




























































































































opposition	14600 Jan 25 17:14	18°05'52" -2°08'12"			14605 Nov 03 04:09	0°00'	
min. Earth dist.	14600 Jan 25 12:28	18°06'47" 8.54489 AU	retrograde		14606 Feb 02 02:26	6°00'00"54	
	14600 Mar 17 17:48	15°00'00"	opposition		14606 Apr 12 23:43	2°00'37"21	-0°17'24"
direct	14600 Apr 05 03:24	14°00'42'47"	min. Earth dist.		14606 Apr 12 10:27	2°00'39'55"	8.67532 AU
	14600 Apr 23 10:04	15°00'00"			14606 May 22 07:03	30°00'00"	
evening set	14600 Jul 17 00:32	22°00'18'10"	direct		14606 Jun 20 14:58	29°00'16'44"	
					14606 Jul 19 13:43	0°00'00"	
conjunction	14600 Aug 02 22:25	24°00'23'32" -1°41'35"	evening set		14606 Sep 29 10:58	6°00'36'09"	
minimum elong	14600 Aug 02 22:26	24°00'23'33" 1°42'17"					
max. Earth dist.	14600 Aug 03 05:10	24°00'25'39" 10.55848 AU	conjunction		14606 Oct 16 15:10	8°00'41'03"	-0°03'14"
morning rise	14600 Aug 19 20:16	26°00'28'53"	minimum elong		14606 Oct 16 15:11	8°00'41'03"	0°02'40"
	14600 Sep 19 19:11	0°00'00"	behind sun begin		14606 Oct 16 08:04	8°00'38'55"	
retrograde	14600 Nov 30 15:09	4°00'03'30"	behind sun end		14606 Oct 16 22:17	8°00'43'12"	
opposition	14601 Feb 07 23:31	0°00'40'56" -2°01'16"	max. Earth dist.		14606 Oct 17 06:37	8°00'45'45"	10.67863 AU
min. Earth dist.	14601 Feb 07 16:43	0°00'42'14" 8.57410 AU	morning rise		14606 Nov 02 22:07	10°00'46'42"	
	14601 Feb 16 21:56	30°00'00'00"	asc. node		14606 Dec 09 19:58	14°00'48'59"	
direct	14601 Apr 18 06:59	27°00'18'24"			14606 Dec 11 18:35	15°00'00"	
	14601 Jun 14 19:39	0°00'00"	retrograde		14607 Feb 14 22:20	18°00'18'27"	
evening set	14601 Jul 29 17:29	4°00'50'12"			14607 Apr 24 15:25	15°00'00'00"	
			opposition		14607 Apr 25 18:33	14°00'54'47"	0°10'12"
conjunction	14601 Aug 15 15:21	6°00'55'07" -1°33'42"	min. Earth dist.		14607 Apr 25 05:48	14°00'57'14"	8.68067 AU
minimum elong	14601 Aug 15 15:23	6°00'55'08" 1°34'13"	direct		14607 Jul 03 06:21	11°00'34'11"	
max. Earth dist.	14601 Aug 16 00:29	6°00'57'57" 10.58731 AU			14607 Sep 06 14:23	15°00'00"	
morning rise	14601 Sep 01 13:56	9°00'00'12"	evening set		14607 Oct 12 00:55	18°00'53'07"	
retrograde	14601 Dec 13 13:24	16°00'33'56"					
opposition	14602 Feb 21 03:42	13°00'11'10" -1°48'37"	conjunction		14607 Oct 29 06:54	20°00'58'19"	0°19'10"
min. Earth dist.	14602 Feb 20 18:38	13°00'12'55" 8.60188 AU	minimum elong		14607 Oct 29 06:53	20°00'58'19"	0°19'54"
direct	14602 May 01 08:42	9°00'49'11"	max. Earth dist.		14607 Oct 29 22:11	21°00'02'58"	10.68100 AU
evening set	14602 Aug 11 08:10	17°00'17'33"	morning rise		14607 Nov 15 15:34	23°00'04'19"	
					14608 Jan 31 19:56	0°00'00"	
conjunction	14602 Aug 28 06:42	19°00'22'11" -1°21'26"	retrograde		14608 Feb 27 17:58	0°00'36'23"	
minimum elong	14602 Aug 28 06:44	19°00'22'12" 1°21'45"			14608 Mar 25 21:57	30°00'00'00"	
max. Earth dist.	14602 Aug 28 18:38	19°00'25'52" 10.61405 AU	opposition		14608 May 07 12:11	27°00'12'34"	0°37'19"
morning rise	14602 Sep 14 06:23	21°00'27'07"	min. Earth dist.		14608 May 06 23:51	27°00'14'57"	8.68005 AU
retrograde	14602 Dec 26 11:33	29°00'00'08"	direct		14608 Jul 14 21:34	23°00'51'54"	
opposition	14603 Mar 06 05:43	25°00'37'08" -1°30'57"			14608 Oct 13 14:02	0°00'00"	
min. Earth dist.	14603 Mar 05 18:16	25°00'39'20" 8.62688 AU	evening set		14608 Oct 23 16:49	1°00'11'08"	
direct	14603 May 14 08:50	22°00'15'39"					
evening set	14603 Aug 23 21:22	29°00'40'53"	conjunction		14608 Nov 10 00:25	3°00'16'43"	0°40'37"
	14603 Aug 26 12:39	0°00'00"	minimum elong		14608 Nov 10 00:24	3°00'16'42"	0°41'29"
			max. Earth dist.		14608 Nov 10 14:45	3°00'21'04"	10.67719 AU
conjunction	14603 Sep 09 21:04	1°00'45'25" -1°05'25"	morning rise		14608 Nov 27 10:32	5°00'23'03"	
minimum elong	14603 Sep 09 21:06	1°00'45'26" 1°05'30"	retrograde		14609 Mar 11 15:14	12°00'55'39"	
max. Earth dist.	14603 Sep 10 11:43	1°00'49'56" 10.63747 AU	opposition		14609 May 20 05:00	9°00'31'44"	1°02'45"
morning rise	14603 Sep 26 22:13	3°00'50'23"	min. Earth dist.		14609 May 19 18:03	9°00'33'52"	8.67332 AU
retrograde	14604 Jan 08 09:56	11°00'22'46"	direct		14609 Jul 27 12:08	6°00'10'48"	
opposition	14604 Mar 18 05:35	7°00'59'33" -1°09'08"	evening set		14609 Nov 05 10:57	13°00'31'05"	
min. Earth dist.	14604 Mar 17 16:19	8°00'02'06" 8.64801 AU					
direct	14604 May 26 04:19	4°00'38'29"	conjunction		14609 Nov 22 19:55	15°00'37'06"	1°00'14"
evening set	14604 Sep 04 09:45	12°00'01'05"	minimum elong		14609 Nov 22 19:53	15°00'37'05"	1°01'11"
			max. Earth dist.		14609 Nov 23 07:46	15°00'40'42"	10.66721 AU
conjunction	14604 Sep 21 10:51	14°00'05'38" -0°46'26"	morning rise		14609 Dec 10 07:21	17°00'43'50"	
minimum elong	14604 Sep 21 10:52	14°00'05'39" 0°46'17"	retrograde		14610 Mar 24 13:28	25°00'17'07"	
max. Earth dist.	14604 Sep 22 02:50	14°00'10'32" 10.65650 AU	opposition		14610 Jun 01 21:45	21°00'53'07"	1°25'21"
morning rise	14604 Oct 08 13:50	16°00'10'45"	min. Earth dist.		14610 Jun 01 13:17	21°00'54'46"	8.66045 AU
retrograde	14605 Jan 20 06:44	23°00'42'41"	direct		14610 Aug 09 01:29	18°00'31'45"	
opposition	14605 Mar 31 03:31	20°00'19'17" -0°44'15"	evening set		14610 Nov 18 07:23	25°00'53'47"	
min. Earth dist.	14605 Mar 30 13:51	20°00'21'55" 8.66434 AU					
direct	14605 Jun 07 21:44	16°00'58'30"	conjunction		14610 Dec 05 17:37	28°00'00'16"	1°17'07"
evening set	14605 Sep 16 22:06	24°00'19'10"	minimum elong		14610 Dec 05 17:35	28°00'00'15"	1°18'07"
			max. Earth dist.		14610 Dec 06 01:40	28°00'02'43"	10.65100 AU
conjunction	14605 Oct 04 00:40	26°00'23'50" -0°25'23"			14610 Dec 22 05:18	0°00'00"	
minimum elong	14605 Oct 04 00:41	26°00'23'51" 0°25'01"	morning rise		14610 Dec 23 06:17	0°00'07'27"	
max. Earth dist.	14605 Oct 04 16:34	26°00'28'41" 10.67036 AU	retrograde		14611 Apr 06 10:30	7°00'41'35"	
morning rise	14605 Oct 21 05:39	28°00'29'11"	opposition		14611 Jun 14 14:37	4°00'17'31"	1°44'05"















































































































































































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direct	14611 Aug 21 17:54	0°  55'35		direct	14617 Nov 05 08:29	16°  52'41	
evening set	14611 Dec 01 06:36	8°  20'03		evening set	14618 Feb 17 08:17	24°  36'25	
				max. Earth dist.	14618 Mar 06 11:10	26°  43'08	10.45435 AU
conjunction	14611 Dec 18 18:08	10°  27'06	1°30'27	conjunction	14618 Mar 07 01:07	26°  47'28	1°12'07
minimum elong	14611 Dec 18 18:07	10°  27'06	1°31'28	minimum elong	14618 Mar 07 01:10	26°  47'29	1°12'18
max. Earth dist.	14611 Dec 18 22:25	10°  28'25	10.62856 AU	morning rise	14618 Mar 24 16:43	28°  58'13	
morning rise	14612 Jan 05 07:47	12°  34'47			14618 Apr 02 06:23	0°  00'	
retrograde	14612 Apr 18 08:55	20°  30'56		retrograde	14618 Jul 05 05:16	6°  37'20	
opposition	14612 Jun 26 07:50	16°  34'54	1°58'02	opposition	14618 Sep 10 22:52	3°  13'37	1°18'14
min. Earth dist.	14612 Jun 26 05:32	16°  34'16	8.61621 AU	min. Earth dist.	14618 Sep 11 09:56	3°  11'25	8.44411 AU
direct	14612 Sep 02 11:43	13°  23'15			14618 Nov 03 00:24	30°  00'	
evening set	14612 Dec 13 08:37	20°  50'43		direct	14618 Nov 18 15:21	29°  47'17	
					14618 Dec 04 03:54	0°  00'	
conjunction	14612 Dec 30 21:28	22°  58'28	1°39'34	evening set	14619 Mar 02 22:43	7°  33'24	
minimum elong	14612 Dec 30 21:28	22°  58'27	1°40'34				
max. Earth dist.	14612 Dec 30 22:38	22°  58'49	10.60092 AU	conjunction	14619 Mar 20 15:28	9°  44'49	0°53'24
morning rise	14613 Jan 17 11:50	25°  30'41		minimum elong	14619 Mar 20 15:30	9°  44'50	0°53'20
	14613 Mar 04 10:06	0°  00'		max. Earth dist.	14619 Mar 20 00:44	9°  40'14	10.43423 AU
retrograde	14613 May 01 10:19	2°  42'57		morning rise	14619 Apr 07 06:17	11°  55'46	
	14613 Jun 30 07:14	30°  00'		retrograde	14619 Jul 18 12:50	19°  34'50	
opposition	14613 Jul 09 02:14	29°  31'48	2°06'28	opposition	14619 Sep 24 03:48	16°  11'17	0°53'12
min. Earth dist.	14613 Jul 09 02:16	29°  31'48	8.58690 AU	min. Earth dist.	14619 Sep 24 15:32	16°  08'57	8.42651 AU
direct	14613 Sep 15 05:43	25°  55'33		direct	14619 Dec 01 23:01	12°  44'40	
	14613 Nov 25 23:01	0°  00'		evening set	14620 Mar 15 13:36	20°  32'40	
evening set	14613 Dec 26 13:21	3°  26'19					
conjunction	14614 Jan 13 03:24	5°  34'47	1°43'59	conjunction	14620 Apr 02 05:34	22°  44'13	0°31'55
minimum elong	14614 Jan 13 03:24	5°  34'47	1°44'53	minimum elong	14620 Apr 02 05:35	22°  44'13	0°31'36
max. Earth dist.	14614 Jan 13 01:36	5°  34'14	10.57025 AU	max. Earth dist.	14620 Apr 01 14:09	22°  39'24	10.41977 AU
morning rise	14614 Jan 30 18:18	7°  43'35		morning rise	14620 Apr 19 19:07	24°  55'10	
	14614 Apr 24 11:50	15°  00'			14620 Jun 05 17:34	0°  00'	
retrograde	14614 May 14 12:06	15°  20'53		retrograde	14620 Jul 30 20:07	2°  34'03	
	14614 Jun 03 13:24	15°  00'			14620 Sep 25 23:29	30°  00'	
opposition	14614 Jul 21 22:03	11°  56'44	2°08'53	opposition	14620 Oct 06 10:35	29°  10'45	0°25'22
min. Earth dist.	14614 Jul 22 00:29	11°  56'15	8.55554 AU	min. Earth dist.	14620 Oct 06 22:52	29°  08'19	8.41511 AU
direct	14614 Sep 28 02:35	8°  32'46		direct	14620 Dec 14 09:15	25°  44'01	
	14614 Dec 30 11:02	15°  00'			14621 Feb 26 04:33	0°  00'	
evening set	14615 Jan 08 20:59	16°  07'00		evening set	14621 Mar 29 04:24	3°  33'19	
conjunction	14615 Jan 26 12:03	18°  16'12	1°43'23	conjunction	14621 Apr 15 18:55	5°  44'45	0°08'47
minimum elong	14615 Jan 26 12:04	18°  16'12	1°44'09	minimum elong	14621 Apr 15 18:56	5°  44'45	0°08'15
max. Earth dist.	14615 Jan 26 06:36	18°  14'31	10.53861 AU	behind sun begin	14621 Apr 15 12:34	5°  42'47	
morning rise	14615 Feb 13 03:29	20°  25'34		behind sun end	14621 Apr 16 01:17	5°  46'43	
retrograde	14615 May 27 15:19	28°  03'40		max. Earth dist.	14621 Apr 15 03:08	5°  39'49	10.41184 AU
opposition	14615 Aug 03 19:26	24°  39'34	2°05'03	morning rise	14621 May 03 06:52	7°  55'30	
min. Earth dist.	14615 Aug 04 00:58	24°  38'28	8.52403 AU		14621 Jul 18 21:00	15°  00'	
direct	14615 Oct 11 01:30	21°  14'53		retrograde	14621 Aug 13 02:45	15°  34'08	
evening set	14616 Jan 22 07:04	28°  52'33		desc. node	14621 Sep 01 19:15	15°  13'30	
	14616 Jan 31 12:19	0°  00'			14621 Sep 07 13:51	15°  00'	
				opposition	14621 Oct 19 18:54	12°  11'08	-0°03'49
conjunction	14616 Feb 08 22:56	1°  02'27	1°37'42	min. Earth dist.	14621 Oct 20 07:20	12°  08'40	8.41063 AU
minimum elong	14616 Feb 08 22:57	1°  02'28	1°38'18	direct	14621 Dec 27 21:36	8°  44'26	
max. Earth dist.	14616 Feb 08 13:34	0°  59'34	10.50776 AU		14622 Mar 29 15:54	15°  00'	
morning rise	14616 Feb 26 14:44	3°  12'22		evening set	14622 Apr 11 18:26	16°  34'25	
retrograde	14616 Jun 08 19:55	10°  51'01					
opposition	14616 Aug 15 18:44	7°  12'01	1°55'01	conjunction	14622 Apr 29 07:04	18°  45'30	-0°14'56
min. Earth dist.	14616 Aug 16 03:04	7°  25'22	8.49402 AU	minimum elong	14622 Apr 29 07:03	18°  45'30	0°15'39
direct	14616 Oct 23 02:52	4°  01'40		behind sun begin	14622 Apr 29 05:31	18°  45'02	
evening set	14617 Feb 03 18:54	11°  42'32		behind sun end	14622 Apr 29 08:34	18°  45'58	
				max. Earth dist.	14622 Apr 28 15:35	18°  40'39	10.41090 AU
conjunction	14617 Feb 21 11:22	13°  53'05	1°27'07	morning rise	14622 May 16 17:04	20°  55'50	
minimum elong	14617 Feb 21 11:24	13°  53'05	1°27'31	retrograde	14622 Aug 26 09:59	28°  34'13	
max. Earth dist.	14617 Feb 20 23:06	13°  49'17	10.47922 AU	opposition	14622 Nov 02 04:32	25°  08'13	-0°32'49
morning rise	14617 Mar 11 03:16	16°  03'29		min. Earth dist.	14622 Nov 02 16:04	25°  09'14	8.41323 AU
retrograde	14617 Jun 21 23:38	23°  42'28		direct	14623 Jan 10 10:33	21°  45'03	
opposition	14617 Aug 28 19:55	20°  18'35	1°39'10	evening set	14623 Apr 25 07:17	29°  35'04	

	14623 Apr 28 16:06	0°♊	evening set	14629 Jul 11 08:56	16°♊38'30	
conjunction	14623 May 12 17:35	1°♊45'34 -0°37'46	conjunction	14629 Jul 28 07:01	18°♊43'58 -1°43'29	
minimum elong	14623 May 12 17:33	1°♊45'34 0°38'38	minimum elong	14629 Jul 28 07:02	18°♊43'59 1°44'15	
max. Earth dist.	14623 May 12 03:57	1°♊41'17 10.41690 AU	max. Earth dist.	14629 Jul 28 12:47	18°♊45'46 10.56173 AU	
morning rise	14623 May 30 01:14	3°♊55'19	morning rise	14629 Aug 14 04:45	20°♊49'20	
retrograde	14623 Sep 08 17:09	11°♊33'24	retrograde	14629 Nov 24 20:43	28°♊23'50	
opposition	14623 Nov 15 15:05	8°♊10'59 -1°00'06	opposition	14630 Feb 02 02:27	25°♊02'00 -2°05'01	
min. Earth dist.	14623 Nov 16 00:31	8°♊09'08 8.42273 AU	min. Earth dist.	14630 Feb 01 19:46	25°♊03'17 8.57840 AU	
direct	14624 Jan 23 23:52	4°♊44'57	direct	14630 Apr 12 11:27	21°♊39'53	
evening set	14624 May 07 18:16	12°♊34'18	evening set	14630 Jul 24 03:03	29°♊12'52	
				14630 Jul 30 13:17	0°♐	
conjunction	14624 May 25 02:04	14°♊44'02 -0°58'39	conjunction	14630 Aug 10 00:54	1°♐17'47 -1°37'50	
minimum elong	14624 May 25 02:02	14°♊44'02 0°59'37	minimum elong	14630 Aug 10 00:56	1°♐17'48 1°38'26	
max. Earth dist.	14624 May 24 15:29	14°♊40'42 10.42954 AU	max. Earth dist.	14630 Aug 10 10:04	1°♐20'38 10.59249 AU	
morning rise	14624 Jun 11 07:12	16°♊53'03	morning rise	14630 Aug 26 22:50	3°♐22'46	
retrograde	14624 Sep 20 23:50	24°♊30'49	retrograde	14630 Dec 07 20:55	10°♐56'22	
opposition	14624 Nov 28 02:18	21°♊08'39 -1°24'14	opposition	14631 Feb 15 07:31	7°♐34'21 -1°55'01	
min. Earth dist.	14624 Nov 28 09:11	21°♊07'19 8.43867 AU	min. Earth dist.	14631 Feb 14 22:42	7°♐36'02 8.60783 AU	
direct	14625 Feb 05 13:28	17°♊43'11	direct	14631 Apr 25 13:25	4°♐12'47	
evening set	14625 May 21 02:54	25°♊31'08	evening set	14631 Aug 05 18:37	11°♐42'11	
conjunction	14625 Jun 07 08:08	27°♊40'00 -1°16'30	conjunction	14631 Aug 22 16:43	13°♐46'45 -1°27'35	
minimum elong	14625 Jun 07 08:06	27°♊40'00 1°17'31	minimum elong	14631 Aug 22 16:45	13°♐46'45 1°27'59	
max. Earth dist.	14625 Jun 07 00:53	27°♊37'44 10.44819 AU	max. Earth dist.	14631 Aug 23 03:46	13°♐50'09 10.62030 AU	
morning rise	14625 Jun 24 10:50	29°♊48'11	morning rise	14631 Sep 08 15:36	15°♐51'31	
	14625 Jun 26 01:20	0°♑	retrograde	14631 Dec 20 19:39	23°♐24'19	
retrograde	14625 Oct 04 07:16	7°♑25'34	opposition	14632 Feb 28 10:31	20°♐02'04 -1°39'39	
opposition	14625 Dec 11 13:39	4°♑03'38 -1°44'00	min. Earth dist.	14632 Feb 28 00:34	20°♐03'59 8.63319 AU	
min. Earth dist.	14625 Dec 11 18:09	4°♑02'45 8.46020 AU	direct	14632 May 07 13:38	16°♐40'58	
direct	14626 Feb 19 01:08	0°♑38'47	evening set	14632 Aug 17 08:31	24°♐07'09	
evening set	14626 Jun 03 09:03	8°♑24'41				
conjunction	14626 Jun 20 11:44	10°♑32'38 -1°30'25	conjunction	14632 Sep 03 07:25	26°♐11'33 -1°13'17	
minimum elong	14626 Jun 20 11:43	10°♑32'37 1°31'27	minimum elong	14632 Sep 03 07:28	26°♐11'34 1°13'28	
max. Earth dist.	14626 Jun 20 07:25	10°♑31'17 10.47190 AU	max. Earth dist.	14632 Sep 03 19:23	26°♐15'14 10.64319 AU	
morning rise	14626 Jul 07 12:22	12°♑39'59	morning rise	14632 Sep 20 07:49	28°♐16'20	
retrograde	14626 Oct 17 13:02	20°♑16'48		14632 Oct 05 01:11	0°♑	
opposition	14626 Dec 25 00:37	16°♑55'02 -1°58'26	retrograde	14633 Jan 01 17:12	5°♑48'30	
min. Earth dist.	14626 Dec 25 03:00	16°♑54'34 8.48628 AU	opposition	14633 Mar 12 11:16	2°♑26'01 -1°19'44	
direct	14627 Mar 04 11:38	13°♑30'52	min. Earth dist.	14633 Mar 12 00:37	2°♑28'03 8.65299 AU	
evening set	14627 Jun 16 12:13	21°♑14'09	direct	14633 Apr 17 03:30	30°♑♐	
				14633 May 20 10:52	29°♐05'13	
conjunction	14627 Jul 03 12:41	23°♑21'10 -1°39'47	evening set	14633 Jun 22 05:04	0°♑	
minimum elong	14627 Jul 03 12:40	23°♑21'09 1°40'46		14633 Aug 29 21:18	6°♑28'45	
max. Earth dist.	14627 Jul 03 11:07	23°♑20'40 10.49966 AU				
morning rise	14627 Jul 20 11:48	25°♑27'45	conjunction	14633 Sep 15 21:31	8°♑33'09 -0°55'37	
	14627 Aug 30 12:47	0°♊	minimum elong	14633 Sep 15 21:33	8°♑33'09 0°55'35	
retrograde	14627 Oct 30 15:55	3°♊03'55	max. Earth dist.	14633 Sep 16 10:35	8°♑37'09 10.66030 AU	
	14628 Jan 03 14:30	30°♑♐	morning rise	14633 Oct 02 23:40	10°♑38'04	
opposition	14628 Jan 07 10:50	29°♑42'13 -2°06'54	retrograde	14634 Jan 14 13:12	18°♑09'53	
min. Earth dist.	14628 Jan 07 10:30	29°♑42'17 8.51574 AU	opposition	14634 Mar 25 10:11	14°♑47'02 -0°56'12	
direct	14628 Mar 16 21:58	26°♑18'44	min. Earth dist.	14634 Mar 24 22:22	14°♑49'18 8.66693 AU	
	14628 May 24 03:17	0°♊	direct	14634 Jun 02 07:01	11°♑26'28	
evening set	14628 Jun 28 12:03	3°♊58'53	evening set	14634 Sep 11 09:30	18°♑47'51	
conjunction	14628 Jul 15 10:58	6°♊05'03 -1°44'11	conjunction	14634 Sep 28 11:22	20°♑52'23 -0°35'27	
minimum elong	14628 Jul 15 10:59	6°♊05'03 1°45'04	minimum elong	14634 Sep 28 11:24	20°♑52'23 0°35'11	
max. Earth dist.	14628 Jul 15 12:53	6°♊05'39 10.53015 AU	max. Earth dist.	14634 Sep 29 02:04	20°♑56'52 10.67152 AU	
morning rise	14628 Aug 01 09:08	8°♊10'58	morning rise	14634 Oct 15 15:20	22°♑57'32	
	14628 Oct 12 19:26	15°♊		14635 Jan 03 07:39	0°♌	
retrograde	14628 Nov 11 18:38	15°♊46'22	retrograde	14635 Jan 27 09:52	0°♌29'14	
	14628 Dec 12 06:40	15°♑♊		14635 Feb 20 17:36	30°♑♌	
opposition	14629 Jan 19 19:36	12°♊24'38 -2°09'06	opposition	14635 Apr 07 07:19	27°♑05'59 -0°30'09	
min. Earth dist.	14629 Jan 19 16:06	12°♊25'19 8.54704 AU	min. Earth dist.	14635 Apr 06 18:32	27°♑08'26 8.67506 AU	
direct	14629 Mar 30 06:54	9°♊01'52	direct	14635 Jun 15 01:21	23°♑45'27	
	14629 Jun 27 13:48	15°♊		14635 Sep 14 16:14	0°♌	

evening set	14635 Sep 23 22:08	1°♍05'19		opposition	14641 Jun 20 17:28	11°♊10'01	1°52'16
				min. Earth dist.	14641 Jun 20 13:06	11°♊10'52	8.60680 AU
conjunction	14635 Oct 11 01:41	3°♍10'06 -0°13'42		direct	14641 Aug 27 20:59	7°♊47'06	
minimum elong	14635 Oct 11 01:42	3°♍10'07 0°13'14		evening set	14641 Dec 07 13:55	15°♊13'48	
behind sun begin	14635 Oct 10 21:31	3°♍08'51					
behind sun end	14635 Oct 11 05:52	3°♍11'22		conjunction	14641 Dec 25 02:11	17°♊21'28	1°35'55
max. Earth dist.	14635 Oct 11 16:57	3°♍14'45 10.67685 AU		minimum elong	14641 Dec 25 02:10	17°♊21'28	1°36'56
morning rise	14635 Oct 28 07:33	5°♍15'35		max. Earth dist.	14641 Dec 25 05:13	17°♊22'24	10.59280 AU
retrograde	14636 Feb 09 07:04	12°♍47'19		morning rise	14642 Jan 11 16:14	19°♊29'40	
opposition	14636 Apr 19 02:46	9°♍23'42 -0°02'46		retrograde	14642 Apr 25 17:26	27°♊06'11	
min. Earth dist.	14636 Apr 18 14:09	9°♍26'07 8.67738 AU		opposition	14642 Jul 03 11:44	23°♊41'23	2°03'22
asc. node	14636 May 26 09:17	6°♍52'10		min. Earth dist.	14642 Jul 03 10:29	23°♊41'38	8.58016 AU
direct	14636 Jun 26 16:02	6°♍03'02		direct	14642 Sep 09 14:06	20°♊17'49	
evening set	14636 Oct 05 11:41	13°♍22'12		evening set	14642 Dec 20 17:39	27°♊47'44	
	14636 Oct 18 23:19	15°♍					
conjunction	14636 Oct 22 16:51	15°♍27'17 0°08'45		conjunction	14643 Jan 07 07:05	29°♊56'04	1°42'35
minimum elong	14636 Oct 22 16:50	15°♍27'17 0°09'25		minimum elong	14643 Jan 07 07:05	29°♊56'04	1°43'32
behind sun begin	14636 Oct 22 10:53	15°♍25'29		max. Earth dist.	14643 Jan 07 06:22	29°♊55'51	10.56504 AU
behind sun end	14636 Oct 22 22:48	15°♍29'05			14643 Jan 07 19:55	0°♊	
max. Earth dist.	14636 Oct 23 07:06	15°♍31'37 10.67627 AU		morning rise	14643 Jan 24 21:58	2°♊04'50	
morning rise	14636 Nov 09 00:40	17°♍33'09		retrograde	14643 May 08 17:18	9°♊42'22	
retrograde	14637 Feb 21 02:23	25°♍05'10		opposition	14643 Jul 16 07:13	6°♊17'39	2°08'37
opposition	14637 May 01 21:04	21°♍41'12 0°24'44		min. Earth dist.	14643 Jul 16 08:48	6°♊17'21	8.55183 AU
min. Earth dist.	14637 May 01 09:48	21°♍43'23 8.67388 AU		direct	14643 Sep 22 11:40	2°♊53'29	
direct	14637 Jul 09 07:26	18°♍20'17		evening set	14644 Jan 03 00:18	10°♊26'48	
evening set	14637 Oct 18 02:38	25°♍39'31					
conjunction	14637 Nov 04 09:20	27°♍44'59 0°30'43		conjunction	14644 Jan 20 14:53	12°♊35'52	1°44'19
minimum elong	14637 Nov 04 09:19	27°♍44'59 0°31'32		minimum elong	14644 Jan 20 14:54	12°♊35'52	1°45'09
max. Earth dist.	14637 Nov 04 21:51	27°♍48'48 10.66981 AU		max. Earth dist.	14644 Jan 20 11:05	12°♊34'41	10.53634 AU
morning rise	14637 Nov 21 18:53	29°♍51'15		morning rise	14644 Feb 07 06:18	14°♊45'10	
	14637 Nov 23 00:17	0°♊			14644 Feb 09 07:43	15°♊	
retrograde	14638 Mar 05 22:08	7°♊23'51		retrograde	14644 May 20 20:15	22°♊23'37	
opposition	14638 May 14 14:30	3°♊59'35 0°51'08		opposition	14644 Jul 28 04:06	18°♊59'04	2°07'40
min. Earth dist.	14638 May 14 04:44	4°♊01'29 8.66467 AU		min. Earth dist.	14644 Jul 28 07:48	18°♊58'20	8.52321 AU
direct	14638 Jul 21 22:53	0°♊38'17		direct	14644 Oct 04 10:00	15°♊34'21	
evening set	14638 Oct 30 19:33	7°♊58'22		evening set	14645 Jan 15 09:31	23°♊11'07	
conjunction	14638 Nov 17 03:51	10°♊04'18 0°51'20		conjunction	14645 Feb 02 01:10	25°♊20'54	1°40'57
minimum elong	14638 Nov 17 03:50	10°♊04'18 0°52'15		minimum elong	14645 Feb 02 01:11	25°♊20'54	1°41'38
max. Earth dist.	14638 Nov 17 15:00	10°♊07'42 10.65770 AU		max. Earth dist.	14645 Feb 01 19:03	25°♊19'00	10.50820 AU
morning rise	14638 Dec 04 14:51	12°♊11'01		morning rise	14645 Feb 19 16:53	27°♊30'46	
retrograde	14639 Mar 18 19:05	19°♊44'24			14645 Mar 13 02:48	0°♊	
opposition	14639 May 27 07:21	16°♊19'53 1°15'14		retrograde	14645 Jun 03 01:37	5°♊09'55	
min. Earth dist.	14639 May 26 22:54	16°♊21'32 8.65009 AU		opposition	14645 Aug 10 02:57	1°♊45'36	2°00'25
direct	14639 Aug 03 13:35	12°♊58'07		min. Earth dist.	14645 Aug 10 08:28	1°♊44'31	8.49579 AU
evening set	14639 Nov 12 14:51	20°♊19'47			14645 Sep 02 10:45	30°♊	
conjunction	14639 Nov 30 00:42	22°♊26'14 1°09'38		direct	14645 Oct 17 09:42	28°♊20'26	
minimum elong	14639 Nov 30 00:40	22°♊26'14 1°10'38			14645 Nov 30 16:28	0°♊	
max. Earth dist.	14639 Nov 30 10:14	22°♊29'09 10.64034 AU		evening set	14646 Jan 28 20:56	6°♊00'30	
morning rise	14639 Dec 17 12:52	24°♊33'24					
	14640 Feb 08 10:33	0°♊		conjunction	14646 Feb 15 13:23	8°♊10'56	1°32'33
retrograde	14640 Mar 30 16:45	2°♊07'47		minimum elong	14646 Feb 15 13:25	8°♊10'57	1°33'02
	14640 May 22 04:20	30°♊		max. Earth dist.	14646 Feb 15 04:38	8°♊08'14	10.48208 AU
opposition	14640 Jun 08 00:11	28°♊43'04 1°35'57		morning rise	14646 Mar 05 05:15	10°♊21'18	
min. Earth dist.	14640 Jun 07 17:18	28°♊44'25 8.63053 AU		retrograde	14646 Jun 16 07:07	18°♊00'55	
direct	14640 Aug 15 05:22	25°♊20'46		opposition	14646 Aug 23 03:49	14°♊36'56	1°47'07
	14640 Oct 31 10:32	0°♊		min. Earth dist.	14646 Aug 23 11:33	14°♊35'23	8.47095 AU
evening set	14640 Nov 24 12:58	2°♊44'41		direct	14646 Oct 30 13:14	11°♊11'21	
conjunction	14640 Dec 12 00:05	4°♊51'43 1°24'44		evening set	14647 Feb 11 10:31	18°♊54'28	
minimum elong	14640 Dec 12 00:04	4°♊51'42 1°25'46					
max. Earth dist.	14640 Dec 12 06:57	4°♊53'49 10.61832 AU		conjunction	14647 Mar 01 03:21	21°♊05'28	1°19'29
morning rise	14640 Dec 29 13:13	6°♊59'22		minimum elong	14647 Mar 01 03:23	21°♊05'29	1°19'45
retrograde	14641 Apr 12 16:30	14°♊34'49		max. Earth dist.	14647 Feb 28 15:41	21°♊01'51	10.45921 AU
				morning rise	14647 Mar 18 19:07	23°♊16'14	
					14647 May 27 22:00	0°♊	
				retrograde	14647 Jun 29 13:34	0°♊56'00	
					14647 Aug 01 11:59	30°♊	

opposition	14647 Sep 05 06:38	27° $\text{K}$ 32'23	1°28'21	morning rise	14653 Jun 05 17:36	11° $\text{II}$ 21'15
min. Earth dist.	14647 Sep 05 16:41	27° $\text{K}$ 30'24	8.44992 AU	retrograde	14653 Sep 15 11:28	18° $\text{II}$ 59'47
direct	14647 Nov 12 19:05	24° $\text{K}$ 06'29		opposition	14653 Nov 22 10:27	15° $\text{II}$ 37'50 -1°13'52
	14648 Feb 09 07:00	0° $\text{Y}$		min. Earth dist.	14653 Nov 22 20:21	15° $\text{II}$ 35'53 8.42740 AU
evening set	14648 Feb 25 01:27	1° $\text{Y}$ 52'13		direct	14654 Jan 30 19:07	12° $\text{II}$ 12'18
				evening set	14654 May 15 13:10	20° $\text{II}$ 01'44
conjunction	14648 Mar 13 18:13	4° $\text{Y}$ 03'37	1°02'19	conjunction	14654 Jun 01 19:29	22° $\text{II}$ 11'09 -1°08'56
minimum elong	14648 Mar 13 18:15	4° $\text{Y}$ 03'37	1°02'21	minimum elong	14654 Jun 01 19:27	22° $\text{II}$ 11'09 1°09'55
max. Earth dist.	14648 Mar 13 04:02	3° $\text{Y}$ 59'12	10.44070 AU	max. Earth dist.	14654 Jun 01 08:17	22° $\text{II}$ 07'38 10.43316 AU
morning rise	14648 Mar 31 09:32	6° $\text{Y}$ 14'37		morning rise	14654 Jun 18 23:28	24° $\text{II}$ 19'54
retrograde	14648 Jul 11 20:43	13° $\text{Y}$ 54'19			14654 Aug 11 19:13	0° $\text{G}$
opposition	14648 Sep 17 11:33	10° $\text{Y}$ 31'02	1°04'59	retrograde	14654 Sep 28 18:49	1° $\text{G}$ 58'15
min. Earth dist.	14648 Sep 17 23:04	10° $\text{Y}$ 28'45	8.43370 AU		14654 Nov 17 11:41	30° $\text{R}$ $\text{II}$
direct	14648 Nov 25 03:33	7° $\text{Y}$ 04'56		opposition	14654 Dec 05 22:44	28° $\text{II}$ 36'22 -1°35'47
evening set	14649 Mar 09 16:50	14° $\text{Y}$ 52'39		min. Earth dist.	14654 Dec 06 06:15	28° $\text{II}$ 34'54 8.44141 AU
				direct	14655 Feb 13 09:35	25° $\text{II}$ 11'15
conjunction	14649 Mar 27 09:06	17° $\text{Y}$ 04'14	0°41'56		14655 May 03 08:27	0° $\text{G}$
minimum elong	14649 Mar 27 09:08	17° $\text{Y}$ 04'15	0°41'44	evening set	14655 May 28 21:26	2° $\text{G}$ 59'05
max. Earth dist.	14649 Mar 26 17:52	16° $\text{Y}$ 59'29	10.42731 AU	conjunction	14655 Jun 15 01:14	5° $\text{G}$ 07'40 -1°24'44
morning rise	14649 Apr 13 23:29	19° $\text{Y}$ 15'19		minimum elong	14655 Jun 15 01:13	5° $\text{G}$ 07'39 1°25'46
retrograde	14649 Jul 25 03:35	26° $\text{Y}$ 54'46		max. Earth dist.	14655 Jun 14 17:32	5° $\text{G}$ 05'14 10.44962 AU
opposition	14649 Sep 30 18:10	23° $\text{Y}$ 31'48	0°38'14	morning rise	14655 Jul 02 02:58	7° $\text{G}$ 15'37
min. Earth dist.	14649 Oct 01 06:01	23° $\text{Y}$ 29'27	8.42281 AU	retrograde	14655 Oct 12 01:34	14° $\text{G}$ 53'39
direct	14649 Dec 08 14:55	20° $\text{Y}$ 05'34		opposition	14655 Dec 19 10:56	11° $\text{G}$ 31'44 -1°52'45
evening set	14650 Mar 23 08:26	27° $\text{Y}$ 54'42		min. Earth dist.	14655 Dec 19 15:05	11° $\text{G}$ 30'55 8.46057 AU
				direct	14656 Feb 26 22:43	8° $\text{G}$ 07'06
conjunction	14650 Apr 09 23:44	0° $\text{G}$ 06'15	0°19'22	evening set	14656 Jun 10 02:49	15° $\text{G}$ 52'37
minimum elong	14650 Apr 09 23:45	0° $\text{G}$ 06'15	0°18'56	conjunction	14656 Jun 27 04:27	18° $\text{G}$ 00'18 -1°36'13
max. Earth dist.	14650 Apr 09 08:26	0° $\text{G}$ 01'28	10.41919 AU	minimum elong	14656 Jun 27 04:26	18° $\text{G}$ 00'18 1°37'13
	14650 Apr 09 03:45	0° $\text{G}$		max. Earth dist.	14656 Jun 27 01:03	17° $\text{G}$ 59'14 10.47089 AU
morning rise	14650 Apr 27 12:36	2° $\text{G}$ 17'10		morning rise	14656 Jul 14 04:16	20° $\text{G}$ 07'29
retrograde	14650 Aug 07 10:55	9° $\text{G}$ 56'15		retrograde	14656 Oct 24 07:14	27° $\text{G}$ 45'01
opposition	14650 Oct 14 02:11	6° $\text{G}$ 33'34	0°09'27	opposition	14656 Dec 31 22:23	24° $\text{G}$ 22'59 -2°03'58
min. Earth dist.	14650 Oct 14 13:57	6° $\text{G}$ 31'14	8.41706 AU	min. Earth dist.	14656 Dec 31 23:20	24° $\text{G}$ 22'47 8.48406 AU
direct	14650 Dec 22 03:12	3° $\text{G}$ 07'19		direct	14657 Mar 11 10:15	20° $\text{G}$ 58'50
desc. node	14651 Feb 12 23:48	5° $\text{G}$ 25'34		evening set	14657 Jun 23 05:02	28° $\text{G}$ 41'29
evening set	14651 Apr 05 23:34	10° $\text{G}$ 57'18			14657 Jul 03 18:27	0° $\text{Q}$
				conjunction	14657 Jul 10 04:54	0° $\text{Q}$ 48'20 -1°42'51
conjunction	14651 Apr 23 13:16	13° $\text{G}$ 08'36	-0°04'19	minimum elong	14657 Jul 10 04:54	0° $\text{Q}$ 48'20 1°43'47
minimum elong	14651 Apr 23 13:16	13° $\text{G}$ 08'36	0°04'56	max. Earth dist.	14657 Jul 10 05:13	0° $\text{Q}$ 48'26 10.49599 AU
behind sun begin	14651 Apr 23 06:16	13° $\text{G}$ 06'26		morning rise	14657 Jul 27 03:26	2° $\text{Q}$ 54'49
behind sun end	14651 Apr 23 20:16	13° $\text{G}$ 10'47		retrograde	14657 Nov 06 12:11	10° $\text{Q}$ 31'39
max. Earth dist.	14651 Apr 22 22:20	13° $\text{G}$ 03'56	10.41578 AU	opposition	14658 Jan 14 08:43	7° $\text{Q}$ 09'27 -2°08'57
	14651 May 08 09:57	15° $\text{G}$		min. Earth dist.	14658 Jan 14 07:00	7° $\text{Q}$ 09'47 8.51068 AU
morning rise	14651 May 11 00:09	15° $\text{G}$ 19'09		direct	14658 Mar 24 19:25	3° $\text{Q}$ 45'50
retrograde	14651 Aug 20 20:05	22° $\text{G}$ 57'57		evening set	14658 Jul 06 04:10	11° $\text{Q}$ 25'10
opposition	14651 Oct 27 11:47	19° $\text{G}$ 35'32	-0°19'50	conjunction	14658 Jul 23 02:41	13° $\text{Q}$ 31'16 -1°44'23
min. Earth dist.	14651 Oct 27 23:20	19° $\text{G}$ 33'16	8.41576 AU	minimum elong	14658 Jul 23 02:42	13° $\text{Q}$ 31'16 1°45'12
direct	14652 Jan 04 15:05	16° $\text{G}$ 09'25		max. Earth dist.	14658 Jul 23 06:05	13° $\text{Q}$ 32'19 10.52363 AU
evening set	14652 Apr 18 13:37	23° $\text{G}$ 59'47			14658 Aug 03 23:47	15° $\text{Q}$
max. Earth dist.	14652 May 05 10:48	26° $\text{G}$ 06'08	10.41655 AU	morning rise	14658 Aug 09 00:37	15° $\text{Q}$ 37'10
				retrograde	14658 Nov 19 14:38	23° $\text{Q}$ 13'10
conjunction	14652 May 06 01:07	26° $\text{G}$ 10'38	-0°27'38	opposition	14659 Jan 27 17:26	19° $\text{Q}$ 50'48 -2°07'36
minimum elong	14652 May 06 01:06	26° $\text{G}$ 10'38	0°28'26	min. Earth dist.	14659 Jan 27 13:16	19° $\text{Q}$ 51'36 8.53913 AU
morning rise	14652 May 23 09:45	28° $\text{G}$ 20'42		direct	14659 Apr 07 02:12	16° $\text{Q}$ 27'42
	14652 Jun 06 04:06	0° $\text{II}$		evening set	14659 Jul 19 00:12	24° $\text{Q}$ 03'30
retrograde	14652 Sep 02 04:30	5° $\text{II}$ 59'22		conjunction	14659 Aug 04 22:06	26° $\text{Q}$ 08'59 -1°40'51
opposition	14652 Nov 08 22:43	2° $\text{II}$ 37'12	-0°48'06	minimum elong	14659 Aug 04 22:07	26° $\text{Q}$ 08'59 1°41'31
min. Earth dist.	14652 Nov 09 09:53	2° $\text{II}$ 35'01	8.41893 AU	max. Earth dist.	14659 Aug 05 04:22	26° $\text{Q}$ 10'56 10.55256 AU
	14652 Dec 17 01:37	30° $\text{R}$ $\text{G}$		morning rise	14659 Aug 21 20:09	28° $\text{Q}$ 14'27
direct	14653 Jan 17 04:19	29° $\text{G}$ 11'21			14659 Sep 05 15:46	0° $\text{P}$
	14653 Feb 17 01:12	0° $\text{II}$				
evening set	14653 May 02 02:20	7° $\text{II}$ 01'35				
conjunction	14653 May 19 11:18	9° $\text{II}$ 11'47	-0°49'34			
minimum elong	14653 May 19 11:16	9° $\text{II}$ 11'46	0°50'29			
max. Earth dist.	14653 May 18 21:55	9° $\text{II}$ 07'35	10.42211 AU			

retrograde	14659 Dec 02 14:40	5° $\mathbb{M}$ 49'36	asc. node	14665 Oct 30 02:30	12° $\mathbb{M}$ 01'48	
opposition	14660 Feb 10 00:11	2° $\mathbb{M}$ 26'59 -2°00'04	morning rise	14665 Nov 04 00:03	12° $\mathbb{M}$ 37'04	
min. Earth dist.	14660 Feb 09 17:18	2° $\mathbb{M}$ 28'19 8.56805 AU		14665 Nov 24 18:17	15° $\mathbb{M}$	
	14660 Mar 16 17:50	30° $\mathbb{R}$ 8	retrograde	14666 Feb 15 23:26	20° $\mathbb{M}$ 08'58	
direct	14660 Apr 19 07:44	29° $\mathbb{Q}$ 04'27	opposition	14666 Apr 26 20:14	16° $\mathbb{M}$ 45'12 0°13'12	
	14660 May 22 07:26	0° $\mathbb{M}$	min. Earth dist.	14666 Apr 26 06:42	16° $\mathbb{M}$ 47'48 8.67783 AU	
evening set	14660 Jul 30 17:24	6° $\mathbb{M}$ 36'38		14666 May 20 19:29	15° $\mathbb{R}$ $\mathbb{M}$	
			direct	14666 Jul 04 08:46	13° $\mathbb{M}$ 24'33	
conjunction	14660 Aug 16 15:28	8° $\mathbb{M}$ 41'40 -1°32'30		14666 Aug 16 18:04	15° $\mathbb{M}$	
minimum elong	14660 Aug 16 15:30	8° $\mathbb{M}$ 41'41 1°32'58	evening set	14666 Oct 13 02:42	20° $\mathbb{M}$ 43'36	
max. Earth dist.	14660 Aug 17 01:10	8° $\mathbb{M}$ 44'41 10.58125 AU				
morning rise	14660 Sep 02 14:10	10° $\mathbb{M}$ 46'52	conjunction	14666 Oct 30 08:51	22° $\mathbb{M}$ 48'52 0°21'33	
retrograde	14660 Dec 14 14:31	18° $\mathbb{M}$ 21'10	minimum elong	14666 Oct 30 08:50	22° $\mathbb{M}$ 48'52 0°22'18	
opposition	14661 Feb 22 04:40	14° $\mathbb{M}$ 58'19 -1°46'52	max. Earth dist.	14666 Oct 31 01:01	22° $\mathbb{M}$ 53'47 10.67863 AU	
min. Earth dist.	14661 Feb 21 18:50	15° $\mathbb{M}$ 00'12 8.59583 AU	morning rise	14666 Nov 16 17:30	24° $\mathbb{M}$ 54'53	
direct	14661 May 02 10:25	11° $\mathbb{M}$ 36'19		14667 Jan 04 09:20	0° $\mathbb{X}$	
evening set	14661 Aug 12 08:32	19° $\mathbb{M}$ 05'00	retrograde	14667 Feb 28 20:33	2° $\mathbb{X}$ 27'02	
				14667 Apr 27 03:36	30° $\mathbb{R}$ $\mathbb{M}$	
conjunction	14661 Aug 29 07:19	21° $\mathbb{M}$ 09'47 -1°19'48	opposition	14667 May 09 13:54	29° $\mathbb{M}$ 03'08 0°40'09	
minimum elong	14661 Aug 29 07:21	21° $\mathbb{M}$ 09'47 1°20'04	min. Earth dist.	14667 May 09 01:01	29° $\mathbb{M}$ 05'38 8.67823 AU	
max. Earth dist.	14661 Aug 29 20:11	21° $\mathbb{M}$ 13'45 10.60811 AU	direct	14667 Jul 16 23:18	25° $\mathbb{M}$ 42'24	
morning rise	14661 Sep 15 07:05	23° $\mathbb{M}$ 14'51		14667 Sep 28 21:17	0° $\mathbb{X}$	
	14661 Nov 26 15:05	0° $\mathbb{Q}$	evening set	14667 Oct 25 18:47	3° $\mathbb{X}$ 01'41	
retrograde	14661 Dec 27 14:22	0° $\mathbb{Q}$ 48'18				
	14662 Jan 27 23:03	30° $\mathbb{R}$ $\mathbb{M}$	conjunction	14667 Nov 12 02:24	5° $\mathbb{X}$ 07'17 0°42'48	
opposition	14662 Mar 07 06:52	27° $\mathbb{M}$ 25'14 -1°28'42	minimum elong	14667 Nov 12 02:22	5° $\mathbb{X}$ 07'17 0°43'41	
min. Earth dist.	14662 Mar 06 18:48	27° $\mathbb{M}$ 27'33 8.62106 AU	max. Earth dist.	14667 Nov 12 16:45	5° $\mathbb{X}$ 11'39 10.67597 AU	
direct	14662 May 15 08:16	24° $\mathbb{M}$ 03'44	morning rise	14667 Nov 29 12:36	7° $\mathbb{X}$ 13'40	
	14662 Aug 12 07:25	0° $\mathbb{Q}$	retrograde	14668 Mar 12 18:13	14° $\mathbb{X}$ 46'12	
evening set	14662 Aug 24 22:12	1° $\mathbb{Q}$ 29'16	opposition	14668 May 21 06:43	11° $\mathbb{X}$ 22'15 1°05'17	
			min. Earth dist.	14668 May 20 19:57	11° $\mathbb{X}$ 24'20 8.67276 AU	
conjunction	14662 Sep 10 22:02	3° $\mathbb{Q}$ 33'55 -1°03'26	direct	14668 Jul 28 12:15	8° $\mathbb{X}$ 01'15	
minimum elong	14662 Sep 10 22:04	3° $\mathbb{Q}$ 33'56 1°03'29	evening set	14668 Nov 06 13:00	15° $\mathbb{X}$ 21'35	
max. Earth dist.	14662 Sep 11 12:59	3° $\mathbb{Q}$ 38'31 10.63188 AU				
morning rise	14662 Sep 27 23:21	5° $\mathbb{Q}$ 39'01	conjunction	14668 Nov 23 21:56	17° $\mathbb{X}$ 27'34 1°02'08	
retrograde	14663 Jan 09 11:29	13° $\mathbb{Q}$ 11'46	minimum elong	14668 Nov 23 21:54	17° $\mathbb{X}$ 27'34 1°03'06	
opposition	14663 Mar 20 07:05	9° $\mathbb{Q}$ 48'30 -1°06'31	max. Earth dist.	14668 Nov 24 09:17	17° $\mathbb{X}$ 31'01 10.66736 AU	
min. Earth dist.	14663 Mar 19 17:54	9° $\mathbb{Q}$ 51'02 8.64266 AU	morning rise	14668 Dec 11 09:31	19° $\mathbb{X}$ 34'19	
direct	14663 May 28 04:47	6° $\mathbb{Q}$ 27'23	retrograde	14669 Mar 25 13:52	27° $\mathbb{X}$ 07'27	
evening set	14663 Sep 06 10:52	13° $\mathbb{Q}$ 50'16	opposition	14669 Jun 02 23:19	23° $\mathbb{X}$ 43'27 1°27'28	
			min. Earth dist.	14669 Jun 02 15:14	23° $\mathbb{X}$ 45'01 8.66140 AU	
conjunction	14663 Sep 23 12:01	15° $\mathbb{Q}$ 54'55 -0°44'11	direct	14669 Aug 10 04:04	20° $\mathbb{X}$ 22'02	
minimum elong	14663 Sep 23 12:02	15° $\mathbb{Q}$ 54'56 0°44'00	evening set	14669 Nov 19 09:24	27° $\mathbb{X}$ 44'03	
max. Earth dist.	14663 Sep 24 03:31	15° $\mathbb{Q}$ 59'40 10.65153 AU				
morning rise	14663 Oct 10 15:16	18° $\mathbb{Q}$ 00'09	conjunction	14669 Dec 06 19:39	29° $\mathbb{X}$ 50'30 1°18'38	
retrograde	14664 Jan 22 08:09	25° $\mathbb{Q}$ 32'23	minimum elong	14669 Dec 06 19:37	29° $\mathbb{X}$ 50'29 1°19'39	
opposition	14664 Apr 01 05:15	22° $\mathbb{Q}$ 08'56 -0°41'21	max. Earth dist.	14669 Dec 07 03:51	29° $\mathbb{X}$ 52'59 10.65280 AU	
min. Earth dist.	14664 Mar 31 15:59	22° $\mathbb{Q}$ 11'29 8.65975 AU		14669 Dec 08 02:52	0° $\mathbb{Z}$	
direct	14664 Jun 08 23:41	18° $\mathbb{Q}$ 48'04	morning rise	14669 Dec 24 08:20	1° $\mathbb{Z}$ 57'38	
evening set	14664 Sep 17 23:29	26° $\mathbb{Q}$ 08'57	retrograde	14670 Apr 07 11:21	9° $\mathbb{Z}$ 31'32	
			opposition	14670 Jun 15 15:58	6° $\mathbb{Z}$ 07'28 1°45'40	
conjunction	14664 Oct 05 02:13	28° $\mathbb{Q}$ 13'43 -0°22'59	min. Earth dist.	14670 Jun 15 10:30	6° $\mathbb{Z}$ 08'32 8.64407 AU	
minimum elong	14664 Oct 05 02:14	28° $\mathbb{Q}$ 13'44 0°22'35	direct	14670 Aug 22 20:25	2° $\mathbb{Z}$ 45'31	
max. Earth dist.	14664 Oct 05 17:58	28° $\mathbb{Q}$ 18'32 10.66621 AU	evening set	14670 Dec 02 08:26	10° $\mathbb{Z}$ 09'48	
	14664 Oct 19 15:32	0° $\mathbb{M}$				
morning rise	14664 Oct 22 07:27	0° $\mathbb{M}$ 19'11	conjunction	14670 Dec 19 20:04	12° $\mathbb{Z}$ 16'48 1°31'31	
retrograde	14665 Feb 03 04:20	7° $\mathbb{M}$ 51'06	minimum elong	14670 Dec 19 20:03	12° $\mathbb{Z}$ 16'48 1°32'32	
opposition	14665 Apr 14 01:26	4° $\mathbb{M}$ 27'29 -0°14'23	max. Earth dist.	14670 Dec 20 01:22	12° $\mathbb{Z}$ 18'25 10.63223 AU	
min. Earth dist.	14665 Apr 13 12:01	4° $\mathbb{M}$ 30'03 8.67160 AU	morning rise	14671 Jan 06 09:36	14° $\mathbb{Z}$ 24'24	
direct	14665 Jun 21 16:04	1° $\mathbb{M}$ 06'46	retrograde	14671 Apr 20 10:41	21° $\mathbb{Z}$ 59'11	
evening set	14665 Sep 30 12:34	8° $\mathbb{M}$ 26'23	opposition	14671 Jun 28 08:54	18° $\mathbb{Z}$ 35'04 1°59'01	
			min. Earth dist.	14671 Jun 28 05:50	18° $\mathbb{Z}$ 35'40 8.62076 AU	
conjunction	14665 Oct 17 17:02	10° $\mathbb{M}$ 31'21 -0°00'44	direct	14671 Sep 04 12:43	15° $\mathbb{Z}$ 12'30	
minimum elong	14665 Oct 17 17:02	10° $\mathbb{M}$ 31'21 0°00'08	evening set	14671 Dec 15 10:16	22° $\mathbb{Z}$ 39'40	
behind sun begin	14665 Oct 17 10:02	10° $\mathbb{M}$ 29'15				
behind sun end	14665 Oct 18 00:02	10° $\mathbb{M}$ 33'28	conjunction	14672 Jan 01 23:10	24° $\mathbb{Z}$ 47'19 1°40'08	
max. Earth dist.	14665 Oct 18 09:12	10° $\mathbb{M}$ 36'17 10.67535 AU	minimum elong	14672 Jan 01 23:09	24° $\mathbb{Z}$ 47'19 1°41'07	

max. Earth dist.	14672 Jan 02 00:58	24°  47'52	10.60609 AU	minimum elong	14678 Mar 21 15:06	11°  28'56	0°51'15
morning rise	14672 Jan 19 13:23	26°  55'26		max. Earth dist.	14678 Mar 20 23:59	11°  24'13	10.43814 AU
	14672 Feb 15 17:25	0° 		morning rise	14678 Apr 08 05:46	13°  39'48	
retrograde	14672 May 02 10:57	4°  31'13		retrograde	14678 Jul 19 12:08	21°  18'37	
opposition	14672 Jul 10 02:57	1°  07'07	2°06'49	opposition	14678 Sep 25 03:06	17°  55'12	0°50'33
min. Earth dist.	14672 Jul 10 02:46	1°  07'09	8.59255 AU	min. Earth dist.	14678 Sep 25 15:30	17°  52'44	8.42989 AU
	14672 Jul 24 15:02	30°  R 		direct	14678 Dec 02 22:25	14°  28'39	
direct	14672 Sep 16 07:00	27°  343'53		evening set	14679 Mar 17 13:07	22°  16'30	
	14672 Nov 07 12:17	0° 					
evening set	14672 Dec 27 14:50	5°  14'20		conjunction	14679 Apr 04 04:55	24°  28'00	0°29'42
				minimum elong	14679 Apr 04 04:57	24°  28'00	0°29'22
conjunction	14673 Jan 14 04:47	7°  22'42	1°44'01	max. Earth dist.	14679 Apr 03 12:25	24°  22'51	10.42260 AU
minimum elong	14673 Jan 14 04:47	7°  22'42	1°44'54	morning rise	14679 Apr 21 18:28	26°  38'54	
max. Earth dist.	14673 Jan 14 02:34	7°  22'01	10.57616 AU		14679 May 20 20:31	0° 	
morning rise	14673 Jan 31 19:38	9°  31'22		retrograde	14679 Aug 01 18:37	4°  17'38	
	14673 Mar 25 15:47	15° 		opposition	14679 Oct 08 09:45	0°  54'26	0°22'35
retrograde	14673 May 15 12:59	17°  08'08		min. Earth dist.	14679 Oct 08 22:56	0°  51'49	8.41733 AU
	14673 Jul 06 11:41	15°  R 			14679 Oct 19 23:51	30°  R 	
opposition	14673 Jul 22 22:29	13°  44'05	2°08'35	direct	14679 Dec 16 09:03	27°  27'44	
min. Earth dist.	14673 Jul 23 01:31	13°  43'29	8.56164 AU		14680 Feb 10 00:42	0° 	
direct	14673 Sep 29 02:53	10°  20'08		evening set	14680 Mar 30 03:45	5°  16'58	
	14673 Dec 15 13:28	15° 					
evening set	14674 Jan 09 22:05	17°  54'02		conjunction	14680 Apr 16 18:06	7°  28'22	0°06'32
				minimum elong	14680 Apr 16 18:07	7°  28'22	0°05'59
conjunction	14674 Jan 27 13:00	20°  03'08	1°42'53	behind sun begin	14680 Apr 16 11:15	7°  26'14	
minimum elong	14674 Jan 27 13:01	20°  03'08	1°43'38	behind sun end	14680 Apr 17 00:58	7°  30'29	
max. Earth dist.	14674 Jan 27 06:30	20°  01'08	10.54479 AU	max. Earth dist.	14680 Apr 16 01:22	7°  23'08	10.41344 AU
morning rise	14674 Feb 14 04:28	22°  12'24		morning rise	14680 May 04 06:04	9°  39'04	
retrograde	14674 May 28 15:28	29°  49'58			14680 Jun 23 05:42	15° 	
opposition	14674 Aug 04 19:36	26°  25'59	2°04'07	desc. node	14680 Jul 29 12:00	17°  04'34	
min. Earth dist.	14674 Aug 05 01:51	26°  24'44	8.53020 AU	retrograde	14680 Aug 14 01:53	17°  17'40	
direct	14674 Oct 12 01:55	23°  01'20			14680 Oct 06 17:11	15°  R 	
	14675 Jan 17 22:25	0° 		opposition	14680 Oct 20 18:05	13°  54'42	-0°06'36
evening set	14675 Jan 23 07:40	0°  R 		min. Earth dist.	14680 Oct 21 06:50	13°  52'11	8.41155 AU
				direct	14680 Dec 28 20:48	10°  28'02	
conjunction	14675 Feb 09 23:31	2°  R 	1°36'43		14681 Mar 15 05:09	15° 	
minimum elong	14675 Feb 09 23:32	2°  R 	1°37'17	evening set	14681 Apr 12 17:31	18°  18'00	
max. Earth dist.	14675 Feb 09 13:40	2°  R 	10.51385 AU				
morning rise	14675 Feb 27 15:21	4°  R 		conjunction	14681 Apr 30 06:02	20°  29'03	-0°17'08
retrograde	14675 Jun 10 18:15	12°  R 		minimum elong	14681 Apr 30 06:01	20°  29'03	0°17'52
opposition	14675 Aug 17 18:33	9°  R 	1°53'30	max. Earth dist.	14681 Apr 29 14:30	20°  24'11	10.41114 AU
min. Earth dist.	14675 Aug 18 02:59	9°  R 	8.49989 AU	morning rise	14681 May 17 15:57	22°  39'22	
direct	14675 Oct 25 04:37	5°  R 			14681 Aug 09 04:56	0° 	
evening set	14676 Feb 05 19:13	13°  R 		retrograde	14681 Aug 27 08:34	0°  R 	
					14681 Sep 14 16:36	30°  R 	
conjunction	14676 Feb 23 11:46	15°  R 	1°25'42	opposition	14681 Nov 03 03:43	26°  55'05	-0°35'28
minimum elong	14676 Feb 23 11:48	15°  R 	1°26'04	min. Earth dist.	14681 Nov 03 14:52	26°  52'54	8.41278 AU
max. Earth dist.	14676 Feb 22 23:43	15°  R 	10.48482 AU	direct	14682 Jan 11 10:19	23°  28'39	
morning rise	14676 Mar 12 03:35	17°  R 			14682 Apr 15 09:44	0° 	
retrograde	14676 Jun 22 23:11	25°  R 		evening set	14682 Apr 26 06:17	1°  R 	
opposition	14676 Aug 29 19:22	22°  R 	1°37'10				
min. Earth dist.	14676 Aug 30 05:15	22°  R 	8.47217 AU	conjunction	14682 May 13 16:34	3°  R 	-0°39'49
direct	14676 Nov 06 08:20	18°  R 		minimum elong	14682 May 13 16:33	3°  R 	0°40'41
evening set	14677 Feb 18 08:18	26°  R 		max. Earth dist.	14682 May 13 03:29	3°  R 	10.41575 AU
max. Earth dist.	14677 Mar 07 11:34	28°  R 	10.45918 AU	morning rise	14682 May 31 00:02	5°  R 	
				retrograde	14682 Sep 09 16:01	13°  R 	
conjunction	14677 Mar 08 01:11	28°  R 	1°10'21	opposition	14682 Nov 16 14:18	9°  R 	-1°02'29
minimum elong	14677 Mar 08 01:13	28°  R 	1°10'29	min. Earth dist.	14682 Nov 16 23:29	9°  R 	8.42091 AU
	14677 Mar 19 20:56	0° 		direct	14683 Jan 24 23:39	6°  R 	
morning rise	14677 Mar 25 16:36	0°  R 		evening set	14683 May 09 17:21	14°  R 	
retrograde	14677 Jul 06 05:48	8°  R 					
opposition	14677 Sep 11 22:15	4°  R 	1°15'50	conjunction	14683 May 27 01:04	16°  R 	-1°00'25
min. Earth dist.	14677 Sep 12 09:17	4°  R 	8.44848 AU	minimum elong	14683 May 27 01:03	16°  R 	1°01'23
direct	14677 Nov 19 13:52	1°  R 		max. Earth dist.	14683 May 26 14:39	16°  R 	10.42703 AU
evening set	14678 Mar 03 22:23	9°  R 		morning rise	14683 Jun 13 06:01	18°  R 	
				retrograde	14683 Sep 23 00:40	26°  R 	
conjunction	14678 Mar 21 15:04	11°  R 	0°51'22	opposition	14683 Nov 30 01:46	22°  R 	-1°26'14

min. Earth dist.	14683 Nov 30 09:00	22° $\Pi$ 51'16	8.43555 AU	morning rise	14689 Aug 27 23:26	5° $\Pi$ 10'32	
direct	14684 Feb 07 11:20	19° $\Pi$ 27'10		retrograde	14689 Dec 08 22:24	12° $\Pi$ 44'32	
evening set	14684 May 22 02:04	27° $\Pi$ 15'16		opposition	14690 Feb 16 08:53	9° $\Pi$ 22'27	-1°53'29
				min. Earth dist.	14690 Feb 16 00:17	9° $\Pi$ 24'06	8.60252 AU
conjunction	14684 Jun 08 07:05	29° $\Pi$ 24'10	-1°17'55	direct	14690 Apr 26 14:23	6° $\Pi$ 00'51	
minimum elong	14684 Jun 08 07:04	29° $\Pi$ 24'09	1°18'56	evening set	14690 Aug 06 19:21	13° $\Pi$ 30'30	
max. Earth dist.	14684 Jun 07 23:18	29° $\Pi$ 21'43	10.44445 AU				
	14684 Jun 13 01:08	0° $\mathfrak{E}$		conjunction	14690 Aug 23 17:31	15° $\Pi$ 35'09	-1°26'07
morning rise	14684 Jun 25 09:44	1° $\mathfrak{E}$ 32'23		minimum elong	14690 Aug 23 17:33	15° $\Pi$ 35'10	1°26'29
retrograde	14684 Oct 05 06:52	9° $\mathfrak{E}$ 10'04		max. Earth dist.	14690 Aug 24 04:24	15° $\Pi$ 38'31	10.61571 AU
opposition	14684 Dec 12 13:24	5° $\mathfrak{E}$ 48'04	-1°45'31	morning rise	14690 Sep 09 16:40	17° $\Pi$ 40'03	
min. Earth dist.	14684 Dec 12 18:37	5° $\mathfrak{E}$ 47'03	8.45598 AU	retrograde	14690 Dec 21 21:13	25° $\Pi$ 13'08	
direct	14685 Feb 19 23:51	2° $\mathfrak{E}$ 23'09		opposition	14691 Mar 01 12:09	21° $\Pi$ 50'50	-1°37'35
evening set	14685 Jun 04 08:17	10° $\mathfrak{E}$ 09'18		min. Earth dist.	14691 Mar 01 02:06	21° $\Pi$ 52'46	8.62944 AU
				direct	14691 May 09 14:23	18° $\Pi$ 29'42	
conjunction	14685 Jun 21 10:48	12° $\mathfrak{E}$ 17'16	-1°31'25	evening set	14691 Aug 19 09:28	25° $\Pi$ 56'01	
minimum elong	14685 Jun 21 10:47	12° $\mathfrak{E}$ 17'15	1°32'26				
max. Earth dist.	14685 Jun 21 05:39	12° $\mathfrak{E}$ 15'39	10.46719 AU	conjunction	14691 Sep 05 08:32	28° $\Pi$ 00'29	-1°11'25
morning rise	14685 Jul 08 11:31	14° $\mathfrak{E}$ 24'42		minimum elong	14691 Sep 05 08:35	28° $\Pi$ 00'30	1°11'34
retrograde	14685 Oct 18 11:18	22° $\mathfrak{E}$ 01'53		max. Earth dist.	14691 Sep 05 21:07	28° $\Pi$ 04'21	10.64040 AU
opposition	14685 Dec 26 00:31	18° $\mathfrak{E}$ 40'02	-1°59'24		14691 Sep 21 15:23	0° $\mathfrak{A}$	
min. Earth dist.	14685 Dec 26 03:12	18° $\mathfrak{E}$ 39'31	8.48117 AU	morning rise	14691 Sep 22 09:07	0° $\mathfrak{A}$ 05'21	
direct	14686 Mar 05 12:26	15° $\mathfrak{E}$ 15'46		retrograde	14692 Jan 03 17:51	7° $\mathfrak{A}$ 37'44	
evening set	14686 Jun 17 11:36	22° $\mathfrak{E}$ 59'22		opposition	14692 Mar 13 13:05	4° $\mathfrak{A}$ 15'09	-1°17'14
				min. Earth dist.	14692 Mar 13 01:35	4° $\mathfrak{A}$ 17'21	8.65108 AU
conjunction	14686 Jul 04 12:04	25° $\mathfrak{E}$ 06'26	-1°40'18	direct	14692 May 21 13:16	0° $\mathfrak{A}$ 54'22	
minimum elong	14686 Jul 04 12:03	25° $\mathfrak{E}$ 06'26	1°41'15	evening set	14692 Aug 30 22:23	8° $\mathfrak{A}$ 17'55	
max. Earth dist.	14686 Jul 04 10:25	25° $\mathfrak{E}$ 05'55	10.49415 AU				
morning rise	14686 Jul 21 11:14	27° $\mathfrak{E}$ 13'06		conjunction	14692 Sep 16 22:52	10° $\mathfrak{A}$ 22'23	-0°53'27
	14686 Aug 14 05:54	0° $\mathfrak{A}$		minimum elong	14692 Sep 16 22:54	10° $\mathfrak{A}$ 22'23	0°53'23
retrograde	14686 Oct 31 15:54	4° $\mathfrak{A}$ 49'42		max. Earth dist.	14692 Sep 17 13:15	10° $\mathfrak{A}$ 26'47	10.65921 AU
opposition	14687 Jan 08 10:58	1° $\mathfrak{A}$ 27'54	-2°07'15	morning rise	14692 Oct 04 01:06	12° $\mathfrak{A}$ 27'21	
min. Earth dist.	14687 Jan 08 10:12	1° $\mathfrak{A}$ 28'02	8.50990 AU	retrograde	14693 Jan 15 15:38	19° $\mathfrak{A}$ 59'17	
	14687 Jan 28 02:16	30° $\mathfrak{R}$ $\mathfrak{E}$		opposition	14693 Mar 26 11:58	16° $\mathfrak{A}$ 36'24	-0°53'23
direct	14687 Mar 18 23:01	28° $\mathfrak{E}$ 04'21		min. Earth dist.	14693 Mar 25 23:07	16° $\mathfrak{A}$ 38'52	8.66656 AU
	14687 May 06 04:14	0° $\mathfrak{A}$		direct	14693 Jun 03 08:53	13° $\mathfrak{A}$ 15'52	
evening set	14687 Jun 30 11:40	5° $\mathfrak{A}$ 44'47		evening set	14693 Sep 12 10:54	20° $\mathfrak{A}$ 37'13	
conjunction	14687 Jul 17 10:43	7° $\mathfrak{A}$ 51'03	-1°44'11	conjunction	14693 Sep 29 12:55	22° $\mathfrak{A}$ 41'47	-0°33'05
minimum elong	14687 Jul 17 10:43	7° $\mathfrak{A}$ 51'03	1°45'03	minimum elong	14693 Sep 29 12:56	22° $\mathfrak{A}$ 41'48	0°32'47
max. Earth dist.	14687 Jul 17 13:23	7° $\mathfrak{A}$ 51'53	10.52406 AU	max. Earth dist.	14693 Sep 30 04:20	22° $\mathfrak{A}$ 46'30	10.67180 AU
morning rise	14687 Aug 03 08:50	9° $\mathfrak{A}$ 57'03		morning rise	14693 Oct 16 16:57	24° $\mathfrak{A}$ 46'59	
	14687 Sep 19 05:31	15° $\mathfrak{A}$			14693 Dec 05 18:57	0° $\mathfrak{M}$	
retrograde	14687 Nov 13 20:11	17° $\mathfrak{A}$ 32'56		retrograde	14694 Jan 28 12:55	2° $\mathfrak{M}$ 18'41	
	14688 Jan 11 03:15	15° $\mathfrak{R}$ $\mathfrak{A}$			14694 Mar 25 02:43	30° $\mathfrak{R}$ $\mathfrak{A}$	
opposition	14688 Jan 21 20:08	14° $\mathfrak{A}$ 11'05	-2°08'48	opposition	14694 Apr 08 09:03	28° $\mathfrak{A}$ 55'28	-0°27'10
min. Earth dist.	14688 Jan 21 15:54	14° $\mathfrak{A}$ 11'54	8.54078 AU	min. Earth dist.	14694 Apr 07 20:00	28° $\mathfrak{A}$ 57'58	8.67597 AU
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	14688 Jun 12 10:21	15° $\mathfrak{A}$			14694 Aug 30 06:21	0° $\mathfrak{M}$	
evening set	14688 Jul 12 08:52	18° $\mathfrak{A}$ 25'11		evening set	14694 Sep 24 23:44	2° $\mathfrak{M}$ 54'50	
conjunction	14688 Jul 29 07:05	20° $\mathfrak{A}$ 30'46	-1°42'58	conjunction	14694 Oct 12 03:18	4° $\mathfrak{M}$ 59'37	-0°11'15
minimum elong	14688 Jul 29 07:06	20° $\mathfrak{A}$ 30'47	1°43'43	minimum elong	14694 Oct 12 03:18	4° $\mathfrak{M}$ 59'37	0°10'45
max. Earth dist.	14688 Jul 29 13:39	20° $\mathfrak{A}$ 32'49	10.55547 AU	behind sun begin	14694 Oct 11 21:50	4° $\mathfrak{M}$ 57'58	
morning rise	14688 Aug 15 04:50	22° $\mathfrak{A}$ 36'15		behind sun end	14694 Oct 12 08:46	5° $\mathfrak{M}$ 01'16	
	14688 Nov 11 04:35	0° $\mathfrak{M}$		max. Earth dist.	14694 Oct 12 18:18	5° $\mathfrak{M}$ 04'11	10.67839 AU
retrograde	14688 Nov 25 21:47	0° $\mathfrak{M}$ 11'13		morning rise	14694 Oct 29 09:20	7° $\mathfrak{M}$ 05'07	
	14688 Dec 10 16:53	30° $\mathfrak{R}$ $\mathfrak{A}$		retrograde	14695 Feb 10 08:15	14° $\mathfrak{M}$ 36'47	
opposition	14689 Feb 03 03:26	26° $\mathfrak{A}$ 49'17	-2°04'05	asc. node	14695 Apr 17 20:14	11° $\mathfrak{M}$ 28'41	
min. Earth dist.	14689 Feb 02 20:30	26° $\mathfrak{A}$ 50'37	8.57227 AU	opposition	14695 Apr 21 04:35	11° $\mathfrak{M}$ 13'14	0°00'15
direct	14689 Apr 13 11:29	23° $\mathfrak{A}$ 27'07		min. Earth dist.	14695 Apr 20 16:17	11° $\mathfrak{M}$ 15'36	8.67954 AU
	14689 Jul 16 17:50	0° $\mathfrak{M}$		direct	14695 Jun 28 17:47	7° $\mathfrak{M}$ 52'37	
evening set	14689 Jul 25 03:22	1° $\mathfrak{M}$ 00'23			14695 Oct 05 21:54	15° $\mathfrak{M}$	
				evening set	14695 Oct 07 13:16	15° $\mathfrak{M}$ 11'43	
conjunction	14689 Aug 11 01:17	3° $\mathfrak{M}$ 05'26	-1°36'49	conjunction	14695 Oct 24 18:27	17° $\mathfrak{M}$ 16'47	0°11'10
minimum elong	14689 Aug 11 01:19	3° $\mathfrak{M}$ 05'26	1°37'24	minimum elong	14695 Oct 24 18:27	17° $\mathfrak{M}$ 16'47	0°11'51
max. Earth dist.	14689 Aug 11 10:30	3° $\mathfrak{M}$ 08'17	10.58669 AU				


































































































































behind sun begin	14695 Oct 24 13:29	17° $\mathbb{M}$ 15'18		max. Earth dist.	14702 Jan 09 06:53	1° $\approx$ 41'52	10.57166 AU
behind sun end	14695 Oct 24 23:25	17° $\mathbb{M}$ 18'17		morning rise	14702 Jan 26 22:13	3° $\approx$ 50'40	
max. Earth dist.	14695 Oct 25 08:23	17° $\mathbb{M}$ 21'01	10.67903 AU	retrograde	14702 May 10 16:54	11° $\approx$ 27'41	
morning rise	14695 Nov 11 02:27	19° $\mathbb{M}$ 22'38		opposition	14702 Jul 18 06:35	8° $\approx$ 03'00	2°08'37
retrograde	14696 Feb 23 03:52	26° $\mathbb{M}$ 54'32		min. Earth dist.	14702 Jul 18 07:54	8° $\approx$ 02'45	8.55832 AU
opposition	14696 May 02 22:43	23° $\mathbb{M}$ 30'39	0°27'38	direct	14702 Sep 24 11:24	4° $\approx$ 38'51	
min. Earth dist.	14696 May 02 11:34	23° $\mathbb{M}$ 32'49	8.67721 AU	evening set	14703 Jan 05 00:06	12° $\approx$ 11'44	
direct	14696 Jul 10 09:26	20° $\mathbb{M}$ 09'47					
evening set	14696 Oct 19 04:16	27° $\mathbb{M}$ 28'54		conjunction	14703 Jan 22 14:47	14° $\approx$ 20'41	1°44'05
				minimum elong	14703 Jan 22 14:47	14° $\approx$ 20'41	1°44'53
conjunction	14696 Nov 05 11:07	29° $\mathbb{M}$ 34'21	0°33'00	max. Earth dist.	14703 Jan 22 11:29	14° $\approx$ 19'40	10.54260 AU
minimum elong	14696 Nov 05 11:06	29° $\mathbb{M}$ 34'21	0°33'49		14703 Jan 27 22:42	15° $\approx$	
max. Earth dist.	14696 Nov 06 00:06	29° $\mathbb{M}$ 38'18	10.67366 AU	morning rise	14703 Feb 09 06:02	16° $\approx$ 29'53	
	14696 Nov 08 23:19	0° $\mathbb{J}$		retrograde	14703 May 23 19:49	24° $\approx$ 07'46	
morning rise	14696 Nov 22 20:41	1° $\mathbb{J}$ 40'35		opposition	14703 Jul 31 02:59	20° $\approx$ 43'14	2°07'03
retrograde	14697 Mar 06 23:34	9° $\mathbb{J}$ 12'57		min. Earth dist.	14703 Jul 31 06:27	20° $\approx$ 42'33	8.52913 AU
opposition	14697 May 15 15:45	5° $\mathbb{J}$ 48'46	0°53'47	direct	14703 Oct 07 08:47	17° $\approx$ 18'30	
min. Earth dist.	14697 May 15 05:28	5° $\mathbb{J}$ 50'46	8.66904 AU	evening set	14704 Jan 18 08:55	24° $\approx$ 54'51	
direct	14697 Jul 23 00:16	2° $\mathbb{J}$ 27'33					
evening set	14697 Oct 31 21:09	9° $\mathbb{J}$ 47'28		conjunction	14704 Feb 05 00:34	27° $\approx$ 04'31	1°40'14
				minimum elong	14704 Feb 05 00:35	27° $\approx$ 04'32	1°40'53
conjunction	14697 Nov 18 05:35	11° $\mathbb{J}$ 53'21	0°53'21	max. Earth dist.	14704 Feb 04 18:09	27° $\approx$ 02'33	10.51372 AU
minimum elong	14697 Nov 18 05:33	11° $\mathbb{J}$ 53'20	0°54'17	morning rise	14704 Feb 22 16:11	29° $\approx$ 14'17	
max. Earth dist.	14697 Nov 18 17:33	11° $\mathbb{J}$ 57'00	10.66248 AU		14704 Feb 29 01:08	0° $\mathbb{H}$	
morning rise	14697 Dec 05 16:28	13° $\mathbb{J}$ 59'59		retrograde	14704 Jun 04 23:40	6° $\mathbb{H}$ 52'53	
retrograde	14698 Mar 19 20:02	21° $\mathbb{J}$ 33'05		opposition	14704 Aug 12 01:27	3° $\mathbb{H}$ 28'36	1°59'14
opposition	14698 May 28 08:23	18° $\mathbb{J}$ 08'39	1°17'31	min. Earth dist.	14704 Aug 12 07:31	3° $\mathbb{H}$ 27'23	8.50080 AU
min. Earth dist.	14698 May 27 23:18	18° $\mathbb{J}$ 10'25	8.65531 AU	direct	14704 Oct 19 09:05	0° $\mathbb{H}$ 03'23	
direct	14698 Aug 04 15:20	14° $\mathbb{J}$ 46'58		evening set	14705 Jan 30 19:55	7° $\mathbb{H}$ 43'04	
evening set	14698 Nov 13 16:17	22° $\mathbb{J}$ 08'24					
				conjunction	14705 Feb 17 12:13	9° $\mathbb{H}$ 53'25	1°31'24
conjunction	14698 Dec 01 02:06	24° $\mathbb{J}$ 14'47	1°11'18	minimum elong	14705 Feb 17 12:16	9° $\mathbb{H}$ 53'25	1°31'52
minimum elong	14698 Dec 01 02:04	24° $\mathbb{J}$ 14'46	1°12'18	max. Earth dist.	14705 Feb 17 02:21	9° $\mathbb{H}$ 50'21	10.48658 AU
max. Earth dist.	14698 Dec 01 11:49	24° $\mathbb{J}$ 17'44	10.64592 AU	morning rise	14705 Mar 07 04:05	12° $\mathbb{H}$ 03'40	
morning rise	14698 Dec 18 14:12	26° $\mathbb{J}$ 21'51		retrograde	14705 Jun 18 05:08	19° $\mathbb{H}$ 42'49	
	14699 Jan 20 08:47	0° $\mathbb{Z}$		opposition	14705 Aug 25 02:00	16° $\mathbb{H}$ 18'50	1°45'26
retrograde	14699 Apr 01 18:57	3° $\mathbb{Z}$ 55'51		min. Earth dist.	14705 Aug 25 10:41	16° $\mathbb{H}$ 17'07	8.47487 AU
opposition	14699 Jun 10 00:57	0° $\mathbb{Z}$ 31'15	1°37'45	direct	14705 Nov 01 11:37	12° $\mathbb{H}$ 53'12	
min. Earth dist.	14699 Jun 09 18:10	0° $\mathbb{Z}$ 32'34	8.63648 AU	evening set	14706 Feb 13 08:59	20° $\mathbb{H}$ 35'59	
	14699 Jun 16 17:31	30° $\mathbb{R}$ $\mathbb{J}$					
direct	14699 Aug 17 05:10	27° $\mathbb{J}$ 09'00		conjunction	14706 Mar 03 01:42	22° $\mathbb{H}$ 46'55	1°17'57
	14699 Oct 15 05:10	0° $\mathbb{Z}$		minimum elong	14706 Mar 03 01:44	22° $\mathbb{H}$ 46'56	1°18'11
evening set	14699 Nov 26 14:12	4° $\mathbb{Z}$ 32'38		max. Earth dist.	14706 Mar 02 12:57	22° $\mathbb{H}$ 42'58	10.46257 AU
				morning rise	14706 Mar 20 17:32	24° $\mathbb{H}$ 57'36	
conjunction	14699 Dec 14 01:14	6° $\mathbb{Z}$ 39'34	1°26'00		14706 May 06 12:18	0° $\mathbb{Y}$	
minimum elong	14699 Dec 14 01:12	6° $\mathbb{Z}$ 39'33	1°27'01	retrograde	14706 Jul 01 11:08	2° $\mathbb{Y}$ 37'00	
max. Earth dist.	14699 Dec 14 07:17	6° $\mathbb{Z}$ 41'25	10.62458 AU		14706 Aug 28 07:17	30° $\mathbb{R}$ $\mathbb{H}$	
morning rise	14699 Dec 31 14:25	8° $\mathbb{Z}$ 47'08		opposition	14706 Sep 07 04:31	29° $\mathbb{H}$ 13'22	1°26'15
retrograde	14700 Apr 14 17:01	16° $\mathbb{Z}$ 22'05		min. Earth dist.	14706 Sep 07 15:09	29° $\mathbb{H}$ 11'16	8.45263 AU
opposition	14700 Jun 22 17:48	12° $\mathbb{Z}$ 57'23	1°53'30	direct	14706 Nov 14 17:35	25° $\mathbb{H}$ 47'25	
min. Earth dist.	14700 Jun 22 14:11	12° $\mathbb{Z}$ 58'06	8.61330 AU		14707 Jan 26 20:38	0° $\mathbb{Y}$	
direct	14700 Aug 29 21:08	9° $\mathbb{Z}$ 34'30		evening set	14707 Feb 26 23:31	3° $\mathbb{Y}$ 32'55	
evening set	14700 Dec 09 14:48	17° $\mathbb{Z}$ 00'55					
				conjunction	14707 Mar 16 16:18	5° $\mathbb{Y}$ 44'16	1°00'30
conjunction	14700 Dec 27 03:00	19° $\mathbb{Z}$ 08'27	1°36'42	minimum elong	14707 Mar 16 16:20	5° $\mathbb{Y}$ 44'16	1°00'30
minimum elong	14700 Dec 27 02:59	19° $\mathbb{Z}$ 08'27	1°37'42	max. Earth dist.	14707 Mar 16 01:47	5° $\mathbb{Y}$ 39'44	10.44279 AU
max. Earth dist.	14700 Dec 27 05:22	19° $\mathbb{Z}$ 09'11	10.59944 AU	morning rise	14707 Apr 03 07:37	7° $\mathbb{Y}$ 55'13	
morning rise	14701 Jan 13 17:05	21° $\mathbb{Z}$ 16'32		retrograde	14707 Jul 14 17:08	15° $\mathbb{Y}$ 34'41	
retrograde	14701 Apr 27 15:27	28° $\mathbb{Z}$ 52'31		opposition	14707 Sep 20 09:10	12° $\mathbb{Y}$ 11'23	1°02'35
opposition	14701 Jul 05 11:36	25° $\mathbb{Z}$ 27'49	2°03'59	min. Earth dist.	14707 Sep 20 20:35	12° $\mathbb{Y}$ 09'08	8.43510 AU
min. Earth dist.	14701 Jul 05 10:43	25° $\mathbb{Z}$ 27'59	8.58684 AU	direct	14707 Nov 28 02:47	8° $\mathbb{Y}$ 45'15	
direct	14701 Sep 11 16:05	22° $\mathbb{Z}$ 04'17		evening set	14708 Mar 11 14:47	16° $\mathbb{Y}$ 32'52	
evening set	14701 Dec 22 17:58	29° $\mathbb{Z}$ 33'48					
	14701 Dec 26 09:00	0° $\approx$		conjunction	14708 Mar 29 07:06	18° $\mathbb{Y}$ 44'26	0°39'55
				minimum elong	14708 Mar 29 07:08	18° $\mathbb{Y}$ 44'26	0°39'41
conjunction	14702 Jan 09 07:26	1° $\approx$ 42'02	1°42'51	max. Earth dist.	14708 Mar 28 16:15	18° $\mathbb{Y}$ 39'47	10.42808 AU
minimum elong	14702 Jan 09 07:26	1° $\approx$ 42'02	1°43'47	morning rise	14708 Apr 15 21:19	20° $\mathbb{Y}$ 55'27	

retrograde	14708 Jul 27 00:58	28° $\Upsilon$ 34'49		max. Earth dist.	14714 Jun 16 16:01	6° $\Phi$ 46'05	10.44678 AU
opposition	14708 Oct 02 15:45	25° $\Upsilon$ 11'50	0°35'38	morning rise	14714 Jul 04 00:43	8° $\Phi$ 56'19	
min. Earth dist.	14708 Oct 03 03:16	25° $\Upsilon$ 09'33	8.42301 AU	retrograde	14714 Oct 14 00:26	16° $\Phi$ 34'44	
direct	14708 Dec 10 12:55	21° $\Upsilon$ 45'37		opposition	14714 Dec 21 09:24	13° $\Phi$ 12'50	-1°53'52
evening set	14709 Mar 25 06:17	29° $\Upsilon$ 34'43		min. Earth dist.	14714 Dec 21 13:25	13° $\Phi$ 12'04	8.45717 AU
	14709 Mar 28 16:33	0° $\mathcal{B}$		direct	14715 Feb 28 20:48	9° $\Phi$ 48'15	
				evening set	14715 Jun 13 01:03	17° $\Phi$ 34'06	
conjunction	14709 Apr 11 21:33	1° $\mathcal{B}$ 46'15	0°17'14	conjunction	14715 Jun 30 02:38	19° $\Phi$ 41'51	-1°36'53
minimum elong	14709 Apr 11 21:34	1° $\mathcal{B}$ 46'16	0°16'47	minimum elong	14715 Jun 30 02:37	19° $\Phi$ 41'51	1°37'52
max. Earth dist.	14709 Apr 11 06:38	1° $\mathcal{B}$ 41'36	10.41900 AU	max. Earth dist.	14715 Jun 29 23:10	19° $\Phi$ 40'46	10.46693 AU
morning rise	14709 Apr 29 10:14	3° $\mathcal{B}$ 57'08		morning rise	14715 Jul 17 02:23	21° $\Phi$ 49'06	
retrograde	14709 Aug 09 10:10	11° $\mathcal{B}$ 36'14		retrograde	14715 Oct 27 07:18	29° $\Phi$ 27'06	
opposition	14709 Oct 15 23:58	8° $\mathcal{B}$ 13'33	0°06'47	opposition	14716 Jan 03 21:25	26° $\Phi$ 05'06	-2°04'30
min. Earth dist.	14709 Oct 16 11:47	8° $\mathcal{B}$ 11'13	8.41665 AU	min. Earth dist.	14716 Jan 03 22:51	26° $\Phi$ 04'50	8.47961 AU
direct	14709 Dec 23 23:22	4° $\mathcal{B}$ 47'18		direct	14716 Mar 13 07:58	22° $\Phi$ 41'01	
desc. node	14710 Jan 11 03:26	5° $\mathcal{B}$ 04'25			14716 Jun 21 20:51	0° $\mathcal{Q}$	
evening set	14710 Apr 07 21:24	12° $\mathcal{B}$ 37'18		evening set	14716 Jun 25 03:34	0° $\mathcal{Q}$ 24'02	
conjunction	14710 Apr 25 10:58	14° $\mathcal{B}$ 48'36	-0°06'26	conjunction	14716 Jul 12 03:19	2° $\mathcal{Q}$ 30'58	-1°43'02
minimum elong	14710 Apr 25 10:57	14° $\mathcal{B}$ 48'35	0°07'05	minimum elong	14716 Jul 12 03:19	2° $\mathcal{Q}$ 30'58	1°43'57
behind sun begin	14710 Apr 25 04:19	14° $\mathcal{B}$ 46'32		max. Earth dist.	14716 Jul 12 02:56	2° $\mathcal{Q}$ 30'50	10.49109 AU
behind sun end	14710 Apr 25 17:36	14° $\mathcal{B}$ 50'39		morning rise	14716 Jul 29 01:59	4° $\mathcal{Q}$ 37'34	
max. Earth dist.	14710 Apr 24 19:48	14° $\mathcal{B}$ 43'51	10.41531 AU	retrograde	14716 Nov 08 11:49	12° $\mathcal{Q}$ 14'55	
	14710 Apr 26 23:19	15° $\mathcal{B}$		opposition	14717 Jan 16 08:13	8° $\mathcal{Q}$ 52'45	-2°08'53
morning rise	14710 May 12 21:45	16° $\mathcal{B}$ 59'08		min. Earth dist.	14717 Jan 16 07:04	8° $\mathcal{Q}$ 52'59	8.50542 AU
retrograde	14710 Aug 22 17:37	24° $\mathcal{B}$ 37'56		direct	14717 Mar 26 17:27	5° $\mathcal{Q}$ 29'10	
opposition	14710 Oct 29 09:40	21° $\mathcal{B}$ 15'32	-0°22'26	evening set	14717 Jul 08 03:03	13° $\mathcal{Q}$ 08'55	
min. Earth dist.	14710 Oct 29 21:46	21° $\mathcal{B}$ 13'08	8.41537 AU		14717 Jul 23 01:13	15° $\mathcal{Q}$	
direct	14711 Jan 06 12:58	17° $\mathcal{B}$ 49'23		conjunction	14717 Jul 25 01:36	15° $\mathcal{Q}$ 15'07	-1°44'05
evening set	14711 Apr 21 11:30	25° $\mathcal{B}$ 39'46		minimum elong	14717 Jul 25 01:37	15° $\mathcal{Q}$ 15'08	1°44'52
conjunction	14711 May 08 22:47	27° $\mathcal{B}$ 50'34	-0°29'39	max. Earth dist.	14717 Jul 25 04:29	15° $\mathcal{Q}$ 16'01	10.51806 AU
minimum elong	14711 May 08 22:46	27° $\mathcal{B}$ 50'34	0°30'28	morning rise	14717 Aug 10 23:44	17° $\mathcal{Q}$ 21'10	
max. Earth dist.	14711 May 08 07:37	27° $\mathcal{B}$ 45'49	10.41615 AU	retrograde	14717 Nov 21 13:19	24° $\mathcal{Q}$ 57'44	
morning rise	14711 May 26 07:24	0° $\mathcal{I}$ 00'37		opposition	14718 Jan 29 17:14	21° $\mathcal{Q}$ 35'21	-2°06'55
	14711 May 26 05:23	0° $\mathcal{I}$		min. Earth dist.	14718 Jan 29 13:03	21° $\mathcal{Q}$ 36'09	8.53328 AU
retrograde	14711 Sep 05 01:05	7° $\mathcal{I}$ 39'18		direct	14718 Apr 09 02:40	18° $\mathcal{Q}$ 12'17	
opposition	14711 Nov 11 20:37	4° $\mathcal{I}$ 17'08	-0°50'30	evening set	14718 Jul 20 23:28	25° $\mathcal{Q}$ 48'30	
min. Earth dist.	14711 Nov 12 08:17	4° $\mathcal{I}$ 14'51	8.41846 AU	conjunction	14718 Aug 06 21:33	27° $\mathcal{Q}$ 54'07	-1°40'03
direct	14712 Jan 20 03:18	0° $\mathcal{I}$ 51'15		minimum elong	14718 Aug 06 21:35	27° $\mathcal{Q}$ 54'07	1°40'41
evening set	14712 May 04 00:08	8° $\mathcal{I}$ 41'31		max. Earth dist.	14718 Aug 07 04:15	27° $\mathcal{Q}$ 56'12	10.54652 AU
conjunction	14712 May 21 08:55	10° $\mathcal{I}$ 51'42	-0°51'22	morning rise	14718 Aug 23 19:43	29° $\mathcal{Q}$ 59'43	
minimum elong	14712 May 21 08:54	10° $\mathcal{I}$ 51'41	0°52'17		14718 Aug 23 20:39	0° $\mathcal{N}$	
max. Earth dist.	14712 May 20 19:06	10° $\mathcal{I}$ 47'21	10.42134 AU	retrograde	14718 Dec 04 15:36	7° $\mathcal{N}$ 35'26	
morning rise	14712 Jun 07 15:11	13° $\mathcal{I}$ 01'08		opposition	14719 Feb 12 00:25	4° $\mathcal{N}$ 12'47	-1°58'47
retrograde	14712 Sep 17 09:16	20° $\mathcal{I}$ 39'49		min. Earth dist.	14719 Feb 11 16:47	4° $\mathcal{N}$ 14'15	8.56182 AU
opposition	14712 Nov 24 08:29	17° $\mathcal{I}$ 17'50	-1°15'55	direct	14719 Apr 22 08:02	0° $\mathcal{N}$ 50'16	
min. Earth dist.	14712 Nov 24 18:13	17° $\mathcal{I}$ 15'56	8.42625 AU	evening set	14719 Aug 02 17:04	8° $\mathcal{N}$ 22'48	
direct	14713 Feb 01 17:22	13° $\mathcal{I}$ 52'20		conjunction	14719 Aug 19 15:22	10° $\mathcal{N}$ 27'59	-1°31'13
evening set	14713 May 17 10:50	21° $\mathcal{I}$ 41'50		minimum elong	14719 Aug 19 15:24	10° $\mathcal{N}$ 28'00	1°31'40
conjunction	14713 Jun 03 17:07	23° $\mathcal{I}$ 51'16	-1°10'25	max. Earth dist.	14719 Aug 20 02:02	10° $\mathcal{N}$ 31'18	10.57498 AU
minimum elong	14713 Jun 03 17:05	23° $\mathcal{I}$ 51'16	1°11'25	morning rise	14719 Sep 05 14:08	12° $\mathcal{N}$ 33'20	
max. Earth dist.	14713 Jun 03 06:18	23° $\mathcal{I}$ 47'52	10.43148 AU	retrograde	14719 Dec 17 16:42	20° $\mathcal{N}$ 08'09	
morning rise	14713 Jun 20 20:59	26° $\mathcal{I}$ 00'02		opposition	14720 Feb 25 05:23	16° $\mathcal{N}$ 45'14	-1°45'02
	14713 Jul 26 01:46	0° $\Phi$		min. Earth dist.	14720 Feb 24 18:58	16° $\mathcal{N}$ 47'13	8.58955 AU
retrograde	14713 Sep 30 17:05	3° $\Phi$ 38'39		direct	14720 May 04 09:18	13° $\mathcal{N}$ 23'14	
opposition	14713 Dec 07 20:56	0° $\Phi$ 16'45	-1°37'24	evening set	14720 Aug 14 08:42	20° $\mathcal{N}$ 52'15	
min. Earth dist.	14713 Dec 08 03:54	0° $\Phi$ 15'24	8.43919 AU	conjunction	14720 Aug 31 07:38	22° $\mathcal{N}$ 57'10	-1°18'07
	14713 Dec 11 11:06	30° $\mathcal{R}$ $\mathcal{I}$		minimum elong	14720 Aug 31 07:41	22° $\mathcal{N}$ 57'10	1°18'21
direct	14714 Feb 15 07:30	26° $\mathcal{I}$ 51'41		max. Earth dist.	14720 Aug 31 20:49	23° $\mathcal{N}$ 01'14	10.60198 AU
	14714 Apr 18 18:00	0° $\Phi$		morning rise	14720 Sep 17 07:36	25° $\mathcal{N}$ 02'23	
evening set	14714 May 30 19:19	4° $\Phi$ 39'44			14720 Nov 02 18:31	0° $\mathcal{A}$	
conjunction	14714 Jun 16 23:09	6° $\Phi$ 48'20	-1°25'50	retrograde	14720 Dec 29 15:12	2° $\mathcal{A}$ 36'17	
minimum elong	14714 Jun 16 23:07	6° $\Phi$ 48'20	1°26'51				

	14721 Feb 27 01:40	30° $\mathbb{R}$ $\mathbb{M}$		max. Earth dist.	14726 Nov 14 17:56	7° $\mathbb{X}$ 01'29	10.67428 AU
opposition	14721 Mar 09 07:55	29° $\mathbb{M}$ 13'09 -1°26'25		morning rise	14726 Dec 01 14:33	9° $\mathbb{X}$ 03'42	
min. Earth dist.	14721 Mar 08 20:01	29° $\mathbb{M}$ 15'26 8.61508 AU		retrograde	14727 Mar 15 18:29	16° $\mathbb{X}$ 36'13	
direct	14721 May 17 08:31	25° $\mathbb{M}$ 51'35		opposition	14727 May 24 08:21	13° $\mathbb{X}$ 12'12	1°07'46
	14721 Jul 28 20:57	0° $\mathbb{L}$		min. Earth dist.	14727 May 23 21:59	13° $\mathbb{X}$ 14'13	8.67165 AU
evening set	14721 Aug 26 22:48	3° $\mathbb{L}$ 17'28		direct	14727 Jul 31 14:46	9° $\mathbb{X}$ 51'05	
				evening set	14727 Nov 09 14:47	17° $\mathbb{X}$ 11'28	
conjunction	14721 Sep 12 22:44	5° $\mathbb{L}$ 22'14 -1°01'25					
minimum elong	14721 Sep 12 22:46	5° $\mathbb{L}$ 22'15 1°01'25		conjunction	14727 Nov 26 23:48	19° $\mathbb{X}$ 17'28	1°03'59
max. Earth dist.	14721 Sep 13 13:12	5° $\mathbb{L}$ 26'41 10.62616 AU		minimum elong	14727 Nov 26 23:46	19° $\mathbb{X}$ 17'27	1°04'58
morning rise	14721 Sep 30 00:22	7° $\mathbb{L}$ 27'28		max. Earth dist.	14727 Nov 27 11:13	19° $\mathbb{X}$ 20'56	10.66682 AU
retrograde	14722 Jan 11 13:09	15° $\mathbb{L}$ 00'35		morning rise	14727 Dec 14 11:28	21° $\mathbb{X}$ 24'12	
opposition	14722 Mar 22 08:25	11° $\mathbb{L}$ 37'14 -1°03'51		retrograde	14728 Mar 27 15:19	28° $\mathbb{X}$ 57'15	
min. Earth dist.	14722 Mar 21 19:42	11° $\mathbb{L}$ 39'41 8.63721 AU		opposition	14728 Jun 05 00:46	25° $\mathbb{X}$ 33'12	1°29'31
direct	14722 May 30 05:50	8° $\mathbb{L}$ 16'02		min. Earth dist.	14728 Jun 04 16:26	25° $\mathbb{X}$ 34'49	8.66151 AU
evening set	14722 Sep 08 11:48	15° $\mathbb{L}$ 39'12		direct	14728 Aug 12 06:09	22° $\mathbb{X}$ 11'43	
				evening set	14728 Nov 21 11:17	29° $\mathbb{X}$ 33'43	
conjunction	14722 Sep 25 13:05	17° $\mathbb{L}$ 43'57 -0°41'55			14728 Nov 25 03:11	0° $\mathbb{Z}$	
minimum elong	14722 Sep 25 13:07	17° $\mathbb{L}$ 43'58 0°41'42					
max. Earth dist.	14722 Sep 26 04:28	17° $\mathbb{L}$ 48'40 10.64643 AU		conjunction	14728 Dec 08 21:40	1° $\mathbb{Z}$ 40'10	1°20'06
morning rise	14722 Oct 12 16:35	19° $\mathbb{L}$ 49'18		minimum elong	14728 Dec 08 21:39	1° $\mathbb{Z}$ 40'09	1°21'07
retrograde	14723 Jan 24 09:35	27° $\mathbb{L}$ 21'50		max. Earth dist.	14728 Dec 09 06:46	1° $\mathbb{Z}$ 42'56	10.65354 AU
opposition	14723 Apr 04 06:47	23° $\mathbb{L}$ 58'17 -0°38'27		morning rise	14728 Dec 26 10:16	3° $\mathbb{Z}$ 47'16	
min. Earth dist.	14723 Apr 03 17:18	24° $\mathbb{L}$ 00'52 8.65499 AU		retrograde	14729 Apr 09 13:01	11° $\mathbb{Z}$ 21'01	
direct	14723 Jun 12 00:48	20° $\mathbb{L}$ 37'21		opposition	14729 Jun 17 17:11	7° $\mathbb{Z}$ 56'55	1°47'12
evening set	14723 Sep 21 00:39	27° $\mathbb{L}$ 58'26		min. Earth dist.	14729 Jun 17 10:54	7° $\mathbb{Z}$ 58'09	8.64558 AU
	14723 Oct 07 16:51	0° $\mathbb{M}$		direct	14729 Aug 24 21:43	4° $\mathbb{Z}$ 34'57	
				evening set	14729 Dec 04 10:20	11° $\mathbb{Z}$ 59'10	
conjunction	14723 Oct 08 03:38	0° $\mathbb{M}$ 03'17 -0°20'34					
minimum elong	14723 Oct 08 03:38	0° $\mathbb{M}$ 03'17 0°20'09		conjunction	14729 Dec 21 21:59	14° $\mathbb{Z}$ 06'07	1°32'31
max. Earth dist.	14723 Oct 08 20:13	0° $\mathbb{M}$ 08'21 10.66186 AU		minimum elong	14729 Dec 21 21:58	14° $\mathbb{Z}$ 06'07	1°33'32
morning rise	14723 Oct 25 08:58	2° $\mathbb{M}$ 08'50		max. Earth dist.	14729 Dec 22 04:05	14° $\mathbb{Z}$ 07'59	10.63453 AU
retrograde	14724 Feb 06 05:07	9° $\mathbb{M}$ 40'59		morning rise	14730 Jan 08 11:23	16° $\mathbb{Z}$ 13'39	
opposition	14724 Apr 16 03:02	6° $\mathbb{M}$ 17'14 -0°11'22		retrograde	14730 Apr 22 11:52	23° $\mathbb{Z}$ 48'10	
min. Earth dist.	14724 Apr 15 12:50	6° $\mathbb{M}$ 19'58 8.66767 AU		opposition	14730 Jun 30 10:03	20° $\mathbb{Z}$ 24'04	1°59'56
direct	14724 Jun 23 18:33	2° $\mathbb{M}$ 56'27		min. Earth dist.	14730 Jun 30 06:34	20° $\mathbb{Z}$ 24'45	8.62393 AU
asc. node	14724 Sep 19 22:15	8° $\mathbb{M}$ 47'24		direct	14730 Sep 06 14:11	17° $\mathbb{Z}$ 01'29	
evening set	14724 Oct 02 14:01	10° $\mathbb{M}$ 16'12		evening set	14730 Dec 17 11:58	24° $\mathbb{Z}$ 28'28	
conjunction	14724 Oct 19 18:41	12° $\mathbb{M}$ 21'16 0°01'47		conjunction	14731 Jan 04 00:46	26° $\mathbb{Z}$ 36'03	1°40'38
minimum elong	14724 Oct 19 18:42	12° $\mathbb{M}$ 21'16 0°02'24		minimum elong	14731 Jan 04 00:46	26° $\mathbb{Z}$ 36'03	1°41'36
behind sun begin	14724 Oct 19 11:35	12° $\mathbb{M}$ 19'07		max. Earth dist.	14731 Jan 04 02:22	26° $\mathbb{Z}$ 36'32	10.60999 AU
behind sun end	14724 Oct 20 01:49	12° $\mathbb{M}$ 23'24		morning rise	14731 Jan 21 14:59	28° $\mathbb{Z}$ 44'05	
max. Earth dist.	14724 Oct 20 11:44	12° $\mathbb{M}$ 26'27 10.67180 AU			14731 Feb 01 09:30	0° $\mathbb{X}$	
morning rise	14724 Nov 06 01:46	14° $\mathbb{M}$ 27'02		retrograde	14731 May 05 12:35	6° $\mathbb{X}$ 19'29	
	14724 Nov 10 17:02	15° $\mathbb{M}$		opposition	14731 Jul 13 03:53	2° $\mathbb{X}$ 55'26	2°07'04
retrograde	14725 Feb 18 02:39	21° $\mathbb{M}$ 59'05		min. Earth dist.	14731 Jul 13 04:07	2° $\mathbb{X}$ 55'23	8.59704 AU
opposition	14725 Apr 28 21:49	18° $\mathbb{M}$ 35'11 0°16'11			14731 Aug 27 05:05	30° $\mathbb{R}$ $\mathbb{Z}$	
min. Earth dist.	14725 Apr 28 07:47	18° $\mathbb{M}$ 37'54 8.67472 AU		direct	14731 Sep 19 07:25	29° $\mathbb{Z}$ 32'11	
direct	14725 Jul 06 09:49	15° $\mathbb{M}$ 14'27			14731 Oct 12 09:02	0° $\mathbb{X}$	
evening set	14725 Oct 15 04:26	22° $\mathbb{M}$ 33'36		evening set	14731 Dec 30 16:22	7° $\mathbb{X}$ 02'24	
conjunction	14725 Nov 01 10:36	24° $\mathbb{M}$ 38'54 0°23'54		conjunction	14732 Jan 17 06:12	9° $\mathbb{X}$ 10'40	1°43'59
minimum elong	14725 Nov 01 10:35	24° $\mathbb{M}$ 38'54 0°24'40		minimum elong	14732 Jan 17 06:13	9° $\mathbb{X}$ 10'41	1°44'50
max. Earth dist.	14725 Nov 02 02:44	24° $\mathbb{M}$ 43'49 10.67593 AU		max. Earth dist.	14732 Jan 17 03:08	9° $\mathbb{X}$ 09'44	10.58106 AU
morning rise	14725 Nov 18 19:21	26° $\mathbb{M}$ 44'58		morning rise	14732 Feb 03 21:07	11° $\mathbb{X}$ 19'17	
	14725 Dec 17 19:24	0° $\mathbb{X}$			14732 Mar 07 20:07	15° $\mathbb{X}$	
retrograde	14726 Mar 02 23:00	4° $\mathbb{X}$ 17'08		retrograde	14732 May 17 13:10	18° $\mathbb{X}$ 55'35	
opposition	14726 May 11 15:31	0° $\mathbb{X}$ 53'10 0°42'57		opposition	14732 Jul 24 23:01	15° $\mathbb{X}$ 31'37	2°08'11
min. Earth dist.	14726 May 11 02:54	0° $\mathbb{X}$ 55'37 8.67603 AU		min. Earth dist.	14732 Jul 25 02:41	15° $\mathbb{X}$ 30'54	8.56677 AU
	14726 May 23 06:00	30° $\mathbb{R}$ $\mathbb{M}$			14732 Jul 31 15:58	15° $\mathbb{R}$ $\mathbb{X}$	
direct	14726 Jul 18 23:37	27° $\mathbb{M}$ 32'19		direct	14732 Oct 01 04:09	12° $\mathbb{X}$ 07'42	
	14726 Sep 11 14:53	0° $\mathbb{X}$			14732 Nov 29 10:59	15° $\mathbb{X}$	
evening set	14726 Oct 27 20:36	4° $\mathbb{X}$ 51'42		evening set	14733 Jan 11 23:15	19° $\mathbb{X}$ 41'23	
conjunction	14726 Nov 14 04:11	6° $\mathbb{X}$ 57'18 0°44'58		conjunction	14733 Jan 29 14:09	21° $\mathbb{X}$ 50'23	1°42'19
minimum elong	14726 Nov 14 04:10	6° $\mathbb{X}$ 57'18 0°45'51		minimum elong	14733 Jan 29 14:10	21° $\mathbb{X}$ 50'23	1°43'03

max. Earth dist.	14733 Jan 29 07:18	21° $\approx$ 48'16	10.55003 AU	behind sun begin	14739 Apr 19 10:41	9° $\mathcal{B}$ 11'04	
morning rise	14733 Feb 16 05:36	23° $\approx$ 59'34		behind sun end	14739 Apr 20 00:57	9° $\mathcal{B}$ 15'30	
	14733 Apr 16 22:22	0° $\mathcal{H}$		max. Earth dist.	14739 Apr 19 01:09	9° $\mathcal{B}$ 08'04	10.41523 AU
retrograde	14733 May 30 14:29	1° $\mathcal{H}$ 36'43		morning rise	14739 May 07 05:40	11° $\mathcal{B}$ 23'58	
	14733 Jul 14 00:00	30° $\mathcal{R}$ $\approx$			14739 Jun 07 15:18	15° $\mathcal{B}$	
opposition	14733 Aug 06 19:51	28° $\approx$ 12'50	2°03'05	desc. node	14739 Jun 26 01:03	16° $\mathcal{B}$ 43'58	
min. Earth dist.	14733 Aug 07 02:06	28° $\approx$ 11'36	8.53543 AU	retrograde	14739 Aug 17 00:26	19° $\mathcal{B}$ 02'29	
direct	14733 Oct 14 03:52	24° $\approx$ 48'15		opposition	14739 Oct 23 17:35	15° $\mathcal{B}$ 39'33	-0°09'26
	14734 Jan 04 11:26	0° $\mathcal{H}$		min. Earth dist.	14739 Oct 24 06:00	15° $\mathcal{B}$ 37'06	8.41279 AU
evening set	14734 Jan 25 08:22	2° $\mathcal{H}$ 25'20			14739 Nov 01 03:17	15° $\mathcal{R}$ $\mathcal{B}$	
				direct	14739 Dec 31 21:38	12° $\mathcal{B}$ 12'57	
conjunction	14734 Feb 12 00:17	4° $\mathcal{H}$ 35'05	1°35'39		14740 Feb 28 09:04	15° $\mathcal{B}$	
minimum elong	14734 Feb 12 00:19	4° $\mathcal{H}$ 35'05	1°36'11	evening set	14740 Apr 14 17:08	20° $\mathcal{B}$ 02'51	
max. Earth dist.	14734 Feb 11 14:55	4° $\mathcal{H}$ 32'11	10.51899 AU				
morning rise	14734 Mar 01 16:01	6° $\mathcal{H}$ 44'49		conjunction	14740 May 02 05:36	22° $\mathcal{B}$ 13'52	-0°19'22
retrograde	14734 Jun 12 18:35	14° $\mathcal{H}$ 22'39		minimum elong	14740 May 02 05:35	22° $\mathcal{B}$ 13'52	0°20'06
opposition	14734 Aug 19 18:32	10° $\mathcal{H}$ 58'51	1°51'54	max. Earth dist.	14740 May 01 14:37	22° $\mathcal{B}$ 09'10	10.41182 AU
min. Earth dist.	14734 Aug 20 02:32	10° $\mathcal{H}$ 57'16	8.50484 AU	morning rise	14740 May 19 15:16	24° $\mathcal{B}$ 24'08	
direct	14734 Oct 27 04:39	7° $\mathcal{H}$ 33'40			14740 Jul 11 14:26	0° $\mathcal{I}$	
evening set	14735 Feb 07 19:43	15° $\mathcal{H}$ 13'59		retrograde	14740 Aug 29 08:28	2° $\mathcal{I}$ 02'36	
					14740 Oct 18 16:34	30° $\mathcal{R}$ $\mathcal{B}$	
conjunction	14735 Feb 25 12:20	17° $\mathcal{H}$ 24'24	1°24'13	opposition	14740 Nov 05 03:17	28° $\mathcal{B}$ 39'53	-0°38'08
minimum elong	14735 Feb 25 12:22	17° $\mathcal{H}$ 24'24	1°24'32	min. Earth dist.	14740 Nov 05 14:14	28° $\mathcal{B}$ 37'43	8.41292 AU
max. Earth dist.	14735 Feb 25 00:36	17° $\mathcal{H}$ 20'46	10.48959 AU	direct	14741 Jan 13 09:53	25° $\mathcal{B}$ 13'28	
morning rise	14735 Mar 15 04:00	19° $\mathcal{H}$ 34'37			14741 Apr 02 00:28	0° $\mathcal{I}$	
retrograde	14735 Jun 26 00:09	27° $\mathcal{H}$ 12'53		evening set	14741 Apr 28 05:47	3° $\mathcal{I}$ 03'28	
opposition	14735 Sep 01 19:09	23° $\mathcal{H}$ 49'13	1°35'04				
min. Earth dist.	14735 Sep 02 05:02	23° $\mathcal{H}$ 47'15	8.47664 AU	conjunction	14741 May 15 15:57	5° $\mathcal{I}$ 13'56	-0°41'52
direct	14735 Nov 09 07:25	20° $\mathcal{H}$ 23'30		minimum elong	14741 May 15 15:55	5° $\mathcal{I}$ 13'56	0°42'44
evening set	14736 Feb 21 08:39	28° $\mathcal{H}$ 06'46		max. Earth dist.	14741 May 15 03:00	5° $\mathcal{I}$ 09'52	10.41534 AU
	14736 Mar 07 16:27	0° $\mathcal{Y}$		morning rise	14741 Jun 01 23:12	7° $\mathcal{I}$ 23'37	
max. Earth dist.	14736 Mar 09 11:23	0° $\mathcal{Y}$ 13'20	10.46337 AU	retrograde	14741 Sep 11 16:49	15° $\mathcal{I}$ 01'56	
				opposition	14741 Nov 18 13:59	11° $\mathcal{I}$ 39'27	-1°04'52
conjunction	14736 Mar 10 01:28	0° $\mathcal{Y}$ 17'42	1°08'30	min. Earth dist.	14741 Nov 18 23:37	11° $\mathcal{I}$ 37'34	8.42001 AU
minimum elong	14736 Mar 10 01:31	0° $\mathcal{Y}$ 17'43	1°08'36	direct	14742 Jan 26 21:55	8° $\mathcal{I}$ 13'23	
morning rise	14736 Mar 27 16:48	2° $\mathcal{Y}$ 28'19		evening set	14742 May 11 16:49	16° $\mathcal{I}$ 02'50	
retrograde	14736 Jul 08 05:14	10° $\mathcal{Y}$ 06'49					
opposition	14736 Sep 13 22:00	6° $\mathcal{Y}$ 43'20	1°13'22	conjunction	14742 May 29 00:20	18° $\mathcal{I}$ 12'34	-1°02'11
min. Earth dist.	14736 Sep 14 09:43	6° $\mathcal{Y}$ 41'00	8.45229 AU	minimum elong	14742 May 29 00:18	18° $\mathcal{I}$ 12'34	1°03'09
direct	14736 Nov 21 14:03	3° $\mathcal{Y}$ 17'10		max. Earth dist.	14742 May 28 13:12	18° $\mathcal{I}$ 09'04	10.42558 AU
evening set	14737 Mar 05 22:29	11° $\mathcal{Y}$ 02'55		morning rise	14742 Jun 15 05:12	20° $\mathcal{I}$ 21'34	
				retrograde	14742 Sep 24 23:46	27° $\mathcal{I}$ 59'41	
conjunction	14737 Mar 23 15:00	13° $\mathcal{Y}$ 14'13	0°49'15	opposition	14742 Dec 02 01:29	24° $\mathcal{I}$ 37'25	-1°28'12
minimum elong	14737 Mar 23 15:01	13° $\mathcal{Y}$ 14'14	0°49'07	min. Earth dist.	14742 Dec 02 09:29	24° $\mathcal{I}$ 35'52	8.43364 AU
max. Earth dist.	14737 Mar 22 22:48	13° $\mathcal{Y}$ 09'11	10.44163 AU	direct	14743 Feb 09 10:57	21° $\mathcal{I}$ 11'50	
morning rise	14737 Apr 10 05:42	15° $\mathcal{Y}$ 25'03		evening set	14743 May 25 01:33	29° $\mathcal{I}$ 00'02	
retrograde	14737 Jul 21 11:28	23° $\mathcal{Y}$ 03'40			14743 Jun 02 02:47	0° $\mathcal{E}$	
opposition	14737 Sep 27 02:48	19° $\mathcal{Y}$ 40'22	0°47'49				
min. Earth dist.	14737 Sep 27 15:59	19° $\mathcal{Y}$ 37'45	8.43299 AU	conjunction	14743 Jun 11 06:21	1° $\mathcal{E}$ 08'54	-1°19'19
direct	14737 Dec 04 22:27	16° $\mathcal{Y}$ 13'53		minimum elong	14743 Jun 11 06:19	1° $\mathcal{E}$ 08'54	1°20'19
evening set	14738 Mar 19 13:00	24° $\mathcal{Y}$ 01'38		max. Earth dist.	14743 Jun 10 21:43	1° $\mathcal{E}$ 06'11	10.44200 AU
max. Earth dist.	14738 Apr 05 11:26	26° $\mathcal{Y}$ 07'41	10.42534 AU	morning rise	14743 Jun 28 08:59	3° $\mathcal{E}$ 17'09	
				retrograde	14743 Oct 08 05:10	10° $\mathcal{E}$ 55'00	
conjunction	14738 Apr 06 04:41	26° $\mathcal{Y}$ 13'05	0°27'27	opposition	14743 Dec 15 13:15	7° $\mathcal{E}$ 32'55	-1°46'59
minimum elong	14738 Apr 06 04:42	26° $\mathcal{Y}$ 13'05	0°27'05	min. Earth dist.	14743 Dec 15 18:44	7° $\mathcal{E}$ 31'51	8.45309 AU
morning rise	14738 Apr 23 18:15	28° $\mathcal{Y}$ 23'56		direct	14744 Feb 23 01:04	4° $\mathcal{E}$ 07'55	
	14738 May 07 03:07	0° $\mathcal{B}$		evening set	14744 Jun 06 07:42	11° $\mathcal{E}$ 54'11	
retrograde	14738 Aug 03 18:06	6° $\mathcal{B}$ 02'31					
opposition	14738 Oct 10 09:17	2° $\mathcal{B}$ 39'24	0°19'44	conjunction	14744 Jun 23 10:08	14° $\mathcal{E}$ 02'10	-1°32'22
min. Earth dist.	14738 Oct 10 22:38	2° $\mathcal{B}$ 36'46	8.41961 AU	minimum elong	14744 Jun 23 10:07	14° $\mathcal{E}$ 02'10	1°33'22
	14738 Nov 17 20:41	30° $\mathcal{R}$ $\mathcal{Y}$		max. Earth dist.	14744 Jun 23 04:55	14° $\mathcal{E}$ 00'32	10.46382 AU
direct	14738 Dec 18 08:46	29° $\mathcal{Y}$ 12'46		morning rise	14744 Jul 10 10:48	16° $\mathcal{E}$ 09'37	
	14739 Jan 17 15:59	0° $\mathcal{B}$		retrograde	14744 Oct 20 11:23	23° $\mathcal{E}$ 47'05	
evening set	14739 Apr 02 03:29	7° $\mathcal{B}$ 01'56		opposition	14744 Dec 28 00:31	20° $\mathcal{E}$ 25'06	-2°00'17
				min. Earth dist.	14744 Dec 28 02:43	20° $\mathcal{E}$ 24'41	8.47740 AU
conjunction	14739 Apr 19 17:48	9° $\mathcal{B}$ 13'17	0°04'14	direct	14745 Mar 07 12:37	17° $\mathcal{E}$ 00'47	
minimum elong	14739 Apr 19 17:49	9° $\mathcal{B}$ 13'17	0°03'40	evening set	14745 Jun 19 10:59	24° $\mathcal{E}$ 44'28	

conjunction	14745 Jul 06 11:33	26° $\mathfrak{D}$ 51'36	-1°40'45	direct	14751 May 24 14:15	2° $\mathfrak{A}$ 43'01	
minimum elong	14745 Jul 06 11:32	26° $\mathfrak{D}$ 51'36	1°41'43	evening set	14751 Sep 02 23:23	10° $\mathfrak{A}$ 06'41	
max. Earth dist.	14745 Jul 06 10:38	26° $\mathfrak{D}$ 51'19	10.48995 AU				
morning rise	14745 Jul 23 10:38	28° $\mathfrak{D}$ 58'19		conjunction	14751 Sep 20 00:03	12° $\mathfrak{A}$ 11'14	-0°51'16
	14745 Jul 31 22:27	0° $\mathfrak{Q}$		minimum elong	14751 Sep 20 00:04	12° $\mathfrak{A}$ 11'14	0°51'09
retrograde	14745 Nov 02 16:41	6° $\mathfrak{Q}$ 35'14		max. Earth dist.	14751 Sep 20 15:16	12° $\mathfrak{A}$ 15'54	10.65652 AU
opposition	14746 Jan 10 11:08	3° $\mathfrak{Q}$ 13'17	-2°07'31	morning rise	14751 Oct 07 02:24	14° $\mathfrak{A}$ 16'17	
min. Earth dist.	14746 Jan 10 09:48	3° $\mathfrak{Q}$ 13'32	8.50530 AU	retrograde	14752 Jan 18 18:16	21° $\mathfrak{A}$ 48'26	
	14746 Mar 06 16:52	30° $\mathfrak{R}$ $\mathfrak{D}$		opposition	14752 Mar 28 13:42	18° $\mathfrak{A}$ 25'33	-0°50'33
direct	14746 Mar 20 22:14	29° $\mathfrak{D}$ 49'41		min. Earth dist.	14752 Mar 28 00:33	18° $\mathfrak{A}$ 28'04	8.66445 AU
	14746 Apr 04 01:30	0° $\mathfrak{Q}$		direct	14752 Jun 05 08:54	15° $\mathfrak{A}$ 05'02	
evening set	14746 Jul 02 11:20	7° $\mathfrak{Q}$ 30'17		evening set	14752 Sep 14 12:18	22° $\mathfrak{A}$ 26'31	
conjunction	14746 Jul 19 10:26	9° $\mathfrak{Q}$ 36'37	-1°44'08	conjunction	14752 Oct 01 14:23	24° $\mathfrak{A}$ 31'09	-0°30'42
minimum elong	14746 Jul 19 10:27	9° $\mathfrak{Q}$ 36'37	1°44'59	minimum elong	14752 Oct 01 14:24	24° $\mathfrak{A}$ 31'09	0°30'22
max. Earth dist.	14746 Jul 19 13:35	9° $\mathfrak{Q}$ 37'36	10.51910 AU	max. Earth dist.	14752 Oct 02 05:31	24° $\mathfrak{A}$ 35'47	10.67023 AU
morning rise	14746 Aug 05 08:32	11° $\mathfrak{Q}$ 42'42		morning rise	14752 Oct 18 18:40	26° $\mathfrak{A}$ 36'25	
	14746 Sep 02 22:06	15° $\mathfrak{Q}$			14752 Nov 18 01:08	0° $\mathfrak{M}$	
retrograde	14746 Nov 15 20:25	19° $\mathfrak{Q}$ 18'55		retrograde	14753 Jan 30 14:17	4° $\mathfrak{M}$ 08'16	
opposition	14747 Jan 23 20:34	15° $\mathfrak{Q}$ 56'57	-2°08'25	opposition	14753 Apr 10 10:51	0° $\mathfrak{M}$ 45'06	-0°24'10
min. Earth dist.	14747 Jan 23 16:23	15° $\mathfrak{Q}$ 57'46	8.53551 AU	min. Earth dist.	14753 Apr 09 22:12	0° $\mathfrak{M}$ 47'32	8.67488 AU
	14747 Feb 05 08:47	15° $\mathfrak{R}$ $\mathfrak{Q}$			14753 Apr 20 07:58	30° $\mathfrak{R}$ $\mathfrak{A}$	
direct	14747 Apr 03 06:09	12° $\mathfrak{Q}$ 34'04		direct	14753 Jun 18 02:58	27° $\mathfrak{A}$ 24'39	
	14747 May 27 18:23	15° $\mathfrak{Q}$			14753 Aug 13 07:42	0° $\mathfrak{M}$	
evening set	14747 Jul 15 08:48	20° $\mathfrak{Q}$ 11'13		evening set	14753 Sep 27 01:22	4° $\mathfrak{M}$ 44'39	
conjunction	14747 Aug 01 07:00	22° $\mathfrak{Q}$ 16'53	-1°42'24	conjunction	14753 Oct 14 05:02	6° $\mathfrak{M}$ 49'29	-0°08'48
minimum elong	14747 Aug 01 07:01	22° $\mathfrak{Q}$ 16'53	1°43'08	minimum elong	14753 Oct 14 05:01	6° $\mathfrak{M}$ 49'29	0°08'16
max. Earth dist.	14747 Aug 01 13:16	22° $\mathfrak{Q}$ 18'50	10.55001 AU	behind sun begin	14753 Oct 13 22:44	6° $\mathfrak{M}$ 47'35	
morning rise	14747 Aug 18 04:53	24° $\mathfrak{Q}$ 22'27		behind sun end	14753 Oct 14 11:19	6° $\mathfrak{M}$ 51'23	
	14747 Oct 11 07:20	0° $\mathfrak{M}$		max. Earth dist.	14753 Oct 14 19:37	6° $\mathfrak{M}$ 53'56	10.67777 AU
retrograde	14747 Nov 28 23:08	1° $\mathfrak{M}$ 57'48		morning rise	14753 Oct 31 11:17	8° $\mathfrak{M}$ 55'02	
	14748 Jan 18 07:14	30° $\mathfrak{R}$ $\mathfrak{Q}$			14754 Jan 01 08:23	15° $\mathfrak{M}$	
opposition	14748 Feb 06 04:19	28° $\mathfrak{Q}$ 35'47	-2°03'05	retrograde	14754 Feb 12 10:33	16° $\mathfrak{M}$ 26'50	
min. Earth dist.	14748 Feb 05 21:51	28° $\mathfrak{Q}$ 37'01	8.56671 AU	asc. node	14754 Mar 10 09:30	15° $\mathfrak{M}$ 53'32	
direct	14748 Apr 15 11:20	25° $\mathfrak{Q}$ 13'32			14754 Mar 27 07:26	15° $\mathfrak{R}$ $\mathfrak{M}$	
	14748 Jul 03 02:19	0° $\mathfrak{M}$		opposition	14754 Apr 23 06:30	13° $\mathfrak{M}$ 03'20	0°03'17
evening set	14748 Jul 27 03:28	2° $\mathfrak{M}$ 47'03		min. Earth dist.	14754 Apr 22 18:19	13° $\mathfrak{M}$ 05'41	8.67933 AU
				direct	14754 Jun 30 19:32	9° $\mathfrak{M}$ 42'48	
conjunction	14748 Aug 13 01:25	4° $\mathfrak{M}$ 52'12	-1°35'46		14754 Sep 22 00:37	15° $\mathfrak{M}$	
minimum elong	14748 Aug 13 01:27	4° $\mathfrak{M}$ 52'12	1°36'18	evening set	14754 Oct 09 15:03	17° $\mathfrak{M}$ 01'59	
max. Earth dist.	14748 Aug 13 10:06	4° $\mathfrak{M}$ 54'54	10.58117 AU				
morning rise	14748 Aug 29 23:50	6° $\mathfrak{M}$ 57'26		conjunction	14754 Oct 26 20:24	19° $\mathfrak{M}$ 07'06	0°13'36
retrograde	14748 Dec 10 23:06	14° $\mathfrak{M}$ 31'50		minimum elong	14754 Oct 26 20:24	19° $\mathfrak{M}$ 07'06	0°14'18
opposition	14749 Feb 18 10:01	11° $\mathfrak{M}$ 09'40	-1°51'53	behind sun begin	14754 Oct 26 17:04	19° $\mathfrak{M}$ 06'05	
min. Earth dist.	14749 Feb 18 01:30	11° $\mathfrak{M}$ 11'17	8.59713 AU	behind sun end	14754 Oct 26 23:44	19° $\mathfrak{M}$ 08'06	
direct	14749 Apr 28 14:47	7° $\mathfrak{M}$ 48'00		max. Earth dist.	14754 Oct 27 10:48	19° $\mathfrak{M}$ 11'29	10.67925 AU
evening set	14749 Aug 08 19:46	15° $\mathfrak{M}$ 17'56		morning rise	14754 Nov 13 04:28	21° $\mathfrak{M}$ 12'59	
				retrograde	14755 Feb 25 05:36	28° $\mathfrak{M}$ 44'58	
conjunction	14749 Aug 25 18:08	17° $\mathfrak{M}$ 22'41	-1°24'36	opposition	14755 May 06 00:39	25° $\mathfrak{M}$ 21'09	0°30'33
minimum elong	14749 Aug 25 18:10	17° $\mathfrak{M}$ 22'42	1°24'56	min. Earth dist.	14755 May 05 12:53	25° $\mathfrak{M}$ 23'25	8.67787 AU
max. Earth dist.	14749 Aug 26 05:22	17° $\mathfrak{M}$ 26'10	10.61065 AU	direct	14755 Jul 13 11:19	22° $\mathfrak{M}$ 00'21	
morning rise	14749 Sep 11 17:29	19° $\mathfrak{M}$ 27'43		evening set	14755 Oct 22 06:15	29° $\mathfrak{M}$ 19'32	
retrograde	14749 Dec 23 21:24	27° $\mathfrak{M}$ 01'11			14755 Oct 27 21:16	0° $\mathfrak{X}$	
opposition	14750 Mar 03 13:24	23° $\mathfrak{M}$ 38'48	-1°35'28				
min. Earth dist.	14750 Mar 03 02:37	23° $\mathfrak{M}$ 40'52	8.62482 AU	conjunction	14755 Nov 08 13:17	1° $\mathfrak{X}$ 25'00	0°35'16
direct	14750 May 11 16:26	20° $\mathfrak{M}$ 17'39		minimum elong	14755 Nov 08 13:16	1° $\mathfrak{X}$ 25'00	0°36'06
evening set	14750 Aug 21 10:11	27° $\mathfrak{M}$ 44'12		max. Earth dist.	14755 Nov 09 03:15	1° $\mathfrak{X}$ 29'15	10.67473 AU
				morning rise	14755 Nov 25 22:51	3° $\mathfrak{X}$ 31'14	
conjunction	14750 Sep 07 09:32	29° $\mathfrak{M}$ 48'46	-1°09'31	retrograde	14756 Mar 09 01:42	11° $\mathfrak{X}$ 03'38	
minimum elong	14750 Sep 07 09:34	29° $\mathfrak{M}$ 48'47	1°09'38	opposition	14756 May 17 17:36	7° $\mathfrak{X}$ 39'30	0°56'27
max. Earth dist.	14750 Sep 07 23:17	29° $\mathfrak{M}$ 53'00	10.63641 AU	min. Earth dist.	14756 May 17 06:38	7° $\mathfrak{X}$ 41'38	8.67055 AU
	14750 Sep 08 22:00	0° $\mathfrak{A}$		direct	14756 Jul 25 02:29	4° $\mathfrak{X}$ 18'21	
morning rise	14750 Sep 24 10:12	1° $\mathfrak{A}$ 53'43		evening set	14756 Nov 02 23:22	11° $\mathfrak{X}$ 38'18	
retrograde	14751 Jan 05 20:44	9° $\mathfrak{A}$ 26'25					
opposition	14751 Mar 16 14:36	6° $\mathfrak{A}$ 03'47	-1°14'41	conjunction	14756 Nov 20 07:49	13° $\mathfrak{X}$ 44'10	0°55'23
min. Earth dist.	14751 Mar 16 02:06	6° $\mathfrak{A}$ 06'10	8.64773 AU	minimum elong	14756 Nov 20 07:48	13° $\mathfrak{X}$ 44'10	0°56'19

max. Earth dist.	14756 Nov 20 19:58	13°  47'52	10.66439 AU	max. Earth dist.	14763 Feb 05 17:58	28°  49'22	10.51910 AU
morning rise	14756 Dec 07 18:43	15°  50'47			14763 Feb 15 07:36	0° 	
retrograde	14757 Mar 21 23:35	23°  23'48		morning rise	14763 Feb 23 16:59	1°  01'17	
opposition	14757 May 30 10:09	19°  59'27	1°19'48	retrograde	14763 Jun 06 23:41	8°  39'18	
min. Earth dist.	14757 May 30 01:11	20°  01'11	8.65767 AU	opposition	14763 Aug 14 01:28	5°  15'02	1°57'55
direct	14757 Aug 06 15:48	16°  37'49		min. Earth dist.	14763 Aug 14 08:22	5°  13'40	8.50610 AU
evening set	14757 Nov 15 18:31	23°  59'13		direct	14763 Oct 21 09:18	1°  49'45	
				evening set	14764 Feb 01 20:22	9°  29'01	
conjunction	14757 Dec 03 04:14	26°  05'33	1°12'58				
minimum elong	14757 Dec 03 04:12	26°  05'32	1°13'58	conjunction	14764 Feb 19 12:35	11°  39'15	1°30'08
max. Earth dist.	14757 Dec 03 13:20	26°  08'19	10.64872 AU	minimum elong	14764 Feb 19 12:37	11°  39'16	1°30'34
morning rise	14757 Dec 20 16:24	28°  12'36		max. Earth dist.	14764 Feb 19 01:50	11°  35'55	10.49174 AU
	14758 Jan 05 02:40	0° 		morning rise	14764 Mar 08 04:28	13°  49'25	
retrograde	14758 Apr 03 20:25	5°  46'23		retrograde	14764 Jun 19 03:50	21°  27'58	
opposition	14758 Jun 12 02:38	2°  32'53	1°39'32	opposition	14764 Aug 26 01:31	18°  03'59	1°43'36
min. Earth dist.	14758 Jun 11 20:24	2°  23'06	8.63975 AU	min. Earth dist.	14764 Aug 26 10:35	18°  02'11	8.47980 AU
	14758 Jul 15 17:30	30°  R 		direct	14764 Nov 02 12:21	14°  38'18	
direct	14758 Aug 19 06:48	28°  59'39		evening set	14765 Feb 14 08:50	22°  20'40	
	14758 Sep 22 11:23	0° 					
evening set	14758 Nov 28 16:18	6°  32'13		conjunction	14765 Mar 04 01:33	24°  31'29	1°16'18
				minimum elong	14765 Mar 04 01:35	24°  31'30	1°16'31
conjunction	14758 Dec 16 03:17	8°  30'04	1°27'13	max. Earth dist.	14765 Mar 03 12:45	24°  31'27	10.46725 AU
minimum elong	14758 Dec 16 03:15	8°  30'04	1°28'14	morning rise	14765 Mar 21 17:18	26°  42'05	
max. Earth dist.	14758 Dec 16 08:58	8°  31'48	10.62830 AU		14765 Apr 19 12:28	0° 	
morning rise	14759 Jan 02 16:32	10°  33'35		retrograde	14765 Jul 02 08:40	4°  20'59	
retrograde	14759 Apr 16 17:16	18°  31'21		opposition	14765 Sep 08 03:38	0°  57'20	1°24'00
opposition	14759 Jun 24 19:14	14°  34'38	1°54'42	min. Earth dist.	14765 Sep 08 13:59	0°  55'16	8.45697 AU
min. Earth dist.	14759 Jun 24 15:48	14°  34'18	8.61745 AU		14765 Sep 20 08:29	30°  R 	
direct	14759 Sep 01 00:10	11°  32'45		direct	14765 Nov 15 18:33	27°  31'21	
evening set	14759 Dec 11 16:41	18°  30'59			14766 Jan 09 13:23	0° 	
				evening set	14766 Feb 27 22:47	5°  16'26	
conjunction	14759 Dec 29 04:59	20°  35'28	1°37'26				
minimum elong	14759 Dec 29 04:58	20°  35'28	1°38'25	conjunction	14766 Mar 17 15:37	7°  27'42	0°58'34
max. Earth dist.	14759 Dec 29 07:47	20°  35'20	10.60393 AU	minimum elong	14766 Mar 17 15:39	7°  27'43	0°58'32
morning rise	14760 Jan 15 19:00	23°  06'28		max. Earth dist.	14766 Mar 17 01:38	7°  23'21	10.44677 AU
	14760 Mar 31 00:45	0° 		morning rise	14766 Apr 04 06:47	9°  38'33	
retrograde	14760 Apr 28 16:57	0°  42'05		retrograde	14766 Jul 15 16:22	17°  17'38	
	14760 May 27 13:08	30°  R 		opposition	14766 Sep 21 07:58	13°  15'19	1°00'03
opposition	14760 Jul 06 12:38	27°  31'24	2°04'34	min. Earth dist.	14766 Sep 21 19:03	13°  15'07	8.43863 AU
min. Earth dist.	14760 Jul 06 11:20	27°  31'40	8.59164 AU	direct	14766 Nov 29 01:25	10°  28'11	
direct	14760 Sep 12 17:30	23°  35'53		evening set	14767 Mar 13 13:49	18°  15'28	
	14760 Dec 12 00:49	0° 					
evening set	14760 Dec 23 19:39	1°  23'08		conjunction	14767 Mar 31 06:06	20°  26'58	0°37'47
				minimum elong	14767 Mar 31 06:08	20°  26'58	0°37'31
conjunction	14761 Jan 10 09:11	3°  31'17	1°43'04	max. Earth dist.	14767 Mar 30 15:21	20°  22'22	10.43120 AU
minimum elong	14761 Jan 10 09:11	3°  31'17	1°43'59	morning rise	14767 Apr 17 20:09	22°  37'54	
max. Earth dist.	14761 Jan 10 09:16	3°  31'19	10.57665 AU		14767 Jul 11 06:01	0° 	
morning rise	14761 Jan 27 23:47	5°  39'49		retrograde	14767 Jul 29 00:24	0°  16'57	
retrograde	14761 May 11 18:08	13°  16'22			14767 Aug 15 19:22	30°  R 	
opposition	14761 Jul 19 07:16	9°  51'43	2°08'32	opposition	14767 Oct 04 14:20	26°  15'00	0°32'56
min. Earth dist.	14761 Jul 19 08:15	9°  51'31	8.56349 AU	min. Earth dist.	14767 Oct 05 02:14	26°  15'38	8.42568 AU
direct	14761 Sep 25 12:14	6°  27'34		direct	14767 Dec 12 10:41	23°  12'46	
evening set	14762 Jan 06 01:27	14°  00'06			14768 Mar 15 14:19	0° 	
	14762 Jan 14 07:05	15° 		evening set	14768 Mar 26 05:07	1°  16'41	
conjunction	14762 Jan 23 16:03	16°  08'57	1°43'46	conjunction	14768 Apr 12 20:13	3°  28'09	0°15'02
minimum elong	14762 Jan 23 16:04	16°  08'57	1°44'34	minimum elong	14768 Apr 12 20:13	3°  28'10	0°14'33
max. Earth dist.	14762 Jan 23 12:42	16°  07'55	10.54787 AU	behind sun begin	14768 Apr 12 17:11	3°  27'13	
morning rise	14762 Feb 10 07:12	18°  18'02		behind sun end	14768 Apr 12 23:16	3°  29'06	
retrograde	14762 May 24 19:59	25°  55'24		max. Earth dist.	14768 Apr 12 04:37	3°  23'17	10.42130 AU
opposition	14762 Aug 01 03:24	22°  30'53	2°06'20	morning rise	14768 Apr 30 08:47	5°  38'59	
min. Earth dist.	14762 Aug 01 07:13	22°  30'08	8.53449 AU	retrograde	14768 Aug 10 07:54	13°  17'53	
direct	14762 Oct 08 09:44	19°  06'07		opposition	14768 Oct 16 22:35	9°  55'15	0°04'03
evening set	14763 Jan 19 09:48	26°  42'04		min. Earth dist.	14768 Oct 17 11:04	9°  52'47	8.41869 AU
				desc. node	14768 Dec 07 14:25	6°  44'39	
conjunction	14763 Feb 06 01:20	28°  51'38	1°39'25	direct	14768 Dec 24 22:44	6°  29'02	
minimum elong	14763 Feb 06 01:21	28°  51'39	1°40'03	evening set	14769 Apr 08 19:57	14°  18'55	

	14769 Apr 14 09:04	15°♄	direct	14775 Mar 15 06:02	24°♄22'44
				14775 Jun 09 09:45	0°♄
conjunction	14769 Apr 26 09:17	16°♄30'08 -0°08'36	evening set	14775 Jun 27 01:45	2°♄06'02
minimum elong	14769 Apr 26 09:17	16°♄30'07 0°09'17			
behind sun begin	14769 Apr 26 03:14	16°♄28'15	conjunction	14775 Jul 14 01:27	4°♄13'00 -1°43'10
behind sun end	14769 Apr 26 15:19	16°♄32'00	minimum elong	14775 Jul 14 01:27	4°♄13'00 1°44'03
max. Earth dist.	14769 Apr 25 17:23	16°♄25'09 10.41722 AU	max. Earth dist.	14775 Jul 14 00:22	4°♄12'40 10.48781 AU
morning rise	14769 May 13 20:03	18°♄40'37	morning rise	14775 Jul 31 00:11	6°♄19'41
retrograde	14769 Aug 23 15:29	26°♄19'20	retrograde	14775 Nov 10 09:25	13°♄57'29
opposition	14769 Oct 30 08:13	22°♄56'58 -0°25'04	opposition	14776 Jan 18 07:11	10°♄35'20 -2°08'45
min. Earth dist.	14769 Oct 30 20:37	22°♄54'31 8.41730 AU	min. Earth dist.	14776 Jan 18 06:03	10°♄35'34 8.50142 AU
direct	14770 Jan 07 12:04	19°♄30'51	direct	14776 Mar 27 17:34	7°♄11'48
evening set	14770 Apr 22 09:54	27°♄21'06	evening set	14776 Jul 09 01:28	14°♄51'53
				14776 Jul 10 03:57	15°♄
conjunction	14770 May 09 21:02	29°♄31'50 -0°31'42			
minimum elong	14770 May 09 21:01	29°♄31'50 0°32'31	conjunction	14776 Jul 26 00:09	16°♄58'11 -1°43'42
max. Earth dist.	14770 May 09 05:44	29°♄27'02 10.41816 AU	minimum elong	14776 Jul 26 00:10	16°♄58'12 1°44'29
	14770 May 13 14:41	0°♄	max. Earth dist.	14776 Jul 26 03:20	16°♄59'11 10.51341 AU
morning rise	14770 May 27 05:35	1°♄41'50	morning rise	14776 Aug 11 22:21	19°♄04'20
retrograde	14770 Sep 05 23:07	9°♄20'24	retrograde	14776 Nov 22 13:57	26°♄41'26
opposition	14770 Nov 12 18:56	5°♄58'15 -0°52'54	opposition	14777 Jan 30 16:32	23°♄19'01 -2°06'09
min. Earth dist.	14770 Nov 13 06:15	5°♄56'02 8.42050 AU	min. Earth dist.	14777 Jan 30 11:50	23°♄19'55 8.52797 AU
direct	14771 Jan 21 01:58	2°♄32'24	direct	14777 Apr 10 01:24	19°♄55'59
evening set	14771 May 05 22:20	10°♄22'30	evening set	14777 Jul 21 22:18	27°♄32'33
conjunction	14771 May 23 07:04	12°♄32'37 -0°53'10	conjunction	14777 Aug 07 20:36	29°♄38'19 -1°39'11
minimum elong	14771 May 23 07:02	12°♄32'37 0°54'06	minimum elong	14777 Aug 07 20:38	29°♄38'19 1°39'48
max. Earth dist.	14771 May 22 17:49	12°♄28'27 10.42323 AU	max. Earth dist.	14777 Aug 08 03:56	29°♄40'36 10.54064 AU
morning rise	14771 Jun 09 13:08	14°♄42'00		14777 Aug 10 18:09	0°♄
retrograde	14771 Sep 19 07:05	22°♄20'37	morning rise	14777 Aug 24 18:49	1°♄44'03
opposition	14771 Nov 26 06:46	18°♄58'39 -1°17'58	retrograde	14777 Dec 05 16:22	9°♄20'18
min. Earth dist.	14771 Nov 26 15:57	18°♄56'51 8.42780 AU	opposition	14778 Feb 13 00:09	5°♄57'37 -1°57'27
direct	14772 Feb 03 16:06	15°♄33'11	min. Earth dist.	14778 Feb 12 16:16	5°♄59'08 8.55540 AU
evening set	14772 May 18 08:46	23°♄22'35	direct	14778 Apr 23 06:05	2°♄35'06
			evening set	14778 Aug 03 16:28	10°♄08'03
conjunction	14772 Jun 04 15:00	25°♄31'59 -1°11'53			
minimum elong	14772 Jun 04 14:58	25°♄31'58 1°12'53	conjunction	14778 Aug 20 14:52	12°♄13'22 -1°29'54
max. Earth dist.	14772 Jun 04 04:43	25°♄28'45 10.43251 AU	minimum elong	14778 Aug 20 14:54	12°♄13'23 1°30'20
morning rise	14772 Jun 21 18:37	27°♄40'40	max. Earth dist.	14778 Aug 21 01:31	12°♄16'41 10.56817 AU
	14772 Jul 11 07:21	0°♄	morning rise	14778 Sep 06 13:47	14°♄18'52
retrograde	14772 Oct 01 15:45	5°♄19'23	retrograde	14778 Dec 18 16:54	21°♄54'13
opposition	14772 Dec 08 19:15	1°♄57'31 -1°38'59	opposition	14779 Feb 26 05:40	18°♄31'15 -1°43'10
min. Earth dist.	14772 Dec 09 02:13	1°♄56'09 8.43962 AU	min. Earth dist.	14779 Feb 25 19:40	18°♄33'11 8.58240 AU
	14773 Jan 04 14:51	30°♄	direct	14779 May 06 08:57	15°♄09'13
direct	14773 Feb 16 05:32	28°♄32'31	evening set	14779 Aug 16 08:35	22°♄38'40
	14773 Mar 29 22:24	0°♄			
evening set	14773 May 31 17:14	6°♄20'33	conjunction	14779 Sep 02 07:35	24°♄43'43 -1°16'24
			minimum elong	14779 Sep 02 07:37	24°♄43'44 1°16'36
conjunction	14773 Jun 17 20:56	8°♄29'09 -1°26'54	max. Earth dist.	14779 Sep 02 20:07	24°♄47'36 10.59467 AU
minimum elong	14773 Jun 17 20:55	8°♄29'08 1°27'55	morning rise	14779 Sep 19 07:50	26°♄49'06
max. Earth dist.	14773 Jun 17 13:34	8°♄26'50 10.44650 AU		14779 Oct 17 05:04	0°♄
morning rise	14773 Jul 04 22:24	10°♄37'08	retrograde	14779 Dec 31 16:36	4°♄23'32
retrograde	14773 Oct 14 23:55	18°♄15'44	opposition	14780 Mar 10 08:43	1°♄00'19 -1°24'04
opposition	14773 Dec 22 07:48	14°♄53'53 -1°54'54	min. Earth dist.	14780 Mar 09 21:20	1°♄02'31 8.60766 AU
min. Earth dist.	14773 Dec 22 12:32	14°♄52'58 8.45619 AU		14780 Mar 23 15:39	30°♄
direct	14774 Mar 01 17:24	11°♄29'21	direct	14780 May 18 08:51	27°♄38'41
evening set	14774 Jun 13 23:05	19°♄15'21	evening set	14780 Jul 10 19:29	0°♄
				14780 Aug 27 23:05	5°♄04'57
conjunction	14774 Jul 01 00:30	21°♄23'07 -1°37'29			
minimum elong	14774 Jul 01 00:29	21°♄23'07 1°38'28	conjunction	14780 Sep 13 23:12	7°♄09'53 -0°59'21
max. Earth dist.	14774 Jun 30 20:00	21°♄21'43 10.46515 AU	minimum elong	14780 Sep 13 23:14	7°♄09'53 0°59'20
morning rise	14774 Jul 18 00:19	23°♄30'25	max. Earth dist.	14780 Sep 14 13:24	7°♄14'15 10.61875 AU
	14774 Sep 21 18:51	0°♄	morning rise	14780 Oct 01 01:08	9°♄15'17
retrograde	14774 Oct 28 05:17	1°♄08'43	retrograde	14781 Jan 12 13:50	16°♄48'53
	14774 Dec 04 10:55	30°♄	opposition	14781 Mar 23 09:31	13°♄25'26 -1°01'09
opposition	14775 Jan 04 20:02	27°♄46'46 -2°04'58	min. Earth dist.	14781 Mar 22 20:43	13°♄27'53 8.62983 AU
min. Earth dist.	14775 Jan 04 22:15	27°♄46'21 8.47709 AU	direct	14781 May 31 06:20	10°♄04'08

evening set	14781 Sep 09 12:35	17° <u>♄</u> 27'42		opposition	14787 Jun 07 03:06	27° <u>♄</u> 24'48	1°31'35
				min. Earth dist.	14787 Jun 06 17:57	27° <u>♄</u> 26'35	8.65904 AU
conjunction	14781 Sep 26 14:10	19° <u>♄</u> 32'36 -0°39'37		direct	14787 Aug 14 08:28	24° <u>♄</u> 03'15	
minimum elong	14781 Sep 26 14:11	19° <u>♄</u> 32'36 0°39'22			14787 Nov 11 09:30	0° <u>♄</u>	
max. Earth dist.	14781 Sep 27 06:13	19° <u>♄</u> 37'31 10.63914 AU		evening set	14787 Nov 23 14:09	1° <u>♄</u> 25'25	
morning rise	14781 Oct 13 17:48	21° <u>♄</u> 38'05					
retrograde	14782 Jan 25 10:36	29° <u>♄</u> 11'05		conjunction	14787 Dec 11 00:38	3° <u>♄</u> 31'54	1°21'33
opposition	14782 Apr 05 08:09	25° <u>♄</u> 47'23 -0°35'30		minimum elong	14787 Dec 11 00:37	3° <u>♄</u> 31'54	1°22'34
min. Earth dist.	14782 Apr 04 17:54	25° <u>♄</u> 50'07 8.64786 AU		max. Earth dist.	14787 Dec 11 10:29	3° <u>♄</u> 34'54	10.65180 AU
direct	14782 Jun 13 02:49	22° <u>♄</u> 26'21		morning rise	14787 Dec 28 13:11	5° <u>♄</u> 39'01	
evening set	14782 Sep 22 01:55	29° <u>♄</u> 47'48		retrograde	14788 Apr 10 16:02	13° <u>♄</u> 12'47	
	14782 Sep 23 18:32	0° <u>♄</u>		opposition	14788 Jun 18 19:27	9° <u>♄</u> 48'40	1°48'42
				min. Earth dist.	14788 Jun 18 12:44	9° <u>♄</u> 49'59	8.64471 AU
conjunction	14782 Oct 09 05:08	1° <u>♄</u> 52'48 -0°18'07		direct	14788 Aug 25 23:53	6° <u>♄</u> 26'40	
minimum elong	14782 Oct 09 05:09	1° <u>♄</u> 52'48 0°17'40		evening set	14788 Dec 05 13:21	13° <u>♄</u> 50'59	
max. Earth dist.	14782 Oct 09 22:34	1° <u>♄</u> 58'08 10.65494 AU					
morning rise	14782 Oct 26 10:32	3° <u>♄</u> 58'28		conjunction	14788 Dec 23 00:58	15° <u>♄</u> 57'58	1°33'30
retrograde	14783 Feb 07 08:26	11° <u>♄</u> 31'02		minimum elong	14788 Dec 23 00:57	15° <u>♄</u> 57'57	1°34'30
opposition	14783 Apr 18 04:48	8° <u>♄</u> 07'08 -0°08'19		max. Earth dist.	14788 Dec 23 06:57	15° <u>♄</u> 59'47	10.63459 AU
min. Earth dist.	14783 Apr 17 14:06	8° <u>♄</u> 09'58 8.66105 AU		morning rise	14789 Jan 09 14:23	18° <u>♄</u> 05'29	
direct	14783 Jun 25 19:37	4° <u>♄</u> 46'15		retrograde	14789 Apr 23 15:14	25° <u>♄</u> 39'52	
asc. node	14783 Aug 10 01:47	6° <u>♄</u> 29'37		opposition	14789 Jul 01 12:20	22° <u>♄</u> 15'48	2°00'49
evening set	14783 Oct 04 15:44	12° <u>♄</u> 06'18		min. Earth dist.	14789 Jul 01 09:05	22° <u>♄</u> 16'26	8.62505 AU
				direct	14789 Sep 07 15:38	18° <u>♄</u> 53'12	
conjunction	14783 Oct 21 20:30	14° <u>♄</u> 11'28 0°04'16		evening set	14789 Dec 18 14:50	26° <u>♄</u> 20'10	
minimum elong	14783 Oct 21 20:30	14° <u>♄</u> 11'28 0°04'54					
behind sun begin	14783 Oct 21 13:34	14° <u>♄</u> 09'23		conjunction	14790 Jan 05 03:32	28° <u>♄</u> 27'42	1°41'05
behind sun end	14783 Oct 22 03:27	14° <u>♄</u> 13'34		minimum elong	14790 Jan 05 03:32	28° <u>♄</u> 27'42	1°42'01
max. Earth dist.	14783 Oct 22 13:33	14° <u>♄</u> 16'40 10.66553 AU		max. Earth dist.	14790 Jan 05 04:44	28° <u>♄</u> 28'04	10.61218 AU
	14783 Oct 28 11:34	15° <u>♄</u>			14790 Jan 17 18:59	0° <u>♄</u>	
morning rise	14783 Nov 08 03:46	16° <u>♄</u> 17'22		morning rise	14790 Jan 22 17:50	0° <u>♄</u> 35'43	
retrograde	14784 Feb 20 05:15	23° <u>♄</u> 49'43		retrograde	14790 May 06 14:03	8° <u>♄</u> 10'50	
opposition	14784 Apr 29 23:53	20° <u>♄</u> 25'43 0°19'12		opposition	14790 Jul 14 06:00	4° <u>♄</u> 46'50	2°07'17
min. Earth dist.	14784 Apr 29 10:05	20° <u>♄</u> 28'22 8.66888 AU		min. Earth dist.	14790 Jul 14 06:30	4° <u>♄</u> 46'44	8.60021 AU
direct	14784 Jul 07 10:21	17° <u>♄</u> 04'50		direct	14790 Sep 20 10:14	1° <u>♄</u> 23'35	
evening set	14784 Oct 16 06:38	24° <u>♄</u> 24'19		evening set	14790 Dec 31 18:59	8° <u>♄</u> 53'40	
conjunction	14784 Nov 02 12:51	26° <u>♄</u> 29'42 0°26'17		conjunction	14791 Jan 18 08:51	11° <u>♄</u> 01'52	1°43'53
minimum elong	14784 Nov 02 12:50	26° <u>♄</u> 29'41 0°27'05		minimum elong	14791 Jan 18 08:52	11° <u>♄</u> 01'53	1°44'43
max. Earth dist.	14784 Nov 03 04:21	26° <u>♄</u> 34'25 10.67053 AU		max. Earth dist.	14791 Jan 18 05:54	11° <u>♄</u> 00'58	10.58503 AU
morning rise	14784 Nov 19 21:50	28° <u>♄</u> 35'51		morning rise	14791 Feb 04 23:48	13° <u>♄</u> 10'24	
	14784 Dec 01 21:49	0° <u>♄</u>			14791 Feb 20 15:29	15° <u>♄</u>	
retrograde	14785 Mar 04 00:24	6° <u>♄</u> 08'15		retrograde	14791 May 19 13:48	20° <u>♄</u> 46'22	
opposition	14785 May 12 17:41	2° <u>♄</u> 44'10 0°45'47		opposition	14791 Jul 27 00:45	17° <u>♄</u> 22'27	2°07'42
min. Earth dist.	14785 May 12 05:30	2° <u>♄</u> 46'32 8.67114 AU		min. Earth dist.	14791 Jul 27 04:12	17° <u>♄</u> 21'46	8.57131 AU
	14785 Jun 23 05:33	30° <u>♄</u>			14791 Aug 29 10:50	15° <u>♄</u>	
direct	14785 Jul 20 02:28	29° <u>♄</u> 23'11		direct	14791 Oct 03 07:25	13° <u>♄</u> 58'34	
	14785 Aug 15 16:55	0° <u>♄</u>			14791 Nov 06 18:44	15° <u>♄</u>	
evening set	14785 Oct 28 23:03	6° <u>♄</u> 42'51		evening set	14792 Jan 14 01:34	21° <u>♄</u> 32'01	
conjunction	14785 Nov 15 06:45	8° <u>♄</u> 48'32 0°47'09		conjunction	14792 Jan 31 16:35	23° <u>♄</u> 40'58	1°41'41
minimum elong	14785 Nov 15 06:43	8° <u>♄</u> 48'32 0°48'03		minimum elong	14792 Jan 31 16:37	23° <u>♄</u> 40'58	1°42'22
max. Earth dist.	14785 Nov 15 20:32	8° <u>♄</u> 52'44 10.66990 AU		max. Earth dist.	14792 Jan 31 10:24	23° <u>♄</u> 39'04	10.55495 AU
morning rise	14785 Dec 02 17:13	10° <u>♄</u> 54'59		morning rise	14792 Feb 18 07:56	25° <u>♄</u> 50'03	
retrograde	14786 Mar 16 20:53	18° <u>♄</u> 27'41			14792 Mar 27 03:11	0° <u>♄</u>	
opposition	14786 May 25 10:40	15° <u>♄</u> 03'34 1°10'17		retrograde	14792 May 31 16:48	3° <u>♄</u> 26'49	
min. Earth dist.	14786 May 24 23:58	15° <u>♄</u> 05'38 8.66788 AU		opposition	14792 Aug 07 21:17	0° <u>♄</u> 03'01	2°01'57
direct	14786 Aug 01 17:31	11° <u>♄</u> 42'21		min. Earth dist.	14792 Aug 08 02:58	0° <u>♄</u> 01'53	8.54055 AU
evening set	14786 Nov 10 17:21	19° <u>♄</u> 02'56			14792 Aug 08 12:32	30° <u>♄</u>	
				direct	14792 Oct 15 04:59	26° <u>♄</u> 38'31	
conjunction	14786 Nov 28 02:33	21° <u>♄</u> 08'59 1°05'51			14792 Dec 18 18:42	0° <u>♄</u>	
minimum elong	14786 Nov 28 02:32	21° <u>♄</u> 08'58 1°06'50		evening set	14793 Jan 26 10:22	4° <u>♄</u> 15'18	
max. Earth dist.	14786 Nov 28 14:54	21° <u>♄</u> 12'44 10.66365 AU					
morning rise	14786 Dec 15 14:11	23° <u>♄</u> 15'46		conjunction	14793 Feb 13 02:19	6° <u>♄</u> 24'59	1°34'30
	14787 Feb 26 12:46	0° <u>♄</u>		minimum elong	14793 Feb 13 02:21	6° <u>♄</u> 24'59	1°35'01
retrograde	14787 Mar 29 17:58	0° <u>♄</u> 48'56		max. Earth dist.	14793 Feb 12 17:22	6° <u>♄</u> 22'13	10.52422 AU
	14787 Apr 30 05:08	30° <u>♄</u>		morning rise	14793 Mar 02 17:53	8° <u>♄</u> 34'38	



retrograde	14793 Jun 13 20:25	16° $\text{X}$ 12'04		morning rise	14799 May 21 15:29	26° $\text{S}$ 11'05	
opposition	14793 Aug 20 19:46	12° $\text{X}$ 48'22	1°50'11		14799 Jun 24 02:00	0° $\text{II}$	
min. Earth dist.	14793 Aug 21 03:44	12° $\text{X}$ 46'47	8.51007 AU	retrograde	14799 Aug 31 09:47	3° $\text{II}$ 49'28	
direct	14793 Oct 28 05:37	9° $\text{X}$ 23'17		opposition	14799 Nov 07 03:48	0° $\text{II}$ 26'47	-0°40'52
evening set	14794 Feb 08 21:24	17° $\text{X}$ 03'19		min. Earth dist.	14799 Nov 07 15:21	0° $\text{II}$ 24'30	8.41365 AU
					14799 Nov 12 20:12	30° $\text{R}$ 8	
conjunction	14794 Feb 26 13:56	19° $\text{X}$ 13'38	1°22'37	direct	14800 Jan 15 09:12	27° $\text{S}$ 00'21	
minimum elong	14794 Feb 26 13:58	19° $\text{X}$ 13'39	1°22'55		14800 Mar 16 07:01	0° $\text{II}$	
max. Earth dist.	14794 Feb 26 01:44	19° $\text{X}$ 09'52	10.49480 AU	evening set	14800 Apr 29 06:17	4° $\text{II}$ 50'18	
morning rise	14794 Mar 16 05:33	21° $\text{X}$ 23'48					
retrograde	14794 Jun 27 00:36	29° $\text{X}$ 01'40		conjunction	14800 May 16 16:10	7° $\text{II}$ 00'42	-0°43'57
opposition	14794 Sep 02 20:11	25° $\text{X}$ 38'08	1°32'51	minimum elong	14800 May 16 16:08	7° $\text{II}$ 00'42	0°44'50
min. Earth dist.	14794 Sep 03 06:44	25° $\text{X}$ 36'02	8.48170 AU	max. Earth dist.	14800 May 16 02:21	6° $\text{II}$ 56'22	10.41545 AU
direct	14794 Nov 10 09:10	22° $\text{X}$ 12'29		morning rise	14800 Jun 02 23:19	9° $\text{II}$ 10'22	
evening set	14795 Feb 22 10:04	29° $\text{X}$ 55'29		retrograde	14800 Sep 12 16:16	16° $\text{II}$ 48'41	
	14795 Feb 23 00:56	0° $\text{Y}$		opposition	14800 Nov 19 14:37	13° $\text{II}$ 26'11	-1°07'17
max. Earth dist.	14795 Mar 11 11:38	2° $\text{Y}$ 01'40	10.46826 AU	min. Earth dist.	14800 Nov 20 01:02	13° $\text{II}$ 24'08	8.41960 AU
				direct	14801 Jan 27 23:05	10° $\text{II}$ 00'03	
conjunction	14795 Mar 12 02:45	2° $\text{Y}$ 06'21	1°06'33	evening set	14801 May 12 17:09	17° $\text{II}$ 49'30	
minimum elong	14795 Mar 12 02:47	2° $\text{Y}$ 06'22	1°06'37				
morning rise	14795 Mar 29 18:08	4° $\text{Y}$ 16'53		conjunction	14801 May 30 00:25	19° $\text{II}$ 59'12	-1°03'58
retrograde	14795 Jul 10 06:19	11° $\text{Y}$ 55'02		minimum elong	14801 May 30 00:24	19° $\text{II}$ 59'11	1°04'56
opposition	14795 Sep 15 22:49	8° $\text{Y}$ 31'41	1°10'46	max. Earth dist.	14801 May 29 12:27	19° $\text{II}$ 55'26	10.42455 AU
min. Earth dist.	14795 Sep 16 11:18	8° $\text{Y}$ 29'12	8.45689 AU	morning rise	14801 Jun 16 05:17	22° $\text{II}$ 08'11	
direct	14795 Nov 23 14:48	5° $\text{Y}$ 05'36		retrograde	14801 Sep 25 22:55	29° $\text{II}$ 46'24	
evening set	14796 Mar 06 23:38	12° $\text{Y}$ 51'06		opposition	14801 Dec 03 02:08	26° $\text{II}$ 24'04	-1°30'11
				min. Earth dist.	14801 Dec 03 10:20	26° $\text{II}$ 22'28	8.43208 AU
conjunction	14796 Mar 24 16:01	15° $\text{Y}$ 02'21	0°47'03	direct	14802 Feb 10 13:05	22° $\text{II}$ 58'25	
minimum elong	14796 Mar 24 16:03	15° $\text{Y}$ 02'21	0°46'53		14802 May 19 16:42	0° $\text{S}$	
max. Earth dist.	14796 Mar 23 23:11	14° $\text{Y}$ 57'06	10.44591 AU	evening set	14802 May 26 01:52	0° $\text{S}$ 46'39	
morning rise	14796 Apr 11 06:41	17° $\text{Y}$ 13'06					
retrograde	14796 Jul 22 11:29	24° $\text{Y}$ 51'26		conjunction	14802 Jun 12 06:35	2° $\text{S}$ 55'31	-1°20'42
opposition	14796 Sep 28 03:26	21° $\text{Y}$ 28'13	0°44'58	minimum elong	14802 Jun 12 06:33	2° $\text{S}$ 55'31	1°21'42
min. Earth dist.	14796 Sep 28 16:42	21° $\text{Y}$ 25'36	8.43688 AU	max. Earth dist.	14802 Jun 11 21:54	2° $\text{S}$ 52'47	10.43983 AU
direct	14796 Dec 05 23:55	18° $\text{Y}$ 01'50		morning rise	14802 Jun 29 09:07	5° $\text{S}$ 03'45	
evening set	14797 Mar 20 13:49	25° $\text{Y}$ 49'22		retrograde	14802 Oct 09 06:08	12° $\text{S}$ 41'47	
				opposition	14802 Dec 16 13:54	9° $\text{S}$ 19'36	-1°48'26
conjunction	14797 Apr 07 05:27	28° $\text{Y}$ 00'44	0°25'06	min. Earth dist.	14802 Dec 16 18:59	9° $\text{S}$ 18'37	8.45037 AU
minimum elong	14797 Apr 07 05:28	28° $\text{Y}$ 00'44	0°24'42	direct	14803 Feb 24 01:33	5° $\text{S}$ 54'33	
max. Earth dist.	14797 Apr 06 12:28	27° $\text{Y}$ 55'26	10.42882 AU	evening set	14803 Jun 08 08:02	13° $\text{S}$ 40'53	
	14797 Apr 23 05:15	0° $\text{S}$					
morning rise	14797 Apr 24 18:52	0° $\text{S}$ 11'32		conjunction	14803 Jun 25 10:29	15° $\text{S}$ 48'54	-1°33'18
retrograde	14797 Aug 04 17:32	7° $\text{S}$ 49'56		minimum elong	14803 Jun 25 10:27	15° $\text{S}$ 48'53	1°34'18
opposition	14797 Oct 11 09:47	4° $\text{S}$ 26'52	0°16'46	max. Earth dist.	14803 Jun 25 05:53	15° $\text{S}$ 47'27	10.46053 AU
min. Earth dist.	14797 Oct 11 22:44	4° $\text{S}$ 24'19	8.42260 AU	morning rise	14803 Jul 12 10:59	17° $\text{S}$ 56'22	
direct	14797 Dec 19 10:42	1° $\text{S}$ 00'19		retrograde	14803 Oct 22 12:18	25° $\text{S}$ 34'05	
evening set	14798 Apr 03 04:03	8° $\text{S}$ 49'17		opposition	14803 Dec 30 01:28	22° $\text{S}$ 11'59	-2°01'08
				min. Earth dist.	14803 Dec 30 03:10	22° $\text{S}$ 11'40	8.47360 AU
conjunction	14798 Apr 20 18:22	11° $\text{S}$ 00'35	0°01'49	direct	14804 Mar 08 13:08	18° $\text{S}$ 47'37	
minimum elong	14798 Apr 20 18:22	11° $\text{S}$ 00'35	0°01'14	evening set	14804 Jun 20 11:19	26° $\text{S}$ 31'25	
behind sun begin	14798 Apr 20 11:10	10° $\text{S}$ 58'21					
behind sun end	14798 Apr 21 01:34	11° $\text{S}$ 02'49		conjunction	14804 Jul 07 11:52	28° $\text{S}$ 38'36	-1°41'11
max. Earth dist.	14798 Apr 20 02:11	10° $\text{S}$ 55'31	10.41772 AU	minimum elong	14804 Jul 07 11:52	28° $\text{S}$ 38'36	1°42'07
morning rise	14798 May 08 06:00	13° $\text{S}$ 11'11		max. Earth dist.	14804 Jul 07 11:22	28° $\text{S}$ 38'26	10.48566 AU
desc. node	14798 May 19 20:12	14° $\text{S}$ 34'56			14804 Jul 18 08:06	0° $\text{Q}$	
	14798 May 23 10:02	15° $\text{S}$		morning rise	14804 Jul 24 10:53	0° $\text{Q}$ 45'21	
retrograde	14798 Aug 18 01:43	20° $\text{S}$ 49'36		retrograde	14804 Nov 03 17:53	8° $\text{Q}$ 22'37	
opposition	14798 Oct 24 18:02	17° $\text{S}$ 26'42	-0°12'21	opposition	14805 Jan 11 12:18	5° $\text{Q}$ 00'34	-2°07'43
min. Earth dist.	14798 Oct 25 06:23	17° $\text{S}$ 24'16	8.41470 AU	min. Earth dist.	14805 Jan 11 11:08	5° $\text{Q}$ 00'47	8.50059 AU
	14798 Nov 28 07:06	15° $\text{R}$ 8		direct	14805 Mar 21 22:58	1° $\text{Q}$ 36'53	
direct	14799 Jan 01 21:30	14° $\text{S}$ 00'08		evening set	14805 Jul 03 11:53	9° $\text{Q}$ 17'41	
	14799 Feb 05 03:20	15° $\text{S}$					
evening set	14799 Apr 16 17:43	21° $\text{S}$ 49'55		conjunction	14805 Jul 20 10:57	11° $\text{Q}$ 24'06	-1°44'01
				minimum elong	14805 Jul 20 10:57	11° $\text{Q}$ 24'06	1°44'51
conjunction	14799 May 04 06:03	24° $\text{S}$ 00'53	-0°21'39	max. Earth dist.	14805 Jul 20 13:37	11° $\text{Q}$ 24'56	10.51401 AU
minimum elong	14799 May 04 06:02	24° $\text{S}$ 00'53	0°22'25	morning rise	14805 Aug 06 09:09	13° $\text{Q}$ 30'15	
max. Earth dist.	14799 May 03 14:56	23° $\text{S}$ 56'09	10.41313 AU		14805 Aug 18 20:39	15° $\text{Q}$	

retrograde	14805 Nov 16 22:23	21°♏06'50		retrograde	14812 Feb 01 17:22	6°♏00'42	
opposition	14806 Jan 24 21:56	17°♏44'47 -2°07'58		opposition	14812 Apr 11 13:39	2°♏37'33 -0°21'02	
min. Earth dist.	14806 Jan 24 18:20	17°♏45'28 8.53010 AU		min. Earth dist.	14812 Apr 11 01:02	2°♏39'58 8.67342 AU	
	14806 Mar 07 15:35	15°♏♏			14812 May 21 00:18	30°♏♏	
direct	14806 Apr 04 06:27	14°♏21'48		direct	14812 Jun 19 05:25	29°♏17'07	
	14806 May 01 14:15	15°♏			14812 Jul 18 01:23	0°♏	
evening set	14806 Jul 16 09:34	21°♏59'13		evening set	14812 Sep 28 03:56	6°♏37'16	
conjunction	14806 Aug 02 07:45	24°♏04'59 -1°41'46		conjunction	14812 Oct 15 07:49	8°♏42'09 -0°06'16	
minimum elong	14806 Aug 02 07:47	24°♏04'59 1°42'27		minimum elong	14812 Oct 15 07:49	8°♏42'09 0°05'43	
max. Earth dist.	14806 Aug 02 13:22	24°♏06'44 10.54435 AU		behind sun begin	14812 Oct 15 01:00	8°♏40'06	
morning rise	14806 Aug 19 05:52	26°♏10'41		behind sun end	14812 Oct 15 14:38	8°♏44'13	
	14806 Sep 22 02:28	0°♏		max. Earth dist.	14812 Oct 15 22:56	8°♏46'46 10.67681 AU	
retrograde	14806 Nov 29 23:44	3°♏46'26		morning rise	14812 Nov 01 14:12	10°♏47'46	
opposition	14807 Feb 07 06:00	0°♏24'19 -2°01'59			14812 Dec 10 05:13	15°♏	
min. Earth dist.	14807 Feb 06 23:43	0°♏25'32 8.56084 AU		asc. node	14813 Jan 28 11:10	18°♏06'35	
	14807 Feb 12 12:58	30°♏♏		retrograde	14813 Feb 13 12:58	18°♏19'41	
direct	14807 Apr 17 12:41	27°♏02'02			14813 Apr 23 13:36	15°♏♏	
	14807 Jun 17 01:57	0°♏		opposition	14813 Apr 24 09:14	14°♏56'13 0°06'25	
evening set	14807 Jul 29 04:22	4°♏35'51		min. Earth dist.	14813 Apr 23 20:28	14°♏58'41 8.67884 AU	
				direct	14813 Jul 01 22:17	11°♏35'44	
conjunction	14807 Aug 15 02:28	6°♏41'06 -1°34'36			14813 Sep 05 00:02	15°♏	
minimum elong	14807 Aug 15 02:30	6°♏41'06 1°35'07		evening set	14813 Oct 10 17:52	18°♏55'02	
max. Earth dist.	14807 Aug 15 11:22	6°♏43'52 10.57525 AU					
morning rise	14807 Sep 01 01:03	8°♏46'27		conjunction	14813 Oct 27 23:26	21°♏00'12 0°16'05	
retrograde	14807 Dec 13 00:26	16°♏21'20		minimum elong	14813 Oct 27 23:25	21°♏00'12 0°16'48	
opposition	14808 Feb 20 11:58	12°♏59'05 -1°50'11		max. Earth dist.	14813 Oct 28 14:44	21°♏04'51 10.67916 AU	
min. Earth dist.	14808 Feb 20 02:48	13°♏00'50 8.59121 AU		morning rise	14813 Nov 14 07:28	23°♏06'06	
direct	14808 Apr 29 17:26	9°♏37'24			14814 Jan 29 18:50	0°♏♏	
evening set	14808 Aug 09 21:01	17°♏07'37		retrograde	14814 Feb 26 09:08	0°♏38'11	
					14814 Mar 26 05:09	30°♏♏	
conjunction	14808 Aug 26 19:40	19°♏12'32 -1°22'59		opposition	14814 May 07 03:27	27°♏14'23 0°33'33	
minimum elong	14808 Aug 26 19:42	19°♏12'32 1°23'17		min. Earth dist.	14814 May 06 15:00	27°♏16'47 8.67821 AU	
max. Earth dist.	14808 Aug 27 07:58	19°♏16'20 10.60494 AU		direct	14814 Jul 14 14:27	23°♏53'40	
morning rise	14808 Sep 12 19:07	21°♏17'40			14814 Oct 13 00:25	0°♏♏	
retrograde	14808 Dec 25 01:00	28°♏51'36		evening set	14814 Oct 23 09:19	1°♏12'54	
opposition	14809 Mar 04 15:32	25°♏29'09 -1°33'14					
min. Earth dist.	14809 Mar 04 03:53	25°♏31'23 8.61939 AU		conjunction	14814 Nov 09 16:24	3°♏18'24 0°37'36	
direct	14809 May 12 17:48	22°♏08'01		minimum elong	14814 Nov 09 16:23	3°♏18'23 0°38'27	
evening set	14809 Aug 22 11:54	29°♏34'50		max. Earth dist.	14814 Nov 10 06:39	3°♏22'44 10.67548 AU	
	14809 Aug 25 22:59	0°♏		morning rise	14814 Nov 27 02:00	5°♏24'38	
				retrograde	14815 Mar 11 06:23	12°♏57'01	
conjunction	14809 Sep 08 11:27	1°♏39'32 -1°07'31		opposition	14815 May 19 20:29	9°♏32'57 0°59'09	
minimum elong	14809 Sep 08 11:29	1°♏39'33 1°07'35		min. Earth dist.	14815 May 19 09:33	9°♏35'04 8.67177 AU	
max. Earth dist.	14809 Sep 09 01:59	1°♏44'01 10.63153 AU		direct	14815 Jul 27 03:49	6°♏11'50	
morning rise	14809 Sep 25 12:15	3°♏44'38		evening set	14815 Nov 05 02:35	13°♏31'48	
retrograde	14810 Jan 06 23:46	11°♏17'40					
opposition	14810 Mar 17 17:04	7°♏55'00 -1°12'02		conjunction	14815 Nov 22 11:01	15°♏37'40 0°57'26	
min. Earth dist.	14810 Mar 17 04:16	7°♏57'27 8.64347 AU		minimum elong	14815 Nov 22 10:59	15°♏37'39 0°58'22	
direct	14810 May 25 14:54	4°♏34'16		max. Earth dist.	14815 Nov 22 22:32	15°♏41'10 10.66605 AU	
evening set	14810 Sep 04 01:28	11°♏58'09		morning rise	14815 Dec 09 22:04	17°♏44'17	
				retrograde	14816 Mar 23 02:13	25°♏17'10	
conjunction	14810 Sep 21 02:11	14°♏02'47 -0°48'58		opposition	14816 May 31 13:00	21°♏52'53 1°22'06	
minimum elong	14810 Sep 21 02:13	14°♏02'47 0°48'49		min. Earth dist.	14816 May 31 04:37	21°♏54'31 8.65977 AU	
max. Earth dist.	14810 Sep 21 17:21	14°♏07'26 10.65304 AU		direct	14816 Aug 07 18:28	18°♏31'16	
morning rise	14810 Oct 08 04:47	16°♏07'56		evening set	14816 Nov 16 21:49	25°♏52'40	
retrograde	14811 Jan 19 20:47	23°♏40'22					
opposition	14811 Mar 30 16:26	20°♏17'28 -0°47'35		conjunction	14816 Dec 04 07:33	27°♏58'58 1°14'38	
min. Earth dist.	14811 Mar 30 03:34	20°♏19'56 8.66169 AU		minimum elong	14816 Dec 04 07:31	27°♏58'58 1°15'39	
direct	14811 Jun 07 11:30	16°♏56'57		max. Earth dist.	14816 Dec 04 16:14	28°♏01'37 10.65120 AU	
evening set	14811 Sep 16 14:38	24°♏18'36			14816 Dec 20 23:44	0°♏♏	
				morning rise	14816 Dec 21 19:48	0°♏05'59	
conjunction	14811 Oct 03 16:49	26°♏23'19 -0°28'14		retrograde	14817 Apr 04 22:05	7°♏39'35	
minimum elong	14811 Oct 03 16:50	26°♏23'19 0°27'52		opposition	14817 Jun 13 05:19	4°♏15'07 1°41'18	
max. Earth dist.	14811 Oct 04 07:44	26°♏27'53 10.66817 AU		min. Earth dist.	14817 Jun 12 23:15	4°♏16'18 8.64265 AU	
morning rise	14811 Oct 20 21:23	28°♏28'40		direct	14817 Aug 20 10:59	0°♏52'54	
	14811 Nov 02 21:14	0°♏		evening set	14817 Nov 29 19:29	8°♏16'22	

conjunction	14817 Dec 17 06:34	10° $\text{S}$ 23'12	1°28'26	conjunction	14824 Mar 05 02:56	26° $\text{K}$ 19'23	1°14'32
minimum elong	14817 Dec 17 06:33	10° $\text{S}$ 23'12	1°29'27	minimum elong	14824 Mar 05 02:58	26° $\text{K}$ 19'24	1°14'42
max. Earth dist.	14817 Dec 17 12:44	10° $\text{S}$ 25'05	10.63154 AU	max. Earth dist.	14824 Mar 04 14:34	26° $\text{K}$ 15'33	10.47103 AU
morning rise	14818 Jan 03 19:45	12° $\text{S}$ 30'39		morning rise	14824 Mar 22 18:31	28° $\text{K}$ 29'52	
retrograde	14818 Apr 17 20:31	20° $\text{S}$ 05'03			14824 Apr 04 09:29	0° $\text{Y}$	
opposition	14818 Jun 25 21:45	16° $\text{S}$ 40'28	1°55'53	retrograde	14824 Jul 03 10:14	6° $\text{Y}$ 08'22	
min. Earth dist.	14818 Jun 25 17:47	16° $\text{S}$ 41'15	8.62106 AU	opposition	14824 Sep 09 04:13	2° $\text{Y}$ 44'42	1°21'36
direct	14818 Sep 02 02:36	13° $\text{S}$ 17'37		min. Earth dist.	14824 Sep 09 14:18	2° $\text{Y}$ 42'42	8.46040 AU
evening set	14818 Dec 12 19:43	20° $\text{S}$ 43'39			14824 Oct 19 10:20	30° $\text{K}$	
				direct	14824 Nov 16 18:28	29° $\text{K}$ 18'43	
conjunction	14818 Dec 30 08:07	22° $\text{S}$ 51'04	1°38'08		14824 Dec 14 23:40	0° $\text{Y}$	
minimum elong	14818 Dec 30 08:06	22° $\text{S}$ 51'04	1°39'07	evening set	14825 Feb 28 23:38	7° $\text{Y}$ 03'27	
max. Earth dist.	14818 Dec 30 11:39	22° $\text{S}$ 52'09	10.60779 AU				
morning rise	14819 Jan 16 22:02	24° $\text{S}$ 59'00		conjunction	14825 Mar 18 16:26	9° $\text{Y}$ 14'40	0°56'30
	14819 Mar 05 10:24	0° $\approx$		minimum elong	14825 Mar 18 16:28	9° $\text{Y}$ 14'41	0°56'26
retrograde	14819 Apr 30 19:35	2° $\approx$ 34'16		max. Earth dist.	14825 Mar 18 02:28	9° $\text{Y}$ 10'19	10.44989 AU
	14819 Jun 27 20:10	30° $\text{K}$		morning rise	14825 Apr 05 07:27	11° $\text{Y}$ 25'27	
opposition	14819 Jul 08 14:54	29° $\text{S}$ 09'37	2°05'05	retrograde	14825 Jul 16 16:57	19° $\text{Y}$ 04'11	
min. Earth dist.	14819 Jul 08 13:12	29° $\text{S}$ 09'57	8.59576 AU	opposition	14825 Sep 22 08:22	15° $\text{Y}$ 40'53	0°57'20
direct	14819 Sep 14 19:54	25° $\text{S}$ 46'06		min. Earth dist.	14825 Sep 22 19:50	15° $\text{Y}$ 38'37	8.44138 AU
	14819 Nov 27 02:26	0° $\approx$		direct	14825 Nov 30 01:43	12° $\text{Y}$ 14'44	
evening set	14819 Dec 25 22:38	3° $\approx$ 15'07		evening set	14826 Mar 14 14:23	20° $\text{Y}$ 01'47	
conjunction	14820 Jan 12 12:08	5° $\approx$ 23'11	1°43'14	conjunction	14826 Apr 01 06:32	22° $\text{Y}$ 13'13	0°35'31
minimum elong	14820 Jan 12 12:08	5° $\approx$ 23'11	1°44'07	minimum elong	14826 Apr 01 06:34	22° $\text{Y}$ 13'14	0°35'13
max. Earth dist.	14820 Jan 12 12:01	5° $\approx$ 23'09	10.58093 AU	max. Earth dist.	14826 Mar 31 14:57	22° $\text{Y}$ 08'22	10.43365 AU
morning rise	14820 Jan 30 02:41	7° $\approx$ 31'37		morning rise	14826 Apr 18 20:33	24° $\text{Y}$ 24'07	
	14820 Apr 30 16:24	15° $\approx$			14826 Jun 11 01:44	0° $\text{S}$	
retrograde	14820 May 12 20:00	15° $\approx$ 07'44		retrograde	14826 Jul 29 23:48	2° $\text{S}$ 02'55	
	14820 May 24 23:38	15° $\text{K}$			14826 Sep 18 06:21	30° $\text{K}$	
opposition	14820 Jul 20 09:14	11° $\approx$ 43'07	2°08'23	opposition	14826 Oct 05 14:33	28° $\text{Y}$ 40'00	0°30'03
min. Earth dist.	14820 Jul 20 10:37	11° $\approx$ 42'51	8.56792 AU	min. Earth dist.	14826 Oct 06 03:17	28° $\text{Y}$ 37'29	8.42777 AU
direct	14820 Sep 26 14:42	8° $\approx$ 18'57		direct	14826 Dec 13 11:39	25° $\text{Y}$ 13'46	
	14820 Dec 30 23:41	15° $\approx$			14827 Mar 02 00:53	0° $\text{S}$	
evening set	14821 Jan 07 04:07	15° $\approx$ 51'12		evening set	14827 Mar 28 05:29	3° $\text{S}$ 02'34	
conjunction	14821 Jan 24 18:36	17° $\approx$ 59'58	1°43'23	conjunction	14827 Apr 14 20:23	5° $\text{S}$ 13'59	0°12'42
minimum elong	14821 Jan 24 18:37	17° $\approx$ 59'58	1°44'09	minimum elong	14827 Apr 14 20:24	5° $\text{S}$ 13'59	0°12'11
max. Earth dist.	14821 Jan 24 14:19	17° $\approx$ 58'39	10.55240 AU	behind sun begin	14827 Apr 14 15:35	5° $\text{S}$ 12'30	
morning rise	14821 Feb 11 09:47	20° $\approx$ 08'58		behind sun end	14827 Apr 15 01:12	5° $\text{S}$ 15'28	
retrograde	14821 May 25 22:07	27° $\approx$ 45'50		max. Earth dist.	14827 Apr 14 03:50	5° $\text{S}$ 08'49	10.42309 AU
opposition	14821 Aug 02 05:06	24° $\approx$ 21'21	2°05'30	morning rise	14827 May 02 08:59	7° $\text{S}$ 24'46	
min. Earth dist.	14821 Aug 02 09:40	24° $\approx$ 20'27	8.53905 AU		14827 Aug 04 05:05	15° $\text{S}$	
direct	14821 Oct 09 11:22	20° $\approx$ 56'32		retrograde	14827 Aug 12 07:31	15° $\text{S}$ 03'33	
evening set	14822 Jan 20 11:56	28° $\approx$ 32'09			14827 Aug 20 10:05	15° $\text{K}$	
	14822 Feb 01 12:11	0° $\text{K}$		opposition	14827 Oct 18 22:42	11° $\text{S}$ 40'57	0°01'09
				min. Earth dist.	14827 Oct 19 11:33	11° $\text{S}$ 38'25	8.42019 AU
conjunction	14822 Feb 07 03:23	0° $\text{K}$ 41'37	1°38'31	desc. node	14827 Nov 02 11:19	10° $\text{S}$ 33'27	
minimum elong	14822 Feb 07 03:25	0° $\text{K}$ 41'38	1°39'06	direct	14827 Dec 26 23:12	8° $\text{S}$ 14'46	
max. Earth dist.	14822 Feb 06 19:20	0° $\text{K}$ 39'08	10.52364 AU		14828 Mar 31 22:29	15° $\text{S}$	
morning rise	14822 Feb 24 19:06	2° $\text{K}$ 51'11		evening set	14828 Apr 09 20:03	16° $\text{S}$ 04'35	
retrograde	14822 Jun 07 23:47	10° $\text{K}$ 28'43					
opposition	14822 Aug 15 02:45	7° $\text{K}$ 04'26	1°56'29	conjunction	14828 Apr 27 09:14	18° $\text{S}$ 15'45	-0°10'54
min. Earth dist.	14822 Aug 15 09:57	7° $\text{K}$ 03'00	8.51054 AU	minimum elong	14828 Apr 27 09:14	18° $\text{S}$ 15'45	0°11'35
direct	14822 Oct 22 12:10	3° $\text{K}$ 39'06		behind sun begin	14828 Apr 27 04:07	18° $\text{S}$ 14'09	
evening set	14823 Feb 02 22:06	11° $\text{K}$ 18'02		behind sun end	14828 Apr 27 14:21	18° $\text{S}$ 17'20	
				max. Earth dist.	14828 Apr 26 17:18	18° $\text{S}$ 10'45	10.41856 AU
conjunction	14823 Feb 20 14:23	13° $\text{K}$ 28'11	1°28'46	morning rise	14828 May 14 19:55	20° $\text{S}$ 26'13	
minimum elong	14823 Feb 20 14:25	13° $\text{K}$ 28'12	1°29'09	retrograde	14828 Aug 24 15:07	28° $\text{S}$ 04'54	
max. Earth dist.	14823 Feb 20 03:42	13° $\text{K}$ 24'53	10.49604 AU	opposition	14828 Oct 31 08:20	24° $\text{S}$ 42'34	-0°27'51
morning rise	14823 Mar 10 06:13	15° $\text{K}$ 38'15		min. Earth dist.	14828 Oct 31 20:13	24° $\text{S}$ 40'14	8.41860 AU
retrograde	14823 Jun 21 03:32	23° $\text{K}$ 16'20		direct	14829 Jan 08 12:35	21° $\text{S}$ 16'32	
opposition	14823 Aug 28 02:20	19° $\text{K}$ 52'20	1°41'38	evening set	14829 Apr 23 09:47	29° $\text{S}$ 06'42	
min. Earth dist.	14823 Aug 28 11:07	19° $\text{K}$ 50'35	8.48385 AU		14829 Apr 30 13:57	0° $\text{II}$	
direct	14823 Nov 04 14:52	16° $\text{K}$ 26'37					
evening set	14824 Feb 16 10:08	24° $\text{K}$ 08'38		conjunction	14829 May 10 20:53	1° $\text{II}$ 17'24	-0°33'51
				minimum elong	14829 May 10 20:52	1° $\text{II}$ 17'24	0°34'41

max. Earth dist.	14829 May 10 06:30	1° $\Pi$ 12'53	10.41960 AU	max. Earth dist.	14835 Jul 28 03:34	18° $\Omega$ 45'03	10.51112 AU
morning rise	14829 May 28 05:14	3° $\Pi$ 27'21		morning rise	14835 Aug 13 21:58	20° $\Omega$ 50'05	
retrograde	14829 Sep 06 22:38	11° $\Pi$ 05'55		retrograde	14835 Nov 24 14:43	28° $\Omega$ 27'29	
opposition	14829 Nov 13 18:58	7° $\Pi$ 43'47	-0°55'25	opposition	14836 Feb 01 16:56	25° $\Omega$ 05'03	-2°05'19
min. Earth dist.	14829 Nov 14 05:29	7° $\Pi$ 41'43	8.42218 AU	min. Earth dist.	14836 Feb 01 12:03	25° $\Omega$ 06'00	8.52504 AU
direct	14830 Jan 22 02:39	4° $\Pi$ 18'00		direct	14836 Apr 11 00:23	21° $\Omega$ 42'04	
evening set	14830 May 06 22:06	12° $\Pi$ 07'58		evening set	14836 Jul 22 22:04	29° $\Omega$ 18'48	
					14836 Jul 28 12:13	0° $\Pi$	
conjunction	14830 May 24 06:45	14° $\Pi$ 18'01	-0°55'04	conjunction	14836 Aug 08 20:27	1° $\Pi$ 24'38	-1°38'15
minimum elong	14830 May 24 06:43	14° $\Pi$ 18'00	0°56'00	minimum elong	14836 Aug 08 20:28	1° $\Pi$ 24'38	1°38'51
max. Earth dist.	14830 May 23 18:21	14° $\Pi$ 14'07	10.42513 AU	max. Earth dist.	14836 Aug 09 03:39	1° $\Pi$ 26'53	10.53712 AU
morning rise	14830 Jun 10 12:35	16° $\Pi$ 27'19		morning rise	14836 Aug 25 18:46	3° $\Pi$ 30'28	
retrograde	14830 Sep 20 07:36	24° $\Pi$ 05'54		retrograde	14836 Dec 06 17:11	11° $\Pi$ 07'03	
opposition	14830 Nov 27 06:46	20° $\Pi$ 43'56	-1°20'06	opposition	14837 Feb 14 00:49	7° $\Pi$ 44'20	-1°56'01
min. Earth dist.	14830 Nov 27 15:52	20° $\Pi$ 42'09	8.42980 AU	min. Earth dist.	14837 Feb 13 17:28	7° $\Pi$ 45'45	8.55130 AU
direct	14831 Feb 04 15:35	17° $\Pi$ 18'31		direct	14837 Apr 24 06:21	4° $\Pi$ 21'48	
evening set	14831 May 20 08:26	25° $\Pi$ 07'45		evening set	14837 Aug 04 16:37	11° $\Pi$ 55'00	
conjunction	14831 Jun 06 14:26	27° $\Pi$ 17'04	-1°13'25	conjunction	14837 Aug 21 15:03	14° $\Pi$ 00'26	-1°28'31
minimum elong	14831 Jun 06 14:24	27° $\Pi$ 17'04	1°14'25	minimum elong	14837 Aug 21 15:05	14° $\Pi$ 00'26	1°28'54
max. Earth dist.	14831 Jun 06 04:01	27° $\Pi$ 13'48	10.43440 AU	max. Earth dist.	14837 Aug 22 00:49	14° $\Pi$ 03'27	10.56356 AU
morning rise	14831 Jun 23 17:53	29° $\Pi$ 25'42		morning rise	14837 Sep 07 14:14	16° $\Pi$ 06'02	
	14831 Jun 28 10:00	0° $\Xi$		retrograde	14837 Dec 19 18:14	23° $\Pi$ 41'44	
retrograde	14831 Oct 03 16:22	7° $\Xi$ 04'22		opposition	14838 Feb 27 06:36	20° $\Pi$ 18'44	-1°41'11
opposition	14831 Dec 10 19:15	3° $\Xi$ 42'32	-1°40'37	min. Earth dist.	14838 Feb 26 21:18	20° $\Pi$ 20'31	8.57729 AU
min. Earth dist.	14831 Dec 11 02:47	3° $\Xi$ 41'04	8.44130 AU	direct	14838 May 07 09:09	16° $\Pi$ 56'38	
direct	14832 Feb 18 04:04	0° $\Xi$ 17'34		evening set	14838 Aug 17 09:03	24° $\Pi$ 26'22	
evening set	14832 Jun 01 16:42	8° $\Xi$ 05'29					
conjunction	14832 Jun 18 20:09	10° $\Xi$ 14'01	-1°28'00	conjunction	14838 Sep 03 08:11	26° $\Pi$ 31'32	-1°14'36
minimum elong	14832 Jun 18 20:07	10° $\Xi$ 14'01	1°29'00	minimum elong	14838 Sep 03 08:13	26° $\Pi$ 31'33	1°14'46
max. Earth dist.	14832 Jun 18 12:01	10° $\Xi$ 11'28	10.44779 AU	max. Earth dist.	14838 Sep 03 20:16	26° $\Pi$ 35'17	10.58916 AU
morning rise	14832 Jul 05 21:36	12° $\Xi$ 21'59		morning rise	14838 Sep 20 08:40	28° $\Pi$ 37'04	
retrograde	14832 Oct 15 22:17	20° $\Xi$ 00'37			14838 Oct 01 23:55	0° $\Omega$	
opposition	14832 Dec 23 07:45	16° $\Xi$ 38'49	-1°55'58	retrograde	14839 Jan 01 17:09	6° $\Omega$ 11'53	
min. Earth dist.	14832 Dec 23 13:02	16° $\Xi$ 37'47	8.45705 AU	opposition	14839 Mar 12 10:01	2° $\Omega$ 48'35	-1°21'38
direct	14833 Mar 02 17:57	13° $\Xi$ 14'19		min. Earth dist.	14839 Mar 11 22:34	2° $\Omega$ 50'47	8.60176 AU
evening set	14833 Jun 14 22:25	21° $\Xi$ 00'18			14839 Apr 24 19:19	30° $\mathbb{R}$ $\Pi$	
conjunction	14833 Jul 01 23:44	23° $\Xi$ 08'02	-1°38'06	direct	14839 May 20 09:49	29° $\Pi$ 26'53	
minimum elong	14833 Jul 01 23:43	23° $\Xi$ 08'02	1°39'04	evening set	14839 Jun 14 17:13	0° $\Omega$	
max. Earth dist.	14833 Jul 01 18:44	23° $\Xi$ 06'28	10.46545 AU		14839 Aug 29 23:49	6° $\Omega$ 53'27	
morning rise	14833 Jul 18 23:35	25° $\Xi$ 15'20		conjunction	14839 Sep 16 00:13	8° $\Omega$ 58'31	-0°57'14
	14833 Aug 31 01:08	0° $\Omega$		minimum elong	14839 Sep 16 00:15	8° $\Omega$ 58'31	0°57'10
retrograde	14833 Oct 29 04:25	2° $\Omega$ 53'47		max. Earth dist.	14839 Sep 16 14:57	9° $\Omega$ 03'03	10.61256 AU
	14833 Dec 30 17:56	30° $\mathbb{R}$ $\Xi$		morning rise	14839 Oct 03 02:17	11° $\Omega$ 04'03	
opposition	14834 Jan 05 19:58	29° $\Xi$ 31'52	-2°05'24	retrograde	14840 Jan 14 15:18	18° $\Omega$ 38'06	
min. Earth dist.	14834 Jan 05 22:07	29° $\Xi$ 31'27	8.47680 AU	opposition	14840 Mar 24 11:05	15° $\Omega$ 14'31	-0°58'22
direct	14834 Mar 16 07:02	26° $\Xi$ 07'52		min. Earth dist.	14840 Mar 23 21:40	15° $\Omega$ 17'05	8.62334 AU
	14834 May 25 03:41	0° $\Omega$		direct	14840 Jun 01 08:44	11° $\Omega$ 53'09	
evening set	14834 Jun 28 01:10	3° $\Omega$ 51'13		evening set	14840 Sep 10 13:52	19° $\Omega$ 17'02	
conjunction	14834 Jul 15 00:54	5° $\Omega$ 58'13	-1°43'15	conjunction	14840 Sep 27 15:43	21° $\Omega$ 22'05	-0°37'15
minimum elong	14834 Jul 15 00:54	5° $\Omega$ 58'13	1°44'08	minimum elong	14840 Sep 27 15:44	21° $\Omega$ 22'06	0°36'58
max. Earth dist.	14834 Jul 15 00:09	5° $\Omega$ 57'59	10.48685 AU	max. Earth dist.	14840 Sep 28 08:23	21° $\Omega$ 27'12	10.63243 AU
morning rise	14834 Jul 31 23:35	8° $\Omega$ 04'54		morning rise	14840 Oct 14 19:27	23° $\Omega$ 27'42	
	14834 Oct 13 16:11	15° $\Omega$			14840 Dec 22 13:23	0° $\mathbb{M}$	
retrograde	14834 Nov 11 10:26	15° $\Omega$ 42'58		retrograde	14841 Jan 26 14:12	1° $\mathbb{M}$ .01'07	
	14834 Dec 10 15:18	15° $\mathbb{R}$ $\Omega$			14841 Mar 03 02:17	30° $\mathbb{R}$ $\Omega$	
opposition	14835 Jan 19 07:15	12° $\Omega$ 20'49	-2°08'32	opposition	14841 Apr 06 09:56	27° $\Omega$ 37'18	-0°32'29
min. Earth dist.	14835 Jan 19 05:34	12° $\Omega$ 21'08	8.49979 AU	min. Earth dist.	14841 Apr 05 19:25	27° $\Omega$ 40'06	8.64097 AU
direct	14835 Mar 29 17:07	8° $\Omega$ 57'20		direct	14841 Jun 14 03:21	24° $\Omega$ 16'11	
	14835 Jun 27 11:09	15° $\Omega$			14841 Sep 09 04:47	0° $\mathbb{M}$	
evening set	14835 Jul 11 01:02	16° $\Omega$ 37'31		evening set	14841 Sep 23 03:45	1° $\mathbb{M}$ .38'00	
conjunction	14835 Jul 27 23:50	18° $\Omega$ 43'53	-1°43'17	conjunction	14841 Oct 10 07:04	3° $\mathbb{M}$ .43'08	-0°15'38
minimum elong	14835 Jul 27 23:51	18° $\Omega$ 43'53	1°44'02	minimum elong	14841 Oct 10 07:05	3° $\mathbb{M}$ .43'08	0°15'09

behind sun begin	14841 Oct 10 04:37	3° $\mathbb{M}$ 42'23		conjunction	14847 Dec 25 05:06	17° $\mathbb{Z}$ 53'00	1°34'27
behind sun end	14841 Oct 10 09:32	3° $\mathbb{M}$ 43'53		minimum elong	14847 Dec 25 05:05	17° $\mathbb{Z}$ 52'59	1°35'27
max. Earth dist.	14841 Oct 11 00:16	3° $\mathbb{M}$ 48'23	10.64795 AU	max. Earth dist.	14847 Dec 25 10:33	17° $\mathbb{Z}$ 54'39	10.63119 AU
morning rise	14841 Oct 27 12:40	5° $\mathbb{M}$ 48'56		morning rise	14848 Jan 11 18:42	20° $\mathbb{Z}$ 00'35	
retrograde	14842 Feb 08 11:11	13° $\mathbb{M}$ 21'54		retrograde	14848 Apr 24 18:06	27° $\mathbb{Z}$ 35'06	
opposition	14842 Apr 19 07:02	9° $\mathbb{M}$ 57'54	-0°05'12	opposition	14848 Jul 02 15:50	24° $\mathbb{Z}$ 11'04	2°01'39
min. Earth dist.	14842 Apr 18 16:46	10° $\mathbb{M}$ 00'39	8.65401 AU	min. Earth dist.	14848 Jul 02 12:55	24° $\mathbb{Z}$ 11'38	8.62255 AU
direct	14842 Jun 26 20:30	6° $\mathbb{M}$ 36'54		direct	14848 Sep 08 19:58	20° $\mathbb{Z}$ 48'25	
asc. node	14842 Jun 28 22:58	6° $\mathbb{M}$ 37'08		evening set	14848 Dec 19 19:08	28° $\mathbb{Z}$ 15'40	
evening set	14842 Oct 05 17:58	13° $\mathbb{M}$ 57'23			14849 Jan 03 03:48	0° $\approx$	
	14842 Oct 14 09:28	15° $\mathbb{M}$					
conjunction	14842 Oct 22 22:47	16° $\mathbb{M}$ 02'39	0°06'46	conjunction	14849 Jan 06 07:55	0° $\approx$ 23'15	1°41'29
minimum elong	14842 Oct 22 22:47	16° $\mathbb{M}$ 02'39	0°07'25	minimum elong	14849 Jan 06 07:55	0° $\approx$ 23'15	1°42'25
behind sun begin	14842 Oct 22 16:17	16° $\mathbb{M}$ 00'41		max. Earth dist.	14849 Jan 06 09:27	0° $\approx$ 23'43	10.61068 AU
behind sun end	14842 Oct 23 05:18	16° $\mathbb{M}$ 04'37		morning rise	14849 Jan 23 22:14	2° $\approx$ 31'16	
max. Earth dist.	14842 Oct 23 15:07	16° $\mathbb{M}$ 07'38	10.65854 AU	retrograde	14849 May 07 16:58	10° $\approx$ 06'25	
morning rise	14842 Nov 09 06:18	18° $\mathbb{M}$ 08'41		opposition	14849 Jul 15 09:33	6° $\approx$ 42'25	2°07'25
retrograde	14843 Feb 21 07:11	25° $\mathbb{M}$ 41'27		min. Earth dist.	14849 Jul 15 09:35	6° $\approx$ 42'25	8.59980 AU
opposition	14843 May 02 02:27	22° $\mathbb{M}$ 17'20	0°22'15	direct	14849 Sep 21 15:07	3° $\approx$ 19'10	
min. Earth dist.	14843 May 01 13:10	22° $\mathbb{M}$ 19'54	8.66197 AU	evening set	14850 Jan 01 23:15	10° $\approx$ 49'19	
direct	14843 Jul 09 13:28	18° $\mathbb{M}$ 56'19		conjunction	14850 Jan 19 13:16	12° $\approx$ 57'32	1°43'43
evening set	14843 Oct 18 09:19	26° $\mathbb{M}$ 16'13		minimum elong	14850 Jan 19 13:16	12° $\approx$ 57'33	1°44'31
				max. Earth dist.	14850 Jan 19 11:20	12° $\approx$ 56'57	10.58561 AU
conjunction	14843 Nov 04 15:42	28° $\mathbb{M}$ 21'44	0°28'42		14850 Feb 05 07:54	15° $\approx$	
minimum elong	14843 Nov 04 15:41	28° $\mathbb{M}$ 21'44	0°29'30	morning rise	14850 Feb 06 04:07	15° $\approx$ 06'03	
max. Earth dist.	14843 Nov 05 07:02	28° $\mathbb{M}$ 26'24	10.66376 AU	retrograde	14850 May 20 18:38	22° $\approx$ 41'52	
	14843 Nov 18 03:20	0° $\mathbb{Z}$		opposition	14850 Jul 28 04:14	19° $\approx$ 17'59	2°07'08
morning rise	14843 Nov 22 00:51	0° $\mathbb{Z}$ 28'01		min. Earth dist.	14850 Jul 28 06:58	19° $\approx$ 17'26	8.57276 AU
retrograde	14844 Mar 05 03:36	8° $\mathbb{Z}$ 00'47		direct	14850 Oct 04 10:14	15° $\approx$ 54'07	
opposition	14844 May 13 20:23	4° $\mathbb{Z}$ 36'36	0°48'39	evening set	14851 Jan 15 05:48	23° $\approx$ 27'29	
min. Earth dist.	14844 May 13 08:05	4° $\mathbb{Z}$ 38'59	8.66455 AU				
direct	14844 Jul 21 04:55	1° $\mathbb{Z}$ 15'29		conjunction	14851 Feb 01 20:54	25° $\approx$ 36'25	1°40'56
evening set	14844 Oct 30 02:08	8° $\mathbb{Z}$ 35'36		minimum elong	14851 Feb 01 20:55	25° $\approx$ 36'26	1°41'36
				max. Earth dist.	14851 Feb 01 15:18	25° $\approx$ 34'42	10.55709 AU
conjunction	14844 Nov 16 10:04	10° $\mathbb{Z}$ 41'24	0°49'21	morning rise	14851 Feb 19 12:09	27° $\approx$ 45'29	
minimum elong	14844 Nov 16 10:02	10° $\mathbb{Z}$ 41'23	0°50'15		14851 Mar 10 19:36	0° $\mathbb{H}$	
max. Earth dist.	14844 Nov 17 00:33	10° $\mathbb{Z}$ 45'49	10.66348 AU	retrograde	14851 Jun 02 20:29	5° $\mathbb{H}$ 21'59	
morning rise	14844 Dec 03 20:32	12° $\mathbb{Z}$ 47'57		opposition	14851 Aug 10 00:39	1° $\mathbb{H}$ 58'14	2°00'41
retrograde	14845 Mar 18 00:02	20° $\mathbb{Z}$ 21'00		min. Earth dist.	14851 Aug 10 06:13	1° $\mathbb{H}$ 57'08	8.54322 AU
opposition	14845 May 26 13:32	16° $\mathbb{Z}$ 56'47	1°12'49		14851 Sep 05 15:46	30° $\mathbb{R}$ $\approx$	
min. Earth dist.	14845 May 26 02:09	16° $\mathbb{Z}$ 58'59	8.66174 AU	direct	14851 Oct 17 08:34	28° $\approx$ 33'45	
direct	14845 Aug 02 20:30	13° $\mathbb{Z}$ 35'28			14851 Nov 27 12:26	0° $\mathbb{H}$	
evening set	14845 Nov 11 20:49	20° $\mathbb{Z}$ 56'28		evening set	14852 Jan 28 14:31	6° $\mathbb{H}$ 10'27	
conjunction	14845 Nov 29 06:08	23° $\mathbb{Z}$ 02'38	1°07'44	conjunction	14852 Feb 15 06:24	8° $\mathbb{H}$ 20'04	1°33'14
minimum elong	14845 Nov 29 06:06	23° $\mathbb{Z}$ 02'37	1°08'42	minimum elong	14852 Feb 15 06:26	8° $\mathbb{H}$ 20'05	1°33'42
max. Earth dist.	14845 Nov 29 19:02	23° $\mathbb{Z}$ 06'33	10.65781 AU	max. Earth dist.	14852 Feb 14 21:02	8° $\mathbb{H}$ 17'11	10.52732 AU
morning rise	14845 Dec 16 17:44	25° $\mathbb{Z}$ 09'29		morning rise	14852 Mar 03 21:57	10° $\mathbb{H}$ 29'40	
	14846 Jan 31 11:18	0° $\mathbb{Z}$		retrograde	14852 Jun 14 23:34	18° $\mathbb{H}$ 06'47	
retrograde	14846 Mar 30 21:58	2° $\mathbb{Z}$ 42'59		opposition	14852 Aug 21 23:03	14° $\mathbb{H}$ 43'11	1°48'17
	14846 May 30 09:05	30° $\mathbb{R}$ $\mathbb{Z}$		min. Earth dist.	14852 Aug 22 07:35	14° $\mathbb{H}$ 41'30	8.51350 AU
opposition	14846 Jun 08 06:15	29° $\mathbb{Z}$ 18'46	1°33'39	direct	14852 Oct 29 09:17	11° $\mathbb{H}$ 18'07	
min. Earth dist.	14846 Jun 07 20:50	29° $\mathbb{Z}$ 20'37	8.65366 AU	evening set	14853 Feb 10 01:17	18° $\mathbb{H}$ 57'59	
direct	14846 Aug 15 11:24	25° $\mathbb{Z}$ 57'09					
	14846 Oct 25 23:30	0° $\mathbb{Z}$		conjunction	14853 Feb 27 17:41	21° $\mathbb{H}$ 08'16	1°20'53
evening set	14846 Nov 24 17:59	3° $\mathbb{Z}$ 19'43		minimum elong	14853 Feb 27 17:43	21° $\mathbb{H}$ 08'16	1°21'08
				max. Earth dist.	14853 Feb 27 04:38	21° $\mathbb{H}$ 04'14	10.49854 AU
conjunction	14846 Dec 12 04:29	5° $\mathbb{Z}$ 26'17	1°23'01	morning rise	14853 Mar 17 09:21	23° $\mathbb{H}$ 18'21	
minimum elong	14846 Dec 12 04:27	5° $\mathbb{Z}$ 26'16	1°24'01		14853 May 26 10:59	0° $\mathbb{Y}$	
max. Earth dist.	14846 Dec 12 14:04	5° $\mathbb{Z}$ 29'12	10.64696 AU	retrograde	14853 Jun 28 03:55	0° $\mathbb{Y}$ 55'53	
morning rise	14846 Dec 29 17:08	7° $\mathbb{Z}$ 33'29			14853 Jul 31 02:58	30° $\mathbb{R}$ $\mathbb{H}$	
retrograde	14847 Apr 12 20:58	15° $\mathbb{Z}$ 07'28		opposition	14853 Sep 03 23:21	27° $\mathbb{H}$ 32'27	1°30'26
opposition	14847 Jun 20 22:49	11° $\mathbb{Z}$ 43'20	1°50'12	min. Earth dist.	14853 Sep 04 10:23	27° $\mathbb{H}$ 30'15	8.48566 AU
min. Earth dist.	14847 Jun 20 16:29	11° $\mathbb{Z}$ 44'35	8.64053 AU	direct	14853 Nov 11 12:15	24° $\mathbb{H}$ 06'51	
direct	14847 Aug 28 01:45	8° $\mathbb{Z}$ 21'15			14854 Feb 08 02:30	0° $\mathbb{Y}$	
evening set	14847 Dec 07 17:30	15° $\mathbb{Z}$ 45'58		evening set	14854 Feb 23 13:34	1° $\mathbb{Y}$ 49'37	

conjunction	14854 Mar 13 06:12	4° $\Upsilon$ 00'26	1°04'25	conjunction	14860 May 31 02:15	21° $\Pi$ 49'50	-1°05'49
minimum elong	14854 Mar 13 06:15	4° $\Upsilon$ 00'26	1°04'27	minimum elong	14860 May 31 02:13	21° $\Pi$ 49'49	1°06'48
max. Earth dist.	14854 Mar 12 14:49	3° $\Upsilon$ 55'39	10.47240 AU	max. Earth dist.	14860 May 30 14:27	21° $\Pi$ 46'07	10.42618 AU
morning rise	14854 Mar 30 21:36	6° $\Upsilon$ 10'55		morning rise	14860 Jun 17 06:57	23° $\Pi$ 58'44	
retrograde	14854 Jul 11 08:08	13° $\Upsilon$ 48'43			14860 Aug 14 19:51	0° $\Theta$	
opposition	14854 Sep 17 01:44	10° $\Upsilon$ 25'26	1°07'56	retrograde	14860 Sep 27 01:06	1° $\Theta$ 36'54	
min. Earth dist.	14854 Sep 17 14:05	10° $\Upsilon$ 22'59	8.46109 AU		14860 Nov 10 11:57	30° $\kappa$ $\Pi$	
direct	14854 Nov 24 19:12	6° $\Upsilon$ 59'25		opposition	14860 Dec 04 04:27	28° $\Pi$ 14'31	-1°32'13
evening set	14855 Mar 09 02:57	14° $\Upsilon$ 44'42		min. Earth dist.	14860 Dec 04 12:07	28° $\Pi$ 13'02	8.43324 AU
				direct	14861 Feb 11 15:25	24° $\Pi$ 48'52	
conjunction	14855 Mar 26 19:21	16° $\Upsilon$ 55'51	0°44'39		14861 May 04 23:16	0° $\Theta$	
minimum elong	14855 Mar 26 19:23	16° $\Upsilon$ 55'51	0°44'27	evening set	14861 May 27 03:38	2° $\Theta$ 36'55	
max. Earth dist.	14855 Mar 26 02:59	16° $\Upsilon$ 50'45	10.45014 AU				
morning rise	14855 Apr 13 09:53	19° $\Upsilon$ 06'32		conjunction	14861 Jun 13 08:18	4° $\Theta$ 45'44	-1°22'07
retrograde	14855 Jul 24 13:33	26° $\Upsilon$ 44'33		minimum elong	14861 Jun 13 08:16	4° $\Theta$ 45'44	1°23'07
opposition	14855 Sep 30 06:09	23° $\Upsilon$ 21'24	0°41'53	max. Earth dist.	14861 Jun 13 00:16	4° $\Theta$ 43'13	10.44043 AU
min. Earth dist.	14855 Sep 30 18:52	23° $\Upsilon$ 18'53	8.44103 AU	morning rise	14861 Jun 30 10:38	6° $\Theta$ 53'55	
direct	14855 Dec 08 03:42	19° $\Upsilon$ 55'06		retrograde	14861 Oct 10 07:54	14° $\Theta$ 31'58	
evening set	14856 Mar 21 16:53	27° $\Upsilon$ 42'21		opposition	14861 Dec 17 16:04	11° $\Theta$ 09'43	-1°49'54
				min. Earth dist.	14861 Dec 17 20:49	11° $\Theta$ 08'47	8.45044 AU
conjunction	14856 Apr 08 08:29	29° $\Upsilon$ 53'40	0°22'34	direct	14862 Feb 25 03:54	7° $\Theta$ 44'39	
minimum elong	14856 Apr 08 08:30	29° $\Upsilon$ 53'40	0°22'09	evening set	14862 Jun 09 09:41	15° $\Theta$ 30'52	
max. Earth dist.	14856 Apr 07 16:06	29° $\Upsilon$ 48'33	10.43289 AU				
	14856 Apr 09 04:48	0° $\delta$		conjunction	14862 Jun 26 12:03	17° $\Theta$ 38'51	-1°34'13
morning rise	14856 Apr 25 21:39	2° $\delta$ 04'20		minimum elong	14862 Jun 26 12:02	17° $\Theta$ 38'51	1°35'12
retrograde	14856 Aug 05 21:07	9° $\delta$ 42'28		max. Earth dist.	14862 Jun 26 07:41	17° $\Theta$ 37'29	10.46000 AU
opposition	14856 Oct 12 12:30	6° $\delta$ 19'29	0°13'36	morning rise	14862 Jul 13 12:24	19° $\Theta$ 46'17	
min. Earth dist.	14856 Oct 13 01:17	6° $\delta$ 16'57	8.42653 AU	retrograde	14862 Oct 23 15:04	27° $\Theta$ 24'06	
direct	14856 Dec 20 12:38	2° $\delta$ 52'59		opposition	14862 Dec 31 03:44	24° $\Theta$ 01'57	-2°01'57
evening set	14857 Apr 04 06:49	10° $\delta$ 41'40		min. Earth dist.	14862 Dec 31 05:44	24° $\Theta$ 01'34	8.47250 AU
desc. node	14857 Apr 09 05:10	11° $\delta$ 18'07		direct	14863 Mar 10 14:43	20° $\Theta$ 37'33	
				evening set	14863 Jun 22 12:54	28° $\Theta$ 21'19	
conjunction	14857 Apr 21 20:58	12° $\delta$ 52'53	-0°00'49		14863 Jul 05 18:26	0° $\delta$	
minimum elong	14857 Apr 21 20:59	12° $\delta$ 52'53	0°01'26				
behind sun begin	14857 Apr 21 13:47	12° $\delta$ 50'40		conjunction	14863 Jul 09 13:17	0° $\delta$ 28'29	-1°41'34
behind sun end	14857 Apr 22 04:12	12° $\delta$ 55'07		minimum elong	14863 Jul 09 13:17	0° $\delta$ 28'29	1°42'29
max. Earth dist.	14857 Apr 21 04:42	12° $\delta$ 47'48	10.42147 AU	max. Earth dist.	14863 Jul 09 12:12	0° $\delta$ 28'09	10.48398 AU
	14857 May 08 21:21	15° $\delta$		morning rise	14863 Jul 26 12:19	2° $\delta$ 35'16	
morning rise	14857 May 09 08:26	15° $\delta$ 03'24		retrograde	14863 Nov 05 20:17	10° $\delta$ 12'41	
retrograde	14857 Aug 19 04:42	22° $\delta$ 41'33		opposition	14864 Jan 13 14:41	6° $\delta$ 50'35	-2°07'51
opposition	14857 Oct 25 20:41	19° $\delta$ 18'43	-0°15'27	min. Earth dist.	14864 Jan 13 14:13	6° $\delta$ 50'40	8.49837 AU
min. Earth dist.	14857 Oct 26 09:33	19° $\delta$ 16'11	8.41824 AU	direct	14864 Mar 23 00:13	3° $\delta$ 26'51	
direct	14858 Jan 02 23:29	15° $\delta$ 52'11		evening set	14864 Jul 04 13:25	11° $\delta$ 07'42	
evening set	14858 Apr 17 20:21	23° $\delta$ 41'44					
				conjunction	14864 Jul 21 12:23	13° $\delta$ 14'08	-1°43'51
conjunction	14858 May 05 08:25	25° $\delta$ 52'35	-0°24'05	minimum elong	14864 Jul 21 12:24	13° $\delta$ 14'08	1°44'39
minimum elong	14858 May 05 08:23	25° $\delta$ 52'35	0°24'52	max. Earth dist.	14864 Jul 21 14:17	13° $\delta$ 14'43	10.51125 AU
max. Earth dist.	14858 May 04 16:29	25° $\delta$ 47'36	10.41638 AU		14864 Aug 04 16:30	15° $\delta$	
morning rise	14858 May 22 17:46	28° $\delta$ 02'43		morning rise	14864 Aug 07 10:45	15° $\delta$ 20'21	
	14858 Jun 08 02:31	0° $\Pi$		retrograde	14864 Nov 17 23:14	22° $\delta$ 57'10	
retrograde	14858 Sep 01 10:49	5° $\Pi$ 40'53		opposition	14865 Jan 26 00:16	19° $\delta$ 35'03	-2°07'25
opposition	14858 Nov 08 06:17	2° $\Pi$ 18'14	-0°43'45	min. Earth dist.	14865 Jan 25 20:57	19° $\delta$ 35'42	8.52681 AU
min. Earth dist.	14858 Nov 08 18:32	2° $\Pi$ 15'49	8.41658 AU	direct	14865 Apr 05 09:01	16° $\delta$ 12'02	
	14858 Dec 10 10:06	30° $\kappa$ $\delta$		evening set	14865 Jul 17 11:08	23° $\delta$ 49'36	
direct	14859 Jan 16 12:57	28° $\delta$ 51'48					
	14859 Feb 22 04:14	0° $\Pi$		conjunction	14865 Aug 03 09:26	25° $\delta$ 55'25	-1°41'02
evening set	14859 May 01 08:40	6° $\Pi$ 41'33		minimum elong	14865 Aug 03 09:27	25° $\delta$ 55'25	1°41'42
				max. Earth dist.	14865 Aug 03 15:03	25° $\delta$ 57'10	10.54054 AU
conjunction	14859 May 18 18:17	8° $\Pi$ 51'51	-0°46'08	morning rise	14865 Aug 20 07:39	28° $\delta$ 01'11	
minimum elong	14859 May 18 18:15	8° $\Pi$ 51'51	0°47'02		14865 Sep 06 00:51	0° $\eta$	
max. Earth dist.	14859 May 18 03:45	8° $\Pi$ 47'17	10.41797 AU	retrograde	14865 Dec 01 01:50	5° $\eta$ 37'18	
morning rise	14859 Jun 05 01:22	11° $\Pi$ 01'26		opposition	14866 Feb 08 08:25	2° $\eta$ 15'06	-2°00'46
retrograde	14859 Sep 14 17:54	18° $\Pi$ 39'37		min. Earth dist.	14866 Feb 08 01:43	2° $\eta$ 16'23	8.55650 AU
opposition	14859 Nov 21 17:03	15° $\Pi$ 17'07	-1°09'48		14866 Mar 12 11:51	30° $\kappa$ $\delta$	
min. Earth dist.	14859 Nov 22 03:34	15° $\Pi$ 15'03	8.42172 AU	direct	14866 Apr 18 16:08	28° $\delta$ 52'47	
direct	14860 Jan 30 02:21	11° $\Pi$ 50'59			14866 May 25 00:19	0° $\eta$	
evening set	14860 May 13 19:07	19° $\Pi$ 40'12		evening set	14866 Jul 30 06:05	6° $\eta$ 26'46	

conjunction	14866 Aug 16 04:23	8° $\mathbb{M}$ 32'08	-1°33'22			14872 Aug 13 22:20	15° $\mathbb{M}$	
minimum elong	14866 Aug 16 04:25	8° $\mathbb{M}$ 32'09	1°33'51	evening set		14872 Oct 11 21:46	20° $\mathbb{M}$ 50'36	
max. Earth dist.	14866 Aug 16 14:01	8° $\mathbb{M}$ 35'08	10.57048 AU					
morning rise	14866 Sep 02 03:00	10° $\mathbb{M}$ 37'35		conjunction		14872 Oct 29 03:25	22° $\mathbb{M}$ 55'50	0°18'40
retrograde	14866 Dec 14 04:26	18° $\mathbb{M}$ 12'53		minimum elong		14872 Oct 29 03:24	22° $\mathbb{M}$ 55'50	0°19'24
opposition	14867 Feb 21 14:37	14° $\mathbb{M}$ 50'32	-1°48'22	max. Earth dist.		14872 Oct 29 18:55	23° $\mathbb{M}$ 00'33	10.67686 AU
min. Earth dist.	14867 Feb 21 04:51	14° $\mathbb{M}$ 52'25	8.58604 AU	morning rise		14872 Nov 15 11:32	25° $\mathbb{M}$ 01'48	
direct	14867 May 01 18:43	11° $\mathbb{M}$ 28'52				14873 Jan 01 17:30	0° $\mathbb{Z}$	
evening set	14867 Aug 11 23:02	18° $\mathbb{M}$ 59'19		retrograde		14873 Feb 27 14:58	2° $\mathbb{Z}$ 34'03	
						14873 Apr 27 11:12	30° $\mathbb{R}$ $\mathbb{M}$	
conjunction	14867 Aug 28 21:50	21° $\mathbb{M}$ 04'20	-1°21'17	opposition		14873 May 08 07:20	29° $\mathbb{M}$ 10'17	0°36'38
minimum elong	14867 Aug 28 21:52	21° $\mathbb{M}$ 04'21	1°21'33	min. Earth dist.		14873 May 07 18:58	29° $\mathbb{M}$ 12'40	8.67625 AU
max. Earth dist.	14867 Aug 29 10:39	21° $\mathbb{M}$ 08'18	10.59958 AU	direct		14873 Jul 15 16:19	25° $\mathbb{M}$ 49'34	
morning rise	14867 Sep 14 21:26	23° $\mathbb{M}$ 09'37				14873 Sep 26 12:03	0° $\mathbb{Z}$	
	14867 Nov 27 16:41	0° $\mathbb{A}$		evening set		14873 Oct 24 13:35	3° $\mathbb{Z}$ 09'02	
retrograde	14867 Dec 27 04:18	0° $\mathbb{A}$ 43'58						
	14868 Jan 26 01:10	30° $\mathbb{R}$ $\mathbb{M}$		conjunction		14873 Nov 10 20:38	5° $\mathbb{Z}$ 14'33	0°40'00
opposition	14868 Mar 05 18:30	27° $\mathbb{M}$ 21'28	-1°30'53	minimum elong		14873 Nov 10 20:37	5° $\mathbb{Z}$ 14'33	0°40'52
min. Earth dist.	14868 Mar 05 06:50	27° $\mathbb{M}$ 23'42	8.61392 AU	max. Earth dist.		14873 Nov 11 10:14	5° $\mathbb{Z}$ 18'41	10.67385 AU
direct	14868 May 13 19:17	24° $\mathbb{M}$ 00'19		morning rise		14873 Nov 28 06:23	7° $\mathbb{Z}$ 20'51	
	14868 Aug 11 06:20	0° $\mathbb{A}$		retrograde		14874 Mar 12 10:01	14° $\mathbb{Z}$ 53'21	
evening set	14868 Aug 23 14:17	1° $\mathbb{A}$ 27'27		opposition		14874 May 21 00:39	11° $\mathbb{Z}$ 29'19	1°01'57
				min. Earth dist.		14874 May 20 14:15	11° $\mathbb{Z}$ 31'20	8.67054 AU
conjunction	14868 Sep 09 13:55	3° $\mathbb{A}$ 32'16	-1°05'26	direct		14874 Jul 28 07:55	8° $\mathbb{Z}$ 08'11	
minimum elong	14868 Sep 09 13:57	3° $\mathbb{A}$ 32'17	1°05'28	evening set		14874 Nov 06 07:02	15° $\mathbb{Z}$ 28'22	
max. Earth dist.	14868 Sep 10 04:10	3° $\mathbb{A}$ 36'39	10.62618 AU					
morning rise	14868 Sep 26 15:02	5° $\mathbb{A}$ 37'29		conjunction		14874 Nov 23 15:31	17° $\mathbb{Z}$ 34'15	0°59'32
retrograde	14869 Jan 08 02:52	13° $\mathbb{A}$ 10'57		minimum elong		14874 Nov 23 15:29	17° $\mathbb{Z}$ 34'15	1°00'29
opposition	14869 Mar 18 20:16	9° $\mathbb{A}$ 48'15	-1°09'15	max. Earth dist.		14874 Nov 24 02:41	17° $\mathbb{Z}$ 37'39	10.66521 AU
min. Earth dist.	14869 Mar 18 07:52	9° $\mathbb{A}$ 50'38	8.63838 AU	morning rise		14874 Dec 11 02:42	19° $\mathbb{Z}$ 40'54	
direct	14869 May 26 18:06	6° $\mathbb{A}$ 27'28		retrograde		14875 Mar 25 05:49	27° $\mathbb{Z}$ 13'51	
evening set	14869 Sep 05 04:13	13° $\mathbb{A}$ 51'40		opposition		14875 Jun 02 17:13	23° $\mathbb{Z}$ 49'36	1°24'27
				min. Earth dist.		14875 Jun 02 08:55	23° $\mathbb{Z}$ 51'13	8.65937 AU
conjunction	14869 Sep 22 05:03	15° $\mathbb{A}$ 56'25	-0°46'35	direct		14875 Aug 09 23:48	20° $\mathbb{Z}$ 27'57	
minimum elong	14869 Sep 22 05:05	15° $\mathbb{A}$ 56'25	0°46'24	evening set		14875 Nov 19 02:35	27° $\mathbb{Z}$ 49'30	
max. Earth dist.	14869 Sep 22 19:57	16° $\mathbb{A}$ 00'59	10.64841 AU					
morning rise	14869 Oct 09 07:56	18° $\mathbb{A}$ 01'42		conjunction		14875 Dec 06 12:27	29° $\mathbb{Z}$ 55'50	1°16'21
retrograde	14870 Jan 21 00:37	25° $\mathbb{A}$ 34'27		minimum elong		14875 Dec 06 12:26	29° $\mathbb{Z}$ 55'49	1°17'21
opposition	14870 Mar 31 19:51	22° $\mathbb{A}$ 11'31	-0°44'31	max. Earth dist.		14875 Dec 06 21:38	29° $\mathbb{Z}$ 58'37	10.65118 AU
min. Earth dist.	14870 Mar 31 07:01	22° $\mathbb{A}$ 13'59	8.65754 AU			14875 Dec 07 02:09	0° $\mathbb{Z}$	
direct	14870 Jun 08 14:03	18° $\mathbb{A}$ 50'59		morning rise		14875 Dec 24 00:41	2° $\mathbb{Z}$ 02'50	
evening set	14870 Sep 17 17:40	26° $\mathbb{A}$ 12'53		retrograde		14876 Apr 06 03:09	9° $\mathbb{Z}$ 36'24	
				opposition		14876 Jun 14 09:24	6° $\mathbb{Z}$ 11'58	1°43'07
conjunction	14870 Oct 04 20:04	28° $\mathbb{A}$ 17'41	-0°25'39	min. Earth dist.		14876 Jun 14 02:50	6° $\mathbb{Z}$ 13'15	8.64308 AU
minimum elong	14870 Oct 04 20:05	28° $\mathbb{A}$ 17'41	0°25'16	direct		14876 Aug 21 14:53	2° $\mathbb{Z}$ 49'45	
max. Earth dist.	14870 Oct 05 11:33	28° $\mathbb{A}$ 22'25	10.66452 AU	evening set		14876 Dec 01 00:25	10° $\mathbb{Z}$ 13'18	
	14870 Oct 18 19:49	0° $\mathbb{M}$						
morning rise	14870 Oct 22 00:47	0° $\mathbb{M}$ 23'08		conjunction		14876 Dec 18 11:37	12° $\mathbb{Z}$ 20'07	1°29'40
retrograde	14871 Feb 02 20:22	7° $\mathbb{M}$ 55'28		minimum elong		14876 Dec 18 11:35	12° $\mathbb{Z}$ 20'07	1°30'41
opposition	14871 Apr 13 17:15	4° $\mathbb{M}$ 32'16	-0°17'49	max. Earth dist.		14876 Dec 18 18:27	12° $\mathbb{Z}$ 22'12	10.63235 AU
min. Earth dist.	14871 Apr 13 03:57	4° $\mathbb{M}$ 34'49	8.67019 AU	morning rise		14877 Jan 05 00:41	14° $\mathbb{Z}$ 27'33	
direct	14871 Jun 21 09:10	1° $\mathbb{M}$ 11'50		retrograde		14877 Apr 19 00:58	22° $\mathbb{Z}$ 01'50	
evening set	14871 Sep 30 07:18	8° $\mathbb{M}$ 32'12		opposition		14877 Jun 27 01:53	18° $\mathbb{Z}$ 37'16	1°57'04
				min. Earth dist.		14877 Jun 26 21:27	18° $\mathbb{Z}$ 38'08	8.62233 AU
conjunction	14871 Oct 17 11:25	10° $\mathbb{M}$ 37'11	-0°03'38	direct		14877 Sep 03 07:00	15° $\mathbb{Z}$ 14'25	
minimum elong	14871 Oct 17 11:25	10° $\mathbb{M}$ 37'11	0°03'04	evening set		14877 Dec 14 00:40	22° $\mathbb{Z}$ 40'28	
behind sun begin	14871 Oct 17 04:20	10° $\mathbb{M}$ 35'03						
behind sun end	14871 Oct 17 18:30	10° $\mathbb{M}$ 39'19		conjunction		14877 Dec 31 13:03	24° $\mathbb{Z}$ 47'52	1°38'50
max. Earth dist.	14871 Oct 18 03:33	10° $\mathbb{M}$ 42'06	10.67392 AU	minimum elong		14877 Dec 31 13:02	24° $\mathbb{Z}$ 47'52	1°39'47
morning rise	14871 Nov 03 17:52	12° $\mathbb{M}$ 42'52		max. Earth dist.		14877 Dec 31 16:33	24° $\mathbb{Z}$ 48'56	10.60949 AU
	14871 Nov 23 14:20	15° $\mathbb{M}$		morning rise		14878 Jan 18 02:56	26° $\mathbb{Z}$ 55'45	
asc. node	14871 Dec 17 12:59	17° $\mathbb{M}$ 23'30				14878 Feb 14 06:34	0° $\mathbb{Z}$	
retrograde	14872 Feb 15 17:17	20° $\mathbb{M}$ 15'03		retrograde		14878 May 02 00:25	4° $\mathbb{Z}$ 30'48	
opposition	14872 Apr 25 12:58	16° $\mathbb{M}$ 51'34	0°09'39	opposition		14878 Jul 09 19:02	1° $\mathbb{Z}$ 06'12	2°05'34
min. Earth dist.	14872 Apr 24 23:31	16° $\mathbb{M}$ 54'09	8.67628 AU	min. Earth dist.		14878 Jul 09 17:37	1° $\mathbb{Z}$ 06'29	8.59790 AU
	14872 May 21 04:29	15° $\mathbb{R}$ $\mathbb{M}$				14878 Jul 24 01:51	30° $\mathbb{R}$ $\mathbb{Z}$	
direct	14872 Jul 03 02:18	13° $\mathbb{M}$ 31'05		direct		14878 Sep 15 23:50	27° $\mathbb{Z}$ 42'40	

	14878 Nov 07 11:30	0°♊	conjunction	14885 Apr 02 09:00	24°♊04'55	0°33'05
evening set	14878 Dec 27 03:36	5°♊11'37	minimum elong	14885 Apr 02 09:02	24°♊04'56	0°32'46
			max. Earth dist.	14885 Apr 01 16:35	23°♊59'48	10.43691 AU
conjunction	14879 Jan 13 17:02	7°♊19'39 1°43'20	morning rise	14885 Apr 19 23:02	26°♊15'44	
minimum elong	14879 Jan 13 17:02	7°♊19'39 1°44'12		14885 May 22 19:39	0°♋	
max. Earth dist.	14879 Jan 13 16:04	7°♊19'21 10.58353 AU	retrograde	14885 Jul 31 01:42	3°♋54'14	
morning rise	14879 Jan 31 07:40	9°♊28'03	opposition	14885 Oct 06 16:44	0°♋31'21	0°26'58
	14879 Mar 25 23:53	15°♊	min. Earth dist.	14885 Oct 07 05:48	0°♋28'46	8.43075 AU
retrograde	14879 May 15 00:28	17°♊03'49		14885 Oct 13 07:50	30°♋♊	
	14879 Jul 05 00:03	15°♋♊	direct	14885 Dec 14 14:13	27°♊05'07	
opposition	14879 Jul 22 13:09	13°♊39'16 2°08'08		14886 Feb 12 12:49	0°♋	
min. Earth dist.	14879 Jul 22 15:14	13°♊38'51 8.57089 AU	evening set	14886 Mar 29 07:42	4°♋53'41	
direct	14879 Sep 28 18:30	10°♊15'03				
	14879 Dec 16 00:40	15°♊	conjunction	14886 Apr 15 22:32	7°♋05'03	0°10'12
evening set	14880 Jan 09 08:53	17°♊47'11	minimum elong	14886 Apr 15 22:33	7°♋05'03	0°09'40
			behind sun begin	14886 Apr 15 16:38	7°♋03'13	
conjunction	14880 Jan 26 23:22	19°♊55'53 1°42'55	behind sun end	14886 Apr 16 04:27	7°♋06'53	
minimum elong	14880 Jan 26 23:23	19°♊55'54 1°43'39	max. Earth dist.	14886 Apr 15 05:54	6°♋59'51	10.42577 AU
max. Earth dist.	14880 Jan 26 18:32	19°♊54'24 10.55572 AU	morning rise	14886 May 03 11:03	9°♋15'46	
morning rise	14880 Feb 13 14:37	22°♊04'50		14886 Jun 27 08:14	15°♋	
retrograde	14880 May 27 00:23	29°♊41'18	retrograde	14886 Aug 13 08:39	16°♋54'21	
opposition	14880 Aug 03 08:48	26°♊16'51 2°04'34	desc. node	14886 Sep 25 08:33	15°♋22'04	
min. Earth dist.	14880 Aug 03 13:33	26°♊15'55 8.54261 AU		14886 Sep 30 17:31	15°♋♋	
direct	14880 Oct 10 16:55	22°♊52'02	opposition	14886 Oct 20 00:38	13°♋31'46	-0°01'57
	14881 Jan 17 20:40	0°♌	min. Earth dist.	14886 Oct 20 13:09	13°♋29'18	8.42251 AU
evening set	14881 Jan 21 16:16	0°♌27'25	direct	14886 Dec 28 02:11	10°♋05'38	
				14887 Mar 17 21:30	15°♋	
conjunction	14881 Feb 08 07:49	2°♌36'50 1°37'29	evening set	14887 Apr 11 22:04	17°♋55'18	
minimum elong	14881 Feb 08 07:50	2°♌36'51 1°38'02				
max. Earth dist.	14881 Feb 08 00:05	2°♌34'27 10.52743 AU	conjunction	14887 Apr 29 11:12	20°♋06'24	-0°13'21
morning rise	14881 Feb 25 23:27	4°♌46'19	minimum elong	14887 Apr 29 11:11	20°♋06'24	0°14'03
retrograde	14881 Jun 09 02:57	12°♌23'26	behind sun begin	14887 Apr 29 07:39	20°♋05'18	
opposition	14881 Aug 16 06:08	8°♌59'10 1°54'53	behind sun end	14887 Apr 29 14:43	20°♋07'30	
min. Earth dist.	14881 Aug 16 12:53	8°♌57'50 8.51446 AU	max. Earth dist.	14887 Apr 28 19:53	20°♋01'36	10.42056 AU
direct	14881 Oct 23 16:23	5°♌33'50	morning rise	14887 May 16 21:38	22°♋16'48	
evening set	14882 Feb 04 02:02	13°♌12'27	retrograde	14887 Aug 26 16:26	29°♋55'24	
			opposition	14887 Nov 02 10:12	26°♋33'06	-0°30'48
conjunction	14882 Feb 21 18:25	15°♌22'33 1°27'14	min. Earth dist.	14887 Nov 02 21:36	26°♋30'51	8.42038 AU
minimum elong	14882 Feb 21 18:28	15°♌22'34 1°27'35	direct	14888 Jan 10 15:12	23°♋07'08	
max. Earth dist.	14882 Feb 21 08:22	15°♌19'27 10.50006 AU		14888 Apr 16 15:15	0°♎	
morning rise	14882 Mar 11 10:08	17°♌32'32	evening set	14888 Apr 24 11:37	0°♎57'11	
retrograde	14882 Jun 22 07:33	25°♌10'10				
opposition	14882 Aug 29 05:23	21°♌46'10 1°39'28	conjunction	14888 May 11 22:34	3°♎07'50	-0°36'08
min. Earth dist.	14882 Aug 29 13:54	21°♌44'28 8.48784 AU	minimum elong	14888 May 11 22:33	3°♎07'49	0°36'58
direct	14882 Nov 05 17:27	18°♌20'26	max. Earth dist.	14888 May 11 08:48	3°♎03'30	10.42128 AU
evening set	14883 Feb 17 13:44	26°♌02'08	morning rise	14888 May 29 06:40	5°♎17'42	
			retrograde	14888 Sep 08 01:53	12°♎56'14	
conjunction	14883 Mar 07 06:31	28°♌12'49 1°12'36	opposition	14888 Nov 14 20:55	9°♎34'09	-0°58'04
minimum elong	14883 Mar 07 06:33	28°♌12'50 1°12'44	min. Earth dist.	14888 Nov 15 07:21	9°♎32'06	8.42395 AU
max. Earth dist.	14883 Mar 06 18:00	28°♌08'56 10.47500 AU	direct	14889 Jan 23 03:05	6°♎08'25	
	14883 Mar 21 17:45	0°♏	evening set	14889 May 07 23:45	13°♎58'13	
morning rise	14883 Mar 24 22:01	0°♏23'14				
retrograde	14883 Jul 05 12:49	8°♏01'15	conjunction	14889 May 25 08:11	16°♎08'13	-0°57'03
opposition	14883 Sep 11 07:00	4°♏37'37 1°19'00	minimum elong	14889 May 25 08:09	16°♎08'13	0°57'59
min. Earth dist.	14883 Sep 11 17:34	4°♏35'31 8.46422 AU	max. Earth dist.	14889 May 24 19:43	16°♎04'18	10.42707 AU
direct	14883 Nov 18 21:46	1°♏11'37	morning rise	14889 Jun 11 13:52	18°♎17'28	
evening set	14884 Mar 02 02:47	8°♏56'03	retrograde	14889 Sep 21 09:26	25°♎55'56	
			opposition	14889 Nov 28 08:39	22°♎34'00	-1°22'19
conjunction	14884 Mar 19 19:25	11°♏07'10 0°54'15	min. Earth dist.	14889 Nov 28 18:14	22°♎32'08	8.43200 AU
minimum elong	14884 Mar 19 19:27	11°♏07'11 0°54'09	direct	14890 Feb 05 16:44	19°♎08'36	
max. Earth dist.	14884 Mar 19 04:34	11°♏02'33 10.45358 AU	evening set	14890 May 21 09:57	26°♎57'38	
morning rise	14884 Apr 06 10:24	13°♏17'53				
retrograde	14884 Jul 17 18:49	20°♏56'13	conjunction	14890 Jun 07 15:40	29°♎06'52	-1°15'01
opposition	14884 Sep 23 10:54	17°♏32'57 0°54'25	minimum elong	14890 Jun 07 15:38	29°♎06'51	1°16'00
min. Earth dist.	14884 Sep 23 23:07	17°♏30'32 8.44486 AU	max. Earth dist.	14890 Jun 07 04:34	29°♎03'22	10.43667 AU
direct	14884 Dec 01 04:50	14°♏06'47		14890 Jun 14 16:42	0°♏	
evening set	14885 Mar 15 17:01	21°♏53'34	morning rise	14890 Jun 24 19:05	1°♏15'26	



retrograde	14890 Oct 04 16:05	8° $\mathring{\text{D}}$ 53'59		max. Earth dist.	14896 Aug 23 02:04	15° $\mathring{\text{N}}$ 53'55	10.55957 AU
opposition	14890 Dec 11 20:59	5° $\mathring{\text{D}}$ 32'09	-1°42'18	morning rise	14896 Sep 08 16:12	17° $\mathring{\text{N}}$ 56'45	
min. Earth dist.	14890 Dec 12 04:53	5° $\mathring{\text{D}}$ 30'37	8.44353 AU	retrograde	14896 Dec 20 19:47	25° $\mathring{\text{N}}$ 32'49	
direct	14891 Feb 19 07:05	2° $\mathring{\text{D}}$ 07'12		opposition	14897 Feb 28 09:08	22° $\mathring{\text{N}}$ 09'45	-1°39'03
evening set	14891 Jun 03 17:55	9° $\mathring{\text{D}}$ 54'56		min. Earth dist.	14897 Feb 27 23:50	22° $\mathring{\text{N}}$ 11'33	8.57275 AU
				direct	14897 May 08 11:52	18° $\mathring{\text{N}}$ 47'39	
conjunction	14891 Jun 20 21:11	12° $\mathring{\text{D}}$ 03'24	-1°29'08	evening set	14897 Aug 18 10:59	26° $\mathring{\text{N}}$ 17'38	
minimum elong	14891 Jun 20 21:10	12° $\mathring{\text{D}}$ 03'23	1°30'07				
max. Earth dist.	14891 Jun 20 12:48	12° $\mathring{\text{D}}$ 00'45	10.44972 AU	conjunction	14897 Sep 04 10:23	28° $\mathring{\text{N}}$ 22'55	-1°12'40
morning rise	14891 Jul 07 22:35	14° $\mathring{\text{D}}$ 11'18		minimum elong	14897 Sep 04 10:25	28° $\mathring{\text{N}}$ 22'56	1°12'48
retrograde	14891 Oct 17 23:22	21° $\mathring{\text{D}}$ 49'56		max. Earth dist.	14897 Sep 04 22:56	28° $\mathring{\text{N}}$ 26'49	10.58417 AU
opposition	14891 Dec 25 09:27	18° $\mathring{\text{D}}$ 28'06	-1°57'02		14897 Sep 17 13:08	0° $\mathring{\text{D}}$	
min. Earth dist.	14891 Dec 25 14:28	18° $\mathring{\text{D}}$ 27'07	8.45861 AU	morning rise	14897 Sep 21 11:00	0° $\mathring{\text{D}}$ 28'33	
direct	14892 Mar 03 20:32	15° $\mathring{\text{D}}$ 03'38		retrograde	14898 Jan 02 20:02	8° $\mathring{\text{D}}$ 03'49	
evening set	14892 Jun 15 23:19	22° $\mathring{\text{D}}$ 49'27		opposition	14898 Mar 13 12:51	4° $\mathring{\text{D}}$ 40'26	-1°19'02
				min. Earth dist.	14898 Mar 13 00:48	4° $\mathring{\text{D}}$ 42'45	8.59629 AU
conjunction	14892 Jul 03 00:38	24° $\mathring{\text{D}}$ 57'10	-1°38'42	direct	14898 May 21 13:11	1° $\mathring{\text{D}}$ 18'43	
minimum elong	14892 Jul 03 00:38	24° $\mathring{\text{D}}$ 57'10	1°39'39	evening set	14898 Aug 31 02:09	8° $\mathring{\text{D}}$ 45'33	
max. Earth dist.	14892 Jul 02 20:09	24° $\mathring{\text{D}}$ 55'45	10.46646 AU				
morning rise	14892 Jul 20 00:24	27° $\mathring{\text{D}}$ 04'26		conjunction	14898 Sep 17 02:47	10° $\mathring{\text{D}}$ 50'45	-0°54'58
	14892 Aug 14 00:38	0° $\mathring{\text{D}}$		minimum elong	14898 Sep 17 02:48	10° $\mathring{\text{D}}$ 50'46	0°54'52
retrograde	14892 Oct 30 06:41	4° $\mathring{\text{D}}$ 42'58		max. Earth dist.	14898 Sep 17 18:10	10° $\mathring{\text{D}}$ 55'30	10.60676 AU
opposition	14893 Jan 06 21:39	1° $\mathring{\text{D}}$ 21'02	-2°05'48	morning rise	14898 Oct 04 04:56	12° $\mathring{\text{D}}$ 56'25	
min. Earth dist.	14893 Jan 06 23:12	1° $\mathring{\text{D}}$ 20'44	8.47722 AU	retrograde	14899 Jan 15 20:17	20° $\mathring{\text{D}}$ 30'54	
	14893 Jan 24 20:38	30° $\mathring{\text{R}}$ $\mathring{\text{D}}$		opposition	14899 Mar 26 14:17	17° $\mathring{\text{D}}$ 07'14	-0°55'25
direct	14893 Mar 17 07:49	27° $\mathring{\text{D}}$ 57'06		min. Earth dist.	14899 Mar 26 00:35	17° $\mathring{\text{D}}$ 09'52	8.61724 AU
	14893 May 06 01:39	0° $\mathring{\text{D}}$		direct	14899 Jun 03 10:17	13° $\mathring{\text{D}}$ 45'50	
evening set	14893 Jun 29 02:09	5° $\mathring{\text{D}}$ 40'21		evening set	14899 Sep 12 16:44	21° $\mathring{\text{D}}$ 10'03	
conjunction	14893 Jul 16 01:56	7° $\mathring{\text{D}}$ 47'23	-1°43'18	conjunction	14899 Sep 29 18:43	23° $\mathring{\text{D}}$ 15'14	-0°34'45
minimum elong	14893 Jul 16 01:57	7° $\mathring{\text{D}}$ 47'23	1°44'10	minimum elong	14899 Sep 29 18:44	23° $\mathring{\text{D}}$ 15'14	0°34'26
max. Earth dist.	14893 Jul 16 01:44	7° $\mathring{\text{D}}$ 47'19	10.48660 AU	max. Earth dist.	14899 Sep 30 11:13	23° $\mathring{\text{D}}$ 20'18	10.62616 AU
morning rise	14893 Aug 02 00:31	9° $\mathring{\text{D}}$ 54'04		morning rise	14899 Oct 16 22:41	25° $\mathring{\text{D}}$ 21'00	
	14893 Sep 18 04:28	15° $\mathring{\text{D}}$			14899 Nov 29 02:59	0° $\mathring{\text{M}}$	
retrograde	14893 Nov 12 12:13	17° $\mathring{\text{D}}$ 32'17		retrograde	14900 Jan 28 17:46	2° $\mathring{\text{M}}$ 54'49	
	14894 Jan 09 12:00	15° $\mathring{\text{R}}$ $\mathring{\text{D}}$			14900 Apr 02 06:07	30° $\mathring{\text{R}}$ $\mathring{\text{D}}$	
opposition	14894 Jan 20 08:59	14° $\mathring{\text{D}}$ 10'08	-2°08'16	opposition	14900 Apr 08 13:24	29° $\mathring{\text{D}}$ 30'57	-0°29'18
min. Earth dist.	14894 Jan 20 07:15	14° $\mathring{\text{D}}$ 10'28	8.49886 AU	min. Earth dist.	14900 Apr 07 23:21	29° $\mathring{\text{D}}$ 33'39	8.63455 AU
direct	14894 Mar 30 18:06	10° $\mathring{\text{D}}$ 46'42		direct	14900 Jun 16 05:48	26° $\mathring{\text{D}}$ 09'44	
	14894 Jun 12 01:01	15° $\mathring{\text{D}}$			14900 Aug 24 16:22	0° $\mathring{\text{M}}$	
evening set	14894 Jul 12 02:11	18° $\mathring{\text{D}}$ 26'56		evening set	14900 Sep 25 07:06	3° $\mathring{\text{M}}$ 31'59	
conjunction	14894 Jul 29 00:57	20° $\mathring{\text{D}}$ 33'19	-1°42'47	conjunction	14900 Oct 12 10:31	5° $\mathring{\text{M}}$ 37'14	-0°13'00
minimum elong	14894 Jul 29 00:58	20° $\mathring{\text{D}}$ 33'20	1°43'30	minimum elong	14900 Oct 12 10:31	5° $\mathring{\text{M}}$ 37'14	0°12'30
max. Earth dist.	14894 Jul 29 04:26	20° $\mathring{\text{D}}$ 34'25	10.50953 AU	behind sun begin	14900 Oct 12 05:54	5° $\mathring{\text{M}}$ 35'50	
morning rise	14894 Aug 14 23:09	22° $\mathring{\text{D}}$ 39'34		behind sun end	14900 Oct 12 15:08	5° $\mathring{\text{M}}$ 38'38	
	14894 Nov 07 11:43	0° $\mathring{\text{N}}$		max. Earth dist.	14900 Oct 13 02:53	5° $\mathring{\text{M}}$ 42'15	10.64146 AU
retrograde	14894 Nov 25 16:51	0° $\mathring{\text{N}}$ 17'14		morning rise	14900 Oct 29 16:24	7° $\mathring{\text{M}}$ 43'10	
	14894 Dec 14 00:31	30° $\mathring{\text{R}}$ $\mathring{\text{D}}$			14901 Jan 23 12:58	15° $\mathring{\text{M}}$	
opposition	14895 Feb 02 19:04	26° $\mathring{\text{D}}$ 54'48	-2°04'22	retrograde	14901 Feb 10 14:44	15° $\mathring{\text{M}}$ 16'33	
min. Earth dist.	14895 Feb 02 14:44	26° $\mathring{\text{D}}$ 55'38	8.52278 AU		14901 Feb 28 18:39	15° $\mathring{\text{R}}$ $\mathring{\text{M}}$	
direct	14895 Apr 13 02:12	23° $\mathring{\text{D}}$ 31'50		opposition	14901 Apr 21 10:45	11° $\mathring{\text{M}}$ 52'30	-0°01'57
	14895 Jul 15 10:56	0° $\mathring{\text{N}}$		min. Earth dist.	14901 Apr 20 21:05	11° $\mathring{\text{M}}$ 55'08	8.64747 AU
evening set	14895 Jul 24 23:23	1° $\mathring{\text{N}}$ 08'40		asc. node	14901 May 17 14:45	9° $\mathring{\text{M}}$ 58'41	
				direct	14901 Jun 29 00:24	8° $\mathring{\text{M}}$ 31'23	
conjunction	14895 Aug 10 21:44	3° $\mathring{\text{N}}$ 14'34	-1°37'14		14901 Sep 30 12:51	15° $\mathring{\text{M}}$	
minimum elong	14895 Aug 10 21:45	3° $\mathring{\text{N}}$ 14'35	1°37'47	evening set	14901 Oct 07 21:42	15° $\mathring{\text{M}}$ 52'17	
max. Earth dist.	14895 Aug 11 04:08	3° $\mathring{\text{N}}$ 16'34	10.53427 AU				
morning rise	14895 Aug 27 20:17	5° $\mathring{\text{N}}$ 20'30		conjunction	14901 Oct 25 02:41	17° $\mathring{\text{M}}$ 57'42	0°09'23
retrograde	14895 Dec 08 19:53	12° $\mathring{\text{N}}$ 57'24		minimum elong	14901 Oct 25 02:40	17° $\mathring{\text{M}}$ 57'42	0°10'03
opposition	14896 Feb 16 03:14	9° $\mathring{\text{N}}$ 34'40	-1°54'26	behind sun begin	14901 Oct 24 20:56	17° $\mathring{\text{M}}$ 55'58	
min. Earth dist.	14896 Feb 15 20:28	9° $\mathring{\text{N}}$ 35'58	8.54783 AU	behind sun end	14901 Oct 25 08:24	17° $\mathring{\text{M}}$ 59'26	
direct	14896 Apr 25 07:36	6° $\mathring{\text{N}}$ 12'08		max. Earth dist.	14901 Oct 25 18:52	18° $\mathring{\text{M}}$ 02'38	10.65201 AU
evening set	14896 Aug 05 18:12	13° $\mathring{\text{N}}$ 45'30		morning rise	14901 Nov 11 10:21	20° $\mathring{\text{M}}$ 03'51	
				retrograde	14902 Feb 23 11:34	27° $\mathring{\text{M}}$ 37'02	
conjunction	14896 Aug 22 16:46	15° $\mathring{\text{N}}$ 51'01	-1°27'00	opposition	14902 May 04 06:25	24° $\mathring{\text{M}}$ 12'50	0°25'27
minimum elong	14896 Aug 22 16:48	15° $\mathring{\text{N}}$ 51'02	1°27'21	min. Earth dist.	14902 May 03 16:59	24° $\mathring{\text{M}}$ 15'25	8.65551 AU

direct	14902 Jul 11 17:08	20° $\mathbb{M}$ 51'43		conjunction	14909 Jan 21 19:10	14° $\approx$ 57'00	1°43'28
evening set	14902 Oct 20 13:25	28° $\mathbb{M}$ 12'03		minimum elong	14909 Jan 21 19:11	14° $\approx$ 57'00	1°44'16
	14902 Nov 04 10:05	0° $\mathbb{A}$		max. Earth dist.	14909 Jan 21 17:55	14° $\approx$ 56'37	10.58512 AU
					14909 Jan 22 05:00	15° $\approx$	
conjunction	14902 Nov 06 20:02	0° $\mathbb{A}$ 17'41	0°31'13	morning rise	14909 Feb 08 09:56	17° $\approx$ 05'30	
minimum elong	14902 Nov 06 20:01	0° $\mathbb{A}$ 17'41	0°32'01	retrograde	14909 May 22 23:39	24° $\approx$ 41'11	
max. Earth dist.	14902 Nov 07 12:04	0° $\mathbb{A}$ 22'35	10.65737 AU	opposition	14909 Jul 30 09:13	21° $\approx$ 17'18	2°06'27
morning rise	14902 Nov 24 05:14	2° $\mathbb{A}$ 24'05		min. Earth dist.	14909 Jul 30 11:42	21° $\approx$ 16'48	8.57319 AU
retrograde	14903 Mar 08 07:45	9° $\mathbb{A}$ 57'15		direct	14909 Oct 06 15:34	17° $\approx$ 53'24	
min. Earth dist.	14903 May 16 11:37	6° $\mathbb{A}$ 35'28	8.65832 AU	evening set	14910 Jan 17 11:35	25° $\approx$ 26'46	
opposition	14903 May 17 00:32	6° $\mathbb{A}$ 32'58	0°51'37				
direct	14903 Jul 24 09:27	3° $\mathbb{A}$ 11'45		conjunction	14910 Feb 04 02:38	27° $\approx$ 35'41	1°40'06
evening set	14903 Nov 02 06:42	10° $\mathbb{A}$ 32'17		minimum elong	14910 Feb 04 02:40	27° $\approx$ 35'41	1°40'44
				max. Earth dist.	14910 Feb 03 20:44	27° $\approx$ 33'52	10.55828 AU
conjunction	14903 Nov 19 14:47	12° $\mathbb{A}$ 38'12	0°51'37	morning rise	14910 Feb 21 17:55	29° $\approx$ 44'43	
minimum elong	14903 Nov 19 14:46	12° $\mathbb{A}$ 38'12	0°52'31		14910 Feb 23 20:57	0° $\mathbb{H}$	
max. Earth dist.	14903 Nov 20 05:46	12° $\mathbb{A}$ 42'46	10.65738 AU	retrograde	14910 Jun 05 01:41	7° $\mathbb{H}$ 20'58	
morning rise	14903 Dec 07 01:17	14° $\mathbb{A}$ 44'51		opposition	14910 Aug 12 05:36	3° $\mathbb{H}$ 57'14	1°59'18
retrograde	14904 Mar 20 05:53	22° $\mathbb{A}$ 18'14		min. Earth dist.	14910 Aug 12 11:39	3° $\mathbb{H}$ 56'02	8.54499 AU
opposition	14904 May 28 17:53	18° $\mathbb{A}$ 53'56	1°15'25	direct	14910 Oct 19 13:27	0° $\mathbb{H}$ 32'43	
min. Earth dist.	14904 May 28 06:21	18° $\mathbb{A}$ 56'11	8.65587 AU	evening set	14911 Jan 30 20:17	8° $\mathbb{H}$ 09'20	
direct	14904 Aug 05 00:13	15° $\mathbb{A}$ 32'32					
evening set	14904 Nov 14 01:49	22° $\mathbb{A}$ 53'56		conjunction	14911 Feb 17 12:05	10° $\mathbb{H}$ 18'56	1°31'51
				minimum elong	14911 Feb 17 12:07	10° $\mathbb{H}$ 18'57	1°32'17
conjunction	14904 Dec 01 11:08	25° $\mathbb{A}$ 00'11	1°09'39	max. Earth dist.	14911 Feb 17 01:52	10° $\mathbb{H}$ 15'47	10.52956 AU
minimum elong	14904 Dec 01 11:06	25° $\mathbb{A}$ 00'11	1°10'38	morning rise	14911 Mar 07 03:42	12° $\mathbb{H}$ 28'30	
max. Earth dist.	14904 Dec 01 23:35	25° $\mathbb{A}$ 03'59	10.65217 AU	retrograde	14911 Jun 18 04:30	20° $\mathbb{H}$ 05'16	
morning rise	14904 Dec 18 22:50	27° $\mathbb{A}$ 07'08		opposition	14911 Aug 25 03:47	16° $\mathbb{H}$ 41'44	1°46'15
	14905 Jan 13 09:08	0° $\mathbb{B}$		min. Earth dist.	14911 Aug 25 12:52	16° $\mathbb{H}$ 39'56	8.51603 AU
retrograde	14905 Apr 02 03:56	4° $\mathbb{B}$ 40'53		direct	14911 Nov 01 14:20	13° $\mathbb{H}$ 16'39	
opposition	14905 Jun 10 10:51	1° $\mathbb{B}$ 16'38	1°35'45	evening set	14912 Feb 13 06:48	20° $\mathbb{H}$ 56'25	
min. Earth dist.	14905 Jun 10 01:55	1° $\mathbb{B}$ 18'23	8.64839 AU				
	14905 Jun 27 06:39	30° $\mathbb{R}$ $\mathbb{A}$		conjunction	14912 Mar 01 23:12	23° $\mathbb{H}$ 06'39	1°19'00
direct	14905 Aug 17 14:40	27° $\mathbb{A}$ 54'54		minimum elong	14912 Mar 01 23:14	23° $\mathbb{H}$ 06'39	1°19'14
	14905 Oct 06 14:22	0° $\mathbb{B}$		max. Earth dist.	14912 Mar 01 09:53	23° $\mathbb{H}$ 02'32	10.50129 AU
evening set	14905 Nov 26 23:13	5° $\mathbb{B}$ 17'53		morning rise	14912 Mar 19 14:52	25° $\mathbb{H}$ 16'42	
					14912 May 02 01:47	0° $\mathbb{Y}$	
conjunction	14905 Dec 14 09:42	7° $\mathbb{B}$ 24'30	1°24'29	retrograde	14912 Jun 30 07:27	2° $\mathbb{Y}$ 53'55	
minimum elong	14905 Dec 14 09:41	7° $\mathbb{B}$ 24'30	1°25'29		14912 Aug 30 22:33	30° $\mathbb{R}$ $\mathbb{H}$	
max. Earth dist.	14905 Dec 14 18:38	7° $\mathbb{B}$ 27'13	10.64211 AU	opposition	14912 Sep 06 04:00	29° $\mathbb{H}$ 30'32	1°27'51
morning rise	14905 Dec 31 22:30	9° $\mathbb{B}$ 31'48		min. Earth dist.	14912 Sep 06 14:53	29° $\mathbb{H}$ 28'22	8.48850 AU
retrograde	14906 Apr 15 00:42	17° $\mathbb{B}$ 05'59		direct	14912 Nov 13 18:34	26° $\mathbb{H}$ 04'58	
opposition	14906 Jun 23 03:37	13° $\mathbb{B}$ 41'49	1°51'42		14913 Jan 23 02:41	0° $\mathbb{Y}$	
min. Earth dist.	14906 Jun 22 21:40	13° $\mathbb{B}$ 42'59	8.63621 AU	evening set	14913 Feb 25 18:46	3° $\mathbb{Y}$ 47'35	
direct	14906 Aug 30 07:30	10° $\mathbb{B}$ 19'38					
evening set	14906 Dec 09 22:56	17° $\mathbb{B}$ 44'43		conjunction	14913 Mar 15 11:28	5° $\mathbb{Y}$ 58'20	1°02'09
				minimum elong	14913 Mar 15 11:30	5° $\mathbb{Y}$ 58'21	1°02'09
conjunction	14906 Dec 27 10:39	19° $\mathbb{B}$ 51'49	1°35'24	max. Earth dist.	14913 Mar 14 20:36	5° $\mathbb{Y}$ 53'44	10.47533 AU
minimum elong	14906 Dec 27 10:38	19° $\mathbb{B}$ 51'49	1°36'22	morning rise	14913 Apr 02 02:44	8° $\mathbb{Y}$ 08'45	
max. Earth dist.	14906 Dec 27 16:14	19° $\mathbb{B}$ 53'31	10.62744 AU	retrograde	14913 Jul 13 12:17	15° $\mathbb{Y}$ 46'19	
morning rise	14907 Jan 14 00:18	21° $\mathbb{B}$ 59'28		opposition	14913 Sep 19 06:18	12° $\mathbb{Y}$ 23'05	1°04'56
retrograde	14907 Apr 27 23:08	29° $\mathbb{B}$ 34'09		min. Earth dist.	14913 Sep 19 18:10	12° $\mathbb{Y}$ 20'44	8.46400 AU
opposition	14907 Jul 05 20:42	26° $\mathbb{B}$ 10'04	2°02'28	direct	14913 Nov 27 00:32	8° $\mathbb{Y}$ 57'07	
min. Earth dist.	14907 Jul 05 17:26	26° $\mathbb{B}$ 10'43	8.61949 AU	evening set	14914 Mar 11 08:03	16° $\mathbb{Y}$ 42'13	
direct	14907 Sep 12 01:24	22° $\mathbb{B}$ 47'22		max. Earth dist.	14914 Mar 28 08:33	18° $\mathbb{Y}$ 48'23	10.45305 AU
	14907 Dec 20 22:52	0° $\approx$					
evening set	14907 Dec 23 00:52	0° $\approx$ 14'54		conjunction	14914 Mar 29 00:28	18° $\mathbb{Y}$ 53'20	0°42'07
				minimum elong	14914 Mar 29 00:30	18° $\mathbb{Y}$ 53'21	0°41'53
conjunction	14908 Jan 09 13:48	2° $\approx$ 22'32	1°41'51	morning rise	14914 Apr 15 14:49	21° $\mathbb{Y}$ 03'57	
minimum elong	14908 Jan 09 13:48	2° $\approx$ 22'32	1°42'45	retrograde	14914 Jul 26 19:31	28° $\mathbb{Y}$ 41'43	
max. Earth dist.	14908 Jan 09 16:17	2° $\approx$ 23'17	10.60836 AU	opposition	14914 Oct 02 10:40	25° $\mathbb{Y}$ 18'39	0°38'38
morning rise	14908 Jan 27 04:02	4° $\approx$ 30'35		min. Earth dist.	14914 Oct 02 23:20	25° $\mathbb{Y}$ 16'08	8.44386 AU
retrograde	14908 May 09 23:05	12° $\approx$ 05'45		direct	14914 Dec 10 07:07	21° $\mathbb{Y}$ 52'23	
opposition	14908 Jul 17 14:25	8° $\approx$ 41'45	2°07'29	evening set	14915 Mar 24 21:54	29° $\mathbb{Y}$ 39'30	
min. Earth dist.	14908 Jul 17 13:39	8° $\approx$ 41'54	8.59838 AU		14915 Mar 27 16:49	0° $\mathbb{B}$	
direct	14908 Sep 23 19:30	5° $\approx$ 18'28					
evening set	14909 Jan 04 05:06	12° $\approx$ 48'46		conjunction	14915 Apr 11 13:23	1° $\mathbb{B}$ 50'45	0°19'52

minimum elong	14915 Apr 11 13:24	1° $\text{♁}$ 50'46	0°19'26	conjunction	14921 Jun 28 15:43	19° $\text{♁}$ 34'31	-1°35'10
max. Earth dist.	14915 Apr 10 20:43	1° $\text{♁}$ 45'34	10.43565 AU	minimum elong	14921 Jun 28 15:42	19° $\text{♁}$ 34'30	1°36'08
morning rise	14915 Apr 29 02:24	4° $\text{♁}$ 01'23		max. Earth dist.	14921 Jun 28 10:49	19° $\text{♁}$ 32'58	10.45996 AU
retrograde	14915 Aug 09 01:42	11° $\text{♁}$ 39'17		morning rise	14921 Jul 15 16:03	21° $\text{♁}$ 41'56	
opposition	14915 Oct 15 17:08	8° $\text{♁}$ 16'23	0°10'14	retrograde	14921 Oct 25 19:17	29° $\text{♁}$ 19'48	
min. Earth dist.	14915 Oct 16 06:29	8° $\text{♁}$ 13'45	8.42917 AU	opposition	14922 Jan 02 08:11	25° $\text{♁}$ 57'38	-2°02'46
direct	14915 Dec 23 17:11	4° $\text{♁}$ 49'57		min. Earth dist.	14922 Jan 02 10:48	25° $\text{♁}$ 57'07	8.47215 AU
desc. node	14916 Feb 26 16:33	8° $\text{♁}$ 12'39		direct	14922 Mar 12 18:15	22° $\text{♁}$ 33'12	
evening set	14916 Apr 06 11:36	12° $\text{♁}$ 38'31			14922 Jun 22 09:20	0° $\text{♁}$	
max. Earth dist.	14916 Apr 23 08:22	14° $\text{♁}$ 44'17	10.42401 AU	evening set	14922 Jun 24 16:38	0° $\text{♁}$ 16'55	
conjunction	14916 Apr 24 01:32	14° $\text{♁}$ 49'39	-0°03'32	conjunction	14922 Jul 11 16:52	2° $\text{♁}$ 24'03	-1°41'56
minimum elong	14916 Apr 24 01:31	14° $\text{♁}$ 49'39	0°04'10	minimum elong	14922 Jul 11 16:52	2° $\text{♁}$ 24'03	1°42'50
behind sun begin	14916 Apr 23 18:25	14° $\text{♁}$ 47'27		max. Earth dist.	14922 Jul 11 15:09	2° $\text{♁}$ 23'31	10.48325 AU
behind sun end	14916 Apr 24 08:36	14° $\text{♁}$ 51'50		morning rise	14922 Jul 28 15:57	4° $\text{♁}$ 30'51	
	14916 Apr 25 10:36	15° $\text{♁}$		retrograde	14922 Nov 07 22:58	12° $\text{♁}$ 08'23	
morning rise	14916 May 11 12:53	17° $\text{♁}$ 00'06		opposition	14923 Jan 15 19:06	8° $\text{♁}$ 46'13	-2°07'56
retrograde	14916 Aug 21 08:01	24° $\text{♁}$ 38'07		min. Earth dist.	14923 Jan 15 18:46	8° $\text{♁}$ 46'17	8.49729 AU
opposition	14916 Oct 28 01:19	21° $\text{♁}$ 15'22	-0°18'45	direct	14923 Mar 26 05:40	5° $\text{♁}$ 22'28	
min. Earth dist.	14916 Oct 28 14:45	21° $\text{♁}$ 12'43	8.42065 AU	evening set	14923 Jul 07 16:57	13° $\text{♁}$ 03'17	
direct	14917 Jan 05 05:13	17° $\text{♁}$ 48'53			14923 Jul 23 08:52	15° $\text{♁}$	
evening set	14917 Apr 20 00:55	25° $\text{♁}$ 38'18		conjunction	14923 Jul 24 15:57	15° $\text{♁}$ 09'44	-1°43'37
conjunction	14917 May 07 12:46	27° $\text{♁}$ 49'05	-0°26'39	minimum elong	14923 Jul 24 15:58	15° $\text{♁}$ 09'44	1°44'24
minimum elong	14917 May 07 12:45	27° $\text{♁}$ 49'05	0°27'26	max. Earth dist.	14923 Jul 24 18:01	15° $\text{♁}$ 10'22	10.50979 AU
max. Earth dist.	14917 May 06 20:19	27° $\text{♁}$ 43'56	10.41864 AU	morning rise	14923 Aug 10 14:20	17° $\text{♁}$ 15'58	
morning rise	14917 May 24 22:05	29° $\text{♁}$ 59'09		retrograde	14923 Nov 21 03:20	24° $\text{♁}$ 52'59	
	14917 May 25 00:50	0° $\text{♁}$		opposition	14924 Jan 29 04:40	21° $\text{♁}$ 30'46	-2°06'46
retrograde	14917 Sep 03 15:03	7° $\text{♁}$ 37'14		min. Earth dist.	14924 Jan 29 00:46	21° $\text{♁}$ 31'31	8.52497 AU
opposition	14917 Nov 10 10:47	4° $\text{♁}$ 14'37	-0°46'48	direct	14924 Apr 07 14:10	18° $\text{♁}$ 07'44	
min. Earth dist.	14917 Nov 10 23:01	4° $\text{♁}$ 12'13	8.41865 AU	evening set	14924 Jul 19 14:33	25° $\text{♁}$ 45'15	
direct	14918 Jan 18 17:43	0° $\text{♁}$ 48'15		conjunction	14924 Aug 05 13:02	27° $\text{♁}$ 51'08	-1°40'14
evening set	14918 May 03 13:02	8° $\text{♁}$ 37'51		minimum elong	14924 Aug 05 13:03	27° $\text{♁}$ 51'09	1°40'52
conjunction	14918 May 20 22:33	10° $\text{♁}$ 48'07	-0°48'28	max. Earth dist.	14924 Aug 05 19:26	27° $\text{♁}$ 53'08	10.53831 AU
minimum elong	14918 May 20 22:31	10° $\text{♁}$ 48'06	0°49'22	morning rise	14924 Aug 22 11:16	29° $\text{♁}$ 56'57	
max. Earth dist.	14918 May 20 08:18	10° $\text{♁}$ 43'38	10.41978 AU		14924 Aug 22 21:16	0° $\text{♁}$	
morning rise	14918 Jun 07 05:28	12° $\text{♁}$ 57'38		retrograde	14924 Dec 03 07:24	7° $\text{♁}$ 33'16	
retrograde	14918 Sep 16 21:58	20° $\text{♁}$ 35'46		opposition	14925 Feb 10 12:47	4° $\text{♁}$ 10'58	-1°59'26
opposition	14918 Nov 23 21:32	17° $\text{♁}$ 13'16	-1°12'27	min. Earth dist.	14925 Feb 10 05:33	4° $\text{♁}$ 12'21	8.55384 AU
min. Earth dist.	14918 Nov 24 07:28	17° $\text{♁}$ 11'19	8.42323 AU	direct	14925 Apr 20 19:08	0° $\text{♁}$ 48'38	
direct	14919 Feb 01 07:13	13° $\text{♁}$ 47'12		evening set	14925 Aug 01 09:40	8° $\text{♁}$ 22'40	
evening set	14919 May 16 23:18	21° $\text{♁}$ 36'18		conjunction	14925 Aug 18 08:06	10° $\text{♁}$ 28'05	-1°32'01
conjunction	14919 Jun 03 06:20	23° $\text{♁}$ 45'51	-1°07'46	minimum elong	14925 Aug 18 08:08	10° $\text{♁}$ 28'06	1°32'28
minimum elong	14919 Jun 03 06:18	23° $\text{♁}$ 45'50	1°08'44	max. Earth dist.	14925 Aug 18 18:05	10° $\text{♁}$ 31'11	10.56744 AU
max. Earth dist.	14919 Jun 02 19:21	23° $\text{♁}$ 42'24	10.42738 AU	morning rise	14925 Sep 04 06:48	12° $\text{♁}$ 33'37	
morning rise	14919 Jun 20 10:45	25° $\text{♁}$ 54'41		retrograde	14925 Dec 16 08:37	20° $\text{♁}$ 09'08	
	14919 Jul 26 13:40	0° $\text{♁}$		opposition	14926 Feb 23 19:06	16° $\text{♁}$ 46'43	-1°46'24
retrograde	14919 Sep 30 05:19	3° $\text{♁}$ 32'53		min. Earth dist.	14926 Feb 23 09:25	16° $\text{♁}$ 48'34	8.58263 AU
opposition	14919 Dec 07 08:59	0° $\text{♁}$ 10'30	-1°34'22	direct	14926 May 03 22:23	13° $\text{♁}$ 25'00	
min. Earth dist.	14919 Dec 07 16:16	0° $\text{♁}$ 09'04	8.43415 AU	evening set	14926 Aug 14 02:45	20° $\text{♁}$ 55'33	
	14919 Dec 09 14:43	30° $\text{♁}$		conjunction	14926 Aug 31 01:37	23° $\text{♁}$ 00'39	-1°19'28
direct	14920 Feb 14 20:09	26° $\text{♁}$ 44'53		minimum elong	14926 Aug 31 01:39	23° $\text{♁}$ 00'40	1°19'42
	14920 Apr 18 11:20	0° $\text{♁}$		max. Earth dist.	14926 Aug 31 13:57	23° $\text{♁}$ 04'28	10.59593 AU
evening set	14920 May 29 07:37	4° $\text{♁}$ 32'47		morning rise	14926 Sep 17 01:27	25° $\text{♁}$ 06'02	
conjunction	14920 Jun 15 12:09	6° $\text{♁}$ 41'33	-1°23'36		14926 Nov 01 17:16	0° $\text{♁}$	
minimum elong	14920 Jun 15 12:07	6° $\text{♁}$ 41'33	1°24'35	retrograde	14926 Dec 29 09:00	2° $\text{♁}$ 40'39	
max. Earth dist.	14920 Jun 15 04:26	6° $\text{♁}$ 39'08	10.44102 AU		14927 Feb 27 18:52	30° $\text{♁}$	
morning rise	14920 Jul 02 14:17	8° $\text{♁}$ 49'41		opposition	14927 Mar 08 23:15	29° $\text{♁}$ 18'05	-1°28'23
retrograde	14920 Oct 12 12:59	16° $\text{♁}$ 27'47		min. Earth dist.	14927 Mar 08 12:06	29° $\text{♁}$ 20'13	8.61008 AU
opposition	14920 Dec 19 20:35	13° $\text{♁}$ 05'31	-1°51'24	direct	14927 May 16 23:40	25° $\text{♁}$ 56'53	
min. Earth dist.	14920 Dec 20 01:37	13° $\text{♁}$ 04'32	8.45075 AU		14927 Jul 27 15:31	0° $\text{♁}$	
direct	14921 Feb 27 07:33	9° $\text{♁}$ 40'26		evening set	14927 Aug 26 18:07	3° $\text{♁}$ 24'08	
evening set	14921 Jun 11 13:34	17° $\text{♁}$ 26'33		conjunction	14927 Sep 12 17:54	5° $\text{♁}$ 29'03	-1°03'13

minimum elong	14927 Sep 12 17:56	5° <u>♂</u> 29'04	1°03'13	conjunction	14933 Nov 25 21:26	19° <u>♂</u> 33'53	1°01'41
max. Earth dist.	14927 Sep 13 07:41	5° <u>♂</u> 33'18	10.62231 AU	minimum elong	14933 Nov 25 21:25	19° <u>♂</u> 33'52	1°02'38
morning rise	14927 Sep 29 19:19	7° <u>♂</u> 34'24		max. Earth dist.	14933 Nov 26 09:01	19° <u>♂</u> 37'24	10.66329 AU
retrograde	14928 Jan 11 07:47	15° <u>♂</u> 08'08		morning rise	14933 Dec 13 08:37	21° <u>♂</u> 40'33	
opposition	14928 Mar 21 01:07	11° <u>♂</u> 45'22	-1°06'19	retrograde	14934 Mar 27 12:05	29° <u>♂</u> 13'41	
min. Earth dist.	14928 Mar 20 12:46	11° <u>♂</u> 47'44	8.63454 AU	opposition	14934 Jun 04 22:46	25° <u>♂</u> 49'26	1°26'51
direct	14928 May 28 22:13	8° <u>♂</u> 24'33		min. Earth dist.	14934 Jun 04 13:58	25° <u>♂</u> 51'09	8.65759 AU
evening set	14928 Sep 07 08:22	15° <u>♂</u> 48'55		direct	14934 Aug 12 05:04	22° <u>♂</u> 27'48	
				evening set	14934 Nov 21 08:44	29° <u>♂</u> 49'35	
conjunction	14928 Sep 24 09:27	17° <u>♂</u> 53'45	-0°44'05		14934 Nov 22 19:38	0° <u>♂</u>	
minimum elong	14928 Sep 24 09:29	17° <u>♂</u> 53'45	0°43'51				
max. Earth dist.	14928 Sep 25 00:50	17° <u>♂</u> 58'28	10.64476 AU	conjunction	14934 Dec 08 18:46	1° <u>♂</u> 55'58	1°18'05
morning rise	14928 Oct 11 12:31	19° <u>♂</u> 59'09		minimum elong	14934 Dec 08 18:44	1° <u>♂</u> 55'57	1°19'05
retrograde	14929 Jan 23 04:26	27° <u>♂</u> 32'09		max. Earth dist.	14934 Dec 09 04:34	1° <u>♂</u> 58'57	10.64953 AU
min. Earth dist.	14929 Apr 02 11:11	24° <u>♂</u> 11'43	8.65418 AU	morning rise	14934 Dec 26 06:56	4° <u>♂</u> 03'00	
opposition	14929 Apr 03 00:42	24° <u>♂</u> 09'08	-0°41'17	retrograde	14935 Apr 09 09:16	11° <u>♂</u> 36'41	
direct	14929 Jun 10 19:28	20° <u>♂</u> 48'34		opposition	14935 Jun 17 15:02	8° <u>♂</u> 12'16	1°44'57
evening set	14929 Sep 19 22:08	28° <u>♂</u> 10'37		min. Earth dist.	14935 Jun 17 08:06	8° <u>♂</u> 13'37	8.64162 AU
	14929 Oct 04 22:10	0° <u>♂</u>		direct	14935 Aug 24 20:35	4° <u>♂</u> 50'03	
				evening set	14935 Dec 04 06:57	12° <u>♂</u> 13'51	
conjunction	14929 Oct 07 00:47	0° <u>♂</u> 15'30	-0°22'58				
minimum elong	14929 Oct 07 00:48	0° <u>♂</u> 15'31	0°22'33	conjunction	14935 Dec 21 18:10	14° <u>♂</u> 20'43	1°30'54
max. Earth dist.	14929 Oct 07 17:15	0° <u>♂</u> 20'33	10.66149 AU	minimum elong	14935 Dec 21 18:09	14° <u>♂</u> 20'43	1°31'53
morning rise	14929 Oct 24 05:33	2° <u>♂</u> 21'01		max. Earth dist.	14935 Dec 22 00:48	14° <u>♂</u> 22'44	10.63108 AU
retrograde	14930 Feb 05 02:24	9° <u>♂</u> 53'34		morning rise	14936 Jan 08 07:15	16° <u>♂</u> 28'09	
opposition	14930 Apr 15 22:16	6° <u>♂</u> 30'18	-0°14'27	retrograde	14936 Apr 21 08:10	24° <u>♂</u> 02'30	
min. Earth dist.	14930 Apr 15 08:15	6° <u>♂</u> 33'00	8.66746 AU	opposition	14936 Jun 29 07:41	20° <u>♂</u> 38'00	1°58'13
direct	14930 Jun 23 14:04	3° <u>♂</u> 09'51		min. Earth dist.	14936 Jun 29 03:38	20° <u>♂</u> 38'47	8.62131 AU
evening set	14930 Oct 02 12:03	10° <u>♂</u> 30'19		direct	14936 Sep 05 11:54	17° <u>♂</u> 15'08	
				evening set	14936 Dec 16 07:23	24° <u>♂</u> 41'23	
conjunction	14930 Oct 19 16:16	12° <u>♂</u> 35'23	-0°00'50				
minimum elong	14930 Oct 19 16:17	12° <u>♂</u> 35'23	0°00'14	conjunction	14937 Jan 02 19:42	26° <u>♂</u> 48'49	1°39'29
behind sun begin	14930 Oct 19 09:13	12° <u>♂</u> 33'15		minimum elong	14937 Jan 02 19:41	26° <u>♂</u> 48'48	1°40'25
behind sun end	14930 Oct 19 23:20	12° <u>♂</u> 37'30		max. Earth dist.	14937 Jan 02 22:21	26° <u>♂</u> 49'37	10.60877 AU
max. Earth dist.	14930 Oct 20 08:43	12° <u>♂</u> 40'23	10.67140 AU	morning rise	14937 Jan 20 09:41	28° <u>♂</u> 56'43	
asc. node	14930 Nov 02 23:49	14° <u>♂</u> 19'50			14937 Jan 29 08:29	0° <u>♂</u>	
morning rise	14930 Nov 05 22:51	14° <u>♂</u> 41'08		retrograde	14937 May 04 06:46	6° <u>♂</u> 31'45	
	14930 Nov 08 14:17	15° <u>♂</u>		opposition	14937 Jul 12 00:59	3° <u>♂</u> 07'13	2°05'59
retrograde	14931 Feb 17 23:57	22° <u>♂</u> 13'29		min. Earth dist.	14937 Jul 12 00:14	3° <u>♂</u> 07'22	8.59752 AU
opposition	14931 Apr 28 18:09	18° <u>♂</u> 49'59	0°13'00		14937 Aug 31 14:55	30° <u>♂</u>	
min. Earth dist.	14931 Apr 28 04:47	18° <u>♂</u> 52'33	8.67393 AU	direct	14937 Sep 18 05:37	29° <u>♂</u> 43'40	
direct	14931 Jul 06 05:44	15° <u>♂</u> 29'28			14937 Oct 05 20:15	0° <u>♂</u>	
evening set	14931 Oct 15 02:58	22° <u>♂</u> 49'11		evening set	14937 Dec 29 10:21	7° <u>♂</u> 12'48	
conjunction	14931 Nov 01 08:39	24° <u>♂</u> 54'27	0°21'20	conjunction	14938 Jan 15 23:48	9° <u>♂</u> 20'50	1°43'23
minimum elong	14931 Nov 01 08:38	24° <u>♂</u> 54'27	0°22'04	minimum elong	14938 Jan 15 23:49	9° <u>♂</u> 20'50	1°44'13
max. Earth dist.	14931 Nov 01 23:28	24° <u>♂</u> 58'58	10.67462 AU	max. Earth dist.	14938 Jan 15 22:27	9° <u>♂</u> 20'26	10.58351 AU
morning rise	14931 Nov 18 16:59	27° <u>♂</u> 00'30		morning rise	14938 Feb 02 14:33	11° <u>♂</u> 29'15	
	14931 Dec 15 04:27	0° <u>♂</u>			14938 Mar 05 22:54	15° <u>♂</u>	
retrograde	14932 Mar 01 19:35	4° <u>♂</u> 32'53		retrograde	14938 May 17 05:23	19° <u>♂</u> 04'57	
opposition	14932 May 10 12:35	1° <u>♂</u> 09'08	0°39'48	opposition	14938 Jul 24 19:03	15° <u>♂</u> 40'27	2°07'48
min. Earth dist.	14932 May 10 00:51	1° <u>♂</u> 11'24	8.67411 AU	min. Earth dist.	14938 Jul 24 21:17	15° <u>♂</u> 40'01	8.57121 AU
	14932 May 25 18:16	30° <u>♂</u>			14938 Aug 02 09:20	15° <u>♂</u>	
direct	14932 Jul 17 21:35	27° <u>♂</u> 48'23		direct	14938 Oct 01 01:58	12° <u>♂</u> 16'13	
	14932 Sep 07 07:06	0° <u>♂</u>			14938 Nov 27 17:28	15° <u>♂</u>	
evening set	14932 Oct 26 19:06	5° <u>♂</u> 08'06		evening set	14939 Jan 11 15:39	19° <u>♂</u> 48'28	
conjunction	14932 Nov 13 02:14	7° <u>♂</u> 13'40	0°42'28	conjunction	14939 Jan 29 06:16	21° <u>♂</u> 57'11	1°42'20
minimum elong	14932 Nov 13 02:13	7° <u>♂</u> 13'40	0°43'20	minimum elong	14939 Jan 29 06:17	21° <u>♂</u> 57'12	1°43'02
max. Earth dist.	14932 Nov 13 15:18	7° <u>♂</u> 17'39	10.67177 AU	max. Earth dist.	14939 Jan 29 01:51	21° <u>♂</u> 55'50	10.55636 AU
morning rise	14932 Nov 30 12:08	9° <u>♂</u> 20'01		morning rise	14939 Feb 15 21:30	24° <u>♂</u> 06'07	
retrograde	14933 Mar 14 15:28	16° <u>♂</u> 52'41			14939 Apr 15 05:10	0° <u>♂</u>	
opposition	14933 May 23 06:03	13° <u>♂</u> 28'40	1°04'48	retrograde	14939 May 30 06:35	1° <u>♂</u> 42'27	
min. Earth dist.	14933 May 22 19:52	13° <u>♂</u> 30'39	8.66855 AU		14939 Jul 15 02:11	30° <u>♂</u>	
direct	14933 Jul 30 13:49	10° <u>♂</u> 07'31		opposition	14939 Aug 06 14:36	28° <u>♂</u> 18'02	2°03'28
evening set	14933 Nov 08 12:48	17° <u>♂</u> 27'56		min. Earth dist.	14939 Aug 06 18:58	28° <u>♂</u> 17'11	8.54353 AU
				direct	14939 Oct 13 23:08	24° <u>♂</u> 53'14	

	14940 Jan 03 13:06	0°♄		min. Earth dist.	14945 Oct 22 17:28	15°♄27'28	8.42511 AU
evening set	14940 Jan 24 23:01	2°♄28'37			14945 Oct 28 13:21	15°♄	
				direct	14945 Dec 30 07:28	12°♄03'43	
conjunction	14940 Feb 11 14:39	4°♄38'02	1°36'19		14946 Feb 28 12:46	15°♄	
minimum elong	14940 Feb 11 14:41	4°♄38'02	1°36'51	evening set	14946 Apr 14 03:01	19°♄53'09	
max. Earth dist.	14940 Feb 11 07:31	4°♄35'50	10.52861 AU				
morning rise	14940 Feb 29 06:09	6°♄47'29		conjunction	14946 May 01 16:02	22°♄04'11	-0°16'00
retrograde	14940 Jun 11 09:52	14°♄24'23		minimum elong	14946 May 01 16:01	22°♄04'11	0°16'44
opposition	14940 Aug 18 11:53	11°♄00'09	1°53'06	max. Earth dist.	14946 May 01 01:05	21°♄59'30	10.42313 AU
min. Earth dist.	14940 Aug 18 18:21	10°♄58'52	8.51587 AU	morning rise	14946 May 19 02:13	24°♄14'29	
direct	14940 Oct 25 21:41	7°♄34'49			14946 Jul 13 04:08	0°♄	
evening set	14941 Feb 06 08:36	15°♄13'21		retrograde	14946 Aug 28 22:12	1°♄52'53	
					14946 Oct 15 23:20	30°♄	
conjunction	14941 Feb 24 00:58	17°♄23'26	1°25'33	opposition	14946 Nov 04 14:53	28°♄30'36	-0°33'59
minimum elong	14941 Feb 24 01:00	17°♄23'26	1°25'52	min. Earth dist.	14946 Nov 05 02:27	28°♄28'19	8.42296 AU
max. Earth dist.	14941 Feb 23 14:52	17°♄20'19	10.50174 AU	direct	14947 Jan 12 18:35	25°♄04'39	
morning rise	14941 Mar 13 16:35	19°♄33'23			14947 Apr 02 19:27	0°♄	
retrograde	14941 Jun 24 13:03	27°♄10'44		evening set	14947 Apr 27 16:21	2°♄54'30	
opposition	14941 Aug 31 11:04	23°♄46'46	1°37'05				
min. Earth dist.	14941 Aug 31 19:58	23°♄45'00	8.48975 AU	conjunction	14947 May 15 03:02	5°♄05'03	-0°38'35
direct	14941 Nov 07 23:41	20°♄21'00		minimum elong	14947 May 15 03:01	5°♄05'03	0°39'26
evening set	14942 Feb 19 20:03	28°♄02'34		max. Earth dist.	14947 May 14 12:57	5°♄00'38	10.42392 AU
	14942 Mar 07 18:05	0°♄		morning rise	14947 Jun 01 10:57	7°♄14'51	
				retrograde	14947 Sep 11 05:54	14°♄53'12	
conjunction	14942 Mar 09 12:44	0°♄13'13	1°10'28	opposition	14947 Nov 18 01:38	11°♄31'09	-1°00'55
minimum elong	14942 Mar 09 12:46	0°♄13'13	1°10'34	min. Earth dist.	14947 Nov 18 12:28	11°♄29'02	8.42683 AU
max. Earth dist.	14942 Mar 08 23:23	0°♄09'05	10.47714 AU	direct	14948 Jan 26 07:54	8°♄05'27	
morning rise	14942 Mar 27 04:15	2°♄23'34		evening set	14948 May 10 04:05	15°♄55'02	
retrograde	14942 Jul 07 17:56	10°♄01'17					
opposition	14942 Sep 13 12:30	6°♄37'40	1°16'07	conjunction	14948 May 27 12:13	18°♄04'55	-0°59'10
min. Earth dist.	14942 Sep 13 23:45	6°♄35'26	8.46652 AU	minimum elong	14948 May 27 12:11	18°♄04'54	1°00'07
direct	14942 Nov 21 03:51	3°♄11'37		max. Earth dist.	14948 May 26 23:22	18°♄00'52	10.43027 AU
evening set	14943 Mar 05 08:52	10°♄55'53		morning rise	14948 Jun 13 17:50	20°♄14'05	
max. Earth dist.	14943 Mar 22 09:49	13°♄02'07	10.45603 AU	retrograde	14948 Sep 23 12:17	27°♄52'22	
				opposition	14948 Nov 30 13:13	24°♄30'27	-1°24'42
conjunction	14943 Mar 23 01:22	13°♄06'57	0°51'47	min. Earth dist.	14948 Nov 30 22:47	24°♄28'35	8.43568 AU
minimum elong	14943 Mar 23 01:24	13°♄06'57	0°51'39	direct	14949 Feb 07 22:42	21°♄05'04	
morning rise	14943 Apr 09 16:20	15°♄17'36		evening set	14949 May 23 13:58	28°♄53'46	
retrograde	14943 Jul 20 23:48	22°♄55'35			14949 Jun 01 11:18	0°♄	
opposition	14943 Sep 26 16:06	19°♄32'20	0°51'13				
min. Earth dist.	14943 Sep 27 04:31	19°♄29'53	8.44739 AU	conjunction	14949 Jun 09 19:29	1°♄02'53	-1°16'42
direct	14943 Dec 04 10:32	16°♄06'09		minimum elong	14949 Jun 09 19:27	1°♄02'53	1°17'41
evening set	14944 Mar 17 22:38	23°♄52'42		max. Earth dist.	14949 Jun 09 08:35	0°♄59'27	10.44079 AU
				morning rise	14949 Jun 26 22:48	3°♄11'20	
conjunction	14944 Apr 04 14:33	26°♄04'00	0°30'25	retrograde	14949 Oct 06 19:42	10°♄49'38	
minimum elong	14944 Apr 04 14:34	26°♄04'00	0°30'04	opposition	14949 Dec 14 01:10	7°♄27'47	-1°44'05
max. Earth dist.	14944 Apr 03 22:16	25°♄58'55	10.43952 AU	min. Earth dist.	14949 Dec 14 08:30	7°♄26'22	8.44800 AU
morning rise	14944 Apr 22 04:27	28°♄14'45		direct	14950 Feb 21 12:05	4°♄02'51	
	14944 May 06 21:36	0°♄		evening set	14950 Jun 05 21:30	11°♄50'09	
retrograde	14944 Aug 02 05:23	5°♄52'57					
opposition	14944 Oct 08 21:45	2°♄30'03	0°23'36	conjunction	14950 Jun 23 00:42	13°♄58'30	-1°30'18
min. Earth dist.	14944 Oct 09 10:18	2°♄27'34	8.43338 AU	minimum elong	14950 Jun 23 00:41	13°♄58'30	1°31'17
	14944 Nov 13 10:42	30°♄		max. Earth dist.	14950 Jun 22 17:06	13°♄56'07	10.45429 AU
direct	14944 Dec 16 20:50	29°♄03'50		morning rise	14950 Jul 10 01:54	16°♄06'17	
	14945 Jan 18 22:25	0°♄		retrograde	14950 Oct 20 03:24	23°♄44'39	
evening set	14945 Mar 31 12:52	6°♄52'09		opposition	14950 Dec 27 13:26	20°♄22'48	-1°58'08
max. Earth dist.	14945 Apr 17 11:48	8°♄58'29	10.42840 AU	min. Earth dist.	14950 Dec 27 17:45	20°♄21'58	8.46308 AU
				direct	14951 Mar 07 00:09	16°♄58'24	
conjunction	14945 Apr 18 03:41	9°♄03'26	0°07'28	evening set	14951 Jun 19 02:29	24°♄43'46	
minimum elong	14945 Apr 18 03:40	9°♄03'26	0°06'55				
behind sun begin	14945 Apr 17 21:00	9°♄01'22		conjunction	14951 Jul 06 03:44	26°♄51'24	-1°39'18
behind sun end	14945 Apr 18 10:21	9°♄05'30		minimum elong	14951 Jul 06 03:44	26°♄51'23	1°40'14
morning rise	14945 May 05 15:57	11°♄14'04		max. Earth dist.	14951 Jul 05 23:56	26°♄50'12	10.47064 AU
	14945 Jun 07 17:14	15°♄		morning rise	14951 Jul 23 03:18	28°♄58'34	
retrograde	14945 Aug 15 13:16	18°♄52'25			14951 Jul 31 13:48	0°♄	
desc. node	14945 Aug 15 17:12	18°♄52'25		retrograde	14951 Nov 02 10:02	6°♄36'56	
opposition	14945 Oct 22 05:26	15°♄29'51	-0°05'19	opposition	14952 Jan 10 01:28	3°♄14'59	-2°06'11

min. Earth dist.	14952 Jan 10 02:52	3°♎14'43	8.48100 AU	retrograde	14958 Jan 18 00:18	22°♊26'05	
	14952 Mar 06 07:15	30°♊♌		opposition	14958 Mar 28 18:26	19°♊02'24	-0°52'20
direct	14952 Mar 19 11:34	29°♌♍51'07		min. Earth dist.	14958 Mar 28 05:21	19°♊04'55	8.61268 AU
	14952 Apr 01 14:11	0°♎		direct	14958 Jun 05 13:35	15°♊40'59	
evening set	14952 Jul 01 05:05	7°♎34'02		evening set	14958 Sep 14 20:27	23°♊05'30	
conjunction	14952 Jul 18 04:48	9°♎40'59	-1°43'19	conjunction	14958 Oct 01 22:31	25°♊10'48	-0°32'09
minimum elong	14952 Jul 18 04:48	9°♎40'59	1°44'09	minimum elong	14958 Oct 01 22:32	25°♊10'48	0°31'49
max. Earth dist.	14952 Jul 18 04:24	9°♎40'52	10.48986 AU	max. Earth dist.	14958 Oct 02 14:11	25°♊15'36	10.62110 AU
morning rise	14952 Aug 04 03:22	11°♎47'38		morning rise	14958 Oct 19 02:48	27°♊16'42	
	14952 Aug 31 19:40	15°♎			14958 Nov 11 19:48	0°♌	
retrograde	14952 Nov 14 16:06	19°♎25'44		retrograde	14959 Jan 30 22:36	4°♌50'56	
opposition	14953 Jan 22 12:37	16°♎03'38	-2°07'54	opposition	14959 Apr 10 17:52	1°♌27'01	-0°26'01
min. Earth dist.	14953 Jan 22 11:31	16°♎03'50	8.50154 AU	min. Earth dist.	14959 Apr 10 04:28	1°♌29'36	8.62900 AU
	14953 Feb 05 12:04	15°♊♌			14959 Apr 30 05:11	30°♊♌	
direct	14953 Apr 01 21:02	12°♎40'14		direct	14959 Jun 18 10:03	28°♊05'46	
	14953 May 25 02:17	15°♎			14959 Aug 05 02:14	0°♌	
evening set	14953 Jul 14 05:01	20°♎20'15		evening set	14959 Sep 27 11:11	5°♌28'21	
conjunction	14953 Jul 31 03:42	22°♎26'37	-1°42'13	conjunction	14959 Oct 14 14:48	7°♌33'45	-0°10'18
minimum elong	14953 Jul 31 03:44	22°♎26'37	1°42'55	minimum elong	14959 Oct 14 14:48	7°♌33'45	0°09'47
max. Earth dist.	14953 Jul 31 06:14	22°♎27'24	10.51154 AU	behind sun begin	14959 Oct 14 08:59	7°♌31'59	
morning rise	14953 Aug 17 02:03	24°♎32'52		behind sun end	14959 Oct 14 20:38	7°♌35'31	
	14953 Oct 07 15:51	0°♐		max. Earth dist.	14959 Oct 15 06:52	7°♌38'40	10.63550 AU
retrograde	14953 Nov 27 20:10	2°♐10'30		morning rise	14959 Oct 31 20:56	9°♌39'50	
	14954 Jan 20 00:50	30°♊♌			14959 Dec 22 05:36	15°♌	
opposition	14954 Feb 04 22:39	28°♌48'07	-2°03'19	retrograde	14960 Feb 12 19:35	17°♌13'39	
min. Earth dist.	14954 Feb 04 18:59	28°♌48'49	8.52406 AU	asc. node	14960 Apr 03 17:05	15°♌14'28	
direct	14954 Apr 15 05:03	25°♌25'12			14960 Apr 07 02:17	15°♊♌	
	14954 Jun 30 21:01	0°♐		opposition	14960 Apr 22 15:24	13°♌49'32	0°01'25
evening set	14954 Jul 27 02:07	3°♐01'56		min. Earth dist.	14960 Apr 22 01:45	13°♌52'10	8.64112 AU
				direct	14960 Jun 30 04:31	10°♌28'21	
conjunction	14954 Aug 13 00:31	5°♐07'50	-1°36'07		14960 Sep 14 05:59	15°♌	
minimum elong	14954 Aug 13 00:33	5°♐07'51	1°36'38	evening set	14960 Oct 09 02:16	17°♌49'42	
max. Earth dist.	14954 Aug 13 06:26	5°♐09'41	10.53482 AU				
morning rise	14954 Aug 29 23:14	7°♐13'48		conjunction	14960 Oct 26 07:30	19°♌55'15	0°12'05
retrograde	14954 Dec 10 21:59	14°♐50'50		minimum elong	14960 Oct 26 07:30	19°♌55'14	0°12'46
opposition	14955 Feb 18 06:52	11°♐28'06	-1°52'44	behind sun begin	14960 Oct 26 03:02	19°♌53'54	
min. Earth dist.	14955 Feb 18 00:05	11°♐29'25	8.54759 AU	behind sun end	14960 Oct 26 11:57	19°♌56'35	
direct	14955 Apr 28 11:57	8°♐05'38		max. Earth dist.	14960 Oct 27 00:13	20°♌00'21	10.64527 AU
evening set	14955 Aug 08 20:58	15°♐38'59		morning rise	14960 Nov 12 15:15	22°♌01'32	
				retrograde	14961 Feb 24 16:20	29°♌35'11	
conjunction	14955 Aug 25 19:46	17°♐44'34	-1°25'23	opposition	14961 May 05 11:16	26°♌10'53	0°28'43
minimum elong	14955 Aug 25 19:48	17°♐44'35	1°25'42	min. Earth dist.	14961 May 04 21:20	26°♌13'35	8.64849 AU
max. Earth dist.	14955 Aug 26 05:27	17°♐47'35	10.55860 AU	direct	14961 Jul 12 22:20	22°♌49'43	
morning rise	14955 Sep 11 19:18	19°♐50'21			14961 Oct 20 07:15	0°♊	
retrograde	14955 Dec 24 00:11	27°♐26'39		evening set	14961 Oct 21 18:30	0°♊10'31	
opposition	14956 Mar 02 12:47	24°♐03'34	-1°36'47				
min. Earth dist.	14956 Mar 02 03:01	24°♐05'27	8.57096 AU	conjunction	14961 Nov 08 01:16	2°♊16'17	0°33'47
direct	14956 May 10 15:34	20°♐41'31		minimum elong	14961 Nov 08 01:15	2°♊16'17	0°34'36
evening set	14956 Aug 20 13:59	28°♐11'34		max. Earth dist.	14961 Nov 08 17:41	2°♊21'18	10.65008 AU
	14956 Sep 04 06:53	0°♊		morning rise	14961 Nov 25 10:30	4°♊22'48	
				retrograde	14962 Mar 09 14:45	11°♊56'28	
conjunction	14956 Sep 06 13:38	0°♊16'58	-1°10'38	opposition	14962 May 18 05:46	8°♊32'05	0°54'39
minimum elong	14956 Sep 06 13:40	0°♊16'58	1°10'44	min. Earth dist.	14962 May 17 16:45	8°♊34'36	8.65091 AU
max. Earth dist.	14956 Sep 07 02:39	0°♊21'00	10.58166 AU	direct	14962 Jul 25 13:50	5°♊10'46	
morning rise	14956 Sep 23 14:22	2°♊22'41		evening set	14962 Nov 03 12:17	12°♊31'47	
retrograde	14957 Jan 05 01:15	9°♊58'13					
opposition	14957 Mar 15 16:41	6°♊34'49	-1°16'18	conjunction	14962 Nov 20 20:24	14°♊37'50	0°53'56
min. Earth dist.	14957 Mar 15 04:36	6°♊37'09	8.59301 AU	minimum elong	14962 Nov 20 20:22	14°♊37'49	0°54'51
direct	14957 May 23 15:23	3°♊13'08		max. Earth dist.	14962 Nov 21 10:52	14°♊42'14	10.64986 AU
evening set	14957 Sep 02 05:32	10°♊40'10		morning rise	14962 Dec 08 07:03	16°♊44'37	
				retrograde	14963 Mar 22 12:33	24°♊18'25	
conjunction	14957 Sep 19 06:16	12°♊45'28	-0°52'36	opposition	14963 May 30 23:26	20°♊54'02	1°18'04
minimum elong	14957 Sep 19 06:18	12°♊45'28	0°52'28	min. Earth dist.	14963 May 30 12:29	20°♊56'10	8.64837 AU
max. Earth dist.	14957 Sep 19 21:16	12°♊50'05	10.60283 AU	direct	14963 Aug 07 04:16	17°♊32'28	
morning rise	14957 Oct 06 08:39	14°♊51'15		evening set	14963 Nov 16 07:58	24°♊54'27	

conjunction	14963 Dec 03 17:17	27° $\mathbb{X}$ 00'48	1°11'36	conjunction	14970 Feb 18 19:50	12° $\mathbb{X}$ 22'40	1°30'19
minimum elong	14963 Dec 03 17:16	27° $\mathbb{X}$ 00'47	1°12'35	minimum elong	14970 Feb 18 19:52	12° $\mathbb{X}$ 22'41	1°30'43
max. Earth dist.	14963 Dec 04 04:51	27° $\mathbb{X}$ 04'19	10.64470 AU	max. Earth dist.	14970 Feb 18 09:40	12° $\mathbb{X}$ 19'32	10.52995 AU
morning rise	14963 Dec 21 05:10	29° $\mathbb{X}$ 07'52		morning rise	14970 Mar 08 11:30	14° $\mathbb{X}$ 32'14	
	14963 Dec 28 13:56	0° $\mathbb{Z}$		retrograde	14970 Jun 19 10:04	22° $\mathbb{X}$ 08'48	
retrograde	14964 Apr 03 08:50	6° $\mathbb{Z}$ 42'01		opposition	14970 Aug 26 10:35	18° $\mathbb{X}$ 45'16	1°44'02
opposition	14964 Jun 11 16:38	3° $\mathbb{Z}$ 17'40	1°37'53	min. Earth dist.	14970 Aug 26 19:24	18° $\mathbb{X}$ 43'31	8.51699 AU
min. Earth dist.	14964 Jun 11 08:15	3° $\mathbb{Z}$ 19'18	8.64107 AU	direct	14970 Nov 02 22:52	15° $\mathbb{X}$ 20'10	
	14964 Aug 09 22:45	30° $\mathbb{R}$ $\mathbb{X}$		evening set	14971 Feb 14 14:25	22° $\mathbb{X}$ 59'53	
direct	14964 Aug 18 21:19	29° $\mathbb{X}$ 55'46					
	14964 Aug 27 18:57	0° $\mathbb{Z}$		conjunction	14971 Mar 04 06:55	25° $\mathbb{X}$ 10'06	1°16'58
evening set	14964 Nov 28 05:44	7° $\mathbb{Z}$ 19'18		minimum elong	14971 Mar 04 06:57	25° $\mathbb{X}$ 10'07	1°17'09
				max. Earth dist.	14971 Mar 03 18:18	25° $\mathbb{X}$ 06'12	10.50274 AU
conjunction	14964 Dec 15 16:20	9° $\mathbb{Z}$ 26'02	1°25'57	morning rise	14971 Mar 21 22:29	27° $\mathbb{X}$ 20'07	
minimum elong	14964 Dec 15 16:18	9° $\mathbb{Z}$ 26'02	1°26'57		14971 Apr 13 22:24	0° $\mathbb{Y}$	
max. Earth dist.	14964 Dec 16 01:14	9° $\mathbb{Z}$ 28'45	10.63498 AU	retrograde	14971 Jul 02 14:27	4° $\mathbb{Y}$ 57'07	
morning rise	14965 Jan 02 05:11	11° $\mathbb{Z}$ 33'26		opposition	14971 Sep 08 10:48	1° $\mathbb{Y}$ 33'45	1°25'04
retrograde	14965 Apr 16 06:55	19° $\mathbb{Z}$ 08'00		min. Earth dist.	14971 Sep 08 21:05	1° $\mathbb{Y}$ 31'43	8.49027 AU
opposition	14965 Jun 24 09:41	15° $\mathbb{Z}$ 43'44	1°53'12		14971 Sep 28 23:04	30° $\mathbb{R}$ $\mathbb{X}$	
min. Earth dist.	14965 Jun 24 03:29	15° $\mathbb{Z}$ 44'57	8.62941 AU	direct	14971 Nov 16 01:43	28° $\mathbb{X}$ 08'13	
direct	14965 Aug 31 14:15	12° $\mathbb{Z}$ 21'26			14972 Jan 02 06:18	0° $\mathbb{Y}$	
evening set	14965 Dec 11 05:44	19° $\mathbb{Z}$ 46'58		evening set	14972 Feb 28 02:14	5° $\mathbb{Y}$ 50'44	
conjunction	14965 Dec 28 17:39	21° $\mathbb{Z}$ 54'11	1°36'19	conjunction	14972 Mar 16 18:57	8° $\mathbb{Y}$ 01'28	0°59'43
minimum elong	14965 Dec 28 17:38	21° $\mathbb{Z}$ 54'11	1°37'17	minimum elong	14972 Mar 16 18:59	8° $\mathbb{Y}$ 01'28	0°59'40
max. Earth dist.	14965 Dec 28 24:00	21° $\mathbb{Z}$ 56'07	10.62102 AU	max. Earth dist.	14972 Mar 16 04:38	7° $\mathbb{Y}$ 57'02	10.47742 AU
morning rise	14966 Jan 15 07:16	24° $\mathbb{Z}$ 01'56		morning rise	14972 Apr 03 10:02	10° $\mathbb{Y}$ 11'49	
	14966 Mar 16 02:37	0° $\mathbb{X}$		retrograde	14972 Jul 14 20:19	17° $\mathbb{Y}$ 49'10	
retrograde	14966 Apr 29 06:46	1° $\mathbb{X}$ 36'55		opposition	14972 Sep 20 13:10	14° $\mathbb{Y}$ 25'59	1°01'43
	14966 Jun 13 02:16	30° $\mathbb{R}$ $\mathbb{Z}$		min. Earth dist.	14972 Sep 21 00:55	14° $\mathbb{Y}$ 23'39	8.46632 AU
opposition	14966 Jul 07 03:02	28° $\mathbb{Z}$ 12'46	2°03'15	direct	14972 Nov 28 06:23	11° $\mathbb{Y}$ 00'04	
min. Earth dist.	14966 Jul 06 23:07	28° $\mathbb{Z}$ 13'32	8.61360 AU	evening set	14973 Mar 12 15:24	18° $\mathbb{Y}$ 45'03	
direct	14966 Sep 13 07:06	24° $\mathbb{Z}$ 49'58					
	14966 Dec 04 09:33	0° $\mathbb{X}$		conjunction	14973 Mar 30 07:42	20° $\mathbb{Y}$ 56'07	0°39'23
evening set	14966 Dec 24 08:13	2° $\mathbb{X}$ 17'56		minimum elong	14973 Mar 30 07:44	20° $\mathbb{Y}$ 56'07	0°39'08
				max. Earth dist.	14973 Mar 29 15:32	20° $\mathbb{Y}$ 51'05	10.45562 AU
conjunction	14967 Jan 10 21:16	4° $\mathbb{X}$ 25'39	1°42'10	morning rise	14973 Apr 16 21:56	23° $\mathbb{Y}$ 06'41	
minimum elong	14967 Jan 10 21:16	4° $\mathbb{X}$ 25'39	1°43'03		14973 Jun 29 04:40	0° $\mathbb{Z}$	
max. Earth dist.	14967 Jan 11 00:16	4° $\mathbb{X}$ 26'35	10.60311 AU	retrograde	14973 Jul 28 01:52	0° $\mathbb{Z}$ 44'13	
morning rise	14967 Jan 28 11:28	6° $\mathbb{X}$ 33'47			14973 Aug 26 04:37	30° $\mathbb{R}$ $\mathbb{Y}$	
retrograde	14967 May 12 06:08	14° $\mathbb{X}$ 09'09		opposition	14973 Oct 03 17:31	27° $\mathbb{Y}$ 21'15	0°35'08
opposition	14967 Jul 19 20:58	10° $\mathbb{X}$ 45'07	2°07'30	min. Earth dist.	14973 Oct 04 06:42	27° $\mathbb{Y}$ 18'38	8.44659 AU
min. Earth dist.	14967 Jul 19 20:00	10° $\mathbb{X}$ 45'18	8.59395 AU	direct	14973 Dec 11 14:31	23° $\mathbb{Y}$ 55'02	
direct	14967 Sep 26 02:11	7° $\mathbb{X}$ 21'45			14974 Mar 11 22:34	0° $\mathbb{Z}$	
evening set	14968 Jan 06 12:49	14° $\mathbb{X}$ 52'24		evening set	14974 Mar 26 05:11	1° $\mathbb{Z}$ 42'03	
	14968 Jan 07 14:09	15° $\mathbb{X}$					
				conjunction	14974 Apr 12 20:26	3° $\mathbb{Z}$ 53'14	0°17'00
conjunction	14968 Jan 24 02:52	17° $\mathbb{X}$ 00'42	1°43'09	minimum elong	14974 Apr 12 20:27	3° $\mathbb{Z}$ 53'14	0°16'32
minimum elong	14968 Jan 24 02:53	17° $\mathbb{X}$ 00'42	1°43'55	max. Earth dist.	14974 Apr 12 02:57	3° $\mathbb{Z}$ 47'47	10.43852 AU
max. Earth dist.	14968 Jan 24 01:23	17° $\mathbb{X}$ 00'15	10.58167 AU	morning rise	14974 Apr 30 09:24	6° $\mathbb{Z}$ 03'48	
morning rise	14968 Feb 10 17:41	19° $\mathbb{X}$ 09'15		retrograde	14974 Aug 10 07:54	13° $\mathbb{Z}$ 41'31	
retrograde	14968 May 24 07:05	26° $\mathbb{X}$ 44'59		opposition	14974 Oct 16 23:57	10° $\mathbb{Z}$ 18'44	0°06'40
opposition	14968 Jul 31 16:04	23° $\mathbb{X}$ 21'04	2°05'41	min. Earth dist.	14974 Oct 17 13:51	10° $\mathbb{Z}$ 15'59	8.43211 AU
min. Earth dist.	14968 Jul 31 18:53	23° $\mathbb{X}$ 20'31	8.57079 AU	direct	14974 Dec 25 00:41	6° $\mathbb{Z}$ 52'21	
direct	14968 Oct 07 22:17	19° $\mathbb{X}$ 57'05		desc. node	14975 Jan 11 14:33	7° $\mathbb{Z}$ 08'27	
evening set	14969 Jan 18 19:19	27° $\mathbb{X}$ 30'38		evening set	14975 Apr 08 18:43	14° $\mathbb{Z}$ 40'49	
					14975 Apr 11 09:14	15° $\mathbb{Z}$	
conjunction	14969 Feb 05 10:19	29° $\mathbb{X}$ 39'34	1°39'10	conjunction	14975 Apr 26 08:24	16° $\mathbb{Z}$ 51'52	-0°06'23
minimum elong	14969 Feb 05 10:21	29° $\mathbb{X}$ 39'34	1°39'46	minimum elong	14975 Apr 26 08:23	16° $\mathbb{Z}$ 51'52	0°07'02
max. Earth dist.	14969 Feb 05 03:59	29° $\mathbb{X}$ 37'37	10.55697 AU	behind sun begin	14975 Apr 26 01:44	16° $\mathbb{Z}$ 49'49	
	14969 Feb 08 04:55	0° $\mathbb{X}$		behind sun end	14975 Apr 26 15:02	16° $\mathbb{Z}$ 53'56	
morning rise	14969 Feb 23 01:43	1° $\mathbb{X}$ 48'37		max. Earth dist.	14975 Apr 25 14:50	16° $\mathbb{Z}$ 46'23	10.42698 AU
retrograde	14969 Jun 06 08:45	9° $\mathbb{X}$ 24'44		morning rise	14975 May 13 19:38	19° $\mathbb{Z}$ 02'14	
opposition	14969 Aug 13 12:31	6° $\mathbb{X}$ 01'00	1°57'46	retrograde	14975 Aug 23 14:27	26° $\mathbb{Z}$ 40'07	
min. Earth dist.	14969 Aug 13 18:50	5° $\mathbb{X}$ 59'46	8.54459 AU	opposition	14975 Oct 30 08:04	23° $\mathbb{Z}$ 17'27	-0°22'14
direct	14969 Oct 20 20:39	2° $\mathbb{X}$ 36'26		min. Earth dist.	14975 Oct 30 21:22	23° $\mathbb{Z}$ 14'50	8.42361 AU
evening set	14970 Feb 01 03:58	10° $\mathbb{X}$ 13'05					

direct	14976 Jan 07 12:21	19° <b>♄</b> 51'04	direct	14982 Mar 27 12:06	7° <b>♄</b> 23'10
evening set	14976 Apr 21 07:44	27° <b>♄</b> 40'21	evening set	14982 Jul 08 22:24	15° <b>♄</b> 03'49
				14982 Jul 08 09:55	15° <b>♄</b>
conjunction	14976 May 08 19:26	29° <b>♄</b> 51'03 -0°29'22	conjunction	14982 Jul 25 21:30	17° <b>♄</b> 10'17 -1°43'19
minimum elong	14976 May 08 19:25	29° <b>♄</b> 51'03 0°30'10	minimum elong	14982 Jul 25 21:31	17° <b>♄</b> 10'18 1°44'05
max. Earth dist.	14976 May 08 03:27	29° <b>♄</b> 46'03 10.42153 AU	max. Earth dist.	14982 Jul 26 00:19	17° <b>♄</b> 11'10 10.50901 AU
	14976 May 09 23:55	0° <b>♄</b>	morning rise	14982 Aug 11 19:49	19° <b>♄</b> 16'32
morning rise	14976 May 26 04:31	2° <b>♄</b> 01'03	retrograde	14982 Nov 22 10:10	26° <b>♄</b> 53'39
retrograde	14976 Sep 04 21:07	9° <b>♄</b> 39'02	opposition	14983 Jan 30 11:01	23° <b>♄</b> 31'21 -2°06'01
opposition	14976 Nov 11 17:27	6° <b>♄</b> 16'29 -0°50'01	min. Earth dist.	14983 Jan 30 06:35	23° <b>♄</b> 32'12 8.52371 AU
min. Earth dist.	14976 Nov 12 05:06	6° <b>♄</b> 14'12 8.42143 AU	direct	14983 Apr 09 19:22	20° <b>♄</b> 08'18
direct	14977 Jan 20 01:07	2° <b>♄</b> 50'13	evening set	14983 Jul 21 19:52	27° <b>♄</b> 45'42
evening set	14977 May 04 19:36	10° <b>♄</b> 39'40			
conjunction	14977 May 22 05:00	12° <b>♄</b> 49'51 -0°50'53	conjunction	14983 Aug 07 18:26	29° <b>♄</b> 51'36 -1°39'20
minimum elong	14977 May 22 04:58	12° <b>♄</b> 49'50 0°51'48	minimum elong	14983 Aug 07 18:27	29° <b>♄</b> 51'37 1°39'55
max. Earth dist.	14977 May 21 15:28	12° <b>♄</b> 45'36 10.42237 AU	max. Earth dist.	14983 Aug 08 01:11	29° <b>♄</b> 53'43 10.53660 AU
morning rise	14977 Jun 08 11:37	14° <b>♄</b> 59'17		14983 Aug 08 21:20	0° <b>♄</b>
retrograde	14977 Sep 18 04:46	22° <b>♄</b> 37'22	morning rise	14983 Aug 24 16:43	1° <b>♄</b> 57'28
opposition	14977 Nov 25 04:07	19° <b>♄</b> 14'55 -1°15'14	retrograde	14983 Dec 05 13:09	9° <b>♄</b> 33'56
min. Earth dist.	14977 Nov 25 13:48	19° <b>♄</b> 13'01 8.42562 AU	opposition	14984 Feb 12 19:09	6° <b>♄</b> 11'32 -1°57'57
direct	14978 Feb 02 13:54	15° <b>♄</b> 48'55	min. Earth dist.	14984 Feb 12 12:05	6° <b>♄</b> 12'54 8.55167 AU
evening set	14978 May 18 05:45	23° <b>♄</b> 37'52	direct	14984 Apr 22 01:01	2° <b>♄</b> 49'09
			evening set	14984 Aug 02 15:06	10° <b>♄</b> 23'09
conjunction	14978 Jun 04 12:33	25° <b>♄</b> 47'21 -1°09'48	conjunction	14984 Aug 19 13:34	12° <b>♄</b> 28'37 -1°30'33
minimum elong	14978 Jun 04 12:31	25° <b>♄</b> 47'20 1°10'46	minimum elong	14984 Aug 19 13:36	12° <b>♄</b> 28'38 1°30'57
max. Earth dist.	14978 Jun 04 01:44	25° <b>♄</b> 43'57 10.42946 AU	max. Earth dist.	14984 Aug 19 22:59	12° <b>♄</b> 31'33 10.56486 AU
morning rise	14978 Jun 21 16:43	27° <b>♄</b> 56'06	morning rise	14984 Sep 05 12:30	14° <b>♄</b> 34'13
	14978 Jul 08 23:48	0° <b>♄</b>	retrograde	14984 Dec 17 15:13	22° <b>♄</b> 09'54
retrograde	14978 Oct 01 12:46	5° <b>♄</b> 34'15	opposition	14985 Feb 25 01:26	18° <b>♄</b> 47'23 -1°44'15
opposition	14978 Dec 08 15:35	2° <b>♄</b> 11'54 -1°36'34	min. Earth dist.	14985 Feb 24 16:22	18° <b>♄</b> 49'08 8.57962 AU
min. Earth dist.	14978 Dec 08 23:16	2° <b>♄</b> 10'24 8.43598 AU	direct	14985 May 05 04:26	15° <b>♄</b> 25'36
	14979 Jan 08 06:31	30° <b>♄</b>	evening set	14985 Aug 15 08:15	22° <b>♄</b> 56'11
direct	14979 Feb 16 01:31	28° <b>♄</b> 46'19			
	14979 Mar 26 06:17	0° <b>♄</b>	conjunction	14985 Sep 01 07:12	25° <b>♄</b> 01'22 -1°17'30
evening set	14979 May 31 13:49	6° <b>♄</b> 34'05	minimum elong	14985 Sep 01 07:15	25° <b>♄</b> 01'23 1°17'41
conjunction	14979 Jun 17 18:02	8° <b>♄</b> 42'46 -1°25'07	max. Earth dist.	14985 Sep 01 18:55	25° <b>♄</b> 05'00 10.59260 AU
minimum elong	14979 Jun 17 18:01	8° <b>♄</b> 42'46 1°26'06	morning rise	14985 Sep 18 07:20	27° <b>♄</b> 06'50
max. Earth dist.	14979 Jun 17 09:44	8° <b>♄</b> 40'10 10.44252 AU		14985 Oct 13 08:55	0° <b>♄</b>
morning rise	14979 Jul 04 20:05	10° <b>♄</b> 50'51	retrograde	14985 Dec 30 15:03	4° <b>♄</b> 41'40
retrograde	14979 Oct 14 18:52	18° <b>♄</b> 28'55	opposition	14986 Mar 10 05:43	1° <b>♄</b> 19'00 -1°25'41
opposition	14979 Dec 22 03:11	15° <b>♄</b> 06'39 -1°52'56	min. Earth dist.	14986 Mar 09 18:44	1° <b>♄</b> 21'06 8.60640 AU
min. Earth dist.	14979 Dec 22 08:48	15° <b>♄</b> 05'33 8.45201 AU		14986 Mar 27 21:13	30° <b>♄</b>
direct	14980 Feb 29 13:41	11° <b>♄</b> 41'35	direct	14986 May 18 05:28	27° <b>♄</b> 57'43
evening set	14980 Jun 12 19:24	19° <b>♄</b> 27'34		14986 Jul 06 18:36	0° <b>♄</b>
			evening set	14986 Aug 27 23:41	5° <b>♄</b> 25'05
conjunction	14980 Jun 29 21:21	21° <b>♄</b> 35'27 -1°36'07	conjunction	14986 Sep 13 23:42	7° <b>♄</b> 30'05 -1°00'50
minimum elong	14980 Jun 29 21:20	21° <b>♄</b> 35'26 1°37'04	minimum elong	14986 Sep 13 23:44	7° <b>♄</b> 30'05 1°00'48
max. Earth dist.	14980 Jun 29 15:53	21° <b>♄</b> 33'43 10.46084 AU	max. Earth dist.	14986 Sep 14 13:48	7° <b>♄</b> 34'26 10.61845 AU
morning rise	14980 Jul 16 21:42	23° <b>♄</b> 42'51	morning rise	14986 Oct 01 01:20	9° <b>♄</b> 35'31
	14980 Sep 17 11:07	0° <b>♄</b>	retrograde	14987 Jan 12 13:19	17° <b>♄</b> 09'33
retrograde	14980 Oct 26 23:42	1° <b>♄</b> 20'45	opposition	14987 Mar 23 07:41	13° <b>♄</b> 46'40 -1°03'11
	14980 Dec 06 13:35	30° <b>♄</b>	min. Earth dist.	14987 Mar 22 18:43	13° <b>♄</b> 49'09 8.63052 AU
opposition	14981 Jan 03 14:38	27° <b>♄</b> 58'32 -2°03'33	direct	14987 May 31 05:18	10° <b>♄</b> 25'48
min. Earth dist.	14981 Jan 03 17:18	27° <b>♄</b> 58'01 8.47270 AU	evening set	14987 Sep 09 14:15	17° <b>♄</b> 50'18
direct	14981 Mar 14 02:11	24° <b>♄</b> 34'05			
	14981 Jun 06 13:19	0° <b>♄</b>	conjunction	14987 Sep 26 15:40	19° <b>♄</b> 55'15 -0°41'24
evening set	14981 Jun 25 22:17	2° <b>♄</b> 17'40	minimum elong	14987 Sep 26 15:41	19° <b>♄</b> 55'15 0°41'09
conjunction	14981 Jul 12 22:28	4° <b>♄</b> 24'47 -1°42'15	max. Earth dist.	14987 Sep 27 07:58	20° <b>♄</b> 00'15 10.64081 AU
minimum elong	14981 Jul 12 22:28	4° <b>♄</b> 24'47 1°43'08	morning rise	14987 Oct 13 18:52	22° <b>♄</b> 00'44
max. Earth dist.	14981 Jul 12 20:54	4° <b>♄</b> 24'17 10.48336 AU	retrograde	14988 Jan 25 12:10	29° <b>♄</b> 34'01
morning rise	14981 Jul 29 21:32	6° <b>♄</b> 31'33	opposition	14988 Apr 04 07:18	26° <b>♄</b> 10'54 -0°37'52
retrograde	14981 Nov 09 05:32	14° <b>♄</b> 09'09	min. Earth dist.	14988 Apr 03 17:06	26° <b>♄</b> 13'38 8.65037 AU
opposition	14982 Jan 17 01:23	10° <b>♄</b> 46'55 -2°07'57	direct	14988 Jun 12 02:00	22° <b>♄</b> 50'19
min. Earth dist.	14982 Jan 17 00:30	10° <b>♄</b> 47'05 8.49696 AU		14988 Sep 19 10:40	0° <b>♄</b>



evening set	14988 Sep 21 04:27	0° $\mathbb{M}$ 12'30		opposition	14994 Jun 18 22:34	10° $\mathcal{Z}$ 17'01	1°46'48
				min. Earth dist.	14994 Jun 18 15:58	10° $\mathcal{Z}$ 18'18	8.64033 AU
conjunction	14988 Oct 08 07:17	2° $\mathbb{M}$ 17'29	-0°20'08	direct	14994 Aug 26 03:03	6° $\mathcal{Z}$ 54'48	
minimum elong	14988 Oct 08 07:18	2° $\mathbb{M}$ 17'29	0°19'41	evening set	14994 Dec 05 15:13	14° $\mathcal{Z}$ 18'52	
max. Earth dist.	14988 Oct 09 00:12	2° $\mathbb{M}$ 22'40	10.65802 AU				
morning rise	14988 Oct 25 12:14	4° $\mathbb{M}$ 23'06		conjunction	14994 Dec 23 02:24	16° $\mathcal{Z}$ 25'46	1°32'07
retrograde	14989 Feb 06 10:22	11° $\mathbb{M}$ 55'50		minimum elong	14994 Dec 23 02:23	16° $\mathcal{Z}$ 25'45	1°33'06
opposition	14989 Apr 17 05:06	8° $\mathbb{M}$ 32'31	-0°10'53	max. Earth dist.	14994 Dec 23 08:12	16° $\mathcal{Z}$ 27'32	10.63000 AU
min. Earth dist.	14989 Apr 16 15:03	8° $\mathbb{M}$ 35'13	8.66434 AU	morning rise	14995 Jan 09 15:38	18° $\mathcal{Z}$ 33'15	
direct	14989 Jun 24 19:01	5° $\mathbb{M}$ 12'01		retrograde	14995 Apr 23 16:18	26° $\mathcal{Z}$ 07'39	
asc. node	14989 Sep 15 04:00	10° $\mathbb{M}$ 23'39		opposition	14995 Jul 01 15:19	22° $\mathcal{Z}$ 43'14	1°59'21
evening set	14989 Oct 03 18:43	12° $\mathbb{M}$ 32'39		min. Earth dist.	14995 Jul 01 11:57	22° $\mathcal{Z}$ 43'54	8.62049 AU
				direct	14995 Sep 07 19:13	19° $\mathcal{Z}$ 20'22	
conjunction	14989 Oct 20 22:59	14° $\mathbb{M}$ 37'45	0°02'07	evening set	14995 Dec 18 15:53	26° $\mathcal{Z}$ 46'54	
minimum elong	14989 Oct 20 22:59	14° $\mathbb{M}$ 37'46	0°02'44				
behind sun begin	14989 Oct 20 15:53	14° $\mathbb{M}$ 35'37		conjunction	14996 Jan 05 04:13	28° $\mathcal{Z}$ 54'20	1°40'06
behind sun end	14989 Oct 21 06:06	14° $\mathbb{M}$ 39'54		minimum elong	14996 Jan 05 04:12	28° $\mathcal{Z}$ 54'20	1°41'01
max. Earth dist.	14989 Oct 21 14:57	14° $\mathbb{M}$ 42'37	10.66865 AU	max. Earth dist.	14996 Jan 05 06:23	28° $\mathcal{Z}$ 55'00	10.60818 AU
	14989 Oct 23 23:48	15° $\mathbb{M}$			14996 Jan 14 03:38	0° $\approx$	
morning rise	14989 Nov 07 05:48	16° $\mathbb{M}$ 43'36		morning rise	14996 Jan 22 18:16	1° $\approx$ 02'16	
retrograde	14990 Feb 19 06:23	24° $\mathbb{M}$ 16'07		retrograde	14996 May 05 13:34	8° $\approx$ 37'20	
opposition	14990 Apr 30 01:12	20° $\mathbb{M}$ 52'35	0°16'31	opposition	14996 Jul 13 08:38	5° $\approx$ 12'52	2°06'21
min. Earth dist.	14990 Apr 29 12:22	20° $\mathbb{M}$ 55'03	8.67148 AU	min. Earth dist.	14996 Jul 13 08:03	5° $\approx$ 12'59	8.59720 AU
direct	14990 Jul 07 12:41	17° $\mathbb{M}$ 32'02		direct	14996 Sep 19 14:39	1° $\approx$ 49'20	
evening set	14990 Oct 16 09:55	24° $\mathbb{M}$ 51'56		evening set	14996 Dec 30 18:52	9° $\approx$ 18'39	
conjunction	14990 Nov 02 15:43	26° $\mathbb{M}$ 57'17	0°24'07	conjunction	14997 Jan 17 08:27	11° $\approx$ 26'43	1°43'21
minimum elong	14990 Nov 02 15:42	26° $\mathbb{M}$ 57'17	0°24'53	minimum elong	14997 Jan 17 08:28	11° $\approx$ 26'43	1°44'11
max. Earth dist.	14990 Nov 03 06:09	27° $\mathbb{M}$ 01'41	10.67240 AU	max. Earth dist.	14997 Jan 17 07:32	11° $\approx$ 26'26	10.58346 AU
morning rise	14990 Nov 20 00:16	29° $\mathbb{M}$ 03'23		morning rise	14997 Feb 03 23:08	13° $\approx$ 35'08	
	14990 Nov 28 00:26	0° $\mathcal{Z}$			14997 Feb 16 00:05	15° $\approx$	
retrograde	14991 Mar 04 02:38	6° $\mathcal{Z}$ 35'57		retrograde	14997 May 18 13:53	21° $\approx$ 10'48	
opposition	14991 May 12 19:42	3° $\mathcal{Z}$ 12'12	0°43'08	opposition	14997 Jul 26 02:44	17° $\approx$ 46'21	2°07'22
min. Earth dist.	14991 May 12 08:07	3° $\mathcal{Z}$ 14'26	8.67207 AU	min. Earth dist.	14997 Jul 26 04:28	17° $\approx$ 46'01	8.57143 AU
	14991 Jul 07 09:20	30° $\mathcal{R}\mathbb{M}$			14997 Sep 05 07:34	15° $\mathcal{R}\approx$	
direct	14991 Jul 20 05:09	29° $\mathbb{M}$ 51'25		direct	14997 Oct 02 09:37	14° $\approx$ 22'09	
	14991 Aug 01 23:20	0° $\mathcal{Z}$			14997 Oct 29 07:22	15° $\approx$	
evening set	14991 Oct 29 02:23	7° $\mathcal{Z}$ 11'22		evening set	14998 Jan 13 00:11	21° $\approx$ 54'29	
conjunction	14991 Nov 15 09:44	9° $\mathcal{Z}$ 17'00	0°45'02	conjunction	14998 Jan 30 14:57	24° $\approx$ 03'14	1°41'40
minimum elong	14991 Nov 15 09:43	9° $\mathcal{Z}$ 17'00	0°45'55	minimum elong	14998 Jan 30 14:59	24° $\approx$ 03'14	1°42'21
max. Earth dist.	14991 Nov 15 23:12	9° $\mathcal{Z}$ 21'06	10.66981 AU	max. Earth dist.	14998 Jan 30 11:08	24° $\approx$ 02'03	10.55685 AU
morning rise	14991 Dec 02 19:42	11° $\mathcal{Z}$ 23'24		morning rise	14998 Feb 17 06:06	26° $\approx$ 12'10	
retrograde	14992 Mar 15 23:11	18° $\mathcal{Z}$ 56'14			14998 Mar 23 08:05	0° $\mathcal{H}$	
opposition	14992 May 24 13:13	15° $\mathcal{Z}$ 32'15	1°07'46	retrograde	14998 May 31 15:24	3° $\mathcal{H}$ 48'22	
min. Earth dist.	14992 May 24 02:36	15° $\mathcal{Z}$ 34'18	8.66670 AU	opposition	14998 Aug 07 22:15	0° $\mathcal{H}$ 24'00	2°02'15
direct	14992 Jul 31 20:41	12° $\mathcal{Z}$ 11'07		min. Earth dist.	14998 Aug 08 02:23	0° $\mathcal{H}$ 23'11	8.54423 AU
evening set	14992 Nov 09 20:26	19° $\mathcal{Z}$ 31'47			14998 Aug 12 23:56	30° $\mathcal{R}\approx$	
				direct	14998 Oct 15 06:17	26° $\approx$ 59'12	
conjunction	14992 Nov 27 05:13	21° $\mathcal{Z}$ 37'47	1°03'54		14998 Dec 15 03:24	0° $\mathcal{H}$	
minimum elong	14992 Nov 27 05:12	21° $\mathcal{Z}$ 37'46	1°04'51	evening set	14999 Jan 26 07:41	4° $\mathcal{H}$ 34'38	
max. Earth dist.	14992 Nov 27 17:26	21° $\mathcal{Z}$ 41'30	10.66148 AU				
morning rise	14992 Dec 14 16:21	23° $\mathcal{Z}$ 44'30		conjunction	14999 Feb 12 23:19	6° $\mathcal{H}$ 44'02	1°35'03
	14993 Feb 17 05:11	0° $\mathcal{Z}$		minimum elong	14999 Feb 12 23:21	6° $\mathcal{H}$ 44'03	1°35'32
retrograde	14993 Mar 28 20:05	1° $\mathcal{Z}$ 17'48		max. Earth dist.	14999 Feb 12 15:57	6° $\mathcal{H}$ 41'46	10.52954 AU
	14993 May 07 23:32	30° $\mathcal{R}\mathcal{Z}$		morning rise	14999 Mar 02 14:47	8° $\mathcal{H}$ 53'29	
opposition	14993 Jun 06 06:06	27° $\mathcal{Z}$ 53'35	1°29'20	retrograde	14999 Jun 13 17:15	16° $\mathcal{H}$ 30'10	
min. Earth dist.	14993 Jun 05 20:54	27° $\mathcal{Z}$ 55'23	8.65594 AU	opposition	14999 Aug 20 19:28	13° $\mathcal{H}$ 05'59	1°51'09
direct	14993 Aug 13 12:23	24° $\mathcal{Z}$ 31'59		min. Earth dist.	14999 Aug 21 02:25	13° $\mathcal{H}$ 04'36	8.51698 AU
	14993 Nov 06 06:41	0° $\mathcal{Z}$		direct	14999 Oct 28 05:56	9° $\mathcal{H}$ 40'37	
evening set	14993 Nov 22 16:43	1° $\mathcal{Z}$ 54'02		evening set	15000 Feb 08 17:08	17° $\mathcal{H}$ 19'08	
conjunction	14993 Dec 10 02:46	4° $\mathcal{Z}$ 00'28	1°19'51	conjunction	15000 Feb 26 09:23	19° $\mathcal{H}$ 29'11	1°23'43
minimum elong	14993 Dec 10 02:44	4° $\mathcal{Z}$ 00'27	1°20'50	minimum elong	15000 Feb 26 09:25	19° $\mathcal{H}$ 29'12	1°24'00
max. Earth dist.	14993 Dec 10 12:27	4° $\mathcal{Z}$ 03'25	10.64800 AU	max. Earth dist.	15000 Feb 25 22:22	19° $\mathcal{H}$ 25'48	10.50305 AU
morning rise	14993 Dec 27 14:58	6° $\mathcal{Z}$ 07'32		morning rise	15000 Mar 16 01:01	21° $\mathcal{H}$ 39'06	
retrograde	14994 Apr 10 18:20	13° $\mathcal{Z}$ 41'22		retrograde	15000 Jun 26 20:53	29° $\mathcal{H}$ 16'12	

opposition	15000 Sep 02 18:38	25° $\text{K}$ 52'16	1°34'30	minimum elong	15006 May 17 09:36	7° $\text{II}$ 07'18	0°42'01
min. Earth dist.	15000 Sep 03 04:14	25° $\text{K}$ 50'21	8.49121 AU	max. Earth dist.	15006 May 16 18:53	7° $\text{II}$ 02'41	10.42547 AU
direct	15000 Nov 10 07:17	22° $\text{K}$ 26'27		morning rise	15006 Jun 03 17:27	9° $\text{II}$ 17'03	
	15001 Feb 21 02:05	0° $\text{Y}$		retrograde	15006 Sep 13 11:11	16° $\text{II}$ 55'18	
evening set	15001 Feb 22 04:12	0° $\text{Y}$ 07'54		opposition	15006 Nov 20 08:31	13° $\text{II}$ 33'15	-1°03'55
				min. Earth dist.	15006 Nov 20 19:28	13° $\text{II}$ 31'07	8.42848 AU
conjunction	15001 Mar 11 20:48	2° $\text{Y}$ 18'30	1°08'10	direct	15007 Jan 28 16:09	10° $\text{II}$ 07'34	
minimum elong	15001 Mar 11 20:50	2° $\text{Y}$ 18'31	1°08'14	evening set	15007 May 13 10:41	17° $\text{II}$ 57'00	
max. Earth dist.	15001 Mar 11 06:50	2° $\text{Y}$ 14'11	10.47876 AU				
morning rise	15001 Mar 29 12:21	4° $\text{Y}$ 28'50		conjunction	15007 May 30 18:34	20° $\text{II}$ 06'47	-1°01'24
retrograde	15001 Jul 10 00:48	12° $\text{Y}$ 06'15		minimum elong	15007 May 30 18:32	20° $\text{II}$ 06'47	1°02'20
opposition	15001 Sep 15 19:51	8° $\text{Y}$ 42'37	1°13'03	max. Earth dist.	15007 May 30 05:56	20° $\text{II}$ 02'49	10.43211 AU
min. Earth dist.	15001 Sep 16 07:15	8° $\text{Y}$ 40'22	8.46821 AU	morning rise	15007 Jun 17 00:01	22° $\text{II}$ 15'52	
direct	15001 Nov 23 12:05	5° $\text{Y}$ 16'31		retrograde	15007 Sep 26 18:57	29° $\text{II}$ 54'07	
evening set	15002 Mar 07 16:45	13° $\text{Y}$ 00'38		opposition	15007 Dec 03 20:03	26° $\text{II}$ 32'12	-1°27'11
				min. Earth dist.	15007 Dec 04 04:53	26° $\text{II}$ 30'28	8.43792 AU
conjunction	15002 Mar 25 09:16	15° $\text{Y}$ 11'39	0°49'09	direct	15008 Feb 11 05:33	23° $\text{II}$ 06'53	
minimum elong	15002 Mar 25 09:17	15° $\text{Y}$ 11'39	0°48'59		15008 May 18 06:13	0° $\text{E}$	
max. Earth dist.	15002 Mar 24 17:51	15° $\text{Y}$ 06'51	10.45779 AU	evening set	15008 May 25 20:17	0° $\text{E}$ 55'19	
morning rise	15002 Apr 12 00:08	17° $\text{Y}$ 22'14					
retrograde	15002 Jul 23 05:29	24° $\text{Y}$ 59'56		conjunction	15008 Jun 12 01:42	3° $\text{E}$ 04'21	-1°18'28
opposition	15002 Sep 28 23:11	21° $\text{Y}$ 36'39	0°47'48	minimum elong	15008 Jun 12 01:40	3° $\text{E}$ 04'21	1°19'27
min. Earth dist.	15002 Sep 29 11:11	21° $\text{Y}$ 34'17	8.44913 AU	max. Earth dist.	15008 Jun 11 15:56	3° $\text{E}$ 01'17	10.44353 AU
direct	15002 Dec 06 19:38	18° $\text{Y}$ 10'26		morning rise	15008 Jun 29 04:46	5° $\text{E}$ 12'44	
evening set	15003 Mar 21 06:13	25° $\text{Y}$ 56'48		retrograde	15008 Oct 09 02:02	12° $\text{E}$ 50'53	
				opposition	15008 Dec 16 07:49	9° $\text{E}$ 29'01	-1°45'56
conjunction	15003 Apr 07 22:08	28° $\text{Y}$ 08'01	0°27'35	min. Earth dist.	15008 Dec 16 14:10	9° $\text{E}$ 27'47	8.45132 AU
minimum elong	15003 Apr 07 22:09	28° $\text{Y}$ 08'02	0°27'12	direct	15009 Feb 23 18:45	6° $\text{E}$ 04'08	
max. Earth dist.	15003 Apr 07 06:25	28° $\text{Y}$ 03'08	10.44126 AU	evening set	15009 Jun 08 03:33	13° $\text{E}$ 51'05	
	15003 Apr 22 22:47	0° $\text{B}$					
morning rise	15003 Apr 25 11:48	0° $\text{B}$ 18'41		conjunction	15009 Jun 25 06:38	15° $\text{E}$ 59'20	-1°31'31
retrograde	15003 Aug 05 12:54	7° $\text{B}$ 56'39		minimum elong	15009 Jun 25 06:37	15° $\text{E}$ 59'20	1°32'29
opposition	15003 Oct 12 04:47	4° $\text{B}$ 33'43	0°20'01	max. Earth dist.	15009 Jun 25 00:03	15° $\text{E}$ 57'16	10.45809 AU
min. Earth dist.	15003 Oct 12 16:57	4° $\text{B}$ 31'19	8.43505 AU	morning rise	15009 Jul 12 07:36	18° $\text{E}$ 07'00	
direct	15003 Dec 20 03:41	1° $\text{B}$ 07'29		retrograde	15009 Oct 22 09:20	25° $\text{E}$ 45'10	
evening set	15004 Apr 02 20:06	8° $\text{B}$ 55'34		opposition	15009 Dec 29 19:54	22° $\text{E}$ 23'19	-1°59'15
				min. Earth dist.	15009 Dec 29 23:57	22° $\text{E}$ 22'31	8.46722 AU
conjunction	15004 Apr 20 10:47	11° $\text{B}$ 06'48	0°04'35	direct	15010 Mar 09 06:45	18° $\text{E}$ 58'58	
minimum elong	15004 Apr 20 10:47	11° $\text{B}$ 06'48	0°04'01	evening set	15010 Jun 21 08:12	26° $\text{E}$ 43'56	
behind sun begin	15004 Apr 20 03:40	11° $\text{B}$ 04'36					
behind sun end	15004 Apr 20 17:53	11° $\text{B}$ 09'00		conjunction	15010 Jul 08 09:15	28° $\text{E}$ 51'27	-1°39'55
max. Earth dist.	15004 Apr 19 19:10	11° $\text{B}$ 01'55	10.43004 AU	minimum elong	15010 Jul 08 09:15	28° $\text{E}$ 51'27	1°40'49
morning rise	15004 May 07 22:49	13° $\text{B}$ 17'20		max. Earth dist.	15010 Jul 08 05:30	28° $\text{E}$ 50'16	10.47491 AU
	15004 May 22 06:12	15° $\text{B}$			15010 Jul 17 11:57	0° $\text{Q}$	
desc. node	15004 Jul 03 01:36	19° $\text{B}$ 07'00		morning rise	15010 Jul 25 08:43	0° $\text{Q}$ 58'31	
retrograde	15004 Aug 17 21:04	20° $\text{B}$ 55'29		retrograde	15010 Nov 04 16:38	8° $\text{Q}$ 36'41	
opposition	15004 Oct 24 12:26	17° $\text{B}$ 32'53	-0°08'52	opposition	15011 Jan 12 07:46	5° $\text{Q}$ 14'46	-2°06'31
min. Earth dist.	15004 Oct 25 00:41	17° $\text{B}$ 30'28	8.42669 AU	min. Earth dist.	15011 Jan 12 09:34	5° $\text{Q}$ 14'25	8.48528 AU
	15004 Nov 30 01:01	15° $\text{R}$ $\text{B}$		direct	15011 Mar 22 16:55	1° $\text{Q}$ 50'58	
direct	15005 Jan 01 13:29	14° $\text{B}$ 06'44		evening set	15011 Jul 04 10:27	9° $\text{Q}$ 33'31	
	15005 Feb 02 20:23	15° $\text{B}$					
evening set	15005 Apr 16 10:04	21° $\text{B}$ 55'58		conjunction	15011 Jul 21 09:58	11° $\text{Q}$ 40'23	-1°43'18
				minimum elong	15011 Jul 21 09:58	11° $\text{Q}$ 40'23	1°44'06
conjunction	15005 May 03 22:50	24° $\text{B}$ 06'56	-0°18'49	max. Earth dist.	15011 Jul 21 09:01	11° $\text{Q}$ 40'05	10.49400 AU
minimum elong	15005 May 03 22:49	24° $\text{B}$ 06'56	0°19'33	morning rise	15011 Aug 07 08:37	13° $\text{Q}$ 46'58	
max. Earth dist.	15005 May 03 07:22	24° $\text{B}$ 02'05	10.42468 AU		15011 Aug 17 10:32	15° $\text{Q}$	
morning rise	15005 May 21 08:53	26° $\text{B}$ 17'10		retrograde	15011 Nov 17 21:07	21° $\text{Q}$ 24'55	
	15005 Jun 22 20:31	0° $\text{II}$		opposition	15012 Jan 25 18:41	18° $\text{Q}$ 02'51	-2°07'28
retrograde	15005 Aug 31 04:08	3° $\text{II}$ 55'23		min. Earth dist.	15012 Jan 25 17:58	18° $\text{Q}$ 02'59	8.50545 AU
opposition	15005 Nov 06 21:45	0° $\text{II}$ 33'06	-0°37'21		15012 Mar 15 02:04	15° $\text{R}$ $\text{Q}$	
min. Earth dist.	15005 Nov 07 09:56	0° $\text{II}$ 30'43	8.42449 AU	direct	15012 Apr 04 02:48	14° $\text{Q}$ 39'33	
	15005 Nov 13 22:53	30° $\text{R}$ $\text{B}$			15012 Apr 24 00:40	15° $\text{Q}$	
direct	15006 Jan 15 02:05	27° $\text{B}$ 07'08		evening set	15012 Jul 16 10:04	22° $\text{Q}$ 19'16	
	15006 Mar 15 17:58	0° $\text{II}$					
evening set	15006 Apr 29 23:13	4° $\text{II}$ 56'52		conjunction	15012 Aug 02 08:45	24° $\text{Q}$ 25'35	-1°41'34
				minimum elong	15012 Aug 02 08:47	24° $\text{Q}$ 25'35	1°42'14
conjunction	15006 May 17 09:37	7° $\text{II}$ 07'19	-0°41'10	max. Earth dist.	15012 Aug 02 11:01	24° $\text{Q}$ 26'18	10.51509 AU

morning rise	15012 Aug 19 07:13	26° $\Omega$ 31'48	morning rise	15018 Nov 03 02:43	11° $\mathbb{M}$ 40'08
	15012 Sep 18 13:57	0° $\mathbb{M}$		15018 Dec 02 16:30	15° $\mathbb{M}$
retrograde	15012 Nov 30 00:36	4° $\mathbb{M}$ 09'22	retrograde	15019 Feb 15 01:21	19° $\mathbb{M}$ 14'14
opposition	15013 Feb 07 04:28	0° $\mathbb{M}$ 47'02 -2°02'08	asc. node	15019 Feb 19 09:50	19° $\mathbb{M}$ 13'17
min. Earth dist.	15013 Feb 07 00:37	0° $\mathbb{M}$ 47'47 8.52716 AU	opposition	15019 Apr 25 21:17	15° $\mathbb{M}$ 50'02 0°04'53
	15013 Feb 17 10:59	30° $\mathbb{R}$ $\Omega$	min. Earth dist.	15019 Apr 25 07:11	15° $\mathbb{M}$ 52'46 8.63726 AU
direct	15013 Apr 17 11:54	27° $\Omega$ 24'13		15019 May 06 19:20	15° $\mathbb{R}$ $\mathbb{M}$
	15013 Jun 12 18:38	0° $\mathbb{M}$	direct	15019 Jul 03 11:04	12° $\mathbb{M}$ 28'49
evening set	15013 Jul 29 07:02	5° $\mathbb{M}$ 00'44		15019 Aug 27 15:45	15° $\mathbb{M}$
			evening set	15019 Oct 12 08:08	19° $\mathbb{M}$ 50'25
conjunction	15013 Aug 15 05:35	7° $\mathbb{M}$ 06'38 -1°34'53	conjunction	15019 Oct 29 13:35	21° $\mathbb{M}$ 56'04 0°14'52
minimum elong	15013 Aug 15 05:37	7° $\mathbb{M}$ 06'39 1°35'22	minimum elong	15019 Oct 29 13:34	21° $\mathbb{M}$ 56'04 0°15'34
max. Earth dist.	15013 Aug 15 12:00	7° $\mathbb{M}$ 08'38 10.53741 AU	behind sun begin	15019 Oct 29 11:48	21° $\mathbb{M}$ 55'32
morning rise	15013 Sep 01 04:19	9° $\mathbb{M}$ 12'35	behind sun end	15019 Oct 29 15:20	21° $\mathbb{M}$ 56'36
retrograde	15013 Dec 13 04:22	16° $\mathbb{M}$ 49'38	max. Earth dist.	15019 Oct 30 06:31	22° $\mathbb{M}$ 01'15 10.64085 AU
opposition	15014 Feb 20 12:33	13° $\mathbb{M}$ 26'57 -1°50'53	morning rise	15019 Nov 15 21:24	24° $\mathbb{M}$ 02'26
min. Earth dist.	15014 Feb 20 05:14	13° $\mathbb{M}$ 28'21 8.54957 AU		15020 Jan 14 15:48	0° $\mathbb{X}$
direct	15014 Apr 30 17:43	10° $\mathbb{M}$ 04'35	retrograde	15020 Feb 28 00:01	1° $\mathbb{X}$ 36'22
evening set	15014 Aug 11 01:51	17° $\mathbb{M}$ 37'46		15020 Apr 13 04:19	30° $\mathbb{R}$ $\mathbb{M}$
conjunction	15014 Aug 28 00:49	19° $\mathbb{M}$ 43'23 -1°23'39	opposition	15020 May 07 17:13	28° $\mathbb{M}$ 12'00 0°32'04
minimum elong	15014 Aug 28 00:51	19° $\mathbb{M}$ 43'23 1°23'56	min. Earth dist.	15020 May 07 03:22	28° $\mathbb{M}$ 14'41 8.64357 AU
max. Earth dist.	15014 Aug 28 11:01	19° $\mathbb{M}$ 46'33 10.56002 AU	direct	15020 Jul 15 03:28	24° $\mathbb{M}$ 50'44
morning rise	15014 Sep 14 00:24	21° $\mathbb{M}$ 49'11		15020 Oct 04 23:41	0° $\mathbb{X}$
retrograde	15014 Dec 26 06:47	29° $\mathbb{M}$ 25'33	evening set	15020 Oct 24 00:49	2° $\mathbb{X}$ 11'52
opposition	15015 Mar 05 18:31	26° $\mathbb{M}$ 02'30 -1°34'20	conjunction	15020 Nov 10 07:38	4° $\mathbb{X}$ 17'44 0°36'25
min. Earth dist.	15015 Mar 05 08:36	26° $\mathbb{M}$ 04'25 8.57175 AU	minimum elong	15020 Nov 10 07:37	4° $\mathbb{X}$ 17'44 0°37'14
direct	15015 May 13 19:30	22° $\mathbb{M}$ 40'32	max. Earth dist.	15020 Nov 10 23:19	4° $\mathbb{X}$ 22'32 10.64468 AU
	15015 Aug 22 08:09	0° $\mathbb{L}$	morning rise	15020 Nov 27 17:01	6° $\mathbb{X}$ 24'22
evening set	15015 Aug 23 18:54	0° $\mathbb{L}$ 10'31	retrograde	15021 Mar 11 22:03	13° $\mathbb{X}$ 58'19
conjunction	15015 Sep 09 18:40	2° $\mathbb{L}$ 15'56 -1°08'27	opposition	15021 May 20 12:04	10° $\mathbb{X}$ 33'51 0°57'44
minimum elong	15015 Sep 09 18:42	2° $\mathbb{L}$ 15'57 1°08'31	min. Earth dist.	15021 May 19 23:47	10° $\mathbb{X}$ 36'14 8.64510 AU
max. Earth dist.	15015 Sep 10 07:23	2° $\mathbb{L}$ 19'53 10.58187 AU	direct	15021 Jul 27 18:40	7° $\mathbb{X}$ 12'25
morning rise	15015 Sep 26 19:38	4° $\mathbb{L}$ 21'44	evening set	15021 Nov 05 18:55	14° $\mathbb{X}$ 33'50
retrograde	15016 Jan 08 06:46	11° $\mathbb{L}$ 57'22	conjunction	15021 Nov 23 03:04	16° $\mathbb{X}$ 39'58 0°56'17
opposition	15016 Mar 17 22:25	8° $\mathbb{L}$ 34'00 -1°13'24	minimum elong	15021 Nov 23 03:03	16° $\mathbb{X}$ 39'57 0°57'12
min. Earth dist.	15016 Mar 17 10:57	8° $\mathbb{L}$ 36'12 8.59259 AU	max. Earth dist.	15021 Nov 23 16:34	16° $\mathbb{X}$ 44'05 10.64365 AU
direct	15016 May 25 20:40	5° $\mathbb{L}$ 12'20	morning rise	15021 Dec 10 13:56	18° $\mathbb{X}$ 46'52
evening set	15016 Sep 04 10:39	12° $\mathbb{L}$ 39'25	retrograde	15022 Mar 24 18:08	26° $\mathbb{X}$ 21'01
conjunction	15016 Sep 21 11:28	14° $\mathbb{L}$ 44'46 -0°50'05	opposition	15022 Jun 02 06:01	22° $\mathbb{X}$ 56'31 1°20'44
minimum elong	15016 Sep 21 11:30	14° $\mathbb{L}$ 44'47 0°49'56	min. Earth dist.	15022 Jun 01 19:45	22° $\mathbb{X}$ 58'31 8.64185 AU
max. Earth dist.	15016 Sep 22 01:29	14° $\mathbb{L}$ 49'05 10.60183 AU	direct	15022 Aug 09 11:49	19° $\mathbb{X}$ 34'48
morning rise	15016 Oct 08 14:09	16° $\mathbb{L}$ 50'37	evening set	15022 Nov 18 15:01	26° $\mathbb{X}$ 57'13
retrograde	15017 Jan 20 06:07	24° $\mathbb{L}$ 25'36	conjunction	15022 Dec 06 00:31	29° $\mathbb{X}$ 03'42 1°13'33
min. Earth dist.	15017 Mar 30 11:48	21° $\mathbb{L}$ 04'19 8.61105 AU	minimum elong	15022 Dec 06 00:29	29° $\mathbb{X}$ 03'41 1°14'31
opposition	15017 Mar 31 00:09	21° $\mathbb{L}$ 01'56 -0°49'05	max. Earth dist.	15022 Dec 06 11:45	29° $\mathbb{X}$ 07'07 10.63787 AU
direct	15017 Jun 07 19:13	17° $\mathbb{L}$ 40'30		15022 Dec 13 17:21	0° $\mathbb{Z}$
evening set	15017 Sep 17 01:42	25° $\mathbb{L}$ 05'08	morning rise	15022 Dec 23 12:30	1° $\mathbb{Z}$ 10'52
conjunction	15017 Oct 04 03:56	27° $\mathbb{L}$ 10'30 -0°29'26	retrograde	15023 Apr 06 16:09	8° $\mathbb{Z}$ 45'21
minimum elong	15017 Oct 04 03:57	27° $\mathbb{L}$ 10'31 0°29'04	opposition	15023 Jun 14 23:19	5° $\mathbb{Z}$ 20'54 1°40'01
max. Earth dist.	15017 Oct 04 19:13	27° $\mathbb{L}$ 15'12 10.61892 AU	min. Earth dist.	15023 Jun 14 14:58	5° $\mathbb{Z}$ 22'32 8.63401 AU
morning rise	15017 Oct 21 08:26	29° $\mathbb{L}$ 16'30	direct	15023 Aug 22 04:16	1° $\mathbb{Z}$ 58'50
	15017 Oct 27 10:20	0° $\mathbb{M}$	evening set	15023 Dec 01 13:13	9° $\mathbb{Z}$ 22'50
retrograde	15018 Feb 02 04:12	6° $\mathbb{M}$ 50'57	conjunction	15023 Dec 19 00:02	11° $\mathbb{Z}$ 29'42 1°27'25
opposition	15018 Apr 12 23:42	3° $\mathbb{M}$ 27'00 -0°22'35	minimum elong	15023 Dec 19 00:01	11° $\mathbb{Z}$ 29'42 1°28'24
min. Earth dist.	15018 Apr 12 10:18	3° $\mathbb{M}$ 29'34 8.62625 AU	max. Earth dist.	15023 Dec 19 09:22	11° $\mathbb{Z}$ 32'33 10.62768 AU
direct	15018 Jun 20 15:18	0° $\mathbb{M}$ 05'43	morning rise	15024 Jan 05 12:52	13° $\mathbb{Z}$ 37'12
evening set	15018 Sep 29 16:35	7° $\mathbb{M}$ 28'29	retrograde	15024 Apr 18 15:02	21° $\mathbb{Z}$ 12'07
conjunction	15018 Oct 16 20:29	9° $\mathbb{M}$ 33'58 -0°07'30	opposition	15024 Jun 26 16:40	17° $\mathbb{Z}$ 47'43 1°54'40
minimum elong	15018 Oct 16 20:29	9° $\mathbb{M}$ 33'58 0°06'57	min. Earth dist.	15024 Jun 26 10:02	17° $\mathbb{Z}$ 49'01 8.62201 AU
behind sun begin	15018 Oct 16 13:54	9° $\mathbb{M}$ 31'58	direct	15024 Sep 02 20:44	14° $\mathbb{Z}$ 25'17
behind sun end	15018 Oct 17 03:05	9° $\mathbb{M}$ 35'58	evening set	15024 Dec 13 13:37	21° $\mathbb{Z}$ 51'19
max. Earth dist.	15018 Oct 17 13:00	9° $\mathbb{M}$ 39'02 10.63219 AU			

conjunction	15024 Dec 31 01:38	23° $\text{Z}$ 58'39	1°37'12	conjunction	15031 Mar 20 04:22	10° $\text{Y}$ 09'14	0°57'07
minimum elong	15024 Dec 31 01:38	23° $\text{Z}$ 58'39	1°38'09	minimum elong	15031 Mar 20 04:24	10° $\text{Y}$ 09'15	0°57'02
max. Earth dist.	15024 Dec 31 08:12	24° $\text{Z}$ 00'39	10.61359 AU	max. Earth dist.	15031 Mar 19 13:45	10° $\text{Y}$ 04'42	10.47692 AU
morning rise	15025 Jan 17 15:15	26° $\text{Z}$ 06'30		morning rise	15031 Apr 06 19:22	12° $\text{Y}$ 19'36	
	15025 Feb 21 21:14	0° $\approx$		retrograde	15031 Jul 18 04:52	19° $\text{Y}$ 56'54	
retrograde	15025 May 01 14:29	3° $\approx$ 41'52		opposition	15031 Sep 23 22:01	16° $\text{Y}$ 33'49	0°58'17
opposition	15025 Jul 09 10:25	0° $\approx$ 17'36	2°03'58	min. Earth dist.	15031 Sep 24 10:17	16° $\text{Y}$ 31'23	8.46617 AU
min. Earth dist.	15025 Jul 09 06:30	0° $\approx$ 18'22	8.60629 AU	direct	15031 Dec 01 15:46	13° $\text{Y}$ 07'56	
	15025 Jul 13 04:09	30° $\text{R}$ $\text{Z}$		evening set	15032 Mar 15 00:52	20° $\text{Y}$ 53'02	
direct	15025 Sep 15 14:32	26° $\text{Z}$ 54'40					
	15025 Nov 16 05:50	0° $\approx$		conjunction	15032 Apr 01 16:59	23° $\text{Y}$ 04'05	0°36'30
evening set	15025 Dec 26 16:33	4° $\approx$ 23'09		minimum elong	15032 Apr 01 17:00	23° $\text{Y}$ 04'05	0°36'12
				max. Earth dist.	15032 Apr 01 00:07	22° $\text{Y}$ 58'50	10.45585 AU
conjunction	15026 Jan 13 05:39	6° $\approx$ 31'00	1°42'25	morning rise	15032 Apr 19 07:11	25° $\text{Y}$ 14'38	
minimum elong	15026 Jan 13 05:39	6° $\approx$ 31'00	1°43'17		15032 Jun 01 19:35	0° $\text{Z}$	
max. Earth dist.	15026 Jan 13 08:07	6° $\approx$ 31'46	10.59610 AU	retrograde	15032 Jul 30 10:36	2° $\text{Z}$ 52'10	
morning rise	15026 Jan 30 19:59	8° $\approx$ 39'15			15032 Sep 29 14:24	30° $\text{R}$ $\text{Y}$	
	15026 Apr 06 02:21	15° $\approx$		opposition	15032 Oct 06 02:31	29° $\text{Y}$ 29'17	0°31'26
retrograde	15026 May 14 15:10	16° $\approx$ 14'55		min. Earth dist.	15032 Oct 06 16:05	29° $\text{Y}$ 26'36	8.44717 AU
	15026 Jun 22 12:00	15° $\text{R}$ $\approx$		direct	15032 Dec 13 23:42	26° $\text{Y}$ 03'08	
opposition	15026 Jul 22 04:43	12° $\approx$ 50'50	2°07'25		15033 Feb 22 17:37	0° $\text{Z}$	
min. Earth dist.	15026 Jul 22 04:18	12° $\approx$ 50'55	8.58735 AU	evening set	15033 Mar 28 14:32	3° $\text{Z}$ 50'13	
direct	15026 Sep 28 09:00	9° $\approx$ 27'20		max. Earth dist.	15033 Apr 14 11:57	5° $\text{Z}$ 55'51	10.43943 AU
	15026 Dec 22 22:08	15° $\approx$					
evening set	15027 Jan 08 21:36	16° $\approx$ 58'31		conjunction	15033 Apr 15 05:38	6° $\text{Z}$ 01'22	0°13'58
				minimum elong	15033 Apr 15 05:39	6° $\text{Z}$ 01'23	0°13'28
conjunction	15027 Jan 26 11:41	19° $\approx$ 06'55	1°42'45	behind sun begin	15033 Apr 15 01:40	6° $\text{Z}$ 00'09	
minimum elong	15027 Jan 26 11:42	19° $\approx$ 06'56	1°43'29	behind sun end	15033 Apr 15 09:38	6° $\text{Z}$ 02'36	
max. Earth dist.	15027 Jan 26 09:33	19° $\approx$ 06'16	10.57569 AU	morning rise	15033 May 02 18:32	8° $\text{Z}$ 11'55	
morning rise	15027 Feb 13 02:41	21° $\approx$ 15'36			15033 Jul 13 02:55	15° $\text{Z}$	
retrograde	15027 May 27 15:18	28° $\approx$ 51'32		retrograde	15033 Aug 12 16:41	15° $\text{Z}$ 49'37	
opposition	15027 Aug 04 00:09	25° $\approx$ 27'37	2°04'48		15033 Sep 12 15:11	15° $\text{R}$ $\text{Z}$	
min. Earth dist.	15027 Aug 04 03:16	25° $\approx$ 27'00	8.56557 AU	opposition	15033 Oct 19 08:59	12° $\text{Z}$ 26'55	0°02'52
direct	15027 Oct 11 06:39	22° $\approx$ 03'32		min. Earth dist.	15033 Oct 19 22:37	12° $\text{Z}$ 24'14	8.43331 AU
evening set	15028 Jan 22 04:23	29° $\approx$ 37'30		desc. node	15033 Nov 25 09:33	9° $\text{Z}$ 52'20	
	15028 Jan 25 07:04	0° $\text{X}$		direct	15033 Dec 27 10:04	9° $\text{Z}$ 00'38	
					15034 Mar 26 22:08	15° $\text{Z}$	
conjunction	15028 Feb 08 19:29	1° $\text{X}$ 46'30	1°38'08	evening set	15034 Apr 11 04:05	16° $\text{Z}$ 49'07	
minimum elong	15028 Feb 08 19:31	1° $\text{X}$ 46'31	1°38'41				
max. Earth dist.	15028 Feb 08 13:24	1° $\text{X}$ 44'38	10.55266 AU	conjunction	15034 Apr 28 17:38	19° $\text{Z}$ 00'08	-0°09'25
morning rise	15028 Feb 26 10:55	3° $\text{X}$ 55'38		minimum elong	15034 Apr 28 17:38	19° $\text{Z}$ 00'08	0°10'05
retrograde	15028 Jun 08 16:00	11° $\text{X}$ 31'53		behind sun begin	15034 Apr 28 11:52	18° $\text{Z}$ 58'21	
opposition	15028 Aug 15 20:51	8° $\text{X}$ 08'07	1°56'06	behind sun end	15034 Apr 28 23:23	19° $\text{Z}$ 01'55	
min. Earth dist.	15028 Aug 16 02:43	8° $\text{X}$ 06'57	8.54117 AU	max. Earth dist.	15034 Apr 28 00:40	18° $\text{Z}$ 54'50	10.42843 AU
direct	15028 Oct 23 06:39	4° $\text{X}$ 43'29		morning rise	15034 May 16 04:39	21° $\text{Z}$ 10'28	
evening set	15029 Feb 03 13:09	12° $\text{X}$ 20'22		retrograde	15034 Aug 25 22:51	28° $\text{Z}$ 48'21	
				opposition	15034 Nov 01 17:09	25° $\text{Z}$ 25'46	-0°25'55
conjunction	15029 Feb 21 05:10	14° $\text{X}$ 30'02	1°28'41	min. Earth dist.	15034 Nov 02 05:43	25° $\text{Z}$ 23'17	8.42529 AU
minimum elong	15029 Feb 21 05:12	14° $\text{X}$ 30'02	1°29'02	direct	15035 Jan 09 22:21	21° $\text{Z}$ 59'30	
max. Earth dist.	15029 Feb 20 19:54	14° $\text{X}$ 27'10	10.52738 AU	evening set	15035 Apr 24 16:58	29° $\text{Z}$ 48'44	
morning rise	15029 Mar 10 20:47	16° $\text{X}$ 39'37			15035 Apr 26 05:38	0° $\text{II}$	
retrograde	15029 Jun 21 19:31	24° $\text{X}$ 16'14					
opposition	15029 Aug 28 19:04	20° $\text{X}$ 52'40	1°41'39	conjunction	15035 May 12 04:32	1° $\text{II}$ 59'23	-0°32'14
min. Earth dist.	15029 Aug 29 03:14	20° $\text{X}$ 51'03	8.51507 AU	minimum elong	15035 May 12 04:31	1° $\text{II}$ 59'23	0°33'03
direct	15029 Nov 05 06:55	17° $\text{X}$ 27'34		max. Earth dist.	15035 May 11 13:26	1° $\text{II}$ 54'39	10.42342 AU
evening set	15030 Feb 16 23:45	25° $\text{X}$ 07'25		morning rise	15035 May 29 13:17	4° $\text{II}$ 09'18	
				retrograde	15035 Sep 08 06:35	11° $\text{II}$ 47'18	
conjunction	15030 Mar 06 16:21	27° $\text{X}$ 17'42	1°14'48	opposition	15035 Nov 15 02:43	8° $\text{II}$ 24'49	-0°53'24
minimum elong	15030 Mar 06 16:24	27° $\text{X}$ 17'42	1°14'56	min. Earth dist.	15035 Nov 15 13:58	8° $\text{II}$ 22'37	8.42353 AU
max. Earth dist.	15030 Mar 06 04:17	27° $\text{X}$ 13'58	10.50140 AU	direct	15036 Jan 23 10:15	4° $\text{II}$ 58'40	
morning rise	15030 Mar 24 07:49	29° $\text{X}$ 27'44		evening set	15036 May 07 04:40	12° $\text{II}$ 48'00	
	15030 Mar 28 19:13	0° $\text{Y}$					
retrograde	15030 Jul 05 00:10	7° $\text{Y}$ 04'42		conjunction	15036 May 24 13:49	14° $\text{II}$ 58'06	-0°53'27
opposition	15030 Sep 10 19:27	3° $\text{Y}$ 41'22	1°22'05	minimum elong	15036 May 24 13:48	14° $\text{II}$ 58'05	0°54'22
min. Earth dist.	15030 Sep 11 05:40	3° $\text{Y}$ 39'21	8.48935 AU	max. Earth dist.	15036 May 24 00:35	14° $\text{II}$ 53'56	10.42463 AU
direct	15030 Nov 18 09:46	0° $\text{Y}$ 15'51		morning rise	15036 Jun 10 20:11	17° $\text{II}$ 07'27	
evening set	15031 Mar 02 11:45	7° $\text{Y}$ 58'30		retrograde	15036 Sep 20 14:58	24° $\text{II}$ 45'30	

opposition	15036 Nov 27 13:26	21° $\Pi$ 23'07	-1°18'08	retrograde	15042 Dec 07 21:12	11° $\Pi$ 38'56	
min. Earth dist.	15036 Nov 27 23:21	21° $\Pi$ 21'10	8.42804 AU	opposition	15043 Feb 15 03:27	8° $\Pi$ 16'27	-1°56'20
direct	15037 Feb 04 21:36	17° $\Pi$ 57'12		min. Earth dist.	15043 Feb 14 20:56	8° $\Pi$ 17'43	8.55252 AU
evening set	15037 May 20 14:43	25° $\Pi$ 45'58		direct	15043 Apr 25 09:00	4° $\Pi$ 54'01	
				evening set	15043 Aug 05 22:13	12° $\Pi$ 27'43	
conjunction	15037 Jun 06 21:12	27° $\Pi$ 55'21	-1°11'55	conjunction	15043 Aug 22 20:44	14° $\Pi$ 33'11	-1°28'58
minimum elong	15037 Jun 06 21:10	27° $\Pi$ 55'21	1°12'53	minimum elong	15043 Aug 22 20:46	14° $\Pi$ 33'12	1°29'19
max. Earth dist.	15037 Jun 06 09:56	27° $\Pi$ 51'49	10.43196 AU	max. Earth dist.	15043 Aug 23 05:33	14° $\Pi$ 35'56	10.56537 AU
	15037 Jun 23 12:03	0° $\mathcal{E}$		morning rise	15043 Sep 08 19:55	16° $\Pi$ 38'49	
morning rise	15037 Jun 24 01:13	0° $\mathcal{E}$ 04'03		retrograde	15043 Dec 20 22:14	24° $\Pi$ 14'24	
retrograde	15037 Oct 03 20:40	7° $\mathcal{E}$ 42'06		opposition	15044 Feb 28 09:24	20° $\Pi$ 51'48	-1°41'58
opposition	15037 Dec 11 00:47	4° $\mathcal{E}$ 19'48	-1°38'51	min. Earth dist.	15044 Feb 28 00:32	20° $\Pi$ 53'30	8.57969 AU
min. Earth dist.	15037 Dec 11 08:55	4° $\mathcal{E}$ 18'12	8.43858 AU	direct	15044 May 07 12:03	17° $\Pi$ 29'57	
direct	15038 Feb 18 11:11	0° $\mathcal{E}$ 54'14		evening set	15044 Aug 17 15:14	25° $\Pi$ 00'20	
evening set	15038 Jun 02 22:32	8° $\mathcal{E}$ 41'48					
conjunction	15038 Jun 20 02:28	10° $\mathcal{E}$ 50'23	-1°26'41	conjunction	15044 Sep 03 14:24	27° $\Pi$ 05'33	-1°15'24
minimum elong	15038 Jun 20 02:26	10° $\mathcal{E}$ 50'23	1°27'40	minimum elong	15044 Sep 03 14:26	27° $\Pi$ 05'33	1°15'33
max. Earth dist.	15038 Jun 19 17:46	10° $\mathcal{E}$ 47'39	10.44512 AU	max. Earth dist.	15044 Sep 04 02:15	27° $\Pi$ 09'13	10.59224 AU
morning rise	15038 Jul 07 04:25	12° $\mathcal{E}$ 58'23		morning rise	15044 Sep 20 14:43	29° $\Pi$ 11'03	
retrograde	15038 Oct 17 02:18	20° $\mathcal{E}$ 36'23			15044 Sep 27 10:00	0° $\mathcal{E}$	
opposition	15038 Dec 24 12:21	17° $\mathcal{E}$ 14'06	-1°54'30	retrograde	15045 Jan 01 21:43	6° $\mathcal{E}$ 45'53	
min. Earth dist.	15038 Dec 24 17:48	17° $\mathcal{E}$ 13'02	8.45463 AU	opposition	15045 Mar 12 13:30	3° $\mathcal{E}$ 23'06	-1°22'50
direct	15039 Mar 04 00:21	13° $\mathcal{E}$ 49'03		min. Earth dist.	15045 Mar 12 02:04	3° $\mathcal{E}$ 25'17	8.60554 AU
evening set	15039 Jun 16 03:38	21° $\mathcal{E}$ 34'44		direct	15045 May 20 14:21	0° $\mathcal{E}$ 01'47	
				evening set	15045 Aug 30 06:39	7° $\mathcal{E}$ 29'01	
conjunction	15039 Jul 03 05:27	23° $\mathcal{E}$ 42'31	-1°37'03	conjunction	15045 Sep 16 06:56	9° $\mathcal{E}$ 34'05	-0°58'21
minimum elong	15039 Jul 03 05:27	23° $\mathcal{E}$ 42'31	1°38'00	minimum elong	15045 Sep 16 06:58	9° $\mathcal{E}$ 34'05	0°58'17
max. Earth dist.	15039 Jul 03 00:26	23° $\mathcal{E}$ 40'57	10.46339 AU	max. Earth dist.	15045 Sep 16 21:46	9° $\mathcal{E}$ 38'39	10.61719 AU
morning rise	15039 Jul 20 05:41	25° $\mathcal{E}$ 49'50		morning rise	15045 Oct 03 08:38	11° $\mathcal{E}$ 39'34	
	15039 Aug 26 06:23	0° $\mathcal{O}$		retrograde	15046 Jan 14 22:03	19° $\mathcal{E}$ 13'40	
retrograde	15039 Oct 30 08:37	3° $\mathcal{O}$ 27'40		opposition	15046 Mar 25 15:27	15° $\mathcal{E}$ 50'41	-0°59'55
opposition	15040 Jan 06 23:32	0° $\mathcal{O}$ 05'22	-2°04'19	min. Earth dist.	15046 Mar 25 01:56	15° $\mathcal{E}$ 53'17	8.62885 AU
min. Earth dist.	15040 Jan 07 01:29	0° $\mathcal{O}$ 05'00	8.47516 AU	direct	15046 Jun 02 12:38	12° $\mathcal{E}$ 29'49	
	15040 Jan 08 03:16	30° $\mathcal{R}$ $\mathcal{E}$		evening set	15046 Sep 11 21:22	19° $\mathcal{E}$ 54'15	
direct	15040 Mar 16 11:21	26° $\mathcal{E}$ 40'57					
	15040 May 19 18:09	0° $\mathcal{O}$		conjunction	15046 Sep 28 22:57	21° $\mathcal{E}$ 59'16	-0°38'38
evening set	15040 Jun 28 06:12	4° $\mathcal{O}$ 24'09		minimum elong	15046 Sep 28 22:58	21° $\mathcal{E}$ 59'17	0°38'21
conjunction	15040 Jul 15 06:24	6° $\mathcal{O}$ 31'13	-1°42'33	max. Earth dist.	15046 Sep 29 15:31	22° $\mathcal{E}$ 04'22	10.63890 AU
minimum elong	15040 Jul 15 06:25	6° $\mathcal{O}$ 31'13	1°43'24	morning rise	15046 Oct 16 02:20	24° $\mathcal{E}$ 04'50	
max. Earth dist.	15040 Jul 15 05:41	6° $\mathcal{O}$ 31'00	10.48566 AU		15046 Dec 14 02:37	0° $\mathcal{M}$	
morning rise	15040 Aug 01 05:19	8° $\mathcal{O}$ 37'56		retrograde	15047 Jan 27 20:51	1° $\mathcal{M}$ 38'14	
	15040 Oct 04 06:21	15° $\mathcal{O}$			15047 Mar 14 15:48	30° $\mathcal{R}$ $\mathcal{E}$	
retrograde	15040 Nov 11 14:05	16° $\mathcal{O}$ 15'24		opposition	15047 Apr 07 15:06	28° $\mathcal{E}$ 15'04	-0°34'19
	15040 Dec 20 18:52	15° $\mathcal{R}$ $\mathcal{O}$		min. Earth dist.	15047 Apr 07 01:03	28° $\mathcal{E}$ 17'46	8.64829 AU
opposition	15041 Jan 19 09:58	12° $\mathcal{O}$ 53'05	-2°07'53	direct	15047 Jun 15 08:04	24° $\mathcal{E}$ 54'27	
min. Earth dist.	15041 Jan 19 08:32	12° $\mathcal{O}$ 53'21	8.49905 AU		15047 Sep 04 18:23	0° $\mathcal{M}$	
direct	15041 Mar 29 19:57	9° $\mathcal{O}$ 29'19		evening set	15047 Sep 24 11:49	2° $\mathcal{M}$ 16'43	
	15041 Jun 23 00:05	15° $\mathcal{O}$					
evening set	15041 Jul 11 06:04	17° $\mathcal{O}$ 09'38		conjunction	15047 Oct 11 14:45	4° $\mathcal{M}$ 21'45	-0°17'12
conjunction	15041 Jul 28 05:08	19° $\mathcal{O}$ 16'03	-1°42'57	minimum elong	15047 Oct 11 14:45	4° $\mathcal{M}$ 21'46	0°16'44
minimum elong	15041 Jul 28 05:09	19° $\mathcal{O}$ 16'03	1°43'40	max. Earth dist.	15047 Oct 12 07:09	4° $\mathcal{M}$ 26'46	10.65596 AU
max. Earth dist.	15041 Jul 28 08:21	19° $\mathcal{O}$ 17'03	10.51084 AU	morning rise	15047 Oct 28 19:59	6° $\mathcal{M}$ 27'27	
morning rise	15041 Aug 14 03:24	21° $\mathcal{O}$ 22'15		retrograde	15048 Feb 09 17:36	14° $\mathcal{M}$ 00'19	
retrograde	15041 Nov 24 18:02	28° $\mathcal{O}$ 59'14		opposition	15048 Apr 19 12:56	10° $\mathcal{M}$ 36'58	-0°07'14
opposition	15042 Feb 01 19:27	25° $\mathcal{O}$ 36'52	-2°05'09	min. Earth dist.	15048 Apr 18 23:25	10° $\mathcal{M}$ 39'34	8.66238 AU
min. Earth dist.	15042 Feb 01 15:08	25° $\mathcal{O}$ 37'42	8.52523 AU	direct	15048 Jun 27 03:02	7° $\mathcal{M}$ 16'27	
direct	15042 Apr 12 03:46	22° $\mathcal{O}$ 13'47		asc. node	15048 Jul 27 23:55	8° $\mathcal{M}$ 05'33	
evening set	15042 Jul 24 03:14	29° $\mathcal{O}$ 50'51		evening set	15048 Oct 06 02:19	14° $\mathcal{M}$ 37'12	
	15042 Jul 25 09:09	0° $\mathcal{M}$			15048 Oct 09 06:16	15° $\mathcal{M}$	
conjunction	15042 Aug 10 01:43	1° $\mathcal{M}$ 56'44	-1°38'19	conjunction	15048 Oct 23 06:43	16° $\mathcal{M}$ 42'23	0°05'05
minimum elong	15042 Aug 10 01:45	1° $\mathcal{M}$ 56'44	1°38'53	minimum elong	15048 Oct 23 06:42	16° $\mathcal{M}$ 42'22	0°05'43
max. Earth dist.	15042 Aug 10 08:01	1° $\mathcal{M}$ 58'42	10.53782 AU	behind sun begin	15048 Oct 22 23:52	16° $\mathcal{M}$ 40'19	
morning rise	15042 Aug 27 00:09	4° $\mathcal{M}$ 02'34		behind sun end	15048 Oct 23 13:31	16° $\mathcal{M}$ 44'26	
				max. Earth dist.	15048 Oct 23 22:15	16° $\mathcal{M}$ 47'07	10.66683 AU

morning rise	15048 Nov 09 13:44	18° $\mathbb{M}$ 48'16		opposition	15055 Jul 16 17:23	7° $\approx$ 21'46	2°06'38
retrograde	15049 Feb 21 14:25	26° $\mathbb{M}$ 20'56		min. Earth dist.	15055 Jul 16 16:28	7° $\approx$ 21'57	8.59501 AU
opposition	15049 May 02 09:02	22° $\mathbb{M}$ 57'23	0°20'07	direct	15055 Sep 22 22:53	3° $\approx$ 58'15	
min. Earth dist.	15049 May 01 20:23	22° $\mathbb{M}$ 59'49	8.66978 AU	evening set	15056 Jan 03 04:48	11° $\approx$ 27'53	
direct	15049 Jul 09 20:28	19° $\mathbb{M}$ 36'48					
evening set	15049 Oct 18 17:42	26° $\mathbb{M}$ 56'53		conjunction	15056 Jan 20 18:32	13° $\approx$ 36'02	1°43'16
				minimum elong	15056 Jan 20 18:32	13° $\approx$ 36'02	1°44'03
conjunction	15049 Nov 04 23:42	29° $\mathbb{M}$ 02'17	0°26'58	max. Earth dist.	15056 Jan 20 18:03	13° $\approx$ 35'53	10.58141 AU
minimum elong	15049 Nov 04 23:41	29° $\mathbb{M}$ 02'16	0°27'44		15056 Feb 01 05:36	15° $\approx$	
max. Earth dist.	15049 Nov 05 14:32	29° $\mathbb{M}$ 06'48	10.67069 AU	morning rise	15056 Feb 07 09:08	15° $\approx$ 44'29	
	15049 Nov 12 21:08	0° $\mathbb{J}$		retrograde	15056 May 20 23:55	23° $\approx$ 20'14	
morning rise	15049 Nov 22 08:19	1° $\mathbb{J}$ 08'26		opposition	15056 Jul 28 11:45	19° $\approx$ 55'50	2°06'50
retrograde	15050 Mar 06 10:46	8° $\mathbb{J}$ 41'11		min. Earth dist.	15056 Jul 28 13:14	19° $\approx$ 55'33	8.56958 AU
opposition	15050 May 15 03:35	5° $\mathbb{J}$ 17'26	0°46'30	direct	15056 Oct 04 18:19	16° $\approx$ 31'38	
min. Earth dist.	15050 May 14 15:34	5° $\mathbb{J}$ 19'45	8.67032 AU	evening set	15057 Jan 15 10:14	24° $\approx$ 04'14	
direct	15050 Jul 22 12:51	1° $\mathbb{J}$ 56'39					
evening set	15050 Oct 31 10:30	9° $\mathbb{J}$ 16'51		conjunction	15057 Feb 02 01:02	26° $\approx$ 13'01	1°40'55
				minimum elong	15057 Feb 02 01:04	26° $\approx$ 13'01	1°41'33
conjunction	15050 Nov 17 18:03	11° $\mathbb{J}$ 22'33	0°47'38	max. Earth dist.	15057 Feb 01 21:01	26° $\approx$ 11'47	10.55525 AU
minimum elong	15050 Nov 17 18:01	11° $\mathbb{J}$ 22'33	0°48'31	morning rise	15057 Feb 19 16:12	28° $\approx$ 21'59	
max. Earth dist.	15050 Nov 18 08:04	11° $\mathbb{J}$ 26'49	10.66789 AU		15057 Mar 05 14:15	0° $\mathbb{H}$	
morning rise	15050 Dec 05 04:01	13° $\mathbb{J}$ 29'00		retrograde	15057 Jun 03 00:48	5° $\mathbb{H}$ 58'13	
retrograde	15051 Mar 19 07:47	21° $\mathbb{J}$ 02'04		opposition	15057 Aug 10 07:29	2° $\mathbb{H}$ 33'53	2°00'54
opposition	15051 May 27 21:11	17° $\mathbb{J}$ 38'06	1°10'46	min. Earth dist.	15057 Aug 10 12:01	2° $\mathbb{H}$ 32'59	8.54288 AU
min. Earth dist.	15051 May 27 10:17	17° $\mathbb{J}$ 40'13	8.66466 AU		15057 Sep 16 02:17	30° $\mathbb{R}$ $\approx$	
direct	15051 Aug 04 04:47	14° $\mathbb{J}$ 16'59		direct	15057 Oct 17 15:54	29° $\approx$ 09'03	
evening set	15051 Nov 13 05:03	21° $\mathbb{J}$ 37'58		evening set	15057 Nov 18 00:29	0° $\mathbb{H}$	
					15058 Jan 28 17:55	6° $\mathbb{H}$ 44'40	
conjunction	15051 Nov 30 13:53	23° $\mathbb{J}$ 44'03	1°06'08				
minimum elong	15051 Nov 30 13:52	23° $\mathbb{J}$ 44'02	1°07'06	conjunction	15058 Feb 15 09:32	8° $\mathbb{H}$ 54'07	1°33'39
max. Earth dist.	15051 Dec 01 01:49	23° $\mathbb{J}$ 47'40	10.65923 AU	minimum elong	15058 Feb 15 09:34	8° $\mathbb{H}$ 54'08	1°34'05
morning rise	15051 Dec 18 01:04	25° $\mathbb{J}$ 50'49		max. Earth dist.	15058 Feb 15 01:17	8° $\mathbb{H}$ 51'35	10.52853 AU
	15052 Jan 25 04:04	0° $\mathbb{Z}$		morning rise	15058 Mar 05 01:06	11° $\mathbb{H}$ 03'35	
retrograde	15052 Mar 31 06:19	3° $\mathbb{Z}$ 24'20		retrograde	15058 Jun 16 03:12	18° $\mathbb{H}$ 40'11	
opposition	15052 Jun 08 14:15	0° $\mathbb{Z}$ 00'12	1°31'48	opposition	15058 Aug 23 04:44	15° $\mathbb{H}$ 16'01	1°49'03
min. Earth dist.	15052 Jun 08 05:30	0° $\mathbb{Z}$ 01'54	8.65359 AU	min. Earth dist.	15058 Aug 23 12:22	15° $\mathbb{H}$ 14'31	8.51623 AU
	15052 Jun 08 15:15	30° $\mathbb{R}$ $\mathbb{J}$		direct	15058 Oct 30 14:59	11° $\mathbb{H}$ 50'37	
direct	15052 Aug 15 18:50	26° $\mathbb{J}$ 38'35		evening set	15059 Feb 11 03:20	19° $\mathbb{H}$ 29'14	
	15052 Oct 19 07:46	0° $\mathbb{Z}$					
evening set	15052 Nov 25 01:42	4° $\mathbb{Z}$ 01'02		conjunction	15059 Feb 28 19:35	21° $\mathbb{H}$ 39'17	1°21'44
				minimum elong	15059 Feb 28 19:37	21° $\mathbb{H}$ 39'18	1°21'58
conjunction	15052 Dec 12 11:44	6° $\mathbb{Z}$ 07'30	1°21'37	max. Earth dist.	15059 Feb 28 08:01	21° $\mathbb{H}$ 35'43	10.50262 AU
minimum elong	15052 Dec 12 11:42	6° $\mathbb{Z}$ 07'30	1°22'36	morning rise	15059 Mar 18 11:19	23° $\mathbb{H}$ 49'14	
max. Earth dist.	15052 Dec 12 20:24	6° $\mathbb{Z}$ 10'09	10.64556 AU		15059 May 19 07:58	0° $\mathbb{Y}$	
morning rise	15052 Dec 30 00:04	8° $\mathbb{Z}$ 14'39		retrograde	15059 Jun 29 05:32	1° $\mathbb{Y}$ 26'08	
retrograde	15053 Apr 13 03:04	15° $\mathbb{Z}$ 48'41			15059 Aug 09 17:19	30° $\mathbb{R}$ $\mathbb{H}$	
opposition	15053 Jun 21 07:05	12° $\mathbb{Z}$ 24'25	1°48'38	opposition	15059 Sep 05 03:56	28° $\mathbb{H}$ 02'12	1°31'45
min. Earth dist.	15053 Jun 21 01:15	12° $\mathbb{Z}$ 25'33	8.63789 AU	min. Earth dist.	15059 Sep 05 13:39	28° $\mathbb{H}$ 00'17	8.49102 AU
direct	15053 Aug 28 11:14	9° $\mathbb{Z}$ 02'12		direct	15059 Nov 12 17:44	24° $\mathbb{H}$ 36'21	
evening set	15053 Dec 08 00:29	16° $\mathbb{Z}$ 26'40			15060 Feb 04 22:50	0° $\mathbb{Y}$	
				evening set	15060 Feb 24 14:12	2° $\mathbb{Y}$ 17'47	
conjunction	15053 Dec 25 11:44	18° $\mathbb{Z}$ 33'38	1°33'19				
minimum elong	15053 Dec 25 11:43	18° $\mathbb{Z}$ 33'38	1°34'17	conjunction	15060 Mar 13 06:50	4° $\mathbb{Y}$ 28'23	1°05'43
max. Earth dist.	15053 Dec 25 17:00	18° $\mathbb{Z}$ 35'14	10.62757 AU	minimum elong	15060 Mar 13 06:52	4° $\mathbb{Y}$ 28'24	1°05'44
morning rise	15054 Jan 12 01:05	20° $\mathbb{Z}$ 41'11		max. Earth dist.	15060 Mar 12 17:12	4° $\mathbb{Y}$ 24'09	10.47886 AU
retrograde	15054 Apr 26 00:12	28° $\mathbb{Z}$ 15'48		morning rise	15060 Mar 30 22:19	6° $\mathbb{Y}$ 38'42	
opposition	15054 Jul 04 00:01	24° $\mathbb{Z}$ 51'26	2°00'27	retrograde	15060 Jul 11 09:02	14° $\mathbb{Y}$ 15'55	
min. Earth dist.	15054 Jul 03 20:51	24° $\mathbb{Z}$ 52'03	8.61812 AU	opposition	15060 Sep 17 05:07	10° $\mathbb{Y}$ 52'15	1°09'47
direct	15054 Sep 10 05:19	21° $\mathbb{Z}$ 28'34		min. Earth dist.	15060 Sep 17 15:58	10° $\mathbb{Y}$ 50'06	8.46854 AU
evening set	15054 Dec 21 01:31	28° $\mathbb{Z}$ 55'28		direct	15060 Nov 24 22:54	7° $\mathbb{Y}$ 26'07	
	15054 Dec 29 23:31	0° $\approx$		evening set	15061 Mar 09 02:34	15° $\mathbb{Y}$ 10'06	
conjunction	15055 Jan 07 14:03	1° $\approx$ 03'00	1°40'40	conjunction	15061 Mar 26 19:08	17° $\mathbb{Y}$ 21'06	0°46'21
minimum elong	15055 Jan 07 14:02	1° $\approx$ 03'00	1°41'34	minimum elong	15061 Mar 26 19:10	17° $\mathbb{Y}$ 21'06	0°46'09
max. Earth dist.	15055 Jan 07 16:28	1° $\approx$ 03'45	10.60587 AU	max. Earth dist.	15061 Mar 26 04:29	17° $\mathbb{Y}$ 16'33	10.45840 AU
morning rise	15055 Jan 25 04:05	3° $\approx$ 10'59		morning rise	15061 Apr 13 09:51	19° $\mathbb{Y}$ 31'38	
retrograde	15055 May 08 23:48	10° $\approx$ 46'11		retrograde	15061 Jul 24 15:13	27° $\mathbb{Y}$ 09'07	

opposition	15061 Sep 30 08:21	23° $\Upsilon$ 45'46	0°44'11	minimum elong	15067 Jun 14 09:41	5° $\mathfrak{D}$ 10'20	1°21'15
min. Earth dist.	15061 Sep 30 19:58	23° $\Upsilon$ 43'28	8.44994 AU	max. Earth dist.	15067 Jun 14 00:58	5° $\mathfrak{D}$ 07'35	10.44646 AU
direct	15061 Dec 08 04:37	20° $\Upsilon$ 19'30		morning rise	15067 Jul 01 12:30	7° $\mathfrak{D}$ 18'36	
evening set	15062 Mar 22 15:55	28° $\Upsilon$ 05'41		retrograde	15067 Oct 11 10:54	14° $\mathfrak{D}$ 56'41	
	15062 Apr 07 01:38	0° $\mathfrak{B}$		opposition	15067 Dec 18 16:31	11° $\mathfrak{D}$ 34'51	-1°47'48
				min. Earth dist.	15067 Dec 18 22:27	11° $\mathfrak{D}$ 33'41	8.45482 AU
conjunction	15062 Apr 09 07:45	0° $\mathfrak{B}$ 16'53	0°24'34	direct	15068 Feb 26 03:01	8° $\mathfrak{D}$ 10'03	
minimum elong	15062 Apr 09 07:45	0° $\mathfrak{B}$ 16'53	0°24'10	evening set	15068 Jun 09 11:28	15° $\mathfrak{D}$ 56'40	
max. Earth dist.	15062 Apr 08 16:12	0° $\mathfrak{B}$ 12'02	10.44230 AU				
morning rise	15062 Apr 26 21:13	2° $\mathfrak{B}$ 27'28		conjunction	15068 Jun 26 14:19	18° $\mathfrak{D}$ 04'48	-1°32'44
retrograde	15062 Aug 06 22:36	10° $\mathfrak{B}$ 05'10		minimum elong	15068 Jun 26 14:18	18° $\mathfrak{D}$ 04'48	1°33'41
opposition	15062 Oct 13 13:56	6° $\mathfrak{B}$ 42'12	0°16'14	max. Earth dist.	15068 Jun 26 08:02	18° $\mathfrak{D}$ 02'50	10.46218 AU
min. Earth dist.	15062 Oct 14 02:21	6° $\mathfrak{B}$ 39'45	8.43625 AU	morning rise	15068 Jul 13 15:09	20° $\mathfrak{D}$ 12'23	
direct	15062 Dec 21 12:15	3° $\mathfrak{B}$ 15'55		retrograde	15068 Oct 23 17:58	27° $\mathfrak{D}$ 50'20	
evening set	15063 Apr 05 05:32	11° $\mathfrak{B}$ 03'48		opposition	15068 Dec 31 04:23	24° $\mathfrak{D}$ 28'31	-2°00'21
				min. Earth dist.	15068 Dec 31 08:39	24° $\mathfrak{D}$ 27'41	8.47189 AU
conjunction	15063 Apr 22 19:55	13° $\mathfrak{B}$ 14'57	0°01'30	direct	15069 Mar 10 14:17	21° $\mathfrak{D}$ 04'13	
minimum elong	15063 Apr 22 19:56	13° $\mathfrak{B}$ 14'57	0°00'54	evening set	15069 Jun 22 15:48	28° $\mathfrak{D}$ 48'47	
behind sun begin	15063 Apr 22 12:44	13° $\mathfrak{B}$ 12'43			15069 Jul 02 05:22	0° $\mathfrak{Q}$	
behind sun end	15063 Apr 23 03:08	13° $\mathfrak{B}$ 17'10					
max. Earth dist.	15063 Apr 22 03:50	13° $\mathfrak{B}$ 09'55	10.43143 AU	conjunction	15069 Jul 09 16:36	0° $\mathfrak{Q}$ 56'11	-1°40'30
	15063 May 06 21:10	15° $\mathfrak{B}$		minimum elong	15069 Jul 09 16:36	0° $\mathfrak{Q}$ 56'10	1°41'23
morning rise	15063 May 10 07:50	15° $\mathfrak{B}$ 25'26		max. Earth dist.	15069 Jul 09 12:28	0° $\mathfrak{Q}$ 54'53	10.47993 AU
desc. node	15063 May 16 21:31	16° $\mathfrak{B}$ 13'14		morning rise	15069 Jul 26 16:03	3° $\mathfrak{Q}$ 03'10	
retrograde	15063 Aug 20 04:50	23° $\mathfrak{B}$ 03'20		retrograde	15069 Nov 05 23:10	10° $\mathfrak{Q}$ 41'03	
opposition	15063 Oct 26 21:32	19° $\mathfrak{B}$ 40'43	-0°12'37	opposition	15070 Jan 13 15:56	7° $\mathfrak{Q}$ 19'11	-2°06'49
min. Earth dist.	15063 Oct 27 10:19	19° $\mathfrak{B}$ 38'12	8.42827 AU	min. Earth dist.	15070 Jan 13 17:55	7° $\mathfrak{Q}$ 18'48	8.49050 AU
direct	15064 Jan 03 23:41	16° $\mathfrak{B}$ 14'31		direct	15070 Mar 24 01:16	3° $\mathfrak{Q}$ 55'28	
evening set	15064 Apr 17 19:08	24° $\mathfrak{B}$ 03'34		evening set	15070 Jul 05 17:35	11° $\mathfrak{Q}$ 37'36	
conjunction	15064 May 05 07:37	26° $\mathfrak{B}$ 14'25	-0°21'46	conjunction	15070 Jul 22 16:59	13° $\mathfrak{Q}$ 44'21	-1°43'13
minimum elong	15064 May 05 07:36	26° $\mathfrak{B}$ 14'25	0°22'31	minimum elong	15070 Jul 22 16:59	13° $\mathfrak{Q}$ 44'21	1°44'00
max. Earth dist.	15064 May 04 15:35	26° $\mathfrak{B}$ 09'24	10.42642 AU	max. Earth dist.	15070 Jul 22 16:00	13° $\mathfrak{Q}$ 44'03	10.49920 AU
morning rise	15064 May 22 17:34	28° $\mathfrak{B}$ 24'34			15070 Aug 01 18:59	15° $\mathfrak{Q}$	
	15064 Jun 04 23:20	0° $\mathfrak{I}$		morning rise	15070 Aug 08 15:38	15° $\mathfrak{Q}$ 50'52	
retrograde	15064 Sep 01 11:55	6° $\mathfrak{I}$ 02'37		retrograde	15070 Nov 19 03:43	23° $\mathfrak{Q}$ 28'38	
opposition	15064 Nov 08 06:40	2° $\mathfrak{I}$ 40'19	-0°40'52	opposition	15071 Jan 27 02:35	20° $\mathfrak{Q}$ 06'37	-2°06'57
min. Earth dist.	15064 Nov 08 18:56	2° $\mathfrak{I}$ 37'55	8.42640 AU	min. Earth dist.	15071 Jan 27 01:28	20° $\mathfrak{Q}$ 06'49	8.51049 AU
	15064 Dec 17 09:06	30° $\mathfrak{R}$ $\mathfrak{B}$		direct	15071 Apr 06 11:56	16° $\mathfrak{Q}$ 43'25	
direct	15065 Jan 16 12:03	29° $\mathfrak{B}$ 14'20		evening set	15071 Jul 18 16:43	24° $\mathfrak{Q}$ 22'44	
	15065 Feb 15 08:17	0° $\mathfrak{I}$					
evening set	15065 May 01 07:57	7° $\mathfrak{I}$ 03'51		conjunction	15071 Aug 04 15:30	26° $\mathfrak{Q}$ 29'00	-1°40'51
				minimum elong	15071 Aug 04 15:31	26° $\mathfrak{Q}$ 29'00	1°41'29
conjunction	15065 May 18 18:09	9° $\mathfrak{I}$ 14'13	-0°43'51	max. Earth dist.	15071 Aug 04 18:27	26° $\mathfrak{Q}$ 29'55	10.51984 AU
minimum elong	15065 May 18 18:07	9° $\mathfrak{I}$ 14'12	0°44'43	morning rise	15071 Aug 21 13:55	28° $\mathfrak{Q}$ 35'09	
max. Earth dist.	15065 May 18 03:34	9° $\mathfrak{I}$ 09'39	10.42747 AU		15071 Sep 02 08:45	0° $\mathfrak{I}$	
morning rise	15065 Jun 05 01:48	11° $\mathfrak{I}$ 23'51		retrograde	15071 Dec 02 08:49	6° $\mathfrak{I}$ 12'36	
retrograde	15065 Sep 14 19:38	19° $\mathfrak{I}$ 01'59		opposition	15072 Feb 09 12:01	2° $\mathfrak{I}$ 50'19	-2°00'50
opposition	15065 Nov 21 17:15	15° $\mathfrak{I}$ 39'55	-1°07'02	min. Earth dist.	15072 Feb 09 07:28	2° $\mathfrak{I}$ 51'11	8.53148 AU
min. Earth dist.	15065 Nov 22 03:39	15° $\mathfrak{I}$ 37'53	8.43062 AU		15072 Mar 24 09:54	30° $\mathfrak{R}$ $\mathfrak{Q}$	
direct	15066 Jan 30 01:07	12° $\mathfrak{I}$ 14'16		direct	15072 Apr 18 18:55	29° $\mathfrak{Q}$ 27'38	
evening set	15066 May 14 19:10	20° $\mathfrak{I}$ 03'29			15072 May 13 19:58	0° $\mathfrak{I}$	
				evening set	15072 Jul 30 13:34	7° $\mathfrak{I}$ 03'48	
conjunction	15066 Jun 01 02:53	22° $\mathfrak{I}$ 13'12	-1°03'42	conjunction	15072 Aug 16 12:14	9° $\mathfrak{I}$ 09'41	-1°33'34
minimum elong	15066 Jun 01 02:52	22° $\mathfrak{I}$ 13'11	1°04'39	minimum elong	15072 Aug 16 12:16	9° $\mathfrak{I}$ 09'42	1°34'01
max. Earth dist.	15066 May 31 15:10	22° $\mathfrak{I}$ 09'30	10.43439 AU	max. Earth dist.	15072 Aug 16 19:14	9° $\mathfrak{I}$ 11'52	10.54123 AU
morning rise	15066 Jun 18 08:03	24° $\mathfrak{I}$ 22'11		morning rise	15072 Sep 02 10:58	11° $\mathfrak{I}$ 15'36	
	15066 Aug 10 17:15	0° $\mathfrak{D}$		retrograde	15072 Dec 14 12:06	18° $\mathfrak{I}$ 52'34	
retrograde	15066 Sep 28 03:01	2° $\mathfrak{D}$ 00'21		opposition	15073 Feb 21 19:52	15° $\mathfrak{I}$ 29'56	-1°48'53
	15066 Nov 17 06:12	30° $\mathfrak{R}$ $\mathfrak{I}$		min. Earth dist.	15073 Feb 21 12:26	15° $\mathfrak{I}$ 31'22	8.55281 AU
opposition	15066 Dec 05 04:45	28° $\mathfrak{I}$ 38'26	-1°29'44	direct	15073 May 01 23:36	12° $\mathfrak{I}$ 07'42	
min. Earth dist.	15066 Dec 05 12:47	28° $\mathfrak{I}$ 36'52	8.44047 AU	evening set	15073 Aug 12 08:18	19° $\mathfrak{I}$ 40'39	
direct	15067 Feb 12 14:41	25° $\mathfrak{I}$ 13'11					
	15067 May 02 06:43	0° $\mathfrak{D}$					
evening set	15067 May 28 04:28	3° $\mathfrak{D}$ 01'24		conjunction	15073 Aug 29 07:19	21° $\mathfrak{I}$ 46'15	-1°21'48
				minimum elong	15073 Aug 29 07:21	21° $\mathfrak{I}$ 46'16	1°22'02
conjunction	15067 Jun 14 09:43	5° $\mathfrak{D}$ 10'20	-1°20'16	max. Earth dist.	15073 Aug 29 17:11	21° $\mathfrak{I}$ 49'19	10.56269 AU

morning rise	15073 Sep 15 07:03	23° $\mathbb{M}$ 52'04			15079 Sep 17 00:10	0° $\mathbb{X}$	
	15073 Nov 15 12:14	0° $\mathbb{L}$		evening set	15079 Oct 26 08:24	4° $\mathbb{X}$ 16'11	
retrograde	15073 Dec 27 13:35	1° $\mathbb{L}$ 28'25					
	15074 Feb 08 15:44	30° $\mathbb{R}$ $\mathbb{M}$		conjunction	15079 Nov 12 15:16	6° $\mathbb{X}$ 22'07	0°39'06
opposition	15074 Mar 07 01:50	28° $\mathbb{M}$ 05'26	-1°31'45	minimum elong	15079 Nov 12 15:15	6° $\mathbb{X}$ 22'06	0°39'56
min. Earth dist.	15074 Mar 06 16:28	28° $\mathbb{M}$ 07'14	8.57378 AU	max. Earth dist.	15079 Nov 13 05:53	6° $\mathbb{X}$ 26'34	10.64040 AU
direct	15074 May 15 02:45	24° $\mathbb{M}$ 43'32		morning rise	15079 Nov 30 00:53	8° $\mathbb{X}$ 28'49	
	15074 Aug 06 01:18	0° $\mathbb{L}$		retrograde	15080 Mar 13 04:28	16° $\mathbb{X}$ 02'58	
evening set	15074 Aug 25 01:15	2° $\mathbb{L}$ 13'22		opposition	15080 May 21 19:30	12° $\mathbb{X}$ 38'26	1°00'53
				min. Earth dist.	15080 May 21 07:58	12° $\mathbb{X}$ 40'41	8.64042 AU
conjunction	15074 Sep 11 01:04	4° $\mathbb{L}$ 18'49	-1°06'10	direct	15080 Jul 29 03:03	9° $\mathbb{X}$ 16'52	
minimum elong	15074 Sep 11 01:06	4° $\mathbb{L}$ 18'49	1°06'11	evening set	15080 Nov 07 02:45	16° $\mathbb{X}$ 38'37	
max. Earth dist.	15074 Sep 11 12:57	4° $\mathbb{L}$ 22'29	10.58332 AU				
morning rise	15074 Sep 28 02:19	6° $\mathbb{L}$ 24'38		conjunction	15080 Nov 24 11:02	18° $\mathbb{X}$ 44'51	0°58'40
retrograde	15075 Jan 09 14:23	14° $\mathbb{L}$ 00'19		minimum elong	15080 Nov 24 11:01	18° $\mathbb{X}$ 44'50	0°59'35
opposition	15075 Mar 20 05:40	10° $\mathbb{L}$ 36'59	-1°10'20	max. Earth dist.	15080 Nov 25 00:14	18° $\mathbb{X}$ 48'52	10.63856 AU
min. Earth dist.	15075 Mar 19 18:50	10° $\mathbb{L}$ 39'04	8.59338 AU	morning rise	15080 Dec 11 21:59	20° $\mathbb{X}$ 51'49	
direct	15075 May 28 03:16	7° $\mathbb{L}$ 15'21		retrograde	15081 Mar 26 02:18	28° $\mathbb{X}$ 26'14	
evening set	15075 Sep 06 17:06	14° $\mathbb{L}$ 42'22		opposition	15081 Jun 03 13:36	25° $\mathbb{X}$ 01'38	1°23'26
				min. Earth dist.	15081 Jun 03 03:21	25° $\mathbb{X}$ 03'37	8.63643 AU
conjunction	15075 Sep 23 18:06	16° $\mathbb{L}$ 47'46	-0°47'28	direct	15081 Aug 10 19:35	21° $\mathbb{X}$ 39'46	
minimum elong	15075 Sep 23 18:08	16° $\mathbb{L}$ 47'46	0°47'16	evening set	15081 Nov 19 23:10	29° $\mathbb{X}$ 02'33	
max. Earth dist.	15075 Sep 24 07:43	16° $\mathbb{L}$ 51'58	10.60202 AU		15081 Nov 27 21:58	0° $\mathbb{Z}$	
morning rise	15075 Oct 10 21:01	18° $\mathbb{L}$ 53'40					
retrograde	15076 Jan 22 12:41	26° $\mathbb{L}$ 28'44		conjunction	15081 Dec 07 08:52	1° $\mathbb{Z}$ 09'07	1°15'31
opposition	15076 Apr 01 07:12	23° $\mathbb{L}$ 05'03	-0°45'41	minimum elong	15081 Dec 07 08:51	1° $\mathbb{Z}$ 09'07	1°16'29
min. Earth dist.	15076 Mar 31 18:53	23° $\mathbb{L}$ 07'26	8.61058 AU	max. Earth dist.	15081 Dec 07 20:33	1° $\mathbb{Z}$ 12'41	10.63211 AU
direct	15076 Jun 09 02:05	19° $\mathbb{L}$ 43'38		morning rise	15081 Dec 24 20:51	3° $\mathbb{Z}$ 16'23	
evening set	15076 Sep 18 08:18	27° $\mathbb{L}$ 08'18		retrograde	15082 Apr 08 00:33	10° $\mathbb{Z}$ 51'08	
				opposition	15082 Jun 16 07:03	7° $\mathbb{Z}$ 26'33	1°42'08
conjunction	15076 Oct 05 10:49	29° $\mathbb{L}$ 13'44	-0°26'36	min. Earth dist.	15082 Jun 15 22:20	7° $\mathbb{Z}$ 28'15	8.62802 AU
minimum elong	15076 Oct 05 10:49	29° $\mathbb{L}$ 13'44	0°26'12	direct	15082 Aug 23 11:53	4° $\mathbb{Z}$ 04'21	
max. Earth dist.	15076 Oct 06 02:29	29° $\mathbb{L}$ 18'33	10.61783 AU	evening set	15082 Dec 02 21:49	11° $\mathbb{Z}$ 28'46	
	15076 Oct 11 17:13	0° $\mathbb{M}$					
morning rise	15076 Oct 22 15:24	1° $\mathbb{M}$ 19'46		conjunction	15082 Dec 20 08:47	13° $\mathbb{Z}$ 35'45	1°28'52
retrograde	15077 Feb 03 10:51	8° $\mathbb{M}$ 54'23		minimum elong	15082 Dec 20 08:45	13° $\mathbb{Z}$ 35'44	1°29'50
opposition	15077 Apr 14 06:47	5° $\mathbb{M}$ 30'23	-0°19'00	max. Earth dist.	15082 Dec 20 18:10	13° $\mathbb{Z}$ 38'37	10.62143 AU
min. Earth dist.	15077 Apr 13 16:58	5° $\mathbb{M}$ 33'02	8.62451 AU	morning rise	15083 Jan 06 21:37	15° $\mathbb{Z}$ 43'19	
direct	15077 Jun 21 23:17	2° $\mathbb{M}$ 09'06		retrograde	15083 Apr 20 23:43	23° $\mathbb{Z}$ 18'31	
evening set	15077 Sep 30 23:26	9° $\mathbb{M}$ 31'57		opposition	15083 Jun 29 00:39	19° $\mathbb{Z}$ 54'01	1°56'06
				min. Earth dist.	15083 Jun 28 18:11	19° $\mathbb{Z}$ 55'17	8.61562 AU
conjunction	15077 Oct 18 03:32	11° $\mathbb{M}$ 37'31	-0°04'35	direct	15083 Sep 05 04:41	16° $\mathbb{Z}$ 31'25	
minimum elong	15077 Oct 18 03:31	11° $\mathbb{M}$ 37'30	0°04'01	evening set	15083 Dec 15 22:38	23° $\mathbb{Z}$ 57'55	
behind sun begin	15077 Oct 17 20:29	11° $\mathbb{M}$ 35'22					
behind sun end	15077 Oct 18 10:32	11° $\mathbb{M}$ 39'38		conjunction	15084 Jan 02 10:40	26° $\mathbb{Z}$ 05'22	1°38'03
max. Earth dist.	15077 Oct 18 20:21	11° $\mathbb{M}$ 42'40	10.62987 AU	minimum elong	15084 Jan 02 10:40	26° $\mathbb{Z}$ 05'22	1°38'59
morning rise	15077 Nov 04 09:49	13° $\mathbb{M}$ 43'44		max. Earth dist.	15084 Jan 02 16:28	26° $\mathbb{Z}$ 07'08	10.60712 AU
	15077 Nov 15 04:33	15° $\mathbb{M}$		morning rise	15084 Jan 20 00:22	28° $\mathbb{Z}$ 13'18	
asc. node	15078 Jan 03 03:34	19° $\mathbb{M}$ 41'49			15084 Feb 04 06:46	0° $\mathbb{Z}$	
retrograde	15078 Feb 16 10:35	21° $\mathbb{M}$ 18'01		retrograde	15084 May 03 00:03	5° $\mathbb{Z}$ 48'55	
opposition	15078 Apr 27 04:30	17° $\mathbb{M}$ 53'46	0°08'29	opposition	15084 Jul 10 18:44	2° $\mathbb{Z}$ 24'36	2°04'38
min. Earth dist.	15078 Apr 26 14:24	17° $\mathbb{M}$ 56'30	8.63440 AU	min. Earth dist.	15084 Jul 10 15:31	2° $\mathbb{Z}$ 25'13	8.59987 AU
	15078 Jun 11 13:23	15° $\mathbb{R}$ $\mathbb{M}$			15084 Aug 13 23:47	30° $\mathbb{R}$ $\mathbb{Z}$	
direct	15078 Jul 04 17:02	14° $\mathbb{M}$ 32'31		direct	15084 Sep 16 22:01	29° $\mathbb{Z}$ 01'31	
	15078 Jul 27 15:50	15° $\mathbb{M}$			15084 Oct 20 13:33	0° $\mathbb{Z}$	
evening set	15078 Oct 13 15:22	21° $\mathbb{M}$ 54'15		evening set	15084 Dec 28 01:53	6° $\mathbb{Z}$ 30'30	
conjunction	15078 Oct 30 20:53	23° $\mathbb{M}$ 59'59	0°17'44	conjunction	15085 Jan 14 14:59	8° $\mathbb{Z}$ 38'27	1°42'37
minimum elong	15078 Oct 30 20:53	23° $\mathbb{M}$ 59'59	0°18'27	minimum elong	15085 Jan 14 14:59	8° $\mathbb{Z}$ 38'27	1°43'27
max. Earth dist.	15078 Oct 31 13:12	24° $\mathbb{M}$ 04'58	10.63749 AU	max. Earth dist.	15085 Jan 14 16:38	8° $\mathbb{Z}$ 38'57	10.58984 AU
morning rise	15078 Nov 17 04:54	26° $\mathbb{M}$ 06'26		morning rise	15085 Feb 01 05:29	10° $\mathbb{Z}$ 46'48	
	15078 Dec 22 10:52	0° $\mathbb{X}$			15085 Mar 11 18:46	15° $\mathbb{Z}$	
retrograde	15079 Mar 01 07:51	3° $\mathbb{X}$ 40'33		retrograde	15085 May 15 23:39	18° $\mathbb{Z}$ 22'45	
min. Earth dist.	15079 May 09 11:26	0° $\mathbb{X}$ 18'40	8.63975 AU	opposition	15085 Jul 23 13:23	14° $\mathbb{Z}$ 58'37	2°07'16
opposition	15079 May 10 00:31	0° $\mathbb{X}$ 16'08	0°35'31		15085 Jul 23 06:19	15° $\mathbb{R}$ $\mathbb{Z}$	
	15079 May 13 11:53	30° $\mathbb{R}$ $\mathbb{M}$		min. Earth dist.	15085 Jul 23 13:27	14° $\mathbb{Z}$ 58'36	8.58137 AU
direct	15079 Jul 17 09:35	26° $\mathbb{M}$ 54'45		direct	15085 Sep 29 18:12	11° $\mathbb{Z}$ 35'00	



	15085 Dec 03 21:50	15°♊			15092 Jan 31 12:11	0°♏	
evening set	15086 Jan 10 07:14	19°♊06'41		evening set	15092 Mar 30 00:37	6°♏00'40	
conjunction	15086 Jan 27 21:29	21°♊15'12	1°42'17	conjunction	15092 Apr 16 15:40	8°♏11'48	0°10'52
minimum elong	15086 Jan 27 21:30	21°♊15'12	1°42'59	minimum elong	15092 Apr 16 15:40	8°♏11'48	0°10'21
max. Earth dist.	15086 Jan 27 19:20	21°♊14'32	10.57014 AU	behind sun begin	15092 Apr 16 10:01	8°♏10'03	
morning rise	15086 Feb 14 12:34	23°♊23'58		behind sun end	15092 Apr 16 21:20	8°♏13'33	
	15086 Apr 24 18:23	0°♏		max. Earth dist.	15092 Apr 15 22:33	8°♏06'28	10.43986 AU
retrograde	15086 May 28 23:49	1°♏00'10		morning rise	15092 May 04 04:23	10°♏22'20	
	15086 Jul 02 13:16	30°♏			15092 Jun 15 03:44	15°♏	
opposition	15086 Aug 05 09:03	27°♏36'13	2°03'48	retrograde	15092 Aug 14 01:47	18°♏00'05	
min. Earth dist.	15086 Aug 05 11:54	27°♏35'39	8.56054 AU	desc. node	15092 Oct 08 02:39	15°♏36'33	
direct	15086 Oct 12 16:39	24°♏12'05			15092 Oct 16 00:13	15°♏	
	15087 Jan 08 10:58	0°♏		opposition	15092 Oct 20 18:49	14°♏37'26	-0°00'59
evening set	15087 Jan 23 14:25	1°♏46'28		min. Earth dist.	15092 Oct 21 07:50	14°♏34'52	8.43386 AU
				direct	15092 Dec 28 20:58	11°♏11'16	
conjunction	15087 Feb 10 05:42	3°♏55'36	1°37'00		15093 Mar 08 05:53	15°♏	
minimum elong	15087 Feb 10 05:43	3°♏55'36	1°37'31	evening set	15093 Apr 12 14:14	18°♏59'47	
max. Earth dist.	15087 Feb 10 00:27	3°♏53'59	10.54833 AU	max. Earth dist.	15093 Apr 29 11:25	21°♏05'41	10.42909 AU
morning rise	15087 Feb 27 21:05	6°♏04'47					
retrograde	15087 Jun 11 02:19	13°♏41'12		conjunction	15093 Apr 30 03:43	21°♏10'47	-0°12'29
opposition	15087 Aug 18 05:59	10°♏17'25	1°54'19	minimum elong	15093 Apr 30 03:42	21°♏10'47	0°13'11
min. Earth dist.	15087 Aug 18 11:09	10°♏16'24	8.53766 AU	behind sun begin	15093 Apr 29 23:30	21°♏09'29	
direct	15087 Oct 25 15:21	6°♏52'46		behind sun end	15093 Apr 30 07:54	21°♏12'05	
evening set	15088 Feb 05 23:22	14°♏29'56		morning rise	15093 May 17 14:27	23°♏21'03	
					15093 Jul 25 00:17	0°♏	
conjunction	15088 Feb 23 15:28	16°♏39'39	1°26'56	retrograde	15093 Aug 27 09:55	0°♏58'59	
minimum elong	15088 Feb 23 15:30	16°♏39'40	1°27'16		15093 Sep 30 06:49	30°♏	
max. Earth dist.	15088 Feb 23 06:50	16°♏36'59	10.52473 AU	opposition	15093 Nov 03 03:08	27°♏36'29	-0°29'39
morning rise	15088 Mar 12 06:59	18°♏49'18		min. Earth dist.	15093 Nov 03 15:27	27°♏34'04	8.42605 AU
retrograde	15088 Jun 23 05:48	26°♏25'55		direct	15094 Jan 11 07:29	24°♏10'18	
opposition	15088 Aug 30 04:27	23°♏02'22	1°39'10		15094 Apr 09 09:50	0°♏	
min. Earth dist.	15088 Aug 30 12:28	23°♏00'47	8.51319 AU	evening set	15094 Apr 26 03:12	1°♏59'34	
direct	15088 Nov 06 15:51	19°♏37'15					
evening set	15089 Feb 18 09:59	27°♏17'17		conjunction	15094 May 13 14:32	4°♏10'11	-0°35'09
				minimum elong	15094 May 13 14:31	4°♏10'11	0°35'58
conjunction	15089 Mar 08 02:32	29°♏27'35	1°12'32	max. Earth dist.	15094 May 12 23:30	4°♏05'28	10.42427 AU
minimum elong	15089 Mar 08 02:35	29°♏27'36	1°12'38	morning rise	15094 May 30 23:02	6°♏20'02	
max. Earth dist.	15089 Mar 07 14:11	29°♏23'46	10.50016 AU	retrograde	15094 Sep 09 17:38	13°♏58'05	
	15089 Mar 12 11:25	0°♏		opposition	15094 Nov 16 13:01	10°♏35'41	-0°56'49
morning rise	15089 Mar 25 18:00	1°♏37'39		min. Earth dist.	15094 Nov 17 00:34	10°♏33'25	8.42450 AU
retrograde	15089 Jul 06 09:31	9°♏14'34		direct	15095 Jan 24 19:16	7°♏09'36	
opposition	15089 Sep 12 04:59	5°♏51'18	1°19'00	evening set	15095 May 09 14:45	14°♏58'55	
min. Earth dist.	15089 Sep 12 15:44	5°♏49'10	8.48857 AU				
direct	15089 Nov 19 19:40	2°♏25'46		conjunction	15095 May 26 23:35	17°♏08'57	-0°56'01
evening set	15090 Mar 03 22:04	10°♏08'34		minimum elong	15095 May 26 23:33	17°♏08'56	0°56'56
				max. Earth dist.	15095 May 26 09:51	17°♏04'38	10.42569 AU
conjunction	15090 Mar 21 14:34	12°♏19'19	0°54'26	morning rise	15095 Jun 13 05:48	19°♏18'15	
minimum elong	15090 Mar 21 14:36	12°♏19'20	0°54'19	retrograde	15095 Sep 22 23:55	26°♏56'21	
max. Earth dist.	15090 Mar 20 23:06	12°♏14'31	10.47653 AU	opposition	15095 Nov 29 23:52	23°♏34'02	-1°21'04
morning rise	15090 Apr 08 05:36	14°♏29'42		min. Earth dist.	15095 Nov 30 10:09	23°♏32'01	8.42924 AU
retrograde	15090 Jul 19 14:31	22°♏06'56		direct	15096 Feb 07 08:42	20°♏08'10	
opposition	15090 Sep 25 07:34	18°♏43'55	0°54'46	evening set	15096 May 22 00:40	27°♏56'52	
min. Earth dist.	15090 Sep 25 20:20	18°♏41'24	8.46604 AU		15096 Jun 07 11:15	0°♏	
direct	15090 Dec 03 01:29	15°♏18'04					
evening set	15091 Mar 17 11:07	23°♏03'17		conjunction	15096 Jun 08 06:52	0°♏06'10	-1°14'01
max. Earth dist.	15091 Apr 03 09:59	25°♏09'00	10.45595 AU	minimum elong	15096 Jun 08 06:50	0°♏06'09	1°14'59
				max. Earth dist.	15096 Jun 07 19:18	0°♏02'32	10.43322 AU
conjunction	15091 Apr 04 03:07	25°♏14'20	0°33'31	morning rise	15096 Jun 25 10:49	2°♏14'49	
minimum elong	15091 Apr 04 03:08	25°♏14'20	0°33'12	retrograde	15096 Oct 05 05:57	9°♏52'54	
morning rise	15091 Apr 21 17:16	27°♏24'53		opposition	15096 Dec 12 11:08	6°♏30'36	-1°41'08
	15091 May 13 19:42	0°♏		min. Earth dist.	15096 Dec 12 19:06	6°♏29'03	8.43994 AU
retrograde	15091 Aug 01 19:57	5°♏02'24		direct	15097 Feb 19 22:39	3°♏05'05	
opposition	15091 Oct 08 12:13	1°♏39'35	0°27'39	evening set	15097 Jun 04 08:17	10°♏52'29	
min. Earth dist.	15091 Oct 09 01:33	1°♏36'57	8.44744 AU				
	15091 Oct 30 10:46	30°♏		conjunction	15097 Jun 21 12:04	13°♏01'01	-1°28'14
direct	15091 Dec 16 10:01	28°♏13'31		minimum elong	15097 Jun 21 12:03	13°♏01'00	1°29'12

max. Earth dist.	15097 Jun 21 03:51	12°☾58'26	10.44649 AU
morning rise	15097 Jul 08 13:52	15°☾08'56	
retrograde	15097 Oct 18 12:46	22°☾46'56	
opposition	15097 Dec 25 22:41	19°☾24'38 -1°56'01	
min. Earth dist.	15097 Dec 26 03:21	19°☾23'43	8.45602 AU
direct	15098 Mar 05 10:27	15°☾59'37	
evening set	15098 Jun 17 13:09	23°☾45'03	
conjunction	15098 Jul 04 14:54	25°☾52'47 -1°37'58	
minimum elong	15098 Jul 04 14:54	25°☾52'47 1°38'53	
max. Earth dist.	15098 Jul 04 10:57	25°☾51'32	10.46478 AU
morning rise	15098 Jul 21 14:54	28°☾00'02	
	15098 Aug 07 09:01	0°♈	
retrograde	15098 Oct 31 18:39	5°♈37'50	
opposition	15099 Jan 08 09:53	2°♈15'29 -2°05'01	
min. Earth dist.	15099 Jan 08 11:10	2°♈15'14	8.47657 AU
	15099 Feb 09 07:31	30°♈☾	
direct	15099 Mar 18 21:09	28°☾51'04	
	15099 Apr 24 18:03	0°♈	
evening set	15099 Jun 30 15:29	6°♈33'59	
conjunction	15099 Jul 17 15:37	8°♈40'59 -1°42'46	
minimum elong	15099 Jul 17 15:37	8°♈41'00 1°43'36	
max. Earth dist.	15099 Jul 17 15:29	8°♈40'57	10.48707 AU
morning rise	15099 Aug 03 14:26	10°♈47'39	
	15099 Sep 10 02:36	15°♈	
retrograde	15099 Nov 13 23:41	18°♈25'04	
opposition	15100 Jan 21 20:11	15°♈02'41 -2°07'44	
min. Earth dist.	15100 Jan 21 18:47	15°♈02'57	8.50046 AU
	15100 Jan 22 10:02	15°♈♈	
direct	15100 Apr 01 06:15	11°♈38'54	
	15100 Jun 04 21:40	15°♈	
evening set	15100 Jul 13 15:11	19°♈18'54	
conjunction	15100 Jul 30 14:10	21°♈25'16 -1°42'29	
minimum elong	15100 Jul 30 14:11	21°♈25'16 1°43'11	
max. Earth dist.	15100 Jul 30 17:05	21°♈26'11	10.51222 AU
morning rise	15100 Aug 16 12:32	23°♈31'27	
	15100 Oct 21 13:49	0°♈☾	
retrograde	15100 Nov 27 04:04	1°♈08'20	
	15101 Jan 03 11:35	30°♈♈	
opposition	15101 Feb 04 05:31	27°♈45'53 -2°04'10	
min. Earth dist.	15101 Feb 04 01:38	27°♈46'38	8.52653 AU
direct	15101 Apr 14 13:03	24°♈22'45	
	15101 Jul 09 16:18	0°♈☾	
evening set	15101 Jul 26 12:08	1°♈59'31	
conjunction	15101 Aug 12 10:35	4°♈05'22 -1°37'12	
minimum elong	15101 Aug 12 10:36	4°♈05'22 1°37'44	
max. Earth dist.	15101 Aug 12 16:27	4°♈07'11	10.53903 AU
morning rise	15101 Aug 29 09:10	6°♈11'12	
retrograde	15101 Dec 10 05:39	13°♈47'28	