

morning rise	11600 Jan 06 23:14	14° ♁ 00'50	direct	11605 Jan 08 12:31	21° ♁ 34'48	
	11600 Apr 05 16:48	0° ♁		11605 Mar 28 22:05	0° ♁	
retrograde	11600 May 09 22:47	1° ♁ 48'20	evening set	11605 May 13 22:41	9° ♁ 42'08	
	11600 Jun 12 23:54	30° ♁	max. Earth dist.	11605 May 24 10:38	12° ♁ 05'18	6.24108 AU
min. Earth dist.	11600 Jul 08 11:05	26° ♁ 55'01	4.35961 AU			
opposition	11600 Jul 09 08:42	26° ♁ 47'52	0°59'14	conjunction	11605 May 26 18:11	12° ♁ 36'59 -0°31'49
direct	11600 Sep 08 06:08	21° ♁ 47'19		minimum elong	11605 May 26 18:10	12° ♁ 36'59 0°32'31
	11600 Nov 26 06:21	0° ♁		morning rise	11605 Jun 08 13:17	15° ♁ 31'57
evening set	11601 Jan 11 20:05	9° ♁ 23'59			11605 Aug 21 02:36	0° ♁
				retrograde	11605 Oct 12 04:30	3° ♁ 59'53
conjunction	11601 Jan 25 03:07	12° ♁ 16'21	0°37'55		11605 Dec 04 13:13	30° ♁
minimum elong	11601 Jan 25 03:08	12° ♁ 16'21	0°38'32	opposition	11605 Dec 11 13:57	29° ♁ 05'35 -0°56'00
max. Earth dist.	11601 Jan 25 22:43	12° ♁ 26'57	6.42497 AU	min. Earth dist.	11605 Dec 13 01:46	28° ♁ 53'57 4.15321 AU
	11601 Feb 06 18:07	15° ♁		direct	11606 Feb 10 08:33	24° ♁ 07'20
morning rise	11601 Feb 07 08:40	15° ♁ 07'49			11606 Apr 14 21:08	0° ♁
	11601 May 02 18:43	0° ♁		evening set	11606 Jun 16 08:49	13° ♁ 07'56
retrograde	11601 Jun 08 23:39	2° ♁ 05'00		max. Earth dist.	11606 Jun 27 14:11	15° ♁ 47'01 6.06890 AU
	11601 Jul 16 04:29	30° ♁				
opposition	11601 Aug 08 19:58	27° ♁ 07'38	0°47'52	conjunction	11606 Jun 29 06:54	16° ♁ 11'09 -0°40'15
min. Earth dist.	11601 Aug 08 16:12	27° ♁ 08'51	4.47234 AU	minimum elong	11606 Jun 29 06:54	16° ♁ 11'09 0°40'58
direct	11601 Oct 09 17:39	22° ♁ 06'30		morning rise	11606 Jul 12 05:31	19° ♁ 15'00
	11601 Dec 27 01:53	0° ♁			11606 Aug 29 22:33	0° ♁
evening set	11602 Feb 11 21:33	9° ♁ 16'58		retrograde	11606 Nov 18 05:12	8° ♁ 58'30
				opposition	11607 Jan 17 01:31	4° ♁ 02'14 -0°59'13
conjunction	11602 Feb 25 00:02	12° ♁ 04'40	0°25'40	min. Earth dist.	11607 Jan 17 20:10	3° ♁ 56'06 3.99395 AU
minimum elong	11602 Feb 25 00:03	12° ♁ 04'41	0°25'57		11607 Feb 22 01:13	30° ♁
max. Earth dist.	11602 Feb 24 14:11	11° ♁ 59'24	6.49983 AU	direct	11607 Mar 17 10:18	29° ♁ 06'07
morning rise	11602 Mar 10 00:36	14° ♁ 51'26			11607 Apr 09 18:05	0° ♁
	11602 Jun 07 14:53	0° ♁			11607 Jul 05 15:46	15° ♁
retrograde	11602 Jul 08 15:06	1° ♁ 26'54		evening set	11607 Jul 22 03:30	18° ♁ 55'51
	11602 Aug 08 13:30	30° ♁				
opposition	11602 Sep 07 16:07	26° ♁ 32'03	0°24'30	conjunction	11607 Aug 04 06:50	22° ♁ 07'32 -0°34'25
min. Earth dist.	11602 Sep 08 08:25	26° ♁ 26'50	4.50570 AU	minimum elong	11607 Aug 04 06:51	22° ♁ 07'33 0°34'56
direct	11602 Nov 09 05:03	21° ♁ 30'51		max. Earth dist.	11607 Aug 03 20:07	22° ♁ 01'00 5.93779 AU
	11603 Jan 30 01:23	0° ♁		morning rise	11607 Aug 17 12:07	25° ♁ 20'25
evening set	11603 Mar 14 02:52	8° ♁ 37'52			11607 Sep 06 01:53	0° ♁
max. Earth dist.	11603 Mar 25 12:53	11° ♁ 04'47	6.48911 AU	retrograde	11607 Dec 26 22:45	16° ♁ 01'31
				opposition	11608 Feb 24 09:22	11° ♁ 02'10 -0°39'10
conjunction	11603 Mar 27 01:27	11° ♁ 24'27	0°06'52	min. Earth dist.	11608 Feb 24 02:27	11° ♁ 04'29 3.90561 AU
minimum elong	11603 Mar 27 01:27	11° ♁ 24'27	0°06'48	direct	11608 Apr 22 15:42	6° ♁ 07'15
behind sun begin	11603 Mar 26 18:00	11° ♁ 20'28		evening set	11608 Aug 27 19:29	26° ♁ 19'28
behind sun end	11603 Mar 27 08:54	11° ♁ 28'26				
morning rise	11603 Apr 08 22:17	14° ♁ 10'16		conjunction	11608 Sep 10 05:29	29° ♁ 36'04 -0°14'41
	11603 Jul 14 09:56	0° ♁		minimum elong	11608 Sep 10 05:29	29° ♁ 36'05 0°14'46
desc. node	11603 Aug 03 15:11	0° ♁ 52'54		behind sun begin	11608 Sep 10 02:09	29° ♁ 34'03
retrograde	11603 Aug 07 21:04	0° ♁ 54'36		behind sun end	11608 Sep 10 08:49	29° ♁ 38'06
	11603 Sep 01 06:04	30° ♁		max. Earth dist.	11608 Sep 11 09:43	29° ♁ 53'21 5.90159 AU
opposition	11603 Oct 07 22:17	26° ♁ 01'06	-0°05'15		11608 Sep 11 20:35	0° ♁
min. Earth dist.	11603 Oct 09 06:11	25° ♁ 50'53	4.45190 AU	morning rise	11608 Sep 23 17:33	2° ♁ 53'47
direct	11603 Dec 09 11:10	21° ♁ 00'11		retrograde	11609 Feb 02 13:19	23° ♁ 42'49
	11604 Mar 02 09:23	0° ♁		opposition	11609 Apr 02 20:19	18° ♁ 40'22 -0°02'28
evening set	11604 Apr 12 11:23	8° ♁ 27'04		min. Earth dist.	11609 Apr 01 16:07	18° ♁ 49'56 3.92659 AU
max. Earth dist.	11604 Apr 23 03:44	10° ♁ 47'36	6.39538 AU	asc. node	11609 Apr 27 05:04	15° ♁ 37'19
				direct	11609 May 30 20:41	13° ♁ 44'51
conjunction	11604 Apr 25 07:32	11° ♁ 16'08	-0°14'08		11609 Sep 19 09:19	0° ♁
minimum elong	11604 Apr 25 07:31	11° ♁ 16'07	0°14'34	evening set	11609 Oct 04 23:30	3° ♁ 40'16
behind sun begin	11604 Apr 25 03:59	11° ♁ 14'11				
behind sun end	11604 Apr 25 11:04	11° ♁ 18'04		conjunction	11609 Oct 18 13:33	6° ♁ 55'10 0°10'59
morning rise	11604 May 08 02:05	14° ♁ 04'42		minimum elong	11609 Oct 18 13:32	6° ♁ 55'09 0°11'22
	11604 May 12 07:22	15° ♁		behind sun begin	11609 Oct 18 07:29	6° ♁ 51'33
	11604 Aug 07 16:26	0° ♁		behind sun end	11609 Oct 18 19:35	6° ♁ 58'46
retrograde	11604 Sep 07 18:16	1° ♁ 28'03		max. Earth dist.	11609 Oct 20 20:44	7° ♁ 28'11 5.97679 AU
	11604 Oct 08 21:55	30° ♁		morning rise	11609 Nov 01 05:15	10° ♁ 10'40
opposition	11604 Nov 07 15:04	26° ♁ 34'43	-0°34'52		11609 Nov 21 22:41	15° ♁
min. Earth dist.	11604 Nov 09 06:26	26° ♁ 22'05	4.32348 AU		11610 Feb 27 12:08	0° ♁

retrograde	11610 Mar 11 00:53	0°♏13'16			11615 Jun 12 10:31	0°♏	
	11610 Mar 22 12:42	30°♏16		desc. node	11615 Jun 15 23:17	0°♏32'16	
min. Earth dist.	11610 May 07 23:45	25°♏22'37	4.04722 AU	retrograde	11615 Aug 12 02:03	5°♏09'20	
opposition	11610 May 09 14:43	25°♏09'24	0°33'54	opposition	11615 Oct 12 03:59	0°♏15'57	-0°09'24
direct	11610 Jul 07 04:09	20°♏11'59		min. Earth dist.	11615 Oct 13 13:31	0°♏05'14	4.44348 AU
	11610 Sep 29 01:52	0°♏			11615 Oct 14 05:55	30°♏♐	
evening set	11610 Nov 10 22:59	9°♏21'10		direct	11615 Dec 13 16:38	25°♐15'10	
					11616 Feb 10 10:28	0°♏	
conjunction	11610 Nov 24 12:55	12°♏28'51	0°31'29	evening set	11616 Apr 16 16:06	12°♏44'40	
minimum elong	11610 Nov 24 12:54	12°♏28'51	0°32'11		11616 Apr 26 22:06	15°♏	
max. Earth dist.	11610 Nov 26 23:02	13°♏02'22	6.13036 AU	max. Earth dist.	11616 Apr 27 05:21	15°♏04'00	6.38241 AU
morning rise	11610 Dec 08 03:30	15°♏36'29					
	11611 Feb 18 08:00	0°♏		conjunction	11616 Apr 29 11:46	15°♏34'03	-0°16'47
retrograde	11611 Apr 13 19:32	4°♏25'35		minimum elong	11616 Apr 29 11:45	15°♏34'03	0°17'16
	11611 Jun 08 04:45	30°♏♐		morning rise	11616 May 12 06:18	18°♏23'06	
min. Earth dist.	11611 Jun 11 10:03	29°♏34'09	4.21746 AU		11616 Jul 09 13:01	0°♐	
opposition	11611 Jun 12 19:58	29°♏22'47	0°55'39	retrograde	11616 Sep 12 05:35	5°♐52'11	
direct	11611 Aug 11 14:19	24°♏23'24		opposition	11616 Nov 12 01:28	0°♐58'44	-0°38'18
	11611 Oct 13 04:14	0°♏		min. Earth dist.	11616 Nov 13 17:34	0°♐45'51	4.30648 AU
evening set	11611 Dec 15 17:37	12°♏38'54			11616 Nov 19 17:18	30°♏♐	
				direct	11617 Jan 12 21:13	25°♏58'55	
conjunction	11611 Dec 29 04:34	15°♏37'48	0°40'19		11617 Mar 06 15:56	0°♐	
minimum elong	11611 Dec 29 04:34	15°♏37'48	0°41'04	evening set	11617 May 18 07:06	14°♐11'27	
max. Earth dist.	11611 Dec 31 00:07	16°♏01'58	6.30285 AU	max. Earth dist.	11617 May 28 20:13	16°♐35'52	6.22129 AU
morning rise	11612 Jan 11 14:41	18°♏36'01					
	11612 Mar 08 12:07	0°♐		conjunction	11617 May 31 02:50	17°♐07'09	-0°33'33
retrograde	11612 May 14 04:23	6°♐15'42		minimum elong	11617 May 31 02:49	17°♐07'09	0°34'16
opposition	11612 Jul 13 16:44	1°♐15'43	0°58'32	morning rise	11617 Jun 12 22:01	20°♐02'59	
min. Earth dist.	11612 Jul 12 20:12	1°♐22'29	4.37807 AU		11617 Jul 29 09:57	0°♐	
	11612 Jul 23 09:23	30°♏♐		retrograde	11617 Oct 16 22:23	8°♐39'41	
direct	11612 Sep 12 17:01	26°♏15'10		opposition	11617 Dec 16 07:00	3°♐45'12	-0°57'33
	11612 Nov 03 00:15	0°♐		min. Earth dist.	11617 Dec 17 17:49	3°♐33'54	4.13201 AU
evening set	11613 Jan 16 06:29	13°♐47'18			11618 Jan 18 02:18	30°♏♐	
	11613 Jan 21 21:43	15°♐		direct	11618 Feb 14 21:18	28°♐47'10	
					11618 Mar 14 13:50	0°♐	
conjunction	11613 Jan 29 12:44	16°♐38'48	0°36'44	evening set	11618 Jun 20 23:55	17°♐54'33	
minimum elong	11613 Jan 29 12:45	16°♐38'49	0°37'18	max. Earth dist.	11618 Jul 02 06:50	20°♐35'20	6.04798 AU
max. Earth dist.	11613 Jan 30 04:01	16°♐47'03	6.43997 AU				
morning rise	11613 Feb 11 17:37	19°♐29'26		conjunction	11618 Jul 03 22:23	20°♐58'53	-0°40'18
	11613 Apr 06 05:14	0°♐		minimum elong	11618 Jul 03 22:23	20°♐58'53	0°41'01
retrograde	11613 Jun 13 04:07	6°♐21'48		morning rise	11618 Jul 16 21:52	24°♐04'02	
opposition	11613 Aug 13 00:38	1°♐24'53	0°45'11		11618 Aug 11 13:59	0°♐	
min. Earth dist.	11613 Aug 13 00:01	1°♐25'05	4.48326 AU	retrograde	11618 Nov 23 07:18	13°♐57'13	
	11613 Aug 24 02:10	30°♏♐		opposition	11619 Jan 22 02:00	9°♐00'34	-0°57'50
direct	11613 Oct 14 02:26	26°♐23'48		min. Earth dist.	11619 Jan 22 18:04	8°♐55'15	3.97511 AU
	11613 Dec 03 23:07	0°♐		direct	11619 Mar 22 06:42	4°♐04'34	
evening set	11614 Feb 16 03:33	13°♐31'53			11619 Jun 18 03:25	15°♐	
				evening set	11619 Jul 27 02:00	24°♐00'21	
conjunction	11614 Mar 01 05:26	16°♐19'08	0°23'21				
minimum elong	11614 Mar 01 05:26	16°♐19'08	0°23'37	conjunction	11619 Aug 09 06:27	27°♐13'12	-0°32'28
max. Earth dist.	11614 Feb 28 16:09	16°♐12'03	6.50605 AU	minimum elong	11619 Aug 09 06:29	27°♐13'13	0°32'56
morning rise	11614 Mar 14 05:22	19°♐05'26		max. Earth dist.	11619 Aug 09 01:14	27°♐10'01	5.92311 AU
	11614 May 09 20:07	0°♐			11619 Aug 20 15:48	0°♐	
retrograde	11614 Jul 12 17:23	5°♐39'23		morning rise	11619 Aug 22 12:38	0°♐27'14	
opposition	11614 Sep 11 19:45	0°♐44'47	0°20'39	retrograde	11620 Jan 01 06:31	21°♐14'35	
min. Earth dist.	11614 Sep 12 13:30	0°♐39'05	4.50710 AU	opposition	11620 Feb 29 14:29	16°♐14'50	-0°34'54
	11614 Sep 17 15:54	30°♏♐		min. Earth dist.	11620 Feb 29 05:33	16°♐17'50	3.89677 AU
direct	11614 Nov 13 09:23	25°♐43'37		direct	11620 Apr 27 18:41	11°♐19'56	
	11615 Jan 08 08:41	0°♐			11620 Aug 26 11:58	0°♐	
evening set	11615 Mar 18 06:49	12°♐50'44		evening set	11620 Sep 01 23:59	1°♐34'29	
max. Earth dist.	11615 Mar 29 15:19	15°♐16'57	6.48557 AU				
				conjunction	11620 Sep 15 10:48	4°♐51'36	-0°11'20
conjunction	11615 Mar 31 04:59	15°♐37'15	0°04'03	minimum elong	11620 Sep 15 10:48	4°♐51'36	0°11'21
minimum elong	11615 Mar 31 04:59	15°♐37'15	0°03'55	behind sun begin	11620 Sep 15 04:44	4°♐47'54	
behind sun begin	11615 Mar 30 21:05	15°♐33'01		behind sun end	11620 Sep 15 16:53	4°♐55'18	
behind sun end	11615 Mar 31 12:52	15°♐41'28		max. Earth dist.	11620 Sep 16 18:53	5°♐11'13	5.89946 AU
morning rise	11615 Apr 13 01:11	18°♐22'59		morning rise	11620 Sep 28 23:52	8°♐09'50	

retrograde	11621 Feb 07 17:15	28°♄57'59		min. Earth dist.	11626 Sep 16 21:59	4°♃52'28	4.50521 AU
asc. node	11621 Mar 10 11:10	27°♄25'01			11626 Nov 13 01:04	30°♃	
min. Earth dist.	11621 Apr 06 16:58	24°♄05'52	3.93158 AU	direct	11626 Nov 17 16:34	29°♃58'04	
opposition	11621 Apr 08 00:19	23°♄55'13	0°02'53		11626 Nov 22 07:51	0°♃	
direct	11621 Jun 04 23:26	18°♄59'29		evening set	11627 Mar 22 12:00	17°♃06'16	
	11621 Sep 01 04:25	0°♄		max. Earth dist.	11627 Apr 02 16:00	19°♃30'25	6.47733 AU
evening set	11621 Oct 10 04:52	8°♄52'30					
conjunction	11621 Oct 23 19:12	12°♄06'59	0°14'16	conjunction	11627 Apr 04 09:41	19°♃52'54	0°01'04
minimum elong	11621 Oct 23 19:11	12°♄06'59	0°14'43	minimum elong	11627 Apr 04 09:40	19°♃52'54	0°00'52
behind sun begin	11621 Oct 23 15:55	12°♄05'02		behind sun begin	11627 Apr 04 01:41	19°♃48'37	
behind sun end	11621 Oct 23 22:28	12°♄08'56		behind sun end	11627 Apr 04 17:40	19°♃57'11	
max. Earth dist.	11621 Oct 26 03:28	12°♄40'34	5.98830 AU	morning rise	11627 Apr 17 05:34	22°♃38'49	
	11621 Nov 04 21:59	15°♄		desc. node	11627 Apr 24 09:44	24°♃10'44	
morning rise	11621 Nov 06 11:13	15°♄22'01			11627 May 23 01:14	0°♃	
	11622 Jan 15 12:08	0°♄		retrograde	11627 Aug 16 10:04	9°♃28'56	
retrograde	11622 Mar 15 22:38	5°♄17'37		opposition	11627 Oct 16 12:09	4°♃35'34	-0°13'43
min. Earth dist.	11622 May 12 22:22	0°♄26'53	4.06372 AU	min. Earth dist.	11627 Oct 17 22:54	4°♃24'27	4.42933 AU
opposition	11622 May 14 13:21	0°♄13'40	0°37'56	direct	11627 Dec 01 08:01	30°♃	
	11622 May 16 05:39	30°♄			11627 Dec 17 23:06	29°♃34'50	
direct	11622 Jul 12 06:20	25°♄15'53			11628 Jan 03 16:18	0°♃	
	11622 Sep 06 02:51	0°♄		evening set	11628 Apr 20 23:44	17°♃08'56	
evening set	11622 Nov 15 23:40	14°♄19'17		max. Earth dist.	11628 May 01 12:51	19°♃28'46	6.36329 AU
conjunction	11622 Nov 29 13:34	17°♄26'01	0°33'26	conjunction	11628 May 03 19:22	19°♃59'01	-0°19'30
minimum elong	11622 Nov 29 13:33	17°♄26'01	0°34'09	minimum elong	11628 May 03 19:22	19°♃59'00	0°20'02
max. Earth dist.	11622 Dec 02 00:56	18°♄00'04	6.15042 AU	morning rise	11628 May 16 13:39	22°♃48'44	
morning rise	11622 Dec 13 03:38	20°♄32'31			11628 Jun 19 10:43	0°♄	
	11623 Jan 26 07:37	0°♄		retrograde	11628 Sep 16 21:34	10°♄25'48	
retrograde	11623 Apr 18 09:22	9°♄12'14		opposition	11628 Nov 16 16:18	5°♄32'19	-0°41'46
min. Earth dist.	11623 Jun 16 01:41	4°♄20'55	4.23900 AU	min. Earth dist.	11628 Nov 18 08:59	5°♄19'15	4.28350 AU
opposition	11623 Jun 17 11:20	4°♄09'40	0°57'06	direct	11629 Jan 17 08:56	0°♄32'44	
	11623 Jul 24 15:17	30°♄		evening set	11629 May 22 20:37	18°♄52'34	
direct	11623 Aug 16 09:28	29°♄10'02		max. Earth dist.	11629 Jun 02 09:17	21°♄17'38	6.19611 AU
	11623 Sep 08 09:00	0°♄					
evening set	11623 Dec 20 11:28	17°♄19'02		conjunction	11629 Jun 04 16:24	21°♄49'23	-0°35'13
conjunction	11624 Jan 02 21:39	20°♄16'45	0°40'28	minimum elong	11629 Jun 04 16:24	21°♄49'23	0°35'57
minimum elong	11624 Jan 02 21:39	20°♄16'45	0°41'12	morning rise	11629 Jun 17 12:09	24°♄46'28	
max. Earth dist.	11624 Jan 04 13:16	20°♄38'38	6.32396 AU		11629 Jul 10 19:06	0°♄	
morning rise	11624 Jan 16 07:13	23°♄13'49		retrograde	11629 Oct 22 00:17	13°♄34'14	
	11624 Feb 17 09:44	0°♄		opposition	11629 Dec 21 06:48	8°♄39'31	-0°58'53
retrograde	11624 May 18 12:23	10°♄45'17		min. Earth dist.	11629 Dec 22 15:37	8°♄28'49	4.10648 AU
min. Earth dist.	11624 Jul 17 07:59	5°♄51'27	4.39696 AU	direct	11630 Feb 19 16:26	3°♄41'44	
opposition	11624 Jul 18 01:45	5°♄45'36	0°57'26	evening set	11630 Jun 25 21:34	22°♄57'23	
direct	11624 Sep 17 06:55	0°♄44'49		max. Earth dist.	11630 Jul 07 10:07	25°♄42'19	6.02455 AU
	11625 Jan 05 13:45	15°♄		conjunction	11630 Jul 08 20:54	26°♄03'07	-0°40'06
evening set	11625 Jan 20 17:21	18°♄11'54		minimum elong	11630 Jul 08 20:54	26°♄03'07	0°40'49
				morning rise	11630 Jul 21 21:03	29°♄09'41	
conjunction	11625 Feb 02 23:07	21°♄02'34	0°35'18		11630 Jul 25 09:50	0°♄	
minimum elong	11625 Feb 02 23:07	21°♄02'35	0°35'49		11630 Oct 06 21:31	15°♄	
max. Earth dist.	11625 Feb 03 11:59	21°♄09'30	6.45510 AU	retrograde	11630 Nov 28 18:24	19°♄13'26	
morning rise	11625 Feb 16 03:06	23°♄52'17			11631 Jan 21 22:08	15°♄	
	11625 Mar 17 19:31	0°♄		opposition	11631 Jan 27 10:00	14°♄16'28	-0°55'56
retrograde	11625 Jun 17 06:52	10°♄39'39		min. Earth dist.	11631 Jan 27 23:36	14°♄11'58	3.95626 AU
opposition	11625 Aug 17 05:49	5°♄43'02	0°42'12	direct	11631 Mar 27 10:07	9°♄20'47	
min. Earth dist.	11625 Aug 17 06:49	5°♄42'43	4.49347 AU		11631 May 26 23:49	15°♄	
direct	11625 Oct 18 09:27	0°♄41'53		evening set	11631 Aug 01 08:08	29°♄22'24	
evening set	11626 Feb 20 09:58	17°♄47'42			11631 Aug 03 21:52	0°♄	
conjunction	11626 Mar 05 11:09	20°♄34'30	0°20'51	conjunction	11631 Aug 14 13:27	2°♄36'19	-0°30'07
minimum elong	11626 Mar 05 11:09	20°♄34'31	0°21'03	minimum elong	11631 Aug 14 13:28	2°♄36'20	0°30'32
max. Earth dist.	11626 Mar 04 17:44	20°♄25'13	6.51044 AU	max. Earth dist.	11631 Aug 14 12:26	2°♄35'42	5.91075 AU
morning rise	11626 Mar 18 10:29	23°♄20'25		morning rise	11631 Aug 27 20:51	5°♄51'28	
	11626 Apr 20 02:13	0°♄		retrograde	11632 Jan 06 18:14	26°♄43'32	
retrograde	11626 Jul 16 22:30	9°♄53'36		opposition	11632 Mar 06 01:46	21°♄43'23	-0°30'02
opposition	11626 Sep 16 00:49	4°♄59'14	0°16'34	min. Earth dist.	11632 Mar 05 12:12	21°♄47'57	3.89275 AU

direct	11632 May 03 02:51	16° \mathbb{M} 48'33		conjunction	11638 Mar 09 14:55	24° \mathbb{H} 46'09	0°18'17
	11632 Aug 08 12:15	0° \mathbb{L}		minimum elong	11638 Mar 09 14:56	24° \mathbb{H} 46'09	0°18'26
evening set	11632 Sep 07 10:23	7° \mathbb{L} 03'20		max. Earth dist.	11638 Mar 08 18:06	24° \mathbb{H} 35'02	6.51156 AU
				morning rise	11638 Mar 22 13:36	27° \mathbb{H} 31'48	
conjunction	11632 Sep 20 21:55	10° \mathbb{L} 20'35	-0°07'42		11638 Apr 03 07:42	0° \mathbb{Y}	
minimum elong	11632 Sep 20 21:56	10° \mathbb{L} 20'35	0°07'38	retrograde	11638 Jul 21 00:49	14° \mathbb{Y} 05'26	
behind sun begin	11632 Sep 20 14:22	10° \mathbb{L} 15'59		opposition	11638 Sep 20 04:23	9° \mathbb{Y} 11'15	0°12'28
behind sun end	11632 Sep 21 05:29	10° \mathbb{L} 25'11		min. Earth dist.	11638 Sep 21 03:19	9° \mathbb{Y} 03'54	4.49923 AU
max. Earth dist.	11632 Sep 22 10:31	10° \mathbb{L} 42'56	5.90430 AU	direct	11638 Nov 21 19:19	4° \mathbb{Y} 10'04	
morning rise	11632 Oct 04 11:43	13° \mathbb{L} 38'54		desc. node	11639 Mar 02 08:23	16° \mathbb{Y} 15'55	
	11632 Dec 21 16:04	0° \mathbb{L}		evening set	11639 Mar 26 16:19	21° \mathbb{Y} 20'47	
asc. node	11633 Jan 18 17:12	3° \mathbb{L} 19'51		max. Earth dist.	11639 Apr 06 17:21	23° \mathbb{Y} 43'46	6.46456 AU
retrograde	11633 Feb 13 00:16	4° \mathbb{L} 23'00					
	11633 Apr 08 10:02	30° \mathbb{R} \mathbb{L}		conjunction	11639 Apr 08 13:36	24° \mathbb{Y} 07'44	-0°01'58
min. Earth dist.	11633 Apr 11 23:05	29° \mathbb{L} 31'11	3.94473 AU	minimum elong	11639 Apr 08 13:36	24° \mathbb{Y} 07'44	0°02'12
opposition	11633 Apr 13 08:16	29° \mathbb{L} 19'54	0°08'28	behind sun begin	11639 Apr 08 05:37	24° \mathbb{Y} 03'26	
direct	11633 Jun 10 09:16	24° \mathbb{L} 23'57		behind sun end	11639 Apr 08 21:35	24° \mathbb{Y} 12'02	
	11633 Aug 09 14:31	0° \mathbb{L}		morning rise	11639 Apr 21 09:10	26° \mathbb{Y} 54'01	
evening set	11633 Oct 15 12:45	14° \mathbb{L} 11'12			11639 May 05 22:57	0° \mathbb{B}	
	11633 Oct 18 23:17	15° \mathbb{L}		retrograde	11639 Aug 20 20:05	13° \mathbb{B} 49'27	
conjunction	11633 Oct 29 03:23	17° \mathbb{L} 24'50	0°17'35	opposition	11639 Oct 20 20:38	8° \mathbb{B} 56'09	-0°17'57
minimum elong	11633 Oct 29 03:22	17° \mathbb{L} 24'49	0°18'06	min. Earth dist.	11639 Oct 22 09:52	8° \mathbb{B} 44'15	4.41038 AU
max. Earth dist.	11633 Oct 31 15:25	18° \mathbb{L} 00'28	6.00851 AU	direct	11639 Dec 22 06:34	3° \mathbb{B} 55'30	
morning rise	11633 Nov 11 19:13	20° \mathbb{L} 38'49			11640 Mar 25 07:18	15° \mathbb{B}	
	11633 Dec 23 17:53	0° \mathbb{L}		evening set	11640 Apr 25 07:52	21° \mathbb{B} 35'42	
retrograde	11634 Mar 20 20:45	10° \mathbb{L} 23'56		max. Earth dist.	11640 May 05 18:17	23° \mathbb{B} 54'50	6.33943 AU
min. Earth dist.	11634 May 17 21:07	5° \mathbb{L} 33'25	4.08868 AU	conjunction	11640 May 08 03:22	24° \mathbb{B} 26'39	-0°22'08
opposition	11634 May 19 12:36	5° \mathbb{L} 20'04	0°41'46	minimum elong	11640 May 08 03:21	24° \mathbb{B} 26'39	0°22'42
direct	11634 Jul 17 09:20	0° \mathbb{L} 22'02		morning rise	11640 May 20 21:51	27° \mathbb{B} 17'23	
evening set	11634 Nov 21 00:14	19° \mathbb{L} 16'50			11640 Jun 02 05:43	0° \mathbb{I}	
				retrograde	11640 Sep 21 15:37	15° \mathbb{I} 04'11	
conjunction	11634 Dec 04 13:32	22° \mathbb{L} 22'07	0°35'11	opposition	11640 Nov 21 08:54	10° \mathbb{I} 10'33	-0°45'03
minimum elong	11634 Dec 04 13:31	22° \mathbb{L} 22'07	0°35'55	min. Earth dist.	11640 Nov 23 00:42	9° \mathbb{I} 57'43	4.25629 AU
max. Earth dist.	11634 Dec 06 22:28	22° \mathbb{L} 54'35	6.17765 AU	direct	11641 Jan 21 20:45	5° \mathbb{I} 11'07	
morning rise	11634 Dec 18 03:10	25° \mathbb{L} 27'10		evening set	11641 May 27 12:10	23° \mathbb{I} 39'41	
	11635 Jan 07 15:51	0° \mathbb{B}		max. Earth dist.	11641 Jun 07 04:20	26° \mathbb{I} 07'38	6.16787 AU
retrograde	11635 Apr 22 20:47	13° \mathbb{B} 55'24					
min. Earth dist.	11635 Jun 20 17:04	9° \mathbb{B} 03'48	4.26598 AU	conjunction	11641 Jun 09 08:26	26° \mathbb{I} 37'51	-0°36'40
opposition	11635 Jun 22 01:00	8° \mathbb{B} 53'08	0°58'12	minimum elong	11641 Jun 09 08:26	26° \mathbb{I} 37'50	0°37'25
direct	11635 Aug 21 03:58	3° \mathbb{B} 53'14		morning rise	11641 Jun 22 04:32	29° \mathbb{I} 36'18	
evening set	11635 Dec 25 02:47	21° \mathbb{B} 54'21			11641 Jun 23 21:40	0° \mathbb{O}	
				retrograde	11641 Oct 27 06:10	18° \mathbb{O} 36'06	
conjunction	11636 Jan 07 12:28	24° \mathbb{B} 50'49	0°40'23	opposition	11641 Dec 26 09:22	13° \mathbb{O} 41'10	-0°59'50
minimum elong	11636 Jan 07 12:28	24° \mathbb{B} 50'49	0°41'07	min. Earth dist.	11641 Dec 27 16:42	13° \mathbb{O} 30'56	4.07961 AU
max. Earth dist.	11636 Jan 09 01:40	25° \mathbb{B} 11'16	6.34864 AU	direct	11642 Feb 24 14:04	8° \mathbb{O} 43'43	
morning rise	11636 Jan 20 21:02	27° \mathbb{B} 46'30		evening set	11642 Jun 30 22:28	28° \mathbb{O} 07'56	
	11636 Jan 31 04:14	0° \mathbb{A}			11642 Jul 08 17:36	0° \mathbb{Q}	
	11636 May 12 20:54	15° \mathbb{A}					
retrograde	11636 May 22 17:15	15° \mathbb{A} 09'13		conjunction	11642 Jul 13 22:28	1° \mathbb{Q} 15'04	-0°39'35
	11636 Jun 01 12:38	15° \mathbb{R} \mathbb{A}		minimum elong	11642 Jul 13 22:29	1° \mathbb{Q} 15'04	0°40'17
opposition	11636 Jul 22 08:22	10° \mathbb{A} 10'00	0°56'04	max. Earth dist.	11642 Jul 12 14:52	0° \mathbb{Q} 56'04	6.00163 AU
min. Earth dist.	11636 Jul 21 16:54	10° \mathbb{A} 15'04	4.41748 AU	morning rise	11642 Jul 26 23:45	4° \mathbb{Q} 23'08	
direct	11636 Sep 21 17:11	5° \mathbb{A} 09'09			11642 Sep 12 04:54	15° \mathbb{Q}	
	11636 Dec 19 04:12	15° \mathbb{A}		retrograde	11642 Dec 04 05:23	24° \mathbb{Q} 36'47	
evening set	11637 Jan 25 01:29	22° \mathbb{A} 31'02		opposition	11643 Feb 01 20:38	19° \mathbb{Q} 39'22	-0°53'31
				min. Earth dist.	11643 Feb 02 05:14	19° \mathbb{Q} 36'31	3.93994 AU
conjunction	11637 Feb 07 06:23	25° \mathbb{A} 20'49	0°33'43		11643 Mar 20 02:52	15° \mathbb{R} \mathbb{Q}	
minimum elong	11637 Feb 07 06:24	25° \mathbb{A} 20'50	0°34'13	direct	11643 Apr 01 15:42	14° \mathbb{Q} 43'55	
max. Earth dist.	11637 Feb 07 13:18	25° \mathbb{A} 24'32	6.46989 AU		11643 Apr 14 05:43	15° \mathbb{Q}	
morning rise	11637 Feb 20 09:47	28° \mathbb{A} 09'43			11643 Jul 17 11:50	0° \mathbb{M}	
	11637 Mar 01 02:12	0° \mathbb{H}		evening set	11643 Aug 06 16:38	4° \mathbb{M} 49'59	
retrograde	11637 Jun 21 10:03	14° \mathbb{H} 52'44					
opposition	11637 Aug 21 09:03	9° \mathbb{H} 56'29	0°39'04	conjunction	11643 Aug 19 22:56	8° \mathbb{M} 04'44	-0°27'29
min. Earth dist.	11637 Aug 21 14:01	9° \mathbb{H} 54'53	4.50174 AU	minimum elong	11643 Aug 19 22:58	8° \mathbb{M} 04'45	0°27'50
direct	11637 Oct 22 15:50	4° \mathbb{H} 55'13		max. Earth dist.	11643 Aug 20 04:29	8° \mathbb{M} 08'08	5.90283 AU
evening set	11638 Feb 24 14:09	21° \mathbb{H} 59'35		morning rise	11643 Sep 02 07:20	11° \mathbb{M} 20'44	

	11643 Dec 05 18:20	0°♎		retrograde	11649 Jun 25 12:44	19°♎06'13	
retrograde	11644 Jan 12 07:28	2°♎15'06		opposition	11649 Aug 25 12:42	14°♎10'23	0°35'45
	11644 Feb 18 21:12	30°♎		min. Earth dist.	11649 Aug 25 20:06	14°♎08'00	4.50578 AU
opposition	11644 Mar 11 14:14	27°♎14'24	-0°24'53	direct	11649 Oct 26 20:50	9°♎09'10	
min. Earth dist.	11644 Mar 10 21:34	27°♎20'01	3.89415 AU	evening set	11650 Feb 28 19:20	26°♎13'27	
direct	11644 May 08 15:08	22°♎19'28					
	11644 Jul 18 18:43	0°♎		conjunction	11650 Mar 13 19:26	28°♎59'54	0°15'37
evening set	11644 Sep 12 21:10	12°♎31'56		minimum elong	11650 Mar 13 19:27	28°♎59'54	0°15'41
				behind sun begin	11650 Mar 13 17:50	28°♎59'03	
conjunction	11644 Sep 26 09:29	15°♎49'01	-0°04'00	behind sun end	11650 Mar 13 21:04	29°♎00'46	
minimum elong	11644 Sep 26 09:29	15°♎49'00	0°03'52	max. Earth dist.	11650 Mar 12 17:32	28°♎46'03	6.50878 AU
behind sun begin	11644 Sep 26 01:12	15°♎44'00			11650 Mar 18 11:49	0°♎	
behind sun end	11644 Sep 26 17:45	15°♎54'01		morning rise	11650 Mar 26 17:47	1°♎45'31	
max. Earth dist.	11644 Sep 28 04:12	16°♎15'01	5.91476 AU	retrograde	11650 Jul 25 07:59	18°♎20'59	
morning rise	11644 Oct 09 23:43	19°♎07'00		opposition	11650 Sep 24 10:05	13°♎27'02	0°08'14
asc. node	11644 Nov 27 17:32	0°♎08'06		min. Earth dist.	11650 Sep 25 12:17	13°♎18'39	4.48983 AU
	11644 Nov 27 01:32	0°♎		direct	11650 Nov 26 01:34	8°♎25'54	
retrograde	11645 Feb 18 06:16	9°♎44'13		desc. node	11651 Jan 08 00:16	11°♎02'41	
min. Earth dist.	11645 Apr 17 03:38	4°♎52'46	3.96286 AU	evening set	11651 Mar 30 22:23	25°♎40'08	
opposition	11645 Apr 18 14:43	4°♎40'52	0°13'54	max. Earth dist.	11651 Apr 10 20:34	28°♎02'05	6.44911 AU
	11645 Jun 03 12:44	30°♎					
direct	11645 Jun 15 17:18	29°♎44'39		conjunction	11651 Apr 12 19:27	28°♎27'33	-0°04'58
	11645 Jun 27 23:18	0°♎		minimum elong	11651 Apr 12 19:27	28°♎27'33	0°05'15
	11645 Oct 01 18:10	15°♎		behind sun begin	11651 Apr 12 11:43	28°♎23'23	
evening set	11645 Oct 20 19:22	19°♎24'30		behind sun end	11651 Apr 13 03:11	28°♎31'44	
					11651 Apr 19 21:31	0°♎	
conjunction	11645 Nov 03 09:50	22°♎36'58	0°20'43	morning rise	11651 Apr 25 14:44	1°♎14'21	
minimum elong	11645 Nov 03 09:49	22°♎36'58	0°21'17		11651 Jul 08 23:49	15°♎	
max. Earth dist.	11645 Nov 05 21:46	23°♎12'19	6.03207 AU	retrograde	11651 Aug 25 07:16	18°♎16'05	
morning rise	11645 Nov 17 01:43	25°♎49'47			11651 Oct 12 09:45	15°♎	
	11645 Dec 05 04:50	0°♎		opposition	11651 Oct 25 07:35	13°♎22'51	-0°22'12
retrograde	11646 Mar 25 14:58	15°♎23'28		min. Earth dist.	11651 Oct 26 20:54	13°♎10'54	4.38994 AU
min. Earth dist.	11646 May 22 17:56	10°♎32'59	4.11508 AU	direct	11651 Dec 26 13:38	8°♎22'23	
opposition	11646 May 24 09:21	10°♎19'40	0°45'13		11652 Mar 05 15:09	15°♎	
direct	11646 Jul 22 09:56	5°♎21'19		evening set	11652 Apr 29 18:39	26°♎09'14	
evening set	11646 Nov 25 22:17	24°♎07'30		max. Earth dist.	11652 May 10 05:51	28°♎29'33	6.31555 AU
conjunction	11646 Dec 09 11:15	27°♎11'27	0°36'41	conjunction	11652 May 12 14:08	29°♎01'07	-0°24'41
minimum elong	11646 Dec 09 11:15	27°♎11'26	0°37'26	minimum elong	11652 May 12 14:07	29°♎01'07	0°25'18
max. Earth dist.	11646 Dec 11 18:22	27°♎42'42	6.20463 AU		11652 May 16 23:02	0°♎	
	11646 Dec 21 21:25	0°♎		morning rise	11652 May 25 08:38	1°♎52'49	
morning rise	11646 Dec 23 00:08	0°♎15'00		retrograde	11652 Sep 26 14:21	19°♎49'29	
retrograde	11647 Apr 27 07:52	18°♎32'29		opposition	11652 Nov 26 04:25	14°♎55'50	-0°48'09
min. Earth dist.	11647 Jun 25 07:25	13°♎40'28	4.29115 AU	min. Earth dist.	11652 Nov 27 20:20	14°♎42'57	4.23069 AU
opposition	11647 Jun 26 12:55	13°♎30'39	0°58'56	direct	11653 Jan 26 12:43	9°♎56'45	
direct	11647 Aug 25 20:42	8°♎30'37		evening set	11653 Jun 01 06:06	28°♎33'25	
evening set	11647 Dec 29 16:35	26°♎24'49			11653 Jun 07 11:25	0°♎	
				max. Earth dist.	11653 Jun 11 23:59	1°♎03'13	6.14285 AU
conjunction	11648 Jan 12 01:31	29°♎20'08	0°40'05				
minimum elong	11648 Jan 12 01:31	29°♎20'08	0°40'46	conjunction	11653 Jun 14 02:41	1°♎32'47	-0°37'56
max. Earth dist.	11648 Jan 13 09:52	29°♎37'50	6.37005 AU	minimum elong	11653 Jun 14 02:41	1°♎32'47	0°38'41
	11648 Jan 15 02:23	0°♎		morning rise	11653 Jun 26 23:26	4°♎32'35	
morning rise	11648 Jan 25 09:29	2°♎14'42		retrograde	11653 Nov 01 11:19	23°♎43'16	
	11648 Apr 01 00:12	15°♎		opposition	11653 Dec 31 13:50	18°♎48'02	-1°00'22
retrograde	11648 May 26 21:41	19°♎30'08		min. Earth dist.	11654 Jan 01 17:10	18°♎39'05	4.05766 AU
	11648 Jul 22 22:34	15°♎		direct	11654 Mar 01 12:29	13°♎50'59	
opposition	11648 Jul 26 14:10	14°♎31'22	0°54'25		11654 Jun 21 19:01	0°♎	
min. Earth dist.	11648 Jul 26 01:37	14°♎35'29	4.43393 AU	evening set	11654 Jul 06 00:18	3°♎21'46	
direct	11648 Sep 26 02:00	9°♎30'25		max. Earth dist.	11654 Jul 17 23:31	6°♎14'36	5.98504 AU
	11648 Nov 28 17:19	15°♎					
evening set	11649 Jan 29 09:13	26°♎48'39		conjunction	11654 Jul 19 01:02	6°♎30'00	-0°38'48
				minimum elong	11654 Jul 19 01:03	6°♎30'00	0°39'27
conjunction	11649 Feb 11 13:40	29°♎37'50	0°31'58	morning rise	11654 Aug 01 03:06	9°♎39'12	
minimum elong	11649 Feb 11 13:41	29°♎37'51	0°32'25		11654 Aug 23 21:00	15°♎	
max. Earth dist.	11649 Feb 11 17:24	29°♎39'51	6.48038 AU		11654 Dec 08 19:57	0°♎	
	11649 Feb 13 07:00	0°♎		retrograde	11654 Dec 09 17:29	0°♎00'05	
morning rise	11649 Feb 24 16:13	2°♎26'03			11654 Dec 10 15:01	30°♎	

opposition	11655 Feb 07 06:48	25°02'13	-0°50'41		11660 Oct 29 08:51	15°≈	
min. Earth dist.	11655 Feb 07 12:10	25°00'26	3.93065 AU		11661 Jan 28 19:07	0°✕	
direct	11655 Apr 06 23:55	20°06'57		evening set	11661 Feb 02 14:48	1°✕01'17	
	11655 Jun 28 10:46	0°♐					
evening set	11655 Aug 11 23:50	10°♐14'36		conjunction	11661 Feb 15 18:35	3°✕50'01	0°30'08
				minimum elong	11661 Feb 15 18:35	3°✕50'01	0°30'32
conjunction	11655 Aug 25 07:03	13°♐29'50	-0°24'42	max. Earth dist.	11661 Feb 15 17:08	3°✕49'15	6.48616 AU
minimum elong	11655 Aug 25 07:04	13°♐29'50	0°25'00	morning rise	11661 Feb 28 20:41	6°✕37'50	
max. Earth dist.	11655 Aug 25 19:02	13°♐37'10	5.90185 AU	retrograde	11661 Jun 29 15:23	23°✕16'36	
morning rise	11655 Sep 07 16:16	16°♐46'16		opposition	11661 Aug 29 15:24	18°✕21'03	0°32'22
	11655 Nov 06 03:13	0°♑		min. Earth dist.	11661 Aug 30 01:35	18°✕17'46	4.50555 AU
retrograde	11656 Jan 17 16:06	7°♑39'40		direct	11661 Oct 31 00:44	13°✕19'48	
opposition	11656 Mar 16 23:01	2°♑38'31	-0°19'42		11662 Mar 03 00:15	0°♑	
min. Earth dist.	11656 Mar 16 02:58	2°♑45'17	3.90190 AU	evening set	11662 Mar 04 23:34	0°♑25'05	
	11656 Apr 06 15:35	30°♑♐					
direct	11656 May 13 22:32	27°♐43'31		conjunction	11662 Mar 17 23:22	3°♑11'37	0°12'56
	11656 Jun 19 23:31	0°♑		minimum elong	11662 Mar 17 23:23	3°♑11'37	0°12'58
evening set	11656 Sep 18 04:15	17°♑51'30		behind sun begin	11662 Mar 17 18:32	3°♑09'02	
				behind sun end	11662 Mar 18 04:15	3°♑14'12	
conjunction	11656 Oct 01 16:50	21°♑08'00	-0°00'22	max. Earth dist.	11662 Mar 16 19:35	2°♑56'44	6.50270 AU
minimum elong	11656 Oct 01 16:50	21°♑08'00	0°00'10	morning rise	11662 Mar 30 21:05	5°♑57'16	
behind sun begin	11656 Oct 01 08:31	21°♑02'59		retrograde	11662 Jul 29 12:43	22°♑35'20	
behind sun end	11656 Oct 02 01:09	21°♑13'01		opposition	11662 Sep 28 15:20	17°♑41'34	0°04'02
max. Earth dist.	11656 Oct 03 13:44	21°♑35'13	5.93003 AU	min. Earth dist.	11662 Sep 29 18:40	17°♑32'49	4.47843 AU
asc. node	11656 Oct 07 09:17	22°♑30'39		desc. node	11662 Nov 18 10:50	12°♑53'05	
morning rise	11656 Oct 15 07:38	24°♑25'26		direct	11662 Nov 30 05:17	12°♑40'32	
	11656 Nov 08 01:23	0°♒		evening set	11663 Apr 04 04:27	29°♑58'37	
retrograde	11657 Feb 23 05:10	14°♒54'06			11663 Apr 04 07:00	0°♒	
min. Earth dist.	11657 Apr 22 03:23	10°♒02'57	3.98386 AU	max. Earth dist.	11663 Apr 15 00:04	2°♒19'45	6.43312 AU
opposition	11657 Apr 23 16:00	9°♒50'31	0°18'57				
direct	11657 Jun 20 21:17	4°♒53'58		conjunction	11663 Apr 17 01:05	2°♒46'30	-0°07'52
	11657 Sep 13 10:29	15°♒		minimum elong	11663 Apr 17 01:04	2°♒46'30	0°08'13
evening set	11657 Oct 25 20:33	24°♒25'45		behind sun begin	11663 Apr 16 18:00	2°♒42'39	
				behind sun end	11663 Apr 17 08:08	2°♒50'20	
conjunction	11657 Nov 08 11:02	27°♒37'03	0°23'33	morning rise	11663 Apr 29 20:14	5°♒33'50	
minimum elong	11657 Nov 08 11:01	27°♒37'02	0°24'09		11663 Jun 15 08:06	15°♒	
max. Earth dist.	11657 Nov 10 23:14	28°♒12'22	6.05670 AU	retrograde	11663 Aug 29 20:50	22°♒41'50	
	11657 Nov 18 15:08	0°♓		opposition	11663 Oct 29 18:47	17°♒48'36	-0°26'16
morning rise	11657 Nov 22 02:30	0°♓48'32		min. Earth dist.	11663 Oct 31 09:36	17°♒36'09	4.37019 AU
retrograde	11658 Mar 30 06:05	20°♓11'00			11663 Nov 22 02:20	15°♒♓	
min. Earth dist.	11658 May 27 11:36	15°♓20'02	4.14070 AU	direct	11663 Dec 30 23:25	12°♒48'15	
opposition	11658 May 29 01:06	15°♓07'23	0°48'12		11664 Feb 07 15:49	15°♒	
direct	11658 Jul 27 06:31	10°♓08'46			11664 May 01 03:03	0°♓	
evening set	11658 Nov 30 15:34	28°♓46'58		evening set	11664 May 04 04:49	0°♓41'06	
	11658 Dec 06 01:31	0°♔		max. Earth dist.	11664 May 14 15:58	3°♓02'05	6.29341 AU
conjunction	11658 Dec 14 04:02	1°♔49'38	0°37'53	conjunction	11664 May 17 00:21	3°♓33'51	-0°27'03
minimum elong	11658 Dec 14 04:01	1°♔49'38	0°38'40	minimum elong	11664 May 17 00:20	3°♓33'51	0°27'42
max. Earth dist.	11658 Dec 16 08:24	2°♔19'09	6.22903 AU	morning rise	11664 May 29 18:57	6°♓26'29	
morning rise	11658 Dec 27 16:21	4°♔51'53		retrograde	11664 Oct 01 09:13	24°♓32'13	
retrograde	11659 May 01 12:52	22°♔59'49		opposition	11664 Nov 30 23:07	19°♓38'22	-0°50'52
opposition	11659 Jun 30 20:30	17°♔58'23	0°59'20	min. Earth dist.	11664 Dec 02 13:02	19°♓26'06	4.20761 AU
min. Earth dist.	11659 Jun 29 16:47	18°♔07'36	4.31259 AU	direct	11665 Jan 31 02:07	14°♓39'31	
direct	11659 Aug 30 07:17	12°♔58'10			11665 May 22 04:04	0°♔	
	11659 Dec 30 11:55	0°♔		evening set	11665 Jun 05 22:55	3°♔23'15	
evening set	11660 Jan 03 02:42	0°♔46'54		max. Earth dist.	11665 Jun 16 20:21	5°♔55'52	6.12056 AU
conjunction	11660 Jan 16 11:05	3°♔41'19	0°39'36	conjunction	11665 Jun 18 19:49	6°♔23'42	-0°38'53
minimum elong	11660 Jan 16 11:06	3°♔41'19	0°40'16	minimum elong	11665 Jun 18 19:49	6°♔23'42	0°39'39
max. Earth dist.	11660 Jan 17 15:15	3°♔56'40	6.38716 AU	morning rise	11665 Jul 01 17:02	9°♔24'40	
morning rise	11660 Jan 29 18:17	6°♔34'54		retrograde	11665 Nov 06 16:19	28°♔45'11	
	11660 Mar 10 21:56	15°♔		opposition	11666 Jan 05 16:25	23°♔49'40	-1°00'24
retrograde	11660 May 31 00:57	23°♔44'39		min. Earth dist.	11666 Jan 06 18:04	23°♔41'15	4.03784 AU
opposition	11660 Jul 30 17:35	18°♔46'21	0°52'36	direct	11666 Mar 06 12:05	18°♔52'52	
min. Earth dist.	11660 Jul 30 08:23	18°♔49'21	4.44575 AU		11666 Jun 04 00:07	0°♓	
	11660 Sep 01 16:32	15°♓		evening set	11666 Jul 11 00:16	8°♓29'36	
direct	11660 Sep 30 09:17	13°♓45'21		max. Earth dist.	11666 Jul 23 04:48	11°♓26'11	5.96957 AU

conjunction	11666 Jul 24 01:52	11°♎38'56 -0°37'41	morning rise	11672 Feb 03 05:09	11°♏00'59	
minimum elong	11666 Jul 24 01:52	11°♎38'56 0°38'18		11672 Feb 22 00:40	15°♏	
morning rise	11666 Aug 06 04:49	14°♎49'17	retrograde	11672 Jun 04 03:55	28°♏05'03	
	11666 Aug 06 22:38	15°♎	opposition	11672 Aug 03 23:00	23°♏07'12	0°50'26
	11666 Oct 16 17:09	0°♏	min. Earth dist.	11672 Aug 03 15:17	23°♏09'43	4.45873 AU
retrograde	11666 Dec 15 02:26	5°♏16'52	direct	11672 Oct 04 16:53	18°♏06'13	
opposition	11667 Feb 12 14:21	0°♏18'38 -0°47'25		11673 Jan 12 04:01	0°♏	
min. Earth dist.	11667 Feb 12 15:57	0°♏18'06 3.92139 AU	evening set	11673 Feb 06 22:11	5°♏19'17	
	11667 Feb 14 22:14	30°♏♎				
direct	11667 Apr 12 03:16	25°♎23'32	conjunction	11673 Feb 20 01:22	8°♏07'27	0°28'05
	11667 Jun 05 02:41	0°♏	minimum elong	11673 Feb 20 01:23	8°♏07'28	0°28'26
evening set	11667 Aug 17 05:16	15°♏33'17	max. Earth dist.	11673 Feb 19 21:13	8°♏05'14	6.49482 AU
			morning rise	11673 Mar 05 02:41	10°♏54'41	
conjunction	11667 Aug 30 13:10	18°♏49'01 -0°21'43	retrograde	11673 Jul 03 18:40	27°♏31'01	
minimum elong	11667 Aug 30 13:11	18°♏49'01 0°21'56	opposition	11673 Sep 02 19:27	22°♏35'48	0°28'46
max. Earth dist.	11667 Aug 31 04:42	18°♏58'32 5.89964 AU	min. Earth dist.	11673 Sep 03 07:58	22°♏31'47	4.50958 AU
morning rise	11667 Sep 12 23:27	22°♏06'00	direct	11673 Nov 04 07:08	17°♏34'39	
	11667 Oct 16 15:43	0°♎		11674 Feb 14 18:05	0°♏	
retrograde	11668 Jan 22 21:54	12°♎59'17	evening set	11674 Mar 09 04:18	4°♏39'17	
min. Earth dist.	11668 Mar 21 06:41	8°♎05'35 3.90701 AU	max. Earth dist.	11674 Mar 20 19:32	7°♏08'31	6.50183 AU
opposition	11668 Mar 22 05:53	7°♎57'43 -0°14'21				
direct	11668 May 19 04:58	3°♎02'36	conjunction	11674 Mar 22 03:26	7°♏25'36	0°10'11
asc. node	11668 Aug 15 23:46	14°♎16'19	minimum elong	11674 Mar 22 03:26	7°♏25'36	0°10'10
evening set	11668 Sep 23 10:22	23°♎07'40	behind sun begin	11674 Mar 21 21:03	7°♏22'12	
			behind sun end	11674 Mar 22 09:49	7°♏29'01	
conjunction	11668 Oct 06 23:35	26°♎23'51 0°03'18	morning rise	11674 Apr 04 00:46	10°♏11'07	
minimum elong	11668 Oct 06 23:35	26°♎23'51 0°03'34	retrograde	11674 Aug 02 18:34	26°♏50'12	
behind sun begin	11668 Oct 06 15:17	26°♎18'51	desc. node	11674 Oct 01 02:41	22°♏09'59	
behind sun end	11668 Oct 07 07:53	26°♎28'50	opposition	11674 Oct 02 20:47	21°♏56'31	-0°00'08
max. Earth dist.	11668 Oct 09 00:21	26°♎53'19 5.94200 AU	min. Earth dist.	11674 Oct 04 02:04	21°♏47'08	4.47271 AU
morning rise	11668 Oct 20 14:37	29°♎40'49	direct	11674 Dec 04 11:15	16°♏55'31	
	11668 Oct 21 22:41	0°♏		11675 Mar 19 07:41	0°♏	
	11669 Jan 01 12:26	15°♏	evening set	11675 Apr 08 09:01	4°♏15'23	
retrograde	11669 Feb 28 06:37	20°♏02'34	max. Earth dist.	11675 Apr 19 03:50	6°♏36'23	6.42288 AU
min. Earth dist.	11669 Apr 27 04:11	15°♏11'20 4.00113 AU				
opposition	11669 Apr 28 16:48	14°♏58'54 0°23'53	conjunction	11675 Apr 21 05:26	7°♏03'31	-0°10'39
	11669 Apr 28 13:34	15°♏♏	minimum elong	11675 Apr 21 05:25	7°♏03'30	0°11'04
direct	11669 Jun 26 01:11	10°♏02'06	behind sun begin	11675 Apr 20 23:25	7°♏00'15	
	11669 Aug 21 20:09	15°♏	behind sun end	11675 Apr 21 11:24	7°♏06'46	
evening set	11669 Oct 30 22:28	29°♏27'38	morning rise	11675 May 04 00:07	9°♏51'05	
	11669 Nov 02 06:08	0°♏♏		11675 May 28 06:03	15°♏	
conjunction	11669 Nov 13 12:53	2°♏37'57 0°26'14	retrograde	11675 Sep 03 05:02	27°♏03'33	
minimum elong	11669 Nov 13 12:52	2°♏37'56 0°26'52	opposition	11675 Nov 03 03:54	22°♏10'15	-0°30'03
max. Earth dist.	11669 Nov 16 01:33	3°♏13'21 6.07748 AU	min. Earth dist.	11675 Nov 04 18:48	21°♏57'47	4.35595 AU
morning rise	11669 Nov 27 04:12	5°♏48'22	direct	11676 Jan 04 05:51	17°♏10'03	
retrograde	11670 Apr 03 20:16	25°♏01'05		11676 Apr 15 02:07	0°♏	
min. Earth dist.	11670 Jun 01 04:06	20°♏10'21 4.16297 AU	evening set	11676 May 08 12:25	5°♏07'07	
opposition	11670 Jun 02 17:39	19°♏57'42 0°50'53	max. Earth dist.	11676 May 18 23:01	7°♏28'22	6.27600 AU
direct	11670 Aug 01 01:27	14°♏58'53	conjunction	11676 May 21 07:44	8°♏00'29	-0°29'09
	11670 Nov 19 12:35	0°♏	minimum elong	11676 May 21 07:43	8°♏00'28	0°29'49
evening set	11670 Dec 05 10:29	3°♏30'29	morning rise	11676 Jun 03 02:28	10°♏53'51	
			retrograde	11676 Oct 06 02:30	29°♏07'15	
conjunction	11670 Dec 18 22:28	6°♏32'01 0°38'52	opposition	11676 Dec 05 14:29	24°♏13'10	-0°53'07
minimum elong	11670 Dec 18 22:27	6°♏32'01 0°39'38	min. Earth dist.	11676 Dec 07 04:41	24°♏00'48	4.18791 AU
max. Earth dist.	11670 Dec 20 23:22	6°♏59'28 6.25101 AU	direct	11677 Feb 04 15:21	19°♏14'27	
morning rise	11671 Jan 01 10:12	9°♏33'05		11677 May 05 05:57	0°♏	
retrograde	11671 May 05 22:28	27°♏32'27	evening set	11677 Jun 10 11:46	8°♏04'11	
min. Earth dist.	11671 Jul 04 05:35	22°♏39'42 4.33259 AU	max. Earth dist.	11677 Jun 21 11:19	10°♏38'44	6.10020 AU
opposition	11671 Jul 05 06:25	22°♏31'29 0°59'21				
direct	11671 Sep 03 22:19	17°♏31'11	conjunction	11677 Jun 23 09:11	11°♏05'43	-0°39'30
	11671 Dec 13 17:36	0°♏	minimum elong	11677 Jun 23 09:11	11°♏05'43	0°40'17
evening set	11672 Jan 07 14:51	5°♏14'48	morning rise	11677 Jul 06 06:54	14°♏07'47	
				11677 Sep 23 16:51	0°♎	
conjunction	11672 Jan 20 22:41	8°♏08'19 0°38'51	retrograde	11677 Nov 11 16:00	3°♎37'35	
minimum elong	11672 Jan 20 22:41	8°♏08'20 0°39'30		11677 Dec 31 13:49	30°♏♏	
max. Earth dist.	11672 Jan 21 23:58	8°♏22'04 6.40396 AU	opposition	11678 Jan 10 14:51	28°♏41'45	-0°59'59

min. Earth dist.	11678 Jan 11 14:09	28°☾34'06	4.01862 AU	conjunction	11684 Jan 25 10:53	12°☾36'10	0°37'51
direct	11678 Mar 11 05:28	23°☾45'09		minimum elong	11684 Jan 25 10:54	12°☾36'10	0°38'28
	11678 May 14 18:07	0°♈		max. Earth dist.	11684 Jan 26 07:52	12°☾47'32	6.42103 AU
evening set	11678 Jul 15 20:24	13°♈27'56			11684 Feb 05 12:53	15°☾	
	11678 Jul 22 04:40	15°♈		morning rise	11684 Feb 07 16:41	15°☾27'52	
					11684 Apr 29 00:10	0°♈	
conjunction	11678 Jul 28 22:39	16°♈38'21	-0°36'20	retrograde	11684 Jun 08 09:51	2°♈26'02	
minimum elong	11678 Jul 28 22:40	16°♈38'22	0°36'55		11684 Jul 18 19:23	30°♈	
max. Earth dist.	11678 Jul 28 04:18	16°♈27'12	5.95320 AU	opposition	11684 Aug 08 05:22	27°☾28'32	0°47'57
morning rise	11678 Aug 11 02:41	19°♈49'55		min. Earth dist.	11684 Aug 08 01:00	27°☾29'57	4.47175 AU
	11678 Sep 24 15:23	0°♈		direct	11684 Oct 09 03:46	22°☾27'27	
retrograde	11678 Dec 20 07:02	10°♈24'56			11684 Dec 24 10:44	0°♈	
opposition	11679 Feb 17 18:05	5°♈26'13	-0°43'57	evening set	11685 Feb 11 05:41	9°♈37'23	
min. Earth dist.	11679 Feb 17 16:40	5°♈26'41	3.90963 AU				
direct	11679 Apr 17 03:53	0°♈31'08		conjunction	11685 Feb 24 08:17	12°♈25'01	0°25'51
evening set	11679 Aug 22 07:44	20°♈44'18		minimum elong	11685 Feb 24 08:17	12°♈25'02	0°26'09
				max. Earth dist.	11685 Feb 24 00:19	12°♈20'47	6.50255 AU
conjunction	11679 Sep 04 16:45	24°♈00'48	-0°18'41	morning rise	11685 Mar 09 08:57	15°♈11'43	
minimum elong	11679 Sep 04 16:46	24°♈00'49	0°18'50		11685 Jun 03 13:27	0°♈	
max. Earth dist.	11679 Sep 05 13:56	24°♈13'47	5.89389 AU	retrograde	11685 Jul 07 22:03	1°♈46'03	
morning rise	11679 Sep 18 03:50	27°♈18'28			11685 Aug 11 06:51	30°♈	
	11679 Sep 29 07:36	0°♈		opposition	11685 Sep 07 00:18	26°♈51'04	0°24'56
retrograde	11680 Jan 28 04:24	18°♈13'05		min. Earth dist.	11685 Sep 07 14:44	26°♈46'26	4.51148 AU
min. Earth dist.	11680 Mar 26 09:31	13°♈19'33	3.90800 AU	direct	11685 Nov 08 12:49	21°♈49'54	
opposition	11680 Mar 27 10:18	13°♈11'10	-0°09'07		11686 Jan 27 16:49	0°♈	
direct	11680 May 24 09:11	8°♈15'53		evening set	11686 Mar 13 09:39	8°♈54'38	
asc. node	11680 Jun 27 00:01	10°♈09'15		max. Earth dist.	11686 Mar 24 22:31	11°♈22'45	6.49760 AU
evening set	11680 Sep 28 15:14	28°♈19'51					
	11680 Oct 05 13:49	0°♈		conjunction	11686 Mar 26 08:22	11°♈40'56	0°07'18
				minimum elong	11686 Mar 26 08:21	11°♈40'55	0°07'14
conjunction	11680 Oct 12 05:00	1°♈35'56	0°06'45	behind sun begin	11686 Mar 26 01:01	11°♈37'00	
minimum elong	11680 Oct 12 04:58	1°♈35'55	0°07'05	behind sun end	11686 Mar 26 15:42	11°♈44'51	
behind sun begin	11680 Oct 11 21:15	1°♈31'17		morning rise	11686 Apr 08 05:04	14°♈26'24	
behind sun end	11680 Oct 12 12:42	1°♈40'33			11686 Jul 10 17:24	0°♈	
max. Earth dist.	11680 Oct 14 08:49	2°♈07'09	5.94946 AU	retrograde	11686 Aug 07 01:08	1°♈07'47	
morning rise	11680 Oct 25 20:35	4°♈52'44		desc. node	11686 Aug 12 05:08	1°♈05'17	
	11680 Dec 09 18:18	15°♈			11686 Sep 03 07:50	30°♈	
retrograde	11681 Mar 05 05:22	25°♈09'12		opposition	11686 Oct 07 03:38	26°♈14'15	-0°04'28
min. Earth dist.	11681 May 02 02:11	20°♈18'30	4.01427 AU	min. Earth dist.	11686 Oct 08 11:05	26°♈04'13	4.46243 AU
opposition	11681 May 03 16:50	20°♈05'23	0°28'29	direct	11686 Dec 08 17:50	21°♈13'23	
direct	11681 Jul 01 01:45	15°♈08'18			11687 Mar 01 13:48	0°♈	
	11681 Oct 16 07:53	0°♈		evening set	11687 Apr 12 15:43	8°♈36'46	
evening set	11681 Nov 05 00:28	4°♈29'04		max. Earth dist.	11687 Apr 23 06:49	10°♈56'18	6.40706 AU
conjunction	11681 Nov 18 14:45	7°♈38'32	0°28'39	conjunction	11687 Apr 25 11:41	11°♈25'20	-0°13'31
minimum elong	11681 Nov 18 14:44	7°♈38'32	0°29'20	minimum elong	11687 Apr 25 11:41	11°♈25'20	0°13'58
max. Earth dist.	11681 Nov 21 02:42	8°♈13'23	6.09498 AU	behind sun begin	11687 Apr 25 07:33	11°♈23'05	
morning rise	11681 Dec 02 05:55	10°♈48'03		behind sun end	11687 Apr 25 15:48	11°♈27'35	
retrograde	11682 Apr 08 12:54	29°♈52'08		morning rise	11687 May 08 06:23	14°♈13'29	
min. Earth dist.	11682 Jun 05 22:51	25°♈01'03	4.18288 AU		11687 May 11 19:46	15°♈	
opposition	11682 Jun 07 11:01	24°♈48'53	0°53'08		11687 Aug 06 20:22	0°♈	
direct	11682 Aug 05 23:32	19°♈49'46		retrograde	11687 Sep 07 19:10	1°♈32'41	
	11682 Nov 01 10:01	0°♈			11687 Oct 09 19:11	30°♈	
evening set	11682 Dec 10 06:12	8°♈15'13		opposition	11687 Nov 07 16:29	26°♈39'20	-0°33'54
				min. Earth dist.	11687 Nov 09 08:27	26°♈26'30	4.33534 AU
conjunction	11682 Dec 23 17:50	11°♈15'42	0°39'33	direct	11688 Jan 08 16:12	21°♈39'16	
minimum elong	11682 Dec 23 17:50	11°♈15'41	0°40'18		11688 Mar 27 18:02	0°♈	
max. Earth dist.	11682 Dec 25 18:21	11°♈42'47	6.27171 AU	evening set	11688 May 12 23:34	9°♈42'52	
morning rise	11683 Jan 06 04:51	14°♈15'35		max. Earth dist.	11688 May 23 11:10	12°♈05'25	6.25219 AU
	11683 Apr 03 05:02	0°♈					
retrograde	11683 May 10 06:22	2°☾06'27		conjunction	11688 May 25 19:09	12°♈37'16	-0°31'13
	11683 Jun 16 05:57	30°♈		minimum elong	11688 May 25 19:08	12°♈37'15	0°31'55
opposition	11683 Jul 09 16:59	27°♈05'48	0°58'58	morning rise	11688 Jun 07 13:59	15°♈31'41	
min. Earth dist.	11683 Jul 08 16:54	27°♈13'46	4.35228 AU		11688 Aug 20 11:05	0°♈	
direct	11683 Sep 08 12:09	22°♈05'22		retrograde	11688 Oct 11 00:16	3°☾55'20	
	11683 Nov 24 19:51	0°☾			11688 Dec 02 20:17	30°♈	
evening set	11684 Jan 12 03:50	9°☾43'36		opposition	11688 Dec 10 11:15	29°♈01'07	-0°55'14

min. Earth dist.	11688 Dec 12 00:10	28° Π 49'09	4.16261 AU			11694 Jun 09 15:49	30° \mathbb{R} \mathbb{A}	
direct	11689 Feb 09 07:09	24° Π 02'43		min. Earth dist.		11694 Jun 10 15:57	29° \mathbb{A} 51'55	4.21016 AU
	11689 Apr 14 08:46	0° \mathbb{B}		opposition		11694 Jun 12 03:45	29° \mathbb{A} 39'55	0°55'05
evening set	11689 Jun 15 06:49	13° \mathbb{B} 00'37		direct		11694 Aug 10 20:39	24° \mathbb{A} 40'33	
max. Earth dist.	11689 Jun 26 08:32	15° \mathbb{B} 37'21	6.07552 AU			11694 Oct 10 15:03	0° \mathbb{B}	
				evening set		11694 Dec 15 00:41	12° \mathbb{B} 57'31	
conjunction	11689 Jun 28 04:37	16° \mathbb{B} 03'26	-0°39'56	conjunction		11694 Dec 28 11:32	15° \mathbb{B} 56'35	0°40'01
minimum elong	11689 Jun 28 04:37	16° \mathbb{B} 03'26	0°40'41	minimum elong		11694 Dec 28 11:32	15° \mathbb{B} 56'35	0°40'47
morning rise	11689 Jul 11 03:11	19° \mathbb{B} 06'56		max. Earth dist.		11694 Dec 30 07:37	16° \mathbb{B} 21'04	6.29804 AU
	11689 Aug 29 14:27	0° \mathbb{Q}		morning rise		11695 Jan 10 21:57	18° \mathbb{B} 55'04	
retrograde	11689 Nov 16 23:44	8° \mathbb{Q} 47'53				11695 Mar 06 21:20	0° \mathbb{A}	
opposition	11690 Jan 15 20:20	3° \mathbb{Q} 51'43	-0°59'07	retrograde		11695 May 14 13:50	6° \mathbb{A} 36'02	
min. Earth dist.	11690 Jan 16 16:46	3° \mathbb{Q} 44'58	3.99677 AU	min. Earth dist.		11695 Jul 13 04:49	1° \mathbb{A} 42'41	4.37562 AU
	11690 Feb 18 13:48	30° \mathbb{R} \mathbb{B}		opposition		11695 Jul 14 01:48	1° \mathbb{A} 35'45	0°58'17
direct	11690 Mar 16 06:45	28° \mathbb{B} 55'21				11695 Jul 26 09:42	30° \mathbb{R} \mathbb{B}	
	11690 Apr 10 20:31	0° \mathbb{Q}		direct		11695 Sep 13 02:17	26° \mathbb{B} 35'05	
	11690 Jul 05 06:42	15° \mathbb{Q}				11695 Oct 31 20:27	0° \mathbb{A}	
evening set	11690 Jul 20 23:55	18° \mathbb{Q} 45'08		evening set		11696 Jan 16 14:01	14° \mathbb{A} 07'03	
						11696 Jan 20 16:36	15° \mathbb{A}	
conjunction	11690 Aug 03 03:18	21° \mathbb{Q} 56'50	-0°34'37	conjunction		11696 Jan 29 20:32	16° \mathbb{A} 58'36	0°36'41
minimum elong	11690 Aug 03 03:19	21° \mathbb{Q} 56'51	0°35'09	minimum elong		11696 Jan 29 20:33	16° \mathbb{A} 58'37	0°37'15
max. Earth dist.	11690 Aug 02 15:10	21° \mathbb{Q} 49'26	5.93660 AU	max. Earth dist.		11696 Jan 30 14:33	17° \mathbb{A} 08'20	6.43964 AU
morning rise	11690 Aug 16 08:14	25° \mathbb{Q} 09'39		morning rise		11696 Feb 12 01:24	19° \mathbb{A} 49'14	
	11690 Sep 05 16:19	0° \mathbb{P}				11696 Apr 03 14:34	0° \mathbb{H}	
retrograde	11690 Dec 25 20:20	15° \mathbb{P} 51'42		retrograde		11696 Jun 12 11:10	6° \mathbb{H} 41'26	
opposition	11691 Feb 23 05:03	10° \mathbb{P} 52'36	-0°39'51	opposition		11696 Aug 12 09:11	1° \mathbb{H} 44'18	0°45'16
min. Earth dist.	11691 Feb 23 00:43	10° \mathbb{P} 54'03	3.90034 AU	min. Earth dist.		11696 Aug 12 06:51	1° \mathbb{H} 45'03	4.48456 AU
direct	11691 Apr 22 11:50	5° \mathbb{P} 57'41				11696 Aug 26 02:09	30° \mathbb{R} \mathbb{A}	
evening set	11691 Aug 27 17:15	26° \mathbb{P} 12'59		direct		11696 Oct 13 09:49	26° \mathbb{A} 43'09	
						11696 Nov 30 20:02	0° \mathbb{H}	
conjunction	11691 Sep 10 03:06	29° \mathbb{P} 29'57	-0°15'17	evening set		11697 Feb 15 10:59	13° \mathbb{H} 50'16	
minimum elong	11691 Sep 10 03:06	29° \mathbb{P} 29'58	0°15'22					
behind sun begin	11691 Sep 10 00:40	29° \mathbb{P} 28'29		conjunction		11697 Feb 28 12:52	16° \mathbb{H} 37'25	0°23'32
behind sun end	11691 Sep 10 05:33	29° \mathbb{P} 31'27		minimum elong		11697 Feb 28 12:52	16° \mathbb{H} 37'25	0°23'47
max. Earth dist.	11691 Sep 11 04:55	29° \mathbb{P} 45'47	5.89288 AU	max. Earth dist.		11697 Feb 27 23:56	16° \mathbb{H} 30'31	6.50861 AU
	11691 Sep 12 04:07	0° \mathbb{B}		morning rise		11697 Mar 13 12:56	19° \mathbb{H} 23'38	
morning rise	11691 Sep 23 15:15	2° \mathbb{B} 48'07				11697 May 07 07:57	0° \mathbb{Y}	
retrograde	11692 Feb 02 13:30	23° \mathbb{B} 41'26		retrograde		11697 Jul 12 01:24	5° \mathbb{Y} 56'42	
opposition	11692 Apr 01 19:56	18° \mathbb{B} 39'08	-0°03'29	opposition		11697 Sep 11 03:25	1° \mathbb{Y} 01'59	0°21'03
min. Earth dist.	11692 Mar 31 15:12	18° \mathbb{B} 48'53	3.91572 AU	min. Earth dist.		11697 Sep 11 21:44	0° \mathbb{Y} 56'07	4.51044 AU
asc. node	11692 May 06 08:23	14° \mathbb{B} 39'55				11697 Sep 19 06:01	30° \mathbb{R} \mathbb{H}	
direct	11692 May 29 17:54	13° \mathbb{B} 43'43		direct		11697 Nov 12 18:17	26° \mathbb{H} 00'45	
	11692 Sep 18 05:47	0° \mathbb{M}				11698 Jan 05 15:29	0° \mathbb{Y}	
evening set	11692 Oct 04 00:50	3° \mathbb{M} 43'43		evening set		11698 Mar 17 13:27	13° \mathbb{Y} 06'35	
				max. Earth dist.		11698 Mar 28 21:17	15° \mathbb{Y} 32'20	6.48932 AU
conjunction	11692 Oct 17 14:52	6° \mathbb{M} 59'11	0°10'19	conjunction		11698 Mar 30 11:42	15° \mathbb{Y} 53'00	0°04'26
minimum elong	11692 Oct 17 14:51	6° \mathbb{M} 59'10	0°10'43	minimum elong		11698 Mar 30 11:42	15° \mathbb{Y} 53'00	0°04'17
behind sun begin	11692 Oct 17 08:28	6° \mathbb{M} 55'21		behind sun begin		11698 Mar 30 03:50	15° \mathbb{Y} 48'47	
behind sun end	11692 Oct 17 21:15	7° \mathbb{M} 03'00		behind sun end		11698 Mar 30 19:34	15° \mathbb{Y} 57'12	
max. Earth dist.	11692 Oct 19 20:58	7° \mathbb{M} 31'39	5.96515 AU	morning rise		11698 Apr 12 08:07	18° \mathbb{Y} 38'39	
morning rise	11692 Oct 31 06:42	10° \mathbb{M} 15'18				11698 Jun 10 03:16	0° \mathbb{B}	
	11692 Nov 20 14:30	15° \mathbb{M}		desc. node		11698 Jun 23 01:39	1° \mathbb{B} 53'24	
	11693 Feb 23 03:10	0° \mathbb{A}		retrograde		11698 Aug 11 07:33	5° \mathbb{B} 23'47	
retrograde	11693 Mar 10 06:07	0° \mathbb{A} 22'52		opposition		11698 Oct 11 10:04	0° \mathbb{B} 30'17	-0°08'45
	11693 Mar 25 07:39	30° \mathbb{R} \mathbb{M}		min. Earth dist.		11698 Oct 12 19:07	0° \mathbb{B} 19'43	4.44741 AU
min. Earth dist.	11693 May 07 04:14	25° \mathbb{M} 32'08	4.03602 AU			11698 Oct 15 08:55	30° \mathbb{R} \mathbb{Y}	
opposition	11693 May 08 19:10	25° \mathbb{M} 18'54	0°33'02	direct		11698 Dec 12 22:33	25° \mathbb{Y} 29'24	
direct	11693 Jul 06 08:08	20° \mathbb{M} 21'30				11699 Feb 08 02:50	0° \mathbb{B}	
	11693 Sep 27 07:17	0° \mathbb{A}		evening set		11699 Apr 16 22:04	12° \mathbb{B} 57'47	
evening set	11693 Nov 10 03:50	9° \mathbb{A} 34'16				11699 Apr 26 04:37	15° \mathbb{B}	
				max. Earth dist.		11699 Apr 27 12:33	15° \mathbb{B} 17'37	6.38627 AU
conjunction	11693 Nov 23 18:01	12° \mathbb{A} 42'28	0°30'57	conjunction		11699 Apr 29 18:00	15° \mathbb{B} 47'06	-0°16'18
minimum elong	11693 Nov 23 18:00	12° \mathbb{A} 42'27	0°31'41	minimum elong		11699 Apr 29 17:59	15° \mathbb{B} 47'06	0°16'47
max. Earth dist.	11693 Nov 26 07:17	13° \mathbb{A} 17'51	6.12080 AU					
morning rise	11693 Dec 07 08:36	15° \mathbb{A} 50'32						
	11694 Feb 15 19:16	0° \mathbb{B}						
retrograde	11694 Apr 13 03:30	4° \mathbb{B} 42'54						

morning rise	11699 May 12 12:27	18°♄36'00	morning rise	11704 Nov 06 15:53	15°♄34'20
	11699 Jul 08 13:41	0°♄		11705 Jan 14 09:13	0°♄
retrograde	11699 Sep 12 10:01	6°♄03'36	retrograde	11705 Mar 16 05:18	5°♄31'14
opposition	11699 Nov 12 06:01	1°♄10'14 -0°37'35	min. Earth dist.	11705 May 13 04:05	0°♄40'42 4.06116 AU
min. Earth dist.	11699 Nov 13 22:48	0°♄57'08 4.31005 AU	opposition	11705 May 14 19:36	0°♄27'19 0°37'14
	11699 Nov 21 10:39	30°♄		11705 May 18 04:25	30°♄
direct	11700 Jan 13 02:34	26°♄10'22	direct	11705 Jul 12 11:45	25°♄29'41
	11700 Mar 05 13:12	0°♄		11705 Sep 04 20:19	0°♄
evening set	11700 May 18 12:34	14°♄22'06	evening set	11705 Nov 16 05:10	14°♄33'41
max. Earth dist.	11700 May 28 23:28	16°♄45'13 6.22426 AU			
conjunction	11700 May 31 08:11	17°♄17'41 -0°33'07	conjunction	11705 Nov 29 18:50	17°♄40'28 0°33'00
minimum elong	11700 May 31 08:10	17°♄17'41 0°33'51	minimum elong	11705 Nov 29 18:49	17°♄40'27 0°33'44
morning rise	11700 Jun 13 03:34	20°♄13'26	max. Earth dist.	11705 Dec 02 05:32	18°♄14'09 6.14800 AU
	11700 Jul 28 18:26	0°♄	morning rise	11705 Dec 13 09:04	20°♄47'06
retrograde	11700 Oct 17 02:03	8°♄48'53		11706 Jan 25 06:17	0°♄
opposition	11700 Dec 16 10:32	3°♄54'27 -0°57'02	retrograde	11706 Apr 18 16:07	9°♄28'00
min. Earth dist.	11700 Dec 17 21:39	3°♄43'02 4.13416 AU	min. Earth dist.	11706 Jun 16 08:29	4°♄36'43 4.23692 AU
	11701 Jan 20 02:47	30°♄	opposition	11706 Jun 17 18:28	4°♄25'21 0°56'38
direct	11701 Feb 15 01:39	28°♄56'18		11706 Jul 28 21:25	30°♄
	11701 Mar 12 22:15	0°♄	direct	11706 Aug 16 16:10	29°♄25'45
evening set	11701 Jun 21 04:37	18°♄03'28		11706 Sep 04 14:38	0°♄
max. Earth dist.	11701 Jul 02 12:02	20°♄44'26 6.04928 AU	evening set	11706 Dec 20 17:10	17°♄35'00
conjunction	11701 Jul 04 03:15	21°♄07'47 -0°40'05	conjunction	11707 Jan 03 03:34	20°♄32'50 0°40'14
minimum elong	11701 Jul 04 03:15	21°♄07'47 0°40'50	minimum elong	11707 Jan 03 03:34	20°♄32'50 0°40'59
morning rise	11701 Jul 17 02:30	24°♄12'49	max. Earth dist.	11707 Jan 04 21:08	20°♄55'49 6.32242 AU
	11701 Aug 11 03:01	0°♄	morning rise	11707 Jan 16 13:02	23°♄29'58
retrograde	11701 Nov 23 11:46	14°♄05'17		11707 Feb 16 06:59	0°♄
opposition	11702 Jan 22 05:08	9°♄08'48 -0°57'46	retrograde	11707 May 19 19:50	11°♄02'13
min. Earth dist.	11702 Jan 22 22:40	9°♄03'00 3.97551 AU	opposition	11707 Jul 19 09:15	6°♄02'29 0°57'17
direct	11702 Mar 22 10:21	4°♄12'47	min. Earth dist.	11707 Jul 18 14:38	6°♄08'36 4.39588 AU
	11702 Jun 17 16:00	15°♄	direct	11707 Sep 18 13:24	1°♄01'46
evening set	11702 Jul 27 06:40	24°♄09'00		11708 Jan 05 11:17	15°♄
conjunction	11702 Aug 09 10:52	27°♄21'50 -0°32'35	evening set	11708 Jan 21 23:40	18°♄28'51
minimum elong	11702 Aug 09 10:53	27°♄21'50 0°33'03	conjunction	11708 Feb 04 05:22	21°♄19'33 0°35'19
max. Earth dist.	11702 Aug 09 03:22	27°♄17'15 5.92246 AU	minimum elong	11708 Feb 04 05:23	21°♄19'34 0°35'51
	11702 Aug 20 06:04	0°♄	max. Earth dist.	11708 Feb 04 17:20	21°♄26'00 6.45437 AU
morning rise	11702 Aug 22 17:03	0°♄35'51	morning rise	11708 Feb 17 09:41	24°♄09'23
retrograde	11703 Jan 01 09:16	21°♄23'21		11708 Mar 16 15:20	0°♄
opposition	11703 Mar 01 17:59	16°♄23'45 -0°35'19	retrograde	11708 Jun 17 15:29	10°♄57'11
min. Earth dist.	11703 Mar 01 08:33	16°♄26'55 3.89529 AU	opposition	11708 Aug 17 13:23	6°♄00'29 0°42'23
direct	11703 Apr 28 21:31	11°♄28'53	min. Earth dist.	11708 Aug 17 14:57	5°♄59'59 4.49304 AU
	11703 Aug 27 00:10	0°♄	direct	11708 Oct 18 17:07	0°♄59'16
evening set	11703 Sep 03 04:37	1°♄44'24	evening set	11709 Feb 20 16:31	18°♄05'02
conjunction	11703 Sep 16 15:15	5°♄01'32 -0°11'44	conjunction	11709 Mar 05 18:00	20°♄51'56 0°21'05
minimum elong	11703 Sep 16 15:15	5°♄01'32 0°11'45	minimum elong	11709 Mar 05 18:01	20°♄51'57 0°21'17
behind sun begin	11703 Sep 16 09:24	4°♄57'58	max. Earth dist.	11709 Mar 05 01:51	20°♄43'20 6.51029 AU
behind sun end	11703 Sep 16 21:06	5°♄05'06	morning rise	11709 Mar 18 17:25	23°♄37'54
max. Earth dist.	11703 Sep 17 22:34	5°♄20'42 5.89738 AU		11709 Apr 18 20:51	0°♄
morning rise	11703 Sep 30 04:06	8°♄19'48	retrograde	11709 Jul 17 04:42	10°♄11'13
retrograde	11704 Feb 08 22:13	29°♄09'05	opposition	11709 Sep 16 07:59	5°♄16'46 0°17'02
asc. node	11704 Mar 17 13:59	26°♄52'34	min. Earth dist.	11709 Sep 17 03:59	5°♄10'22 4.50536 AU
min. Earth dist.	11704 Apr 06 22:42	24°♄16'45 3.92900 AU	direct	11709 Nov 17 22:13	0°♄15'35
opposition	11704 Apr 08 05:18	24°♄06'21 0°02'11	evening set	11710 Mar 22 19:00	17°♄23'45
direct	11704 Jun 05 05:10	19°♄10'41	max. Earth dist.	11710 Apr 02 23:45	19°♄48'15 6.47778 AU
	11704 Aug 31 11:16	0°♄	conjunction	11710 Apr 04 16:49	20°♄10'25 0°01'28
evening set	11704 Oct 10 09:42	9°♄04'37	minimum elong	11710 Apr 04 16:49	20°♄10'25 0°01'16
conjunction	11704 Oct 24 00:06	12°♄19'14 0°13'46	behind sun begin	11710 Apr 04 08:49	20°♄06'07
minimum elong	11704 Oct 24 00:05	12°♄19'13 0°14'13	behind sun end	11710 Apr 05 00:49	20°♄14'42
behind sun begin	11704 Oct 23 20:13	12°♄16'56	morning rise	11710 Apr 17 12:52	22°♄56'23
behind sun end	11704 Oct 24 03:57	12°♄21'31	desc. node	11710 May 02 10:05	26°♄05'34
max. Earth dist.	11704 Oct 26 10:04	12°♄53'51 5.98561 AU		11710 May 21 20:11	0°♄
	11704 Nov 04 05:56	15°♄	retrograde	11710 Aug 16 17:51	9°♄46'17
			opposition	11710 Oct 16 18:59	4°♄52'57 -0°13'05

min. Earth dist.	11710 Oct 18 06:32	4° 8 41'36	4.43001 AU	direct	11716 Jun 10 11:22	24° 2 27'36	
	11710 Dec 08 23:53	30° 8 Y			11716 Aug 09 08:44	0° M	
direct	11710 Dec 18 06:51	29° Y 52'11		evening set	11716 Oct 15 14:11	14° M 14'01	
	11710 Dec 27 13:03	0° 8			11716 Oct 18 19:56	15° M	
	11711 Apr 11 02:02	15° 8					
evening set	11711 Apr 22 07:05	17° 8 26'16		conjunction	11716 Oct 29 04:26	17° M 27'30	0°16'58
max. Earth dist.	11711 May 02 18:46	19° 8 45'18	6.36420 AU	minimum elong	11716 Oct 29 04:25	17° M 27'30	0°17'29
				max. Earth dist.	11716 Oct 31 14:14	18° M 01'48	6.00863 AU
conjunction	11711 May 05 02:49	20° 8 16'22	-0°19'03	morning rise	11716 Nov 11 20:18	20° M 41'28	
minimum elong	11711 May 05 02:48	20° 8 16'22	0°19'36		11716 Dec 23 13:31	0° J	
morning rise	11711 May 17 21:22	23° 8 06'09		retrograde	11717 Mar 20 22:01	10° J 27'08	
	11711 Jun 19 07:46	0° II		min. Earth dist.	11717 May 17 23:33	5° J 36'35	4.08688 AU
retrograde	11711 Sep 18 03:50	10° II 42'41		opposition	11717 May 19 14:54	5° J 23'16	0°40'58
opposition	11711 Nov 17 22:36	5° II 49'14	-0°41'09	direct	11717 Jul 17 11:09	0° J 25'16	
min. Earth dist.	11711 Nov 19 14:34	5° II 36'22	4.28479 AU	evening set	11717 Nov 21 01:37	19° J 20'43	
direct	11712 Jan 18 14:44	0° II 49'35					
evening set	11712 May 23 04:00	19° II 09'20		conjunction	11717 Dec 04 15:01	22° J 26'11	0°34'44
max. Earth dist.	11712 Jun 02 18:17	21° II 35'11	6.19803 AU	minimum elong	11717 Dec 04 15:01	22° J 26'11	0°35'29
				max. Earth dist.	11717 Dec 07 00:03	22° J 58'44	6.17422 AU
conjunction	11712 Jun 04 24:00	22° II 06'07	-0°34'51	morning rise	11717 Dec 18 04:31	25° J 31'22	
minimum elong	11712 Jun 04 23:59	22° II 06'07	0°35'36		11718 Jan 07 08:59	0° Z	
morning rise	11712 Jun 17 19:36	25° II 03'06		retrograde	11718 Apr 23 01:47	14° Z 01'35	
	11712 Jul 09 20:16	0° 6		min. Earth dist.	11718 Jun 20 21:18	9° Z 09'52	4.26131 AU
retrograde	11712 Oct 22 07:01	13° 6 49'43		opposition	11718 Jun 22 04:51	8° Z 59'20	0°57'46
opposition	11712 Dec 21 12:35	8° 6 55'07	-0°58'29	direct	11718 Aug 21 07:11	3° Z 59'33	
min. Earth dist.	11712 Dec 22 22:08	8° 6 44'12	4.10924 AU	evening set	11718 Dec 25 05:38	22° Z 02'06	
direct	11713 Feb 19 23:00	3° 6 57'22					
evening set	11713 Jun 26 04:29	23° 6 12'12		conjunction	11719 Jan 07 15:20	24° Z 58'50	0°40'14
max. Earth dist.	11713 Jul 07 15:27	25° 6 56'06	6.02812 AU	minimum elong	11719 Jan 07 15:21	24° Z 58'50	0°40'58
				max. Earth dist.	11719 Jan 09 04:02	25° Z 19'02	6.34306 AU
conjunction	11713 Jul 09 03:38	26° 6 17'44	-0°39'58	morning rise	11719 Jan 21 00:16	27° Z 54'53	
minimum elong	11713 Jul 09 03:38	26° 6 17'44	0°40'41		11719 Jan 30 15:25	0° W	
morning rise	11713 Jul 22 03:50	29° 6 24'07			11719 May 09 11:22	15° W	
	11713 Jul 24 16:17	0° 9		retrograde	11719 May 23 23:07	15° W 20'00	
	11713 Oct 05 16:41	15° 9			11719 Jun 07 09:28	15° R W	
retrograde	11713 Nov 28 20:57	19° 9 25'45		opposition	11719 Jul 23 13:51	10° W 20'42	0°56'04
	11714 Jan 23 16:14	15° R 9		min. Earth dist.	11719 Jul 22 22:06	10° W 25'52	4.41166 AU
opposition	11714 Jan 27 14:27	14° 9 28'50	-0°55'57	direct	11719 Sep 22 20:53	5° W 19'52	
min. Earth dist.	11714 Jan 28 03:06	14° 9 24'38	3.96059 AU		11719 Dec 19 07:57	15° W	
direct	11714 Mar 27 14:56	9° 9 33'05		evening set	11720 Jan 26 06:20	22° W 43'30	
	11714 May 26 01:30	15° 9					
evening set	11714 Aug 01 13:24	29° 9 33'06		conjunction	11720 Feb 08 11:37	25° W 33'38	0°33'50
	11714 Aug 03 09:40	0° M		minimum elong	11720 Feb 08 11:38	25° W 33'38	0°34'20
				max. Earth dist.	11720 Feb 08 20:30	25° W 38'25	6.46441 AU
conjunction	11714 Aug 14 18:30	2° M 46'40	-0°30'19	morning rise	11720 Feb 21 15:06	28° W 22'49	
minimum elong	11714 Aug 14 18:31	2° M 46'41	0°30'44		11720 Feb 29 06:28	0° H	
max. Earth dist.	11714 Aug 14 17:40	2° M 46'10	5.91548 AU	retrograde	11720 Jun 21 17:08	15° H 07'48	
morning rise	11714 Aug 28 01:32	6° M 01'26		opposition	11720 Aug 21 15:53	10° H 11'32	0°39'24
retrograde	11715 Jan 06 21:05	26° M 51'03		min. Earth dist.	11720 Aug 21 19:48	10° H 10'16	4.49702 AU
opposition	11715 Mar 07 04:54	21° M 50'55	-0°30'36	direct	11720 Oct 22 21:07	5° H 10'22	
min. Earth dist.	11715 Mar 06 16:31	21° M 55'05	3.89714 AU	evening set	11721 Feb 24 21:02	22° H 16'07	
direct	11715 May 04 08:23	16° M 56'01					
	11715 Aug 09 04:29	0° 2		conjunction	11721 Mar 09 21:50	25° H 02'53	0°18'36
evening set	11715 Sep 08 13:08	7° 2 08'55		minimum elong	11721 Mar 09 21:51	25° H 02'53	0°18'44
				max. Earth dist.	11721 Mar 09 00:42	24° H 51'35	6.50799 AU
conjunction	11715 Sep 22 00:30	10° 2 25'52	-0°08'13	morning rise	11721 Mar 22 20:53	27° H 48'47	
minimum elong	11715 Sep 22 00:30	10° 2 25'52	0°08'09		11721 Apr 02 06:06	0° Y	
behind sun begin	11715 Sep 21 17:06	10° 2 21'22		retrograde	11721 Jul 21 10:26	14° Y 23'34	
behind sun end	11715 Sep 22 07:54	10° 2 30'22		opposition	11721 Sep 20 12:17	9° Y 29'22	0°13'00
max. Earth dist.	11715 Sep 23 13:42	10° 2 48'34	5.90780 AU	min. Earth dist.	11721 Sep 21 11:23	9° Y 21'58	4.49714 AU
morning rise	11715 Oct 05 13:52	13° 2 43'50		direct	11721 Nov 22 03:20	4° Y 28'13	
	11715 Dec 22 07:32	0° M		desc. node	11722 Mar 10 19:38	18° Y 14'22	
asc. node	11716 Jan 28 14:44	3° M 59'28		evening set	11722 Mar 27 00:06	21° Y 39'32	
retrograde	11716 Feb 14 02:23	4° M 26'32		max. Earth dist.	11722 Apr 07 02:22	24° Y 03'09	6.46421 AU
	11716 Apr 08 22:40	30° R 2					
min. Earth dist.	11716 Apr 12 01:38	29° 2 34'38	3.94681 AU	conjunction	11722 Apr 08 21:40	24° Y 26'35	-0°01'32
opposition	11716 Apr 13 10:25	29° 2 23'31	0°07'34	minimum elong	11722 Apr 08 21:41	24° Y 26'36	0°01'47

behind sun begin	11722 Apr 08 13:41	24° Υ 22'18			11727 Nov 28 06:39	0° \mathbb{M}	
behind sun end	11722 Apr 09 05:41	24° Υ 30'54		asc. node	11727 Dec 09 07:31	2° \mathbb{M} 09'08	
morning rise	11722 Apr 21 17:24	27° Υ 12'59		retrograde	11728 Feb 19 04:02	9° \mathbb{M} 40'51	
	11722 May 04 19:04	0° \mathcal{B}		min. Earth dist.	11728 Apr 17 03:03	4° \mathbb{M} 49'20	3.96122 AU
retrograde	11722 Aug 21 02:58	14° \mathcal{B} 08'19		opposition	11728 Apr 18 13:37	4° \mathbb{M} 37'35	0°12'51
opposition	11722 Oct 21 04:12	9° \mathcal{B} 15'02	-0°17'17		11728 Jun 02 06:50	30° \mathcal{R} $\underline{\mathcal{A}}$	
min. Earth dist.	11722 Oct 22 15:43	9° \mathcal{B} 03'40	4.41202 AU	direct	11728 Jun 15 16:20	29° $\underline{\mathcal{A}}$ 41'24	
direct	11722 Dec 22 12:40	4° \mathcal{B} 14'25			11728 Jun 29 03:14	0° \mathbb{M}	
	11723 Mar 25 01:45	15° \mathcal{B}			11728 Oct 01 21:27	15° \mathbb{M}	
evening set	11723 Apr 26 15:56	21° \mathcal{B} 54'10		evening set	11728 Oct 20 17:55	19° \mathbb{M} 22'08	
max. Earth dist.	11723 May 07 04:17	24° \mathcal{B} 14'14	6.34303 AU				
				conjunction	11728 Nov 03 08:25	22° \mathbb{M} 34'47	0°20'03
conjunction	11723 May 09 11:32	24° \mathcal{B} 45'02	-0°21'40	minimum elong	11728 Nov 03 08:24	22° \mathbb{M} 34'46	0°20'37
minimum elong	11723 May 09 11:32	24° \mathcal{B} 45'01	0°22'16	max. Earth dist.	11728 Nov 05 19:49	23° \mathbb{M} 09'53	6.02789 AU
morning rise	11723 May 22 06:01	27° \mathcal{B} 35'38		morning rise	11728 Nov 17 00:05	25° \mathbb{M} 47'45	
	11723 Jun 02 04:38	0° \mathbb{I}			11728 Dec 05 06:19	0° \mathcal{X}	
retrograde	11723 Sep 22 23:10	15° \mathbb{I} 20'46		retrograde	11729 Mar 25 17:33	15° \mathcal{X} 23'57	
opposition	11723 Nov 22 15:18	10° \mathbb{I} 27'15	-0°44'25	min. Earth dist.	11729 May 22 20:07	10° \mathcal{X} 33'06	4.10876 AU
min. Earth dist.	11723 Nov 24 07:41	10° \mathbb{I} 14'15	4.26168 AU	opposition	11729 May 24 10:19	10° \mathcal{X} 20'12	0°44'25
direct	11724 Jan 23 04:40	5° \mathbb{I} 27'50		direct	11729 Jul 22 10:36	5° \mathcal{X} 21'57	
evening set	11724 May 27 19:03	23° \mathbb{I} 54'41		evening set	11729 Nov 25 22:44	24° \mathcal{X} 10'23	
max. Earth dist.	11724 Jun 07 10:09	26° \mathbb{I} 21'49	6.17465 AU				
				conjunction	11729 Dec 09 11:44	27° \mathcal{X} 14'42	0°36'15
conjunction	11724 Jun 09 15:12	26° \mathbb{I} 52'32	-0°36'19	minimum elong	11729 Dec 09 11:43	27° \mathcal{X} 14'41	0°37'02
minimum elong	11724 Jun 09 15:11	26° \mathbb{I} 52'31	0°37'04	max. Earth dist.	11729 Dec 11 19:00	27° \mathcal{X} 46'05	6.19671 AU
morning rise	11724 Jun 22 11:19	29° \mathbb{I} 50'41			11729 Dec 21 15:38	0° \mathcal{Z}	
	11724 Jun 23 03:29	0° \mathcal{E}		morning rise	11729 Dec 23 00:49	0° \mathcal{Z} 18'41	
retrograde	11724 Oct 27 08:23	18° \mathcal{E} 47'23		retrograde	11730 Apr 27 10:57	18° \mathcal{Z} 39'37	
opposition	11724 Dec 26 13:16	13° \mathcal{E} 52'29	-0°59'26	min. Earth dist.	11730 Jun 25 10:06	13° \mathcal{Z} 47'51	4.28264 AU
min. Earth dist.	11724 Dec 27 19:37	13° \mathcal{E} 42'34	4.08742 AU	opposition	11730 Jun 26 16:32	13° \mathcal{Z} 37'42	0°58'34
direct	11725 Feb 24 17:59	8° \mathcal{E} 55'00		direct	11730 Aug 25 21:41	8° \mathcal{Z} 37'46	
evening set	11725 Jul 01 02:45	28° \mathcal{E} 16'33		evening set	11730 Dec 29 19:48	26° \mathcal{Z} 34'34	
	11725 Jul 08 07:56	0° Ω					
max. Earth dist.	11725 Jul 12 19:31	1° Ω 04'34	6.00975 AU	conjunction	11731 Jan 12 04:59	29° \mathcal{Z} 30'19	0°39'58
				minimum elong	11731 Jan 12 04:59	29° \mathcal{Z} 30'19	0°40'40
conjunction	11725 Jul 14 02:35	1° Ω 23'13	-0°39'30	max. Earth dist.	11731 Jan 13 14:23	29° \mathcal{Z} 48'38	6.36189 AU
minimum elong	11725 Jul 14 02:36	1° Ω 23'13	0°40'12		11731 Jan 14 11:06	0° \approx	
morning rise	11725 Jul 27 03:30	4° Ω 30'46		morning rise	11731 Jan 25 13:06	2° \approx 25'18	
	11725 Sep 11 19:54	15° Ω			11731 Mar 31 19:34	15° \approx	
retrograde	11725 Dec 04 06:33	24° Ω 40'43		retrograde	11731 May 28 05:23	19° \approx 43'45	
opposition	11726 Feb 01 21:41	19° Ω 43'25	-0°53'40		11731 Jul 25 22:25	15° \mathcal{R} \approx	
min. Earth dist.	11726 Feb 02 07:53	19° Ω 40'02	3.94742 AU	opposition	11731 Jul 27 20:29	14° \approx 44'56	0°54'29
	11726 Mar 21 21:14	15° \mathcal{R} Ω		min. Earth dist.	11731 Jul 27 07:32	14° \approx 49'10	4.42689 AU
direct	11726 Apr 01 19:35	14° Ω 47'53		direct	11731 Sep 27 07:45	9° \approx 44'05	
	11726 Apr 12 16:47	15° Ω			11731 Nov 28 09:46	15° \approx	
	11726 Jul 17 09:58	0° \mathbb{P}		evening set	11732 Jan 30 15:10	27° \approx 04'11	
evening set	11726 Aug 06 17:49	4° \mathbb{P} 51'20					
				conjunction	11732 Feb 12 19:43	29° \approx 53'39	0°32'07
conjunction	11726 Aug 19 23:51	8° \mathbb{P} 05'40	-0°27'49	minimum elong	11732 Feb 12 19:44	29° \approx 53'39	0°32'35
minimum elong	11726 Aug 19 23:52	8° \mathbb{P} 05'40	0°28'11	max. Earth dist.	11732 Feb 13 00:12	29° \approx 56'03	6.47526 AU
max. Earth dist.	11726 Aug 20 04:24	8° \mathbb{P} 08'27	5.90883 AU		11732 Feb 13 07:35	0° \mathcal{H}	
morning rise	11726 Sep 02 07:50	11° \mathbb{P} 21'12		morning rise	11732 Feb 25 22:40	2° \mathcal{H} 42'11	
	11726 Dec 05 23:21	0° $\underline{\mathcal{A}}$		retrograde	11732 Jun 25 20:58	19° \mathcal{H} 23'53	
retrograde	11727 Jan 12 05:58	2° $\underline{\mathcal{A}}$ 12'58		opposition	11732 Aug 25 20:26	14° \mathcal{H} 27'55	0°36'08
	11727 Feb 18 12:43	30° \mathcal{R} \mathbb{P}		min. Earth dist.	11732 Aug 26 02:39	14° \mathcal{H} 25'55	4.50328 AU
opposition	11727 Mar 12 13:08	27° \mathbb{P} 12'25	-0°25'40	direct	11732 Oct 27 03:34	9° \mathcal{H} 26'45	
min. Earth dist.	11727 Mar 11 21:13	27° \mathbb{P} 17'47	3.89807 AU	evening set	11733 Mar 01 02:28	26° \mathcal{H} 31'19	
direct	11727 May 09 13:55	22° \mathbb{P} 17'32		max. Earth dist.	11733 Mar 13 04:20	29° \mathcal{H} 05'47	6.50952 AU
	11727 Jul 19 23:31	0° $\underline{\mathcal{A}}$					
evening set	11727 Sep 13 20:05	12° $\underline{\mathcal{A}}$ 28'50		conjunction	11733 Mar 14 02:53	29° \mathcal{H} 17'50	0°15'59
				minimum elong	11733 Mar 14 02:53	29° \mathcal{H} 17'50	0°16'04
conjunction	11727 Sep 27 07:54	15° $\underline{\mathcal{A}}$ 45'39	-0°04'39		11733 Mar 17 09:44	0° Υ	
minimum elong	11727 Sep 27 07:54	15° $\underline{\mathcal{A}}$ 45'39	0°04'31	morning rise	11733 Mar 27 01:11	2° Υ 03'26	
behind sun begin	11727 Sep 26 23:42	15° $\underline{\mathcal{A}}$ 40'41		retrograde	11733 Jul 25 14:07	18° Υ 38'17	
behind sun end	11727 Sep 27 16:05	15° $\underline{\mathcal{A}}$ 50'37		opposition	11733 Sep 24 17:24	13° Υ 44'15	0°08'54
max. Earth dist.	11727 Sep 28 23:30	16° $\underline{\mathcal{A}}$ 09'45	5.91595 AU	min. Earth dist.	11733 Sep 25 17:31	13° Υ 36'32	4.49399 AU
morning rise	11727 Oct 10 22:01	19° $\underline{\mathcal{A}}$ 03'30		direct	11733 Nov 26 08:03	8° Υ 43'12	

desc. node	11734 Jan 18 00:33	12° Υ 33'01		conjunction	11739 Oct 02 12:46	20° Ω 57'18	-0°01'09
evening set	11734 Mar 31 05:06	25° Υ 55'37		minimum elong	11739 Oct 02 12:46	20° Ω 57'18	0°00'57
max. Earth dist.	11734 Apr 11 04:19	28° Υ 17'55	6.45654 AU	behind sun begin	11739 Oct 02 04:24	20° Ω 52'14	
				behind sun end	11739 Oct 02 21:09	21° Ω 02'22	
conjunction	11734 Apr 13 02:06	28° Υ 42'46	-0°04'25	max. Earth dist.	11739 Oct 04 08:54	21° Ω 24'07	5.91996 AU
minimum elong	11734 Apr 13 02:04	28° Υ 42'45	0°04'43	morning rise	11739 Oct 16 03:23	24° Ω 15'13	
behind sun begin	11734 Apr 12 18:16	28° Υ 38'33		asc. node	11739 Oct 20 12:11	25° Ω 18'08	
behind sun end	11734 Apr 13 09:52	28° Υ 46'58			11739 Nov 09 13:27	0° \mathbb{M}	
	11734 Apr 19 00:25	0° \mathcal{B}		retrograde	11740 Feb 24 06:49	14° \mathbb{M} 49'08	
morning rise	11734 Apr 25 21:30	1° \mathcal{B} 29'17		min. Earth dist.	11740 Apr 22 03:43	9° \mathbb{M} 57'39	3.97111 AU
	11734 Jul 07 14:34	15° \mathcal{B}		opposition	11740 Apr 23 14:56	9° \mathbb{M} 45'41	0°17'51
retrograde	11734 Aug 25 12:41	18° \mathcal{B} 28'03		direct	11740 Jun 20 19:29	4° \mathbb{M} 49'16	
	11734 Oct 14 05:35	15° \mathcal{R} \mathcal{B}			11740 Sep 13 13:31	15° \mathbb{M}	
opposition	11734 Oct 25 12:32	13° \mathcal{B} 34'45	-0°21'18	evening set	11740 Oct 25 20:39	24° \mathbb{M} 26'13	
min. Earth dist.	11734 Oct 27 01:59	13° \mathcal{B} 22'46	4.40010 AU				
direct	11734 Dec 26 20:50	8° \mathcal{B} 34'12		conjunction	11740 Nov 08 11:16	27° \mathbb{M} 38'15	0°22'53
	11735 Mar 05 19:22	15° \mathcal{B}		minimum elong	11740 Nov 08 11:14	27° \mathbb{M} 38'14	0°23'29
evening set	11735 Apr 30 22:46	26° \mathcal{B} 17'25		max. Earth dist.	11740 Nov 11 00:00	28° \mathbb{M} 14'00	6.04257 AU
max. Earth dist.	11735 May 11 09:59	28° \mathcal{B} 37'20	6.32763 AU		11740 Nov 18 12:33	0° \mathcal{A}	
				morning rise	11740 Nov 22 03:01	0° \mathcal{A} 50'31	
conjunction	11735 May 13 18:16	29° \mathcal{B} 08'48	-0°24'04	retrograde	11741 Mar 30 10:23	20° \mathcal{A} 18'55	
minimum elong	11735 May 13 18:15	29° \mathcal{B} 08'48	0°24'42	min. Earth dist.	11741 May 27 14:07	15° \mathcal{A} 28'26	4.12674 AU
	11735 May 17 13:47	0° \mathbb{I}		opposition	11741 May 29 05:08	15° \mathcal{A} 15'16	0°47'27
morning rise	11735 May 26 12:40	1° \mathbb{I} 59'58		direct	11741 Jul 27 07:19	10° \mathcal{A} 16'46	
retrograde	11735 Sep 27 12:20	19° \mathbb{I} 51'45		evening set	11741 Nov 30 20:18	28° \mathcal{A} 59'38	
opposition	11735 Nov 27 04:56	14° \mathbb{I} 58'01	-0°47'15		11741 Dec 05 07:29	0° \mathcal{B}	
min. Earth dist.	11735 Nov 28 20:07	14° \mathbb{I} 45'23	4.24369 AU				
direct	11736 Jan 27 14:00	9° \mathbb{I} 58'46		conjunction	11741 Dec 14 08:55	2° \mathcal{B} 02'56	0°37'28
evening set	11736 Jun 01 06:23	28° \mathbb{I} 30'59		minimum elong	11741 Dec 14 08:55	2° \mathcal{B} 02'55	0°38'16
	11736 Jun 07 16:22	0° \mathcal{E}		max. Earth dist.	11741 Dec 16 13:59	2° \mathcal{B} 32'56	6.21647 AU
max. Earth dist.	11736 Jun 11 23:44	1° \mathcal{E} 00'02	6.15542 AU	morning rise	11741 Dec 27 21:30	5° \mathcal{B} 05'50	
				retrograde	11742 May 01 23:04	23° \mathcal{B} 18'15	
conjunction	11736 Jun 14 02:45	1° \mathcal{E} 29'43	-0°37'27	min. Earth dist.	11742 Jun 30 00:45	18° \mathcal{B} 26'02	4.30232 AU
minimum elong	11736 Jun 14 02:44	1° \mathcal{E} 29'42	0°38'14	opposition	11742 Jul 01 04:53	18° \mathcal{B} 16'41	0°58'57
morning rise	11736 Jun 26 23:12	4° \mathcal{E} 28'50		direct	11742 Aug 30 15:07	13° \mathcal{B} 16'33	
retrograde	11736 Nov 01 07:22	23° \mathcal{E} 34'21			11742 Dec 29 04:59	0° \mathcal{C}	
opposition	11736 Dec 31 09:55	18° \mathcal{E} 39'10	-0°59'54	evening set	11743 Jan 03 10:33	1° \mathcal{C} 07'56	
min. Earth dist.	11737 Jan 01 15:39	18° \mathcal{E} 29'26	4.06821 AU				
direct	11737 Mar 01 11:58	13° \mathcal{E} 41'53		conjunction	11743 Jan 16 19:11	4° \mathcal{C} 02'44	0°39'26
	11737 Jun 22 12:09	0° \mathcal{Q}		minimum elong	11743 Jan 16 19:12	4° \mathcal{C} 02'44	0°40'07
evening set	11737 Jul 05 20:37	3° \mathcal{Q} 09'19		max. Earth dist.	11743 Jan 18 02:20	4° \mathcal{C} 19'44	6.37987 AU
				morning rise	11743 Jan 30 02:37	6° \mathcal{C} 56'42	
conjunction	11737 Jul 18 21:11	6° \mathcal{Q} 17'06	-0°38'46		11743 Mar 10 06:21	15° \mathcal{C}	
minimum elong	11737 Jul 18 21:12	6° \mathcal{Q} 17'07	0°39'25	retrograde	11743 Jun 01 09:59	24° \mathcal{C} 08'36	
max. Earth dist.	11737 Jul 17 16:47	6° \mathcal{Q} 00'00	5.99237 AU	opposition	11743 Aug 01 03:46	19° \mathcal{C} 10'06	0°52'33
morning rise	11737 Jul 31 22:57	9° \mathcal{Q} 25'50		min. Earth dist.	11743 Jul 31 16:10	19° \mathcal{C} 13'53	4.44184 AU
	11737 Aug 24 17:15	15° \mathcal{Q}			11743 Sep 08 05:01	15° \mathcal{R} \mathcal{C}	
retrograde	11737 Dec 09 10:10	29° \mathcal{Q} 43'44		direct	11743 Oct 01 17:32	14° \mathcal{C} 09'10	
opposition	11738 Feb 06 23:54	24° \mathcal{Q} 46'04	-0°51'03		11743 Oct 25 13:24	15° \mathcal{C}	
min. Earth dist.	11738 Feb 07 06:56	24° \mathcal{Q} 43'44	3.93378 AU		11744 Jan 28 06:21	0° \mathcal{H}	
direct	11738 Apr 06 17:10	19° \mathcal{Q} 50'40		evening set	11744 Feb 04 00:11	1° \mathcal{H} 25'34	
	11738 Jun 29 12:46	0° \mathbb{P}					
evening set	11738 Aug 11 18:27	9° \mathbb{P} 58'16		conjunction	11744 Feb 17 04:07	4° \mathcal{H} 14'22	0°30'12
				minimum elong	11744 Feb 17 04:08	4° \mathcal{H} 14'23	0°30'36
conjunction	11738 Aug 25 01:17	13° \mathbb{P} 13'25	-0°25'12	max. Earth dist.	11744 Feb 17 05:29	4° \mathcal{H} 15'06	6.48593 AU
minimum elong	11738 Aug 25 01:18	13° \mathbb{P} 13'26	0°25'30	morning rise	11744 Mar 01 06:15	7° \mathcal{H} 02'13	
max. Earth dist.	11738 Aug 25 08:48	13° \mathbb{P} 18'02	5.90028 AU	retrograde	11744 Jun 30 01:10	23° \mathcal{H} 40'42	
morning rise	11738 Sep 07 10:23	16° \mathbb{P} 29'51		opposition	11744 Aug 30 01:26	18° \mathcal{H} 45'04	0°32'38
	11738 Nov 07 06:49	0° \mathcal{U}		min. Earth dist.	11744 Aug 30 10:26	18° \mathcal{H} 42'10	4.50875 AU
retrograde	11739 Jan 17 09:58	7° \mathcal{U} 24'47		direct	11744 Oct 31 11:16	13° \mathcal{H} 43'54	
opposition	11739 Mar 17 17:19	2° \mathcal{U} 23'49	-0°20'44		11745 Mar 01 14:30	0° \mathcal{Y}	
min. Earth dist.	11739 Mar 16 22:38	2° \mathcal{U} 30'08	3.89559 AU	evening set	11745 Mar 05 08:26	0° \mathcal{Y} 47'34	
	11739 Apr 05 07:09	30° \mathcal{R} \mathbb{P}		max. Earth dist.	11745 Mar 17 04:41	3° \mathcal{Y} 19'10	6.50903 AU
direct	11739 May 14 16:45	27° \mathbb{P} 28'49					
	11739 Jun 22 17:28	0° \mathcal{U}		conjunction	11745 Mar 18 08:09	3° \mathcal{Y} 33'51	0°13'14
evening set	11739 Sep 19 00:03	17° \mathcal{U} 40'18		minimum elong	11745 Mar 18 08:09	3° \mathcal{Y} 33'51	0°13'16
				behind sun begin	11745 Mar 18 03:31	3° \mathcal{Y} 31'23	

behind sun end	11745 Mar 18 12:47	3°♈36'19		retrograde	11751 Jan 22 22:25	12°♊53'58	
morning rise	11745 Mar 31 06:04	6°♈19'18		min. Earth dist.	11751 Mar 22 06:46	7°♊59'47	3.89776 AU
retrograde	11745 Jul 29 20:45	22°♈55'04		opposition	11751 Mar 23 04:02	7°♊52'35	-0°15'19
opposition	11745 Sep 28 23:20	18°♈01'11	0°04'38	direct	11751 May 20 02:50	2°♊57'31	
min. Earth dist.	11745 Sep 30 02:02	17°♈52'38	4.48743 AU	asc. node	11751 Aug 27 13:42	16°♊34'17	
desc. node	11745 Nov 27 01:02	13°♈01'16		evening set	11751 Sep 24 10:18	23°♊06'53	
direct	11745 Nov 30 14:24	13°♈00'07					
	11746 Apr 03 07:08	0°♋		conjunction	11751 Oct 07 23:29	26°♊23'37	0°02'38
evening set	11746 Apr 04 10:58	0°♋14'59		minimum elong	11751 Oct 07 23:29	26°♊23'37	0°02'54
max. Earth dist.	11746 Apr 15 08:39	2°♋36'50	6.44419 AU	behind sun begin	11751 Oct 07 15:08	26°♊18'35	
				behind sun end	11751 Oct 08 07:50	26°♊28'40	
conjunction	11746 Apr 17 07:46	3°♋02'28	-0°07'21	max. Earth dist.	11751 Oct 09 23:24	26°♊52'39	5.93043 AU
minimum elong	11746 Apr 17 07:45	3°♋02'28	0°07'43	morning rise	11751 Oct 21 14:42	29°♊41'14	
behind sun begin	11746 Apr 17 00:33	2°♋58'34			11751 Oct 22 21:59	0°♌	
behind sun end	11746 Apr 17 14:58	3°♋06'22			11752 Jan 02 04:06	15°♌	
morning rise	11746 Apr 30 02:45	5°♋49'20		retrograde	11752 Feb 29 09:46	20°♌08'12	
	11746 Jun 14 07:52	15°♋		min. Earth dist.	11752 Apr 27 05:56	15°♌17'23	3.98890 AU
retrograde	11746 Aug 29 22:50	22°♋53'22		opposition	11752 Apr 28 19:46	15°♌04'33	0°22'57
opposition	11746 Oct 29 22:55	18°♋00'04	-0°25'24		11752 Apr 29 09:08	15°♌	
min. Earth dist.	11746 Oct 31 12:57	17°♋47'54	4.38258 AU	direct	11752 Jun 26 01:22	10°♌07'50	
	11746 Nov 24 03:06	15°♌♋			11752 Aug 21 05:25	15°♌	
direct	11746 Dec 31 04:09	12°♌59'41		evening set	11752 Oct 31 02:33	29°♌37'49	
	11747 Feb 06 03:59	15°♌			11752 Nov 01 16:37	0°♍	
	11747 May 01 17:02	0°♎					
evening set	11747 May 05 08:19	0°♎48'27		conjunction	11752 Nov 13 17:02	2°♍48'42	0°25'40
max. Earth dist.	11747 May 15 18:36	3°♎08'33	6.30604 AU	minimum elong	11752 Nov 13 17:01	2°♍48'41	0°26'19
				max. Earth dist.	11752 Nov 16 05:40	3°♍24'12	6.06592 AU
conjunction	11747 May 18 03:38	3°♎40'37	-0°26'27	morning rise	11752 Nov 27 08:33	5°♍59'44	
minimum elong	11747 May 18 03:37	3°♎40'37	0°27'07	retrograde	11753 Apr 04 04:50	25°♍16'51	
morning rise	11747 May 30 22:12	6°♎32'42		min. Earth dist.	11753 Jun 01 11:22	20°♍26'00	4.15303 AU
retrograde	11747 Oct 02 08:58	24°♎33'40		opposition	11753 Jun 03 01:03	20°♍13'18	0°50'14
opposition	11747 Dec 01 22:59	19°♎39'48	-0°50'01	direct	11753 Aug 01 08:37	15°♍14'29	
min. Earth dist.	11747 Dec 03 14:39	19°♎26'59	4.21928 AU		11753 Nov 18 10:47	0°♎	
direct	11748 Feb 01 05:11	14°♎40'45		evening set	11753 Dec 05 17:34	3°♎48'42	
	11748 May 22 07:29	0°♏					
evening set	11748 Jun 05 22:41	3°♏20'44		conjunction	11753 Dec 19 05:47	6°♎50'37	0°38'30
max. Earth dist.	11748 Jun 16 18:02	5°♏51'47	6.13025 AU	minimum elong	11753 Dec 19 05:47	6°♎50'37	0°39'17
				max. Earth dist.	11753 Dec 21 10:10	7°♎20'03	6.24347 AU
conjunction	11748 Jun 18 19:32	6°♏20'43	-0°38'27	morning rise	11754 Jan 01 17:35	9°♎52'02	
minimum elong	11748 Jun 18 19:32	6°♏20'43	0°39'15	retrograde	11754 May 06 06:54	27°♎53'40	
morning rise	11748 Jul 01 16:31	9°♏21'10		opposition	11754 Jul 05 15:58	22°♎52'27	0°59'00
retrograde	11748 Nov 06 11:18	28°♏37'43		min. Earth dist.	11754 Jul 04 12:51	23°♎01'26	4.32772 AU
opposition	11749 Jan 05 12:33	23°♏42'16	-1°00'03	direct	11754 Sep 04 06:09	17°♎52'09	
min. Earth dist.	11749 Jan 06 15:32	23°♏33'26	4.04457 AU		11754 Dec 12 07:59	0°♏	
direct	11749 Mar 06 08:58	18°♏45'16		evening set	11755 Jan 07 23:26	5°♏36'22	
	11749 Jun 04 13:46	0°♐					
evening set	11749 Jul 10 21:33	8°♐20'20		conjunction	11755 Jan 21 07:15	8°♏29'58	0°38'43
				minimum elong	11755 Jan 21 07:15	8°♏29'58	0°39'22
conjunction	11749 Jul 23 22:50	11°♐29'24	-0°37'43	max. Earth dist.	11755 Jan 22 09:19	8°♏44'09	6.40174 AU
minimum elong	11749 Jul 23 22:51	11°♐29'24	0°38'20	morning rise	11755 Feb 03 13:56	11°♏22'45	
max. Earth dist.	11749 Jul 22 22:09	11°♐14'28	5.97246 AU		11755 Feb 20 15:16	15°♏	
morning rise	11749 Aug 06 01:41	14°♐39'32		retrograde	11755 Jun 05 14:31	28°♏27'14	
	11749 Aug 07 11:46	15°♐		opposition	11755 Aug 05 08:58	23°♏29'10	0°50'24
	11749 Oct 17 14:52	0°♑		min. Earth dist.	11755 Aug 05 01:11	23°♏31'42	4.45868 AU
retrograde	11749 Dec 14 21:28	5°♑06'15		direct	11755 Oct 06 03:47	18°♏28'06	
opposition	11750 Feb 12 09:34	0°♑08'07	-0°47'52		11756 Jan 11 17:22	0°♒	
min. Earth dist.	11750 Feb 12 13:06	0°♑06'56	3.91976 AU	evening set	11756 Feb 08 06:44	5°♒40'28	
	11750 Feb 13 09:51	30°♒♐					
direct	11750 Apr 11 23:27	25°♐12'51		conjunction	11756 Feb 21 10:04	8°♒28'37	0°28'10
	11750 Jun 06 01:03	0°♑		minimum elong	11756 Feb 21 10:05	8°♒28'38	0°28'31
evening set	11750 Aug 17 02:18	15°♑24'21		max. Earth dist.	11756 Feb 21 07:00	8°♒26'59	6.49648 AU
				morning rise	11756 Mar 05 11:32	11°♒15'49	
conjunction	11750 Aug 30 10:18	18°♑40'20	-0°22'12	retrograde	11756 Jul 04 02:36	27°♒51'28	
minimum elong	11750 Aug 30 10:19	18°♑40'21	0°22'25	opposition	11756 Sep 03 04:23	22°♒56'05	0°29'03
max. Earth dist.	11750 Aug 31 00:47	18°♑49'13	5.89386 AU	min. Earth dist.	11756 Sep 03 15:44	22°♒52'26	4.51249 AU
morning rise	11750 Sep 12 20:16	21°♑57'31		direct	11756 Nov 04 15:20	17°♒54'53	
	11750 Oct 17 02:22	0°♓			11757 Feb 13 11:26	0°♑	

evening set	11757 Mar 09 12:11	4°♈58'19		minimum elong	11762 Sep 04 21:59	24°♏12'58	0°19'07
max. Earth dist.	11757 Mar 21 05:18	7°♈28'22	6.50566 AU	max. Earth dist.	11762 Sep 05 17:31	24°♏24'57	5.89161 AU
				morning rise	11762 Sep 18 09:02	27°♏30'43	
conjunction	11757 Mar 22 11:29	7°♈44'32	0°10'29		11762 Sep 28 16:01	0°♏	
minimum elong	11757 Mar 22 11:30	7°♈44'32	0°10'27	retrograde	11763 Jan 28 09:11	18°♏26'18	
behind sun begin	11757 Mar 22 05:14	7°♈41'12		opposition	11763 Mar 28 15:37	13°♏24'29	-0°09'43
behind sun end	11757 Mar 22 17:45	7°♈47'52		min. Earth dist.	11763 Mar 27 13:59	13°♏33'10	3.90517 AU
morning rise	11757 Apr 04 08:47	10°♈29'55		direct	11763 May 25 13:34	8°♏29'17	
retrograde	11757 Aug 03 01:32	27°♈07'45		asc. node	11763 Jul 04 21:08	11°♏09'40	
opposition	11757 Oct 03 04:16	22°♈14'03	0°00'24	evening set	11763 Sep 29 21:07	28°♏34'26	
min. Earth dist.	11757 Oct 04 09:36	22°♈04'41	4.47702 AU		11763 Oct 05 19:24	0°♏	
desc. node	11757 Oct 08 07:43	21°♈34'43					
direct	11757 Dec 04 19:17	17°♈13'04		conjunction	11763 Oct 13 10:42	1°♏50'35	0°06'17
	11758 Mar 18 06:35	0°♏		minimum elong	11763 Oct 13 10:41	1°♏50'35	0°06'39
evening set	11758 Apr 08 16:09	4°♏31'38		behind sun begin	11763 Oct 13 02:52	1°♏45'53	
max. Earth dist.	11758 Apr 19 09:24	6°♏51'41	6.42726 AU	behind sun end	11763 Oct 13 18:30	1°♏55'17	
				max. Earth dist.	11763 Oct 15 13:39	2°♏21'20	5.94643 AU
conjunction	11758 Apr 21 12:30	7°♏19'37	-0°10'13	morning rise	11763 Oct 27 02:11	5°♏07'30	
minimum elong	11758 Apr 21 12:30	7°♏19'36	0°10'38		11763 Dec 09 18:07	15°♏	
behind sun begin	11758 Apr 21 06:19	7°♏16'15		retrograde	11764 Mar 05 12:16	25°♏25'27	
behind sun end	11758 Apr 21 18:41	7°♏22'58		min. Earth dist.	11764 May 02 09:42	20°♏34'34	4.01120 AU
morning rise	11758 May 04 07:29	10°♏07'05		opposition	11764 May 03 23:52	20°♏21'36	0°27'49
	11758 May 27 06:49	15°♏		direct	11764 Jul 01 09:19	15°♏24'34	
retrograde	11758 Sep 03 11:26	27°♏18'06			11764 Oct 15 08:02	0°♏	
opposition	11758 Nov 03 09:43	22°♏24'48	-0°29'22	evening set	11764 Nov 05 06:54	4°♏46'09	
min. Earth dist.	11758 Nov 05 01:15	22°♏12'07	4.36003 AU				
direct	11759 Jan 04 12:39	17°♏24'30		conjunction	11764 Nov 18 21:18	7°♏55'45	0°28'13
	11759 Apr 15 06:03	0°♏		minimum elong	11764 Nov 18 21:17	7°♏55'44	0°28'55
evening set	11759 May 09 18:35	5°♏20'37		max. Earth dist.	11764 Nov 21 11:18	8°♏31'48	6.09221 AU
max. Earth dist.	11759 May 20 05:20	7°♏41'47	6.27956 AU	morning rise	11764 Dec 02 12:18	11°♏05'20	
					11765 Mar 29 11:54	0°♏	
conjunction	11759 May 22 14:09	8°♏13'55	-0°28'42	retrograde	11765 Apr 08 20:34	0°♏10'34	
minimum elong	11759 May 22 14:08	8°♏13'54	0°29'23		11765 Apr 19 04:37	30°♏♏	
morning rise	11759 Jun 04 08:48	11°♏07'08		min. Earth dist.	11765 Jun 06 05:41	25°♏19'50	4.18061 AU
retrograde	11759 Oct 07 06:08	29°♏19'05		opposition	11765 Jun 07 19:01	25°♏07'18	0°52'37
opposition	11759 Dec 06 18:48	24°♏25'08	-0°52'31	direct	11765 Aug 06 06:43	20°♏08'16	
min. Earth dist.	11759 Dec 08 09:18	24°♏12'41	4.19081 AU		11765 Oct 31 03:13	0°♏	
direct	11760 Feb 05 19:41	19°♏26'24		evening set	11765 Dec 10 13:16	8°♏33'59	
	11760 May 04 12:41	0°♏					
evening set	11760 Jun 10 17:24	8°♏15'42		conjunction	11765 Dec 24 00:43	11°♏34'30	0°39'16
max. Earth dist.	11760 Jun 21 15:01	10°♏49'06	6.10215 AU	minimum elong	11765 Dec 24 00:43	11°♏34'30	0°40'02
				max. Earth dist.	11765 Dec 26 00:31	12°♏01'12	6.26993 AU
conjunction	11760 Jun 23 14:38	11°♏17'07	-0°39'13	morning rise	11766 Jan 06 11:55	14°♏34'30	
minimum elong	11760 Jun 23 14:38	11°♏17'07	0°39'59		11766 Mar 31 15:21	0°♏	
morning rise	11760 Jul 06 12:27	14°♏19'08		retrograde	11766 May 10 15:24	2°♏26'10	
	11760 Sep 22 15:11	0°♏			11766 Jun 19 13:46	30°♏♏	
retrograde	11760 Nov 11 20:04	3°♏48'06		min. Earth dist.	11766 Jul 09 01:45	27°♏33'17	4.35107 AU
	11761 Jan 02 02:58	30°♏♏		opposition	11766 Jul 10 01:38	27°♏25'22	0°58'42
opposition	11761 Jan 10 18:37	28°♏52'22	-0°59'45	direct	11766 Sep 08 21:09	22°♏24'53	
min. Earth dist.	11761 Jan 11 18:39	28°♏44'27	4.01936 AU		11766 Nov 23 07:22	0°♏	
direct	11761 Mar 11 10:31	23°♏55'41		evening set	11767 Jan 12 10:57	10°♏03'01	
	11761 May 13 22:40	0°♏					
evening set	11761 Jul 16 01:36	13°♏38'50		conjunction	11767 Jan 25 18:16	12°♏55'39	0°37'46
	11761 Jul 21 15:54	15°♏		minimum elong	11767 Jan 25 18:16	12°♏55'39	0°38'24
max. Earth dist.	11761 Jul 28 09:50	16°♏38'16	5.95288 AU	max. Earth dist.	11767 Jan 26 17:17	13°♏08'08	6.42038 AU
					11767 Feb 04 08:01	15°♏	
conjunction	11761 Jul 29 03:58	16°♏49'17	-0°36'20	morning rise	11767 Feb 08 00:02	15°♏47'23	
minimum elong	11761 Jul 29 03:59	16°♏49'18	0°36'55		11767 Apr 27 13:00	0°♏	
morning rise	11761 Aug 11 07:43	20°♏00'48		retrograde	11767 Jun 09 17:06	2°♏45'53	
	11761 Sep 23 23:22	0°♏			11767 Jul 23 01:36	30°♏♏	
retrograde	11761 Dec 20 12:18	10°♏35'49		opposition	11767 Aug 09 13:49	27°♏48'15	0°48'00
opposition	11762 Feb 17 22:09	5°♏37'17	-0°44'12	min. Earth dist.	11767 Aug 09 08:06	27°♏50'06	4.47160 AU
min. Earth dist.	11762 Feb 17 22:07	5°♏37'18	3.90831 AU	direct	11767 Oct 10 10:52	22°♏47'09	
direct	11762 Apr 17 08:16	0°♏42'16			11767 Dec 23 21:09	0°♏	
evening set	11762 Aug 22 13:12	20°♏56'27		evening set	11768 Feb 12 13:18	9°♏56'49	
conjunction	11762 Sep 04 21:58	24°♏12'58	-0°18'58	conjunction	11768 Feb 25 15:54	12°♏44'28	0°25'59

minimum elong	11768 Feb 25 15:55	12° H 44'28	0°26'18		11773 Apr 07 18:54	0° Ω	
max. Earth dist.	11768 Feb 25 07:46	12° H 40'07	6.50282 AU		11773 Jul 04 12:18	15° Ω	
morning rise	11768 Mar 09 16:46	15° H 31'12		evening set	11773 Jul 21 07:05	18° Ω 59'52	
	11768 May 31 18:06	0° Υ					
retrograde	11768 Jul 08 07:00	2° Υ 05'28		conjunction	11773 Aug 03 10:09	22° Ω 11'19	-0°34'41
	11768 Aug 14 20:08	30° R H		minimum elong	11773 Aug 03 10:10	22° Ω 11'19	0°35'14
opposition	11768 Sep 07 08:32	27° H 10'25	0°25'17	max. Earth dist.	11773 Aug 02 20:25	22° Ω 02'57	5.93995 AU
min. Earth dist.	11768 Sep 07 23:44	27° H 05'32	4.51199 AU	morning rise	11773 Aug 16 15:04	25° Ω 23'55	
direct	11768 Nov 08 22:02	22° H 09'10			11773 Sep 04 22:54	0° M	
	11769 Jan 26 05:19	0° Υ		retrograde	11773 Dec 25 23:35	16° M 03'59	
evening set	11769 Mar 13 17:22	9° Υ 13'37		opposition	11774 Feb 23 09:58	11° M 04'56	-0°40'12
max. Earth dist.	11769 Mar 25 05:37	11° Υ 41'23	6.49823 AU	min. Earth dist.	11774 Feb 23 04:52	11° M 06'38	3.90399 AU
				direct	11774 Apr 22 17:00	6° M 09'59	
conjunction	11769 Mar 26 16:11	11° Υ 59'56	0°07'38	evening set	11774 Aug 27 22:30	26° M 23'52	
minimum elong	11769 Mar 26 16:12	11° Υ 59'56	0°07'33				
behind sun begin	11769 Mar 26 08:56	11° Υ 56'03		conjunction	11774 Sep 10 08:04	29° M 40'32	-0°15'40
behind sun end	11769 Mar 26 23:28	12° Υ 03'49		minimum elong	11774 Sep 10 08:04	29° M 40'32	0°15'46
morning rise	11769 Apr 08 13:09	14° Υ 45'27		behind sun begin	11774 Sep 10 06:31	29° M 39'35	
	11769 Jul 07 09:23	0° B		behind sun end	11774 Sep 10 09:38	29° M 41'29	
retrograde	11769 Aug 07 08:24	1° B 26'35		max. Earth dist.	11774 Sep 11 09:31	29° M 56'07	5.89638 AU
desc. node	11769 Aug 19 07:15	1° B 13'17			11774 Sep 11 15:50	0° A	
	11769 Sep 07 08:12	30° R Υ		morning rise	11774 Sep 23 19:48	2° A 58'21	
opposition	11769 Oct 07 11:19	26° Υ 32'58	-0°03'55	retrograde	11775 Feb 02 17:12	23° A 50'09	
min. Earth dist.	11769 Oct 08 18:13	26° Υ 23'04	4.46321 AU	opposition	11775 Apr 02 23:59	18° A 47'52	-0°04'15
direct	11769 Dec 09 00:56	21° Υ 31'58		min. Earth dist.	11775 Apr 01 20:29	18° A 57'12	3.91835 AU
	11770 Feb 28 05:18	0° B		asc. node	11775 May 15 09:27	14° A 17'35	
evening set	11770 Apr 12 23:33	8° B 55'13		direct	11775 May 30 23:44	13° A 52'27	
max. Earth dist.	11770 Apr 23 16:10	11° B 15'29	6.40797 AU		11775 Sep 18 19:58	0° M	
				evening set	11775 Oct 05 04:08	3° M 51'19	
conjunction	11770 Apr 25 19:49	11° B 43'50	-0°13'05				
minimum elong	11770 Apr 25 19:48	11° B 43'50	0°13'33	conjunction	11775 Oct 18 18:04	7° M 06'38	0°09'45
behind sun begin	11770 Apr 25 15:21	11° B 41'24		minimum elong	11775 Oct 18 18:03	7° M 06'38	0°10'09
behind sun end	11770 Apr 26 00:16	11° B 46'16		behind sun begin	11775 Oct 18 11:24	7° M 02'39	
morning rise	11770 May 08 14:29	14° B 31'58		behind sun end	11775 Oct 19 00:43	7° M 10'37	
	11770 May 10 17:55	15° B		max. Earth dist.	11775 Oct 21 00:57	7° M 39'34	5.96653 AU
	11770 Aug 04 02:10	0° II		morning rise	11775 Nov 01 09:35	10° M 22'35	
retrograde	11770 Sep 08 02:20	1° II 50'40			11775 Nov 21 04:45	15° M	
	11770 Oct 13 05:49	30° R B		retrograde	11776 Feb 22 00:05	0° A	
opposition	11770 Nov 07 23:36	26° B 57'22	-0°33'16		11776 Mar 10 09:59	0° A 30'01	
min. Earth dist.	11770 Nov 09 15:56	26° B 44'26	4.33643 AU		11776 Mar 27 17:03	30° R M	
direct	11771 Jan 08 23:46	21° B 57'17		min. Earth dist.	11776 May 07 08:06	25° M 39'21	4.03591 AU
	11771 Mar 27 11:01	0° II		opposition	11776 May 08 23:00	25° M 26'10	0°32'12
evening set	11771 May 14 07:49	10° II 00'51		direct	11776 Jul 06 11:10	20° M 28'53	
max. Earth dist.	11771 May 24 17:49	12° II 22'30	6.25341 AU		11776 Sep 26 19:42	0° A	
				evening set	11776 Nov 10 06:45	9° A 41'41	
conjunction	11771 May 27 03:19	12° II 55'12	-0°30'49				
minimum elong	11771 May 27 03:18	12° II 55'12	0°31'33	conjunction	11776 Nov 23 20:41	12° A 49'54	0°30'28
morning rise	11771 Jun 08 22:23	15° II 49'38		minimum elong	11776 Nov 23 20:40	12° A 49'53	0°31'12
	11771 Aug 19 18:29	0° B		max. Earth dist.	11776 Nov 26 08:02	13° A 24'11	6.11896 AU
retrograde	11771 Oct 12 07:21	4° B 12'33		morning rise	11776 Dec 07 11:25	15° A 58'06	
	11771 Dec 06 09:12	30° R II			11777 Feb 15 00:50	0° B	
opposition	11771 Dec 11 17:57	29° II 18'23	-0°54'45	retrograde	11777 Apr 13 07:57	4° B 51'53	
min. Earth dist.	11771 Dec 13 06:45	29° II 06'26	4.16411 AU		11777 Jun 10 23:21	30° R A	
direct	11772 Feb 10 14:32	24° II 19'55		min. Earth dist.	11777 Jun 10 20:59	0° B 00'48	4.20689 AU
	11772 Apr 12 23:32	0° B		opposition	11777 Jun 12 08:25	29° A 48'54	0°54'32
evening set	11772 Jun 15 14:45	13° B 17'39		direct	11777 Aug 11 00:51	24° A 49'37	
max. Earth dist.	11772 Jun 26 17:49	15° B 55'02	6.07759 AU		11777 Oct 09 19:07	0° B	
				evening set	11777 Dec 15 04:15	13° B 07'40	
conjunction	11772 Jun 28 12:41	16° B 20'24	-0°39'43				
minimum elong	11772 Jun 28 12:41	16° B 20'24	0°40'28	conjunction	11777 Dec 28 15:20	16° B 06'59	0°39'46
morning rise	11772 Jul 11 11:01	19° B 23'46		minimum elong	11777 Dec 28 15:20	16° B 06'59	0°40'32
	11772 Aug 28 12:42	0° Ω		max. Earth dist.	11777 Dec 30 12:38	16° B 32'10	6.29379 AU
retrograde	11772 Nov 17 06:36	9° Ω 03'23		morning rise	11778 Jan 11 01:41	19° B 05'40	
opposition	11773 Jan 16 02:29	4° Ω 07'21	-0°58'58		11778 Mar 05 22:40	0° \approx	
min. Earth dist.	11773 Jan 16 23:34	4° Ω 00'24	3.99961 AU	retrograde	11778 May 14 20:24	6° \approx 48'45	
	11773 Feb 22 06:11	30° R B		min. Earth dist.	11778 Jul 13 10:23	1° \approx 55'36	4.37080 AU
direct	11773 Mar 16 13:26	29° B 11'01		opposition	11778 Jul 14 07:56	1° \approx 48'30	0°58'08

	11778 Jul 28 09:05	30° $\overline{\text{R}}\overline{\text{C}}$	retrograde	11783 Oct 17 08:34	9° $\overline{\text{C}}$ 05'30		
direct	11778 Sep 13 06:56	26° $\overline{\text{C}}$ 47'58	opposition	11783 Dec 16 16:39	4° $\overline{\text{C}}$ 11'10	-0°56'32	
	11778 Oct 30 08:45	0° \approx	min. Earth dist.	11783 Dec 18 04:20	3° $\overline{\text{C}}$ 59'34	4.14078 AU	
evening set	11779 Jan 16 19:26	14° \approx 21'24		11784 Jan 24 03:25	30° $\overline{\text{R}}\overline{\text{I}}$		
	11779 Jan 19 19:15	15° \approx	direct	11784 Feb 15 09:02	29° $\overline{\text{I}}$ 13'00		
				11784 Mar 08 12:52	0° $\overline{\text{C}}$		
conjunction	11779 Jan 30 01:58	17° \approx 13'12	0°36'41	evening set	11784 Jun 20 11:07	18° $\overline{\text{C}}$ 17'50	
minimum elong	11779 Jan 30 01:59	17° \approx 13'13	0°37'16	max. Earth dist.	11784 Jul 01 16:39	20° $\overline{\text{C}}$ 57'29	6.05658 AU
max. Earth dist.	11779 Jan 30 18:57	17° \approx 22'23	6.43465 AU				
morning rise	11779 Feb 12 07:14	20° \approx 04'11		conjunction	11784 Jul 03 09:28	21° $\overline{\text{C}}$ 21'44	-0°39'53
	11779 Apr 03 07:56	0° $\overline{\text{K}}$		minimum elong	11784 Jul 03 09:28	21° $\overline{\text{C}}$ 21'44	0°40'39
retrograde	11779 Jun 13 20:15	6° $\overline{\text{K}}$ 58'23		morning rise	11784 Jul 16 08:41	24° $\overline{\text{C}}$ 26'23	
opposition	11779 Aug 13 16:44	2° $\overline{\text{K}}$ 01'13	0°45'28		11784 Aug 09 09:58	0° Ω	
min. Earth dist.	11779 Aug 13 14:51	2° $\overline{\text{K}}$ 01'50	4.47984 AU	retrograde	11784 Nov 22 12:48	14° Ω 15'22	
	11779 Aug 29 17:49	30° $\overline{\text{R}}\approx$		opposition	11785 Jan 21 08:31	9° Ω 18'54	-0°57'42
direct	11779 Oct 14 16:50	27° \approx 00'05		min. Earth dist.	11785 Jan 22 01:27	9° Ω 13'19	3.98288 AU
	11779 Nov 29 19:05	0° $\overline{\text{K}}$		direct	11785 Mar 21 14:29	4° Ω 22'49	
evening set	11780 Feb 16 18:04	14° $\overline{\text{K}}$ 08'37			11785 Jun 16 04:07	15° Ω	
				evening set	11785 Jul 26 10:20	24° Ω 16'23	
conjunction	11780 Feb 29 20:20	16° $\overline{\text{K}}$ 56'03	0°23'45				
minimum elong	11780 Feb 29 20:20	16° $\overline{\text{K}}$ 56'04	0°24'01	conjunction	11785 Aug 08 14:19	27° Ω 28'45	-0°32'45
max. Earth dist.	11780 Feb 29 09:09	16° $\overline{\text{K}}$ 50'05	6.50463 AU	minimum elong	11785 Aug 08 14:20	27° Ω 28'46	0°33'13
morning rise	11780 Mar 13 20:32	19° $\overline{\text{K}}$ 42'31		max. Earth dist.	11785 Aug 08 06:37	27° Ω 24'03	5.92918 AU
	11780 May 05 16:24	0° $\overline{\text{Y}}$			11785 Aug 18 22:24	0° $\overline{\text{M}}$	
retrograde	11780 Jul 12 09:11	6° $\overline{\text{Y}}$ 16'57		morning rise	11785 Aug 21 20:03	0° $\overline{\text{M}}$ 42'16	
opposition	11780 Sep 11 11:51	1° $\overline{\text{Y}}$ 22'12	0°21'30	retrograde	11785 Dec 31 10:27	21° $\overline{\text{M}}$ 26'44	
min. Earth dist.	11780 Sep 12 04:34	1° $\overline{\text{Y}}$ 16'50	4.50757 AU	opposition	11786 Feb 28 19:05	16° $\overline{\text{M}}$ 27'13	-0°35'52
	11780 Sep 22 07:31	30° $\overline{\text{R}}\overline{\text{K}}$		min. Earth dist.	11786 Feb 28 11:29	16° $\overline{\text{M}}$ 29'46	3.90040 AU
direct	11780 Nov 13 00:46	26° $\overline{\text{K}}$ 21'03		direct	11786 Apr 28 01:16	11° $\overline{\text{M}}$ 32'17	
	11781 Jan 03 10:38	0° $\overline{\text{Y}}$			11786 Aug 25 22:30	0° $\underline{\text{C}}$	
evening set	11781 Mar 17 21:57	13° $\overline{\text{Y}}$ 27'44		evening set	11786 Sep 02 05:37	1° $\underline{\text{C}}$ 45'59	
max. Earth dist.	11781 Mar 29 07:12	15° $\overline{\text{Y}}$ 54'17	6.48793 AU				
				conjunction	11786 Sep 15 16:00	5° $\underline{\text{C}}$ 02'50	-0°12'16
conjunction	11781 Mar 30 20:19	16° $\overline{\text{Y}}$ 14'15	0°04'48	minimum elong	11786 Sep 15 16:01	5° $\underline{\text{C}}$ 02'51	0°12'16
minimum elong	11781 Mar 30 20:20	16° $\overline{\text{Y}}$ 14'16	0°04'39	behind sun begin	11786 Sep 15 10:29	4° $\underline{\text{C}}$ 59'28	
behind sun begin	11781 Mar 30 12:31	16° $\overline{\text{Y}}$ 10'05		behind sun end	11786 Sep 15 21:33	5° $\underline{\text{C}}$ 06'13	
behind sun end	11781 Mar 31 04:09	16° $\overline{\text{Y}}$ 18'27		max. Earth dist.	11786 Sep 16 22:49	5° $\underline{\text{C}}$ 21'41	5.90032 AU
morning rise	11781 Apr 12 16:55	19° $\overline{\text{Y}}$ 00'03		morning rise	11786 Sep 29 04:29	8° $\underline{\text{C}}$ 20'47	
	11781 Jun 08 06:12	0° $\overline{\text{B}}$		retrograde	11787 Feb 07 22:26	29° $\underline{\text{C}}$ 09'07	
desc. node	11781 Jun 30 17:53	3° $\overline{\text{B}}$ 10'07		asc. node	11787 Mar 26 23:45	25° $\underline{\text{C}}$ 44'26	
retrograde	11781 Aug 11 17:15	5° $\overline{\text{B}}$ 45'31		min. Earth dist.	11787 Apr 06 23:39	24° $\underline{\text{C}}$ 16'42	3.92953 AU
opposition	11781 Oct 11 18:53	0° $\overline{\text{B}}$ 52'05	-0°08'09	opposition	11787 Apr 08 05:41	24° $\underline{\text{C}}$ 06'31	0°01'14
min. Earth dist.	11781 Oct 13 04:05	0° $\overline{\text{B}}$ 41'28	4.44765 AU	direct	11787 Jun 05 05:08	19° $\underline{\text{C}}$ 10'54	
	11781 Oct 18 14:33	30° $\overline{\text{R}}\overline{\text{Y}}$			11787 Aug 31 11:18	0° $\overline{\text{M}}$	
direct	11781 Dec 13 08:10	25° $\overline{\text{Y}}$ 51'15		evening set	11787 Oct 10 09:43	9° $\overline{\text{M}}$ 04'48	
	11782 Feb 05 22:34	0° $\overline{\text{B}}$					
evening set	11782 Apr 17 07:05	13° $\overline{\text{B}}$ 19'32		conjunction	11787 Oct 23 23:46	12° $\overline{\text{M}}$ 19'23	0°13'07
	11782 Apr 24 22:10	15° $\overline{\text{B}}$		minimum elong	11787 Oct 23 23:45	12° $\overline{\text{M}}$ 19'23	0°13'35
max. Earth dist.	11782 Apr 27 21:02	15° $\overline{\text{B}}$ 39'03	6.38822 AU	behind sun begin	11787 Oct 23 19:15	12° $\overline{\text{M}}$ 16'42	
				behind sun end	11787 Oct 24 04:15	12° $\overline{\text{M}}$ 22'04	
conjunction	11782 Apr 30 03:05	16° $\overline{\text{B}}$ 08'50	-0°15'52	max. Earth dist.	11787 Oct 26 07:05	12° $\overline{\text{M}}$ 52'26	5.98347 AU
minimum elong	11782 Apr 30 03:04	16° $\overline{\text{B}}$ 08'50	0°16'22		11787 Nov 04 05:15	15° $\overline{\text{M}}$	
morning rise	11782 May 12 21:47	18° $\overline{\text{B}}$ 57'44		morning rise	11787 Nov 06 15:36	15° $\overline{\text{M}}$ 34'35	
	11782 Jul 06 20:21	0° $\overline{\text{I}}$			11788 Jan 14 06:28	0° J	
retrograde	11782 Sep 12 17:26	6° $\overline{\text{I}}$ 24'21		retrograde	11788 Mar 15 06:13	5° J 33'06	
opposition	11782 Nov 12 13:52	1° $\overline{\text{I}}$ 30'58	-0°36'57	min. Earth dist.	11788 May 12 05:59	0° J 42'27	4.05667 AU
min. Earth dist.	11782 Nov 14 05:28	1° $\overline{\text{I}}$ 18'15	4.31375 AU	opposition	11788 May 13 21:09	0° J 29'10	0°36'21
	11782 Nov 24 13:34	30° $\overline{\text{R}}\overline{\text{B}}$			11788 May 17 11:23	30° $\overline{\text{R}}\overline{\text{M}}$	
direct	11783 Jan 13 10:15	26° $\overline{\text{B}}$ 31'04		direct	11788 Jul 11 12:53	25° $\overline{\text{M}}$ 31'32	
	11783 Mar 03 09:37	0° $\overline{\text{I}}$			11788 Sep 03 15:32	0° J	
evening set	11783 May 18 20:56	14° $\overline{\text{I}}$ 41'39		evening set	11788 Nov 15 06:10	14° J 37'13	
max. Earth dist.	11783 May 29 09:51	17° $\overline{\text{I}}$ 05'42	6.22956 AU				
				conjunction	11788 Nov 28 20:00	17° J 44'19	0°32'30
conjunction	11783 May 31 16:42	17° $\overline{\text{I}}$ 37'04	-0°32'43	minimum elong	11788 Nov 28 20:00	17° J 44'19	0°33'15
minimum elong	11783 May 31 16:41	17° $\overline{\text{I}}$ 37'03	0°33'28	max. Earth dist.	11788 Dec 01 06:57	18° J 18'13	6.14171 AU
morning rise	11783 Jun 13 11:52	20° $\overline{\text{I}}$ 32'33		morning rise	11788 Dec 12 10:08	20° J 51'15	
	11783 Jul 27 12:54	0° $\overline{\text{C}}$			11789 Jan 23 21:10	0° $\overline{\text{C}}$	

retrograde	11789 Apr 17 21:33	9°♄35'09		max. Earth dist.	11795 Jun 02 19:32	21°♄38'50	6.21136 AU
opposition	11789 Jun 16 22:27	4°♄32'29	0°56'08				
min. Earth dist.	11789 Jun 15 12:46	4°♄43'45	4.22945 AU	conjunction	11795 Jun 05 02:53	22°♄10'36	-0°34'19
	11789 Jul 30 02:48	30°♄32'59		minimum elong	11795 Jun 05 02:52	22°♄10'35	0°35'06
direct	11789 Aug 15 19:09	29°♄32'59		morning rise	11795 Jun 17 22:25	25°♄06'58	
	11789 Sep 01 13:40	0°♄			11795 Jul 09 17:40	0°♄	
evening set	11789 Dec 19 20:38	17°♄44'36		retrograde	11795 Oct 22 03:33	13°♄48'07	
				opposition	11795 Dec 21 11:22	8°♄53'31	-0°57'50
conjunction	11790 Jan 02 07:04	20°♄42'49	0°40'01	min. Earth dist.	11795 Dec 22 20:52	8°♄42'37	4.12196 AU
minimum elong	11790 Jan 02 07:04	20°♄42'49	0°40'47	direct	11796 Feb 19 22:53	3°♄55'34	
max. Earth dist.	11790 Jan 04 00:24	21°♄05'42	6.31436 AU	evening set	11796 Jun 25 03:14	23°♄06'12	
morning rise	11790 Jan 15 16:54	23°♄40'24		max. Earth dist.	11796 Jul 06 13:11	25°♄49'03	6.03885 AU
	11790 Feb 14 12:41	0°♄					
retrograde	11790 May 19 02:47	11°♄15'49		conjunction	11796 Jul 08 02:10	26°♄11'08	-0°39'45
opposition	11790 Jul 18 15:48	6°♄15'58	0°57'12	minimum elong	11796 Jul 08 02:10	26°♄11'08	0°40'30
min. Earth dist.	11790 Jul 17 20:34	6°♄22'18	4.38819 AU	morning rise	11796 Jul 21 01:57	29°♄16'51	
direct	11790 Sep 17 17:55	1°♄15'18			11796 Jul 24 02:51	0°♄	
	11791 Jan 03 11:32	15°♄			11796 Oct 05 16:35	15°♄	
evening set	11791 Jan 21 05:38	18°♄44'33		retrograde	11796 Nov 27 16:10	19°♄14'10	
					11797 Jan 21 00:09	15°♄	
conjunction	11791 Feb 03 11:43	21°♄35'39	0°35'21	opposition	11797 Jan 26 09:22	14°♄17'23	-0°56'01
minimum elong	11791 Feb 03 11:44	21°♄35'40	0°35'54	min. Earth dist.	11797 Jan 27 00:56	14°♄12'14	3.96779 AU
max. Earth dist.	11791 Feb 04 02:21	21°♄43'32	6.44797 AU	direct	11797 Mar 26 12:38	9°♄21'28	
morning rise	11791 Feb 16 16:07	24°♄25'49			11797 May 26 02:36	15°♄	
	11791 Mar 15 11:43	0°♄		evening set	11797 Jul 31 08:56	29°♄19'39	
retrograde	11791 Jun 18 00:01	11°♄15'46			11797 Aug 03 03:18	0°♄	
opposition	11791 Aug 17 21:43	6°♄19'02	0°42'37	conjunction	11797 Aug 13 13:50	2°♄32'59	-0°30'38
min. Earth dist.	11791 Aug 17 21:43	6°♄19'02	4.48863 AU	minimum elong	11797 Aug 13 13:51	2°♄32'59	0°31'04
direct	11791 Oct 18 23:55	1°♄17'58		max. Earth dist.	11797 Aug 13 09:49	2°♄30'32	5.91827 AU
evening set	11792 Feb 21 00:37	18°♄24'46		morning rise	11797 Aug 26 20:36	5°♄47'30	
max. Earth dist.	11792 Mar 04 10:32	21°♄03'28	6.50852 AU	retrograde	11798 Jan 05 15:36	26°♄36'31	
				opposition	11798 Mar 05 22:53	21°♄36'39	-0°31'27
conjunction	11792 Mar 05 02:06	21°♄11'47	0°21'21	min. Earth dist.	11798 Mar 05 12:01	21°♄40'18	3.89511 AU
minimum elong	11792 Mar 05 02:07	21°♄11'47	0°21'33	direct	11798 May 03 01:30	16°♄41'45	
morning rise	11792 Mar 18 01:52	23°♄57'55			11798 Aug 08 22:59	0°♄	
	11792 Apr 16 11:55	0°♄		evening set	11798 Sep 07 08:39	6°♄56'39	
retrograde	11792 Jul 16 14:49	10°♄31'36					
opposition	11792 Sep 15 16:54	5°♄37'07	0°17'33	conjunction	11798 Sep 20 19:41	10°♄13'49	-0°08'55
min. Earth dist.	11792 Sep 16 12:25	5°♄30'52	4.50666 AU	minimum elong	11798 Sep 20 19:42	10°♄13'50	0°08'51
direct	11792 Nov 17 07:38	0°♄35'59		behind sun begin	11798 Sep 20 12:32	10°♄09'28	
evening set	11793 Mar 22 03:12	17°♄43'20		behind sun end	11798 Sep 21 02:53	10°♄18'12	
max. Earth dist.	11793 Apr 02 10:08	20°♄08'50	6.48239 AU	max. Earth dist.	11798 Sep 22 04:44	10°♄34'01	5.90109 AU
				morning rise	11798 Oct 04 09:06	13°♄32'07	
conjunction	11793 Apr 04 01:14	20°♄29'55	0°01'55		11798 Dec 22 03:22	0°♄	
minimum elong	11793 Apr 04 01:13	20°♄29'54	0°01'43	asc. node	11799 Feb 07 19:16	4°♄16'02	
behind sun begin	11793 Apr 03 17:13	20°♄25'37		retrograde	11799 Feb 12 23:45	4°♄18'46	
behind sun end	11793 Apr 04 09:13	20°♄34'12			11799 Apr 07 21:28	30°♄	
morning rise	11793 Apr 16 21:17	23°♄15'43		min. Earth dist.	11799 Apr 11 23:45	29°♄26'44	3.93620 AU
desc. node	11793 May 10 16:58	28°♄14'40		opposition	11799 Apr 13 07:38	29°♄15'54	0°06'26
	11793 May 19 13:36	0°♄		direct	11799 Jun 10 07:37	24°♄20'04	
retrograde	11793 Aug 15 23:33	10°♄03'45			11799 Aug 09 20:40	0°♄	
opposition	11793 Oct 16 02:14	5°♄10'21	-0°12'19	evening set	11799 Oct 15 12:42	14°♄11'14	
min. Earth dist.	11793 Oct 17 11:37	4°♄59'41	4.43791 AU		11799 Oct 18 22:56	15°♄	
direct	11793 Dec 17 13:25	0°♄09'37					
	11794 Apr 09 04:40	15°♄		conjunction	11799 Oct 29 03:14	17°♄25'26	0°16'15
evening set	11794 Apr 21 13:39	17°♄40'51		minimum elong	11799 Oct 29 03:13	17°♄25'25	0°16'47
max. Earth dist.	11794 May 02 03:30	20°♄00'44	6.37489 AU	max. Earth dist.	11799 Oct 31 13:12	17°♄59'57	5.99554 AU
				morning rise	11799 Nov 11 19:05	20°♄40'04	
conjunction	11794 May 04 09:22	20°♄30'32	-0°18'29		11799 Dec 23 11:24	0°♄	
minimum elong	11794 May 04 09:21	20°♄30'32	0°19'03	retrograde	11800 Mar 21 03:33	10°♄31'47	
morning rise	11794 May 17 03:49	23°♄19'52		min. Earth dist.	11800 May 18 02:46	5°♄41'03	4.07264 AU
	11794 Jun 17 13:03	0°♄		opposition	11800 May 19 17:30	5°♄27'56	0°40'06
retrograde	11794 Sep 17 07:33	10°♄52'13		direct	11800 Jul 17 12:22	0°♄30'04	
opposition	11794 Nov 17 02:20	5°♄58'47	-0°40'16	evening set	11800 Nov 21 05:03	19°♄30'37	
min. Earth dist.	11794 Nov 18 18:59	5°♄45'43	4.29741 AU				
direct	11795 Jan 17 21:05	0°♄59'03		conjunction	11800 Dec 04 18:38	22°♄36'49	0°34'15
evening set	11795 May 23 07:07	19°♄14'27					

minimum elong	11800 Dec 04 18:37	22° ♊ 36'48	0°35'00	opposition	11806 Nov 22 17:31	10° ♊ 34'20	-0°43'33
max. Earth dist.	11800 Dec 07 04:44	23° ♊ 10'04	6.16009 AU	min. Earth dist.	11806 Nov 24 09:22	10° ♊ 21'31	4.27478 AU
morning rise	11800 Dec 18 08:31	25° ♊ 42'46		direct	11807 Jan 23 07:34	5° ♊ 34'46	
	11801 Jan 06 14:24	0° ♋		evening set	11807 May 28 21:04	23° ♊ 57'17	
retrograde	11801 Apr 23 09:06	14° ♋ 18'16		max. Earth dist.	11807 Jun 08 11:32	26° ♊ 23'37	6.18687 AU
min. Earth dist.	11801 Jun 21 02:54	9° ♋ 26'59	4.24860 AU				
opposition	11801 Jun 22 12:08	9° ♋ 15'52	0°57'18	conjunction	11807 Jun 10 17:04	26° ♊ 54'32	-0°35'49
direct	11801 Aug 21 11:22	4° ♋ 16'10		minimum elong	11807 Jun 10 17:03	26° ♊ 54'32	0°36'36
evening set	11801 Dec 25 13:06	22° ♋ 22'24		morning rise	11807 Jun 23 12:55	29° ♊ 52'05	
					11807 Jun 24 02:44	0° ♌	
conjunction	11802 Jan 07 23:04	25° ♋ 19'39	0°39'59	retrograde	11807 Oct 28 06:34	18° ♌ 43'53	
minimum elong	11802 Jan 07 23:05	25° ♋ 19'39	0°40'43	opposition	11807 Dec 27 11:20	13° ♌ 49'01	-0°58'53
max. Earth dist.	11802 Jan 09 13:57	25° ♋ 41'06	6.33288 AU	min. Earth dist.	11807 Dec 28 20:12	13° ♌ 38'18	4.09741 AU
morning rise	11802 Jan 21 08:09	28° ♋ 16'11		direct	11808 Feb 25 19:25	8° ♌ 51'18	
	11802 Jan 29 07:21	0° ♍		evening set	11808 Jul 01 01:08	28° ♌ 09'44	
	11802 May 02 16:10	15° ♍			11808 Jul 08 17:56	0° ♍	
retrograde	11802 May 24 10:56	15° ♍ 44'30		max. Earth dist.	11808 Jul 12 14:38	0° ♍ 55'32	6.01650 AU
	11802 Jun 15 00:46	15° ♍					
min. Earth dist.	11802 Jul 23 07:31	10° ♍ 50'33	4.40450 AU	conjunction	11808 Jul 14 00:49	1° ♍ 16'01	-0°39'22
opposition	11802 Jul 24 00:20	10° ♍ 45'02	0°55'54	minimum elong	11808 Jul 14 00:49	1° ♍ 16'01	0°40'05
direct	11802 Sep 23 06:49	5° ♍ 44'17		morning rise	11808 Jul 27 01:31	4° ♍ 23'09	
	11802 Dec 17 11:40	15° ♍			11808 Sep 12 10:54	15° ♍	
evening set	11803 Jan 26 16:16	23° ♍ 09'22		retrograde	11808 Dec 04 01:20	24° ♍ 30'21	
				opposition	11809 Feb 01 17:04	19° ♍ 33'12	-0°53'50
conjunction	11803 Feb 08 21:37	25° ♍ 59'42	0°33'48	min. Earth dist.	11809 Feb 02 04:42	19° ♍ 29'20	3.95009 AU
minimum elong	11803 Feb 08 21:38	25° ♍ 59'42	0°34'18		11809 Mar 17 17:41	15° ♍	
max. Earth dist.	11803 Feb 09 08:02	26° ♍ 05'17	6.46069 AU	direct	11809 Apr 01 15:00	14° ♍ 37'30	
morning rise	11803 Feb 22 01:26	28° ♍ 49'06			11809 Apr 16 13:14	15° ♍	
	11803 Feb 27 14:50	0° ♎			11809 Jul 18 00:50	0° ♎	
retrograde	11803 Jun 23 04:23	15° ♎ 34'51		evening set	11809 Aug 06 14:49	4° ♎ 41'00	
opposition	11803 Aug 23 03:05	10° ♎ 38'21	0°39'30				
min. Earth dist.	11803 Aug 23 05:31	10° ♎ 37'34	4.49686 AU	conjunction	11809 Aug 19 20:34	7° ♎ 55'18	-0°28'10
direct	11803 Oct 24 07:36	5° ♎ 37'10		minimum elong	11809 Aug 19 20:35	7° ♎ 55'19	0°28'32
evening set	11804 Feb 26 07:15	22° ♎ 42'15		max. Earth dist.	11809 Aug 19 21:05	7° ♎ 55'37	5.90702 AU
				morning rise	11809 Sep 02 04:28	11° ♎ 10'51	
conjunction	11804 Mar 10 08:19	25° ♎ 28'56	0°18'47		11809 Dec 07 04:45	0° ♏	
minimum elong	11804 Mar 10 08:19	25° ♎ 28'57	0°18'55	retrograde	11810 Jan 12 02:17	2° ♏ 04'05	
max. Earth dist.	11804 Mar 09 14:37	25° ♎ 19'30	6.51146 AU		11810 Feb 17 01:11	30° ♎	
morning rise	11804 Mar 23 07:17	28° ♎ 14'42		opposition	11810 Mar 12 09:39	27° ♎ 03'42	-0°26'30
	11804 Mar 31 15:10	0° ♏		min. Earth dist.	11810 Mar 11 19:20	27° ♎ 08'33	3.89174 AU
retrograde	11804 Jul 21 18:53	14° ♏ 47'55		direct	11810 May 09 10:44	22° ♎ 08'46	
opposition	11804 Sep 20 22:10	9° ♏ 53'36	0°13'26		11810 Jul 20 12:29	0° ♏	
min. Earth dist.	11804 Sep 21 19:20	9° ♏ 46'50	4.50389 AU	evening set	11810 Sep 13 18:32	12° ♏ 23'36	
direct	11804 Nov 22 12:45	4° ♏ 52'30					
desc. node	11805 Mar 18 23:29	20° ♏ 14'05		conjunction	11810 Sep 27 06:31	15° ♏ 40'56	-0°05'18
evening set	11805 Mar 27 08:55	22° ♏ 01'07		minimum elong	11810 Sep 27 06:30	15° ♏ 40'56	0°05'09
max. Earth dist.	11805 Apr 07 11:44	24° ♏ 24'46	6.47376 AU	behind sun begin	11810 Sep 26 22:24	15° ♏ 36'01	
				behind sun end	11810 Sep 27 14:37	15° ♏ 45'51	
conjunction	11805 Apr 09 06:21	24° ♏ 47'48	-0°01'07	max. Earth dist.	11810 Sep 28 21:40	16° ♏ 04'49	5.90619 AU
minimum elong	11805 Apr 09 06:20	24° ♏ 47'48	0°01'22	morning rise	11810 Oct 10 20:25	18° ♏ 59'14	
behind sun begin	11805 Apr 08 22:20	24° ♏ 43'30			11810 Nov 28 09:54	0° ♐	
behind sun end	11805 Apr 09 14:20	24° ♏ 52'06		asc. node	11810 Dec 19 12:57	3° ♐ 57'21	
morning rise	11805 Apr 22 02:09	27° ♏ 33'49		retrograde	11811 Feb 19 07:47	9° ♐ 41'31	
	11805 May 03 12:50	0° ♑		min. Earth dist.	11811 Apr 18 05:21	4° ♐ 49'45	3.94929 AU
retrograde	11805 Aug 21 10:13	14° ♑ 25'39		opposition	11811 Apr 19 14:47	4° ♐ 38'23	0°11'53
opposition	11805 Oct 21 11:08	9° ♑ 32'17	-0°16'33		11811 Jun 03 14:22	30° ♐	
min. Earth dist.	11805 Oct 22 23:02	9° ♑ 20'48	4.42364 AU	direct	11811 Jun 16 16:44	29° ♐ 42'20	
direct	11805 Dec 22 21:55	4° ♑ 31'35			11811 Jun 29 18:51	0° ♑	
	11806 Mar 24 02:27	15° ♑			11811 Oct 02 15:08	15° ♑	
evening set	11806 Apr 26 21:40	22° ♑ 07'18		evening set	11811 Oct 21 20:22	19° ♑ 27'53	
max. Earth dist.	11806 May 07 09:43	24° ♑ 26'46	6.35584 AU				
				conjunction	11811 Nov 04 10:57	22° ♑ 41'12	0°19'26
conjunction	11806 May 09 17:18	24° ♑ 57'39	-0°21'07	minimum elong	11811 Nov 04 10:56	22° ♑ 41'11	0°20'02
minimum elong	11806 May 09 17:17	24° ♑ 57'38	0°21'44	max. Earth dist.	11811 Nov 06 22:55	23° ♑ 16'44	6.01518 AU
morning rise	11806 May 22 11:41	27° ♑ 47'41		morning rise	11811 Nov 18 02:53	25° ♑ 54'53	
	11806 Jun 01 12:51	0° ♒			11811 Dec 05 19:08	0° ♒	
retrograde	11806 Sep 22 22:57	15° ♒ 27'56		retrograde	11812 Mar 25 23:26	15° ♒ 36'20	

min. Earth dist.	11812 May 23 00:23	10° \mathbb{A} 46'00	4.09682 AU	evening set	11818 May 01 05:48	26° \mathbb{B} 33'35	
opposition	11812 May 24 16:16	10° \mathbb{A} 32'30	0°43'41	max. Earth dist.	11818 May 11 16:14	28° \mathbb{B} 52'57	6.33203 AU
direct	11812 Jul 22 13:49	5° \mathbb{A} 34'21					
evening set	11812 Nov 26 05:15	24° \mathbb{A} 26'37		conjunction	11818 May 14 01:14	29° \mathbb{B} 24'48	-0°23'37
				minimum elong	11818 May 14 01:14	29° \mathbb{B} 24'48	0°24'16
conjunction	11812 Dec 09 18:21	27° \mathbb{A} 31'25	0°35'50		11818 May 16 16:12	0° \mathbb{B}	
minimum elong	11812 Dec 09 18:21	27° \mathbb{A} 31'25	0°36'37	morning rise	11818 May 26 19:47	2° \mathbb{B} 15'51	
max. Earth dist.	11812 Dec 12 02:33	28° \mathbb{A} 03'25	6.18665 AU	retrograde	11818 Sep 27 18:42	20° \mathbb{B} 06'00	
	11812 Dec 20 15:59	0° \mathbb{B}		opposition	11818 Nov 27 10:09	15° \mathbb{B} 12'20	-0°46'37
morning rise	11812 Dec 23 07:37	0° \mathbb{B} 35'55		min. Earth dist.	11818 Nov 29 02:51	14° \mathbb{B} 59'13	4.24732 AU
retrograde	11813 Apr 27 21:52	19° \mathbb{B} 00'17		direct	11819 Jan 27 20:54	10° \mathbb{B} 12'59	
min. Earth dist.	11813 Jun 25 19:11	14° \mathbb{B} 08'29	4.27500 AU	evening set	11819 Jun 02 12:26	28° \mathbb{B} 44'27	
opposition	11813 Jun 27 01:59	13° \mathbb{B} 58'12	0°58'09		11819 Jun 07 23:15	0° \mathbb{B}	
direct	11813 Aug 26 07:04	8° \mathbb{B} 58'17		max. Earth dist.	11819 Jun 13 04:33	1° \mathbb{B} 12'41	6.15807 AU
evening set	11813 Dec 30 04:31	26° \mathbb{B} 56'46					
				conjunction	11819 Jun 15 08:55	1° \mathbb{B} 43'07	-0°37'06
conjunction	11814 Jan 12 13:50	29° \mathbb{B} 52'46	0°39'45	minimum elong	11819 Jun 15 08:54	1° \mathbb{B} 43'06	0°37'54
minimum elong	11814 Jan 12 13:51	29° \mathbb{B} 52'46	0°40'28	morning rise	11819 Jun 28 05:18	4° \mathbb{B} 42'07	
	11814 Jan 13 03:03	0° \mathbb{B}		retrograde	11819 Nov 02 10:31	23° \mathbb{B} 46'23	
max. Earth dist.	11814 Jan 14 02:00	0° \mathbb{B} 12'36	6.35700 AU	opposition	11820 Jan 01 13:58	18° \mathbb{B} 51'19	-0°59'33
morning rise	11814 Jan 25 22:07	2° \mathbb{B} 47'59		min. Earth dist.	11820 Jan 02 19:55	18° \mathbb{B} 41'32	4.06980 AU
	11814 Mar 29 15:44	15° \mathbb{B}		direct	11820 Mar 01 15:46	13° \mathbb{B} 53'59	
retrograde	11814 May 28 14:24	20° \mathbb{B} 07'43			11820 Jun 21 20:50	0° \mathbb{B}	
opposition	11814 Jul 28 06:56	15° \mathbb{B} 08'38	0°54'20	evening set	11820 Jul 06 02:19	3° \mathbb{B} 21'29	
min. Earth dist.	11814 Jul 27 15:56	15° \mathbb{B} 13'33	4.42471 AU	max. Earth dist.	11820 Jul 17 20:45	6° \mathbb{B} 11'09	5.99274 AU
	11814 Jul 29 09:19	15° \mathbb{B}					
direct	11814 Sep 27 16:36	10° \mathbb{B} 07'47		conjunction	11820 Jul 19 02:42	6° \mathbb{B} 29'12	-0°38'40
	11814 Nov 26 04:44	15° \mathbb{B}		minimum elong	11820 Jul 19 02:43	6° \mathbb{B} 29'12	0°39'20
evening set	11815 Jan 31 00:29	27° \mathbb{B} 27'47		morning rise	11820 Aug 01 04:27	9° \mathbb{B} 37'54	
	11815 Feb 11 20:59	0° \mathbb{B}			11820 Aug 24 01:27	15° \mathbb{B}	
				retrograde	11820 Dec 09 14:41	29° \mathbb{B} 55'33	
conjunction	11815 Feb 13 05:10	0° \mathbb{B} 17'16	0°32'07	opposition	11821 Feb 07 04:04	24° \mathbb{B} 57'59	-0°51'09
minimum elong	11815 Feb 13 05:11	0° \mathbb{B} 17'16	0°32'35	min. Earth dist.	11821 Feb 07 11:59	24° \mathbb{B} 55'21	3.93276 AU
max. Earth dist.	11815 Feb 13 11:34	0° \mathbb{B} 20'42	6.47555 AU	direct	11821 Apr 06 22:28	20° \mathbb{B} 02'30	
morning rise	11815 Feb 26 08:09	3° \mathbb{B} 05'49			11821 Jun 28 18:44	0° \mathbb{B}	
retrograde	11815 Jun 27 06:54	19° \mathbb{B} 47'11		evening set	11821 Aug 12 00:03	10° \mathbb{B} 11'02	
opposition	11815 Aug 27 06:27	14° \mathbb{B} 51'06	0°36'17				
min. Earth dist.	11815 Aug 27 12:12	14° \mathbb{B} 49'14	4.50541 AU	conjunction	11821 Aug 25 06:58	13° \mathbb{B} 26'17	-0°25'24
direct	11815 Oct 28 14:02	9° \mathbb{B} 49'56		minimum elong	11821 Aug 25 06:59	13° \mathbb{B} 26'18	0°25'42
evening set	11816 Mar 01 11:26	26° \mathbb{B} 53'25		max. Earth dist.	11821 Aug 25 15:07	13° \mathbb{B} 31'17	5.89820 AU
				morning rise	11821 Sep 07 15:46	16° \mathbb{B} 42'43	
conjunction	11816 Mar 14 11:48	29° \mathbb{B} 39'48	0°16'12		11821 Nov 06 07:34	0° \mathbb{B}	
minimum elong	11816 Mar 14 11:48	29° \mathbb{B} 39'49	0°16'17	retrograde	11822 Jan 17 16:50	7° \mathbb{B} 38'29	
max. Earth dist.	11816 Mar 13 12:32	29° \mathbb{B} 27'24	6.51291 AU	opposition	11822 Mar 17 22:43	2° \mathbb{B} 37'39	-0°21'14
	11816 Mar 16 01:36	0° \mathbb{B}		min. Earth dist.	11822 Mar 17 05:02	2° \mathbb{B} 43'37	3.89268 AU
morning rise	11816 Mar 27 10:21	2° \mathbb{B} 25'21			11822 Apr 07 12:23	30° \mathbb{B}	
retrograde	11816 Jul 25 23:19	18° \mathbb{B} 59'03		direct	11822 May 14 22:22	27° \mathbb{B} 42'43	
opposition	11816 Sep 25 02:02	14° \mathbb{B} 04'56	0°09'20		11822 Jun 21 00:58	0° \mathbb{B}	
min. Earth dist.	11816 Sep 26 02:13	13° \mathbb{B} 57'11	4.49817 AU	evening set	11822 Sep 19 06:20	17° \mathbb{B} 55'27	
direct	11816 Nov 26 17:08	9° \mathbb{B} 03'49					
desc. node	11817 Jan 25 04:46	13° \mathbb{B} 51'33		conjunction	11822 Oct 02 18:47	21° \mathbb{B} 12'32	-0°01'34
evening set	11817 Mar 31 12:57	26° \mathbb{B} 14'53		minimum elong	11822 Oct 02 18:48	21° \mathbb{B} 12'33	0°01'22
max. Earth dist.	11817 Apr 11 13:37	28° \mathbb{B} 37'45	6.46116 AU	behind sun begin	11822 Oct 02 10:25	21° \mathbb{B} 07'28	
				behind sun end	11822 Oct 03 03:11	21° \mathbb{B} 17'37	
conjunction	11817 Apr 13 10:12	29° \mathbb{B} 01'55	-0°04'02	max. Earth dist.	11822 Oct 04 14:09	21° \mathbb{B} 38'54	5.91645 AU
minimum elong	11817 Apr 13 10:11	29° \mathbb{B} 01'55	0°04'20	morning rise	11822 Oct 16 09:26	24° \mathbb{B} 30'36	
behind sun begin	11817 Apr 13 02:21	28° \mathbb{B} 57'41		asc. node	11822 Oct 27 07:16	27° \mathbb{B} 07'10	
behind sun end	11817 Apr 13 18:02	29° \mathbb{B} 06'08			11822 Nov 08 15:59	0° \mathbb{B}	
	11817 Apr 17 21:20	0° \mathbb{B}			11823 Feb 16 19:50	15° \mathbb{B}	
morning rise	11817 Apr 26 05:32	1° \mathbb{B} 48'16		retrograde	11823 Feb 24 12:57	15° \mathbb{B} 05'59	
	11817 Jul 05 17:34	15° \mathbb{B}			11823 Mar 04 05:31	15° \mathbb{B}	
retrograde	11817 Aug 25 18:26	18° \mathbb{B} 45'29		min. Earth dist.	11823 Apr 23 09:34	10° \mathbb{B} 14'54	3.96755 AU
	11817 Oct 16 21:08	15° \mathbb{B}		opposition	11823 Apr 24 21:58	10° \mathbb{B} 02'32	0°17'13
opposition	11817 Oct 25 19:17	13° \mathbb{B} 52'11	-0°20'41	direct	11823 Jun 22 01:00	5° \mathbb{B} 06'11	
min. Earth dist.	11817 Oct 27 08:17	13° \mathbb{B} 40'21	4.40483 AU		11823 Sep 13 10:21	15° \mathbb{B}	
direct	11817 Dec 27 03:04	8° \mathbb{B} 51'37		evening set	11823 Oct 27 03:41	24° \mathbb{B} 44'12	
	11818 Mar 04 09:55	15° \mathbb{B}					

conjunction	11823 Nov 09 18:10	27° \mathbb{M} 56'19	0°22'27	morning rise	11829 Apr 30 11:18	6° \mathcal{B} 08'28	
minimum elong	11823 Nov 09 18:09	27° \mathbb{M} 56'19	0°23'04		11829 Jun 12 22:49	15° \mathcal{B}	
max. Earth dist.	11823 Nov 12 06:26	28° \mathbb{M} 31'50	6.03930 AU	retrograde	11829 Aug 30 07:24	23° \mathcal{B} 12'04	
	11823 Nov 18 12:25	0° \mathcal{A}		opposition	11829 Oct 30 06:43	18° \mathcal{B} 18'45	-0°24'48
morning rise	11823 Nov 23 09:53	1° \mathcal{A} 08'43		min. Earth dist.	11829 Oct 31 21:10	18° \mathcal{B} 06'25	4.38371 AU
retrograde	11824 Mar 30 19:16	20° \mathcal{A} 38'30			11829 Nov 27 14:35	15° $\mathcal{R}\mathcal{B}$	
min. Earth dist.	11824 May 27 23:10	15° \mathcal{A} 47'46	4.12389 AU	direct	11829 Dec 31 12:29	13° \mathcal{B} 18'15	
opposition	11824 May 29 13:42	15° \mathcal{A} 34'44	0°46'53		11830 Feb 03 09:56	15° \mathcal{B}	
direct	11824 Jul 27 16:32	10° \mathcal{A} 36'15			11830 Apr 30 15:48	0° \mathbb{I}	
evening set	11824 Dec 01 03:54	29° \mathcal{A} 19'34		evening set	11830 May 05 16:35	1° \mathbb{I} 06'57	
	11824 Dec 04 03:41	0° \mathcal{Z}		max. Earth dist.	11830 May 16 03:27	3° \mathbb{I} 27'18	6.30709 AU
conjunction	11824 Dec 14 16:38	2° \mathcal{Z} 22'59	0°37'09	conjunction	11830 May 18 12:12	3° \mathbb{I} 59'11	-0°26'03
minimum elong	11824 Dec 14 16:38	2° \mathcal{Z} 22'59	0°37'57	minimum elong	11830 May 18 12:11	3° \mathbb{I} 59'11	0°26'43
max. Earth dist.	11824 Dec 16 23:55	2° \mathcal{Z} 54'15	6.21426 AU	morning rise	11830 May 31 06:43	6° \mathbb{I} 51'15	
morning rise	11824 Dec 28 05:09	5° \mathcal{Z} 25'58		retrograde	11830 Oct 02 15:33	24° \mathbb{I} 51'37	
retrograde	11825 May 02 06:52	23° \mathcal{Z} 39'12		opposition	11830 Dec 02 06:03	19° \mathbb{I} 57'52	-0°49'29
min. Earth dist.	11825 Jun 30 08:25	18° \mathcal{Z} 47'22	4.30083 AU	min. Earth dist.	11830 Dec 03 21:32	19° \mathbb{I} 45'07	4.22042 AU
opposition	11825 Jul 01 14:06	18° \mathcal{Z} 37'30	0°58'36	direct	11831 Feb 01 11:52	14° \mathbb{I} 58'50	
direct	11825 Aug 30 23:06	13° \mathcal{Z} 37'25			11831 May 22 07:22	0° \mathcal{E}	
	11825 Dec 27 22:21	0° \approx		evening set	11831 Jun 07 07:12	3° \mathcal{E} 38'55	
evening set	11826 Jan 03 18:34	1° \approx 28'41		max. Earth dist.	11831 Jun 18 01:31	6° \mathcal{E} 09'23	6.13151 AU
conjunction	11826 Jan 17 03:07	4° \approx 23'29	0°39'17	conjunction	11831 Jun 20 03:56	6° \mathcal{E} 38'52	-0°38'10
minimum elong	11826 Jan 17 03:07	4° \approx 23'29	0°39'59	minimum elong	11831 Jun 20 03:56	6° \mathcal{E} 38'51	0°38'59
max. Earth dist.	11826 Jan 18 09:59	4° \approx 40'21	6.37913 AU	morning rise	11831 Jul 03 01:01	9° \mathcal{E} 39'17	
morning rise	11826 Jan 30 10:41	7° \approx 17'31		retrograde	11831 Nov 07 18:37	28° \mathcal{E} 55'08	
	11826 Mar 08 18:39	15° \approx		opposition	11832 Jan 06 19:30	23° \mathcal{E} 59'47	-0°59'47
retrograde	11826 Jun 01 20:07	24° \approx 29'45		min. Earth dist.	11832 Jan 07 22:41	23° \mathcal{E} 50'52	4.04606 AU
opposition	11826 Aug 01 13:14	19° \approx 31'07	0°52'29	direct	11832 Mar 06 17:11	19° \mathcal{E} 02'47	
min. Earth dist.	11826 Aug 01 02:04	19° \approx 34'46	4.44172 AU		11832 Jun 03 13:00	0° \mathcal{Q}	
	11826 Sep 14 03:32	15° $\mathcal{R}\approx$		evening set	11832 Jul 11 05:29	8° \mathcal{Q} 37'38	
direct	11826 Oct 02 03:55	14° \approx 30'09		max. Earth dist.	11832 Jul 23 07:13	11° \mathcal{Q} 32'19	5.97444 AU
	11826 Oct 20 06:29	15° \approx					
	11827 Jan 26 23:17	0° \mathcal{H}		conjunction	11832 Jul 24 06:51	11° \mathcal{Q} 46'37	-0°37'40
evening set	11827 Feb 04 08:16	1° \mathcal{H} 46'08		minimum elong	11832 Jul 24 06:52	11° \mathcal{Q} 46'37	0°38'19
				morning rise	11832 Aug 06 09:25	14° \mathcal{Q} 56'34	
conjunction	11827 Feb 17 12:22	4° \mathcal{H} 34'58	0°30'16		11832 Aug 06 15:08	15° \mathcal{Q}	
minimum elong	11827 Feb 17 12:23	4° \mathcal{H} 34'58	0°30'40		11832 Oct 16 06:06	0° \mathcal{N}	
max. Earth dist.	11827 Feb 17 14:24	4° \mathcal{H} 36'03	6.48629 AU	retrograde	11832 Dec 15 04:32	5° \mathcal{N} 22'04	
morning rise	11827 Mar 02 14:39	7° \mathcal{H} 22'51		opposition	11833 Feb 12 15:58	0° \mathcal{N} 24'05	-0°48'02
retrograde	11827 Jul 01 09:09	24° \mathcal{H} 01'16		min. Earth dist.	11833 Feb 12 20:08	0° \mathcal{N} 22'42	3.92231 AU
opposition	11827 Aug 31 10:18	19° \mathcal{H} 05'28	0°32'52		11833 Feb 15 16:15	30° $\mathcal{R}\mathcal{Q}$	
min. Earth dist.	11827 Aug 31 18:23	19° \mathcal{H} 02'51	4.50951 AU	direct	11833 Apr 12 06:20	25° \mathcal{Q} 28'53	
direct	11827 Nov 01 19:11	14° \mathcal{H} 04'14			11833 Jun 04 16:29	0° \mathcal{N}	
	11828 Feb 29 08:48	0° \mathcal{Y}		evening set	11833 Aug 17 09:19	15° \mathcal{N} 39'29	
evening set	11828 Mar 05 16:39	1° \mathcal{Y} 07'28					
conjunction	11828 Mar 18 16:34	3° \mathcal{Y} 53'46	0°13'30	conjunction	11833 Aug 30 16:54	18° \mathcal{N} 55'12	-0°22'28
minimum elong	11828 Mar 18 16:35	3° \mathcal{Y} 53'47	0°13'31	minimum elong	11833 Aug 30 16:55	18° \mathcal{N} 55'13	0°22'41
behind sun begin	11828 Mar 18 12:09	3° \mathcal{Y} 51'25		max. Earth dist.	11833 Aug 31 05:56	19° \mathcal{N} 03'12	5.89655 AU
behind sun end	11828 Mar 18 21:00	3° \mathcal{Y} 56'08		morning rise	11833 Sep 13 02:47	22° \mathcal{N} 12'10	
max. Earth dist.	11828 Mar 17 14:28	3° \mathcal{Y} 39'49	6.51014 AU		11833 Oct 16 06:54	0° \mathcal{A}	
morning rise	11828 Mar 31 14:30	6° \mathcal{Y} 39'12		retrograde	11834 Jan 23 02:20	13° \mathcal{A} 07'11	
retrograde	11828 Jul 30 04:52	23° \mathcal{Y} 14'37		min. Earth dist.	11834 Mar 22 11:27	8° \mathcal{A} 13'20	3.90030 AU
opposition	11828 Sep 29 07:43	18° \mathcal{Y} 20'41	0°05'06	opposition	11834 Mar 23 09:29	8° \mathcal{A} 05'53	-0°15'55
min. Earth dist.	11828 Sep 30 10:32	18° \mathcal{Y} 12'07	4.48869 AU	direct	11834 May 20 08:18	3° \mathcal{A} 10'51	
direct	11828 Nov 30 23:08	13° \mathcal{Y} 19'37		asc. node	11834 Sep 04 12:27	18° \mathcal{A} 32'51	
desc. node	11828 Dec 03 21:38	13° \mathcal{Y} 20'23		evening set	11834 Sep 24 15:32	23° \mathcal{A} 19'09	
	11829 Apr 02 03:49	0° \mathcal{B}					
evening set	11829 Apr 04 19:13	0° \mathcal{B} 34'06		conjunction	11834 Oct 08 04:28	26° \mathcal{A} 35'41	0°02'08
max. Earth dist.	11829 Apr 15 15:26	2° \mathcal{B} 55'09	6.44543 AU	minimum elong	11834 Oct 08 04:26	26° \mathcal{A} 35'40	0°02'25
				behind sun begin	11834 Oct 07 20:04	26° \mathcal{A} 30'37	
				behind sun end	11834 Oct 08 12:48	26° \mathcal{A} 40'43	
conjunction	11829 Apr 17 16:00	3° \mathcal{B} 21'34	-0°06'58	max. Earth dist.	11834 Oct 10 03:21	27° \mathcal{A} 04'05	5.93240 AU
minimum elong	11829 Apr 17 16:00	3° \mathcal{B} 21'33	0°07'20	morning rise	11834 Oct 21 19:20	29° \mathcal{A} 53'03	
behind sun begin	11829 Apr 17 08:41	3° \mathcal{B} 17'36			11834 Oct 22 06:56	0° \mathbb{M}	
behind sun end	11829 Apr 17 23:18	3° \mathcal{B} 25'31			11835 Jan 01 04:26	15° \mathbb{M}	

retrograde	11835 Mar 01 14:39	20°♄19'36		max. Earth dist.	11841 Apr 19 21:17	7°♄16'15	6.42792 AU
min. Earth dist.	11835 Apr 28 12:19	15°♄28'25	3.98973 AU				
opposition	11835 Apr 30 01:02	15°♄15'56	0°22'10	conjunction	11841 Apr 21 22:12	7°♄42'59	-0°09'49
	11835 May 01 23:57	15°♄		minimum elong	11841 Apr 21 22:12	7°♄42'59	0°10'14
direct	11835 Jun 27 07:45	10°♄19'17		behind sun begin	11841 Apr 21 15:50	7°♄39'31	
	11835 Aug 21 05:42	15°♄		behind sun end	11841 Apr 22 04:33	7°♄46'26	
evening set	11835 Nov 01 06:35	29°♄48'50		morning rise	11841 May 04 17:09	10°♄30'28	
	11835 Nov 02 01:45	0°♄			11841 May 25 19:22	15°♄	
				retrograde	11841 Sep 03 20:03	27°♄40'56	
conjunction	11835 Nov 14 21:04	2°♄59'43	0°25'09	opposition	11841 Nov 03 18:37	22°♄47'39	-0°28'45
minimum elong	11835 Nov 14 21:03	2°♄59'43	0°25'49	min. Earth dist.	11841 Nov 05 09:49	22°♄35'06	4.36239 AU
max. Earth dist.	11835 Nov 17 10:44	3°♄35'49	6.06542 AU	direct	11842 Jan 04 22:09	17°♄47'22	
morning rise	11835 Nov 28 12:23	6°♄10'44			11842 Apr 13 20:36	0°♄	
retrograde	11836 Apr 04 09:58	25°♄28'39		evening set	11842 May 10 04:02	5°♄42'41	
min. Earth dist.	11836 Jun 01 16:21	20°♄38'02	4.15128 AU	max. Earth dist.	11842 May 20 13:59	8°♄03'21	6.28346 AU
opposition	11836 Jun 03 06:35	20°♄25'10	0°49'36				
direct	11836 Aug 01 13:01	15°♄26'29		conjunction	11842 May 22 23:30	8°♄35'50	-0°28'17
	11836 Nov 17 16:18	0°♄		minimum elong	11842 May 22 23:29	8°♄35'50	0°28'59
evening set	11836 Dec 05 22:06	4°♄01'16		morning rise	11842 Jun 04 18:22	11°♄28'57	
				retrograde	11842 Oct 07 13:32	29°♄39'01	
conjunction	11836 Dec 19 10:08	7°♄03'18	0°38'10	opposition	11842 Dec 07 02:20	24°♄45'03	-0°51'58
minimum elong	11836 Dec 19 10:08	7°♄03'17	0°38'58	min. Earth dist.	11842 Dec 08 16:29	24°♄32'42	4.19603 AU
max. Earth dist.	11836 Dec 21 12:53	7°♄31'50	6.24045 AU	direct	11843 Feb 06 04:31	19°♄46'12	
morning rise	11837 Jan 01 22:09	10°♄04'54			11843 May 04 08:07	0°♄	
retrograde	11837 May 06 14:18	28°♄08'17		evening set	11843 Jun 12 01:23	8°♄33'43	
opposition	11837 Jul 05 22:40	23°♄07'01	0°58'44	max. Earth dist.	11843 Jun 23 00:19	11°♄07'36	6.10842 AU
min. Earth dist.	11837 Jul 04 20:13	23°♄15'48	4.32385 AU				
direct	11837 Sep 04 12:48	18°♄06'47		conjunction	11843 Jun 24 22:43	11°♄34'51	-0°38'56
	11837 Dec 11 06:54	0°♄		minimum elong	11843 Jun 24 22:43	11°♄34'51	0°39'44
evening set	11838 Jan 08 04:57	5°♄52'08		morning rise	11843 Jul 07 20:13	14°♄36'29	
					11843 Sep 22 03:30	0°♄	
conjunction	11838 Jan 21 13:04	8°♄46'00	0°38'38	retrograde	11843 Nov 13 01:20	4°♄02'21	
minimum elong	11838 Jan 21 13:04	8°♄46'01	0°39'18		11844 Jan 05 04:34	30°♄	
max. Earth dist.	11838 Jan 22 16:52	9°♄01'08	6.39742 AU	opposition	11844 Jan 11 23:56	29°♄06'41	-0°59'30
morning rise	11838 Feb 03 19:47	11°♄39'02		min. Earth dist.	11844 Jan 13 00:39	28°♄58'34	4.02629 AU
	11838 Feb 19 13:37	15°♄		direct	11844 Mar 11 16:51	24°♄09'57	
retrograde	11838 Jun 05 21:40	28°♄45'22			11844 May 12 21:57	0°♄	
opposition	11838 Aug 05 16:45	23°♄47'15	0°50'28	evening set	11844 Jul 16 07:20	13°♄50'33	
min. Earth dist.	11838 Aug 05 07:42	23°♄50'12	4.45438 AU		11844 Jul 21 02:25	15°♄	
direct	11838 Oct 06 09:35	18°♄46'17					
	11839 Jan 10 09:45	0°♄		conjunction	11844 Jul 29 09:19	17°♄00'33	-0°36'21
evening set	11839 Feb 08 14:01	5°♄59'52		minimum elong	11844 Jul 29 09:20	17°♄00'34	0°36'58
				max. Earth dist.	11844 Jul 28 13:00	16°♄48'14	5.95966 AU
conjunction	11839 Feb 21 17:26	8°♄48'14	0°28'19	morning rise	11844 Aug 11 12:59	20°♄11'39	
minimum elong	11839 Feb 21 17:27	8°♄48'15	0°28'40		11844 Sep 23 09:36	0°♄	
max. Earth dist.	11839 Feb 21 14:16	8°♄46'32	6.49257 AU	retrograde	11844 Dec 20 13:00	10°♄43'23	
morning rise	11839 Mar 06 19:12	11°♄35'41		opposition	11845 Feb 18 00:54	5°♄44'53	-0°44'30
retrograde	11839 Jul 05 12:43	28°♄12'45		min. Earth dist.	11845 Feb 18 00:40	5°♄44'58	3.91418 AU
opposition	11839 Sep 04 13:18	23°♄17'22	0°29'23	direct	11845 Apr 17 11:55	0°♄49'45	
min. Earth dist.	11839 Sep 05 01:09	23°♄13'33	4.50926 AU	evening set	11845 Aug 22 16:12	21°♄01'52	
direct	11839 Nov 06 00:40	18°♄16'10					
	11840 Feb 12 23:42	0°♄		conjunction	11845 Sep 05 00:43	24°♄18'01	-0°19'22
evening set	11840 Mar 09 20:52	5°♄20'30		minimum elong	11845 Sep 05 00:44	24°♄18'02	0°19'31
				max. Earth dist.	11845 Sep 05 19:24	24°♄29'29	5.89601 AU
conjunction	11840 Mar 22 20:21	8°♄06'53	0°10'47	morning rise	11845 Sep 18 11:21	27°♄35'22	
minimum elong	11840 Mar 22 20:22	8°♄06'53	0°10'46		11845 Sep 28 10:52	0°♄	
behind sun begin	11840 Mar 22 14:15	8°♄03'38		retrograde	11846 Jan 28 10:54	18°♄29'16	
behind sun end	11840 Mar 23 02:30	8°♄10'09		opposition	11846 Mar 28 17:14	13°♄27'31	-0°10'31
max. Earth dist.	11840 Mar 21 14:12	7°♄50'44	6.50340 AU	min. Earth dist.	11846 Mar 27 17:26	13°♄35'35	3.90734 AU
morning rise	11840 Apr 04 17:57	10°♄52'27		direct	11846 May 25 17:01	8°♄32'17	
retrograde	11840 Aug 03 10:27	27°♄30'56		asc. node	11846 Jul 14 02:12	12°♄27'50	
opposition	11840 Oct 03 13:34	22°♄37'09	0°00'56	evening set	11846 Sep 29 22:19	28°♄36'45	
min. Earth dist.	11840 Oct 04 17:45	22°♄28'08	4.47609 AU		11846 Oct 05 16:43	0°♄	
desc. node	11840 Oct 15 08:27	21°♄08'04					
direct	11840 Dec 05 03:40	17°♄36'09		conjunction	11846 Oct 13 11:47	1°♄52'50	0°05'41
	11841 Mar 16 18:20	0°♄		minimum elong	11846 Oct 13 11:46	1°♄52'49	0°06'03
evening set	11841 Apr 09 01:34	4°♄54'57		behind sun begin	11846 Oct 13 03:49	1°♄48'03	





























































































































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max. Earth dist.	11846 Oct 15 14:46	2° \mathbb{M} 23'36	5.94621 AU	behind sun end	11852 Mar 27 08:50	12° Υ 26'25	
morning rise	11846 Oct 27 02:59	5° \mathbb{M} 09'39		morning rise	11852 Apr 08 22:44	15° Υ 08'06	
	11846 Dec 09 14:30	15° \mathbb{M}			11852 Jul 03 22:38	0° \mathcal{B}	
retrograde	11847 Mar 06 14:35	25° \mathbb{M} 28'16		retrograde	11852 Aug 07 17:53	1° \mathcal{B} 48'23	
min. Earth dist.	11847 May 03 11:57	20° \mathbb{M} 37'24	4.00872 AU	desc. node	11852 Aug 27 04:58	1° \mathcal{B} 13'21	
opposition	11847 May 05 01:57	20° \mathbb{M} 24'31	0°26'55		11852 Sep 11 14:23	30° $\mathcal{R}\Upsilon$	
direct	11847 Jul 02 10:14	15° \mathbb{M} 27'35		opposition	11852 Oct 07 20:26	26° Υ 54'48	-0°03'18
	11847 Oct 16 02:57	0° \mathcal{A}		min. Earth dist.	11852 Oct 09 02:52	26° Υ 45'05	4.46838 AU
evening set	11847 Nov 06 08:35	4° \mathcal{A} 50'11		direct	11852 Dec 09 11:22	21° Υ 53'56	
					11853 Feb 26 15:29	0° \mathcal{B}	
conjunction	11847 Nov 19 22:45	7° \mathcal{A} 59'57	0°27'40	evening set	11853 Apr 13 07:58	9° \mathcal{B} 15'14	
minimum elong	11847 Nov 19 22:44	7° \mathcal{A} 59'56	0°28'23	max. Earth dist.	11853 Apr 24 00:47	11° \mathcal{B} 35'25	6.41627 AU
max. Earth dist.	11847 Nov 22 10:31	8° \mathcal{A} 34'45	6.08754 AU				
morning rise	11847 Dec 03 13:57	11° \mathcal{A} 09'49		conjunction	11853 Apr 26 04:13	12° \mathcal{B} 03'34	-0°12'36
	11848 Mar 26 16:49	0° \mathcal{B}		minimum elong	11853 Apr 26 04:12	12° \mathcal{B} 03'34	0°13'05
retrograde	11848 Apr 09 00:38	0° \mathcal{B} 17'33		behind sun begin	11853 Apr 25 23:23	12° \mathcal{B} 00'56	
	11848 Apr 22 07:40	30° $\mathcal{R}\mathcal{A}$		behind sun end	11853 Apr 26 09:01	12° \mathcal{B} 06'11	
min. Earth dist.	11848 Jun 06 10:07	25° \mathcal{A} 26'38	4.17432 AU	morning rise	11853 May 08 23:01	14° \mathcal{B} 51'26	
opposition	11848 Jun 07 22:57	25° \mathcal{A} 14'15	0°52'00		11853 May 09 14:46	15° \mathcal{B}	
direct	11848 Aug 06 09:57	20° \mathcal{A} 15'15			11853 Aug 01 17:11	0° \mathbb{I}	
	11848 Oct 30 13:50	0° \mathcal{B}		retrograde	11853 Sep 08 07:16	2° \mathbb{I} 06'56	
evening set	11848 Dec 10 16:41	8° \mathcal{B} 43'09			11853 Oct 16 03:22	30° $\mathcal{R}\mathcal{B}$	
				opposition	11853 Nov 08 05:52	27° \mathcal{B} 13'35	-0°32'29
conjunction	11848 Dec 24 04:26	11° \mathcal{B} 44'04	0°38'57	min. Earth dist.	11853 Nov 09 20:44	27° \mathcal{B} 01'07	4.34747 AU
minimum elong	11848 Dec 24 04:26	11° \mathcal{B} 44'04	0°39'45	direct	11854 Jan 09 06:46	22° \mathcal{B} 13'28	
max. Earth dist.	11848 Dec 26 05:31	12° \mathcal{B} 11'32	6.26269 AU		11854 Mar 26 09:41	0° \mathbb{I}	
morning rise	11849 Jan 06 15:38	14° \mathcal{B} 44'25		evening set	11854 May 14 13:23	10° \mathbb{I} 13'13	
	11849 Mar 30 02:44	0° \approx		max. Earth dist.	11854 May 25 01:16	12° \mathbb{I} 35'28	6.26636 AU
retrograde	11849 May 10 22:35	2° \approx 39'08					
	11849 Jun 21 17:59	30° $\mathcal{R}\mathcal{B}$		conjunction	11854 May 27 08:55	13° \mathbb{I} 07'02	-0°30'18
min. Earth dist.	11849 Jul 09 07:27	27° \mathcal{B} 46'29	4.34356 AU	minimum elong	11854 May 27 08:54	13° \mathbb{I} 07'02	0°31'03
opposition	11849 Jul 10 08:04	27° \mathcal{B} 38'21	0°58'29	morning rise	11854 Jun 09 03:41	16° \mathbb{I} 00'50	
direct	11849 Sep 09 01:46	22° \mathcal{B} 38'01			11854 Aug 19 01:22	0° \mathcal{E}	
	11849 Nov 22 04:44	0° \approx		retrograde	11854 Oct 12 08:24	4° \mathcal{E} 18'29	
evening set	11850 Jan 12 16:59	10° \approx 18'26			11854 Dec 07 05:19	30° $\mathcal{R}\mathbb{I}$	
				opposition	11854 Dec 11 19:39	29° \mathbb{I} 24'23	-0°54'01
conjunction	11850 Jan 26 00:20	13° \approx 11'25	0°37'44	min. Earth dist.	11854 Dec 13 09:25	29° \mathbb{I} 12'09	4.17785 AU
minimum elong	11850 Jan 26 00:20	13° \approx 11'25	0°38'22	direct	11855 Feb 10 18:37	24° \mathbb{I} 25'50	
max. Earth dist.	11850 Jan 26 22:49	13° \approx 23'37	6.41327 AU		11855 Apr 13 15:35	0° \mathcal{E}	
	11850 Feb 03 08:39	15° \approx		evening set	11855 Jun 16 16:08	13° \mathcal{E} 18'49	
morning rise	11850 Feb 08 06:32	16° \approx 03'35		max. Earth dist.	11855 Jun 27 16:01	15° \mathcal{E} 53'55	6.09056 AU
	11850 Apr 25 10:08	0° \mathcal{H}					
retrograde	11850 Jun 10 03:17	3° \mathcal{H} 04'43		conjunction	11855 Jun 29 13:41	16° \mathcal{E} 20'51	-0°39'23
	11850 Jul 26 01:52	30° $\mathcal{R}\approx$		minimum elong	11855 Jun 29 13:41	16° \mathcal{E} 20'51	0°40'10
opposition	11850 Aug 09 22:27	28° \approx 07'02	0°48'07	morning rise	11855 Jul 12 11:53	19° \mathcal{E} 23'33	
min. Earth dist.	11850 Aug 09 16:42	28° \approx 08'55	4.46568 AU		11855 Aug 29 17:53	0° \mathcal{O}	
direct	11850 Oct 10 18:41	23° \approx 06'02		retrograde	11855 Nov 18 01:14	8° \mathcal{O} 57'45	
	11850 Dec 22 06:32	0° \mathcal{H}		opposition	11856 Jan 16 23:19	4° \mathcal{O} 01'45	-0°58'46
evening set	11851 Feb 12 21:29	10° \mathcal{H} 17'22		min. Earth dist.	11856 Jan 17 21:00	3° \mathcal{O} 54'36	4.01029 AU
					11856 Feb 21 21:14	30° $\mathcal{R}\mathcal{E}$	
conjunction	11851 Feb 26 00:28	13° \mathcal{H} 05'19	0°26'10	direct	11856 Mar 16 11:37	29° \mathcal{E} 05'14	
minimum elong	11851 Feb 26 00:29	13° \mathcal{H} 05'19	0°26'28		11856 Apr 09 01:43	0° \mathcal{O}	
max. Earth dist.	11851 Feb 25 19:02	13° \mathcal{H} 02'24	6.49888 AU		11856 Jul 05 00:22	15° \mathcal{O}	
morning rise	11851 Mar 11 01:28	15° \mathcal{H} 52'17		evening set	11856 Jul 21 04:06	18° \mathcal{O} 50'43	
	11851 May 29 19:45	0° Υ					
retrograde	11851 Jul 09 15:43	2° Υ 27'47		conjunction	11856 Aug 03 06:59	22° \mathcal{O} 01'42	-0°34'49
	11851 Aug 19 16:53	30° $\mathcal{R}\mathcal{H}$		minimum elong	11856 Aug 03 07:00	22° \mathcal{O} 01'42	0°35'23
opposition	11851 Sep 08 18:01	27° \mathcal{H} 32'44	0°25'40	max. Earth dist.	11856 Aug 02 15:33	21° \mathcal{O} 52'18	5.94714 AU
min. Earth dist.	11851 Sep 09 07:01	27° \mathcal{H} 28'34	4.51070 AU	morning rise	11856 Aug 16 11:24	25° \mathcal{O} 13'46	
direct	11851 Nov 10 05:40	22° \mathcal{H} 31'39			11856 Sep 05 13:26	0° \mathcal{H}	
	11852 Jan 25 10:41	0° Υ		retrograde	11856 Dec 25 18:48	15° \mathcal{H} 51'15	
evening set	11852 Mar 14 02:46	9° Υ 36'17		opposition	11857 Feb 23 04:23	10° \mathcal{H} 52'23	-0°40'48
max. Earth dist.	11852 Mar 25 17:09	12° Υ 05'09	6.50011 AU	min. Earth dist.	11857 Feb 23 02:25	10° \mathcal{H} 53'03	3.90650 AU
				direct	11857 Apr 22 13:41	5° \mathcal{H} 57'20	
conjunction	11852 Mar 27 01:40	12° Υ 22'35	0°07'59	evening set	11857 Aug 27 17:49	26° \mathcal{H} 11'17	
minimum elong	11852 Mar 27 01:40	12° Υ 22'35	0°07'53				

conjunction	11857 Sep 10 03:13	29° \mathbb{M} 27'59	-0°16'16	evening set	11863 Feb 17 05:02	14° \mathbb{H} 35'55	
minimum elong	11857 Sep 10 03:14	29° \mathbb{M} 27'59	0°16'22				
max. Earth dist.	11857 Sep 11 02:06	29° \mathbb{M} 42'00	5.89392 AU	conjunction	11863 Mar 02 07:15	17° \mathbb{H} 23'21	0°23'51
	11857 Sep 12 07:27	0° \mathbb{L}		minimum elong	11863 Mar 02 07:15	17° \mathbb{H} 23'21	0°24'07
morning rise	11857 Sep 23 14:45	2° \mathbb{L} 45'50		max. Earth dist.	11863 Mar 01 21:01	17° \mathbb{H} 17'54	6.50475 AU
retrograde	11858 Feb 02 13:41	23° \mathbb{L} 39'35		morning rise	11863 Mar 15 07:45	20° \mathbb{H} 09'53	
opposition	11858 Apr 02 19:46	18° \mathbb{L} 37'33	-0°05'19		11863 May 04 11:09	0° \mathbb{Y}	
min. Earth dist.	11858 Apr 01 17:24	18° \mathbb{L} 46'29	3.91132 AU	retrograde	11863 Jul 13 21:16	6° \mathbb{Y} 43'45	
asc. node	11858 May 26 09:18	13° \mathbb{L} 44'11		opposition	11863 Sep 12 23:10	1° \mathbb{Y} 48'52	0°21'47
direct	11858 May 30 17:53	13° \mathbb{L} 42'12		min. Earth dist.	11863 Sep 13 15:19	1° \mathbb{Y} 43'41	4.51121 AU
	11858 Sep 19 05:28	0° \mathbb{L}			11863 Sep 27 10:27	30° \mathbb{R} \mathbb{H}	
evening set	11858 Oct 05 01:19	3° \mathbb{L} 44'42		direct	11863 Nov 14 12:56	26° \mathbb{H} 47'40	
					11864 Jan 01 11:57	0° \mathbb{Y}	
conjunction	11858 Oct 18 15:04	7° \mathbb{L} 00'31	0°09'01	evening set	11864 Mar 18 08:08	13° \mathbb{Y} 52'34	
minimum elong	11858 Oct 18 15:04	7° \mathbb{L} 00'30	0°09'26	max. Earth dist.	11864 Mar 29 19:34	16° \mathbb{Y} 20'01	6.49488 AU
behind sun begin	11858 Oct 18 08:06	6° \mathbb{L} 56'20					
behind sun end	11858 Oct 18 22:02	7° \mathbb{L} 04'41		conjunction	11864 Mar 31 06:41	16° \mathbb{Y} 38'53	0°05'07
max. Earth dist.	11858 Oct 20 18:49	7° \mathbb{L} 31'38	5.95565 AU	minimum elong	11864 Mar 31 06:40	16° \mathbb{Y} 38'52	0°04'57
morning rise	11858 Nov 01 06:48	10° \mathbb{L} 17'03		behind sun begin	11864 Mar 30 22:53	16° \mathbb{Y} 34'43	
	11858 Nov 21 10:11	15° \mathbb{L}		behind sun end	11864 Mar 31 14:27	16° \mathbb{Y} 43'02	
	11859 Feb 22 03:35	0° \mathbb{X}		morning rise	11864 Apr 13 03:13	19° \mathbb{Y} 24'23	
retrograde	11859 Mar 11 11:05	0° \mathbb{X} 29'55			11864 Jun 06 08:08	0° \mathbb{B}	
	11859 Mar 28 17:37	30° \mathbb{R} \mathbb{L}		desc. node	11864 Jul 07 18:49	4° \mathbb{B} 15'58	
min. Earth dist.	11859 May 08 08:57	25° \mathbb{L} 39'09	4.02252 AU	retrograde	11864 Aug 12 00:13	6° \mathbb{B} 07'08	
opposition	11859 May 09 23:28	25° \mathbb{L} 26'04	0°31'15	opposition	11864 Oct 12 03:46	1° \mathbb{B} 13'34	-0°07'34
direct	11859 Jul 07 10:26	20° \mathbb{L} 28'51		min. Earth dist.	11864 Oct 13 10:59	1° \mathbb{B} 03'36	4.45751 AU
	11859 Sep 27 15:05	0° \mathbb{X}			11864 Oct 21 20:24	30° \mathbb{R} \mathbb{Y}	
evening set	11859 Nov 11 08:09	9° \mathbb{X} 46'47		direct	11864 Dec 13 16:40	26° \mathbb{Y} 12'44	
					11865 Feb 03 20:00	0° \mathbb{B}	
conjunction	11859 Nov 24 22:28	12° \mathbb{X} 55'47	0°29'54	evening set	11865 Apr 17 14:56	13° \mathbb{B} 37'29	
minimum elong	11859 Nov 24 22:27	12° \mathbb{X} 55'46	0°30'39		11865 Apr 23 21:53	15° \mathbb{B}	
max. Earth dist.	11859 Nov 27 11:00	13° \mathbb{X} 30'53	6.10459 AU	max. Earth dist.	11865 Apr 28 06:39	15° \mathbb{B} 57'33	6.40031 AU
morning rise	11859 Dec 08 13:17	16° \mathbb{X} 04'42					
	11860 Feb 15 02:00	0° \mathbb{B}		conjunction	11865 Apr 30 10:53	16° \mathbb{B} 26'17	-0°15'23
retrograde	11860 Apr 13 16:05	5° \mathbb{B} 04'18		minimum elong	11865 Apr 30 10:52	16° \mathbb{B} 26'16	0°15'54
min. Earth dist.	11860 Jun 11 02:22	0° \mathbb{B} 13'15	4.19282 AU	behind sun begin	11865 Apr 30 09:29	16° \mathbb{B} 25'31	
opposition	11860 Jun 12 14:10	0° \mathbb{B} 01'14	0°53'58	behind sun end	11865 Apr 30 12:15	16° \mathbb{B} 27'02	
	11860 Jun 12 17:50	30° \mathbb{R} \mathbb{X}		morning rise	11865 May 13 05:27	19° \mathbb{B} 14'39	
direct	11860 Aug 11 04:44	25° \mathbb{X} 02'02			11865 Jul 05 17:06	0° \mathbb{I}	
	11860 Oct 08 12:52	0° \mathbb{B}		retrograde	11865 Sep 12 22:11	6° \mathbb{I} 36'44	
evening set	11860 Dec 15 10:31	13° \mathbb{B} 24'29		opposition	11865 Nov 12 18:49	1° \mathbb{I} 43'21	-0°36'09
				min. Earth dist.	11865 Nov 14 11:18	1° \mathbb{I} 30'22	4.32712 AU
conjunction	11860 Dec 28 21:42	16° \mathbb{B} 24'24	0°39'27		11865 Nov 26 11:20	30° \mathbb{R} \mathbb{B}	
minimum elong	11860 Dec 28 21:42	16° \mathbb{B} 24'24	0°40'14	direct	11866 Jan 13 17:52	26° \mathbb{B} 43'21	
max. Earth dist.	11860 Dec 30 19:56	16° \mathbb{B} 50'10	6.28110 AU		11866 Mar 02 04:49	0° \mathbb{I}	
morning rise	11861 Jan 11 08:30	19° \mathbb{B} 23'46		evening set	11866 May 19 01:06	14° \mathbb{I} 49'24	
	11861 Mar 04 08:05	0° \mathbb{B}		max. Earth dist.	11866 May 29 11:53	17° \mathbb{I} 11'49	6.24307 AU
retrograde	11861 May 15 06:33	7° \mathbb{B} 11'03					
opposition	11861 Jul 14 17:35	2° \mathbb{B} 10'33	0°57'53	conjunction	11866 May 31 20:40	17° \mathbb{I} 44'11	-0°32'12
min. Earth dist.	11861 Jul 13 18:40	2° \mathbb{B} 18'07	4.36050 AU	minimum elong	11866 May 31 20:39	17° \mathbb{I} 44'11	0°32'59
	11861 Jul 31 19:47	30° \mathbb{R} \mathbb{B}		morning rise	11866 Jun 13 15:48	20° \mathbb{I} 39'04	
direct	11861 Sep 13 14:22	27° \mathbb{B} 10'01			11866 Jul 27 07:07	0° \mathbb{B}	
	11861 Oct 27 16:32	0° \mathbb{B}		retrograde	11866 Oct 17 06:24	9° \mathbb{B} 06'40	
evening set	11862 Jan 17 04:50	14° \mathbb{B} 45'59		opposition	11866 Dec 16 16:38	4° \mathbb{B} 12'19	-0°55'51
	11862 Jan 18 06:54	15° \mathbb{B}		min. Earth dist.	11866 Dec 18 04:26	4° \mathbb{B} 00'41	4.15325 AU
					11867 Jan 24 10:52	30° \mathbb{R} \mathbb{I}	
conjunction	11862 Jan 30 11:44	17° \mathbb{B} 38'11	0°36'35	direct	11867 Feb 15 10:14	29° \mathbb{I} 13'58	
minimum elong	11862 Jan 30 11:44	17° \mathbb{B} 38'11	0°37'11		11867 Mar 09 10:19	0° \mathbb{B}	
max. Earth dist.	11862 Jan 31 08:21	17° \mathbb{B} 49'21	6.42759 AU	evening set	11867 Jun 21 11:10	18° \mathbb{B} 14'46	
morning rise	11862 Feb 12 17:03	20° \mathbb{B} 29'28		max. Earth dist.	11867 Jul 02 15:46	20° \mathbb{B} 53'26	6.06687 AU
	11862 Apr 01 06:13	0° \mathbb{H}					
retrograde	11862 Jun 14 07:45	7° \mathbb{H} 25'31		conjunction	11867 Jul 04 09:22	21° \mathbb{B} 18'07	-0°39'37
opposition	11862 Aug 14 04:15	2° \mathbb{H} 28'10	0°45'28	minimum elong	11867 Jul 04 09:22	21° \mathbb{B} 18'07	0°40'23
min. Earth dist.	11862 Aug 14 00:19	2° \mathbb{H} 29'27	4.47628 AU	morning rise	11867 Jul 17 08:10	24° \mathbb{B} 22'08	
	11862 Sep 03 02:34	30° \mathbb{R} \mathbb{B}			11867 Aug 10 18:23	0° \mathbb{Q}	
direct	11862 Oct 15 03:08	27° \mathbb{B} 27'05		retrograde	11867 Nov 23 09:37	14° \mathbb{Q} 07'00	
	11862 Nov 26 10:26	0° \mathbb{H}		opposition	11868 Jan 22 04:52	9° \mathbb{Q} 10'40	-0°57'36

min. Earth dist.	11868 Jan 23 00:45	9°♏04'06	3.98966 AU	opposition	11873 Jul 19 02:15	6°♐39'53	0°56'59
direct	11868 Mar 21 13:32	4°♏14'24		direct	11873 Sep 18 04:08	1°♐39'16	
	11868 Jun 16 19:27	15°♏			11874 Jan 01 21:15	15°♐	
evening set	11868 Jul 26 07:28	24°♏06'17		evening set	11874 Jan 21 15:04	19°♐09'10	
conjunction	11868 Aug 08 11:15	27°♏18'26	-0°32'57	conjunction	11874 Feb 03 21:09	22°♐00'21	0°35'18
minimum elong	11868 Aug 08 11:16	27°♏18'26	0°33'26	minimum elong	11874 Feb 03 21:10	22°♐00'21	0°35'51
max. Earth dist.	11868 Aug 08 00:04	27°♏11'37	5.93168 AU	max. Earth dist.	11874 Feb 04 12:57	22°♐08'51	6.44593 AU
	11868 Aug 19 12:29	0°♐		morning rise	11874 Feb 17 01:50	24°♐50'39	
morning rise	11868 Aug 21 16:47	0°♐31'44			11874 Mar 13 19:39	0°♐	
retrograde	11868 Dec 31 06:05	21°♐15'35		retrograde	11874 Jun 18 10:25	11°♐40'57	
opposition	11869 Feb 28 14:30	16°♐16'20	-0°36'31	opposition	11874 Aug 18 08:17	6°♐43'58	0°42'41
min. Earth dist.	11869 Feb 28 08:13	16°♐18'26	3.89824 AU	min. Earth dist.	11874 Aug 18 07:14	6°♐44'18	4.48902 AU
direct	11869 Apr 27 19:52	11°♐21'22		direct	11874 Oct 19 09:50	1°♐42'49	
	11869 Aug 26 10:37	0°♑		evening set	11875 Feb 21 09:57	18°♐48'52	
evening set	11869 Sep 02 02:56	1°♑37'11					
conjunction	11869 Sep 15 13:04	4°♑54'17	-0°12'51	conjunction	11875 Mar 06 11:42	21°♐35'51	0°21'29
minimum elong	11869 Sep 15 13:04	4°♑54'17	0°12'51	minimum elong	11875 Mar 06 11:42	21°♐35'51	0°21'41
behind sun begin	11869 Sep 15 07:56	4°♑51'09		max. Earth dist.	11875 Mar 05 22:36	21°♐28'52	6.51095 AU
behind sun end	11869 Sep 15 18:13	4°♑57'26		morning rise	11875 Mar 19 11:22	24°♐21'53	
max. Earth dist.	11869 Sep 16 15:51	5°♑10'42	5.89373 AU		11875 Apr 15 21:02	0°♑	
morning rise	11869 Sep 29 01:33	8°♑12'33		retrograde	11875 Jul 17 23:03	10°♑54'33	
retrograde	11870 Feb 07 21:26	29°♑04'42		opposition	11875 Sep 17 02:10	5°♑59'57	0°17'53
asc. node	11870 Apr 05 19:39	24°♑21'33		min. Earth dist.	11875 Sep 17 20:33	5°♑54'04	4.51051 AU
min. Earth dist.	11870 Apr 06 23:21	24°♑12'09	3.91927 AU	direct	11875 Nov 18 16:07	0°♑58'48	
opposition	11870 Apr 08 04:23	24°♑02'17	0°00'14	evening set	11876 Mar 22 11:51	18°♑04'43	
direct	11870 Jun 05 03:04	19°♑06'46		max. Earth dist.	11876 Apr 02 18:12	20°♑29'47	6.48711 AU
	11870 Aug 31 13:47	0°♒					
evening set	11870 Oct 10 09:57	9°♒05'22		conjunction	11876 Apr 04 09:46	20°♑51'06	0°02'15
conjunction	11870 Oct 24 00:14	12°♒20'38	0°12'28	minimum elong	11876 Apr 04 09:46	20°♑51'06	0°02'02
minimum elong	11870 Oct 24 00:13	12°♒20'38	0°12'57	behind sun begin	11876 Apr 04 01:46	20°♑46'49	
behind sun begin	11870 Oct 23 19:11	12°♒17'38		behind sun end	11876 Apr 04 17:46	20°♑55'23	
behind sun end	11870 Oct 24 05:14	12°♒23'38		morning rise	11876 Apr 17 06:02	23°♑36'46	
max. Earth dist.	11870 Oct 26 08:13	12°♒54'11	5.97114 AU	desc. node	11876 May 17 19:34	29°♑55'49	
	11870 Nov 04 02:40	15°♒			11876 May 18 04:06	0°♒	
morning rise	11870 Nov 06 15:59	15°♒36'27		retrograde	11876 Aug 16 08:25	10°♒23'11	
	11871 Jan 13 19:16	0°♒		opposition	11876 Oct 16 09:59	5°♒29'44	-0°11'45
retrograde	11871 Mar 16 12:58	5°♒40'41		min. Earth dist.	11876 Oct 17 20:19	5°♒18'45	4.44295 AU
min. Earth dist.	11871 May 13 10:16	0°♒50'01	4.04375 AU	direct	11876 Dec 17 22:31	0°♒28'54	
opposition	11871 May 15 01:07	0°♒36'50	0°35'33		11877 Apr 08 02:23	15°♒	
	11871 May 19 14:02	30°♒♒		evening set	11877 Apr 21 20:55	17°♒58'34	
direct	11871 Jul 12 15:38	25°♒39'22		max. Earth dist.	11877 May 02 10:10	20°♒17'55	6.37983 AU
	11871 Sep 03 19:04	0°♒					
evening set	11871 Nov 16 10:58	14°♒49'39		conjunction	11877 May 04 16:48	20°♒48'06	-0°18'03
conjunction	11871 Nov 30 00:53	17°♒57'23	0°32'01	minimum elong	11877 May 04 16:47	20°♒48'06	0°18'38
minimum elong	11871 Nov 30 00:52	17°♒57'22	0°32'47	morning rise	11877 May 17 11:19	23°♒37'15	
max. Earth dist.	11871 Dec 02 13:02	18°♒32'03	6.12950 AU		11877 Jun 16 10:58	0°♓	
morning rise	11871 Dec 13 15:21	21°♒04'59		retrograde	11877 Sep 17 12:05	11°♓07'46	
	11872 Jan 23 19:24	0°♓		opposition	11877 Nov 17 07:59	6°♓14'18	-0°39'38
retrograde	11872 Apr 18 05:22	9°♓53'25		min. Earth dist.	11877 Nov 19 00:07	6°♓01'23	4.30196 AU
min. Earth dist.	11872 Jun 15 19:04	5°♓02'29	4.21912 AU	direct	11878 Jan 18 02:04	1°♓14'27	
opposition	11872 Jun 17 06:30	4°♓50'36	0°55'38	evening set	11878 May 23 13:29	19°♓28'42	
	11872 Aug 06 13:41	30°♒♒		max. Earth dist.	11878 Jun 03 01:53	21°♓52'55	6.21511 AU
direct	11872 Aug 16 00:38	29°♒51'10		conjunction	11878 Jun 05 09:17	22°♓24'42	-0°33'56
	11872 Aug 25 13:39	0°♓		minimum elong	11878 Jun 05 09:16	22°♓24'42	0°34'43
evening set	11872 Dec 20 04:42	18°♓05'39		morning rise	11878 Jun 18 04:44	25°♓20'53	
conjunction	11873 Jan 02 15:19	21°♓04'15	0°39'44		11878 Jul 08 22:52	0°♓	
minimum elong	11873 Jan 02 15:19	21°♓04'15	0°40'32	retrograde	11878 Oct 22 09:05	14°♓00'27	
max. Earth dist.	11873 Jan 04 10:46	21°♓28'21	6.30674 AU	opposition	11878 Dec 21 15:43	9°♓05'55	-0°57'23
morning rise	11873 Jan 16 01:13	24°♓02'12		min. Earth dist.	11878 Dec 23 03:06	8°♓54'24	4.12452 AU
	11873 Feb 13 00:54	0°♓		direct	11879 Feb 20 05:12	4°♓07'50	
retrograde	11873 May 19 14:21	11°♓39'55		evening set	11879 Jun 26 08:49	23°♓18'04	
min. Earth dist.	11873 Jul 18 06:07	6°♓46'30	4.38340 AU	max. Earth dist.	11879 Jul 07 16:43	25°♓59'40	6.04003 AU
				conjunction	11879 Jul 09 07:44	26°♓22'56	-0°39'35
				minimum elong	11879 Jul 09 07:44	26°♓22'56	0°40'21

morning rise	11879 Jul 22 07:28	29°☿28'34			11885 Apr 27 04:31	15°♊	
	11879 Jul 24 12:32	0°♌		retrograde	11885 May 23 19:00	16°♊06'09	
	11879 Oct 05 15:43	15°♌			11885 Jun 19 06:55	15°♋	
retrograde	11879 Nov 28 19:38	19°♌25'08		opposition	11885 Jul 23 10:02	11°♊06'31	0°55'45
	11880 Jan 23 13:47	15°♋♌		min. Earth dist.	11885 Jul 22 15:48	11°♊12'31	4.40406 AU
opposition	11880 Jan 27 13:16	14°♌28'28	-0°55'59	direct	11885 Sep 22 15:08	6°♊05'47	
min. Earth dist.	11880 Jan 28 04:54	14°♌23'17	3.96763 AU		11885 Dec 14 22:16	15°♊	
direct	11880 Mar 26 15:59	9°♌32'29		evening set	11886 Jan 26 00:36	23°♊30'32	
	11880 May 25 05:15	15°♌					
evening set	11880 Jul 31 14:26	29°♌31'17		conjunction	11886 Feb 08 06:04	26°♊20'52	0°33'48
	11880 Aug 02 13:40	0°♍		minimum elong	11886 Feb 08 06:04	26°♊20'52	0°34'19
				max. Earth dist.	11886 Feb 08 17:31	26°♊27'01	6.46110 AU
conjunction	11880 Aug 13 19:08	2°♍44'37	-0°30'46	morning rise	11886 Feb 21 09:55	29°♊10'17	
minimum elong	11880 Aug 13 19:09	2°♍44'37	0°31'12		11886 Feb 25 07:24	0°♋	
max. Earth dist.	11880 Aug 13 13:30	2°♍41'10	5.91676 AU	retrograde	11886 Jun 22 13:59	15°♋56'02	
morning rise	11880 Aug 27 01:50	5°♍59'09		opposition	11886 Aug 22 12:32	10°♋59'28	0°39'39
retrograde	11881 Jan 05 19:57	26°♍48'49		min. Earth dist.	11886 Aug 22 14:55	10°♋58'42	4.49786 AU
opposition	11881 Mar 06 03:44	21°♍48'59	-0°31'52	direct	11886 Oct 23 17:21	5°♋58'19	
min. Earth dist.	11881 Mar 05 17:32	21°♍52'25	3.89230 AU	evening set	11887 Feb 25 15:39	23°♋02'49	
direct	11881 May 03 07:05	16°♍54'02					
	11881 Aug 08 05:24	0°♎		conjunction	11887 Mar 10 16:43	25°♋49'30	0°18'59
evening set	11881 Sep 07 14:36	7°♎10'19		minimum elong	11887 Mar 10 16:44	25°♋49'30	0°19'07
				max. Earth dist.	11887 Mar 09 22:02	25°♋39'31	6.51282 AU
conjunction	11881 Sep 21 01:43	10°♎27'40	-0°09'17	morning rise	11887 Mar 23 16:00	28°♋35'18	
minimum elong	11881 Sep 21 01:43	10°♎27'40	0°09'12		11887 Mar 30 08:35	0°♏	
behind sun begin	11881 Sep 20 18:40	10°♎23'22		retrograde	11887 Jul 22 04:20	15°♏08'11	
behind sun end	11881 Sep 21 08:46	10°♎31'57		opposition	11887 Sep 21 06:56	10°♏13'47	0°13'50
max. Earth dist.	11881 Sep 22 11:45	10°♎48'29	5.89751 AU	min. Earth dist.	11887 Sep 22 04:16	10°♏06'57	4.50543 AU
morning rise	11881 Oct 04 14:49	13°♎46'02		direct	11887 Nov 22 21:31	5°♏12'37	
	11881 Dec 20 18:11	0°♏		desc. node	11888 Mar 25 03:47	22°♏00'51	
retrograde	11882 Feb 13 07:58	4°♏34'14		evening set	11888 Mar 26 17:05	22°♏20'47	
asc. node	11882 Feb 14 03:08	4°♏34'10		max. Earth dist.	11888 Apr 06 21:24	24°♏45'07	6.47541 AU
	11882 Apr 10 02:05	30°♋♎					
min. Earth dist.	11882 Apr 12 07:07	29°♎42'02	3.93226 AU	conjunction	11888 Apr 08 14:49	25°♏07'29	-0°00'46
opposition	11882 Apr 13 14:25	29°♎31'25	0°05'49	minimum elong	11888 Apr 08 14:49	25°♏07'29	0°01'01
direct	11882 Jun 10 14:37	24°♎35'39		behind sun begin	11888 Apr 08 06:49	25°♏03'12	
	11882 Aug 08 13:40	0°♏		behind sun end	11888 Apr 08 22:48	25°♏11'47	
evening set	11882 Oct 15 19:39	14°♏28'06		morning rise	11888 Apr 21 10:36	27°♏53'28	
	11882 Oct 18 01:21	15°♏			11888 May 01 08:12	0°♐	
				retrograde	11888 Aug 20 17:22	14°♐44'48	
conjunction	11882 Oct 29 09:59	17°♏42'26	0°15'50	opposition	11888 Oct 20 19:01	9°♐51'27	-0°15'59
minimum elong	11882 Oct 29 09:58	17°♏42'26	0°16'22	min. Earth dist.	11888 Oct 22 06:23	9°♐40'08	4.42529 AU
max. Earth dist.	11882 Oct 31 20:10	18°♏17'07	5.99152 AU	direct	11888 Dec 22 04:53	4°♐50'45	
morning rise	11882 Nov 12 01:55	20°♏57'16			11889 Mar 21 19:44	15°♐	
	11882 Dec 22 07:49	0°♑		evening set	11889 Apr 26 05:57	22°♐26'13	
retrograde	11883 Mar 21 10:36	10°♑50'37		max. Earth dist.	11889 May 06 17:27	24°♐45'21	6.35734 AU
min. Earth dist.	11883 May 18 09:47	6°♑00'16	4.06908 AU				
opposition	11883 May 20 01:53	5°♑46'41	0°39'31	conjunction	11889 May 09 01:35	25°♐16'32	-0°20'42
direct	11883 Jul 17 19:13	0°♑48'51		minimum elong	11889 May 09 01:34	25°♐16'32	0°21'20
evening set	11883 Nov 21 12:50	19°♑50'13		morning rise	11889 May 21 20:10	28°♐06'36	
					11889 May 30 10:42	0°♒	
conjunction	11883 Dec 05 02:23	22°♑56'31	0°33'53	retrograde	11889 Sep 22 07:49	15°♒46'18	
minimum elong	11883 Dec 05 02:22	22°♑56'30	0°34'40	opposition	11889 Nov 22 00:51	10°♒52'48	-0°42'59
max. Earth dist.	11883 Dec 07 12:39	23°♑29'55	6.15726 AU	min. Earth dist.	11889 Nov 23 17:54	10°♒39'35	4.27595 AU
morning rise	11883 Dec 18 16:16	26°♑02'36		direct	11890 Jan 22 15:57	5°♒53'11	
	11884 Jan 05 09:28	0°♓		evening set	11890 May 28 05:18	24°♒15'49	
retrograde	11884 Apr 22 19:29	14°♓39'15		max. Earth dist.	11890 Jun 07 19:04	26°♒41'42	6.18778 AU
opposition	11884 Jun 21 21:44	9°♓36'43	0°56'54				
min. Earth dist.	11884 Jun 20 12:50	9°♓47'44	4.24652 AU	conjunction	11890 Jun 10 01:28	27°♒13'06	-0°35'29
direct	11884 Aug 20 21:38	4°♓37'03		minimum elong	11890 Jun 10 01:28	27°♒13'06	0°36'17
evening set	11884 Dec 24 21:19	22°♓43'23		morning rise	11890 Jun 22 21:22	0°♔10'38	
					11890 Jun 22 02:51	0°♔	
conjunction	11885 Jan 07 07:21	25°♓40'42	0°39'47	retrograde	11890 Oct 27 12:28	19°♔01'52	
minimum elong	11885 Jan 07 07:21	25°♓40'42	0°40'32	opposition	11890 Dec 26 18:08	14°♔07'10	-0°58'31
max. Earth dist.	11885 Jan 08 23:55	26°♓03'04	6.33158 AU	min. Earth dist.	11890 Dec 28 02:33	13°♔56'36	4.09833 AU
morning rise	11885 Jan 20 16:31	28°♓37'19		direct	11891 Feb 25 01:29	9°♔09'31	
	11885 Jan 27 00:30	0°♕		evening set	11891 Jul 01 09:26	28°♔28'09	

	11891 Jul 07 19:28	0°♎		conjunction	11897 Jan 11 19:44	0°♊09'02	0°39'35
max. Earth dist.	11891 Jul 12 22:23	1°♎13'37	6.01756 AU	minimum elong	11897 Jan 11 19:44	0°♊09'02	0°40'19
					11897 Jan 11 03:17	0°♊	
conjunction	11891 Jul 14 08:58	1°♎34'21	-0°39'14	max. Earth dist.	11897 Jan 13 06:51	0°♊28'19	6.35356 AU
minimum elong	11891 Jul 14 08:59	1°♎34'22	0°39'58	morning rise	11897 Jan 25 04:12	3°♊04'28	
morning rise	11891 Jul 27 09:38	4°♎41'26			11897 Mar 27 02:24	15°♊	
	11891 Sep 11 06:54	15°♎		retrograde	11897 May 27 23:36	20°♊25'47	
retrograde	11891 Dec 04 08:30	24°♎48'01		opposition	11897 Jul 27 14:59	15°♊26'39	0°54'17
opposition	11892 Feb 01 23:53	19°♎50'58	-0°53'51	min. Earth dist.	11897 Jul 27 00:41	15°♊31'20	4.42093 AU
min. Earth dist.	11892 Feb 02 11:55	19°♎46'58	3.95136 AU		11897 Jul 31 00:23	15°♊	
	11892 Mar 25 04:01	15°♎♎		direct	11897 Sep 27 01:02	10°♊25'49	
direct	11892 Mar 31 23:25	14°♎55'17			11897 Nov 23 10:11	15°♊	
	11892 Apr 07 17:55	15°♎		evening set	11898 Jan 30 07:32	27°♊46'47	
	11892 Jul 16 02:20	0°♎			11898 Feb 09 16:28	0°♋	
evening set	11892 Aug 05 22:28	4°♎58'31					
				conjunction	11898 Feb 12 12:28	0°♋36'30	0°32'11
conjunction	11892 Aug 19 04:14	8°♎12'43	-0°28'19	minimum elong	11898 Feb 12 12:29	0°♋36'30	0°32'40
minimum elong	11892 Aug 19 04:15	8°♎12'44	0°28'42	max. Earth dist.	11898 Feb 12 19:36	0°♋40'19	6.47175 AU
max. Earth dist.	11892 Aug 19 06:01	8°♎13'49	5.90867 AU	morning rise	11898 Feb 25 15:41	3°♋25'17	
morning rise	11892 Sep 01 11:47	11°♎28'04		retrograde	11898 Jun 26 15:13	20°♋08'05	
	11892 Dec 04 01:45	0°♎		opposition	11898 Aug 26 15:15	15°♋11'52	0°36'32
retrograde	11893 Jan 11 09:17	2°♎20'15		min. Earth dist.	11898 Aug 26 19:55	15°♋10'21	4.50202 AU
	11893 Feb 18 18:12	30°♎		direct	11898 Oct 27 21:18	10°♋10'41	
opposition	11893 Mar 11 16:04	27°♎20'00	-0°26'58	evening set	11899 Mar 01 20:02	27°♋15'05	
min. Earth dist.	11893 Mar 11 02:20	27°♎24'37	3.89368 AU				
direct	11893 May 08 17:34	22°♎25'08		conjunction	11899 Mar 14 20:40	0°♌01'40	0°16'27
	11893 Jul 18 10:11	0°♎		minimum elong	11899 Mar 14 20:40	0°♌01'40	0°16'31
evening set	11893 Sep 13 01:06	12°♎39'08		max. Earth dist.	11899 Mar 13 23:05	29°♋50'08	6.51032 AU
					11899 Mar 14 17:32	0°♌	
conjunction	11893 Sep 26 12:41	15°♎56'14	-0°05'43	morning rise	11899 Mar 27 19:19	2°♌47'21	
minimum elong	11893 Sep 26 12:41	15°♎56'14	0°05'34	retrograde	11899 Jul 26 08:49	19°♌21'49	
behind sun begin	11893 Sep 26 04:39	15°♎51'21		opposition	11899 Sep 25 11:25	14°♌27'40	0°09'47
behind sun end	11893 Sep 26 20:43	16°♎01'06		min. Earth dist.	11899 Sep 26 11:21	14°♌20'01	4.49661 AU
max. Earth dist.	11893 Sep 28 02:36	16°♎19'21	5.90791 AU	direct	11899 Nov 27 02:38	9°♌26'35	
morning rise	11893 Oct 10 02:31	19°♎14'22		desc. node	11900 Feb 01 10:14	15°♌17'49	
	11893 Nov 26 10:43	0°♎		evening set	11900 Mar 31 22:38	26°♌38'03	
asc. node	11893 Dec 25 21:57	5°♎21'29		max. Earth dist.	11900 Apr 11 22:34	29°♌00'35	6.46080 AU
retrograde	11894 Feb 18 12:22	9°♎55'52					
min. Earth dist.	11894 Apr 17 10:28	5°♎04'24	3.95052 AU	conjunction	11900 Apr 13 19:51	29°♌25'08	-0°03'40
opposition	11894 Apr 18 20:44	4°♎52'45	0°11'09	minimum elong	11900 Apr 13 19:52	29°♌25'08	0°03'59
	11894 Jun 10 07:45	30°♎		behind sun begin	11900 Apr 13 11:59	29°♌20'53	
direct	11894 Jun 15 22:06	29°♎56'44		behind sun end	11900 Apr 14 03:45	29°♌29'23	
	11894 Jun 21 12:42	0°♎			11900 Apr 16 12:12	0°♌	
	11894 Sep 30 20:14	15°♎		morning rise	11900 Apr 26 15:34	2°♌11'36	
evening set	11894 Oct 21 01:35	19°♎41'37			11900 Jul 03 09:10	15°♌	
				retrograde	11900 Aug 26 04:30	19°♌08'42	
conjunction	11894 Nov 03 15:57	22°♎54'49	0°18'56		11900 Oct 20 08:33	15°♌	
minimum elong	11894 Nov 03 15:56	22°♎54'49	0°19'32	opposition	11900 Oct 26 04:43	14°♌15'20	-0°20'06
max. Earth dist.	11894 Nov 06 02:50	23°♎29'43	6.01559 AU	min. Earth dist.	11900 Oct 27 17:29	14°♌03'34	4.40586 AU
morning rise	11894 Nov 17 07:42	26°♎08'24		direct	11900 Dec 27 12:59	9°♌14'42	
	11894 Dec 04 00:03	0°♌			11901 Mar 02 11:04	15°♌	
retrograde	11895 Mar 26 05:48	15°♌50'12		evening set	11901 May 01 15:27	26°♌56'18	
min. Earth dist.	11895 May 23 07:43	10°♌59'28	4.09610 AU	max. Earth dist.	11901 May 12 03:27	29°♌16'24	6.33454 AU
opposition	11895 May 24 22:32	10°♌46'20	0°43'00				
direct	11895 Jul 22 20:46	5°♌48'14		conjunction	11901 May 14 11:11	29°♌47'31	-0°23'13
evening set	11895 Nov 26 10:13	24°♌40'34		minimum elong	11901 May 14 11:10	29°♌47'30	0°23'53
					11901 May 15 09:33	0°♍	
conjunction	11895 Dec 09 23:25	27°♌45'28	0°35'26	morning rise	11901 May 27 05:41	2°♍38'28	
minimum elong	11895 Dec 09 23:24	27°♌45'27	0°36'15	retrograde	11901 Sep 28 01:57	20°♍27'16	
max. Earth dist.	11895 Dec 12 08:46	28°♌18'07	6.18478 AU	opposition	11901 Nov 27 18:28	15°♍33'37	-0°46'03
	11895 Dec 19 20:06	0°♍		min. Earth dist.	11901 Nov 29 10:20	15°♍20'46	4.25141 AU
morning rise	11895 Dec 23 12:37	0°♍50'03		direct	11902 Jan 28 05:13	10°♍34'15	
retrograde	11896 Apr 27 03:28	19°♍15'35		evening set	11902 Jun 02 21:33	29°♍04'24	
min. Earth dist.	11896 Jun 25 00:58	14°♍24'03	4.27224 AU		11902 Jun 06 22:01	0°♍	
opposition	11896 Jun 26 08:44	14°♍13'28	0°57'45	max. Earth dist.	11902 Jun 13 13:12	1°♍32'14	6.16335 AU
direct	11896 Aug 25 12:23	9°♍13'39					
evening set	11896 Dec 29 10:26	27°♍12'53		conjunction	11902 Jun 15 17:51	2°♍02'48	-0°36'46

minimum elong	11902 Jun 15 17:51	2°  02'48	0°37'35	max. Earth dist.	11907 Dec 18 01:22	3°  02'16	6.20804 AU
morning rise	11902 Jun 28 14:17	5°  01'34		morning rise	11907 Dec 29 08:37	5°  35'18	
retrograde	11902 Nov 02 17:02	24°  03'16		retrograde	11908 May 02 13:55	23°  51'27	
opposition	11903 Jan 01 20:30	19°  08'14	-0°59'11	opposition	11908 Jul 01 20:06	18°  34'44	0°58'16
min. Earth dist.	11903 Jan 03 02:46	18°  05'820	4.07587 AU	min. Earth dist.	11908 Jun 30 15:04	18°  35'23	4.29376 AU
direct	11903 Mar 03 00:23	14°  10'47		direct	11908 Aug 31 04:39	13°  34'43	
	11903 Jun 22 02:05	0°  0			11908 Dec 27 00:56	0°  0	
evening set	11903 Jul 07 09:17	3°  03'609		evening set	11909 Jan 03 23:55	1°  43'16	
max. Earth dist.	11903 Jul 19 04:16	6°  02'51	5.99916 AU				
conjunction	11903 Jul 20 09:40	6°  04'32	-0°38'34	conjunction	11909 Jan 17 08:49	4°  38'29	0°39'09
minimum elong	11903 Jul 20 09:41	6°  04'32	0°39'16	minimum elong	11909 Jan 17 08:49	4°  38'29	0°39'52
morning rise	11903 Aug 02 11:03	9°  05'148		max. Earth dist.	11909 Jan 18 17:39	4°  36'27	6.37189 AU
	11903 Aug 24 08:33	15°  0		morning rise	11909 Jan 30 16:28	7°  32'54	
	11903 Dec 02 18:34	0°  0			11909 Mar 07 14:51	15°  0	
retrograde	11903 Dec 10 18:59	0°  06'18		retrograde	11909 Jun 02 03:55	24°  47'58	
	11903 Dec 18 18:00	30°  0		opposition	11909 Aug 01 21:20	19°  49'19	0°52'29
opposition	11904 Feb 08 08:21	25°  08'49	-0°51'15	min. Earth dist.	11909 Aug 01 08:38	19°  53'28	4.43503 AU
min. Earth dist.	11904 Feb 08 17:10	25°  05'53	3.93903 AU		11909 Sep 21 06:35	15°  0	
direct	11904 Apr 07 03:36	20°  01'320		direct	11909 Oct 02 09:41	14°  48'31	
	11904 Jun 28 05:11	0°  0			11909 Oct 13 14:31	15°  0	
evening set	11904 Aug 12 04:37	10°  0		evening set	11910 Jan 25 16:26	0°  0	
					11910 Feb 04 16:09	2°  06'30	
conjunction	11904 Aug 25 11:05	13°  0	-0°25'40	conjunction	11910 Feb 17 20:22	4°  0	0°30'21
minimum elong	11904 Aug 25 11:06	13°  0	0°25'58	minimum elong	11910 Feb 17 20:23	4°  0	0°30'46
max. Earth dist.	11904 Aug 25 16:44	13°  0	5.90342 AU	max. Earth dist.	11910 Feb 17 22:48	4°  0	6.48090 AU
morning rise	11904 Sep 07 19:46	16°  0		morning rise	11910 Mar 02 22:59	7°  0	
	11904 Nov 05 21:03	0°  0		retrograde	11910 Jul 01 20:20	24°  0	
retrograde	11905 Jan 17 17:29	7°  0		opposition	11910 Aug 31 20:04	19°  0	0°33'08
min. Earth dist.	11905 Mar 17 07:24	2°  0	3.89626 AU	min. Earth dist.	11910 Sep 01 04:05	19°  0	4.50602 AU
opposition	11905 Mar 18 01:07	2°  0	-0°21'53	direct	11910 Nov 02 05:09	14°  0	
	11905 Apr 08 11:05	30°  0			11911 Feb 27 20:43	0°  0	
direct	11905 May 15 01:06	27°  0		evening set	11911 Mar 07 02:09	1°  0	
	11905 Jun 20 09:36	0°  0		max. Earth dist.	11911 Mar 19 01:19	4°  0	6.50918 AU
evening set	11905 Sep 19 08:43	17°  0					
conjunction	11905 Oct 02 20:56	21°  0	-0°02'07	conjunction	11911 Mar 20 02:17	4°  0	0°13'46
minimum elong	11905 Oct 02 20:57	21°  0	0°01'54	minimum elong	11911 Mar 20 02:17	4°  0	0°13'48
behind sun begin	11905 Oct 02 12:35	21°  0		behind sun begin	11911 Mar 19 22:05	4°  0	
behind sun end	11905 Oct 03 05:19	21°  0		behind sun end	11911 Mar 20 06:29	4°  0	
max. Earth dist.	11905 Oct 04 14:54	21°  0	5.91803 AU	morning rise	11911 Apr 02 00:27	7°  0	
morning rise	11905 Oct 16 11:13	24°  0		retrograde	11911 Jul 31 14:07	23°  0	
asc. node	11905 Nov 05 08:14	29°  0		opposition	11911 Sep 30 17:38	18°  0	0°05'37
	11905 Nov 08 10:45	0°  0		min. Earth dist.	11911 Oct 01 18:35	18°  0	4.49077 AU
	11906 Feb 14 17:04	15°  0		direct	11911 Dec 02 08:15	13°  0	
retrograde	11906 Feb 24 15:33	15°  0		desc. node	11911 Dec 12 08:41	13°  0	
	11906 Mar 06 12:46	15°  0			11912 Mar 31 17:09	0°  0	
min. Earth dist.	11906 Apr 23 13:39	10°  0	3.96679 AU	evening set	11912 Apr 05 04:47	0°  0	
opposition	11906 Apr 25 00:24	10°  0	0°16'19	max. Earth dist.	11912 Apr 16 04:18	3°  0	6.45085 AU
direct	11906 Jun 22 04:34	5°  0					
	11906 Sep 13 04:03	15°  0		conjunction	11912 Apr 18 01:45	3°  0	-0°06'33
evening set	11906 Oct 27 05:28	24°  0		minimum elong	11912 Apr 18 01:44	3°  0	0°06'56
				behind sun begin	11912 Apr 17 18:20	3°  0	
				behind sun end	11912 Apr 18 09:08	3°  0	
conjunction	11906 Nov 09 19:58	28°  0	0°21'52	morning rise	11912 Apr 30 20:56	6°  0	
minimum elong	11906 Nov 09 19:57	28°  0	0°22'30		11912 Jun 11 07:46	15°  0	
max. Earth dist.	11906 Nov 12 08:44	28°  0	6.03634 AU	retrograde	11912 Aug 30 14:35	23°  0	
	11906 Nov 18 06:03	0°  0		opposition	11912 Oct 30 14:57	18°  0	-0°24'06
morning rise	11906 Nov 23 11:32	1°  0		min. Earth dist.	11912 Nov 01 04:29	18°  0	4.39239 AU
retrograde	11907 Mar 31 22:59	20°  0			11912 Dec 01 20:36	15°  0	
min. Earth dist.	11907 May 29 02:26	15°  0	4.11916 AU	direct	11912 Dec 31 22:02	13°  0	
opposition	11907 May 30 17:26	15°  0	0°46'10		11913 Jan 30 23:28	15°  0	
direct	11907 Jul 28 18:28	10°  0			11913 Apr 29 14:16	0°  0	
evening set	11907 Dec 02 07:10	29°  0		evening set	11913 May 06 00:19	1°  0	
	11907 Dec 04 15:28	0°  0		max. Earth dist.	11913 May 16 10:46	3°  0	6.31844 AU
conjunction	11907 Dec 15 19:49	2°  0	0°36'46	conjunction	11913 May 18 19:42	4°  0	-0°25'33
minimum elong	11907 Dec 15 19:48	2°  0	0°37'35	minimum elong	11913 May 18 19:42	4°  0	0°26'14

morning rise	11913 May 31 14:19	7° Π 08'23	min. Earth dist.	11919 Jun 02 19:54	20° \mathbb{X} 44'01	4.13680 AU
retrograde	11913 Oct 02 18:46	25° Π 04'11	opposition	11919 Jun 04 09:59	20° \mathbb{X} 31'10	0°48'55
opposition	11913 Dec 02 10:24	20° Π 10'23 -0°48'44	direct	11919 Aug 02 14:59	15° \mathbb{X} 32'30	
min. Earth dist.	11913 Dec 04 01:36	19° Π 57'44 4.23359 AU		11919 Nov 18 01:41	0° \mathbb{Z}	
direct	11914 Feb 01 18:41	15° Π 11'13	evening set	11919 Dec 07 02:07	4° \mathbb{Z} 12'11	
	11914 May 21 20:07	0° \mathbb{G}				
evening set	11914 Jun 07 10:56	3° \mathbb{G} 46'38	conjunction	11919 Dec 20 14:36	7° \mathbb{Z} 14'58	0°37'47
max. Earth dist.	11914 Jun 18 05:48	6° \mathbb{G} 16'53 6.14534 AU	minimum elong	11919 Dec 20 14:35	7° \mathbb{Z} 14'58	0°38'36
			max. Earth dist.	11919 Dec 22 19:38	7° \mathbb{Z} 44'53	6.22640 AU
conjunction	11914 Jun 20 07:38	6° \mathbb{G} 45'55 -0°37'47	morning rise	11920 Jan 03 02:42	10° \mathbb{Z} 17'15	
minimum elong	11914 Jun 20 07:38	6° \mathbb{G} 45'54 0°38'36	retrograde	11920 May 06 23:31	28° \mathbb{Z} 25'37	
morning rise	11914 Jul 03 04:17	9° \mathbb{G} 45'35	min. Earth dist.	11920 Jul 05 02:43	23° \mathbb{Z} 33'30	4.31131 AU
retrograde	11914 Nov 07 16:55	28° \mathbb{G} 55'28	opposition	11920 Jul 06 06:35	23° \mathbb{Z} 24'15	0°58'24
opposition	11915 Jan 06 18:45	24° \mathbb{G} 00'12 -0°59'22	direct	11920 Sep 04 18:28	18° \mathbb{Z} 24'05	
min. Earth dist.	11915 Jan 07 23:16	23° \mathbb{G} 50'52 4.05916 AU		11920 Dec 09 23:29	0° \approx	
direct	11915 Mar 07 18:26	19° \mathbb{G} 03'02	evening set	11921 Jan 08 13:15	6° \approx 12'57	
	11915 Jun 04 17:32	0° Ω				
evening set	11915 Jul 12 04:36	8° Ω 33'18	conjunction	11921 Jan 21 21:24	9° \approx 07'17	0°38'28
max. Earth dist.	11915 Jul 24 02:06	11° Ω 25'04 5.98516 AU	minimum elong	11921 Jan 21 21:25	9° \approx 07'17	0°39'10
			max. Earth dist.	11921 Jan 23 01:47	9° \approx 22'45	6.38729 AU
conjunction	11915 Jul 25 05:27	11° Ω 41'34 -0°37'39	morning rise	11921 Feb 04 04:34	12° \approx 00'50	
minimum elong	11915 Jul 25 05:28	11° Ω 41'35 0°38'18		11921 Feb 18 03:56	15° \approx	
morning rise	11915 Aug 07 07:49	14° Ω 50'53	retrograde	11921 Jun 06 10:00	29° \approx 10'12	
	11915 Aug 07 23:01	15° Ω	opposition	11921 Aug 06 03:44	24° \approx 11'52	0°50'24
	11915 Oct 17 23:59	0° \mathbb{P}	min. Earth dist.	11921 Aug 05 17:57	24° \approx 15'04	4.44729 AU
retrograde	11915 Dec 15 21:20	5° \mathbb{P} 11'55	direct	11921 Oct 06 19:49	19° \approx 10'53	
opposition	11916 Feb 13 11:10	0° \mathbb{P} 14'01 -0°48'22		11922 Jan 08 15:19	0° \mathbb{H}	
min. Earth dist.	11916 Feb 13 16:27	0° \mathbb{P} 12'15 3.92920 AU	evening set	11922 Feb 09 00:25	6° \mathbb{H} 25'56	
	11916 Feb 15 05:13	30° \mathbb{R} Ω				
direct	11916 Apr 12 02:55	25° Ω 18'37	conjunction	11922 Feb 22 04:12	9° \mathbb{H} 14'32	0°28'21
	11916 Jun 05 16:21	0° \mathbb{P}	minimum elong	11922 Feb 22 04:13	9° \mathbb{H} 14'33	0°28'42
evening set	11916 Aug 17 05:04	15° \mathbb{P} 27'24	max. Earth dist.	11922 Feb 22 04:39	9° \mathbb{H} 14'47	6.48907 AU
			morning rise	11922 Mar 07 06:01	12° \mathbb{H} 02'10	
conjunction	11916 Aug 30 12:28	18° \mathbb{P} 42'52 -0°22'56	retrograde	11922 Jul 05 23:04	28° \mathbb{H} 39'54	
minimum elong	11916 Aug 30 12:29	18° \mathbb{P} 42'53 0°23'09	opposition	11922 Sep 05 00:52	23° \mathbb{H} 44'20	0°29'33
max. Earth dist.	11916 Aug 30 23:08	18° \mathbb{P} 49'24 5.89891 AU	min. Earth dist.	11922 Sep 05 10:10	23° \mathbb{H} 41'21	4.50947 AU
morning rise	11916 Sep 12 21:53	21° \mathbb{P} 59'32	direct	11922 Nov 06 10:44	18° \mathbb{H} 43'11	
	11916 Oct 17 00:57	0° $\underline{\mathbb{A}}$		11923 Feb 11 04:41	0° \mathbb{Y}	
retrograde	11917 Jan 22 22:26	12° $\underline{\mathbb{A}}$ 54'20	evening set	11923 Mar 11 07:52	5° \mathbb{Y} 46'50	
min. Earth dist.	11917 Mar 22 09:16	7° $\underline{\mathbb{A}}$ 59'39 3.89758 AU	max. Earth dist.	11923 Mar 23 03:19	8° \mathbb{Y} 18'05	6.50732 AU
opposition	11917 Mar 23 04:17	7° $\underline{\mathbb{A}}$ 53'13 -0°16'54				
direct	11917 May 20 04:34	2° $\underline{\mathbb{A}}$ 58'07	conjunction	11923 Mar 24 07:22	8° \mathbb{Y} 33'06	0°11'00
asc. node	11917 Sep 16 01:07	21° $\underline{\mathbb{A}}$ 07'03	minimum elong	11923 Mar 24 07:22	8° \mathbb{Y} 33'06	0°10'58
evening set	11917 Sep 24 11:19	23° $\underline{\mathbb{A}}$ 08'26	behind sun begin	11923 Mar 24 01:21	8° \mathbb{Y} 29'53	
			behind sun end	11923 Mar 24 13:23	8° \mathbb{Y} 36'18	
conjunction	11917 Oct 08 00:12	26° $\underline{\mathbb{A}}$ 25'17 0°01'24	morning rise	11923 Apr 06 05:01	11° \mathbb{Y} 18'32	
minimum elong	11917 Oct 08 00:12	26° $\underline{\mathbb{A}}$ 25'17 0°01'42	retrograde	11923 Aug 04 20:49	27° \mathbb{Y} 55'18	
behind sun begin	11917 Oct 07 15:48	26° $\underline{\mathbb{A}}$ 20'13	opposition	11923 Oct 04 23:54	23° \mathbb{Y} 01'29	0°01'23
behind sun end	11917 Oct 08 08:35	26° $\underline{\mathbb{A}}$ 30'21	min. Earth dist.	11923 Oct 06 03:40	22° \mathbb{Y} 52'37	4.48336 AU
max. Earth dist.	11917 Oct 09 21:45	26° $\underline{\mathbb{A}}$ 52'55 5.92501 AU	desc. node	11923 Oct 22 13:22	20° \mathbb{Y} 51'17	
morning rise	11917 Oct 21 14:59	29° $\underline{\mathbb{A}}$ 42'59	direct	11923 Dec 06 15:44	18° \mathbb{Y} 00'31	
	11917 Oct 22 19:17	0° \mathbb{M}		11924 Mar 15 07:32	0° \mathbb{B}	
	11918 Jan 01 19:23	15° \mathbb{M}	evening set	11924 Apr 09 10:54	5° \mathbb{B} 16'36	
retrograde	11918 Mar 01 13:57	20° \mathbb{M} 13'35	max. Earth dist.	11924 Apr 20 06:36	7° \mathbb{B} 37'37	6.43803 AU
min. Earth dist.	11918 Apr 28 10:52	15° \mathbb{M} 22'25 3.97875 AU				
opposition	11918 Apr 29 23:12	15° \mathbb{M} 10'04 0°21'07	conjunction	11924 Apr 22 07:27	8° \mathbb{B} 04'14	-0°09'25
	11918 May 01 04:52	15° \mathbb{R} \mathbb{M}	minimum elong	11924 Apr 22 07:26	8° \mathbb{B} 04'14	0°09'51
direct	11918 Jun 27 03:35	10° \mathbb{M} 13'31	behind sun begin	11924 Apr 22 00:55	8° \mathbb{B} 00'42	
	11918 Aug 21 15:28	15° \mathbb{M}	behind sun end	11924 Apr 22 13:57	8° \mathbb{B} 07'45	
evening set	11918 Nov 01 05:52	29° \mathbb{M} 47'39	morning rise	11924 May 05 02:28	10° \mathbb{B} 51'20	
	11918 Nov 02 03:00	0° \mathbb{X}		11924 May 24 13:38	15° \mathbb{B}	
			retrograde	11924 Sep 04 01:31	27° \mathbb{B} 58'03	
conjunction	11918 Nov 14 20:18	2° \mathbb{X} 59'10 0°24'31	opposition	11924 Nov 04 01:35	23° \mathbb{B} 04'42	-0°28'03
minimum elong	11918 Nov 14 20:17	2° \mathbb{X} 59'10 0°25'12	min. Earth dist.	11924 Nov 05 15:33	22° \mathbb{B} 52'33	4.37475 AU
max. Earth dist.	11918 Nov 17 07:51	3° \mathbb{X} 34'08 6.05196 AU	direct	11925 Jan 05 05:58	18° \mathbb{B} 04'23	
morning rise	11918 Nov 28 11:59	6° \mathbb{X} 10'56		11925 Apr 12 23:42	0° \mathbb{I}	
retrograde	11919 Apr 05 14:28	25° \mathbb{X} 34'45	evening set	11925 May 10 09:59	5° \mathbb{I} 55'29	

max. Earth dist.	11925 May 20 21:33	8° Π 16'34	6.29715 AU	morning rise	11930 Dec 03 16:24	11° X 17'56	
					11931 Mar 23 12:50	0° Z	
conjunction	11925 May 23 05:29	8° Π 48'04	-0°27'48	retrograde	11931 Apr 10 09:04	0° Z 31'02	
minimum elong	11925 May 23 05:28	8° Π 48'04	0°28'31		11931 Apr 28 00:53	30° R X	
morning rise	11925 Jun 05 00:02	11° Π 40'32		min. Earth dist.	11931 Jun 07 15:36	25° X 40'18	4.16214 AU
retrograde	11925 Oct 07 14:54	29° Π 45'20		opposition	11931 Jun 09 05:06	25° X 27'41	0°51'25
opposition	11925 Dec 07 04:34	24° Π 51'26	-0°51'14	direct	11931 Aug 07 14:26	20° X 28'49	
min. Earth dist.	11925 Dec 08 19:46	24° Π 38'46	4.20997 AU		11931 Oct 30 11:22	0° Z	
direct	11926 Feb 06 09:03	19° Π 52'31		evening set	11931 Dec 11 23:00	9° Z 00'25	
	11926 May 04 03:25	0° E					
evening set	11926 Jun 12 03:16	8° E 35'24		conjunction	11931 Dec 25 10:49	12° Z 01'50	0°38'38
max. Earth dist.	11926 Jun 22 22:57	11° E 07'00	6.12124 AU	minimum elong	11931 Dec 25 10:48	12° Z 01'50	0°39'26
				max. Earth dist.	11931 Dec 27 13:00	12° Z 29'59	6.25238 AU
conjunction	11926 Jun 25 00:13	11° E 35'51	-0°38'35	morning rise	11932 Jan 07 22:25	15° Z 02'45	
minimum elong	11926 Jun 25 00:13	11° E 35'51	0°39'24		11932 Mar 27 15:09	0° \approx	
morning rise	11926 Jul 07 21:38	14° E 36'52		retrograde	11932 May 11 08:02	3° \approx 00'52	
	11926 Sep 22 12:07	0° Ω			11932 Jun 25 04:02	30° R Z	
retrograde	11926 Nov 12 21:02	3° Ω 57'34		opposition	11932 Jul 10 17:21	27° Z 59'50	0°58'13
	11927 Jan 04 11:27	30° R E		min. Earth dist.	11932 Jul 09 15:21	28° Z 08'27	4.33582 AU
opposition	11927 Jan 11 21:23	29° E 01'58	-0°59'12	direct	11932 Sep 09 09:10	22° Z 59'29	
min. Earth dist.	11927 Jan 12 22:52	28° E 53'36	4.03663 AU		11932 Nov 20 09:46	0° \approx	
direct	11927 Mar 12 15:43	24° E 05'04		evening set	11933 Jan 13 01:29	10° \approx 41'31	
	11927 May 14 10:28	0° Ω					
evening set	11927 Jul 17 05:09	13° Ω 42'34		conjunction	11933 Jan 26 09:07	13° \approx 34'46	0°37'37
	11927 Jul 22 13:42	15° Ω		minimum elong	11933 Jan 26 09:08	13° \approx 34'46	0°38'16
max. Earth dist.	11927 Jul 29 09:14	16° Ω 38'58	5.96654 AU	max. Earth dist.	11933 Jan 27 11:00	13° \approx 48'49	6.40860 AU
					11933 Feb 01 22:07	15° \approx	
conjunction	11927 Jul 30 06:59	16° Ω 52'08	-0°36'24	morning rise	11933 Feb 08 15:19	16° \approx 27'07	
minimum elong	11927 Jul 30 07:00	16° Ω 52'08	0°37'02		11933 Apr 22 16:37	0° X	
morning rise	11927 Aug 12 10:09	20° Ω 02'43		retrograde	11933 Jun 10 13:27	3° X 29'22	
	11927 Sep 25 01:25	0° W			11933 Jul 29 20:34	30° R \approx	
retrograde	11927 Dec 21 09:06	10° W 32'01		opposition	11933 Aug 10 08:50	28° \approx 31'29	0°48'06
opposition	11928 Feb 18 20:06	5° W 33'44	-0°44'57	min. Earth dist.	11933 Aug 10 01:20	28° \approx 33'55	4.46389 AU
min. Earth dist.	11928 Feb 18 22:58	5° W 32'47	3.91655 AU	direct	11933 Oct 11 04:09	23° \approx 30'28	
direct	11928 Apr 17 08:59	0° W 38'32			11933 Dec 20 05:49	0° X	
evening set	11928 Aug 22 12:24	20° W 50'50		evening set	11934 Feb 13 06:44	10° X 41'28	
conjunction	11928 Sep 04 20:45	24° W 07'02	-0°19'52	conjunction	11934 Feb 26 09:40	13° X 29'22	0°26'15
minimum elong	11928 Sep 04 20:46	24° W 07'03	0°20'02	minimum elong	11934 Feb 26 09:40	13° X 29'22	0°26'34
max. Earth dist.	11928 Sep 05 12:27	24° W 16'39	5.89356 AU	max. Earth dist.	11934 Feb 26 04:26	13° X 26'35	6.49967 AU
morning rise	11928 Sep 18 07:15	27° W 24'27		morning rise	11934 Mar 11 10:57	16° X 16'22	
	11928 Sep 29 00:41	0° $\underline{\text{A}}$			11934 May 26 21:32	0° Y	
retrograde	11929 Jan 28 08:09	18° $\underline{\text{A}}$ 20'19		retrograde	11934 Jul 10 02:14	2° Y 51'16	
opposition	11929 Mar 28 13:44	13° $\underline{\text{A}}$ 18'50	-0°11'30		11934 Aug 23 12:38	30° R X	
min. Earth dist.	11929 Mar 27 14:54	13° $\underline{\text{A}}$ 26'34	3.90047 AU	opposition	11934 Sep 09 03:46	27° X 55'59	0°25'56
direct	11929 May 25 11:46	8° $\underline{\text{A}}$ 23'43		min. Earth dist.	11934 Sep 09 16:46	27° X 51'48	4.51346 AU
asc. node	11929 Jul 24 14:24	14° $\underline{\text{A}}$ 02'17		direct	11934 Nov 10 16:07	22° X 54'45	
evening set	11929 Sep 29 20:26	28° $\underline{\text{A}}$ 31'55			11935 Jan 23 15:06	0° Y	
	11929 Oct 05 22:28	0° W		evening set	11935 Mar 15 11:17	9° Y 58'01	
				max. Earth dist.	11935 Mar 27 02:59	12° Y 27'22	6.50430 AU
conjunction	11929 Oct 13 09:44	1° W 48'28	0°05'01				
minimum elong	11929 Oct 13 09:43	1° W 48'28	0°05'23	conjunction	11935 Mar 28 10:25	12° Y 44'12	0°08'16
behind sun begin	11929 Oct 13 01:39	1° W 43'36		minimum elong	11935 Mar 28 10:25	12° Y 44'12	0°08'10
behind sun end	11929 Oct 13 17:48	1° W 53'20		behind sun begin	11935 Mar 28 03:19	12° Y 40'25	
max. Earth dist.	11929 Oct 15 09:42	2° W 17'30	5.93575 AU	behind sun end	11935 Mar 28 17:30	12° Y 47'59	
morning rise	11929 Oct 27 01:05	5° W 05'52		morning rise	11935 Apr 10 07:30	15° Y 29'33	
	11929 Dec 09 16:26	15° W			11935 Jul 02 01:24	0° X	
retrograde	11930 Mar 06 16:19	25° W 29'50		retrograde	11935 Aug 09 00:27	2° X 08'15	
min. Earth dist.	11930 May 03 13:29	20° W 38'56	3.99609 AU	desc. node	11935 Sep 03 22:09	1° X 07'08	
opposition	11930 May 05 03:06	20° W 26'10	0°26'00		11935 Sep 16 04:15	30° R Y	
direct	11930 Jul 02 10:18	15° W 29'22		opposition	11935 Oct 09 04:23	27° Y 14'31	-0°02'46
	11930 Oct 15 18:42	0° X		min. Earth dist.	11935 Oct 10 09:33	27° Y 05'12	4.47346 AU
evening set	11930 Nov 06 10:39	4° X 56'54		direct	11935 Dec 10 18:21	22° Y 13'33	
					11936 Feb 26 05:19	0° X	
conjunction	11930 Nov 20 01:11	8° X 07'23	0°27'08	evening set	11936 Apr 13 15:25	9° X 33'05	
minimum elong	11930 Nov 20 01:10	8° X 07'23	0°27'51	max. Earth dist.	11936 Apr 24 09:07	11° X 53'32	6.42176 AU
max. Earth dist.	11930 Nov 22 14:41	8° X 43'19	6.07448 AU				

conjunction	11936 Apr 26 11:42	12°821'13	-0°12'11	minimum elong	11941 Oct 18 21:21	7°15'10	0°09'01
minimum elong	11936 Apr 26 11:41	12°821'13	0°12'40	behind sun begin	11941 Oct 18 14:14	7°10'53	
behind sun begin	11936 Apr 26 06:35	12°818'26		behind sun end	11941 Oct 19 04:28	7°19'26	
behind sun end	11936 Apr 26 16:46	12°823'59		max. Earth dist.	11941 Oct 21 02:35	7°47'14	5.95114 AU
	11936 May 08 14:13	15°8		morning rise	11941 Nov 01 12:49	10°31'51	
morning rise	11936 May 09 06:30	15°808'51			11941 Nov 20 13:50	15°10	
	11936 Jul 30 14:47	0°II			11942 Feb 18 01:20	0°7	
retrograde	11936 Sep 08 14:03	2°II22'20		retrograde	11942 Mar 11 20:20	0°46'43	
	11936 Oct 18 19:12	30°R8			11942 Apr 02 10:10	30°R10	
opposition	11936 Nov 08 11:58	27°828'59	-0°31'50	min. Earth dist.	11942 May 08 16:52	25°15'55	4.01823 AU
min. Earth dist.	11936 Nov 10 04:05	27°816'08	4.35280 AU	opposition	11942 May 10 07:14	25°14'54	0°30'38
direct	11937 Jan 09 14:26	22°828'44		direct	11942 Jul 07 18:04	20°14'54	
	11937 Mar 25 07:48	0°II			11942 Sep 26 10:59	0°7	
evening set	11937 May 14 19:36	10°II26'52		evening set	11942 Nov 11 15:31	10°7'04'54	
max. Earth dist.	11937 May 25 05:20	12°II47'47	6.27105 AU				
				conjunction	11942 Nov 25 05:41	13°7'14'03	0°29'31
conjunction	11937 May 27 15:07	13°II20'30	-0°29'53	minimum elong	11942 Nov 25 05:40	13°7'14'02	0°30'17
minimum elong	11937 May 27 15:06	13°II20'30	0°30'38	max. Earth dist.	11942 Nov 27 18:47	13°7'49'31	6.10076 AU
morning rise	11937 Jun 09 10:02	16°II14'09		morning rise	11942 Dec 08 20:39	16°7'23'11	
	11937 Aug 17 22:41	0°8			11943 Feb 13 09:15	0°3	
retrograde	11937 Oct 12 11:37	4°829'51		retrograde	11943 Apr 14 23:58	5°32'20	
	11937 Dec 08 20:44	30°RII		min. Earth dist.	11943 Jun 12 10:13	0°33'36	4.18985 AU
opposition	11937 Dec 11 23:42	29°II35'44	-0°53'28	opposition	11943 Jun 13 23:15	0°32'10'9	0°53'30
min. Earth dist.	11937 Dec 13 13:23	29°II23'31	4.18153 AU		11943 Jun 16 14:16	30°R7	
direct	11938 Feb 10 22:38	24°II36'59		direct	11943 Aug 12 12:25	25°7'22'00	
	11938 Apr 12 18:01	0°8			11943 Oct 07 16:39	0°3	
evening set	11938 Jun 16 21:20	13°829'11		evening set	11943 Dec 16 18:40	13°34'50'1	
max. Earth dist.	11938 Jun 27 21:24	16°804'16	6.09298 AU				
				conjunction	11943 Dec 30 05:56	16°34'50'2	0°39'12
conjunction	11938 Jun 29 18:57	16°831'08	-0°39'08	minimum elong	11943 Dec 30 05:56	16°34'50'2	0°40'01
minimum elong	11938 Jun 29 18:57	16°831'08	0°39'56	max. Earth dist.	11944 Jan 01 05:12	17°311'25	6.27918 AU
morning rise	11938 Jul 12 16:57	19°833'39		morning rise	11944 Jan 12 16:40	19°344'29	
	11938 Aug 29 03:05	0°9			11944 Mar 02 17:13	0°≈	
retrograde	11938 Nov 18 05:46	9°906'42		retrograde	11944 May 15 17:06	7°≈32'32	
opposition	11939 Jan 17 02:43	4°910'48	-0°58'36	min. Earth dist.	11944 Jul 14 04:15	2°≈39'35	4.35956 AU
min. Earth dist.	11939 Jan 18 02:23	4°903'01	4.01112 AU	opposition	11944 Jul 15 03:18	2°≈31'59	0°57'40
	11939 Feb 24 02:18	30°R8			11944 Aug 04 07:25	30°R3	
direct	11939 Mar 17 16:40	29°814'11		direct	11944 Sep 14 00:19	27°331'31	
	11939 Apr 08 04:45	0°9			11944 Oct 25 00:37	0°≈	
	11939 Jul 05 13:24	15°9			11945 Jan 16 23:37	15°≈	
evening set	11939 Jul 22 08:51	18°959'54		evening set	11945 Jan 17 13:15	15°≈07'20	
conjunction	11939 Aug 04 11:37	22°910'51	-0°34'52	conjunction	11945 Jan 30 20:06	17°≈59'32	0°36'32
minimum elong	11939 Aug 04 11:38	22°910'52	0°35'26	minimum elong	11945 Jan 30 20:07	17°≈59'32	0°37'08
max. Earth dist.	11939 Aug 03 18:13	22°900'17	5.94635 AU	max. Earth dist.	11945 Jan 31 16:57	18°≈10'49	6.42750 AU
morning rise	11939 Aug 17 16:01	25°922'56		morning rise	11945 Feb 13 01:39	20°≈50'53	
	11939 Sep 06 02:07	0°10			11945 Mar 30 14:47	0°H	
retrograde	11939 Dec 26 22:22	16°100'37		retrograde	11945 Jun 14 17:01	7°H47'07	
opposition	11940 Feb 24 08:10	11°101'53	-0°41'06	opposition	11945 Aug 14 13:44	2°H49'37	0°45'32
min. Earth dist.	11940 Feb 24 06:03	11°102'36	3.90429 AU	min. Earth dist.	11945 Aug 14 09:15	2°H51'05	4.47703 AU
direct	11940 Apr 22 16:32	6°106'49			11945 Sep 06 18:46	30°R≈	
evening set	11940 Aug 27 23:08	26°122'08		direct	11945 Oct 15 11:49	27°≈48'32	
					11945 Nov 23 13:35	0°H	
conjunction	11940 Sep 10 08:19	29°138'55	-0°16'35	evening set	11946 Feb 17 13:13	14°H56'52	
minimum elong	11940 Sep 10 08:20	29°138'55	0°16'40				
max. Earth dist.	11940 Sep 11 05:17	29°151'47	5.89052 AU	conjunction	11946 Mar 02 15:42	17°H44'19	0°24'00
	11940 Sep 11 18:40	0°15		minimum elong	11946 Mar 02 15:43	17°H44'19	0°24'16
morning rise	11940 Sep 23 19:48	2°156'54		max. Earth dist.	11946 Mar 02 07:24	17°H39'53	6.50623 AU
retrograde	11941 Feb 02 18:48	23°152'13		morning rise	11946 Mar 15 16:11	20°H30'49	
min. Earth dist.	11941 Apr 01 23:16	18°159'04	3.90703 AU		11946 May 02 19:26	0°Y	
opposition	11941 Apr 03 01:19	18°150'13	-0°05'55	retrograde	11946 Jul 14 05:15	7°Y04'20	
direct	11941 May 30 23:48	13°154'53		opposition	11946 Sep 13 07:48	2°Y09'25	0°22'07
asc. node	11941 Jun 01 21:41	13°155'17		min. Earth dist.	11946 Sep 13 23:09	2°Y04'29	4.51318 AU
	11941 Sep 18 11:27	0°10			11946 Sep 30 17:09	30°RH	
evening set	11941 Oct 05 07:30	3°159'09		direct	11946 Nov 14 20:31	27°H08'15	
					11946 Dec 30 01:41	0°Y	
conjunction	11941 Oct 18 21:21	7°15'10	0°08'35	evening set	11947 Mar 19 16:20	14°Y12'32	

max. Earth dist.	11947 Mar 31 02:50	16° Υ 39'27	6.49706 AU		11952 Aug 25 14:23	0° Ω	
				evening set	11952 Sep 02 09:48	1° Ω 53'34	
conjunction	11947 Apr 01 14:50	16° Υ 58'46	0°05'26		11952 Sep 15 19:56	5° Ω 10'33	-0°13'12
minimum elong	11947 Apr 01 14:50	16° Υ 58'46	0°05'15	conjunction	11952 Sep 15 19:57	5° Ω 10'34	0°13'12
behind sun begin	11947 Apr 01 07:06	16° Υ 54'39		minimum elong	11952 Sep 15 15:04	5° Ω 07'35	
behind sun end	11947 Apr 01 22:34	17° Υ 02'54		behind sun begin	11952 Sep 16 00:50	5° Ω 13'32	
morning rise	11947 Apr 14 11:38	19° Υ 44'16		behind sun end	11952 Sep 17 00:07	5° Ω 27'49	5.89478 AU
	11947 Jun 05 17:41	0° \mathcal{B}		max. Earth dist.	11952 Sep 29 08:03	8° Ω 28'38	
desc. node	11947 Jul 15 18:05	5° \mathcal{B} 12'11		morning rise	11953 Feb 08 04:27	29° Ω 20'03	
retrograde	11947 Aug 13 09:31	6° \mathcal{B} 26'23		retrograde	11953 Apr 07 06:12	24° Ω 27'21	3.92032 AU
opposition	11947 Oct 13 11:34	1° \mathcal{B} 32'50	-0°07'02	min. Earth dist.	11953 Apr 08 10:43	24° Ω 17'41	-0°00'26
min. Earth dist.	11947 Oct 14 19:51	1° \mathcal{B} 22'31	4.45965 AU	opposition	11953 Apr 12 17:51	23° Ω 42'48	
	11947 Oct 25 18:40	30° $\mathcal{R}\Upsilon$		asc. node	11953 Jun 05 10:06	19° Ω 22'12	
direct	11947 Dec 15 01:23	26° Υ 31'55		direct	11953 Aug 30 15:37	0° \mathcal{M}	
	11948 Feb 02 18:25	0° \mathcal{B}		evening set	11953 Oct 10 15:53	9° \mathcal{M} 20'05	
evening set	11948 Apr 17 22:42	13° \mathcal{B} 56'12					
	11948 Apr 22 19:32	15° \mathcal{B}					
max. Earth dist.	11948 Apr 28 14:00	16° \mathcal{B} 15'57	6.40223 AU	conjunction	11953 Oct 24 05:49	12° \mathcal{M} 35'11	0°11'59
				minimum elong	11953 Oct 24 05:48	12° \mathcal{M} 35'11	0°12'28
conjunction	11948 Apr 30 18:52	16° \mathcal{B} 45'00	-0°14'59	behind sun begin	11953 Oct 24 00:25	12° \mathcal{M} 31'58	
minimum elong	11948 Apr 30 18:51	16° \mathcal{B} 45'00	0°15'30	behind sun end	11953 Oct 24 11:11	12° \mathcal{M} 38'23	
behind sun begin	11948 Apr 30 16:35	16° \mathcal{B} 43'45		max. Earth dist.	11953 Oct 26 13:01	13° \mathcal{M} 08'15	5.97169 AU
behind sun end	11948 Apr 30 21:07	16° \mathcal{B} 46'14			11953 Nov 03 07:57	15° \mathcal{M}	
morning rise	11948 May 13 13:31	19° \mathcal{B} 33'21		morning rise	11953 Nov 06 21:32	15° \mathcal{M} 50'55	
	11948 Jul 04 06:44	0° \mathcal{I}			11954 Jan 12 14:38	0° \mathcal{J}	
retrograde	11948 Sep 13 04:22	6° \mathcal{I} 54'44		retrograde	11954 Mar 16 17:26	5° \mathcal{J} 55'01	
opposition	11948 Nov 13 01:36	2° \mathcal{I} 01'22	-0°35'33	min. Earth dist.	11954 May 13 15:43	1° \mathcal{J} 04'33	4.04366 AU
min. Earth dist.	11948 Nov 14 17:26	1° \mathcal{I} 48'34	4.32881 AU	opposition	11954 May 15 07:23	0° \mathcal{J} 51'06	0°34'49
	11948 Nov 29 06:58	30° $\mathcal{R}\mathcal{B}$			11954 May 21 15:01	30° $\mathcal{R}\mathcal{M}$	
direct	11949 Jan 13 23:27	27° \mathcal{B} 01'19		direct	11954 Jul 12 20:58	25° \mathcal{M} 53'38	
	11949 Feb 28 03:58	0° \mathcal{I}			11954 Sep 02 11:05	0° \mathcal{J}	
evening set	11949 May 19 08:49	15° \mathcal{I} 07'17		evening set	11954 Nov 16 16:13	15° \mathcal{J} 03'40	
max. Earth dist.	11949 May 29 20:02	17° \mathcal{I} 29'52	6.24438 AU				
				conjunction	11954 Nov 30 06:04	18° \mathcal{J} 11'23	0°31'35
conjunction	11949 Jun 01 04:30	18° \mathcal{I} 02'03	-0°31'50	minimum elong	11954 Nov 30 06:03	18° \mathcal{J} 11'22	0°32'22
minimum elong	11949 Jun 01 04:29	18° \mathcal{I} 02'03	0°32'37	max. Earth dist.	11954 Dec 02 17:32	18° \mathcal{J} 45'41	6.12861 AU
morning rise	11949 Jun 13 23:38	20° \mathcal{I} 56'55		morning rise	11954 Dec 13 20:27	21° \mathcal{J} 19'00	
	11949 Jul 26 02:42	0° \mathcal{B}			11955 Jan 22 20:11	0° \mathcal{B}	
retrograde	11949 Oct 17 14:25	9° \mathcal{B} 23'54		retrograde	11955 Apr 19 13:00	10° \mathcal{B} 08'13	
opposition	11949 Dec 16 22:58	4° \mathcal{B} 29'40	-0°55'25	min. Earth dist.	11955 Jun 17 02:52	5° \mathcal{B} 16'54	4.21733 AU
min. Earth dist.	11949 Dec 18 12:18	4° \mathcal{B} 17'33	4.15410 AU	opposition	11955 Jun 18 13:23	5° \mathcal{B} 05'20	0°55'08
	11950 Jan 29 09:36	30° $\mathcal{R}\mathcal{I}$		direct	11955 Aug 17 08:06	0° \mathcal{B} 05'56	
direct	11950 Feb 15 17:47	29° \mathcal{I} 31'17		evening set	11955 Dec 21 10:21	18° \mathcal{B} 20'45	
	11950 Mar 05 00:44	0° \mathcal{B}					
evening set	11950 Jun 21 18:55	18° \mathcal{B} 32'22		conjunction	11956 Jan 03 21:03	21° \mathcal{B} 19'30	0°39'30
max. Earth dist.	11950 Jul 02 22:00	21° \mathcal{B} 10'09	6.06736 AU	minimum elong	11956 Jan 03 21:03	21° \mathcal{B} 19'30	0°40'18
				max. Earth dist.	11956 Jan 05 17:17	21° \mathcal{B} 44'02	6.30409 AU
conjunction	11950 Jul 04 17:07	21° \mathcal{B} 35'43	-0°39'25	morning rise	11956 Jan 17 07:05	24° \mathcal{B} 17'36	
minimum elong	11950 Jul 04 17:07	21° \mathcal{B} 35'43	0°40'13		11956 Feb 13 00:14	0° \approx	
morning rise	11950 Jul 17 15:58	24° \mathcal{B} 39'44		retrograde	11956 May 19 20:35	11° \approx 56'36	
	11950 Aug 09 18:46	0° \mathcal{Q}		opposition	11956 Jul 19 09:48	6° \approx 56'28	0°56'49
retrograde	11950 Nov 23 15:02	14° \mathcal{Q} 24'03		min. Earth dist.	11956 Jul 18 12:42	7° \approx 03'25	4.38025 AU
opposition	11951 Jan 22 11:01	9° \mathcal{Q} 27'52	-0°57'30	direct	11956 Sep 18 10:02	1° \approx 55'53	
min. Earth dist.	11951 Jan 23 06:20	9° \mathcal{Q} 21'30	3.99015 AU		11956 Dec 31 18:21	15° \approx	
direct	11951 Mar 22 19:04	4° \mathcal{Q} 31'38		evening set	11957 Jan 21 21:44	19° \approx 26'34	
	11951 Jun 16 18:05	15° \mathcal{Q}					
evening set	11951 Jul 27 15:10	24° \mathcal{Q} 23'45		conjunction	11957 Feb 04 04:00	22° \approx 17'56	0°35'17
				minimum elong	11957 Feb 04 04:01	22° \approx 17'56	0°35'51
conjunction	11951 Aug 09 18:46	27° \mathcal{Q} 35'47	-0°33'01	max. Earth dist.	11957 Feb 04 20:18	22° \approx 26'43	6.44266 AU
minimum elong	11951 Aug 09 18:47	27° \mathcal{Q} 35'48	0°33'31	morning rise	11957 Feb 17 08:47	25° \approx 08'25	
max. Earth dist.	11951 Aug 09 07:13	27° \mathcal{Q} 28'45	5.93235 AU		11957 Mar 12 14:52	0° \mathcal{H}	
	11951 Aug 19 15:24	0° \mathcal{M}		retrograde	11957 Jun 18 19:38	12° \mathcal{H} 00'03	
morning rise	11951 Aug 23 00:11	0° \mathcal{M} 49'00		opposition	11957 Aug 18 16:52	7° \mathcal{H} 03'00	0°42'50
retrograde	11952 Jan 01 12:12	21° \mathcal{M} 32'18		min. Earth dist.	11957 Aug 18 15:52	7° \mathcal{H} 03'19	4.48586 AU
opposition	11952 Feb 29 20:53	16° \mathcal{M} 33'04	-0°36'52	direct	11957 Oct 19 18:17	2° \mathcal{H} 01'54	
min. Earth dist.	11952 Feb 29 15:00	16° \mathcal{M} 35'02	3.89907 AU	evening set	11958 Feb 21 18:00	19° \mathcal{H} 08'45	
direct	11952 Apr 28 03:31	11° \mathcal{M} 38'05					

conjunction	11958 Mar 06 19:50	21° H 55'54	0°21'41	retrograde	11964 Jan 06 23:19	26° H 56'39	
minimum elong	11958 Mar 06 19:51	21° H 55'54	0°21'53	opposition	11964 Mar 06 06:58	21° H 56'58	-0°32'20
max. Earth dist.	11958 Mar 06 05:57	21° H 48'30	6.50815 AU	min. Earth dist.	11964 Mar 05 21:48	22° H 00'04	3.89691 AU
morning rise	11958 Mar 19 19:54	24° H 42'09		direct	11964 May 03 10:57	17° H 02'05	
	11958 Apr 14 12:10	0° Y			11964 Aug 07 20:38	0° L	
retrograde	11958 Jul 18 09:10	11° Y 15'47		evening set	11964 Sep 07 17:51	7° L 16'49	
opposition	11958 Sep 17 11:18	6° Y 21'05	0°18'17				
min. Earth dist.	11958 Sep 18 05:30	6° Y 15'15	4.50839 AU	conjunction	11964 Sep 21 04:31	10° L 33'51	-0°09'44
direct	11958 Nov 19 00:47	1° Y 19'54		minimum elong	11964 Sep 21 04:31	10° L 33'51	0°09'39
evening set	11959 Mar 23 20:56	18° Y 26'26		behind sun begin	11964 Sep 20 21:38	10° L 29'40	
max. Earth dist.	11959 Apr 04 05:30	20° Y 52'39	6.48600 AU	behind sun end	11964 Sep 21 11:23	10° L 38'01	
				max. Earth dist.	11964 Sep 22 12:03	10° L 53'08	5.90037 AU
conjunction	11959 Apr 05 19:12	21° Y 12'58	0°02'35	morning rise	11964 Oct 04 17:29	13° L 51'59	
minimum elong	11959 Apr 05 19:13	21° Y 12'58	0°02'22		11964 Dec 20 06:49	0° M	
behind sun begin	11959 Apr 05 11:14	21° Y 08'42		retrograde	11965 Feb 13 08:57	4° M 39'16	
behind sun end	11959 Apr 06 03:13	21° Y 17'15		asc. node	11965 Feb 22 09:58	4° M 31'01	
morning rise	11959 Apr 18 15:31	23° Y 58'44			11965 Apr 10 19:39	30° R L	
	11959 May 17 16:45	0° Z		min. Earth dist.	11965 Apr 12 09:13	29° L 47'16	3.93312 AU
desc. node	11959 May 26 01:06	1° Z 36'41		opposition	11965 Apr 13 16:42	29° L 36'35	0°04'59
retrograde	11959 Aug 17 17:03	10° Z 45'21		direct	11965 Jun 10 16:39	24° L 40'52	
opposition	11959 Oct 17 19:13	5° Z 51'54	-0°11'12		11965 Aug 08 03:48	0° M	
min. Earth dist.	11959 Oct 19 04:27	5° Z 41'16	4.44309 AU	evening set	11965 Oct 15 21:39	14° M 33'16	
direct	11959 Dec 19 06:44	0° Z 51'07			11965 Oct 17 18:40	15° M	
	11960 Apr 06 17:59	15° Z					
evening set	11960 Apr 22 06:38	18° Z 20'46		conjunction	11965 Oct 29 11:49	17° M 47'35	0°15'15
max. Earth dist.	11960 May 02 20:11	20° Z 40'16	6.38130 AU	minimum elong	11965 Oct 29 11:49	17° M 47'34	0°15'48
				behind sun begin	11965 Oct 29 10:54	17° M 47'02	
conjunction	11960 May 05 02:30	21° Z 10'16	-0°17'39	behind sun end	11965 Oct 29 12:43	17° M 48'07	
minimum elong	11960 May 05 02:29	21° Z 10'16	0°18'15	max. Earth dist.	11965 Oct 31 20:28	18° M 21'23	5.99032 AU
morning rise	11960 May 17 21:12	23° Z 59'26		morning rise	11965 Nov 12 03:31	21° M 02'23	
	11960 Jun 15 01:29	0° II			11965 Dec 21 23:00	0° Z	
retrograde	11960 Sep 17 22:04	11° II 29'11		retrograde	11966 Mar 21 14:40	10° Z 57'04	
opposition	11960 Nov 17 16:49	6° II 35'45	-0°39'02	min. Earth dist.	11966 May 18 14:34	6° Z 06'18	4.06586 AU
min. Earth dist.	11960 Nov 19 09:28	6° II 22'40	4.30476 AU	opposition	11966 May 20 05:17	5° Z 53'10	0°38'44
direct	11961 Jan 18 12:09	1° II 35'53		direct	11966 Jul 17 23:00	0° Z 55'26	
evening set	11961 May 23 22:44	19° II 49'17		evening set	11966 Nov 21 15:20	19° Z 58'01	
max. Earth dist.	11961 Jun 03 11:08	22° II 13'22	6.21914 AU				
				conjunction	11966 Dec 05 04:59	23° Z 04'34	0°33'26
conjunction	11961 Jun 05 18:40	22° II 45'11	-0°33'34	minimum elong	11966 Dec 05 04:58	23° Z 04'34	0°34'14
minimum elong	11961 Jun 05 18:39	22° II 45'11	0°34'22	max. Earth dist.	11966 Dec 07 16:09	23° Z 38'31	6.15231 AU
morning rise	11961 Jun 18 14:06	25° II 41'12		morning rise	11966 Dec 18 18:53	26° Z 10'55	
	11961 Jul 07 19:38	0° O			11967 Jan 04 20:26	0° Z	
retrograde	11961 Oct 22 14:39	14° O 18'44		retrograde	11967 Apr 23 23:51	14° Z 50'05	
opposition	11961 Dec 21 22:46	9° O 24'16	-0°56'55	min. Earth dist.	11967 Jun 21 16:57	9° Z 58'53	4.24044 AU
min. Earth dist.	11961 Dec 23 09:18	9° O 13'03	4.12975 AU	opposition	11967 Jun 23 02:48	9° Z 47'33	0°56'26
direct	11962 Feb 20 12:05	4° O 26'13		direct	11967 Aug 22 00:38	4° Z 48'01	
evening set	11962 Jun 26 16:45	23° O 34'47		evening set	11967 Dec 26 01:58	22° Z 56'23	
max. Earth dist.	11962 Jul 08 00:18	26° O 16'00	6.04595 AU				
				conjunction	11968 Jan 08 12:01	25° Z 54'01	0°39'34
conjunction	11962 Jul 09 15:26	26° O 39'19	-0°39'23	minimum elong	11968 Jan 08 12:01	25° Z 54'01	0°40'21
minimum elong	11962 Jul 09 15:27	26° O 39'19	0°40'10	max. Earth dist.	11968 Jan 10 03:37	26° Z 15'53	6.32481 AU
morning rise	11962 Jul 22 15:02	29° O 44'37		morning rise	11968 Jan 21 21:25	28° Z 51'00	
	11962 Jul 23 17:02	0° Q			11968 Jan 27 03:59	0° Z	
	11962 Oct 04 09:05	15° Q			11968 Apr 24 07:18	15° Z	
retrograde	11962 Nov 29 00:37	19° Q 38'24		retrograde	11968 May 24 03:52	16° Z 22'38	
	11963 Jan 25 11:24	15° R Q			11968 Jun 22 19:52	15° R Z	
opposition	11963 Jan 27 18:27	14° Q 41'48	-0°55'54	opposition	11968 Jul 23 17:24	11° Z 22'59	0°55'39
min. Earth dist.	11963 Jan 28 10:53	14° Q 36'21	3.97363 AU	min. Earth dist.	11968 Jul 22 23:45	11° Z 28'47	4.39718 AU
direct	11963 Mar 27 23:39	9° Q 45'46		direct	11968 Sep 22 22:26	6° Z 22'20	
	11963 May 25 05:04	15° Q			11968 Dec 13 14:21	15° Z	
evening set	11963 Aug 01 19:49	29° Q 42'27		evening set	11969 Jan 26 07:27	23° Z 49'07	
	11963 Aug 03 00:44	0° H					
				conjunction	11969 Feb 08 13:10	26° Z 39'49	0°33'49
conjunction	11963 Aug 15 00:25	2° H 55'26	-0°30'54	minimum elong	11969 Feb 08 13:11	26° Z 39'49	0°34'21
minimum elong	11963 Aug 15 00:26	2° H 55'26	0°31'21	max. Earth dist.	11969 Feb 09 01:55	26° Z 46'41	6.45474 AU
max. Earth dist.	11963 Aug 14 19:10	2° H 52'14	5.92235 AU	morning rise	11969 Feb 21 17:15	29° Z 29'35	
morning rise	11963 Aug 28 06:41	6° H 09'32			11969 Feb 24 02:17	0° H	

retrograde	11969 Jun 22 22:41	16° H 17'36			11975 Apr 12 17:19	15° Q	
opposition	11969 Aug 22 21:34	11° H 20'58 0°39'50			11975 Jul 17 16:31	0° P	
min. Earth dist.	11969 Aug 22 22:25	11° H 20'41 4.49276 AU	evening set		11975 Aug 06 19:13	4° P 47'50	
direct	11969 Oct 24 00:26	6° H 19'55					
evening set	11970 Feb 26 00:31	23° H 25'50	conjunction	11975 Aug 20 00:26	8° P 01'29 -0°28'39		
max. Earth dist.	11970 Mar 10 09:33	26° H 04'02 6.50974 AU	minimum elong	11975 Aug 20 00:27	8° P 01'30 0°29'02		
			max. Earth dist.	11975 Aug 19 21:49	7° P 59'53 5.91545 AU		
conjunction	11970 Mar 11 01:51	26° H 12'44 0°19'12	morning rise	11975 Sep 02 07:47	11° P 16'22		
minimum elong	11970 Mar 11 01:52	26° H 12'45 0°19'20		11975 Dec 06 20:45	0° Q		
morning rise	11970 Mar 24 01:15	28° H 58'43	retrograde	11976 Jan 12 02:04	2° Q 06'06		
	11970 Mar 28 21:14	0° Y		11976 Feb 17 09:31	30° R P		
retrograde	11970 Jul 22 14:28	15° Y 32'31	opposition	11976 Mar 11 10:19	27° P 05'59 -0°27'47		
opposition	11970 Sep 21 16:52	10° Y 38'09 0°14'15	min. Earth dist.	11976 Mar 10 21:53	27° P 10'10 3.89566 AU		
min. Earth dist.	11970 Sep 22 13:19	10° Y 31'36 4.50490 AU	direct	11976 May 08 12:29	22° P 11'00		
direct	11970 Nov 23 07:36	5° Y 37'08		11976 Jul 19 10:52	0° Q		
evening set	11971 Mar 28 03:00	22° Y 45'14	evening set	11976 Sep 12 20:03	12° Q 25'12		
desc. node	11971 Apr 02 16:10	23° Y 56'42					
max. Earth dist.	11971 Apr 08 07:36	25° Y 09'43 6.47782 AU	conjunction	11976 Sep 26 07:31	15° Q 42'21 -0°06'24		
			minimum elong	11976 Sep 26 07:31	15° Q 42'20 0°06'15		
conjunction	11971 Apr 10 00:42	25° Y 31'53 -0°00'24	behind sun begin	11976 Sep 25 23:37	15° Q 37'32		
minimum elong	11971 Apr 10 00:41	25° Y 31'53 0°00'40	behind sun end	11976 Sep 26 15:25	15° Q 47'08		
behind sun begin	11971 Apr 09 16:42	25° Y 27'36	max. Earth dist.	11976 Sep 27 18:58	16° Q 03'59 5.90504 AU		
behind sun end	11971 Apr 10 08:41	25° Y 36'10	morning rise	11976 Oct 09 21:01	19° Q 00'31		
morning rise	11971 Apr 22 20:45	28° Y 17'51		11976 Nov 27 06:50	0° M		
	11971 Apr 30 20:17	0° X	asc. node	11977 Jan 05 23:50	6° M 45'50		
	11971 Aug 12 19:46	15° X	retrograde	11977 Feb 18 09:53	9° M 44'23		
retrograde	11971 Aug 22 02:42	15° X 08'03	min. Earth dist.	11977 Apr 17 09:04	4° M 52'15 3.94301 AU		
	11971 Aug 31 08:54	15° R X	opposition	11977 Apr 18 16:54	4° M 41'25 0°10'04		
opposition	11971 Oct 22 04:16	10° X 14'39 -0°15'23		11977 Jun 03 21:46	30° R Q		
min. Earth dist.	11971 Oct 23 14:41	10° X 03'38 4.43089 AU	direct	11977 Jun 15 18:37	29° Q 45'27		
direct	11971 Dec 23 15:01	5° X 14'00		11977 Jun 27 14:59	0° M		
	11972 Mar 20 07:16	15° X		11977 Oct 01 07:58	15° M		
evening set	11972 Apr 26 14:42	22° X 47'20	evening set	11977 Oct 20 22:25	19° M 33'53		
max. Earth dist.	11972 May 07 04:37	25° X 07'29 6.36608 AU					
			conjunction	11977 Nov 03 12:54	22° M 47'39 0°18'14		
conjunction	11972 May 09 10:29	25° X 37'21 -0°20'15	minimum elong	11977 Nov 03 12:54	22° M 47'38 0°18'51		
minimum elong	11972 May 09 10:28	25° X 37'20 0°20'53	max. Earth dist.	11977 Nov 05 23:34	23° M 22'30 6.00444 AU		
morning rise	11972 May 22 04:53	28° X 27'01	morning rise	11977 Nov 17 04:42	26° M 01'49		
	11972 May 29 06:23	0° I		11977 Dec 04 07:33	0° X		
retrograde	11972 Sep 22 11:57	16° I 03'04	retrograde	11978 Mar 26 07:24	15° X 48'58		
opposition	11972 Nov 22 07:05	11° I 09'32 -0°42'16	min. Earth dist.	11978 May 23 07:47	10° X 58'29 4.08276 AU		
min. Earth dist.	11972 Nov 23 22:52	10° I 56'45 4.28754 AU	opposition	11978 May 24 23:09	10° X 45'10 0°42'11		
direct	11973 Jan 22 23:10	6° I 09'56	direct	11978 Jul 22 18:24	5° X 47'12		
evening set	11973 May 28 11:08	24° I 28'20	evening set	11978 Nov 26 11:35	24° X 44'26		
max. Earth dist.	11973 Jun 08 00:32	26° I 53'37 6.20119 AU					
			conjunction	11978 Dec 10 00:52	27° X 50'03 0°34'59		
conjunction	11973 Jun 10 07:00	27° I 24'58 -0°35'04	minimum elong	11978 Dec 10 00:51	27° X 50'02 0°35'49		
minimum elong	11973 Jun 10 06:59	27° I 24'58 0°35'52	max. Earth dist.	11978 Dec 12 09:04	28° X 22'09 6.17048 AU		
	11973 Jun 21 12:37	0° Q		11978 Dec 19 12:47	0° Z		
morning rise	11973 Jun 23 02:47	0° Q 21'51	morning rise	11978 Dec 23 14:30	0° Z 55'25		
retrograde	11973 Oct 27 13:07	19° Q 07'24	retrograde	11979 Apr 28 10:51	19° Z 26'36		
opposition	11973 Dec 26 19:43	14° Q 12'39 -0°57'59	min. Earth dist.	11979 Jun 26 06:40	14° Z 34'56 4.25829 AU		
min. Earth dist.	11973 Dec 28 04:56	14° Q 01'49 4.11224 AU	opposition	11979 Jun 27 14:21	14° Z 24'22 0°57'21		
direct	11974 Feb 25 06:29	9° Q 14'47	direct	11979 Aug 26 16:43	9° Z 24'34		
evening set	11974 Jul 01 10:27	28° Q 28'21	evening set	11979 Dec 30 16:15	27° Z 28'07		
	11974 Jul 07 20:40	0° Q		11980 Jan 11 04:43	0° X		
max. Earth dist.	11974 Jul 12 22:28	1° Q 12'42 6.03056 AU					
			conjunction	11980 Jan 13 02:00	0° X 24'56 0°39'23		
conjunction	11974 Jul 14 09:49	1° Q 33'49 -0°39'05	minimum elong	11980 Jan 13 02:00	0° X 24'56 0°40'08		
minimum elong	11974 Jul 14 09:50	1° Q 33'50 0°39'50	max. Earth dist.	11980 Jan 14 16:09	0° X 45'56 6.34117 AU		
morning rise	11974 Jul 27 09:59	4° Q 40'06	morning rise	11980 Jan 26 10:39	3° X 20'58		
	11974 Sep 11 13:47	15° Q		11980 Mar 25 10:54	15° X		
retrograde	11974 Dec 04 04:19	24° Q 40'57	retrograde	11980 May 28 08:48	20° X 46'22		
opposition	11975 Feb 01 20:33	19° Q 44'00 -0°53'56	min. Earth dist.	11980 Jul 27 07:39	15° X 52'31 4.41095 AU		
min. Earth dist.	11975 Feb 02 10:23	19° Q 39'25 3.96196 AU	opposition	11980 Jul 28 00:13	15° X 47'05 0°54'11		
	11975 Mar 22 01:48	15° R Q		11980 Aug 03 00:32	15° R X		
direct	11975 Apr 01 21:34	14° Q 48'10	direct	11980 Sep 27 07:37	10° X 46'22		

	11980 Nov 21 07:10	15°♊		minimum elong	11986 Jul 19 08:10	6°♏37'56	0°39'12
evening set	11981 Jan 30 16:43	28°♊09'52		morning rise	11986 Aug 01 09:22	9°♏45'35	
	11981 Feb 08 06:17	0°♋			11986 Aug 23 18:54	15°♏	
				retrograde	11986 Dec 09 11:57	29°♏55'54	
conjunction	11981 Feb 12 21:45	0°♋59'55	0°32'11	opposition	11987 Feb 07 03:25	24°♏58'32	-0°51'28
minimum elong	11981 Feb 12 21:46	0°♋59'56	0°32'39	min. Earth dist.	11987 Feb 07 13:27	24°♏55'12	3.94569 AU
max. Earth dist.	11981 Feb 13 06:13	1°♋04'29	6.46493 AU	direct	11987 Apr 07 00:02	20°♏02'53	
morning rise	11981 Feb 26 01:17	3°♋49'04			11987 Jun 28 23:17	0°♐	
retrograde	11981 Jun 27 03:36	20°♋33'46		evening set	11987 Aug 12 00:15	10°♐07'31	
opposition	11981 Aug 27 02:28	15°♋37'27	0°36'39				
min. Earth dist.	11981 Aug 27 06:29	15°♋36'09	4.49865 AU	conjunction	11987 Aug 25 06:35	13°♐22'08	-0°26'03
direct	11981 Oct 28 08:48	10°♋36'20		minimum elong	11987 Aug 25 06:36	13°♐22'09	0°26'22
evening set	11982 Mar 02 06:31	27°♋41'09		max. Earth dist.	11987 Aug 25 10:16	13°♐24'24	5.90564 AU
	11982 Mar 13 03:17	0°♑		morning rise	11987 Sep 07 14:48	16°♐37'57	
max. Earth dist.	11982 Mar 14 11:35	0°♑17'15	6.51063 AU		11987 Nov 06 18:58	0°♑	
				retrograde	11988 Jan 17 13:52	7°♑31'17	
conjunction	11982 Mar 15 07:20	0°♑27'48	0°16'37	opposition	11988 Mar 16 19:54	2°♑30'47	-0°22'46
minimum elong	11982 Mar 15 07:20	0°♑27'48	0°16'41	min. Earth dist.	11988 Mar 16 05:10	2°♑35'45	3.89354 AU
morning rise	11982 Mar 28 06:11	3°♑13'32			11988 Apr 05 09:57	30°♑	
retrograde	11982 Jul 26 18:25	19°♑47'31		direct	11988 May 13 21:22	27°♑35'47	
opposition	11982 Sep 25 22:05	14°♑53'15	0°10'08		11988 Jun 20 22:29	0°♒	
min. Earth dist.	11982 Sep 26 19:57	14°♑46'16	4.50058 AU	evening set	11988 Sep 18 04:37	17°♒49'33	
direct	11982 Nov 27 12:40	9°♑52'13					
desc. node	11983 Feb 07 18:53	16°♑41'30		conjunction	11988 Oct 01 16:47	21°♒06'46	-0°02'48
evening set	11983 Apr 01 08:32	27°♑02'01		minimum elong	11988 Oct 01 16:47	21°♒06'46	0°02'35
max. Earth dist.	11983 Apr 12 11:41	29°♑26'01	6.46826 AU	behind sun begin	11988 Oct 01 08:26	21°♒01'42	
				behind sun end	11988 Oct 02 01:09	21°♒11'51	
conjunction	11983 Apr 14 05:56	29°♑48'52	-0°03'20	max. Earth dist.	11988 Oct 03 09:02	21°♒31'18	5.91076 AU
minimum elong	11983 Apr 14 05:55	29°♑48'52	0°03'40	morning rise	11988 Oct 15 07:00	24°♒24'57	
behind sun begin	11983 Apr 13 22:01	29°♑44'37			11988 Nov 07 22:15	0°♓	
behind sun end	11983 Apr 14 13:50	29°♑53'07		asc. node	11988 Nov 15 05:52	1°♓39'16	
	11983 Apr 15 02:30	0°♓			11989 Feb 17 01:15	15°♓	
morning rise	11983 Apr 27 01:28	2°♓35'02		retrograde	11989 Feb 23 14:31	15°♓04'20	
	11983 Jul 01 07:04	15°♓			11989 Mar 02 03:32	15°♓	
retrograde	11983 Aug 26 11:38	19°♓29'17		min. Earth dist.	11989 Apr 22 11:54	10°♓12'53	3.95615 AU
	11983 Oct 23 09:44	15°♓		opposition	11989 Apr 23 22:26	10°♓01'10	0°15'19
opposition	11983 Oct 26 13:05	14°♓35'57	-0°19'30	direct	11989 Jun 21 00:05	5°♓05'00	
min. Earth dist.	11983 Oct 28 01:02	14°♓24'28	4.41633 AU		11989 Sep 12 08:18	15°♓	
direct	11983 Dec 27 22:47	9°♓35'25		evening set	11989 Oct 26 04:49	24°♓48'05	
	11984 Feb 28 18:32	15°♓					
evening set	11984 Apr 30 22:51	27°♓13'21		conjunction	11989 Nov 08 19:15	28°♓00'57	0°21'15
max. Earth dist.	11984 May 11 10:11	29°♓32'45	6.34722 AU	minimum elong	11989 Nov 08 19:14	28°♓00'57	0°21'54
				max. Earth dist.	11989 Nov 11 06:07	28°♓35'46	6.02361 AU
conjunction	11984 May 13 18:20	0°♐04'01	-0°22'45		11989 Nov 17 04:50	0°♐	
minimum elong	11984 May 13 18:19	0°♐04'00	0°23'26	morning rise	11989 Nov 22 11:07	1°♐14'11	
	11984 May 13 11:07	0°♐		retrograde	11990 Mar 31 03:12	20°♐51'32	
morning rise	11984 May 26 12:54	2°♐54'27		min. Earth dist.	11990 May 28 05:42	16°♐00'58	4.10594 AU
retrograde	11984 Sep 27 05:01	20°♐38'30		opposition	11990 May 29 20:39	15°♐47'48	0°45'29
opposition	11984 Nov 26 22:36	15°♐44'51	-0°45'20	direct	11990 Jul 27 20:41	10°♐49'31	
min. Earth dist.	11984 Nov 28 14:25	15°♐32'01	4.26535 AU	evening set	11990 Dec 01 10:45	29°♐38'59	
direct	11985 Jan 27 11:48	10°♐45'23			11990 Dec 02 23:55	0°♑	
evening set	11985 Jun 02 00:49	29°♐10'48					
	11985 Jun 05 14:29	0°♑		conjunction	11990 Dec 14 23:48	2°♑43'20	0°36'22
max. Earth dist.	11985 Jun 12 16:46	1°♑38'17	6.17744 AU	minimum elong	11990 Dec 14 23:47	2°♑43'20	0°37'13
				max. Earth dist.	11990 Dec 17 08:06	3°♑15'19	6.19586 AU
conjunction	11985 Jun 14 21:07	2°♑08'34	-0°36'22	morning rise	11990 Dec 28 12:40	5°♑47'18	
minimum elong	11985 Jun 14 21:06	2°♑08'34	0°37'12	retrograde	11991 May 02 22:16	24°♑07'47	
morning rise	11985 Jun 27 17:09	5°♑06'36		min. Earth dist.	11991 Jun 30 20:46	19°♑16'06	4.28359 AU
retrograde	11985 Nov 01 14:53	24°♑02'35		opposition	11991 Jul 02 03:24	19°♑05'55	0°57'56
opposition	11985 Dec 31 19:24	19°♑07'40	-0°58'43	direct	11991 Aug 31 09:59	14°♑05'57	
min. Earth dist.	11986 Jan 02 02:58	18°♑57'22	4.08889 AU		11991 Dec 25 21:18	0°♒	
direct	11986 Mar 02 01:11	14°♑10'07		evening set	11992 Jan 04 07:05	2°♒02'05	
	11986 Jun 21 08:35	0°♓					
evening set	11986 Jul 06 08:15	3°♓31'12		conjunction	11992 Jan 17 15:58	4°♒57'37	0°39'00
max. Earth dist.	11986 Jul 17 23:05	6°♓18'04	6.00966 AU	minimum elong	11992 Jan 17 15:58	4°♒57'38	0°39'44
				max. Earth dist.	11992 Jan 19 01:28	5°♒15'59	6.36437 AU
conjunction	11986 Jul 19 08:10	6°♓37'56	-0°38'29	morning rise	11992 Jan 31 00:01	7°♒52'26	

	11992 Mar 05 04:52	15°♊	direct	11998 Mar 06 20:58	19°♊09'17	
retrograde	11992 Jun 01 14:14	25°♊09'35		11998 Jun 03 09:22	0°♊	
opposition	11992 Aug 01 06:45	20°♊10'40 0°52'27	evening set	11998 Jul 11 08:15	8°♊39'29	
min. Earth dist.	11992 Jul 31 17:25	20°♊15'02 4.43045 AU	max. Earth dist.	11998 Jul 23 05:49	11°♊31'13 5.98560 AU	
direct	11992 Oct 01 18:45	15°♊09'46				
	11993 Jan 23 07:18	0°♋	conjunction	11998 Jul 24 09:11	11°♊47'44 -0°37'37	
evening set	11993 Feb 04 00:30	2°♋28'14	minimum elong	11998 Jul 24 09:11	11°♊47'45 0°38'17	
			morning rise	11998 Aug 06 11:15	14°♊56'56	
conjunction	11993 Feb 17 05:00	5°♋17'29 0°30'25		11998 Aug 06 16:21	15°♊	
minimum elong	11993 Feb 17 05:01	5°♋17'29 0°30'50		11998 Oct 16 12:32	0°♌	
max. Earth dist.	11993 Feb 17 10:47	5°♋20'34 6.47935 AU	retrograde	11998 Dec 15 01:12	5°♌17'48	
morning rise	11993 Mar 02 07:38	8°♋05'45	opposition	11999 Feb 12 13:32	0°♌20'03 -0°48'35	
retrograde	11993 Jul 01 04:09	24°♋46'03	min. Earth dist.	11999 Feb 12 20:43	0°♌17'39 3.92783 AU	
opposition	11993 Aug 31 05:21	19°♋50'02 0°33'22		11999 Feb 15 01:44	30°♌♊	
min. Earth dist.	11993 Aug 31 11:17	19°♋48'07 4.50715 AU	direct	11999 Apr 12 06:16	25°♌24'39	
direct	11993 Nov 01 13:11	14°♋48'51		11999 Jun 05 03:46	0°♌	
	11994 Feb 25 13:29	0°♍	evening set	11999 Aug 17 08:54	15°♌34'35	
evening set	11994 Mar 06 10:27	1°♍51'57				
max. Earth dist.	11994 Mar 18 10:39	4°♍25'29 6.51250 AU	conjunction	11999 Aug 30 16:12	18°♌50'10 -0°23'13	
			minimum elong	11999 Aug 30 16:13	18°♌50'10 0°23'27	
conjunction	11994 Mar 19 10:36	4°♍38'16 0°14'01	max. Earth dist.	11999 Aug 31 01:20	18°♌55'46 5.89591 AU	
minimum elong	11994 Mar 19 10:36	4°♍38'16 0°14'03	morning rise	11999 Sep 13 01:36	22°♌06'58	
behind sun begin	11994 Mar 19 06:38	4°♍36'10		11999 Oct 16 14:25	0°♎	
behind sun end	11994 Mar 19 14:34	4°♍40'23	retrograde	12000 Jan 23 02:25	13°♎03'07	
morning rise	11994 Apr 01 08:55	7°♍23'44	opposition	12000 Mar 22 08:03	8°♎02'10 -0°17'30	
retrograde	11994 Jul 30 22:21	23°♍57'53	min. Earth dist.	12000 Mar 21 12:39	8°♎08'43 3.89342 AU	
opposition	11994 Sep 30 01:34	19°♍03'48 0°06'06	direct	12000 May 19 06:53	3°♎07'09	
min. Earth dist.	11994 Oct 01 02:55	18°♍55'42 4.49555 AU	asc. node	12000 Sep 22 09:27	23°♎00'50	
direct	11994 Dec 01 17:46	14°♍02'43	evening set	12000 Sep 23 16:21	23°♎19'30	
desc. node	11994 Dec 18 13:57	14°♍28'05				
	11995 Mar 30 16:43	0°♏	conjunction	12000 Oct 07 05:03	26°♎36'32 0°00'57	
evening set	11995 Apr 05 11:59	1°♏14'31	minimum elong	12000 Oct 07 05:01	26°♎36'31 0°01'15	
max. Earth dist.	11995 Apr 16 10:32	3°♏36'27 6.45642 AU	behind sun begin	12000 Oct 06 20:38	26°♎31'27	
			behind sun end	12000 Oct 07 13:24	26°♎41'35	
conjunction	11995 Apr 18 08:58	4°♏01'38 -0°06'08	max. Earth dist.	12000 Oct 09 00:57	27°♎03'12 5.92011 AU	
minimum elong	11995 Apr 18 08:57	4°♏01'38 0°06'32	morning rise	12000 Oct 20 19:50	29°♎54'28	
behind sun begin	11995 Apr 18 01:28	3°♏57'35		12000 Oct 21 05:02	0°♐	
behind sun end	11995 Apr 18 16:27	4°♏05'40		12000 Dec 30 17:02	15°♐	
morning rise	11995 May 01 04:20	6°♏48'09	retrograde	12001 Feb 28 19:49	20°♐27'21	
	11995 Jun 10 05:28	15°♏	min. Earth dist.	12001 Apr 27 17:08	15°♐36'11 3.97358 AU	
retrograde	11995 Aug 30 19:38	23°♏47'28	opposition	12001 Apr 29 05:23	15°♐23'52 0°20'28	
opposition	11995 Oct 30 20:44	18°♏54'05 -0°23'27		12001 May 02 03:41	15°♐♌	
min. Earth dist.	11995 Nov 01 09:45	18°♏42'14 4.39824 AU	direct	12001 Jun 26 09:44	10°♐27'24	
	11995 Dec 04 23:02	15°♐♏		12001 Aug 19 08:53	15°♐	
direct	11996 Jan 01 03:55	13°♏53'32	evening set	12001 Oct 31 12:01	0°♑03'18	
	11996 Jan 28 10:41	15°♏		12001 Oct 31 06:22	0°♑	
	11996 Apr 27 21:19	0°♒				
evening set	11996 May 05 05:59	1°♒37'19	conjunction	12001 Nov 14 02:36	3°♑15'05 0°24'06	
max. Earth dist.	11996 May 15 17:32	3°♒57'30 6.32410 AU	minimum elong	12001 Nov 14 02:34	3°♑15'04 0°24'48	
			max. Earth dist.	12001 Nov 16 16:07	3°♑51'15 6.04722 AU	
conjunction	11996 May 18 01:34	4°♒28'52 -0°25'06	morning rise	12001 Nov 27 18:04	6°♑27'01	
minimum elong	11996 May 18 01:33	4°♒28'51 0°25'48	retrograde	12002 Apr 04 23:52	25°♑52'52	
morning rise	11996 May 30 20:02	7°♒20'13	min. Earth dist.	12002 Jun 02 03:35	21°♑02'17 4.13285 AU	
retrograde	11996 Oct 01 22:32	25°♒13'46	opposition	12002 Jun 03 18:10	20°♑49'17 0°48'24	
opposition	11996 Dec 01 14:02	20°♒20'02 -0°48'07	direct	12002 Aug 01 22:35	15°♑50'45	
min. Earth dist.	11996 Dec 03 06:24	20°♒07'01 4.23857 AU		12002 Nov 15 21:53	0°♓	
direct	11997 Jan 31 23:20	15°♒20'45	evening set	12002 Dec 06 09:32	4°♓31'21	
	11997 May 20 09:13	0°♔				
evening set	11997 Jun 06 15:27	3°♔54'54	conjunction	12002 Dec 19 21:53	7°♓34'14 0°37'30	
max. Earth dist.	11997 Jun 17 07:34	6°♔23'28 6.14910 AU	minimum elong	12002 Dec 19 21:52	7°♓34'14 0°38'19	
			max. Earth dist.	12002 Dec 22 03:10	8°♓04'19 6.22339 AU	
conjunction	11997 Jun 19 12:00	6°♔54'00 -0°37'27	morning rise	12003 Jan 02 10:14	10°♓36'44	
minimum elong	11997 Jun 19 12:00	6°♔53'59 0°38'18	retrograde	12003 May 07 08:04	28°♓46'17	
morning rise	11997 Jul 02 08:48	9°♔53'32	min. Earth dist.	12003 Jul 05 11:02	23°♓54'16 4.30941 AU	
retrograde	11997 Nov 06 18:35	29°♔01'48	opposition	12003 Jul 06 15:36	23°♓44'46 0°58'07	
opposition	11998 Jan 05 20:54	24°♔06'35 -0°59'05	direct	12003 Sep 05 02:26	18°♓44'38	
min. Earth dist.	11998 Jan 07 01:45	23°♔57'08 4.06127 AU		12003 Dec 08 13:59	0°♕	

evening set	12004 Jan 08 21:03	6° \approx 33'39		conjunction	12009 Jun 24 07:01	11° \approx 50'39	-0°38'19
				minimum elong	12009 Jun 24 07:01	11° \approx 50'39	0°39'09
conjunction	12004 Jan 22 05:25	9° \approx 28'04	0°38'22	morning rise	12009 Jul 07 04:16	14° \approx 51'36	
minimum elong	12004 Jan 22 05:25	9° \approx 28'04	0°39'04		12009 Sep 20 02:51	0° Ω	
max. Earth dist.	12004 Jan 23 12:00	9° \approx 44'45	6.38665 AU	retrograde	12009 Nov 12 03:28	4° Ω 11'44	
morning rise	12004 Feb 04 12:29	12° \approx 21'38			12010 Jan 05 12:42	30° \mathbb{R} \approx	
	12004 Feb 16 20:30	15° \approx		opposition	12010 Jan 11 02:31	29° \approx 16'17	-0°58'59
retrograde	12004 Jun 05 18:59	29° \approx 31'19		min. Earth dist.	12010 Jan 12 05:33	29° \approx 07'24	4.03679 AU
opposition	12004 Aug 05 12:50	24° \approx 32'55	0°50'24	direct	12010 Mar 11 22:09	24° \approx 19'20	
min. Earth dist.	12004 Aug 05 02:02	24° \approx 36'27	4.44772 AU		12010 May 12 07:09	0° Ω	
direct	12004 Oct 06 04:11	19° \approx 32'01		evening set	12010 Jul 16 11:55	13° Ω 57'15	
	12005 Jan 06 04:19	0° \mathbb{X}			12010 Jul 20 20:05	15° Ω	
evening set	12005 Feb 08 08:16	6° \mathbb{X} 46'30					
				conjunction	12010 Jul 29 13:37	17° Ω 06'48	-0°36'24
conjunction	12005 Feb 21 11:57	9° \mathbb{X} 35'03	0°28'27	minimum elong	12010 Jul 29 13:38	17° Ω 06'48	0°37'03
minimum elong	12005 Feb 21 11:58	9° \mathbb{X} 35'04	0°28'48	max. Earth dist.	12010 Jul 28 14:24	16° Ω 52'44	5.96633 AU
max. Earth dist.	12005 Feb 21 11:47	9° \mathbb{X} 34'57	6.49039 AU	morning rise	12010 Aug 11 16:48	20° Ω 17'22	
morning rise	12005 Mar 06 14:04	12° \mathbb{X} 22'42			12010 Sep 23 03:51	0° \mathbb{P}	
retrograde	12005 Jul 05 08:35	29° \mathbb{X} 00'07		retrograde	12010 Dec 20 13:52	10° \mathbb{P} 46'19	
opposition	12005 Sep 04 09:24	24° \mathbb{X} 04'28	0°29'51	opposition	12011 Feb 18 01:30	5° \mathbb{P} 48'08	-0°45'11
min. Earth dist.	12005 Sep 04 19:05	24° \mathbb{X} 01'21	4.51148 AU	min. Earth dist.	12011 Feb 18 03:35	5° \mathbb{P} 47'27	3.91640 AU
direct	12005 Nov 05 19:40	19° \mathbb{X} 03'16		direct	12011 Apr 17 13:50	0° \mathbb{P} 52'56	
	12006 Feb 08 20:09	0° \mathbb{Y}		evening set	12011 Aug 22 18:56	21° \mathbb{P} 05'26	
evening set	12006 Mar 10 15:19	6° \mathbb{Y} 06'06					
max. Earth dist.	12006 Mar 22 11:50	8° \mathbb{Y} 37'47	6.50980 AU	conjunction	12011 Sep 05 03:02	24° \mathbb{P} 21'32	-0°20'09
				minimum elong	12011 Sep 05 03:03	24° \mathbb{P} 21'32	0°20'19
conjunction	12006 Mar 23 15:04	8° \mathbb{Y} 52'20	0°11'18	max. Earth dist.	12011 Sep 05 17:56	24° \mathbb{P} 30'40	5.89359 AU
minimum elong	12006 Mar 23 15:05	8° \mathbb{Y} 52'21	0°11'15	morning rise	12011 Sep 18 13:22	27° \mathbb{P} 38'51	
behind sun begin	12006 Mar 23 09:12	8° \mathbb{Y} 49'13			12011 Sep 28 06:47	0° $\underline{\mathbb{A}}$	
behind sun end	12006 Mar 23 20:58	8° \mathbb{Y} 55'29		retrograde	12012 Jan 28 12:57	18° $\underline{\mathbb{A}}$ 34'27	
morning rise	12006 Apr 05 12:47	11° \mathbb{Y} 37'43		opposition	12012 Mar 27 19:33	13° $\underline{\mathbb{A}}$ 32'56	-0°12'06
retrograde	12006 Aug 04 03:01	28° \mathbb{Y} 13'42		min. Earth dist.	12012 Mar 26 21:00	13° $\underline{\mathbb{A}}$ 40'35	3.90056 AU
opposition	12006 Oct 04 07:06	23° \mathbb{Y} 19'49	0°01'54	direct	12012 May 24 18:47	8° $\underline{\mathbb{A}}$ 37'46	
min. Earth dist.	12006 Oct 05 09:52	23° \mathbb{Y} 11'15	4.48610 AU	asc. node	12012 Jul 31 00:59	15° $\underline{\mathbb{A}}$ 32'58	
desc. node	12006 Oct 28 16:41	20° \mathbb{Y} 24'47		evening set	12012 Sep 29 02:15	28° $\underline{\mathbb{A}}$ 45'41	
direct	12006 Dec 05 21:36	18° \mathbb{Y} 18'47			12012 Oct 04 05:32	0° \mathbb{M}	
	12007 Mar 14 03:25	0° \mathbb{Z}					
evening set	12007 Apr 09 18:05	5° \mathbb{Z} 34'06		conjunction	12012 Oct 12 15:29	2° \mathbb{M} 02'09	0°04'32
max. Earth dist.	12007 Apr 20 14:25	7° \mathbb{Z} 55'20	6.44078 AU	minimum elong	12012 Oct 12 15:29	2° \mathbb{M} 02'09	0°04'55
				behind sun begin	12012 Oct 12 07:20	1° \mathbb{M} 57'15	
conjunction	12007 Apr 22 14:44	8° \mathbb{Z} 21'40	-0°09'00	behind sun end	12012 Oct 12 23:38	2° \mathbb{M} 07'03	
minimum elong	12007 Apr 22 14:44	8° \mathbb{Z} 21'40	0°09'27	max. Earth dist.	12012 Oct 14 16:57	2° \mathbb{M} 32'05	5.93591 AU
behind sun begin	12007 Apr 22 08:04	8° \mathbb{Z} 18'03		morning rise	12012 Oct 26 06:28	5° \mathbb{M} 19'24	
behind sun end	12007 Apr 22 21:23	8° \mathbb{Z} 25'16			12012 Dec 07 19:54	15° \mathbb{M}	
morning rise	12007 May 05 09:49	11° \mathbb{Z} 08'41		retrograde	12013 Mar 05 23:10	25° \mathbb{M} 43'12	
	12007 May 23 11:55	15° \mathbb{Z}		min. Earth dist.	12013 May 02 19:55	20° \mathbb{M} 52'10	3.99607 AU
retrograde	12007 Sep 04 08:52	28° \mathbb{Z} 14'25		opposition	12013 May 04 09:12	20° \mathbb{M} 39'31	0°25'16
opposition	12007 Nov 04 07:55	23° \mathbb{Z} 21'06	-0°27'26	direct	12013 Jul 01 16:56	15° \mathbb{M} 42'46	
min. Earth dist.	12007 Nov 05 23:07	23° \mathbb{Z} 08'33	4.37719 AU		12013 Oct 14 00:35	0° \mathbb{Z}	
direct	12008 Jan 05 13:26	18° \mathbb{Z} 20'41		evening set	12013 Nov 05 15:51	5° \mathbb{Z} 09'53	
	12008 Apr 10 23:22	0° \mathbb{I}					
evening set	12008 May 09 16:44	6° \mathbb{I} 11'15		conjunction	12013 Nov 19 06:05	8° \mathbb{Z} 20'17	0°26'39
max. Earth dist.	12008 May 20 02:23	8° \mathbb{I} 31'13	6.29906 AU	minimum elong	12013 Nov 19 06:04	8° \mathbb{Z} 20'17	0°27'24
				max. Earth dist.	12013 Nov 21 19:08	8° \mathbb{Z} 55'57	6.07384 AU
conjunction	12008 May 22 12:16	9° \mathbb{I} 03'47	-0°27'23	morning rise	12013 Dec 02 21:22	11° \mathbb{Z} 30'50	
minimum elong	12008 May 22 12:15	9° \mathbb{I} 03'47	0°28'08		12014 Mar 19 05:31	0° \mathbb{Z}	
morning rise	12008 Jun 04 07:02	11° \mathbb{I} 56'14		retrograde	12014 Apr 09 13:51	0° \mathbb{Z} 44'28	
	12008 Oct 05 10:38	0° \mathbb{S}			12014 Apr 30 19:54	30° \mathbb{R} \mathbb{Z}	
retrograde	12008 Oct 06 19:55	0° \mathbb{S} 00'11		min. Earth dist.	12014 Jun 06 21:21	25° \mathbb{Z} 53'50	4.16090 AU
	12008 Oct 08 05:12	30° \mathbb{R} \mathbb{I}		opposition	12014 Jun 08 11:26	25° \mathbb{Z} 41'00	0°50'50
opposition	12008 Dec 06 09:53	25° \mathbb{I} 06'17	-0°50'43	direct	12014 Aug 06 19:48	20° \mathbb{Z} 42'09	
min. Earth dist.	12008 Dec 08 00:47	24° \mathbb{I} 53'42	4.21127 AU		12014 Oct 28 13:15	0° \mathbb{Z}	
direct	12009 Feb 05 13:53	20° \mathbb{I} 07'14		evening set	12014 Dec 11 04:09	9° \mathbb{Z} 13'53	
	12009 May 02 04:33	0° \mathbb{S}					
evening set	12009 Jun 11 09:55	8° \mathbb{S} 50'12		conjunction	12014 Dec 24 16:02	12° \mathbb{Z} 15'23	0°38'19
max. Earth dist.	12009 Jun 22 06:21	11° \mathbb{S} 22'08	6.12193 AU	minimum elong	12014 Dec 24 16:02	12° \mathbb{Z} 15'23	0°39'09
				max. Earth dist.	12014 Dec 26 18:28	12° \mathbb{Z} 43'42	6.25056 AU

morning rise	12015 Jan 07 03:34	15°♁16'23		evening set	12020 May 14 04:31	10°♂47'14	
	12015 Mar 26 00:24	0°♁		max. Earth dist.	12020 May 24 15:40	13°♂08'49	6.27415 AU
retrograde	12015 May 11 16:06	3°♁15'35					
	12015 Jun 27 10:59	30°♁		conjunction	12020 May 27 00:07	13°♂40'47	-0°29'29
min. Earth dist.	12015 Jul 09 22:53	28°♁23'00	4.33344 AU	minimum elong	12020 May 27 00:06	13°♂40'46	0°30'16
opposition	12015 Jul 11 00:28	28°♁14'31	0°57'57	morning rise	12020 Jun 08 19:00	16°♂34'19	
direct	12015 Sep 09 16:23	23°♁14'14			12020 Aug 15 04:35	0°♂	
	12015 Nov 19 05:01	0°♁		retrograde	12020 Oct 11 20:06	4°♂48'34	
evening set	12016 Jan 13 07:32	10°♁56'50			12020 Dec 10 14:10	30°♁	
				opposition	12020 Dec 11 06:58	29°♂54'33	-0°52'57
conjunction	12016 Jan 26 15:10	13°♁50'12	0°37'33	min. Earth dist.	12020 Dec 12 21:34	29°♂42'03	4.18577 AU
minimum elong	12016 Jan 26 15:11	13°♁50'13	0°38'12	direct	12021 Feb 10 07:20	24°♂55'50	
max. Earth dist.	12016 Jan 27 16:43	14°♁04'05	6.40573 AU		12021 Apr 10 04:06	0°♂	
	12016 Jan 31 23:41	15°♁		evening set	12021 Jun 16 05:16	13°♂46'46	
morning rise	12016 Feb 08 21:38	16°♁42'46		max. Earth dist.	12021 Jun 27 04:08	16°♂20'59	6.09804 AU
	12016 Apr 19 22:59	0°♁					
retrograde	12016 Jun 09 21:18	3°♁46'19		conjunction	12021 Jun 29 02:49	16°♂48'29	-0°38'53
	12016 Jul 31 10:25	30°♁		minimum elong	12021 Jun 29 02:48	16°♂48'29	0°39'42
opposition	12016 Aug 09 16:38	28°♁48'19	0°48'11	morning rise	12021 Jul 12 00:48	19°♂50'45	
min. Earth dist.	12016 Aug 09 08:50	28°♁50'52	4.46093 AU		12021 Aug 27 01:52	0°♂	
direct	12016 Oct 10 10:45	23°♁47'20		retrograde	12021 Nov 17 09:19	9°♂21'17	
	12016 Dec 17 18:45	0°♁		opposition	12022 Jan 16 07:58	4°♂25'30	-0°58'23
evening set	12017 Feb 12 13:44	10°♁59'08		min. Earth dist.	12022 Jan 17 06:57	4°♂17'57	4.01677 AU
					12022 Feb 27 05:15	30°♁	
conjunction	12017 Feb 25 17:00	13°♁47'14	0°26'24	direct	12022 Mar 16 21:55	29°♂28'53	
minimum elong	12017 Feb 25 17:01	13°♁47'14	0°26'43		12022 Apr 03 15:48	0°♂	
max. Earth dist.	12017 Feb 25 13:37	13°♁45'26	6.49699 AU		12022 Jul 03 20:49	15°♂	
morning rise	12017 Mar 10 18:18	16°♁34'23		evening set	12022 Jul 21 14:51	19°♂12'44	
	12017 May 23 17:29	0°♁					
retrograde	12017 Jul 09 10:25	3°♁10'20		conjunction	12022 Aug 03 17:20	22°♂23'20	-0°34'54
	12017 Aug 25 14:02	30°♁		minimum elong	12022 Aug 03 17:21	22°♂23'20	0°35'28
opposition	12017 Sep 08 12:07	28°♁15'03	0°26'16	max. Earth dist.	12022 Aug 02 23:32	22°♂12'31	5.95203 AU
min. Earth dist.	12017 Sep 09 00:14	28°♁11'09	4.51129 AU	morning rise	12022 Aug 16 21:26	25°♂35'01	
direct	12017 Nov 09 22:59	23°♁13'54			12022 Sep 04 11:16	0°♁	
	12018 Jan 21 01:04	0°♁		retrograde	12022 Dec 26 01:44	16°♁10'07	
evening set	12018 Mar 14 19:35	10°♁17'50		opposition	12023 Feb 23 11:42	11°♁11'28	-0°41'24
max. Earth dist.	12018 Mar 26 10:48	12°♁47'01	6.50285 AU	min. Earth dist.	12023 Feb 23 10:39	11°♁11'49	3.90926 AU
				direct	12023 Apr 22 22:17	6°♁16'22	
conjunction	12018 Mar 27 18:44	13°♁04'07	0°08'35	evening set	12023 Aug 28 02:39	26°♁29'55	
minimum elong	12018 Mar 27 18:44	13°♁04'08	0°08'28				
behind sun begin	12018 Mar 27 11:44	13°♁00'24		conjunction	12023 Sep 10 11:42	29°♁46'25	-0°16'58
behind sun end	12018 Mar 28 01:45	13°♁07'52		minimum elong	12023 Sep 10 11:43	29°♁46'26	0°17'03
morning rise	12018 Apr 09 16:11	15°♁49'39		max. Earth dist.	12023 Sep 11 09:05	29°♁59'31	5.89439 AU
	12018 Jun 28 08:58	0°♁			12023 Sep 11 09:51	0°♁	
retrograde	12018 Aug 08 10:53	2°♁28'49		morning rise	12023 Sep 23 22:45	3°♁04'03	
desc. node	12018 Sep 09 21:13	0°♁54'11		retrograde	12024 Feb 02 21:32	23°♁57'50	
	12018 Sep 18 17:36	30°♁		min. Earth dist.	12024 Apr 01 02:35	19°♁04'29	3.90930 AU
opposition	12018 Oct 08 13:06	27°♁35'08	-0°02'15	opposition	12024 Apr 02 03:38	18°♁56'00	-0°06'41
min. Earth dist.	12018 Oct 09 18:52	27°♁25'37	4.47289 AU	direct	12024 May 30 02:25	14°♁00'44	
direct	12018 Dec 10 03:33	22°♁34'10		asc. node	12024 Jun 09 05:50	14°♁11'22	
	12019 Feb 23 14:43	0°♁			12024 Sep 17 04:35	0°♁	
evening set	12019 Apr 14 00:18	9°♁54'00		evening set	12024 Oct 04 09:34	4°♁04'17	
max. Earth dist.	12019 Apr 24 18:32	12°♁14'42	6.42225 AU				
				conjunction	12024 Oct 17 23:02	7°♁20'09	0°08'01
conjunction	12019 Apr 26 20:49	12°♁42'12	-0°11'47	minimum elong	12024 Oct 17 23:02	7°♁20'09	0°08'27
minimum elong	12019 Apr 26 20:49	12°♁42'12	0°12'17	behind sun begin	12024 Oct 17 15:43	7°♁15'46	
behind sun begin	12019 Apr 26 15:28	12°♁39'17		behind sun end	12024 Oct 18 06:21	7°♁24'32	
behind sun end	12019 Apr 27 02:09	12°♁45'06		max. Earth dist.	12024 Oct 20 02:10	7°♁50'57	5.95137 AU
	12019 May 07 08:53	15°♁		morning rise	12024 Oct 31 14:28	10°♁36'47	
morning rise	12019 May 09 15:44	15°♁29'53			12024 Nov 19 06:45	15°♁	
	12019 Jul 28 00:55	0°♁			12025 Feb 15 22:05	0°♁	
retrograde	12019 Sep 08 21:37	2°♁43'01		retrograde	12025 Mar 10 21:39	0°♁52'06	
	12019 Oct 22 05:48	30°♁			12025 Apr 02 18:36	30°♁	
opposition	12019 Nov 08 20:13	27°♁49'41	-0°31'14	min. Earth dist.	12025 May 07 19:05	26°♁01'28	4.01651 AU
min. Earth dist.	12019 Nov 10 11:00	27°♁37'16	4.35460 AU	opposition	12025 May 09 09:48	25°♁48'20	0°29'47
direct	12020 Jan 09 21:28	22°♁49'29		direct	12025 Jul 06 19:39	20°♁51'16	
	12020 Mar 22 18:14	0°♁			12025 Sep 25 01:27	0°♁	

evening set	12025 Nov 10 17:20	10° ♊ 11'04		direct	12030 Dec 14 09:48	26° ♑ 54'37	
					12031 Jan 30 05:15	0° ♋	
conjunction	12025 Nov 24 07:28	13° ♊ 20'21	0°29'00	evening set	12031 Apr 18 07:56	14° ♋ 17'47	
minimum elong	12025 Nov 24 07:27	13° ♊ 20'20	0°29'47		12031 Apr 21 13:25	15° ♋	
max. Earth dist.	12025 Nov 26 19:42	13° ♊ 55'21	6.09729 AU	max. Earth dist.	12031 Apr 29 00:23	16° ♋ 38'02	6.40813 AU
morning rise	12025 Dec 07 22:20	16° ♊ 29'38					
	12026 Feb 11 17:03	0° ♋		conjunction	12031 May 01 04:01	17° ♋ 06'22	-0°14'33
retrograde	12026 Apr 14 05:22	5° ♋ 32'51		minimum elong	12031 May 01 04:00	17° ♋ 06'22	0°15'06
min. Earth dist.	12026 Jun 11 15:26	0° ♋ 41'45	4.18491 AU	behind sun begin	12031 May 01 01:07	17° ♋ 04'47	
opposition	12026 Jun 13 03:28	0° ♋ 29'39	0°52'56	behind sun end	12031 May 01 06:53	17° ♋ 07'56	
	12026 Jun 16 19:49	30° ♋ ♊		morning rise	12031 May 13 22:48	19° ♋ 54'32	
direct	12026 Aug 11 16:31	25° ♊ 30'34			12031 Jul 02 17:57	0° ♌	
	12026 Oct 05 20:04	0° ♋		retrograde	12031 Sep 13 12:16	7° ♌ 13'25	
evening set	12026 Dec 15 21:56	13° ♋ 55'08		opposition	12031 Nov 13 09:12	2° ♌ 20'02	-0°34'53
				min. Earth dist.	12031 Nov 15 00:54	2° ♌ 07'18	4.33778 AU
conjunction	12026 Dec 29 09:20	16° ♋ 55'28	0°38'55		12031 Dec 02 07:27	30° ♋ ♌	
minimum elong	12026 Dec 29 09:20	16° ♋ 55'28	0°39'44	direct	12032 Jan 14 09:03	27° ♋ 19'59	
max. Earth dist.	12026 Dec 31 09:21	17° ♋ 22'17	6.27311 AU		12032 Feb 26 00:22	0° ♌	
morning rise	12027 Jan 11 20:16	19° ♋ 55'15		evening set	12032 May 18 15:44	15° ♌ 22'38	
	12027 Mar 01 19:05	0° ♌		max. Earth dist.	12032 May 29 03:30	17° ♌ 45'09	6.25594 AU
retrograde	12027 May 15 22:04	7° ♌ 45'53					
min. Earth dist.	12027 Jul 14 09:08	2° ♌ 53'11	4.35300 AU	conjunction	12032 May 31 11:25	18° ♌ 16'55	-0°31'24
opposition	12027 Jul 15 09:14	2° ♌ 45'13	0°57'28	minimum elong	12032 May 31 11:24	18° ♌ 16'55	0°32'13
	12027 Aug 06 12:59	30° ♋ ♌		morning rise	12032 Jun 13 06:26	21° ♌ 11'14	
direct	12027 Sep 14 04:07	27° ♋ 44'49			12032 Jul 24 07:27	0° ♍	
	12027 Oct 23 05:01	0° ♌		retrograde	12032 Oct 16 15:08	9° ♍ 33'17	
	12028 Jan 16 00:44	15° ♌		opposition	12032 Dec 16 02:22	4° ♍ 39'01	-0°54'49
evening set	12028 Jan 17 18:45	15° ♌ 22'35		min. Earth dist.	12032 Dec 17 14:37	4° ♍ 27'16	4.16758 AU
					12033 Jan 31 17:05	30° ♋ ♌	
conjunction	12028 Jan 31 01:49	18° ♌ 15'07	0°36'30	direct	12033 Feb 14 22:13	29° ♌ 40'34	
minimum elong	12028 Jan 31 01:50	18° ♌ 15'07	0°37'06		12033 Mar 01 04:51	0° ♍	
max. Earth dist.	12028 Jan 31 23:18	18° ♌ 26'45	6.42105 AU	evening set	12033 Jun 20 21:54	18° ♍ 36'43	
morning rise	12028 Feb 13 07:31	21° ♌ 06'48		max. Earth dist.	12033 Jul 02 00:20	21° ♍ 13'37	6.08138 AU
	12028 Mar 28 07:40	0° ♋					
retrograde	12028 Jun 14 02:01	8° ♋ 05'23		conjunction	12033 Jul 03 19:46	21° ♍ 39'17	-0°39'11
opposition	12028 Aug 13 21:44	3° ♋ 07'51	0°45'40	minimum elong	12033 Jul 03 19:46	21° ♍ 39'17	0°39'59
min. Earth dist.	12028 Aug 13 17:04	3° ♋ 09'22	4.47119 AU	morning rise	12033 Jul 16 18:17	24° ♍ 42'32	
	12028 Sep 09 00:59	30° ♋ ♌			12033 Aug 08 17:52	0° ♎	
direct	12028 Oct 14 19:20	28° ♌ 06'52		retrograde	12033 Nov 22 12:28	14° ♎ 20'45	
	12028 Nov 19 21:09	0° ♋		opposition	12034 Jan 21 09:21	9° ♎ 24'35	-0°57'22
evening set	12029 Feb 16 20:48	15° ♋ 16'45		min. Earth dist.	12034 Jan 22 06:23	9° ♎ 17'39	4.00305 AU
				direct	12034 Mar 21 21:05	4° ♎ 28'09	
conjunction	12029 Mar 01 23:24	18° ♋ 04'27	0°24'10		12034 Jun 16 04:34	15° ♎	
minimum elong	12029 Mar 01 23:25	18° ♋ 04'28	0°24'26	evening set	12034 Jul 26 13:03	24° ♎ 15'38	
max. Earth dist.	12029 Mar 01 15:04	18° ♋ 00'01	6.50156 AU				
morning rise	12029 Mar 15 00:17	20° ♋ 51'16		conjunction	12034 Aug 08 16:23	27° ♎ 27'02	-0°33'12
	12029 Apr 30 03:28	0° ♑		minimum elong	12034 Aug 08 16:24	27° ♎ 27'03	0°33'43
retrograde	12029 Jul 13 15:24	7° ♑ 26'18		max. Earth dist.	12034 Aug 08 03:18	27° ♎ 19'05	5.94270 AU
opposition	12029 Sep 12 17:04	2° ♑ 31'17	0°22'28		12034 Aug 19 03:58	0° ♐	
min. Earth dist.	12029 Sep 13 07:35	2° ♑ 26'38	4.51036 AU	morning rise	12034 Aug 21 21:16	0° ♐ 39'32	
	12029 Oct 03 07:53	30° ♋ ♐		retrograde	12034 Dec 31 06:25	21° ♐ 18'34	
direct	12029 Nov 14 04:59	27° ♋ 30'11		opposition	12035 Feb 28 15:25	16° ♐ 19'31	-0°37'29
	12029 Dec 26 06:06	0° ♑		min. Earth dist.	12035 Feb 28 11:37	16° ♐ 20'48	3.90559 AU
evening set	12030 Mar 19 01:22	14° ♑ 35'07		direct	12035 Apr 27 23:00	11° ♐ 24'29	
max. Earth dist.	12030 Mar 30 15:10	17° ♑ 03'44	6.49677 AU		12035 Aug 26 10:25	0° ♑	
				evening set	12035 Sep 02 04:29	1° ♑ 38'13	
conjunction	12030 Apr 01 00:14	17° ♑ 21'30	0°05'45				
minimum elong	12030 Apr 01 00:14	17° ♑ 21'30	0°05'34	conjunction	12035 Sep 15 14:07	4° ♑ 54'56	-0°13'48
behind sun begin	12030 Mar 31 16:33	17° ♑ 17'23		minimum elong	12035 Sep 15 14:08	4° ♑ 54'56	0°13'49
behind sun end	12030 Apr 01 07:55	17° ♑ 25'36		behind sun begin	12035 Sep 15 09:46	4° ♑ 52'16	
morning rise	12030 Apr 13 21:03	20° ♑ 07'03		behind sun end	12035 Sep 15 18:30	4° ♑ 57'36	
	12030 Jun 02 21:42	0° ♋		max. Earth dist.	12035 Sep 16 13:49	5° ♑ 09'26	5.89653 AU
desc. node	12030 Jul 21 18:19	6° ♋ 04'40		morning rise	12035 Sep 29 02:07	8° ♑ 12'50	
retrograde	12030 Aug 12 17:49	6° ♋ 48'58		retrograde	12036 Feb 07 21:49	29° ♑ 04'32	
opposition	12030 Oct 12 20:45	1° ♋ 55'25	-0°06'29	min. Earth dist.	12036 Apr 06 01:26	24° ♑ 11'42	3.91712 AU
min. Earth dist.	12030 Oct 14 03:12	1° ♋ 45'41	4.46237 AU	opposition	12036 Apr 07 04:58	24° ♑ 02'21	-0°01'31
	12030 Oct 28 07:35	30° ♋ ♑		asc. node	12036 Apr 22 15:10	22° ♑ 00'52	

direct	12036 Jun 04 03:51	19°♊06'53		minimum elong	12042 Apr 05 04:59	21°♏37'14	0°02'39
	12036 Aug 30 13:17	0°♊		behind sun begin	12042 Apr 04 21:00	21°♏32'58	
evening set	12036 Oct 09 10:44	9°♊06'58		behind sun end	12042 Apr 05 12:58	21°♏41'30	
				morning rise	12042 Apr 18 01:32	24°♏22'55	
conjunction	12036 Oct 23 00:40	12°♊22'25	0°11'15		12042 May 15 02:47	0°♏	
minimum elong	12036 Oct 23 00:39	12°♊22'25	0°11'45	desc. node	12042 May 31 10:43	3°♏06'43	
behind sun begin	12036 Oct 22 18:49	12°♊18'55		retrograde	12042 Aug 17 01:49	11°♏07'44	
behind sun end	12036 Oct 23 06:30	12°♊25'54		opposition	12042 Oct 17 04:06	6°♏14'13	-0°10'41
max. Earth dist.	12036 Oct 25 05:40	12°♊54'15	5.96410 AU	min. Earth dist.	12042 Oct 18 12:21	6°♏03'53	4.45067 AU
	12036 Nov 02 23:37	15°♊		direct	12042 Dec 18 16:34	1°♏13'26	
morning rise	12036 Nov 05 16:14	15°♊38'30			12043 Apr 05 12:00	15°♏	
	12037 Jan 12 09:43	0°♊		evening set	12043 Apr 22 14:36	18°♏40'19	
retrograde	12037 Mar 15 17:14	5°♊47'00		max. Earth dist.	12043 May 03 06:25	21°♏00'42	6.39184 AU
min. Earth dist.	12037 May 12 15:20	0°♊56'04	4.03258 AU				
opposition	12037 May 14 05:15	0°♊43'13	0°33'53	conjunction	12043 May 05 10:37	21°♏29'27	-0°17'14
	12037 May 19 13:04	30°♊		minimum elong	12043 May 05 10:36	21°♏29'27	0°17'50
direct	12037 Jul 11 18:19	25°♊45'53		morning rise	12043 May 18 05:06	24°♏18'09	
	12037 Sep 02 02:22	0°♊			12043 Jun 13 22:28	0°♏	
evening set	12037 Nov 15 14:28	15°♊00'23		retrograde	12043 Sep 18 01:09	11°♏43'47	
				opposition	12043 Nov 17 22:04	6°♏50'21	-0°38'21
conjunction	12037 Nov 29 04:34	18°♊08'48	0°31'03	min. Earth dist.	12043 Nov 19 13:36	6°♏37'40	4.31769 AU
minimum elong	12037 Nov 29 04:33	18°♊08'48	0°31'50	direct	12044 Jan 18 18:21	1°♏50'31	
max. Earth dist.	12037 Dec 01 16:51	18°♊43'41	6.11528 AU	evening set	12044 May 23 03:22	19°♏59'25	
morning rise	12037 Dec 12 19:10	21°♊17'09		max. Earth dist.	12044 Jun 02 15:12	22°♏22'45	6.23337 AU
	12038 Jan 21 19:06	0°♋					
retrograde	12038 Apr 18 15:57	10°♋12'07		conjunction	12044 Jun 04 23:00	22°♏54'38	-0°33'09
min. Earth dist.	12038 Jun 16 04:10	5°♋21'14	4.20325 AU	minimum elong	12044 Jun 04 22:59	22°♏54'37	0°33'57
opposition	12038 Jun 17 15:58	5°♋09'13	0°54'37	morning rise	12044 Jun 17 18:21	25°♏50'00	
direct	12038 Aug 16 07:22	0°♋09'58			12044 Jul 06 09:16	0°♋	
evening set	12038 Dec 20 13:26	18°♋29'31		retrograde	12044 Oct 21 14:11	14°♋21'49	
				opposition	12044 Dec 20 23:08	9°♋27'22	-0°56'21
conjunction	12039 Jan 03 00:20	21°♋28'57	0°39'15	min. Earth dist.	12044 Dec 22 10:44	9°♋15'48	4.14398 AU
minimum elong	12039 Jan 03 00:20	21°♋28'57	0°40'03	direct	12045 Feb 19 15:52	4°♋29'07	
max. Earth dist.	12039 Jan 04 20:30	21°♋53'31	6.29047 AU	evening set	12045 Jun 25 16:39	23°♋32'46	
morning rise	12039 Jan 16 10:45	24°♋27'47		max. Earth dist.	12045 Jul 06 22:55	26°♋12'42	6.05894 AU
	12039 Feb 11 06:06	0°♌					
retrograde	12039 May 20 05:43	12°♌11'42		conjunction	12045 Jul 08 15:14	26°♋36'38	-0°39'12
opposition	12039 Jul 19 16:50	7°♌11'27	0°56'40	minimum elong	12045 Jul 08 15:14	26°♋36'38	0°40'00
min. Earth dist.	12039 Jul 18 19:40	7°♌18'27	4.36808 AU	morning rise	12045 Jul 21 14:24	29°♋41'11	
direct	12039 Sep 18 16:12	2°♌10'57			12045 Jul 22 22:17	0°♌	
	12039 Dec 30 14:12	15°♌			12045 Oct 04 01:28	15°♌	
evening set	12040 Jan 22 04:45	19°♌45'06		retrograde	12045 Nov 27 19:16	19°♌29'24	
					12046 Jan 23 03:51	15°♌♌	
conjunction	12040 Feb 04 11:20	22°♌36'59	0°35'15	opposition	12046 Jan 26 13:55	14°♌32'57	-0°55'54
minimum elong	12040 Feb 04 11:20	22°♌36'59	0°35'49	min. Earth dist.	12046 Jan 27 08:00	14°♌26'58	3.98403 AU
max. Earth dist.	12040 Feb 05 06:07	22°♌47'08	6.43285 AU	direct	12046 Mar 26 20:25	9°♌36'47	
morning rise	12040 Feb 17 16:24	25°♌27'58			12046 May 25 01:58	15°♌	
	12040 Mar 10 06:53	0°♍		evening set	12046 Jul 31 15:40	29°♌30'09	
retrograde	12040 Jun 18 04:54	12°♍22'36			12046 Aug 02 16:54	0°♍	
opposition	12040 Aug 18 02:28	7°♍25'23	0°42'55				
min. Earth dist.	12040 Aug 17 23:14	7°♍26'26	4.47909 AU	conjunction	12046 Aug 13 19:45	2°♍42'36	-0°31'10
direct	12040 Oct 19 01:40	2°♍24'23		minimum elong	12046 Aug 13 19:46	2°♍42'36	0°31'37
evening set	12041 Feb 21 03:20	19°♍32'45		max. Earth dist.	12046 Aug 13 10:04	2°♍36'42	5.92892 AU
				morning rise	12046 Aug 27 01:49	5°♍56'15	
conjunction	12041 Mar 06 05:25	22°♍20'07	0°21'49	retrograde	12047 Jan 05 15:06	26°♍41'00	
minimum elong	12041 Mar 06 05:25	22°♍20'07	0°22'01	opposition	12047 Mar 06 00:15	21°♍41'29	-0°33'05
max. Earth dist.	12041 Mar 05 18:39	22°♍14'22	6.50502 AU	min. Earth dist.	12047 Mar 05 16:31	21°♍44'05	3.89869 AU
morning rise	12041 Mar 19 05:35	25°♍06'33		direct	12047 May 03 05:06	16°♍46'28	
	12041 Apr 11 20:31	0°♎			12047 Aug 08 18:28	0°♎	
retrograde	12041 Jul 17 19:35	11°♎40'48		evening set	12047 Sep 07 12:03	7°♎01'31	
opposition	12041 Sep 16 21:37	6°♎46'03	0°18'35				
min. Earth dist.	12041 Sep 17 14:35	6°♎40'36	4.50895 AU	conjunction	12047 Sep 20 22:38	10°♎18'36	-0°10'24
direct	12041 Nov 18 11:24	1°♎44'58		minimum elong	12047 Sep 20 22:39	10°♎18'36	0°10'19
evening set	12042 Mar 23 06:44	18°♎50'49		behind sun begin	12047 Sep 20 16:04	10°♎14'35	
max. Earth dist.	12042 Apr 03 15:52	21°♎17'17	6.49020 AU	behind sun end	12047 Sep 21 05:14	10°♎22'37	
				max. Earth dist.	12047 Sep 22 04:09	10°♎36'40	5.89741 AU
conjunction	12042 Apr 05 05:00	21°♎37'14	0°02'53	morning rise	12047 Oct 04 11:16	13°♎36'46	

	12047 Dec 21 12:28	0°♄		min. Earth dist.	12053 Sep 21 19:16	10°♄49'08	4.50862 AU
retrograde	12048 Feb 13 05:55	4°♄26'23		direct	12053 Nov 22 14:27	5°♄54'04	
asc. node	12048 Mar 04 03:03	3°♄46'31		evening set	12054 Mar 27 09:35	23°♄00'38	
	12048 Apr 08 01:13	30°♄		max. Earth dist.	12054 Apr 07 16:16	25°♄25'58	6.48315 AU
min. Earth dist.	12048 Apr 11 06:54	29°♄33'43	3.92564 AU				
opposition	12048 Apr 12 11:52	29°♄23'52	0°03'54	conjunction	12054 Apr 09 07:29	25°♄47'07	0°00'01
direct	12048 Jun 09 12:09	24°♄28'12		minimum elong	12054 Apr 09 07:28	25°♄47'07	0°00'16
	12048 Aug 08 03:11	0°♄		behind sun begin	12054 Apr 08 23:32	25°♄42'51	
evening set	12048 Oct 14 17:55	14°♄24'16		behind sun end	12054 Apr 09 15:24	25°♄51'22	
	12048 Oct 17 05:55	15°♄		desc. node	12054 Apr 09 23:22	25°♄55'40	
				morning rise	12054 Apr 22 03:28	28°♄32'52	
conjunction	12048 Oct 28 08:10	17°♄39'07	0°14'33		12054 Apr 28 22:59	0°♄	
minimum elong	12048 Oct 28 08:09	17°♄39'07	0°15'08		12054 Aug 06 05:09	15°♄	
behind sun begin	12048 Oct 28 05:29	17°♄37'31		retrograde	12054 Aug 21 07:22	15°♄21'02	
behind sun end	12048 Oct 28 10:50	17°♄40'42			12054 Sep 05 08:53	15°♄	
max. Earth dist.	12048 Oct 30 16:25	18°♄12'45	5.97936 AU	opposition	12054 Oct 21 09:37	10°♄27'36	-0°14'43
morning rise	12048 Nov 10 23:56	20°♄54'31		min. Earth dist.	12054 Oct 22 20:06	10°♄16'35	4.43713 AU
	12048 Dec 21 07:30	0°♄		direct	12054 Dec 22 21:28	5°♄26'53	
retrograde	12049 Mar 20 15:11	10°♄54'24			12055 Mar 19 12:06	15°♄	
min. Earth dist.	12049 May 17 13:33	6°♄03'58	4.05307 AU	evening set	12055 Apr 26 19:56	22°♄58'15	
opposition	12049 May 19 05:01	5°♄50'35	0°37'54	max. Earth dist.	12055 May 07 08:07	25°♄17'19	6.37250 AU
direct	12049 Jul 16 19:44	0°♄53'01					
evening set	12049 Nov 20 15:54	20°♄00'17		conjunction	12055 May 09 15:36	25°♄48'01	-0°19'46
				minimum elong	12055 May 09 15:35	25°♄48'01	0°20'26
conjunction	12049 Dec 04 05:35	23°♄07'28	0°32'58	morning rise	12055 May 22 10:12	28°♄37'28	
minimum elong	12049 Dec 04 05:34	23°♄07'28	0°33'47		12055 May 28 16:45	0°♄	
max. Earth dist.	12049 Dec 06 15:58	23°♄41'04	6.13912 AU	retrograde	12055 Sep 22 15:14	16°♄11'10	
morning rise	12049 Dec 17 19:50	26°♄14'32		opposition	12055 Nov 22 10:12	11°♄17'37	-0°41'35
	12050 Jan 03 13:27	0°♄		min. Earth dist.	12055 Nov 24 02:34	11°♄04'38	4.29352 AU
retrograde	12050 Apr 23 05:55	14°♄58'53		direct	12056 Jan 23 03:43	6°♄17'51	
min. Earth dist.	12050 Jun 20 21:25	10°♄07'35	4.22823 AU	evening set	12056 May 27 14:32	24°♄34'38	
opposition	12050 Jun 22 07:24	9°♄56'12	0°56'01	max. Earth dist.	12056 Jun 07 04:00	26°♄59'44	6.20625 AU
direct	12050 Aug 21 04:22	4°♄56'40					
evening set	12050 Dec 25 06:30	23°♄08'34		conjunction	12056 Jun 09 10:36	27°♄31'06	-0°34'41
				minimum elong	12056 Jun 09 10:36	27°♄31'06	0°35'30
conjunction	12051 Jan 07 16:56	26°♄06'45	0°39'23		12056 Jun 20 05:44	0°♄	
minimum elong	12051 Jan 07 16:56	26°♄06'45	0°40'09	morning rise	12056 Jun 22 06:13	0°♄27'45	
max. Earth dist.	12051 Jan 09 11:51	26°♄30'30	6.31473 AU	retrograde	12056 Oct 26 14:04	19°♄11'12	
morning rise	12051 Jan 21 02:27	29°♄04'13		opposition	12056 Dec 25 20:44	14°♄16'36	-0°57'34
	12051 Jan 25 08:28	0°♄		min. Earth dist.	12056 Dec 27 07:01	14°♄05'26	4.11598 AU
	12051 Apr 21 17:39	15°♄		direct	12057 Feb 24 07:57	9°♄18'39	
retrograde	12051 May 24 10:55	16°♄38'58		evening set	12057 Jun 30 12:58	28°♄31'37	
	12051 Jun 26 01:24	15°♄			12057 Jul 06 17:42	0°♄	
min. Earth dist.	12051 Jul 23 04:52	11°♄45'40	4.38985 AU	max. Earth dist.	12057 Jul 11 21:57	1°♄14'10	6.03248 AU
opposition	12051 Jul 24 00:49	11°♄39'06	0°55'34				
direct	12051 Sep 23 03:41	6°♄38'29		conjunction	12057 Jul 13 12:06	1°♄36'57	-0°38'58
	12051 Dec 12 07:48	15°♄		minimum elong	12057 Jul 13 12:06	1°♄36'57	0°39'44
evening set	12052 Jan 26 14:30	24°♄06'45		morning rise	12057 Jul 26 12:19	4°♄43'08	
					12057 Sep 10 10:17	15°♄	
conjunction	12052 Feb 08 20:15	26°♄57'38	0°33'51	retrograde	12057 Dec 03 04:09	24°♄43'11	
minimum elong	12052 Feb 08 20:16	26°♄57'38	0°34'24	opposition	12058 Jan 31 20:54	19°♄46'21	-0°54'02
max. Earth dist.	12052 Feb 09 10:05	27°♄05'05	6.45055 AU	min. Earth dist.	12058 Feb 01 11:17	19°♄41'35	3.96177 AU
morning rise	12052 Feb 22 00:36	29°♄47'38			12058 Mar 22 06:04	15°♄	
	12052 Feb 22 23:46	0°♄		direct	12058 Mar 31 22:24	14°♄50'26	
retrograde	12052 Jun 22 08:02	16°♄36'32			12058 Apr 10 15:02	15°♄	
opposition	12052 Aug 22 06:07	11°♄39'41	0°40'02		12058 Jul 16 13:28	0°♄	
min. Earth dist.	12052 Aug 22 06:36	11°♄39'32	4.49158 AU	evening set	12058 Aug 05 21:15	4°♄51'02	
direct	12052 Oct 23 09:43	6°♄38'34					
evening set	12053 Feb 25 07:52	23°♄44'02		conjunction	12058 Aug 19 02:31	8°♄04'45	-0°28'53
				minimum elong	12058 Aug 19 02:32	8°♄04'46	0°29'17
conjunction	12053 Mar 10 09:21	26°♄30'55	0°19'26	max. Earth dist.	12058 Aug 18 23:49	8°♄03'06	5.91338 AU
minimum elong	12053 Mar 10 09:22	26°♄30'55	0°19'33	morning rise	12058 Sep 01 09:32	11°♄19'38	
max. Earth dist.	12053 Mar 09 18:26	26°♄22'58	6.51126 AU		12058 Dec 05 07:44	0°♄	
morning rise	12053 Mar 23 08:55	29°♄16'53		retrograde	12059 Jan 11 05:29	2°♄10'29	
	12053 Mar 26 18:27	0°♄			12059 Feb 17 03:41	30°♄	
retrograde	12053 Jul 21 20:38	15°♄49'48		opposition	12059 Mar 11 12:02	27°♄10'33	-0°28'22
opposition	12053 Sep 21 00:18	10°♄55'12	0°14'43	min. Earth dist.	12059 Mar 11 01:18	27°♄14'10	3.89188 AU

direct	12059 May 08 15:02	22° \mathbb{M} 15'37		12065 Mar 11 01:28	0° \mathbb{Y}	
	12059 Jul 19 02:14	0° \mathbb{L}				
evening set	12059 Sep 12 23:01	12° \mathbb{L} 31'48	conjunction	12065 Mar 14 14:05	0° \mathbb{Y} 45'10	0°16'53
			minimum elong	12065 Mar 14 14:05	0° \mathbb{Y} 45'11	0°16'57
conjunction	12059 Sep 26 10:23	15° \mathbb{L} 49'10 -0°06'51	max. Earth dist.	12065 Mar 13 18:37	0° \mathbb{Y} 34'47	6.51339 AU
minimum elong	12059 Sep 26 10:23	15° \mathbb{L} 49'10 0°06'43	morning rise	12065 Mar 27 13:06	3° \mathbb{Y} 30'51	
behind sun begin	12059 Sep 26 02:35	15° \mathbb{L} 44'25	retrograde	12065 Jul 26 01:48	20° \mathbb{Y} 03'55	
behind sun end	12059 Sep 26 18:11	15° \mathbb{L} 53'55	opposition	12065 Sep 25 04:53	15° \mathbb{Y} 09'36	0°10'39
max. Earth dist.	12059 Sep 27 21:25	16° \mathbb{L} 10'34 5.89994 AU	min. Earth dist.	12065 Sep 26 03:25	15° \mathbb{Y} 02'23	4.50382 AU
morning rise	12059 Oct 09 23:53	19° \mathbb{L} 07'35	direct	12065 Nov 26 20:47	10° \mathbb{Y} 08'28	
	12059 Nov 26 18:00	0° \mathbb{L}	desc. node	12066 Feb 15 01:34	18° \mathbb{Y} 21'09	
asc. node	12060 Jan 13 15:32	7° \mathbb{M} 49'11	evening set	12066 Mar 31 14:42	27° \mathbb{Y} 17'08	
retrograde	12060 Feb 18 13:54	9° \mathbb{M} 53'48	max. Earth dist.	12066 Apr 11 16:46	29° \mathbb{Y} 40'26	6.47164 AU
opposition	12060 Apr 17 20:52	4° \mathbb{M} 50'57 0°09'19				
min. Earth dist.	12060 Apr 16 12:18	5° \mathbb{M} 02'00 3.93735 AU	conjunction	12066 Apr 13 12:11	0° \mathbb{S} 03'53	-0°02'55
	12060 Jun 08 00:22	30° \mathbb{R} \mathbb{L}	minimum elong	12066 Apr 13 12:11	0° \mathbb{S} 03'53	0°03'15
direct	12060 Jun 14 20:43	29° \mathbb{L} 55'06	behind sun begin	12066 Apr 13 04:14	29° \mathbb{Y} 59'37	
	12060 Jun 21 17:50	0° \mathbb{M}	behind sun end	12066 Apr 13 20:07	0° \mathbb{S} 08'09	
	12060 Sep 29 16:30	15° \mathbb{M}		12066 Apr 13 04:56	0° \mathbb{S}	
evening set	12060 Oct 20 03:03	19° \mathbb{M} 45'45	morning rise	12066 Apr 26 07:57	2° \mathbb{S} 49'59	
				12066 Jun 28 23:14	15° \mathbb{S}	
conjunction	12060 Nov 02 17:20	22° \mathbb{M} 59'44 0°17'46	retrograde	12066 Aug 25 16:30	19° \mathbb{S} 43'01	
minimum elong	12060 Nov 02 17:19	22° \mathbb{M} 59'43 0°18'23		12066 Oct 24 09:51	15° \mathbb{R} \mathbb{S}	
max. Earth dist.	12060 Nov 05 02:56	23° \mathbb{M} 34'01 5.99871 AU	opposition	12066 Oct 25 18:25	14° \mathbb{S} 49'35	-0°18'50
morning rise	12060 Nov 16 09:12	26° \mathbb{M} 14'11	min. Earth dist.	12066 Oct 27 05:57	14° \mathbb{S} 38'13	4.41957 AU
	12060 Dec 02 13:38	0° \mathbb{S}	direct	12066 Dec 27 03:52	9° \mathbb{S} 48'54	
retrograde	12061 Mar 25 13:45	16° \mathbb{S} 03'51		12067 Feb 26 14:15	15° \mathbb{S}	
min. Earth dist.	12061 May 22 14:17	11° \mathbb{S} 13'19 4.07749 AU	evening set	12067 May 01 04:22	27° \mathbb{S} 25'56	
opposition	12061 May 24 05:38	10° \mathbb{S} 59'59 0°41'35	max. Earth dist.	12067 May 11 16:48	29° \mathbb{S} 45'47	6.35010 AU
direct	12061 Jul 22 01:11	6° \mathbb{S} 02'05		12067 May 12 18:22	0° \mathbb{I}	
evening set	12061 Nov 25 17:26	25° \mathbb{S} 00'44				
			conjunction	12067 May 14 00:05	0° \mathbb{I} 16'32	-0°22'18
conjunction	12061 Dec 09 06:54	28° \mathbb{S} 06'35 0°34'38	minimum elong	12067 May 14 00:04	0° \mathbb{I} 16'31	0°22'59
minimum elong	12061 Dec 09 06:53	28° \mathbb{S} 06'34 0°35'29	morning rise	12067 May 26 18:33	3° \mathbb{I} 06'51	
max. Earth dist.	12061 Dec 11 17:37	28° \mathbb{S} 40'09 6.16626 AU	retrograde	12067 Sep 27 09:27	20° \mathbb{I} 49'40	
	12061 Dec 17 13:28	0° \mathbb{S}	opposition	12067 Nov 27 02:48	15° \mathbb{I} 56'04	-0°44'43
morning rise	12061 Dec 22 20:25	1° \mathbb{S} 12'08	min. Earth dist.	12067 Nov 28 19:35	15° \mathbb{I} 42'56	4.26763 AU
retrograde	12062 Apr 27 19:02	19° \mathbb{S} 44'55	direct	12068 Jan 27 16:37	10° \mathbb{I} 56'31	
opposition	12062 Jun 26 22:19	14° \mathbb{S} 42'36 0°57'00	evening set	12068 Jun 01 06:05	29° \mathbb{I} 21'32	
min. Earth dist.	12062 Jun 25 13:26	14° \mathbb{S} 53'35 4.25532 AU		12068 Jun 04 01:06	0° \mathbb{S}	
direct	12062 Aug 25 23:41	9° \mathbb{S} 42'54	max. Earth dist.	12068 Jun 11 19:41	1° \mathbb{S} 47'39	6.17887 AU
evening set	12062 Dec 29 23:12	27° \mathbb{S} 46'50				
	12063 Jan 09 01:29	0° \mathbb{S}	conjunction	12068 Jun 14 02:17	2° \mathbb{S} 19'14	-0°36'02
			minimum elong	12068 Jun 14 02:17	2° \mathbb{S} 19'13	0°36'53
conjunction	12063 Jan 12 08:48	0° \mathbb{S} 43'42 0°39'14	morning rise	12068 Jun 26 22:32	5° \mathbb{S} 17'15	
minimum elong	12063 Jan 12 08:48	0° \mathbb{S} 43'42 0°39'59	retrograde	12068 Oct 31 18:19	24° \mathbb{S} 12'27	
max. Earth dist.	12063 Jan 13 22:44	1° \mathbb{S} 04'35 6.33948 AU	opposition	12068 Dec 30 22:54	19° \mathbb{S} 17'34	-0°58'24
morning rise	12063 Jan 25 17:44	3° \mathbb{S} 39'52	min. Earth dist.	12069 Jan 01 06:34	19° \mathbb{S} 07'13	4.08934 AU
	12063 Mar 23 19:41	15° \mathbb{S}	direct	12069 Mar 01 04:52	14° \mathbb{S} 19'53	
retrograde	12063 May 28 17:41	21° \mathbb{S} 05'51		12069 Jun 19 20:09	0° \mathbb{Q}	
opposition	12063 Jul 28 08:38	16° \mathbb{S} 06'26 0°54'07	evening set	12069 Jul 05 13:24	3° \mathbb{Q} 41'25	
min. Earth dist.	12063 Jul 27 16:06	16° \mathbb{S} 11'52 4.41052 AU	max. Earth dist.	12069 Jul 17 05:01	6° \mathbb{Q} 28'42	6.00937 AU
	12063 Aug 05 20:48	15° \mathbb{R} \mathbb{S}				
direct	12063 Sep 27 16:10	11° \mathbb{S} 05'40	conjunction	12069 Jul 18 13:27	6° \mathbb{Q} 48'10	-0°38'25
	12063 Nov 19 07:36	15° \mathbb{S}	minimum elong	12069 Jul 18 13:27	6° \mathbb{Q} 48'11	0°39'08
evening set	12064 Jan 30 23:38	28° \mathbb{S} 28'45	morning rise	12069 Jul 31 14:24	9° \mathbb{Q} 55'47	
	12064 Feb 07 02:09	0° \mathbb{H}		12069 Aug 22 05:59	15° \mathbb{Q}	
				12069 Nov 30 23:04	0° \mathbb{M}	
conjunction	12064 Feb 13 04:54	1° \mathbb{H} 18'49 0°32'15	retrograde	12069 Dec 08 17:18	0° \mathbb{M} 05'56	
minimum elong	12064 Feb 13 04:55	1° \mathbb{H} 18'49 0°32'43		12069 Dec 16 10:58	30° \mathbb{R} \mathbb{Q}	
max. Earth dist.	12064 Feb 13 15:47	1° \mathbb{H} 24'40 6.46575 AU	opposition	12070 Feb 06 07:24	25° \mathbb{Q} 08'44	-0°51'36
morning rise	12064 Feb 26 08:23	4° \mathbb{H} 07'56	min. Earth dist.	12070 Feb 06 18:46	25° \mathbb{Q} 04'57	3.94487 AU
retrograde	12064 Jun 26 09:59	20° \mathbb{H} 52'22	direct	12070 Apr 06 04:54	20° \mathbb{Q} 13'06	
opposition	12064 Aug 26 10:16	15° \mathbb{H} 55'54 0°36'54		12070 Jun 27 08:05	0° \mathbb{M}	
min. Earth dist.	12064 Aug 26 12:47	15° \mathbb{H} 55'05 4.50053 AU	evening set	12070 Aug 11 05:35	10° \mathbb{M} 18'22	
direct	12064 Oct 27 15:23	10° \mathbb{H} 54'47				
evening set	12065 Mar 01 13:16	27° \mathbb{H} 58'37	conjunction	12070 Aug 24 11:43	13° \mathbb{M} 32'58	-0°26'18

minimum elong	12070 Aug 24 11:44	13° \mathbb{M} 32'59	0°26'36	morning rise	12076 Mar 01 13:57	8° \mathbb{H} 21'37	
max. Earth dist.	12070 Aug 24 14:18	13° \mathbb{M} 34'34	5.90456 AU	retrograde	12076 Jun 30 13:07	25° \mathbb{H} 03'03	
morning rise	12070 Sep 06 19:54	16° \mathbb{M} 48'47		opposition	12076 Aug 30 12:54	20° \mathbb{H} 07'00	0°33'39
	12070 Nov 05 00:24	0° \mathbb{L}		min. Earth dist.	12076 Aug 30 19:15	20° \mathbb{H} 04'57	4.50497 AU
retrograde	12071 Jan 16 17:55	7° \mathbb{L} 42'17		direct	12076 Oct 31 20:30	15° \mathbb{H} 05'50	
min. Earth dist.	12071 Mar 16 08:53	2° \mathbb{L} 47'08	3.89259 AU		12077 Feb 23 10:37	0° \mathbb{Y}	
opposition	12071 Mar 17 00:34	2° \mathbb{L} 41'51	-0°23'20	evening set	12077 Mar 05 17:16	2° \mathbb{Y} 09'35	
	12071 Apr 07 05:49	30° \mathbb{R} \mathbb{M}					
direct	12071 May 14 01:05	27° \mathbb{M} 46'55		conjunction	12077 Mar 18 17:45	4° \mathbb{Y} 56'05	0°14'18
	12071 Jun 19 13:58	0° \mathbb{L}		minimum elong	12077 Mar 18 17:46	4° \mathbb{Y} 56'05	0°14'19
evening set	12071 Sep 18 09:56	18° \mathbb{L} 01'00		behind sun begin	12077 Mar 18 14:04	4° \mathbb{Y} 54'07	
				behind sun end	12077 Mar 18 21:27	4° \mathbb{Y} 58'03	
conjunction	12071 Oct 01 21:48	21° \mathbb{L} 18'08	-0°03'16	max. Earth dist.	12077 Mar 17 19:01	4° \mathbb{Y} 43'56	6.51082 AU
minimum elong	12071 Oct 01 21:49	21° \mathbb{L} 18'08	0°03'03	morning rise	12077 Mar 31 16:11	7° \mathbb{Y} 41'41	
behind sun begin	12071 Oct 01 13:29	21° \mathbb{L} 13'05		retrograde	12077 Jul 30 05:23	24° \mathbb{Y} 16'31	
behind sun end	12071 Oct 02 06:09	21° \mathbb{L} 23'12		opposition	12077 Sep 29 09:11	19° \mathbb{Y} 22'26	0°06'36
max. Earth dist.	12071 Oct 03 12:59	21° \mathbb{L} 42'01	5.91001 AU	min. Earth dist.	12077 Sep 30 09:10	19° \mathbb{Y} 14'45	4.49463 AU
morning rise	12071 Oct 15 11:53	24° \mathbb{L} 36'16		direct	12077 Nov 30 23:27	14° \mathbb{Y} 21'23	
	12071 Nov 07 07:10	0° \mathbb{M}		desc. node	12077 Dec 25 02:45	15° \mathbb{Y} 12'37	
asc. node	12071 Nov 23 02:14	3° \mathbb{M} 31'11			12078 Mar 28 12:33	0° \mathbb{B}	
	12072 Feb 11 05:54	15° \mathbb{M}		evening set	12078 Apr 04 19:50	1° \mathbb{B} 33'36	
retrograde	12072 Feb 23 19:03	15° \mathbb{M} 15'54		max. Earth dist.	12078 Apr 15 19:38	3° \mathbb{B} 56'12	6.45645 AU
	12072 Mar 07 07:50	15° \mathbb{R} \mathbb{M}					
min. Earth dist.	12072 Apr 21 17:31	10° \mathbb{M} 24'20	3.95542 AU	conjunction	12078 Apr 17 16:57	4° \mathbb{B} 20'48	-0°05'44
opposition	12072 Apr 23 03:46	10° \mathbb{M} 12'41	0°14'34	minimum elong	12078 Apr 17 16:57	4° \mathbb{B} 20'48	0°06'09
direct	12072 Jun 20 06:19	5° \mathbb{M} 16'32		behind sun begin	12078 Apr 17 09:23	4° \mathbb{B} 16'42	
	12072 Sep 10 14:57	15° \mathbb{M}		behind sun end	12078 Apr 18 00:31	4° \mathbb{B} 24'53	
evening set	12072 Oct 25 09:30	24° \mathbb{M} 59'31		morning rise	12078 Apr 30 12:27	7° \mathbb{B} 07'23	
					12078 Jun 07 20:52	15° \mathbb{B}	
conjunction	12072 Nov 07 23:58	28° \mathbb{M} 12'23	0°20'45	retrograde	12078 Aug 30 04:19	24° \mathbb{B} 06'36	
minimum elong	12072 Nov 07 23:57	28° \mathbb{M} 12'22	0°21'25	opposition	12078 Oct 30 04:17	19° \mathbb{B} 13'18	-0°22'50
max. Earth dist.	12072 Nov 10 12:28	28° \mathbb{M} 48'10	6.02288 AU	min. Earth dist.	12078 Oct 31 17:57	19° \mathbb{B} 01'15	4.39930 AU
	12072 Nov 15 14:03	0° \mathbb{X}			12078 Dec 08 15:12	15° \mathbb{R} \mathbb{B}	
morning rise	12072 Nov 21 15:30	1° \mathbb{X} 25'32		direct	12078 Dec 31 12:19	14° \mathbb{B} 12'47	
retrograde	12073 Mar 30 09:41	21° \mathbb{X} 03'23			12079 Jan 23 09:16	15° \mathbb{B}	
min. Earth dist.	12073 May 27 11:26	16° \mathbb{X} 12'49	4.10499 AU		12079 Apr 26 18:23	0° \mathbb{I}	
opposition	12073 May 29 02:32	15° \mathbb{X} 59'37	0°44'49	evening set	12079 May 05 14:05	1° \mathbb{I} 56'24	
direct	12073 Jul 27 02:18	11° \mathbb{X} 01'26		max. Earth dist.	12079 May 16 00:43	4° \mathbb{I} 16'03	6.32621 AU
evening set	12073 Nov 30 15:17	29° \mathbb{X} 50'50					
	12073 Dec 01 07:30	0° \mathbb{Z}		conjunction	12079 May 18 09:42	4° \mathbb{I} 47'55	-0°24'41
				minimum elong	12079 May 18 09:41	4° \mathbb{I} 47'55	0°25'24
conjunction	12073 Dec 14 04:07	2° \mathbb{Z} 55'12	0°36'00	morning rise	12079 May 31 04:22	7° \mathbb{I} 39'15	
minimum elong	12073 Dec 14 04:07	2° \mathbb{Z} 55'12	0°36'52	retrograde	12079 Oct 02 04:49	25° \mathbb{I} 31'47	
max. Earth dist.	12073 Dec 16 11:46	3° \mathbb{Z} 26'48	6.19438 AU	opposition	12079 Dec 01 20:45	20° \mathbb{I} 38'04	-0°47'33
morning rise	12073 Dec 27 17:11	5° \mathbb{Z} 59'16		min. Earth dist.	12079 Dec 03 12:08	20° \mathbb{I} 25'21	4.24183 AU
retrograde	12074 May 02 03:58	24° \mathbb{Z} 20'46		direct	12080 Feb 01 05:45	15° \mathbb{I} 38'46	
min. Earth dist.	12074 Jun 30 02:55	19° \mathbb{Z} 29'04	4.28167 AU		12080 May 18 09:24	0° \mathbb{O}	
opposition	12074 Jul 01 09:43	19° \mathbb{Z} 18'48	0°57'34	evening set	12080 Jun 05 22:52	4° \mathbb{O} 12'01	
direct	12074 Aug 30 15:26	14° \mathbb{Z} 18'52		max. Earth dist.	12080 Jun 16 16:38	6° \mathbb{O} 41'20	6.15337 AU
	12074 Dec 24 01:33	0° \mathbb{A}					
evening set	12075 Jan 03 12:02	2° \mathbb{A} 15'25		conjunction	12080 Jun 18 19:32	7° \mathbb{O} 10'57	-0°37'08
				minimum elong	12080 Jun 18 19:32	7° \mathbb{O} 10'57	0°38'00
conjunction	12075 Jan 16 21:10	5° \mathbb{A} 11'07	0°38'52	morning rise	12080 Jul 01 16:08	10° \mathbb{O} 10'15	
minimum elong	12075 Jan 16 21:10	5° \mathbb{A} 11'07	0°39'36	retrograde	12080 Nov 06 00:43	29° \mathbb{O} 16'26	
max. Earth dist.	12075 Jan 18 08:07	5° \mathbb{A} 30'17	6.36216 AU	opposition	12081 Jan 05 02:09	24° \mathbb{O} 21'19	-0°58'46
morning rise	12075 Jan 30 05:08	8° \mathbb{A} 06'02		min. Earth dist.	12081 Jan 06 08:08	24° \mathbb{O} 11'30	4.06631 AU
	12075 Mar 04 05:49	15° \mathbb{A}		direct	12081 Mar 06 03:45	19° \mathbb{O} 24'00	
retrograde	12075 Jun 01 21:21	25° \mathbb{A} 24'22			12081 Jun 01 13:18	0° \mathbb{Q}	
opposition	12075 Aug 01 13:36	20° \mathbb{A} 25'27	0°52'26	evening set	12081 Jul 10 14:14	8° \mathbb{Q} 52'33	
min. Earth dist.	12075 Jul 31 23:40	20° \mathbb{A} 30'01	4.42807 AU	max. Earth dist.	12081 Jul 22 09:59	11° \mathbb{Q} 43'03	5.99086 AU
direct	12075 Oct 02 00:33	15° \mathbb{A} 24'40					
	12076 Jan 22 07:29	0° \mathbb{H}		conjunction	12081 Jul 23 14:55	12° \mathbb{Q} 00'29	-0°37'33
evening set	12076 Feb 04 06:31	2° \mathbb{H} 43'46		minimum elong	12081 Jul 23 14:55	12° \mathbb{Q} 00'29	0°38'14
				morning rise	12081 Aug 05 16:54	15° \mathbb{Q} 09'22	
conjunction	12076 Feb 17 10:59	5° \mathbb{H} 33'08	0°30'31		12081 Aug 05 01:16	15° \mathbb{Q}	
minimum elong	12076 Feb 17 11:00	5° \mathbb{H} 33'09	0°30'56		12081 Oct 14 14:56	0° \mathbb{M}	
max. Earth dist.	12076 Feb 17 15:44	5° \mathbb{H} 35'41	6.47693 AU	retrograde	12081 Dec 14 02:51	5° \mathbb{M} 27'30	

opposition	12082 Feb 11 16:46	0° \mathfrak{M} 29'52	-0°48'44			12088 Jan 05 03:01	0° \mathfrak{H}	
min. Earth dist.	12082 Feb 11 23:25	0° \mathfrak{M} 27'39	3.93296 AU	evening set		12088 Feb 08 14:13	7° \mathfrak{H} 02'00	
	12082 Feb 15 10:39	30° \mathfrak{R} 02						
direct	12082 Apr 11 09:48	25° \mathfrak{Q} 34'26		conjunction		12088 Feb 21 18:17	9° \mathfrak{H} 50'52	0°28'35
	12082 Jun 03 08:23	0° \mathfrak{M}		minimum elong		12088 Feb 21 18:18	9° \mathfrak{H} 50'53	0°28'56
evening set	12082 Aug 16 12:39	15° \mathfrak{M} 42'34		max. Earth dist.		12088 Feb 21 20:16	9° \mathfrak{H} 51'56	6.48494 AU
				morning rise		12088 Mar 05 20:28	12° \mathfrak{H} 38'48	
conjunction	12082 Aug 29 19:36	18° \mathfrak{M} 57'46	-0°23'30	retrograde		12088 Jul 04 16:31	29° \mathfrak{H} 18'03	
minimum elong	12082 Aug 29 19:37	18° \mathfrak{M} 57'47	0°23'44	opposition		12088 Sep 03 17:19	24° \mathfrak{H} 22'22	0°30'10
max. Earth dist.	12082 Aug 30 03:42	19° \mathfrak{M} 02'44	5.90037 AU	min. Earth dist.		12088 Sep 04 01:45	24° \mathfrak{H} 19'39	4.50728 AU
morning rise	12082 Sep 12 04:40	22° \mathfrak{M} 14'12		direct		12088 Nov 05 01:54	19° \mathfrak{H} 21'17	
	12082 Oct 15 05:19	0° \mathfrak{Q}				12089 Feb 06 12:57	0° \mathfrak{Y}	
retrograde	12083 Jan 22 03:22	13° \mathfrak{Q} 08'27		evening set		12089 Mar 09 23:14	6° \mathfrak{Y} 25'15	
opposition	12083 Mar 22 10:04	8° \mathfrak{Q} 07'31	-0°18'10					
min. Earth dist.	12083 Mar 21 15:46	8° \mathfrak{Q} 13'42	3.89654 AU	conjunction		12089 Mar 22 23:03	9° \mathfrak{Y} 11'39	0°11'35
direct	12083 May 19 10:36	3° \mathfrak{Q} 12'27		minimum elong		12089 Mar 22 23:03	9° \mathfrak{Y} 11'40	0°11'33
evening set	12083 Sep 23 18:02	23° \mathfrak{Q} 23'40		behind sun begin		12089 Mar 22 17:19	9° \mathfrak{Y} 08'36	
asc. node	12083 Oct 01 08:13	25° \mathfrak{Q} 14'01		behind sun end		12089 Mar 23 04:47	9° \mathfrak{Y} 14'43	
				max. Earth dist.		12089 Mar 21 19:58	8° \mathfrak{Y} 57'10	6.50744 AU
conjunction	12083 Oct 07 06:39	26° \mathfrak{Q} 40'32	0°00'23	morning rise		12089 Apr 04 21:08	11° \mathfrak{Y} 57'15	
minimum elong	12083 Oct 07 06:38	26° \mathfrak{Q} 40'31	0°00'41	retrograde		12089 Aug 03 13:18	28° \mathfrak{Y} 33'52	
behind sun begin	12083 Oct 06 22:16	26° \mathfrak{Q} 35'28		opposition		12089 Oct 03 15:44	23° \mathfrak{Y} 40'00	0°02'24
behind sun end	12083 Oct 07 15:00	26° \mathfrak{Q} 45'35		min. Earth dist.		12089 Oct 04 18:24	23° \mathfrak{Y} 31'28	4.48608 AU
max. Earth dist.	12083 Oct 09 03:02	27° \mathfrak{Q} 07'29	5.92164 AU	desc. node		12089 Nov 03 18:00	20° \mathfrak{Y} 06'19	
morning rise	12083 Oct 20 21:03	29° \mathfrak{Q} 58'15		direct		12089 Dec 05 06:36	18° \mathfrak{Y} 39'02	
	12083 Oct 20 23:57	0° \mathfrak{M}				12090 Mar 11 19:12	0° \mathfrak{B}	
	12083 Dec 30 09:43	15° \mathfrak{M}		evening set		12090 Apr 09 02:40	5° \mathfrak{B} 54'14	
retrograde	12084 Feb 28 22:26	20° \mathfrak{M} 30'50		max. Earth dist.		12090 Apr 20 00:43	8° \mathfrak{B} 16'19	6.44357 AU
min. Earth dist.	12084 Apr 26 19:44	15° \mathfrak{M} 39'29	3.97334 AU					
opposition	12084 Apr 28 07:13	15° \mathfrak{M} 27'27	0°19'35	conjunction		12090 Apr 21 23:33	8° \mathfrak{B} 41'48	-0°08'36
	12084 May 01 16:11	15° \mathfrak{R} 02		minimum elong		12090 Apr 21 23:33	8° \mathfrak{B} 41'48	0°09'04
direct	12084 Jun 25 11:57	10° \mathfrak{M} 31'02		behind sun begin		12090 Apr 21 16:45	8° \mathfrak{B} 38'07	
	12084 Aug 18 01:17	15° \mathfrak{M}		behind sun end		12090 Apr 22 06:21	8° \mathfrak{B} 45'29	
evening set	12084 Oct 30 13:13	0° \mathfrak{X} 06'59		morning rise		12090 May 04 18:44	11° \mathfrak{B} 28'46	
	12084 Oct 30 01:17	0° \mathfrak{X}				12090 May 21 06:45	15° \mathfrak{B}	
				retrograde		12090 Sep 03 15:16	28° \mathfrak{B} 33'11	
conjunction	12084 Nov 13 03:30	3° \mathfrak{X} 18'46	0°23'32	opposition		12090 Nov 03 15:31	23° \mathfrak{B} 39'53	-0°26'48
minimum elong	12084 Nov 13 03:29	3° \mathfrak{X} 18'45	0°24'15	min. Earth dist.		12090 Nov 05 04:37	23° \mathfrak{B} 28'00	4.38316 AU
max. Earth dist.	12084 Nov 15 15:36	3° \mathfrak{X} 54'07	6.04502 AU	direct		12091 Jan 04 20:15	18° \mathfrak{B} 39'34	
morning rise	12084 Nov 26 19:03	6° \mathfrak{X} 30'49				12091 Apr 09 20:37	0° \mathfrak{I}	
retrograde	12085 Apr 04 01:30	25° \mathfrak{X} 58'06		evening set		12091 May 10 00:18	6° \mathfrak{I} 28'01	
min. Earth dist.	12085 Jun 01 06:09	21° \mathfrak{X} 07'34	4.12908 AU	max. Earth dist.		12091 May 20 12:13	8° \mathfrak{I} 48'57	6.30808 AU
opposition	12085 Jun 02 21:00	20° \mathfrak{X} 54'27	0°47'43					
direct	12085 Aug 01 00:14	15° \mathfrak{X} 55'56		conjunction		12091 May 22 19:48	9° \mathfrak{I} 20'12	-0°26'57
	12085 Nov 14 12:40	0° \mathfrak{Z}		minimum elong		12091 May 22 19:48	9° \mathfrak{I} 20'11	0°27'43
evening set	12085 Dec 05 11:27	4° \mathfrak{Z} 37'43		morning rise		12091 Jun 04 14:27	12° \mathfrak{I} 12'15	
						12091 Sep 25 12:53	0° \mathfrak{Q}	
conjunction	12085 Dec 18 23:57	7° \mathfrak{Z} 40'51	0°37'08	retrograde		12091 Oct 07 00:51	0° \mathfrak{Q} 12'25	
minimum elong	12085 Dec 18 23:57	7° \mathfrak{Z} 40'51	0°37'58			12091 Oct 18 11:08	30° \mathfrak{R} 02	
max. Earth dist.	12085 Dec 21 05:24	8° \mathfrak{Z} 11'04	6.21843 AU	opposition		12091 Dec 06 14:44	25° \mathfrak{I} 18'35	-0°50'05
morning rise	12086 Jan 01 12:18	10° \mathfrak{Z} 43'34		min. Earth dist.		12091 Dec 08 06:03	25° \mathfrak{I} 05'53	4.22290 AU
retrograde	12086 May 06 14:03	28° \mathfrak{Z} 55'26		direct		12092 Feb 05 21:08	20° \mathfrak{I} 19'33	
opposition	12086 Jul 05 20:17	23° \mathfrak{Z} 53'52	0°57'49			12092 Apr 30 13:26	0° \mathfrak{Q}	
min. Earth dist.	12086 Jul 04 16:06	24° \mathfrak{Z} 03'14	4.30362 AU	evening set		12092 Jun 10 14:16	8° \mathfrak{Q} 58'17	
direct	12086 Sep 04 06:41	18° \mathfrak{Z} 53'46		max. Earth dist.		12092 Jun 21 09:27	11° \mathfrak{Q} 29'05	6.13521 AU
	12086 Dec 06 21:17	0° \mathfrak{A}						
evening set	12087 Jan 08 00:59	6° \mathfrak{A} 44'28		conjunction		12092 Jun 23 11:09	11° \mathfrak{Q} 58'06	-0°38'01
				minimum elong		12092 Jun 23 11:09	11° \mathfrak{Q} 58'06	0°38'51
conjunction	12087 Jan 21 09:27	9° \mathfrak{A} 39'12	0°38'16	morning rise		12092 Jul 06 08:16	14° \mathfrak{Q} 58'23	
minimum elong	12087 Jan 21 09:27	9° \mathfrak{A} 39'12	0°38'59			12092 Sep 18 21:23	0° \mathfrak{Q}	
max. Earth dist.	12087 Jan 22 15:51	9° \mathfrak{A} 55'47	6.38035 AU	retrograde		12092 Nov 11 00:23	4° \mathfrak{Q} 12'40	
morning rise	12087 Feb 03 16:53	12° \mathfrak{A} 33'08				12093 Jan 04 15:25	30° \mathfrak{R} 02	
	12087 Feb 15 02:41	15° \mathfrak{A}		opposition		12093 Jan 10 02:17	29° \mathfrak{Q} 17'14	-0°58'42
retrograde	12087 Jun 06 01:38	29° \mathfrak{A} 45'12		min. Earth dist.		12093 Jan 11 04:51	29° \mathfrak{Q} 08'32	4.05059 AU
opposition	12087 Aug 05 19:17	24° \mathfrak{A} 46'40	0°50'27	direct		12093 Mar 10 23:08	24° \mathfrak{Q} 20'12	
min. Earth dist.	12087 Aug 05 07:59	24° \mathfrak{A} 50'22	4.44152 AU			12093 May 11 09:39	0° \mathfrak{Q}	
direct	12087 Oct 06 09:02	19° \mathfrak{A} 45'46		evening set		12093 Jul 15 11:27	13° \mathfrak{Q} 53'10	

	12093 Jul 20 02:46	15°♈		minimum elong	12099 Jan 25 19:49	14°♊03'14	0°38'09
				max. Earth dist.	12099 Jan 26 22:55	14°♊17'59	6.39401 AU
conjunction	12093 Jul 28 12:46	17°♈01'55 -0°36'27			12099 Jan 30 04:02	15°♊	
minimum elong	12093 Jul 28 12:46	17°♈01'56 0°37'06		morning rise	12099 Feb 08 02:32	16°♊56'22	
max. Earth dist.	12093 Jul 27 12:25	16°♈47'13 5.97910 AU			12099 Apr 18 06:49	0°♋	
morning rise	12093 Aug 10 15:27	20°♈11'42		retrograde	12099 Jun 10 06:15	4°♋03'42	
	12093 Sep 22 16:37	0°♌			12099 Aug 03 00:14	30°♌	
retrograde	12093 Dec 19 08:34	10°♌35'14		opposition	12099 Aug 10 00:08	29°♌05'36 0°48'16	
opposition	12094 Feb 16 20:46	5°♌37'11 -0°45'36		min. Earth dist.	12099 Aug 09 15:31	29°♌08'25 4.45153 AU	
min. Earth dist.	12094 Feb 17 01:12	5°♌35'42 3.92637 AU		direct	12099 Oct 10 17:16	24°♌04'42	
direct	12094 Apr 16 12:29	0°♌41'51			12099 Dec 16 04:10	0°♋	
evening set	12094 Aug 21 13:51	20°♌51'04		evening set	12100 Feb 12 21:14	11°♋18'53	
conjunction	12094 Sep 03 21:42	24°♌06'43 -0°20'40		conjunction	12100 Feb 26 00:37	14°♋07'19 0°26'31	
minimum elong	12094 Sep 03 21:43	24°♌06'44 0°20'51		minimum elong	12100 Feb 26 00:38	14°♋07'20 0°26'51	
max. Earth dist.	12094 Sep 04 10:59	24°♌14'51 5.89968 AU		max. Earth dist.	12100 Feb 25 22:16	14°♋06'04 6.49054 AU	
morning rise	12094 Sep 17 07:32	27°♌23'33		morning rise	12100 Mar 11 02:20	16°♋54'50	
	12094 Sep 28 02:47	0°♍			12100 May 21 07:45	0°♎	
retrograde	12095 Jan 27 06:43	18°♍17'17		retrograde	12100 Jul 09 20:18	3°♎32'29	
opposition	12095 Mar 27 12:53	13°♍16'02 -0°13'08			12100 Aug 28 23:38	30°♎	
min. Earth dist.	12095 Mar 26 16:18	13°♍23'00 3.90203 AU		opposition	12100 Sep 08 21:16	28°♎37'01 0°26'34	
direct	12095 May 24 12:02	8°♍20'56		min. Earth dist.	12100 Sep 09 07:57	28°♎33'35 4.50826 AU	
asc. node	12095 Aug 11 20:32	17°♍36'50		direct	12100 Nov 10 07:13	23°♎35'54	
evening set	12095 Sep 28 19:52	28°♍29'14			12101 Jan 19 03:51	0°♏	
	12095 Oct 05 02:10	0°♎		evening set	12101 Mar 15 04:14	10°♏40'11	
				max. Earth dist.	12101 Mar 26 23:22	13°♏11'21 6.50355 AU	
conjunction	12095 Oct 12 08:45	1°♎45'45 0°03'47		conjunction	12101 Mar 28 03:44	13°♏26'33 0°08'51	
minimum elong	12095 Oct 12 08:44	1°♎45'45 0°04'10		minimum elong	12101 Mar 28 03:44	13°♏26'33 0°08'43	
behind sun begin	12095 Oct 12 00:30	1°♎40'47		behind sun begin	12101 Mar 27 20:49	13°♏22'52	
behind sun end	12095 Oct 12 16:59	1°♎50'43		behind sun end	12101 Mar 28 10:39	13°♏30'15	
max. Earth dist.	12095 Oct 14 06:10	2°♎13'15 5.93248 AU		morning rise	12101 Apr 10 01:10	16°♏12'04	
morning rise	12095 Oct 25 23:44	5°♎03'09			12101 Jun 25 15:56	0°♐	
	12095 Dec 08 18:47	15°♎		retrograde	12101 Aug 08 18:24	2°♐50'31	
retrograde	12096 Mar 04 18:00	25°♎29'38		desc. node	12101 Sep 16 05:15	0°♐40'14	
min. Earth dist.	12096 May 01 15:30	20°♎38'38 3.98837 AU			12101 Sep 22 06:57	30°♐	
opposition	12096 May 03 04:15	20°♎26'09 0°24'11		opposition	12101 Oct 08 21:39	27°♐56'44 -0°01'46	
direct	12096 Jun 30 10:35	15°♎29'29		min. Earth dist.	12101 Oct 10 01:25	27°♐47'51 4.47730 AU	
	12096 Oct 13 15:06	0°♑		direct	12101 Dec 10 11:37	22°♐55'50	
evening set	12096 Nov 04 11:27	5°♑00'12					
conjunction	12096 Nov 18 01:50	8°♑11'10 0°26'02					
minimum elong	12096 Nov 18 01:49	8°♑11'09 0°26'48					
max. Earth dist.	12096 Nov 20 13:40	8°♑46'13 6.06290 AU					
morning rise	12096 Dec 01 17:07	11°♑22'16					
	12097 Mar 19 01:54	0°♒					
retrograde	12097 Apr 08 15:54	0°♒41'14					
	12097 Apr 29 00:54	30°♒					
min. Earth dist.	12097 Jun 05 21:59	25°♒50'20 4.14794 AU					
opposition	12097 Jun 07 11:05	25°♒37'50 0°50'11					
direct	12097 Aug 05 18:07	20°♒39'07					
	12097 Oct 27 13:33	0°♓					
evening set	12097 Dec 10 03:57	9°♓15'28					
conjunction	12097 Dec 23 16:06	12°♓17'41 0°38'00					
minimum elong	12097 Dec 23 16:06	12°♓17'41 0°38'50					
max. Earth dist.	12097 Dec 25 19:40	12°♓46'43 6.23673 AU					
morning rise	12098 Jan 06 04:00	15°♓19'26					
	12098 Mar 24 05:55	0°♈					
retrograde	12098 May 10 20:03	3°♈23'58					
	12098 Jun 27 18:08	30°♈					
min. Earth dist.	12098 Jul 09 01:19	28°♈31'47 4.32011 AU					
opposition	12098 Jul 10 04:28	28°♈22'46 0°57'45					
direct	12098 Sep 08 17:13	23°♈22'35					
	12098 Nov 17 08:37	0°♈					
evening set	12099 Jan 12 11:52	11°♈09'15					
conjunction	12099 Jan 25 19:49	14°♈03'13 0°37'29					