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|---------------------|-------------------|------------|------------|---------------------|-------------------|------------|------------|
| superior conj | 2000 Jun 11 10:31 | 20°II48'01 | 0°06'07 | direct | 2002 Nov 21 07:13 | 0°ML03'13 | |
| minimum elong | 2000 Jun 11 09:15 | 20°II44'07 | 0°06'03 | asc. node | 2002 Nov 24 15:57 | 0°ML16'50 | |
| behind sun begin | 2000 Jun 10 12:07 | 19°II39'13 | | greatest brilliancy | 2002 Dec 04 21:21 | 3°ML28'28 | -4.7m |
| behind sun end | 2000 Jun 12 06:22 | 21°II49'02 | | | 2003 Jan 07 13:07 | 0°x | |
| max. Earth dist. | 2000 Jun 11 07:54 | 20°II39'59 | 1.73566 AU | morning max el | 2003 Jan 11 02:27 | 3°x34'33 | 46°57'41 |
| | 2000 Jun 18 22:15 | 0°S | | | 2003 Feb 04 13:27 | 0°S | |
| | 2000 Jul 13 08:02 | 0°Q | | | 2003 Mar 02 12:40 | 0°≈ | |
| evening rise | 2000 Jul 17 11:57 | 5°Q07'05 | | desc. node | 2003 Mar 16 05:37 | 16°≈13'48 | |
| | 2000 Aug 06 17:32 | 0°M | | | 2003 Mar 27 18:14 | 0°K | |
| | 2000 Aug 31 03:35 | 0°U | | | 2003 Apr 21 16:18 | 0°V | |
| | 2000 Sep 24 15:26 | 0°ML | | | 2003 May 16 10:58 | 0°R | |
| desc. node | 2000 Sep 28 10:29 | 4°ML38'07 | | | 2003 Jun 10 03:32 | 0°II | |
| | 2000 Oct 19 06:18 | 0°x | | | 2003 Jul 04 17:39 | 0°S | |
| | 2000 Nov 13 02:14 | 0°Z | | asc. node | 2003 Jul 07 08:53 | 3°S13'29 | |
| | 2000 Dec 08 08:48 | 0°≈ | | morning set | 2003 Jul 13 09:02 | 10°S34'52 | |
| | 2001 Jan 03 18:14 | 0°K | | | 2003 Jul 29 04:25 | 0°Q | |
| evening max el | 2001 Jan 17 06:09 | 14°K17'16 | 47°05'36 | max. Earth dist. | 2003 Aug 15 16:05 | 21°Q34'19 | 1.73042 AU |
| asc. node | 2001 Jan 19 13:39 | 16°K37'29 | | | | | |
| | 2001 Feb 02 19:14 | 0°V | | superior conj | 2003 Aug 18 18:05 | 25°Q23'02 | 1°18'47 |
| greatest brilliancy | 2001 Feb 23 07:43 | 14°V14'59 | -4.6m | minimum elong | 2003 Aug 18 11:53 | 25°Q03'53 | 1°18'41 |
| retrograde | 2001 Mar 09 01:07 | 17°V43'46 | | | 2003 Aug 22 11:36 | 0°M | |
| evening set | 2001 Mar 26 16:10 | 11°V42'32 | | | 2003 Sep 15 15:58 | 0°U | |
| inferior conj | 2001 Mar 30 04:17 | 9°V31'43 | 8°01'17 | evening rise | 2003 Sep 24 10:22 | 10°U53'51 | |
| minimum elong | 2001 Mar 30 11:43 | 9°V19'59 | 8°00'24 | | 2003 Oct 09 18:56 | 0°ML | |
| min. Earth dist. | 2001 Mar 29 22:20 | 9°V41'04 | 0.28187 AU | desc. node | 2003 Oct 26 22:22 | 21°ML19'37 | |
| morning rise | 2001 Apr 03 07:28 | 6°V58'34 | | | 2003 Nov 02 21:42 | 0°x | |
| direct | 2001 Apr 20 04:34 | 1°V27'23 | | | 2003 Nov 27 01:07 | 0°Z | |
| greatest brilliancy | 2001 May 01 18:29 | 3°V52'36 | -4.5m | | 2003 Dec 21 06:32 | 0°≈ | |
| desc. node | 2001 May 11 03:00 | 8°V41'20 | | | 2004 Jan 14 17:16 | 0°K | |
| | 2001 Jun 06 10:25 | 0°R | | | 2004 Feb 08 16:20 | 0°V | |
| morning max el | 2001 Jun 08 04:41 | 1°R40'35 | 45°50'18 | asc. node | 2004 Feb 17 01:36 | 9°V50'16 | |
| | 2001 Jul 05 16:44 | 0°II | | | 2004 Mar 05 18:12 | 0°R | |
| | 2001 Aug 01 12:18 | 0°S | | evening max el | 2004 Mar 29 16:40 | 25°R14'45 | 46°00'16 |
| | 2001 Aug 27 04:12 | 0°Q | | | 2004 Apr 03 14:57 | 0°II | |
| asc. node | 2001 Sep 01 06:40 | 6°Q04'48 | | greatest brilliancy | 2004 May 03 04:32 | 22°II19'38 | -4.5m |
| | 2001 Sep 21 02:09 | 0°M | | retrograde | 2004 May 17 22:28 | 26°II08'18 | |
| | 2001 Oct 15 11:42 | 0°U | | evening set | 2004 Jun 02 00:07 | 21°II43'16 | |
| | 2001 Nov 08 13:28 | 0°ML | | desc. node | 2004 Jun 07 14:50 | 18°II21'26 | |
| | 2001 Dec 02 11:11 | 0°x | | inferior conj | 2004 Jun 08 08:43 | 17°II53'21 | 0°-10'-33 |
| morning set | 2001 Dec 03 22:56 | 1°x52'22 | | minimum elong | 2004 Jun 08 08:20 | 17°II53'58 | 0°10'27 |
| desc. node | 2001 Dec 21 19:56 | 24°x21'48 | | transit begin | 2004 Jun 08 05:14 | 17°II58'50 | |
| | 2001 Dec 26 07:25 | 0°Z | | transit end | 2004 Jun 08 11:26 | 17°II49'05 | |
| | | | | min. Earth dist. | 2004 Jun 08 06:58 | 17°II56'06 | 0.28888 AU |
| superior conj | 2002 Jan 14 11:32 | 24°Z07'22 | 0°-52'-41 | morning rise | 2004 Jun 14 16:51 | 14°II04'50 | |
| minimum elong | 2002 Jan 13 23:57 | 23°Z30'55 | 0°52'14 | direct | 2004 Jun 29 23:15 | 9°II37'32 | |
| max. Earth dist. | 2002 Jan 16 09:00 | 26°Z30'18 | 1.71147 AU | greatest brilliancy | 2004 Jul 13 06:12 | 12°II43'26 | -4.5m |
| | 2002 Jan 19 03:42 | 0°≈ | | | 2004 Aug 07 11:02 | 0°S | |
| | 2002 Feb 12 01:18 | 0°K | | morning max el | 2004 Aug 17 18:31 | 9°S26'32 | 45°48'58 |
| evening rise | 2002 Feb 24 14:23 | 15°K41'48 | | | 2004 Sep 06 22:16 | 0°Q | |
| | 2002 Mar 08 01:42 | 0°V | | asc. node | 2004 Sep 28 18:28 | 24°Q17'27 | |
| | 2002 Apr 01 06:39 | 0°R | | | 2004 Oct 03 17:20 | 0°M | |
| asc. node | 2002 Apr 13 23:28 | 15°R36'58 | | | 2004 Oct 29 00:39 | 0°U | |
| | 2002 Apr 25 17:57 | 0°II | | | 2004 Nov 22 13:31 | 0°ML | |
| | 2002 May 20 13:27 | 0°S | | | 2004 Dec 16 17:10 | 0°x | |
| | 2002 Jun 14 20:16 | 0°Q | | | 2005 Jan 09 16:56 | 0°Z | |
| | 2002 Jul 10 21:09 | 0°M | | desc. node | 2005 Jan 18 07:49 | 10°Z47'55 | |
| desc. node | 2002 Aug 03 12:37 | 25°M56'42 | | | 2005 Feb 02 15:42 | 0°≈ | |
| | 2002 Aug 07 09:09 | 0°U | | morning set | 2005 Feb 19 04:05 | 20°≈40'30 | |
| evening max el | 2002 Aug 22 13:18 | 15°U15'19 | 46°00'16 | | 2005 Feb 26 15:07 | 0°K | |
| | 2002 Sep 08 03:05 | 0°ML | | | 2005 Mar 22 16:25 | 0°V | |
| greatest brilliancy | 2002 Sep 30 02:22 | 13°ML32'58 | -4.6m | | | | |
| retrograde | 2002 Oct 10 18:35 | 15°ML36'35 | | superior conj | 2005 Mar 31 03:30 | 10°V31'04 | -1°-18'-26 |
| evening set | 2002 Oct 26 17:04 | 10°ML43'53 | | minimum elong | 2005 Mar 31 11:32 | 10°V56'00 | 1°18'16 |
| inferior conj | 2002 Oct 31 12:06 | 7°ML53'26 | -5°-41'-31 | max. Earth dist. | 2005 Apr 04 02:17 | 15°V25'15 | 1.72462 AU |
| minimum elong | 2002 Oct 31 22:27 | 7°ML37'40 | 5°39'01 | | 2005 Apr 15 20:37 | 0°R | |
| min. Earth dist. | 2002 Nov 01 08:07 | 7°ML22'57 | 0.27088 AU | evening rise | 2005 May 08 16:49 | 28°R11'02 | |
| morning rise | 2002 Nov 06 03:21 | 4°ML34'20 | | | 2005 May 10 04:14 | 0°II | |

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|---------------------|-------------------|-----------|------------|---------------------|-------------------|-----------|------------|
| asc. node | 2005 May 11 11:15 | 1°♊35'21 | | morning max el | 2007 Oct 28 15:05 | 18°♎20'38 | 46°27'59 |
| | 2005 Jun 03 15:18 | 0°♌ | | | 2007 Nov 08 21:05 | 0°♍ | |
| | 2005 Jun 28 05:53 | 0°♈ | | | 2007 Dec 05 13:29 | 0°♌ | |
| | 2005 Jul 23 01:01 | 0°♎ | | | 2007 Dec 30 18:02 | 0°♏ | |
| | 2005 Aug 17 03:05 | 0°♉ | | | 2008 Jan 24 08:06 | 0°♊ | |
| desc. node | 2005 Aug 31 00:33 | 16°♌23'55 | | desc. node | 2008 Feb 15 19:44 | 27°♏42'13 | |
| | 2005 Sep 11 16:14 | 0°♌ | | | 2008 Feb 17 16:22 | 0°♎ | |
| | 2005 Oct 08 01:00 | 0°♏ | | | 2008 Mar 12 22:51 | 0°♐ | |
| evening max el | 2005 Nov 03 19:34 | 28°♏28'48 | 47°06'10 | | 2008 Apr 06 05:35 | 0°♑ | |
| | 2005 Nov 05 08:10 | 0°♏ | | | 2008 Apr 30 13:34 | 0°♒ | |
| greatest brilliancy | 2005 Dec 12 11:44 | 28°♏48'35 | -4.7m | morning set | 2008 May 03 01:17 | 3°♒03'50 | |
| | 2005 Dec 15 15:57 | 0°♎ | | | 2008 May 24 22:52 | 0°♊ | |
| asc. node | 2005 Dec 22 03:49 | 1°♎21'58 | | asc. node | 2008 Jun 07 23:08 | 17°♊13'09 | |
| retrograde | 2005 Dec 24 09:36 | 1°♎28'01 | | | | | |
| | 2006 Jan 01 20:18 | 30°♏ | | superior conj | 2008 Jun 09 04:19 | 18°♊42'47 | 0°02'55 |
| evening set | 2006 Jan 08 09:05 | 27°♏00'49 | | minimum elong | 2008 Jun 09 03:42 | 18°♊40'54 | 0°02'54 |
| min. Earth dist. | 2006 Jan 13 06:16 | 24°♏07'23 | 0.26649 AU | behind sun begin | 2008 Jun 08 05:18 | 17°♊32'06 | |
| inferior conj | 2006 Jan 13 23:59 | 23°♏40'06 | 5°30'44 | behind sun end | 2008 Jun 10 02:05 | 19°♊49'42 | |
| minimum elong | 2006 Jan 13 13:50 | 23°♏55'44 | 5°28'08 | max. Earth dist. | 2008 Jun 09 04:51 | 18°♊44'27 | 1.73558 AU |
| morning rise | 2006 Jan 18 18:57 | 20°♏48'07 | | | 2008 Jun 18 08:48 | 0°♌ | |
| direct | 2006 Feb 03 09:19 | 16°♏01'19 | | | 2008 Jul 12 18:39 | 0°♈ | |
| greatest brilliancy | 2006 Feb 14 08:27 | 18°♏15'53 | -4.6m | evening rise | 2008 Jul 15 06:49 | 3°♈04'56 | |
| | 2006 Mar 05 08:39 | 0°♎ | | | 2008 Aug 06 04:20 | 0°♎ | |
| morning max el | 2006 Mar 25 06:45 | 17°♎58'28 | 46°31'49 | | 2008 Aug 30 14:41 | 0°♍ | |
| | 2006 Apr 06 01:21 | 0°♐ | | | 2008 Sep 24 02:59 | 0°♌ | |
| desc. node | 2006 Apr 12 17:19 | 7°♐05'22 | | desc. node | 2008 Sep 27 12:27 | 4°♌08'37 | |
| | 2006 May 03 10:25 | 0°♑ | | | 2008 Oct 18 18:31 | 0°♏ | |
| | 2006 May 29 12:41 | 0°♒ | | | 2008 Nov 12 15:25 | 0°♏ | |
| | 2006 Jun 24 00:31 | 0°♊ | | | 2008 Dec 07 23:37 | 0°♎ | |
| | 2006 Jul 19 02:41 | 0°♌ | | | 2009 Jan 03 12:35 | 0°♐ | |
| asc. node | 2006 Aug 03 20:48 | 19°♌03'41 | | evening max el | 2009 Jan 14 21:24 | 11°♐58'34 | 47°07'21 |
| | 2006 Aug 12 20:21 | 0°♈ | | asc. node | 2009 Jan 18 15:51 | 15°♐45'58 | |
| | 2006 Sep 06 06:15 | 0°♎ | | | 2009 Feb 03 03:41 | 0°♑ | |
| morning set | 2006 Sep 19 21:10 | 16°♎53'01 | | greatest brilliancy | 2009 Feb 20 23:28 | 11°♑58'26 | -4.6m |
| | 2006 Sep 30 10:02 | 0°♍ | | retrograde | 2009 Mar 06 17:17 | 15°♑27'27 | |
| | 2006 Oct 24 09:58 | 0°♌ | | evening set | 2009 Mar 24 09:45 | 9°♑22'31 | |
| max. Earth dist. | 2006 Oct 25 04:00 | 0°♌56'31 | 1.71626 AU | min. Earth dist. | 2009 Mar 27 12:18 | 7°♑26'41 | 0.28147 AU |
| | | | | inferior conj | 2009 Mar 27 19:24 | 7°♑15'33 | 8°09'51 |
| superior conj | 2006 Oct 27 17:50 | 4°♌10'16 | 0°58'03 | minimum elong | 2009 Mar 28 02:18 | 7°♑04'41 | 8°09'05 |
| minimum elong | 2006 Oct 28 04:14 | 4°♌42'50 | 0°57'40 | morning rise | 2009 Mar 31 19:04 | 4°♑47'58 | |
| | 2006 Nov 17 08:02 | 0°♏ | | | 2009 Apr 11 12:47 | 30°♐ | |
| desc. node | 2006 Nov 23 10:11 | 7°♏38'44 | | direct | 2009 Apr 17 19:24 | 29°♐11'57 | |
| evening rise | 2006 Dec 07 02:24 | 24°♏48'50 | | | 2009 Apr 24 07:18 | 0°♑ | |
| | 2006 Dec 11 05:33 | 0°♏ | | greatest brilliancy | 2009 Apr 29 07:08 | 1°♑35'42 | -4.5m |
| | 2007 Jan 04 03:31 | 0°♎ | | desc. node | 2009 May 10 05:00 | 7°♑22'48 | |
| | 2007 Jan 28 03:32 | 0°♐ | | morning max el | 2009 Jun 05 20:51 | 29°♑30'33 | 45°51'07 |
| | 2007 Feb 21 08:21 | 0°♑ | | | 2009 Jun 06 09:07 | 0°♒ | |
| asc. node | 2007 Mar 16 13:32 | 28°♑21'49 | | | 2009 Jul 05 08:23 | 0°♊ | |
| | 2007 Mar 17 22:00 | 0°♒ | | | 2009 Aug 01 01:28 | 0°♌ | |
| | 2007 Apr 12 02:15 | 0°♊ | | | 2009 Aug 26 16:11 | 0°♈ | |
| | 2007 May 08 07:28 | 0°♌ | | asc. node | 2009 Aug 31 08:39 | 5°♈35'22 | |
| | 2007 Jun 05 17:59 | 0°♈ | | | 2009 Sep 20 13:32 | 0°♎ | |
| evening max el | 2007 Jun 09 02:45 | 3°♈15'54 | 45°23'27 | | 2009 Oct 14 22:46 | 0°♍ | |
| desc. node | 2007 Jul 06 02:52 | 25°♈23'30 | | | 2009 Nov 08 00:23 | 0°♌ | |
| greatest brilliancy | 2007 Jul 14 17:41 | 29°♈59'15 | -4.5m | morning set | 2009 Dec 01 10:19 | 29°♌23'07 | |
| | 2007 Jul 14 18:23 | 0°♎ | | | 2009 Dec 01 22:04 | 0°♏ | |
| retrograde | 2007 Jul 27 17:28 | 2°♎57'23 | | desc. node | 2009 Dec 20 22:01 | 23°♏54'10 | |
| | 2007 Aug 09 01:10 | 30°♈ | | | 2009 Dec 25 18:17 | 0°♏ | |
| evening set | 2007 Aug 13 21:44 | 27°♈25'47 | | | | | |
| inferior conj | 2007 Aug 18 03:41 | 24°♈50'52 | -7°-58'-53 | superior conj | 2010 Jan 11 21:06 | 21°♏32'15 | 0°-49'-26 |
| minimum elong | 2007 Aug 17 20:23 | 25°♈02'13 | 7°58'04 | minimum elong | 2010 Jan 11 09:52 | 20°♏56'55 | 0°48'59 |
| min. Earth dist. | 2007 Aug 18 10:03 | 24°♈40'59 | 0.28816 AU | max. Earth dist. | 2010 Jan 13 17:06 | 23°♏50'37 | 1.71129 AU |
| morning rise | 2007 Aug 21 18:47 | 22°♈37'07 | | | 2010 Jan 18 14:35 | 0°♎ | |
| direct | 2007 Sep 08 16:14 | 16°♈35'27 | | | 2010 Feb 11 12:10 | 0°♐ | |
| greatest brilliancy | 2007 Sep 23 04:52 | 20°♈17'45 | -4.6m | evening rise | 2010 Feb 22 01:26 | 13°♐12'28 | |
| | 2007 Oct 08 06:53 | 0°♎ | | | 2010 Mar 07 12:33 | 0°♑ | |
| asc. node | 2007 Oct 27 06:11 | 16°♎58'56 | | | 2010 Mar 31 17:35 | 0°♒ | |

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|---------------------|-------------------|-----------|------------|---------------------|-------------------|-----------|------------|
| asc. node | 2010 Apr 13 01:27 | 15°♄09'14 | | asc. node | 2012 Sep 27 20:28 | 23°♁42'57 | |
| | 2010 Apr 25 05:05 | 0°♁ | | | 2012 Oct 03 06:59 | 0°♁ | |
| | 2010 May 20 01:05 | 0°♁ | | | 2012 Oct 28 13:04 | 0°♁ | |
| | 2010 Jun 14 08:50 | 0°♁ | | | 2012 Nov 22 01:20 | 0°♁ | |
| | 2010 Jul 10 11:31 | 0°♁ | | | 2012 Dec 16 04:38 | 0°♁ | |
| desc. node | 2010 Aug 02 14:43 | 25°♁15'31 | | | 2013 Jan 09 04:11 | 0°♁ | |
| | 2010 Aug 07 03:47 | 0°♁ | | desc. node | 2013 Jan 17 09:55 | 10°♁19'31 | |
| evening max el | 2010 Aug 20 03:48 | 12°♁59'17 | 45°57'59 | | 2013 Feb 02 02:47 | 0°♁ | |
| | 2010 Sep 08 15:44 | 0°♁ | | morning set | 2013 Feb 16 14:35 | 18°♁08'55 | |
| greatest brilliancy | 2010 Sep 27 15:05 | 11°♁11'08 | -4.6m | | 2013 Feb 26 02:03 | 0°♁ | |
| retrograde | 2010 Oct 08 07:05 | 13°♁13'58 | | | 2013 Mar 22 03:15 | 0°♁ | |
| evening set | 2010 Oct 24 09:12 | 8°♁16'58 | | superior conj | 2013 Mar 28 17:05 | 8°♁10'36 | -1°-19'-52 |
| inferior conj | 2010 Oct 29 01:10 | 5°♁30'25 | -5°-58'-47 | minimum elong | 2013 Mar 29 00:31 | 8°♁33'43 | 1°19'44 |
| minimum elong | 2010 Oct 29 11:39 | 5°♁14'25 | 5°56'22 | max. Earth dist. | 2013 Apr 01 17:14 | 13°♁09'10 | 1.72406 AU |
| min. Earth dist. | 2010 Oct 29 21:38 | 4°♁59'11 | 0.27150 AU | | 2013 Apr 15 07:25 | 0°♁ | |
| morning rise | 2010 Nov 03 13:38 | 2°♁14'42 | | evening rise | 2013 May 06 08:46 | 25°♁59'11 | |
| | 2010 Nov 08 03:06 | 30°♁ | | | 2013 May 09 15:03 | 0°♁ | |
| direct | 2010 Nov 18 21:18 | 27°♁39'26 | | asc. node | 2013 May 10 13:22 | 1°♁08'37 | |
| asc. node | 2010 Nov 23 17:59 | 28°♁07'29 | | | 2013 Jun 03 02:13 | 0°♁ | |
| | 2010 Nov 30 00:33 | 0°♁ | | | 2013 Jun 27 17:03 | 0°♁ | |
| greatest brilliancy | 2010 Dec 02 11:36 | 1°♁04'37 | -4.7m | | 2013 Jul 22 12:41 | 0°♁ | |
| | 2011 Jan 07 12:30 | 0°♁ | | | 2013 Aug 16 15:37 | 0°♁ | |
| morning max el | 2011 Jan 08 16:02 | 1°♁09'49 | 46°57'24 | desc. node | 2013 Aug 30 02:30 | 15°♁50'53 | |
| | 2011 Feb 04 05:58 | 0°♁ | | | 2013 Sep 11 06:15 | 0°♁ | |
| | 2011 Mar 02 02:39 | 0°♁ | | | 2013 Oct 07 17:54 | 0°♁ | |
| desc. node | 2011 Mar 15 07:31 | 15°♁40'15 | | evening max el | 2013 Nov 01 07:59 | 26°♁01'29 | 47°04'26 |
| | 2011 Mar 27 06:53 | 0°♁ | | | 2013 Nov 05 08:43 | 0°♁ | |
| | 2011 Apr 21 04:06 | 0°♁ | | greatest brilliancy | 2013 Dec 10 02:30 | 26°♁21'40 | -4.7m |
| | 2011 May 15 22:12 | 0°♁ | | asc. node | 2013 Dec 21 06:00 | 28°♁58'24 | |
| | 2011 Jun 09 14:23 | 0°♁ | | retrograde | 2013 Dec 21 21:53 | 28°♁58'57 | |
| | 2011 Jul 04 04:17 | 0°♁ | | evening set | 2014 Jan 05 18:49 | 24°♁35'46 | |
| asc. node | 2011 Jul 06 11:02 | 2°♁47'31 | | min. Earth dist. | 2014 Jan 10 19:54 | 21°♁37'22 | 0.26612 AU |
| morning set | 2011 Jul 11 03:13 | 8°♁31'05 | | inferior conj | 2014 Jan 11 12:24 | 21°♁11'59 | 5°11'17 |
| | 2011 Jul 28 14:59 | 0°♁ | | minimum elong | 2014 Jan 11 02:32 | 21°♁27'09 | 5°08'40 |
| max. Earth dist. | 2011 Aug 13 09:24 | 19°♁26'53 | 1.73085 AU | morning rise | 2014 Jan 16 10:32 | 18°♁15'43 | |
| | | | | direct | 2014 Jan 31 20:49 | 13°♁33'23 | |
| superior conj | 2011 Aug 16 12:08 | 23°♁17'47 | 1°17'33 | greatest brilliancy | 2014 Feb 11 23:12 | 15°♁50'55 | -4.6m |
| minimum elong | 2011 Aug 16 05:29 | 22°♁57'15 | 1°17'25 | | 2014 Mar 05 21:03 | 0°♁ | |
| | 2011 Aug 21 22:11 | 0°♁ | | morning max el | 2014 Mar 22 19:31 | 15°♁33'55 | 46°33'26 |
| | 2011 Sep 15 02:40 | 0°♁ | | | 2014 Apr 05 20:31 | 0°♁ | |
| evening rise | 2011 Sep 22 02:08 | 8°♁40'10 | | desc. node | 2014 Apr 11 19:23 | 6°♁22'53 | |
| | 2011 Oct 09 05:50 | 0°♁ | | | 2014 May 03 01:21 | 0°♁ | |
| desc. node | 2011 Oct 26 00:22 | 20°♁51'21 | | | 2014 May 29 01:45 | 0°♁ | |
| | 2011 Nov 02 08:51 | 0°♁ | | | 2014 Jun 23 12:33 | 0°♁ | |
| | 2011 Nov 26 12:36 | 0°♁ | | | 2014 Jul 18 14:06 | 0°♁ | |
| | 2011 Dec 20 18:26 | 0°♁ | | asc. node | 2014 Aug 02 22:49 | 18°♁35'54 | |
| | 2012 Jan 14 05:47 | 0°♁ | | | 2014 Aug 12 07:23 | 0°♁ | |
| | 2012 Feb 08 06:01 | 0°♁ | | | 2014 Sep 05 17:07 | 0°♁ | |
| asc. node | 2012 Feb 16 03:35 | 9°♁14'32 | | morning set | 2014 Sep 17 13:24 | 14°♁40'36 | |
| | 2012 Mar 05 10:24 | 0°♁ | | | 2014 Sep 29 20:52 | 0°♁ | |
| evening max el | 2012 Mar 27 07:44 | 23°♁00'19 | 46°02'27 | max. Earth dist. | 2014 Oct 22 18:18 | 28°♁36'47 | 1.71673 AU |
| | 2012 Apr 03 15:18 | 0°♁ | | | 2014 Oct 23 20:52 | 0°♁ | |
| greatest brilliancy | 2012 Apr 30 22:07 | 20°♁11'55 | -4.5m | superior conj | 2014 Oct 25 07:31 | 1°♁48'31 | 1°00'39 |
| retrograde | 2012 May 15 14:33 | 23°♁59'32 | | minimum elong | 2014 Oct 25 17:53 | 2°♁21'00 | 1°00'17 |
| evening set | 2012 May 30 17:21 | 19°♁33'39 | | | 2014 Nov 16 19:03 | 0°♁ | |
| inferior conj | 2012 Jun 06 01:09 | 15°♁44'46 | 0°09'21 | desc. node | 2014 Nov 22 12:21 | 7°♁10'48 | |
| minimum elong | 2012 Jun 06 01:30 | 15°♁44'14 | 0°09'14 | evening rise | 2014 Dec 04 13:19 | 22°♁17'36 | |
| transit begin | 2012 Jun 05 22:10 | 15°♁49'29 | | | 2014 Dec 10 16:42 | 0°♁ | |
| transit end | 2012 Jun 06 04:49 | 15°♁38'59 | | | 2015 Jan 03 14:48 | 0°♁ | |
| min. Earth dist. | 2012 Jun 05 23:53 | 15°♁46'46 | 0.28870 AU | | 2015 Jan 27 14:59 | 0°♁ | |
| desc. node | 2012 Jun 06 16:56 | 15°♁19'56 | | | 2015 Feb 20 20:05 | 0°♁ | |
| morning rise | 2012 Jun 12 09:53 | 11°♁55'01 | | asc. node | 2015 Mar 15 15:31 | 27°♁50'58 | |
| direct | 2012 Jun 27 15:07 | 7°♁29'16 | | | 2015 Mar 17 10:14 | 0°♁ | |
| greatest brilliancy | 2012 Jul 10 20:26 | 10°♁32'46 | -4.5m | | 2015 Apr 11 15:28 | 0°♁ | |
| | 2012 Aug 07 13:43 | 0°♁ | | | 2015 May 07 22:52 | 0°♁ | |
| morning max el | 2012 Aug 15 09:07 | 7°♁13'45 | 45°48'10 | | | | |
| | 2012 Sep 06 14:48 | 0°♁ | | | | | |

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|---------------------|-------------------|-----------|------------|---------------------|--|-------------------|-----------|------------|--|
| | 2015 Jun 05 15:33 | 0°♈ | | | | 2017 Sep 20 01:15 | 0°♎ | | |
| evening max el | 2015 Jun 06 18:29 | 1°♈04'50 | 45°23'40 | | | 2017 Oct 14 10:11 | 0°♏ | | |
| desc. node | 2015 Jul 05 04:58 | 24°♈05'29 | | | | 2017 Nov 07 11:38 | 0°♐ | | |
| greatest brilliancy | 2015 Jul 12 05:23 | 27°♈43'58 | -4.5m | morning set | | 2017 Nov 28 22:13 | 26°♐54'32 | | |
| | 2015 Jul 18 22:38 | 0°♑ | | | | 2017 Dec 01 09:14 | 0°♒ | | |
| retrograde | 2015 Jul 25 09:29 | 0°♑46'23 | | desc. node | | 2017 Dec 20 00:06 | 23°♒25'37 | | |
| | 2015 Jul 31 15:27 | 30°♈ | | | | 2017 Dec 25 05:26 | 0°♓ | | |
| evening set | 2015 Aug 11 10:05 | 25°♈18'54 | | | | | | | |
| inferior conj | 2015 Aug 15 19:22 | 22°♈39'06 | -7°-50'-25 | superior conj | | 2018 Jan 09 07:02 | 18°♓57'28 | 0°-46'-5 | |
| minimum elong | 2015 Aug 15 11:34 | 22°♈51'12 | 7°49'28 | minimum elong | | 2018 Jan 08 20:15 | 18°♓23'35 | 0°45'40 | |
| min. Earth dist. | 2015 Aug 16 00:36 | 22°♈30'58 | 0.28844 AU | max. Earth dist. | | 2018 Jan 11 01:45 | 21°♓11'49 | 1.71112 AU | |
| morning rise | 2015 Aug 19 12:50 | 20°♈21'57 | | | | 2018 Jan 18 01:43 | 0°♈ | | |
| direct | 2015 Sep 06 08:29 | 14°♈23'18 | | | | 2018 Feb 10 23:19 | 0°♉ | | |
| greatest brilliancy | 2015 Sep 20 20:59 | 18°♈05'49 | -4.5m | evening rise | | 2018 Feb 19 12:29 | 10°♉42'05 | | |
| | 2015 Oct 08 17:29 | 0°♊ | | | | 2018 Mar 06 23:45 | 0°♋ | | |
| morning max el | 2015 Oct 26 07:11 | 16°♊06'25 | 46°26'29 | | | 2018 Mar 31 04:53 | 0°♌ | | |
| asc. node | 2015 Oct 26 08:17 | 16°♊09'09 | | asc. node | | 2018 Apr 12 03:32 | 14°♌40'35 | | |
| | 2015 Nov 08 15:31 | 0°♍ | | | | 2018 Apr 24 16:40 | 0°♍ | | |
| | 2015 Dec 05 04:15 | 0°♎ | | | | 2018 May 19 13:10 | 0°♏ | | |
| | 2015 Dec 30 07:16 | 0°♏ | | | | 2018 Jun 13 21:54 | 0°♐ | | |
| desc. node | 2016 Jan 23 20:31 | 0°♑ | | desc. node | | 2018 Jul 10 02:32 | 0°♑ | | |
| | 2016 Feb 14 21:40 | 27°♑11'18 | | | | 2018 Aug 01 16:39 | 24°♑32'10 | | |
| | 2016 Feb 17 04:17 | 0°♒ | | | | 2018 Aug 06 23:27 | 0°♒ | | |
| | 2016 Mar 12 10:24 | 0°♓ | | evening max el | | 2018 Aug 17 17:31 | 10°♒40'09 | 45°55'40 | |
| | 2016 Apr 05 16:50 | 0°♈ | | | | 2018 Sep 09 09:25 | 0°♓ | | |
| morning set | 2016 Apr 30 00:35 | 0°♉ | | greatest brilliancy | | 2018 Sep 25 04:25 | 8°♓48'50 | -4.6m | |
| | 2016 Apr 30 17:26 | 0°♉51'51 | | retrograde | | 2018 Oct 05 19:04 | 10°♓50'23 | | |
| | 2016 May 24 09:44 | 0°♊ | | evening set | | 2018 Oct 22 01:22 | 5°♓48'55 | | |
| | | | | inferior conj | | 2018 Oct 26 14:16 | 3°♓06'30 | -6°-15'-22 | |
| superior conj | 2016 Jun 06 21:50 | 16°♊35'47 | 0°00'-20 | minimum elong | | 2018 Oct 27 00:48 | 2°♓50'23 | 6°13'01 | |
| minimum elong | 2016 Jun 06 21:53 | 16°♊35'59 | 0°00'20 | min. Earth dist. | | 2018 Oct 27 11:31 | 2°♓33'59 | 0.27212 AU | |
| behind sun begin | 2016 Jun 05 23:15 | 15°♊26'26 | | morning rise | | 2018 Oct 31 23:43 | 29°♓54'23 | | |
| behind sun end | 2016 Jun 07 20:32 | 17°♊45'33 | | | | 2018 Oct 31 19:42 | 30°♓ | | |
| max. Earth dist. | 2016 Jun 07 03:29 | 16°♊53'12 | 1.73547 AU | direct | | 2018 Nov 16 10:51 | 25°♓14'32 | | |
| asc. node | 2016 Jun 07 01:13 | 16°♊46'16 | | asc. node | | 2018 Nov 22 20:05 | 26°♓02'09 | | |
| | 2016 Jun 17 19:39 | 0°♔ | | greatest brilliancy | | 2018 Nov 30 02:31 | 28°♓40'30 | -4.7m | |
| | 2016 Jul 12 05:34 | 0°♈ | | | | 2018 Dec 02 17:01 | 0°♔ | | |
| evening rise | 2016 Jul 13 01:40 | 1°♈01'47 | | morning max el | | 2019 Jan 06 04:53 | 28°♔42'12 | 46°57'22 | |
| | 2016 Aug 05 15:26 | 0°♉ | | | | 2019 Jan 07 11:18 | 0°♕ | | |
| | 2016 Aug 30 02:06 | 0°♊ | | | | 2019 Feb 03 22:29 | 0°♖ | | |
| | 2016 Sep 23 14:50 | 0°♋ | | | | 2019 Mar 01 16:45 | 0°♗ | | |
| desc. node | 2016 Sep 26 14:31 | 3°♋38'31 | | desc. node | | 2019 Mar 14 09:37 | 15°♗06'42 | | |
| | 2016 Oct 18 07:01 | 0°♌ | | | | 2019 Mar 26 19:43 | 0°♘ | | |
| | 2016 Nov 12 04:54 | 0°♍ | | | | 2019 Apr 20 16:10 | 0°♙ | | |
| | 2016 Dec 07 14:51 | 0°♎ | | | | 2019 May 15 09:46 | 0°♚ | | |
| | 2017 Jan 03 07:46 | 0°♏ | | | | 2019 Jun 09 01:37 | 0°♛ | | |
| evening max el | 2017 Jan 12 13:18 | 9°♏40'27 | 47°08'46 | | | 2019 Jul 03 15:18 | 0°♜ | | |
| asc. node | 2017 Jan 17 17:46 | 14°♏51'40 | | asc. node | | 2019 Jul 05 13:00 | 2°♜19'55 | | |
| | 2017 Feb 03 15:51 | 0°♐ | | morning set | | 2019 Jul 08 21:14 | 6°♜25'38 | | |
| greatest brilliancy | 2017 Feb 18 15:51 | 9°♐41'01 | -4.6m | | | 2019 Jul 28 01:54 | 0°♑ | | |
| retrograde | 2017 Mar 04 09:09 | 13°♐08'50 | | max. Earth dist. | | 2019 Aug 11 03:11 | 17°♑19'56 | 1.73127 AU | |
| evening set | 2017 Mar 22 02:58 | 7°♐00'44 | | | | | | | |
| min. Earth dist. | 2017 Mar 25 01:59 | 5°♐10'17 | 0.28105 AU | superior conj | | 2019 Aug 14 06:07 | 21°♑11'22 | 1°16'12 | |
| inferior conj | 2017 Mar 25 10:17 | 4°♐57'14 | 8°17'38 | minimum elong | | 2019 Aug 13 23:03 | 20°♑49'32 | 1°16'03 | |
| minimum elong | 2017 Mar 25 16:36 | 4°♐47'18 | 8°17'01 | | | 2019 Aug 21 09:06 | 0°♒ | | |
| morning rise | 2017 Mar 29 06:28 | 2°♐34'59 | | | | 2019 Sep 14 13:43 | 0°♓ | | |
| | 2017 Apr 03 00:25 | 30°♑ | | evening rise | | 2019 Sep 19 18:02 | 6°♓25'58 | | |
| direct | 2017 Apr 15 10:18 | 26°♑54'34 | | | | 2019 Oct 08 17:06 | 0°♔ | | |
| greatest brilliancy | 2017 Apr 26 18:44 | 29°♑15'42 | -4.5m | desc. node | | 2019 Oct 25 02:30 | 20°♔22'21 | | |
| | 2017 Apr 28 13:13 | 0°♒ | | | | 2019 Nov 01 20:24 | 0°♕ | | |
| desc. node | 2017 May 09 07:08 | 6°♒05'22 | | | | 2019 Nov 26 00:28 | 0°♖ | | |
| morning max el | 2017 Jun 03 12:30 | 27°♒17'53 | 45°51'59 | | | 2019 Dec 20 06:41 | 0°♗ | | |
| | 2017 Jun 06 07:26 | 0°♓ | | | | 2020 Jan 13 18:39 | 0°♘ | | |
| | 2017 Jul 05 00:11 | 0°♔ | | | | 2020 Feb 07 20:02 | 0°♙ | | |
| | 2017 Jul 31 14:54 | 0°♕ | | asc. node | | 2020 Feb 15 05:37 | 8°♙38'09 | | |
| | 2017 Aug 26 04:29 | 0°♖ | | | | 2020 Mar 05 03:07 | 0°♚ | | |
| asc. node | 2017 Aug 30 10:36 | 5°♖04'51 | | evening max el | | 2020 Mar 24 22:13 | 20°♚43'48 | 46°04'39 | |

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|---------------------|-------------------|-----------|------------|---------------------|-------------------|-----------|------------|
| | 2020 Apr 03 17:10 | 0°♁ | | superior conj | 2022 Oct 22 21:17 | 29°♁26'53 | 1°03'07 |
| greatest brilliancy | 2020 Apr 28 14:35 | 18°♁02'07 | -4.5m | minimum elong | 2022 Oct 23 07:33 | 29°♁59'00 | 1°02'46 |
| retrograde | 2020 May 13 06:45 | 21°♁50'25 | | | 2022 Oct 23 07:52 | 0°♁ | |
| evening set | 2020 May 28 10:49 | 17°♁23'05 | | | 2022 Nov 16 06:08 | 0°♁ | |
| inferior conj | 2020 Jun 03 17:43 | 13°♁35'40 | 0°29'12 | desc. node | 2022 Nov 21 14:21 | 6°♁42'12 | |
| minimum elong | 2020 Jun 03 18:48 | 13°♁33'59 | 0°28'52 | evening rise | 2022 Dec 02 00:16 | 19°♁46'21 | |
| min. Earth dist. | 2020 Jun 03 17:05 | 13°♁36'41 | 0.28858 AU | | 2022 Dec 10 03:54 | 0°♁ | |
| desc. node | 2020 Jun 05 19:01 | 12°♁18'25 | | | 2023 Jan 03 02:09 | 0°♁ | |
| morning rise | 2020 Jun 10 02:55 | 9°♁44'59 | | | 2023 Jan 27 02:32 | 0°♁ | |
| direct | 2020 Jun 25 06:48 | 5°♁20'12 | | | 2023 Feb 20 07:55 | 0°♁ | |
| greatest brilliancy | 2020 Jul 08 12:01 | 8°♁22'55 | -4.5m | asc. node | 2023 Mar 14 17:40 | 27°♁20'23 | |
| | 2020 Aug 07 15:21 | 0°♁ | | | 2023 Mar 16 22:34 | 0°♁ | |
| morning max el | 2020 Aug 13 00:14 | 5°♁01'18 | 45°47'28 | | 2023 Apr 11 04:47 | 0°♁ | |
| | 2020 Sep 06 07:21 | 0°♁ | | | 2023 May 07 14:24 | 0°♁ | |
| asc. node | 2020 Sep 26 22:39 | 23°♁08'22 | | evening max el | 2023 Jun 04 11:01 | 28°♁56'08 | 45°23'57 |
| | 2020 Oct 02 20:48 | 0°♁ | | | 2023 Jun 05 13:46 | 0°♁ | |
| | 2020 Oct 28 01:41 | 0°♁ | | desc. node | 2023 Jul 04 06:53 | 22°♁45'22 | |
| | 2020 Nov 21 13:22 | 0°♁ | | greatest brilliancy | 2023 Jul 09 17:59 | 25°♁30'37 | -4.5m |
| | 2020 Dec 15 16:21 | 0°♁ | | retrograde | 2023 Jul 23 01:33 | 28°♁36'12 | |
| | 2021 Jan 08 15:41 | 0°♁ | | evening set | 2023 Aug 08 22:41 | 23°♁13'05 | |
| desc. node | 2021 Jan 16 11:50 | 9°♁49'44 | | inferior conj | 2023 Aug 13 11:15 | 20°♁28'14 | -7°-41'-17 |
| | 2021 Feb 01 14:05 | 0°♁ | | minimum elong | 2023 Aug 13 03:01 | 20°♁41'02 | 7°40'13 |
| morning set | 2021 Feb 14 01:14 | 15°♁36'53 | | min. Earth dist. | 2023 Aug 13 15:17 | 20°♁21'59 | 0.28871 AU |
| | 2021 Feb 25 13:11 | 0°♁ | | morning rise | 2023 Aug 17 07:11 | 18°♁07'26 | |
| | 2021 Mar 21 14:16 | 0°♁ | | direct | 2023 Sep 04 01:20 | 12°♁12'14 | |
| | | | | greatest brilliancy | 2023 Sep 18 12:19 | 15°♁53'26 | -4.5m |
| superior conj | 2021 Mar 26 06:57 | 5°♁50'28 | -1°-21'-8 | | 2023 Oct 09 01:10 | 0°♁ | |
| minimum elong | 2021 Mar 26 13:47 | 6°♁11'40 | 1°21'03 | morning max el | 2023 Oct 23 23:14 | 13°♁52'22 | 46°24'47 |
| max. Earth dist. | 2021 Mar 30 06:51 | 10°♁48'20 | 1.72346 AU | asc. node | 2023 Oct 25 10:20 | 15°♁20'11 | |
| | 2021 Apr 14 18:22 | 0°♁ | | | 2023 Nov 08 09:30 | 0°♁ | |
| evening rise | 2021 May 04 01:01 | 23°♁47'44 | | | 2023 Dec 04 18:50 | 0°♁ | |
| | 2021 May 09 02:01 | 0°♁ | | | 2023 Dec 29 20:23 | 0°♁ | |
| asc. node | 2021 May 09 15:27 | 0°♁41'19 | | | 2024 Jan 23 08:50 | 0°♁ | |
| | 2021 Jun 02 13:18 | 0°♁ | | desc. node | 2024 Feb 13 23:46 | 26°♁41'11 | |
| | 2021 Jun 27 04:27 | 0°♁ | | | 2024 Feb 16 16:05 | 0°♁ | |
| | 2021 Jul 22 00:36 | 0°♁ | | | 2024 Mar 11 21:50 | 0°♁ | |
| desc. node | 2021 Aug 16 04:26 | 0°♁ | | | 2024 Apr 05 04:00 | 0°♁ | |
| | 2021 Aug 29 04:35 | 15°♁17'28 | | morning set | 2024 Apr 28 09:39 | 28°♁40'19 | |
| | 2021 Sep 10 20:39 | 0°♁ | | | 2024 Apr 29 11:31 | 0°♁ | |
| | 2021 Oct 07 11:21 | 0°♁ | | | 2024 May 23 20:30 | 0°♁ | |
| evening max el | 2021 Oct 29 20:52 | 23°♁35'03 | 47°02'42 | | | | |
| | 2021 Nov 05 10:44 | 0°♁ | | superior conj | 2024 Jun 04 15:33 | 14°♁29'49 | 0°-3'-33 |
| greatest brilliancy | 2021 Dec 07 16:16 | 23°♁53'05 | -4.7m | minimum elong | 2024 Jun 04 16:18 | 14°♁32'07 | 0°03'32 |
| retrograde | 2021 Dec 19 10:36 | 26°♁29'25 | | behind sun begin | 2024 Jun 03 17:58 | 13°♁23'29 | |
| asc. node | 2021 Dec 20 07:58 | 26°♁28'27 | | behind sun end | 2024 Jun 05 14:38 | 15°♁40'45 | |
| evening set | 2022 Jan 03 04:45 | 22°♁09'38 | | max. Earth dist. | 2024 Jun 05 03:00 | 15°♁05'01 | 1.73528 AU |
| min. Earth dist. | 2022 Jan 08 09:18 | 19°♁06'52 | 0.26579 AU | asc. node | 2024 Jun 06 03:13 | 16°♁19'24 | |
| inferior conj | 2022 Jan 09 00:47 | 18°♁43'08 | 4°51'07 | | 2024 Jun 17 06:20 | 0°♁ | |
| minimum elong | 2022 Jan 08 15:16 | 18°♁57'44 | 4°48'32 | evening rise | 2024 Jul 10 20:50 | 29°♁00'10 | |
| morning rise | 2022 Jan 14 02:02 | 15°♁42'54 | | | 2024 Jul 11 16:18 | 0°♁ | |
| direct | 2022 Jan 29 08:46 | 11°♁04'37 | | | 2024 Aug 05 02:23 | 0°♁ | |
| greatest brilliancy | 2022 Feb 09 13:48 | 13°♁25'07 | -4.6m | | 2024 Aug 29 13:22 | 0°♁ | |
| | 2022 Mar 06 06:29 | 0°♁ | | | 2024 Sep 23 02:36 | 0°♁ | |
| morning max el | 2022 Mar 20 09:25 | 13°♁11'39 | 46°35'11 | desc. node | 2024 Sep 25 16:39 | 3°♁08'57 | |
| | 2022 Apr 05 15:17 | 0°♁ | | | 2024 Oct 17 19:28 | 0°♁ | |
| desc. node | 2022 Apr 10 21:30 | 5°♁40'44 | | | 2024 Nov 11 18:25 | 0°♁ | |
| | 2022 May 02 16:10 | 0°♁ | | | 2024 Dec 07 06:13 | 0°♁ | |
| | 2022 May 28 14:46 | 0°♁ | | | 2025 Jan 03 03:24 | 0°♁ | |
| | 2022 Jun 23 00:34 | 0°♁ | | evening max el | 2025 Jan 10 05:01 | 7°♁21'57 | 47°10'07 |
| | 2022 Jul 18 01:32 | 0°♁ | | asc. node | 2025 Jan 16 19:50 | 13°♁57'01 | |
| asc. node | 2022 Aug 02 00:48 | 18°♁07'53 | | | 2025 Feb 04 07:57 | 0°♁ | |
| | 2022 Aug 11 18:30 | 0°♁ | | greatest brilliancy | 2025 Feb 16 09:07 | 7°♁24'55 | -4.6m |
| | 2022 Sep 05 04:05 | 0°♁ | | retrograde | 2025 Mar 02 00:36 | 10°♁50'09 | |
| morning set | 2022 Sep 15 05:45 | 12°♁28'22 | | evening set | 2025 Mar 19 19:57 | 4°♁39'33 | |
| | 2022 Sep 29 07:49 | 0°♁ | | min. Earth dist. | 2025 Mar 22 15:48 | 2°♁53'47 | 0.28060 AU |
| max. Earth dist. | 2022 Oct 20 08:15 | 26°♁15'47 | 1.71718 AU | inferior conj | 2025 Mar 23 01:07 | 2°♁39'07 | 8°24'41 |
| | | | | minimum elong | 2025 Mar 23 06:46 | 2°♁30'13 | 8°24'12 |

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|---------------------|-------------------|-----------|------------|---------------------|-------------------|----------------------|
| morning rise | 2025 Mar 26 17:50 | 0°♃21'58 | | 2027 Sep 14 00:24 | 0°♌ | |
| | 2025 Mar 27 08:40 | 30°♋ | | 2027 Sep 17 10:26 | 4°♌14'37 | |
| direct | 2025 Apr 13 01:02 | 24°♋37'30 | | 2027 Oct 08 03:59 | 0°♍ | |
| greatest brilliancy | 2025 Apr 24 06:09 | 26°♋55'38 | -4.5m | 2027 Oct 24 04:31 | 19°♍54'18 | |
| | 2025 Apr 30 17:16 | 0°♃ | | 2027 Nov 01 07:34 | 0°♎ | |
| desc. node | 2025 May 08 09:10 | 4°♃50'31 | | 2027 Nov 25 11:59 | 0°♏ | |
| morning max el | 2025 Jun 01 03:28 | 25°♃04'00 | 45°52'59 | 2027 Dec 19 18:40 | 0°♐ | |
| | 2025 Jun 06 04:42 | 0°♄ | | 2028 Jan 13 07:20 | 0°♋ | |
| | 2025 Jul 04 15:30 | 0°♅ | | 2028 Feb 07 10:01 | 0°♄ | |
| | 2025 Jul 31 03:57 | 0°♆ | | 2028 Feb 14 07:46 | 8°♃02'21 | |
| | 2025 Aug 25 16:27 | 0°♇ | | 2028 Mar 04 20:00 | 0°♄ | |
| asc. node | 2025 Aug 29 12:49 | 4°♇36'04 | | 2028 Mar 22 12:26 | 18°♄26'54 | 46°07'00 |
| | 2025 Sep 19 12:39 | 0°♈ | | 2028 Apr 03 20:27 | 0°♅ | |
| | 2025 Oct 13 21:18 | 0°♉ | | 2028 Apr 26 06:08 | 15°♅51'09 | -4.5m |
| | 2025 Nov 06 22:39 | 0°♊ | | 2028 May 10 23:02 | 19°♅41'13 | |
| morning set | 2025 Nov 26 09:59 | 24°♊26'10 | | 2028 May 26 04:08 | 15°♅11'59 | |
| | 2025 Nov 30 20:13 | 0°♋ | | 2028 Jun 01 10:00 | 11°♅26'20 | 0°49'06 |
| desc. node | 2025 Dec 19 02:06 | 22°♋57'15 | | 2028 Jun 01 11:48 | 11°♅23'30 | 0°48'34 |
| | 2025 Dec 24 16:26 | 0°♌ | | 2028 Jun 01 09:48 | 11°♅26'38 | 0.28843 AU |
| | | | | 2028 Jun 04 20:58 | 9°♅17'28 | |
| superior conj | 2026 Jan 06 16:36 | 16°♌22'03 | 0°-42'-38 | 2028 Jun 07 19:33 | 7°♅35'09 | |
| minimum elong | 2026 Jan 06 06:23 | 15°♌49'58 | 0°42'12 | 2028 Jun 22 22:12 | 3°♅10'47 | |
| max. Earth dist. | 2026 Jan 08 06:37 | 18°♌21'40 | 1.71096 AU | 2028 Jul 06 03:58 | 6°♅13'48 | -4.5m |
| | 2026 Jan 17 12:43 | 0°♍ | | 2028 Aug 07 15:26 | 0°♆ | |
| | 2026 Feb 10 10:18 | 0°♎ | | 2028 Aug 10 16:03 | 2°♆51'20 | 45°46'57 |
| evening rise | 2026 Feb 16 23:02 | 8°♎10'33 | | 2028 Sep 05 23:17 | 0°♇ | |
| | 2026 Mar 06 10:45 | 0°♃ | | 2028 Sep 26 00:36 | 22°♇34'20 | |
| | 2026 Mar 30 16:00 | 0°♄ | | 2028 Oct 02 10:08 | 0°♈ | |
| asc. node | 2026 Apr 11 05:37 | 14°♄12'35 | | 2028 Oct 27 13:51 | 0°♉ | |
| | 2026 Apr 24 04:03 | 0°♅ | | 2028 Nov 21 00:57 | 0°♊ | |
| | 2026 May 19 01:05 | 0°♆ | | 2028 Dec 15 03:39 | 0°♋ | |
| | 2026 Jun 13 10:46 | 0°♇ | | 2029 Jan 08 02:47 | 0°♌ | |
| | 2026 Jul 09 17:22 | 0°♈ | | 2029 Jan 15 13:58 | 9°♌21'45 | |
| desc. node | 2026 Jul 31 18:48 | 23°♈50'05 | | 2029 Feb 01 01:03 | 0°♍ | |
| | 2026 Aug 06 19:12 | 0°♉ | | 2029 Feb 11 11:32 | 13°♍04'38 | |
| evening max el | 2026 Aug 15 06:31 | 8°♉20'48 | 45°53'32 | 2029 Feb 25 00:03 | 0°♎ | |
| | 2026 Sep 10 08:06 | 0°♊ | | 2029 Mar 21 01:03 | 0°♃ | |
| greatest brilliancy | 2026 Sep 22 17:39 | 6°♊28'33 | -4.6m | | | |
| retrograde | 2026 Oct 03 07:16 | 8°♊29'28 | | superior conj | 2029 Mar 23 20:11 | 3°♃28'53 -1°-22'-18 |
| evening set | 2026 Oct 19 17:48 | 3°♊23'12 | | minimum elong | 2029 Mar 24 02:19 | 3°♃47'58 1°22'14 |
| inferior conj | 2026 Oct 24 03:44 | 0°♊45'03 | -6°-30'-49 | max. Earth dist. | 2029 Mar 27 17:43 | 8°♃19'37 1.72292 AU |
| minimum elong | 2026 Oct 24 14:14 | 0°♊28'57 | 6°28'36 | | 2029 Apr 14 05:06 | 0°♄ |
| min. Earth dist. | 2026 Oct 25 01:48 | 0°♊11'15 | 0.27280 AU | evening rise | 2029 May 01 16:34 | 21°♄34'50 |
| | 2026 Oct 25 09:09 | 30°♋ | | 2029 May 08 12:46 | 0°♅ | |
| morning rise | 2026 Oct 29 10:06 | 27°♋36'50 | | asc. node | 2029 May 08 17:24 | 0°♅14'15 |
| direct | 2026 Nov 14 00:27 | 22°♋51'49 | | 2029 Jun 02 00:10 | 0°♆ | |
| asc. node | 2026 Nov 21 22:05 | 24°♋03'39 | | 2029 Jun 26 15:37 | 0°♇ | |
| greatest brilliancy | 2026 Nov 27 18:46 | 26°♋19'56 | -4.7m | 2029 Jul 21 12:20 | 0°♈ | |
| | 2026 Dec 04 08:12 | 0°♌ | | 2029 Aug 15 17:06 | 0°♉ | |
| morning max el | 2027 Jan 03 17:58 | 26°♌15'57 | 46°57'01 | 2029 Aug 28 06:41 | 14°♉44'44 | |
| | 2027 Jan 07 08:53 | 0°♍ | | 2029 Sep 10 10:54 | 0°♊ | |
| | 2027 Feb 03 14:30 | 0°♎ | | 2029 Oct 07 04:47 | 0°♋ | |
| | 2027 Mar 01 06:32 | 0°♏ | | evening max el | 2029 Oct 27 10:52 | 21°♋12'55 47°01'08 |
| desc. node | 2027 Mar 13 11:45 | 14°♏33'58 | | 2029 Nov 05 13:38 | 0°♌ | |
| | 2027 Mar 26 08:16 | 0°♎ | | 2029 Dec 05 05:11 | 21°♌25'19 | -4.7m |
| | 2027 Apr 20 03:57 | 0°♃ | | retrograde | 2029 Dec 16 23:47 | 24°♌01'42 |
| | 2027 May 14 21:01 | 0°♄ | | asc. node | 2029 Dec 19 09:59 | 23°♌54'25 |
| | 2027 Jun 08 12:32 | 0°♅ | | evening set | 2029 Dec 31 15:06 | 19°♌44'58 |
| | 2027 Jul 03 02:01 | 0°♆ | | min. Earth dist. | 2030 Jan 05 22:29 | 16°♌38'33 0.26550 AU |
| asc. node | 2027 Jul 04 15:03 | 1°♆53'23 | | inferior conj | 2030 Jan 06 13:17 | 16°♌15'55 4°30'31 |
| morning set | 2027 Jul 06 15:14 | 4°♆20'58 | | minimum elong | 2030 Jan 06 04:12 | 16°♌29'48 4°27'57 |
| | 2027 Jul 27 12:31 | 0°♇ | | morning rise | 2030 Jan 11 17:35 | 13°♌11'58 |
| max. Earth dist. | 2027 Aug 08 22:02 | 15°♇17'14 | 1.73164 AU | direct | 2030 Jan 26 21:33 | 8°♌37'41 |
| | | | | greatest brilliancy | 2030 Feb 07 03:37 | 11°♌00'01 -4.7m |
| superior conj | 2027 Aug 12 00:20 | 19°♇06'40 | 1°14'45 | 2030 Mar 06 12:51 | 0°♍ | |
| minimum elong | 2027 Aug 11 16:54 | 18°♇43'42 | 1°14'35 | morning max el | 2030 Mar 17 23:55 | 10°♍51'53 46°36'30 |
| | 2027 Aug 20 19:42 | 0°♈ | | 2030 Apr 05 09:18 | 0°♎ | |

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|---------------------|-------------------|-----------|---------------------|---------------------|-------------------|------------|------------|
| desc. node | 2030 Apr 09 23:29 | 4°♄59'31 | | 2032 Nov 11 08:03 | 0°♁ | | |
| | 2030 May 02 06:37 | 0°♃ | | 2032 Dec 06 21:48 | 0°♁ | | |
| | 2030 May 28 03:32 | 0°♄ | | 2033 Jan 02 23:34 | 0°♄ | | |
| | 2030 Jun 22 12:23 | 0°♁ | evening max el | 2033 Jan 07 20:05 | 5°♄01'47 | 47°11'27 | |
| | 2030 Jul 17 12:46 | 0°♁ | asc. node | 2033 Jan 15 22:01 | 13°♄01'42 | | |
| asc. node | 2030 Aug 01 02:58 | 17°♁40'58 | | 2033 Feb 05 05:26 | 0°♃ | | |
| | 2030 Aug 11 05:24 | 0°♁ | greatest brilliancy | 2033 Feb 14 03:01 | 5°♃09'50 | -4.6m | |
| | 2030 Sep 04 14:50 | 0°♄ | retrograde | 2033 Feb 27 15:40 | 8°♃31'52 | | |
| morning set | 2030 Sep 12 21:57 | 10°♄16'27 | evening set | 2033 Mar 17 12:49 | 2°♃19'17 | | |
| | 2030 Sep 28 18:33 | 0°♁ | min. Earth dist. | 2033 Mar 20 06:01 | 0°♃37'30 | 0.28011 AU | |
| max. Earth dist. | 2030 Oct 17 19:59 | 23°♁48'36 | 1.71760 AU | inferior conj | 2033 Mar 20 16:05 | 0°♃21'38 | 8°30'58 |
| | | | | minimum elong | 2033 Mar 20 21:01 | 0°♃13'51 | 8°30'36 |
| superior conj | 2030 Oct 20 11:12 | 27°♁06'24 | 1°05'28 | | 2033 Mar 21 05:48 | 30°♄ | |
| minimum elong | 2030 Oct 20 21:17 | 27°♁37'57 | 1°05'10 | morning rise | 2033 Mar 24 05:28 | 28°♄09'18 | |
| | 2030 Oct 22 18:39 | 0°♄ | | direct | 2033 Apr 10 15:27 | 22°♄21'03 | |
| | 2030 Nov 15 17:00 | 0°♄ | | greatest brilliancy | 2033 Apr 21 18:20 | 24°♄36'49 | -4.5m |
| desc. node | 2030 Nov 20 16:21 | 6°♄14'18 | | | 2033 May 02 03:12 | 0°♃ | |
| evening rise | 2030 Nov 29 11:25 | 17°♄16'28 | | desc. node | 2033 May 07 11:11 | 3°♃38'19 | |
| | 2030 Dec 09 14:51 | 0°♁ | | morning max el | 2033 May 29 17:31 | 22°♃47'59 | 45°53'53 |
| | 2031 Jan 02 13:14 | 0°♁ | | | 2033 Jun 06 01:08 | 0°♄ | |
| | 2031 Jan 26 13:48 | 0°♄ | | | 2033 Jul 04 06:36 | 0°♁ | |
| | 2031 Feb 19 19:29 | 0°♃ | | | 2033 Jul 30 16:59 | 0°♁ | |
| asc. node | 2031 Mar 13 19:40 | 26°♃50'03 | | | 2033 Aug 25 04:29 | 0°♁ | |
| | 2031 Mar 16 10:41 | 0°♄ | | asc. node | 2033 Aug 28 14:47 | 4°♁06'16 | |
| | 2031 Apr 10 18:01 | 0°♁ | | | 2033 Sep 19 00:09 | 0°♄ | |
| | 2031 May 07 06:06 | 0°♁ | | | 2033 Oct 13 08:31 | 0°♁ | |
| evening max el | 2031 Jun 02 03:33 | 26°♁47'28 | 45°24'11 | | 2033 Nov 06 09:44 | 0°♄ | |
| | 2031 Jun 05 12:57 | 0°♁ | | morning set | 2033 Nov 23 21:40 | 21°♄57'15 | |
| desc. node | 2031 Jul 03 09:02 | 21°♁22'49 | | | 2033 Nov 30 07:17 | 0°♄ | |
| greatest brilliancy | 2031 Jul 07 07:52 | 23°♁18'35 | -4.5m | desc. node | 2033 Dec 18 04:11 | 22°♄28'59 | |
| retrograde | 2031 Jul 20 17:08 | 26°♁25'37 | | | 2033 Dec 24 03:30 | 0°♁ | |
| evening set | 2031 Aug 06 11:10 | 21°♁07'14 | | | | | |
| inferior conj | 2031 Aug 11 03:00 | 18°♁17'13 | -7°-31'-35 | superior conj | 2034 Jan 04 02:10 | 13°♁46'23 | 0°-39'-5 |
| minimum elong | 2031 Aug 10 18:21 | 18°♁30'41 | 7°30'21 | minimum elong | 2034 Jan 03 16:36 | 13°♁16'17 | 0°38'39 |
| min. Earth dist. | 2031 Aug 11 06:01 | 18°♁12'32 | 0.28893 AU | max. Earth dist. | 2034 Jan 05 08:26 | 15°♁21'37 | 1.71083 AU |
| morning rise | 2031 Aug 15 01:26 | 15°♁52'33 | | | 2034 Jan 16 23:48 | 0°♁ | |
| direct | 2031 Sep 01 17:56 | 10°♁01'11 | | | 2034 Feb 09 21:23 | 0°♄ | |
| greatest brilliancy | 2031 Sep 16 02:34 | 13°♁39'43 | -4.5m | evening rise | 2034 Feb 14 09:35 | 5°♄38'45 | |
| | 2031 Oct 09 06:32 | 0°♄ | | | 2034 Mar 05 21:50 | 0°♃ | |
| morning max el | 2031 Oct 21 14:12 | 11°♄35'59 | 46°23'07 | | 2034 Mar 30 03:11 | 0°♄ | |
| asc. node | 2031 Oct 24 12:22 | 14°♄32'11 | | asc. node | 2034 Apr 10 07:35 | 13°♄44'06 | |
| | 2031 Nov 08 02:59 | 0°♁ | | | 2034 Apr 23 15:30 | 0°♁ | |
| | 2031 Dec 04 09:08 | 0°♄ | | | 2034 May 18 13:04 | 0°♁ | |
| | 2031 Dec 29 09:16 | 0°♄ | | | 2034 Jun 12 23:49 | 0°♁ | |
| | 2032 Jan 22 20:56 | 0°♁ | | | 2034 Jul 09 08:34 | 0°♄ | |
| desc. node | 2032 Feb 13 01:53 | 26°♁11'41 | | desc. node | 2034 Jul 30 20:51 | 23°♄06'28 | |
| | 2032 Feb 16 03:40 | 0°♁ | | | 2034 Aug 06 15:54 | 0°♁ | |
| | 2032 Mar 11 09:04 | 0°♄ | | evening max el | 2034 Aug 12 19:00 | 5°♄59'32 | 45°51'21 |
| | 2032 Apr 04 14:57 | 0°♃ | | | 2034 Sep 11 16:18 | 0°♄ | |
| morning set | 2032 Apr 26 01:55 | 26°♃29'20 | | greatest brilliancy | 2034 Sep 20 06:06 | 4°♄06'25 | -4.6m |
| | 2032 Apr 28 22:17 | 0°♄ | | retrograde | 2034 Sep 30 19:36 | 6°♄07'44 | |
| | 2032 May 23 07:10 | 0°♁ | | evening set | 2034 Oct 17 10:04 | 0°♄56'15 | |
| | | | | | 2034 Oct 19 00:40 | 30°♁ | |
| superior conj | 2032 Jun 02 09:07 | 12°♁23'32 | 0°-6'-46 | inferior conj | 2034 Oct 21 17:03 | 28°♁22'30 | -6°-45'-33 |
| minimum elong | 2032 Jun 02 10:33 | 12°♁27'56 | 0°06'43 | minimum elong | 2034 Oct 22 03:27 | 28°♁06'36 | 6°43'29 |
| behind sun begin | 2032 Jun 01 13:40 | 11°♁23'45 | | min. Earth dist. | 2034 Oct 22 15:49 | 27°♁47'40 | 0.27350 AU |
| behind sun end | 2032 Jun 03 07:26 | 13°♁32'06 | | morning rise | 2034 Oct 26 20:14 | 25°♁18'41 | |
| max. Earth dist. | 2032 Jun 03 01:27 | 13°♁13'45 | 1.73513 AU | direct | 2034 Nov 11 14:01 | 20°♁27'53 | |
| asc. node | 2032 Jun 05 05:18 | 15°♁53'04 | | asc. node | 2034 Nov 21 00:09 | 22°♁08'45 | |
| | 2032 Jun 16 16:59 | 0°♁ | | greatest brilliancy | 2034 Nov 25 11:43 | 23°♁59'33 | -4.6m |
| evening rise | 2032 Jul 08 15:38 | 26°♁57'28 | | | 2034 Dec 05 12:03 | 0°♄ | |
| | 2032 Jul 11 03:03 | 0°♁ | | morning max el | 2035 Jan 01 07:27 | 23°♄50'05 | 46°56'45 |
| | 2032 Aug 04 13:19 | 0°♄ | | | 2035 Jan 07 05:59 | 0°♄ | |
| | 2032 Aug 29 00:39 | 0°♁ | | | 2035 Feb 03 06:28 | 0°♁ | |
| | 2032 Sep 22 14:23 | 0°♄ | | | 2035 Feb 28 20:22 | 0°♁ | |
| desc. node | 2032 Sep 24 18:36 | 2°♄38'50 | | desc. node | 2035 Mar 12 13:39 | 14°♁00'08 | |
| | 2032 Oct 17 07:59 | 0°♄ | | | 2035 Mar 25 20:56 | 0°♄ | |

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|---------------------|-------------------|-----------|------------|---------------------|-------------------|-----------|------------|
| | 2035 Apr 19 15:51 | 0°♃ | | retrograde | 2037 Dec 14 12:46 | 21°♁31'16 | |
| | 2035 May 14 08:25 | 0°♄ | | asc. node | 2037 Dec 18 12:09 | 21°♁11'37 | |
| | 2035 Jun 07 23:36 | 0°♅ | | evening set | 2037 Dec 29 01:25 | 17°♁17'39 | |
| | 2035 Jul 02 12:53 | 0°♆ | | min. Earth dist. | 2038 Jan 03 11:23 | 14°♁07'33 | 0.26523 AU |
| asc. node | 2035 Jul 03 17:11 | 1°♁26'40 | | inferior conj | 2038 Jan 04 01:26 | 13°♁46'05 | 4°08'59 |
| morning set | 2035 Jul 04 09:29 | 2°♁16'36 | | minimum elong | 2038 Jan 03 16:53 | 13°♁59'09 | 4°06'30 |
| | 2035 Jul 26 23:18 | 0°♇ | | morning rise | 2038 Jan 09 08:42 | 10°♁38'26 | |
| max. Earth dist. | 2035 Aug 06 19:09 | 13°♄20'56 | 1.73207 AU | direct | 2038 Jan 24 10:19 | 6°♁08'23 | |
| | | | | greatest brilliancy | 2038 Feb 04 16:38 | 8°♁31'38 | -4.7m |
| superior conj | 2035 Aug 09 18:40 | 17°♄01'39 | 1°13'13 | | 2038 Mar 06 17:53 | 0°♁ | |
| minimum elong | 2035 Aug 09 10:54 | 16°♄37'41 | 1°13'01 | morning max el | 2038 Mar 15 13:49 | 8°♁29'03 | 46°37'56 |
| | 2035 Aug 20 06:32 | 0°♈ | | | 2038 Apr 05 03:23 | 0°♁ | |
| | 2035 Sep 13 11:23 | 0°♉ | | desc. node | 2038 Apr 09 01:34 | 4°♁17'45 | |
| evening rise | 2035 Sep 15 02:54 | 2°♉02'36 | | | 2038 May 01 21:17 | 0°♃ | |
| | 2035 Oct 07 15:12 | 0°♊ | | | 2038 May 27 16:34 | 0°♄ | |
| desc. node | 2035 Oct 23 06:31 | 19°♊25'07 | | | 2038 Jun 22 00:28 | 0°♅ | |
| | 2035 Oct 31 19:05 | 0°♋ | | | 2038 Jul 17 00:16 | 0°♆ | |
| | 2035 Nov 24 23:51 | 0°♌ | | asc. node | 2038 Jul 31 04:57 | 17°♆12'36 | |
| | 2035 Dec 19 06:59 | 0°♍ | | | 2038 Aug 10 16:34 | 0°♇ | |
| | 2036 Jan 12 20:23 | 0°♎ | | | 2038 Sep 04 01:51 | 0°♈ | |
| asc. node | 2036 Feb 07 00:26 | 0°♏ | | morning set | 2038 Sep 10 14:41 | 8°♈05'31 | |
| | 2036 Feb 13 09:43 | 7°♏24'53 | | | 2038 Sep 28 05:33 | 0°♉ | |
| evening max el | 2036 Mar 04 13:33 | 0°♐ | | max. Earth dist. | 2038 Oct 15 07:22 | 21°♉19'35 | 1.71809 AU |
| | 2036 Mar 20 03:24 | 16°♐11'04 | 46°09'29 | | | | |
| | 2036 Apr 04 01:53 | 0°♑ | | superior conj | 2038 Oct 18 01:40 | 24°♉46'56 | 1°07'41 |
| greatest brilliancy | 2036 Apr 23 21:46 | 13°♑39'48 | -4.5m | minimum elong | 2038 Oct 18 11:30 | 25°♉17'42 | 1°07'23 |
| retrograde | 2036 May 08 15:58 | 17°♑31'43 | | | 2038 Oct 22 05:43 | 0°♊ | |
| evening set | 2036 May 23 21:46 | 13°♑00'22 | | | 2038 Nov 15 04:11 | 0°♋ | |
| inferior conj | 2036 May 30 02:24 | 9°♑16'35 | 1°08'57 | desc. node | 2038 Nov 19 18:30 | 5°♋45'53 | |
| minimum elong | 2036 May 30 04:56 | 9°♑12'38 | 1°08'13 | evening rise | 2038 Nov 26 22:42 | 14°♋45'55 | |
| min. Earth dist. | 2036 May 30 02:19 | 9°♑16'44 | 0.28826 AU | | 2038 Dec 09 02:12 | 0°♌ | |
| desc. node | 2036 Jun 03 23:06 | 6°♑17'53 | | | 2039 Jan 02 00:45 | 0°♍ | |
| morning rise | 2036 Jun 05 12:13 | 5°♑25'22 | | | 2039 Jan 26 01:32 | 0°♎ | |
| direct | 2036 Jun 20 14:11 | 1°♑01'07 | | | 2039 Feb 19 07:31 | 0°♏ | |
| greatest brilliancy | 2036 Jul 03 19:43 | 4°♑04'17 | -4.5m | asc. node | 2039 Mar 12 21:41 | 26°♏18'25 | |
| | 2036 Aug 07 14:37 | 0°♒ | | | 2039 Mar 15 23:16 | 0°♐ | |
| morning max el | 2036 Aug 08 08:37 | 0°♒42'50 | 45°46'23 | | 2039 Apr 10 07:44 | 0°♑ | |
| | 2036 Sep 05 15:11 | 0°♓ | | | 2039 May 06 22:25 | 0°♒ | |
| asc. node | 2036 Sep 25 02:38 | 21°♓59'57 | | evening max el | 2039 May 30 19:33 | 24°♒36'33 | 45°24'34 |
| | 2036 Oct 01 23:39 | 0°♈ | | | 2039 Jun 05 13:34 | 0°♓ | |
| | 2036 Oct 27 02:20 | 0°♉ | | desc. node | 2039 Jul 02 11:07 | 19°♓56'55 | |
| | 2036 Nov 20 12:56 | 0°♊ | | greatest brilliancy | 2039 Jul 04 22:52 | 21°♓07'25 | -4.5m |
| | 2036 Dec 14 15:20 | 0°♋ | | retrograde | 2039 Jul 18 08:35 | 24°♓15'04 | |
| | 2037 Jan 07 14:16 | 0°♌ | | evening set | 2039 Aug 03 23:58 | 19°♓01'25 | |
| desc. node | 2037 Jan 14 16:04 | 8°♌52'26 | | inferior conj | 2039 Aug 08 19:02 | 16°♓06'26 | -7°-21'-19 |
| | 2037 Jan 31 12:22 | 0°♍ | | minimum elong | 2039 Aug 08 10:02 | 16°♓20'27 | 7°19'57 |
| morning set | 2037 Feb 08 21:37 | 10°♍30'32 | | min. Earth dist. | 2039 Aug 08 21:23 | 16°♓02'45 | 0.28909 AU |
| | 2037 Feb 24 11:15 | 0°♎ | | morning rise | 2039 Aug 12 19:59 | 13°♓37'42 | |
| | 2037 Mar 20 12:10 | 0°♏ | | direct | 2039 Aug 30 10:14 | 7°♓50'24 | |
| | | | | greatest brilliancy | 2039 Sep 13 16:49 | 11°♓25'54 | -4.5m |
| superior conj | 2037 Mar 21 09:15 | 1°♏05'39 | -1°-23'-19 | | 2039 Oct 09 10:09 | 0°♈ | |
| minimum elong | 2037 Mar 21 14:37 | 1°♏22'21 | 1°23'16 | morning max el | 2039 Oct 19 04:21 | 9°♈17'23 | 46°21'31 |
| max. Earth dist. | 2037 Mar 25 06:07 | 5°♏54'30 | 1.72238 AU | asc. node | 2039 Oct 23 14:27 | 13°♈44'49 | |
| | 2037 Apr 13 16:10 | 0°♉ | | | 2039 Nov 07 20:12 | 0°♉ | |
| evening rise | 2037 Apr 29 08:12 | 19°♉21'03 | | | 2039 Dec 03 23:27 | 0°♊ | |
| | 2037 May 07 23:50 | 0°♊ | | | 2039 Dec 28 22:18 | 0°♋ | |
| asc. node | 2037 May 07 19:32 | 29°♉46'46 | | desc. node | 2040 Jan 22 09:16 | 0°♌ | |
| | 2037 Jun 01 11:22 | 0°♋ | | | 2040 Feb 12 03:49 | 25°♌40'39 | |
| | 2037 Jun 26 03:06 | 0°♌ | | | 2040 Feb 15 15:34 | 0°♍ | |
| | 2037 Jul 21 00:22 | 0°♍ | | | 2040 Mar 10 20:38 | 0°♎ | |
| | 2037 Aug 15 06:06 | 0°♎ | | | 2040 Apr 04 02:15 | 0°♏ | |
| desc. node | 2037 Aug 27 08:39 | 14°♎10'37 | | morning set | 2040 Apr 23 17:40 | 24°♏15'43 | |
| | 2037 Sep 10 01:37 | 0°♏ | | | 2040 Apr 28 09:21 | 0°♐ | |
| | 2037 Oct 06 23:02 | 0°♐ | | | 2040 May 22 18:05 | 0°♑ | |
| evening max el | 2037 Oct 25 01:24 | 18°♐50'50 | 46°59'07 | | | | |
| | 2037 Nov 05 18:58 | 0°♑ | | superior conj | 2040 May 31 02:24 | 10°♑15'40 | 0°-10'00 |
| greatest brilliancy | 2037 Dec 02 18:12 | 18°♑55'41 | -4.7m | minimum elong | 2040 May 31 04:31 | 10°♑22'09 | 0°09'54 |

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|---------------------|-------------------|-----------|------------|---------------------|-------------------|-----------|------------|
| behind sun begin | 2040 May 30 10:26 | 9°♊26'37 | | min. Earth dist. | 2042 Oct 20 05:33 | 25°♊25'18 | 0.27419 AU |
| behind sun end | 2040 May 31 22:35 | 11°♊17'41 | | morning rise | 2042 Oct 24 06:23 | 23°♊01'31 | |
| max. Earth dist. | 2040 May 31 22:44 | 11°♊18'08 | 1.73490 AU | direct | 2042 Nov 09 04:04 | 18°♊04'37 | |
| asc. node | 2040 Jun 04 07:23 | 15°♊25'56 | | asc. node | 2042 Nov 20 02:14 | 20°♊18'49 | |
| | 2040 Jun 16 03:53 | 0°♋ | | greatest brilliancy | 2042 Nov 23 04:41 | 21°♊39'57 | -4.6m |
| evening rise | 2040 Jul 06 10:23 | 24°♋53'58 | | | 2042 Dec 06 08:11 | 0°♌ | |
| | 2040 Jul 10 14:02 | 0°♌ | | morning max el | 2042 Dec 29 22:02 | 21°♌27'39 | 46°56'34 |
| | 2040 Aug 04 00:29 | 0°♍ | | | 2043 Jan 07 02:12 | 0°♌ | |
| | 2040 Aug 28 12:08 | 0°♎ | | | 2043 Feb 02 21:59 | 0°♍ | |
| | 2040 Sep 22 02:20 | 0°♏ | | | 2043 Feb 28 09:54 | 0°♎ | |
| desc. node | 2040 Sep 23 20:41 | 2°♏08'42 | | desc. node | 2043 Mar 11 15:47 | 13°♏27'37 | |
| | 2040 Oct 16 20:40 | 0°♐ | | | 2043 Mar 25 09:21 | 0°♏ | |
| | 2040 Nov 10 21:53 | 0°♑ | | | 2043 Apr 19 03:37 | 0°♐ | |
| | 2040 Dec 06 13:42 | 0°♒ | | | 2043 May 13 19:44 | 0°♑ | |
| | 2041 Jan 02 20:36 | 0°♓ | | | 2043 Jun 07 10:37 | 0°♒ | |
| evening max el | 2041 Jan 05 09:57 | 2°♓37'50 | 47°12'23 | | 2043 Jul 01 23:41 | 0°♓ | |
| asc. node | 2041 Jan 14 23:54 | 12°♓03'44 | | morning set | 2043 Jul 02 03:24 | 0°♓11'22 | |
| | 2041 Feb 06 11:58 | 0°♈ | | asc. node | 2043 Jul 02 19:09 | 0°♓59'38 | |
| greatest brilliancy | 2041 Feb 11 20:28 | 2°♈52'35 | -4.6m | | 2043 Jul 26 10:00 | 0°♈ | |
| retrograde | 2041 Feb 25 06:07 | 6°♈11'48 | | max. Earth dist. | 2043 Aug 04 17:07 | 11°♈27'34 | 1.73242 AU |
| evening set | 2041 Mar 15 05:04 | 29°♈57'37 | | | | | |
| | 2041 Mar 15 03:30 | 30°♈ | | superior conj | 2043 Aug 07 12:39 | 14°♈55'59 | 1°11'33 |
| min. Earth dist. | 2041 Mar 17 20:16 | 28°♈18'56 | 0.27967 AU | minimum elong | 2043 Aug 07 04:35 | 14°♈31'05 | 1°11'20 |
| inferior conj | 2041 Mar 18 06:46 | 28°♈02'22 | 8°36'21 | | 2043 Aug 19 17:15 | 0°♉ | |
| minimum elong | 2041 Mar 18 10:57 | 27°♈55'46 | 8°36'05 | evening rise | 2043 Sep 12 19:19 | 29°♉50'56 | |
| morning rise | 2041 Mar 21 17:03 | 25°♈54'34 | | | 2043 Sep 12 22:14 | 0°♊ | |
| direct | 2041 Apr 08 05:08 | 20°♈02'36 | | | 2043 Oct 07 02:17 | 0°♋ | |
| greatest brilliancy | 2041 Apr 19 07:34 | 22°♈17'29 | -4.5m | desc. node | 2043 Oct 22 08:39 | 18°♋56'51 | |
| | 2041 May 03 04:07 | 0°♈ | | | 2043 Oct 31 06:27 | 0°♌ | |
| desc. node | 2041 May 06 13:18 | 2°♈27'06 | | | 2043 Nov 24 11:33 | 0°♍ | |
| morning max el | 2041 May 27 07:02 | 20°♈29'32 | 45°55'01 | | 2043 Dec 18 19:08 | 0°♎ | |
| | 2041 Jun 05 21:15 | 0°♉ | | | 2044 Jan 12 09:15 | 0°♏ | |
| | 2041 Jul 03 21:43 | 0°♊ | | | 2044 Feb 06 14:40 | 0°♐ | |
| | 2041 Jul 30 06:04 | 0°♋ | | asc. node | 2044 Feb 12 11:46 | 6°♈48'22 | |
| asc. node | 2041 Aug 24 16:32 | 0°♌ | | | 2044 Mar 04 07:07 | 0°♑ | |
| | 2041 Aug 27 16:45 | 3°♌36'18 | | evening max el | 2044 Mar 17 19:05 | 13°♑57'56 | 46°11'51 |
| | 2041 Sep 18 11:40 | 0°♍ | | | 2044 Apr 04 09:08 | 0°♒ | |
| | 2041 Oct 12 19:46 | 0°♎ | | greatest brilliancy | 2044 Apr 21 13:44 | 11°♒29'34 | -4.5m |
| | 2041 Nov 05 20:50 | 0°♏ | | retrograde | 2044 May 06 09:01 | 15°♒22'27 | |
| morning set | 2041 Nov 21 10:02 | 19°♏30'30 | | evening set | 2044 May 21 15:28 | 10°♒48'59 | |
| | 2041 Nov 29 18:20 | 0°♐ | | inferior conj | 2044 May 27 18:42 | 7°♒06'59 | 1°28'50 |
| desc. node | 2041 Dec 17 06:16 | 22°♐00'46 | | minimum elong | 2044 May 27 21:55 | 7°♒01'55 | 1°27'53 |
| | 2041 Dec 23 14:32 | 0°♑ | | min. Earth dist. | 2044 May 27 18:25 | 7°♒07'25 | 0.28814 AU |
| | | | | morning rise | 2044 Jun 03 04:36 | 3°♒16'00 | |
| superior conj | 2042 Jan 01 12:16 | 11°♑12'30 | 0°-35'-28 | desc. node | 2044 Jun 03 01:08 | 3°♒20'46 | |
| minimum elong | 2042 Jan 01 03:24 | 10°♑44'37 | 0°35'05 | | 2044 Jun 10 17:14 | 30°♓ | |
| max. Earth dist. | 2042 Jan 02 11:36 | 12°♑25'56 | 1.71077 AU | direct | 2044 Jun 18 06:36 | 28°♓51'44 | |
| | 2042 Jan 16 10:51 | 0°♒ | | | 2044 Jun 26 03:20 | 0°♔ | |
| | 2042 Feb 09 08:26 | 0°♓ | | greatest brilliancy | 2044 Jul 01 10:55 | 1°♔54'23 | -4.5m |
| evening rise | 2042 Feb 11 20:24 | 3°♓07'43 | | morning max el | 2044 Aug 06 01:26 | 28°♔35'24 | 45°45'47 |
| | 2042 Mar 05 08:58 | 0°♈ | | | 2044 Aug 07 12:42 | 0°♕ | |
| | 2042 Mar 29 14:28 | 0°♉ | | | 2044 Sep 05 06:39 | 0°♌ | |
| asc. node | 2042 Apr 09 09:42 | 13°♉15'43 | | asc. node | 2044 Sep 24 04:48 | 21°♌26'41 | |
| | 2042 Apr 23 03:05 | 0°♊ | | | 2044 Oct 01 12:50 | 0°♍ | |
| | 2042 May 18 01:13 | 0°♋ | | | 2044 Oct 26 14:30 | 0°♎ | |
| | 2042 Jun 12 13:02 | 0°♌ | | | 2044 Nov 20 00:35 | 0°♏ | |
| | 2042 Jul 09 00:02 | 0°♍ | | | 2044 Dec 14 02:41 | 0°♐ | |
| desc. node | 2042 Jul 29 22:48 | 22°♍21'55 | | desc. node | 2045 Jan 07 01:25 | 0°♑ | |
| | 2042 Aug 06 13:19 | 0°♎ | | | 2045 Jan 13 17:59 | 8°♑23'34 | |
| evening max el | 2042 Aug 10 07:50 | 3°♎39'26 | 45°49'25 | | 2045 Jan 30 23:22 | 0°♒ | |
| | 2042 Sep 13 15:30 | 0°♏ | | morning set | 2045 Feb 06 07:50 | 7°♒57'51 | |
| greatest brilliancy | 2042 Sep 17 17:32 | 1°♏43'52 | -4.6m | | 2045 Feb 23 22:06 | 0°♓ | |
| retrograde | 2042 Sep 28 08:41 | 3°♏46'49 | | | | | |
| | 2042 Oct 12 08:14 | 30°♏ | | superior conj | 2045 Mar 18 22:23 | 28°♏43'35 | -1°-24'-10 |
| evening set | 2042 Oct 15 02:27 | 28°♏29'56 | | minimum elong | 2045 Mar 19 02:56 | 28°♏57'46 | 1°24'09 |
| inferior conj | 2042 Oct 19 06:29 | 26°♏00'32 | -6°-59'-34 | | 2045 Mar 19 22:55 | 0°♐ | |
| minimum elong | 2042 Oct 19 16:42 | 25°♏44'54 | 6°57'37 | max. Earth dist. | 2045 Mar 22 21:01 | 3°♐38'12 | 1.72183 AU |

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| | 2045 Apr 13 02:51 | 0°♄ | | | 2047 Nov 07 12:52 | 0°♁ | | |
| evening rise | 2045 Apr 26 23:51 | 17°♄08'27 | | | 2047 Dec 03 13:22 | 0°♁ | | |
| asc. node | 2045 May 06 21:36 | 29°♄20'10 | | | 2047 Dec 28 10:58 | 0°♄ | | |
| | 2045 May 07 10:33 | 0°♁ | | | 2048 Jan 21 21:14 | 0°♁ | | |
| | 2045 May 31 22:15 | 0°♁ | | desc. node | 2048 Feb 11 05:57 | 25°♁11'23 | | |
| | 2045 Jun 25 14:19 | 0°♁ | | | 2048 Feb 15 03:05 | 0°♁ | | |
| | 2045 Jul 20 12:12 | 0°♁ | | | 2048 Mar 10 07:49 | 0°♁ | | |
| | 2045 Aug 14 18:56 | 0°♁ | | | 2048 Apr 03 13:10 | 0°♁ | | |
| desc. node | 2045 Aug 26 10:44 | 13°♁37'27 | | morning set | 2048 Apr 21 09:20 | 22°♁02'48 | | |
| | 2045 Sep 09 16:14 | 0°♁ | | | 2048 Apr 27 20:04 | 0°♄ | | |
| | 2045 Oct 06 17:24 | 0°♄ | | | 2048 May 22 04:41 | 0°♁ | | |
| evening max el | 2045 Oct 22 15:55 | 16°♄29'50 46°57'09 | | | | | | |
| | 2045 Nov 06 01:56 | 0°♁ | | superior conj | 2048 May 28 19:50 | 8°♁09'16 0°-13'-12 | | |
| greatest brilliancy | 2045 Nov 30 08:02 | 16°♁28'15 -4.7m | | minimum elong | 2048 May 28 22:37 | 8°♁17'49 0°13'05 | | |
| retrograde | 2045 Dec 12 01:28 | 19°♁01'46 | | behind sun begin | 2048 May 28 09:30 | 7°♁37'29 | | |
| asc. node | 2045 Dec 17 14:05 | 18°♁23'51 | | behind sun end | 2048 May 29 11:45 | 8°♁58'09 | | |
| evening set | 2045 Dec 26 12:00 | 14°♁51'16 | | max. Earth dist. | 2048 May 29 18:18 | 9°♁18'18 1.73464 AU | | |
| min. Earth dist. | 2046 Jan 01 00:30 | 11°♁37'24 0.26496 AU | | asc. node | 2048 Jun 03 09:21 | 14°♁59'32 | | |
| inferior conj | 2046 Jan 01 13:35 | 11°♁17'24 3°46'54 | | | 2048 Jun 15 14:26 | 0°♁ | | |
| minimum elong | 2046 Jan 01 05:37 | 11°♁29'34 3°44'33 | | evening rise | 2048 Jul 04 05:19 | 22°♁52'09 | | |
| morning rise | 2046 Jan 06 23:38 | 8°♁06'01 | | | 2048 Jul 10 00:40 | 0°♁ | | |
| direct | 2046 Jan 21 22:57 | 3°♁40'18 | | | 2048 Aug 03 11:20 | 0°♁ | | |
| greatest brilliancy | 2046 Feb 02 05:37 | 6°♁04'07 -4.7m | | | 2048 Aug 27 23:20 | 0°♁ | | |
| | 2046 Mar 06 20:41 | 0°♁ | | | 2048 Sep 21 14:06 | 0°♁ | | |
| morning max el | 2046 Mar 13 02:52 | 6°♁05'04 46°39'23 | | desc. node | 2048 Sep 22 22:47 | 1°♁39'13 | | |
| | 2046 Apr 04 20:36 | 0°♁ | | | 2048 Oct 16 09:14 | 0°♄ | | |
| desc. node | 2046 Apr 08 03:39 | 3°♁37'38 | | | 2048 Nov 10 11:40 | 0°♁ | | |
| | 2046 May 01 11:20 | 0°♁ | | | 2048 Dec 06 05:42 | 0°♁ | | |
| | 2046 May 27 05:03 | 0°♄ | | | 2049 Jan 02 18:09 | 0°♁ | | |
| | 2046 Jun 21 12:04 | 0°♁ | | evening max el | 2049 Jan 02 23:06 | 0°♁12'39 47°13'34 | | |
| | 2046 Jul 16 11:21 | 0°♁ | | asc. node | 2049 Jan 14 02:00 | 11°♁05'38 | | |
| asc. node | 2046 Jul 30 06:58 | 16°♁45'28 | | | 2049 Feb 08 08:09 | 0°♁ | | |
| | 2046 Aug 10 03:23 | 0°♁ | | greatest brilliancy | 2049 Feb 09 13:12 | 0°♁35'03 -4.6m | | |
| | 2046 Sep 03 12:33 | 0°♁ | | retrograde | 2049 Feb 22 20:42 | 3°♁52'43 | | |
| morning set | 2046 Sep 08 07:09 | 5°♁54'42 | | | 2049 Mar 08 17:47 | 30°♁ | | |
| | 2046 Sep 27 16:15 | 0°♁ | | evening set | 2049 Mar 12 21:00 | 27°♁37'07 | | |
| max. Earth dist. | 2046 Oct 12 17:10 | 18°♁46'39 1.71857 AU | | min. Earth dist. | 2049 Mar 15 10:28 | 26°♁01'16 0.27920 AU | | |
| | | | | inferior conj | 2049 Mar 15 21:29 | 25°♁43'55 8°40'51 | | |
| superior conj | 2046 Oct 15 16:01 | 22°♁28'08 1°09'47 | | minimum elong | 2049 Mar 16 00:53 | 25°♁38'34 8°40'41 | | |
| minimum elong | 2046 Oct 16 01:31 | 22°♁57'52 1°09'30 | | morning rise | 2049 Mar 19 04:56 | 23°♁40'27 | | |
| | 2046 Oct 21 16:28 | 0°♁ | | direct | 2049 Apr 05 18:36 | 17°♁44'46 | | |
| | 2046 Nov 14 15:02 | 0°♄ | | greatest brilliancy | 2049 Apr 16 21:25 | 19°♁59'43 -4.5m | | |
| desc. node | 2046 Nov 18 20:30 | 5°♄18'01 | | | 2049 May 03 22:02 | 0°♁ | | |
| evening rise | 2046 Nov 24 09:50 | 12°♄16'02 | | desc. node | 2049 May 05 15:20 | 1°♁18'34 | | |
| | 2046 Dec 08 13:10 | 0°♁ | | morning max el | 2049 May 24 21:10 | 18°♁13'17 45°56'14 | | |
| | 2047 Jan 01 11:54 | 0°♁ | | | 2049 Jun 05 16:27 | 0°♄ | | |
| | 2047 Jan 25 12:53 | 0°♁ | | | 2049 Jul 03 12:20 | 0°♁ | | |
| | 2047 Feb 18 19:11 | 0°♁ | | | 2049 Jul 29 18:46 | 0°♁ | | |
| asc. node | 2047 Mar 11 23:48 | 25°♁48'13 | | | 2049 Aug 24 04:18 | 0°♁ | | |
| | 2047 Mar 15 11:31 | 0°♄ | | asc. node | 2049 Aug 26 18:57 | 3°♁07'51 | | |
| | 2047 Apr 09 21:09 | 0°♁ | | | 2049 Sep 17 22:55 | 0°♁ | | |
| | 2047 May 06 14:34 | 0°♁ | | | 2049 Oct 12 06:47 | 0°♁ | | |
| evening max el | 2047 May 28 10:36 | 22°♁24'40 45°25'00 | | | 2049 Nov 05 07:47 | 0°♁ | | |
| | 2047 Jun 05 14:55 | 0°♁ | | morning set | 2049 Nov 18 22:16 | 17°♁03'46 | | |
| desc. node | 2047 Jul 01 13:01 | 18°♁29'06 | | | 2049 Nov 29 05:17 | 0°♄ | | |
| greatest brilliancy | 2047 Jul 02 13:09 | 18°♁56'36 -4.5m | | desc. node | 2049 Dec 16 08:15 | 21°♄32'31 | | |
| retrograde | 2047 Jul 15 23:46 | 22°♁05'52 | | | 2049 Dec 23 01:31 | 0°♁ | | |
| evening set | 2047 Aug 01 12:45 | 16°♁56'37 | | | | | | |
| inferior conj | 2047 Aug 06 11:03 | 13°♁56'54 -7°-10'-18 | | superior conj | 2049 Dec 29 21:52 | 8°♁37'14 0°-31'-45 | | |
| minimum elong | 2047 Aug 06 01:47 | 14°♁11'24 7°08'49 | | minimum elong | 2049 Dec 29 13:48 | 8°♁11'49 0°31'24 | | |
| min. Earth dist. | 2047 Aug 06 13:04 | 13°♁53'45 0.28930 AU | | max. Earth dist. | 2049 Dec 30 15:31 | 9°♁32'43 1.71073 AU | | |
| morning rise | 2047 Aug 10 14:38 | 11°♁24'01 | | | 2050 Jan 15 21:48 | 0°♁ | | |
| direct | 2047 Aug 28 02:07 | 5°♁40'33 | | | 2050 Feb 08 19:23 | 0°♁ | | |
| greatest brilliancy | 2047 Sep 11 08:05 | 9°♁14'19 -4.5m | | evening rise | 2050 Feb 09 06:46 | 0°♁35'38 | | |
| | 2047 Oct 09 11:55 | 0°♁ | | | 2050 Mar 04 19:58 | 0°♁ | | |
| morning max el | 2047 Oct 16 18:06 | 6°♁58'33 46°19'55 | | | 2050 Mar 29 01:37 | 0°♄ | | |
| asc. node | 2047 Oct 22 16:29 | 12°♁58'40 | | asc. node | 2050 Apr 08 11:44 | 12°♄47'35 | | |

| | | | | | | | | | | | | | | | |
|---------------------|-------------------|-----------|------------|--|--|--|--|--|-------------------|-----------|------------|--|--|--|--|
| | 2050 Apr 22 14:32 | 0°♁ | | | | | | | 2052 Oct 01 02:01 | 0°♁ | | | | | |
| | 2050 May 17 13:15 | 0°♁ | | | | | | | 2052 Oct 26 02:43 | 0°♁ | | | | | |
| | 2050 Jun 12 02:11 | 0°♁ | | | | | | | 2052 Nov 19 12:18 | 0°♁ | | | | | |
| | 2050 Jul 08 15:33 | 0°♁ | | | | | | | 2052 Dec 13 14:07 | 0°♁ | | | | | |
| desc. node | 2050 Jul 29 00:59 | 21°♁37'54 | | | | | | | 2053 Jan 06 12:41 | 0°♁ | | | | | |
| | 2050 Aug 06 11:19 | 0°♁ | | | | | | | 2053 Jan 12 20:08 | 7°♁55'04 | | | | | |
| evening max el | 2050 Aug 07 21:41 | 1°♁22'36 | 45°47'35 | | | | | | 2053 Jan 30 10:31 | 0°♁ | | | | | |
| greatest brilliancy | 2050 Sep 15 04:13 | 29°♁21'43 | -4.5m | | | | | | 2053 Feb 03 17:59 | 5°♁24'21 | | | | | |
| | 2050 Sep 17 01:03 | 0°♁ | | | | | | | 2053 Feb 23 09:11 | 0°♁ | | | | | |
| retrograde | 2050 Sep 25 22:19 | 1°♁26'57 | | | | | | | | | | | | | |
| | 2050 Oct 04 10:59 | 30°♁ | | | | | | | 2053 Mar 16 11:04 | 26°♁19'17 | -1°-24'-53 | | | | |
| evening set | 2050 Oct 12 18:54 | 26°♁04'49 | | | | | | | 2053 Mar 16 14:46 | 26°♁30'49 | 1°24'53 | | | | |
| inferior conj | 2050 Oct 16 20:01 | 23°♁39'31 | -7°-12'-32 | | | | | | 2053 Mar 19 09:55 | 0°♁ | | | | | |
| minimum elong | 2050 Oct 17 06:00 | 23°♁24'15 | 7°10'45 | | | | | | 2053 Mar 20 12:09 | 1°♁21'40 | 1.72129 AU | | | | |
| min. Earth dist. | 2050 Oct 17 18:55 | 23°♁04'33 | 0.27492 AU | | | | | | 2053 Apr 12 13:49 | 0°♁ | | | | | |
| morning rise | 2050 Oct 21 16:37 | 20°♁45'22 | | | | | | | 2053 Apr 24 14:57 | 14°♁53'15 | | | | | |
| direct | 2050 Nov 06 18:43 | 15°♁42'27 | | | | | | | 2053 May 05 23:32 | 28°♁52'25 | | | | | |
| asc. node | 2050 Nov 19 04:13 | 18°♁33'30 | | | | | | | 2053 May 06 21:32 | 0°♁ | | | | | |
| greatest brilliancy | 2050 Nov 20 20:53 | 19°♁20'07 | -4.6m | | | | | | 2053 May 31 09:22 | 0°♁ | | | | | |
| | 2050 Dec 06 23:01 | 0°♁ | | | | | | | 2053 Jun 25 01:47 | 0°♁ | | | | | |
| morning max el | 2050 Dec 27 13:23 | 19°♁07'17 | 46°56'03 | | | | | | 2053 Jul 20 00:17 | 0°♁ | | | | | |
| | 2051 Jan 06 21:50 | 0°♁ | | | | | | | 2053 Aug 14 08:05 | 0°♁ | | | | | |
| | 2051 Feb 02 13:22 | 0°♁ | | | | | | | 2053 Aug 25 12:50 | 13°♁03'27 | | | | | |
| | 2051 Feb 27 23:23 | 0°♁ | | | | | | | 2053 Sep 09 07:16 | 0°♁ | | | | | |
| desc. node | 2051 Mar 10 17:53 | 12°♁54'57 | | | | | | | 2053 Oct 06 12:26 | 0°♁ | | | | | |
| | 2051 Mar 24 21:47 | 0°♁ | | | | | | | 2053 Oct 20 06:08 | 14°♁07'42 | 46°55'06 | | | | |
| | 2051 Apr 18 15:20 | 0°♁ | | | | | | | 2053 Nov 06 11:37 | 0°♁ | | | | | |
| | 2051 May 13 07:00 | 0°♁ | | | | | | | 2053 Nov 27 22:54 | 14°♁02'04 | -4.7m | | | | |
| | 2051 Jun 06 21:34 | 0°♁ | | | | | | | 2053 Dec 09 13:51 | 16°♁32'30 | | | | | |
| morning set | 2051 Jun 29 21:28 | 28°♁06'46 | | | | | | | 2053 Dec 16 16:08 | 15°♁30'21 | | | | | |
| | 2051 Jul 01 10:27 | 0°♁ | | | | | | | 2053 Dec 23 23:06 | 12°♁24'51 | | | | | |
| asc. node | 2051 Jul 01 21:12 | 0°♁32'56 | | | | | | | 2053 Dec 29 14:14 | 9°♁07'08 | 0.26472 AU | | | | |
| | 2051 Jul 25 20:40 | 0°♁ | | | | | | | 2053 Dec 30 01:59 | 8°♁49'09 | 3°24'35 | | | | |
| max. Earth dist. | 2051 Aug 02 14:53 | 9°♁33'41 | 1.73274 AU | | | | | | 2053 Dec 29 18:40 | 9°♁00'20 | 3°22'22 | | | | |
| | | | | | | | | | 2054 Jan 04 14:36 | 5°♁34'03 | | | | | |
| superior conj | 2051 Aug 05 06:56 | 12°♁51'16 | 1°09'48 | | | | | | 2054 Jan 19 11:19 | 1°♁12'29 | | | | | |
| minimum elong | 2051 Aug 04 22:38 | 12°♁25'39 | 1°09'34 | | | | | | 2054 Jan 30 19:22 | 3°♁37'18 | -4.7m | | | | |
| | 2051 Aug 19 03:57 | 0°♁ | | | | | | | 2054 Mar 06 22:16 | 0°♁ | | | | | |
| evening rise | 2051 Sep 10 12:11 | 27°♁40'45 | | | | | | | 2054 Mar 10 15:12 | 3°♁38'33 | 46°40'38 | | | | |
| | 2051 Sep 12 09:05 | 0°♁ | | | | | | | 2054 Apr 04 13:46 | 0°♁ | | | | | |
| | 2051 Oct 06 13:21 | 0°♁ | | | | | | | 2054 Apr 07 05:39 | 2°♁56'54 | | | | | |
| desc. node | 2051 Oct 21 10:39 | 18°♁28'14 | | | | | | | 2054 May 01 01:34 | 0°♁ | | | | | |
| | 2051 Oct 30 17:49 | 0°♁ | | | | | | | 2054 May 26 17:50 | 0°♁ | | | | | |
| | 2051 Nov 23 23:17 | 0°♁ | | | | | | | 2054 Jun 20 23:59 | 0°♁ | | | | | |
| | 2051 Dec 18 07:24 | 0°♁ | | | | | | | 2054 Jul 15 22:44 | 0°♁ | | | | | |
| | 2052 Jan 11 22:20 | 0°♁ | | | | | | | 2054 Jul 29 09:07 | 16°♁17'55 | | | | | |
| | 2052 Feb 06 05:17 | 0°♁ | | | | | | | 2054 Aug 09 14:28 | 0°♁ | | | | | |
| asc. node | 2052 Feb 11 13:54 | 6°♁11'07 | | | | | | | 2054 Sep 02 23:32 | 0°♁ | | | | | |
| | 2052 Mar 04 01:21 | 0°♁ | | | | | | | 2054 Sep 05 23:45 | 3°♁43'30 | | | | | |
| evening max el | 2052 Mar 15 11:25 | 11°♁45'36 | 46°14'21 | | | | | | 2054 Sep 27 03:13 | 0°♁ | | | | | |
| | 2052 Apr 04 19:28 | 0°♁ | | | | | | | 2054 Oct 10 04:15 | 16°♁16'57 | 1.71908 AU | | | | |
| greatest brilliancy | 2052 Apr 19 07:05 | 9°♁20'35 | -4.5m | | | | | | | | | | | | |
| retrograde | 2052 May 04 02:06 | 13°♁12'31 | | | | | | | 2054 Oct 13 06:44 | 20°♁09'41 | 1°11'43 | | | | |
| evening set | 2052 May 19 09:23 | 8°♁37'06 | | | | | | | 2054 Oct 13 15:52 | 20°♁38'15 | 1°11'29 | | | | |
| inferior conj | 2052 May 25 10:59 | 4°♁56'56 | 1°48'31 | | | | | | 2054 Oct 21 03:30 | 0°♁ | | | | | |
| minimum elong | 2052 May 25 14:55 | 4°♁50'47 | 1°47'22 | | | | | | 2054 Nov 14 02:11 | 0°♁ | | | | | |
| min. Earth dist. | 2052 May 25 10:25 | 4°♁57'49 | 0.28794 AU | | | | | | 2054 Nov 17 22:31 | 4°♁49'20 | | | | | |
| morning rise | 2052 May 31 20:48 | 1°♁06'17 | | | | | | | 2054 Nov 21 21:23 | 9°♁46'41 | | | | | |
| desc. node | 2052 Jun 02 03:07 | 0°♁ | | | | | | | 2054 Dec 08 00:27 | 0°♁ | | | | | |
| | 2052 Jun 02 23:52 | 30°♁ | | | | | | | 2054 Dec 31 23:19 | 0°♁ | | | | | |
| direct | 2052 Jun 15 23:09 | 26°♁42'09 | | | | | | | 2055 Jan 25 00:31 | 0°♁ | | | | | |
| greatest brilliancy | 2052 Jun 29 00:50 | 29°♁42'37 | -4.5m | | | | | | 2055 Feb 18 07:09 | 0°♁ | | | | | |
| | 2052 Jun 29 16:37 | 0°♁ | | | | | | | 2055 Mar 11 01:48 | 25°♁16'42 | | | | | |
| morning max el | 2052 Aug 03 17:57 | 26°♁27'03 | 45°45'12 | | | | | | 2055 Mar 15 00:06 | 0°♁ | | | | | |
| | 2052 Aug 07 10:02 | 0°♁ | | | | | | | 2055 Apr 09 11:02 | 0°♁ | | | | | |
| | 2052 Sep 04 21:58 | 0°♁ | | | | | | | 2055 May 06 07:26 | 0°♁ | | | | | |
| asc. node | 2052 Sep 23 06:44 | 20°♁52'42 | | | | | | | 2055 May 26 01:22 | 20°♁10'51 | 45°25'31 | | | | |

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|---------------------|-------------------|-----------|------------|---------------------|-------------------|-----------|------------|
| | 2055 Jun 05 18:17 | 0°♁ | | desc. node | 2057 Dec 15 10:22 | 21°♁04'01 | |
| greatest brilliancy | 2055 Jun 30 02:44 | 16°♁43'49 | -4.5m | | 2057 Dec 22 12:43 | 0°♁ | |
| desc. node | 2055 Jun 30 15:13 | 16°♁57'30 | | | | | |
| retrograde | 2055 Jul 13 15:17 | 19°♁56'03 | | superior conj | 2057 Dec 27 07:30 | 6°♁01'14 | 0°-27'-58 |
| evening set | 2055 Jul 30 01:40 | 14°♁50'49 | | minimum elong | 2057 Dec 27 00:18 | 5°♁38'32 | 0°27'38 |
| inferior conj | 2055 Aug 04 03:13 | 11°♁46'39 | -6°-58'-44 | max. Earth dist. | 2057 Dec 27 23:07 | 6°♁50'21 | 1.71074 AU |
| minimum elong | 2055 Aug 03 17:40 | 12°♁01'33 | 6°57'07 | | 2058 Jan 15 09:02 | 0°♁ | |
| min. Earth dist. | 2055 Aug 04 04:57 | 11°♁43'56 | 0.28947 AU | evening rise | 2058 Feb 06 17:10 | 28°♁02'41 | |
| morning rise | 2055 Aug 08 09:27 | 9°♁09'45 | | | 2058 Feb 08 06:38 | 0°♁ | |
| direct | 2055 Aug 25 17:50 | 3°♁29'56 | | | 2058 Mar 04 07:16 | 0°♁ | |
| greatest brilliancy | 2055 Sep 09 00:21 | 7°♁03'23 | -4.5m | | 2058 Mar 28 13:03 | 0°♁ | |
| | 2055 Oct 09 12:43 | 0°♁ | | asc. node | 2058 Apr 07 13:44 | 12°♁18'31 | |
| morning max el | 2055 Oct 14 08:26 | 4°♁40'28 | 46°18'21 | | 2058 Apr 22 02:15 | 0°♁ | |
| asc. node | 2055 Oct 21 18:32 | 12°♁12'23 | | | 2058 May 17 01:33 | 0°♁ | |
| | 2055 Nov 07 05:30 | 0°♁ | | | 2058 Jun 11 15:41 | 0°♁ | |
| | 2055 Dec 03 03:27 | 0°♁ | | | 2058 Jul 08 07:35 | 0°♁ | |
| | 2055 Dec 27 23:52 | 0°♁ | | desc. node | 2058 Jul 28 03:00 | 20°♁52'00 | |
| | 2056 Jan 21 09:28 | 0°♁ | | evening max el | 2058 Aug 05 12:32 | 29°♁07'30 | 45°45'40 |
| desc. node | 2056 Feb 10 08:02 | 24°♁41'04 | | | 2058 Aug 06 10:35 | 0°♁ | |
| | 2056 Feb 14 14:53 | 0°♁ | | greatest brilliancy | 2058 Sep 12 15:18 | 26°♁59'25 | -4.5m |
| | 2056 Mar 09 19:16 | 0°♁ | | retrograde | 2058 Sep 23 11:57 | 29°♁06'21 | |
| | 2056 Apr 03 00:21 | 0°♁ | | evening set | 2058 Oct 10 11:24 | 23°♁39'27 | |
| morning set | 2056 Apr 19 01:04 | 19°♁49'04 | | inferior conj | 2058 Oct 14 09:38 | 21°♁18'03 | -7°-24'-41 |
| | 2056 Apr 27 07:04 | 0°♁ | | minimum elong | 2058 Oct 14 19:18 | 21°♁03'16 | 7°23'06 |
| | 2056 May 21 15:35 | 0°♁ | | min. Earth dist. | 2058 Oct 15 08:09 | 20°♁43'39 | 0.27561 AU |
| | | | | morning rise | 2058 Oct 19 02:47 | 18°♁28'47 | |
| superior conj | 2056 May 26 13:18 | 6°♁01'55 | 0°-16'-23 | direct | 2058 Nov 04 09:42 | 13°♁20'08 | |
| minimum elong | 2056 May 26 16:45 | 6°♁12'31 | 0°16'15 | greatest brilliancy | 2058 Nov 18 11:58 | 16°♁58'26 | -4.6m |
| max. Earth dist. | 2056 May 27 12:48 | 7°♁14'10 | 1.73443 AU | asc. node | 2058 Nov 18 06:18 | 16°♁51'38 | |
| asc. node | 2056 Jun 02 11:28 | 14°♁32'35 | | | 2058 Dec 07 10:19 | 0°♁ | |
| | 2056 Jun 15 01:21 | 0°♁ | | morning max el | 2058 Dec 25 04:32 | 16°♁46'06 | 46°55'24 |
| evening rise | 2056 Jul 02 00:13 | 20°♁49'13 | | | 2059 Jan 06 17:05 | 0°♁ | |
| | 2056 Jul 09 11:40 | 0°♁ | | | 2059 Feb 02 04:41 | 0°♁ | |
| | 2056 Aug 02 22:32 | 0°♁ | | | 2059 Feb 27 12:56 | 0°♁ | |
| | 2056 Aug 27 10:53 | 0°♁ | | desc. node | 2059 Mar 09 19:49 | 12°♁21'23 | |
| | 2056 Sep 21 02:12 | 0°♁ | | | 2059 Mar 24 10:19 | 0°♁ | |
| desc. node | 2056 Sep 22 00:45 | 1°♁08'22 | | | 2059 Apr 18 03:13 | 0°♁ | |
| | 2056 Oct 15 22:10 | 0°♁ | | | 2059 May 12 18:25 | 0°♁ | |
| | 2056 Nov 10 01:54 | 0°♁ | | | 2059 Jun 06 08:40 | 0°♁ | |
| | 2056 Dec 05 22:18 | 0°♁ | | morning set | 2059 Jun 27 15:45 | 26°♁02'25 | |
| evening max el | 2056 Dec 31 12:50 | 27°♁47'58 | 47°14'38 | | 2059 Jun 30 21:20 | 0°♁ | |
| | 2057 Jan 02 16:56 | 0°♁ | | asc. node | 2059 Jun 30 23:21 | 0°♁06'11 | |
| asc. node | 2057 Jan 13 04:10 | 10°♁05'19 | | | 2059 Jul 25 07:29 | 0°♁ | |
| greatest brilliancy | 2057 Feb 07 05:03 | 28°♁15'14 | -4.6m | max. Earth dist. | 2059 Jul 31 12:08 | 7°♁37'49 | 1.73306 AU |
| | 2057 Feb 11 13:29 | 0°♁ | | | | | |
| retrograde | 2057 Feb 20 11:43 | 1°♁32'39 | | superior conj | 2059 Aug 03 01:21 | 10°♁46'35 | 1°07'58 |
| | 2057 Mar 01 02:51 | 30°♁ | | minimum elong | 2059 Aug 02 16:52 | 10°♁20'25 | 1°07'43 |
| evening set | 2057 Mar 10 12:29 | 25°♁15'58 | | | 2059 Aug 18 14:50 | 0°♁ | |
| min. Earth dist. | 2057 Mar 13 00:23 | 23°♁42'49 | 0.27872 AU | evening rise | 2059 Sep 08 05:06 | 25°♁30'16 | |
| inferior conj | 2057 Mar 13 12:09 | 23°♁24'19 | 8°44'30 | | 2059 Sep 11 20:07 | 0°♁ | |
| minimum elong | 2057 Mar 13 14:43 | 23°♁20'16 | 8°44'24 | | 2059 Oct 06 00:37 | 0°♁ | |
| morning rise | 2057 Mar 16 17:06 | 21°♁24'52 | | desc. node | 2059 Oct 20 12:41 | 17°♁59'10 | |
| direct | 2057 Apr 03 08:12 | 15°♁25'47 | | | 2059 Oct 30 05:22 | 0°♁ | |
| greatest brilliancy | 2057 Apr 14 10:58 | 17°♁40'52 | -4.6m | | 2059 Nov 23 11:12 | 0°♁ | |
| | 2057 May 04 11:45 | 0°♁ | | | 2059 Dec 17 19:50 | 0°♁ | |
| desc. node | 2057 May 04 17:20 | 0°♁11'05 | | | 2060 Jan 11 11:37 | 0°♁ | |
| morning max el | 2057 May 22 12:04 | 15°♁58'10 | 45°57'29 | | 2060 Feb 05 20:11 | 0°♁ | |
| | 2057 Jun 05 11:24 | 0°♁ | | asc. node | 2060 Feb 10 15:51 | 5°♁32'41 | |
| | 2057 Jul 03 03:04 | 0°♁ | | | 2060 Mar 03 20:13 | 0°♁ | |
| | 2057 Jul 29 07:44 | 0°♁ | | evening max el | 2060 Mar 13 03:35 | 9°♁32'16 | 46°16'42 |
| | 2057 Aug 23 16:21 | 0°♁ | | | 2060 Apr 05 09:40 | 0°♁ | |
| asc. node | 2057 Aug 25 20:54 | 2°♁37'43 | | greatest brilliancy | 2060 Apr 17 01:16 | 7°♁11'57 | -4.5m |
| | 2057 Sep 17 10:28 | 0°♁ | | retrograde | 2060 May 01 18:42 | 11°♁01'40 | |
| | 2057 Oct 11 18:04 | 0°♁ | | evening set | 2060 May 17 03:20 | 6°♁24'26 | |
| | 2057 Nov 04 18:59 | 0°♁ | | inferior conj | 2060 May 23 03:12 | 2°♁46'17 | 2°08'09 |
| morning set | 2057 Nov 16 10:44 | 14°♁37'07 | | minimum elong | 2060 May 23 07:47 | 2°♁39'05 | 2°06'50 |
| | 2057 Nov 28 16:28 | 0°♁ | | min. Earth dist. | 2060 May 23 02:37 | 2°♁47'12 | 0.28772 AU |

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|---------------------|-------------------|----------------------|--|---------------------|-------------------|----------------------|--|
| | 2060 May 27 15:29 | 30°♄ | | | 2062 Nov 13 13:08 | 0°♁ | |
| morning rise | 2060 May 29 12:38 | 28°♄55'58 | | desc. node | 2062 Nov 17 00:40 | 4°♁21'42 | |
| desc. node | 2060 Jun 01 05:16 | 27°♄33'28 | | evening rise | 2062 Nov 19 09:09 | 7°♁18'38 | |
| direct | 2060 Jun 13 15:25 | 24°♄32'04 | | | 2062 Dec 07 11:35 | 0°♁ | |
| greatest brilliancy | 2060 Jun 26 13:51 | 27°♄29'16 -4.5m | | | 2062 Dec 31 10:38 | 0°♁ | |
| | 2060 Jul 01 16:11 | 0°♁ | | | 2063 Jan 24 12:03 | 0°♁ | |
| morning max el | 2060 Aug 01 09:32 | 24°♁16'20 45°44'45 | | | 2063 Feb 17 19:01 | 0°♁ | |
| | 2060 Aug 07 06:41 | 0°♁ | | asc. node | 2063 Mar 10 03:49 | 24°♁45'28 | |
| | 2060 Sep 04 13:05 | 0°♁ | | | 2063 Mar 14 12:37 | 0°♁ | |
| asc. node | 2060 Sep 22 08:49 | 20°♁19'13 | | | 2063 Apr 09 00:53 | 0°♁ | |
| | 2060 Sep 30 15:09 | 0°♁ | | | 2063 May 06 00:28 | 0°♁ | |
| | 2060 Oct 25 14:56 | 0°♁ | | evening max el | 2063 May 23 16:03 | 17°♁57'25 45°26'13 | |
| | 2060 Nov 19 00:04 | 0°♁ | | | 2063 Jun 05 23:14 | 0°♁ | |
| | 2060 Dec 13 01:37 | 0°♁ | | greatest brilliancy | 2063 Jun 27 15:16 | 14°♁30'15 -4.5m | |
| | 2061 Jan 05 23:59 | 0°♁ | | desc. node | 2063 Jun 29 17:15 | 15°♁22'57 | |
| desc. node | 2061 Jan 11 22:13 | 7°♁26'13 | | retrograde | 2063 Jul 11 07:11 | 17°♁46'45 | |
| | 2061 Jan 29 21:41 | 0°♁ | | evening set | 2063 Jul 27 14:33 | 12°♁45'10 | |
| morning set | 2061 Feb 01 03:52 | 2°♁49'54 | | inferior conj | 2063 Aug 01 19:15 | 9°♁36'47 -6°-46'-34 | |
| | 2061 Feb 22 20:15 | 0°♁ | | minimum elong | 2063 Aug 01 09:31 | 9°♁51'57 6°44'49 | |
| | | | | min. Earth dist. | 2063 Aug 01 20:35 | 9°♁34'41 0.28962 AU | |
| superior conj | 2061 Mar 13 23:34 | 23°♁54'22 -1°-25'-27 | | morning rise | 2063 Aug 06 04:13 | 6°♁55'57 | |
| minimum elong | 2061 Mar 14 02:21 | 24°♁03'03 1°25'27 | | direct | 2063 Aug 23 09:29 | 1°♁19'39 | |
| max. Earth dist. | 2061 Mar 18 03:39 | 29°♁06'15 1.72074 AU | | greatest brilliancy | 2063 Sep 06 17:04 | 4°♁53'50 -4.5m | |
| | 2061 Mar 18 20:54 | 0°♁ | | | 2063 Oct 09 12:01 | 0°♁ | |
| | 2061 Apr 12 00:46 | 0°♁ | | morning max el | 2063 Oct 11 23:39 | 2°♁25'41 46°16'59 | |
| evening rise | 2061 Apr 22 05:52 | 12°♁37'22 | | asc. node | 2063 Oct 20 20:38 | 11°♁27'47 | |
| asc. node | 2061 May 05 01:42 | 28°♁25'19 | | | 2063 Nov 06 21:30 | 0°♁ | |
| | 2061 May 06 08:31 | 0°♁ | | | 2063 Dec 02 17:04 | 0°♁ | |
| | 2061 May 30 20:30 | 0°♁ | | | 2063 Dec 27 12:23 | 0°♁ | |
| | 2061 Jun 24 13:16 | 0°♁ | | | 2064 Jan 20 21:23 | 0°♁ | |
| | 2061 Jul 19 12:22 | 0°♁ | | desc. node | 2064 Feb 09 09:58 | 24°♁11'10 | |
| | 2061 Aug 13 21:14 | 0°♁ | | | 2064 Feb 14 02:24 | 0°♁ | |
| desc. node | 2061 Aug 24 14:48 | 12°♁29'08 | | | 2064 Mar 09 06:29 | 0°♁ | |
| | 2061 Sep 08 22:23 | 0°♁ | | | 2064 Apr 02 11:19 | 0°♁ | |
| | 2061 Oct 06 07:57 | 0°♁ | | morning set | 2064 Apr 16 16:14 | 17°♁34'10 | |
| evening max el | 2061 Oct 17 19:12 | 11°♁42'48 46°52'48 | | | 2064 Apr 26 17:50 | 0°♁ | |
| | 2061 Nov 07 00:38 | 0°♁ | | | 2064 May 21 02:14 | 0°♁ | |
| greatest brilliancy | 2061 Nov 25 14:03 | 11°♁35'40 -4.7m | | | | | |
| retrograde | 2061 Dec 07 01:32 | 14°♁02'35 | | superior conj | 2064 May 24 06:19 | 3°♁53'58 0°-19'-36 | |
| asc. node | 2061 Dec 15 18:18 | 12°♁29'54 | | minimum elong | 2064 May 24 10:25 | 4°♁06'36 0°19'25 | |
| evening set | 2061 Dec 21 10:09 | 9°♁57'13 | | max. Earth dist. | 2064 May 25 08:02 | 5°♁13'04 1.73420 AU | |
| min. Earth dist. | 2061 Dec 27 04:12 | 6°♁35'32 0.26454 AU | | asc. node | 2064 Jun 01 13:32 | 14°♁06'17 | |
| inferior conj | 2061 Dec 27 14:11 | 6°♁20'16 3°01'35 | | | 2064 Jun 14 11:59 | 0°♁ | |
| minimum elong | 2061 Dec 27 07:35 | 6°♁30'22 2°59'33 | | evening rise | 2064 Jun 29 18:56 | 18°♁46'35 | |
| morning rise | 2062 Jan 02 05:14 | 3°♁01'34 | | | 2064 Jul 08 22:24 | 0°♁ | |
| | 2062 Jan 09 01:52 | 30°♁ | | | 2064 Aug 02 09:29 | 0°♁ | |
| direct | 2062 Jan 16 23:01 | 28°♁43'42 | | | 2064 Aug 26 22:12 | 0°♁ | |
| | 2062 Jan 25 02:24 | 0°♁ | | | 2064 Sep 20 14:04 | 0°♁ | |
| greatest brilliancy | 2062 Jan 28 10:04 | 1°♁10'59 -4.7m | | desc. node | 2064 Sep 21 02:50 | 0°♁38'43 | |
| | 2062 Mar 06 22:37 | 0°♁ | | | 2064 Oct 15 10:50 | 0°♁ | |
| morning max el | 2062 Mar 08 03:02 | 1°♁10'31 46°42'01 | | | 2064 Nov 09 15:52 | 0°♁ | |
| | 2062 Apr 04 06:31 | 0°♁ | | | 2064 Dec 05 14:44 | 0°♁ | |
| desc. node | 2062 Apr 06 07:46 | 2°♁17'05 | | evening max el | 2064 Dec 29 03:26 | 25°♁26'45 47°15'31 | |
| | 2062 Apr 30 15:33 | 0°♁ | | | 2065 Jan 02 16:12 | 0°♁ | |
| | 2062 May 26 06:24 | 0°♁ | | asc. node | 2065 Jan 12 06:04 | 9°♁04'00 | |
| | 2062 Jun 20 11:43 | 0°♁ | | greatest brilliancy | 2065 Feb 04 19:57 | 25°♁54'53 -4.7m | |
| | 2062 Jul 15 09:58 | 0°♁ | | retrograde | 2065 Feb 18 03:02 | 29°♁12'49 | |
| asc. node | 2062 Jul 28 11:06 | 15°♁50'16 | | evening set | 2065 Mar 08 03:25 | 22°♁55'31 | |
| | 2062 Aug 09 01:25 | 0°♁ | | min. Earth dist. | 2065 Mar 10 13:49 | 21°♁24'52 0.27827 AU | |
| | 2062 Sep 02 10:19 | 0°♁ | | inferior conj | 2065 Mar 11 02:36 | 21°♁04'48 8°47'16 | |
| morning set | 2062 Sep 03 16:34 | 1°♁33'33 | | minimum elong | 2065 Mar 11 04:22 | 21°♁02'03 8°47'13 | |
| | 2062 Sep 26 13:59 | 0°♁ | | morning rise | 2065 Mar 14 05:28 | 19°♁08'49 | |
| max. Earth dist. | 2062 Oct 07 18:26 | 13°♁57'34 1.71960 AU | | direct | 2065 Mar 31 22:06 | 13°♁06'56 | |
| | | | | greatest brilliancy | 2065 Apr 11 23:47 | 15°♁21'30 -4.6m | |
| superior conj | 2062 Oct 10 21:44 | 17°♁52'50 1°13'31 | | desc. node | 2065 May 03 19:29 | 29°♁06'07 | |
| minimum elong | 2062 Oct 11 06:28 | 18°♁20'06 1°13'19 | | | 2065 May 04 21:44 | 0°♁ | |
| | 2062 Oct 20 14:20 | 0°♁ | | morning max el | 2065 May 20 03:43 | 13°♁45'22 45°58'44 | |

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|---------------------|-------------------|-----------|------------|---------------------|-------------------|-----------|------------|
| | 2065 Jun 05 05:37 | 0°♄ | | asc. node | 2068 Feb 09 17:57 | 4°♃55'26 | |
| | 2065 Jul 02 17:21 | 0°♁ | | | 2068 Mar 03 15:06 | 0°♄ | |
| | 2065 Jul 28 20:18 | 0°♁ | | evening max el | 2068 Mar 10 19:05 | 7°♄18'22 | 46°19'03 |
| | 2065 Aug 23 04:01 | 0°♁ | | | 2068 Apr 06 03:57 | 0°♁ | |
| asc. node | 2065 Aug 24 22:56 | 2°♁08'51 | | greatest brilliancy | 2068 Apr 14 19:27 | 5°♁04'34 | -4.5m |
| | 2065 Sep 16 21:40 | 0°♁ | | retrograde | 2068 Apr 29 10:50 | 8°♁52'16 | |
| | 2065 Oct 11 05:02 | 0°♁ | | evening set | 2068 May 14 21:33 | 4°♁12'57 | |
| | 2065 Nov 04 05:51 | 0°♁ | | inferior conj | 2068 May 20 19:35 | 0°♁37'07 | 2°27'36 |
| morning set | 2065 Nov 13 23:34 | 12°♁12'43 | | minimum elong | 2068 May 21 00:48 | 0°♁28'53 | 2°26'05 |
| | 2065 Nov 28 03:19 | 0°♁ | | min. Earth dist. | 2068 May 20 19:16 | 0°♁37'37 | 0.28753 AU |
| desc. node | 2065 Dec 14 12:25 | 20°♁36'25 | | | 2068 May 21 19:10 | 30°♄ | |
| | 2065 Dec 21 23:33 | 0°♁ | | morning rise | 2068 May 27 04:27 | 26°♄47'10 | |
| | | | | desc. node | 2068 May 31 07:17 | 24°♄46'13 | |
| superior conj | 2065 Dec 24 17:32 | 3°♁27'38 | 0°-24'-10 | direct | 2068 Jun 11 07:32 | 22°♄23'19 | |
| minimum elong | 2065 Dec 24 11:14 | 3°♁07'48 | 0°23'52 | greatest brilliancy | 2068 Jun 24 03:33 | 25°♄17'40 | -4.5m |
| max. Earth dist. | 2065 Dec 25 09:13 | 4°♁16'59 | 1.71071 AU | | 2068 Jul 02 23:30 | 0°♁ | |
| | 2066 Jan 14 19:51 | 0°♁ | | morning max el | 2068 Jul 30 00:37 | 22°♁05'04 | 45°44'15 |
| evening rise | 2066 Feb 04 03:52 | 25°♁31'52 | | | 2068 Aug 07 02:24 | 0°♁ | |
| | 2066 Feb 07 17:29 | 0°♁ | | | 2068 Sep 04 03:48 | 0°♁ | |
| | 2066 Mar 03 18:11 | 0°♁ | | asc. node | 2068 Sep 21 10:57 | 19°♁46'42 | |
| | 2066 Mar 28 00:09 | 0°♁ | | | 2068 Sep 30 03:59 | 0°♁ | |
| asc. node | 2066 Apr 06 15:52 | 11°♁50'46 | | | 2068 Oct 25 02:54 | 0°♁ | |
| | 2066 Apr 21 13:41 | 0°♁ | | | 2068 Nov 18 11:35 | 0°♁ | |
| | 2066 May 16 13:37 | 0°♁ | | | 2068 Dec 12 12:53 | 0°♁ | |
| | 2066 Jun 11 04:59 | 0°♁ | | | 2069 Jan 05 11:06 | 0°♁ | |
| desc. node | 2066 Jul 07 23:35 | 0°♁ | | desc. node | 2069 Jan 11 00:08 | 6°♁57'25 | |
| | 2066 Jul 27 04:59 | 20°♁06'10 | | | 2069 Jan 29 08:41 | 0°♁ | |
| evening max el | 2066 Aug 03 03:35 | 26°♁53'49 | 45°43'49 | morning set | 2069 Jan 29 13:42 | 0°♁15'44 | |
| | 2066 Aug 06 10:33 | 0°♁ | | | 2069 Feb 22 07:08 | 0°♁ | |
| greatest brilliancy | 2066 Sep 10 03:05 | 24°♁39'09 | -4.5m | | | | |
| retrograde | 2066 Sep 21 01:10 | 26°♁46'50 | | superior conj | 2069 Mar 11 12:12 | 21°♁30'29 | -1°-25'-51 |
| evening set | 2066 Oct 08 03:54 | 21°♁15'28 | | minimum elong | 2069 Mar 11 14:02 | 21°♁36'11 | 1°25'52 |
| inferior conj | 2066 Oct 11 23:18 | 18°♁57'47 | -7°-36'-8 | max. Earth dist. | 2069 Mar 15 17:21 | 26°♁45'48 | 1.72012 AU |
| minimum elong | 2066 Oct 12 08:34 | 18°♁43'35 | 7°34'42 | | 2069 Mar 18 07:41 | 0°♁ | |
| min. Earth dist. | 2066 Oct 12 21:28 | 18°♁23'49 | 0.27629 AU | | 2069 Apr 11 11:29 | 0°♁ | |
| morning rise | 2066 Oct 16 12:52 | 16°♁13'20 | | evening rise | 2069 Apr 19 20:54 | 10°♁22'30 | |
| direct | 2066 Nov 02 00:38 | 10°♁59'03 | | asc. node | 2069 May 04 03:45 | 27°♁58'36 | |
| greatest brilliancy | 2066 Nov 16 02:22 | 14°♁36'46 | -4.6m | | 2069 May 05 19:16 | 0°♁ | |
| asc. node | 2066 Nov 17 08:24 | 15°♁14'19 | | | 2069 May 30 07:26 | 0°♁ | |
| | 2066 Dec 07 18:18 | 0°♁ | | | 2069 Jun 24 00:35 | 0°♁ | |
| morning max el | 2066 Dec 22 19:05 | 14°♁24'20 | 46°54'52 | | 2069 Jul 19 00:22 | 0°♁ | |
| | 2067 Jan 06 11:27 | 0°♁ | | | 2069 Aug 13 10:21 | 0°♁ | |
| | 2067 Feb 01 19:23 | 0°♁ | | desc. node | 2069 Aug 23 16:54 | 11°♁55'18 | |
| | 2067 Feb 27 01:56 | 0°♁ | | | 2069 Sep 08 13:36 | 0°♁ | |
| desc. node | 2067 Mar 08 21:56 | 11°♁49'51 | | | 2069 Oct 06 03:56 | 0°♁ | |
| | 2067 Mar 23 22:22 | 0°♁ | | evening max el | 2069 Oct 15 07:32 | 9°♁16'37 | 46°50'35 |
| | 2067 Apr 17 14:41 | 0°♁ | | | 2069 Nov 07 17:46 | 0°♁ | |
| | 2067 May 12 05:29 | 0°♁ | | greatest brilliancy | 2069 Nov 23 04:35 | 9°♁08'54 | -4.7m |
| | 2067 Jun 05 19:26 | 0°♁ | | retrograde | 2069 Dec 04 13:09 | 11°♁33'16 | |
| morning set | 2067 Jun 25 09:54 | 23°♁58'31 | | asc. node | 2069 Dec 14 20:13 | 9°♁24'23 | |
| asc. node | 2067 Jun 30 01:18 | 29°♁39'41 | | evening set | 2069 Dec 18 21:23 | 7°♁29'18 | |
| | 2067 Jun 30 07:56 | 0°♁ | | min. Earth dist. | 2069 Dec 24 18:16 | 4°♁04'04 | 0.26443 AU |
| | 2067 Jul 24 18:01 | 0°♁ | | inferior conj | 2069 Dec 25 02:22 | 3°♁51'41 | 2°38'08 |
| max. Earth dist. | 2067 Jul 29 07:34 | 5°♁37'22 | 1.73335 AU | minimum elong | 2069 Dec 24 20:33 | 4°♁00'36 | 2°36'19 |
| | | | | morning rise | 2069 Dec 30 19:45 | 0°♁29'44 | |
| | | | | | 2069 Dec 31 18:10 | 30°♁ | |
| superior conj | 2067 Jul 31 19:37 | 8°♁42'24 | 1°06'02 | direct | 2070 Jan 14 10:37 | 26°♁14'47 | |
| minimum elong | 2067 Jul 31 11:00 | 8°♁15'49 | 1°05'46 | greatest brilliancy | 2070 Jan 26 01:43 | 28°♁45'51 | -4.7m |
| | 2067 Aug 18 01:24 | 0°♁ | | | 2070 Jan 28 19:28 | 0°♁ | |
| evening rise | 2067 Sep 05 21:57 | 23°♁20'34 | | morning max el | 2070 Mar 05 15:33 | 28°♁44'04 | 46°43'30 |
| | 2067 Sep 11 06:51 | 0°♁ | | | 2070 Mar 06 21:52 | 0°♁ | |
| | 2067 Oct 05 11:36 | 0°♁ | | | 2070 Apr 03 22:55 | 0°♁ | |
| desc. node | 2067 Oct 19 14:48 | 17°♁31'08 | | desc. node | 2070 Apr 05 09:49 | 1°♁37'39 | |
| | 2067 Oct 29 16:41 | 0°♁ | | | 2070 Apr 30 05:19 | 0°♁ | |
| | 2067 Nov 22 22:55 | 0°♁ | | | 2070 May 25 18:47 | 0°♁ | |
| | 2067 Dec 17 08:05 | 0°♁ | | | 2070 Jun 19 23:19 | 0°♁ | |
| | 2068 Jan 11 00:42 | 0°♁ | | | 2070 Jul 14 21:06 | 0°♁ | |
| | 2068 Feb 05 10:53 | 0°♁ | | | | | |

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| asc. node | 2070 Jul 27 13:08 | 15°☿23'03 | | greatest brilliancy | 2073 Feb 02 11:03 | 23°♃33'21 | -4.7m |
| | 2070 Aug 08 12:18 | 0°♁ | | retrograde | 2073 Feb 15 18:21 | 26°♃51'04 | |
| morning set | 2070 Sep 01 09:25 | 29°♁23'48 | | evening set | 2073 Mar 05 17:45 | 20°♃34'00 | |
| | 2070 Sep 01 21:07 | 0°♃ | | min. Earth dist. | 2073 Mar 08 02:50 | 19°♃05'27 | 0.27777 AU |
| | 2070 Sep 26 00:48 | 0°♁ | | inferior conj | 2073 Mar 08 16:52 | 18°♃43'29 | 8°49'07 |
| max. Earth dist. | 2070 Oct 05 09:53 | 11°♁42'06 | 1.72013 AU | minimum elong | 2073 Mar 08 17:46 | 18°♃42'03 | 8°49'06 |
| | | | | morning rise | 2073 Mar 11 17:58 | 16°♃50'22 | |
| superior conj | 2070 Oct 08 12:44 | 15°♁35'50 | 1°15'13 | direct | 2073 Mar 29 12:14 | 10°♃46'32 | |
| minimum elong | 2070 Oct 08 20:59 | 16°♁01'36 | 1°15'01 | greatest brilliancy | 2073 Apr 09 11:31 | 12°♃59'27 | -4.6m |
| | 2070 Oct 20 01:13 | 0°♃ | | desc. node | 2073 May 02 21:30 | 28°♃01'28 | |
| | 2070 Nov 13 00:09 | 0°♃ | | | 2073 May 05 05:30 | 0°♃ | |
| desc. node | 2070 Nov 16 02:39 | 3°♃53'22 | | morning max el | 2073 May 17 19:18 | 11°♃31'23 | 45°59'59 |
| evening rise | 2070 Nov 16 20:55 | 4°♃50'34 | | | 2073 Jun 04 23:46 | 0°♃ | |
| | 2070 Dec 06 22:45 | 0°♃ | | | 2073 Jul 02 07:47 | 0°♃ | |
| | 2070 Dec 30 22:01 | 0°♃ | | | 2073 Jul 28 09:04 | 0°♃ | |
| | 2071 Jan 23 23:40 | 0°♃ | | | 2073 Aug 22 15:54 | 0°♁ | |
| | 2071 Feb 17 07:01 | 0°♃ | | asc. node | 2073 Aug 24 01:07 | 1°♁39'47 | |
| asc. node | 2071 Mar 09 05:58 | 24°♃14'13 | | | 2073 Sep 16 09:05 | 0°♃ | |
| | 2071 Mar 14 01:18 | 0°♃ | | | 2073 Oct 10 16:15 | 0°♁ | |
| | 2071 Apr 08 14:57 | 0°♃ | | greatest brilliancy | 2073 Oct 12 11:11 | 2°♁13'28 | -3.9m |
| | 2071 May 05 17:53 | 0°♃ | | | 2073 Nov 03 17:01 | 0°♃ | |
| evening max el | 2071 May 21 07:36 | 15°♁46'17 | 45°27'10 | morning set | 2073 Nov 11 12:33 | 9°♃47'54 | |
| | 2071 Jun 06 06:15 | 0°♁ | | | 2073 Nov 27 14:30 | 0°♃ | |
| greatest brilliancy | 2071 Jun 25 03:35 | 12°♁16'59 | -4.5m | desc. node | 2073 Dec 13 14:25 | 20°♃07'32 | |
| desc. node | 2071 Jun 28 19:11 | 13°♁45'28 | | | 2073 Dec 21 10:45 | 0°♃ | |
| retrograde | 2071 Jul 08 23:42 | 15°♁38'11 | | | | | |
| evening set | 2071 Jul 25 03:50 | 10°♁40'01 | | superior conj | 2073 Dec 22 03:23 | 0°♃52'18 | 0°-20'-16 |
| inferior conj | 2071 Jul 30 11:30 | 7°♁27'31 | -6°-33'-51 | minimum elong | 2073 Dec 21 22:03 | 0°♃35'32 | 0°20'02 |
| minimum elong | 2071 Jul 30 01:39 | 7°♁42'50 | 6°31'59 | max. Earth dist. | 2073 Dec 22 16:34 | 1°♃33'48 | 1.71073 AU |
| min. Earth dist. | 2071 Jul 30 12:06 | 7°♁26'34 | 0.28978 AU | | 2074 Jan 14 07:05 | 0°♃ | |
| morning rise | 2071 Aug 03 23:16 | 4°♁42'49 | | evening rise | 2074 Feb 01 14:02 | 22°♃57'57 | |
| | 2071 Aug 14 14:44 | 30°♃ | | | 2074 Feb 07 04:45 | 0°♃ | |
| direct | 2071 Aug 21 01:55 | 29°♁10'02 | | | 2074 Mar 03 05:32 | 0°♃ | |
| | 2071 Aug 27 18:29 | 0°♁ | | | 2074 Mar 27 11:40 | 0°♃ | |
| greatest brilliancy | 2071 Sep 04 09:54 | 2°♁44'52 | -4.5m | asc. node | 2074 Apr 05 17:53 | 11°♃21'26 | |
| | 2071 Oct 09 10:28 | 0°♃ | | | 2074 Apr 21 01:32 | 0°♃ | |
| morning max el | 2071 Oct 09 15:51 | 0°♃13'14 | 46°15'22 | | 2074 May 16 02:08 | 0°♃ | |
| asc. node | 2071 Oct 19 22:40 | 10°♃43'13 | | | 2074 Jun 10 18:48 | 0°♁ | |
| | 2071 Nov 06 13:25 | 0°♁ | | | 2074 Jul 07 16:16 | 0°♃ | |
| | 2071 Dec 02 06:46 | 0°♃ | | desc. node | 2074 Jul 26 07:09 | 19°♃19'11 | |
| | 2071 Dec 27 01:04 | 0°♃ | | evening max el | 2074 Jul 31 18:11 | 24°♃38'15 | 45°42'07 |
| | 2072 Jan 20 09:28 | 0°♃ | | | 2074 Aug 06 12:05 | 0°♁ | |
| desc. node | 2072 Feb 08 12:08 | 23°♃41'26 | | greatest brilliancy | 2074 Sep 07 15:51 | 22°♁19'49 | -4.5m |
| | 2072 Feb 13 14:05 | 0°♃ | | retrograde | 2074 Sep 18 14:10 | 24°♁27'31 | |
| | 2072 Mar 08 17:52 | 0°♃ | | evening set | 2074 Oct 05 20:32 | 18°♁51'59 | |
| | 2072 Apr 01 22:27 | 0°♃ | | inferior conj | 2074 Oct 09 13:17 | 16°♁37'52 | -7°-46'-33 |
| morning set | 2072 Apr 14 07:17 | 15°♃18'08 | | minimum elong | 2074 Oct 09 22:05 | 16°♁24'21 | 7°45'17 |
| | 2072 Apr 26 04:49 | 0°♃ | | min. Earth dist. | 2074 Oct 10 11:16 | 16°♁04'05 | 0.27695 AU |
| | 2072 May 20 13:07 | 0°♃ | | morning rise | 2074 Oct 13 23:16 | 13°♁58'08 | |
| | | | | direct | 2074 Oct 30 15:25 | 8°♁38'19 | |
| superior conj | 2072 May 21 23:21 | 1°♃45'20 | 0°-22'-47 | greatest brilliancy | 2074 Nov 13 17:02 | 12°♁15'16 | -4.6m |
| minimum elong | 2072 May 22 04:06 | 1°♃59'58 | 0°22'34 | asc. node | 2074 Nov 16 10:22 | 13°♁39'57 | |
| max. Earth dist. | 2072 May 23 04:28 | 3°♃14'54 | 1.73391 AU | | 2074 Dec 08 00:15 | 0°♃ | |
| asc. node | 2072 May 31 15:31 | 13°♃39'08 | | morning max el | 2074 Dec 20 08:38 | 11°♃59'10 | 46°53'59 |
| | 2072 Jun 13 22:49 | 0°♃ | | | 2075 Jan 06 05:46 | 0°♃ | |
| evening rise | 2072 Jun 27 13:51 | 16°♁44'01 | | | 2075 Feb 01 10:22 | 0°♃ | |
| | 2072 Jul 08 09:18 | 0°♁ | | | 2075 Feb 26 15:22 | 0°♃ | |
| | 2072 Aug 01 20:36 | 0°♃ | | desc. node | 2075 Mar 08 00:02 | 11°♃16'47 | |
| | 2072 Aug 26 09:43 | 0°♁ | | | 2075 Mar 23 10:53 | 0°♃ | |
| | 2072 Sep 20 02:12 | 0°♃ | | | 2075 Apr 17 02:35 | 0°♃ | |
| desc. node | 2072 Sep 20 04:56 | 0°♃08'17 | | | 2075 May 11 16:57 | 0°♃ | |
| | 2072 Oct 14 23:53 | 0°♃ | | | 2075 Jun 05 06:37 | 0°♃ | |
| | 2072 Nov 09 06:20 | 0°♃ | | morning set | 2075 Jun 23 03:47 | 21°♃52'35 | |
| | 2072 Dec 05 07:54 | 0°♃ | | asc. node | 2075 Jun 29 03:22 | 29°♃12'20 | |
| evening max el | 2072 Dec 26 18:52 | 23°♃06'23 | 47°16'20 | | 2075 Jun 29 18:56 | 0°♃ | |
| | 2073 Jan 02 17:05 | 0°♃ | | | 2075 Jul 24 04:57 | 0°♁ | |
| asc. node | 2073 Jan 11 08:10 | 8°♃00'22 | | max. Earth dist. | 2075 Jul 27 01:26 | 3°♁30'53 | 1.73362 AU |

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|---------------------|-------------------|-----------|------------|---------------------|-------------------|-----------|------------|
| superior conj | 2075 Jul 29 13:55 | 6°♌37'11 | 1°04'00 | morning rise | 2077 Dec 28 10:15 | 27°♌58'30 | |
| minimum elong | 2075 Jul 29 05:12 | 6°♌10'18 | 1°03'44 | direct | 2078 Jan 11 22:35 | 23°♌45'57 | |
| | 2075 Aug 17 12:23 | 0°♍ | | greatest brilliancy | 2078 Jan 23 17:09 | 26°♌20'47 | -4.7m |
| evening rise | 2075 Sep 03 15:05 | 21°♍10'41 | | | 2078 Jan 30 20:24 | 0°♌ | |
| | 2075 Sep 10 17:58 | 0°♎ | | morning max el | 2078 Mar 03 04:59 | 26°♌19'49 | 46°44'48 |
| | 2075 Oct 04 22:56 | 0°♏ | | | 2078 Mar 06 20:11 | 0°♍ | |
| desc. node | 2075 Oct 18 16:47 | 17°♏01'44 | | | 2078 Apr 03 15:08 | 0°♎ | |
| | 2075 Oct 29 04:18 | 0°♐ | | desc. node | 2078 Apr 04 11:50 | 0°♎58'11 | |
| | 2075 Nov 22 10:57 | 0°♑ | | | 2078 Apr 29 19:07 | 0°♏ | |
| | 2075 Dec 16 20:42 | 0°♒ | | | 2078 May 25 07:20 | 0°♐ | |
| | 2076 Jan 10 14:16 | 0°♓ | | | 2078 Jun 19 11:06 | 0°♑ | |
| | 2076 Feb 05 02:17 | 0°♈ | | | 2078 Jul 14 08:25 | 0°♒ | |
| asc. node | 2076 Feb 08 20:02 | 4°♈16'19 | | asc. node | 2078 Jul 26 15:17 | 14°♒55'36 | |
| | 2076 Mar 03 11:11 | 0°♉ | | | 2078 Aug 07 23:21 | 0°♓ | |
| evening max el | 2076 Mar 08 09:34 | 5°♉00'00 | 46°21'22 | morning set | 2078 Aug 30 02:06 | 27°♓13'06 | |
| | 2076 Apr 07 06:19 | 0°♊ | | | 2078 Sep 01 08:04 | 0°♈ | |
| greatest brilliancy | 2076 Apr 12 13:07 | 2°♊54'20 | -4.5m | | 2078 Sep 25 11:44 | 0°♉ | |
| retrograde | 2076 Apr 27 02:37 | 6°♊40'40 | | max. Earth dist. | 2078 Oct 03 01:48 | 9°♊27'43 | 1.72064 AU |
| evening set | 2076 May 12 15:37 | 1°♊58'53 | | | | | |
| | 2076 May 15 23:37 | 30°♋ | | superior conj | 2078 Oct 06 03:42 | 13°♊18'21 | 1°16'46 |
| inferior conj | 2076 May 18 11:44 | 28°♋25'46 | 2°46'53 | minimum elong | 2078 Oct 06 11:24 | 13°♊42'26 | 1°16'37 |
| minimum elong | 2076 May 18 17:35 | 28°♋16'33 | 2°45'14 | | 2078 Oct 19 12:14 | 0°♋ | |
| min. Earth dist. | 2076 May 18 11:54 | 28°♋25'30 | 0.28732 AU | | 2078 Nov 12 11:18 | 0°♌ | |
| morning rise | 2076 May 24 19:51 | 24°♋36'28 | | evening rise | 2078 Nov 14 08:49 | 2°♌22'35 | |
| desc. node | 2076 May 30 09:16 | 22°♋00'32 | | desc. node | 2078 Nov 15 04:40 | 3°♌24'45 | |
| direct | 2076 Jun 08 22:54 | 20°♋12'16 | | | 2078 Dec 06 10:02 | 0°♍ | |
| greatest brilliancy | 2076 Jun 21 17:53 | 23°♋04'56 | -4.5m | | 2078 Dec 30 09:26 | 0°♎ | |
| | 2076 Jul 03 22:54 | 0°♌ | | | 2079 Jan 23 11:17 | 0°♏ | |
| morning max el | 2076 Jul 27 15:20 | 19°♌51'28 | 45°43'56 | | 2079 Feb 16 18:59 | 0°♐ | |
| | 2076 Aug 06 22:02 | 0°♍ | | asc. node | 2079 Mar 08 07:56 | 23°♐42'28 | |
| | 2076 Sep 03 18:44 | 0°♎ | | | 2079 Mar 13 14:00 | 0°♑ | |
| asc. node | 2076 Sep 20 12:53 | 19°♎12'43 | | | 2079 Apr 08 05:10 | 0°♒ | |
| | 2076 Sep 29 17:06 | 0°♏ | | | 2079 May 05 11:48 | 0°♓ | |
| | 2076 Oct 24 15:08 | 0°♐ | | evening max el | 2079 May 18 23:55 | 13°♓36'35 | 45°27'58 |
| | 2076 Nov 17 23:20 | 0°♑ | | | 2079 Jun 06 16:13 | 0°♔ | |
| | 2076 Dec 12 00:22 | 0°♒ | | greatest brilliancy | 2079 Jun 22 16:53 | 10°♔04'15 | -4.5m |
| | 2077 Jan 04 22:25 | 0°♓ | | desc. node | 2079 Jun 27 21:22 | 12°♔03'56 | |
| desc. node | 2077 Jan 10 02:19 | 6°♓28'49 | | retrograde | 2079 Jul 06 16:12 | 13°♔28'34 | |
| morning set | 2077 Jan 26 23:37 | 27°♓41'01 | | evening set | 2079 Jul 22 17:02 | 8°♔34'01 | |
| | 2077 Jan 28 19:54 | 0°♈ | | inferior conj | 2079 Jul 28 03:33 | 5°♔17'19 | -6°-20'-26 |
| | 2077 Feb 21 18:17 | 0°♉ | | minimum elong | 2079 Jul 27 17:39 | 5°♔32'44 | 6°18'30 |
| | | | | min. Earth dist. | 2079 Jul 28 03:12 | 5°♔17'51 | 0.28991 AU |
| superior conj | 2077 Mar 09 00:33 | 19°♉04'39 | -1°-26'-5 | morning rise | 2079 Aug 01 18:07 | 2°♔28'44 | |
| minimum elong | 2077 Mar 09 01:25 | 19°♉07'19 | 1°26'07 | | 2079 Aug 06 09:56 | 30°♕ | |
| max. Earth dist. | 2077 Mar 13 03:48 | 24°♉14'09 | 1.71958 AU | direct | 2079 Aug 18 18:38 | 26°♕59'46 | |
| | 2077 Mar 17 18:47 | 0°♊ | | | 2079 Aug 31 19:21 | 0°♖ | |
| | 2077 Apr 10 22:33 | 0°♋ | | greatest brilliancy | 2079 Sep 02 01:43 | 0°♖34'12 | -4.5m |
| evening rise | 2077 Apr 17 11:19 | 8°♋04'36 | | morning max el | 2079 Oct 07 07:59 | 28°♖00'44 | 46°13'45 |
| asc. node | 2077 May 03 05:42 | 27°♋30'25 | | | 2079 Oct 09 08:07 | 0°♗ | |
| | 2077 May 05 06:23 | 0°♌ | | asc. node | 2079 Oct 19 00:42 | 9°♗59'10 | |
| | 2077 May 29 18:45 | 0°♍ | | | 2079 Nov 06 05:05 | 0°♘ | |
| | 2077 Jun 23 12:17 | 0°♎ | | | 2079 Dec 01 20:21 | 0°♙ | |
| | 2077 Jul 18 12:44 | 0°♏ | | | 2079 Dec 26 13:38 | 0°♐ | |
| | 2077 Aug 12 23:55 | 0°♐ | | | 2080 Jan 19 21:27 | 0°♑ | |
| desc. node | 2077 Aug 22 18:58 | 11°♐20'10 | | desc. node | 2080 Feb 07 14:10 | 23°♑11'42 | |
| | 2077 Sep 08 05:22 | 0°♑ | | | 2080 Feb 13 01:38 | 0°♒ | |
| | 2077 Oct 06 00:51 | 0°♒ | | | 2080 Mar 08 05:05 | 0°♓ | |
| evening max el | 2077 Oct 12 20:03 | 6°♒50'28 | 46°48'32 | | 2080 Apr 01 09:25 | 0°♔ | |
| | 2077 Nov 08 17:01 | 0°♓ | | morning set | 2080 Apr 11 22:32 | 13°♔03'16 | |
| greatest brilliancy | 2077 Nov 20 18:18 | 6°♓41'04 | -4.7m | | 2080 Apr 25 15:36 | 0°♕ | |
| retrograde | 2077 Dec 02 01:20 | 9°♓04'16 | | | | | |
| asc. node | 2077 Dec 13 22:18 | 6°♓13'55 | | superior conj | 2080 May 19 16:24 | 29°♓37'08 | 0°-25'-55 |
| evening set | 2077 Dec 16 09:00 | 5°♓01'02 | | minimum elong | 2080 May 19 21:47 | 29°♓53'41 | 0°25'41 |
| min. Earth dist. | 2077 Dec 22 08:08 | 1°♓33'07 | 0.26433 AU | | 2080 May 19 23:50 | 0°♔ | |
| inferior conj | 2077 Dec 22 14:40 | 1°♓23'10 | 2°14'27 | max. Earth dist. | 2080 May 21 02:40 | 1°♔22'34 | 1.73368 AU |
| minimum elong | 2077 Dec 22 09:39 | 1°♓30'49 | 2°12'52 | asc. node | 2080 May 30 17:37 | 13°♔12'45 | |
| | 2077 Dec 24 21:32 | 30°♕ | | | 2080 Jun 13 09:33 | 0°♕ | |

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|---------------------|-------------------|-----------|------------|---------------------|-------------------|-----------|------------|
| evening rise | 2080 Jun 25 08:38 | 14°☾41'22 | | morning max el | 2082 Dec 17 21:31 | 9°♁32'58 | 46°53'14 |
| | 2080 Jul 07 20:07 | 0°♁ | | | 2083 Jan 05 23:20 | 0°♁ | |
| | 2080 Aug 01 07:39 | 0°♁ | | | 2083 Feb 01 00:50 | 0°♁ | |
| | 2080 Aug 25 21:11 | 0°♁ | | | 2083 Feb 26 04:20 | 0°♁ | |
| desc. node | 2080 Sep 19 06:53 | 29°♁37'35 | | desc. node | 2083 Mar 07 01:58 | 10°♁44'32 | |
| | 2080 Sep 19 14:17 | 0°♁ | | | 2083 Mar 22 22:58 | 0°♁ | |
| | 2080 Oct 14 12:54 | 0°♁ | | | 2083 Apr 16 14:05 | 0°♁ | |
| | 2080 Nov 08 20:49 | 0°♁ | | | 2083 May 11 04:01 | 0°♁ | |
| | 2080 Dec 05 01:15 | 0°♁ | | | 2083 Jun 04 17:21 | 0°♁ | |
| evening max el | 2080 Dec 24 10:45 | 20°♁47'33 | 47°17'03 | morning set | 2083 Jun 20 22:03 | 19°♁49'07 | |
| | 2081 Jan 02 19:03 | 0°♁ | | asc. node | 2083 Jun 28 05:30 | 28°♁46'31 | |
| asc. node | 2081 Jan 10 10:19 | 6°♁55'45 | | | 2083 Jun 29 05:29 | 0°♁ | |
| greatest brilliancy | 2081 Jan 31 03:14 | 21°♁13'50 | -4.7m | | 2083 Jul 23 15:26 | 0°♁ | |
| retrograde | 2081 Feb 13 09:33 | 24°♁29'52 | | max. Earth dist. | 2083 Jul 24 20:50 | 1°♁30'31 | 1.73392 AU |
| evening set | 2081 Mar 03 07:46 | 18°♁14'04 | | | | | |
| min. Earth dist. | 2081 Mar 05 15:58 | 16°♁46'51 | 0.27720 AU | superior conj | 2083 Jul 27 08:37 | 4°♁34'35 | 1°01'55 |
| inferior conj | 2081 Mar 06 07:10 | 16°♁23'02 | 8°50'08 | minimum elong | 2083 Jul 26 23:51 | 4°♁07'34 | 1°01'38 |
| minimum elong | 2081 Mar 06 07:13 | 16°♁22'58 | 8°50'09 | | 2083 Aug 16 22:58 | 0°♁ | |
| morning rise | 2081 Mar 09 06:52 | 14°♁32'07 | | evening rise | 2083 Sep 01 08:36 | 19°♁03'14 | |
| direct | 2081 Mar 27 02:35 | 8°♁27'19 | | | 2083 Sep 10 04:44 | 0°♁ | |
| greatest brilliancy | 2081 Apr 06 22:45 | 10°♁37'48 | -4.6m | | 2083 Oct 04 09:57 | 0°♁ | |
| desc. node | 2081 May 01 23:31 | 26°♁59'35 | | desc. node | 2083 Oct 17 18:51 | 16°♁33'26 | |
| | 2081 May 05 10:31 | 0°♁ | | | 2083 Oct 28 15:39 | 0°♁ | |
| morning max el | 2081 May 15 10:05 | 9°♁16'29 | 46°01'13 | | 2083 Nov 21 22:44 | 0°♁ | |
| | 2081 Jun 04 17:04 | 0°♁ | | | 2083 Dec 16 09:05 | 0°♁ | |
| | 2081 Jul 01 21:44 | 0°♁ | | | 2084 Jan 10 03:37 | 0°♁ | |
| | 2081 Jul 27 21:29 | 0°♁ | | | 2084 Feb 04 17:30 | 0°♁ | |
| | 2081 Aug 22 03:32 | 0°♁ | | asc. node | 2084 Feb 07 22:00 | 3°♁37'35 | |
| asc. node | 2081 Aug 23 03:02 | 1°♁10'40 | | | 2084 Mar 03 07:26 | 0°♁ | |
| | 2081 Sep 15 20:18 | 0°♁ | | evening max el | 2084 Mar 05 23:29 | 2°♁41'21 | 46°23'49 |
| | 2081 Oct 10 03:15 | 0°♁ | | | 2084 Apr 08 18:51 | 0°♁ | |
| greatest brilliancy | 2081 Oct 18 15:00 | 10°♁34'11 | -3.9m | greatest brilliancy | 2084 Apr 10 06:05 | 0°♁44'27 | -4.5m |
| | 2081 Nov 03 03:57 | 0°♁ | | retrograde | 2084 Apr 24 18:45 | 4°♁30'51 | |
| morning set | 2081 Nov 09 01:29 | 7°♁23'39 | | | 2084 May 09 23:59 | 30°♁ | |
| | 2081 Nov 27 01:25 | 0°♁ | | evening set | 2084 May 10 09:55 | 29°♁46'06 | |
| desc. node | 2081 Dec 12 16:32 | 19°♁39'49 | | inferior conj | 2084 May 16 04:03 | 26°♁16'04 | 3°05'52 |
| | | | | minimum elong | 2084 May 16 10:29 | 26°♁05'56 | 3°04'05 |
| superior conj | 2081 Dec 19 13:14 | 28°♁17'55 | 0°-16'-21 | min. Earth dist. | 2084 May 16 04:40 | 26°♁15'05 | 0.28711 AU |
| minimum elong | 2081 Dec 19 08:55 | 28°♁04'20 | 0°16'10 | morning rise | 2084 May 22 11:16 | 22°♁27'51 | |
| behind sun begin | 2081 Dec 19 05:03 | 27°♁52'09 | | desc. node | 2084 May 29 11:26 | 19°♁20'57 | |
| behind sun end | 2081 Dec 19 12:47 | 28°♁16'30 | | direct | 2084 Jun 06 14:10 | 18°♁02'43 | |
| max. Earth dist. | 2081 Dec 19 21:19 | 28°♁43'19 | 1.71076 AU | greatest brilliancy | 2084 Jun 19 09:16 | 20°♁55'04 | -4.5m |
| | 2081 Dec 20 21:41 | 0°♁ | | | 2084 Jul 04 15:23 | 0°♁ | |
| | 2082 Jan 13 18:02 | 0°♁ | | morning max el | 2084 Jul 25 06:38 | 17°♁40'52 | 45°43'48 |
| evening rise | 2082 Jan 30 00:08 | 20°♁24'39 | | | 2084 Aug 06 16:31 | 0°♁ | |
| | 2082 Feb 06 15:45 | 0°♁ | | | 2084 Sep 03 08:57 | 0°♁ | |
| | 2082 Mar 02 16:36 | 0°♁ | | asc. node | 2084 Sep 19 14:58 | 18°♁40'44 | |
| | 2082 Mar 26 22:51 | 0°♁ | | | 2084 Sep 29 05:40 | 0°♁ | |
| asc. node | 2082 Apr 04 19:53 | 10°♁53'03 | | | 2084 Oct 24 02:56 | 0°♁ | |
| | 2082 Apr 20 13:02 | 0°♁ | | | 2084 Nov 17 10:45 | 0°♁ | |
| | 2082 May 15 14:18 | 0°♁ | | | 2084 Dec 11 11:34 | 0°♁ | |
| | 2082 Jun 10 08:20 | 0°♁ | | | 2085 Jan 04 09:29 | 0°♁ | |
| | 2082 Jul 07 08:52 | 0°♁ | | desc. node | 2085 Jan 09 04:22 | 6°♁00'36 | |
| desc. node | 2082 Jul 25 09:10 | 18°♁32'03 | | morning set | 2085 Jan 24 09:08 | 25°♁05'47 | |
| evening max el | 2082 Jul 29 07:53 | 22°♁21'29 | 45°40'12 | | 2085 Jan 28 06:52 | 0°♁ | |
| | 2082 Aug 06 14:41 | 0°♁ | | | 2085 Feb 21 05:09 | 0°♁ | |
| greatest brilliancy | 2082 Sep 05 04:56 | 20°♁01'32 | -4.5m | | | | |
| retrograde | 2082 Sep 16 02:52 | 22°♁09'08 | | superior conj | 2085 Mar 06 12:34 | 16°♁38'40 | -1°-26'-10 |
| evening set | 2082 Oct 03 12:57 | 16°♁29'32 | | minimum elong | 2085 Mar 06 12:25 | 16°♁38'14 | 1°26'11 |
| inferior conj | 2082 Oct 07 03:16 | 14°♁18'53 | -7°-55'-59 | max. Earth dist. | 2085 Mar 10 12:52 | 21°♁39'10 | 1.71903 AU |
| minimum elong | 2082 Oct 07 11:31 | 14°♁06'10 | 7°54'55 | | 2085 Mar 17 05:33 | 0°♁ | |
| min. Earth dist. | 2082 Oct 08 01:20 | 13°♁44'54 | 0.27764 AU | | 2085 Apr 10 09:17 | 0°♁ | |
| morning rise | 2082 Oct 11 09:43 | 11°♁43'53 | | evening rise | 2085 Apr 15 01:40 | 5°♁47'28 | |
| direct | 2082 Oct 28 05:41 | 6°♁18'16 | | asc. node | 2085 May 02 07:52 | 27°♁03'55 | |
| greatest brilliancy | 2082 Nov 11 08:46 | 9°♁55'56 | -4.6m | | 2085 May 04 17:11 | 0°♁ | |
| asc. node | 2082 Nov 15 12:27 | 12°♁09'40 | | | 2085 May 29 05:44 | 0°♁ | |
| | 2082 Dec 08 03:59 | 0°♁ | | | 2085 Jun 22 23:38 | 0°♁ | |

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|---------------------|-------------------|-----------|------------|---------------------|-------------------|-----------|------------|--|
| | 2085 Jul 18 00:45 | 0°♍ | | | 2087 Dec 26 01:58 | 0°♁ | | |
| | 2085 Aug 12 13:07 | 0°♁ | | | 2088 Jan 19 09:16 | 0°♁ | | |
| desc. node | 2085 Aug 21 20:57 | 10°♁45'58 | | desc. node | 2088 Feb 06 16:08 | 22°♁41'58 | | |
| | 2085 Sep 07 20:54 | 0°♍ | | | 2088 Feb 12 13:07 | 0°♁ | | |
| | 2085 Oct 05 22:04 | 0°♁ | | | 2088 Mar 07 16:17 | 0°♁ | | |
| evening max el | 2085 Oct 10 09:03 | 4°♁26'52 | 46°46'12 | | 2088 Mar 31 20:25 | 0°♁ | | |
| | 2085 Nov 10 00:40 | 0°♁ | | morning set | 2088 Apr 09 13:13 | 10°♁46'25 | | |
| greatest brilliancy | 2085 Nov 18 06:55 | 4°♁12'33 | -4.7m | | 2088 Apr 25 02:26 | 0°♁ | | |
| retrograde | 2085 Nov 29 13:44 | 6°♁35'26 | | | | | | |
| asc. node | 2085 Dec 13 00:26 | 2°♁58'44 | | superior conj | 2088 May 17 09:00 | 27°♁27'27 | 0°-29'-4 | |
| evening set | 2085 Dec 13 20:40 | 2°♁32'30 | | minimum elong | 2088 May 17 14:59 | 27°♁45'53 | 0°28'48 | |
| | 2085 Dec 18 07:27 | 30°♁ | | max. Earth dist. | 2088 May 19 01:14 | 29°♁31'18 | 1.73335 AU | |
| inferior conj | 2085 Dec 20 02:44 | 28°♁54'28 | 1°50'19 | | 2088 May 19 10:34 | 0°♁ | | |
| minimum elong | 2085 Dec 19 22:34 | 29°♁00'48 | 1°48'59 | asc. node | 2088 May 29 19:41 | 12°♁46'11 | | |
| min. Earth dist. | 2085 Dec 19 21:33 | 29°♁02'21 | 0.26433 AU | | 2088 Jun 12 20:16 | 0°♁ | | |
| morning rise | 2085 Dec 26 00:25 | 25°♁27'26 | | evening rise | 2088 Jun 23 03:12 | 12°♁38'04 | | |
| direct | 2086 Jan 09 11:03 | 21°♁16'56 | | | 2088 Jul 07 06:57 | 0°♁ | | |
| greatest brilliancy | 2086 Jan 21 08:07 | 23°♁55'06 | -4.7m | | 2088 Jul 31 18:44 | 0°♁ | | |
| | 2086 Feb 01 05:13 | 0°♁ | | | 2088 Aug 25 08:40 | 0°♁ | | |
| morning max el | 2086 Feb 28 19:04 | 23°♁57'24 | 46°46'07 | desc. node | 2088 Sep 18 09:00 | 29°♁07'31 | | |
| | 2086 Mar 06 17:34 | 0°♁ | | | 2088 Sep 19 02:23 | 0°♁ | | |
| | 2086 Apr 03 06:53 | 0°♁ | | | 2088 Oct 14 01:54 | 0°♁ | | |
| desc. node | 2086 Apr 03 13:56 | 0°♁19'52 | | | 2088 Nov 08 11:19 | 0°♁ | | |
| | 2086 Apr 29 08:34 | 0°♁ | | | 2088 Dec 04 18:49 | 0°♁ | | |
| | 2086 May 24 19:32 | 0°♁ | | evening max el | 2088 Dec 22 01:56 | 18°♁27'08 | 47°17'25 | |
| | 2086 Jun 18 22:34 | 0°♁ | | | 2089 Jan 02 22:24 | 0°♁ | | |
| | 2086 Jul 13 19:27 | 0°♁ | | asc. node | 2089 Jan 09 12:13 | 5°♁49'07 | | |
| asc. node | 2086 Jul 25 17:14 | 14°♁28'25 | | greatest brilliancy | 2089 Jan 28 20:01 | 18°♁54'48 | -4.7m | |
| | 2086 Aug 07 10:07 | 0°♁ | | retrograde | 2089 Feb 11 00:10 | 22°♁07'59 | | |
| morning set | 2086 Aug 27 19:24 | 25°♁05'23 | | evening set | 2089 Feb 28 21:14 | 15°♁54'19 | | |
| | 2086 Aug 31 18:43 | 0°♁ | | min. Earth dist. | 2089 Mar 03 05:21 | 14°♁27'09 | 0.27669 AU | |
| | 2086 Sep 24 22:22 | 0°♁ | | inferior conj | 2089 Mar 03 21:24 | 14°♁01'58 | 8°50'15 | |
| max. Earth dist. | 2086 Sep 30 18:07 | 7°♁15'36 | 1.72112 AU | minimum elong | 2089 Mar 03 20:35 | 14°♁03'16 | 8°50'14 | |
| | | | | morning rise | 2089 Mar 06 20:08 | 12°♁12'26 | | |
| superior conj | 2086 Oct 03 19:21 | 11°♁04'06 | 1°18'10 | direct | 2089 Mar 24 16:38 | 6°♁07'23 | | |
| minimum elong | 2086 Oct 04 02:30 | 11°♁26'25 | 1°18'02 | greatest brilliancy | 2089 Apr 04 10:42 | 8°♁15'53 | -4.6m | |
| | 2086 Oct 18 22:57 | 0°♁ | | desc. node | 2089 May 01 01:40 | 25°♁58'41 | | |
| evening rise | 2086 Nov 11 21:14 | 29°♁57'01 | | | 2089 May 05 14:05 | 0°♁ | | |
| | 2086 Nov 11 22:11 | 0°♁ | | morning max el | 2089 May 12 23:55 | 6°♁58'17 | 46°02'27 | |
| desc. node | 2086 Nov 14 06:51 | 2°♁57'26 | | | 2089 Jun 04 10:18 | 0°♁ | | |
| | 2086 Dec 05 21:07 | 0°♁ | | | 2089 Jul 01 11:44 | 0°♁ | | |
| | 2086 Dec 29 20:44 | 0°♁ | | | 2089 Jul 27 09:59 | 0°♁ | | |
| | 2087 Jan 22 22:50 | 0°♁ | | | 2089 Aug 21 15:14 | 0°♁ | | |
| | 2087 Feb 16 06:57 | 0°♁ | | asc. node | 2089 Aug 22 05:06 | 0°♁41'44 | | |
| asc. node | 2087 Mar 07 09:59 | 23°♁11'01 | | | 2089 Sep 15 07:34 | 0°♁ | | |
| | 2087 Mar 13 02:44 | 0°♁ | | | 2089 Oct 09 14:21 | 0°♁ | | |
| | 2087 Apr 07 19:28 | 0°♁ | | greatest brilliancy | 2089 Oct 22 08:50 | 15°♁54'55 | -3.9m | |
| | 2087 May 05 06:02 | 0°♁ | | | 2089 Nov 02 14:58 | 0°♁ | | |
| evening max el | 2087 May 16 16:35 | 11°♁28'09 | 45°28'58 | morning set | 2089 Nov 06 14:49 | 5°♁00'25 | | |
| | 2087 Jun 07 05:20 | 0°♁ | | | 2089 Nov 26 12:26 | 0°♁ | | |
| greatest brilliancy | 2087 Jun 20 07:37 | 7°♁54'02 | -4.5m | desc. node | 2089 Dec 11 18:35 | 19°♁11'41 | | |
| desc. node | 2087 Jun 26 23:23 | 10°♁19'26 | | | | | | |
| retrograde | 2087 Jul 04 08:43 | 11°♁19'45 | | superior conj | 2089 Dec 16 23:43 | 25°♁45'16 | 0°-12'-28 | |
| evening set | 2087 Jul 20 06:37 | 6°♁28'59 | | minimum elong | 2089 Dec 16 20:25 | 25°♁34'53 | 0°12'19 | |
| inferior conj | 2087 Jul 25 19:45 | 3°♁08'06 | -6°-6'-42 | behind sun begin | 2089 Dec 16 02:52 | 24°♁39'42 | | |
| minimum elong | 2087 Jul 25 09:51 | 3°♁23'33 | 6°04'40 | behind sun end | 2089 Dec 17 13:57 | 26°♁30'05 | | |
| min. Earth dist. | 2087 Jul 25 18:33 | 3°♁09'59 | 0.28996 AU | max. Earth dist. | 2089 Dec 17 00:38 | 25°♁48'10 | 1.71080 AU | |
| morning rise | 2087 Jul 30 13:01 | 0°♁15'35 | | | 2089 Dec 20 08:41 | 0°♁ | | |
| | 2087 Jul 30 23:50 | 30°♁ | | | 2090 Jan 13 05:04 | 0°♁ | | |
| direct | 2087 Aug 16 11:34 | 24°♁50'42 | | evening rise | 2090 Jan 27 10:36 | 17°♁52'14 | | |
| greatest brilliancy | 2087 Aug 30 16:26 | 28°♁23'02 | -4.5m | | 2090 Feb 06 02:49 | 0°♁ | | |
| | 2087 Sep 02 21:13 | 0°♁ | | | 2090 Mar 02 03:47 | 0°♁ | | |
| morning max el | 2087 Oct 04 23:47 | 25°♁48'17 | 46°12'16 | | 2090 Mar 26 10:15 | 0°♁ | | |
| | 2087 Oct 09 04:42 | 0°♁ | | asc. node | 2090 Apr 03 22:01 | 10°♁24'22 | | |
| asc. node | 2087 Oct 18 02:48 | 9°♁16'35 | | | 2090 Apr 20 00:49 | 0°♁ | | |
| | 2087 Nov 05 20:16 | 0°♁ | | | 2090 May 15 02:49 | 0°♁ | | |
| | 2087 Dec 01 09:36 | 0°♁ | | | 2090 Jun 09 22:18 | 0°♁ | | |

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|---------------------|-------------------|-----------|------------|---------------------|-------------------|-----------|------------|
| | 2090 Jul 07 02:08 | 0°♍ | | desc. node | 2093 Jan 08 06:18 | 5°♁31°05 | |
| desc. node | 2090 Jul 24 11:09 | 17°♍43'20 | | morning set | 2093 Jan 21 18:43 | 22°♁29°43 | |
| evening max el | 2090 Jul 26 20:48 | 20°♍02'11 | 45°38'35 | | 2093 Jan 27 18:08 | 0°≈ | |
| | 2090 Aug 06 19:17 | 0°♌ | | | 2093 Feb 20 16:19 | 0°✠ | |
| greatest brilliancy | 2090 Sep 02 17:32 | 17°♌42'23 | -4.5m | | | | |
| retrograde | 2090 Sep 13 15:52 | 19°♌50'49 | | superior conj | 2093 Mar 04 00:36 | 14°♋11'37 | -1°-26'-4 |
| evening set | 2090 Oct 01 05:18 | 14°♌06'59 | | minimum elong | 2093 Mar 03 23:25 | 14°♋07'58 | 1°26'05 |
| inferior conj | 2090 Oct 04 17:21 | 11°♌59'43 | -8°-4'-39 | max. Earth dist. | 2093 Mar 07 21:55 | 19°♋03'01 | 1.71848 AU |
| minimum elong | 2090 Oct 05 01:00 | 11°♌47'55 | 8°03'45 | | 2093 Mar 16 16:38 | 0°♍ | |
| min. Earth dist. | 2090 Oct 05 15:29 | 11°♌25'38 | 0.27832 AU | | 2093 Apr 09 20:19 | 0°♋ | |
| morning rise | 2090 Oct 08 20:20 | 9°♌29'37 | | evening rise | 2093 Apr 12 16:08 | 3°♋29°43 | |
| direct | 2090 Oct 25 19:49 | 3°♌57'49 | | asc. node | 2093 May 01 09:54 | 26°♋36°04 | |
| greatest brilliancy | 2090 Nov 09 01:27 | 7°♌37'36 | -4.6m | | 2093 May 04 04:17 | 0°♌ | |
| asc. node | 2090 Nov 14 14:34 | 10°♌42'04 | | | 2093 May 28 17:03 | 0°♍ | |
| | 2090 Dec 08 06:20 | 0°♍ | | | 2093 Jun 22 11:23 | 0°♎ | |
| morning max el | 2090 Dec 15 11:02 | 7°♍07'58 | 46°52'37 | | 2093 Jul 17 13:15 | 0°♏ | |
| | 2091 Jan 05 16:42 | 0°♎ | | | 2093 Aug 12 02:54 | 0°♌ | |
| | 2091 Jan 31 15:17 | 0°♁ | | desc. node | 2093 Aug 20 23:04 | 10°♌10°30 | |
| | 2091 Feb 25 17:21 | 0°≈ | | | 2093 Sep 07 13:11 | 0°♍ | |
| desc. node | 2091 Mar 06 04:07 | 10°≈12'43 | | | 2093 Oct 05 20:36 | 0°♎ | |
| | 2091 Mar 22 11:10 | 0°♋ | | evening max el | 2093 Oct 07 22:59 | 2°♎04'32 | 46°44'02 |
| | 2091 Apr 16 01:44 | 0°♍ | | | 2093 Nov 12 00:02 | 0°♁ | |
| | 2091 May 10 15:18 | 0°♋ | | greatest brilliancy | 2093 Nov 15 19:21 | 1°♁43'06 | -4.6m |
| | 2091 Jun 04 04:24 | 0°♌ | | retrograde | 2093 Nov 27 02:27 | 4°♁05'38 | |
| morning set | 2091 Jun 18 15:58 | 17°♌43'28 | | evening set | 2093 Dec 11 08:40 | 0°♁02'58 | |
| asc. node | 2091 Jun 27 07:27 | 28°♌19'08 | | | 2093 Dec 11 10:55 | 30°♎ | |
| | 2091 Jun 28 16:22 | 0°♍ | | asc. node | 2093 Dec 12 02:22 | 29°♎39'10 | |
| max. Earth dist. | 2091 Jul 22 16:55 | 29°♍31'09 | 1.73420 AU | inferior conj | 2093 Dec 17 14:48 | 26°♎24'49 | 1°25'57 |
| | 2091 Jul 23 02:17 | 0°♎ | | minimum elong | 2093 Dec 17 11:32 | 26°♎29'47 | 1°24'53 |
| | | | | min. Earth dist. | 2093 Dec 17 10:42 | 26°♎31'02 | 0.26432 AU |
| superior conj | 2091 Jul 25 02:56 | 2°♎29'47 | 0°59'43 | morning rise | 2093 Dec 23 14:24 | 22°♎55'41 | |
| minimum elong | 2091 Jul 24 18:09 | 2°♎02'44 | 0°59'24 | direct | 2094 Jan 06 23:56 | 18°♎47'15 | |
| | 2091 Aug 16 09:52 | 0°♏ | | greatest brilliancy | 2094 Jan 18 22:05 | 21°♎27'20 | -4.7m |
| evening rise | 2091 Aug 30 01:56 | 16°♏54'23 | | | 2094 Feb 02 05:14 | 0°♁ | |
| | 2091 Sep 09 15:48 | 0°♌ | | morning max el | 2094 Feb 26 09:20 | 21°♁34'30 | 46°47'17 |
| | 2091 Oct 03 21:16 | 0°♍ | | | 2094 Mar 06 14:33 | 0°≈ | |
| desc. node | 2091 Oct 16 20:57 | 16°♍04'20 | | desc. node | 2094 Apr 02 16:00 | 29°≈40'56 | |
| | 2091 Oct 28 03:19 | 0°♎ | | | 2094 Apr 02 22:43 | 0°♋ | |
| | 2091 Nov 21 10:50 | 0°♁ | | | 2094 Apr 28 22:13 | 0°♍ | |
| | 2091 Dec 15 21:48 | 0°≈ | | | 2094 May 24 07:59 | 0°♋ | |
| | 2092 Jan 09 17:19 | 0°♋ | | | 2094 Jun 18 10:19 | 0°♌ | |
| | 2092 Feb 04 09:11 | 0°♍ | | | 2094 Jul 13 06:47 | 0°♍ | |
| asc. node | 2092 Feb 07 00:07 | 2°♍58'16 | | asc. node | 2094 Jul 24 19:19 | 14°♍00'44 | |
| | 2092 Mar 03 04:38 | 0°♋ | | | 2094 Aug 06 21:14 | 0°♎ | |
| evening max el | 2092 Mar 03 13:35 | 0°♋22'25 | 46°26'19 | morning set | 2094 Aug 25 12:34 | 22°♎56'08 | |
| greatest brilliancy | 2092 Apr 07 21:56 | 28°♋32'15 | -4.6m | | 2094 Aug 31 05:44 | 0°♏ | |
| | 2092 Apr 11 05:23 | 0°♌ | | | 2094 Sep 24 09:24 | 0°♌ | |
| retrograde | 2092 Apr 22 11:10 | 2°♌20'05 | | max. Earth dist. | 2094 Sep 28 07:37 | 4°♌53'34 | 1.72162 AU |
| | 2092 May 03 05:50 | 30°♋ | | | | | |
| evening set | 2092 May 08 04:14 | 27°♋31'54 | | superior conj | 2094 Oct 01 10:50 | 8°♌48'07 | 1°19'27 |
| inferior conj | 2092 May 13 20:17 | 24°♋05'05 | 3°24'41 | minimum elong | 2094 Oct 01 17:23 | 9°♌08'30 | 1°19'20 |
| minimum elong | 2092 May 14 03:15 | 23°♋54'06 | 3°22'46 | | 2094 Oct 18 10:04 | 0°♍ | |
| min. Earth dist. | 2092 May 13 21:03 | 24°♋03'53 | 0.28695 AU | evening rise | 2094 Nov 09 09:18 | 27°♍29'20 | |
| morning rise | 2092 May 20 02:29 | 20°♋18'25 | | | 2094 Nov 11 09:26 | 0°♎ | |
| desc. node | 2092 May 28 13:26 | 16°♋44'56 | | desc. node | 2094 Nov 13 08:48 | 2°♎28'17 | |
| direct | 2092 Jun 04 05:39 | 15°♋51'45 | | | 2094 Dec 05 08:32 | 0°♁ | |
| greatest brilliancy | 2092 Jun 17 01:08 | 18°♋44'34 | -4.5m | | 2094 Dec 29 08:20 | 0°≈ | |
| | 2092 Jul 05 04:17 | 0°♌ | | | 2095 Jan 22 10:42 | 0°♋ | |
| morning max el | 2092 Jul 22 22:47 | 15°♌30'59 | 45°43'38 | | 2095 Feb 15 19:15 | 0°♍ | |
| | 2092 Aug 06 11:03 | 0°♍ | | asc. node | 2095 Mar 06 12:06 | 22°♍38'44 | |
| | 2092 Sep 02 23:30 | 0°♎ | | | 2095 Mar 12 15:51 | 0°♋ | |
| asc. node | 2092 Sep 18 17:07 | 18°♎07'52 | | | 2095 Apr 07 10:14 | 0°♌ | |
| | 2092 Sep 28 18:35 | 0°♏ | | | 2095 May 05 01:02 | 0°♍ | |
| | 2092 Oct 23 15:04 | 0°♌ | | evening max el | 2095 May 14 09:08 | 9°♍18'36 | 45°29'59 |
| | 2092 Nov 16 22:28 | 0°♍ | | | 2095 Jun 07 23:25 | 0°♎ | |
| | 2092 Dec 10 23:04 | 0°♎ | | greatest brilliancy | 2095 Jun 17 23:04 | 5°♎44'04 | -4.5m |
| | 2093 Jan 03 20:51 | 0°♁ | | desc. node | 2095 Jun 26 01:21 | 8°♎30'33 | |

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| retrograde | 2095 Jul 02 00:51 | 9°♁10'19 | | superior conj | 2097 Dec 14 09:52 | 23°♁11'15 | 0°-8'-30 |
| evening set | 2095 Jul 17 20:24 | 4°♁23'18 | | minimum elong | 2097 Dec 14 07:37 | 23°♁04'09 | 0°08'25 |
| inferior conj | 2095 Jul 23 12:01 | 0°♁58'30 | -5°-52'-27 | behind sun begin | 2097 Dec 13 08:49 | 21°♁52'25 | |
| minimum elong | 2095 Jul 23 02:11 | 1°♁13'52 | 5°50'21 | behind sun end | 2097 Dec 15 06:25 | 24°♁15'53 | |
| min. Earth dist. | 2095 Jul 23 10:16 | 1°♁01'14 | 0.29002 AU | max. Earth dist. | 2097 Dec 14 03:14 | 22°♁50'21 | 1.71094 AU |
| | 2095 Jul 25 01:34 | 30°☾ | | | 2097 Dec 19 19:49 | 0°☾ | |
| morning rise | 2095 Jul 28 07:57 | 28°☾01'51 | | | 2098 Jan 12 16:14 | 0°☾ | |
| direct | 2095 Aug 14 04:17 | 22°☾41'17 | | evening rise | 2098 Jan 24 20:31 | 15°☾17'39 | |
| greatest brilliancy | 2095 Aug 28 06:33 | 26°☾10'25 | -4.5m | | 2098 Feb 05 14:02 | 0°☾ | |
| | 2095 Sep 04 06:38 | 0°♁ | | | 2098 Mar 01 15:04 | 0°♁ | |
| morning max el | 2095 Oct 02 14:40 | 23°♁32'41 | 46°10'35 | | 2098 Mar 25 21:42 | 0°♁ | |
| | 2095 Oct 09 01:01 | 0°♁ | | asc. node | 2098 Apr 03 00:02 | 9°♁55'12 | |
| asc. node | 2095 Oct 17 04:51 | 8°♁33'25 | | | 2098 Apr 19 12:38 | 0°♁ | |
| | 2095 Nov 05 11:39 | 0°♁ | | | 2098 May 14 15:23 | 0°☾ | |
| | 2095 Nov 30 23:08 | 0°♁ | | | 2098 Jun 09 12:23 | 0°♁ | |
| | 2095 Dec 25 14:36 | 0°♁ | | | 2098 Jul 06 19:43 | 0°♁ | |
| | 2096 Jan 18 21:21 | 0°☾ | | desc. node | 2098 Jul 23 13:20 | 16°♁54'35 | |
| desc. node | 2096 Feb 05 18:19 | 22°☾12'13 | | evening max el | 2098 Jul 24 10:01 | 17°♁44'08 | 45°37'10 |
| | 2096 Feb 12 00:48 | 0°☾ | | | 2098 Aug 07 01:45 | 0°♁ | |
| | 2096 Mar 07 03:41 | 0°♁ | | greatest brilliancy | 2098 Aug 31 05:11 | 15°♁23'08 | -4.5m |
| | 2096 Mar 31 07:35 | 0°♁ | | retrograde | 2098 Sep 11 05:33 | 17°♁33'50 | |
| morning set | 2096 Apr 07 03:48 | 8°♁28'37 | | evening set | 2098 Sep 28 21:36 | 11°♁45'49 | |
| | 2096 Apr 24 13:28 | 0°♁ | | inferior conj | 2098 Oct 02 07:38 | 9°♁41'41 | -8°-12'-20 |
| | | | | minimum elong | 2098 Oct 02 14:40 | 9°♁30'51 | 8°11'35 |
| superior conj | 2096 May 15 01:40 | 25°♁17'19 | 0°-32'-11 | min. Earth dist. | 2098 Oct 03 05:34 | 9°♁07'56 | 0.27901 AU |
| minimum elong | 2096 May 15 08:13 | 25°♁37'31 | 0°31'53 | morning rise | 2098 Oct 06 07:21 | 7°♁16'27 | |
| max. Earth dist. | 2096 May 16 22:43 | 27°♁36'03 | 1.73299 AU | direct | 2098 Oct 23 10:23 | 1°♁38'33 | |
| | 2096 May 18 21:30 | 0°♁ | | greatest brilliancy | 2098 Nov 06 18:34 | 5°♁21'02 | -4.6m |
| asc. node | 2096 May 28 21:40 | 12°♁18'46 | | asc. node | 2098 Nov 13 16:31 | 9°♁17'58 | |
| | 2096 Jun 12 07:10 | 0°☾ | | | 2098 Dec 08 07:08 | 0°♁ | |
| evening rise | 2096 Jun 20 21:49 | 10°☾34'18 | | morning max el | 2098 Dec 13 01:31 | 4°♁45'58 | 46°51'43 |
| | 2096 Jul 06 17:56 | 0°♁ | | | 2099 Jan 05 09:38 | 0°♁ | |
| | 2096 Jul 31 05:58 | 0°♁ | | | 2099 Jan 31 05:34 | 0°☾ | |
| | 2096 Aug 24 20:21 | 0°♁ | | | 2099 Feb 25 06:20 | 0°☾ | |
| desc. node | 2096 Sep 17 11:05 | 28°♁36'36 | | desc. node | 2099 Mar 05 06:10 | 9°☾40'35 | |
| | 2096 Sep 18 14:44 | 0°♁ | | | 2099 Mar 21 23:19 | 0°♁ | |
| | 2096 Oct 13 15:15 | 0°♁ | | | 2099 Apr 15 13:20 | 0°♁ | |
| | 2096 Nov 08 02:18 | 0°☾ | | | 2099 May 10 02:28 | 0°♁ | |
| | 2096 Dec 04 13:09 | 0°☾ | | | 2099 Jun 03 15:16 | 0°♁ | |
| evening max el | 2096 Dec 19 16:06 | 16°☾03'01 | 47°17'47 | morning set | 2099 Jun 16 09:51 | 15°♁38'11 | |
| | 2097 Jan 03 04:01 | 0°♁ | | asc. node | 2099 Jun 26 09:33 | 27°♁52'40 | |
| asc. node | 2097 Jan 08 14:21 | 4°♁40'16 | | | 2099 Jun 28 03:05 | 0°☾ | |
| greatest brilliancy | 2097 Jan 26 13:21 | 16°♁35'13 | -4.7m | max. Earth dist. | 2099 Jul 20 14:41 | 27°☾37'32 | 1.73446 AU |
| retrograde | 2097 Feb 08 14:18 | 19°♁44'56 | | | 2099 Jul 22 12:58 | 0°♁ | |
| evening set | 2097 Feb 26 10:08 | 13°♁34'15 | | | | | |
| min. Earth dist. | 2097 Feb 28 18:58 | 12°♁05'59 | 0.27612 AU | superior conj | 2099 Jul 22 21:22 | 0°♁25'50 | 0°57'27 |
| inferior conj | 2097 Mar 01 11:31 | 11°♁39'59 | 8°49'25 | minimum elong | 2099 Jul 22 12:36 | 29°☾58'52 | 0°57'08 |
| minimum elong | 2097 Mar 01 09:49 | 11°♁42'39 | 8°49'23 | | 2099 Aug 15 20:37 | 0°♁ | |
| morning rise | 2097 Mar 04 09:43 | 9°♁51'09 | | evening rise | 2099 Aug 27 19:38 | 14°♁47'18 | |
| direct | 2097 Mar 22 05:54 | 3°♁46'29 | | | 2099 Sep 09 02:41 | 0°♁ | |
| greatest brilliancy | 2097 Apr 01 23:18 | 5°♁53'55 | -4.6m | | 2099 Oct 03 08:23 | 0°♁ | |
| desc. node | 2097 Apr 30 03:41 | 24°♁58'41 | | desc. node | 2099 Oct 15 22:57 | 15°♁35'34 | |
| | 2097 May 05 16:13 | 0°♁ | | | 2099 Oct 27 14:46 | 0°♁ | |
| morning max el | 2097 May 10 12:56 | 4°♁37'36 | 46°03'48 | | 2099 Nov 20 22:45 | 0°☾ | |
| | 2097 Jun 04 03:15 | 0°♁ | | | 2099 Dec 15 10:23 | 0°☾ | |
| | 2097 Jul 01 01:40 | 0°♁ | | | 2100 Jan 09 06:58 | 0°♁ | |
| | 2097 Jul 26 22:28 | 0°☾ | | | 2100 Feb 04 00:59 | 0°♁ | |
| | 2097 Aug 21 02:56 | 0°♁ | | asc. node | 2100 Feb 06 02:12 | 2°♁18'45 | |
| asc. node | 2097 Aug 21 07:15 | 0°♁13'02 | | evening max el | 2100 Mar 02 04:36 | 28°♁05'52 | 46°28'48 |
| | 2097 Sep 14 18:52 | 0°♁ | | | 2100 Mar 04 02:34 | 0°♁ | |
| | 2097 Oct 09 01:28 | 0°♁ | | greatest brilliancy | 2100 Apr 06 13:58 | 26°♁20'16 | -4.6m |
| greatest brilliancy | 2097 Oct 25 04:59 | 20°♁08'15 | -3.9m | | 2100 Apr 18 09:36 | 0°♁ | |
| | 2097 Nov 02 02:03 | 0°♁ | | retrograde | 2100 Apr 21 04:02 | 0°♁09'05 | |
| morning set | 2097 Nov 04 04:10 | 2°♁37'04 | | | 2100 Apr 23 21:35 | 30°♁ | |
| | 2097 Nov 25 23:31 | 0°♁ | | evening set | 2100 May 06 22:33 | 25°♁17'26 | |
| desc. node | 2097 Dec 10 20:36 | 18°♁43'01 | | inferior conj | 2100 May 12 12:20 | 21°♁53'54 | 3°43'17 |
| | | | | minimum elong | 2100 May 12 19:50 | 21°♁42'07 | 3°41'16 |

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| min. Earth dist. | 2100 May 12 12:56 | 21° ♁ 52'58 | 0.28675 AU |
| morning rise | 2100 May 18 17:23 | 18° ♁ 09'14 | |
| desc. node | 2100 May 28 15:25 | 14° ♁ 13'46 | |
| direct | 2100 Jun 02 21:20 | 13° ♁ 40'51 | |
| greatest brilliancy | 2100 Jun 15 15:59 | 16° ♁ 33'21 | -4.5m |
| | 2100 Jul 06 13:35 | 0° ♁ | |
| morning max el | 2100 Jul 21 15:30 | 13° ♁ 23'20 | 45°43'30 |
| | 2100 Aug 07 04:49 | 0° ♁ | |