superior conj	2000 Jun 11 10:31	20°♊48'01	0°06'07
minimum elong	2000 Jun 11 09:15	20°♊44'07	0°06'03
behind sun begin	2000 Jun 10 12:07	19°♊39'13	
behind sun end	2000 Jun 12 06:22	21°♊49'02	
max. Earth dist.	2000 Jun 11 07:54	20°♊39'59	1.73566 AU
	2000 Jun 18 22:15	0°♋	
	2000 Jul 13 08:02	0°♌	
evening rise	2000 Jul 17 11:57	5°♌07'05	
	2000 Aug 06 17:32	0°♍	
	2000 Aug 31 03:35	0°♎	
	2000 Sep 24 15:26	0°♏	
desc. node	2000 Sep 28 10:29	4°♏38'07	
	2000 Oct 19 06:18	0°♐	
	2000 Nov 13 02:14	0°♑	
	2000 Dec 08 08:48	0°♒	
	2001 Jan 03 18:14	0°♓	
evening max el	2001 Jan 17 06:09	14°♓17'16	47°05'36
asc. node	2001 Jan 19 13:39	16°♓37'29	
	2001 Feb 02 19:14	0°♈	
greatest brilliancy	2001 Feb 23 07:43	14°♈14'59	-4.6m
retrograde	2001 Mar 09 01:07	17°♈43'46	
evening set	2001 Mar 26 16:10	11°♈42'32	
inferior conj	2001 Mar 30 04:17	9°♈31'43	8°01'17
minimum elong	2001 Mar 30 11:43	9°♈19'59	8°00'24
min. Earth dist.	2001 Mar 29 22:20	9°♈41'04	0.28187 AU
morning rise	2001 Apr 03 07:28	6°♈58'34	
direct	2001 Apr 20 04:34	1°♈27'23	
greatest brilliancy	2001 May 01 18:29	3°♈52'36	-4.5m
desc. node	2001 May 11 03:00	8°♈41'20	
	2001 Jun 06 10:25	0°♉	
morning max el	2001 Jun 08 04:41	1°♉40'35	45°50'18
	2001 Jul 05 16:44	0°♊	
	2001 Aug 01 12:18	0°♋	
	2001 Aug 27 04:12	0°♌	
asc. node	2001 Sep 01 06:40	6°♌04'48	
	2001 Sep 21 02:09	0°♍	
	2001 Oct 15 11:42	0°♎	
	2001 Nov 08 13:28	0°♏	
	2001 Dec 02 11:11	0°♐	
morning set	2001 Dec 03 22:56	1°♐52'22	
desc. node	2001 Dec 21 19:56	24°♐21'48	
	2001 Dec 26 07:25	0°♑	
superior conj	2002 Jan 14 11:32	24°♑07'22	0°-52'-41
minimum elong	2002 Jan 13 23:57	23°♑30'55	0°52'14
max. Earth dist.	2002 Jan 16 09:00	26°♑30'18	1.71147 AU
	2002 Jan 19 03:42	0°♒	
	2002 Feb 12 01:18	0°♓	
evening rise	2002 Feb 24 14:23	15°♓41'48	
	2002 Mar 08 01:42	0°♈	
	2002 Apr 01 06:39	0°♉	
asc. node	2002 Apr 13 23:28	15°♉36'58	
	2002 Apr 25 17:57	0°♊	
	2002 May 20 13:27	0°♋	
	2002 Jun 14 20:16	0°♌	
	2002 Jul 10 21:09	0°♍	
desc. node	2002 Aug 03 12:37	25°♍56'42	
	2002 Aug 07 09:09	0°♎	
evening max el	2002 Aug 22 13:18	15°♎15'19	46°00'16
	2002 Sep 08 03:05	0°♏	
greatest brilliancy	2002 Sep 30 02:22	13°♏32'58	-4.6m
retrograde	2002 Oct 10 18:35	15°♏36'35	
evening set	2002 Oct 26 17:04	10°♏43'53	
inferior conj	2002 Oct 31 12:06	7°♏53'26	-5°-41'-31
minimum elong	2002 Oct 31 22:27	7°♏37'40	5°39'01
min. Earth dist.	2002 Nov 01 08:07	7°♏22'57	0.27088 AU
morning rise	2002 Nov 06 03:21	4°♏34'20	
direct	2002 Nov 21 07:13	0°♏03'13	
asc. node	2002 Nov 24 15:57	0°♏16'50	
greatest brilliancy	2002 Dec 04 21:21	3°♏28'28	-4.7m
	2003 Jan 07 13:07	0°♐	
morning max el	2003 Jan 11 02:27	3°♐34'33	46°57'41
	2003 Feb 04 13:27	0°♑	
	2003 Mar 02 12:40	0°♒	
desc. node	2003 Mar 16 05:37	16°♒13'48	
	2003 Mar 27 18:14	0°♓	
	2003 Apr 21 16:18	0°♈	
	2003 May 16 10:58	0°♉	
	2003 Jun 10 03:32	0°♊	
	2003 Jul 04 17:39	0°♋	
asc. node	2003 Jul 07 08:53	3°♋13'29	
morning set	2003 Jul 13 09:02	10°♋34'52	
	2003 Jul 29 04:25	0°♌	
max. Earth dist.	2003 Aug 15 16:05	21°♌34'19	1.73042 AU
superior conj	2003 Aug 18 18:05	25°♌23'02	1°18'47
minimum elong	2003 Aug 18 11:53	25°♌03'53	1°18'41
	2003 Aug 22 11:36	0°♍	
	2003 Sep 15 15:58	0°♎	
evening rise	2003 Sep 24 10:22	10°♎53'51	
	2003 Oct 09 18:56	0°♏	
desc. node	2003 Oct 26 22:22	21°♏19'37	
	2003 Nov 02 21:42	0°♐	
	2003 Nov 27 01:07	0°♑	
	2003 Dec 21 06:32	0°♒	
	2004 Jan 14 17:16	0°♓	
	2004 Feb 08 16:20	0°♈	
asc. node	2004 Feb 17 01:36	9°♈50'16	
	2004 Mar 05 18:12	0°♉	
evening max el	2004 Mar 29 16:40	25°♉14'45	46°00'16
	2004 Apr 03 14:57	0°♊	
greatest brilliancy	2004 May 03 04:32	22°♊19'38	-4.5m
retrograde	2004 May 17 22:28	26°♊08'18	
evening set	2004 Jun 02 00:07	21°♊43'16	
desc. node	2004 Jun 07 14:50	18°♊21'26	
inferior conj	2004 Jun 08 08:43	17°♊53'21	0°-10'-33
minimum elong	2004 Jun 08 08:20	17°♊53'58	0°10'27
transit begin	2004 Jun 08 05:14	17°♊58'50	
transit end	2004 Jun 08 11:26	17°♊49'05	
min. Earth dist.	2004 Jun 08 06:58	17°♊56'06	0.28888 AU
morning rise	2004 Jun 14 16:51	14°♊04'50	
direct	2004 Jun 29 23:15	9°♊37'32	
greatest brilliancy	2004 Jul 13 06:12	12°♊43'26	-4.5m
	2004 Aug 07 11:02	0°♋	
morning max el	2004 Aug 17 18:31	9°♋26'32	45°48'58
	2004 Sep 06 22:16	0°♌	
asc. node	2004 Sep 28 18:28	24°♌17'27	
	2004 Oct 03 17:20	0°♍	
	2004 Oct 29 00:39	0°♎	
	2004 Nov 22 13:31	0°♏	
	2004 Dec 16 17:10	0°♐	
	2005 Jan 09 16:56	0°♑	
desc. node	2005 Jan 18 07:49	10°♑47'55	
	2005 Feb 02 15:42	0°♒	
morning set	2005 Feb 19 04:05	20°♒40'30	
	2005 Feb 26 15:07	0°♓	
	2005 Mar 22 16:25	0°♈	
superior conj	2005 Mar 31 03:30	10°♈31'04	-1°-18'-26
minimum elong	2005 Mar 31 11:32	10°♈56'00	1°18'16
max. Earth dist.	2005 Apr 04 02:17	15°♈25'15	1.72462 AU
	2005 Apr 15 20:37	0°♉	
evening rise	2005 May 08 16:49	28°♉11'02	
	2005 May 10 04:14	0°♊	

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

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

	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°♌		
	2016 Jan	23	20:31	0°♑					2018 Jul	10	02:32	0°♍		
desc. node	2016 Feb	14	21:40	27°♑11’18				desc. node	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°♏		
	2016 Apr	30	00:35	0°♉				greatest brilliancy	2018 Sep	25	04:25	8°♏48’50	-4.6m	
morning set	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	

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

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

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

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

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

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

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

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

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

	2060 May 27 15:29	30°♉	
morning rise	2060 May 29 12:38	28°♉55’58	
desc. node	2060 Jun 01 05:16	27°♉33’28	
direct	2060 Jun 13 15:25	24°♉32’04	
greatest brilliancy	2060 Jun 26 13:51	27°♉29’16	-4.5m
	2060 Jul 01 16:11	0°♊	
morning max el	2060 Aug 01 09:32	24°♊16’20	45°44’45
	2060 Aug 07 06:41	0°♋	
	2060 Sep 04 13:05	0°♌	
asc. node	2060 Sep 22 08:49	20°♌19’13	
	2060 Sep 30 15:09	0°♍	
	2060 Oct 25 14:56	0°♎	
	2060 Nov 19 00:04	0°♏	
	2060 Dec 13 01:37	0°♐	
	2061 Jan 05 23:59	0°♑	
desc. node	2061 Jan 11 22:13	7°♑26’13	
	2061 Jan 29 21:41	0°♒	
morning set	2061 Feb 01 03:52	2°♒49’54	
	2061 Feb 22 20:15	0°♓	
superior conj	2061 Mar 13 23:34	23°♓54’22	-1°-25’-27
minimum elong	2061 Mar 14 02:21	24°♓03’03	1°25’27
max. Earth dist.	2061 Mar 18 03:39	29°♓06’15	1.72074 AU
	2061 Mar 18 20:54	0°♈	
	2061 Apr 12 00:46	0°♉	
evening rise	2061 Apr 22 05:52	12°♉37’22	
asc. node	2061 May 05 01:42	28°♉25’19	
	2061 May 06 08:31	0°♊	
	2061 May 30 20:30	0°♋	
	2061 Jun 24 13:16	0°♌	
	2061 Jul 19 12:22	0°♍	
	2061 Aug 13 21:14	0°♎	
desc. node	2061 Aug 24 14:48	12°♎29’08	
	2061 Sep 08 22:23	0°♏	
	2061 Oct 06 07:57	0°♐	
evening max el	2061 Oct 17 19:12	11°♐42’48	46°52’48
	2061 Nov 07 00:38	0°♑	
greatest brilliancy	2061 Nov 25 14:03	11°♑35’40	-4.7m
retrograde	2061 Dec 07 01:32	14°♑02’35	
asc. node	2061 Dec 15 18:18	12°♑29’54	
evening set	2061 Dec 21 10:09	9°♑57’13	
min. Earth dist.	2061 Dec 27 04:12	6°♑35’32	0.26454 AU
inferior conj	2061 Dec 27 14:11	6°♑20’16	3°01’35
minimum elong	2061 Dec 27 07:35	6°♑30’22	2°59’33
morning rise	2062 Jan 02 05:14	3°♑01’34	
	2062 Jan 09 01:52	30°♐	
direct	2062 Jan 16 23:01	28°♐43’42	
	2062 Jan 25 02:24	0°♑	
greatest brilliancy	2062 Jan 28 10:04	1°♑10’59	-4.7m
	2062 Mar 06 22:37	0°♒	
morning max el	2062 Mar 08 03:02	1°♒10’31	46°42’01
	2062 Apr 04 06:31	0°♓	
desc. node	2062 Apr 06 07:46	2°♓17’05	
	2062 Apr 30 15:33	0°♈	
	2062 May 26 06:24	0°♉	
	2062 Jun 20 11:43	0°♊	
	2062 Jul 15 09:58	0°♋	
asc. node	2062 Jul 28 11:06	15°♋50’16	
	2062 Aug 09 01:25	0°♌	
	2062 Sep 02 10:19	0°♍	
morning set	2062 Sep 03 16:34	1°♍33’33	
	2062 Sep 26 13:59	0°♎	
max. Earth dist.	2062 Oct 07 18:26	13°♎57’34	1.71960 AU
superior conj	2062 Oct 10 21:44	17°♎52’50	1°13’31
minimum elong	2062 Oct 11 06:28	18°♎20’06	1°13’19
	2062 Oct 20 14:20	0°♏	

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

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

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

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

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

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

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

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

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°♋	