opposition	1600 Feb 06 05:54	16°♌49'42	1°03'15
min. Earth dist.	1600 Feb 05 23:20	16°♌51'52	4.36797 AU
	1600 Feb 20 09:11	15°℞♌	
direct	1600 Apr 07 10:55	11°♌46'53	
	1600 May 24 19:17	15°♌	
evening set	1600 Aug 12 07:36	29°♌34'14	
	1600 Aug 14 07:25	0°♍	
conjunction	1600 Aug 25 15:03	2°♍27'10	0°55'36
minimum elong	1600 Aug 25 15:01	2°♍27'09	0°55'35
max. Earth dist.	1600 Aug 25 11:01	2°♍24'58	6.41278 AU
morning rise	1600 Sep 07 19:48	5°♍18'42	
retrograde	1601 Jan 06 12:19	22°♍14'22	
opposition	1601 Mar 07 20:05	17°♍19'06	1°31'57
min. Earth dist.	1601 Mar 08 07:13	17°♍15'28	4.44158 AU
direct	1601 May 09 01:08	12°♍16'08	
evening set	1601 Sep 12 19:08	29°♍49'01	
	1601 Sep 13 15:35	0°♎	
conjunction	1601 Sep 25 19:07	2°♎37'25	1°07'01
minimum elong	1601 Sep 25 19:06	2°♎37'25	1°07'01
max. Earth dist.	1601 Sep 24 13:49	2°♎21'33	6.45136 AU
morning rise	1601 Oct 08 16:10	5°♎24'26	
retrograde	1602 Feb 05 18:47	22°♎09'58	
opposition	1602 Apr 07 09:43	17°♎17'12	1°35'40
min. Earth dist.	1602 Apr 08 13:06	17°♎08'26	4.44409 AU
direct	1602 Jun 09 03:33	12°♎15'11	
evening set	1602 Oct 13 11:53	29°♎50'06	
	1602 Oct 14 06:05	0°♏	
max. Earth dist.	1602 Oct 24 07:32	2°♏11'58	6.41688 AU
conjunction	1602 Oct 26 06:21	2°♏37'38	1°00'17
minimum elong	1602 Oct 26 06:22	2°♏37'39	1°00'16
morning rise	1602 Nov 07 22:33	5°♏24'10	
	1602 Dec 25 03:02	15°♏	
retrograde	1603 Mar 09 00:07	22°♏28'00	
opposition	1603 May 08 20:31	17°♏36'09	1°13'38
min. Earth dist.	1603 May 10 08:22	17°♏24'43	4.37503 AU
	1603 May 30 08:39	15°℞♏	
direct	1603 Jul 10 09:52	12°♏35'52	
	1603 Aug 20 05:33	15°♏	
	1603 Nov 11 02:32	0°♐	
evening set	1603 Nov 13 06:53	0°♐29'06	
max. Earth dist.	1603 Nov 23 21:22	2°♐51'36	6.31836 AU
conjunction	1603 Nov 25 23:01	3°♐19'31	0°36'38
minimum elong	1603 Nov 25 23:03	3°♐19'32	0°36'38
morning rise	1603 Dec 08 13:38	6°♐09'28	
retrograde	1604 Apr 10 00:39	23°♐57'50	
opposition	1604 Jun 09 22:33	19°♐05'21	0°29'21
min. Earth dist.	1604 Jun 11 08:44	18°♐54'27	4.25243 AU
direct	1604 Aug 10 15:42	14°♐07'31	
	1604 Dec 02 22:46	0°♑	
evening set	1604 Dec 14 02:27	2°♑32'22	
max. Earth dist.	1604 Dec 25 02:07	5°♑04'49	6.18181 AU
conjunction	1604 Dec 26 18:54	5°♑28'28	0°01'09
minimum elong	1604 Dec 26 18:54	5°♑28'28	0°01'08
behind sun begin	1604 Dec 26 10:55	5°♑23'51	
behind sun end	1604 Dec 27 02:54	5°♑33'05	
desc. node	1605 Jan 07 05:00	8°♑07'16	
morning rise	1605 Jan 08 11:38	8°♑24'56	
retrograde	1605 May 15 09:04	27°♑17'06	
opposition	1605 Jul 15 02:07	22°♑22'20	-0°27'12
min. Earth dist.	1605 Jul 15 23:16	22°♑15'30	4.11108 AU
direct	1605 Sep 13 11:46	17°♑26'59	
	1605 Dec 19 09:08	0°♒	
evening set	1606 Jan 16 16:13	6°♒29'24	
conjunction	1606 Jan 29 12:15	9°♒32'39	-0°36'20
minimum elong	1606 Jan 29 12:13	9°♒32'37	0°36'20
max. Earth dist.	1606 Jan 28 20:39	9°♒23'21	6.04837 AU
morning rise	1606 Feb 11 09:48	12°♒36'59	
	1606 Feb 21 12:59	15°♒	
	1606 May 11 16:30	0°♓	
retrograde	1606 Jun 21 18:41	2°♓34'42	
	1606 Aug 02 01:54	30°℞♒	
opposition	1606 Aug 21 01:46	27°♒36'25	-1°17'31
min. Earth dist.	1606 Aug 21 01:54	27°♒36'22	3.99802 AU
direct	1606 Oct 19 00:59	22°♒42'44	
	1606 Dec 27 18:03	0°♓	
evening set	1607 Feb 21 07:18	12°♓15'28	
conjunction	1607 Mar 06 09:24	15°♓25'08	-1°01'48
minimum elong	1607 Mar 06 09:23	15°♓25'07	1°01'48
max. Earth dist.	1607 Mar 07 00:49	15°♓34'27	5.96572 AU
morning rise	1607 Mar 19 14:34	18°♓36'27	
	1607 May 09 11:52	0°♈	
retrograde	1607 Jul 29 21:37	9°♈13'18	
opposition	1607 Sep 27 20:09	4°♈11'03	-1°39'26
min. Earth dist.	1607 Sep 26 22:12	4°♈18'26	3.95613 AU
	1607 Nov 04 10:12	30°℞♓	
direct	1607 Nov 24 20:24	29°♓17'04	
	1607 Dec 15 07:42	0°♈	
evening set	1608 Mar 29 10:57	18°♈58'22	
conjunction	1608 Apr 11 21:08	22°♈11'36	-1°03'35
minimum elong	1608 Apr 11 21:10	22°♈11'37	1°03'35
max. Earth dist.	1608 Apr 13 17:46	22°♈38'25	5.96785 AU
morning rise	1608 Apr 25 10:17	25°♈26'21	
	1608 May 14 21:56	0°♉	
	1608 Aug 11 20:07	15°♉	
retrograde	1608 Sep 04 06:36	15°♉53'31	
	1608 Sep 27 11:14	15°℞♉	
opposition	1608 Nov 02 21:23	10°♉48'40	-1°21'48
min. Earth dist.	1608 Nov 01 12:08	11°♉00'00	4.00284 AU
direct	1608 Dec 30 21:19	5°♉52'25	
	1609 Mar 20 06:20	15°♉	
evening set	1609 May 05 21:50	25°♉15'44	
conjunction	1609 May 19 14:29	28°♉27'58	-0°40'43
minimum elong	1609 May 19 14:31	28°♉27'59	0°40'44
max. Earth dist.	1609 May 21 22:11	29°♉00'35	6.05415 AU
	1609 May 26 03:46	0°♊	
morning rise	1609 Jun 02 09:03	1°♊40'57	
retrograde	1609 Oct 09 11:28	21°♊14'57	
min. Earth dist.	1609 Dec 06 16:10	16°♊21'39	4.11861 AU
opposition	1609 Dec 08 01:35	16°♊10'17	-0°34'08
direct	1610 Feb 04 19:01	11°♊11'01	
evening set	1610 Jun 11 08:27	29°♊59'47	
	1610 Jun 11 08:49	0°♋	
conjunction	1610 Jun 25 02:24	3°♋06'34	-0°03'57
minimum elong	1610 Jun 25 02:23	3°♋06'33	0°03'57
behind sun begin	1610 Jun 24 18:07	3°♋01'54	
behind sun end	1610 Jun 25 10:38	3°♋11'13	
max. Earth dist.	1610 Jun 26 22:15	3°♋31'25	6.18935 AU
morning rise	1610 Jul 08 20:28	6°♋13'03	
asc. node	1610 Aug 04 03:35	11°♋58'07	
retrograde	1610 Nov 11 09:47	24°♋38'41	

min. Earth dist.	1611 Jan 09 05:51	19°♋43'47	4.25929 AU	
opposition	1611 Jan 10 03:01	19°♋36'39	0°22'13	
direct	1611 Mar 11 04:19	14°♋34'57		
	1611 Jul 03 02:58	0°♌		
evening set	1611 Jul 15 23:51	2°♌47'28		
conjunction	1611 Jul 29 13:39	5°♌46'37	0°32'39	
minimum elong	1611 Jul 29 13:37	5°♌46'36	0°32'40	
max. Earth dist.	1611 Jul 30 10:36	5°♌58'10	6.32467 AU	
morning rise	1611 Aug 12 01:34	8°♌44'41		
	1611 Sep 10 14:59	15°♌		
retrograde	1611 Dec 12 11:58	26°♌12'30		
opposition	1612 Feb 10 12:39	21°♌14'14	1°08'32	
min. Earth dist.	1612 Feb 10 07:44	21°♌15'51	4.37892 AU	
direct	1612 Apr 11 20:17	16°♌11'23		
	1612 Jul 29 02:57	0°♍		
evening set	1612 Aug 16 18:41	3°♍56'51		
conjunction	1612 Aug 30 01:00	6°♍49'05	0°58'11	
minimum elong	1612 Aug 30 00:58	6°♍49'04	0°58'10	
max. Earth dist.	1612 Aug 29 16:30	6°♍44'29	6.41942 AU	
morning rise	1612 Sep 12 04:43	9°♍39'56		
retrograde	1613 Jan 10 18:39	26°♍33'27		
opposition	1613 Mar 12 02:22	21°♍38'39	1°33'58	
min. Earth dist.	1613 Mar 12 16:40	21°♍34'01	4.44377 AU	
direct	1613 May 13 10:50	16°♍35'48		
	1613 Aug 28 11:07	0°♎		
evening set	1613 Sep 17 03:15	4°♎08'47		
max. Earth dist.	1613 Sep 28 18:14	6°♎39'30	6.44887 AU	
conjunction	1613 Sep 30 02:24	6°♎56'57	1°07'07	
minimum elong	1613 Sep 30 02:24	6°♎56'57	1°07'07	
morning rise	1613 Oct 12 22:40	9°♎43'45		
retrograde	1614 Feb 10 01:51	26°♎30'44		
opposition	1614 Apr 11 18:16	21°♎38'10	1°34'01	
min. Earth dist.	1614 Apr 12 22:29	21°♎29'07	4.43731 AU	
direct	1614 Jun 13 11:41	16°♎36'21		
	1614 Sep 28 01:06	0°♏		
evening set	1614 Oct 17 19:20	4°♏13'10		
max. Earth dist.	1614 Oct 28 15:00	6°♏35'25	6.40632 AU	
conjunction	1614 Oct 30 13:22	7°♏00'55	0°57'51	
minimum elong	1614 Oct 30 13:23	7°♏00'56	0°57'50	
morning rise	1614 Nov 12 05:02	9°♏47'42		
	1614 Dec 06 14:32	15°♏		
retrograde	1615 Mar 13 12:30	26°♏56'13		
opposition	1615 May 13 09:41	22°♏04'24	1°08'31	
min. Earth dist.	1615 May 14 21:54	21°♏52'52	4.36112 AU	
direct	1615 Jul 14 21:47	17°♏04'28		
	1615 Oct 25 16:10	0°♐		
evening set	1615 Nov 17 16:29	5°♐01'05		
max. Earth dist.	1615 Nov 28 06:06	7°♐23'43	6.30203 AU	
conjunction	1615 Nov 30 08:20	7°♐52'04	0°32'08	
minimum elong	1615 Nov 30 08:22	7°♐52'05	0°32'08	
morning rise	1615 Dec 12 23:11	10°♐42'44		
retrograde	1616 Apr 14 19:58	28°♐38'35		
opposition	1616 Jun 14 17:42	23°♐45'50	0°21'46	
min. Earth dist.	1616 Jun 16 02:31	23°♐35'20	4.23443 AU	
direct	1616 Aug 15 07:25	18°♐48'18		
	1616 Nov 15 18:01	0°♑		
desc. node	1616 Nov 16 20:38	0°♑13'53		
evening set	1616 Dec 18 16:23	7°♑17'43		
max. Earth dist.	1616 Dec 29 20:12	9°♑53'08	6.16365 AU	
conjunction	1616 Dec 31 09:18	10°♑14'44	-0°04'23	
minimum elong	1616 Dec 31 09:17	10°♑14'44	0°04'23	
behind sun begin	1616 Dec 31 01:26	10°♑10'11		
behind sun end	1616 Dec 31 17:09	10°♑19'17		
morning rise	1617 Jan 13 02:21	13°♑12'09		
	1617 Apr 12 06:00	0°♒		
retrograde	1617 May 20 11:56	2°♒13'11		
	1617 Jun 28 00:20	30°℞♑		
opposition	1617 Jul 20 03:33	27°♑18'04	-0°35'08	
min. Earth dist.	1617 Jul 20 22:35	27°♑11'54	4.09411 AU	
direct	1617 Sep 18 08:15	22°♑23'03		
	1617 Nov 29 22:08	0°♒		
evening set	1618 Jan 21 12:27	11°♒29'58		
conjunction	1618 Feb 03 08:59	14°♒34'07	-0°40'56	
minimum elong	1618 Feb 03 08:57	14°♒34'05	0°40'56	
max. Earth dist.	1618 Feb 02 19:53	14°♒26'16	6.03395 AU	
	1618 Feb 05 04:16	15°♒		
morning rise	1618 Feb 16 07:35	17°♒39'30		
	1618 Apr 13 21:08	0°♓		
retrograde	1618 Jun 27 00:08	7°♓44'36		
opposition	1618 Aug 26 07:17	2°♓45'45	-1°22'41	
min. Earth dist.	1618 Aug 26 03:43	2°♓46'55	3.98766 AU	
	1618 Sep 17 13:33	30°℞♒		
direct	1618 Oct 24 02:02	27°♒52'08		
	1618 Nov 29 04:08	0°♓		
evening set	1619 Feb 26 09:31	17°♓27'37		
conjunction	1619 Mar 11 12:48	20°♓38'01	-1°03'37	
minimum elong	1619 Mar 11 12:47	20°♓38'00	1°03'37	
max. Earth dist.	1619 Mar 12 09:29	20°♓50'32	5.96044 AU	
morning rise	1619 Mar 24 18:55	23°♓50'03		
	1619 Apr 20 03:16	0°♈		
retrograde	1619 Aug 04 05:44	14°♈28'53		
min. Earth dist.	1619 Oct 02 02:28	9°♈33'59	3.95658 AU	
opposition	1619 Oct 03 01:32	9°♈26'12	-1°39'19	
direct	1619 Nov 30 01:27	4°♈31'59		
evening set	1620 Apr 03 16:30	24°♈12'46		
conjunction	1620 Apr 17 03:46	27°♈26'14	-1°01'42	
minimum elong	1620 Apr 17 03:48	27°♈26'15	1°01'42	
max. Earth dist.	1620 Apr 19 02:55	27°♈54'29	5.97385 AU	
	1620 Apr 27 20:50	0°♉		
morning rise	1620 Apr 30 18:02	0°♉41'10		
	1620 Jul 07 02:51	15°♉		
retrograde	1620 Sep 09 07:39	21°♉03'40		
min. Earth dist.	1620 Nov 06 11:36	16°♉10'30	4.01376 AU	
opposition	1620 Nov 07 22:11	15°♉58'43	-1°16'28	
	1620 Nov 15 03:53	15°℞♉		
direct	1621 Jan 04 22:01	11°♉02'04		
	1621 Feb 24 00:09	15°♉		
	1621 May 09 12:11	0°♊		
evening set	1621 May 11 02:19	0°♊22'06		
conjunction	1621 May 24 19:29	3°♊33'55	-0°36'02	
minimum elong	1621 May 24 19:31	3°♊33'57	0°36'02	
max. Earth dist.	1621 May 27 01:27	4°♊05'25	6.06890 AU	
morning rise	1621 Jun 07 14:30	6°♊46'23		
retrograde	1621 Oct 14 06:07	26°♊12'04		
opposition	1621 Dec 12 20:12	21°♊07'38	-0°26'12	
min. Earth dist.	1621 Dec 11 12:28	21°♊18'26	4.13542 AU	
direct	1622 Feb 09 18:19	16°♊07'57		
	1622 May 25 05:41	0°♋		
asc. node	1622 Jun 13 11:14	4°♋13'34		
evening set	1622 Jun 16 08:28	4°♋52'22		
conjunction	1622 Jun 30 02:21	7°♋58'18	0°01'39	
minimum elong	1622 Jun 30 02:19	7°♋58'17	0°01'39	
behind sun begin	1622 Jun 29 17:56	7°♋53'35		

behind sun end	1622 Jun	30	10:41	8°♋02'59	
max. Earth dist.	1622 Jul	01	21:06	8°♋22'26	6.20712 AU
morning rise	1622 Jul	13	19:43	11°♋03'45	
retrograde	1622 Nov	15	21:50	29°♋20'57	
opposition	1623 Jan	14	15:45	24°♋19'28	0°29'44
min. Earth dist.	1623 Jan	13	19:48	24°♋26'10	4.27664 AU
direct	1623 Mar	15	20:44	19°♋17'36	
	1623 Jun	15	07:35	0°♌	
evening set	1623 Jul	20	18:20	7°♌26'07	
conjunction	1623 Aug	03	07:03	10°♌24'13	0°37'08
minimum elong	1623 Aug	03	07:01	10°♌24'11	0°37'08
max. Earth dist.	1623 Aug	03	23:13	10°♌33'06	6.34052 AU
morning rise	1623 Aug	16	18:02	13°♌21'11	
	1623 Aug	24	08:19	15°♌	
	1623 Nov	25	17:18	0°♍	
retrograde	1623 Dec	16	20:52	0°♍42'39	
	1624 Jan	06	20:53	30°℞♌	
opposition	1624 Feb	14	21:45	25°♌44'55	1°13'34
min. Earth dist.	1624 Feb	14	19:48	25°♌45'33	4.39256 AU
direct	1624 Apr	16	10:24	20°♌41'59	
	1624 Jul	11	01:00	0°♍	
evening set	1624 Aug	21	07:09	8°♍24'18	
conjunction	1624 Sep	03	12:32	11°♍15'42	1°00'31
minimum elong	1624 Sep	03	12:30	11°♍15'41	1°00'32
max. Earth dist.	1624 Sep	03	02:22	11°♍10'11	6.43004 AU
morning rise	1624 Sep	16	14:56	14°♍05'38	
	1624 Dec	21	15:20	0°♎	
retrograde	1625 Jan	14	23:16	0°♎55'35	
	1625 Feb	08	07:25	30°℞♍	
opposition	1625 Mar	16	09:45	26°♍01'07	1°35'30
min. Earth dist.	1625 Mar	17	00:52	25°♍56'14	4.45105 AU
direct	1625 May	17	19:49	20°♍58'23	
	1625 Aug	10	14:58	0°♎	
evening set	1625 Sep	21	11:20	8°♎29'24	
max. Earth dist.	1625 Oct	02	23:01	10°♎58'22	6.45226 AU
conjunction	1625 Oct	04	09:25	11°♎17'01	1°06'53
minimum elong	1625 Oct	04	09:25	11°♎17'01	1°06'52
morning rise	1625 Oct	17	04:48	14°♎03'21	
	1626 Jan	22	04:30	0°♏	
retrograde	1626 Feb	14	08:57	0°♏49'49	
	1626 Mar	09	12:37	30°℞♎	
opposition	1626 Apr	16	02:17	25°♎57'27	1°31'53
min. Earth dist.	1626 Apr	17	08:37	25°♎47'45	4.43656 AU
direct	1626 Jun	17	21:50	20°♎55'49	
	1626 Sep	10	13:05	0°♏	
evening set	1626 Oct	22	01:04	8°♏32'19	
max. Earth dist.	1626 Nov	01	18:02	10°♏53'19	6.40134 AU
conjunction	1626 Nov	03	18:31	11°♏20'02	0°55'10
minimum elong	1626 Nov	03	18:33	11°♏20'03	0°55'11
morning rise	1626 Nov	16	09:50	14°♏06'51	
	1626 Nov	20	11:07	15°♏	
	1627 Feb	16	16:03	0°♐	
retrograde	1627 Mar	17	21:31	1°♐18'17	
	1627 Apr	16	06:45	30°℞♏	
opposition	1627 May	17	20:16	26°♏26'22	1°03'10
min. Earth dist.	1627 May	19	08:15	26°♏14'54	4.35207 AU
direct	1627 Jul	19	06:16	21°♏26'38	
	1627 Oct	08	00:32	0°♐	
evening set	1627 Nov	21	22:41	9°♐25'04	
max. Earth dist.	1627 Dec	02	13:47	11°♐48'55	6.28959 AU
conjunction	1627 Dec	04	14:30	12°♐16'30	0°27'38
minimum elong	1627 Dec	04	14:32	12°♐16'31	0°27'37
morning rise	1627 Dec	17	05:15	15°♐07'41	
	1628 Mar	04	05:46	0°♑	
retrograde	1628 Apr	19	11:56	3°♑09'51	
	1628 Jun	05	15:12	30°℞♐	
opposition	1628 Jun	19	09:11	28°♐16'53	0°14'20
min. Earth dist.	1628 Jun	20	17:55	28°♐06'25	4.21911 AU
direct	1628 Aug	19	19:53	23°♐19'38	
desc. node	1628 Sep	28	19:20	25°♐44'21	
	1628 Oct	27	15:04	0°♑	
evening set	1628 Dec	23	02:27	11°♑52'53	
max. Earth dist.	1629 Jan	03	06:38	14°♑29'09	6.14664 AU
conjunction	1629 Jan	04	19:30	14°♑50'41	-0°09'33
minimum elong	1629 Jan	04	19:30	14°♑50'41	0°09'33
behind sun begin	1629 Jan	04	12:48	14°♑46'48	
behind sun end	1629 Jan	05	02:11	14°♑54'34	
morning rise	1629 Jan	17	13:15	17°♑49'05	
	1629 Mar	15	23:10	0°♒	
retrograde	1629 May	25	09:28	6°♒58'53	
opposition	1629 Jul	25	00:39	2°♒03'17	-0°42'31
min. Earth dist.	1629 Jul	25	17:03	1°♒57'57	4.07671 AU
	1629 Aug	10	08:39	30°℞♑	
direct	1629 Sep	23	00:04	27°♑08'26	
	1629 Nov	04	18:01	0°♒	
	1630 Jan	20	13:18	15°♒	
evening set	1630 Jan	26	05:02	16°♒20'30	
conjunction	1630 Feb	08	02:29	19°♒25'42	-0°45'04
minimum elong	1630 Feb	08	02:27	19°♒25'41	0°45'04
max. Earth dist.	1630 Feb	07	17:43	19°♒20'27	6.01782 AU
morning rise	1630 Feb	21	01:52	22°♒32'11	
	1630 Mar	25	12:13	0°♓	
retrograde	1630 Jul	02	05:10	12°♓45'27	
opposition	1630 Aug	31	09:09	7°♓46'07	-1°27'07
min. Earth dist.	1630 Aug	31	04:13	7°♓47'45	3.97450 AU
direct	1630 Oct	29	00:39	2°♓52'32	
evening set	1631 Mar	03	09:22	22°♓32'14	
conjunction	1631 Mar	16	13:46	25°♓43'35	-1°04'53
minimum elong	1631 Mar	16	13:45	25°♓43'35	1°04'54
max. Earth dist.	1631 Mar	17	13:27	25°♓57'56	5.95144 AU
morning rise	1631 Mar	29	21:16	28°♓56'38	
	1631 Apr	03	07:00	0°♈	
retrograde	1631 Aug	09	10:26	19°♈38'53	
min. Earth dist.	1631 Oct	07	02:49	14°♈44'32	3.95308 AU
opposition	1631 Oct	08	04:40	14°♈35'48	-1°38'27
direct	1631 Dec	05	01:22	9°♈41'23	
evening set	1632 Apr	08	21:05	29°♈23'26	
	1632 Apr	11	10:26	0°♉	
conjunction	1632 Apr	22	09:27	2°♉37'21	-0°59'21
minimum elong	1632 Apr	22	09:29	2°♉37'22	0°59'21
max. Earth dist.	1632 Apr	24	10:09	3°♉06'30	5.97612 AU
morning rise	1632 May	06	00:50	5°♉52'39	
	1632 Jun	15	09:29	15°♉	
retrograde	1632 Sep	14	08:44	26°♉12'00	
min. Earth dist.	1632 Nov	11	11:38	21°♉18'48	4.02140 AU
opposition	1632 Nov	12	22:30	21°♉06'54	-1°10'37
direct	1633 Jan	10	00:10	16°♉09'51	
	1633 Apr	22	04:33	0°♊	
evening set	1633 May	16	07:00	5°♊27'46	
conjunction	1633 May	30	00:53	8°♊39'19	-0°31'06
minimum elong	1633 May	30	00:55	8°♊39'20	0°31'05
max. Earth dist.	1633 Jun	01	08:34	9°♊11'41	6.08144 AU
morning rise	1633 Jun	12	20:03	11°♊51'17	
	1633 Sep	22	08:11	0°♋	

retrograde	1633 Oct 19 01:42	1°♋09'07	
	1633 Nov 14 12:10	30°℞♊	
min. Earth dist.	1633 Dec 16 07:39	26°♊15'36	4.15133 AU
opposition	1633 Dec 17 14:55	26°♊04'58	-0°18'05
direct	1634 Feb 14 16:21	21°♊04'57	
asc. node	1634 Apr 22 09:42	27°♊29'58	
	1634 May 06 04:04	0°♋	
evening set	1634 Jun 21 09:03	9°♋45'07	
conjunction	1634 Jul 05 02:22	12°♋50'04	0°07'09
minimum elong	1634 Jul 05 02:21	12°♋50'04	0°07'09
behind sun begin	1634 Jul 04 18:42	12°♋45'47	
behind sun end	1634 Jul 05 10:00	12°♋54'21	
max. Earth dist.	1634 Jul 06 17:48	13°♋12'15	6.22491 AU
morning rise	1634 Jul 18 19:19	15°♋54'30	
	1634 Sep 29 09:43	0°♌	
retrograde	1634 Nov 20 09:59	4°♌03'10	
	1635 Jan 11 22:55	30°℞♋	
min. Earth dist.	1635 Jan 18 10:56	29°♋08'05	4.29451 AU
opposition	1635 Jan 19 04:51	29°♋02'05	0°37'03
direct	1635 Mar 20 14:40	23°♋59'55	
	1635 May 25 08:59	0°♌	
evening set	1635 Jul 25 12:08	12°♌03'55	
	1635 Aug 07 22:17	15°♌	
conjunction	1635 Aug 08 00:02	15°♌00'57	0°41'22
minimum elong	1635 Aug 07 23:59	15°♌00'56	0°41'21
max. Earth dist.	1635 Aug 08 14:18	15°♌08'47	6.35691 AU
morning rise	1635 Aug 21 09:39	17°♌56'43	
	1635 Oct 22 04:12	0°♍	
retrograde	1635 Dec 21 04:08	5°♍11'48	
opposition	1636 Feb 19 06:41	0°♍14'32	1°18'09
min. Earth dist.	1636 Feb 19 06:29	0°♍14'37	4.40599 AU
	1636 Feb 21 02:58	30°℞♌	
direct	1636 Apr 20 22:41	25°♌11'36	
	1636 Jun 19 03:26	0°♍	
evening set	1636 Aug 25 19:11	12°♍50'46	
conjunction	1636 Sep 07 23:15	15°♍41'19	1°02'30
minimum elong	1636 Sep 07 23:13	15°♍41'18	1°02'31
max. Earth dist.	1636 Sep 07 08:09	15°♍33'09	6.43911 AU
morning rise	1636 Sep 21 00:39	18°♍30'28	
	1636 Nov 19 07:50	0°♎	
retrograde	1637 Jan 19 06:39	5°♎17'39	
opposition	1637 Mar 20 17:25	0°♎23'34	1°36'32
min. Earth dist.	1637 Mar 21 11:45	0°♎17'38	4.45514 AU
	1637 Mar 23 18:23	30°℞♍	
direct	1637 May 22 06:40	25°♍20'52	
	1637 Jul 19 20:18	0°♎	
evening set	1637 Sep 25 19:24	12°♎51'08	
max. Earth dist.	1637 Oct 07 04:19	15°♎18'42	6.45086 AU
conjunction	1637 Oct 08 16:48	15°♎38'29	1°06'17
minimum elong	1637 Oct 08 16:48	15°♎38'30	1°06'17
morning rise	1637 Oct 21 11:17	18°♎24'34	
	1637 Dec 20 04:07	0°♏	
retrograde	1638 Feb 18 16:23	5°♏12'26	
opposition	1638 Apr 20 11:42	0°♏20'13	1°29'14
min. Earth dist.	1638 Apr 21 18:38	0°♏10'20	4.42976 AU
	1638 Apr 23 03:02	30°℞♎	
direct	1638 Jun 22 05:45	25°♎18'49	
	1638 Aug 19 21:09	0°♏	
evening set	1638 Oct 26 08:33	12°♏57'09	
	1638 Nov 04 15:51	15°♏	
max. Earth dist.	1638 Nov 06 00:15	15°♏17'54	6.38959 AU
conjunction	1638 Nov 08 01:31	15°♏45'08	0°52'07
minimum elong	1638 Nov 08 01:33	15°♏45'09	0°52'07
morning rise	1638 Nov 20 16:31	18°♏32'19	
	1639 Jan 17 04:35	0°♐	
retrograde	1639 Mar 22 12:53	5°♐49'17	
opposition	1639 May 22 10:43	0°♐57'21	0°57'16
min. Earth dist.	1639 May 24 00:00	0°♐45'29	4.33580 AU
	1639 May 29 23:47	30°℞♏	
direct	1639 Jul 23 19:10	25°♏57'56	
	1639 Sep 15 02:58	0°♐	
evening set	1639 Nov 26 09:04	14°♐00'38	
max. Earth dist.	1639 Dec 06 23:41	16°♐24'52	6.27011 AU
conjunction	1639 Dec 09 00:52	16°♐52'50	0°22'45
minimum elong	1639 Dec 09 00:54	16°♐52'51	0°22'45
morning rise	1639 Dec 21 15:56	19°♐44'56	
	1640 Feb 08 07:51	0°♑	
retrograde	1640 Apr 24 09:14	7°♑56'05	
opposition	1640 Jun 24 06:24	3°♑02'49	0°06'23
min. Earth dist.	1640 Jun 25 12:57	2°♑53'01	4.19768 AU
	1640 Jul 19 21:37	30°℞♐	
desc. node	1640 Aug 08 02:17	28°♐31'16	
direct	1640 Aug 24 11:24	28°♐05'53	
	1640 Sep 28 18:03	0°♑	
evening set	1640 Dec 27 18:56	16°♑45'08	
max. Earth dist.	1641 Jan 08 03:42	19°♑24'46	6.12525 AU
conjunction	1641 Jan 09 12:32	19°♑44'03	-0°14'59
minimum elong	1641 Jan 09 12:31	19°♑44'02	0°14'59
behind sun begin	1641 Jan 09 09:17	19°♑42'09	
behind sun end	1641 Jan 09 15:44	19°♑45'55	
morning rise	1641 Jan 22 06:47	22°♑43'36	
	1641 Feb 23 13:45	0°♒	
retrograde	1641 May 30 16:36	12°♒03'46	
opposition	1641 Jul 30 05:24	7°♒07'43	-0°50'08
min. Earth dist.	1641 Jul 30 20:00	7°♒02'58	4.05716 AU
direct	1641 Sep 28 00:37	2°♒13'10	
	1642 Jan 03 02:51	15°♒	
evening set	1642 Jan 31 05:16	21°♒30'50	
conjunction	1642 Feb 13 03:32	24°♒37'08	-0°49'09
minimum elong	1642 Feb 13 03:29	24°♒37'06	0°49'09
max. Earth dist.	1642 Feb 12 22:29	24°♒34'05	6.00198 AU
morning rise	1642 Feb 26 04:05	27°♒44'49	
	1642 Mar 07 15:49	0°♓	
retrograde	1642 Jul 07 15:22	18°♓05'34	
opposition	1642 Sep 05 18:15	13°♓05'43	-1°31'07
min. Earth dist.	1642 Sep 05 09:02	13°♓08'46	3.96452 AU
direct	1642 Nov 03 04:57	8°♓12'11	
evening set	1643 Mar 08 16:19	27°♓54'30	
	1643 Mar 17 08:03	0°♈	
conjunction	1643 Mar 21 21:49	1°♈06'31	-1°05'43
minimum elong	1643 Mar 21 21:49	1°♈06'31	1°05'43
max. Earth dist.	1643 Mar 23 01:53	1°♈23'32	5.94833 AU
morning rise	1643 Apr 04 06:30	4°♈20'14	
retrograde	1643 Aug 14 18:56	25°♈02'40	
min. Earth dist.	1643 Oct 12 08:44	20°♈08'35	3.95748 AU
opposition	1643 Oct 13 12:41	19°♈59'07	-1°36'42
direct	1643 Dec 10 09:20	15°♈04'23	
	1644 Mar 24 22:57	0°♉	
evening set	1644 Apr 14 05:58	4°♉44'16	
conjunction	1644 Apr 27 19:28	7°♉58'07	-0°56'28
minimum elong	1644 Apr 27 19:31	7°♉58'08	0°56'29
max. Earth dist.	1644 Apr 30 00:20	8°♉29'39	5.98778 AU
morning rise	1644 May 11 11:34	11°♉13'12	
	1644 May 27 16:43	15°♉	

	1644 Aug 20	19:54	0°♊		
retrograde	1644 Sep 19	11:23	1°♊24'48		
	1644 Oct 18	19:20	30℞♉		
min. Earth dist.	1644 Nov 16	12:51	26°♉31'41	4.03896 AU	
opposition	1644 Nov 18	00:09	26°♉19'39	-1°04'07	
direct	1645 Jan 15	04:37	21°♉22'09		
	1645 Apr 02	15:11	0°♊		
evening set	1645 May 21	12:14	10°♊34'09		
conjunction	1645 Jun 04	06:12	13°♊44'47	-0°25'56	
minimum elong	1645 Jun 04	06:14	13°♊44'48	0°25'56	
max. Earth dist.	1645 Jun 06	12:07	14°♊15'57	6.10309 AU	
morning rise	1645 Jun 18	01:31	16°♊55'45		
	1645 Aug 20	08:36	0°♋		
retrograde	1645 Oct 23	17:02	6°♋02'29		
min. Earth dist.	1645 Dec 21	01:53	1°♋08'50	4.17472 AU	
opposition	1645 Dec 22	08:08	0°♋58'34	-0°10'00	
	1645 Dec 29	13:59	30℞♊		
direct	1646 Feb 19	14:07	25°♊58'06		
asc. node	1646 Mar 02	01:20	26°♊08'58		
	1646 Apr 12	10:39	0°♋		
evening set	1646 Jun 26	06:54	14°♋31'35		
conjunction	1646 Jul 09	23:43	17°♋35'16	0°12'26	
minimum elong	1646 Jul 09	23:42	17°♋35'15	0°12'27	
behind sun begin	1646 Jul 09	18:26	17°♋32'19		
behind sun end	1646 Jul 10	04:59	17°♋38'12		
max. Earth dist.	1646 Jul 11	12:36	17°♋55'55	6.24818 AU	
morning rise	1646 Jul 23	15:39	20°♋38'15		
	1646 Sep 06	11:58	0°♌		
retrograde	1646 Nov 24	19:30	8°♌37'03		
opposition	1647 Jan 23	14:53	3°♌36'30	0°43'53	
min. Earth dist.	1647 Jan 22	23:40	3°♌41'35	4.31560 AU	
	1647 Feb 22	22:54	30℞♋		
direct	1647 Mar 25	05:47	28°♋34'09		
	1647 Apr 24	22:07	0°♌		
	1647 Jul 22	22:21	15°♌		
evening set	1647 Jul 30	02:35	16°♌32'54		
conjunction	1647 Aug 12	13:17	19°♌28'46	0°45'13	
minimum elong	1647 Aug 12	13:15	19°♌28'45	0°45'13	
max. Earth dist.	1647 Aug 12	22:08	19°♌33'36	6.37399 AU	
morning rise	1647 Aug 25	21:51	22°♌23'22		
	1647 Oct 01	15:59	0°♍		
retrograde	1647 Dec 25	08:43	9°♍32'21		
opposition	1648 Feb 23	12:35	4°♍35'33	1°22'08	
min. Earth dist.	1648 Feb 23	15:31	4°♍34'35	4.41816 AU	
	1648 Apr 08	01:56	30℞♌		
direct	1648 Apr 25	08:17	29°♌32'29		
	1648 May 12	18:46	0°♍		
evening set	1648 Aug 30	03:45	17°♍09'11		
conjunction	1648 Sep 12	06:56	19°♍59'05	1°04'06	
minimum elong	1648 Sep 12	06:55	19°♍59'04	1°04'06	
max. Earth dist.	1648 Sep 11	13:04	19°♍49'25	6.44536 AU	
morning rise	1648 Sep 25	07:06	22°♍47'32		
	1648 Oct 30	07:59	0°♎		
retrograde	1649 Jan 23	10:31	9°♎33'13		
opposition	1649 Mar 24	22:58	4°♎39'30	1°37'03	
min. Earth dist.	1649 Mar 25	19:15	4°♎32'58	4.45526 AU	
	1649 May 10	13:27	30℞♍		
direct	1649 May 26	12:53	29°♍36'57		
	1649 Jun 11	15:52	0°♎		
evening set	1649 Sep 30	01:34	17°♎07'46		
max. Earth dist.	1649 Oct 11	05:28	19°♎32'57	6.44464 AU	
conjunction	1649 Oct 12	22:03	19°♎55'02	1°05'20	
minimum elong	1649 Oct 12	22:04	19°♎55'03	1°05'21	
morning rise	1649 Oct 25	16:02	22°♎41'08		
	1649 Nov 30	00:11	0°♏		
retrograde	1650 Feb 23	02:23	9°♏32'11		
opposition	1650 Apr 24	20:41	4°♏40'08	1°26'11	
min. Earth dist.	1650 Apr 26	06:11	4°♏29'26	4.41760 AU	
	1650 Jun 11	07:19	30℞♎		
direct	1650 Jun 26	14:50	29°♎38'55		
	1650 Jul 11	22:46	0°♏		
	1650 Oct 19	21:02	15°♏		
evening set	1650 Oct 30	15:43	17°♏20'52		
max. Earth dist.	1650 Nov 10	06:21	19°♏41'35	6.37238 AU	
conjunction	1650 Nov 12	08:32	20°♏09'25	0°48'48	
minimum elong	1650 Nov 12	08:34	20°♏09'26	0°48'48	
morning rise	1650 Nov 24	23:20	22°♏57'14		
	1650 Dec 28	04:03	0°♐		
retrograde	1651 Mar 27	03:35	10°♐21'38		
opposition	1651 May 27	02:01	5°♐29'38	0°51'02	
min. Earth dist.	1651 May 28	14:17	5°♐18'04	4.31469 AU	
direct	1651 Jul 28	05:38	0°♐30'35		
evening set	1651 Nov 30	20:53	18°♐39'15		
max. Earth dist.	1651 Dec 11	13:39	21°♐05'29	6.24685 AU	
conjunction	1651 Dec 13	12:49	21°♐32'28	0°17'42	
minimum elong	1651 Dec 13	12:50	21°♐32'28	0°17'43	
morning rise	1651 Dec 26	04:12	24°♐25'40		
	1652 Jan 20	07:20	0°♑		
retrograde	1652 Apr 29	11:43	12°♑47'20		
desc. node	1652 Jun 17	05:41	9°♑24'48		
opposition	1652 Jun 29	06:24	7°♑53'49	-0°01'43	
min. Earth dist.	1652 Jun 30	11:56	7°♑44'19	4.17388 AU	
direct	1652 Aug 29	07:25	2°♑57'19		
evening set	1653 Jan 01	13:51	21°♑43'15		
max. Earth dist.	1653 Jan 13	02:21	24°♑25'51	6.10311 AU	
conjunction	1653 Jan 14	07:59	24°♑43'20	-0°20'24	
minimum elong	1653 Jan 14	07:58	24°♑43'19	0°20'24	
morning rise	1653 Jan 27	03:05	27°♑44'12		
	1653 Feb 05	20:19	0°♒		
	1653 Apr 27	16:35	15°♒		
retrograde	1653 Jun 05	00:19	17°♒14'52		
	1653 Jul 13	15:14	15°℞♒		
opposition	1653 Aug 04	12:41	12°♒18'21	-0°57'29	
min. Earth dist.	1653 Aug 04	22:52	12°♒15'02	4.03902 AU	
direct	1653 Oct 03	01:37	7°♒24'08		
	1653 Dec 13	22:36	15°♒		
evening set	1654 Feb 05	08:10	26°♒46'47		
conjunction	1654 Feb 18	07:17	29°♒54'02	-0°52'53	
minimum elong	1654 Feb 18	07:14	29°♒54'00	0°52'53	
max. Earth dist.	1654 Feb 18	07:42	29°♒54'17	5.98947 AU	
	1654 Feb 18	17:11	0°♓		
morning rise	1654 Mar 03	08:51	3°♓02'45		
retrograde	1654 Jul 13	03:31	23°♓29'18		
opposition	1654 Sep 11	04:34	18°♓28'49	-1°34'21	
min. Earth dist.	1654 Sep 10	16:15	18°♓32'55	3.95912 AU	
direct	1654 Nov 08	12:53	13°♓35'14		
	1655 Feb 28	02:58	0°♈		
evening set	1655 Mar 14	00:08	3°♈18'18		
conjunction	1655 Mar 27	06:53	6°♈30'46	-1°06'00	
minimum elong	1655 Mar 27	06:53	6°♈30'46	1°05'59	
max. Earth dist.	1655 Mar 28	16:53	6°♈51'20	5.95039 AU	
morning rise	1655 Apr 09	16:37	9°♈44'52		
	1655 Aug 04	04:56	0°♉		
retrograde	1655 Aug 20	03:21	0°♉24'56		

	1655 Sep 04	22:34	30°℞♈		
opposition	1655 Oct 18	19:53	25°♈21'01	-1°34'07	
min. Earth dist.	1655 Oct 17	14:07	25°♈31'07	3.96682 AU	
direct	1655 Dec 15	16:09	20°♈26'02		
	1656 Mar 05	17:48	0°♉		
evening set	1656 Apr 19	13:52	10°♉02'05		
conjunction	1656 May 03	04:03	13°♉15'35	-0°53'09	
minimum elong	1656 May 03	04:06	13°♉15'37	0°53'09	
max. Earth dist.	1656 May 05	09:18	13°♉47'12	6.00307 AU	
	1656 May 10	12:06	15°♉		
morning rise	1656 May 16	21:03	16°♉30'18		
	1656 Jul 19	08:30	0°♊		
retrograde	1656 Sep 24	09:43	6°♊33'03		
min. Earth dist.	1656 Nov 21	11:52	1°♊40'08	4.05841 AU	
opposition	1656 Nov 22	23:40	1°♊27'55	-0°57'13	
	1656 Dec 03	21:49	30°℞♉		
direct	1657 Jan 20	06:55	26°♉29'59		
	1657 Mar 08	10:44	0°♊		
evening set	1657 May 26	15:27	15°♊35'56		
conjunction	1657 Jun 09	09:39	18°♊45'38	-0°20'39	
minimum elong	1657 Jun 09	09:40	18°♊45'39	0°20'40	
max. Earth dist.	1657 Jun 11	14:12	19°♊15'53	6.12512 AU	
morning rise	1657 Jun 23	04:41	21°♊55'30		
	1657 Jul 30	04:59	0°♋		
retrograde	1657 Oct 28	08:50	10°♋51'37		
opposition	1657 Dec 26	23:30	5°♋48'08	-0°01'58	
min. Earth dist.	1657 Dec 25	19:46	5°♋57'32	4.19701 AU	
asc. node	1658 Jan 09	16:24	3°♋59'28		
direct	1658 Feb 24	10:28	0°♋47'22		
evening set	1658 Jul 01	03:16	19°♋14'58		
conjunction	1658 Jul 14	19:25	22°♋17'29	0°17'37	
minimum elong	1658 Jul 14	19:24	22°♋17'29	0°17'36	
max. Earth dist.	1658 Jul 16	04:30	22°♋35'55	6.26897 AU	
morning rise	1658 Jul 28	10:34	25°♋19'14		
	1658 Aug 19	01:37	0°♌		
retrograde	1658 Nov 29	02:27	13°♌09'30		
min. Earth dist.	1659 Jan 27	10:56	8°♌13'51	4.33347 AU	
opposition	1659 Jan 28	00:06	8°♌09'27	0°50'26	
direct	1659 Mar 29	18:39	3°♌06'56		
	1659 Jul 05	23:06	15°♌		
evening set	1659 Aug 03	16:11	21°♌01'40		
conjunction	1659 Aug 17	01:54	23°♌56'33	0°48'49	
minimum elong	1659 Aug 17	01:52	23°♌56'32	0°48'49	
max. Earth dist.	1659 Aug 17	06:51	23°♌59'15	6.38770 AU	
morning rise	1659 Aug 30	09:14	26°♌50'07		
	1659 Sep 14	04:58	0°♍		
retrograde	1659 Dec 29	14:25	13°♍54'22		
opposition	1660 Feb 27	19:03	8°♍58'05	1°25'43	
min. Earth dist.	1660 Feb 28	00:59	8°♍56'09	4.42695 AU	
direct	1660 Apr 29	18:16	3°♍55'04		
evening set	1660 Sep 03	12:52	21°♍30'11		
conjunction	1660 Sep 16	14:58	24°♍19'33	1°05'21	
minimum elong	1660 Sep 16	14:57	24°♍19'33	1°05'20	
max. Earth dist.	1660 Sep 15	16:04	24°♍07'11	6.44842 AU	
morning rise	1660 Sep 29	14:16	27°♍07'32		
	1660 Oct 13	03:00	0°♎		
retrograde	1661 Jan 27	17:14	13°♎52'43		
opposition	1661 Mar 29	05:58	8°♎59'17	1°37'03	
min. Earth dist.	1661 Mar 30	04:50	8°♎51'55	4.45271 AU	
direct	1661 May 30	21:22	3°♎56'49		
evening set	1661 Oct 04	08:50	21°♎28'48		
max. Earth dist.	1661 Oct 15	11:21	23°♎53'32	6.43666 AU	

conjunction	1661 Oct 17	04:50	24°♎16'08	1°04'01	
minimum elong	1661 Oct 17	04:51	24°♎16'09	1°04'01	
morning rise	1661 Oct 29	22:03	27°♎02'18		
	1661 Nov 12	17:49	0°♏		
retrograde	1662 Feb 27	11:51	13°♏56'59		
opposition	1662 Apr 29	07:31	9°♏05'02	1°22'34	
min. Earth dist.	1662 Apr 30	17:28	8°♏54'13	4.40476 AU	
direct	1662 Jun 30	23:43	4°♏04'09		
	1662 Oct 02	19:30	15°♏		
evening set	1662 Nov 04	00:26	21°♏49'35		
max. Earth dist.	1662 Nov 14	13:48	24°♏10'13	6.35568 AU	
conjunction	1662 Nov 16	16:51	24°♏38'40	0°45'08	
minimum elong	1662 Nov 16	16:52	24°♏38'41	0°45'07	
morning rise	1662 Nov 29	07:42	27°♏27'09		
	1662 Dec 10	22:01	0°♐		
retrograde	1663 Mar 31	22:18	14°♐58'52		
opposition	1663 May 31	19:34	10°♐06'45	0°44'21	
min. Earth dist.	1663 Jun 02	08:02	9°♐55'07	4.29511 AU	
direct	1663 Aug 01	20:55	5°♐08'04		
evening set	1663 Dec 05	09:55	23°♐21'49		
max. Earth dist.	1663 Dec 16	05:06	25°♐50'07	6.22632 AU	
conjunction	1663 Dec 18	02:06	26°♐15'57	0°12'28	
minimum elong	1663 Dec 18	02:06	26°♐15'57	0°12'28	
behind sun begin	1663 Dec 17	20:49	26°♐12'56		
behind sun end	1663 Dec 18	07:23	26°♐18'59		
morning rise	1663 Dec 30	17:46	29°♐10'08		
	1664 Jan 03	09:17	0°♑		
desc. node	1664 Apr 26	07:33	17°♑34'49		
retrograde	1664 May 04	11:41	17°♑41'09		
opposition	1664 Jul 04	07:05	12°♑47'17	-0°09'55	
min. Earth dist.	1664 Jul 05	09:24	12°♑38'49	4.15416 AU	
direct	1664 Sep 03	02:34	7°♑51'12		
evening set	1665 Jan 06	09:23	26°♑42'13		
max. Earth dist.	1665 Jan 18	02:26	29°♑28'08	6.08604 AU	
conjunction	1665 Jan 19	03:56	29°♑43'14	-0°25'40	
minimum elong	1665 Jan 19	03:54	29°♑43'13	0°25'39	
	1665 Jan 20	08:15	0°♒		
morning rise	1665 Jan 31	23:46	2°♒45'09		
	1665 Mar 29	19:26	15°♒		
retrograde	1665 Jun 10	08:26	22°♒24'12		
opposition	1665 Aug 09	19:07	17°♒27'07	-1°04'19	
min. Earth dist.	1665 Aug 10	02:17	17°♒24'46	4.02624 AU	
	1665 Aug 29	10:21	15°℞♒		
direct	1665 Oct 08	04:49	12°♒33'04		
	1665 Nov 16	05:43	15°♒		
	1666 Feb 02	02:37	0°♓		
evening set	1666 Feb 10	09:38	1°♓58'36		
conjunction	1666 Feb 23	09:44	5°♓06'35	-0°56'08	
minimum elong	1666 Feb 23	09:42	5°♓06'34	0°56'09	
max. Earth dist.	1666 Feb 23	16:05	5°♓10'25	5.98220 AU	
morning rise	1666 Mar 08	12:15	8°♓16'02		
retrograde	1666 Jul 18	11:58	28°♓45'53		
opposition	1666 Sep 16	11:58	23°♓44'51	-1°36'41	
min. Earth dist.	1666 Sep 15	20:44	23°♓49'56	3.95848 AU	
direct	1666 Nov 13	17:20	18°♓51'13		
	1667 Feb 10	01:05	0°♈		
evening set	1667 Mar 19	05:12	8°♈33'23		
conjunction	1667 Apr 01	12:48	11°♈46'00	-1°05'43	
minimum elong	1667 Apr 01	12:48	11°♈46'01	1°05'42	
max. Earth dist.	1667 Apr 03	01:01	12°♈07'52	5.95604 AU	
morning rise	1667 Apr 14	23:43	15°♈00'19		
	1667 Jun 24	17:10	0°♉		

retrograde	1667 Aug 25	05:21	5°♉36'28		
opposition	1667 Oct 23	22:31	0°♉32'13	-1°30'49	
min. Earth dist.	1667 Oct 22	14:45	0°♉43'00	3.97822 AU	
	1667 Oct 27	21:37	30°℞♈		
direct	1667 Dec 20	19:27	25°♈36'49		
	1668 Feb 11	09:14	0°♉		
evening set	1668 Apr 24	17:53	15°♉08'42		
	1668 Apr 24	03:05	15°♉		
conjunction	1668 May 08	08:59	18°♉21'50	-0°49'32	
minimum elong	1668 May 08	09:01	18°♉21'52	0°49'31	
max. Earth dist.	1668 May 10	15:19	18°♉53'58	6.01913 AU	
morning rise	1668 May 22	02:24	21°♉36'00		
	1668 Jun 28	13:19	0°♊		
retrograde	1668 Sep 29	05:52	11°♊29'55		
min. Earth dist.	1668 Nov 26	08:45	6°♊36'32	4.07714 AU	
opposition	1668 Nov 27	18:56	6°♊24'53	-0°50'09	
direct	1669 Jan 25	06:05	1°♊26'32		
evening set	1669 May 31	14:51	20°♊27'03		
conjunction	1669 Jun 14	09:07	23°♊35'55	-0°15'25	
minimum elong	1669 Jun 14	09:08	23°♊35'55	0°15'24	
behind sun begin	1669 Jun 14	07:20	23°♊34'53		
behind sun end	1669 Jun 14	10:56	23°♊36'57		
max. Earth dist.	1669 Jun 16	11:42	24°♊04'53	6.14489 AU	
morning rise	1669 Jun 28	04:00	26°♊44'48		
	1669 Jul 12	16:17	0°♋		
retrograde	1669 Nov 01	19:14	15°♋31'29		
asc. node	1669 Nov 20	13:55	14°♋56'33		
min. Earth dist.	1669 Dec 30	08:55	10°♋37'27	4.21606 AU	
opposition	1669 Dec 31	11:32	10°♋28'27	0°05'49	
direct	1670 Mar 01	01:34	5°♋27'25		
evening set	1670 Jul 05	20:43	23°♋50'31		
conjunction	1670 Jul 19	12:10	26°♋52'02	0°22'32	
minimum elong	1670 Jul 19	12:08	26°♋52'01	0°22'32	
max. Earth dist.	1670 Jul 20	16:29	27°♋07'46	6.28592 AU	
morning rise	1670 Aug 02	02:26	29°♋52'42		
	1670 Aug 02	15:42	0°♌		
	1670 Oct 23	05:12	15°♌		
retrograde	1670 Dec 03	10:15	17°♌36'06		
	1671 Jan 13	13:04	15°℞♌		
opposition	1671 Feb 01	07:35	12°♌36'40	0°56'30	
min. Earth dist.	1671 Jan 31	21:54	12°♌39'53	4.34718 AU	
direct	1671 Apr 03	07:01	7°♌34'02		
	1671 Jun 17	01:11	15°♌		
evening set	1671 Aug 08	04:20	25°♌26'13		
conjunction	1671 Aug 21	13:08	28°♌20'20	0°52'04	
minimum elong	1671 Aug 21	13:05	28°♌20'19	0°52'04	
max. Earth dist.	1671 Aug 21	14:09	28°♌20'53	6.39714 AU	
	1671 Aug 29	04:26	0°♍		
morning rise	1671 Sep 03	19:21	1°♍13'05		
retrograde	1672 Jan 02	18:40	18°♍14'05		
opposition	1672 Mar 03	00:47	13°♍18'16	1°28'45	
min. Earth dist.	1672 Mar 03	08:37	13°♍15'42	4.43199 AU	
direct	1672 May 04	01:55	8°♍15'19		
evening set	1672 Sep 07	21:28	25°♍50'03		
conjunction	1672 Sep 20	22:40	28°♍39'03	1°06'12	
minimum elong	1672 Sep 20	22:39	28°♍39'02	1°06'12	
max. Earth dist.	1672 Sep 19	21:35	28°♍25'28	6.44875 AU	
	1672 Sep 27	04:16	0°♎		
morning rise	1672 Oct 03	20:57	1°♎26'38		
retrograde	1673 Jan 31	23:52	18°♎12'15		
opposition	1673 Apr 02	13:22	13°♎19'10	1°36'30	
min. Earth dist.	1673 Apr 03	14:10	13°♎11'12	4.44850 AU	
direct	1673 Jun 04	06:02	8°♎16'57		
evening set	1673 Oct 08	16:11	25°♎50'22		
max. Earth dist.	1673 Oct 19	15:08	28°♎13'35	6.42809 AU	
conjunction	1673 Oct 21	11:26	28°♎37'47	1°02'19	
minimum elong	1673 Oct 21	11:27	28°♎37'48	1°02'19	
	1673 Oct 27	17:54	0°♏		
morning rise	1673 Nov 03	04:17	1°♏24'07		
	1674 Jan 15	00:10	15°♏		
retrograde	1674 Mar 03	23:08	18°♏22'40		
	1674 Apr 21	21:58	15°℞♏		
opposition	1674 May 03	18:58	13°♏30'46	1°18'27	
min. Earth dist.	1674 May 05	05:44	13°♏19'41	4.39238 AU	
direct	1674 Jul 05	10:15	8°♏30'08		
	1674 Sep 13	03:09	15°♏		
evening set	1674 Nov 08	09:02	26°♏18'42		
max. Earth dist.	1674 Nov 18	23:44	28°♏40'34	6.34044 AU	
conjunction	1674 Nov 21	01:22	29°♏08'20	0°41'10	
minimum elong	1674 Nov 21	01:24	29°♏08'21	0°41'11	
	1674 Nov 24	21:44	0°♐		
morning rise	1674 Dec 03	15:59	1°♐57'23		
retrograde	1675 Apr 05	14:19	19°♐35'48		
opposition	1675 Jun 05	12:37	14°♐43'31	0°37'22	
min. Earth dist.	1675 Jun 06	23:49	14°♐32'18	4.27782 AU	
direct	1675 Aug 06	10:29	9°♐45'13		
evening set	1675 Dec 09	22:23	28°♐03'17		
	1675 Dec 18	09:40	0°♑		
max. Earth dist.	1675 Dec 20	18:51	0°♑32'58	6.20817 AU	
conjunction	1675 Dec 22	14:34	0°♑58'11	0°07'12	
minimum elong	1675 Dec 22	14:34	0°♑58'11	0°07'11	
behind sun begin	1675 Dec 22	07:13	0°♑53'58		
behind sun end	1675 Dec 22	21:55	1°♑02'24		
morning rise	1676 Jan 04	06:44	3°♑53'19		
desc. node	1676 Mar 05	22:45	16°♑37'03		
retrograde	1676 May 09	12:31	22°♑33'02		
opposition	1676 Jul 09	06:47	17°♑38'45	-0°18'00	
min. Earth dist.	1676 Jul 10	07:14	17°♑30'52	4.13620 AU	
direct	1676 Sep 07	22:43	12°♑42'56		
	1677 Jan 04	03:10	0°♒		
evening set	1677 Jan 11	03:25	1°♒38'36		
conjunction	1677 Jan 23	22:39	4°♒40'34	-0°30'43	
minimum elong	1677 Jan 23	22:37	4°♒40'33	0°30'42	
max. Earth dist.	1677 Jan 23	01:33	4°♒28'02	6.06986 AU	
morning rise	1677 Feb 05	19:08	7°♒43'29		
	1677 Mar 09	16:58	15°♒		
retrograde	1677 Jun 15	14:55	27°♒30'40		
opposition	1677 Aug 14	23:46	22°♒33'05	-1°10'38	
min. Earth dist.	1677 Aug 15	04:09	22°♒31'39	4.01351 AU	
direct	1677 Oct 13	04:27	17°♒39'13		
	1678 Jan 15	16:52	0°♓		
evening set	1678 Feb 15	10:17	7°♓08'05		
conjunction	1678 Feb 28	11:07	10°♓16'49	-0°58'57	
minimum elong	1678 Feb 28	11:05	10°♓16'48	0°58'56	
max. Earth dist.	1678 Feb 28	20:18	10°♓22'22	5.97386 AU	
morning rise	1678 Mar 13	14:52	13°♓27'09		
	1678 Jun 02	05:43	0°♈		
retrograde	1678 Jul 23	17:45	4°♈00'45		
	1678 Sep 14	02:56	30°℞♓		
opposition	1678 Sep 21	17:37	28°♓59'09	-1°38'17	
min. Earth dist.	1678 Sep 20	23:16	29°♓05'18	3.95564 AU	
direct	1678 Nov 18	20:23	24°♓05'20		
	1679 Jan 19	12:10	0°♈		
evening set	1679 Mar 24	09:53	13°♈47'54		

conjunction	1679 Apr 06 18:47	17°♈00'56	-1°04'55
minimum elong	1679 Apr 06 18:48	17°♈00'57	1°04'56
max. Earth dist.	1679 Apr 08 11:16	17°♈25'20	5.95897 AU
morning rise	1679 Apr 20 06:39	20°♈15'33	
	1679 Jun 02 06:32	0°♉	
retrograde	1679 Aug 30 09:59	10°♉48'52	
min. Earth dist.	1679 Oct 27 17:13	5°♉55'09	3.98646 AU
opposition	1679 Oct 29 01:03	5°♉44'19	-1°26'52
direct	1679 Dec 25 23:23	0°♉48'32	
	1680 Apr 06 22:10	15°♉	
evening set	1680 Apr 29 22:42	20°♉17'35	
conjunction	1680 May 13 14:35	23°♉30'30	-0°45'31
minimum elong	1680 May 13 14:37	23°♉30'31	0°45'31
max. Earth dist.	1680 May 15 21:47	24°♉03'00	6.03183 AU
morning rise	1680 May 27 08:41	26°♉44'20	
	1680 Jun 10 11:53	0°♊	
retrograde	1680 Oct 04 01:26	16°♊30'29	
min. Earth dist.	1680 Dec 01 04:39	11°♊37'20	4.09286 AU
opposition	1680 Dec 02 15:10	11°♊25'34	-0°42'41
direct	1681 Jan 30 03:54	6°♊26'49	
evening set	1681 Jun 05 16:16	25°♊23'01	
conjunction	1681 Jun 19 10:27	28°♊31'05	-0°09'59
minimum elong	1681 Jun 19 10:27	28°♊31'05	0°09'59
behind sun begin	1681 Jun 19 03:46	28°♊27'17	
behind sun end	1681 Jun 19 17:08	28°♊34'53	
max. Earth dist.	1681 Jun 21 09:40	28°♊58'01	6.16235 AU
	1681 Jun 25 22:28	0°♋	
morning rise	1681 Jul 03 05:07	1°♋39'03	
asc. node	1681 Sep 30 00:44	18°♋05'49	
retrograde	1681 Nov 06 09:33	20°♋17'03	
min. Earth dist.	1682 Jan 04 01:46	15°♋22'31	4.23356 AU
opposition	1682 Jan 05 01:41	15°♋14'26	0°13'42
direct	1682 Mar 05 21:11	10°♋13'06	
evening set	1682 Jul 10 16:31	28°♋32'02	
	1682 Jul 17 08:02	0°♌	
conjunction	1682 Jul 24 07:22	1°♌32'35	0°27'26
minimum elong	1682 Jul 24 07:20	1°♌32'34	0°27'26
max. Earth dist.	1682 Jul 25 09:35	1°♌47'06	6.30238 AU
morning rise	1682 Aug 06 20:34	4°♌32'08	
	1682 Sep 27 08:39	15°♌	
retrograde	1682 Dec 07 18:03	22°♌08'35	
opposition	1683 Feb 05 17:21	17°♌09'41	1°02'24
min. Earth dist.	1683 Feb 05 08:49	17°♌12'31	4.36171 AU
	1683 Feb 22 14:48	15°℞♌	
direct	1683 Apr 07 19:53	12°♌07'01	
	1683 May 22 11:52	15°♌	
evening set	1683 Aug 12 18:29	29°♌55'56	
	1683 Aug 13 02:02	0°♍	
conjunction	1683 Aug 26 02:04	2°♍49'07	0°55'06
minimum elong	1683 Aug 26 02:02	2°♍49'06	0°55'05
max. Earth dist.	1683 Aug 25 23:12	2°♍47'33	6.40898 AU
morning rise	1683 Sep 08 07:11	5°♍40'56	
retrograde	1684 Jan 07 02:01	22°♍37'44	
opposition	1684 Mar 07 08:44	17°♍42'23	1°31'23
min. Earth dist.	1684 Mar 07 19:22	17°♍38'56	4.44069 AU
direct	1684 May 08 14:15	12°♍39'31	
	1684 Sep 11 08:15	0°♎	
evening set	1684 Sep 12 06:51	0°♎12'07	
max. Earth dist.	1684 Sep 24 03:27	2°♎45'35	6.45373 AU
conjunction	1684 Sep 25 07:04	3°♎00'31	1°06'45
minimum elong	1684 Sep 25 07:04	3°♎00'31	1°06'45
morning rise	1684 Oct 08 04:21	5°♎47'31	
retrograde	1685 Feb 05 05:12	22°♎31'55	
opposition	1685 Apr 06 21:10	17°♎39'02	1°35'27
min. Earth dist.	1685 Apr 07 22:48	17°♎30'49	4.44968 AU
direct	1685 Jun 08 14:38	12°♎37'00	
evening set	1685 Oct 12 22:44	0°♏09'47	
	1685 Oct 12 04:39	0°♏	
max. Earth dist.	1685 Oct 23 21:01	2°♏32'46	6.42545 AU
conjunction	1685 Oct 25 17:20	2°♏57'02	1°00'20
minimum elong	1685 Oct 25 17:22	2°♏57'02	1°00'20
morning rise	1685 Nov 07 09:27	5°♏43'13	
	1685 Dec 22 22:33	15°♏	
retrograde	1686 Mar 08 07:39	22°♏43'42	
opposition	1686 May 08 05:01	17°♏51'51	1°13'58
min. Earth dist.	1686 May 09 16:36	17°♏40'32	4.38583 AU
	1686 Jun 01 04:31	15°℞♏	
direct	1686 Jul 09 20:16	12°♏51'32	
	1686 Aug 17 07:45	15°♏	
	1686 Nov 09 12:51	0°♐	
evening set	1686 Nov 12 15:10	0°♐41'11	
max. Earth dist.	1686 Nov 23 03:57	3°♐02'24	6.33038 AU
conjunction	1686 Nov 25 07:04	3°♐31'03	0°37'08
minimum elong	1686 Nov 25 07:06	3°♐31'04	0°37'08
morning rise	1686 Dec 07 21:45	6°♐20'30	
retrograde	1687 Apr 10 04:09	24°♐04'14	
opposition	1687 Jun 10 02:50	19°♐11'44	0°30'23
min. Earth dist.	1687 Jun 11 13:32	19°♐00'40	4.26455 AU
direct	1687 Aug 10 22:12	14°♐13'41	
	1687 Dec 02 22:23	0°♑	
evening set	1687 Dec 14 07:06	2°♑34'51	
max. Earth dist.	1687 Dec 25 06:19	5°♑06'35	6.19287 AU
conjunction	1687 Dec 26 23:34	5°♑30'27	0°02'04
minimum elong	1687 Dec 26 23:35	5°♑30'27	0°02'03
behind sun begin	1687 Dec 26 15:36	5°♑25'51	
behind sun end	1687 Dec 27 07:34	5°♑35'03	
morning rise	1688 Jan 08 15:55	8°♑26'20	
desc. node	1688 Jan 16 21:16	10°♑19'11	
retrograde	1688 May 14 08:46	27°♑13'56	
opposition	1688 Jul 14 02:12	22°♑19'22	-0°25'41
min. Earth dist.	1688 Jul 15 01:20	22°♑11'54	4.11991 AU
direct	1688 Sep 12 13:41	17°♑23'51	
	1688 Dec 18 19:37	0°♒	
evening set	1689 Jan 15 17:52	6°♒24'02	
conjunction	1689 Jan 28 13:31	9°♒26'54	-0°35'21
minimum elong	1689 Jan 28 13:29	9°♒26'53	0°35'21
max. Earth dist.	1689 Jan 27 17:41	9°♒15'06	6.05393 AU
morning rise	1689 Feb 10 10:57	12°♒30'54	
	1689 Feb 21 00:44	15°♒	
	1689 May 11 18:37	0°♓	
retrograde	1689 Jun 20 15:42	2°♓26'27	
	1689 Jul 30 19:21	30°℞♒	
opposition	1689 Aug 20 00:01	27°♒28'21	-1°16'14
min. Earth dist.	1689 Aug 20 01:28	27°♒27'53	3.99946 AU
direct	1689 Oct 17 24:00	22°♒34'34	
	1689 Dec 27 11:03	0°♓	
evening set	1690 Feb 20 07:22	12°♓07'51	
conjunction	1690 Mar 05 09:25	15°♓17'35	-1°01'13
minimum elong	1690 Mar 05 09:23	15°♓17'34	1°01'13
max. Earth dist.	1690 Mar 05 23:22	15°♓26'01	5.96312 AU
morning rise	1690 Mar 18 14:09	18°♓28'54	
	1690 May 09 01:11	0°♈	
retrograde	1690 Jul 28 23:41	9°♈07'30	
opposition	1690 Sep 26 20:16	4°♈05'30	-1°39'07

min. Earth dist.	1690 Sep 26 00:48	4°♈12'02	3.94950 AU
	1690 Nov 02 02:33	30℞♓	
direct	1690 Nov 23 21:26	29°♓11'34	
	1690 Dec 15 14:07	0°♈	
evening set	1691 Mar 29 12:37	18°♈56'11	
conjunction	1691 Apr 11 22:38	22°♈09'50	-1°03'39
minimum elong	1691 Apr 11 22:40	22°♈09'51	1°03'38
max. Earth dist.	1691 Apr 13 17:41	22°♈35'45	5.95796 AU
morning rise	1691 Apr 25 11:48	25°♈25'04	
	1691 May 15 00:25	0°♉	
	1691 Aug 11 07:19	15°♉	
retrograde	1691 Sep 04 11:26	15°♉57'03	
	1691 Sep 28 10:58	15℞♉	
min. Earth dist.	1691 Nov 01 15:53	11°♉03'50	3.99091 AU
opposition	1691 Nov 03 01:38	10°♉52'21	-1°22'21
direct	1691 Dec 30 22:50	5°♉56'14	
	1692 Mar 18 22:39	15°♉	
evening set	1692 May 05 03:09	25°♉24'15	
conjunction	1692 May 18 19:45	28°♉37'04	-0°41'12
minimum elong	1692 May 18 19:47	28°♉37'06	0°41'12
max. Earth dist.	1692 May 21 02:33	29°♉09'17	6.04135 AU
	1692 May 24 16:58	0°♊	
morning rise	1692 Jun 01 14:28	1°♊50'44	
retrograde	1692 Oct 08 21:44	21°♊30'19	
min. Earth dist.	1692 Dec 06 01:30	16°♊36'58	4.10618 AU
opposition	1692 Dec 07 10:58	16°♊25'33	-0°34'59
direct	1693 Feb 04 03:41	11°♊26'23	
	1693 Jun 09 07:49	0°♋	
evening set	1693 Jun 10 17:36	0°♋19'04	
conjunction	1693 Jun 24 11:53	3°♋26'26	-0°04'31
minimum elong	1693 Jun 24 11:53	3°♋26'26	0°04'31
behind sun begin	1693 Jun 24 03:41	3°♋21'48	
behind sun end	1693 Jun 24 20:05	3°♋31'04	
max. Earth dist.	1693 Jun 26 11:06	3°♋53'16	6.17849 AU
morning rise	1693 Jul 08 06:03	6°♋33'29	
asc. node	1693 Aug 09 09:18	13°♋32'22	
retrograde	1693 Nov 10 23:04	25°♋03'04	
opposition	1694 Jan 09 15:54	20°♋00'54	0°21'27
min. Earth dist.	1694 Jan 08 16:42	20°♋08'42	4.25085 AU
direct	1694 Mar 10 15:02	14°♋59'18	
	1694 Jun 30 14:12	0°♌	
evening set	1694 Jul 15 12:11	3°♌13'51	
conjunction	1694 Jul 29 01:59	6°♌13'17	0°32'09
minimum elong	1694 Jul 29 01:57	6°♌13'16	0°32'10
max. Earth dist.	1694 Jul 29 23:46	6°♌25'18	6.31919 AU
morning rise	1694 Aug 11 14:18	9°♌11'41	
	1694 Sep 07 21:44	15°♌	
retrograde	1694 Dec 12 03:16	26°♌41'04	
opposition	1695 Feb 10 03:06	21°♌42'37	1°07'54
min. Earth dist.	1695 Feb 09 21:35	21°♌44'26	4.37660 AU
direct	1695 Apr 12 11:04	16°♌39'45	
	1695 Jul 27 09:10	0°♍	
evening set	1695 Aug 17 07:49	4°♍25'06	
conjunction	1695 Aug 30 14:26	7°♍17'23	0°57'48
minimum elong	1695 Aug 30 14:24	7°♍17'22	0°57'48
max. Earth dist.	1695 Aug 30 09:22	7°♍14'38	6.42046 AU
morning rise	1695 Sep 12 18:11	10°♍08'13	
retrograde	1696 Jan 11 06:42	27°♍01'01	
opposition	1696 Mar 11 16:03	22°♍06'02	1°33'30
min. Earth dist.	1696 Mar 12 04:04	22°♍02'08	4.44794 AU
direct	1696 May 12 23:26	17°♍03'11	
	1696 Aug 25 21:01	0°♎	
evening set	1696 Sep 16 15:41	4°♎34'12	
max. Earth dist.	1696 Sep 28 07:56	7°♎05'22	6.45588 AU
conjunction	1696 Sep 29 14:50	7°♎22'05	1°06'55
minimum elong	1696 Sep 29 14:50	7°♎22'05	1°06'56
morning rise	1696 Oct 12 11:15	10°♎08'40	
retrograde	1697 Feb 09 13:09	26°♎53'01	
opposition	1697 Apr 11 05:35	22°♎00'23	1°33'54
min. Earth dist.	1697 Apr 12 09:56	21°♎51'18	4.44648 AU
direct	1697 Jun 13 01:04	16°♎58'29	
	1697 Sep 25 21:30	0°♏	
evening set	1697 Oct 17 05:41	4°♏32'06	
max. Earth dist.	1697 Oct 28 00:44	6°♏53'40	6.41689 AU
conjunction	1697 Oct 29 23:44	7°♏19'27	0°57'59
minimum elong	1697 Oct 29 23:45	7°♏19'27	0°57'59
morning rise	1697 Nov 11 15:28	10°♏05'49	
	1697 Dec 04 15:20	15°♏	
retrograde	1698 Mar 12 18:43	27°♏10'27	
opposition	1698 May 12 17:12	22°♏18'33	1°08'59
min. Earth dist.	1698 May 14 04:54	22°♏07'11	4.37238 AU
direct	1698 Jul 14 06:01	17°♏18'27	
	1698 Oct 24 02:09	0°♐	
evening set	1698 Nov 16 23:57	5°♐11'33	
max. Earth dist.	1698 Nov 27 14:04	7°♐34'03	6.31311 AU
conjunction	1698 Nov 29 15:50	8°♐02'04	0°32'43
minimum elong	1698 Nov 29 15:52	8°♐02'05	0°32'43
morning rise	1698 Dec 12 06:25	10°♐52'13	
retrograde	1699 Apr 14 23:32	28°♐43'47	
opposition	1699 Jun 14 21:24	23°♐51'07	0°22'55
min. Earth dist.	1699 Jun 16 07:54	23°♐40'06	4.24441 AU
direct	1699 Aug 15 13:16	18°♐53'23	
	1699 Nov 15 16:36	0°♑	
desc. node	1699 Nov 26 08:38	2°♑16'06	
evening set	1699 Dec 18 21:01	7°♑19'59	
max. Earth dist.	1699 Dec 29 21:05	9°♑52'59	6.17152 AU
conjunction	1699 Dec 31 13:40	10°♑16'34	-0°03'28
minimum elong	1699 Dec 31 13:40	10°♑16'34	0°03'27
behind sun begin	1699 Dec 31 05:43	10°♑11'59	
behind sun end	1699 Dec 31 21:36	10°♑21'10	
morning rise	1700 Jan 13 06:44	13°♑13'37	
	1700 Apr 12 12:46	0°♒	
retrograde	1700 May 20 11:45	2°♒11'25	
	1700 Jun 27 18:18	30℞♑	
opposition	1700 Jul 20 04:15	27°♑16'22	-0°33'39
min. Earth dist.	1700 Jul 21 00:18	27°♑09'52	4.09901 AU
direct	1700 Sep 18 09:52	22°♑21'07	
	1700 Nov 30 05:37	0°♒	
evening set	1701 Jan 21 15:02	11°♒27'16	
conjunction	1701 Feb 03 11:35	14°♒31'18	-0°40'02
minimum elong	1701 Feb 03 11:32	14°♒31'16	0°40'02
max. Earth dist.	1701 Feb 02 21:14	14°♒22'43	6.03552 AU
	1701 Feb 05 11:33	15°♒	
morning rise	1701 Feb 16 09:47	17°♒36'29	
	1701 Apr 14 05:55	0°♓	
retrograde	1701 Jun 27 02:21	7°♓41'01	
opposition	1701 Aug 26 07:55	2°♓42'24	-1°21'38
min. Earth dist.	1701 Aug 26 07:03	2°♓42'42	3.98560 AU
	1701 Sep 17 01:59	30℞♒	
direct	1701 Oct 24 04:04	27°♒48'46	
	1701 Nov 29 17:18	0°♓	
evening set	1702 Feb 26 12:10	17°♓25'56	
conjunction	1702 Mar 11 15:13	20°♓36'31	-1°03'10

minimum elong	1702 Mar 11 15:12	20°♓36'30	1°03'09
max. Earth dist.	1702 Mar 12 09:13	20°♓47'25	5.95514 AU
morning rise	1702 Mar 24 21:18	23°♓48'46	
	1702 Apr 20 06:53	0°♈	
retrograde	1702 Aug 04 09:13	14°♈30'14	
min. Earth dist.	1702 Oct 02 05:35	9°♈35'35	3.94890 AU
opposition	1702 Oct 03 04:49	9°♈27'45	-1°39'09
direct	1702 Nov 30 02:57	4°♈33'40	
evening set	1703 Apr 04 21:17	24°♈17'50	
conjunction	1703 Apr 18 08:24	27°♈31'42	-1°01'49
minimum elong	1703 Apr 18 08:26	27°♈31'43	1°01'48
max. Earth dist.	1703 Apr 20 06:24	27°♈59'19	5.96485 AU
	1703 Apr 28 15:44	0°♉	
morning rise	1703 May 01 22:37	0°♉47'02	
	1703 Jul 07 12:45	15°♉	
retrograde	1703 Sep 10 15:26	21°♉13'45	
min. Earth dist.	1703 Nov 07 19:09	16°♉20'33	4.00448 AU
opposition	1703 Nov 09 05:35	16°♉08'48	-1°17'01
	1703 Nov 17 17:24	15°℞♉	
direct	1704 Jan 06 05:04	11°♉12'16	
	1704 Feb 24 01:06	15°♉	
	1704 May 08 20:47	0°♊	
evening set	1704 May 11 09:41	0°♊35'23	
conjunction	1704 May 25 02:59	3°♊47'37	-0°36'31
minimum elong	1704 May 25 03:01	3°♊47'38	0°36'30
max. Earth dist.	1704 May 27 11:52	4°♊20'52	6.06047 AU
morning rise	1704 Jun 07 21:52	7°♊00'27	
retrograde	1704 Oct 14 17:35	26°♊29'32	
min. Earth dist.	1704 Dec 11 21:50	21°♊36'14	4.12862 AU
opposition	1704 Dec 13 06:51	21°♊25'00	-0°27'03
direct	1705 Feb 10 03:26	16°♊25'27	
	1705 May 24 04:19	0°♋	
evening set	1705 Jun 16 18:00	5°♋11'24	
asc. node	1705 Jun 20 03:11	5°♋57'06	
conjunction	1705 Jun 30 11:43	8°♋17'30	0°01'02
minimum elong	1705 Jun 30 11:43	8°♋17'30	0°01'02
behind sun begin	1705 Jun 30 03:21	8°♋12'48	
behind sun end	1705 Jun 30 20:05	8°♋22'12	
max. Earth dist.	1705 Jul 02 07:03	8°♋41'59	6.20219 AU
morning rise	1705 Jul 14 05:26	11°♋23'15	
retrograde	1705 Nov 16 09:33	29°♋42'14	
min. Earth dist.	1706 Jan 14 07:05	24°♋47'27	4.27360 AU
opposition	1706 Jan 15 03:48	24°♋40'30	0°28'51
direct	1706 Mar 16 08:24	19°♋38'35	
	1706 Jun 13 22:59	0°♌	
evening set	1706 Jul 21 04:33	7°♌47'15	
conjunction	1706 Aug 03 17:35	10°♌45'28	0°36'33
minimum elong	1706 Aug 03 17:33	10°♌45'27	0°36'32
max. Earth dist.	1706 Aug 04 12:35	10°♌55'55	6.33929 AU
morning rise	1706 Aug 17 04:33	13°♌42'31	
	1706 Aug 23 03:20	15°♌	
	1706 Nov 21 06:12	0°♍	
retrograde	1706 Dec 17 08:20	1°♍04'24	
	1707 Jan 12 06:52	30°℞♌	
opposition	1707 Feb 15 09:43	26°♌06'30	1°12'48
min. Earth dist.	1707 Feb 15 06:28	26°♌07'34	4.39259 AU
direct	1707 Apr 17 21:17	21°♌03'36	
	1707 Jul 10 13:39	0°♍	
evening set	1707 Aug 22 17:38	8°♍45'20	
conjunction	1707 Sep 04 23:00	11°♍36'44	1°00'06
minimum elong	1707 Sep 04 22:58	11°♍36'43	1°00'06
max. Earth dist.	1707 Sep 04 12:11	11°♍30'53	6.43094 AU
morning rise	1707 Sep 18 01:47	14°♍26'44	
	1707 Dec 18 18:20	0°♎	
retrograde	1708 Jan 16 11:41	1°♎16'31	
	1708 Feb 14 03:01	30°℞♍	
opposition	1708 Mar 16 21:09	26°♍21'57	1°35'03
min. Earth dist.	1708 Mar 17 12:48	26°♍16'53	4.45243 AU
direct	1708 May 18 07:47	21°♍19'09	
	1708 Aug 09 04:47	0°♎	
evening set	1708 Sep 21 21:39	8°♎49'36	
max. Earth dist.	1708 Oct 03 10:32	11°♎19'05	6.45391 AU
conjunction	1708 Oct 04 20:07	11°♎37'17	1°06'44
minimum elong	1708 Oct 04 20:07	11°♎37'17	1°06'43
morning rise	1708 Oct 17 15:36	14°♎23'37	
	1709 Jan 18 07:37	0°♏	
retrograde	1709 Feb 14 18:22	1°♏09'37	
	1709 Mar 14 07:24	30°℞♎	
opposition	1709 Apr 16 12:26	26°♎17'12	1°31'53
min. Earth dist.	1709 Apr 17 17:49	26°♎07'48	4.43832 AU
direct	1709 Jun 18 06:29	21°♎15'31	
	1709 Sep 09 05:13	0°♏	
evening set	1709 Oct 22 11:40	8°♏51'47	
max. Earth dist.	1709 Nov 02 04:47	11°♏12'48	6.40310 AU
conjunction	1709 Nov 04 05:13	11°♏39'29	0°55'21
minimum elong	1709 Nov 04 05:15	11°♏39'29	0°55'22
morning rise	1709 Nov 16 20:40	14°♏26'17	
	1709 Nov 19 10:22	15°♏	
	1710 Feb 13 16:07	0°♐	
retrograde	1710 Mar 18 08:34	1°♐37'03	
	1710 Apr 20 04:27	30°℞♏	
opposition	1710 May 18 05:45	26°♏45'14	1°03'40
min. Earth dist.	1710 May 19 19:01	26°♏33'22	4.35363 AU
direct	1710 Jul 19 16:54	21°♏45'26	
	1710 Oct 06 18:15	0°♐	
evening set	1710 Nov 22 09:16	9°♐43'51	
max. Earth dist.	1710 Dec 02 22:47	12°♐06'46	6.29090 AU
conjunction	1710 Dec 05 01:10	12°♐35'16	0°28'07
minimum elong	1710 Dec 05 01:11	12°♐35'17	0°28'06
morning rise	1710 Dec 17 16:04	15°♐26'27	
	1711 Mar 03 08:54	0°♑	
retrograde	1711 Apr 20 20:29	3°♑27'54	
	1711 Jun 09 12:09	30°℞♐	
opposition	1711 Jun 20 17:57	28°♐34'59	0°15'13
min. Earth dist.	1711 Jun 22 02:14	28°♐24'39	4.22025 AU
direct	1711 Aug 21 03:49	23°♐37'39	
desc. node	1711 Oct 06 18:20	26°♐51'07	
	1711 Oct 27 07:27	0°♑	
evening set	1711 Dec 24 13:01	12°♑11'08	
max. Earth dist.	1712 Jan 04 17:57	14°♑47'45	6.14763 AU
conjunction	1712 Jan 06 06:11	15°♑08'56	-0°08'54
minimum elong	1712 Jan 06 06:10	15°♑08'55	0°08'54
behind sun begin	1712 Jan 05 23:16	15°♑04'54	
behind sun end	1712 Jan 06 13:05	15°♑12'56	
morning rise	1712 Jan 18 23:44	18°♑07'14	
	1712 Mar 14 17:39	0°♒	
retrograde	1712 May 25 19:14	7°♒16'13	
opposition	1712 Jul 25 09:11	2°♒20'47	-0°41'32
min. Earth dist.	1712 Jul 26 03:07	2°♒14'58	4.07749 AU
	1712 Aug 13 05:31	30°℞♑	
direct	1712 Sep 23 10:12	27°♑25'55	
	1712 Nov 02 19:42	0°♒	
	1713 Jan 19 17:42	15°♒	
evening set	1713 Jan 26 15:22	16°♒38'10	

conjunction	1713 Feb 08 12:37	19°♒43'17	-0°44'28
minimum elong	1713 Feb 08 12:35	19°♒43'16	0°44'28
max. Earth dist.	1713 Feb 08 02:21	19°♒37'08	6.01837 AU
morning rise	1713 Feb 21 11:58	22°♒49'43	
	1713 Mar 24 14:14	0°♓	
retrograde	1713 Jul 02 12:49	13°♓02'15	
opposition	1713 Aug 31 17:45	8°♓03'04	-1°26'23
min. Earth dist.	1713 Aug 31 12:06	8°♓04'56	3.97499 AU
direct	1713 Oct 29 08:57	3°♓09'31	
evening set	1714 Mar 03 19:00	22°♓49'11	
conjunction	1714 Mar 16 23:08	26°♓00'24	-1°04'35
minimum elong	1714 Mar 16 23:07	26°♓00'23	1°04'35
max. Earth dist.	1714 Mar 17 22:19	26°♓14'27	5.95187 AU
morning rise	1714 Mar 30 06:21	29°♓13'18	
	1714 Apr 02 12:13	0°♈	
retrograde	1714 Aug 09 18:43	19°♈55'18	
opposition	1714 Oct 08 13:47	14°♈52'15	-1°38'18
min. Earth dist.	1714 Oct 07 12:21	15°♈00'51	3.95330 AU
direct	1714 Dec 05 11:38	9°♈57'52	
evening set	1715 Apr 10 05:53	29°♈39'36	
	1715 Apr 11 16:07	0°♉	
conjunction	1715 Apr 23 18:08	2°♉53'24	-0°59'28
minimum elong	1715 Apr 23 18:10	2°♉53'26	0°59'28
max. Earth dist.	1715 Apr 25 20:21	3°♉23'28	5.97628 AU
morning rise	1715 May 07 09:08	6°♉08'34	
	1715 Jun 15 11:27	15°♉	
retrograde	1715 Sep 15 18:35	26°♉27'57	
min. Earth dist.	1715 Nov 12 20:57	21°♉34'49	4.02153 AU
opposition	1715 Nov 14 07:58	21°♉22'53	-1°11'06
direct	1716 Jan 11 09:43	16°♉25'56	
	1716 Apr 21 08:28	0°♊	
evening set	1716 May 16 15:11	5°♊43'19	
conjunction	1716 May 30 08:41	8°♊54'43	-0°31'36
minimum elong	1716 May 30 08:43	8°♊54'44	0°31'36
max. Earth dist.	1716 Jun 01 15:37	9°♊26'39	6.08132 AU
morning rise	1716 Jun 13 03:52	12°♊06'39	
	1716 Sep 19 17:08	0°♋	
retrograde	1716 Oct 19 09:55	1°♋24'58	
	1716 Nov 17 20:50	30°℞♊	
min. Earth dist.	1716 Dec 16 16:45	26°♊31'31	4.15107 AU
opposition	1716 Dec 18 00:38	26°♊20'40	-0°19'01
direct	1717 Feb 15 01:37	21°♊20'41	
asc. node	1717 Apr 29 17:12	28°♊59'24	
	1717 May 05 03:48	0°♋	
evening set	1717 Jun 21 16:40	10°♋00'21	
conjunction	1717 Jul 05 10:06	13°♋05'20	0°06'27
minimum elong	1717 Jul 05 10:05	13°♋05'19	0°06'28
behind sun begin	1717 Jul 05 02:16	13°♋00'57	
behind sun end	1717 Jul 05 17:54	13°♋09'42	
max. Earth dist.	1717 Jul 07 02:57	13°♋28'19	6.22456 AU
morning rise	1717 Jul 19 02:57	16°♋09'45	
	1717 Sep 27 23:22	0°♌	
retrograde	1717 Nov 20 20:21	4°♌19'02	
	1718 Jan 14 08:24	30°℞♋	
opposition	1718 Jan 19 14:43	29°♋17'50	0°36'02
min. Earth dist.	1718 Jan 18 20:40	29°♋23'53	4.29399 AU
direct	1718 Mar 21 00:04	24°♋15'43	
	1718 May 24 02:55	0°♌	
evening set	1718 Jul 25 20:10	12°♌19'26	
	1718 Aug 07 01:55	15°♌	
conjunction	1718 Aug 08 08:06	15°♌16'32	0°40'43
minimum elong	1718 Aug 08 08:03	15°♌16'31	0°40'43
max. Earth dist.	1718 Aug 08 21:49	15°♌24'03	6.35604 AU
morning rise	1718 Aug 21 18:05	18°♌12'27	
	1718 Oct 20 20:49	0°♍	
retrograde	1718 Dec 21 13:54	5°♍28'09	
opposition	1719 Feb 19 16:30	0°♍30'43	1°17'21
min. Earth dist.	1719 Feb 19 16:16	0°♍30'48	4.40490 AU
	1719 Feb 23 14:01	30°℞♌	
direct	1719 Apr 22 07:49	25°♌27'42	
	1719 Jun 18 16:12	0°♍	
evening set	1719 Aug 27 03:44	13°♍07'01	
conjunction	1719 Sep 09 08:12	15°♍57'43	1°02'05
minimum elong	1719 Sep 09 08:11	15°♍57'42	1°02'05
max. Earth dist.	1719 Sep 08 18:42	15°♍50'25	6.43791 AU
morning rise	1719 Sep 22 09:42	18°♍46'59	
	1719 Nov 18 23:12	0°♎	
retrograde	1720 Jan 20 16:08	5°♎34'44	
opposition	1720 Mar 21 03:10	0°♎40'34	1°36'09
min. Earth dist.	1720 Mar 21 20:45	0°♎34'53	4.45388 AU
	1720 Mar 26 09:06	30°℞♍	
direct	1720 May 22 14:53	25°♍37'52	
	1720 Jul 18 05:59	0°♎	
evening set	1720 Sep 26 05:04	13°♎08'34	
max. Earth dist.	1720 Oct 07 12:51	15°♎35'35	6.44957 AU
conjunction	1720 Oct 09 02:34	15°♎56'03	1°06'11
minimum elong	1720 Oct 09 02:34	15°♎56'03	1°06'11
morning rise	1720 Oct 21 21:29	18°♎42'19	
	1720 Dec 18 17:24	0°♏	
retrograde	1721 Feb 19 04:16	5°♏30'36	
opposition	1721 Apr 20 21:33	0°♏38'22	1°29'20
min. Earth dist.	1721 Apr 22 05:28	0°♏28'10	4.42853 AU
	1721 Apr 25 21:50	30°℞♎	
direct	1721 Jun 22 16:08	25°♎36'52	
	1721 Aug 18 04:57	0°♏	
evening set	1721 Oct 26 19:10	13°♏15'57	
	1721 Nov 03 16:26	15°♏	
max. Earth dist.	1721 Nov 06 11:17	15°♏36'54	6.38860 AU
conjunction	1721 Nov 08 12:29	16°♏04'05	0°52'21
minimum elong	1721 Nov 08 12:31	16°♏04'06	0°52'21
morning rise	1721 Nov 21 03:37	18°♏51'23	
	1722 Jan 15 17:36	0°♐	
retrograde	1722 Mar 22 22:16	6°♐08'26	
opposition	1722 May 22 20:29	1°♐16'33	0°57'49
min. Earth dist.	1722 May 24 08:47	1°♐04'59	4.33543 AU
	1722 Jun 01 23:35	30°℞♏	
direct	1722 Jul 24 03:29	26°♏17'08	
	1722 Sep 13 05:52	0°♐	
evening set	1722 Nov 26 20:35	14°♐20'28	
max. Earth dist.	1722 Dec 07 11:59	16°♐45'08	6.27062 AU
conjunction	1722 Dec 09 12:28	17°♐12'42	0°23'15
minimum elong	1722 Dec 09 12:29	17°♐12'43	0°23'15
morning rise	1722 Dec 22 03:33	20°♐04'48	
	1723 Feb 07 01:01	0°♑	
retrograde	1723 Apr 25 20:45	8°♑15'21	
opposition	1723 Jun 25 16:13	3°♑22'14	0°07'16
min. Earth dist.	1723 Jun 26 23:43	3°♑12'08	4.19933 AU
	1723 Jul 24 15:47	30°℞♐	
desc. node	1723 Aug 15 20:35	28°♐34'56	
direct	1723 Aug 25 22:46	28°♐25'19	
	1723 Sep 26 23:12	0°♑	
evening set	1723 Dec 29 06:16	17°♑04'21	
conjunction	1724 Jan 10 23:51	20°♑03'09	-0°14'20
minimum elong	1724 Jan 10 23:50	20°♑03'09	0°14'20

behind sun begin	1724 Jan 10	19:54	20°♑00'51		
behind sun end	1724 Jan 11	03:45	20°♑05'26		
max. Earth dist.	1724 Jan 09	14:24	19°♑43'32	6.12811 AU	
morning rise	1724 Jan 23	18:06	23°♑02'35		
	1724 Feb 23	14:00	0°♒		
retrograde	1724 May 30	23:54	12°♒20'54		
opposition	1724 Jul 30	14:05	7°♒24'59	-0°49'07	
min. Earth dist.	1724 Jul 31	03:47	7°♒20'32	4.06135 AU	
direct	1724 Sep 28	09:10	2°♒30'27		
	1725 Jan 02	07:10	15°♒		
evening set	1725 Jan 31	15:14	21°♒46'47		
conjunction	1725 Feb 13	13:13	24°♒52'44	-0°48'32	
minimum elong	1725 Feb 13	13:11	24°♒52'43	0°48'31	
max. Earth dist.	1725 Feb 13	08:17	24°♒49'46	6.00709 AU	
morning rise	1725 Feb 26	13:27	28°♒00'03		
	1725 Mar 06	23:36	0°♓		
retrograde	1725 Jul 07	22:28	18°♓18'10		
opposition	1725 Sep 06	01:33	13°♓18'23	-1°30'20	
min. Earth dist.	1725 Sep 05	17:07	13°♓21'11	3.96985 AU	
direct	1725 Nov 03	14:33	8°♓24'50		
evening set	1726 Mar 08	23:30	28°♓05'04		
	1726 Mar 16	21:58	0°♈		
conjunction	1726 Mar 22	04:46	1°♈16'43	-1°05'26	
minimum elong	1726 Mar 22	04:45	1°♈16'43	1°05'25	
max. Earth dist.	1726 Mar 23	09:26	1°♈34'04	5.95330 AU	
morning rise	1726 Apr 04	12:59	4°♈30'00		
retrograde	1726 Aug 15	00:31	25°♈10'19		
opposition	1726 Oct 13	18:33	20°♈06'54	-1°36'37	
min. Earth dist.	1726 Oct 12	15:11	20°♈16'09	3.96135 AU	
direct	1726 Dec 10	15:20	15°♈12'17		
	1727 Mar 25	16:27	0°♉		
evening set	1727 Apr 15	10:58	4°♉50'42		
conjunction	1727 Apr 28	23:57	8°♉04'15	-0°56'43	
minimum elong	1727 Apr 28	23:59	8°♉04'17	0°56'43	
max. Earth dist.	1727 May 01	02:24	8°♉34'20	5.98982 AU	
morning rise	1727 May 12	15:55	11°♉19'09		
	1727 May 28	10:38	15°♉		
	1727 Aug 20	23:39	0°♊		
retrograde	1727 Sep 20	15:25	1°♊30'39		
	1727 Oct 21	01:30	30°℞♉		
min. Earth dist.	1727 Nov 17	18:11	26°♉37'40	4.03896 AU	
opposition	1727 Nov 19	05:40	26°♉25'34	-1°04'51	
direct	1728 Jan 16	09:51	21°♉28'11		
	1728 Apr 02	07:29	0°♊		
evening set	1728 May 21	16:12	10°♊40'09		
conjunction	1728 Jun 04	10:08	13°♊50'50	-0°26'37	
minimum elong	1728 Jun 04	10:10	13°♊50'51	0°26'37	
max. Earth dist.	1728 Jun 06	16:03	14°♊22'03	6.10120 AU	
morning rise	1728 Jun 18	05:13	17°♊01'50		
	1728 Aug 19	20:35	0°♋		
retrograde	1728 Oct 24	00:56	6°♋10'23		
min. Earth dist.	1728 Dec 21	09:20	1°♋16'30	4.17121 AU	
opposition	1728 Dec 22	14:50	1°♋06'30	-0°11'09	
	1728 Dec 30	20:34	30°℞♊		
direct	1729 Feb 19	20:16	26°♊06'12		
asc. node	1729 Mar 10	13:23	26°♊40'28		
	1729 Apr 11	16:38	0°♋		
evening set	1729 Jun 26	11:54	14°♋40'44		
conjunction	1729 Jul 10	04:48	17°♋44'42	0°11'38	
minimum elong	1729 Jul 10	04:47	17°♋44'41	0°11'38	
behind sun begin	1729 Jul 09	22:58	17°♋41'27		
behind sun end	1729 Jul 10	10:35	17°♋47'55		
max. Earth dist.	1729 Jul 11	17:50	18°♋05'26	6.24336 AU	
morning rise	1729 Jul 23	21:01	20°♋48'01		
	1729 Sep 05	19:17	0°♌		
retrograde	1729 Nov 25	02:51	8°♌49'19		
opposition	1730 Jan 23	22:59	3°♌48'40	0°42'48	
min. Earth dist.	1730 Jan 23	06:54	3°♌54'03	4.31014 AU	
	1730 Feb 25	13:36	30°℞♋		
direct	1730 Mar 25	11:40	28°♋46'23		
	1730 Apr 22	19:56	0°♌		
	1730 Jul 22	03:39	15°♌		
evening set	1730 Jul 30	09:38	16°♌46'49		
conjunction	1730 Aug 12	20:41	19°♌43'02	0°44'33	
minimum elong	1730 Aug 12	20:38	19°♌43'01	0°44'33	
max. Earth dist.	1730 Aug 13	06:31	19°♌48'24	6.36853 AU	
morning rise	1730 Aug 26	05:29	22°♌37'59		
	1730 Sep 30	16:23	0°♍		
retrograde	1730 Dec 25	19:30	9°♍49'10		
opposition	1731 Feb 23	22:19	4°♍52'19	1°21'22	
min. Earth dist.	1731 Feb 24	00:57	4°♍51'27	4.41310 AU	
	1731 Apr 15	23:14	30°℞♌		
direct	1731 Apr 26	16:55	29°♌49'22		
	1731 May 07	12:16	0°♍		
evening set	1731 Aug 31	12:54	17°♍27'27		
conjunction	1731 Sep 13	16:19	20°♍17'39	1°03'41	
minimum elong	1731 Sep 13	16:17	20°♍17'38	1°03'41	
max. Earth dist.	1731 Sep 12	22:05	20°♍07'47	6.44115 AU	
morning rise	1731 Sep 26	16:57	23°♍06'26		
	1731 Oct 30	01:58	0°♎		
retrograde	1732 Jan 24	22:25	9°♎53'30		
opposition	1732 Mar 25	09:40	4°♎59'41	1°36'41	
min. Earth dist.	1732 Mar 26	05:33	4°♎53'15	4.45233 AU	
	1732 May 21	07:25	30°℞♍		
direct	1732 May 26	22:51	29°♍57'06		
	1732 Jun 01	15:00	0°♎		
evening set	1732 Sep 30	12:13	17°♎28'43		
max. Earth dist.	1732 Oct 11	18:50	19°♎55'21	6.44341 AU	
conjunction	1732 Oct 13	09:09	20°♎16'11	1°05'14	
minimum elong	1732 Oct 13	09:10	20°♎16'12	1°05'14	
morning rise	1732 Oct 26	03:13	23°♎02'24		
	1732 Nov 28	15:28	0°♏		
retrograde	1733 Feb 23	12:28	9°♏53'32		
opposition	1733 Apr 25	07:13	5°♏01'26	1°26'15	
min. Earth dist.	1733 Apr 26	15:29	4°♏51'08	4.41824 AU	
direct	1733 Jun 27	00:25	0°♏00'15		
	1733 Oct 18	16:44	15°♏		
evening set	1733 Oct 31	03:07	17°♏42'01		
max. Earth dist.	1733 Nov 10	17:43	20°♏02'40	6.37489 AU	
conjunction	1733 Nov 12	19:55	20°♏30'31	0°49'01	
minimum elong	1733 Nov 12	19:57	20°♏30'32	0°49'01	
morning rise	1733 Nov 25	10:58	23°♏18'18		
	1733 Dec 26	22:16	0°♐		
retrograde	1734 Mar 27	14:22	10°♐41'19		
opposition	1734 May 27	11:45	5°♐49'19	0°51'35	
min. Earth dist.	1734 May 29	00:30	5°♐37'35	4.31893 AU	
direct	1734 Jul 28	17:07	0°♐50'10		
evening set	1734 Dec 01	07:22	18°♐57'30		
max. Earth dist.	1734 Dec 12	00:32	21°♐23'45	6.25262 AU	
conjunction	1734 Dec 13	23:24	21°♐50'30	0°18'14	
minimum elong	1734 Dec 13	23:25	21°♐50'31	0°18'15	
morning rise	1734 Dec 26	14:41	24°♐43'26		
	1735 Jan 19	09:32	0°♑		
retrograde	1735 Apr 30	17:17	13°♑02'15		

desc. node	1735 Jun 25	11:48	8°♑47'48		
opposition	1735 Jun 30	13:52	8°♑08'45	-0°00'43	
min. Earth dist.	1735 Jul 01	18:40	7°♑59'30	4.18094 AU	
direct	1735 Aug 30	15:22	3°♑12'11		
evening set	1736 Jan 02	22:30	21°♑55'50		
max. Earth dist.	1736 Jan 14	10:15	24°♑37'45	6.11075 AU	
conjunction	1736 Jan 15	16:23	24°♑55'30	-0°19'38	
minimum elong	1736 Jan 15	16:22	24°♑55'29	0°19'39	
morning rise	1736 Jan 28	11:16	27°♑55'56		
	1736 Feb 06	08:36	0°♒		
	1736 Apr 26	16:09	15°♒		
retrograde	1736 Jun 05	05:06	17°♒22'54		
	1736 Jul 15	00:57	15°℞♒		
opposition	1736 Aug 04	17:31	12°♒26'27	-0°56'18	
min. Earth dist.	1736 Aug 05	04:58	12°♒22'43	4.04640 AU	
direct	1736 Oct 03	09:28	7°♒32'04		
	1736 Dec 13	14:06	15°♒		
evening set	1737 Feb 05	13:47	26°♒52'15		
conjunction	1737 Feb 18	12:42	29°♒59'04	-0°52'12	
minimum elong	1737 Feb 18	12:40	29°♒59'03	0°52'13	
	1737 Feb 18	14:15	0°♓		
max. Earth dist.	1737 Feb 18	12:38	29°♒59'01	5.99593 AU	
morning rise	1737 Mar 03	13:51	3°♓07'18		
retrograde	1737 Jul 13	05:46	23°♓30'46		
opposition	1737 Sep 11	07:25	18°♓30'26	-1°33'34	
min. Earth dist.	1737 Sep 10	20:10	18°♓34'10	3.96396 AU	
direct	1737 Nov 08	16:32	13°♓36'51		
	1738 Feb 28	05:48	0°♈		
evening set	1738 Mar 14	03:12	3°♈18'16		
conjunction	1738 Mar 27	09:24	6°♈30'24	-1°05'46	
minimum elong	1738 Mar 27	09:24	6°♈30'24	1°05'46	
max. Earth dist.	1738 Mar 28	16:21	6°♈49'07	5.95292 AU	
morning rise	1738 Apr 09	18:55	9°♈44'14		
	1738 Aug 04	17:21	0°♉		
retrograde	1738 Aug 20	04:09	0°♉23'37		
	1738 Sep 04	14:32	30°℞♈		
opposition	1738 Oct 18	22:16	25°♈19'47	-1°34'15	
min. Earth dist.	1738 Oct 17	16:44	25°♈29'47	3.96663 AU	
direct	1738 Dec 15	18:51	20°♈24'47		
	1739 Mar 06	22:39	0°♉		
evening set	1739 Apr 20	15:51	10°♉01'05		
conjunction	1739 May 04	05:56	13°♉14'38	-0°53'32	
minimum elong	1739 May 04	05:58	13°♉14'39	0°53'31	
max. Earth dist.	1739 May 06	10:39	13°♉45'58	6.00026 AU	
	1739 May 11	15:21	15°♉		
morning rise	1739 May 17	22:31	16°♉29'20		
	1739 Jul 20	10:17	0°♊		
retrograde	1739 Sep 25	14:53	6°♊34'10		
min. Earth dist.	1739 Nov 22	17:18	1°♊40'49	4.05317 AU	
opposition	1739 Nov 24	03:46	1°♊29'04	-0°58'09	
	1739 Dec 05	05:12	30°℞♉		
direct	1740 Jan 21	11:04	26°♉31'15		
	1740 Mar 08	09:26	0°♊		
evening set	1740 May 26	18:36	15°♊39'03		
conjunction	1740 Jun 09	12:45	18°♊49'05	-0°21'24	
minimum elong	1740 Jun 09	12:46	18°♊49'06	0°21'25	
max. Earth dist.	1740 Jun 11	17:29	19°♊19'28	6.11788 AU	
morning rise	1740 Jun 23	07:54	21°♊59'20		
	1740 Jul 29	22:52	0°♋		
retrograde	1740 Oct 28	14:55	10°♋59'02		
min. Earth dist.	1740 Dec 26	01:19	6°♋05'17	4.18875 AU	
opposition	1740 Dec 27	06:12	5°♋55'30	-0°03'08	

asc. node	1741 Jan 18	04:36	3°♋08'08		
direct	1741 Feb 24	14:28	0°♋54'52		
evening set	1741 Jul 01	09:06	19°♋25'08		
conjunction	1741 Jul 15	01:25	22°♋28'07	0°16'50	
minimum elong	1741 Jul 15	01:24	22°♋28'06	0°16'50	
max. Earth dist.	1741 Jul 16	10:35	22°♋46'38	6.26050 AU	
morning rise	1741 Jul 28	16:51	25°♋30'22		
	1741 Aug 18	09:44	0°♌		
retrograde	1741 Nov 29	13:45	13°♌24'11		
opposition	1742 Jan 28	09:42	8°♌24'05	0°49'27	
min. Earth dist.	1742 Jan 27	20:36	8°♌28'28	4.32562 AU	
direct	1742 Mar 30	03:27	3°♌21'42		
	1742 Jul 04	22:59	15°♌		
evening set	1742 Aug 04	01:00	21°♌18'44		
conjunction	1742 Aug 17	11:04	24°♌14'02	0°48'14	
minimum elong	1742 Aug 17	11:01	24°♌14'00	0°48'14	
max. Earth dist.	1742 Aug 17	17:50	24°♌17'43	6.38135 AU	
morning rise	1742 Aug 30	18:43	27°♌08'00		
	1742 Sep 13	04:03	0°♍		
retrograde	1742 Dec 30	01:23	14°♍14'28		
opposition	1743 Feb 28	06:18	9°♍18'05	1°25'03	
min. Earth dist.	1743 Feb 28	10:21	9°♍16'46	4.42298 AU	
direct	1743 May 01	03:28	4°♍15'12		
evening set	1743 Sep 04	23:35	21°♍51'12		
max. Earth dist.	1743 Sep 17	05:54	24°♍29'53	6.44764 AU	
conjunction	1743 Sep 18	01:56	24°♍40'43	1°05'01	
minimum elong	1743 Sep 18	01:55	24°♍40'43	1°05'00	
morning rise	1743 Oct 01	01:24	27°♍28'49		
	1743 Oct 12	21:39	0°♎		
retrograde	1744 Jan 29	04:39	14°♎14'02		
opposition	1744 Mar 29	17:18	9°♎20'34	1°36'45	
min. Earth dist.	1744 Mar 30	14:59	9°♎13'36	4.45528 AU	
direct	1744 May 31	08:53	4°♎18'14		
evening set	1744 Oct 04	19:37	21°♎49'00		
max. Earth dist.	1744 Oct 15	22:30	24°♎13'47	6.44254 AU	
conjunction	1744 Oct 17	15:38	24°♎36'10	1°04'00	
minimum elong	1744 Oct 17	15:39	24°♎36'11	1°04'00	
morning rise	1744 Oct 30	09:09	27°♎22'12		
	1744 Nov 11	15:38	0°♏		
retrograde	1745 Feb 27	21:00	14°♏14'32		
opposition	1745 Apr 29	16:45	9°♏22'31	1°22'46	
min. Earth dist.	1745 May 01	02:03	9°♏11'54	4.41360 AU	
direct	1745 Jul 01	10:06	4°♏21'35		
	1745 Oct 01	21:05	15°♏		
evening set	1745 Nov 04	09:15	22°♏04'01		
max. Earth dist.	1745 Nov 15	00:30	24°♏25'19	6.36686 AU	
conjunction	1745 Nov 17	01:47	24°♏52'42	0°45'31	
minimum elong	1745 Nov 17	01:49	24°♏52'43	0°45'31	
morning rise	1745 Nov 29	16:24	27°♏40'41		
	1745 Dec 10	06:36	0°♐		
retrograde	1746 Apr 01	01:39	15°♐08'00		
opposition	1746 Jun 01	00:46	10°♐15'54	0°45'13	
min. Earth dist.	1746 Jun 02	12:48	10°♐04'26	4.30779 AU	
direct	1746 Aug 02	03:36	5°♐17'09		
evening set	1746 Dec 05	15:26	23°♐26'52		
max. Earth dist.	1746 Dec 16	08:43	25°♐53'42	6.23918 AU	
conjunction	1746 Dec 18	07:17	26°♐20'22	0°13'19	
minimum elong	1746 Dec 18	07:18	26°♐20'23	0°13'19	
behind sun begin	1746 Dec 18	02:34	26°♐17'41		
behind sun end	1746 Dec 18	12:02	26°♐23'04		
morning rise	1746 Dec 30	22:52	29°♐13'57		

	1747 Jan 03 07:55	0°♑	
retrograde	1747 May 05 12:00	17°♑39'49	
desc. node	1747 May 07 09:56	17°♑39'28	
opposition	1747 Jul 05 07:49	12°♑46'01	-0°08'25
min. Earth dist.	1747 Jul 06 11:45	12°♑37'02	4.16584 AU
direct	1747 Sep 04 06:30	7°♑49'42	
evening set	1748 Jan 07 10:52	26°♑37'16	
max. Earth dist.	1748 Jan 19 02:07	29°♑21'44	6.09540 AU
conjunction	1748 Jan 20 05:20	29°♑37'48	-0°24'36
minimum elong	1748 Jan 20 05:18	29°♑37'47	0°24'36
	1748 Jan 21 18:54	0°♒	
morning rise	1748 Feb 02 00:46	2°♒39'10	
	1748 Mar 30 12:56	15°♒	
retrograde	1748 Jun 10 05:34	22°♒14'15	
opposition	1748 Aug 09 16:23	17°♒17'24	-1°02'48
min. Earth dist.	1748 Aug 10 01:38	17°♒14'23	4.03223 AU
	1748 Aug 27 21:46	15°℞♒	
direct	1748 Oct 08 03:10	12°♒23'15	
	1748 Nov 17 13:58	15°♒	
	1749 Feb 02 20:00	0°♓	
evening set	1749 Feb 10 08:31	1°♓47'34	
conjunction	1749 Feb 23 08:09	4°♓55'17	-0°55'21
minimum elong	1749 Feb 23 08:07	4°♓55'15	0°55'21
max. Earth dist.	1749 Feb 23 10:04	4°♓56'26	5.98410 AU
morning rise	1749 Mar 08 10:29	8°♓04'32	
retrograde	1749 Jul 18 08:04	28°♓34'01	
opposition	1749 Sep 16 09:03	23°♓33'11	-1°36'01
min. Earth dist.	1749 Sep 15 19:08	23°♓37'50	3.95585 AU
direct	1749 Nov 13 14:43	18°♓39'31	
	1750 Feb 10 19:23	0°♈	
evening set	1750 Mar 19 03:43	8°♈23'34	
conjunction	1750 Apr 01 11:17	11°♈36'27	-1°05'36
minimum elong	1750 Apr 01 11:18	11°♈36'28	1°05'36
max. Earth dist.	1750 Apr 02 22:36	11°♈57'49	5.94946 AU
morning rise	1750 Apr 14 21:50	14°♈50'58	
	1750 Jun 25 09:12	0°♉	
retrograde	1750 Aug 25 08:07	5°♉30'48	
opposition	1750 Oct 23 23:02	0°♉26'42	-1°31'16
min. Earth dist.	1750 Oct 22 17:09	0°♉36'51	3.96825 AU
	1750 Oct 27 05:42	30°℞♈	
direct	1750 Dec 20 19:54	25°♈31'24	
	1751 Feb 11 21:07	0°♉	
evening set	1751 Apr 25 19:15	15°♉07'25	
	1751 Apr 25 06:41	15°♉	
conjunction	1751 May 09 10:16	18°♉21'06	-0°50'01
minimum elong	1751 May 09 10:19	18°♉21'08	0°50'01
max. Earth dist.	1751 May 11 16:18	18°♉53'09	6.00685 AU
morning rise	1751 May 23 03:49	21°♉35'54	
	1751 Jun 29 11:49	0°♊	
retrograde	1751 Sep 30 11:23	11°♊35'25	
min. Earth dist.	1751 Nov 27 12:50	6°♊42'28	4.06401 AU
opposition	1751 Nov 29 00:16	6°♊30'22	-0°51'09
direct	1752 Jan 26 08:09	1°♊32'10	
evening set	1752 May 31 20:24	20°♊37'08	
conjunction	1752 Jun 14 14:43	23°♊46'37	-0°16'07
minimum elong	1752 Jun 14 14:44	23°♊46'38	0°16'06
max. Earth dist.	1752 Jun 16 17:22	24°♊15'43	6.13213 AU
morning rise	1752 Jun 28 09:52	26°♊56'11	
	1752 Jul 12 00:33	0°♋	
retrograde	1752 Nov 02 06:31	15°♋47'57	
asc. node	1752 Nov 28 00:49	14°♋42'35	
opposition	1752 Dec 31 21:32	10°♋44'43	0°04'49
min. Earth dist.	1752 Dec 30 18:41	10°♋53'48	4.20474 AU
direct	1753 Mar 01 10:57	5°♋43'44	
evening set	1753 Jul 06 05:57	24°♋09'53	
conjunction	1753 Jul 19 21:47	27°♋11'55	0°21'54
minimum elong	1753 Jul 19 21:45	27°♋11'54	0°21'54
max. Earth dist.	1753 Jul 21 05:32	27°♋29'34	6.27700 AU
	1753 Aug 01 12:36	0°♌	
morning rise	1753 Aug 02 12:15	0°♌13'03	
	1753 Oct 20 15:11	15°♌	
retrograde	1753 Dec 03 21:56	17°♌59'19	
	1754 Jan 17 07:29	15°℞♌	
opposition	1754 Feb 01 20:00	12°♌59'39	0°55'44
min. Earth dist.	1754 Feb 01 07:51	13°♌03'41	4.34121 AU
direct	1754 Apr 03 17:14	7°♌57'04	
	1754 Jun 15 06:18	15°♌	
evening set	1754 Aug 08 15:59	25°♌50'17	
conjunction	1754 Aug 22 00:51	28°♌44'34	0°51'35
minimum elong	1754 Aug 22 00:49	28°♌44'33	0°51'35
max. Earth dist.	1754 Aug 22 03:22	28°♌45'56	6.39461 AU
	1754 Aug 27 19:28	0°♍	
morning rise	1754 Sep 04 07:24	1°♍37'31	
retrograde	1755 Jan 03 08:25	18°♍38'57	
opposition	1755 Mar 04 13:56	13°♍42'58	1°28'12
min. Earth dist.	1755 Mar 04 21:10	13°♍40'36	4.43275 AU
direct	1755 May 05 15:57	8°♍40'00	
evening set	1755 Sep 09 09:08	26°♍13'39	
max. Earth dist.	1755 Sep 21 11:15	28°♍49'58	6.45275 AU
conjunction	1755 Sep 22 10:32	29°♍02'33	1°05'57
minimum elong	1755 Sep 22 10:31	29°♍02'33	1°05'57
	1755 Sep 26 20:50	0°♎	
morning rise	1755 Oct 05 08:59	1°♎50'02	
retrograde	1756 Feb 02 09:45	18°♎33'58	
opposition	1756 Apr 03 00:46	13°♎40'41	1°36'17
min. Earth dist.	1756 Apr 03 23:52	13°♎33'16	4.45538 AU
direct	1756 Jun 04 17:14	8°♎38'25	
evening set	1756 Oct 09 02:30	26°♎09'11	
max. Earth dist.	1756 Oct 20 03:45	28°♎33'17	6.43745 AU
conjunction	1756 Oct 21 21:53	28°♎56'16	1°02'23
minimum elong	1756 Oct 21 21:54	28°♎56'17	1°02'22
	1756 Oct 26 18:42	0°♏	
morning rise	1756 Nov 03 14:39	1°♏42'14	
	1757 Jan 13 11:05	15°♏	
retrograde	1757 Mar 04 06:12	18°♏37'17	
	1757 Apr 24 05:48	15°℞♏	
opposition	1757 May 04 03:03	13°♏45'21	1°18'46
min. Earth dist.	1757 May 05 13:44	13°♏34'19	4.40343 AU
direct	1757 Jul 05 20:17	8°♏44'39	
	1757 Sep 12 04:11	15°♏	
evening set	1757 Nov 08 16:50	26°♏29'37	
max. Earth dist.	1757 Nov 19 05:38	28°♏50'06	6.35225 AU
conjunction	1757 Nov 21 08:59	29°♏18'44	0°41'40
minimum elong	1757 Nov 21 09:01	29°♏18'45	0°41'41
	1757 Nov 24 10:57	0°♐	
morning rise	1757 Dec 03 23:41	2°♐07'19	
retrograde	1758 Apr 05 17:48	19°♐41'19	
opposition	1758 Jun 05 16:42	14°♐49'01	0°38'23
min. Earth dist.	1758 Jun 07 04:29	14°♐37'36	4.28946 AU
direct	1758 Aug 06 16:37	9°♐50'29	
evening set	1758 Dec 10 02:45	28°♐05'03	
	1758 Dec 18 11:31	0°♑	
max. Earth dist.	1758 Dec 20 22:55	0°♑34'09	6.21872 AU

conjunction	1758 Dec 22 18:58	0°♑59'30	0°08'06
minimum elong	1758 Dec 22 18:59	0°♑59'30	0°08'05
behind sun begin	1758 Dec 22 11:52	0°♑55'26	
behind sun end	1758 Dec 23 02:06	1°♑03'35	
morning rise	1759 Jan 04 10:48	3°♑54'05	
desc. node	1759 Mar 17 02:55	18°♑10'39	
retrograde	1759 May 10 12:12	22°♑29'32	
opposition	1759 Jul 10 07:01	17°♑35'25	-0°16'28
min. Earth dist.	1759 Jul 11 09:11	17°♑27'00	4.14473 AU
direct	1759 Sep 09 00:35	12°♑39'27	
	1760 Jan 05 14:20	0°♒	
evening set	1760 Jan 12 05:09	1°♒32'57	
max. Earth dist.	1760 Jan 23 23:02	4°♒19'44	6.07542 AU
conjunction	1760 Jan 25 00:02	4°♒34'34	-0°29'41
minimum elong	1760 Jan 25 00:00	4°♒34'33	0°29'41
morning rise	1760 Feb 06 20:26	7°♒37'10	
	1760 Mar 10 06:48	15°♒	
retrograde	1760 Jun 15 12:18	27°♒22'07	
opposition	1760 Aug 14 22:03	22°♒24'43	-1°09'16
min. Earth dist.	1760 Aug 15 03:45	22°♒22'51	4.01536 AU
direct	1760 Oct 13 03:45	17°♒30'44	
	1761 Jan 16 08:04	0°♓	
evening set	1761 Feb 15 10:31	7°♓00'01	
conjunction	1761 Feb 28 11:19	10°♓08'47	-0°58'17
minimum elong	1761 Feb 28 11:17	10°♓08'45	0°58'17
max. Earth dist.	1761 Feb 28 19:20	10°♓13'37	5.97209 AU
morning rise	1761 Mar 13 14:38	13°♓19'04	
	1761 Jun 03 01:14	0°♈	
retrograde	1761 Jul 23 19:25	3°♈53'56	
	1761 Sep 13 06:32	30°℞♓	
opposition	1761 Sep 21 17:31	28°♓52'37	-1°37'49
min. Earth dist.	1761 Sep 21 01:26	28°♓58'01	3.95041 AU
direct	1761 Nov 18 21:04	23°♓58'55	
	1762 Jan 20 01:47	0°♈	
evening set	1762 Mar 24 11:14	13°♈44'13	
conjunction	1762 Apr 06 19:54	16°♈57'35	-1°04'55
minimum elong	1762 Apr 06 19:55	16°♈57'35	1°04'55
max. Earth dist.	1762 Apr 08 10:47	17°♈21'03	5.95110 AU
morning rise	1762 Apr 20 07:47	20°♈12'34	
	1762 Jun 02 10:45	0°♉	
retrograde	1762 Aug 30 13:41	10°♉49'50	
min. Earth dist.	1762 Oct 27 19:56	5°♉56'33	3.97722 AU
opposition	1762 Oct 29 04:34	5°♉45'27	-1°27'22
direct	1762 Dec 26 00:38	0°♉49'51	
	1763 Apr 07 19:04	15°♉	
evening set	1763 May 01 02:53	20°♉22'29	
conjunction	1763 May 14 18:38	23°♉35'48	-0°46'01
minimum elong	1763 May 14 18:40	23°♉35'50	0°46'01
max. Earth dist.	1763 May 17 01:26	24°♉08'11	6.02231 AU
morning rise	1763 May 28 12:45	26°♉50'07	
	1763 Jun 11 04:57	0°♊	
retrograde	1763 Oct 05 09:26	16°♊40'32	
opposition	1763 Dec 03 22:39	11°♊35'33	-0°43'40
min. Earth dist.	1763 Dec 02 12:05	11°♊47'20	4.08406 AU
direct	1764 Jan 31 11:06	6°♊36'55	
evening set	1764 Jun 05 22:53	25°♊35'37	
conjunction	1764 Jun 19 17:16	28°♊44'04	-0°10'42
minimum elong	1764 Jun 19 17:16	28°♊44'05	0°10'42
behind sun begin	1764 Jun 19 10:55	28°♊40'28	
behind sun end	1764 Jun 19 23:38	28°♊47'41	
max. Earth dist.	1764 Jun 21 19:48	29°♊12'56	6.15512 AU
	1764 Jun 25 06:15	0°♋	

morning rise	1764 Jul 03 11:54	1°♋52'23	
asc. node	1764 Oct 07 21:32	19°♋07'33	
retrograde	1764 Nov 06 19:14	20°♋33'07	
min. Earth dist.	1765 Jan 04 09:44	15°♋39'03	4.22835 AU
opposition	1765 Jan 05 11:31	15°♋30'21	0°12'38
direct	1765 Mar 06 05:09	10°♋29'06	
evening set	1765 Jul 11 00:49	28°♋48'53	
	1765 Jul 16 09:43	0°♌	
conjunction	1765 Jul 24 15:38	1°♌49'35	0°26'44
minimum elong	1765 Jul 24 15:36	1°♌49'34	0°26'44
max. Earth dist.	1765 Jul 25 18:09	2°♌04'16	6.29919 AU
morning rise	1765 Aug 07 05:12	4°♌49'22	
	1765 Sep 26 01:49	15°♌	
retrograde	1765 Dec 08 05:05	22°♌26'54	
opposition	1766 Feb 06 03:52	17°♌27'46	1°01'29
min. Earth dist.	1766 Feb 05 19:18	17°♌30'36	4.36026 AU
	1766 Feb 25 14:46	15°℞♌	
direct	1766 Apr 08 06:55	12°♌25'01	
	1766 May 20 08:27	15°♌	
	1766 Aug 12 01:46	0°♍	
evening set	1766 Aug 13 03:10	0°♍13'41	
conjunction	1766 Aug 26 11:07	3°♍06'58	0°54'33
minimum elong	1766 Aug 26 11:05	3°♍06'57	0°54'33
max. Earth dist.	1766 Aug 26 10:39	3°♍06'43	6.40896 AU
morning rise	1766 Sep 08 16:18	5°♍58'50	
retrograde	1767 Jan 07 10:33	22°♍55'37	
opposition	1767 Mar 08 18:35	18°♍00'06	1°30'47
min. Earth dist.	1767 Mar 09 03:44	17°♍57'08	4.44167 AU
direct	1767 May 09 22:42	12°♍57'12	
	1767 Sep 11 09:11	0°♎	
evening set	1767 Sep 13 15:42	0°♎29'10	
conjunction	1767 Sep 26 16:01	3°♎17'33	1°06'30
minimum elong	1767 Sep 26 16:00	3°♎17'33	1°06'30
max. Earth dist.	1767 Sep 25 12:29	3°♎02'40	6.45541 AU
morning rise	1767 Oct 09 13:35	6°♎04'36	
retrograde	1768 Feb 06 15:03	22°♎48'26	
opposition	1768 Apr 07 06:07	17°♎55'30	1°35'20
min. Earth dist.	1768 Apr 08 08:30	17°♎47'03	4.45167 AU
direct	1768 Jun 09 00:45	12°♎53'23	
	1768 Oct 11 08:08	0°♏	
evening set	1768 Oct 13 07:29	0°♏25'37	
max. Earth dist.	1768 Oct 24 04:53	2°♏48'02	6.42746 AU
conjunction	1768 Oct 26 02:19	3°♏12'53	1°00'28
minimum elong	1768 Oct 26 02:21	3°♏12'53	1°00'27
morning rise	1768 Nov 07 18:42	5°♏59'05	
	1768 Dec 21 21:42	15°♏	
retrograde	1769 Mar 08 15:15	22°♏58'47	
opposition	1769 May 08 12:46	18°♏06'53	1°14'24
min. Earth dist.	1769 May 09 23:59	17°♏55'40	4.38778 AU
	1769 Jun 03 23:26	15°℞♏	
direct	1769 Jul 10 03:27	13°♏06'25	
	1769 Aug 15 06:31	15°♏	
	1769 Nov 08 18:59	0°♐	
evening set	1769 Nov 12 24:00	0°♐55'52	
max. Earth dist.	1769 Nov 23 13:46	3°♐17'31	6.33219 AU
conjunction	1769 Nov 25 16:08	3°♐45'45	0°37'37
minimum elong	1769 Nov 25 16:10	3°♐45'46	0°37'37
morning rise	1769 Dec 08 06:45	6°♐35'08	
retrograde	1770 Apr 10 11:58	24°♐17'54	
opposition	1770 Jun 10 09:52	19°♐25'30	0°31'19
min. Earth dist.	1770 Jun 11 21:35	19°♐14'07	4.26615 AU
direct	1770 Aug 11 06:04	14°♐27'22	

	1770 Dec 02	06:36	0°♑		
evening set	1770 Dec 14	15:57	2°♑48'31		
max. Earth dist.	1770 Dec 25	12:58	5°♑19'00	6.19414 AU	
conjunction	1770 Dec 27	08:20	5°♑44'05	0°02'48	
minimum elong	1770 Dec 27	08:20	5°♑44'05	0°02'48	
behind sun begin	1770 Dec 27	00:22	5°♑39'30		
behind sun end	1770 Dec 27	16:18	5°♑48'40		
morning rise	1771 Jan 09	00:51	8°♑39'56		
desc. node	1771 Jan 24	20:04	12°♑15'12		
retrograde	1771 May 15	15:16	27°♑26'36		
opposition	1771 Jul 15	08:42	22°♑32'05	-0°24'32	
min. Earth dist.	1771 Jul 16	07:43	22°♑24'39	4.12083 AU	
direct	1771 Sep 13	20:10	17°♑36'27		
	1771 Dec 19	04:32	0°♒		
evening set	1772 Jan 17	02:23	6°♒36'52		
conjunction	1772 Jan 29	22:08	9°♒39'43	-0°34'37	
minimum elong	1772 Jan 29	22:06	9°♒39'42	0°34'37	
max. Earth dist.	1772 Jan 29	03:01	9°♒28'19	6.05458 AU	
morning rise	1772 Feb 11	19:16	12°♒43'36		
	1772 Feb 21	11:23	15°♒		
	1772 May 10	09:22	0°♓		
retrograde	1772 Jun 20	23:26	2°♓38'20		
	1772 Aug 01	19:56	30°℞♒		
opposition	1772 Aug 20	06:41	27°♒40'24	-1°15'17	
min. Earth dist.	1772 Aug 20	09:31	27°♒39'28	3.99981 AU	
direct	1772 Oct 18	08:03	22°♒46'37		
	1772 Dec 26	17:24	0°♓		
evening set	1773 Feb 20	15:28	12°♓20'00		
conjunction	1773 Mar 05	17:12	15°♓29'37	-1°00'46	
minimum elong	1773 Mar 05	17:10	15°♓29'36	1°00'45	
max. Earth dist.	1773 Mar 06	05:41	15°♓37'10	5.96318 AU	
morning rise	1773 Mar 18	21:51	18°♓40'51		
	1773 May 08	08:41	0°♈		
retrograde	1773 Jul 29	05:44	9°♈19'03		
min. Earth dist.	1773 Sep 26	06:58	4°♈23'58	3.94944 AU	
opposition	1773 Sep 27	03:19	4°♈17'09	-1°38'45	
	1773 Nov 05	06:57	30°℞♓		
direct	1773 Nov 24	03:48	29°♓23'16		
	1773 Dec 13	01:45	0°♈		
evening set	1774 Mar 29	20:02	19°♈07'48		
conjunction	1774 Apr 12	05:46	22°♈21'20	-1°03'39	
minimum elong	1774 Apr 12	05:48	22°♈21'21	1°03'38	
max. Earth dist.	1774 Apr 14	00:14	22°♈46'55	5.95785 AU	
morning rise	1774 Apr 25	18:39	25°♈36'26		
	1774 May 14	11:19	0°♉		
	1774 Aug 09	04:53	15°♉		
retrograde	1774 Sep 04	18:31	16°♉08'36		
	1774 Oct 01	03:19	15°℞♉		
min. Earth dist.	1774 Nov 02	00:05	11°♉15'12	3.99062 AU	
opposition	1774 Nov 03	09:23	11°♉03'52	-1°22'44	
direct	1774 Dec 31	07:37	6°♉07'48		
	1775 Mar 19	06:51	15°♉		
evening set	1775 May 06	09:50	25°♉35'28		
conjunction	1775 May 20	02:21	28°♉48'15	-0°41'40	
minimum elong	1775 May 20	02:24	28°♉48'17	0°41'40	
max. Earth dist.	1775 May 22	11:07	29°♉21'37	6.04102 AU	
	1775 May 25	04:30	0°♊		
morning rise	1775 Jun 02	20:46	2°♊01'48		
retrograde	1775 Oct 10	06:01	21°♊41'51		
min. Earth dist.	1775 Dec 07	09:04	16°♊48'40	4.10588 AU	
opposition	1775 Dec 08	19:13	16°♊37'03	-0°35'55	
direct	1776 Feb 05	11:13	11°♊38'00		
	1776 Jun 08	18:27	0°♋		
evening set	1776 Jun 10	23:57	0°♋30'11		
conjunction	1776 Jun 24	17:56	3°♋37'29	-0°05'15	
minimum elong	1776 Jun 24	17:57	3°♋37'29	0°05'15	
behind sun begin	1776 Jun 24	09:52	3°♋32'55		
behind sun end	1776 Jun 25	02:02	3°♋42'04		
max. Earth dist.	1776 Jun 26	16:28	4°♋03'55	6.17806 AU	
morning rise	1776 Jul 08	12:17	6°♋44'36		
asc. node	1776 Aug 17	11:24	15°♋18'20		
retrograde	1776 Nov 11	06:54	25°♋14'53		
min. Earth dist.	1777 Jan 09	01:04	20°♋20'23	4.25034 AU	
opposition	1777 Jan 10	00:22	20°♋12'32	0°20'19	
direct	1777 Mar 10	23:23	15°♋10'57		
	1777 Jun 29	23:23	0°♌		
evening set	1777 Jul 15	18:26	3°♌25'09		
conjunction	1777 Jul 29	08:33	6°♌24'41	0°31'24	
minimum elong	1777 Jul 29	08:31	6°♌24'40	0°31'24	
max. Earth dist.	1777 Jul 30	08:18	6°♌37'48	6.31869 AU	
morning rise	1777 Aug 11	20:52	9°♌23'09		
	1777 Sep 07	05:49	15°♌		
retrograde	1777 Dec 12	11:19	26°♌53'08		
opposition	1778 Feb 10	11:24	21°♌54'35	1°06'55	
min. Earth dist.	1778 Feb 10	05:02	21°♌56'41	4.37601 AU	
direct	1778 Apr 12	18:06	16°♌51'46		
	1778 Jul 26	16:46	0°♍		
evening set	1778 Aug 17	14:47	4°♍37'02		
conjunction	1778 Aug 30	21:28	7°♍29'25	0°57'15	
minimum elong	1778 Aug 30	21:26	7°♍29'24	0°57'15	
max. Earth dist.	1778 Aug 30	15:15	7°♍26'03	6.41970 AU	
morning rise	1778 Sep 13	01:40	10°♍20'26		
retrograde	1779 Jan 11	16:23	27°♍13'48		
opposition	1779 Mar 13	00:26	22°♍18'43	1°32'56	
min. Earth dist.	1779 Mar 13	13:08	22°♍14'36	4.44702 AU	
direct	1779 May 14	08:02	17°♍15'49		
	1779 Aug 26	03:10	0°♎		
evening set	1779 Sep 17	23:12	4°♎47'05		
conjunction	1779 Sep 30	22:48	7°♎35'10	1°06'43	
minimum elong	1779 Sep 30	22:48	7°♎35'10	1°06'43	
max. Earth dist.	1779 Sep 29	16:46	7°♎18'55	6.45488 AU	
morning rise	1779 Oct 13	19:23	10°♎21'53		
retrograde	1780 Feb 10	20:45	27°♎06'41		
opposition	1780 Apr 11	13:37	22°♎14'00	1°33'52	
min. Earth dist.	1780 Apr 12	16:57	22°♎05'14	4.44552 AU	
direct	1780 Jun 13	07:13	17°♎12'05		
	1780 Sep 25	02:34	0°♏		
evening set	1780 Oct 17	14:22	4°♏46'21		
max. Earth dist.	1780 Oct 28	09:41	7°♏08'04	6.41607 AU	
conjunction	1780 Oct 30	08:36	7°♏33'49	0°58'10	
minimum elong	1780 Oct 30	08:38	7°♏33'50	0°58'10	
morning rise	1780 Nov 12	00:34	10°♏20'19		
	1780 Dec 03	20:17	15°♏		
retrograde	1781 Mar 13	04:32	27°♏25'07		
opposition	1781 May 13	01:12	22°♏33'20	1°09'30	
min. Earth dist.	1781 May 14	14:00	22°♏21'37	4.37179 AU	
direct	1781 Jul 14	14:51	17°♏33'11		
	1781 Oct 23	05:56	0°♐		
evening set	1781 Nov 17	09:29	5°♐27'04		
max. Earth dist.	1781 Nov 27	22:30	7°♐48'57	6.31290 AU	
conjunction	1781 Nov 30	01:30	8°♐17'40	0°33'14	
minimum elong	1781 Nov 30	01:32	8°♐17'41	0°33'13	
morning rise	1781 Dec 12	16:18	11°♐07'54		

retrograde	1782 Apr 15	07:25	28°♐59'13		
opposition	1782 Jun 15	05:17	24°♐06'39	0°23'51	
min. Earth dist.	1782 Jun 16	14:57	23°♐55'53	4.24499 AU	
direct	1782 Aug 15	20:13	19°♐08'55		
	1782 Nov 14	19:18	0°♑		
desc. node	1782 Dec 04	00:02	4°♑07'40		
evening set	1782 Dec 19	06:47	7°♑35'53		
max. Earth dist.	1782 Dec 30	08:23	10°♑09'41	6.17313 AU	
conjunction	1782 Dec 31	23:32	10°♑32'27	-0°02'45	
minimum elong	1782 Dec 31	23:33	10°♑32'27	0°02'45	
behind sun begin	1782 Dec 31	15:34	10°♑27'50		
behind sun end	1783 Jan 01	07:31	10°♑37'04		
morning rise	1783 Jan 13	16:26	13°♑29'24		
	1783 Apr 10	16:58	0°♒		
retrograde	1783 May 20	20:35	2°♒26'02		
	1783 Jun 30	07:59	30°℞♑		
opposition	1783 Jul 20	11:48	27°♑31'10	-0°32'32	
min. Earth dist.	1783 Jul 21	08:50	27°♑24'22	4.10182 AU	
direct	1783 Sep 18	19:00	22°♑35'57		
	1783 Nov 29	07:24	0°♒		
evening set	1784 Jan 22	00:08	11°♒41'24		
conjunction	1784 Feb 03	20:25	14°♒45'11	-0°39'19	
minimum elong	1784 Feb 03	20:23	14°♒45'10	0°39'19	
max. Earth dist.	1784 Feb 03	05:00	14°♒35'58	6.03934 AU	
	1784 Feb 04	21:13	15°♒		
morning rise	1784 Feb 16	18:33	17°♒50'08		
	1784 Apr 12	10:55	0°♓		
retrograde	1784 Jun 26	06:50	7°♓52'21		
opposition	1784 Aug 25	14:06	2°♓53'52	-1°20'40	
min. Earth dist.	1784 Aug 25	12:19	2°♓54'27	3.99025 AU	
	1784 Sep 18	03:18	30°℞♒		
direct	1784 Oct 23	10:35	28°♒00'15		
	1784 Nov 27	08:40	0°♓		
evening set	1785 Feb 25	19:04	17°♓35'41		
conjunction	1785 Mar 10	21:47	20°♓45'52	-1°02'43	
minimum elong	1785 Mar 10	21:46	20°♓45'52	1°02'43	
max. Earth dist.	1785 Mar 11	15:32	20°♓56'38	5.96008 AU	
morning rise	1785 Mar 24	03:25	23°♓57'42		
	1785 Apr 18	21:45	0°♈		
retrograde	1785 Aug 03	13:13	14°♈36'53		
min. Earth dist.	1785 Oct 01	11:30	9°♈41'57	3.95324 AU	
opposition	1785 Oct 02	09:49	9°♈34'26	-1°38'50	
direct	1785 Nov 29	09:55	4°♈40'21		
evening set	1786 Apr 04	01:28	24°♈22'42		
conjunction	1786 Apr 17	12:19	27°♈36'15	-1°01'55	
minimum elong	1786 Apr 17	12:21	27°♈36'16	1°01'54	
max. Earth dist.	1786 Apr 19	10:50	28°♈04'10	5.96803 AU	
	1786 Apr 27	12:08	0°♉		
morning rise	1786 May 01	02:05	0°♉51'16		
	1786 Jul 06	07:37	15°♉		
retrograde	1786 Sep 09	19:36	21°♉17'04		
min. Earth dist.	1786 Nov 06	23:48	16°♉23'49	4.00604 AU	
opposition	1786 Nov 08	09:53	16°♉12'13	-1°17'35	
	1786 Nov 17	08:16	15°℞♉		
direct	1787 Jan 05	09:22	11°♉15'48		
	1787 Feb 22	20:00	15°♉		
	1787 May 08	18:48	0°♊		
evening set	1787 May 11	12:37	0°♊38'13		
conjunction	1787 May 25	05:28	3°♊50'19	-0°37'09	
minimum elong	1787 May 25	05:30	3°♊50'20	0°37'08	
max. Earth dist.	1787 May 27	12:21	4°♊22'25	6.05998 AU	
morning rise	1787 Jun 08	00:20	7°♊03'08		
retrograde	1787 Oct 14	21:18	26°♊33'21		
min. Earth dist.	1787 Dec 12	02:37	21°♊40'01	4.12630 AU	
opposition	1787 Dec 13	11:38	21°♊28'46	-0°28'13	
direct	1788 Feb 10	07:43	16°♊29'19		
	1788 May 22	23:29	0°♋		
evening set	1788 Jun 15	20:58	5°♋15'52		
asc. node	1788 Jun 28	07:09	8°♋04'15		
conjunction	1788 Jun 29	14:51	8°♋22'11	0°00'08	
minimum elong	1788 Jun 29	14:51	8°♋22'11	0°00'07	
behind sun begin	1788 Jun 29	06:40	8°♋17'34		
behind sun end	1788 Jun 29	23:02	8°♋26'47		
max. Earth dist.	1788 Jul 01	11:10	8°♋47'15	6.19843 AU	
morning rise	1788 Jul 13	08:29	11°♋28'07		
retrograde	1788 Nov 15	16:57	29°♋49'20		
opposition	1789 Jan 14	10:04	24°♋47'33	0°27'36	
min. Earth dist.	1789 Jan 13	13:22	24°♋54'31	4.26885 AU	
direct	1789 Mar 15	13:22	19°♋45'46		
	1789 Jun 12	11:27	0°♌		
evening set	1789 Jul 20	09:20	7°♌55'44		
conjunction	1789 Aug 02	22:29	10°♌54'16	0°35'45	
minimum elong	1789 Aug 02	22:27	10°♌54'15	0°35'44	
max. Earth dist.	1789 Aug 03	17:02	11°♌04'28	6.33390 AU	
morning rise	1789 Aug 16	09:56	13°♌51'43		
	1789 Aug 21	15:31	15°♌		
	1789 Nov 18	07:29	0°♍		
retrograde	1789 Dec 16	16:34	1°♍15'55		
	1790 Jan 13	21:53	30°℞♌		
opposition	1790 Feb 14	17:26	26°♌17'51	1°11'52	
min. Earth dist.	1790 Feb 14	13:57	26°♌19'00	4.38719 AU	
direct	1790 Apr 17	03:35	21°♌14'56		
	1790 Jul 08	17:52	0°♍		
evening set	1790 Aug 22	00:31	8°♍58'13		
conjunction	1790 Sep 04	06:21	11°♍49'57	0°59'34	
minimum elong	1790 Sep 04	06:20	11°♍49'56	0°59'35	
max. Earth dist.	1790 Sep 03	21:41	11°♍45'15	6.42614 AU	
morning rise	1790 Sep 17	09:19	14°♍40'15		
	1790 Dec 15	08:52	0°♎		
retrograde	1791 Jan 15	20:35	1°♎31'40		
	1791 Feb 16	07:52	30°℞♍		
opposition	1791 Mar 17	05:57	26°♍37'01	1°34'33	
min. Earth dist.	1791 Mar 17	20:22	26°♍32'21	4.44863 AU	
direct	1791 May 18	14:38	21°♍34'15		
	1791 Aug 08	02:36	0°♎		
evening set	1791 Sep 22	06:30	9°♎05'44		
max. Earth dist.	1791 Oct 03	19:09	11°♎35'11	6.45151 AU	
conjunction	1791 Oct 05	05:05	11°♎53'35	1°06'33	
minimum elong	1791 Oct 05	05:05	11°♎53'35	1°06'32	
morning rise	1791 Oct 18	01:02	14°♎40'09		
	1792 Jan 15	10:59	0°♏		
retrograde	1792 Feb 15	05:34	1°♏26'42		
	1792 Mar 17	00:41	30°℞♎		
opposition	1792 Apr 15	21:45	26°♎34'13	1°31'53	
min. Earth dist.	1792 Apr 17	03:26	26°♎24'43	4.43753 AU	
direct	1792 Jun 17	16:15	21°♎32'28		
	1792 Sep 07	01:18	0°♏		
evening set	1792 Oct 21	21:23	9°♏08'57		
max. Earth dist.	1792 Nov 01	15:54	11°♏30'39	6.40410 AU	
conjunction	1792 Nov 03	15:18	11°♏56'44	0°55'31	
minimum elong	1792 Nov 03	15:20	11°♏56'45	0°55'32	
morning rise	1792 Nov 16	06:51	14°♏43'34		
	1792 Nov 17	12:54	15°♏		
	1793 Feb 10	07:01	0°♐		

retrograde	1793 Mar 17 16:12	1°♐53'28	
	1793 Apr 22 08:44	30°℞♏	
opposition	1793 May 17 14:15	27°♏01'36	1°04'09
min. Earth dist.	1793 May 19 02:05	26°♏50'11	4.35658 AU
direct	1793 Jul 19 00:25	22°♏01'46	
	1793 Oct 04 16:55	0°♐	
evening set	1793 Nov 21 18:57	9°♐59'21	
max. Earth dist.	1793 Dec 02 09:30	12°♐22'41	6.29564 AU
conjunction	1793 Dec 04 10:50	12°♐50'35	0°28'38
minimum elong	1793 Dec 04 10:52	12°♐50'36	0°28'37
morning rise	1793 Dec 17 01:42	15°♐41'33	
	1794 Mar 01 01:52	0°♑	
retrograde	1794 Apr 20 04:24	3°♑40'38	
	1794 Jun 10 12:30	30°℞♐	
opposition	1794 Jun 20 00:59	28°♐47'48	0°16'11
min. Earth dist.	1794 Jun 21 10:13	28°♐37'10	4.22647 AU
direct	1794 Aug 20 13:12	23°♐50'23	
desc. node	1794 Oct 13 15:32	28°♐06'43	
	1794 Oct 25 11:36	0°♑	
evening set	1794 Dec 23 21:05	12°♑21'53	
max. Earth dist.	1795 Jan 04 00:50	14°♑57'35	6.15486 AU
conjunction	1795 Jan 05 14:07	15°♑19'20	-0°08'08
minimum elong	1795 Jan 05 14:07	15°♑19'20	0°08'08
behind sun begin	1795 Jan 05 06:58	15°♑15'11	
behind sun end	1795 Jan 05 21:15	15°♑23'29	
morning rise	1795 Jan 18 07:36	18°♑17'16	
	1795 Mar 14 06:20	0°♒	
retrograde	1795 May 25 21:29	7°♒22'40	
opposition	1795 Jul 25 13:25	2°♒27'19	-0°40'16
min. Earth dist.	1795 Jul 26 06:51	2°♒21'40	4.08525 AU
	1795 Aug 14 09:27	30°℞♑	
direct	1795 Sep 23 15:01	27°♑32'22	
	1795 Nov 02 05:23	0°♒	
	1796 Jan 19 16:04	15°♒	
evening set	1796 Jan 26 20:45	16°♒42'06	
conjunction	1796 Feb 08 17:43	19°♒46'45	-0°43'41
minimum elong	1796 Feb 08 17:41	19°♒46'44	0°43'40
max. Earth dist.	1796 Feb 08 06:53	19°♒40'15	6.02587 AU
morning rise	1796 Feb 21 16:39	22°♒52'40	
	1796 Mar 23 14:49	0°♓	
retrograde	1796 Jul 01 14:39	13°♓01'41	
opposition	1796 Aug 30 19:40	8°♓02'37	-1°25'21
min. Earth dist.	1796 Aug 30 15:39	8°♓03'57	3.98122 AU
direct	1796 Oct 28 13:39	3°♓09'00	
evening set	1797 Mar 02 21:11	22°♓46'33	
conjunction	1797 Mar 16 01:01	25°♓57'24	-1°04'10
minimum elong	1797 Mar 16 01:00	25°♓57'24	1°04'10
max. Earth dist.	1797 Mar 16 23:38	26°♓11'05	5.95629 AU
morning rise	1797 Mar 29 07:46	29°♓09'54	
	1797 Apr 01 19:21	0°♈	
retrograde	1797 Aug 08 19:19	19°♈50'10	
opposition	1797 Oct 07 14:35	14°♈47'18	-1°38'09
min. Earth dist.	1797 Oct 06 14:02	14°♈55'35	3.95540 AU
direct	1797 Dec 04 12:23	9°♈53'00	
evening set	1798 Apr 09 06:19	29°♈34'09	
	1798 Apr 11 01:41	0°♉	
conjunction	1798 Apr 22 18:03	2°♉47'47	-0°59'43
minimum elong	1798 Apr 22 18:05	2°♉47'49	0°59'43
max. Earth dist.	1798 Apr 24 17:16	3°♉16'04	5.97563 AU
morning rise	1798 May 06 08:55	6°♉02'54	
	1798 Jun 14 21:25	15°♉	
retrograde	1798 Sep 14 18:55	26°♉23'24	
min. Earth dist.	1798 Nov 11 22:34	21°♉30'18	4.01815 AU
opposition	1798 Nov 13 09:27	21°♉18'25	-1°11'56
direct	1799 Jan 10 10:46	16°♉21'33	
	1799 Apr 21 15:31	0°♊	
evening set	1799 May 16 15:46	5°♊40'16	
conjunction	1799 May 30 09:17	8°♊51'55	-0°32'21
minimum elong	1799 May 30 09:19	8°♊51'56	0°32'21
max. Earth dist.	1799 Jun 01 16:16	9°♊23'57	6.07564 AU
morning rise	1799 Jun 13 04:15	12°♊04'05	
	1799 Sep 19 18:39	0°♋	
retrograde	1799 Oct 19 15:34	1°♋25'42	
	1799 Nov 18 04:18	30°℞♊	
min. Earth dist.	1799 Dec 16 21:29	26°♊32'03	4.14365 AU
opposition	1799 Dec 18 04:43	26°♊21'26	-0°20'18
direct	1800 Feb 15 04:45	21°♊21'37	
	1800 May 05 01:59	0°♋	
asc. node	1800 May 09 03:17	0°♋46'40	
evening set	1800 Jun 21 19:26	10°♋03'44	
conjunction	1800 Jul 05 12:56	13°♋09'09	0°05'34
minimum elong	1800 Jul 05 12:56	13°♋09'08	0°05'35
behind sun begin	1800 Jul 05 04:55	13°♋04'39	
behind sun end	1800 Jul 05 20:56	13°♋13'38	
max. Earth dist.	1800 Jul 07 06:07	13°♋32'21	6.21598 AU
morning rise	1800 Jul 19 06:08	16°♋14'05	
	1800 Sep 27 09:35	0°♌	
retrograde	1800 Nov 21 02:46	4°♌27'16	
	1801 Jan 15 15:54	30°℞♋	
opposition	1801 Jan 19 21:30	29°♋25'58	0°34'51
min. Earth dist.	1801 Jan 19 02:16	29°♋32'26	4.28525 AU
direct	1801 Mar 21 04:08	24°♋24'00	
	1801 May 23 09:12	0°♌	
evening set	1801 Jul 26 02:06	12°♌30'25	
	1801 Aug 06 11:23	15°♌	
conjunction	1801 Aug 08 14:24	15°♌28'00	0°39'59
minimum elong	1801 Aug 08 14:22	15°♌27'59	0°39'59
max. Earth dist.	1801 Aug 09 05:44	15°♌36'25	6.34813 AU
morning rise	1801 Aug 22 00:40	18°♌24'24	
	1801 Oct 19 18:40	0°♍	
retrograde	1801 Dec 22 00:25	5°♍43'07	
opposition	1802 Feb 20 01:41	0°♍45'40	1°16'31
min. Earth dist.	1802 Feb 20 00:38	0°♍46'01	4.39856 AU
	1802 Feb 25 21:03	30°℞♌	
direct	1802 Apr 22 15:31	25°♌42'51	
	1802 Jun 17 04:32	0°♍	
evening set	1802 Aug 27 12:25	13°♍23'53	
conjunction	1802 Sep 09 17:06	16°♍14'53	1°01'38
minimum elong	1802 Sep 09 17:05	16°♍14'52	1°01'39
max. Earth dist.	1802 Sep 09 04:18	16°♍07'57	6.43395 AU
morning rise	1802 Sep 22 19:05	19°♍04'28	
	1802 Nov 17 12:24	0°♎	
retrograde	1803 Jan 21 03:20	5°♎53'27	
opposition	1803 Mar 22 13:26	0°♎59'12	1°35'44
min. Earth dist.	1803 Mar 23 05:50	0°♎53'53	4.45293 AU
	1803 Mar 30 05:37	30°℞♍	
direct	1803 May 24 00:16	25°♍56'34	
	1803 Jul 17 10:00	0°♎	
evening set	1803 Sep 27 14:39	13°♎27'11	
max. Earth dist.	1803 Oct 09 02:15	15°♎56'06	6.45216 AU
conjunction	1803 Oct 10 12:32	16°♎14'42	1°06'04
minimum elong	1803 Oct 10 12:32	16°♎14'42	1°06'04
morning rise	1803 Oct 23 07:29	19°♎00'55	
	1803 Dec 18 06:57	0°♏	

retrograde	1804 Feb 20 12:23	5°♏47'59	
opposition	1804 Apr 21 06:38	0°♏55'42	1°29'25
min. Earth dist.	1804 Apr 22 12:41	0°♏46'06	4.43461 AU
	1804 Apr 28 14:02	30°℞♎	
direct	1804 Jun 23 00:46	25°♎54'17	
	1804 Aug 16 14:22	0°♏	
evening set	1804 Oct 27 04:04	13°♏31'09	
	1804 Nov 02 22:05	15°♏	
max. Earth dist.	1804 Nov 06 20:33	15°♏52'03	6.39780 AU
conjunction	1804 Nov 08 21:15	16°♏18'55	0°52'39
minimum elong	1804 Nov 08 21:17	16°♏18'56	0°52'38
morning rise	1804 Nov 21 12:32	19°♏05'53	
	1805 Jan 14 20:00	0°♐	
retrograde	1805 Mar 23 04:33	6°♐19'15	
opposition	1805 May 23 02:27	1°♐27'21	0°58'33
min. Earth dist.	1805 May 24 15:10	1°♐15'39	4.34704 AU
	1805 Jun 03 16:42	30°℞♏	
direct	1805 Jul 24 11:57	26°♏27'49	
	1805 Sep 12 07:20	0°♐	
evening set	1805 Nov 27 02:24	14°♐27'17	
max. Earth dist.	1805 Dec 07 17:44	16°♐51'27	6.28366 AU
conjunction	1805 Dec 09 18:17	17°♐18'58	0°24'00
minimum elong	1805 Dec 09 18:18	17°♐18'59	0°24'01
morning rise	1805 Dec 22 09:09	20°♐10'27	
	1806 Feb 06 22:43	0°♑	
retrograde	1806 Apr 25 19:26	8°♑15'39	
opposition	1806 Jun 25 17:27	3°♑22'32	0°08'42
min. Earth dist.	1806 Jun 27 00:43	3°♑12'31	4.21276 AU
	1806 Jul 24 18:51	30°℞♐	
direct	1806 Aug 26 01:23	28°♐25'28	
desc. node	1806 Aug 26 12:35	28°♐25'29	
	1806 Sep 27 03:19	0°♑	
evening set	1806 Dec 29 08:04	17°♑00'13	
max. Earth dist.	1807 Jan 09 14:22	19°♑37'53	6.14048 AU
conjunction	1807 Jan 11 01:20	19°♑58'21	-0°13'14
minimum elong	1807 Jan 11 01:19	19°♑58'21	0°13'15
behind sun begin	1807 Jan 10 20:31	19°♑55'33	
behind sun end	1807 Jan 11 06:07	20°♑01'09	
morning rise	1807 Jan 23 19:17	22°♑57'07	
	1807 Feb 24 03:40	0°♒	
retrograde	1807 May 31 20:42	12°♒10'15	
opposition	1807 Jul 31 11:00	7°♒14'26	-0°47'24
min. Earth dist.	1807 Aug 01 03:10	7°♒09'11	4.07120 AU
direct	1807 Sep 29 09:47	2°♒19'40	
	1808 Jan 04 04:38	15°♒	
evening set	1808 Feb 01 13:07	21°♒33'09	
conjunction	1808 Feb 14 10:54	24°♒38'41	-0°47'33
minimum elong	1808 Feb 14 10:51	24°♒38'40	0°47'33
max. Earth dist.	1808 Feb 14 03:28	24°♒34'14	6.01345 AU
morning rise	1808 Feb 27 10:43	27°♒45'33	
	1808 Mar 07 21:43	0°♓	
retrograde	1808 Jul 07 17:04	18°♓01'03	
opposition	1808 Sep 05 20:22	13°♓01'30	-1°29'15
min. Earth dist.	1808 Sep 05 13:54	13°♓03'39	3.97198 AU
direct	1808 Nov 03 09:49	8°♓07'55	
evening set	1809 Mar 08 19:41	27°♓48'13	
	1809 Mar 17 21:48	0°♈	
conjunction	1809 Mar 22 00:29	0°♈59'47	-1°05'06
minimum elong	1809 Mar 22 00:28	0°♈59'47	1°05'05
max. Earth dist.	1809 Mar 23 00:57	1°♈14'36	5.95093 AU
morning rise	1809 Apr 04 08:31	4°♈13'05	
retrograde	1809 Aug 14 20:27	24°♈55'13	
opposition	1809 Oct 13 15:06	19°♈51'56	-1°36'48
min. Earth dist.	1809 Oct 12 12:37	20°♈00'53	3.95466 AU
direct	1809 Dec 10 11:43	14°♈57'20	
	1810 Mar 26 11:52	0°♉	
evening set	1810 Apr 15 08:17	4°♉38'50	
conjunction	1810 Apr 28 21:19	7°♉52'50	-0°57'08
minimum elong	1810 Apr 28 21:21	7°♉52'52	0°57'09
max. Earth dist.	1810 Apr 30 23:30	8°♉22'51	5.97979 AU
morning rise	1810 May 12 13:01	11°♉08'09	
	1810 May 29 01:59	15°♉	
	1810 Aug 22 03:09	0°♊	
retrograde	1810 Sep 20 18:32	1°♊24'49	
	1810 Oct 20 02:21	30°℞♉	
min. Earth dist.	1810 Nov 17 20:25	26°♉31'28	4.02662 AU
opposition	1810 Nov 19 06:47	26°♉19'45	-1°05'56
direct	1811 Jan 16 09:59	21°♉22'29	
	1811 Apr 03 15:36	0°♊	
evening set	1811 May 22 17:27	10°♊38'55	
conjunction	1811 Jun 05 11:24	13°♊50'14	-0°27'26
minimum elong	1811 Jun 05 11:26	13°♊50'15	0°27'27
max. Earth dist.	1811 Jun 07 17:59	14°♊21'55	6.08772 AU
morning rise	1811 Jun 19 06:45	17°♊01'58	
	1811 Aug 20 15:27	0°♋	
retrograde	1811 Oct 25 06:34	6°♋16'12	
opposition	1811 Dec 23 20:45	1°♋12'10	-0°12'25
min. Earth dist.	1811 Dec 22 13:30	1°♋22'47	4.15810 AU
	1812 Jan 01 19:40	30°℞♊	
direct	1812 Feb 20 23:00	26°♊11'58	
asc. node	1812 Mar 19 11:18	27°♊24'40	
	1812 Apr 11 02:21	0°♋	
evening set	1812 Jun 26 17:24	14°♋50'28	
conjunction	1812 Jul 10 10:31	17°♋55'01	0°10'49
minimum elong	1812 Jul 10 10:30	17°♋55'00	0°10'49
behind sun begin	1812 Jul 10 04:15	17°♋51'31	
behind sun end	1812 Jul 10 16:45	17°♋58'30	
max. Earth dist.	1812 Jul 12 00:50	18°♋16'32	6.23177 AU
morning rise	1812 Jul 24 03:03	20°♋58'58	
	1812 Sep 04 23:27	0°♌	
retrograde	1812 Nov 25 14:06	9°♌04'27	
opposition	1813 Jan 24 08:42	4°♌03'35	0°41'47
min. Earth dist.	1813 Jan 23 16:03	4°♌09'09	4.30086 AU
	1813 Feb 28 23:49	30°℞♋	
direct	1813 Mar 25 20:37	29°♋01'21	
	1813 Apr 20 00:03	0°♌	
	1813 Jul 21 04:39	15°♌	
evening set	1813 Jul 30 18:20	17°♌03'59	
conjunction	1813 Aug 13 05:43	20°♌00'35	0°43'56
minimum elong	1813 Aug 13 05:41	20°♌00'34	0°43'56
max. Earth dist.	1813 Aug 13 18:13	20°♌07'26	6.36220 AU
morning rise	1813 Aug 26 14:52	22°♌55'56	
	1813 Sep 29 11:56	0°♍	
retrograde	1813 Dec 26 05:53	10°♍08'56	
opposition	1814 Feb 24 09:29	5°♍11'50	1°20'40
min. Earth dist.	1814 Feb 24 09:56	5°♍11'41	4.41005 AU
direct	1814 Apr 27 02:20	0°♍08'53	
evening set	1814 Aug 31 23:03	17°♍47'10	
max. Earth dist.	1814 Sep 13 11:22	20°♍29'08	6.44172 AU
conjunction	1814 Sep 14 02:41	20°♍37'25	1°03'20
minimum elong	1814 Sep 14 02:40	20°♍37'24	1°03'19
morning rise	1814 Sep 27 03:28	23°♍26'14	
	1814 Oct 28 20:14	0°♎	
retrograde	1815 Jan 25 08:50	10°♎12'44	

opposition	1815 Mar 26 20:20	5°♎18'48	1°36'21
min. Earth dist.	1815 Mar 27 15:06	5°♎12'45	4.45622 AU
direct	1815 May 28 10:02	0°♎16'16	
evening set	1815 Oct 01 21:49	17°♎46'04	
max. Earth dist.	1815 Oct 13 04:43	20°♎12'39	6.45031 AU
conjunction	1815 Oct 14 18:47	20°♎33'19	1°05'12
minimum elong	1815 Oct 14 18:47	20°♎33'19	1°05'13
morning rise	1815 Oct 27 13:08	23°♎19'20	
	1815 Nov 28 16:12	0°♏	
retrograde	1816 Feb 24 20:22	10°♏07'50	
opposition	1816 Apr 25 15:22	5°♏15'39	1°26'27
min. Earth dist.	1816 Apr 26 23:07	5°♏05'30	4.42762 AU
direct	1816 Jun 27 09:41	0°♏14'22	
	1816 Oct 18 02:56	15°♏	
evening set	1816 Oct 31 10:36	17°♏53'00	
max. Earth dist.	1816 Nov 11 02:56	20°♏14'12	6.38612 AU
conjunction	1816 Nov 13 03:35	20°♏41'06	0°49'25
minimum elong	1816 Nov 13 03:37	20°♏41'07	0°49'25
morning rise	1816 Nov 25 18:26	23°♏28'25	
	1816 Dec 26 11:45	0°♐	
retrograde	1817 Mar 27 16:48	10°♐47'11	
opposition	1817 May 27 15:52	5°♐55'13	0°52'29
min. Earth dist.	1817 May 29 04:15	5°♐43'38	4.33120 AU
direct	1817 Jul 28 22:27	0°♐56'01	
evening set	1817 Dec 01 11:51	18°♐59'36	
max. Earth dist.	1817 Dec 12 03:05	21°♐24'24	6.26485 AU
conjunction	1817 Dec 14 03:36	21°♐52'02	0°19'06
minimum elong	1817 Dec 14 03:37	21°♐52'02	0°19'07
morning rise	1817 Dec 26 18:49	24°♐44'24	
	1818 Jan 19 13:26	0°♑	
retrograde	1818 Apr 30 17:09	12°♑58'28	
opposition	1818 Jun 30 13:53	8°♑05'04	0°00'50
min. Earth dist.	1818 Jul 01 20:19	7°♑55'18	4.19201 AU
desc. node	1818 Jul 06 10:43	7°♑20'01	
direct	1818 Aug 30 18:21	3°♑08'18	
evening set	1819 Jan 02 23:23	21°♑48'49	
max. Earth dist.	1819 Jan 14 09:23	24°♑29'20	6.11974 AU
conjunction	1819 Jan 15 17:14	24°♑48'03	-0°18'31
minimum elong	1819 Jan 15 17:13	24°♑48'02	0°18'32
morning rise	1819 Jan 28 11:47	27°♑47'59	
	1819 Feb 06 23:20	0°♒	
	1819 Apr 29 05:13	15°♒	
retrograde	1819 Jun 06 01:20	17°♒11'10	
	1819 Jul 14 03:07	15°℞♒	
opposition	1819 Aug 05 14:11	12°♒14'59	-0°54'39
min. Earth dist.	1819 Aug 06 03:24	12°♒10'40	4.05240 AU
direct	1819 Oct 04 07:08	7°♒20'31	
	1819 Dec 15 14:28	15°♒	
evening set	1820 Feb 06 12:20	26°♒39'34	
conjunction	1820 Feb 19 10:51	29°♒46'09	-0°51'19
minimum elong	1820 Feb 19 10:48	29°♒46'07	0°51'19
max. Earth dist.	1820 Feb 19 06:39	29°♒43'37	5.99826 AU
	1820 Feb 20 09:51	0°♓	
morning rise	1820 Mar 03 11:49	2°♓54'11	
retrograde	1820 Jul 13 01:21	23°♓17'01	
opposition	1820 Sep 11 03:46	18°♓16'56	-1°32'43
min. Earth dist.	1820 Sep 10 17:50	18°♓20'14	3.96222 AU
direct	1820 Nov 08 13:23	13°♓23'22	
	1821 Mar 01 00:28	0°♈	
evening set	1821 Mar 14 01:10	3°♈06'27	
conjunction	1821 Mar 27 07:19	6°♈18'46	-1°05'34
minimum elong	1821 Mar 27 07:19	6°♈18'46	1°05'33
max. Earth dist.	1821 Mar 28 13:43	6°♈37'11	5.94773 AU
morning rise	1821 Apr 09 16:25	9°♈32'44	
	1821 Aug 07 20:10	0°♉	
retrograde	1821 Aug 20 05:47	0°♉15'10	
	1821 Sep 01 12:32	30°℞♈	
opposition	1821 Oct 18 21:41	25°♈11'34	-1°34'34
min. Earth dist.	1821 Oct 17 17:47	25°♈21'01	3.95870 AU
direct	1821 Dec 15 18:23	20°♈16'45	
	1822 Mar 07 10:47	0°♉	
evening set	1822 Apr 20 16:03	9°♉56'27	
conjunction	1822 May 04 05:57	13°♉10'24	-0°54'01
minimum elong	1822 May 04 05:59	13°♉10'25	0°54'00
max. Earth dist.	1822 May 06 10:21	13°♉41'37	5.99070 AU
	1822 May 11 22:08	15°♉	
morning rise	1822 May 17 22:36	16°♉25'35	
	1822 Jul 20 13:49	0°♊	
retrograde	1822 Sep 25 18:03	6°♊34'55	
min. Earth dist.	1822 Nov 22 19:14	1°♊42'05	4.04337 AU
opposition	1822 Nov 24 07:06	1°♊29'51	-0°59'14
	1822 Dec 05 11:10	30°℞♉	
direct	1823 Jan 21 11:38	26°♉32'12	
	1823 Mar 09 07:27	0°♊	
evening set	1823 May 27 21:49	15°♊43'15	
conjunction	1823 Jun 10 15:55	18°♊53'42	-0°22'14
minimum elong	1823 Jun 10 15:57	18°♊53'43	0°22'14
max. Earth dist.	1823 Jun 12 20:58	19°♊24'20	6.10886 AU
morning rise	1823 Jun 24 11:10	22°♊04'23	
	1823 Jul 30 14:21	0°♋	
retrograde	1823 Oct 29 22:30	11°♋07'50	
min. Earth dist.	1823 Dec 27 07:59	6°♋13'59	4.18122 AU
opposition	1823 Dec 28 13:05	6°♋04'07	-0°04'25
asc. node	1824 Jan 28 11:08	2°♋22'17	
direct	1824 Feb 25 21:10	1°♋03'33	
evening set	1824 Jul 01 14:24	19°♋35'29	
conjunction	1824 Jul 15 06:59	22°♋38'47	0°15'59
minimum elong	1824 Jul 15 06:58	22°♋38'46	0°15'58
max. Earth dist.	1824 Jul 16 19:19	22°♋59'04	6.25497 AU
morning rise	1824 Jul 28 22:32	25°♋41'19	
	1824 Aug 17 18:20	0°♌	
retrograde	1824 Nov 29 20:44	13°♌37'01	
opposition	1825 Jan 28 17:53	8°♌36'39	0°48'18
min. Earth dist.	1825 Jan 28 02:40	8°♌41'44	4.32221 AU
direct	1825 Mar 30 09:46	3°♌34'16	
	1825 Jul 04 04:10	15°♌	
evening set	1825 Aug 04 07:39	21°♌31'29	
conjunction	1825 Aug 17 17:49	24°♌26'53	0°47'32
minimum elong	1825 Aug 17 17:46	24°♌26'52	0°47'32
max. Earth dist.	1825 Aug 18 01:09	24°♌30'53	6.37994 AU
morning rise	1825 Aug 31 01:48	27°♌21'00	
	1825 Sep 12 10:29	0°♍	
retrograde	1825 Dec 30 10:15	14°♍27'47	
opposition	1826 Feb 28 14:31	9°♍31'12	1°24'14
min. Earth dist.	1826 Feb 28 18:46	9°♍29'48	4.42303 AU
direct	1826 May 01 12:42	4°♍28'12	
evening set	1826 Sep 05 06:25	22°♍03'36	
conjunction	1826 Sep 18 09:04	24°♍53'09	1°04'37
minimum elong	1826 Sep 18 09:03	24°♍53'09	1°04'37
max. Earth dist.	1826 Sep 17 13:40	24°♍42'40	6.44874 AU
morning rise	1826 Oct 01 08:47	27°♍41'17	
	1826 Oct 12 05:26	0°♎	
retrograde	1827 Jan 29 10:51	14°♎26'02	

opposition	1827 Mar 31 00:32	9°♎32'22	1°36'27
min. Earth dist.	1827 Mar 31 21:20	9°♎25'40	4.45709 AU
direct	1827 Jun 01 15:21	4°♎29'53	
evening set	1827 Oct 06 02:23	21°♎59'57	
max. Earth dist.	1827 Oct 17 06:41	24°♎25'21	6.44482 AU
conjunction	1827 Oct 18 22:41	24°♎47'07	1°04'01
minimum elong	1827 Oct 18 22:42	24°♎47'08	1°04'02
morning rise	1827 Oct 31 16:17	27°♎33'06	
	1827 Nov 12 02:30	0°♏	
retrograde	1828 Feb 29 03:01	14°♏24'30	
opposition	1828 Apr 29 22:45	9°♏32'27	1°23'06
min. Earth dist.	1828 May 01 08:25	9°♏21'44	4.41603 AU
direct	1828 Jul 01 16:59	4°♏31'24	
	1828 Oct 01 08:23	15°♏	
evening set	1828 Nov 04 16:06	22°♏13'21	
max. Earth dist.	1828 Nov 15 05:21	24°♏33'29	6.36911 AU
conjunction	1828 Nov 17 08:41	25°♏01'59	0°45'59
minimum elong	1828 Nov 17 08:43	25°♏02'00	0°45'58
morning rise	1828 Nov 29 23:36	27°♏49'57	
	1828 Dec 09 20:46	0°♐	
retrograde	1829 Apr 01 07:13	15°♐16'09	
opposition	1829 Jun 01 05:39	10°♐24'03	0°46'10
min. Earth dist.	1829 Jun 02 18:14	10°♐12'23	4.30974 AU
direct	1829 Aug 02 09:18	5°♐25'05	
evening set	1829 Dec 05 22:01	23°♐34'43	
max. Earth dist.	1829 Dec 16 15:49	26°♐01'43	6.24078 AU
conjunction	1829 Dec 18 14:07	26°♐28'13	0°14'06
minimum elong	1829 Dec 18 14:08	26°♐28'14	0°14'06
behind sun begin	1829 Dec 18 10:01	26°♐25'53	
behind sun end	1829 Dec 18 18:14	26°♐30'34	
morning rise	1829 Dec 31 05:33	29°♐21'43	
	1830 Jan 03 00:56	0°♑	
retrograde	1830 May 05 16:28	17°♑46'26	
desc. node	1830 May 16 12:35	17°♑35'25	
opposition	1830 Jul 05 12:01	12°♑52'46	-0°07'07
min. Earth dist.	1830 Jul 06 16:38	12°♑43'34	4.16714 AU
direct	1830 Sep 04 11:04	7°♑56'22	
evening set	1831 Jan 07 17:21	26°♑44'05	
max. Earth dist.	1831 Jan 19 06:22	29°♑27'16	6.09623 AU
conjunction	1831 Jan 20 11:37	29°♑44'33	-0°23'44
minimum elong	1831 Jan 20 11:36	29°♑44'32	0°23'43
	1831 Jan 21 13:47	0°♒	
morning rise	1831 Feb 02 07:07	2°♒45'52	
	1831 Mar 31 04:52	15°♒	
retrograde	1831 Jun 11 09:17	22°♒20'06	
opposition	1831 Aug 10 20:26	17°♒23'21	-1°01'36
min. Earth dist.	1831 Aug 11 05:50	17°♒20'16	4.03251 AU
	1831 Aug 29 22:56	15°℞♒	
direct	1831 Oct 09 07:57	12°♒29'05	
	1831 Nov 17 23:53	15°♒	
	1832 Feb 03 15:33	0°♓	
evening set	1832 Feb 11 14:29	1°♓53'48	
conjunction	1832 Feb 24 14:07	5°♓01'29	-0°54'43
minimum elong	1832 Feb 24 14:05	5°♓01'27	0°54'43
max. Earth dist.	1832 Feb 24 16:48	5°♓03'05	5.98401 AU
morning rise	1832 Mar 08 16:04	8°♓10'37	
retrograde	1832 Jul 18 13:49	28°♓39'43	
opposition	1832 Sep 16 13:45	23°♓39'03	-1°35'24
min. Earth dist.	1832 Sep 16 00:59	23°♓43'19	3.95545 AU
direct	1832 Nov 13 20:37	18°♓45'28	
	1833 Feb 10 13:50	0°♈	
evening set	1833 Mar 19 09:15	8°♈29'43	
conjunction	1833 Apr 01 16:25	11°♈42'29	-1°05'28
minimum elong	1833 Apr 01 16:25	11°♈42'29	1°05'28
max. Earth dist.	1833 Apr 03 02:43	12°♈03'14	5.94878 AU
morning rise	1833 Apr 15 02:51	14°♈56'56	
	1833 Jun 24 23:06	0°♉	
retrograde	1833 Aug 25 12:20	5°♉37'00	
min. Earth dist.	1833 Oct 22 21:34	0°♉43'28	3.96753 AU
opposition	1833 Oct 24 04:31	0°♉32'58	-1°31'28
	1833 Oct 28 05:54	30°℞♈	
direct	1833 Dec 21 00:26	25°♈37'47	
	1834 Feb 11 10:20	0°♉	
	1834 Apr 25 00:52	15°♉	
evening set	1834 Apr 26 00:15	15°♉13'48	
conjunction	1834 May 09 14:59	18°♉27'24	-0°50'25
minimum elong	1834 May 09 15:02	18°♉27'25	0°50'25
max. Earth dist.	1834 May 11 20:39	18°♉59'14	6.00615 AU
morning rise	1834 May 23 08:17	21°♉42'07	
	1834 Jun 29 04:15	0°♊	
retrograde	1834 Sep 30 17:25	11°♊42'21	
min. Earth dist.	1834 Nov 27 19:42	6°♊49'11	4.06327 AU
opposition	1834 Nov 29 06:38	6°♊37'15	-0°52'05
direct	1835 Jan 26 15:22	1°♊39'09	
evening set	1835 Jun 02 00:53	20°♊43'50	
conjunction	1835 Jun 15 19:12	23°♊53'19	-0°16'53
minimum elong	1835 Jun 15 19:13	23°♊53'20	0°16'52
max. Earth dist.	1835 Jun 18 00:05	24°♊23'42	6.13146 AU
morning rise	1835 Jun 29 14:08	27°♊02'51	
	1835 Jul 12 16:49	0°♋	
retrograde	1835 Nov 03 12:29	15°♋55'23	
asc. node	1835 Dec 08 00:16	14°♋00'54	
min. Earth dist.	1836 Jan 01 00:11	11°♋01'35	4.20424 AU
opposition	1836 Jan 02 04:13	10°♋52'06	0°03'34
direct	1836 Mar 01 16:12	5°♋51'16	
evening set	1836 Jul 06 10:28	24°♋17'01	
conjunction	1836 Jul 20 02:10	27°♋19'03	0°21'02
minimum elong	1836 Jul 20 02:08	27°♋19'03	0°21'02
max. Earth dist.	1836 Jul 21 09:13	27°♋36'20	6.27657 AU
	1836 Aug 01 04:09	0°♌	
morning rise	1836 Aug 02 16:56	0°♌20'18	
	1836 Oct 19 20:38	15°♌	
retrograde	1836 Dec 04 05:11	18°♌07'18	
	1837 Jan 18 15:51	15°℞♌	
opposition	1837 Feb 02 02:47	13°♌07'30	0°54'33
min. Earth dist.	1837 Feb 01 15:08	13°♌11'23	4.34080 AU
direct	1837 Apr 04 00:29	8°♌04'57	
	1837 Jun 14 17:06	15°♌	
evening set	1837 Aug 08 20:38	25°♌57'56	
conjunction	1837 Aug 22 05:55	28°♌52'21	0°50'54
minimum elong	1837 Aug 22 05:53	28°♌52'20	0°50'53
max. Earth dist.	1837 Aug 22 10:17	28°♌54'43	6.39420 AU
	1837 Aug 27 10:12	0°♍	
morning rise	1837 Sep 04 12:35	1°♍45'24	
retrograde	1838 Jan 03 13:45	18°♍47'22	
opposition	1838 Mar 04 20:18	13°♍51'18	1°27'26
min. Earth dist.	1838 Mar 05 02:21	13°♍49'19	4.43232 AU
direct	1838 May 05 20:36	8°♍48'22	
evening set	1838 Sep 09 14:36	26°♍22'05	
conjunction	1838 Sep 22 16:09	29°♍11'05	1°05'36
minimum elong	1838 Sep 22 16:08	29°♍11'05	1°05'36
max. Earth dist.	1838 Sep 21 16:33	28°♍58'20	6.45232 AU
	1838 Sep 26 10:38	0°♎	
morning rise	1838 Oct 05 14:58	1°♎58'43	

retrograde	1839 Feb 02 17:16	18°♎43'00	
opposition	1839 Apr 04 07:01	13°♎49'43	1°36'05
min. Earth dist.	1839 Apr 05 06:56	13°♎42'02	4.45487 AU
direct	1839 Jun 06 00:13	8°♎47'25	
evening set	1839 Oct 10 08:42	26°♎18'33	
max. Earth dist.	1839 Oct 21 09:17	28°♎42'18	6.43684 AU
conjunction	1839 Oct 23 04:23	29°♎05'47	1°02'28
minimum elong	1839 Oct 23 04:24	29°♎05'48	1°02'28
	1839 Oct 27 07:47	0°♏	
morning rise	1839 Nov 04 21:28	1°♏51'54	
	1840 Jan 13 13:34	15°♏	
retrograde	1840 Mar 04 12:13	18°♏47'08	
	1840 Apr 25 19:45	15°℞♏	
opposition	1840 May 04 08:51	13°♏55'11	1°19'12
min. Earth dist.	1840 May 05 19:01	13°♏44'18	4.40287 AU
direct	1840 Jul 06 01:03	8°♏54'24	
	1840 Sep 11 10:04	15°♏	
evening set	1840 Nov 08 23:58	26°♏40'06	
max. Earth dist.	1840 Nov 19 14:03	29°♏01'15	6.35191 AU
conjunction	1840 Nov 21 16:24	29°♏29'21	0°42'10
minimum elong	1840 Nov 21 16:26	29°♏29'22	0°42'10
	1840 Nov 23 23:20	0°♐	
morning rise	1840 Dec 04 07:07	2°♐17'58	
retrograde	1841 Apr 06 00:25	19°♐51'47	
opposition	1841 Jun 05 22:26	14°♐59'40	0°39'21
min. Earth dist.	1841 Jun 07 10:54	14°♐48'03	4.28950 AU
direct	1841 Aug 06 22:53	10°♐01'09	
evening set	1841 Dec 10 10:33	28°♐16'18	
	1841 Dec 17 23:40	0°♑	
max. Earth dist.	1841 Dec 21 05:05	0°♑44'30	6.21930 AU
conjunction	1841 Dec 23 02:42	1°♑10'44	0°08'52
minimum elong	1841 Dec 23 02:42	1°♑10'44	0°08'51
behind sun begin	1841 Dec 22 19:49	1°♑06'48	
behind sun end	1841 Dec 23 09:36	1°♑14'41	
morning rise	1842 Jan 04 18:42	4°♑05'20	
desc. node	1842 Mar 25 18:56	19°♑31'21	
retrograde	1842 May 10 18:00	22°♑40'06	
opposition	1842 Jul 10 12:37	17°♑46'05	-0°15'13
min. Earth dist.	1842 Jul 11 14:15	17°♑37'50	4.14613 AU
direct	1842 Sep 09 06:08	12°♑50'05	
	1843 Jan 05 03:37	0°♒	
evening set	1843 Jan 12 12:39	1°♒43'31	
max. Earth dist.	1843 Jan 24 08:03	4°♒31'04	6.07787 AU
conjunction	1843 Jan 25 07:37	4°♒45'02	-0°28'51
minimum elong	1843 Jan 25 07:35	4°♒45'01	0°28'51
morning rise	1843 Feb 07 03:42	7°♒47'26	
	1843 Mar 10 19:26	15°♒	
retrograde	1843 Jun 16 17:50	27°♒30'38	
opposition	1843 Aug 16 03:02	22°♒33'24	-1°08'07
min. Earth dist.	1843 Aug 16 09:39	22°♒31'14	4.01881 AU
direct	1843 Oct 14 10:16	17°♒39'26	
	1844 Jan 17 00:06	0°♓	
evening set	1844 Feb 16 16:40	7°♓07'29	
conjunction	1844 Feb 29 17:03	10°♓15'54	-0°57'41
minimum elong	1844 Feb 29 17:01	10°♓15'52	0°57'40
max. Earth dist.	1844 Feb 29 23:41	10°♓19'54	5.97614 AU
morning rise	1844 Mar 13 20:12	13°♓25'53	
	1844 Jun 02 15:16	0°♈	
retrograde	1844 Jul 23 21:24	3°♈58'22	
	1844 Sep 14 00:03	30°℞♓	
opposition	1844 Sep 21 21:17	28°♓57'08	-1°37'13
min. Earth dist.	1844 Sep 21 04:19	29°♓02'48	3.95465 AU
direct	1844 Nov 19 01:06	24°♓03'26	
	1845 Jan 19 21:21	0°♈	
evening set	1845 Mar 24 14:46	13°♈46'52	
conjunction	1845 Apr 06 23:01	16°♈59'50	-1°04'50
minimum elong	1845 Apr 06 23:02	16°♈59'51	1°04'50
max. Earth dist.	1845 Apr 08 13:13	17°♈22'54	5.95489 AU
morning rise	1845 Apr 20 10:24	20°♈14'25	
	1845 Jun 02 10:39	0°♉	
retrograde	1845 Aug 30 15:40	10°♉50'17	
min. Earth dist.	1845 Oct 27 23:59	5°♉56'38	3.97975 AU
opposition	1845 Oct 29 07:35	5°♉45'53	-1°27'43
direct	1845 Dec 26 05:11	0°♉50'19	
	1846 Apr 07 21:55	15°♉	
evening set	1846 May 01 04:22	20°♉21'40	
conjunction	1846 May 14 19:55	23°♉34'49	-0°46'33
minimum elong	1846 May 14 19:57	23°♉34'51	0°46'33
max. Earth dist.	1846 May 17 03:35	24°♉07'42	6.02322 AU
morning rise	1846 May 28 13:39	26°♉48'56	
	1846 Jun 11 08:00	0°♊	
retrograde	1846 Oct 05 12:19	16°♊39'41	
min. Earth dist.	1846 Dec 02 14:56	11°♊46'33	4.08329 AU
opposition	1846 Dec 04 01:39	11°♊34'43	-0°44'49
direct	1847 Jan 31 13:21	6°♊36'13	
evening set	1847 Jun 07 00:05	25°♊34'54	
conjunction	1847 Jun 20 18:10	28°♊43'22	-0°11'36
minimum elong	1847 Jun 20 18:11	28°♊43'23	0°11'36
behind sun begin	1847 Jun 20 12:20	28°♊40'03	
behind sun end	1847 Jun 21 00:02	28°♊46'43	
max. Earth dist.	1847 Jun 22 19:05	29°♊11'20	6.15254 AU
	1847 Jun 26 08:18	0°♋	
morning rise	1847 Jul 04 12:58	1°♋51'51	
asc. node	1847 Oct 18 19:44	19°♋54'51	
retrograde	1847 Nov 07 23:09	20°♋34'29	
opposition	1848 Jan 06 15:39	15°♋31'36	0°11'14
min. Earth dist.	1848 Jan 05 14:09	15°♋40'13	4.22442 AU
direct	1848 Mar 06 08:49	10°♋30'23	
evening set	1848 Jul 11 02:56	28°♋51'10	
	1848 Jul 16 07:39	0°♌	
conjunction	1848 Jul 24 18:07	1°♌52'10	0°25'49
minimum elong	1848 Jul 24 18:05	1°♌52'10	0°25'49
max. Earth dist.	1848 Jul 25 22:30	2°♌07'55	6.29441 AU
morning rise	1848 Aug 07 07:46	4°♌52'14	
	1848 Sep 25 20:32	15°♌	
retrograde	1848 Dec 08 10:52	22°♌32'04	
opposition	1849 Feb 06 09:22	17°♌32'51	1°00'19
min. Earth dist.	1849 Feb 05 23:51	17°♌36'00	4.35513 AU
	1849 Feb 26 13:39	15°℞♌	
direct	1849 Apr 08 10:23	12°♌30'11	
	1849 May 19 18:07	15°♌	
	1849 Aug 11 18:04	0°♍	
evening set	1849 Aug 13 07:39	0°♍20'15	
conjunction	1849 Aug 26 15:44	3°♍13'50	0°53'54
minimum elong	1849 Aug 26 15:42	3°♍13'49	0°53'53
max. Earth dist.	1849 Aug 26 14:29	3°♍13'09	6.40389 AU
morning rise	1849 Sep 08 21:28	6°♍06'05	
retrograde	1850 Jan 07 19:03	23°♍04'47	
opposition	1850 Mar 09 01:25	18°♍09'10	1°30'06
min. Earth dist.	1850 Mar 09 10:52	18°♍06'05	4.43714 AU
direct	1850 May 10 05:11	13°♍06'13	
	1850 Sep 10 20:19	0°♎	
evening set	1850 Sep 13 22:04	0°♎39'28	

conjunction	1850 Sep 26 22:53	3°♎28'09	1°06'12
minimum elong	1850 Sep 26 22:53	3°♎28'09	1°06'13
max. Earth dist.	1850 Sep 25 21:04	3°♎14'11	6.45193 AU
morning rise	1850 Oct 09 20:39	6°♎15'27	
retrograde	1851 Feb 06 22:07	23°♎00'20	
opposition	1851 Apr 08 13:33	18°♎07'19	1°35'12
min. Earth dist.	1851 Apr 09 14:17	17°♎59'22	4.44965 AU
direct	1851 Jun 10 06:03	13°♎05'11	
	1851 Oct 11 16:55	0°♏	
evening set	1851 Oct 14 15:22	0°♏38'04	
max. Earth dist.	1851 Oct 25 13:56	3°♏01'07	6.42719 AU
conjunction	1851 Oct 27 10:22	3°♏25'25	1°00'34
minimum elong	1851 Oct 27 10:24	3°♏25'26	1°00'33
morning rise	1851 Nov 09 03:01	6°♏11'44	
	1851 Dec 22 02:38	15°♏	
retrograde	1852 Mar 08 23:56	23°♏11'10	
opposition	1852 May 08 20:03	18°♏19'18	1°14'49
min. Earth dist.	1852 May 10 07:42	18°♏07'57	4.38932 AU
	1852 Jun 06 09:59	15°℞♏	
direct	1852 Jul 10 11:45	13°♏18'48	
	1852 Aug 13 11:55	15°♏	
	1852 Nov 08 05:16	0°♐	
evening set	1852 Nov 13 08:13	1°♐07'56	
max. Earth dist.	1852 Nov 23 21:34	3°♐29'15	6.33548 AU
conjunction	1852 Nov 26 00:27	3°♐57'44	0°38'05
minimum elong	1852 Nov 26 00:29	3°♐57'45	0°38'05
morning rise	1852 Dec 08 15:13	6°♐47'02	
retrograde	1853 Apr 10 17:11	24°♐28'04	
opposition	1853 Jun 10 15:42	19°♐35'41	0°32'16
min. Earth dist.	1853 Jun 12 02:22	19°♐24'38	4.27120 AU
direct	1853 Aug 11 11:47	14°♐37'29	
	1853 Dec 01 21:44	0°♑	
evening set	1853 Dec 14 23:06	2°♑57'15	
max. Earth dist.	1853 Dec 25 21:36	5°♑28'19	6.20063 AU
conjunction	1853 Dec 27 15:31	5°♑52'32	0°03'35
minimum elong	1853 Dec 27 15:31	5°♑52'32	0°03'35
behind sun begin	1853 Dec 27 07:36	5°♑47'59	
behind sun end	1853 Dec 27 23:26	5°♑57'05	
morning rise	1854 Jan 09 07:45	8°♑48'02	
desc. node	1854 Feb 02 10:40	14°♑12'45	
retrograde	1854 May 15 19:44	27°♑31'35	
opposition	1854 Jul 15 12:28	22°♑37'12	-0°23'12
min. Earth dist.	1854 Jul 16 12:41	22°♑29'23	4.12833 AU
direct	1854 Sep 14 02:12	17°♑41'31	
	1854 Dec 19 03:08	0°♒	
evening set	1855 Jan 17 07:11	6°♒39'33	
max. Earth dist.	1855 Jan 29 05:38	9°♒29'29	6.06232 AU
conjunction	1855 Jan 30 02:36	9°♒41'57	-0°33'44
minimum elong	1855 Jan 30 02:34	9°♒41'56	0°33'44
morning rise	1855 Feb 11 23:37	12°♒45'24	
	1855 Feb 21 12:53	15°♒	
	1855 May 11 15:20	0°♓	
retrograde	1855 Jun 21 22:16	2°♓36'24	
	1855 Aug 02 14:17	30°℞♒	
opposition	1855 Aug 21 07:34	27°♒38'36	-1°14'03
min. Earth dist.	1855 Aug 21 10:09	27°♒37'45	4.00711 AU
direct	1855 Oct 19 09:36	22°♒44'47	
	1855 Dec 28 01:40	0°♓	
evening set	1856 Feb 21 17:06	12°♓15'48	
conjunction	1856 Mar 05 18:29	15°♓24'57	-1°00'10
minimum elong	1856 Mar 05 18:27	15°♓24'56	1°00'10
max. Earth dist.	1856 Mar 06 06:08	15°♓32'01	5.96928 AU
morning rise	1856 Mar 18 22:36	18°♓35'42	
	1856 May 08 21:23	0°♈	
retrograde	1856 Jul 29 04:42	9°♈11'23	
min. Earth dist.	1856 Sep 26 07:57	4°♈15'53	3.95343 AU
opposition	1856 Sep 27 02:37	4°♈09'37	-1°38'17
	1856 Nov 03 09:42	30°℞♓	
direct	1856 Nov 24 05:21	29°♓15'46	
	1856 Dec 14 22:54	0°♈	
evening set	1857 Mar 29 18:56	18°♈58'59	
conjunction	1857 Apr 12 04:22	22°♈12'17	-1°03'43
minimum elong	1857 Apr 12 04:23	22°♈12'17	1°03'42
max. Earth dist.	1857 Apr 13 22:27	22°♈37'37	5.95940 AU
morning rise	1857 Apr 25 16:49	25°♈27'08	
	1857 May 15 01:45	0°♉	
	1857 Aug 11 01:13	15°♉	
retrograde	1857 Sep 04 17:49	15°♉59'20	
	1857 Sep 29 05:13	15°℞♉	
min. Earth dist.	1857 Nov 01 23:56	11°♉05'55	3.98957 AU
opposition	1857 Nov 03 08:45	10°♉54'46	-1°23'22
direct	1857 Dec 31 06:07	5°♉58'52	
	1858 Mar 19 23:29	15°♉	
evening set	1858 May 06 08:14	25°♉27'02	
conjunction	1858 May 20 00:22	28°♉39'51	-0°42'23
minimum elong	1858 May 20 00:24	28°♉39'52	0°42'23
max. Earth dist.	1858 May 22 06:41	29°♉11'48	6.03724 AU
	1858 May 25 16:43	0°♊	
morning rise	1858 Jun 02 18:48	1°♊53'34	
retrograde	1858 Oct 10 06:34	21°♊36'14	
min. Earth dist.	1858 Dec 07 10:23	16°♊43'00	4.09981 AU
opposition	1858 Dec 08 20:21	16°♊31'26	-0°37'17
direct	1859 Feb 05 11:34	11°♊32'29	
	1859 Jun 10 00:21	0°♋	
evening set	1859 Jun 11 23:39	0°♋26'44	
conjunction	1859 Jun 25 17:51	3°♋34'26	-0°06'14
minimum elong	1859 Jun 25 17:52	3°♋34'27	0°06'15
behind sun begin	1859 Jun 25 09:59	3°♋29'58	
behind sun end	1859 Jun 26 01:46	3°♋38'55	
max. Earth dist.	1859 Jun 27 17:32	4°♋01'35	6.17036 AU
morning rise	1859 Jul 09 12:10	6°♋41'56	
asc. node	1859 Aug 28 21:06	17°♋16'28	
retrograde	1859 Nov 12 12:26	25°♋16'02	
min. Earth dist.	1860 Jan 10 04:50	20°♋21'34	4.24176 AU
opposition	1860 Jan 11 04:18	20°♋13'40	0°18'54
direct	1860 Mar 11 01:26	15°♋12'15	
	1860 Jun 29 19:23	0°♌	
evening set	1860 Jul 15 21:08	3°♌29'04	
conjunction	1860 Jul 29 11:26	6°♌29'05	0°30'30
minimum elong	1860 Jul 29 11:24	6°♌29'04	0°30'31
max. Earth dist.	1860 Jul 30 11:09	6°♌42'12	6.30990 AU
morning rise	1860 Aug 12 00:17	9°♌28'07	
	1860 Sep 06 22:20	15°♌	
retrograde	1860 Dec 12 18:42	27°♌01'40	
opposition	1861 Feb 10 17:54	22°♌02'58	1°05'52
min. Earth dist.	1861 Feb 10 10:52	22°♌05'18	4.36793 AU
direct	1861 Apr 12 22:37	17°♌00'14	
	1861 Jul 26 02:13	0°♍	
evening set	1861 Aug 17 20:30	4°♍47'50	
conjunction	1861 Aug 31 03:44	7°♍40'40	0°56'40
minimum elong	1861 Aug 31 03:42	7°♍40'39	0°56'40
max. Earth dist.	1861 Aug 31 00:26	7°♍38'52	6.41335 AU
morning rise	1861 Sep 13 08:09	10°♍32'04	
retrograde	1862 Jan 12 00:48	27°♍27'33	

opposition	1862 Mar 13 08:34	22°♍32'25	1°32'22
min. Earth dist.	1862 Mar 13 19:25	22°♍28'54	4.44305 AU
direct	1862 May 14 13:54	17°♍29'40	
	1862 Aug 25 06:02	0°♎	
evening set	1862 Sep 18 07:06	5°♎01'49	
max. Earth dist.	1862 Sep 30 01:25	7°♎34'08	6.45400 AU
conjunction	1862 Oct 01 06:48	7°♎50'03	1°06'30
minimum elong	1862 Oct 01 06:48	7°♎50'02	1°06'30
morning rise	1862 Oct 14 03:50	10°♎36'56	
retrograde	1863 Feb 11 06:35	27°♎21'41	
opposition	1863 Apr 12 21:57	22°♎28'56	1°33'50
min. Earth dist.	1863 Apr 14 00:50	22°♎20'19	4.44802 AU
direct	1863 Jun 14 16:07	17°♎27'01	
	1863 Sep 25 06:45	0°♏	
evening set	1863 Oct 18 22:17	5°♏00'07	
max. Earth dist.	1863 Oct 29 19:59	7°♏22'54	6.42208 AU
conjunction	1863 Oct 31 16:48	7°♏47'27	0°58'22
minimum elong	1863 Oct 31 16:50	7°♏47'28	0°58'22
morning rise	1863 Nov 13 08:49	10°♏33'45	
	1863 Dec 04 03:35	15°♏	
retrograde	1864 Mar 13 08:57	27°♏35'54	
opposition	1864 May 13 07:06	22°♏44'02	1°10'05
min. Earth dist.	1864 May 14 17:59	22°♏32'55	4.38108 AU
direct	1864 Jul 14 20:26	17°♏43'50	
	1864 Oct 22 19:57	0°♐	
evening set	1864 Nov 17 15:35	5°♐34'31	
max. Earth dist.	1864 Nov 28 05:42	7°♐56'39	6.32477 AU
conjunction	1864 Nov 30 07:30	8°♐24'37	0°33'54
minimum elong	1864 Nov 30 07:32	8°♐24'38	0°33'53
morning rise	1864 Dec 12 22:10	11°♐14'19	
retrograde	1865 Apr 15 09:25	29°♐00'42	
opposition	1865 Jun 15 07:17	24°♐08'08	0°25'09
min. Earth dist.	1865 Jun 16 18:05	23°♐57'02	4.25840 AU
direct	1865 Aug 16 01:29	19°♐10'14	
	1865 Nov 15 00:53	0°♑	
desc. node	1865 Dec 15 05:33	6°♑35'46	
evening set	1865 Dec 19 09:00	7°♑32'42	
max. Earth dist.	1865 Dec 30 08:28	10°♑04'49	6.18680 AU
conjunction	1866 Jan 01 01:34	10°♑28'38	-0°01'40
minimum elong	1866 Jan 01 01:33	10°♑28'37	0°01'39
behind sun begin	1865 Dec 31 17:33	10°♑24'00	
behind sun end	1866 Jan 01 09:33	10°♑33'13	
morning rise	1866 Jan 13 18:14	13°♑24'52	
	1866 Apr 12 00:17	0°♒	
retrograde	1866 May 20 14:46	2°♒15'36	
	1866 Jun 28 14:27	30°℞♑	
opposition	1866 Jul 20 08:46	27°♑20'46	-0°30'44
min. Earth dist.	1866 Jul 21 06:04	27°♑13'53	4.11447 AU
direct	1866 Sep 18 17:30	22°♑25'21	
	1866 Nov 30 08:31	0°♒	
evening set	1867 Jan 21 22:01	11°♒26'48	
conjunction	1867 Feb 03 18:00	14°♒29'58	-0°38'11
minimum elong	1867 Feb 03 17:58	14°♒29'57	0°38'11
max. Earth dist.	1867 Feb 03 00:45	14°♒19'41	6.04965 AU
	1867 Feb 05 20:21	15°♒	
morning rise	1867 Feb 16 15:39	17°♒34'16	
	1867 Apr 14 21:48	0°♓	
retrograde	1867 Jun 27 00:32	7°♓32'05	
opposition	1867 Aug 26 07:36	2°♓33'47	-1°19'13
min. Earth dist.	1867 Aug 26 08:46	2°♓33'24	3.99682 AU
	1867 Sep 15 19:26	30°℞♒	
direct	1867 Oct 24 07:22	27°♒39'59	
	1867 Dec 01 03:45	0°♓	
evening set	1868 Feb 26 13:38	17°♓13'47	
conjunction	1868 Mar 10 16:02	20°♓23'42	-1°02'07
minimum elong	1868 Mar 10 16:00	20°♓23'42	1°02'07
max. Earth dist.	1868 Mar 11 07:14	20°♓32'55	5.96234 AU
morning rise	1868 Mar 23 21:15	23°♓35'15	
	1868 Apr 20 07:31	0°♈	
retrograde	1868 Aug 03 06:46	14°♈13'56	
min. Earth dist.	1868 Oct 01 06:23	9°♈18'45	3.95095 AU
opposition	1868 Oct 02 03:11	9°♈11'46	-1°38'36
direct	1868 Nov 29 02:46	4°♈17'44	
evening set	1869 Apr 03 19:39	24°♈01'41	
conjunction	1869 Apr 17 06:05	27°♈15'22	-1°02'11
minimum elong	1869 Apr 17 06:06	27°♈15'23	1°02'10
max. Earth dist.	1869 Apr 19 00:55	27°♈41'09	5.96144 AU
	1869 Apr 28 16:24	0°♉	
morning rise	1869 Apr 30 19:44	0°♉30'38	
	1869 Jul 07 20:48	15°♉	
retrograde	1869 Sep 09 15:58	21°♉00'21	
min. Earth dist.	1869 Nov 06 20:51	16°♉07'03	3.99591 AU
opposition	1869 Nov 08 06:32	15°♉55'34	-1°18'37
	1869 Nov 15 02:42	15°℞♉	
direct	1870 Jan 05 05:00	10°♉59'15	
	1870 Feb 24 11:14	15°♉	
	1870 May 09 13:21	0°♊	
evening set	1870 May 11 09:28	0°♊25'42	
conjunction	1870 May 25 02:28	3°♊38'25	-0°38'02
minimum elong	1870 May 25 02:31	3°♊38'26	0°38'01
max. Earth dist.	1870 May 27 09:56	4°♊10'57	6.04756 AU
morning rise	1870 Jun 07 21:13	6°♊51'49	
retrograde	1870 Oct 15 01:04	26°♊27'52	
min. Earth dist.	1870 Dec 12 04:26	21°♊34'26	4.11289 AU
opposition	1870 Dec 13 13:15	21°♊23'16	-0°29'43
direct	1871 Feb 10 07:40	16°♊23'58	
	1871 May 24 04:17	0°♋	
evening set	1871 Jun 16 22:15	5°♋14'57	
conjunction	1871 Jun 30 16:15	8°♋21'56	-0°00'54
minimum elong	1871 Jun 30 16:15	8°♋21'56	0°00'54
behind sun begin	1871 Jun 30 07:53	8°♋17'13	
behind sun end	1871 Jul 01 00:38	8°♋26'40	
max. Earth dist.	1871 Jul 02 13:32	8°♋47'38	6.18513 AU
asc. node	1871 Jul 09 17:16	10°♋24'53	
morning rise	1871 Jul 14 10:18	11°♋28'37	
retrograde	1871 Nov 16 22:42	29°♋55'03	
opposition	1872 Jan 15 15:59	24°♋53'04	0°26'17
min. Earth dist.	1872 Jan 14 17:30	25°♋00'38	4.25696 AU
direct	1872 Mar 15 16:25	19°♋51'21	
	1872 Jun 12 00:32	0°♌	
evening set	1872 Jul 20 14:32	8°♌04'40	
conjunction	1872 Aug 03 04:04	11°♌03'44	0°34'57
minimum elong	1872 Aug 03 04:02	11°♌03'43	0°34'57
max. Earth dist.	1872 Aug 04 01:12	11°♌15'23	6.32445 AU
morning rise	1872 Aug 16 15:48	14°♌01'43	
	1872 Aug 21 02:48	15°♌	
	1872 Nov 16 06:43	0°♍	
retrograde	1872 Dec 17 02:20	1°♍29'03	
	1873 Jan 16 17:08	30°℞♌	
opposition	1873 Feb 15 02:05	26°♌30'50	1°10'57
min. Earth dist.	1873 Feb 14 21:19	26°♌32'25	4.38064 AU
direct	1873 Apr 17 10:55	21°♌28'01	
	1873 Jul 07 18:57	0°♍	
evening set	1873 Aug 22 08:23	9°♍12'40	

conjunction	1873 Sep 04	14:26	12°♍04'39	0°59'04	
minimum elong	1873 Sep 04	14:24	12°♍04'38	0°59'05	
max. Earth dist.	1873 Sep 04	06:56	12°♍00'35	6.42289 AU	
morning rise	1873 Sep 17	17:50	14°♍55'14		
	1873 Dec 13	01:54	0°♎		
retrograde	1874 Jan 16	06:16	1°♎47'22		
	1874 Feb 19	10:15	30°℞♍		
opposition	1874 Mar 17	15:09	26°♍52'33	1°34'05	
min. Earth dist.	1874 Mar 18	04:19	26°♍48'17	4.44879 AU	
direct	1874 May 18	23:10	21°♍49'47		
	1874 Aug 07	00:52	0°♎		
evening set	1874 Sep 22	14:49	9°♎20'40		
max. Earth dist.	1874 Oct 04	07:10	11°♎51'56	6.45520 AU	
conjunction	1874 Oct 05	13:45	12°♎08'30	1°06'25	
minimum elong	1874 Oct 05	13:45	12°♎08'30	1°06'24	
morning rise	1874 Oct 18	09:42	14°♎54'58		
	1875 Jan 13	09:56	0°♏		
retrograde	1875 Feb 15	12:06	1°♏39'54		
	1875 Mar 20	17:07	30°℞♎		
opposition	1875 Apr 17	05:21	26°♎47'22	1°31'55	
min. Earth dist.	1875 Apr 18	09:19	26°♎38'25	4.44440 AU	
direct	1875 Jun 18	23:31	21°♎45'39		
	1875 Sep 07	06:07	0°♏		
evening set	1875 Oct 23	04:34	9°♏19'43		
max. Earth dist.	1875 Nov 02	23:07	11°♏41'10	6.41361 AU	
conjunction	1875 Nov 04	22:23	12°♏07'08	0°55'49	
minimum elong	1875 Nov 04	22:25	12°♏07'09	0°55'50	
morning rise	1875 Nov 17	14:07	14°♏53'39		
	1875 Nov 18	01:46	15°♏		
	1876 Feb 10	09:32	0°♐		
retrograde	1876 Mar 17	21:05	1°♐59'56		
	1876 Apr 23	14:29	30°℞♏		
opposition	1876 May 17	18:36	27°♏08'05	1°04'54	
min. Earth dist.	1876 May 19	07:03	26°♏56'28	4.36797 AU	
direct	1876 Jul 19	07:01	22°♏08'08		
	1876 Oct 04	11:10	0°♐		
evening set	1876 Nov 21	23:16	10°♐02'11		
max. Earth dist.	1876 Dec 02	13:33	12°♐24'56	6.30801 AU	
conjunction	1876 Dec 04	15:12	12°♐52'56	0°29'25	
minimum elong	1876 Dec 04	15:14	12°♐52'56	0°29'25	
morning rise	1876 Dec 17	05:53	15°♐43'20		
	1877 Mar 01	09:11	0°♑		
retrograde	1877 Apr 20	02:11	3°♑37'30		
	1877 Jun 10	02:21	30°℞♐		
opposition	1877 Jun 20	00:44	28°♐44'44	0°17'41	
min. Earth dist.	1877 Jun 21	09:46	28°♐34'10	4.23900 AU	
direct	1877 Aug 20	14:00	23°♐47'13		
desc. node	1877 Oct 25	08:54	29°♐53'47		
	1877 Oct 25	23:29	0°♑		
evening set	1877 Dec 23	21:52	12°♑15'00		
max. Earth dist.	1878 Jan 03	24:00	14°♑49'22	6.16638 AU	
conjunction	1878 Jan 05	14:38	15°♑11'52	-0°06'59	
minimum elong	1878 Jan 05	14:38	15°♑11'52	0°06'58	
behind sun begin	1878 Jan 05	07:13	15°♑07'33		
behind sun end	1878 Jan 05	22:03	15°♑16'10		
morning rise	1878 Jan 18	07:50	18°♑09'12		
	1878 Mar 15	04:32	0°♒		
retrograde	1878 May 25	17:34	7°♒09'51		
opposition	1878 Jul 25	09:20	2°♒14'39	-0°38'26	
min. Earth dist.	1878 Jul 26	05:14	2°♒08'12	4.09452 AU	
	1878 Aug 12	09:02	30°℞♑		
direct	1878 Sep 23	14:23	27°♑19'31		
	1878 Nov 03	22:41	0°♒		
	1879 Jan 20	15:11	15°♒		
evening set	1879 Jan 26	17:57	16°♒26'46		
conjunction	1879 Feb 08	14:45	19°♒31'04	-0°42'35	
minimum elong	1879 Feb 08	14:43	19°♒31'02	0°42'35	
max. Earth dist.	1879 Feb 08	01:17	19°♒23'01	6.03204 AU	
morning rise	1879 Feb 21	13:21	22°♒36'34		
	1879 Mar 25	17:52	0°♓		
retrograde	1879 Jul 02	08:22	12°♓42'58		
opposition	1879 Aug 31	13:28	7°♓44'12	-1°24'05	
min. Earth dist.	1879 Aug 31	11:08	7°♓44'58	3.98364 AU	
direct	1879 Oct 29	07:47	2°♓50'34		
evening set	1880 Mar 02	16:46	22°♓28'14		
conjunction	1880 Mar 15	20:09	25°♓38'59	-1°03'42	
minimum elong	1880 Mar 15	20:09	25°♓38'59	1°03'42	
max. Earth dist.	1880 Mar 16	14:53	25°♓50'20	5.95474 AU	
morning rise	1880 Mar 29	02:41	28°♓51'27		
	1880 Apr 02	21:04	0°♈		
retrograde	1880 Aug 08	14:01	19°♈33'04		
min. Earth dist.	1880 Oct 06	10:17	14°♈38'22	3.95003 AU	
opposition	1880 Oct 07	09:54	14°♈30'24	-1°38'08	
direct	1880 Dec 04	07:45	9°♈36'12		
evening set	1881 Apr 09	02:37	29°♈20'01		
	1881 Apr 11	21:32	0°♉		
conjunction	1881 Apr 22	14:21	2°♉34'00	-1°00'04	
minimum elong	1881 Apr 22	14:23	2°♉34'02	1°00'04	
max. Earth dist.	1881 Apr 24	13:56	3°♉02'34	5.96758 AU	
morning rise	1881 May 06	04:52	5°♉49'24		
	1881 Jun 15	16:45	15°♉		
retrograde	1881 Sep 14	20:14	26°♉14'10		
min. Earth dist.	1881 Nov 11	22:45	21°♉20'53	4.00854 AU	
opposition	1881 Nov 13	08:50	21°♉09'16	-1°13'00	
direct	1882 Jan 10	09:25	16°♉12'36		
	1882 Apr 22	02:24	0°♊		
evening set	1882 May 16	15:05	5°♊34'44		
conjunction	1882 May 30	08:29	8°♊46'49	-0°33'15	
minimum elong	1882 May 30	08:31	8°♊46'51	0°33'14	
max. Earth dist.	1882 Jun 01	16:07	9°♊19'18	6.06559 AU	
morning rise	1882 Jun 13	03:38	11°♊59'31		
	1882 Sep 19	23:36	0°♋		
retrograde	1882 Oct 19	17:58	1°♋25'28		
	1882 Nov 18	06:31	30°℞♊		
min. Earth dist.	1882 Dec 16	22:50	26°♊32'19	4.13440 AU	
opposition	1882 Dec 18	07:54	26°♊21'03	-0°21'47	
direct	1883 Feb 15	05:12	21°♊21'21		
	1883 May 05	01:59	0°♋		
asc. node	1883 May 19	19:26	2°♋55'09		
evening set	1883 Jun 21	21:33	10°♋05'56		
conjunction	1883 Jul 05	15:09	13°♋11'42	0°04'33	
minimum elong	1883 Jul 05	15:09	13°♋11'42	0°04'34	
behind sun begin	1883 Jul 05	06:59	13°♋07'07		
behind sun end	1883 Jul 05	23:19	13°♋16'18		
max. Earth dist.	1883 Jul 07	09:42	13°♋35'43	6.20840 AU	
morning rise	1883 Jul 19	08:30	16°♋17'02		
	1883 Sep 27	00:21	0°♌		
retrograde	1883 Nov 21	09:23	4°♌33'03		
	1884 Jan 16	14:13	30°℞♋		
min. Earth dist.	1884 Jan 19	07:37	29°♋38'06	4.27968 AU	
opposition	1884 Jan 20	03:17	29°♋31'30	0°33'27	
direct	1884 Mar 20	09:42	24°♋29'32		
	1884 May 21	22:46	0°♌		
evening set	1884 Jul 25	05:58	12°♌36'43		
	1884 Aug 05	03:38	15°♌		

conjunction	1884 Aug 07 18:31	15°♌34'31	0°39'07
minimum elong	1884 Aug 07 18:29	15°♌34'30	0°39'06
max. Earth dist.	1884 Aug 08 12:01	15°♌44'07	6.34473 AU
morning rise	1884 Aug 21 05:05	18°♌31'09	
	1884 Oct 18 05:52	0°♍	
retrograde	1884 Dec 21 05:20	5°♍50'50	
opposition	1885 Feb 19 07:48	0°♍53'03	1°15'27
min. Earth dist.	1885 Feb 19 05:08	0°♍53'56	4.39714 AU
	1885 Feb 26 01:48	30°℞♌	
direct	1885 Apr 21 20:16	25°♌50'07	
	1885 Jun 15 13:05	0°♍	
evening set	1885 Aug 26 17:03	13°♍30'48	
conjunction	1885 Sep 08 22:00	16°♍21'52	1°01'05
minimum elong	1885 Sep 08 21:59	16°♍21'51	1°01'05
max. Earth dist.	1885 Sep 08 10:55	16°♍15'52	6.43432 AU
morning rise	1885 Sep 22 00:11	19°♍11'31	
	1885 Nov 16 01:07	0°♎	
retrograde	1886 Jan 20 08:47	6°♎00'10	
opposition	1886 Mar 21 18:57	1°♎05'44	1°35'13
min. Earth dist.	1886 Mar 22 11:06	1°♎00'31	4.45445 AU
	1886 Mar 30 07:48	30°℞♍	
direct	1886 May 23 06:15	26°♍03'01	
	1886 Jul 15 20:36	0°♎	
evening set	1886 Sep 26 19:18	13°♎32'46	
max. Earth dist.	1886 Oct 08 06:02	16°♎01'09	6.45437 AU
conjunction	1886 Oct 09 17:18	16°♎20'16	1°05'58
minimum elong	1886 Oct 09 17:18	16°♎20'16	1°05'58
morning rise	1886 Oct 22 12:38	19°♎06'30	
	1886 Dec 16 23:49	0°♏	
retrograde	1887 Feb 19 17:04	5°♏52'41	
opposition	1887 Apr 21 10:54	1°♏00'15	1°29'36
min. Earth dist.	1887 Apr 22 17:10	0°♏50'34	4.43717 AU
	1887 Apr 29 08:31	30°℞♎	
direct	1887 Jun 23 05:24	25°♎58'38	
	1887 Aug 16 06:31	0°♏	
evening set	1887 Oct 27 08:29	13°♏34'50	
	1887 Nov 02 19:59	15°♏	
max. Earth dist.	1887 Nov 07 02:06	15°♏56'11	6.40046 AU
conjunction	1887 Nov 09 02:04	16°♏22'37	0°53'02
minimum elong	1887 Nov 09 02:05	16°♏22'38	0°53'02
morning rise	1887 Nov 21 17:20	19°♏09'30	
	1888 Jan 14 17:30	0°♐	
retrograde	1888 Mar 22 06:43	6°♐21'39	
opposition	1888 May 22 05:09	1°♐29'45	0°59'26
min. Earth dist.	1888 May 23 17:44	1°♐18'07	4.34961 AU
	1888 Jun 03 03:30	30°℞♏	
direct	1888 Jul 23 14:38	26°♏30'07	
	1888 Sep 11 04:21	0°♐	
evening set	1888 Nov 26 06:53	14°♐29'18	
max. Earth dist.	1888 Dec 06 20:32	16°♐52'29	6.28583 AU
conjunction	1888 Dec 08 22:41	17°♐20'55	0°24'49
minimum elong	1888 Dec 08 22:43	17°♐20'56	0°24'49
morning rise	1888 Dec 21 13:43	20°♐12'20	
	1889 Feb 05 23:50	0°♑	
retrograde	1889 Apr 24 22:38	8°♑16'22	
opposition	1889 Jun 24 19:26	3°♑23'20	0°10'06
min. Earth dist.	1889 Jun 26 03:58	3°♑12'54	4.21430 AU
	1889 Jul 24 00:11	30°℞♐	
direct	1889 Aug 25 05:00	28°♐26'06	
desc. node	1889 Sep 04 19:48	28°♐36'47	
	1889 Sep 26 03:38	0°♑	
evening set	1889 Dec 28 12:06	17°♑01'00	
max. Earth dist.	1890 Jan 08 17:51	19°♑38'18	6.14142 AU
conjunction	1890 Jan 10 05:29	19°♑59'08	-0°12'15
minimum elong	1890 Jan 10 05:28	19°♑59'08	0°12'15
behind sun begin	1890 Jan 10 00:01	19°♑55'58	
behind sun end	1890 Jan 10 10:55	20°♑02'18	
morning rise	1890 Jan 22 23:18	22°♑57'49	
	1890 Feb 23 06:24	0°♒	
retrograde	1890 May 30 22:12	12°♒10'02	
opposition	1890 Jul 30 12:37	7°♒14'26	-0°45'57
min. Earth dist.	1890 Jul 31 05:08	7°♒09'04	4.07161 AU
direct	1890 Sep 28 11:20	2°♒19'39	
	1891 Jan 03 07:52	15°♒	
evening set	1891 Jan 31 17:06	21°♒33'38	
conjunction	1891 Feb 13 14:36	24°♒39'06	-0°46'43
minimum elong	1891 Feb 13 14:34	24°♒39'04	0°46'43
max. Earth dist.	1891 Feb 13 05:14	24°♒33'29	6.01324 AU
morning rise	1891 Feb 26 14:19	27°♒45'54	
	1891 Mar 08 00:39	0°♓	
retrograde	1891 Jul 07 18:27	18°♓01'08	
opposition	1891 Sep 05 22:25	13°♓01'44	-1°28'20
min. Earth dist.	1891 Sep 05 16:10	13°♓03'48	3.97112 AU
direct	1891 Nov 03 12:41	8°♓08'09	
evening set	1892 Mar 07 23:07	27°♓49'07	
	1892 Mar 16 23:44	0°♈	
conjunction	1892 Mar 21 03:49	1°♈00'40	-1°04'45
minimum elong	1892 Mar 21 03:49	1°♈00'39	1°04'45
max. Earth dist.	1892 Mar 22 05:22	1°♈16'08	5.94975 AU
morning rise	1892 Apr 03 11:24	4°♈13'52	
retrograde	1892 Aug 14 00:53	24°♈56'27	
opposition	1892 Oct 12 18:27	19°♈53'19	-1°36'46
min. Earth dist.	1892 Oct 11 16:47	20°♈02'00	3.95329 AU
direct	1892 Dec 09 15:56	14°♈58'53	
	1893 Mar 25 11:56	0°♉	
evening set	1893 Apr 14 11:25	4°♉40'42	
conjunction	1893 Apr 28 00:01	7°♉54'38	-0°57'25
minimum elong	1893 Apr 28 00:04	7°♉54'39	0°57'25
max. Earth dist.	1893 Apr 30 02:01	8°♉24'31	5.97829 AU
morning rise	1893 May 11 15:37	11°♉09'56	
	1893 May 28 01:11	15°♉	
	1893 Aug 20 19:17	0°♊	
retrograde	1893 Sep 19 21:27	1°♊27'29	
	1893 Oct 19 17:49	30°℞♉	
min. Earth dist.	1893 Nov 16 23:19	26°♉34'38	4.02531 AU
opposition	1893 Nov 18 11:03	26°♉22'26	-1°06'46
direct	1894 Jan 15 12:57	21°♉25'20	
	1894 Apr 02 13:12	0°♊	
evening set	1894 May 21 20:19	10°♊41'48	
conjunction	1894 Jun 04 14:03	13°♊53'04	-0°28'12
minimum elong	1894 Jun 04 14:05	13°♊53'05	0°28'12
max. Earth dist.	1894 Jun 06 20:34	14°♊24'44	6.08665 AU
morning rise	1894 Jun 18 09:13	17°♊04'46	
	1894 Aug 19 10:47	0°♋	
retrograde	1894 Oct 24 11:39	6°♋20'00	
min. Earth dist.	1894 Dec 21 18:55	1°♋26'22	4.15725 AU
opposition	1894 Dec 23 01:46	1°♋15'53	-0°13'44
	1895 Jan 01 11:49	30°℞♊	
direct	1895 Feb 20 04:36	26°♊15'49	
asc. node	1895 Mar 29 06:46	28°♊25'29	
	1895 Apr 10 19:12	0°♋	
evening set	1895 Jun 26 19:59	14°♋53'57	
conjunction	1895 Jul 10 13:11	17°♋58'33	0°09'52
minimum elong	1895 Jul 10 13:10	17°♋58'32	0°09'52
behind sun begin	1895 Jul 10 06:28	17°♋54'47	

behind sun end	1895 Jul	10	19:53	18°♋02'17	
max. Earth dist.	1895 Jul	12	05:34	18°♋21'13	6.23117 AU
morning rise	1895 Jul	24	05:42	21°♋02'33	
	1895 Sep	04	18:35	0°♌	
retrograde	1895 Nov	25	17:38	9°♌08'47	
opposition	1896 Jan	24	13:42	4°♌07'48	0°40'25
min. Earth dist.	1896 Jan	23	19:34	4°♌13'52	4.30058 AU
	1896 Mar	01	03:21	30°℞♋	
direct	1896 Mar	24	23:47	29°♋05'41	
	1896 Apr	18	05:03	0°♌	
	1896 Jul	20	00:04	15°♌	
evening set	1896 Jul	29	21:08	17°♌07'51	
conjunction	1896 Aug	12	08:34	20°♌04'31	0°43'05
minimum elong	1896 Aug	12	08:32	20°♌04'30	0°43'05
max. Earth dist.	1896 Aug	12	20:52	20°♌11'15	6.36218 AU
morning rise	1896 Aug	25	18:02	22°♌59'58	
	1896 Sep	28	07:01	0°♍	
retrograde	1896 Dec	25	11:31	10°♍13'26	
opposition	1897 Feb	23	14:18	5°♍16'14	1°19'39
min. Earth dist.	1897 Feb	23	15:21	5°♍15'54	4.41012 AU
direct	1897 Apr	26	07:56	0°♍13'18	
evening set	1897 Aug	31	02:17	17°♍51'17	
conjunction	1897 Sep	13	06:15	20°♍41'40	1°02'50
minimum elong	1897 Sep	13	06:14	20°♍41'39	1°02'49
max. Earth dist.	1897 Sep	12	15:16	20°♍33'34	6.44175 AU
morning rise	1897 Sep	26	07:20	23°♍30'37	
	1897 Oct	27	15:16	0°♎	
retrograde	1898 Jan	24	12:17	10°♎17'20	
opposition	1898 Mar	26	00:33	5°♎23'16	1°35'57
min. Earth dist.	1898 Mar	26	18:37	5°♎17'26	4.45623 AU
direct	1898 May	27	13:06	0°♎20'39	
evening set	1898 Oct	01	01:45	17°♎50'33	
max. Earth dist.	1898 Oct	12	09:54	20°♎17'45	6.45034 AU
conjunction	1898 Oct	13	23:02	20°♎37'54	1°05'10
minimum elong	1898 Oct	13	23:02	20°♎37'54	1°05'11
morning rise	1898 Oct	26	17:32	23°♎24'01	
	1898 Nov	27	11:16	0°♏	
retrograde	1899 Feb	24	00:31	10°♏12'29	
opposition	1899 Apr	25	19:08	5°♏20'18	1°26'45
min. Earth dist.	1899 Apr	27	03:14	5°♏10'03	4.42762 AU
direct	1899 Jun	27	13:54	0°♏18'57	
	1899 Oct	17	22:12	15°♏	
evening set	1899 Oct	31	15:21	17°♏57'58	
max. Earth dist.	1899 Nov	11	05:52	20°♏18'12	6.38598 AU
conjunction	1899 Nov	13	08:26	20°♏46'09	0°49'52
minimum elong	1899 Nov	13	08:28	20°♏46'10	0°49'52
morning rise	1899 Nov	25	23:40	23°♏33'35	
	1899 Dec	26	06:47	0°♐	
retrograde	1900 Mar	27	21:18	10°♐52'10	
opposition	1900 May	27	19:17	6°♐00'12	0°53'26
min. Earth dist.	1900 May	29	08:08	5°♐48'28	4.33103 AU
direct	1900 Jul	29	02:23	1°♐00'51	
evening set	1900 Dec	01	17:12	19°♐05'07	
max. Earth dist.	1900 Dec	12	09:23	21°♐30'23	6.26484 AU
conjunction	1900 Dec	14	09:15	21°♐57'38	0°19'55
minimum elong	1900 Dec	14	09:16	21°♐57'39	0°19'55
morning rise	1900 Dec	27	00:23	24°♐50'01	
	1901 Jan	19	08:33	0°♑	
retrograde	1901 Apr	30	20:41	13°♑03'30	
opposition	1901 Jun	30	17:09	8°♑10'16	0°02'11
min. Earth dist.	1901 Jul	01	23:47	8°♑00'27	4.19251 AU
desc. node	1901 Jul	16	03:59	6°♑14'30	
direct	1901 Aug	30	21:47	3°♑13'29	
evening set	1902 Jan	03	05:07	21°♑54'23	
conjunction	1902 Jan	15	22:46	24°♑53'32	-0°17'35
minimum elong	1902 Jan	15	22:45	24°♑53'31	0°17'35
max. Earth dist.	1902 Jan	14	13:45	24°♑34'07	6.12085 AU
morning rise	1902 Jan	28	17:23	27°♑53'24	
	1902 Feb	06	19:30	0°♒	
	1902 Apr	28	17:23	15°♒	
retrograde	1902 Jun	06	04:31	17°♒15'28	
	1902 Jul	14	22:05	15°℞♒	
opposition	1902 Aug	05	17:20	12°♒19'21	-0°53'18
min. Earth dist.	1902 Aug	06	06:21	12°♒15'06	4.05427 AU
direct	1902 Oct	04	11:13	7°♒24'49	
	1902 Dec	15	10:21	15°♒	
evening set	1903 Feb	06	17:08	26°♒43'24	
conjunction	1903 Feb	19	15:38	29°♒49'48	-0°50'33
minimum elong	1903 Feb	19	15:36	29°♒49'47	0°50'33
max. Earth dist.	1903 Feb	19	12:46	29°♒48'05	6.00098 AU
	1903 Feb	20	08:34	0°♓	
morning rise	1903 Mar	04	16:12	2°♓57'34	
retrograde	1903 Jul	14	04:21	23°♓18'29	
opposition	1903 Sep	12	06:24	18°♓18'31	-1°31'51
min. Earth dist.	1903 Sep	11	21:18	18°♓21'32	3.96555 AU
direct	1903 Nov	09	17:32	13°♓24'58	
	1904 Mar	01	02:59	0°♈	
evening set	1904 Mar	14	04:10	3°♈06'33	
conjunction	1904 Mar	27	09:47	6°♈18'30	-1°05'17
minimum elong	1904 Mar	27	09:46	6°♈18'30	1°05'16
max. Earth dist.	1904 Mar	28	14:43	6°♈36'00	5.95111 AU
morning rise	1904 Apr	09	18:39	9°♈32'09	
	1904 Aug	08	20:06	0°♉	
retrograde	1904 Aug	20	05:28	0°♉12'49	
	1904 Aug	31	13:58	30°℞♈	
opposition	1904 Oct	18	23:26	25°♈09'14	-1°34'38
min. Earth dist.	1904 Oct	17	18:42	25°♈18'58	3.96165 AU
direct	1904 Dec	15	19:58	20°♈14'27	
	1905 Mar	07	18:27	0°♉	
evening set	1905 Apr	20	16:45	9°♉52'39	
conjunction	1905 May	04	06:17	13°♉06'18	-0°54'24
minimum elong	1905 May	04	06:20	13°♉06'20	0°54'23
max. Earth dist.	1905 May	06	09:53	13°♉37'03	5.99266 AU
	1905 May	12	05:19	15°♉	
morning rise	1905 May	17	22:32	16°♉21'13	
	1905 Jul	21	00:22	0°♊	
retrograde	1905 Sep	25	19:20	6°♊30'22	
min. Earth dist.	1905 Nov	22	22:03	1°♊37'06	4.04381 AU
opposition	1905 Nov	24	08:47	1°♊25'15	-1°00'15
	1905 Dec	04	22:32	30°℞♉	
direct	1906 Jan	21	14:25	26°♉27'40	
	1906 Mar	09	21:47	0°♊	
evening set	1906 May	27	21:25	15°♊38'11	
conjunction	1906 Jun	10	15:29	18°♊48'37	-0°23'08
minimum elong	1906 Jun	10	15:30	18°♊48'38	0°23'08
max. Earth dist.	1906 Jun	12	21:44	19°♊19'58	6.10765 AU
morning rise	1906 Jun	24	10:33	21°♊59'19	
	1906 Jul	30	23:12	0°♋	
retrograde	1906 Oct	30	00:16	11°♋04'05	
min. Earth dist.	1906 Dec	27	09:31	6°♋10'27	4.17862 AU
opposition	1906 Dec	28	15:22	6°♋00'21	-0°05'54
asc. node	1907 Feb	08	01:32	1°♋31'37	
direct	1907 Feb	25	21:40	0°♋59'56	
evening set	1907 Jul	02	14:38	19°♋32'24	

conjunction	1907 Jul	16	07:09	22°♋35'53	0°14'57
minimum elong	1907 Jul	16	07:08	22°♋35'52	0°14'57
behind sun begin	1907 Jul	16	04:25	22°♋34'21	
behind sun end	1907 Jul	16	09:50	22°♋37'23	
max. Earth dist.	1907 Jul	17	18:17	22°♋55'32	6.25114 AU
morning rise	1907 Jul	29	23:02	25°♋38'42	
	1907 Aug	18	23:14	0°♌	
retrograde	1907 Dec	01	01:20	13°♌36'38	
opposition	1908 Jan	29	21:33	8°♌36'10	0°46'56
min. Earth dist.	1908 Jan	29	06:57	8°♌41'02	4.31761 AU
direct	1908 Mar	30	13:16	3°♌33'49	
	1908 Jul	04	05:12	15°♌	
evening set	1908 Aug	04	09:27	21°♌32'16	
conjunction	1908 Aug	17	20:07	24°♌28'02	0°46'43
minimum elong	1908 Aug	17	20:04	24°♌28'01	0°46'43
max. Earth dist.	1908 Aug	18	05:25	24°♌33'07	6.37508 AU
morning rise	1908 Aug	31	04:20	27°♌22'30	
	1908 Sep	12	10:01	0°♍	
retrograde	1908 Dec	30	14:22	14°♍31'21	
opposition	1909 Feb	28	19:08	9°♍34'40	1°23'20
min. Earth dist.	1909 Feb	28	21:56	9°♍33'45	4.41839 AU
direct	1909 May	01	14:51	4°♍31'44	
evening set	1909 Sep	05	10:31	22°♍08'32	
conjunction	1909 Sep	18	13:25	24°♍58'22	1°04'11
minimum elong	1909 Sep	18	13:24	24°♍58'22	1°04'11
max. Earth dist.	1909 Sep	17	18:11	24°♍47'58	6.44481 AU
morning rise	1909 Oct	01	13:35	27°♍46'50	
	1909 Oct	11	23:33	0°♎	
retrograde	1910 Jan	29	18:10	14°♎32'58	
opposition	1910 Mar	31	06:13	9°♎39'18	1°36'09
min. Earth dist.	1910 Apr	01	03:16	9°♎32'31	4.45416 AU
direct	1910 Jun	01	21:14	4°♎36'50	
evening set	1910 Oct	06	08:01	22°♎07'50	
max. Earth dist.	1910 Oct	17	12:44	24°♎33'30	6.44323 AU
conjunction	1910 Oct	19	04:39	24°♎55'13	1°04'02
minimum elong	1910 Oct	19	04:40	24°♎55'13	1°04'01
morning rise	1910 Oct	31	22:36	27°♎41'24	
	1910 Nov	11	17:04	0°♏	
retrograde	1911 Mar	01	08:49	14°♏33'10	
opposition	1911 May	01	04:24	9°♏41'05	1°23'25
min. Earth dist.	1911 May	02	12:51	9°♏30'43	4.41610 AU
direct	1911 Jul	02	21:30	4°♏39'59	
	1911 Oct	01	20:30	15°♏	
evening set	1911 Nov	05	22:36	22°♏22'09	
max. Earth dist.	1911 Nov	16	14:03	24°♏43'23	6.37102 AU
conjunction	1911 Nov	18	15:27	25°♏10'49	0°46'24
minimum elong	1911 Nov	18	15:29	25°♏10'50	0°46'23
morning rise	1911 Dec	01	06:22	27°♏58'45	
	1911 Dec	10	11:35	0°♐	
retrograde	1912 Apr	01	12:12	15°♐23'49	
opposition	1912 Jun	01	10:23	10°♐31'50	0°47'03
min. Earth dist.	1912 Jun	02	23:04	10°♐20'09	4.31349 AU
direct	1912 Aug	02	14:56	5°♐32'53	
evening set	1912 Dec	06	04:13	23°♐41'37	
max. Earth dist.	1912 Dec	16	20:44	26°♐07'47	6.24607 AU
conjunction	1912 Dec	18	20:11	26°♐34'54	0°14'52
minimum elong	1912 Dec	18	20:12	26°♐34'55	0°14'52
behind sun begin	1912 Dec	18	16:51	26°♐33'00	
behind sun end	1912 Dec	18	23:32	26°♐36'49	
morning rise	1912 Dec	31	11:45	29°♐28'12	
	1913 Jan	02	19:45	0°♑	
retrograde	1913 May	05	19:02	17°♑50'22	
desc. node	1913 May	25	19:53	17°♑12'59	
opposition	1913 Jul	05	14:58	12°♑56'46	-0°05'47
min. Earth dist.	1913 Jul	06	19:09	12°♑47'42	4.17370 AU
direct	1913 Sep	04	14:56	8°♑00'18	
evening set	1914 Jan	07	21:30	26°♑46'04	
max. Earth dist.	1914 Jan	19	11:37	29°♑29'34	6.10363 AU
conjunction	1914 Jan	20	15:46	29°♑46'10	-0°22'47
minimum elong	1914 Jan	20	15:44	29°♑46'09	0°22'47
	1914 Jan	21	15:13	0°♒	
morning rise	1914 Feb	02	10:51	2°♒47'02	
	1914 Mar	31	08:52	15°♒	
retrograde	1914 Jun	11	09:56	22°♒17'41	
opposition	1914 Aug	10	20:57	17°♒21'06	-1°00'11
min. Earth dist.	1914 Aug	11	07:39	17°♒17'36	4.04013 AU
	1914 Aug	29	15:48	15°℞♒	
direct	1914 Oct	09	10:25	12°♒26'51	
	1914 Nov	18	10:45	15°♒	
	1915 Feb	04	00:43	0°♓	
evening set	1915 Feb	11	15:54	1°♓49'02	
conjunction	1915 Feb	24	15:03	4°♓56'13	-0°53'57
minimum elong	1915 Feb	24	15:01	4°♓56'12	0°53'58
max. Earth dist.	1915 Feb	24	15:15	4°♓56'21	5.99097 AU
morning rise	1915 Mar	09	16:46	8°♓04'54	
retrograde	1915 Jul	19	09:49	28°♓30'43	
opposition	1915 Sep	17	11:52	23°♓30'13	-1°34'36
min. Earth dist.	1915 Sep	16	22:56	23°♓34'32	3.96101 AU
direct	1915 Nov	14	19:30	18°♓36'38	
	1916 Feb	12	07:10	0°♈	
evening set	1916 Mar	19	07:32	8°♈19'01	
conjunction	1916 Apr	01	14:18	11°♈31'25	-1°05'18
minimum elong	1916 Apr	01	14:18	11°♈31'25	1°05'19
max. Earth dist.	1916 Apr	02	23:22	11°♈51'25	5.95239 AU
morning rise	1916 Apr	15	00:09	14°♈45'28	
	1916 Jun	26	01:31	0°♉	
retrograde	1916 Aug	25	09:35	5°♉24'32	
min. Earth dist.	1916 Oct	22	20:52	0°♉30'33	3.96857 AU
opposition	1916 Oct	24	02:13	0°♉20'35	-1°31'49
	1916 Oct	26	14:54	30°℞♈	
direct	1916 Dec	20	23:37	25°♈25'28	
	1917 Feb	12	15:57	0°♉	
evening set	1917 Apr	25	20:47	15°♉01'06	
	1917 Apr	25	18:55	15°♉	
conjunction	1917 May	09	11:18	18°♉14'39	-0°51'01
minimum elong	1917 May	09	11:20	18°♉14'40	0°51'01
max. Earth dist.	1917 May	11	17:07	18°♉46'36	6.00453 AU
morning rise	1917 May	23	04:16	21°♉29'20	
	1917 Jun	29	23:51	0°♊	
retrograde	1917 Sep	30	16:05	11°♊31'11	
min. Earth dist.	1917 Nov	27	18:21	6°♊38'06	4.05926 AU
opposition	1917 Nov	29	05:24	6°♊26'09	-0°53'23
direct	1918 Jan	26	12:48	1°♊28'11	
evening set	1918 Jun	01	22:17	20°♊34'12	
conjunction	1918 Jun	15	16:21	23°♊43'54	-0°17'55
minimum elong	1918 Jun	15	16:22	23°♊43'55	0°17'55
max. Earth dist.	1918 Jun	17	19:25	24°♊13'16	6.12519 AU
morning rise	1918 Jun	29	11:29	26°♊53'46	
	1918 Jul	13	05:53	0°♋	
retrograde	1918 Nov	03	13:52	15°♋49'42	
asc. node	1918 Dec	19	07:29	12°♋36'42	
min. Earth dist.	1919 Jan	01	01:38	10°♋55'41	4.19642 AU
opposition	1919 Jan	02	05:20	10°♋46'18	0°01'58
direct	1919 Mar	02	16:35	5°♋45'31	

evening set	1919 Jul	07	10:01	24°♋13'40	
conjunction	1919 Jul	21	02:08	27°♋16'12	0°20'00
minimum elong	1919 Jul	21	02:07	27°♋16'11	0°19'59
max. Earth dist.	1919 Jul	22	11:17	27°♋34'40	6.26795 AU
	1919 Aug	02	08:38	0°♌	
morning rise	1919 Aug	03	17:01	0°♌17'54	
	1919 Oct	20	21:43	15°♌	
retrograde	1919 Dec	05	09:36	18°♌08'33	
	1920 Jan	19	23:51	15°℞♌	
opposition	1920 Feb	03	06:30	13°♌08'39	0°53'15
min. Earth dist.	1920 Feb	02	17:39	13°♌12'56	4.33219 AU
direct	1920 Apr	04	01:37	8°♌06'12	
	1920 Jun	14	14:07	15°♌	
evening set	1920 Aug	08	23:32	26°♌01'39	
conjunction	1920 Aug	22	09:01	28°♌56'32	0°50'08
minimum elong	1920 Aug	22	08:59	28°♌56'31	0°50'08
max. Earth dist.	1920 Aug	22	13:09	28°♌58'47	6.38634 AU
	1920 Aug	27	05:29	0°♍	
morning rise	1920 Sep	04	16:18	1°♍50'07	
retrograde	1921 Jan	03	21:37	18°♍54'52	
opposition	1921 Mar	05	02:15	13°♍58'40	1°26'39
min. Earth dist.	1921 Mar	05	08:08	13°♍56'45	4.42597 AU
direct	1921 May	06	01:48	8°♍55'45	
evening set	1921 Sep	09	20:08	26°♍31'11	
conjunction	1921 Sep	22	22:12	29°♍20'32	1°05'15
minimum elong	1921 Sep	22	22:11	29°♍20'31	1°05'16
max. Earth dist.	1921 Sep	22	01:17	29°♍09'13	6.44834 AU
	1921 Sep	25	23:10	0°♎	
morning rise	1921 Oct	05	21:14	2°♎08'27	
retrograde	1922 Feb	02	23:30	18°♎53'45	
opposition	1922 Apr	04	13:44	14°♎00'22	1°35'54
min. Earth dist.	1922 Apr	05	11:20	13°♎53'25	4.45390 AU
direct	1922 Jun	06	04:49	8°♎58'08	
evening set	1922 Oct	10	15:37	26°♎29'15	
max. Earth dist.	1922 Oct	21	18:16	28°♎54'02	6.43939 AU
conjunction	1922 Oct	23	11:25	29°♎16'28	1°02'34
minimum elong	1922 Oct	23	11:26	29°♎16'29	1°02'33
	1922 Oct	26	19:16	0°♏	
morning rise	1922 Nov	05	04:43	2°♏02'33	
	1923 Jan	12	16:35	15°♏	
retrograde	1923 Mar	05	18:50	18°♏56'21	
	1923 Apr	28	06:53	15°℞♏	
opposition	1923 May	05	14:40	14°♏04'24	1°19'38
min. Earth dist.	1923 May	07	00:37	13°♏53'35	4.40892 AU
direct	1923 Jul	07	08:21	9°♏03'34	
	1923 Sep	11	19:26	15°♏	
evening set	1923 Nov	10	05:55	26°♏47'06	
max. Earth dist.	1923 Nov	20	20:14	29°♏08'06	6.36109 AU
conjunction	1923 Nov	22	22:24	29°♏36'00	0°42'44
minimum elong	1923 Nov	22	22:26	29°♏36'01	0°42'44
	1923 Nov	24	17:31	0°♐	
morning rise	1923 Dec	05	13:11	2°♐24'17	
retrograde	1924 Apr	06	01:27	19°♐54'06	
opposition	1924 Jun	06	00:49	15°♐01'55	0°40'31
min. Earth dist.	1924 Jun	07	12:08	14°♐50'39	4.30132 AU
direct	1924 Aug	07	02:11	10°♐03'15	
evening set	1924 Dec	10	13:30	28°♐14'29	
	1924 Dec	18	06:25	0°♑	
max. Earth dist.	1924 Dec	21	09:12	0°♑42'51	6.23273 AU
conjunction	1924 Dec	23	05:35	1°♑08'19	0°09'53
minimum elong	1924 Dec	23	05:35	1°♑08'19	0°09'53
behind sun begin	1924 Dec	22	23:03	1°♑04'35	
behind sun end	1924 Dec	23	12:06	1°♑12'02	
morning rise	1925 Jan	04	21:11	4°♑02'13	
desc. node	1925 Apr	06	11:27	20°♑44'44	
retrograde	1925 May	10	15:30	22°♑31'08	
opposition	1925 Jul	10	10:24	17°♑37'13	-0°13'27
min. Earth dist.	1925 Jul	11	13:43	17°♑28'26	4.15995 AU
direct	1925 Sep	09	07:17	12°♑41'04	
	1926 Jan	06	01:00	0°♒	
evening set	1926 Jan	12	11:09	1°♒29'57	
max. Earth dist.	1926 Jan	24	03:02	4°♒14'59	6.09058 AU
conjunction	1926 Jan	25	05:41	4°♒30'45	-0°27'38
minimum elong	1926 Jan	25	05:39	4°♒30'44	0°27'37
morning rise	1926 Feb	07	01:32	7°♒32'27	
	1926 Mar	11	23:25	15°♒	
retrograde	1926 Jun	16	08:35	27°♒10'02	
opposition	1926 Aug	15	20:07	22°♒12'57	-1°06'22
min. Earth dist.	1926 Aug	16	03:31	22°♒10'31	4.02904 AU
direct	1926 Oct	14	04:48	17°♒18'49	
	1927 Jan	18	11:43	0°♓	
evening set	1927 Feb	16	10:49	6°♓43'52	
conjunction	1927 Mar	01	10:53	9°♓51'48	-0°56'49
minimum elong	1927 Mar	01	10:51	9°♓51'47	0°56'49
max. Earth dist.	1927 Mar	01	15:28	9°♓54'34	5.98288 AU
morning rise	1927 Mar	14	13:26	13°♓01'14	
	1927 Jun	06	10:13	0°♈	
retrograde	1927 Jul	24	13:09	3°♈31'14	
	1927 Sep	11	03:44	30°℞♓	
opposition	1927 Sep	22	12:37	28°♓30'15	-1°36'32
min. Earth dist.	1927 Sep	21	22:32	28°♓34'57	3.95682 AU
direct	1927 Nov	19	18:48	23°♓36'32	
	1928 Jan	23	02:54	0°♈	
evening set	1928 Mar	24	06:46	13°♈19'57	
conjunction	1928 Apr	06	14:41	16°♈32'52	-1°04'51
minimum elong	1928 Apr	06	14:42	16°♈32'53	1°04'51
max. Earth dist.	1928 Apr	08	02:52	16°♈54'43	5.95250 AU
morning rise	1928 Apr	20	01:42	19°♈47'26	
	1928 Jun	04	04:50	0°♉	
retrograde	1928 Aug	30	09:19	10°♉25'20	
min. Earth dist.	1928 Oct	27	17:51	5°♉31'38	3.97318 AU
opposition	1928 Oct	29	00:41	5°♉21'10	-1°28'29
direct	1928 Dec	25	20:33	0°♉25'46	
	1929 Apr	09	07:01	15°♉	
evening set	1929 Apr	30	21:44	20°♉00'08	
conjunction	1929 May	14	12:59	23°♉13'40	-0°47'23
minimum elong	1929 May	14	13:01	23°♉13'41	0°47'23
max. Earth dist.	1929 May	16	17:51	23°♉44'58	6.01316 AU
morning rise	1929 May	28	06:48	26°♉28'16	
	1929 Jun	12	12:20	0°♊	
retrograde	1929 Oct	05	09:56	16°♊24'21	
opposition	1929 Dec	03	23:02	11°♊19'23	-0°46'25
min. Earth dist.	1929 Dec	02	12:30	11°♊31'11	4.07089 AU
direct	1930 Jan	31	09:17	6°♊21'01	
evening set	1930 Jun	06	21:09	25°♊24'11	
conjunction	1930 Jun	20	15:34	28°♊33'22	-0°12'45
minimum elong	1930 Jun	20	15:35	28°♊33'23	0°12'44
behind sun begin	1930 Jun	20	10:29	28°♊30'28	
behind sun end	1930 Jun	20	20:41	28°♊36'17	
max. Earth dist.	1930 Jun	22	18:19	29°♊02'28	6.13917 AU
	1930 Jun	26	22:41	0°♋	
morning rise	1930 Jul	04	10:25	1°♋42'32	
asc. node	1930 Oct	30	14:16	20°♋23'44	

retrograde	1930 Nov 08	03:21	20°♋30'55		
opposition	1931 Jan 06	17:54	15°♋27'58	0°09'38	
min. Earth dist.	1931 Jan 05	15:36	15°♋36'51	4.21132 AU	
direct	1931 Mar 07	08:40	10°♋26'57		
evening set	1931 Jul 12	04:28	28°♋51'41		
	1931 Jul 17	07:51	0°♌		
conjunction	1931 Jul 25	19:49	1°♌53'19	0°24'48	
minimum elong	1931 Jul 25	19:47	1°♌53'18	0°24'49	
max. Earth dist.	1931 Jul 27	01:01	2°♌09'32	6.28256 AU	
morning rise	1931 Aug 08	10:03	4°♌54'04		
	1931 Sep 26	15:11	15°♌		
retrograde	1931 Dec 09	17:29	22°♌38'14		
opposition	1932 Feb 07	15:08	17°♌38'47	0°59'08	
min. Earth dist.	1932 Feb 07	04:23	17°♌42'22	4.34548 AU	
	1932 Feb 28	16:08	15℞♌		
direct	1932 Apr 08	14:10	12°♌36'10		
	1932 May 18	23:19	15°♌		
	1932 Aug 11	07:16	0°♍		
evening set	1932 Aug 13	12:31	0°♍28'43		
conjunction	1932 Aug 26	21:08	3°♍22'45	0°53'13	
minimum elong	1932 Aug 26	21:06	3°♍22'44	0°53'12	
max. Earth dist.	1932 Aug 26	23:30	3°♍24'02	6.39729 AU	
morning rise	1932 Sep 09	03:06	6°♍15'24		
retrograde	1933 Jan 08	02:22	23°♍16'02		
opposition	1933 Mar 09	08:39	18°♍20'16	1°29'25	
min. Earth dist.	1933 Mar 09	15:59	18°♍17'53	4.43381 AU	
direct	1933 May 10	10:21	13°♍17'25		
	1933 Sep 10	05:10	0°♎		
evening set	1933 Sep 14	04:49	0°♎51'08		
max. Earth dist.	1933 Sep 26	04:37	3°♎26'20	6.45211 AU	
conjunction	1933 Sep 27	05:43	3°♎39'55	1°05'56	
minimum elong	1933 Sep 27	05:43	3°♎39'54	1°05'56	
morning rise	1933 Oct 10	03:56	6°♎27'19		
retrograde	1934 Feb 07	06:19	23°♎11'44		
opposition	1934 Apr 08	20:32	18°♎18'38	1°35'05	
min. Earth dist.	1934 Apr 09	20:52	18°♎10'48	4.45317 AU	
direct	1934 Jun 10	13:41	13°♎16'28		
	1934 Oct 11	04:55	0°♏		
evening set	1934 Oct 14	21:34	0°♏47'50		
max. Earth dist.	1934 Oct 25	22:25	3°♏11'51	6.43387 AU	
conjunction	1934 Oct 27	16:52	3°♏35'01	1°00'44	
minimum elong	1934 Oct 27	16:53	3°♏35'02	1°00'44	
morning rise	1934 Nov 09	09:31	6°♏21'06		
	1934 Dec 21	15:03	15°♏		
retrograde	1935 Mar 10	02:47	23°♏17'49		
opposition	1935 May 10	00:20	18°♏25'54	1°15'24	
min. Earth dist.	1935 May 11	10:14	18°♏15'05	4.39876 AU	
	1935 Jun 08	18:44	15℞♏		
direct	1935 Jul 11	15:39	13°♏25'20		
	1935 Aug 13	14:15	15°♏		
	1935 Nov 09	02:55	0°♐		
evening set	1935 Nov 14	12:35	1°♐11'24		
max. Earth dist.	1935 Nov 25	02:44	3°♐32'48	6.34692 AU	
conjunction	1935 Nov 27	04:44	4°♐00'44	0°38'47	
minimum elong	1935 Nov 27	04:46	4°♐00'45	0°38'47	
morning rise	1935 Dec 09	19:25	6°♐49'32		
retrograde	1936 Apr 10	17:49	24°♐25'59		
opposition	1936 Jun 10	16:02	19°♐33'41	0°33'37	
min. Earth dist.	1936 Jun 12	03:59	19°♐22'13	4.28374 AU	
direct	1936 Aug 11	14:59	14°♐35'20		
	1936 Dec 02	08:38	0°♑		
evening set	1936 Dec 15	00:02	2°♑51'11		
max. Earth dist.	1936 Dec 25	20:11	5°♑20'30	6.21315 AU	
conjunction	1936 Dec 27	16:15	5°♑45'52	0°04'43	
minimum elong	1936 Dec 27	16:15	5°♑45'53	0°04'44	
behind sun begin	1936 Dec 27	08:27	5°♑41'25		
behind sun end	1936 Dec 28	00:03	5°♑50'21		
morning rise	1937 Jan 09	08:21	8°♑40'47		
desc. node	1937 Feb 14	18:51	16°♑40'07		
retrograde	1937 May 15	13:02	27°♑19'01		
opposition	1937 Jul 15	08:15	22°♑24'43	-0°21'18	
min. Earth dist.	1937 Jul 16	08:42	22°♑16'50	4.13983 AU	
direct	1937 Sep 13	23:18	17°♑28'52		
	1937 Dec 20	04:05	0°♒		
evening set	1938 Jan 17	04:11	6°♒23'27		
conjunction	1938 Jan 29	23:22	9°♒25'19	-0°32'29	
minimum elong	1938 Jan 29	23:20	9°♒25'18	0°32'30	
max. Earth dist.	1938 Jan 29	00:57	9°♒12'00	6.07172 AU	
morning rise	1938 Feb 11	19:55	12°♒28'10		
	1938 Feb 22	15:27	15°♒		
	1938 May 14	07:45	0°♓		
retrograde	1938 Jun 21	15:30	2°♓15'09		
	1938 Jul 30	03:02	30℞♒		
opposition	1938 Aug 21	00:21	27°♒17'33	-1°12'24	
min. Earth dist.	1938 Aug 21	05:50	27°♒15'45	4.01320 AU	
direct	1938 Oct 19	05:46	22°♒23'34		
	1938 Dec 29	18:34	0°♓		
evening set	1939 Feb 21	11:11	11°♓53'09		
conjunction	1939 Mar 06	12:15	15°♓02'03	-0°59'25	
minimum elong	1939 Mar 06	12:14	15°♓02'02	0°59'25	
max. Earth dist.	1939 Mar 06	21:08	15°♓07'25	5.97153 AU	
morning rise	1939 Mar 19	16:01	18°♓12'32		
	1939 May 11	14:08	0°♈		
retrograde	1939 Jul 29	21:01	8°♈47'32		
opposition	1939 Sep 27	19:06	3°♈46'03	-1°37'50	
min. Earth dist.	1939 Sep 27	01:39	3°♈51'53	3.95167 AU	
	1939 Oct 30	00:46	30℞♓		
direct	1939 Nov 24	21:17	28°♓52'16		
	1939 Dec 20	17:02	0°♈		
evening set	1940 Mar 29	12:36	18°♈36'55		
conjunction	1940 Apr 11	21:35	21°♈50'18	-1°03'51	
minimum elong	1940 Apr 11	21:36	21°♈50'18	1°03'51	
max. Earth dist.	1940 Apr 13	12:26	22°♈13'44	5.95394 AU	
morning rise	1940 Apr 25	09:50	25°♈05'19		
	1940 May 16	07:54	0°♉		
	1940 Aug 15	04:43	15°♉		
retrograde	1940 Sep 04	13:00	15°♉40'48		
	1940 Sep 24	19:17	15℞♉		
min. Earth dist.	1940 Nov 01	19:51	10°♉47'22	3.98125 AU	
opposition	1940 Nov 03	04:19	10°♉36'19	-1°24'15	
direct	1940 Dec 31	01:20	5°♉40'33		
	1941 Mar 21	04:26	15°♉		
evening set	1941 May 06	03:47	25°♉11'57		
conjunction	1941 May 19	19:59	28°♉25'14	-0°43'14	
minimum elong	1941 May 19	20:01	28°♉25'15	0°43'14	
max. Earth dist.	1941 May 22	03:39	28°♉58'03	6.02744 AU	
	1941 May 26	12:48	0°♊		
morning rise	1941 Jun 02	14:11	1°♊39'22		
retrograde	1941 Oct 10	08:00	21°♊26'46		
min. Earth dist.	1941 Dec 07	10:04	16°♊33'33	4.08980 AU	
opposition	1941 Dec 08	20:12	16°♊21'55	-0°38'52	
direct	1942 Feb 05	10:02	11°♊23'09		
	1942 Jun 10	10:36	0°♋		
evening set	1942 Jun 11	22:33	0°♋20'23		

conjunction	1942 Jun 25 16:43	3°♋28'30	-0°07'22
minimum elong	1942 Jun 25 16:44	3°♋28'31	0°07'23
behind sun begin	1942 Jun 25 09:06	3°♋24'11	
behind sun end	1942 Jun 26 00:21	3°♋32'50	
max. Earth dist.	1942 Jun 27 17:27	3°♋56'18	6.16106 AU
morning rise	1942 Jul 09 11:20	6°♋36'31	
asc. node	1942 Sep 09 17:44	19°♋18'30	
retrograde	1942 Nov 12 14:25	25°♋14'19	
min. Earth dist.	1943 Jan 10 05:56	20°♋20'13	4.23413 AU
opposition	1943 Jan 11 07:12	20°♋11'41	0°17'15
direct	1943 Mar 12 02:11	15°♋10'19	
	1943 Jun 30 21:45	0°♌	
evening set	1943 Jul 16 22:20	3°♌28'43	
conjunction	1943 Jul 30 12:54	6°♌29'03	0°29'28
minimum elong	1943 Jul 30 12:52	6°♌29'02	0°29'28
max. Earth dist.	1943 Jul 31 15:11	6°♌43'36	6.30455 AU
morning rise	1943 Aug 13 01:54	9°♌28'23	
	1943 Sep 07 22:51	15°♌	
retrograde	1943 Dec 13 23:25	27°♌03'43	
opposition	1944 Feb 11 22:12	22°♌04'46	1°04'33
min. Earth dist.	1944 Feb 11 14:09	22°♌07'26	4.36486 AU
direct	1944 Apr 13 02:11	17°♌02'02	
	1944 Jul 26 01:03	0°♍	
evening set	1944 Aug 17 22:58	4°♍49'40	
conjunction	1944 Aug 31 06:22	7°♍42'36	0°55'56
minimum elong	1944 Aug 31 06:20	7°♍42'35	0°55'55
max. Earth dist.	1944 Aug 31 03:36	7°♍41'06	6.41236 AU
morning rise	1944 Sep 13 11:16	10°♍34'11	
retrograde	1945 Jan 12 04:51	27°♍29'49	
opposition	1945 Mar 13 12:32	22°♍34'25	1°31'36
min. Earth dist.	1945 Mar 13 22:51	22°♍31'03	4.44374 AU
direct	1945 May 14 17:27	17°♍31'30	
	1945 Aug 25 06:05	0°♎	
evening set	1945 Sep 18 09:46	5°♎02'57	
max. Earth dist.	1945 Sep 30 06:38	7°♎36'28	6.45604 AU
conjunction	1945 Oct 01 09:53	7°♎51'12	1°06'14
minimum elong	1945 Oct 01 09:53	7°♎51'12	1°06'13
morning rise	1945 Oct 14 06:59	10°♎38'04	
retrograde	1946 Feb 11 08:26	27°♎22'00	
opposition	1946 Apr 13 00:33	22°♎29'07	1°33'47
min. Earth dist.	1946 Apr 14 02:36	22°♎20'46	4.45085 AU
direct	1946 Jun 14 18:05	17°♎27'07	
	1946 Sep 25 10:19	0°♏	
evening set	1946 Oct 19 00:54	4°♏59'21	
max. Earth dist.	1946 Oct 29 21:34	7°♏21'29	6.42527 AU
conjunction	1946 Oct 31 19:28	7°♏46'37	0°58'38
minimum elong	1946 Oct 31 19:29	7°♏46'37	0°58'38
morning rise	1946 Nov 13 11:49	10°♏32'53	
	1946 Dec 04 08:38	15°♏	
retrograde	1947 Mar 14 11:36	27°♏33'47	
opposition	1947 May 14 08:16	22°♏41'55	1°10'51
min. Earth dist.	1947 May 15 20:26	22°♏30'23	4.38419 AU
direct	1947 Jul 15 22:53	17°♏41'32	
	1947 Oct 24 02:59	0°♐	
evening set	1947 Nov 18 17:47	5°♐31'45	
max. Earth dist.	1947 Nov 29 07:16	7°♐53'23	6.32749 AU
conjunction	1947 Dec 01 09:59	8°♐21'50	0°34'41
minimum elong	1947 Dec 01 10:01	8°♐21'51	0°34'40
morning rise	1947 Dec 14 00:41	11°♐11'27	
retrograde	1948 Apr 15 08:34	28°♐56'29	
opposition	1948 Jun 15 06:56	24°♐04'00	0°26'35
min. Earth dist.	1948 Jun 16 17:32	23°♐52'58	4.26062 AU
direct	1948 Aug 16 00:40	19°♐06'01	
	1948 Nov 15 10:38	0°♑	
evening set	1948 Dec 19 11:04	7°♑28'34	
desc. node	1948 Dec 26 14:41	9°♑07'27	
max. Earth dist.	1948 Dec 30 09:44	10°♑00'10	6.18828 AU
conjunction	1949 Jan 01 03:36	10°♑24'25	-0°00'33
minimum elong	1949 Jan 01 03:34	10°♑24'24	0°00'32
behind sun begin	1948 Dec 31 19:36	10°♑19'48	
behind sun end	1949 Jan 01 11:33	10°♑29'00	
morning rise	1949 Jan 13 20:11	13°♑20'34	
	1949 Apr 12 19:17	0°♒	
retrograde	1949 May 20 15:34	2°♒10'21	
	1949 Jun 27 18:30	30°℞♑	
opposition	1949 Jul 20 08:07	27°♑15'42	-0°29'05
min. Earth dist.	1949 Jul 21 07:12	27°♑08'14	4.11501 AU
direct	1949 Sep 18 18:47	22°♑20'12	
	1949 Nov 30 20:07	0°♒	
evening set	1950 Jan 21 23:43	11°♒22'13	
conjunction	1950 Feb 03 19:41	14°♒25'24	-0°37'09
minimum elong	1950 Feb 03 19:39	14°♒25'22	0°37'09
max. Earth dist.	1950 Feb 03 01:06	14°♒14'19	6.04932 AU
	1950 Feb 06 05:43	15°♒	
morning rise	1950 Feb 16 17:14	17°♒29'40	
	1950 Apr 15 08:58	0°♓	
retrograde	1950 Jun 27 00:14	7°♓27'07	
opposition	1950 Aug 26 07:13	2°♓29'03	-1°17'57
min. Earth dist.	1950 Aug 26 08:31	2°♓28'38	3.99578 AU
	1950 Sep 15 02:23	30°℞♒	
direct	1950 Oct 24 06:34	27°♒35'19	
	1950 Dec 01 19:56	0°♓	
evening set	1951 Feb 26 15:19	17°♓10'03	
conjunction	1951 Mar 11 17:24	20°♓19'57	-1°01'33
minimum elong	1951 Mar 11 17:23	20°♓19'56	1°01'33
max. Earth dist.	1951 Mar 12 06:56	20°♓28'09	5.96066 AU
morning rise	1951 Mar 24 22:27	23°♓31'29	
	1951 Apr 21 14:57	0°♈	
retrograde	1951 Aug 04 06:54	14°♈10'46	
min. Earth dist.	1951 Oct 02 07:23	9°♈15'41	3.94871 AU
opposition	1951 Oct 03 04:07	9°♈08'42	-1°38'16
direct	1951 Nov 30 04:08	4°♈14'46	
evening set	1952 Apr 03 21:02	23°♈59'34	
conjunction	1952 Apr 17 07:21	27°♈13'18	-1°02'17
minimum elong	1952 Apr 17 07:22	27°♈13'19	1°02'16
max. Earth dist.	1952 Apr 19 03:53	27°♈40'06	5.95911 AU
	1952 Apr 28 20:50	0°♉	
morning rise	1952 Apr 30 20:33	0°♉28'31	
	1952 Jul 08 01:08	15°♉	
retrograde	1952 Sep 09 19:40	20°♉59'26	
min. Earth dist.	1952 Nov 06 23:46	16°♉06'05	3.99374 AU
opposition	1952 Nov 08 09:09	15°♉54'43	-1°19'15
	1952 Nov 15 02:45	15°℞♉	
direct	1953 Jan 05 07:52	10°♉58'34	
	1953 Feb 24 15:00	15°♉	
	1953 May 09 15:33	0°♊	
evening set	1953 May 11 10:58	0°♊25'20	
conjunction	1953 May 25 03:38	3°♊38'00	-0°38'43
minimum elong	1953 May 25 03:40	3°♊38'02	0°38'42
max. Earth dist.	1953 May 27 11:23	4°♊10'43	6.04561 AU
morning rise	1953 Jun 07 22:22	6°♊51'28	
retrograde	1953 Oct 15 02:56	26°♊28'40	
min. Earth dist.	1953 Dec 12 06:25	21°♊35'39	4.11143 AU
opposition	1953 Dec 13 16:41	21°♊23'58	-0°31'01

direct	1954 Feb 10	09:27	16°♊24'47		
	1954 May 24	04:43	0°♋		
evening set	1954 Jun 16	23:41	5°♋15'37		
conjunction	1954 Jun 30	17:38	8°♋22'36	-0°01'55	
minimum elong	1954 Jun 30	17:39	8°♋22'36	0°01'55	
behind sun begin	1954 Jun 30	09:16	8°♋17'52		
behind sun end	1954 Jul 01	02:01	8°♋27'20		
max. Earth dist.	1954 Jul 02	15:36	8°♋48'42	6.18427 AU	
morning rise	1954 Jul 14	11:39	11°♋29'19		
asc. node	1954 Jul 20	03:03	12°♋45'08		
retrograde	1954 Nov 17	03:02	29°♋56'35		
opposition	1955 Jan 15	20:01	24°♋54'27	0°24'48	
min. Earth dist.	1955 Jan 14	21:41	25°♋01'58	4.25661 AU	
direct	1955 Mar 16	20:38	19°♋52'50		
	1955 Jun 13	00:06	0°♌		
evening set	1955 Jul 21	15:49	8°♌05'29		
conjunction	1955 Aug 04	05:31	11°♌04'36	0°33'59	
minimum elong	1955 Aug 04	05:29	11°♌04'35	0°33'58	
max. Earth dist.	1955 Aug 05	03:53	11°♌16'56	6.32449 AU	
morning rise	1955 Aug 17	17:29	14°♌02'40		
	1955 Aug 22	02:42	15°♌		
	1955 Nov 17	03:58	0°♍		
retrograde	1955 Dec 18	04:30	1°♍30'24		
	1956 Jan 18	02:04	30°℞♌		
opposition	1956 Feb 16	05:38	26°♌31'58	1°09'42	
min. Earth dist.	1956 Feb 15	23:44	26°♌33'55	4.38107 AU	
direct	1956 Apr 17	12:59	21°♌29'09		
	1956 Jul 07	19:01	0°♍		
evening set	1956 Aug 22	09:58	9°♍13'11		
conjunction	1956 Sep 04	16:18	12°♍05'14	0°58'24	
minimum elong	1956 Sep 04	16:16	12°♍05'13	0°58'24	
max. Earth dist.	1956 Sep 04	09:52	12°♍01'45	6.42369 AU	
morning rise	1956 Sep 17	19:56	14°♍55'53		
	1956 Dec 13	02:17	0°♎		
retrograde	1957 Jan 16	09:22	1°♎47'59		
	1957 Feb 19	15:38	30°℞♍		
opposition	1957 Mar 17	18:01	26°♍53'03	1°33'25	
min. Earth dist.	1957 Mar 18	07:15	26°♍48'45	4.44968 AU	
direct	1957 May 19	02:20	21°♍50'14		
	1957 Aug 07	02:11	0°♎		
evening set	1957 Sep 22	16:53	9°♎20'43		
max. Earth dist.	1957 Oct 04	08:07	11°♎51'21	6.45598 AU	
conjunction	1957 Oct 05	16:00	12°♎08'36	1°06'13	
minimum elong	1957 Oct 05	16:00	12°♎08'36	1°06'12	
morning rise	1957 Oct 18	12:25	14°♎55'11		
	1958 Jan 13	12:51	0°♏		
retrograde	1958 Feb 15	14:59	1°♏39'54		
	1958 Mar 20	19:14	30°℞♎		
opposition	1958 Apr 17	07:32	26°♎47'13	1°32'01	
min. Earth dist.	1958 Apr 18	11:51	26°♎38'08	4.44504 AU	
direct	1958 Jun 19	01:44	21°♎45'20		
	1958 Sep 07	08:52	0°♏		
evening set	1958 Oct 23	06:58	9°♏19'25		
max. Earth dist.	1958 Nov 03	02:44	11°♏41'26	6.41407 AU	
conjunction	1958 Nov 05	01:13	12°♏06'57	0°56'10	
minimum elong	1958 Nov 05	01:14	12°♏06'57	0°56'10	
morning rise	1958 Nov 17	17:01	14°♏53'29		
	1958 Nov 18	04:57	15°♏		
	1959 Feb 10	13:45	0°♐		
retrograde	1959 Mar 18	22:10	1°♐59'24		
	1959 Apr 24	14:11	30°℞♏		
opposition	1959 May 18	20:00	27°♏07'32	1°05'45	
min. Earth dist.	1959 May 20	08:10	26°♏56'01	4.36830 AU	
direct	1959 Jul 20	07:59	22°♏07'29		
	1959 Oct 05	14:39	0°♐		
evening set	1959 Nov 23	02:33	10°♐01'59		
max. Earth dist.	1959 Dec 03	15:26	12°♐23'59	6.30811 AU	
conjunction	1959 Dec 05	18:30	12°♐52'47	0°30'13	
minimum elong	1959 Dec 05	18:32	12°♐52'47	0°30'13	
morning rise	1959 Dec 18	09:25	15°♐43'15		
	1960 Mar 01	13:10	0°♑		
retrograde	1960 Apr 20	04:55	3°♑36'56		
	1960 Jun 10	01:53	30°℞♐		
opposition	1960 Jun 20	01:57	28°♐44'15	0°19'05	
min. Earth dist.	1960 Jun 21	12:09	28°♐33'18	4.23894 AU	
direct	1960 Aug 20	16:40	23°♐46'34		
	1960 Oct 26	03:00	0°♑		
desc. node	1960 Nov 05	00:35	1°♑46'25		
evening set	1960 Dec 24	01:28	12°♑15'04		
max. Earth dist.	1961 Jan 04	03:25	14°♑49'18	6.16640 AU	
conjunction	1961 Jan 05	18:24	15°♑11'59	-0°05'58	
minimum elong	1961 Jan 05	18:24	15°♑11'59	0°05'57	
behind sun begin	1961 Jan 05	10:46	15°♑07'34		
behind sun end	1961 Jan 06	02:03	15°♑16'24		
morning rise	1961 Jan 18	11:31	18°♑09'18		
	1961 Mar 15	08:01	0°♒		
retrograde	1961 May 25	18:35	7°♒09'14		
opposition	1961 Jul 25	10:37	2°♒14'12	-0°36'54	
min. Earth dist.	1961 Jul 26	06:15	2°♒07'51	4.09506 AU	
	1961 Aug 12	08:54	30°℞♑		
direct	1961 Sep 23	15:27	27°♑19'04		
	1961 Nov 04	02:49	0°♒		
	1962 Jan 20	19:04	15°♒		
evening set	1962 Jan 26	21:35	16°♒26'34		
conjunction	1962 Feb 08	18:08	19°♒30'44	-0°41'40	
minimum elong	1962 Feb 08	18:05	19°♒30'43	0°41'39	
max. Earth dist.	1962 Feb 08	03:44	19°♒22'07	6.03318 AU	
morning rise	1962 Feb 21	16:38	22°♒36'07		
	1962 Mar 25	22:07	0°♓		
retrograde	1962 Jul 02	08:58	12°♓41'24		
opposition	1962 Aug 31	14:48	7°♓42'42	-1°22'57	
min. Earth dist.	1962 Aug 31	12:30	7°♓43'27	3.98533 AU	
direct	1962 Oct 29	10:32	2°♓49'01		
evening set	1963 Mar 03	19:08	22°♓26'03		
conjunction	1963 Mar 16	22:23	25°♓36'36	-1°03'13	
minimum elong	1963 Mar 16	22:22	25°♓36'36	1°03'13	
max. Earth dist.	1963 Mar 17	18:26	25°♓48'45	5.95695 AU	
morning rise	1963 Mar 30	04:24	28°♓48'46		
	1963 Apr 04	03:19	0°♈		
retrograde	1963 Aug 09	15:26	19°♈28'57		
opposition	1963 Oct 08	10:59	14°♈26'24	-1°37'53	
min. Earth dist.	1963 Oct 07	12:07	14°♈34'06	3.95245 AU	
direct	1963 Dec 05	10:10	9°♈32'16		
evening set	1964 Apr 09	03:10	29°♈14'46		
	1964 Apr 12	06:52	0°♉		
conjunction	1964 Apr 22	14:20	2°♉28'25	-1°00'15	
minimum elong	1964 Apr 22	14:21	2°♉28'27	1°00'16	
max. Earth dist.	1964 Apr 24	12:50	2°♉56'19	5.96956 AU	
morning rise	1964 May 06	04:38	5°♉43'35		
	1964 Jun 16	03:50	15°♉		
retrograde	1964 Sep 14	19:01	26°♉07'44		
min. Earth dist.	1964 Nov 11	22:38	21°♉14'44	4.00972 AU	
opposition	1964 Nov 13	09:35	21°♉02'49	-1°13'48	
direct	1965 Jan 10	09:33	16°♉06'13		

	1965 Apr 22 14:32	0°♊	
evening set	1965 May 16 14:02	5°♊27'32	
conjunction	1965 May 30 07:12	8°♊39'30	-0°34'03
minimum elong	1965 May 30 07:14	8°♊39'31	0°34'03
max. Earth dist.	1965 Jun 01 14:14	9°♊11'39	6.06559 AU
morning rise	1965 Jun 13 02:05	11°♊52'05	
	1965 Sep 21 04:39	0°♋	
retrograde	1965 Oct 19 19:32	1°♋18'59	
	1965 Nov 17 03:08	30°℞♊	
min. Earth dist.	1965 Dec 17 01:06	26°♊25'25	4.13301 AU
opposition	1965 Dec 18 09:08	26°♊14'31	-0°23'15
direct	1966 Feb 15 06:57	21°♊14'56	
	1966 May 05 14:52	0°♋	
asc. node	1966 May 30 20:25	5°♋08'38	
evening set	1966 Jun 21 20:24	9°♋59'38	
conjunction	1966 Jul 05 14:05	13°♋05'33	0°03'29
minimum elong	1966 Jul 05 14:05	13°♋05'33	0°03'29
behind sun begin	1966 Jul 05 05:48	13°♋00'53	
behind sun end	1966 Jul 05 22:23	13°♋10'13	
max. Earth dist.	1966 Jul 07 09:49	13°♋30'15	6.20565 AU
morning rise	1966 Jul 19 07:29	16°♋11'03	
	1966 Sep 27 13:19	0°♌	
retrograde	1966 Nov 21 10:22	4°♌28'57	
	1967 Jan 16 03:50	30°℞♋	
min. Earth dist.	1967 Jan 19 08:30	29°♋34'19	4.27604 AU
opposition	1967 Jan 20 05:17	29°♋27'20	0°31'55
direct	1967 Mar 21 09:15	24°♋25'31	
	1967 May 23 08:20	0°♌	
evening set	1967 Jul 26 06:07	12°♌33'39	
	1967 Aug 06 09:06	15°♌	
conjunction	1967 Aug 08 18:49	15°♌31'43	0°38'10
minimum elong	1967 Aug 08 18:47	15°♌31'42	0°38'09
max. Earth dist.	1967 Aug 09 11:58	15°♌41'09	6.34053 AU
morning rise	1967 Aug 22 05:46	18°♌28'41	
	1967 Oct 19 10:51	0°♍	
retrograde	1967 Dec 22 10:02	5°♍50'28	
opposition	1968 Feb 20 11:02	0°♍52'38	1°14'20
min. Earth dist.	1968 Feb 20 08:53	0°♍53'21	4.39277 AU
	1968 Feb 27 03:33	30°℞♌	
direct	1968 Apr 21 23:26	25°♌49'46	
	1968 Jun 15 14:43	0°♍	
evening set	1968 Aug 26 19:02	13°♍31'43	
conjunction	1968 Sep 09 00:26	16°♍23'08	1°00'30
minimum elong	1968 Sep 09 00:25	16°♍23'07	1°00'30
max. Earth dist.	1968 Sep 08 14:05	16°♍17'32	6.43014 AU
morning rise	1968 Sep 22 03:02	19°♍13'08	
	1968 Nov 15 22:44	0°♎	
retrograde	1969 Jan 20 12:29	6°♎03'25	
opposition	1969 Mar 21 22:53	1°♎08'54	1°34'43
min. Earth dist.	1969 Mar 22 13:57	1°♎04'01	4.45092 AU
	1969 Mar 30 21:36	30°℞♍	
direct	1969 May 23 08:20	26°♍06'12	
	1969 Jul 15 13:30	0°♎	
evening set	1969 Sep 26 23:15	13°♎37'09	
max. Earth dist.	1969 Oct 08 11:59	16°♎06'39	6.45198 AU
conjunction	1969 Oct 09 21:38	16°♎24'53	1°05'50
minimum elong	1969 Oct 09 21:38	16°♎24'53	1°05'50
morning rise	1969 Oct 22 17:11	19°♎11'20	
	1969 Dec 16 15:55	0°♏	
retrograde	1970 Feb 19 21:58	5°♏58'12	
opposition	1970 Apr 21 15:14	1°♏05'49	1°29'45
min. Earth dist.	1970 Apr 22 21:10	0°♏56'15	4.43615 AU
	1970 Apr 30 06:44	30°℞♎	
direct	1970 Jun 23 09:44	26°♎04'15	
	1970 Aug 15 17:57	0°♏	
evening set	1970 Oct 27 13:40	13°♏40'58	
	1970 Nov 02 13:58	15°♏	
max. Earth dist.	1970 Nov 07 06:30	16°♏01'55	6.40096 AU
conjunction	1970 Nov 09 07:21	16°♏28'49	0°53'22
minimum elong	1970 Nov 09 07:23	16°♏28'50	0°53'22
morning rise	1970 Nov 21 23:00	19°♏15'49	
	1971 Jan 14 08:49	0°♐	
retrograde	1971 Mar 23 11:33	6°♐27'25	
opposition	1971 May 23 08:59	1°♐35'32	1°00'14
min. Earth dist.	1971 May 24 21:23	1°♐23'56	4.35176 AU
	1971 Jun 05 02:12	30°℞♏	
direct	1971 Jul 24 19:09	26°♏35'48	
	1971 Sep 11 15:33	0°♐	
evening set	1971 Nov 27 12:05	14°♐34'40	
max. Earth dist.	1971 Dec 08 03:24	16°♐58'37	6.28963 AU
conjunction	1971 Dec 10 04:10	17°♐26'13	0°25'33
minimum elong	1971 Dec 10 04:11	17°♐26'14	0°25'33
morning rise	1971 Dec 22 19:04	20°♐17'29	
	1972 Feb 06 19:36	0°♑	
retrograde	1972 Apr 25 00:18	8°♑19'24	
opposition	1972 Jun 24 21:43	3°♑26'31	0°11'24
min. Earth dist.	1972 Jun 26 06:03	3°♑16'10	4.21971 AU
	1972 Jul 24 16:43	30°℞♐	
direct	1972 Aug 25 08:01	28°♐29'16	
desc. node	1972 Sep 14 15:49	29°♐07'48	
	1972 Sep 25 18:19	0°♑	
evening set	1972 Dec 28 16:13	17°♑02'41	
max. Earth dist.	1973 Jan 08 20:38	19°♑39'03	6.14794 AU
conjunction	1973 Jan 10 09:19	20°♑00'29	-0°11'16
minimum elong	1973 Jan 10 09:18	20°♑00'28	0°11'17
behind sun begin	1973 Jan 10 03:21	19°♑57'00	
behind sun end	1973 Jan 10 15:15	20°♑03'56	
morning rise	1973 Jan 23 03:05	22°♑58'50	
	1973 Feb 23 09:28	0°♒	
retrograde	1973 May 30 22:10	12°♒07'47	
opposition	1973 Jul 30 12:49	7°♒12'15	-0°44'27
min. Earth dist.	1973 Jul 31 05:35	7°♒06'48	4.07870 AU
direct	1973 Sep 28 13:26	2°♒17'22	
	1974 Jan 03 16:24	15°♒	
evening set	1974 Jan 31 18:29	21°♒29'03	
conjunction	1974 Feb 13 15:53	24°♒34'07	-0°45'49
minimum elong	1974 Feb 13 15:51	24°♒34'06	0°45'49
max. Earth dist.	1974 Feb 13 07:04	24°♒28'50	6.02042 AU
morning rise	1974 Feb 26 15:07	27°♒40'25	
	1974 Mar 08 11:11	0°♓	
retrograde	1974 Jul 07 16:13	17°♓52'01	
opposition	1974 Sep 05 20:18	12°♓52'48	-1°27'14
min. Earth dist.	1974 Sep 05 15:25	12°♓54'25	3.97761 AU
direct	1974 Nov 03 12:13	7°♓59'13	
evening set	1975 Mar 08 21:34	27°♓37'55	
	1975 Mar 18 16:47	0°♈	
conjunction	1975 Mar 22 01:41	0°♈49'00	-1°04'22
minimum elong	1975 Mar 22 01:40	0°♈48'59	1°04'21
max. Earth dist.	1975 Mar 23 00:25	1°♈02'46	5.95475 AU
morning rise	1975 Apr 04 08:59	4°♈01'47	
retrograde	1975 Aug 14 19:32	24°♈42'13	
opposition	1975 Oct 13 14:59	19°♈39'13	-1°36'45
min. Earth dist.	1975 Oct 12 13:07	19°♈47'57	3.95623 AU
direct	1975 Dec 10 12:39	14°♈44'48	

	1976 Mar 26 10:25	0°♉	
evening set	1976 Apr 14 07:20	4°♉25'31	
conjunction	1976 Apr 27 19:35	7°♉39'13	-0°57'49
minimum elong	1976 Apr 27 19:37	7°♉39'15	0°57'49
max. Earth dist.	1976 Apr 29 20:22	8°♉08'24	5.97890 AU
morning rise	1976 May 11 10:41	10°♉54'18	
	1976 May 28 23:27	15°♉	
	1976 Aug 23 10:24	0°♊	
retrograde	1976 Sep 19 18:39	1°♊12'29	
	1976 Oct 16 20:24	30°℞♉	
min. Earth dist.	1976 Nov 16 22:01	26°♉19'07	4.02336 AU
opposition	1976 Nov 18 08:16	26°♉07'26	-1°07'54
direct	1977 Jan 15 10:56	21°♉10'24	
	1977 Apr 03 15:42	0°♊	
evening set	1977 May 21 15:56	10°♊27'22	
conjunction	1977 Jun 04 09:35	13°♊38'47	-0°29'12
minimum elong	1977 Jun 04 09:37	13°♊38'48	0°29'12
max. Earth dist.	1977 Jun 06 16:51	14°♊10'55	6.08231 AU
morning rise	1977 Jun 18 04:38	16°♊50'39	
	1977 Aug 20 12:42	0°♋	
retrograde	1977 Oct 24 10:13	6°♋08'31	
min. Earth dist.	1977 Dec 21 17:09	1°♋15'03	4.15107 AU
opposition	1977 Dec 23 00:40	1°♋04'21	-0°15'24
	1977 Dec 30 23:50	30°℞♊	
direct	1978 Feb 20 01:24	26°♊04'23	
asc. node	1978 Apr 10 05:29	29°♊44'57	
	1978 Apr 12 00:12	0°♋	
evening set	1978 Jun 26 17:27	14°♋44'24	
conjunction	1978 Jul 10 10:38	17°♋49'20	0°08'43
minimum elong	1978 Jul 10 10:37	17°♋49'20	0°08'43
behind sun begin	1978 Jul 10 03:28	17°♋45'19	
behind sun end	1978 Jul 10 17:47	17°♋53'20	
max. Earth dist.	1978 Jul 12 01:48	18°♋11'23	6.22353 AU
morning rise	1978 Jul 24 03:30	20°♋53'47	
	1978 Sep 05 08:30	0°♌	
retrograde	1978 Nov 25 20:30	9°♌03'35	
opposition	1979 Jan 24 15:18	4°♌02'26	0°38'53
min. Earth dist.	1979 Jan 23 21:42	4°♌08'20	4.29221 AU
	1979 Feb 28 23:35	30°℞♋	
direct	1979 Mar 26 00:55	29°♋00'20	
	1979 Apr 20 08:29	0°♌	
	1979 Jul 21 06:11	15°♌	
evening set	1979 Jul 30 21:13	17°♌04'54	
conjunction	1979 Aug 13 09:12	20°♌02'05	0°42'10
minimum elong	1979 Aug 13 09:09	20°♌02'04	0°42'11
max. Earth dist.	1979 Aug 13 23:49	20°♌10'06	6.35382 AU
morning rise	1979 Aug 26 18:57	22°♌58'02	
	1979 Sep 29 10:23	0°♍	
retrograde	1979 Dec 26 14:59	10°♍14'41	
opposition	1980 Feb 24 18:02	5°♍17'20	1°18'39
min. Earth dist.	1980 Feb 24 17:18	5°♍17'35	4.40254 AU
direct	1980 Apr 26 08:47	0°♍14'28	
evening set	1980 Aug 31 05:40	17°♍54'38	
conjunction	1980 Sep 13 09:55	20°♍45'23	1°02'19
minimum elong	1980 Sep 13 09:54	20°♍45'22	1°02'19
max. Earth dist.	1980 Sep 12 19:41	20°♍37'41	6.43578 AU
morning rise	1980 Sep 26 11:30	23°♍34'45	
	1980 Oct 27 10:10	0°♎	
retrograde	1981 Jan 24 19:23	10°♎23'21	
opposition	1981 Mar 26 05:54	5°♎29'14	1°35'34
min. Earth dist.	1981 Mar 26 23:42	5°♎23'30	4.45245 AU
direct	1981 May 27 18:26	0°♎26'42	
evening set	1981 Oct 01 07:10	17°♎57'35	
max. Earth dist.	1981 Oct 12 16:43	20°♎25'33	6.44940 AU
conjunction	1981 Oct 14 04:46	20°♎45'07	1°05'08
minimum elong	1981 Oct 14 04:47	20°♎45'07	1°05'08
morning rise	1981 Oct 26 23:36	23°♎31'23	
	1981 Nov 27 02:19	0°♏	
retrograde	1982 Feb 24 05:42	10°♏19'47	
opposition	1982 Apr 26 00:28	5°♏27'31	1°27'01
min. Earth dist.	1982 Apr 27 06:41	5°♏17'51	4.42999 AU
direct	1982 Jun 27 18:16	0°♏26'11	
	1982 Oct 17 15:31	15°♏	
evening set	1982 Oct 31 20:57	18°♏04'17	
max. Earth dist.	1982 Nov 11 14:34	20°♏25'59	6.39185 AU
conjunction	1982 Nov 13 14:15	20°♏52'19	0°50'18
minimum elong	1982 Nov 13 14:16	20°♏52'20	0°50'18
morning rise	1982 Nov 26 05:26	23°♏39'31	
	1982 Dec 26 01:57	0°♐	
retrograde	1983 Mar 27 23:56	10°♐55'25	
opposition	1983 May 27 22:29	6°♐03'31	0°54'24
min. Earth dist.	1983 May 29 10:51	5°♐51'57	4.34017 AU
direct	1983 Jul 29 07:04	1°♐04'09	
evening set	1983 Dec 01 20:59	19°♐05'24	
max. Earth dist.	1983 Dec 12 12:07	21°♐29'45	6.27645 AU
conjunction	1983 Dec 14 12:48	21°♐57'23	0°20'50
minimum elong	1983 Dec 14 12:49	21°♐57'24	0°20'50
morning rise	1983 Dec 27 03:58	24°♐49'16	
	1984 Jan 19 15:04	0°♑	
retrograde	1984 Apr 29 18:37	12°♑57'44	
opposition	1984 Jun 29 16:12	8°♑04'31	0°03'50
min. Earth dist.	1984 Jun 30 22:41	7°♑54'45	4.20569 AU
desc. node	1984 Jul 27 01:47	4°♑51'21	
direct	1984 Aug 29 23:02	3°♑07'34	
evening set	1985 Jan 02 04:47	21°♑44'09	
conjunction	1985 Jan 14 22:19	24°♑42'38	-0°16'21
minimum elong	1985 Jan 14 22:19	24°♑42'37	0°16'21
max. Earth dist.	1985 Jan 13 13:43	24°♑23'31	6.13438 AU
morning rise	1985 Jan 27 16:24	27°♑41'44	
	1985 Feb 06 15:35	0°♒	
	1985 Apr 30 01:53	15°♒	
retrograde	1985 Jun 04 22:24	16°♒57'50	
	1985 Jul 10 21:36	15°℞♒	
opposition	1985 Aug 04 11:41	12°♒01'54	-0°51'24
min. Earth dist.	1985 Aug 05 02:39	11°♒57'02	4.06678 AU
direct	1985 Oct 03 08:17	7°♒07'16	
	1985 Dec 15 22:57	15°♒	
evening set	1986 Feb 05 12:11	26°♒21'50	
conjunction	1986 Feb 18 10:06	29°♒27'34	-0°49'29
minimum elong	1986 Feb 18 10:04	29°♒27'33	0°49'29
max. Earth dist.	1986 Feb 18 03:25	29°♒23'33	6.01102 AU
	1986 Feb 20 16:05	0°♓	
morning rise	1986 Mar 03 10:23	2°♓34'43	
retrograde	1986 Jul 12 17:01	22°♓51'26	
opposition	1986 Sep 10 21:15	17°♓51'42	-1°30'42
min. Earth dist.	1986 Sep 10 13:06	17°♓54'24	3.97190 AU
direct	1986 Nov 08 09:27	12°♓58'06	
	1987 Mar 02 18:41	0°♈	
evening set	1987 Mar 13 19:39	2°♈38'07	
conjunction	1987 Mar 27 00:55	5°♈49'46	-1°04'59
minimum elong	1987 Mar 27 00:55	5°♈49'46	1°04'59
max. Earth dist.	1987 Mar 28 03:45	6°♈06'01	5.95325 AU
morning rise	1987 Apr 09 09:09	9°♈03'05	

retrograde	1987 Aug 19 21:07	29°♈43'51		
opposition	1987 Oct 18 14:32	24°♈40'30	-1°34'58	
min. Earth dist.	1987 Oct 17 12:16	24°♈49'23	3.95915 AU	
direct	1987 Dec 15 12:22	19°♈45'50		
	1988 Mar 08 15:44	0°♉		
evening set	1988 Apr 19 07:42	9°♉25'33		
conjunction	1988 May 02 20:59	12°♉39'25	-0°55'04	
minimum elong	1988 May 02 21:02	12°♉39'26	0°55'03	
max. Earth dist.	1988 May 04 23:42	13°♉09'40	5.98600 AU	
	1988 May 12 16:57	15°♉		
morning rise	1988 May 16 13:00	15°♉54'34		
	1988 Jul 21 24:00	0°♊		
retrograde	1988 Sep 24 13:58	6°♊07'48		
min. Earth dist.	1988 Nov 21 16:12	1°♊14'42	4.03397 AU	
opposition	1988 Nov 23 03:04	1°♊02'49	-1°01'47	
	1988 Nov 30 20:53	30°℞♉		
direct	1989 Jan 20 06:12	26°♉05'28		
	1989 Mar 11 03:26	0°♊		
evening set	1989 May 26 15:14	15°♊19'44		
conjunction	1989 Jun 09 09:10	18°♊30'43	-0°24'19	
minimum elong	1989 Jun 09 09:11	18°♊30'44	0°24'19	
max. Earth dist.	1989 Jun 11 13:49	19°♊01'13	6.09553 AU	
morning rise	1989 Jun 23 04:30	21°♊42'04		
	1989 Jul 30 23:50	0°♋		
retrograde	1989 Oct 29 00:03	10°♋52'38		
min. Earth dist.	1989 Dec 26 08:31	5°♋58'53	4.16549 AU	
opposition	1989 Dec 27 14:16	5°♋48'46	-0°07'44	
asc. node	1990 Feb 19 20:20	0°♋50'57		
direct	1990 Feb 24 19:14	0°♋48'29		
evening set	1990 Jul 01 12:33	19°♋25'09		
conjunction	1990 Jul 15 05:32	22°♋29'20	0°13'46	
minimum elong	1990 Jul 15 05:31	22°♋29'19	0°13'46	
behind sun begin	1990 Jul 15 01:19	22°♋26'59		
behind sun end	1990 Jul 15 09:42	22°♋31'40		
max. Earth dist.	1990 Jul 16 19:36	22°♋50'41	6.23828 AU	
morning rise	1990 Jul 28 21:36	25°♋32'50		
	1990 Aug 18 07:30	0°♌		
retrograde	1990 Nov 30 05:03	13°♌35'46		
min. Earth dist.	1991 Jan 28 08:00	8°♌40'38	4.30609 AU	
opposition	1991 Jan 29 00:26	8°♌35'09	0°45'27	
direct	1991 Mar 30 13:15	3°♌32'57		
	1991 Jul 04 04:26	15°♌		
evening set	1991 Aug 04 11:32	21°♌34'31		
conjunction	1991 Aug 17 22:24	24°♌30'48	0°45'51	
minimum elong	1991 Aug 17 22:22	24°♌30'46	0°45'51	
max. Earth dist.	1991 Aug 18 08:24	24°♌36'15	6.36575 AU	
morning rise	1991 Aug 31 07:15	27°♌25'50		
	1991 Sep 12 06:00	0°♍		
retrograde	1991 Dec 30 21:33	14°♍37'45		
opposition	1992 Feb 29 00:37	9°♍40'51	1°22'25	
min. Earth dist.	1992 Feb 29 02:46	9°♍40'09	4.41180 AU	
direct	1992 Apr 30 19:39	4°♍37'55		
evening set	1992 Sep 04 15:06	22°♍16'07		
conjunction	1992 Sep 17 18:31	25°♍06'16	1°03'45	
minimum elong	1992 Sep 17 18:30	25°♍06'15	1°03'44	
max. Earth dist.	1992 Sep 17 02:28	24°♍57'35	6.44150 AU	
morning rise	1992 Sep 30 18:55	27°♍54'58		
	1992 Oct 10 13:26	0°♎		
retrograde	1993 Jan 28 23:09	14°♎41'45		
opposition	1993 Mar 30 12:01	9°♎47'54	1°35'51	
min. Earth dist.	1993 Mar 31 06:41	9°♎41'53	4.45423 AU	
direct	1993 Jun 01 01:09	4°♎45'27		
evening set	1993 Oct 05 13:32	22°♎15'55		
max. Earth dist.	1993 Oct 16 20:07	24°♎42'29	6.44678 AU	
conjunction	1993 Oct 18 10:16	25°♎03'13	1°04'03	
minimum elong	1993 Oct 18 10:17	25°♎03'14	1°04'03	
morning rise	1993 Oct 31 04:26	27°♎49'19		
	1993 Nov 10 08:15	0°♏		
retrograde	1994 Feb 28 13:50	14°♏39'22		
opposition	1994 Apr 30 08:55	9°♏47'14	1°23'47	
min. Earth dist.	1994 May 01 17:17	9°♏36'55	4.42273 AU	
direct	1994 Jul 02 03:33	4°♏46'05		
	1994 Sep 30 15:19	15°♏		
evening set	1994 Nov 05 02:54	22°♏25'51		
max. Earth dist.	1994 Nov 15 18:19	24°♏46'46	6.38024 AU	
conjunction	1994 Nov 17 19:48	25°♏14'11	0°46'57	
minimum elong	1994 Nov 17 19:50	25°♏14'12	0°46'57	
morning rise	1994 Nov 30 10:50	28°♏01'46		
	1994 Dec 09 10:54	0°♐		
retrograde	1995 Apr 01 12:03	15°♐23'01		
opposition	1995 Jun 01 11:22	10°♐30'57	0°48'13	
min. Earth dist.	1995 Jun 02 23:08	10°♐19'33	4.32471 AU	
direct	1995 Aug 02 16:44	5°♐31'49		
evening set	1995 Dec 06 05:45	23°♐37'00		
max. Earth dist.	1995 Dec 16 23:15	26°♐03'14	6.25839 AU	
conjunction	1995 Dec 18 21:43	26°♐29'44	0°15'55	
minimum elong	1995 Dec 18 21:44	26°♐29'45	0°15'55	
behind sun begin	1995 Dec 18 20:02	26°♐28'47		
behind sun end	1995 Dec 18 23:26	26°♐30'43		
morning rise	1995 Dec 31 12:57	29°♐22'25		
	1996 Jan 03 07:22	0°♑		
retrograde	1996 May 04 15:37	17°♑39'19		
desc. node	1996 Jun 06 12:18	16°♑01'32		
opposition	1996 Jul 04 11:41	12°♑45'50	-0°03'56	
min. Earth dist.	1996 Jul 05 17:33	12°♑36'15	4.18609 AU	
direct	1996 Sep 03 14:37	7°♑49'12		
evening set	1997 Jan 06 19:16	26°♑31'03		
max. Earth dist.	1997 Jan 18 05:49	29°♑12'06	6.11487 AU	
conjunction	1997 Jan 19 13:07	29°♑30'31	-0°21'29	
minimum elong	1997 Jan 19 13:06	29°♑30'31	0°21'28	
	1997 Jan 21 15:13	0°♒		
morning rise	1997 Feb 01 08:03	2°♒30'46		
	1997 Mar 31 22:31	15°♒		
retrograde	1997 Jun 10 00:24	21°♒56'27		
opposition	1997 Aug 09 13:39	16°♒59'59	-0°58'17	
min. Earth dist.	1997 Aug 10 01:05	16°♒56'15	4.04909 AU	
	1997 Aug 25 08:48	15°℞♒		
direct	1997 Oct 08 04:37	12°♒05'32		
	1997 Nov 20 02:33	15°♒		
	1998 Feb 04 10:52	0°♓		
evening set	1998 Feb 10 09:56	1°♓25'10		
conjunction	1998 Feb 23 08:51	4°♓31'56	-0°52'57	
minimum elong	1998 Feb 23 08:49	4°♓31'55	0°52'57	
max. Earth dist.	1998 Feb 23 07:30	4°♓31'07	5.99686 AU	
morning rise	1998 Mar 08 10:00	7°♓40'08		
retrograde	1998 Jul 18 01:48	28°♓03'35		
opposition	1998 Sep 16 03:02	23°♓03'19	-1°33'39	
min. Earth dist.	1998 Sep 15 16:58	23°♓06'40	3.96289 AU	
direct	1998 Nov 13 13:02	18°♓09'40		
	1999 Feb 13 01:23	0°♈		
evening set	1999 Mar 18 23:45	7°♈52'08		
conjunction	1999 Apr 01 06:10	11°♈04'28	-1°05'09	
minimum elong	1999 Apr 01 06:10	11°♈04'28	1°05'09	

max. Earth dist.	1999 Apr 02	13:03	11°♈23'09	5.95024 AU	
morning rise	1999 Apr 14	15:43	14°♈18'29		
	1999 Jun 28	09:29	0°♉		
retrograde	1999 Aug 25	02:38	4°♉59'12		
opposition	1999 Oct 23	19:04	29°♈55'30	-1°32'21	
min. Earth dist.	1999 Oct 22	14:07	0°♉05'19	3.96287 AU	
	1999 Oct 23	05:48	30°℞♈		
direct	1999 Dec 20	14:48	25°♈00'35		
	2000 Feb 14	21:40	0°♉		
evening set	2000 Apr 24	13:59	14°♉38'47		
	2000 Apr 26	01:49	15°♉		
conjunction	2000 May 08	04:08	17°♉52'37	-0°51'44	
minimum elong	2000 May 08	04:11	17°♉52'38	0°51'44	
max. Earth dist.	2000 May 10	07:40	18°♉23'17	5.99610 AU	
morning rise	2000 May 21	21:05	21°♉07'40		
	2000 Jun 30	07:35	0°♊		
retrograde	2000 Sep 29	12:52	11°♊14'05		
min. Earth dist.	2000 Nov 26	15:07	6°♊21'02	4.04935 AU	
opposition	2000 Nov 28	02:12	6°♊09'03	-0°54'56	
direct	2001 Jan 25	08:38	1°♊11'16		
evening set	2001 May 31	18:20	20°♊20'38		
conjunction	2001 Jun 14	12:38	23°♊30'50	-0°19'06	
minimum elong	2001 Jun 14	12:39	23°♊30'51	0°19'05	
max. Earth dist.	2001 Jun 16	18:10	24°♊01'42	6.11521 AU	
morning rise	2001 Jun 28	07:42	26°♊41'12		
	2001 Jul 13	00:03	0°♋		
retrograde	2001 Nov 02	15:35	15°♋41'30		
asc. node	2001 Dec 30	23:32	10°♋48'17		
min. Earth dist.	2001 Dec 31	01:04	10°♋47'46	4.18746 AU	
opposition	2002 Jan 01	05:53	10°♋38'01	0°00'11	
direct	2002 Mar 01	15:15	5°♋37'24		
evening set	2002 Jul 06	09:10	24°♋07'50		
conjunction	2002 Jul 20	01:19	27°♋10'44	0°18'48	
minimum elong	2002 Jul 20	01:17	27°♋10'44	0°18'48	
max. Earth dist.	2002 Jul 21	11:20	27°♋29'44	6.26068 AU	
	2002 Aug 01	17:20	0°♌		
morning rise	2002 Aug 02	16:39	0°♌12'54		
	2002 Oct 20	08:09	15°♌		
retrograde	2002 Dec 04	12:22	18°♌06'16		
	2003 Jan 18	18:29	15°℞♌		
opposition	2003 Feb 02	09:12	13°♌06'06	0°51'42	
min. Earth dist.	2003 Feb 01	19:11	13°♌10'46	4.32714 AU	
direct	2003 Apr 04	03:04	8°♌03'39		
	2003 Jun 14	19:56	15°♌		
evening set	2003 Aug 09	00:11	25°♌59'49		
conjunction	2003 Aug 22	10:08	28°♌54'56	0°49'13	
minimum elong	2003 Aug 22	10:06	28°♌54'55	0°49'13	
max. Earth dist.	2003 Aug 22	17:36	28°♌59'00	6.38381 AU	
	2003 Aug 27	09:26	0°♍		
morning rise	2003 Sep 04	17:34	1°♍48'43		
retrograde	2004 Jan 03	23:57	18°♍54'13		
opposition	2004 Mar 04	05:05	13°♍57'48	1°25'38	
min. Earth dist.	2004 Mar 04	09:17	13°♍56'26	4.42565 AU	
direct	2004 May 05	03:07	8°♍54'53		
evening set	2004 Sep 08	21:37	26°♍29'46		
conjunction	2004 Sep 21	23:48	29°♍19'08	1°04'47	
minimum elong	2004 Sep 21	23:47	29°♍19'08	1°04'48	
max. Earth dist.	2004 Sep 21	02:34	29°♍07'39	6.44986 AU	
	2004 Sep 25	03:23	0°♎		
morning rise	2004 Oct 04	23:18	2°♎07'07		
retrograde	2005 Feb 02	02:26	18°♎51'45		
opposition	2005 Apr 03	15:30	13°♎58'15	1°35'36	
min. Earth dist.	2005 Apr 04	13:38	13°♎51'07	4.45665 AU	
direct	2005 Jun 05	07:21	8°♎55'50		
evening set	2005 Oct 09	16:43	26°♎26'00		
max. Earth dist.	2005 Oct 20	20:25	28°♎51'10	6.44285 AU	
conjunction	2005 Oct 22	12:54	29°♎13'12	1°02'40	
minimum elong	2005 Oct 22	12:55	29°♎13'12	1°02'39	
	2005 Oct 26	02:52	0°♏		
morning rise	2005 Nov 04	06:20	1°♏59'12		
	2006 Jan 12	06:04	15°♏		
retrograde	2006 Mar 04	18:02	18°♏51'42		
	2006 Apr 26	15:57	15°℞♏		
opposition	2006 May 04	14:36	13°♏59'40	1°20'12	
min. Earth dist.	2006 May 05	23:44	13°♏49'06	4.41270 AU	
direct	2006 Jul 06	07:19	8°♏58'43		
	2006 Sep 11	08:21	15°♏		
evening set	2006 Nov 09	06:39	26°♏41'27		
max. Earth dist.	2006 Nov 19	20:53	29°♏02'14	6.36473 AU	
conjunction	2006 Nov 21	23:15	29°♏30'15	0°43'25	
minimum elong	2006 Nov 21	23:17	29°♏30'16	0°43'25	
	2006 Nov 24	04:43	0°♐		
morning rise	2006 Dec 04	14:10	2°♐18'26		
retrograde	2007 Apr 06	01:22	19°♐46'44		
opposition	2007 Jun 05	23:13	14°♐54'38	0°41'52	
min. Earth dist.	2007 Jun 07	12:16	14°♐42'50	4.30438 AU	
direct	2007 Aug 07	02:05	9°♐55'48		
evening set	2007 Dec 10	13:49	28°♐06'49		
	2007 Dec 18	20:11	0°♑		
max. Earth dist.	2007 Dec 21	07:01	0°♑33'42	6.23484 AU	
conjunction	2007 Dec 23	05:56	1°♑00'35	0°10'59	
minimum elong	2007 Dec 23	05:56	1°♑00'35	0°10'58	
behind sun begin	2007 Dec 22	23:52	0°♑57'08		
behind sun end	2007 Dec 23	12:01	1°♑04'03		
morning rise	2008 Jan 04	21:40	3°♑54'25		
desc. node	2008 Apr 17	16:02	21°♑37'34		
retrograde	2008 May 09	12:11	22°♑22'06		
opposition	2008 Jul 09	07:39	17°♑28'18	-0°11'40	
min. Earth dist.	2008 Jul 10	10:59	17°♑19'30	4.16102 AU	
direct	2008 Sep 08	04:16	12°♑32'01		
	2009 Jan 05	15:41	0°♒		
evening set	2009 Jan 11	11:11	1°♒21'27		
max. Earth dist.	2009 Jan 23	02:42	4°♒06'15	6.09056 AU	
conjunction	2009 Jan 24	05:44	4°♒22'14	-0°26'28	
minimum elong	2009 Jan 24	05:43	4°♒22'13	0°26'27	
morning rise	2009 Feb 06	01:21	7°♒23'52		
	2009 Mar 11	15:11	15°♒		
retrograde	2009 Jun 15	07:50	27°♒01'03		
opposition	2009 Aug 14	17:53	22°♒04'09	-1°04'49	
min. Earth dist.	2009 Aug 15	03:13	22°♒01'06	4.02783 AU	
direct	2009 Oct 13	04:34	17°♒09'59		
	2010 Jan 18	02:10	0°♓		
evening set	2010 Feb 15	10:49	6°♓36'06		
conjunction	2010 Feb 28	10:44	9°♓44'05	-0°56'02	
minimum elong	2010 Feb 28	10:42	9°♓44'04	0°56'01	
max. Earth dist.	2010 Feb 28	13:56	9°♓46'00	5.98065 AU	
morning rise	2010 Mar 13	13:11	12°♓53'34		
	2010 Jun 06	06:28	0°♈		
retrograde	2010 Jul 23	12:03	3°♈24'07		
	2010 Sep 09	04:49	30°℞♓		
opposition	2010 Sep 21	11:36	28°♓23'19	-1°35'50	
min. Earth dist.	2010 Sep 20	21:19	28°♓28'05	3.95393 AU	
direct	2010 Nov 18	16:54	23°♓29'41		
	2011 Jan 22	17:11	0°♈		

evening set	2011 Mar 24	07:07	13°♈14'25		
conjunction	2011 Apr 06	14:40	16°♈27'21	-1°04'43	
minimum elong	2011 Apr 06	14:41	16°♈27'21	1°04'43	
max. Earth dist.	2011 Apr 08	01:39	16°♈48'30	5.94919 AU	
morning rise	2011 Apr 20	01:29	19°♈41'57		
	2011 Jun 04	13:56	0°♉		
retrograde	2011 Aug 30	09:17	10°♉21'20		
min. Earth dist.	2011 Oct 27	18:41	5°♉27'43	3.96975 AU	
opposition	2011 Oct 29	01:42	5°♉17'10	-1°28'51	
direct	2011 Dec 25	22:08	0°♉21'52		
	2012 Apr 08	13:26	15°♉		
evening set	2012 Apr 29	22:12	19°♉57'04		
conjunction	2012 May 13	13:23	23°♉10'41	-0°47'56	
minimum elong	2012 May 13	13:25	23°♉10'42	0°47'56	
max. Earth dist.	2012 May 15	20:29	23°♉43'20	6.01014 AU	
morning rise	2012 May 27	06:49	26°♉25'18		
	2012 Jun 11	17:22	0°♊		
retrograde	2012 Oct 04	13:18	16°♊22'53		
min. Earth dist.	2012 Dec 01	14:50	11°♊29'47	4.06853 AU	
opposition	2012 Dec 03	01:45	11°♊17'52	-0°47'36	
direct	2013 Jan 30	11:37	6°♊19'38		
evening set	2013 Jun 05	22:01	25°♊22'51		
conjunction	2013 Jun 19	16:11	28°♊32'01	-0°13'42	
minimum elong	2013 Jun 19	16:12	28°♊32'02	0°13'42	
behind sun begin	2013 Jun 19	11:55	28°♊29'35		
behind sun end	2013 Jun 19	20:29	28°♊34'29		
max. Earth dist.	2013 Jun 21	19:20	29°♊01'22	6.13746 AU	
	2013 Jun 26	01:40	0°♋		
morning rise	2013 Jul 03	11:11	1°♋41'17		
retrograde	2013 Nov 07	05:03	20°♋30'39		
asc. node	2013 Nov 09	05:45	20°♋30'14		
opposition	2014 Jan 05	21:11	15°♋27'29	0°08'06	
min. Earth dist.	2014 Jan 04	17:38	15°♋36'49	4.21043 AU	
direct	2014 Mar 06	10:42	10°♋26'31		
evening set	2014 Jul 11	05:13	28°♋50'41		
	2014 Jul 16	10:31	0°♌		
conjunction	2014 Jul 24	20:44	1°♌52'20	0°23'46	
minimum elong	2014 Jul 24	20:42	1°♌52'19	0°23'46	
max. Earth dist.	2014 Jul 26	03:40	2°♌09'32	6.28258 AU	
morning rise	2014 Aug 07	10:57	4°♌53'07		
	2014 Sep 25	18:26	15°♌		
retrograde	2014 Dec 08	20:41	22°♌37'37		
opposition	2015 Feb 06	18:20	17°♌38'00	0°57'43	
min. Earth dist.	2015 Feb 06	07:06	17°♌41'44	4.34620 AU	
	2015 Feb 27	16:10	15°℞♌		
direct	2015 Apr 08	16:57	12°♌35'26		
	2015 May 19	04:29	15°♌		
	2015 Aug 11	11:11	0°♍		
evening set	2015 Aug 13	13:17	0°♍27'01		
conjunction	2015 Aug 26	22:02	3°♍21'04	0°52'24	
minimum elong	2015 Aug 26	22:00	3°♍21'03	0°52'23	
max. Earth dist.	2015 Aug 27	00:08	3°♍22'12	6.39850 AU	
morning rise	2015 Sep 09	04:25	6°♍13'48		
retrograde	2016 Jan 08	04:40	23°♍14'17		
opposition	2016 Mar 08	10:57	18°♍18'17	1°28'30	
min. Earth dist.	2016 Mar 08	18:12	18°♍15'55	4.43535 AU	
direct	2016 May 09	12:14	13°♍15'19		
	2016 Sep 09	11:18	0°♎		
evening set	2016 Sep 13	05:38	0°♎48'16		
max. Earth dist.	2016 Sep 25	07:32	3°♎24'25	6.45387 AU	
conjunction	2016 Sep 26	07:00	3°♎37'06	1°05'33	
minimum elong	2016 Sep 26	06:59	3°♎37'06	1°05'33	
morning rise	2016 Oct 09	05:20	6°♎24'32		
retrograde	2017 Feb 06	06:52	23°♎08'25		
opposition	2017 Apr 07	21:39	18°♎15'12	1°34'55	
min. Earth dist.	2017 Apr 08	21:23	18°♎07'35	4.45490 AU	
direct	2017 Jun 09	14:03	13°♎12'58		
	2017 Oct 10	13:20	0°♏		
evening set	2017 Oct 13	22:46	0°♏43'54		
max. Earth dist.	2017 Oct 24	22:20	3°♏07'11	6.43536 AU	
conjunction	2017 Oct 26	18:09	3°♏31'06	1°00'56	
minimum elong	2017 Oct 26	18:11	3°♏31'07	1°00'55	
morning rise	2017 Nov 08	11:12	6°♏17'14		
	2017 Dec 21	01:33	15°♏		
retrograde	2018 Mar 09	04:45	23°♏13'21		
opposition	2018 May 09	00:39	18°♏21'24	1°16'04	
min. Earth dist.	2018 May 10	11:53	18°♏10'10	4.39983 AU	
	2018 Jun 06	23:14	15°℞♏		
direct	2018 Jul 10	17:02	13°♏20'40		
	2018 Aug 13	10:38	15°♏		
	2018 Nov 08	12:39	0°♐		
evening set	2018 Nov 13	14:03	1°♐06'53		
max. Earth dist.	2018 Nov 24	03:39	3°♐27'54	6.34749 AU	
conjunction	2018 Nov 26	06:33	3°♐56'19	0°39'30	
minimum elong	2018 Nov 26	06:35	3°♐56'20	0°39'30	
morning rise	2018 Dec 08	21:21	6°♐45'09		
retrograde	2019 Apr 10	17:01	24°♐21'01		
opposition	2019 Jun 10	15:28	19°♐28'46	0°34'59	
min. Earth dist.	2019 Jun 12	03:04	19°♐17'25	4.28391 AU	
direct	2019 Aug 11	13:37	14°♐30'18		
	2019 Dec 02	18:20	0°♑		
evening set	2019 Dec 15	02:09	2°♑46'57		
max. Earth dist.	2019 Dec 25	21:56	5°♑16'03	6.21293 AU	
conjunction	2019 Dec 27	18:25	5°♑41'41	0°05'46	
minimum elong	2019 Dec 27	18:26	5°♑41'41	0°05'46	
behind sun begin	2019 Dec 27	10:47	5°♑37'18		
behind sun end	2019 Dec 28	02:04	5°♑46'04		
morning rise	2020 Jan 09	10:31	8°♑36'36		
desc. node	2020 Feb 26	02:46	18°♑49'05		
retrograde	2020 May 14	14:32	27°♑14'25		
opposition	2020 Jul 14	07:58	22°♑20'18	-0°19'40	
min. Earth dist.	2020 Jul 15	09:57	22°♑11'55	4.13933 AU	
direct	2020 Sep 13	00:41	17°♑24'24		
	2020 Dec 19	13:07	0°♒		
evening set	2021 Jan 16	06:30	6°♒19'52		
max. Earth dist.	2021 Jan 28	02:16	9°♒07'52	6.07126 AU	
conjunction	2021 Jan 29	01:40	9°♒21'45	-0°31'27	
minimum elong	2021 Jan 29	01:38	9°♒21'44	0°31'27	
morning rise	2021 Feb 10	22:08	12°♒24'36		
	2021 Feb 21	23:41	15°♒		
	2021 May 13	22:36	0°♓		
retrograde	2021 Jun 20	15:05	2°♓11'04		
	2021 Jul 28	12:42	30°℞♒		
opposition	2021 Aug 20	00:29	27°♒13'41	-1°11'02	
min. Earth dist.	2021 Aug 20	05:26	27°♒12'03	4.01320 AU	
direct	2021 Oct 18	05:30	22°♒19'46		
	2021 Dec 29	04:10	0°♓		
evening set	2022 Feb 20	13:21	11°♓49'40		
conjunction	2022 Mar 05	14:06	14°♓58'27	-0°58'44	
minimum elong	2022 Mar 05	14:05	14°♓58'25	0°58'44	
max. Earth dist.	2022 Mar 05	22:11	15°♓03'20	5.97207 AU	
morning rise	2022 Mar 18	17:37	18°♓08'47		
	2022 May 10	23:22	0°♈		

retrograde	2022 Jul 28	20:38	8°♈43'04		
opposition	2022 Sep 26	19:33	3°♈41'39	-1°37'15	
min. Earth dist.	2022 Sep 26	02:14	3°♈47'28	3.95256 AU	
	2022 Oct 28	05:10	30°℞♓		
direct	2022 Nov 23	23:02	28°♓47'54		
	2022 Dec 20	14:33	0°♈		
evening set	2023 Mar 29	13:21	18°♈32'02		
conjunction	2023 Apr 11	22:07	21°♈45'14	-1°03'49	
minimum elong	2023 Apr 11	22:08	21°♈45'14	1°03'48	
max. Earth dist.	2023 Apr 13	14:33	22°♈09'37	5.95513 AU	
morning rise	2023 Apr 25	09:50	24°♈59'59		
	2023 May 16	17:20	0°♉		
	2023 Aug 16	17:05	15°♉		
retrograde	2023 Sep 04	14:11	15°♉34'55		
	2023 Sep 23	06:25	15°℞♉		
min. Earth dist.	2023 Nov 01	21:01	10°♉41'23	3.98237 AU	
opposition	2023 Nov 03	05:02	10°♉30'30	-1°24'44	
direct	2023 Dec 31	02:40	5°♉34'52		
	2024 Mar 20	16:44	15°♉		
evening set	2024 May 05	03:04	25°♉05'20		
conjunction	2024 May 18	18:45	28°♉18'23	-0°43'53	
minimum elong	2024 May 18	18:48	28°♉18'25	0°43'53	
max. Earth dist.	2024 May 21	01:41	28°♉50'46	6.02787 AU	
	2024 May 25	23:15	0°♊		
morning rise	2024 Jun 01	12:52	1°♊32'25		
retrograde	2024 Oct 09	07:05	21°♊20'16		
min. Earth dist.	2024 Dec 06	10:00	16°♊27'17	4.08936 AU	
opposition	2024 Dec 07	20:58	16°♊15'22	-0°40'11	
direct	2025 Feb 04	09:40	11°♊16'42		
	2025 Jun 09	21:02	0°♋		
evening set	2025 Jun 10	21:10	0°♋13'41		
conjunction	2025 Jun 24	15:17	3°♋21'50	-0°08'25	
minimum elong	2025 Jun 24	15:18	3°♋21'51	0°08'25	
behind sun begin	2025 Jun 24	08:00	3°♋17'42		
behind sun end	2025 Jun 24	22:36	3°♋25'59		
max. Earth dist.	2025 Jun 26	16:02	3°♋49'40	6.15961 AU	
morning rise	2025 Jul 08	09:47	6°♋29'53		
asc. node	2025 Sep 19	20:40	20°♋57'50		
retrograde	2025 Nov 11	16:41	25°♋09'09		
min. Earth dist.	2026 Jan 09	08:06	20°♋14'46	4.23168 AU	
opposition	2026 Jan 10	08:42	20°♋06'28	0°15'41	
direct	2026 Mar 11	03:30	15°♋05'14		
	2026 Jun 30	05:52	0°♌		
evening set	2026 Jul 15	21:35	3°♌24'06		
conjunction	2026 Jul 29	12:18	6°♌24'39	0°28'25	
minimum elong	2026 Jul 29	12:16	6°♌24'38	0°28'25	
max. Earth dist.	2026 Jul 30	15:07	6°♌39'30	6.30122 AU	
morning rise	2026 Aug 12	01:36	9°♌24'15		
	2026 Sep 07	06:09	15°♌		
retrograde	2026 Dec 13	00:57	27°♌01'29		
opposition	2027 Feb 11	00:29	22°♌02'24	1°03'15	
min. Earth dist.	2027 Feb 10	15:32	22°♌05'22	4.36112 AU	
direct	2027 Apr 13	02:11	16°♌59'44		
	2027 Jul 26	04:49	0°♍		
evening set	2027 Aug 17	23:43	4°♍48'21		
conjunction	2027 Aug 31	07:30	7°♍41'36	0°55'12	
minimum elong	2027 Aug 31	07:27	7°♍41'35	0°55'12	
max. Earth dist.	2027 Aug 31	05:51	7°♍40'42	6.40865 AU	
morning rise	2027 Sep 13	12:41	10°♍33'28		
retrograde	2028 Jan 12	08:54	27°♍30'44		
opposition	2028 Mar 12	15:37	22°♍35'16	1°30'53	
min. Earth dist.	2028 Mar 13	01:46	22°♍31'58	4.44032 AU	
direct	2028 May 13	20:00	17°♍32'25		
	2028 Aug 24	05:08	0°♎		
evening set	2028 Sep 17	12:29	5°♎04'55		
max. Earth dist.	2028 Sep 29	08:52	7°♎38'17	6.45317 AU	
conjunction	2028 Sep 30	12:51	7°♎53'25	1°05'57	
minimum elong	2028 Sep 30	12:51	7°♎53'25	1°05'57	
morning rise	2028 Oct 13	10:28	10°♎40'35		
retrograde	2029 Feb 10	13:07	27°♎25'26		
opposition	2029 Apr 12	04:05	22°♎32'29	1°33'45	
min. Earth dist.	2029 Apr 13	06:00	22°♎24'10	4.44891 AU	
direct	2029 Jun 13	21:07	17°♎30'25		
	2029 Sep 24	06:24	0°♏		
evening set	2029 Oct 18	04:57	5°♏03'26		
max. Earth dist.	2029 Oct 29	03:46	7°♏26'41	6.42459 AU	
conjunction	2029 Oct 30	23:57	7°♏50'52	0°58'51	
minimum elong	2029 Oct 30	23:59	7°♏50'52	0°58'51	
morning rise	2029 Nov 12	16:22	10°♏37'13		
	2029 Dec 03	04:56	15°♏		
retrograde	2030 Mar 13	14:33	27°♏38'00		
opposition	2030 May 13	11:33	22°♏46'08	1°11'29	
min. Earth dist.	2030 May 14	22:40	22°♏34'57	4.38506 AU	
direct	2030 Jul 15	01:26	17°♏45'45		
	2030 Oct 22	23:14	0°♐		
evening set	2030 Nov 17	22:32	5°♐35'57		
max. Earth dist.	2030 Nov 28	11:40	7°♐57'21	6.32987 AU	
conjunction	2030 Nov 30	14:43	8°♐25'59	0°35'19	
minimum elong	2030 Nov 30	14:45	8°♐26'00	0°35'19	
morning rise	2030 Dec 13	05:38	11°♐15'33		
retrograde	2031 Apr 15	12:04	28°♐59'10		
opposition	2031 Jun 15	09:20	24°♐06'44	0°27'47	
min. Earth dist.	2031 Jun 16	20:35	23°♐55'28	4.26444 AU	
direct	2031 Aug 16	04:59	19°♐08'36		
	2031 Nov 15	10:30	0°♑		
evening set	2031 Dec 19	15:05	7°♑30'13		
max. Earth dist.	2031 Dec 30	13:54	10°♑01'42	6.19333 AU	
conjunction	2032 Jan 01	07:41	10°♑25'52	0°00'26	
minimum elong	2032 Jan 01	07:41	10°♑25'52	0°00'26	
behind sun begin	2031 Dec 31	23:42	10°♑21'17		
behind sun end	2032 Jan 01	15:39	10°♑30'27		
desc. node	2032 Jan 05	16:24	11°♑26'27		
morning rise	2032 Jan 14	00:09	13°♑21'46		
	2032 Apr 12	00:59	0°♒		
retrograde	2032 May 19	14:48	2°♒08'42		
	2032 Jun 26	12:56	30°℞♑		
opposition	2032 Jul 19	08:34	27°♑14'10	-0°27'33	
min. Earth dist.	2032 Jul 20	07:13	27°♑06'52	4.12118 AU	
direct	2032 Sep 17	19:52	22°♑18'37		
	2032 Nov 30	03:32	0°♒		
evening set	2033 Jan 21	01:53	11°♒18'43		
conjunction	2033 Feb 02	21:30	14°♒21'28	-0°36'11	
minimum elong	2033 Feb 02	21:28	14°♒21'27	0°36'11	
max. Earth dist.	2033 Feb 02	02:00	14°♒09'52	6.05600 AU	
	2033 Feb 05	14:10	15°♒		
morning rise	2033 Feb 15	18:48	17°♒25'19		
	2033 Apr 14	22:45	0°♓		
retrograde	2033 Jun 25	21:52	7°♓19'22		
opposition	2033 Aug 25	05:40	2°♓21'22	-1°16'39	
min. Earth dist.	2033 Aug 25	07:41	2°♓20'42	4.00224 AU	
	2033 Sep 12	22:28	30°℞♒		
direct	2033 Oct 23	07:19	27°♒27'31		
	2033 Dec 01	22:35	0°♓		
evening set	2034 Feb 25	14:26	16°♓59'58		

conjunction	2034 Mar 10 16:18	20°♓09'27	-1°00'57
minimum elong	2034 Mar 10 16:16	20°♓09'26	1°00'58
max. Earth dist.	2034 Mar 11 06:02	20°♓17'46	5.96639 AU
morning rise	2034 Mar 23 20:47	23°♓20'30	
	2034 Apr 21 09:40	0°♈	
retrograde	2034 Aug 03 03:42	13°♈57'03	
min. Earth dist.	2034 Oct 01 05:31	9°♈01'40	3.95305 AU
opposition	2034 Oct 02 00:58	8°♈55'09	-1°37'52
direct	2034 Nov 29 02:24	4°♈01'15	
evening set	2035 Apr 03 17:32	23°♈44'22	
conjunction	2035 Apr 17 03:13	26°♈57'43	-1°02'26
minimum elong	2035 Apr 17 03:14	26°♈57'44	1°02'25
max. Earth dist.	2035 Apr 18 21:18	27°♈23'02	5.96142 AU
	2035 Apr 29 18:57	0°♉	
morning rise	2035 Apr 30 16:09	0°♉12'39	
	2035 Jul 09 10:50	15°♉	
retrograde	2035 Sep 09 14:14	20°♉43'05	
min. Earth dist.	2035 Nov 06 20:01	15°♉49'53	3.99381 AU
opposition	2035 Nov 08 05:43	15°♉38'25	-1°20'04
	2035 Nov 12 22:58	15℞♉	
direct	2036 Jan 05 03:59	10°♉42'20	
	2036 Feb 26 06:47	15°♉	
	2036 May 09 14:52	0°♊	
evening set	2036 May 10 06:07	0°♊08'54	
conjunction	2036 May 23 22:33	3°♊21'33	-0°39'35
minimum elong	2036 May 23 22:36	3°♊21'34	0°39'34
max. Earth dist.	2036 May 26 05:38	3°♊53'54	6.04347 AU
morning rise	2036 Jun 06 16:59	6°♊34'59	
retrograde	2036 Oct 14 01:38	26°♊14'08	
min. Earth dist.	2036 Dec 11 05:38	21°♊20'39	4.10717 AU
opposition	2036 Dec 12 14:42	21°♊09'23	-0°32'37
direct	2037 Feb 09 07:42	16°♊10'17	
	2037 May 24 02:13	0°♋	
evening set	2037 Jun 15 19:41	5°♋02'18	
conjunction	2037 Jun 29 13:43	8°♋09'35	-0°03'06
minimum elong	2037 Jun 29 13:44	8°♋09'35	0°03'06
behind sun begin	2037 Jun 29 05:23	8°♋04'52	
behind sun end	2037 Jun 29 22:04	8°♋14'18	
max. Earth dist.	2037 Jul 01 12:36	8°♋36'13	6.17818 AU
morning rise	2037 Jul 13 07:51	11°♋16'38	
asc. node	2037 Jul 31 08:05	15°♋16'06	
retrograde	2037 Nov 16 02:17	29°♋47'02	
opposition	2038 Jan 14 19:58	24°♋44'48	0°23'07
min. Earth dist.	2038 Jan 13 20:31	24°♋52'41	4.24936 AU
direct	2038 Mar 15 17:52	19°♋43'17	
	2038 Jun 12 15:26	0°♌	
evening set	2038 Jul 20 14:14	7°♌58'02	
conjunction	2038 Aug 03 04:07	10°♌57'35	0°32'56
minimum elong	2038 Aug 03 04:05	10°♌57'34	0°32'55
max. Earth dist.	2038 Aug 04 02:20	11°♌09'51	6.31668 AU
morning rise	2038 Aug 16 16:29	13°♌56'08	
	2038 Aug 21 13:36	15°♌	
	2038 Nov 16 21:21	0°♍	
retrograde	2038 Dec 17 08:40	1°♍27'11	
	2039 Jan 16 14:55	30℞♌	
opposition	2039 Feb 15 08:02	26°♌28'39	1°08'28
min. Earth dist.	2039 Feb 15 02:27	26°♌30'30	4.37328 AU
direct	2039 Apr 17 14:51	21°♌25'54	
	2039 Jul 08 00:24	0°♍	
evening set	2039 Aug 22 11:15	9°♍12'09	
conjunction	2039 Sep 04 18:04	12°♍04'41	0°57'44
minimum elong	2039 Sep 04 18:02	12°♍04'40	0°57'44
max. Earth dist.	2039 Sep 04 12:51	12°♍01'52	6.41659 AU
morning rise	2039 Sep 17 22:10	14°♍55'49	
	2039 Dec 12 22:05	0°♎	
retrograde	2040 Jan 16 13:18	1°♎50'27	
	2040 Feb 20 05:35	30℞♍	
opposition	2040 Mar 16 21:58	26°♍55'24	1°32'49
min. Earth dist.	2040 Mar 17 09:43	26°♍51'36	4.44399 AU
direct	2040 May 18 03:57	21°♍52'39	
	2040 Aug 05 22:03	0°♎	
evening set	2040 Sep 21 20:51	9°♎24'52	
conjunction	2040 Oct 04 20:24	12°♎13'03	1°06'01
minimum elong	2040 Oct 04 20:24	12°♎13'03	1°06'01
max. Earth dist.	2040 Oct 03 14:50	11°♎57'03	6.45253 AU
morning rise	2040 Oct 17 17:04	14°♎59'54	
	2041 Jan 11 19:33	0°♏	
retrograde	2041 Feb 14 20:22	1°♏45'34	
	2041 Mar 21 00:01	30℞♎	
opposition	2041 Apr 16 12:21	26°♎52'56	1°32'05
min. Earth dist.	2041 Apr 17 15:39	26°♎44'11	4.44426 AU
direct	2041 Jun 18 06:14	21°♎51'11	
	2041 Sep 06 00:12	0°♏	
evening set	2041 Oct 22 12:14	9°♏25'27	
max. Earth dist.	2041 Nov 02 08:11	11°♏47'32	6.41639 AU
conjunction	2041 Nov 04 06:33	12°♏12'58	0°56'27
minimum elong	2041 Nov 04 06:35	12°♏12'59	0°56'27
morning rise	2041 Nov 16 22:42	14°♏59'32	
	2041 Nov 16 23:33	15°♏	
	2042 Feb 08 23:53	0°♐	
retrograde	2042 Mar 18 02:47	2°♐04'13	
	2042 Apr 24 12:41	30℞♏	
opposition	2042 May 17 23:55	27°♏12'21	1°06'30
min. Earth dist.	2042 May 19 11:16	27°♏01'05	4.37386 AU
direct	2042 Jul 19 12:48	22°♏12'17	
	2042 Oct 04 09:59	0°♐	
evening set	2042 Nov 22 06:56	10°♐04'59	
max. Earth dist.	2042 Dec 02 22:10	12°♐27'59	6.31674 AU
conjunction	2042 Dec 04 23:05	12°♐55'30	0°30'59
minimum elong	2042 Dec 04 23:07	12°♐55'30	0°30'59
morning rise	2042 Dec 17 13:49	15°♐45'35	
	2043 Mar 01 17:06	0°♑	
retrograde	2043 Apr 20 04:02	3°♑35'24	
	2043 Jun 09 21:42	30℞♐	
opposition	2043 Jun 20 02:36	28°♐42'47	0°20'32
min. Earth dist.	2043 Jun 21 12:11	28°♐32'04	4.25019 AU
direct	2043 Aug 20 18:35	23°♐45'06	
	2043 Oct 26 11:31	0°♑	
desc. node	2043 Nov 16 20:02	4°♑00'16	
evening set	2043 Dec 24 03:03	12°♑09'56	
max. Earth dist.	2044 Jan 04 03:42	14°♑43'01	6.17914 AU
conjunction	2044 Jan 05 19:38	15°♑06'12	-0°04'49
minimum elong	2044 Jan 05 19:38	15°♑06'12	0°04'49
behind sun begin	2044 Jan 05 11:50	15°♑01'42	
behind sun end	2044 Jan 06 03:26	15°♑10'42	
morning rise	2044 Jan 18 12:36	18°♑02'53	
	2044 Mar 15 04:27	0°♒	
retrograde	2044 May 24 14:03	6°♒57'12	
opposition	2044 Jul 24 06:55	2°♒02'16	-0°35'01
min. Earth dist.	2044 Jul 25 03:24	1°♒55'38	4.10799 AU
	2044 Aug 09 12:42	30℞♑	
direct	2044 Sep 22 14:53	27°♑06'57	
	2044 Nov 04 17:33	0°♒	
	2045 Jan 20 19:29	15°♒	
evening set	2045 Jan 25 18:23	16°♒10'09	

conjunction	2045 Feb 07	14:44	19°♒13'40	-0°40'29
minimum elong	2045 Feb 07	14:41	19°♒13'39	0°40'29
max. Earth dist.	2045 Feb 06	23:51	19°♒04'48	6.04506 AU
morning rise	2045 Feb 20	12:39	22°♒18'18	
	2045 Mar 26	05:08	0°♓	
retrograde	2045 Jul 01	00:37	12°♓18'20	
opposition	2045 Aug 30	07:02	7°♓19'53	-1°21'27
min. Earth dist.	2045 Aug 30	06:43	7°♓19'59	3.99480 AU
direct	2045 Oct 28	04:36	2°♓26'10	
evening set	2046 Mar 02	11:55	22°♓00'17	
conjunction	2046 Mar 15	14:31	25°♓10'17	-1°02'37
minimum elong	2046 Mar 15	14:30	25°♓10'17	1°02'38
max. Earth dist.	2046 Mar 16	06:19	25°♓19'51	5.96290 AU
morning rise	2046 Mar 28	20:12	28°♓22'00	
	2046 Apr 04	16:11	0°♈	
retrograde	2046 Aug 08	04:13	19°♈00'07	
min. Earth dist.	2046 Oct 06	03:22	14°♈05'15	3.95412 AU
opposition	2046 Oct 07	01:29	13°♈57'48	-1°37'43
direct	2046 Dec 04	01:07	9°♈03'42	
evening set	2047 Apr 08	17:46	28°♈46'13	
	2047 Apr 13	21:04	0°♉	
conjunction	2047 Apr 22	04:38	1°♉59'50	-1°00'38
minimum elong	2047 Apr 22	04:39	1°♉59'51	1°00'39
max. Earth dist.	2047 Apr 24	01:17	2°♉26'40	5.96701 AU
morning rise	2047 May 05	18:24	5°♉14'56	
	2047 Jun 17	23:30	15°♉	
retrograde	2047 Sep 14	12:36	25°♉41'30	
min. Earth dist.	2047 Nov 11	17:10	20°♉47'58	4.00322 AU
opposition	2047 Nov 13	02:11	20°♉36'42	-1°15'03
direct	2048 Jan 10	02:18	15°♉40'16	
	2048 Apr 23	01:44	0°♊	
evening set	2048 May 15	05:47	5°♊04'10	
conjunction	2048 May 28	22:54	8°♊16'33	-0°35'10
minimum elong	2048 May 28	22:56	8°♊16'34	0°35'10
max. Earth dist.	2048 May 31	06:14	8°♊48'57	6.05591 AU
morning rise	2048 Jun 11	17:46	11°♊29'37	
	2048 Sep 23	12:58	0°♋	
retrograde	2048 Oct 18	15:58	1°♋01'31	
	2048 Nov 12	14:05	30°℞♊	
min. Earth dist.	2048 Dec 15	20:35	26°♊08'15	4.12144 AU
opposition	2048 Dec 17	05:33	25°♊57'02	-0°25'09
direct	2049 Feb 14	00:24	20°♊57'37	
	2049 May 05	18:13	0°♋	
asc. node	2049 Jun 12	03:56	7°♋51'55	
evening set	2049 Jun 20	16:00	9°♋46'11	
conjunction	2049 Jul 04	09:46	12°♋52'43	0°02'11
minimum elong	2049 Jul 04	09:45	12°♋52'43	0°02'12
behind sun begin	2049 Jul 04	01:24	12°♋48'00	
behind sun end	2049 Jul 04	18:07	12°♋57'26	
max. Earth dist.	2049 Jul 06	04:55	13°♋17'10	6.19317 AU
morning rise	2049 Jul 18	03:33	15°♋58'55	
	2049 Sep 27	10:29	0°♌	
retrograde	2049 Nov 20	12:41	4°♌22'03	
	2050 Jan 14	07:24	30°℞♋	
min. Earth dist.	2050 Jan 18	09:16	29°♋27'12	4.26380 AU
opposition	2050 Jan 19	05:57	29°♋20'15	0°30'12
direct	2050 Mar 20	09:07	24°♋18'29	
	2050 May 22	21:49	0°♌	
evening set	2050 Jul 25	05:40	12°♌30'06	
	2050 Aug 05	14:34	15°♌	
conjunction	2050 Aug 07	18:55	15°♌28'49	0°37'08
minimum elong	2050 Aug 07	18:52	15°♌28'48	0°37'07
max. Earth dist.	2050 Aug 08	15:12	15°♌39'59	6.32958 AU
morning rise	2050 Aug 21	06:11	18°♌26'24	
	2050 Oct 18	12:46	0°♍	
retrograde	2050 Dec 21	13:17	5°♍51'59	
opposition	2051 Feb 19	14:40	0°♍53'54	1°13'10
min. Earth dist.	2051 Feb 19	10:12	0°♍55'23	4.38393 AU
	2051 Feb 26	11:01	30°℞♌	
direct	2051 Apr 22	00:08	25°♌51'05	
	2051 Jun 15	11:27	0°♍	
evening set	2051 Aug 26	22:00	13°♍35'10	
conjunction	2051 Sep 09	03:41	16°♍26'57	0°59'53
minimum elong	2051 Sep 09	03:39	16°♍26'56	0°59'53
max. Earth dist.	2051 Sep 08	18:46	16°♍22'07	6.42412 AU
morning rise	2051 Sep 22	06:46	19°♍17'21	
	2051 Nov 15	14:44	0°♎	
retrograde	2052 Jan 20	18:58	6°♎09'18	
opposition	2052 Mar 21	03:58	1°♎14'36	1°34'11
min. Earth dist.	2052 Mar 21	18:29	1°♎09'54	4.44793 AU
	2052 Mar 30	20:30	30°℞♍	
direct	2052 May 22	13:37	26°♍11'52	
	2052 Jul 14	00:23	0°♎	
evening set	2052 Sep 26	03:52	13°♎43'11	
max. Earth dist.	2052 Oct 07	18:15	16°♎13'32	6.45220 AU
conjunction	2052 Oct 09	02:34	16°♎31'02	1°05'42
minimum elong	2052 Oct 09	02:34	16°♎31'02	1°05'42
morning rise	2052 Oct 21	22:26	19°♎17'35	
	2052 Dec 15	06:53	0°♏	
retrograde	2053 Feb 19	01:56	6°♏03'50	
opposition	2053 Apr 20	19:41	1°♏11'16	1°29'54
min. Earth dist.	2053 Apr 21	23:52	1°♏02'15	4.43959 AU
	2053 Apr 30	04:32	30°℞♎	
direct	2053 Jun 22	13:33	26°♎09'37	
	2053 Aug 14	07:30	0°♏	
evening set	2053 Oct 26	18:07	13°♏44'56	
	2053 Nov 01	11:29	15°♏	
max. Earth dist.	2053 Nov 06	13:46	16°♏07'09	6.40749 AU
conjunction	2053 Nov 08	12:00	16°♏32'35	0°53'45
minimum elong	2053 Nov 08	12:02	16°♏32'36	0°53'45
morning rise	2053 Nov 21	03:36	19°♏19'19	
	2054 Jan 13	07:59	0°♐	
retrograde	2054 Mar 22	12:50	6°♐28'03	
opposition	2054 May 22	11:03	1°♐36'10	1°01'08
min. Earth dist.	2054 May 23	23:10	1°♐24'40	4.36091 AU
	2054 Jun 04	06:27	30°℞♏	
direct	2054 Jul 23	22:39	26°♏36'21	
	2054 Sep 10	18:30	0°♐	
evening set	2054 Nov 26	14:36	14°♐32'12	
max. Earth dist.	2054 Dec 07	04:34	16°♐55'05	6.30055 AU
conjunction	2054 Dec 09	06:30	17°♐23'16	0°26'27
minimum elong	2054 Dec 09	06:31	17°♐23'17	0°26'28
morning rise	2054 Dec 21	21:29	20°♐14'05	
	2055 Feb 06	08:36	0°♑	
retrograde	2055 Apr 24	21:45	8°♑11'23	
opposition	2055 Jun 24	19:51	3°♑18'29	0°13'04
min. Earth dist.	2055 Jun 26	04:23	3°♑08'04	4.23157 AU
	2055 Jul 23	04:36	30°℞♐	
direct	2055 Aug 25	08:18	28°♐21'02	
desc. node	2055 Sep 27	07:34	0°♑00'22	
	2055 Sep 27	06:03	0°♑	
evening set	2055 Dec 28	15:13	16°♑50'45	
max. Earth dist.	2056 Jan 08	19:45	19°♑26'41	6.15974 AU
conjunction	2056 Jan 10	08:18	19°♑47'59	-0°10'01

minimum elong	2056 Jan 10 08:17	19°♑47'58	0°10'01
behind sun begin	2056 Jan 10 01:47	19°♑44'12	
behind sun end	2056 Jan 10 14:47	19°♑51'44	
morning rise	2056 Jan 23 01:36	22°♑45'40	
	2056 Feb 24 10:59	0°♒	
retrograde	2056 May 29 15:44	11°♒49'21	
opposition	2056 Jul 29 06:47	6°♒54'00	-0°42'28
min. Earth dist.	2056 Jul 30 01:24	6°♒47'59	4.08938 AU
direct	2056 Sep 27 09:48	1°♒58'59	
	2057 Jan 04 01:25	15°♒	
evening set	2057 Jan 30 13:43	21°♒07'25	
conjunction	2057 Feb 12 10:36	24°♒11'55	-0°44'39
minimum elong	2057 Feb 12 10:34	24°♒11'54	0°44'38
max. Earth dist.	2057 Feb 11 22:06	24°♒04'26	6.02881 AU
morning rise	2057 Feb 25 09:37	27°♒17'43	
	2057 Mar 08 20:52	0°♓	
retrograde	2057 Jul 06 05:36	17°♓25'41	
opposition	2057 Sep 04 11:29	12°♓26'39	-1°25'53
min. Earth dist.	2057 Sep 04 07:32	12°♓27'57	3.98269 AU
direct	2057 Nov 02 04:27	7°♓32'59	
evening set	2058 Mar 07 13:51	27°♓10'35	
	2058 Mar 19 06:18	0°♈	
conjunction	2058 Mar 20 17:43	0°♈21'27	-1°03'54
minimum elong	2058 Mar 20 17:43	0°♈21'27	1°03'53
max. Earth dist.	2058 Mar 21 14:59	0°♈34'20	5.95615 AU
morning rise	2058 Apr 03 00:26	3°♈33'58	
retrograde	2058 Aug 13 12:05	24°♈14'31	
min. Earth dist.	2058 Oct 11 07:11	19°♈19'40	3.95360 AU
opposition	2058 Oct 12 06:38	19°♈11'45	-1°36'48
direct	2058 Dec 09 05:35	14°♈17'28	
	2059 Mar 27 23:46	0°♉	
evening set	2059 Apr 13 23:20	3°♉59'47	
conjunction	2059 Apr 27 11:17	7°♉13'39	-0°58'18
minimum elong	2059 Apr 27 11:19	7°♉13'41	0°58'17
max. Earth dist.	2059 Apr 29 11:01	7°♉42'15	5.97277 AU
morning rise	2059 May 11 02:10	10°♉28'57	
	2059 May 30 10:27	15°♉	
	2059 Aug 27 19:03	0°♊	
retrograde	2059 Sep 19 13:33	0°♊50'47	
	2059 Oct 12 03:33	30°℞♉	
min. Earth dist.	2059 Nov 16 16:13	25°♉57'47	4.01486 AU
opposition	2059 Nov 18 03:01	25°♉45'56	-1°09'13
direct	2060 Jan 15 03:10	20°♉49'11	
	2060 Apr 04 01:53	0°♊	
evening set	2060 May 20 10:18	10°♊09'23	
conjunction	2060 Jun 03 03:47	13°♊21'13	-0°30'19
minimum elong	2060 Jun 03 03:49	13°♊21'14	0°30'19
max. Earth dist.	2060 Jun 05 09:59	13°♊52'49	6.07254 AU
morning rise	2060 Jun 16 22:58	16°♊33'36	
	2060 Aug 20 18:13	0°♋	
retrograde	2060 Oct 23 09:32	5°♋56'15	
opposition	2060 Dec 21 23:27	0°♋52'00	-0°17'14
min. Earth dist.	2060 Dec 20 15:43	1°♋02'48	4.14131 AU
	2060 Dec 28 09:15	30°℞♊	
direct	2061 Feb 18 23:14	25°♊52'14	
	2061 Apr 12 05:05	0°♋	
asc. node	2061 Apr 22 04:56	1°♋33'12	
evening set	2061 Jun 25 14:52	14°♋35'06	
conjunction	2061 Jul 09 08:25	17°♋40'33	0°07'28
minimum elong	2061 Jul 09 08:24	17°♋40'33	0°07'29
behind sun begin	2061 Jul 09 00:50	17°♋36'18	
behind sun end	2061 Jul 09 15:58	17°♋44'47	

max. Earth dist.	2061 Jul 11 02:57	18°♋04'32	6.21497 AU
morning rise	2061 Jul 23 01:22	20°♋45'28	
	2061 Sep 04 21:41	0°♌	
retrograde	2061 Nov 24 22:06	8°♌58'40	
opposition	2062 Jan 23 16:51	3°♌57'24	0°37'11
min. Earth dist.	2062 Jan 22 21:11	4°♌03'59	4.28558 AU
	2062 Feb 26 23:35	30°℞♋	
direct	2062 Mar 25 00:12	28°♋55'28	
	2062 Apr 20 08:57	0°♌	
	2062 Jul 20 12:46	15°♌	
evening set	2062 Jul 29 21:03	17°♌01'19	
conjunction	2062 Aug 12 09:06	19°♌58'46	0°41'07
minimum elong	2062 Aug 12 09:04	19°♌58'45	0°41'07
max. Earth dist.	2062 Aug 13 00:24	20°♌07'09	6.34957 AU
morning rise	2062 Aug 25 19:22	22°♌55'03	
	2062 Sep 28 16:17	0°♍	
retrograde	2062 Dec 25 18:29	10°♍13'09	
opposition	2063 Feb 23 20:35	5°♍15'35	1°17'23
min. Earth dist.	2063 Feb 23 19:24	5°♍15'58	4.40071 AU
direct	2063 Apr 26 11:21	0°♍12'40	
evening set	2063 Aug 31 06:17	17°♍52'37	
conjunction	2063 Sep 13 11:01	20°♍43'29	1°01'41
minimum elong	2063 Sep 13 11:00	20°♍43'29	1°01'40
max. Earth dist.	2063 Sep 12 23:23	20°♍37'12	6.43630 AU
morning rise	2063 Sep 26 12:48	23°♍32'56	
	2063 Oct 27 15:33	0°♎	
retrograde	2064 Jan 24 19:38	10°♎21'09	
opposition	2064 Mar 25 07:21	5°♎26'50	1°34'59
min. Earth dist.	2064 Mar 25 23:26	5°♎21'38	4.45484 AU
direct	2064 May 26 18:28	0°♎24'11	
evening set	2064 Sep 30 07:51	17°♎53'59	
max. Earth dist.	2064 Oct 11 17:58	20°♎22'06	6.45317 AU
conjunction	2064 Oct 13 05:37	20°♎41'26	1°05'02
minimum elong	2064 Oct 13 05:37	20°♎41'27	1°05'03
morning rise	2064 Oct 26 00:43	23°♎27'39	
	2064 Nov 26 12:00	0°♏	
retrograde	2065 Feb 23 06:14	10°♏14'34	
opposition	2065 Apr 25 00:17	5°♏22'14	1°27'17
min. Earth dist.	2065 Apr 26 07:24	5°♏12'18	4.43439 AU
direct	2065 Jun 26 19:30	0°♏20'45	
	2065 Oct 17 03:38	15°♏	
evening set	2065 Oct 30 20:53	17°♏57'35	
max. Earth dist.	2065 Nov 10 13:10	20°♏18'24	6.39626 AU
conjunction	2065 Nov 12 14:21	20°♏45'31	0°50'50
minimum elong	2065 Nov 12 14:23	20°♏45'32	0°50'49
morning rise	2065 Nov 25 05:46	23°♏32'37	
	2065 Dec 25 16:54	0°♐	
retrograde	2066 Mar 26 21:28	10°♐46'43	
opposition	2066 May 26 20:10	5°♐54'46	0°55'34
min. Earth dist.	2066 May 28 08:32	5°♐43'11	4.34419 AU
direct	2066 Jul 28 04:47	0°♐55'10	
evening set	2066 Nov 30 20:17	18°♐55'44	
max. Earth dist.	2066 Dec 11 11:39	21°♐20'03	6.27963 AU
conjunction	2066 Dec 13 12:19	21°♐47'40	0°21'52
minimum elong	2066 Dec 13 12:20	21°♐47'40	0°21'52
morning rise	2066 Dec 26 03:20	24°♐39'23	
	2067 Jan 19 09:28	0°♑	
retrograde	2067 Apr 29 16:00	12°♑46'11	
opposition	2067 Jun 29 12:23	7°♑53'07	0°05'37
min. Earth dist.	2067 Jun 30 20:46	7°♑42'45	4.20771 AU
desc. node	2067 Aug 08 17:36	3°♑37'29	
direct	2067 Aug 29 20:32	2°♑55'59	

evening set	2068 Jan	02	03:46	21°♑32'45	
max. Earth dist.	2068 Jan	13	09:22	24°♑10'13	6.13492 AU
conjunction	2068 Jan	14	21:09	24°♑31'11	-0°15'07
minimum elong	2068 Jan	14	21:09	24°♑31'11	0°15'07
behind sun begin	2068 Jan	14	18:05	24°♑29'23	
behind sun end	2068 Jan	15	00:13	24°♑32'58	
morning rise	2068 Jan	27	15:20	27°♑30'16	
	2068 Feb	07	10:27	0°♒	
	2068 Apr	30	22:07	15°♒	
retrograde	2068 Jun	03	17:40	16°♒45'36	
	2068 Jul	07	17:10	15°℞♒	
opposition	2068 Aug	03	07:45	11°♒49'47	-0°49'39
min. Earth dist.	2068 Aug	03	23:00	11°♒44'49	4.06576 AU
direct	2068 Oct	02	04:27	6°♒55'01	
	2068 Dec	15	21:45	15°♒	
evening set	2069 Feb	04	11:00	26°♒10'44	
conjunction	2069 Feb	17	08:57	29°♒16'33	-0°48'30
minimum elong	2069 Feb	17	08:54	29°♒16'32	0°48'30
max. Earth dist.	2069 Feb	17	02:12	29°♒12'30	6.00866 AU
	2069 Feb	20	09:12	0°♓	
morning rise	2069 Mar	02	08:53	2°♓23'41	
retrograde	2069 Jul	11	16:19	22°♓41'01	
opposition	2069 Sep	09	18:52	17°♓41'27	-1°29'40
min. Earth dist.	2069 Sep	09	12:27	17°♓43'35	3.96830 AU
direct	2069 Nov	07	08:42	12°♓47'50	
	2070 Mar	02	08:59	0°♈	
evening set	2070 Mar	12	19:10	2°♈29'33	
conjunction	2070 Mar	26	00:11	5°♈41'19	-1°04'38
minimum elong	2070 Mar	26	00:10	5°♈41'19	1°04'37
max. Earth dist.	2070 Mar	27	02:12	5°♈57'05	5.94881 AU
morning rise	2070 Apr	08	08:17	8°♈54'46	
retrograde	2070 Aug	18	20:34	29°♈37'09	
min. Earth dist.	2070 Oct	16	11:14	24°♈43'03	3.95447 AU
opposition	2070 Oct	17	14:18	24°♈33'54	-1°35'01
direct	2070 Dec	14	10:40	19°♈39'20	
	2071 Mar	09	02:50	0°♉	
evening set	2071 Apr	19	08:03	9°♉20'38	
conjunction	2071 May	02	20:58	12°♉34'34	-0°55'24
minimum elong	2071 May	02	21:00	12°♉34'35	0°55'23
max. Earth dist.	2071 May	04	22:53	13°♉04'24	5.98149 AU
	2071 May	13	00:49	15°♉	
morning rise	2071 May	16	12:49	15°♉49'50	
	2071 Jul	22	08:27	0°♊	
retrograde	2071 Sep	24	15:23	6°♊05'06	
min. Earth dist.	2071 Nov	21	18:00	1°♊12'02	4.03002 AU
opposition	2071 Nov	23	05:15	1°♊00'00	-1°02'44
	2071 Nov	30	14:28	30°℞♉	
direct	2072 Jan	20	08:44	26°♉02'43	
	2072 Mar	10	11:52	0°♊	
evening set	2072 May	25	15:57	15°♊17'39	
conjunction	2072 Jun	08	09:56	18°♊28'44	-0°25'10
minimum elong	2072 Jun	08	09:57	18°♊28'45	0°25'10
max. Earth dist.	2072 Jun	10	17:23	19°♊00'53	6.09260 AU
morning rise	2072 Jun	22	05:01	21°♊40'09	
	2072 Jul	30	03:33	0°♋	
retrograde	2072 Oct	28	03:34	10°♋52'04	
min. Earth dist.	2072 Dec	25	10:51	5°♋58'33	4.16376 AU
opposition	2072 Dec	26	17:41	5°♋48'06	-0°09'09
direct	2073 Feb	23	21:46	0°♋47'55	
asc. node	2073 Mar	01	06:58	0°♋50'47	
evening set	2073 Jun	30	13:47	19°♋24'15	
conjunction	2073 Jul	14	06:35	22°♋28'26	0°12'45
minimum elong	2073 Jul	14	06:34	22°♋28'25	0°12'44
behind sun begin	2073 Jul	14	01:30	22°♋25'35	
behind sun end	2073 Jul	14	11:38	22°♋31'15	
max. Earth dist.	2073 Jul	15	20:47	22°♋49'51	6.23763 AU
morning rise	2073 Jul	27	22:55	25°♋32'01	
	2073 Aug	17	10:19	0°♌	
retrograde	2073 Nov	29	07:53	13°♌35'27	
min. Earth dist.	2074 Jan	27	10:54	8°♌40'17	4.30652 AU
opposition	2074 Jan	28	03:54	8°♌34'36	0°43'59
direct	2074 Mar	29	16:22	3°♌32'23	
	2074 Jul	03	07:58	15°♌	
evening set	2074 Aug	03	12:25	21°♌33'01	
conjunction	2074 Aug	16	23:36	24°♌29'19	0°44'56
minimum elong	2074 Aug	16	23:34	24°♌29'18	0°44'56
max. Earth dist.	2074 Aug	17	12:05	24°♌36'08	6.36724 AU
morning rise	2074 Aug	30	08:28	27°♌24'21	
	2074 Sep	11	10:20	0°♍	
retrograde	2074 Dec	29	23:20	14°♍36'00	
opposition	2075 Feb	28	03:11	9°♍38'57	1°21'18
min. Earth dist.	2075 Feb	28	04:12	9°♍38'37	4.41405 AU
direct	2075 Apr	30	21:01	4°♍36'02	
evening set	2075 Sep	04	15:54	22°♍13'04	
conjunction	2075 Sep	17	19:24	25°♍03'11	1°03'12
minimum elong	2075 Sep	17	19:23	25°♍03'10	1°03'12
max. Earth dist.	2075 Sep	17	02:25	24°♍54'00	6.44422 AU
morning rise	2075 Sep	30	20:16	27°♍51'55	
	2075 Oct	10	20:42	0°♎	
retrograde	2076 Jan	29	01:37	14°♎37'58	
opposition	2076 Mar	29	13:21	9°♎44'01	1°35'24
min. Earth dist.	2076 Mar	30	08:54	9°♎37'43	4.45707 AU
direct	2076 May	31	03:14	4°♎41'26	
evening set	2076 Oct	04	14:06	22°♎11'04	
max. Earth dist.	2076 Oct	15	21:28	24°♎37'52	6.44945 AU
conjunction	2076 Oct	17	11:15	24°♎58'23	1°04'03
minimum elong	2076 Oct	17	11:16	24°♎58'24	1°04'03
morning rise	2076 Oct	30	05:34	27°♎44'28	
	2076 Nov	09	18:46	0°♏	
retrograde	2077 Feb	27	13:00	14°♏33'37	
opposition	2077 Apr	29	08:41	9°♏41'26	1°24'12
min. Earth dist.	2077 Apr	30	16:25	9°♏31'18	4.42508 AU
direct	2077 Jul	01	02:15	4°♏40'10	
	2077 Sep	30	04:05	15°♏	
evening set	2077 Nov	04	03:39	22°♏19'42	
max. Earth dist.	2077 Nov	14	18:52	24°♏40'25	6.38204 AU
conjunction	2077 Nov	16	20:42	25°♏08'01	0°47'31
minimum elong	2077 Nov	16	20:43	25°♏08'02	0°47'32
morning rise	2077 Nov	29	11:52	27°♏55'36	
	2077 Dec	08	23:30	0°♐	
retrograde	2078 Mar	31	12:35	15°♐16'02	
opposition	2078 May	31	10:15	10°♐24'05	0°49'25
min. Earth dist.	2078 Jun	01	23:44	10°♐12'09	4.32575 AU
direct	2078 Aug	01	16:51	5°♐24'49	
evening set	2078 Dec	05	06:44	23°♐30'29	
max. Earth dist.	2078 Dec	15	21:52	25°♐55'24	6.25851 AU
conjunction	2078 Dec	17	22:48	26°♐23'17	0°16'55
minimum elong	2078 Dec	17	22:49	26°♐23'18	0°16'55
morning rise	2078 Dec	30	14:13	29°♐16'01	
	2079 Jan	02	19:56	0°♑	
retrograde	2079 May	04	14:06	17°♑32'29	
desc. node	2079 Jun	18	04:17	14°♑40'12	
opposition	2079 Jul	04	10:06	12°♑39'07	-0°02'16

min. Earth dist.	2079 Jul 05	15:51	12°♑29'34	4.18544 AU	
direct	2079 Sep 03	12:26	7°♑42'24		
evening set	2080 Jan 06	20:41	26°♑25'29		
max. Earth dist.	2080 Jan 18	07:28	29°♑06'41	6.11366 AU	
conjunction	2080 Jan 19	14:38	29°♑25'02	-0°20'22	
minimum elong	2080 Jan 19	14:37	29°♑25'01	0°20'21	
	2080 Jan 22	02:00	0°♒		
morning rise	2080 Feb 01	09:21	2°♒25'18		
	2080 Mar 31	11:23	15°♒		
retrograde	2080 Jun 09	01:23	21°♒50'58		
opposition	2080 Aug 08	12:58	16°♒54'44	-0°56'45	
min. Earth dist.	2080 Aug 09	01:57	16°♒50'30	4.04758 AU	
	2080 Aug 23	14:25	15°℞♒		
direct	2080 Oct 07	05:26	12°♒00'20		
	2080 Nov 19	18:36	15°♒		
	2081 Feb 03	19:34	0°♓		
evening set	2081 Feb 09	11:39	1°♓21'05		
conjunction	2081 Feb 22	10:23	4°♓27'53	-0°52'06	
minimum elong	2081 Feb 22	10:21	4°♓27'52	0°52'06	
max. Earth dist.	2081 Feb 22	07:55	4°♓26'24	5.99543 AU	
morning rise	2081 Mar 07	11:27	7°♓36'06		
retrograde	2081 Jul 17	01:35	27°♓59'33		
opposition	2081 Sep 15	03:14	22°♓59'28	-1°32'47	
min. Earth dist.	2081 Sep 14	16:25	23°♓03'03	3.96195 AU	
direct	2081 Nov 12	12:39	18°♓05'55		
	2082 Feb 12	09:08	0°♈		
evening set	2082 Mar 18	01:10	7°♈48'46		
conjunction	2082 Mar 31	07:13	11°♈00'59	-1°04'53	
minimum elong	2082 Mar 31	07:13	11°♈00'59	1°04'53	
max. Earth dist.	2082 Apr 01	13:32	11°♈19'21	5.94982 AU	
morning rise	2082 Apr 13	16:27	14°♈14'53		
	2082 Jun 27	18:49	0°♉		
retrograde	2082 Aug 24	02:28	4°♉55'35		
	2082 Oct 21	20:09	30°℞♈		
opposition	2082 Oct 22	20:05	29°♈51'53	-1°32'29	
min. Earth dist.	2082 Oct 21	15:12	0°♉01'41	3.96274 AU	
direct	2082 Dec 19	16:52	24°♈57'02		
	2083 Feb 14	07:51	0°♉		
evening set	2083 Apr 24	14:08	14°♉34'45		
	2083 Apr 26	08:46	15°♉		
conjunction	2083 May 08	04:06	17°♉48'27	-0°52'09	
minimum elong	2083 May 08	04:09	17°♉48'28	0°52'09	
max. Earth dist.	2083 May 10	09:34	18°♉20'16	5.99616 AU	
morning rise	2083 May 21	20:33	21°♉03'18		
	2083 Jun 30	15:22	0°♊		
retrograde	2083 Sep 29	14:38	11°♊09'59		
min. Earth dist.	2083 Nov 26	16:32	6°♊16'54	4.04928 AU	
opposition	2083 Nov 28	03:43	6°♊04'55	-0°55'59	
direct	2084 Jan 25	10:03	1°♊07'15		
evening set	2084 May 30	17:43	20°♊15'58		
conjunction	2084 Jun 13	11:40	23°♊26'05	-0°20'01	
minimum elong	2084 Jun 13	11:41	23°♊26'06	0°20'00	
max. Earth dist.	2084 Jun 15	16:27	23°♊56'32	6.11448 AU	
morning rise	2084 Jun 27	06:49	26°♊36'29		
	2084 Jul 12	07:28	0°♋		
retrograde	2084 Nov 01	16:04	15°♋37'46		
min. Earth dist.	2084 Dec 30	02:13	10°♋44'06	4.18603 AU	
opposition	2084 Dec 31	07:37	10°♋34'07	-0°01'20	
asc. node	2085 Jan 09	18:29	9°♋18'12		
direct	2085 Feb 28	15:47	5°♋33'34		
evening set	2085 Jul 05	08:33	24°♋04'00		

conjunction	2085 Jul 19	00:53	27°♋07'03	0°17'45	
minimum elong	2085 Jul 19	00:52	27°♋07'02	0°17'45	
max. Earth dist.	2085 Jul 20	11:57	27°♋26'38	6.25863 AU	
	2085 Jul 31	23:22	0°♌		
morning rise	2085 Aug 01	16:14	0°♌09'20		
	2085 Oct 19	16:51	15°♌		
retrograde	2085 Dec 03	15:24	18°♌04'09		
	2086 Jan 17	13:54	15°℞♌		
opposition	2086 Feb 01	11:41	13°♌03'53	0°50'17	
min. Earth dist.	2086 Jan 31	21:31	13°♌08'36	4.32454 AU	
direct	2086 Apr 03	04:30	8°♌01'32		
	2086 Jun 14	01:11	15°♌		
evening set	2086 Aug 08	00:37	25°♌58'08		
conjunction	2086 Aug 21	10:43	28°♌53'28	0°48'23	
minimum elong	2086 Aug 21	10:41	28°♌53'26	0°48'23	
max. Earth dist.	2086 Aug 21	17:39	28°♌57'14	6.38081 AU	
	2086 Aug 26	12:45	0°♍		
morning rise	2086 Sep 03	18:39	1°♍47'32		
retrograde	2087 Jan 03	03:33	18°♍54'31		
opposition	2087 Mar 04	08:08	13°♍57'56	1°24'43	
min. Earth dist.	2087 Mar 04	12:14	13°♍56'36	4.42262 AU	
direct	2087 May 05	04:54	8°♍54'58		
evening set	2087 Sep 08	23:32	26°♍30'39		
max. Earth dist.	2087 Sep 21	06:58	29°♍09'52	6.44720 AU	
conjunction	2087 Sep 22	02:15	29°♍20'18	1°04'22	
minimum elong	2087 Sep 22	02:14	29°♍20'17	1°04'22	
	2087 Sep 25	03:40	0°♎		
morning rise	2087 Oct 05	01:57	2°♎08'30		
retrograde	2088 Feb 02	05:42	18°♎54'05		
opposition	2088 Apr 02	18:45	14°♎00'30	1°35'20	
min. Earth dist.	2088 Apr 03	15:52	13°♎53'42	4.45458 AU	
direct	2088 Jun 04	09:07	8°♎58'05		
evening set	2088 Oct 08	20:21	26°♎28'57		
max. Earth dist.	2088 Oct 19	23:31	28°♎53'53	6.44164 AU	
conjunction	2088 Oct 21	16:41	29°♎16'18	1°02'44	
minimum elong	2088 Oct 21	16:42	29°♎16'18	1°02'43	
	2088 Oct 25	00:57	0°♏		
morning rise	2088 Nov 03	10:33	2°♏02'30		
	2089 Jan 11	00:33	15°♏		
retrograde	2089 Mar 03	23:19	18°♏55'10		
	2089 Apr 26	06:22	15°℞♏		
opposition	2089 May 03	18:05	14°♏03'06	1°20'38	
min. Earth dist.	2089 May 05	03:50	13°♏52'20	4.41251 AU	
direct	2089 Jul 05	11:27	9°♏02'03		
	2089 Sep 10	03:28	15°♏		
evening set	2089 Nov 08	10:58	26°♏45'02		
max. Earth dist.	2089 Nov 19	01:46	29°♏06'05	6.36571 AU	
conjunction	2089 Nov 21	03:53	29°♏33'55	0°43'56	
minimum elong	2089 Nov 21	03:55	29°♏33'56	0°43'56	
	2089 Nov 23	02:48	0°♐		
morning rise	2089 Dec 03	18:54	2°♐22'07		
retrograde	2090 Apr 05	03:24	19°♐49'33		
opposition	2090 Jun 05	01:52	14°♐57'26	0°42'54	
min. Earth dist.	2090 Jun 06	13:42	14°♐46'01	4.30679 AU	
direct	2090 Aug 06	03:59	9°♐58'32		
evening set	2090 Dec 09	18:15	28°♐09'05		
	2090 Dec 17	20:51	0°♑		
max. Earth dist.	2090 Dec 20	12:07	0°♑36'14	6.23852 AU	
conjunction	2090 Dec 22	10:23	1°♑02'44	0°11'51	
minimum elong	2090 Dec 22	10:23	1°♑02'44	0°11'50	
behind sun begin	2090 Dec 22	04:45	0°♑59'31		
behind sun end	2090 Dec 22	16:02	1°♑05'57		

morning rise	2091 Jan 04 02:03	3°♑56'23	
desc. node	2091 Apr 27 15:30	22°♑08'32	
retrograde	2091 May 09 14:32	22°♑21'57	
opposition	2091 Jul 09 09:04	17°♑28'15	-0°10'14
min. Earth dist.	2091 Jul 10 13:32	17°♑19'06	4.16576 AU
direct	2091 Sep 08 08:02	12°♑31'52	
	2092 Jan 05 21:14	0°♒	
evening set	2092 Jan 11 14:17	1°♒19'58	
max. Earth dist.	2092 Jan 23 04:40	4°♒03'54	6.09602 AU
conjunction	2092 Jan 24 08:42	4°♒20'28	-0°25'29
minimum elong	2092 Jan 24 08:40	4°♒20'27	0°25'29
morning rise	2092 Feb 06 04:10	7°♒21'47	
	2092 Mar 10 22:55	15°♒	
retrograde	2092 Jun 14 05:46	26°♒55'55	
opposition	2092 Aug 13 17:27	21°♒59'09	-1°03'25
min. Earth dist.	2092 Aug 14 02:17	21°♒56'16	4.03373 AU
direct	2092 Oct 12 04:36	17°♒04'57	
	2093 Jan 17 14:38	0°♓	
evening set	2093 Feb 14 11:33	6°♓29'05	
conjunction	2093 Feb 27 11:05	9°♓36'39	-0°55'17
minimum elong	2093 Feb 27 11:03	9°♓36'38	0°55'17
max. Earth dist.	2093 Feb 27 13:16	9°♓37'58	5.98639 AU
morning rise	2093 Mar 12 13:08	12°♓45'42	
	2093 Jun 06 10:42	0°♈	
retrograde	2093 Jul 22 08:59	3°♈13'30	
	2093 Sep 06 16:50	30°℞♓	
opposition	2093 Sep 20 09:38	28°♓12'46	-1°35'07
min. Earth dist.	2093 Sep 19 20:16	28°♓17'14	3.95873 AU
direct	2093 Nov 17 17:08	23°♓19'07	
	2094 Jan 22 16:49	0°♈	
evening set	2094 Mar 23 05:04	13°♈02'04	
conjunction	2094 Apr 05 12:20	16°♈14'40	-1°04'37
minimum elong	2094 Apr 05 12:21	16°♈14'40	1°04'37
max. Earth dist.	2094 Apr 06 23:41	16°♈36'01	5.95266 AU
morning rise	2094 Apr 18 22:34	19°♈28'52	
	2094 Jun 04 13:21	0°♉	
retrograde	2094 Aug 29 06:55	10°♉07'01	
opposition	2094 Oct 27 23:04	5°♉03'00	-1°29'17
min. Earth dist.	2094 Oct 26 16:58	5°♉13'13	3.97152 AU
direct	2094 Dec 24 20:03	0°♉07'50	
	2095 Apr 09 11:55	15°♉	
evening set	2095 Apr 29 18:25	19°♉42'14	
conjunction	2095 May 13 09:02	22°♉55'38	-0°48'34
minimum elong	2095 May 13 09:05	22°♉55'39	0°48'35
max. Earth dist.	2095 May 15 14:18	23°♉27'12	6.00978 AU
morning rise	2095 May 27 02:20	26°♉10'11	
	2095 Jun 12 15:12	0°♊	
retrograde	2095 Oct 04 09:44	16°♊08'49	
opposition	2095 Dec 02 23:44	11°♊03'48	-0°48'59
min. Earth dist.	2095 Dec 01 12:24	11°♊15'51	4.06622 AU
direct	2096 Jan 30 08:35	6°♊05'40	
evening set	2096 Jun 04 17:58	25°♊09'27	
conjunction	2096 Jun 18 12:09	28°♊18'48	-0°14'48
minimum elong	2096 Jun 18 12:10	28°♊18'48	0°14'48
behind sun begin	2096 Jun 18 09:12	28°♊17'06	
behind sun end	2096 Jun 18 15:08	28°♊20'30	
max. Earth dist.	2096 Jun 20 15:23	28°♊48'14	6.13338 AU
	2096 Jun 25 20:30	0°♋	
morning rise	2096 Jul 02 07:02	1°♋28'13	
retrograde	2096 Nov 06 05:57	20°♋20'15	
asc. node	2096 Nov 20 06:10	20°♋00'32	
opposition	2097 Jan 04 20:53	15°♋17'01	0°06'24
min. Earth dist.	2097 Jan 03 18:04	15°♋26'06	4.20489 AU
direct	2097 Mar 05 09:48	10°♋16'10	
evening set	2097 Jul 10 02:55	28°♋41'55	
	2097 Jul 15 23:44	0°♌	
conjunction	2097 Jul 23 18:36	1°♌43'57	0°22'39
minimum elong	2097 Jul 23 18:35	1°♌43'56	0°22'39
max. Earth dist.	2097 Jul 25 01:58	2°♌01'24	6.27587 AU
morning rise	2097 Aug 06 09:11	4°♌45'10	
	2097 Sep 25 08:10	15°♌	
retrograde	2097 Dec 07 21:48	22°♌32'48	
opposition	2098 Feb 05 19:51	17°♌33'02	0°56'19
min. Earth dist.	2098 Feb 05 07:42	17°♌37'04	4.33902 AU
	2098 Feb 25 23:54	15°℞♌	
direct	2098 Apr 07 15:46	12°♌30'32	
	2098 May 18 20:09	15°♌	
	2098 Aug 10 16:36	0°♍	
evening set	2098 Aug 12 13:30	0°♍24'14	
conjunction	2098 Aug 25 22:40	3°♍18'44	0°51'36
minimum elong	2098 Aug 25 22:38	3°♍18'43	0°51'35
max. Earth dist.	2098 Aug 26 02:12	3°♍20'40	6.39152 AU
morning rise	2098 Sep 08 05:23	6°♍11'55	
retrograde	2099 Jan 07 09:22	23°♍15'07	
opposition	2099 Mar 08 14:17	18°♍19'05	1°27'42
min. Earth dist.	2099 Mar 08 21:05	18°♍16'52	4.42906 AU
direct	2099 May 09 14:23	13°♍16'14	
	2099 Sep 09 09:05	0°♎	
evening set	2099 Sep 13 08:35	0°♎51'05	
max. Earth dist.	2099 Sep 25 10:39	3°♎27'31	6.44883 AU
conjunction	2099 Sep 26 10:15	3°♎40'17	1°05'12
minimum elong	2099 Sep 26 10:14	3°♎40'17	1°05'12
morning rise	2099 Oct 09 09:10	6°♎28'07	
retrograde	2100 Feb 06 12:46	23°♎13'41	
opposition	2100 Apr 08 02:08	18°♎20'25	1°34'47
min. Earth dist.	2100 Apr 09 01:16	18°♎12'58	4.45172 AU
direct	2100 Jun 09 17:32	13°♎18'13	
	2100 Oct 10 06:25	0°♏	
evening set	2100 Oct 14 03:37	0°♏50'14	
max. Earth dist.	2100 Oct 25 06:12	3°♏15'07	6.43470 AU
conjunction	2100 Oct 26 23:27	3°♏37'37	1°01'03
minimum elong	2100 Oct 26 23:28	3°♏37'38	1°01'03
morning rise	2100 Nov 08 16:35	6°♏23'52	
	2100 Dec 20 16:49	15°♏	
retrograde	2101 Mar 09 08:40	23°♏19'49	
opposition	2101 May 09 04:58	18°♏27'54	1°16'35
min. Earth dist.	2101 May 10 14:28	18°♏17'14	4.40213 AU
	2101 Jun 08 07:47	15°℞♏	
direct	2101 Jul 10 20:21	13°♏27'16	
	2101 Aug 12 11:00	15°♏	
	2101 Nov 08 06:55	0°♐	
evening set	2101 Nov 13 19:20	1°♐12'48	
max. Earth dist.	2101 Nov 24 09:30	3°♐34'00	6.35284 AU
conjunction	2101 Nov 26 11:47	4°♐02'03	0°40'06
minimum elong	2101 Nov 26 11:48	4°♐02'04	0°40'06
morning rise	2101 Dec 09 02:45	6°♐50'44	