

retrograde	1600 Feb 06 16:13	28°♄32'16		morning rise	1606 Jan 05 20:07	0°♄29'19	
opposition	1600 Apr 15 01:02	25°♄13'30	2°46'51	retrograde	1606 Apr 16 13:42	7°♄28'23	
min. Earth dist.	1600 Apr 14 23:28	25°♄13'48	8.78434 AU	opposition	1606 Jun 26 06:05	4°♄10'46	0°46'15
direct	1600 Jun 24 17:48	21°♄49'40		min. Earth dist.	1606 Jun 26 11:15	4°♄09'49	9.07780 AU
evening set	1600 Oct 07 12:44	29°♄17'16		direct	1606 Sep 05 02:59	0°♄52'23	
	1600 Oct 13 12:56	0°♄		evening set	1606 Dec 14 21:52	7°♄51'36	
conjunction	1600 Oct 24 11:06	1°♄18'36	2°13'58	conjunction	1606 Dec 31 12:38	9°♄48'14	0°24'49
minimum elong	1600 Oct 24 11:07	1°♄18'36	2°13'58	minimum elong	1606 Dec 31 12:39	9°♄48'14	0°24'48
max. Earth dist.	1600 Oct 24 12:14	1°♄18'56	10.83411 AU	max. Earth dist.	1606 Dec 31 06:29	9°♄46'26	11.06516 AU
morning rise	1600 Nov 10 05:22	3°♄18'45		morning rise	1607 Jan 17 03:47	11°♄45'01	
retrograde	1601 Feb 17 16:12	10°♄25'18		retrograde	1607 Apr 28 12:12	18°♄47'18	
opposition	1601 Apr 27 12:39	7°♄07'24	2°40'06	opposition	1607 Jul 08 08:26	15°♄28'53	0°13'53
min. Earth dist.	1601 Apr 27 12:45	7°♄07'23	8.88310 AU	min. Earth dist.	1607 Jul 08 13:24	15°♄27'58	9.04687 AU
direct	1601 Jul 07 12:15	3°♄44'50		direct	1607 Sep 16 22:30	12°♄10'41	
evening set	1601 Oct 19 14:51	11°♄04'56		desc. node	1607 Dec 13 14:57	17°♄44'20	
				evening set	1607 Dec 26 05:48	19°♄10'00	
conjunction	1601 Nov 05 10:13	13°♄04'22	2°05'56	conjunction	1608 Jan 11 21:05	21°♄07'15	0°-2'-9
minimum elong	1601 Nov 05 10:15	13°♄04'22	2°05'55	minimum elong	1608 Jan 11 21:06	21°♄07'15	0°02'11
max. Earth dist.	1601 Nov 05 09:18	13°♄04'05	10.92536 AU	behind sun begin	1608 Jan 11 14:08	21°♄05'13	
	1601 Nov 21 16:37	15°♄		behind sun end	1608 Jan 12 04:04	21°♄09'17	
morning rise	1601 Nov 22 02:16	15°♄02'49		max. Earth dist.	1608 Jan 11 15:24	21°♄05'35	11.02320 AU
retrograde	1602 Mar 01 12:59	22°♄04'50		morning rise	1608 Jan 28 13:23	23°♄04'52	
opposition	1602 May 09 20:19	18°♄47'33	2°26'51		1608 Apr 24 00:05	0°♄	
min. Earth dist.	1602 May 09 21:19	18°♄47'21	8.96580 AU	retrograde	1608 May 09 14:40	0°♄11'52	
direct	1602 Jul 20 00:21	15°♄26'10			1608 May 25 07:23	30°♄	
evening set	1602 Oct 31 09:40	22°♄39'31		opposition	1608 Jul 19 12:37	26°♄52'26	0°-19'-17
conjunction	1602 Nov 17 02:57	24°♄37'32	1°52'51	min. Earth dist.	1608 Jul 19 17:23	26°♄51'33	8.99401 AU
minimum elong	1602 Nov 17 03:00	24°♄37'33	1°52'51	direct	1608 Sep 27 17:34	23°♄34'08	
max. Earth dist.	1602 Nov 17 00:59	24°♄36'57	10.99885 AU		1608 Dec 31 15:10	0°♄	
morning rise	1602 Dec 03 17:31	26°♄34'46		evening set	1609 Jan 05 16:43	0°♄35'06	
	1603 Jan 04 12:22	0°♄		conjunction	1609 Jan 22 08:42	2°♄33'19	0°-29'-11
retrograde	1603 Mar 13 06:55	3°♄33'40		minimum elong	1609 Jan 22 08:40	2°♄33'19	0°29'12
opposition	1603 May 22 00:48	0°♄16'40	2°07'57	max. Earth dist.	1609 Jan 22 02:34	2°♄31'30	10.96017 AU
min. Earth dist.	1603 May 22 02:18	0°♄16'24	9.02886 AU	morning rise	1609 Feb 08 02:33	4°♄32'08	
	1603 May 25 18:58	30°♄		retrograde	1609 May 21 22:43	11°♄45'16	
direct	1603 Aug 01 07:08	26°♄56'21		opposition	1609 Jul 31 19:59	8°♄24'37	0°-52'-10
	1603 Oct 04 00:36	0°♄		min. Earth dist.	1609 Aug 01 01:00	8°♄23'41	8.92135 AU
evening set	1603 Nov 11 22:43	4°♄04'03		direct	1609 Oct 09 13:47	5°♄05'59	
conjunction	1603 Nov 28 14:42	6°♄01'06	1°35'26	evening set	1610 Jan 17 07:56	12°♄10'08	
minimum elong	1603 Nov 28 14:44	6°♄01'06	1°35'27	conjunction	1610 Feb 03 00:56	14°♄09'37	0°-55'-25
max. Earth dist.	1603 Nov 28 12:13	6°♄00'22	11.05114 AU	minimum elong	1610 Feb 03 00:54	14°♄09'36	0°55'26
morning rise	1603 Dec 15 04:27	7°♄57'33		max. Earth dist.	1610 Feb 02 18:15	14°♄07'37	10.87853 AU
retrograde	1604 Mar 24 01:36	14°♄54'53			1610 Feb 10 01:00	15°♄	
opposition	1604 Jun 02 03:11	11°♄37'58	1°44'15	morning rise	1610 Feb 19 20:47	16°♄09'58	
min. Earth dist.	1604 Jun 02 05:47	11°♄37'29	9.06923 AU	retrograde	1610 Jun 03 10:58	23°♄30'34	
direct	1604 Aug 12 08:49	8°♄18'31		opposition	1610 Aug 13 07:12	20°♄08'32	-1°-23'-30
evening set	1604 Nov 22 08:03	15°♄21'56		min. Earth dist.	1610 Aug 13 12:29	20°♄07'33	8.83164 AU
conjunction	1604 Dec 08 23:07	17°♄18'26	1°14'26	direct	1610 Oct 21 13:16	16°♄49'22	
minimum elong	1604 Dec 08 23:09	17°♄18'27	1°14'26	evening set	1611 Jan 29 05:16	23°♄58'12	
max. Earth dist.	1604 Dec 08 19:03	17°♄17'15	11.07979 AU	conjunction	1611 Feb 14 23:51	25°♄59'18	-1°-19'-46
morning rise	1604 Dec 25 12:46	19°♄14'35		minimum elong	1611 Feb 14 23:49	25°♄59'17	1°19'46
retrograde	1605 Apr 04 18:51	26°♄11'58		max. Earth dist.	1611 Feb 14 17:56	25°♄57'30	10.78130 AU
opposition	1605 Jun 14 04:34	22°♄54'52	1°16'42	morning rise	1611 Mar 03 21:54	28°♄01'28	
min. Earth dist.	1605 Jun 14 08:48	22°♄54'05	9.08549 AU		1611 Mar 21 02:12	0°♄	
direct	1605 Aug 24 05:36	19°♄36'05		retrograde	1611 Jun 16 06:48	5°♄30'37	
evening set	1605 Dec 03 15:17	26°♄36'40		opposition	1611 Aug 25 22:47	2°♄07'08	-1°-51'-56
conjunction	1605 Dec 20 05:53	28°♄33'02	0°50'36	min. Earth dist.	1611 Aug 26 03:21	2°♄06'16	8.72822 AU
minimum elong	1605 Dec 20 05:55	28°♄33'03	0°50'37		1611 Sep 25 02:35	30°♄	
max. Earth dist.	1605 Dec 20 00:06	28°♄31'20	11.08432 AU	direct	1611 Nov 02 18:03	28°♄47'14	
	1606 Jan 01 14:45	0°♄			1611 Dec 10 08:37	0°♄	

evening set	1612 Feb 10 10:01	6°♄02'07		conjunction	1618 May 18 19:54	27°♄33'38	-1°-47'-40
				minimum elong	1618 May 18 19:57	27°♄33'39	1°47'41
conjunction	1612 Feb 27 06:42	8°♄05'10	-1°-41'-5	max. Earth dist.	1618 May 18 23:46	27°♄34'53	10.06237 AU
minimum elong	1612 Feb 27 06:40	8°♄05'10	1°41'06	morning rise	1618 Jun 05 19:25	29°♄53'04	
max. Earth dist.	1612 Feb 27 02:05	8°♄03'45	10.67214 AU		1618 Jun 06 17:13	0°♄	
morning rise	1612 Mar 15 07:12	10°♄09'27		retrograde	1618 Sep 20 11:09	8°♄14'20	
retrograde	1612 Jun 28 12:09	17°♄47'57		opposition	1618 Nov 26 23:52	4°♄44'24	-2°00'-36
opposition	1612 Sep 06 19:50	14°♄23'00	-2°-16'-3	min. Earth dist.	1618 Nov 26 20:13	4°♄45'09	8.03950 AU
min. Earth dist.	1612 Sep 06 23:06	14°♄22'22	8.61511 AU	direct	1619 Feb 01 09:08	1°♄17'05	
direct	1612 Nov 14 01:54	11°♄02'14		evening set	1619 May 15 21:18	9°♄26'13	
evening set	1613 Feb 21 23:21	18°♄24'18					
				conjunction	1619 Jun 02 21:44	11°♄46'26	-1°-24'-15
conjunction	1613 Mar 10 22:35	20°♄29'35	-1°-58'-13	minimum elong	1619 Jun 02 21:47	11°♄46'27	1°24'16
minimum elong	1613 Mar 10 22:33	20°♄29'35	1°58'14	max. Earth dist.	1619 Jun 03 03:04	11°♄48'10	10.02179 AU
max. Earth dist.	1613 Mar 10 18:58	20°♄28'28	10.55562 AU	morning rise	1619 Jun 21 00:17	14°♄07'21	
morning rise	1613 Mar 28 02:04	22°♄36'15		retrograde	1619 Oct 05 03:22	22°♄28'23	
	1613 Jun 19 23:15	0°♄		opposition	1619 Dec 11 05:51	18°♄58'47	-1°-27'-54
retrograde	1613 Jul 12 00:00	0°♄24'27		min. Earth dist.	1619 Dec 11 01:18	18°♄59'44	8.01280 AU
	1613 Aug 03 02:23	30°♄		direct	1620 Feb 15 16:25	15°♄30'38	
opposition	1613 Sep 19 22:49	26°♄58'06	-2°-34'-23	evening set	1620 May 29 23:53	23°♄43'45	
min. Earth dist.	1613 Sep 20 00:54	26°♄57'41	8.49720 AU				
direct	1613 Nov 26 16:15	23°♄36'19		conjunction	1620 Jun 17 03:13	26°♄04'59	0°-55'-32
	1614 Feb 25 18:27	0°♄		minimum elong	1620 Jun 17 03:16	26°♄05'00	0°55'33
evening set	1614 Mar 06 22:29	1°♄06'32		max. Earth dist.	1620 Jun 17 09:28	26°♄07'02	10.01018 AU
				morning rise	1620 Jul 05 07:32	28°♄26'32	
conjunction	1614 Mar 24 00:52	3°♄14'19	-2°-10'-1		1620 Jul 17 17:38	0°♄	
minimum elong	1614 Mar 24 00:50	3°♄14'18	2°10'02	retrograde	1620 Oct 18 18:00	6°♄44'37	
max. Earth dist.	1614 Mar 23 21:36	3°♄13'17	10.43707 AU	opposition	1620 Dec 24 12:03	3°♄15'41	0°-49'-39
morning rise	1614 Apr 10 07:56	5°♄23'35		min. Earth dist.	1620 Dec 24 07:07	3°♄16'42	8.01571 AU
retrograde	1614 Jul 25 19:28	13°♄21'16			1621 Feb 13 21:57	30°♄	
opposition	1614 Oct 03 07:43	9°♄53'38	-2°-45'-31	direct	1621 Mar 01 04:25	29°♄46'51	
min. Earth dist.	1614 Oct 03 09:19	9°♄53'19	8.38006 AU		1621 Mar 16 12:31	0°♄	
direct	1614 Dec 09 14:09	6°♄30'44		evening set	1621 Jun 14 04:24	8°♄01'49	
evening set	1615 Mar 20 07:50	14°♄09'37					
				conjunction	1621 Jul 02 09:08	10°♄23'09	0°-23'-25
conjunction	1615 Apr 06 14:04	16°♄20'07	-2°-15'-27	minimum elong	1621 Jul 02 09:09	10°♄23'09	0°23'26
minimum elong	1615 Apr 06 14:04	16°♄20'07	2°15'28	max. Earth dist.	1621 Jul 02 15:37	10°♄25'15	10.02814 AU
max. Earth dist.	1615 Apr 06 11:46	16°♄19'23	10.32236 AU	morning rise	1621 Jul 20 13:35	12°♄44'22	
morning rise	1615 Apr 24 01:11	18°♄32'08		retrograde	1621 Nov 02 03:14	20°♄57'05	
retrograde	1615 Aug 08 22:26	26°♄38'28		opposition	1622 Jan 07 16:48	17°♄29'04	0°-8'-31
opposition	1615 Oct 16 22:37	23°♄09'49	-2°-48'-14	min. Earth dist.	1622 Jan 07 11:57	17°♄30'04	8.04764 AU
min. Earth dist.	1615 Oct 16 23:31	23°♄09'38	8.26971 AU	direct	1622 Mar 15 18:52	13°♄59'50	
direct	1615 Dec 22 19:16	19°♄45'43		asc. node	1622 Mar 26 09:44	14°♄06'08	
evening set	1616 Apr 02 03:23	27°♄33'21		evening set	1622 Jun 29 07:54	22°♄14'25	
conjunction	1616 Apr 19 14:07	29°♄46'38	-2°-13'-42	conjunction	1622 Jul 17 12:11	24°♄34'50	0°09'57
minimum elong	1616 Apr 19 14:08	29°♄46'38	2°13'44	minimum elong	1622 Jul 17 12:10	24°♄34'50	0°09'57
max. Earth dist.	1616 Apr 19 13:36	29°♄46'28	10.21763 AU	behind sun begin	1622 Jul 17 06:17	24°♄32'57	
	1616 Apr 21 07:49	0°♄		behind sun end	1622 Jul 17 18:04	24°♄36'44	
morning rise	1616 May 07 05:27	2°♄01'23		max. Earth dist.	1622 Jul 17 18:14	24°♄36'47	10.07374 AU
retrograde	1616 Aug 22 06:59	10°♄14'57		morning rise	1622 Aug 04 14:58	26°♄54'45	
opposition	1616 Oct 29 18:57	6°♄45'31	-2°-41'-42		1622 Aug 30 04:22	0°♄	
min. Earth dist.	1616 Oct 29 18:33	6°♄45'36	8.17233 AU	retrograde	1622 Nov 16 05:38	5°♄00'18	
direct	1617 Jan 04 09:04	3°♄20'16		opposition	1623 Jan 21 18:27	1°♄33'26	0°32'39
evening set	1617 Apr 16 08:58	11°♄16'13		min. Earth dist.	1623 Jan 21 13:48	1°♄34'23	8.10558 AU
					1623 Feb 10 10:46	30°♄	
conjunction	1617 May 04 00:34	13°♄32'11	-2°-4'-24	direct	1623 Mar 30 08:30	28°♄04'05	
minimum elong	1617 May 04 00:37	13°♄32'12	2°04'26		1623 May 16 13:37	0°♄	
max. Earth dist.	1617 May 04 02:20	13°♄32'46	10.12911 AU	evening set	1623 Jul 14 07:15	6°♄16'13	
	1617 May 15 08:50	15°♄					
morning rise	1617 May 21 20:11	15°♄49'29		conjunction	1623 Aug 01 09:26	8°♄34'55	0°42'16
retrograde	1617 Sep 05 19:32	24°♄08'11		minimum elong	1623 Aug 01 09:24	8°♄34'54	0°42'16
opposition	1617 Nov 12 19:43	20°♄38'19	-2°-25'-39	max. Earth dist.	1623 Aug 01 14:49	8°♄36'39	10.14290 AU
min. Earth dist.	1617 Nov 12 17:38	20°♄38'44	8.09392 AU	morning rise	1623 Aug 19 08:58	10°♄52'44	
direct	1618 Jan 18 06:12	17°♄11'58			1623 Sep 23 18:22	15°♄	
evening set	1618 Apr 30 23:31	25°♄15'15		retrograde	1623 Nov 30 01:29	18°♄50'06	
				opposition	1624 Feb 04 16:01	15°♄24'30	1°11'13

min. Earth dist.	1624 Feb 04 11:28	15°♃25'26	8.18472 AU	min. Earth dist.	1630 Apr 22 10:46	2°♄11'54	8.82674 AU
	1624 Feb 09 16:42	15°♃♄			1630 May 24 01:19	30°♃♄	
direct	1624 Apr 12 18:42	11°♃♄55'23		direct	1630 Jul 02 09:49	28°♄48'18	
	1624 Jun 12 19:16	15°♃			1630 Aug 10 01:55	0°♄	
evening set	1624 Jul 27 23:57	20°♃03'22		evening set	1630 Oct 14 18:20	6°♄12'13	
conjunction	1624 Aug 14 22:43	22°♃19'44	1°11'40	conjunction	1630 Oct 31 15:11	8°♄12'38	2°10'06
minimum elong	1624 Aug 14 22:40	22°♃19'43	1°11'40	minimum elong	1630 Oct 31 15:12	8°♄12'39	2°10'05
max. Earth dist.	1624 Aug 15 03:38	22°♃21'18	10.23056 AU	max. Earth dist.	1630 Oct 31 15:07	8°♄12'37	10.87099 AU
morning rise	1624 Sep 01 17:49	24°♃34'55		morning rise	1630 Nov 17 08:10	10°♄11'58	
	1624 Oct 21 08:19	0°♄			1631 Jan 03 00:19	15°♄	
retrograde	1624 Dec 12 15:18	2°♄23'37		retrograde	1631 Feb 24 19:30	17°♄16'26	
	1625 Feb 04 15:29	30°♃♄			1631 Apr 20 23:39	15°♃♄	
opposition	1625 Feb 17 08:46	28°♃59'24	1°44'57	opposition	1631 May 04 20:57	13°♄58'25	2°33'27
min. Earth dist.	1625 Feb 17 04:27	29°♃00'16	8.28012 AU	min. Earth dist.	1631 May 04 21:20	13°♄58'21	8.91410 AU
direct	1625 Apr 26 23:57	25°♃30'49		direct	1631 Jul 14 23:34	10°♄36'03	
	1625 Jul 11 17:34	0°♄			1631 Sep 30 12:44	15°♄	
evening set	1625 Aug 11 08:31	3°♄33'14		evening set	1631 Oct 26 16:28	17°♄52'51	
conjunction	1625 Aug 29 02:52	5°♄46'50	1°36'33	conjunction	1631 Nov 12 10:50	19°♄51'39	1°59'09
minimum elong	1625 Aug 29 02:49	5°♄46'49	1°36'33	minimum elong	1631 Nov 12 10:53	19°♄51'40	1°59'09
max. Earth dist.	1625 Aug 29 07:21	5°♄48'14	10.33212 AU	max. Earth dist.	1631 Nov 12 09:44	19°♄51'20	10.95045 AU
morning rise	1625 Sep 15 16:46	7°♄59'02		morning rise	1631 Nov 29 01:59	21°♄49'34	
retrograde	1625 Dec 25 21:04	15°♄38'55		retrograde	1632 Mar 07 13:43	28°♄50'14	
opposition	1626 Mar 02 20:14	12°♄16'06	2°12'11	opposition	1632 May 16 02:53	25°♄32'38	2°16'55
min. Earth dist.	1626 Mar 02 16:33	12°♄16'50	8.38722 AU	min. Earth dist.	1632 May 16 04:41	25°♄32'17	8.98472 AU
direct	1626 May 11 00:28	8°♄48'16		direct	1632 Jul 26 07:41	22°♄11'17	
evening set	1626 Aug 25 07:22	16°♄43'55		evening set	1632 Nov 06 08:14	29°♄22'00	
					1632 Nov 11 18:47	0°♄♃	
conjunction	1626 Sep 11 20:46	18°♄54'31	1°55'49	conjunction	1632 Nov 23 00:45	1°♄19'36	1°43'33
minimum elong	1626 Sep 11 20:43	18°♄54'31	1°55'49	minimum elong	1632 Nov 23 00:48	1°♄19'37	1°43'33
max. Earth dist.	1626 Sep 12 00:36	18°♄55'43	10.44286 AU	max. Earth dist.	1632 Nov 22 21:58	1°♄18'47	11.01189 AU
morning rise	1626 Sep 29 05:20	21°♄03'41		morning rise	1632 Dec 09 14:58	3°♄16'33	
retrograde	1627 Jan 07 18:54	28°♄34'57		retrograde	1633 Mar 19 07:25	10°♄14'54	
opposition	1627 Mar 16 02:18	25°♄13'26	2°31'54	opposition	1633 May 28 06:19	6°♄57'28	1°55'11
min. Earth dist.	1627 Mar 15 23:51	25°♄13'55	8.50093 AU	min. Earth dist.	1633 May 28 09:02	6°♄56'58	9.03600 AU
direct	1627 May 24 18:53	21°♄46'33		direct	1633 Aug 07 12:39	3°♄37'05	
evening set	1627 Sep 07 19:28	29°♄34'31		evening set	1633 Nov 17 19:03	10°♄42'49	
	1627 Sep 11 07:30	0°♄					
conjunction	1627 Sep 25 03:53	1°♄42'09	2°08'50	conjunction	1633 Dec 04 10:28	12°♄39'40	1°24'00
minimum elong	1627 Sep 25 03:51	1°♄42'09	2°08'50	minimum elong	1633 Dec 04 10:30	12°♄39'41	1°24'00
max. Earth dist.	1627 Sep 25 06:15	1°♄42'53	10.55745 AU	max. Earth dist.	1633 Dec 04 06:59	12°♄38'38	11.05307 AU
morning rise	1627 Oct 12 07:33	3°♄48'22		morning rise	1633 Dec 21 00:18	14°♄36'04	
retrograde	1628 Jan 20 09:46	11°♄11'32		retrograde	1634 Mar 31 00:28	21°♄33'39	
opposition	1628 Mar 28 02:39	7°♄51'11	2°43'41	opposition	1634 Jun 09 08:06	18°♄16'09	1°29'11
min. Earth dist.	1628 Mar 28 01:19	7°♄51'26	8.61566 AU	min. Earth dist.	1634 Jun 09 10:38	18°♄15'41	9.06611 AU
direct	1628 Jun 06 06:12	4°♄25'22		direct	1634 Aug 19 12:19	14°♄56'37	
evening set	1628 Sep 19 21:04	12°♄05'14		evening set	1634 Nov 29 02:51	21°♄58'39	
conjunction	1628 Oct 07 00:53	14°♄10'07	2°15'25	conjunction	1634 Dec 15 17:48	23°♄55'10	1°01'18
minimum elong	1628 Oct 07 00:52	14°♄10'07	2°15'25	minimum elong	1634 Dec 15 17:50	23°♄55'10	1°01'19
max. Earth dist.	1628 Oct 07 01:37	14°♄10'21	10.67036 AU	max. Earth dist.	1634 Dec 15 14:36	23°♄54'13	11.07246 AU
morning rise	1628 Oct 24 00:17	16°♄13'39		morning rise	1635 Jan 01 07:45	25°♄51'27	
retrograde	1629 Jan 31 16:34	23°♄29'29		retrograde	1635 Feb 10 06:32	0°♄♃	
opposition	1629 Apr 09 21:23	20°♄10'07	2°47'33	opposition	1635 Apr 11 20:01	2°♄49'48	
min. Earth dist.	1629 Apr 09 20:39	20°♄10'15	8.72590 AU		1635 Jun 15 00:38	30°♃♄	
direct	1629 Jun 19 11:21	16°♄45'25		opposition	1635 Jun 21 09:10	29°♄32'01	0°59'51
evening set	1629 Oct 02 12:25	24°♄17'11		min. Earth dist.	1635 Jun 21 11:55	29°♄31'30	9.07399 AU
				direct	1635 Aug 31 09:28	26°♄13'08	
conjunction	1629 Oct 19 12:22	26°♄19'38	2°15'42		1635 Nov 10 11:17	0°♄♃	
minimum elong	1629 Oct 19 12:22	26°♄19'38	2°15'42	evening set	1635 Dec 10 09:24	3°♄12'55	
max. Earth dist.	1629 Oct 19 12:18	26°♄19'37	10.77639 AU				
morning rise	1629 Nov 05 08:10	28°♄20'51		conjunction	1635 Dec 27 00:12	5°♄09'29	0°36'16
	1629 Nov 19 15:45	0°♄		minimum elong	1635 Dec 27 00:13	5°♄09'29	0°36'16
retrograde	1630 Feb 12 19:41	5°♄30'24		max. Earth dist.	1635 Dec 26 20:21	5°♄08'20	11.06933 AU
opposition	1630 Apr 22 11:18	2°♄11'48	2°43'56	morning rise	1636 Jan 12 14:51	7°♄06'02	

retrograde	1636 Apr 22 16:34	14°♄06'40		minimum elong	1642 Mar 05 15:52	15°♄12'36	1°51'05
opposition	1636 Jul 02 10:49	10°♄48'24	0°28'12	max. Earth dist.	1642 Mar 05 11:44	15°♄11'20	10.63748 AU
min. Earth dist.	1636 Jul 02 14:28	10°♄47'44	9.05934 AU	morning rise	1642 Mar 22 17:56	17°♄17'48	
direct	1636 Sep 11 03:19	7°♄29'58		retrograde	1642 Jul 06 06:54	25°♄00'12	
evening set	1636 Dec 20 16:24	14°♄29'02		opposition	1642 Sep 14 11:20	21°♄35'12	-2°-26'-44
				min. Earth dist.	1642 Sep 14 14:25	21°♄34'36	8.58085 AU
conjunction	1637 Jan 06 07:18	16°♄25'56	0°09'47	direct	1642 Nov 21 10:51	18°♄14'35	
minimum elong	1637 Jan 06 07:18	16°♄25'56	0°09'46	evening set	1643 Mar 01 12:06	25°♄39'38	
behind sun begin	1637 Jan 06 01:33	16°♄24'16					
behind sun end	1637 Jan 06 13:03	16°♄27'37		conjunction	1643 Mar 18 12:47	27°♄45'50	-2°-5'-19
max. Earth dist.	1637 Jan 06 02:12	16°♄24'27	11.04377 AU	minimum elong	1643 Mar 18 12:46	27°♄45'49	2°05'20
morning rise	1637 Jan 22 23:06	18°♄23'08		max. Earth dist.	1643 Mar 18 09:40	27°♄44'51	10.52150 AU
retrograde	1637 May 04 15:16	25°♄27'39		morning rise	1643 Apr 04 17:58	29°♄53'27	
desc. node	1637 May 21 19:40	25°♄13'34			1643 Apr 05 15:30	0°♃	
opposition	1637 Jul 14 13:59	22°♄08'40	0°-4'-43	retrograde	1643 Jul 19 21:57	7°♃45'18	
min. Earth dist.	1637 Jul 14 18:17	22°♄07'52	9.02273 AU	opposition	1643 Sep 27 16:29	4°♃18'58	-2°-41'-11
direct	1637 Sep 22 22:23	18°♄50'26		min. Earth dist.	1643 Sep 27 18:42	4°♃18'32	8.46361 AU
evening set	1638 Jan 01 01:29	25°♄50'17		direct	1643 Dec 04 05:15	0°♃57'17	
				evening set	1644 Mar 13 15:47	8°♃30'41	
conjunction	1638 Jan 17 17:00	27°♄47'57	0°-17'-21				
minimum elong	1638 Jan 17 16:59	27°♄47'56	0°17'23	conjunction	1644 Mar 30 20:05	10°♃39'29	-2°-13'-41
max. Earth dist.	1638 Jan 17 12:06	27°♄46'30	10.99674 AU	minimum elong	1644 Mar 30 20:05	10°♃39'29	2°13'42
morning rise	1638 Feb 03 10:11	29°♄46'06		max. Earth dist.	1644 Mar 30 17:56	10°♃38'49	10.40388 AU
	1638 Feb 05 10:13	0°♂		morning rise	1644 Apr 17 04:54	12°♃49'47	
retrograde	1638 May 16 20:53	6°♂55'59		retrograde	1644 Aug 01 21:31	20°♃50'45	
opposition	1638 Jul 26 19:34	3°♂36'03	0°-37'-49	opposition	1644 Oct 10 03:43	17°♃23'12	-2°-47'-48
min. Earth dist.	1638 Jul 26 23:25	3°♂35'20	8.96551 AU	min. Earth dist.	1644 Oct 10 04:43	17°♃23'00	8.34786 AU
direct	1638 Oct 04 19:21	0°♂17'49		direct	1644 Dec 16 05:18	14°♃00'19	
evening set	1639 Jan 12 14:15	7°♂19'56		evening set	1645 Mar 27 05:38	21°♃42'27	
conjunction	1639 Jan 29 06:49	9°♂18'41	0°-44'-2	conjunction	1645 Apr 13 14:06	23°♃54'01	-2°-15'-16
minimum elong	1639 Jan 29 06:47	9°♂18'41	0°44'03	minimum elong	1645 Apr 13 14:07	23°♃54'02	2°15'17
max. Earth dist.	1639 Jan 29 02:42	9°♂17'27	10.92983 AU	max. Earth dist.	1645 Apr 13 12:42	23°♃53'35	10.29139 AU
morning rise	1639 Feb 15 01:36	11°♂18'09		morning rise	1645 May 01 03:07	26°♃07'06	
	1639 Mar 21 08:37	15°♂			1645 Jun 03 12:58	0°♂	
retrograde	1639 May 29 07:19	18°♂34'42		retrograde	1645 Aug 16 03:25	4°♂16'04	
opposition	1639 Aug 08 04:28	15°♂13'39	-1°-9'-54	opposition	1645 Oct 23 20:41	0°♂47'30	-2°-45'-34
min. Earth dist.	1639 Aug 08 07:37	15°♂13'04	8.88962 AU	min. Earth dist.	1645 Oct 23 20:52	0°♂47'28	8.24061 AU
	1639 Aug 11 05:32	15°♂			1645 Nov 02 19:06	30°♂	
direct	1639 Oct 16 16:20	11°♂55'12		direct	1645 Dec 29 13:35	27°♃23'19	
	1639 Dec 17 20:12	15°♂			1646 Feb 22 03:54	0°♂	
evening set	1640 Jan 24 08:29	19°♂01'07		evening set	1646 Apr 10 05:48	5°♂14'04	
conjunction	1640 Feb 10 02:15	21°♂01'14	-1°-9'-17	conjunction	1646 Apr 27 18:53	7°♂28'26	-2°-9'-28
minimum elong	1640 Feb 10 02:13	21°♂01'14	1°09'18	minimum elong	1646 Apr 27 18:55	7°♂28'27	2°09'29
max. Earth dist.	1640 Feb 09 22:09	21°♂00'00	10.84541 AU	max. Earth dist.	1646 Apr 27 18:15	7°♂28'14	10.19099 AU
morning rise	1640 Feb 26 23:00	23°♂02'18		morning rise	1646 May 15 12:21	9°♂44'12	
	1640 May 17 15:34	0°♄			1646 Jul 01 10:16	15°♂	
retrograde	1640 Jun 10 00:23	0°♄26'41		retrograde	1646 Aug 30 13:04	17°♂59'22	
	1640 Jul 03 13:08	30°♂			1646 Oct 31 14:53	15°♂	
opposition	1640 Aug 19 17:35	27°♂04'25	-1°-39'-41	opposition	1646 Nov 06 18:28	14°♂30'04	-2°-33'-57
min. Earth dist.	1640 Aug 19 20:38	27°♂03'50	8.79784 AU	min. Earth dist.	1646 Nov 06 18:04	14°♂30'09	8.14856 AU
direct	1640 Oct 27 17:25	23°♂45'28		direct	1647 Jan 12 06:29	11°♂04'33	
	1641 Jan 27 08:43	0°♄			1647 Mar 21 03:24	15°♂	
evening set	1641 Feb 04 09:27	0°♄56'35		evening set	1647 Apr 24 15:18	19°♂03'15	
conjunction	1641 Feb 21 04:50	2°♄58'25	-1°-32'-1	conjunction	1647 May 12 09:10	21°♂20'13	-1°-56'-10
minimum elong	1641 Feb 21 04:48	2°♄58'24	1°32'01	minimum elong	1647 May 12 09:13	21°♂20'14	1°56'11
max. Earth dist.	1641 Feb 21 00:16	2°♄57'01	10.74675 AU	max. Earth dist.	1647 May 12 09:36	21°♂20'21	10.10896 AU
morning rise	1641 Mar 10 04:03	5°♄01'24		morning rise	1647 May 30 06:53	23°♂38'23	
retrograde	1641 Jun 23 00:51	12°♄34'30			1647 Jul 28 11:14	0°♂	
opposition	1641 Sep 01 11:47	9°♄10'54	-2°-5'-46	retrograde	1647 Sep 14 02:09	1°♂57'28	
min. Earth dist.	1641 Sep 01 15:04	9°♄10'16	8.69368 AU		1647 Nov 01 10:02	30°♂	
direct	1641 Nov 08 22:38	5°♄51'14		opposition	1647 Nov 20 20:17	28°♂27'45	-2°-13'-5
evening set	1642 Feb 16 18:13	13°♄08'45		min. Earth dist.	1647 Nov 20 19:12	28°♂27'58	8.07751 AU
				direct	1648 Jan 26 06:06	25°♂00'58	
conjunction	1642 Mar 05 15:54	15°♄12'37	-1°-51'-4		1648 Apr 12 18:10	0°♂	

evening set	1648 May 08 08:34	3°II06'23		direct	1654 Apr 20 16:05	19°Ω22'12	
				evening set	1654 Aug 05 00:00	27°Ω27'38	
conjunction	1648 May 26 06:56	5°II25'31	-1°-35'-48	conjunction	1654 Aug 22 20:28	29°Ω42'40	1°25'21
minimum elong	1648 May 26 07:00	5°II25'32	1°35'50	minimum elong	1654 Aug 22 20:25	29°Ω42'39	1°25'21
max. Earth dist.	1648 May 26 09:03	5°II26'12	10.05050 AU	max. Earth dist.	1654 Aug 23 00:59	29°Ω44'06	10.27145 AU
morning rise	1648 Jun 13 08:13	7°II45'34			1654 Aug 25 03:05	0°♊	
retrograde	1648 Sep 27 16:44	16°II05'57		morning rise	1654 Sep 09 13:01	1°♊56'26	
opposition	1648 Dec 04 00:38	12°II36'10	-1°-43'-53	retrograde	1654 Dec 20 00:08	9°♊40'40	
min. Earth dist.	1648 Dec 03 22:22	12°II36'38	8.03200 AU	opposition	1655 Feb 24 21:33	6°♊16'42	2°00'07
direct	1649 Feb 08 11:27	9°II08'16		min. Earth dist.	1655 Feb 24 17:50	6°♊17'26	8.32520 AU
evening set	1649 May 23 07:58	17°II18'46		direct	1655 May 04 20:37	2°♊47'59	
				evening set	1655 Aug 19 03:14	10°♊47'05	
conjunction	1649 Jun 10 10:02	19°II39'25	-1°-9'-28	conjunction	1655 Sep 05 18:57	12°♊59'10	1°47'22
minimum elong	1649 Jun 10 10:05	19°II39'26	1°09'29	minimum elong	1655 Sep 05 18:54	12°♊59'09	1°47'22
max. Earth dist.	1649 Jun 10 13:51	19°II40'39	10.01929 AU	max. Earth dist.	1655 Sep 05 22:46	13°♊00'22	10.38063 AU
morning rise	1649 Jun 28 13:45	22°II00'36		morning rise	1655 Sep 23 06:18	15°♊09'52	
	1649 Sep 23 12:51	0°♋		retrograde	1656 Jan 02 00:47	22°♊45'16	
retrograde	1649 Oct 12 06:45	0°♋19'33		opposition	1656 Mar 09 05:47	19°♊22'43	2°23'28
	1649 Oct 31 01:31	30°R♊		min. Earth dist.	1656 Mar 09 02:01	19°♊23'28	8.43903 AU
opposition	1649 Dec 18 05:49	26°II50'04	-1°-8'-5	direct	1656 May 17 18:03	15°♊55'00	
min. Earth dist.	1649 Dec 18 02:21	26°II50'47	8.01487 AU	evening set	1656 Aug 31 20:11	23°♊46'44	
direct	1650 Feb 22 21:21	23°II21'15					
	1650 May 25 19:41	0°♋		conjunction	1656 Sep 18 07:03	25°♊55'49	2°03'22
evening set	1650 Jun 07 10:55	1°♋34'54		minimum elong	1656 Sep 18 07:01	25°♊55'48	2°03'23
				max. Earth dist.	1656 Sep 18 10:37	25°♊56'56	10.49694 AU
conjunction	1650 Jun 25 15:16	3°♋56'12	0°-38'-48	morning rise	1656 Oct 05 13:11	25°♊03'28	
minimum elong	1650 Jun 25 15:18	3°♋56'13	0°38'49		1656 Oct 22 00:04	0°♌	
max. Earth dist.	1650 Jun 25 20:23	3°♋57'52	10.01717 AU	retrograde	1657 Jan 13 19:48	5°♌30'27	
morning rise	1650 Jul 13 19:51	6°♋17'36		opposition	1657 Mar 22 08:28	2°♌09'16	2°39'00
retrograde	1650 Oct 26 17:31	14°♋32'39		min. Earth dist.	1657 Mar 22 05:07	2°♌09'55	8.55687 AU
opposition	1651 Jan 01 10:36	11°♋03'48	0°-28'-5		1657 Apr 21 04:59	30°R♊	
min. Earth dist.	1651 Jan 01 06:11	11°♋04'43	8.02708 AU	direct	1657 May 31 07:40	28°♊42'45	
direct	1651 Mar 09 09:40	7°♋34'22			1657 Jul 09 23:37	0°♌	
evening set	1651 Jun 22 14:20	15°♋49'00		evening set	1657 Sep 14 02:40	6°♌26'31	
				conjunction	1657 Oct 01 08:49	8°♌32'44	2°13'00
conjunction	1651 Jul 10 19:10	18°♋09'58	0°-5'-53	minimum elong	1657 Oct 01 08:48	8°♌32'43	2°13'00
minimum elong	1651 Jul 10 19:11	18°♋09'58	0°05'54	max. Earth dist.	1657 Oct 01 12:03	8°♌33'43	10.61434 AU
behind sun begin	1651 Jul 10 12:10	18°♋07'43		morning rise	1657 Oct 18 10:08	10°♌37'31	
behind sun end	1651 Jul 11 02:12	18°♋12'14		retrograde	1658 Jan 26 07:27	17°♌56'46	
max. Earth dist.	1651 Jul 11 01:14	18°♋11'54	10.04403 AU	opposition	1658 Apr 04 05:50	14°♌36'51	2°46'34
morning rise	1651 Jul 28 22:53	20°♋30'36		min. Earth dist.	1658 Apr 04 03:40	14°♌37'16	8.67295 AU
asc. node	1651 Sep 15 09:48	25°♋57'33		direct	1658 Jun 13 14:16	11°♌11'37	
retrograde	1651 Nov 09 23:25	28°♋39'42		evening set	1658 Sep 26 22:54	18°♌47'15	
opposition	1652 Jan 15 13:21	25°♋11'48	0°13'20				
min. Earth dist.	1652 Jan 15 08:32	25°♋12'48	8.06769 AU	conjunction	1658 Oct 14 00:44	20°♌50'51	2°16'13
direct	1652 Mar 22 21:51	21°♋42'02		minimum elong	1658 Oct 14 00:43	20°♌50'51	2°16'14
evening set	1652 Jul 06 15:27	29°♋55'31		max. Earth dist.	1658 Oct 14 02:40	20°♌51'26	10.72736 AU
	1652 Jul 07 05:38	0°♌		morning rise	1658 Oct 30 22:04	22°♌53'08	
conjunction	1652 Jul 24 19:00	2°♌15'14	0°27'12		1659 Jan 28 05:29	0°♍	
minimum elong	1652 Jul 24 18:59	2°♌15'13	0°27'12	retrograde	1659 Feb 07 12:33	0°♍05'34	
max. Earth dist.	1652 Jul 25 01:12	2°♌17'13	10.09798 AU		1659 Feb 17 20:52	30°R♌	
morning rise	1652 Aug 11 20:12	4°♌34'12		opposition	1659 Apr 16 22:10	26°♌46'45	2°46'24
retrograde	1652 Nov 22 23:34	12°♌35'48		min. Earth dist.	1659 Apr 16 21:25	26°♌46'54	8.78206 AU
opposition	1653 Jan 28 12:40	9°♌09'04	0°53'25	direct	1659 Jun 26 15:31	23°♌22'50	
min. Earth dist.	1653 Jan 28 08:16	9°♌09'58	8.13396 AU	evening set	1659 Oct 02 03:51	0°♍	
direct	1653 Apr 06 08:21	5°♌39'17			1659 Oct 09 09:23	0°♍50'30	
evening set	1653 Jul 21 11:30	13°♌49'38		conjunction	1659 Oct 26 07:35	2°♍51'50	2°13'20
	1653 Jul 30 17:48	15°♌		minimum elong	1659 Oct 26 07:36	2°♍51'50	2°13'20
conjunction	1653 Aug 08 12:08	16°♌07'18	0°58'11	max. Earth dist.	1659 Oct 26 07:44	2°♍51'53	10.83110 AU
minimum elong	1653 Aug 08 12:05	16°♌07'17	0°58'11	morning rise	1659 Nov 12 01:56	4°♍52'01	
max. Earth dist.	1653 Aug 08 17:33	16°♌09'02	10.17540 AU	retrograde	1660 Feb 19 13:02	11°♍58'46	
morning rise	1653 Aug 26 09:29	18°♌23'55		opposition	1660 Apr 28 09:54	8°♍40'48	2°39'03
retrograde	1653 Dec 06 16:39	26°♌17'01		min. Earth dist.	1660 Apr 28 10:00	8°♍40'47	8.87944 AU
opposition	1654 Feb 11 07:41	22°♌51'37	1°29'40				
min. Earth dist.	1654 Feb 11 03:46	22°♌52'25	8.22156 AU				

direct	1660 Jul 08 09:39	5°♄18'12		evening set	1666 Dec 27 04:14	20°♄48'13	
evening set	1660 Oct 20 11:30	12°♄38'23					
conjunction	1660 Nov 06 06:54	14°♄37'53	2°04'50	conjunction	1667 Jan 12 19:32	22°♄45'34	0°-4'-47
minimum elong	1660 Nov 06 06:56	14°♄37'54	2°04'49	minimum elong	1667 Jan 12 19:33	22°♄45'34	0°04'48
max. Earth dist.	1660 Nov 06 05:59	14°♄37'37	10.92111 AU	behind sun begin	1667 Jan 12 12:44	22°♄43'35	
	1660 Nov 09 08:59	15°♄		behind sun end	1667 Jan 13 02:22	22°♄47'34	
morning rise	1660 Nov 22 22:59	16°♄36'25		max. Earth dist.	1667 Jan 12 13:54	22°♄43'56	11.01772 AU
retrograde	1661 Mar 02 09:39	23°♄38'44		morning rise	1667 Jan 29 11:58	24°♄43'19	
opposition	1661 May 10 17:41	20°♄21'21	2°25'15		1667 Mar 24 01:15	0°♄	
min. Earth dist.	1661 May 10 18:06	20°♄21'17	8.96098 AU	retrograde	1667 May 11 15:43	1°♄50'51	
direct	1661 Jul 20 22:01	16°♄59'58			1667 Jun 30 20:04	30°♄	
evening set	1661 Nov 01 06:27	24°♄13'30		opposition	1667 Jul 21 12:21	28°♄31'25	0°-22'-29
				min. Earth dist.	1667 Jul 21 17:16	28°♄30'30	8.98860 AU
conjunction	1661 Nov 17 23:53	26°♄11'36	1°51'19	direct	1667 Sep 29 15:58	25°♄13'09	
minimum elong	1661 Nov 17 23:55	26°♄11'37	1°51'19		1667 Dec 18 14:54	0°♄	
max. Earth dist.	1661 Nov 17 22:41	26°♄11'15	10.99366 AU	evening set	1668 Jan 07 15:35	2°♄14'29	
morning rise	1661 Dec 04 14:24	28°♄08'54		conjunction	1668 Jan 24 07:34	4°♄12'47	0°-31'-45
	1661 Dec 21 01:23	0°♄		minimum elong	1668 Jan 24 07:33	4°♄12'47	0°31'46
retrograde	1662 Mar 14 06:03	5°♄08'11		max. Earth dist.	1668 Jan 24 01:02	4°♄10'51	10.95486 AU
opposition	1662 May 22 22:39	1°♄51'09	2°05'51	morning rise	1668 Feb 10 01:40	6°♄11'44	
min. Earth dist.	1662 May 22 23:52	1°♄50'55	9.02334 AU	retrograde	1668 May 22 21:38	13°♄25'25	
	1662 Jun 18 11:28	30°♄		opposition	1668 Aug 01 20:04	10°♄04'45	0°-55'-14
direct	1662 Aug 02 04:27	28°♄30'50		min. Earth dist.	1668 Aug 02 01:24	10°♄03'45	8.91618 AU
	1662 Sep 14 17:43	0°♄		direct	1668 Oct 10 12:31	6°♄46'09	
evening set	1662 Nov 12 19:46	5°♄38'43		evening set	1669 Jan 18 07:15	13°♄50'41	
					1669 Jan 28 00:53	15°♄	
conjunction	1662 Nov 29 11:46	7°♄35'52	1°33'32	conjunction	1669 Feb 04 00:21	15°♄50'16	0°-57'-49
minimum elong	1662 Nov 29 11:48	7°♄35'53	1°33'32	minimum elong	1669 Feb 04 00:19	15°♄50'15	0°57'50
max. Earth dist.	1662 Nov 29 09:29	7°♄35'11	11.04559 AU	max. Earth dist.	1669 Feb 03 18:12	15°♄48'25	10.87352 AU
morning rise	1662 Dec 16 01:35	9°♄32'25		morning rise	1669 Feb 20 20:19	17°♄50'42	
retrograde	1663 Mar 25 23:12	16°♄30'08		retrograde	1669 Jun 04 11:27	25°♄11'52	
opposition	1663 Jun 04 01:31	13°♄13'10	1°41'44	opposition	1669 Aug 14 07:34	21°♄49'48	-1°-26'-17
min. Earth dist.	1663 Jun 04 04:29	13°♄12'37	9.06370 AU	min. Earth dist.	1669 Aug 14 12:23	21°♄48'54	8.82690 AU
direct	1663 Aug 14 05:16	9°♄53'43		direct	1669 Oct 22 14:16	18°♄30'40	
evening set	1663 Nov 24 05:24	16°♄57'21		evening set	1670 Jan 30 05:00	25°♄39'49	
conjunction	1663 Dec 10 20:26	18°♄53'56	1°12'13	conjunction	1670 Feb 15 23:45	27°♄41'01	-1°-21'-53
minimum elong	1663 Dec 10 20:28	18°♄53'57	1°12'13	minimum elong	1670 Feb 15 23:43	27°♄41'00	1°21'53
max. Earth dist.	1663 Dec 10 15:55	18°♄52'36	11.07441 AU	max. Earth dist.	1670 Feb 15 18:58	27°♄39'34	10.77679 AU
morning rise	1663 Dec 27 10:19	20°♄50'12		morning rise	1670 Mar 04 21:48	29°♄43'17	
retrograde	1664 Apr 05 16:47	27°♄47'59			1670 Mar 07 06:23	0°♄	
opposition	1664 Jun 15 03:06	24°♄30'50	1°13'51	retrograde	1670 Jun 17 09:12	7°♄12'56	
min. Earth dist.	1664 Jun 15 07:23	24°♄30'02	9.08014 AU	opposition	1670 Aug 26 23:29	3°♄49'24	-1°-54'-19
direct	1664 Aug 25 04:33	21°♄12'02		min. Earth dist.	1670 Aug 27 03:03	3°♄48'43	8.72415 AU
evening set	1664 Dec 04 12:52	28°♄12'52		direct	1670 Nov 03 17:31	0°♄29'32	
	1664 Dec 19 19:50	0°♄		evening set	1671 Feb 11 10:14	7°♄44'41	
conjunction	1664 Dec 21 03:35	0°♄09'21	0°48'10	conjunction	1671 Feb 28 07:00	9°♄47'48	-1°-42'-49
minimum elong	1664 Dec 21 03:37	0°♄09'21	0°48'10	minimum elong	1671 Feb 28 06:58	9°♄47'48	1°42'49
max. Earth dist.	1664 Dec 20 22:12	0°♄07'46	11.07900 AU	max. Earth dist.	1671 Feb 28 02:45	9°♄46'30	10.66844 AU
morning rise	1665 Jan 06 17:57	2°♄05'44		morning rise	1671 Mar 17 07:37	11°♄52'10	
retrograde	1665 Apr 17 12:41	9°♄05'14		retrograde	1671 Jun 30 13:15	19°♄31'02	
opposition	1665 Jun 27 04:52	5°♄47'35	0°43'10	opposition	1671 Sep 08 20:44	16°♄06'03	-2°-17'-53
min. Earth dist.	1665 Jun 27 09:18	5°♄46'46	9.07240 AU	min. Earth dist.	1671 Sep 08 23:32	16°♄05'30	8.61197 AU
direct	1665 Sep 06 01:07	2°♄29'15		direct	1671 Nov 16 01:38	12°♄45'17	
evening set	1665 Dec 15 19:48	9°♄28'44		evening set	1672 Feb 24 00:02	20°♄07'36	
conjunction	1666 Jan 01 10:43	11°♄25'28	0°22'14	conjunction	1672 Mar 11 23:16	22°♄12'56	-1°-59'-27
minimum elong	1666 Jan 01 10:44	11°♄25'28	0°22'14	minimum elong	1672 Mar 11 23:14	22°♄12'55	1°59'28
max. Earth dist.	1666 Jan 01 05:35	11°♄23'58	11.05970 AU	max. Earth dist.	1672 Mar 11 19:12	22°♄11'41	10.55299 AU
morning rise	1666 Jan 18 01:51	13°♄22'21		morning rise	1672 Mar 29 02:58	24°♄19'40	
retrograde	1666 Apr 29 11:52	20°♄25'10			1672 May 22 13:24	0°♄	
opposition	1666 Jul 09 07:41	17°♄06'44	0°10'42	retrograde	1672 Jul 13 01:14	2°♄08'04	
min. Earth dist.	1666 Jul 09 11:57	17°♄05'57	9.04137 AU		1672 Sep 03 20:05	30°♄	
direct	1666 Sep 17 20:55	13°♄48'35		opposition	1672 Sep 20 23:45	28°♄41'42	-2°-35'-33
desc. node	1666 Nov 08 01:58	15°♄53'09					

min. Earth dist.	1672 Sep 21 02:09	28° κ 41'14	8.49520 AU	conjunction	1679 Jun 19 03:14	27° π 44'34	0°-53'-3
direct	1672 Nov 27 16:52	25° κ 19'53		minimum elong	1679 Jun 19 03:16	27° π 44'35	0°53'04
	1673 Feb 11 16:46	0° γ		max. Earth dist.	1679 Jun 19 08:25	27° π 46'15	10.01476 AU
evening set	1673 Mar 07 23:22	2° γ 50'14			1679 Jul 06 12:48	0° ϖ	
				morning rise	1679 Jul 07 07:39	0° ϖ 06'02	
conjunction	1673 Mar 25 01:50	4° γ 58'03	-2°-10'-40	retrograde	1679 Oct 20 16:12	8° ϖ 23'27	
minimum elong	1673 Mar 25 01:49	4° γ 58'03	2°10'41	opposition	1679 Dec 26 10:48	4° ϖ 54'33	0°-46'-27
max. Earth dist.	1673 Mar 24 22:29	4° γ 57'00	10.43573 AU	min. Earth dist.	1679 Dec 26 06:30	4° ϖ 55'27	8.02039 AU
morning rise	1673 Apr 11 09:07	7° γ 07'23		direct	1680 Mar 02 05:03	1° ϖ 25'42	
retrograde	1673 Jul 26 20:45	15° γ 05'07		evening set	1680 Jun 15 03:53	9° ϖ 40'19	
opposition	1673 Oct 04 08:42	11° γ 37'28	-2°-45'-56				
min. Earth dist.	1673 Oct 04 10:34	11° γ 37'06	8.37942 AU	conjunction	1680 Jul 03 08:34	12° ϖ 01'32	0°-20'-50
direct	1673 Dec 10 14:44	8° γ 14'30		minimum elong	1680 Jul 03 08:34	12° ϖ 01'33	0°20'51
evening set	1674 Mar 21 08:44	15° γ 53'25		max. Earth dist.	1680 Jul 03 14:23	12° ϖ 03'25	10.03298 AU
				morning rise	1680 Jul 21 13:01	14° ϖ 22'38	
conjunction	1674 Apr 07 15:14	18° γ 03'56	-2°-15'-28	retrograde	1680 Nov 03 00:07	22° ϖ 34'48	
minimum elong	1674 Apr 07 15:14	18° γ 03'56	2°15'29	opposition	1681 Jan 08 15:08	19° ϖ 06'51	0°-5'-17
max. Earth dist.	1674 Apr 07 13:38	18° γ 03'26	10.32238 AU	min. Earth dist.	1681 Jan 08 10:22	19° ϖ 07'50	8.05260 AU
morning rise	1674 Apr 25 02:28	20° γ 15'59		asc. node	1681 Feb 25 23:48	15° ϖ 57'02	
retrograde	1674 Aug 09 22:51	28° γ 22'12		direct	1681 Mar 16 18:27	15° ϖ 37'38	
opposition	1674 Oct 17 23:22	24° γ 53'30	-2°-47'-51	evening set	1681 Jun 30 06:59	23° ϖ 51'53	
min. Earth dist.	1674 Oct 17 23:57	24° γ 53'22	8.27042 AU				
direct	1674 Dec 23 20:52	21° γ 29'21		conjunction	1681 Jul 18 11:14	26° ϖ 12'12	0°12'30
evening set	1675 Apr 04 04:25	29° γ 16'54		minimum elong	1681 Jul 18 11:13	26° ϖ 12'12	0°12'30
	1675 Apr 09 21:05	0° ϛ		behind sun begin	1681 Jul 18 06:35	26° ϖ 10'43	
				behind sun end	1681 Jul 18 15:52	26° ϖ 13'41	
conjunction	1675 Apr 21 15:27	1° ϛ 30'11	-2°-13'-5	max. Earth dist.	1681 Jul 18 17:18	26° ϖ 14'09	10.07892 AU
minimum elong	1675 Apr 21 15:29	1° ϛ 30'12	2°13'06	morning rise	1681 Aug 05 13:54	28° ϖ 31'58	
max. Earth dist.	1675 Apr 21 15:50	1° ϛ 30'19	10.21893 AU		1681 Aug 17 08:44	0° ϛ	
morning rise	1675 May 09 06:52	3° ϛ 44'56		retrograde	1681 Nov 17 03:06	6° ϛ 37'02	
retrograde	1675 Aug 24 06:32	11° ϛ 58'11		opposition	1682 Jan 22 16:21	3° ϛ 10'13	0°35'43
opposition	1675 Oct 31 19:15	8° ϛ 28'42	-2°-40'-31	min. Earth dist.	1682 Jan 22 11:11	3° ϛ 11'17	8.11102 AU
min. Earth dist.	1675 Oct 31 18:14	8° ϛ 28'55	8.17425 AU		1682 Mar 12 12:34	30° Rϖ	
direct	1676 Jan 06 10:23	5° ϛ 03'24		direct	1682 Mar 31 06:50	29° ϖ 40'55	
evening set	1676 Apr 17 09:55	12° ϛ 59'08			1682 Apr 19 00:03	0° ϛ	
	1676 May 03 02:58	15° ϛ		evening set	1682 Jul 15 06:00	7° ϛ 52'42	
conjunction	1676 May 05 01:45	15° ϛ 15'07	-2°-3'-10	conjunction	1682 Aug 02 08:06	10° ϛ 11'17	0°44'37
minimum elong	1676 May 05 01:47	15° ϛ 15'08	2°03'12	minimum elong	1682 Aug 02 08:04	10° ϛ 11'16	0°44'37
max. Earth dist.	1676 May 05 03:59	15° ϛ 15'50	10.13155 AU	max. Earth dist.	1682 Aug 02 14:11	10° ϛ 13'14	10.14869 AU
morning rise	1676 May 22 21:25	17° ϛ 32'22		morning rise	1682 Aug 20 07:20	12° ϛ 28'56	
retrograde	1676 Sep 06 19:54	25° ϛ 50'37			1682 Sep 10 01:56	15° ϛ	
opposition	1676 Nov 13 19:43	22° ϛ 20'42	-2°-23'-45	retrograde	1682 Nov 30 23:36	20° ϛ 25'46	
min. Earth dist.	1676 Nov 13 17:11	22° ϛ 21'13	8.09686 AU	opposition	1683 Feb 05 13:37	17° ϛ 00'14	1°13'57
direct	1677 Jan 19 05:45	18° ϛ 54'17		min. Earth dist.	1683 Feb 05 08:38	17° ϛ 01'15	8.19078 AU
evening set	1677 May 02 00:09	26° ϛ 57'14			1683 Mar 03 20:46	15° Rϛ	
				direct	1683 Apr 14 16:21	13° ϛ 31'10	
conjunction	1677 May 19 20:39	29° ϛ 15'36	-1°-45'-53		1683 May 26 03:32	15° ϛ	
minimum elong	1677 May 19 20:43	29° ϛ 15'37	1°45'54	evening set	1683 Jul 29 22:13	21° ϛ 38'44	
max. Earth dist.	1677 May 20 00:16	29° ϛ 16'46	10.06578 AU				
	1677 May 25 13:18	0° π		conjunction	1683 Aug 16 20:47	23° ϛ 54'55	1°13'41
morning rise	1677 Jun 06 20:18	1° π 34'59		minimum elong	1683 Aug 16 20:44	23° ϛ 54'54	1°13'41
retrograde	1677 Sep 21 11:50	9° π 55'40		max. Earth dist.	1683 Aug 17 02:18	23° ϛ 56'41	10.23674 AU
opposition	1677 Nov 27 23:29	6° π 25'43	-1°-58'-5	morning rise	1683 Sep 03 15:29	26° ϛ 09'56	
min. Earth dist.	1677 Nov 27 20:03	6° π 26'25	8.04326 AU		1683 Oct 06 16:34	0° π	
direct	1678 Feb 02 08:07	2° π 58'18		retrograde	1683 Dec 14 12:29	3° π 58'07	
evening set	1678 May 16 21:40	11° π 07'06		opposition	1684 Feb 19 06:04	0° π 33'59	1°47'11
				min. Earth dist.	1684 Feb 19 02:02	0° π 34'47	8.28620 AU
conjunction	1678 Jun 03 22:09	13° π 27'14	-1°-22'-3		1684 Feb 26 07:34	30° Rϛ	
minimum elong	1678 Jun 03 22:13	13° π 27'15	1°22'03	direct	1684 Apr 27 21:48	27° ϛ 05'26	
max. Earth dist.	1678 Jun 04 02:35	13° π 28'41	10.02593 AU		1684 Jun 26 15:58	0° π	
morning rise	1678 Jun 22 00:53	15° π 48'06		evening set	1684 Aug 12 06:13	5° π 07'29	
retrograde	1678 Oct 06 03:28	24° π 08'27					
opposition	1678 Dec 12 04:59	20° π 38'52	-1°-24'-57	conjunction	1684 Aug 30 00:17	7° π 20'54	1°38'09
min. Earth dist.	1678 Dec 12 01:10	20° π 39'40	8.01714 AU	minimum elong	1684 Aug 30 00:14	7° π 20'53	1°38'09
direct	1679 Feb 16 16:27	17° π 10'37		max. Earth dist.	1684 Aug 30 04:33	7° π 22'15	10.33778 AU
evening set	1679 May 31 23:54	25° π 23'25		morning rise	1684 Sep 16 13:52	9° π 32'57	

retrograde	1684 Dec 26 17:52	17° \mathring{M} 12'27			1691 Feb 14 20:16	0° \mathring{A}	
opposition	1685 Mar 03 17:12	13° \mathring{M} 49'44	2°13'51	retrograde	1691 Mar 09 12:08	0° \mathring{A} 25'56	
min. Earth dist.	1685 Mar 03 14:30	13° \mathring{M} 50'16	8.39234 AU		1691 Apr 01 10:53	30° \mathring{R} \mathring{M}	
direct	1685 May 11 21:28	10° \mathring{M} 21'57		opposition	1691 May 18 01:02	27° \mathring{M} 08'18	2°14'58
evening set	1685 Aug 26 04:39	18° \mathring{M} 17'20		min. Earth dist.	1691 May 18 03:11	27° \mathring{M} 07'54	8.97779 AU
				direct	1691 Jul 28 06:21	23° \mathring{M} 46'58	
conjunction	1685 Sep 12 17:43	20° \mathring{M} 27'49	1°56'55		1691 Oct 30 18:17	0° \mathring{A}	
minimum elong	1685 Sep 12 17:40	20° \mathring{M} 27'48	1°56'55	evening set	1691 Nov 08 05:34	0° \mathring{A} 58'01	
max. Earth dist.	1685 Sep 12 20:23	20° \mathring{M} 28'39	10.44713 AU				
morning rise	1685 Sep 30 02:07	22° \mathring{M} 36'52		conjunction	1691 Nov 24 22:10	2° \mathring{A} 55'46	1°41'44
	1685 Dec 27 13:50	0° \mathring{A}		minimum elong	1691 Nov 24 22:13	2° \mathring{A} 55'47	1°41'44
retrograde	1686 Jan 08 15:33	0° \mathring{A} 07'55		max. Earth dist.	1691 Nov 24 19:12	2° \mathring{A} 54'53	11.00414 AU
	1686 Jan 20 17:38	30° \mathring{R} \mathring{M}		morning rise	1691 Dec 11 12:31	4° \mathring{A} 52'51	
opposition	1686 Mar 16 23:03	26° \mathring{M} 46'29	2°32'57	retrograde	1692 Mar 20 05:34	11° \mathring{A} 51'47	
min. Earth dist.	1686 Mar 16 21:26	26° \mathring{M} 46'48	8.50437 AU	opposition	1692 May 29 04:52	8° \mathring{A} 34'15	1°52'46
direct	1686 May 25 15:39	23° \mathring{M} 19'40		min. Earth dist.	1692 May 29 07:03	8° \mathring{A} 33'51	9.02742 AU
	1686 Aug 30 05:31	0° \mathring{A}		direct	1692 Aug 08 10:26	5° \mathring{A} 13'51	
evening set	1686 Sep 08 16:28	1° \mathring{A} 07'32		evening set	1692 Nov 18 16:48	12° \mathring{A} 19'59	
conjunction	1686 Sep 26 00:35	3° \mathring{A} 15'06	2°09'26	conjunction	1692 Dec 05 08:25	14° \mathring{A} 16'59	1°21'50
minimum elong	1686 Sep 26 00:33	3° \mathring{A} 15'06	2°09'26	minimum elong	1692 Dec 05 08:28	14° \mathring{A} 17'00	1°21'50
max. Earth dist.	1686 Sep 26 01:43	3° \mathring{A} 15'27	10.55981 AU	max. Earth dist.	1692 Dec 05 05:40	14° \mathring{A} 16'10	11.04378 AU
morning rise	1686 Oct 13 04:08	5° \mathring{A} 21'15		morning rise	1692 Dec 21 22:17	16° \mathring{A} 13'32	
retrograde	1687 Jan 21 05:12	12° \mathring{A} 44'24		retrograde	1693 Apr 01 00:20	23° \mathring{A} 11'46	
opposition	1687 Mar 29 23:22	9° \mathring{A} 24'07	2°44'05	opposition	1693 Jun 10 07:09	19° \mathring{A} 54'08	1°26'22
min. Earth dist.	1687 Mar 29 22:04	9° \mathring{A} 24'22	8.61702 AU	min. Earth dist.	1693 Jun 10 09:24	19° \mathring{A} 53'43	9.05613 AU
direct	1687 Jun 08 03:55	5° \mathring{A} 58'22		direct	1693 Aug 20 11:15	16° \mathring{A} 34'32	
evening set	1687 Sep 21 17:47	13° \mathring{A} 38'16		evening set	1693 Nov 30 01:09	23° \mathring{A} 37'02	
conjunction	1687 Oct 08 21:30	15° \mathring{A} 43'07	2°15'29	conjunction	1693 Dec 16 16:11	25° \mathring{A} 33'42	0°58'51
minimum elong	1687 Oct 08 21:29	15° \mathring{A} 43'07	2°15'29	minimum elong	1693 Dec 16 16:13	25° \mathring{A} 33'43	0°58'51
max. Earth dist.	1687 Oct 08 22:03	15° \mathring{A} 43'17	10.67062 AU	max. Earth dist.	1693 Dec 16 12:57	25° \mathring{A} 32'45	11.06196 AU
morning rise	1687 Oct 25 20:45	17° \mathring{A} 46'39		morning rise	1694 Jan 02 06:15	27° \mathring{A} 30'09	
retrograde	1688 Feb 02 13:56	25° \mathring{A} 02'38			1694 Jan 24 23:15	0° \mathring{B}	
opposition	1688 Apr 10 18:15	21° \mathring{A} 43'19	2°47'20	retrograde	1694 Apr 12 20:09	4° \mathring{B} 29'10	
min. Earth dist.	1688 Apr 10 17:17	21° \mathring{A} 43'30	8.72507 AU	opposition	1694 Jun 22 08:59	1° \mathring{B} 11'15	0°56'44
direct	1688 Jun 20 09:04	18° \mathring{A} 18'43		min. Earth dist.	1694 Jun 22 12:07	1° \mathring{B} 10'41	9.06305 AU
evening set	1688 Oct 03 09:05	25° \mathring{A} 50'35			1694 Jul 08 20:44	30° \mathring{R} \mathring{A}	
conjunction	1688 Oct 20 09:04	27° \mathring{A} 53'05	2°15'16	direct	1694 Sep 01 07:18	27° \mathring{A} 52'17	
minimum elong	1688 Oct 20 09:04	27° \mathring{A} 53'05	2°15'16		1694 Oct 23 13:26	0° \mathring{B}	
max. Earth dist.	1688 Oct 20 09:19	27° \mathring{A} 53'09	10.77447 AU	evening set	1694 Dec 11 08:12	4° \mathring{B} 52'33	
morning rise	1688 Nov 06 04:42	29° \mathring{A} 54'19		conjunction	1694 Dec 27 23:00	6° \mathring{B} 49'15	0°33'37
	1688 Nov 06 23:56	0° \mathring{M}		minimum elong	1694 Dec 27 23:01	6° \mathring{B} 49'16	0°33'37
retrograde	1689 Feb 13 18:03	7° \mathring{M} 04'08		max. Earth dist.	1694 Dec 27 18:35	6° \mathring{B} 47'57	11.05810 AU
opposition	1689 Apr 23 08:27	3° \mathring{M} 45'36	2°43'06	morning rise	1695 Jan 13 13:54	8° \mathring{B} 46'00	
min. Earth dist.	1689 Apr 23 08:20	3° \mathring{M} 45'37	8.82372 AU	retrograde	1695 Apr 24 15:43	15° \mathring{B} 47'23	
direct	1689 Jul 03 05:13	0° \mathring{M} 22'09		opposition	1695 Jul 04 11:12	12° \mathring{B} 28'56	0°24'54
evening set	1689 Oct 15 15:15	7° \mathring{M} 46'18		min. Earth dist.	1695 Jul 04 15:07	12° \mathring{B} 28'13	9.04788 AU
conjunction	1689 Nov 01 12:03	9° \mathring{M} 46'48	2°09'10	direct	1695 Sep 13 03:11	9° \mathring{B} 10'22	
minimum elong	1689 Nov 01 12:05	9° \mathring{M} 46'49	2°09'09	evening set	1695 Dec 22 15:47	16° \mathring{B} 09'58	
max. Earth dist.	1689 Nov 01 11:35	9° \mathring{M} 46'40	10.86690 AU	conjunction	1696 Jan 08 06:49	18° \mathring{B} 07'03	0°07'02
morning rise	1689 Nov 18 05:00	11° \mathring{M} 46'13		minimum elong	1696 Jan 08 06:49	18° \mathring{B} 07'03	0°07'02
	1689 Dec 17 14:21	15° \mathring{M}		behind sun begin	1696 Jan 08 00:21	18° \mathring{B} 05'10	
retrograde	1690 Feb 25 16:07	18° \mathring{M} 51'03		behind sun end	1696 Jan 08 13:17	18° \mathring{B} 08'56	
opposition	1690 May 05 18:33	15° \mathring{M} 33'04	2°32'02	max. Earth dist.	1696 Jan 08 02:03	18° \mathring{B} 05'40	11.03218 AU
min. Earth dist.	1690 May 05 19:53	15° \mathring{M} 32'49	8.90901 AU	morning rise	1696 Jan 24 22:47	20° \mathring{B} 04'25	
	1690 May 13 03:20	15° \mathring{R} \mathring{M}		desc. node	1696 Apr 14 09:44	26° \mathring{B} 47'36	
direct	1690 Jul 15 20:15	12° \mathring{M} 10'43		retrograde	1696 May 05 16:50	27° \mathring{B} 09'41	
	1690 Sep 14 17:14	15° \mathring{M}		opposition	1696 Jul 15 14:45	23° \mathring{B} 50'30	0°-8'-6
evening set	1690 Oct 27 13:39	19° \mathring{M} 27'51		min. Earth dist.	1696 Jul 15 18:26	23° \mathring{B} 49'49	9.01108 AU
conjunction	1690 Nov 13 07:56	21° \mathring{M} 26'45	1°57'45	direct	1696 Sep 23 23:36	20° \mathring{B} 32'09	
minimum elong	1690 Nov 13 07:58	21° \mathring{M} 26'45	1°57'45	evening set	1697 Jan 02 01:27	27° \mathring{B} 32'33	
max. Earth dist.	1690 Nov 13 05:47	21° \mathring{M} 26'06	10.94442 AU	conjunction	1697 Jan 18 17:11	29° \mathring{B} 30'22	0°-20'-6
morning rise	1690 Nov 29 23:13	23° \mathring{M} 24'47		minimum elong	1697 Jan 18 17:10	29° \mathring{B} 30'22	0°20'08

max. Earth dist.	1697 Jan 18 13:16	29°☾29'13	10.98507 AU	minimum elong	1703 Apr 02 23:35	12°♃28'49	2°14'02
	1697 Jan 22 20:53	0°♁		max. Earth dist.	1703 Apr 02 21:38	12°♃28'13	10.40251 AU
morning rise	1697 Feb 04 10:24	1°♁28'43		morning rise	1703 Apr 20 08:40	14°♃39'12	
retrograde	1697 May 17 22:30	8°♁39'21		retrograde	1703 Aug 05 01:37	22°♃40'11	
opposition	1697 Jul 27 20:54	5°♁19'13	0°-41'-9	opposition	1703 Oct 13 07:02	19°♃12'39	-2°-47'-46
min. Earth dist.	1697 Jul 27 23:52	5°♁18'40	8.95398 AU	min. Earth dist.	1703 Oct 13 07:48	19°♃12'30	8.34788 AU
direct	1697 Oct 05 19:09	2°♁00'53		direct	1703 Dec 19 08:03	15°♃49'46	
evening set	1698 Jan 13 14:53	9°♁03'34		evening set	1704 Mar 29 09:10	23°♃31'57	
conjunction	1698 Jan 30 07:30	11°♁02'28	0°-46'-40	conjunction	1704 Apr 15 17:45	25°♃43'33	-2°-14'-53
minimum elong	1698 Jan 30 07:29	11°♁02'27	0°46'41	minimum elong	1704 Apr 15 17:46	25°♃43'33	2°14'55
max. Earth dist.	1698 Jan 30 03:42	11°♁01'20	10.91851 AU	max. Earth dist.	1704 Apr 15 16:04	25°♃43'01	10.29263 AU
morning rise	1698 Feb 16 02:25	13°♁02'06		morning rise	1704 May 03 07:04	27°♃56'39	
	1698 Mar 05 10:42	15°♁			1704 May 20 06:32	0°♃	
retrograde	1698 May 30 10:10	20°♁19'25		retrograde	1704 Aug 18 06:09	6°♃05'27	
opposition	1698 Aug 09 06:29	16°♁58'12	-1°-13'-2	opposition	1704 Oct 25 23:51	2°♃36'57	-2°-44'-39
min. Earth dist.	1698 Aug 09 09:22	16°♁57'39	8.87870 AU	min. Earth dist.	1704 Oct 26 00:19	2°♃36'51	8.24299 AU
	1698 Sep 06 10:28	15°♁			1704 Dec 02 03:22	30°♁	
direct	1698 Oct 17 17:21	13°♁39'37		direct	1704 Dec 31 17:11	29°♃12'47	
	1698 Nov 26 20:00	15°♁			1705 Jan 29 23:13	0°♃	
evening set	1699 Jan 25 09:48	20°♁46'05		evening set	1705 Apr 12 09:17	7°♃03'27	
conjunction	1699 Feb 11 03:36	22°♁46'22	-1°-11'-41	conjunction	1705 Apr 29 22:34	9°♃17'49	-2°-8'-23
minimum elong	1699 Feb 11 03:34	22°♁46'22	1°11'42	minimum elong	1705 Apr 29 22:37	9°♃17'50	2°08'25
max. Earth dist.	1699 Feb 10 23:11	22°♁45'02	10.83500 AU	max. Earth dist.	1705 Apr 29 21:58	9°♃17'37	10.19444 AU
morning rise	1699 Feb 28 00:39	24°♁47'38		morning rise	1705 May 17 16:17	11°♃33'35	
	1699 Apr 19 23:19	0°♃			1705 Jun 15 15:03	15°♃	
retrograde	1699 Jun 12 03:15	2°♃12'43		retrograde	1705 Sep 01 16:02	19°♃48'23	
	1699 Aug 06 03:11	30°♁		opposition	1705 Nov 08 21:22	16°♃19'11	-2°-32'-11
opposition	1699 Aug 21 20:03	28°♁50'18	-1°-42'-27	min. Earth dist.	1705 Nov 08 21:09	16°♃19'14	8.15297 AU
min. Earth dist.	1699 Aug 21 23:20	28°♁49'40	8.78808 AU		1705 Nov 25 13:07	15°♁	
direct	1699 Oct 29 18:24	25°♁31'14		direct	1706 Jan 14 09:21	12°♃53'43	
	1700 Jan 13 12:20	0°♃			1706 Mar 03 22:03	15°♃	
evening set	1700 Feb 06 11:21	2°♃42'54		evening set	1706 Apr 26 18:38	20°♃52'11	
conjunction	1700 Feb 23 06:54	4°♃44'53	-1°-34'-3	conjunction	1706 May 14 12:48	23°♃09'08	-1°-54'-27
minimum elong	1700 Feb 23 06:51	4°♃44'52	1°34'04	minimum elong	1706 May 14 12:52	23°♃09'09	1°54'28
max. Earth dist.	1700 Feb 23 02:54	4°♃43'40	10.73772 AU	max. Earth dist.	1706 May 14 13:47	23°♃09'26	10.11427 AU
morning rise	1700 Mar 12 06:18	6°♃48'02		morning rise	1706 Jun 01 10:41	25°♃27'16	
retrograde	1700 Jun 25 02:36	14°♃21'47			1706 Jul 10 13:33	0°♁	
opposition	1700 Sep 03 14:37	10°♃58'03	-2°-8'-2	retrograde	1706 Sep 16 04:52	3°♁45'47	
min. Earth dist.	1700 Sep 03 17:31	10°♃57'30	8.68559 AU	opposition	1706 Nov 22 22:42	0°♁16'12	-2°-10'-34
direct	1700 Nov 11 01:26	7°♃38'19		min. Earth dist.	1706 Nov 22 21:21	0°♁16'28	8.08358 AU
evening set	1701 Feb 18 20:38	14°♃56'20			1706 Nov 26 05:46	30°♁	
				direct	1707 Jan 28 09:10	26°♃49'29	
conjunction	1701 Mar 07 18:34	17°♃00'20	-1°-52'-38		1707 Mar 29 18:29	0°♁	
minimum elong	1701 Mar 07 18:32	17°♃00'20	1°52'39	evening set	1707 May 11 11:46	4°♁54'34	
max. Earth dist.	1701 Mar 07 15:50	16°♃59'30	10.63038 AU	conjunction	1707 May 29 10:25	7°♁13'38	-1°-33'-34
morning rise	1701 Mar 24 20:40	19°♃05'39		minimum elong	1707 May 29 10:28	7°♁13'39	1°33'35
retrograde	1701 Jul 08 10:51	26°♃48'37		max. Earth dist.	1707 May 29 13:19	7°♁14'34	10.05726 AU
opposition	1701 Sep 16 14:29	23°♃23'31	-2°-28'-21	morning rise	1707 Jun 16 11:42	9°♁33'36	
min. Earth dist.	1701 Sep 16 16:23	23°♃23'08	8.57511 AU	retrograde	1707 Sep 30 18:43	17°♁53'17	
direct	1701 Nov 23 13:54	20°♃02'53		opposition	1707 Dec 07 02:28	14°♁23'38	-1°-40'-48
evening set	1702 Mar 03 15:02	27°♃28'16		min. Earth dist.	1707 Dec 06 23:38	14°♁24'13	8.03932 AU
conjunction	1702 Mar 20 15:56	29°♃34'35	-2°-6'-18	direct	1708 Feb 11 14:26	10°♁55'50	
minimum elong	1702 Mar 20 15:55	29°♃34'34	2°06'19	evening set	1708 May 25 10:48	19°♁05'53	
max. Earth dist.	1702 Mar 20 14:03	29°♃33'59	10.51711 AU	conjunction	1708 Jun 12 13:00	21°♁26'26	-1°-6'-50
	1702 Mar 24 01:38	0°♃		minimum elong	1708 Jun 12 13:03	21°♁26'26	1°06'52
morning rise	1702 Apr 06 21:14	1°♃42'18		max. Earth dist.	1708 Jun 12 17:23	21°♁27'51	10.02714 AU
retrograde	1702 Jul 22 03:00	9°♃34'29		morning rise	1708 Jun 30 16:38	23°♁47'28	
opposition	1702 Sep 29 19:48	6°♃08'05	-2°-42'00		1708 Aug 26 13:29	0°♁	
min. Earth dist.	1702 Sep 29 20:55	6°♃07'52	8.46083 AU	retrograde	1708 Oct 14 07:51	2°♁05'39	
direct	1702 Dec 06 06:59	2°♃46'23			1708 Dec 02 22:58	30°♁	
evening set	1703 Mar 16 19:09	10°♃19'58		opposition	1708 Dec 20 07:11	28°♁36'19	-1°-4'-38
conjunction	1703 Apr 02 23:36	12°♃28'50	-2°-14'-1	min. Earth dist.	1708 Dec 20 03:26	28°♁37'05	8.02312 AU

direct	1709 Feb 24 23:17	25°II07'36		opposition	1715 Mar 12 04:28	21°mp00'39	2°24'56
	1709 May 12 21:00	0°☾		min. Earth dist.	1715 Mar 12 00:47	21°mp01'23	8.44315 AU
evening set	1709 Jun 09 13:14	3°☾20'43		direct	1715 May 20 16:13	17°mp32'56	
				evening set	1715 Sep 03 19:00	25°mp24'18	
conjunction	1709 Jun 27 17:35	5°☾41'52	0°-35'-58	conjunction	1715 Sep 21 05:40	27°mp33'17	2°04'18
minimum elong	1709 Jun 27 17:37	5°☾41'53	0°35'59	minimum elong	1715 Sep 21 05:38	27°mp33'17	2°04'18
max. Earth dist.	1709 Jun 27 22:43	5°☾43'32	10.02575 AU	max. Earth dist.	1715 Sep 21 09:23	27°mp34'26	10.50010 AU
morning rise	1709 Jul 15 22:03	8°☾03'05		morning rise	1715 Oct 08 11:27	29°mp40'49	
retrograde	1709 Oct 28 18:31	16°☾17'20			1715 Oct 11 02:54	0°♁	
opposition	1710 Jan 03 11:26	12°☾48'38	0°-24'-31	retrograde	1716 Jan 16 17:57	7°♁07'33	
min. Earth dist.	1710 Jan 03 07:22	12°☾49'29	8.03583 AU	opposition	1716 Mar 24 07:03	3°♁46'21	2°39'48
direct	1710 Mar 11 09:54	9°☾19'15		min. Earth dist.	1716 Mar 24 04:29	3°♁46'52	8.55911 AU
evening set	1710 Jun 24 16:15	17°☾33'22		direct	1716 Jun 02 06:09	0°♁19'48	
				evening set	1716 Sep 16 01:09	8°♁03'20	
conjunction	1710 Jul 12 20:54	19°☾54'09	0°-3'-3	conjunction	1716 Oct 03 07:03	10°♁09'28	2°13'22
minimum elong	1710 Jul 12 20:56	19°☾54'10	0°03'04	minimum elong	1716 Oct 03 07:01	10°♁09'28	2°13'22
behind sun begin	1710 Jul 12 13:35	19°☾51'48		max. Earth dist.	1716 Oct 03 09:30	10°♁10'14	10.61557 AU
behind sun end	1710 Jul 13 04:16	19°☾56'31		morning rise	1716 Oct 20 08:12	12°♁14'12	
max. Earth dist.	1710 Jul 13 02:12	19°☾55'50	10.05284 AU	retrograde	1717 Jan 28 05:02	19°♁33'20	
morning rise	1710 Jul 31 00:28	22°☾14'35		opposition	1717 Apr 06 04:14	16°♁13'24	2°46'41
asc. node	1710 Aug 16 05:19	24°☾14'49		min. Earth dist.	1717 Apr 06 02:59	16°♁13'39	8.67327 AU
	1710 Oct 22 18:48	0°♁		direct	1717 Jun 15 13:34	12°♁48'07	
retrograde	1710 Nov 12 00:33	0°♁22'52		evening set	1717 Sep 28 21:08	20°♁23'39	
	1710 Dec 02 05:25	30°R☾					
opposition	1711 Jan 17 13:37	26°☾55'07	0°16'48	conjunction	1717 Oct 15 22:44	22°♁27'13	2°16'02
min. Earth dist.	1711 Jan 17 09:44	26°☾55'55	8.07645 AU	minimum elong	1717 Oct 15 22:44	22°♁27'13	2°16'02
direct	1711 Mar 25 22:15	23°☾25'22		max. Earth dist.	1717 Oct 15 23:29	22°♁27'27	10.72667 AU
	1711 Jun 26 10:44	0°♁		morning rise	1717 Nov 01 20:04	24°♁29'29	
evening set	1711 Jul 09 16:46	1°♁38'21			1717 Dec 26 14:44	0°♁	
				retrograde	1718 Feb 09 10:10	1°♁41'57	
conjunction	1711 Jul 27 20:01	3°♁57'52	0°29'52		1718 Mar 27 17:23	30°R♁	
minimum elong	1711 Jul 27 19:59	3°♁57'51	0°29'53	opposition	1718 Apr 18 20:35	28°♁23'05	2°45'51
max. Earth dist.	1711 Jul 28 00:54	3°♁59'26	10.10653 AU	min. Earth dist.	1718 Apr 18 20:03	28°♁23'11	8.78042 AU
morning rise	1711 Aug 14 21:02	6°♁16'38		direct	1718 Jun 28 13:58	24°♁59'09	
retrograde	1711 Nov 25 23:14	14°♁17'27			1718 Sep 19 15:29	0°♁	
opposition	1712 Jan 31 12:29	10°♁50'51	0°56'34	evening set	1718 Oct 11 07:23	2°♁26'48	
min. Earth dist.	1712 Jan 31 08:50	10°♁51'36	8.14226 AU				
direct	1712 Apr 08 09:37	7°♁21'06		conjunction	1718 Oct 28 05:31	4°♁28'10	2°12'37
	1712 Jul 19 08:37	15°♁		minimum elong	1718 Oct 28 05:32	4°♁28'10	2°12'36
evening set	1712 Jul 23 12:01	15°♁30'57		max. Earth dist.	1718 Oct 28 05:21	4°♁28'07	10.82852 AU
				morning rise	1718 Nov 13 23:49	6°♁28'22	
conjunction	1712 Aug 10 12:20	17°♁48'24	1°00'33	retrograde	1719 Feb 21 10:50	13°♁35'20	
minimum elong	1712 Aug 10 12:18	17°♁48'23	1°00'34	opposition	1719 May 01 08:28	10°♁17'17	2°37'52
max. Earth dist.	1712 Aug 10 16:39	17°♁49'47	10.18324 AU	min. Earth dist.	1719 May 01 08:04	10°♁17'22	8.87592 AU
morning rise	1712 Aug 28 09:30	20°♁04'49		direct	1719 Jul 11 08:57	6°♁54'40	
retrograde	1712 Dec 08 14:09	27°♁57'16		evening set	1719 Oct 23 09:26	14°♁14'59	
opposition	1713 Feb 13 06:59	24°♁31'58	1°32'21		1719 Oct 29 18:34	15°♁	
min. Earth dist.	1713 Feb 13 03:14	24°♁32'43	8.22891 AU	conjunction	1719 Nov 09 04:56	16°♁14'32	2°03'36
direct	1713 Apr 22 17:59	21°♁02'34		minimum elong	1719 Nov 09 04:58	16°♁14'33	2°03'36
evening set	1713 Aug 06 23:56	29°♁07'32		max. Earth dist.	1719 Nov 09 04:39	16°♁14'27	10.91682 AU
	1713 Aug 13 23:48	0°mp		morning rise	1719 Nov 25 20:56	18°♁13'07	
conjunction	1713 Aug 24 20:10	1°mp22'23	1°27'18	retrograde	1720 Mar 04 09:45	25°♁15'46	
minimum elong	1713 Aug 24 20:07	1°mp22'22	1°27'19	opposition	1720 May 12 16:30	21°♁58'20	2°23'29
max. Earth dist.	1713 Aug 25 00:12	1°mp23'39	10.27809 AU	min. Earth dist.	1720 May 12 16:54	21°♁58'15	8.95587 AU
morning rise	1713 Sep 11 12:27	3°mp35'57		direct	1720 Jul 22 20:30	18°♁36'57	
retrograde	1713 Dec 21 22:11	11°mp19'40		evening set	1720 Nov 03 04:36	25°♁50'41	
opposition	1714 Feb 26 20:22	7°mp55'44	2°02'14				
min. Earth dist.	1714 Feb 26 16:30	7°mp56'30	8.33110 AU	conjunction	1720 Nov 19 22:03	27°♁48'53	1°49'39
direct	1714 May 06 20:22	4°mp27'02		minimum elong	1720 Nov 19 22:06	27°♁48'54	1°49'39
evening set	1714 Aug 21 02:37	12°mp25'42		max. Earth dist.	1720 Nov 19 20:52	27°♁48'32	10.98795 AU
				morning rise	1720 Dec 06 12:37	29°♁46'18	
conjunction	1714 Sep 07 18:09	14°mp37'39	1°48'50		1720 Dec 08 12:00	0°♁	
minimum elong	1714 Sep 07 18:06	14°mp37'38	1°48'50	retrograde	1721 Mar 16 04:30	6°♁45'58	
max. Earth dist.	1714 Sep 07 22:07	14°mp38'54	10.38565 AU	opposition	1721 May 24 21:50	3°♁28'54	2°03'34
morning rise	1714 Sep 25 05:07	16°mp48'11					
retrograde	1715 Jan 04 00:14	24°mp23'12					

min. Earth dist.	1721 May 24 23:40	3°♂28'33	9.01710 AU		1727 Jun 09 12:18	15°R♁	
direct	1721 Aug 04 01:38	0°♂08'34		opposition	1727 Aug 04 21:54	11°♁49'26	0°-58'-29
evening set	1721 Nov 14 18:14	7°♂16'47		min. Earth dist.	1727 Aug 05 02:47	11°♁48'31	8.90921 AU
				direct	1727 Oct 13 15:07	8°♁30'51	
conjunction	1721 Dec 01 10:10	9°♂14'01	1°31'28		1728 Jan 16 05:26	15°♁	
minimum elong	1721 Dec 01 10:12	9°♂14'02	1°31'28	evening set	1728 Jan 21 08:19	15°♁35'49	
max. Earth dist.	1721 Dec 01 07:14	9°♂13'09	11.03905 AU				
morning rise	1721 Dec 18 00:10	11°♂10'42		conjunction	1728 Feb 07 01:37	17°♁35'32	-1°00'-21
retrograde	1722 Mar 27 22:20	18°♂08'56		minimum elong	1728 Feb 07 01:35	17°♁35'32	1°00'22
opposition	1722 Jun 06 01:09	14°♂51'55	1°39'01	max. Earth dist.	1728 Feb 06 20:29	17°♁34'00	10.86658 AU
min. Earth dist.	1722 Jun 06 04:17	14°♂51'20	9.05697 AU	morning rise	1728 Feb 23 21:36	19°♁36'07	
direct	1722 Aug 16 05:15	11°♂32'27		retrograde	1728 Jun 06 14:58	26°♁57'54	
evening set	1722 Nov 26 04:05	18°♂36'25		opposition	1728 Aug 16 09:43	23°♁35'48	-1°-29'-15
				min. Earth dist.	1728 Aug 16 13:37	23°♁35'04	8.82016 AU
conjunction	1722 Dec 12 19:12	20°♂33'07	1°09'49	direct	1728 Oct 24 14:52	20°♁16'40	
minimum elong	1722 Dec 12 19:14	20°♂33'07	1°09'50	evening set	1729 Feb 01 06:43	27°♁26'16	
max. Earth dist.	1722 Dec 12 14:59	20°♂31'52	11.06768 AU				
morning rise	1722 Dec 29 09:14	22°♂29'30		conjunction	1729 Feb 18 01:33	29°♁27'35	-1°-24'-7
retrograde	1723 Apr 08 16:57	29°♂27'49		minimum elong	1729 Feb 18 01:31	29°♁27'34	1°24'08
opposition	1723 Jun 18 03:06	26°♂10'35	1°10'48	max. Earth dist.	1729 Feb 17 21:04	29°♁26'13	10.77021 AU
min. Earth dist.	1723 Jun 18 06:39	26°♂09'56	9.07338 AU		1729 Feb 22 12:25	0°♁	
direct	1723 Aug 28 04:11	22°♂51'48		morning rise	1729 Mar 06 23:42	1°♁29'58	
evening set	1723 Dec 07 11:49	29°♂52'57		retrograde	1729 Jun 19 12:07	9°♁00'12	
	1723 Dec 08 12:17	0°♁		opposition	1729 Aug 29 02:11	5°♁36'37	-1°-56'-49
				min. Earth dist.	1729 Aug 29 05:21	5°♁36'01	8.71793 AU
conjunction	1723 Dec 24 02:45	1°♁49'33	0°45'33	direct	1729 Nov 05 18:53	2°♁16'44	
minimum elong	1723 Dec 24 02:46	1°♁49'33	0°45'33	evening set	1730 Feb 13 12:30	9°♁32'18	
max. Earth dist.	1723 Dec 23 22:22	1°♁48'15	11.07220 AU				
morning rise	1724 Jan 09 17:08	3°♁46'03		conjunction	1730 Mar 02 09:17	11°♁35'32	-1°-44'-37
retrograde	1724 Apr 19 13:44	10°♁46'08		minimum elong	1730 Mar 02 09:14	11°♁35'31	1°44'38
opposition	1724 Jun 29 05:13	7°♁28'25	0°39'52	max. Earth dist.	1730 Mar 02 04:40	11°♁34'07	10.66260 AU
min. Earth dist.	1724 Jun 29 08:59	7°♁27'43	9.06551 AU	morning rise	1730 Mar 19 10:08	13°♁40'01	
direct	1724 Sep 08 00:53	4°♁10'05		retrograde	1730 Jul 02 17:08	21°♁19'23	
evening set	1724 Dec 17 19:17	11°♁09'56		opposition	1730 Sep 10 23:52	17°♁54'20	-2°-19'-48
				min. Earth dist.	1730 Sep 11 02:55	17°♁53'45	8.60661 AU
conjunction	1725 Jan 03 10:16	13°♁06'48	0°19'28	direct	1730 Nov 18 04:11	14°♁33'31	
minimum elong	1725 Jan 03 10:16	13°♁06'48	0°19'28	evening set	1731 Feb 26 02:51	21°♁56'11	
max. Earth dist.	1725 Jan 03 05:20	13°♁05'22	11.05271 AU				
morning rise	1725 Jan 20 01:30	15°♁03'49		conjunction	1731 Mar 15 02:14	24°♁01'38	-2°00'-43
retrograde	1725 May 01 13:49	22°♁07'12		minimum elong	1731 Mar 15 02:12	24°♁01'37	2°00'44
opposition	1725 Jul 11 08:32	18°♁48'45	0°07'17	max. Earth dist.	1731 Mar 14 22:09	24°♁00'22	10.54817 AU
min. Earth dist.	1725 Jul 11 12:57	18°♁47'57	9.03431 AU	morning rise	1731 Apr 01 06:12	26°♁08'29	
direct	1725 Sep 19 20:08	15°♁30'37			1731 May 05 12:46	0°♁	
desc. node	1725 Oct 02 05:00	15°♁38'10		retrograde	1731 Jul 16 04:51	3°♁57'14	
evening set	1725 Dec 29 04:14	22°♁30'40		opposition	1731 Sep 24 02:59	0°♁30'48	-2°-36'-45
				min. Earth dist.	1731 Sep 24 05:36	0°♁30'17	8.49099 AU
conjunction	1726 Jan 14 19:30	24°♁28'08	0°-7'-34		1731 Sep 30 17:01	30°R♁	
minimum elong	1726 Jan 14 19:30	24°♁28'08	0°07'35	direct	1731 Nov 30 19:22	27°♁08'55	
behind sun begin	1726 Jan 14 13:09	24°♁26'17			1732 Jan 27 18:51	0°♁	
behind sun end	1726 Jan 15 01:51	24°♁30'00		evening set	1732 Mar 10 02:34	4°♁39'34	
max. Earth dist.	1726 Jan 14 13:20	24°♁26'20	11.01062 AU				
morning rise	1726 Jan 31 12:09	26°♁26'02		conjunction	1732 Mar 27 05:19	6°♁47'29	-2°-11'-18
	1726 Mar 05 18:23	0°♁		minimum elong	1732 Mar 27 05:18	6°♁47'29	2°11'19
retrograde	1726 May 13 15:45	3°♁34'13		max. Earth dist.	1732 Mar 27 02:48	6°♁46'41	10.43210 AU
opposition	1726 Jul 23 13:48	0°♁14'44	0°-25'-53	morning rise	1732 Apr 13 12:45	8°♁56'53	
min. Earth dist.	1726 Jul 23 19:01	0°♁13'46	8.98152 AU	retrograde	1732 Jul 28 23:28	16°♁54'50	
	1726 Jul 26 21:24	30°R♁		opposition	1732 Oct 06 12:01	13°♁27'07	-2°-46'-18
direct	1726 Oct 01 15:42	26°♁56'30		min. Earth dist.	1732 Oct 06 13:27	13°♁26'50	8.37649 AU
	1726 Dec 03 04:32	0°♁		direct	1732 Dec 12 18:47	10°♁04'05	
evening set	1727 Jan 09 16:01	3°♁58'17		evening set	1733 Mar 23 12:11	17°♁43'10	
conjunction	1727 Jan 26 08:07	5°♁56'42	0°-34'-29	conjunction	1733 Apr 09 18:59	19°♁53'47	-2°-15'-25
minimum elong	1727 Jan 26 08:05	5°♁56'42	0°34'30	minimum elong	1733 Apr 09 19:00	19°♁53'47	2°15'26
max. Earth dist.	1727 Jan 26 01:58	5°♁54'53	10.94781 AU	max. Earth dist.	1733 Apr 09 18:25	19°♁53'36	10.32009 AU
morning rise	1727 Feb 12 02:22	7°♁55'47		morning rise	1733 Apr 27 06:21	22°♁05'53	
	1727 May 11 14:49	15°♁			1733 Jul 27 21:16	0°♁	
retrograde	1727 May 26 00:05	15°♁10'09		retrograde	1733 Aug 12 02:00	0°♁12'10	

	1733 Aug 27 08:42	30°R Υ		asc. node	1740 Jan 26 23:17	19° \mathcal{E} 38'26	
opposition	1733 Oct 20 02:40	26° Υ 43'22	-2°-47'-20	direct	1740 Mar 18 20:18	17° \mathcal{E} 23'13	
min. Earth dist.	1733 Oct 20 02:26	26° Υ 43'25	8.26888 AU	evening set	1740 Jul 02 09:19	25° \mathcal{E} 37'11	
direct	1733 Dec 26 00:28	23° Υ 19'10					
	1734 Mar 28 08:17	0° \mathcal{E}		conjunction	1740 Jul 20 13:31	27° \mathcal{E} 57'23	0°15'21
evening set	1734 Apr 06 08:08	1° \mathcal{E} 06'45		minimum elong	1740 Jul 20 13:30	27° \mathcal{E} 57'23	0°15'21
				behind sun begin	1740 Jul 20 11:47	27° \mathcal{E} 56'50	
conjunction	1734 Apr 23 19:27	3° \mathcal{E} 20'07	-2°-12'-19	behind sun end	1740 Jul 20 15:14	27° \mathcal{E} 57'56	
minimum elong	1734 Apr 23 19:28	3° \mathcal{E} 20'08	2°12'21	max. Earth dist.	1740 Jul 20 20:19	27° \mathcal{E} 59'35	10.08402 AU
max. Earth dist.	1734 Apr 23 20:11	3° \mathcal{E} 20'21	10.21810 AU		1740 Aug 05 10:16	0° \mathcal{Q}	
morning rise	1734 May 11 11:04	5° \mathcal{E} 34'55		morning rise	1740 Aug 07 15:53	0° \mathcal{Q} 17'01	
retrograde	1734 Aug 26 11:14	13° \mathcal{E} 48'01		retrograde	1740 Nov 19 04:27	8° \mathcal{Q} 21'34	
opposition	1734 Nov 02 22:24	10° \mathcal{E} 18'28	-2°-39'-8	opposition	1741 Jan 24 17:20	4° \mathcal{Q} 54'51	0°39'09
min. Earth dist.	1734 Nov 02 20:59	10° \mathcal{E} 18'45	8.17413 AU	min. Earth dist.	1741 Jan 24 11:51	4° \mathcal{Q} 55'58	8.11647 AU
direct	1735 Jan 08 12:10	6° \mathcal{E} 53'04		direct	1741 Apr 02 08:24	1° \mathcal{Q} 25'36	
evening set	1735 Apr 20 13:46	14° \mathcal{E} 48'45		evening set	1741 Jul 17 07:56	9° \mathcal{Q} 37'06	
	1735 Apr 22 01:17	15° \mathcal{E}					
				conjunction	1741 Aug 04 09:53	11° \mathcal{Q} 55'32	0°47'15
conjunction	1735 May 08 05:47	17° \mathcal{E} 04'46	-2°-1'-44	minimum elong	1741 Aug 04 09:51	11° \mathcal{Q} 55'31	0°47'15
minimum elong	1735 May 08 05:50	17° \mathcal{E} 04'47	2°01'45	max. Earth dist.	1741 Aug 04 16:31	11° \mathcal{Q} 57'39	10.15457 AU
max. Earth dist.	1735 May 08 07:34	17° \mathcal{E} 05'21	10.13214 AU	morning rise	1741 Aug 22 08:47	14° \mathcal{Q} 13'01	
morning rise	1735 May 26 01:44	19° \mathcal{E} 22'05			1741 Aug 28 15:40	15° \mathcal{Q}	
retrograde	1735 Sep 10 00:16	27° \mathcal{E} 39'56		retrograde	1741 Dec 03 00:07	22° \mathcal{Q} 09'20	
opposition	1735 Nov 16 22:39	24° \mathcal{E} 10'00	-2°-21'-33	opposition	1742 Feb 07 14:18	18° \mathcal{Q} 43'55	1°17'00
min. Earth dist.	1735 Nov 16 20:24	24° \mathcal{E} 10'27	8.09806 AU	min. Earth dist.	1742 Feb 07 09:33	18° \mathcal{Q} 44'53	8.19719 AU
direct	1736 Jan 22 08:39	20° \mathcal{E} 43'28		direct	1742 Apr 16 17:38	15° \mathcal{Q} 14'53	
evening set	1736 May 04 03:49	28° \mathcal{E} 46'19		evening set	1742 Jul 31 23:46	23° \mathcal{Q} 22'06	
	1736 May 13 17:15	0° \mathcal{I}					
				conjunction	1742 Aug 18 21:59	25° \mathcal{Q} 38'05	1°15'56
conjunction	1736 May 22 00:27	1° \mathcal{I} 04'39	-1°-43'-51	minimum elong	1742 Aug 18 21:56	25° \mathcal{Q} 38'05	1°15'57
minimum elong	1736 May 22 00:31	1° \mathcal{I} 04'40	1°43'53	max. Earth dist.	1742 Aug 19 03:21	25° \mathcal{Q} 39'48	10.24362 AU
max. Earth dist.	1736 May 22 03:13	1° \mathcal{I} 05'33	10.06766 AU	morning rise	1742 Sep 05 16:20	27° \mathcal{Q} 52'53	
morning rise	1736 Jun 09 00:23	3° \mathcal{I} 24'03			1742 Sep 23 05:05	0° \mathcal{M}	
retrograde	1736 Sep 23 14:27	11° \mathcal{I} 44'13		retrograde	1742 Dec 16 12:39	5° \mathcal{M} 40'31	
opposition	1736 Nov 30 02:08	8° \mathcal{I} 14'16	-1°-55'-14	opposition	1743 Feb 21 06:23	2° \mathcal{M} 16'28	1°49'41
min. Earth dist.	1736 Nov 29 23:21	8° \mathcal{I} 14'51	8.04568 AU	min. Earth dist.	1743 Feb 21 03:00	2° \mathcal{M} 17'09	8.29350 AU
direct	1737 Feb 04 12:02	4° \mathcal{I} 46'45		direct	1743 Mar 24 04:23	30°R \mathcal{Q}	
evening set	1737 May 19 01:04	12° \mathcal{I} 55'21		direct	1743 Apr 30 22:10	28° \mathcal{Q} 47'58	
					1743 Jun 07 11:32	0° \mathcal{M}	
conjunction	1737 Jun 06 01:43	15° \mathcal{I} 15'27	-1°-19'-33	evening set	1743 Aug 15 07:05	6° \mathcal{M} 49'33	
minimum elong	1737 Jun 06 01:46	15° \mathcal{I} 15'28	1°19'34				
max. Earth dist.	1737 Jun 06 05:30	15° \mathcal{I} 16'41	10.02896 AU	conjunction	1743 Sep 02 00:42	9° \mathcal{M} 02'46	1°39'54
morning rise	1737 Jun 24 04:39	17° \mathcal{I} 36'17		minimum elong	1743 Sep 02 00:39	9° \mathcal{M} 02'45	1°39'55
retrograde	1737 Oct 08 04:36	25° \mathcal{I} 56'03		max. Earth dist.	1743 Sep 02 04:07	9° \mathcal{M} 03'50	10.34511 AU
opposition	1737 Dec 14 07:12	22° \mathcal{I} 26'30	-1°-21'-36	morning rise	1743 Sep 19 14:01	11° \mathcal{M} 14'37	
min. Earth dist.	1737 Dec 14 03:47	22° \mathcal{I} 27'12	8.02060 AU	retrograde	1743 Dec 29 17:24	18° \mathcal{M} 53'35	
direct	1738 Feb 18 20:13	18° \mathcal{I} 58'10		opposition	1744 Mar 05 17:06	15° \mathcal{M} 30'56	2°15'41
evening set	1738 Jun 03 03:00	27° \mathcal{I} 10'42		min. Earth dist.	1744 Mar 05 14:52	15° \mathcal{M} 31'23	8.39960 AU
				direct	1744 May 13 22:01	12° \mathcal{M} 03'12	
conjunction	1738 Jun 21 06:30	29° \mathcal{I} 31'47	0°-50'-15	evening set	1744 Aug 28 04:44	19° \mathcal{M} 58'09	
minimum elong	1738 Jun 21 06:32	29° \mathcal{I} 31'48	0°50'16				
max. Earth dist.	1738 Jun 21 11:30	29° \mathcal{I} 33'25	10.01867 AU	conjunction	1744 Sep 14 17:27	22° \mathcal{M} 08'27	1°58'08
	1738 Jun 24 20:58	0° \mathcal{E}		minimum elong	1744 Sep 14 17:24	22° \mathcal{M} 08'26	1°58'08
morning rise	1738 Jul 09 10:59	1° \mathcal{E} 53'11		max. Earth dist.	1744 Sep 14 19:14	22° \mathcal{M} 09'01	10.45389 AU
retrograde	1738 Oct 22 16:58	10° \mathcal{E} 09'59		morning rise	1744 Oct 02 01:39	24° \mathcal{M} 17'21	
opposition	1738 Dec 28 12:32	6° \mathcal{E} 41'08	0°-42'-51		1744 Nov 26 03:39	0° \mathcal{E}	
min. Earth dist.	1738 Dec 28 08:09	6° \mathcal{E} 42'02	8.02460 AU	retrograde	1745 Jan 10 13:19	1° \mathcal{E} 47'59	
direct	1739 Mar 05 07:24	3° \mathcal{E} 12'15			1745 Feb 26 08:05	30°R \mathcal{M}	
evening set	1739 Jun 18 06:39	11° \mathcal{E} 26'35		opposition	1745 Mar 18 22:32	28° \mathcal{M} 26'38	2°34'05
				min. Earth dist.	1745 Mar 18 20:47	28° \mathcal{M} 26'59	8.51054 AU
conjunction	1739 Jul 06 11:24	13° \mathcal{E} 47'43	0°-17'-55	direct	1745 May 27 17:02	24° \mathcal{M} 59'53	
minimum elong	1739 Jul 06 11:24	13° \mathcal{E} 47'44	0°17'56		1745 Aug 17 11:16	0° \mathcal{E}	
max. Earth dist.	1739 Jul 06 17:33	13° \mathcal{E} 49'43	10.03750 AU	evening set	1745 Sep 10 16:03	2° \mathcal{E} 47'24	
morning rise	1739 Jul 24 15:42	16° \mathcal{E} 08'42					
retrograde	1739 Nov 06 01:49	24° \mathcal{E} 20'18		conjunction	1745 Sep 27 23:58	4° \mathcal{E} 54'50	2°10'03
opposition	1740 Jan 11 16:27	20° \mathcal{E} 52'24	0°-1'-39	minimum elong	1745 Sep 27 23:56	4° \mathcal{E} 54'49	2°10'04
min. Earth dist.	1740 Jan 11 11:13	20° \mathcal{E} 53'29	8.05738 AU	max. Earth dist.	1745 Sep 28 00:58	4° \mathcal{E} 55'08	10.56513 AU

morning rise	1745 Oct 15 03:15	7°♁00'51		morning rise	1751 Dec 24 21:49	17°♁754'39	
retrograde	1746 Jan 23 04:22	14°♁23'45		retrograde	1752 Apr 03 01:31	24°♁753'23	
opposition	1746 Mar 31 22:38	11°♁03'32	2°44'30	opposition	1752 Jun 12 07:52	21°♁735'40	1°23'20
min. Earth dist.	1746 Mar 31 21:06	11°♁03'50	8.62141 AU	min. Earth dist.	1752 Jun 12 10:45	21°♁735'08	9.04746 AU
direct	1746 Jun 10 04:11	7°♁37'54		direct	1752 Aug 22 10:14	18°♁716'00	
evening set	1746 Sep 23 16:59	15°♁17'32		evening set	1752 Dec 02 01:00	25°♁718'52	
conjunction	1746 Oct 10 20:36	17°♁22'19	2°15'32	conjunction	1752 Dec 18 16:01	27°♁715'40	0°56'14
minimum elong	1746 Oct 10 20:35	17°♁22'18	2°15'32	minimum elong	1752 Dec 18 16:02	27°♁715'41	0°56'14
max. Earth dist.	1746 Oct 10 21:28	17°♁22'35	10.67399 AU	max. Earth dist.	1752 Dec 18 11:53	27°♁714'27	11.05244 AU
morning rise	1746 Oct 27 19:32	19°♁25'44		morning rise	1753 Jan 04 06:18	29°♁712'17	
retrograde	1747 Feb 04 14:10	26°♁41'38			1753 Jan 11 05:33	0°♁	
opposition	1747 Apr 13 17:38	23°♁22'23	2°47'02	retrograde	1753 Apr 14 19:48	6°♁11'56	
min. Earth dist.	1747 Apr 13 17:04	23°♁22'30	8.72739 AU	opposition	1753 Jun 24 10:14	2°♁53'53	0°53'25
direct	1747 Jun 23 06:41	19°♁57'53		min. Earth dist.	1753 Jun 24 13:57	2°♁53'11	9.05269 AU
evening set	1747 Oct 06 08:01	27°♁29'35			1753 Aug 11 08:09	30°♁7	
conjunction	1747 Oct 23 07:50	29°♁32'03	2°14'44	direct	1753 Sep 03 07:49	29°♁734'48	
minimum elong	1747 Oct 23 07:51	29°♁32'03	2°14'44		1753 Sep 26 02:26	0°♁	
max. Earth dist.	1747 Oct 23 07:47	29°♁32'02	10.77568 AU	evening set	1753 Dec 13 08:27	6°♁35'33	
	1747 Oct 27 04:16	0°♁		conjunction	1753 Dec 29 23:20	8°♁32'24	0°30'48
morning rise	1747 Nov 09 03:21	1°♁33'17		minimum elong	1753 Dec 29 23:21	8°♁32'25	0°30'48
retrograde	1748 Feb 16 16:25	8°♁43'08		max. Earth dist.	1753 Dec 29 18:48	8°♁31'04	11.04704 AU
opposition	1748 Apr 25 07:56	5°♁24'39	2°42'07	morning rise	1754 Jan 15 14:24	10°♁29'19	
min. Earth dist.	1748 Apr 25 08:47	5°♁24'30	8.82385 AU	retrograde	1754 Apr 26 18:06	17°♁31'27	
direct	1748 Jul 05 04:36	2°♁01'15		opposition	1754 Jul 06 13:01	14°♁12'50	0°21'22
evening set	1748 Oct 17 14:11	9°♁25'25		min. Earth dist.	1754 Jul 06 16:35	14°♁12'11	9.03615 AU
conjunction	1748 Nov 03 10:49	11°♁25'54	2°08'06	direct	1754 Sep 15 05:14	10°♁354'10	
minimum elong	1748 Nov 03 10:51	11°♁25'55	2°08'05	evening set	1754 Dec 24 16:34	17°♁354'17	
max. Earth dist.	1748 Nov 03 09:08	11°♁25'24	10.86588 AU	conjunction	1755 Jan 10 07:50	19°♁351'33	0°04'08
morning rise	1748 Nov 20 03:51	13°♁25'20		minimum elong	1755 Jan 10 07:50	19°♁351'33	0°04'08
	1748 Dec 03 22:17	15°♁		behind sun begin	1755 Jan 10 00:57	19°♁49'33	
retrograde	1749 Feb 27 15:24	20°♁30'21		behind sun end	1755 Jan 10 14:42	19°♁53'34	
opposition	1749 May 07 18:06	17°♁12'24	2°30'27	max. Earth dist.	1755 Jan 10 03:55	19°♁50'26	11.01989 AU
min. Earth dist.	1749 May 07 19:57	17°♁12'03	8.90686 AU	morning rise	1755 Jan 26 23:52	21°♁49'07	
	1749 Jun 08 20:38	15°♁		desc. node	1755 Mar 07 20:30	25°♁59'01	
direct	1749 Jul 17 20:25	13°♁50'04		retrograde	1755 May 08 19:34	28°♁55'13	
	1749 Aug 25 03:44	15°♁		opposition	1755 Jul 18 17:05	25°♁35'50	0°-11'-41
evening set	1749 Oct 29 12:36	21°♁07'19		min. Earth dist.	1755 Jul 18 20:03	25°♁35'17	8.99831 AU
conjunction	1749 Nov 15 06:51	23°♁06'16	1°56'13	direct	1755 Sep 27 00:37	22°♁17'23	
minimum elong	1749 Nov 15 06:54	23°♁06'17	1°56'12	evening set	1756 Jan 05 02:59	29°♁18'23	
max. Earth dist.	1749 Nov 15 04:10	23°♁05'28	10.94113 AU		1756 Jan 11 01:05	0°♁	
morning rise	1749 Dec 01 22:13	25°♁04'22		conjunction	1756 Jan 21 18:49	1°♁16'25	0°-23'-1
	1750 Jan 19 14:47	0°♁		minimum elong	1756 Jan 21 18:48	1°♁16'25	0°23'01
retrograde	1750 Mar 11 11:13	2°♁05'51		max. Earth dist.	1756 Jan 21 15:02	1°♁15'18	10.97189 AU
	1750 May 03 14:25	30°♁		morning rise	1756 Feb 07 12:11	3°♁14'57	
opposition	1750 May 20 00:54	28°♁48'10	2°12'49	retrograde	1756 May 20 02:32	10°♁26'29	
min. Earth dist.	1750 May 20 02:45	28°♁47'49	8.97330 AU	opposition	1756 Jul 29 23:53	7°♁06'10	0°-44'-40
direct	1750 Jul 30 05:47	25°♁26'51		min. Earth dist.	1756 Jul 30 02:54	7°♁05'37	8.94053 AU
	1750 Oct 17 07:22	0°♁		direct	1756 Oct 07 21:09	3°♁47'42	
evening set	1750 Nov 10 04:33	2°♁38'04		evening set	1757 Jan 15 17:10	10°♁51'05	
conjunction	1750 Nov 26 21:18	4°♁35'55	1°39'45	conjunction	1757 Feb 01 09:48	12°♁50'11	0°-49'-27
minimum elong	1750 Nov 26 21:20	4°♁35'55	1°39'45	minimum elong	1757 Feb 01 09:46	12°♁50'11	0°49'27
max. Earth dist.	1750 Nov 26 18:48	4°♁35'10	10.99858 AU	max. Earth dist.	1757 Feb 01 05:28	12°♁48'53	10.90490 AU
morning rise	1750 Dec 13 11:37	6°♁33'06		morning rise	1757 Feb 18 04:58	14°♁50'03	
retrograde	1751 Mar 23 06:49	13°♁32'29			1757 Feb 19 15:00	15°♁	
opposition	1751 Jun 01 05:10	10°♁14'52	1°50'08	retrograde	1757 Jun 01 14:00	22°♁08'18	
min. Earth dist.	1751 Jun 01 07:08	10°♁14'30	9.02072 AU	opposition	1757 Aug 11 10:11	18°♁46'55	-1°-16'-19
direct	1751 Aug 11 10:56	6°♁54'27		min. Earth dist.	1757 Aug 11 13:27	18°♁46'18	8.86508 AU
evening set	1751 Nov 21 16:11	14°♁00'50		direct	1757 Oct 19 19:03	15°♁28'12	
conjunction	1751 Dec 08 07:53	15°♁57'58	1°19'30	evening set	1758 Jan 27 12:46	22°♁35'27	
minimum elong	1751 Dec 08 07:55	15°♁57'59	1°19'30	conjunction	1758 Feb 13 06:42	24°♁35'56	-1°-14'-13
max. Earth dist.	1751 Dec 08 05:06	15°♁57'09	11.03610 AU	minimum elong	1758 Feb 13 06:40	24°♁35'55	1°14'13

max. Earth dist.	1758 Feb 13 02:31	24°♊34'40	10.82148 AU		1764 May 30 20:59	15°♄	
morning rise	1758 Mar 02 03:58	26°♊37'24		retrograde	1764 Sep 02 22:44	21°♄46'41	
	1758 Apr 01 17:22	0°♋		opposition	1764 Nov 10 03:45	18°♄17'32	-2°-30'-7
retrograde	1758 Jun 14 06:57	4°♋03'30		min. Earth dist.	1764 Nov 10 02:54	18°♄17'42	8.15367 AU
opposition	1758 Aug 24 00:25	0°♋40'53	-1°-45'-21		1765 Jan 03 19:08	15°♄	
min. Earth dist.	1758 Aug 24 03:31	0°♋40'18	8.77484 AU	direct	1765 Jan 15 16:37	14°♄52'04	
	1758 Sep 02 01:50	30°♌			1765 Jan 27 12:11	15°♄	
direct	1758 Oct 31 22:37	27°♌21'42		evening set	1765 Apr 28 01:48	22°♄50'34	
	1758 Dec 27 14:54	0°♌					
evening set	1759 Feb 08 15:05	4°♌34'10		conjunction	1765 May 15 20:23	25°♄07'35	-1°-52'-27
				minimum elong	1765 May 15 20:26	25°♄07'36	1°52'28
conjunction	1759 Feb 25 10:55	6°♌36'22	-1°-36'-12	max. Earth dist.	1765 May 15 22:25	25°♄08'14	10.11620 AU
minimum elong	1759 Feb 25 10:53	6°♌36'22	1°36'12	morning rise	1765 Jun 02 18:24	27°♄25'44	
max. Earth dist.	1759 Feb 25 08:04	6°♌35'30	10.72480 AU		1765 Jun 23 19:45	0°♌	
morning rise	1759 Mar 14 10:28	8°♌39'44		retrograde	1765 Sep 17 10:57	5°♌43'56	
retrograde	1759 Jun 27 08:49	16°♌14'29		opposition	1765 Nov 24 04:53	2°♌14'24	-2°-7'-40
opposition	1759 Sep 05 19:30	12°♌50'35	-2°-10'-23	min. Earth dist.	1765 Nov 24 02:43	2°♌14'51	8.08669 AU
min. Earth dist.	1759 Sep 05 21:28	12°♌50'12	8.67328 AU		1765 Dec 23 23:32	30°♌	
direct	1759 Nov 13 05:58	9°♌30'45		direct	1766 Jan 29 15:53	28°♄47'44	
evening set	1760 Feb 21 01:18	16°♌49'34		evening set	1766 Mar 06 20:54	0°♌	
					1766 May 12 19:05	6°♌52'40	
conjunction	1760 Mar 08 23:28	18°♌53'46	-1°-54'-16	conjunction	1766 May 30 18:01	9°♌11'45	-1°-30'-57
minimum elong	1760 Mar 08 23:26	18°♌53'46	1°54'17	minimum elong	1766 May 30 18:04	9°♌11'47	1°30'58
max. Earth dist.	1760 Mar 08 21:36	18°♌53'12	10.61870 AU	max. Earth dist.	1766 May 30 21:26	9°♌12'52	10.06152 AU
morning rise	1760 Mar 26 01:43	20°♌59'19		morning rise	1766 Jun 17 19:25	11°♌31'40	
retrograde	1760 Jul 09 18:16	28°♌43'09		retrograde	1766 Oct 02 01:00	19°♌50'48	
opposition	1760 Sep 17 19:57	25°♌17'56	-2°-30'00	opposition	1766 Dec 08 08:18	16°♌21'15	-1°-37'-14
min. Earth dist.	1760 Sep 17 20:56	25°♌17'44	8.56446 AU	min. Earth dist.	1766 Dec 08 05:10	16°♌21'54	8.04462 AU
direct	1760 Nov 24 17:07	21°♌57'14		direct	1767 Feb 12 19:59	12°♌53'29	
evening set	1761 Mar 04 20:34	29°♌23'22		evening set	1767 May 27 18:00	21°♌03'15	
	1761 Mar 09 20:05	0°♍					
conjunction	1761 Mar 21 21:37	1°♍29'52	-2°-7'-18	conjunction	1767 Jun 14 20:18	23°♌23'44	-1°-3'-48
minimum elong	1761 Mar 21 21:35	1°♍29'51	2°07'20	minimum elong	1767 Jun 14 20:21	23°♌23'45	1°03'49
max. Earth dist.	1761 Mar 21 19:54	1°♍29'20	10.50764 AU	max. Earth dist.	1767 Jun 15 00:29	23°♌25'06	10.03348 AU
morning rise	1761 Apr 08 03:11	3°♍37'48		morning rise	1767 Jul 02 23:58	25°♌44'41	
retrograde	1761 Jul 23 09:37	11°♍30'40			1767 Aug 08 01:15	0°♍	
opposition	1761 Oct 01 01:54	8°♍04'12	-2°-42'-50	retrograde	1767 Oct 16 14:19	4°♍02'07	
min. Earth dist.	1761 Oct 01 02:38	8°♍04'03	8.45285 AU	opposition	1767 Dec 22 12:43	0°♍32'54	-1°00'-40
direct	1761 Dec 07 12:19	4°♍42'26		min. Earth dist.	1767 Dec 22 09:14	0°♍33'38	8.03035 AU
evening set	1762 Mar 18 01:21	12°♍16'35			1767 Dec 29 04:23	30°♌	
				direct	1768 Feb 27 04:17	27°♌04'14	
conjunction	1762 Apr 04 05:59	14°♍25'37	-2°-14'-17	evening set	1768 Apr 25 08:10	0°♍	
minimum elong	1762 Apr 04 05:59	14°♍25'37	2°14'19		1768 Jun 10 19:58	5°♍16'55	
max. Earth dist.	1762 Apr 04 04:04	14°♍25'01	10.39612 AU	conjunction	1768 Jun 29 00:14	7°♍37'56	0°-32'-43
morning rise	1762 Apr 21 15:27	16°♍36'10		minimum elong	1768 Jun 29 00:15	7°♍37'56	0°32'43
retrograde	1762 Aug 06 08:19	24°♍37'33		max. Earth dist.	1768 Jun 29 04:40	7°♍39'23	10.03387 AU
opposition	1762 Oct 14 13:27	21°♍09'59	-2°-47'-38	morning rise	1768 Jul 17 04:42	9°♍59'00	
min. Earth dist.	1762 Oct 14 14:20	21°♍09'48	8.34308 AU	retrograde	1768 Oct 30 00:26	18°♍12'22	
direct	1762 Dec 20 14:09	17°♍47'02		opposition	1769 Jan 04 16:28	14°♍43'49	0°-20'-24
evening set	1763 Mar 31 15:58	25°♍29'36		min. Earth dist.	1769 Jan 04 13:00	14°♍44'32	8.04467 AU
				direct	1769 Mar 12 16:03	11°♍14'29	
conjunction	1763 Apr 18 00:52	27°♍41'20	-2°-14'-23	evening set	1769 Jun 25 22:28	19°♍28'03	
minimum elong	1763 Apr 18 00:53	27°♍41'21	2°14'24	asc. node	1769 Jul 11 02:19	21°♍25'05	
max. Earth dist.	1763 Apr 17 23:41	27°♍40'58	10.28931 AU				
morning rise	1763 May 05 14:30	29°♍54'34		conjunction	1769 Jul 14 03:00	21°♍48'39	0°00'17
	1763 May 06 07:56	0°♎		minimum elong	1769 Jul 14 02:59	21°♍48'39	0°00'17
retrograde	1763 Aug 20 13:12	8°♎03'29		behind sun begin	1769 Jul 13 19:39	21°♍46'18	
opposition	1763 Oct 28 06:16	4°♎35'00	-2°-43'-32	behind sun end	1769 Jul 14 10:18	21°♍51'00	
min. Earth dist.	1763 Oct 28 06:37	4°♎34'55	8.24109 AU	max. Earth dist.	1769 Jul 14 07:21	21°♍50'01	10.06233 AU
direct	1764 Jan 02 23:15	1°♎10'48		morning rise	1769 Aug 01 06:28	24°♍08'53	
evening set	1764 Apr 13 16:21	9°♎01'41			1769 Sep 23 11:50	0°♎	
				retrograde	1769 Nov 13 04:04	2°♎16'11	
conjunction	1764 May 01 06:03	11°♎16'09	-2°-7'-6		1770 Jan 03 23:45	30°♌	
minimum elong	1764 May 01 06:05	11°♎16'10	2°07'08	opposition	1770 Jan 18 18:00	28°♍48'36	0°20'47
max. Earth dist.	1764 May 01 06:24	11°♎16'16	10.19385 AU	min. Earth dist.	1770 Jan 18 14:33	28°♍49'19	8.08641 AU
morning rise	1764 May 18 23:58	13°♎32'00					

direct	1770 Mar 27 04:58	25°♄18'55		evening set	1776 Sep 29 22:00	22°♄06'54	
	1770 Jun 11 08:06	0°♄					
evening set	1770 Jul 10 22:20	3°♄31'17		conjunction	1776 Oct 16 23:27	24°♄10'22	2°15'47
				minimum elong	1776 Oct 16 23:26	24°♄10'22	2°15'47
conjunction	1770 Jul 29 01:21	5°♄50'33	0°32'57	max. Earth dist.	1776 Oct 16 23:42	24°♄10'26	10.72960 AU
minimum elong	1770 Jul 29 01:20	5°♄50'32	0°32'58	morning rise	1776 Nov 02 20:39	26°♄12'34	
max. Earth dist.	1770 Jul 29 05:37	5°♄51'55	10.11680 AU		1776 Dec 07 11:17	0°♄	
morning rise	1770 Aug 16 02:10	8°♄09'04		retrograde	1777 Feb 10 10:12	3°♄24'53	
	1770 Oct 22 14:00	15°♄		opposition	1777 Apr 19 21:37	0°♄05'59	2°45'11
retrograde	1770 Nov 27 01:21	16°♄08'57		min. Earth dist.	1777 Apr 19 20:52	0°♄06'08	8.78210 AU
	1771 Jan 01 22:56	15°♄♂			1777 Apr 21 05:04	30°♄♂	
opposition	1771 Feb 01 16:15	12°♄42'29	1°00'11	direct	1777 Jun 29 16:36	26°♄42'04	
min. Earth dist.	1771 Feb 01 12:30	12°♄43'15	8.15268 AU		1777 Sep 03 13:12	0°♄	
direct	1771 Apr 10 15:22	9°♄12'49		evening set	1777 Oct 12 07:55	4°♄09'31	
	1771 Jul 06 03:29	15°♄					
evening set	1771 Jul 25 16:41	17°♄21'57		conjunction	1777 Oct 29 06:02	6°♄10'50	2°11'47
				minimum elong	1777 Oct 29 06:03	6°♄10'51	2°11'46
conjunction	1771 Aug 12 16:45	19°♄39'09	1°03'16	max. Earth dist.	1777 Oct 29 06:08	6°♄10'52	10.82896 AU
minimum elong	1771 Aug 12 16:42	19°♄39'08	1°03'16	morning rise	1777 Nov 15 00:08	8°♄11'01	
max. Earth dist.	1771 Aug 12 21:06	19°♄40'32	10.19363 AU		1778 Feb 03 20:11	15°♄	
morning rise	1771 Aug 30 13:32	21°♄55'17		retrograde	1778 Feb 22 12:51	15°♄18'01	
retrograde	1771 Dec 10 16:45	29°♄46'54			1778 Mar 13 08:31	15°♄♂	
opposition	1772 Feb 15 10:07	26°♄21'40	1°35'25	opposition	1778 May 02 09:33	11°♄59'57	2°36'31
min. Earth dist.	1772 Feb 15 06:01	26°♄22'30	8.23914 AU	min. Earth dist.	1778 May 02 09:20	12°♄00'00	8.87508 AU
direct	1772 Apr 23 21:45	22°♄52'21		direct	1778 Jul 12 09:30	8°♄37'21	
	1772 Jul 31 11:05	0°♄♂			1778 Oct 16 02:03	15°♄	
evening set	1772 Aug 08 03:42	0°♄♂56'35		evening set	1778 Oct 24 09:48	15°♄57'35	
conjunction	1772 Aug 25 23:42	3°♄11'11	1°29'31	conjunction	1778 Nov 10 05:15	17°♄57'10	2°02'14
minimum elong	1772 Aug 25 23:39	3°♄11'10	1°29'32	minimum elong	1778 Nov 10 05:17	17°♄57'11	2°02'14
max. Earth dist.	1772 Aug 26 04:09	3°♄12'36	10.28799 AU	max. Earth dist.	1778 Nov 10 04:52	17°♄57'03	10.91479 AU
morning rise	1772 Sep 12 15:31	5°♄24'29		morning rise	1778 Nov 26 21:10	19°♄55'47	
retrograde	1772 Dec 23 01:17	13°♄07'26		retrograde	1779 Mar 06 10:18	26°♄58'37	
opposition	1773 Feb 27 22:53	9°♄43'33	2°04'37	opposition	1779 May 14 17:50	23°♄41'10	2°21'31
min. Earth dist.	1773 Feb 27 19:10	9°♄44'18	8.34053 AU	min. Earth dist.	1779 May 14 19:03	23°♄40'56	8.95270 AU
direct	1773 May 07 22:55	6°♄14'54		direct	1779 Jul 24 20:13	20°♄19'47	
evening set	1773 Aug 22 05:37	14°♄12'55		evening set	1779 Nov 05 04:57	27°♄33'37	
conjunction	1773 Sep 08 20:51	16°♄24'37	1°50'28	conjunction	1779 Nov 21 22:19	29°♄31'52	1°47'47
minimum elong	1773 Sep 08 20:48	16°♄24'36	1°50'28	minimum elong	1779 Nov 21 22:21	29°♄31'53	1°47'47
max. Earth dist.	1773 Sep 09 00:50	16°♄25'52	10.39441 AU	max. Earth dist.	1779 Nov 21 20:11	29°♄31'14	10.98371 AU
morning rise	1773 Sep 26 07:22	18°♄34'55			1779 Nov 25 21:07	0°♄♂	
retrograde	1774 Jan 05 01:29	26°♄09'16		morning rise	1779 Dec 08 13:02	1°♄♂29'23	
opposition	1774 Mar 13 06:32	22°♄46'47	2°26'34	retrograde	1780 Mar 17 05:37	8°♄♂29'25	
min. Earth dist.	1774 Mar 13 03:43	22°♄47'21	8.45119 AU	opposition	1780 May 25 23:21	5°♄♂12'19	2°01'03
direct	1774 May 21 19:08	19°♄19'04		min. Earth dist.	1780 May 26 01:44	5°♄♂11'52	9.01187 AU
evening set	1774 Sep 04 21:16	27°♄09'53		direct	1780 Aug 05 03:46	1°♄♂51'59	
				evening set	1780 Nov 15 18:44	9°♄♂00'26	
conjunction	1774 Sep 22 07:31	29°♄18'39	2°05'19	conjunction	1780 Dec 02 10:41	10°♄♂57'46	1°29'11
minimum elong	1774 Sep 22 07:28	29°♄18'38	2°05'19	minimum elong	1780 Dec 02 10:44	10°♄♂57'47	1°29'12
max. Earth dist.	1774 Sep 22 10:24	29°♄19'32	10.50720 AU	max. Earth dist.	1780 Dec 02 07:25	10°♄♂56'48	11.03295 AU
	1774 Sep 27 20:58	0°♄♂		morning rise	1780 Dec 19 00:50	12°♄♂54'35	
morning rise	1774 Oct 09 12:59	1°♄♂25'58		retrograde	1781 Mar 28 23:54	19°♄♂53'18	
retrograde	1775 Jan 17 18:49	8°♄♂52'13		opposition	1781 Jun 07 02:55	16°♄♂36'13	1°36'02
opposition	1775 Mar 26 08:45	5°♄♂31'03	2°40'38	min. Earth dist.	1781 Jun 07 05:37	16°♄♂35'44	9.05010 AU
min. Earth dist.	1775 Mar 26 07:07	5°♄♂31'22	8.56536 AU	direct	1781 Aug 17 06:20	13°♄♂16'47	
direct	1775 Jun 04 08:33	2°♄♂04'30		evening set	1781 Nov 27 04:51	20°♄♂21'03	
evening set	1775 Sep 18 02:39	9°♄♂47'34					
conjunction	1775 Oct 05 08:11	11°♄♂53'32	2°13'44	conjunction	1781 Dec 13 20:07	22°♄♂17'53	1°07'13
minimum elong	1775 Oct 05 08:10	11°♄♂53'32	2°13'44	minimum elong	1781 Dec 13 20:09	22°♄♂17'53	1°07'13
max. Earth dist.	1775 Oct 05 09:23	11°♄♂53'54	10.62072 AU	max. Earth dist.	1781 Dec 13 16:44	22°♄♂16'53	11.06026 AU
morning rise	1775 Oct 22 09:12	13°♄♂58'08		morning rise	1781 Dec 30 10:09	24°♄♂14'24	
retrograde	1776 Jan 30 05:12	21°♄♂16'55			1782 Mar 01 20:45	0°♄♂	
opposition	1776 Apr 07 05:30	17°♄♂56'59	2°46'45	retrograde	1782 Apr 09 19:18	1°♄♂13'19	
min. Earth dist.	1776 Apr 07 04:31	17°♄♂57'11	8.67739 AU		1782 May 19 19:43	30°♄♂♂	
direct	1776 Jun 16 15:23	14°♄♂31'43		opposition	1782 Jun 19 05:26	27°♄♂56'00	1°07'27

min. Earth dist.	1782 Jun 19 08:17	27° $\overline{\text{A}}$ 55'29	9.06548 AU	max. Earth dist.	1788 Feb 20 01:20	1° H 19'56	10.76003 AU
direct	1782 Aug 29 05:55	24° $\overline{\text{A}}$ 37'14		morning rise	1788 Mar 08 04:44	3° H 24'01	
	1782 Nov 23 21:01	0° $\overline{\text{B}}$		retrograde	1788 Jun 20 19:03	10° H 55'05	
evening set	1782 Dec 08 12:56	1° $\overline{\text{B}}$ 38'43		opposition	1788 Aug 30 08:03	7° H 31'26	-1°-59'-32
				min. Earth dist.	1788 Aug 30 11:32	7° H 30'47	8.70804 AU
conjunction	1782 Dec 25 03:57	3° $\overline{\text{B}}$ 35'27	0°42'41	direct	1788 Nov 06 23:30	4° H 11'30	
minimum elong	1782 Dec 25 03:58	3° $\overline{\text{B}}$ 35'28	0°42'41	evening set	1789 Feb 14 17:56	11° H 27'43	
max. Earth dist.	1782 Dec 24 23:55	3° $\overline{\text{B}}$ 34'16	11.06396 AU				
morning rise	1783 Jan 10 18:26	5° $\overline{\text{B}}$ 32'06		conjunction	1789 Mar 03 14:51	13° H 31'07	-1°-46'-33
retrograde	1783 Apr 21 17:48	12° $\overline{\text{B}}$ 32'49		minimum elong	1789 Mar 03 14:49	13° H 31'06	1°46'34
opposition	1783 Jul 01 08:03	9° $\overline{\text{B}}$ 15'02	0°36'17	max. Earth dist.	1789 Mar 03 10:19	13° H 29'43	10.65313 AU
min. Earth dist.	1783 Jul 01 11:58	9° $\overline{\text{B}}$ 14'19	9.05690 AU	morning rise	1789 Mar 20 15:58	15° H 35'48	
direct	1783 Sep 10 02:24	5° $\overline{\text{B}}$ 56'42		retrograde	1789 Jul 03 23:42	23° H 15'56	
evening set	1783 Dec 19 21:01	12° $\overline{\text{B}}$ 56'58		opposition	1789 Sep 12 06:18	19° H 50'48	-2°-21'-52
				min. Earth dist.	1789 Sep 12 09:26	19° H 50'11	8.59771 AU
conjunction	1784 Jan 05 11:58	14° $\overline{\text{B}}$ 53'58	0°16'29	direct	1789 Nov 19 09:29	16° H 29'54	
minimum elong	1784 Jan 05 11:58	14° $\overline{\text{B}}$ 53'58	0°16'28	evening set	1790 Feb 27 09:01	23° H 53'12	
max. Earth dist.	1784 Jan 05 06:26	14° $\overline{\text{B}}$ 52'21	11.04375 AU				
morning rise	1784 Jan 22 03:26	16° $\overline{\text{B}}$ 51'09		conjunction	1790 Mar 16 08:43	25° H 58'48	-2°-2'-3
retrograde	1784 May 02 15:51	23° $\overline{\text{B}}$ 55'15		minimum elong	1790 Mar 16 08:41	25° H 58'48	2°02'04
opposition	1784 Jul 12 11:49	20° $\overline{\text{B}}$ 36'44	0°03'34	max. Earth dist.	1790 Mar 16 05:38	25° H 57'51	10.53989 AU
min. Earth dist.	1784 Jul 12 16:44	20° $\overline{\text{B}}$ 35'49	9.02500 AU	morning rise	1790 Apr 02 12:52	28° H 05'49	
desc. node	1784 Aug 22 00:46	18° $\overline{\text{B}}$ 00'55			1790 Apr 18 15:10	0° Y	
direct	1784 Sep 20 21:45	17° $\overline{\text{B}}$ 18'34		retrograde	1790 Jul 17 11:14	5° Y 55'14	
evening set	1784 Dec 30 06:31	24° $\overline{\text{B}}$ 19'10		opposition	1790 Sep 25 09:49	2° Y 28'41	-2°-38'00
				min. Earth dist.	1790 Sep 25 11:49	2° Y 28'17	8.48352 AU
conjunction	1785 Jan 15 21:52	26° $\overline{\text{B}}$ 16'47	0°-10'-36		1790 Oct 31 00:19	30° R H	
minimum elong	1785 Jan 15 21:52	26° $\overline{\text{B}}$ 16'47	0°10'37	direct	1790 Dec 02 02:48	29° H 06'44	
behind sun begin	1785 Jan 15 16:25	26° $\overline{\text{B}}$ 15'11			1791 Jan 02 14:49	0° Y	
behind sun end	1785 Jan 16 03:20	26° $\overline{\text{B}}$ 18'23		evening set	1791 Mar 12 09:29	6° Y 37'54	
max. Earth dist.	1785 Jan 15 15:45	26° $\overline{\text{B}}$ 14'59	11.00099 AU				
morning rise	1785 Feb 01 14:41	28° $\overline{\text{B}}$ 14'50		conjunction	1791 Mar 29 12:36	8° Y 46'00	-2°-11'-56
	1785 Feb 17 03:23	0° \approx		minimum elong	1791 Mar 29 12:35	8° Y 46'00	2°11'58
retrograde	1785 May 14 19:55	5° \approx 23'51		max. Earth dist.	1791 Mar 29 11:09	8° Y 45'33	10.42541 AU
opposition	1785 Jul 24 17:43	2° \approx 04'17	0°-29'-35	morning rise	1791 Apr 15 20:13	10° Y 55'33	
min. Earth dist.	1785 Jul 24 22:36	2° \approx 03'23	8.97159 AU	retrograde	1791 Jul 31 07:55	18° Y 53'58	
	1785 Aug 23 22:29	30° R $\overline{\text{B}}$		opposition	1791 Oct 08 19:06	15° Y 26'08	-2°-46'-38
direct	1785 Oct 02 20:03	28° $\overline{\text{B}}$ 46'02		min. Earth dist.	1791 Oct 08 19:37	15° Y 26'02	8.37078 AU
	1785 Nov 10 14:20	0° \approx		direct	1791 Dec 15 01:03	12° Y 03'03	
evening set	1786 Jan 10 18:55	5° \approx 48'24		evening set	1792 Mar 24 19:43	19° Y 42'31	
conjunction	1786 Jan 27 11:13	7° \approx 47'00	0°-37'-26	conjunction	1792 Apr 11 02:47	21° Y 53'16	-2°-15'-16
minimum elong	1786 Jan 27 11:12	7° \approx 47'00	0°37'27	minimum elong	1792 Apr 11 02:48	21° Y 53'16	2°15'18
max. Earth dist.	1786 Jan 27 06:01	7° \approx 45'27	10.93762 AU	max. Earth dist.	1792 Apr 11 02:35	21° Y 53'12	10.31534 AU
morning rise	1786 Feb 13 05:31	9° \approx 46'15		morning rise	1792 Apr 28 14:24	24° Y 05'31	
	1786 Apr 06 08:45	15° \approx			1792 Jun 22 21:48	0° B	
retrograde	1786 May 27 05:59	17° \approx 01'30		retrograde	1792 Aug 13 11:15	2° B 12'01	
	1786 Jul 18 21:44	15° R \approx			1792 Oct 05 01:39	30° R Y	
opposition	1786 Aug 06 02:28	13° \approx 40'42	-1°-2'-1	opposition	1792 Oct 21 10:00	28° Y 43'09	-2°-46'-41
min. Earth dist.	1786 Aug 06 06:30	13° \approx 39'57	8.89891 AU	min. Earth dist.	1792 Oct 21 09:18	28° Y 43'18	8.26525 AU
direct	1786 Oct 14 18:05	10° \approx 22'07		direct	1792 Dec 27 06:20	25° Y 18'52	
	1786 Dec 31 15:07	15° \approx			1793 Mar 12 12:38	0° B	
evening set	1787 Jan 22 12:09	17° \approx 27'43		evening set	1793 Apr 07 16:04	3° B 06'43	
conjunction	1787 Feb 08 05:36	19° \approx 27'36	-1°-3'-7	conjunction	1793 Apr 25 03:36	5° B 20'11	-2°-11'-23
minimum elong	1787 Feb 08 05:34	19° \approx 27'36	1°03'07	minimum elong	1793 Apr 25 03:38	5° B 20'11	2°11'24
max. Earth dist.	1787 Feb 08 00:50	19° \approx 26'10	10.85618 AU	max. Earth dist.	1793 Apr 25 04:05	5° B 20'20	10.21564 AU
morning rise	1787 Feb 25 01:42	21° \approx 28'22		morning rise	1793 May 12 19:36	7° B 35'06	
retrograde	1787 Jun 08 20:49	28° \approx 51'02			1793 Jul 28 11:27	15° B	
opposition	1787 Aug 18 14:53	25° \approx 28'50	-1°-32'-27	retrograde	1793 Aug 27 19:33	15° B 48'08	
min. Earth dist.	1787 Aug 18 18:26	25° \approx 28'10	8.80984 AU		1793 Sep 27 05:00	15° R B	
direct	1787 Oct 26 18:39	22° \approx 09'41		opposition	1793 Nov 04 05:47	12° B 18'33	-2°-37'-29
evening set	1788 Feb 03 11:27	29° \approx 19'58		min. Earth dist.	1793 Nov 04 04:33	12° B 18'48	8.17282 AU
	1788 Feb 09 01:19	0° H		direct	1794 Jan 09 19:48	8° B 53'03	
					1794 Apr 07 04:57	15° B	
conjunction	1788 Feb 20 06:19	1° H 21'27	-1°-26'-32	evening set	1794 Apr 21 21:55	16° B 48'51	
minimum elong	1788 Feb 20 06:17	1° H 21'26	1°26'32				

conjunction	1794 May 09 14:13	19°♄04'57	-2°00'-1	minimum elong	1800 Aug 06 15:06	13°♃48'39	0°50'11
minimum elong	1794 May 09 14:16	19°♄04'57	2°00'03	max. Earth dist.	1800 Aug 06 21:14	13°♃50'37	10.16298 AU
max. Earth dist.	1794 May 09 15:35	19°♄05'23	10.13205 AU		1800 Aug 15 21:48	15°♃	
morning rise	1794 May 27 10:34	21°♄22'19		morning rise	1800 Aug 24 13:45	16°♃05'55	
retrograde	1794 Sep 11 07:01	29°♄39'51		retrograde	1800 Dec 05 04:29	24°♃01'30	
opposition	1794 Nov 18 05:51	26°♄09'54	-2°-18'-59	opposition	1801 Feb 09 18:19	20°♃36'13	1°20'22
min. Earth dist.	1794 Nov 18 04:02	26°♄10'17	8.09906 AU	min. Earth dist.	1801 Feb 09 14:15	20°♃37'03	8.20604 AU
direct	1795 Jan 23 16:44	22°♄43'17		direct	1801 Apr 18 21:53	17°♃07'15	
	1795 Apr 30 09:49	0°♄		evening set	1801 Aug 03 04:45	25°♃13'56	
evening set	1795 May 06 12:00	0°♄46'03					
conjunction	1795 May 24 08:55	3°♄04'26	-1°-41'-29	conjunction	1801 Aug 21 02:32	27°♃29'42	1°18'25
minimum elong	1795 May 24 08:58	3°♄04'27	1°41'30	minimum elong	1801 Aug 21 02:29	27°♃29'41	1°18'26
max. Earth dist.	1795 May 24 11:34	3°♄05'18	10.06979 AU	max. Earth dist.	1801 Aug 21 07:01	27°♃31'07	10.25285 AU
morning rise	1795 Jun 11 09:05	5°♄23'49		morning rise	1801 Sep 07 20:37	29°♃44'15	
retrograde	1795 Sep 25 20:50	13°♄43'27		retrograde	1801 Sep 09 23:22	0°♄	
opposition	1795 Dec 02 08:54	10°♄13'31	-1°-51'-55	retrograde	1801 Dec 18 15:22	7°♄31'06	
min. Earth dist.	1795 Dec 02 06:14	10°♄14'04	8.04880 AU	opposition	1802 Feb 23 09:49	4°♄07'11	1°52'25
direct	1796 Feb 06 19:33	6°♄45'55		min. Earth dist.	1802 Feb 23 06:38	4°♄07'49	8.30318 AU
evening set	1796 May 20 08:55	14°♄54'16		direct	1802 May 03 03:16	0°♄38'44	
				evening set	1802 Aug 17 11:13	8°♄39'41	
conjunction	1796 Jun 07 09:49	17°♄14'21	-1°-16'-39	conjunction	1802 Sep 04 04:26	10°♄52'38	1°41'50
minimum elong	1796 Jun 07 09:53	17°♄14'22	1°16'41	minimum elong	1802 Sep 04 04:23	10°♄52'37	1°41'51
max. Earth dist.	1796 Jun 07 14:02	17°♄15'44	10.03307 AU	max. Earth dist.	1802 Sep 04 07:19	10°♄53'32	10.35497 AU
morning rise	1796 Jun 25 12:51	19°♄35'07		morning rise	1802 Sep 21 17:26	13°♄04'15	
retrograde	1796 Oct 09 10:53	27°♄54'12		retrograde	1802 Dec 31 18:05	20°♄42'28	
opposition	1796 Dec 15 13:27	24°♄25'27	-1°-17'-45	opposition	1803 Mar 08 20:02	17°♄19'54	2°17'40
min. Earth dist.	1796 Dec 15 09:38	24°♄25'27	8.02555 AU	min. Earth dist.	1803 Mar 08 17:28	17°♄20'25	8.40945 AU
direct	1797 Feb 20 03:14	20°♄56'17		direct	1803 May 17 03:30	13°♄52'16	
evening set	1797 Jun 04 10:23	29°♄08'26		evening set	1803 Aug 31 07:48	21°♄46'30	
	1797 Jun 11 02:57	0°♄					
conjunction	1797 Jun 22 14:05	1°♄29'27	0°-47'-3	conjunction	1803 Sep 17 20:14	23°♄56'34	1°59'26
minimum elong	1797 Jun 22 14:07	1°♄29'27	0°47'04	minimum elong	1803 Sep 17 20:11	23°♄56'33	1°59'26
max. Earth dist.	1797 Jun 22 19:46	1°♄31'18	10.02442 AU	max. Earth dist.	1803 Sep 17 22:09	23°♄57'09	10.46336 AU
morning rise	1797 Jul 10 18:30	3°♄50'43		morning rise	1803 Oct 05 04:04	26°♄05'12	
retrograde	1797 Oct 23 22:57	12°♄06'44		retrograde	1803 Nov 08 22:01	0°♄	
opposition	1797 Dec 29 18:08	8°♄37'55	0°-38'-45	retrograde	1804 Jan 13 15:51	3°♄35'15	
min. Earth dist.	1797 Dec 29 13:16	8°♄38'55	8.03095 AU	opposition	1804 Mar 21 00:55	0°♄13'58	2°35'16
direct	1798 Mar 06 14:10	5°♄09'01		min. Earth dist.	1804 Mar 20 22:54	0°♄14'22	8.51940 AU
evening set	1798 Jun 19 13:37	13°♄22'55		direct	1804 Mar 24 00:09	30°♄	
				direct	1804 May 29 19:43	26°♄47'19	
conjunction	1798 Jul 07 18:22	15°♄43'55	0°-14'-36	evening set	1804 Aug 01 21:01	0°♄	
minimum elong	1798 Jul 07 18:23	15°♄43'55	0°14'37	evening set	1804 Sep 12 18:22	4°♄34'11	
behind sun begin	1798 Jul 07 15:33	15°♄43'00		conjunction	1804 Sep 30 02:06	6°♄41'27	2°10'42
behind sun end	1798 Jul 07 21:14	15°♄44'50		minimum elong	1804 Sep 30 02:04	6°♄41'26	2°10'42
max. Earth dist.	1798 Jul 08 01:00	15°♄46'03	10.04441 AU	max. Earth dist.	1804 Sep 30 03:26	6°♄41'52	10.57314 AU
morning rise	1798 Jul 25 22:27	18°♄04'43		morning rise	1804 Oct 17 05:00	8°♄47'16	
retrograde	1798 Nov 07 06:42	26°♄15'30		retrograde	1805 Jan 25 06:46	16°♄09'42	
asc. node	1798 Dec 21 14:46	24°♄32'41		opposition	1805 Apr 03 00:37	12°♄49'34	2°44'52
opposition	1799 Jan 12 21:27	22°♄47'41	0°02'26	min. Earth dist.	1805 Apr 02 23:38	12°♄49'45	8.62842 AU
min. Earth dist.	1799 Jan 12 16:09	22°♄48'47	8.06471 AU	direct	1805 Jun 12 05:18	9°♄24'01	
direct	1799 Mar 21 02:08	19°♄18'31		evening set	1805 Sep 25 18:47	17°♄03'10	
evening set	1799 Jul 04 15:40	27°♄32'01					
conjunction	1799 Jul 22 19:40	29°♄52'02	0°18'33	conjunction	1805 Oct 12 22:08	19°♄07'49	2°15'32
minimum elong	1799 Jul 22 19:40	29°♄52'02	0°18'34	minimum elong	1805 Oct 12 22:08	19°♄07'49	2°15'31
max. Earth dist.	1799 Jul 23 02:29	29°♄54'14	10.09173 AU	max. Earth dist.	1805 Oct 12 22:34	19°♄07'57	10.67984 AU
	1799 Jul 23 20:19	0°♄		morning rise	1805 Oct 29 20:50	21°♄11'08	
morning rise	1799 Aug 09 21:44	2°♄11'27		retrograde	1806 Feb 06 14:38	28°♄26'44	
retrograde	1799 Nov 21 09:04	10°♄15'14		opposition	1806 Apr 15 19:33	25°♄07'34	2°46'38
opposition	1800 Jan 26 21:52	6°♄48'38	0°43'00	min. Earth dist.	1806 Apr 15 19:59	25°♄07'29	8.73207 AU
min. Earth dist.	1800 Jan 26 16:52	6°♄49'40	8.12455 AU	direct	1806 Jun 25 09:11	21°♄43'08	
direct	1800 Apr 04 12:49	3°♄19'25		evening set	1806 Oct 08 09:22	29°♄14'32	
evening set	1800 Jul 19 13:32	11°♄30'26			1806 Oct 14 17:57	0°♄	
conjunction	1800 Aug 06 15:08	13°♄48'39	0°50'10	conjunction	1806 Oct 25 08:55	1°♄16'54	2°14'07
				minimum elong	1806 Oct 25 08:55	1°♄16'54	2°14'06

max. Earth dist.	1806 Oct 25 07:41	1°M.16'32	10.77908 AU	retrograde	1813 Apr 28 22:18	19°☾20'58	
morning rise	1806 Nov 11 04:22	3°M.18'04		opposition	1813 Jul 08 17:05	16°☾02'11	0°17'33
retrograde	1807 Feb 18 17:57	10°M.27'51		min. Earth dist.	1813 Jul 08 20:05	16°☾01'37	9.02392 AU
opposition	1807 Apr 28 09:50	7°M.09'25	2°40'59	direct	1813 Sep 17 08:00	12°☾43'26	
min. Earth dist.	1807 Apr 28 11:16	7°M.09'09	8.82599 AU	evening set	1813 Dec 26 19:36	19°☾44'09	
direct	1807 Jul 08 06:52	3°M.46'05					
evening set	1807 Oct 20 15:16	11°M.10'04		conjunction	1814 Jan 12 10:59	21°☾41'37	0°00'56
				minimum elong	1814 Jan 12 10:59	21°☾41'37	0°00'56
conjunction	1807 Nov 06 11:48	13°M.10'33	2°06'54	behind sun begin	1814 Jan 12 04:00	21°☾39'35	
minimum elong	1807 Nov 06 11:50	13°M.10'33	2°06'53	behind sun end	1814 Jan 12 17:57	21°☾43'39	
max. Earth dist.	1807 Nov 06 09:22	13°M.09'49	10.86671 AU	max. Earth dist.	1814 Jan 12 07:20	21°☾40'35	11.00689 AU
	1807 Nov 21 18:55	15°M.		desc. node	1814 Jan 24 21:57	23°☾09'54	
morning rise	1807 Nov 23 04:51	15°M.09'59		morning rise	1814 Jan 29 03:06	23°☾39'23	
retrograde	1808 Mar 01 16:22	22°M.15'05			1814 Apr 10 01:02	0°≈	
opposition	1808 May 09 19:57	18°M.57'08	2°28'39	retrograde	1814 May 11 01:36	0°≈46'25	
min. Earth dist.	1808 May 09 21:36	18°M.56'49	8.90630 AU		1814 Jun 11 13:15	30°R☾	
direct	1808 Jul 19 22:16	15°M.34'52		opposition	1814 Jul 20 21:54	27°☾26'52	0°-15'-34
evening set	1808 Oct 31 13:37	22°M.52'05		min. Earth dist.	1814 Jul 21 00:53	27°☾26'19	8.98469 AU
				direct	1814 Sep 29 04:14	24°☾08'18	
conjunction	1808 Nov 17 07:58	24°M.51'04	1°54'29		1814 Dec 28 02:01	0°≈	
minimum elong	1808 Nov 17 08:01	24°M.51'05	1°54'28	evening set	1815 Jan 07 06:43	1°≈10'01	
max. Earth dist.	1808 Nov 17 05:33	24°M.50'21	10.93924 AU				
morning rise	1808 Dec 03 23:16	26°M.49'12		conjunction	1815 Jan 23 22:35	3°≈08'15	0°-26'-9
	1809 Jan 02 01:59	0°☾		minimum elong	1815 Jan 23 22:34	3°≈08'14	0°26'10
retrograde	1809 Mar 13 13:46	3°☾50'58		max. Earth dist.	1815 Jan 23 18:10	3°≈06'56	10.95774 AU
opposition	1809 May 22 03:03	0°☾33'16	2°10'25	morning rise	1815 Feb 09 16:14	5°≈07'02	
min. Earth dist.	1809 May 22 04:50	0°☾32'56	8.96996 AU	retrograde	1815 May 23 08:08	12°≈19'33	
	1809 May 29 14:26	30°R☾		opposition	1815 Aug 02 05:22	8°≈59'04	0°-48'-27
direct	1809 Aug 01 08:20	27°M.11'59		min. Earth dist.	1815 Aug 02 08:54	8°≈58'24	8.92598 AU
	1809 Sep 30 22:57	0°☾		direct	1815 Oct 11 00:31	5°≈40'28	
evening set	1809 Nov 12 05:48	4°☾23'19		evening set	1816 Jan 18 21:42	12°≈44'40	
conjunction	1809 Nov 28 22:35	6°☾21'14	1°37'34	conjunction	1816 Feb 04 14:26	14°≈43'59	0°-52'-26
minimum elong	1809 Nov 28 22:37	6°☾21'15	1°37'34	minimum elong	1816 Feb 04 14:25	14°≈43'58	0°52'27
max. Earth dist.	1809 Nov 28 20:05	6°☾20'29	10.99395 AU	max. Earth dist.	1816 Feb 04 10:02	14°≈42'39	10.89001 AU
morning rise	1809 Dec 15 12:53	8°☾18'30			1816 Feb 06 19:52	15°≈	
retrograde	1810 Mar 25 09:41	15°☾18'17		morning rise	1816 Feb 21 09:51	16°≈44'05	
opposition	1810 Jun 03 07:50	12°☾00'38	1°47'13	retrograde	1816 Jun 03 19:22	24°≈03'26	
min. Earth dist.	1810 Jun 03 10:28	12°☾00'09	9.01476 AU	opposition	1816 Aug 13 16:17	20°≈41'50	-1°-19'-51
direct	1810 Aug 13 11:38	8°☾40'13		min. Earth dist.	1816 Aug 13 19:32	20°≈41'13	8.85001 AU
evening set	1810 Nov 23 17:44	15°☾46'50		direct	1816 Oct 22 01:01	17°≈22'59	
				evening set	1817 Jan 29 18:07	24°≈31'06	
conjunction	1810 Dec 10 09:23	17°☾44'04	1°16'55	conjunction	1817 Feb 15 12:18	26°≈31'50	-1°-16'-55
minimum elong	1810 Dec 10 09:25	17°☾44'05	1°16'55	minimum elong	1817 Feb 15 12:15	26°≈31'50	1°16'55
max. Earth dist.	1810 Dec 10 05:44	17°☾43'00	11.02899 AU	max. Earth dist.	1817 Feb 15 09:02	26°≈30'51	10.80628 AU
morning rise	1810 Dec 26 23:32	19°☾40'54		morning rise	1817 Mar 04 09:39	28°≈33'33	
retrograde	1811 Apr 06 03:23	26°☾40'11			1817 Mar 16 19:58	0°☾	
opposition	1811 Jun 15 10:58	23°☾22'23	1°20'00	retrograde	1817 Jun 16 15:28	6°☾00'48	
min. Earth dist.	1811 Jun 15 14:37	23°☾21'42	9.03919 AU	opposition	1817 Aug 26 07:18	2°☾37'58	-1°-48'-28
direct	1811 Aug 25 12:42	20°☾02'39		min. Earth dist.	1817 Aug 26 09:31	2°☾37'33	8.75977 AU
evening set	1811 Dec 05 02:55	27°☾05'55			1817 Oct 05 09:45	30°R≈	
				direct	1817 Nov 03 04:34	29°≈18'40	
conjunction	1811 Dec 21 17:59	29°☾02'51	0°53'21		1817 Dec 01 10:30	0°☾	
minimum elong	1811 Dec 21 18:01	29°☾02'52	0°53'21	evening set	1818 Feb 10 21:21	6°☾32'01	
max. Earth dist.	1811 Dec 21 13:25	29°☾01'30	11.04311 AU				
	1811 Dec 29 19:53	0°☾		conjunction	1818 Feb 27 17:25	8°☾34'28	-1°-38'-28
morning rise	1812 Jan 07 08:29	0°☾59'38		minimum elong	1818 Feb 27 17:22	8°☾34'27	1°38'29
retrograde	1812 Apr 16 23:44	7°☾59'58		max. Earth dist.	1818 Feb 27 15:18	8°☾33'49	10.70986 AU
opposition	1812 Jun 26 13:44	4°☾41'47	0°49'46	morning rise	1818 Mar 16 17:06	10°☾38'06	
min. Earth dist.	1812 Jun 26 17:20	4°☾41'07	9.04230 AU	retrograde	1818 Jun 29 17:54	18°☾13'58	
direct	1812 Sep 05 11:43	1°☾22'38		opposition	1818 Sep 08 03:08	14°☾49'52	-2°-12'-54
evening set	1812 Dec 15 10:50	8°☾23'53		min. Earth dist.	1818 Sep 08 04:18	14°☾49'39	8.65878 AU
				direct	1818 Nov 15 11:22	11°☾29'55	
conjunction	1813 Jan 01 01:55	10°☾20'55	0°27'44	evening set	1819 Feb 23 08:42	18°☾49'39	
minimum elong	1813 Jan 01 01:55	10°☾20'55	0°27'43				
max. Earth dist.	1812 Dec 31 21:57	10°☾19'45	11.03569 AU	conjunction	1819 Mar 12 07:01	20°☾54'07	-1°-55'-58
morning rise	1813 Jan 17 17:02	12°☾18'01					

minimum elong	1819 Mar 12 06:58	20° Υ 54'06	1°56'00	max. Earth dist.	1825 Jun 02 08:19	11° Π 19'36	10.06393 AU
max. Earth dist.	1819 Mar 12 05:02	20° Υ 53'30	10.60472 AU	morning rise	1825 Jun 20 06:54	13° Π 38'33	
morning rise	1819 Mar 29 09:34	22° Υ 59'54		retrograde	1825 Oct 04 12:11	21° Π 57'09	
	1819 Jun 13 02:58	0° Υ		opposition	1825 Dec 10 17:44	18° Π 27'43	-1°-33'-14
retrograde	1819 Jul 13 02:59	0° Υ 44'46		min. Earth dist.	1825 Dec 10 14:57	18° Π 28'17	8.04822 AU
	1819 Aug 12 08:46	30° Υ 30'30		direct	1826 Feb 15 05:27	14° Π 59'55	
opposition	1819 Sep 21 04:13	27° Υ 19'24	-2°-31'-44	evening set	1826 May 30 05:03	23° Π 09'36	
min. Earth dist.	1819 Sep 21 05:06	27° Υ 19'14	8.55130 AU				
direct	1819 Nov 28 00:38	23° Υ 58'35		conjunction	1826 Jun 17 07:27	25° Π 30'02	-1°00'-24
	1820 Feb 24 06:33	0° Υ		minimum elong	1826 Jun 17 07:30	25° Π 30'03	1°00'25
evening set	1820 Mar 07 04:54	1° Υ 25'37		max. Earth dist.	1826 Jun 17 10:52	25° Π 31'08	10.03833 AU
				morning rise	1826 Jul 05 11:19	27° Π 50'56	
conjunction	1820 Mar 24 06:08	3° Υ 32'22	-2°-8'-19		1826 Jul 22 20:24	0° Υ	
minimum elong	1820 Mar 24 06:06	3° Υ 32'21	2°08'21	retrograde	1826 Oct 18 23:58	6° Υ 07'38	
max. Earth dist.	1820 Mar 24 04:21	3° Υ 31'49	10.49549 AU	opposition	1826 Dec 24 21:54	2° Υ 38'34	0°-56'-13
morning rise	1820 Apr 10 12:05	5° Υ 40'33		min. Earth dist.	1826 Dec 24 18:59	2° Υ 39'11	8.03627 AU
retrograde	1820 Jul 25 19:48	13° Υ 34'17			1827 Jan 30 08:19	30° Υ 30'00	
opposition	1820 Oct 03 10:52	10° Υ 07'43	-2°-43'-38	direct	1827 Mar 01 15:07	29° Π 09'54	
min. Earth dist.	1820 Oct 03 11:38	10° Υ 07'34	8.44201 AU		1827 Mar 31 18:52	0° Υ	
direct	1820 Dec 09 20:03	6° Υ 45'50		evening set	1827 Jun 14 06:44	7° Υ 22'20	
evening set	1821 Mar 20 10:26	14° Υ 20'45					
				conjunction	1827 Jul 02 10:58	9° Υ 43'13	0°-29'-3
conjunction	1821 Apr 06 15:25	16° Υ 30'00	-2°-14'-30	minimum elong	1827 Jul 02 11:00	9° Υ 43'13	0°29'04
minimum elong	1821 Apr 06 15:24	16° Υ 30'00	2°14'32	max. Earth dist.	1827 Jul 02 14:50	9° Υ 44'28	10.04087 AU
max. Earth dist.	1821 Apr 06 14:20	16° Υ 29'40	10.38679 AU	morning rise	1827 Jul 20 15:27	12° Υ 04'09	
morning rise	1821 Apr 24 01:13	18° Υ 40'46		retrograde	1827 Nov 02 07:59	20° Υ 16'41	
retrograde	1821 Aug 08 18:23	26° Υ 42'46		opposition	1828 Jan 08 01:13	16° Υ 48'18	0°-15'-48
opposition	1821 Oct 16 22:50	23° Υ 15'06	-2°-47'-25	min. Earth dist.	1828 Jan 07 21:53	16° Υ 48'59	8.05262 AU
min. Earth dist.	1821 Oct 16 23:19	23° Υ 15'00	8.33543 AU	direct	1828 Mar 15 02:58	13° Υ 19'00	
direct	1821 Dec 22 23:08	19° Υ 52'03		asc. node	1828 Jun 01 08:57	18° Υ 17'07	
evening set	1822 Apr 03 01:49	27° Υ 35'11		evening set	1828 Jun 28 08:41	21° Υ 32'08	
conjunction	1822 Apr 20 11:12	29° Υ 47'06	-2°-13'-45	conjunction	1828 Jul 16 13:08	23° Υ 52'33	0°04'00
minimum elong	1822 Apr 20 11:13	29° Υ 47'07	2°13'46	minimum elong	1828 Jul 16 13:07	23° Υ 52'33	0°04'00
max. Earth dist.	1822 Apr 20 11:19	29° Υ 47'09	10.28329 AU	behind sun begin	1828 Jul 16 05:52	23° Υ 50'13	
	1822 Apr 22 03:41	0° Υ		behind sun end	1828 Jul 16 20:23	23° Υ 54'53	
morning rise	1822 May 08 01:05	2° Υ 00'30		max. Earth dist.	1828 Jul 16 17:27	23° Υ 53'55	10.07116 AU
retrograde	1822 Aug 22 22:47	10° Υ 09'41		morning rise	1828 Aug 03 16:27	26° Υ 12'34	
opposition	1822 Oct 30 15:44	6° Υ 41'08	-2°-42'-14		1828 Sep 04 15:00	0° Ω	
min. Earth dist.	1822 Oct 30 15:17	6° Υ 41'13	8.23666 AU	retrograde	1828 Nov 15 11:12	4° Ω 19'00	
direct	1823 Jan 05 09:30	3° Υ 16'52		opposition	1829 Jan 21 02:10	0° Ω 51'33	0°25'14
evening set	1823 Apr 17 02:47	11° Υ 08'07		min. Earth dist.	1829 Jan 20 22:23	0° Ω 52'20	8.09596 AU
					1829 Jan 31 15:23	30° Υ 30'00	
conjunction	1823 May 04 16:56	13° Υ 22'45	-2°-5'-38	direct	1829 Mar 29 14:04	27° Υ 21'57	
minimum elong	1823 May 04 16:58	13° Υ 22'45	2°05'39		1829 May 24 03:58	0° Ω	
max. Earth dist.	1823 May 04 18:18	13° Υ 23'11	10.19086 AU	evening set	1829 Jul 13 07:55	5° Ω 33'44	
	1823 May 17 08:39	15° Υ					
morning rise	1823 May 22 11:05	15° Υ 38'42		conjunction	1829 Jul 31 10:48	7° Ω 52'47	0°36'24
retrograde	1823 Sep 06 08:29	23° Υ 53'24		minimum elong	1829 Jul 31 10:47	7° Ω 52'46	0°36'24
opposition	1823 Nov 13 13:20	20° Υ 24'14	-2°-27'-46	max. Earth dist.	1829 Jul 31 15:27	7° Ω 54'17	10.12693 AU
min. Earth dist.	1823 Nov 13 11:40	20° Υ 24'34	8.15208 AU	morning rise	1829 Aug 18 11:16	10° Ω 11'02	
direct	1824 Jan 19 02:04	16° Υ 58'45			1829 Sep 29 18:31	15° Ω	
evening set	1824 Apr 30 12:34	24° Υ 57'25		retrograde	1829 Nov 29 09:16	18° Ω 10'01	
					1830 Jan 31 15:52	15° Υ 30'00	
conjunction	1824 May 18 07:28	27° Υ 14'32	-1°-50'-11	opposition	1830 Feb 03 23:48	14° Ω 43'41	1°04'14
minimum elong	1824 May 18 07:31	27° Υ 14'33	1°50'12	min. Earth dist.	1830 Feb 03 19:39	14° Ω 44'32	8.16322 AU
max. Earth dist.	1824 May 18 09:53	27° Υ 15'19	10.11597 AU	direct	1830 Apr 12 23:28	11° Ω 14'07	
morning rise	1824 Jun 05 05:43	29° Υ 32'45			1830 Jun 19 23:22	15° Ω	
	1824 Jun 08 20:14	0° Π		evening set	1830 Jul 28 01:33	19° Ω 22'36	
retrograde	1824 Sep 19 22:09	7° Π 50'42					
opposition	1824 Nov 26 14:29	4° Π 21'13	-2°-4'-23	conjunction	1830 Aug 15 01:20	21° Ω 39'32	1°06'18
min. Earth dist.	1824 Nov 26 12:01	4° Π 21'43	8.08774 AU	minimum elong	1830 Aug 15 01:17	21° Ω 39'31	1°06'18
direct	1825 Feb 01 00:13	0° Π 54'31		max. Earth dist.	1830 Aug 15 06:14	21° Ω 41'06	10.20442 AU
evening set	1825 May 15 06:05	8° Π 59'29		morning rise	1830 Sep 01 21:35	23° Ω 55'22	
					1830 Oct 29 11:10	0° Υ	
conjunction	1825 Jun 02 05:14	11° Π 18'36	-1°-28'-1	retrograde	1830 Dec 12 23:55	1° Υ 46'06	
minimum elong	1825 Jun 02 05:18	11° Π 18'38	1°28'02		1831 Jan 27 10:34	30° Υ 30'00	

opposition	1831 Feb 17 17:08	28°♄21'01	1°38'50	opposition	1837 May 04 13:52	13°♄50'46	2°34'57
min. Earth dist.	1831 Feb 17 13:08	28°♄21'50	8.25006 AU	min. Earth dist.	1837 May 04 14:30	13°♄50'38	8.87733 AU
direct	1831 Apr 27 05:30	24°♄51'48		direct	1837 Jul 14 12:51	10°♄28'11	
	1831 Jul 17 18:21	0°♄			1837 Oct 01 06:43	15°♄	
evening set	1831 Aug 11 11:38	2°♄55'20		evening set	1837 Oct 26 13:14	17°♄48'08	
conjunction	1831 Aug 29 07:14	5°♄09'39	1°32'00	conjunction	1837 Nov 12 08:29	19°♄47'41	2°00'40
minimum elong	1831 Aug 29 07:11	5°♄09'38	1°32'00	minimum elong	1837 Nov 12 08:31	19°♄47'42	2°00'40
max. Earth dist.	1831 Aug 29 11:46	5°♄11'05	10.29885 AU	max. Earth dist.	1837 Nov 12 07:05	19°♄47'16	10.91584 AU
morning rise	1831 Sep 15 22:32	7°♄22'40		morning rise	1837 Nov 29 00:27	21°♄46'17	
retrograde	1831 Dec 26 06:55	15°♄04'47		retrograde	1838 Mar 08 13:28	28°♄49'08	
opposition	1832 Mar 02 05:20	11°♄41'02	2°07'15	opposition	1838 May 16 22:10	25°♄31'39	2°19'16
min. Earth dist.	1832 Mar 02 02:20	11°♄41'38	8.35128 AU	min. Earth dist.	1838 May 17 00:02	25°♄31'19	8.95256 AU
direct	1832 May 10 06:30	8°♄12'27		direct	1838 Jul 27 01:21	22°♄10'16	
evening set	1832 Aug 24 12:37	16°♄09'46		evening set	1838 Nov 07 07:59	29°♄23'58	
					1838 Nov 12 11:24	0°♄	
conjunction	1832 Sep 11 03:21	18°♄21'12	1°52'16	conjunction	1838 Nov 24 01:17	1°♄22'14	1°45'42
minimum elong	1832 Sep 11 03:18	18°♄21'11	1°52'17	minimum elong	1838 Nov 24 01:20	1°♄22'14	1°45'42
max. Earth dist.	1832 Sep 11 06:33	18°♄22'12	10.40475 AU	max. Earth dist.	1838 Nov 23 22:34	1°♄21'25	10.98242 AU
morning rise	1832 Sep 28 13:30	20°♄31'13		morning rise	1838 Dec 10 16:07	3°♄19'46	
retrograde	1833 Jan 07 07:00	28°♄04'50		retrograde	1839 Mar 20 09:23	10°♄20'00	
opposition	1833 Mar 15 12:22	24°♄42'27	2°28'20	opposition	1839 May 29 03:42	7°♄02'49	1°58'13
min. Earth dist.	1833 Mar 15 10:23	24°♄42'51	8.46114 AU	min. Earth dist.	1839 May 29 05:49	7°♄02'26	9.00939 AU
direct	1833 May 24 01:26	21°♄14'48		direct	1839 Aug 08 07:56	3°♄42'30	
evening set	1833 Sep 07 03:24	29°♄04'56		evening set	1839 Nov 18 21:43	10°♄50'57	
	1833 Sep 14 15:33	0°♄					
conjunction	1833 Sep 24 13:10	1°♄13'28	2°06'24	conjunction	1839 Dec 05 13:49	12°♄48'21	1°26'40
minimum elong	1833 Sep 24 13:08	1°♄13'27	2°06'25	minimum elong	1839 Dec 05 13:51	12°♄48'21	1°26'40
max. Earth dist.	1833 Sep 24 14:55	1°♄14'00	10.51645 AU	max. Earth dist.	1839 Dec 05 10:59	12°♄47'30	11.02942 AU
morning rise	1833 Oct 11 18:22	3°♄20'34		morning rise	1839 Dec 22 03:59	14°♄45'14	
retrograde	1834 Jan 19 22:32	10°♄46'10		retrograde	1840 Mar 31 04:22	21°♄44'17	
opposition	1834 Mar 28 14:01	7°♄25'05	2°41'31	opposition	1840 Jun 09 07:22	18°♄27'08	1°32'43
min. Earth dist.	1834 Mar 28 12:36	7°♄25'21	8.57392 AU	min. Earth dist.	1840 Jun 09 09:36	18°♄26'43	9.04550 AU
direct	1834 Jun 06 15:10	3°♄58'34		direct	1840 Aug 19 10:47	15°♄07'42	
evening set	1834 Sep 20 07:51	11°♄41'01		evening set	1840 Nov 29 08:02	22°♄12'05	
conjunction	1834 Oct 07 13:03	13°♄46'48	2°14'07	conjunction	1840 Dec 15 23:24	24°♄09'01	1°04'20
minimum elong	1834 Oct 07 13:02	13°♄46'47	2°14'07	minimum elong	1840 Dec 15 23:26	24°♄09'02	1°04'20
max. Earth dist.	1834 Oct 07 13:48	13°♄47'01	10.62840 AU	max. Earth dist.	1840 Dec 15 20:23	24°♄08'08	11.05484 AU
morning rise	1834 Oct 24 13:47	15°♄51'13		morning rise	1841 Jan 01 13:29	26°♄05'38	
retrograde	1835 Feb 01 08:39	23°♄09'33			1841 Feb 07 17:33	0°♄	
opposition	1835 Apr 10 10:23	19°♄49'38	2°46'45	retrograde	1841 Apr 12 01:12	3°♄05'01	
min. Earth dist.	1835 Apr 10 09:03	19°♄49'53	8.68414 AU		1841 Jun 18 15:07	30°♄	
direct	1835 Jun 19 22:06	16°♄24'24		opposition	1841 Jun 21 10:22	29°♄47'38	1°03'46
evening set	1835 Oct 03 02:17	23°♄59'02		min. Earth dist.	1841 Jun 21 13:23	29°♄47'04	9.05929 AU
				direct	1841 Aug 31 09:43	26°♄28'51	
conjunction	1835 Oct 20 03:37	26°♄02'22	2°15'28		1841 Nov 07 18:39	0°♄	
minimum elong	1835 Oct 20 03:37	26°♄02'22	2°15'28	evening set	1841 Dec 10 16:28	3°♄30'32	
max. Earth dist.	1835 Oct 20 04:13	26°♄02'33	10.73532 AU				
morning rise	1835 Nov 06 00:32	28°♄04'25		conjunction	1841 Dec 27 07:26	5°♄27'22	0°39'34
	1835 Nov 22 17:37	0°♄		minimum elong	1841 Dec 27 07:28	5°♄27'23	0°39'33
retrograde	1836 Feb 13 15:38	5°♄16'26		max. Earth dist.	1841 Dec 27 02:54	5°♄26'02	11.05724 AU
opposition	1836 Apr 22 02:08	1°♄57'32	2°44'22	morning rise	1842 Jan 12 22:08	7°♄24'10	
min. Earth dist.	1836 Apr 22 01:30	1°♄57'39	8.78670 AU	retrograde	1842 Apr 23 21:24	14°♄25'25	
	1836 May 19 13:24	30°♄		opposition	1842 Jul 03 13:28	11°♄07'31	0°32'22
direct	1836 Jul 01 20:47	28°♄33'40		min. Earth dist.	1842 Jul 03 17:51	11°♄06'43	9.04964 AU
	1836 Aug 13 09:18	0°♄		direct	1842 Sep 12 05:58	7°♄49'09	
evening set	1836 Oct 14 11:43	6°♄00'40		evening set	1842 Dec 22 00:56	14°♄49'44	
conjunction	1836 Oct 31 09:42	8°♄01'55	2°10'48	conjunction	1843 Jan 07 15:56	16°♄46'50	0°13'13
minimum elong	1836 Oct 31 09:43	8°♄01'55	2°10'48	minimum elong	1843 Jan 07 15:57	16°♄46'50	0°13'13
max. Earth dist.	1836 Oct 31 09:44	8°♄01'56	10.83241 AU	behind sun begin	1843 Jan 07 11:45	16°♄45'37	
morning rise	1836 Nov 17 03:38	10°♄02'01		behind sun end	1843 Jan 07 20:09	16°♄48'04	
	1837 Jan 04 14:29	15°♄		max. Earth dist.	1843 Jan 07 10:15	16°♄45'10	11.03600 AU
retrograde	1837 Feb 24 15:58	17°♄08'49		morning rise	1843 Jan 24 07:38	18°♄44'09	
	1837 Apr 18 22:20	15°♄		retrograde	1843 May 05 21:46	25°♄48'55	

desc. node	1843 Jul 10 14:28	22°☾52'55		max. Earth dist.	1849 Mar 18 15:32	28°♄01'26	10.52891 AU
opposition	1843 Jul 15 17:30	22°☾30'16	0°00'-26		1849 Apr 03 15:18	0°♃	
min. Earth dist.	1843 Jul 15 22:18	22°☾29'23	9.01665 AU	morning rise	1849 Apr 04 22:01	0°♃09'21	
direct	1843 Sep 24 04:02	19°☾12'03		retrograde	1849 Jul 19 22:55	7°♃59'41	
evening set	1844 Jan 02 10:57	26°☾13'04		opposition	1849 Sep 27 19:20	4°♃33'01	-2°-39'-16
				min. Earth dist.	1849 Sep 27 20:29	4°♃32'47	8.47311 AU
conjunction	1844 Jan 19 02:30	28°☾10'51	0°-13'-52	direct	1849 Dec 04 10:43	1°♃11'00	
minimum elong	1844 Jan 19 02:29	28°☾10'51	0°13'53	evening set	1850 Mar 14 19:09	8°♃42'55	
behind sun begin	1844 Jan 18 22:44	28°☾09'44					
behind sun end	1844 Jan 19 06:15	28°☾11'57		conjunction	1850 Mar 31 22:33	10°♃51'15	-2°-12'-33
max. Earth dist.	1844 Jan 18 21:08	28°☾09'16	10.99201 AU	minimum elong	1850 Mar 31 22:32	10°♃51'15	2°12'34
	1844 Feb 03 12:15	0°♁		max. Earth dist.	1850 Mar 31 21:19	10°♃50'52	10.41558 AU
morning rise	1844 Feb 04 19:22	0°♁09'03		morning rise	1850 Apr 18 06:29	13°♃01'03	
retrograde	1844 May 17 02:56	7°♁18'49		retrograde	1850 Aug 02 19:55	21°♃00'11	
opposition	1844 Jul 26 23:52	3°♁59'09	0°-33'-33	opposition	1850 Oct 11 05:11	17°♃32'17	-2°-46'-53
min. Earth dist.	1844 Jul 27 04:01	3°♁58'23	8.96202 AU	min. Earth dist.	1850 Oct 11 05:20	17°♃32'15	8.36175 AU
direct	1844 Oct 05 00:52	0°♁40'53		direct	1850 Dec 17 09:28	14°♃09'06	
evening set	1845 Jan 13 00:03	7°♁43'46		evening set	1851 Mar 28 06:20	21°♃49'18	
conjunction	1845 Jan 29 16:27	9°♁42'31	0°-40'-36	conjunction	1851 Apr 14 13:39	24°♃00'15	-2°-15'-2
minimum elong	1845 Jan 29 16:26	9°♁42'31	0°40'37	minimum elong	1851 Apr 14 13:39	24°♃00'16	2°15'03
max. Earth dist.	1845 Jan 29 11:36	9°♁41'05	10.92745 AU	max. Earth dist.	1851 Apr 14 13:00	24°♃00'03	10.30720 AU
morning rise	1845 Feb 15 10:50	11°♁41'57		morning rise	1851 May 02 01:41	26°♃12'43	
	1845 Mar 17 15:23	15°♁			1851 Jun 03 16:12	0°♄	
retrograde	1845 May 29 13:05	18°♁58'05		retrograde	1851 Aug 16 22:22	4°♄19'43	
opposition	1845 Aug 08 09:19	15°♁37'10	-1°-5'-47	opposition	1851 Oct 24 20:27	0°♄50'49	-2°-45'-51
min. Earth dist.	1845 Aug 08 13:05	15°♁36'28	8.88828 AU	min. Earth dist.	1851 Oct 24 20:01	0°♄50'54	8.25812 AU
	1845 Aug 16 17:21	15°♁			1851 Nov 04 12:00	30°♃	
direct	1845 Oct 16 23:21	12°♁18'34		direct	1851 Dec 30 16:38	27°♃26'26	
	1845 Dec 13 20:03	15°♁			1852 Feb 22 17:37	0°♄	
evening set	1846 Jan 24 18:08	19°♁24'49		evening set	1852 Apr 10 03:18	5°♄14'52	
conjunction	1846 Feb 10 11:36	21°♁24'53	-1°-6'-2	conjunction	1852 Apr 27 15:10	7°♄28'32	-2°-10'-15
minimum elong	1846 Feb 10 11:34	21°♁24'52	1°06'03	minimum elong	1852 Apr 27 15:12	7°♄28'33	2°10'17
max. Earth dist.	1846 Feb 10 06:21	21°♁23'18	10.84517 AU	max. Earth dist.	1852 Apr 27 15:25	7°♄28'37	10.20967 AU
morning rise	1846 Feb 27 07:58	23°♁25'51		morning rise	1852 May 15 07:35	9°♄43'38	
	1846 May 10 07:08	0°♄			1852 Jul 01 11:58	15°♄	
retrograde	1846 Jun 11 05:43	0°♄49'27		retrograde	1852 Aug 30 06:18	17°♄56'56	
	1846 Jul 13 13:08	30°♁			1852 Oct 30 22:57	15°♁	
opposition	1846 Aug 20 22:28	27°♁27'10	-1°-35'-51	opposition	1852 Nov 06 16:32	14°♄27'19	-2°-35'-33
min. Earth dist.	1846 Aug 21 02:25	27°♁26'25	8.79858 AU	min. Earth dist.	1852 Nov 06 15:35	14°♄27'31	8.16805 AU
direct	1846 Oct 29 00:32	24°♁07'57		direct	1853 Jan 12 06:43	11°♄01'43	
	1847 Jan 25 11:29	0°♄			1853 Mar 21 15:25	15°♄	
evening set	1847 Feb 05 18:16	1°♄18'58		evening set	1853 Apr 24 09:33	18°♄57'55	
conjunction	1847 Feb 22 13:17	3°♄20'39	-1°-29'-5	conjunction	1853 May 12 02:17	21°♄14'10	-1°-58'-3
minimum elong	1847 Feb 22 13:14	3°♄20'39	1°29'05	minimum elong	1853 May 12 02:20	21°♄14'11	1°58'04
max. Earth dist.	1847 Feb 22 08:04	3°♄19'04	10.74858 AU	max. Earth dist.	1853 May 12 04:03	21°♄14'45	10.12859 AU
morning rise	1847 Mar 11 11:58	5°♄23'27		morning rise	1853 May 29 22:59	23°♄31'42	
retrograde	1847 Jun 24 03:05	12°♄55'29			1853 Jul 29 20:06	0°♅	
opposition	1847 Sep 02 16:15	9°♄31'44	-2°-2'-24	retrograde	1853 Sep 13 18:18	1°♅49'12	
min. Earth dist.	1847 Sep 02 20:00	9°♄31'01	8.69655 AU		1853 Oct 30 06:50	30°♁	
direct	1847 Nov 10 06:31	6°♄11'43		opposition	1853 Nov 20 16:35	28°♄19'14	-2°-16'-3
evening set	1848 Feb 18 01:39	13°♄28'46		min. Earth dist.	1853 Nov 20 14:35	28°♄19'39	8.09687 AU
				direct	1854 Jan 26 03:34	24°♄52'31	
conjunction	1848 Mar 05 22:51	15°♄32'22	-1°-48'-35		1854 Apr 14 22:21	0°♅	
minimum elong	1848 Mar 05 22:49	15°♄32'22	1°48'36	evening set	1854 May 09 00:01	2°♅55'31	
max. Earth dist.	1848 Mar 05 19:04	15°♄31'13	10.64163 AU				
morning rise	1848 Mar 23 00:08	17°♄37'16		conjunction	1854 May 26 21:23	5°♅14'00	-1°-38'-46
retrograde	1848 Jul 06 08:31	25°♄18'23		minimum elong	1854 May 26 21:26	5°♅14'01	1°38'47
opposition	1848 Sep 14 15:09	21°♄53'08	-2°-24'00	max. Earth dist.	1854 May 27 00:49	5°♅15'07	10.06891 AU
min. Earth dist.	1848 Sep 14 17:45	21°♄52'38	8.58646 AU	morning rise	1854 Jun 13 21:45	7°♅33'28	
direct	1848 Nov 21 18:30	18°♄32'11		retrograde	1854 Sep 28 07:56	15°♅52'46	
evening set	1849 Mar 01 17:42	25°♄56'16		opposition	1854 Dec 04 19:21	12°♅22'50	-1°-48'-8
				min. Earth dist.	1854 Dec 04 16:06	12°♅23'30	8.04917 AU
conjunction	1849 Mar 18 17:43	28°♄02'07	-2°-3'-26	direct	1855 Feb 09 07:04	8°♅55'09	
minimum elong	1849 Mar 18 17:41	28°♄02'06	2°03'27	evening set	1855 May 23 20:58	17°♅03'31	

conjunction	1855 Jun 10 22:12	19°II23'38	-1°-13'-22	evening set	1861 Aug 18 19:31	10°♎40'00	
minimum elong	1855 Jun 10 22:16	19°II23'39	1°13'23				
max. Earth dist.	1855 Jun 11 03:15	19°II25'17	10.03471 AU	conjunction	1861 Sep 05 12:24	12°♎52'39	1°44'00
morning rise	1855 Jun 29 01:16	21°II44'23		minimum elong	1861 Sep 05 12:21	12°♎52'38	1°44'00
	1855 Oct 05 15:35	0°♄		max. Earth dist.	1861 Sep 05 15:51	12°♎53'44	10.36650 AU
retrograde	1855 Oct 12 21:11	0°♄02'56		morning rise	1861 Sep 23 00:55	15°♎03'57	
	1855 Oct 20 03:19	30°RII		retrograde	1862 Jan 02 00:57	22°♎41'16	
opposition	1855 Dec 18 23:38	26°II33'23	-1°-13'-23	opposition	1862 Mar 10 02:53	19°♎18'47	2°19'53
min. Earth dist.	1855 Dec 18 19:11	26°II34'18	8.02836 AU	min. Earth dist.	1862 Mar 09 23:49	19°♎19'24	8.42139 AU
direct	1856 Feb 23 14:25	23°II04'57		direct	1862 May 18 10:44	15°♎51'14	
	1856 May 27 17:13	0°♄		evening set	1862 Sep 01 14:59	23°♎44'33	
evening set	1856 Jun 06 22:10	1°♄16'55					
				conjunction	1862 Sep 19 03:05	25°♎54'20	2°00'53
conjunction	1856 Jun 25 02:00	3°♄37'53	0°-43'-23	minimum elong	1862 Sep 19 03:02	25°♎54'19	2°00'53
minimum elong	1856 Jun 25 02:03	3°♄37'54	0°43'24	max. Earth dist.	1862 Sep 19 05:39	25°♎55'08	10.47545 AU
max. Earth dist.	1856 Jun 25 08:10	3°♄39'54	10.02840 AU	morning rise	1862 Oct 06 10:22	28°♎02'40	
morning rise	1856 Jul 13 06:22	5°♄59'03			1862 Oct 22 23:06	0°♄	
retrograde	1856 Oct 26 08:43	14°♄14'23		retrograde	1863 Jan 14 21:48	5°♄31'49	
opposition	1857 Jan 01 03:55	10°♄45'36	0°-34'-4	opposition	1863 Mar 23 07:10	2°♄10'37	2°36'33
min. Earth dist.	1856 Dec 31 22:59	10°♄46'37	8.03597 AU	min. Earth dist.	1863 Mar 23 05:25	2°♄10'58	8.53135 AU
direct	1857 Mar 09 00:22	7°♄16'37			1863 Apr 22 10:54	30°R♎	
evening set	1857 Jun 22 01:07	15°♄30'13		direct	1863 Jun 01 02:00	28°♎44'03	
					1863 Jul 10 08:32	0°♄	
conjunction	1857 Jul 10 05:48	17°♄51'05	0°-10'-50	evening set	1863 Sep 15 00:30	6°♄30'02	
minimum elong	1857 Jul 10 05:48	17°♄51'05	0°10'51				
behind sun begin	1857 Jul 10 00:17	17°♄49'19		conjunction	1863 Oct 02 07:51	8°♄37'01	2°11'24
behind sun end	1857 Jul 10 11:20	17°♄52'52		minimum elong	1863 Oct 02 07:49	8°♄37'01	2°11'24
max. Earth dist.	1857 Jul 10 12:11	17°♄53'08	10.05043 AU	max. Earth dist.	1863 Oct 02 09:01	8°♄37'23	10.58461 AU
morning rise	1857 Jul 28 09:44	20°♄11'43		morning rise	1863 Oct 19 10:22	10°♄42'35	
retrograde	1857 Nov 09 16:22	28°♄21'40		retrograde	1864 Jan 27 10:55	18°♄04'15	
asc. node	1857 Nov 11 03:10	28°♄21'32		opposition	1864 Apr 04 06:14	14°♄44'13	2°45'15
opposition	1858 Jan 15 06:40	24°♄53'55	0°07'05	min. Earth dist.	1864 Apr 04 06:11	14°♄44'14	8.63923 AU
min. Earth dist.	1858 Jan 15 01:55	24°♄54'54	8.07159 AU	direct	1864 Jun 13 11:58	11°♄18'44	
direct	1858 Mar 23 11:18	21°♄24'41		evening set	1864 Sep 27 00:02	18°♄57'08	
evening set	1858 Jul 07 02:37	29°♄37'47					
	1858 Jul 10 00:37	0°♄		conjunction	1864 Oct 14 03:00	21°♄01'34	2°15'30
conjunction	1858 Jul 25 06:21	1°♄57'37	0°22'12	minimum elong	1864 Oct 14 03:00	21°♄01'33	2°15'29
minimum elong	1858 Jul 25 06:20	1°♄57'37	0°22'13	max. Earth dist.	1864 Oct 14 02:16	21°♄01'20	10.68967 AU
max. Earth dist.	1858 Jul 25 12:23	1°♄59'34	10.09939 AU	morning rise	1864 Oct 31 01:32	23°♄04'40	
morning rise	1858 Aug 12 08:12	4°♄16'49			1865 Jan 19 10:40	0°♄	
retrograde	1858 Nov 23 18:23	12°♄19'43		retrograde	1865 Feb 07 18:49	0°♄19'42	
opposition	1859 Jan 29 06:38	8°♄53'13	0°47'21		1865 Feb 27 07:18	30°R♄	
min. Earth dist.	1859 Jan 29 02:13	8°♄54'07	8.13293 AU	opposition	1865 Apr 17 00:40	27°♄00'38	2°46'08
direct	1859 Apr 06 22:49	5°♄24'00		min. Earth dist.	1865 Apr 17 01:42	27°♄00'26	8.74083 AU
evening set	1859 Jul 21 23:38	13°♄34'30		direct	1865 Jun 26 15:14	23°♄36'17	
	1859 Aug 02 05:05	15°♄			1865 Sep 29 23:27	0°♄	
conjunction	1859 Aug 09 00:50	15°♄52'28	0°53'29	evening set	1865 Oct 09 13:54	1°♄07'04	
minimum elong	1859 Aug 09 00:47	15°♄52'27	0°53'29				
max. Earth dist.	1859 Aug 09 06:09	15°♄54'11	10.17198 AU	conjunction	1865 Oct 26 13:11	3°♄09'17	2°13'23
morning rise	1859 Aug 26 23:10	18°♄09'30		minimum elong	1865 Oct 26 13:12	3°♄09'17	2°13'23
retrograde	1859 Dec 07 11:21	26°♄04'12		max. Earth dist.	1865 Oct 26 11:07	3°♄08'39	10.78655 AU
opposition	1860 Feb 12 02:29	22°♄39'03	1°24'10	morning rise	1865 Nov 12 08:32	5°♄10'19	
min. Earth dist.	1860 Feb 11 22:29	22°♄39'51	8.21571 AU	retrograde	1866 Feb 19 21:11	12°♄19'45	
direct	1860 Apr 20 08:28	19°♄10'07		opposition	1866 Apr 29 14:40	9°♄01'23	2°39'41
evening set	1860 Aug 04 13:59	27°♄16'13		min. Earth dist.	1866 Apr 29 15:59	9°♄01'07	8.83209 AU
				direct	1866 Jul 09 12:18	5°♄38'10	
conjunction	1860 Aug 22 11:24	29°♄31'41	1°21'13	evening set	1866 Oct 21 19:13	13°♄01'41	
minimum elong	1860 Aug 22 11:21	29°♄31'40	1°21'14				
max. Earth dist.	1860 Aug 22 15:40	29°♄33'03	10.26312 AU	conjunction	1866 Nov 07 15:42	15°♄02'04	2°05'32
	1860 Aug 26 04:30	0°♄		minimum elong	1866 Nov 07 15:44	15°♄02'05	2°05'32
morning rise	1860 Sep 09 05:08	1°♄45'59		max. Earth dist.	1866 Nov 07 08:48	15°♄	
retrograde	1860 Dec 19 21:06	9°♄31'58		morning rise	1866 Nov 07 13:24	15°♄01'23	10.87137 AU
opposition	1861 Feb 24 17:17	6°♄08'10	1°55'29	retrograde	1866 Nov 24 08:37	17°♄01'26	
min. Earth dist.	1861 Feb 24 13:33	6°♄08'55	8.31411 AU	opposition	1867 May 12 00:40	20°♄48'31	2°26'37
direct	1861 May 04 13:01	2°♄39'48		min. Earth dist.	1867 May 12 02:17	20°♄48'13	8.90938 AU
				direct	1867 Jul 22 03:34	17°♄26'22	

evening set	1867 Nov 02 17:17	24°♄43'18		min. Earth dist.	1873 Jul 22 08:52	29°♄23'17	8.96993 AU
				direct	1873 Sep 30 08:55	26°♄05'17	
conjunction	1867 Nov 19 11:40	26°♄42'17	1°52'33		1873 Dec 10 21:45	0°♁	
minimum elong	1867 Nov 19 11:42	26°♄42'18	1°52'34	evening set	1874 Jan 08 12:41	3°♁07'47	
max. Earth dist.	1867 Nov 19 09:13	26°♄41'33	10.94075 AU				
morning rise	1867 Dec 06 02:54	28°♄40'24		conjunction	1874 Jan 25 04:38	5°♁06'15	0°-29'-30
	1867 Dec 17 17:28	0°♁		minimum elong	1874 Jan 25 04:37	5°♁06'15	0°29'31
retrograde	1868 Mar 14 18:54	5°♁42'13		max. Earth dist.	1874 Jan 24 23:48	5°♁04'49	10.94204 AU
opposition	1868 May 23 07:51	2°♁24'34	2°07'46	morning rise	1874 Feb 10 22:33	7°♁05'17	
min. Earth dist.	1868 May 23 10:27	2°♁24'05	8.96980 AU	retrograde	1874 May 24 15:24	14°♁19'01	
	1868 Jun 28 11:57	30°♁♄		opposition	1874 Aug 03 13:27	10°♁58'19	0°-52'-30
direct	1868 Aug 02 11:40	29°♄03'22		min. Earth dist.	1874 Aug 03 17:09	10°♁57'38	8.90946 AU
	1868 Sep 05 22:25	0°♁		direct	1874 Oct 12 08:10	7°♁39'34	
evening set	1868 Nov 13 09:31	6°♁14'38		evening set	1875 Jan 20 04:38	14°♁44'42	
					1875 Jan 22 08:33	15°♁	
conjunction	1868 Nov 30 02:12	8°♁12'35	1°35'09	conjunction	1875 Feb 05 21:37	16°♁44'17	0°-55'-37
minimum elong	1868 Nov 30 02:15	8°♁12'35	1°35'10	minimum elong	1875 Feb 05 21:35	16°♁44'17	0°55'38
max. Earth dist.	1868 Nov 29 22:39	8°♁11'31	10.99216 AU	max. Earth dist.	1875 Feb 05 17:48	16°♁43'08	10.87274 AU
morning rise	1868 Dec 16 16:39	10°♁09'55		morning rise	1875 Feb 22 17:10	18°♁44'40	
retrograde	1869 Mar 26 13:19	17°♁09'58		retrograde	1875 Jun 06 05:58	26°♁05'18	
opposition	1869 Jun 04 12:53	13°♁52'20	1°44'02	opposition	1875 Aug 16 01:01	22°♁43'28	-1°-23'-37
min. Earth dist.	1869 Jun 04 16:29	13°♁51'40	9.01131 AU	min. Earth dist.	1875 Aug 16 03:42	22°♁42'58	8.83221 AU
direct	1869 Aug 14 16:11	10°♁31'56		direct	1875 Oct 24 09:13	19°♁24'28	
evening set	1869 Nov 24 21:31	17°♁38'42		evening set	1876 Feb 01 02:08	26°♁33'37	
conjunction	1869 Dec 11 13:10	19°♁36'01	1°14'07	conjunction	1876 Feb 17 20:33	28°♁34'39	-1°-19'-47
minimum elong	1869 Dec 11 13:12	19°♁36'02	1°14'07	minimum elong	1876 Feb 17 20:30	28°♁34'38	1°19'47
max. Earth dist.	1869 Dec 11 08:38	19°♁34'41	11.02395 AU	max. Earth dist.	1876 Feb 17 17:50	28°♁33'49	10.78798 AU
morning rise	1869 Dec 28 03:30	21°♁32'57			1876 Feb 29 15:08	0°♁	
retrograde	1870 Apr 07 08:53	28°♁32'45		morning rise	1876 Mar 05 18:02	0°♁36'40	
opposition	1870 Jun 16 16:24	25°♁14'53	1°16'23	retrograde	1876 Jun 18 02:16	8°♁05'14	
min. Earth dist.	1870 Jun 16 20:12	25°♁14'11	9.03254 AU	opposition	1876 Aug 27 17:00	4°♁42'11	-1°-51'-46
direct	1870 Aug 26 18:07	21°♁55'10		min. Earth dist.	1876 Aug 27 18:37	4°♁41'53	8.74128 AU
evening set	1870 Dec 06 06:51	28°♁58'42		direct	1876 Nov 04 11:51	1°♁22'43	
	1870 Dec 15 01:02	0°♁		evening set	1877 Feb 12 06:30	8°♁37'11	
conjunction	1870 Dec 22 22:07	0°♁55'47	0°50'15	conjunction	1877 Mar 01 02:41	10°♁39'56	-1°-40'-52
minimum elong	1870 Dec 22 22:08	0°♁55'48	0°50'15	minimum elong	1877 Mar 01 02:39	10°♁39'55	1°40'53
max. Earth dist.	1870 Dec 22 17:50	0°♁54'32	11.03494 AU	max. Earth dist.	1877 Mar 01 00:22	10°♁39'13	10.69130 AU
morning rise	1871 Jan 08 12:43	2°♁52'44		morning rise	1877 Mar 18 02:41	12°♁43'53	
retrograde	1871 Apr 19 05:31	9°♁53'46		retrograde	1877 Jul 01 05:27	20°♁21'07	
opposition	1871 Jun 28 19:34	6°♁35'28	0°45'50	opposition	1877 Sep 09 13:52	16°♁56'48	-2°-15'-32
min. Earth dist.	1871 Jun 28 22:46	6°♁34'52	9.03259 AU	min. Earth dist.	1877 Sep 09 15:01	16°♁56'34	8.64044 AU
direct	1871 Sep 07 16:27	3°♁16'17		direct	1877 Nov 16 20:47	13°♁36'39	
evening set	1871 Dec 17 15:22	10°♁18'00		evening set	1878 Feb 24 19:05	20°♁57'33	
conjunction	1872 Jan 03 06:35	12°♁15'13	0°24'25	conjunction	1878 Mar 13 17:37	23°♁02'20	-1°-57'-45
minimum elong	1872 Jan 03 06:36	12°♁15'13	0°24'24	minimum elong	1878 Mar 13 17:35	23°♁02'19	1°57'46
max. Earth dist.	1872 Jan 03 02:45	12°♁14'05	11.02455 AU	max. Earth dist.	1878 Mar 13 15:22	23°♁01'38	10.58681 AU
morning rise	1872 Jan 19 21:48	14°♁12'30		morning rise	1878 Mar 30 20:36	25°♁08'28	
retrograde	1872 Apr 30 06:08	21°♁16'19			1878 May 14 20:15	0°♁	
opposition	1872 Jul 09 23:30	17°♁57'24	0°13'26	retrograde	1878 Jul 14 15:56	2°♁54'37	
min. Earth dist.	1872 Jul 10 02:44	17°♁56'49	9.01144 AU		1878 Sep 15 23:55	30°♁	
direct	1872 Sep 18 13:35	14°♁38'35		opposition	1878 Sep 22 15:49	29°♁29'03	-2°-33'-32
desc. node	1872 Dec 10 00:07	19°♁38'43		min. Earth dist.	1878 Sep 22 16:56	29°♁28'50	8.53406 AU
evening set	1872 Dec 28 00:51	21°♁39'56		direct	1878 Nov 29 10:42	26°♁08'03	
					1879 Feb 06 00:53	0°♁	
conjunction	1873 Jan 13 16:13	23°♁37'37	0°-2'-33	evening set	1879 Mar 09 16:28	3°♁36'15	
minimum elong	1873 Jan 13 16:13	23°♁37'37	0°02'34				
behind sun begin	1873 Jan 13 09:15	23°♁35'34		conjunction	1879 Mar 26 18:06	5°♁43'19	-2°-9'-20
behind sun end	1873 Jan 13 23:11	23°♁39'40		minimum elong	1879 Mar 26 18:05	5°♁43'18	2°09'22
max. Earth dist.	1873 Jan 13 11:48	23°♁36'21	10.99322 AU	max. Earth dist.	1879 Mar 26 16:59	5°♁42'58	10.47912 AU
morning rise	1873 Jan 30 08:36	25°♁35'37		morning rise	1879 Apr 13 00:26	7°♁51'50	
	1873 Mar 13 20:00	0°♁		retrograde	1879 Jul 28 08:44	15°♁46'44	
retrograde	1873 May 12 08:40	2°♁43'41		opposition	1879 Oct 05 23:16	12°♁19'59	-2°-44'-25
	1873 Jul 14 01:55	30°♁♄		min. Earth dist.	1879 Oct 05 23:38	12°♁19'55	8.42687 AU
opposition	1873 Jul 22 05:13	29°♁23'58	0°-19'-44				

direct	1879 Dec 12 07:42	8° Υ 57'57		conjunction	1886 Jul 04 02:21	11° ♄ 59'15	0°-24'-57
evening set	1880 Mar 21 23:08	16° Υ 33'57		minimum elong	1886 Jul 04 02:22	11° ♄ 59'15	0°24'58
conjunction	1880 Apr 08 04:37	18° Υ 43'31	-2°-14'-39	max. Earth dist.	1886 Jul 04 06:37	12° ♄ 00'38	10.04902 AU
minimum elong	1880 Apr 08 04:37	18° Υ 43'31	2°14'40	morning rise	1886 Jul 22 06:42	14° ♄ 20'00	
max. Earth dist.	1880 Apr 08 05:02	18° Υ 43'38	10.37310 AU	retrograde	1886 Nov 03 20:37	22° ♄ 31'36	
morning rise	1880 Apr 25 14:43	20° Υ 54'34		opposition	1887 Jan 09 14:03	19° ♄ 03'23	0°-10'-39
retrograde	1880 Aug 10 07:42	28° Υ 57'30		min. Earth dist.	1887 Jan 09 10:11	19° ♄ 04'11	8.06209 AU
opposition	1880 Oct 18 11:57	25° Υ 29'40	-2°-47'-3	direct	1887 Mar 17 16:39	15° ♄ 34'10	
min. Earth dist.	1880 Oct 18 11:17	25° Υ 29'48	8.32361 AU	asc. node	1887 Apr 17 19:09	16° ♄ 26'47	
direct	1880 Dec 24 12:22	22° Υ 06'30		evening set	1887 Jun 30 23:24	23° ♄ 46'47	
evening set	1881 Apr 04 15:36	29° Υ 50'27		conjunction	1887 Jul 19 03:46	26° ♄ 06'59	0°08'04
	1881 Apr 05 22:10	0° ♄		minimum elong	1887 Jul 19 03:45	26° ♄ 06'59	0°08'04
conjunction	1881 Apr 22 01:29	2° ♄ 02'40	-2°-12'-58	behind sun begin	1887 Jul 18 21:14	26° ♄ 04'53	
minimum elong	1881 Apr 22 01:30	2° ♄ 02'40	2°12'59	behind sun end	1887 Jul 19 10:16	26° ♄ 09'04	
max. Earth dist.	1881 Apr 22 02:59	2° ♄ 03'08	10.27344 AU	max. Earth dist.	1887 Jul 19 08:48	26° ♄ 08'35	10.08186 AU
morning rise	1881 May 09 15:43	4° ♄ 16'18		morning rise	1887 Aug 06 06:43	28° ♄ 26'44	
retrograde	1881 Aug 24 13:41	12° ♄ 26'01			1887 Aug 18 19:05	0° ♄	
opposition	1881 Nov 01 05:21	8° ♄ 57'21	-2°-40'-40	retrograde	1887 Nov 17 23:59	6° ♄ 32'08	
min. Earth dist.	1881 Nov 01 03:48	8° ♄ 57'40	8.22891 AU	opposition	1888 Jan 23 14:23	3° ♄ 04'52	0°30'11
direct	1882 Jan 06 22:07	5° ♄ 32'58		min. Earth dist.	1888 Jan 23 10:05	3° ♄ 05'44	8.10771 AU
evening set	1882 Apr 18 17:29	13° ♄ 24'47			1888 Mar 09 20:01	30° $\text{R}\text{♄}$	
	1882 May 01 04:41	15° ♄		direct	1888 Mar 31 03:16	29° ♄ 35'22	
conjunction	1882 May 06 08:03	15° ♄ 39'37	-2°-3'-54	evening set	1888 Apr 21 10:01	0° ♄	
minimum elong	1882 May 06 08:05	15° ♄ 39'38	2°03'55		1888 Jul 14 21:50	7° ♄ 46'28	
max. Earth dist.	1882 May 06 09:54	15° ♄ 40'13	10.18511 AU	conjunction	1888 Aug 02 00:29	10° ♄ 05'14	0°40'13
morning rise	1882 May 24 02:36	17° ♄ 55'46		minimum elong	1888 Aug 02 00:27	10° ♄ 05'13	0°40'13
retrograde	1882 Sep 08 00:28	26° ♄ 10'35		max. Earth dist.	1888 Aug 02 05:42	10° ♄ 06'55	10.13958 AU
opposition	1882 Nov 15 03:12	22° ♄ 41'23	-2°-25'-3	morning rise	1888 Aug 20 00:26	12° ♄ 23'10	
min. Earth dist.	1882 Nov 15 01:11	22° ♄ 41'48	8.14824 AU		1888 Sep 10 14:54	15° ♄	
direct	1883 Jan 20 14:35	19° ♄ 15'48		retrograde	1888 Nov 30 20:37	20° ♄ 21'02	
evening set	1883 May 03 03:50	27° ♄ 14'50		opposition	1889 Feb 05 11:19	16° ♄ 54'55	1°08'41
conjunction	1883 May 20 23:02	29° ♄ 32'04	-1°-47'-34	min. Earth dist.	1889 Feb 05 07:14	16° ♄ 55'45	8.17658 AU
minimum elong	1883 May 20 23:05	29° ♄ 32'05	1°47'35		1889 Mar 02 08:48	15° $\text{R}\text{♄}$	
max. Earth dist.	1883 May 21 01:18	29° ♄ 32'48	10.11405 AU	direct	1889 Apr 14 12:12	13° ♄ 25'28	
	1883 May 24 13:24	0° ♄		evening set	1889 May 27 06:15	15° ♄	
morning rise	1883 Jun 07 21:41	1° ♄ 50'26			1889 Jul 29 14:39	21° ♄ 33'10	
retrograde	1883 Sep 22 13:32	10° ♄ 08'09		conjunction	1889 Aug 16 13:59	23° ♄ 49'46	1°09'38
opposition	1883 Nov 29 04:27	6° ♄ 38'43	-2°00'-39	minimum elong	1889 Aug 16 13:56	23° ♄ 49'45	1°09'38
min. Earth dist.	1883 Nov 29 02:09	6° ♄ 39'11	8.08761 AU	max. Earth dist.	1889 Aug 16 18:48	23° ♄ 51'18	10.21825 AU
direct	1884 Feb 03 14:49	3° ♄ 11'58		morning rise	1889 Sep 03 09:42	26° ♄ 05'15	
evening set	1884 May 16 21:34	11° ♄ 17'04			1889 Oct 07 03:33	0° ♄	
conjunction	1884 Jun 03 20:58	13° ♄ 36'14	-1°-24'-41	retrograde	1889 Dec 14 10:19	3° ♄ 54'51	
minimum elong	1884 Jun 03 21:01	13° ♄ 36'15	1°24'42	opposition	1890 Feb 19 03:53	0° ♄ 30'00	1°42'33
max. Earth dist.	1884 Jun 03 23:46	13° ♄ 37'09	10.06565 AU	min. Earth dist.	1890 Feb 19 00:38	0° ♄ 30'39	8.26425 AU
morning rise	1884 Jun 21 22:57	15° ♄ 56'13			1890 Feb 25 08:41	30° $\text{R}\text{♄}$	
retrograde	1884 Oct 06 01:48	24° ♄ 14'18		direct	1890 Apr 28 17:09	27° ♄ 00'53	
opposition	1884 Dec 12 07:34	20° ♄ 44'58	-1°-28'-43		1890 Jun 28 04:53	0° ♄	
min. Earth dist.	1884 Dec 12 05:01	20° ♄ 45'30	8.05165 AU	evening set	1890 Aug 12 23:38	5° ♄ 03'35	
direct	1885 Feb 16 20:42	17° ♄ 17'10		conjunction	1890 Aug 30 18:39	7° ♄ 17'32	1°34'40
evening set	1885 May 31 20:32	25° ♄ 26'44		minimum elong	1890 Aug 30 18:35	7° ♄ 17'31	1°34'41
conjunction	1885 Jun 18 23:08	27° ♄ 47'09	0°-56'-33	max. Earth dist.	1890 Aug 30 22:19	7° ♄ 18'42	10.31309 AU
minimum elong	1885 Jun 18 23:11	27° ♄ 47'10	0°56'34	morning rise	1890 Sep 17 09:28	9° ♄ 30'11	
max. Earth dist.	1885 Jun 19 02:32	27° ♄ 48'15	10.04348 AU	retrograde	1890 Dec 27 16:31	17° ♄ 11'14	
	1885 Jul 06 02:09	0° ♄		opposition	1891 Mar 04 15:24	13° ♄ 47'41	2°10'05
morning rise	1885 Jul 07 03:09	0° ♄ 07'58		min. Earth dist.	1891 Mar 04 13:06	13° ♄ 48'09	8.36554 AU
retrograde	1885 Oct 20 12:39	8° ♄ 23'55		direct	1891 May 12 17:21	10° ♄ 19'14	
opposition	1885 Dec 26 11:18	4° ♄ 55'01	0°-51'-12	evening set	1891 Aug 26 23:15	18° ♄ 15'37	
min. Earth dist.	1885 Dec 26 08:17	4° ♄ 55'38	8.04295 AU	conjunction	1891 Sep 13 13:26	20° ♄ 26'43	1°54'12
direct	1886 Mar 03 05:53	1° ♄ 26'22		minimum elong	1891 Sep 13 13:23	20° ♄ 26'42	1°54'12
evening set	1886 Jun 15 22:02	9° ♄ 38'29		max. Earth dist.	1891 Sep 13 15:35	20° ♄ 27'23	10.41866 AU
				morning rise	1891 Sep 30 23:12	22° ♄ 36'25	
					1891 Dec 27 17:42	0° ♄	

retrograde	1892 Jan 09 14:21	0°♁09'03		max. Earth dist.	1897 Nov 25 04:13	3°♁17'58	10.98285 AU
	1892 Jan 22 12:49	30°♁		morning rise	1897 Dec 11 21:34	5°♁16'16	
opposition	1892 Mar 16 21:34	26°♁46'49	2°30'12	retrograde	1898 Mar 21 15:14	12°♁16'35	
min. Earth dist.	1892 Mar 16 19:44	26°♁47'11	8.47465 AU	opposition	1898 May 30 10:30	8°♁59'20	1°55'06
direct	1892 May 25 12:41	23°♁19'16		min. Earth dist.	1898 May 30 12:18	8°♁59'00	9.00831 AU
	1892 Aug 29 23:07	0°♁		direct	1898 Aug 09 14:56	5°♁39'02	
evening set	1892 Sep 08 12:51	1°♁08'31		evening set	1898 Nov 20 03:04	12°♁47'19	
conjunction	1892 Sep 25 22:13	3°♁16'44	2°07'33	conjunction	1898 Dec 06 19:16	14°♁44'45	1°23'54
minimum elong	1892 Sep 25 22:11	3°♁16'43	2°07'33	minimum elong	1898 Dec 06 19:18	14°♁44'46	1°23'54
max. Earth dist.	1892 Sep 25 23:29	3°♁17'07	10.52923 AU	max. Earth dist.	1898 Dec 06 16:42	14°♁44'00	11.02704 AU
morning rise	1892 Oct 13 03:01	5°♁23'33		morning rise	1898 Dec 23 09:26	16°♁41'41	
retrograde	1893 Jan 21 05:42	12°♁48'18		retrograde	1899 Apr 02 12:15	23°♁40'59	
opposition	1893 Mar 29 22:25	9°♁27'19	2°42'24	opposition	1899 Jun 11 14:18	20°♁23'46	1°29'07
min. Earth dist.	1893 Mar 29 20:46	9°♁27'38	8.58591 AU	min. Earth dist.	1899 Jun 11 16:52	20°♁23'18	9.04179 AU
direct	1893 Jun 08 01:42	6°♁00'54		direct	1899 Aug 21 16:55	17°♁04'20	
evening set	1893 Sep 21 16:09	13°♁42'29		evening set	1899 Dec 01 13:34	24°♁08'45	
conjunction	1893 Oct 08 21:06	15°♁48'01	2°14'28	conjunction	1899 Dec 18 04:55	26°♁05'45	1°01'13
minimum elong	1893 Oct 08 21:05	15°♁48'01	2°14'28	minimum elong	1899 Dec 18 04:57	26°♁05'46	1°01'13
max. Earth dist.	1893 Oct 08 22:04	15°♁48'19	10.63939 AU	max. Earth dist.	1899 Dec 18 01:14	26°♁04'40	11.05001 AU
morning rise	1893 Oct 25 21:24	17°♁52'10		morning rise	1900 Jan 03 19:11	28°♁02'29	
retrograde	1894 Feb 02 16:55	25°♁09'50			1900 Jan 21 08:09	0°♁	
opposition	1894 Apr 11 18:17	21°♁49'58	2°46'41	retrograde	1900 Apr 14 06:59	5°♁02'15	
min. Earth dist.	1894 Apr 11 17:07	21°♁50'12	8.69403 AU	opposition	1900 Jun 23 17:36	1°♁44'47	0°59'47
direct	1894 Jun 21 05:53	18°♁24'51		min. Earth dist.	1900 Jun 23 21:21	1°♁44'06	9.05342 AU
evening set	1894 Oct 04 09:32	25°♁58'39			1900 Jul 18 17:34	30°♁	
conjunction	1894 Oct 21 10:36	28°♁01'48	2°15'03	direct	1900 Sep 02 15:16	28°♁25'59	
minimum elong	1894 Oct 21 10:37	28°♁01'48	2°15'03		1900 Oct 17 05:01	0°♁	
max. Earth dist.	1894 Oct 21 11:11	28°♁01'59	10.74401 AU	evening set	1900 Dec 12 22:16	5°♁27'53	
	1894 Nov 06 18:50	0°♁		conjunction	1900 Dec 29 13:14	7°♁24'48	0°36'11
morning rise	1894 Nov 07 07:13	0°♁03'40		minimum elong	1900 Dec 29 13:15	7°♁24'49	0°36'11
retrograde	1895 Feb 14 21:43	7°♁15'10		max. Earth dist.	1900 Dec 29 08:16	7°♁23'20	11.05057 AU
opposition	1895 Apr 24 09:37	3°♁56'18	2°43'24	morning rise	1901 Jan 15 04:09	9°♁21'43	
min. Earth dist.	1895 Apr 24 09:49	3°♁56'16	8.79416 AU	retrograde	1901 Apr 26 04:34	16°♁23'32	
direct	1895 Jul 04 03:44	0°♁32'29		opposition	1901 Jul 05 21:05	13°♁05'32	0°28'08
evening set	1895 Oct 16 18:14	7°♁58'51		min. Earth dist.	1901 Jul 06 01:23	13°♁04'44	9.04222 AU
conjunction	1895 Nov 02 15:57	9°♁59'57	2°09'41	direct	1901 Sep 14 14:09	9°♁47'07	
minimum elong	1895 Nov 02 15:58	9°♁59'57	2°09'40	evening set	1901 Dec 24 07:02	16°♁47'59	
max. Earth dist.	1895 Nov 02 14:58	9°♁59'39	10.83852 AU	conjunction	1902 Jan 09 22:13	18°♁45'13	0°09'43
morning rise	1895 Nov 19 09:48	11°♁59'57		minimum elong	1902 Jan 09 22:13	18°♁45'14	0°09'43
	1895 Dec 16 10:27	15°♁		behind sun begin	1902 Jan 09 16:27	18°♁43'32	
retrograde	1896 Feb 26 21:56	19°♁06'24		behind sun end	1902 Jan 10 03:59	18°♁46'55	
opposition	1896 May 05 20:52	15°♁48'21	2°33'10	max. Earth dist.	1902 Jan 09 17:15	18°♁43'46	11.02794 AU
min. Earth dist.	1896 May 05 22:20	15°♁48'04	8.88208 AU	morning rise	1902 Jan 26 14:01	20°♁42'41	
	1896 May 16 16:03	15°♁		retrograde	1902 May 08 06:18	27°♁48'07	
direct	1896 Jul 15 21:09	12°♁25'47		desc. node	1902 May 24 18:36	27°♁34'59	
	1896 Sep 11 17:17	15°♁		opposition	1902 Jul 18 01:33	24°♁29'20	0°-4'-45
evening set	1896 Oct 27 19:08	19°♁45'16		min. Earth dist.	1902 Jul 18 05:39	24°♁28'34	9.00794 AU
conjunction	1896 Nov 13 14:14	21°♁44'44	1°58'55	direct	1902 Sep 26 10:54	21°♁11'06	
minimum elong	1896 Nov 13 14:16	21°♁44'45	1°58'54	evening set	1903 Jan 04 17:36	28°♁12'30	
max. Earth dist.	1896 Nov 13 11:52	21°♁44'02	10.91917 AU		1903 Jan 19 22:14	0°♁	
morning rise	1896 Nov 30 06:14	23°♁43'17		conjunction	1903 Jan 21 09:20	0°♁10'26	0°-17'-23
	1897 Feb 07 14:32	0°♁		minimum elong	1903 Jan 21 09:19	0°♁10'25	0°17'24
retrograde	1897 Mar 09 19:19	0°♁45'59		max. Earth dist.	1903 Jan 21 04:29	0°♁09'00	10.98259 AU
	1897 Apr 09 14:28	30°♁		morning rise	1903 Feb 07 02:17	2°♁08'48	
opposition	1897 May 18 04:58	27°♁28'28	2°16'46	retrograde	1903 May 20 12:08	9°♁19'22	
min. Earth dist.	1897 May 18 06:49	27°♁28'08	8.95439 AU	opposition	1903 Jul 30 08:27	5°♁59'35	0°-37'-49
direct	1897 Jul 28 08:15	24°♁07'07		min. Earth dist.	1903 Jul 30 12:21	5°♁58'51	8.95194 AU
	1897 Oct 27 18:33	0°♁		direct	1903 Oct 08 08:06	2°♁41'17	
evening set	1897 Nov 08 13:27	1°♁20'28		evening set	1904 Jan 16 07:32	9°♁44'44	
conjunction	1897 Nov 25 06:47	3°♁18'44	1°43'24	conjunction	1904 Feb 01 23:57	11°♁43'40	0°-43'-59
minimum elong	1897 Nov 25 06:50	3°♁18'44	1°43'24	minimum elong	1904 Feb 01 23:55	11°♁43'40	0°44'00

max. Earth dist.	1904 Feb 01 18:34	11° 42 '04	10.91671 AU	max. Earth dist.	1910 Apr 17 02:42	26° 14 '26	10.29773 AU
morning rise	1904 Feb 18 18:33	13° 43 '17		morning rise	1910 May 04 15:58	28° 27 '24	
	1904 Feb 29 21:35	15° 43 '			1910 May 17 07:29	0° 28 '	
retrograde	1904 May 31 23:27	21° 00 '21		retrograde	1910 Aug 19 12:50	6° 35 '01	
opposition	1904 Aug 10 18:38	17° 39 '21	-1°-9'-49	opposition	1910 Oct 27 09:48	3° 06 '05	-2°-44'-50
min. Earth dist.	1904 Aug 10 22:51	17° 38 '34	8.87700 AU	min. Earth dist.	1910 Oct 27 09:37	3° 06 '07	8.24967 AU
	1904 Sep 20 23:16	15° 38 '			1910 Dec 14 23:13	30° 14 '	
direct	1904 Oct 19 06:57	14° 20 '42		direct	1911 Jan 02 05:19	29° 14 '35	
	1904 Nov 16 03:49	15° 19 '			1911 Jan 20 09:18	0° 14 '	
evening set	1905 Jan 27 02:24	21° 27 '40		evening set	1911 Apr 13 17:30	7° 30 '44	
conjunction	1905 Feb 12 19:56	23° 27 '55	-1°-9'-9	conjunction	1911 May 01 05:53	9° 44 '38	-2°-8'-57
minimum elong	1905 Feb 12 19:54	23° 27 '55	1°09'10	minimum elong	1911 May 01 05:54	9° 44 '39	2°08'58
max. Earth dist.	1905 Feb 12 14:19	23° 26 '14	10.83340 AU	max. Earth dist.	1911 May 01 06:42	9° 44 '54	10.20238 AU
morning rise	1905 Mar 01 16:34	25° 29 '07		morning rise	1911 May 18 22:41	11° 59 '58	
	1905 Apr 13 08:38	0° 53 '			1911 Jun 12 23:23	15° 58 '	
retrograde	1905 Jun 13 15:10	2° 53 '46		retrograde	1911 Sep 02 20:57	20° 13 '37	
	1905 Aug 17 00:43	30° 00 '		opposition	1911 Nov 10 06:11	16° 43 '58	-2°-33'-22
opposition	1905 Aug 23 08:37	29° 31 '24	-1°-39'-28	min. Earth dist.	1911 Nov 10 04:55	16° 44 '13	8.16199 AU
min. Earth dist.	1905 Aug 23 12:49	29° 30 '36	8.78646 AU		1911 Dec 02 14:32	15° 18 '	
direct	1905 Oct 31 09:03	26° 12 '08		direct	1912 Jan 15 20:23	13° 18 '16	
	1906 Jan 08 12:46	0° 53 '			1912 Feb 28 03:41	15° 18 '	
evening set	1906 Feb 08 03:25	3° 23 '59		evening set	1912 Apr 27 00:18	21° 15 '00	
conjunction	1906 Feb 24 22:41	5° 25 '54	-1°-31'-46	conjunction	1912 May 14 17:34	23° 31 '26	-1°-55'-50
minimum elong	1906 Feb 24 22:39	5° 25 '53	1°31'47	minimum elong	1912 May 14 17:37	23° 31 '27	1°55'51
max. Earth dist.	1906 Feb 24 18:08	5° 24 '31	10.73615 AU	max. Earth dist.	1912 May 14 20:21	23° 32 '20	10.12385 AU
morning rise	1906 Mar 13 21:35	7° 28 '55		morning rise	1912 Jun 01 14:34	25° 49 '07	
retrograde	1906 Jun 26 14:36	15° 02 '06			1912 Jul 07 06:11	0° 11 '	
opposition	1906 Sep 05 03:06	11° 38 '14	-2°-5'-25	retrograde	1912 Sep 16 08:36	4° 06 '42	
min. Earth dist.	1906 Sep 05 06:22	11° 37 '37	8.68400 AU	opposition	1912 Nov 23 06:19	0° 36 '42	-2°-12'-46
direct	1906 Nov 12 17:09	8° 18 '11		min. Earth dist.	1912 Nov 23 03:37	0° 37 '15	8.09348 AU
evening set	1907 Feb 20 11:56	15° 36 '07			1912 Nov 30 18:20	30° 18 '	
conjunction	1907 Mar 09 09:26	17° 39 '59	-1°-50'-42	direct	1913 Jan 28 18:13	27° 09 '53	
minimum elong	1907 Mar 09 09:24	17° 39 '58	1°50'43	evening set	1913 Mar 26 13:05	0° 11 '	
max. Earth dist.	1907 Mar 09 06:29	17° 39 '04	10.62894 AU		1913 May 11 15:16	5° 13 '11	
morning rise	1907 Mar 26 10:52	19° 45 '07		conjunction	1913 May 29 13:06	7° 31 '49	-1°-35'-45
retrograde	1907 Jul 09 22:15	27° 27 '21		minimum elong	1913 May 29 13:09	7° 31 '50	1°35'46
opposition	1907 Sep 18 02:39	24° 02 '00	-2°-26'-13	max. Earth dist.	1913 May 29 17:19	7° 33 '11	10.06694 AU
min. Earth dist.	1907 Sep 18 04:27	24° 01 '39	8.57395 AU	morning rise	1913 Jun 16 13:41	9° 51 '22	
direct	1907 Nov 25 04:06	20° 41 '01		retrograde	1913 Sep 30 21:49	18° 10 '25	
evening set	1908 Mar 04 05:06	28° 06 '02		opposition	1913 Dec 07 08:59	14° 40 '28	-1°-43'-57
	1908 Mar 19 14:22	0° 12 '		min. Earth dist.	1913 Dec 07 05:12	14° 41 '15	8.04855 AU
conjunction	1908 Mar 21 05:20	0° 12 '07	-2°-4'-50	direct	1914 Feb 11 20:52	11° 21 '41	
minimum elong	1908 Mar 21 05:19	0° 12 '07	2°04'51	evening set	1914 May 26 12:29	19° 21 '09	
max. Earth dist.	1908 Mar 21 03:14	0° 11 '28	10.51661 AU	conjunction	1914 Jun 13 13:59	21° 41 '20	-1°-9'-44
morning rise	1908 Apr 07 09:57	2° 19 '38		minimum elong	1914 Jun 13 14:02	21° 41 '21	1°09'45
retrograde	1908 Jul 22 12:46	10° 10 '59		max. Earth dist.	1914 Jun 13 19:14	21° 43 '03	10.03549 AU
opposition	1908 Sep 30 07:40	6° 44 '14	-2°-40'-32	morning rise	1914 Jul 01 17:10	24° 02 '05	
min. Earth dist.	1908 Sep 30 08:31	6° 44 '04	8.46131 AU		1914 Aug 24 17:26	0° 28 '	
direct	1908 Dec 06 21:04	3° 22 '10		retrograde	1914 Oct 15 11:41	2° 20 '05	
evening set	1909 Mar 17 07:32	10° 55 '00			1914 Dec 07 06:50	30° 13 '	
conjunction	1909 Apr 03 11:10	13° 03 '35	-2°-13'-7	opposition	1914 Dec 21 13:07	28° 50 '34	-1°-8'-35
minimum elong	1909 Apr 03 11:09	13° 03 '34	2°13'08	min. Earth dist.	1914 Dec 21 08:39	28° 51 '29	8.03042 AU
max. Earth dist.	1909 Apr 03 09:35	13° 03 '05	10.40440 AU	direct	1915 Feb 26 03:25	25° 22 '01	
morning rise	1909 Apr 20 19:33	15° 13 '39			1915 May 11 21:22	0° 28 '	
retrograde	1909 Aug 05 09:32	23° 13 '39		evening set	1915 Jun 10 13:29	3° 33 '52	
opposition	1909 Oct 13 18:10	19° 45 '41	-2°-47'-3	conjunction	1915 Jun 28 17:21	5° 54 '48	0°-39'-23
min. Earth dist.	1909 Oct 13 18:33	19° 45 '37	8.35135 AU	minimum elong	1915 Jun 28 17:23	5° 54 '48	0°39'24
direct	1909 Dec 19 21:51	16° 22 '25		max. Earth dist.	1915 Jun 28 23:08	5° 56 '40	10.03178 AU
evening set	1910 Mar 30 19:45	24° 03 '27		morning rise	1915 Jul 16 21:44	8° 15 '53	
conjunction	1910 Apr 17 03:28	26° 14 '41	-2°-14'-40	retrograde	1915 Oct 29 22:58	16° 30 '28	
minimum elong	1910 Apr 17 03:28	26° 14 '41	2°14'41	opposition	1916 Jan 04 17:04	13° 01 '43	0°-28'-58
				min. Earth dist.	1916 Jan 04 12:37	13° 02 '38	8.04053 AU

direct	1916 Mar 11 13:51	9°♄32'38		opposition	1922 Mar 25 16:47	4°♄15'17	2°37'54
evening set	1916 Jun 24 16:01	17°♄45'56		min. Earth dist.	1922 Mar 25 15:37	4°♄15'31	8.54425 AU
conjunction	1916 Jul 12 20:34	20°♄06'40	0°-6'-45	direct	1922 Jun 03 13:07	0°♄48'48	
minimum elong	1916 Jul 12 20:34	20°♄06'41	0°06'45	evening set	1922 Sep 17 10:08	8°♄33'51	
behind sun begin	1916 Jul 12 13:43	20°♄04'28		conjunction	1922 Oct 04 16:56	10°♄40'31	2°12'07
behind sun end	1916 Jul 13 03:25	20°♄08'53		minimum elong	1922 Oct 04 16:55	10°♄40'31	2°12'07
max. Earth dist.	1916 Jul 13 02:10	20°♄08'28	10.05616 AU	max. Earth dist.	1922 Oct 04 17:23	10°♄40'39	10.59740 AU
morning rise	1916 Jul 31 00:27	22°♄27'10		morning rise	1922 Oct 21 19:08	12°♄45'48	
asc. node	1916 Sep 27 18:34	28°♄45'40		retrograde	1923 Jan 29 18:45	20°♄06'36	
retrograde	1916 Oct 17 15:33	0°♄36'13		opposition	1923 Apr 07 15:09	16°♄46'41	2°45'35
	1916 Dec 07 19:24	30°♄R♄		min. Earth dist.	1923 Apr 07 15:28	16°♄46'37	8.65175 AU
opposition	1917 Jan 17 19:15	27°♄08'32	0°12'09	direct	1923 Jun 16 21:42	13°♄21'19	
min. Earth dist.	1917 Jan 17 15:00	27°♄09'25	8.07833 AU	evening set	1923 Sep 30 08:30	20°♄58'48	
direct	1917 Mar 26 01:53	23°♄39'14		conjunction	1923 Oct 17 11:05	23°♄02'59	2°15'24
	1917 Jun 24 13:52	0°♄		minimum elong	1923 Oct 17 11:05	23°♄02'59	2°15'24
evening set	1917 Jul 09 16:56	1°♄51'55		max. Earth dist.	1923 Oct 17 09:40	23°♄02'33	10.70153 AU
conjunction	1917 Jul 27 20:26	4°♄11'31	0°26'10	morning rise	1923 Nov 03 09:23	25°♄05'52	
minimum elong	1917 Jul 27 20:24	4°♄11'31	0°26'10		1923 Dec 20 04:24	0°♄	
max. Earth dist.	1917 Jul 28 01:46	4°♄13'15	10.10704 AU	retrograde	1924 Feb 11 01:16	2°♄20'12	
morning rise	1917 Aug 14 22:04	6°♄30'31			1924 Apr 06 08:37	30°♄R♄	
retrograde	1917 Nov 26 04:38	14°♄32'28		opposition	1924 Apr 19 08:52	29°♄01'13	2°45'31
opposition	1918 Jan 31 18:37	11°♄06'03	0°52'04	min. Earth dist.	1924 Apr 19 09:42	29°♄01'04	8.75185 AU
min. Earth dist.	1918 Jan 31 14:15	11°♄06'57	8.14137 AU	direct	1924 Jun 29 00:43	25°♄37'01	
direct	1918 Apr 09 13:34	7°♄36'49		evening set	1924 Sep 13 21:58	0°♄	
	1918 Jul 18 06:35	15°♄			1924 Oct 11 21:28	3°♄07'02	
evening set	1918 Jul 24 13:10	15°♄46'47		conjunction	1924 Oct 28 20:35	5°♄09'03	2°12'33
conjunction	1918 Aug 11 14:02	18°♄04'29	0°57'04	minimum elong	1924 Oct 28 20:35	5°♄09'03	2°12'32
minimum elong	1918 Aug 11 13:59	18°♄04'28	0°57'04	max. Earth dist.	1924 Oct 28 18:38	5°♄08'28	10.79652 AU
max. Earth dist.	1918 Aug 11 19:15	18°♄06'09	10.18109 AU	morning rise	1924 Nov 14 15:39	7°♄09'54	
morning rise	1918 Aug 29 11:57	20°♄21'13		retrograde	1925 Feb 22 04:52	14°♄18'52	
retrograde	1918 Dec 09 21:31	28°♄15'03		opposition	1925 May 01 22:26	11°♄00'35	2°38'12
opposition	1919 Feb 14 13:52	24°♄49'59	1°28'16	min. Earth dist.	1925 May 01 23:38	11°♄00'21	8.84083 AU
min. Earth dist.	1919 Feb 14 09:21	24°♄50'54	8.22546 AU	direct	1925 Jul 11 21:18	7°♄37'32	
direct	1919 Apr 23 21:10	21°♄21'06		evening set	1925 Oct 24 02:06	15°♄00'25	
evening set	1919 Aug 08 02:34	29°♄26'32			1925 Oct 24 00:40	15°♄	
	1919 Aug 12 13:51	0°♄		conjunction	1925 Nov 09 22:29	17°♄00'42	2°04'01
conjunction	1919 Aug 25 23:38	1°♄41'44	1°24'14	minimum elong	1925 Nov 09 22:31	17°♄00'42	2°04'01
minimum elong	1919 Aug 25 23:35	1°♄41'43	1°24'14	max. Earth dist.	1925 Nov 09 20:19	17°♄00'03	10.87882 AU
max. Earth dist.	1919 Aug 26 04:34	1°♄43'18	10.27346 AU	morning rise	1925 Nov 26 15:09	18°♄59'56	
morning rise	1919 Sep 12 16:49	3°♄55'42		retrograde	1926 Mar 06 04:53	26°♄04'38	
retrograde	1919 Dec 23 08:08	11°♄40'51		opposition	1926 May 14 08:20	22°♄46'50	2°24'21
opposition	1920 Feb 28 04:04	8°♄17'08	1°58'46	min. Earth dist.	1926 May 14 10:33	22°♄46'25	8.91544 AU
min. Earth dist.	1920 Feb 27 23:50	8°♄17'59	8.32505 AU	direct	1926 Jul 24 09:37	19°♄24'49	
direct	1920 May 07 00:04	4°♄48'51		evening set	1926 Nov 04 23:39	26°♄41'18	
evening set	1920 Aug 21 07:13	12°♄48'18		conjunction	1926 Nov 21 17:52	28°♄40'13	1°50'26
conjunction	1920 Sep 07 23:43	15°♄00'40	1°46'18	minimum elong	1926 Nov 21 17:54	28°♄40'14	1°50'26
minimum elong	1920 Sep 07 23:40	15°♄00'39	1°46'18	max. Earth dist.	1926 Nov 21 14:38	28°♄39'15	10.94537 AU
max. Earth dist.	1920 Sep 08 04:00	15°♄02'01	10.37804 AU		1926 Dec 02 22:34	0°♄	
morning rise	1920 Sep 25 11:38	17°♄11'39		morning rise	1926 Dec 08 09:07	0°♄38'19	
retrograde	1921 Jan 04 10:52	24°♄48'04		retrograde	1927 Mar 18 00:48	7°♄40'02	
opposition	1921 Mar 12 13:06	21°♄25'41	2°22'13	opposition	1927 May 26 15:24	4°♄22'28	2°04'50
min. Earth dist.	1921 Mar 12 10:10	21°♄26'17	8.43355 AU	min. Earth dist.	1927 May 26 18:56	4°♄21'48	8.97290 AU
direct	1921 May 20 21:37	17°♄58'13		direct	1927 Aug 05 18:58	1°♄01'21	
evening set	1921 Sep 04 01:47	25°♄50'41		evening set	1927 Nov 16 15:39	8°♄12'24	
conjunction	1921 Sep 21 13:21	28°♄00'08	2°02'24	conjunction	1927 Dec 03 08:15	10°♄7'10	1°32'31
minimum elong	1921 Sep 21 13:18	28°♄00'07	2°02'24	minimum elong	1927 Dec 03 08:18	10°♄7'10	1°32'32
max. Earth dist.	1921 Sep 21 16:01	28°♄00'58	10.48804 AU	max. Earth dist.	1927 Dec 03 03:38	10°♄08'57	10.99372 AU
	1921 Oct 07 17:21	0°♄		morning rise	1927 Dec 19 22:50	12°♄07'40	
morning rise	1921 Oct 08 20:07	0°♄08'09		retrograde	1928 Mar 28 20:37	19°♄07'52	
retrograde	1922 Jan 17 05:56	7°♄36'22		opposition	1928 Jun 06 20:18	15°♄50'15	1°40'33
				min. Earth dist.	1928 Jun 07 00:11	15°♄49'32	9.01121 AU

direct	1928 Aug 17 00:17	12° \mathring{A} 29'56		max. Earth dist.	1934 Feb 08 03:00	18° \approx 47'41	10.85708 AU
evening set	1928 Nov 27 03:32	19° \mathring{A} 36'37		morning rise	1934 Feb 25 02:02	20° \approx 49'20	
conjunction	1928 Dec 13 19:16	21° \mathring{A} 34'00	1°11'04	retrograde	1934 Jun 08 17:06	28° \approx 11'08	
minimum elong	1928 Dec 13 19:18	21° \mathring{A} 34'00	1°11'04	opposition	1934 Aug 18 11:22	24° \approx 49'03	-1°-27'-31
max. Earth dist.	1928 Dec 13 14:44	21° \mathring{A} 32'39	11.02224 AU	min. Earth dist.	1934 Aug 18 13:38	24° \approx 48'38	8.81572 AU
morning rise	1928 Dec 30 09:39	23° \mathring{A} 31'00		direct	1934 Oct 26 17:18	21° \approx 29'54	
	1929 Mar 15 13:46	0° \mathring{B}		evening set	1935 Feb 03 11:42	28° \approx 39'59	
retrograde	1929 Apr 09 16:01	0° \mathring{B} 31'08			1935 Feb 14 14:08	0° \mathring{K}	
	1929 May 05 04:20	30° \mathring{R} \mathring{A}		conjunction	1935 Feb 20 06:15	0° \mathring{K} 41'16	-1°-22'-44
opposition	1929 Jun 19 00:05	27° \mathring{A} 13'14	1°12'28	minimum elong	1935 Feb 20 06:13	0° \mathring{K} 41'16	1°22'44
min. Earth dist.	1929 Jun 19 03:34	27° \mathring{A} 12'35	9.02912 AU	max. Earth dist.	1935 Feb 20 03:05	0° \mathring{K} 40'19	10.77071 AU
direct	1929 Aug 29 00:57	23° \mathring{A} 53'34		morning rise	1935 Mar 09 04:02	2° \mathring{K} 43'35	
	1929 Nov 30 04:22	0° \mathring{B}		retrograde	1935 Jun 21 14:27	10° \mathring{K} 13'25	
evening set	1929 Dec 08 12:57	0° \mathring{B} 57'12		opposition	1935 Aug 31 04:14	6° \mathring{K} 50'07	-1°-55'-9
conjunction	1929 Dec 25 04:21	2° \mathring{B} 54'23	0°46'54	min. Earth dist.	1935 Aug 31 06:08	6° \mathring{K} 49'45	8.72346 AU
minimum elong	1929 Dec 25 04:22	2° \mathring{B} 54'23	0°46'54	direct	1935 Nov 07 21:59	3° \mathring{K} 30'27	
max. Earth dist.	1929 Dec 25 00:19	2° \mathring{B} 53'11	11.02993 AU	evening set	1936 Feb 15 17:10	10° \mathring{K} 45'59	
morning rise	1930 Jan 10 18:59	4° \mathring{B} 51'24		conjunction	1936 Mar 03 13:30	12° \mathring{K} 49'02	-1°-43'-19
retrograde	1930 Apr 21 14:31	11° \mathring{B} 53'00		minimum elong	1936 Mar 03 13:27	12° \mathring{K} 49'01	1°43'19
opposition	1930 Jul 01 03:38	8° \mathring{B} 34'37	0°41'38	max. Earth dist.	1936 Mar 03 10:33	12° \mathring{K} 48'08	10.67306 AU
min. Earth dist.	1930 Jul 01 07:01	8° \mathring{B} 34'00	9.02596 AU	morning rise	1936 Mar 20 13:52	14° \mathring{K} 53'18	
direct	1930 Sep 09 23:54	5° \mathring{B} 15'27		retrograde	1936 Jul 03 18:52	22° \mathring{K} 31'51	
evening set	1930 Dec 19 21:56	12° \mathring{B} 17'26		opposition	1936 Sep 12 02:04	19° \mathring{K} 07'17	-2°-18'-13
conjunction	1931 Jan 05 13:10	14° \mathring{B} 14'46	0°20'54	min. Earth dist.	1936 Sep 12 03:43	19° \mathring{K} 06'58	8.62201 AU
minimum elong	1931 Jan 05 13:11	14° \mathring{B} 14'46	0°20'53	direct	1936 Nov 19 07:07	15° \mathring{K} 46'55	
max. Earth dist.	1931 Jan 05 08:34	14° \mathring{B} 13'25	11.01642 AU	evening set	1937 Feb 27 06:51	23° \mathring{K} 08'59	
morning rise	1931 Jan 22 04:35	16° \mathring{B} 12'12		conjunction	1937 Mar 16 05:43	25° \mathring{K} 14'05	-1°-59'-32
retrograde	1931 May 03 14:28	23° \mathring{B} 16'42		minimum elong	1937 Mar 16 05:41	25° \mathring{K} 14'04	1°59'33
opposition	1931 Jul 13 07:57	19° \mathring{B} 57'41	0°09'04	max. Earth dist.	1937 Mar 16 03:49	25° \mathring{K} 13'29	10.56836 AU
min. Earth dist.	1931 Jul 13 12:01	19° \mathring{B} 56'56	9.00184 AU	morning rise	1937 Apr 02 09:03	27° \mathring{K} 20'33	
direct	1931 Sep 21 19:54	16° \mathring{B} 38'48			1937 Apr 25 06:29	0° \mathring{Y}	
desc. node	1931 Oct 24 10:57	17° \mathring{B} 30'48		retrograde	1937 Jul 17 05:18	5° \mathring{Y} 08'03	
evening set	1931 Dec 31 07:55	23° \mathring{B} 40'38		opposition	1937 Sep 25 04:58	1° \mathring{Y} 42'14	-2°-35'-18
conjunction	1932 Jan 16 23:19	25° \mathring{B} 38'27	0°-6'-8	min. Earth dist.	1937 Sep 25 05:56	1° \mathring{Y} 42'03	8.51587 AU
minimum elong	1932 Jan 16 23:20	25° \mathring{B} 38'27	0°06'09		1937 Oct 18 03:42	30° \mathring{R} \mathring{K}	
behind sun begin	1932 Jan 16 16:42	25° \mathring{B} 36'31		direct	1937 Dec 01 23:03	28° \mathring{K} 21'01	
behind sun end	1932 Jan 17 05:57	25° \mathring{B} 40'24		evening set	1938 Jan 14 10:30	0° \mathring{Y}	
max. Earth dist.	1932 Jan 16 18:06	25° \mathring{B} 36'56	10.98226 AU	conjunction	1938 Mar 12 05:32	5° \mathring{Y} 50'26	
morning rise	1932 Feb 02 15:58	27° \mathring{B} 36'39		conjunction	1938 Mar 29 07:39	7° \mathring{Y} 57'51	-2°-10'-18
	1932 Feb 24 02:46	0° \approx		minimum elong	1938 Mar 29 07:38	7° \mathring{Y} 57'51	2°10'20
retrograde	1932 May 14 16:46	4° \approx 45'36		max. Earth dist.	1938 Mar 29 07:33	7° \mathring{Y} 57'49	10.46133 AU
opposition	1932 Jul 24 14:12	1° \approx 25'43	0°-24'-6	morning rise	1938 Apr 15 14:19	10° \mathring{Y} 06'43	
min. Earth dist.	1932 Jul 24 18:19	1° \approx 24'57	8.95764 AU	retrograde	1938 Jul 30 23:14	18° \mathring{Y} 02'54	
	1932 Aug 13 11:15	30° \mathring{R} \mathring{B}		opposition	1938 Oct 08 13:16	14° \mathring{Y} 35'55	-2°-45'-7
direct	1932 Oct 02 17:38	28° \mathring{B} 06'55		min. Earth dist.	1938 Oct 08 12:51	14° \mathring{Y} 36'00	8.40984 AU
	1932 Nov 20 02:09	0° \approx		direct	1938 Dec 14 21:34	11° \mathring{Y} 13'43	
evening set	1933 Jan 10 20:20	5° \approx 10'04		evening set	1939 Mar 25 13:35	18° \mathring{Y} 50'53	
conjunction	1933 Jan 27 12:28	7° \approx 08'44	0°-33'-2	conjunction	1939 Apr 11 19:32	21° \mathring{Y} 00'49	-2°-14'-42
minimum elong	1933 Jan 27 12:26	7° \approx 08'43	0°33'02	minimum elong	1939 Apr 11 19:32	21° \mathring{Y} 00'49	2°14'44
max. Earth dist.	1933 Jan 27 07:56	7° \approx 07'23	10.92853 AU	max. Earth dist.	1939 Apr 11 20:52	21° \mathring{Y} 01'14	10.35702 AU
morning rise	1933 Feb 13 06:30	9° \approx 07'59		morning rise	1939 Apr 29 06:00	23° \mathring{Y} 12'13	
	1933 Apr 15 11:29	15° \approx			1939 Jul 06 05:44	0° \mathring{B}	
retrograde	1933 May 27 02:19	16° \approx 22'46		retrograde	1939 Aug 14 01:03	1° \mathring{B} 16'16	
	1933 Jul 08 17:48	15° \mathring{R} \approx			1939 Sep 22 05:19	30° \mathring{R} \mathring{Y}	
opposition	1933 Aug 05 23:05	13° \approx 01'51	0°-56'-44	opposition	1939 Oct 22 02:50	27° \mathring{Y} 48'16	-2°-46'-33
min. Earth dist.	1933 Aug 06 02:22	13° \approx 01'14	8.89484 AU	min. Earth dist.	1939 Oct 22 01:14	27° \mathring{Y} 48'35	8.30893 AU
direct	1933 Oct 14 17:14	9° \approx 42'58		direct	1939 Dec 28 01:11	24° \mathring{Y} 24'57	
	1934 Jan 06 16:02	15° \approx			1940 Mar 20 09:40	0° \mathring{B}	
evening set	1934 Jan 22 13:08	16° \approx 48'52		evening set	1940 Apr 07 07:19	2° \mathring{B} 09'58	
conjunction	1934 Feb 08 06:21	18° \approx 48'42	0°-58'-56	conjunction	1940 Apr 24 17:37	4° \mathring{B} 22'29	-2°-12'-2
minimum elong	1934 Feb 08 06:19	18° \approx 48'41	0°58'56	minimum elong	1940 Apr 24 17:38	4° \mathring{B} 22'30	2°12'03

max. Earth dist.	1940 Apr 24 19:33	4°♄23'07	10.26045 AU		1946 Aug 02 14:41	0°♄	
morning rise	1940 May 12 08:19	6°♄36'28		morning rise	1946 Aug 09 00:13	0°♄48'54	
retrograde	1940 Aug 27 07:43	14°♄46'57		retrograde	1946 Nov 20 15:21	8°♄53'24	
opposition	1940 Nov 03 21:01	11°♄18'10	-2°-38'-55	opposition	1947 Jan 26 05:49	5°♄26'21	0°35'30
min. Earth dist.	1940 Nov 03 18:59	11°♄18'35	8.21789 AU	min. Earth dist.	1947 Jan 26 01:31	5°♄27'14	8.11767 AU
direct	1941 Jan 09 12:20	7°♄53'38		direct	1947 Apr 03 19:38	1°♄56'58	
	1941 Apr 15 05:48	15°♄		evening set	1947 Jul 18 15:09	10°♄07'34	
evening set	1941 Apr 21 10:12	15°♄46'17					
				conjunction	1947 Aug 05 17:24	12°♄26'04	0°44'19
conjunction	1941 May 09 01:11	18°♄01'23	-2°-1'-58	minimum elong	1947 Aug 05 17:22	12°♄26'03	0°44'20
minimum elong	1941 May 09 01:13	18°♄01'24	2°01'59	max. Earth dist.	1947 Aug 05 22:37	12°♄27'44	10.15075 AU
max. Earth dist.	1941 May 09 03:00	18°♄01'58	10.17616 AU	morning rise	1947 Aug 23 16:55	14°♄43'42	
morning rise	1941 May 26 20:17	20°♄17'48			1947 Aug 25 20:56	15°♄	
retrograde	1941 Sep 10 17:39	28°♄32'59		retrograde	1947 Dec 04 11:34	22°♄40'35	
opposition	1941 Nov 17 19:19	25°♄03'44	-2°-22'-5	opposition	1948 Feb 09 02:13	19°♄14'42	1°13'28
min. Earth dist.	1941 Nov 17 17:24	25°♄04'08	8.14126 AU	min. Earth dist.	1948 Feb 08 22:35	19°♄15'26	8.18887 AU
direct	1942 Jan 23 07:01	21°♄38'01		direct	1948 Apr 17 03:19	15°♄45'21	
evening set	1942 May 05 21:26	29°♄37'42		evening set	1948 Aug 01 07:08	23°♄52'23	
	1942 May 08 19:39	0°♄					
				conjunction	1948 Aug 19 05:56	26°♄08'39	1°13'12
conjunction	1942 May 23 17:03	1°♄55'08	-1°-44'-43	minimum elong	1948 Aug 19 05:53	26°♄08'38	1°13'12
minimum elong	1942 May 23 17:06	1°♄55'09	1°44'44	max. Earth dist.	1948 Aug 19 10:05	26°♄09'59	10.23141 AU
max. Earth dist.	1942 May 23 19:14	1°♄55'50	10.10903 AU	morning rise	1948 Sep 06 01:12	28°♄23'48	
morning rise	1942 Jun 10 16:08	4°♄13'40			1948 Sep 19 04:35	0°♄	
retrograde	1942 Sep 25 05:38	12°♄31'24		retrograde	1948 Dec 17 00:20	6°♄12'19	
opposition	1942 Dec 01 20:43	9°♄02'01	-1°-56'-36	opposition	1949 Feb 21 18:01	2°♄47'41	1°46'32
min. Earth dist.	1942 Dec 01 18:32	9°♄02'28	8.08442 AU	min. Earth dist.	1949 Feb 21 15:14	2°♄48'15	8.27819 AU
direct	1943 Feb 06 07:52	5°♄35'11			1949 Apr 03 03:41	30°♄	
evening set	1943 May 20 15:36	13°♄40'41		direct	1949 May 01 08:34	29°♄18'42	
				evening set	1949 May 29 12:57	0°♄	
					1949 Aug 15 15:03	7°♄20'35	
conjunction	1943 Jun 07 15:23	15°♄59'59	-1°-21'-4				
minimum elong	1943 Jun 07 15:27	16°♄00'00	1°21'06	conjunction	1949 Sep 02 09:28	9°♄34'11	1°37'32
max. Earth dist.	1943 Jun 07 18:33	16°♄01'01	10.06434 AU	minimum elong	1949 Sep 02 09:25	9°♄34'10	1°37'33
morning rise	1943 Jun 25 17:38	18°♄20'04		max. Earth dist.	1949 Sep 02 12:22	9°♄35'05	10.32749 AU
retrograde	1943 Oct 09 18:17	26°♄37'54		morning rise	1949 Sep 19 23:49	11°♄46'28	
opposition	1943 Dec 15 23:52	23°♄08'40	-1°-23'-50	retrograde	1949 Dec 30 04:04	19°♄26'26	
min. Earth dist.	1943 Dec 15 20:59	23°♄09'15	8.05211 AU	opposition	1950 Mar 07 04:49	16°♄03'05	2°13'06
direct	1944 Feb 20 13:18	19°♄40'50		min. Earth dist.	1950 Mar 07 02:25	16°♄03'34	8.38030 AU
evening set	1944 Jun 03 14:44	27°♄50'34		direct	1950 May 15 09:22	12°♄34'46	
	1944 Jun 20 07:47	0°♄		evening set	1950 Aug 29 13:18	20°♄30'12	
conjunction	1944 Jun 21 17:39	0°♄11'01	0°-52'-24	conjunction	1950 Sep 16 02:58	22°♄40'55	1°56'15
minimum elong	1944 Jun 21 17:42	0°♄11'02	0°52'25	minimum elong	1950 Sep 16 02:55	22°♄40'54	1°56'15
max. Earth dist.	1944 Jun 21 21:52	0°♄12'23	10.04574 AU	max. Earth dist.	1950 Sep 16 05:01	22°♄41'34	10.43349 AU
morning rise	1944 Jul 09 21:44	2°♄31'50		morning rise	1950 Oct 03 12:12	24°♄50'16	
retrograde	1944 Oct 23 05:37	10°♄47'18			1950 Nov 20 15:49	0°♄	
opposition	1944 Dec 29 03:25	7°♄18'31	0°-45'-49	retrograde	1951 Jan 12 01:17	2°♄21'54	
min. Earth dist.	1944 Dec 28 23:40	7°♄19'17	8.04688 AU		1951 Mar 07 12:14	30°♄	
direct	1945 Mar 05 22:43	3°♄49'54		opposition	1951 Mar 20 10:11	28°♄59'48	2°32'09
evening set	1945 Jun 18 16:20	12°♄01'58		min. Earth dist.	1951 Mar 20 07:53	29°♄00'15	8.48942 AU
				direct	1951 May 29 03:37	25°♄32'24	
conjunction	1945 Jul 06 20:47	14°♄22'40	0°-20'-32		1951 Aug 13 16:43	0°♄	
minimum elong	1945 Jul 06 20:48	14°♄22'40	0°20'33	evening set	1951 Sep 12 01:35	3°♄20'35	
max. Earth dist.	1945 Jul 07 01:57	14°♄24'20	10.05463 AU				
morning rise	1945 Jul 25 00:57	16°♄43'18		conjunction	1951 Sep 29 10:33	5°♄28'28	2°08'43
retrograde	1945 Nov 06 13:02	24°♄54'10		minimum elong	1951 Sep 29 10:31	5°♄28'27	2°08'43
opposition	1946 Jan 12 05:49	21°♄26'07	0°-5'-7	max. Earth dist.	1951 Sep 29 12:17	5°♄29'00	10.54372 AU
min. Earth dist.	1946 Jan 12 01:24	21°♄27'02	8.06922 AU	morning rise	1951 Oct 16 14:48	7°♄34'55	
asc. node	1946 Feb 28 12:37	18°♄18'41		retrograde	1952 Jan 24 17:55	14°♄58'43	
direct	1946 Mar 20 09:29	17°♄56'59		opposition	1952 Apr 01 10:11	11°♄37'50	2°43'17
evening set	1946 Jul 03 17:26	26°♄09'20		min. Earth dist.	1952 Apr 01 08:32	11°♄38'09	8.59993 AU
				direct	1952 Jun 10 13:19	8°♄11'33	
conjunction	1946 Jul 21 21:39	28°♄29'22	0°12'27	evening set	1952 Sep 24 03:43	15°♄52'04	
minimum elong	1946 Jul 21 21:38	28°♄29'21	0°12'28				
behind sun begin	1946 Jul 21 16:59	28°♄27'52		conjunction	1952 Oct 11 08:17	17°♄57'18	2°14'47
behind sun end	1946 Jul 22 02:18	28°♄30'51		minimum elong	1952 Oct 11 08:16	17°♄57'18	2°14'46
max. Earth dist.	1946 Jul 22 03:16	28°♄31'10	10.09046 AU				

max. Earth dist.	1952 Oct 11 09:25	17°♄57'39	10.65276 AU	max. Earth dist.	1958 Dec 20 07:45	28°♄05'42	11.04794 AU
morning rise	1952 Oct 28 08:07	20°♄01'10			1959 Jan 05 13:32	0°♄	
retrograde	1953 Feb 05 02:31	27°♄17'55		morning rise	1959 Jan 06 02:47	0°♄03'50	
opposition	1953 Apr 14 05:25	23°♄58'09	2°46'31	retrograde	1959 Apr 16 15:32	7°♄03'52	
min. Earth dist.	1953 Apr 14 05:00	23°♄58'13	8.70663 AU	opposition	1959 Jun 26 02:46	3°♄46'19	0°55'34
direct	1953 Jun 23 17:26	20°♄33'06		min. Earth dist.	1959 Jun 26 06:49	3°♄45'34	9.04994 AU
evening set	1953 Oct 06 20:00	28°♄05'55		direct	1959 Sep 05 01:01	0°♄27'30	
	1953 Oct 22 15:35	0°♄		evening set	1959 Dec 15 05:45	7°♄29'27	
conjunction	1953 Oct 23 20:38	0°♄08'48	2°14'33	conjunction	1959 Dec 31 20:51	9°♄26'27	0°32'37
minimum elong	1953 Oct 23 20:39	0°♄08'48	2°14'32	minimum elong	1959 Dec 31 20:52	9°♄26'27	0°32'37
max. Earth dist.	1953 Oct 23 20:27	0°♄08'44	10.75567 AU	max. Earth dist.	1959 Dec 31 16:07	9°♄25'03	11.04583 AU
morning rise	1953 Nov 09 16:59	2°♄10'26		morning rise	1960 Jan 17 11:51	11°♄23'27	
retrograde	1954 Feb 17 06:16	9°♄21'11		retrograde	1960 Apr 27 14:06	18°♄25'45	
opposition	1954 Apr 26 20:07	6°♄02'22	2°42'16	opposition	1960 Jul 07 06:25	15°♄07'38	0°23'41
min. Earth dist.	1954 Apr 26 21:03	6°♄02'11	8.80483 AU	min. Earth dist.	1960 Jul 07 10:11	15°♄06'57	9.03631 AU
direct	1954 Jul 06 15:53	2°♄38'35		direct	1960 Sep 15 22:48	11°♄49'14	
evening set	1954 Oct 19 03:37	10°♄04'03		evening set	1960 Dec 25 14:51	18°♄50'18	
conjunction	1954 Nov 05 01:02	12°♄04'57	2°08'25	conjunction	1961 Jan 11 06:10	20°♄47'39	0°06'03
minimum elong	1954 Nov 05 01:03	12°♄04'57	2°08'25	minimum elong	1961 Jan 11 06:10	20°♄47'39	0°06'03
max. Earth dist.	1954 Nov 04 23:08	12°♄04'23	10.84805 AU	behind sun begin	1961 Jan 10 23:31	20°♄45'42	
morning rise	1954 Nov 21 18:49	14°♄04'46		behind sun end	1961 Jan 11 12:48	20°♄49'35	
	1954 Nov 29 17:03	15°♄		max. Earth dist.	1961 Jan 11 01:46	20°♄46'22	11.02101 AU
retrograde	1955 Mar 01 06:19	21°♄10'38		morning rise	1961 Jan 27 22:00	22°♄45'14	
opposition	1955 May 09 06:40	17°♄52'34	2°31'10	desc. node	1961 Apr 04 18:56	28°♄52'44	
min. Earth dist.	1955 May 09 08:10	17°♄52'17	8.89035 AU	retrograde	1961 May 09 16:21	29°♄51'19	
	1955 Jun 24 05:47	15°♄		opposition	1961 Jul 19 11:24	26°♄32'24	0°-9'-16
direct	1955 Jul 19 07:30	14°♄30'03		min. Earth dist.	1961 Jul 19 15:12	26°♄31'42	9.00006 AU
	1955 Aug 13 04:21	15°♄		direct	1961 Sep 27 19:31	23°♄14'10	
evening set	1955 Oct 31 03:38	21°♄48'46			1962 Jan 03 19:01	0°♄	
conjunction	1955 Nov 16 22:40	23°♄48'06	1°56'59	evening set	1962 Jan 06 01:55	0°♄15'55	
minimum elong	1955 Nov 16 22:42	23°♄48'07	1°56'59	conjunction	1962 Jan 22 17:39	2°♄13'59	0°-21'-2
max. Earth dist.	1955 Nov 16 20:14	23°♄47'23	10.92610 AU	minimum elong	1962 Jan 22 17:38	2°♄13'59	0°21'03
morning rise	1955 Dec 03 14:33	25°♄46'32		max. Earth dist.	1962 Jan 22 12:25	2°♄12'26	10.97378 AU
	1956 Jan 12 18:45	0°♄		morning rise	1962 Feb 08 10:49	4°♄12'31	
retrograde	1956 Mar 12 03:29	2°♄48'50		retrograde	1962 May 21 23:22	11°♄23'53	
	1956 May 14 03:46	30°♄		opposition	1962 Jul 31 18:49	8°♄04'00	0°-42'-14
opposition	1956 May 20 14:16	29°♄31'17	2°14'02	min. Earth dist.	1962 Jul 31 23:14	8°♄03'11	8.94221 AU
min. Earth dist.	1956 May 20 15:52	29°♄30'59	8.95980 AU	direct	1962 Oct 09 16:25	4°♄45'40	
direct	1956 Jul 30 18:36	26°♄09'57		evening set	1963 Jan 17 16:36	11°♄49'42	
	1956 Oct 10 15:10	0°♄		conjunction	1963 Feb 03 09:03	13°♄48'48	0°-47'-30
evening set	1956 Nov 10 21:22	3°♄22'43		minimum elong	1963 Feb 03 09:01	13°♄48'47	0°47'30
conjunction	1956 Nov 27 14:43	5°♄20'54	1°40'54	max. Earth dist.	1963 Feb 03 02:59	13°♄46'59	10.90602 AU
minimum elong	1956 Nov 27 14:45	5°♄20'55	1°40'54		1963 Feb 13 07:19	15°♄	
max. Earth dist.	1956 Nov 27 12:25	5°♄20'13	10.98677 AU	morning rise	1963 Feb 20 03:55	15°♄48'37	
morning rise	1956 Dec 14 05:23	7°♄18'22		retrograde	1963 Jun 03 09:39	23°♄06'39	
retrograde	1957 Mar 24 00:45	14°♄18'30		opposition	1963 Aug 13 05:32	19°♄45'34	-1°-13'-58
opposition	1957 Jun 01 19:40	11°♄01'12	1°51'45	min. Earth dist.	1963 Aug 13 10:17	19°♄44'40	8.86544 AU
min. Earth dist.	1957 Jun 01 21:50	11°♄00'48	9.01065 AU	direct	1963 Oct 21 16:22	16°♄26'52	
direct	1957 Aug 11 23:57	7°♄40'55		evening set	1964 Jan 29 12:16	23°♄34'39	
evening set	1957 Nov 22 10:40	14°♄48'48		conjunction	1964 Feb 15 06:00	25°♄35'07	-1°-12'-21
conjunction	1957 Dec 09 02:46	16°♄46'13	1°20'56	minimum elong	1964 Feb 15 05:58	25°♄35'06	1°12'22
minimum elong	1957 Dec 09 02:49	16°♄46'14	1°20'56	max. Earth dist.	1964 Feb 15 00:40	25°♄33'30	10.82097 AU
max. Earth dist.	1957 Dec 08 23:35	16°♄45'17	11.02789 AU	morning rise	1964 Mar 03 02:48	27°♄36'31	
morning rise	1957 Dec 25 17:02	18°♄43'09			1964 Mar 24 04:17	0°♄	
retrograde	1958 Apr 04 19:38	25°♄42'29		retrograde	1964 Jun 15 03:25	5°♄02'21	
opposition	1958 Jun 13 23:27	22°♄25'12	1°25'15	opposition	1964 Aug 24 20:18	1°♄39'52	-1°-43'-10
min. Earth dist.	1958 Jun 14 02:53	22°♄24'34	9.04113 AU	min. Earth dist.	1964 Aug 25 00:13	1°♄39'08	8.77332 AU
direct	1958 Aug 24 00:31	19°♄05'45			1964 Sep 16 21:04	30°♄	
evening set	1958 Dec 03 20:58	26°♄10'01		direct	1964 Nov 01 20:44	28°♄20'35	
conjunction	1958 Dec 20 12:17	28°♄07'02	0°57'53		1964 Dec 16 05:38	0°♄	
minimum elong	1958 Dec 20 12:19	28°♄07'03	0°57'53	evening set	1965 Feb 09 14:16	5°♄33'21	

conjunction	1965 Feb 26 09:49	7° ✕ 35'32	-1°-34'-30		1971 Jun 18 16:08	0° Π	
minimum elong	1965 Feb 26 09:47	7° ✕ 35'31	1°34'31	retrograde	1971 Sep 19 02:17	6° Π 31'43	
max. Earth dist.	1965 Feb 26 05:54	7° ✕ 34'20	10.72231 AU	opposition	1971 Nov 25 23:05	3° Π 01'40	-2°-9'-9
morning rise	1965 Mar 15 08:51	9° ✕ 38'49		min. Earth dist.	1971 Nov 25 19:44	3° Π 02'21	8.08795 AU
retrograde	1965 Jun 28 05:32	17° ✕ 13'16			1972 Jan 10 03:44	30° R ⊝	
opposition	1965 Sep 06 15:39	13° ✕ 49'18	-2°-8'-28	direct	1972 Jan 31 10:22	29° ⊝ 34'44	
min. Earth dist.	1965 Sep 06 18:18	13° ✕ 48'48	8.66975 AU		1972 Feb 21 14:51	0° Π	
direct	1965 Nov 14 03:17	10° ✕ 29'14		evening set	1972 May 13 09:42	7° Π 38'30	
evening set	1966 Feb 22 00:07	17° ✕ 48'12					
conjunction	1966 Mar 10 21:51	19° ✕ 52'21	-1°-52'-50	conjunction	1972 May 31 07:55	9° Π 57'18	-1°-32'-26
minimum elong	1966 Mar 10 21:49	19° ✕ 52'20	1°52'51	minimum elong	1972 May 31 07:58	9° Π 57'19	1°32'27
max. Earth dist.	1966 Mar 10 18:47	19° ✕ 51'24	10.61433 AU	max. Earth dist.	1972 May 31 12:22	9° Π 58'45	10.06317 AU
morning rise	1966 Mar 27 23:35	21° ✕ 57'47		morning rise	1972 Jun 18 08:51	12° Π 17'00	
retrograde	1966 Jul 11 13:03	29° ✕ 41'17		retrograde	1972 Oct 02 16:25	20° Π 35'54	
opposition	1966 Sep 19 16:02	26° ✕ 15'51	-2°-28'-26	opposition	1972 Dec 09 01:52	17° Π 05'55	-1°-39'-23
min. Earth dist.	1966 Sep 19 17:44	26° ✕ 15'31	8.55924 AU	min. Earth dist.	1972 Dec 08 22:01	17° Π 06'43	8.04649 AU
direct	1966 Nov 26 15:33	22° ✕ 54'48		direct	1973 Feb 13 12:49	13° Π 37'59	
	1967 Mar 03 21:31	0° Υ		evening set	1973 May 28 07:16	21° Π 46'40	
evening set	1967 Mar 06 18:33	0° Υ 20'58		conjunction	1973 Jun 15 09:00	24° Π 06'56	-1°-5'-46
conjunction	1967 Mar 23 19:01	2° Υ 27'22	-2°-6'-12	minimum elong	1973 Jun 15 09:03	24° Π 06'56	1°05'47
minimum elong	1967 Mar 23 19:00	2° Υ 27'21	2°06'13	max. Earth dist.	1973 Jun 15 13:55	24° Π 08'31	10.03524 AU
max. Earth dist.	1967 Mar 23 16:17	2° Υ 26'30	10.50195 AU	morning rise	1973 Jul 03 12:27	26° Π 27'44	
morning rise	1967 Apr 10 00:05	4° Υ 35'12			1973 Aug 01 22:20	0° ⊝	
retrograde	1967 Jul 25 04:08	12° Υ 27'45		retrograde	1973 Oct 17 05:50	4° ⊝ 45'13	
opposition	1967 Oct 02 22:03	9° Υ 00'56	-2°-41'-44	opposition	1973 Dec 23 05:51	1° ⊝ 15'42	-1°-3'-21
min. Earth dist.	1967 Oct 02 23:17	9° Υ 00'42	8.44691 AU	min. Earth dist.	1973 Dec 23 01:47	1° ⊝ 16'32	8.03186 AU
direct	1967 Dec 09 10:27	5° Υ 38'47		direct	1974 Jan 07 20:27	30° R Π	
evening set	1968 Mar 18 22:07	13° Υ 12'44		evening set	1974 Feb 27 21:13	27° Π 47'00	
conjunction	1968 Apr 05 02:08	15° Υ 21'38	-2°-13'-35		1974 Apr 18 22:33	0° ⊝	
minimum elong	1968 Apr 05 02:08	15° Υ 21'38	2°13'37	conjunction	1974 Jun 12 08:17	5° ⊝ 58'49	
max. Earth dist.	1968 Apr 05 00:28	15° Υ 21'07	10.39050 AU	minimum elong	1974 Jun 30 12:11	8° ⊝ 19'42	0°-35'-3
morning rise	1968 Apr 22 11:00	17° Υ 32'03		max. Earth dist.	1974 Jun 30 12:13	8° ⊝ 19'42	0°35'04
retrograde	1968 Aug 07 02:22	25° Υ 33'09		morning rise	1974 Jun 30 17:25	8° ⊝ 21'24	10.03493 AU
opposition	1968 Oct 15 09:25	22° Υ 05'06	-2°-47'-6	retrograde	1974 Jul 18 16:38	10° ⊝ 40'43	
min. Earth dist.	1968 Oct 15 10:01	22° Υ 04'59	8.33814 AU	opposition	1974 Oct 31 14:56	18° ⊝ 54'30	
direct	1968 Dec 21 11:38	18° Υ 41'44		min. Earth dist.	1975 Jan 06 09:25	15° ⊝ 25'47	0°-23'-27
evening set	1969 Apr 01 11:30	26° Υ 23'50		direct	1975 Jan 06 05:12	15° ⊝ 26'39	8.04528 AU
conjunction	1969 Apr 18 19:48	28° Υ 35'23	-2°-14'-11	evening set	1975 Mar 14 08:32	11° ⊝ 56'36	
minimum elong	1969 Apr 18 19:48	28° Υ 35'23	2°14'12	conjunction	1975 Jun 27 10:19	20° ⊝ 09'36	
max. Earth dist.	1969 Apr 18 19:46	28° Υ 35'22	10.28543 AU	minimum elong	1975 Jul 15 14:46	22° ⊝ 30'10	0°-2'-19
	1969 Apr 29 22:23	0° ⊝		behind sun begin	1975 Jul 15 14:46	22° ⊝ 30'10	0°02'20
morning rise	1969 May 06 08:46	0° ⊝ 48'25		behind sun end	1975 Jul 15 07:25	22° ⊝ 27'48	
retrograde	1969 Aug 21 05:44	8° ⊝ 56'54		max. Earth dist.	1975 Jul 15 22:08	22° ⊝ 32'32	
opposition	1969 Oct 29 01:42	5° ⊝ 27'53	-2°-43'-38	morning rise	1975 Jul 15 20:10	22° ⊝ 31'53	10.06244 AU
min. Earth dist.	1969 Oct 29 01:09	5° ⊝ 27'59	8.23844 AU	asc. node	1975 Aug 02 18:31	24° ⊝ 50'28	
direct	1970 Jan 03 21:06	2° ⊝ 03'16			1975 Aug 10 15:41	25° ⊝ 49'50	
evening set	1970 Apr 15 10:25	9° ⊝ 53'22		retrograde	1975 Sep 17 04:56	0° Ω	
conjunction	1970 May 02 23:25	12° ⊝ 07'35	-2°-7'-27		1975 Nov 14 19:25	2° Ω 58'33	
minimum elong	1970 May 02 23:27	12° ⊝ 07'35	2°07'28	opposition	1976 Jan 14 13:17	30° R ⊝	
max. Earth dist.	1970 May 03 01:20	12° ⊝ 08'11	10.19237 AU	min. Earth dist.	1976 Jan 20 11:00	29° ⊝ 30'56	0°17'36
morning rise	1970 May 20 16:37	14° ⊝ 23'10		direct	1976 Jan 20 06:31	29° ⊝ 31'52	8.08602 AU
	1970 May 25 14:35	15° ⊝		evening set	1976 Mar 27 19:58	26° ⊝ 01'34	
retrograde	1970 Sep 04 13:57	22° ⊝ 37'23			1976 Jun 05 05:08	0° Ω	
opposition	1970 Nov 11 22:34	19° ⊝ 07'40	-2°-30'-54	conjunction	1976 Jul 11 10:30	4° Ω 13'42	
min. Earth dist.	1970 Nov 11 20:30	19° ⊝ 08'06	8.15334 AU	minimum elong	1976 Jul 29 13:49	6° Ω 33'05	0°30'24
direct	1971 Jan 17 13:01	15° ⊝ 41'52		max. Earth dist.	1976 Jul 29 13:47	6° Ω 33'05	0°30'25
evening set	1971 Apr 29 18:05	23° ⊝ 39'18		morning rise	1976 Jul 29 19:25	6° Ω 34'53	10.11598 AU
conjunction	1971 May 17 11:53	25° ⊝ 56'01	-1°-53'-22	retrograde	1976 Aug 16 15:05	8° Ω 51'47	
minimum elong	1971 May 17 11:56	25° ⊝ 56'02	1°53'23		1976 Oct 12 22:32	15° Ω	
max. Earth dist.	1971 May 17 15:28	25° ⊝ 57'10	10.11672 AU	opposition	1976 Nov 27 18:46	16° Ω 52'42	
morning rise	1971 Jun 04 09:14	28° ⊝ 13'54		min. Earth dist.	1977 Jan 13 13:46	15° R Ω	
					1977 Feb 02 09:36	13° Ω 26'20	0°57'06
					1977 Feb 02 04:42	13° Ω 27'20	8.15140 AU

direct	1977 Apr 11 05:41	9°♄57'06		direct	1983 Jul 01 12:31	27°♄43'21	
	1977 Jun 30 04:32	15°♄			1983 Aug 24 11:53	0°♄	
evening set	1977 Jul 26 05:55	18°♄06'22		evening set	1983 Oct 14 07:02	5°♄12'21	
conjunction	1977 Aug 13 06:28	20°♄23'47	1°00'52	conjunction	1983 Oct 31 05:56	7°♄14'09	2°11'35
minimum elong	1977 Aug 13 06:26	20°♄23'46	1°00'52	minimum elong	1983 Oct 31 05:57	7°♄14'09	2°11'35
max. Earth dist.	1977 Aug 13 12:18	20°♄25'39	10.19204 AU	max. Earth dist.	1983 Oct 31 04:22	7°♄13'40	10.80941 AU
morning rise	1977 Aug 31 03:49	22°♄40'10		morning rise	1983 Nov 17 00:41	9°♄14'46	
	1977 Nov 17 02:41	0°♄			1984 Jan 15 01:04	15°♄	
retrograde	1977 Dec 11 12:11	0°♄32'55		retrograde	1984 Feb 24 14:36	16°♄23'03	
	1978 Jan 05 00:46	30°♄♄			1984 Apr 06 05:53	15°♄♄	
opposition	1978 Feb 16 04:08	27°♄07'56	1°32'36	opposition	1984 May 03 08:21	13°♄04'55	2°36'33
min. Earth dist.	1978 Feb 15 23:15	27°♄08'56	8.23721 AU	min. Earth dist.	1984 May 03 10:06	13°♄04'35	8.85251 AU
direct	1978 Apr 25 12:16	23°♄39'07		direct	1984 Jul 13 06:16	9°♄42'03	
	1978 Jul 26 12:02	0°♄			1984 Oct 07 04:14	15°♄	
evening set	1978 Aug 09 18:16	1°♄43'44		evening set	1984 Oct 25 10:53	17°♄04'08	
conjunction	1978 Aug 27 14:53	3°♄58'37	1°27'23	conjunction	1984 Nov 11 07:01	19°♄04'13	2°02'21
minimum elong	1978 Aug 27 14:49	3°♄58'36	1°27'24	minimum elong	1984 Nov 11 07:03	19°♄04'14	2°02'21
max. Earth dist.	1978 Aug 27 20:24	4°♄00'22	10.28588 AU	max. Earth dist.	1984 Nov 11 04:11	19°♄03'23	10.88918 AU
morning rise	1978 Sep 14 07:24	6°♄12'14		morning rise	1984 Nov 27 23:34	21°♄03'20	
retrograde	1978 Dec 24 21:12	13°♄56'19		retrograde	1985 Mar 07 12:38	28°♄07'34	
opposition	1979 Mar 01 17:42	10°♄32'44	2°02'12	opposition	1985 May 15 17:57	24°♄49'54	2°21'54
min. Earth dist.	1979 Mar 01 13:39	10°♄33'33	8.33813 AU	min. Earth dist.	1985 May 15 21:03	24°♄49'19	8.92435 AU
direct	1979 May 09 14:53	7°♄04'33		direct	1985 Jul 25 19:34	21°♄28'03	
evening set	1979 Aug 23 21:43	15°♄03'07		evening set	1985 Nov 06 07:45	28°♄43'55	
					1985 Nov 17 02:09	0°♄♄	
conjunction	1979 Sep 10 13:40	17°♄15'08	1°48'41	conjunction	1985 Nov 23 01:45	0°♄42'42	1°48'09
minimum elong	1979 Sep 10 13:36	17°♄15'07	1°48'42	minimum elong	1985 Nov 23 01:48	0°♄42'43	1°48'09
max. Earth dist.	1979 Sep 10 18:01	17°♄16'30	10.39165 AU	max. Earth dist.	1985 Nov 22 21:27	0°♄41'25	10.95276 AU
morning rise	1979 Sep 28 01:02	19°♄25'46		morning rise	1985 Dec 09 17:03	2°♄40'43	
retrograde	1980 Jan 06 22:42	27°♄01'10		retrograde	1986 Mar 19 09:27	9°♄42'14	
opposition	1980 Mar 14 02:02	23°♄38'58	2°24'37	opposition	1986 May 28 00:42	6°♄24'45	2°01'42
min. Earth dist.	1980 Mar 13 23:35	23°♄39'27	8.44779 AU	min. Earth dist.	1986 May 28 04:35	6°♄24'02	8.97866 AU
direct	1980 May 22 11:50	20°♄11'37		direct	1986 Aug 07 04:50	3°♄03'48	
evening set	1980 Sep 05 15:10	28°♄03'07		evening set	1986 Nov 17 23:19	10°♄14'23	
	1980 Sep 21 10:48	0°♄					
conjunction	1980 Sep 23 02:08	0°♄12'12	2°03'56	conjunction	1986 Dec 04 15:56	12°♄12'17	1°29'44
minimum elong	1980 Sep 23 02:05	0°♄12'11	2°03'57	minimum elong	1986 Dec 04 15:59	12°♄12'18	1°29'44
max. Earth dist.	1980 Sep 23 04:15	0°♄12'51	10.50275 AU	max. Earth dist.	1986 Dec 04 11:04	12°♄10'51	10.99783 AU
morning rise	1980 Oct 10 08:28	2°♄19'52		morning rise	1986 Dec 21 06:32	14°♄09'36	
retrograde	1981 Jan 18 16:58	9°♄47'03		retrograde	1987 Mar 31 04:42	21°♄09'47	
opposition	1981 Mar 27 04:53	6°♄26'07	2°39'13	opposition	1987 Jun 09 05:20	17°♄52'13	1°36'51
min. Earth dist.	1981 Mar 27 03:51	6°♄26'19	8.55941 AU	min. Earth dist.	1987 Jun 09 09:00	17°♄51'32	9.01350 AU
direct	1981 Jun 05 02:12	2°♄59'47		direct	1987 Aug 19 08:53	14°♄32'01	
evening set	1981 Sep 18 22:12	10°♄43'44		evening set	1987 Nov 29 11:03	21°♄38'29	
conjunction	1981 Oct 06 04:30	12°♄50'04	2°12'47	conjunction	1987 Dec 16 02:53	23°♄35'52	1°07'52
minimum elong	1981 Oct 06 04:28	12°♄50'04	2°12'47	minimum elong	1987 Dec 16 02:55	23°♄35'52	1°07'52
max. Earth dist.	1981 Oct 06 04:30	12°♄50'04	10.61269 AU	max. Earth dist.	1987 Dec 15 22:33	23°♄34'35	11.02278 AU
morning rise	1981 Oct 23 06:18	14°♄55'02		morning rise	1988 Jan 01 17:15	25°♄32'53	
retrograde	1982 Jan 31 03:46	22°♄14'51			1988 Feb 13 23:50	0°♄	
opposition	1982 Apr 09 02:30	18°♄55'03	2°45'51	retrograde	1988 Apr 11 02:08	2°♄33'13	
min. Earth dist.	1982 Apr 09 02:23	18°♄55'04	8.66690 AU		1988 Jun 10 05:22	30°♄♄	
direct	1982 Jun 18 11:05	15°♄29'51		opposition	1988 Jun 20 09:13	29°♄15'20	1°08'22
evening set	1982 Oct 01 19:07	23°♄06'14		min. Earth dist.	1988 Jun 20 12:55	29°♄14'39	9.02779 AU
				direct	1988 Aug 30 10:07	25°♄55'45	
conjunction	1982 Oct 18 21:24	25°♄10'06	2°15'14		1988 Nov 12 09:26	0°♄	
minimum elong	1982 Oct 18 21:24	25°♄10'06	2°15'14	evening set	1988 Dec 09 20:35	2°♄59'20	
max. Earth dist.	1982 Oct 18 20:18	25°♄09'46	10.71620 AU				
morning rise	1982 Nov 04 19:20	27°♄12'42		conjunction	1988 Dec 26 11:57	4°♄56'34	0°43'25
	1982 Nov 29 10:29	0°♄		minimum elong	1988 Dec 26 11:58	4°♄56'35	0°43'24
retrograde	1983 Feb 12 11:17	4°♄26'14		max. Earth dist.	1988 Dec 26 07:17	4°♄55'12	11.02688 AU
opposition	1983 Apr 21 19:27	1°♄07'22	2°44'47	morning rise	1989 Jan 12 02:42	6°♄53'41	
min. Earth dist.	1983 Apr 21 19:56	1°♄07'16	8.76573 AU	retrograde	1989 Apr 22 23:37	13°♄55'39	
	1983 May 06 19:30	30°♄♄		opposition	1989 Jul 02 13:08	10°♄37'15	0°37'14

min. Earth dist.	1989 Jul 02 17:26	10°☾36'27	9.02116 AU	morning rise	1995 Mar 23 02:12	17°♄05'15	
direct	1989 Sep 11 07:10	7°☾18'05		retrograde	1995 Jul 06 07:46	24°♄45'07	
evening set	1989 Dec 21 05:49	14°☾20'14		opposition	1995 Sep 14 15:19	21°♄20'18	-2°-20'-52
conjunction	1990 Jan 06 21:02	16°☾17'39	0°17'14	min. Earth dist.	1995 Sep 14 17:02	21°♄19'58	8.60387 AU
minimum elong	1990 Jan 06 21:03	16°☾17'39	0°17'14	direct	1995 Nov 21 19:48	17°♄59'43	
max. Earth dist.	1990 Jan 06 15:26	16°☾16'00	11.01003 AU	evening set	1996 Feb 29 19:47	25°♄22'56	
morning rise	1990 Jan 23 12:42	18°☾15'14		conjunction	1996 Mar 17 19:04	27°♄28'22	-2°-1'-16
retrograde	1990 May 04 22:43	25°☾20'20		minimum elong	1996 Mar 17 19:02	27°♄28'22	2°01'18
opposition	1990 Jul 14 17:44	22°☾01'12	0°04'32	max. Earth dist.	1996 Mar 17 17:59	27°♄28'02	10.54999 AU
min. Earth dist.	1990 Jul 14 22:27	22°☾00'19	8.99385 AU	morning rise	1996 Apr 03 22:38	29°♄35'10	
desc. node	1990 Sep 04 05:12	18°☾59'49			1996 Apr 07 08:49	0°♃	
direct	1990 Sep 23 05:10	18°☾42'15		retrograde	1996 Jul 18 20:29	7°♃24'02	
evening set	1991 Jan 01 16:10	25°☾44'28		opposition	1996 Sep 26 19:11	3°♃57'58	-2°-37'-1
conjunction	1991 Jan 18 07:45	27°☾42'26	0°-9'-49	min. Earth dist.	1996 Sep 26 19:27	3°♃57'54	8.49762 AU
minimum elong	1991 Jan 18 07:44	27°☾42'26	0°09'50	direct	1996 Dec 03 12:39	0°♃36'32	
behind sun begin	1991 Jan 18 02:00	27°☾40'45		evening set	1997 Mar 13 19:46	8°♃07'08	
behind sun end	1991 Jan 18 13:28	27°☾44'07		conjunction	1997 Mar 30 22:20	10°♃14'56	-2°-11'-13
max. Earth dist.	1991 Jan 18 02:31	27°☾40'54	10.97273 AU	minimum elong	1997 Mar 30 22:19	10°♃14'55	2°11'14
morning rise	1991 Feb 04 00:32	29°☾40'47		max. Earth dist.	1997 Mar 30 22:49	10°♃15'05	10.44330 AU
	1991 Feb 06 18:51	0°♁		morning rise	1997 Apr 17 05:21	12°♃24'10	
retrograde	1991 May 17 04:05	6°♁50'32		retrograde	1997 Aug 01 16:56	20°♃21'39	
opposition	1991 Jul 27 00:21	3°♁30'28	0°-28'-37	opposition	1997 Oct 10 04:26	16°♃54'27	-2°-45'-42
min. Earth dist.	1991 Jul 27 04:19	3°♁29'44	8.94665 AU	min. Earth dist.	1997 Oct 10 03:19	16°♃54'40	8.39240 AU
direct	1991 Oct 05 03:57	0°♁11'35		direct	1997 Dec 16 10:29	13°♃32'03	
evening set	1992 Jan 13 05:14	7°♁15'16		evening set	1998 Mar 27 05:20	21°♃10'28	
conjunction	1992 Jan 29 21:33	9°♁14'08	0°-36'-39	conjunction	1998 Apr 13 11:41	23°♃20'46	-2°-14'-39
minimum elong	1992 Jan 29 21:31	9°♁14'07	0°36'39	minimum elong	1998 Apr 13 11:41	23°♃20'46	2°14'40
max. Earth dist.	1992 Jan 29 17:25	9°♁12'54	10.91612 AU	max. Earth dist.	1998 Apr 13 12:56	23°♃21'09	10.34038 AU
morning rise	1992 Feb 15 15:39	11°♁13'35		morning rise	1998 Apr 30 22:38	25°♃32'33	
	1992 Mar 21 16:50	15°♁			1998 Jun 09 06:07	0°♂	
retrograde	1992 May 28 13:36	18°♁29'20		retrograde	1998 Aug 15 19:09	3°♂37'42	
opposition	1992 Aug 07 09:53	15°♁08'12	-1°-1'-3	opposition	1998 Oct 23 18:49	0°♂09'34	-2°-45'-54
min. Earth dist.	1992 Aug 07 12:50	15°♁07'39	8.88120 AU	min. Earth dist.	1998 Oct 23 17:03	0°♂09'55	8.29344 AU
	1992 Aug 09 05:43	15°♁			1998 Oct 25 18:41	30°♁	
direct	1992 Oct 16 02:06	11°♁49'12		direct	1998 Dec 29 15:45	26°♃46'04	
	1992 Dec 18 09:54	15°♁			1999 Mar 01 01:26	0°♂	
evening set	1993 Jan 23 22:52	18°♁55'50		evening set	1999 Apr 10 00:21	4°♂32'18	
conjunction	1993 Feb 09 16:10	20°♁55'52	-1°-2'-19	conjunction	1999 Apr 27 11:04	6°♂45'11	-2°-10'-57
minimum elong	1993 Feb 09 16:08	20°♁55'51	1°02'19	minimum elong	1999 Apr 27 11:05	6°♂45'12	2°10'58
max. Earth dist.	1993 Feb 09 12:26	20°♁54'44	10.84228 AU	max. Earth dist.	1999 Apr 27 12:50	6°♂45'45	10.24647 AU
morning rise	1993 Feb 26 12:04	22°♁56'44		morning rise	1999 May 15 02:21	8°♂59'30	
	1993 May 21 04:58	0°♄			1999 Jul 10 00:42	15°♂	
retrograde	1993 Jun 10 05:27	0°♄19'40		retrograde	1999 Aug 30 01:23	17°♂10'51	
	1993 Jun 30 08:29	30°♁			1999 Oct 21 01:43	15°♁	
opposition	1993 Aug 19 23:01	26°♁57'21	-1°-31'-29	opposition	1999 Nov 06 13:53	13°♂42'00	-2°-36'-59
min. Earth dist.	1993 Aug 20 01:36	26°♁56'52	8.79998 AU	min. Earth dist.	1999 Nov 06 11:53	13°♂42'24	8.20572 AU
direct	1993 Oct 28 03:39	23°♁38'00		direct	2000 Jan 12 04:59	10°♂17'18	
	1994 Jan 28 23:43	0°♄			2000 Mar 27 13:22	15°♂	
evening set	1994 Feb 04 22:24	0°♄49'00		evening set	2000 Apr 23 04:16	18°♂10'57	
conjunction	1994 Feb 21 17:03	2°♄50'32	-1°-25'-44	conjunction	2000 May 10 19:45	20°♂26'22	-1°-59'-53
minimum elong	1994 Feb 21 17:00	2°♄50'31	1°25'44	minimum elong	2000 May 10 19:48	20°♂26'23	1°59'53
max. Earth dist.	1994 Feb 21 13:07	2°♄49'20	10.75413 AU	max. Earth dist.	2000 May 10 21:56	20°♂27'04	10.16612 AU
morning rise	1994 Mar 10 15:11	4°♄53'08		morning rise	2000 May 28 15:24	22°♂43'04	
retrograde	1994 Jun 23 03:57	12°♄24'11			2000 Aug 10 02:26	0°♂	
opposition	1994 Sep 01 16:40	9°♄00'39	-1°-58'-33	retrograde	2000 Sep 12 11:34	0°♂58'43	
min. Earth dist.	1994 Sep 01 19:13	9°♄00'09	8.70621 AU		2000 Oct 16 00:45	30°♁	
direct	1994 Nov 09 08:36	5°♄40'45		opposition	2000 Nov 19 12:41	27°♂29'26	-2°-18'-54
evening set	1995 Feb 17 04:56	12°♄57'21		min. Earth dist.	2000 Nov 19 10:39	27°♂29'51	8.13335 AU
conjunction	1995 Mar 06 01:32	15°♄00'41	-1°-45'-45	direct	2001 Jan 25 00:24	24°♂03'34	
minimum elong	1995 Mar 06 01:30	15°♄00'40	1°45'47		2001 Apr 20 21:59	0°♂	
max. Earth dist.	1995 Mar 05 22:36	14°♄59'47	10.65523 AU	evening set	2001 May 07 16:22	2°♂03'57	

conjunction	2001 May 25 12:33	4°II21'38	-1°-41'-42		2007 Sep 02 13:48	0°♄	
minimum elong	2001 May 25 12:37	4°II21'39	1°41'43	morning rise	2007 Sep 08 18:17	0°♄46'33	
max. Earth dist.	2001 May 25 15:29	4°II22'34	10.10326 AU	retrograde	2007 Dec 19 14:10	8°♄34'04	
morning rise	2001 Jun 12 12:03	6°II40'22		opposition	2008 Feb 24 09:48	5°♄09'38	1°50'34
retrograde	2001 Sep 27 00:04	14°II58'11		min. Earth dist.	2008 Feb 24 06:49	5°♄10'14	8.29140 AU
opposition	2001 Dec 03 14:13	11°II28'48	-1°-52'-21	direct	2008 May 03 03:07	1°♄40'48	
min. Earth dist.	2001 Dec 03 11:35	11°II29'21	8.08060 AU	evening set	2008 Aug 17 08:04	9°♄41'53	
direct	2002 Feb 08 01:32	8°II01'53					
evening set	2002 May 22 11:07	16°II07'52		conjunction	2008 Sep 04 02:00	11°♄55'07	1°40'25
				minimum elong	2008 Sep 04 01:56	11°♄55'06	1°40'25
conjunction	2002 Jun 09 11:24	18°II27'19	-1°-17'-17	max. Earth dist.	2008 Sep 04 04:55	11°♄56'03	10.34125 AU
minimum elong	2002 Jun 09 11:27	18°II27'20	1°17'18	morning rise	2008 Sep 21 15:47	14°♄07'04	
max. Earth dist.	2002 Jun 09 15:29	18°II28'39	10.06242 AU	retrograde	2008 Dec 31 18:08	21°♄46'01	
morning rise	2002 Jun 27 13:50	20°II47'30		opposition	2009 Mar 08 19:53	18°♄22'51	2°16'07
retrograde	2002 Oct 11 13:01	29°II05'07		min. Earth dist.	2009 Mar 08 16:59	18°♄23'25	8.39445 AU
opposition	2002 Dec 17 17:28	25°II35'57	-1°-18'-45	direct	2009 May 17 02:06	14°♄54'41	
min. Earth dist.	2002 Dec 17 13:50	25°II36'42	8.05195 AU	evening set	2009 Aug 31 05:10	22°♄49'11	
direct	2003 Feb 22 07:41	22°II08'07					
	2003 Jun 04 01:28	0°♄		conjunction	2009 Sep 17 18:22	24°♄59'33	1°58'16
evening set	2003 Jun 06 10:27	0°♄18'05		minimum elong	2009 Sep 17 18:19	24°♄59'32	1°58'17
				max. Earth dist.	2009 Sep 17 21:03	25°♄00'23	10.44783 AU
conjunction	2003 Jun 24 13:39	2°♄38'35	0°-48'-5	morning rise	2009 Oct 05 02:56	27°♄08'30	
minimum elong	2003 Jun 24 13:42	2°♄38'35	0°48'06		2009 Oct 29 17:09	0°♄	
max. Earth dist.	2003 Jun 24 18:45	2°♄40'14	10.04735 AU	retrograde	2010 Jan 13 15:56	4°♄39'09	
morning rise	2003 Jul 12 17:43	4°♄59'23		opposition	2010 Mar 22 00:37	1°♄17'12	2°34'04
retrograde	2003 Oct 25 23:42	13°♄14'24		min. Earth dist.	2010 Mar 21 22:13	1°♄17'40	8.50381 AU
opposition	2003 Dec 31 20:57	9°♄45'45	0°-40'-14		2010 Apr 07 18:52	30°♄	
min. Earth dist.	2003 Dec 31 16:40	9°♄46'38	8.05013 AU	direct	2010 May 30 18:09	27°♄49'57	
direct	2004 Mar 07 16:51	6°♄17'10			2010 Jul 21 15:10	0°♄	
evening set	2004 Jun 20 12:07	14°♄29'14		evening set	2010 Sep 13 16:12	5°♄37'05	
conjunction	2004 Jul 08 16:38	16°♄49'53	0°-15'-59	conjunction	2010 Oct 01 00:42	7°♄44'38	2°09'51
minimum elong	2004 Jul 08 16:39	16°♄49'53	0°15'59	minimum elong	2010 Oct 01 00:40	7°♄44'38	2°09'51
max. Earth dist.	2004 Jul 08 22:12	16°♄51'41	10.05952 AU	max. Earth dist.	2010 Oct 01 02:50	7°♄45'18	10.55796 AU
morning rise	2004 Jul 26 20:39	19°♄10'24		morning rise	2010 Oct 18 04:22	9°♄50'46	
retrograde	2004 Nov 08 06:54	27°♄20'36		retrograde	2011 Jan 26 06:10	17°♄13'36	
asc. node	2005 Jan 08 17:08	24°♄18'39		opposition	2011 Apr 03 23:56	13°♄52'49	2°44'04
opposition	2005 Jan 13 23:06	23°♄52'45	0°00'34	min. Earth dist.	2011 Apr 03 22:51	13°♄53'02	8.61393 AU
min. Earth dist.	2005 Jan 13 18:45	23°♄53'39	8.07562 AU	direct	2011 Jun 13 03:51	10°♄26'39	
direct	2005 Mar 22 02:54	20°♄23'39		evening set	2011 Sep 26 17:09	18°♄06'07	
evening set	2005 Jul 05 13:01	28°♄35'49					
	2005 Jul 16 12:30	0°♄		conjunction	2011 Oct 13 21:13	20°♄11'02	2°15'00
				minimum elong	2011 Oct 13 21:12	20°♄11'02	2°15'00
conjunction	2005 Jul 23 17:01	0°♄55'41	0°16'57	max. Earth dist.	2011 Oct 13 21:48	20°♄11'13	10.66628 AU
minimum elong	2005 Jul 23 17:00	0°♄55'41	0°16'58	morning rise	2011 Oct 30 20:41	22°♄14'37	
max. Earth dist.	2005 Jul 23 22:24	0°♄57'24	10.09830 AU	retrograde	2012 Feb 07 14:03	29°♄30'29	
morning rise	2005 Aug 10 19:19	3°♄15'00		opposition	2012 Apr 15 18:26	26°♄10'47	2°46'14
retrograde	2005 Nov 22 09:01	11°♄18'40		min. Earth dist.	2012 Apr 15 18:42	26°♄10'44	8.71961 AU
opposition	2006 Jan 27 22:48	7°♄51'50	0°40'57	direct	2012 Jun 25 08:00	22°♄45'49	
min. Earth dist.	2006 Jan 27 18:59	7°♄52'37	8.12684 AU		2012 Oct 05 20:34	0°♄	
direct	2006 Apr 05 12:54	4°♄22'32		evening set	2012 Oct 08 08:20	0°♄17'37	
evening set	2006 Jul 20 10:06	12°♄32'43					
				conjunction	2012 Oct 25 08:32	2°♄20'14	2°13'55
conjunction	2006 Aug 07 11:54	14°♄50'57	0°48'30	minimum elong	2012 Oct 25 08:33	2°♄20'14	2°13'55
minimum elong	2006 Aug 07 11:52	14°♄50'57	0°48'30	max. Earth dist.	2012 Oct 25 07:27	2°♄19'54	10.76788 AU
max. Earth dist.	2006 Aug 07 16:28	14°♄52'25	10.16111 AU	morning rise	2012 Nov 11 04:40	4°♄21'37	
	2006 Aug 08 16:06	15°♄		retrograde	2013 Feb 18 17:02	11°♄31'35	
morning rise	2006 Aug 25 11:02	17°♄08'19		opposition	2013 Apr 28 08:27	8°♄12'48	2°40'59
retrograde	2006 Dec 06 04:07	25°♄04'16		min. Earth dist.	2013 Apr 28 09:22	8°♄12'37	8.81619 AU
opposition	2007 Feb 10 18:42	21°♄38'35	1°18'20	direct	2013 Jul 08 05:12	4°♄49'06	
min. Earth dist.	2007 Feb 10 15:23	21°♄39'16	8.20036 AU	evening set	2013 Oct 20 14:50	12°♄13'35	
direct	2007 Apr 19 21:24	18°♄09'21					
evening set	2007 Aug 04 01:11	26°♄15'47		conjunction	2013 Nov 06 12:01	14°♄14'17	2°07'01
				minimum elong	2013 Nov 06 12:02	14°♄14'17	2°07'01
conjunction	2007 Aug 21 23:28	28°♄31'43	1°16'49	max. Earth dist.	2013 Nov 06 10:06	14°♄13'42	10.85846 AU
minimum elong	2007 Aug 21 23:25	28°♄31'42	1°16'49		2013 Nov 12 20:30	15°♄	
max. Earth dist.	2007 Aug 22 03:05	28°♄32'52	10.24381 AU	morning rise	2013 Nov 23 05:35	16°♄13'55	

retrograde	2014 Mar 02 16:19	23°♄19'10			2020 Mar 22 03:58	0°≈	
opposition	2014 May 10 18:28	20°♄01'05	2°29'00	retrograde	2020 May 11 04:09	1°≈57'25	
min. Earth dist.	2014 May 10 19:32	20°♄00'53	8.89967 AU		2020 Jul 01 23:37	30°R☾	
direct	2014 Jul 20 20:35	16°♄38'38		opposition	2020 Jul 20 22:28	28°☾38'28	0°-13'-55
evening set	2014 Nov 01 13:52	23°♄56'29		min. Earth dist.	2020 Jul 21 02:37	28°☾37'41	8.99470 AU
				direct	2020 Sep 29 05:11	25°☾20'14	
conjunction	2014 Nov 18 08:50	25°♄55'40	1°54'53		2020 Dec 17 05:04	0°≈	
minimum elong	2014 Nov 18 08:52	25°♄55'40	1°54'54	evening set	2021 Jan 07 11:19	2°≈22'12	
max. Earth dist.	2014 Nov 18 06:53	25°♄55'05	10.93429 AU				
morning rise	2014 Dec 05 00:33	27°♄53'57		conjunction	2021 Jan 24 03:01	4°≈20'21	0°-24'-47
	2014 Dec 23 16:34	0°☾		minimum elong	2021 Jan 24 03:00	4°≈20'21	0°24'48
retrograde	2015 Mar 14 15:02	4°☾55'48		max. Earth dist.	2021 Jan 23 21:13	4°≈18'38	10.96766 AU
opposition	2015 May 23 01:35	1°☾38'14	2°11'05	morning rise	2021 Feb 09 20:26	6°≈19'01	
min. Earth dist.	2015 May 23 03:20	1°☾37'54	8.96670 AU	retrograde	2021 May 23 09:19	13°≈31'02	
	2015 Jun 15 00:36	30°R♄		opposition	2021 Aug 02 06:14	10°≈11'04	0°-46'-44
direct	2015 Aug 02 05:53	28°♄16'57		min. Earth dist.	2021 Aug 02 11:06	10°≈10'10	8.93529 AU
	2015 Sep 18 02:49	0°☾		direct	2021 Oct 11 02:17	6°≈52'43	
evening set	2015 Nov 13 07:03	5°☾29'01		evening set	2022 Jan 19 02:29	13°≈57'09	
					2022 Jan 27 22:49	15°≈	
conjunction	2015 Nov 30 00:16	7°☾27'06	1°38'13	conjunction	2022 Feb 04 19:05	15°≈56'23	0°-51'-3
minimum elong	2015 Nov 30 00:18	7°☾27'07	1°38'14	minimum elong	2022 Feb 04 19:03	15°≈56'22	0°51'03
max. Earth dist.	2015 Nov 29 21:36	7°☾26'19	10.99239 AU	max. Earth dist.	2022 Feb 04 13:11	15°≈54'37	10.89826 AU
morning rise	2015 Dec 16 14:54	9°☾24'29		morning rise	2022 Feb 21 14:06	17°≈56'21	
retrograde	2016 Mar 25 10:01	16°☾24'19		retrograde	2022 Jun 04 21:47	25°≈15'11	
opposition	2016 Jun 03 06:37	13°☾07'00	1°48'10	opposition	2022 Aug 14 17:10	21°≈54'00	-1°-18'-9
min. Earth dist.	2016 Jun 03 09:38	13°☾06'27	9.01490 AU	min. Earth dist.	2022 Aug 14 21:47	21°≈53'09	8.85684 AU
direct	2016 Aug 13 09:50	9°☾46'45		direct	2022 Oct 23 04:07	18°≈35'18	
evening set	2016 Nov 23 19:53	16°☾54'09		evening set	2023 Jan 30 22:51	25°≈43'38	
conjunction	2016 Dec 10 11:51	18°☾51'30	1°17'47	conjunction	2023 Feb 16 16:48	27°≈44'17	-1°-15'-34
minimum elong	2016 Dec 10 11:53	18°☾51'31	1°17'48	minimum elong	2023 Feb 16 16:46	27°≈44'17	1°15'34
max. Earth dist.	2016 Dec 10 07:41	18°☾50'16	11.03082 AU	max. Earth dist.	2023 Feb 16 12:05	27°≈42'52	10.81143 AU
morning rise	2016 Dec 27 02:15	20°☾48'25		morning rise	2023 Mar 05 13:41	29°≈45'52	
retrograde	2017 Apr 06 05:06	27°☾47'41			2023 Mar 07 13:35	0°☿	
opposition	2017 Jun 15 10:18	24°☾30'22	1°21'11	retrograde	2023 Jun 17 17:27	7°☿12'39	
min. Earth dist.	2017 Jun 15 14:03	24°☾29'40	9.04267 AU	opposition	2023 Aug 27 08:28	3°☿50'05	-1°-46'-51
direct	2017 Aug 25 12:08	21°☾10'56		min. Earth dist.	2023 Aug 27 11:50	3°☿49'27	8.76301 AU
evening set	2017 Dec 05 05:46	28°☾14'53		direct	2023 Nov 04 07:03	0°☿30'49	
	2017 Dec 20 04:49	0°☾		evening set	2024 Feb 12 01:44	7°☿44'19	
conjunction	2017 Dec 21 21:08	0°☾11'54	0°54'24	conjunction	2024 Feb 28 21:25	9°☿46'41	-1°-37'-13
minimum elong	2017 Dec 21 21:10	0°☾11'55	0°54'24	minimum elong	2024 Feb 28 21:23	9°☿46'40	1°37'14
max. Earth dist.	2017 Dec 21 16:38	0°☾10'35	11.04818 AU	max. Earth dist.	2024 Feb 28 17:21	9°☿45'26	10.71121 AU
morning rise	2018 Jan 07 11:44	2°☾08'43		morning rise	2024 Mar 16 20:38	11°☿50'11	
retrograde	2018 Apr 18 01:46	9°☾08'56		retrograde	2024 Jun 29 19:06	19°☿25'41	
opposition	2018 Jun 27 13:28	5°☾51'19	0°51'09	opposition	2024 Sep 08 04:35	16°☿01'39	-2°-11'-27
min. Earth dist.	2018 Jun 27 17:05	5°☾50'39	9.04882 AU	min. Earth dist.	2024 Sep 08 07:12	16°☿01'09	8.65807 AU
direct	2018 Sep 06 11:08	2°☾32'32		direct	2024 Nov 15 14:20	12°☿41'33	
evening set	2018 Dec 16 14:35	9°☾34'22		evening set	2025 Feb 23 12:36	20°☿01'24	
conjunction	2019 Jan 02 05:50	11°☾31'25	0°28'55	conjunction	2025 Mar 12 10:29	22°☿05'47	-1°-54'-54
minimum elong	2019 Jan 02 05:50	11°☾31'25	0°28'54	minimum elong	2025 Mar 12 10:27	22°☿05'47	1°54'55
max. Earth dist.	2019 Jan 02 01:40	11°☾30'11	11.04348 AU	max. Earth dist.	2025 Mar 12 06:40	22°☿04'37	10.60217 AU
morning rise	2019 Jan 18 20:51	13°☾28'28		morning rise	2025 Mar 29 12:36	24°☿11'29	
retrograde	2019 Apr 30 00:54	20°☾31'08			2025 May 25 03:36	0°♃	
opposition	2019 Jul 09 17:07	17°☾12'57	0°19'05	retrograde	2025 Jul 13 04:07	1°♃56'04	
min. Earth dist.	2019 Jul 09 20:34	17°☾12'19	9.03279 AU		2025 Sep 01 08:06	30°R☿	
direct	2019 Sep 18 08:47	13°☾54'35		opposition	2025 Sep 21 05:45	28°☿30'34	-2°-30'-34
evening set	2019 Dec 27 23:56	20°☾55'44		min. Earth dist.	2025 Sep 21 08:01	28°☿30'08	8.54677 AU
				direct	2025 Nov 28 03:52	25°☿09'27	
					2026 Feb 14 00:11	0°♃	
conjunction	2020 Jan 13 15:16	22°☾53'10	0°02'15	evening set	2026 Mar 08 08:07	2°♃36'35	
minimum elong	2020 Jan 13 15:16	22°☾53'10	0°02'15				
behind sun begin	2020 Jan 13 08:17	22°☾51'07		conjunction	2026 Mar 25 08:55	4°♃43'16	-2°-7'-29
behind sun end	2020 Jan 13 22:14	22°☾55'12		minimum elong	2026 Mar 25 08:54	4°♃43'15	2°07'30
max. Earth dist.	2020 Jan 13 10:39	22°☾51'50	11.01652 AU	max. Earth dist.	2026 Mar 25 05:51	4°♃42'18	10.48931 AU
morning rise	2020 Jan 30 07:14	24°☾50'50					
desc. node	2020 Feb 13 05:53	26°☾25'25					

morning rise	2026 Apr 11 14:24	6°♃51'24		min. Earth dist.	2032 Dec 24 19:04	3°♄42'18	8.03160 AU
retrograde	2026 Jul 26 19:56	14°♃45'00		direct	2033 Mar 01 16:02	0°♄12'40	
opposition	2026 Oct 04 12:29	11°♃18'07	-2°-42'-48	evening set	2033 Jun 14 03:35	8°♄24'38	
min. Earth dist.	2026 Oct 04 14:10	11°♃17'47	8.43425 AU				
direct	2026 Dec 10 23:31	7°♃55'52		conjunction	2033 Jul 02 07:38	10°♄45'30	0°-30'-37
evening set	2027 Mar 21 12:48	15°♃30'51		minimum elong	2033 Jul 02 07:40	10°♄45'30	0°30'38
				max. Earth dist.	2033 Jul 02 12:50	10°♄47'11	10.03623 AU
conjunction	2027 Apr 07 17:18	17°♃40'03	-2°-13'-58	morning rise	2033 Jul 20 12:07	13°♄06'28	
minimum elong	2027 Apr 07 17:18	17°♃40'03	2°14'00	retrograde	2033 Nov 02 07:03	21°♄19'39	
max. Earth dist.	2027 Apr 07 16:09	17°♃39'41	10.37798 AU	opposition	2034 Jan 08 02:12	17°♄50'58	0°-17'-50
morning rise	2027 Apr 25 02:31	19°♃50'45		min. Earth dist.	2034 Jan 07 21:43	17°♄51'54	8.04806 AU
retrograde	2027 Aug 09 18:06	27°♃52'49		direct	2034 Mar 16 02:29	14°♄21'41	
opposition	2027 Oct 18 00:35	24°♃24'42	-2°-47'00	asc. node	2034 Jun 21 15:38	21°♄37'32	
min. Earth dist.	2027 Oct 18 00:55	24°♃24'38	8.32600 AU	evening set	2034 Jun 29 05:21	22°♄34'33	
direct	2027 Dec 24 02:46	21°♃01'14					
evening set	2028 Apr 03 03:19	28°♃44'19		conjunction	2034 Jul 17 09:49	24°♄55'02	0°02'18
	2028 Apr 13 03:39	0°♄		minimum elong	2034 Jul 17 09:48	24°♄55'02	0°02'18
conjunction	2028 Apr 20 12:10	0°♄56'11	-2°-13'-34	behind sun begin	2034 Jul 17 02:27	24°♄52'41	
minimum elong	2028 Apr 20 12:11	0°♄56'11	2°13'35	behind sun end	2034 Jul 17 17:10	24°♄57'24	
max. Earth dist.	2028 Apr 20 12:59	0°♄56'27	10.27382 AU	max. Earth dist.	2034 Jul 17 15:41	24°♄56'55	10.06667 AU
morning rise	2028 May 08 01:29	3°♄09'31		morning rise	2034 Aug 04 13:18	27°♄15'11	
retrograde	2028 Aug 22 22:17	11°♄18'49			2034 Aug 27 02:46	0°♄	
opposition	2028 Oct 30 17:33	7°♄49'42	-2°-42'-16	retrograde	2034 Nov 16 12:00	5°♄22'31	
min. Earth dist.	2028 Oct 30 16:21	7°♄49'57	8.22757 AU	opposition	2035 Jan 22 03:25	1°♄54'55	0°23'07
direct	2029 Jan 05 12:39	4°♄25'00		min. Earth dist.	2035 Jan 21 22:15	1°♄55'58	8.09161 AU
evening set	2029 Apr 17 03:24	12°♄15'58			2035 Feb 15 19:35	30°♄	
				direct	2035 Mar 30 13:12	28°♄25'29	
conjunction	2029 May 04 16:57	14°♄30'30	-2°-5'-50		2035 May 11 20:44	0°♄	
minimum elong	2029 May 04 16:59	14°♄30'31	2°05'51	evening set	2035 Jul 14 04:54	6°♄37'16	
max. Earth dist.	2029 May 04 19:16	14°♄31'15	10.18241 AU	conjunction	2035 Aug 01 08:03	8°♄56'28	0°34'42
	2029 May 08 12:45	15°♄		minimum elong	2035 Aug 01 08:01	8°♄56'28	0°34'43
morning rise	2029 May 22 10:35	16°♄46'23		max. Earth dist.	2035 Aug 01 14:29	8°♄58'32	10.12283 AU
retrograde	2029 Sep 06 08:34	25°♄01'09		morning rise	2035 Aug 19 08:53	11°♄14'57	
opposition	2029 Nov 13 15:00	21°♄31'22	-2°-28'-18		2035 Sep 20 04:01	15°♄	
min. Earth dist.	2029 Nov 13 12:32	21°♄31'52	8.14441 AU	retrograde	2035 Nov 30 11:07	19°♄14'59	
direct	2030 Jan 19 03:54	18°♄05'25		opposition	2036 Feb 05 01:31	15°♄48'41	1°02'11
evening set	2030 May 01 12:09	26°♄03'38		min. Earth dist.	2036 Feb 04 20:14	15°♄49'46	8.15939 AU
					2036 Feb 15 02:10	15°♄	
conjunction	2030 May 19 06:22	28°♄20'36	-1°-50'-47	direct	2036 Apr 12 22:36	12°♄19'26	
minimum elong	2030 May 19 06:25	28°♄20'37	1°50'48		2036 Jun 08 09:19	15°♄	
max. Earth dist.	2030 May 19 09:43	28°♄21'41	10.10901 AU	evening set	2036 Jul 27 23:40	20°♄28'12	
	2030 Jun 01 02:34	0°♄					
morning rise	2030 Jun 06 04:09	0°♄38'44		conjunction	2036 Aug 14 23:52	22°♄45'21	1°04'42
retrograde	2030 Sep 20 21:29	8°♄56'47		minimum elong	2036 Aug 14 23:49	22°♄45'20	1°04'43
opposition	2030 Nov 27 15:55	5°♄26'42	-2°-5'-24	max. Earth dist.	2036 Aug 15 06:12	22°♄47'22	10.20105 AU
min. Earth dist.	2030 Nov 27 12:43	5°♄27'21	8.08153 AU	morning rise	2036 Sep 01 20:39	25°♄01'27	
direct	2031 Feb 02 02:24	1°♄59'37			2036 Oct 16 07:34	0°♄	
evening set	2031 May 16 04:26	10°♄03'59		retrograde	2036 Dec 13 02:58	2°♄53'16	
					2037 Feb 11 06:46	30°♄	
conjunction	2031 Jun 03 02:58	12°♄22'58	-1°-29'-1	opposition	2037 Feb 17 19:27	29°♄28'24	1°36'57
minimum elong	2031 Jun 03 03:02	12°♄22'59	1°29'02	min. Earth dist.	2037 Feb 17 14:50	29°♄29'20	8.24715 AU
max. Earth dist.	2031 Jun 03 06:53	12°♄24'14	10.05826 AU	direct	2037 Apr 27 04:57	25°♄59'36	
morning rise	2031 Jun 21 04:19	14°♄42'50			2037 Jul 07 02:30	0°♄	
retrograde	2031 Oct 05 10:50	23°♄01'40		evening set	2037 Aug 11 11:08	4°♄03'37	
opposition	2031 Dec 11 19:00	19°♄31'40	-1°-34'-42				
min. Earth dist.	2031 Dec 11 15:33	19°♄32'23	8.04307 AU	conjunction	2037 Aug 29 07:12	6°♄18'11	1°30'34
direct	2032 Feb 16 06:59	16°♄03'36		minimum elong	2037 Aug 29 07:08	6°♄18'10	1°30'35
evening set	2032 May 30 02:22	24°♄12'40		max. Earth dist.	2037 Aug 29 12:34	6°♄19'53	10.29657 AU
				morning rise	2037 Sep 15 23:09	8°♄31'28	
conjunction	2032 Jun 17 04:23	26°♄33'00	-1°-1'-43	retrograde	2037 Dec 26 11:35	16°♄14'39	
minimum elong	2032 Jun 17 04:25	26°♄33'01	1°01'44	opposition	2038 Mar 03 08:33	12°♄51'13	2°05'37
max. Earth dist.	2032 Jun 17 08:52	26°♄34'28	10.03344 AU	min. Earth dist.	2038 Mar 03 04:59	12°♄51'56	8.34959 AU
morning rise	2032 Jul 05 08:07	28°♄53'53		direct	2038 May 11 06:22	9°♄23'07	
	2032 Jul 14 02:16	0°♄		evening set	2038 Aug 25 13:24	17°♄20'56	
retrograde	2032 Oct 18 22:26	7°♄11'00					
opposition	2032 Dec 24 22:55	3°♄41'30	0°-58'-2	conjunction	2038 Sep 12 04:43	19°♄32'38	1°51'04

minimum elong	2038 Sep 12 04:39	19° \mathring{M} 32'37	1°51'04	evening set	2044 Nov 07 16:53	0° \mathring{A} 49'26	
max. Earth dist.	2038 Sep 12 08:30	19° \mathring{M} 33'49	10.40370 AU				
morning rise	2038 Sep 29 15:37	21° \mathring{M} 42'56		conjunction	2044 Nov 24 10:45	2° \mathring{A} 48'05	1°45'46
retrograde	2039 Jan 08 11:55	29° \mathring{M} 17'27		minimum elong	2044 Nov 24 10:47	2° \mathring{A} 48'05	1°45'46
opposition	2039 Mar 16 16:12	25° \mathring{M} 55'25	2°26'59	max. Earth dist.	2044 Nov 24 06:12	2° \mathring{A} 46'43	10.96274 AU
min. Earth dist.	2039 Mar 16 13:47	25° \mathring{M} 55'53	8.46053 AU	morning rise	2044 Dec 11 01:59	4° \mathring{A} 45'57	
direct	2039 May 25 03:05	22° \mathring{M} 28'12		retrograde	2045 Mar 20 18:12	11° \mathring{A} 47'04	
	2039 Sep 05 15:14	0° \mathring{A}		opposition	2045 May 29 10:58	8° \mathring{A} 29'39	1°58'26
evening set	2039 Sep 08 05:42	0° \mathring{A} 18'52		min. Earth dist.	2045 May 29 14:28	8° \mathring{A} 29'00	8.98720 AU
				direct	2045 Aug 08 15:00	5° \mathring{A} 08'53	
conjunction	2039 Sep 25 16:08	2° \mathring{A} 27'38	2°05'26	evening set	2045 Nov 19 07:50	12° \mathring{A} 18'48	
minimum elong	2039 Sep 25 16:05	2° \mathring{A} 27'37	2°05'26				
max. Earth dist.	2039 Sep 25 18:01	2° \mathring{A} 28'13	10.51607 AU	conjunction	2045 Dec 06 00:29	14° \mathring{A} 16'36	1°26'50
morning rise	2039 Oct 12 22:04	4° \mathring{A} 34'59		minimum elong	2045 Dec 06 00:31	14° \mathring{A} 16'36	1°26'51
retrograde	2040 Jan 21 04:12	12° \mathring{A} 01'17		max. Earth dist.	2045 Dec 05 20:06	14° \mathring{A} 15'18	11.00495 AU
opposition	2040 Mar 28 18:15	8° \mathring{A} 40'29	2°40'29	morning rise	2045 Dec 22 15:00	16° \mathring{A} 13'50	
min. Earth dist.	2040 Mar 28 16:34	8° \mathring{A} 40'49	8.57333 AU	retrograde	2046 Apr 01 14:45	23° \mathring{A} 13'49	
direct	2040 Jun 06 17:54	5° \mathring{A} 14'19		opposition	2046 Jun 10 15:21	19° \mathring{A} 56'17	1°33'03
evening set	2040 Sep 20 11:31	12° \mathring{A} 57'18		min. Earth dist.	2046 Jun 10 19:02	19° \mathring{A} 55'36	9.01900 AU
				direct	2046 Aug 20 19:11	16° \mathring{A} 36'14	
conjunction	2040 Oct 07 17:25	15° \mathring{A} 03'19	2°13'24	evening set	2046 Nov 30 19:17	23° \mathring{A} 42'12	
minimum elong	2040 Oct 07 17:24	15° \mathring{A} 03'18	2°13'23				
max. Earth dist.	2040 Oct 07 18:05	15° \mathring{A} 03'31	10.62712 AU	conjunction	2046 Dec 17 11:06	25° \mathring{A} 39'33	1°04'35
morning rise	2040 Oct 24 18:47	17° \mathring{A} 07'57		minimum elong	2046 Dec 17 11:08	25° \mathring{A} 39'33	1°04'35
retrograde	2041 Feb 01 16:00	24° \mathring{A} 26'53		max. Earth dist.	2046 Dec 17 06:21	25° \mathring{A} 38'08	11.02668 AU
opposition	2041 Apr 10 15:12	21° \mathring{A} 07'12	2°46'01	morning rise	2047 Jan 03 01:31	27° \mathring{A} 36'32	
min. Earth dist.	2041 Apr 10 14:24	21° \mathring{A} 07'21	8.68160 AU		2047 Jan 24 15:40	0° \mathring{B}	
direct	2041 Jun 20 01:10	17° \mathring{A} 42'11		retrograde	2047 Apr 13 11:46	4° \mathring{B} 36'50	
evening set	2041 Oct 03 07:08	25° \mathring{A} 17'27		opposition	2047 Jun 22 19:08	1° \mathring{B} 18'58	1°04'10
				min. Earth dist.	2047 Jun 22 23:41	1° \mathring{B} 18'08	9.02995 AU
conjunction	2041 Oct 20 09:07	27° \mathring{A} 21'02	2°14'59		2047 Jul 11 02:58	30° \mathring{R} \mathring{A}	
minimum elong	2041 Oct 20 09:07	27° \mathring{A} 21'02	2°14'58	direct	2047 Sep 01 18:29	27° \mathring{A} 59'28	
max. Earth dist.	2041 Oct 20 08:50	27° \mathring{A} 20'57	10.73095 AU		2047 Oct 22 11:09	0° \mathring{B}	
morning rise	2041 Nov 06 06:35	29° \mathring{A} 23'20		evening set	2047 Dec 12 04:46	5° \mathring{B} 02'46	
	2041 Nov 11 10:57	0° \mathring{M}					
retrograde	2042 Feb 13 22:50	6° \mathring{M} 35'58		conjunction	2047 Dec 28 20:02	7° \mathring{B} 00'00	0°39'52
opposition	2042 Apr 23 07:28	3° \mathring{M} 17'14	2°43'55	minimum elong	2047 Dec 28 20:03	7° \mathring{B} 00'00	0°39'51
min. Earth dist.	2042 Apr 23 08:05	3° \mathring{M} 17'07	8.78021 AU	max. Earth dist.	2047 Dec 28 14:17	6° \mathring{B} 58'18	11.02735 AU
	2042 Jun 21 10:26	30° \mathring{R} \mathring{A}		morning rise	2048 Jan 14 10:58	8° \mathring{B} 57'09	
direct	2042 Jul 02 23:47	29° \mathring{A} 53'25		retrograde	2048 Apr 24 07:53	15° \mathring{B} 59'18	
	2042 Jul 14 13:59	0° \mathring{M}		opposition	2048 Jul 03 23:04	12° \mathring{B} 40'51	0°32'47
evening set	2042 Oct 15 17:55	7° \mathring{M} 21'19		min. Earth dist.	2048 Jul 04 04:08	12° \mathring{B} 39'55	9.01986 AU
				direct	2048 Sep 12 16:55	9° \mathring{B} 21'41	
conjunction	2042 Nov 01 16:31	9° \mathring{M} 22'52	2°10'32	evening set	2048 Dec 22 14:00	16° \mathring{B} 23'48	
minimum elong	2042 Nov 01 16:32	9° \mathring{M} 22'53	2°10'31				
max. Earth dist.	2042 Nov 01 14:48	9° \mathring{M} 22'21	10.82340 AU	conjunction	2049 Jan 08 05:16	18° \mathring{B} 21'16	0°13'33
morning rise	2042 Nov 18 11:01	11° \mathring{M} 23'16		minimum elong	2049 Jan 08 05:16	18° \mathring{B} 21'16	0°13'32
	2042 Dec 21 13:49	15° \mathring{M}		behind sun begin	2049 Jan 08 01:16	18° \mathring{B} 20'06	
retrograde	2043 Feb 25 23:40	18° \mathring{M} 30'46		behind sun end	2049 Jan 08 09:16	18° \mathring{B} 22'26	
opposition	2043 May 05 19:38	15° \mathring{M} 12'46	2°34'46	max. Earth dist.	2049 Jan 07 23:22	18° \mathring{B} 19'32	11.00702 AU
min. Earth dist.	2043 May 05 22:06	15° \mathring{M} 12'18	8.86577 AU	morning rise	2049 Jan 24 21:03	20° \mathring{B} 18'54	
	2043 May 08 15:17	15° \mathring{R} \mathring{M}		retrograde	2049 May 06 09:11	27° \mathring{B} 24'26	
direct	2043 Jul 15 18:06	11° \mathring{M} 50'04		desc. node	2049 Jul 15 20:31	24° \mathring{B} 06'32	
	2043 Sep 18 09:46	15° \mathring{M}		opposition	2049 Jul 16 03:51	24° \mathring{B} 05'11	0°00'-1
evening set	2043 Oct 27 20:50	19° \mathring{M} 11'11		min. Earth dist.	2049 Jul 16 08:30	24° \mathring{B} 04'19	8.98910 AU
				direct	2049 Sep 24 15:34	20° \mathring{B} 46'13	
conjunction	2043 Nov 13 16:39	21° \mathring{M} 11'04	2°00'34	evening set	2050 Jan 03 00:33	27° \mathring{B} 48'32	
minimum elong	2043 Nov 13 16:41	21° \mathring{M} 11'05	2°00'34				
max. Earth dist.	2043 Nov 13 12:54	21° \mathring{M} 09'57	10.90151 AU	conjunction	2050 Jan 19 16:17	29° \mathring{B} 46'37	0°-13'-31
morning rise	2043 Nov 30 09:10	23° \mathring{M} 09'59		minimum elong	2050 Jan 19 16:17	29° \mathring{B} 46'37	0°13'32
	2044 Feb 21 14:20	0° \mathring{A}		behind sun begin	2050 Jan 19 12:17	29° \mathring{B} 45'26	
retrograde	2044 Mar 08 22:25	0° \mathring{A} 13'38		behind sun end	2050 Jan 19 20:17	29° \mathring{B} 47'47	
	2044 Mar 25 10:01	30° \mathring{R} \mathring{M}		max. Earth dist.	2050 Jan 19 11:26	29° \mathring{B} 45'11	10.96626 AU
opposition	2044 May 17 04:37	26° \mathring{M} 56'04	2°19'19		2050 Jan 21 13:15	0° \mathring{B}	
min. Earth dist.	2044 May 17 08:01	26° \mathring{M} 55'26	8.93555 AU	morning rise	2050 Feb 05 09:08	1° \mathring{B} 45'05	
direct	2044 Jul 27 07:28	23° \mathring{M} 34'24		retrograde	2050 May 18 14:28	8° \mathring{B} 55'26	
	2044 Oct 31 12:52	0° \mathring{A}		opposition	2050 Jul 28 10:42	5° \mathring{B} 35'13	0°-33'-7

min. Earth dist.	2050 Jul 28 14:26	5°≈34'31	8.93853 AU	min. Earth dist.	2056 Oct 11 18:19	19°Υ12'39	8.37394 AU
direct	2050 Oct 06 12:42	2°≈16'17		direct	2056 Dec 17 23:52	15°Υ49'51	
evening set	2051 Jan 14 14:14	9°≈20'20		evening set	2057 Mar 28 20:47	23°Υ29'38	
conjunction	2051 Jan 31 06:36	11°≈19'19	0°-40'-14	conjunction	2057 Apr 15 03:33	25°Υ40'20	-2°-14'-28
minimum elong	2051 Jan 31 06:35	11°≈19'18	0°40'15	minimum elong	2057 Apr 15 03:34	25°Υ40'20	2°14'30
max. Earth dist.	2051 Jan 31 02:02	11°≈17'57	10.90637 AU	max. Earth dist.	2057 Apr 15 04:14	25°Υ40'33	10.32244 AU
morning rise	2051 Feb 17 00:51	13°≈18'55		morning rise	2057 May 02 15:07	27°Υ52'32	
	2051 Mar 03 19:13	15°≈			2057 May 20 06:00	0°♄	
retrograde	2051 May 31 01:16	20°≈35'28		retrograde	2057 Aug 17 11:50	5°♄58'56	
opposition	2051 Aug 09 20:40	17°≈14'10	-1°-5'-20	opposition	2057 Oct 25 10:39	2°♄30'40	-2°-45'-7
min. Earth dist.	2051 Aug 10 00:06	17°≈13'31	8.86996 AU	min. Earth dist.	2057 Oct 25 09:17	2°♄30'56	8.27625 AU
	2051 Sep 11 14:34	15°≈			2057 Nov 29 18:49	30°♄	
direct	2051 Oct 18 11:51	13°≈55'03		direct	2057 Dec 31 06:59	29°Υ06'59	
	2051 Nov 23 11:44	15°≈			2058 Jan 31 09:15	0°♄	
evening set	2052 Jan 26 08:34	21°≈02'16		evening set	2058 Apr 11 17:12	6°♄54'35	
conjunction	2052 Feb 12 01:52	23°≈02'30	-1°-5'-38	conjunction	2058 Apr 29 04:28	9°♄07'52	-2°-9'-45
minimum elong	2052 Feb 12 01:50	23°≈02'29	1°05'39	minimum elong	2058 Apr 29 04:30	9°♄07'53	2°09'46
max. Earth dist.	2052 Feb 11 21:03	23°≈01'02	10.82964 AU	max. Earth dist.	2058 Apr 29 06:21	9°♄08'29	10.23043 AU
morning rise	2052 Feb 28 22:02	25°≈03'35		morning rise	2058 May 16 20:20	11°♄22'36	
	2052 Apr 16 13:54	0°♄			2058 Jun 16 14:27	15°♄	
retrograde	2052 Jun 11 17:22	2°♄27'30		retrograde	2058 Aug 31 19:37	19°♄35'00	
	2052 Aug 09 03:34	30°♄		opposition	2058 Nov 08 06:37	16°♄06'04	-2°-34'-54
opposition	2052 Aug 21 10:31	29°≈05'00	-1°-35'-21	min. Earth dist.	2058 Nov 08 04:34	16°♄06'29	8.19111 AU
min. Earth dist.	2052 Aug 21 13:57	29°≈04'21	8.78608 AU		2058 Nov 22 02:59	15°♄	
direct	2052 Oct 29 13:18	25°≈45'29		direct	2059 Jan 13 20:42	12°♄41'14	
	2053 Jan 11 02:51	0°♄			2059 Mar 05 22:56	15°♄	
evening set	2053 Feb 06 08:50	2°♄57'17		evening set	2059 Apr 25 22:20	20°♄36'05	
conjunction	2053 Feb 23 03:40	4°♄59'02	-1°-28'-38	conjunction	2059 May 13 14:27	22°♄51'52	-1°-57'-40
minimum elong	2053 Feb 23 03:38	4°♄59'02	1°28'39	minimum elong	2059 May 13 14:30	22°♄51'53	1°57'41
max. Earth dist.	2053 Feb 22 23:30	4°♄57'46	10.73906 AU	max. Earth dist.	2059 May 13 17:42	22°♄52'55	10.15338 AU
morning rise	2053 Mar 12 02:04	7°♄01'53		morning rise	2059 May 31 10:33	25°♄08'56	
retrograde	2053 Jun 24 15:27	14°♄34'09			2059 Jul 12 19:57	0°♄	
opposition	2053 Sep 03 04:52	11°♄10'21	-2°-1'-51	retrograde	2059 Sep 15 06:27	3°♄25'18	
min. Earth dist.	2053 Sep 03 07:40	11°♄09'49	8.69015 AU		2059 Nov 21 10:19	30°♄	
direct	2053 Nov 10 20:12	7°♄50'17		opposition	2059 Nov 22 06:09	29°♄55'57	-2°-15'-35
evening set	2054 Feb 18 16:29	15°♄07'53		min. Earth dist.	2059 Nov 22 03:21	29°♄56'32	8.12273 AU
				direct	2060 Jan 27 17:50	26°♄29'59	
conjunction	2054 Mar 07 13:26	17°♄11'31	-1°-48'-6		2060 Mar 31 11:49	0°♄	
minimum elong	2054 Mar 07 13:23	17°♄11'30	1°48'07	evening set	2060 May 09 11:32	4°♄31'16	
max. Earth dist.	2054 Mar 07 10:56	17°♄10'44	10.63822 AU				
morning rise	2054 Mar 24 14:17	19°♄16'23		conjunction	2060 May 27 08:20	6°♄49'14	-1°-38'-34
retrograde	2054 Jul 07 22:04	26°♄57'33		minimum elong	2060 May 27 08:23	6°♄49'15	1°38'35
opposition	2054 Sep 16 04:10	23°≈32'29	-2°-23'-23	max. Earth dist.	2060 May 27 12:40	6°♄50'38	10.09495 AU
min. Earth dist.	2054 Sep 16 05:31	23°≈32'13	8.58620 AU	morning rise	2060 Jun 14 08:10	9°♄08'13	
direct	2054 Nov 23 08:06	20°≈11'43		retrograde	2060 Sep 28 18:54	17°♄26'18	
evening set	2055 Mar 03 08:33	27°≈36'05		opposition	2060 Dec 05 08:04	13°♄56'54	-1°-47'-57
				min. Earth dist.	2060 Dec 05 04:28	13°♄57'39	8.07449 AU
conjunction	2055 Mar 20 08:10	29°≈41'52	-2°-2'-54	direct	2061 Feb 09 19:57	10°♄29'54	
minimum elong	2055 Mar 20 08:08	29°≈41'52	2°02'56	evening set	2061 May 24 07:08	18°♄36'30	
max. Earth dist.	2055 Mar 20 07:17	29°≈41'35	10.53170 AU				
	2055 Mar 22 18:29	0°♄		conjunction	2061 Jun 11 07:51	20°♄56'09	-1°-13'-24
morning rise	2055 Apr 06 12:00	1°♄49'01		minimum elong	2061 Jun 11 07:54	20°♄56'10	1°13'25
retrograde	2055 Jul 21 12:49	9°♄39'14		max. Earth dist.	2061 Jun 11 12:53	20°♄57'47	10.05847 AU
opposition	2055 Sep 29 09:01	6°♄12'56	-2°-38'-34	morning rise	2061 Jun 29 10:29	23°♄16'27	
min. Earth dist.	2055 Sep 29 08:54	6°♄12'58	8.47906 AU		2061 Sep 01 07:38	0°♄	
direct	2055 Dec 06 00:05	2°♄51'20		retrograde	2061 Oct 13 07:45	1°♄33'59	
evening set	2056 Mar 15 09:48	10°♄23'13			2061 Nov 24 19:03	30°♄	
				opposition	2061 Dec 19 11:34	28°♄04'52	-1°-13'-32
conjunction	2056 Apr 01 12:40	12°♄31'22	-2°-12'00	min. Earth dist.	2061 Dec 19 07:24	28°♄05'43	8.04996 AU
minimum elong	2056 Apr 01 12:40	12°♄31'22	2°12'01	direct	2062 Feb 24 01:54	24°♄36'59	
max. Earth dist.	2056 Apr 01 12:43	12°≈31'23	10.42465 AU		2062 May 16 10:49	0°♄	
morning rise	2056 Apr 18 20:09	14°≈40'59		evening set	2062 Jun 08 06:55	2°♄47'18	
retrograde	2056 Aug 03 09:25	22°≈39'50					
opposition	2056 Oct 11 19:19	19°≈12'27	-2°-46'-9	conjunction	2062 Jun 26 10:17	5°♄07'52	0°-43'-41

minimum elong	2062 Jun 26 10:19	5°♄07'53	0°43'42	max. Earth dist.	2068 Sep 19 13:40	27°♃20'47	10.46298 AU
max. Earth dist.	2062 Jun 26 15:42	5°♄09'38	10.04735 AU	morning rise	2068 Oct 06 18:28	29°♃28'24	
morning rise	2062 Jul 14 14:23	7°♄28'41			2068 Oct 11 02:55	0°♄	
retrograde	2062 Oct 27 18:57	15°♄43'20		retrograde	2069 Jan 15 05:59	6°♄57'57	
opposition	2063 Jan 02 15:07	12°♄14'47	0°-34'-34	opposition	2069 Mar 23 15:47	3°♄36'10	2°35'53
min. Earth dist.	2063 Jan 02 10:51	12°♄15'40	8.05199 AU	min. Earth dist.	2069 Mar 23 13:51	3°♄36'33	8.51920 AU
direct	2063 Mar 10 10:19	8°♄46'11		direct	2069 Jun 01 10:29	0°♄09'04	
evening set	2063 Jun 23 08:40	16°♄58'22		evening set	2069 Sep 15 07:38	7°♄55'08	
conjunction	2063 Jul 11 13:05	19°♄18'58	0°-11'-21	conjunction	2069 Oct 02 15:33	10°♄02'19	2°10'53
minimum elong	2063 Jul 11 13:06	19°♄18'58	0°11'23	minimum elong	2069 Oct 02 15:31	10°♄02'19	2°10'53
behind sun begin	2063 Jul 11 07:50	19°♄17'17		max. Earth dist.	2069 Oct 02 17:18	10°♄02'52	10.57334 AU
behind sun end	2063 Jul 11 18:22	19°♄20'40		morning rise	2069 Oct 19 18:44	12°♄08'06	
max. Earth dist.	2063 Jul 11 18:25	19°♄20'41	10.06324 AU	retrograde	2070 Jan 27 18:59	19°♄29'54	
morning rise	2063 Jul 29 17:02	21°♄39'24		opposition	2070 Apr 05 14:26	16°♄09'16	2°44'45
retrograde	2063 Nov 11 02:16	29°♄48'58		min. Earth dist.	2070 Apr 05 13:53	16°♄09'22	8.62925 AU
asc. node	2063 Nov 19 04:08	29°♄45'16		direct	2070 Jun 14 20:00	12°♄43'13	
opposition	2064 Jan 16 17:07	26°♄21'16	0°06'20	evening set	2070 Sep 28 07:10	20°♄21'33	
min. Earth dist.	2064 Jan 16 13:09	26°♄22'05	8.08109 AU	conjunction	2070 Oct 15 10:43	22°♄26'09	2°15'08
direct	2064 Mar 23 21:32	22°♄52'11		minimum elong	2070 Oct 15 10:43	22°♄26'09	2°15'08
	2064 Jun 28 19:26	0°♄		max. Earth dist.	2070 Oct 15 10:34	22°♄26'06	10.68124 AU
evening set	2064 Jul 07 09:21	1°♄04'13		morning rise	2070 Nov 01 09:54	24°♄29'25	
conjunction	2064 Jul 25 13:05	3°♄23'55	0°21'30		2070 Dec 25 20:45	0°♄	
minimum elong	2064 Jul 25 13:03	3°♄23'55	0°21'31	retrograde	2071 Feb 09 01:58	1°♄44'19	
max. Earth dist.	2064 Jul 25 17:52	3°♄25'28	10.10542 AU		2071 Mar 27 18:15	30°♄	
morning rise	2064 Aug 12 15:10	5°♄43'04		opposition	2071 Apr 18 08:04	28°♄24'43	2°45'49
retrograde	2064 Nov 24 02:32	13°♄45'53		min. Earth dist.	2071 Apr 18 08:18	28°♄24'40	8.73413 AU
opposition	2065 Jan 29 16:27	10°♄19'15	0°46'26	direct	2071 Jun 27 22:34	24°♄59'52	
min. Earth dist.	2065 Jan 29 12:50	10°♄19'59	8.13552 AU		2071 Sep 18 17:21	0°♄	
direct	2065 Apr 07 08:45	6°♄49'59		evening set	2071 Oct 10 21:06	2°♄30'33	
evening set	2065 Jul 22 05:55	14°♄59'49		conjunction	2071 Oct 27 21:00	4°♄32'53	2°13'12
	2065 Jul 22 06:30	15°♄		minimum elong	2071 Oct 27 21:00	4°♄32'53	2°13'11
conjunction	2065 Aug 09 07:19	17°♄17'47	0°52'42	max. Earth dist.	2071 Oct 27 19:47	4°♄32'31	10.78173 AU
minimum elong	2065 Aug 09 07:16	17°♄17'46	0°52'42	morning rise	2071 Nov 13 16:51	6°♄34'01	
max. Earth dist.	2065 Aug 09 11:33	17°♄19'09	10.17115 AU	retrograde	2072 Feb 21 04:06	13°♄43'08	
morning rise	2065 Aug 27 06:01	19°♄34'52		opposition	2072 Apr 29 21:14	10°♄24'23	2°39'34
retrograde	2065 Dec 07 19:32	27°♄29'52		min. Earth dist.	2072 Apr 29 21:41	10°♄24'18	8.82922 AU
opposition	2066 Feb 12 11:50	24°♄04'23	1°23'11	direct	2072 Jul 09 19:45	7°♄00'48	
min. Earth dist.	2066 Feb 12 08:10	24°♄05'08	8.21172 AU	evening set	2072 Oct 22 02:27	14°♄24'15	
direct	2066 Apr 21 17:22	20°♄35'16			2072 Oct 27 03:47	15°♄	
evening set	2066 Aug 05 20:04	28°♄41'04		conjunction	2072 Nov 07 23:29	16°♄24'42	2°05'31
	2066 Aug 16 07:24	0°♄		minimum elong	2072 Nov 07 23:30	16°♄24'43	2°05'31
conjunction	2066 Aug 23 17:54	0°♄56'41	1°20'25	max. Earth dist.	2072 Nov 07 22:07	16°♄24'18	10.87059 AU
minimum elong	2066 Aug 23 17:51	0°♄56'40	1°20'26	morning rise	2072 Nov 24 16:45	18°♄24'07	
max. Earth dist.	2066 Aug 23 21:51	0°♄57'56	10.25625 AU	retrograde	2073 Mar 04 04:30	25°♄28'41	
morning rise	2066 Sep 10 12:08	3°♄11'09		opposition	2073 May 12 06:45	22°♄10'38	2°26'42
retrograde	2066 Dec 21 05:56	10°♄57'40		min. Earth dist.	2073 May 12 07:50	22°♄10'25	8.91070 AU
opposition	2067 Feb 26 02:18	7°♄33'25	1°54'33	direct	2073 Jul 22 09:20	18°♄48'18	
min. Earth dist.	2067 Feb 25 22:42	7°♄34'08	8.30484 AU	evening set	2073 Nov 03 00:28	26°♄05'09	
direct	2067 May 05 20:42	4°♄04'43		conjunction	2073 Nov 19 19:16	28°♄04'10	1°52'43
evening set	2067 Aug 20 01:49	12°♄04'57		minimum elong	2073 Nov 19 19:19	28°♄04'11	1°52'43
conjunction	2067 Sep 06 19:19	14°♄17'51	1°43'15	max. Earth dist.	2073 Nov 19 17:14	28°♄03'34	10.94423 AU
minimum elong	2067 Sep 06 19:16	14°♄17'50	1°43'16	morning rise	2073 Dec 06 10:51	0°♄	
max. Earth dist.	2067 Sep 06 22:58	14°♄19'00	10.35544 AU		2073 Dec 06 02:55	0°♄	
morning rise	2067 Sep 24 08:27	16°♄29'24		retrograde	2074 Mar 16 00:56	7°♄03'37	
retrograde	2068 Jan 03 10:20	24°♄07'18		opposition	2074 May 24 13:20	3°♄46'04	2°08'03
opposition	2068 Mar 10 11:44	20°♄44'18	2°19'03	min. Earth dist.	2074 May 24 15:47	3°♄45'36	8.97543 AU
min. Earth dist.	2068 Mar 10 08:36	20°♄44'55	8.40924 AU	direct	2074 Aug 03 16:31	0°♄24'52	
direct	2068 May 18 18:16	17°♄16'17		evening set	2074 Nov 14 16:56	7°♄36'09	
evening set	2068 Sep 01 21:52	25°♄09'48		conjunction	2074 Dec 01 09:59	9°♄34'06	1°35'29
conjunction	2068 Sep 19 10:33	27°♄19'49	2°00'14	minimum elong	2074 Dec 01 10:01	9°♄34'07	1°35'29
minimum elong	2068 Sep 19 10:30	27°♄19'48	2°00'14	max. Earth dist.	2074 Dec 01 06:23	9°♄33'02	10.99988 AU

morning rise	2074 Dec 18 00:43	11° $\overline{\text{A}}$ 31'24		conjunction	2081 Feb 06 04:54	18° \approx 03'48	0°-54'-33
retrograde	2075 Mar 27 19:44	18° $\overline{\text{A}}$ 30'52		minimum elong	2081 Feb 06 04:52	18° \approx 03'47	0°54'32
opposition	2075 Jun 05 17:46	15° $\overline{\text{A}}$ 13'34	1°44'31	max. Earth dist.	2081 Feb 05 23:47	18° \approx 02'16	10.89165 AU
min. Earth dist.	2075 Jun 05 21:18	15° $\overline{\text{A}}$ 12'55	9.02103 AU	morning rise	2081 Feb 22 23:59	20° \approx 03'53	
direct	2075 Aug 15 21:59	11° $\overline{\text{A}}$ 53'22		retrograde	2081 Jun 06 10:27	27° \approx 23'25	
evening set	2075 Nov 26 05:10	19° $\overline{\text{A}}$ 00'11		opposition	2081 Aug 16 04:38	24° \approx 02'09	-1°-22'-14
				min. Earth dist.	2081 Aug 16 08:38	24° \approx 01'24	8.84948 AU
conjunction	2075 Dec 12 21:06	20° $\overline{\text{A}}$ 57'28	1°14'36	direct	2081 Oct 24 13:43	20° \approx 43'27	
minimum elong	2075 Dec 12 21:09	20° $\overline{\text{A}}$ 57'28	1°14'36	evening set	2082 Feb 01 09:09	27° \approx 52'13	
max. Earth dist.	2075 Dec 12 16:37	20° $\overline{\text{A}}$ 56'08	11.03560 AU				
morning rise	2075 Dec 29 11:34	22° $\overline{\text{A}}$ 54'19		conjunction	2082 Feb 18 03:13	29° \approx 53'01	-1°-18'-41
retrograde	2076 Apr 07 15:15	29° $\overline{\text{A}}$ 53'27		minimum elong	2082 Feb 18 03:11	29° \approx 53'00	1°18'42
opposition	2076 Jun 16 21:08	26° $\overline{\text{A}}$ 36'06	1°17'04	max. Earth dist.	2082 Feb 17 22:31	29° \approx 51'35	10.80319 AU
min. Earth dist.	2076 Jun 17 00:36	26° $\overline{\text{A}}$ 35'28	9.04595 AU		2082 Feb 19 02:20	0° H	
direct	2076 Aug 26 23:04	23° $\overline{\text{A}}$ 16'45		morning rise	2082 Mar 07 00:15	1° H 54'45	
	2076 Dec 03 16:02	0° $\overline{\text{B}}$		retrograde	2082 Jun 19 05:48	9° H 22'21	
evening set	2076 Dec 06 14:39	0° $\overline{\text{B}}$ 20'17		opposition	2082 Aug 28 20:21	5° H 59'42	-1°-50'-25
				min. Earth dist.	2082 Aug 28 23:43	5° H 59'04	8.75404 AU
conjunction	2076 Dec 23 06:07	2° $\overline{\text{B}}$ 17'17	0°50'53	direct	2082 Nov 05 17:16	2° H 40'25	
minimum elong	2076 Dec 23 06:09	2° $\overline{\text{B}}$ 17'17	0°50'53	evening set	2083 Feb 13 12:53	9° H 54'33	
max. Earth dist.	2076 Dec 23 02:08	2° $\overline{\text{B}}$ 16'06	11.05006 AU				
morning rise	2077 Jan 08 20:41	4° $\overline{\text{B}}$ 14'05		conjunction	2083 Mar 02 08:37	11° H 57'06	-1°-39'-50
retrograde	2077 Apr 19 12:13	11° $\overline{\text{B}}$ 14'24		minimum elong	2083 Mar 02 08:35	11° H 57'05	1°39'51
opposition	2077 Jun 29 00:13	7° $\overline{\text{B}}$ 56'44	0°46'42	max. Earth dist.	2083 Mar 02 03:46	11° H 55'36	10.70148 AU
min. Earth dist.	2077 Jun 29 03:31	7° $\overline{\text{B}}$ 56'07	9.04924 AU	morning rise	2083 Mar 19 08:08	14° H 00'48	
direct	2077 Sep 07 21:28	4° $\overline{\text{B}}$ 38'01		retrograde	2083 Jul 02 08:41	21° H 37'13	
evening set	2077 Dec 17 23:26	11° $\overline{\text{B}}$ 39'38		opposition	2083 Sep 10 17:07	18° H 13'07	-2°-14'-19
				min. Earth dist.	2083 Sep 10 20:19	18° H 12'30	8.64774 AU
conjunction	2078 Jan 03 14:43	13° $\overline{\text{B}}$ 36'43	0°25'12	direct	2083 Nov 18 01:48	14° H 52'59	
minimum elong	2078 Jan 03 14:44	13° $\overline{\text{B}}$ 36'43	0°25'11	evening set	2084 Feb 26 00:35	22° H 13'35	
max. Earth dist.	2078 Jan 03 10:28	13° $\overline{\text{B}}$ 35'28	11.04261 AU				
morning rise	2078 Jan 20 05:50	15° $\overline{\text{B}}$ 33'49		conjunction	2084 Mar 13 22:40	24° H 18'11	-1°-56'-51
retrograde	2078 May 01 12:14	22° $\overline{\text{B}}$ 36'43		minimum elong	2084 Mar 13 22:37	24° H 18'11	1°56'53
opposition	2078 Jul 11 03:53	19° $\overline{\text{B}}$ 18'32	0°14'28	max. Earth dist.	2084 Mar 13 18:28	24° H 16'54	10.59134 AU
min. Earth dist.	2078 Jul 11 07:47	19° $\overline{\text{B}}$ 17'49	9.03066 AU	morning rise	2084 Mar 31 01:07	26° H 24'08	
direct	2078 Sep 19 18:02	16° $\overline{\text{B}}$ 00'11			2084 May 01 21:25	0° Y	
desc. node	2078 Dec 23 21:07	22° $\overline{\text{B}}$ 23'29		retrograde	2084 Jul 14 18:15	4° Y 09'41	
evening set	2078 Dec 29 08:58	23° $\overline{\text{B}}$ 01'21		opposition	2084 Sep 22 19:01	0° Y 44'08	-2°-32'-32
				min. Earth dist.	2084 Sep 22 21:42	0° Y 43'36	8.53559 AU
conjunction	2079 Jan 15 00:16	24° $\overline{\text{B}}$ 58'50	0°-1'-37		2084 Oct 02 07:50	30° R H	
minimum elong	2079 Jan 15 00:15	24° $\overline{\text{B}}$ 58'49	0°01'39	direct	2084 Nov 29 15:29	27° H 22'56	
behind sun begin	2079 Jan 14 17:16	24° $\overline{\text{B}}$ 56'47			2085 Jan 24 04:56	0° Y	
behind sun end	2079 Jan 15 07:14	25° $\overline{\text{B}}$ 00'52		evening set	2085 Mar 09 21:05	4° Y 50'56	
max. Earth dist.	2079 Jan 14 18:50	24° $\overline{\text{B}}$ 57'15	11.01330 AU				
morning rise	2079 Jan 31 16:28	26° $\overline{\text{B}}$ 56'36		conjunction	2085 Mar 26 22:17	6° Y 57'52	-2°-8'-39
	2079 Feb 28 17:24	0° \approx		minimum elong	2085 Mar 26 22:16	6° Y 57'52	2°08'41
retrograde	2079 May 13 13:29	4° \approx 03'36		max. Earth dist.	2085 Mar 26 19:43	6° Y 57'04	10.47788 AU
opposition	2079 Jul 23 09:23	0° \approx 44'36	0°-18'-32	morning rise	2085 Apr 13 04:04	9° Y 06'15	
min. Earth dist.	2079 Jul 23 14:08	0° \approx 43'43	8.99050 AU	retrograde	2085 Jul 28 09:57	17° Y 00'51	
	2079 Aug 02 12:24	30° R $\overline{\text{B}}$		opposition	2085 Oct 06 02:23	13° Y 33'53	-2°-43'-44
direct	2079 Oct 01 14:32	27° $\overline{\text{B}}$ 26'22		min. Earth dist.	2085 Oct 06 03:51	13° Y 33'36	8.42277 AU
	2079 Nov 27 14:19	0° \approx		direct	2085 Dec 12 13:20	10° Y 11'33	
evening set	2080 Jan 09 20:34	4° \approx 28'33		evening set	2086 Mar 23 02:59	17° Y 47'28	
conjunction	2080 Jan 26 12:20	6° \approx 26'46	0°-28'-30	conjunction	2086 Apr 09 07:57	19° Y 56'57	-2°-14'-14
minimum elong	2080 Jan 26 12:19	6° \approx 26'46	0°28'30	minimum elong	2086 Apr 09 07:57	19° Y 56'57	2°14'15
max. Earth dist.	2080 Jan 26 06:38	6° \approx 25'05	10.96262 AU	max. Earth dist.	2086 Apr 09 07:28	19° Y 56'48	10.36652 AU
morning rise	2080 Feb 12 05:53	8° \approx 25'32		morning rise	2086 Apr 26 17:27	22° Y 07'55	
	2080 Apr 26 20:00	15° \approx			2086 Jul 27 23:35	0° B	
retrograde	2080 May 24 20:34	15° \approx 38'08		retrograde	2086 Aug 11 09:38	0° B 10'53	
	2080 Jun 22 07:31	15° R \approx			2086 Aug 25 21:37	30° R Y	
opposition	2080 Aug 03 17:23	12° \approx 18'05	0°-51'-11	opposition	2086 Oct 19 15:05	26° Y 42'41	-2°-46'-45
min. Earth dist.	2080 Aug 03 22:03	12° \approx 17'13	8.92949 AU	min. Earth dist.	2086 Oct 19 14:48	26° Y 42'44	8.31483 AU
direct	2080 Oct 12 14:08	8° \approx 59'44		direct	2086 Dec 25 16:43	23° Y 19'08	
	2081 Jan 11 04:58	15° \approx			2087 Mar 28 05:49	0° B	
evening set	2081 Jan 20 12:08	16° \approx 04'27		evening set	2087 Apr 05 18:38	1° B 03'07	

conjunction	2087 Apr 23 03:54	3°♄15'17	-2°-12'-51	behind sun end	2093 Jul 19 11:05	27°♄20'36	
minimum elong	2087 Apr 23 03:56	3°♄15'17	2°12'53	max. Earth dist.	2093 Jul 19 10:47	27°♄20'30	10.07056 AU
max. Earth dist.	2087 Apr 23 04:52	3°♄15'35	10.26309 AU	morning rise	2093 Aug 06 07:25	29°♄38'24	
morning rise	2087 May 10 17:37	5°♄28'54			2093 Aug 09 03:50	0°♄	
retrograde	2087 Aug 25 16:02	13°♄38'56		retrograde	2093 Nov 18 04:12	7°♄45'02	
opposition	2087 Nov 02 08:47	10°♄09'45	-2°-40'-48	opposition	2094 Jan 23 19:16	4°♄17'30	0°28'31
min. Earth dist.	2087 Nov 02 07:15	10°♄10'04	8.21749 AU	min. Earth dist.	2094 Jan 23 13:49	4°♄18'37	8.09671 AU
direct	2088 Jan 08 01:45	6°♄44'56		direct	2094 Apr 01 06:12	0°♄48'02	
evening set	2088 Apr 18 19:43	14°♄36'46		evening set	2094 Jul 15 22:48	8°♄59'33	
	2088 Apr 21 21:16	15°♄					
conjunction	2088 May 06 09:40	16°♄51'34	-2°-4'-8	conjunction	2094 Aug 03 01:41	11°♄18'34	0°38'53
minimum elong	2088 May 06 09:43	16°♄51'34	2°04'09	minimum elong	2094 Aug 03 01:39	11°♄18'34	0°38'54
max. Earth dist.	2088 May 06 11:36	16°♄52'11	10.17319 AU	max. Earth dist.	2094 Aug 03 08:26	11°♄20'45	10.12907 AU
morning rise	2088 May 24 03:49	19°♄07'43		morning rise	2094 Aug 21 02:04	13°♄36'49	
retrograde	2088 Sep 08 02:31	27°♄22'59		retrograde	2094 Sep 01 06:50	15°♄	
opposition	2088 Nov 15 06:49	23°♄53'10	-2°-25'-36	opposition	2094 Dec 02 02:21	21°♄36'05	
min. Earth dist.	2088 Nov 15 04:34	23°♄53'37	8.13615 AU	min. Earth dist.	2095 Feb 06 16:58	18°♄09'52	1°07'07
direct	2089 Jan 20 19:08	20°♄27'06		direct	2095 Feb 06 11:57	18°♄10'54	8.16669 AU
evening set	2089 May 03 05:29	28°♄26'05		direct	2095 Mar 27 15:20	15°♄♄	
	2089 May 15 10:22	0°♄		evening set	2095 Apr 15 15:00	14°♄40'36	
conjunction	2089 May 21 00:07	0°♄43'17	-1°-48'-8		2095 May 04 15:21	15°♄	
minimum elong	2089 May 21 00:10	0°♄43'18	1°48'09		2095 Jul 30 16:52	22°♄48'57	
max. Earth dist.	2089 May 21 02:49	0°♄44'09	10.10195 AU	conjunction	2095 Aug 17 16:37	25°♄05'51	1°08'25
morning rise	2089 Jun 07 22:24	3°♄01'39		minimum elong	2095 Aug 17 16:34	25°♄05'50	1°08'25
retrograde	2089 Sep 22 14:17	11°♄19'53		max. Earth dist.	2095 Aug 17 22:37	25°♄07'46	10.20926 AU
opposition	2089 Nov 29 08:02	7°♄49'49	-2°-1'-36	morning rise	2095 Sep 04 12:57	27°♄21'40	
min. Earth dist.	2089 Nov 29 05:21	7°♄50'22	8.07565 AU	retrograde	2095 Sep 26 12:44	0°♄	
direct	2090 Feb 03 19:22	4°♄22'35		retrograde	2095 Dec 15 17:43	5°♄12'39	
evening set	2090 May 17 22:26	12°♄27'35		opposition	2096 Feb 20 10:20	1°♄47'54	1°41'09
conjunction	2090 Jun 04 21:22	14°♄46'45	-1°-25'-34	min. Earth dist.	2096 Feb 20 06:16	1°♄48'43	8.25624 AU
minimum elong	2090 Jun 04 21:25	14°♄46'46	1°25'35		2096 Mar 14 20:18	30°♄♄	
max. Earth dist.	2090 Jun 05 01:00	14°♄47'55	10.05378 AU	direct	2096 Apr 28 20:26	28°♄19'07	
morning rise	2090 Jun 22 23:05	17°♄06'46		evening set	2096 Jun 12 10:20	0°♄	
retrograde	2090 Oct 07 02:57	25°♄25'32			2096 Aug 13 03:27	6°♄22'35	
opposition	2090 Dec 13 11:20	21°♄55'34	-1°-30'00	conjunction	2096 Aug 30 22:57	8°♄36'52	1°33'36
min. Earth dist.	2090 Dec 13 08:02	21°♄56'15	8.03995 AU	minimum elong	2096 Aug 30 22:54	8°♄36'51	1°33'37
direct	2091 Feb 18 00:25	18°♄27'22		max. Earth dist.	2096 Aug 31 03:34	8°♄38'20	10.30629 AU
evening set	2091 Jun 01 20:41	26°♄36'48		morning rise	2096 Sep 17 14:28	10°♄49'52	
conjunction	2091 Jun 19 23:02	28°♄57'16	0°-57'-41	retrograde	2096 Dec 28 01:14	18°♄32'11	
minimum elong	2091 Jun 19 23:04	28°♄57'17	0°57'41	opposition	2097 Mar 04 22:51	15°♄08'53	2°08'53
max. Earth dist.	2091 Jun 20 03:50	28°♄58'50	10.03181 AU	min. Earth dist.	2097 Mar 04 19:29	15°♄09'34	8.35995 AU
	2091 Jun 27 23:55	0°♄		direct	2097 May 12 22:09	11°♄40'51	
morning rise	2091 Jul 08 02:55	1°♄18'12		evening set	2097 Aug 27 04:38	19°♄38'03	
retrograde	2091 Oct 21 14:47	9°♄35'01		conjunction	2097 Sep 13 19:23	21°♄49'26	1°53'18
opposition	2091 Dec 27 15:14	6°♄05'32	0°-52'-44	minimum elong	2097 Sep 13 19:20	21°♄49'25	1°53'19
min. Earth dist.	2091 Dec 27 11:00	6°♄06'25	8.03138 AU	max. Earth dist.	2097 Sep 13 22:48	21°♄50'30	10.41451 AU
direct	2092 Mar 03 08:53	2°♄36'37		morning rise	2097 Oct 01 05:50	23°♄59'27	
evening set	2092 Jun 15 22:07	10°♄48'43		retrograde	2097 Nov 29 00:35	0°♄	
conjunction	2092 Jul 04 02:23	13°♄09'37	0°-26'-15		2098 Jan 09 23:35	1°♄33'10	
minimum elong	2092 Jul 04 02:24	13°♄09'37	0°26'15	retrograde	2098 Feb 21 23:50	30°♄♄	
max. Earth dist.	2092 Jul 04 08:13	13°♄11'30	10.03747 AU	opposition	2098 Mar 18 05:56	28°♄11'15	2°29'12
morning rise	2092 Jul 22 06:47	15°♄30'33		min. Earth dist.	2098 Mar 18 02:59	28°♄11'50	8.47182 AU
retrograde	2092 Nov 04 00:01	23°♄43'11		direct	2098 May 26 19:14	24°♄44'10	
opposition	2093 Jan 09 18:15	20°♄14'32	0°-12'-19	evening set	2098 Aug 18 17:53	0°♄	
min. Earth dist.	2093 Jan 09 13:13	20°♄15'34	8.05064 AU		2098 Sep 09 19:46	2°♄34'05	
direct	2093 Mar 17 19:30	16°♄45'10		conjunction	2098 Sep 27 05:47	4°♄42'33	2°06'49
asc. node	2093 May 03 09:02	18°♄39'58		minimum elong	2098 Sep 27 05:45	4°♄42'32	2°06'49
evening set	2093 Jun 30 23:48	24°♄58'00		max. Earth dist.	2098 Sep 27 08:13	4°♄43'18	10.52778 AU
conjunction	2093 Jul 19 04:15	27°♄18'24	0°06'43	morning rise	2098 Oct 14 11:13	6°♄49'37	
minimum elong	2093 Jul 19 04:14	27°♄18'24	0°06'43	retrograde	2099 Jan 22 16:49	14°♄15'10	
behind sun begin	2093 Jul 18 21:23	27°♄16'12		opposition	2099 Mar 31 07:19	10°♄54'30	2°41'36
				min. Earth dist.	2099 Mar 31 04:57	10°♄54'57	8.58547 AU
				direct	2099 Jun 09 08:07	7°♄28'30	

evening set	2099 Sep 23 00:32	15° Ω 10'37	
conjunction	2099 Oct 10 06:07	17° Ω 16'21	2°13'53
minimum elong	2099 Oct 10 06:06	17° Ω 16'21	2°13'53
max. Earth dist.	2099 Oct 10 07:47	17° Ω 16'52	10.63972 AU
morning rise	2099 Oct 27 06:58	19° Ω 20'42	
retrograde	2100 Feb 04 04:27	26° Ω 38'49	
opposition	2100 Apr 13 03:44	23° Ω 19'16	2°46'04
min. Earth dist.	2100 Apr 13 02:52	23° Ω 19'26	8.69458 AU
direct	2100 Jun 22 12:59	19° Ω 54'25	
evening set	2100 Oct 05 19:10	27° Ω 28'42	
conjunction	2100 Oct 22 20:45	29° Ω 32'01	2°14'38
minimum elong	2100 Oct 22 20:45	29° Ω 32'01	2°14'37
max. Earth dist.	2100 Oct 22 20:44	29° Ω 32'00	10.74423 AU
	2100 Oct 26 17:02	0° \mathbb{M}	
morning rise	2100 Nov 08 17:51	1° \mathbb{M} 34'03	