

	100 Jan 06 j 20:59	0°♊	conjunction	105 Jul 23 j 18:30	28°♊29'23	0°43'06
evening set	100 Jan 12 j 23:36	1°♊27'00	minimum elong	105 Jul 23 j 18:28	28°♊29'22	0°43'06
			max. Earth dist.	105 Jul 23 j 22:27	28°♊31'33	6.36879 AU
conjunction	100 Jan 25 j 22:24	4°♊33'08 -0°48'33		105 Jul 30 j 16:10	0°♋	
minimum elong	100 Jan 25 j 22:21	4°♊33'07 0°48'34	morning rise	105 Aug 06 j 02:24	1°♋24'00	
max. Earth dist.	100 Jan 26 j 01:03	4°♊34'44 6.01051 AU		105 Oct 17 j 13:00	15°♋	
morning rise	100 Feb 07 j 23:36	7°♊40'45	retrograde	105 Dec 05 j 07:54	18°♋33'20	
	100 Mar 10 j 18:20	15°♊		106 Jan 23 j 17:54	15°♌♋	
retrograde	100 Jun 18 j 15:14	27°♊59'21	opposition	106 Feb 03 j 10:09	13°♋37'15	1°22'06
opposition	100 Aug 17 j 19:50	22°♊58'40 -1°33'24	min. Earth dist.	106 Feb 03 j 16:09	13°♋35'17	4.40813 AU
min. Earth dist.	100 Aug 17 j 07:43	23°♊02'42 3.97961 AU	direct	106 Apr 06 j 07:58	8°♋34'06	
direct	100 Oct 15 j 06:03	18°♊05'09		106 Jun 14 j 23:42	15°♋	
	101 Jan 15 j 05:29	0°♋	evening set	106 Aug 11 j 10:54	26°♋16'21	
evening set	101 Feb 17 j 08:12	7°♋39'18				
			conjunction	106 Aug 24 j 13:04	29°♋06'27	1°06'09
conjunction	101 Mar 02 j 14:25	10°♋50'40 -1°09'18	minimum elong	106 Aug 24 j 13:02	29°♋06'26	1°06'09
minimum elong	101 Mar 02 j 14:24	10°♋50'39 1°09'18	max. Earth dist.	106 Aug 23 j 14:05	28°♋53'58	6.43119 AU
max. Earth dist.	101 Mar 03 j 22:48	11°♋10'10 5.96817 AU		106 Aug 28 j 15:43	0°♎	
morning rise	101 Mar 15 j 23:52	14°♋03'45	morning rise	106 Sep 06 j 12:23	1°♎55'04	
	101 May 31 j 18:54	0°♏	retrograde	107 Jan 04 j 15:53	18°♎44'25	
retrograde	101 Jul 26 j 09:34	4°♏38'17	opposition	107 Mar 06 j 02:32	13°♎51'13	1°42'48
	101 Sep 20 j 23:49	30°♌♋	min. Earth dist.	107 Mar 07 j 01:14	13°♎43'54	4.43828 AU
min. Earth dist.	101 Sep 22 j 23:01	29°♋44'02 3.98019 AU	direct	107 May 07 j 18:23	8°♎48'44	
opposition	101 Sep 24 j 03:51	29°♋34'16 -1°44'37	evening set	107 Sep 11 j 11:00	26°♎25'54	
direct	101 Nov 21 j 00:42	24°♋39'08	max. Earth dist.	107 Sep 22 j 14:10	28°♎51'24	6.42590 AU
	102 Jan 18 j 12:30	0°♏				
evening set	102 Mar 26 j 17:50	14°♏10'52	conjunction	107 Sep 24 j 06:24	29°♎13'23	1°10'50
			minimum elong	107 Sep 24 j 06:25	29°♎13'24	1°10'49
conjunction	102 Apr 09 j 07:43	17°♏23'47 -1°03'10		107 Sep 27 j 19:39	0°♏	
minimum elong	102 Apr 09 j 07:46	17°♏23'49 1°03'09	morning rise	107 Oct 06 j 22:58	1°♏59'38	
max. Earth dist.	102 Apr 11 j 09:44	17°♏53'26 6.01055 AU	retrograde	108 Feb 04 j 12:14	18°♏56'44	
morning rise	102 Apr 23 j 00:25	20°♏37'58	opposition	108 Apr 05 j 08:04	14°♏04'55	1°35'52
	102 Jun 04 j 00:04	0°♐	min. Earth dist.	108 Apr 06 j 16:12	13°♏54'40	4.39864 AU
retrograde	102 Aug 31 j 14:59	10°♐40'10	direct	108 Jun 07 j 00:28	9°♏04'10	
min. Earth dist.	102 Oct 28 j 19:18	5°♐46'17 4.05969 AU	evening set	108 Oct 11 j 03:34	26°♏51'25	
opposition	102 Oct 30 j 04:20	5°♐35'00 -1°15'10	max. Earth dist.	108 Oct 21 j 19:17	29°♏13'28	6.35436 AU
direct	102 Dec 27 j 10:59	0°♐36'54				
	103 Apr 11 j 19:17	15°♐	conjunction	108 Oct 23 j 19:00	29°♏40'06	0°56'00
evening set	103 May 02 j 19:56	19°♐44'05	minimum elong	108 Oct 23 j 19:02	29°♏40'07	0°56'01
				108 Oct 25 j 06:41	0°♑	
conjunction	103 May 16 j 14:29	22°♐54'07 -0°33'28	morning rise	108 Nov 05 j 08:47	2°♑28'08	
minimum elong	103 May 16 j 14:32	22°♐54'09 0°33'28		109 Jan 07 j 19:30	15°♑	
max. Earth dist.	103 May 18 j 16:18	23°♐22'48 6.12005 AU	retrograde	109 Mar 07 j 22:42	19°♑59'42	
morning rise	103 May 30 j 09:49	26°♐04'20	opposition	109 May 07 j 21:40	15°♑07'37	1°01'41
	103 Jun 16 j 21:19	0°♒		109 May 08 j 21:37	15°♒♑	
retrograde	103 Oct 04 j 16:31	15°♒03'48	min. Earth dist.	109 May 09 j 08:13	14°♑56'38	4.29891 AU
min. Earth dist.	103 Dec 02 j 03:09	10°♒09'12 4.18668 AU	direct	109 Jul 09 j 00:18	10°♑09'15	
opposition	103 Dec 03 j 05:09	10°♒00'24 -0°20'19		109 Sep 05 j 13:03	15°♑	
direct	104 Jan 31 j 14:02	4°♒59'28	evening set	109 Nov 11 j 10:24	28°♑20'31	
asc. node	104 Apr 15 j 18:48	12°♒50'00		109 Nov 18 j 16:41	0°♓	
evening set	104 Jun 06 j 12:25	23°♒32'23	max. Earth dist.	109 Nov 22 j 07:06	0°♓49'31	6.23457 AU
conjunction	104 Jun 20 j 05:22	26°♒35'55 0°06'42	conjunction	109 Nov 24 j 01:38	1°♓13'54	0°24'26
minimum elong	104 Jun 20 j 05:20	26°♒35'54 0°06'42	minimum elong	109 Nov 24 j 01:39	1°♓13'55	0°24'26
behind sun begin	104 Jun 19 j 21:35	26°♒31'36	morning rise	109 Dec 06 j 16:36	4°♓07'24	
behind sun end	104 Jun 20 j 13:06	26°♒40'13	retrograde	110 Apr 11 j 09:02	22°♓35'17	
max. Earth dist.	104 Jun 21 j 10:45	26°♒52'20 6.25431 AU	opposition	110 Jun 11 j 07:20	17°♓41'19	0°06'36
morning rise	104 Jul 03 j 21:23	29°♒38'40	min. Earth dist.	110 Jun 12 j 07:28	17°♓33'34	4.16626 AU
	104 Jul 05 j 11:55	0°♓	desc. node	110 Jul 24 j 04:36	13°♓16'16	
retrograde	104 Nov 04 j 15:51	17°♓34'00	direct	110 Aug 11 j 03:48	12°♓45'32	
opposition	105 Jan 03 j 09:50	12°♓34'05 0°37'49		110 Dec 07 j 17:11	0°♔	
min. Earth dist.	105 Jan 02 j 22:42	12°♓37'49 4.31591 AU	evening set	110 Dec 14 j 04:19	1°♔30'21	
direct	105 Mar 05 j 03:32	7°♓31'21				
evening set	105 Jul 10 j 07:54	25°♓33'21	conjunction	110 Dec 26 j 22:27	4°♔30'32	-0°16'16
			minimum elong	110 Dec 26 j 22:26	4°♔30'32	0°16'15

behind sun begin	110 Dec 26 j 22:08	4° $\text{♁}$ 30'21		behind sun begin	116 Jun 24 j 18:33	1° $\text{♁}$ 12'04	
behind sun end	110 Dec 26 j 22:44	4° $\text{♁}$ 30'42		behind sun end	116 Jun 25 j 05:25	1° $\text{♁}$ 18'05	
max. Earth dist.	110 Dec 25 j 23:56	4° $\text{♁}$ 17'15	6.10087 AU	max. Earth dist.	116 Jun 26 j 03:06	1° $\text{♁}$ 30'10	6.27589 AU
morning rise	111 Jan 08 j 17:49	7° $\text{♁}$ 31'39		morning rise	116 Jul 08 j 14:53	4° $\text{♁}$ 16'27	
retrograde	111 May 18 j 00:47	27° $\text{♁}$ 05'13		retrograde	116 Nov 08 j 22:57	22° $\text{♁}$ 02'39	
opposition	111 Jul 17 j 14:29	22° $\text{♁}$ 08'00	-0°54'14	opposition	117 Jan 07 j 17:48	17° $\text{♁}$ 03'16	0°44'58
min. Earth dist.	111 Jul 17 j 20:57	22° $\text{♁}$ 05'53	4.04236 AU	min. Earth dist.	117 Jan 07 j 09:00	17° $\text{♁}$ 06'11	4.33551 AU
direct	111 Sep 15 j 01:26	17° $\text{♁}$ 14'12		direct	117 Mar 09 j 16:22	12° $\text{♁}$ 00'22	
	111 Dec 20 j 18:03	0° $\approx$		evening set	117 Jul 14 j 19:53	29° $\text{♁}$ 57'22	
evening set	112 Jan 17 j 22:09	6° $\approx$ 32'00			117 Jul 15 j 00:45	0° $\text{♁}$	
conjunction	112 Jan 30 j 21:51	9° $\approx$ 39'06	-0°52'47	conjunction	117 Jul 28 j 05:11	2° $\text{♁}$ 52'15	0°47'10
minimum elong	112 Jan 30 j 21:49	9° $\approx$ 39'05	0°52'47	minimum elong	117 Jul 28 j 05:09	2° $\text{♁}$ 52'13	0°47'09
max. Earth dist.	112 Jan 31 j 04:06	9° $\approx$ 42'52	5.99814 AU	max. Earth dist.	117 Jul 28 j 03:59	2° $\text{♁}$ 51'35	6.38470 AU
morning rise	112 Feb 13 j 00:16	12° $\approx$ 47'47		morning rise	117 Aug 10 j 11:57	5° $\text{♁}$ 45'42	
	112 Feb 22 j 07:10	15° $\approx$			117 Sep 24 j 23:50	15° $\text{♁}$	
	112 May 09 j 01:33	0° $\text{♁}$		retrograde	117 Dec 09 j 11:12	22° $\text{♁}$ 49'26	
retrograde	112 Jun 23 j 22:06	3° $\text{♁}$ 12'10		opposition	118 Feb 07 j 14:35	17° $\text{♁}$ 53'45	1°26'21
	112 Aug 09 j 03:00	30° $\text{♁}$		min. Earth dist.	118 Feb 07 j 23:34	17° $\text{♁}$ 50'49	4.41944 AU
min. Earth dist.	112 Aug 22 j 09:35	28° $\approx$ 16'15	3.97267 AU		118 Mar 03 j 07:18	15° $\text{♁}$	
opposition	112 Aug 23 j 01:13	28° $\approx$ 11'02	-1°37'27	direct	118 Apr 10 j 16:06	12° $\text{♁}$ 50'30	
direct	112 Oct 20 j 07:19	23° $\approx$ 17'29			118 May 19 j 09:48	15° $\text{♁}$	
	112 Dec 25 j 12:03	0° $\text{♁}$			118 Aug 13 j 08:50	0° $\text{♁}$	
evening set	113 Feb 22 j 12:44	12° $\text{♁}$ 53'42		evening set	118 Aug 15 j 16:57	0° $\text{♁}$ 30'08	
conjunction	113 Mar 07 j 20:01	16° $\text{♁}$ 05'37	-1°10'07	conjunction	118 Aug 28 j 18:12	3° $\text{♁}$ 19'35	1°07'52
minimum elong	113 Mar 07 j 20:01	16° $\text{♁}$ 05'37	1°10'07	minimum elong	118 Aug 28 j 18:10	3° $\text{♁}$ 19'34	1°07'53
max. Earth dist.	113 Mar 09 j 07:18	16° $\text{♁}$ 26'51	5.96725 AU	max. Earth dist.	118 Aug 27 j 16:59	3° $\text{♁}$ 05'54	6.43686 AU
morning rise	113 Mar 21 j 06:39	19° $\text{♁}$ 19'14		morning rise	118 Sep 10 j 16:15	6° $\text{♁}$ 07'31	
	113 May 07 j 21:19	0° $\text{♁}$		retrograde	119 Jan 08 j 18:00	22° $\text{♁}$ 55'40	
retrograde	113 Jul 31 j 13:35	9° $\text{♁}$ 52'50		opposition	119 Mar 10 j 06:46	18° $\text{♁}$ 02'43	1°43'27
min. Earth dist.	113 Sep 28 j 01:02	4° $\text{♁}$ 58'46	3.98562 AU	min. Earth dist.	119 Mar 11 j 07:03	17° $\text{♁}$ 54'55	4.43804 AU
opposition	113 Sep 29 j 07:16	4° $\text{♁}$ 48'29	-1°42'45	direct	119 May 11 j 22:58	13° $\text{♁}$ 00'23	
	113 Nov 18 j 01:05	30° $\text{♁}$			119 Sep 12 j 16:50	0° $\text{♁}$	
direct	113 Nov 26 j 04:28	29° $\text{♁}$ 53'02		evening set	119 Sep 15 j 14:35	0° $\text{♁}$ 37'47	
	113 Dec 04 j 08:14	0° $\text{♁}$		max. Earth dist.	119 Sep 26 j 13:24	3° $\text{♁}$ 01'14	6.41951 AU
evening set	114 Mar 31 j 23:48	19° $\text{♁}$ 22'57		conjunction	119 Sep 28 j 09:07	3° $\text{♁}$ 25'11	1°09'54
conjunction	114 Apr 14 j 14:47	22° $\text{♁}$ 35'48	-1°00'10	minimum elong	119 Sep 28 j 09:08	3° $\text{♁}$ 25'11	1°09'53
minimum elong	114 Apr 14 j 14:49	22° $\text{♁}$ 35'49	1°00'10	morning rise	119 Oct 11 j 01:13	6° $\text{♁}$ 11'28	
max. Earth dist.	114 Apr 16 j 19:55	23° $\text{♁}$ 07'11	6.02218 AU	retrograde	120 Feb 08 j 20:30	23° $\text{♁}$ 12'00	
morning rise	114 Apr 28 j 08:03	25° $\text{♁}$ 49'43		opposition	120 Apr 09 j 15:44	18° $\text{♁}$ 20'14	1°32'44
	114 May 16 j 10:36	0° $\text{♁}$		min. Earth dist.	120 Apr 11 j 02:12	18° $\text{♁}$ 09'15	4.38637 AU
	114 Aug 15 j 07:28	15° $\text{♁}$		direct	120 Jun 11 j 07:53	13° $\text{♁}$ 19'40	
retrograde	114 Sep 05 j 13:41	15° $\text{♁}$ 44'15			120 Oct 10 j 01:08	0° $\text{♁}$	
	114 Sep 26 j 14:03	15° $\text{♁}$		evening set	120 Oct 15 j 08:13	1° $\text{♁}$ 10'13	
min. Earth dist.	114 Nov 02 j 16:55	10° $\text{♁}$ 50'27	4.07631 AU	max. Earth dist.	120 Oct 25 j 23:09	3° $\text{♁}$ 32'24	6.33710 AU
opposition	114 Nov 04 j 01:56	10° $\text{♁}$ 39'12	-1°08'29	conjunction	120 Oct 27 j 23:37	3° $\text{♁}$ 59'32	0°52'34
direct	115 Jan 01 j 11:39	5° $\text{♁}$ 40'44		minimum elong	120 Oct 27 j 23:39	3° $\text{♁}$ 59'33	0°52'34
	115 Mar 23 j 22:21	15° $\text{♁}$		morning rise	120 Nov 09 j 13:21	6° $\text{♁}$ 48'16	
evening set	115 May 07 j 22:18	24° $\text{♁}$ 42'47			120 Dec 18 j 05:29	15° $\text{♁}$	
conjunction	115 May 21 j 16:49	27° $\text{♁}$ 51'56	-0°28'09	retrograde	121 Mar 12 j 12:00	24° $\text{♁}$ 27'34	
minimum elong	115 May 21 j 16:51	27° $\text{♁}$ 51'58	0°28'08	opposition	121 May 12 j 11:33	19° $\text{♁}$ 35'18	0°55'11
max. Earth dist.	115 May 23 j 16:27	28° $\text{♁}$ 19'14	6.14022 AU	min. Earth dist.	121 May 13 j 20:54	19° $\text{♁}$ 24'40	4.27772 AU
	115 May 31 j 00:40	0° $\text{♁}$			121 Jun 27 j 16:48	15° $\text{♁}$	
morning rise	115 Jun 04 j 12:10	1° $\text{♁}$ 01'11		direct	121 Jul 13 j 09:08	14° $\text{♁}$ 37'15	
retrograde	115 Oct 09 j 05:07	19° $\text{♁}$ 50'18			121 Jul 29 j 02:58	15° $\text{♁}$	
opposition	115 Dec 07 j 19:22	14° $\text{♁}$ 47'13	-0°11'58		121 Nov 02 j 23:12	0° $\text{♁}$	
min. Earth dist.	115 Dec 06 j 18:29	14° $\text{♁}$ 55'39	4.20836 AU	evening set	121 Nov 15 j 20:00	2° $\text{♁}$ 54'21	
direct	116 Feb 05 j 09:02	9° $\text{♁}$ 45'55		max. Earth dist.	121 Nov 26 j 19:02	5° $\text{♁}$ 25'28	6.21121 AU
asc. node	116 Feb 25 j 05:43	10° $\text{♁}$ 23'55		conjunction	121 Nov 28 j 11:31	5° $\text{♁}$ 48'49	0°19'09
evening set	116 Jun 11 j 07:41	28° $\text{♁}$ 12'47		minimum elong	121 Nov 28 j 11:32	5° $\text{♁}$ 48'50	0°19'09
	116 Jun 19 j 09:03	0° $\text{♁}$		morning rise	121 Dec 11 j 03:00	8° $\text{♁}$ 43'32	
conjunction	116 Jun 24 j 24:00	1° $\text{♁}$ 15'05	0°12'12	retrograde	122 Apr 16 j 10:08	27° $\text{♁}$ 22'14	
minimum elong	116 Jun 24 j 23:59	1° $\text{♁}$ 15'05	0°12'12	desc. node	122 Jun 03 j 21:46	24° $\text{♁}$ 01'20	

opposition	122 Jun 16 j 05:45	22°♏27'54 -0°01'55	direct	128 Feb 10 j 04:07	14°♐30'51	
min. Earth dist.	122 Jun 17 j 04:48	22°♏20'29 4.14233 AU		128 Jun 02 j 22:39	0°♑	
direct	122 Aug 15 j 21:56	17°♏32'28	evening set	128 Jun 16 j 02:41	2°♑52'14	
	122 Nov 20 j 19:37	0°♑				
evening set	122 Dec 18 j 21:41	6°♑24'06	conjunction	128 Jun 29 j 18:10	5°♑53'22	0°17'40
			minimum elong	128 Jun 29 j 18:09	5°♑53'22	0°17'40
conjunction	122 Dec 31 j 16:33	9°♑25'35 -0°21'55	max. Earth dist.	128 Jun 30 j 17:14	6°♑06'08	6.29553 AU
minimum elong	122 Dec 31 j 16:32	9°♑25'34 0°21'56	morning rise	128 Jul 13 j 08:07	8°♑53'30	
max. Earth dist.	122 Dec 30 j 21:20	9°♑14'11 6.07860 AU	retrograde	128 Nov 13 j 05:31	26°♑31'49	
morning rise	123 Jan 13 j 12:55	12°♑28'05	opposition	129 Jan 12 j 02:09	21°♑33'00	0°51'56
	123 Apr 15 j 09:05	0°♒	min. Earth dist.	129 Jan 11 j 19:29	21°♑35'12	4.35203 AU
retrograde	123 May 23 j 07:14	2°♒12'11	direct	129 Mar 14 j 04:15	16°♑29'59	
	123 Jun 30 j 10:31	30°♒♑		129 Jun 28 j 15:20	0°♒	
opposition	123 Jul 22 j 19:52	27°♑14'27 -1°01'54	evening set	129 Jul 19 j 08:13	4°♒23'20	
min. Earth dist.	123 Jul 22 j 22:12	27°♑13'41 4.02419 AU				
direct	123 Sep 20 j 00:33	22°♑20'52	conjunction	129 Aug 01 j 16:25	7°♒17'15	0°51'03
	123 Nov 30 j 21:57	0°♒	minimum elong	129 Aug 01 j 16:22	7°♒17'13	0°51'02
evening set	124 Jan 23 j 00:10	11°♒43'59	max. Earth dist.	129 Aug 01 j 11:48	7°♒14'44	6.39692 AU
			morning rise	129 Aug 14 j 21:49	10°♒09'42	
conjunction	124 Feb 05 j 00:51	14°♒52'06 -0°56'39		129 Sep 06 j 19:17	15°♒	
minimum elong	124 Feb 05 j 00:48	14°♒52'04 0°56'39	retrograde	129 Dec 13 j 16:28	27°♒09'28	
max. Earth dist.	124 Feb 05 j 11:58	14°♒58'48 5.98566 AU	opposition	130 Feb 11 j 20:45	22°♒14'18	1°30'17
	124 Feb 05 j 13:57	15°♒	min. Earth dist.	130 Feb 12 j 08:25	22°♒10'30	4.42675 AU
morning rise	124 Feb 18 j 04:25	18°♒01'51	direct	130 Apr 15 j 01:09	17°♒11'11	
	124 Apr 12 j 05:53	0°♓		130 Jul 28 j 02:07	0°♓	
retrograde	124 Jun 29 j 08:08	8°♓31'37	evening set	130 Aug 20 j 01:00	4°♓49'31	
opposition	124 Aug 28 j 09:18	3°♓29'52 -1°40'44	max. Earth dist.	130 Aug 31 j 19:13	7°♓22'14	6.43855 AU
min. Earth dist.	124 Aug 27 j 14:44	3°♓36'05 3.96743 AU				
	124 Sep 26 j 14:34	30°♓♒	conjunction	130 Sep 02 j 01:05	7°♓38'27	1°09'19
direct	124 Oct 25 j 13:13	28°♓36'09	minimum elong	130 Sep 02 j 01:04	7°♓38'26	1°09'18
	124 Nov 23 j 08:16	0°♓	morning rise	130 Sep 14 j 22:16	10°♓25'57	
evening set	125 Feb 27 j 19:59	18°♓13'28	retrograde	131 Jan 13 j 01:01	27°♓14'21	
			opposition	131 Mar 14 j 14:00	22°♓21'41	1°43'37
conjunction	125 Mar 13 j 04:35	21°♓25'50 -1°10'20	min. Earth dist.	131 Mar 15 j 16:41	22°♓13'06	4.43425 AU
minimum elong	125 Mar 13 j 04:35	21°♓25'50 1°10'20	direct	131 May 16 j 06:59	17°♓19'29	
max. Earth dist.	125 Mar 14 j 21:32	21°♓50'27 5.96961 AU		131 Aug 27 j 10:51	0°♔	
morning rise	125 Mar 26 j 16:13	24°♓39'48	evening set	131 Sep 19 j 20:59	4°♔58'13	
	125 Apr 18 j 13:15	0°♕	max. Earth dist.	131 Sep 30 j 18:55	7°♔21'30	6.41051 AU
retrograde	125 Aug 05 j 19:58	15°♕10'21				
min. Earth dist.	125 Oct 03 j 04:32	10°♕16'26 3.99527 AU	conjunction	131 Oct 02 j 15:04	7°♔45'45	1°08'35
opposition	125 Oct 04 j 12:07	10°♕05'42 -1°39'58	minimum elong	131 Oct 02 j 15:05	7°♔45'46	1°08'35
direct	125 Dec 01 j 09:34	5°♕09'53	morning rise	131 Oct 15 j 06:29	10°♔32'10	
evening set	126 Apr 06 j 06:53	24°♕36'12	retrograde	132 Feb 13 j 06:42	27°♔37'01	
			opposition	132 Apr 14 j 03:08	22°♔45'19	1°28'59
conjunction	126 Apr 19 j 22:28	27°♕48'40 -0°56'40	min. Earth dist.	132 Apr 15 j 13:39	22°♔34'20	4.37273 AU
minimum elong	126 Apr 19 j 22:31	27°♕48'41 0°56'40	direct	132 Jun 15 j 16:39	17°♔45'07	
max. Earth dist.	126 Apr 22 j 03:30	28°♕19'51 6.03768 AU		132 Sep 23 j 12:45	0°♕	
	126 Apr 29 j 06:10	0°♖	evening set	132 Oct 19 j 16:24	5°♕39'13	
morning rise	126 May 03 j 16:30	1°♖02'07	max. Earth dist.	132 Oct 30 j 06:42	8°♕01'41	6.31989 AU
	126 Jul 09 j 17:08	15°♖				
retrograde	126 Sep 10 j 09:56	20°♖47'29	conjunction	132 Nov 01 j 07:30	8°♕29'08	0°48'42
opposition	126 Nov 08 j 23:17	15°♖42'31 -1°01'17	minimum elong	132 Nov 01 j 07:33	8°♕29'09	0°48'41
min. Earth dist.	126 Nov 07 j 14:05	15°♖53'51 4.09568 AU	morning rise	132 Nov 13 j 21:24	11°♕18'37	
	126 Nov 14 j 04:26	15°♖♖		132 Nov 30 j 15:05	15°♕	
direct	127 Jan 06 j 12:15	10°♖43'36	retrograde	133 Mar 17 j 07:31	29°♕05'49	
	127 Feb 28 j 07:23	15°♖	opposition	133 May 17 j 05:45	24°♕13'22	0°48'03
evening set	127 May 13 j 00:21	29°♖39'54	min. Earth dist.	133 May 18 j 14:56	24°♕02'47	4.25792 AU
	127 May 14 j 11:47	0°♗	direct	133 Jul 18 j 00:18	19°♕15'42	
				133 Oct 16 j 14:22	0°♘	
conjunction	127 May 26 j 18:56	2°♗48'07 -0°22'36	evening set	133 Nov 20 j 08:57	7°♘37'56	
minimum elong	127 May 26 j 18:58	2°♗48'08 0°22'37	max. Earth dist.	133 Dec 01 j 10:57	10°♘11'27	6.19079 AU
max. Earth dist.	127 May 28 j 16:43	3°♗14'14 6.16179 AU				
morning rise	127 Jun 09 j 13:50	5°♗56'13	conjunction	133 Dec 03 j 00:54	10°♘33'25	0°13'34
retrograde	127 Oct 13 j 19:19	24°♗35'00	minimum elong	133 Dec 03 j 00:55	10°♘33'26	0°13'34
min. Earth dist.	127 Dec 11 j 10:52	19°♗39'57 4.22983 AU	behind sun begin	133 Dec 02 j 20:21	10°♘30'48	
opposition	127 Dec 12 j 09:10	19°♗32'25 -0°03'32	behind sun end	133 Dec 03 j 05:28	10°♘36'03	
asc. node	128 Jan 04 j 21:06	16°♗35'08	morning rise	133 Dec 15 j 16:52	13°♘29'13	

	134 Mar 13 j 12:30	0°♂	direct	140 Feb 14 j 17:28	19°♂06'09	
desc. node	134 Apr 13 j 09:33	2°♂11'22		140 May 16 j 18:48	0°♂	
retrograde	134 Apr 21 j 10:55	2°♂17'31	evening set	140 Jun 20 j 18:21	7°♂23'12	
	134 May 30 j 19:02	30°♂♂				
opposition	134 Jun 21 j 06:51	27°♂22'48 -0°10'42	conjunction	140 Jul 04 j 08:59	10°♂23'20	0°22'52
min. Earth dist.	134 Jun 22 j 02:34	27°♂16'27 4.12316 AU	minimum elong	140 Jul 04 j 08:57	10°♂23'19	0°22'52
direct	134 Aug 20 j 17:19	22°♂27'46	max. Earth dist.	140 Jul 05 j 03:12	10°♂33'23	6.31134 AU
	134 Nov 01 j 05:12	0°♂	morning rise	140 Jul 17 j 21:55	13°♂22'22	
evening set	134 Dec 23 j 17:38	11°♂24'27		140 Oct 24 j 14:28	0°♂	
			retrograde	140 Nov 17 j 11:52	0°♂54'24	
conjunction	135 Jan 05 j 13:05	14°♂26'53 -0°27'33		140 Dec 11 j 04:06	30°♂♂	
minimum elong	135 Jan 05 j 13:03	14°♂26'52 0°27'34	opposition	141 Jan 16 j 08:23	25°♂56'09	0°58'27
max. Earth dist.	135 Jan 04 j 21:59	14°♂17'55 6.06256 AU	min. Earth dist.	141 Jan 16 j 05:16	25°♂57'11	4.36408 AU
morning rise	135 Jan 18 j 10:21	17°♂30'29	direct	141 Mar 18 j 15:15	20°♂53'04	
	135 Mar 17 j 06:05	0°♂		141 Jun 10 j 23:39	0°♂	
retrograde	135 May 28 j 15:05	7°♂22'29	evening set	141 Jul 23 j 18:44	8°♂44'13	
opposition	135 Jul 28 j 02:02	2°♂24'09 -1°09'11				
min. Earth dist.	135 Jul 28 j 01:11	2°♂24'26 4.01300 AU	conjunction	141 Aug 06 j 01:54	11°♂37'24	0°54'33
	135 Aug 16 j 05:05	30°♂♂	minimum elong	141 Aug 06 j 01:51	11°♂37'22	0°54'34
direct	135 Sep 25 j 03:33	27°♂30'39	max. Earth dist.	141 Aug 05 j 17:10	11°♂32'39	6.40424 AU
	135 Nov 03 j 08:41	0°♂	morning rise	141 Aug 19 j 06:11	14°♂29'06	
	136 Jan 19 j 22:52	15°♂		141 Aug 21 j 15:28	15°♂	
evening set	136 Jan 28 j 02:10	16°♂56'20		141 Nov 17 j 09:00	0°♂	
			retrograde	141 Dec 17 j 20:26	1°♂26'31	
conjunction	136 Feb 10 j 03:57	20°♂05'09 -1°00'06		142 Jan 17 j 07:19	30°♂♂	
minimum elong	136 Feb 10 j 03:54	20°♂05'07 1°00'06	opposition	142 Feb 16 j 02:09	26°♂31'46	1°33'42
max. Earth dist.	136 Feb 10 j 21:07	20°♂15'30 5.98043 AU	min. Earth dist.	142 Feb 16 j 15:46	26°♂27'20	4.42934 AU
morning rise	136 Feb 23 j 08:30	23°♂15'34	direct	142 Apr 19 j 07:54	21°♂28'43	
	136 Mar 23 j 08:55	0°♂		142 Jul 10 j 05:43	0°♂	
retrograde	136 Jul 04 j 15:36	13°♂47'17	evening set	142 Aug 24 j 08:25	9°♂07'11	
opposition	136 Sep 02 j 15:21	8°♂45'00 -1°43'08	max. Earth dist.	142 Sep 05 j 00:10	11°♂38'44	6.43623 AU
min. Earth dist.	136 Sep 01 j 18:24	8°♂52'02 3.96905 AU				
direct	136 Oct 30 j 17:10	3°♂51'06	conjunction	142 Sep 06 j 07:37	11°♂55'50	1°10'21
evening set	137 Mar 05 j 01:06	23°♂27'02	minimum elong	142 Sep 06 j 07:36	11°♂55'50	1°10'20
			morning rise	142 Sep 19 j 03:47	14°♂43'04	
conjunction	137 Mar 18 j 10:32	26°♂39'26 -1°10'01		142 Dec 16 j 12:16	0°♂	
minimum elong	137 Mar 18 j 10:33	26°♂39'27 1°10'00	retrograde	143 Jan 17 j 08:12	1°♂32'59	
max. Earth dist.	137 Mar 20 j 05:09	27°♂04'59 5.97753 AU		143 Feb 18 j 05:43	30°♂♂	
morning rise	137 Mar 31 j 23:19	29°♂53'29	opposition	143 Mar 18 j 21:52	26°♂40'35	1°43'13
	137 Apr 01 j 10:18	0°♂	min. Earth dist.	143 Mar 20 j 02:05	26°♂31'33	4.42737 AU
retrograde	137 Aug 10 j 19:44	20°♂18'38	direct	143 May 20 j 15:18	21°♂38'43	
min. Earth dist.	137 Oct 08 j 03:29	15°♂25'00 4.00863 AU		143 Aug 09 j 10:38	0°♂	
opposition	137 Oct 09 j 12:37	15°♂13'43 -1°36'29	evening set	143 Sep 24 j 03:54	9°♂19'27	
direct	137 Dec 06 j 11:21	10°♂17'27	max. Earth dist.	143 Oct 04 j 22:49	11°♂41'35	6.39948 AU
evening set	138 Apr 11 j 10:04	29°♂39'13				
	138 Apr 12 j 21:46	0°♂	conjunction	143 Oct 06 j 21:17	12°♂07'10	1°06'52
			minimum elong	143 Oct 06 j 21:18	12°♂07'11	1°06'52
conjunction	138 Apr 25 j 02:25	2°♂51'10 -0°52'51	morning rise	143 Oct 19 j 12:26	14°♂53'54	
minimum elong	138 Apr 25 j 02:28	2°♂51'12 0°52'51		144 Jan 11 j 19:24	0°♂	
max. Earth dist.	138 Apr 27 j 07:35	3°♂22'18 6.05524 AU	retrograde	144 Feb 17 j 19:31	2°♂03'45	
morning rise	138 May 08 j 20:44	6°♂03'57		144 Mar 26 j 03:14	30°♂♂	
	138 Jun 18 j 07:39	15°♂	opposition	144 Apr 18 j 15:52	27°♂12'02	1°24'40
retrograde	138 Sep 15 j 03:44	25°♂39'44	min. Earth dist.	144 Apr 20 j 02:42	27°♂00'56	4.35832 AU
min. Earth dist.	138 Nov 12 j 09:06	20°♂45'34 4.11525 AU	direct	144 Jun 20 j 03:37	22°♂12'10	
opposition	138 Nov 13 j 16:18	20°♂34'56 -0°53'54		144 Sep 04 j 22:51	0°♂	
direct	139 Jan 11 j 09:49	15°♂35'34	evening set	144 Oct 24 j 01:19	10°♂09'49	
	139 Apr 27 j 22:23	0°♂	max. Earth dist.	144 Nov 03 j 17:46	12°♂34'01	6.30337 AU
evening set	139 May 17 j 22:10	4°♂26'20				
			conjunction	144 Nov 05 j 16:30	13°♂00'24	0°44'30
conjunction	139 May 31 j 16:39	7°♂33'38 -0°17'07	minimum elong	144 Nov 05 j 16:33	13°♂00'25	0°44'29
minimum elong	139 May 31 j 16:41	7°♂33'39 0°17'06		144 Nov 14 j 12:24	15°♂	
max. Earth dist.	139 Jun 02 j 11:53	7°♂58'10 6.18172 AU	morning rise	144 Nov 18 j 06:21	15°♂50'35	
morning rise	139 Jun 14 j 11:13	10°♂40'42		145 Jan 30 j 10:16	0°♂	
retrograde	139 Oct 18 j 03:47	29°♂10'06	retrograde	145 Mar 22 j 01:34	3°♂45'15	
asc. node	139 Nov 15 j 19:36	27°♂50'06		145 May 13 j 03:15	30°♂♂	
opposition	139 Dec 16 j 19:20	24°♂08'00 0°04'38	opposition	145 May 22 j 00:31	28°♂52'36	0°40'31
min. Earth dist.	139 Dec 15 j 22:26	24°♂15'03 4.24838 AU	min. Earth dist.	145 May 23 j 07:49	28°♂42'37	4.24035 AU

direct	145 Jul 22 j 14:52	23°♄55'23		evening set	151 May 22 j 20:15	9°♂13'43	
	145 Sep 26 j 06:03	0°♂					
evening set	145 Nov 24 j 22:19	12°♂21'50		conjunction	151 Jun 05 j 14:29	12°♂20'12	-0°11'30
max. Earth dist.	145 Dec 06 j 02:31	14°♂57'16	6.17354 AU	minimum elong	151 Jun 05 j 14:30	12°♂20'12	0°11'30
				behind sun begin	151 Jun 05 j 08:36	12°♂16'53	
conjunction	145 Dec 07 j 14:25	15°♂18'09	0°07'53	behind sun end	151 Jun 05 j 20:24	12°♂23'32	
minimum elong	145 Dec 07 j 14:26	15°♂18'09	0°07'53	max. Earth dist.	151 Jun 07 j 05:33	12°♂42'18	6.19838 AU
behind sun begin	145 Dec 07 j 07:14	15°♂14'00		morning rise	151 Jun 19 j 08:40	15°♂26'20	
behind sun end	145 Dec 07 j 21:37	15°♂22'19			151 Sep 02 j 12:15	0°♂	
morning rise	145 Dec 20 j 07:03	18°♂14'56		asc. node	151 Sep 26 j 03:08	2°♂40'15	
	146 Feb 13 j 17:55	0°♂		retrograde	151 Oct 22 j 14:57	3°♂47'43	
desc. node	146 Feb 21 j 04:38	1°♂17'48			151 Dec 12 j 00:13	30°♂♂	
retrograde	146 Apr 26 j 12:44	7°♂11'45		opposition	151 Dec 21 j 06:15	28°♂46'05	0°12'47
opposition	146 Jun 26 j 07:45	2°♂16'35	-0°19'25	min. Earth dist.	151 Dec 20 j 12:31	28°♂52'03	4.26384 AU
min. Earth dist.	146 Jun 27 j 00:57	2°♂11'01	4.10739 AU	direct	152 Feb 19 j 09:47	23°♂43'58	
	146 Jul 14 j 15:26	30°♂♂			152 Apr 26 j 11:21	0°♂	
direct	146 Aug 25 j 14:25	27°♂21'48		evening set	152 Jun 25 j 11:00	11°♂57'41	
	146 Oct 05 j 17:13	0°♂					
evening set	146 Dec 28 j 12:34	16°♂22'21		conjunction	152 Jul 09 j 00:56	14°♂56'56	0°28'01
				minimum elong	152 Jul 09 j 00:54	14°♂56'55	0°28'00
conjunction	147 Jan 10 j 08:50	19°♂25'40	-0°32'58	max. Earth dist.	152 Jul 09 j 16:27	15°♂05'29	6.32449 AU
minimum elong	147 Jan 10 j 08:48	19°♂25'38	0°32'58	morning rise	152 Jul 22 j 12:44	17°♂54'59	
max. Earth dist.	147 Jan 09 j 22:45	19°♂19'40	6.04966 AU		152 Sep 21 j 22:16	0°♂	
morning rise	147 Jan 23 j 06:51	22°♂30'10		retrograde	152 Nov 21 j 17:35	5°♂21'34	
	147 Feb 25 j 02:29	0°♂		opposition	153 Jan 20 j 16:10	0°♂23'50	1°04'43
retrograde	147 Jun 02 j 21:28	12°♂28'50		min. Earth dist.	153 Jan 20 j 14:30	0°♂24'23	4.37422 AU
opposition	147 Aug 02 j 06:20	7°♂30'00	-1°15'51		153 Jan 23 j 16:25	30°♂♂	
min. Earth dist.	147 Aug 02 j 02:53	7°♂31'08	4.00441 AU	direct	153 Mar 23 j 01:30	25°♂20'43	
direct	147 Sep 30 j 03:35	2°♂36'36			153 May 20 j 01:09	0°♂	
	148 Jan 02 j 15:23	15°♂		evening set	153 Jul 28 j 06:44	13°♂10'02	
evening set	148 Feb 02 j 02:55	22°♂04'20			153 Aug 05 j 17:45	15°♂	
conjunction	148 Feb 15 j 05:28	25°♂13'43	-1°03'02	conjunction	153 Aug 10 j 12:40	16°♂02'30	0°57'50
minimum elong	148 Feb 15 j 05:26	25°♂13'41	1°03'03	minimum elong	153 Aug 10 j 12:38	16°♂02'28	0°57'50
max. Earth dist.	148 Feb 16 j 01:09	25°♂25'34	5.97663 AU	max. Earth dist.	153 Aug 10 j 00:16	15°♂55'45	6.41070 AU
morning rise	148 Feb 28 j 11:15	28°♂24'48		morning rise	153 Aug 23 j 15:49	18°♂53'28	
	148 Mar 06 j 03:06	0°♂			153 Oct 19 j 04:05	0°♂	
retrograde	148 Jul 09 j 18:51	18°♂57'59		retrograde	153 Dec 22 j 03:44	5°♂48'47	
opposition	148 Sep 07 j 18:41	13°♂55'13	-1°44'43	opposition	154 Feb 20 j 09:47	0°♂54'29	1°36'41
min. Earth dist.	148 Sep 06 j 19:00	14°♂03'11	3.97072 AU	min. Earth dist.	154 Feb 21 j 02:05	0°♂49'12	4.43204 AU
direct	148 Nov 04 j 18:29	9°♂01'05			154 Feb 27 j 10:40	30°♂♂	
evening set	149 Mar 10 j 04:27	28°♂36'11		direct	154 Apr 23 j 19:09	25°♂51'35	
	149 Mar 16 j 01:07	0°♂			154 Jun 17 j 16:09	0°♂	
				evening set	154 Aug 28 j 17:18	13°♂29'42	
conjunction	149 Mar 23 j 15:06	1°♂48'48	-1°09'10	max. Earth dist.	154 Sep 09 j 05:42	15°♂59'36	6.43506 AU
minimum elong	149 Mar 23 j 15:07	1°♂48'48	1°09'10				
max. Earth dist.	149 Mar 25 j 12:46	2°♂16'06	5.98444 AU	conjunction	154 Sep 10 j 15:34	16°♂18'01	1°11'02
morning rise	149 Apr 06 j 04:42	5°♂02'54		minimum elong	154 Sep 10 j 15:33	16°♂18'00	1°11'02
retrograde	149 Aug 15 j 20:44	25°♂23'22		morning rise	154 Sep 23 j 10:51	19°♂04'56	
min. Earth dist.	149 Oct 13 j 02:59	20°♂29'24	4.01988 AU		154 Nov 17 j 18:58	0°♂	
opposition	149 Oct 14 j 11:29	20°♂18'20	-1°32'22	retrograde	155 Jan 21 j 15:44	5°♂55'51	
direct	149 Dec 11 j 12:38	15°♂21'38		opposition	155 Mar 23 j 07:21	1°♂03'36	1°42'17
	150 Mar 27 j 01:31	0°♂		min. Earth dist.	155 Mar 24 j 11:57	0°♂54'27	4.42280 AU
evening set	150 Apr 16 j 12:13	4°♂39'59			155 Mar 31 j 15:35	30°♂♂	
				direct	155 May 25 j 00:41	26°♂01'58	
conjunction	150 Apr 30 j 05:11	7°♂51'35	-0°48'43		155 Jul 17 j 15:50	0°♂	
minimum elong	150 Apr 30 j 05:14	7°♂51'36	0°48'42	evening set	155 Sep 28 j 11:35	13°♂43'35	
max. Earth dist.	150 May 02 j 10:15	8°♂22'31	6.06978 AU	max. Earth dist.	155 Oct 09 j 07:04	16°♂06'18	6.39206 AU
morning rise	150 May 13 j 23:58	11°♂03'52					
	150 May 31 j 06:52	15°♂		conjunction	155 Oct 11 j 04:28	16°♂31'23	1°04'49
	150 Sep 01 j 23:33	0°♂		minimum elong	155 Oct 11 j 04:30	16°♂31'24	1°04'49
retrograde	150 Sep 19 j 19:24	0°♂31'21		morning rise	155 Oct 23 j 19:02	19°♂18'12	
	150 Oct 07 j 12:21	30°♂♂			155 Dec 15 j 20:00	0°♂	
min. Earth dist.	150 Nov 17 j 01:43	25°♂37'20	4.13150 AU	retrograde	156 Feb 22 j 07:21	6°♂31'40	
opposition	150 Nov 18 j 08:37	25°♂26'49	-0°46'14	opposition	156 Apr 23 j 05:08	1°♂39'55	1°19'53
direct	151 Jan 16 j 04:08	20°♂27'04		min. Earth dist.	156 Apr 24 j 15:51	1°♂28'53	4.34842 AU
	151 Apr 09 j 15:00	0°♂			156 May 06 j 13:18	30°♂♂	

direct	156 Jun 24 j 15:49	26°♄40'27		direct	161 Dec 16 j 07:50	20°♑16'56	
	156 Aug 11 j 22:23	0°♌			162 Mar 09 j 00:35	0°♏	
evening set	156 Oct 28 j 09:50	14°♌39'48		evening set	162 Apr 21 j 12:04	9°♏33'20	
	156 Oct 29 j 21:48	15°♌					
max. Earth dist.	156 Nov 08 j 01:57	17°♌04'17	6.29178 AU	conjunction	162 May 05 j 05:34	12°♏44'41	-0°44'21
				minimum elong	162 May 05 j 05:37	12°♏44'42	0°44'21
conjunction	156 Nov 10 j 00:44	17°♌30'46	0°40'07	max. Earth dist.	162 May 07 j 08:30	13°♏14'18	6.08117 AU
minimum elong	156 Nov 10 j 00:46	17°♌30'47	0°40'07		162 May 14 j 22:43	15°♏	
morning rise	156 Nov 22 j 14:49	20°♌21'30		morning rise	162 May 19 j 00:48	15°♏56'37	
	157 Jan 07 j 07:12	0°♌			162 Jul 26 j 17:29	0°♐	
retrograde	157 Mar 26 j 18:50	8°♌22'01		retrograde	162 Sep 24 j 10:27	5°♐17'15	
opposition	157 May 26 j 18:25	3°♌29'02	0°32'53	opposition	162 Nov 22 j 22:57	0°♐13'00	-0°38'29
min. Earth dist.	157 May 28 j 00:05	3°♌19'33	4.22760 AU	min. Earth dist.	162 Nov 21 j 18:01	0°♐22'52	4.14447 AU
	157 Jun 26 j 02:06	30°♌			162 Nov 24 j 13:09	30°♏	
direct	157 Jul 27 j 05:53	28°♌32'07		direct	163 Jan 20 j 22:31	25°♏12'54	
	157 Aug 27 j 04:47	0°♌			163 Mar 18 j 13:28	0°♐	
evening set	157 Nov 29 j 09:47	17°♌01'02		evening set	163 May 27 j 16:41	13°♐56'41	
max. Earth dist.	157 Dec 10 j 18:15	19°♌39'18	6.16088 AU				
				conjunction	163 Jun 10 j 10:55	17°♐02'32	-0°05'57
conjunction	157 Dec 12 j 02:21	19°♌58'01	0°02'18	minimum elong	163 Jun 10 j 10:55	17°♐02'33	0°05'56
minimum elong	157 Dec 12 j 02:20	19°♌58'00	0°02'17	behind sun begin	163 Jun 10 j 02:58	16°♐58'05	
behind sun begin	157 Dec 11 j 18:20	19°♌53'22		behind sun end	163 Jun 10 j 18:52	17°♐07'00	
behind sun end	157 Dec 12 j 10:20	20°♌02'38		max. Earth dist.	163 Jun 12 j 00:56	17°♐23'58	6.21215 AU
morning rise	157 Dec 24 j 19:16	22°♌55'30		morning rise	163 Jun 24 j 04:29	20°♐07'51	
desc. node	158 Jan 02 j 16:10	24°♌58'01		asc. node	163 Aug 07 j 04:29	29°♐24'34	
	158 Jan 25 j 10:14	0°♐			163 Aug 10 j 07:19	0°♑	
retrograde	158 May 01 j 11:26	11°♐59'02		retrograde	163 Oct 27 j 00:11	8°♑22'16	
opposition	158 Jul 01 j 05:42	7°♐03'27	-0°27'45	opposition	163 Dec 25 j 16:17	3°♑21'10	0°20'43
min. Earth dist.	158 Jul 01 j 20:58	6°♐58'30	4.09577 AU	min. Earth dist.	163 Dec 24 j 23:34	3°♑26'47	4.27726 AU
direct	158 Aug 30 j 08:27	2°♐08'56			164 Jan 22 j 04:11	30°♏	
evening set	159 Jan 02 j 04:57	21°♐12'04		direct	164 Feb 23 j 22:51	28°♐18'54	
					164 Mar 28 j 04:56	0°♑	
conjunction	159 Jan 15 j 01:41	24°♐16'02	-0°37'57	evening set	164 Jun 30 j 02:51	16°♑29'49	
minimum elong	159 Jan 15 j 01:38	24°♐16'00	0°37'56				
max. Earth dist.	159 Jan 14 j 17:28	24°♐11'08	6.04001 AU	conjunction	164 Jul 13 j 15:42	19°♑28'10	0°32'54
morning rise	159 Jan 28 j 00:41	27°♐21'21		minimum elong	164 Jul 13 j 15:40	19°♑28'09	0°32'55
	159 Feb 08 j 06:26	0°♑		max. Earth dist.	164 Jul 14 j 02:45	19°♑34'14	6.33652 AU
	159 Apr 29 j 03:42	15°♑		morning rise	164 Jul 27 j 02:34	22°♑25'17	
retrograde	159 Jun 07 j 21:20	17°♑25'22			164 Sep 01 j 09:34	0°♒	
	159 Jul 17 j 19:38	15°♒		retrograde	164 Nov 26 j 00:54	9°♒46'50	
opposition	159 Aug 07 j 06:26	12°♑25'59	-1°21'44	opposition	165 Jan 24 j 23:39	4°♒49'35	1°10'32
min. Earth dist.	159 Aug 06 j 23:54	12°♑28'08	3.99777 AU	min. Earth dist.	165 Jan 25 j 00:52	4°♒49'11	4.38408 AU
direct	159 Oct 04 j 23:52	7°♑32'33			165 Mar 15 j 11:30	30°♒	
	159 Dec 14 j 11:57	15°♑		direct	165 Mar 27 j 13:58	29°♑46'24	
evening set	160 Feb 06 j 23:53	27°♑01'58			165 Apr 08 j 17:06	0°♒	
	160 Feb 19 j 07:48	0°♒			165 Jul 20 j 17:45	15°♒	
				evening set	165 Aug 01 j 17:41	17°♒33'41	
conjunction	160 Feb 20 j 03:35	0°♒11'56	-1°05'25				
minimum elong	160 Feb 20 j 03:33	0°♒11'55	1°05'25	conjunction	165 Aug 14 j 22:39	20°♒25'26	1°00'45
max. Earth dist.	160 Feb 21 j 03:26	0°♒26'19	5.97363 AU	minimum elong	165 Aug 14 j 22:36	20°♒25'25	1°00'45
morning rise	160 Mar 04 j 10:15	3°♒23'35		max. Earth dist.	165 Aug 14 j 08:31	20°♒17'45	6.41745 AU
retrograde	160 Jul 14 j 20:45	23°♒58'00		morning rise	165 Aug 28 j 00:28	23°♒15'38	
opposition	160 Sep 12 j 18:01	18°♒54'53	-1°45'30		165 Sep 29 j 10:53	0°♓	
min. Earth dist.	160 Sep 11 j 17:58	19°♒03'00	3.97179 AU	retrograde	165 Dec 26 j 07:40	10°♓08'41	
direct	160 Nov 09 j 17:40	14°♒00'29		opposition	166 Feb 24 j 16:27	5°♓14'41	1°39'05
	161 Feb 27 j 21:30	0°♓		min. Earth dist.	166 Feb 25 j 09:33	5°♓09'09	4.43531 AU
evening set	161 Mar 15 j 04:28	3°♓35'20		direct	166 Apr 28 j 03:02	0°♓11'54	
				evening set	166 Sep 02 j 00:44	17°♓49'18	
conjunction	161 Mar 28 j 16:07	6°♓48'11	-1°07'51	max. Earth dist.	166 Sep 13 j 10:02	20°♓17'40	6.43421 AU
minimum elong	161 Mar 28 j 16:08	6°♓48'12	1°07'51				
max. Earth dist.	161 Mar 30 j 15:10	7°♓16'15	5.98941 AU	conjunction	166 Sep 14 j 21:58	20°♓37'15	1°11'19
morning rise	161 Apr 11 j 06:46	10°♓02'30		minimum elong	166 Sep 14 j 21:58	20°♓37'15	1°11'20
	161 Aug 06 j 19:33	0°♔		morning rise	166 Sep 27 j 16:24	23°♓23'52	
retrograde	161 Aug 20 j 16:33	0°♔19'03			166 Oct 29 j 07:40	0°♕	
	161 Sep 03 j 11:21	30°♒		retrograde	167 Jan 25 j 23:39	10°♕15'52	
min. Earth dist.	161 Oct 17 j 21:22	25°♓25'21	4.02840 AU	opposition	167 Mar 27 j 16:01	5°♕23'47	1°40'46
opposition	161 Oct 19 j 06:42	25°♓14'00	-1°27'46	min. Earth dist.	167 Mar 28 j 22:37	5°♕14'00	4.41759 AU

direct	167 May 29 j 10:43	0°♄22'23		minimum elong	173 Apr 02 j 22:53	12°♄01'19	1°05'56
evening set	167 Oct 02 j 17:42	18°♄05'05		max. Earth dist.	173 Apr 04 j 23:20	12°♄30'10	5.99687 AU
max. Earth dist.	167 Oct 13 j 10:49	20°♄26'52	6.38256 AU	morning rise	173 Apr 16 j 14:28	15°♄15'40	
					173 Jun 26 j 03:10	0°♄	
conjunction	167 Oct 15 j 10:05	20°♄53'02	1°02'24	retrograde	173 Aug 25 j 16:28	5°♄26'42	
minimum elong	167 Oct 15 j 10:07	20°♄53'03	1°02'23	min. Earth dist.	173 Oct 22 j 20:57	0°♄32'56	4.04126 AU
morning rise	167 Oct 28 j 00:24	23°♄40'08		opposition	173 Oct 24 j 06:19	0°♄21'32	-1°22'18
	167 Nov 26 j 17:53	0°♄			173 Oct 26 j 21:25	30°♄	
retrograde	168 Feb 26 j 18:45	10°♄58'18		direct	173 Dec 21 j 10:02	25°♄24'03	
opposition	168 Apr 27 j 17:48	6°♄06'26	1°14'39		174 Feb 13 j 20:17	0°♄	
min. Earth dist.	168 Apr 29 j 03:59	5°♄55'34	4.33503 AU	evening set	174 Apr 26 j 15:42	14°♄36'22	
direct	168 Jun 29 j 01:49	1°♄07'15			174 Apr 28 j 08:43	15°♄	
	168 Oct 13 j 21:40	15°♄					
evening set	168 Nov 01 j 17:55	19°♄09'46		conjunction	174 May 10 j 09:48	17°♄47'10	-0°39'31
max. Earth dist.	168 Nov 12 j 12:19	21°♄36'02	6.27560 AU	minimum elong	174 May 10 j 09:51	17°♄47'11	0°39'31
				max. Earth dist.	174 May 12 j 14:07	18°♄17'27	6.09869 AU
conjunction	168 Nov 14 j 08:56	22°♄01'23	0°35'27	morning rise	174 May 24 j 05:03	20°♄58'20	
minimum elong	168 Nov 14 j 08:58	22°♄01'24	0°35'28		174 Jul 04 j 15:38	0°♄	
morning rise	168 Nov 26 j 23:03	24°♄52'51		retrograde	174 Sep 29 j 02:50	10°♄09'12	
	168 Dec 20 j 03:09	0°♄		min. Earth dist.	174 Nov 26 j 11:11	5°♄14'56	4.16483 AU
retrograde	169 Mar 31 j 14:10	13°♄01'06		opposition	174 Nov 27 j 15:37	5°♄05'16	-0°30'19
opposition	169 May 31 j 12:59	8°♄07'54	0°24'56	direct	175 Jan 25 j 19:09	0°♄04'50	
min. Earth dist.	169 Jun 01 j 18:02	7°♄58'36	4.20951 AU	evening set	175 Jun 01 j 14:37	18°♄42'45	
direct	169 Jul 31 j 20:55	3°♄11'19					
desc. node	169 Nov 13 j 03:45	17°♄01'28		conjunction	175 Jun 15 j 08:09	21°♄47'25	-0°00'14
evening set	169 Dec 03 j 22:51	21°♄44'53		minimum elong	175 Jun 15 j 08:09	21°♄47'24	0°00'15
max. Earth dist.	169 Dec 15 j 08:45	24°♄24'40	6.14237 AU	behind sun begin	175 Jun 14 j 23:51	21°♄42'47	
				behind sun end	175 Jun 15 j 16:26	21°♄52'02	
conjunction	169 Dec 16 j 15:42	24°♄42'47	-0°03'33	max. Earth dist.	175 Jun 16 j 18:18	22°♄06'34	6.23369 AU
minimum elong	169 Dec 16 j 15:42	24°♄42'47	0°03'34	asc. node	175 Jun 17 j 14:26	22°♄17'52	
behind sun begin	169 Dec 16 j 07:45	24°♄38'09		morning rise	175 Jun 29 j 01:09	24°♄51'28	
behind sun end	169 Dec 16 j 23:39	24°♄47'24			175 Jul 22 j 16:51	0°♄	
morning rise	169 Dec 29 j 09:30	27°♄41'24		retrograde	175 Oct 31 j 08:44	12°♄56'08	
	170 Jan 08 j 09:33	0°♄		min. Earth dist.	175 Dec 29 j 11:53	8°♄00'16	4.29808 AU
retrograde	170 May 06 j 12:51	16°♄54'10		opposition	175 Dec 30 j 02:10	7°♄55'29	0°28'28
opposition	170 Jul 06 j 06:26	11°♄58'04	-0°36'10	direct	176 Feb 28 j 14:30	2°♄52'56	
min. Earth dist.	170 Jul 06 j 18:26	11°♄54'10	4.07839 AU	evening set	176 Jul 04 j 17:04	20°♄58'23	
direct	170 Sep 04 j 03:23	7°♄03'45					
evening set	171 Jan 07 j 00:45	26°♄11'42		conjunction	176 Jul 18 j 05:00	23°♄55'31	0°37'32
				minimum elong	176 Jul 18 j 04:58	23°♄55'30	0°37'32
conjunction	171 Jan 19 j 22:26	29°♄16'42	-0°42'51	max. Earth dist.	176 Jul 18 j 13:54	24°♄00'24	6.35505 AU
minimum elong	171 Jan 19 j 22:24	29°♄16'40	0°42'51	morning rise	176 Jul 31 j 14:27	26°♄51'19	
max. Earth dist.	171 Jan 19 j 19:31	29°♄14'57	6.02539 AU		176 Aug 15 j 05:46	0°♄	
	171 Jan 22 j 22:43	0°♄		retrograde	176 Nov 30 j 03:47	14°♄05'54	
morning rise	171 Feb 01 j 22:17	2°♄23'04		opposition	177 Jan 29 j 04:56	9°♄09'09	1°15'46
	171 Mar 31 j 21:24	15°♄		min. Earth dist.	177 Jan 29 j 07:54	9°♄08'10	4.39900 AU
retrograde	171 Jun 13 j 04:48	22°♄34'21		direct	177 Mar 31 j 22:40	4°♄05'56	
opposition	171 Aug 12 j 11:13	17°♄34'25	-1°27'18		177 Jul 04 j 02:30	15°♄	
min. Earth dist.	171 Aug 12 j 02:52	17°♄37'11	3.98755 AU	evening set	177 Aug 06 j 01:21	21°♄49'31	
	171 Sep 01 j 22:37	15°♄		max. Earth dist.	177 Aug 18 j 09:46	24°♄29'56	6.42739 AU
direct	171 Oct 10 j 01:40	12°♄41'00					
	171 Nov 16 j 15:17	15°♄		conjunction	177 Aug 19 j 04:58	24°♄40'21	1°03'14
	172 Feb 02 j 18:32	0°♄		minimum elong	177 Aug 19 j 04:56	24°♄40'20	1°03'13
evening set	172 Feb 12 j 02:27	2°♄13'21		morning rise	177 Sep 01 j 05:45	27°♄29'42	
					177 Sep 12 j 23:14	0°♄	
conjunction	172 Feb 25 j 07:11	5°♄24'02	-1°07'25	retrograde	177 Dec 30 j 11:07	14°♄19'56	
minimum elong	172 Feb 25 j 07:09	5°♄24'01	1°07'24	opposition	178 Feb 28 j 20:25	9°♄26'16	1°40'51
max. Earth dist.	172 Feb 26 j 10:25	5°♄40'27	5.96866 AU	min. Earth dist.	178 Mar 01 j 16:53	9°♄19'39	4.43968 AU
morning rise	172 Mar 09 j 15:09	8°♄36'27		direct	178 May 02 j 10:21	4°♄23'31	
retrograde	172 Jul 20 j 02:11	29°♄12'08		evening set	178 Sep 06 j 04:23	21°♄59'57	
opposition	172 Sep 17 j 22:09	24°♄08'38	-1°45'29	max. Earth dist.	178 Sep 17 j 10:33	24°♄26'43	6.43245 AU
min. Earth dist.	172 Sep 16 j 19:13	24°♄17'44	3.97308 AU				
direct	172 Nov 14 j 19:29	19°♄13'59		conjunction	178 Sep 19 j 00:54	24°♄47'38	1°11'13
	173 Feb 09 j 14:15	0°♄		minimum elong	178 Sep 19 j 00:54	24°♄47'38	1°11'12
evening set	173 Mar 20 j 10:11	8°♄48'18		morning rise	178 Oct 01 j 18:28	27°♄34'00	
					178 Oct 13 j 02:18	0°♄	
conjunction	173 Apr 02 j 22:51	12°♄01'18	-1°05'57	retrograde	179 Jan 30 j 03:14	14°♄27'42	

opposition	179 Mar 31 j 21:38	9°♌35'44	1°38'47		185 Jan 18 j 02:05	0°♏	
min. Earth dist.	179 Apr 02 j 05:00	9°♌25'43	4.40984 AU	evening set	185 Mar 25 j 18:08	14°♏06'03	
direct	179 Jun 02 j 14:55	4°♌34'32					
evening set	179 Oct 06 j 21:11	22°♌19'23		conjunction	185 Apr 08 j 07:55	17°♏19'00	-1°03'28
max. Earth dist.	179 Oct 17 j 13:02	24°♌40'57	6.36932 AU	minimum elong	185 Apr 08 j 07:57	17°♏19'01	1°03'27
				max. Earth dist.	185 Apr 10 j 12:09	17°♏50'00	6.00799 AU
conjunction	179 Oct 19 j 13:10	25°♌07'41	0°59'42	morning rise	185 Apr 22 j 00:14	20°♏33'10	
minimum elong	179 Oct 19 j 13:11	25°♌07'42	0°59'42		185 Jun 03 j 08:31	0°♏	
morning rise	179 Nov 01 j 03:15	27°♌55'15		retrograde	185 Aug 30 j 17:23	10°♏36'38	
	179 Nov 10 j 14:46	0°♌		min. Earth dist.	185 Oct 27 j 20:51	5°♏42'57	4.05788 AU
	180 Feb 16 j 18:08	15°♌		opposition	185 Oct 29 j 06:32	5°♏31'28	-1°16'07
retrograde	180 Mar 02 j 06:42	15°♌19'38		direct	185 Dec 26 j 12:41	0°♏33'34	
	180 Mar 16 j 18:31	15°♌			186 Apr 11 j 02:05	15°♏	
opposition	180 May 02 j 04:53	10°♌27'44	1°09'07	evening set	186 May 01 j 20:19	19°♏40'38	
min. Earth dist.	180 May 03 j 16:28	10°♌16'25	4.31681 AU				
direct	180 Jul 03 j 11:01	5°♌28'51		conjunction	186 May 15 j 14:30	22°♏50'36	-0°34'22
	180 Sep 26 j 18:51	15°♌		minimum elong	186 May 15 j 14:32	22°♏50'37	0°34'21
evening set	180 Nov 06 j 00:48	23°♌36'20		max. Earth dist.	186 May 17 j 16:22	23°♏19'18	6.11890 AU
max. Earth dist.	180 Nov 16 j 18:48	26°♌03'08	6.25384 AU	morning rise	186 May 29 j 09:54	26°♏00'51	
					186 Jun 16 j 03:32	0°♏	
conjunction	180 Nov 18 j 15:56	26°♌28'54	0°30'40	retrograde	186 Oct 03 j 17:50	15°♏01'13	
minimum elong	180 Nov 18 j 15:58	26°♌28'55	0°30'40	min. Earth dist.	186 Dec 01 j 04:50	10°♏06'48	4.18635 AU
morning rise	180 Dec 01 j 06:34	29°♌21'27		opposition	186 Dec 02 j 07:54	9°♏57'37	-0°21'53
	180 Dec 04 j 02:34	0°♌		direct	187 Jan 30 j 16:16	4°♏56'46	
retrograde	181 Apr 05 j 09:17	17°♌39'45		asc. node	187 Apr 27 j 01:52	14°♏54'58	
opposition	181 Jun 05 j 07:42	12°♌46'13	0°16'53	evening set	187 Jun 06 j 12:15	23°♏28'54	
min. Earth dist.	181 Jun 06 j 10:30	12°♌37'38	4.18566 AU				
direct	181 Aug 05 j 09:36	7°♌50'00		conjunction	187 Jun 20 j 05:23	26°♏32'26	0°05'32
desc. node	181 Sep 24 j 04:56	11°♌31'48		minimum elong	187 Jun 20 j 05:21	26°♏32'25	0°05'32
evening set	181 Dec 08 j 12:51	26°♌30'27		behind sun begin	187 Jun 19 j 21:22	26°♏27'59	
max. Earth dist.	181 Dec 20 j 03:35	29°♌13'51	6.11865 AU	behind sun end	187 Jun 20 j 13:21	26°♏36'52	
				max. Earth dist.	187 Jun 21 j 13:01	26°♏50'07	6.25484 AU
conjunction	181 Dec 21 j 06:24	29°♌29'38	-0°09'14	morning rise	187 Jul 03 j 21:21	29°♏35'11	
minimum elong	181 Dec 21 j 06:23	29°♌29'37	0°09'14		187 Jul 05 j 18:13	0°♏	
behind sun begin	181 Dec 20 j 23:34	29°♌25'38		retrograde	187 Nov 04 j 18:24	17°♏30'48	
behind sun end	181 Dec 21 j 13:11	29°♌33'36		opposition	188 Jan 03 j 12:15	12°♏30'44	0°36'07
	181 Dec 23 j 10:00	0°♏		min. Earth dist.	188 Jan 03 j 00:26	12°♏34'41	4.31706 AU
morning rise	182 Jan 03 j 00:51	2°♏29'35		direct	188 Mar 04 j 05:16	7°♏28'03	
retrograde	182 May 11 j 18:47	21°♏53'40		evening set	188 Jul 09 j 07:46	25°♏28'59	
opposition	182 Jul 11 j 09:11	16°♏57'08	-0°44'24				
min. Earth dist.	182 Jul 11 j 19:18	16°♏53'50	4.05687 AU	conjunction	188 Jul 22 j 18:28	28°♏25'01	0°42'01
direct	182 Sep 09 j 01:33	12°♏03'06		minimum elong	188 Jul 22 j 18:26	28°♏25'00	0°42'01
	183 Jan 06 j 13:12	0°♏		max. Earth dist.	188 Jul 22 j 21:59	28°♏26'57	6.37027 AU
evening set	183 Jan 11 j 23:40	1°♏17'33			188 Jul 30 j 00:19	0°♏	
				morning rise	188 Aug 05 j 02:49	1°♏19'43	
conjunction	183 Jan 24 j 22:16	4°♏23'44	-0°47'28		188 Oct 17 j 03:13	15°♏	
minimum elong	183 Jan 24 j 22:13	4°♏23'43	0°47'29	retrograde	188 Dec 04 j 09:45	18°♏28'52	
max. Earth dist.	183 Jan 24 j 23:15	4°♏24'20	6.00808 AU		189 Jan 22 j 04:38	15°♏	
morning rise	183 Feb 06 j 23:23	7°♏31'25		opposition	189 Feb 02 j 11:39	13°♏32'36	1°20'45
	183 Mar 11 j 10:29	15°♏		min. Earth dist.	189 Feb 02 j 17:40	13°♏30'37	4.40977 AU
retrograde	183 Jun 18 j 13:31	27°♏50'33		direct	189 Apr 05 j 09:08	8°♏29'19	
opposition	183 Aug 17 j 18:35	22°♏50'06	-1°32'13		189 Jun 14 j 11:57	15°♏	
min. Earth dist.	183 Aug 17 j 05:55	22°♏54'18	3.97669 AU	evening set	189 Aug 10 j 10:42	26°♏10'45	
direct	183 Oct 15 j 04:05	17°♏56'41					
	184 Jan 15 j 19:33	0°♏		conjunction	189 Aug 23 j 13:21	29°♏00'56	1°05'28
evening set	184 Feb 17 j 08:25	7°♏32'09		minimum elong	189 Aug 23 j 13:20	29°♏00'55	1°05'29
				max. Earth dist.	189 Aug 22 j 15:55	28°♏49'17	6.43290 AU
conjunction	184 Mar 01 j 14:19	10°♏43'32	-1°08'51		189 Aug 28 j 02:13	0°♏	
minimum elong	184 Mar 01 j 14:18	10°♏43'31	1°08'51	morning rise	189 Sep 05 j 12:49	1°♏49'35	
max. Earth dist.	184 Mar 02 j 21:58	11°♏02'37	5.96508 AU	retrograde	190 Jan 03 j 15:46	18°♏38'29	
morning rise	184 Mar 14 j 23:30	13°♏56'38		opposition	190 Mar 05 j 02:53	13°♏45'09	1°42'13
	184 May 31 j 10:31	0°♏		min. Earth dist.	190 Mar 06 j 00:53	13°♏38'04	4.43984 AU
retrograde	184 Jul 25 j 09:38	4°♏32'33		direct	190 May 06 j 17:22	8°♏42'35	
	184 Sep 19 j 07:47	30°♏		evening set	190 Sep 10 j 11:13	26°♏19'21	
min. Earth dist.	184 Sep 21 j 23:49	29°♏38'20	3.97714 AU	max. Earth dist.	190 Sep 21 j 13:06	28°♏44'06	6.42709 AU
opposition	184 Sep 23 j 04:38	29°♏28'34	-1°44'33				
direct	184 Nov 20 j 02:04	24°♏33'33		conjunction	190 Sep 23 j 06:47	29°♏06'53	1°10'45



minimum elong	190 Sep 23 j 06:48	29° $\mathbb{M}$ 06'53	1°10'44		196 May 07 j 11:26	0° $\Upsilon$	
	190 Sep 27 j 07:59	0° $\underline{\mathbf{a}}$		retrograde	196 Jul 30 j 13:56	9° $\Upsilon$ 45'05	
morning rise	190 Oct 05 j 23:48	1° $\underline{\mathbf{a}}$ 53'13		min. Earth dist.	196 Sep 27 j 01:34	4° $\Upsilon$ 51'01	3.98718 AU
retrograde	191 Feb 03 j 13:40	18° $\underline{\mathbf{a}}$ 49'49		opposition	196 Sep 28 j 07:45	4° $\Upsilon$ 40'47	-1°42'46
opposition	191 Apr 05 j 07:35	13° $\underline{\mathbf{a}}$ 57'58	1°36'13		196 Nov 13 j 09:15	30° $\mathbb{R}$ $\mathbb{H}$	
min. Earth dist.	191 Apr 06 j 17:11	13° $\underline{\mathbf{a}}$ 47'15	4.39929 AU	direct	196 Nov 25 j 05:00	29° $\mathbb{H}$ 45'26	
direct	191 Jun 07 j 00:56	8° $\underline{\mathbf{a}}$ 56'59			196 Dec 07 j 02:00	0° $\Upsilon$	
evening set	191 Oct 11 j 04:21	26° $\underline{\mathbf{a}}$ 44'35		evening set	197 Mar 30 j 22:55	19° $\Upsilon$ 14'12	
max. Earth dist.	191 Oct 21 j 19:32	29° $\underline{\mathbf{a}}$ 06'16	6.35436 AU				
				conjunction	197 Apr 13 j 13:21	22° $\Upsilon$ 26'47	-1°00'35
conjunction	191 Oct 23 j 20:10	29° $\underline{\mathbf{a}}$ 33'23	0°56'34	minimum elong	197 Apr 13 j 13:23	22° $\Upsilon$ 26'49	1°00'35
minimum elong	191 Oct 23 j 20:12	29° $\underline{\mathbf{a}}$ 33'24	0°56'34	max. Earth dist.	197 Apr 15 j 17:08	22° $\Upsilon$ 57'23	6.02320 AU
	191 Oct 25 j 19:54	0° $\mathbb{M}$		morning rise	197 Apr 27 j 06:30	25° $\Upsilon$ 40'33	
morning rise	191 Nov 05 j 10:05	2° $\mathbb{M}$ 21'29			197 May 16 j 01:14	0° $\mathbb{B}$	
	192 Jan 08 j 14:07	15° $\mathbb{M}$			197 Aug 16 j 15:05	15° $\mathbb{B}$	
retrograde	192 Mar 06 j 21:23	19° $\mathbb{M}$ 52'37		retrograde	197 Sep 04 j 12:11	15° $\mathbb{B}$ 35'13	
opposition	192 May 06 j 20:30	15° $\mathbb{M}$ 00'35	1°02'55		197 Sep 23 j 06:59	15° $\mathbb{R}$ $\mathbb{B}$	
	192 May 06 j 22:19	15° $\mathbb{R}$ $\mathbb{M}$		min. Earth dist.	197 Nov 01 j 16:37	10° $\mathbb{B}$ 41'35	4.07645 AU
min. Earth dist.	192 May 08 j 06:46	14° $\mathbb{M}$ 49'40	4.29844 AU	opposition	197 Nov 03 j 02:19	10° $\mathbb{B}$ 30'05	-1°09'36
direct	192 Jul 07 j 22:09	10° $\mathbb{M}$ 02'03		direct	197 Dec 31 j 11:35	5° $\mathbb{B}$ 31'43	
	192 Sep 05 j 07:13	15° $\mathbb{M}$			198 Mar 23 j 16:11	15° $\mathbb{B}$	
evening set	192 Nov 10 j 12:03	28° $\mathbb{M}$ 14'18		evening set	198 May 06 j 20:17	24° $\mathbb{B}$ 33'13	
	192 Nov 18 j 05:13	0° $\mathbb{Z}$					
max. Earth dist.	192 Nov 21 j 08:29	0° $\mathbb{Z}$ 43'09	6.23370 AU	conjunction	198 May 20 j 14:44	27° $\mathbb{B}$ 42'21	-0°29'09
				minimum elong	198 May 20 j 14:46	27° $\mathbb{B}$ 42'23	0°29'09
conjunction	192 Nov 23 j 03:21	1° $\mathbb{Z}$ 07'46	0°25'29	max. Earth dist.	198 May 22 j 15:00	28° $\mathbb{B}$ 10'01	6.13934 AU
minimum elong	192 Nov 23 j 03:23	1° $\mathbb{Z}$ 07'46	0°25'28		198 May 30 j 15:12	0° $\mathbb{H}$	
morning rise	192 Dec 05 j 18:19	4° $\mathbb{Z}$ 01'18		morning rise	198 Jun 03 j 09:51	0° $\mathbb{H}$ 51'35	
retrograde	193 Apr 10 j 10:24	22° $\mathbb{Z}$ 28'57		retrograde	198 Oct 08 j 06:56	19° $\mathbb{H}$ 42'02	
opposition	193 Jun 10 j 06:43	17° $\mathbb{Z}$ 35'08	0°08'21	opposition	198 Dec 06 j 20:24	14° $\mathbb{H}$ 38'55	-0°13'39
min. Earth dist.	193 Jun 11 j 08:28	17° $\mathbb{Z}$ 26'52	4.16521 AU	min. Earth dist.	198 Dec 05 j 19:54	14° $\mathbb{H}$ 47'12	4.20642 AU
desc. node	193 Aug 03 j 15:53	12° $\mathbb{Z}$ 43'22		direct	199 Feb 04 j 09:43	9° $\mathbb{H}$ 37'46	
direct	193 Aug 10 j 04:48	12° $\mathbb{Z}$ 39'16		asc. node	199 Mar 07 j 20:24	11° $\mathbb{H}$ 10'58	
	193 Dec 07 j 04:24	0° $\mathbb{Z}$		evening set	199 Jun 11 j 06:04	28° $\mathbb{H}$ 04'52	
evening set	193 Dec 13 j 06:27	1° $\mathbb{Z}$ 25'08			199 Jun 19 j 21:29	0° $\mathbb{G}$	
max. Earth dist.	193 Dec 25 j 00:50	4° $\mathbb{Z}$ 11'22	6.09992 AU	conjunction	199 Jun 24 j 22:29	1° $\mathbb{G}$ 07'21	0°11'00
				minimum elong	199 Jun 24 j 22:28	1° $\mathbb{G}$ 07'21	0°11'00
conjunction	193 Dec 26 j 00:34	4° $\mathbb{Z}$ 25'23	-0°15'04	behind sun begin	199 Jun 24 j 16:19	1° $\mathbb{G}$ 03'56	
minimum elong	193 Dec 26 j 00:33	4° $\mathbb{Z}$ 25'22	0°15'03	behind sun end	199 Jun 25 j 04:37	1° $\mathbb{G}$ 10'45	
behind sun begin	193 Dec 25 j 21:24	4° $\mathbb{Z}$ 23'31		max. Earth dist.	199 Jun 26 j 01:45	1° $\mathbb{G}$ 22'32	6.27293 AU
behind sun end	193 Dec 26 j 03:42	4° $\mathbb{Z}$ 27'13		morning rise	199 Jul 08 j 13:42	4° $\mathbb{G}$ 08'59	
morning rise	194 Jan 07 j 19:55	7° $\mathbb{Z}$ 26'31		retrograde	199 Nov 09 j 00:12	21° $\mathbb{G}$ 57'05	
retrograde	194 May 16 j 23:52	26° $\mathbb{Z}$ 59'39		opposition	200 Jan 07 j 19:26	16° $\mathbb{G}$ 57'34	0°43'19
opposition	194 Jul 16 j 14:16	22° $\mathbb{Z}$ 02'36	-0°52'32	min. Earth dist.	200 Jan 07 j 09:52	17° $\mathbb{G}$ 00'46	4.33195 AU
min. Earth dist.	194 Jul 16 j 20:10	22° $\mathbb{Z}$ 00'40	4.04199 AU	direct	200 Mar 08 j 15:53	11° $\mathbb{G}$ 54'44	
direct	194 Sep 14 j 00:47	17° $\mathbb{Z}$ 08'49		evening set	200 Jul 13 j 19:48	29° $\mathbb{G}$ 52'44	
	194 Dec 20 j 05:05	0° $\approx$			200 Jul 14 j 09:14	0° $\Omega$	
evening set	195 Jan 17 j 00:12	6° $\approx$ 27'03					
				conjunction	200 Jul 27 j 05:32	2° $\Omega$ 47'55	0°46'10
conjunction	195 Jan 29 j 23:38	9° $\approx$ 34'03	-0°51'49	minimum elong	200 Jul 27 j 05:29	2° $\Omega$ 47'53	0°46'09
minimum elong	195 Jan 29 j 23:36	9° $\approx$ 34'02	0°51'49	max. Earth dist.	200 Jul 27 j 05:28	2° $\Omega$ 47'53	6.38098 AU
max. Earth dist.	195 Jan 30 j 05:42	9° $\approx$ 37'42	5.99845 AU	morning rise	200 Aug 09 j 12:36	5° $\Omega$ 41'41	
morning rise	195 Feb 12 j 01:45	12° $\approx$ 42'36			200 Sep 24 j 08:25	15° $\Omega$	
	195 Feb 21 j 17:31	15° $\approx$		retrograde	200 Dec 08 j 14:43	22° $\Omega$ 47'09	
	195 May 09 j 19:35	0° $\mathbb{H}$		opposition	201 Feb 06 j 17:04	17° $\Omega$ 51'26	1°25'13
retrograde	195 Jun 23 j 22:15	3° $\mathbb{H}$ 06'15		min. Earth dist.	201 Feb 07 j 01:45	17° $\Omega$ 48'36	4.41580 AU
	195 Aug 08 j 07:58	30° $\mathbb{R}$ $\approx$		direct	201 Mar 02 j 00:32	15° $\mathbb{R}$ $\Omega$	
min. Earth dist.	195 Aug 22 j 10:18	28° $\approx$ 10'16	3.97354 AU		201 Apr 09 j 17:17	12° $\Omega$ 48'17	
opposition	195 Aug 23 j 01:36	28° $\approx$ 05'10	-1°36'23		201 May 18 j 18:59	15° $\Omega$	
direct	195 Oct 20 j 09:25	23° $\approx$ 11'37		evening set	201 Aug 12 j 12:48	0° $\mathbb{M}$	
	195 Dec 26 j 02:30	0° $\mathbb{H}$			201 Aug 14 j 18:49	0° $\mathbb{M}$ 29'02	
evening set	196 Feb 22 j 13:21	12° $\mathbb{H}$ 47'12					
				conjunction	201 Aug 27 j 20:21	3° $\mathbb{M}$ 18'45	1°07'19
conjunction	196 Mar 06 j 20:26	15° $\mathbb{H}$ 58'55	-1°09'45	minimum elong	201 Aug 27 j 20:19	3° $\mathbb{M}$ 18'44	1°07'19
minimum elong	196 Mar 06 j 20:25	15° $\mathbb{H}$ 58'55	1°09'45	max. Earth dist.	201 Aug 26 j 18:18	3° $\mathbb{M}$ 04'37	6.43366 AU
max. Earth dist.	196 Mar 08 j 09:19	16° $\mathbb{H}$ 21'08	5.96864 AU	morning rise	201 Sep 09 j 18:58	6° $\mathbb{M}$ 07'01	
morning rise	196 Mar 20 j 06:35	19° $\mathbb{H}$ 12'17					

retrograde	202 Jan 07 j 22:38	22° $\mathbb{M}$ 56'20		direct	207 Oct 25 j 10:59	28° $\approx$ 22'22	
opposition	202 Mar 09 j 09:50	18° $\mathbb{M}$ 03'20	1°43'01		207 Nov 25 j 15:22	0° $\mathbb{H}$	
min. Earth dist.	202 Mar 10 j 10:08	17° $\mathbb{M}$ 55'31	4.43565 AU	evening set	208 Feb 27 j 16:36	17° $\mathbb{H}$ 57'49	
direct	202 May 11 j 01:07	13° $\mathbb{M}$ 00'57					
	202 Sep 11 j 17:23	0° $\underline{\mathbb{L}}$		conjunction	208 Mar 12 j 00:33	21° $\mathbb{H}$ 09'47	-1°10'07
evening set	202 Sep 14 j 17:57	0° $\underline{\mathbb{L}}$ 39'18		minimum elong	208 Mar 12 j 00:33	21° $\mathbb{H}$ 09'47	1°10'06
max. Earth dist.	202 Sep 25 j 19:04	3° $\underline{\mathbb{L}}$ 03'58	6.41831 AU	max. Earth dist.	208 Mar 13 j 14:56	21° $\mathbb{H}$ 32'50	5.97263 AU
				morning rise	208 Mar 25 j 11:54	24° $\mathbb{H}$ 23'26	
conjunction	202 Sep 27 j 13:00	3° $\underline{\mathbb{L}}$ 26'56	1°09'53		208 Apr 18 j 14:06	0° $\mathbb{Y}$	
minimum elong	202 Sep 27 j 13:00	3° $\underline{\mathbb{L}}$ 26'56	1°09'52	retrograde	208 Aug 04 j 14:18	14° $\mathbb{Y}$ 53'07	
morning rise	202 Oct 10 j 05:14	6° $\underline{\mathbb{L}}$ 13'21		min. Earth dist.	208 Oct 02 j 00:44	9° $\mathbb{Y}$ 59'18	3.99613 AU
retrograde	203 Feb 07 j 23:19	23° $\underline{\mathbb{L}}$ 14'00		opposition	208 Oct 03 j 08:28	9° $\mathbb{Y}$ 48'30	-1°40'17
opposition	203 Apr 09 j 18:29	18° $\underline{\mathbb{L}}$ 22'16	1°33'05	direct	208 Nov 30 j 06:11	4° $\mathbb{Y}$ 52'45	
min. Earth dist.	203 Apr 11 j 03:56	18° $\underline{\mathbb{L}}$ 11'36	4.38661 AU	evening set	209 Apr 05 j 01:53	24° $\mathbb{Y}$ 18'32	
direct	203 Jun 11 j 09:30	13° $\underline{\mathbb{L}}$ 21'42					
	203 Oct 10 j 01:11	0° $\mathbb{M}$		conjunction	209 Apr 18 j 17:16	27° $\mathbb{Y}$ 30'55	-0°57'17
evening set	203 Oct 15 j 12:39	1° $\mathbb{M}$ 12'35		minimum elong	209 Apr 18 j 17:18	27° $\mathbb{Y}$ 30'56	0°57'17
max. Earth dist.	203 Oct 26 j 03:16	3° $\mathbb{M}$ 34'33	6.33882 AU	max. Earth dist.	209 Apr 20 j 22:06	28° $\mathbb{Y}$ 02'01	6.03636 AU
					209 Apr 29 j 07:03	0° $\mathbb{B}$	
conjunction	203 Oct 28 j 04:04	4° $\mathbb{M}$ 01'52	0°53'04	morning rise	209 May 02 j 10:52	0° $\mathbb{B}$ 44'16	
minimum elong	203 Oct 28 j 04:06	4° $\mathbb{M}$ 01'54	0°53'04		209 Jul 10 j 05:22	15° $\mathbb{B}$	
morning rise	203 Nov 09 j 18:02	6° $\mathbb{M}$ 50'37		retrograde	209 Sep 09 j 08:06	20° $\mathbb{B}$ 31'11	
	203 Dec 18 j 05:51	15° $\mathbb{M}$		opposition	209 Nov 07 j 20:47	15° $\mathbb{B}$ 26'10	-1°02'42
retrograde	204 Mar 11 j 15:43	24° $\mathbb{M}$ 28'44		min. Earth dist.	209 Nov 06 j 12:43	15° $\mathbb{B}$ 37'07	4.09217 AU
opposition	204 May 11 j 13:42	19° $\mathbb{M}$ 36'34	0°56'15		209 Nov 11 j 01:35	15° $\mathbb{R}$ $\mathbb{B}$	
min. Earth dist.	204 May 12 j 23:47	19° $\mathbb{M}$ 25'42	4.28087 AU	direct	210 Jan 05 j 09:52	10° $\mathbb{B}$ 27'21	
	204 Jun 27 j 05:28	15° $\mathbb{R}$ $\mathbb{M}$			210 Feb 28 j 22:10	15° $\mathbb{B}$	
direct	204 Jul 12 j 12:44	14° $\mathbb{M}$ 38'25		evening set	210 May 11 j 19:48	29° $\mathbb{B}$ 24'32	
	204 Jul 27 j 19:28	15° $\mathbb{M}$			210 May 14 j 10:11	0° $\mathbb{I}$	
	204 Nov 02 j 01:53	0° $\mathbb{X}$					
evening set	204 Nov 14 j 23:53	2° $\mathbb{X}$ 54'54		conjunction	210 May 25 j 14:19	2° $\mathbb{I}$ 32'58	-0°23'47
max. Earth dist.	204 Nov 25 j 23:00	5° $\mathbb{X}$ 25'53	6.21569 AU	minimum elong	210 May 25 j 14:21	2° $\mathbb{I}$ 32'59	0°23'47
				max. Earth dist.	210 May 27 j 12:21	2° $\mathbb{I}$ 59'14	6.15627 AU
conjunction	204 Nov 27 j 15:30	5° $\mathbb{X}$ 49'13	0°20'05	morning rise	210 Jun 08 j 09:19	5° $\mathbb{I}$ 41'21	
minimum elong	204 Nov 27 j 15:31	5° $\mathbb{X}$ 49'13	0°20'05	retrograde	210 Oct 12 j 17:42	24° $\mathbb{I}$ 23'08	
morning rise	204 Dec 10 j 06:51	8° $\mathbb{X}$ 43'41		min. Earth dist.	210 Dec 10 j 09:09	19° $\mathbb{I}$ 28'18	4.22300 AU
retrograde	205 Apr 15 j 09:05	27° $\mathbb{X}$ 19'52		opposition	210 Dec 11 j 08:31	19° $\mathbb{I}$ 20'24	-0°05'22
desc. node	205 Jun 13 j 07:26	22° $\mathbb{X}$ 40'40		asc. node	211 Jan 16 j 05:02	15° $\mathbb{I}$ 14'22	
opposition	205 Jun 15 j 06:10	22° $\mathbb{X}$ 25'39	-0°00'18	direct	211 Feb 09 j 00:44	14° $\mathbb{I}$ 18'55	
min. Earth dist.	205 Jun 16 j 04:38	22° $\mathbb{X}$ 18'26	4.14807 AU		211 Jun 03 j 15:15	0° $\mathbb{D}$	
direct	205 Aug 14 j 22:49	17° $\mathbb{X}$ 30'12		evening set	211 Jun 16 j 00:15	2° $\mathbb{D}$ 42'13	
	205 Nov 20 j 04:11	0° $\mathbb{Z}$					
evening set	205 Dec 18 j 00:03	6° $\mathbb{Z}$ 20'11		conjunction	211 Jun 29 j 15:58	5° $\mathbb{D}$ 43'46	0°16'26
				minimum elong	211 Jun 29 j 15:57	5° $\mathbb{D}$ 43'46	0°16'26
conjunction	205 Dec 30 j 18:37	9° $\mathbb{Z}$ 21'17	-0°20'47	max. Earth dist.	211 Jun 30 j 15:02	5° $\mathbb{D}$ 56'34	6.28793 AU
minimum elong	205 Dec 30 j 18:36	9° $\mathbb{Z}$ 21'16	0°20'48	morning rise	211 Jul 13 j 06:16	8° $\mathbb{D}$ 44'23	
max. Earth dist.	205 Dec 29 j 22:41	9° $\mathbb{Z}$ 09'29	6.08504 AU	retrograde	211 Nov 13 j 08:48	26° $\mathbb{D}$ 26'00	
morning rise	206 Jan 12 j 14:43	12° $\mathbb{Z}$ 23'23		opposition	212 Jan 12 j 03:50	21° $\mathbb{D}$ 27'02	0°50'21
	206 Apr 15 j 11:49	0° $\approx$		min. Earth dist.	212 Jan 11 j 21:30	21° $\mathbb{D}$ 29'08	4.34422 AU
retrograde	206 May 22 j 05:22	2° $\approx$ 04'08		direct	212 Mar 13 j 05:05	16° $\mathbb{D}$ 24'04	
	206 Jun 28 j 02:21	30° $\mathbb{R}$ $\mathbb{Z}$			212 Jun 27 j 23:44	0° $\mathbb{Q}$	
opposition	206 Jul 21 j 18:16	27° $\mathbb{Z}$ 06'31	-1°00'13	evening set	212 Jul 18 j 08:48	4° $\mathbb{Q}$ 19'39	
min. Earth dist.	206 Jul 21 j 21:36	27° $\mathbb{Z}$ 05'25	4.03062 AU				
direct	206 Sep 19 j 01:54	22° $\mathbb{Z}$ 12'50		conjunction	212 Jul 31 j 17:28	7° $\mathbb{Q}$ 14'03	0°50'06
	206 Nov 30 j 16:36	0° $\approx$		minimum elong	212 Jul 31 j 17:26	7° $\mathbb{Q}$ 14'02	0°50'06
evening set	207 Jan 21 j 23:35	11° $\approx$ 33'47		max. Earth dist.	212 Jul 31 j 13:40	7° $\mathbb{Q}$ 11'59	6.38950 AU
				morning rise	212 Aug 13 j 23:23	10° $\mathbb{Q}$ 07'00	
conjunction	207 Feb 04 j 00:01	14° $\approx$ 41'29	-0°55'44		212 Sep 06 j 01:22	15° $\mathbb{Q}$	
minimum elong	207 Feb 03 j 23:58	14° $\approx$ 41'28	0°55'44	retrograde	212 Dec 12 j 20:08	27° $\mathbb{Q}$ 09'24	
max. Earth dist.	207 Feb 04 j 11:09	14° $\approx$ 48'11	5.99158 AU	opposition	213 Feb 11 j 00:10	22° $\mathbb{Q}$ 14'06	1°29'17
	207 Feb 05 j 06:46	15° $\approx$		min. Earth dist.	213 Feb 11 j 10:36	22° $\mathbb{Q}$ 10'41	4.42048 AU
morning rise	207 Feb 17 j 03:04	17° $\approx$ 50'46		direct	213 Apr 14 j 02:13	17° $\mathbb{Q}$ 10'59	
	207 Apr 13 j 05:37	0° $\mathbb{H}$			213 Jul 27 j 02:45	0° $\mathbb{M}$	
retrograde	207 Jun 29 j 04:27	8° $\mathbb{H}$ 17'36		evening set	213 Aug 19 j 04:24	4° $\mathbb{M}$ 51'12	
opposition	207 Aug 28 j 06:08	3° $\mathbb{H}$ 16'01	-1°39'45	max. Earth dist.	213 Aug 31 j 01:30	7° $\mathbb{M}$ 25'34	6.43430 AU
min. Earth dist.	207 Aug 27 j 12:29	3° $\mathbb{H}$ 21'55	3.97222 AU				
	207 Sep 24 j 02:20	30° $\mathbb{R}$ $\approx$		conjunction	213 Sep 01 j 04:56	7° $\mathbb{M}$ 40'28	1°08'51

minimum elong	213 Sep 01 j 04:54	7° $\mathbb{M}$ 40'28	1°08'50	retrograde	219 Jul 04 j 04:40	13° $\mathbb{H}$ 18'37	
morning rise	213 Sep 14 j 02:24	10° $\mathbb{M}$ 28'17		min. Earth dist.	219 Sep 01 j 10:23	8° $\mathbb{H}$ 23'16	3.97167 AU
retrograde	214 Jan 12 j 06:10	27° $\mathbb{M}$ 17'51		opposition	219 Sep 02 j 06:24	8° $\mathbb{H}$ 16'33	-1°42'16
opposition	214 Mar 13 j 18:25	22° $\mathbb{M}$ 25'10	1°43'19	direct	219 Oct 30 j 08:55	3° $\mathbb{H}$ 22'42	
min. Earth dist.	214 Mar 14 j 20:04	22° $\mathbb{M}$ 16'56	4.43253 AU	evening set	220 Mar 03 j 16:07	22° $\mathbb{H}$ 58'13	
direct	214 May 15 j 10:53	17° $\mathbb{M}$ 23'04					
	214 Aug 26 j 07:43	0° $\mathbb{L}$		conjunction	220 Mar 17 j 01:18	26° $\mathbb{H}$ 10'32	-1°09'57
evening set	214 Sep 19 j 01:58	5° $\mathbb{L}$ 02'15		minimum elong	220 Mar 17 j 01:18	26° $\mathbb{H}$ 10'33	1°09'56
max. Earth dist.	214 Sep 30 j 00:04	7° $\mathbb{L}$ 25'38	6.41173 AU	max. Earth dist.	220 Mar 18 j 18:53	26° $\mathbb{H}$ 35'30	5.97623 AU
				morning rise	220 Mar 30 j 13:30	29° $\mathbb{H}$ 24'27	
conjunction	214 Oct 01 j 20:11	7° $\mathbb{L}$ 49'50	1°08'39		220 Apr 02 j 01:24	0° $\mathbb{Y}$	
minimum elong	214 Oct 01 j 20:12	7° $\mathbb{L}$ 49'51	1°08'39	retrograde	220 Aug 09 j 13:47	19° $\mathbb{Y}$ 51'23	
morning rise	214 Oct 14 j 12:00	10° $\mathbb{L}$ 36'20		min. Earth dist.	220 Oct 06 j 22:07	14° $\mathbb{Y}$ 57'16	4.00348 AU
retrograde	215 Feb 12 j 11:15	27° $\mathbb{L}$ 40'14		opposition	220 Oct 08 j 05:15	14° $\mathbb{Y}$ 46'40	-1°37'11
opposition	215 Apr 14 j 06:51	22° $\mathbb{L}$ 48'30	1°29'26	direct	220 Dec 05 j 04:33	9° $\mathbb{Y}$ 50'33	
min. Earth dist.	215 Apr 15 j 16:42	22° $\mathbb{L}$ 37'43	4.37709 AU	evening set	221 Apr 10 j 01:56	29° $\mathbb{Y}$ 14'29	
direct	215 Jun 15 j 21:00	17° $\mathbb{L}$ 48'14			221 Apr 13 j 07:48	0° $\mathbb{B}$	
	215 Sep 23 j 12:48	0° $\mathbb{M}$					
evening set	215 Oct 19 j 20:56	5° $\mathbb{M}$ 40'59		conjunction	221 Apr 23 j 18:04	2° $\mathbb{B}$ 26'45	-0°53'43
max. Earth dist.	215 Oct 30 j 13:26	8° $\mathbb{M}$ 04'23	6.32728 AU	minimum elong	221 Apr 23 j 18:07	2° $\mathbb{B}$ 26'47	0°53'42
				max. Earth dist.	221 Apr 25 j 22:42	2° $\mathbb{B}$ 57'38	6.04683 AU
conjunction	215 Nov 01 j 12:15	8° $\mathbb{M}$ 30'40	0°49'18	morning rise	221 May 07 j 12:23	5° $\mathbb{B}$ 39'56	
minimum elong	215 Nov 01 j 12:18	8° $\mathbb{M}$ 30'41	0°49'18		221 Jun 18 j 19:56	15° $\mathbb{B}$	
morning rise	215 Nov 14 j 01:59	11° $\mathbb{M}$ 19'49		retrograde	221 Sep 13 j 23:39	25° $\mathbb{B}$ 20'18	
	215 Nov 30 j 18:17	15° $\mathbb{M}$		min. Earth dist.	221 Nov 11 j 04:18	20° $\mathbb{B}$ 26'28	4.10472 AU
retrograde	216 Mar 16 j 07:07	29° $\mathbb{M}$ 03'32		opposition	221 Nov 12 j 12:22	20° $\mathbb{B}$ 15'32	-0°55'38
opposition	216 May 16 j 06:40	24° $\mathbb{M}$ 11'09	0°49'19	direct	222 Jan 10 j 02:47	15° $\mathbb{B}$ 16'22	
min. Earth dist.	216 May 17 j 14:59	24° $\mathbb{M}$ 00'51	4.26800 AU		222 Apr 27 j 23:26	0° $\mathbb{I}$	
direct	216 Jul 17 j 02:14	19° $\mathbb{M}$ 13'28		evening set	222 May 16 j 17:09	4° $\mathbb{I}$ 10'43	
	216 Oct 16 j 00:46	0° $\mathbb{X}$					
evening set	216 Nov 19 j 11:04	7° $\mathbb{X}$ 32'28		conjunction	222 May 30 j 11:41	7° $\mathbb{I}$ 18'34	-0°18'24
max. Earth dist.	216 Nov 30 j 11:52	10° $\mathbb{X}$ 04'56	6.20255 AU	minimum elong	222 May 30 j 11:43	7° $\mathbb{I}$ 18'35	0°18'24
				max. Earth dist.	222 Jun 01 j 06:27	7° $\mathbb{I}$ 42'55	6.17007 AU
conjunction	216 Dec 02 j 02:40	10° $\mathbb{X}$ 27'21	0°14'41	morning rise	222 Jun 13 j 06:32	10° $\mathbb{I}$ 26'16	
minimum elong	216 Dec 02 j 02:41	10° $\mathbb{X}$ 27'22	0°14'42	retrograde	222 Oct 17 j 05:35	29° $\mathbb{I}$ 00'55	
behind sun begin	216 Dec 01 j 23:08	10° $\mathbb{X}$ 25'19		asc. node	222 Nov 27 j 11:14	26° $\mathbb{I}$ 21'08	
behind sun end	216 Dec 02 j 06:14	10° $\mathbb{X}$ 29'24		opposition	222 Dec 15 j 19:36	23° $\mathbb{I}$ 58'39	0°02'44
morning rise	216 Dec 14 j 18:29	13° $\mathbb{X}$ 22'33		min. Earth dist.	222 Dec 14 j 22:56	24° $\mathbb{I}$ 05'37	4.23667 AU
	217 Mar 14 j 02:48	0° $\mathbb{Z}$		direct	223 Feb 13 j 16:36	18° $\mathbb{I}$ 56'55	
retrograde	217 Apr 20 j 07:08	2° $\mathbb{Z}$ 05'37			223 May 17 j 07:38	0° $\mathbb{D}$	
desc. node	217 Apr 24 j 12:07	2° $\mathbb{Z}$ 03'56		evening set	223 Jun 20 j 17:12	7° $\mathbb{D}$ 17'22	
	217 May 27 j 18:40	30° $\mathbb{R}$ $\mathbb{X}$					
opposition	217 Jun 20 j 03:47	27° $\mathbb{X}$ 10'59	-0°08'44	conjunction	223 Jul 04 j 08:20	10° $\mathbb{D}$ 18'07	0°21'40
min. Earth dist.	217 Jun 21 j 00:22	27° $\mathbb{X}$ 04'21	4.13545 AU	minimum elong	223 Jul 04 j 08:19	10° $\mathbb{D}$ 18'06	0°21'40
direct	217 Aug 19 j 17:24	22° $\mathbb{X}$ 15'47		max. Earth dist.	223 Jul 05 j 05:17	10° $\mathbb{D}$ 29'43	6.30059 AU
	217 Nov 01 j 08:50	0° $\mathbb{Z}$		morning rise	223 Jul 17 j 21:39	13° $\mathbb{D}$ 17'48	
evening set	217 Dec 22 j 15:21	11° $\mathbb{Z}$ 08'29			223 Oct 24 j 22:33	0° $\mathbb{Q}$	
				retrograde	223 Nov 17 j 14:31	0° $\mathbb{Q}$ 53'46	
conjunction	218 Jan 04 j 10:36	14° $\mathbb{Z}$ 10'18	-0°26'12		223 Dec 11 j 04:27	30° $\mathbb{R}$ $\mathbb{D}$	
minimum elong	218 Jan 04 j 10:35	14° $\mathbb{Z}$ 10'17	0°26'12	opposition	224 Jan 16 j 11:31	25° $\mathbb{D}$ 55'17	0°56'57
max. Earth dist.	218 Jan 03 j 18:48	14° $\mathbb{Z}$ 00'56	6.07415 AU	min. Earth dist.	224 Jan 16 j 06:16	25° $\mathbb{D}$ 57'02	4.35510 AU
morning rise	218 Jan 17 j 07:21	17° $\mathbb{Z}$ 13'11		direct	224 Mar 17 j 15:17	20° $\mathbb{D}$ 52'15	
	218 Mar 17 j 21:49	0° $\mathbb{W}$			224 Jun 10 j 00:26	0° $\mathbb{Q}$	
retrograde	218 May 27 j 07:19	6° $\mathbb{W}$ 59'57		evening set	224 Jul 22 j 21:10	8° $\mathbb{Q}$ 45'43	
opposition	218 Jul 26 j 18:52	2° $\mathbb{W}$ 01'53	-1°07'13				
min. Earth dist.	218 Jul 26 j 19:46	2° $\mathbb{W}$ 01'36	4.02263 AU	conjunction	224 Aug 05 j 04:39	11° $\mathbb{Q}$ 39'19	0°53'42
	218 Aug 11 j 17:59	30° $\mathbb{R}$ $\mathbb{Z}$		minimum elong	224 Aug 05 j 04:37	11° $\mathbb{Q}$ 39'17	0°53'43
direct	218 Sep 23 j 22:15	27° $\mathbb{Z}$ 08'21		max. Earth dist.	224 Aug 04 j 21:24	11° $\mathbb{Q}$ 35'21	6.39779 AU
	218 Nov 05 j 04:25	0° $\mathbb{W}$		morning rise	224 Aug 18 j 09:26	14° $\mathbb{Q}$ 31'27	
	219 Jan 20 j 10:51	15° $\mathbb{W}$			224 Aug 20 j 14:20	15° $\mathbb{Q}$	
evening set	219 Jan 26 j 19:48	16° $\mathbb{W}$ 31'05			224 Nov 15 j 20:23	0° $\mathbb{M}$	
				retrograde	224 Dec 17 j 02:32	1° $\mathbb{M}$ 30'46	
conjunction	219 Feb 08 j 20:56	19° $\mathbb{W}$ 39'21	-0°59'06		225 Jan 17 j 06:44	30° $\mathbb{R}$ $\mathbb{Q}$	
minimum elong	219 Feb 08 j 20:54	19° $\mathbb{W}$ 39'19	0°59'06	opposition	225 Feb 15 j 06:58	26° $\mathbb{Q}$ 35'52	1°32'48
max. Earth dist.	219 Feb 09 j 10:04	19° $\mathbb{W}$ 47'15	5.98697 AU	min. Earth dist.	225 Feb 15 j 20:03	26° $\mathbb{Q}$ 31'37	4.42563 AU
morning rise	219 Feb 22 j 01:08	22° $\mathbb{W}$ 49'17		direct	225 Apr 18 j 13:01	21° $\mathbb{Q}$ 32'49	
	219 Mar 25 j 01:52	0° $\mathbb{H}$			225 Jul 08 j 23:39	0° $\mathbb{M}$	

evening set	225 Aug 23 j 12:37	9°♎11'53		231 Jan 03 j 06:53	15°♏	
max. Earth dist.	225 Sep 04 j 06:00	11°♎44'18	6.43554 AU	evening set	231 Jan 31 j 20:17	21°♏38'36
conjunction	225 Sep 05 j 12:10	12°♎00'42	1°09'58	conjunction	231 Feb 13 j 22:37	24°♏47'44 -1°02'09
minimum elong	225 Sep 05 j 12:09	12°♎00'41	1°09'57	minimum elong	231 Feb 13 j 22:35	24°♏47'43 1°02'10
morning rise	225 Sep 18 j 08:42	14°♎48'05		max. Earth dist.	231 Feb 14 j 17:08	24°♏58'53 5.97866 AU
	225 Dec 14 j 21:01	0°♏		morning rise	231 Feb 27 j 03:48	27°♏58'30
retrograde	226 Jan 16 j 12:02	1°♏37'45			231 Mar 07 j 16:11	0°♐
	226 Feb 18 j 06:11	30°♎		retrograde	231 Jul 09 j 12:13	18°♐31'16
opposition	226 Mar 18 j 02:18	26°♎45'10	1°43'01	opposition	231 Sep 07 j 11:08	13°♐28'44 -1°44'06
min. Earth dist.	226 Mar 19 j 04:50	26°♎36'39	4.42973 AU	min. Earth dist.	231 Sep 06 j 13:45	13°♐35'56 3.96910 AU
direct	226 May 19 j 19:08	21°♎43'12		direct	231 Nov 04 j 12:20	8°♐34'42
	226 Aug 08 j 06:00	0°♏		evening set	232 Mar 08 j 21:09	28°♐10'51
evening set	226 Sep 23 j 08:16	9°♏22'52			232 Mar 16 j 11:53	0°♑
max. Earth dist.	226 Oct 04 j 05:54	11°♏46'15	6.40483 AU			
conjunction	226 Oct 06 j 01:55	12°♏10'28	1°07'02	conjunction	232 Mar 22 j 07:24	1°♑23'33 -1°09'13
minimum elong	226 Oct 06 j 01:57	12°♏10'29	1°07'02	minimum elong	232 Mar 22 j 07:25	1°♑23'33 1°09'14
morning rise	226 Oct 18 j 17:05	14°♏57'01		max. Earth dist.	232 Mar 24 j 03:26	1°♑49'54 5.97952 AU
	227 Jan 10 j 18:36	0°♎		morning rise	232 Apr 04 j 20:50	4°♑37'48
retrograde	227 Feb 16 j 21:04	2°♎04'21		retrograde	232 Aug 14 j 15:25	25°♑01'17
	227 Mar 26 j 07:50	30°♎		min. Earth dist.	232 Oct 11 j 21:28	20°♑07'40 4.01261 AU
opposition	227 Apr 18 j 18:02	27°♏12'37	1°25'17	opposition	232 Oct 13 j 06:31	19°♑56'24 -1°33'13
min. Earth dist.	227 Apr 20 j 04:28	27°♏01'40	4.36620 AU	direct	232 Dec 10 j 05:33	14°♑59'56
direct	227 Jun 20 j 07:15	22°♏12'40			233 Mar 27 j 07:08	0°♒
	227 Sep 05 j 03:09	0°♎		evening set	233 Apr 15 j 06:50	4°♒21'03
evening set	227 Oct 24 j 04:15	10°♎07'46		conjunction	233 Apr 28 j 23:36	7°♒32'58 -0°49'36
max. Earth dist.	227 Nov 03 j 19:20	12°♎30'56	6.31305 AU	minimum elong	233 Apr 28 j 23:39	7°♒33'00 0°49'35
conjunction	227 Nov 05 j 19:17	12°♎57'56	0°45'15	max. Earth dist.	233 May 01 j 03:54	8°♒03'33 6.06114 AU
minimum elong	227 Nov 05 j 19:19	12°♎57'57	0°45'15	morning rise	233 May 12 j 18:23	10°♒45'40
	227 Nov 14 j 20:09	15°♎			233 May 31 j 08:49	15°♒
morning rise	227 Nov 18 j 09:13	15°♎47'43		retrograde	233 Sep 05 j 12:19	0°♓
	228 Jan 31 j 04:05	0°♒			233 Sep 18 j 18:53	0°♓17'32
retrograde	228 Mar 20 j 23:48	3°♒38'12		min. Earth dist.	233 Oct 01 j 23:08	30°♒
	228 May 11 j 03:04	30°♎		opposition	233 Nov 16 j 00:37	25°♒23'26 4.12271 AU
opposition	228 May 20 j 23:18	28°♎45'32	0°42'02	opposition	233 Nov 17 j 07:23	25°♒12'57 -0°47'56
min. Earth dist.	228 May 22 j 06:47	28°♎35'29	4.25107 AU	direct	234 Jan 15 j 02:16	20°♒13'23
direct	228 Jul 21 j 15:54	23°♎48'06			234 Apr 09 j 13:16	0°♓
	228 Sep 26 j 02:06	0°♒		evening set	234 May 21 j 17:24	9°♓02'32
evening set	228 Nov 23 j 22:05	12°♒11'13		conjunction	234 Jun 04 j 11:53	12°♓09'27 -0°12'46
max. Earth dist.	228 Dec 05 j 02:33	14°♒46'21	6.18445 AU	minimum elong	234 Jun 04 j 11:54	12°♓09'27 0°12'46
conjunction	228 Dec 06 j 14:11	15°♒07'00	0°09'09	behind sun begin	234 Jun 04 j 06:50	12°♓06'36
minimum elong	228 Dec 06 j 14:11	15°♒07'01	0°09'09	behind sun end	234 Jun 04 j 16:58	12°♓12'19
behind sun begin	228 Dec 06 j 07:23	15°♒03'05		max. Earth dist.	234 Jun 06 j 06:17	12°♓33'28 6.19055 AU
behind sun end	228 Dec 06 j 21:00	15°♒10'56		morning rise	234 Jun 18 j 06:07	15°♓15'59
morning rise	228 Dec 19 j 06:23	18°♒03'11			234 Sep 02 j 10:19	0°♔
	229 Feb 13 j 23:45	0°♓		asc. node	234 Oct 07 j 18:12	3°♔21'39
desc. node	229 Mar 05 j 00:33	3°♓03'14		retrograde	234 Oct 21 j 15:51	3°♔40'40
retrograde	229 Apr 25 j 07:03	6°♓55'05			234 Dec 10 j 03:37	30°♒♓
opposition	229 Jun 25 j 02:41	2°♓00'03	-0°17'18	min. Earth dist.	234 Dec 19 j 11:45	28°♓45'33 4.25781 AU
min. Earth dist.	229 Jun 25 j 21:18	1°♓54'03	4.11753 AU	opposition	234 Dec 20 j 07:34	28°♓38'53 0°10'55
	229 Jul 11 j 01:38	30°♒♒		direct	235 Feb 18 j 08:34	23°♓36'55
direct	229 Aug 24 j 11:30	27°♒05'09			235 Apr 27 j 02:31	0°♔
	229 Oct 06 j 21:15	0°♓		evening set	235 Jun 25 j 10:21	11°♔51'45
evening set	229 Dec 27 j 08:59	16°♓02'37		conjunction	235 Jul 09 j 00:22	14°♔51'14 0°26'46
conjunction	230 Jan 09 j 04:45	19°♓05'23	-0°31'34	minimum elong	235 Jul 09 j 00:20	14°♔51'13 0°26'46
minimum elong	230 Jan 09 j 04:43	19°♓05'22	0°31'34	max. Earth dist.	235 Jul 09 j 16:38	15°♔00'12 6.32065 AU
max. Earth dist.	230 Jan 08 j 15:11	18°♓57'19	6.05790 AU	morning rise	235 Jul 22 j 12:39	17°♔49'36
morning rise	230 Jan 22 j 02:33	22°♓09'24			235 Sep 22 j 10:28	0°♕
	230 Feb 25 j 14:16	0°♏		retrograde	235 Nov 21 j 20:37	5°♕17'37
retrograde	230 Jun 01 j 11:40	12°♏04'20		opposition	236 Jan 20 j 18:26	0°♕19'39 1°03'07
opposition	230 Jul 31 j 22:26	7°♏05'39	-1°13'59	min. Earth dist.	236 Jan 20 j 16:26	0°♕20'18 4.37260 AU
min. Earth dist.	230 Jul 31 j 19:54	7°♏06'29	4.00972 AU		236 Jan 23 j 05:53	30°♒♔
direct	230 Sep 28 j 21:10	2°♏12'08		direct	236 Mar 22 j 04:06	25°♔16'30
					236 May 19 j 13:14	0°♕

evening set	236 Jul 27 j 06:54	13°Ω05'33		direct	241 Aug 29 j 04:45	1°♄56'40	
	236 Aug 05 j 02:19	15°Ω		evening set	242 Jan 01 j 04:20	21°♄01'14	
conjunction	236 Aug 09 j 13:19	15°Ω58'08	0°56'55	conjunction	242 Jan 14 j 01:08	24°♄05'19	-0°36'43
minimum elong	236 Aug 09 j 13:17	15°Ω58'07	0°56'55	minimum elong	242 Jan 14 j 01:06	24°♄05'18	0°36'42
max. Earth dist.	236 Aug 09 j 03:31	15°Ω52'48	6.41121 AU	max. Earth dist.	242 Jan 13 j 17:04	24°♄00'30	6.03726 AU
morning rise	236 Aug 22 j 16:41	18°Ω49'12		morning rise	242 Jan 26 j 23:50	27°♄10'40	
	236 Oct 18 j 16:09	0°♍			242 Feb 07 j 23:48	0°♍	
retrograde	236 Dec 21 j 03:30	5°♍44'13			242 Apr 29 j 13:18	15°♍	
opposition	237 Feb 19 j 10:59	0°♍49'41	1°35'41	retrograde	242 Jun 06 j 20:50	17°♍15'24	
min. Earth dist.	237 Feb 20 j 01:33	0°♍44'58	4.43427 AU		242 Jul 15 j 06:06	15°♍	
	237 Feb 25 j 20:53	30°♋Ω		opposition	242 Aug 06 j 04:26	12°♍16'12	-1°20'15
direct	237 Apr 22 j 19:02	25°Ω46'43		min. Earth dist.	242 Aug 05 j 23:33	12°♍17'49	3.99397 AU
	237 Jun 17 j 07:05	0°♍		direct	242 Oct 03 j 22:57	7°♍22'48	
evening set	237 Aug 27 j 17:31	13°♍23'45			242 Dec 14 j 06:34	15°♍	
max. Earth dist.	237 Sep 08 j 06:34	15°♍53'52	6.43854 AU	evening set	243 Feb 05 j 23:57	26°♍54'01	
					243 Feb 18 j 20:34	0°♋	
conjunction	237 Sep 09 j 15:58	16°♍12'01	1°10'39	conjunction	243 Feb 19 j 03:21	0°♋04'06	-1°04'43
minimum elong	237 Sep 09 j 15:57	16°♍12'01	1°10'39	minimum elong	243 Feb 19 j 03:19	0°♋04'04	1°04'43
morning rise	237 Sep 22 j 11:33	18°♍58'55		max. Earth dist.	243 Feb 20 j 01:57	0°♋17'44	5.96917 AU
	237 Nov 17 j 12:00	0°♌		morning rise	243 Mar 04 j 09:56	3°♋15'54	
retrograde	238 Jan 20 j 16:00	5°♌48'32		retrograde	243 Jul 14 j 20:34	23°♋51'55	
opposition	238 Mar 22 j 06:56	0°♌56'13	1°42'09	opposition	243 Sep 12 j 18:17	18°♋48'54	-1°45'03
min. Earth dist.	238 Mar 23 j 12:19	0°♌46'49	4.42682 AU	min. Earth dist.	243 Sep 11 j 17:09	18°♋57'22	3.96726 AU
	238 Mar 29 j 15:32	30°♋♍		direct	243 Nov 09 j 16:44	13°♋54'38	
direct	238 May 24 j 01:35	25°♍54'27			244 Feb 28 j 06:17	0°♎	
	238 Jul 17 j 13:39	0°♌		evening set	244 Mar 14 j 05:13	3°♎30'56	
evening set	238 Sep 27 j 11:15	13°♌34'58					
max. Earth dist.	238 Oct 08 j 05:17	15°♌56'45	6.39597 AU	conjunction	244 Mar 27 j 16:34	6°♎43'52	-1°07'53
conjunction	238 Oct 10 j 04:22	16°♌22'42	1°05'06	minimum elong	244 Mar 27 j 16:36	6°♎43'53	1°07'53
minimum elong	238 Oct 10 j 04:23	16°♌22'43	1°05'06	max. Earth dist.	244 Mar 29 j 15:26	7°♎11'52	5.98527 AU
morning rise	238 Oct 22 j 19:13	19°♌09'29		morning rise	244 Apr 10 j 07:01	9°♎58'16	
	238 Dec 15 j 18:17	0°♍			244 Aug 06 j 19:46	0°♎	
retrograde	239 Feb 21 j 04:55	6°♍21'23		retrograde	244 Aug 19 j 18:29	0°♎16'42	
opposition	239 Apr 23 j 02:40	1°♍29'36	1°20'47		244 Sep 01 j 15:35	30°♋♎	
min. Earth dist.	239 Apr 24 j 13:30	1°♍18'30	4.35180 AU	min. Earth dist.	244 Oct 16 j 23:47	25°♎22'58	4.02493 AU
	239 May 05 j 00:31	30°♋♌		opposition	244 Oct 18 j 09:13	25°♎11'33	-1°28'23
direct	239 Jun 24 j 13:27	26°♌29'54		direct	244 Dec 15 j 10:43	20°♎14'35	
	239 Aug 13 j 05:07	0°♍			245 Mar 08 j 06:17	0°♎	
evening set	239 Oct 28 j 09:08	14°♍28'54		evening set	245 Apr 20 j 13:12	9°♎31'29	
	239 Oct 30 j 16:34	15°♍					
max. Earth dist.	239 Nov 08 j 01:33	16°♍53'24	6.29425 AU	conjunction	245 May 04 j 06:41	12°♎42'53	-0°45'02
conjunction	239 Nov 10 j 00:17	17°♍19'50	0°41'02	minimum elong	245 May 04 j 06:43	12°♎42'55	0°45'02
minimum elong	239 Nov 10 j 00:19	17°♍19'51	0°41'03	max. Earth dist.	245 May 06 j 12:31	13°♎14'13	6.07876 AU
morning rise	239 Nov 22 j 14:14	20°♍10'27			245 May 14 j 02:43	15°♎	
	240 Jan 08 j 06:57	0°♎		morning rise	245 May 18 j 01:38	15°♎54'51	
retrograde	240 Mar 25 j 16:09	8°♎09'39			245 Jul 25 j 21:39	0°♏	
opposition	240 May 25 j 14:49	3°♎16'50	0°34'38	retrograde	245 Sep 23 j 13:38	5°♏16'37	
min. Earth dist.	240 May 26 j 22:12	3°♎06'49	4.22891 AU	min. Earth dist.	245 Nov 20 j 20:16	0°♏22'34	4.14330 AU
	240 Jun 22 j 17:40	30°♋♍		opposition	245 Nov 22 j 02:35	0°♏12'16	-0°39'50
direct	240 Jul 26 j 03:34	28°♍19'46			245 Nov 23 j 14:39	30°♋♎	
	240 Aug 28 j 06:18	0°♎		direct	246 Jan 20 j 01:12	25°♎12'17	
evening set	240 Nov 28 j 09:03	16°♎49'12			246 Mar 17 j 17:37	0°♏	
max. Earth dist.	240 Dec 09 j 14:24	19°♎25'43	6.16077 AU	evening set	246 May 26 j 17:53	13°♏55'29	
conjunction	240 Dec 11 j 01:29	19°♎46'10	0°03'37	conjunction	246 Jun 09 j 11:51	17°♏01'15	-0°07'01
minimum elong	240 Dec 11 j 01:28	19°♎46'09	0°03'37	minimum elong	246 Jun 09 j 11:52	17°♏01'15	0°07'00
behind sun begin	240 Dec 10 j 17:32	19°♎41'33		behind sun begin	246 Jun 09 j 04:10	16°♏56'56	
behind sun end	240 Dec 11 j 09:24	19°♎50'45		behind sun end	246 Jun 09 j 19:34	17°♏05'35	
morning rise	240 Dec 23 j 18:31	22°♎43'40		max. Earth dist.	246 Jun 11 j 02:01	17°♏22'46	6.21210 AU
desc. node	241 Jan 14 j 09:03	27°♎38'06		morning rise	246 Jun 23 j 05:39	20°♏06'36	
	241 Jan 25 j 07:42	0°♄			246 Aug 09 j 11:14	0°♄	
retrograde	241 Apr 30 j 08:01	11°♄46'47		asc. node	246 Aug 17 j 00:34	1°♄22'28	
opposition	241 Jun 30 j 02:07	6°♄51'19	-0°25'45	retrograde	246 Oct 26 j 03:08	8°♄21'24	
min. Earth dist.	241 Jun 30 j 17:46	6°♄46'15	4.09423 AU	opposition	246 Dec 24 j 19:54	3°♄20'04	0°19'04
				min. Earth dist.	246 Dec 24 j 02:45	3°♄25'49	4.27826 AU

	247 Jan 21 j 03:10	30° $\text{R}\text{II}$		minimum elong	252 Dec 15 j 17:28	24° $\text{X}$ 36'26	0°02'21
direct	247 Feb 23 j 02:41	28° $\text{II}$ 17'47		behind sun begin	252 Dec 15 j 09:28	24° $\text{X}$ 31'47	
	247 Mar 28 j 12:16	0° $\text{E}$		behind sun end	252 Dec 16 j 01:29	24° $\text{X}$ 41'06	
evening set	247 Jun 30 j 03:31	16° $\text{E}$ 27'28		morning rise	252 Dec 28 j 11:04	27° $\text{X}$ 35'05	
					253 Jan 07 j 22:07	0° $\text{Z}$	
conjunction	247 Jul 13 j 16:42	19° $\text{E}$ 25'49	0°31'47	retrograde	253 May 05 j 14:29	16° $\text{Z}$ 48'03	
minimum elong	247 Jul 13 j 16:40	19° $\text{E}$ 25'48	0°31'48	opposition	253 Jul 05 j 06:02	11° $\text{Z}$ 52'10	-0°34'23
max. Earth dist.	247 Jul 14 j 06:25	19° $\text{E}$ 33'21	6.33849 AU	min. Earth dist.	253 Jul 05 j 19:36	11° $\text{Z}$ 47'46	4.07636 AU
morning rise	247 Jul 27 j 03:37	22° $\text{E}$ 22'55		direct	253 Sep 03 j 04:23	6° $\text{Z}$ 57'52	
	247 Sep 01 j 16:17	0° $\text{O}$		evening set	254 Jan 06 j 03:04	26° $\text{Z}$ 07'11	
retrograde	247 Nov 26 j 02:17	9° $\text{O}$ 44'03					
opposition	248 Jan 25 j 02:07	4° $\text{O}$ 46'38	1°09'03	conjunction	254 Jan 19 j 00:34	29° $\text{Z}$ 12'13	-0°41'46
min. Earth dist.	248 Jan 25 j 02:01	4° $\text{O}$ 46'39	4.38667 AU	minimum elong	254 Jan 19 j 00:31	29° $\text{Z}$ 12'12	0°41'47
	248 Mar 13 j 06:58	30° $\text{R}\text{E}$		max. Earth dist.	254 Jan 18 j 20:17	29° $\text{Z}$ 09'40	6.02351 AU
direct	248 Mar 26 j 15:17	29° $\text{E}$ 43'26			254 Jan 22 j 08:18	0° $\approx$	
	248 Apr 09 j 02:18	0° $\text{O}$		morning rise	254 Feb 01 j 00:22	2° $\approx$ 18'38	
	248 Jul 20 j 02:05	15° $\text{O}$			254 Mar 31 j 08:09	15° $\approx$	
evening set	248 Jul 31 j 18:14	17° $\text{O}$ 29'23		retrograde	254 Jun 12 j 04:26	22° $\approx$ 29'58	
				opposition	254 Aug 11 j 11:45	17° $\approx$ 30'13	-1°26'00
conjunction	248 Aug 13 j 23:18	20° $\text{O}$ 21'05	0°59'55	min. Earth dist.	254 Aug 11 j 02:28	17° $\approx$ 33'18	3.98628 AU
minimum elong	248 Aug 13 j 23:16	20° $\text{O}$ 21'04	0°59'55		254 Aug 31 j 08:37	15° $\text{R}\approx$	
max. Earth dist.	248 Aug 13 j 08:10	20° $\text{O}$ 12'52	6.42036 AU	direct	254 Oct 09 j 01:33	12° $\approx$ 36'53	
morning rise	248 Aug 27 j 01:36	23° $\text{O}$ 11'19			254 Nov 16 j 06:23	15° $\approx$	
	248 Sep 28 j 21:40	0° $\text{M}$			255 Feb 02 j 02:39	0° $\text{H}$	
retrograde	248 Dec 25 j 09:59	10° $\text{M}$ 03'34		evening set	255 Feb 11 j 04:30	2° $\text{H}$ 09'46	
opposition	249 Feb 23 j 17:42	5° $\text{M}$ 09'26	1°38'13				
min. Earth dist.	249 Feb 24 j 11:39	5° $\text{M}$ 03'37	4.43817 AU	conjunction	255 Feb 24 j 08:56	5° $\text{H}$ 20'21	-1°06'49
direct	249 Apr 27 j 05:10	0° $\text{M}$ 06'30		minimum elong	255 Feb 24 j 08:54	5° $\text{H}$ 20'20	1°06'49
evening set	249 Sep 01 j 00:54	17° $\text{M}$ 42'55		max. Earth dist.	255 Feb 25 j 12:11	5° $\text{H}$ 36'48	5.96814 AU
max. Earth dist.	249 Sep 12 j 10:51	20° $\text{M}$ 11'28	6.43676 AU	morning rise	255 Mar 09 j 16:32	8° $\text{H}$ 32'39	
				retrograde	255 Jul 20 j 03:08	29° $\text{H}$ 08'17	
conjunction	249 Sep 13 j 22:34	20° $\text{M}$ 30'54	1°11'02	opposition	255 Sep 17 j 23:43	24° $\text{H}$ 04'47	-1°45'08
minimum elong	249 Sep 13 j 22:34	20° $\text{M}$ 30'54	1°11'02	min. Earth dist.	255 Sep 16 j 21:00	24° $\text{H}$ 13'49	3.97309 AU
morning rise	249 Sep 26 j 17:13	23° $\text{M}$ 17'31		direct	255 Nov 14 j 22:26	19° $\text{H}$ 10'12	
	249 Oct 28 j 22:03	0° $\text{A}$			256 Feb 09 j 23:26	0° $\text{Y}$	
retrograde	250 Jan 24 j 22:41	10° $\text{A}$ 08'40		evening set	256 Mar 19 j 10:59	8° $\text{Y}$ 43'58	
opposition	250 Mar 26 j 15:40	5° $\text{A}$ 16'29	1°40'48				
min. Earth dist.	250 Mar 27 j 21:41	5° $\text{A}$ 06'53	4.41967 AU	conjunction	256 Apr 01 j 23:25	11° $\text{Y}$ 56'49	-1°06'05
direct	250 May 28 j 09:12	0° $\text{A}$ 14'56		minimum elong	256 Apr 01 j 23:27	11° $\text{Y}$ 56'50	1°06'04
evening set	250 Oct 01 j 18:14	17° $\text{A}$ 57'24		max. Earth dist.	256 Apr 04 j 01:44	12° $\text{Y}$ 26'46	5.99727 AU
max. Earth dist.	250 Oct 12 j 11:09	20° $\text{A}$ 19'01	6.38396 AU	morning rise	256 Apr 15 j 14:37	15° $\text{Y}$ 11'00	
					256 Jun 25 j 14:55	0° $\text{B}$	
conjunction	250 Oct 14 j 10:49	20° $\text{A}$ 45'23	1°02'45	retrograde	256 Aug 24 j 17:57	5° $\text{B}$ 22'02	
minimum elong	250 Oct 14 j 10:51	20° $\text{A}$ 45'24	1°02'44	min. Earth dist.	256 Oct 21 j 22:23	0° $\text{B}$ 28'23	4.04171 AU
morning rise	250 Oct 27 j 01:19	23° $\text{A}$ 32'31		opposition	256 Oct 23 j 08:11	0° $\text{B}$ 16'52	-1°23'01
	250 Nov 26 j 10:18	0° $\text{M}$			256 Oct 25 j 09:41	30° $\text{R}\text{Y}$	
retrograde	251 Feb 25 j 19:05	10° $\text{M}$ 49'57		direct	256 Dec 20 j 11:16	25° $\text{Y}$ 19'31	
opposition	251 Apr 27 j 16:30	5° $\text{M}$ 58'10	1°15'37		257 Feb 13 j 09:35	0° $\text{B}$	
min. Earth dist.	251 Apr 29 j 04:30	5° $\text{M}$ 46'43	4.33553 AU	evening set	257 Apr 25 j 15:36	14° $\text{B}$ 31'04	
direct	251 Jun 29 j 01:52	0° $\text{M}$ 58'48			257 Apr 27 j 17:48	15° $\text{B}$	
	251 Oct 14 j 13:00	15° $\text{M}$					
evening set	251 Nov 01 j 18:56	19° $\text{M}$ 02'00		conjunction	257 May 09 j 09:15	17° $\text{B}$ 41'42	-0°40'18
max. Earth dist.	251 Nov 12 j 11:01	21° $\text{M}$ 26'59	6.27507 AU	minimum elong	257 May 09 j 09:18	17° $\text{B}$ 41'44	0°40'18
				max. Earth dist.	257 May 11 j 12:28	18° $\text{B}$ 11'21	6.09853 AU
conjunction	251 Nov 14 j 10:03	21° $\text{M}$ 53'42	0°36'23	morning rise	257 May 23 j 04:30	20° $\text{B}$ 52'50	
minimum elong	251 Nov 14 j 10:05	21° $\text{M}$ 53'43	0°36'23		257 Jul 04 j 01:47	0° $\text{II}$	
morning rise	251 Nov 27 j 00:22	24° $\text{M}$ 45'14		retrograde	257 Sep 28 j 03:31	10° $\text{II}$ 04'30	
	251 Dec 20 j 18:41	0° $\text{X}$		opposition	257 Nov 26 j 17:35	5° $\text{II}$ 00'28	-0°31'47
retrograde	252 Mar 30 j 12:50	12° $\text{X}$ 53'15		min. Earth dist.	257 Nov 25 j 12:50	5° $\text{II}$ 10'14	4.16395 AU
opposition	252 May 30 j 11:32	8° $\text{X}$ 00'09	0°26'36	direct	258 Jan 24 j 20:49	0° $\text{II}$ 00'05	
min. Earth dist.	252 May 31 j 16:34	7° $\text{X}$ 50'51	4.20819 AU	evening set	258 May 31 j 14:02	18° $\text{II}$ 37'49	
direct	252 Jul 30 j 18:57	3° $\text{X}$ 03'27					
desc. node	252 Nov 23 j 18:01	19° $\text{X}$ 30'18		conjunction	258 Jun 14 j 07:45	21° $\text{II}$ 42'35	-0°01'23
evening set	252 Dec 03 j 00:30	21° $\text{X}$ 38'25		minimum elong	258 Jun 14 j 07:44	21° $\text{II}$ 42'35	0°01'24
max. Earth dist.	252 Dec 14 j 10:51	24° $\text{X}$ 18'31	6.14054 AU	behind sun begin	258 Jun 13 j 23:23	21° $\text{II}$ 37'55	
				behind sun end	258 Jun 14 j 16:06	21° $\text{II}$ 47'15	
conjunction	252 Dec 15 j 17:28	24° $\text{X}$ 36'26	-0°02'20	max. Earth dist.	258 Jun 15 j 19:23	22° $\text{II}$ 02'36	6.23209 AU

asc. node	258 Jun 27 j 14:45	24° $\Pi$ 41'13	evening set	264 Dec 07 j 16:43	26° $\text{X}$ 30'09	
morning rise	258 Jun 28 j 00:39	24° $\Pi$ 46'44	max. Earth dist.	264 Dec 19 j 06:11	29° $\text{X}$ 12'40	6.12364 AU
	258 Jul 22 j 01:08	0° $\text{E}$				
retrograde	258 Oct 30 j 11:45	12° $\text{E}$ 52'49	conjunction	264 Dec 20 j 10:07	29° $\text{X}$ 29'04	-0°08'11
opposition	258 Dec 29 j 04:39	7° $\text{E}$ 52'06 0°26'50	minimum elong	264 Dec 20 j 10:06	29° $\text{X}$ 29'04	0°08'10
min. Earth dist.	258 Dec 28 j 14:02	7° $\text{E}$ 57'00 4.29587 AU	behind sun begin	264 Dec 20 j 02:58	29° $\text{X}$ 24'53	
direct	259 Feb 27 j 15:53	2° $\text{E}$ 49'41	behind sun end	264 Dec 20 j 17:15	29° $\text{X}$ 33'14	
evening set	259 Jul 04 j 17:27	20° $\text{E}$ 55'30		264 Dec 22 j 14:46	0° $\text{Z}$	
			morning rise	265 Jan 02 j 04:28	2° $\text{Z}$ 28'44	
conjunction	259 Jul 18 j 05:31	23° $\text{E}$ 52'51 0°36'29	retrograde	265 May 10 j 17:08	21° $\text{Z}$ 49'56	
minimum elong	259 Jul 18 j 05:29	23° $\text{E}$ 52'50 0°36'29	opposition	265 Jul 10 j 09:24	16° $\text{Z}$ 53'31	-0°42'45
max. Earth dist.	259 Jul 18 j 13:36	23° $\text{E}$ 57'17 6.35227 AU	min. Earth dist.	265 Jul 10 j 18:59	16° $\text{Z}$ 50'23	4.06250 AU
morning rise	259 Jul 31 j 15:28	26° $\text{E}$ 48'57	direct	265 Sep 08 j 02:15	11° $\text{Z}$ 59'25	
	259 Aug 15 j 11:01	0° $\Omega$		266 Jan 05 j 24:00	0° $\approx$	
retrograde	259 Nov 30 j 07:45	14° $\Omega$ 05'04	evening set	266 Jan 11 j 01:24	1° $\approx$ 12'03	
opposition	260 Jan 29 j 07:56	9° $\Omega$ 08'10 1°14'29				
min. Earth dist.	260 Jan 29 j 11:00	9° $\Omega$ 07'10 4.39599 AU	conjunction	266 Jan 23 j 23:40	4° $\approx$ 17'51	-0°46'29
direct	260 Mar 31 j 00:42	4° $\Omega$ 04'56	minimum elong	266 Jan 23 j 23:38	4° $\approx$ 17'49	0°46'29
	260 Jul 03 j 05:03	15° $\Omega$	max. Earth dist.	266 Jan 24 j 00:08	4° $\approx$ 18'07	6.01378 AU
evening set	260 Aug 05 j 03:14	21° $\Omega$ 49'24	morning rise	266 Feb 06 j 00:22	7° $\approx$ 25'05	
				266 Mar 11 j 00:08	15° $\approx$	
conjunction	260 Aug 18 j 07:23	24° $\Omega$ 40'32 1°02'32	retrograde	266 Jun 17 j 11:51	27° $\approx$ 41'19	
minimum elong	260 Aug 18 j 07:21	24° $\Omega$ 40'30 1°02'32	opposition	266 Aug 16 j 17:17	22° $\approx$ 40'57	-1°31'00
max. Earth dist.	260 Aug 17 j 13:59	24° $\Omega$ 31'05 6.42454 AU	min. Earth dist.	266 Aug 16 j 05:51	22° $\approx$ 44'45	3.98170 AU
morning rise	260 Aug 31 j 08:23	27° $\Omega$ 30'08	direct	266 Oct 14 j 05:26	17° $\approx$ 47'30	
	260 Sep 12 j 01:05	0° $\Pi$		267 Jan 15 j 13:57	0° $\text{X}$	
retrograde	260 Dec 29 j 14:27	14° $\Pi$ 21'27	evening set	267 Feb 16 j 07:12	7° $\text{X}$ 21'02	
opposition	261 Feb 27 j 23:43	9° $\Pi$ 27'44 1°40'12				
min. Earth dist.	261 Feb 28 j 19:10	9° $\Pi$ 21'27 4.43726 AU	conjunction	267 Mar 01 j 12:46	10° $\text{X}$ 32'03	-1°08'23
direct	261 May 01 j 11:45	4° $\Pi$ 25'00	minimum elong	267 Mar 01 j 12:45	10° $\text{X}$ 32'03	1°08'23
evening set	261 Sep 05 j 08:01	22° $\Pi$ 02'19	max. Earth dist.	267 Mar 02 j 20:41	10° $\text{X}$ 51'17	5.96901 AU
max. Earth dist.	261 Sep 16 j 13:44	24° $\Pi$ 28'55 6.43077 AU	morning rise	267 Mar 14 j 21:25	13° $\text{X}$ 44'45	
				267 Jun 01 j 18:14	0° $\Upsilon$	
conjunction	261 Sep 18 j 04:42	24° $\Pi$ 50'10 1°11'01	retrograde	267 Jul 25 j 07:08	4° $\Upsilon$ 19'03	
minimum elong	261 Sep 18 j 04:42	24° $\Pi$ 50'10 1°11'01		267 Sep 17 j 13:38	30° $\text{R}$ $\text{X}$	
morning rise	261 Sep 30 j 22:44	27° $\Pi$ 36'46	min. Earth dist.	267 Sep 21 j 22:15	29° $\text{X}$ 24'46	3.97959 AU
	261 Oct 12 j 01:17	0° $\underline{\Omega}$	opposition	267 Sep 23 j 02:33	29° $\text{X}$ 15'11	-1°44'25
retrograde	262 Jan 29 j 08:47	14° $\underline{\Omega}$ 30'51	direct	267 Nov 20 j 00:07	24° $\text{X}$ 20'17	
opposition	262 Mar 31 j 01:12	9° $\underline{\Omega}$ 38'52 1°38'53		268 Jan 19 j 08:21	0° $\Upsilon$	
min. Earth dist.	262 Apr 01 j 09:21	9° $\underline{\Omega}$ 28'36 4.40910 AU	evening set	268 Mar 24 j 14:57	13° $\Upsilon$ 51'37	
direct	262 Jun 01 j 19:00	4° $\underline{\Omega}$ 37'34				
evening set	262 Oct 06 j 01:46	22° $\underline{\Omega}$ 22'57	conjunction	268 Apr 07 j 04:10	17° $\Upsilon$ 04'19	-1°03'48
max. Earth dist.	262 Oct 16 j 18:13	24° $\underline{\Omega}$ 44'46 6.36967 AU	minimum elong	268 Apr 07 j 04:12	17° $\Upsilon$ 04'21	1°03'47
			max. Earth dist.	268 Apr 09 j 06:08	17° $\Upsilon$ 33'58	6.00851 AU
conjunction	262 Oct 18 j 18:07	25° $\underline{\Omega}$ 11'22 1°00'01	morning rise	268 Apr 20 j 20:19	20° $\Upsilon$ 18'21	
minimum elong	262 Oct 18 j 18:09	25° $\underline{\Omega}$ 11'23 1°00'01		268 Jun 03 j 09:19	0° $\text{B}$	
morning rise	262 Oct 31 j 08:21	27° $\underline{\Omega}$ 58'59	retrograde	268 Aug 29 j 13:56	10° $\text{B}$ 22'24	
	262 Nov 09 j 13:02	0° $\text{M}$	min. Earth dist.	268 Oct 26 j 18:52	5° $\text{B}$ 28'46	4.05640 AU
	263 Feb 14 j 19:41	15° $\text{M}$	opposition	268 Oct 28 j 04:45	5° $\text{B}$ 17'12	-1°17'11
retrograde	263 Mar 02 j 09:15	15° $\text{M}$ 22'42	direct	268 Dec 25 j 10:35	0° $\text{B}$ 19'22	
	263 Mar 18 j 00:18	15° $\text{R}$ $\text{M}$		269 Apr 11 j 00:12	15° $\text{B}$	
opposition	263 May 02 j 07:45	10° $\text{M}$ 30'49 1°09'57	evening set	269 Apr 30 j 16:34	19° $\text{B}$ 26'39	
min. Earth dist.	263 May 03 j 18:15	10° $\text{M}$ 19'50 4.31851 AU				
direct	263 Jul 03 j 12:57	5° $\text{M}$ 31'51	conjunction	269 May 14 j 10:45	22° $\text{B}$ 36'43	-0°35'22
	263 Sep 26 j 17:09	15° $\text{M}$	minimum elong	269 May 14 j 10:47	22° $\text{B}$ 36'44	0°35'21
evening set	263 Nov 06 j 05:46	23° $\text{M}$ 39'13	max. Earth dist.	269 May 16 j 13:04	23° $\text{B}$ 05'44	6.11560 AU
max. Earth dist.	263 Nov 17 j 00:26	26° $\text{M}$ 06'17 6.25682 AU	morning rise	269 May 28 j 05:55	25° $\text{B}$ 47'03	
				269 Jun 16 j 00:16	0° $\Pi$	
conjunction	263 Nov 18 j 20:56	26° $\text{M}$ 31'41 0°31'27	retrograde	269 Oct 02 j 18:38	14° $\Pi$ 49'45	
minimum elong	263 Nov 18 j 20:58	26° $\text{M}$ 31'42 0°31'27	min. Earth dist.	269 Nov 30 j 05:06	9° $\Pi$ 55'07	4.18146 AU
morning rise	263 Dec 01 j 11:29	29° $\text{M}$ 24'05	opposition	269 Dec 01 j 07:42	9° $\Pi$ 46'05	-0°23'36
	263 Dec 04 j 02:55	0° $\text{X}$	direct	270 Jan 29 j 15:20	4° $\Pi$ 45'22	
retrograde	264 Apr 04 j 12:34	17° $\text{X}$ 40'31	asc. node	270 May 07 j 23:37	17° $\Pi$ 09'49	
opposition	264 Jun 04 j 09:43	12° $\text{X}$ 47'07 0°18'18	evening set	270 Jun 05 j 09:51	23° $\Pi$ 18'46	
min. Earth dist.	264 Jun 05 j 13:41	12° $\text{X}$ 38'09 4.18979 AU				
direct	264 Aug 04 j 13:41	7° $\text{X}$ 50'47	conjunction	270 Jun 19 j 03:03	26° $\Pi$ 22'38	0°04'19
desc. node	264 Oct 03 j 04:34	13° $\text{X}$ 01'15	minimum elong	270 Jun 19 j 03:01	26° $\Pi$ 22'37	0°04'19

behind sun begin	270 Jun 18 j 18:50	26° $\Pi$ 18'03		opposition	276 Jun 09 j 06:37	17° $\Sigma$ 31'13	0°10'01
behind sun end	270 Jun 19 j 11:13	26° $\Pi$ 27'10		min. Earth dist.	276 Jun 10 j 07:35	17° $\Sigma$ 23'13	4.17618 AU
max. Earth dist.	270 Jun 20 j 10:36	26° $\Pi$ 40'16	6.24861 AU	direct	276 Aug 09 j 05:37	12° $\Sigma$ 35'18	
morning rise	270 Jul 02 j 19:23	29° $\Pi$ 25'47		desc. node	276 Aug 14 j 01:55	12° $\Sigma$ 37'32	
	270 Jul 05 j 09:10	0° $\Theta$			276 Dec 06 j 17:59	0° $\Xi$	
retrograde	270 Nov 03 j 19:45	17° $\Theta$ 24'28		evening set	276 Dec 12 j 07:23	1° $\Xi$ 17'34	
opposition	271 Jan 02 j 13:51	12° $\Theta$ 24'14	0°34'26	max. Earth dist.	276 Dec 24 j 00:41	4° $\Xi$ 02'46	6.11142 AU
min. Earth dist.	271 Jan 02 j 01:15	12° $\Theta$ 28'27	4.31014 AU				
direct	271 Mar 04 j 04:31	7° $\Theta$ 21'35		conjunction	276 Dec 25 j 01:08	4° $\Xi$ 17'11	-0°13'48
evening set	271 Jul 09 j 07:52	25° $\Theta$ 24'31		minimum elong	276 Dec 25 j 01:07	4° $\Xi$ 17'10	0°13'48
				behind sun begin	276 Dec 24 j 20:44	4° $\Xi$ 14'36	
conjunction	271 Jul 22 j 19:02	28° $\Theta$ 21'01	0°40'59	behind sun end	276 Dec 25 j 05:31	4° $\Xi$ 19'45	
minimum elong	271 Jul 22 j 18:59	28° $\Theta$ 21'00	0°40'59	morning rise	277 Jan 06 j 20:07	7° $\Xi$ 17'39	
max. Earth dist.	271 Jul 22 j 23:55	28° $\Theta$ 23'42	6.36332 AU	retrograde	277 May 15 j 19:16	26° $\Xi$ 45'37	
	271 Jul 30 j 07:54	0° $\Omega$		opposition	277 Jul 15 j 10:20	21° $\Xi$ 48'42	-0°50'34
morning rise	271 Aug 05 j 03:42	1° $\Omega$ 16'10		min. Earth dist.	277 Jul 15 j 17:52	21° $\Xi$ 46'14	4.05262 AU
	271 Oct 17 j 10:21	15° $\Omega$		direct	277 Sep 13 j 00:25	16° $\Xi$ 54'47	
retrograde	271 Dec 04 j 14:22	18° $\Omega$ 28'05			277 Dec 20 j 07:50	0° $\approx$	
	272 Jan 22 j 05:27	15° $\mathbb{R}$ $\Omega$		evening set	278 Jan 15 j 20:48	6° $\approx$ 09'32	
opposition	272 Feb 02 j 15:01	13° $\Omega$ 31'44	1°19'34				
min. Earth dist.	272 Feb 02 j 20:31	13° $\Omega$ 29'56	4.40324 AU	conjunction	278 Jan 28 j 19:55	9° $\approx$ 15'58	-0°50'42
direct	272 Apr 04 j 10:52	8° $\Omega$ 28'33		minimum elong	278 Jan 28 j 19:53	9° $\approx$ 15'57	0°50'42
	272 Jun 13 j 14:09	15° $\Omega$		max. Earth dist.	278 Jan 29 j 00:36	9° $\approx$ 18'47	6.00713 AU
evening set	272 Aug 09 j 13:43	26° $\Omega$ 11'59		morning rise	278 Feb 10 j 21:30	12° $\approx$ 23'54	
					278 Feb 21 j 21:31	15° $\approx$	
conjunction	272 Aug 22 j 16:41	29° $\Omega$ 02'33	1°04'51		278 May 11 j 09:33	0° $\mathbb{H}$	
minimum elong	272 Aug 22 j 16:39	29° $\Omega$ 02'32	1°04'52	retrograde	278 Jun 22 j 15:01	2° $\mathbb{H}$ 43'48	
max. Earth dist.	272 Aug 21 j 18:52	28° $\Omega$ 50'42	6.42737 AU		278 Aug 03 j 22:58	30° $\mathbb{R}$ $\approx$	
	272 Aug 27 j 02:31	0° $\mathbb{P}$		opposition	278 Aug 21 j 18:49	27° $\approx$ 42'58	-1°35'07
morning rise	272 Sep 04 j 16:45	1° $\mathbb{P}$ 51'38		min. Earth dist.	278 Aug 21 j 05:02	27° $\approx$ 47'34	3.97931 AU
retrograde	273 Jan 02 j 22:08	18° $\mathbb{P}$ 42'24		direct	278 Oct 19 j 03:34	22° $\approx$ 49'29	
opposition	273 Mar 04 j 07:41	13° $\mathbb{P}$ 49'02	1°41'41		278 Dec 26 j 22:20	0° $\mathbb{H}$	
min. Earth dist.	273 Mar 05 j 05:18	13° $\mathbb{P}$ 42'03	4.43592 AU	evening set	279 Feb 21 j 06:46	12° $\mathbb{H}$ 23'22	
direct	273 May 05 j 21:01	8° $\mathbb{P}$ 46'28					
evening set	273 Sep 09 j 16:10	26° $\mathbb{P}$ 24'30		conjunction	279 Mar 06 j 13:11	15° $\mathbb{H}$ 34'44	-1°09'22
max. Earth dist.	273 Sep 20 j 21:13	28° $\mathbb{P}$ 50'58	6.42551 AU	minimum elong	279 Mar 06 j 13:11	15° $\mathbb{H}$ 34'44	1°09'22
				max. Earth dist.	279 Mar 07 j 22:20	15° $\mathbb{H}$ 54'41	5.97080 AU
conjunction	273 Sep 22 j 12:14	29° $\mathbb{P}$ 12'18	1°10'38	morning rise	279 Mar 19 j 23:01	18° $\mathbb{H}$ 47'50	
minimum elong	273 Sep 22 j 12:15	29° $\mathbb{P}$ 12'18	1°10'37		279 May 09 j 04:48	0° $\mathbb{Y}$	
	273 Sep 26 j 03:31	0° $\underline{\Omega}$		retrograde	279 Jul 30 j 05:37	9° $\mathbb{Y}$ 20'35	
morning rise	273 Oct 05 j 05:23	1° $\underline{\Omega}$ 58'47		min. Earth dist.	279 Sep 26 j 19:28	4° $\mathbb{Y}$ 26'27	3.98550 AU
retrograde	274 Feb 02 j 18:13	18° $\underline{\Omega}$ 55'35		opposition	279 Sep 28 j 01:02	4° $\mathbb{Y}$ 16'25	-1°42'58
opposition	274 Apr 04 j 12:22	14° $\underline{\Omega}$ 03'46	1°36'25		279 Nov 05 j 13:42	30° $\mathbb{R}$ $\mathbb{H}$	
min. Earth dist.	274 Apr 05 j 20:14	13° $\underline{\Omega}$ 53'36	4.40051 AU	direct	279 Nov 24 j 22:19	29° $\mathbb{H}$ 21'11	
direct	274 Jun 06 j 04:31	9° $\underline{\Omega}$ 02'52			279 Dec 14 j 09:04	0° $\mathbb{Y}$	
evening set	274 Oct 10 j 10:10	26° $\underline{\Omega}$ 50'10		evening set	280 Mar 29 j 15:23	18° $\mathbb{Y}$ 50'49	
max. Earth dist.	274 Oct 21 j 01:52	29° $\underline{\Omega}$ 12'03	6.35851 AU				
				conjunction	280 Apr 12 j 05:42	22° $\mathbb{Y}$ 03'33	-1°01'09
conjunction	274 Oct 23 j 01:58	29° $\underline{\Omega}$ 38'51	0°56'58	minimum elong	280 Apr 12 j 05:45	22° $\mathbb{Y}$ 03'35	1°01'09
minimum elong	274 Oct 23 j 02:00	29° $\underline{\Omega}$ 38'52	0°56'58	max. Earth dist.	280 Apr 14 j 09:14	22° $\mathbb{Y}$ 34'02	6.01812 AU
	274 Oct 24 j 15:55	0° $\mathbb{M}$		morning rise	280 Apr 25 j 22:28	25° $\mathbb{Y}$ 17'26	
morning rise	274 Nov 04 j 16:05	2° $\mathbb{M}$ 26'52			280 May 16 j 09:37	0° $\mathbb{B}$	
	275 Jan 07 j 08:42	15° $\mathbb{M}$			280 Aug 21 j 21:25	15° $\mathbb{B}$	
retrograde	275 Mar 07 j 01:50	19° $\mathbb{M}$ 55'55		retrograde	280 Sep 03 j 09:47	15° $\mathbb{B}$ 15'31	
opposition	275 May 06 j 23:48	15° $\mathbb{M}$ 03'56	1°03'52		280 Sep 15 j 18:52	15° $\mathbb{R}$ $\mathbb{B}$	
	275 May 07 j 12:09	15° $\mathbb{R}$ $\mathbb{M}$		opposition	280 Nov 01 j 22:20	10° $\mathbb{B}$ 10'26	-1°11'03
min. Earth dist.	275 May 08 j 10:19	14° $\mathbb{M}$ 52'56	4.30538 AU	min. Earth dist.	280 Oct 31 j 13:52	10° $\mathbb{B}$ 21'31	4.06856 AU
direct	275 Jul 08 j 03:16	10° $\mathbb{M}$ 05'21		direct	280 Dec 30 j 07:04	5° $\mathbb{B}$ 12'13	
	275 Sep 05 j 04:26	15° $\mathbb{M}$			281 Mar 23 j 23:22	15° $\mathbb{B}$	
evening set	275 Nov 10 j 16:19	28° $\mathbb{M}$ 15'27		evening set	281 May 05 j 15:00	24° $\mathbb{B}$ 16'27	
	275 Nov 18 j 07:52	0° $\Sigma$					
max. Earth dist.	275 Nov 21 j 13:06	0° $\Sigma$ 44'10	6.24295 AU	conjunction	281 May 19 j 09:25	27° $\mathbb{B}$ 26'02	-0°30'20
				minimum elong	281 May 19 j 09:27	27° $\mathbb{B}$ 26'03	0°30'19
conjunction	275 Nov 23 j 07:38	1° $\Sigma$ 08'31	0°26'24	max. Earth dist.	281 May 21 j 09:46	27° $\mathbb{B}$ 53'49	6.12933 AU
minimum elong	275 Nov 23 j 07:40	1° $\Sigma$ 08'32	0°26'23		281 May 30 j 13:58	0° $\Pi$	
morning rise	275 Dec 05 j 22:25	4° $\Sigma$ 01'37		morning rise	281 Jun 02 j 04:45	0° $\Pi$ 35'48	
retrograde	276 Apr 09 j 08:21	22° $\Sigma$ 24'58		retrograde	281 Oct 07 j 05:58	19° $\Pi$ 31'00	



opposition	281 Dec 05 j 19:51	14° $\Pi$ 27'44	-0°15'32		287 Nov 02 j 12:23	0° $\text{♄}$	
min. Earth dist.	281 Dec 04 j 18:05	14° $\Pi$ 36'28	4.19556 AU	evening set	287 Nov 15 j 02:11	2° $\text{♄}$ 49'52	
direct	282 Feb 03 j 05:55	9° $\Pi$ 26'42		max. Earth dist.	287 Nov 25 j 23:52	5° $\text{♄}$ 19'45	6.22584 AU
asc. node	282 Mar 19 j 07:45	12° $\Pi$ 24'04					
evening set	282 Jun 10 j 04:17	27° $\Pi$ 57'05		conjunction	287 Nov 27 j 17:31	5° $\text{♄}$ 43'41	0°21'09
	282 Jun 19 j 09:14	0° $\text{♄}$		minimum elong	287 Nov 27 j 17:32	5° $\text{♄}$ 43'42	0°21'10
				morning rise	287 Dec 10 j 08:46	8° $\text{♄}$ 37'40	
conjunction	282 Jun 23 j 20:58	1° $\text{♄}$ 00'08	0°09'45	retrograde	288 Apr 14 j 06:30	27° $\text{♄}$ 09'23	
minimum elong	282 Jun 23 j 20:57	1° $\text{♄}$ 00'08	0°09'45	opposition	288 Jun 14 j 03:47	22° $\text{♄}$ 15'13	0°01'35
behind sun begin	282 Jun 23 j 14:13	0° $\text{♄}$ 56'23		min. Earth dist.	288 Jun 15 j 03:27	22° $\text{♄}$ 07'37	4.15813 AU
behind sun end	282 Jun 24 j 03:42	1° $\text{♄}$ 03'53		desc. node	288 Jun 24 j 13:05	20° $\text{♄}$ 56'02	
max. Earth dist.	282 Jun 25 j 01:05	1° $\text{♄}$ 15'50	6.26220 AU	direct	288 Aug 13 j 23:23	17° $\text{♄}$ 19'34	
morning rise	282 Jul 07 j 12:32	4° $\text{♄}$ 02'23			288 Nov 20 j 02:40	0° $\text{♄}$	
retrograde	282 Nov 08 j 04:46	21° $\text{♄}$ 54'44		evening set	288 Dec 16 j 22:51	6° $\text{♄}$ 06'30	
opposition	283 Jan 06 j 22:19	16° $\text{♄}$ 55'01	0°41'41				
min. Earth dist.	283 Jan 06 j 12:34	16° $\text{♄}$ 58'16	4.32218 AU	conjunction	288 Dec 29 j 17:19	9° $\text{♄}$ 07'07	-0°19'26
direct	283 Mar 08 j 17:36	11° $\text{♄}$ 52'14		minimum elong	288 Dec 29 j 17:18	9° $\text{♄}$ 07'06	0°19'26
evening set	283 Jul 13 j 21:30	29° $\text{♄}$ 52'46		max. Earth dist.	288 Dec 28 j 20:28	8° $\text{♄}$ 54'48	6.09415 AU
	283 Jul 14 j 10:49	0° $\text{♄}$		morning rise	289 Jan 11 j 13:00	12° $\text{♄}$ 08'39	
					289 Apr 17 j 05:14	0° $\text{♄}$	
conjunction	283 Jul 27 j 07:40	2° $\text{♄}$ 48'28	0°45'12	retrograde	289 May 20 j 23:06	1° $\text{♄}$ 45'11	
minimum elong	283 Jul 27 j 07:38	2° $\text{♄}$ 48'27	0°45'11		289 Jun 23 j 18:36	30° $\text{♄}$	
max. Earth dist.	283 Jul 27 j 09:14	2° $\text{♄}$ 49'19	6.37287 AU	opposition	289 Jul 20 j 12:40	26° $\text{♄}$ 47'48	-0°58'15
morning rise	283 Aug 09 j 15:15	5° $\text{♄}$ 42'46		min. Earth dist.	289 Jul 20 j 17:25	26° $\text{♄}$ 46'14	4.03785 AU
	283 Sep 24 j 06:54	15° $\text{♄}$		direct	289 Sep 17 j 21:41	21° $\text{♄}$ 54'03	
retrograde	283 Dec 08 j 19:23	22° $\text{♄}$ 50'51			289 Dec 01 j 05:51	0° $\text{♄}$	
opposition	284 Feb 06 j 21:48	17° $\text{♄}$ 54'52	1°24'07	evening set	290 Jan 20 j 19:23	11° $\text{♄}$ 13'01	
min. Earth dist.	284 Feb 07 j 04:53	17° $\text{♄}$ 52'33	4.40992 AU				
	284 Mar 01 j 17:43	15° $\text{♄}$		conjunction	290 Feb 02 j 19:18	14° $\text{♄}$ 20'19	-0°54'40
direct	284 Apr 08 j 19:50	12° $\text{♄}$ 51'40		minimum elong	290 Feb 02 j 19:15	14° $\text{♄}$ 20'18	0°54'39
	284 May 17 j 08:41	15° $\text{♄}$		max. Earth dist.	290 Feb 03 j 02:40	14° $\text{♄}$ 24'46	5.99604 AU
	284 Aug 11 j 08:15	0° $\text{♄}$			290 Feb 05 j 13:14	15° $\text{♄}$	
evening set	284 Aug 13 j 23:05	0° $\text{♄}$ 33'46		morning rise	290 Feb 15 j 22:05	17° $\text{♄}$ 29'14	
max. Earth dist.	284 Aug 26 j 01:48	3° $\text{♄}$ 11'08	6.43058 AU		290 Apr 13 j 23:13	0° $\text{♄}$	
				retrograde	290 Jun 27 j 20:15	7° $\text{♄}$ 54'22	
conjunction	284 Aug 27 j 01:02	3° $\text{♄}$ 23'45	1°06'46	opposition	290 Aug 26 j 23:28	2° $\text{♄}$ 53'00	-1°38'41
minimum elong	284 Aug 27 j 01:00	3° $\text{♄}$ 23'44	1°06'46	min. Earth dist.	290 Aug 26 j 06:46	2° $\text{♄}$ 58'35	3.97323 AU
morning rise	284 Sep 08 j 23:54	6° $\text{♄}$ 12'15			290 Sep 19 j 02:51	30° $\text{♄}$	
retrograde	285 Jan 07 j 04:08	23° $\text{♄}$ 02'09		direct	290 Oct 24 j 05:10	27° $\text{♄}$ 59'21	
opposition	285 Mar 08 j 15:03	18° $\text{♄}$ 09'01	1°42'35		290 Nov 28 j 00:19	0° $\text{♄}$	
min. Earth dist.	285 Mar 09 j 14:12	18° $\text{♄}$ 01'34	4.43541 AU	evening set	291 Feb 26 j 10:32	17° $\text{♄}$ 35'02	
direct	285 May 10 j 06:12	13° $\text{♄}$ 06'37					
	285 Sep 10 j 12:40	0° $\text{♄}$		conjunction	291 Mar 11 j 18:18	20° $\text{♄}$ 46'59	-1°09'51
evening set	285 Sep 13 j 23:11	0° $\text{♄}$ 44'39		minimum elong	291 Mar 11 j 18:18	20° $\text{♄}$ 46'59	1°09'50
max. Earth dist.	285 Sep 25 j 00:24	3° $\text{♄}$ 09'18	6.42091 AU	max. Earth dist.	291 Mar 13 j 08:09	21° $\text{♄}$ 09'45	5.97036 AU
				morning rise	291 Mar 25 j 05:07	24° $\text{♄}$ 00'35	
conjunction	285 Sep 26 j 18:20	3° $\text{♄}$ 32'15	1°09'50		291 Apr 19 j 23:19	0° $\text{♄}$	
minimum elong	285 Sep 26 j 18:21	3° $\text{♄}$ 32'15	1°09'50	retrograde	291 Aug 04 j 11:03	14° $\text{♄}$ 32'10	
morning rise	285 Oct 09 j 10:58	6° $\text{♄}$ 18'41		min. Earth dist.	291 Oct 01 j 21:42	9° $\text{♄}$ 37'59	3.99085 AU
retrograde	286 Feb 07 j 03:53	23° $\text{♄}$ 17'52		opposition	291 Oct 03 j 03:46	9° $\text{♄}$ 27'47	-1°40'40
opposition	286 Apr 08 j 22:28	18° $\text{♄}$ 26'01	1°33'23	direct	291 Nov 30 j 01:53	4° $\text{♄}$ 32'14	
min. Earth dist.	286 Apr 10 j 07:29	18° $\text{♄}$ 15'29	4.39184 AU	evening set	292 Apr 03 j 20:50	24° $\text{♄}$ 00'14	
direct	286 Jun 10 j 14:23	13° $\text{♄}$ 25'17					
	286 Oct 09 j 01:57	0° $\text{♄}$		conjunction	292 Apr 17 j 11:58	27° $\text{♄}$ 12'54	-0°57'56
evening set	286 Oct 14 j 17:01	1° $\text{♄}$ 14'25		minimum elong	292 Apr 17 j 12:00	27° $\text{♄}$ 12'55	0°57'55
max. Earth dist.	286 Oct 25 j 09:26	3° $\text{♄}$ 37'05	6.34631 AU	max. Earth dist.	292 Apr 19 j 16:24	27° $\text{♄}$ 43'48	6.02882 AU
					292 Apr 29 j 08:04	0° $\text{♄}$	
conjunction	286 Oct 27 j 08:41	4° $\text{♄}$ 03'29	0°53'36	morning rise	292 May 01 j 05:35	0° $\text{♄}$ 26'37	
minimum elong	286 Oct 27 j 08:43	4° $\text{♄}$ 03'30	0°53'36		292 Jul 10 j 14:24	15° $\text{♄}$	
morning rise	286 Nov 08 j 22:31	6° $\text{♄}$ 51'54		retrograde	292 Sep 08 j 06:17	20° $\text{♄}$ 17'36	
	286 Dec 17 j 09:44	15° $\text{♄}$		min. Earth dist.	292 Nov 05 j 09:58	15° $\text{♄}$ 24'01	4.08367 AU
retrograde	287 Mar 11 j 15:21	24° $\text{♄}$ 26'39		opposition	292 Nov 06 j 19:17	15° $\text{♄}$ 12'39	-1°04'09
opposition	287 May 11 j 14:42	19° $\text{♄}$ 34'29	0°57'25		292 Nov 08 j 08:24	15° $\text{♄}$	
min. Earth dist.	287 May 13 j 00:11	19° $\text{♄}$ 23'49	4.29015 AU	direct	293 Jan 04 j 05:45	10° $\text{♄}$ 14'05	
	287 Jun 26 j 13:01	15° $\text{♄}$			293 Mar 01 j 03:58	15° $\text{♄}$	
direct	287 Jul 12 j 14:36	14° $\text{♄}$ 36'15		evening set	293 May 10 j 17:23	29° $\text{♄}$ 14'06	
	287 Jul 28 j 17:24	15° $\text{♄}$			293 May 14 j 01:57	0° $\text{♄}$	

conjunction	293 May 24 j 11:54	2° $\Pi$ 22'56	-0°24'55	direct	299 Jul 17 j 00:30	19° $\mathbb{M}$ 02'01	
minimum elong	293 May 24 j 11:55	2° $\Pi$ 22'57	0°24'55		299 Oct 16 j 21:58	0° $\mathcal{A}$	
max. Earth dist.	293 May 26 j 10:18	2° $\Pi$ 49'29	6.14793 AU	evening set	299 Nov 19 j 10:20	7° $\mathcal{A}$ 21'03	
morning rise	293 Jun 07 j 07:02	5° $\Pi$ 31'46		max. Earth dist.	299 Nov 30 j 10:41	9° $\mathcal{A}$ 53'09	6.20359 AU
retrograde	293 Oct 11 j 20:48	24° $\Pi$ 17'24					
min. Earth dist.	293 Dec 09 j 10:50	19° $\Pi$ 22'30	4.21581 AU	conjunction	299 Dec 02 j 02:09	10° $\mathcal{A}$ 15'56	0°15'54
opposition	293 Dec 10 j 10:21	19° $\Pi$ 14'33	-0°07'11	minimum elong	299 Dec 02 j 02:10	10° $\mathcal{A}$ 15'56	0°15'55
asc. node	294 Jan 27 j 09:09	14° $\Pi$ 26'43		behind sun begin	299 Dec 02 j 00:25	10° $\mathcal{A}$ 14'56	
direct	294 Feb 08 j 01:55	14° $\Pi$ 13'14		behind sun end	299 Dec 02 j 03:55	10° $\mathcal{A}$ 16'57	
	294 Jun 02 j 22:57	0° $\mathcal{E}$		morning rise	299 Dec 14 j 17:46	13° $\mathcal{A}$ 11'02	
evening set	294 Jun 15 j 00:04	2° $\mathcal{E}$ 38'12			300 Mar 14 j 22:52	0° $\mathcal{Z}$	
				retrograde	300 Apr 19 j 04:07	1° $\mathcal{Z}$ 53'09	
conjunction	294 Jun 28 j 16:06	5° $\mathcal{E}$ 40'06	0°15'12	desc. node	300 May 06 j 02:33	1° $\mathcal{Z}$ 26'17	
minimum elong	294 Jun 28 j 16:05	5° $\mathcal{E}$ 40'05	0°15'13		300 May 24 j 15:01	30° $\mathcal{R}$ $\mathcal{A}$	
behind sun begin	294 Jun 28 j 13:51	5° $\mathcal{E}$ 38'51		opposition	300 Jun 19 j 00:07	26° $\mathcal{A}$ 58'41	-0°06'45
behind sun end	294 Jun 28 j 18:19	5° $\mathcal{E}$ 41'19		min. Earth dist.	300 Jun 19 j 22:09	26° $\mathcal{A}$ 51'36	4.13479 AU
max. Earth dist.	294 Jun 29 j 18:19	5° $\mathcal{E}$ 54'40	6.28265 AU	direct	300 Aug 18 j 14:20	22° $\mathcal{A}$ 03'21	
morning rise	294 Jul 12 j 06:38	8° $\mathcal{E}$ 41'03			300 Nov 01 j 08:53	0° $\mathcal{Z}$	
retrograde	294 Nov 12 j 10:40	26° $\mathcal{E}$ 24'43		evening set	300 Dec 21 j 14:50	10° $\mathcal{Z}$ 57'12	
opposition	295 Jan 11 j 06:57	21° $\mathcal{E}$ 25'31	0°48'40				
min. Earth dist.	295 Jan 10 j 22:20	21° $\mathcal{E}$ 28'23	4.34127 AU	conjunction	301 Jan 03 j 09:53	13° $\mathcal{Z}$ 59'04	-0°24'53
direct	295 Mar 13 j 05:45	16° $\mathcal{E}$ 22'38		minimum elong	301 Jan 03 j 09:51	13° $\mathcal{Z}$ 59'03	0°24'54
	295 Jun 28 j 03:34	0° $\Omega$		max. Earth dist.	301 Jan 02 j 15:10	13° $\mathcal{Z}$ 47'58	6.07170 AU
evening set	295 Jul 18 j 10:07	4° $\Omega$ 18'21		morning rise	301 Jan 16 j 06:40	17° $\mathcal{Z}$ 02'02	
					301 Mar 17 j 20:49	0° $\mathcal{A}$	
conjunction	295 Jul 31 j 18:59	7° $\Omega$ 12'52	0°49'05	retrograde	301 May 26 j 04:48	6° $\mathcal{A}$ 49'22	
minimum elong	295 Jul 31 j 18:56	7° $\Omega$ 12'51	0°49'05	opposition	301 Jul 25 j 16:22	1° $\mathcal{A}$ 51'24	-1°05'30
max. Earth dist.	295 Jul 31 j 16:34	7° $\Omega$ 11'33	6.38909 AU	min. Earth dist.	301 Jul 25 j 17:40	1° $\mathcal{A}$ 50'58	4.01848 AU
morning rise	295 Aug 14 j 01:17	10° $\Omega$ 05'59			301 Aug 09 j 04:50	30° $\mathcal{R}$ $\mathcal{Z}$	
	295 Sep 06 j 05:21	15° $\Omega$		direct	301 Sep 22 j 19:55	26° $\mathcal{Z}$ 57'45	
retrograde	295 Dec 12 j 23:37	27° $\Omega$ 08'24			301 Nov 05 j 10:30	0° $\mathcal{A}$	
opposition	296 Feb 11 j 02:56	22° $\Omega$ 12'55	1°28'04		302 Jan 20 j 01:27	15° $\mathcal{A}$	
min. Earth dist.	296 Feb 11 j 13:11	22° $\Omega$ 09'35	4.42219 AU	evening set	302 Jan 25 j 19:59	16° $\mathcal{A}$ 22'40	
direct	296 Apr 13 j 05:51	17° $\Omega$ 09'46					
	296 Jul 26 j 08:04	0° $\mathcal{M}$		conjunction	302 Feb 07 j 21:09	19° $\mathcal{A}$ 31'09	-0°58'12
evening set	296 Aug 18 j 05:42	4° $\mathcal{M}$ 48'50		minimum elong	302 Feb 07 j 21:07	19° $\mathcal{A}$ 31'08	0°58'12
max. Earth dist.	296 Aug 30 j 03:30	7° $\mathcal{M}$ 23'26	6.43769 AU	max. Earth dist.	302 Feb 08 j 10:44	19° $\mathcal{A}$ 39'21	5.98169 AU
				morning rise	302 Feb 21 j 01:00	22° $\mathcal{A}$ 41'13	
conjunction	296 Aug 31 j 06:33	7° $\mathcal{M}$ 38'06	1°08'16		302 Mar 24 j 15:12	0° $\mathcal{H}$	
minimum elong	296 Aug 31 j 06:31	7° $\mathcal{M}$ 38'05	1°08'15	retrograde	302 Jul 03 j 06:29	13° $\mathcal{H}$ 12'28	
morning rise	296 Sep 13 j 04:21	10° $\mathcal{M}$ 25'54		min. Earth dist.	302 Aug 31 j 11:45	8° $\mathcal{H}$ 16'53	3.96571 AU
retrograde	297 Jan 11 j 06:33	27° $\mathcal{M}$ 14'08		opposition	302 Sep 01 j 06:40	8° $\mathcal{H}$ 10'33	-1°41'28
opposition	297 Mar 12 j 19:25	22° $\mathcal{M}$ 21'14	1°42'52	direct	302 Oct 29 j 09:48	3° $\mathcal{H}$ 16'46	
min. Earth dist.	297 Mar 13 j 20:18	22° $\mathcal{M}$ 13'14	4.43704 AU	evening set	303 Mar 03 j 17:39	22° $\mathcal{H}$ 54'30	
direct	297 May 14 j 11:36	17° $\mathcal{M}$ 18'57					
	297 Aug 25 j 18:28	0° $\mathcal{A}$		conjunction	303 Mar 17 j 02:31	26° $\mathcal{H}$ 07'00	-1°09'44
evening set	297 Sep 18 j 02:30	4° $\mathcal{A}$ 56'38		minimum elong	303 Mar 17 j 02:31	26° $\mathcal{H}$ 07'00	1°09'43
max. Earth dist.	297 Sep 29 j 01:56	7° $\mathcal{A}$ 20'29	6.41676 AU	max. Earth dist.	303 Mar 18 j 19:41	26° $\mathcal{H}$ 31'43	5.97017 AU
				morning rise	303 Mar 30 j 14:41	29° $\mathcal{H}$ 21'08	
conjunction	297 Sep 30 j 21:02	7° $\mathcal{A}$ 44'07	1°08'41		303 Apr 02 j 08:03	0° $\mathcal{Y}$	
minimum elong	297 Sep 30 j 21:03	7° $\mathcal{A}$ 44'07	1°08'41	retrograde	303 Aug 09 j 16:02	19° $\mathcal{Y}$ 50'30	
morning rise	297 Oct 13 j 12:55	10° $\mathcal{A}$ 30'28		min. Earth dist.	303 Oct 06 j 23:38	14° $\mathcal{Y}$ 56'53	3.99810 AU
retrograde	298 Feb 11 j 09:44	27° $\mathcal{A}$ 32'24		opposition	303 Oct 08 j 08:21	14° $\mathcal{Y}$ 45'45	-1°37'26
opposition	298 Apr 13 j 05:32	22° $\mathcal{A}$ 40'38	1°29'57	direct	303 Dec 05 j 05:58	9° $\mathcal{Y}$ 49'45	
min. Earth dist.	298 Apr 14 j 15:58	22° $\mathcal{A}$ 29'40	4.38196 AU	evening set	304 Apr 09 j 04:34	29° $\mathcal{Y}$ 15'04	
direct	298 Jun 14 j 20:37	17° $\mathcal{A}$ 40'12			304 Apr 12 j 09:22	0° $\mathcal{B}$	
	298 Sep 23 j 05:36	0° $\mathcal{M}$					
evening set	298 Oct 18 j 20:50	5° $\mathcal{M}$ 31'51		conjunction	304 Apr 22 j 20:30	2° $\mathcal{B}$ 27'27	-0°54'10
max. Earth dist.	298 Oct 29 j 10:39	7° $\mathcal{M}$ 53'39	6.33126 AU	minimum elong	304 Apr 22 j 20:33	2° $\mathcal{B}$ 27'29	0°54'09
				max. Earth dist.	304 Apr 25 j 01:40	2° $\mathcal{B}$ 58'41	6.04257 AU
conjunction	298 Oct 31 j 12:08	8° $\mathcal{M}$ 21'24	0°50'01	morning rise	304 May 06 j 14:41	5° $\mathcal{B}$ 40'45	
minimum elong	298 Oct 31 j 12:10	8° $\mathcal{M}$ 21'25	0°50'00		304 Jun 17 j 19:28	15° $\mathcal{B}$	
morning rise	298 Nov 13 j 02:07	11° $\mathcal{M}$ 10'27		retrograde	304 Sep 13 j 04:41	25° $\mathcal{B}$ 23'01	
	298 Nov 30 j 12:09	15° $\mathcal{M}$		min. Earth dist.	304 Nov 10 j 09:19	20° $\mathcal{B}$ 29'03	4.10183 AU
retrograde	299 Mar 16 j 04:46	28° $\mathcal{M}$ 52'22		opposition	304 Nov 11 j 17:30	20° $\mathcal{B}$ 18'04	-0°56'41
opposition	299 May 16 j 03:28	24° $\mathcal{M}$ 00'00	0°50'47	direct	305 Jan 09 j 08:18	15° $\mathcal{B}$ 18'59	
min. Earth dist.	299 May 17 j 13:03	23° $\mathcal{M}$ 49'18	4.27064 AU		305 Apr 26 j 21:50	0° $\mathcal{H}$	

evening set	305 May 15 j 20:15	4° $\Pi$ 13'23		conjunction	310 Nov 04 j 20:49	12° $\mathbb{M}$ 51'30	0°45'59
				minimum elong	310 Nov 04 j 20:52	12° $\mathbb{M}$ 51'32	0°45'59
conjunction	305 May 29 j 14:50	7° $\Pi$ 21'17	-0°19'17		310 Nov 14 j 09:05	15° $\mathbb{M}$	
minimum elong	305 May 29 j 14:51	7° $\Pi$ 21'18	0°19'17	morning rise	310 Nov 17 j 10:43	15° $\mathbb{M}$ 41'17	
max. Earth dist.	305 May 31 j 12:48	7° $\Pi$ 47'27	6.16873 AU		311 Jan 31 j 00:59	0° $\mathcal{A}$	
morning rise	305 Jun 12 j 09:32	10° $\Pi$ 29'00		retrograde	311 Mar 20 j 23:37	3° $\mathcal{A}$ 31'09	
retrograde	305 Oct 16 j 09:40	29° $\Pi$ 04'17			311 May 10 j 03:30	30° $\mathbb{R}$ $\mathbb{M}$	
asc. node	305 Dec 06 j 09:28	25° $\Pi$ 11'18		opposition	311 May 20 j 22:13	28° $\mathbb{M}$ 38'40	0°43'29
min. Earth dist.	305 Dec 14 j 02:31	24° $\Pi$ 09'27	4.23697 AU	min. Earth dist.	311 May 22 j 07:18	28° $\mathbb{M}$ 28'07	4.25069 AU
opposition	305 Dec 15 j 01:03	24° $\Pi$ 01'51	0°01'17	direct	311 Jul 21 j 15:39	23° $\mathbb{M}$ 41'09	
direct	306 Feb 12 j 20:38	19° $\Pi$ 00'13			311 Sep 26 j 18:15	0° $\mathcal{A}$	
	306 May 16 j 05:37	0° $\mathcal{E}$		evening set	311 Nov 23 j 23:58	12° $\mathcal{A}$ 05'26	
evening set	306 Jun 19 j 20:07	7° $\mathcal{E}$ 19'35		max. Earth dist.	311 Dec 05 j 01:32	14° $\mathcal{A}$ 39'01	6.18276 AU
conjunction	306 Jul 03 j 11:08	10° $\mathcal{E}$ 20'16	0°20'38	conjunction	311 Dec 06 j 15:58	15° $\mathcal{A}$ 01'18	0°10'17
minimum elong	306 Jul 03 j 11:07	10° $\mathcal{E}$ 20'15	0°20'37	minimum elong	311 Dec 06 j 15:59	15° $\mathcal{A}$ 01'19	0°10'17
max. Earth dist.	306 Jul 04 j 08:17	10° $\mathcal{E}$ 31'57	6.30233 AU	behind sun begin	311 Dec 06 j 09:35	14° $\mathcal{A}$ 57'37	
morning rise	306 Jul 17 j 00:43	13° $\mathcal{E}$ 19'56		behind sun end	311 Dec 06 j 22:22	15° $\mathcal{A}$ 05'00	
	306 Oct 23 j 16:31	0° $\mathcal{Q}$		morning rise	311 Dec 19 j 08:20	17° $\mathcal{A}$ 57'35	
retrograde	306 Nov 16 j 19:29	0° $\mathcal{Q}$ 55'35			312 Feb 14 j 13:27	0° $\mathcal{Z}$	
	306 Dec 10 j 18:06	30° $\mathbb{R}$ $\mathcal{E}$		desc. node	312 Mar 15 j 09:27	4° $\mathcal{Z}$ 25'27	
opposition	307 Jan 15 j 16:17	25° $\mathcal{E}$ 56'54	0°55'29	retrograde	312 Apr 24 j 07:05	6° $\mathcal{Z}$ 49'46	
min. Earth dist.	307 Jan 15 j 11:12	25° $\mathcal{E}$ 58'36	4.35797 AU	opposition	312 Jun 24 j 02:15	1° $\mathcal{Z}$ 54'55	-0°15'32
direct	307 Mar 17 j 20:59	20° $\mathcal{E}$ 53'51		min. Earth dist.	312 Jun 24 j 21:07	1° $\mathcal{Z}$ 48'49	4.11479 AU
	307 Jun 10 j 01:31	0° $\mathcal{Q}$			312 Jul 09 j 08:02	30° $\mathbb{R}$ $\mathcal{A}$	
evening set	307 Jul 22 j 23:17	8° $\mathcal{Q}$ 45'42		direct	312 Aug 23 j 10:57	26° $\mathcal{A}$ 59'56	
					312 Oct 06 j 13:15	0° $\mathcal{Z}$	
conjunction	307 Aug 05 j 07:08	11° $\mathcal{Q}$ 39'16	0°52'48	evening set	312 Dec 26 j 11:35	15° $\mathcal{Z}$ 59'17	
minimum elong	307 Aug 05 j 07:06	11° $\mathcal{Q}$ 39'14	0°52'49				
max. Earth dist.	307 Aug 05 j 01:47	11° $\mathcal{Q}$ 36'21	6.40147 AU	conjunction	313 Jan 08 j 07:29	19° $\mathcal{Z}$ 02'14	-0°30'26
morning rise	307 Aug 18 j 12:03	14° $\mathcal{Q}$ 31'20		minimum elong	313 Jan 08 j 07:27	19° $\mathcal{Z}$ 02'13	0°30'25
	307 Aug 20 j 17:12	15° $\mathcal{Q}$		max. Earth dist.	313 Jan 07 j 18:34	18° $\mathcal{Z}$ 54'33	6.05470 AU
	307 Nov 16 j 03:30	0° $\mathbb{M}$		morning rise	313 Jan 21 j 04:59	22° $\mathcal{Z}$ 06'19	
retrograde	307 Dec 17 j 03:53	1° $\mathbb{M}$ 29'39			313 Feb 24 j 21:39	0° $\approx$	
	308 Jan 17 j 04:25	30° $\mathbb{R}$ $\mathcal{Q}$		retrograde	313 May 31 j 14:30	12° $\approx$ 02'04	
opposition	308 Feb 15 j 09:53	26° $\mathcal{Q}$ 34'35	1°31'44	opposition	313 Jul 30 j 23:40	7° $\approx$ 03'37	-1°12'31
min. Earth dist.	308 Feb 15 j 21:43	26° $\mathcal{Q}$ 30'44	4.42974 AU	min. Earth dist.	313 Jul 30 j 22:21	7° $\approx$ 04'02	4.00650 AU
direct	308 Apr 17 j 14:47	21° $\mathcal{Q}$ 31'30		direct	313 Sep 27 j 23:11	2° $\approx$ 10'11	
	308 Jul 08 j 06:05	0° $\mathbb{M}$			314 Jan 02 j 11:40	15° $\approx$	
evening set	308 Aug 22 j 14:17	9° $\mathbb{M}$ 09'04		evening set	314 Jan 30 j 23:37	21° $\approx$ 38'10	
max. Earth dist.	308 Sep 03 j 07:41	11° $\mathbb{M}$ 41'21	6.43976 AU				
conjunction	308 Sep 04 j 14:00	11° $\mathbb{M}$ 57'48	1°09'29	conjunction	314 Feb 13 j 01:39	24° $\approx$ 47'20	-1°01'24
minimum elong	308 Sep 04 j 13:59	11° $\mathbb{M}$ 57'48	1°09'28	minimum elong	314 Feb 13 j 01:37	24° $\approx$ 47'19	1°01'24
morning rise	308 Sep 17 j 10:49	14° $\mathbb{M}$ 45'08		max. Earth dist.	314 Feb 13 j 19:08	24° $\approx$ 57'53	5.97580 AU
	308 Dec 14 j 15:54	0° $\mathcal{L}$		morning rise	314 Feb 26 j 06:46	27° $\approx$ 58'12	
retrograde	309 Jan 15 j 14:00	1° $\mathcal{L}$ 33'31			314 Mar 06 j 19:25	0° $\mathcal{H}$	
	309 Feb 16 j 13:30	30° $\mathbb{R}$ $\mathbb{M}$		retrograde	314 Jul 08 j 13:55	18° $\mathcal{H}$ 31'37	
opposition	309 Mar 17 j 03:32	26° $\mathbb{M}$ 40'55	1°42'42	opposition	314 Sep 06 j 13:52	13° $\mathcal{H}$ 29'12	-1°43'26
min. Earth dist.	309 Mar 18 j 07:07	26° $\mathbb{M}$ 32'04	4.43358 AU	min. Earth dist.	314 Sep 05 j 15:09	13° $\mathcal{H}$ 36'50	3.96702 AU
direct	309 May 18 j 21:33	21° $\mathbb{M}$ 38'51		direct	314 Nov 03 j 14:27	8° $\mathcal{H}$ 35'16	
	309 Aug 07 j 17:37	0° $\mathcal{L}$		evening set	315 Mar 09 j 00:12	28° $\mathcal{H}$ 11'51	
evening set	309 Sep 22 j 09:28	9° $\mathcal{L}$ 17'35			315 Mar 16 j 13:14	0° $\mathcal{Y}$	
max. Earth dist.	309 Oct 03 j 05:29	11° $\mathcal{L}$ 39'58	6.40790 AU	conjunction	315 Mar 22 j 10:08	1° $\mathcal{Y}$ 24'26	-1°09'06
				minimum elong	315 Mar 22 j 10:09	1° $\mathcal{Y}$ 24'27	1°09'06
conjunction	309 Oct 05 j 03:21	12° $\mathcal{L}$ 05'09	1°07'09	max. Earth dist.	315 Mar 24 j 06:22	1° $\mathcal{Y}$ 50'57	5.97831 AU
minimum elong	309 Oct 05 j 03:22	12° $\mathcal{L}$ 05'10	1°07'09	morning rise	315 Apr 04 j 23:13	4° $\mathcal{Y}$ 38'36	
morning rise	309 Oct 17 j 18:49	14° $\mathcal{L}$ 51'41		retrograde	315 Aug 14 j 18:30	25° $\mathcal{Y}$ 02'35	
	310 Jan 10 j 19:15	0° $\mathbb{M}$		min. Earth dist.	315 Oct 12 j 01:29	20° $\mathcal{Y}$ 08'48	4.01199 AU
retrograde	310 Feb 15 j 20:56	1° $\mathbb{M}$ 57'57		opposition	315 Oct 13 j 10:22	19° $\mathcal{Y}$ 57'35	-1°33'32
	310 Mar 24 j 06:22	30° $\mathbb{R}$ $\mathcal{L}$		direct	315 Dec 10 j 10:24	15° $\mathcal{Y}$ 01'10	
opposition	310 Apr 17 j 17:36	27° $\mathcal{L}$ 06'11	1°25'55		316 Mar 26 j 08:11	0° $\mathcal{B}$	
min. Earth dist.	310 Apr 19 j 04:18	26° $\mathcal{L}$ 55'08	4.36828 AU	evening set	316 Apr 14 j 08:58	4° $\mathcal{B}$ 21'43	
direct	310 Jun 19 j 06:39	22° $\mathcal{L}$ 06'03					
	310 Sep 04 j 18:18	0° $\mathbb{M}$		conjunction	316 Apr 28 j 01:37	7° $\mathcal{B}$ 33'33	-0°50'07
evening set	310 Oct 23 j 05:31	10° $\mathbb{M}$ 01'18		minimum elong	316 Apr 28 j 01:40	7° $\mathcal{B}$ 33'35	0°50'06
max. Earth dist.	310 Nov 02 j 20:54	12° $\mathbb{M}$ 24'31	6.31394 AU	max. Earth dist.	316 Apr 30 j 08:01	8° $\mathcal{B}$ 05'21	6.06087 AU

morning rise	316 May 11 j 20:05	10° <b>8</b> 46'09		conjunction	321 Oct 09 j 10:09	16° <b>2</b> 28'34	1°05'14
	316 May 30 j 09:44	15° <b>8</b>		minimum elong	321 Oct 09 j 10:10	16° <b>2</b> 28'35	1°05'14
	316 Sep 04 j 06:35	0° <b>II</b>		morning rise	321 Oct 22 j 01:13	19° <b>2</b> 15'26	
retrograde	316 Sep 17 j 22:01	0° <b>II</b> 18'25			321 Dec 14 j 10:26	0° <b>II</b>	
	316 Oct 01 j 11:16	30° <b>8</b> 8		retrograde	322 Feb 20 j 10:49	6° <b>II</b> 27'05	
min. Earth dist.	316 Nov 15 j 03:42	25° <b>8</b> 24'32	4.12247 AU	opposition	322 Apr 22 j 07:16	1° <b>II</b> 35'20	1°21'19
opposition	316 Nov 16 j 11:23	25° <b>8</b> 13'45	-0°49'04	min. Earth dist.	322 Apr 23 j 18:57	1° <b>II</b> 23'59	4.35244 AU
direct	317 Jan 14 j 05:21	20° <b>8</b> 14'17			322 May 04 j 23:49	30° <b>8</b> <b>2</b>	
	317 Apr 08 j 14:27	0° <b>II</b>		direct	322 Jun 23 j 19:07	26° <b>2</b> 35'32	
evening set	317 May 20 j 19:10	9° <b>II</b> 02'50			322 Aug 11 j 16:56	0° <b>II</b>	
				evening set	322 Oct 27 j 15:20	14° <b>II</b> 34'43	
conjunction	317 Jun 03 j 13:22	12° <b>II</b> 09'41	-0°13'43		322 Oct 29 j 12:24	15° <b>II</b>	
minimum elong	317 Jun 03 j 13:23	12° <b>II</b> 09'42	0°13'42	max. Earth dist.	322 Nov 07 j 06:37	16° <b>II</b> 58'32	6.29581 AU
behind sun begin	317 Jun 03 j 09:08	12° <b>II</b> 07'18					
behind sun end	317 Jun 03 j 17:39	12° <b>II</b> 12'06		conjunction	322 Nov 09 j 06:33	17° <b>II</b> 25'38	0°41'38
max. Earth dist.	317 Jun 05 j 06:48	12° <b>II</b> 33'09	6.18986 AU	minimum elong	322 Nov 09 j 06:35	17° <b>II</b> 25'39	0°41'38
morning rise	317 Jun 17 j 07:46	15° <b>II</b> 16'17		morning rise	322 Nov 21 j 20:42	20° <b>II</b> 16'14	
	317 Sep 01 j 10:21	0° <b>8</b>			323 Jan 07 j 01:39	0° <b>8</b>	
asc. node	317 Oct 16 j 18:56	3° <b>8</b> 40'16		retrograde	323 Mar 25 j 19:32	8° <b>8</b> 14'13	
retrograde	317 Oct 20 j 19:47	3° <b>8</b> 41'54		opposition	323 May 25 j 18:30	3° <b>8</b> 21'26	0°35'47
	317 Dec 09 j 11:18	30° <b>8</b> <b>II</b>		min. Earth dist.	323 May 27 j 01:11	3° <b>8</b> 11'38	4.23153 AU
opposition	317 Dec 19 j 11:53	28° <b>II</b> 39'56	0°09'25		323 Jun 23 j 16:50	30° <b>8</b> <b>II</b>	
min. Earth dist.	317 Dec 18 j 16:14	28° <b>II</b> 46'33	4.25662 AU	direct	323 Jul 26 j 07:12	28° <b>II</b> 24'15	
direct	318 Feb 17 j 13:00	23° <b>II</b> 38'00			323 Aug 27 j 16:38	0° <b>8</b>	
	318 Apr 26 j 02:27	0° <b>8</b>		evening set	323 Nov 28 j 14:49	16° <b>8</b> 53'14	
evening set	318 Jun 24 j 12:04	11° <b>8</b> 52'40		max. Earth dist.	323 Dec 09 j 21:20	19° <b>8</b> 30'16	6.16435 AU
conjunction	318 Jul 08 j 02:27	14° <b>8</b> 52'19	0°25'45	conjunction	323 Dec 11 j 07:17	19° <b>8</b> 50'02	0°04'32
minimum elong	318 Jul 08 j 02:25	14° <b>8</b> 52'18	0°25'45	minimum elong	323 Dec 11 j 07:16	19° <b>8</b> 50'02	0°04'32
max. Earth dist.	318 Jul 08 j 20:45	15° <b>8</b> 02'25	6.31906 AU	behind sun begin	323 Dec 10 j 23:26	19° <b>8</b> 45'29	
morning rise	318 Jul 21 j 14:48	17° <b>8</b> 50'50		behind sun end	323 Dec 11 j 15:06	19° <b>8</b> 54'34	
	318 Sep 21 j 08:55	0° <b>8</b>		morning rise	323 Dec 24 j 00:02	22° <b>8</b> 47'18	
retrograde	318 Nov 21 j 00:27	5° <b>8</b> 19'58		desc. node	324 Jan 23 j 15:13	29° <b>8</b> 38'54	
opposition	319 Jan 19 j 22:51	0° <b>8</b> 21'52	1°01'46		324 Jan 25 j 07:02	0° <b>8</b>	
min. Earth dist.	319 Jan 19 j 19:46	0° <b>8</b> 22'53	4.37071 AU	retrograde	324 Apr 29 j 11:46	11° <b>8</b> 48'16	
	319 Jan 22 j 17:05	30° <b>8</b> <b>8</b>		opposition	324 Jun 29 j 04:53	6° <b>8</b> 52'57	-0°24'15
direct	319 Mar 22 j 06:51	25° <b>8</b> 18'46		min. Earth dist.	324 Jun 29 j 21:48	6° <b>8</b> 47'29	4.09858 AU
	319 May 19 j 09:51	0° <b>8</b>		direct	324 Aug 28 j 09:37	1° <b>8</b> 58'15	
evening set	319 Jul 27 j 09:58	13° <b>8</b> 08'09		evening set	324 Dec 31 j 08:36	21° <b>8</b> 01'30	
	319 Aug 05 j 00:28	15° <b>8</b>					
				conjunction	325 Jan 13 j 05:05	24° <b>8</b> 05'17	-0°35'44
conjunction	319 Aug 09 j 16:32	16° <b>8</b> 00'55	0°56'08	minimum elong	325 Jan 13 j 05:02	24° <b>8</b> 05'16	0°35'44
minimum elong	319 Aug 09 j 16:30	16° <b>8</b> 00'54	0°56'08	max. Earth dist.	325 Jan 12 j 19:24	23° <b>8</b> 59'30	6.04196 AU
max. Earth dist.	319 Aug 09 j 05:40	15° <b>8</b> 55'00	6.40916 AU	morning rise	325 Jan 26 j 03:39	27° <b>8</b> 10'20	
morning rise	319 Aug 22 j 20:26	18° <b>8</b> 52'15			325 Feb 07 j 04:22	0° <b>8</b>	
	319 Oct 18 j 11:55	0° <b>8</b>			325 Apr 28 j 23:53	15° <b>8</b>	
retrograde	319 Dec 21 j 09:51	5° <b>8</b> 48'12		retrograde	325 Jun 05 j 20:14	17° <b>8</b> 12'26	
opposition	320 Feb 19 j 15:46	0° <b>8</b> 53'35	1°34'51		325 Jul 13 j 20:27	15° <b>8</b> <b>8</b>	
min. Earth dist.	320 Feb 20 j 07:02	0° <b>8</b> 48'37	4.43223 AU	opposition	325 Aug 05 j 05:37	12° <b>8</b> 13'21	-1°18'55
	320 Feb 26 j 13:31	30° <b>8</b> <b>8</b>		min. Earth dist.	325 Aug 05 j 00:11	12° <b>8</b> 15'09	3.99868 AU
direct	320 Apr 22 j 00:03	25° <b>8</b> 50'31		direct	325 Oct 03 j 00:24	7° <b>8</b> 19'57	
	320 Jun 15 j 23:37	0° <b>8</b>			325 Dec 13 j 16:29	15° <b>8</b>	
evening set	320 Aug 26 j 21:51	13° <b>8</b> 28'12		evening set	326 Feb 05 j 01:53	26° <b>8</b> 49'33	
conjunction	320 Sep 08 j 20:47	16° <b>8</b> 16'42	1°10'18	conjunction	326 Feb 18 j 04:56	29° <b>8</b> 59'15	-1°04'05
minimum elong	320 Sep 08 j 20:46	16° <b>8</b> 16'41	1°10'18	minimum elong	326 Feb 18 j 04:54	29° <b>8</b> 59'14	1°04'05
max. Earth dist.	320 Sep 07 j 12:08	15° <b>8</b> 58'57	6.43680 AU		326 Feb 18 j 06:10	0° <b>8</b>	
morning rise	320 Sep 21 j 16:37	19° <b>8</b> 03'47		max. Earth dist.	326 Feb 19 j 03:04	0° <b>8</b> 12'37	5.97341 AU
	320 Nov 16 j 04:53	0° <b>2</b>		morning rise	326 Mar 03 j 11:00	3° <b>8</b> 10'38	
retrograde	321 Jan 19 j 20:24	5° <b>2</b> 53'54		retrograde	326 Jul 13 j 20:26	23° <b>8</b> 44'50	
opposition	321 Mar 21 j 11:43	1° <b>2</b> 01'29	1°42'00	opposition	326 Sep 11 j 18:39	18° <b>8</b> 41'54	-1°44'33
min. Earth dist.	321 Mar 22 j 15:55	0° <b>2</b> 52'27	4.42568 AU	min. Earth dist.	326 Sep 10 j 18:38	18° <b>8</b> 50'00	3.97039 AU
	321 Mar 29 j 13:02	30° <b>8</b> <b>8</b>		direct	326 Nov 08 j 19:06	13° <b>8</b> 47'40	
direct	321 May 23 j 04:43	25° <b>8</b> 59'38			327 Feb 27 j 20:07	0° <b>8</b>	
	321 Jul 16 j 02:56	0° <b>2</b>		evening set	327 Mar 14 j 04:44	3° <b>8</b> 22'38	
evening set	321 Sep 26 j 16:49	13° <b>2</b> 40'44					
max. Earth dist.	321 Oct 07 j 11:48	16° <b>2</b> 03'01	6.39567 AU	conjunction	327 Mar 27 j 15:47	6° <b>8</b> 35'19	-1°07'56

minimum elong	327 Mar 27 j 15:49	6° $\Upsilon$ 35'20	1°07'57	conjunction	332 Sep 13 j 04:25	20° $\mathbb{M}$ 38'39	1°10'45
max. Earth dist.	327 Mar 29 j 15:14	7° $\Upsilon$ 03'39	5.98706 AU	minimum elong	332 Sep 13 j 04:25	20° $\mathbb{M}$ 38'39	1°10'45
morning rise	327 Apr 10 j 05:46	9° $\Upsilon$ 49'27		morning rise	332 Sep 25 j 23:34	23° $\mathbb{M}$ 25'34	
	327 Aug 10 j 23:10	0° $\mathcal{B}$			332 Oct 27 j 11:34	0° $\mathcal{A}$	
retrograde	327 Aug 19 j 18:29	0° $\mathcal{B}$ 07'42		retrograde	333 Jan 24 j 06:47	10° $\mathcal{A}$ 17'39	
	327 Aug 28 j 12:47	30° $\mathcal{K}$ $\Upsilon$		opposition	333 Mar 25 j 21:52	5° $\mathcal{A}$ 25'31	1°40'44
min. Earth dist.	327 Oct 17 j 00:05	25° $\Upsilon$ 14'02	4.02525 AU	min. Earth dist.	333 Mar 27 j 04:06	5° $\mathcal{A}$ 15'50	4.41835 AU
opposition	327 Oct 18 j 09:34	25° $\Upsilon$ 02'38	-1°29'01	direct	333 May 27 j 15:43	0° $\mathcal{A}$ 23'58	
direct	327 Dec 15 j 10:09	20° $\Upsilon$ 05'50		evening set	333 Oct 01 j 01:04	18° $\mathcal{A}$ 06'59	
	328 Mar 07 j 23:18	0° $\mathcal{B}$		max. Earth dist.	333 Oct 11 j 19:32	20° $\mathcal{A}$ 29'22	6.38506 AU
evening set	328 Apr 19 j 11:45	9° $\mathcal{B}$ 22'19					
conjunction	328 May 03 j 04:48	12° $\mathcal{B}$ 33'39	-0°45'47	conjunction	333 Oct 13 j 18:00	20° $\mathcal{A}$ 55'04	1°02'57
minimum elong	328 May 03 j 04:51	12° $\mathcal{B}$ 33'40	0°45'47	minimum elong	333 Oct 13 j 18:02	20° $\mathcal{A}$ 55'05	1°02'56
max. Earth dist.	328 May 05 j 08:49	13° $\mathcal{B}$ 03'55	6.07731 AU	morning rise	333 Oct 26 j 08:39	23° $\mathcal{A}$ 42'13	
	328 May 13 j 16:47	15° $\mathcal{B}$			333 Nov 24 j 22:43	0° $\mathbb{M}$	
morning rise	328 May 16 j 23:47	15° $\mathcal{B}$ 45'39		retrograde	334 Feb 24 j 23:48	10° $\mathbb{M}$ .58'44	
	328 Jul 25 j 17:15	0° $\mathbb{I}$		opposition	334 Apr 26 j 21:51	6° $\mathbb{M}$ .06'59	1°16'15
retrograde	328 Sep 22 j 13:46	5° $\mathbb{I}$ 09'00		min. Earth dist.	334 Apr 28 j 08:05	5° $\mathbb{M}$ .56'05	4.33939 AU
min. Earth dist.	328 Nov 19 j 21:27	0° $\mathbb{I}$ 14'53	4.14025 AU	direct	334 Jun 28 j 06:20	1° $\mathbb{M}$ .07'36	
opposition	328 Nov 21 j 03:44	0° $\mathbb{I}$ 04'34	-0°41'17		334 Oct 13 j 04:46	15° $\mathbb{M}$	
	328 Nov 21 j 17:09	30° $\mathcal{K}$ $\mathcal{B}$		evening set	334 Nov 01 j 01:37	19° $\mathbb{M}$ .09'42	
direct	329 Jan 19 j 01:50	25° $\mathcal{B}$ 04'41		max. Earth dist.	334 Nov 11 j 19:07	21° $\mathbb{M}$ .35'16	6.28154 AU
	329 Mar 17 j 12:26	0° $\mathbb{I}$		conjunction	334 Nov 13 j 16:44	22° $\mathbb{M}$ .01'09	0°37'03
evening set	329 May 25 j 16:47	13° $\mathbb{I}$ 48'38		minimum elong	334 Nov 13 j 16:46	22° $\mathbb{M}$ .01'11	0°37'04
conjunction	329 Jun 08 j 10:58	16° $\mathbb{I}$ 54'39	-0°08'07	morning rise	334 Nov 26 j 06:58	24° $\mathbb{M}$ .52'24	
minimum elong	329 Jun 08 j 10:58	16° $\mathbb{I}$ 54'39	0°08'06		334 Dec 19 j 12:43	0° $\mathcal{A}$	
behind sun begin	329 Jun 08 j 03:35	16° $\mathbb{I}$ 50'30		retrograde	335 Mar 30 j 16:51	12° $\mathcal{A}$ 57'14	
behind sun end	329 Jun 08 j 18:21	16° $\mathbb{I}$ 58'48		opposition	335 May 30 j 14:48	8° $\mathcal{A}$ 04'14	0°27'55
max. Earth dist.	329 Jun 10 j 02:28	17° $\mathbb{I}$ 16'56	6.20773 AU	min. Earth dist.	335 May 31 j 20:38	7° $\mathcal{A}$ 54'41	4.21682 AU
morning rise	329 Jun 22 j 04:41	20° $\mathbb{I}$ 00'13		direct	335 Jul 31 j 00:37	3° $\mathcal{A}$ 07'27	
	329 Aug 08 j 22:32	0° $\mathcal{B}$		evening set	335 Dec 03 j 04:47	21° $\mathcal{A}$ 39'34	
asc. node	329 Aug 27 j 02:31	3° $\mathcal{B}$ 08'51		desc. node	335 Dec 04 j 04:25	21° $\mathcal{A}$ 53'16	
retrograde	329 Oct 25 j 06:28	8° $\mathcal{B}$ 17'32		conjunction	335 Dec 15 j 21:29	24° $\mathcal{A}$ 37'03	-0°01'15
opposition	329 Dec 23 j 22:31	3° $\mathcal{B}$ 16'09	0°17'27	minimum elong	335 Dec 15 j 21:31	24° $\mathcal{A}$ 37'04	0°01'15
min. Earth dist.	329 Dec 23 j 05:03	3° $\mathcal{B}$ 22'01	4.27294 AU	behind sun begin	335 Dec 15 j 13:30	24° $\mathcal{A}$ 32'25	
	330 Jan 19 j 13:44	30° $\mathcal{K}$ $\mathbb{I}$		behind sun end	335 Dec 16 j 05:32	24° $\mathcal{A}$ 41'44	
direct	330 Feb 22 j 03:49	28° $\mathbb{I}$ 14'01		max. Earth dist.	335 Dec 14 j 13:43	24° $\mathcal{A}$ 18'30	6.15052 AU
	330 Mar 28 j 03:58	0° $\mathcal{B}$		morning rise	335 Dec 28 j 14:56	27° $\mathcal{A}$ 35'11	
evening set	330 Jun 29 j 04:17	16° $\mathcal{B}$ 25'09			336 Jan 08 j 02:18	0° $\mathcal{B}$	
conjunction	330 Jul 12 j 17:38	19° $\mathcal{B}$ 23'52	0°30'44	retrograde	336 May 04 j 11:26	16° $\mathcal{B}$ 43'22	
minimum elong	330 Jul 12 j 17:36	19° $\mathcal{B}$ 23'50	0°30'44	opposition	336 Jul 04 j 05:40	11° $\mathcal{B}$ 47'33	-0°32'36
max. Earth dist.	330 Jul 13 j 06:36	19° $\mathcal{B}$ 30'59	6.33248 AU	min. Earth dist.	336 Jul 04 j 18:50	11° $\mathcal{B}$ 43'17	4.08682 AU
morning rise	330 Jul 26 j 05:06	22° $\mathcal{B}$ 21'24		direct	336 Sep 02 j 05:07	6° $\mathcal{B}$ 53'08	
	330 Aug 31 j 19:35	0° $\mathcal{Q}$		evening set	337 Jan 05 j 03:34	25° $\mathcal{B}$ 58'54	
retrograde	330 Nov 25 j 07:34	9° $\mathcal{Q}$ 45'13		conjunction	337 Jan 18 j 00:43	29° $\mathcal{B}$ 03'20	-0°40'38
opposition	331 Jan 24 j 06:15	4° $\mathcal{Q}$ 47'40	1°07'45	minimum elong	337 Jan 18 j 00:41	29° $\mathcal{B}$ 03'19	0°40'38
min. Earth dist.	331 Jan 24 j 06:10	4° $\mathcal{Q}$ 47'42	4.38052 AU	max. Earth dist.	337 Jan 17 j 19:29	29° $\mathcal{B}$ 00'13	6.03327 AU
	331 Mar 13 j 20:49	30° $\mathcal{K}$ $\mathcal{B}$			337 Jan 21 j 23:27	0° $\approx$	
direct	331 Mar 26 j 18:06	29° $\mathcal{B}$ 44'29		morning rise	337 Jan 31 j 00:01	2° $\approx$ 09'06	
	331 Apr 08 j 17:13	0° $\mathcal{Q}$			337 Mar 31 j 08:29	15° $\approx$	
	331 Jul 20 j 00:04	15° $\mathcal{Q}$		retrograde	337 Jun 11 j 00:35	22° $\approx$ 16'02	
evening set	331 Jul 31 j 21:21	17° $\mathcal{Q}$ 32'18		opposition	337 Aug 10 j 08:14	17° $\approx$ 16'25	-1°24'30
conjunction	331 Aug 14 j 03:01	20° $\mathcal{Q}$ 24'27	0°59'12	min. Earth dist.	337 Aug 10 j 01:03	17° $\approx$ 18'48	3.99397 AU
minimum elong	331 Aug 14 j 02:58	20° $\mathcal{Q}$ 24'26	0°59'11		337 Aug 28 j 05:35	15° $\mathcal{R}$ $\approx$	
max. Earth dist.	331 Aug 13 j 14:00	20° $\mathcal{Q}$ 17'23	6.41467 AU	direct	337 Oct 08 j 01:28	12° $\approx$ 22'59	
morning rise	331 Aug 27 j 05:35	23° $\mathcal{Q}$ 15'04			337 Nov 17 j 03:12	15° $\approx$	
	331 Sep 28 j 17:04	0° $\mathbb{M}$		evening set	338 Feb 02 j 03:00	0° $\mathcal{H}$	
retrograde	331 Dec 25 j 15:32	10° $\mathbb{M}$ 09'24			338 Feb 10 j 01:10	1° $\mathcal{H}$ 53'19	
opposition	332 Feb 23 j 23:01	5° $\mathbb{M}$ 15'14	1°37'30	conjunction	338 Feb 23 j 05:14	5° $\mathcal{H}$ 03'29	-1°06'11
min. Earth dist.	332 Feb 24 j 15:39	5° $\mathbb{M}$ 09'51	4.43338 AU	minimum elong	338 Feb 23 j 05:12	5° $\mathcal{H}$ 03'28	1°06'11
direct	332 Apr 26 j 08:15	0° $\mathbb{M}$ 12'24		max. Earth dist.	338 Feb 24 j 07:11	5° $\mathcal{H}$ 19'07	5.97303 AU
evening set	332 Aug 31 j 06:33	17° $\mathbb{M}$ 50'24		morning rise	338 Mar 08 j 12:20	8° $\mathcal{H}$ 15'20	
max. Earth dist.	332 Sep 11 j 16:38	20° $\mathbb{M}$ 19'09	6.43349 AU	retrograde	338 Jul 18 j 22:00	28° $\mathcal{H}$ 49'14	

opposition	338 Sep 16 j 19:04	23° $\text{K}$ 45'57	-1°44'49	direct	344 Apr 30 j 17:29	4° $\text{P}$ 32'42	
min. Earth dist.	338 Sep 15 j 17:24	23° $\text{K}$ 54'36	3.97468 AU	evening set	344 Sep 04 j 14:21	22° $\text{P}$ 10'31	
direct	338 Nov 13 j 17:40	18° $\text{K}$ 51'27		max. Earth dist.	344 Sep 15 j 23:18	24° $\text{P}$ 38'46	6.43095 AU
	339 Feb 10 j 06:40	0° $\text{Y}$					
evening set	339 Mar 19 j 05:49	8° $\text{Y}$ 24'53		conjunction	344 Sep 17 j 11:30	24° $\text{P}$ 58'31	1°10'48
				minimum elong	344 Sep 17 j 11:30	24° $\text{P}$ 58'31	1°10'48
conjunction	339 Apr 01 j 17:43	11° $\text{Y}$ 37'35	-1°06'20	morning rise	344 Sep 30 j 05:38	27° $\text{P}$ 45'10	
minimum elong	339 Apr 01 j 17:45	11° $\text{Y}$ 37'36	1°06'19		344 Oct 10 j 16:34	0° $\text{A}$	
max. Earth dist.	339 Apr 03 j 16:52	12° $\text{Y}$ 05'40	5.99537 AU	retrograde	345 Jan 28 j 13:55	14° $\text{A}$ 38'42	
morning rise	339 Apr 15 j 08:45	14° $\text{Y}$ 51'46		opposition	345 Mar 30 j 07:03	9° $\text{A}$ 46'38	1°38'54
	339 Jun 27 j 06:33	0° $\text{B}$		min. Earth dist.	345 Mar 31 j 13:31	9° $\text{A}$ 36'55	4.41197 AU
retrograde	339 Aug 24 j 13:40	5° $\text{B}$ 04'42		direct	345 Jun 01 j 00:01	4° $\text{A}$ 45'20	
min. Earth dist.	339 Oct 21 j 19:29	0° $\text{B}$ 10'59	4.03663 AU	evening set	345 Oct 05 j 08:09	22° $\text{A}$ 29'42	
opposition	339 Oct 23 j 04:58	29° $\text{Y}$ 59'33	-1°24'02	max. Earth dist.	345 Oct 16 j 00:45	24° $\text{A}$ 51'29	6.37498 AU
	339 Oct 23 j 03:40	30° $\text{K}$ $\text{Y}$					
direct	339 Dec 20 j 07:43	25° $\text{Y}$ 02'18		conjunction	345 Oct 18 j 00:28	25° $\text{A}$ 17'57	1°00'19
	340 Feb 15 j 00:05	0° $\text{B}$		minimum elong	345 Oct 18 j 00:30	25° $\text{A}$ 17'58	1°00'19
evening set	340 Apr 24 j 11:13	14° $\text{B}$ 15'42		morning rise	345 Oct 30 j 14:55	28° $\text{A}$ 05'24	
	340 Apr 27 j 15:56	15° $\text{B}$			345 Nov 08 j 08:05	0° $\text{M}$	
					346 Feb 12 j 15:06	15° $\text{M}$	
conjunction	340 May 08 j 04:58	17° $\text{B}$ 26'40	-0°41'17	retrograde	346 Mar 01 j 14:08	15° $\text{M}$ 26'43	
minimum elong	340 May 08 j 05:01	17° $\text{B}$ 26'42	0°41'16		346 Mar 18 j 11:50	15° $\text{R}$ $\text{M}$	
max. Earth dist.	340 May 10 j 08:41	17° $\text{B}$ 56'40	6.09102 AU	opposition	346 May 01 j 11:37	10° $\text{M}$ 34'51	1°10'44
morning rise	340 May 22 j 00:02	20° $\text{B}$ 38'07		min. Earth dist.	346 May 02 j 22:43	10° $\text{M}$ 23'40	4.32580 AU
	340 Jul 04 j 00:41	0° $\text{II}$		direct	346 Jul 02 j 18:49	5° $\text{M}$ 35'44	
retrograde	340 Sep 27 j 04:59	9° $\text{II}$ 53'47			346 Sep 25 j 16:15	15° $\text{M}$	
opposition	340 Nov 25 j 17:29	4° $\text{II}$ 49'42	-0°33'29	evening set	346 Nov 05 j 10:27	23° $\text{M}$ 40'55	
min. Earth dist.	340 Nov 24 j 13:04	4° $\text{II}$ 59'22	4.15483 AU	max. Earth dist.	346 Nov 16 j 04:56	26° $\text{M}$ 07'34	6.26547 AU
	341 Jan 13 j 13:04	30° $\text{R}$ $\text{B}$					
direct	341 Jan 23 j 19:21	29° $\text{B}$ 49'28		conjunction	346 Nov 18 j 01:41	26° $\text{M}$ 33'03	0°32'16
	341 Feb 03 j 02:15	0° $\text{II}$		minimum elong	346 Nov 18 j 01:43	26° $\text{M}$ 33'04	0°32'16
evening set	341 May 30 j 12:40	18° $\text{II}$ 30'04		morning rise	346 Nov 30 j 16:06	29° $\text{M}$ 25'03	
					346 Dec 03 j 05:55	0° $\text{A}$	
conjunction	341 Jun 13 j 06:29	21° $\text{II}$ 35'20	-0°02'37	retrograde	347 Apr 04 j 11:27	17° $\text{A}$ 37'35	
minimum elong	341 Jun 13 j 06:28	21° $\text{II}$ 35'19	0°02'37	opposition	347 Jun 04 j 10:10	12° $\text{A}$ 44'15	0°19'52
behind sun begin	341 Jun 12 j 22:07	21° $\text{II}$ 30'39		min. Earth dist.	347 Jun 05 j 13:39	12° $\text{A}$ 35'28	4.19925 AU
behind sun end	341 Jun 13 j 14:49	21° $\text{II}$ 39'59		direct	347 Aug 04 j 14:46	7° $\text{A}$ 47'51	
max. Earth dist.	341 Jun 14 j 18:11	21° $\text{II}$ 55'24	6.22210 AU	desc. node	347 Oct 14 j 12:34	14° $\text{A}$ 52'33	
morning rise	341 Jun 26 j 23:49	24° $\text{II}$ 40'04		evening set	347 Dec 07 j 18:41	26° $\text{A}$ 24'25	
asc. node	341 Jul 08 j 11:07	27° $\text{II}$ 12'13		max. Earth dist.	347 Dec 19 j 06:59	29° $\text{A}$ 05'56	6.13293 AU
	341 Jul 21 j 11:42	0° $\text{E}$					
retrograde	341 Oct 29 j 14:49	12° $\text{E}$ 50'22		conjunction	347 Dec 20 j 11:48	29° $\text{A}$ 22'50	-0°06'59
opposition	341 Dec 28 j 07:42	7° $\text{E}$ 49'26	0°25'10	minimum elong	347 Dec 20 j 11:48	29° $\text{A}$ 22'50	0°06'58
min. Earth dist.	341 Dec 27 j 15:59	7° $\text{E}$ 54'42	4.28607 AU	behind sun begin	347 Dec 20 j 04:21	29° $\text{A}$ 18'29	
direct	342 Feb 26 j 16:20	2° $\text{E}$ 47'02		behind sun end	347 Dec 20 j 19:14	29° $\text{A}$ 27'11	
evening set	342 Jul 03 j 19:20	20° $\text{E}$ 55'36			347 Dec 23 j 03:09	0° $\text{B}$	
				morning rise	348 Jan 02 j 05:51	2° $\text{B}$ 21'58	
conjunction	342 Jul 17 j 07:53	23° $\text{E}$ 53'29	0°35'26	retrograde	348 May 09 j 14:37	21° $\text{B}$ 39'02	
minimum elong	342 Jul 17 j 07:51	23° $\text{E}$ 53'28	0°35'27	opposition	348 Jul 09 j 06:53	16° $\text{B}$ 42'45	-0°40'51
max. Earth dist.	342 Jul 17 j 18:11	23° $\text{E}$ 59'08	6.34358 AU	min. Earth dist.	348 Jul 09 j 18:21	16° $\text{B}$ 39'02	4.07056 AU
morning rise	342 Jul 30 j 18:09	26° $\text{E}$ 50'06		direct	348 Sep 07 j 02:48	11° $\text{B}$ 48'32	
	342 Aug 14 j 11:01	0° $\text{O}$			349 Jan 05 j 20:51	0° $\text{A}$	
retrograde	342 Nov 29 j 14:17	14° $\text{O}$ 09'16		evening set	349 Jan 09 j 23:59	0° $\text{A}$ 58'50	
opposition	343 Jan 28 j 13:22	9° $\text{O}$ 12'13	1°13'15				
min. Earth dist.	343 Jan 28 j 15:25	9° $\text{O}$ 11'33	4.38893 AU	conjunction	349 Jan 22 j 22:01	4° $\text{A}$ 04'14	-0°45'20
direct	343 Mar 31 j 04:32	4° $\text{O}$ 09'01		minimum elong	349 Jan 22 j 21:59	4° $\text{A}$ 04'13	0°45'20
	343 Jul 02 j 22:49	15° $\text{O}$		max. Earth dist.	349 Jan 22 j 20:48	4° $\text{A}$ 03'30	6.01984 AU
evening set	343 Aug 05 j 08:08	21° $\text{O}$ 55'16		morning rise	349 Feb 04 j 22:20	7° $\text{A}$ 11'03	
					349 Mar 11 j 00:55	15° $\text{A}$	
conjunction	343 Aug 18 j 12:34	24° $\text{O}$ 46'44	1°01'52	retrograde	349 Jun 16 j 07:16	27° $\text{A}$ 24'35	
minimum elong	343 Aug 18 j 12:32	24° $\text{O}$ 46'43	1°01'52	opposition	349 Aug 15 j 12:51	22° $\text{A}$ 24'30	-1°29'37
max. Earth dist.	343 Aug 17 j 19:26	24° $\text{O}$ 37'25	6.41959 AU	min. Earth dist.	349 Aug 15 j 02:40	22° $\text{A}$ 27'53	3.98506 AU
morning rise	343 Aug 31 j 14:09	27° $\text{O}$ 36'43		direct	349 Oct 13 j 01:30	17° $\text{A}$ 31'05	
	343 Sep 11 j 18:03	0° $\text{P}$			350 Jan 15 j 17:23	0° $\text{K}$	
retrograde	343 Dec 29 j 22:01	14° $\text{P}$ 29'24		evening set	350 Feb 15 j 03:43	7° $\text{K}$ 04'00	
opposition	344 Feb 28 j 06:10	9° $\text{P}$ 35'30	1°39'33				
min. Earth dist.	344 Feb 29 j 01:00	9° $\text{P}$ 29'25	4.43472 AU	conjunction	350 Feb 28 j 08:46	10° $\text{K}$ 14'49	-1°07'51

minimum elong	350 Feb 28 j 08:45	10° $\text{X}$ 14'48	1°07'51	morning rise	355 Sep 04 j 20:23	1° $\text{P}$ 54'14	
max. Earth dist.	350 Mar 01 j 13:10	10° $\text{X}$ 31'57	5.96920 AU	retrograde	356 Jan 03 j 01:07	18° $\text{P}$ 43'44	
morning rise	350 Mar 13 j 17:09	13° $\text{X}$ 27'22		opposition	356 Mar 03 j 10:57	13° $\text{P}$ 50'12	1°40'58
	350 Jun 02 j 11:52	0° $\text{Y}$		min. Earth dist.	356 Mar 04 j 07:56	13° $\text{P}$ 43'26	4.44058 AU
retrograde	350 Jul 24 j 02:17	4° $\text{Y}$ 02'16		direct	356 May 05 j 00:48	8° $\text{P}$ 47'32	
	350 Sep 14 j 08:12	30° $\text{R}$ $\text{X}$		evening set	356 Sep 08 j 18:37	26° $\text{P}$ 23'42	
opposition	350 Sep 21 j 22:51	28° $\text{X}$ 58'35	-1°44'19	max. Earth dist.	356 Sep 19 j 22:32	28° $\text{P}$ 49'22	6.43121 AU
min. Earth dist.	350 Sep 20 j 19:12	29° $\text{X}$ 07'56	3.97649 AU				
direct	350 Nov 18 j 20:19	24° $\text{X}$ 03'49		conjunction	356 Sep 21 j 14:44	29° $\text{P}$ 11'18	1°10'26
	351 Jan 19 j 18:10	0° $\text{Y}$		minimum elong	356 Sep 21 j 14:45	29° $\text{P}$ 11'18	1°10'25
evening set	351 Mar 24 j 11:11	13° $\text{Y}$ 36'42			356 Sep 25 j 08:01	0° $\text{Z}$	
				morning rise	356 Oct 04 j 08:15	1° $\text{Z}$ 57'40	
conjunction	351 Apr 07 j 00:19	16° $\text{Y}$ 49'36	-1°04'08	retrograde	357 Feb 01 j 19:42	18° $\text{Z}$ 52'16	
minimum elong	351 Apr 07 j 00:21	16° $\text{Y}$ 49'38	1°04'08	opposition	357 Apr 03 j 13:18	14° $\text{Z}$ 00'16	1°36'33
max. Earth dist.	351 Apr 09 j 02:43	17° $\text{Y}$ 19'34	6.00280 AU	min. Earth dist.	357 Apr 04 j 21:46	13° $\text{Z}$ 49'54	4.40648 AU
morning rise	351 Apr 20 j 16:05	20° $\text{Y}$ 03'48		direct	357 Jun 05 j 06:35	8° $\text{Z}$ 59'06	
	351 Jun 04 j 07:45	0° $\text{Z}$		evening set	357 Oct 09 j 11:19	26° $\text{Z}$ 44'40	
retrograde	351 Aug 29 j 15:09	10° $\text{Z}$ 11'20		max. Earth dist.	357 Oct 20 j 03:21	29° $\text{Z}$ 06'28	6.36408 AU
min. Earth dist.	351 Oct 26 j 19:05	5° $\text{Z}$ 17'31	4.04887 AU				
opposition	351 Oct 28 j 04:08	5° $\text{Z}$ 06'15	-1°18'16	conjunction	357 Oct 22 j 03:25	29° $\text{Z}$ 33'12	0°57'25
direct	351 Dec 25 j 09:24	0° $\text{Z}$ 08'39		minimum elong	357 Oct 22 j 03:27	29° $\text{Z}$ 33'14	0°57'26
	352 Apr 10 j 14:10	15° $\text{Z}$			357 Oct 24 j 03:35	0° $\text{M}$	
evening set	352 Apr 29 j 15:05	19° $\text{Z}$ 18'36		morning rise	357 Nov 03 j 17:29	2° $\text{M}$ 20'59	
					358 Jan 07 j 04:23	15° $\text{M}$	
conjunction	352 May 13 j 09:08	22° $\text{Z}$ 29'03	-0°36'19	retrograde	358 Mar 05 j 23:18	19° $\text{M}$ 47'41	
minimum elong	352 May 13 j 09:11	22° $\text{Z}$ 29'04	0°36'18	opposition	358 May 05 j 22:04	14° $\text{M}$ 55'41	1°04'59
max. Earth dist.	352 May 15 j 11:57	22° $\text{Z}$ 58'24	6.10719 AU		358 May 05 j 08:30	15° $\text{R}$ $\text{M}$	
morning rise	352 May 27 j 04:30	25° $\text{Z}$ 39'51		min. Earth dist.	358 May 07 j 08:58	14° $\text{M}$ 44'35	4.30997 AU
	352 Jun 15 j 10:58	0° $\text{II}$		direct	358 Jul 07 j 01:47	9° $\text{M}$ 56'53	
retrograde	352 Oct 01 j 20:37	14° $\text{II}$ 46'34			358 Sep 05 j 02:43	15° $\text{M}$	
min. Earth dist.	352 Nov 29 j 06:00	9° $\text{II}$ 52'25	4.17350 AU	evening set	358 Nov 09 j 16:44	28° $\text{M}$ 06'11	
opposition	352 Nov 30 j 10:14	9° $\text{II}$ 42'50	-0°25'13		358 Nov 18 j 00:36	0° $\text{J}$	
direct	353 Jan 28 j 15:08	4° $\text{II}$ 42'18		max. Earth dist.	358 Nov 20 j 11:00	0° $\text{J}$ 33'24	6.24589 AU
asc. node	353 May 18 j 07:05	19° $\text{II}$ 31'39					
evening set	353 Jun 04 j 10:58	23° $\text{II}$ 17'54		conjunction	358 Nov 22 j 07:57	0° $\text{J}$ 59'07	0°27'26
				minimum elong	358 Nov 22 j 07:58	0° $\text{J}$ 59'08	0°27'25
conjunction	353 Jun 18 j 04:20	26° $\text{II}$ 22'06	0°03'11	morning rise	358 Dec 04 j 22:47	3° $\text{J}$ 52'05	
minimum elong	353 Jun 18 j 04:18	26° $\text{II}$ 22'06	0°03'10	retrograde	359 Apr 09 j 06:43	22° $\text{J}$ 13'55	
behind sun begin	353 Jun 17 j 20:01	26° $\text{II}$ 17'28		opposition	359 Jun 09 j 03:48	17° $\text{J}$ 20'15	0°11'51
behind sun end	353 Jun 18 j 12:36	26° $\text{II}$ 26'43		min. Earth dist.	359 Jun 10 j 06:48	17° $\text{J}$ 11'35	4.17698 AU
max. Earth dist.	353 Jun 19 j 13:34	26° $\text{II}$ 40'44	6.24215 AU	direct	359 Aug 09 j 04:49	12° $\text{J}$ 24'04	
morning rise	353 Jul 01 j 20:50	29° $\text{II}$ 25'37		desc. node	359 Aug 26 j 05:49	12° $\text{J}$ 51'41	
	353 Jul 04 j 10:51	0° $\text{E}$			359 Dec 07 j 12:16	0° $\text{Z}$	
retrograde	353 Nov 03 j 01:40	17° $\text{E}$ 26'56		evening set	359 Dec 12 j 07:18	1° $\text{Z}$ 06'59	
opposition	354 Jan 01 j 18:38	12° $\text{E}$ 26'32	0°32'49	max. Earth dist.	359 Dec 23 j 23:08	3° $\text{Z}$ 51'20	6.11003 AU
min. Earth dist.	354 Jan 01 j 05:26	12° $\text{E}$ 30'57	4.30576 AU				
direct	354 Mar 03 j 08:41	7° $\text{E}$ 24'00		conjunction	359 Dec 25 j 01:09	4° $\text{Z}$ 06'39	-0°12'31
evening set	354 Jul 08 j 10:37	25° $\text{E}$ 27'28		minimum elong	359 Dec 25 j 01:08	4° $\text{Z}$ 06'39	0°12'31
				behind sun begin	359 Dec 24 j 19:50	4° $\text{Z}$ 03'32	
conjunction	354 Jul 21 j 22:02	28° $\text{E}$ 24'09	0°39'57	behind sun end	359 Dec 25 j 06:26	4° $\text{Z}$ 09'45	
minimum elong	354 Jul 21 j 22:00	28° $\text{E}$ 24'08	0°39'57	morning rise	360 Jan 06 j 19:58	7° $\text{Z}$ 07'07	
max. Earth dist.	354 Jul 22 j 04:56	28° $\text{E}$ 27'55	6.36139 AU	retrograde	360 May 14 j 17:32	26° $\text{Z}$ 35'08	
	354 Jul 29 j 05:14	0° $\text{O}$		opposition	360 Jul 14 j 08:05	21° $\text{Z}$ 38'24	-0°48'44
morning rise	354 Aug 04 j 07:05	1° $\text{O}$ 19'31		min. Earth dist.	360 Jul 14 j 16:39	21° $\text{Z}$ 35'37	4.04916 AU
	354 Oct 16 j 03:30	15° $\text{O}$		direct	360 Sep 11 j 21:59	16° $\text{Z}$ 44'25	
retrograde	354 Dec 03 j 18:13	18° $\text{O}$ 31'59			360 Dec 20 j 00:20	0° $\text{A}$	
	355 Jan 21 j 22:11	15° $\text{R}$ $\text{O}$		evening set	361 Jan 14 j 21:36	6° $\text{A}$ 01'15	
opposition	355 Feb 01 j 19:47	13° $\text{O}$ 35'22	1°18'15				
min. Earth dist.	355 Feb 01 j 23:40	13° $\text{O}$ 34'05	4.40378 AU	conjunction	361 Jan 27 j 20:29	9° $\text{A}$ 07'51	-0°49'39
direct	355 Apr 04 j 14:12	8° $\text{O}$ 32'08		minimum elong	361 Jan 27 j 20:26	9° $\text{A}$ 07'49	0°49'39
	355 Jun 13 j 09:33	15° $\text{O}$		max. Earth dist.	361 Jan 27 j 22:29	9° $\text{A}$ 09'03	6.00183 AU
evening set	355 Aug 09 j 16:50	26° $\text{O}$ 14'38		morning rise	361 Feb 09 j 22:02	12° $\text{A}$ 15'59	
					361 Feb 21 j 11:09	15° $\text{A}$	
conjunction	355 Aug 22 j 20:08	29° $\text{O}$ 05'11	1°04'09		361 May 11 j 06:45	0° $\text{X}$	
minimum elong	355 Aug 22 j 20:06	29° $\text{O}$ 05'10	1°04'09	retrograde	361 Jun 21 j 14:50	2° $\text{X}$ 37'51	
max. Earth dist.	355 Aug 22 j 00:45	28° $\text{O}$ 54'40	6.43031 AU		361 Aug 02 j 03:06	30° $\text{R}$ $\text{A}$	
	355 Aug 27 j 01:09	0° $\text{P}$		opposition	361 Aug 20 j 19:00	27° $\text{A}$ 37'08	-1°34'01

min. Earth dist.	361 Aug 20 j 05:29	27° $\approx$ 41'38	3.97250 AU	direct	367 Apr 09 j 02:43	12° $\Omega$ 57'10	
direct	361 Oct 18 j 03:48	22° $\approx$ 43'37			367 May 16 j 17:50	15° $\Omega$	
	361 Dec 26 j 09:55	0° $\mathbb{X}$			367 Aug 11 j 05:23	0° $\mathbb{P}$	
evening set	362 Feb 20 j 08:58	12° $\mathbb{X}$ 20'26		evening set	367 Aug 14 j 02:57	0° $\mathbb{P}$ 37'20	
				max. Earth dist.	367 Aug 26 j 05:46	3° $\mathbb{P}$ 14'33	6.43590 AU
conjunction	362 Mar 05 j 15:25	15° $\mathbb{X}$ 32'06	-1°08'55				
minimum elong	362 Mar 05 j 15:25	15° $\mathbb{X}$ 32'06	1°08'56	conjunction	367 Aug 27 j 05:08	3° $\mathbb{P}$ 27'13	1°06'10
max. Earth dist.	362 Mar 07 j 01:44	15° $\mathbb{X}$ 52'48	5.96340 AU	minimum elong	367 Aug 27 j 05:06	3° $\mathbb{P}$ 27'12	1°06'10
morning rise	362 Mar 19 j 00:54	18° $\mathbb{X}$ 45'27		morning rise	367 Sep 09 j 04:17	6° $\mathbb{P}$ 15'37	
	362 May 08 j 08:50	0° $\mathbb{Y}$		retrograde	368 Jan 07 j 07:08	23° $\mathbb{P}$ 03'55	
retrograde	362 Jul 29 j 11:02	9° $\mathbb{Y}$ 21'17		opposition	368 Mar 07 j 18:35	18° $\mathbb{P}$ 10'41	1°42'00
min. Earth dist.	362 Sep 25 j 23:46	4° $\mathbb{Y}$ 27'03	3.97820 AU	min. Earth dist.	368 Mar 08 j 17:21	18° $\mathbb{P}$ 03'21	4.44077 AU
opposition	362 Sep 27 j 04:52	4° $\mathbb{Y}$ 17'11	-1°42'52	direct	368 May 09 j 09:24	13° $\mathbb{P}$ 08'10	
	362 Nov 04 j 22:00	30° $\mathbb{R}$ $\mathbb{H}$			368 Sep 09 j 15:26	0° $\underline{\Omega}$	
direct	362 Nov 24 j 02:16	29° $\mathbb{H}$ 22'05		evening set	368 Sep 13 j 02:08	0° $\underline{\Omega}$ 44'40	
	362 Dec 13 j 06:34	0° $\mathbb{Y}$		max. Earth dist.	368 Sep 24 j 04:16	3° $\underline{\Omega}$ 09'36	6.42593 AU
evening set	363 Mar 29 j 19:25	18° $\mathbb{Y}$ 54'03					
				conjunction	368 Sep 25 j 21:34	3° $\underline{\Omega}$ 32'11	1°09'44
conjunction	363 Apr 12 j 09:27	22° $\mathbb{Y}$ 07'01	-1°01'21	minimum elong	368 Sep 25 j 21:35	3° $\underline{\Omega}$ 32'11	1°09'44
minimum elong	363 Apr 12 j 09:30	22° $\mathbb{Y}$ 07'02	1°01'21	morning rise	368 Oct 08 j 14:15	6° $\underline{\Omega}$ 18'28	
max. Earth dist.	363 Apr 14 j 13:41	22° $\mathbb{Y}$ 37'57	6.01155 AU	retrograde	369 Feb 06 j 05:20	23° $\underline{\Omega}$ 16'01	
morning rise	363 Apr 26 j 02:15	25° $\mathbb{Y}$ 21'11		opposition	369 Apr 07 j 23:58	18° $\underline{\Omega}$ 24'12	1°33'39
	363 May 16 j 05:55	0° $\mathbb{B}$		min. Earth dist.	369 Apr 09 j 09:41	18° $\underline{\Omega}$ 13'27	4.39605 AU
	363 Aug 19 j 18:05	15° $\mathbb{B}$		direct	369 Jun 09 j 16:21	13° $\underline{\Omega}$ 23'23	
retrograde	363 Sep 03 j 15:07	15° $\mathbb{B}$ 21'57			369 Oct 08 j 09:09	0° $\mathbb{M}$	
	363 Sep 18 j 10:20	15° $\mathbb{R}$ $\mathbb{B}$		evening set	369 Oct 13 j 19:27	1° $\mathbb{M}$ 11'44	
min. Earth dist.	363 Oct 31 j 18:22	10° $\mathbb{B}$ 28'31	4.06347 AU	max. Earth dist.	369 Oct 24 j 09:11	3° $\mathbb{M}$ 32'51	6.34920 AU
opposition	363 Nov 02 j 04:47	10° $\mathbb{B}$ 16'47	-1°11'45				
direct	363 Dec 30 j 11:45	5° $\mathbb{B}$ 18'41		conjunction	369 Oct 26 j 11:08	4° $\mathbb{M}$ 00'44	0°54'06
	364 Mar 22 j 14:43	15° $\mathbb{B}$		minimum elong	369 Oct 26 j 11:10	4° $\mathbb{M}$ 00'45	0°54'06
evening set	364 May 04 j 20:20	24° $\mathbb{B}$ 23'59		morning rise	369 Nov 08 j 01:16	6° $\mathbb{M}$ 49'08	
					369 Dec 16 j 18:47	15° $\mathbb{M}$	
conjunction	364 May 18 j 14:39	27° $\mathbb{B}$ 33'40	-0°30'59	retrograde	370 Mar 10 j 16:46	24° $\mathbb{M}$ 22'45	
minimum elong	364 May 18 j 14:41	27° $\mathbb{B}$ 33'41	0°30'59	opposition	370 May 10 j 14:49	19° $\mathbb{M}$ 30'38	0°58'33
max. Earth dist.	364 May 20 j 16:09	28° $\mathbb{B}$ 02'09	6.12610 AU	min. Earth dist.	370 May 12 j 01:37	19° $\mathbb{M}$ 19'32	4.29144 AU
	364 May 29 j 05:35	0° $\mathbb{I}$			370 Jun 24 j 05:56	15° $\mathbb{R}$ $\mathbb{M}$	
morning rise	364 Jun 01 j 09:55	0° $\mathbb{I}$ 43'33		direct	370 Jul 11 j 15:48	14° $\mathbb{M}$ 32'11	
retrograde	364 Oct 06 j 14:16	19° $\mathbb{I}$ 40'08			370 Jul 29 j 01:35	15° $\mathbb{M}$	
min. Earth dist.	364 Dec 04 j 01:42	14° $\mathbb{I}$ 45'30	4.19424 AU		370 Nov 01 j 21:10	0° $\mathbb{J}$	
opposition	364 Dec 05 j 03:39	14° $\mathbb{I}$ 36'42	-0°16'42	evening set	370 Nov 14 j 04:33	2° $\mathbb{J}$ 46'23	
direct	365 Feb 02 j 14:07	9° $\mathbb{I}$ 35'46		max. Earth dist.	370 Nov 25 j 01:53	5° $\mathbb{J}$ 16'00	6.22541 AU
asc. node	365 Mar 27 j 01:07	13° $\mathbb{I}$ 41'40					
evening set	365 Jun 09 j 09:43	28° $\mathbb{I}$ 05'39		conjunction	370 Nov 26 j 20:09	5° $\mathbb{J}$ 40'17	0°22'08
	365 Jun 17 j 23:20	0° $\mathbb{E}$		minimum elong	370 Nov 26 j 20:10	5° $\mathbb{J}$ 40'18	0°22'09
				morning rise	370 Dec 09 j 11:16	8° $\mathbb{J}$ 34'16	
conjunction	365 Jun 23 j 02:30	1° $\mathbb{E}$ 08'42	0°08'52	retrograde	371 Apr 14 j 07:03	27° $\mathbb{J}$ 05'45	
minimum elong	365 Jun 23 j 02:28	1° $\mathbb{E}$ 08'41	0°08'52	opposition	371 Jun 14 j 03:46	22° $\mathbb{J}$ 11'50	0°03'15
behind sun begin	365 Jun 22 j 19:23	1° $\mathbb{E}$ 04'45		min. Earth dist.	371 Jun 15 j 04:37	22° $\mathbb{J}$ 03'51	4.15614 AU
behind sun end	365 Jun 23 j 09:34	1° $\mathbb{E}$ 12'38		desc. node	371 Jul 05 j 09:57	19° $\mathbb{J}$ 36'13	
max. Earth dist.	365 Jun 24 j 09:22	1° $\mathbb{E}$ 25'55	6.26278 AU	direct	371 Aug 13 j 23:32	17° $\mathbb{J}$ 16'06	
morning rise	365 Jul 06 j 18:05	4° $\mathbb{E}$ 10'56			371 Nov 20 j 09:38	0° $\mathbb{Z}$	
retrograde	365 Nov 07 j 10:07	22° $\mathbb{E}$ 03'14		evening set	371 Dec 17 j 02:05	6° $\mathbb{Z}$ 04'46	
opposition	366 Jan 06 j 05:35	17° $\mathbb{E}$ 03'20	0°40'21				
min. Earth dist.	366 Jan 05 j 17:53	17° $\mathbb{E}$ 07'14	4.32454 AU	conjunction	371 Dec 29 j 20:22	9° $\mathbb{Z}$ 05'30	-0°18'18
direct	366 Mar 07 j 23:15	12° $\mathbb{E}$ 00'37		minimum elong	371 Dec 29 j 20:21	9° $\mathbb{Z}$ 05'29	0°18'19
evening set	366 Jul 13 j 02:19	29° $\mathbb{E}$ 59'38		max. Earth dist.	371 Dec 28 j 21:08	8° $\mathbb{Z}$ 51'45	6.09076 AU
	366 Jul 13 j 03:01	0° $\Omega$		morning rise	372 Jan 11 j 16:08	12° $\mathbb{Z}$ 07'12	
					372 Apr 16 j 09:58	0° $\approx$	
conjunction	366 Jul 26 j 12:33	2° $\Omega$ 55'12	0°44'19	retrograde	372 May 20 j 01:26	1° $\approx$ 44'45	
minimum elong	366 Jul 26 j 12:30	2° $\Omega$ 55'11	0°44'18		372 Jun 22 j 18:51	30° $\mathbb{R}$ $\mathbb{Z}$	
max. Earth dist.	366 Jul 26 j 14:54	2° $\Omega$ 56'29	6.37675 AU	opposition	372 Jul 19 j 14:17	26° $\mathbb{Z}$ 47'31	-0°56'42
morning rise	366 Aug 08 j 20:21	5° $\Omega$ 49'25		min. Earth dist.	372 Jul 19 j 19:17	26° $\mathbb{Z}$ 45'53	4.03349 AU
	366 Sep 22 j 22:38	15° $\Omega$		direct	372 Sep 16 j 23:22	21° $\mathbb{Z}$ 53'44	
retrograde	366 Dec 08 j 01:35	22° $\Omega$ 56'27			372 Nov 30 j 07:53	0° $\approx$	
opposition	367 Feb 06 j 03:38	18° $\Omega$ 00'22	1°22'58	evening set	373 Jan 19 j 23:32	11° $\approx$ 14'53	
min. Earth dist.	367 Feb 06 j 10:54	17° $\Omega$ 57'59	4.41478 AU				
	367 Mar 02 j 20:21	15° $\mathbb{R}$ $\Omega$		conjunction	373 Feb 01 j 23:32	14° $\approx$ 22'25	-0°53'48



minimum elong	373 Feb 01 j 23:30	14° $\approx$ 22'24	0°53'47	morning rise	378 Aug 13 j 06:27	10° $\Omega$ 12'54	
max. Earth dist.	373 Feb 02 j 08:01	14° $\approx$ 27'32	5.99148 AU		378 Sep 04 j 21:03	15° $\Omega$	
	373 Feb 04 j 13:54	15° $\approx$		retrograde	378 Dec 12 j 05:03	27° $\Omega$ 16'04	
morning rise	373 Feb 15 j 02:02	17° $\approx$ 31'28		opposition	379 Feb 10 j 09:23	22° $\Omega$ 20'26	1°27'08
	373 Apr 12 j 20:25	0° $\mathbb{X}$		min. Earth dist.	379 Feb 10 j 18:26	22° $\Omega$ 17'29	4.42094 AU
retrograde	373 Jun 27 j 01:32	7° $\mathbb{X}$ 58'04		direct	379 Apr 13 j 10:29	17° $\Omega$ 17'15	
min. Earth dist.	373 Aug 25 j 11:27	3° $\mathbb{X}$ 02'10	3.96903 AU		379 Jul 25 j 22:30	0° $\mathbb{M}$	
opposition	373 Aug 26 j 03:27	2° $\mathbb{X}$ 56'49	-1°37'47	evening set	379 Aug 18 j 11:27	4° $\mathbb{M}$ 56'38	
	373 Sep 18 j 21:17	30° $\mathbb{R}$ $\approx$		max. Earth dist.	379 Aug 30 j 09:32	7° $\mathbb{M}$ 31'24	6.43655 AU
direct	373 Oct 23 j 09:30	28° $\approx$ 03'16					
	373 Nov 26 j 14:15	0° $\mathbb{X}$		conjunction	379 Aug 31 j 12:33	7° $\mathbb{M}$ 46'03	1°07'48
evening set	374 Feb 25 j 15:38	17° $\mathbb{X}$ 40'23		minimum elong	379 Aug 31 j 12:31	7° $\mathbb{M}$ 46'03	1°07'47
				morning rise	379 Sep 13 j 10:43	10° $\mathbb{M}$ 34'02	
conjunction	374 Mar 10 j 23:02	20° $\mathbb{X}$ 52'22	-1°09'31	retrograde	380 Jan 11 j 14:14	27° $\mathbb{M}$ 22'45	
minimum elong	374 Mar 10 j 23:02	20° $\mathbb{X}$ 52'22	1°09'30	opposition	380 Mar 12 j 01:59	22° $\mathbb{M}$ 29'49	1°42'29
max. Earth dist.	374 Mar 12 j 12:25	21° $\mathbb{X}$ 14'52	5.96687 AU	min. Earth dist.	380 Mar 13 j 03:29	22° $\mathbb{M}$ 21'37	4.43605 AU
morning rise	374 Mar 24 j 09:48	24° $\mathbb{X}$ 06'03		direct	380 May 13 j 18:36	17° $\mathbb{M}$ 27'30	
	374 Apr 18 j 17:40	0° $\mathbb{Y}$			380 Aug 24 j 07:32	0° $\underline{\Omega}$	
retrograde	374 Aug 03 j 15:33	14° $\mathbb{Y}$ 38'43		evening set	380 Sep 17 j 09:15	5° $\underline{\Omega}$ 05'37	
min. Earth dist.	374 Oct 01 j 01:47	9° $\mathbb{Y}$ 45'02	3.98845 AU	max. Earth dist.	380 Sep 28 j 08:03	7° $\underline{\Omega}$ 29'09	6.41609 AU
opposition	374 Oct 02 j 09:28	9° $\mathbb{Y}$ 34'17	-1°40'38				
direct	374 Nov 29 j 06:36	4° $\mathbb{Y}$ 38'47		conjunction	380 Sep 30 j 04:03	7° $\underline{\Omega}$ 53'15	1°08'39
evening set	375 Apr 04 j 01:46	24° $\mathbb{Y}$ 06'56		minimum elong	380 Sep 30 j 04:04	7° $\underline{\Omega}$ 53'15	1°08'39
				morning rise	380 Oct 12 j 20:17	10° $\underline{\Omega}$ 39'45	
conjunction	375 Apr 17 j 16:38	27° $\mathbb{Y}$ 19'31	-0°58'11	retrograde	381 Feb 10 j 16:27	27° $\underline{\Omega}$ 41'45	
minimum elong	375 Apr 17 j 16:41	27° $\mathbb{Y}$ 19'33	0°58'11	opposition	381 Apr 12 j 11:53	22° $\underline{\Omega}$ 49'56	1°30'13
max. Earth dist.	375 Apr 19 j 21:37	27° $\mathbb{Y}$ 50'46	6.02746 AU	min. Earth dist.	381 Apr 13 j 21:46	22° $\underline{\Omega}$ 39'08	4.38186 AU
	375 Apr 29 j 01:17	0° $\mathbb{Z}$		direct	381 Jun 14 j 02:21	17° $\underline{\Omega}$ 49'24	
morning rise	375 May 01 j 10:00	0° $\mathbb{Z}$ 33'11			381 Sep 21 j 18:21	0° $\mathbb{L}$	
	375 Jul 10 j 02:05	15° $\mathbb{Z}$		evening set	381 Oct 18 j 04:24	5° $\mathbb{L}$ 41'29	
retrograde	375 Sep 08 j 12:32	20° $\mathbb{Z}$ 24'49		max. Earth dist.	381 Oct 28 j 19:52	8° $\mathbb{L}$ 04'07	6.33193 AU
min. Earth dist.	375 Nov 05 j 16:53	15° $\mathbb{Z}$ 30'56	4.08296 AU				
opposition	375 Nov 07 j 01:54	15° $\mathbb{Z}$ 19'40	-1°04'55	conjunction	381 Oct 30 j 20:00	8° $\mathbb{L}$ 31'06	0°50'25
	375 Nov 09 j 11:32	15° $\mathbb{R}$ $\mathbb{Z}$		minimum elong	381 Oct 30 j 20:03	8° $\mathbb{L}$ 31'07	0°50'24
direct	376 Jan 04 j 13:06	10° $\mathbb{Z}$ 21'06		morning rise	381 Nov 12 j 09:58	11° $\mathbb{L}$ 20'09	
	376 Feb 28 j 15:55	15° $\mathbb{Z}$			381 Nov 29 j 02:09	15° $\mathbb{L}$	
evening set	376 May 09 j 21:44	29° $\mathbb{Z}$ 20'27		retrograde	382 Mar 15 j 10:55	29° $\mathbb{L}$ 01'22	
	376 May 12 j 19:10	0° $\mathbb{I}$		opposition	382 May 15 j 09:16	24° $\mathbb{L}$ 09'08	0°51'39
				min. Earth dist.	382 May 16 j 19:21	23° $\mathbb{L}$ 58'16	4.27218 AU
conjunction	376 May 23 j 16:14	2° $\mathbb{I}$ 29'14	-0°25'38	direct	382 Jul 16 j 07:00	19° $\mathbb{L}$ 11'07	
minimum elong	376 May 23 j 16:16	2° $\mathbb{I}$ 29'16	0°25'39		382 Oct 15 j 11:38	0° $\mathbb{J}$	
max. Earth dist.	376 May 25 j 16:50	2° $\mathbb{I}$ 57'03	6.14752 AU	evening set	382 Nov 18 j 18:10	7° $\mathbb{J}$ 30'08	
morning rise	376 Jun 06 j 11:15	5° $\mathbb{I}$ 38'03		max. Earth dist.	382 Nov 29 j 16:48	10° $\mathbb{J}$ 01'14	6.20585 AU
retrograde	376 Oct 11 j 01:55	24° $\mathbb{I}$ 24'10					
opposition	376 Dec 09 j 16:57	19° $\mathbb{I}$ 21'09	-0°08'25	conjunction	382 Dec 01 j 09:51	10° $\mathbb{J}$ 24'55	0°16'39
min. Earth dist.	376 Dec 08 j 16:10	19° $\mathbb{I}$ 29'32	4.21544 AU	minimum elong	382 Dec 01 j 09:52	10° $\mathbb{J}$ 24'55	0°16'39
asc. node	377 Feb 04 j 04:55	14° $\mathbb{I}$ 20'50		morning rise	382 Dec 14 j 01:36	13° $\mathbb{J}$ 19'57	
direct	377 Feb 07 j 07:08	14° $\mathbb{I}$ 19'54			383 Mar 13 j 23:53	0° $\mathbb{Z}$	
	377 Jun 01 j 15:52	0° $\mathbb{G}$		retrograde	383 Apr 19 j 08:58	2° $\mathbb{Z}$ 00'37	
evening set	377 Jun 14 j 04:19	2° $\mathbb{G}$ 44'17		desc. node	383 May 14 j 10:34	1° $\mathbb{Z}$ 02'33	
					383 May 26 j 01:27	30° $\mathbb{R}$ $\mathbb{J}$	
conjunction	377 Jun 27 j 20:15	5° $\mathbb{G}$ 46'11	0°14'18	opposition	383 Jun 19 j 05:12	27° $\mathbb{J}$ 06'15	-0°05'29
minimum elong	377 Jun 27 j 20:14	5° $\mathbb{G}$ 46'10	0°14'18	min. Earth dist.	383 Jun 20 j 02:57	26° $\mathbb{J}$ 59'14	4.13773 AU
behind sun begin	377 Jun 27 j 16:39	5° $\mathbb{G}$ 44'11		direct	383 Aug 18 j 20:09	22° $\mathbb{J}$ 10'50	
behind sun end	377 Jun 27 j 23:50	5° $\mathbb{G}$ 48'10			383 Nov 01 j 00:11	0° $\mathbb{Z}$	
max. Earth dist.	377 Jun 28 j 21:46	6° $\mathbb{G}$ 00'21	6.28204 AU	evening set	383 Dec 21 j 21:37	11° $\mathbb{Z}$ 04'04	
morning rise	377 Jul 11 j 11:04	8° $\mathbb{G}$ 47'14					
retrograde	377 Nov 11 j 17:57	26° $\mathbb{G}$ 31'39		conjunction	384 Jan 03 j 16:41	14° $\mathbb{Z}$ 05'45	-0°24'00
opposition	378 Jan 10 j 13:40	21° $\mathbb{G}$ 32'17	0°47'24	minimum elong	384 Jan 03 j 16:39	14° $\mathbb{Z}$ 05'44	0°24'00
min. Earth dist.	378 Jan 10 j 05:39	21° $\mathbb{G}$ 34'57	4.34037 AU	max. Earth dist.	384 Jan 02 j 23:06	13° $\mathbb{Z}$ 55'20	6.07525 AU
direct	378 Mar 12 j 13:01	16° $\mathbb{G}$ 29'23		morning rise	384 Jan 16 j 13:05	17° $\mathbb{Z}$ 08'27	
	378 Jun 26 j 19:22	0° $\Omega$			384 Mar 16 j 14:18	0° $\approx$	
evening set	378 Jul 17 j 14:38	4° $\Omega$ 24'56		retrograde	384 May 25 j 09:43	6° $\approx$ 53'46	
				opposition	384 Jul 24 j 20:35	1° $\approx$ 55'59	-1°04'12
conjunction	378 Jul 30 j 23:56	7° $\Omega$ 19'38	0°48'18	min. Earth dist.	384 Jul 24 j 23:03	1° $\approx$ 55'10	4.02238 AU
minimum elong	378 Jul 30 j 23:54	7° $\Omega$ 19'37	0°48'18		384 Aug 09 j 00:14	30° $\mathbb{R}$ $\mathbb{Z}$	
max. Earth dist.	378 Jul 30 j 23:01	7° $\Omega$ 19'08	6.38794 AU	direct	384 Sep 22 j 01:41	27° $\mathbb{Z}$ 02'23	

	384 Nov 04 j 02:43	0°♊	morning rise	390 Aug 17 j 17:05	14°♊38'06	
	385 Jan 19 j 00:54	15°♊		390 Aug 19 j 09:39	15°♊	
evening set	385 Jan 25 j 01:13	16°♊26'03		390 Nov 13 j 22:30	0°♊	
			retrograde	390 Dec 16 j 12:19	1°♊38'26	
conjunction	385 Feb 07 j 01:57	19°♊34'12 -0°57'29		391 Jan 18 j 00:45	30°♊	
minimum elong	385 Feb 07 j 01:54	19°♊34'11 0°57'29	opposition	391 Feb 14 j 16:32	26°♊43'17 1°30'53	
max. Earth dist.	385 Feb 07 j 13:46	19°♊41'20 5.98548 AU	min. Earth dist.	391 Feb 15 j 04:55	26°♊39'15 4.42485 AU	
morning rise	385 Feb 20 j 05:38	22°♊43'59	direct	391 Apr 17 j 21:18	21°♊40'09	
	385 Mar 23 j 15:18	0°♋		391 Jul 07 j 14:59	0°♊	
retrograde	385 Jul 02 j 07:38	13°♋13'17	evening set	391 Aug 22 j 20:43	9°♊19'18	
opposition	385 Aug 31 j 09:42	8°♋11'31 -1°40'43				
min. Earth dist.	385 Aug 30 j 14:06	8°♋18'04 3.96906 AU	conjunction	391 Sep 04 j 20:57	12°♊08'23 1°09'05	
direct	385 Oct 28 j 12:56	3°♋17'49	minimum elong	391 Sep 04 j 20:56	12°♊08'23 1°09'04	
evening set	386 Mar 02 j 20:39	22°♋54'17	max. Earth dist.	391 Sep 03 j 15:51	11°♊52'35 6.43561 AU	
			morning rise	391 Sep 17 j 18:03	14°♊56'01	
conjunction	386 Mar 16 j 05:10	26°♋06'30 -1°09'33		391 Dec 12 j 22:33	0°♋	
minimum elong	386 Mar 16 j 05:10	26°♋06'30 1°09'32	retrograde	392 Jan 15 j 21:05	1°♋45'41	
max. Earth dist.	386 Mar 17 j 21:46	26°♋30'53 5.97275 AU		392 Feb 19 j 00:10	30°♋	
morning rise	386 Mar 29 j 16:50	29°♋20'19	opposition	392 Mar 16 j 10:53	26°♋53'02 1°42'26	
	386 Apr 01 j 11:38	0°♌	min. Earth dist.	392 Mar 17 j 12:58	26°♋44'39 4.43072 AU	
retrograde	386 Aug 08 j 18:28	19°♌49'01	direct	392 May 18 j 03:03	21°♋50'58	
min. Earth dist.	386 Oct 06 j 03:32	14°♌55'07 3.99947 AU		392 Aug 05 j 21:09	0°♋	
opposition	386 Oct 07 j 11:16	14°♌44'19 -1°37'39	evening set	392 Sep 21 j 17:46	9°♋30'46	
direct	386 Dec 04 j 10:18	9°♌48'26	max. Earth dist.	392 Oct 02 j 15:21	11°♋54'02 6.40689 AU	
evening set	387 Apr 09 j 05:50	29°♌12'58				
	387 Apr 12 j 14:12	0°♍	conjunction	392 Oct 04 j 11:51	12°♋18'30 1°07'11	
			minimum elong	392 Oct 04 j 11:52	12°♋18'30 1°07'11	
conjunction	387 Apr 22 j 21:34	2°♍25'14 -0°54'38	morning rise	392 Oct 17 j 03:32	15°♋05'09	
minimum elong	387 Apr 22 j 21:37	2°♍25'15 0°54'37		393 Jan 08 j 01:46	0°♍	
max. Earth dist.	387 Apr 25 j 03:45	2°♍57'03 6.04260 AU	retrograde	393 Feb 15 j 05:35	2°♍11'20	
morning rise	387 May 06 j 15:26	5°♍38'25		393 Mar 25 j 18:12	30°♍	
	387 Jun 18 j 00:38	15°♍	opposition	393 Apr 17 j 01:11	27°♍19'38 1°26'15	
retrograde	387 Sep 13 j 07:13	25°♍21'28	min. Earth dist.	393 Apr 18 j 12:06	27°♍08'31 4.36946 AU	
min. Earth dist.	387 Nov 10 j 11:56	20°♍27'43 4.10061 AU	direct	393 Jun 18 j 15:15	22°♍19'28	
opposition	387 Nov 11 j 20:44	20°♍16'33 -0°57'46		393 Sep 02 j 20:47	0°♍	
direct	388 Jan 09 j 10:05	15°♍17'38	evening set	393 Oct 22 j 14:15	10°♍14'27	
	388 Apr 26 j 01:38	0°♎	max. Earth dist.	393 Nov 02 j 05:22	12°♍37'26 6.31743 AU	
evening set	388 May 14 j 21:33	4°♎12'09				
			conjunction	393 Nov 04 j 05:38	13°♎04'35 0°46'26	
conjunction	388 May 28 j 15:52	7°♎20'06 -0°20'12	minimum elong	393 Nov 04 j 05:40	13°♎04'36 0°46'26	
minimum elong	388 May 28 j 15:54	7°♎20'07 0°20'11		393 Nov 12 j 18:53	15°♎	
max. Earth dist.	388 May 30 j 12:20	7°♎45'25 6.16612 AU	morning rise	393 Nov 16 j 19:42	15°♎54'16	
morning rise	388 Jun 11 j 10:45	10°♎27'58		394 Jan 28 j 23:04	0°♏	
retrograde	388 Oct 15 j 13:49	29°♎05'10	retrograde	394 Mar 20 j 05:05	3°♏42'07	
min. Earth dist.	388 Dec 13 j 07:09	24°♎10'05 4.23322 AU		394 May 10 j 21:24	30°♎	
opposition	388 Dec 14 j 05:15	24°♎02'37 -0°00'11	opposition	394 May 20 j 04:18	28°♎49'38 0°44'26	
asc. node	388 Dec 15 j 09:50	23°♎52'58	min. Earth dist.	394 May 21 j 12:12	28°♎39'27 4.25657 AU	
direct	389 Feb 12 j 00:38	19°♎01'02	direct	394 Jul 20 j 22:03	23°♎51'59	
	389 May 15 j 05:09	0°♏		394 Sep 25 j 01:30	0°♏	
evening set	389 Jun 18 j 22:17	7°♏21'22	evening set	394 Nov 23 j 07:25	12°♏14'25	
			max. Earth dist.	394 Dec 04 j 10:35	14°♏48'36 6.19060 AU	
conjunction	389 Jul 02 j 13:41	10°♏22'21 0°19'38				
minimum elong	389 Jul 02 j 13:40	10°♏22'20 0°19'37	conjunction	394 Dec 05 j 23:24	15°♏09'56 0°11'07	
max. Earth dist.	389 Jul 03 j 12:41	10°♏35'05 6.29775 AU	minimum elong	394 Dec 05 j 23:25	15°♏09'56 0°11'07	
morning rise	389 Jul 16 j 03:21	13°♏22'18	behind sun begin	394 Dec 05 j 17:24	15°♏06'28	
	389 Oct 21 j 22:30	0°♐	behind sun end	394 Dec 06 j 05:26	15°♏13'24	
retrograde	389 Nov 16 j 00:35	1°♐00'11	morning rise	394 Dec 18 j 15:26	18°♏05'46	
	389 Dec 10 j 23:45	30°♐		395 Feb 13 j 05:26	0°♑	
opposition	390 Jan 14 j 21:38	26°♑01'25 0°54'10	desc. node	395 Mar 24 j 15:49	5°♑26'54	
min. Earth dist.	390 Jan 14 j 15:27	26°♑03'28 4.35295 AU	retrograde	395 Apr 24 j 10:49	6°♑53'59	
direct	390 Mar 17 j 00:19	20°♑58'27	opposition	395 Jun 24 j 05:40	1°♑59'13 -0°14'02	
	390 Jun 08 j 17:55	0°♑	min. Earth dist.	395 Jun 25 j 01:42	1°♑52'46 4.12396 AU	
evening set	390 Jul 22 j 03:33	8°♑51'43		395 Jul 10 j 02:02	30°♑	
			direct	395 Aug 23 j 16:58	27°♑04'08	
conjunction	390 Aug 04 j 11:36	11°♑45'37 0°52'01		395 Oct 06 j 07:06	0°♑	
minimum elong	390 Aug 04 j 11:33	11°♑45'35 0°52'02	evening set	395 Dec 26 j 15:58	16°♑00'18	
max. Earth dist.	390 Aug 04 j 05:18	11°♑42'11 6.39632 AU				

conjunction	396 Jan 08 j 11:27	19°♄02'40 -0°29'23	max. Earth dist.	401 Jul 07 j 23:25	15°♄04'36 6.31033 AU
minimum elong	396 Jan 08 j 11:25	19°♄02'39 0°29'22	morning rise	401 Jul 20 j 18:14	17°♄53'41
max. Earth dist.	396 Jan 07 j 20:30	18°♄53'47 6.06411 AU		401 Sep 20 j 01:27	0°♌
morning rise	396 Jan 21 j 08:46	22°♄06'12	retrograde	401 Nov 20 j 07:59	5°♌26'13
	396 Feb 25 j 03:29	0°♌	opposition	402 Jan 19 j 05:18	0°♌27'57 1°00'29
retrograde	396 May 30 j 12:07	11°♌57'22	min. Earth dist.	402 Jan 19 j 01:46	0°♌29'07 4.36295 AU
opposition	396 Jul 29 j 23:45	6°♌59'00 -1°10'59		402 Jan 22 j 17:47	30°♌♄
min. Earth dist.	396 Jul 29 j 22:23	6°♌59'27 4.01512 AU	direct	402 Mar 21 j 11:54	25°♄24'52
direct	396 Sep 27 j 00:21	2°♌05'27		402 May 17 j 20:28	0°♌
	397 Jan 02 j 00:55	15°♌	evening set	402 Jul 26 j 15:28	13°♌16'21
evening set	397 Jan 30 j 00:12	21°♌30'29		402 Aug 03 j 14:44	15°♌
conjunction	397 Feb 12 j 01:54	24°♌39'09 -1°00'37	conjunction	402 Aug 08 j 22:36	16°♌09'34 0°55'23
minimum elong	397 Feb 12 j 01:52	24°♌39'08 1°00'37	minimum elong	402 Aug 08 j 22:34	16°♌09'33 0°55'23
max. Earth dist.	397 Feb 12 j 18:16	24°♌49'01 5.98266 AU	max. Earth dist.	402 Aug 08 j 14:35	16°♌05'12 6.40311 AU
morning rise	397 Feb 25 j 06:27	27°♌49'28	morning rise	402 Aug 22 j 02:45	19°♌01'16
	397 Mar 06 j 10:17	0°♌		402 Oct 16 j 18:22	0°♌
retrograde	397 Jul 07 j 12:04	18°♌20'05	retrograde	402 Dec 20 j 17:28	5°♌59'10
opposition	397 Sep 05 j 12:07	13°♌17'48 -1°42'43	opposition	403 Feb 18 j 23:25	1°♌04'26 1°34'03
min. Earth dist.	397 Sep 04 j 15:29	13°♌24'44 3.97105 AU	min. Earth dist.	403 Feb 19 j 12:58	1°♌00'02 4.42820 AU
direct	397 Nov 02 j 15:04	8°♌23'51		403 Feb 27 j 07:19	30°♌♌
evening set	398 Mar 07 j 22:02	27°♌59'08	direct	403 Apr 22 j 05:42	26°♌01'26
	398 Mar 16 j 08:15	0°♌		403 Jun 14 j 22:06	0°♌
conjunction	398 Mar 21 j 07:38	1°♌11'31 -1°09'02	evening set	403 Aug 27 j 05:31	13°♌40'08
minimum elong	398 Mar 21 j 07:39	1°♌11'31 1°09'02	max. Earth dist.	403 Sep 07 j 20:14	16°♌11'13 6.43511 AU
max. Earth dist.	398 Mar 23 j 03:03	1°♌37'32 5.97926 AU	conjunction	403 Sep 09 j 04:36	16°♌28'49 1°09'56
morning rise	398 Apr 03 j 20:18	4°♌25'27	minimum elong	403 Sep 09 j 04:35	16°♌28'48 1°09'56
retrograde	398 Aug 13 j 16:59	24°♌49'50	morning rise	403 Sep 22 j 00:54	19°♌16'07
min. Earth dist.	398 Oct 11 j 00:29	19°♌56'03 4.00991 AU		403 Nov 15 j 07:17	0°♌
opposition	398 Oct 12 j 09:00	19°♌44'59 -1°34'04	retrograde	404 Jan 20 j 05:47	6°♌06'27
direct	398 Dec 09 j 07:49	14°♌48'44	opposition	404 Mar 20 j 19:40	1°♌14'01 1°41'46
	399 Mar 27 j 02:59	0°♌	min. Earth dist.	404 Mar 21 j 23:59	1°♌04'57 4.42634 AU
evening set	399 Apr 14 j 06:39	4°♌10'08		404 Mar 30 j 12:50	30°♌♌
conjunction	399 Apr 27 j 22:56	7°♌22'05 -0°50'49	direct	404 May 22 j 13:26	26°♌12'08
minimum elong	399 Apr 27 j 22:59	7°♌22'06 0°50'49		404 Jul 13 j 22:08	0°♌
max. Earth dist.	399 Apr 30 j 02:53	7°♌52'30 6.05595 AU	evening set	404 Sep 26 j 00:50	13°♌52'54
morning rise	399 May 11 j 17:27	10°♌34'53	max. Earth dist.	404 Oct 06 j 21:17	16°♌15'50 6.39869 AU
	399 May 31 j 02:33	15°♌	conjunction	404 Oct 08 j 18:28	16°♌40'44 1°05'19
	399 Sep 07 j 19:37	0°♌	minimum elong	404 Oct 08 j 18:30	16°♌40'45 1°05'18
retrograde	399 Sep 17 j 22:34	0°♌10'18	morning rise	404 Oct 21 j 09:38	19°♌27'32
	399 Sep 28 j 01:22	30°♌♌		404 Dec 12 j 16:11	0°♌
min. Earth dist.	399 Nov 15 j 04:54	25°♌16'16 4.11538 AU	retrograde	405 Feb 19 j 16:12	6°♌37'40
opposition	399 Nov 16 j 12:18	25°♌05'34 -0°50'30	opposition	405 Apr 21 j 13:41	1°♌45'54 1°21'46
direct	400 Jan 14 j 05:27	20°♌06'12	min. Earth dist.	405 Apr 22 j 23:47	1°♌35'02 4.35771 AU
	400 Apr 08 j 03:54	0°♌		405 May 05 j 17:46	30°♌♌
evening set	400 May 19 j 18:44	8°♌57'08	direct	405 Jun 23 j 00:56	26°♌46'03
conjunction	400 Jun 02 j 13:14	12°♌04'26 -0°14'47		405 Aug 09 j 16:35	0°♌
minimum elong	400 Jun 02 j 13:15	12°♌04'27 0°14'46	evening set	405 Oct 26 j 22:36	14°♌43'40
behind sun begin	400 Jun 02 j 10:16	12°♌02'46		405 Oct 28 j 03:47	15°♌
behind sun end	400 Jun 02 j 16:14	12°♌06'08	max. Earth dist.	405 Nov 06 j 14:48	17°♌07'45 6.30289 AU
max. Earth dist.	400 Jun 04 j 08:12	12°♌28'49 6.18144 AU	conjunction	405 Nov 08 j 13:49	17°♌34'18 0°42'12
morning rise	400 Jun 16 j 07:39	15°♌11'28	minimum elong	405 Nov 08 j 13:51	17°♌34'19 0°42'12
	400 Aug 31 j 17:58	0°♌	morning rise	405 Nov 21 j 03:52	20°♌24'35
retrograde	400 Oct 20 j 00:48	3°♌41'00		406 Jan 05 j 17:10	0°♌
asc. node	400 Oct 26 j 17:27	3°♌36'33	retrograde	406 Mar 25 j 00:10	8°♌19'25
	400 Dec 08 j 12:21	30°♌♌	opposition	406 May 24 j 22:22	3°♌26'45 0°36'57
opposition	400 Dec 18 j 15:47	28°♌38'59 0°07'50	min. Earth dist.	406 May 26 j 06:13	3°♌16'35 4.23979 AU
min. Earth dist.	400 Dec 17 j 19:31	28°♌45'49 4.24770 AU		406 Jun 23 j 20:11	30°♌♌
direct	401 Feb 16 j 14:55	23°♌37'12	direct	406 Jul 25 j 13:24	28°♌29'28
	401 Apr 25 j 04:26	0°♌		406 Aug 26 j 00:50	0°♌
evening set	401 Jun 23 j 14:49	11°♌54'30	evening set	406 Nov 27 j 19:50	16°♌56'00
conjunction	401 Jul 07 j 05:20	14°♌54'37 0°24'43	max. Earth dist.	406 Dec 09 j 00:20	19°♌31'35 6.17299 AU
minimum elong	401 Jul 07 j 05:18	14°♌54'36 0°24'43	conjunction	406 Dec 10 j 12:06	19°♌52'22 0°05'32

minimum elong	406 Dec 10 j 12:06	19° $\text{♁}$ 52'22	0°05'31	behind sun begin	412 Jun 07 j 06:26	16° $\text{♁}$ 53'16	
behind sun begin	406 Dec 10 j 04:24	19° $\text{♁}$ 47'55		behind sun end	412 Jun 07 j 20:31	17° $\text{♁}$ 01'11	
behind sun end	406 Dec 10 j 19:48	19° $\text{♁}$ 56'49		max. Earth dist.	412 Jun 09 j 05:42	17° $\text{♁}$ 19'58	6.20024 AU
morning rise	406 Dec 23 j 04:45	22° $\text{♁}$ 49'11		morning rise	412 Jun 21 j 07:32	20° $\text{♁}$ 03'15	
	407 Jan 24 j 09:41	0° $\text{♁}$			412 Aug 07 j 16:41	0° $\text{♁}$	
desc. node	407 Feb 01 j 21:11	1° $\text{♁}$ 44'52		asc. node	412 Sep 05 j 07:20	4° $\text{♁}$ 43'28	
retrograde	407 Apr 29 j 10:26	11° $\text{♁}$ 46'12		retrograde	412 Oct 24 j 12:14	8° $\text{♁}$ 23'41	
opposition	407 Jun 29 j 05:34	6° $\text{♁}$ 50'59	-0°22'34	min. Earth dist.	412 Dec 22 j 09:39	3° $\text{♁}$ 28'30	4.26706 AU
min. Earth dist.	407 Jun 29 j 22:17	6° $\text{♁}$ 45'35	4.10688 AU	opposition	412 Dec 23 j 04:39	3° $\text{♁}$ 22'06	0°15'58
direct	407 Aug 28 j 10:58	1° $\text{♁}$ 56'12			413 Jan 19 j 19:33	30° $\text{♁}$ 11	
evening set	407 Dec 31 j 10:32	20° $\text{♁}$ 56'58		direct	413 Feb 21 j 07:57	28° $\text{♁}$ 20'03	
					413 Mar 26 j 07:21	0° $\text{♁}$	
conjunction	408 Jan 13 j 06:46	24° $\text{♁}$ 00'19	-0°34'37	evening set	413 Jun 28 j 08:50	16° $\text{♁}$ 32'22	
minimum elong	408 Jan 13 j 06:43	24° $\text{♁}$ 00'17	0°34'37				
max. Earth dist.	408 Jan 12 j 20:11	23° $\text{♁}$ 54'01	6.04907 AU	conjunction	413 Jul 11 j 22:29	19° $\text{♁}$ 31'19	0°29'45
morning rise	408 Jan 26 j 04:52	27° $\text{♁}$ 04'52		minimum elong	413 Jul 11 j 22:27	19° $\text{♁}$ 31'18	0°29'45
	408 Feb 07 j 15:31	0° $\text{♁}$		max. Earth dist.	413 Jul 12 j 14:22	19° $\text{♁}$ 40'03	6.32903 AU
	408 Apr 29 j 04:39	15° $\text{♁}$		morning rise	413 Jul 25 j 10:05	22° $\text{♁}$ 29'04	
retrograde	408 Jun 04 j 19:00	17° $\text{♁}$ 03'50			413 Aug 30 j 08:26	0° $\text{♁}$	
	408 Jul 11 j 10:47	15° $\text{♁}$		retrograde	413 Nov 24 j 14:58	9° $\text{♁}$ 54'02	
opposition	408 Aug 04 j 04:13	12° $\text{♁}$ 04'56	-1°17'24	opposition	414 Jan 23 j 13:20	4° $\text{♁}$ 56'17	1°06'27
min. Earth dist.	408 Aug 04 j 00:59	12° $\text{♁}$ 05'59	4.00358 AU	min. Earth dist.	414 Jan 23 j 11:55	4° $\text{♁}$ 56'45	4.37966 AU
direct	408 Oct 02 j 02:00	7° $\text{♁}$ 11'27			414 Mar 17 j 10:31	30° $\text{♁}$ 15	
	408 Dec 13 j 11:24	15° $\text{♁}$		direct	414 Mar 26 j 00:20	29° $\text{♁}$ 53'09	
evening set	409 Feb 04 j 01:15	26° $\text{♁}$ 39'43			414 Apr 03 j 15:04	0° $\text{♁}$	
					414 Jul 18 j 13:55	15° $\text{♁}$	
conjunction	409 Feb 17 j 03:59	29° $\text{♁}$ 49'10	-1°03'22	evening set	414 Jul 31 j 02:42	17° $\text{♁}$ 40'21	
minimum elong	409 Feb 17 j 03:57	29° $\text{♁}$ 49'09	1°03'21				
	409 Feb 17 j 21:57	0° $\text{♁}$		conjunction	414 Aug 13 j 08:30	20° $\text{♁}$ 32'30	0°58'25
max. Earth dist.	409 Feb 18 j 00:28	0° $\text{♁}$ 01'31	5.97561 AU	minimum elong	414 Aug 13 j 08:27	20° $\text{♁}$ 32'29	0°58'25
morning rise	409 Mar 02 j 09:42	3° $\text{♁}$ 00'18		max. Earth dist.	414 Aug 12 j 20:00	20° $\text{♁}$ 25'43	6.41639 AU
retrograde	409 Jul 12 j 18:27	23° $\text{♁}$ 33'46		morning rise	414 Aug 26 j 11:31	23° $\text{♁}$ 23'11	
opposition	409 Sep 10 j 16:50	18° $\text{♁}$ 31'05	-1°44'01		414 Sep 27 j 07:05	0° $\text{♁}$	
min. Earth dist.	409 Sep 09 j 17:39	18° $\text{♁}$ 38'53	3.96964 AU	retrograde	414 Dec 24 j 21:45	10° $\text{♁}$ 16'40	
direct	409 Nov 07 j 16:48	13° $\text{♁}$ 36'57		opposition	415 Feb 23 j 05:04	5° $\text{♁}$ 22'15	1°36'36
	410 Feb 27 j 12:12	0° $\text{♁}$		min. Earth dist.	415 Feb 23 j 21:14	5° $\text{♁}$ 17'01	4.43734 AU
evening set	410 Mar 13 j 03:16	3° $\text{♁}$ 12'36		direct	415 Apr 26 j 14:28	0° $\text{♁}$ 19'15	
				evening set	415 Aug 31 j 11:16	17° $\text{♁}$ 55'27	
conjunction	410 Mar 26 j 13:51	6° $\text{♁}$ 25'16	-1°07'59	max. Earth dist.	415 Sep 11 j 23:53	20° $\text{♁}$ 25'17	6.43927 AU
minimum elong	410 Mar 26 j 13:52	6° $\text{♁}$ 25'17	1°07'59				
max. Earth dist.	410 Mar 28 j 10:28	6° $\text{♁}$ 51'58	5.98337 AU	conjunction	415 Sep 13 j 09:30	20° $\text{♁}$ 43'34	1°10'23
morning rise	410 Apr 09 j 03:40	9° $\text{♁}$ 39'30		minimum elong	415 Sep 13 j 09:30	20° $\text{♁}$ 43'34	1°10'23
	410 Aug 17 j 06:26	0° $\text{♁}$		morning rise	415 Sep 26 j 04:39	23° $\text{♁}$ 30'17	
retrograde	410 Aug 18 j 17:59	0° $\text{♁}$ 00'13			415 Oct 27 j 08:26	0° $\text{♁}$	
	410 Aug 20 j 05:35	30° $\text{♁}$ 17		retrograde	416 Jan 24 j 08:59	10° $\text{♁}$ 20'06	
min. Earth dist.	410 Oct 16 j 00:42	25° $\text{♁}$ 06'33	4.01909 AU	opposition	416 Mar 25 j 01:24	5° $\text{♁}$ 27'48	1°40'32
opposition	410 Oct 17 j 09:56	24° $\text{♁}$ 55'13	-1°29'40	min. Earth dist.	416 Mar 26 j 06:40	5° $\text{♁}$ 18'26	4.42521 AU
direct	410 Dec 14 j 10:11	19° $\text{♁}$ 58'34		direct	416 May 26 j 19:07	0° $\text{♁}$ 26'06	
	411 Mar 08 j 11:07	0° $\text{♁}$		evening set	416 Sep 30 j 04:31	18° $\text{♁}$ 06'51	
evening set	411 Apr 19 j 11:25	9° $\text{♁}$ 17'20		max. Earth dist.	416 Oct 10 j 21:46	20° $\text{♁}$ 28'21	6.39216 AU
conjunction	411 May 03 j 04:33	12° $\text{♁}$ 29'01	-0°46'29	conjunction	416 Oct 12 j 21:25	20° $\text{♁}$ 54'39	1°03'09
minimum elong	411 May 03 j 04:36	12° $\text{♁}$ 29'02	0°46'30	minimum elong	416 Oct 12 j 21:27	20° $\text{♁}$ 54'40	1°03'09
max. Earth dist.	411 May 05 j 09:53	13° $\text{♁}$ 00'07	6.06968 AU	morning rise	416 Oct 25 j 12:16	23° $\text{♁}$ 41'34	
	411 May 13 j 23:54	15° $\text{♁}$			416 Nov 24 j 05:00	0° $\text{♁}$	
morning rise	411 May 16 j 23:19	15° $\text{♁}$ 41'21		retrograde	417 Feb 24 j 01:45	10° $\text{♁}$ 55'21	
	411 Jul 25 j 22:54	0° $\text{♁}$		opposition	417 Apr 25 j 22:42	6° $\text{♁}$ 03'32	1°16'58
retrograde	411 Sep 22 j 19:04	5° $\text{♁}$ 08'37		min. Earth dist.	417 Apr 27 j 10:39	5° $\text{♁}$ 52'05	4.34584 AU
min. Earth dist.	411 Nov 20 j 00:59	0° $\text{♁}$ 14'33	4.13222 AU	direct	417 Jun 27 j 09:21	1° $\text{♁}$ 03'53	
opposition	411 Nov 21 j 07:26	0° $\text{♁}$ 04'12	-0°42'38		417 Oct 12 j 15:51	15° $\text{♁}$	
	411 Nov 21 j 19:45	30° $\text{♁}$ 18		evening set	417 Oct 31 j 03:26	19° $\text{♁}$ 04'23	
direct	412 Jan 19 j 04:16	25° $\text{♁}$ 04'31		max. Earth dist.	417 Nov 10 j 19:15	21° $\text{♁}$ 28'46	6.28658 AU
	412 Mar 16 j 13:25	0° $\text{♁}$					
evening set	412 May 24 j 19:19	13° $\text{♁}$ 50'51		conjunction	417 Nov 12 j 18:43	21° $\text{♁}$ 55'40	0°37'52
				minimum elong	417 Nov 12 j 18:45	21° $\text{♁}$ 55'41	0°37'52
conjunction	412 Jun 07 j 13:28	16° $\text{♁}$ 57'13	-0°09'07	morning rise	417 Nov 25 j 08:56	24° $\text{♁}$ 46'42	
minimum elong	412 Jun 07 j 13:28	16° $\text{♁}$ 57'14	0°09'06		417 Dec 19 j 02:10	0° $\text{♁}$	

retrograde	418 Mar 29 j 14:32	12° $\text{♄}$ 49'19	opposition	423 Nov 26 j 03:14	5° $\text{♄}$ 04'34 -0°34'22
opposition	418 May 29 j 13:16	7° $\text{♄}$ 56'21 0°29'28	direct	424 Jan 24 j 03:27	0° $\text{♄}$ 04'27
min. Earth dist.	418 May 30 j 19:35	7° $\text{♄}$ 46'39 4.21995 AU	evening set	424 May 29 j 20:46	18° $\text{♄}$ 45'25
direct	418 Jul 29 j 23:01	2° $\text{♄}$ 59'22			
evening set	418 Dec 02 j 05:52	21° $\text{♄}$ 31'22	conjunction	424 Jun 12 j 14:36	21° $\text{♄}$ 50'45 -0°03'19
			minimum elong	424 Jun 12 j 14:36	21° $\text{♄}$ 50'45 0°03'19
conjunction	418 Dec 14 j 22:31	24° $\text{♄}$ 28'49 -0°00'02	behind sun begin	424 Jun 12 j 06:19	21° $\text{♄}$ 46'06
minimum elong	418 Dec 14 j 22:32	24° $\text{♄}$ 28'49 0°00'02	behind sun end	424 Jun 12 j 22:54	21° $\text{♄}$ 55'24
behind sun begin	418 Dec 14 j 16:09	24° $\text{♄}$ 25'07	max. Earth dist.	424 Jun 14 j 04:15	22° $\text{♄}$ 11'56 6.22091 AU
behind sun end	418 Dec 15 j 04:55	24° $\text{♄}$ 32'31	morning rise	424 Jun 26 j 07:57	24° $\text{♄}$ 55'32
max. Earth dist.	418 Dec 13 j 12:57	24° $\text{♄}$ 09'12 6.15130 AU	asc. node	424 Jul 14 j 20:42	28° $\text{♄}$ 59'31
desc. node	418 Dec 14 j 16:31	24° $\text{♄}$ 25'20		424 Jul 19 j 14:20	0° $\text{♄}$
morning rise	418 Dec 27 j 15:49	27° $\text{♄}$ 26'50	retrograde	424 Oct 29 j 01:42	13° $\text{♄}$ 06'23
	419 Jan 07 j 17:54	0° $\text{♄}$	opposition	424 Dec 27 j 17:56	8° $\text{♄}$ 05'18 0°24'03
retrograde	419 May 04 j 11:24	16° $\text{♄}$ 34'26	min. Earth dist.	424 Dec 27 j 01:44	8° $\text{♄}$ 10'44 4.28707 AU
opposition	419 Jul 04 j 04:03	11° $\text{♄}$ 38'47 -0°30'46	direct	425 Feb 26 j 02:44	3° $\text{♄}$ 03'01
min. Earth dist.	419 Jul 04 j 19:38	11° $\text{♄}$ 33'44 4.08488 AU	evening set	425 Jul 03 j 03:00	21° $\text{♄}$ 10'19
direct	419 Sep 02 j 05:20	6° $\text{♄}$ 44'12			
evening set	420 Jan 05 j 04:44	25° $\text{♄}$ 51'39	conjunction	425 Jul 16 j 15:37	24° $\text{♄}$ 08'06 0°34'39
			minimum elong	425 Jul 16 j 15:35	24° $\text{♄}$ 08'05 0°34'40
conjunction	420 Jan 18 j 01:53	28° $\text{♄}$ 56'16 -0°39'31	max. Earth dist.	425 Jul 17 j 03:29	24° $\text{♄}$ 14'37 6.34655 AU
minimum elong	420 Jan 18 j 01:51	28° $\text{♄}$ 56'14 0°39'31	morning rise	425 Jul 30 j 02:06	27° $\text{♄}$ 04'40
max. Earth dist.	420 Jan 17 j 18:46	28° $\text{♄}$ 52'00 6.02887 AU		425 Aug 12 j 15:45	0° $\text{♄}$
	420 Jan 22 j 12:23	0° $\text{♄}$	retrograde	425 Nov 28 j 21:44	14° $\text{♄}$ 22'58
morning rise	420 Jan 31 j 01:06	2° $\text{♄}$ 02'12	opposition	426 Jan 27 j 22:13	9° $\text{♄}$ 25'43 1°12'09
	420 Mar 30 j 22:28	15° $\text{♄}$	min. Earth dist.	426 Jan 27 j 23:00	9° $\text{♄}$ 25'28 4.39354 AU
retrograde	420 Jun 10 j 01:39	22° $\text{♄}$ 10'42	direct	426 Mar 30 j 12:22	4° $\text{♄}$ 22'31
opposition	420 Aug 09 j 08:33	17° $\text{♄}$ 11'19 -1°23'11		426 Jul 01 j 04:35	15° $\text{♄}$
min. Earth dist.	420 Aug 09 j 01:56	17° $\text{♄}$ 13'30 3.98752 AU	evening set	426 Aug 04 j 14:43	22° $\text{♄}$ 06'42
	420 Aug 26 j 12:28	15° $\text{♄}$			
direct	420 Oct 07 j 00:47	12° $\text{♄}$ 17'54	conjunction	426 Aug 17 j 19:23	24° $\text{♄}$ 58'00 1°01'13
	420 Nov 16 j 19:23	15° $\text{♄}$	minimum elong	426 Aug 17 j 19:21	24° $\text{♄}$ 57'59 1°01'13
	421 Feb 01 j 09:29	0° $\text{♄}$	max. Earth dist.	426 Aug 17 j 04:02	24° $\text{♄}$ 49'41 6.42554 AU
evening set	421 Feb 09 j 04:02	1° $\text{♄}$ 51'21	morning rise	426 Aug 30 j 21:03	27° $\text{♄}$ 47'49
				426 Sep 10 j 04:30	0° $\text{♄}$
conjunction	421 Feb 22 j 07:53	5° $\text{♄}$ 01'49 -1°05'33	retrograde	426 Dec 29 j 04:15	14° $\text{♄}$ 38'38
minimum elong	421 Feb 22 j 07:51	5° $\text{♄}$ 01'48 1°05'33	opposition	427 Feb 27 j 12:41	9° $\text{♄}$ 44'41 1°38'47
max. Earth dist.	421 Feb 23 j 07:43	5° $\text{♄}$ 16'13 5.96509 AU	min. Earth dist.	427 Feb 28 j 07:15	9° $\text{♄}$ 38'40 4.44131 AU
morning rise	421 Mar 07 j 14:58	8° $\text{♄}$ 14'01	direct	427 May 01 j 00:26	4° $\text{♄}$ 41'51
retrograde	421 Jul 18 j 01:51	28° $\text{♄}$ 51'22	evening set	427 Sep 04 j 19:41	22° $\text{♄}$ 17'26
opposition	421 Sep 15 j 23:02	23° $\text{♄}$ 48'09 -1°44'26	max. Earth dist.	427 Sep 16 j 03:01	24° $\text{♄}$ 44'38 6.43755 AU
min. Earth dist.	421 Sep 14 j 21:15	23° $\text{♄}$ 56'52 3.96593 AU			
direct	421 Nov 12 j 21:04	18° $\text{♄}$ 53'45	conjunction	427 Sep 17 j 16:53	25° $\text{♄}$ 05'14 1°10'31
	422 Feb 09 j 03:23	0° $\text{♄}$	minimum elong	427 Sep 17 j 16:53	25° $\text{♄}$ 05'14 1°10'31
evening set	422 Mar 18 j 10:47	8° $\text{♄}$ 30'29	morning rise	427 Sep 30 j 11:21	27° $\text{♄}$ 51'44
				427 Oct 10 j 10:15	0° $\text{♄}$
conjunction	422 Mar 31 j 22:46	11° $\text{♄}$ 43'35 -1°06'18	retrograde	428 Jan 28 j 18:51	14° $\text{♄}$ 43'09
minimum elong	422 Mar 31 j 22:48	11° $\text{♄}$ 43'37 1°06'17	opposition	428 Mar 29 j 11:10	9° $\text{♄}$ 51'01 1°38'49
max. Earth dist.	422 Apr 03 j 00:06	12° $\text{♄}$ 13'03 5.98691 AU	min. Earth dist.	428 Mar 30 j 18:28	9° $\text{♄}$ 41'01 4.41804 AU
morning rise	422 Apr 14 j 13:31	14° $\text{♄}$ 58'06	direct	428 May 31 j 05:01	4° $\text{♄}$ 49'31
	422 Jun 25 j 14:30	0° $\text{♄}$	evening set	428 Oct 04 j 12:07	22° $\text{♄}$ 32'16
retrograde	422 Aug 23 j 23:06	5° $\text{♄}$ 14'41	max. Earth dist.	428 Oct 15 j 05:00	24° $\text{♄}$ 53'57 6.38004 AU
min. Earth dist.	422 Oct 21 j 03:04	0° $\text{♄}$ 21'01 4.02926 AU			
opposition	422 Oct 22 j 12:44	0° $\text{♄}$ 09'32 -1°24'26	conjunction	428 Oct 17 j 04:47	25° $\text{♄}$ 20'24 1°00'35
	422 Oct 23 j 16:42	30° $\text{♄}$	minimum elong	428 Oct 17 j 04:48	25° $\text{♄}$ 20'25 1°00'35
direct	422 Dec 19 j 14:58	25° $\text{♄}$ 12'28	morning rise	428 Oct 29 j 19:11	28° $\text{♄}$ 07'41
	423 Feb 13 j 04:01	0° $\text{♄}$		428 Nov 07 j 08:29	0° $\text{♄}$
evening set	423 Apr 24 j 18:23	14° $\text{♄}$ 27'55		429 Feb 11 j 13:54	15° $\text{♄}$
	423 Apr 27 j 01:52	15° $\text{♄}$	retrograde	429 Feb 28 j 15:23	15° $\text{♄}$ 27'10
				429 Mar 17 j 17:55	15° $\text{♄}$
conjunction	423 May 08 j 11:57	17° $\text{♄}$ 39'07 -0°41'43	opposition	429 Apr 30 j 13:28	10° $\text{♄}$ 35'18 1°11'31
minimum elong	423 May 08 j 12:00	17° $\text{♄}$ 39'08 0°41'43	min. Earth dist.	429 May 02 j 00:55	10° $\text{♄}$ 24'01 4.32948 AU
max. Earth dist.	423 May 10 j 17:01	18° $\text{♄}$ 09'55 6.08528 AU	direct	429 Jul 01 j 20:19	5° $\text{♄}$ 36'02
morning rise	423 May 22 j 07:11	20° $\text{♄}$ 50'52		429 Sep 24 j 19:21	15° $\text{♄}$
	423 Jul 03 j 04:48	0° $\text{♄}$	evening set	429 Nov 04 j 14:05	23° $\text{♄}$ 40'47
retrograde	423 Sep 27 j 13:35	10° $\text{♄}$ 08'48	max. Earth dist.	429 Nov 15 j 06:12	26° $\text{♄}$ 06'02 6.26728 AU
min. Earth dist.	423 Nov 24 j 20:50	5° $\text{♄}$ 14'55 4.15123 AU			

conjunction	429 Nov 17 j 05:16	26°♄32'50	0°33'04	retrograde	435 Oct 02 j 06:07	14°♂59'24	
minimum elong	429 Nov 17 j 05:17	26°♄32'51	0°33'03	opposition	435 Nov 30 j 19:27	9°♂55'28	-0°26'09
morning rise	429 Nov 29 j 19:48	29°♄24'47		min. Earth dist.	435 Nov 29 j 15:36	10°♂04'56	4.17309 AU
	429 Dec 02 j 10:08	0°♂		direct	436 Jan 29 j 01:02	4°♂54'56	
retrograde	430 Apr 03 j 14:03	17°♂36'26		asc. node	436 May 24 j 20:09	21°♂18'24	
opposition	430 Jun 03 j 11:12	12°♂43'12	0°21'18	evening set	436 Jun 03 j 17:52	23°♂29'52	
min. Earth dist.	430 Jun 04 j 16:45	12°♂33'44	4.19889 AU				
direct	430 Aug 03 j 17:32	7°♂46'33		conjunction	436 Jun 17 j 11:16	26°♂34'04	0°02'26
desc. node	430 Oct 23 j 18:05	16°♂45'58		minimum elong	436 Jun 17 j 11:15	26°♂34'04	0°02'26
evening set	430 Dec 06 j 22:25	26°♂24'16		behind sun begin	436 Jun 17 j 02:55	26°♂29'25	
max. Earth dist.	430 Dec 18 j 09:22	29°♂05'02	6.13053 AU	behind sun end	436 Jun 17 j 19:36	26°♂38'43	
				max. Earth dist.	436 Jun 18 j 22:08	26°♂53'36	6.24193 AU
conjunction	430 Dec 19 j 15:41	29°♂22'49	-0°05'56	morning rise	436 Jul 01 j 03:49	29°♂37'37	
minimum elong	430 Dec 19 j 15:41	29°♂22'49	0°05'55		436 Jul 02 j 20:10	0°♂	
behind sun begin	430 Dec 19 j 08:02	29°♂18'21		retrograde	436 Nov 02 j 08:50	17°♂39'20	
behind sun end	430 Dec 19 j 23:21	29°♂27'18		opposition	437 Jan 01 j 03:29	12°♂38'46	0°31'42
	430 Dec 22 j 07:03	0°♂		min. Earth dist.	436 Dec 31 j 13:01	12°♂43'36	4.30561 AU
morning rise	431 Jan 01 j 09:39	2°♂22'03		direct	437 Mar 02 j 15:53	7°♂36'15	
retrograde	431 May 09 j 17:03	21°♂39'38		evening set	437 Jul 07 j 17:34	25°♂39'18	
opposition	431 Jul 09 j 08:53	16°♂43'34	-0°39'17				
min. Earth dist.	431 Jul 09 j 20:59	16°♂39'38	4.06650 AU	conjunction	437 Jul 21 j 05:05	28°♂36'02	0°39'13
direct	431 Sep 07 j 04:19	11°♂49'19		minimum elong	437 Jul 21 j 05:03	28°♂36'01	0°39'12
	432 Jan 05 j 20:45	0°♂		max. Earth dist.	437 Jul 21 j 11:59	28°♂39'49	6.36119 AU
evening set	432 Jan 10 j 04:57	1°♂01'52			437 Jul 27 j 14:30	0°♂	
				morning rise	437 Aug 03 j 14:23	1°♂31'30	
conjunction	432 Jan 23 j 02:49	4°♂07'28	-0°44'24		437 Oct 13 j 23:38	15°♂	
minimum elong	432 Jan 23 j 02:47	4°♂07'27	0°44'24	retrograde	437 Dec 03 j 03:56	18°♂44'28	
max. Earth dist.	432 Jan 22 j 23:45	4°♂05'37	6.01463 AU		438 Jan 22 j 22:02	15°♂	
morning rise	432 Feb 05 j 03:08	7°♂14'30		opposition	438 Feb 01 j 04:32	13°♂47'45	1°17'18
	432 Mar 09 j 22:07	15°♂		min. Earth dist.	438 Feb 01 j 08:57	13°♂46'18	4.40343 AU
retrograde	432 Jun 15 j 11:43	27°♂29'56		direct	438 Apr 03 j 23:19	8°♂44'32	
opposition	432 Aug 14 j 17:22	22°♂29'55	-1°28'33		438 Jun 11 j 11:02	15°♂	
min. Earth dist.	432 Aug 14 j 07:14	22°♂33'17	3.97926 AU	evening set	438 Aug 09 j 00:18	26°♂26'59	
direct	432 Oct 12 j 06:11	17°♂36'29		max. Earth dist.	438 Aug 21 j 08:17	29°♂07'03	6.42976 AU
	433 Jan 14 j 10:51	0°♂					
evening set	433 Feb 14 j 10:05	7°♂11'46		conjunction	438 Aug 22 j 03:55	29°♂17'42	1°03'37
				minimum elong	438 Aug 22 j 03:53	29°♂17'41	1°03'37
conjunction	433 Feb 27 j 15:11	10°♂22'50	-1°07'21		438 Aug 25 j 09:56	0°♂	
minimum elong	433 Feb 27 j 15:09	10°♂22'49	1°07'21	morning rise	438 Sep 04 j 04:31	2°♂06'55	
max. Earth dist.	433 Feb 28 j 21:14	10°♂40'58	5.96371 AU	retrograde	439 Jan 02 j 09:34	18°♂56'49	
morning rise	433 Mar 12 j 23:15	13°♂35'32		opposition	439 Mar 03 j 19:19	14°♂03'11	1°40'26
	433 May 31 j 15:58	0°♂		min. Earth dist.	439 Mar 04 j 15:47	13°♂56'34	4.44000 AU
retrograde	433 Jul 23 j 10:40	4°♂12'21		direct	439 May 05 j 07:59	9°♂00'28	
	433 Sep 14 j 21:35	30°♂		evening set	439 Sep 09 j 03:01	26°♂37'02	
min. Earth dist.	433 Sep 20 j 02:39	29°♂17'58	3.97190 AU	max. Earth dist.	439 Sep 20 j 08:25	29°♂03'27	6.43080 AU
opposition	433 Sep 21 j 06:04	29°♂08'42	-1°44'01				
direct	433 Nov 18 j 03:57	24°♂14'00		conjunction	439 Sep 21 j 23:30	29°♂24'47	1°10'16
	434 Jan 18 j 01:09	0°♂		minimum elong	439 Sep 21 j 23:30	29°♂24'47	1°10'15
evening set	434 Mar 23 j 18:32	13°♂48'02			439 Sep 24 j 16:02	0°♂	
				morning rise	439 Oct 04 j 17:07	2°♂11'15	
conjunction	434 Apr 06 j 07:18	17°♂00'58	-1°04'10	retrograde	440 Feb 02 j 04:13	19°♂05'57	
minimum elong	434 Apr 06 j 07:20	17°♂00'59	1°04'10	opposition	440 Apr 02 j 21:25	14°♂14'01	1°36'34
max. Earth dist.	434 Apr 08 j 09:59	17°♂31'06	5.99932 AU	min. Earth dist.	440 Apr 04 j 05:56	14°♂03'38	4.40635 AU
morning rise	434 Apr 19 j 23:03	20°♂15'15		direct	440 Jun 04 j 14:25	9°♂12'52	
	434 Jun 02 j 15:11	0°♂		evening set	440 Oct 08 j 20:35	26°♂58'53	
retrograde	434 Aug 28 j 22:11	10°♂23'57		max. Earth dist.	440 Oct 19 j 11:12	29°♂19'56	6.36429 AU
min. Earth dist.	434 Oct 26 j 02:03	5°♂30'34	4.04672 AU				
opposition	434 Oct 27 j 12:49	5°♂18'42	-1°18'40	conjunction	440 Oct 21 j 12:45	29°♂47'29	0°57'38
direct	434 Dec 24 j 16:59	0°♂21'08		minimum elong	440 Oct 21 j 12:47	29°♂47'30	0°57'39
	435 Apr 09 j 23:18	15°♂			440 Oct 22 j 11:15	0°♂	
evening set	435 Apr 29 j 22:16	19°♂30'56		morning rise	440 Nov 03 j 03:09	2°♂35'22	
					441 Jan 05 j 01:05	15°♂	
conjunction	435 May 13 j 16:12	22°♂41'20	-0°36'47	retrograde	441 Mar 05 j 08:36	20°♂01'45	
minimum elong	435 May 13 j 16:14	22°♂41'22	0°36'47	opposition	441 May 05 j 05:56	15°♂09'48	1°05'34
max. Earth dist.	435 May 15 j 19:46	23°♂11'08	6.10615 AU		441 May 06 j 12:41	15°♂	
morning rise	435 May 27 j 11:24	25°♂52'07		min. Earth dist.	441 May 06 j 17:14	14°♂58'33	4.31065 AU
	435 Jun 14 j 19:29	0°♂		direct	441 Jul 06 j 10:19	10°♂10'54	

	441 Sep 02 j 22:41	15°♄			447 Mar 22 j 08:41	15°♄	
evening set	441 Nov 09 j 02:14	28°♄20'34		evening set	447 May 05 j 00:02	24°♄28'59	
	441 Nov 16 j 09:02	0°♄					
max. Earth dist.	441 Nov 19 j 21:34	0°♄48'18	6.24713 AU	conjunction	447 May 18 j 18:17	27°♄38'41	-0°31'41
				minimum elong	447 May 18 j 18:20	27°♄38'42	0°31'41
conjunction	441 Nov 21 j 17:43	1°♄13'33	0°27'59	max. Earth dist.	447 May 20 j 21:05	28°♄07'54	6.12497 AU
minimum elong	441 Nov 21 j 17:45	1°♄13'34	0°27'59		447 May 29 j 00:24	0°♄	
morning rise	441 Dec 04 j 08:27	4°♄06'27		morning rise	447 Jun 01 j 13:26	0°♄48'35	
retrograde	442 Apr 08 j 13:39	22°♄27'16		retrograde	447 Oct 06 j 19:08	19°♄46'19	
opposition	442 Jun 08 j 10:58	17°♄33'47	0°12'52	min. Earth dist.	447 Dec 04 j 06:50	14°♄51'56	4.19214 AU
min. Earth dist.	442 Jun 09 j 14:06	17°♄25'05	4.17893 AU	opposition	447 Dec 05 j 09:44	14°♄42'49	-0°17'55
direct	442 Aug 08 j 12:12	12°♄37'37		direct	448 Feb 02 j 18:29	9°♄41'58	
desc. node	442 Sep 01 j 14:38	13°♄32'09		asc. node	448 Apr 03 j 22:03	15°♄07'14	
	442 Dec 05 j 22:18	0°♄		evening set	448 Jun 08 j 14:02	28°♄12'13	
evening set	442 Dec 11 j 16:39	1°♄20'25			448 Jun 16 j 15:44	0°♄	
max. Earth dist.	442 Dec 23 j 06:59	4°♄03'52	6.11250 AU				
				conjunction	448 Jun 22 j 06:46	1°♄15'24	0°07'59
conjunction	442 Dec 24 j 10:15	4°♄19'56	-0°11'46	minimum elong	448 Jun 22 j 06:45	1°♄15'23	0°07'59
minimum elong	442 Dec 24 j 10:14	4°♄19'55	0°11'46	behind sun begin	448 Jun 21 j 23:22	1°♄11'17	
behind sun begin	442 Dec 24 j 04:31	4°♄16'34		behind sun end	448 Jun 22 j 14:09	1°♄19'30	
behind sun end	442 Dec 24 j 15:58	4°♄23'17		max. Earth dist.	448 Jun 23 j 12:32	1°♄32'01	6.25974 AU
morning rise	443 Jan 06 j 05:03	7°♄20'16		morning rise	448 Jul 05 j 22:39	4°♄17'52	
retrograde	443 May 15 j 00:03	26°♄46'47		retrograde	448 Nov 06 j 18:10	22°♄11'54	
opposition	443 Jul 14 j 14:41	21°♄50'10	-0°47'34	opposition	449 Jan 05 j 12:47	17°♄11'52	0°39'06
min. Earth dist.	443 Jul 14 j 23:19	21°♄47'21	4.05196 AU	min. Earth dist.	449 Jan 05 j 01:49	17°♄15'32	4.32076 AU
direct	443 Sep 12 j 05:50	16°♄56'09		direct	449 Mar 07 j 06:39	12°♄09'10	
	443 Dec 19 j 12:08	0°♄			449 Jul 11 j 15:03	0°♄	
evening set	444 Jan 15 j 05:33	6°♄12'17		evening set	449 Jul 12 j 07:46	0°♄09'04	
conjunction	444 Jan 28 j 04:24	9°♄18'42	-0°48'56	conjunction	449 Jul 25 j 18:25	3°♄04'57	0°43'32
minimum elong	444 Jan 28 j 04:22	9°♄18'41	0°48'56	minimum elong	449 Jul 25 j 18:23	3°♄04'56	0°43'31
max. Earth dist.	444 Jan 28 j 07:29	9°♄20'33	6.00492 AU	max. Earth dist.	449 Jul 25 j 22:16	3°♄07'03	6.37250 AU
morning rise	444 Feb 10 j 05:33	12°♄26'33		morning rise	449 Aug 08 j 02:28	5°♄59'28	
	444 Feb 21 j 00:48	15°♄			449 Sep 21 j 05:55	15°♄	
	444 May 09 j 06:50	0°♄		retrograde	449 Dec 07 j 08:46	23°♄08'17	
retrograde	444 Jun 20 j 21:12	2°♄46'42		opposition	450 Feb 05 j 11:36	18°♄12'03	1°22'03
	444 Aug 02 j 15:18	30°♄		min. Earth dist.	450 Feb 05 j 17:36	18°♄10'05	4.41044 AU
opposition	444 Aug 20 j 00:57	27°♄46'09	-1°33'09		450 Mar 04 j 01:39	15°♄	
min. Earth dist.	444 Aug 19 j 12:23	27°♄50'20	3.97559 AU	direct	450 Apr 08 j 08:36	13°♄08'51	
direct	444 Oct 17 j 10:43	22°♄52'44			450 May 14 j 02:01	15°♄	
	444 Dec 24 j 22:18	0°♄			450 Aug 09 j 12:44	0°♄	
evening set	445 Feb 19 j 15:18	12°♄28'25		evening set	450 Aug 13 j 10:30	0°♄50'18	
conjunction	445 Mar 04 j 21:16	15°♄39'48	-1°08'34	conjunction	450 Aug 26 j 12:58	3°♄40'28	1°05'41
minimum elong	445 Mar 04 j 21:16	15°♄39'48	1°08'34	minimum elong	450 Aug 26 j 12:56	3°♄40'27	1°05'41
max. Earth dist.	445 Mar 06 j 05:51	15°♄59'26	5.96604 AU	max. Earth dist.	450 Aug 25 j 13:45	3°♄27'52	6.43189 AU
morning rise	445 Mar 18 j 06:36	18°♄52'55		morning rise	450 Sep 08 j 12:31	6°♄29'10	
	445 May 07 j 00:08	0°♄		retrograde	451 Jan 06 j 17:18	23°♄18'49	
retrograde	445 Jul 28 j 14:50	9°♄27'36		opposition	451 Mar 08 j 03:28	18°♄25'32	1°41'34
min. Earth dist.	445 Sep 25 j 04:20	4°♄33'44	3.98017 AU	min. Earth dist.	451 Mar 09 j 02:38	18°♄18'04	4.43736 AU
opposition	445 Sep 26 j 10:15	4°♄23'36	-1°42'45	direct	451 May 09 j 18:30	13°♄23'01	
	445 Nov 05 j 22:13	30°♄			451 Sep 08 j 19:09	0°♄	
direct	445 Nov 23 j 07:28	29°♄28'35		evening set	451 Sep 13 j 11:30	1°♄00'40	
	445 Dec 10 j 18:45	0°♄		max. Earth dist.	451 Sep 24 j 13:34	3°♄25'38	6.42352 AU
evening set	446 Mar 28 j 23:56	18°♄59'37					
				conjunction	451 Sep 26 j 07:14	3°♄48'24	1°09'37
conjunction	446 Apr 11 j 13:40	22°♄12'22	-1°01'34	minimum elong	451 Sep 26 j 07:14	3°♄48'24	1°09'37
minimum elong	446 Apr 11 j 13:43	22°♄12'24	1°01'34	morning rise	451 Oct 09 j 00:16	6°♄34'55	
max. Earth dist.	446 Apr 13 j 17:27	22°♄43'03	6.01268 AU	retrograde	452 Feb 06 j 15:00	23°♄33'00	
morning rise	446 Apr 25 j 06:05	25°♄26'20		opposition	452 Apr 07 j 09:19	18°♄41'08	1°33'45
	446 May 15 j 00:34	0°♄		min. Earth dist.	452 Apr 08 j 18:02	18°♄30'41	4.39518 AU
	446 Aug 17 j 05:32	15°♄		direct	452 Jun 09 j 01:00	13°♄40'16	
retrograde	446 Sep 02 j 20:47	15°♄27'19			452 Oct 06 j 11:47	0°♄	
	446 Sep 19 j 08:05	15°♄		evening set	452 Oct 13 j 05:47	1°♄29'03	
min. Earth dist.	446 Oct 31 j 01:02	10°♄33'32	4.06348 AU	max. Earth dist.	452 Oct 23 j 22:01	3°♄51'27	6.35032 AU
opposition	446 Nov 01 j 10:30	10°♄22'07	-1°12'28				
direct	446 Dec 29 j 18:16	5°♄24'07		conjunction	452 Oct 25 j 21:45	4°♄18'06	0°54'21

minimum elong	452 Oct 25 j 21:48	4°♄18'07	0°54'21		458 Jul 09 j 14:07	15°♄	
morning rise	452 Nov 07 j 11:52	7°♄06'28		retrograde	458 Sep 07 j 14:48	20°♄20'53	
	452 Dec 14 j 18:22	15°♄		min. Earth dist.	458 Nov 04 j 18:56	15°♄27'13	4.07824 AU
retrograde	453 Mar 10 j 01:25	24°♄39'06		opposition	458 Nov 06 j 04:21	15°♄15'49	-1°05'59
opposition	453 May 09 j 23:38	19°♄47'03	0°59'12		458 Nov 08 j 02:48	15°♄	
min. Earth dist.	453 May 11 j 10:13	19°♄36'03	4.29480 AU	direct	459 Jan 03 j 13:27	10°♄17'28	
	453 Jun 29 j 21:47	15°♄			459 Feb 28 j 01:38	15°♄	
direct	453 Jul 11 j 01:27	14°♄48'36		evening set	459 May 09 j 22:53	29°♄18'29	
	453 Jul 22 j 04:37	15°♄			459 May 12 j 23:38	0°♄	
	453 Oct 31 j 03:03	0°♄					
evening set	453 Nov 13 j 14:43	3°♄01'47		conjunction	459 May 23 j 17:12	2°♄27'33	-0°26'32
max. Earth dist.	453 Nov 24 j 11:02	5°♄30'42	6.23079 AU	minimum elong	459 May 23 j 17:14	2°♄27'34	0°26'32
				max. Earth dist.	459 May 25 j 16:10	2°♄54'28	6.14088 AU
conjunction	453 Nov 26 j 06:08	5°♄55'26	0°22'46	morning rise	459 Jun 06 j 12:26	5°♄36'44	
minimum elong	453 Nov 26 j 06:10	5°♄55'26	0°22'46	retrograde	459 Oct 11 j 07:22	24°♄26'26	
morning rise	453 Dec 08 j 21:21	8°♄49'11		opposition	459 Dec 09 j 21:56	19°♄23'20	-0°09'51
retrograde	454 Apr 13 j 13:14	27°♄17'50		min. Earth dist.	459 Dec 08 j 21:31	19°♄31'36	4.20767 AU
opposition	454 Jun 13 j 10:35	22°♄23'55	0°04'25	direct	460 Feb 07 j 11:19	14°♄22'11	
min. Earth dist.	454 Jun 14 j 10:58	22°♄16'05	4.16326 AU	asc. node	460 Feb 14 j 02:50	14°♄26'32	
desc. node	454 Jul 12 j 12:25	19°♄00'58			460 May 31 j 11:24	0°♄	
direct	454 Aug 13 j 07:48	17°♄28'03		evening set	460 Jun 13 j 07:55	2°♄49'01	
	454 Nov 18 j 22:40	0°♄					
evening set	454 Dec 16 j 09:56	6°♄14'19		conjunction	460 Jun 27 j 00:16	5°♄51'25	0°13'20
max. Earth dist.	454 Dec 28 j 06:05	9°♄01'35	6.09901 AU	minimum elong	460 Jun 27 j 00:15	5°♄51'24	0°13'20
				behind sun begin	460 Jun 26 j 19:41	5°♄48'52	
conjunction	454 Dec 29 j 04:10	9°♄14'37	-0°17'25	behind sun end	460 Jun 27 j 04:50	5°♄53'56	
minimum elong	454 Dec 29 j 04:09	9°♄14'36	0°17'26	max. Earth dist.	460 Jun 28 j 04:02	6°♄06'52	6.27393 AU
morning rise	455 Jan 10 j 23:28	12°♄15'47		morning rise	460 Jul 10 j 15:11	8°♄52'55	
	455 Apr 15 j 18:41	0°♄		retrograde	460 Nov 11 j 01:20	26°♄40'44	
retrograde	455 May 20 j 05:27	1°♄49'15		opposition	461 Jan 09 j 21:02	21°♄41'17	0°46'07
	455 Jun 23 j 16:54	30°♄		min. Earth dist.	461 Jan 09 j 11:32	21°♄44'27	4.33268 AU
opposition	455 Jul 19 j 18:24	26°♄52'07	-0°55'17	direct	461 Mar 11 j 18:00	16°♄38'32	
min. Earth dist.	455 Jul 20 j 00:42	26°♄50'04	4.04200 AU		461 Jun 25 j 04:43	0°♄	
direct	455 Sep 17 j 05:42	21°♄58'17		evening set	461 Jul 16 j 21:12	4°♄36'16	
	455 Nov 30 j 06:37	0°♄					
evening set	456 Jan 20 j 04:04	11°♄16'23		conjunction	461 Jul 30 j 06:40	7°♄31'21	0°47'31
				minimum elong	461 Jul 30 j 06:37	7°♄31'20	0°47'31
conjunction	456 Feb 02 j 03:33	14°♄23'22	-0°52'58	max. Earth dist.	461 Jul 30 j 05:35	7°♄30'46	6.38129 AU
minimum elong	456 Feb 02 j 03:30	14°♄23'21	0°52'58	morning rise	461 Aug 12 j 13:43	10°♄25'05	
max. Earth dist.	456 Feb 02 j 09:30	14°♄26'57	5.99912 AU		461 Sep 03 j 03:52	15°♄	
	456 Feb 04 j 16:27	15°♄		retrograde	461 Dec 11 j 15:50	27°♄30'37	
morning rise	456 Feb 15 j 05:49	17°♄31'55		opposition	462 Feb 09 j 18:34	22°♄34'53	1°26'15
	456 Apr 12 j 02:01	0°♄		min. Earth dist.	462 Feb 10 j 03:39	22°♄31'54	4.41578 AU
retrograde	456 Jun 26 j 00:46	7°♄55'04		direct	462 Apr 12 j 19:29	17°♄31'42	
opposition	456 Aug 25 j 04:57	2°♄53'57	-1°36'49		462 Jul 24 j 00:14	0°♄	
min. Earth dist.	456 Aug 24 j 12:58	2°♄59'17	3.97484 AU	evening set	462 Aug 17 j 20:04	5°♄12'27	
	456 Sep 17 j 12:38	30°♄					
direct	456 Oct 22 j 11:37	28°♄00'23		conjunction	462 Aug 30 j 21:39	8°♄02'10	1°07'20
	456 Nov 26 j 04:11	0°♄		minimum elong	462 Aug 30 j 21:38	8°♄02'10	1°07'19
evening set	457 Feb 24 j 16:59	17°♄35'34		max. Earth dist.	462 Aug 29 j 20:39	7°♄48'36	6.43332 AU
				morning rise	462 Sep 12 j 20:04	10°♄50'24	
conjunction	457 Mar 10 j 00:03	20°♄47'13	-1°09'12	retrograde	463 Jan 10 j 23:03	27°♄39'57	
minimum elong	457 Mar 10 j 00:02	20°♄47'13	1°09'12	opposition	463 Mar 12 j 11:30	22°♄46'56	1°42'05
max. Earth dist.	457 Mar 11 j 12:11	21°♄08'58	5.97025 AU	min. Earth dist.	463 Mar 13 j 11:13	22°♄39'18	4.43497 AU
morning rise	457 Mar 23 j 10:15	24°♄00'31		direct	463 May 14 j 02:34	17°♄44'37	
	457 Apr 18 j 04:10	0°♄			463 Aug 23 j 07:06	0°♄	
retrograde	457 Aug 02 j 16:32	14°♄32'28		evening set	463 Sep 17 j 19:07	5°♄22'58	
min. Earth dist.	457 Sep 30 j 04:34	9°♄38'19	3.98887 AU	max. Earth dist.	463 Sep 28 j 19:33	7°♄47'20	6.41734 AU
opposition	457 Oct 01 j 10:29	9°♄28'09	-1°40'43				
direct	457 Nov 28 j 09:06	4°♄32'46		conjunction	463 Sep 30 j 14:04	8°♄10'38	1°08'34
evening set	458 Apr 03 j 01:46	24°♄00'54		minimum elong	463 Sep 30 j 14:05	8°♄10'38	1°08'34
				morning rise	463 Oct 13 j 06:28	10°♄57'09	
conjunction	458 Apr 16 j 16:24	27°♄13'29	-0°58'36	retrograde	464 Feb 11 j 01:57	27°♄58'18	
minimum elong	458 Apr 16 j 16:27	27°♄13'31	0°58'36	opposition	464 Apr 11 j 20:49	23°♄06'31	1°30'22
max. Earth dist.	458 Apr 18 j 21:18	27°♄44'43	6.02503 AU	min. Earth dist.	464 Apr 13 j 06:56	22°♄55'38	4.38528 AU
	458 Apr 28 j 11:06	0°♄		direct	464 Jun 13 j 12:45	18°♄05'57	
morning rise	458 Apr 30 j 09:30	0°♄27'11			464 Sep 19 j 20:56	0°♄	



evening set	464 Oct 17 j 13:52	5°♄56'55		max. Earth dist.	470 Apr 24 j 02:51	2°♄54'09	6.03616 AU
max. Earth dist.	464 Oct 28 j 04:47	8°♄19'05	6.33723 AU	morning rise	470 May 05 j 16:37	5°♄36'58	
					470 Jun 17 j 02:36	15°♄	
conjunction	464 Oct 30 j 05:31	8°♄46'22	0°50'46	retrograde	470 Sep 12 j 11:40	25°♄23'32	
minimum elong	464 Oct 30 j 05:33	8°♄46'23	0°50'45	min. Earth dist.	470 Nov 09 j 16:39	20°♄29'45	4.09289 AU
morning rise	464 Nov 11 j 19:37	11°♄35'15		opposition	470 Nov 11 j 01:25	20°♄18'34	-0°58'49
	464 Nov 27 j 08:18	15°♄		direct	471 Jan 08 j 14:09	15°♄19'46	
retrograde	465 Mar 14 j 16:51	29°♄14'00			471 Apr 25 j 21:47	0°♄	
opposition	465 May 14 j 16:01	24°♄21'45	0°52'28	evening set	471 May 15 j 01:13	4°♄16'48	
min. Earth dist.	465 May 16 j 01:17	24°♄11'08	4.27904 AU				
direct	465 Jul 15 j 14:19	19°♄23'35		conjunction	471 May 28 j 19:49	7°♄25'11	-0°21'01
	465 Oct 13 j 21:18	0°♄		minimum elong	471 May 28 j 19:51	7°♄25'11	0°21'01
evening set	465 Nov 18 j 01:58	7°♄40'33		max. Earth dist.	471 May 30 j 18:35	7°♄51'52	6.15827 AU
max. Earth dist.	465 Nov 29 j 01:40	10°♄11'56	6.21369 AU	morning rise	471 Jun 11 j 14:40	10°♄33'27	
				retrograde	471 Oct 15 j 22:19	29°♄14'06	
conjunction	465 Nov 30 j 17:41	10°♄34'59	0°17'25	opposition	471 Dec 14 j 12:48	24°♄11'30	-0°01'29
minimum elong	465 Nov 30 j 17:42	10°♄35'00	0°17'25	min. Earth dist.	471 Dec 13 j 13:33	24°♄19'21	4.22630 AU
morning rise	465 Dec 13 j 09:08	13°♄29'36		asc. node	471 Dec 24 j 11:17	22°♄51'59	
	466 Mar 12 j 04:28	0°♄		direct	472 Feb 12 j 06:26	19°♄10'06	
retrograde	466 Apr 18 j 13:24	2°♄06'37			472 May 13 j 14:59	0°♄	
desc. node	466 May 22 j 14:22	0°♄21'48		evening set	472 Jun 18 j 04:41	7°♄32'10	
	466 May 26 j 04:41	30°♄					
opposition	466 Jun 18 j 09:12	27°♄12'23	-0°04'05	conjunction	472 Jul 01 j 20:07	10°♄33'25	0°18'44
min. Earth dist.	466 Jun 19 j 08:26	27°♄04'54	4.14582 AU	minimum elong	472 Jul 01 j 20:05	10°♄33'24	0°18'44
direct	466 Aug 18 j 02:22	22°♄16'51		max. Earth dist.	472 Jul 02 j 19:40	10°♄46'28	6.29258 AU
	466 Oct 30 j 19:15	0°♄		morning rise	472 Jul 15 j 10:13	13°♄33'44	
evening set	466 Dec 21 j 02:50	11°♄07'34			472 Oct 18 j 14:38	0°♄	
				retrograde	472 Nov 15 j 10:10	1°♄13'31	
conjunction	467 Jan 02 j 21:30	14°♄08'48	-0°22'59		472 Dec 13 j 01:38	30°♄	
minimum elong	467 Jan 02 j 21:29	14°♄08'47	0°22'59	opposition	473 Jan 14 j 06:52	26°♄14'33	0°52'57
max. Earth dist.	467 Jan 02 j 01:19	13°♄56'50	6.08271 AU	min. Earth dist.	473 Jan 13 j 23:45	26°♄16'55	4.35015 AU
morning rise	467 Jan 15 j 17:47	17°♄11'03		direct	473 Mar 16 j 08:49	21°♄11'36	
	467 Mar 16 j 16:12	0°♄			473 Jun 06 j 20:52	0°♄	
retrograde	467 May 25 j 08:48	6°♄52'50		evening set	473 Jul 21 j 10:57	9°♄04'57	
opposition	467 Jul 24 j 21:56	1°♄55'08	-1°02'41				
min. Earth dist.	467 Jul 25 j 00:32	1°♄54'17	4.02840 AU	conjunction	473 Aug 03 j 19:24	11°♄58'58	0°51'15
	467 Aug 08 j 23:27	30°♄		minimum elong	473 Aug 03 j 19:22	11°♄58'56	0°51'16
direct	467 Sep 22 j 03:48	27°♄01'26		max. Earth dist.	473 Aug 03 j 16:37	11°♄57'27	6.39639 AU
	467 Nov 04 j 09:35	0°♄		morning rise	473 Aug 17 j 00:59	14°♄51'30	
	468 Jan 19 j 07:45	15°♄			473 Aug 17 j 16:42	15°♄	
evening set	468 Jan 25 j 03:34	16°♄23'18			473 Nov 11 j 01:51	0°♄	
				retrograde	473 Dec 15 j 20:01	1°♄51'38	
conjunction	468 Feb 07 j 04:05	19°♄31'08	-0°56'39		474 Jan 19 j 14:43	30°♄	
minimum elong	468 Feb 07 j 04:03	19°♄31'06	0°56'39	opposition	474 Feb 14 j 01:14	26°♄56'19	1°29'55
max. Earth dist.	468 Feb 07 j 14:57	19°♄37'41	5.98949 AU	min. Earth dist.	474 Feb 14 j 11:40	26°♄52'55	4.42760 AU
morning rise	468 Feb 20 j 07:16	22°♄40'33		direct	474 Apr 17 j 04:53	21°♄53'12	
	468 Mar 22 j 23:48	0°♄			474 Jul 05 j 19:03	0°♄	
retrograde	468 Jul 01 j 08:49	13°♄08'13		evening set	474 Aug 22 j 04:06	9°♄30'49	
opposition	468 Aug 30 j 10:13	8°♄06'35	-1°39'52	max. Earth dist.	474 Sep 02 j 23:25	12°♄04'02	6.44078 AU
min. Earth dist.	468 Aug 29 j 16:48	8°♄12'25	3.97027 AU				
direct	468 Oct 27 j 15:40	3°♄12'50		conjunction	474 Sep 04 j 04:22	12°♄19'44	1°08'35
evening set	469 Mar 01 j 21:29	22°♄49'12		minimum elong	474 Sep 04 j 04:21	12°♄19'44	1°08'35
				morning rise	474 Sep 17 j 01:49	15°♄07'16	
conjunction	469 Mar 15 j 05:44	26°♄01'21	-1°09'20		474 Dec 10 j 16:16	0°♄	
minimum elong	469 Mar 15 j 05:44	26°♄01'21	1°09'19	retrograde	475 Jan 15 j 04:23	1°♄54'56	
max. Earth dist.	469 Mar 16 j 21:17	26°♄25'07	5.97108 AU		475 Feb 19 j 19:49	30°♄	
morning rise	469 Mar 28 j 17:08	29°♄15'08		opposition	475 Mar 16 j 17:35	27°♄02'09	1°41'59
	469 Mar 31 j 20:35	0°♄		min. Earth dist.	475 Mar 17 j 20:09	26°♄53'37	4.43761 AU
retrograde	469 Aug 07 j 20:11	19°♄45'05		direct	475 May 18 j 11:27	21°♄59'56	
min. Earth dist.	469 Oct 05 j 05:25	14°♄51'16	3.99520 AU		475 Aug 05 j 09:51	0°♄	
opposition	469 Oct 06 j 13:01	14°♄40'32	-1°37'55	evening set	475 Sep 21 j 23:35	9°♄37'18	
direct	469 Dec 03 j 10:28	9°♄44'47		max. Earth dist.	475 Oct 02 j 21:42	12°♄00'32	6.41475 AU
evening set	470 Apr 08 j 07:18	29°♄11'01					
	470 Apr 11 j 18:52	0°♄		conjunction	475 Oct 04 j 17:56	12°♄24'48	1°07'09
				minimum elong	475 Oct 04 j 17:57	12°♄24'48	1°07'09
conjunction	470 Apr 21 j 22:43	2°♄23'28	-0°55'05	morning rise	475 Oct 17 j 09:40	15°♄11'10	
minimum elong	470 Apr 21 j 22:46	2°♄23'30	0°55'04		476 Jan 07 j 17:32	0°♄	

retrograde	476 Feb 15 j 07:42	2°♍14'26		min. Earth dist.	481 Oct 10 j 07:58	20°♑08'09	4.00042 AU
	476 Mar 25 j 09:05	30°♑♂		opposition	481 Oct 11 j 17:01	19°♑56'54	-1°34'13
opposition	476 Apr 16 j 04:45	27°♂22'38	1°26'34	direct	481 Dec 08 j 15:03	15°♑00'45	
min. Earth dist.	476 Apr 17 j 15:01	27°♂11'43	4.37752 AU		482 Mar 25 j 09:19	0°♂	
direct	476 Jun 17 j 18:45	22°♂22'17		evening set	482 Apr 13 j 14:50	4°♂25'18	
	476 Sep 01 j 21:01	0°♍					
evening set	476 Oct 21 j 18:13	10°♍14'58		conjunction	482 Apr 27 j 07:16	7°♂37'39	-0°51'04
max. Earth dist.	476 Nov 01 j 08:49	12°♍37'24	6.32477 AU	minimum elong	482 Apr 27 j 07:18	7°♂37'41	0°51'04
				max. Earth dist.	482 Apr 29 j 14:07	8°♂09'50	6.04777 AU
conjunction	476 Nov 03 j 09:37	13°♍04'48	0°47'00	morning rise	482 May 11 j 01:36	10°♂50'49	
minimum elong	476 Nov 03 j 09:39	13°♍04'50	0°46'59		482 May 29 j 05:23	15°♂	
	476 Nov 11 j 22:46	15°♍			482 Aug 31 j 03:23	0°♐	
morning rise	476 Nov 15 j 23:38	15°♍54'11		retrograde	482 Sep 17 j 11:13	0°♐29'32	
	477 Jan 28 j 07:50	0°♐			482 Oct 04 j 14:17	30°♑♂	
retrograde	477 Mar 19 j 06:54	3°♐39'13		opposition	482 Nov 15 j 23:38	25°♂24'43	-0°51'07
	477 May 09 j 12:46	30°♑♍		min. Earth dist.	482 Nov 14 j 15:18	25°♂35'44	4.10919 AU
opposition	477 May 19 j 05:06	28°♍46'49	0°45'38	direct	483 Jan 13 j 15:54	20°♂25'30	
min. Earth dist.	477 May 20 j 15:16	28°♍35'55	4.26230 AU		483 Apr 06 j 21:24	0°♐	
direct	477 Jul 20 j 01:06	23°♍48'56		evening set	483 May 20 j 04:56	9°♐17'45	
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max. Earth dist.	477 Dec 03 j 09:36	14°♐42'23	6.19400 AU	minimum elong	483 Jun 02 j 23:20	12°♐25'13	0°15'17
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conjunction	477 Dec 05 j 01:50	15°♐05'39	0°12'09	behind sun end	483 Jun 03 j 01:23	12°♐26'23	
minimum elong	477 Dec 05 j 01:50	15°♐05'40	0°12'08	max. Earth dist.	483 Jun 04 j 19:32	12°♐50'20	6.17755 AU
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behind sun end	477 Dec 05 j 07:20	15°♐08'50			483 Aug 29 j 15:07	0°♑	
morning rise	477 Dec 17 j 17:53	18°♐01'20		retrograde	483 Oct 20 j 12:19	4°♑03'22	
	478 Feb 12 j 19:01	0°♑		asc. node	483 Nov 01 j 21:33	3°♑48'05	
desc. node	478 Apr 03 j 10:58	6°♑10'45			483 Dec 11 j 20:36	30°♑♐	
retrograde	478 Apr 23 j 09:27	6°♑48'01		min. Earth dist.	483 Dec 18 j 06:22	29°♐08'30	4.24635 AU
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min. Earth dist.	478 Jun 24 j 01:35	1°♑46'42	4.12462 AU	direct	484 Feb 17 j 02:16	23°♐59'22	
	478 Jul 08 j 05:51	30°♑♐			484 Apr 22 j 10:27	0°♑	
direct	478 Aug 22 j 15:58	26°♐58'08		evening set	484 Jun 23 j 01:18	12°♑16'11	
	478 Oct 06 j 02:14	0°♑					
evening set	478 Dec 25 j 17:57	15°♑55'12		conjunction	484 Jul 06 j 15:59	15°♑16'17	0°24'05
				minimum elong	484 Jul 06 j 15:57	15°♑16'16	0°24'05
conjunction	479 Jan 07 j 13:25	18°♑57'39	-0°28'16	max. Earth dist.	484 Jul 07 j 12:50	15°♑27'49	6.31163 AU
minimum elong	479 Jan 07 j 13:24	18°♑57'38	0°28'15	morning rise	484 Jul 20 j 04:51	18°♑15'18	
max. Earth dist.	479 Jan 06 j 21:01	18°♑47'53	6.06193 AU		484 Sep 17 j 07:56	0°♒	
morning rise	479 Jan 20 j 10:30	22°♑01'11		retrograde	484 Nov 19 j 19:46	5°♒47'18	
	479 Feb 24 j 13:58	0°♒		opposition	485 Jan 18 j 17:08	0°♒48'53	0°59'31
retrograde	479 May 30 j 14:27	11°♒53'15		min. Earth dist.	485 Jan 18 j 12:32	0°♒50'25	4.36650 AU
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min. Earth dist.	479 Jul 30 j 01:20	6°♒54'45	4.01001 AU	direct	485 Mar 20 j 23:32	25°♑45'52	
direct	479 Sep 27 j 02:15	2°♒01'30			485 May 14 j 22:15	0°♒	
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evening set	480 Jan 30 j 03:13	21°♒29'17			485 Aug 01 j 13:32	15°♒	
conjunction	480 Feb 12 j 04:52	24°♒38'18	-0°59'51	conjunction	485 Aug 08 j 08:14	16°♒28'23	0°54'46
minimum elong	480 Feb 12 j 04:49	24°♒38'16	0°59'51	minimum elong	485 Aug 08 j 08:11	16°♒28'21	0°54'46
max. Earth dist.	480 Feb 12 j 19:42	24°♒47'15	5.97521 AU	max. Earth dist.	485 Aug 08 j 00:19	16°♒24'05	6.40850 AU
morning rise	480 Feb 25 j 09:23	27°♒48'57		morning rise	485 Aug 21 j 12:41	19°♒19'57	
	480 Mar 05 j 13:34	0°♒			485 Oct 14 j 10:03	0°♒	
retrograde	480 Jul 06 j 16:53	18°♒22'47		retrograde	485 Dec 20 j 03:05	6°♒16'03	
opposition	480 Sep 04 j 15:56	13°♒20'42	-1°42'04	opposition	486 Feb 18 j 09:12	1°♒21'08	1°33'14
min. Earth dist.	480 Sep 03 j 19:18	13°♒27'37	3.96206 AU	min. Earth dist.	486 Feb 18 j 22:37	1°♒16'46	4.43490 AU
direct	480 Nov 01 j 17:12	8°♒26'51			486 Feb 28 j 21:53	30°♑♒	
evening set	481 Mar 07 j 03:40	28°♒05'55		direct	486 Apr 21 j 15:50	26°♒18'01	
	481 Mar 15 j 02:05	0°♑			486 Jun 12 j 07:52	0°♒	
				evening set	486 Aug 26 j 13:29	13°♒54'11	
conjunction	481 Mar 20 j 13:04	1°♑18'42	-1°08'50	max. Earth dist.	486 Sep 07 j 06:15	16°♒26'01	6.44264 AU
minimum elong	481 Mar 20 j 13:05	1°♑18'42	1°08'50				
max. Earth dist.	481 Mar 22 j 07:14	1°♑44'01	5.96954 AU	conjunction	486 Sep 08 j 12:54	16°♒42'39	1°09'33
morning rise	481 Apr 03 j 01:46	4°♑33'06		minimum elong	486 Sep 08 j 12:54	16°♒42'39	1°09'33
retrograde	481 Aug 13 j 00:44	25°♑01'45		morning rise	486 Sep 21 j 09:11	19°♒29'41	

















































































































































































































	486 Nov 13 j 10:14	0°♏		max. Earth dist.	492 Feb 18 j 05:59	0°♏09'19	5.96901 AU
retrograde	487 Jan 19 j 11:20	6°♏17'30		morning rise	492 Mar 01 j 16:36	3°♏09'12	
opposition	487 Mar 21 j 02:30	1°♏24'58	1°41'26	retrograde	492 Jul 12 j 01:51	23°♏45'16	
min. Earth dist.	487 Mar 22 j 06:10	1°♏16'06	4.43403 AU	min. Earth dist.	492 Sep 09 j 01:03	18°♏50'29	3.96311 AU
	487 Apr 01 j 07:23	30°♏		opposition	492 Sep 10 j 00:27	18°♏42'36	-1°43'30
direct	487 May 22 j 20:03	26°♏22'59		direct	492 Nov 07 j 00:26	13°♏48'31	
	487 Jul 12 j 22:28	0°♏			493 Feb 25 j 21:37	0°♏	
evening set	487 Sep 26 j 07:23	14°♏01'23		evening set	493 Mar 12 j 11:56	3°♏26'29	
max. Earth dist.	487 Oct 07 j 02:13	16°♏23'13	6.40587 AU				
				conjunction	493 Mar 25 j 22:33	6°♏39'24	-1°07'50
conjunction	487 Oct 09 j 00:57	16°♏48'56	1°05'22	minimum elong	493 Mar 25 j 22:35	6°♏39'25	1°07'50
minimum elong	487 Oct 09 j 00:59	16°♏48'57	1°05'21	max. Earth dist.	493 Mar 27 j 21:30	7°♏07'31	5.97778 AU
morning rise	487 Oct 21 j 16:20	19°♏35'30		morning rise	493 Apr 08 j 12:05	9°♏53'48	
	487 Dec 12 j 07:01	0°♏			493 Aug 05 j 06:30	0°♏	
retrograde	488 Feb 19 j 21:46	6°♏43'07		retrograde	493 Aug 18 j 05:25	0°♏16'35	
opposition	488 Apr 20 j 18:01	1°♏51'20	1°22'11		493 Aug 31 j 01:25	30°♏	
min. Earth dist.	488 Apr 22 j 05:56	1°♏39'54	4.36372 AU	min. Earth dist.	493 Oct 15 j 10:45	25°♏22'57	4.01490 AU
	488 May 05 j 16:06	30°♏		opposition	493 Oct 16 j 20:12	25°♏11'33	-1°29'49
direct	488 Jun 22 j 07:11	26°♏51'15		direct	493 Dec 13 j 20:26	20°♏14'59	
	488 Aug 08 j 06:07	0°♏			494 Mar 06 j 11:31	0°♏	
evening set	488 Oct 26 j 03:41	14°♏47'26		evening set	494 Apr 18 j 20:54	9°♏34'30	
	488 Oct 27 j 02:10	15°♏					
max. Earth dist.	488 Nov 05 j 18:14	17°♏10'24	6.30718 AU	conjunction	494 May 02 j 13:44	12°♏46'12	-0°46'46
				minimum elong	494 May 02 j 13:47	12°♏46'14	0°46'46
conjunction	488 Nov 07 j 19:05	17°♏37'56	0°42'46	max. Earth dist.	494 May 04 j 19:46	13°♏17'43	6.06686 AU
minimum elong	488 Nov 07 j 19:07	17°♏37'57	0°42'47		494 May 12 j 03:25	15°♏	
morning rise	488 Nov 20 j 09:10	20°♏28'03		morning rise	494 May 16 j 08:35	15°♏58'38	
	489 Jan 04 j 16:26	0°♏			494 Jul 23 j 11:56	0°♏	
retrograde	489 Mar 24 j 01:47	8°♏21'05		retrograde	494 Sep 22 j 04:38	5°♏26'57	
opposition	489 May 24 j 00:36	3°♏28'27	0°38'08	min. Earth dist.	494 Nov 19 j 10:40	0°♏33'12	4.13074 AU
min. Earth dist.	489 May 25 j 08:51	3°♏18'09	4.24206 AU	opposition	494 Nov 20 j 18:37	0°♏22'19	-0°43'17
	489 Jun 23 j 05:37	30°♏			494 Nov 23 j 12:13	30°♏	
direct	489 Jul 24 j 15:14	28°♏30'57		direct	495 Jan 18 j 14:29	25°♏22'39	
	489 Aug 24 j 21:52	0°♏			495 Mar 15 j 00:55	0°♏	
evening set	489 Nov 27 j 00:35	16°♏57'41		evening set	495 May 25 j 04:43	14°♏08'41	
max. Earth dist.	489 Dec 08 j 03:32	19°♏32'21	6.17293 AU				
				conjunction	495 Jun 07 j 22:53	17°♏15'03	-0°09'40
conjunction	489 Dec 09 j 16:51	19°♏54'03	0°06'28	minimum elong	495 Jun 07 j 22:54	17°♏15'03	0°09'40
minimum elong	489 Dec 09 j 16:52	19°♏54'03	0°06'27	behind sun begin	495 Jun 07 j 16:05	17°♏11'13	
behind sun begin	489 Dec 09 j 09:20	19°♏49'42		behind sun end	495 Jun 08 j 05:42	17°♏18'53	
behind sun end	489 Dec 10 j 00:23	19°♏58'25		max. Earth dist.	495 Jun 09 j 16:11	17°♏38'24	6.19980 AU
morning rise	489 Dec 22 j 09:26	22°♏50'51		morning rise	495 Jun 21 j 16:52	20°♏21'03	
	490 Jan 23 j 11:11	0°♏			495 Aug 06 j 12:14	0°♏	
desc. node	490 Feb 10 j 11:26	3°♏36'38		asc. node	495 Sep 11 j 17:23	5°♏49'11	
retrograde	490 Apr 28 j 14:36	11°♏47'38		retrograde	495 Oct 25 j 00:15	8°♏41'54	
opposition	490 Jun 28 j 08:01	6°♏52'35	-0°21'04	opposition	495 Dec 23 j 15:55	3°♏40'11	0°15'02
min. Earth dist.	490 Jun 29 j 03:05	6°♏46'25	4.10431 AU	min. Earth dist.	495 Dec 22 j 21:10	3°♏46'30	4.26711 AU
direct	490 Aug 27 j 15:07	1°♏57'38			496 Jan 23 j 11:31	30°♏	
evening set	490 Dec 30 j 15:51	21°♏00'18		direct	496 Feb 21 j 19:30	28°♏38'10	
					496 Mar 22 j 12:03	0°♏	
conjunction	491 Jan 12 j 12:06	24°♏03'51	-0°33'40	evening set	496 Jun 27 j 18:05	16°♏49'55	
minimum elong	491 Jan 12 j 12:04	24°♏03'49	0°33'39				
max. Earth dist.	491 Jan 11 j 23:42	23°♏56'27	6.04444 AU	conjunction	496 Jul 11 j 07:48	19°♏48'53	0°29'05
morning rise	491 Jan 25 j 10:11	27°♏08'36		minimum elong	496 Jul 11 j 07:46	19°♏48'52	0°29'06
	491 Feb 06 j 13:58	0°♏		max. Earth dist.	496 Jul 12 j 00:08	19°♏57'52	6.32920 AU
	491 Apr 28 j 14:59	15°♏		morning rise	496 Jul 24 j 19:37	22°♏46'43	
retrograde	491 Jun 04 j 23:57	17°♏09'08			496 Aug 28 j 06:02	0°♏	
	491 Jul 12 j 12:00	15°♏		retrograde	496 Nov 24 j 00:54	10°♏12'00	
opposition	491 Aug 04 j 08:42	12°♏10'27	-1°16'13	opposition	497 Jan 23 j 00:11	5°♏14'06	1°05'33
min. Earth dist.	491 Aug 04 j 05:35	12°♏11'28	3.99757 AU	min. Earth dist.	497 Jan 22 j 22:03	5°♏14'48	4.37985 AU
direct	491 Oct 02 j 05:25	7°♏17'00		direct	497 Mar 25 j 09:46	0°♏10'58	
	491 Dec 13 j 03:41	15°♏			497 Jul 16 j 13:48	15°♏	
evening set	492 Feb 04 j 08:20	26°♏48'04		evening set	497 Jul 30 j 12:01	17°♏57'54	
conjunction	492 Feb 17 j 10:54	29°♏57'47	-1°02'45	conjunction	497 Aug 12 j 18:06	20°♏50'09	0°57'53
minimum elong	492 Feb 17 j 10:52	29°♏57'46	1°02'44	minimum elong	497 Aug 12 j 18:03	20°♏50'07	0°57'52
	492 Feb 17 j 14:34	0°♏		max. Earth dist.	497 Aug 12 j 06:48	20°♏44'00	6.41662 AU

morning rise	497 Aug 25 j 21:16	23°♏40'54		503 Nov 15 j 02:52	15°♏
	497 Sep 25 j 05:01	0°♏		504 Jan 31 j 17:43	0°♏
retrograde	497 Dec 24 j 08:40	10°♏34'38	evening set	504 Feb 09 j 12:57	2°♏06'00
opposition	498 Feb 22 j 15:29	5°♏40'13 1°35'59			
min. Earth dist.	498 Feb 23 j 07:32	5°♏35'01 4.43748 AU	conjunction	504 Feb 22 j 16:42	5°♏16'17 -1°05'07
direct	498 Apr 26 j 00:23	0°♏37'16	minimum elong	504 Feb 22 j 16:41	5°♏16'16 1°05'06
evening set	498 Aug 30 j 21:18	18°♏13'31	max. Earth dist.	504 Feb 23 j 17:41	5°♏31'21 5.96748 AU
max. Earth dist.	498 Sep 11 j 08:33	20°♏42'39 6.43928 AU	morning rise	504 Mar 06 j 23:21	8°♏28'12
			retrograde	504 Jul 17 j 10:08	29°♏04'20
conjunction	498 Sep 12 j 19:41	21°♏01'44 1°10'06	min. Earth dist.	504 Sep 14 j 06:01	24°♏09'40 3.96807 AU
minimum elong	498 Sep 12 j 19:40	21°♏01'44 1°10'07	opposition	504 Sep 15 j 07:04	24°♏01'13 -1°44'03
morning rise	498 Sep 25 j 15:15	23°♏48'36	direct	504 Nov 12 j 06:00	19°♏06'55
	498 Oct 25 j 06:06	0°♏		505 Feb 07 j 11:52	0°♏
retrograde	499 Jan 23 j 20:37	10°♏38'30	evening set	505 Mar 17 j 18:20	8°♏42'35
opposition	499 Mar 25 j 11:26	5°♏46'12 1°40'22			
min. Earth dist.	499 Mar 26 j 17:12	5°♏36'39 4.42519 AU	conjunction	505 Mar 31 j 05:48	11°♏55'26 -1°06'19
direct	499 May 27 j 05:05	0°♏44'25	minimum elong	505 Mar 31 j 05:49	11°♏55'27 1°06'18
evening set	499 Sep 30 j 15:08	18°♏25'35	max. Earth dist.	505 Apr 02 j 05:50	12°♏24'05 5.98840 AU
max. Earth dist.	499 Oct 11 j 09:36	20°♏47'40 6.39226 AU	morning rise	505 Apr 13 j 20:25	15°♏09'45
				505 Jun 23 j 17:12	0°♏
conjunction	499 Oct 13 j 08:25	21°♏13'31 1°03'13	retrograde	505 Aug 23 j 05:08	5°♏25'57
minimum elong	499 Oct 13 j 08:26	21°♏13'32 1°03'13	min. Earth dist.	505 Oct 20 j 10:00	0°♏32'34 4.03007 AU
morning rise	499 Oct 25 j 23:17	24°♏00'29	opposition	505 Oct 21 j 20:34	0°♏20'47 -1°24'48
	499 Nov 23 j 02:43	0°♏		505 Oct 24 j 09:36	30°♏
retrograde	500 Feb 24 j 11:11	11°♏14'04	direct	505 Dec 18 j 22:16	25°♏23'47
opposition	500 Apr 25 j 08:21	6°♏22'19 1°17'18		506 Feb 11 j 07:09	0°♏
min. Earth dist.	500 Apr 26 j 19:43	6°♏11'04 4.34628 AU	evening set	506 Apr 24 j 00:37	14°♏38'30
direct	500 Jun 26 j 17:42	1°♏22'40		506 Apr 25 j 13:49	15°♏
	500 Oct 10 j 15:11	15°♏			
evening set	500 Oct 30 j 14:39	19°♏23'32	conjunction	506 May 07 j 18:01	17°♏49'35 -0°42'11
max. Earth dist.	500 Nov 10 j 05:41	21°♏47'30 6.28734 AU	minimum elong	506 May 07 j 18:04	17°♏49'37 0°42'11
			max. Earth dist.	506 May 09 j 23:01	18°♏20'23 6.08531 AU
conjunction	500 Nov 12 j 05:54	22°♏14'50 0°38'15	morning rise	506 May 21 j 12:59	21°♏01'15
minimum elong	500 Nov 12 j 05:56	22°♏14'51 0°38'15		506 Jul 01 j 13:55	0°♏
morning rise	500 Nov 24 j 20:16	25°♏05'52	retrograde	506 Sep 26 j 22:22	10°♏19'52
	500 Dec 17 j 01:36	0°♏	min. Earth dist.	506 Nov 24 j 05:59	5°♏25'35 4.15037 AU
retrograde	501 Mar 29 j 01:32	13°♏07'54	opposition	506 Nov 25 j 11:31	5°♏15'32 -0°35'19
opposition	501 May 28 j 22:38	8°♏15'01 0°30'15	direct	507 Jan 23 j 12:11	0°♏15'28
min. Earth dist.	501 May 30 j 05:57	8°♏05'00 4.22106 AU	evening set	507 May 30 j 02:54	18°♏56'15
direct	501 Jul 29 j 09:52	3°♏17'57			
evening set	501 Dec 01 j 16:59	21°♏50'07	conjunction	507 Jun 12 j 20:47	22°♏01'39 -0°04'04
max. Earth dist.	501 Dec 12 j 23:59	24°♏27'50 6.15277 AU	minimum elong	507 Jun 12 j 20:48	22°♏01'39 0°04'04
			behind sun begin	507 Jun 12 j 12:34	21°♏57'03
conjunction	501 Dec 14 j 09:45	24°♏47'32 0°00'37	behind sun end	507 Jun 13 j 05:03	22°♏06'16
minimum elong	501 Dec 14 j 09:45	24°♏47'32 0°00'37	max. Earth dist.	507 Jun 14 j 11:30	22°♏23'26 6.21910 AU
behind sun begin	501 Dec 14 j 01:45	24°♏42'53	morning rise	507 Jun 26 j 14:13	25°♏06'34
behind sun end	501 Dec 14 j 17:45	24°♏52'11		507 Jul 18 j 23:39	0°♏
desc. node	501 Dec 20 j 04:58	26°♏08'49	asc. node	507 Jul 22 j 16:52	0°♏46'59
morning rise	501 Dec 27 j 02:55	27°♏45'28	retrograde	507 Oct 29 j 08:52	13°♏18'38
	502 Jan 05 j 20:24	0°♏	min. Earth dist.	507 Dec 27 j 09:23	8°♏23'12 4.28455 AU
retrograde	502 May 03 j 19:29	16°♏51'50	opposition	507 Dec 28 j 02:37	8°♏17'25 0°22'55
opposition	502 Jul 03 j 12:47	11°♏56'22 -0°29'45	direct	508 Feb 26 j 09:32	3°♏15'10
min. Earth dist.	502 Jul 04 j 04:06	11°♏51'24 4.08688 AU	evening set	508 Jul 02 j 10:06	21°♏22'57
direct	502 Sep 01 j 14:06	7°♏01'48			
evening set	503 Jan 04 j 15:16	26°♏08'53	conjunction	508 Jul 15 j 22:50	24°♏20'55 0°33'55
			minimum elong	508 Jul 15 j 22:48	24°♏20'54 0°33'55
conjunction	503 Jan 17 j 12:08	29°♏13'19 -0°38'51	max. Earth dist.	508 Jul 16 j 10:30	24°♏27'19 6.34348 AU
minimum elong	503 Jan 17 j 12:05	29°♏13'17 0°38'51	morning rise	508 Jul 29 j 09:35	27°♏17'42
max. Earth dist.	503 Jan 17 j 04:02	29°♏08'28 6.03118 AU		508 Aug 10 j 22:32	0°♏
	503 Jan 20 j 18:08	0°♏	retrograde	508 Nov 28 j 08:27	14°♏37'30
morning rise	503 Jan 30 j 11:10	2°♏19'03	opposition	509 Jan 27 j 07:47	9°♏40'08 1°11'12
	503 Mar 29 j 20:32	15°♏	min. Earth dist.	509 Jan 27 j 09:06	9°♏39'42 4.39007 AU
retrograde	503 Jun 10 j 09:35	22°♏26'11	direct	509 Mar 29 j 22:02	4°♏36'57
opposition	503 Aug 09 j 16:56	17°♏26'51 -1°22'17		509 Jun 29 j 06:04	15°♏
min. Earth dist.	503 Aug 09 j 10:30	17°♏28'59 3.98990 AU	evening set	509 Aug 03 j 23:12	22°♏22'00
	503 Aug 29 j 02:54	15°♏			
direct	503 Oct 07 j 10:28	12°♏33'25	conjunction	509 Aug 17 j 04:13	25°♏13'35 1°00'41

minimum elong	509 Aug 17 j 04:11	25°♎13'34	1°00'40	opposition	515 Aug 14 j 22:19	22°♊35'46	-1°27'28
max. Earth dist.	509 Aug 16 j 12:53	25°♎05'17	6.42187 AU	min. Earth dist.	515 Aug 14 j 13:28	22°♊38'42	3.98611 AU
morning rise	509 Aug 30 j 06:17	28°♎03'42		direct	515 Oct 12 j 12:35	17°♊42'22	
	509 Sep 08 j 07:33	0°♎			516 Jan 14 j 08:35	0°♊	
retrograde	509 Dec 28 j 14:31	14°♏55'54		evening set	516 Feb 14 j 14:58	7°♊15'15	
opposition	510 Feb 26 j 22:50	10°♏01'48	1°38'14				
min. Earth dist.	510 Feb 27 j 16:40	9°♏56'02	4.43782 AU	conjunction	516 Feb 27 j 19:30	10°♋25'51	-1°06'52
direct	510 Apr 30 j 09:05	4°♏58'56		minimum elong	516 Feb 27 j 19:29	10°♋25'50	1°06'53
evening set	510 Sep 04 j 05:57	22°♏35'42		max. Earth dist.	516 Feb 28 j 22:42	10°♋42'16	5.96879 AU
max. Earth dist.	510 Sep 15 j 15:09	25°♏03'56	6.43470 AU	morning rise	516 Mar 12 j 03:21	13°♋38'12	
					516 May 30 j 15:47	0°♋	
conjunction	510 Sep 17 j 03:33	25°♏23'45	1°10'17	retrograde	516 Jul 22 j 12:09	4°♋13'09	
minimum elong	510 Sep 17 j 03:33	25°♏23'45	1°10'17		516 Sep 14 j 03:49	30°♋	
morning rise	510 Sep 29 j 22:12	28°♏10'28		min. Earth dist.	516 Sep 19 j 05:55	29°♋18'57	3.97457 AU
	510 Oct 08 j 09:58	0°♏		opposition	516 Sep 20 j 09:24	29°♋09'40	-1°43'44
retrograde	511 Jan 28 j 05:58	15°♐02'42		direct	516 Nov 17 j 07:22	24°♋15'03	
opposition	511 Mar 29 j 21:53	10°♐10'36	1°38'44		517 Jan 17 j 03:00	0°♋	
min. Earth dist.	511 Mar 31 j 04:51	10°♐00'42	4.41612 AU	evening set	517 Mar 22 j 21:15	13°♌48'20	
direct	511 May 31 j 15:12	5°♐09'09					
evening set	511 Oct 04 j 23:53	22°♐52'43		conjunction	517 Apr 05 j 09:46	17°♌01'08	-1°04'19
max. Earth dist.	511 Oct 15 j 16:01	25°♐14'04	6.37943 AU	minimum elong	517 Apr 05 j 09:48	17°♌01'09	1°04'19
				max. Earth dist.	517 Apr 07 j 11:15	17°♌30'35	5.99942 AU
conjunction	511 Oct 17 j 16:35	25°♐40'58	1°00'41	morning rise	517 Apr 19 j 01:05	20°♌15'17	
minimum elong	511 Oct 17 j 16:37	25°♐40'59	1°00'41		517 Jun 01 j 16:47	0°♌	
morning rise	511 Oct 30 j 07:20	28°♐28'22		retrograde	517 Aug 28 j 02:58	10°♌25'01	
	511 Nov 06 j 06:32	0°♌		min. Earth dist.	517 Oct 25 j 07:42	5°♌31'13	4.04422 AU
	512 Feb 06 j 10:13	15°♌		opposition	517 Oct 26 j 17:00	5°♌19'52	-1°19'22
retrograde	512 Feb 29 j 03:26	15°♌47'43		direct	517 Dec 23 j 21:46	0°♌22'27	
	512 Mar 22 j 20:34	15°♌			518 Apr 08 j 22:31	15°♌	
opposition	512 Apr 30 j 00:21	10°♌55'53	1°11'54	evening set	518 Apr 29 j 00:57	19°♌33'10	
min. Earth dist.	512 May 01 j 11:36	10°♌44'39	4.33056 AU				
direct	512 Jul 01 j 07:50	5°♌56'36		conjunction	518 May 12 j 18:50	22°♌43'46	-0°37'29
	512 Sep 22 j 12:23	15°♌		minimum elong	518 May 12 j 18:52	22°♌43'47	0°37'28
evening set	512 Nov 04 j 02:04	24°♌01'12		max. Earth dist.	518 May 14 j 23:04	23°♌13'59	6.10143 AU
max. Earth dist.	512 Nov 14 j 20:06	26°♌27'24	6.27032 AU	morning rise	518 May 26 j 14:00	25°♌54'46	
					518 Jun 13 j 16:45	0°♌	
conjunction	512 Nov 16 j 17:29	26°♌53'13	0°33'29	retrograde	518 Oct 01 j 11:29	15°♌04'56	
minimum elong	512 Nov 16 j 17:31	26°♌53'14	0°33'28	min. Earth dist.	518 Nov 28 j 20:38	10°♌10'47	4.16691 AU
morning rise	512 Nov 29 j 07:54	29°♌45'01		opposition	518 Nov 30 j 01:26	10°♌01'00	-0°27'23
	512 Nov 30 j 10:25	0°♌		direct	519 Jan 28 j 04:31	5°♌00'39	
retrograde	513 Apr 02 j 22:45	17°♌54'51		asc. node	519 Jun 02 j 19:47	23°♌22'37	
opposition	513 Jun 02 j 20:48	13°♌01'43	0°22'10	evening set	519 Jun 03 j 22:40	23°♌37'36	
min. Earth dist.	513 Jun 04 j 01:48	12°♌52'27	4.20399 AU				
direct	513 Aug 03 j 03:33	8°♌05'06		conjunction	519 Jun 17 j 16:05	26°♌42'09	0°01'32
desc. node	513 Oct 29 j 19:59	18°♌23'12		minimum elong	519 Jun 17 j 16:05	26°♌42'09	0°01'32
evening set	513 Dec 06 j 09:23	26°♌41'14		behind sun begin	519 Jun 17 j 07:44	26°♌37'30	
max. Earth dist.	513 Dec 17 j 19:21	29°♌21'15	6.13718 AU	behind sun end	519 Jun 18 j 00:26	26°♌46'49	
				max. Earth dist.	519 Jun 19 j 02:05	27°♌01'14	6.23484 AU
conjunction	513 Dec 19 j 02:23	29°♌39'26	-0°05'13	morning rise	519 Jul 01 j 08:59	29°♌46'09	
minimum elong	513 Dec 19 j 02:22	29°♌39'25	0°05'13		519 Jul 02 j 09:55	0°♌	
behind sun begin	513 Dec 18 j 18:36	29°♌34'54		retrograde	519 Nov 02 j 18:31	17°♍51'08	
behind sun end	513 Dec 19 j 10:07	29°♌43'57		opposition	520 Jan 01 j 11:54	12°♍50'28	0°30'28
	513 Dec 20 j 13:29	0°♍		min. Earth dist.	519 Dec 31 j 21:54	12°♍55'10	4.29829 AU
morning rise	513 Dec 31 j 20:15	2°♍38'18		direct	520 Mar 01 j 23:50	7°♍48'03	
retrograde	514 May 08 j 23:46	21°♍52'34		evening set	520 Jul 07 j 00:51	25°♍53'13	
opposition	514 Jul 08 j 16:17	16°♍56'34	-0°38'04				
min. Earth dist.	514 Jul 09 j 04:32	16°♍52'35	4.07403 AU	conjunction	520 Jul 20 j 12:49	28°♍50'24	0°38'26
direct	514 Sep 06 j 13:53	12°♍02'13		minimum elong	520 Jul 20 j 12:46	28°♍50'23	0°38'25
	515 Jan 04 j 11:11	0°♍		max. Earth dist.	520 Jul 20 j 21:48	28°♍55'20	6.35431 AU
evening set	515 Jan 09 j 12:52	1°♍12'08			520 Jul 25 j 19:47	0°♍	
				morning rise	520 Aug 02 j 22:21	1°♍46'17	
conjunction	515 Jan 22 j 10:37	4°♍17'17	-0°43'36		520 Oct 11 j 10:00	15°♍	
minimum elong	515 Jan 22 j 10:34	4°♍17'16	0°43'37	retrograde	520 Dec 02 j 13:24	19°♍01'48	
max. Earth dist.	515 Jan 22 j 08:13	4°♍15'51	6.02230 AU		521 Jan 24 j 14:17	15°♍	
morning rise	515 Feb 04 j 10:25	7°♍23'47		opposition	521 Jan 31 j 14:41	14°♍04'58	1°16'22
	515 Mar 09 j 13:40	15°♍		min. Earth dist.	521 Jan 31 j 17:20	14°♍04'05	4.39762 AU
retrograde	515 Jun 15 j 16:29	27°♍35'37		direct	521 Apr 03 j 07:10	9°♍01'48	

	521 Jun 09 j 00:04	15°♏		max. Earth dist.	527 Jan 27 j 09:17	9°♐21'45	6.01018 AU
evening set	521 Aug 08 j 09:56	26°♏45'47		morning rise	527 Feb 09 j 10:09	12°♐29'10	
					527 Feb 20 j 01:07	15°♐	
conjunction	521 Aug 21 j 13:48	29°♏36'47	1°03'05		527 May 09 j 07:45	0°♐	
minimum elong	521 Aug 21 j 13:46	29°♏36'46	1°03'06	retrograde	527 Jun 20 j 21:56	2°♐46'54	
max. Earth dist.	521 Aug 20 j 19:05	29°♏26'37	6.42557 AU		527 Aug 02 j 18:46	30°♐	
	521 Aug 23 j 08:34	0°♐		opposition	527 Aug 20 j 03:31	27°♐46'27	-1°32'06
morning rise	521 Sep 03 j 14:48	2°♐26'18		min. Earth dist.	527 Aug 19 j 15:11	27°♐50'33	3.97859 AU
retrograde	522 Jan 01 j 21:45	19°♐17'29		direct	527 Oct 17 j 13:45	22°♐52'57	
opposition	522 Mar 03 j 06:29	14°♐23'46	1°39'54		527 Dec 25 j 02:10	0°♐	
min. Earth dist.	522 Mar 04 j 02:53	14°♐17'11	4.43761 AU	evening set	528 Feb 19 j 18:23	12°♐27'52	
direct	522 May 04 j 19:30	9°♐21'03					
evening set	522 Sep 08 j 14:06	26°♐58'08		conjunction	528 Mar 04 j 00:10	15°♐39'06	-1°08'09
max. Earth dist.	522 Sep 19 j 20:03	29°♐24'51	6.43038 AU	minimum elong	528 Mar 04 j 00:09	15°♐39'05	1°08'09
				max. Earth dist.	528 Mar 05 j 07:50	15°♐58'12	5.96653 AU
conjunction	522 Sep 21 j 10:52	29°♐46'01	1°10'03	morning rise	528 Mar 17 j 09:02	18°♐52'01	
minimum elong	522 Sep 21 j 10:52	29°♐46'01	1°10'02		528 May 06 j 04:05	0°♐	
	522 Sep 22 j 12:30	0°♐		retrograde	528 Jul 27 j 18:37	9°♐27'01	
morning rise	522 Oct 04 j 04:49	2°♐32'37		min. Earth dist.	528 Sep 24 j 09:21	4°♐32'37	3.97780 AU
retrograde	523 Feb 01 j 14:48	19°♐27'03		opposition	528 Sep 25 j 13:26	4°♐23'07	-1°42'38
opposition	523 Apr 03 j 08:13	14°♐35'01	1°36'30		528 Nov 04 j 22:03	30°♐	
min. Earth dist.	523 Apr 04 j 15:37	14°♐24'59	4.40800 AU	direct	528 Nov 22 j 11:48	29°♐28'08	
direct	523 Jun 05 j 00:57	9°♐33'46			528 Dec 10 j 00:43	0°♐	
evening set	523 Oct 09 j 07:52	27°♐19'12		evening set	529 Mar 28 j 02:51	19°♐00'15	
max. Earth dist.	523 Oct 20 j 00:50	29°♐41'22	6.36801 AU				
	523 Oct 21 j 10:22	0°♐		conjunction	529 Apr 10 j 16:25	22°♐13'08	-1°01'47
				minimum elong	529 Apr 10 j 16:28	22°♐13'10	1°01'47
conjunction	523 Oct 22 j 00:15	0°♐07'43	0°57'47	max. Earth dist.	529 Apr 12 j 20:00	22°♐43'44	6.00777 AU
minimum elong	523 Oct 22 j 00:17	0°♐07'44	0°57'48	morning rise	529 Apr 24 j 08:41	25°♐27'17	
morning rise	523 Nov 03 j 14:35	2°♐55'27			529 May 14 j 00:51	0°♐	
	524 Jan 03 j 11:54	15°♐			529 Aug 15 j 07:59	15°♐	
retrograde	524 Mar 04 j 17:21	20°♐19'58		retrograde	529 Sep 02 j 02:13	15°♐31'04	
opposition	524 May 04 j 15:20	15°♐28'02	1°06'04		529 Sep 19 j 16:51	15°♐	
min. Earth dist.	524 May 06 j 02:35	15°♐16'49	4.31620 AU	min. Earth dist.	529 Oct 30 j 05:51	10°♐37'34	4.05682 AU
	524 May 08 j 07:32	15°♐		opposition	529 Oct 31 j 15:57	10°♐25'56	-1°13'13
direct	524 Jul 05 j 20:57	10°♐29'05		direct	529 Dec 28 j 21:24	5°♐28'08	
	524 Aug 31 j 09:51	15°♐			530 Mar 21 j 02:53	15°♐	
evening set	524 Nov 08 j 12:27	28°♐36'57		evening set	530 May 04 j 04:51	24°♐35'22	
	524 Nov 14 j 14:42	0°♐					
max. Earth dist.	524 Nov 19 j 06:19	1°♐03'39	6.25394 AU	conjunction	530 May 17 j 22:58	27°♐45'23	-0°32'21
				minimum elong	530 May 17 j 23:00	27°♐45'25	0°32'21
conjunction	524 Nov 21 j 03:46	1°♐29'36	0°28'32	max. Earth dist.	530 May 20 j 00:40	28°♐14'02	6.11726 AU
minimum elong	524 Nov 21 j 03:47	1°♐29'37	0°28'32		530 May 27 j 16:58	0°♐	
morning rise	524 Dec 03 j 18:37	4°♐22'14		morning rise	530 May 31 j 18:20	0°♐55'43	
retrograde	525 Apr 07 j 19:59	22°♐39'54		retrograde	530 Oct 06 j 04:12	19°♐57'12	
opposition	525 Jun 07 j 17:51	17°♐46'23	0°13'57	opposition	530 Dec 04 j 18:16	14°♐53'38	-0°19'03
min. Earth dist.	525 Jun 08 j 21:01	17°♐37'40	4.18644 AU	min. Earth dist.	530 Dec 03 j 15:19	15°♐02'47	4.18442 AU
direct	525 Aug 07 j 20:45	12°♐50'01		direct	531 Feb 02 j 02:17	9°♐52'56	
desc. node	525 Sep 08 j 18:57	14°♐24'28		asc. node	531 Apr 12 j 00:09	16°♐37'07	
	525 Dec 04 j 12:32	0°♐		evening set	531 Jun 08 j 21:25	28°♐25'28	
evening set	525 Dec 11 j 00:30	1°♐30'28			531 Jun 15 j 23:08	0°♐	
conjunction	525 Dec 23 j 18:06	4°♐29'36	-0°10'54	conjunction	531 Jun 22 j 14:31	1°♐29'04	0°07'11
minimum elong	525 Dec 23 j 18:06	4°♐29'36	0°10'54	minimum elong	531 Jun 22 j 14:30	1°♐29'04	0°07'12
behind sun begin	525 Dec 23 j 11:57	4°♐26'00		behind sun begin	531 Jun 22 j 06:53	1°♐24'49	
behind sun end	525 Dec 24 j 00:15	4°♐33'11		behind sun end	531 Jun 22 j 22:08	1°♐33'18	
max. Earth dist.	525 Dec 22 j 15:18	4°♐13'51	6.12003 AU	max. Earth dist.	531 Jun 23 j 23:23	1°♐47'26	6.25313 AU
morning rise	526 Jan 05 j 12:30	7°♐29'28		morning rise	531 Jul 06 j 06:29	4°♐31'54	
retrograde	526 May 14 j 04:30	26°♐52'20		retrograde	531 Nov 07 j 04:32	22°♐28'33	
opposition	526 Jul 13 j 18:54	21°♐55'51	-0°46'10	opposition	532 Jan 05 j 23:24	17°♐28'28	0°38'00
min. Earth dist.	526 Jul 14 j 05:08	21°♐52'31	4.05879 AU	min. Earth dist.	532 Jan 05 j 10:24	17°♐32'48	4.31610 AU
direct	526 Sep 11 j 11:55	17°♐01'43		direct	532 Mar 06 j 15:14	12°♐25'56	
	526 Dec 18 j 10:26	0°♐			532 Jul 09 j 15:55	0°♐	
evening set	527 Jan 14 j 10:47	6°♐15'40		evening set	532 Jul 11 j 17:13	0°♐26'43	
conjunction	527 Jan 27 j 09:10	9°♐21'41	-0°48'05	conjunction	532 Jul 25 j 03:55	3°♐22'46	0°42'48
minimum elong	527 Jan 27 j 09:08	9°♐21'39	0°48'04	minimum elong	532 Jul 25 j 03:52	3°♐22'44	0°42'48

max. Earth dist.	532 Jul 25 j 08:24	3°Ω25'13	6.37044 AU	opposition	538 Jul 18 j 18:51	26°♄49'25	-0°53'44
morning rise	532 Aug 07 j 12:22	6°Ω17'29		min. Earth dist.	538 Jul 19 j 01:57	26°♄47'06	4.03943 AU
	532 Sep 19 j 00:25	15°Ω		direct	538 Sep 16 j 05:50	21°♄55'28	
retrograde	532 Dec 06 j 20:44	23°Ω26'57			538 Nov 29 j 13:19	0°♄	
opposition	533 Feb 04 j 22:48	18°Ω30'35	1°21'06	evening set	539 Jan 19 j 07:13	11°♄15'34	
min. Earth dist.	533 Feb 05 j 04:23	18°Ω28'45	4.41114 AU				
	533 Mar 06 j 17:41	15°♌Ω		conjunction	539 Feb 01 j 06:44	14°♄22'47	-0°52'05
direct	533 Apr 07 j 20:19	13°Ω27'25		minimum elong	539 Feb 01 j 06:41	14°♄22'46	0°52'05
	533 May 10 j 06:52	15°Ω		max. Earth dist.	539 Feb 01 j 11:39	14°♄25'45	5.99361 AU
	533 Aug 07 j 13:09	0°♍			539 Feb 03 j 20:29	15°♄	
evening set	533 Aug 12 j 20:03	1°♍07'57		morning rise	539 Feb 14 j 08:43	17°♄31'31	
					539 Apr 12 j 03:04	0°♋	
conjunction	533 Aug 25 j 22:52	3°♍58'06	1°05'08	retrograde	539 Jun 26 j 06:08	7°♋57'10	
minimum elong	533 Aug 25 j 22:51	3°♍58'05	1°05'08	opposition	539 Aug 25 j 08:15	2°♋56'14	-1°35'56
max. Earth dist.	533 Aug 25 j 02:12	3°♍46'54	6.43543 AU	min. Earth dist.	539 Aug 24 j 18:17	3°♋00'54	3.96666 AU
morning rise	533 Sep 07 j 22:32	6°♍46'45			539 Sep 18 j 00:28	30°♋	
retrograde	534 Jan 06 j 01:06	23°♍34'59		direct	539 Oct 22 j 15:58	28°♋02'41	
opposition	534 Mar 07 j 12:53	18°♍41'34	1°40'57		539 Nov 25 j 22:24	0°♋	
min. Earth dist.	534 Mar 08 j 10:14	18°♍34'41	4.44333 AU	evening set	540 Feb 24 j 22:23	17°♋41'31	
direct	534 May 09 j 03:11	13°♍39'00					
	534 Sep 07 j 01:45	0°♎		conjunction	540 Mar 09 j 05:24	20°♋53'38	-1°08'51
evening set	534 Sep 12 j 20:03	1°♎14'25		minimum elong	540 Mar 09 j 05:24	20°♋53'38	1°08'50
max. Earth dist.	534 Sep 23 j 23:10	3°♎39'41	6.43143 AU	max. Earth dist.	540 Mar 10 j 16:59	21°♋15'05	5.96033 AU
				morning rise	540 Mar 22 j 15:37	24°♋07'25	
conjunction	534 Sep 25 j 15:51	4°♎01'53	1°09'25		540 Apr 16 j 19:42	0°♏	
minimum elong	534 Sep 25 j 15:52	4°♎01'54	1°09'25	retrograde	540 Aug 02 j 00:45	14°♏43'38	
morning rise	534 Oct 08 j 09:01	6°♎48'09		min. Earth dist.	540 Sep 29 j 11:18	9°♏49'48	3.97834 AU
retrograde	535 Feb 05 j 21:35	23°♎43'18		opposition	540 Sep 30 j 17:56	9°♏39'25	-1°40'39
opposition	535 Apr 07 j 15:56	18°♎51'25	1°33'45	direct	540 Nov 27 j 14:10	4°♏44'09	
min. Earth dist.	535 Apr 09 j 01:29	18°♎40'43	4.40407 AU	evening set	541 Apr 02 j 10:23	24°♏16'11	
direct	535 Jun 09 j 09:54	13°♎50'25					
	535 Oct 06 j 04:17	0°♏		conjunction	541 Apr 16 j 00:53	27°♏29'12	-0°58'42
evening set	535 Oct 13 j 12:10	1°♏36'26		minimum elong	541 Apr 16 j 00:56	27°♏29'14	0°58'42
max. Earth dist.	535 Oct 24 j 02:33	3°♏57'33	6.35920 AU	max. Earth dist.	541 Apr 18 j 05:12	28°♏00'11	6.01485 AU
					541 Apr 26 j 16:12	0°♐	
conjunction	535 Oct 26 j 04:08	4°♏25'09	0°54'40	morning rise	541 Apr 29 j 18:05	0°♐43'24	
minimum elong	535 Oct 26 j 04:10	4°♏25'10	0°54'40		541 Jul 07 j 01:38	15°♐	
morning rise	535 Nov 07 j 18:21	7°♏13'11		retrograde	541 Sep 07 j 02:11	20°♐41'18	
	535 Dec 14 j 13:06	15°♏		min. Earth dist.	541 Nov 04 j 05:51	15°♐47'45	4.06935 AU
retrograde	536 Mar 09 j 03:37	24°♏42'30		opposition	541 Nov 05 j 15:57	15°♐36'06	-1°06'24
opposition	536 May 09 j 02:47	19°♏50'25	1°00'01		541 Nov 10 j 01:58	15°♐	
min. Earth dist.	536 May 10 j 13:39	19°♏39'19	4.30280 AU	direct	542 Jan 03 j 00:39	10°♐37'48	
	536 Jun 30 j 18:28	15°♏			542 Feb 25 j 05:39	15°♐	
direct	536 Jul 10 j 05:29	14°♏51'44		evening set	542 May 09 j 09:59	29°♐41'17	
	536 Jul 19 j 16:33	15°♏			542 May 10 j 18:46	0°♑	
	536 Oct 30 j 04:46	0°♑					
evening set	536 Nov 12 j 18:57	3°♑02'55		conjunction	542 May 23 j 04:31	2°♑50'42	-0°26'54
max. Earth dist.	536 Nov 23 j 14:47	5°♑31'16	6.23709 AU	minimum elong	542 May 23 j 04:33	2°♑50'43	0°26'55
				max. Earth dist.	542 May 25 j 06:55	3°♑19'37	6.13419 AU
conjunction	536 Nov 25 j 10:28	5°♑56'19	0°23'36	morning rise	542 Jun 05 j 23:40	6°♑00'10	
minimum elong	536 Nov 25 j 10:30	5°♑56'20	0°23'35	retrograde	542 Oct 10 j 21:45	24°♑52'13	
morning rise	536 Dec 08 j 01:26	8°♑49'45		min. Earth dist.	542 Dec 08 j 09:51	19°♑57'46	4.20360 AU
retrograde	537 Apr 12 j 14:51	27°♑15'49		opposition	542 Dec 09 j 11:52	19°♑48'58	-0°10'31
opposition	537 Jun 12 j 11:16	22°♑22'04	0°05'55	direct	543 Feb 07 j 00:13	14°♑47'53	
min. Earth dist.	537 Jun 13 j 14:10	22°♑13'26	4.16705 AU	asc. node	543 Feb 18 j 08:20	15°♑00'26	
desc. node	537 Jul 21 j 16:12	18°♑10'24			543 May 29 j 23:40	0°♒	
direct	537 Aug 12 j 10:16	17°♑26'01		evening set	543 Jun 13 j 20:35	3°♒15'08	
	537 Nov 18 j 05:46	0°♓					
evening set	537 Dec 15 j 12:59	6°♓12'01		conjunction	543 Jun 27 j 12:49	6°♒17'34	0°12'49
max. Earth dist.	537 Dec 27 j 04:53	8°♓56'48	6.09975 AU	minimum elong	543 Jun 27 j 12:48	6°♒17'33	0°12'49
				behind sun begin	543 Jun 27 j 07:49	6°♒14'47	
conjunction	537 Dec 28 j 07:01	9°♓12'14	-0°16'21	behind sun end	543 Jun 27 j 17:48	6°♒20'19	
minimum elong	537 Dec 28 j 07:00	9°♓12'13	0°16'21	max. Earth dist.	543 Jun 28 j 17:21	6°♒33'27	6.27258 AU
morning rise	538 Jan 10 j 02:21	12°♓13'20		morning rise	543 Jul 11 j 04:02	9°♒19'11	
	538 Apr 15 j 07:17	0°♒		retrograde	543 Nov 11 j 15:13	27°♒07'14	
retrograde	538 May 19 j 05:09	1°♒46'23		opposition	544 Jan 10 j 11:10	22°♒07'33	0°45'19
	538 Jun 22 j 06:11	30°♒		min. Earth dist.	544 Jan 10 j 00:50	22°♒11'00	4.33398 AU

direct	544 Mar 11 j 08:16	17°  04'44		morning rise	550 Jan 14 j 23:18	17°  14'55	
	544 Jun 22 j 16:02	0° 			550 Mar 15 j 11:35	0° 	
evening set	544 Jul 16 j 09:22	5°  01'08		retrograde	550 May 24 j 15:07	6°  57'39	
				opposition	550 Jul 24 j 02:16	2°  00'11	-1°01'25
conjunction	544 Jul 29 j 19:05	7°  56'07	0°46'58	min. Earth dist.	550 Jul 24 j 07:05	1°  58'37	4.02347 AU
minimum elong	544 Jul 29 j 19:02	7°  56'05	0°46'58		550 Aug 08 j 20:23	30°  R 	
max. Earth dist.	544 Jul 29 j 21:07	7°  57'14	6.38518 AU	direct	550 Sep 21 j 09:16	27°  30'28	
morning rise	544 Aug 12 j 02:03	10°  54'40			550 Nov 02 j 22:15	0° 	
	544 Aug 31 j 17:15	15° 			551 Jan 18 j 01:56	15° 	
retrograde	544 Dec 11 j 03:05	27°  53'43		evening set	551 Jan 24 j 10:26	16°  31'01	
opposition	545 Feb 09 j 07:08	22°  57'49	1°25'28				
min. Earth dist.	545 Feb 09 j 14:37	22°  55'23	4.42175 AU	conjunction	551 Feb 06 j 10:53	19°  39'09	-0°55'57
direct	545 Apr 12 j 07:29	17°  54'39		minimum elong	551 Feb 06 j 10:51	19°  39'07	0°55'57
	545 Jul 21 j 17:22	0°  M 		max. Earth dist.	551 Feb 06 j 20:22	19°  44'52	5.98287 AU
evening set	545 Aug 17 j 06:54	5°  M  32'51		morning rise	551 Feb 19 j 14:05	22°  48'52	
max. Earth dist.	545 Aug 29 j 07:04	8°  M  08'33	6.44083 AU		551 Mar 22 j 14:00	0°  H 	
				retrograde	551 Jul 01 j 16:47	13°  H  19'14	
conjunction	545 Aug 30 j 08:25	8°  M  22'17	1°06'54	opposition	551 Aug 30 j 17:30	8°  H  17'48	-1°39'11
minimum elong	545 Aug 30 j 08:24	8°  M  22'16	1°06'53	min. Earth dist.	551 Aug 29 j 23:40	8°  H  23'46	3.96296 AU
morning rise	545 Sep 12 j 07:08	11°  M  10'17		direct	551 Oct 27 j 21:25	3°  H  24'11	
retrograde	546 Jan 10 j 09:27	27°  M  57'17		evening set	552 Mar 01 j 06:33	23°  H  03'34	
opposition	546 Mar 11 j 21:29	23°  M  04'09	1°41'35				
min. Earth dist.	546 Mar 12 j 21:59	22°  M  56'16	4.44332 AU	conjunction	552 Mar 14 j 14:36	26°  H  16'00	-1°09'03
direct	546 May 13 j 14:24	18°  M  01'41		minimum elong	552 Mar 14 j 14:36	26°  H  16'00	1°09'02
	546 Aug 21 j 10:16	0°  A 		max. Earth dist.	552 Mar 16 j 05:26	26°  H  39'23	5.96390 AU
evening set	546 Sep 17 j 03:57	5°  A  37'14		morning rise	552 Mar 28 j 01:58	29°  H  30'06	
max. Earth dist.	546 Sep 28 j 04:39	8°  A  01'24	6.42584 AU		552 Mar 30 j 04:08	0°  Y 	
				retrograde	552 Aug 07 j 06:23	20°  Y  03'04	
conjunction	546 Sep 29 j 23:08	8°  A  24'38	1°08'27	opposition	552 Oct 05 j 23:35	14°  Y  58'29	-1°37'52
minimum elong	546 Sep 29 j 23:09	8°  A  24'38	1°08'27	min. Earth dist.	552 Oct 04 j 15:31	15°  Y  09'23	3.98882 AU
morning rise	546 Oct 12 j 15:33	11°  A  10'50		direct	552 Dec 02 j 20:47	10°  Y  02'50	
retrograde	547 Feb 10 j 07:14	28°  A  09'01		evening set	553 Apr 07 j 17:47	29°  Y  30'55	
opposition	547 Apr 12 j 03:31	23°  A  17'10	1°30'29		553 Apr 09 j 19:21	0°  B 	
min. Earth dist.	547 Apr 13 j 13:12	23°  A  06'26	4.39332 AU				
direct	547 Jun 13 j 19:21	18°  A  16'25		conjunction	553 Apr 21 j 09:15	2°  B  43'36	-0°55'13
	547 Sep 19 j 10:35	0°  M 		minimum elong	553 Apr 21 j 09:18	2°  B  43'37	0°55'12
evening set	547 Oct 17 j 20:59	6°  M  05'11		max. Earth dist.	553 Apr 23 j 16:16	3°  B  16'01	6.03128 AU
max. Earth dist.	547 Oct 28 j 11:12	8°  M  26'43	6.34412 AU	morning rise	553 May 05 j 02:53	5°  B  57'14	
					553 Jun 14 j 20:01	15°  B 	
conjunction	547 Oct 30 j 12:38	8°  M  54'21	0°51'07	retrograde	553 Sep 12 j 01:04	25°  B  45'40	
minimum elong	547 Oct 30 j 12:41	8°  M  54'22	0°51'07	min. Earth dist.	553 Nov 09 j 04:33	20°  B  52'02	4.08969 AU
morning rise	547 Nov 12 j 02:42	11°  M  42'56		opposition	553 Nov 10 j 14:03	20°  B  40'37	-0°59'15
	547 Nov 27 j 01:45	15°  M 		direct	554 Jan 08 j 02:19	15°  B  41'56	
retrograde	548 Mar 13 j 22:12	29°  M  19'10			554 Apr 23 j 16:04	0°  II 	
opposition	548 May 13 j 20:20	24°  M  26'58	0°53'20	evening set	554 May 14 j 12:24	4°  II  39'12	
min. Earth dist.	548 May 15 j 07:48	24°  M  15'40	4.28413 AU				
direct	548 Jul 14 j 20:40	19°  M  28'37		conjunction	554 May 28 j 06:46	7°  II  47'35	-0°21'26
	548 Oct 12 j 18:15	0°  A 		minimum elong	554 May 28 j 06:48	7°  II  47'36	0°21'26
evening set	548 Nov 17 j 07:45	7°  A  44'39		max. Earth dist.	554 May 30 j 06:00	8°  II  14'32	6.15651 AU
max. Earth dist.	548 Nov 28 j 04:09	10°  A  14'04	6.21640 AU	morning rise	554 Jun 11 j 01:47	10°  II  55'58	
				retrograde	554 Oct 15 j 10:09	29°  II  37'21	
conjunction	548 Nov 29 j 23:26	10°  A  38'59	0°18'13	min. Earth dist.	554 Dec 13 j 01:32	24°  II  42'43	4.22567 AU
minimum elong	548 Nov 29 j 23:28	10°  A  39'00	0°18'13	opposition	554 Dec 14 j 01:47	24°  II  34'32	-0°02'13
morning rise	548 Dec 12 j 14:59	13°  A  33'29		asc. node	554 Dec 29 j 01:23	22°  II  36'35	
	549 Mar 10 j 22:29	0°  B 		direct	555 Feb 11 j 18:44	19°  II  33'07	
retrograde	549 Apr 17 j 15:58	2°  B  09'18			555 May 12 j 04:26	0°  B 	
	549 May 25 j 18:10	30°  R  A 		evening set	555 Jun 18 j 15:40	7°  B  54'41	
desc. node	549 May 30 j 16:15	29°  A  27'34					
opposition	549 Jun 17 j 12:09	27°  A  15'10	-0°02'42	conjunction	555 Jul 02 j 07:16	10°  B  55'58	0°18'11
min. Earth dist.	549 Jun 18 j 11:58	27°  A  07'30	4.14592 AU	minimum elong	555 Jul 02 j 07:15	10°  B  55'58	0°18'10
direct	549 Aug 17 j 05:00	22°  A  19'28		max. Earth dist.	555 Jul 03 j 08:30	11°  B  09'58	6.29278 AU
	549 Oct 29 j 17:49	0°  B 		morning rise	555 Jul 15 j 21:20	13°  B  56'17	
evening set	549 Dec 20 j 08:31	11°  B  11'17			555 Oct 14 j 23:04	0°  O 	
max. Earth dist.	550 Jan 01 j 05:57	14°  B  00'00	6.08021 AU	retrograde	555 Nov 15 j 23:19	1°  O  36'16	
					555 Dec 17 j 17:54	30°  R  B	
conjunction	550 Jan 02 j 03:15	14°  B  12'37	-0°22'03	opposition	556 Jan 14 j 19:34	26°  B  37'13	0°52'07
minimum elong	550 Jan 02 j 03:13	14°  B  12'36	0°				



direct	556 Mar 15 j 21:04	21°♄34'19		opposition	561 Jun 22 j 15:21	2°♄14'37	-0°11'28
	556 Jun 04 j 07:09	0°♄		min. Earth dist.	561 Jun 23 j 13:18	2°♄07'33	4.12587 AU
evening set	556 Jul 20 j 21:55	9°♄27'04			561 Jul 10 j 16:56	30°♄♂	
				direct	561 Aug 22 j 04:17	27°♄19'18	
conjunction	556 Aug 03 j 06:24	12°♄21'06	0°50'43		561 Oct 02 j 18:56	0°♄	
minimum elong	556 Aug 03 j 06:22	12°♄21'04	0°50'44	evening set	561 Dec 25 j 06:07	16°♄16'17	
max. Earth dist.	556 Aug 03 j 02:51	12°♄19'10	6.39697 AU	max. Earth dist.	562 Jan 06 j 08:21	19°♄08'26	6.06342 AU
	556 Aug 15 j 10:56	15°♄					
morning rise	556 Aug 16 j 12:21	15°♄13'44		conjunction	562 Jan 07 j 01:30	19°♄18'38	-0°27'39
	556 Nov 07 j 02:45	0°♄		minimum elong	562 Jan 07 j 01:28	19°♄18'37	0°27'39
retrograde	556 Dec 15 j 08:44	2°♄14'00		morning rise	562 Jan 19 j 22:29	22°♄22'03	
	557 Jan 22 j 15:59	30°♄♂			562 Feb 22 j 11:08	0°♄	
opposition	557 Feb 13 j 13:27	27°♄18'34	1°29'15	retrograde	562 May 29 j 23:40	12°♄12'51	
min. Earth dist.	557 Feb 14 j 00:07	27°♄15'05	4.42813 AU	opposition	562 Jul 29 j 10:26	7°♄14'49	-1°08'38
direct	557 Apr 16 j 16:36	22°♄15'24		min. Earth dist.	562 Jul 29 j 10:54	7°♄14'40	4.01185 AU
	557 Jul 03 j 04:23	0°♄		direct	562 Sep 26 j 12:20	2°♄21'15	
evening set	557 Aug 21 j 15:12	9°♄52'46			562 Dec 31 j 07:54	15°♄	
				evening set	563 Jan 29 j 14:25	21°♄48'26	
conjunction	557 Sep 03 j 15:53	12°♄41'49	1°08'15				
minimum elong	557 Sep 03 j 15:52	12°♄41'48	1°08'14	conjunction	563 Feb 11 j 15:45	24°♄57'14	-0°59'21
max. Earth dist.	557 Sep 02 j 12:26	12°♄26'55	6.44130 AU	minimum elong	563 Feb 11 j 15:43	24°♄57'12	0°59'21
morning rise	557 Sep 16 j 13:25	15°♄29'23		max. Earth dist.	563 Feb 12 j 05:40	25°♄05'38	5.97720 AU
	557 Dec 06 j 18:21	0°♄		morning rise	563 Feb 24 j 20:02	28°♄07'40	
retrograde	558 Jan 14 j 15:27	2°♄17'01			563 Mar 04 j 16:39	0°♄	
	558 Feb 22 j 20:02	30°♄♂		retrograde	563 Jul 07 j 01:38	18°♄40'25	
opposition	558 Mar 16 j 05:02	27°♄24'13	1°41'40	min. Earth dist.	563 Sep 04 j 05:27	13°♄45'12	3.96390 AU
min. Earth dist.	558 Mar 17 j 06:50	27°♄15'56	4.43807 AU	opposition	563 Sep 05 j 01:53	13°♄38'20	-1°41'32
direct	558 May 17 j 21:32	22°♄22'00		direct	563 Nov 02 j 04:24	8°♄44'29	
	558 Aug 02 j 19:30	0°♄		evening set	564 Mar 06 j 13:26	28°♄22'39	
evening set	558 Sep 21 j 11:25	9°♄59'28			564 Mar 13 j 08:03	0°♄	
max. Earth dist.	558 Oct 02 j 08:29	12°♄22'08	6.41517 AU				
				conjunction	564 Mar 19 j 22:42	1°♄35'15	-1°08'41
conjunction	558 Oct 04 j 05:49	12°♄47'00	1°07'06	minimum elong	564 Mar 19 j 22:43	1°♄35'16	1°08'41
minimum elong	558 Oct 04 j 05:50	12°♄47'01	1°07'06	max. Earth dist.	564 Mar 21 j 18:13	2°♄01'23	5.97120 AU
morning rise	558 Oct 16 j 21:53	15°♄33'28		morning rise	564 Apr 02 j 10:57	4°♄49'25	
	559 Jan 04 j 00:46	0°♄		retrograde	564 Aug 12 j 11:00	25°♄17'24	
retrograde	559 Feb 14 j 20:56	2°♄36'31		min. Earth dist.	564 Oct 09 j 18:17	20°♄23'40	4.00172 AU
	559 Mar 29 j 05:14	30°♄♂		opposition	564 Oct 11 j 02:51	20°♄12'36	-1°34'19
opposition	559 Apr 16 j 16:00	27°♄44'45	1°26'43	direct	564 Dec 08 j 01:34	15°♄16'33	
min. Earth dist.	559 Apr 18 j 03:21	27°♄33'29	4.37788 AU		565 Mar 23 j 15:19	0°♄	
direct	559 Jun 18 j 06:50	22°♄44'18		evening set	565 Apr 12 j 23:27	4°♄40'11	
	559 Aug 31 j 06:41	0°♄					
evening set	559 Oct 22 j 06:21	10°♄37'16		conjunction	565 Apr 26 j 15:26	7°♄52'21	-0°51'21
max. Earth dist.	559 Nov 01 j 20:44	12°♄59'30	6.32519 AU	minimum elong	565 Apr 26 j 15:29	7°♄52'23	0°51'21
				max. Earth dist.	565 Apr 28 j 21:29	8°♄24'02	6.04837 AU
conjunction	559 Nov 03 j 22:00	13°♄27'10	0°47'15	morning rise	565 May 10 j 09:44	11°♄05'25	
minimum elong	559 Nov 03 j 22:02	13°♄27'11	0°47'14		565 May 27 j 11:24	15°♄	
	559 Nov 10 j 19:21	15°♄			565 Aug 26 j 13:26	0°♄	
morning rise	559 Nov 16 j 12:06	16°♄16'33		retrograde	565 Sep 16 j 19:18	0°♄44'21	
	560 Jan 26 j 05:08	0°♄			565 Oct 07 j 21:52	30°♄♂	
retrograde	560 Mar 18 j 17:12	4°♄01'07		min. Earth dist.	565 Nov 14 j 00:21	25°♄50'44	4.10917 AU
	560 May 11 j 22:17	30°♄♂		opposition	565 Nov 15 j 09:27	25°♄39'26	-0°51'49
opposition	560 May 18 j 15:50	29°♄08'45	0°46'13	direct	566 Jan 13 j 00:59	20°♄40'17	
min. Earth dist.	560 May 20 j 01:11	28°♄58'07	4.26301 AU		566 Apr 05 j 00:17	0°♄	
direct	560 Jul 19 j 10:36	24°♄10'50		evening set	566 May 19 j 12:46	9°♄32'04	
	560 Sep 21 j 19:23	0°♄					
evening set	560 Nov 21 j 22:25	12°♄32'25		conjunction	566 Jun 02 j 07:10	12°♄39'31	-0°15'54
max. Earth dist.	560 Dec 02 j 22:23	15°♄04'36	6.19501 AU	minimum elong	566 Jun 02 j 07:11	12°♄39'32	0°15'54
				max. Earth dist.	566 Jun 04 j 03:49	13°♄04'55	6.17690 AU
conjunction	560 Dec 04 j 14:21	15°♄27'44	0°12'39	morning rise	566 Jun 16 j 01:42	15°♄46'48	
minimum elong	560 Dec 04 j 14:22	15°♄27'45	0°12'38		566 Aug 27 j 07:02	0°♄	
behind sun begin	560 Dec 04 j 09:10	15°♄24'45		retrograde	566 Oct 19 j 23:28	4°♄18'37	
behind sun end	560 Dec 04 j 19:34	15°♄30'45		asc. node	566 Nov 07 j 22:54	3°♄42'44	
morning rise	560 Dec 17 j 06:21	18°♄23'21			566 Dec 13 j 04:19	30°♄♂	
	561 Feb 10 j 06:30	0°♄		opposition	566 Dec 18 j 14:29	29°♄16'17	0°05'58
desc. node	561 Apr 08 j 08:17	6°♄49'20		min. Earth dist.	566 Dec 17 j 17:11	29°♄23'28	4.24501 AU
retrograde	561 Apr 22 j 21:02	7°♄09'10		direct	567 Feb 16 j 12:35	24°♄14'34	

	567 Apr 21 j 06:13	0°♌		572 Aug 19 j 22:33	0°♏	
evening set	567 Jun 23 j 09:38	12°♌31'28		evening set	572 Nov 26 j 13:22	17°♏20'13
				max. Earth dist.	572 Dec 07 j 16:56	19°♏55'04 6.17757 AU
conjunction	567 Jul 07 j 00:24	15°♌31'42 0°23'23				
minimum elong	567 Jul 07 j 00:23	15°♌31'41 0°23'23		conjunction	572 Dec 09 j 05:43	20°♏16'26 0°07'01
max. Earth dist.	567 Jul 07 j 21:25	15°♌43'18 6.30951 AU		minimum elong	572 Dec 09 j 05:43	20°♏16'26 0°07'01
morning rise	567 Jul 20 j 13:32	18°♌30'53		behind sun begin	572 Dec 08 j 22:18	20°♏12'09
	567 Sep 16 j 02:09	0°♏		behind sun end	572 Dec 09 j 13:08	20°♏20'43
retrograde	567 Nov 20 j 05:33	6°♏04'08		morning rise	572 Dec 21 j 22:10	23°♏13'00
opposition	568 Jan 19 j 03:41	1°♏05'34 0°58'35			573 Jan 21 j 06:52	0°♏
min. Earth dist.	568 Jan 18 j 22:29	1°♏07'17 4.36388 AU		desc. node	573 Feb 15 j 18:48	5°♏01'46
	568 Jan 27 j 11:17	30°♏♌		retrograde	573 Apr 27 j 23:05	12°♏07'14
direct	568 Mar 20 j 08:27	26°♌02'32		opposition	573 Jun 27 j 17:51	7°♏12'18 -0°20'03
	568 May 12 j 07:37	0°♏		min. Earth dist.	573 Jun 28 j 12:16	7°♏06'21 4.11054 AU
evening set	568 Jul 25 j 10:27	13°♏52'44		direct	573 Aug 27 j 01:14	2°♏17'23
	568 Jul 30 j 14:52	15°♏		evening set	573 Dec 30 j 02:45	21°♏17'58
conjunction	568 Aug 07 j 17:54	16°♏45'58 0°54'12		conjunction	574 Jan 11 j 22:39	24°♏21'04 -0°32'57
minimum elong	568 Aug 07 j 17:52	16°♏45'57 0°54'12		minimum elong	574 Jan 11 j 22:37	24°♏21'03 0°32'57
max. Earth dist.	568 Aug 07 j 11:03	16°♏42'15 6.40563 AU		max. Earth dist.	574 Jan 11 j 09:35	24°♏13'17 6.05151 AU
morning rise	568 Aug 20 j 22:32	19°♏37'45		morning rise	574 Jan 24 j 20:29	27°♏25'23
	568 Oct 12 j 01:01	0°♏			574 Feb 04 j 19:47	0°♏
retrograde	568 Dec 19 j 15:01	6°♏35'07			574 Apr 25 j 22:01	15°♏
opposition	569 Feb 17 j 20:21	1°♏40'10 1°32'36		retrograde	574 Jun 04 j 06:53	17°♏22'30
min. Earth dist.	569 Feb 18 j 09:37	1°♏35'51 4.43193 AU			574 Jul 13 j 19:56	15°♏
	569 Mar 02 j 22:27	30°♏♏		opposition	574 Aug 03 j 16:16	12°♏23'53 -1°15'08
direct	569 Apr 21 j 02:10	26°♏37'06		min. Earth dist.	574 Aug 03 j 13:45	12°♏24'43 4.00453 AU
	569 Jun 09 j 07:15	0°♏		direct	574 Oct 01 j 15:14	7°♏30'23
evening set	569 Aug 26 j 00:23	14°♏14'15			574 Dec 11 j 10:11	15°♏
				evening set	575 Feb 03 j 15:56	26°♏58'55
conjunction	569 Sep 07 j 23:59	17°♏02'57 1°09'14				
minimum elong	569 Sep 07 j 23:59	17°♏02'56 1°09'14		conjunction	575 Feb 16 j 18:19	0°♏08'14 -1°02'11
max. Earth dist.	569 Sep 06 j 16:09	16°♏45'40 6.43974 AU		minimum elong	575 Feb 16 j 18:17	0°♏08'13 1°02'10
morning rise	569 Sep 20 j 20:46	19°♏50'15			575 Feb 16 j 04:40	0°♏
	569 Nov 10 j 20:42	0°♏		max. Earth dist.	575 Feb 17 j 13:43	0°♏19'57 5.97514 AU
retrograde	570 Jan 19 j 00:46	6°♏39'07		morning rise	575 Mar 01 j 23:30	3°♏19'11
opposition	570 Mar 20 j 14:12	1°♏46'34 1°41'13		retrograde	575 Jul 12 j 07:31	23°♏52'39
min. Earth dist.	570 Mar 21 j 18:04	1°♏37'37 4.43153 AU		min. Earth dist.	575 Sep 09 j 08:03	18°♏57'35 3.96758 AU
	570 Apr 03 j 17:53	30°♏♏		opposition	575 Sep 10 j 06:12	18°♏50'09 -1°42'57
direct	570 May 22 j 07:16	26°♏44'31		direct	575 Nov 07 j 06:56	13°♏56'08
	570 Jul 09 j 14:36	0°♏			576 Feb 25 j 16:07	0°♏
evening set	570 Sep 25 j 19:41	14°♏24'03		evening set	576 Mar 11 j 17:09	3°♏32'34
max. Earth dist.	570 Oct 06 j 16:24	16°♏46'53 6.40420 AU				
				conjunction	576 Mar 25 j 03:15	6°♏45'11 -1°07'46
conjunction	570 Oct 08 j 13:41	17°♏11'48 1°05'21		minimum elong	576 Mar 25 j 03:16	6°♏45'12 1°07'46
minimum elong	570 Oct 08 j 13:43	17°♏11'49 1°05'21		max. Earth dist.	576 Mar 26 j 23:32	7°♏11'42 5.97993 AU
morning rise	570 Oct 21 j 05:07	19°♏58'31		morning rise	576 Apr 07 j 16:38	9°♏59'23
	570 Dec 09 j 14:52	0°♏			576 Aug 02 j 12:04	0°♏
retrograde	571 Feb 19 j 09:30	7°♏06'29		retrograde	576 Aug 17 j 09:24	0°♏21'58
opposition	571 Apr 21 j 05:55	2°♏14'47 1°22'23			576 Sep 01 j 05:25	30°♏♏
min. Earth dist.	571 Apr 22 j 16:46	2°♏03'41 4.36333 AU		min. Earth dist.	576 Oct 14 j 15:56	25°♏28'29 4.01458 AU
	571 May 09 j 13:07	30°♏♏		opposition	576 Oct 16 j 01:36	25°♏17'02 -1°30'10
direct	571 Jun 22 j 17:35	27°♏14'47		direct	576 Dec 13 j 01:21	20°♏20'34
	571 Aug 05 j 13:51	0°♏			577 Mar 05 j 05:12	0°♏
	571 Oct 25 j 20:30	15°♏		evening set	577 Apr 18 j 01:10	9°♏40'17
evening set	571 Oct 26 j 17:02	15°♏11'28				
max. Earth dist.	571 Nov 06 j 07:37	17°♏34'27 6.30837 AU		conjunction	577 May 01 j 17:54	12°♏52'02 -0°47'15
				minimum elong	577 May 01 j 17:57	12°♏52'03 0°47'15
conjunction	571 Nov 08 j 08:24	18°♏01'58 0°43'03		max. Earth dist.	577 May 03 j 23:18	13°♏23'14 6.06428 AU
minimum elong	571 Nov 08 j 08:26	18°♏01'59 0°43'04			577 May 10 j 21:16	15°♏
morning rise	571 Nov 20 j 22:39	20°♏52'06		morning rise	577 May 15 j 12:29	16°♏04'31
	572 Jan 03 j 03:28	0°♏			577 Jul 21 j 23:30	0°♏
retrograde	572 Mar 23 j 15:02	8°♏44'18		retrograde	577 Sep 21 j 12:49	5°♏34'56
opposition	572 May 23 j 12:17	3°♏51'45 0°38'45		min. Earth dist.	577 Nov 18 j 18:46	0°♏40'50 4.12624 AU
min. Earth dist.	572 May 24 j 20:57	3°♏41'19 4.24499 AU		opposition	577 Nov 20 j 01:36	0°♏30'19 -0°44'18
	572 Jun 27 j 07:23	30°♏♏			577 Nov 23 j 18:45	30°♏♏
direct	572 Jul 24 j 04:22	28°♏54'15		direct	578 Jan 17 j 21:17	25°♏30'47

	578 Mar 13 j 08:20	0°♐		minimum elong	583 Nov 12 j 17:54	22°♐35'03	0°38'37
evening set	578 May 24 j 10:11	14°♐18'14		morning rise	583 Nov 25 j 08:05	25°♐25'48	
					583 Dec 16 j 01:03	0°♐	
conjunction	578 Jun 07 j 04:29	17°♐24'55 -0°10'27		retrograde	584 Mar 28 j 09:14	13°♐25'08	
minimum elong	578 Jun 07 j 04:29	17°♐24'56 0°10'27		opposition	584 May 28 j 07:42	8°♐32'18	0°31'03
behind sun begin	578 Jun 06 j 22:01	17°♐21'17		min. Earth dist.	584 May 29 j 14:45	8°♐22'23	4.22793 AU
behind sun end	578 Jun 07 j 10:57	17°♐28'34		direct	584 Jul 28 j 19:40	3°♐35'09	
max. Earth dist.	578 Jun 08 j 22:38	17°♐48'47 6.19386 AU		evening set	584 Dec 01 j 03:09	22°♐05'10	
morning rise	578 Jun 20 j 22:38	20°♐31'16		max. Earth dist.	584 Dec 12 j 08:36	24°♐41'45	6.16016 AU
	578 Aug 04 j 18:50	0°♑					
asc. node	578 Sep 19 j 00:01	6°♑57'10		conjunction	584 Dec 13 j 19:38	25°♐02'10	0°01'21
retrograde	578 Oct 24 j 08:09	8°♑55'02		minimum elong	584 Dec 13 j 19:39	25°♐02'11	0°01'21
min. Earth dist.	578 Dec 22 j 04:49	3°♑59'56 4.26054 AU		behind sun begin	584 Dec 13 j 11:39	24°♐57'32	
opposition	578 Dec 23 j 00:46	3°♑53'13 0°13'52		behind sun end	584 Dec 14 j 03:39	25°♐06'49	
	579 Jan 25 j 08:02	30°♑♐		morning rise	584 Dec 26 j 12:45	27°♐59'44	
direct	579 Feb 21 j 01:47	28°♐51'17		desc. node	584 Dec 26 j 15:18	28°♐01'13	
	579 Mar 20 j 05:27	0°♑			585 Jan 04 j 05:37	0°♑	
evening set	579 Jun 28 j 02:01	17°♑05'00		retrograde	585 May 03 j 01:30	17°♑02'39	
				opposition	585 Jul 02 j 19:11	12°♑07'12	-0°28'31
conjunction	579 Jul 11 j 15:57	20°♑04'21 0°28'19		min. Earth dist.	585 Jul 03 j 11:18	12°♑01'59	4.09400 AU
minimum elong	579 Jul 11 j 15:55	20°♑04'19 0°28'20		direct	585 Aug 31 j 22:53	7°♑12'28	
max. Earth dist.	579 Jul 12 j 08:29	20°♑13'27 6.32263 AU		evening set	586 Jan 03 j 22:39	26°♑17'20	
morning rise	579 Jul 25 j 04:06	23°♑02'35					
	579 Aug 27 j 05:16	0°♒		conjunction	586 Jan 16 j 19:25	29°♑21'24	-0°38'01
retrograde	579 Nov 24 j 13:20	10°♒30'27		minimum elong	586 Jan 16 j 19:23	29°♑21'23	0°38'01
opposition	580 Jan 23 j 11:09	5°♒32'27 1°04'35		max. Earth dist.	586 Jan 16 j 11:14	29°♑16'31	6.03740 AU
min. Earth dist.	580 Jan 23 j 09:10	5°♒33'07 4.37378 AU			586 Jan 19 j 12:00	0°♒	
direct	580 Mar 24 j 20:22	0°♒29'22		morning rise	586 Jan 29 j 18:02	2°♒26'42	
	580 Jul 14 j 10:08	15°♒			586 Mar 28 j 13:04	15°♒	
evening set	580 Jul 29 j 22:09	18°♒17'53		retrograde	586 Jun 09 j 14:06	22°♒30'54	
				opposition	586 Aug 08 j 21:25	17°♒31'44	-1°21'07
conjunction	580 Aug 12 j 04:35	21°♒10'28 0°57'18		min. Earth dist.	586 Aug 08 j 16:30	17°♒33'22	3.99447 AU
minimum elong	580 Aug 12 j 04:33	21°♒10'27 0°57'18			586 Aug 29 j 00:49	15°♒	
max. Earth dist.	580 Aug 11 j 18:10	21°♒04'48 6.41155 AU		direct	586 Oct 06 j 16:10	12°♒38'17	
morning rise	580 Aug 25 j 08:08	24°♒01'34			586 Nov 13 j 17:24	15°♒	
	580 Sep 22 j 21:36	0°♓			587 Jan 30 j 16:45	0°♓	
retrograde	580 Dec 23 j 20:35	10°♓56'57		evening set	587 Feb 08 j 18:05	2°♓09'30	
opposition	581 Feb 22 j 03:32	6°♓02'20 1°35'21					
min. Earth dist.	581 Feb 22 j 18:17	5°♓57'33 4.43389 AU		conjunction	587 Feb 21 j 21:21	5°♓19'29	-1°04'33
direct	581 Apr 25 j 10:56	0°♓59'21		minimum elong	587 Feb 21 j 21:19	5°♓19'28	1°04'33
evening set	581 Aug 30 j 09:11	18°♓36'28		max. Earth dist.	587 Feb 22 j 19:11	5°♓32'40	5.96978 AU
max. Earth dist.	581 Sep 10 j 22:55	21°♓06'55 6.43760 AU		morning rise	587 Mar 07 j 03:51	8°♓31'12	
				retrograde	587 Jul 17 j 12:37	29°♓06'38	
conjunction	581 Sep 12 j 07:55	21°♓24'52 1°09'48		min. Earth dist.	587 Sep 14 j 10:09	24°♓12'04	3.96770 AU
minimum elong	581 Sep 12 j 07:55	21°♓24'52 1°09'48		opposition	587 Sep 15 j 11:08	24°♓03'39	-1°43'38
morning rise	581 Sep 25 j 03:40	24°♓11'53		direct	587 Nov 12 j 09:57	19°♓09'22	
	581 Oct 22 j 19:45	0°♈			588 Feb 07 j 11:18	0°♓	
retrograde	582 Jan 23 j 08:45	11°♈01'59		evening set	588 Mar 16 j 22:31	8°♓45'31	
opposition	582 Mar 24 j 23:32	6°♈09'37 1°40'08					
min. Earth dist.	582 Mar 26 j 04:38	6°♈00'18 4.42547 AU		conjunction	588 Mar 30 j 09:50	11°♓58'25	-1°06'19
direct	582 May 26 j 17:05	1°♈07'49		minimum elong	588 Mar 30 j 09:52	11°♓58'26	1°06'19
evening set	582 Sep 30 j 03:45	18°♈48'45		max. Earth dist.	588 Apr 01 j 08:59	12°♓26'35	5.98547 AU
max. Earth dist.	582 Oct 10 j 21:39	21°♈10'30 6.39446 AU		morning rise	588 Apr 13 j 00:05	15°♓12'46	
					588 Jun 22 j 11:07	0°♈	
conjunction	582 Oct 12 j 21:03	21°♈36'39 1°03'13		retrograde	588 Aug 22 j 12:04	5°♈31'03	
minimum elong	582 Oct 12 j 21:05	21°♈36'40 1°03'13		min. Earth dist.	588 Oct 19 j 17:18	0°♈37'17	4.02477 AU
morning rise	582 Oct 25 j 12:15	24°♈23'37		opposition	588 Oct 21 j 02:27	0°♈25'59	-1°25'17
	582 Nov 20 j 18:49	0°♉			588 Oct 24 j 06:43	30°♓♐	
retrograde	583 Feb 23 j 23:03	11°♉35'57		direct	588 Dec 18 j 04:33	25°♓29'07	
opposition	583 Apr 25 j 19:36	6°♉44'08 1°17'33			589 Feb 09 j 21:28	0°♈	
min. Earth dist.	583 Apr 27 j 06:49	6°♉32'54 4.35028 AU		evening set	589 Apr 23 j 05:56	14°♈45'53	
direct	583 Jun 27 j 06:08	1°♉44'21			589 Apr 24 j 06:19	15°♈	
	583 Oct 09 j 12:03	15°♉					
evening set	583 Oct 31 j 02:25	19°♉43'55		conjunction	589 May 06 j 23:17	17°♈57'17	-0°42'42
max. Earth dist.	583 Nov 10 j 19:04	22°♉08'33 6.29293 AU		minimum elong	589 May 06 j 23:20	17°♈57'19	0°42'42
				max. Earth dist.	589 May 09 j 04:59	18°♈28'32	6.07825 AU
conjunction	583 Nov 12 j 17:52	22°♉35'01 0°38'37		morning rise	589 May 20 j 18:16	21°♈09'18	

	589 Jun 30 j 01:13	0°♂		direct	595 Jul 01 j 15:33	6°♂05'56	
retrograde	589 Sep 26 j 06:41	10°♂31'31			595 Sep 22 j 02:25	15°♂	
opposition	589 Nov 24 j 20:10	5°♂27'13 -0°36'16		evening set	595 Nov 04 j 08:18	24°♂07'38	
min. Earth dist.	589 Nov 23 j 13:22	5°♂37'42 4.14263 AU		max. Earth dist.	595 Nov 14 j 23:22	26°♂31'55	6.27913 AU
direct	590 Jan 22 j 18:06	0°♂27'22					
evening set	590 May 29 j 10:47	19°♂10'43		conjunction	595 Nov 16 j 23:30	26°♂59'14	0°34'07
				minimum elong	595 Nov 16 j 23:32	26°♂59'15	0°34'07
conjunction	590 Jun 12 j 04:43	22°♂16'31 -0°04'46		morning rise	595 Nov 29 j 14:00	29°♂50'40	
minimum elong	590 Jun 12 j 04:42	22°♂16'31 0°04'47			595 Nov 30 j 06:33	0°♂	
behind sun begin	590 Jun 11 j 20:34	22°♂11'57		retrograde	596 Apr 02 j 00:52	17°♂57'03	
behind sun end	590 Jun 12 j 12:51	22°♂21'05		opposition	596 Jun 01 j 23:11	13°♂03'56	0°23'26
max. Earth dist.	590 Jun 13 j 19:17	22°♂38'16 6.21156 AU		min. Earth dist.	596 Jun 03 j 05:30	12°♂54'14	4.21082 AU
morning rise	590 Jun 25 j 22:25	25°♂21'53		direct	596 Aug 02 j 07:51	8°♂07'01	
	590 Jul 17 j 02:00	0°♂		desc. node	596 Nov 07 j 12:43	20°♂23'51	
asc. node	590 Jul 29 j 02:46	2°♂30'29		evening set	596 Dec 05 j 13:20	26°♂41'38	
retrograde	590 Oct 28 j 21:27	13°♂37'16		max. Earth dist.	596 Dec 16 j 22:10	29°♂20'46	6.14132 AU
opposition	590 Dec 27 j 14:01	8°♂35'59 0°21'54		conjunction	596 Dec 18 j 06:25	29°♂39'38	-0°04'14
min. Earth dist.	590 Dec 26 j 20:41	8°♂41'48 4.27817 AU		minimum elong	596 Dec 18 j 06:24	29°♂39'38	0°04'13
direct	591 Feb 25 j 20:24	3°♂33'53		behind sun begin	596 Dec 17 j 22:30	29°♂35'02	
evening set	591 Jul 02 j 20:21	21°♂43'22		behind sun end	596 Dec 18 j 14:17	29°♂44'13	
					596 Dec 19 j 17:12	0°♂	
conjunction	591 Jul 16 j 09:27	24°♂41'40 0°33'14		morning rise	596 Dec 30 j 23:58	2°♂38'14	
minimum elong	591 Jul 16 j 09:25	24°♂41'39 0°33'14		retrograde	597 May 08 j 01:42	21°♂50'38	
max. Earth dist.	591 Jul 17 j 00:10	24°♂49'45 6.33916 AU		opposition	597 Jul 07 j 17:05	16°♂54'50	-0°36'31
morning rise	591 Jul 29 j 20:20	27°♂38'43		min. Earth dist.	597 Jul 08 j 07:50	16°♂50'02	4.07491 AU
	591 Aug 09 j 17:43	0°♂		direct	597 Sep 05 j 15:45	12°♂00'20	
retrograde	591 Nov 28 j 19:46	15°♂00'02			598 Jan 03 j 16:34	0°♂	
	591 Nov 28 j 07:08	15°♂		evening set	598 Jan 08 j 16:11	1°♂10'56	
	591 Nov 29 j 08:24	15°♂♂					
opposition	592 Jan 27 j 20:14	10°♂02'34 1°10'18		conjunction	598 Jan 21 j 13:37	4°♂16'07	-0°42'39
min. Earth dist.	592 Jan 27 j 19:12	10°♂02'54 4.38841 AU		minimum elong	598 Jan 21 j 13:35	4°♂16'05	0°42'39
direct	592 Mar 29 j 08:38	4°♂59'31		max. Earth dist.	598 Jan 21 j 07:12	4°♂12'15	6.01969 AU
	592 Jun 26 j 18:13	15°♂		morning rise	598 Feb 03 j 13:26	7°♂22'41	
evening set	592 Aug 03 j 10:35	22°♂44'30			598 Mar 08 j 17:55	15°♂	
conjunction	592 Aug 16 j 15:40	25°♂36'06 1°00'07		retrograde	598 Jun 14 j 18:00	27°♂35'39	
minimum elong	592 Aug 16 j 15:38	25°♂36'05 1°00'07		opposition	598 Aug 14 j 00:24	22°♂35'56	-1°26'22
max. Earth dist.	592 Aug 16 j 01:55	25°♂28'38 6.42328 AU		min. Earth dist.	598 Aug 13 j 16:12	22°♂38'39	3.98008 AU
morning rise	592 Aug 29 j 17:59	28°♂26'15		direct	598 Oct 11 j 14:05	17°♂42'28	
	592 Sep 06 j 00:59	0°♂			599 Jan 13 j 08:55	0°♂	
retrograde	592 Dec 28 j 02:40	15°♂17'48		evening set	599 Feb 13 j 19:24	7°♂18'24	
opposition	593 Feb 26 j 10:42	10°♂23'37 1°37'33					
min. Earth dist.	593 Feb 27 j 04:10	10°♂17'58 4.44207 AU		conjunction	599 Feb 27 j 00:00	10°♂29'24	-1°06'22
direct	593 Apr 29 j 22:03	5°♂20'46		minimum elong	599 Feb 26 j 23:59	10°♂29'23	1°06'22
evening set	593 Sep 03 j 16:34	22°♂55'40		max. Earth dist.	599 Feb 28 j 02:49	10°♂45'37	5.96017 AU
max. Earth dist.	593 Sep 15 j 02:30	25°♂24'04 6.44143 AU		morning rise	599 Mar 12 j 07:36	13°♂42'05	
					599 May 30 j 02:53	0°♂	
conjunction	593 Sep 16 j 14:19	25°♂43'32 1°09'59		retrograde	599 Jul 22 j 20:27	4°♂21'01	
minimum elong	593 Sep 16 j 14:19	25°♂43'32 1°09'59			599 Sep 15 j 09:44	30°♂	
morning rise	593 Sep 29 j 09:10	28°♂30'03		opposition	599 Sep 20 j 15:34	29°♂17'36	-1°43'28
	593 Oct 06 j 08:29	0°♂		min. Earth dist.	599 Sep 19 j 13:30	29°♂26'25	3.96405 AU
retrograde	594 Jan 27 j 14:09	15°♂19'46		direct	599 Nov 17 j 13:42	24°♂23'02	
opposition	594 Mar 29 j 07:06	10°♂27'31 1°38'30			600 Jan 16 j 12:02	0°♂	
min. Earth dist.	594 Mar 30 j 13:10	10°♂17'54 4.42473 AU		evening set	600 Mar 22 j 04:49	14°♂00'26	
direct	594 May 31 j 00:59	5°♂25'57					
evening set	594 Oct 04 j 08:35	23°♂06'39		conjunction	600 Apr 04 j 17:19	17°♂13'46	-1°04'18
max. Earth dist.	594 Oct 15 j 02:13	25°♂28'27 6.38914 AU		minimum elong	600 Apr 04 j 17:21	17°♂13'47	1°04'18
				max. Earth dist.	600 Apr 06 j 19:26	17°♂43'39	5.98811 AU
conjunction	594 Oct 17 j 01:25	25°♂54'32 1°00'48		morning rise	600 Apr 18 j 08:43	20°♂28'28	
minimum elong	594 Oct 17 j 01:27	25°♂54'33 1°00'48			600 May 30 j 19:30	0°♂	
morning rise	594 Oct 29 j 16:01	28°♂41'31		retrograde	600 Aug 27 j 13:57	10°♂42'56	
	594 Nov 04 j 15:30	0°♂		min. Earth dist.	600 Oct 24 j 16:51	5°♂49'37	4.03342 AU
retrograde	595 Feb 03 j 10:19	15°♂		opposition	600 Oct 26 j 03:39	5°♂37'45	-1°19'41
	595 Feb 28 j 08:03	15°♂57'12		direct	600 Dec 23 j 05:38	0°♂40'27	
	595 Mar 25 j 07:09	15°♂♂			601 Apr 06 j 19:55	15°♂	
opposition	595 Apr 30 j 06:03	11°♂05'22 1°12'24		evening set	601 Apr 28 j 11:56	19°♂54'38	
min. Earth dist.	595 May 01 j 18:04	10°♂53'55 4.34038 AU					

conjunction	601 May 12 j 05:44	23° <b>8</b> 05'39	-0°37'46
minimum elong	601 May 12 j 05:46	23° <b>8</b> 05'40	0°37'45
max. Earth dist.	601 May 14 j 10:09	23° <b>8</b> 36'03	6.09205 AU
morning rise	601 May 26 j 01:05	26° <b>8</b> 17'07	
	601 Jun 11 j 10:32	0° <b>II</b>	
retrograde	601 Oct 01 j 01:53	15° <b>II</b> 30'52	
min. Earth dist.	601 Nov 28 j 10:10	10° <b>II</b> 36'44	4.15969 AU
opposition	601 Nov 29 j 15:39	10° <b>II</b> 26'43	-0°27'56