

	11600 Feb 03 22:38	30° κ ♎		minimum elong	11605 Oct 19 13:13	7° μ .50'39	0°42'15
opposition	11600 Feb 12 11:28	29° Ω 21'01	-1°40'05	max. Earth dist.	11605 Oct 19 18:07	7° μ .52'10	10.50043 AU
min. Earth dist.	11600 Feb 12 03:30	29° Ω 22'33	8.69089 AU	morning rise	11605 Nov 06 05:49	10° μ .01'03	
direct	11600 Apr 21 05:13	26° Ω 00'26			11605 Dec 22 12:58	15° μ .	
	11600 Jul 01 05:22	0° η		retrograde	11606 Feb 18 23:49	17° μ .45'54	
evening set	11600 Jul 30 19:59	3° η 19'01			11606 Apr 20 08:37	15° κ μ .	
				opposition	11606 Apr 28 20:35	14° μ .19'53	1°05'54
conjunction	11600 Aug 16 20:45	5° η 23'01	-1°12'42	min. Earth dist.	11606 Apr 28 17:04	14° μ .20'34	8.48154 AU
minimum elong	11600 Aug 16 20:47	5° η 23'02	1°13'04	direct	11606 Jul 05 13:52	10° μ .56'19	
max. Earth dist.	11600 Aug 17 06:32	5° η 26'00	10.67843 AU		11606 Sep 14 11:32	15° μ .	
morning rise	11600 Sep 03 00:32	7° η 27'54		evening set	11606 Oct 15 08:53	18° μ .30'38	
retrograde	11600 Dec 16 05:38	15° η 01'05					
opposition	11601 Feb 24 07:02	11° η 37'01	-1°17'37	conjunction	11606 Nov 02 00:30	20° μ .41'10	1°03'46
min. Earth dist.	11601 Feb 23 22:41	11° η 38'38	8.66548 AU	minimum elong	11606 Nov 02 00:28	20° μ .41'09	1°04'18
direct	11601 May 03 20:37	8° η 16'10		max. Earth dist.	11606 Nov 02 04:12	20° μ .42'19	10.46293 AU
evening set	11601 Aug 12 07:55	15° η 35'34		morning rise	11606 Nov 19 18:12	22° μ .52'23	
					11607 Feb 04 22:28	0° χ	
conjunction	11601 Aug 29 11:31	17° η 40'36	-0°52'52	retrograde	11607 Mar 04 09:20	0° χ 39'11	
minimum elong	11601 Aug 29 11:33	17° η 40'36	0°53'04		11607 Apr 01 00:15	30° κ μ .	
max. Earth dist.	11601 Aug 29 21:55	17° η 43'46	10.65016 AU	opposition	11607 May 11 22:44	27° μ .13'08	1°31'19
morning rise	11601 Sep 15 18:10	19° η 46'32		min. Earth dist.	11607 May 11 20:17	27° μ .13'37	8.44606 AU
retrograde	11601 Dec 29 05:48	27° η 21'57		direct	11607 Jul 18 15:34	23° μ .48'56	
opposition	11602 Mar 09 02:47	23° η 57'18	-0°51'27		11607 Oct 16 18:07	0° χ	
min. Earth dist.	11602 Mar 08 18:10	23° η 58'58	8.63414 AU	evening set	11607 Oct 28 23:06	1° χ 27'31	
direct	11602 May 16 10:33	20° η 36'05					
evening set	11602 Aug 24 23:17	27° η 57'06		conjunction	11607 Nov 15 15:59	3° χ 38'53	1°22'37
	11602 Sep 10 19:08	0° $\underline{\Omega}$		minimum elong	11607 Nov 15 15:56	3° χ 38'52	1°23'15
				max. Earth dist.	11607 Nov 15 17:40	3° χ 39'24	10.42940 AU
conjunction	11602 Sep 11 05:42	0° $\underline{\Omega}$ 03'14	-0°30'27	morning rise	11607 Dec 03 10:15	5° χ 50'44	
minimum elong	11602 Sep 11 05:43	0° $\underline{\Omega}$ 03'15	0°30'31	retrograde	11608 Mar 16 21:59	13° χ 38'54	
max. Earth dist.	11602 Sep 11 15:44	0° $\underline{\Omega}$ 06'19	10.61659 AU	opposition	11608 May 24 02:29	10° χ 13'02	1°52'18
morning rise	11602 Sep 28 15:16	2° $\underline{\Omega}$ 10'21		min. Earth dist.	11608 May 24 01:51	10° χ 13'09	8.41550 AU
retrograde	11603 Jan 11 07:42	9° $\underline{\Omega}$ 48'09		direct	11608 Jul 30 18:20	6° χ 48'10	
opposition	11603 Mar 21 23:28	6° $\underline{\Omega}$ 22'58	-0°22'40	evening set	11608 Nov 10 17:18	14° χ 30'58	
min. Earth dist.	11603 Mar 21 15:30	6° $\underline{\Omega}$ 24'31	8.59831 AU				
direct	11603 May 29 01:24	3° $\underline{\Omega}$ 01'17		conjunction	11608 Nov 28 10:54	16° χ 42'58	1°37'21
evening set	11603 Sep 06 18:36	10° $\underline{\Omega}$ 24'41		minimum elong	11608 Nov 28 10:52	16° χ 42'58	1°38'04
				max. Earth dist.	11608 Nov 28 09:50	16° χ 42'38	10.40160 AU
conjunction	11603 Sep 24 03:42	12° $\underline{\Omega}$ 31'59	-0°06'30	morning rise	11608 Dec 16 05:18	18° χ 55'16	
minimum elong	11603 Sep 24 03:42	12° $\underline{\Omega}$ 31'59	0°06'24	retrograde	11609 Mar 30 10:34	26° χ 44'09	
behind sun begin	11603 Sep 23 20:56	12° $\underline{\Omega}$ 29'56		opposition	11609 Jun 06 08:01	23° χ 18'35	2°07'36
behind sun end	11603 Sep 24 10:27	12° $\underline{\Omega}$ 34'02		min. Earth dist.	11609 Jun 06 09:41	23° χ 18'14	8.39139 AU
max. Earth dist.	11603 Sep 24 12:06	12° $\underline{\Omega}$ 34'33	10.57925 AU	direct	11609 Aug 13 01:51	19° χ 53'07	
morning rise	11603 Oct 11 16:05	14° $\underline{\Omega}$ 40'16		evening set	11609 Nov 24 14:19	27° χ 39'41	
asc. node	11604 Jan 02 11:30	21° $\underline{\Omega}$ 55'57					
retrograde	11604 Jan 24 10:58	22° $\underline{\Omega}$ 20'31		conjunction	11609 Dec 12 08:11	29° χ 52'07	1°47'06
opposition	11604 Apr 02 21:13	18° $\underline{\Omega}$ 54'56	0°07'26	minimum elong	11609 Dec 12 08:10	29° χ 52'07	1°47'51
min. Earth dist.	11604 Apr 02 14:48	18° $\underline{\Omega}$ 56'11	8.55966 AU	max. Earth dist.	11609 Dec 12 04:08	29° χ 50'51	10.38091 AU
direct	11604 Jun 09 19:07	15° $\underline{\Omega}$ 32'40			11609 Dec 13 09:20	0° Ξ	
evening set	11604 Sep 18 18:37	22° $\underline{\Omega}$ 59'10		morning rise	11609 Dec 30 02:19	2° Ξ 04'40	
				retrograde	11610 Apr 12 22:16	9° Ξ 53'31	
conjunction	11604 Oct 06 06:13	25° $\underline{\Omega}$ 07'38	0°18'04	opposition	11610 Jun 19 14:59	6° Ξ 28'20	2°16'20
minimum elong	11604 Oct 06 06:12	25° $\underline{\Omega}$ 07'38	0°18'19	min. Earth dist.	11610 Jun 19 18:51	6° Ξ 27'34	8.37486 AU
max. Earth dist.	11604 Oct 06 12:39	25° $\underline{\Omega}$ 09'36	10.53989 AU	direct	11610 Aug 26 13:05	3° Ξ 02'19	
morning rise	11604 Oct 23 21:02	27° $\underline{\Omega}$ 17'02		evening set	11610 Dec 08 13:10	10° Ξ 52'00	
	11604 Nov 16 10:23	0° μ .					
retrograde	11605 Feb 05 16:37	4° μ .59'39		conjunction	11610 Dec 26 07:06	13° Ξ 04'41	1°51'16
opposition	11605 Apr 15 20:05	1° μ .33'48	0°37'27	minimum elong	11610 Dec 26 07:06	13° Ξ 04'41	1°52'01
min. Earth dist.	11605 Apr 15 15:23	1° μ .34'43	8.52007 AU	max. Earth dist.	11610 Dec 26 00:44	13° Ξ 02'41	10.36826 AU
	11605 May 06 11:07	30° κ $\underline{\Omega}$		morning rise	11611 Jan 13 00:35	15° Ξ 17'15	
direct	11605 Jun 22 14:48	28° $\underline{\Omega}$ 10'52		retrograde	11611 Apr 26 09:57	23° Ξ 05'17	
	11605 Aug 07 16:33	0° μ .		opposition	11611 Jul 02 22:52	19° Ξ 40'32	2°17'54
evening set	11605 Oct 01 23:25	5° μ .41'06		min. Earth dist.	11611 Jul 03 04:15	19° Ξ 39'27	8.36634 AU
				direct	11611 Sep 09 01:56	16° Ξ 14'03	
conjunction	11605 Oct 19 13:14	7° μ .50'39	0°41'52	evening set	11611 Dec 22 12:36	24° Ξ 05'57	

conjunction	11612 Jan 09 06:23	26° S 18'43	1°49'34	direct	11617 Nov 27 19:27	4° V 53'51	
minimum elong	11612 Jan 09 06:24	26° S 18'43	1°50'17	evening set	11618 Mar 12 18:13	12° V 40'50	
max. Earth dist.	11612 Jan 08 22:16	26° S 16'10	10.36364 AU				
morning rise	11612 Jan 26 22:53	28° S 31'08		conjunction	11618 Mar 30 03:14	14° V 50'01	0°02'11
	11612 Feb 08 05:33	0° \approx		minimum elong	11618 Mar 30 03:12	14° V 50'01	0°02'03
retrograde	11612 May 08 22:22	6° \approx 17'39		behind sun begin	11618 Mar 29 20:03	14° V 47'49	
opposition	11612 Jul 15 07:34	2° \approx 53'23	2°12'11	behind sun end	11618 Mar 30 10:21	14° V 52'13	
min. Earth dist.	11612 Jul 15 14:08	2° \approx 52'04	8.36534 AU	max. Earth dist.	11618 Mar 29 18:46	14° V 47'24	10.48364 AU
	11612 Aug 27 08:26	30° R S		morning rise	11618 Apr 16 09:00	16° V 58'18	
direct	11612 Sep 21 15:33	29° S 26'35		desc. node	11618 May 01 17:45	18° V 47'59	
	11612 Oct 16 20:29	0° \approx		retrograde	11618 Jul 26 11:48	24° V 30'07	
evening set	11613 Jan 04 11:30	7° \approx 19'50		opposition	11618 Oct 02 13:10	21° V 08'40	-0°12'36
				min. Earth dist.	11618 Oct 02 18:45	21° V 07'35	8.50263 AU
conjunction	11613 Jan 22 04:46	9° \approx 32'30	1°42'05	direct	11618 Dec 11 06:55	17° V 43'19	
minimum elong	11613 Jan 22 04:47	9° \approx 32'31	1°42'43	evening set	11619 Mar 25 22:46	25° V 26'54	
max. Earth dist.	11613 Jan 21 19:17	9° \approx 29'32	10.36624 AU				
morning rise	11613 Feb 08 19:57	11° \approx 44'37		conjunction	11619 Apr 12 05:07	27° V 34'53	-0°22'37
	11613 Mar 08 19:58	15° \approx		minimum elong	11619 Apr 12 05:06	27° V 34'53	0°22'55
retrograde	11613 May 22 09:03	19° \approx 29'11		max. Earth dist.	11619 Apr 11 22:59	27° V 32'59	10.52227 AU
opposition	11613 Jul 28 16:50	16° \approx 05'28	1°59'29	morning rise	11619 Apr 29 08:21	29° V 42'00	
min. Earth dist.	11613 Jul 29 00:24	16° \approx 03'58	8.37118 AU		11619 May 01 19:41	0° S	
	11613 Aug 11 14:55	15° R \approx		retrograde	11619 Aug 08 11:41	7° S 11'35	
direct	11613 Oct 05 06:41	12° \approx 38'33		opposition	11619 Oct 15 19:05	3° S 50'21	-0°42'32
	11613 Nov 27 13:57	15° \approx		min. Earth dist.	11619 Oct 15 23:15	3° S 49'33	8.54216 AU
evening set	11614 Jan 18 09:00	20° \approx 32'20		direct	11619 Dec 24 14:39	0° S 25'37	
				evening set	11620 Apr 06 23:05	8° S 05'33	
conjunction	11614 Feb 05 01:23	22° \approx 44'43	1°29'13				
minimum elong	11614 Feb 05 01:26	22° \approx 44'44	1°29'44	conjunction	11620 Apr 24 02:33	10° S 12'16	-0°46'02
max. Earth dist.	11614 Feb 04 14:52	22° \approx 41'25	10.37584 AU	minimum elong	11620 Apr 24 02:32	10° S 12'15	0°46'29
morning rise	11614 Feb 22 15:08	24° \approx 56'23		max. Earth dist.	11620 Apr 23 22:19	10° S 10'57	10.56203 AU
	11614 Apr 09 23:50	0° H		morning rise	11620 May 11 03:23	12° S 18'14	
retrograde	11614 Jun 04 18:29	2° H 38'42			11620 Jun 03 09:37	15° S	
	11614 Aug 01 17:07	30° R \approx		retrograde	11620 Aug 20 07:53	19° S 45'59	
opposition	11614 Aug 11 02:27	29° \approx 15'34	1°40'32	opposition	11620 Oct 27 23:37	16° S 24'53	-1°10'09
min. Earth dist.	11614 Aug 11 11:07	29° \approx 13'51	8.38417 AU	min. Earth dist.	11620 Oct 28 02:24	16° S 24'21	8.58205 AU
direct	11614 Oct 18 22:04	25° \approx 48'41			11620 Nov 15 23:02	15° R S	
	11614 Dec 30 21:38	0° H		direct	11621 Jan 05 21:38	13° S 00'49	
evening set	11615 Feb 01 04:20	3° H 42'05			11621 Feb 24 08:11	15° S	
				evening set	11621 Apr 19 19:05	20° S 37'00	
conjunction	11615 Feb 18 19:26	5° H 54'00	1°11'42				
minimum elong	11615 Feb 18 19:29	5° H 54'00	1°12'05	conjunction	11621 May 06 19:45	22° S 42'28	-1°07'04
max. Earth dist.	11615 Feb 18 07:55	5° H 50'23	10.39289 AU	minimum elong	11621 May 06 19:43	22° S 42'27	1°07'38
morning rise	11615 Mar 08 07:37	8° H 05'04		max. Earth dist.	11621 May 06 17:11	22° S 41'40	10.60110 AU
retrograde	11615 Jun 18 02:40	15° H 44'48		morning rise	11621 May 23 18:30	24° S 47'20	
opposition	11615 Aug 24 12:10	12° H 22'14	1°16'23		11621 Jul 12 07:42	0° II	
min. Earth dist.	11615 Aug 24 21:24	12° H 20'25	8.40462 AU	retrograde	11621 Sep 02 02:55	2° II 13'46	
direct	11615 Nov 01 13:11	8° H 55'32			11621 Oct 26 03:55	30° R S	
evening set	11616 Feb 14 20:47	16° H 47'36		opposition	11621 Nov 10 02:27	28° S 52'43	-1°34'10
				min. Earth dist.	11621 Nov 10 03:26	28° S 52'31	8.62038 AU
conjunction	11616 Mar 03 10:09	18° H 58'48	0°50'33	direct	11622 Jan 19 01:37	25° S 29'20	
minimum elong	11616 Mar 03 10:10	18° H 58'49	0°50'46		11622 Apr 05 21:40	0° II	
max. Earth dist.	11616 Mar 02 22:27	18° H 55'08	10.41721 AU	evening set	11622 May 02 11:21	3° II 01'52	
morning rise	11616 Mar 20 20:28	21° H 09'06					
retrograde	11616 Jun 30 07:32	28° H 46'06		conjunction	11622 May 19 09:39	5° II 06'11	-1°24'48
opposition	11616 Sep 05 21:23	25° H 24'01	0°48'27	minimum elong	11622 May 19 09:37	5° II 06'11	1°25'27
min. Earth dist.	11616 Sep 06 06:15	25° H 22'17	8.43204 AU	max. Earth dist.	11622 May 19 09:24	5° II 06'07	10.63761 AU
direct	11616 Nov 14 04:46	21° H 57'39		morning rise	11622 Jun 05 06:35	7° II 10'06	
evening set	11617 Feb 27 09:35	29° H 47'32		retrograde	11622 Sep 14 20:52	14° II 35'40	
	11617 Mar 01 02:16	0° V		opposition	11622 Nov 23 03:27	11° II 14'35	-1°53'36
				min. Earth dist.	11622 Nov 23 01:55	11° II 14'53	8.65519 AU
conjunction	11617 Mar 16 20:53	1° V 57'48	0°26'57	direct	11623 Feb 01 02:04	7° II 51'57	
minimum elong	11617 Mar 16 20:54	1° V 57'49	0°26'59	evening set	11623 May 15 00:15	15° II 21'00	
max. Earth dist.	11617 Mar 16 10:11	1° V 54'28	10.44797 AU				
morning rise	11617 Apr 03 05:05	4° V 07'10		conjunction	11623 May 31 20:43	17° II 24'23	-1°38'30
retrograde	11617 Jul 13 10:00	11° V 41'29		minimum elong	11623 May 31 20:41	17° II 24'22	1°39'12
opposition	11617 Sep 19 05:52	8° V 19'46	0°18'15	max. Earth dist.	11623 May 31 23:29	17° II 25'14	10.66975 AU
min. Earth dist.	11617 Sep 19 13:13	8° V 18'20	8.46530 AU	morning rise	11623 Jun 17 16:15	19° II 27'31	

retrograde	11623 Sep 27 14:15	26° Π 52'44		morning rise	11629 Aug 28 23:33	2° Π 29'07	
opposition	11623 Dec 06 03:08	23° Π 31'33 -2°07'41		retrograde	11629 Dec 11 02:31	10° Π 00'12	
min. Earth dist.	11623 Dec 05 23:10	23° Π 32'18 8.68482 AU		opposition	11630 Feb 19 03:52	6° Π 37'03 -1°27'32	
direct	11624 Feb 14 00:15	20° Π 09'37		min. Earth dist.	11630 Feb 18 18:05	6° Π 38'56 8.70423 AU	
evening set	11624 May 26 10:16	27° Π 35'28		direct	11630 Apr 28 19:00	3° Π 17'02	
				evening set	11630 Aug 07 07:43	10° Π 34'47	
conjunction	11624 Jun 12 05:27	29° Π 38'09 -1°47'37		conjunction	11630 Aug 24 09:44	12° Π 38'58 -1°01'37	
minimum elong	11624 Jun 12 05:26	29° Π 38'08 1°48'22		minimum elong	11630 Aug 24 09:46	12° Π 38'59 1°01'54	
max. Earth dist.	11624 Jun 12 10:54	29° Π 39'49 10.69606 AU		max. Earth dist.	11630 Aug 24 20:43	12° Π 42'19 10.69255 AU	
	11624 Jun 15 04:46	0° Ξ		morning rise	11630 Sep 10 14:58	14° Π 44'04	
morning rise	11624 Jun 29 00:18	1° Ξ 40'45		retrograde	11630 Dec 24 00:39	22° Π 17'05	
retrograde	11624 Oct 09 08:15	9° Ξ 06'04		opposition	11631 Mar 03 22:49	18° Π 53'29 -1°02'55	
opposition	11624 Dec 18 01:31	5° Ξ 44'44 -2°15'53		min. Earth dist.	11631 Mar 03 13:58	18° Π 55'11 8.67999 AU	
min. Earth dist.	11624 Dec 17 19:51	5° Ξ 45'48 8.70794 AU		direct	11631 May 11 07:50	15° Π 33'14	
direct	11625 Feb 25 18:41	2° Ξ 23'25		evening set	11631 Aug 19 20:37	22° Π 52'03	
evening set	11625 Jun 07 18:22	9° Ξ 46'28					
conjunction	11625 Jun 24 12:54	11° Ξ 48'43 -1°51'51		conjunction	11631 Sep 06 01:25	24° Π 57'14 -0°40'17	
minimum elong	11625 Jun 24 12:54	11° Ξ 48'43 1°52'36		minimum elong	11631 Sep 06 01:26	24° Π 57'15 0°40'25	
max. Earth dist.	11625 Jun 24 19:42	11° Ξ 50'47 10.71541 AU		max. Earth dist.	11631 Sep 06 11:22	25° Π 00'16 10.66514 AU	
morning rise	11625 Jul 11 07:57	13° Ξ 51'06		morning rise	11631 Sep 23 09:38	27° Π 03'24	
retrograde	11625 Oct 22 00:46	21° Ξ 16'51			11631 Oct 19 08:47	0° Ξ	
opposition	11625 Dec 30 22:33	17° Ξ 55'17 -2°17'56		retrograde	11632 Jan 05 22:50	4° Ξ 38'35	
min. Earth dist.	11625 Dec 30 16:05	17° Ξ 56'31 8.72357 AU		opposition	11632 Mar 15 18:08	1° Ξ 14'28 -0°35'15	
direct	11626 Mar 10 10:44	14° Ξ 34'30		min. Earth dist.	11632 Mar 15 10:21	1° Ξ 15'59 8.64900 AU	
evening set	11626 Jun 20 01:08	21° Ξ 55'17			11632 Apr 01 04:41	30° \mathbb{R}	
conjunction	11626 Jul 06 19:49	23° Ξ 57'22 -1°51'03		direct	11632 May 22 22:50	27° Π 53'48	
minimum elong	11626 Jul 06 19:50	23° Ξ 57'22 1°51'46			11632 Jul 11 23:36	0° Ξ	
max. Earth dist.	11626 Jul 07 03:43	23° Ξ 59'47 10.72704 AU		evening set	11632 Aug 31 13:06	5° Ξ 14'32	
morning rise	11626 Jul 23 15:49	25° Ξ 59'48		conjunction	11632 Sep 17 20:50	7° Ξ 20'50 -0°16'58	
	11626 Aug 29 05:47	0° Ω		minimum elong	11632 Sep 17 20:51	7° Ξ 20'51 0°16'56	
retrograde	11626 Nov 03 16:37	3° Ω 26'26		max. Earth dist.	11632 Sep 18 06:01	7° Ξ 23'38 10.63108 AU	
opposition	11627 Jan 12 18:45	0° Ω 04'33 -2°13'49		morning rise	11632 Oct 05 07:49	9° Ξ 28'08	
min. Earth dist.	11627 Jan 12 11:08	0° Ω 06'00 8.73107 AU		retrograde	11633 Jan 17 23:50	17° Ξ 05'40	
	11627 Jan 13 18:43	30° \mathbb{R}		opposition	11633 Mar 28 14:11	13° Ξ 41'04 -0°05'43	
direct	11627 Mar 23 03:12	26° Ξ 44'09		min. Earth dist.	11633 Mar 28 07:12	13° Ξ 42'25 8.61178 AU	
	11627 May 26 02:27	0° Ω		direct	11633 Jun 04 15:26	10° Ξ 19'52	
evening set	11627 Jul 02 07:13	4° Ω 03'12		asc. node	11633 Jun 07 12:51	10° Ξ 20'19	
conjunction	11627 Jul 19 02:55	6° Ω 05'26 -1°45'17		evening set	11633 Sep 13 09:55	17° Ξ 43'20	
minimum elong	11627 Jul 19 02:57	6° Ω 05'26 1°45'57		conjunction	11633 Sep 30 20:18	19° Ξ 50'49 0°07'25	
max. Earth dist.	11627 Jul 19 12:37	6° Ω 08'23 10.73049 AU		minimum elong	11633 Sep 30 20:18	19° Ξ 50'49 0°07'36	
morning rise	11627 Aug 05 00:27	8° Ω 08'10		behind sun begin	11633 Sep 30 13:48	19° Ξ 48'51	
	11627 Oct 20 13:46	15° Ω		behind sun end	11633 Oct 01 02:49	19° Ξ 52'48	
retrograde	11627 Nov 16 11:10	15° Ω 36'02		max. Earth dist.	11633 Oct 01 04:02	19° Ξ 53'11 10.59137 AU	
	11627 Dec 13 16:03	15° \mathbb{R}		morning rise	11633 Oct 18 09:42	21° Ξ 59'15	
opposition	11628 Jan 25 14:13	12° Ω 13'46 -2°03'43		retrograde	11634 Jan 31 05:08	29° Ξ 39'15	
min. Earth dist.	11628 Jan 25 05:07	12° Ω 15'30 8.73022 AU		opposition	11634 Apr 10 11:22	26° Ξ 14'15 0°24'21	
direct	11628 Apr 03 17:31	8° Ω 53'40		min. Earth dist.	11634 Apr 10 05:41	26° Ξ 15'22 8.57017 AU	
	11628 Jul 03 09:53	15° Ω		direct	11634 Jun 17 07:45	22° Ξ 52'23	
evening set	11628 Jul 13 13:47	16° Ω 11'32			11634 Sep 23 19:01	0° \mathbb{M}	
conjunction	11628 Jul 30 11:14	18° Ω 14'12 -1°34'48		evening set	11634 Sep 26 11:29	0° \mathbb{M} .19'21	
minimum elong	11628 Jul 30 11:16	18° Ω 14'13 1°35'22		conjunction	11634 Oct 14 00:10	2° \mathbb{M} .27'59 0°31'31	
max. Earth dist.	11628 Jul 30 22:43	18° Ω 17'42 10.72572 AU		minimum elong	11634 Oct 14 00:08	2° \mathbb{M} .27'58 0°31'52	
morning rise	11628 Aug 16 10:50	20° Ω 17'32		max. Earth dist.	11634 Oct 14 05:36	2° \mathbb{M} .29'39 10.54860 AU	
retrograde	11628 Nov 28 06:17	27° Ω 46'53		morning rise	11634 Oct 31 15:37	4° \mathbb{M} .37'29	
opposition	11629 Feb 06 09:04	24° Ω 24'11 -1°48'05		retrograde	11635 Feb 13 10:53	12° \mathbb{M} .19'54	
min. Earth dist.	11629 Feb 05 22:59	24° Ω 26'06 8.72117 AU		opposition	11635 Apr 23 10:09	8° \mathbb{M} .54'34 0°53'33	
direct	11629 Apr 16 05:59	21° Ω 04'13		min. Earth dist.	11635 Apr 23 06:26	8° \mathbb{M} .55'18 8.52709 AU	
evening set	11629 Jul 25 21:42	28° Ω 21'40		direct	11635 Jun 30 03:43	5° \mathbb{M} .31'53	
	11629 Aug 08 11:15	0° Π		evening set	11635 Oct 09 17:49	13° \mathbb{M} .02'52	
conjunction	11629 Aug 11 21:18	0° Π 24'59 -1°20'02			11635 Oct 25 15:42	15° \mathbb{M}	
minimum elong	11629 Aug 11 21:20	0° Π 25'00 1°20'29		conjunction	11635 Oct 27 08:22	15° \mathbb{M} .12'34 0°54'20	
max. Earth dist.	11629 Aug 12 09:02	0° Π 28'34 10.71294 AU		minimum elong	11635 Oct 27 08:20	15° \mathbb{M} .12'33 0°54'48	

max. Earth dist.	11635 Oct 27 10:51	15° \mathbb{M} 13'20	10.50562 AU	max. Earth dist.	11642 Jan 15 16:16	3° \approx 36'53	10.35652 AU
morning rise	11635 Nov 14 01:27	17° \mathbb{M} 23'02		morning rise	11642 Feb 02 18:22	5° \approx 52'24	
retrograde	11636 Feb 26 17:54	25° \mathbb{M} 07'36		retrograde	11642 May 16 11:11	13° \approx 37'52	
opposition	11636 May 05 10:34	21° \mathbb{M} 42'01	1°20'23	opposition	11642 Jul 22 20:45	10° \approx 13'23	2°06'17
min. Earth dist.	11636 May 05 09:16	21° \mathbb{M} 42'17	8.48514 AU	min. Earth dist.	11642 Jul 23 04:57	10° \approx 11'44	8.35904 AU
direct	11636 Jul 12 03:34	18° \mathbb{M} 18'28		direct	11642 Sep 29 08:53	6° \approx 45'56	
evening set	11636 Oct 22 04:56	25° \mathbb{M} 53'47		evening set	11643 Jan 12 06:51	14° \approx 39'31	
					11643 Jan 15 01:18	15° \approx	
conjunction	11636 Nov 08 20:58	28° \mathbb{M} 04'26	1°14'37	conjunction	11643 Jan 29 23:38	16° \approx 52'05	1°35'51
minimum elong	11636 Nov 08 20:55	28° \mathbb{M} 04'25	1°15'13	minimum elong	11643 Jan 29 23:40	16° \approx 52'06	1°36'26
max. Earth dist.	11636 Nov 08 20:56	28° \mathbb{M} 04'25	10.46479 AU	max. Earth dist.	11643 Jan 29 12:28	16° \approx 48'35	10.36165 AU
	11636 Nov 24 11:29	0° \mathbb{X}		morning rise	11643 Feb 16 14:20	19° \approx 04'03	
morning rise	11636 Nov 26 14:59	0° \mathbb{X} 15'40		retrograde	11643 May 29 20:18	26° \approx 47'25	
retrograde	11637 Mar 11 03:00	8° \mathbb{X} 01'59		opposition	11643 Aug 05 05:46	23° \approx 23'29	1°50'08
opposition	11637 May 18 12:30	4° \mathbb{X} 36'16	1°43'27	min. Earth dist.	11643 Aug 05 14:10	23° \approx 21'48	8.36868 AU
min. Earth dist.	11637 May 18 13:04	4° \mathbb{X} 36'10	8.44652 AU	direct	11643 Oct 13 00:13	19° \approx 56'01	
direct	11637 Jul 25 05:48	1° \mathbb{X} 11'50		evening set	11644 Jan 26 02:56	27° \approx 49'37	
evening set	11637 Nov 04 20:08	8° \mathbb{X} 51'32					
conjunction	11637 Nov 22 13:15	11° \mathbb{X} 02'58	1°31'17	conjunction	11644 Feb 12 18:45	0° \mathbb{X} 01'49	1°20'25
minimum elong	11637 Nov 22 13:13	11° \mathbb{X} 02'57	1°31'58	minimum elong	11644 Feb 12 18:48	0° \mathbb{X} 01'50	1°20'52
max. Earth dist.	11637 Nov 22 11:21	11° \mathbb{X} 02'22	10.42827 AU	max. Earth dist.	11644 Feb 12 07:50	29° \approx 58'23	10.37619 AU
morning rise	11637 Dec 10 07:35	13° \mathbb{X} 14'48			11644 Feb 12 12:58	0° \mathbb{X}	
retrograde	11638 Mar 24 13:39	21° \mathbb{X} 02'21		morning rise	11644 Mar 01 07:51	2° \mathbb{X} 13'14	
opposition	11638 May 31 16:13	17° \mathbb{X} 36'37	2°01'25	retrograde	11644 Jun 11 05:13	9° \mathbb{X} 54'07	
min. Earth dist.	11638 May 31 18:07	17° \mathbb{X} 36'14	8.41320 AU	opposition	11644 Aug 17 15:05	6° \mathbb{X} 30'47	1°28'16
direct	11638 Aug 07 11:19	14° \mathbb{X} 11'20		min. Earth dist.	11644 Aug 17 23:02	6° \mathbb{X} 29'12	8.38732 AU
evening set	11638 Nov 18 14:37	21° \mathbb{X} 55'10		direct	11644 Oct 25 14:45	3° \mathbb{X} 03'33	
				evening set	11645 Feb 07 20:17	10° \mathbb{X} 56'11	
conjunction	11638 Dec 06 08:26	24° \mathbb{X} 07'13	1°43'22	conjunction	11645 Feb 25 10:41	13° \mathbb{X} 07'46	1°00'50
minimum elong	11638 Dec 06 08:25	24° \mathbb{X} 07'13	1°44'06	minimum elong	11645 Feb 25 10:43	13° \mathbb{X} 07'47	1°01'08
max. Earth dist.	11638 Dec 06 04:50	24° \mathbb{X} 06'06	10.39791 AU	max. Earth dist.	11645 Feb 25 00:36	13° \mathbb{X} 04'36	10.39937 AU
morning rise	11638 Dec 24 02:36	26° \mathbb{X} 19'27		morning rise	11645 Mar 14 21:54	15° \mathbb{X} 18'28	
	11639 Jan 25 06:27	0° \mathbb{Z}		retrograde	11645 Jun 24 12:02	22° \mathbb{X} 56'41	
retrograde	11639 Apr 07 01:05	4° \mathbb{Z} 07'35		opposition	11645 Aug 31 00:14	19° \mathbb{X} 33'59	1°01'56
opposition	11639 Jun 13 21:29	0° \mathbb{Z} 41'58	2°13'14	min. Earth dist.	11645 Aug 31 07:50	19° \mathbb{X} 32'29	8.41410 AU
min. Earth dist.	11639 Jun 14 00:46	0° \mathbb{Z} 41'18	8.38671 AU	direct	11645 Nov 08 05:01	16° \mathbb{X} 07'10	
	11639 Jun 22 16:26	30° \mathbb{R} \mathbb{X}		evening set	11646 Feb 21 10:31	23° \mathbb{X} 58'00	
direct	11639 Aug 20 19:18	27° \mathbb{X} 15'56					
	11639 Oct 17 01:12	0° \mathbb{Z}		conjunction	11646 Mar 10 23:01	26° \mathbb{X} 08'45	0°38'15
evening set	11639 Dec 02 11:49	5° \mathbb{Z} 03'26		minimum elong	11646 Mar 10 23:02	26° \mathbb{X} 08'45	0°38'22
conjunction	11639 Dec 20 05:53	7° \mathbb{Z} 15'55	1°50'08	max. Earth dist.	11646 Mar 10 13:38	26° \mathbb{X} 05'49	10.43002 AU
minimum elong	11639 Dec 20 05:52	7° \mathbb{Z} 15'55	1°50'53	morning rise	11646 Mar 28 08:10	28° \mathbb{X} 18'34	
max. Earth dist.	11639 Dec 20 00:07	7° \mathbb{Z} 14'07	10.37514 AU		11646 Apr 11 11:01	0° \mathbb{Y}	
morning rise	11640 Jan 06 23:32	9° \mathbb{Z} 28'21		retrograde	11646 Jul 07 16:08	5° \mathbb{Y} 54'03	
retrograde	11640 Apr 19 13:28	17° \mathbb{Z} 16'18		opposition	11646 Sep 13 08:44	2° \mathbb{Y} 32'00	0°32'37
opposition	11640 Jun 26 04:06	13° \mathbb{Z} 50'57	2°18'09	min. Earth dist.	11646 Sep 13 16:06	2° \mathbb{Y} 30'33	8.44767 AU
min. Earth dist.	11640 Jun 26 09:18	13° \mathbb{Z} 49'54	8.36830 AU		11646 Oct 19 18:18	30° \mathbb{R} \mathbb{X}	
direct	11640 Sep 02 05:01	10° \mathbb{Z} 24'16		direct	11646 Nov 21 18:56	29° \mathbb{X} 05'44	
evening set	11640 Dec 15 10:24	18° \mathbb{Z} 14'44			11646 Dec 24 12:11	0° \mathbb{Y}	
				evening set	11647 Mar 06 21:08	6° \mathbb{Y} 54'04	
conjunction	11641 Jan 02 04:18	20° \mathbb{Z} 27'27	1°51'08	conjunction	11647 Mar 24 07:17	9° \mathbb{Y} 03'48	0°13'52
minimum elong	11641 Jan 02 04:19	20° \mathbb{Z} 27'28	1°51'53	minimum elong	11647 Mar 24 07:17	9° \mathbb{Y} 03'48	0°13'49
max. Earth dist.	11641 Jan 01 20:02	20° \mathbb{Z} 24'52	10.36110 AU	behind sun begin	11647 Mar 24 03:32	9° \mathbb{Y} 02'38	
morning rise	11641 Jan 19 21:11	22° \mathbb{Z} 39'55		behind sun end	11647 Mar 24 11:02	9° \mathbb{Y} 04'57	
	11641 Apr 10 15:58	0° \approx		max. Earth dist.	11647 Mar 23 22:29	9° \mathbb{Y} 01'04	10.46651 AU
retrograde	11641 May 03 01:43	0° \approx 26'57		morning rise	11647 Apr 10 14:14	11° \mathbb{Y} 12'35	
	11641 May 25 11:16	30° \mathbb{R} \mathbb{Z}		retrograde	11647 Jul 20 18:33	18° \mathbb{Y} 45'28	
opposition	11641 Jul 09 12:01	27° \mathbb{Z} 01'59	2°15'48	opposition	11647 Sep 26 16:32	15° \mathbb{Y} 23'58	0°01'54
min. Earth dist.	11641 Jul 09 19:04	27° \mathbb{Z} 00'34	8.35891 AU	min. Earth dist.	11647 Sep 26 23:11	15° \mathbb{Y} 22'40	8.48632 AU
direct	11641 Sep 15 17:20	23° \mathbb{Z} 34'49		desc. node	11647 Oct 19 12:12	13° \mathbb{Y} 42'02	
	11641 Dec 17 07:16	0° \approx		direct	11647 Dec 05 07:01	11° \mathbb{Y} 58'25	
evening set	11641 Dec 29 08:59	1° \approx 27'20		evening set	11648 Mar 19 03:39	19° \mathbb{Y} 43'39	
conjunction	11642 Jan 16 02:26	3° \approx 40'05	1°46'18	conjunction	11648 Apr 05 11:08	21° \mathbb{Y} 52'12	-0°11'05
minimum elong	11642 Jan 16 02:28	3° \approx 40'05	1°46'59				

minimum elong	11648 Apr 05 11:07	21° Υ 52'12	0°11'19	evening set	11654 Jun 02 10:16	4° \mathfrak{D} 24'05	
behind sun begin	11648 Apr 05 05:53	21° Υ 50'35					
behind sun end	11648 Apr 05 16:21	21° Υ 53'48		conjunction	11654 Jun 19 05:01	6° \mathfrak{D} 26'27	-1°50'20
max. Earth dist.	11648 Apr 05 03:38	21° Υ 49'53	10.50698 AU	minimum elong	11654 Jun 19 05:00	6° \mathfrak{D} 26'27	1°51'06
morning rise	11648 Apr 22 15:42	23° Υ 59'52		max. Earth dist.	11654 Jun 19 09:44	6° \mathfrak{D} 27'54	10.71431 AU
	11648 Jun 20 22:40	0° \mathfrak{B}		morning rise	11654 Jul 05 23:54	8° \mathfrak{D} 28'53	
retrograde	11648 Aug 01 18:18	1° \mathfrak{B} 30'26		retrograde	11654 Oct 16 12:21	15° \mathfrak{D} 54'29	
	11648 Sep 13 17:49	30° \mathfrak{K} Υ		opposition	11654 Dec 25 08:04	12° \mathfrak{D} 33'25	-2°17'32
opposition	11648 Oct 08 23:10	28° Υ 09'22	-0°28'38	min. Earth dist.	11654 Dec 25 02:38	12° \mathfrak{D} 34'27	8.72200 AU
min. Earth dist.	11648 Oct 09 03:59	28° Υ 08'26	8.52810 AU	direct	11655 Mar 04 23:08	9° \mathfrak{D} 12'43	
direct	11648 Dec 17 17:20	24° Υ 44'37		evening set	11655 Jun 14 17:57	16° \mathfrak{D} 34'43	
	11649 Mar 11 08:46	0° \mathfrak{B}					
evening set	11649 Apr 01 06:00	2° \mathfrak{B} 26'21		conjunction	11655 Jul 01 12:37	18° \mathfrak{D} 36'52	-1°51'53
				minimum elong	11655 Jul 01 12:37	18° \mathfrak{D} 36'52	1°52'38
conjunction	11649 Apr 18 10:46	4° \mathfrak{B} 33'37	-0°35'13	max. Earth dist.	11655 Jul 01 19:34	18° \mathfrak{D} 38'59	10.72484 AU
minimum elong	11649 Apr 18 10:45	4° \mathfrak{B} 33'36	0°35'36	morning rise	11655 Jul 18 07:56	20° \mathfrak{D} 39'14	
max. Earth dist.	11649 Apr 18 05:46	4° \mathfrak{B} 32'04	10.54949 AU	retrograde	11655 Oct 29 06:01	28° \mathfrak{D} 05'42	
morning rise	11649 May 05 12:51	6° \mathfrak{B} 40'07		opposition	11656 Jan 07 05:09	24° \mathfrak{D} 44'10	-2°16'18
retrograde	11649 Aug 14 15:57	14° \mathfrak{B} 08'42		min. Earth dist.	11656 Jan 06 22:21	24° \mathfrak{D} 45'28	8.72818 AU
opposition	11649 Oct 22 04:22	10° \mathfrak{B} 47'57	-0°57'28	direct	11656 Mar 16 15:42	21° \mathfrak{D} 23'45	
min. Earth dist.	11649 Oct 22 06:56	10° \mathfrak{B} 47'27	8.57100 AU	evening set	11656 Jun 26 00:41	28° \mathfrak{D} 43'50	
direct	11649 Dec 31 02:07	7° \mathfrak{B} 24'01			11656 Jul 06 12:55	0° \mathfrak{Q}	
	11650 Apr 13 21:33	15° \mathfrak{B}					
evening set	11650 Apr 14 04:14	15° \mathfrak{B} 02'01		conjunction	11656 Jul 12 19:55	0° \mathfrak{Q} 46'03	-1°48'25
				minimum elong	11656 Jul 12 19:56	0° \mathfrak{Q} 46'03	1°49'07
conjunction	11650 May 01 06:20	17° \mathfrak{B} 08'02	-0°57'29	max. Earth dist.	11656 Jul 13 03:57	0° \mathfrak{Q} 48'30	10.72678 AU
minimum elong	11650 May 01 06:18	17° \mathfrak{B} 08'01	0°58'00	morning rise	11656 Jul 29 16:35	2° \mathfrak{Q} 48'40	
max. Earth dist.	11650 May 01 04:07	17° \mathfrak{B} 07'21	10.59188 AU	retrograde	11656 Nov 10 00:35	10° \mathfrak{Q} 16'17	
morning rise	11650 May 18 05:59	19° \mathfrak{B} 13'21		opposition	11657 Jan 19 01:25	6° \mathfrak{Q} 54'13	-2°08'58
retrograde	11650 Aug 27 13:52	26° \mathfrak{B} 40'21		min. Earth dist.	11657 Jan 18 18:05	6° \mathfrak{Q} 55'36	8.72575 AU
opposition	11650 Nov 04 08:07	23° \mathfrak{B} 19'48	-1°23'17	direct	11657 Mar 29 06:03	3° \mathfrak{Q} 33'54	
min. Earth dist.	11650 Nov 04 08:40	23° \mathfrak{B} 19'42	8.61270 AU	evening set	11657 Jul 08 07:28	10° \mathfrak{Q} 52'39	
direct	11651 Jan 13 06:20	19° \mathfrak{B} 56'41					
evening set	11651 Apr 26 22:37	27° \mathfrak{B} 30'54		conjunction	11657 Jul 25 03:59	12° \mathfrak{Q} 55'12	-1°40'05
				minimum elong	11657 Jul 25 04:01	12° \mathfrak{Q} 55'13	1°40'42
conjunction	11651 May 13 22:06	29° \mathfrak{B} 35'42	-1°16'51	max. Earth dist.	11657 Jul 25 12:26	12° \mathfrak{Q} 57'47	10.72033 AU
minimum elong	11651 May 13 22:04	29° \mathfrak{B} 35'41	1°17'28	morning rise	11657 Aug 11 02:42	14° \mathfrak{Q} 58'21	
max. Earth dist.	11651 May 13 22:06	29° \mathfrak{B} 35'42	10.63181 AU		11657 Aug 11 08:13	15° \mathfrak{Q}	
	11651 May 17 04:53	0° \mathfrak{I}		retrograde	11657 Nov 22 17:45	22° \mathfrak{Q} 27'23	
morning rise	11651 May 30 19:39	1° \mathfrak{I} 39'58		opposition	11658 Jan 31 20:53	19° \mathfrak{Q} 04'42	-1°55'51
retrograde	11651 Sep 09 09:05	9° \mathfrak{I} 05'48		min. Earth dist.	11658 Jan 31 13:19	19° \mathfrak{Q} 06'08	8.71501 AU
opposition	11651 Nov 17 10:21	5° \mathfrak{I} 45'19	-1°44'57	direct	11658 Apr 10 20:30	15° \mathfrak{Q} 44'20	
min. Earth dist.	11651 Nov 17 09:41	5° \mathfrak{I} 45'27	8.65086 AU	evening set	11658 Jul 20 14:58	23° \mathfrak{Q} 02'28	
direct	11652 Jan 26 07:32	2° \mathfrak{I} 22'56					
evening set	11652 May 08 13:26	9° \mathfrak{I} 53'30		conjunction	11658 Aug 06 13:29	25° \mathfrak{Q} 05'37	-1°27'15
				minimum elong	11658 Aug 06 13:31	25° \mathfrak{Q} 05'38	1°27'44
conjunction	11652 May 25 10:36	11° \mathfrak{I} 57'13	-1°32'30	max. Earth dist.	11658 Aug 06 22:51	25° \mathfrak{Q} 08'28	10.70588 AU
minimum elong	11652 May 25 10:34	11° \mathfrak{I} 57'13	1°33'11	morning rise	11658 Aug 23 14:39	27° \mathfrak{Q} 09'31	
max. Earth dist.	11652 May 25 11:46	11° \mathfrak{I} 57'35	10.66697 AU		11658 Sep 17 15:47	0° \mathfrak{N}	
morning rise	11652 Jun 11 06:40	14° \mathfrak{I} 00'38		retrograde	11658 Dec 05 12:50	4° \mathfrak{N} 40'19	
retrograde	11652 Sep 21 01:39	21° \mathfrak{I} 25'49		opposition	11659 Feb 13 16:08	1° \mathfrak{N} 16'58	-1°37'29
opposition	11652 Nov 29 11:01	18° \mathfrak{I} 05'16	-2°01'36	min. Earth dist.	11659 Feb 13 07:47	1° \mathfrak{N} 18'34	8.69649 AU
min. Earth dist.	11652 Nov 29 09:12	18° \mathfrak{I} 05'37	8.68303 AU		11659 Mar 02 20:40	30° \mathfrak{K} \mathfrak{Q}	
direct	11653 Feb 07 07:27	14° \mathfrak{I} 43'31		direct	11659 Apr 23 11:13	27° \mathfrak{Q} 56'27	
evening set	11653 May 21 01:00	22° \mathfrak{I} 10'46		evening set	11659 Jun 12 03:44	0° \mathfrak{N}	
					11659 Aug 02 00:01	5° \mathfrak{N} 14'37	
conjunction	11653 Jun 06 20:33	24° \mathfrak{I} 13'41	-1°43'48				
minimum elong	11653 Jun 06 20:32	24° \mathfrak{I} 13'40	1°44'32	conjunction	11659 Aug 19 01:04	7° \mathfrak{N} 18'37	-1°10'25
max. Earth dist.	11653 Jun 06 23:07	24° \mathfrak{I} 14'28	10.69497 AU	minimum elong	11659 Aug 19 01:06	7° \mathfrak{N} 18'37	1°10'46
morning rise	11653 Jun 23 15:46	26° \mathfrak{I} 16'27		max. Earth dist.	11659 Aug 19 11:37	7° \mathfrak{N} 21'50	10.68399 AU
	11653 Jul 27 04:50	0° \mathfrak{D}		morning rise	11659 Sep 05 04:57	9° \mathfrak{N} 23'27	
retrograde	11653 Oct 03 19:12	3° \mathfrak{D} 41'35		retrograde	11659 Dec 18 11:16	16° \mathfrak{N} 56'18	
opposition	11653 Dec 12 10:10	0° \mathfrak{D} 20'51	-2°12'35	opposition	11660 Feb 26 11:22	13° \mathfrak{N} 32'17	-1°14'35
min. Earth dist.	11653 Dec 12 06:48	0° \mathfrak{D} 21'30	8.70699 AU	min. Earth dist.	11660 Feb 26 02:25	13° \mathfrak{N} 34'00	8.67091 AU
	11653 Dec 17 00:21	30° \mathfrak{K} \mathfrak{I}		direct	11660 May 05 00:18	10° \mathfrak{N} 11'31	
direct	11654 Feb 20 04:56	26° \mathfrak{I} 59'41		evening set	11660 Aug 13 11:51	17° \mathfrak{N} 30'31	
	11654 Apr 22 15:58	0° \mathfrak{D}					

conjunction	11660 Aug 30 15:38	19° \mathring{M} 35'30	-0°50'17	direct	11666 Jul 19 16:43	25° \mathring{M} 40'50	
minimum elong	11660 Aug 30 15:40	19° \mathring{M} 35'30	0°50'29		11666 Oct 01 02:57	0° \mathring{A}	
max. Earth dist.	11660 Aug 31 02:13	19° \mathring{M} 38'44	10.65551 AU	evening set	11666 Oct 30 02:19	3° \mathring{A} 19'28	
morning rise	11660 Sep 16 22:27	21° \mathring{M} 41'25					
retrograde	11660 Dec 30 10:07	29° \mathring{M} 16'28		conjunction	11666 Nov 16 19:03	5° \mathring{A} 30'48	1°24'19
opposition	11661 Mar 10 06:46	25° \mathring{M} 51'52	-0°48'08	minimum elong	11666 Nov 16 19:01	5° \mathring{A} 30'48	1°24'59
min. Earth dist.	11661 Mar 09 22:14	25° \mathring{M} 53'31	8.63930 AU	max. Earth dist.	11666 Nov 16 19:34	5° \mathring{A} 30'58	10.42940 AU
direct	11661 May 17 13:51	22° \mathring{M} 30'42		morning rise	11666 Dec 04 13:18	7° \mathring{A} 42'39	
evening set	11661 Aug 26 03:06	29° \mathring{M} 51'24		retrograde	11667 Mar 19 00:52	15° \mathring{A} 30'42	
	11661 Aug 27 07:46	0° \mathring{A}		opposition	11667 May 26 04:46	12° \mathring{A} 04'49	1°54'05
				min. Earth dist.	11667 May 26 05:05	12° \mathring{A} 04'46	8.41492 AU
conjunction	11661 Sep 12 09:36	1° \mathring{A} 57'29	-0°27'43	direct	11667 Aug 01 20:54	8° \mathring{A} 39'53	
minimum elong	11661 Sep 12 09:37	1° \mathring{A} 57'30	0°27'45	evening set	11667 Nov 12 20:24	16° \mathring{A} 22'50	
max. Earth dist.	11661 Sep 12 18:47	2° \mathring{A} 00'18	10.62157 AU				
morning rise	11661 Sep 29 19:26	4° \mathring{A} 04'34		conjunction	11667 Nov 30 13:53	18° \mathring{A} 34'50	1°38'32
retrograde	11662 Jan 12 11:05	11° \mathring{A} 42'00		minimum elong	11667 Nov 30 13:51	18° \mathring{A} 34'49	1°39'16
opposition	11662 Mar 23 03:04	8° \mathring{A} 16'53	-0°19'14	max. Earth dist.	11667 Nov 30 11:33	18° \mathring{A} 34'06	10.40041 AU
min. Earth dist.	11662 Mar 22 19:56	8° \mathring{A} 18'17	8.60299 AU	morning rise	11667 Dec 18 08:20	20° \mathring{A} 47'08	
direct	11662 May 30 05:20	4° \mathring{A} 55'13		retrograde	11668 Mar 31 11:46	28° \mathring{A} 35'59	
evening set	11662 Sep 07 22:14	12° \mathring{A} 18'21		opposition	11668 Jun 07 10:16	25° \mathring{A} 10'25	2°08'42
				min. Earth dist.	11668 Jun 07 12:46	25° \mathring{A} 09'55	8.38967 AU
conjunction	11662 Sep 25 07:25	14° \mathring{A} 25'36	-0°03'43	direct	11668 Aug 14 05:31	21° \mathring{A} 44'52	
minimum elong	11662 Sep 25 07:24	14° \mathring{A} 25'36	0°03'36	evening set	11668 Nov 25 17:31	29° \mathring{A} 31'41	
behind sun begin	11662 Sep 25 00:17	14° \mathring{A} 23'26			11668 Nov 29 13:32	0° \mathring{B}	
behind sun end	11662 Sep 25 14:31	14° \mathring{A} 27'46					
max. Earth dist.	11662 Sep 25 15:01	14° \mathring{A} 27'55	10.58364 AU	conjunction	11668 Dec 13 11:23	1° \mathring{B} 44'09	1°47'41
morning rise	11662 Oct 12 19:58	16° \mathring{A} 33'51		minimum elong	11668 Dec 13 11:22	1° \mathring{B} 44'09	1°48'27
asc. node	11662 Nov 21 16:38	20° \mathring{A} 55'13		max. Earth dist.	11668 Dec 13 06:43	1° \mathring{B} 42'41	10.37867 AU
retrograde	11663 Jan 25 14:21	24° \mathring{A} 13'46		morning rise	11668 Dec 31 05:29	3° \mathring{B} 56'42	
opposition	11663 Apr 05 00:25	20° \mathring{A} 48'13	0°10'50	retrograde	11669 Apr 14 00:24	11° \mathring{B} 45'37	
min. Earth dist.	11663 Apr 04 18:38	20° \mathring{A} 49'21	8.56368 AU	opposition	11669 Jun 20 17:12	8° \mathring{B} 20'26	2°16'41
direct	11663 Jun 11 22:14	17° \mathring{A} 25'57		min. Earth dist.	11669 Jun 20 21:13	8° \mathring{B} 19'38	8.37218 AU
evening set	11663 Sep 20 21:59	24° \mathring{A} 52'16		direct	11669 Aug 27 15:49	4° \mathring{B} 54'22	
				evening set	11669 Dec 09 16:27	12° \mathring{B} 44'19	
conjunction	11663 Oct 08 09:44	27° \mathring{A} 00'41	0°20'46				
minimum elong	11663 Oct 08 09:43	27° \mathring{A} 00'40	0°21'02	conjunction	11669 Dec 27 10:27	14° \mathring{B} 57'04	1°51'14
max. Earth dist.	11663 Oct 08 16:11	27° \mathring{A} 02'39	10.54347 AU	minimum elong	11669 Dec 27 10:27	14° \mathring{B} 57'04	1°52'00
morning rise	11663 Oct 26 00:34	29° \mathring{A} 10'02		max. Earth dist.	11669 Dec 27 04:21	14° \mathring{B} 55'09	10.36526 AU
	11663 Nov 02 00:04	0° \mathring{M}		morning rise	11670 Jan 14 03:48	17° \mathring{B} 09'40	
retrograde	11664 Feb 07 18:39	6° \mathring{M} 52'23		retrograde	11670 Apr 27 13:30	24° \mathring{B} 57'50	
opposition	11664 Apr 16 22:55	3° \mathring{M} 26'32	0°40'40	opposition	11670 Jul 04 01:22	21° \mathring{B} 33'05	2°17'29
min. Earth dist.	11664 Apr 16 18:12	3° \mathring{M} 27'28	8.52320 AU	min. Earth dist.	11670 Jul 04 06:20	21° \mathring{B} 32'05	8.36317 AU
direct	11664 Jun 23 18:48	0° \mathring{M} 03'36		direct	11670 Sep 10 04:05	18° \mathring{B} 06'35	
evening set	11664 Oct 03 02:40	7° \mathring{M} 33'42		evening set	11670 Dec 23 15:58	25° \mathring{B} 58'47	
conjunction	11664 Oct 20 16:38	9° \mathring{M} 43'14	0°44'20	conjunction	11671 Jan 10 09:49	28° \mathring{B} 11'37	1°48'55
minimum elong	11664 Oct 20 16:37	9° \mathring{M} 43'13	0°44'45	minimum elong	11671 Jan 10 09:50	28° \mathring{B} 11'37	1°49'38
max. Earth dist.	11664 Oct 20 21:51	9° \mathring{M} 44'50	10.50297 AU	max. Earth dist.	11671 Jan 10 02:17	28° \mathring{B} 09'15	10.36051 AU
morning rise	11664 Nov 07 09:08	11° \mathring{M} 53'33			11671 Jan 24 20:12	0° \mathring{C}	
	11664 Dec 04 11:43	15° \mathring{M}		morning rise	11671 Jan 28 02:09	0° \mathring{C} 24'04	
retrograde	11665 Feb 20 02:30	19° \mathring{M} 38'12		retrograde	11671 May 11 01:26	8° \mathring{C} 10'44	
opposition	11665 Apr 29 23:04	16° \mathring{M} 12'10	1°08'46	opposition	11671 Jul 17 10:23	4° \mathring{C} 46'28	2°11'00
min. Earth dist.	11665 Apr 29 19:21	16° \mathring{M} 12'54	8.48351 AU	min. Earth dist.	11671 Jul 17 16:42	4° \mathring{C} 45'12	8.36244 AU
	11665 May 15 11:38	15° \mathring{R} \mathring{M}		direct	11671 Sep 23 18:39	1° \mathring{C} 19'39	
direct	11665 Jul 06 16:52	12° \mathring{M} 48'35		evening set	11672 Jan 06 15:07	9° \mathring{C} 13'08	
	11665 Aug 26 10:44	15° \mathring{M}					
evening set	11665 Oct 16 12:10	20° \mathring{M} 22'51		conjunction	11672 Jan 24 08:22	11° \mathring{C} 25'50	1°40'50
				minimum elong	11672 Jan 24 08:24	11° \mathring{C} 25'51	1°41'27
conjunction	11665 Nov 03 03:46	22° \mathring{M} 33'21	1°05'55	max. Earth dist.	11672 Jan 23 22:59	11° \mathring{C} 22'53	10.36377 AU
minimum elong	11665 Nov 03 03:44	22° \mathring{M} 33'21	1°06'28	morning rise	11672 Feb 10 23:28	13° \mathring{C} 37'58	
max. Earth dist.	11665 Nov 03 07:05	22° \mathring{M} 34'23	10.46421 AU		11672 Feb 22 06:51	15° \mathring{C}	
morning rise	11665 Nov 20 21:21	24° \mathring{M} 44'31		retrograde	11672 May 23 12:24	21° \mathring{C} 22'35	
	11666 Jan 09 03:10	0° \mathring{A}		opposition	11672 Jul 29 19:52	17° \mathring{C} 58'53	1°57'37
retrograde	11666 Mar 05 13:10	2° \mathring{A} 31'08		min. Earth dist.	11672 Jul 30 03:52	17° \mathring{C} 57'17	8.36909 AU
	11666 May 01 09:46	30° \mathring{R} \mathring{M}			11672 Sep 13 04:25	15° \mathring{R}	
opposition	11666 May 13 01:01	29° \mathring{M} 05'06	1°33'43	direct	11672 Oct 06 09:30	14° \mathring{C} 31'54	
min. Earth dist.	11666 May 12 23:01	29° \mathring{M} 05'30	8.44673 AU		11672 Oct 29 13:54	15° \mathring{C}	

evening set	11673 Jan 19 12:44	22° \approx 25'49		opposition	11678 Oct 16 23:52	5° \mathcal{B} 46'00	-0°45'49
				min. Earth dist.	11678 Oct 17 04:29	5° \mathcal{B} 45'07	8.53979 AU
conjunction	11673 Feb 06 04:59	24° \approx 38'14	1°27'26	direct	11678 Dec 25 19:38	2° \mathcal{B} 21'19	
minimum elong	11673 Feb 06 05:02	24° \approx 38'15	1°27'57	evening set	11679 Apr 09 03:28	10° \mathcal{B} 01'29	
max. Earth dist.	11673 Feb 05 17:44	24° \approx 34'42	10.37409 AU				
morning rise	11673 Feb 23 18:44	26° \approx 49'55		conjunction	11679 Apr 26 06:42	12° \mathcal{B} 08'12	-0°48'34
	11673 Mar 22 23:10	0° \mathcal{H}		minimum elong	11679 Apr 26 06:40	12° \mathcal{B} 08'11	0°49'02
retrograde	11673 Jun 05 22:05	4° \mathcal{H} 32'12		max. Earth dist.	11679 Apr 26 01:57	12° \mathcal{B} 06'43	10.55967 AU
opposition	11673 Aug 12 05:47	1° \mathcal{H} 09'05	1°38'02	morning rise	11679 May 13 07:32	14° \mathcal{B} 14'11	
min. Earth dist.	11673 Aug 12 15:04	1° \mathcal{H} 07'14	8.38256 AU		11679 May 19 15:47	15° \mathcal{B}	
	11673 Aug 27 00:12	30° \mathcal{R} \approx		retrograde	11679 Aug 22 12:48	21° \mathcal{B} 42'16	
direct	11673 Oct 20 01:06	27° \approx 42'09		opposition	11679 Oct 30 04:40	18° \mathcal{B} 21'12	-1°13'06
	11673 Dec 11 19:10	0° \mathcal{H}		min. Earth dist.	11679 Oct 30 07:30	18° \mathcal{B} 20'40	8.57978 AU
evening set	11674 Feb 02 07:56	5° \mathcal{H} 35'39			11679 Dec 31 16:16	15° \mathcal{R} \mathcal{B}	
				direct	11680 Jan 08 02:35	14° \mathcal{B} 57'11	
conjunction	11674 Feb 19 22:54	7° \mathcal{H} 47'34	1°09'29		11680 Jan 15 12:39	15° \mathcal{B}	
minimum elong	11674 Feb 19 22:56	7° \mathcal{H} 47'35	1°09'51	evening set	11680 Apr 20 23:35	22° \mathcal{B} 33'33	
max. Earth dist.	11674 Feb 19 10:40	7° \mathcal{H} 43'43	10.39134 AU				
morning rise	11674 Mar 09 11:06	9° \mathcal{H} 58'40		conjunction	11680 May 08 00:07	24° \mathcal{B} 39'02	-1°09'16
retrograde	11674 Jun 19 05:14	17° \mathcal{H} 38'27		minimum elong	11680 May 08 00:05	24° \mathcal{B} 39'01	1°09'51
opposition	11674 Aug 25 15:39	14° \mathcal{H} 15'53	1°13'26	max. Earth dist.	11680 May 07 21:46	24° \mathcal{B} 38'18	10.59888 AU
min. Earth dist.	11674 Aug 26 00:57	14° \mathcal{H} 14'02	8.40299 AU	morning rise	11680 May 24 22:46	26° \mathcal{B} 43'55	
direct	11674 Nov 02 17:37	10° \mathcal{H} 49'10			11680 Jun 22 16:08	0° \mathcal{I}	
evening set	11675 Feb 16 00:25	18° \mathcal{H} 41'21		retrograde	11680 Sep 03 07:44	4° \mathcal{I} 10'41	
				opposition	11680 Nov 11 07:44	0° \mathcal{I} 49'37	-1°36'39
conjunction	11675 Mar 05 13:44	20° \mathcal{H} 52'34	0°48'00	min. Earth dist.	11680 Nov 11 07:57	0° \mathcal{I} 49'35	8.61827 AU
minimum elong	11675 Mar 05 13:46	20° \mathcal{H} 52'35	0°48'12		11680 Nov 22 05:37	30° \mathcal{R} \mathcal{B}	
max. Earth dist.	11675 Mar 05 02:04	20° \mathcal{H} 48'55	10.41551 AU	direct	11681 Jan 20 06:42	27° \mathcal{B} 26'19	
morning rise	11675 Mar 23 00:01	23° \mathcal{H} 02'54			11681 Mar 17 18:43	0° \mathcal{I}	
	11675 Jun 05 02:58	0° \mathcal{Y}		evening set	11681 May 03 15:54	4° \mathcal{I} 58'57	
retrograde	11675 Jul 02 10:13	0° \mathcal{Y} 40'03					
	11675 Jul 30 02:48	30° \mathcal{R} \mathcal{H}		conjunction	11681 May 20 14:10	7° \mathcal{I} 03'17	-1°26'34
opposition	11675 Sep 08 01:03	27° \mathcal{H} 17'57	0°45'09	minimum elong	11681 May 20 14:08	7° \mathcal{I} 03'16	1°27'14
min. Earth dist.	11675 Sep 08 09:24	27° \mathcal{H} 16'19	8.43015 AU	max. Earth dist.	11681 May 20 15:03	7° \mathcal{I} 03'33	10.63562 AU
direct	11675 Nov 16 09:39	23° \mathcal{H} 51'37		morning rise	11681 Jun 06 10:56	9° \mathcal{I} 07'13	
	11676 Feb 15 09:23	0° \mathcal{Y}		retrograde	11681 Sep 16 02:10	16° \mathcal{I} 33'06	
evening set	11676 Feb 29 13:21	1° \mathcal{Y} 41'38		opposition	11681 Nov 24 08:57	13° \mathcal{I} 11'59	-1°55'29
				min. Earth dist.	11681 Nov 24 06:37	13° \mathcal{I} 12'26	8.65340 AU
conjunction	11676 Mar 18 00:40	3° \mathcal{Y} 51'57	0°24'12	direct	11682 Feb 02 07:43	9° \mathcal{I} 49'23	
minimum elong	11676 Mar 18 00:41	3° \mathcal{Y} 51'57	0°24'13	evening set	11682 May 16 04:53	17° \mathcal{I} 18'29	
max. Earth dist.	11676 Mar 17 14:39	3° \mathcal{Y} 48'49	10.44594 AU				
morning rise	11676 Apr 04 08:41	6° \mathcal{Y} 01'19		conjunction	11682 Jun 02 01:19	19° \mathcal{I} 21'53	-1°39'45
retrograde	11676 Jul 14 15:01	13° \mathcal{Y} 35'52		minimum elong	11682 Jun 02 01:17	19° \mathcal{I} 21'53	1°40'28
opposition	11676 Sep 20 09:54	10° \mathcal{Y} 14'10	0°14'48	max. Earth dist.	11682 Jun 02 04:51	19° \mathcal{I} 22'59	10.66812 AU
min. Earth dist.	11676 Sep 20 16:47	10° \mathcal{Y} 12'49	8.46307 AU	morning rise	11682 Jun 18 20:46	21° \mathcal{I} 25'02	
direct	11676 Nov 28 22:40	6° \mathcal{Y} 48'19		retrograde	11682 Sep 28 21:08	28° \mathcal{I} 50'30	
evening set	11677 Mar 13 22:11	14° \mathcal{Y} 35'27		opposition	11682 Dec 07 08:45	25° \mathcal{I} 29'17	-2°08'52
desc. node	11677 Mar 20 14:32	15° \mathcal{Y} 24'47		min. Earth dist.	11682 Dec 07 04:40	25° \mathcal{I} 30'04	8.68344 AU
				direct	11683 Feb 15 04:28	22° \mathcal{I} 07'22	
conjunction	11677 Mar 31 07:05	16° \mathcal{Y} 44'40	-0°00'43	evening set	11683 May 28 15:02	29° \mathcal{I} 33'13	
minimum elong	11677 Mar 31 07:05	16° \mathcal{Y} 44'40	0°00'53		11683 Jun 01 07:54	0° \mathcal{E}	
behind sun begin	11677 Mar 30 23:56	16° \mathcal{Y} 42'28					
behind sun end	11677 Mar 31 14:13	16° \mathcal{Y} 46'52		conjunction	11683 Jun 14 10:06	1° \mathcal{E} 35'54	-1°48'17
max. Earth dist.	11677 Mar 30 23:12	16° \mathcal{Y} 42'14	10.48130 AU	minimum elong	11683 Jun 14 10:05	1° \mathcal{E} 35'54	1°49'03
morning rise	11677 Apr 17 12:39	18° \mathcal{Y} 52'58		max. Earth dist.	11683 Jun 14 15:22	1° \mathcal{E} 37'31	10.69488 AU
retrograde	11677 Jul 27 16:53	26° \mathcal{Y} 25'04		morning rise	11683 Jul 01 05:01	3° \mathcal{E} 38'33	
opposition	11677 Oct 03 17:40	23° \mathcal{Y} 03'39	-0°16'03	retrograde	11683 Oct 11 13:02	11° \mathcal{E} 04'00	
min. Earth dist.	11677 Oct 03 23:21	23° \mathcal{Y} 02'33	8.50023 AU	opposition	11683 Dec 20 07:12	7° \mathcal{E} 42'38	-2°16'20
direct	11677 Dec 12 09:56	19° \mathcal{Y} 38'22		min. Earth dist.	11683 Dec 20 01:53	7° \mathcal{E} 43'39	8.70705 AU
evening set	11678 Mar 27 02:57	27° \mathcal{Y} 22'09		direct	11684 Feb 27 23:09	4° \mathcal{E} 21'19	
				evening set	11684 Jun 08 23:04	11° \mathcal{E} 44'21	
conjunction	11678 Apr 13 09:05	29° \mathcal{Y} 30'09	-0°25'21				
minimum elong	11678 Apr 13 09:04	29° \mathcal{Y} 30'08	0°25'41	conjunction	11684 Jun 25 17:33	13° \mathcal{E} 46'34	-1°51'54
max. Earth dist.	11678 Apr 13 02:45	29° \mathcal{Y} 28'11	10.51985 AU	minimum elong	11684 Jun 25 17:34	13° \mathcal{E} 46'34	1°52'40
	11678 Apr 17 08:59	0° \mathcal{B}		max. Earth dist.	11684 Jun 26 00:08	13° \mathcal{E} 48'35	10.71478 AU
morning rise	11678 Apr 30 12:14	1° \mathcal{B} 37'18		morning rise	11684 Jul 12 12:46	15° \mathcal{E} 48'59	
retrograde	11678 Aug 09 15:34	9° \mathcal{B} 07'11		retrograde	11684 Oct 23 04:54	23° \mathcal{E} 14'52	

opposition	11685 Jan 01 04:15	19° \mathfrak{D} 53'14	-2°17'37	retrograde	11691 Jan 07 03:01	6° \mathfrak{A} 34'37	
min. Earth dist.	11684 Dec 31 21:35	19° \mathfrak{D} 54'30	8.72323 AU	opposition	11691 Mar 17 22:23	3° \mathfrak{A} 10'28	-0°31'48
direct	11685 Mar 11 17:19	16° \mathfrak{D} 32'25		min. Earth dist.	11691 Mar 17 13:50	3° \mathfrak{A} 12'08	8.65137 AU
evening set	11685 Jun 21 05:38	23° \mathfrak{D} 53'06			11691 May 11 04:26	30° \mathfrak{R} \mathfrak{M}	
				direct	11691 May 25 03:58	29° \mathfrak{M} 49'49	
conjunction	11685 Jul 08 00:30	25° \mathfrak{D} 55'12	-1°50'29		11691 Jun 08 00:02	0° \mathfrak{A}	
minimum elong	11685 Jul 08 00:31	25° \mathfrak{D} 55'12	1°51'13	evening set	11691 Sep 02 17:19	7° \mathfrak{A} 10'19	
max. Earth dist.	11685 Jul 08 09:07	25° \mathfrak{D} 57'50	10.72694 AU				
morning rise	11685 Jul 24 20:37	27° \mathfrak{D} 57'39		conjunction	11691 Sep 20 01:16	9° \mathfrak{A} 16'37	-0°14'08
	11685 Aug 11 11:53	0° \mathfrak{Q}		minimum elong	11691 Sep 20 01:16	9° \mathfrak{A} 16'37	0°14'05
retrograde	11685 Nov 04 22:48	5° \mathfrak{Q} 24'20		behind sun begin	11691 Sep 19 21:46	9° \mathfrak{A} 15'34	
opposition	11686 Jan 14 00:12	2° \mathfrak{Q} 02'22	-2°12'46	behind sun end	11691 Sep 20 04:46	9° \mathfrak{A} 17'41	
min. Earth dist.	11686 Jan 13 15:45	2° \mathfrak{Q} 03'58	8.73118 AU	max. Earth dist.	11691 Sep 20 11:12	9° \mathfrak{A} 19'39	10.63393 AU
	11686 Feb 11 22:13	30° \mathfrak{R} \mathfrak{D}		morning rise	11691 Oct 07 12:18	11° \mathfrak{A} 23'53	
direct	11686 Mar 24 08:44	28° \mathfrak{D} 41'58		retrograde	11692 Jan 20 05:24	19° \mathfrak{A} 01'08	
	11686 May 02 18:14	0° \mathfrak{Q}		opposition	11692 Mar 29 18:14	15° \mathfrak{A} 36'32	-0°02'14
evening set	11686 Jul 03 11:42	6° \mathfrak{Q} 00'49		min. Earth dist.	11692 Mar 29 10:47	15° \mathfrak{A} 37'59	8.61513 AU
				asc. node	11692 Apr 26 07:42	13° \mathfrak{A} 36'33	
conjunction	11686 Jul 20 07:39	8° \mathfrak{Q} 03'05	-1°44'08	direct	11692 Jun 05 18:26	12° \mathfrak{A} 15'20	
minimum elong	11686 Jul 20 07:41	8° \mathfrak{Q} 03'05	1°44'48	evening set	11692 Sep 14 14:12	19° \mathfrak{A} 38'34	
max. Earth dist.	11686 Jul 20 18:18	8° \mathfrak{Q} 06'19	10.73078 AU				
morning rise	11686 Aug 06 05:16	10° \mathfrak{Q} 05'51		conjunction	11692 Oct 02 00:40	21° \mathfrak{A} 46'00	0°10'12
	11686 Sep 21 19:37	15° \mathfrak{Q}		minimum elong	11692 Oct 02 00:39	21° \mathfrak{A} 46'00	0°10'25
retrograde	11686 Nov 17 16:20	17° \mathfrak{Q} 33'40		behind sun begin	11692 Oct 01 19:02	21° \mathfrak{A} 44'18	
	11687 Jan 16 01:00	15° \mathfrak{R} \mathfrak{Q}		behind sun end	11692 Oct 02 06:17	21° \mathfrak{A} 47'42	
opposition	11687 Jan 26 19:23	14° \mathfrak{Q} 11'20	-2°01'59	max. Earth dist.	11692 Oct 02 08:04	21° \mathfrak{A} 48'15	10.59513 AU
min. Earth dist.	11687 Jan 26 09:38	14° \mathfrak{Q} 13'11	8.73066 AU	morning rise	11692 Oct 19 14:11	23° \mathfrak{A} 54'24	
direct	11687 Apr 05 21:49	10° \mathfrak{Q} 51'12			11692 Dec 19 17:01	0° \mathfrak{M}	
	11687 Jun 17 16:58	15° \mathfrak{Q}		retrograde	11693 Feb 01 08:57	1° \mathfrak{M} 34'02	
evening set	11687 Jul 15 18:15	18° \mathfrak{Q} 08'54			11693 Mar 17 14:57	30° \mathfrak{R} \mathfrak{A}	
				opposition	11693 Apr 11 15:06	28° \mathfrak{A} 09'04	0°27'44
conjunction	11687 Aug 01 15:50	20° \mathfrak{Q} 11'35	-1°33'08	min. Earth dist.	11693 Apr 11 09:52	28° \mathfrak{A} 10'05	8.57419 AU
minimum elong	11687 Aug 01 15:52	20° \mathfrak{Q} 11'36	1°33'41	direct	11693 Jun 18 11:22	24° \mathfrak{A} 47'10	
max. Earth dist.	11687 Aug 02 03:27	20° \mathfrak{Q} 15'07	10.72634 AU		11693 Sep 08 10:41	0° \mathfrak{M}	
morning rise	11687 Aug 18 15:39	22° \mathfrak{Q} 14'56		evening set	11693 Sep 27 15:44	2° \mathfrak{M} 13'58	
retrograde	11687 Nov 30 11:21	29° \mathfrak{Q} 44'12					
opposition	11688 Feb 08 14:10	26° \mathfrak{Q} 21'26	-1°45'44	conjunction	11693 Oct 15 04:23	4° \mathfrak{M} 22'32	0°34'10
min. Earth dist.	11688 Feb 08 04:11	26° \mathfrak{Q} 23'20	8.72193 AU	minimum elong	11693 Oct 15 04:22	4° \mathfrak{M} 22'31	0°34'31
direct	11688 Apr 17 10:57	23° \mathfrak{Q} 01'25		max. Earth dist.	11693 Oct 15 08:52	4° \mathfrak{M} 23'54	10.55272 AU
	11688 Jul 24 11:13	0° \mathfrak{M}		morning rise	11693 Nov 01 19:59	6° \mathfrak{M} 31'59	
evening set	11688 Jul 27 02:01	0° \mathfrak{M} 18'39		retrograde	11694 Feb 14 13:51	14° \mathfrak{M} 14'02	
				opposition	11694 Apr 24 13:39	10° \mathfrak{M} 48'46	0°56'38
conjunction	11688 Aug 13 01:44	2° \mathfrak{M} 22'00	-1°17'55	min. Earth dist.	11694 Apr 24 10:42	10° \mathfrak{M} 49'21	8.53120 AU
minimum elong	11688 Aug 13 01:46	2° \mathfrak{M} 22'01	1°18'20	direct	11694 Jul 01 08:01	7° \mathfrak{M} 26'05	
max. Earth dist.	11688 Aug 13 12:56	2° \mathfrak{M} 25'25	10.71394 AU	evening set	11694 Oct 10 21:53	14° \mathfrak{M} 56'56	
morning rise	11688 Aug 30 04:21	4° \mathfrak{M} 26'10			11694 Oct 11 08:02	15° \mathfrak{M}	
retrograde	11688 Dec 12 07:47	11° \mathfrak{M} 57'06					
opposition	11689 Feb 20 08:45	8° \mathfrak{M} 33'54	-1°24'41	conjunction	11694 Oct 28 12:26	17° \mathfrak{M} 06'34	0°56'40
min. Earth dist.	11689 Feb 19 23:24	8° \mathfrak{M} 35'42	8.70540 AU	minimum elong	11694 Oct 28 12:24	17° \mathfrak{M} 06'33	0°57'10
direct	11689 Apr 29 23:11	5° \mathfrak{M} 13'50		max. Earth dist.	11694 Oct 28 14:29	17° \mathfrak{M} 07'12	10.50960 AU
evening set	11689 Aug 08 12:00	12° \mathfrak{M} 31'23		morning rise	11694 Nov 15 05:32	19° \mathfrak{M} 16'58	
				retrograde	11695 Feb 27 21:14	27° \mathfrak{M} 01'14	
conjunction	11689 Aug 25 14:16	14° \mathfrak{M} 35'35	-0°59'08	opposition	11695 May 07 13:48	23° \mathfrak{M} 35'44	1°23'03
minimum elong	11689 Aug 25 14:18	14° \mathfrak{M} 35'36	0°59'24	min. Earth dist.	11695 May 07 12:45	23° \mathfrak{M} 35'56	8.48898 AU
max. Earth dist.	11689 Aug 26 01:10	14° \mathfrak{M} 38'54	10.69400 AU	direct	11695 Jul 14 07:11	20° \mathfrak{M} 12'12	
morning rise	11689 Sep 11 19:47	16° \mathfrak{M} 40'43		evening set	11695 Oct 24 08:51	27° \mathfrak{M} 47'25	
retrograde	11689 Dec 25 03:42	24° \mathfrak{M} 13'33					
opposition	11690 Mar 05 03:19	20° \mathfrak{M} 49'54	-0°59'42	conjunction	11695 Nov 11 00:58	29° \mathfrak{M} 58'01	1°16'33
min. Earth dist.	11690 Mar 04 18:24	20° \mathfrak{M} 51'37	8.68165 AU	minimum elong	11695 Nov 11 00:55	29° \mathfrak{M} 58'00	1°17'10
direct	11690 May 12 12:54	17° \mathfrak{M} 29'37		max. Earth dist.	11695 Nov 11 01:15	29° \mathfrak{M} 58'06	10.46837 AU
evening set	11690 Aug 21 00:52	24° \mathfrak{M} 48'16			11695 Nov 11 07:23	0° \mathfrak{A}	
				morning rise	11695 Nov 28 18:53	2° \mathfrak{A} 09'12	
conjunction	11690 Sep 07 05:59	26° \mathfrak{M} 53'29	-0°37'34	retrograde	11696 Mar 12 06:10	9° \mathfrak{A} 55'15	
minimum elong	11690 Sep 07 06:01	26° \mathfrak{M} 53'29	0°37'40	opposition	11696 May 19 15:30	6° \mathfrak{A} 29'37	1°45'33
max. Earth dist.	11690 Sep 07 16:45	26° \mathfrak{M} 56'46	10.66713 AU	min. Earth dist.	11696 May 19 15:48	6° \mathfrak{A} 29'33	8.44988 AU
morning rise	11690 Sep 24 14:20	28° \mathfrak{M} 59'38		direct	11696 Jul 26 09:31	3° \mathfrak{A} 05'14	
	11690 Oct 03 03:14	0° \mathfrak{A}		evening set	11696 Nov 06 00:05	10° \mathfrak{A} 44'54	

conjunction	11696 Nov 23 17:15	12° \mathbb{A} 56'17	1°32'43	evening set	11703 Jan 28 06:24	29° \approx 43'00	
minimum elong	11696 Nov 23 17:13	12° \mathbb{A} 56'17	1°33'26		11703 Jan 30 13:34	0° \mathbb{H}	
max. Earth dist.	11696 Nov 23 15:35	12° \mathbb{A} 55'46	10.43129 AU				
morning rise	11696 Dec 11 11:25	15° \mathbb{A} 08'03		conjunction	11703 Feb 14 22:13	1° \mathbb{H} 55'13	1°18'24
retrograde	11697 Mar 25 16:54	22° \mathbb{A} 55'24		minimum elong	11703 Feb 14 22:16	1° \mathbb{H} 55'14	1°18'50
opposition	11697 Jun 01 19:06	19° \mathbb{A} 29'45	2°02'51	max. Earth dist.	11703 Feb 14 11:42	1° \mathbb{H} 51'54	10.37578 AU
min. Earth dist.	11697 Jun 01 20:59	19° \mathbb{A} 29'23	8.41592 AU	morning rise	11703 Mar 04 11:10	4° \mathbb{H} 06'38	
direct	11697 Aug 08 14:18	16° \mathbb{A} 04'32		retrograde	11703 Jun 14 08:31	11° \mathbb{H} 47'30	
evening set	11697 Nov 19 18:35	23° \mathbb{A} 48'23		opposition	11703 Aug 20 18:16	8° \mathbb{H} 24'10	1°25'31
				min. Earth dist.	11703 Aug 21 02:26	8° \mathbb{H} 22'33	8.38661 AU
conjunction	11697 Dec 07 12:18	26° \mathbb{A} 00'24	1°44'14	direct	11703 Oct 28 17:59	4° \mathbb{H} 56'55	
minimum elong	11697 Dec 07 12:17	26° \mathbb{A} 00'23	1°45'00	evening set	11704 Feb 10 23:47	12° \mathbb{H} 49'36	
max. Earth dist.	11697 Dec 07 08:16	25° \mathbb{A} 59'08	10.40029 AU				
morning rise	11697 Dec 25 06:20	28° \mathbb{A} 12'34		conjunction	11704 Feb 28 14:04	15° \mathbb{H} 01'11	0°58'27
	11698 Jan 09 06:36	0° \mathbb{B}		minimum elong	11704 Feb 28 14:06	15° \mathbb{H} 01'12	0°58'44
retrograde	11698 Apr 08 05:27	6° \mathbb{B} 00'32		max. Earth dist.	11704 Feb 28 03:34	14° \mathbb{H} 57'54	10.39841 AU
opposition	11698 Jun 15 00:25	2° \mathbb{B} 35'02	2°13'56	morning rise	11704 Mar 17 01:10	17° \mathbb{H} 11'53	
min. Earth dist.	11698 Jun 15 04:17	2° \mathbb{B} 34'15	8.38881 AU	retrograde	11704 Jun 26 14:51	24° \mathbb{H} 50'06	
	11698 Jul 21 15:10	30° \mathbb{R} \mathbb{A}		opposition	11704 Sep 02 03:31	21° \mathbb{H} 27'24	0°58'48
direct	11698 Aug 21 21:16	29° \mathbb{A} 09'02		min. Earth dist.	11704 Sep 02 11:48	21° \mathbb{H} 25'46	8.41290 AU
	11698 Sep 22 00:21	0° \mathbb{B}		direct	11704 Nov 10 08:44	18° \mathbb{H} 00'33	
evening set	11698 Dec 03 15:43	6° \mathbb{B} 56'36		evening set	11705 Feb 23 13:56	25° \mathbb{H} 51'25	
conjunction	11698 Dec 21 09:37	9° \mathbb{B} 09'03	1°50'23	conjunction	11705 Mar 13 02:12	28° \mathbb{H} 02'10	0°35'37
minimum elong	11698 Dec 21 09:36	9° \mathbb{B} 09'03	1°51'09	minimum elong	11705 Mar 13 02:14	28° \mathbb{H} 02'10	0°35'43
max. Earth dist.	11698 Dec 21 02:44	9° \mathbb{B} 06'54	10.37698 AU	max. Earth dist.	11705 Mar 12 15:59	27° \mathbb{H} 58'58	10.42862 AU
morning rise	11699 Jan 08 03:14	11° \mathbb{B} 21'27			11705 Mar 28 20:22	0° \mathbb{Y}	
retrograde	11699 Apr 21 16:57	19° \mathbb{B} 09'15		morning rise	11705 Mar 30 11:20	0° \mathbb{Y} 11'59	
opposition	11699 Jun 28 07:05	15° \mathbb{B} 44'01	2°18'05	retrograde	11705 Jul 09 19:38	7° \mathbb{Y} 47'31	
min. Earth dist.	11699 Jun 28 13:12	15° \mathbb{B} 42'48	8.36988 AU	opposition	11705 Sep 15 12:12	4° \mathbb{Y} 25'25	0°29'16
direct	11699 Sep 04 08:12	12° \mathbb{B} 17'22		min. Earth dist.	11705 Sep 15 19:57	4° \mathbb{Y} 23'54	8.44611 AU
evening set	11699 Dec 17 14:13	20° \mathbb{B} 07'56		direct	11705 Nov 23 22:03	0° \mathbb{Y} 59'08	
				evening set	11706 Mar 09 00:18	8° \mathbb{Y} 47'28	
conjunction	11700 Jan 04 08:00	22° \mathbb{B} 20'37	1°50'46	conjunction	11706 Mar 26 10:17	10° \mathbb{Y} 57'12	0°11'08
minimum elong	11700 Jan 04 08:01	22° \mathbb{B} 20'38	1°51'31	minimum elong	11706 Mar 26 10:17	10° \mathbb{Y} 57'12	0°11'03
max. Earth dist.	11700 Jan 03 22:43	22° \mathbb{B} 17'43	10.36243 AU	behind sun begin	11706 Mar 26 04:56	10° \mathbb{Y} 55'33	
morning rise	11700 Jan 22 00:56	24° \mathbb{B} 33'05		behind sun end	11706 Mar 26 15:38	10° \mathbb{Y} 58'51	
	11700 Mar 13 20:12	0° \approx		max. Earth dist.	11706 Mar 26 01:06	10° \mathbb{Y} 54'21	10.46479 AU
retrograde	11700 May 05 03:25	2° \approx 19'59		morning rise	11706 Apr 12 17:13	13° \mathbb{Y} 06'00	
	11700 Jun 27 21:35	30° \mathbb{R} \mathbb{B}		retrograde	11706 Jul 22 20:49	20° \mathbb{Y} 39'00	
opposition	11700 Jul 11 14:59	28° \mathbb{B} 55'08	2°14'58	desc. node	11706 Sep 10 16:04	18° \mathbb{Y} 39'54	
min. Earth dist.	11700 Jul 11 22:30	28° \mathbb{B} 53'38	8.35995 AU	opposition	11706 Sep 28 20:01	17° \mathbb{Y} 17'25	-0°01'30
direct	11700 Sep 17 22:05	25° \mathbb{B} 28'00		min. Earth dist.	11706 Sep 29 02:19	17° \mathbb{Y} 16'12	8.48444 AU
	11700 Dec 02 16:50	0° \approx		direct	11706 Dec 07 11:15	13° \mathbb{Y} 51'51	
evening set	11700 Dec 31 12:46	3° \approx 20'37		evening set	11707 Mar 22 06:49	21° \mathbb{Y} 37'07	
conjunction	11701 Jan 18 06:11	5° \approx 33'21	1°45'19	conjunction	11707 Apr 08 14:13	23° \mathbb{Y} 45'39	-0°13'48
minimum elong	11701 Jan 18 06:13	5° \approx 33'22	1°46'00	minimum elong	11707 Apr 08 14:13	23° \mathbb{Y} 45'39	0°14'03
max. Earth dist.	11701 Jan 17 19:46	5° \approx 30'05	10.35727 AU	behind sun begin	11707 Apr 08 10:38	23° \mathbb{Y} 44'32	
morning rise	11701 Feb 04 22:04	7° \approx 45'38		behind sun end	11707 Apr 08 17:47	23° \mathbb{Y} 46'45	
	11701 Apr 24 15:13	15° \approx		max. Earth dist.	11707 Apr 08 07:13	23° \mathbb{Y} 43'29	10.50496 AU
retrograde	11701 May 18 14:03	15° \approx 31'03		morning rise	11707 Apr 25 18:39	25° \mathbb{Y} 53'19	
	11701 Jun 11 17:20	15° \mathbb{R} \approx			11707 Jun 01 13:31	0° \mathbb{B}	
opposition	11701 Jul 24 23:42	12° \approx 06'38	2°04'43	retrograde	11707 Aug 04 20:57	3° \mathbb{B} 24'03	
min. Earth dist.	11701 Jul 25 07:44	12° \approx 05'02	8.35947 AU	opposition	11707 Oct 12 02:42	0° \mathbb{B} 02'54	-0°31'55
direct	11701 Oct 01 12:08	8° \approx 39'14		min. Earth dist.	11707 Oct 12 06:49	0° \mathbb{B} 02'06	8.52593 AU
	11702 Jan 01 14:12	15° \approx			11707 Oct 12 17:41	30° \mathbb{R} \mathbb{Y}	
evening set	11702 Jan 14 10:27	16° \approx 32'51		direct	11707 Dec 20 22:04	26° \mathbb{Y} 38'08	
					11708 Feb 24 04:58	0° \mathbb{B}	
conjunction	11702 Feb 01 03:17	18° \approx 45'27	1°34'19	evening set	11708 Apr 03 09:13	4° \mathbb{B} 19'55	
minimum elong	11702 Feb 01 03:19	18° \approx 45'28	1°34'54				
max. Earth dist.	11702 Jan 31 16:35	18° \approx 42'05	10.36181 AU				
morning rise	11702 Feb 18 17:49	20° \approx 57'23		conjunction	11708 Apr 20 13:54	6° \mathbb{B} 27'11	-0°37'47
retrograde	11702 Jun 01 00:20	28° \approx 40'43		minimum elong	11708 Apr 20 13:53	6° \mathbb{B} 27'10	0°38'11
opposition	11702 Aug 07 08:51	25° \approx 16'49	1°47'55	max. Earth dist.	11708 Apr 20 09:44	6° \mathbb{B} 25'53	10.54722 AU
min. Earth dist.	11702 Aug 07 16:53	25° \approx 15'13	8.36852 AU	morning rise	11708 May 07 15:45	8° \mathbb{B} 33'39	
direct	11702 Oct 15 02:45	21° \approx 49'23			11708 Jul 13 03:29	15° \mathbb{B}	

retrograde	11708 Aug 16 21:08	16° $\text{802}^{\circ}27'$		opposition	11715 Jan 09 09:09	26° $\text{37}^{\circ}52'$	-2°15'35"
	11708 Sep 21 06:20	15° 8°		min. Earth dist.	11715 Jan 09 02:38	26° $\text{39}^{\circ}06'$	8.73113 AU
opposition	11708 Oct 24 08:13	12° $\text{841}^{\circ}38'$	-1°00'30"	direct	11715 Mar 19 18:35	23° $\text{17}^{\circ}31'$	
min. Earth dist.	11708 Oct 24 10:26	12° $\text{841}^{\circ}13'$	8.56867 AU		11715 Jun 23 21:36	0° 0°	
direct	11709 Jan 02 04:43	9° $\text{817}^{\circ}43'$		evening set	11715 Jun 29 03:50	0° $\text{037}^{\circ}22'$	
	11709 Mar 30 21:54	15° 8°					
evening set	11709 Apr 16 07:27	16° $\text{855}^{\circ}44'$		conjunction	11715 Jul 15 23:04	2° $\text{039}^{\circ}33'$	-1°47'34"
				minimum elong	11715 Jul 15 23:05	2° $\text{039}^{\circ}33'$	1°48'16"
conjunction	11709 May 03 09:22	19° $\text{801}^{\circ}44'$	-0°59'46"	max. Earth dist.	11715 Jul 16 06:44	2° $\text{041}^{\circ}53'$	10.73005 AU
minimum elong	11709 May 03 09:20	19° $\text{801}^{\circ}44'$	1°00'18"	morning rise	11715 Aug 01 19:58	4° $\text{042}^{\circ}11'$	
max. Earth dist.	11709 May 03 07:28	19° $\text{801}^{\circ}09'$	10.58956 AU	retrograde	11715 Nov 13 02:57	12° $\text{009}^{\circ}41'$	
morning rise	11709 May 20 08:52	21° $\text{807}^{\circ}04'$		opposition	11716 Jan 22 05:19	8° $\text{047}^{\circ}40'$	-2°07'34"
retrograde	11709 Aug 29 17:28	28° $\text{834}^{\circ}17'$		min. Earth dist.	11716 Jan 21 22:09	8° $\text{049}^{\circ}02'$	8.72927 AU
opposition	11709 Nov 06 12:12	25° $\text{813}^{\circ}41'$	-1°25'54"	direct	11716 Mar 31 09:41	5° $\text{027}^{\circ}26'$	
min. Earth dist.	11709 Nov 06 13:00	25° $\text{813}^{\circ}32'$	8.61052 AU	evening set	11716 Jul 10 10:28	12° $\text{045}^{\circ}58'$	
direct	11710 Jan 15 09:01	21° $\text{850}^{\circ}33'$					
evening set	11710 Apr 29 01:56	29° $\text{824}^{\circ}50'$		conjunction	11716 Jul 27 07:10	14° $\text{048}^{\circ}30'$	-1°38'42"
	11710 May 03 21:47	0° 0°		minimum elong	11716 Jul 27 07:12	14° $\text{048}^{\circ}31'$	1°39'19"
				max. Earth dist.	11716 Jul 27 16:00	14° $\text{051}^{\circ}12'$	10.72411 AU
conjunction	11710 May 16 01:11	1° $\text{029}^{\circ}36'$	-1°18'45"		11716 Jul 28 20:53	15° 0°	
minimum elong	11710 May 16 01:08	1° $\text{029}^{\circ}36'$	1°19'23"	morning rise	11716 Aug 13 06:04	16° $\text{051}^{\circ}39'$	
max. Earth dist.	11710 May 16 00:48	1° $\text{029}^{\circ}29'$	10.62983 AU	retrograde	11716 Nov 24 21:11	24° $\text{020}^{\circ}34'$	
morning rise	11710 Jun 01 22:45	3° $\text{033}^{\circ}54'$		opposition	11717 Feb 03 00:33	20° $\text{057}^{\circ}56'$	-1°53'50"
retrograde	11710 Sep 11 11:39	10° $\text{059}^{\circ}56'$		min. Earth dist.	11717 Feb 02 16:29	20° $\text{059}^{\circ}28'$	8.71895 AU
opposition	11710 Nov 19 14:27	7° $\text{039}^{\circ}26'$	-1°47'02"	direct	11717 Apr 13 01:00	17° $\text{037}^{\circ}40'$	
min. Earth dist.	11710 Nov 19 13:55	7° $\text{039}^{\circ}32'$	8.64926 AU	evening set	11717 Jul 22 17:53	24° $\text{055}^{\circ}32'$	
direct	11711 Jan 28 12:12	4° $\text{017}^{\circ}02'$					
evening set	11711 May 11 16:47	11° $\text{047}^{\circ}39'$		conjunction	11717 Aug 08 16:43	26° $\text{058}^{\circ}41'$	-1°25'23"
				minimum elong	11717 Aug 08 16:45	26° $\text{058}^{\circ}42'$	1°25'52"
conjunction	11711 May 28 13:49	13° $\text{051}^{\circ}21'$	-1°33'56"	max. Earth dist.	11717 Aug 09 03:02	27° $\text{001}^{\circ}50'$	10.70998 AU
minimum elong	11711 May 28 13:47	13° $\text{051}^{\circ}21'$	1°34'38"	morning rise	11717 Aug 25 17:59	29° $\text{002}^{\circ}35'$	
max. Earth dist.	11711 May 28 15:10	13° $\text{051}^{\circ}46'$	10.66585 AU		11717 Sep 02 21:04	0° 0°	
morning rise	11711 Jun 14 09:54	15° $\text{054}^{\circ}45'$		retrograde	11717 Dec 07 17:23	6° $\text{033}^{\circ}12'$	
retrograde	11711 Sep 24 05:46	23° $\text{020}^{\circ}07'$		opposition	11718 Feb 15 19:29	3° $\text{009}^{\circ}55'$	-1°34'56"
opposition	11711 Dec 02 15:13	19° $\text{059}^{\circ}32'$	-2°03'02"	min. Earth dist.	11718 Feb 15 10:26	3° $\text{011}^{\circ}38'$	8.70066 AU
min. Earth dist.	11711 Dec 02 12:39	20° $\text{000}^{\circ}01'$	8.68254 AU		11718 Apr 11 07:12	30° 0°	
direct	11712 Feb 10 12:09	16° $\text{037}^{\circ}49'$		direct	11718 Apr 25 13:48	29° $\text{049}^{\circ}31'$	
evening set	11712 May 23 04:16	24° $\text{004}^{\circ}58'$			11718 May 09 17:50	0° 0°	
				evening set	11718 Aug 04 02:58	7° $\text{007}^{\circ}25'$	
conjunction	11712 Jun 08 23:50	26° $\text{007}^{\circ}52'$	-1°44'42"				
minimum elong	11712 Jun 08 23:49	26° $\text{007}^{\circ}51'$	1°45'27"	conjunction	11718 Aug 21 04:12	9° $\text{011}^{\circ}23'$	-1°08'11"
max. Earth dist.	11712 Jun 09 03:37	26° $\text{009}^{\circ}01'$	10.69520 AU	minimum elong	11718 Aug 21 04:14	9° $\text{011}^{\circ}24'$	1°08'31"
morning rise	11712 Jun 25 18:57	28° $\text{010}^{\circ}37'$		max. Earth dist.	11718 Aug 21 15:01	9° $\text{014}^{\circ}41'$	10.68826 AU
	11712 Jul 11 09:44	0° 0°		morning rise	11718 Sep 07 08:14	11° $\text{016}^{\circ}13'$	
retrograde	11712 Oct 05 22:59	5° $\text{035}^{\circ}50'$		retrograde	11718 Dec 20 14:24	18° $\text{048}^{\circ}50'$	
opposition	11712 Dec 14 14:23	2° $\text{015}^{\circ}03'$	-2°13'20"	opposition	11719 Feb 28 14:29	15° $\text{024}^{\circ}54'$	-1°11'38"
min. Earth dist.	11712 Dec 14 09:51	2° $\text{015}^{\circ}54'$	8.70795 AU	min. Earth dist.	11719 Feb 28 05:31	15° $\text{026}^{\circ}37'$	8.67523 AU
	11713 Jan 16 04:41	30° 0°		direct	11719 May 08 02:41	12° $\text{004}^{\circ}13'$	
direct	11713 Feb 22 08:41	28° $\text{053}^{\circ}55'$		evening set	11719 Aug 16 14:44	19° $\text{022}^{\circ}58'$	
	11713 Mar 30 17:38	0° 0°					
evening set	11713 Jun 04 13:29	6° $\text{018}^{\circ}07'$		conjunction	11719 Sep 02 18:35	21° $\text{027}^{\circ}56'$	-0°47'46"
				minimum elong	11719 Sep 02 18:37	21° $\text{027}^{\circ}57'$	0°47'57"
conjunction	11713 Jun 21 08:17	8° $\text{020}^{\circ}28'$	-1°50'39"	max. Earth dist.	11719 Sep 03 04:33	21° $\text{030}^{\circ}59'$	10.65995 AU
minimum elong	11713 Jun 21 08:17	8° $\text{020}^{\circ}28'$	1°51'25"	morning rise	11719 Sep 20 01:40	23° $\text{033}^{\circ}51'$	
max. Earth dist.	11713 Jun 21 14:10	8° $\text{022}^{\circ}16'$	10.71591 AU		11719 Nov 26 06:06	0° 0°	
morning rise	11713 Jul 08 03:08	10° $\text{022}^{\circ}52'$		retrograde	11720 Jan 02 13:24	1° $\text{008}^{\circ}37'$	
retrograde	11713 Oct 18 16:40	17° $\text{048}^{\circ}27'$			11720 Feb 09 07:14	30° 0°	
opposition	11713 Dec 27 12:09	14° $\text{027}^{\circ}22'$	-2°17'33"	opposition	11720 Mar 12 09:43	27° $\text{044}^{\circ}06'$	-0°44'55"
min. Earth dist.	11713 Dec 27 06:13	14° $\text{028}^{\circ}30'$	8.72414 AU	min. Earth dist.	11720 Mar 12 01:46	27° $\text{045}^{\circ}39'$	8.64379 AU
direct	11714 Mar 07 02:57	11° $\text{006}^{\circ}43'$		direct	11720 May 19 16:35	24° $\text{022}^{\circ}59'$	
evening set	11714 Jun 16 21:10	18° $\text{028}^{\circ}30'$			11720 Aug 13 11:24	0° 0°	
				evening set	11720 Aug 28 05:49	1° $\text{043}^{\circ}26'$	
conjunction	11714 Jul 03 15:49	20° $\text{030}^{\circ}37'$	-1°51'37"				
minimum elong	11714 Jul 03 15:50	20° $\text{030}^{\circ}37'$	1°52'22"	conjunction	11720 Sep 14 12:27	3° $\text{049}^{\circ}30'$	-0°25'03"
max. Earth dist.	11714 Jul 03 22:50	20° $\text{032}^{\circ}46'$	10.72743 AU	minimum elong	11720 Sep 14 12:28	3° $\text{049}^{\circ}30'$	0°25'04"
morning rise	11714 Jul 20 11:16	22° $\text{032}^{\circ}59'$		max. Earth dist.	11720 Sep 14 21:05	3° $\text{052}^{\circ}08'$	10.62615 AU
retrograde	11714 Oct 31 10:36	29° $\text{059}^{\circ}21'$		morning rise	11720 Oct 01 22:32	5° $\text{056}^{\circ}34'$	

retrograde	11721 Jan 14 13:39	13°♄33'40		minimum elong	11726 Dec 02 15:26	20°♄23'05	1°40'21
opposition	11721 Mar 25 05:38	10°♄08'38 -0°15'54		max. Earth dist.	11726 Dec 02 12:46	20°♄22'15	10.40215 AU
min. Earth dist.	11721 Mar 24 22:55	10°♄09'57 8.60757 AU		morning rise	11726 Dec 20 09:50	22°♄35'20	
direct	11721 Jun 01 07:48	6°♄46'59			11727 Mar 13 07:45	0°♄	
evening set	11721 Sep 10 00:53	14°♄09'55		retrograde	11727 Apr 03 12:40	0°♄23'56	
					11727 Apr 24 19:24	30°♄♂	
conjunction	11721 Sep 27 10:15	16°♄17'07 -0°00'59		opposition	11727 Jun 10 10:56	26°♄58'20	2°09'41
minimum elong	11721 Sep 27 10:15	16°♄17'07 0°00'51		min. Earth dist.	11727 Jun 10 13:27	26°♄57'50	8.39097 AU
behind sun begin	11721 Sep 27 03:05	16°♄14'57		direct	11727 Aug 17 06:21	23°♄32'43	
behind sun end	11721 Sep 27 17:25	16°♄19'18			11727 Nov 17 19:04	0°♄	
max. Earth dist.	11721 Sep 27 18:06	16°♄19'30 10.58817 AU		evening set	11727 Nov 28 18:53	1°♄19'27	
asc. node	11721 Oct 12 14:38	18°♄08'23					
morning rise	11721 Oct 14 22:53	18°♄25'19		conjunction	11727 Dec 16 12:50	3°♄31'54	1°48'12
retrograde	11722 Jan 27 15:29	26°♄04'54		minimum elong	11727 Dec 16 12:50	3°♄31'54	1°48'59
opposition	11722 Apr 07 02:30	22°♄39'24 0°14'07		max. Earth dist.	11727 Dec 16 08:28	3°♄30'32	10.37952 AU
min. Earth dist.	11722 Apr 06 20:30	22°♄40'35 8.56812 AU		morning rise	11728 Jan 03 06:48	5°♄44'24	
direct	11722 Jun 14 01:42	19°♄17'10		retrograde	11728 Apr 16 01:17	13°♄33'07	
evening set	11722 Sep 23 00:30	26°♄43'15		opposition	11728 Jun 22 17:39	10°♄07'54	2°16'57
				min. Earth dist.	11728 Jun 22 21:22	10°♄07'10	8.37259 AU
conjunction	11722 Oct 10 12:24	28°♄51'38 0°23'21		direct	11728 Aug 29 16:41	6°♄41'47	
minimum elong	11722 Oct 10 12:23	28°♄51'37 0°23'39		evening set	11728 Dec 11 17:46	14°♄31'46	
max. Earth dist.	11722 Oct 10 19:20	28°♄53'45 10.54775 AU					
	11722 Oct 19 18:45	0°♄		conjunction	11728 Dec 29 11:48	16°♄44'30	1°51'09
morning rise	11722 Oct 28 03:09	1°♄00'54		minimum elong	11728 Dec 29 11:49	16°♄44'30	1°51'55
retrograde	11723 Feb 09 21:06	8°♄42'56		max. Earth dist.	11728 Dec 29 05:53	16°♄42'38	10.36527 AU
opposition	11723 Apr 20 00:43	5°♄17'06 0°43'44		morning rise	11729 Jan 16 04:59	18°♄57'03	
min. Earth dist.	11723 Apr 19 19:38	5°♄18'06 8.52733 AU		retrograde	11729 Apr 29 14:03	26°♄45'06	
direct	11723 Jun 26 20:46	1°♄54'11		opposition	11729 Jul 06 01:54	23°♄20'21	2°17'01
evening set	11723 Oct 06 05:00	9°♄24'03		min. Earth dist.	11729 Jul 06 06:59	23°♄19'20	8.36283 AU
				direct	11729 Sep 12 05:03	19°♄53'50	
conjunction	11723 Oct 23 18:59	11°♄33'31 0°46'42		evening set	11729 Dec 25 17:12	27°♄46'05	
minimum elong	11723 Oct 23 18:57	11°♄33'31 0°47'09					
max. Earth dist.	11723 Oct 24 00:02	11°♄35'05 10.50685 AU		conjunction	11730 Jan 12 10:57	29°♄58'54	1°48'15
morning rise	11723 Nov 10 11:25	13°♄43'47		minimum elong	11730 Jan 12 10:58	29°♄58'55	1°48'58
	11723 Nov 21 03:51	15°♄		max. Earth dist.	11730 Jan 12 03:02	29°♄56'25	10.36001 AU
retrograde	11724 Feb 23 05:40	21°♄28'04			11730 Jan 12 14:26	0°♄	
opposition	11724 May 02 00:35	18°♄02'03 1°11'30		morning rise	11730 Jan 30 03:12	2°♄11'20	
min. Earth dist.	11724 May 01 21:10	18°♄02'44 8.48715 AU		retrograde	11730 May 13 02:33	9°♄57'57	
	11724 Jun 18 14:28	15°♄♂		opposition	11730 Jul 19 11:05	6°♄33'43	2°09'51
direct	11724 Jul 08 17:16	14°♄38'26		min. Earth dist.	11730 Jul 19 17:58	6°♄32'20	8.36189 AU
	11724 Jul 28 19:49	15°♄		direct	11730 Sep 25 18:43	3°♄06'52	
evening set	11724 Oct 18 14:26	22°♄12'32		evening set	11731 Jan 08 16:19	11°♄00'25	
conjunction	11724 Nov 05 05:56	24°♄22'57 1°07'56		conjunction	11731 Jan 26 09:26	13°♄13'07	1°39'37
minimum elong	11724 Nov 05 05:54	24°♄22'57 1°08'31		minimum elong	11731 Jan 26 09:28	13°♄13'08	1°40'15
max. Earth dist.	11724 Nov 05 08:06	24°♄23'38 10.46752 AU		max. Earth dist.	11731 Jan 25 23:19	13°♄09'56	10.36342 AU
morning rise	11724 Nov 22 23:33	26°♄34'04			11731 Feb 09 14:51	15°♄	
	11724 Dec 23 01:31	0°♄♂		morning rise	11731 Feb 13 00:35	15°♄25'15	
retrograde	11725 Mar 07 14:15	4°♄20'17		retrograde	11731 May 26 13:26	23°♄09'46	
opposition	11725 May 15 02:11	0°♄54'16 1°35'57		opposition	11731 Aug 01 20:38	19°♄46'05	1°55'49
min. Earth dist.	11725 May 15 01:09	0°♄54'28 8.44971 AU		min. Earth dist.	11731 Aug 02 05:09	19°♄44'23	8.36900 AU
	11725 May 26 14:09	30°♄♂		direct	11731 Oct 09 10:28	16°♄19'04	
direct	11725 Jul 21 18:37	27°♄29'55		evening set	11732 Jan 22 13:52	24°♄12'59	
	11725 Sep 14 06:38	0°♄♂					
evening set	11725 Nov 01 04:18	5°♄08'28		conjunction	11732 Feb 09 06:02	26°♄25'23	1°25'45
				minimum elong	11732 Feb 09 06:05	26°♄25'23	1°26'15
conjunction	11725 Nov 18 20:57	7°♄19'43 1°25'55		max. Earth dist.	11732 Feb 08 18:14	26°♄21'40	10.37430 AU
minimum elong	11725 Nov 18 20:54	7°♄19'43 1°26'35		morning rise	11732 Feb 26 19:50	28°♄37'04	
max. Earth dist.	11725 Nov 18 20:18	7°♄19'31 10.43198 AU			11732 Mar 09 06:15	0°♄♂	
morning rise	11725 Dec 06 15:13	9°♄31'29		retrograde	11732 Jun 07 21:30	6°♄19'13	
retrograde	11726 Mar 21 00:19	17°♄19'12		opposition	11732 Aug 14 06:32	2°♄56'05	1°35'42
opposition	11726 May 28 05:43	13°♄53'20 1°55'44		min. Earth dist.	11732 Aug 14 15:50	2°♄54'14	8.38287 AU
min. Earth dist.	11726 May 28 06:44	13°♄53'08 8.41711 AU			11732 Sep 27 15:48	30°♄♂	
direct	11726 Aug 03 23:27	10°♄28'19		direct	11732 Oct 22 03:28	29°♄29'09	
evening set	11726 Nov 14 21:58	18°♄11'09			11732 Nov 15 11:26	0°♄♂	
				evening set	11733 Feb 04 08:54	7°♄22'35	
conjunction	11726 Dec 02 15:27	20°♄23'06 1°39'36					

conjunction	11733 Feb 21 23:49	9° X 34'28	1°07'25	conjunction	11739 May 11 01:55	26° S 29'18	-1°11'15
minimum elong	11733 Feb 21 23:52	9° X 34'29	1°07'46	minimum elong	11739 May 11 01:53	26° S 29'18	1°11'51
max. Earth dist.	11733 Feb 21 11:45	9° X 30'41	10.39161 AU	max. Earth dist.	11739 May 11 00:22	26° S 28'50	10.59458 AU
morning rise	11733 Mar 11 11:57	11° X 45'33		morning rise	11739 May 28 00:24	28° S 34'15	
retrograde	11733 Jun 21 05:12	19° X 25'17			11739 Jun 09 01:14	0° II	
opposition	11733 Aug 27 16:27	16° X 02'43	1°10'41	retrograde	11739 Sep 06 10:53	6° II 01'33	
min. Earth dist.	11733 Aug 28 01:16	16° X 00'58	8.40301 AU	opposition	11739 Nov 14 10:24	2° II 40'29	-1°38'52
direct	11733 Nov 04 19:24	12° X 36'02		min. Earth dist.	11739 Nov 14 10:00	2° II 40'34	8.61378 AU
evening set	11734 Feb 18 01:12	20° X 28'10			11739 Dec 24 19:43	30° R S	
				direct	11740 Jan 23 09:26	29° S 17'14	
conjunction	11734 Mar 07 14:32	22° X 39'23	0°45'40		11740 Feb 21 12:25	0° II	
minimum elong	11734 Mar 07 14:34	22° X 39'24	0°45'50	evening set	11740 May 05 18:04	6° II 50'11	
max. Earth dist.	11734 Mar 07 03:31	22° X 35'56	10.41520 AU				
morning rise	11734 Mar 25 00:39	24° X 49'42		conjunction	11740 May 22 16:16	8° II 54'35	-1°28'08
	11734 May 11 21:54	0° Y		minimum elong	11740 May 22 16:14	8° II 54'35	1°28'50
retrograde	11734 Jul 04 12:24	2° Y 26'55		max. Earth dist.	11740 May 22 17:46	8° II 55'03	10.63098 AU
	11734 Aug 29 05:57	30° R X		morning rise	11740 Jun 08 12:53	10° II 58'34	
opposition	11734 Sep 10 01:58	29° X 04'50	0°42'08	retrograde	11740 Sep 18 06:43	18° II 24'58	
min. Earth dist.	11734 Sep 10 10:04	29° X 03'15	8.42939 AU	opposition	11740 Nov 26 12:11	15° II 03'50	-1°57'09
direct	11734 Nov 18 09:17	25° X 38'33		min. Earth dist.	11740 Nov 26 09:50	15° II 04'17	8.64876 AU
	11735 Feb 01 07:56	0° Y		direct	11741 Feb 04 09:19	11° II 41'16	
evening set	11735 Mar 03 14:12	3° Y 28'38		evening set	11741 May 18 07:19	19° II 10'38	
conjunction	11735 Mar 21 01:28	5° Y 38'58	0°21'41	conjunction	11741 Jun 04 03:36	21° II 14'05	-1°40'50
minimum elong	11735 Mar 21 01:29	5° Y 38'58	0°21'41	minimum elong	11741 Jun 04 03:34	21° II 14'04	1°41'35
max. Earth dist.	11735 Mar 20 15:42	5° Y 35'55	10.44472 AU	max. Earth dist.	11741 Jun 04 06:57	21° II 15'07	10.66351 AU
morning rise	11735 Apr 07 09:19	7° Y 48'21		morning rise	11741 Jun 20 23:06	23° II 17'19	
retrograde	11735 Jul 17 16:19	15° Y 23'04			11741 Sep 01 19:17	0° S	
opposition	11735 Sep 23 11:04	12° Y 01'25	0°11'38	retrograde	11741 Sep 30 23:48	0° S 43'13	
min. Earth dist.	11735 Sep 23 18:22	11° Y 59'59	8.46135 AU		11741 Oct 30 14:47	30° R II	
direct	11735 Dec 01 23:07	8° Y 35'37		opposition	11741 Dec 09 12:18	27° II 21'58	-2°09'54
desc. node	11736 Feb 12 06:16	12° Y 39'46		min. Earth dist.	11741 Dec 09 08:33	27° II 22'41	8.67899 AU
evening set	11736 Mar 15 23:17	16° Y 22'57		direct	11742 Feb 17 06:38	24° II 00'02	
					11742 May 18 12:35	0° S	
conjunction	11736 Apr 02 07:58	18° Y 32'11	-0°03'19	evening set	11742 May 30 17:43	1° S 26'08	
minimum elong	11736 Apr 02 07:58	18° Y 32'11	0°03'30				
behind sun begin	11736 Apr 02 00:52	18° Y 30'00		conjunction	11742 Jun 16 12:43	3° S 28'52	-1°48'50
behind sun end	11736 Apr 02 15:03	18° Y 34'23		minimum elong	11742 Jun 16 12:42	3° S 28'51	1°49'37
max. Earth dist.	11736 Apr 01 23:30	18° Y 29'34	10.47908 AU	max. Earth dist.	11742 Jun 16 17:42	3° S 30'23	10.69058 AU
morning rise	11736 Apr 19 13:27	20° Y 40'31		morning rise	11742 Jul 03 07:46	5° S 31'35	
retrograde	11736 Jul 29 17:53	28° Y 12'55		retrograde	11742 Oct 13 15:55	12° S 57'26	
opposition	11736 Oct 05 19:12	24° Y 51'35	-0°19'11	opposition	11742 Dec 22 10:50	9° S 35'59	-2°16'40
min. Earth dist.	11736 Oct 06 01:37	24° Y 50'20	8.49760 AU	min. Earth dist.	11742 Dec 22 05:23	9° S 37'01	8.70300 AU
direct	11736 Dec 14 11:33	21° Y 26'21		direct	11743 Mar 02 03:42	6° S 14'38	
evening set	11737 Mar 29 04:15	29° Y 10'25		evening set	11743 Jun 12 01:53	13° S 37'49	
	11737 Apr 04 21:45	0° S					
				conjunction	11743 Jun 28 20:29	15° S 40'08	-1°51'53
conjunction	11737 Apr 15 10:08	1° S 18'26	-0°27'50	minimum elong	11743 Jun 28 20:29	15° S 40'08	1°52'39
minimum elong	11737 Apr 15 10:07	1° S 18'26	0°28'11	max. Earth dist.	11743 Jun 29 03:42	15° S 42'20	10.71099 AU
max. Earth dist.	11737 Apr 15 02:59	1° S 16'13	10.51678 AU	morning rise	11743 Jul 15 15:45	17° S 42'36	
morning rise	11737 May 02 13:16	3° S 25'38		retrograde	11743 Oct 26 09:19	25° S 08'48	
retrograde	11737 Aug 11 17:29	10° S 55'57		opposition	11744 Jan 04 08:03	21° S 47'04	-2°17'15
opposition	11737 Oct 19 01:49	7° S 34'49	-0°48'47	min. Earth dist.	11744 Jan 04 00:28	21° S 48'30	8.71973 AU
min. Earth dist.	11737 Oct 19 06:32	7° S 33'54	8.53641 AU	direct	11744 Mar 13 20:52	18° S 26'14	
direct	11737 Dec 27 21:12	4° S 10'12		evening set	11744 Jun 23 08:31	25° S 46'57	
evening set	11738 Apr 11 04:55	11° S 50'40					
				conjunction	11744 Jul 10 03:35	27° S 49'07	-1°49'54
conjunction	11738 Apr 28 08:03	13° S 57'26	-0°50'51	minimum elong	11744 Jul 10 03:36	27° S 49'07	1°50'38
minimum elong	11738 Apr 28 08:01	13° S 57'25	0°51'20	max. Earth dist.	11744 Jul 10 13:22	27° S 52'06	10.72378 AU
max. Earth dist.	11738 Apr 28 03:19	13° S 55'58	10.55594 AU	morning rise	11744 Jul 26 23:44	29° S 51'38	
	11738 May 06 17:50	15° S			11744 Jul 28 03:48	0° S	
morning rise	11738 May 15 08:49	16° S 03'30		retrograde	11744 Nov 07 02:32	7° S 18'33	
retrograde	11738 Aug 24 14:26	23° S 32'04		opposition	11745 Jan 16 04:05	3° S 56'28	-2°11'41
opposition	11738 Nov 01 06:56	20° S 11'01	-1°15'45	min. Earth dist.	11745 Jan 15 18:51	3° S 58'13	8.72838 AU
min. Earth dist.	11738 Nov 01 09:10	20° S 10'35	8.57576 AU	direct	11745 Mar 26 11:35	0° S 36'02	
direct	11739 Jan 10 04:45	16° S 47'04		evening set	11745 Jul 05 14:49	7° S 54'53	
evening set	11739 Apr 24 01:24	24° S 23'47					

conjunction	11745 Jul 22 10:55	9°Ω57'12	-1°42'59	direct	11751 Jun 08 21:16	14°♊07'47	
minimum elong	11745 Jul 22 10:56	9°Ω57'13	1°43'38	evening set	11751 Sep 17 17:20	21°♊30'47	
max. Earth dist.	11745 Jul 22 21:53	10°Ω00'33	10.72840 AU				
morning rise	11745 Aug 08 08:43	12°Ω00'02		conjunction	11751 Oct 05 03:48	23°♊38'10	0°12'53
	11745 Sep 03 22:40	15°Ω		minimum elong	11751 Oct 05 03:47	23°♊38'10	0°13'07
retrograde	11745 Nov 19 20:41	19°Ω27'57		behind sun begin	11751 Oct 04 23:33	23°♊36'53	
opposition	11746 Jan 28 23:13	16°Ω05'31	-2°00'15	behind sun end	11751 Oct 05 08:00	23°♊39'27	
min. Earth dist.	11746 Jan 28 13:29	16°Ω07'22	8.72868 AU	max. Earth dist.	11751 Oct 05 10:44	23°♊40'17	10.59958 AU
	11746 Feb 12 14:06	15°♌Ω		morning rise	11751 Oct 22 17:30	25°♊46'30	
direct	11746 Apr 08 01:27	12°Ω45'19			11751 Nov 30 06:46	0°♌	
	11746 May 30 07:44	15°Ω		retrograde	11752 Feb 04 10:55	3°♌25'43	
evening set	11746 Jul 17 21:29	20°Ω02'58		opposition	11752 Apr 13 17:41	0°♌00'47	0°30'57
					11752 Apr 13 21:41	30°♌♊	
conjunction	11746 Aug 03 19:10	22°Ω05'42	-1°31'29	min. Earth dist.	11752 Apr 13 12:55	0°♌01'43	8.57933 AU
minimum elong	11746 Aug 03 19:12	22°Ω05'43	1°32'01	direct	11752 Jun 20 14:40	26°♊38'53	
max. Earth dist.	11746 Aug 04 06:20	22°Ω09'06	10.72484 AU		11752 Aug 23 15:58	0°♌	
morning rise	11746 Aug 20 19:19	24°Ω09'07		evening set	11752 Sep 29 18:38	4°♌05'23	
	11746 Oct 18 13:55	0°♍					
retrograde	11746 Dec 02 15:15	1°♍38'21		conjunction	11752 Oct 17 07:22	6°♌13'53	0°36'40
	11747 Jan 17 17:54	30°♌Ω		minimum elong	11752 Oct 17 07:21	6°♌13'52	0°37'03
opposition	11747 Feb 10 17:58	28°Ω15'31	-1°43'25	max. Earth dist.	11752 Oct 17 11:47	6°♌15'14	10.55833 AU
min. Earth dist.	11747 Feb 10 08:20	28°Ω17'22	8.72085 AU	morning rise	11752 Nov 03 23:02	8°♌23'15	
direct	11747 Apr 20 13:49	24°Ω55'25			11753 Jan 11 19:29	15°♌	
	11747 Jul 10 23:53	0°♍		retrograde	11753 Feb 16 15:56	16°♌04'49	
evening set	11747 Jul 30 05:12	2°♍12'34			11753 Mar 24 19:38	15°♌♌	
				opposition	11753 Apr 26 15:44	12°♌39'37	0°59'34
conjunction	11747 Aug 16 05:07	4°♍15'57	-1°15'50	min. Earth dist.	11753 Apr 26 12:53	12°♌40'11	8.53709 AU
minimum elong	11747 Aug 16 05:09	4°♍15'57	1°16'14	direct	11753 Jul 03 10:31	9°♌16'58	
max. Earth dist.	11747 Aug 16 16:24	4°♍19'23	10.71338 AU		11753 Sep 27 19:01	15°♌	
morning rise	11747 Sep 02 07:59	6°♍20'10		evening set	11753 Oct 13 00:35	16°♌47'33	
retrograde	11747 Dec 15 09:54	13°♍51'01					
opposition	11748 Feb 23 12:24	10°♍27'44	-1°21'53	conjunction	11753 Oct 30 15:14	18°♌57'06	0°58'53
min. Earth dist.	11748 Feb 23 02:47	10°♍29'35	8.70529 AU	minimum elong	11753 Oct 30 15:12	18°♌57'05	0°59'25
direct	11748 May 02 03:25	7°♍07'36		max. Earth dist.	11753 Oct 30 17:47	18°♌57'53	10.51553 AU
evening set	11748 Aug 10 15:09	14°♍25'01		morning rise	11753 Nov 17 08:12	21°♌07'23	
				retrograde	11754 Mar 01 22:32	28°♌51'13	
conjunction	11748 Aug 27 17:46	16°♍29'15	-0°56'43	opposition	11754 May 09 15:30	25°♌25'48	1°25'32
minimum elong	11748 Aug 27 17:48	16°♍29'16	0°56'58	min. Earth dist.	11754 May 09 14:02	25°♌26'05	8.49491 AU
max. Earth dist.	11748 Aug 28 05:35	16°♍32'51	10.69443 AU	direct	11754 Jul 16 09:55	22°♌02'20	
morning rise	11748 Sep 13 23:26	18°♍34'24		evening set	11754 Oct 26 11:20	29°♌37'20	
retrograde	11748 Dec 27 07:16	26°♍07'06			11754 Oct 29 13:50	0°♌♌	
opposition	11749 Mar 07 06:39	22°♍43'22	-0°56'33				
min. Earth dist.	11749 Mar 06 20:57	22°♍45'14	8.68257 AU	conjunction	11754 Nov 13 03:27	1°♌47'50	1°18'22
direct	11749 May 14 17:13	19°♍23'03		minimum elong	11754 Nov 13 03:25	1°♌47'49	1°19'00
evening set	11749 Aug 23 04:06	26°♍41'31		max. Earth dist.	11754 Nov 13 04:02	1°♌48'00	10.47411 AU
				morning rise	11754 Nov 30 21:11	3°♌58'53	
conjunction	11749 Sep 09 09:29	28°♍46'45	-0°34'56	retrograde	11755 Mar 15 08:08	11°♌44'34	
minimum elong	11749 Sep 09 09:30	28°♍46'45	0°35'01	opposition	11755 May 22 16:57	8°♌19'03	1°47'28
max. Earth dist.	11749 Sep 09 21:02	28°♍50'16	10.66863 AU	min. Earth dist.	11755 May 22 17:11	8°♌19'00	8.45543 AU
	11749 Sep 19 10:03	0°♊		direct	11755 Jul 29 10:53	4°♌54'44	
morning rise	11749 Sep 26 17:56	0°♊52'55		evening set	11755 Nov 09 02:21	12°♌34'12	
retrograde	11750 Jan 09 07:32	8°♊27'39					
opposition	11750 Mar 20 01:29	5°♊03'30	-0°28'29	conjunction	11755 Nov 26 19:26	14°♌45'30	1°34'02
min. Earth dist.	11750 Mar 19 16:23	5°♊05'15	8.65347 AU	minimum elong	11755 Nov 26 19:24	14°♌45'30	1°34'46
direct	11750 May 27 05:52	1°♊42'49		max. Earth dist.	11755 Nov 26 17:08	14°♌44'47	10.43652 AU
evening set	11750 Sep 04 20:34	9°♊03'08		morning rise	11755 Dec 14 13:30	16°♌57'11	
				retrograde	11756 Mar 27 19:42	24°♌44'09	
conjunction	11750 Sep 22 04:34	11°♊09'25	-0°11'25	opposition	11756 Jun 03 20:22	21°♌18'39	2°04'08
minimum elong	11750 Sep 22 04:34	11°♊09'25	0°11'20	min. Earth dist.	11756 Jun 03 22:56	21°♌18'09	8.42083 AU
behind sun begin	11750 Sep 21 23:21	11°♊07'50		direct	11756 Aug 10 14:31	17°♌53'29	
behind sun end	11750 Sep 22 09:47	11°♊10'59		evening set	11756 Nov 21 20:46	25°♌37'14	
max. Earth dist.	11750 Sep 22 14:27	11°♊12'25	10.63676 AU				
morning rise	11750 Oct 09 15:46	13°♊16'40		conjunction	11756 Dec 09 14:19	27°♌49'10	1°45'00
retrograde	11751 Jan 22 08:10	20°♊53'35		minimum elong	11756 Dec 09 14:18	27°♌49'09	1°45'47
asc. node	11751 Mar 18 18:47	18°♊33'40		max. Earth dist.	11756 Dec 09 08:59	27°♌47'30	10.40478 AU
opposition	11751 Apr 01 21:07	17°♊29'00	0°01'08	morning rise	11756 Dec 27 08:19	0°♌01'16	
min. Earth dist.	11751 Apr 01 13:51	17°♊30'25	8.61877 AU		11756 Dec 27 04:10	0°♌	

retrograde	11757 Apr 10 06:15	7°♄48'53		max. Earth dist.	11763 Mar 01 03:36	16°♄45'49	10.39690 AU
opposition	11757 Jun 17 01:27	4°♄23'33	2°14'31	morning rise	11763 Mar 19 02:21	19°♄00'10	
min. Earth dist.	11757 Jun 17 06:18	4°♄22'35	8.39289 AU	retrograde	11763 Jun 28 16:02	26°♄38'25	
direct	11757 Aug 23 23:24	0°♄57'36		opposition	11763 Sep 04 04:41	23°♄15'42	0°55'51
evening set	11757 Dec 05 17:36	8°♄45'07		min. Earth dist.	11763 Sep 04 13:29	23°♄13'57	8.41094 AU
				direct	11763 Nov 12 09:45	19°♄48'48	
conjunction	11757 Dec 23 11:23	10°♄57'30	1°50'34	evening set	11764 Feb 25 15:11	27°♄39'45	
minimum elong	11757 Dec 23 11:22	10°♄57'30	1°51'21				
max. Earth dist.	11757 Dec 23 03:30	10°♄55'02	10.38059 AU	conjunction	11764 Mar 14 03:22	29°♄50'30	0°33'08
morning rise	11758 Jan 10 04:59	13°♄09'51		minimum elong	11764 Mar 14 03:23	29°♄50'31	0°33'13
retrograde	11758 Apr 23 16:48	20°♄57'24		max. Earth dist.	11764 Mar 13 16:38	29°♄47'09	10.42625 AU
opposition	11758 Jun 30 08:01	17°♄32'19	2°17'55		11764 Mar 15 09:39	0°♄	
min. Earth dist.	11758 Jun 30 14:35	17°♄31'00	8.37304 AU	morning rise	11764 Mar 31 12:29	2°♄00'21	
direct	11758 Sep 06 10:33	14°♄05'43		retrograde	11764 Jul 10 19:25	9°♄36'01	
evening set	11758 Dec 19 15:46	21°♄56'14		opposition	11764 Sep 16 13:34	6°♄13'51	0°26'07
				min. Earth dist.	11764 Sep 16 21:03	6°♄12'23	8.44334 AU
conjunction	11759 Jan 06 09:34	24°♄08'54	1°50'21	direct	11764 Nov 25 00:52	2°♄47'31	
minimum elong	11759 Jan 06 09:35	24°♄08'54	1°51'07	evening set	11765 Mar 10 01:27	10°♄35'57	
max. Earth dist.	11759 Jan 06 00:09	24°♄05'56	10.36509 AU				
morning rise	11759 Jan 24 02:25	26°♄21'17		conjunction	11765 Mar 27 11:24	12°♄45'40	0°08'34
	11759 Feb 24 19:32	0°♄		minimum elong	11765 Mar 27 11:24	12°♄45'40	0°08'28
retrograde	11759 May 07 04:27	4°♄08'03		behind sun begin	11765 Mar 27 05:08	12°♄43'44	
opposition	11759 Jul 13 15:47	0°♄43'17	2°14'05	behind sun end	11765 Mar 27 17:40	12°♄47'37	
min. Earth dist.	11759 Jul 13 23:08	0°♄41'49	8.36207 AU	max. Earth dist.	11765 Mar 27 02:42	12°♄42'58	10.46168 AU
	11759 Jul 22 17:23	30°♄		morning rise	11765 Apr 13 18:12	14°♄54'30	
direct	11759 Sep 19 22:56	27°♄16'14		retrograde	11765 Jul 23 22:15	22°♄27'44	
	11759 Nov 16 08:54	0°♄		desc. node	11765 Aug 04 05:02	22°♄20'57	
evening set	11760 Jan 02 14:14	5°♄08'48		opposition	11765 Sep 29 21:37	19°♄06'03	-0°04'42
				min. Earth dist.	11765 Sep 30 03:15	19°♄04'57	8.48101 AU
conjunction	11760 Jan 20 07:45	7°♄21'33	1°44'20	direct	11765 Dec 08 13:21	15°♄40'26	
minimum elong	11760 Jan 20 07:47	7°♄21'33	1°45'01	evening set	11766 Mar 23 08:01	23°♄25'47	
max. Earth dist.	11760 Jan 19 21:37	7°♄18'21	10.35887 AU				
morning rise	11760 Feb 06 23:28	9°♄33'48		conjunction	11766 Apr 09 15:25	25°♄34'21	-0°16'21
	11760 Mar 28 14:50	15°♄		minimum elong	11766 Apr 09 15:24	25°♄34'21	0°16'38
retrograde	11760 May 19 15:55	17°♄19'05		max. Earth dist.	11766 Apr 09 09:12	25°♄32'26	10.50130 AU
	11760 Jul 12 04:28	15°♄		morning rise	11766 Apr 26 19:39	27°♄42'02	
opposition	11760 Jul 26 00:27	13°♄54'45	2°03'11		11766 May 16 08:30	0°♄	
min. Earth dist.	11760 Jul 26 08:22	13°♄53'10	8.36047 AU	retrograde	11766 Aug 05 23:53	5°♄13'02	
direct	11760 Oct 02 12:39	10°♄27'24		opposition	11766 Oct 13 04:30	1°♄51'47	-0°35'01
	11760 Dec 17 14:36	15°♄		min. Earth dist.	11766 Oct 13 08:30	1°♄51'01	8.52205 AU
evening set	11761 Jan 15 11:53	18°♄21'02			11766 Nov 07 15:42	30°♄	
				direct	11766 Dec 21 22:32	28°♄26'58	
conjunction	11761 Feb 02 04:43	20°♄33'37	1°32'50		11767 Feb 03 07:30	0°♄	
minimum elong	11761 Feb 02 04:45	20°♄33'38	1°33'24	evening set	11767 Apr 05 10:37	6°♄08'53	
max. Earth dist.	11761 Feb 01 18:03	20°♄30'16	10.36229 AU				
morning rise	11761 Feb 19 19:05	22°♄45'33		conjunction	11767 Apr 22 15:11	8°♄16'11	-0°40'11
	11761 May 09 23:21	0°♄		minimum elong	11767 Apr 22 15:09	8°♄16'10	0°40'37
retrograde	11761 Jun 02 01:15	0°♄28'49		max. Earth dist.	11767 Apr 22 11:04	8°♄14'54	10.54317 AU
	11761 Jun 25 06:22	30°♄		morning rise	11767 May 09 16:54	10°♄22'42	
opposition	11761 Aug 08 09:48	27°♄04'58	1°45'48		11767 Jun 21 01:47	15°♄	
min. Earth dist.	11761 Aug 08 18:15	27°♄03'17	8.36843 AU	retrograde	11767 Aug 18 22:39	17°♄51'46	
direct	11761 Oct 16 03:57	23°♄37'33			11767 Oct 20 02:41	15°♄	
	11762 Jan 16 16:50	0°♄		opposition	11767 Oct 26 10:20	14°♄30'53	-1°03'19
evening set	11762 Jan 29 07:40	1°♄31'12		min. Earth dist.	11767 Oct 26 12:59	14°♄30'22	8.56454 AU
				direct	11768 Jan 04 05:55	11°♄06'54	
conjunction	11762 Feb 15 23:23	3°♄43'24	1°16'29		11768 Mar 14 23:45	15°♄	
minimum elong	11762 Feb 15 23:26	3°♄43'25	1°16'53	evening set	11768 Apr 17 09:02	18°♄45'07	
max. Earth dist.	11762 Feb 15 12:14	3°♄39'54	10.37521 AU				
morning rise	11762 Mar 05 12:17	5°♄54'49		conjunction	11768 May 04 10:42	20°♄51'07	-1°01'54
retrograde	11762 Jun 15 09:41	13°♄35'42		minimum elong	11768 May 04 10:40	20°♄51'06	1°02'27
opposition	11762 Aug 21 19:23	10°♄12'24	1°22'55	max. Earth dist.	11768 May 04 08:19	20°♄50'23	10.58539 AU
min. Earth dist.	11762 Aug 22 04:25	10°♄10'36	8.38554 AU	morning rise	11768 May 21 10:12	22°♄56'30	
direct	11762 Oct 29 18:57	6°♄45'07			11768 Aug 09 07:25	0°♄	
evening set	11763 Feb 12 01:03	14°♄37'51		retrograde	11768 Aug 30 18:53	0°♄24'04	
					11768 Sep 21 12:20	30°♄	
conjunction	11763 Mar 01 15:11	16°♄49'27	0°56'12	opposition	11768 Nov 07 14:38	27°♄03'23	-1°28'20
minimum elong	11763 Mar 01 15:13	16°♄49'27	0°56'27	min. Earth dist.	11768 Nov 07 15:38	27°♄03'12	8.60648 AU

direct	11769 Jan 16 12:05	23° 8 40'13		11775 Jul 15 17:35	15° 8	
	11769 Apr 19 16:02	0° II				
evening set	11769 Apr 30 03:37	1° II 14'40		conjunction	11775 Jul 29 09:22	16° 8 39'27 -1°37'19
				minimum elong	11775 Jul 29 09:24	16° 8 39'28 1°37'55
conjunction	11769 May 17 02:43	3° II 19'28 -1°20'31		max. Earth dist.	11775 Jul 29 19:15	16° 8 42'28 10.72755 AU
minimum elong	11769 May 17 02:41	3° II 19'27 1°21'10		morning rise	11775 Aug 15 08:19	18° 8 42'36
max. Earth dist.	11769 May 17 02:22	3° II 19'21 10.62594 AU		retrograde	11775 Nov 27 00:39	26° 8 11'25
morning rise	11769 Jun 03 00:18	5° II 23'47		opposition	11776 Feb 05 03:08	22° 8 48'50 -1°51'49
retrograde	11769 Sep 12 14:08	12° II 50'12		min. Earth dist.	11776 Feb 04 18:10	22° 8 50'32 8.72273 AU
opposition	11769 Nov 20 17:05	9° II 29'37 -1°48'57		direct	11776 Apr 14 02:23	19° 8 28'42
min. Earth dist.	11769 Nov 20 15:54	9° II 29'50 8.64569 AU		evening set	11776 Jul 23 19:48	26° 8 46'18
direct	11770 Jan 29 14:41	6° II 07'13				
evening set	11770 May 12 18:35	13° II 37'58		conjunction	11776 Aug 09 18:47	28° 8 49'27 -1°23'33
				minimum elong	11776 Aug 09 18:50	28° 8 49'28 1°24'02
conjunction	11770 May 29 15:39	15° II 41'43 -1°35'14		max. Earth dist.	11776 Aug 10 05:37	28° 8 52'45 10.71410 AU
minimum elong	11770 May 29 15:38	15° II 41'43 1°35'58			11776 Aug 19 10:44	0° II
max. Earth dist.	11770 May 29 18:04	15° II 42'28 10.66265 AU		morning rise	11776 Aug 26 20:13	0° II 53'21
morning rise	11770 Jun 15 11:39	17° II 45'10		retrograde	11776 Dec 08 19:47	8° II 23'48
retrograde	11770 Sep 25 08:15	25° II 10'52		opposition	11777 Feb 16 21:52	5° II 00'34 -1°32'26
opposition	11770 Dec 03 18:00	21° II 50'13 -2°04'22		min. Earth dist.	11777 Feb 16 12:37	5° II 02'21 8.70504 AU
min. Earth dist.	11770 Dec 03 14:20	21° II 50'54 8.67991 AU		direct	11777 Apr 26 15:39	1° II 40'17
direct	11771 Feb 11 14:33	18° II 28'32		evening set	11777 Aug 05 04:55	8° II 57'56
evening set	11771 May 25 06:19	25° II 55'47				
				conjunction	11777 Aug 22 06:14	11° II 01'53 -1°05'59
conjunction	11771 Jun 11 01:54	27° II 58'41 -1°45'30		minimum elong	11777 Aug 22 06:16	11° II 01'54 1°06'18
minimum elong	11771 Jun 11 01:53	27° II 58'41 1°46'16		max. Earth dist.	11777 Aug 22 16:30	11° II 05'01 10.69294 AU
max. Earth dist.	11771 Jun 11 06:57	28° II 00'14 10.69327 AU		morning rise	11777 Sep 08 10:32	13° II 06'42
morning rise	11771 Jun 27 20:55	0° III 01'27		retrograde	11777 Dec 21 16:49	20° II 39'02
	11771 Jun 27 16:03	0° III		opposition	11778 Mar 01 16:32	17° II 15'12 -1°08'46
retrograde	11771 Oct 08 02:40	7° III 26'55		min. Earth dist.	11778 Mar 01 08:05	17° II 16'49 8.68011 AU
opposition	11771 Dec 16 17:24	4° III 06'05 -2°13'59		direct	11778 May 09 04:40	13° II 54'35
min. Earth dist.	11771 Dec 16 12:10	4° III 07'05 8.70689 AU		evening set	11778 Aug 17 16:32	21° II 13'04
direct	11772 Feb 24 11:23	0° III 45'01				
evening set	11772 Jun 05 15:39	8° III 09'09		conjunction	11778 Sep 03 20:30	23° II 18'00 -0°45'20
				minimum elong	11778 Sep 03 20:32	23° II 18'00 0°45'30
conjunction	11772 Jun 22 10:22	10° III 11'31 -1°50'54		max. Earth dist.	11778 Sep 04 06:01	23° II 20'54 10.66508 AU
minimum elong	11772 Jun 22 10:22	10° III 11'31 1°51'41		morning rise	11778 Sep 21 03:49	25° II 23'53
max. Earth dist.	11772 Jun 22 16:41	10° III 13'27 10.71573 AU			11778 Nov 03 01:41	0° III
morning rise	11772 Jul 09 05:16	12° III 13'56		retrograde	11779 Jan 03 14:48	2° III 58'19
retrograde	11772 Oct 19 20:01	19° III 39'36			11779 Mar 08 20:05	30° III
opposition	11772 Dec 28 15:17	16° III 18'32 -2°17'30		opposition	11779 Mar 14 11:29	29° II 33'53 -0°41'48
min. Earth dist.	11772 Dec 28 09:23	16° III 19'39 8.72483 AU		min. Earth dist.	11779 Mar 14 03:48	29° II 35'22 8.64906 AU
direct	11773 Mar 08 04:21	12° III 57'55		direct	11779 May 21 17:58	26° II 12'50
evening set	11773 Jun 17 23:17	20° III 19'34			11779 Jul 29 10:53	0° III
				evening set	11779 Aug 30 07:21	3° III 32'58
conjunction	11773 Jul 04 17:54	22° III 21'41 -1°51'17				
minimum elong	11773 Jul 04 17:55	22° III 21'41 1°52'03		conjunction	11779 Sep 16 14:12	5° III 38'59 -0°22'29
max. Earth dist.	11773 Jul 05 00:43	22° III 23'46 10.72884 AU		minimum elong	11779 Sep 16 14:13	5° III 39'00 0°22'28
morning rise	11773 Jul 21 13:34	24° III 24'05		max. Earth dist.	11779 Sep 16 23:16	5° III 41'46 10.63158 AU
	11773 Sep 14 20:42	0° III		morning rise	11779 Oct 04 00:21	7° III 46'00
retrograde	11773 Nov 01 12:02	1° III 50'26		retrograde	11780 Jan 16 13:56	15° III 22'45
	11773 Dec 20 17:27	30° III		opposition	11780 Mar 26 06:59	11° III 57'46 -0°12'42
opposition	11774 Jan 10 12:06	28° III 28'59 -2°14'50		min. Earth dist.	11780 Mar 25 23:52	11° III 59'09 8.61307 AU
min. Earth dist.	11774 Jan 10 05:36	28° III 30'13 8.73318 AU		direct	11780 Jun 02 10:33	8° III 36'10
direct	11774 Mar 20 21:26	25° III 08'42		asc. node	11780 Sep 02 20:10	15° III 00'03
	11774 Jun 08 15:01	0° III		evening set	11780 Sep 11 02:21	15° III 58'46
evening set	11774 Jun 30 05:53	2° III 28'25				
				conjunction	11780 Sep 28 11:55	18° III 05'56 0°01'40
conjunction	11774 Jul 17 01:15	4° III 30'35 -1°46'41		minimum elong	11780 Sep 28 11:55	18° III 05'56 0°01'51
minimum elong	11774 Jul 17 01:17	4° III 30'36 1°47'23		behind sun begin	11780 Sep 28 04:44	18° III 03'45
max. Earth dist.	11774 Jul 17 09:24	4° III 33'04 10.73263 AU		behind sun end	11780 Sep 28 19:05	18° III 08'06
morning rise	11774 Aug 02 22:17	6° III 33'13		max. Earth dist.	11780 Sep 28 20:24	18° III 08'31 10.59369 AU
retrograde	11774 Nov 14 05:33	14° III 00'41		morning rise	11780 Oct 16 00:32	20° III 14'02
opposition	11775 Jan 23 08:00	10° III 38'43 -2°06'09		retrograde	11781 Jan 28 17:09	27° III 53'12
min. Earth dist.	11775 Jan 23 00:11	10° III 40'12 8.73230 AU		opposition	11781 Apr 08 03:20	24° III 27'45 0°17'15
direct	11775 Apr 02 13:29	7° III 18'35		min. Earth dist.	11781 Apr 07 20:55	24° III 29'01 8.57362 AU
evening set	11775 Jul 12 12:26	14° III 36'54		direct	11781 Jun 15 02:42	21° III 05'33

evening set	11781 Sep 24 01:52	28° Ω 31'19		direct	11787 Aug 31 15:29	8° \mathfrak{Z} 24'51	
	11781 Oct 06 04:59	0° \mathbb{M}		evening set	11787 Dec 13 17:25	16° \mathfrak{Z} 14'44	
conjunction	11781 Oct 11 13:46	0° \mathbb{M} 39'36	0°25'49	conjunction	11787 Dec 31 11:22	18° \mathfrak{Z} 27'27	1°51'02
minimum elong	11781 Oct 11 13:45	0° \mathbb{M} 39'36	0°26'09	minimum elong	11787 Dec 31 11:23	18° \mathfrak{Z} 27'27	1°51'48
max. Earth dist.	11781 Oct 11 20:27	0° \mathbb{M} 41'39	10.55315 AU	max. Earth dist.	11787 Dec 31 04:38	18° \mathfrak{Z} 25'20	10.36614 AU
morning rise	11781 Oct 29 04:31	2° \mathbb{M} 48'48		morning rise	11788 Jan 18 04:31	20° \mathfrak{Z} 39'58	
retrograde	11782 Feb 10 22:59	10° \mathbb{M} 30'21		retrograde	11788 Apr 30 13:45	28° \mathfrak{Z} 27'49	
opposition	11782 Apr 21 01:14	7° \mathbb{M} 04'34	0°46'39	opposition	11788 Jul 07 00:46	25° \mathfrak{Z} 03'05	2°16'31
min. Earth dist.	11782 Apr 20 20:27	7° \mathbb{M} 05'30	8.53261 AU	min. Earth dist.	11788 Jul 07 06:48	25° \mathfrak{Z} 01'53	8.36324 AU
direct	11782 Jun 27 20:05	3° \mathbb{M} 41'39		direct	11788 Sep 13 03:24	21° \mathfrak{Z} 36'30	
evening set	11782 Oct 07 06:03	11° \mathbb{M} 11'13		evening set	11788 Dec 26 16:45	29° \mathfrak{Z} 28'47	
					11788 Dec 30 21:48	0° \approx	
conjunction	11782 Oct 24 19:55	13° \mathbb{M} 20'35	0°48'56	conjunction	11789 Jan 13 10:21	1° \approx 41'35	1°47'34
minimum elong	11782 Oct 24 19:53	13° \mathbb{M} 20'34	0°49'25	minimum elong	11789 Jan 13 10:22	1° \approx 41'36	1°48'18
max. Earth dist.	11782 Oct 24 23:57	13° \mathbb{M} 21'49	10.51196 AU	max. Earth dist.	11789 Jan 13 01:15	1° \approx 38'44	10.36004 AU
	11782 Nov 07 07:09	15° \mathbb{M}		morning rise	11789 Jan 31 02:39	3° \approx 54'02	
morning rise	11782 Nov 11 12:24	15° \mathbb{M} 30'45		retrograde	11789 May 14 01:22	11° \approx 40'31	
retrograde	11783 Feb 24 04:56	23° \mathbb{M} 14'33		opposition	11789 Jul 20 09:59	8° \approx 16'20	2°08'41
opposition	11783 May 04 00:45	19° \mathbb{M} 48'35	1°14'04	min. Earth dist.	11789 Jul 20 17:33	8° \approx 14'49	8.36166 AU
min. Earth dist.	11783 May 03 22:13	19° \mathbb{M} 49'05	8.49205 AU	direct	11789 Sep 26 18:19	4° \approx 49'28	
direct	11783 Jul 10 18:36	16° \mathbb{M} 24'55		evening set	11790 Jan 09 15:41	12° \approx 43'06	
evening set	11783 Oct 20 15:10	23° \mathbb{M} 58'45					
conjunction	11783 Nov 07 06:37	26° \mathbb{M} 09'05	1°09'50	conjunction	11790 Jan 27 08:44	14° \approx 55'47	1°38'26
minimum elong	11783 Nov 07 06:35	26° \mathbb{M} 09'04	1°10'26	minimum elong	11790 Jan 27 08:46	14° \approx 55'48	1°39'04
max. Earth dist.	11783 Nov 07 07:50	26° \mathbb{M} 09'27	10.47215 AU	max. Earth dist.	11790 Jan 26 22:08	14° \approx 52'27	10.36309 AU
morning rise	11783 Nov 25 00:17	28° \mathbb{M} 20'04			11790 Jan 27 22:07	15° \approx	
	11783 Dec 09 01:24	0° \mathfrak{X}		morning rise	11790 Feb 13 23:55	17° \approx 07'57	
retrograde	11784 Mar 08 13:12	6° \mathfrak{X} 05'50		retrograde	11790 May 27 10:55	24° \approx 52'26	
opposition	11784 May 16 01:54	2° \mathfrak{X} 39'50	1°38'02	opposition	11790 Aug 02 19:37	21° \approx 28'47	1°54'04
min. Earth dist.	11784 May 16 01:32	2° \mathfrak{X} 39'54	8.45402 AU	min. Earth dist.	11790 Aug 03 03:59	21° \approx 27'07	8.36872 AU
	11784 Jun 23 14:39	30° $\mathbb{R}\mathbb{M}$		direct	11790 Oct 10 10:59	18° \approx 01'47	
direct	11784 Jul 22 19:33	29° \mathbb{M} 15'25		evening set	11791 Jan 23 13:06	25° \approx 55'44	
	11784 Aug 20 19:03	0° \mathfrak{X}					
evening set	11784 Nov 02 04:44	6° \mathfrak{X} 53'42		conjunction	11791 Feb 10 05:20	28° \approx 08'08	1°24'08
				minimum elong	11791 Feb 10 05:22	28° \approx 08'09	1°24'37
conjunction	11784 Nov 19 21:25	9° \mathfrak{X} 04'53	1°27'23	max. Earth dist.	11791 Feb 09 18:00	28° \approx 04'34	10.37424 AU
minimum elong	11784 Nov 19 21:23	9° \mathfrak{X} 04'52	1°28'05		11791 Feb 25 02:54	0° \mathfrak{H}	
max. Earth dist.	11784 Nov 19 20:34	9° \mathfrak{X} 04'37	10.43584 AU	morning rise	11791 Feb 27 19:05	0° \mathfrak{H} 19'48	
morning rise	11784 Dec 07 15:36	11° \mathfrak{X} 16'33		retrograde	11791 Jun 09 20:43	8° \mathfrak{H} 01'56	
retrograde	11785 Mar 21 23:47	19° \mathfrak{X} 03'50		opposition	11791 Aug 16 05:31	4° \mathfrak{H} 38'49	1°33'28
opposition	11785 May 29 05:01	15° \mathfrak{X} 37'56	1°57'15	min. Earth dist.	11791 Aug 16 14:09	4° \mathfrak{H} 37'06	8.38298 AU
min. Earth dist.	11785 May 29 06:03	15° \mathfrak{X} 37'44	8.42051 AU	direct	11791 Oct 24 02:26	1° \mathfrak{H} 11'54	
direct	11785 Aug 04 23:16	12° \mathfrak{X} 12'52		evening set	11792 Feb 06 08:07	9° \mathfrak{H} 05'17	
evening set	11785 Nov 15 22:03	19° \mathfrak{X} 55'28					
conjunction	11785 Dec 03 15:35	22° \mathfrak{X} 07'20	1°40'34	conjunction	11792 Feb 23 23:06	11° \mathfrak{H} 17'11	1°05'27
minimum elong	11785 Dec 03 15:33	22° \mathfrak{X} 07'20	1°41'20	minimum elong	11792 Feb 23 23:08	11° \mathfrak{H} 17'12	1°05'46
max. Earth dist.	11785 Dec 03 13:09	22° \mathfrak{X} 06'35	10.40501 AU	max. Earth dist.	11792 Feb 23 11:49	11° \mathfrak{H} 13'39	10.39184 AU
morning rise	11785 Dec 21 09:45	24° \mathfrak{X} 19'29		morning rise	11792 Mar 12 11:03	13° \mathfrak{H} 28'14	
	11786 Feb 13 06:15	0° \mathfrak{Z}		retrograde	11792 Jun 22 05:08	21° \mathfrak{H} 07'56	
retrograde	11786 Apr 04 11:37	2° \mathfrak{Z} 07'44		opposition	11792 Aug 28 15:28	17° \mathfrak{H} 45'21	1°08'03
	11786 May 25 18:43	30° $\mathbb{R}\mathfrak{X}$		min. Earth dist.	11792 Aug 29 00:04	17° \mathfrak{H} 43'39	8.40314 AU
opposition	11786 Jun 11 10:00	28° \mathfrak{X} 42'06	2°10'33	direct	11792 Nov 05 17:34	14° \mathfrak{H} 18'43	
min. Earth dist.	11786 Jun 11 12:19	28° \mathfrak{X} 41'38	8.39334 AU	evening set	11793 Feb 19 00:20	22° \mathfrak{H} 10'50	
direct	11786 Aug 18 06:23	25° \mathfrak{X} 16'25		conjunction	11793 Mar 08 13:36	24° \mathfrak{H} 22'02	0°43'26
	11786 Nov 03 13:33	0° \mathfrak{Z}		minimum elong	11793 Mar 08 13:38	24° \mathfrak{H} 22'03	0°43'35
evening set	11786 Nov 29 18:41	3° \mathfrak{Z} 03'00		max. Earth dist.	11793 Mar 08 02:43	24° \mathfrak{H} 18'38	10.41513 AU
				morning rise	11793 Mar 25 23:33	26° \mathfrak{H} 32'20	
conjunction	11786 Dec 17 12:38	5° \mathfrak{Z} 15'23	1°48'38		11793 Apr 25 00:19	0° \mathfrak{Y}	
minimum elong	11786 Dec 17 12:37	5° \mathfrak{Z} 15'23	1°49'25	retrograde	11793 Jul 05 11:18	4° \mathfrak{Y} 09'36	
max. Earth dist.	11786 Dec 17 08:15	5° \mathfrak{Z} 14'01	10.38137 AU	opposition	11793 Sep 11 01:11	0° \mathfrak{Y} 47'34	0°39'16
morning rise	11787 Jan 04 06:26	7° \mathfrak{Z} 27'49		min. Earth dist.	11793 Sep 11 09:46	0° \mathfrak{Y} 45'52	8.42899 AU
retrograde	11787 Apr 18 00:31	15° \mathfrak{Z} 16'15			11793 Sep 21 05:16	30° $\mathbb{R}\mathfrak{H}$	
opposition	11787 Jun 24 16:34	11° \mathfrak{Z} 51'02	2°17'08	direct	11793 Nov 19 08:28	27° \mathfrak{H} 21'19	
min. Earth dist.	11787 Jun 24 20:35	11° \mathfrak{Z} 50'14	8.37393 AU		11794 Jan 15 11:31	0° \mathfrak{Y}	

evening set	11794 Mar 04 13:15	5°♈11'27		conjunction	11800 Jun 06 04:00	23°♊01'48	-1°41'48
				minimum elong	11800 Jun 06 03:59	23°♊01'48	1°42'34
conjunction	11794 Mar 22 00:20	7°♈21'47	0°19'20	max. Earth dist.	11800 Jun 06 06:55	23°♊02'42	10.65823 AU
minimum elong	11794 Mar 22 00:21	7°♈21'47	0°19'18	morning rise	11800 Jun 22 23:37	25°♊05'08	
max. Earth dist.	11794 Mar 21 13:53	7°♈18'31	10.44390 AU		11800 Aug 08 06:17	0°♊	
morning rise	11794 Apr 08 08:10	9°♈31'10		retrograde	11800 Oct 03 00:29	2°♊31'32	
retrograde	11794 Jul 18 15:37	17°♈06'04			11800 Nov 30 13:25	30°♊	
opposition	11794 Sep 24 10:26	13°♈44'28	0°08'40	opposition	11800 Dec 11 13:58	29°♊10'12	-2°10'48
min. Earth dist.	11794 Sep 24 18:28	13°♈42'54	8.46010 AU	min. Earth dist.	11800 Dec 11 10:07	29°♊10'56	8.67367 AU
direct	11794 Dec 02 22:21	10°♈18'43		direct	11801 Feb 19 09:17	25°♊48'14	
desc. node	11795 Jan 07 13:38	11°♈22'40			11801 May 04 00:40	0°♊	
evening set	11795 Mar 17 22:29	18°♈06'13		evening set	11801 Jun 01 18:31	3°♊14'36	
conjunction	11795 Apr 04 06:59	20°♈15'28	-0°05'42	conjunction	11801 Jun 18 13:36	5°♊17'25	-1°49'18
minimum elong	11795 Apr 04 06:58	20°♈15'28	0°05'55	minimum elong	11801 Jun 18 13:35	5°♊17'24	1°50'05
behind sun begin	11795 Apr 04 00:09	20°♈13'21		max. Earth dist.	11801 Jun 18 19:06	5°♊19'06	10.68525 AU
behind sun end	11795 Apr 04 13:47	20°♈17'34		morning rise	11801 Jul 05 08:43	7°♊20'13	
max. Earth dist.	11795 Apr 03 21:37	20°♈12'33	10.47731 AU	retrograde	11801 Oct 15 18:25	14°♊46'30	
morning rise	11795 Apr 21 12:29	22°♈23'49		opposition	11801 Dec 24 12:40	11°♊24'57	-2°16'55
retrograde	11795 Jul 31 17:20	29°♈56'30		min. Earth dist.	11801 Dec 24 06:28	11°♊26'08	8.69770 AU
opposition	11795 Oct 07 18:45	26°♈35'13	-0°22'07	direct	11802 Mar 04 04:51	8°♊03'34	
min. Earth dist.	11795 Oct 08 01:22	26°♈33'56	8.49536 AU	evening set	11802 Jun 14 02:59	15°♊26'57	
direct	11795 Dec 16 10:45	23°♈10'02					
	11796 Mar 22 15:05	0°♈		conjunction	11802 Jun 30 21:46	17°♊29'21	-1°51'48
evening set	11796 Mar 30 03:36	0°♈54'22		minimum elong	11802 Jun 30 21:46	17°♊29'21	1°52'35
				max. Earth dist.	11802 Jul 01 06:00	17°♊31'52	10.70574 AU
conjunction	11796 Apr 16 09:23	3°♈02'25	-0°30'08	morning rise	11802 Jul 17 17:02	19°♊31'55	
minimum elong	11796 Apr 16 09:21	3°♈02'24	0°30'30	retrograde	11802 Oct 28 11:25	26°♊58'30	
max. Earth dist.	11796 Apr 16 02:09	3°♈00'10	10.51404 AU	opposition	11803 Jan 06 10:10	23°♊36'38	-2°16'49
morning rise	11796 May 03 12:26	5°♈09'39		min. Earth dist.	11803 Jan 06 01:53	23°♊38'13	8.71458 AU
retrograde	11796 Aug 12 16:39	12°♈40'23		direct	11803 Mar 16 22:19	20°♊15'45	
opposition	11796 Oct 20 01:47	9°♈19'15	-0°51'32	evening set	11803 Jun 26 09:57	27°♊36'39	
min. Earth dist.	11796 Oct 20 05:56	9°♈18'27	8.53322 AU				
direct	11796 Dec 28 21:30	5°♈54'44		conjunction	11803 Jul 13 05:05	29°♊38'54	-1°49'16
evening set	11797 Apr 12 04:24	13°♈35'29		minimum elong	11803 Jul 13 05:06	29°♊38'54	1°50'00
	11797 Apr 23 15:22	15°♈		max. Earth dist.	11803 Jul 13 15:13	29°♊42'00	10.71882 AU
					11803 Jul 16 02:12	0°♊	
conjunction	11797 Apr 29 07:32	15°♈42'17	-0°52'57	morning rise	11803 Jul 30 01:22	1°♊41'30	
minimum elong	11797 Apr 29 07:30	15°♈42'17	0°53'28	retrograde	11803 Nov 10 05:23	9°♊08'44	
max. Earth dist.	11797 Apr 29 03:32	15°♈41'03	10.55230 AU	opposition	11804 Jan 19 06:30	5°♊46'32	-2°10'36
morning rise	11797 May 16 08:08	17°♈48'23		min. Earth dist.	11804 Jan 18 21:19	5°♊48'17	8.72364 AU
retrograde	11797 Aug 25 15:30	25°♈17'28		direct	11804 Mar 28 13:36	2°♊26'01	
opposition	11797 Nov 02 07:18	21°♈56'25	-1°18'12	evening set	11804 Jul 07 16:29	9°♊45'00	
min. Earth dist.	11797 Nov 02 09:02	21°♈56'05	8.57173 AU				
direct	11798 Jan 11 05:12	18°♈32'33		conjunction	11804 Jul 24 12:38	11°♊47'24	-1°41'50
evening set	11798 Apr 25 01:17	26°♈09'33		minimum elong	11804 Jul 24 12:40	11°♊47'24	1°42'29
				max. Earth dist.	11804 Jul 24 23:15	11°♊50'38	10.72399 AU
conjunction	11798 May 12 01:46	28°♈15'09	-1°13'03	morning rise	11804 Aug 10 10:45	13°♊50'21	
minimum elong	11798 May 12 01:44	28°♈15'08	1°13'41		11804 Aug 20 08:04	15°♊	
max. Earth dist.	11798 May 12 00:38	28°♈14'48	10.59017 AU	retrograde	11804 Nov 21 23:19	21°♊18'29	
	11798 May 26 05:49	0°♊		opposition	11805 Jan 31 01:44	17°♊55'56	-1°58'32
morning rise	11798 May 29 00:07	0°♊20'10		min. Earth dist.	11805 Jan 30 16:21	17°♊57'43	8.72457 AU
retrograde	11798 Sep 07 13:02	7°♊47'56			11805 Mar 19 04:25	15°♊	
opposition	11798 Nov 15 11:10	4°♊26'52	-1°40'53	direct	11805 Apr 10 02:45	14°♊35'38	
min. Earth dist.	11798 Nov 15 10:57	4°♊26'55	8.60907 AU		11805 May 01 21:34	15°♊	
direct	11799 Jan 24 07:53	1°♊03'39		evening set	11805 Jul 19 23:19	21°♊53'23	
evening set	11799 May 07 18:22	8°♊36'56					
				conjunction	11805 Aug 05 21:13	23°♊56'12	-1°29'51
conjunction	11799 May 24 16:25	10°♊41'24	-1°29'34	minimum elong	11805 Aug 05 21:15	23°♊56'13	1°30'23
minimum elong	11799 May 24 16:22	10°♊41'24	1°30'17	max. Earth dist.	11805 Aug 06 08:21	23°♊59'36	10.72110 AU
max. Earth dist.	11799 May 24 17:29	10°♊41'44	10.62600 AU	morning rise	11805 Aug 22 21:39	25°♊59'43	
morning rise	11799 Jun 10 13:04	12°♊45'28			11805 Sep 28 13:08	0°♊	
retrograde	11799 Sep 20 07:03	20°♊12'20		retrograde	11805 Dec 04 16:23	3°♊29'07	
opposition	11799 Nov 28 13:28	16°♊51'11	-1°58'39	opposition	11806 Feb 12 20:27	0°♊06'09	-1°41'09
min. Earth dist.	11799 Nov 28 11:39	16°♊51'32	8.64362 AU	min. Earth dist.	11806 Feb 12 10:39	0°♊08'01	8.71742 AU
direct	11800 Feb 06 09:39	13°♊28'37			11806 Feb 14 04:41	30°♊	
evening set	11800 May 20 07:50	20°♊58'18		direct	11806 Apr 22 17:03	26°♊45'58	

	11806 Jun 25 01:36	0° \mathbb{M}	retrograde	11812 Feb 19 17:03	17° \mathbb{M} 54'52	
evening set	11806 Aug 01 07:10	4° \mathbb{M} 03'11		11812 Apr 22 06:56	15° \mathbb{R} \mathbb{M}	
			opposition	11812 Apr 28 17:26	14° \mathbb{M} 29'42	1°02'24
conjunction	11806 Aug 18 07:23	6° \mathbb{M} 06'39 -1°13'48	min. Earth dist.	11812 Apr 28 13:54	14° \mathbb{M} 30'24	8.54157 AU
minimum elong	11806 Aug 18 07:25	6° \mathbb{M} 06'40 1°14'11	direct	11812 Jul 05 13:24	11° \mathbb{M} 07'06	
max. Earth dist.	11806 Aug 18 19:35	6° \mathbb{M} 10'22 10.71033 AU		11812 Sep 12 21:27	15° \mathbb{M}	
morning rise	11806 Sep 04 10:24	8° \mathbb{M} 10'56	evening set	11812 Oct 15 02:59	18° \mathbb{M} 37'30	
retrograde	11806 Dec 17 12:45	15° \mathbb{M} 41'55				
opposition	11807 Feb 25 14:50	12° \mathbb{M} 18'31 -1°19'10	conjunction	11812 Nov 01 17:41	20° \mathbb{M} 46'59	1°01'01
min. Earth dist.	11807 Feb 25 04:20	12° \mathbb{M} 20'31 8.70262 AU	minimum elong	11812 Nov 01 17:38	20° \mathbb{M} 46'58	1°01'35
direct	11807 May 05 06:19	8° \mathbb{M} 58'19	max. Earth dist.	11812 Nov 01 20:41	20° \mathbb{M} 47'55	10.52042 AU
evening set	11807 Aug 13 17:17	16° \mathbb{M} 15'45	morning rise	11812 Nov 19 10:29	22° \mathbb{M} 57'10	
				11813 Feb 03 22:29	0° \mathbb{Z}	
conjunction	11807 Aug 30 20:09	18° \mathbb{M} 20'04 -0°54'22	retrograde	11813 Mar 04 01:17	0° \mathbb{Z} 40'38	
minimum elong	11807 Aug 30 20:11	18° \mathbb{M} 20'04 0°54'36		11813 Apr 01 06:05	30° \mathbb{R} \mathbb{M}	
max. Earth dist.	11807 Aug 31 08:49	18° \mathbb{M} 23'55 10.69221 AU	opposition	11813 May 11 16:48	27° \mathbb{M} 15'18	1°27'56
morning rise	11807 Sep 17 01:58	20° \mathbb{M} 25'16	min. Earth dist.	11813 May 11 15:08	27° \mathbb{M} 15'38	8.50017 AU
retrograde	11807 Dec 30 10:59	27° \mathbb{M} 58'01	direct	11813 Jul 18 10:27	23° \mathbb{M} 51'54	
opposition	11808 Mar 09 09:06	24° \mathbb{M} 34'12 -0°53'30		11813 Oct 16 09:41	0° \mathbb{Z}	
min. Earth dist.	11808 Mar 08 22:50	24° \mathbb{M} 36'11 8.68085 AU	evening set	11813 Oct 28 13:35	1° \mathbb{Z} 26'42	
direct	11808 May 16 18:12	21° \mathbb{M} 13'50				
evening set	11808 Aug 25 06:25	28° \mathbb{M} 32'20	conjunction	11813 Nov 15 05:34	3° \mathbb{Z} 37'07	1°20'06
	11808 Sep 06 08:36	0° \mathbb{Z}	minimum elong	11813 Nov 15 05:32	3° \mathbb{Z} 37'06	1°20'46
			max. Earth dist.	11813 Nov 15 05:37	3° \mathbb{Z} 37'08	10.47956 AU
conjunction	11808 Sep 11 11:56	0° \mathbb{Z} 37'36 -0°32'22	morning rise	11813 Dec 02 23:12	5° \mathbb{Z} 48'04	
minimum elong	11808 Sep 11 11:57	0° \mathbb{Z} 37'36 0°32'26	retrograde	11814 Mar 17 10:25	13° \mathbb{Z} 33'20	
max. Earth dist.	11808 Sep 11 23:24	0° \mathbb{Z} 41'06 10.66749 AU	opposition	11814 May 24 18:05	10° \mathbb{Z} 07'57	1°49'19
morning rise	11808 Sep 28 20:38	2° \mathbb{Z} 43'50	min. Earth dist.	11814 May 24 18:52	10° \mathbb{Z} 07'48	8.46107 AU
retrograde	11809 Jan 11 09:44	10° \mathbb{Z} 18'32	direct	11814 Jul 31 11:23	6° \mathbb{Z} 43'41	
opposition	11809 Mar 22 03:51	6° \mathbb{Z} 54'21 -0°25'14	evening set	11814 Nov 11 04:15	14° \mathbb{Z} 22'59	
min. Earth dist.	11809 Mar 21 18:57	6° \mathbb{Z} 56'04 8.65296 AU				
direct	11809 May 29 08:09	3° \mathbb{Z} 33'38	conjunction	11814 Nov 28 21:09	16° \mathbb{Z} 34'10	1°35'17
evening set	11809 Sep 06 23:04	10° \mathbb{Z} 53'58	minimum elong	11814 Nov 28 21:07	16° \mathbb{Z} 34'09	1°36'02
			max. Earth dist.	11814 Nov 28 17:49	16° \mathbb{Z} 33'08	10.44222 AU
conjunction	11809 Sep 24 07:08	13° \mathbb{Z} 00'17 -0°08'46	morning rise	11814 Dec 16 15:13	18° \mathbb{Z} 45'45	
minimum elong	11809 Sep 24 07:08	13° \mathbb{Z} 00'17 0°08'40	retrograde	11815 Mar 30 19:43	26° \mathbb{Z} 32'18	
behind sun begin	11809 Sep 24 00:55	12° \mathbb{Z} 58'24	opposition	11815 Jun 06 21:13	23° \mathbb{Z} 06'57	2°05'20
behind sun end	11809 Sep 24 13:20	13° \mathbb{Z} 02'09	min. Earth dist.	11815 Jun 07 00:33	23° \mathbb{Z} 06'17	8.42655 AU
max. Earth dist.	11809 Sep 24 16:32	13° \mathbb{Z} 03'08 10.63700 AU	direct	11815 Aug 13 16:50	19° \mathbb{Z} 41'51	
morning rise	11809 Oct 11 18:34	15° \mathbb{Z} 07'33	evening set	11815 Nov 24 22:26	27° \mathbb{Z} 25'25	
retrograde	11810 Jan 24 10:29	22° \mathbb{Z} 44'22				
asc. node	11810 Feb 08 06:06	22° \mathbb{Z} 33'15	conjunction	11815 Dec 12 15:54	29° \mathbb{Z} 37'14	1°45'41
opposition	11810 Apr 03 23:21	19° \mathbb{Z} 19'49 0°04'24	minimum elong	11815 Dec 12 15:53	29° \mathbb{Z} 37'14	1°46'29
min. Earth dist.	11810 Apr 03 16:24	19° \mathbb{Z} 21'10 8.61985 AU	max. Earth dist.	11815 Dec 12 09:53	29° \mathbb{Z} 35'22	10.41044 AU
direct	11810 Jun 10 23:30	15° \mathbb{Z} 58'35		11815 Dec 15 16:52	0° \mathbb{Z}	
evening set	11810 Sep 19 19:49	23° \mathbb{Z} 21'33	morning rise	11815 Dec 30 09:52	1° \mathbb{Z} 49'14	
			retrograde	11816 Apr 12 05:54	9° \mathbb{Z} 36'26	
conjunction	11810 Oct 07 06:24	25° \mathbb{Z} 28'55 0°15'29	opposition	11816 Jun 19 01:56	6° \mathbb{Z} 11'14	2°15'00
minimum elong	11810 Oct 07 06:23	25° \mathbb{Z} 28'55 0°15'45	min. Earth dist.	11816 Jun 19 07:05	6° \mathbb{Z} 10'12	8.39842 AU
behind sun begin	11810 Oct 07 05:15	25° \mathbb{Z} 28'34	direct	11816 Aug 26 00:49	2° \mathbb{Z} 45'22	
behind sun end	11810 Oct 07 07:31	25° \mathbb{Z} 29'16	evening set	11816 Dec 07 18:57	10° \mathbb{Z} 32'40	
max. Earth dist.	11810 Oct 07 13:41	25° \mathbb{Z} 31'09 10.60160 AU				
morning rise	11810 Oct 24 20:11	27° \mathbb{Z} 37'14	conjunction	11816 Dec 25 12:44	12° \mathbb{Z} 44'58	1°50'41
	11810 Nov 14 10:55	0° \mathbb{M}	minimum elong	11816 Dec 25 12:44	12° \mathbb{Z} 44'58	1°51'29
retrograde	11811 Feb 06 12:44	5° \mathbb{M} 16'15	max. Earth dist.	11816 Dec 25 04:56	12° \mathbb{Z} 42'32	10.38592 AU
opposition	11811 Apr 16 19:43	1° \mathbb{M} 51'21 0°34'05	morning rise	11817 Jan 12 06:11	14° \mathbb{Z} 57'12	
min. Earth dist.	11811 Apr 16 14:36	1° \mathbb{M} 52'21 8.58233 AU	retrograde	11817 Apr 25 17:43	22° \mathbb{Z} 44'22	
	11811 May 11 22:53	30° \mathbb{R} \mathbb{Z}	opposition	11817 Jul 02 08:17	19° \mathbb{Z} 19'24	2°17'42
direct	11811 Jun 23 17:04	28° \mathbb{Z} 29'28	min. Earth dist.	11817 Jul 02 14:31	19° \mathbb{Z} 18'09	8.37811 AU
	11811 Aug 04 14:53	0° \mathbb{M}	direct	11817 Sep 08 10:50	15° \mathbb{Z} 52'53	
evening set	11811 Oct 02 21:01	5° \mathbb{M} 55'50	evening set	11817 Dec 21 16:42	23° \mathbb{Z} 43'10	
conjunction	11811 Oct 20 09:54	8° \mathbb{M} 04'17 0°39'06	conjunction	11818 Jan 08 10:33	25° \mathbb{Z} 55'45	1°49'54
minimum elong	11811 Oct 20 09:53	8° \mathbb{M} 04'16 0°39'32	minimum elong	11818 Jan 08 10:34	25° \mathbb{Z} 55'45	1°50'39
max. Earth dist.	11811 Oct 20 15:16	8° \mathbb{M} 05'56 10.56210 AU	max. Earth dist.	11818 Jan 08 01:37	25° \mathbb{Z} 52'57	10.36988 AU
morning rise	11811 Nov 07 01:29	10° \mathbb{M} 13'35	morning rise	11818 Jan 26 03:11	28° \mathbb{Z} 08'03	
	11811 Dec 21 09:00	15° \mathbb{M}		11818 Feb 10 17:20	0° \mathbb{Z}	

retrograde	11818 May 09 04:58	5° \approx 54'27		behind sun begin	11824 Mar 29 04:09	14° Υ 27'41	
opposition	11818 Jul 15 15:54	2° \approx 29'47	2°13'11	behind sun end	11824 Mar 29 17:45	14° Υ 31'53	
min. Earth dist.	11818 Jul 15 23:04	2° \approx 28'21	8.36651 AU	max. Earth dist.	11824 Mar 29 02:40	14° Υ 27'13	10.46040 AU
	11818 Aug 19 14:41	30° \mathbb{R} 3		morning rise	11824 Apr 15 17:32	16° Υ 38'34	
direct	11818 Sep 21 23:19	29° \mathbb{Z} 02'48		desc. node	11824 Jun 30 17:18	23° Υ 38'02	
	11818 Oct 25 02:27	0° \approx		retrograde	11824 Jul 25 22:58	24° Υ 11'52	
evening set	11819 Jan 04 14:57	6° \approx 55'09		opposition	11824 Oct 01 21:27	20° Υ 50'07	-0°07'42
				min. Earth dist.	11824 Oct 02 03:12	20° Υ 49'00	8.47915 AU
conjunction	11819 Jan 22 08:27	9° \approx 07'49	1°43'21	direct	11824 Dec 10 11:49	17° Υ 24'28	
minimum elong	11819 Jan 22 08:28	9° \approx 07'50	1°44'01	evening set	11825 Mar 25 07:35	25° Υ 09'49	
max. Earth dist.	11819 Jan 21 22:11	9° \approx 04'36	10.36299 AU				
morning rise	11819 Feb 09 00:02	11° \approx 20'00		conjunction	11825 Apr 11 14:49	27° Υ 18'23	-0°18'44
	11819 Mar 12 21:38	15° \approx		minimum elong	11825 Apr 11 14:48	27° Υ 18'23	0°19'01
retrograde	11819 May 22 15:33	19° \approx 04'57		max. Earth dist.	11825 Apr 11 08:24	27° Υ 16'24	10.49888 AU
opposition	11819 Jul 29 00:25	15° \approx 40'42	2°01'38	morning rise	11825 Apr 28 18:56	29° Υ 26'05	
min. Earth dist.	11819 Jul 29 08:53	15° \approx 39'00	8.36415 AU		11825 May 03 10:51	0° \mathbb{B}	
	11819 Aug 06 13:11	15° \mathbb{R} \approx		retrograde	11825 Aug 07 23:11	6° \mathbb{B} 57'14	
direct	11819 Oct 05 13:07	12° \approx 13'23		opposition	11825 Oct 15 04:31	3° \mathbb{B} 35'56	-0°37'53
	11819 Dec 02 15:56	15° \approx		min. Earth dist.	11825 Oct 15 09:13	3° \mathbb{B} 35'01	8.51917 AU
evening set	11820 Jan 18 12:24	20° \approx 06'49		direct	11825 Dec 23 22:18	0° \mathbb{B} 11'02	
				evening set	11826 Apr 07 10:12	7° \mathbb{B} 53'04	
conjunction	11820 Feb 05 05:06	22° \approx 19'21	1°31'21				
minimum elong	11820 Feb 05 05:08	22° \approx 19'22	1°31'54	conjunction	11826 Apr 24 14:33	10° \mathbb{B} 00'23	-0°42'24
max. Earth dist.	11820 Feb 04 17:32	22° \approx 15'43	10.36556 AU	minimum elong	11826 Apr 24 14:31	10° \mathbb{B} 00'22	0°42'52
morning rise	11820 Feb 22 19:27	24° \approx 31'13		max. Earth dist.	11826 Apr 24 09:34	9° \mathbb{B} 58'50	10.53978 AU
	11820 Apr 14 01:00	0° \mathbb{H}		morning rise	11826 May 11 16:18	12° \mathbb{B} 06'55	
retrograde	11820 Jun 04 01:41	2° \mathbb{H} 14'11			11826 Jun 05 14:39	15° \mathbb{B}	
	11820 Jul 26 13:14	30° \mathbb{R} \approx		retrograde	11826 Aug 20 21:53	19° \mathbb{B} 36'16	
opposition	11820 Aug 10 09:44	28° \approx 50'24	1°43'42	opposition	11826 Oct 28 10:29	16° \mathbb{B} 15'19	-1°05'56
min. Earth dist.	11820 Aug 10 19:06	28° \approx 48'32	8.37118 AU	min. Earth dist.	11826 Oct 28 13:35	16° \mathbb{B} 14'43	8.56075 AU
direct	11820 Oct 18 03:26	25° \approx 22'59			11826 Nov 14 02:59	15° \mathbb{R} \mathbb{B}	
	11821 Jan 03 03:05	0° \mathbb{H}		direct	11827 Jan 06 06:42	12° \mathbb{B} 51'16	
evening set	11821 Jan 31 07:51	3° \mathbb{H} 16'27			11827 Feb 26 16:52	15° \mathbb{B}	
				evening set	11827 Apr 20 08:45	20° \mathbb{B} 29'41	
conjunction	11821 Feb 17 23:24	5° \mathbb{H} 28'36	1°14'36				
minimum elong	11821 Feb 17 23:26	5° \mathbb{H} 28'37	1°15'00	conjunction	11827 May 07 10:16	22° \mathbb{B} 35'43	-1°03'52
max. Earth dist.	11821 Feb 17 11:08	5° \mathbb{H} 24'45	10.37747 AU	minimum elong	11827 May 07 10:14	22° \mathbb{B} 35'43	1°04'27
morning rise	11821 Mar 07 12:19	7° \mathbb{H} 39'59		max. Earth dist.	11827 May 07 07:32	22° \mathbb{B} 34'52	10.58115 AU
retrograde	11821 Jun 17 08:55	15° \mathbb{H} 20'37		morning rise	11827 May 24 09:45	24° \mathbb{B} 41'09	
opposition	11821 Aug 23 19:12	11° \mathbb{H} 57'21	1°20'24		11827 Jul 14 00:57	0° \mathbb{I}	
min. Earth dist.	11821 Aug 24 04:45	11° \mathbb{H} 55'27	8.38726 AU	retrograde	11827 Sep 02 19:02	2° \mathbb{I} 09'05	
direct	11821 Oct 31 19:30	8° \mathbb{H} 30'03			11827 Oct 25 16:18	30° \mathbb{R} \mathbb{B}	
evening set	11822 Feb 14 00:53	16° \mathbb{H} 22'37		opposition	11827 Nov 10 15:00	28° \mathbb{B} 48'19	-1°30'34
				min. Earth dist.	11827 Nov 10 15:39	28° \mathbb{B} 48'12	8.60192 AU
conjunction	11822 Mar 03 14:57	18° \mathbb{H} 34'10	0°54'02	direct	11828 Jan 19 12:07	25° \mathbb{B} 25'08	
minimum elong	11822 Mar 03 14:59	18° \mathbb{H} 34'10	0°54'16		11828 Apr 05 23:14	0° \mathbb{I}	
max. Earth dist.	11822 Mar 03 02:56	18° \mathbb{H} 30'24	10.39808 AU	evening set	11828 May 02 03:26	2° \mathbb{I} 59'50	
morning rise	11822 Mar 21 02:07	20° \mathbb{H} 44'51					
retrograde	11822 Jun 30 14:12	28° \mathbb{H} 22'59		conjunction	11828 May 19 02:32	5° \mathbb{I} 04'41	-1°22'07
opposition	11822 Sep 06 04:22	25° \mathbb{H} 00'13	0°53'02	minimum elong	11828 May 19 02:30	5° \mathbb{I} 04'40	1°22'48
min. Earth dist.	11822 Sep 06 12:59	24° \mathbb{H} 58'31	8.41151 AU	max. Earth dist.	11828 May 19 02:51	5° \mathbb{I} 04'47	10.62109 AU
direct	11822 Nov 14 11:13	21° \mathbb{H} 33'17		morning rise	11828 Jun 05 00:00	7° \mathbb{I} 09'04	
evening set	11823 Feb 27 14:49	29° \mathbb{H} 24'07		retrograde	11828 Sep 14 14:37	14° \mathbb{I} 35'57	
	11823 Mar 04 11:18	0° Υ		opposition	11828 Nov 22 17:49	11° \mathbb{I} 15'17	-1°50'42
				min. Earth dist.	11828 Nov 22 15:48	11° \mathbb{I} 15'40	8.64070 AU
conjunction	11823 Mar 17 03:01	1° Υ 34'51	0°30'47	direct	11829 Jan 31 15:25	7° \mathbb{I} 52'54	
minimum elong	11823 Mar 17 03:03	1° Υ 34'51	0°30'50	evening set	11829 May 14 18:36	15° \mathbb{I} 23'55	
max. Earth dist.	11823 Mar 16 16:39	1° Υ 31'36	10.42622 AU				
morning rise	11823 Apr 03 12:02	3° Υ 44'40		conjunction	11829 May 31 15:43	17° \mathbb{I} 27'45	-1°36'25
retrograde	11823 Jul 13 19:16	11° Υ 20'18		minimum elong	11829 May 31 15:41	17° \mathbb{I} 27'44	1°37'10
opposition	11823 Sep 19 13:15	7° Υ 58'04	0°23'08	max. Earth dist.	11829 May 31 19:04	17° \mathbb{I} 28'47	10.65762 AU
min. Earth dist.	11823 Sep 19 20:23	7° Υ 56'40	8.44266 AU	morning rise	11829 Jun 17 11:37	19° \mathbb{I} 31'15	
direct	11823 Nov 28 00:51	4° Υ 31'42		retrograde	11829 Sep 27 10:21	26° \mathbb{I} 57'27	
evening set	11824 Mar 12 01:02	12° Υ 20'03		opposition	11829 Dec 05 19:05	23° \mathbb{I} 36'45	-2°05'32
				min. Earth dist.	11829 Dec 05 15:04	23° \mathbb{I} 37'31	8.67502 AU
conjunction	11824 Mar 29 10:57	14° Υ 29'47	0°06'09	direct	11830 Feb 13 14:51	20° \mathbb{I} 15'05	
minimum elong	11824 Mar 29 10:57	14° Υ 29'47	0°06'02	evening set	11830 May 27 06:44	27° \mathbb{I} 42'37	

conjunction	11830 Jun 13 02:16	29° Π 45'36	-1°46'11	conjunction	11836 Aug 24 07:47	12° Π 51'22	-1°03'49
minimum elong	11830 Jun 13 02:15	29° Π 45'36	1°46'58	minimum elong	11836 Aug 24 07:49	12° Π 51'22	1°04'06
max. Earth dist.	11830 Jun 13 07:28	29° Π 47'12	10.68868 AU	max. Earth dist.	11836 Aug 24 17:48	12° Π 54'25	10.69523 AU
	11830 Jun 15 01:11	0° \mathfrak{C}		morning rise	11836 Sep 10 12:23	14° Π 56'13	
morning rise	11830 Jun 29 21:20	1° \mathfrak{C} 48'28		retrograde	11836 Dec 23 17:59	22° Π 28'25	
retrograde	11830 Oct 10 04:38	9° \mathfrak{C} 14'20		opposition	11837 Mar 03 18:11	19° Π 04'38	-1°05'54
opposition	11830 Dec 18 18:48	5° \mathfrak{C} 53'30	-2°14'32	min. Earth dist.	11837 Mar 03 09:51	19° Π 06'14	8.68284 AU
min. Earth dist.	11830 Dec 18 13:44	5° \mathfrak{C} 54'28	8.70283 AU	direct	11837 May 11 05:59	15° Π 44'04	
direct	11831 Feb 26 10:46	2° \mathfrak{C} 32'27		evening set	11837 Aug 19 17:58	23° Π 02'25	
evening set	11831 Jun 08 16:20	9° \mathfrak{C} 56'50					
conjunction	11831 Jun 25 10:59	11° \mathfrak{C} 59'14	-1°51'04	conjunction	11837 Sep 05 22:12	25° Π 07'20	-0°42'55
minimum elong	11831 Jun 25 10:59	11° \mathfrak{C} 59'14	1°51'52	minimum elong	11837 Sep 05 22:13	25° Π 07'21	0°43'03
max. Earth dist.	11831 Jun 25 17:10	12° \mathfrak{C} 01'08	10.71236 AU	max. Earth dist.	11837 Sep 06 08:20	25° Π 10'26	10.66829 AU
morning rise	11831 Jul 12 06:05	14° \mathfrak{C} 01'45		morning rise	11837 Sep 23 05:39	27° Π 13'13	
retrograde	11831 Oct 22 20:19	21° \mathfrak{C} 27'46			11837 Oct 17 16:08	0° \mathfrak{A}	
opposition	11831 Dec 31 17:01	18° \mathfrak{C} 06'40	-2°17'23	retrograde	11838 Jan 05 15:07	4° \mathfrak{A} 47'27	
min. Earth dist.	11831 Dec 31 11:02	18° \mathfrak{C} 07'48	8.72220 AU	opposition	11838 Mar 16 12:53	1° \mathfrak{A} 23'03	-0°38'43
direct	11832 Mar 10 06:15	14° \mathfrak{C} 46'04		min. Earth dist.	11838 Mar 16 04:37	1° \mathfrak{A} 24'39	8.65269 AU
evening set	11832 Jun 20 00:00	22° \mathfrak{C} 07'51			11838 Apr 03 23:40	30° \mathfrak{R} Π	
conjunction	11832 Jul 06 18:44	24° \mathfrak{C} 10'01	-1°50'54	direct	11838 May 23 20:59	28° Π 02'03	
minimum elong	11832 Jul 06 18:44	24° \mathfrak{C} 10'01	1°51'40		11838 Jul 11 03:27	0° \mathfrak{A}	
max. Earth dist.	11832 Jul 07 02:08	24° \mathfrak{C} 12'17	10.72693 AU	evening set	11838 Sep 01 08:43	5° \mathfrak{A} 21'57	
morning rise	11832 Jul 23 14:32	26° \mathfrak{C} 12'28		conjunction	11838 Sep 18 15:46	7° \mathfrak{A} 27'58	-0°19'56
	11832 Aug 26 23:21	0° \mathfrak{Q}		minimum elong	11838 Sep 18 15:47	7° \mathfrak{A} 27'58	0°19'54
retrograde	11832 Nov 03 14:02	3° \mathfrak{Q} 39'06		max. Earth dist.	11838 Sep 19 01:44	7° \mathfrak{A} 31'00	10.63563 AU
opposition	11833 Jan 12 13:55	0° \mathfrak{Q} 17'38	-2°14'03	morning rise	11838 Oct 06 01:56	9° \mathfrak{A} 34'55	
min. Earth dist.	11833 Jan 12 06:36	0° \mathfrak{Q} 19'01	8.73189 AU	retrograde	11839 Jan 18 16:35	17° \mathfrak{A} 11'23	
	11833 Jan 16 11:04	30° \mathfrak{R} \mathfrak{C}		opposition	11839 Mar 29 08:08	13° \mathfrak{A} 46'25	-0°09'32
direct	11833 Mar 22 23:39	26° \mathfrak{C} 57'24		min. Earth dist.	11839 Mar 29 00:21	13° \mathfrak{A} 47'56	8.61753 AU
	11833 May 23 14:40	0° \mathfrak{Q}		direct	11839 Jun 05 11:04	10° \mathfrak{A} 24'53	
evening set	11833 Jul 02 06:50	4° \mathfrak{Q} 17'09		asc. node	11839 Jul 27 08:32	12° \mathfrak{A} 40'30	
conjunction	11833 Jul 19 02:26	6° \mathfrak{Q} 19'23	-1°45'47	evening set	11839 Sep 14 03:41	17° \mathfrak{A} 47'10	
minimum elong	11833 Jul 19 02:28	6° \mathfrak{Q} 19'24	1°46'28	conjunction	11839 Oct 01 13:19	19° \mathfrak{A} 54'17	0°04'14
max. Earth dist.	11833 Jul 19 11:47	6° \mathfrak{Q} 22'14	10.73189 AU	minimum elong	11839 Oct 01 13:19	19° \mathfrak{A} 54'17	0°04'26
morning rise	11833 Aug 04 23:32	8° \mathfrak{Q} 22'05		behind sun begin	11839 Oct 01 06:16	19° \mathfrak{A} 52'08	
	11833 Oct 15 16:21	15° \mathfrak{Q}		behind sun end	11839 Oct 01 20:21	19° \mathfrak{A} 56'25	
retrograde	11833 Nov 16 08:14	15° \mathfrak{Q} 49'42		max. Earth dist.	11839 Oct 01 21:54	19° \mathfrak{A} 56'53	10.59855 AU
	11833 Dec 18 10:57	15° \mathfrak{R} \mathfrak{Q}		morning rise	11839 Oct 19 02:00	22° \mathfrak{A} 02'20	
opposition	11834 Jan 25 09:45	12° \mathfrak{Q} 27'44	-2°04'43	retrograde	11840 Jan 31 18:51	29° \mathfrak{A} 41'04	
min. Earth dist.	11834 Jan 25 00:58	12° \mathfrak{Q} 29'24	8.73206 AU	opposition	11840 Apr 10 04:10	26° \mathfrak{A} 15'40	0°20'21
direct	11834 Apr 04 13:59	9° \mathfrak{Q} 07'42		min. Earth dist.	11840 Apr 09 21:52	26° \mathfrak{A} 16'54	8.57883 AU
	11834 Jul 02 07:06	15° \mathfrak{Q}		direct	11840 Jun 17 02:41	22° \mathfrak{A} 53'28	
evening set	11834 Jul 14 13:36	16° \mathfrak{Q} 26'02			11840 Sep 23 11:54	0° \mathfrak{M}	
conjunction	11834 Jul 31 10:43	18° \mathfrak{Q} 28'37	-1°35'55	evening set	11840 Sep 26 03:05	0° \mathfrak{M} 18'56	
minimum elong	11834 Jul 31 10:45	18° \mathfrak{Q} 28'37	1°36'30	conjunction	11840 Oct 13 14:57	2° \mathfrak{M} 27'08	0°28'15
max. Earth dist.	11834 Jul 31 21:13	18° \mathfrak{Q} 31'49	10.72781 AU	minimum elong	11840 Oct 13 14:56	2° \mathfrak{M} 27'07	0°28'36
morning rise	11834 Aug 17 09:47	20° \mathfrak{Q} 31'48		max. Earth dist.	11840 Oct 13 20:50	2° \mathfrak{M} 28'56	10.55866 AU
retrograde	11834 Nov 29 02:34	28° \mathfrak{Q} 00'43		morning rise	11840 Oct 31 05:49	4° \mathfrak{M} 36'14	
opposition	11835 Feb 07 05:01	24° \mathfrak{Q} 38'11	-1°49'49	retrograde	11841 Feb 12 22:25	12° \mathfrak{M} 17'16	
min. Earth dist.	11835 Feb 06 19:44	24° \mathfrak{Q} 39'57	8.72345 AU	opposition	11841 Apr 23 01:40	8° \mathfrak{M} 51'32	0°49'31
direct	11835 Apr 17 03:46	21° \mathfrak{Q} 18'08		min. Earth dist.	11841 Apr 22 21:38	8° \mathfrak{M} 52'20	8.53836 AU
evening set	11835 Jul 26 21:06	28° \mathfrak{Q} 35'41		direct	11841 Jun 29 21:46	5° \mathfrak{M} 28'36	
	11835 Aug 07 12:32	0° \mathfrak{M}		evening set	11841 Oct 09 06:57	12° \mathfrak{M} 57'50	
conjunction	11835 Aug 12 20:10	0° \mathfrak{M} 38'52	-1°21'44		11841 Oct 25 21:47	15° \mathfrak{M}	
minimum elong	11835 Aug 12 20:12	0° \mathfrak{M} 38'53	1°22'11	conjunction	11841 Oct 26 20:46	15° \mathfrak{M} 07'05	0°51'08
max. Earth dist.	11835 Aug 13 06:42	0° \mathfrak{M} 42'05	10.71535 AU	minimum elong	11841 Oct 26 20:44	15° \mathfrak{M} 07'05	0°51'38
morning rise	11835 Aug 29 21:52	2° \mathfrak{M} 42'48		max. Earth dist.	11841 Oct 27 00:14	15° \mathfrak{M} 08'09	10.51785 AU
retrograde	11835 Dec 11 22:23	10° \mathfrak{M} 13'14		morning rise	11841 Nov 13 13:17	17° \mathfrak{M} 17'08	
opposition	11836 Feb 19 23:47	6° \mathfrak{M} 50'06	-1°29'56	retrograde	11842 Feb 26 04:33	25° \mathfrak{M} 00'24	
min. Earth dist.	11836 Feb 19 14:53	6° \mathfrak{M} 51'48	8.70676 AU	opposition	11842 May 06 00:44	21° \mathfrak{M} 34'28	1°16'34
direct	11836 Apr 28 16:40	3° \mathfrak{M} 29'51		min. Earth dist.	11842 May 05 22:36	21° \mathfrak{M} 34'53	8.49806 AU
evening set	11836 Aug 07 06:19	10° \mathfrak{M} 47'23		direct	11842 Jul 12 19:15	18° \mathfrak{M} 10'46	
				evening set	11842 Oct 22 15:38	25° \mathfrak{M} 44'13	

conjunction	11842 Nov 09 07:06	27° \mathbb{M} 54'26	1°11'41	conjunction	11849 Jan 29 07:06	16° \approx 35'56	1°37'16
minimum elong	11842 Nov 09 07:04	27° \mathbb{M} 54'25	1°12'18	minimum elong	11849 Jan 29 07:08	16° \approx 35'56	1°37'53
max. Earth dist.	11842 Nov 09 08:33	27° \mathbb{M} 54'52	10.47812 AU	max. Earth dist.	11849 Jan 28 20:44	16° \approx 32'40	10.36395 AU
	11842 Nov 26 07:11	0° \mathbb{A}		morning rise	11849 Feb 15 22:10	18° \approx 48'03	
morning rise	11842 Nov 27 00:39	0° \mathbb{A} 05'18		retrograde	11849 May 29 09:32	26° \approx 32'30	
retrograde	11843 Mar 11 12:27	7° \mathbb{A} 50'30		opposition	11849 Aug 04 17:25	23° \approx 08'52	1°52'20
opposition	11843 May 19 01:23	4° \mathbb{A} 24'30	1°40'03	min. Earth dist.	11849 Aug 05 01:22	23° \approx 07'17	8.36921 AU
min. Earth dist.	11843 May 19 00:47	4° \mathbb{A} 24'37	8.45994 AU	direct	11849 Oct 12 08:09	19° \approx 41'56	
direct	11843 Jul 25 19:53	1° \mathbb{A} 00'03		evening set	11850 Jan 25 11:14	27° \approx 35'52	
evening set	11843 Nov 05 04:48	8° \mathbb{A} 37'57					
conjunction	11843 Nov 22 21:31	10° \mathbb{A} 49'00	1°28'47	conjunction	11850 Feb 12 03:31	29° \approx 48'17	1°22'32
minimum elong	11843 Nov 22 21:29	10° \mathbb{A} 49'00	1°29'30	minimum elong	11850 Feb 12 03:33	29° \approx 48'18	1°23'01
max. Earth dist.	11843 Nov 22 21:10	10° \mathbb{A} 48'54	10.44150 AU	max. Earth dist.	11850 Feb 11 16:50	29° \approx 44'56	10.37459 AU
morning rise	11843 Dec 10 15:30	13° \mathbb{A} 00'31			11850 Feb 13 16:45	0° \mathbb{H}	
retrograde	11844 Mar 23 22:27	20° \mathbb{A} 47'16		morning rise	11850 Mar 01 17:07	1° \mathbb{H} 59'57	
opposition	11844 May 31 04:00	17° \mathbb{A} 21'22	1°58'40	retrograde	11850 Jun 11 19:15	9° \mathbb{H} 42'04	
min. Earth dist.	11844 May 31 04:46	17° \mathbb{A} 21'13	8.42591 AU	opposition	11850 Aug 18 03:25	6° \mathbb{H} 18'59	1°31'17
direct	11844 Aug 06 23:16	13° \mathbb{A} 56'15		min. Earth dist.	11850 Aug 18 11:51	6° \mathbb{H} 17'18	8.38327 AU
evening set	11844 Nov 17 21:48	21° \mathbb{A} 38'30		direct	11850 Oct 26 00:00	2° \mathbb{H} 52'06	
				evening set	11851 Feb 08 06:17	10° \mathbb{H} 45'29	
conjunction	11844 Dec 05 15:14	23° \mathbb{A} 50'15	1°41'29	conjunction	11851 Feb 25 21:13	12° \mathbb{H} 57'23	1°03'32
minimum elong	11844 Dec 05 15:12	23° \mathbb{A} 50'15	1°42'16	minimum elong	11851 Feb 25 21:16	12° \mathbb{H} 57'23	1°03'50
max. Earth dist.	11844 Dec 05 12:34	23° \mathbb{A} 49'25	10.40998 AU	max. Earth dist.	11851 Feb 25 10:01	12° \mathbb{H} 53'51	10.39220 AU
morning rise	11844 Dec 23 09:12	26° \mathbb{A} 02'15		morning rise	11851 Mar 15 09:04	15° \mathbb{H} 08'25	
	11845 Jan 27 09:55	0° \mathbb{B}		retrograde	11851 Jun 25 02:49	22° \mathbb{H} 48'03	
retrograde	11845 Apr 06 10:34	3° \mathbb{B} 49'59		opposition	11851 Aug 31 13:24	19° \mathbb{H} 25'31	1°05'32
opposition	11845 Jun 13 08:35	0° \mathbb{B} 24'22	2°11'21	min. Earth dist.	11851 Aug 31 22:34	19° \mathbb{H} 23'43	8.40343 AU
min. Earth dist.	11845 Jun 13 11:19	0° \mathbb{B} 23'49	8.39790 AU	direct	11851 Nov 08 15:45	15° \mathbb{H} 58'53	
	11845 Jun 18 10:30	30° \mathbb{R} \mathbb{A}		evening set	11852 Feb 21 22:26	23° \mathbb{H} 51'00	
direct	11845 Aug 20 04:38	26° \mathbb{A} 58'38					
	11845 Oct 19 15:30	0° \mathbb{B}		conjunction	11852 Mar 10 11:32	26° \mathbb{H} 02'11	0°41'18
evening set	11845 Dec 01 17:58	4° \mathbb{B} 44'54		minimum elong	11852 Mar 10 11:34	26° \mathbb{H} 02'12	0°41'26
conjunction	11845 Dec 19 11:44	6° \mathbb{B} 57'11	1°49'00	max. Earth dist.	11852 Mar 09 23:48	25° \mathbb{H} 58'31	10.41525 AU
minimum elong	11845 Dec 19 11:43	6° \mathbb{B} 57'11	1°49'49	morning rise	11852 Mar 27 21:29	28° \mathbb{H} 12'28	
max. Earth dist.	11845 Dec 19 06:19	6° \mathbb{B} 55'29	10.38543 AU		11852 Apr 11 20:36	0° \mathbb{Y}	
morning rise	11846 Jan 06 05:26	9° \mathbb{B} 09'30		retrograde	11852 Jul 07 09:16	5° \mathbb{Y} 49'45	
retrograde	11846 Apr 19 23:29	16° \mathbb{B} 57'30		opposition	11852 Sep 12 23:16	2° \mathbb{Y} 27'44	0°36'32
opposition	11846 Jun 26 14:53	13° \mathbb{B} 32'18	2°17'15	min. Earth dist.	11852 Sep 13 08:34	2° \mathbb{Y} 25'54	8.42877 AU
min. Earth dist.	11846 Jun 26 19:50	13° \mathbb{B} 31'18	8.37750 AU		11852 Oct 17 23:35	30° \mathbb{R} \mathbb{H}	
direct	11846 Sep 02 13:47	10° \mathbb{B} 06'03		direct	11852 Nov 21 06:24	29° \mathbb{H} 01'30	
evening set	11846 Dec 15 16:13	17° \mathbb{B} 55'44			11852 Dec 25 05:32	0° \mathbb{Y}	
				evening set	11853 Mar 06 11:08	6° \mathbb{Y} 51'41	
conjunction	11847 Jan 02 10:01	20° \mathbb{B} 08'21	1°50'52	conjunction	11853 Mar 23 22:03	9° \mathbb{Y} 02'00	0°17'04
minimum elong	11847 Jan 02 10:01	20° \mathbb{B} 08'21	1°51'39	minimum elong	11853 Mar 23 22:04	9° \mathbb{Y} 02'00	0°17'01
max. Earth dist.	11847 Jan 02 02:00	20° \mathbb{B} 05'50	10.36917 AU	max. Earth dist.	11853 Mar 23 10:46	8° \mathbb{Y} 58'28	10.44319 AU
morning rise	11847 Jan 20 03:11	22° \mathbb{B} 20'49		morning rise	11853 Apr 10 05:55	11° \mathbb{Y} 11'24	
	11847 Apr 21 01:19	0° \approx		retrograde	11853 Jul 20 13:18	18° \mathbb{Y} 46'26	
retrograde	11847 May 03 10:44	0° \approx 08'19		opposition	11853 Sep 26 08:35	15° \mathbb{Y} 24'51	0°05'51
	11847 May 15 21:01	30° \mathbb{R} \mathbb{B}		min. Earth dist.	11853 Sep 26 16:46	15° \mathbb{Y} 23'15	8.45885 AU
opposition	11847 Jul 09 22:47	26° \mathbb{B} 43'38	2°15'59	direct	11853 Dec 04 20:21	11° \mathbb{Y} 59'08	
min. Earth dist.	11847 Jul 10 05:35	26° \mathbb{B} 42'16	8.36569 AU	desc. node	11853 Dec 05 22:26	11° \mathbb{Y} 59'12	
direct	11847 Sep 16 02:58	23° \mathbb{B} 17'00		evening set	11854 Mar 19 20:22	19° \mathbb{Y} 46'46	
	11847 Dec 20 02:51	0° \approx					
evening set	11847 Dec 29 15:18	1° \approx 09'11		conjunction	11854 Apr 06 04:50	21° \mathbb{Y} 56'02	-0°07'57
conjunction	11848 Jan 16 08:52	3° \approx 21'57	1°46'53	minimum elong	11854 Apr 06 04:49	21° \mathbb{Y} 56'02	0°08'11
minimum elong	11848 Jan 16 08:53	3° \approx 21'57	1°47'36	behind sun begin	11854 Apr 05 22:29	21° \mathbb{Y} 54'05	
max. Earth dist.	11848 Jan 15 23:06	3° \approx 18'53	10.36192 AU	behind sun end	11854 Apr 06 11:09	21° \mathbb{Y} 58'00	
morning rise	11848 Feb 03 01:08	5° \approx 34'20		max. Earth dist.	11854 Apr 05 19:22	21° \mathbb{Y} 53'06	10.47544 AU
retrograde	11848 May 15 22:00	13° \approx 20'38		morning rise	11854 Apr 23 10:17	24° \mathbb{Y} 04'26	
opposition	11848 Jul 22 07:45	9° \approx 56'29	2°07'32		11854 Jun 20 06:42	0° \mathbb{B}	
min. Earth dist.	11848 Jul 22 15:23	9° \approx 54'57	8.36296 AU	retrograde	11854 Aug 02 14:44	1° \mathbb{B} 37'23	
direct	11848 Sep 28 17:31	6° \approx 29'38			11854 Sep 16 06:49	30° \mathbb{R} \mathbb{Y}	
evening set	11849 Jan 11 14:00	14° \approx 23'14		opposition	11854 Oct 09 17:02	28° \mathbb{Y} 16'06	-0°24'53
	11849 Jan 16 12:55	15° \approx		min. Earth dist.	11854 Oct 09 23:11	28° \mathbb{Y} 14'54	8.49285 AU
				direct	11854 Dec 18 10:03	24° \mathbb{Y} 50'59	

	11855 Mar 10 21:29	0°♄	conjunction	11861 Jul 01 22:14	19°♄16'25	-1°51'39
evening set	11855 Apr 02 01:42	2°♄35'33	minimum elong	11861 Jul 01 22:14	19°♄16'25	1°52'27
			max. Earth dist.	11861 Jul 02 06:51	19°♄19'03	10.69938 AU
conjunction	11855 Apr 19 07:30	4°♄43'38 -0°32'18	morning rise	11861 Jul 18 17:37	21°♄19'05	
minimum elong	11855 Apr 19 07:29	4°♄43'38 0°32'42	retrograde	11861 Oct 29 13:51	28°♄46'06	
max. Earth dist.	11855 Apr 19 00:53	4°♄41'35 10.51088 AU	opposition	11862 Jan 07 11:31	25°♄24'09	-2°16'20
morning rise	11855 May 06 10:23	6°♄50'54	min. Earth dist.	11862 Jan 07 03:22	25°♄25'42	8.70840 AU
retrograde	11855 Aug 15 16:18	14°♄22'03	direct	11862 Mar 17 22:38	22°♄03'10	
opposition	11855 Oct 23 00:30	11°♄00'56 -0°54'08	evening set	11862 Jun 27 10:44	29°♄24'20	
min. Earth dist.	11855 Oct 23 04:20	11°♄00'11 8.52943 AU		11862 Jul 02 09:16	0°♄	
direct	11855 Dec 31 19:49	7°♄36'28				
	11856 Apr 11 17:04	15°♄	conjunction	11862 Jul 14 05:54	1°♄26'42	-1°48'35
evening set	11856 Apr 14 02:49	15°♄17'30	minimum elong	11862 Jul 14 05:55	1°♄26'42	1°49'20
			max. Earth dist.	11862 Jul 14 15:34	1°♄29'39	10.71289 AU
conjunction	11856 May 01 05:52	17°♄24'23 -0°54'56	morning rise	11862 Jul 31 02:27	3°♄29'26	
minimum elong	11856 May 01 05:50	17°♄24'22 0°55'28	retrograde	11862 Nov 11 06:52	10°♄57'01	
max. Earth dist.	11856 May 01 02:08	17°♄23'13 10.54793 AU	opposition	11863 Jan 20 08:11	7°♄34'43	-2°09'28
morning rise	11856 May 18 06:19	19°♄30'32	min. Earth dist.	11863 Jan 19 23:23	7°♄36'24	8.71801 AU
retrograde	11856 Aug 27 15:58	27°♄00'06	direct	11863 Mar 30 14:05	4°♄14'06	
opposition	11856 Nov 04 06:35	23°♄39'03 -1°20'29	evening set	11863 Jul 09 17:30	11°♄33'19	
min. Earth dist.	11856 Nov 04 08:39	23°♄38'39 8.56690 AU				
direct	11857 Jan 13 02:12	20°♄15'13	conjunction	11863 Jul 26 13:49	13°♄35'49	-1°40'39
evening set	11857 Apr 27 00:07	27°♄52'35	minimum elong	11863 Jul 26 13:50	13°♄35'50	1°41'18
			max. Earth dist.	11863 Jul 27 00:27	13°♄39'04	10.71874 AU
conjunction	11857 May 14 00:26	29°♄58'15 -1°14'45		11863 Aug 07 02:41	15°♄	
minimum elong	11857 May 14 00:24	29°♄58'14 1°15'23	morning rise	11863 Aug 12 12:11	15°♄38'53	
max. Earth dist.	11857 May 13 22:46	29°♄57'44 10.58490 AU	retrograde	11863 Nov 23 23:44	23°♄07'21	
	11857 May 14 06:06	0°♄	opposition	11864 Feb 02 03:39	19°♄44'40	-1°56'48
morning rise	11857 May 30 22:49	2°♄03'21	min. Earth dist.	11864 Feb 01 17:56	19°♄46'31	8.71970 AU
retrograde	11857 Sep 09 11:40	9°♄31'38	direct	11864 Apr 11 05:20	16°♄24'17	
opposition	11857 Nov 17 10:52	6°♄10'34 -1°42'46	evening set	11864 Jul 21 00:29	23°♄42'12	
min. Earth dist.	11857 Nov 17 11:16	6°♄10'29 8.60347 AU				
direct	11858 Jan 26 07:21	2°♄47'20	conjunction	11864 Aug 06 22:42	25°♄45'08	-1°28'12
evening set	11858 May 09 17:36	10°♄21'02	minimum elong	11864 Aug 06 22:44	25°♄45'09	1°28'44
			max. Earth dist.	11864 Aug 07 10:46	25°♄48'49	10.71665 AU
conjunction	11858 May 26 15:32	12°♄25'34 -1°30'53	morning rise	11864 Aug 23 23:18	27°♄48'45	
minimum elong	11858 May 26 15:30	12°♄25'34 1°31'36		11864 Sep 11 23:29	0°♄	
max. Earth dist.	11858 May 26 15:59	12°♄25'43 10.62007 AU	retrograde	11864 Dec 05 19:22	5°♄18'25	
morning rise	11858 Jun 12 12:17	14°♄29'44	opposition	11865 Feb 13 22:23	1°♄55'19	-1°38'53
retrograde	11858 Sep 22 06:57	21°♄57'10	min. Earth dist.	11865 Feb 13 11:42	1°♄57'22	8.71337 AU
opposition	11858 Nov 30 13:36	18°♄35'58 -2°00'01		11865 Mar 12 18:03	30°♄	
min. Earth dist.	11858 Nov 30 11:50	18°♄36'18 8.63744 AU	direct	11865 Apr 23 18:54	28°♄35'04	
direct	11859 Feb 08 10:19	15°♄13'21		11865 Jun 03 17:16	0°♄	
evening set	11859 May 22 07:26	22°♄43'26	evening set	11865 Aug 02 08:40	5°♄52'24	
conjunction	11859 Jun 08 03:38	24°♄47'02 -1°42'40	conjunction	11865 Aug 19 09:10	7°♄55'58	-1°11'46
minimum elong	11859 Jun 08 03:36	24°♄47'02 1°43'27	minimum elong	11865 Aug 19 09:12	7°♄55'59	1°12'08
max. Earth dist.	11859 Jun 08 06:55	24°♄48'03 10.65185 AU	max. Earth dist.	11865 Aug 19 22:13	7°♄59'57	10.70670 AU
morning rise	11859 Jun 24 23:15	26°♄50'27	morning rise	11865 Sep 05 12:19	10°♄00'21	
	11859 Jul 22 18:51	0°♄	retrograde	11865 Dec 18 15:31	17°♄31'29	
retrograde	11859 Oct 05 01:36	4°♄17'24	opposition	11866 Feb 26 16:46	14°♄07'59	-1°16'28
opposition	11859 Dec 13 14:33	0°♄55'59 -2°11'36	min. Earth dist.	11866 Feb 26 05:43	14°♄10'06	8.69943 AU
min. Earth dist.	11859 Dec 13 09:57	0°♄56'51 8.66718 AU	direct	11866 May 06 07:02	10°♄47'44	
	11859 Dec 26 00:31	30°♄	evening set	11866 Aug 14 19:01	18°♄05'16	
direct	11860 Feb 21 09:18	27°♄34'00				
	11860 Apr 16 05:38	0°♄	conjunction	11866 Aug 31 22:00	20°♄09'39	-0°52'02
evening set	11860 Jun 02 18:28	5°♄00'41	minimum elong	11866 Aug 31 22:02	20°♄09'40	0°52'15
			max. Earth dist.	11866 Sep 01 10:34	20°♄13'29	10.68954 AU
conjunction	11860 Jun 19 13:41	7°♄03'36 -1°49'40	morning rise	11866 Sep 18 04:03	22°♄14'56	
minimum elong	11860 Jun 19 13:41	7°♄03'36 1°50'28	retrograde	11866 Dec 31 12:51	29°♄47'47	
max. Earth dist.	11860 Jun 19 20:12	7°♄05'36 10.67872 AU	opposition	11867 Mar 11 11:10	26°♄23'55	-0°50'30
morning rise	11860 Jul 06 08:47	9°♄06'31	min. Earth dist.	11867 Mar 11 01:04	26°♄25'51	8.67871 AU
retrograde	11860 Oct 16 19:23	16°♄33'19	direct	11867 May 18 20:06	23°♄03'29	
opposition	11860 Dec 25 13:41	13°♄11'39 -2°17'05		11867 Aug 24 06:02	0°♄	
min. Earth dist.	11860 Dec 25 06:50	13°♄12'57 8.69122 AU	evening set	11867 Aug 27 08:12	0°♄22'02	
direct	11861 Mar 05 05:18	9°♄50'12				
evening set	11861 Jun 15 03:22	17°♄13'54	conjunction	11867 Sep 13 13:49	2°♄27'22	-0°29'51

minimum elong	11867 Sep 13 13:50	2° <u>♂</u> 27'22	0°29'53	evening set	11873 Nov 12 05:34	16° <u>♂</u> 10'40	
max. Earth dist.	11867 Sep 14 00:54	2° <u>♂</u> 30'44	10.66599 AU				
morning rise	11867 Sep 30 22:50	4° <u>♂</u> 33'40		conjunction	11873 Nov 29 22:23	18° <u>♂</u> 21'45	1°36'26
retrograde	11868 Jan 13 12:12	12° <u>♂</u> 08'24		minimum elong	11873 Nov 29 22:21	18° <u>♂</u> 21'45	1°37'12
opposition	11868 Mar 23 05:51	8° <u>♂</u> 44'10	-0°22'04	max. Earth dist.	11873 Nov 29 18:41	18° <u>♂</u> 20'36	10.44799 AU
min. Earth dist.	11868 Mar 22 21:13	8° <u>♂</u> 45'50	8.65208 AU	morning rise	11873 Dec 17 16:22	20° <u>♂</u> 33'12	
direct	11868 May 30 09:37	5° <u>♂</u> 23'25		retrograde	11874 Mar 31 19:27	28° <u>♂</u> 19'20	
evening set	11868 Sep 08 00:59	12° <u>♂</u> 43'48		opposition	11874 Jun 07 21:31	24° <u>♂</u> 54'06	2°06'25
				min. Earth dist.	11874 Jun 08 00:56	24° <u>♂</u> 53'25	8.43233 AU
conjunction	11868 Sep 25 09:14	14° <u>♂</u> 50'08	-0°06'11	direct	11874 Aug 14 17:58	21° <u>♂</u> 29'03	
minimum elong	11868 Sep 25 09:14	14° <u>♂</u> 50'08	0°06'03	evening set	11874 Nov 25 23:23	29° <u>♂</u> 12'20	
behind sun begin	11868 Sep 25 02:26	14° <u>♂</u> 48'05			11874 Dec 02 10:33	0° <u>♂</u>	
behind sun end	11868 Sep 25 16:02	14° <u>♂</u> 52'12					
max. Earth dist.	11868 Sep 25 18:54	14° <u>♂</u> 53'05	10.63683 AU	conjunction	11874 Dec 13 16:53	1° <u>♂</u> 24'04	1°46'18
morning rise	11868 Oct 12 20:50	16° <u>♂</u> 57'27		minimum elong	11874 Dec 13 16:52	1° <u>♂</u> 24'04	1°47'07
asc. node	11868 Dec 31 06:07	24° <u>♂</u> 02'02		max. Earth dist.	11874 Dec 13 11:13	1° <u>♂</u> 22'18	10.41612 AU
retrograde	11869 Jan 25 11:30	24° <u>♂</u> 34'12		morning rise	11874 Dec 31 10:42	3° <u>♂</u> 35'57	
opposition	11869 Apr 05 01:02	21° <u>♂</u> 09'39	0°07'36	retrograde	11875 Apr 14 06:33	11° <u>♂</u> 22'44	
min. Earth dist.	11869 Apr 04 17:46	21° <u>♂</u> 11'04	8.62044 AU	opposition	11875 Jun 21 01:53	7° <u>♂</u> 57'38	2°15'24
direct	11869 Jun 12 01:45	17° <u>♂</u> 48'25		min. Earth dist.	11875 Jun 21 06:42	7° <u>♂</u> 56'40	8.40395 AU
evening set	11869 Sep 20 21:49	25° <u>♂</u> 11'24		direct	11875 Aug 28 00:58	4° <u>♂</u> 31'50	
				evening set	11875 Dec 09 19:40	12° <u>♂</u> 18'52	
conjunction	11869 Oct 08 08:35	27° <u>♂</u> 18'47	0°18'02				
minimum elong	11869 Oct 08 08:35	27° <u>♂</u> 18'46	0°18'19	conjunction	11875 Dec 27 13:29	14° <u>♂</u> 31'05	1°50'44
max. Earth dist.	11869 Oct 08 16:59	27° <u>♂</u> 21'20	10.60301 AU	minimum elong	11875 Dec 27 13:29	14° <u>♂</u> 31'05	1°51'33
morning rise	11869 Oct 25 22:20	29° <u>♂</u> 27'04		max. Earth dist.	11875 Dec 27 06:02	14° <u>♂</u> 28'45	10.39121 AU
	11869 Oct 30 12:59	0° <u>♂</u>		morning rise	11876 Jan 14 06:44	16° <u>♂</u> 43'13	
retrograde	11870 Feb 07 13:57	7° <u>♂</u> 05'56		retrograde	11876 Apr 26 17:26	24° <u>♂</u> 29'58	
opposition	11870 Apr 17 21:13	3° <u>♂</u> 41'03	0°37'08	opposition	11876 Jul 03 08:02	21° <u>♂</u> 05'05	2°17'24
min. Earth dist.	11870 Apr 17 15:10	3° <u>♂</u> 42'14	8.58468 AU	min. Earth dist.	11876 Jul 03 14:12	21° <u>♂</u> 03'51	8.38311 AU
direct	11870 Jun 24 19:31	0° <u>♂</u> 19'13		direct	11876 Sep 09 11:13	17° <u>♂</u> 38'39	
evening set	11870 Oct 03 22:58	7° <u>♂</u> 45'27		evening set	11876 Dec 22 17:11	25° <u>♂</u> 28'40	
conjunction	11870 Oct 21 11:54	9° <u>♂</u> 53'52	0°41'28	conjunction	11877 Jan 09 10:55	27° <u>♂</u> 41'10	1°49'24
minimum elong	11870 Oct 21 11:52	9° <u>♂</u> 53'51	0°41'55	minimum elong	11877 Jan 09 10:56	27° <u>♂</u> 41'10	1°50'09
max. Earth dist.	11870 Oct 21 18:01	9° <u>♂</u> 55'44	10.56534 AU	max. Earth dist.	11877 Jan 09 01:43	27° <u>♂</u> 38'17	10.37458 AU
morning rise	11870 Nov 08 03:24	12° <u>♂</u> 03'06		morning rise	11877 Jan 27 03:23	29° <u>♂</u> 53'22	
	11870 Dec 03 22:31	15° <u>♂</u>			11877 Jan 28 01:02	0° <u>♂</u>	
retrograde	11871 Feb 20 19:51	19° <u>♂</u> 44'06		retrograde	11877 May 10 04:52	7° <u>♂</u> 39'24	
opposition	11871 Apr 30 18:42	16° <u>♂</u> 18'59	1°05'08	opposition	11877 Jul 16 15:34	4° <u>♂</u> 14'51	2°12'13
min. Earth dist.	11871 Apr 30 14:46	16° <u>♂</u> 19'45	8.54566 AU	min. Earth dist.	11877 Jul 16 23:20	4° <u>♂</u> 13'17	8.37088 AU
	11871 May 17 23:13	15° <u>♂</u>		direct	11877 Sep 22 22:53	0° <u>♂</u> 47'54	
direct	11871 Jul 07 13:32	12° <u>♂</u> 56'25		evening set	11878 Jan 05 15:07	8° <u>♂</u> 40'00	
	11871 Aug 25 21:18	15° <u>♂</u>					
evening set	11871 Oct 17 04:55	20° <u>♂</u> 26'36		conjunction	11878 Jan 23 08:26	10° <u>♂</u> 52'36	1°42'19
				minimum elong	11878 Jan 23 08:28	10° <u>♂</u> 52'37	1°42'59
conjunction	11871 Nov 03 19:31	22° <u>♂</u> 36'00	1°03'05	max. Earth dist.	11878 Jan 22 21:12	10° <u>♂</u> 49'04	10.36704 AU
minimum elong	11871 Nov 03 19:29	22° <u>♂</u> 35'59	1°03'39	morning rise	11878 Feb 09 24:00	13° <u>♂</u> 04'42	
max. Earth dist.	11871 Nov 03 22:09	22° <u>♂</u> 36'49	10.52514 AU		11878 Feb 26 01:28	15° <u>♂</u>	
morning rise	11871 Nov 21 12:19	24° <u>♂</u> 46'07		retrograde	11878 May 23 15:33	20° <u>♂</u> 49'18	
	11872 Jan 09 20:49	0° <u>♂</u>		opposition	11878 Jul 29 23:58	17° <u>♂</u> 25'09	2°00'03
retrograde	11872 Mar 05 02:47	2° <u>♂</u> 29'08		min. Earth dist.	11878 Jul 30 09:18	17° <u>♂</u> 23'17	8.36782 AU
	11872 Apr 30 18:28	30° <u>♂</u>			11878 Sep 01 14:38	15° <u>♂</u>	
opposition	11872 May 12 17:43	29° <u>♂</u> 03'55	1°30'13	direct	11878 Oct 06 12:22	13° <u>♂</u> 57'51	
min. Earth dist.	11872 May 12 16:33	29° <u>♂</u> 04'09	8.50539 AU		11878 Nov 10 05:18	15° <u>♂</u>	
direct	11872 Jul 19 11:18	25° <u>♂</u> 40'31		evening set	11879 Jan 19 12:17	21° <u>♂</u> 51'05	
	11872 Oct 01 03:42	0° <u>♂</u>					
evening set	11872 Oct 29 15:18	3° <u>♂</u> 15'08		conjunction	11879 Feb 06 04:52	24° <u>♂</u> 03'33	1°29'52
				minimum elong	11879 Feb 06 04:54	24° <u>♂</u> 03'33	1°30'25
conjunction	11872 Nov 16 07:09	5° <u>♂</u> 25'26	1°21'44	max. Earth dist.	11879 Feb 05 16:16	23° <u>♂</u> 59'35	10.36884 AU
minimum elong	11872 Nov 16 07:07	5° <u>♂</u> 25'25	1°22'26	morning rise	11879 Feb 23 19:16	26° <u>♂</u> 15'22	
max. Earth dist.	11872 Nov 16 06:15	5° <u>♂</u> 25'09	10.48507 AU		11879 Mar 28 11:00	0° <u>♂</u>	
morning rise	11872 Dec 04 00:48	7° <u>♂</u> 36'17		retrograde	11879 Jun 06 00:00	3° <u>♂</u> 58'02	
retrograde	11873 Mar 18 09:56	15° <u>♂</u> 21'06		opposition	11879 Aug 12 09:06	0° <u>♂</u> 34'19	1°41'36
opposition	11873 May 25 18:43	11° <u>♂</u> 55'50	1°51'03	min. Earth dist.	11879 Aug 12 18:57	0° <u>♂</u> 32'22	8.37397 AU
min. Earth dist.	11873 May 25 20:11	11° <u>♂</u> 55'33	8.46678 AU		11879 Aug 19 14:04	30° <u>♂</u>	
direct	11873 Aug 01 13:30	8° <u>♂</u> 31'37		direct	11879 Oct 20 04:18	27° <u>♂</u> 06'55	

	11879 Dec 18 15:22	0°♄	min. Earth dist.	11885 Oct 29 12:51	17°♄58'06	8.55727 AU
evening set	11880 Feb 02 07:33	5°♄00'13		11885 Dec 15 16:16	15°♄	
			direct	11886 Jan 07 06:21	14°♄34'33	
conjunction	11880 Feb 19 23:02	7°♄12'19 1°12'44		11886 Jan 29 15:37	15°♄	
minimum elong	11880 Feb 19 23:04	7°♄12'19 1°13'07	evening set	11886 Apr 21 07:54	22°♄13'09	
max. Earth dist.	11880 Feb 19 10:26	7°♄08'21 10.37977 AU				
morning rise	11880 Mar 08 11:54	9°♄23'39	conjunction	11886 May 08 09:26	24°♄19'14 -1°05'45	
retrograde	11880 Jun 18 07:04	17°♄04'05	minimum elong	11886 May 08 09:24	24°♄19'13 1°06'21	
opposition	11880 Aug 24 18:29	13°♄40'49 1°17'53	max. Earth dist.	11886 May 08 07:13	24°♄18'33 10.57721 AU	
min. Earth dist.	11880 Aug 25 03:48	13°♄38'59 8.38899 AU	morning rise	11886 May 25 08:48	26°♄24'41	
direct	11880 Nov 01 20:12	10°♄13'33		11886 Jun 26 02:49	0°♄	
evening set	11881 Feb 15 00:19	18°♄05'57	retrograde	11886 Sep 03 18:25	3°♄53'00	
			opposition	11886 Nov 11 14:47	0°♄32'10 -1°32'42	
conjunction	11881 Mar 04 14:23	20°♄17'28 0°51'52	min. Earth dist.	11886 Nov 11 14:49	0°♄32'10 8.59759 AU	
minimum elong	11881 Mar 04 14:25	20°♄17'29 0°52'05		11886 Nov 18 15:25	30°♄	
max. Earth dist.	11881 Mar 04 02:51	20°♄13'51 10.39927 AU	direct	11887 Jan 20 12:26	27°♄08'57	
morning rise	11881 Mar 22 01:22	22°♄28'06		11887 Mar 21 06:42	0°♄	
	11881 Jun 20 23:30	0°♄	evening set	11887 May 04 02:48	4°♄43'54	
retrograde	11881 Jul 01 14:04	0°♄06'08				
	11881 Jul 12 05:20	30°♄	conjunction	11887 May 21 01:54	6°♄48'49 -1°23'39	
opposition	11881 Sep 07 03:40	26°♄43'21 0°50'14	minimum elong	11887 May 21 01:51	6°♄48'48 1°24'21	
min. Earth dist.	11881 Sep 07 11:56	26°♄41'43 8.41213 AU	max. Earth dist.	11887 May 21 02:51	6°♄49'07 10.61642 AU	
direct	11881 Nov 15 10:10	23°♄16'26	morning rise	11887 Jun 06 23:12	8°♄53'15	
	11882 Feb 19 07:55	0°♄	retrograde	11887 Sep 16 16:21	16°♄20'34	
evening set	11882 Feb 28 14:05	1°♄07'08	opposition	11887 Nov 24 18:02	12°♄59'51 -1°52'21	
			min. Earth dist.	11887 Nov 24 15:51	13°♄00'16 8.63580 AU	
conjunction	11882 Mar 18 02:16	3°♄17'51 0°28'27	direct	11888 Feb 02 14:18	9°♄37'27	
minimum elong	11882 Mar 18 02:17	3°♄17'51 0°28'29	evening set	11888 May 15 18:09	17°♄08'44	
max. Earth dist.	11882 Mar 17 16:15	3°♄14'43 10.42628 AU				
morning rise	11882 Apr 04 11:05	5°♄27'38	conjunction	11888 Jun 01 15:09	19°♄12'38 -1°37'31	
retrograde	11882 Jul 14 19:13	13°♄03'14	minimum elong	11888 Jun 01 15:07	19°♄12'37 1°38'17	
opposition	11882 Sep 20 12:35	9°♄40'58 0°20'12	max. Earth dist.	11888 Jun 01 18:29	19°♄13'39 10.65255 AU	
min. Earth dist.	11882 Sep 20 20:02	9°♄39'30 8.44215 AU	morning rise	11888 Jun 18 11:05	21°♄16'13	
direct	11882 Nov 28 23:09	6°♄14'34	retrograde	11888 Sep 28 10:57	28°♄42'52	
evening set	11883 Mar 14 00:20	14°♄02'54	opposition	11888 Dec 06 19:40	25°♄22'08 -2°06'37	
			min. Earth dist.	11888 Dec 06 16:03	25°♄22'49 8.66997 AU	
conjunction	11883 Mar 31 10:05	16°♄12'37 0°03'47	direct	11889 Feb 14 13:33	22°♄00'28	
minimum elong	11883 Mar 31 10:05	16°♄12'37 0°03'37	evening set	11889 May 28 06:34	29°♄28'18	
behind sun begin	11883 Mar 31 02:59	16°♄10'25		11889 Jun 01 15:32	0°♄	
behind sun end	11883 Mar 31 17:10	16°♄14'48				
max. Earth dist.	11883 Mar 31 01:20	16°♄09'54 10.45930 AU	conjunction	11889 Jun 14 02:01	1°♄31'21 -1°46'48	
morning rise	11883 Apr 17 16:33	18°♄21'24	minimum elong	11889 Jun 14 02:00	1°♄31'20 1°47'36	
desc. node	11883 May 27 12:50	22°♄46'45	max. Earth dist.	11889 Jun 14 06:44	1°♄32'47 10.68377 AU	
retrograde	11883 Jul 27 21:32	25°♄54'44	morning rise	11889 Jun 30 21:16	3°♄34'19	
opposition	11883 Oct 03 20:51	22°♄32'58 -0°10'38	retrograde	11889 Oct 11 03:50	11°♄00'38	
min. Earth dist.	11883 Oct 04 03:23	22°♄31'42 8.47754 AU	opposition	11889 Dec 19 19:33	7°♄39'46 -2°14'59	
direct	11883 Dec 12 11:42	19°♄07'15	min. Earth dist.	11889 Dec 19 14:33	7°♄40'43 8.69823 AU	
evening set	11884 Mar 26 06:49	26°♄52'42	direct	11890 Feb 27 11:51	4°♄18'41	
			evening set	11890 Jun 09 16:24	11°♄43'22	
conjunction	11884 Apr 12 13:49	29°♄01'14 -0°21'03				
minimum elong	11884 Apr 12 13:48	29°♄01'14 0°21'23	conjunction	11890 Jun 26 11:08	13°♄45'51 -1°51'09	
max. Earth dist.	11884 Apr 12 06:28	28°♄58'57 10.49673 AU	minimum elong	11890 Jun 26 11:07	13°♄45'51 1°51'58	
	11884 Apr 20 10:24	0°♄	max. Earth dist.	11890 Jun 26 17:44	13°♄47'52 10.70820 AU	
morning rise	11884 Apr 29 17:55	1°♄08'56	morning rise	11890 Jul 13 06:20	15°♄48'26	
retrograde	11884 Aug 08 22:23	8°♄40'16	retrograde	11890 Oct 23 21:58	23°♄14'50	
opposition	11884 Oct 16 04:06	5°♄18'55 -0°40'41	opposition	11891 Jan 01 18:01	19°♄53'41 -2°17'11	
min. Earth dist.	11884 Oct 16 09:13	5°♄17'56 8.51660 AU	min. Earth dist.	11891 Jan 01 11:13	19°♄54'58 8.71861 AU	
direct	11884 Dec 24 21:58	1°♄53'59	direct	11891 Mar 12 07:30	16°♄33'07	
evening set	11885 Apr 08 09:17	9°♄36'08	evening set	11891 Jun 22 00:13	23°♄55'02	
conjunction	11885 Apr 25 13:30	11°♄43'27 -0°44'34	conjunction	11891 Jul 08 19:08	25°♄57'16 -1°50'29	
minimum elong	11885 Apr 25 13:28	11°♄43'27 0°45'03	minimum elong	11891 Jul 08 19:08	25°♄57'17 1°51'15	
max. Earth dist.	11885 Apr 25 08:09	11°♄41'47 10.53672 AU	max. Earth dist.	11891 Jul 09 03:49	25°♄59'56 10.72395 AU	
morning rise	11885 May 12 15:14	13°♄50'02	morning rise	11891 Jul 25 14:58	27°♄59'48	
	11885 May 22 08:37	15°♄		11891 Aug 11 22:01	0°♄	
retrograde	11885 Aug 21 21:01	21°♄19'40	retrograde	11891 Nov 05 15:33	5°♄26'43	
opposition	11885 Oct 29 10:07	17°♄58'37 -1°08'28	opposition	11892 Jan 14 15:05	2°♄05'11 -2°13'12	

min. Earth dist.	11892 Jan 14 06:44	2° Ω 06'46	8.72948 AU	retrograde	11898 Jan 19 18:14	18° Ω 59'48	
	11892 Feb 13 09:08	30° \mathbb{R} \mathfrak{S}		opposition	11898 Mar 30 09:23	15° Ω 34'53	-0°06'23
direct	11892 Mar 23 23:40	28° \mathfrak{S} 44'59		min. Earth dist.	11898 Mar 30 01:41	15° Ω 36'23	8.61982 AU
	11892 May 01 15:26	0° Ω		direct	11898 Jun 06 11:27	12° Ω 13'21	
evening set	11892 Jul 03 07:18	6° Ω 04'48		asc. node	11898 Jun 18 09:34	12° Ω 20'52	
				evening set	11898 Sep 15 05:09	19° Ω 35'32	
conjunction	11892 Jul 20 03:04	8° Ω 07'06	-1°44'50				
minimum elong	11892 Jul 20 03:06	8° Ω 07'07	1°45'31	conjunction	11898 Oct 02 14:47	21° Ω 42'36	0°06'46
max. Earth dist.	11892 Jul 20 13:09	8° Ω 10'11	10.73002 AU	minimum elong	11898 Oct 02 14:47	21° Ω 42'36	0°06'59
morning rise	11892 Aug 06 00:17	10° Ω 09'51		behind sun begin	11898 Oct 02 08:08	21° Ω 40'36	
	11892 Sep 20 18:53	15° Ω		behind sun end	11898 Oct 02 21:25	21° Ω 44'37	
retrograde	11892 Nov 17 09:33	17° Ω 37'41		max. Earth dist.	11898 Oct 02 22:41	21° Ω 45'01	10.60125 AU
	11893 Jan 16 15:58	15° \mathbb{R} Ω		morning rise	11898 Oct 20 03:39	23° Ω 50'39	
opposition	11893 Jan 26 11:00	14° Ω 15'42	-2°03'16		11898 Dec 21 08:05	0° \mathbb{M}	
min. Earth dist.	11893 Jan 26 02:00	14° Ω 17'25	8.73062 AU	retrograde	11899 Feb 01 19:29	1° \mathbb{M} 29'08	
direct	11893 Apr 05 14:45	10° Ω 55'41			11899 Mar 16 20:49	30° \mathbb{R} Ω	
	11893 Jun 16 17:17	15° Ω		opposition	11899 Apr 12 05:21	28° Ω 03'47	0°23'25
evening set	11893 Jul 15 14:22	18° Ω 14'05		min. Earth dist.	11899 Apr 11 23:38	28° Ω 04'54	8.58195 AU
				direct	11899 Jun 19 04:23	24° Ω 41'34	
conjunction	11893 Aug 01 11:32	20° Ω 16'43	-1°34'29		11899 Sep 10 00:13	0° \mathbb{M}	
minimum elong	11893 Aug 01 11:34	20° Ω 16'44	1°35'04	evening set	11899 Sep 28 04:27	2° \mathbb{M} 06'52	
max. Earth dist.	11893 Aug 01 21:44	20° Ω 19'50	10.72680 AU				
morning rise	11893 Aug 18 10:54	22° Ω 19'59		conjunction	11899 Oct 15 16:23	4° \mathbb{M} 15'02	0°30'40
retrograde	11893 Nov 30 04:56	29° Ω 49'00		minimum elong	11899 Oct 15 16:21	4° \mathbb{M} 15'01	0°31'02
opposition	11894 Feb 08 06:23	26° Ω 26'29	-1°47'48	max. Earth dist.	11899 Oct 15 21:58	4° \mathbb{M} 16'44	10.56217 AU
min. Earth dist.	11894 Feb 07 21:30	26° Ω 28'11	8.72279 AU	morning rise	11899 Nov 02 07:22	6° \mathbb{M} 24'05	
direct	11894 Apr 18 04:14	23° Ω 06'28		retrograde	11900 Feb 14 23:09	14° \mathbb{M} 04'49	
	11894 Jul 24 12:53	0° \mathbb{M}		opposition	11900 Apr 25 02:31	10° \mathbb{M} 39'07	0°52'22
evening set	11894 Jul 27 22:00	0° \mathbb{M} 24'03		min. Earth dist.	11900 Apr 24 22:40	10° \mathbb{M} 39'52	8.54222 AU
				direct	11900 Jul 01 23:04	7° \mathbb{M} 16'10	
conjunction	11894 Aug 13 21:12	2° \mathbb{M} 27'17	-1°19'53	evening set	11900 Oct 11 08:15	14° \mathbb{M} 45'13	
minimum elong	11894 Aug 13 21:14	2° \mathbb{M} 27'17	1°20'20		11900 Oct 13 09:11	15° \mathbb{M}	
max. Earth dist.	11894 Aug 14 07:28	2° \mathbb{M} 30'24	10.71511 AU				
morning rise	11894 Aug 30 23:12	4° \mathbb{M} 31'17		conjunction	11900 Oct 28 22:10	16° \mathbb{M} 54'24	0°53'18
retrograde	11894 Dec 12 22:50	12° \mathbb{M} 01'47		minimum elong	11900 Oct 28 22:08	16° \mathbb{M} 54'23	0°53'50
opposition	11895 Feb 21 01:15	8° \mathbb{M} 38'39	-1°27'27	max. Earth dist.	11900 Oct 29 02:04	16° \mathbb{M} 55'36	10.52195 AU
min. Earth dist.	11895 Feb 20 16:26	8° \mathbb{M} 40'20	8.70686 AU	morning rise	11900 Nov 15 14:36	19° \mathbb{M} 04'22	
direct	11895 Apr 30 17:50	5° \mathbb{M} 18'26		retrograde	11901 Feb 28 04:36	26° \mathbb{M} 47'15	
evening set	11895 Aug 09 07:20	12° \mathbb{M} 35'59		opposition	11901 May 08 01:08	23° \mathbb{M} 21'20	1°19'02
				min. Earth dist.	11901 May 07 22:37	23° \mathbb{M} 21'50	8.50242 AU
conjunction	11895 Aug 26 09:06	14° \mathbb{M} 40'00	-1°01'38	direct	11901 Jul 14 20:42	19° \mathbb{M} 57'39	
minimum elong	11895 Aug 26 09:08	14° \mathbb{M} 40'00	1°01'55	evening set	11901 Oct 24 16:44	27° \mathbb{M} 30'52	
max. Earth dist.	11895 Aug 26 19:48	14° \mathbb{M} 43'15	10.69573 AU				
morning rise	11895 Sep 12 13:53	16° \mathbb{M} 44'53		conjunction	11901 Nov 11 08:14	29° \mathbb{M} 41'00	1°13'29
retrograde	11895 Dec 25 18:52	24° \mathbb{M} 17'06		minimum elong	11901 Nov 11 08:12	29° \mathbb{M} 40'59	1°14'09
opposition	11896 Mar 04 19:37	20° \mathbb{M} 53'20	-1°03'04	max. Earth dist.	11901 Nov 11 10:17	29° \mathbb{M} 41'38	10.48260 AU
min. Earth dist.	11896 Mar 04 10:38	20° \mathbb{M} 55'03	8.68368 AU		11901 Nov 13 21:37	0° \mathbb{X}	
direct	11896 May 12 08:26	17° \mathbb{M} 32'48		morning rise	11901 Nov 29 01:35	1° \mathbb{X} 51'45	
evening set	11896 Aug 20 19:10	24° \mathbb{M} 51'04		retrograde	11902 Mar 13 12:37	9° \mathbb{X} 36'33	
				opposition	11902 May 21 01:29	6° \mathbb{X} 10'35	1°42'01
conjunction	11896 Sep 06 23:42	26° \mathbb{M} 56'03	-0°40'30	min. Earth dist.	11902 May 21 00:29	6° \mathbb{X} 10'46	8.46459 AU
minimum elong	11896 Sep 06 23:44	26° \mathbb{M} 56'03	0°40'37	direct	11902 Jul 27 20:26	2° \mathbb{X} 46'08	
max. Earth dist.	11896 Sep 07 10:44	26° \mathbb{M} 59'25	10.66949 AU	evening set	11902 Nov 07 05:35	10° \mathbb{X} 23'44	
morning rise	11896 Sep 24 07:15	29° \mathbb{M} 01'57					
	11896 Oct 02 12:22	0° Ω		conjunction	11902 Nov 24 22:13	12° \mathbb{X} 34'43	1°30'10
retrograde	11897 Jan 06 18:08	6° Ω 36'06		minimum elong	11902 Nov 24 22:11	12° \mathbb{X} 34'42	1°30'55
opposition	11897 Mar 17 14:12	3° Ω 11'43	-0°35'39	max. Earth dist.	11902 Nov 24 21:46	12° \mathbb{X} 34'34	10.44618 AU
min. Earth dist.	11897 Mar 17 05:19	3° Ω 13'26	8.65423 AU	morning rise	11902 Dec 12 16:03	14° \mathbb{X} 46'07	
	11897 May 11 14:06	30° \mathbb{R} \mathbb{M}		retrograde	11903 Mar 26 23:18	22° \mathbb{X} 32'24	
direct	11897 May 24 21:34	29° \mathbb{M} 50'45		opposition	11903 Jun 03 03:46	19° \mathbb{X} 06'33	2°00'04
	11897 Jun 07 03:03	0° Ω		min. Earth dist.	11903 Jun 03 04:52	19° \mathbb{X} 06'20	8.43064 AU
evening set	11897 Sep 02 10:10	7° Ω 10'33		direct	11903 Aug 09 22:23	15° \mathbb{X} 41'24	
				evening set	11903 Nov 20 22:20	23° \mathbb{X} 23'22	
conjunction	11897 Sep 19 17:19	9° Ω 16'33	-0°17'24				
minimum elong	11897 Sep 19 17:20	9° Ω 16'34	0°17'21	conjunction	11903 Dec 08 15:36	25° \mathbb{X} 35'01	1°42'21
max. Earth dist.	11897 Sep 20 03:21	9° Ω 19'37	10.63753 AU	minimum elong	11903 Dec 08 15:35	25° \mathbb{X} 35'01	1°43'10
morning rise	11897 Oct 07 03:37	11° Ω 23'32		max. Earth dist.	11903 Dec 08 11:55	25° \mathbb{X} 33'52	10.41463 AU

morning rise	11903 Dec 26 09:32	27° ♄ 46'55		conjunction	11910 Feb 27 19:21	14° ♄ 38'19	1°01'35
	11904 Jan 14 04:16	0° ♄		minimum elong	11910 Feb 27 19:23	14° ♄ 38'19	1°01'53
retrograde	11904 Apr 08 10:16	5° ♄ 34'09		max. Earth dist.	11910 Feb 27 07:29	14° ♄ 34'35	10.39445 AU
opposition	11904 Jun 15 07:56	2° ♄ 08'34	2°12'05	morning rise	11910 Mar 17 07:13	16° ♄ 49'18	
min. Earth dist.	11904 Jun 15 11:32	2° ♄ 07'51	8.40245 AU	retrograde	11910 Jun 27 01:03	24° ♄ 28'44	
	11904 Jul 14 07:10	30° ♄ ♂		opposition	11910 Sep 02 11:31	21° ♄ 06'15	1°02'59
direct	11904 Aug 22 04:28	28° ♄ 42'48		min. Earth dist.	11910 Sep 02 21:10	21° ♄ 04'21	8.40584 AU
	11904 Sep 29 17:09	0° ♄		direct	11910 Nov 10 13:41	17° ♄ 39'37	
evening set	11904 Dec 03 18:02	6° ♄ 28'49		evening set	11911 Feb 23 20:30	25° ♄ 31'32	
conjunction	11904 Dec 21 11:38	8° ♄ 40'59	1°49'20	conjunction	11911 Mar 13 09:27	27° ♄ 42'40	0°39'09
minimum elong	11904 Dec 21 11:37	8° ♄ 40'59	1°50'10	minimum elong	11911 Mar 13 09:28	27° ♄ 42'40	0°39'16
max. Earth dist.	11904 Dec 21 05:11	8° ♄ 38'58	10.38980 AU	max. Earth dist.	11911 Mar 12 21:09	27° ♄ 38'48	10.41775 AU
morning rise	11905 Jan 08 05:19	10° ♄ 53'13		morning rise	11911 Mar 30 19:25	29° ♄ 52'54	
retrograde	11905 Apr 21 20:50	18° ♄ 40'45			11911 Mar 31 18:34	0° ♄	
opposition	11905 Jun 28 13:54	15° ♄ 15'36	2°17'19	retrograde	11911 Jul 10 06:06	7° ♄ 29'57	
min. Earth dist.	11905 Jun 28 19:23	15° ♄ 14'30	8.38166 AU	opposition	11911 Sep 15 21:14	4° ♄ 07'57	0°33'48
direct	11905 Sep 04 14:41	11° ♄ 49'19		min. Earth dist.	11911 Sep 16 06:28	4° ♄ 06'08	8.43111 AU
evening set	11905 Dec 17 15:38	19° ♄ 38'43		direct	11911 Nov 24 05:21	0° ♄ 41'44	
				evening set	11912 Mar 08 08:55	8° ♄ 31'42	
conjunction	11906 Jan 04 09:24	21° ♄ 51'16	1°50'39	conjunction	11912 Mar 25 19:44	10° ♄ 41'57	0°14'51
minimum elong	11906 Jan 04 09:24	21° ♄ 51'16	1°51'26	minimum elong	11912 Mar 25 19:45	10° ♄ 41'57	0°14'46
max. Earth dist.	11906 Jan 04 01:06	21° ♄ 48'40	10.37307 AU	behind sun begin	11912 Mar 25 16:53	10° ♄ 41'04	
morning rise	11906 Jan 22 02:31	24° ♄ 03'38		behind sun end	11912 Mar 25 22:37	10° ♄ 42'50	
	11906 Mar 20 02:26	0° ♄		max. Earth dist.	11912 Mar 25 08:38	10° ♄ 38'29	10.44521 AU
retrograde	11906 May 05 08:56	1° ♄ 50'46		morning rise	11912 Apr 12 03:29	12° ♄ 51'18	
	11906 Jun 21 13:42	30° ♄ ♂		retrograde	11912 Jul 22 09:52	20° ♄ 26'15	
opposition	11906 Jul 11 21:24	28° ♄ 26'06	2°15'22	opposition	11912 Sep 28 06:28	17° ♄ 04'39	0°03'05
min. Earth dist.	11906 Jul 12 04:03	28° ♄ 24'46	8.36927 AU	min. Earth dist.	11912 Sep 28 14:11	17° ♄ 03'09	8.46035 AU
direct	11906 Sep 18 02:08	24° ♄ 59'29		desc. node	11912 Nov 04 07:14	14° ♄ 31'19	
	11906 Dec 07 05:54	0° ♄		direct	11912 Dec 06 19:51	13° ♄ 38'59	
evening set	11906 Dec 31 14:20	2° ♄ 51'24		evening set	11913 Mar 21 17:56	21° ♄ 26'28	
conjunction	11907 Jan 18 07:57	5° ♄ 04'07	1°46'09	conjunction	11913 Apr 08 02:22	23° ♄ 35'42	-0°10'10
minimum elong	11907 Jan 18 07:59	5° ♄ 04'07	1°46'51	minimum elong	11913 Apr 08 02:21	23° ♄ 35'41	0°10'25
max. Earth dist.	11907 Jan 17 22:36	5° ♄ 01'10	10.36519 AU	behind sun begin	11913 Apr 07 20:45	23° ♄ 33'57	
morning rise	11907 Feb 05 00:05	7° ♄ 16'25		behind sun end	11913 Apr 08 07:58	23° ♄ 37'26	
	11907 May 12 05:31	15° ♄		max. Earth dist.	11913 Apr 07 17:29	23° ♄ 32'56	10.47633 AU
retrograde	11907 May 18 20:59	15° ♄ 02'25		morning rise	11913 Apr 25 07:37	25° ♄ 44'02	
	11907 May 25 12:13	15° ♄			11913 Jun 02 13:07	0° ♄	
opposition	11907 Jul 25 06:03	11° ♄ 38'17	2°06'18	retrograde	11913 Aug 04 13:59	3° ♄ 17'02	
min. Earth dist.	11907 Jul 25 13:18	11° ♄ 36'50	8.36584 AU		11913 Oct 10 17:03	30° ♄ ♂	
direct	11907 Oct 01 15:34	8° ♄ 11'28		opposition	11913 Oct 11 14:55	29° ♄ 55'45	-0°27'34
	11908 Jan 05 14:56	15° ♄		min. Earth dist.	11913 Oct 11 20:56	29° ♄ 54'35	8.49303 AU
evening set	11908 Jan 14 12:46	16° ♄ 04'53		direct	11913 Dec 20 06:53	26° ♄ 30'41	
conjunction	11908 Feb 01 05:53	18° ♄ 17'32	1°36'03		11914 Feb 24 19:12	0° ♄	
minimum elong	11908 Feb 01 05:55	18° ♄ 17'33	1°36'39	evening set	11914 Apr 03 23:19	4° ♄ 15'12	
max. Earth dist.	11908 Jan 31 19:54	18° ♄ 14'24	10.36651 AU	conjunction	11914 Apr 21 05:01	6° ♄ 23'18	-0°34'24
morning rise	11908 Feb 18 20:47	20° ♄ 29'36		minimum elong	11914 Apr 21 05:00	6° ♄ 23'18	0°34'49
retrograde	11908 May 31 07:54	28° ♄ 13'48		max. Earth dist.	11914 Apr 20 22:27	6° ♄ 21'15	10.51027 AU
opposition	11908 Aug 06 15:41	24° ♄ 50'14	1°50'33	morning rise	11914 May 08 07:45	8° ♄ 30'34	
min. Earth dist.	11908 Aug 06 23:43	24° ♄ 48'38	8.37145 AU		11914 Jul 14 03:39	15° ♄	
direct	11908 Oct 14 06:41	21° ♄ 23'21		retrograde	11914 Aug 17 14:52	16° ♄ 01'50	
evening set	11909 Jan 27 09:42	29° ♄ 17'09			11914 Sep 21 17:36	15° ♄ ♂	
	11909 Feb 02 04:09	0° ♄ ♂		opposition	11914 Oct 24 22:34	12° ♄ 40'45	-0°56'37
conjunction	11909 Feb 14 01:53	1° ♄ 29'31	1°20'55	min. Earth dist.	11914 Oct 25 03:02	12° ♄ 39'53	8.52806 AU
minimum elong	11909 Feb 14 01:56	1° ♄ 29'32	1°21'22	direct	11915 Jan 02 16:23	9° ♄ 16'18	
max. Earth dist.	11909 Feb 13 15:01	1° ♄ 26'06	10.37671 AU		11915 Mar 31 10:46	15° ♄	
morning rise	11909 Mar 03 15:23	3° ♄ 41'09		evening set	11915 Apr 17 00:39	16° ♄ 57'29	
retrograde	11909 Jun 13 17:17	11° ♄ 23'06		conjunction	11915 May 04 03:29	19° ♄ 04'22	-0°56'49
opposition	11909 Aug 20 01:41	8° ♄ 00'05	1°29'03	minimum elong	11915 May 04 03:27	19° ♄ 04'21	0°57'22
min. Earth dist.	11909 Aug 20 10:38	7° ♄ 58'18	8.38535 AU	max. Earth dist.	11915 May 03 22:53	19° ♄ 02'56	10.54573 AU
direct	11909 Oct 27 22:10	4° ♄ 33'14		morning rise	11915 May 21 03:53	21° ♄ 10'33	
evening set	11910 Feb 10 04:35	12° ♄ 26'28		retrograde	11915 Aug 30 13:06	28° ♄ 40'24	

opposition	11915 Nov 07 04:58	25° 8 19'22	-1°22'39	opposition	11922 Jan 22 09:06	9° Q 21'16	-2°08'17
min. Earth dist.	11915 Nov 07 07:50	25° 8 18'49	8.56398 AU	min. Earth dist.	11922 Jan 22 00:09	9° Q 22'58	8.71011 AU
direct	11916 Jan 16 00:47	21° 8 55'33		direct	11922 Apr 01 15:39	6° Q 00'34	
evening set	11916 Apr 28 22:07	29° 8 33'11		evening set	11922 Jul 11 17:56	13° Q 20'14	
	11916 May 02 14:10	0° II			11922 Jul 25 11:35	15° Q	
conjunction	11916 May 15 22:16	1° II 38'52	-1°16'19	conjunction	11922 Jul 28 14:31	15° Q 22'54	-1°39'26
minimum elong	11916 May 15 22:14	1° II 38'51	1°16'59	minimum elong	11922 Jul 28 14:33	15° Q 22'54	1°40'04
max. Earth dist.	11916 May 15 19:48	1° II 38'06	10.58121 AU	max. Earth dist.	11922 Jul 29 01:56	15° Q 26'23	10.71095 AU
morning rise	11916 Jun 01 20:41	3° II 44'01		morning rise	11922 Aug 14 13:02	17° Q 26'06	
retrograde	11916 Sep 11 10:22	11° II 12'44		retrograde	11922 Nov 26 02:14	24° Q 55'08	
opposition	11916 Nov 19 09:37	7° II 51'39	-1°44'31	opposition	11923 Feb 04 04:58	21° Q 32'19	-1°55'01
min. Earth dist.	11916 Nov 19 10:10	7° II 51'32	8.59913 AU	min. Earth dist.	11923 Feb 03 18:24	21° Q 34'20	8.71206 AU
direct	11917 Jan 28 06:28	4° II 28'26		direct	11923 Apr 14 06:22	18° Q 11'53	
evening set	11917 May 11 15:49	12° II 02'26		evening set	11923 Jul 24 01:18	25° Q 30'10	
conjunction	11917 May 28 13:46	14° II 07'03	-1°32'05	conjunction	11923 Aug 09 23:48	27° Q 33'16	-1°26'32
minimum elong	11917 May 28 13:44	14° II 07'02	1°32'50	minimum elong	11923 Aug 09 23:50	27° Q 33'17	1°27'02
max. Earth dist.	11917 May 28 14:18	14° II 07'13	10.61502 AU	max. Earth dist.	11923 Aug 10 12:44	27° Q 37'13	10.70926 AU
morning rise	11917 Jun 14 10:31	16° II 11'18		morning rise	11923 Aug 27 00:34	29° Q 37'03	
retrograde	11917 Sep 24 06:11	23° II 39'13			11923 Aug 30 05:54	0° III	
opposition	11917 Dec 02 12:40	20° II 17'58	-2°01'16	retrograde	11923 Dec 08 21:38	7° III 07'12	
min. Earth dist.	11917 Dec 02 10:23	20° II 18'24	8.63176 AU	opposition	11924 Feb 17 00:02	3° III 43'59	-1°36'35
direct	11918 Feb 10 08:46	16° II 55'22		min. Earth dist.	11924 Feb 16 12:48	3° III 46'08	8.70628 AU
evening set	11918 May 24 06:05	24° II 25'49		direct	11924 Apr 25 19:01	0° III 23'41	
				evening set	11924 Aug 04 10:03	7° III 41'22	
conjunction	11918 Jun 10 02:22	26° II 29'31	-1°43'26	conjunction	11924 Aug 21 10:44	9° III 45'05	-1°09'43
minimum elong	11918 Jun 10 02:21	26° II 29'31	1°44'15	minimum elong	11924 Aug 21 10:46	9° III 45'06	1°10'04
max. Earth dist.	11918 Jun 10 06:23	26° II 30'46	10.64554 AU	max. Earth dist.	11924 Aug 21 23:41	9° III 49'02	10.70003 AU
morning rise	11918 Jun 26 21:55	28° II 33'02		morning rise	11924 Sep 07 14:11	11° III 49'37	
	11918 Jul 09 04:20	0° III		retrograde	11924 Dec 20 17:54	19° III 21'08	
retrograde	11918 Oct 07 01:28	6° III 00'33		opposition	11925 Feb 28 18:36	15° III 57'33	-1°13'45
opposition	11918 Dec 15 14:06	2° III 39'04	-2°12'17	min. Earth dist.	11925 Feb 28 07:49	15° III 59'37	8.69318 AU
min. Earth dist.	11918 Dec 15 09:09	2° III 40'01	8.66036 AU	direct	11925 May 08 08:25	12° III 37'12	
	11919 Jan 24 18:00	30° III		evening set	11925 Aug 16 20:47	19° III 55'05	
direct	11919 Feb 23 08:26	29° III 17'04					
	11919 Mar 24 11:34	0° III					
evening set	11919 Jun 05 17:36	6° III 44'10		conjunction	11925 Sep 02 23:56	21° III 59'36	-0°49'41
				minimum elong	11925 Sep 02 23:58	21° III 59'36	0°49'52
conjunction	11919 Jun 22 12:51	8° III 47'12	-1°49'58	max. Earth dist.	11925 Sep 03 11:57	22° III 03'16	10.68386 AU
minimum elong	11919 Jun 22 12:50	8° III 47'12	1°50'47	morning rise	11925 Sep 20 06:19	24° III 05'02	
max. Earth dist.	11919 Jun 22 19:28	8° III 49'14	10.67147 AU		11925 Nov 18 16:40	0° III	
morning rise	11919 Jul 09 07:59	10° III 50'14		retrograde	11926 Jan 02 15:24	1° III 38'09	
retrograde	11919 Oct 19 20:50	18° III 17'38			11926 Feb 17 11:09	30° III	
opposition	11919 Dec 28 13:53	14° III 55'53	-2°17'09	opposition	11926 Mar 13 13:14	28° III 14'13	-0°47'28
min. Earth dist.	11919 Dec 28 07:21	14° III 57'08	8.68368 AU	min. Earth dist.	11926 Mar 13 03:27	28° III 16'06	8.67357 AU
direct	11920 Mar 07 04:16	11° III 34'24		direct	11926 May 20 21:27	24° III 53'42	
evening set	11920 Jun 17 02:55	18° III 58'31			11926 Aug 10 06:06	0° III	
				evening set	11926 Aug 29 10:11	2° III 12'32	
conjunction	11920 Jul 03 21:47	21° III 01'09	-1°51'26	conjunction	11926 Sep 15 16:03	4° III 17'58	-0°27'18
minimum elong	11920 Jul 03 21:47	21° III 01'09	1°52'14	minimum elong	11926 Sep 15 16:04	4° III 17'58	0°27'19
max. Earth dist.	11920 Jul 04 05:50	21° III 03'38	10.69163 AU	max. Earth dist.	11926 Sep 16 03:28	4° III 21'27	10.66153 AU
morning rise	11920 Jul 20 17:25	23° III 04'00		morning rise	11926 Oct 03 01:16	6° III 24'23	
	11920 Oct 06 12:50	0° III		retrograde	11927 Jan 15 13:28	13° III 59'20	
retrograde	11920 Oct 31 14:01	0° III 31'35		opposition	11927 Mar 26 08:01	10° III 35'02	-0°18'52
	11920 Nov 25 21:52	30° III		min. Earth dist.	11927 Mar 25 22:57	10° III 36'47	8.64832 AU
opposition	11921 Jan 09 12:10	27° III 09'33	-2°15'47	direct	11927 Jun 02 12:16	7° III 14'13	
min. Earth dist.	11921 Jan 09 04:30	27° III 11'00	8.70054 AU	evening set	11927 Sep 11 03:16	14° III 34'49	
direct	11921 Mar 19 21:56	23° III 48'30					
	11921 Jun 19 12:35	0° III					
evening set	11921 Jun 29 10:45	1° III 10'07		conjunction	11927 Sep 28 11:50	16° III 41'16	-0°03'35
				minimum elong	11927 Sep 28 11:50	16° III 41'16	0°03'26
conjunction	11921 Jul 16 06:03	3° III 12'37	-1°47'52	behind sun begin	11927 Sep 28 04:43	16° III 39'07	
minimum elong	11921 Jul 16 06:04	3° III 12'38	1°48'36	behind sun end	11927 Sep 28 18:57	16° III 43'24	
max. Earth dist.	11921 Jul 16 15:29	3° III 15'30	10.70498 AU	max. Earth dist.	11927 Sep 28 22:34	16° III 44'31	10.63386 AU
morning rise	11921 Aug 02 02:51	5° III 15'31		morning rise	11927 Oct 15 23:31	18° III 48'38	
retrograde	11921 Nov 13 07:06	12° III 43'40		asc. node	11927 Nov 23 08:24	23° III 00'12	

retrograde	11928 Jan 28 14:06	26° $\mathbf{\Omega}$ 25'31		minimum elong	11933 Dec 15 18:35	3° $\mathbf{\Omega}$ 12'31	1°47'43
opposition	11928 Apr 07 03:09	23° $\mathbf{\Omega}$ 00'54	0°10'49	max. Earth dist.	11933 Dec 15 13:26	3° $\mathbf{\Omega}$ 10'55	10.42250 AU
min. Earth dist.	11928 Apr 06 19:00	23° $\mathbf{\Omega}$ 02'29	8.61833 AU	morning rise	11934 Jan 02 12:10	5° $\mathbf{\Omega}$ 24'15	
direct	11928 Jun 14 04:22	19° $\mathbf{\Omega}$ 39'38		retrograde	11934 Apr 16 06:57	13° $\mathbf{\Omega}$ 10'32	
evening set	11928 Sep 23 00:25	27° $\mathbf{\Omega}$ 02'45		opposition	11934 Jun 23 02:37	9° $\mathbf{\Omega}$ 45'30	2°15'45
				min. Earth dist.	11934 Jun 23 07:18	9° $\mathbf{\Omega}$ 44'34	8.41042 AU
conjunction	11928 Oct 10 11:21	29° $\mathbf{\Omega}$ 10'12	0°20'35	direct	11934 Aug 30 02:24	6° $\mathbf{\Omega}$ 19'45	
minimum elong	11928 Oct 10 11:20	29° $\mathbf{\Omega}$ 10'12	0°20'54	evening set	11934 Dec 11 21:04	14° $\mathbf{\Omega}$ 06'25	
max. Earth dist.	11928 Oct 10 20:31	29° $\mathbf{\Omega}$ 13'00	10.60183 AU				
	11928 Oct 17 06:01	0° $\mathbf{\Omega}$		conjunction	11934 Dec 29 14:46	16° $\mathbf{\Omega}$ 18'31	1°50'44
morning rise	11928 Oct 28 01:09	1° $\mathbf{\Omega}$ 18'31		minimum elong	11934 Dec 29 14:46	16° $\mathbf{\Omega}$ 18'31	1°51'33
retrograde	11929 Feb 09 17:57	8° $\mathbf{\Omega}$ 57'22		max. Earth dist.	11934 Dec 29 06:56	16° $\mathbf{\Omega}$ 16'04	10.39765 AU
opposition	11929 Apr 19 23:21	5° $\mathbf{\Omega}$ 32'29	0°40'12	morning rise	11935 Jan 16 07:53	18° $\mathbf{\Omega}$ 30'30	
min. Earth dist.	11929 Apr 19 16:48	5° $\mathbf{\Omega}$ 33'46	8.58459 AU	retrograde	11935 Apr 29 18:33	26° $\mathbf{\Omega}$ 16'43	
direct	11929 Jun 26 20:17	2° $\mathbf{\Omega}$ 10'38		opposition	11935 Jul 06 08:28	22° $\mathbf{\Omega}$ 51'57	2°17'02
evening set	11929 Oct 06 01:43	9° $\mathbf{\Omega}$ 36'54		min. Earth dist.	11935 Jul 06 15:16	22° $\mathbf{\Omega}$ 50'36	8.38944 AU
				direct	11935 Sep 12 11:02	19° $\mathbf{\Omega}$ 25'33	
conjunction	11929 Oct 23 14:37	11° $\mathbf{\Omega}$ 45'18	0°43'50	evening set	11935 Dec 25 18:17	27° $\mathbf{\Omega}$ 15'13	
minimum elong	11929 Oct 23 14:35	11° $\mathbf{\Omega}$ 45'17	0°44'19				
max. Earth dist.	11929 Oct 23 20:41	11° $\mathbf{\Omega}$ 47'10	10.56641 AU	conjunction	11936 Jan 12 11:50	29° $\mathbf{\Omega}$ 27'36	1°48'50
morning rise	11929 Nov 10 06:11	13° $\mathbf{\Omega}$ 54'32		minimum elong	11936 Jan 12 11:51	29° $\mathbf{\Omega}$ 27'37	1°49'36
	11929 Nov 19 11:11	15° $\mathbf{\Omega}$		max. Earth dist.	11936 Jan 12 01:31	29° $\mathbf{\Omega}$ 24'22	10.38072 AU
retrograde	11930 Feb 22 22:12	21° $\mathbf{\Omega}$ 35'19			11936 Jan 16 19:16	0° $\mathbf{\Omega}$	
opposition	11930 May 02 20:48	18° $\mathbf{\Omega}$ 10'14	1°07'53	morning rise	11936 Jan 30 04:16	1° $\mathbf{\Omega}$ 39'41	
min. Earth dist.	11930 May 02 17:02	18° $\mathbf{\Omega}$ 10'58	8.54797 AU	retrograde	11936 May 12 05:05	9° $\mathbf{\Omega}$ 25'11	
	11930 Jun 24 10:07	15° $\mathbf{\Omega}$		opposition	11936 Jul 18 15:42	6° $\mathbf{\Omega}$ 00'45	2°11'10
direct	11930 Jul 09 15:34	14° $\mathbf{\Omega}$ 47'38		min. Earth dist.	11936 Jul 19 00:20	5° $\mathbf{\Omega}$ 59'02	8.37676 AU
	11930 Jul 24 21:20	15° $\mathbf{\Omega}$		direct	11936 Sep 24 23:31	2° $\mathbf{\Omega}$ 33'51	
evening set	11930 Oct 19 07:33	22° $\mathbf{\Omega}$ 17'44		evening set	11937 Jan 07 15:45	10° $\mathbf{\Omega}$ 25'38	
conjunction	11930 Nov 05 22:05	24° $\mathbf{\Omega}$ 27'04	1°05'08	conjunction	11937 Jan 25 08:55	12° $\mathbf{\Omega}$ 38'07	1°41'14
minimum elong	11930 Nov 05 22:03	24° $\mathbf{\Omega}$ 27'03	1°05'44	minimum elong	11937 Jan 25 08:57	12° $\mathbf{\Omega}$ 38'07	1°41'54
max. Earth dist.	11930 Nov 06 00:22	24° $\mathbf{\Omega}$ 27'46	10.52855 AU	max. Earth dist.	11937 Jan 24 20:44	12° $\mathbf{\Omega}$ 34'17	10.37261 AU
morning rise	11930 Nov 23 14:58	26° $\mathbf{\Omega}$ 37'06		morning rise	11937 Feb 12 00:28	14° $\mathbf{\Omega}$ 50'07	
	11930 Dec 23 10:24	0° $\mathbf{\Omega}$			11937 Feb 13 08:40	15° $\mathbf{\Omega}$	
retrograde	11931 Mar 08 03:23	4° $\mathbf{\Omega}$ 19'46		retrograde	11937 May 25 14:02	22° $\mathbf{\Omega}$ 34'17	
opposition	11931 May 15 19:34	0° $\mathbf{\Omega}$ 54'35	1°32'31	opposition	11937 Jul 31 23:51	19° $\mathbf{\Omega}$ 10'13	1°58'24
min. Earth dist.	11931 May 15 18:43	0° $\mathbf{\Omega}$ 54'45	8.50976 AU	min. Earth dist.	11937 Aug 01 09:28	19° $\mathbf{\Omega}$ 08'18	8.37300 AU
	11931 May 27 10:51	30° $\mathbf{\Omega}$		direct	11937 Oct 08 14:04	15° $\mathbf{\Omega}$ 42'59	
direct	11931 Jul 22 14:26	27° $\mathbf{\Omega}$ 31'11		evening set	11938 Jan 21 12:24	23° $\mathbf{\Omega}$ 35'54	
	11931 Sep 14 23:39	0° $\mathbf{\Omega}$					
evening set	11931 Nov 01 17:43	5° $\mathbf{\Omega}$ 05'34		conjunction	11938 Feb 08 04:58	25° $\mathbf{\Omega}$ 48'16	1°28'20
				minimum elong	11938 Feb 08 05:00	25° $\mathbf{\Omega}$ 48'17	1°28'51
conjunction	11931 Nov 19 09:34	7° $\mathbf{\Omega}$ 15'47	1°23'23	max. Earth dist.	11938 Feb 07 16:15	25° $\mathbf{\Omega}$ 44'17	10.37359 AU
minimum elong	11931 Nov 19 09:32	7° $\mathbf{\Omega}$ 15'46	1°24'06	morning rise	11938 Feb 25 19:18	28° $\mathbf{\Omega}$ 00'00	
max. Earth dist.	11931 Nov 19 08:44	7° $\mathbf{\Omega}$ 15'31	10.49014 AU		11938 Mar 14 12:54	0° $\mathbf{\Omega}$	
morning rise	11931 Dec 07 03:11	9° $\mathbf{\Omega}$ 26'32		retrograde	11938 Jun 07 22:47	5° $\mathbf{\Omega}$ 42'21	
retrograde	11932 Mar 20 11:29	17° $\mathbf{\Omega}$ 10'53		opposition	11938 Aug 14 08:43	2° $\mathbf{\Omega}$ 18'42	1°39'26
opposition	11932 May 27 20:07	13° $\mathbf{\Omega}$ 45'40	1°52'45	min. Earth dist.	11938 Aug 14 18:18	2° $\mathbf{\Omega}$ 16'47	8.37815 AU
min. Earth dist.	11932 May 27 21:30	13° $\mathbf{\Omega}$ 45'24	8.47242 AU		11938 Sep 15 05:29	30° $\mathbf{\Omega}$	
direct	11932 Aug 03 15:16	10° $\mathbf{\Omega}$ 21'28		direct	11938 Oct 22 04:56	28° $\mathbf{\Omega}$ 51'22	
evening set	11932 Nov 14 07:40	18° $\mathbf{\Omega}$ 00'13			11938 Nov 27 18:52	0° $\mathbf{\Omega}$	
				evening set	11939 Feb 04 07:24	6° $\mathbf{\Omega}$ 44'23	
conjunction	11932 Dec 02 00:31	20° $\mathbf{\Omega}$ 11'12	1°37'34				
minimum elong	11932 Dec 02 00:29	20° $\mathbf{\Omega}$ 11'11	1°38'22	conjunction	11939 Feb 21 22:56	8° $\mathbf{\Omega}$ 56'25	1°10'49
max. Earth dist.	11932 Dec 01 21:29	20° $\mathbf{\Omega}$ 10'15	10.45395 AU	minimum elong	11939 Feb 21 22:58	8° $\mathbf{\Omega}$ 56'26	1°11'11
morning rise	11932 Dec 19 18:18	22° $\mathbf{\Omega}$ 22'31		max. Earth dist.	11939 Feb 21 10:41	8° $\mathbf{\Omega}$ 52'34	10.38338 AU
	11933 Mar 21 12:14	0° $\mathbf{\Omega}$		morning rise	11939 Mar 11 11:38	11° $\mathbf{\Omega}$ 07'40	
retrograde	11933 Apr 02 20:36	0° $\mathbf{\Omega}$ 08'08		retrograde	11939 Jun 21 07:35	18° $\mathbf{\Omega}$ 47'52	
	11933 Apr 15 05:42	30° $\mathbf{\Omega}$		opposition	11939 Aug 27 17:55	15° $\mathbf{\Omega}$ 24'39	1°15'20
opposition	11933 Jun 09 22:31	26° $\mathbf{\Omega}$ 42'58	2°07'28	min. Earth dist.	11939 Aug 28 03:05	15° $\mathbf{\Omega}$ 22'50	8.39190 AU
min. Earth dist.	11933 Jun 10 01:23	26° $\mathbf{\Omega}$ 42'24	8.43859 AU	direct	11939 Nov 04 18:55	11° $\mathbf{\Omega}$ 57'26	
direct	11933 Aug 16 19:35	23° $\mathbf{\Omega}$ 17'58		evening set	11940 Feb 17 23:58	19° $\mathbf{\Omega}$ 49'38	
	11933 Nov 19 14:48	0° $\mathbf{\Omega}$					
evening set	11933 Nov 28 01:07	1° $\mathbf{\Omega}$ 00'55		conjunction	11940 Mar 06 13:59	22° $\mathbf{\Omega}$ 01'06	0°49'42
				minimum elong	11940 Mar 06 14:01	22° $\mathbf{\Omega}$ 01'07	0°49'53
conjunction	11933 Dec 15 18:36	3° $\mathbf{\Omega}$ 12'31	1°46'53	max. Earth dist.	11940 Mar 06 02:34	21° $\mathbf{\Omega}$ 57'32	10.40152 AU

morning rise	11940 Mar 24 00:46	24° X 11'41		conjunction	11946 May 23 01:20	8° II 33'39	-1°25'08
	11940 May 18 16:27	0° Y		minimum elong	11946 May 23 01:18	8° II 33'39	1°25'51
retrograde	11940 Jul 03 13:39	1° Y 49'34		max. Earth dist.	11946 May 23 02:00	8° II 33'51	10.61090 AU
	11940 Aug 19 16:24	30° R X		morning rise	11946 Jun 08 22:37	10° II 38'10	
opposition	11940 Sep 09 03:11	28° X 26'50	0°47'26	retrograde	11946 Sep 18 16:17	18° II 05'55	
min. Earth dist.	11940 Sep 09 11:54	28° X 25'06	8.41366 AU	opposition	11946 Nov 26 18:26	14° II 45'08	-1°53'56
direct	11940 Nov 17 09:27	24° X 59'55		min. Earth dist.	11946 Nov 26 16:51	14° II 45'27	8.62992 AU
	11941 Feb 06 06:08	0° Y		direct	11947 Feb 04 13:11	11° II 22'42	
evening set	11941 Mar 02 13:26	2° Y 50'30		evening set	11947 May 18 17:58	18° II 54'21	
conjunction	11941 Mar 20 01:27	5° Y 01'10	0°26'08	conjunction	11947 Jun 04 14:48	20° II 58'17	-1°38'34
minimum elong	11941 Mar 20 01:28	5° Y 01'11	0°26'07	minimum elong	11947 Jun 04 14:47	20° II 58'17	1°39'21
max. Earth dist.	11941 Mar 19 14:49	4° Y 57'51	10.42710 AU	max. Earth dist.	11947 Jun 04 17:29	20° II 59'07	10.64637 AU
morning rise	11941 Apr 06 10:12	7° Y 10'56		morning rise	11947 Jun 21 10:49	23° II 01'59	
retrograde	11941 Jul 16 18:02	14° Y 46'31			11947 Sep 07 14:32	0° G	
opposition	11941 Sep 22 12:07	11° Y 24'16	0°17'16	retrograde	11947 Oct 01 10:37	0° G 29'09	
min. Earth dist.	11941 Sep 22 20:26	11° Y 22'38	8.44229 AU		11947 Oct 25 15:03	30° R II	
direct	11941 Nov 30 23:08	7° Y 57'51		opposition	11947 Dec 09 20:26	27° II 08'20	-2°07'38
evening set	11942 Mar 15 23:38	15° Y 46'10		min. Earth dist.	11947 Dec 09 17:01	27° II 08'59	8.66365 AU
				direct	11948 Feb 17 14:58	23° II 46'37	
conjunction	11942 Apr 02 09:10	17° Y 55'51	0°01'23		11948 May 19 17:25	0° G	
minimum elong	11942 Apr 02 09:10	17° Y 55'51	0°01'12	evening set	11948 May 30 06:37	1° G 14'49	
behind sun begin	11942 Apr 02 02:00	17° Y 53'38					
behind sun end	11942 Apr 02 16:19	17° Y 58'03		conjunction	11948 Jun 16 02:05	3° G 17'58	-1°47'21
max. Earth dist.	11942 Apr 01 23:20	17° Y 52'47	10.45872 AU	minimum elong	11948 Jun 16 02:05	3° G 17'57	1°48'10
morning rise	11942 Apr 19 15:39	20° Y 04'37		max. Earth dist.	11948 Jun 16 07:00	3° G 19'28	10.67740 AU
desc. node	11942 Apr 23 03:08	20° Y 30'04		morning rise	11948 Jul 02 21:25	5° G 21'01	
retrograde	11942 Jul 29 20:54	27° Y 38'03		retrograde	11948 Oct 13 05:26	12° G 47'53	
opposition	11942 Oct 05 20:20	24° Y 16'15	-0°13'33	opposition	11948 Dec 21 20:35	9° G 26'55	-2°15'22
min. Earth dist.	11942 Oct 06 03:22	24° Y 14'53	8.47628 AU	min. Earth dist.	11948 Dec 21 14:54	9° G 28'00	8.69197 AU
direct	11942 Dec 14 11:00	20° Y 50'32		direct	11949 Mar 01 12:57	6° G 05'50	
evening set	11943 Mar 29 06:02	28° Y 36'01		evening set	11949 Jun 11 16:46	13° G 30'50	
	11943 Apr 09 14:03	0° G					
conjunction	11943 Apr 15 12:54	0° G 44'34	-0°23'21	conjunction	11949 Jun 28 11:41	15° G 33'26	-1°51'11
minimum elong	11943 Apr 15 12:53	0° G 44'34	0°23'42	minimum elong	11949 Jun 28 11:41	15° G 33'26	1°52'00
max. Earth dist.	11943 Apr 15 05:04	0° G 42'08	10.49476 AU	max. Earth dist.	11949 Jun 28 19:23	15° G 35'47	10.70221 AU
morning rise	11943 May 02 16:57	2° G 52'17		morning rise	11949 Jul 15 06:54	17° G 36'08	
retrograde	11943 Aug 11 20:56	10° G 23'49		retrograde	11949 Oct 25 23:34	25° G 03'00	
opposition	11943 Oct 19 03:45	7° G 02'25	-0°43'26	opposition	11950 Jan 03 19:20	21° G 41'46	-2°16'55
min. Earth dist.	11943 Oct 19 08:32	7° G 01'29	8.51394 AU	min. Earth dist.	11950 Jan 03 11:36	21° G 43'14	8.71304 AU
direct	11943 Dec 27 22:11	3° G 37'29		direct	11950 Mar 14 07:40	18° G 21'12	
evening set	11944 Apr 10 08:26	11° G 19'45		evening set	11950 Jun 24 01:00	25° G 43'22	
conjunction	11944 Apr 27 12:36	13° G 27'05	-0°46'41	conjunction	11950 Jul 10 20:02	27° G 45'42	-1°49'59
minimum elong	11944 Apr 27 12:34	13° G 27'04	0°47'11	minimum elong	11950 Jul 10 20:03	27° G 45'42	1°50'45
max. Earth dist.	11944 Apr 27 07:46	13° G 25'35	10.53339 AU	max. Earth dist.	11950 Jul 11 05:36	27° G 48'38	10.71899 AU
	11944 May 10 00:10	15° G		morning rise	11950 Jul 27 15:56	29° G 48'19	
morning rise	11944 May 14 14:10	15° G 33'41			11950 Jul 29 07:05	0° Q	
retrograde	11944 Aug 23 20:39	23° G 03'40		retrograde	11950 Nov 07 17:48	7° Q 15'36	
opposition	11944 Oct 31 09:58	19° G 42'33	-1°10'56	opposition	11951 Jan 16 16:47	3° Q 54'01	-2°12'17
min. Earth dist.	11944 Oct 31 12:08	19° G 42'08	8.55333 AU	min. Earth dist.	11951 Jan 16 08:04	3° Q 55'40	8.72519 AU
direct	11945 Jan 09 06:42	16° G 18'28		direct	11951 Mar 27 00:57	0° Q 33'47	
evening set	11945 Apr 23 07:12	23° G 57'16		evening set	11951 Jul 06 08:24	7° Q 53'46	
conjunction	11945 May 10 08:42	26° G 03'23	-1°07'35	conjunction	11951 Jul 23 04:13	9° Q 56'09	-1°43'49
minimum elong	11945 May 10 08:40	26° G 03'23	1°08'13	minimum elong	11951 Jul 23 04:15	9° Q 56'10	1°44'30
max. Earth dist.	11945 May 10 07:02	26° G 02'52	10.57269 AU	max. Earth dist.	11951 Jul 23 14:14	9° Q 59'13	10.72643 AU
morning rise	11945 May 27 07:54	28° G 08'53		morning rise	11951 Aug 09 01:42	11° Q 59'00	
	11945 Jun 12 00:11	0° II			11951 Sep 04 18:53	15° Q	
retrograde	11945 Sep 05 19:53	5° II 37'36		retrograde	11951 Nov 20 12:12	19° Q 27'04	
opposition	11945 Nov 13 14:49	2° II 16'42	-1°34'47	opposition	11952 Jan 29 13:00	16° Q 05'03	-2°01'43
min. Earth dist.	11945 Nov 13 14:58	2° II 16'40	8.59256 AU	min. Earth dist.	11952 Jan 29 04:17	16° Q 06'43	8.72767 AU
	11945 Dec 16 06:33	30° R G			11952 Feb 13 01:42	15° R Q	
direct	11946 Jan 22 11:10	28° G 53'27		direct	11952 Apr 07 15:28	12° Q 45'01	
	11946 Feb 27 23:51	0° II			11952 May 30 00:39	15° Q	
evening set	11946 May 06 02:23	6° II 28'41		evening set	11952 Jul 17 15:41	20° Q 03'31	

conjunction	11952 Aug 03 13:01	22° Ω 06'14	-1°33'00	min. Earth dist.	11958 Apr 14 01:40	29° Ω 55'03	8.58501 AU
minimum elong	11952 Aug 03 13:03	22° Ω 06'14	1°33'34	direct	11958 Jun 21 06:23	26° Ω 31'45	
max. Earth dist.	11952 Aug 03 23:03	22° Ω 09'17	10.72445 AU		11958 Aug 25 13:40	0° \mathbb{M}	
morning rise	11952 Aug 20 12:41	24° Ω 09'36		evening set	11958 Sep 30 06:43	3° \mathbb{M} 56'57	
	11952 Oct 18 03:31	0° \mathbb{M}					
retrograde	11952 Dec 02 05:48	1° \mathbb{M} 38'47		conjunction	11958 Oct 17 18:48	6° \mathbb{M} 05'04	0°33'06
	11953 Jan 17 12:09	30° \mathbb{R} δ Ω		minimum elong	11958 Oct 17 18:47	6° \mathbb{M} 05'04	0°33'31
opposition	11953 Feb 10 08:27	28° Ω 16'15	-1°45'41	max. Earth dist.	11958 Oct 18 01:03	6° \mathbb{M} 06'59	10.56567 AU
min. Earth dist.	11953 Feb 09 23:32	28° Ω 17'57	8.72095 AU	morning rise	11958 Nov 04 09:46	8° \mathbb{M} 14'04	
direct	11953 Apr 20 05:56	24° Ω 56'13			11959 Jan 15 04:58	15° \mathbb{M}	
	11953 Jul 10 13:41	0° \mathbb{M}		retrograde	11959 Feb 17 00:20	15° \mathbb{M} 54'32	
evening set	11953 Jul 29 23:35	2° \mathbb{M} 13'54			11959 Mar 22 02:23	15° \mathbb{R} \mathbb{M}	
				opposition	11959 Apr 27 04:12	12° \mathbb{M} 28'53	0°55'14
conjunction	11953 Aug 15 23:04	4° \mathbb{M} 17'12	-1°17'58	min. Earth dist.	11959 Apr 26 23:47	12° \mathbb{M} 29'45	8.54617 AU
minimum elong	11953 Aug 15 23:06	4° \mathbb{M} 17'13	1°18'24	direct	11959 Jul 04 01:44	9° \mathbb{M} 05'59	
max. Earth dist.	11953 Aug 16 10:00	4° \mathbb{M} 20'32	10.71375 AU		11959 Sep 30 00:51	15° \mathbb{M}	
morning rise	11953 Sep 02 01:14	6° \mathbb{M} 21'16		evening set	11959 Oct 13 10:34	16° \mathbb{M} 34'51	
retrograde	11953 Dec 15 00:53	13° \mathbb{M} 51'54					
opposition	11954 Feb 23 03:19	10° \mathbb{M} 28'45	-1°24'52	conjunction	11959 Oct 31 00:35	18° \mathbb{M} 43'59	0°55'28
min. Earth dist.	11954 Feb 22 17:48	10° \mathbb{M} 30'35	8.70595 AU	minimum elong	11959 Oct 31 00:33	18° \mathbb{M} 43'58	0°56'02
direct	11954 May 02 20:57	7° \mathbb{M} 08'35		max. Earth dist.	11959 Oct 31 05:08	18° \mathbb{M} 45'23	10.52623 AU
evening set	11954 Aug 11 09:10	14° \mathbb{M} 26'08		morning rise	11959 Nov 17 16:54	20° \mathbb{M} 53'52	
				retrograde	11960 Mar 01 06:21	28° \mathbb{M} 36'24	
conjunction	11954 Aug 28 11:12	16° \mathbb{M} 30'14	-0°59'23	opposition	11960 May 09 02:25	25° \mathbb{M} 10'32	1°21'30
minimum elong	11954 Aug 28 11:14	16° \mathbb{M} 30'15	0°59'39	min. Earth dist.	11960 May 08 23:31	25° \mathbb{M} 11'07	8.50705 AU
max. Earth dist.	11954 Aug 28 22:54	16° \mathbb{M} 33'48	10.69528 AU	direct	11960 Jul 15 22:14	21° \mathbb{M} 46'53	
morning rise	11954 Sep 14 16:05	18° \mathbb{M} 35'11		evening set	11960 Oct 25 18:54	29° \mathbb{M} 19'53	
retrograde	11954 Dec 27 22:36	26° \mathbb{M} 07'27			11960 Oct 31 06:37	0° \mathbb{X}	
opposition	11955 Mar 07 21:49	22° \mathbb{M} 43'41	-1°00'08				
min. Earth dist.	11955 Mar 07 12:03	22° \mathbb{M} 45'33	8.68371 AU	conjunction	11960 Nov 12 10:21	1° \mathbb{X} 29'56	1°15'18
direct	11955 May 15 09:28	19° \mathbb{M} 23'12		minimum elong	11960 Nov 12 10:19	1° \mathbb{X} 29'55	1°15'59
evening set	11955 Aug 23 21:13	26° \mathbb{M} 41'27		max. Earth dist.	11960 Nov 12 12:11	1° \mathbb{X} 30'30	10.48745 AU
				morning rise	11960 Nov 30 03:36	3° \mathbb{X} 40'35	
conjunction	11955 Sep 10 01:55	28° \mathbb{M} 46'27	-0°38'01	retrograde	11961 Mar 14 15:12	11° \mathbb{X} 24'57	
minimum elong	11955 Sep 10 01:56	28° \mathbb{M} 46'28	0°38'07	opposition	11961 May 22 02:31	7° \mathbb{X} 59'03	1°43'58
max. Earth dist.	11955 Sep 10 13:08	28° \mathbb{M} 49'52	10.67003 AU	min. Earth dist.	11961 May 22 01:51	7° \mathbb{X} 59'11	8.46967 AU
	11955 Sep 20 03:29	0° Ω		direct	11961 Jul 28 20:24	4° \mathbb{X} 34'36	
morning rise	11955 Sep 27 09:40	0° Ω 52'24		evening set	11961 Nov 08 07:21	12° \mathbb{X} 11'58	
retrograde	11956 Jan 09 20:42	8° Ω 26'31					
opposition	11956 Mar 19 16:25	5° Ω 02'09	-0°32'30	conjunction	11961 Nov 25 23:49	14° \mathbb{X} 22'49	1°31'31
min. Earth dist.	11956 Mar 19 07:33	5° Ω 03'52	8.65525 AU	minimum elong	11961 Nov 25 23:46	14° \mathbb{X} 22'48	1°32'17
direct	11956 May 26 22:53	1° Ω 41'13		max. Earth dist.	11961 Nov 25 22:25	14° \mathbb{X} 22'23	10.45139 AU
evening set	11956 Sep 04 12:30	9° Ω 01'00		morning rise	11961 Dec 13 17:38	16° \mathbb{X} 34'07	
				retrograde	11962 Mar 27 23:28	24° \mathbb{X} 19'55	
conjunction	11956 Sep 21 19:43	11° Ω 07'01	-0°14'49	opposition	11962 Jun 04 04:27	20° \mathbb{X} 54'08	2°01'24
minimum elong	11956 Sep 21 19:44	11° Ω 07'01	0°14'44	min. Earth dist.	11962 Jun 04 06:21	20° \mathbb{X} 53'45	8.43595 AU
behind sun begin	11956 Sep 21 16:50	11° Ω 06'09		direct	11962 Aug 11 00:06	17° \mathbb{X} 28'57	
behind sun end	11956 Sep 21 22:37	11° Ω 07'54		evening set	11962 Nov 21 23:39	25° \mathbb{X} 10'40	
max. Earth dist.	11956 Sep 22 05:09	11° Ω 09'53	10.63907 AU				
morning rise	11956 Oct 09 06:15	13° Ω 14'00		conjunction	11962 Dec 09 16:49	27° \mathbb{X} 22'11	1°43'11
retrograde	11957 Jan 21 20:12	20° Ω 50'08		minimum elong	11962 Dec 09 16:47	27° \mathbb{X} 22'11	1°44'00
opposition	11957 Apr 01 11:28	17° Ω 25'16	-0°03'10	max. Earth dist.	11962 Dec 09 12:17	27° \mathbb{X} 20'47	10.41993 AU
min. Earth dist.	11957 Apr 01 04:16	17° Ω 26'40	8.62186 AU	morning rise	11962 Dec 27 10:45	29° \mathbb{X} 33'58	
asc. node	11957 May 11 02:41	14° Ω 45'23			11962 Dec 31 00:29	0° \mathbb{Z}	
direct	11957 Jun 08 13:55	14° Ω 03'45		retrograde	11963 Apr 10 09:00	7° \mathbb{Z} 20'41	
evening set	11957 Sep 17 07:31	21° Ω 25'53		opposition	11963 Jun 17 08:06	3° \mathbb{Z} 55'10	2°12'45
				min. Earth dist.	11963 Jun 17 12:10	3° \mathbb{Z} 54'21	8.40767 AU
conjunction	11957 Oct 04 17:14	23° Ω 32'57	0°09'20	direct	11963 Aug 24 06:28	0° \mathbb{Z} 29'22	
minimum elong	11957 Oct 04 17:14	23° Ω 32'57	0°09'35	evening set	11963 Dec 05 18:50	8° \mathbb{Z} 15'04	
behind sun begin	11957 Oct 04 11:19	23° Ω 31'09					
behind sun end	11957 Oct 04 23:10	23° Ω 34'44		conjunction	11963 Dec 23 12:26	10° \mathbb{Z} 27'09	1°49'37
max. Earth dist.	11957 Oct 05 00:55	23° Ω 35'17	10.60381 AU	minimum elong	11963 Dec 23 12:26	10° \mathbb{Z} 27'08	1°50'27
morning rise	11957 Oct 22 06:15	25° Ω 40'58		max. Earth dist.	11963 Dec 23 05:54	10° \mathbb{Z} 25'06	10.39483 AU
	11957 Nov 30 20:01	0° \mathbb{M}		morning rise	11964 Jan 10 06:02	12° \mathbb{Z} 39'14	
retrograde	11958 Feb 03 21:28	3° \mathbb{M} 19'15		retrograde	11964 Apr 22 20:31	20° \mathbb{Z} 26'17	
	11958 Apr 13 00:21	30° \mathbb{R} Ω		opposition	11964 Jun 29 13:36	17° \mathbb{Z} 01'09	2°17'18
opposition	11958 Apr 14 07:18	29° Ω 53'57	0°26'32	min. Earth dist.	11964 Jun 29 18:55	17° \mathbb{Z} 00'05	8.38642 AU

direct	11964 Sep 05 14:40	13° S 34'52		min. Earth dist.	11970 Sep 17 04:22	5° Y 48'05	8.43329 AU
evening set	11964 Dec 18 15:50	21° S 23'55		direct	11970 Nov 25 04:57	2° Y 23'33	
				evening set	11971 Mar 10 07:22	10° Y 13'16	
conjunction	11965 Jan 05 09:38	23° S 36'22	1°50'22				
minimum elong	11965 Jan 05 09:38	23° S 36'22	1°51'09	conjunction	11971 Mar 27 18:10	12° Y 23'27	0°12'34
max. Earth dist.	11965 Jan 05 01:45	23° S 33'54	10.37751 AU	minimum elong	11971 Mar 27 18:11	12° Y 23'27	0°12'28
morning rise	11965 Jan 23 02:33	25° S 48'38		behind sun begin	11971 Mar 27 13:32	12° Y 22'01	
	11965 Mar 01 05:44	0° \approx		behind sun end	11971 Mar 27 22:50	12° Y 24'54	
retrograde	11965 May 06 08:40	3° \approx 35'19		max. Earth dist.	11971 Mar 27 07:52	12° Y 20'14	10.44730 AU
opposition	11965 Jul 12 20:45	0° \approx 10'39	2°14'41	morning rise	11971 Apr 14 01:41	14° Y 32'43	
min. Earth dist.	11965 Jul 13 03:06	0° \approx 09'23	8.37334 AU	retrograde	11971 Jul 24 09:25	22° Y 07'32	
	11965 Jul 15 02:01	30° R S		opposition	11971 Sep 30 05:02	18° Y 45'54	0°00'15
direct	11965 Sep 19 01:53	26° S 44'02		min. Earth dist.	11971 Sep 30 12:35	18° Y 44'26	8.46215 AU
	11965 Nov 21 07:57	0° \approx		desc. node	11971 Oct 03 05:01	18° Y 31'51	
evening set	11966 Jan 01 14:04	4° \approx 35'38		direct	11971 Dec 08 17:24	15° Y 20'16	
				evening set	11972 Mar 22 16:13	23° Y 07'32	
conjunction	11966 Jan 19 07:42	6° \approx 48'16	1°45'20				
minimum elong	11966 Jan 19 07:43	6° \approx 48'17	1°46'03	conjunction	11972 Apr 09 00:30	25° Y 16'42	-0°12'24
max. Earth dist.	11966 Jan 18 22:32	6° \approx 45'24	10.36890 AU	minimum elong	11972 Apr 09 00:30	25° Y 16'42	0°12'41
morning rise	11966 Feb 05 23:40	9° \approx 00'30		behind sun begin	11972 Apr 08 19:58	25° Y 15'18	
	11966 Apr 04 16:05	15° \approx		behind sun end	11972 Apr 09 05:01	25° Y 18'06	
retrograde	11966 May 19 19:50	16° \approx 46'06		max. Earth dist.	11972 Apr 08 15:40	25° Y 13'58	10.47767 AU
	11966 Jul 04 21:03	15° R \approx		morning rise	11972 Apr 26 05:34	27° Y 25'00	
opposition	11966 Jul 26 05:07	13° \approx 22'00	2°04'59		11972 May 18 06:06	0° S	
min. Earth dist.	11966 Jul 26 12:40	13° \approx 20'30	8.36911 AU	retrograde	11972 Aug 05 12:17	4° S 57'57	
direct	11966 Oct 02 15:09	9° \approx 55'11		opposition	11972 Oct 12 13:33	1° S 36'40	-0°30'18
	11966 Dec 22 15:03	15° \approx		min. Earth dist.	11972 Oct 12 20:09	1° S 35'23	8.49388 AU
evening set	11967 Jan 15 12:12	17° \approx 48'21			11972 Nov 03 04:24	30° R Y	
				direct	11972 Dec 21 04:43	28° Y 11'37	
conjunction	11967 Feb 02 05:13	20° \approx 00'56	1°34'45		11973 Feb 06 02:37	0° S	
minimum elong	11967 Feb 02 05:16	20° \approx 00'57	1°35'21	evening set	11973 Apr 04 21:28	5° S 56'04	
max. Earth dist.	11967 Feb 01 18:37	19° \approx 57'36	10.36941 AU				
morning rise	11967 Feb 19 20:04	22° \approx 12'56		conjunction	11973 Apr 22 02:57	8° S 04'06	-0°36'31
retrograde	11967 Jun 02 06:50	29° \approx 56'51		minimum elong	11973 Apr 22 02:56	8° S 04'06	0°36'58
opposition	11967 Aug 08 14:37	26° \approx 33'19	1°48'41	max. Earth dist.	11973 Apr 21 19:35	8° S 01'49	10.51045 AU
min. Earth dist.	11967 Aug 08 23:29	26° \approx 31'33	8.37392 AU	morning rise	11973 May 09 05:39	10° S 11'22	
direct	11967 Oct 16 05:31	23° \approx 06'26			11973 Jun 22 11:45	15° S	
	11968 Jan 21 03:00	0° H		retrograde	11973 Aug 18 12:35	17° S 42'44	
evening set	11968 Jan 29 08:54	1° H 00'04			11973 Oct 17 13:34	15° R S	
				opposition	11973 Oct 25 21:17	14° S 21'40	-0°59'06
conjunction	11968 Feb 16 00:54	3° H 12'22	1°19'13	min. Earth dist.	11973 Oct 26 02:30	14° S 20'39	8.52763 AU
minimum elong	11968 Feb 16 00:56	3° H 12'23	1°19'40	direct	11974 Jan 03 15:38	10° S 57'14	
max. Earth dist.	11968 Feb 15 13:02	3° H 08'38	10.37888 AU		11974 Mar 16 19:50	15° S	
morning rise	11968 Mar 04 14:25	5° H 23'57		evening set	11974 Apr 17 22:56	18° S 38'29	
retrograde	11968 Jun 14 16:18	13° H 05'41					
opposition	11968 Aug 21 00:33	9° H 42'43	1°26'44	conjunction	11974 May 05 01:34	20° S 45'21	-0°58'41
min. Earth dist.	11968 Aug 21 10:01	9° H 40'50	8.38730 AU	minimum elong	11974 May 05 01:32	20° S 45'20	0°59'16
direct	11968 Oct 28 20:58	6° H 15'53		max. Earth dist.	11974 May 04 20:07	20° S 43'39	10.54453 AU
evening set	11969 Feb 11 03:27	14° H 08'58		morning rise	11974 May 22 01:58	22° S 51'32	
					11974 Aug 11 04:43	0° II	
conjunction	11969 Feb 28 18:06	16° H 20'46	0°59'35	retrograde	11974 Aug 31 11:44	0° II 21'38	
minimum elong	11969 Feb 28 18:08	16° H 20'47	0°59'51		11974 Sep 21 00:22	30° R S	
max. Earth dist.	11969 Feb 28 05:52	16° H 16'55	10.39635 AU	opposition	11974 Nov 08 03:48	27° S 00'37	-1°24'48
morning rise	11969 Mar 18 06:00	18° H 31'45		min. Earth dist.	11974 Nov 08 06:47	27° S 00'03	8.56209 AU
retrograde	11969 Jun 27 22:10	26° H 11'01		direct	11975 Jan 16 23:49	23° S 36'49	
opposition	11969 Sep 03 10:16	22° H 48'32	1°00'21		11975 Apr 20 10:23	0° II	
min. Earth dist.	11969 Sep 03 19:38	22° H 46'41	8.40782 AU	evening set	11975 Apr 30 20:32	1° II 14'38	
direct	11969 Nov 11 14:03	19° H 21'56					
evening set	11970 Feb 24 19:07	27° H 13'38		conjunction	11975 May 17 20:37	3° II 20'20	-1°17'53
				minimum elong	11975 May 17 20:35	3° II 20'20	1°18'35
conjunction	11970 Mar 14 08:03	29° H 24'42	0°36'57	max. Earth dist.	11975 May 17 18:14	3° II 19'36	10.57855 AU
minimum elong	11970 Mar 14 08:05	29° H 24'43	0°37'02	morning rise	11975 Jun 03 18:57	5° II 25'32	
max. Earth dist.	11970 Mar 13 20:17	29° H 21'01	10.41988 AU	retrograde	11975 Sep 13 09:20	12° II 54'38	
	11970 Mar 19 00:33	0° Y		opposition	11975 Nov 21 08:50	9° II 33'32	-1°46'13
morning rise	11970 Mar 31 17:56	1° Y 34'53		min. Earth dist.	11975 Nov 21 08:51	9° II 33'32	8.59578 AU
retrograde	11970 Jul 11 04:04	9° Y 11'47		direct	11976 Jan 30 05:19	6° II 10'23	
opposition	11970 Sep 16 19:50	5° Y 49'45	0°31'00	evening set	11976 May 12 14:24	13° II 44'37	

conjunction	11976 May 29 12:24	15°II49'18	-1°33'15	max. Earth dist.	11982 Aug 11 13:50	29°Ω26'11	10.70136 AU
minimum elong	11976 May 29 12:22	15°II49'17	1°34'02		11982 Aug 16 04:44	0°Π	
max. Earth dist.	11976 May 29 13:34	15°II49'39	10.61095 AU	morning rise	11982 Aug 28 02:07	1°Π26'14	
morning rise	11976 Jun 15 09:01	17°II53'36		retrograde	11982 Dec 10 00:06	8°Π56'54	
retrograde	11976 Sep 25 06:31	25°II22'02		opposition	11983 Feb 18 01:57	5°Π33'35	-1°34'14
opposition	11976 Dec 03 12:16	22°II00'45	-2°02'28	min. Earth dist.	11983 Feb 17 15:03	5°Π35'40	8.69846 AU
min. Earth dist.	11976 Dec 03 09:41	22°II01'15	8.62704 AU	direct	11983 Apr 27 20:37	2°Π13'11	
direct	11977 Feb 11 08:06	18°II38'12		evening set	11983 Aug 06 11:38	9°Π31'16	
evening set	11977 May 25 05:07	26°II08'58					
conjunction	11977 Jun 11 01:24	28°II12'46	-1°44'10	conjunction	11983 Aug 23 12:29	11°Π35'09	-1°07'37
minimum elong	11977 Jun 11 01:23	28°II12'45	1°44'59	minimum elong	11983 Aug 23 12:32	11°Π35'10	1°07'57
max. Earth dist.	11977 Jun 11 05:26	28°II14'00	10.64019 AU	max. Earth dist.	11983 Aug 24 00:54	11°Π38'56	10.69244 AU
	11977 Jun 25 14:51	0°Ω		morning rise	11983 Sep 09 16:19	13°Π39'52	
morning rise	11977 Jun 27 20:56	0°Ω16'22		retrograde	11983 Dec 22 20:39	21°Π11'48	
retrograde	11977 Oct 08 02:39	7°Ω44'24		opposition	11984 Mar 01 20:47	17°Π48'08	-1°10'59
opposition	11977 Dec 16 14:04	4°Ω22'54	-2°12'54	min. Earth dist.	11984 Mar 01 10:25	17°Π50'07	8.68579 AU
min. Earth dist.	11977 Dec 16 09:35	4°Ω23'45	8.65446 AU	direct	11984 May 09 09:24	14°Π27'40	
direct	11978 Feb 24 06:38	1°Ω00'54		evening set	11984 Aug 17 22:47	21°Π45'57	
evening set	11978 Jun 06 17:05	8°Ω28'24		conjunction	11984 Sep 04 02:14	23°Π50'37	-0°47'18
conjunction	11978 Jun 23 12:15	10°Ω31'32	-1°50'12	minimum elong	11984 Sep 04 02:16	23°Π50'37	0°47'28
minimum elong	11978 Jun 23 12:15	10°Ω31'32	1°51'01	max. Earth dist.	11984 Sep 04 14:22	23°Π54'19	10.67676 AU
max. Earth dist.	11978 Jun 23 18:06	10°Ω33'20	10.66508 AU	morning rise	11984 Sep 21 08:54	25°Π56'12	
morning rise	11978 Jul 10 07:33	12°Ω34'42			11984 Oct 28 12:26	0°Ω	
retrograde	11978 Oct 20 20:35	20°Ω02'39		retrograde	11985 Jan 03 16:52	3°Ω29'43	
opposition	11978 Dec 29 14:22	16°Ω40'52	-2°17'09	opposition	11985 Mar 14 15:34	0°Ω05'39	-0°44'24
min. Earth dist.	11978 Dec 29 08:25	16°Ω42'00	8.67689 AU	min. Earth dist.	11985 Mar 14 05:32	0°Ω07'35	8.66675 AU
direct	11979 Mar 09 03:35	13°Ω19'21			11985 Mar 15 20:51	30°RΠ	
evening set	11979 Jun 19 02:40	20°Ω43'55		direct	11985 May 22 00:24	26°Π45'01	
					11985 Jul 24 05:56	0°Ω	
conjunction	11979 Jul 05 21:35	22°Ω46'40	-1°51'10	evening set	11985 Aug 30 12:36	4°Ω04'14	
minimum elong	11979 Jul 05 21:35	22°Ω46'40	1°51'57	conjunction	11985 Sep 16 18:47	6°Ω09'49	-0°24'44
max. Earth dist.	11979 Jul 06 05:20	22°Ω49'02	10.68451 AU	minimum elong	11985 Sep 16 18:48	6°Ω09'50	0°24'43
morning rise	11979 Jul 22 17:25	24°Ω49'38		max. Earth dist.	11985 Sep 17 07:06	6°Ω13'35	10.65506 AU
	11979 Sep 10 05:46	0°Ω		morning rise	11985 Oct 04 04:06	8°Ω16'20	
retrograde	11979 Nov 02 14:20	2°Ω17'51		retrograde	11986 Jan 16 16:27	15°Ω51'39	
	11979 Dec 28 05:06	30°RΩ		opposition	11986 Mar 27 10:33	12°Ω27'13	-0°15'38
opposition	11980 Jan 11 13:01	28°Ω55'43	-2°15'08	min. Earth dist.	11986 Mar 27 00:42	12°Ω29'07	8.64228 AU
min. Earth dist.	11980 Jan 11 05:13	28°Ω57'12	8.69314 AU	direct	11986 Jun 03 15:20	9°Ω06'19	
direct	11980 Mar 20 23:38	25°Ω34'38		evening set	11986 Sep 12 06:06	16°Ω27'14	
	11980 Jun 04 12:10	0°Ω					
evening set	11980 Jun 30 10:55	2°Ω56'41		conjunction	11986 Sep 29 14:52	18°Ω33'48	-0°00'54
conjunction	11980 Jul 17 06:28	4°Ω59'20	-1°47'05	minimum elong	11986 Sep 29 14:52	18°Ω33'48	0°00'44
minimum elong	11980 Jul 17 06:29	4°Ω59'21	1°47'48	behind sun begin	11986 Sep 29 07:42	18°Ω31'38	
max. Earth dist.	11980 Jul 17 16:31	5°Ω02'25	10.69739 AU	behind sun end	11986 Sep 29 22:01	18°Ω35'57	
morning rise	11980 Aug 03 03:24	7°Ω02'23		max. Earth dist.	11986 Sep 30 02:12	18°Ω37'15	10.62834 AU
retrograde	11980 Nov 14 09:24	14°Ω31'07		asc. node	11986 Oct 13 13:49	20°Ω15'48	
opposition	11981 Jan 23 10:10	11°Ω08'37	-2°07'01	morning rise	11986 Oct 17 02:40	20°Ω41'17	
min. Earth dist.	11981 Jan 23 00:31	11°Ω10'27	8.70234 AU	retrograde	11987 Jan 29 18:58	28°Ω18'25	
direct	11981 Apr 02 15:48	7°Ω47'53		opposition	11987 Apr 09 05:55	24°Ω53'42	0°14'03
	11981 Jul 11 15:56	15°Ω		min. Earth dist.	11987 Apr 08 21:24	24°Ω55'22	8.61345 AU
evening set	11981 Jul 12 18:35	15°Ω07'57		direct	11987 Jun 16 05:13	21°Ω32'21	
				evening set	11987 Sep 25 03:41	28°Ω55'47	
conjunction	11981 Jul 29 15:26	17°Ω10'47	-1°38'10		11987 Oct 03 23:48	0°Π	
minimum elong	11981 Jul 29 15:28	17°Ω10'48	1°38'47	conjunction	11987 Oct 12 14:41	1°Π03'18	0°23'10
max. Earth dist.	11981 Jul 30 03:34	17°Ω14'30	10.70307 AU	minimum elong	11987 Oct 12 14:40	1°Π03'17	0°23'30
morning rise	11981 Aug 15 14:04	19°Ω14'10		max. Earth dist.	11987 Oct 12 23:34	1°Π06'01	10.59770 AU
retrograde	11981 Nov 27 04:11	26°Ω43'43		morning rise	11987 Oct 30 04:40	3°Π11'43	
opposition	11982 Feb 05 06:25	23°Ω20'49	-1°53'11	retrograde	11988 Feb 11 20:50	10°Π50'41	
min. Earth dist.	11982 Feb 04 19:30	23°Ω22'54	8.70410 AU	opposition	11988 Apr 21 02:16	7°Π25'46	0°43'17
direct	11982 Apr 15 06:36	20°Ω00'19		min. Earth dist.	11988 Apr 20 20:02	7°Π26'59	8.58133 AU
evening set	11982 Jul 25 02:27	27°Ω19'03		direct	11988 Jun 27 23:12	4°Π03'49	
				evening set	11988 Oct 07 05:21	11°Π30'23	
conjunction	11982 Aug 11 01:05	29°Ω22'17	-1°24'49	conjunction	11988 Oct 24 18:15	13°Π38'49	0°46'13
minimum elong	11982 Aug 11 01:07	29°Ω22'18	1°25'18				

minimum elong	11988 Oct 24 18:13	13° \mathbb{M} 38'49	0°46'44	conjunction	11995 Jan 13 14:40	1° \approx 18'25	1°48'11
max. Earth dist.	11988 Oct 24 23:55	13° \mathbb{M} 40'34	10.56413 AU	minimum elong	11995 Jan 13 14:41	1° \approx 18'25	1°48'56
	11988 Nov 04 19:09	15° \mathbb{M}		max. Earth dist.	11995 Jan 13 03:44	1° \approx 14'59	10.38605 AU
morning rise	11988 Nov 11 09:57	15° \mathbb{M} 48'05		morning rise	11995 Jan 31 07:06	3° \approx 30'25	
retrograde	11989 Feb 24 00:33	23° \mathbb{M} 28'53		retrograde	11995 May 14 05:37	11° \approx 15'28	
opposition	11989 May 03 23:46	20° \mathbb{M} 03'47	1°10'40	opposition	11995 Jul 20 17:36	7° \approx 51'09	2°09'59
min. Earth dist.	11989 May 03 20:13	20° \mathbb{M} 04'29	8.54686 AU	min. Earth dist.	11995 Jul 21 02:21	7° \approx 49'24	8.38214 AU
direct	11989 Jul 10 19:30	16° \mathbb{M} 41'07		direct	11995 Sep 27 03:04	4° \approx 24'19	
evening set	11989 Oct 20 11:18	24° \mathbb{M} 11'21		evening set	11996 Jan 09 18:16	12° \approx 15'50	
conjunction	11989 Nov 07 01:53	26° \mathbb{M} 20'40	1°07'12	conjunction	11996 Jan 27 11:26	14° \approx 28'14	1°40'02
minimum elong	11989 Nov 07 01:51	26° \mathbb{M} 20'40	1°07'50	minimum elong	11996 Jan 27 11:28	14° \approx 28'15	1°40'41
max. Earth dist.	11989 Nov 07 04:38	26° \mathbb{M} 21'32	10.52857 AU	max. Earth dist.	11996 Jan 26 23:25	14° \approx 24'28	10.37802 AU
morning rise	11989 Nov 24 18:45	28° \mathbb{M} 30'42			11996 Jan 31 16:43	15° \approx	
	11989 Dec 07 08:54	0° \mathbb{Z}		morning rise	11996 Feb 14 02:52	16° \approx 40'08	
retrograde	11990 Mar 09 06:36	6° \mathbb{Z} 13'13		retrograde	11996 May 26 15:44	24° \approx 23'54	
opposition	11990 May 16 22:29	2° \mathbb{Z} 48'01	1°34'49	opposition	11996 Aug 02 01:33	20° \approx 59'57	1°56'35
min. Earth dist.	11990 May 16 21:13	2° \mathbb{Z} 48'16	8.51093 AU	min. Earth dist.	11996 Aug 02 10:41	20° \approx 58'08	8.37832 AU
	11990 Jun 27 17:07	30° \mathbb{R} \mathbb{M}		direct	11996 Oct 09 16:04	17° \approx 32'50	
direct	11990 Jul 23 17:32	29° \mathbb{M} 24'34		evening set	11997 Jan 22 14:24	25° \approx 25'24	
	11990 Aug 18 13:58	0° \mathbb{Z}					
evening set	11990 Nov 02 21:26	6° \mathbb{Z} 58'56		conjunction	11997 Feb 09 06:59	27° \approx 37'42	1°26'39
conjunction	11990 Nov 20 13:23	9° \mathbb{Z} 09'06	1°25'01	minimum elong	11997 Feb 09 07:02	27° \approx 37'43	1°27'09
minimum elong	11990 Nov 20 13:21	9° \mathbb{Z} 09'05	1°25'45	max. Earth dist.	11997 Feb 08 18:56	27° \approx 33'55	10.37883 AU
max. Earth dist.	11990 Nov 20 13:28	9° \mathbb{Z} 09'07	10.49218 AU	morning rise	11997 Feb 26 21:08	29° \approx 49'20	
morning rise	11990 Dec 08 06:53	11° \mathbb{Z} 19'47			11997 Feb 28 07:55	0° \mathbb{H}	
retrograde	11991 Mar 22 14:07	19° \mathbb{Z} 03'52		retrograde	11997 Jun 09 01:07	7° \mathbb{H} 31'19	
opposition	11991 May 29 22:52	15° \mathbb{Z} 38'40	1°54'27	opposition	11997 Aug 15 10:14	4° \mathbb{H} 07'46	1°37'06
min. Earth dist.	11991 May 29 23:34	15° \mathbb{Z} 38'31	8.47526 AU	min. Earth dist.	11997 Aug 15 19:33	4° \mathbb{H} 05'55	8.38317 AU
direct	11991 Aug 05 18:56	12° \mathbb{Z} 14'27		direct	11997 Oct 23 05:51	0° \mathbb{H} 40'33	
evening set	11991 Nov 16 11:28	19° \mathbb{Z} 53'06		evening set	11998 Feb 05 09:07	8° \mathbb{H} 33'14	
conjunction	11991 Dec 04 04:18	22° \mathbb{Z} 04'01	1°38'41	conjunction	11998 Feb 23 00:36	10° \mathbb{H} 45'12	1°08'46
minimum elong	11991 Dec 04 04:16	22° \mathbb{Z} 04'01	1°39'30	minimum elong	11998 Feb 23 00:39	10° \mathbb{H} 45'13	1°09'06
max. Earth dist.	11991 Dec 04 01:45	22° \mathbb{Z} 03'14	10.45734 AU	max. Earth dist.	11998 Feb 22 12:28	10° \mathbb{H} 41'24	10.38822 AU
morning rise	11991 Dec 21 21:54	24° \mathbb{Z} 15'14		morning rise	11998 Mar 12 13:09	12° \mathbb{H} 56'22	
	11992 Feb 15 02:25	0° \mathbb{Z}		retrograde	11998 Jun 22 08:30	20° \mathbb{H} 36'13	
retrograde	11992 Apr 03 23:33	2° \mathbb{Z} 00'30		opposition	11998 Aug 28 19:14	17° \mathbb{H} 13'07	1°12'36
	11992 May 23 19:06	30° \mathbb{R} \mathbb{Z}		min. Earth dist.	11998 Aug 29 04:51	17° \mathbb{H} 11'12	8.39640 AU
opposition	11992 Jun 11 01:03	28° \mathbb{Z} 35'24	2°08'29	direct	11998 Nov 05 20:39	13° \mathbb{H} 45'58	
min. Earth dist.	11992 Jun 11 03:46	28° \mathbb{Z} 34'51	8.44250 AU	evening set	11999 Feb 19 01:24	21° \mathbb{H} 37'54	
direct	11992 Aug 17 22:15	25° \mathbb{Z} 10'25		conjunction	11999 Mar 08 15:14	23° \mathbb{H} 49'17	0°47'23
	11992 Nov 04 08:10	0° \mathbb{Z}		minimum elong	11999 Mar 08 15:16	23° \mathbb{H} 49'17	0°47'33
evening set	11992 Nov 29 04:44	2° \mathbb{Z} 53'11		max. Earth dist.	11999 Mar 08 03:08	23° \mathbb{H} 45'29	10.40570 AU
conjunction	11992 Dec 16 22:04	5° \mathbb{Z} 04'43	1°47'25	morning rise	11999 Mar 26 01:58	25° \mathbb{H} 59'47	
minimum elong	11992 Dec 16 22:03	5° \mathbb{Z} 04'43	1°48'16		11999 Apr 30 09:55	0° \mathbb{Y}	
max. Earth dist.	11992 Dec 16 16:29	5° \mathbb{Z} 02'59	10.42679 AU	retrograde	11999 Jul 05 14:39	3° \mathbb{Y} 37'23	
morning rise	11993 Jan 03 15:32	7° \mathbb{Z} 16'21		opposition	11999 Sep 11 04:23	0° \mathbb{Y} 14'44	0°44'27
retrograde	11993 Apr 17 10:21	15° \mathbb{Z} 02'13		min. Earth dist.	11999 Sep 11 13:56	0° \mathbb{Y} 12'51	8.41740 AU
opposition	11993 Jun 24 05:05	11° \mathbb{Z} 37'17	2°16'01		11999 Sep 14 07:04	30° \mathbb{R} \mathbb{H}	
min. Earth dist.	11993 Jun 24 10:17	11° \mathbb{Z} 36'15	8.41508 AU	direct	11999 Nov 19 10:43	26° \mathbb{H} 47'53	
direct	11993 Aug 31 04:15	8° \mathbb{Z} 11'34			12000 Jan 21 16:39	0° \mathbb{Y}	
evening set	11993 Dec 13 00:17	15° \mathbb{Z} 58'01		evening set	12000 Mar 03 14:28	4° \mathbb{Y} 38'11	
conjunction	11993 Dec 30 17:49	18° \mathbb{Z} 10'01	1°50'40	conjunction	12000 Mar 21 02:15	6° \mathbb{Y} 48'47	0°23'40
minimum elong	11993 Dec 30 17:49	18° \mathbb{Z} 10'01	1°51'29	minimum elong	12000 Mar 21 02:16	6° \mathbb{Y} 48'47	0°23'39
max. Earth dist.	11993 Dec 30 09:07	18° \mathbb{Z} 07'18	10.40260 AU	max. Earth dist.	12000 Mar 20 14:39	6° \mathbb{Y} 45'09	10.43039 AU
morning rise	11994 Jan 17 10:56	20° \mathbb{Z} 21'56		morning rise	12000 Apr 07 10:58	8° \mathbb{Y} 58'28	
retrograde	11994 Apr 30 20:38	28° \mathbb{Z} 07'42		retrograde	12000 Jul 17 18:34	16° \mathbb{Y} 33'51	
opposition	11994 Jul 07 10:42	24° \mathbb{Z} 43'03	2°16'34	opposition	12000 Sep 23 13:10	13° \mathbb{Y} 11'38	0°14'11
min. Earth dist.	11994 Jul 07 18:07	24° \mathbb{Z} 41'34	8.39461 AU	min. Earth dist.	12000 Sep 23 21:48	13° \mathbb{Y} 09'56	8.44509 AU
direct	11994 Sep 13 14:16	21° \mathbb{Z} 16'41		direct	12000 Dec 02 00:21	9° \mathbb{Y} 45'16	
evening set	11994 Dec 26 21:12	29° \mathbb{Z} 06'08		desc. node	12001 Mar 16 21:19	17° \mathbb{Y} 32'25	
	11995 Jan 03 03:43	0° \approx		evening set	12001 Mar 17 00:16	17° \mathbb{Y} 33'19	
				conjunction	12001 Apr 03 09:40	19° \mathbb{Y} 42'56	-0°01'10

minimum elong	12001 Apr 03 09:40	19° Υ 42'56	0°01'23	conjunction	12007 Jun 18 02:33	5° \ominus 05'18	-1°47'51
behind sun begin	12001 Apr 03 02:31	19° Υ 40'43		minimum elong	12007 Jun 18 02:32	5° \ominus 05'17	1°48'41
behind sun end	12001 Apr 03 16:49	19° Υ 45'09		max. Earth dist.	12007 Jun 18 08:17	5° \ominus 07'03	10.67216 AU
max. Earth dist.	12001 Apr 02 23:35	19° Υ 39'48	10.46097 AU	morning rise	12007 Jul 04 21:50	7° \ominus 08'26	
morning rise	12001 Apr 20 16:05	21° Υ 51'40		retrograde	12007 Oct 15 06:51	14° \ominus 35'44	
retrograde	12001 Jul 30 20:14	29° Υ 24'59		opposition	12007 Dec 23 22:03	11° \ominus 14'39	-2°15'40
opposition	12001 Oct 06 21:07	26° Υ 03'10	-0°16'34	min. Earth dist.	12007 Dec 23 15:40	11° \ominus 15'52	8.68639 AU
min. Earth dist.	12001 Oct 07 03:49	26° Υ 01'52	8.47795 AU	direct	12008 Mar 02 13:37	7° \ominus 53'32	
direct	12001 Dec 15 13:03	22° Υ 37'27		evening set	12008 Jun 12 17:25	15° \ominus 18'47	
	12002 Mar 27 03:26	0° \mathcal{B}					
evening set	12002 Mar 30 06:25	0° \mathcal{B} 22'46		conjunction	12008 Jun 29 12:26	17° \ominus 21'28	-1°51'09
				minimum elong	12008 Jun 29 12:26	17° \ominus 21'28	1°51'59
conjunction	12002 Apr 16 13:14	2° \mathcal{B} 31'16	-0°25'43	max. Earth dist.	12008 Jun 29 20:43	17° \ominus 24'00	10.69641 AU
minimum elong	12002 Apr 16 13:13	2° \mathcal{B} 31'15	0°26'05	morning rise	12008 Jul 16 07:43	19° \ominus 24'16	
max. Earth dist.	12002 Apr 16 05:51	2° \mathcal{B} 28'58	10.49577 AU	retrograde	12008 Oct 27 01:50	26° \ominus 51'36	
morning rise	12002 May 03 17:06	4° \mathcal{B} 38'55		opposition	12009 Jan 04 21:08	23° \ominus 30'17	-2°16'33
retrograde	12002 Aug 12 21:48	12° \mathcal{B} 10'28		min. Earth dist.	12009 Jan 04 13:19	23° \ominus 31'46	8.70721 AU
opposition	12002 Oct 20 04:26	8° \mathcal{B} 49'00	-0°46'15	direct	12009 Mar 15 09:01	20° \ominus 09'40	
min. Earth dist.	12002 Oct 20 08:52	8° \mathcal{B} 48'09	8.51428 AU	evening set	12009 Jun 25 02:07	27° \ominus 32'07	
direct	12002 Dec 28 23:28	5° \mathcal{B} 24'04					
evening set	12003 Apr 12 08:40	13° \mathcal{B} 06'13		conjunction	12009 Jul 11 21:10	29° \ominus 34'33	-1°49'25
	12003 Apr 27 17:17	15° \mathcal{B}		minimum elong	12009 Jul 11 21:11	29° \ominus 34'34	1°50'11
				max. Earth dist.	12009 Jul 12 06:30	29° \ominus 37'25	10.71331 AU
conjunction	12003 Apr 29 12:44	15° \mathcal{B} 13'32	-0°48'50		12009 Jul 15 08:23	0° \mathcal{J}	
minimum elong	12003 Apr 29 12:42	15° \mathcal{B} 13'31	0°49'22	morning rise	12009 Jul 28 17:17	1° \mathcal{J} 37'18	
max. Earth dist.	12003 Apr 29 08:19	15° \mathcal{B} 12'09	10.53302 AU	retrograde	12009 Nov 08 20:32	9° \mathcal{J} 04'58	
morning rise	12003 May 16 14:04	17° \mathcal{B} 20'04		opposition	12010 Jan 17 18:53	5° \mathcal{J} 43'19	-2°11'16
retrograde	12003 Aug 25 22:27	24° \mathcal{B} 50'09		min. Earth dist.	12010 Jan 17 10:31	5° \mathcal{J} 44'54	8.71982 AU
opposition	12003 Nov 02 10:44	21° \mathcal{B} 28'59	-1°13'25	direct	12010 Mar 28 01:26	2° \mathcal{J} 23'02	
min. Earth dist.	12003 Nov 02 13:08	21° \mathcal{B} 28'31	8.55231 AU	evening set	12010 Jul 07 09:51	9° \mathcal{J} 43'16	
direct	12004 Jan 11 05:55	18° \mathcal{B} 04'52					
evening set	12004 Apr 24 07:21	25° \mathcal{B} 43'37		conjunction	12010 Jul 24 05:44	11° \mathcal{J} 45'45	-1°42'44
				minimum elong	12010 Jul 24 05:46	11° \mathcal{J} 45'45	1°43'25
conjunction	12004 May 11 08:40	27° \mathcal{B} 49'44	-1°09'26	max. Earth dist.	12010 Jul 24 15:32	11° \mathcal{J} 48'44	10.72148 AU
minimum elong	12004 May 11 08:37	27° \mathcal{B} 49'43	1°10'05	morning rise	12010 Aug 10 03:29	13° \mathcal{J} 48'43	
max. Earth dist.	12004 May 11 06:36	27° \mathcal{B} 49'06	10.57097 AU		12010 Aug 20 06:05	15° \mathcal{J}	
morning rise	12004 May 28 07:47	29° \mathcal{B} 55'14		retrograde	12010 Nov 21 13:22	21° \mathcal{J} 17'08	
	12004 May 28 23:29	0° \mathcal{I}		opposition	12011 Jan 30 15:25	17° \mathcal{J} 55'03	-2°00'05
retrograde	12004 Sep 06 19:52	7° \mathcal{I} 24'06		min. Earth dist.	12011 Jan 30 06:40	17° \mathcal{J} 56'43	8.72309 AU
opposition	12004 Nov 14 15:41	4° \mathcal{I} 03'09	-1°36'50		12011 Mar 18 11:02	15° \mathcal{R} \mathcal{J}	
min. Earth dist.	12004 Nov 14 16:33	4° \mathcal{I} 02'59	8.59025 AU	direct	12011 Apr 09 17:51	14° \mathcal{J} 34'58	
direct	12005 Jan 23 11:11	0° \mathcal{I} 39'51			12011 May 01 19:02	15° \mathcal{J}	
evening set	12005 May 07 02:30	8° \mathcal{I} 15'09		evening set	12011 Jul 19 17:19	21° \mathcal{J} 53'42	
conjunction	12005 May 24 01:17	10° \mathcal{I} 20'07	-1°26'35	conjunction	12011 Aug 05 14:55	23° \mathcal{J} 56'31	-1°31'25
minimum elong	12005 May 24 01:15	10° \mathcal{I} 20'06	1°27'20	minimum elong	12011 Aug 05 14:57	23° \mathcal{J} 56'32	1°31'59
max. Earth dist.	12005 May 24 01:05	10° \mathcal{I} 20'03	10.60790 AU	max. Earth dist.	12011 Aug 06 01:38	23° \mathcal{J} 59'47	10.72022 AU
morning rise	12005 Jun 09 22:38	12° \mathcal{I} 24'40		morning rise	12011 Aug 22 14:46	25° \mathcal{J} 59'59	
retrograde	12005 Sep 19 15:56	19° \mathcal{I} 52'42			12011 Sep 28 04:13	0° \mathcal{P}	
opposition	12005 Nov 27 19:22	16° \mathcal{I} 31'49	-1°55'28	retrograde	12011 Dec 04 08:23	3° \mathcal{P} 29'32	
min. Earth dist.	12005 Nov 27 18:10	16° \mathcal{I} 32'03	8.62633 AU	opposition	12012 Feb 12 11:01	0° \mathcal{P} 06'56	-1°43'29
direct	12006 Feb 05 15:15	13° \mathcal{I} 09'19		min. Earth dist.	12012 Feb 12 01:21	0° \mathcal{P} 08'47	8.71699 AU
evening set	12006 May 19 18:11	20° \mathcal{I} 41'07			12012 Feb 13 23:24	30° \mathcal{R} \mathcal{J}	
				direct	12012 Apr 21 09:10	26° \mathcal{J} 46'55	
conjunction	12006 Jun 05 14:59	22° \mathcal{I} 45'06	-1°39'33		12012 Jun 23 14:04	0° \mathcal{P}	
minimum elong	12006 Jun 05 14:58	22° \mathcal{I} 45'05	1°40'22	evening set	12012 Jul 31 01:41	4° \mathcal{P} 04'48	
max. Earth dist.	12006 Jun 05 17:31	22° \mathcal{I} 45'53	10.64215 AU				
morning rise	12006 Jun 22 11:01	24° \mathcal{I} 48'50		conjunction	12012 Aug 17 01:29	6° \mathcal{P} 08'14	-1°15'59
	12006 Aug 10 19:59	0° \mathcal{Q}		minimum elong	12012 Aug 17 01:32	6° \mathcal{P} 08'14	1°16'23
retrograde	12006 Oct 02 12:03	2° \mathcal{Q} 16'22		max. Earth dist.	12012 Aug 17 13:20	6° \mathcal{P} 11'50	10.71006 AU
	12006 Nov 26 12:06	30° \mathcal{R} \mathcal{I}		morning rise	12012 Sep 03 03:47	8° \mathcal{P} 12'24	
opposition	12006 Dec 10 21:33	28° \mathcal{I} 55'27	-2°08'34	retrograde	12012 Dec 16 05:16	15° \mathcal{P} 43'20	
min. Earth dist.	12006 Dec 10 17:43	28° \mathcal{I} 56'11	8.65889 AU	opposition	12013 Feb 24 06:00	12° \mathcal{P} 20'10	-1°22'12
direct	12007 Feb 18 15:43	25° \mathcal{I} 33'41		min. Earth dist.	12013 Feb 23 19:48	12° \mathcal{P} 22'07	8.70250 AU
	12007 May 05 15:00	0° \mathcal{Q}		direct	12013 May 03 22:07	9° \mathcal{P} 00'02	
evening set	12007 Jun 01 06:59	3° \mathcal{Q} 02'04		evening set	12013 Aug 12 11:45	16° \mathcal{P} 17'50	

conjunction	12013 Aug 29 13:59	18° \mathring{M} 22'01	-0°57'04	retrograde	12019 Mar 03 10:59	0° \mathring{X} 30'18	
minimum elong	12013 Aug 29 14:01	18° \mathring{M} 22'02	0°57'18		12019 Mar 27 17:11	30° \mathring{R} \mathring{M}	
max. Earth dist.	12013 Aug 30 01:49	18° \mathring{M} 25'37	10.69214 AU	opposition	12019 May 11 05:32	27° \mathring{M} 04'31	1°24'03
morning rise	12013 Sep 15 19:04	20° \mathring{M} 27'05		min. Earth dist.	12019 May 11 02:53	27° \mathring{M} 05'02	8.50951 AU
retrograde	12013 Dec 29 01:59	27° \mathring{M} 59'36		direct	12019 Jul 18 00:17	23° \mathring{M} 40'51	
opposition	12014 Mar 09 00:50	24° \mathring{M} 35'51	-0°57'06		12019 Oct 17 14:42	0° \mathring{X}	
min. Earth dist.	12014 Mar 08 15:05	24° \mathring{M} 37'44	8.68088 AU	evening set	12019 Oct 27 22:55	1° \mathring{X} 13'51	
direct	12014 May 16 11:38	21° \mathring{M} 15'24					
evening set	12014 Aug 25 00:11	28° \mathring{M} 33'54		conjunction	12019 Nov 14 14:15	3° \mathring{X} 23'50	1°17'10
	12014 Sep 05 21:08	0° \mathring{X}		minimum elong	12019 Nov 14 14:13	3° \mathring{X} 23'49	1°17'52
				max. Earth dist.	12019 Nov 14 15:20	3° \mathring{X} 24'10	10.49044 AU
conjunction	12014 Sep 11 04:58	0° \mathring{X} 39'00	-0°35'28	morning rise	12019 Dec 02 07:34	5° \mathring{X} 34'26	
minimum elong	12014 Sep 11 04:59	0° \mathring{X} 39'00	0°35'32	retrograde	12020 Mar 15 17:23	13° \mathring{X} 18'28	
max. Earth dist.	12014 Sep 11 15:35	0° \mathring{X} 42'14	10.66764 AU	opposition	12020 May 23 05:25	9° \mathring{X} 52'39	1°45'59
morning rise	12014 Sep 28 13:02	2° \mathring{X} 45'02		min. Earth dist.	12020 May 23 05:23	9° \mathring{X} 52'39	8.47318 AU
retrograde	12015 Jan 11 00:18	10° \mathring{X} 19'22		direct	12020 Jul 30 00:38	6° \mathring{X} 28'11	
opposition	12015 Mar 21 19:41	6° \mathring{X} 55'03	-0°29'15	evening set	12020 Nov 09 11:07	14° \mathring{X} 05'26	
min. Earth dist.	12015 Mar 21 11:18	6° \mathring{X} 56'40	8.65328 AU				
direct	12015 May 29 01:46	3° \mathring{X} 34'08		conjunction	12020 Nov 27 03:29	16° \mathring{X} 16'13	1°32'53
evening set	12015 Sep 06 15:51	10° \mathring{X} 54'08		minimum elong	12020 Nov 27 03:27	16° \mathring{X} 16'12	1°33'41
				max. Earth dist.	12020 Nov 27 01:37	16° \mathring{X} 15'38	10.45532 AU
conjunction	12015 Sep 23 23:15	13° \mathring{X} 00'14	-0°12'08	morning rise	12020 Dec 14 21:17	18° \mathring{X} 27'25	
minimum elong	12015 Sep 23 23:16	13° \mathring{X} 00'14	0°12'02	retrograde	12021 Mar 29 01:24	26° \mathring{X} 12'49	
behind sun begin	12015 Sep 23 18:24	12° \mathring{X} 58'46		opposition	12021 Jun 05 07:01	22° \mathring{X} 47'05	2°02'46
behind sun end	12015 Sep 24 04:09	13° \mathring{X} 01'42		min. Earth dist.	12021 Jun 05 09:10	22° \mathring{X} 46'39	8.44030 AU
max. Earth dist.	12015 Sep 24 08:33	13° \mathring{X} 03'03	10.63763 AU	direct	12021 Aug 12 03:41	19° \mathring{X} 21'53	
morning rise	12015 Oct 11 10:02	15° \mathring{X} 07'18		evening set	12021 Nov 23 03:00	27° \mathring{X} 03'20	
retrograde	12016 Jan 23 23:40	22° \mathring{X} 43'33					
asc. node	12016 Mar 31 18:26	19° \mathring{X} 27'20		conjunction	12021 Dec 10 20:10	29° \mathring{X} 14'47	1°44'00
opposition	12016 Apr 02 14:42	19° \mathring{X} 18'44	0°00'09	minimum elong	12021 Dec 10 20:09	29° \mathring{X} 14'47	1°44'51
min. Earth dist.	12016 Apr 02 07:31	19° \mathring{X} 20'08	8.62091 AU	max. Earth dist.	12021 Dec 10 15:58	29° \mathring{X} 13'28	10.42457 AU
direct	12016 Jun 09 16:50	15° \mathring{X} 57'14			12021 Dec 16 21:27	0° \mathring{X}	
evening set	12016 Sep 18 11:10	23° \mathring{X} 19'34		morning rise	12021 Dec 28 13:58	1° \mathring{X} 26'27	
				retrograde	12022 Apr 11 11:28	9° \mathring{X} 12'41	
conjunction	12016 Oct 05 21:08	25° \mathring{X} 26'41	0°12'00	opposition	12022 Jun 18 10:14	5° \mathring{X} 47'11	2°13'24
minimum elong	12016 Oct 05 21:08	25° \mathring{X} 26'41	0°12'16	min. Earth dist.	12022 Jun 18 13:55	5° \mathring{X} 46'26	8.41258 AU
behind sun begin	12016 Oct 05 16:23	25° \mathring{X} 25'15		direct	12022 Aug 25 09:00	2° \mathring{X} 21'21	
behind sun end	12016 Oct 06 01:52	25° \mathring{X} 28'07		evening set	12022 Dec 06 21:47	10° \mathring{X} 06'43	
max. Earth dist.	12016 Oct 06 05:30	25° \mathring{X} 29'14	10.60337 AU				
morning rise	12016 Oct 23 10:12	27° \mathring{X} 34'44		conjunction	12022 Dec 24 15:26	12° \mathring{X} 18'41	1°49'51
	12016 Nov 13 10:16	0° \mathring{M}		minimum elong	12022 Dec 24 15:26	12° \mathring{X} 18'41	1°50'41
retrograde	12017 Feb 05 00:19	5° \mathring{M} 13'04		max. Earth dist.	12022 Dec 24 09:29	12° \mathring{X} 16'49	10.39985 AU
opposition	12017 Apr 15 10:33	1° \mathring{M} 47'48	0°29'46	morning rise	12023 Jan 11 08:49	14° \mathring{X} 30'40	
min. Earth dist.	12017 Apr 15 04:16	1° \mathring{M} 49'02	8.58512 AU	retrograde	12023 Apr 24 22:21	22° \mathring{X} 17'09	
	12017 May 09 15:58	30° \mathring{R} \mathring{X}		opposition	12023 Jul 01 15:21	18° \mathring{X} 52'01	2°17'13
direct	12017 Jun 22 10:40	28° \mathring{X} 25'40		min. Earth dist.	12023 Jul 01 20:22	18° \mathring{X} 51'00	8.39150 AU
	12017 Aug 04 05:38	0° \mathring{M}		direct	12023 Sep 07 17:17	15° \mathring{X} 25'42	
evening set	12017 Oct 01 10:33	5° \mathring{M} 50'58		evening set	12023 Dec 20 18:23	23° \mathring{X} 14'22	
conjunction	12017 Oct 18 22:46	7° \mathring{M} 59'07	0°35'37	conjunction	12024 Jan 07 12:07	25° \mathring{X} 26'42	1°50'01
minimum elong	12017 Oct 18 22:45	7° \mathring{M} 59'07	0°36'04	minimum elong	12024 Jan 07 12:07	25° \mathring{X} 26'43	1°50'49
max. Earth dist.	12017 Oct 19 05:49	8° \mathring{M} 01'17	10.56633 AU	max. Earth dist.	12024 Jan 07 04:15	25° \mathring{X} 24'15	10.38255 AU
morning rise	12017 Nov 05 13:41	10° \mathring{M} 08'07		morning rise	12024 Jan 25 04:50	27° \mathring{X} 38'50	
	12017 Dec 20 23:22	15° \mathring{M}			12024 Feb 14 01:55	0° \mathring{X}	
retrograde	12018 Feb 18 04:55	17° \mathring{M} 48'33		retrograde	12024 May 07 09:37	5° \mathring{X} 24'57	
	12018 Apr 20 10:09	15° \mathring{R} \mathring{M}		opposition	12024 Jul 13 22:07	2° \mathring{X} 00'18	2°13'53
opposition	12018 Apr 28 07:25	14° \mathring{M} 22'57	0°58'12	min. Earth dist.	12024 Jul 14 04:48	1° \mathring{X} 58'58	8.37829 AU
min. Earth dist.	12018 Apr 28 02:28	14° \mathring{M} 23'55	8.54743 AU		12024 Aug 09 16:45	30° \mathring{R} \mathring{X}	
direct	12018 Jul 05 04:21	11° \mathring{M} 00'04		direct	12024 Sep 20 03:42	28° \mathring{X} 33'38	
	12018 Sep 13 17:15	15° \mathring{M}			12024 Oct 31 03:32	0° \mathring{X}	
evening set	12018 Oct 14 14:33	18° \mathring{M} 28'59		evening set	12025 Jan 02 16:02	6° \mathring{X} 24'49	
conjunction	12018 Nov 01 04:34	20° \mathring{M} 38'06	0°57'44	conjunction	12025 Jan 20 09:29	8° \mathring{X} 37'21	1°44'25
minimum elong	12018 Nov 01 04:32	20° \mathring{M} 38'05	0°58'19	minimum elong	12025 Jan 20 09:31	8° \mathring{X} 37'21	1°45'08
max. Earth dist.	12018 Nov 01 09:03	20° \mathring{M} 39'29	10.52808 AU	max. Earth dist.	12025 Jan 19 23:35	8° \mathring{X} 34'14	10.37373 AU
morning rise	12018 Nov 18 20:54	22° \mathring{M} 47'58		morning rise	12025 Feb 07 01:23	10° \mathring{X} 49'27	
	12019 Feb 07 04:28	0° \mathring{X}			12025 Mar 16 00:32	15° \mathring{X}	

retrograde	12025 May 20 21:18	18° \approx 34'31		behind sun begin	12031 Apr 10 21:21	27° Υ 00'00	
opposition	12025 Jul 27 06:10	15° \approx 10'26	2°03'31	behind sun end	12031 Apr 11 02:32	27° Υ 01'36	
min. Earth dist.	12025 Jul 27 14:33	15° \approx 08'45	8.37376 AU	max. Earth dist.	12031 Apr 10 14:18	26° Υ 57'47	10.48036 AU
	12025 Jul 29 10:22	15° \approx		morning rise	12031 Apr 28 04:58	29° Υ 09'01	
direct	12025 Oct 03 15:57	11° \approx 43'33			12031 May 05 05:22	0° \mathcal{B}	
	12025 Dec 06 04:46	15° \approx		retrograde	12031 Aug 07 11:12	6° \mathcal{B} 41'51	
evening set	12026 Jan 16 13:33	19° \approx 36'19		opposition	12031 Oct 14 13:32	3° \mathcal{B} 20'35	-0°33'06
				min. Earth dist.	12031 Oct 14 20:44	3° \mathcal{B} 19'11	8.49610 AU
conjunction	12026 Feb 03 06:26	21° \approx 48'49	1°33'21		12031 Dec 13 21:43	30° $\mathcal{R}\Upsilon$	
minimum elong	12026 Feb 03 06:28	21° \approx 48'50	1°33'56	direct	12031 Dec 23 05:24	29° Υ 55'33	
max. Earth dist.	12026 Feb 02 18:43	21° \approx 45'08	10.37383 AU		12032 Jan 01 12:26	0° \mathcal{B}	
morning rise	12026 Feb 20 21:19	24° \approx 00'44		evening set	12032 Apr 05 20:50	7° \mathcal{B} 39'49	
	12026 Apr 19 14:43	0° \mathcal{H}					
retrograde	12026 Jun 03 06:54	1° \mathcal{H} 44'08		conjunction	12032 Apr 23 02:06	9° \mathcal{B} 47'48	-0°38'41
	12026 Jul 18 21:32	30° $\mathcal{R}\approx$		minimum elong	12032 Apr 23 02:04	9° \mathcal{B} 47'48	0°39'09
opposition	12026 Aug 09 15:15	28° \approx 20'38	1°46'40	max. Earth dist.	12032 Apr 22 18:02	9° \mathcal{B} 45'17	10.51201 AU
min. Earth dist.	12026 Aug 10 00:42	28° \approx 18'45	8.37803 AU	morning rise	12032 May 10 04:46	11° \mathcal{B} 55'01	
direct	12026 Oct 17 07:08	24° \approx 53'42			12032 Jun 05 21:16	15° \mathcal{B}	
	12027 Jan 06 17:11	0° \mathcal{H}		retrograde	12032 Aug 19 12:02	19° \mathcal{B} 26'26	
evening set	12027 Jan 30 09:50	2° \mathcal{H} 47'01		opposition	12032 Oct 26 21:11	16° \mathcal{B} 05'23	-1°01'38
				min. Earth dist.	12032 Oct 27 02:26	16° \mathcal{B} 04'22	8.52848 AU
conjunction	12027 Feb 17 01:45	4° \mathcal{H} 59'14	1°17'24		12032 Nov 10 05:41	15° $\mathcal{R}\mathcal{B}$	
minimum elong	12027 Feb 17 01:47	4° \mathcal{H} 59'14	1°17'49	direct	12033 Jan 04 15:21	12° \mathcal{B} 41'00	
max. Earth dist.	12027 Feb 16 13:22	4° \mathcal{H} 55'20	10.38268 AU		12033 Feb 27 02:31	15° \mathcal{B}	
morning rise	12027 Mar 06 15:14	7° \mathcal{H} 10'44		evening set	12033 Apr 18 22:12	20° \mathcal{B} 22'13	
retrograde	12027 Jun 16 14:47	14° \mathcal{H} 52'05					
opposition	12027 Aug 23 00:52	11° \mathcal{H} 29'08	1°24'16	conjunction	12033 May 06 00:47	22° \mathcal{B} 29'04	-1°00'36
min. Earth dist.	12027 Aug 23 10:12	11° \mathcal{H} 27'17	8.39075 AU	minimum elong	12033 May 06 00:45	22° \mathcal{B} 29'03	1°01'12
direct	12027 Oct 30 23:30	8° \mathcal{H} 02'20		max. Earth dist.	12033 May 05 19:24	22° \mathcal{B} 27'23	10.54454 AU
evening set	12028 Feb 13 03:57	15° \mathcal{H} 55'07		morning rise	12033 May 23 01:05	24° \mathcal{B} 35'15	
					12033 Jul 13 14:19	0° \mathcal{I}	
conjunction	12028 Mar 01 18:36	18° \mathcal{H} 06'50	0°57'28	retrograde	12033 Sep 01 11:06	2° \mathcal{I} 05'33	
minimum elong	12028 Mar 01 18:38	18° \mathcal{H} 06'51	0°57'43		12033 Oct 23 09:22	30° $\mathcal{R}\mathcal{B}$	
max. Earth dist.	12028 Mar 01 06:46	18° \mathcal{H} 03'08	10.39959 AU	opposition	12033 Nov 09 03:41	28° \mathcal{B} 44'33	-1°26'57
morning rise	12028 Mar 19 06:21	20° \mathcal{H} 17'44		min. Earth dist.	12033 Nov 09 06:11	28° \mathcal{B} 44'04	8.56126 AU
retrograde	12028 Jun 28 22:29	27° \mathcal{H} 56'46		direct	12034 Jan 17 23:58	25° \mathcal{B} 20'50	
opposition	12028 Sep 04 10:30	24° \mathcal{H} 34'17	0°57'34		12034 Apr 05 22:59	0° \mathcal{I}	
min. Earth dist.	12028 Sep 04 19:16	24° \mathcal{H} 32'33	8.41088 AU	evening set	12034 May 01 19:55	2° \mathcal{I} 58'45	
direct	12028 Nov 12 14:22	21° \mathcal{H} 07'44					
evening set	12029 Feb 25 19:13	28° \mathcal{H} 59'07		conjunction	12034 May 18 20:01	5° \mathcal{I} 04'29	-1°19'27
	12029 Mar 06 00:02	0° Υ		minimum elong	12034 May 18 19:59	5° \mathcal{I} 04'28	1°20'09
				max. Earth dist.	12034 May 18 18:11	5° \mathcal{I} 03'55	10.57682 AU
conjunction	12029 Mar 15 08:09	1° Υ 10'09	0°34'38	morning rise	12034 Jun 04 18:10	7° \mathcal{I} 09'41	
minimum elong	12029 Mar 15 08:11	1° Υ 10'09	0°34'41	retrograde	12034 Sep 14 10:13	14° \mathcal{I} 39'10	
max. Earth dist.	12029 Mar 14 21:13	1° Υ 06'43	10.42296 AU	opposition	12034 Nov 22 09:04	11° \mathcal{I} 18'05	-1°47'54
morning rise	12029 Apr 01 17:50	3° Υ 20'15		min. Earth dist.	12034 Nov 22 08:57	11° \mathcal{I} 18'07	8.59317 AU
retrograde	12029 Jul 12 05:00	10° Υ 56'54		direct	12035 Jan 31 05:15	7° \mathcal{I} 55'01	
opposition	12029 Sep 17 19:58	7° Υ 34'53	0°28'03	evening set	12035 May 14 14:01	15° \mathcal{I} 29'29	
min. Earth dist.	12029 Sep 18 04:16	7° Υ 33'15	8.43641 AU				
direct	12029 Nov 26 04:08	4° Υ 08'43		conjunction	12035 May 31 11:56	17° \mathcal{I} 34'12	-1°34'24
evening set	12030 Mar 11 07:19	11° Υ 58'06		minimum elong	12035 May 31 11:54	17° \mathcal{I} 34'12	1°35'11
				max. Earth dist.	12035 May 31 13:01	17° \mathcal{I} 34'33	10.60748 AU
conjunction	12030 Mar 28 18:00	14° Υ 08'13	0°10'11	morning rise	12035 Jun 17 08:29	19° \mathcal{I} 38'34	
minimum elong	12030 Mar 28 18:00	14° Υ 08'13	0°10'03	retrograde	12035 Sep 27 08:18	27° \mathcal{I} 07'28	
behind sun begin	12030 Mar 28 12:14	14° Υ 06'26		opposition	12035 Dec 05 12:56	23° \mathcal{I} 46'13	-2°03'36
behind sun end	12030 Mar 28 23:46	14° Υ 10'00		min. Earth dist.	12035 Dec 05 10:53	23° \mathcal{I} 46'37	8.62280 AU
max. Earth dist.	12030 Mar 28 07:46	14° Υ 05'02	10.45045 AU	direct	12036 Feb 13 06:26	20° \mathcal{I} 23'43	
morning rise	12030 Apr 15 01:21	16° Υ 17'24		evening set	12036 May 26 05:06	27° \mathcal{I} 54'49	
retrograde	12030 Jul 25 08:48	23° Υ 51'57					
desc. node	12030 Aug 29 19:13	22° Υ 48'07		conjunction	12036 Jun 12 01:17	29° \mathcal{I} 58'41	-1°44'50
opposition	12030 Oct 01 05:00	20° Υ 30'21	-0°02'42	minimum elong	12036 Jun 12 01:16	29° \mathcal{I} 58'41	1°45'40
min. Earth dist.	12030 Oct 01 13:08	20° Υ 28'45	8.46517 AU	max. Earth dist.	12036 Jun 12 04:29	29° \mathcal{I} 59'41	10.63521 AU
direct	12030 Dec 09 17:26	17° Υ 04'42			12036 Jun 12 05:31	0° \mathcal{G}	
evening set	12031 Mar 24 15:56	24° Υ 51'43		morning rise	12036 Jun 28 20:58	2° \mathcal{G} 02'25	
				retrograde	12036 Oct 09 02:41	9° \mathcal{G} 30'59	
conjunction	12031 Apr 10 23:57	27° Υ 00'48	-0°14'44	opposition	12036 Dec 17 15:04	6° \mathcal{G} 09'29	-2°13'26
minimum elong	12031 Apr 10 23:57	27° Υ 00'48	0°15'02	min. Earth dist.	12036 Dec 17 11:18	6° \mathcal{G} 10'12	8.64882 AU

direct	12037 Feb 25 07:05	2°☾47'29		direct	12043 May 11 13:39	16°♊21'21	
evening set	12037 Jun 07 17:25	10°☾15'25		evening set	12043 Aug 20 02:01	23°♊40'02	
conjunction	12037 Jun 24 12:36	12°☾18'40	-1°50'21	conjunction	12043 Sep 06 05:50	25°♊44'53	-0°44'47
minimum elong	12037 Jun 24 12:36	12°☾18'40	1°51'12	minimum elong	12043 Sep 06 05:52	25°♊44'54	0°44'56
max. Earth dist.	12037 Jun 24 17:57	12°☾20'18	10.65880 AU	max. Earth dist.	12043 Sep 06 18:54	25°♊48'53	10.66880 AU
morning rise	12037 Jul 11 08:05	14°☾21'57		morning rise	12043 Sep 23 12:40	27°♊50'38	
retrograde	12037 Oct 21 21:43	21°☾50'31			12043 Oct 12 04:59	0°♊	
opposition	12037 Dec 30 15:46	18°☾28'42	-2°17'03	retrograde	12044 Jan 05 21:45	5°♊24'36	
min. Earth dist.	12037 Dec 30 09:48	18°☾29'50	8.67001 AU	opposition	12044 Mar 15 19:17	2°♊00'22	-0°41'11
direct	12038 Mar 10 05:41	15°☾07'11		min. Earth dist.	12044 Mar 15 08:28	2°♊02'27	8.65910 AU
evening set	12038 Jun 20 03:24	22°☾32'11			12044 Apr 12 16:26	30°♊♊	
conjunction	12038 Jul 06 22:30	24°☾35'04	-1°50'48	direct	12044 May 23 04:01	28°♊39'37	
minimum elong	12038 Jul 06 22:31	24°☾35'05	1°51'36		12044 Jul 01 17:32	0°♊	
max. Earth dist.	12038 Jul 07 06:47	24°☾37'37	10.67713 AU	evening set	12044 Aug 31 16:27	5°♊59'12	
morning rise	12038 Jul 23 18:25	26°☾38'12		conjunction	12044 Sep 17 22:52	8°♊04'57	-0°22'03
	12038 Aug 22 15:51	0°♊		minimum elong	12044 Sep 17 22:53	8°♊04'57	0°22'00
retrograde	12038 Nov 03 17:28	4°♊07'03		max. Earth dist.	12044 Sep 18 11:41	8°♊08'51	10.64774 AU
opposition	12039 Jan 12 14:54	0°♊44'50	-2°14'23	morning rise	12044 Oct 05 08:21	10°♊11'37	
min. Earth dist.	12039 Jan 12 06:28	0°♊46'27	8.68531 AU	retrograde	12045 Jan 17 22:05	17°♊47'15	
	12039 Jan 22 12:26	30°♊☾		opposition	12045 Mar 28 14:29	14°♊22'41	-0°12'16
direct	12039 Mar 23 00:30	27°☾23'44		min. Earth dist.	12045 Mar 28 04:22	14°♊24'39	8.63541 AU
	12039 May 18 15:13	0°♊		direct	12045 Jun 04 17:41	11°♊01'39	
evening set	12039 Jul 02 12:08	4°♊46'13		asc. node	12045 Aug 31 22:00	16°♊54'55	
conjunction	12039 Jul 19 07:56	6°♊49'02	-1°46'11	evening set	12045 Sep 13 10:26	18°♊22'58	
minimum elong	12039 Jul 19 07:57	6°♊49'03	1°46'55	conjunction	12045 Sep 30 19:16	20°♊29'37	0°01'55
max. Earth dist.	12039 Jul 19 18:43	6°♊52'21	10.68925 AU	minimum elong	12045 Sep 30 19:17	20°♊29'37	0°02'08
morning rise	12039 Aug 05 04:58	8°♊52'15		behind sun begin	12045 Sep 30 12:06	20°♊27'27	
	12039 Oct 06 19:09	15°♊		behind sun end	12045 Oct 01 02:27	20°♊31'47	
retrograde	12039 Nov 16 12:04	16°♊21'37		max. Earth dist.	12045 Oct 01 06:14	20°♊32'57	10.62200 AU
	12039 Dec 28 03:11	15°♊♊		morning rise	12045 Oct 18 07:18	22°♊37'14	
opposition	12040 Jan 25 12:31	12°♊59'01	-2°05'38		12046 Jan 13 23:35	0°♊	
min. Earth dist.	12040 Jan 25 02:31	13°♊00'55	8.69393 AU	retrograde	12046 Jan 30 22:54	0°♊14'38	
direct	12040 Apr 03 17:07	9°♊38'13			12046 Feb 16 22:12	30°♊♊	
	12040 Jun 26 18:58	15°♊		opposition	12046 Apr 10 10:12	26°♊49'49	0°17'24
evening set	12040 Jul 13 20:24	16°♊58'46		min. Earth dist.	12046 Apr 10 02:00	26°♊51'25	8.60775 AU
conjunction	12040 Jul 30 17:25	19°♊01'46	-1°36'46	direct	12046 Jun 17 09:38	23°♊28'20	
minimum elong	12040 Jul 30 17:27	19°♊01'47	1°37'23		12046 Sep 19 00:34	0°♊	
max. Earth dist.	12040 Jul 31 05:23	19°♊05'26	10.69452 AU	evening set	12046 Sep 26 08:20	0°♊52'07	
morning rise	12040 Aug 16 16:20	21°♊05'19		conjunction	12046 Oct 13 19:25	2°♊59'43	0°25'49
retrograde	12040 Nov 28 07:54	28°♊35'28		minimum elong	12046 Oct 13 19:24	2°♊59'43	0°26'12
opposition	12041 Feb 06 09:12	25°♊12'28	-1°51'12	max. Earth dist.	12046 Oct 14 03:55	3°♊02'19	10.59273 AU
min. Earth dist.	12041 Feb 05 22:43	25°♊14'28	8.69544 AU	morning rise	12046 Oct 31 09:38	5°♊08'13	
direct	12041 Apr 16 08:34	21°♊51'52		retrograde	12047 Feb 13 01:22	12°♊47'24	
evening set	12041 Jul 26 04:48	29°♊11'03		opposition	12047 Apr 23 06:43	9°♊22'24	0°46'27
	12041 Aug 01 23:17	0°♊		min. Earth dist.	12047 Apr 23 00:43	9°♊23'34	8.57719 AU
conjunction	12041 Aug 12 03:34	1°♊14'28	-1°22'59	direct	12047 Jun 30 03:51	6°♊00'20	
minimum elong	12041 Aug 12 03:37	1°♊14'28	1°23'27	evening set	12047 Oct 09 10:25	13°♊27'12	
max. Earth dist.	12041 Aug 12 15:40	1°♊18'10	10.69274 AU		12047 Oct 22 03:20	15°♊	
morning rise	12041 Aug 29 04:58	3°♊18'37		conjunction	12047 Oct 26 23:28	15°♊35'42	0°48'40
retrograde	12041 Dec 11 03:38	10°♊49'47		minimum elong	12047 Oct 26 23:27	15°♊35'42	0°49'12
opposition	12042 Feb 19 05:07	7°♊26'22	-1°31'44	max. Earth dist.	12047 Oct 27 05:33	15°♊37'34	10.56091 AU
min. Earth dist.	12042 Feb 18 18:39	7°♊28'22	8.68988 AU	morning rise	12047 Nov 13 15:14	17°♊45'01	
direct	12042 Apr 28 22:36	4°♊05'50		retrograde	12048 Feb 26 05:15	25°♊25'53	
evening set	12042 Aug 07 14:26	11°♊24'24		opposition	12048 May 05 04:09	22°♊00'45	1°13'29
conjunction	12042 Aug 24 15:33	13°♊28'26	-1°05'24	min. Earth dist.	12048 May 05 00:09	22°♊01'32	8.54471 AU
minimum elong	12042 Aug 24 15:36	13°♊28'27	1°05'43	direct	12048 Jul 12 00:08	18°♊38'01	
max. Earth dist.	12042 Aug 25 04:07	13°♊32'16	10.68403 AU	evening set	12048 Oct 21 16:38	26°♊08'28	
morning rise	12042 Sep 10 19:40	15°♊33'19		conjunction	12048 Nov 08 07:21	28°♊17'48	1°09'18
retrograde	12042 Dec 23 22:55	23°♊05'47		minimum elong	12048 Nov 08 07:19	28°♊17'48	1°09'58
opposition	12043 Mar 04 00:18	19°♊41'56	-1°08'03	max. Earth dist.	12048 Nov 08 11:14	28°♊19'00	10.52753 AU
min. Earth dist.	12043 Mar 03 13:36	19°♊44'00	8.67758 AU		12048 Nov 22 04:15	0°♊♊	

morning rise	12048 Nov 26 00:06	0°♊27'49		morning rise	12055 Feb 15 06:50	18°♊34'17	
retrograde	12049 Mar 10 10:55	8°♊10'16		retrograde	12055 May 28 19:26	26°♊17'39	
opposition	12049 May 18 02:54	4°♊45'02	1°37'08	opposition	12055 Aug 04 04:48	22°♊53'49	1°54'37
min. Earth dist.	12049 May 18 00:44	4°♊45'28	8.51115 AU	min. Earth dist.	12055 Aug 04 13:48	22°♊52'02	8.38342 AU
direct	12049 Jul 24 22:49	1°♊21'34		direct	12055 Oct 11 19:27	19°♊26'49	
evening set	12049 Nov 04 02:48	8°♊55'57		evening set	12056 Jan 24 18:12	27°♊19'08	
conjunction	12049 Nov 21 18:46	11°♊06'06	1°26'39	conjunction	12056 Feb 11 10:42	29°♊31'21	1°24'50
minimum elong	12049 Nov 21 18:44	11°♊06'06	1°27'25	minimum elong	12056 Feb 11 10:45	29°♊31'21	1°25'20
max. Earth dist.	12049 Nov 21 19:33	11°♊06'21	10.49346 AU	max. Earth dist.	12056 Feb 10 22:36	29°♊27'33	10.38383 AU
morning rise	12049 Dec 09 12:06	13°♊16'44			12056 Feb 15 06:00	0°♋	
retrograde	12050 Mar 23 19:18	21°♊00'35		morning rise	12056 Feb 29 00:40	1°♋42'53	
opposition	12050 May 31 03:12	17°♊35'24	1°56'09	retrograde	12056 Jun 10 03:58	9°♋24'31	
min. Earth dist.	12050 May 31 03:36	17°♊35'19	8.47755 AU	opposition	12056 Aug 16 13:24	6°♋01'06	1°34'35
direct	12050 Aug 06 22:44	14°♊11'10		min. Earth dist.	12056 Aug 16 23:14	5°♋59'09	8.38797 AU
evening set	12050 Nov 17 16:52	21°♊49'45		direct	12056 Oct 24 09:31	2°♋33'59	
				evening set	12057 Feb 06 12:32	10°♋26'24	
conjunction	12050 Dec 05 09:36	24°♊00'36	1°39'46	conjunction	12057 Feb 24 03:51	12°♋38'17	1°06'34
minimum elong	12050 Dec 05 09:34	24°♊00'36	1°40'36	minimum elong	12057 Feb 24 03:53	12°♋38'18	1°06'54
max. Earth dist.	12050 Dec 05 06:40	23°♊59'42	10.46039 AU	max. Earth dist.	12057 Feb 23 14:57	12°♋34'14	10.39285 AU
morning rise	12050 Dec 23 03:08	26°♊11'45		morning rise	12057 Mar 13 16:21	14°♋49'22	
	12051 Jan 25 19:18	0°♋		retrograde	12057 Jun 23 11:35	22°♋28'54	
retrograde	12051 Apr 06 04:46	3°♋56'39		opposition	12057 Aug 29 22:13	19°♋05'55	1°09'41
opposition	12051 Jun 13 05:10	0°♋31'37	2°09'27	min. Earth dist.	12057 Aug 30 08:36	19°♋03'51	8.40075 AU
min. Earth dist.	12051 Jun 13 08:25	0°♋30'58	8.44620 AU	direct	12057 Nov 06 23:26	15°♋38'51	
	12051 Jun 19 20:24	30°♋♊		evening set	12058 Feb 20 04:28	23°♋30'30	
direct	12051 Aug 20 02:01	27°♊06'37					
	12051 Oct 18 05:06	0°♋		conjunction	12058 Mar 09 18:07	25°♋41'49	0°44'56
evening set	12051 Dec 01 09:56	4°♋49'19		minimum elong	12058 Mar 09 18:09	25°♋41'49	0°45'04
conjunction	12051 Dec 19 03:07	7°♋00'45	1°47'54	max. Earth dist.	12058 Mar 09 05:08	25°♋37'44	10.40974 AU
minimum elong	12051 Dec 19 03:06	7°♋00'45	1°48'45	morning rise	12058 Mar 27 04:52	27°♋52'15	
max. Earth dist.	12051 Dec 18 20:37	6°♋58'44	10.43098 AU		12058 Apr 14 02:27	0°♌	
morning rise	12052 Jan 05 20:34	9°♋12'19		retrograde	12058 Jul 06 16:45	5°♌29'35	
retrograde	12052 Apr 18 13:37	16°♋57'45		opposition	12058 Sep 12 07:08	2°♌07'00	0°41'17
opposition	12052 Jun 25 09:01	13°♋32'57	2°16'13	min. Earth dist.	12058 Sep 12 17:01	2°♌05'03	8.42103 AU
min. Earth dist.	12052 Jun 25 14:50	13°♋31'47	8.41966 AU		12058 Oct 11 06:11	30°♌♋	
direct	12052 Sep 01 09:34	10°♋07'15		direct	12058 Nov 20 14:01	28°♋40'12	
evening set	12052 Dec 14 05:04	17°♋53'33			12058 Dec 30 09:15	0°♌	
				evening set	12059 Mar 05 17:12	6°♌30'16	
conjunction	12052 Dec 31 22:30	20°♋05'27	1°50'31	conjunction	12059 Mar 23 04:50	8°♌40'47	0°21'05
minimum elong	12052 Dec 31 22:31	20°♋05'27	1°51'20	minimum elong	12059 Mar 23 04:51	8°♌40'47	0°21'02
max. Earth dist.	12052 Dec 31 13:26	20°♋02'37	10.40747 AU	max. Earth dist.	12059 Mar 22 17:02	8°♌37'05	10.43357 AU
morning rise	12053 Jan 18 15:35	22°♋17'16		morning rise	12059 Apr 09 13:27	10°♌50'24	
	12053 Apr 24 23:34	0°♌		retrograde	12059 Jul 19 19:44	18°♌25'36	
retrograde	12053 May 01 23:03	0°♌02'39		opposition	12059 Sep 25 15:46	15°♌03'24	0°10'57
	12053 May 08 23:37	30°♌♋		min. Earth dist.	12059 Sep 26 00:01	15°♌01'47	8.44777 AU
opposition	12053 Jul 08 14:23	26°♋38'07	2°15'59	direct	12059 Dec 04 04:33	11°♌37'05	
min. Earth dist.	12053 Jul 08 21:47	26°♋36'38	8.39969 AU	desc. node	12060 Feb 06 14:43	14°♌55'27	
direct	12053 Sep 14 19:27	23°♋11'50		evening set	12060 Mar 18 02:37	19°♌24'54	
	12053 Dec 19 15:39	0°♌					
evening set	12053 Dec 28 01:36	1°♌01'02		conjunction	12060 Apr 04 11:57	21°♌34'26	-0°03'48
conjunction	12054 Jan 14 19:06	3°♌13'15	1°47'25	minimum elong	12060 Apr 04 11:57	21°♌34'26	0°04'02
minimum elong	12054 Jan 14 19:08	3°♌13'16	1°48'10	behind sun begin	12060 Apr 04 04:54	21°♌32'15	
max. Earth dist.	12054 Jan 14 08:31	3°♌09'56	10.39128 AU	behind sun end	12060 Apr 04 19:00	21°♌36'37	
morning rise	12054 Feb 01 11:25	5°♌25'09		max. Earth dist.	12060 Apr 04 02:30	21°♌31'30	10.46314 AU
retrograde	12054 May 15 09:44	13°♌09'49		morning rise	12060 Apr 21 18:08	23°♌43'05	
opposition	12054 Jul 21 20:58	9°♌45'37	2°08'40		12060 Jun 23 18:34	0°♍	
min. Earth dist.	12054 Jul 22 05:19	9°♌43'57	8.38739 AU	retrograde	12060 Jul 31 22:54	1°♍16'19	
direct	12054 Sep 28 06:16	6°♌18'53			12060 Sep 08 24:00	30°♌♌	
evening set	12055 Jan 10 22:23	14°♌10'08		opposition	12060 Oct 07 23:39	27°♌54'28	-0°19'44
	12055 Jan 17 15:49	15°♌		min. Earth dist.	12060 Oct 08 05:57	27°♌53'14	8.47959 AU
				direct	12060 Dec 16 15:56	24°♌28'47	
conjunction	12055 Jan 28 15:36	16°♌22'28	1°38'42		12061 Mar 12 10:18	0°♍	
minimum elong	12055 Jan 28 15:38	16°♌22'29	1°39'21	evening set	12061 Mar 31 08:30	2°♍13'52	
max. Earth dist.	12055 Jan 28 04:06	16°♌18'52	10.38327 AU				

conjunction	12061 Apr 17 15:14	4° 8 22'19	-0°28'11	max. Earth dist.	12067 Jul 01 22:27	19° 5 15'18	10.69127 AU
minimum elong	12061 Apr 17 15:12	4° 8 22'18	0°28'35	morning rise	12067 Jul 18 10:00	21° 5 15'47	
max. Earth dist.	12061 Apr 17 08:15	4° 8 20'08	10.49683 AU	retrograde	12067 Oct 29 05:28	28° 5 43'30	
morning rise	12061 May 04 18:52	6° 8 29'54		opposition	12068 Jan 07 00:29	25° 5 22'06	-2°16'06
retrograde	12061 Aug 14 01:08	14° 8 01'24		min. Earth dist.	12068 Jan 06 17:07	25° 5 23'30	8.70195 AU
opposition	12061 Oct 21 06:55	10° 8 39'54	-0°49'12	direct	12068 Mar 16 10:47	22° 5 01'26	
min. Earth dist.	12061 Oct 21 11:38	10° 8 38'59	8.51479 AU	evening set	12068 Jun 26 04:33	29° 5 24'08	
direct	12061 Dec 30 00:13	7° 8 14'56			12068 Jul 01 03:36	0° 8	
evening set	12062 Apr 13 10:43	14° 8 56'57					
	12062 Apr 13 20:45	15° 8		conjunction	12068 Jul 12 23:40	1° 8 26'40	-1°48'45
				minimum elong	12068 Jul 12 23:41	1° 8 26'40	1°49'31
conjunction	12062 Apr 30 14:33	17° 8 04'12	-0°51'05	max. Earth dist.	12068 Jul 13 08:40	1° 8 29'25	10.70812 AU
minimum elong	12062 Apr 30 14:31	17° 8 04'11	0°51'38	morning rise	12068 Jul 29 20:05	3° 8 29'32	
max. Earth dist.	12062 Apr 30 09:39	17° 8 02'40	10.53291 AU	retrograde	12068 Nov 09 22:30	10° 8 57'36	
morning rise	12062 May 17 15:46	19° 8 10'43		opposition	12069 Jan 18 22:22	7° 8 35'53	-2°10'08
retrograde	12062 Aug 26 23:36	26° 8 40'48		min. Earth dist.	12069 Jan 18 13:58	7° 8 37'28	8.71480 AU
opposition	12062 Nov 03 13:14	23° 8 19'35	-1°16'01	direct	12069 Mar 29 05:03	4° 8 15'34	
min. Earth dist.	12062 Nov 03 16:22	23° 8 18'59	8.55166 AU	evening set	12069 Jul 08 12:32	11° 8 36'03	
direct	12063 Jan 12 08:35	19° 8 55'24					
evening set	12063 Apr 26 09:16	27° 8 34'07		conjunction	12069 Jul 25 08:41	13° 8 38'38	-1°41'32
				minimum elong	12069 Jul 25 08:42	13° 8 38'39	1°42'12
conjunction	12063 May 13 10:19	29° 8 40'11	-1°11'20	max. Earth dist.	12069 Jul 25 19:07	13° 8 41'49	10.71680 AU
minimum elong	12063 May 13 10:17	29° 8 40'10	1°12'01		12069 Aug 05 11:52	15° 8	
max. Earth dist.	12063 May 13 07:23	29° 8 39'16	10.56971 AU	morning rise	12069 Aug 11 06:37	15° 8 41'43	
	12063 May 16 02:11	0° 8		retrograde	12069 Nov 22 17:38	23° 8 10'31	
morning rise	12063 May 30 09:25	1° 8 45'40		opposition	12070 Jan 31 19:08	19° 8 48'21	-1°58'18
retrograde	12063 Sep 08 21:20	9° 8 14'41		min. Earth dist.	12070 Jan 31 09:34	19° 8 50'10	8.71874 AU
opposition	12063 Nov 16 18:16	5° 8 53'38	-1°38'57	direct	12070 Apr 10 21:46	16° 8 28'16	
min. Earth dist.	12063 Nov 16 19:24	5° 8 53'25	8.58848 AU	evening set	12070 Jul 20 20:18	23° 8 47'09	
direct	12064 Jan 25 14:43	2° 8 30'15					
evening set	12064 May 08 04:13	10° 8 05'33		conjunction	12070 Aug 06 18:11	25° 8 50'06	-1°29'44
				minimum elong	12070 Aug 06 18:13	25° 8 50'07	1°30'16
conjunction	12064 May 25 02:55	12° 8 10'31	-1°28'04	max. Earth dist.	12070 Aug 07 06:01	25° 8 53'43	10.71622 AU
minimum elong	12064 May 25 02:53	12° 8 10'30	1°28'50	morning rise	12070 Aug 23 18:10	27° 8 53'41	
max. Earth dist.	12064 May 25 02:38	12° 8 10'26	10.60553 AU		12070 Sep 10 23:59	0° 8	
morning rise	12064 Jun 11 00:15	14° 8 15'04		retrograde	12070 Dec 05 13:26	5° 8 23'34	
retrograde	12064 Sep 20 18:32	21° 8 43'20		opposition	12071 Feb 13 14:58	2° 8 00'55	-1°41'09
opposition	12064 Nov 28 21:56	18° 8 22'20	-1°57'01	min. Earth dist.	12071 Feb 13 04:33	2° 8 02'54	8.71324 AU
min. Earth dist.	12064 Nov 28 20:17	18° 8 22'39	8.62341 AU		12071 Mar 14 00:18	30° 8	
direct	12065 Feb 06 17:43	14° 8 59'46		direct	12071 Apr 23 11:42	28° 8 40'55	
evening set	12065 May 20 19:58	22° 8 31'36			12071 Jun 01 23:51	0° 8	
				evening set	12071 Aug 02 05:07	5° 8 59'00	
conjunction	12065 Jun 06 16:50	24° 8 35'38	-1°40'33				
minimum elong	12065 Jun 06 16:48	24° 8 35'37	1°41'23	conjunction	12071 Aug 19 05:07	8° 8 02'32	-1°13'52
max. Earth dist.	12065 Jun 06 19:59	24° 8 36'36	10.63863 AU	minimum elong	12071 Aug 19 05:09	8° 8 02'32	1°14'15
morning rise	12065 Jun 23 12:46	26° 8 39'24		max. Earth dist.	12071 Aug 19 17:09	8° 8 06'12	10.70656 AU
	12065 Jul 23 01:33	0° 8		morning rise	12071 Sep 05 07:40	10° 8 06'50	
retrograde	12065 Oct 03 14:21	4° 8 07'13		retrograde	12071 Dec 18 09:33	17° 8 38'03	
opposition	12065 Dec 12 00:12	0° 8 46'11	-2°09'29	opposition	12072 Feb 26 10:07	14° 8 14'53	-1°19'23
min. Earth dist.	12065 Dec 11 19:50	0° 8 47'01	8.65486 AU	min. Earth dist.	12072 Feb 26 00:02	14° 8 16'49	8.69918 AU
	12065 Dec 22 05:08	30° 8		direct	12072 May 05 01:28	10° 8 54'46	
direct	12066 Feb 19 18:14	27° 8 24'22		evening set	12072 Aug 13 15:38	18° 8 12'49	
	12066 Apr 17 12:01	0° 8					
evening set	12066 Jun 02 08:55	4° 8 52'53		conjunction	12072 Aug 30 18:00	20° 8 17'08	-0°54'37
				minimum elong	12072 Aug 30 18:02	20° 8 17'08	0°54'50
conjunction	12066 Jun 19 04:32	6° 8 56'10	-1°48'18	max. Earth dist.	12072 Aug 31 05:13	20° 8 20'33	10.68903 AU
minimum elong	12066 Jun 19 04:32	6° 8 56'10	1°49'09	morning rise	12072 Sep 16 23:26	22° 8 22'18	
max. Earth dist.	12066 Jun 19 10:41	6° 8 58'04	10.66765 AU	retrograde	12072 Dec 30 07:16	29° 8 55'06	
morning rise	12066 Jul 05 23:47	8° 8 59'22		opposition	12073 Mar 10 05:10	26° 8 31'24	-0°53'56
retrograde	12066 Oct 16 10:39	16° 8 27'02		min. Earth dist.	12073 Mar 09 19:57	26° 8 33'10	8.67792 AU
opposition	12066 Dec 25 01:05	13° 8 05'51	-2°15'55	direct	12073 May 17 15:04	23° 8 10'58	
min. Earth dist.	12066 Dec 24 18:43	13° 8 07'04	8.68150 AU		12073 Aug 22 00:09	0° 8	
direct	12067 Mar 04 15:52	9° 8 44'41		evening set	12073 Aug 26 04:21	0° 8 29'43	
evening set	12067 Jun 14 19:32	17° 8 10'06					
				conjunction	12073 Sep 12 09:21	2° 8 34'56	-0°32'48
conjunction	12067 Jul 01 14:32	19° 8 12'52	-1°51'03	minimum elong	12073 Sep 12 09:22	2° 8 34'56	0°32'50
minimum elong	12067 Jul 01 14:32	19° 8 12'52	1°51'53	max. Earth dist.	12073 Sep 12 19:45	2° 8 38'06	10.66491 AU

morning rise	12073 Sep 29 17:40	4° <u>♁</u> 41'05		evening set	12079 Nov 11 16:50	16° <u>♂</u> 03'43	
retrograde	12074 Jan 12 04:37	12° <u>♁</u> 15'39					
opposition	12074 Mar 23 00:11	8° <u>♁</u> 51'23	-0°25'52	conjunction	12079 Nov 29 09:15	18° <u>♂</u> 14'28	1°34'16
min. Earth dist.	12074 Mar 22 15:51	8° <u>♁</u> 53'00	8.65075 AU	minimum elong	12079 Nov 29 09:13	18° <u>♂</u> 14'27	1°35'05
direct	12074 May 30 05:59	5° <u>♁</u> 30'30		max. Earth dist.	12079 Nov 29 07:47	18° <u>♂</u> 14'00	10.45695 AU
evening set	12074 Sep 07 20:23	12° <u>♁</u> 50'47		morning rise	12079 Dec 17 02:55	20° <u>♂</u> 25'37	
				retrograde	12080 Mar 30 06:27	28° <u>♂</u> 10'46	
conjunction	12074 Sep 25 04:06	14° <u>♁</u> 56'58	-0°09'22	opposition	12080 Jun 06 11:30	24° <u>♂</u> 45'02	2°04'06
minimum elong	12074 Sep 25 04:06	14° <u>♁</u> 56'58	0°09'14	min. Earth dist.	12080 Jun 06 13:14	24° <u>♂</u> 44'41	8.44233 AU
behind sun begin	12074 Sep 24 22:04	14° <u>♁</u> 55'09		direct	12080 Aug 13 08:37	21° <u>♂</u> 19'49	
behind sun end	12074 Sep 25 10:07	14° <u>♁</u> 58'48		evening set	12080 Nov 24 08:34	29° <u>♂</u> 01'12	
max. Earth dist.	12074 Sep 25 14:04	15° <u>♁</u> 00'00	10.63537 AU		12080 Dec 02 08:07	0° <u>♂</u>	
morning rise	12074 Oct 12 14:59	17° <u>♁</u> 04'07					
retrograde	12075 Jan 25 03:56	24° <u>♁</u> 40'36		conjunction	12080 Dec 12 01:45	1° <u>♂</u> 12'34	1°44'48
asc. node	12075 Feb 19 05:17	24° <u>♁</u> 09'21		minimum elong	12080 Dec 12 01:44	1° <u>♂</u> 12'34	1°45'39
opposition	12075 Apr 04 19:17	21° <u>♁</u> 15'48	0°03'35	max. Earth dist.	12080 Dec 11 22:11	1° <u>♂</u> 11'28	10.42689 AU
min. Earth dist.	12075 Apr 04 11:31	21° <u>♁</u> 17'19	8.61893 AU	morning rise	12080 Dec 29 19:20	3° <u>♂</u> 24'09	
direct	12075 Jun 11 22:17	17° <u>♁</u> 54'21		retrograde	12081 Apr 12 15:42	11° <u>♂</u> 10'04	
evening set	12075 Sep 20 16:08	25° <u>♁</u> 16'55		opposition	12081 Jun 19 14:35	7° <u>♂</u> 44'33	2°13'59
				min. Earth dist.	12081 Jun 19 17:54	7° <u>♂</u> 43'53	8.41523 AU
conjunction	12075 Oct 08 02:20	27° <u>♁</u> 24'08	0°14'44	direct	12081 Aug 26 14:12	4° <u>♂</u> 18'41	
minimum elong	12075 Oct 08 02:19	27° <u>♁</u> 24'08	0°15'02	evening set	12081 Dec 08 03:04	12° <u>♂</u> 03'52	
behind sun begin	12075 Oct 07 23:51	27° <u>♁</u> 23'23					
behind sun end	12075 Oct 08 04:48	27° <u>♁</u> 24'53		conjunction	12081 Dec 25 20:39	14° <u>♂</u> 15'46	1°50'01
max. Earth dist.	12075 Oct 08 11:20	27° <u>♁</u> 26'53	10.60167 AU	minimum elong	12081 Dec 25 20:39	14° <u>♂</u> 15'46	1°50'52
morning rise	12075 Oct 25 15:26	29° <u>♁</u> 32'15		max. Earth dist.	12081 Dec 25 14:42	14° <u>♂</u> 13'54	10.40274 AU
	12075 Oct 29 12:37	0° <u>♂</u>		morning rise	12082 Jan 12 13:53	16° <u>♂</u> 27'38	
retrograde	12076 Feb 07 07:03	7° <u>♂</u> 10'43		retrograde	12082 Apr 26 02:38	24° <u>♂</u> 13'43	
opposition	12076 Apr 16 15:11	3° <u>♂</u> 45'30	0°33'05	opposition	12082 Jul 02 19:29	20° <u>♂</u> 48'34	2°17'01
min. Earth dist.	12076 Apr 16 08:31	3° <u>♂</u> 46'48	8.58377 AU	min. Earth dist.	12082 Jul 03 00:50	20° <u>♂</u> 47'30	8.39462 AU
direct	12076 Jun 23 14:09	0° <u>♂</u> 23'23		direct	12082 Sep 08 21:39	17° <u>♂</u> 22'11	
evening set	12076 Oct 02 15:55	7° <u>♂</u> 48'54		evening set	12082 Dec 21 23:27	25° <u>♂</u> 10'36	
conjunction	12076 Oct 20 04:11	9° <u>♂</u> 57'06	0°38'13	conjunction	12083 Jan 08 17:01	27° <u>♂</u> 22'52	1°49'33
minimum elong	12076 Oct 20 04:09	9° <u>♂</u> 57'06	0°38'41	minimum elong	12083 Jan 08 17:01	27° <u>♂</u> 22'52	1°50'21
max. Earth dist.	12076 Oct 20 11:02	9° <u>♂</u> 59'12	10.56531 AU	max. Earth dist.	12083 Jan 08 08:18	27° <u>♂</u> 20'08	10.38584 AU
morning rise	12076 Nov 06 19:09	12° <u>♂</u> 06'09		morning rise	12083 Jan 26 09:40	29° <u>♂</u> 34'53	
	12076 Dec 02 03:08	15° <u>♂</u>			12083 Jan 29 20:02	0° <u>♂</u>	
retrograde	12077 Feb 19 10:53	19° <u>♂</u> 46'36		retrograde	12083 May 09 14:01	7° <u>♂</u> 20'30	
opposition	12077 Apr 29 12:12	16° <u>♂</u> 21'04	1°01'14	opposition	12083 Jul 16 01:57	3° <u>♂</u> 55'52	2°12'55
min. Earth dist.	12077 Apr 29 07:30	16° <u>♂</u> 21'59	8.54686 AU	min. Earth dist.	12083 Jul 16 09:22	3° <u>♂</u> 54'22	8.38170 AU
	12077 May 17 04:02	15° <u>♂</u>		direct	12083 Sep 22 07:32	0° <u>♂</u> 29'07	
direct	12077 Jul 06 08:09	12° <u>♂</u> 58'11		evening set	12084 Jan 04 20:36	8° <u>♂</u> 20'01	
	12077 Aug 24 07:07	15° <u>♂</u>					
evening set	12077 Oct 15 20:08	20° <u>♂</u> 27'18		conjunction	12084 Jan 22 13:54	10° <u>♂</u> 32'27	1°43'22
				minimum elong	12084 Jan 22 13:56	10° <u>♂</u> 32'27	1°44'04
conjunction	12077 Nov 02 10:05	22° <u>♂</u> 36'25	1°00'01	max. Earth dist.	12084 Jan 22 03:04	10° <u>♂</u> 29'03	10.37724 AU
minimum elong	12077 Nov 02 10:03	22° <u>♂</u> 36'24	1°00'38	morning rise	12084 Feb 09 05:48	12° <u>♂</u> 44'28	
max. Earth dist.	12077 Nov 02 13:48	22° <u>♂</u> 37'33	10.52795 AU		12084 Feb 28 06:26	15° <u>♂</u>	
morning rise	12077 Nov 20 02:31	24° <u>♂</u> 46'17		retrograde	12084 May 21 23:36	20° <u>♂</u> 29'01	
	12078 Jan 08 11:53	0° <u>♂</u>		opposition	12084 Jul 28 09:44	17° <u>♂</u> 04'57	2°01'52
retrograde	12078 Mar 04 15:09	2° <u>♂</u> 28'35		min. Earth dist.	12084 Jul 28 18:30	17° <u>♂</u> 03'12	8.37730 AU
	12078 Apr 30 05:35	30° <u>♂</u>			12084 Aug 25 10:35	15° <u>♂</u>	
opposition	12078 May 12 10:23	29° <u>♂</u> 02'51	1°26'39	direct	12084 Oct 04 21:19	13° <u>♂</u> 38'00	
min. Earth dist.	12078 May 12 08:21	29° <u>♂</u> 03'15	8.50988 AU		12084 Nov 13 20:53	15° <u>♂</u>	
direct	12078 Jul 19 06:05	25° <u>♂</u> 39'09		evening set	12085 Jan 17 17:30	21° <u>♂</u> 30'27	
	12078 Oct 01 02:52	0° <u>♂</u>					
evening set	12078 Oct 29 04:34	3° <u>♂</u> 12'17		conjunction	12085 Feb 04 10:19	23° <u>♂</u> 42'51	1°31'46
				minimum elong	12085 Feb 04 10:21	23° <u>♂</u> 42'52	1°32'20
conjunction	12078 Nov 15 19:55	5° <u>♂</u> 22'15	1°19'03	max. Earth dist.	12085 Feb 03 22:23	23° <u>♂</u> 39'06	10.37741 AU
minimum elong	12078 Nov 15 19:53	5° <u>♂</u> 22'15	1°19'47	morning rise	12085 Feb 22 01:09	25° <u>♂</u> 54'41	
max. Earth dist.	12078 Nov 15 20:41	5° <u>♂</u> 22'29	10.49126 AU		12085 Mar 30 03:15	0° <u>♂</u>	
morning rise	12078 Dec 03 13:17	7° <u>♂</u> 32'50		retrograde	12085 Jun 04 08:44	3° <u>♂</u> 37'40	
retrograde	12079 Mar 17 21:47	15° <u>♂</u> 16'44		opposition	12085 Aug 10 18:30	0° <u>♂</u> 14'09	1°44'25
opposition	12079 May 25 10:07	11° <u>♂</u> 50'56	1°48'00	min. Earth dist.	12085 Aug 11 03:38	0° <u>♂</u> 12'20	8.38153 AU
min. Earth dist.	12079 May 25 10:15	11° <u>♂</u> 50'55	8.47446 AU		12085 Aug 13 17:37	30° <u>♂</u>	
direct	12079 Aug 01 06:06	8° <u>♂</u> 26'27		direct	12085 Oct 18 12:02	26° <u>♂</u> 47'13	

	12085 Dec 20 11:41	0°♄		direct	12092 Jan 06 18:28	14°♄30'25	
evening set	12086 Jan 31 13:23	4°♄40'11			12092 Jan 30 20:42	15°♄	
				evening set	12092 Apr 19 23:33	22°♄11'22	
conjunction	12086 Feb 18 05:20	6°♄52'20	1°15'23				
minimum elong	12086 Feb 18 05:23	6°♄52'21	1°15'47	conjunction	12092 May 07 02:03	24°♄18'08	-1°02'36
max. Earth dist.	12086 Feb 17 17:28	6°♄48'36	10.38615 AU	minimum elong	12092 May 07 02:01	24°♄18'07	1°03'13
morning rise	12086 Mar 07 18:41	9°♄03'44		max. Earth dist.	12092 May 06 21:20	24°♄16'40	10.54776 AU
retrograde	12086 Jun 17 18:00	16°♄44'44		morning rise	12092 May 24 02:07	26°♄24'13	
opposition	12086 Aug 24 03:48	13°♄21'47	1°21'33		12092 Jun 24 18:55	0°♄	
min. Earth dist.	12086 Aug 24 12:39	13°♄20'01	8.39408 AU	retrograde	12092 Sep 02 14:00	3°♄54'31	
direct	12086 Nov 01 02:24	9°♄55'00		opposition	12092 Nov 10 05:34	0°♄33'34	-1°29'12
evening set	12087 Feb 14 07:13	17°♄47'29		min. Earth dist.	12092 Nov 10 07:57	0°♄33'06	8.56381 AU
					12092 Nov 17 12:59	30°♄	
conjunction	12087 Mar 03 21:50	19°♄59'09	0°55'07	direct	12093 Jan 19 01:12	27°♄09'57	
minimum elong	12087 Mar 03 21:52	19°♄59'10	0°55'20		12093 Mar 19 13:31	0°♄	
max. Earth dist.	12087 Mar 03 10:35	19°♄55'37	10.40290 AU	evening set	12093 May 02 21:10	4°♄47'43	
morning rise	12087 Mar 21 09:22	22°♄09'57					
retrograde	12087 Jul 01 01:58	29°♄48'41		conjunction	12093 May 19 21:08	6°♄53'25	-1°21'03
opposition	12087 Sep 06 13:26	26°♄26'15	0°54'32	minimum elong	12093 May 19 21:06	6°♄53'24	1°21'47
min. Earth dist.	12087 Sep 06 22:07	26°♄24'32	8.41417 AU	max. Earth dist.	12093 May 19 19:10	6°♄52'48	10.57856 AU
direct	12087 Nov 14 16:39	22°♄59'45		morning rise	12093 Jun 05 19:09	8°♄58'35	
	12088 Feb 20 22:27	0°♄		retrograde	12093 Sep 15 12:44	16°♄28'08	
evening set	12088 Feb 27 22:07	0°♄50'52		opposition	12093 Nov 23 10:59	13°♄07'08	-1°49'37
				min. Earth dist.	12093 Nov 23 11:33	13°♄07'01	8.59413 AU
conjunction	12088 Mar 16 10:53	3°♄01'48	0°32'06	direct	12094 Feb 01 05:26	9°♄44'08	
minimum elong	12088 Mar 16 10:55	3°♄01'48	0°32'08	evening set	12094 May 15 15:18	17°♄18'36	
max. Earth dist.	12088 Mar 16 00:02	2°♄58'24	10.42642 AU				
morning rise	12088 Apr 02 20:24	5°♄11'50		conjunction	12094 Jun 01 13:01	19°♄23'18	-1°35'33
retrograde	12088 Jul 13 07:04	12°♄48'14		minimum elong	12094 Jun 01 12:59	19°♄23'18	1°36'21
opposition	12088 Sep 18 22:48	9°♄26'16	0°24'51	max. Earth dist.	12094 Jun 01 13:09	19°♄23'21	10.60755 AU
min. Earth dist.	12088 Sep 19 07:29	9°♄24'34	8.44014 AU	morning rise	12094 Jun 18 09:36	21°♄27'41	
direct	12088 Nov 27 07:22	6°♄00'09		retrograde	12094 Sep 28 08:47	28°♄56'48	
evening set	12089 Mar 12 09:55	13°♄49'14		opposition	12094 Dec 06 15:02	25°♄35'36	-2°04'43
				min. Earth dist.	12094 Dec 06 13:41	25°♄35'52	8.62205 AU
conjunction	12089 Mar 29 20:20	15°♄59'15	0°07'36	direct	12095 Feb 14 08:33	22°♄13'09	
minimum elong	12089 Mar 29 20:21	15°♄59'15	0°07'27	evening set	12095 May 28 06:23	29°♄44'22	
behind sun begin	12089 Mar 29 13:49	15°♄57'14			12095 May 30 10:02	0°♄	
behind sun end	12089 Mar 30 02:53	16°♄01'16					
max. Earth dist.	12089 Mar 29 09:37	15°♄55'54	10.45457 AU	conjunction	12095 Jun 14 02:30	1°♄48'15	-1°45'28
morning rise	12089 Apr 16 03:39	18°♄08'21		minimum elong	12095 Jun 14 02:29	1°♄48'15	1°46'19
desc. node	12089 Jul 23 08:23	25°♄42'06		max. Earth dist.	12095 Jun 14 05:07	1°♄49'04	10.63357 AU
retrograde	12089 Jul 26 10:40	25°♄42'36		morning rise	12095 Jun 30 22:17	3°♄52'01	
opposition	12089 Oct 02 07:33	22°♄21'03	-0°05'53	retrograde	12095 Oct 11 05:05	11°♄20'56	
min. Earth dist.	12089 Oct 02 16:00	22°♄19'24	8.46964 AU	opposition	12095 Dec 19 17:19	7°♄59'26	-2°13'54
direct	12089 Dec 10 20:25	18°♄55'27		min. Earth dist.	12095 Dec 19 13:37	8°♄00'09	8.64632 AU
evening set	12090 Mar 25 18:07	26°♄42'06		direct	12096 Feb 27 09:50	4°♄37'28	
				evening set	12096 Jun 08 18:49	12°♄05'34	
conjunction	12090 Apr 12 01:55	28°♄51'04	-0°17'15				
minimum elong	12090 Apr 12 01:54	28°♄51'04	0°17'35	conjunction	12096 Jun 25 14:09	14°♄08'54	-1°50'28
max. Earth dist.	12090 Apr 11 15:54	28°♄47'57	10.48498 AU	minimum elong	12096 Jun 25 14:09	14°♄08'54	1°51'19
	12090 Apr 21 06:58	0°♄		max. Earth dist.	12096 Jun 25 19:49	14°♄10'39	10.65543 AU
morning rise	12090 Apr 29 06:51	0°♄59'11		morning rise	12096 Jul 12 09:41	16°♄12'16	
retrograde	12090 Aug 08 12:36	8°♄31'44		retrograde	12096 Oct 23 00:51	23°♄41'15	
opposition	12090 Oct 15 15:46	5°♄10'30	-0°36'06	opposition	12096 Dec 31 18:11	20°♄19'23	-2°16'51
min. Earth dist.	12090 Oct 15 22:44	5°♄09'09	8.50066 AU	min. Earth dist.	12096 Dec 31 11:44	20°♄20'36	8.66576 AU
direct	12090 Dec 24 08:02	1°♄45'33		direct	12097 Mar 11 07:07	16°♄57'52	
evening set	12091 Apr 07 22:31	9°♄29'28		evening set	12097 Jun 21 05:09	24°♄23'07	
conjunction	12091 Apr 25 03:39	11°♄37'20	-0°40'59	conjunction	12097 Jul 08 00:27	26°♄26'07	-1°50'21
minimum elong	12091 Apr 25 03:37	11°♄37'20	0°41'29	minimum elong	12097 Jul 08 00:27	26°♄26'07	1°51'10
max. Earth dist.	12091 Apr 24 19:58	11°♄34'57	10.51627 AU	max. Earth dist.	12097 Jul 08 09:13	26°♄28'49	10.67204 AU
morning rise	12091 May 12 06:07	13°♄44'27		morning rise	12097 Jul 24 20:24	28°♄29'21	
	12091 May 22 17:54	15°♄			12097 Aug 06 16:47	0°♄	
retrograde	12091 Aug 21 13:00	21°♄15'44		retrograde	12097 Nov 04 20:12	5°♄58'40	
opposition	12091 Oct 28 23:14	17°♄54'42	-1°04'19	opposition	12098 Jan 13 17:39	2°♄36'23	-2°13'32
min. Earth dist.	12091 Oct 29 03:54	17°♄53'48	8.53230 AU	min. Earth dist.	12098 Jan 13 09:09	2°♄38'01	8.67945 AU
	12091 Dec 13 09:14	15°♄			12098 Feb 21 23:59	30°♄	

direct	12098 Mar 24 02:27	29°☾15'16	
	12098 Apr 22 17:23	0°♈	
evening set	12098 Jul 03 14:19	6°♈38'04	
conjunction	12098 Jul 20 10:12	8°♈41'01	-1°45'13
minimum elong	12098 Jul 20 10:13	8°♈41'01	1°45'56
max. Earth dist.	12098 Jul 20 20:37	8°♈44'13	10.68272 AU
morning rise	12098 Aug 06 07:27	10°♈44'22	
	12098 Sep 14 10:06	15°♈	
retrograde	12098 Nov 17 16:29	18°♈14'15	
	12099 Jan 24 19:32	15°♋♈	
opposition	12099 Jan 26 15:47	14°♈51'33	-2°04'08
min. Earth dist.	12099 Jan 26 06:21	14°♈53'21	8.68680 AU
direct	12099 Apr 05 19:28	11°♈30'41	
	12099 Jun 10 22:49	15°♈	
evening set	12099 Jul 15 22:57	18°♈51'35	
conjunction	12099 Aug 01 20:06	20°♈54'44	-1°35'17
minimum elong	12099 Aug 01 20:08	20°♈54'45	1°35'53
max. Earth dist.	12099 Aug 02 07:16	20°♈58'09	10.68690 AU
morning rise	12099 Aug 18 19:24	22°♈58'29	
	12099 Nov 06 08:40	0°♐	
retrograde	12099 Nov 30 11:27	0°♐29'08	
	12099 Dec 24 19:02	30°♋♐	
opposition	12100 Feb 08 12:51	27°♈06'01	-1°49'06
min. Earth dist.	12100 Feb 08 02:56	27°♈07'55	8.68735 AU
direct	12100 Apr 18 10:59	23°♈45'18	
	12100 Jul 19 03:36	0°♐	
evening set	12100 Jul 28 07:53	1°♐04'55	
conjunction	12100 Aug 14 06:57	3°♐08'31	-1°21'02
minimum elong	12100 Aug 14 06:59	3°♐08'31	1°21'29
max. Earth dist.	12100 Aug 14 18:55	3°♐12'10	10.68427 AU
morning rise	12100 Aug 31 08:38	5°♐12'50	
retrograde	12100 Dec 13 06:32	12°♐44'34	
opposition	12101 Feb 21 09:01	9°♐20'59	-1°29'07
min. Earth dist.	12101 Feb 20 22:25	9°♐23'01	8.68106 AU
direct	12101 May 01 03:09	6°♐00'20	
evening set	12101 Aug 09 18:01	13°♐19'21	
conjunction	12101 Aug 26 19:31	15°♐23'36	-1°03'04
minimum elong	12101 Aug 26 19:33	15°♐23'36	1°03'22
max. Earth dist.	12101 Aug 27 08:45	15°♐27'38	10.67497 AU
morning rise	12101 Sep 12 23:48	17°♐28'39	
retrograde	12101 Dec 26 04:38	25°♐01'41	