

opposition	8600 Feb 27 21:17	11° <u>♏</u> 04'24	-0°24'34	max. Earth dist.	8605 Nov 10 22:56	24° <u>♏</u> 16'08	10.26281 AU
min. Earth dist.	8600 Feb 27 18:08	11° <u>♏</u> 05'01	8.42541 AU	morning rise	8605 Nov 28 22:33	26° <u>♏</u> 32'08	
direct	8600 May 06 08:07	7° <u>♏</u> 40'50			8605 Dec 28 13:21	0° <u>♏</u>	
evening set	8600 Aug 15 19:20	15° <u>♏</u> 17'27		retrograde	8606 Mar 12 07:52	4° <u>♏</u> 26'04	
				opposition	8606 May 18 12:51	1° <u>♏</u> 00'08	2°19'31
conjunction	8600 Sep 02 11:47	17° <u>♏</u> 29'16	-0°06'35	min. Earth dist.	8606 May 18 15:45	0° <u>♏</u> 59'33	8.26933 AU
minimum elong	8600 Sep 02 11:47	17° <u>♏</u> 29'16	0°06'39		8606 May 31 02:28	30° <u>♏</u>	
behind sun begin	8600 Sep 02 05:01	17° <u>♏</u> 27'10		direct	8606 Jul 25 12:58	27° <u>♏</u> 32'12	
behind sun end	8600 Sep 02 18:33	17° <u>♏</u> 31'22			8606 Sep 17 14:36	0° <u>♏</u>	
max. Earth dist.	8600 Sep 02 15:25	17° <u>♏</u> 30'22	10.39764 AU	evening set	8606 Nov 07 13:52	5° <u>♏</u> 31'45	
morning rise	8600 Sep 20 07:09	19° <u>♏</u> 42'01					
asc. node	8600 Dec 02 12:09	26° <u>♏</u> 42'00		conjunction	8606 Nov 25 09:17	7° <u>♏</u> 46'15	1°56'16
retrograde	8601 Jan 03 14:52	27° <u>♏</u> 35'12		minimum elong	8606 Nov 25 09:15	7° <u>♏</u> 46'14	1°56'28
opposition	8601 Mar 13 03:35	24° <u>♏</u> 08'06	0°09'02	max. Earth dist.	8606 Nov 25 04:38	7° <u>♏</u> 44'46	10.27678 AU
min. Earth dist.	8601 Mar 13 01:05	24° <u>♏</u> 08'36	8.37143 AU	morning rise	8606 Dec 13 02:35	10° <u>♏</u> 00'11	
direct	8601 May 19 11:30	20° <u>♏</u> 43'33		retrograde	8607 Mar 25 23:54	17° <u>♏</u> 51'12	
evening set	8601 Aug 29 13:01	28° <u>♏</u> 25'15		opposition	8607 Jun 01 02:11	14° <u>♏</u> 26'06	2°27'14
	8601 Sep 11 05:31	0° <u>♏</u>		min. Earth dist.	8607 Jun 01 05:47	14° <u>♏</u> 25'22	8.29053 AU
				direct	8607 Aug 08 08:16	10° <u>♏</u> 58'06	
conjunction	8601 Sep 16 08:01	0° <u>♏</u> 38'28	0°20'47	evening set	8607 Nov 21 19:20	18° <u>♏</u> 57'46	
minimum elong	8601 Sep 16 08:00	0° <u>♏</u> 38'27	0°20'46				
max. Earth dist.	8601 Sep 16 09:55	0° <u>♏</u> 39'03	10.34753 AU	conjunction	8607 Dec 09 12:59	21° <u>♏</u> 11'29	1°59'19
morning rise	8601 Oct 04 05:20	2° <u>♏</u> 52'26		minimum elong	8607 Dec 09 12:59	21° <u>♏</u> 11'29	1°59'31
retrograde	8602 Jan 17 08:14	10° <u>♏</u> 47'41		max. Earth dist.	8607 Dec 09 07:33	21° <u>♏</u> 09'46	10.30471 AU
opposition	8602 Mar 26 12:10	7° <u>♏</u> 20'23	0°42'33	morning rise	8607 Dec 27 03:51	23° <u>♏</u> 24'24	
min. Earth dist.	8602 Mar 26 11:06	7° <u>♏</u> 20'36	8.32600 AU		8608 Mar 01 22:34	0° <u>♏</u>	
direct	8602 Jun 01 19:31	3° <u>♏</u> 54'52		retrograde	8608 Apr 07 13:04	1° <u>♏</u> 11'37	
evening set	8602 Sep 12 12:05	11° <u>♏</u> 41'34			8608 May 14 13:55	30° <u>♏</u>	
				opposition	8608 Jun 13 14:52	27° <u>♏</u> 47'27	2°26'55
conjunction	8602 Sep 30 08:43	13° <u>♏</u> 55'49	0°47'13	min. Earth dist.	8608 Jun 13 19:24	27° <u>♏</u> 46'32	8.32482 AU
minimum elong	8602 Sep 30 08:41	13° <u>♏</u> 55'49	0°47'15	direct	8608 Aug 21 04:41	24° <u>♏</u> 19'38	
max. Earth dist.	8602 Sep 30 08:30	13° <u>♏</u> 55'45	10.30707 AU		8608 Nov 15 14:29	0° <u>♏</u>	
morning rise	8602 Oct 18 07:02	16° <u>♏</u> 10'37		evening set	8608 Dec 04 21:13	2° <u>♏</u> 17'59	
retrograde	8603 Jan 31 02:14	24° <u>♏</u> 07'05					
opposition	8603 Apr 08 22:39	20° <u>♏</u> 39'49	1°14'07	conjunction	8608 Dec 22 12:45	4° <u>♏</u> 30'38	1°55'55
min. Earth dist.	8603 Apr 08 23:12	20° <u>♏</u> 39'42	8.29155 AU	minimum elong	8608 Dec 22 12:46	4° <u>♏</u> 30'39	1°56'08
direct	8603 Jun 15 07:30	17° <u>♏</u> 13'25		max. Earth dist.	8608 Dec 22 06:24	4° <u>♏</u> 28'38	10.34498 AU
evening set	8603 Sep 26 15:38	25° <u>♏</u> 04'42		morning rise	8609 Jan 09 01:08	6° <u>♏</u> 42'21	
				retrograde	8609 Apr 20 21:18	14° <u>♏</u> 25'07	
conjunction	8603 Oct 14 13:05	27° <u>♏</u> 19'37	1°11'17	opposition	8609 Jun 27 02:14	11° <u>♏</u> 01'56	2°18'46
minimum elong	8603 Oct 14 13:03	27° <u>♏</u> 19'37	1°11'22	min. Earth dist.	8609 Jun 27 07:27	11° <u>♏</u> 00'54	8.37031 AU
max. Earth dist.	8603 Oct 14 10:59	27° <u>♏</u> 18'58	10.27853 AU	direct	8609 Sep 04 01:05	7° <u>♏</u> 34'31	
morning rise	8603 Nov 01 11:25	29° <u>♏</u> 34'49		evening set	8609 Dec 18 18:06	15° <u>♏</u> 30'12	
	8603 Nov 04 21:07	0° <u>♏</u>					
retrograde	8604 Feb 13 21:00	7° <u>♏</u> 31'29		conjunction	8610 Jan 05 07:24	17° <u>♏</u> 41'36	1°46'26
opposition	8604 Apr 21 10:30	4° <u>♏</u> 04'27	1°41'51	minimum elong	8610 Jan 05 07:26	17° <u>♏</u> 41'37	1°46'39
min. Earth dist.	8604 Apr 21 12:25	4° <u>♏</u> 04'04	8.26997 AU	max. Earth dist.	8610 Jan 05 00:35	17° <u>♏</u> 39'28	10.39545 AU
direct	8604 Jun 27 22:45	0° <u>♏</u> 37'19		morning rise	8610 Jan 22 17:22	19° <u>♏</u> 51'59	
evening set	8604 Oct 09 22:17	8° <u>♏</u> 32'30		retrograde	8610 May 04 01:54	27° <u>♏</u> 29'57	
				opposition	8610 Jul 10 11:47	24° <u>♏</u> 07'41	2°03'28
conjunction	8604 Oct 27 19:46	10° <u>♏</u> 47'40	1°31'34	min. Earth dist.	8610 Jul 10 16:43	24° <u>♏</u> 06'43	8.42459 AU
minimum elong	8604 Oct 27 19:43	10° <u>♏</u> 47'39	1°31'42	direct	8610 Sep 17 19:29	20° <u>♏</u> 40'51	
max. Earth dist.	8604 Oct 27 16:17	10° <u>♏</u> 46'33	10.26349 AU	evening set	8611 Jan 01 09:01	28° <u>♏</u> 32'41	
morning rise	8604 Nov 14 17:07	13° <u>♏</u> 02'49			8611 Jan 13 03:22	0° <u>♏</u>	
	8604 Nov 30 21:02	15° <u>♏</u>					
retrograde	8605 Feb 26 14:57	20° <u>♏</u> 58'38		conjunction	8611 Jan 18 20:08	0° <u>♏</u> 42'44	1°31'35
opposition	8605 May 04 23:27	17° <u>♏</u> 32'03	2°04'06	minimum elong	8611 Jan 18 20:10	0° <u>♏</u> 42'45	1°31'46
min. Earth dist.	8605 May 05 02:00	17° <u>♏</u> 31'32	8.26240 AU	max. Earth dist.	8611 Jan 18 13:57	0° <u>♏</u> 40'48	10.45336 AU
	8605 Jun 09 03:54	15° <u>♏</u>		morning rise	8611 Feb 05 03:43	2° <u>♏</u> 51'43	
direct	8605 Jul 11 17:09	14° <u>♏</u> 04'24		retrograde	8611 May 17 04:08	10° <u>♏</u> 24'48	
	8605 Aug 13 01:20	15° <u>♏</u>		opposition	8611 Jul 23 19:03	7° <u>♏</u> 03'22	1°42'05
evening set	8605 Oct 24 06:17	22° <u>♏</u> 02'25		min. Earth dist.	8611 Jul 23 23:11	7° <u>♏</u> 02'34	8.48462 AU
				direct	8611 Oct 01 09:43	3° <u>♏</u> 37'16	
conjunction	8605 Nov 11 03:00	24° <u>♏</u> 17'25	1°46'52	evening set	8612 Jan 14 17:52	11° <u>♏</u> 24'24	
minimum elong	8605 Nov 11 02:58	24° <u>♏</u> 17'24	1°47'01				

conjunction	8612 Feb 01 02:44	13° \approx 33'03	1°12'18	direct	8617 Dec 16 19:52	17° Υ 52'09	
minimum elong	8612 Feb 01 02:46	13° \approx 33'03	1°12'28	evening set	8618 Mar 29 06:24	25° Υ 12'28	
max. Earth dist.	8612 Jan 31 21:40	13° \approx 31'28	10.51540 AU				
	8612 Feb 12 19:18	15° \approx		conjunction	8618 Apr 15 01:34	27° Υ 13'53	-1°11'25
morning rise	8612 Feb 18 07:53	15° \approx 40'35		minimum elong	8618 Apr 15 01:32	27° Υ 13'52	1°11'30
retrograde	8612 May 29 01:46	23° \approx 09'00		max. Earth dist.	8618 Apr 15 02:05	27° Υ 14'02	10.79100 AU
opposition	8612 Aug 04 23:46	19° \approx 48'17	1°15'58	morning rise	8618 May 01 19:50	29° Υ 15'05	
min. Earth dist.	8612 Aug 05 03:11	19° \approx 47'37	8.54708 AU		8618 May 08 04:43	0° \mathcal{B}	
direct	8612 Oct 13 20:57	16° \approx 22'59		retrograde	8618 Aug 11 10:19	6° \mathcal{B} 32'30	
evening set	8613 Jan 26 20:29	24° \approx 04'59		opposition	8618 Oct 20 06:46	3° \mathcal{B} 12'30	-1°39'32
				min. Earth dist.	8618 Oct 20 05:45	3° \mathcal{B} 12'41	8.79887 AU
conjunction	8613 Feb 13 02:57	26° \approx 12'09	0°49'43		8618 Dec 16 13:18	30° $\mathcal{R}\Upsilon$	
minimum elong	8613 Feb 13 02:58	26° \approx 12'10	0°49'51	direct	8618 Dec 29 09:04	29° Υ 51'47	
max. Earth dist.	8613 Feb 12 22:54	26° \approx 10'54	10.57804 AU		8619 Jan 11 04:51	0° \mathcal{B}	
morning rise	8613 Mar 02 05:46	28° \approx 18'17		evening set	8619 Apr 10 08:48	7° \mathcal{B} 09'37	
	8613 Mar 16 14:38	0° \mathcal{H}					
retrograde	8613 Jun 10 20:10	5° \mathcal{H} 42'35		conjunction	8619 Apr 27 02:28	9° \mathcal{B} 10'29	-1°29'53
opposition	8613 Aug 18 02:04	2° \mathcal{H} 22'25	0°46'33	minimum elong	8619 Apr 27 02:26	9° \mathcal{B} 10'28	1°30'00
min. Earth dist.	8613 Aug 18 05:24	2° \mathcal{H} 21'46	8.60839 AU	max. Earth dist.	8619 Apr 27 03:37	9° \mathcal{B} 10'49	10.80248 AU
	8613 Sep 21 06:35	30° $\mathcal{R}\approx$		morning rise	8619 May 13 20:12	11° \mathcal{B} 11'21	
direct	8613 Oct 27 04:20	28° \approx 57'59			8619 Jun 17 18:04	15° \mathcal{B}	
	8613 Dec 01 14:11	0° \mathcal{H}		retrograde	8619 Aug 23 21:16	18° \mathcal{B} 30'03	
evening set	8614 Feb 08 16:59	6° \mathcal{H} 34'43		opposition	8619 Nov 01 23:30	15° \mathcal{B} 09'32	-1°59'55
				min. Earth dist.	8619 Nov 01 21:51	15° \mathcal{B} 09'51	8.80476 AU
conjunction	8614 Feb 25 20:54	8° \mathcal{H} 40'27	0°25'04		8619 Nov 04 02:10	15° $\mathcal{R}\mathcal{B}$	
minimum elong	8614 Feb 25 20:55	8° \mathcal{H} 40'27	0°25'09	direct	8620 Jan 10 22:22	11° \mathcal{B} 49'11	
max. Earth dist.	8614 Feb 25 16:54	8° \mathcal{H} 39'14	10.63749 AU		8620 Mar 14 12:20	15° \mathcal{B}	
morning rise	8614 Mar 14 21:39	10° \mathcal{H} 45'16		evening set	8620 Apr 21 10:00	19° \mathcal{B} 05'16	
retrograde	8614 Jun 23 12:12	18° \mathcal{H} 06'14					
opposition	8614 Aug 31 01:50	14° \mathcal{H} 46'29	0°15'22	conjunction	8620 May 08 02:51	21° \mathcal{B} 05'52	-1°44'26
min. Earth dist.	8614 Aug 31 05:11	14° \mathcal{H} 45'50	8.66478 AU	minimum elong	8620 May 08 02:49	21° \mathcal{B} 05'51	1°44'35
direct	8614 Nov 09 06:58	11° \mathcal{H} 22'54		max. Earth dist.	8620 May 08 05:12	21° \mathcal{B} 06'35	10.80212 AU
evening set	8615 Feb 21 08:18	18° \mathcal{H} 54'44		morning rise	8620 May 24 20:32	23° \mathcal{B} 06'42	
desc. node	8615 Mar 02 18:32	20° \mathcal{H} 03'09			8620 Aug 11 22:24	0° Π	
conjunction	8615 Mar 10 09:43	20° \mathcal{H} 59'09	-0°00'32	retrograde	8620 Sep 04 09:31	0° Π 27'28	
minimum elong	8615 Mar 10 09:42	20° \mathcal{H} 59'09	0°00'30		8620 Sep 28 03:30	30° $\mathcal{R}\mathcal{B}$	
behind sun begin	8615 Mar 10 02:39	20° \mathcal{H} 57'01		opposition	8620 Nov 13 15:55	27° \mathcal{B} 06'18	-2°15'07
behind sun end	8615 Mar 10 16:46	21° \mathcal{H} 01'17		min. Earth dist.	8620 Nov 13 12:50	27° \mathcal{B} 06'53	8.79876 AU
max. Earth dist.	8615 Mar 10 05:42	20° \mathcal{H} 57'58	10.69022 AU	direct	8621 Jan 22 09:25	23° \mathcal{B} 46'11	
morning rise	8615 Mar 27 08:35	23° \mathcal{H} 02'47			8621 Apr 24 17:33	0° Π	
	8615 Jun 15 16:18	0° Υ		evening set	8621 May 03 11:10	1° Π 01'19	
retrograde	8615 Jul 05 23:41	0° Υ 21'25		conjunction	8621 May 20 04:03	3° Π 01'59	-1°54'28
	8615 Jul 26 14:05	30° $\mathcal{R}\mathcal{H}$		minimum elong	8621 May 20 04:01	3° Π 01'59	1°54'39
opposition	8615 Sep 12 23:15	27° \mathcal{H} 01'54	-0°16'08	max. Earth dist.	8621 May 20 08:27	3° Π 03'20	10.78998 AU
min. Earth dist.	8615 Sep 13 01:55	27° \mathcal{H} 01'24	8.71329 AU	morning rise	8621 Jun 05 22:16	5° Π 03'06	
direct	8615 Nov 22 06:39	23° \mathcal{H} 39'12		retrograde	8621 Sep 16 23:30	12° Π 26'34	
	8616 Feb 24 08:03	0° Υ		opposition	8621 Nov 26 08:21	9° Π 04'41	-2°24'30
evening set	8616 Mar 04 19:05	1° Υ 06'39		min. Earth dist.	8621 Nov 26 03:43	9° Π 05'33	8.78107 AU
conjunction	8616 Mar 21 18:10	3° Υ 09'52	-0°25'50	direct	8622 Feb 03 19:43	5° Π 44'39	
minimum elong	8616 Mar 21 18:09	3° Υ 09'52	0°25'50	evening set	8622 May 15 13:18	12° Π 59'41	
max. Earth dist.	8616 Mar 21 15:18	3° Υ 09'00	10.73409 AU	conjunction	8622 Jun 01 06:56	15° Π 00'48	-1°59'33
morning rise	8616 Apr 07 15:14	5° Υ 12'29		minimum elong	8622 Jun 01 06:56	15° Π 00'48	1°59'46
retrograde	8616 Jul 17 11:45	12° Υ 29'50		max. Earth dist.	8622 Jun 01 12:42	15° Π 02'33	10.76650 AU
opposition	8616 Sep 24 19:05	9° Υ 10'22	-0°46'36	morning rise	8622 Jun 18 02:30	17° Π 02'31	
min. Earth dist.	8616 Sep 24 20:05	9° Υ 10'10	8.75244 AU	retrograde	8622 Sep 29 17:26	24° Π 29'14	
direct	8616 Dec 04 03:49	5° Υ 48'28		opposition	8622 Dec 09 01:28	21° Π 06'35	-2°27'37
evening set	8617 Mar 17 02:05	13° Υ 12'02		min. Earth dist.	8622 Dec 08 20:01	21° Π 07'37	8.75224 AU
				direct	8623 Feb 16 05:06	17° Π 46'31	
conjunction	8617 Apr 02 23:06	15° Υ 14'15	-0°49'47	evening set	8623 May 27 17:21	25° Π 02'14	
minimum elong	8617 Apr 02 23:04	15° Υ 14'14	0°49'50	conjunction	8623 Jun 13 12:24	27° Π 04'07	-1°59'23
max. Earth dist.	8617 Apr 02 22:22	15° Υ 14'02	10.76799 AU	minimum elong	8623 Jun 13 12:24	27° Π 04'08	1°59'37
morning rise	8617 Apr 19 18:31	17° Υ 16'02		max. Earth dist.	8623 Jun 13 18:20	27° Π 05'56	10.73253 AU
retrograde	8617 Jul 30 00:17	24° Υ 33'01		morning rise	8623 Jun 30 10:10	29° Π 06'50	
opposition	8617 Oct 07 13:33	21° Υ 13'21	-1°14'46		8623 Jul 07 22:44	0° \mathcal{E}	
min. Earth dist.	8617 Oct 07 13:11	21° Υ 13'25	8.78124 AU				

retrograde	8623 Oct 12 12:39	6°☾37'11		retrograde	8629 Dec 29 08:00	22°♊23'16	
opposition	8623 Dec 21 19:45	3°☾13'46	-2°24'13	opposition	8630 Mar 07 24:00	18°♊56'31	-0°05'02
min. Earth dist.	8623 Dec 21 14:23	3°☾14'48	8.71343 AU	min. Earth dist.	8630 Mar 07 20:53	18°♊57'08	8.39018 AU
	8624 Feb 17 10:35	30°♋II		asc. node	8630 May 03 00:59	15°♊39'35	
direct	8624 Feb 28 14:54	29°♊53'30		direct	8630 May 14 07:46	15°♊32'37	
	8624 Mar 10 19:21	0°☾		evening set	8630 Aug 24 04:22	23°♊12'45	
evening set	8624 Jun 08 00:20	7°☾10'45					
				conjunction	8630 Sep 10 22:16	25°♊25'28	0°09'30
conjunction	8624 Jun 24 21:40	9°☾13'45	-1°53'54	minimum elong	8630 Sep 10 22:16	25°♊25'28	0°09'28
minimum elong	8624 Jun 24 21:41	9°☾13'45	1°54'07	behind sun begin	8630 Sep 10 16:15	25°♊23'36	
max. Earth dist.	8624 Jun 25 03:38	9°☾15'34	10.68955 AU	behind sun end	8630 Sep 11 04:17	25°♊27'20	
morning rise	8624 Jul 11 22:22	11°☾17'43		max. Earth dist.	8630 Sep 11 01:35	25°♊26'29	10.36740 AU
retrograde	8624 Oct 24 10:17	18°☾52'01		morning rise	8630 Sep 28 18:59	27°♊39'03	
opposition	8625 Jan 02 15:25	15°☾27'50	-2°14'17		8630 Oct 18 14:25	0°♊	
min. Earth dist.	8625 Jan 02 10:04	15°☾28'52	8.66636 AU	retrograde	8631 Jan 12 00:09	5°♊33'58	
direct	8625 Mar 12 03:39	12°☾07'12		opposition	8631 Mar 21 08:23	2°♊07'06	0°28'47
evening set	8625 Jun 20 11:04	19°☾26'45		min. Earth dist.	8631 Mar 21 06:05	2°♊07'34	8.34662 AU
					8631 Apr 18 21:15	30°♋♊	
conjunction	8625 Jul 07 11:33	21°☾31'10	-1°43'09	direct	8631 May 27 15:53	28°♊42'25	
minimum elong	8625 Jul 07 11:35	21°☾31'11	1°43'21		8631 Jul 04 20:39	0°♊	
max. Earth dist.	8625 Jul 07 18:12	21°☾33'13	10.63931 AU	evening set	8631 Sep 07 01:47	6°♊27'22	
morning rise	8625 Jul 24 15:39	23°☾36'40					
	8625 Sep 28 11:44	0°♊		conjunction	8631 Sep 24 21:53	8°♊41'14	0°36'28
retrograde	8625 Nov 06 12:53	1°♊15'02		minimum elong	8631 Sep 24 21:51	8°♊41'14	0°36'29
	8625 Dec 16 04:02	30°♋☾		max. Earth dist.	8631 Sep 25 00:23	8°♊42'02	10.32824 AU
opposition	8626 Jan 15 12:46	27°☾50'08	-1°58'02	morning rise	8631 Oct 12 19:52	10°♊55'44	
min. Earth dist.	8626 Jan 15 07:04	27°☾51'14	8.61294 AU	retrograde	8632 Jan 25 18:39	18°♊52'01	
direct	8626 Mar 24 17:50	24°☾29'01		opposition	8632 Apr 02 18:36	15°♊25'12	1°01'23
	8626 Jun 17 05:56	0°♊		min. Earth dist.	8632 Apr 02 17:01	15°♊25'31	8.31262 AU
evening set	8626 Jul 03 02:38	1°♊51'35		direct	8632 Jun 09 02:34	11°♊59'44	
				evening set	8632 Sep 20 04:11	19°♊49'10	
conjunction	8626 Jul 20 06:43	3°♊57'38	-1°27'29				
minimum elong	8626 Jul 20 06:45	3°♊57'39	1°27'39	conjunction	8632 Oct 08 01:30	22°♊03'49	1°01'41
max. Earth dist.	8626 Jul 20 14:02	3°♊59'54	10.58393 AU	minimum elong	8632 Oct 08 01:28	22°♊03'48	1°01'45
morning rise	8626 Aug 06 14:26	6°♊04'50		max. Earth dist.	8632 Oct 08 02:20	22°♊04'04	10.29919 AU
retrograde	8626 Nov 19 18:45	13°♊47'15		morning rise	8632 Oct 25 23:45	24°♊18'48	
opposition	8627 Jan 28 12:05	10°♊21'41	-1°36'00		8632 Dec 18 01:11	0°♊	
min. Earth dist.	8627 Jan 28 06:00	10°♊22'52	8.55566 AU	retrograde	8633 Feb 07 15:07	2°♊15'26	
direct	8627 Apr 06 10:04	7°♊00'00			8633 Apr 01 06:19	30°♋♊	
evening set	8627 Jul 15 23:46	14°♊26'16		opposition	8633 Apr 16 06:06	28°♊48'50	1°30'53
	8627 Jul 20 14:33	15°♊		min. Earth dist.	8633 Apr 16 06:00	28°♊48'51	8.28929 AU
				direct	8633 Jun 22 15:11	25°♊22'37	
conjunction	8627 Aug 02 07:36	16°♊34'05	-1°07'27		8633 Sep 06 12:42	0°♊	
minimum elong	8627 Aug 02 07:38	16°♊34'05	1°07'35	evening set	8633 Oct 04 10:02	3°♊16'03	
max. Earth dist.	8627 Aug 02 14:36	16°♊36'14	10.52616 AU				
morning rise	8627 Aug 19 19:09	18°♊43'02		conjunction	8633 Oct 22 07:35	5°♊31'03	1°23'40
retrograde	8627 Dec 03 04:12	26°♊29'20		minimum elong	8633 Oct 22 07:33	5°♊31'02	1°23'46
opposition	8628 Feb 10 13:47	23°♊03'12	-1°09'00	max. Earth dist.	8633 Oct 22 06:00	5°♊30'33	10.28102 AU
min. Earth dist.	8628 Feb 10 08:10	23°♊04'19	8.49747 AU	morning rise	8633 Nov 09 05:12	7°♊46'08	
direct	8628 Apr 18 05:34	19°♊40'51			8634 Jan 24 08:12	15°♊	
evening set	8628 Jul 28 02:55	27°♊11'21		retrograde	8634 Feb 21 10:03	15°♊42'13	
					8634 Mar 21 13:21	15°♋♊	
conjunction	8628 Aug 14 14:28	29°♊20'57	-0°43'52	opposition	8634 Apr 29 18:52	12°♊16'01	1°55'32
minimum elong	8628 Aug 14 14:30	29°♊20'58	0°43'59	min. Earth dist.	8634 Apr 29 20:42	12°♊15'39	8.27713 AU
max. Earth dist.	8628 Aug 14 20:13	29°♊22'44	10.46893 AU	direct	8634 Jul 06 08:36	8°♊49'11	
	8628 Aug 19 20:05	0°♊			8634 Oct 04 03:52	15°♊	
morning rise	8628 Sep 01 05:45	1°♊31'41		evening set	8634 Oct 18 17:42	16°♊45'52	
retrograde	8628 Dec 15 17:20	9°♊21'27					
opposition	8629 Feb 22 17:49	5°♊54'56	-0°38'12	conjunction	8634 Nov 05 14:40	19°♊00'51	1°41'07
min. Earth dist.	8629 Feb 22 13:25	5°♊55'48	8.44134 AU	minimum elong	8634 Nov 05 14:37	19°♊00'51	1°41'16
direct	8629 May 01 04:04	2°♊31'49		max. Earth dist.	8634 Nov 05 10:31	18°♊59'33	10.27445 AU
evening set	8629 Aug 10 12:33	10°♊07'01		morning rise	8634 Nov 23 10:56	21°♊15'40	
				retrograde	8635 Mar 07 03:16	29°♊10'19	
conjunction	8629 Aug 28 03:32	12°♊18'17	-0°17'49	opposition	8635 May 13 08:20	25°♊44'42	2°13'52
minimum elong	8629 Aug 28 03:33	12°♊18'18	0°17'53	min. Earth dist.	8635 May 13 12:01	25°♊43'57	8.27718 AU
max. Earth dist.	8629 Aug 28 07:52	12°♊19'38	10.41509 AU	direct	8635 Jul 20 04:19	22°♊17'25	
morning rise	8629 Sep 14 21:59	14°♊30'35			8635 Oct 30 21:13	0°♊	

evening set	8635 Nov 02 01:49	0°♊16'16		evening set	8642 Jan 21 19:51	19°♊07'43	
conjunction	8635 Nov 19 21:38	2°♊30'54	1°53'01	conjunction	8642 Feb 08 03:14	21°♊15'29	0°59'21
minimum elong	8635 Nov 19 21:37	2°♊30'53	1°53'12	minimum elong	8642 Feb 08 03:16	21°♊15'30	0°59'30
max. Earth dist.	8635 Nov 19 15:35	2°♊28'59	10.28076 AU	max. Earth dist.	8642 Feb 07 21:12	21°♊13'37	10.54620 AU
morning rise	8635 Dec 07 16:01	4°♊45'06		morning rise	8642 Feb 25 07:14	23°♊22'13	
retrograde	8636 Mar 19 18:55	12°♊37'16			8642 May 06 16:39	0°♋	
opposition	8636 May 25 21:45	9°♊12'19	2°24'49	retrograde	8642 Jun 05 20:38	0°♋47'57	
min. Earth dist.	8636 May 26 02:25	9°♊11'23	8.29040 AU		8642 Jul 06 13:29	30°♋	
direct	8636 Aug 02 00:57	5°♊44'46		opposition	8642 Aug 13 00:53	27°♋27'05	0°59'01
evening set	8636 Nov 15 08:32	13°♊44'22		min. Earth dist.	8642 Aug 13 04:57	27°♋26'18	8.57658 AU
				direct	8642 Oct 22 02:55	24°♋01'45	
conjunction	8636 Dec 03 02:48	15°♊58'21	1°58'42		8643 Jan 20 12:35	0°♋	
minimum elong	8636 Dec 03 02:48	15°♊58'21	1°58'54	evening set	8643 Feb 03 18:20	1°♋40'30	
max. Earth dist.	8636 Dec 02 19:57	15°♊56'11	10.30047 AU				
morning rise	8636 Dec 20 18:50	18°♊11'39		conjunction	8643 Feb 20 23:23	3°♋46'51	0°35'27
retrograde	8637 Apr 02 08:44	26°♊00'22		minimum elong	8643 Feb 20 23:24	3°♋46'51	0°35'33
opposition	8637 Jun 08 10:47	22°♊36'09	2°27'49	max. Earth dist.	8643 Feb 20 18:50	3°♋45'27	10.60630 AU
min. Earth dist.	8637 Jun 08 15:40	22°♊35'10	8.31663 AU	morning rise	8643 Mar 10 01:11	5°♋52'13	
direct	8637 Aug 15 22:01	19°♊08'32		retrograde	8643 Jun 18 13:22	13°♋14'16	
evening set	8637 Nov 29 11:53	27°♊07'22		opposition	8643 Aug 26 01:04	9°♋53'49	0°28'26
				min. Earth dist.	8643 Aug 26 03:35	9°♋53'20	8.63522 AU
conjunction	8637 Dec 17 04:19	29°♊20'25	1°57'57	direct	8643 Nov 04 07:09	6°♋29'22	
minimum elong	8637 Dec 17 04:19	29°♊20'25	1°58'10	evening set	8644 Feb 16 11:15	14°♋02'59	
max. Earth dist.	8637 Dec 16 21:32	29°♊18'16	10.33287 AU				
	8637 Dec 22 09:41	0°♋		conjunction	8644 Mar 04 13:54	16°♋07'57	0°10'12
morning rise	8638 Jan 03 17:46	1°♋32'35		minimum elong	8644 Mar 04 13:54	16°♋07'57	0°10'14
retrograde	8638 Apr 15 18:39	9°♋17'07		behind sun begin	8644 Mar 04 08:15	16°♋06'14	
opposition	8638 Jun 21 22:39	5°♋53'38	2°22'52	behind sun end	8644 Mar 04 19:33	16°♋09'40	
min. Earth dist.	8638 Jun 22 03:24	5°♋52'41	8.35464 AU	max. Earth dist.	8644 Mar 04 11:15	16°♋07'09	10.66317 AU
direct	8638 Aug 29 18:43	2°♋26'09		morning rise	8644 Mar 21 13:30	18°♋12'03	
evening set	8638 Dec 13 10:45	10°♋22'47		retrograde	8644 Jun 30 03:01	25°♋31'14	
				desc. node	8644 Aug 01 13:05	24°♋39'05	
conjunction	8638 Dec 31 01:09	12°♋34'41	1°50'56	opposition	8644 Sep 06 22:57	22°♋11'08	-0°03'03
minimum elong	8638 Dec 31 01:11	12°♋34'42	1°51'09	min. Earth dist.	8644 Sep 07 00:28	22°♋10'51	8.68947 AU
max. Earth dist.	8638 Dec 30 18:46	12°♋32'41	10.37628 AU	direct	8644 Nov 16 06:33	18°♋47'37	
morning rise	8639 Jan 17 12:03	14°♋45'35		evening set	8645 Feb 27 23:16	26°♋16'26	
retrograde	8639 Apr 29 01:24	22°♋25'23					
opposition	8639 Jul 05 08:41	19°♋02'39	2°10'27	conjunction	8645 Mar 16 23:26	28°♋20'06	-0°15'22
min. Earth dist.	8639 Jul 05 13:41	19°♋01'40	8.40238 AU	minimum elong	8645 Mar 16 23:26	28°♋20'06	0°15'22
direct	8639 Sep 12 12:52	15°♋35'27		behind sun begin	8645 Mar 16 21:09	28°♋19'24	
evening set	8639 Dec 27 04:04	23°♋28'42		behind sun end	8645 Mar 17 01:43	28°♋20'47	
				max. Earth dist.	8645 Mar 16 21:55	28°♋19'38	10.71430 AU
conjunction	8640 Jan 13 16:16	25°♋39'19	1°38'13		8645 Mar 30 16:13	0°♌	
minimum elong	8640 Jan 13 16:18	25°♋39'19	1°38'26	morning rise	8645 Apr 02 21:08	0°♌23'04	
max. Earth dist.	8640 Jan 13 09:51	25°♋37'18	10.42823 AU	retrograde	8645 Jul 12 14:40	7°♌40'19	
morning rise	8640 Jan 31 00:44	27°♋48'50		opposition	8645 Sep 19 18:50	4°♌20'26	-0°34'01
	8640 Feb 18 11:12	0°♌		min. Earth dist.	8645 Sep 19 19:43	4°♌20'16	8.73702 AU
retrograde	8640 May 11 04:44	5°♌23'42		direct	8645 Nov 29 03:21	0°♌57'50	
opposition	8640 Jul 17 16:40	2°♌01'41	1°51'29	evening set	8646 Mar 12 07:02	8°♌22'22	
min. Earth dist.	8640 Jul 17 22:03	2°♌00'37	8.45720 AU				
	8640 Aug 14 07:35	30°♌		conjunction	8646 Mar 29 04:50	10°♌24'53	-0°39'55
direct	8640 Sep 25 04:02	28°♋34'57		minimum elong	8646 Mar 29 04:49	10°♌24'52	0°39'58
	8640 Nov 05 12:12	0°♌		max. Earth dist.	8646 Mar 29 03:55	10°♌24'36	10.75747 AU
evening set	8641 Jan 08 15:10	6°♌23'50		morning rise	8646 Apr 15 01:00	12°♌26'53	
				retrograde	8646 Jul 25 00:44	19°♌43'09	
conjunction	8641 Jan 26 00:57	8°♌33'03	1°20'40	opposition	8646 Oct 02 12:57	16°♌23'21	-1°03'12
minimum elong	8641 Jan 26 00:59	8°♌33'04	1°20'51	min. Earth dist.	8646 Oct 02 12:58	16°♌23'21	8.77569 AU
max. Earth dist.	8641 Jan 25 18:25	8°♌31'01	10.48584 AU	direct	8646 Dec 11 20:24	13°♌01'38	
morning rise	8641 Feb 12 07:07	10°♌41'11		evening set	8647 Mar 24 11:38	20°♌22'31	
	8641 Mar 23 04:42	15°♌					
retrograde	8641 May 24 02:23	18°♌11'15		conjunction	8647 Apr 10 07:24	22°♌24'04	-1°02'34
	8641 Jul 28 18:15	15°♌		minimum elong	8647 Apr 10 07:22	22°♌24'03	1°02'38
opposition	8641 Jul 30 22:09	14°♌49'53	1°27'12	max. Earth dist.	8647 Apr 10 07:45	22°♌24'10	10.79077 AU
min. Earth dist.	8641 Jul 31 03:18	14°♌48'52	8.51624 AU	morning rise	8647 Apr 27 02:12	24°♌25'20	
direct	8641 Oct 08 17:12	11°♌23'46			8647 Jun 21 23:06	0°♍	
	8641 Dec 15 16:34	15°♌		retrograde	8647 Aug 06 09:41	1°♍41'33	

	8647 Sep 22 10:54	30° Υ	opposition	8653 Dec 28 07:41	10° Θ 18'04 -2°19'08
opposition	8647 Oct 15 05:38	28° Υ 21'40 -1°29'24	min. Earth dist.	8653 Dec 28 01:46	10° Θ 19'11 8.72011 AU
min. Earth dist.	8647 Oct 15 03:59	28° Υ 21'58 8.80379 AU	direct	8654 Mar 06 24:00	6° Θ 58'23
direct	8647 Dec 24 11:17	25° Υ 00'45	evening set	8654 Jun 15 07:17	14° Θ 15'31
	8648 Mar 15 06:19	0° \mathcal{B}			
evening set	8648 Apr 04 13:49	2° \mathcal{B} 18'43	conjunction	8654 Jul 02 06:08	16° Θ 18'53 -1°48'21
			minimum elong	8654 Jul 02 06:09	16° Θ 18'54 1°48'34
conjunction	8648 Apr 21 08:02	4° \mathcal{B} 19'33 -1°22'23	max. Earth dist.	8654 Jul 02 12:19	16° Θ 20'47 10.69338 AU
minimum elong	8648 Apr 21 08:00	4° \mathcal{B} 19'32 1°22'29	morning rise	8654 Jul 19 08:19	18° Θ 23'16
max. Earth dist.	8648 Apr 21 10:32	4° \mathcal{B} 20'18 10.81285 AU	retrograde	8654 Nov 01 02:44	25° Θ 58'27
morning rise	8648 May 08 01:49	6° \mathcal{B} 20'18	opposition	8655 Jan 10 03:29	22° Θ 34'38 -2°05'43
retrograde	8648 Aug 17 21:32	13° \mathcal{B} 37'24	min. Earth dist.	8655 Jan 09 22:18	22° Θ 35'38 8.66680 AU
opposition	8648 Oct 26 21:39	10° \mathcal{B} 17'16 -1°51'38	direct	8655 Mar 19 11:05	19° Θ 14'28
min. Earth dist.	8648 Oct 26 18:19	10° \mathcal{B} 17'54 8.82027 AU	evening set	8655 Jun 27 19:47	26° Θ 34'23
direct	8649 Jan 04 23:48	6° \mathcal{B} 57'03			
evening set	8649 Apr 16 14:33	14° \mathcal{B} 12'48	conjunction	8655 Jul 14 21:52	28° Θ 39'19 -1°34'53
	8649 Apr 23 04:52	15° \mathcal{B}	minimum elong	8655 Jul 14 21:54	28° Θ 39'19 1°35'05
			max. Earth dist.	8655 Jul 15 03:06	28° Θ 40'55 10.63664 AU
conjunction	8649 May 03 07:42	16° \mathcal{B} 13'14 -1°38'36		8655 Jul 25 21:42	0° \mathcal{Q}
minimum elong	8649 May 03 07:40	16° \mathcal{B} 13'13 1°38'44	morning rise	8655 Aug 01 03:48	0° \mathcal{Q} 45'22
max. Earth dist.	8649 May 03 11:51	16° \mathcal{B} 14'29 10.82292 AU	retrograde	8655 Nov 14 05:10	8° \mathcal{Q} 24'45
morning rise	8649 May 20 01:05	18° \mathcal{B} 13'46	opposition	8656 Jan 23 01:20	5° \mathcal{Q} 00'09 -1°46'18
retrograde	8649 Aug 30 09:04	25° \mathcal{B} 32'30	min. Earth dist.	8656 Jan 22 21:00	5° \mathcal{Q} 00'59 8.60678 AU
opposition	8649 Nov 08 13:16	22° \mathcal{B} 12'01 -2°09'02	direct	8656 Mar 31 01:54	1° \mathcal{Q} 39'17
min. Earth dist.	8649 Nov 08 09:06	22° \mathcal{B} 12'48 8.82449 AU	evening set	8656 Jul 09 13:33	9° \mathcal{Q} 02'44
direct	8650 Jan 17 08:38	18° \mathcal{B} 52'18			
evening set	8650 Apr 28 15:01	26° \mathcal{B} 06'42	conjunction	8656 Jul 26 19:24	11° \mathcal{Q} 09'25 -1°16'48
			minimum elong	8656 Jul 26 19:26	11° \mathcal{Q} 09'25 1°16'58
conjunction	8650 May 15 07:38	28° \mathcal{B} 07'00 -1°50'34	max. Earth dist.	8656 Jul 27 00:12	11° \mathcal{Q} 10'53 10.57496 AU
minimum elong	8650 May 15 07:37	28° \mathcal{B} 07'00 1°50'44	morning rise	8656 Aug 13 05:13	13° \mathcal{Q} 17'16
max. Earth dist.	8650 May 15 12:04	28° \mathcal{B} 08'21 10.82067 AU		8656 Aug 27 18:18	15° \mathcal{Q}
	8650 May 30 23:34	0° \mathcal{I}	retrograde	8656 Nov 26 10:55	21° \mathcal{Q} 00'45
morning rise	8650 Jun 01 01:24	0° \mathcal{I} 07'39	opposition	8657 Feb 04 01:11	17° \mathcal{Q} 35'20 -1°21'32
retrograde	8650 Sep 11 20:45	7° \mathcal{I} 28'41	min. Earth dist.	8657 Feb 03 21:23	17° \mathcal{Q} 36'05 8.54353 AU
opposition	8650 Nov 21 04:46	4° \mathcal{I} 07'45 -2°20'54		8657 Mar 13 21:37	15° \mathcal{R} \mathcal{Q}
min. Earth dist.	8650 Nov 21 00:30	4° \mathcal{I} 08'33 8.81630 AU	direct	8657 Apr 12 20:47	14° \mathcal{Q} 13'39
direct	8651 Jan 29 18:03	0° \mathcal{I} 48'20		8657 May 12 09:37	15° \mathcal{Q}
evening set	8651 May 10 15:58	8° \mathcal{I} 02'14	evening set	8657 Jul 22 13:08	21° \mathcal{Q} 41'13
conjunction	8651 May 27 08:52	10° \mathcal{I} 02'45 -1°57'47	conjunction	8657 Aug 08 22:57	23° \mathcal{Q} 49'45 -0°54'48
minimum elong	8651 May 27 08:51	10° \mathcal{I} 02'45 1°57'59	minimum elong	8657 Aug 08 22:59	23° \mathcal{Q} 49'46 0°54'56
max. Earth dist.	8651 May 27 13:52	10° \mathcal{I} 04'16 10.80618 AU	max. Earth dist.	8657 Aug 09 03:52	23° \mathcal{Q} 51'17 10.51160 AU
morning rise	8651 Jun 13 03:43	12° \mathcal{I} 03'50	morning rise	8657 Aug 26 12:28	25° \mathcal{Q} 59'25
retrograde	8651 Sep 24 11:55	19° \mathcal{I} 27'47		8657 Oct 01 08:34	0° \mathcal{P}
opposition	8651 Dec 03 20:53	16° \mathcal{I} 06'15 -2°26'43	retrograde	8657 Dec 09 21:27	3° \mathcal{P} 46'44
min. Earth dist.	8651 Dec 03 16:01	16° \mathcal{I} 07'10 8.79589 AU	opposition	8658 Feb 17 03:20	0° \mathcal{P} 20'36 -0°52'25
direct	8652 Feb 11 04:02	12° \mathcal{I} 46'58	min. Earth dist.	8658 Feb 16 23:34	0° \mathcal{P} 21'21 8.48028 AU
evening set	8652 May 21 18:11	20° \mathcal{I} 01'04		8658 Feb 21 12:04	30° \mathcal{R} \mathcal{Q}
			direct	8658 Apr 25 17:43	26° \mathcal{Q} 57'59
conjunction	8652 Jun 07 12:20	22° \mathcal{I} 02'12 -1°59'55		8658 Jun 24 21:40	0° \mathcal{P}
minimum elong	8652 Jun 07 12:20	22° \mathcal{I} 02'12 2°00'08	evening set	8658 Aug 04 18:56	4° \mathcal{P} 30'10
max. Earth dist.	8652 Jun 07 18:33	22° \mathcal{I} 04'05 10.77976 AU			
morning rise	8652 Jun 24 08:53	24° \mathcal{I} 04'03	conjunction	8658 Aug 22 08:24	6° \mathcal{P} 40'30 -0°29'49
	8652 Aug 23 17:27	0° Θ	minimum elong	8658 Aug 22 08:26	6° \mathcal{P} 40'30 0°29'54
retrograde	8652 Oct 06 04:57	1° Θ 31'25	max. Earth dist.	8658 Aug 22 12:49	6° \mathcal{P} 41'52 10.44974 AU
	8652 Nov 19 18:10	30° \mathcal{R} \mathcal{I}	morning rise	8658 Sep 09 01:13	8° \mathcal{P} 51'53
opposition	8652 Dec 15 13:46	28° \mathcal{I} 09'09 -2°26'10	retrograde	8658 Dec 23 11:27	16° \mathcal{P} 42'35
min. Earth dist.	8652 Dec 15 08:02	28° \mathcal{I} 10'14 8.76365 AU	opposition	8659 Mar 02 07:51	13° \mathcal{P} 15'53 -0°20'15
direct	8653 Feb 22 13:24	24° \mathcal{I} 49'46	min. Earth dist.	8659 Mar 02 04:36	13° \mathcal{P} 16'32 8.42026 AU
	8653 May 15 20:47	0° Θ	direct	8659 May 08 17:36	9° \mathcal{P} 52'17
evening set	8653 Jun 02 22:59	2° Θ 04'57	evening set	8659 Aug 18 07:09	17° \mathcal{P} 29'27
conjunction	8653 Jun 19 19:11	4° Θ 07'01 -1°56'46	conjunction	8659 Sep 04 23:46	19° \mathcal{P} 41'24 -0°03'04
minimum elong	8653 Jun 19 19:12	4° Θ 07'02 1°56'59	minimum elong	8659 Sep 04 23:47	19° \mathcal{P} 41'24 0°03'07
max. Earth dist.	8653 Jun 20 02:10	4° Θ 09'09 10.74186 AU	behind sun begin	8659 Sep 04 16:34	19° \mathcal{P} 39'10
morning rise	8653 Jul 06 18:11	6° Θ 09'59	behind sun end	8659 Sep 05 07:00	19° \mathcal{P} 43'38
retrograde	8653 Oct 19 01:36	13° Θ 41'06	max. Earth dist.	8659 Sep 05 02:48	19° \mathcal{P} 42'18 10.39258 AU

morning rise	8659 Sep 22 19:20	21° $\mathring{\text{M}}$ 54'17	morning rise	8665 Dec 14 15:42	12° $\mathring{\text{X}}$ 15'20	
asc. node	8659 Oct 16 20:56	24° $\mathring{\text{M}}$ 43'16	retrograde	8666 Mar 27 12:40	20° $\mathring{\text{X}}$ 06'02	
retrograde	8660 Jan 06 02:46	29° $\mathring{\text{M}}$ 47'45	opposition	8666 Jun 02 14:13	16° $\mathring{\text{X}}$ 40'58	2°27'27
opposition	8660 Mar 14 14:39	26° $\mathring{\text{M}}$ 20'41 0°13'23	min. Earth dist.	8666 Jun 02 18:20	16° $\mathring{\text{X}}$ 40'09	8.29263 AU
min. Earth dist.	8660 Mar 14 12:38	26° $\mathring{\text{M}}$ 21'05 8.36658 AU	direct	8666 Aug 09 20:42	13° $\mathring{\text{X}}$ 12'56	
direct	8660 May 20 22:26	22° $\mathring{\text{M}}$ 56'04	evening set	8666 Nov 23 08:26	21° $\mathring{\text{X}}$ 12'31	
	8660 Aug 25 19:49	0° $\mathring{\text{A}}$				
evening set	8660 Aug 31 01:28	0° $\mathring{\text{A}}$ 38'21	conjunction	8666 Dec 11 01:46	23° $\mathring{\text{X}}$ 26'07	1°59'04
			minimum elong	8666 Dec 11 01:47	23° $\mathring{\text{X}}$ 26'07	1°59'17
conjunction	8660 Sep 17 20:33	2° $\mathring{\text{A}}$ 51'40 0°24'15	max. Earth dist.	8666 Dec 10 19:40	23° $\mathring{\text{X}}$ 24'11	10.30740 AU
minimum elong	8660 Sep 17 20:32	2° $\mathring{\text{A}}$ 51'40 0°24'15	morning rise	8666 Dec 28 16:30	25° $\mathring{\text{X}}$ 38'57	
max. Earth dist.	8660 Sep 17 21:27	2° $\mathring{\text{A}}$ 51'57 10.34300 AU		8667 Feb 05 02:00	0° $\mathring{\text{B}}$	
morning rise	8660 Oct 05 18:04	5° $\mathring{\text{A}}$ 05'45	retrograde	8667 Apr 09 23:33	3° $\mathring{\text{B}}$ 25'45	
retrograde	8661 Jan 18 20:12	13° $\mathring{\text{A}}$ 01'13	opposition	8667 Jun 16 02:44	0° $\mathring{\text{B}}$ 01'39	2°26'06
opposition	8661 Mar 27 23:36	9° $\mathring{\text{A}}$ 33'58 0°46'43	min. Earth dist.	8667 Jun 16 07:38	0° $\mathring{\text{B}}$ 00'40	8.32808 AU
min. Earth dist.	8661 Mar 27 23:17	9° $\mathring{\text{A}}$ 34'02 8.32189 AU		8667 Jun 16 10:55	30° $\mathring{\text{R}}$ $\mathring{\text{X}}$	
direct	8661 Jun 03 07:00	6° $\mathring{\text{A}}$ 08'23	direct	8667 Aug 23 18:23	26° $\mathring{\text{X}}$ 33'48	
evening set	8661 Sep 14 01:11	13° $\mathring{\text{A}}$ 55'39		8667 Oct 28 01:07	0° $\mathring{\text{B}}$	
			evening set	8667 Dec 07 09:43	4° $\mathring{\text{B}}$ 31'55	
conjunction	8661 Oct 01 21:53	16° $\mathring{\text{A}}$ 09'59 0°50'25	conjunction	8667 Dec 25 01:02	6° $\mathring{\text{B}}$ 44'27	1°54'52
minimum elong	8661 Oct 01 21:51	16° $\mathring{\text{A}}$ 09'58 0°50'28	minimum elong	8667 Dec 25 01:03	6° $\mathring{\text{B}}$ 44'27	1°55'05
max. Earth dist.	8661 Oct 01 21:05	16° $\mathring{\text{A}}$ 09'44 10.30342 AU	max. Earth dist.	8667 Dec 24 18:14	6° $\mathring{\text{B}}$ 42'18	10.34877 AU
morning rise	8661 Oct 19 20:16	18° $\mathring{\text{A}}$ 24'51	morning rise	8668 Jan 11 13:19	8° $\mathring{\text{B}}$ 56'03	
retrograde	8662 Feb 01 14:38	26° $\mathring{\text{A}}$ 21'27	retrograde	8668 Apr 22 07:42	16° $\mathring{\text{B}}$ 38'22	
opposition	8662 Apr 10 10:17	22° $\mathring{\text{A}}$ 54'13 1°17'51	opposition	8668 Jun 28 13:43	13° $\mathring{\text{B}}$ 15'13	2°17'00
min. Earth dist.	8662 Apr 10 11:08	22° $\mathring{\text{A}}$ 54'03 8.28847 AU	min. Earth dist.	8668 Jun 28 18:44	13° $\mathring{\text{B}}$ 14'14	8.37449 AU
direct	8662 Jun 16 19:28	19° $\mathring{\text{A}}$ 27'46	direct	8668 Sep 05 14:01	9° $\mathring{\text{B}}$ 47'48	
evening set	8662 Sep 28 05:08	27° $\mathring{\text{A}}$ 19'34	evening set	8668 Dec 20 05:59	17° $\mathring{\text{B}}$ 43'07	
conjunction	8662 Oct 16 02:38	29° $\mathring{\text{A}}$ 34'31 1°14'03	conjunction	8669 Jan 06 19:11	19° $\mathring{\text{B}}$ 54'25	1°44'39
minimum elong	8662 Oct 16 02:35	29° $\mathring{\text{A}}$ 34'30 1°14'09	minimum elong	8669 Jan 06 19:13	19° $\mathring{\text{B}}$ 54'26	1°44'52
max. Earth dist.	8662 Oct 16 00:42	29° $\mathring{\text{A}}$ 33'55 10.27600 AU	max. Earth dist.	8669 Jan 06 12:39	19° $\mathring{\text{B}}$ 52'22	10.40004 AU
	8662 Oct 19 11:06	0° $\mathring{\text{M}}$	morning rise	8669 Jan 24 04:58	22° $\mathring{\text{B}}$ 04'41	
morning rise	8662 Nov 03 00:50	1° $\mathring{\text{M}}$ 49'44	retrograde	8669 May 05 13:10	29° $\mathring{\text{B}}$ 42'11	
retrograde	8663 Feb 15 08:47	9° $\mathring{\text{M}}$ 46'28	opposition	8669 Jul 11 23:01	26° $\mathring{\text{B}}$ 19'57	2°00'51
opposition	8663 Apr 23 22:23	6° $\mathring{\text{M}}$ 19'28 1°44'56	min. Earth dist.	8669 Jul 12 03:16	26° $\mathring{\text{B}}$ 19'07	8.42937 AU
min. Earth dist.	8663 Apr 23 23:55	6° $\mathring{\text{M}}$ 19'09 8.26813 AU	direct	8669 Sep 19 06:58	22° $\mathring{\text{B}}$ 53'11	
direct	8663 Jun 30 11:54	2° $\mathring{\text{M}}$ 52'18		8669 Dec 27 17:11	0° $\mathring{\text{A}}$	
evening set	8663 Oct 12 11:54	10° $\mathring{\text{M}}$ 47'50	evening set	8670 Jan 02 20:14	0° $\mathring{\text{A}}$ 44'31	
conjunction	8663 Oct 30 09:23	13° $\mathring{\text{M}}$ 03'01 1°33'44	conjunction	8670 Jan 20 07:16	2° $\mathring{\text{A}}$ 54'28	1°29'11
minimum elong	8663 Oct 30 09:20	13° $\mathring{\text{M}}$ 03'00 1°33'52	minimum elong	8670 Jan 20 07:18	2° $\mathring{\text{A}}$ 54'29	1°29'22
max. Earth dist.	8663 Oct 30 06:36	13° $\mathring{\text{M}}$ 02'08 10.26226 AU	max. Earth dist.	8670 Jan 20 01:56	2° $\mathring{\text{A}}$ 52'49	10.45845 AU
	8663 Nov 14 20:12	15° $\mathring{\text{M}}$	morning rise	8670 Feb 06 14:34	5° $\mathring{\text{A}}$ 03'20	
morning rise	8663 Nov 17 06:29	15° $\mathring{\text{M}}$ 18'08	retrograde	8670 May 18 14:29	12° $\mathring{\text{A}}$ 36'00	
retrograde	8664 Feb 29 03:11	23° $\mathring{\text{M}}$ 13'55	opposition	8670 Jul 25 06:04	9° $\mathring{\text{A}}$ 14'36	1°38'48
opposition	8664 May 06 11:27	19° $\mathring{\text{M}}$ 47'23 2°06'20	min. Earth dist.	8670 Jul 25 09:48	9° $\mathring{\text{A}}$ 13'52	8.48982 AU
min. Earth dist.	8664 May 06 13:32	19° $\mathring{\text{M}}$ 46'57 8.26189 AU	direct	8670 Oct 02 21:06	5° $\mathring{\text{A}}$ 48'34	
direct	8664 Jul 13 05:32	16° $\mathring{\text{M}}$ 19'42	evening set	8671 Jan 16 04:29	13° $\mathring{\text{A}}$ 35'12	
evening set	8664 Oct 25 20:01	24° $\mathring{\text{M}}$ 17'55		8671 Jan 27 16:22	15° $\mathring{\text{A}}$	
conjunction	8664 Nov 12 16:39	26° $\mathring{\text{M}}$ 32'54 1°48'17	conjunction	8671 Feb 02 13:13	15° $\mathring{\text{A}}$ 43'43	1°09'25
minimum elong	8664 Nov 12 16:37	26° $\mathring{\text{M}}$ 32'54 1°48'27	minimum elong	8671 Feb 02 13:15	15° $\mathring{\text{A}}$ 43'44	1°09'35
max. Earth dist.	8664 Nov 12 12:57	26° $\mathring{\text{M}}$ 31'44 10.26295 AU	max. Earth dist.	8671 Feb 02 08:43	15° $\mathring{\text{A}}$ 42'19	10.52086 AU
morning rise	8664 Nov 30 11:55	28° $\mathring{\text{M}}$ 47'32	morning rise	8671 Feb 19 18:08	17° $\mathring{\text{A}}$ 51'08	
	8664 Dec 10 08:46	0° $\mathring{\text{X}}$	retrograde	8671 May 31 12:08	25° $\mathring{\text{A}}$ 19'11	
retrograde	8665 Mar 13 21:02	6° $\mathring{\text{X}}$ 41'17	opposition	8671 Aug 07 10:31	21° $\mathring{\text{A}}$ 58'31	1°12'11
opposition	8665 May 20 00:51	3° $\mathring{\text{X}}$ 15'24 2°20'47	min. Earth dist.	8671 Aug 07 14:09	21° $\mathring{\text{A}}$ 57'48	8.55269 AU
min. Earth dist.	8665 May 20 03:52	3° $\mathring{\text{X}}$ 14'47 8.27016 AU	direct	8671 Oct 16 07:54	18° $\mathring{\text{A}}$ 33'18	
	8665 Jul 11 17:22	30° $\mathring{\text{R}}$ $\mathring{\text{M}}$	evening set	8672 Jan 29 06:37	26° $\mathring{\text{A}}$ 14'47	
direct	8665 Jul 27 00:21	29° $\mathring{\text{M}}$ 47'25				
	8665 Aug 11 08:18	0° $\mathring{\text{X}}$	conjunction	8672 Feb 15 12:50	28° $\mathring{\text{A}}$ 21'50	0°46'31
evening set	8665 Nov 09 03:28	7° $\mathring{\text{X}}$ 47'02	minimum elong	8672 Feb 15 12:51	28° $\mathring{\text{A}}$ 21'50	0°46'39
conjunction	8665 Nov 26 22:38	10° $\mathring{\text{X}}$ 01'29 1°56'53	max. Earth dist.	8672 Feb 15 08:36	28° $\mathring{\text{A}}$ 20'31	10.58392 AU
minimum elong	8665 Nov 26 22:37	10° $\mathring{\text{X}}$ 01'28 1°57'04		8672 Feb 28 19:53	0° $\mathring{\text{H}}$	
max. Earth dist.	8665 Nov 26 17:41	9° $\mathring{\text{X}}$ 59'54 10.27824 AU	morning rise	8672 Mar 03 15:33	0° $\mathring{\text{H}}$ 27'50	

retrograde	8672 Jun 12 06:12	7° H 51'46			8678 May 30 08:05	15° B
opposition	8672 Aug 19 12:33	4° H 31'40	0°42'29	retrograde	8678 Aug 25 05:02	20° B 33'28
min. Earth dist.	8672 Aug 19 16:10	4° H 30'58	8.61456 AU	opposition	8678 Nov 03 08:07	17° B 12'58 -2°01'58
direct	8672 Oct 28 14:28	1° H 07'19		min. Earth dist.	8678 Nov 03 06:14	17° B 13'20 8.80917 AU
evening set	8673 Feb 10 02:38	8° H 43'32			8678 Dec 05 14:22	15° R B
				direct	8679 Jan 12 06:35	13° B 52'43
conjunction	8673 Feb 27 06:16	10° H 49'07	0°21'43		8679 Feb 18 02:40	15° B
minimum elong	8673 Feb 27 06:16	10° H 49'07	0°21'47	evening set	8679 Apr 23 17:16	21° B 08'30
max. Earth dist.	8673 Feb 27 02:05	10° H 47'50	10.64406 AU			
morning rise	8673 Mar 16 06:57	12° H 53'49		conjunction	8679 May 10 10:10	23° B 09'02 -1°45'49
retrograde	8673 Jun 24 20:02	20° H 14'25		minimum elong	8679 May 10 10:08	23° B 09'01 1°45'59
opposition	8673 Sep 01 12:01	16° H 54'41	0°11'13	max. Earth dist.	8679 May 10 13:07	23° B 09'55 10.80568 AU
min. Earth dist.	8673 Sep 01 14:52	16° H 54'09	8.67179 AU	morning rise	8679 May 27 03:46	25° B 09'49
direct	8673 Nov 10 17:53	13° H 31'13			8679 Jul 12 10:28	0° II
desc. node	8674 Jan 13 11:55	16° H 41'11		retrograde	8679 Sep 06 17:26	2° II 30'35
evening set	8674 Feb 22 17:19	21° H 02'26			8679 Nov 04 16:58	30° R B
				opposition	8679 Nov 16 00:16	29° B 09'26 -2°16'26
conjunction	8674 Mar 11 18:32	23° H 06'40	-0°03'56	min. Earth dist.	8679 Nov 15 20:37	29° B 10'07 8.80151 AU
minimum elong	8674 Mar 11 18:32	23° H 06'40	0°03'54	direct	8680 Jan 24 17:55	25° B 49'24
behind sun begin	8674 Mar 11 11:33	23° H 04'33			8680 Apr 07 06:39	0° II
behind sun end	8674 Mar 12 01:31	23° H 08'46		evening set	8680 May 04 18:23	3° II 04'20
max. Earth dist.	8674 Mar 11 15:17	23° H 05'43	10.69765 AU			
morning rise	8674 Mar 28 17:14	25° H 10'09		conjunction	8680 May 21 11:19	5° II 04'59 -1°55'13
	8674 May 13 11:19	0° Y		minimum elong	8680 May 21 11:18	5° II 04'59 1°55'25
retrograde	8674 Jul 07 08:48	2° Y 28'26		max. Earth dist.	8680 May 21 15:58	5° II 06'24 10.79186 AU
	8674 Sep 03 00:52	30° R H		morning rise	8680 Jun 07 05:33	7° II 06'05
opposition	8674 Sep 14 09:02	29° H 08'55	-0°20'10	retrograde	8680 Sep 18 09:08	14° II 29'38
min. Earth dist.	8674 Sep 14 10:45	29° H 08'35	8.72097 AU	opposition	8680 Nov 27 16:43	11° II 07'45 -2°25'01
direct	8674 Nov 23 17:58	25° H 46'19		min. Earth dist.	8680 Nov 27 12:08	11° II 08'37 8.78212 AU
	8675 Feb 06 09:47	0° Y		direct	8681 Feb 05 03:09	7° II 47'48
evening set	8675 Mar 07 03:31	3° Y 13'05		evening set	8681 May 16 20:32	15° II 02'41
conjunction	8675 Mar 24 02:30	5° Y 16'09	-0°29'01	conjunction	8681 Jun 02 14:11	17° II 03'48 -1°59'38
minimum elong	8675 Mar 24 02:29	5° Y 16'08	0°29'02	minimum elong	8681 Jun 02 14:10	17° II 03'48 1°59'51
max. Earth dist.	8675 Mar 24 00:42	5° Y 15'36	10.74180 AU	max. Earth dist.	8681 Jun 02 19:17	17° II 05'21 10.76675 AU
morning rise	8675 Apr 09 23:18	7° Y 18'36		morning rise	8681 Jun 19 09:58	19° II 05'35
retrograde	8675 Jul 19 21:30	14° Y 35'36		retrograde	8681 Oct 01 01:22	26° II 32'25
opposition	8675 Sep 27 04:27	11° Y 16'08	-0°50'21	opposition	8681 Dec 10 09:51	23° II 09'47 -2°27'18
min. Earth dist.	8675 Sep 27 05:00	11° Y 16'02	8.76002 AU	min. Earth dist.	8681 Dec 10 05:06	23° II 10'41 8.75168 AU
direct	8675 Dec 06 12:12	7° Y 54'21		direct	8682 Feb 17 11:57	19° II 49'42
evening set	8676 Mar 18 10:09	15° Y 17'18		evening set	8682 May 29 00:44	27° II 05'27
conjunction	8676 Apr 04 06:57	17° Y 19'22	-0°52'40	conjunction	8682 Jun 14 19:56	29° II 07'23 -1°58'48
minimum elong	8676 Apr 04 06:56	17° Y 19'21	0°52'43	minimum elong	8682 Jun 14 19:56	29° II 07'23 1°59'01
max. Earth dist.	8676 Apr 04 06:27	17° Y 19'13	10.77521 AU	max. Earth dist.	8682 Jun 15 01:07	29° II 08'58 10.73125 AU
morning rise	8676 Apr 21 02:12	19° Y 21'01			8682 Jun 22 00:55	0° B
retrograde	8676 Jul 31 08:00	26° Y 37'43		morning rise	8682 Jul 01 18:01	1° B 10'09
opposition	8676 Oct 08 22:39	23° Y 18'06	-1°18'04	retrograde	8682 Oct 13 20:03	8° B 40'42
min. Earth dist.	8676 Oct 08 22:38	23° Y 18'06	8.78810 AU	opposition	8682 Dec 23 03:58	5° B 17'16 -2°23'05
direct	8676 Dec 18 04:04	19° Y 57'00		min. Earth dist.	8682 Dec 22 23:10	5° B 18'11 8.71136 AU
evening set	8677 Mar 30 14:10	27° Y 16'49		direct	8683 Mar 01 23:38	1° B 56'57
				evening set	8683 Jun 10 07:51	9° B 14'20
conjunction	8677 Apr 16 09:02	29° Y 18'05	-1°13'54	conjunction	8683 Jun 27 05:32	11° B 17'26 -1°52'39
minimum elong	8677 Apr 16 09:00	29° Y 18'04	1°13'59	minimum elong	8683 Jun 27 05:33	11° B 17'26 1°52'52
max. Earth dist.	8677 Apr 16 08:57	29° Y 18'04	10.79731 AU	max. Earth dist.	8683 Jun 27 11:38	11° B 19'18 10.68677 AU
	8677 Apr 22 03:24	0° B		morning rise	8683 Jul 14 06:29	13° B 21'31
morning rise	8677 May 03 03:17	1° B 19'11		retrograde	8683 Oct 26 19:21	20° B 56'03
retrograde	8677 Aug 12 18:30	8° B 36'26		opposition	8684 Jan 04 23:39	17° B 31'50 -2°12'22
opposition	8677 Oct 21 15:43	5° B 16'29	-1°42'16	min. Earth dist.	8684 Jan 04 18:09	17° B 32'53 8.66282 AU
min. Earth dist.	8677 Oct 21 15:05	5° B 16'36	8.80467 AU	direct	8684 Mar 13 11:47	14° B 11'09
direct	8677 Dec 30 18:28	1° B 55'52		evening set	8684 Jun 21 18:50	21° B 30'53
evening set	8678 Apr 11 16:12	9° B 13'17				
conjunction	8678 Apr 28 09:44	11° B 14'02	-1°31'51	conjunction	8684 Jul 08 19:42	23° B 35'27 -1°41'17
minimum elong	8678 Apr 28 09:42	11° B 14'01	1°31'59	minimum elong	8684 Jul 08 19:44	23° B 35'27 1°41'29
max. Earth dist.	8678 Apr 28 10:42	11° B 14'20	10.80758 AU	max. Earth dist.	8684 Jul 09 02:47	23° B 37'37 10.63512 AU
morning rise	8678 May 15 03:28	13° B 14'50		morning rise	8684 Jul 26 00:01	25° B 41'04

	8684 Sep 03 12:23	0°♈	evening set	8690 Sep 08 12:53	8°♊37'33	
retrograde	8684 Nov 07 21:56	3°♈19'45				
	8685 Jan 15 18:05	30°♈	conjunction	8690 Sep 26 09:06	10°♊51'34	0°39'39
opposition	8685 Jan 16 21:07	29°♊54'46 -1°55'24	minimum elong	8690 Sep 26 09:04	10°♊51'33	0°39'40
min. Earth dist.	8685 Jan 16 15:05	29°♊55'56 8.60809 AU	max. Earth dist.	8690 Sep 26 11:47	10°♊52'24	10.32105 AU
direct	8685 Mar 26 01:22	26°♊33'36	morning rise	8690 Oct 14 07:04	13°♊06'11	
	8685 May 29 22:06	0°♈	retrograde	8691 Jan 27 06:49	21°♊02'50	
evening set	8685 Jul 04 10:53	3°♈56'28	opposition	8691 Apr 05 04:34	17°♊35'58	1°05'09
			min. Earth dist.	8691 Apr 05 02:57	17°♊36'18	8.30597 AU
conjunction	8685 Jul 21 15:18	6°♈02'41 -1°25'04	direct	8691 Jun 11 11:16	14°♊10'24	
minimum elong	8685 Jul 21 15:20	6°♈02'42 1°25'15	evening set	8691 Sep 22 15:54	22°♊00'32	
max. Earth dist.	8685 Jul 21 22:17	6°♈04'50 10.57854 AU				
morning rise	8685 Aug 07 23:22	8°♈10'02	conjunction	8691 Oct 10 13:10	24°♊15'16	1°04'31
	8685 Oct 19 16:44	15°♈	minimum elong	8691 Oct 10 13:07	24°♊15'15	1°04'35
retrograde	8685 Nov 21 04:15	15°♈52'46	max. Earth dist.	8691 Oct 10 13:40	24°♊15'25	10.29325 AU
	8685 Dec 23 21:58	15°♈	morning rise	8691 Oct 28 11:23	26°♊30'21	
opposition	8686 Jan 29 20:33	12°♈27'07 -1°32'45		8691 Nov 27 11:35	0°♈	
min. Earth dist.	8686 Jan 29 14:48	12°♈28'15 8.54970 AU	retrograde	8692 Feb 10 02:21	4°♈27'15	
direct	8686 Apr 07 18:00	9°♈05'20	opposition	8692 Apr 17 16:33	1°♈00'39	1°34'06
	8686 Jul 04 10:09	15°♈	min. Earth dist.	8692 Apr 17 16:49	1°♈00'36	8.28437 AU
evening set	8686 Jul 17 08:32	16°♈32'01		8692 Apr 30 09:10	30°♈	
			direct	8692 Jun 24 02:17	27°♊34'20	
conjunction	8686 Aug 03 16:38	18°♈40'00 -1°04'36		8692 Aug 16 10:51	0°♈	
minimum elong	8686 Aug 03 16:40	18°♈40'01 1°04'44	evening set	8692 Oct 05 22:15	5°♈28'21	
max. Earth dist.	8686 Aug 03 22:30	18°♈41'49 10.51978 AU				
morning rise	8686 Aug 21 04:38	20°♈49'09	conjunction	8692 Oct 23 19:40	7°♈43'23	1°25'59
retrograde	8686 Dec 04 14:16	28°♈35'45	minimum elong	8692 Oct 23 19:38	7°♈43'22	1°26'06
opposition	8687 Feb 11 22:30	25°♈09'35 -1°05'16	max. Earth dist.	8692 Oct 23 17:32	7°♈42'42	10.27723 AU
min. Earth dist.	8687 Feb 11 17:47	25°♈10'30 8.49061 AU	morning rise	8692 Nov 10 17:15	9°♈58'30	
direct	8687 Apr 20 13:13	21°♈47'05		8692 Dec 26 00:55	15°♈	
evening set	8687 Jul 30 12:07	29°♈18'06	retrograde	8693 Feb 22 20:23	17°♈54'39	
	8687 Aug 05 04:51	0°♈		8693 Apr 24 17:06	15°♈	
			opposition	8693 May 01 05:35	14°♈28'28	1°58'01
conjunction	8687 Aug 16 23:57	1°♈27'52 -0°40'42	min. Earth dist.	8693 May 01 07:51	14°♈28'01	8.27461 AU
minimum elong	8687 Aug 16 23:59	1°♈27'52 0°40'48	direct	8693 Jul 07 20:13	11°♈01'32	
max. Earth dist.	8687 Aug 17 04:54	1°♈29'24 10.46179 AU		8693 Sep 15 17:04	15°♈	
morning rise	8687 Sep 03 15:37	3°♈38'47	evening set	8693 Oct 20 06:11	18°♈58'34	
retrograde	8687 Dec 18 02:35	11°♈28'54				
opposition	8688 Feb 25 02:48	8°♈02'18 -0°34'09	conjunction	8693 Nov 07 02:59	21°♈13'33	1°42'46
min. Earth dist.	8688 Feb 24 23:00	8°♈03'04 8.43391 AU	minimum elong	8693 Nov 07 02:57	21°♈13'32	1°42'56
direct	8688 May 02 13:10	4°♈39'03	max. Earth dist.	8693 Nov 06 22:30	21°♈12'08	10.27298 AU
evening set	8688 Aug 11 22:15	12°♈14'50	morning rise	8693 Nov 24 23:08	23°♈28'20	
				8694 Jan 28 01:04	0°♈	
conjunction	8688 Aug 29 13:37	14°♈26'17 -0°14'29	retrograde	8694 Mar 08 14:05	1°♈22'52	
minimum elong	8688 Aug 29 13:37	14°♈26'18 0°14'33		8694 Apr 17 15:00	30°♈	
behind sun begin	8688 Aug 29 10:37	14°♈25'22	opposition	8694 May 14 19:08	27°♈57'16	2°15'27
behind sun end	8688 Aug 29 16:38	14°♈27'13	min. Earth dist.	8694 May 14 22:49	27°♈56'31	8.27670 AU
max. Earth dist.	8688 Aug 29 17:59	14°♈27'39 10.40753 AU	direct	8694 Jul 21 15:47	24°♈29'55	
morning rise	8688 Sep 16 08:17	16°♈38'45		8694 Oct 13 19:43	0°♈	
retrograde	8688 Dec 30 16:43	24°♈31'50	evening set	8694 Nov 03 14:12	2°♈28'55	
opposition	8689 Mar 09 09:13	21°♈04'59 -0°00'51				
min. Earth dist.	8689 Mar 09 06:02	21°♈05'38 8.38254 AU	conjunction	8694 Nov 21 09:54	4°♈43'32	1°53'54
asc. node	8689 Mar 18 22:06	20°♈19'42	minimum elong	8694 Nov 21 09:53	4°♈43'31	1°54'05
direct	8689 May 15 18:02	17°♈40'57	max. Earth dist.	8694 Nov 21 04:06	4°♈41'41	10.28103 AU
evening set	8689 Aug 25 14:45	25°♈21'43	morning rise	8694 Dec 09 04:02	6°♈57'40	
			retrograde	8695 Mar 22 06:02	14°♈49'38	
conjunction	8689 Sep 12 09:00	27°♈34'37 0°12'51	opposition	8695 May 28 08:37	11°♈24'43	2°25'24
minimum elong	8689 Sep 12 08:59	27°♈34'37 0°12'49	min. Earth dist.	8695 May 28 12:48	11°♈23'53	8.29133 AU
behind sun begin	8689 Sep 12 04:34	27°♈33'15	direct	8695 Aug 04 12:37	7°♈57'10	
behind sun end	8689 Sep 12 13:24	27°♈36'00	evening set	8695 Nov 17 20:40	15°♈56'48	
max. Earth dist.	8689 Sep 12 12:46	27°♈35'48 10.35978 AU				
morning rise	8689 Sep 30 05:47	29°♈48'21	conjunction	8695 Dec 05 14:53	18°♈10'44	1°58'46
	8689 Oct 01 19:49	0°♈	minimum elong	8695 Dec 05 14:52	18°♈10'44	1°58'59
retrograde	8690 Jan 13 10:58	7°♈43'40	max. Earth dist.	8695 Dec 05 08:43	18°♈08'47	10.30193 AU
opposition	8690 Mar 22 17:55	4°♈16'44 0°32'52	morning rise	8695 Dec 23 06:37	20°♈23'58	
min. Earth dist.	8690 Mar 22 15:14	4°♈17'16 8.33915 AU	retrograde	8696 Apr 03 19:23	28°♈12'28	
direct	8690 May 29 00:45	0°♈51'56	opposition	8696 Jun 09 21:43	24°♈48'18	2°27'23

min. Earth dist.	8696 Jun 10 02:12	24° \mathbb{A} 47'24	8.31851 AU	opposition	8702 Aug 28 12:01	12° \mathbb{H} 03'27	0°24'12
direct	8696 Aug 17 09:54	21° \mathbb{A} 20'42		min. Earth dist.	8702 Aug 28 14:21	12° \mathbb{H} 03'00	8.63957 AU
evening set	8696 Nov 30 23:55	29° \mathbb{A} 19'30		direct	8702 Nov 06 17:27	8° \mathbb{H} 39'07	
	8696 Dec 06 10:17	0° \mathbb{B}		evening set	8703 Feb 18 21:11	16° \mathbb{H} 12'20	
conjunction	8696 Dec 18 16:14	1° \mathbb{B} 32'29	1°57'11	conjunction	8703 Mar 07 23:36	18° \mathbb{H} 17'11	0°06'45
minimum elong	8696 Dec 18 16:15	1° \mathbb{B} 32'29	1°57'25	minimum elong	8703 Mar 07 23:37	18° \mathbb{H} 17'11	0°06'47
max. Earth dist.	8696 Dec 18 09:53	1° \mathbb{B} 30'28	10.33514 AU	behind sun begin	8703 Mar 07 17:01	18° \mathbb{H} 15'12	
morning rise	8697 Jan 05 05:24	3° \mathbb{B} 44'34		behind sun end	8703 Mar 08 06:13	18° \mathbb{H} 19'11	
retrograde	8697 Apr 17 06:12	11° \mathbb{B} 28'50		max. Earth dist.	8703 Mar 07 21:06	18° \mathbb{H} 16'27	10.66752 AU
opposition	8697 Jun 23 09:38	8° \mathbb{B} 05'28	2°21'27	morning rise	8703 Mar 24 23:04	20° \mathbb{H} 21'12	
min. Earth dist.	8697 Jun 23 14:34	8° \mathbb{B} 04'28	8.35723 AU	desc. node	8703 Jun 15 03:21	27° \mathbb{H} 22'39	
direct	8697 Aug 31 05:20	4° \mathbb{B} 38'00		retrograde	8703 Jul 03 13:06	27° \mathbb{H} 40'15	
evening set	8697 Dec 14 22:31	12° \mathbb{B} 34'32		opposition	8703 Sep 10 09:41	24° \mathbb{H} 20'11	-0°07'17
conjunction	8698 Jan 01 12:43	14° \mathbb{B} 46'23	1°49'24	min. Earth dist.	8703 Sep 10 11:33	24° \mathbb{H} 19'49	8.69379 AU
minimum elong	8698 Jan 01 12:45	14° \mathbb{B} 46'23	1°49'38	direct	8703 Nov 19 17:36	20° \mathbb{H} 56'44	
max. Earth dist.	8698 Jan 01 06:06	14° \mathbb{B} 44'18	10.37921 AU	evening set	8704 Mar 02 08:53	28° \mathbb{H} 25'10	
morning rise	8698 Jan 18 23:25	16° \mathbb{B} 57'11			8704 Mar 15 10:36	0° \mathbb{Y}	
retrograde	8698 Apr 30 12:55	24° \mathbb{B} 36'43		conjunction	8704 Mar 19 08:45	0° \mathbb{Y} 28'43	-0°18'44
opposition	8698 Jul 06 19:49	21° \mathbb{B} 14'06	2°08'08	minimum elong	8704 Mar 19 08:45	0° \mathbb{Y} 28'43	0°18'44
min. Earth dist.	8698 Jul 07 01:22	21° \mathbb{B} 13'00	8.40561 AU	max. Earth dist.	8704 Mar 19 06:48	0° \mathbb{Y} 28'08	10.71851 AU
direct	8698 Sep 13 23:35	17° \mathbb{B} 46'58		morning rise	8704 Apr 05 06:24	2° \mathbb{Y} 31'36	
evening set	8698 Dec 28 15:25	25° \mathbb{B} 40'01		retrograde	8704 Jul 15 00:08	9° \mathbb{Y} 48'43	
conjunction	8699 Jan 15 03:22	27° \mathbb{B} 50'34	1°36'01	opposition	8704 Sep 22 05:23	6° \mathbb{Y} 28'50	-0°38'03
minimum elong	8699 Jan 15 03:25	27° \mathbb{B} 50'34	1°36'14	min. Earth dist.	8704 Sep 22 06:19	6° \mathbb{Y} 28'40	8.74113 AU
max. Earth dist.	8699 Jan 14 20:18	27° \mathbb{B} 48'21	10.43177 AU	direct	8704 Dec 01 13:22	3° \mathbb{Y} 06'19	
morning rise	8699 Feb 01 11:47	0° \approx 00'02		evening set	8705 Mar 14 16:13	10° \mathbb{Y} 30'26	
	8699 Feb 01 11:41	0° \approx		conjunction	8705 Mar 31 13:48	12° \mathbb{Y} 32'50	-0°43'03
retrograde	8699 May 13 14:28	7° \approx 34'38		minimum elong	8705 Mar 31 13:46	12° \mathbb{Y} 32'50	0°43'06
opposition	8699 Jul 20 03:46	4° \approx 12'44	1°48'24	max. Earth dist.	8705 Mar 31 13:02	12° \mathbb{Y} 32'36	10.76140 AU
min. Earth dist.	8699 Jul 20 09:19	4° \approx 11'39	8.46097 AU	morning rise	8705 Apr 17 09:50	14° \mathbb{Y} 34'46	
direct	8699 Sep 27 16:12	0° \approx 46'06		retrograde	8705 Jul 27 09:15	21° \mathbb{Y} 50'57	
evening set	8700 Jan 11 02:11	8° \approx 34'45		opposition	8705 Oct 04 23:13	18° \mathbb{Y} 31'06	-1°06'51
conjunction	8700 Jan 28 11:48	10° \approx 43'52	1°17'55	min. Earth dist.	8705 Oct 04 22:32	18° \mathbb{Y} 31'14	8.77945 AU
minimum elong	8700 Jan 28 11:51	10° \approx 43'53	1°18'06	direct	8705 Dec 14 07:24	15° \mathbb{Y} 09'27	
max. Earth dist.	8700 Jan 28 05:02	10° \approx 41'46	10.48986 AU	evening set	8706 Mar 26 20:24	22° \mathbb{Y} 29'57	
morning rise	8700 Feb 14 17:55	12° \approx 51'56		conjunction	8706 Apr 12 16:06	24° \mathbb{Y} 31'24	-1°05'20
	8700 Mar 04 20:08	15° \approx		minimum elong	8706 Apr 12 16:04	24° \mathbb{Y} 31'23	1°05'24
retrograde	8700 May 26 12:14	20° \approx 21'47		max. Earth dist.	8706 Apr 12 17:27	24° \mathbb{Y} 31'48	10.79426 AU
opposition	8700 Aug 02 09:06	17° \approx 00'30	1°23'32	morning rise	8706 Apr 29 10:43	26° \mathbb{Y} 32'34	
min. Earth dist.	8700 Aug 02 13:45	16° \approx 59'36	8.52036 AU		8706 May 30 18:01	0° \mathbb{B}	
	8700 Aug 29 22:40	15° \mathbb{R} \approx		retrograde	8706 Aug 08 20:10	3° \mathbb{B} 48'45	
direct	8700 Oct 11 05:39	13° \approx 34'31		opposition	8706 Oct 17 15:35	0° \mathbb{B} 28'48	-1°32'32
	8700 Nov 21 18:45	15° \approx		min. Earth dist.	8706 Oct 17 13:12	0° \mathbb{B} 29'15	8.80703 AU
evening set	8701 Jan 24 06:31	21° \approx 18'09			8706 Oct 24 01:12	30° \mathbb{R} \mathbb{Y}	
conjunction	8701 Feb 10 13:49	23° \approx 25'51	0°56'12	direct	8706 Dec 26 21:43	27° \mathbb{Y} 07'56	
minimum elong	8701 Feb 10 13:51	23° \approx 25'51	0°56'21		8707 Feb 25 06:15	0° \mathbb{B}	
max. Earth dist.	8701 Feb 10 08:25	23° \approx 24'11	10.55050 AU	evening set	8707 Apr 07 22:21	4° \mathbb{B} 25'31	
morning rise	8701 Feb 27 17:38	25° \approx 32'29		conjunction	8707 Apr 24 16:29	6° \mathbb{B} 26'17	-1°24'40
	8701 Apr 09 12:17	0° \mathbb{H}		minimum elong	8707 Apr 24 16:27	6° \mathbb{B} 26'16	1°24'47
retrograde	8701 Jun 08 08:00	2° \mathbb{H} 58'02		max. Earth dist.	8707 Apr 24 19:28	6° \mathbb{B} 27'11	10.81571 AU
	8701 Aug 10 13:58	30° \mathbb{R} \approx		morning rise	8707 May 11 10:09	8° \mathbb{B} 26'58	
opposition	8701 Aug 15 11:53	29° \approx 37'15	0°54'57		8707 Jul 22 12:38	15° \mathbb{B}	
min. Earth dist.	8701 Aug 15 15:10	29° \approx 36'36	8.58087 AU	retrograde	8707 Aug 21 07:00	15° \mathbb{B} 44'00	
direct	8701 Oct 24 13:27	26° \approx 12'03			8707 Sep 20 11:33	15° \mathbb{R} \mathbb{B}	
	8702 Jan 02 17:15	0° \mathbb{H}		opposition	8707 Oct 30 07:21	12° \mathbb{B} 23'50	-1°54'06
evening set	8702 Feb 06 04:33	3° \mathbb{H} 50'24		min. Earth dist.	8707 Oct 30 04:05	12° \mathbb{B} 24'26	8.82280 AU
conjunction	8702 Feb 23 09:30	5° \mathbb{H} 56'40	0°32'04	direct	8708 Jan 08 07:25	9° \mathbb{B} 03'37	
minimum elong	8702 Feb 23 09:31	5° \mathbb{H} 56'40	0°32'10		8708 Apr 07 14:14	15° \mathbb{B}	
max. Earth dist.	8702 Feb 23 05:55	5° \mathbb{H} 55'34	10.61068 AU	evening set	8708 Apr 18 22:53	16° \mathbb{B} 19'04	
morning rise	8702 Mar 12 11:04	8° \mathbb{H} 01'57		conjunction	8708 May 05 15:51	18° \mathbb{B} 19'25	-1°40'19
retrograde	8702 Jun 20 23:45	15° \mathbb{H} 23'51		minimum elong	8708 May 05 15:49	18° \mathbb{B} 19'24	1°40'28

max. Earth dist.	8708 May 05 19:32	18°♄20'32	10.82505 AU	retrograde	8714 Nov 16 13:07	10°♄30'08	
morning rise	8708 May 22 09:17	20°♄19'55		opposition	8715 Jan 25 09:53	7°♄05'30	-1°43'16
retrograde	8708 Sep 01 17:04	27°♄38'38		min. Earth dist.	8715 Jan 25 05:40	7°♄06'19	8.60603 AU
opposition	8708 Nov 10 22:49	24°♄18'06	-2°10'46	direct	8715 Apr 03 11:28	3°♄44'37	
min. Earth dist.	8708 Nov 10 19:08	24°♄18'47	8.82626 AU	evening set	8715 Jul 12 22:02	11°♄08'07	
direct	8709 Jan 19 18:11	20°♄58'22					
evening set	8709 Apr 30 23:06	28°♄12'31		conjunction	8715 Jul 30 04:18	13°♄14'54	-1°14'07
	8709 May 15 21:24	0°♄		minimum elong	8715 Jul 30 04:20	13°♄14'55	1°14'17
				max. Earth dist.	8715 Jul 30 09:36	13°♄16'32	10.57391 AU
conjunction	8709 May 17 15:40	0°♄12'47	-1°51'39		8715 Aug 13 10:50	15°♄	
minimum elong	8709 May 17 15:39	0°♄12'46	1°51'50	morning rise	8715 Aug 16 14:19	15°♄22'50	
max. Earth dist.	8709 May 17 19:52	0°♄14'03	10.82203 AU	retrograde	8715 Nov 29 20:47	23°♄06'23	
morning rise	8709 Jun 03 09:34	2°♄13'25		opposition	8716 Feb 07 09:47	19°♄40'59	-1°17'58
retrograde	8709 Sep 14 05:47	9°♄34'28		min. Earth dist.	8716 Feb 07 05:33	19°♄41'48	8.54211 AU
opposition	8709 Nov 23 14:05	6°♄13'27	-2°21'49	direct	8716 Apr 15 04:43	16°♄19'17	
min. Earth dist.	8709 Nov 23 09:45	6°♄14'16	8.81729 AU	evening set	8716 Jul 24 21:58	23°♄47'00	
direct	8710 Feb 01 03:49	2°♄54'01					
evening set	8710 May 12 23:51	10°♄07'41		conjunction	8716 Aug 11 08:07	25°♄55'38	-0°51'44
				minimum elong	8716 Aug 11 08:09	25°♄55'39	0°51'52
conjunction	8710 May 29 16:56	12°♄08'13	-1°58'11	max. Earth dist.	8716 Aug 11 13:07	25°♄57'11	10.50984 AU
minimum elong	8710 May 29 16:55	12°♄08'13	1°58'25	morning rise	8716 Aug 28 21:51	28°♄05'24	
max. Earth dist.	8710 May 29 22:34	12°♄09'56	10.80675 AU		8716 Sep 14 02:33	0°♄	
morning rise	8710 Jun 15 11:52	14°♄09'19		retrograde	8716 Dec 12 07:33	5°♄52'49	
retrograde	8710 Sep 26 20:28	21°♄33'19		opposition	8717 Feb 19 12:03	2°♄26'43	-0°48'29
opposition	8710 Dec 06 05:53	18°♄11'41	-2°26'48	min. Earth dist.	8717 Feb 19 08:13	2°♄27'28	8.47817 AU
min. Earth dist.	8710 Dec 06 00:23	18°♄12'43	8.79609 AU		8717 Mar 26 05:17	30°♄	
direct	8711 Feb 13 12:25	14°♄52'23		direct	8717 Apr 28 01:27	29°♄04'06	
evening set	8711 May 25 02:06	22°♄06'21			8717 May 30 11:50	0°♄	
				evening set	8717 Aug 07 04:22	6°♄36'34	
conjunction	8711 Jun 10 20:28	24°♄07'31	-1°59'38				
minimum elong	8711 Jun 10 20:28	24°♄07'31	1°59'51	conjunction	8717 Aug 24 18:03	8°♄47'00	-0°26'31
max. Earth dist.	8711 Jun 11 03:21	24°♄09'36	10.77960 AU	minimum elong	8717 Aug 24 18:04	8°♄47'00	0°26'36
morning rise	8711 Jun 27 17:07	26°♄09'23		max. Earth dist.	8717 Aug 24 21:35	8°♄48'06	10.44736 AU
	8711 Aug 01 20:28	0°♄		morning rise	8717 Sep 11 11:07	10°♄58'29	
retrograde	8711 Oct 09 14:19	3°♄36'49		retrograde	8717 Dec 25 20:50	18°♄49'18	
opposition	8711 Dec 18 22:38	0°♄14'30	-2°25'24	opposition	8718 Mar 04 16:41	15°♄22'40	-0°16'07
min. Earth dist.	8711 Dec 18 16:26	0°♄15'40	8.76327 AU	min. Earth dist.	8718 Mar 04 14:06	15°♄23'11	8.41760 AU
	8711 Dec 22 03:05	30°♄		direct	8718 May 11 02:20	11°♄59'02	
direct	8712 Feb 25 22:12	26°♄55'07		evening set	8718 Aug 20 17:06	19°♄36'36	
	8712 Apr 27 17:07	0°♄		asc. node	8718 Sep 02 07:18	21°♄10'19	
evening set	8712 Jun 05 07:00	4°♄10'11					
				conjunction	8718 Sep 07 09:51	21°♄48'40	0°00'23
conjunction	8712 Jun 22 03:20	6°♄12'18	-1°55'48	minimum elong	8718 Sep 07 09:50	21°♄48'40	0°00'20
minimum elong	8712 Jun 22 03:21	6°♄12'19	1°56'02	behind sun begin	8718 Sep 07 02:36	21°♄46'26	
max. Earth dist.	8712 Jun 22 10:09	6°♄14'23	10.74141 AU	behind sun end	8718 Sep 07 17:04	21°♄50'54	
morning rise	8712 Jul 09 02:37	8°♄15'19		max. Earth dist.	8718 Sep 07 11:40	21°♄49'10	10.38977 AU
retrograde	8712 Oct 21 11:35	15°♄46'29		morning rise	8718 Sep 25 05:39	24°♄01'39	
opposition	8712 Dec 30 16:35	12°♄23'24	-2°17'32		8718 Nov 21 15:00	0°♄	
min. Earth dist.	8712 Dec 30 10:54	12°♄24'29	8.71967 AU	retrograde	8719 Jan 08 12:58	1°♄55'16	
direct	8713 Mar 09 07:31	9°♄03'42			8719 Feb 26 04:23	30°♄	
evening set	8713 Jun 17 15:22	16°♄20'44		opposition	8719 Mar 17 23:47	28°♄28'16	0°17'32
				min. Earth dist.	8719 Mar 17 22:36	28°♄28'30	8.36363 AU
conjunction	8713 Jul 04 14:24	18°♄24'09	-1°46'44	direct	8719 May 24 07:05	25°♄03'37	
minimum elong	8713 Jul 04 14:26	18°♄24'09	1°46'57		8719 Aug 10 22:00	0°♄	
max. Earth dist.	8713 Jul 04 20:03	18°♄25'52	10.69306 AU	evening set	8719 Sep 03 11:47	2°♄46'22	
morning rise	8713 Jul 21 17:01	20°♄28'37					
retrograde	8713 Nov 03 10:43	28°♄03'46		conjunction	8719 Sep 21 06:59	4°♄59'47	0°27'31
opposition	8714 Jan 12 12:15	24°♄39'56	-2°03'22	minimum elong	8719 Sep 21 06:58	4°♄59'47	0°27'31
min. Earth dist.	8714 Jan 12 07:36	24°♄40'49	8.66642 AU	max. Earth dist.	8719 Sep 21 07:19	4°♄59'53	10.34002 AU
direct	8714 Mar 21 19:23	21°♄19'43		morning rise	8719 Oct 09 04:38	7°♄13'57	
evening set	8714 Jun 30 04:03	28°♄39'37		retrograde	8720 Jan 22 06:02	15°♄09'36	
	8714 Jul 11 04:58	0°♄		opposition	8720 Mar 30 08:57	11°♄42'25	0°50'38
conjunction	8714 Jul 17 06:29	0°♄44'37	-1°32'41	min. Earth dist.	8720 Mar 30 08:58	11°♄42'25	8.31894 AU
minimum elong	8714 Jul 17 06:31	0°♄44'37	1°32'53	direct	8720 Jun 05 16:52	8°♄16'49	
max. Earth dist.	8714 Jul 17 11:40	0°♄46'12	10.63616 AU	evening set	8720 Sep 16 12:01	16°♄04'35	
morning rise	8714 Aug 03 12:44	2°♄50'44		conjunction	8720 Oct 04 08:52	18°♄19'00	0°53'25




























































































































minimum elong	8720 Oct 04 08:50	18°♄18'59	0°53'28	max. Earth dist.	8726 Dec 27 05:33	8°♄52'58	10.34998 AU
max. Earth dist.	8720 Oct 04 08:12	18°♄18'47	10.30055 AU	morning rise	8727 Jan 14 00:04	11°♄06'32	
morning rise	8720 Oct 22 07:12	20°♄33'55		retrograde	8727 Apr 25 18:04	18°♄48'35	
retrograde	8721 Feb 04 00:03	28°♄30'41		opposition	8727 Jul 01 23:54	15°♄25'25	2°15'08
opposition	8721 Apr 12 19:46	25°♄03'31	1°21'18	min. Earth dist.	8727 Jul 02 04:14	15°♄24'34	8.37604 AU
min. Earth dist.	8721 Apr 12 20:25	25°♄03'23	8.28576 AU	direct	8727 Sep 09 00:31	11°♄58'00	
direct	8721 Jun 19 06:10	21°♄37'03		evening set	8727 Dec 23 16:33	19°♄53'05	
evening set	8721 Sep 30 16:27	29°♄29'21					
	8721 Oct 04 18:57	0°♄		conjunction	8728 Jan 10 05:44	22°♄04'21	1°42'49
				minimum elong	8728 Jan 10 05:46	22°♄04'21	1°43'02
conjunction	8721 Oct 18 14:01	1°♄44'22	1°16'36	max. Earth dist.	8728 Jan 10 00:04	22°♄02'34	10.40200 AU
minimum elong	8721 Oct 18 13:59	1°♄44'22	1°16'42	morning rise	8728 Jan 27 15:17	24°♄14'32	
max. Earth dist.	8721 Oct 18 12:28	1°♄43'53	10.27344 AU		8728 Mar 22 16:17	0°♄	
morning rise	8721 Nov 05 12:01	3°♄59'35		retrograde	8728 May 07 22:46	1°♄51'45	
retrograde	8722 Feb 17 19:22	11°♄56'27			8728 Jun 24 13:17	30°♄	
opposition	8722 Apr 26 08:10	8°♄29'31	1°47'44	opposition	8728 Jul 14 09:06	28°♄29'31	1°58'11
min. Earth dist.	8722 Apr 26 09:27	8°♄29'16	8.26584 AU	min. Earth dist.	8728 Jul 14 13:05	28°♄28'44	8.43158 AU
direct	8722 Jul 02 21:09	5°♄02'21		direct	8728 Sep 21 17:44	25°♄02'44	
evening set	8722 Oct 14 23:28	12°♄58'19			8728 Dec 11 09:20	0°♄	
	8722 Oct 31 02:13	15°♄		evening set	8729 Jan 05 06:28	2°♄53'48	
conjunction	8722 Nov 01 20:52	15°♄13'32	1°35'41	conjunction	8729 Jan 22 17:23	5°♄03'40	1°26'45
minimum elong	8722 Nov 01 20:49	15°♄13'31	1°35'49	minimum elong	8729 Jan 22 17:25	5°♄03'41	1°26'57
max. Earth dist.	8722 Nov 01 18:10	15°♄12'40	10.26023 AU	max. Earth dist.	8729 Jan 22 12:30	5°♄02'09	10.46102 AU
morning rise	8722 Nov 19 17:43	17°♄28'38		morning rise	8729 Feb 09 00:28	7°♄12'26	
retrograde	8723 Mar 03 15:13	25°♄24'29		retrograde	8729 May 21 00:06	14°♄44'49	
opposition	8723 May 09 21:30	21°♄58'00	2°08'20	opposition	8729 Jul 27 16:06	11°♄23'26	1°35'29
min. Earth dist.	8723 May 09 23:49	21°♄57'32	8.26025 AU	min. Earth dist.	8729 Jul 27 20:06	11°♄22'39	8.49266 AU
direct	8723 Jul 16 14:40	18°♄30'17		direct	8729 Oct 05 07:32	7°♄57'24	
evening set	8723 Oct 29 07:44	26°♄28'51			8730 Jan 12 13:10	15°♄	
				evening set	8730 Jan 18 14:17	15°♄43'42	
conjunction	8723 Nov 16 04:11	28°♄43'51	1°49'31	conjunction	8730 Feb 04 22:45	17°♄52'07	1°06'32
minimum elong	8723 Nov 16 04:09	28°♄43'50	1°49'41	minimum elong	8730 Feb 04 22:47	17°♄52'08	1°06'42
max. Earth dist.	8723 Nov 15 23:55	28°♄42'30	10.26168 AU	max. Earth dist.	8730 Feb 04 18:02	17°♄50'39	10.52405 AU
	8723 Nov 26 04:38	0°♄		morning rise	8730 Feb 22 03:35	19°♄59'27	
morning rise	8723 Dec 03 23:17	0°♄58'28		retrograde	8730 Jun 02 21:49	27°♄27'13	
retrograde	8724 Mar 16 07:53	8°♄52'09		opposition	8730 Aug 09 20:28	24°♄06'33	1°08'24
opposition	8724 May 22 11:05	5°♄26'20	2°21'50	min. Earth dist.	8730 Aug 10 00:21	24°♄05'48	8.55621 AU
min. Earth dist.	8724 May 22 14:49	5°♄25'35	8.26932 AU	direct	8730 Oct 18 17:20	20°♄41'22	
direct	8724 Jul 29 11:14	1°♄58'18		evening set	8731 Jan 31 15:54	28°♄22'28	
evening set	8724 Nov 11 15:11	9°♄58'10			8731 Feb 13 22:37	0°♄	
conjunction	8724 Nov 29 10:08	12°♄12'34	1°57'20	conjunction	8731 Feb 17 21:53	0°♄29'25	0°43'20
minimum elong	8724 Nov 29 10:07	12°♄12'34	1°57'32	minimum elong	8731 Feb 17 21:54	0°♄29'25	0°43'27
max. Earth dist.	8724 Nov 29 04:14	12°♄10'42	10.27779 AU	max. Earth dist.	8731 Feb 17 17:23	0°♄28'02	10.58783 AU
morning rise	8724 Dec 17 03:06	14°♄26'24		morning rise	8731 Mar 07 00:35	2°♄35'21	
retrograde	8725 Mar 29 21:45	22°♄16'56		retrograde	8731 Mar 15 13:52	9°♄59'01	
opposition	8725 Jun 05 00:31	18°♄51'56	2°27'31	opposition	8731 Aug 22 22:15	6°♄38'56	0°38'26
min. Earth dist.	8725 Jun 05 05:08	18°♄51'00	8.29261 AU	min. Earth dist.	8731 Aug 23 01:26	6°♄38'19	8.61886 AU
direct	8725 Aug 12 08:52	15°♄23'51		direct	8731 Nov 01 01:16	3°♄14'38	
evening set	8725 Nov 25 19:54	23°♄23'31		evening set	8732 Feb 13 11:32	10°♄50'26	
conjunction	8725 Dec 13 13:03	25°♄37'04	1°58'43	conjunction	8732 Mar 01 15:02	12°♄55'54	0°18'23
minimum elong	8725 Dec 13 13:03	25°♄37'04	1°58'56	minimum elong	8732 Mar 01 15:02	12°♄55'54	0°18'27
max. Earth dist.	8725 Dec 13 06:29	25°♄34'59	10.30778 AU	max. Earth dist.	8732 Mar 01 11:28	12°♄54'49	10.64887 AU
morning rise	8725 Dec 31 03:38	27°♄49'50		morning rise	8732 Mar 18 15:35	15°♄00'29	
	8726 Jan 18 05:20	0°♄		retrograde	8732 Jun 27 04:38	22°♄20'51	
retrograde	8726 Apr 12 09:21	5°♄36'27		opposition	8732 Sep 03 21:28	19°♄01'08	0°07'06
opposition	8726 Jun 18 13:01	2°♄12'21	2°25'11	min. Earth dist.	8732 Sep 03 23:14	19°♄00'48	8.67714 AU
min. Earth dist.	8726 Jun 18 17:43	2°♄11'25	8.32886 AU	direct	8732 Nov 13 04:46	15°♄37'45	
	8726 Jul 18 11:14	30°♄		desc. node	8732 Nov 27 17:19	15°♄48'24	
direct	8726 Aug 26 05:19	28°♄44'29		evening set	8733 Feb 25 01:48	23°♄08'26	
	8726 Oct 03 14:34	0°♄					
evening set	8726 Dec 09 20:44	6°♄42'29					
				conjunction	8733 Mar 14 02:56	25°♄12'33	-0°07'14
conjunction	8726 Dec 27 11:58	8°♄54'59	1°53'44	minimum elong	8733 Mar 14 02:55	25°♄12'33	0°07'12
minimum elong	8726 Dec 27 11:59	8°♄55'00	1°53'58	behind sun begin	8733 Mar 13 20:24	25°♄10'35	

behind sun end	8733 Mar 14 09:25	25° K 14'31		conjunction	8739 May 24 17:34	7° II 05'34	-1°55'51
max. Earth dist.	8733 Mar 14 01:01	25° K 11'59	10.70367 AU	minimum elong	8739 May 24 17:34	7° II 05'33	1°56'04
morning rise	8733 Mar 31 01:21	27° K 15'54		max. Earth dist.	8739 May 24 21:40	7° II 06'48	10.79667 AU
	8733 Apr 24 01:51	0° Y		morning rise	8739 Jun 10 11:57	9° II 06'38	
retrograde	8733 Jul 09 18:28	4° Y 33'52		retrograde	8739 Sep 21 15:45	16° II 30'04	
opposition	8733 Sep 16 18:21	1° Y 14'21	-0°24'09	opposition	8739 Dec 01 00:01	13° II 08'15	-2°25'23
min. Earth dist.	8733 Sep 16 19:14	1° Y 14'11	8.72763 AU	min. Earth dist.	8739 Nov 30 20:03	13° II 09'00	8.78623 AU
	8733 Oct 03 11:55	30° R K		direct	8740 Feb 08 09:01	9° II 48'23	
direct	8733 Nov 26 02:16	27° K 51'51		evening set	8740 May 19 02:38	17° II 03'00	
	8734 Jan 16 20:28	0° Y					
evening set	8734 Mar 09 11:30	5° Y 17'58		conjunction	8740 Jun 04 20:18	19° II 04'06	-1°59'37
				minimum elong	8740 Jun 04 20:18	19° II 04'06	1°59'51
conjunction	8734 Mar 26 10:17	7° Y 20'53	-0°32'09	max. Earth dist.	8740 Jun 05 00:44	19° II 05'26	10.77019 AU
minimum elong	8734 Mar 26 10:16	7° Y 20'52	0°32'10	morning rise	8740 Jun 21 16:20	21° II 05'52	
max. Earth dist.	8734 Mar 26 09:14	7° Y 20'34	10.74899 AU	retrograde	8740 Oct 03 07:40	28° II 32'40	
morning rise	8734 Apr 12 06:54	9° Y 23'12		opposition	8740 Dec 12 16:58	25° II 10'04	-2°26'53
retrograde	8734 Jul 22 05:08	16° Y 39'51		min. Earth dist.	8740 Dec 12 12:42	25° II 10'52	8.75438 AU
opposition	8734 Sep 29 13:26	13° Y 20'24	-0°54'01	direct	8741 Feb 19 19:45	21° II 50'03	
min. Earth dist.	8734 Sep 29 14:00	13° Y 20'17	8.76761 AU	evening set	8741 May 31 06:43	29° II 05'35	
direct	8734 Dec 08 20:41	9° Y 58'42			8741 Jun 07 19:54	0° E	
evening set	8735 Mar 21 17:45	17° Y 21'02					
				conjunction	8741 Jun 17 02:10	1° E 07'33	-1°58'08
conjunction	8735 Apr 07 14:15	19° Y 22'56	-0°55'29	minimum elong	8741 Jun 17 02:11	1° E 07'33	1°58'22
minimum elong	8735 Apr 07 14:13	19° Y 22'55	0°55'33	max. Earth dist.	8741 Jun 17 07:31	1° E 09'11	10.73324 AU
max. Earth dist.	8735 Apr 07 13:25	19° Y 22'40	10.78294 AU	morning rise	8741 Jul 04 00:27	3° E 10'21	
morning rise	8735 Apr 24 09:27	21° Y 24'27		retrograde	8741 Oct 16 03:22	10° E 40'54	
retrograde	8735 Aug 03 15:26	28° Y 40'48		opposition	8741 Dec 25 10:45	7° E 17'28	-2°21'52
opposition	8735 Oct 12 07:08	25° Y 21'14	-1°21'16	min. Earth dist.	8741 Dec 25 05:48	7° E 18'25	8.71255 AU
min. Earth dist.	8735 Oct 12 07:23	25° Y 21'11	8.79590 AU	direct	8742 Mar 04 06:00	3° E 57'12	
direct	8735 Dec 21 12:56	22° Y 00'14		evening set	8742 Jun 12 13:53	11° E 14'27	
evening set	8736 Apr 01 21:18	29° Y 19'29					
	8736 Apr 07 13:08	0° B		conjunction	8742 Jun 29 11:54	13° E 17'37	-1°51'21
				minimum elong	8742 Jun 29 11:55	13° E 17'37	1°51'34
conjunction	8736 Apr 18 15:58	1° B 20'36	-1°16'17	max. Earth dist.	8742 Jun 29 18:29	13° E 19'37	10.68719 AU
minimum elong	8736 Apr 18 15:56	1° B 20'35	1°16'23	morning rise	8742 Jul 16 13:01	15° E 21'44	
max. Earth dist.	8736 Apr 18 15:49	1° B 20'34	10.80494 AU	retrograde	8742 Oct 29 02:13	22° E 56'20	
morning rise	8736 May 05 10:09	3° B 21'34		opposition	8743 Jan 07 06:15	19° E 32'05	-2°10'25
retrograde	8736 Aug 15 01:25	10° B 38'34		min. Earth dist.	8743 Jan 07 00:26	19° E 33'12	8.66241 AU
opposition	8736 Oct 23 23:53	7° B 18'39	-1°44'52	direct	8743 Mar 16 17:49	16° E 11'25	
min. Earth dist.	8736 Oct 23 22:49	7° B 18'51	8.81209 AU	evening set	8743 Jun 25 01:02	23° E 31'09	
direct	8737 Jan 02 02:26	3° B 58'11					
evening set	8737 Apr 13 22:51	11° B 15'04		conjunction	8743 Jul 12 02:08	25° E 35'47	-1°39'25
				minimum elong	8743 Jul 12 02:10	25° E 35'48	1°39'37
conjunction	8737 Apr 30 16:22	13° B 15'42	-1°33'42	max. Earth dist.	8743 Jul 12 08:51	25° E 37'51	10.63396 AU
minimum elong	8737 Apr 30 16:20	13° B 15'41	1°33'51	morning rise	8743 Jul 29 06:43	27° E 41'30	
max. Earth dist.	8737 Apr 30 18:06	13° B 16'14	10.81461 AU		8743 Aug 18 05:30	0° O	
	8737 May 15 02:46	15° B		retrograde	8743 Nov 11 05:18	5° O 20'16	
morning rise	8737 May 17 09:57	15° B 16'23		opposition	8744 Jan 20 03:42	1° O 55'15	-1°52'47
retrograde	8737 Aug 27 12:29	22° B 34'51		min. Earth dist.	8744 Jan 19 22:02	1° O 56'21	8.60614 AU
opposition	8737 Nov 05 15:56	19° B 14'24	-2°03'53		8744 Feb 15 13:13	30° R E	
min. Earth dist.	8737 Nov 05 13:18	19° B 14'54	8.81578 AU	direct	8744 Mar 28 07:39	28° E 34'03	
direct	8738 Jan 14 14:58	15° B 54'18			8744 May 08 02:07	0° O	
evening set	8738 Apr 25 23:42	23° B 09'37		evening set	8744 Jul 06 17:16	5° O 57'00	
conjunction	8738 May 12 16:37	25° B 10'04	-1°47'05	conjunction	8744 Jul 23 21:52	8° O 03'20	-1°22'43
minimum elong	8738 May 12 16:35	25° B 10'04	1°47'15	minimum elong	8744 Jul 23 21:55	8° O 03'20	1°22'53
max. Earth dist.	8738 May 12 20:05	25° B 11'07	10.81173 AU	max. Earth dist.	8744 Jul 24 03:48	8° O 05'09	10.57597 AU
morning rise	8738 May 29 10:10	27° B 10'46		morning rise	8744 Aug 10 06:21	10° O 10'48	
	8738 Jun 23 11:58	0° II			8744 Sep 24 00:17	15° O	
retrograde	8738 Sep 09 01:55	4° II 31'24		retrograde	8744 Nov 23 12:07	17° O 53'39	
opposition	8738 Nov 18 07:43	1° II 10'19	-2°17'35		8745 Jan 25 06:36	15° R O	
min. Earth dist.	8738 Nov 18 03:59	1° II 11'01	8.80698 AU	opposition	8745 Feb 01 03:11	14° O 27'59	-1°29'34
	8738 Dec 04 05:24	30° R B		min. Earth dist.	8745 Jan 31 22:21	14° O 28'55	8.54640 AU
direct	8739 Jan 27 00:18	27° B 50'25		direct	8745 Apr 09 23:15	11° O 06'05	
	8739 Mar 19 14:22	0° II			8745 Jun 18 05:48	15° O	
evening set	8739 May 08 00:42	5° II 04'58		evening set	8745 Jul 19 15:10	18° O 32'59	

conjunction	8745 Aug 05 23:35	20° Ω 41'06	-1°01'50			8751 Jul 16 17:27	0° \mathbb{M}	
minimum elong	8745 Aug 05 23:37	20° Ω 41'07	1°01'59	evening set		8751 Oct 09 07:53	7° \mathbb{M} 34'25	
max. Earth dist.	8745 Aug 06 04:37	20° Ω 42'39	10.51590 AU					
morning rise	8745 Aug 23 11:58	22° Ω 50'23		conjunction		8751 Oct 27 05:15	9° \mathbb{M} 49'32	1°28'06
	8745 Nov 09 20:04	0° \mathbb{M}		minimum elong		8751 Oct 27 05:12	9° \mathbb{M} 49'31	1°28'14
retrograde	8745 Dec 06 20:27	0° \mathbb{M} 37'09		max. Earth dist.		8751 Oct 27 02:57	9° \mathbb{M} 48'48	10.27233 AU
	8746 Jan 03 00:30	30° \mathbb{R} Ω		morning rise		8751 Nov 14 02:47	12° \mathbb{M} 04'42	
opposition	8746 Feb 14 05:07	27° Ω 10'55	-1°01'40			8751 Dec 08 18:49	15° \mathbb{M}	
min. Earth dist.	8746 Feb 14 01:07	27° Ω 11'42	8.48607 AU	retrograde		8752 Feb 26 05:20	20° \mathbb{M} 01'04	
direct	8746 Apr 22 20:24	23° Ω 48'18		opposition		8752 May 03 14:01	16° \mathbb{M} 34'52	2°00'16
	8746 Jul 21 16:54	0° \mathbb{M}		min. Earth dist.		8752 May 03 16:04	16° \mathbb{M} 34'27	8.27076 AU
evening set	8746 Aug 01 19:08	1° \mathbb{M} 19'39				8752 May 23 21:26	15° \mathbb{R} \mathbb{M}	
				direct		8752 Jul 10 05:00	13° \mathbb{M} 07'52	
conjunction	8746 Aug 19 07:20	3° \mathbb{M} 29'34	-0°37'39			8752 Aug 25 18:14	15° \mathbb{M}	
minimum elong	8746 Aug 19 07:22	3° \mathbb{M} 29'34	0°37'46	evening set		8752 Oct 22 16:12	21° \mathbb{M} 05'19	
max. Earth dist.	8746 Aug 19 12:14	3° \mathbb{M} 31'05	10.45668 AU					
morning rise	8746 Sep 05 23:12	5° \mathbb{M} 40'35		conjunction		8752 Nov 09 13:00	23° \mathbb{M} 20'20	1°44'15
retrograde	8746 Dec 20 08:36	13° \mathbb{M} 30'58		minimum elong		8752 Nov 09 12:58	23° \mathbb{M} 20'19	1°44'25
opposition	8747 Feb 27 09:29	10° \mathbb{M} 04'16	-0°30'17	max. Earth dist.		8752 Nov 09 09:07	23° \mathbb{M} 19'06	10.27020 AU
min. Earth dist.	8747 Feb 27 05:42	10° \mathbb{M} 05'02	8.42827 AU	morning rise		8752 Nov 27 08:57	25° \mathbb{M} 35'07	
direct	8747 May 05 21:08	6° \mathbb{M} 40'54				8753 Jan 05 05:23	0° \mathbb{X}	
evening set	8747 Aug 15 05:43	14° \mathbb{M} 17'05		retrograde		8753 Mar 10 22:38	3° \mathbb{X} 29'39	
				opposition		8753 May 17 03:42	0° \mathbb{X} 04'02	2°16'50
conjunction	8747 Sep 01 21:22	16° \mathbb{M} 28'42	-0°11'18	min. Earth dist.		8753 May 17 06:43	0° \mathbb{X} 03'25	8.27497 AU
minimum elong	8747 Sep 01 21:23	16° \mathbb{M} 28'42	0°11'23			8753 May 17 23:40	30° \mathbb{R} \mathbb{M}	
behind sun begin	8747 Sep 01 16:10	16° \mathbb{M} 27'05		direct		8753 Jul 24 01:29	26° \mathbb{M} 36'38	
behind sun end	8747 Sep 02 02:37	16° \mathbb{M} 30'19				8753 Sep 26 06:07	0° \mathbb{X}	
max. Earth dist.	8747 Sep 02 02:01	16° \mathbb{M} 30'08	10.40143 AU	evening set		8753 Nov 06 00:20	4° \mathbb{X} 35'53	
morning rise	8747 Sep 19 16:07	18° \mathbb{M} 41'17						
retrograde	8748 Jan 03 01:20	26° \mathbb{M} 34'40		conjunction		8753 Nov 23 19:59	6° \mathbb{X} 50'28	1°54'38
asc. node	8748 Feb 06 04:16	25° \mathbb{M} 35'33		minimum elong		8753 Nov 23 19:58	6° \mathbb{X} 50'28	1°54'50
opposition	8748 Mar 11 16:09	23° \mathbb{M} 07'43	0°03'06	max. Earth dist.		8753 Nov 23 15:02	6° \mathbb{X} 48'54	10.28015 AU
min. Earth dist.	8748 Mar 11 12:43	23° \mathbb{M} 08'24	8.37611 AU	morning rise		8753 Dec 11 13:48	9° \mathbb{X} 04'34	
direct	8748 May 17 23:50	19° \mathbb{M} 43'33		retrograde		8754 Mar 24 14:47	16° \mathbb{X} 56'26	
evening set	8748 Aug 27 22:45	27° \mathbb{M} 24'48		opposition		8754 May 30 17:25	13° \mathbb{X} 31'33	2°25'50
				min. Earth dist.		8754 May 30 21:10	13° \mathbb{X} 30'47	8.29116 AU
conjunction	8748 Sep 14 17:10	29° \mathbb{M} 37'51	0°16'00	direct		8754 Aug 06 21:58	10° \mathbb{X} 03'58	
minimum elong	8748 Sep 14 17:10	29° \mathbb{M} 37'51	0°15'59	evening set		8754 Nov 20 06:37	18° \mathbb{X} 03'42	
max. Earth dist.	8748 Sep 14 20:47	29° \mathbb{M} 38'58	10.35309 AU					
	8748 Sep 17 15:38	0° \mathbb{L}		conjunction		8754 Dec 08 00:42	20° \mathbb{X} 17'36	1°58'43
morning rise	8748 Oct 02 14:02	1° \mathbb{L} 51'42		minimum elong		8754 Dec 08 00:42	20° \mathbb{X} 17'36	1°58'57
retrograde	8749 Jan 15 20:04	9° \mathbb{L} 47'20		max. Earth dist.		8754 Dec 07 18:56	20° \mathbb{X} 15'47	10.30233 AU
opposition	8749 Mar 25 01:10	6° \mathbb{L} 20'19	0°36'41	morning rise		8754 Dec 25 16:10	22° \mathbb{X} 30'46	
min. Earth dist.	8749 Mar 24 22:40	6° \mathbb{L} 20'49	8.33234 AU			8755 Mar 19 12:27	0° \mathbb{Z}	
direct	8749 May 31 07:16	2° \mathbb{L} 55'22		retrograde		8755 Apr 07 05:02	0° \mathbb{Z} 19'08	
evening set	8749 Sep 10 21:35	10° \mathbb{L} 41'36				8755 Apr 25 22:32	30° \mathbb{R} \mathbb{X}	
				opposition		8755 Jun 13 06:38	26° \mathbb{X} 55'02	2°26'51
conjunction	8749 Sep 28 17:49	12° \mathbb{L} 55'44	0°42'37	min. Earth dist.		8755 Jun 13 11:22	26° \mathbb{X} 54'05	8.31939 AU
minimum elong	8749 Sep 28 17:47	12° \mathbb{L} 55'44	0°42'39	direct		8755 Aug 20 18:05	23° \mathbb{X} 27'27	
max. Earth dist.	8749 Sep 28 19:36	12° \mathbb{L} 56'18	10.31422 AU			8755 Nov 22 13:11	0° \mathbb{Z}	
morning rise	8749 Oct 16 15:51	15° \mathbb{L} 10'28		evening set		8755 Dec 04 09:48	1° \mathbb{Z} 26'16	
retrograde	8750 Jan 29 14:54	23° \mathbb{L} 07'26						
opposition	8750 Apr 07 12:10	19° \mathbb{L} 40'32	1°08'39	conjunction		8755 Dec 22 01:55	3° \mathbb{Z} 39'13	1°56'22
min. Earth dist.	8750 Apr 07 11:17	19° \mathbb{L} 40'43	8.29933 AU	minimum elong		8755 Dec 22 01:56	3° \mathbb{Z} 39'13	1°56'36
direct	8750 Jun 13 19:23	16° \mathbb{L} 14'50		max. Earth dist.		8755 Dec 21 19:09	3° \mathbb{Z} 37'05	10.33644 AU
evening set	8750 Sep 25 01:08	24° \mathbb{L} 05'38		morning rise		8756 Jan 08 14:56	5° \mathbb{Z} 51'16	
				retrograde		8756 Apr 19 15:41	13° \mathbb{Z} 35'20	
conjunction	8750 Oct 12 22:19	26° \mathbb{L} 20'27	1°07'08	opposition		8756 Jun 25 18:37	10° \mathbb{Z} 12'04	2°19'58
minimum elong	8750 Oct 12 22:16	26° \mathbb{L} 20'26	1°07'13	min. Earth dist.		8756 Jun 26 00:11	10° \mathbb{Z} 10'57	8.35886 AU
max. Earth dist.	8750 Oct 12 21:53	26° \mathbb{L} 20'19	10.28694 AU	direct		8756 Sep 02 14:24	6° \mathbb{Z} 44'39	
morning rise	8750 Oct 30 20:34	28° \mathbb{L} 35'37		evening set		8756 Dec 17 08:14	14° \mathbb{Z} 41'10	
	8750 Nov 11 10:03	0° \mathbb{M}						
retrograde	8751 Feb 12 10:13	6° \mathbb{M} 32'50		conjunction		8757 Jan 03 22:12	16° \mathbb{Z} 52'57	1°47'52
opposition	8751 Apr 21 00:38	3° \mathbb{M} 06'14	1°37'04	minimum elong		8757 Jan 03 22:14	16° \mathbb{Z} 52'58	1°48'05
min. Earth dist.	8751 Apr 21 01:25	3° \mathbb{M} 06'04	8.27869 AU	max. Earth dist.		8757 Jan 03 14:48	16° \mathbb{Z} 50'38	10.38115 AU
	8751 Jun 08 03:21	30° \mathbb{R} \mathbb{L}		morning rise		8757 Jan 21 08:50	19° \mathbb{Z} 03'44	
direct	8751 Jun 27 10:45	29° \mathbb{L} 39'49		retrograde		8757 May 02 20:41	26° \mathbb{Z} 43'05	

opposition	8757 Jul 09 04:56	23° ♁ 20'36	2°05'48	morning rise	8763 Apr 07 14:11	4° ♄ 36'43
min. Earth dist.	8757 Jul 09 10:41	23° ♁ 19'27	8.40778 AU	retrograde	8763 Jul 17 07:16	11° ♄ 53'48
direct	8757 Sep 16 10:11	19° ♁ 53'33		opposition	8763 Sep 24 14:15	8° ♄ 33'53 -0°41'53
evening set	8757 Dec 31 00:46	27° ♁ 46'30		min. Earth dist.	8763 Sep 24 14:36	8° ♄ 33'49 8.74377 AU
				direct	8763 Dec 03 23:19	5° ♄ 11'25
conjunction	8758 Jan 17 12:33	29° ♁ 56'59	1°33'50	evening set	8764 Mar 15 23:59	12° ♄ 35'16
minimum elong	8758 Jan 17 12:35	29° ♁ 57'00	1°34'03			
max. Earth dist.	8758 Jan 17 05:15	29° ♁ 54'42	10.43421 AU	conjunction	8764 Apr 01 21:29	14° ♄ 37'34 -0°46'03
	8758 Jan 17 22:11	0° ♁		minimum elong	8764 Apr 01 21:28	14° ♄ 37'34 0°46'05
morning rise	8758 Feb 03 20:53	2° ♁ 06'24		max. Earth dist.	8764 Apr 01 21:36	14° ♄ 37'37 10.76382 AU
retrograde	8758 May 15 22:48	9° ♁ 40'54		morning rise	8764 Apr 18 17:19	16° ♄ 39'25
opposition	8758 Jul 22 12:54	6° ♁ 19'06	1°45'22	retrograde	8764 Jul 28 18:39	23° ♄ 55'37
min. Earth dist.	8758 Jul 22 17:56	6° ♁ 18'07	8.46357 AU	opposition	8764 Oct 06 07:59	20° ♄ 35'43 -1°10'19
direct	8758 Sep 30 02:26	2° ♁ 52'35		min. Earth dist.	8764 Oct 06 06:32	20° ♄ 36'00 8.78169 AU
evening set	8759 Jan 13 11:13	10° ♁ 41'04		direct	8764 Dec 15 16:26	17° ♄ 14'07
				evening set	8765 Mar 28 03:57	24° ♄ 34'17
conjunction	8759 Jan 30 20:48	12° ♁ 50'09	1°15'14			
minimum elong	8759 Jan 30 20:50	12° ♁ 50'10	1°15'25	conjunction	8765 Apr 13 23:31	26° ♄ 35'40 -1°07'57
max. Earth dist.	8759 Jan 30 14:38	12° ♁ 48'14	10.49268 AU	minimum elong	8765 Apr 13 23:29	26° ♄ 35'40 1°08'02
morning rise	8759 Feb 17 02:45	14° ♁ 58'10		max. Earth dist.	8765 Apr 14 01:34	26° ♄ 36'18 10.79626 AU
	8759 Feb 17 08:48	15° ♁		morning rise	8765 Apr 30 17:58	28° ♄ 36'47
retrograde	8759 May 28 22:01	22° ♁ 27'54			8765 May 12 16:31	0° ♄
opposition	8759 Aug 04 18:11	19° ♁ 06'42	1°19'57	retrograde	8765 Aug 10 04:49	5° ♄ 52'57
min. Earth dist.	8759 Aug 04 22:10	19° ♁ 05'55	8.52322 AU	opposition	8765 Oct 19 00:18	2° ♄ 32'57 -1°35'28
direct	8759 Oct 13 14:06	15° ♁ 40'52		min. Earth dist.	8765 Oct 18 21:51	2° ♄ 33'24 8.80887 AU
evening set	8760 Jan 26 15:19	23° ♁ 24'18			8765 Nov 26 14:27	30° ♄
				direct	8765 Dec 28 04:41	29° ♄ 12'06
conjunction	8760 Feb 12 22:35	25° ♁ 31'57	0°53'09		8766 Jan 28 07:26	0° ♄
minimum elong	8760 Feb 12 22:37	25° ♁ 31'57	0°53'17	evening set	8766 Apr 09 05:42	6° ♄ 29'23
max. Earth dist.	8760 Feb 12 17:59	25° ♁ 30'31	10.55349 AU			
morning rise	8760 Mar 01 02:11	27° ♁ 38'32		conjunction	8766 Apr 25 23:39	8° ♄ 30'05 -1°26'49
	8760 Mar 21 07:19	0° ♄		minimum elong	8766 Apr 25 23:37	8° ♄ 30'04 1°26'56
retrograde	8760 Jun 09 16:42	5° ♄ 03'59		max. Earth dist.	8766 Apr 26 02:20	8° ♄ 30'54 10.81728 AU
opposition	8760 Aug 16 21:02	1° ♄ 43'17	0°51'01	morning rise	8766 May 12 17:20	10° ♄ 30'44
min. Earth dist.	8760 Aug 17 00:14	1° ♄ 42'39	8.58382 AU		8766 Jun 24 02:13	15° ♄
	8760 Sep 09 05:48	30° ♄		retrograde	8766 Aug 22 13:57	17° ♄ 47'46
direct	8760 Oct 25 22:26	28° ♄ 18'12			8766 Oct 24 10:17	15° ♄
	8760 Dec 10 14:55	0° ♄		opposition	8766 Oct 31 15:53	14° ♄ 27'31 -1°56'24
evening set	8761 Feb 07 13:10	5° ♄ 56'21		min. Earth dist.	8766 Oct 31 13:01	14° ♄ 28'04 8.82418 AU
				direct	8767 Jan 09 16:03	11° ♄ 07'17
conjunction	8761 Feb 24 17:55	8° ♄ 02'31	0°28'48		8767 Mar 21 15:55	15° ♄
minimum elong	8761 Feb 24 17:56	8° ♄ 02'32	0°28'53	evening set	8767 Apr 21 06:05	18° ♄ 22'30
max. Earth dist.	8761 Feb 24 14:30	8° ♄ 01'28	10.61367 AU			
morning rise	8761 Mar 13 19:19	10° ♄ 07'45		conjunction	8767 May 07 22:56	20° ♄ 22'48 -1°41'54
retrograde	8761 Jun 22 08:41	17° ♄ 29'34		minimum elong	8767 May 07 22:54	20° ♄ 22'48 1°42'04
opposition	8761 Aug 29 21:15	14° ♄ 09'15	0°20'06	max. Earth dist.	8767 May 08 02:16	20° ♄ 23'49 10.82610 AU
min. Earth dist.	8761 Aug 30 00:01	14° ♄ 08'44	8.64254 AU	morning rise	8767 May 24 16:27	22° ♄ 23'16
direct	8761 Nov 08 02:35	10° ♄ 45'01		retrograde	8767 Sep 04 01:03	29° ♄ 42'00
evening set	8762 Feb 20 05:31	18° ♄ 17'58		opposition	8767 Nov 13 07:06	26° ♄ 21'23 -2°12'20
				min. Earth dist.	8767 Nov 13 03:24	26° ♄ 22'05 8.82707 AU
conjunction	8762 Mar 09 07:41	20° ♄ 22'45	0°03'26	direct	8768 Jan 22 02:38	23° ♄ 01'37
minimum elong	8762 Mar 09 07:40	20° ♄ 22'45	0°03'29		8768 Apr 30 01:19	0° ♄
behind sun begin	8762 Mar 09 00:39	20° ♄ 20'37		evening set	8768 May 02 06:06	0° ♄ 15'33
behind sun end	8762 Mar 09 14:42	20° ♄ 24'52				
max. Earth dist.	8762 Mar 09 04:42	20° ♄ 21'53	10.67046 AU	conjunction	8768 May 18 22:44	2° ♄ 15'48 -1°52'36
morning rise	8762 Mar 26 07:07	22° ♄ 26'42		minimum elong	8768 May 18 22:43	2° ♄ 15'47 1°52'49
desc. node	8762 Apr 28 07:29	26° ♄ 06'42		max. Earth dist.	8768 May 19 03:32	2° ♄ 17'15 10.82252 AU
retrograde	8762 Jul 04 21:24	29° ♄ 45'40		morning rise	8768 Jun 04 16:39	4° ♄ 16'25
opposition	8762 Sep 11 18:47	26° ♄ 25'38	-0°11'20	retrograde	8768 Sep 15 13:15	11° ♄ 37'32
min. Earth dist.	8762 Sep 11 20:45	26° ♄ 25'15	8.69669 AU	opposition	8768 Nov 24 22:16	8° ♄ 16'24 -2°22'35
direct	8762 Nov 21 02:11	23° ♄ 02'16		min. Earth dist.	8768 Nov 24 17:10	8° ♄ 17'21 8.81752 AU
	8763 Feb 28 10:13	0° ♄		direct	8769 Feb 02 11:36	4° ♄ 56'57
evening set	8763 Mar 04 16:55	0° ♄ 30'25		evening set	8769 May 14 06:43	12° ♄ 10'25
conjunction	8763 Mar 21 16:36	2° ♄ 33'53	-0°21'57	conjunction	8769 May 30 23:58	14° ♄ 10'57 -1°58'29
minimum elong	8763 Mar 21 16:35	2° ♄ 33'52	0°21'58	minimum elong	8769 May 30 23:57	14° ♄ 10'57 1°58'43
max. Earth dist.	8763 Mar 21 14:41	2° ♄ 33'18	10.72128 AU	max. Earth dist.	8769 May 31 06:26	14° ♄ 12'54 10.80668 AU

morning rise	8769 Jun 16 18:57	16° Π 12'03		8775 Aug 30 02:58	0° Π
retrograde	8769 Sep 28 04:41	23° Π 36'08	morning rise	8775 Aug 31 06:00	0° Π 08'12
opposition	8769 Dec 07 13:55	20° Π 14'24 -2°26'44	retrograde	8775 Dec 14 15:39	7° Π 55'35
min. Earth dist.	8769 Dec 07 07:53	20° Π 15'32 8.79578 AU	opposition	8776 Feb 21 19:30	4° Π 29'34 -0°44'36
direct	8770 Feb 14 20:31	16° Π 55'04	min. Earth dist.	8776 Feb 21 16:13	4° Π 30'12 8.47835 AU
evening set	8770 May 26 09:06	24° Π 08'53	direct	8776 Apr 29 08:31	1° Π 06'57
			evening set	8776 Aug 08 12:18	8° Π 39'34
conjunction	8770 Jun 12 03:34	26° Π 10'05 -1°59'15			
minimum elong	8770 Jun 12 03:34	26° Π 10'05 1°59'29	conjunction	8776 Aug 26 02:10	10° Π 50'03 -0°23'19
max. Earth dist.	8770 Jun 12 10:21	26° Π 12'08 10.77912 AU	minimum elong	8776 Aug 26 02:10	10° Π 50'04 0°23'24
morning rise	8770 Jun 29 00:28	28° Π 12'01	max. Earth dist.	8776 Aug 26 04:42	10° Π 50'51 10.44750 AU
	8770 Jul 14 14:42	0° Ξ	morning rise	8776 Sep 12 19:33	13° Π 01'37
retrograde	8770 Oct 10 23:10	5° Ξ 39'28	retrograde	8776 Dec 27 05:16	20° Π 52'24
opposition	8770 Dec 20 06:31	2° Ξ 17'05 -2°24'31	opposition	8777 Mar 06 00:06	17° Π 25'52 -0°12'06
min. Earth dist.	8770 Dec 20 00:34	2° Ξ 18'13 8.76267 AU	min. Earth dist.	8777 Mar 05 22:19	17° Π 26'13 8.41762 AU
	8771 Jan 22 11:29	30° κ Π	direct	8777 May 12 09:07	14° Π 02'15
direct	8771 Feb 27 04:19	28° Π 57'40	asc. node	8777 Jul 20 07:37	17° Π 56'09
	8771 Apr 03 04:49	0° Ξ	evening set	8777 Aug 22 01:22	21° Π 40'03
evening set	8771 Jun 07 14:04	6° Ξ 12'39			
conjunction	8771 Jun 24 10:32	8° Ξ 14'49 -1°54'45	conjunction	8777 Sep 08 18:18	23° Π 52'09 0°03'40
minimum elong	8771 Jun 24 10:33	8° Ξ 14'49 1°54'59	minimum elong	8777 Sep 08 18:18	23° Π 52'09 0°03'38
max. Earth dist.	8771 Jun 24 16:49	8° Ξ 16'44 10.74088 AU	behind sun begin	8777 Sep 08 11:07	23° Π 49'56
morning rise	8771 Jul 11 10:11	10° Ξ 17'55	behind sun end	8777 Sep 09 01:30	23° Π 54'23
retrograde	8771 Oct 23 18:27	17° Ξ 49'05	max. Earth dist.	8777 Sep 08 19:40	23° Π 52'33 10.38972 AU
opposition	8772 Jan 02 00:30	14° Ξ 25'58 -2°15'51	morning rise	8777 Sep 26 14:17	26° Π 05'12
min. Earth dist.	8772 Jan 01 19:11	14° Ξ 26'59 8.71926 AU		8777 Oct 31 00:05	0° $\underline{\Omega}$
direct	8772 Mar 10 15:04	11° Ξ 06'14	retrograde	8778 Jan 09 20:13	3° $\underline{\Omega}$ 58'48
evening set	8772 Jun 18 22:25	18° Ξ 23'13	opposition	8778 Mar 19 07:11	0° $\underline{\Omega}$ 31'54 0°21'29
			min. Earth dist.	8778 Mar 19 06:21	0° $\underline{\Omega}$ 32'04 8.36349 AU
conjunction	8772 Jul 05 21:45	20° Ξ 26'41 -1°45'04		8778 Mar 25 23:10	30° κ Π
minimum elong	8772 Jul 05 21:47	20° Ξ 26'42 1°45'17	direct	8778 May 25 15:32	27° Π 07'17
max. Earth dist.	8772 Jul 06 03:44	20° Ξ 28'31 10.69297 AU		8778 Jul 22 22:51	0° $\underline{\Omega}$
morning rise	8772 Jul 23 00:41	22° Ξ 31'13	evening set	8778 Sep 04 20:18	4° $\underline{\Omega}$ 50'19
	8772 Oct 24 12:02	0° Ω			
retrograde	8772 Nov 04 17:44	0° Ω 06'23	conjunction	8778 Sep 22 15:40	7° $\underline{\Omega}$ 03'46 0°30'37
	8772 Nov 16 01:22	30° κ Ξ	minimum elong	8778 Sep 22 15:39	7° $\underline{\Omega}$ 03'46 0°30'38
opposition	8773 Jan 13 20:01	26° Ξ 42'29 -2°00'57	max. Earth dist.	8778 Sep 22 16:17	7° $\underline{\Omega}$ 03'57 10.33982 AU
min. Earth dist.	8773 Jan 13 15:07	26° Ξ 43'26 8.66659 AU	morning rise	8778 Oct 10 13:16	9° $\underline{\Omega}$ 17'56
direct	8773 Mar 23 04:11	23° Ξ 22'15	retrograde	8779 Jan 23 13:17	17° $\underline{\Omega}$ 13'38
	8773 Jun 25 13:49	0° Ω	opposition	8779 Apr 01 16:24	13° $\underline{\Omega}$ 46'32 0°54'19
evening set	8773 Jul 01 11:17	0° Ω 42'04	min. Earth dist.	8779 Apr 01 16:08	13° $\underline{\Omega}$ 46'35 8.31877 AU
			direct	8779 Jun 08 01:03	10° $\underline{\Omega}$ 20'58
conjunction	8773 Jul 18 14:08	2° Ω 47'08 -1°30'28	evening set	8779 Sep 18 20:47	18° $\underline{\Omega}$ 09'00
minimum elong	8773 Jul 18 14:10	2° Ω 47'09 1°30'39			
max. Earth dist.	8773 Jul 18 20:07	2° Ω 48'59 10.63658 AU	conjunction	8779 Oct 06 17:44	20° $\underline{\Omega}$ 23'27 0°56'13
morning rise	8773 Aug 04 20:36	4° Ω 53'20	minimum elong	8779 Oct 06 17:42	20° $\underline{\Omega}$ 23'27 0°56'16
retrograde	8773 Nov 17 21:51	12° Ω 32'39	max. Earth dist.	8779 Oct 06 17:30	20° $\underline{\Omega}$ 23'23 10.30038 AU
opposition	8774 Jan 26 17:21	9° Ω 08'00 -1°40'14	morning rise	8779 Oct 24 15:55	22° $\underline{\Omega}$ 38'21
min. Earth dist.	8774 Jan 26 12:34	9° Ω 08'56 8.60652 AU		8780 Jan 11 17:05	0° \mathbb{M}
direct	8774 Apr 04 18:10	5° Ω 47'08	retrograde	8780 Feb 06 08:50	0° \mathbb{M} 35'08
evening set	8774 Jul 14 05:30	13° Ω 10'36		8780 Mar 03 02:45	30° κ $\underline{\Omega}$
	8774 Jul 29 03:26	15° Ω	opposition	8780 Apr 14 03:19	27° $\underline{\Omega}$ 08'03 1°24'31
conjunction	8774 Jul 31 12:05	15° Ω 17'27 -1°11'26	min. Earth dist.	8780 Apr 14 03:46	27° $\underline{\Omega}$ 07'58 8.28569 AU
minimum elong	8774 Jul 31 12:08	15° Ω 17'28 1°11'36	direct	8780 Jun 20 12:52	23° $\underline{\Omega}$ 41'38
max. Earth dist.	8774 Jul 31 17:39	15° Ω 19'10 10.57440 AU		8780 Sep 19 03:05	0° \mathbb{M}
morning rise	8774 Aug 17 22:19	17° Ω 25'27	evening set	8780 Oct 02 01:31	1° \mathbb{M} 34'11
retrograde	8774 Dec 01 04:55	25° Ω 08'56			
opposition	8775 Feb 08 17:11	21° Ω 43'34 -1°14'26	conjunction	8780 Oct 19 23:02	3° \mathbb{M} 49'13 1°18'56
min. Earth dist.	8775 Feb 08 12:46	21° Ω 44'25 8.54250 AU	minimum elong	8780 Oct 19 23:00	3° \mathbb{M} 49'12 1°19'03
direct	8775 Apr 17 11:36	18° Ω 21'53	max. Earth dist.	8780 Oct 19 21:16	3° \mathbb{M} 48'39 10.27344 AU
evening set	8775 Jul 27 05:38	25° Ω 49'40	morning rise	8780 Nov 06 20:52	6° \mathbb{M} 04'25
			retrograde	8781 Feb 19 04:57	14° \mathbb{M} 01'13
conjunction	8775 Aug 13 15:58	27° Ω 58'22 -0°48'43	opposition	8781 Apr 27 15:50	10° \mathbb{M} 34'23 1°50'18
minimum elong	8775 Aug 13 16:00	27° Ω 58'23 0°48'51	min. Earth dist.	8781 Apr 27 17:35	10° \mathbb{M} 34'02 8.26597 AU
max. Earth dist.	8775 Aug 13 20:17	27° Ω 59'42 10.51017 AU	direct	8781 Jul 04 04:07	7° \mathbb{M} 07'13
				8781 Oct 15 21:38	15° \mathbb{M}
			evening set	8781 Oct 16 08:44	15° \mathbb{M} 03'27

conjunction	8781 Nov 03 05:55	17°  18'37	1°37'26	max. Earth dist.	8788 Jan 24 19:30	7°  04'47	10.46239 AU
minimum elong	8781 Nov 03 05:52	17°  18'36	1°37'35	morning rise	8788 Feb 11 07:59	9°  15'12	
max. Earth dist.	8781 Nov 03 02:20	17°  17'29	10.26046 AU		8788 Apr 06 19:16	15° 	
morning rise	8781 Nov 21 02:37	19°  33'42		retrograde	8788 May 22 07:23	16°  47'20	
retrograde	8782 Mar 04 22:59	27°  29'25			8788 Jul 08 02:42	15° 	
opposition	8782 May 11 05:17	24°  03'02	2°10'05	opposition	8788 Jul 28 23:40	13°  25'56	1°32'17
min. Earth dist.	8782 May 11 08:25	24°  02'24	8.26067 AU	min. Earth dist.	8788 Jul 29 04:11	13°  25'03	8.49404 AU
direct	8782 Jul 17 23:40	20°  35'18		direct	8788 Oct 06 14:58	9°  59'53	
evening set	8782 Oct 30 16:54	28°  34'04			8788 Dec 27 01:27	15° 	
	8782 Nov 11 02:35	0° 		evening set	8789 Jan 19 21:43	17°  45'57	
conjunction	8782 Nov 17 13:06	0°  49'00	1°50'35	conjunction	8789 Feb 06 05:59	19°  54'18	1°03'45
minimum elong	8782 Nov 17 13:04	0°  48'59	1°50'46	minimum elong	8789 Feb 06 06:01	19°  54'19	1°03'55
max. Earth dist.	8782 Nov 17 07:51	0°  47'20	10.26223 AU	max. Earth dist.	8789 Feb 06 00:40	19°  52'39	10.52549 AU
morning rise	8782 Dec 05 08:06	3°  03'34		morning rise	8789 Feb 23 10:47	22°  01'37	
retrograde	8783 Mar 18 14:51	10°  57'06		retrograde	8789 Jun 04 03:11	29°  29'12	
opposition	8783 May 24 18:54	7°  31'21	2°22'42	opposition	8789 Aug 11 04:02	26°  08'32	1°04'46
min. Earth dist.	8783 May 24 23:10	7°  30'29	8.27008 AU	min. Earth dist.	8789 Aug 11 07:41	26°  07'49	8.55767 AU
direct	8783 Jul 31 20:17	4°  03'17		direct	8789 Oct 20 02:26	22°  43'21	
evening set	8783 Nov 14 00:09	12°  03'13			8790 Jan 29 14:17	0° 	
				evening set	8790 Feb 01 22:53	0°  24'13	
conjunction	8783 Dec 01 18:57	14°  17'35	1°57'38	conjunction	8790 Feb 19 04:45	2°  31'05	0°40'17
minimum elong	8783 Dec 01 18:56	14°  17'35	1°57'51	minimum elong	8790 Feb 19 04:47	2°  31'06	0°40'24
max. Earth dist.	8783 Dec 01 12:36	14°  15'34	10.27867 AU	max. Earth dist.	8790 Feb 19 00:36	2°  29'48	10.58940 AU
morning rise	8783 Dec 19 11:47	16°  31'20		morning rise	8790 Mar 08 07:23	4°  36'59	
retrograde	8784 Mar 31 05:22	24°  21'41		retrograde	8790 Jun 16 21:09	12°  00'35	
opposition	8784 Jun 06 08:15	20°  56'42	2°27'26	opposition	8790 Aug 24 05:45	8°  40'27	0°34'34
min. Earth dist.	8784 Jun 06 12:47	20°  55'48	8.29360 AU	min. Earth dist.	8790 Aug 24 08:03	8°  40'01	8.62051 AU
direct	8784 Aug 13 17:15	17°  28'35		direct	8790 Nov 02 09:30	5°  16'14	
evening set	8784 Nov 27 04:42	25°  28'13		evening set	8791 Feb 14 18:18	12°  51'46	
conjunction	8784 Dec 14 21:45	27°  41'43	1°58'16	conjunction	8791 Mar 03 21:45	14°  57'11	0°15'13
minimum elong	8784 Dec 14 21:46	27°  41'43	1°58'30	minimum elong	8791 Mar 03 21:45	14°  57'12	0°15'16
max. Earth dist.	8784 Dec 14 15:27	27°  39'43	10.30883 AU	behind sun begin	8791 Mar 03 19:24	14°  56'29	
morning rise	8785 Jan 01 12:07	29°  54'25		behind sun end	8791 Mar 04 00:07	14°  57'54	
	8785 Jan 02 06:10	0° 		max. Earth dist.	8791 Mar 03 19:17	14°  56'27	10.65074 AU
retrograde	8785 Apr 13 17:14	7°  40'47		morning rise	8791 Mar 20 22:06	17°  01'43	
opposition	8785 Jun 19 20:42	4°  16'40	2°24'10	retrograde	8791 Jun 29 12:31	24°  22'02	
min. Earth dist.	8785 Jun 20 00:57	4°  15'49	8.32995 AU	opposition	8791 Sep 06 04:53	21°  02'18	0°03'11
direct	8785 Aug 27 13:45	0°  48'46		min. Earth dist.	8791 Sep 06 06:00	21°  02'05	8.67927 AU
evening set	8785 Dec 11 05:11	8°  46'39		desc. node	8791 Oct 14 03:14	18°  29'21	
conjunction	8785 Dec 28 20:21	10°  59'05	1°52'34	direct	8791 Nov 15 11:08	17°  39'01	
minimum elong	8785 Dec 28 20:22	10°  59'06	1°52'48	evening set	8792 Feb 27 08:26	25°  09'26	
max. Earth dist.	8785 Dec 28 14:31	10°  57'15	10.35116 AU				
morning rise	8786 Jan 15 08:10	13°  10'34		conjunction	8792 Mar 15 09:24	27°  13'29	-0°10'22
retrograde	8786 Apr 27 01:17	20°  52'23		minimum elong	8792 Mar 15 09:23	27°  13'28	0°10'21
opposition	8786 Jul 03 07:38	17°  32'11	2°13'17	behind sun begin	8792 Mar 15 03:47	27°  11'47	
min. Earth dist.	8786 Jul 03 11:49	17°  32'21	8.37725 AU	behind sun end	8792 Mar 15 14:59	27°  15'10	
direct	8786 Sep 10 08:59	14°  30'14		max. Earth dist.	8792 Mar 15 08:14	27°  13'08	10.70626 AU
evening set	8786 Dec 25 00:35	21°  56'37		morning rise	8792 Apr 01 07:39	29°  16'46	
conjunction	8787 Jan 11 13:39	24°  07'48	1°41'00	retrograde	8792 Apr 07 09:41	0° 	
minimum elong	8787 Jan 11 13:41	24°  07'49	1°41'14	opposition	8792 Jul 11 00:54	6°  34'41	
max. Earth dist.	8787 Jan 11 08:11	24°  06'06	10.40330 AU	min. Earth dist.	8792 Sep 18 01:53	3°  15'11	-0°27'57
morning rise	8787 Jan 28 23:00	26°  17'56			8792 Sep 18 02:40	3°  15'02	8.73080 AU
	8787 Mar 02 07:04	0° 		direct	8792 Nov 15 07:45	30° 	
retrograde	8787 May 10 06:37	3°  54'54			8792 Nov 27 09:17	29°  52'46	
opposition	8787 Jul 16 16:47	0°  32'39	1°55'35	evening set	8792 Dec 09 10:13	0° 	
min. Earth dist.	8787 Jul 16 21:13	0°  31'47	8.43290 AU		8793 Mar 10 17:54	7°  18'34	
	8787 Jul 23 14:56	30° 		conjunction	8793 Mar 27 16:23	9°  21'22	-0°35'07
direct	8787 Sep 24 01:12	27°  05'49		minimum elong	8793 Mar 27 16:21	9°  21'22	0°35'09
	8787 Nov 23 05:10	0° 		max. Earth dist.	8793 Mar 27 15:22	9°  21'04	10.75279 AU
evening set	8788 Jan 07 14:16	4°  56'40		morning rise	8793 Apr 13 12:57	11°  23'37	
conjunction	8788 Jan 25 00:58	7°  06'29	1°24'23	retrograde	8793 Jul 23 12:00	18°  40'09	
minimum elong	8788 Jan 25 01:00	7°  06'30	1°24'35	opposition	8793 Sep 30 20:49	15°  20'43	-0°57'31
				min. Earth dist.	8793 Sep 30 21:24	15°  20'37	8.77202 AU

direct	8793 Dec 10 04:02	11° Υ 59'07	opposition	8799 Dec 14 22:46	27° Π 08'01	-2°26'21
evening set	8794 Mar 22 23:50	19° Υ 21'03	min. Earth dist.	8799 Dec 14 18:07	27° Π 08'54	8.75810 AU
			direct	8800 Feb 22 01:13	23° Π 48'06	
conjunction	8794 Apr 08 20:07	21° Υ 22'50 -0°58'09		8800 May 23 11:46	0° Θ	
minimum elong	8794 Apr 08 20:05	21° Υ 22'50 0°58'13	evening set	8800 Jun 01 11:38	1° Θ 03'22	
max. Earth dist.	8794 Apr 08 19:22	21° Υ 22'37 10.78778 AU				
morning rise	8794 Apr 25 15:18	23° Υ 24'16	conjunction	8800 Jun 18 07:20	3° Θ 05'19	-1°57'24
	8794 Jul 07 12:57	0° \mathcal{B}	minimum elong	8800 Jun 18 07:21	3° Θ 05'19	1°57'39
retrograde	8794 Aug 04 21:06	0° \mathcal{B} 40'30	max. Earth dist.	8800 Jun 18 13:26	3° Θ 07'10	10.73660 AU
	8794 Sep 02 17:31	30° $\mathcal{R}\Upsilon$	morning rise	8800 Jul 05 05:43	5° Θ 08'07	
opposition	8794 Oct 13 14:07	27° Υ 20'57 -1°24'19	retrograde	8800 Oct 17 08:51	12° Θ 38'33	
min. Earth dist.	8794 Oct 13 13:51	27° Υ 21'00 8.80108 AU	opposition	8800 Dec 26 16:22	9° Θ 15'08	-2°20'35
direct	8794 Dec 22 19:49	24° Υ 00'04	min. Earth dist.	8800 Dec 26 10:52	9° Θ 16'11	8.71554 AU
	8795 Mar 23 19:20	0° \mathcal{B}	direct	8801 Mar 05 11:26	5° Θ 54'55	
evening set	8795 Apr 04 03:03	1° \mathcal{B} 18'57	evening set	8801 Jun 13 18:47	13° Θ 11'56	
conjunction	8795 Apr 20 21:41	3° \mathcal{B} 19'58 -1°18'32	conjunction	8801 Jun 30 17:00	15° Θ 15'07	-1°50'01
minimum elong	8795 Apr 20 21:38	3° \mathcal{B} 19'57 1°18'38	minimum elong	8801 Jun 30 17:02	15° Θ 15'08	1°50'15
max. Earth dist.	8795 Apr 20 22:26	3° \mathcal{B} 20'11 10.81023 AU	max. Earth dist.	8801 Jun 30 23:32	15° Θ 17'07	10.68980 AU
morning rise	8795 May 07 15:43	5° \mathcal{B} 20'50	morning rise	8801 Jul 17 18:23	17° Θ 19'16	
retrograde	8795 Aug 17 07:35	12° \mathcal{B} 37'45	retrograde	8801 Oct 30 08:30	24° Θ 53'42	
opposition	8795 Oct 26 06:36	9° \mathcal{B} 17'52 -1°47'19	opposition	8802 Jan 08 11:37	21° Θ 29'28	-2°08'25
min. Earth dist.	8795 Oct 26 04:37	9° \mathcal{B} 18'14 8.81744 AU	min. Earth dist.	8802 Jan 08 06:00	21° Θ 30'33	8.66458 AU
direct	8796 Jan 04 09:52	5° \mathcal{B} 57'33	direct	8802 Mar 17 22:48	18° Θ 08'49	
evening set	8796 Apr 15 04:24	13° \mathcal{B} 14'04	evening set	8802 Jun 26 05:58	25° Θ 28'21	
	8796 Apr 29 21:32	15° \mathcal{B}				
conjunction	8796 May 01 21:52	15° \mathcal{B} 14'37 -1°35'27	conjunction	8802 Jul 13 07:14	27° Θ 33'01	-1°37'33
minimum elong	8796 May 01 21:50	15° \mathcal{B} 14'37 1°35'36	minimum elong	8802 Jul 13 07:16	27° Θ 33'01	1°37'45
max. Earth dist.	8796 May 02 00:27	15° \mathcal{B} 15'24 10.81988 AU	max. Earth dist.	8802 Jul 13 13:01	27° Θ 34'47	10.63576 AU
morning rise	8796 May 18 15:18	17° \mathcal{B} 15'13	morning rise	8802 Jul 30 12:11	29° Θ 38'46	
retrograde	8796 Aug 28 20:15	24° \mathcal{B} 33'36		8802 Aug 02 11:15	0° \mathcal{Q}	
opposition	8796 Nov 06 22:31	21° \mathcal{B} 13'14 -2°05'40	retrograde	8802 Nov 12 11:18	7° \mathcal{Q} 17'21	
min. Earth dist.	8796 Nov 06 19:30	21° \mathcal{B} 13'48 8.82099 AU	opposition	8803 Jan 21 08:52	3° \mathcal{Q} 52'21	-1°50'10
direct	8797 Jan 15 20:16	17° \mathcal{B} 53'18	min. Earth dist.	8803 Jan 21 03:59	3° \mathcal{Q} 53'17	8.60746 AU
evening set	8797 Apr 27 05:07	25° \mathcal{B} 08'15	direct	8803 Mar 30 11:41	0° \mathcal{Q} 31'06	
			evening set	8803 Jul 08 22:09	7° \mathcal{Q} 53'56	
conjunction	8797 May 13 21:55	27° \mathcal{B} 08'38 -1°48'15	conjunction	8803 Jul 26 03:00	10° \mathcal{Q} 00'17	-1°20'23
minimum elong	8797 May 13 21:53	27° \mathcal{B} 08'38 1°48'26	minimum elong	8803 Jul 26 03:02	10° \mathcal{Q} 00'18	1°20'33
max. Earth dist.	8797 May 14 01:14	27° \mathcal{B} 09'39 10.81680 AU	max. Earth dist.	8803 Jul 26 08:18	10° \mathcal{Q} 01'55	10.57692 AU
morning rise	8797 May 30 15:32	29° \mathcal{B} 09'18	morning rise	8803 Aug 12 11:49	12° \mathcal{Q} 07'48	
	8797 Jun 06 20:48	0° \mathcal{I}		8803 Sep 06 11:52	15° \mathcal{Q}	
retrograde	8797 Sep 10 07:23	6° \mathcal{I} 29'49	retrograde	8803 Nov 25 15:41	19° \mathcal{Q} 50'31	
opposition	8797 Nov 19 14:06	3° \mathcal{I} 08'49 -2°18'38	opposition	8804 Feb 03 08:12	16° \mathcal{Q} 24'48	-1°26'27
min. Earth dist.	8797 Nov 19 10:48	3° \mathcal{I} 09'27 8.81189 AU	min. Earth dist.	8804 Feb 03 03:54	16° \mathcal{Q} 25'38	8.54685 AU
	8798 Jan 13 11:23	30° $\mathcal{R}\mathcal{B}$		8804 Feb 21 23:59	15° $\mathcal{R}\mathcal{Q}$	
direct	8798 Jan 28 05:20	29° \mathcal{B} 49'02	direct	8804 Apr 11 05:14	13° \mathcal{Q} 02'51	
	8798 Feb 11 22:30	0° \mathcal{I}		8804 May 28 22:48	15° \mathcal{Q}	
evening set	8798 May 09 05:57	7° \mathcal{I} 03'19	evening set	8804 Jul 20 20:01	20° \mathcal{Q} 29'40	
conjunction	8798 May 25 22:47	9° \mathcal{I} 03'51 -1°56'24	conjunction	8804 Aug 07 04:47	22° \mathcal{Q} 37'51	-0°59'09
minimum elong	8798 May 25 22:46	9° \mathcal{I} 03'51 1°56'37	minimum elong	8804 Aug 07 04:49	22° \mathcal{Q} 37'51	0°59'17
max. Earth dist.	8798 May 26 02:18	9° \mathcal{I} 04'55 10.80136 AU	max. Earth dist.	8804 Aug 07 10:00	22° \mathcal{Q} 39'28	10.51591 AU
morning rise	8798 Jun 11 17:21	11° \mathcal{I} 04'53	morning rise	8804 Aug 24 17:22	24° \mathcal{Q} 47'10	
retrograde	8798 Sep 22 20:55	18° \mathcal{I} 28'13		8804 Oct 12 15:30	0° \mathcal{P}	
opposition	8798 Dec 02 06:06	15° \mathcal{I} 06'29 -2°25'39	retrograde	8804 Dec 08 01:01	2° \mathcal{P} 33'51	
min. Earth dist.	8798 Dec 02 02:30	15° \mathcal{I} 07'10 8.79063 AU		8805 Feb 04 04:25	30° $\mathcal{R}\mathcal{Q}$	
direct	8799 Feb 09 15:47	11° \mathcal{I} 46'42	opposition	8805 Feb 15 09:54	29° \mathcal{Q} 07'32	-0°58'11
evening set	8799 May 21 07:41	19° \mathcal{I} 01'04	min. Earth dist.	8805 Feb 15 05:48	29° \mathcal{Q} 08'20	8.48556 AU
			direct	8805 Apr 24 01:59	25° \mathcal{Q} 44'50	
				8805 Jul 05 12:14	0° \mathcal{P}	
conjunction	8799 Jun 07 01:30	21° \mathcal{I} 02'08 -1°59'31	evening set	8805 Aug 03 00:13	3° \mathcal{P} 16'11	
minimum elong	8799 Jun 07 01:30	21° \mathcal{I} 02'08 1°59'45				
max. Earth dist.	8799 Jun 07 06:14	21° \mathcal{I} 03'34 10.77428 AU				
morning rise	8799 Jun 23 21:39	23° \mathcal{I} 03'53	conjunction	8805 Aug 20 12:45	5° \mathcal{P} 26'09	-0°34'44
	8799 Sep 10 17:40	0° Θ	minimum elong	8805 Aug 20 12:46	5° \mathcal{P} 26'10	0°34'51
retrograde	8799 Oct 05 13:52	0° Θ 30'35	max. Earth dist.	8805 Aug 20 17:55	5° \mathcal{P} 27'46	10.45563 AU
	8799 Oct 30 15:49	30° $\mathcal{R}\mathcal{I}$	morning rise	8805 Sep 07 04:42	7° \mathcal{P} 37'13	

retrograde	8805 Dec 21 14:37	15° \mathring{M} 27'31		retrograde	8812 Mar 12 04:49	5° \mathring{A} 28'30	
opposition	8806 Feb 28 14:01	12° \mathring{M} 00'45 -0°26'36		opposition	8812 May 18 09:12	2° \mathring{A} 02'54	2°18'00
min. Earth dist.	8806 Feb 28 10:01	12° \mathring{M} 01'32 8.42669 AU		min. Earth dist.	8812 May 18 11:52	2° \mathring{A} 02'21	8.27277 AU
direct	8806 May 07 00:52	8° \mathring{M} 37'16			8812 Jun 14 13:24	30° \mathring{M}	
evening set	8806 Aug 16 11:00	16° \mathring{M} 13'34		direct	8812 Jul 25 06:28	28° \mathring{M} 35'28	
					8812 Sep 03 14:05	0° \mathring{A}	
conjunction	8806 Sep 03 02:49	18° \mathring{M} 25'13 -0°08'19		evening set	8812 Nov 07 07:11	6° \mathring{A} 34'59	
minimum elong	8806 Sep 03 02:49	18° \mathring{M} 25'13 0°08'23					
behind sun begin	8806 Sep 02 20:28	18° \mathring{M} 23'15		conjunction	8812 Nov 25 02:43	8° \mathring{A} 49'36	1°55'13
behind sun end	8806 Sep 03 09:10	18° \mathring{M} 27'11		minimum elong	8812 Nov 25 02:42	8° \mathring{A} 49'35	1°55'25
max. Earth dist.	8806 Sep 03 06:59	18° \mathring{M} 26'30 10.39932 AU		max. Earth dist.	8812 Nov 24 22:00	8° \mathring{A} 48'06	10.27861 AU
morning rise	8806 Sep 20 21:38	20° \mathring{M} 37'51		morning rise	8812 Dec 12 20:19	11° \mathring{A} 03'40	
asc. node	8806 Dec 27 21:31	28° \mathring{M} 28'20		retrograde	8813 Mar 25 21:53	18° \mathring{A} 55'31	
retrograde	8807 Jan 04 06:56	28° \mathring{M} 31'12		opposition	8813 May 31 23:12	15° \mathring{A} 30'40	2°26'07
opposition	8807 Mar 13 20:45	25° \mathring{M} 04'11 0°06'47		min. Earth dist.	8813 Jun 01 03:17	15° \mathring{A} 29'51	8.29014 AU
min. Earth dist.	8807 Mar 13 17:40	25° \mathring{M} 04'48 8.37352 AU		direct	8813 Aug 08 02:56	12° \mathring{A} 03'04	
direct	8807 May 20 04:09	21° \mathring{M} 39'53		evening set	8813 Nov 21 13:24	20° \mathring{A} 02'59	
evening set	8807 Aug 30 04:12	29° \mathring{M} 21'22					
	8807 Sep 04 09:07	0° \mathring{A}		conjunction	8813 Dec 09 07:16	22° \mathring{A} 16'52	1°58'35
conjunction	8807 Sep 16 22:38	1° \mathring{A} 34'27 0°18'56		minimum elong	8813 Dec 09 07:16	22° \mathring{A} 16'52	1°58'48
minimum elong	8807 Sep 16 22:38	1° \mathring{A} 34'27 0°18'55		max. Earth dist.	8813 Dec 09 00:55	22° \mathring{A} 14'51	10.30168 AU
max. Earth dist.	8807 Sep 17 01:07	1° \mathring{A} 35'13 10.35008 AU		morning rise	8813 Dec 26 22:35	24° \mathring{A} 30'01	
morning rise	8807 Oct 04 19:38	3° \mathring{A} 48'21			8814 Feb 15 20:00	0° \mathring{B}	
retrograde	8808 Jan 18 00:40	11° \mathring{A} 44'02		retrograde	8814 Apr 08 11:13	2° \mathring{B} 18'20	
opposition	8808 Mar 26 05:52	8° \mathring{A} 16'57 0°40'14			8814 May 31 14:44	30° \mathring{R} \mathring{A}	
min. Earth dist.	8808 Mar 26 04:15	8° \mathring{A} 17'17 8.32895 AU		opposition	8814 Jun 14 12:36	28° \mathring{A} 54'18	2°26'14
direct	8808 Jun 01 12:19	4° \mathring{A} 51'51		min. Earth dist.	8814 Jun 14 18:00	28° \mathring{A} 53'13	8.31899 AU
evening set	8808 Sep 12 03:21	12° \mathring{A} 38'26		direct	8814 Aug 22 00:30	25° \mathring{A} 26'43	
					8814 Nov 06 05:33	0° \mathring{B}	
conjunction	8808 Sep 29 23:35	14° \mathring{A} 52'38 0°45'20		evening set	8814 Dec 05 16:25	3° \mathring{B} 25'42	
minimum elong	8808 Sep 29 23:33	14° \mathring{A} 52'37 0°45'23					
max. Earth dist.	8808 Sep 30 00:09	14° \mathring{A} 52'48 10.31053 AU		conjunction	8814 Dec 23 08:20	5° \mathring{B} 38'37	1°55'30
morning rise	8808 Oct 17 21:44	17° \mathring{A} 07'24		minimum elong	8814 Dec 23 08:21	5° \mathring{B} 38'38	1°55'45
retrograde	8809 Jan 30 19:57	25° \mathring{A} 04'27		max. Earth dist.	8814 Dec 23 00:45	5° \mathring{B} 36'13	10.33621 AU
opposition	8809 Apr 08 16:54	21° \mathring{A} 37'32 1°11'49		morning rise	8815 Jan 09 21:20	7° \mathring{B} 50'40	
min. Earth dist.	8809 Apr 08 16:49	21° \mathring{A} 37'33 8.29541 AU		retrograde	8815 Apr 21 20:16	15° \mathring{B} 34'44	
direct	8809 Jun 15 00:20	18° \mathring{A} 11'42		opposition	8815 Jun 28 00:40	12° \mathring{B} 11'33	2°18'29
evening set	8809 Sep 26 07:13	26° \mathring{A} 02'56		min. Earth dist.	8815 Jun 28 06:30	12° \mathring{B} 10'23	8.35870 AU
				direct	8815 Sep 04 22:01	8° \mathring{B} 44'11	
conjunction	8809 Oct 14 04:25	28° \mathring{A} 17'49 1°09'30		evening set	8815 Dec 19 14:46	16° \mathring{B} 40'49	
minimum elong	8809 Oct 14 04:23	28° \mathring{A} 17'49 1°09'35					
max. Earth dist.	8809 Oct 14 03:31	28° \mathring{A} 17'32 10.28287 AU		conjunction	8816 Jan 06 04:37	18° \mathring{B} 52'36	1°46'20
	8809 Oct 27 16:31	0° \mathring{M}		minimum elong	8816 Jan 06 04:39	18° \mathring{B} 52'37	1°46'34
morning rise	8809 Nov 01 02:39	0° \mathring{M} 33'02		max. Earth dist.	8816 Jan 05 20:56	18° \mathring{B} 50'11	10.38106 AU
retrograde	8810 Feb 13 15:32	8° \mathring{M} 30'26		morning rise	8816 Jan 23 15:13	21° \mathring{B} 03'23	
opposition	8810 Apr 22 05:37	5° \mathring{M} 03'48 1°39'43		retrograde	8816 May 04 02:56	28° \mathring{B} 42'47	
min. Earth dist.	8810 Apr 22 06:25	5° \mathring{M} 03'38 8.27463 AU		opposition	8816 Jul 10 11:08	25° \mathring{B} 20'22	2°03'32
direct	8810 Jun 28 16:21	1° \mathring{M} 37'19		min. Earth dist.	8816 Jul 10 16:30	25° \mathring{B} 19'18	8.40764 AU
evening set	8810 Oct 10 14:10	9° \mathring{M} 32'24		direct	8816 Sep 17 16:32	21° \mathring{B} 53'24	
				evening set	8817 Jan 01 07:14	29° \mathring{B} 46'26	
conjunction	8810 Oct 28 11:34	11° \mathring{M} 47'34 1°29'57			8817 Jan 03 03:27	0° \mathring{A}	
minimum elong	8810 Oct 28 11:32	11° \mathring{M} 47'33 1°30'06		conjunction	8817 Jan 18 18:59	1° \mathring{A} 56'56	1°31'43
max. Earth dist.	8810 Oct 28 09:44	11° \mathring{M} 46'59 10.26841 AU		minimum elong	8817 Jan 18 19:01	1° \mathring{A} 56'57	1°31'56
morning rise	8810 Nov 15 08:56	14° \mathring{M} 02'46		max. Earth dist.	8817 Jan 18 12:15	1° \mathring{A} 54'49	10.43410 AU
	8810 Nov 23 03:27	15° \mathring{M}		morning rise	8817 Feb 05 03:08	4° \mathring{A} 06'20	
retrograde	8811 Feb 27 10:27	21° \mathring{M} 59'21		retrograde	8817 May 17 05:47	11° \mathring{A} 40'55	
opposition	8811 May 05 19:16	18° \mathring{M} 33'09 2°02'14		opposition	8817 Jul 23 19:22	8° \mathring{A} 19'11	1°42'27
min. Earth dist.	8811 May 05 20:47	18° \mathring{M} 32'51 8.26727 AU		min. Earth dist.	8817 Jul 23 23:47	8° \mathring{A} 18'20	8.46340 AU
direct	8811 Jul 12 11:14	15° \mathring{M} 06'08		direct	8817 Oct 01 08:21	4° \mathring{A} 52'48	
evening set	8811 Oct 24 22:50	23° \mathring{M} 04'00		evening set	8818 Jan 14 17:39	12° \mathring{A} 41'18	
conjunction	8811 Nov 11 19:38	25° \mathring{M} 19'03 1°45'30		conjunction	8818 Feb 01 03:11	14° \mathring{A} 50'24	1°12'38
minimum elong	8811 Nov 11 19:36	25° \mathring{M} 19'03 1°45'41		minimum elong	8818 Feb 01 03:13	14° \mathring{A} 50'25	1°12'50
max. Earth dist.	8811 Nov 11 16:30	25° \mathring{M} 18'04 10.26729 AU		max. Earth dist.	8818 Jan 31 21:52	14° \mathring{A} 48'45	10.49261 AU
morning rise	8811 Nov 29 15:21	27° \mathring{M} 33'50			8818 Feb 02 09:58	15° \mathring{A}	
	8811 Dec 19 23:11	0° \mathring{A}		morning rise	8818 Feb 18 08:56	16° \mathring{A} 58'25	

retrograde	8818 May 30 04:23	24° \approx 28'16		morning rise	8824 May 01 23:52	0° \mathcal{B} 37'08
opposition	8818 Aug 06 00:56	21° \approx 07'09	1°16'31	retrograde	8824 Aug 11 10:36	7° \mathcal{B} 53'21
min. Earth dist.	8818 Aug 06 04:53	21° \approx 06'23	8.52315 AU	opposition	8824 Oct 20 07:33	4° \mathcal{B} 33'16 -1°38'14
direct	8818 Oct 14 20:45	17° \approx 41'25		min. Earth dist.	8824 Oct 20 05:24	4° \mathcal{B} 33'40 8.80980 AU
evening set	8819 Jan 27 21:47	25° \approx 24'52		direct	8824 Dec 29 11:51	1° \mathcal{B} 12'24
				evening set	8825 Apr 10 11:37	8° \mathcal{B} 29'27
conjunction	8819 Feb 14 04:55	27° \approx 32'30	0°50'13			
minimum elong	8819 Feb 14 04:56	27° \approx 32'30	0°50'21	conjunction	8825 Apr 27 05:23	10° \mathcal{B} 30'05 -1°28'49
max. Earth dist.	8819 Feb 14 00:23	27° \approx 31'06	10.55352 AU	minimum elong	8825 Apr 27 05:21	10° \mathcal{B} 30'05 1°28'58
morning rise	8819 Mar 03 08:24	29° \approx 39'05		max. Earth dist.	8825 Apr 27 07:50	10° \mathcal{B} 30'50 10.81826 AU
	8819 Mar 06 05:41	0° \mathcal{H}		morning rise	8825 May 13 23:08	12° \mathcal{B} 30'42
retrograde	8819 Jun 11 24:00	7° \mathcal{H} 04'39			8825 Jun 04 22:20	15° \mathcal{B}
opposition	8819 Aug 19 03:59	3° \mathcal{H} 44'01	0°47'16	retrograde	8825 Aug 23 20:29	19° \mathcal{B} 47'46
min. Earth dist.	8819 Aug 19 07:38	3° \mathcal{H} 43'19	8.58390 AU	opposition	8825 Nov 01 22:56	16° \mathcal{B} 27'25 -1°58'33
direct	8819 Oct 28 04:57	0° \mathcal{H} 19'02		min. Earth dist.	8825 Nov 01 19:54	16° \mathcal{B} 27'59 8.82527 AU
evening set	8820 Feb 09 19:44	7° \mathcal{H} 57'10			8825 Nov 22 00:27	15° \mathcal{R} \mathcal{B}
				direct	8826 Jan 10 23:33	13° \mathcal{B} 07'09
conjunction	8820 Feb 27 00:14	10° \mathcal{H} 03'19	0°25'40		8826 Feb 28 04:35	15° \mathcal{B}
minimum elong	8820 Feb 27 00:15	10° \mathcal{H} 03'20	0°25'45	evening set	8826 Apr 22 11:49	20° \mathcal{B} 22'07
max. Earth dist.	8820 Feb 26 20:17	10° \mathcal{H} 02'07	10.61383 AU			
morning rise	8820 Mar 15 01:37	12° \mathcal{H} 08'33		conjunction	8826 May 09 04:42	22° \mathcal{B} 22'22 -1°43'21
retrograde	8820 Jun 23 15:02	19° \mathcal{H} 30'27		minimum elong	8826 May 09 04:41	22° \mathcal{B} 22'21 1°43'32
opposition	8820 Aug 31 04:21	16° \mathcal{H} 10'11	0°16'12	max. Earth dist.	8826 May 09 08:39	22° \mathcal{B} 23'33 10.82718 AU
min. Earth dist.	8820 Aug 31 07:14	16° \mathcal{H} 09'38	8.64278 AU	morning rise	8826 May 25 22:12	24° \mathcal{B} 22'49
direct	8820 Nov 09 09:09	12° \mathcal{H} 46'01			8826 Jul 21 11:55	0° \mathcal{I}
evening set	8821 Feb 21 11:58	20° \mathcal{H} 18'55		retrograde	8826 Sep 05 06:43	1° \mathcal{I} 41'32
					8826 Oct 22 13:16	30° \mathcal{R} \mathcal{B}
conjunction	8821 Mar 10 13:55	22° \mathcal{H} 23'39	0°00'12	opposition	8826 Nov 14 13:47	28° \mathcal{B} 20'48 -2°13'45
minimum elong	8821 Mar 10 13:55	22° \mathcal{H} 23'39	0°00'14	min. Earth dist.	8826 Nov 14 09:19	28° \mathcal{B} 21'38 8.82816 AU
behind sun begin	8821 Mar 10 06:54	22° \mathcal{H} 21'32		direct	8827 Jan 23 09:15	25° \mathcal{B} 01'01
behind sun end	8821 Mar 10 20:56	22° \mathcal{H} 25'46			8827 Apr 14 18:22	0° \mathcal{I}
max. Earth dist.	8821 Mar 10 10:57	22° \mathcal{H} 22'48	10.67078 AU	evening set	8827 May 04 11:42	2° \mathcal{I} 14'41
desc. node	8821 Mar 13 09:31	22° \mathcal{H} 44'22				
morning rise	8821 Mar 27 13:18	24° \mathcal{H} 27'36		conjunction	8827 May 21 04:27	4° \mathcal{I} 14'54 -1°53'27
	8821 May 21 02:08	0° \mathcal{Y}		minimum elong	8827 May 21 04:25	4° \mathcal{I} 14'54 1°53'40
retrograde	8821 Jul 06 02:56	1° \mathcal{Y} 46'41		max. Earth dist.	8827 May 21 10:10	4° \mathcal{I} 16'38 10.82354 AU
	8821 Aug 22 20:02	30° \mathcal{R} \mathcal{H}		morning rise	8827 Jun 06 22:18	6° \mathcal{I} 15'30
opposition	8821 Sep 13 02:00	28° \mathcal{H} 26'38	-0°15'12	retrograde	8827 Sep 17 20:11	13° \mathcal{I} 36'36
min. Earth dist.	8821 Sep 13 03:16	28° \mathcal{H} 26'23	8.69711 AU	opposition	8827 Nov 27 04:50	10° \mathcal{I} 15'22 -2°23'14
direct	8821 Nov 22 10:24	25° \mathcal{H} 03'19		min. Earth dist.	8827 Nov 26 23:05	10° \mathcal{I} 16'27 8.81848 AU
	8822 Feb 11 21:18	0° \mathcal{Y}		direct	8828 Feb 04 18:16	6° \mathcal{I} 55'54
evening set	8822 Mar 05 23:09	2° \mathcal{Y} 31'20		evening set	8828 May 15 12:11	14° \mathcal{I} 09'06
conjunction	8822 Mar 22 22:47	4° \mathcal{Y} 34'46	-0°25'02	conjunction	8828 Jun 01 05:28	16° \mathcal{I} 09'38 -1°58'42
minimum elong	8822 Mar 22 22:46	4° \mathcal{Y} 34'45	0°25'03	minimum elong	8828 Jun 01 05:28	16° \mathcal{I} 09'38 1°58'56
max. Earth dist.	8822 Mar 22 21:49	4° \mathcal{Y} 34'28	10.72178 AU	max. Earth dist.	8828 Jun 01 12:01	16° \mathcal{I} 11'37 10.80759 AU
morning rise	8822 Apr 08 20:12	6° \mathcal{Y} 37'32		morning rise	8828 Jun 18 00:36	18° \mathcal{I} 10'45
retrograde	8822 Jul 18 15:18	13° \mathcal{Y} 54'45		retrograde	8828 Sep 29 11:45	25° \mathcal{I} 34'46
opposition	8822 Sep 25 21:27	10° \mathcal{Y} 34'47	-0°45'33	opposition	8828 Dec 08 20:22	22° \mathcal{I} 12'58 -2°26'35
min. Earth dist.	8822 Sep 25 20:57	10° \mathcal{Y} 34'53	8.74435 AU	min. Earth dist.	8828 Dec 08 14:29	22° \mathcal{I} 14'04 8.79666 AU
direct	8822 Dec 05 06:58	7° \mathcal{Y} 12'22		direct	8829 Feb 16 01:33	18° \mathcal{I} 53'37
evening set	8823 Mar 18 06:13	14° \mathcal{Y} 36'00		evening set	8829 May 27 14:31	26° \mathcal{I} 07'13
conjunction	8823 Apr 04 03:37	16° \mathcal{Y} 38'17	-0°48'53	conjunction	8829 Jun 13 09:03	28° \mathcal{I} 08'24 -1°58'48
minimum elong	8823 Apr 04 03:35	16° \mathcal{Y} 38'16	0°48'56	minimum elong	8829 Jun 13 09:04	28° \mathcal{I} 08'24 1°59'02
max. Earth dist.	8823 Apr 04 04:34	16° \mathcal{Y} 38'34	10.76444 AU	max. Earth dist.	8829 Jun 13 15:18	28° \mathcal{I} 10'17 10.78004 AU
morning rise	8823 Apr 20 23:15	18° \mathcal{Y} 40'05			8829 Jun 28 19:24	0° \mathcal{G}
retrograde	8823 Jul 31 01:37	25° \mathcal{Y} 56'19		morning rise	8829 Jun 30 06:17	0° \mathcal{G} 10'22
opposition	8823 Oct 08 15:09	22° \mathcal{Y} 36'22	-1°13'36	retrograde	8829 Oct 12 03:53	7° \mathcal{G} 37'44
min. Earth dist.	8823 Oct 08 13:31	22° \mathcal{Y} 36'40	8.78242 AU	opposition	8829 Dec 21 12:40	4° \mathcal{G} 15'19 -2°23'34
direct	8823 Dec 17 21:48	19° \mathcal{Y} 14'47		min. Earth dist.	8829 Dec 21 07:09	4° \mathcal{G} 16'22 8.76357 AU
evening set	8824 Mar 29 10:07	26° \mathcal{Y} 34'45		direct	8830 Feb 28 10:21	0° \mathcal{G} 55'51
				evening set	8830 Jun 08 19:23	8° \mathcal{G} 10'42
conjunction	8824 Apr 15 05:27	28° \mathcal{Y} 36'04	-1°10'26	conjunction	8830 Jun 25 16:06	10° \mathcal{G} 12'54 -1°53'40
minimum elong	8824 Apr 15 05:25	28° \mathcal{Y} 36'03	1°10'31	minimum elong	8830 Jun 25 16:07	10° \mathcal{G} 12'55 1°53'55
max. Earth dist.	8824 Apr 15 07:25	28° \mathcal{Y} 36'39	10.79703 AU	max. Earth dist.	8830 Jun 25 22:28	10° \mathcal{G} 14'50 10.74189 AU
	8824 Apr 26 19:23	0° \mathcal{B}				

morning rise	8830 Jul 12 16:01	12°☾16'01		max. Earth dist.	8836 Sep 10 01:54	25°♊50'20	10.39109 AU
retrograde	8830 Oct 25 00:10	19°☾47'08		morning rise	8836 Sep 27 20:15	28°♊02'52	
opposition	8831 Jan 03 06:23	16°☾24'00 -2°14'09			8836 Oct 14 05:23	0°♊	
min. Earth dist.	8831 Jan 03 00:53	16°☾25'03 8.72035 AU		retrograde	8837 Jan 11 01:04	5°♊56'25	
direct	8831 Mar 12 21:35	13°☾04'16		opposition	8837 Mar 20 12:05	2°♊29'36 0°25'10	
evening set	8831 Jun 21 03:39	20°☾21'05		min. Earth dist.	8837 Mar 20 11:01	2°♊29'48 8.36463 AU	
					8837 Apr 24 12:01	30°♊	
conjunction	8831 Jul 08 03:21	22°☾24'37 -1°43'24		direct	8837 May 26 20:48	29°♊05'02	
minimum elong	8831 Jul 08 03:23	22°☾24'37 1°43'37			8837 Jun 27 20:54	0°♊	
max. Earth dist.	8831 Jul 08 10:19	22°☾26'44 10.69431 AU		evening set	8837 Sep 06 02:17	6°♊48'11	
morning rise	8831 Jul 25 06:26	24°☾29'10					
	8831 Sep 17 02:14	0°♊		conjunction	8837 Sep 23 21:47	9°♊01'41 0°33'30	
retrograde	8831 Nov 07 00:11	2°♊04'15		minimum elong	8837 Sep 23 21:45	9°♊01'40 0°33'31	
	8831 Dec 29 07:57	30°♊		max. Earth dist.	8837 Sep 23 22:33	9°♊01'55 10.34068 AU	
opposition	8832 Jan 16 01:41	28°☾40'20 -1°58'34		morning rise	8837 Oct 11 19:16	11°♊15'50	
min. Earth dist.	8832 Jan 15 19:59	28°☾41'26 8.66822 AU		retrograde	8838 Jan 24 20:15	19°♊11'28	
direct	8832 Mar 24 09:16	25°☾20'08		opposition	8838 Apr 02 21:17	15°♊44'28 0°57'43	
	8832 Jun 09 10:24	0°♊		min. Earth dist.	8838 Apr 02 20:56	15°♊44'32 8.31947 AU	
evening set	8832 Jul 02 16:36	2°♊39'47		direct	8838 Jun 09 04:41	12°♊18'56	
				evening set	8838 Sep 20 02:58	20°♊07'10	
conjunction	8832 Jul 19 19:45	4°♊44'54 -1°28'18		conjunction	8838 Oct 07 23:51	22°♊21'37 0°58'48	
minimum elong	8832 Jul 19 19:47	4°♊44'54 1°28'29		minimum elong	8838 Oct 07 23:48	22°♊21'36 0°58'52	
max. Earth dist.	8832 Jul 20 02:18	4°♊46'54 10.63856 AU		max. Earth dist.	8838 Oct 07 23:08	22°♊21'24 10.30089 AU	
morning rise	8832 Aug 06 02:27	6°♊51'07		morning rise	8838 Oct 25 21:55	24°♊36'30	
retrograde	8832 Nov 19 03:32	14°♊30'16			8838 Dec 14 12:12	0°♊	
opposition	8833 Jan 27 22:47	11°♊05'38 -1°37'16		retrograde	8839 Feb 07 15:16	2°♊33'14	
min. Earth dist.	8833 Jan 27 17:43	11°♊06'37 8.60872 AU			8839 Apr 05 03:27	30°♊	
direct	8833 Apr 05 23:20	7°♊44'47		opposition	8839 Apr 16 08:22	29°♊06'15 1°27'28	
	8833 Jul 14 07:56	15°♊		min. Earth dist.	8839 Apr 16 09:19	29°♊06'03 8.28616 AU	
evening set	8833 Jul 15 10:56	15°♊08'08		direct	8839 Jun 22 17:40	25°♊39'50	
					8839 Sep 03 20:47	0°♊	
conjunction	8833 Aug 01 17:44	17°♊15'01 -1°08'51		evening set	8839 Oct 04 07:50	3°♊32'37	
minimum elong	8833 Aug 01 17:46	17°♊15'02 1°09'01					
max. Earth dist.	8833 Aug 01 22:42	17°♊16'33 10.57674 AU		conjunction	8839 Oct 22 05:12	5°♊47'37 1°21'04	
morning rise	8833 Aug 19 04:17	19°♊23'03		minimum elong	8839 Oct 22 05:09	5°♊47'36 1°21'12	
retrograde	8833 Dec 02 11:14	27°♊06'19		max. Earth dist.	8839 Oct 22 02:20	5°♊46'43 10.27382 AU	
opposition	8834 Feb 09 22:26	23°♊41'01 -1°11'03		morning rise	8839 Nov 09 03:00	8°♊02'48	
min. Earth dist.	8834 Feb 09 18:35	23°♊41'46 8.54478 AU			8840 Jan 18 22:42	15°♊	
direct	8834 Apr 18 16:01	20°♊19'22		retrograde	8840 Feb 21 09:50	15°♊59'32	
evening set	8834 Jul 28 11:07	27°♊47'06			8840 Mar 26 01:45	15°♊	
				opposition	8840 Apr 28 20:59	12°♊32'48 1°52'37	
conjunction	8834 Aug 14 21:37	29°♊55'49 -0°45'51		min. Earth dist.	8840 Apr 28 23:36	12°♊32'16 8.26635 AU	
minimum elong	8834 Aug 14 21:38	29°♊55'50 0°45'59		direct	8840 Jul 05 10:28	9°♊05'37	
max. Earth dist.	8834 Aug 15 00:58	29°♊56'52 10.51239 AU			8840 Sep 30 18:24	15°♊	
	8834 Aug 15 11:06	0°♊		evening set	8840 Oct 17 15:14	17°♊02'04	
morning rise	8834 Sep 01 11:56	2°♊05'42					
retrograde	8834 Dec 15 21:21	9°♊52'53		conjunction	8840 Nov 04 12:14	19°♊17'12 1°38'59	
opposition	8835 Feb 23 00:37	6°♊26'58 -0°40'56		minimum elong	8840 Nov 04 12:12	19°♊17'12 1°39'10	
min. Earth dist.	8835 Feb 22 22:08	6°♊27'28 8.48037 AU		max. Earth dist.	8840 Nov 04 07:37	19°♊15'44 10.26079 AU	
direct	8835 May 01 13:15	3°♊04'23		morning rise	8840 Nov 22 08:52	21°♊32'15	
evening set	8835 Aug 10 17:49	10°♊37'02		retrograde	8841 Mar 06 03:36	29°♊27'52	
				opposition	8841 May 12 10:25	26°♊01'34 2°11'38	
conjunction	8835 Aug 28 07:54	12°♊47'33 -0°20'17		min. Earth dist.	8841 May 12 14:06	26°♊00'50 8.26103 AU	
minimum elong	8835 Aug 28 07:55	12°♊47'33 0°20'23		direct	8841 Jul 19 05:21	22°♊33'50	
max. Earth dist.	8835 Aug 28 10:12	12°♊48'16 10.44935 AU			8841 Oct 27 13:13	0°♊	
morning rise	8835 Sep 15 01:29	14°♊59'08		evening set	8841 Oct 31 23:21	0°♊32'44	
retrograde	8835 Dec 29 09:37	22°♊49'49					
opposition	8836 Mar 07 05:07	19°♊23'22 -0°08'19		conjunction	8841 Nov 18 19:26	2°♊47'38 1°51'29	
min. Earth dist.	8836 Mar 07 03:33	19°♊23'40 8.41924 AU		minimum elong	8841 Nov 18 19:24	2°♊47'38 1°51'41	
direct	8836 May 13 15:23	15°♊59'47		max. Earth dist.	8841 Nov 18 13:49	2°♊45'52 10.26257 AU	
asc. node	8836 Jun 09 00:24	16°♊37'19		morning rise	8841 Dec 06 14:17	5°♊02'10	
evening set	8836 Aug 23 07:02	23°♊37'41		retrograde	8842 Mar 19 20:27	12°♊55'35	
				opposition	8842 May 26 00:08	9°♊29'52 2°23'23	
conjunction	8836 Sep 10 00:14	25°♊49'50 0°06'42		min. Earth dist.	8842 May 26 04:14	9°♊29'02 8.27045 AU	
minimum elong	8836 Sep 10 00:14	25°♊49'50 0°06'39		direct	8842 Aug 02 01:59	6°♊01'47	
behind sun begin	8836 Sep 09 17:28	25°♊47'44		evening set	8842 Nov 15 06:22	14°♊01'46	
behind sun end	8836 Sep 10 07:00	25°♊51'55					

conjunction	8842 Dec 03 01:08	16° \mathbb{X} 16'06	1°57'50			8849 Jan 14 01:07	0° \mathbb{X}	
minimum elong	8842 Dec 03 01:07	16° \mathbb{X} 16'06	1°58'04	evening set		8849 Feb 03 03:37	2° \mathbb{X} 20'22	
max. Earth dist.	8842 Dec 02 19:13	16° \mathbb{X} 14'14	10.27905 AU					
morning rise	8842 Dec 20 17:45	18° \mathbb{X} 29'49		conjunction		8849 Feb 20 09:27	4° \mathbb{X} 27'13	0°37'22
retrograde	8843 Apr 02 10:35	26° \mathbb{X} 20'01		minimum elong		8849 Feb 20 09:28	4° \mathbb{X} 27'13	0°37'29
opposition	8843 Jun 08 13:31	22° \mathbb{X} 55'02	2°27'15	max. Earth dist.		8849 Feb 20 06:14	4° \mathbb{X} 26'13	10.58983 AU
min. Earth dist.	8843 Jun 08 17:35	22° \mathbb{X} 54'13	8.29398 AU	morning rise		8849 Mar 09 11:52	6° \mathbb{X} 33'04	
direct	8843 Aug 15 23:22	19° \mathbb{X} 26'54		retrograde		8849 Jun 18 02:44	13° \mathbb{X} 56'41	
evening set	8843 Nov 29 10:50	27° \mathbb{X} 26'30		opposition		8849 Aug 25 11:07	10° \mathbb{X} 36'32	0°30'54
				min. Earth dist.		8849 Aug 25 12:55	10° \mathbb{X} 36'11	8.62092 AU
				direct		8849 Nov 03 13:47	7° \mathbb{X} 12'22	
				evening set		8850 Feb 15 22:55	14° \mathbb{X} 47'44	
conjunction	8843 Dec 17 03:52	29° \mathbb{X} 39'58	1°57'46					
minimum elong	8843 Dec 17 03:53	29° \mathbb{X} 39'59	1°58'00					
max. Earth dist.	8843 Dec 16 22:05	29° \mathbb{X} 38'09	10.30922 AU					
	8843 Dec 19 19:08	0° \mathbb{Z}		conjunction		8850 Mar 05 02:16	16° \mathbb{X} 53'08	0°12'12
morning rise	8844 Jan 03 17:58	1° \mathbb{Z} 52'37		minimum elong		8850 Mar 05 02:16	16° \mathbb{X} 53'08	0°12'16
retrograde	8844 Apr 14 22:14	9° \mathbb{Z} 38'49		behind sun begin		8850 Mar 04 21:31	16° \mathbb{X} 51'41	
opposition	8844 Jun 21 01:59	6° \mathbb{Z} 14'41	2°23'07	behind sun end		8850 Mar 05 07:02	16° \mathbb{X} 54'35	
min. Earth dist.	8844 Jun 21 06:18	6° \mathbb{Z} 13'49	8.33031 AU	max. Earth dist.		8850 Mar 05 00:25	16° \mathbb{X} 52'34	10.65129 AU
direct	8844 Aug 28 19:38	2° \mathbb{Z} 46'44		morning rise		8850 Mar 22 02:28	18° \mathbb{X} 57'38	
evening set	8844 Dec 12 11:09	10° \mathbb{Z} 44'33		retrograde		8850 Jun 30 17:20	26° \mathbb{X} 18'00	
				desc. node		8850 Sep 01 01:00	23° \mathbb{X} 27'26	
conjunction	8844 Dec 30 02:11	12° \mathbb{Z} 56'56	1°51'23	opposition		8850 Sep 07 10:16	22° \mathbb{X} 58'17	-0°00'32
minimum elong	8844 Dec 30 02:12	12° \mathbb{Z} 56'57	1°51'38	min. Earth dist.		8850 Sep 07 11:34	22° \mathbb{X} 58'02	8.67999 AU
max. Earth dist.	8844 Dec 29 20:17	12° \mathbb{Z} 55'05	10.35153 AU	direct		8850 Nov 16 16:14	19° \mathbb{X} 35'03	
morning rise	8845 Jan 16 13:49	15° \mathbb{Z} 08'21		evening set		8851 Feb 28 13:02	27° \mathbb{X} 05'22	
retrograde	8845 Apr 28 07:19	22° \mathbb{Z} 49'59						
opposition	8845 Jul 04 13:04	19° \mathbb{Z} 26'47	2°11'26	conjunction		8851 Mar 17 13:45	29° \mathbb{X} 09'21	-0°13'20
min. Earth dist.	8845 Jul 04 17:47	19° \mathbb{Z} 25'50	8.37762 AU	minimum elong		8851 Mar 17 13:44	29° \mathbb{X} 09'21	0°13'19
direct	8845 Sep 11 13:40	15° \mathbb{Z} 59'16		behind sun begin		8851 Mar 17 09:36	29° \mathbb{X} 08'06	
evening set	8845 Dec 26 06:11	23° \mathbb{Z} 54'00		behind sun end		8851 Mar 17 17:53	29° \mathbb{X} 10'36	
				max. Earth dist.		8851 Mar 17 12:23	29° \mathbb{X} 08'57	10.70726 AU
conjunction	8846 Jan 12 19:02	26° \mathbb{Z} 05'09	1°39'13			8851 Mar 24 11:41	0° \mathbb{Y}	
minimum elong	8846 Jan 12 19:04	26° \mathbb{Z} 05'10	1°39'26	morning rise		8851 Apr 03 11:59	1° \mathbb{Y} 12'37	
max. Earth dist.	8846 Jan 12 12:56	26° \mathbb{Z} 03'15	10.40371 AU	retrograde		8851 Jul 13 05:56	8° \mathbb{Y} 30'35	
morning rise	8846 Jan 30 04:20	28° \mathbb{Z} 15'15		opposition		8851 Sep 20 07:17	5° \mathbb{Y} 11'07	-0°31'32
	8846 Feb 13 17:52	0° \mathbb{Z}		min. Earth dist.		8851 Sep 20 08:13	5° \mathbb{Y} 10'56	8.73222 AU
retrograde	8846 May 11 11:21	5° \mathbb{Z} 52'02		direct		8851 Nov 29 14:31	1° \mathbb{Y} 48'48	
opposition	8846 Jul 17 22:12	2° \mathbb{Z} 29'46	1°53'03	evening set		8852 Mar 11 22:23	9° \mathbb{Y} 14'26	
min. Earth dist.	8846 Jul 18 03:06	2° \mathbb{Z} 28'47	8.43332 AU					
	8846 Aug 22 10:28	30° \mathbb{R} \mathbb{Z}		conjunction		8852 Mar 28 20:38	11° \mathbb{Y} 17'10	-0°37'55
direct	8846 Sep 25 07:04	29° \mathbb{Z} 02'52		minimum elong		8852 Mar 28 20:36	11° \mathbb{Y} 17'10	0°37'58
	8846 Oct 28 21:31	0° \mathbb{Z}		max. Earth dist.		8852 Mar 28 19:41	11° \mathbb{Y} 16'53	10.75472 AU
evening set	8847 Jan 08 19:33	6° \mathbb{Z} 53'34		morning rise		8852 Apr 14 17:09	13° \mathbb{Y} 19'23	
				retrograde		8852 Jul 24 15:41	20° \mathbb{Y} 35'57	
conjunction	8847 Jan 26 06:05	9° \mathbb{Z} 03'20	1°22'06	opposition		8852 Oct 02 02:10	17° \mathbb{Y} 16'32	-1°00'47
minimum elong	8847 Jan 26 06:07	9° \mathbb{Z} 03'21	1°22'17	min. Earth dist.		8852 Oct 02 02:06	17° \mathbb{Y} 16'32	8.77455 AU
max. Earth dist.	8847 Jan 25 23:58	9° \mathbb{Z} 01'26	10.46287 AU	direct		8852 Dec 11 09:08	13° \mathbb{Y} 55'01	
morning rise	8847 Feb 12 13:07	11° \mathbb{Z} 12'02		evening set		8853 Mar 24 04:02	21° \mathbb{Y} 16'43	
	8847 Mar 18 01:52	15° \mathbb{Z}						
retrograde	8847 May 24 10:52	18° \mathbb{Z} 44'02		conjunction		8853 Apr 10 00:14	23° \mathbb{Y} 18'25	-1°00'40
opposition	8847 Jul 31 04:56	15° \mathbb{Z} 22'36	1°29'12	minimum elong		8853 Apr 10 00:12	23° \mathbb{Y} 18'25	1°00'44
min. Earth dist.	8847 Jul 31 09:16	15° \mathbb{Z} 21'45	8.49448 AU	max. Earth dist.		8853 Apr 10 00:32	23° \mathbb{Y} 18'31	10.79082 AU
	8847 Aug 05 00:46	15° \mathbb{R} \mathbb{Z}		morning rise		8853 Apr 26 19:16	25° \mathbb{Y} 19'48	
direct	8847 Oct 08 21:56	11° \mathbb{Z} 56'31				8853 Jun 10 03:24	0° \mathbb{Z}	
	8847 Dec 09 23:35	15° \mathbb{Z}		retrograde		8853 Aug 06 02:03	2° \mathbb{Z} 36'02	
evening set	8848 Jan 22 02:44	19° \mathbb{Z} 42'26				8853 Oct 05 01:55	30° \mathbb{R} \mathbb{Y}	
				opposition		8853 Oct 14 19:15	29° \mathbb{Y} 16'29	-1°27'09
conjunction	8848 Feb 08 10:56	21° \mathbb{Z} 50'45	1°01'05	min. Earth dist.		8853 Oct 14 17:54	29° \mathbb{Y} 16'44	8.80455 AU
minimum elong	8848 Feb 08 10:57	21° \mathbb{Z} 50'46	1°01'15	direct		8853 Dec 24 01:49	25° \mathbb{Y} 55'42	
max. Earth dist.	8848 Feb 08 05:50	21° \mathbb{Z} 49'10	10.52597 AU			8854 Mar 07 03:03	0° \mathbb{Z}	
morning rise	8848 Feb 25 15:40	23° \mathbb{Z} 58'01		evening set		8854 Apr 05 07:04	3° \mathbb{Z} 14'17	
	8848 Apr 25 18:24	0° \mathbb{X}						
retrograde	8848 Jun 05 08:18	1° \mathbb{X} 25'34		conjunction		8854 Apr 22 01:38	5° \mathbb{Z} 15'15	-1°20'38
	8848 Jul 16 23:49	30° \mathbb{R} \mathbb{Z}		minimum elong		8854 Apr 22 01:36	5° \mathbb{Z} 15'14	1°20'45
opposition	8848 Aug 12 09:19	28° \mathbb{Z} 04'50	1°01'19	max. Earth dist.		8854 Apr 22 03:28	5° \mathbb{Z} 15'48	10.81391 AU
min. Earth dist.	8848 Aug 12 12:15	28° \mathbb{Z} 04'16	8.55805 AU	morning rise		8854 May 08 19:31	7° \mathbb{Z} 16'03	
direct	8848 Oct 21 08:24	24° \mathbb{Z} 39'42		retrograde		8854 Aug 18 13:34	14° \mathbb{Z} 32'55	

opposition	8854 Oct 27 11:32	11° 8 13'05 -1°49'36	direct	8861 Mar 19 01:38	20° 5 02'37
min. Earth dist.	8854 Oct 27 09:09	11° 8 13'32 8.82131 AU	evening set	8861 Jun 27 09:32	27° 5 21'59
direct	8855 Jan 05 13:39	7° 8 52'53			
	8855 Apr 16 01:23	15° 8	conjunction	8861 Jul 14 11:01	29° 5 26'39 -1°35'41
evening set	8855 Apr 17 08:21	15° 8 09'09	minimum elong	8861 Jul 14 11:03	29° 5 26'40 1°35'53
			max. Earth dist.	8861 Jul 14 16:20	29° 5 28'17 10.63788 AU
conjunction	8855 May 04 01:39	17° 8 09'37 -1°37'03		8861 Jul 18 23:48	0° 9
minimum elong	8855 May 04 01:37	17° 8 09'37 1°37'13	morning rise	8861 Jul 31 16:18	1° 9 32'26
max. Earth dist.	8855 May 04 04:13	17° 8 10'24 10.82376 AU	retrograde	8861 Nov 13 13:28	9° 9 10'48
morning rise	8855 May 20 19:03	19° 8 10'11	opposition	8862 Jan 22 12:30	5° 9 45'48 -1°47'35
retrograde	8855 Aug 30 23:57	26° 8 28'30	min. Earth dist.	8862 Jan 22 08:03	5° 9 46'40 8.60931 AU
opposition	8855 Nov 09 03:21	23° 8 08'12 -2°07'18	direct	8862 Mar 31 16:22	2° 9 24'31
min. Earth dist.	8855 Nov 09 00:39	23° 8 08'43 8.82492 AU	evening set	8862 Jul 10 01:40	9° 9 47'12
direct	8856 Jan 17 23:41	19° 8 48'23			
evening set	8856 Apr 28 08:55	27° 8 03'07	conjunction	8862 Jul 27 06:52	11° 9 53'36 -1°18'04
			minimum elong	8862 Jul 27 06:54	11° 9 53'36 1°18'15
conjunction	8856 May 15 01:35	29° 8 03'26 -1°49'17	max. Earth dist.	8862 Jul 27 12:30	11° 9 55'20 10.57857 AU
minimum elong	8856 May 15 01:33	29° 8 03'26 1°49'29	morning rise	8862 Aug 13 15:52	14° 9 01'07
max. Earth dist.	8856 May 15 04:27	29° 8 04'18 10.82067 AU		8862 Aug 21 21:44	15° 9
	8856 May 22 20:55	0° 11	retrograde	8862 Nov 26 19:13	21° 9 43'38
morning rise	8856 May 31 19:18	1° 11 04'03	opposition	8863 Feb 04 11:37	18° 9 17'53 -1°23'23
retrograde	8856 Sep 11 11:43	8° 11 24'33	min. Earth dist.	8863 Feb 04 07:03	18° 9 18'47 8.54822 AU
opposition	8856 Nov 20 18:52	5° 11 03'37 -2°19'32		8863 Apr 04 14:54	15° 9 4
min. Earth dist.	8856 Nov 20 15:47	5° 11 04'12 8.81572 AU	direct	8863 Apr 13 09:26	14° 9 55'54
direct	8857 Jan 29 10:39	1° 11 43'56		8863 Apr 22 02:15	15° 9
evening set	8857 May 10 09:32	8° 11 57'58	evening set	8863 Jul 22 23:30	22° 9 22'34
conjunction	8857 May 27 02:28	10° 11 58'29 -1°56'50	conjunction	8863 Aug 09 08:35	24° 9 30'46 -0°56'31
minimum elong	8857 May 27 02:27	10° 11 58'29 1°57'04	minimum elong	8863 Aug 09 08:37	24° 9 30'47 0°56'40
max. Earth dist.	8857 May 27 06:18	10° 11 59'39 10.80506 AU	max. Earth dist.	8863 Aug 09 14:15	24° 9 32'32 10.51704 AU
morning rise	8857 Jun 12 21:08	12° 11 59'30	morning rise	8863 Aug 26 21:17	26° 9 40'07
retrograde	8857 Sep 24 01:31	20° 11 22'47		8863 Sep 25 02:16	0° 10
opposition	8857 Dec 03 10:35	17° 11 01'05 -2°25'48	retrograde	8863 Dec 10 05:35	4° 10 26'35
min. Earth dist.	8857 Dec 03 06:31	17° 11 01'52 8.79416 AU	opposition	8864 Feb 17 13:06	1° 10 00'14 -0°54'48
direct	8858 Feb 10 19:53	13° 11 41'24	min. Earth dist.	8864 Feb 17 08:40	1° 10 01'06 8.48639 AU
evening set	8858 May 22 11:15	20° 11 55'32		8864 Mar 01 11:27	30° 9 4
			direct	8864 Apr 25 04:25	27° 9 37'28
conjunction	8858 Jun 08 05:17	22° 11 56'35 -1°59'21		8864 Jun 16 23:47	0° 10
minimum elong	8858 Jun 08 05:17	22° 11 56'35 1°59'35	evening set	8864 Aug 04 03:53	5° 10 08'44
max. Earth dist.	8858 Jun 08 10:50	22° 11 58'16 10.77757 AU			
morning rise	8858 Jun 25 01:27	24° 11 58'19	conjunction	8864 Aug 21 16:36	7° 10 18'44 -0°31'55
	8858 Aug 12 10:01	0° 11	minimum elong	8864 Aug 21 16:37	7° 10 18'45 0°32'01
retrograde	8858 Oct 06 17:41	2° 11 24'56	max. Earth dist.	8864 Aug 21 21:22	7° 10 20'13 10.45621 AU
	8858 Dec 03 07:16	30° 9 11	morning rise	8864 Sep 08 08:43	9° 10 29'49
opposition	8858 Dec 16 02:59	29° 11 02'24 -2°25'45	retrograde	8864 Dec 22 18:09	17° 10 19'53
min. Earth dist.	8858 Dec 15 21:43	29° 11 03'24 8.76116 AU	opposition	8865 Mar 01 17:01	13° 10 53'05 -0°23'03
direct	8859 Feb 23 05:18	25° 11 42'33	min. Earth dist.	8865 Mar 01 13:24	13° 10 53'49 8.42696 AU
	8859 May 08 08:14	0° 11	direct	8865 May 08 03:54	10° 10 29'31
evening set	8859 Jun 03 15:13	2° 11 57'36	evening set	8865 Aug 17 14:47	18° 10 05'50
conjunction	8859 Jun 20 11:03	4° 11 59'33 -1°56'37	conjunction	8865 Sep 04 06:40	20° 10 17'30 -0°05'27
minimum elong	8859 Jun 20 11:04	4° 11 59'34 1°56'52	minimum elong	8865 Sep 04 06:40	20° 10 17'30 0°05'31
max. Earth dist.	8859 Jun 20 17:15	5° 11 01'26 10.73945 AU	behind sun begin	8865 Sep 03 23:42	20° 10 15'21
morning rise	8859 Jul 07 09:36	7° 11 02'21	behind sun end	8865 Sep 04 13:38	20° 10 19'40
retrograde	8859 Oct 19 14:20	14° 11 32'40	max. Earth dist.	8865 Sep 04 09:38	20° 10 18'24 10.39931 AU
opposition	8859 Dec 28 20:33	11° 11 09'17 -2°19'15	morning rise	8865 Sep 22 01:42	22° 10 30'09
min. Earth dist.	8859 Dec 28 15:04	11° 11 10'20 8.71816 AU	asc. node	8865 Nov 18 22:42	28° 10 30'19
direct	8860 Mar 06 14:58	7° 11 49'06		8865 Dec 15 06:55	0° 11
evening set	8860 Jun 14 22:18	15° 11 05'53	retrograde	8866 Jan 05 09:51	0° 11 23'18
				8866 Jan 26 12:50	30° 9 11
conjunction	8860 Jul 01 20:38	17° 11 09'04 -1°48'40	opposition	8866 Mar 14 23:41	26° 10 56'16 0°10'20
minimum elong	8860 Jul 01 20:40	17° 11 09'05 1°48'54	min. Earth dist.	8866 Mar 14 21:31	26° 10 56'42 8.37319 AU
max. Earth dist.	8860 Jul 02 02:26	17° 11 10'50 10.69228 AU	direct	8866 May 21 07:26	23° 10 31'51
morning rise	8860 Jul 18 22:21	19° 11 13'15		8866 Aug 21 05:17	0° 11
retrograde	8860 Oct 31 12:40	26° 11 47'30	evening set	8866 Aug 31 07:55	1° 11 13'24
opposition	8861 Jan 09 15:38	23° 11 23'18 -2°06'25			
min. Earth dist.	8861 Jan 09 10:42	23° 11 24'15 8.66683 AU	conjunction	8866 Sep 18 02:24	3° 11 26'31 0°21'43

minimum elong	8866 Sep 18 02:23	3° <u>♄</u> 26'30	0°21'43	retrograde	8873 Apr 09 13:07	4° <u>♄</u> 11'02	
max. Earth dist.	8866 Sep 18 03:52	3° <u>♄</u> 26'58	10.34948 AU	opposition	8873 Jun 15 15:45	0° <u>♄</u> 47'05	2°25'34
morning rise	8866 Oct 05 23:32	5° <u>♄</u> 40'26		min. Earth dist.	8873 Jun 15 21:20	0° <u>♄</u> 45'58	8.32020 AU
retrograde	8867 Jan 19 03:57	13° <u>♄</u> 35'58			8873 Jun 25 12:41	30° <u>♄</u> ♂	
opposition	8867 Mar 28 08:44	10° <u>♄</u> 08'53	0°43'34	direct	8873 Aug 23 05:07	27° <u>♄</u> 19'31	
min. Earth dist.	8867 Mar 28 07:48	10° <u>♄</u> 09'04	8.32809 AU		8873 Oct 19 03:51	0° <u>♄</u>	
direct	8867 Jun 03 15:19	6° <u>♄</u> 43'41		evening set	8873 Dec 06 20:08	5° <u>♄</u> 18'28	
evening set	8867 Sep 14 07:05	14° <u>♄</u> 30'24					
				conjunction	8873 Dec 24 11:56	7° <u>♄</u> 31'21	1°54'38
conjunction	8867 Oct 02 03:26	16° <u>♄</u> 44'36	0°47'54	minimum elong	8873 Dec 24 11:57	7° <u>♄</u> 31'21	1°54'54
minimum elong	8867 Oct 02 03:24	16° <u>♄</u> 44'36	0°47'57	max. Earth dist.	8873 Dec 24 04:12	7° <u>♄</u> 28'55	10.33747 AU
max. Earth dist.	8867 Oct 02 03:44	16° <u>♄</u> 44'42	10.30942 AU	morning rise	8874 Jan 11 00:49	9° <u>♄</u> 43'21	
morning rise	8867 Oct 20 01:35	18° <u>♄</u> 59'24		retrograde	8874 Apr 22 23:30	17° <u>♄</u> 27'19	
retrograde	8868 Feb 01 22:21	26° <u>♄</u> 56'23		opposition	8874 Jun 29 03:49	14° <u>♄</u> 04'10	2°17'02
opposition	8868 Apr 09 19:40	23° <u>♄</u> 29'27	1°14'47	min. Earth dist.	8874 Jun 29 09:16	14° <u>♄</u> 03'05	8.35987 AU
min. Earth dist.	8868 Apr 09 19:37	23° <u>♄</u> 29'27	8.29410 AU	direct	8874 Sep 06 01:11	10° <u>♄</u> 36'52	
direct	8868 Jun 16 04:20	20° <u>♄</u> 03'32		evening set	8874 Dec 20 18:11	18° <u>♄</u> 33'26	
evening set	8868 Sep 27 11:04	27° <u>♄</u> 55'00					
	8868 Oct 14 01:05	0° <u>♄</u>		conjunction	8875 Jan 07 08:03	20° <u>♄</u> 45'13	1°44'51
				minimum elong	8875 Jan 07 08:05	20° <u>♄</u> 45'14	1°45'06
conjunction	8868 Oct 15 08:23	0° <u>♄</u> 09'55	1°11'41	max. Earth dist.	8875 Jan 07 00:51	20° <u>♄</u> 42'57	10.38206 AU
minimum elong	8868 Oct 15 08:21	0° <u>♄</u> 09'54	1°11'47	morning rise	8875 Jan 24 18:30	22° <u>♄</u> 55'58	
max. Earth dist.	8868 Oct 15 07:52	0° <u>♄</u> 09'45	10.28135 AU		8875 Apr 10 16:57	0° <u>♄</u>	
morning rise	8868 Nov 02 06:29	2° <u>♄</u> 25'07		retrograde	8875 May 06 06:31	0° <u>♄</u> 35'19	
retrograde	8869 Feb 14 18:08	10° <u>♄</u> 22'32			8875 Jun 01 01:51	30° <u>♄</u> ♂	
opposition	8869 Apr 23 08:23	6° <u>♄</u> 55'54	1°42'09	opposition	8875 Jul 12 14:19	27° <u>♄</u> 12'57	2°01'23
min. Earth dist.	8869 Apr 23 08:50	6° <u>♄</u> 55'49	8.27301 AU	min. Earth dist.	8875 Jul 12 19:19	27° <u>♄</u> 11'58	8.40834 AU
direct	8869 Jun 29 19:46	3° <u>♄</u> 29'24		direct	8875 Sep 19 19:42	23° <u>♄</u> 46'04	
evening set	8869 Oct 11 18:10	11° <u>♄</u> 24'44			8875 Dec 20 15:48	0° <u>♄</u>	
				evening set	8876 Jan 03 10:39	1° <u>♄</u> 39'05	
conjunction	8869 Oct 29 15:33	13° <u>♄</u> 39'56	1°31'39				
minimum elong	8869 Oct 29 15:30	13° <u>♄</u> 39'55	1°31'48	conjunction	8876 Jan 20 22:24	3° <u>♄</u> 49'35	1°29'43
max. Earth dist.	8869 Oct 29 14:06	13° <u>♄</u> 39'28	10.26674 AU	minimum elong	8876 Jan 20 22:26	3° <u>♄</u> 49'36	1°29'56
	8869 Nov 09 04:29	15° <u>♄</u>		max. Earth dist.	8876 Jan 20 16:07	3° <u>♄</u> 47'37	10.43454 AU
morning rise	8869 Nov 16 12:41	15° <u>♄</u> 55'07		morning rise	8876 Feb 07 06:21	5° <u>♄</u> 58'59	
retrograde	8870 Feb 28 14:24	23° <u>♄</u> 51'47		retrograde	8876 May 18 09:06	13° <u>♄</u> 33'35	
opposition	8870 May 06 22:12	20° <u>♄</u> 25'37	2°04'00	opposition	8876 Jul 24 22:45	10° <u>♄</u> 11'55	1°39'42
min. Earth dist.	8870 May 06 23:38	20° <u>♄</u> 25'20	8.26577 AU	min. Earth dist.	8876 Jul 25 03:22	10° <u>♄</u> 11'01	8.46350 AU
direct	8870 Jul 13 13:03	16° <u>♄</u> 58'36		direct	8876 Oct 02 11:51	6° <u>♄</u> 45'36	
evening set	8870 Oct 26 02:54	24° <u>♄</u> 56'44		evening set	8877 Jan 15 21:03	14° <u>♄</u> 34'08	
					8877 Jan 19 09:35	15° <u>♄</u>	
conjunction	8870 Nov 12 23:35	27° <u>♄</u> 11'48	1°46'37				
minimum elong	8870 Nov 12 23:33	27° <u>♄</u> 11'47	1°46'48	conjunction	8877 Feb 02 06:28	16° <u>♄</u> 43'14	1°10'13
max. Earth dist.	8870 Nov 12 20:25	27° <u>♄</u> 10'48	10.26611 AU	minimum elong	8877 Feb 02 06:30	16° <u>♄</u> 43'14	1°10'24
morning rise	8870 Nov 30 19:07	29° <u>♄</u> 26'35		max. Earth dist.	8877 Feb 02 00:56	16° <u>♄</u> 41'31	10.49244 AU
	8870 Dec 05 07:26	0° <u>♄</u> ♂		morning rise	8877 Feb 19 12:06	18° <u>♄</u> 51'14	
retrograde	8871 Mar 14 09:29	7° <u>♄</u> 21'15		retrograde	8877 May 31 08:28	26° <u>♄</u> 21'11	
opposition	8871 May 20 12:20	3° <u>♄</u> 55'43	2°18'59	opposition	8877 Aug 07 04:41	23° <u>♄</u> 00'08	1°13'19
min. Earth dist.	8871 May 20 15:21	3° <u>♄</u> 55'06	8.27215 AU	min. Earth dist.	8877 Aug 07 09:15	22° <u>♄</u> 59'15	8.52272 AU
direct	8871 Jul 27 09:04	0° <u>♄</u> 28'17		direct	8877 Oct 15 23:51	19° <u>♄</u> 34'28	
evening set	8871 Nov 09 11:19	8° <u>♄</u> 28'00		evening set	8878 Jan 29 01:08	27° <u>♄</u> 17'56	
conjunction	8871 Nov 27 06:40	10° <u>♄</u> 42'34	1°55'41	conjunction	8878 Feb 15 08:04	29° <u>♄</u> 25'35	0°47'29
minimum elong	8871 Nov 27 06:39	10° <u>♄</u> 42'34	1°55'54	minimum elong	8878 Feb 15 08:05	29° <u>♄</u> 25'36	0°47'37
max. Earth dist.	8871 Nov 27 01:22	10° <u>♄</u> 40'54	10.27860 AU	max. Earth dist.	8878 Feb 15 02:48	29° <u>♄</u> 23'57	10.55285 AU
morning rise	8871 Dec 15 00:11	12° <u>♄</u> 56'38			8878 Feb 19 23:13	0° <u>♄</u> ♂	
retrograde	8872 Mar 27 00:33	20° <u>♄</u> 48'22		morning rise	8878 Mar 04 11:35	1° <u>♄</u> 32'12	
opposition	8872 Jun 02 02:23	17° <u>♄</u> 23'35	2°26'17	retrograde	8878 Jun 13 03:14	8° <u>♄</u> 57'54	
min. Earth dist.	8872 Jun 02 07:05	17° <u>♄</u> 22'38	8.29073 AU	opposition	8878 Aug 20 07:55	5° <u>♄</u> 37'19	0°43'46
direct	8872 Aug 09 07:24	13° <u>♄</u> 55'58		min. Earth dist.	8878 Aug 20 11:48	5° <u>♄</u> 36'34	8.58299 AU
evening set	8872 Nov 22 17:27	21° <u>♄</u> 55'57		direct	8878 Oct 29 08:19	2° <u>♄</u> 12'23	
				evening set	8879 Feb 10 23:09	9° <u>♄</u> 50'35	
conjunction	8872 Dec 10 11:05	24° <u>♄</u> 09'47	1°58'22				
minimum elong	8872 Dec 10 11:05	24° <u>♄</u> 09'47	1°58'37	conjunction	8879 Feb 28 03:32	11° <u>♄</u> 56'44	0°22'46
max. Earth dist.	8872 Dec 10 03:58	24° <u>♄</u> 07'31	10.30266 AU	minimum elong	8879 Feb 28 03:33	11° <u>♄</u> 56'45	0°22'51
morning rise	8872 Dec 28 02:21	26° <u>♄</u> 22'53		max. Earth dist.	8879 Feb 27 23:18	11° <u>♄</u> 55'26	10.61270 AU
	8873 Jan 28 06:01	0° <u>♄</u> ♂		morning rise	8879 Mar 17 04:55	14° <u>♄</u> 02'00	

retrograde	8879 Jun 25 17:48	21° K 24'07	morning rise	8885 May 27 02:04	26° S 17'30
opposition	8879 Sep 02 08:25	18° K 03'50 0°12'34		8885 Jun 30 00:58	0° II
min. Earth dist.	8879 Sep 02 10:49	18° K 03'23 8.64139 AU	retrograde	8885 Sep 06 12:27	3° II 36'25
direct	8879 Nov 11 14:33	14° K 39'44	opposition	8885 Nov 15 18:40	0° II 15'35 -2°15'01
desc. node	8880 Jan 30 19:37	19° K 29'14	min. Earth dist.	8885 Nov 15 13:28	0° II 16'34 8.82658 AU
evening set	8880 Feb 23 15:27	22° K 12'41		8885 Nov 19 05:37	30° R S
			direct	8886 Jan 24 14:18	26° S 55'47
conjunction	8880 Mar 11 17:23	24° K 17'25 -0°02'49		8886 Mar 27 21:18	0° II
minimum elong	8880 Mar 11 17:23	24° K 17'25 0°02'47	evening set	8886 May 05 15:40	4° II 09'24
behind sun begin	8880 Mar 11 10:20	24° K 15'17			
behind sun end	8880 Mar 12 00:26	24° K 19'33	conjunction	8886 May 22 08:25	6° II 09'39 -1°54'12
max. Earth dist.	8880 Mar 11 15:07	24° K 16'47 10.66920 AU	minimum elong	8886 May 22 08:24	6° II 09'38 1°54'25
morning rise	8880 Mar 28 16:37	26° K 21'22	max. Earth dist.	8886 May 22 14:26	6° II 11'28 10.82207 AU
	8880 Apr 30 11:06	0° Y	morning rise	8886 Jun 08 02:22	8° II 10'16
retrograde	8880 Jul 07 08:10	3° Y 40'44	retrograde	8886 Sep 19 01:27	15° II 31'29
opposition	8880 Sep 14 06:26	0° Y 20'38 -0°18'47	opposition	8886 Nov 28 09:41	12° II 10'11 -2°23'46
min. Earth dist.	8880 Sep 14 06:56	0° Y 20'32 8.69531 AU	min. Earth dist.	8886 Nov 28 04:02	12° II 11'15 8.81719 AU
	8880 Sep 18 18:55	30° R K	direct	8887 Feb 05 21:16	8° II 50'41
direct	8880 Nov 23 14:42	26° K 57'23	evening set	8887 May 17 16:10	16° II 03'51
	8881 Jan 24 23:46	0° Y			
evening set	8881 Mar 07 02:41	4° Y 25'23	conjunction	8887 Jun 03 09:26	18° II 04'23 -1°58'49
			minimum elong	8887 Jun 03 09:25	18° II 04'23 1°59'04
conjunction	8881 Mar 24 02:15	6° Y 28'49 -0°27'52	max. Earth dist.	8887 Jun 03 15:30	18° II 06'13 10.80650 AU
minimum elong	8881 Mar 24 02:14	6° Y 28'49 0°27'54	morning rise	8887 Jun 20 04:47	20° II 05'33
max. Earth dist.	8881 Mar 24 02:10	6° Y 28'48 10.71983 AU	retrograde	8887 Oct 01 15:11	27° II 29'39
morning rise	8881 Apr 09 23:30	8° Y 31'37	opposition	8887 Dec 11 01:11	24° II 07'48 -2°26'21
retrograde	8881 Jul 19 20:03	15° Y 49'05	min. Earth dist.	8887 Dec 10 19:40	24° II 08'51 8.79580 AU
opposition	8881 Sep 27 02:11	12° Y 29'04 -0°48'56	direct	8888 Feb 18 06:11	20° II 48'24
min. Earth dist.	8881 Sep 27 01:34	12° Y 29'10 8.74231 AU	evening set	8888 May 28 18:24	28° II 01'58
direct	8881 Dec 06 09:52	9° Y 06'40			
evening set	8882 Mar 19 09:59	16° Y 30'19	conjunction	8888 Jun 14 13:07	0° S 03'11 -1°58'18
			minimum elong	8888 Jun 14 13:07	0° S 03'11 1°58'33
conjunction	8882 Apr 05 07:11	18° Y 32'34 -0°51'30		8888 Jun 14 02:36	0° S
minimum elong	8882 Apr 05 07:10	18° Y 32'34 0°51'34	max. Earth dist.	8888 Jun 14 19:36	0° S 05'09 10.77946 AU
max. Earth dist.	8882 Apr 05 08:04	18° Y 32'50 10.76232 AU	morning rise	8888 Jul 01 10:34	2° S 05'12
morning rise	8882 Apr 22 02:47	20° Y 34'24	retrograde	8888 Oct 13 08:30	9° S 32'38
retrograde	8882 Aug 01 05:34	27° Y 50'53	opposition	8888 Dec 22 17:20	6° S 10'09 -2°22'34
opposition	8882 Oct 09 19:59	24° Y 30'51 -1°16'38	min. Earth dist.	8888 Dec 22 11:30	6° S 11'16 8.76326 AU
min. Earth dist.	8882 Oct 09 18:44	24° Y 31'06 8.78033 AU	direct	8889 Mar 01 15:45	2° S 50'41
direct	8882 Dec 19 02:43	21° Y 09'14	evening set	8889 Jun 09 23:15	10° S 05'27
evening set	8883 Mar 31 14:00	28° Y 29'14			
	8883 Apr 13 04:20	0° S	conjunction	8889 Jun 26 20:18	12° S 07'42 -1°52'34
			minimum elong	8889 Jun 26 20:20	12° S 07'43 1°52'48
conjunction	8883 Apr 17 09:08	0° S 30'32 -1°12'43	max. Earth dist.	8889 Jun 27 03:39	12° S 09'56 10.74190 AU
minimum elong	8883 Apr 17 09:06	0° S 30'32 1°12'49	morning rise	8889 Jul 13 20:24	14° S 10'53
max. Earth dist.	8883 Apr 17 10:43	0° S 31'01 10.79494 AU	retrograde	8889 Oct 26 05:03	21° S 41'59
morning rise	8883 May 04 03:35	2° S 31'37	opposition	8890 Jan 04 10:47	18° S 18'49 -2°12'26
retrograde	8883 Aug 13 15:03	9° S 48'04	min. Earth dist.	8890 Jan 04 04:29	18° S 20'01 8.72070 AU
opposition	8883 Oct 22 12:30	6° S 27'54 -1°40'48	direct	8890 Mar 14 01:16	14° S 59'06
min. Earth dist.	8883 Oct 22 10:15	6° S 28'20 8.80779 AU	evening set	8890 Jun 22 07:37	22° S 15'50
direct	8883 Dec 31 16:42	3° S 07'00			
evening set	8884 Apr 11 15:28	10° S 24'03	conjunction	8890 Jul 09 07:35	24° S 19'25 -1°41'44
			minimum elong	8890 Jul 09 07:37	24° S 19'25 1°41'58
conjunction	8884 Apr 28 09:11	12° S 24'41 -1°30'40	max. Earth dist.	8890 Jul 09 15:15	24° S 21'45 10.69511 AU
minimum elong	8884 Apr 28 09:09	12° S 24'40 1°30'49	morning rise	8890 Jul 26 10:52	26° S 24'00
max. Earth dist.	8884 Apr 28 12:13	12° S 25'36 10.81630 AU		8890 Aug 27 20:05	0° Q
morning rise	8884 May 15 02:52	14° S 25'18	retrograde	8890 Nov 08 04:44	3° Q 59'01
	8884 May 20 01:01	15° S	opposition	8891 Jan 17 05:56	0° Q 35'07 -1°56'11
retrograde	8884 Aug 25 00:27	21° S 42'36	min. Earth dist.	8891 Jan 16 23:42	0° Q 36'19 8.66957 AU
opposition	8884 Nov 03 03:55	18° S 22'09 -2°00'30		8891 Jan 24 21:27	30° R S
min. Earth dist.	8884 Nov 02 23:59	18° S 22'53 8.82344 AU	direct	8891 Mar 26 13:21	27° S 14'56
direct	8885 Jan 12 04:27	15° S 01'52		8891 May 23 05:31	0° Q
evening set	8885 Apr 23 15:41	22° S 16'47	evening set	8891 Jul 04 20:38	4° Q 34'28
conjunction	8885 May 10 08:39	24° S 17'03 -1°44'41	conjunction	8891 Jul 21 23:55	6° Q 39'36 -1°26'09
minimum elong	8885 May 10 08:37	24° S 17'02 1°44'52	minimum elong	8891 Jul 21 23:57	6° Q 39'37 1°26'21
max. Earth dist.	8885 May 10 13:40	24° S 18'34 10.82544 AU	max. Earth dist.	8891 Jul 22 06:18	6° Q 41'33 10.64062 AU

morning rise	8891 Aug 08 06:56	8°♎45'51	max. Earth dist.	8897 Oct 09 01:38	24°♎13'19	10.30419 AU
	8891 Oct 10 17:33	15°♎	morning rise	8897 Oct 27 01:44	26°♎28'46	
retrograde	8891 Nov 21 08:35	16°♎24'49		8897 Nov 26 09:00	0°♎	
	8892 Jan 02 13:22	15°♎♎	retrograde	8898 Feb 08 17:31	4°♎25'11	
opposition	8892 Jan 30 02:56	13°♎00'13 -1°34'22	opposition	8898 Apr 17 11:02	0°♎58'19	1°30'09
min. Earth dist.	8892 Jan 29 22:04	13°♎01'09 8.61145 AU	min. Earth dist.	8898 Apr 17 12:57	0°♎57'56	8.28924 AU
direct	8892 Apr 07 02:46	9°♎39'22		8898 Apr 29 15:29	30°♎♎	
	8892 Jun 29 02:56	15°♎	direct	8898 Jun 23 21:09	27°♎31'54	
evening set	8892 Jul 16 14:53	17°♎02'31		8898 Aug 16 15:55	0°♎	
			evening set	8898 Oct 05 11:35	5°♎24'41	
conjunction	8892 Aug 02 21:51	19°♎09'24 -1°06'19	conjunction	8898 Oct 23 08:49	7°♎39'38	1°23'00
minimum elong	8892 Aug 02 21:53	19°♎09'25 1°06'29	minimum elong	8898 Oct 23 08:47	7°♎39'37	1°23'08
max. Earth dist.	8892 Aug 03 02:23	19°♎10'48 10.58012 AU	max. Earth dist.	8898 Oct 23 04:59	7°♎38'25	10.27663 AU
morning rise	8892 Aug 20 08:45	21°♎17'27	morning rise	8898 Nov 10 06:35	9°♎54'44	
retrograde	8892 Dec 03 15:07	29°♎00'24		8898 Dec 26 06:58	15°♎	
opposition	8893 Feb 11 02:14	25°♎35'10 -1°07'44	retrograde	8899 Feb 22 12:16	17°♎51'13	
min. Earth dist.	8893 Feb 10 22:53	25°♎35'49 8.54857 AU		8899 Apr 23 15:38	15°♎♎	
direct	8893 Apr 19 19:34	22°♎13'31	opposition	8899 Apr 30 23:33	14°♎24'34	1°54'41
evening set	8893 Jul 29 15:03	29°♎41'04	min. Earth dist.	8899 May 01 02:40	14°♎23'56	8.26893 AU
	8893 Aug 01 05:24	0°♎♎	direct	8899 Jul 07 13:33	10°♎57'23	
conjunction	8893 Aug 16 01:47	1°♎49'47 -0°43'04		8899 Sep 16 00:29	15°♎	
minimum elong	8893 Aug 16 01:48	1°♎49'47 0°43'11	evening set	8899 Oct 19 18:55	18°♎53'51	
max. Earth dist.	8893 Aug 16 05:10	1°♎50'50 10.51646 AU	conjunction	8899 Nov 06 15:54	21°♎08'56	1°40'22
morning rise	8893 Sep 02 16:17	3°♎59'37	minimum elong	8899 Nov 06 15:51	21°♎08'55	1°40'33
retrograde	8893 Dec 16 23:30	11°♎46'29	max. Earth dist.	8899 Nov 06 11:01	21°♎07'23	10.26307 AU
opposition	8894 Feb 24 03:59	8°♎20'38 -0°37'24	morning rise	8899 Nov 24 12:24	23°♎23'54	
min. Earth dist.	8894 Feb 24 01:34	8°♎21'07 8.48457 AU		8900 Jan 28 14:43	0°♎♎	
direct	8894 May 02 18:10	4°♎58'05	retrograde	8900 Mar 08 06:18	1°♎19'18	
evening set	8894 Aug 11 21:40	12°♎30'34		8900 Apr 16 08:15	30°♎♎	
conjunction	8894 Aug 29 11:59	14°♎41'04 -0°17'23	opposition	8900 May 14 12:50	27°♎53'03	2°12'58
minimum elong	8894 Aug 29 12:00	14°♎41'04 0°17'28	min. Earth dist.	8900 May 14 16:27	27°♎52'19	8.26301 AU
max. Earth dist.	8894 Aug 29 14:51	14°♎41'57 10.45358 AU	direct	8900 Jul 21 08:40	24°♎25'19	
morning rise	8894 Sep 16 05:34	16°♎52'35		8900 Oct 14 01:27	0°♎♎	
retrograde	8894 Dec 30 13:01	24°♎42'57	evening set	8900 Nov 03 02:57	2°♎24'15	
opposition	8895 Mar 09 08:14	21°♎16'35 -0°04'43	conjunction	8900 Nov 20 23:02	4°♎39'06	1°52'15
min. Earth dist.	8895 Mar 09 06:13	21°♎16'59 8.42344 AU	minimum elong	8900 Nov 20 23:00	4°♎39'06	1°52'28
asc. node	8895 May 01 15:47	18°♎03'48	max. Earth dist.	8900 Nov 20 17:40	4°♎37'24	10.26420 AU
direct	8895 May 15 18:42	17°♎53'04	morning rise	8900 Dec 08 17:38	6°♎53'34	
evening set	8895 Aug 25 10:50	25°♎30'47	retrograde	8901 Mar 21 22:39	14°♎46'47	
conjunction	8895 Sep 12 04:10	27°♎42'54 0°09'33	opposition	8901 May 28 02:37	11°♎21'07	2°23'56
minimum elong	8895 Sep 12 04:09	27°♎42'54 0°09'32	min. Earth dist.	8901 May 28 06:29	11°♎20'20	8.27173 AU
behind sun begin	8895 Sep 11 22:10	27°♎41'03	direct	8901 Aug 04 05:21	7°♎53'03	
behind sun end	8895 Sep 12 10:09	27°♎44'45	evening set	8901 Nov 17 09:45	15°♎53'02	
max. Earth dist.	8895 Sep 12 06:01	27°♎43'28 10.39516 AU	conjunction	8901 Dec 05 04:27	18°♎07'19	1°57'57
morning rise	8895 Sep 30 00:08	29°♎55'53	minimum elong	8901 Dec 05 04:26	18°♎07'19	1°58'11
	8895 Sep 30 13:35	0°♎♎	max. Earth dist.	8901 Dec 04 22:48	18°♎05'32	10.27998 AU
retrograde	8896 Jan 13 05:51	7°♎49'07	morning rise	8901 Dec 22 20:48	20°♎20'58	
opposition	8896 Mar 21 14:59	4°♎22'23 0°28'38	retrograde	8902 Apr 04 13:41	28°♎11'02	
min. Earth dist.	8896 Mar 21 13:51	4°♎22'36 8.36857 AU	opposition	8902 Jun 10 16:05	24°♎46'05	2°26'59
direct	8896 May 27 22:29	0°♎57'51	min. Earth dist.	8902 Jun 10 20:24	24°♎45'13	8.29457 AU
evening set	8896 Sep 07 06:15	8°♎40'56	direct	8902 Aug 18 01:32	21°♎17'55	
conjunction	8896 Sep 25 01:42	10°♎54'22 0°36'12	evening set	8902 Dec 01 14:03	29°♎17'31	
minimum elong	8896 Sep 25 01:41	10°♎54'21 0°36'13		8902 Dec 07 06:27	0°♎♎	
max. Earth dist.	8896 Sep 25 01:44	10°♎54'22 10.34442 AU	conjunction	8902 Dec 19 06:58	1°♎30'58	1°57'13
morning rise	8896 Oct 12 23:10	13°♎08'28	minimum elong	8902 Dec 19 06:58	1°♎30'58	1°57'28
retrograde	8897 Jan 25 23:28	21°♎03'45	max. Earth dist.	8902 Dec 19 00:47	1°♎29'01	10.30949 AU
opposition	8897 Apr 03 24:00	17°♎36'51 1°00'53	morning rise	8903 Jan 05 20:56	3°♎43'34	
min. Earth dist.	8897 Apr 04 00:19	17°♎36'47 8.32300 AU	retrograde	8903 Apr 18 01:40	11°♎29'38	
direct	8897 Jun 10 07:57	14°♎11'21	opposition	8903 Jun 24 04:35	8°♎05'31	2°22'03
evening set	8897 Sep 21 06:55	21°♎59'34	min. Earth dist.	8903 Jun 24 09:43	8°♎04'30	8.33025 AU
conjunction	8897 Oct 09 03:40	24°♎13'57 1°01'10	direct	8903 Aug 31 21:37	4°♎37'31	
minimum elong	8897 Oct 09 03:37	24°♎13'56 1°01'15	evening set	8903 Dec 15 14:15	12°♎35'20	

conjunction	8904 Jan 02 05:07	14° Z 47'43	1°50'13	direct	8909 Nov 18 18:46	21° X 26'29
minimum elong	8904 Jan 02 05:08	14° Z 47'44	1°50'27	evening set	8910 Mar 02 15:37	28° X 56'53
max. Earth dist.	8904 Jan 01 22:12	14° Z 45'33	10.35116 AU		8910 Mar 11 08:44	0° Y
morning rise	8904 Jan 19 16:44	16° Z 59'08				
retrograde	8904 Apr 30 09:16	24° Z 40'39		conjunction	8910 Mar 19 16:10	1° Y 00'53 -0°16'09
opposition	8904 Jul 06 15:45	21° Z 17'27	2°09'38	minimum elong	8910 Mar 19 16:10	1° Y 00'53 0°16'09
min. Earth dist.	8904 Jul 06 21:08	21° Z 16'23	8.37692 AU	behind sun begin	8910 Mar 19 15:51	1° Y 00'47
direct	8904 Sep 13 17:21	17° Z 49'53		behind sun end	8910 Mar 19 16:29	1° Y 00'58
evening set	8904 Dec 28 09:03	25° Z 44'39		max. Earth dist.	8910 Mar 19 14:38	1° Y 00'25 10.70538 AU
				morning rise	8910 Apr 05 14:27	3° Y 04'11
conjunction	8905 Jan 14 21:45	27° Z 55'46	1°37'29	retrograde	8910 Jul 15 08:05	10° Y 22'25
minimum elong	8905 Jan 14 21:47	27° Z 55'47	1°37'43	opposition	8910 Sep 22 10:46	7° Y 02'55 -0°34'55
max. Earth dist.	8905 Jan 14 14:54	27° Z 53'38	10.40274 AU	min. Earth dist.	8910 Sep 22 11:09	7° Y 02'51 8.73070 AU
	8905 Jan 31 11:58	0° \approx		direct	8910 Dec 01 17:56	3° Y 40'39
morning rise	8905 Feb 01 07:04	0° \approx 05'53		evening set	8911 Mar 15 01:02	11° Y 06'22
retrograde	8905 May 13 12:43	7° \approx 42'40				
opposition	8905 Jul 20 00:57	4° \approx 20'21	1°50'38	conjunction	8911 Mar 31 23:14	13° Y 09'06 -0°40'35
min. Earth dist.	8905 Jul 20 05:46	4° \approx 19'24	8.43207 AU	minimum elong	8911 Mar 31 23:13	13° Y 09'05 0°40'38
direct	8905 Sep 27 11:15	0° \approx 53'27		max. Earth dist.	8911 Mar 31 23:14	13° Y 09'06 10.75367 AU
evening set	8906 Jan 10 22:10	8° \approx 44'08		morning rise	8911 Apr 17 19:39	15° Y 11'18
				retrograde	8911 Jul 27 19:08	22° Y 28'08
conjunction	8906 Jan 28 08:41	10° \approx 53'55	1°19'54	opposition	8911 Oct 05 05:45	19° Y 08'41 -1°03'54
minimum elong	8906 Jan 28 08:43	10° \approx 53'55	1°20'07	min. Earth dist.	8911 Oct 05 04:32	19° Y 08'55 8.77413 AU
max. Earth dist.	8906 Jan 28 02:45	10° \approx 52'03	10.46142 AU	direct	8911 Dec 14 13:49	15° Y 47'15
morning rise	8906 Feb 14 15:40	13° \approx 02'37		evening set	8912 Mar 26 06:44	23° Y 08'54
	8906 Mar 03 02:57	15° \approx				
retrograde	8906 May 26 13:58	20° \approx 34'42		conjunction	8912 Apr 12 02:54	25° Y 10'35 -1°03'02
opposition	8906 Aug 02 07:43	17° \approx 13'12	1°26'17	minimum elong	8912 Apr 12 02:52	25° Y 10'34 1°03'07
min. Earth dist.	8906 Aug 02 11:24	17° \approx 12'29	8.49275 AU	max. Earth dist.	8912 Apr 12 04:32	25° Y 11'05 10.79110 AU
	8906 Sep 02 06:46	15° R \approx		morning rise	8912 Apr 28 21:44	27° Y 11'55
direct	8906 Oct 11 00:38	13° \approx 47'08			8912 May 23 18:09	0° Z
	8906 Nov 18 05:50	15° \approx		retrograde	8912 Aug 08 06:52	4° Z 28'18
evening set	8907 Jan 24 05:15	21° \approx 33'02		opposition	8912 Oct 16 23:03	1° Z 08'44 -1°29'50
				min. Earth dist.	8912 Oct 16 20:56	1° Z 09'08 8.80559 AU
conjunction	8907 Feb 10 13:30	23° \approx 41'24	0°58'33		8912 Nov 01 12:22	30° R Y
minimum elong	8907 Feb 10 13:32	23° \approx 41'24	0°58'43	direct	8912 Dec 26 03:54	27° Y 48'02
max. Earth dist.	8907 Feb 10 09:13	23° \approx 40'04	10.52409 AU		8913 Feb 16 16:03	0° Z
morning rise	8907 Feb 27 18:05	25° \approx 48'41		evening set	8913 Apr 07 09:42	5° Z 06'26
	8907 Apr 06 12:10	0° X				
retrograde	8907 Jun 08 11:32	3° X 16'21		conjunction	8913 Apr 24 04:08	7° Z 07'21 -1°22'36
	8907 Aug 14 13:28	30° R \approx		minimum elong	8913 Apr 24 04:05	7° Z 07'20 1°22'44
opposition	8907 Aug 15 12:15	29° \approx 55'35	0°58'02	max. Earth dist.	8913 Apr 24 06:26	7° Z 08'02 10.81558 AU
min. Earth dist.	8907 Aug 15 14:56	29° \approx 55'04	8.55593 AU	morning rise	8913 May 10 21:58	9° Z 08'07
direct	8907 Oct 24 10:29	26° \approx 30'27			8913 Jul 10 01:03	15° Z
	8907 Dec 30 08:57	0° X		retrograde	8913 Aug 20 16:10	16° Z 25'02
evening set	8908 Feb 06 06:12	4° X 11'11			8913 Oct 02 11:08	15° R Z
				opposition	8913 Oct 29 15:18	13° Z 05'12 -1°51'44
conjunction	8908 Feb 23 11:58	6° X 18'03	0°34'37	min. Earth dist.	8913 Oct 29 13:00	13° Z 05'38 8.82358 AU
minimum elong	8908 Feb 23 11:59	6° X 18'03	0°34'43	direct	8914 Jan 07 16:13	9° Z 45'04
max. Earth dist.	8908 Feb 23 09:07	6° X 17'10	10.58761 AU		8914 Apr 01 19:29	15° Z
morning rise	8908 Mar 11 14:14	8° X 23'55		evening set	8914 Apr 19 11:00	17° Z 01'09
retrograde	8908 Jun 20 05:32	15° X 47'44				
opposition	8908 Aug 27 14:19	12° X 27'34	0°27'25	conjunction	8914 May 06 04:07	19° Z 01'33 -1°38'33
min. Earth dist.	8908 Aug 27 16:25	12° X 27'10	8.61862 AU	minimum elong	8914 May 06 04:06	19° Z 01'33 1°38'43
direct	8908 Nov 05 16:58	9° X 03'25		max. Earth dist.	8914 May 06 06:24	19° Z 02'15 10.82644 AU
evening set	8909 Feb 18 01:32	16° X 38'52		morning rise	8914 May 22 21:37	21° Z 02'04
				retrograde	8914 Sep 02 02:43	28° Z 20'24
conjunction	8909 Mar 07 04:40	18° X 44'16	0°09'21	opposition	8914 Nov 11 06:55	25° Z 00'08 -2°08'48
minimum elong	8909 Mar 07 04:40	18° X 44'16	0°09'25	min. Earth dist.	8914 Nov 11 04:16	25° Z 00'38 8.82802 AU
behind sun begin	8909 Mar 06 22:44	18° X 42'28		direct	8915 Jan 20 04:00	21° Z 40'22
behind sun end	8909 Mar 07 10:37	18° X 46'04		evening set	8915 May 01 11:26	28° Z 54'53
max. Earth dist.	8909 Mar 07 02:31	18° X 43'38	10.64903 AU		8915 May 10 13:27	0° II
morning rise	8909 Mar 24 04:51	20° X 48'48				
retrograde	8909 Jul 02 20:44	28° X 09'24		conjunction	8915 May 18 04:05	0° II 55'09 -1°50'14
desc. node	8909 Jul 23 02:37	27° X 48'26		minimum elong	8915 May 18 04:04	0° II 55'09 1°50'27
opposition	8909 Sep 09 13:42	24° X 49'41	-0°04'03	max. Earth dist.	8915 May 18 07:24	0° II 56'09 10.82404 AU
min. Earth dist.	8909 Sep 09 15:15	24° X 49'23	8.67789 AU	morning rise	8915 Jun 03 21:50	2° II 55'44

retrograde	8915 Sep 14 14:48	10° Π 16'12	min. Earth dist.	8922 Feb 06 08:17	20° Ω 07'16	8.55199 AU
opposition	8915 Nov 23 22:19	6° Π 55'17 -2°20'20	direct	8922 Apr 15 10:23	16° Ω 44'20	
min. Earth dist.	8915 Nov 23 18:32	6° Π 56'00 8.81935 AU	evening set	8922 Jul 25 01:16	24° Ω 10'43	
direct	8916 Feb 01 13:31	3° Π 35'42				
evening set	8916 May 12 11:53	10° Π 49'27	conjunction	8922 Aug 11 10:28	26° Ω 18'54 -0°54'00	
			minimum elong	8922 Aug 11 10:30	26° Ω 18'54 0°54'09	
conjunction	8916 May 29 04:57	12° Π 49'56 -1°57'12	max. Earth dist.	8922 Aug 11 15:46	26° Ω 20'32 10.52060 AU	
minimum elong	8916 May 29 04:56	12° Π 49'56 1°57'27	morning rise	8922 Aug 28 23:20	28° Ω 28'12	
max. Earth dist.	8916 May 29 09:53	12° Π 51'25 10.80885 AU		8922 Sep 10 21:09	0° \mathbb{N}	
morning rise	8916 Jun 14 23:34	14° Π 50'54	retrograde	8922 Dec 12 06:56	6° \mathbb{N} 14'19	
retrograde	8916 Sep 26 04:27	22° Π 14'07	opposition	8923 Feb 19 14:25	2° \mathbb{N} 47'58 -0°51'34	
opposition	8916 Dec 05 13:50	18° Π 52'26 -2°25'52	min. Earth dist.	8923 Feb 19 10:19	2° \mathbb{N} 48'47 8.48969 AU	
min. Earth dist.	8916 Dec 05 08:52	18° Π 53'22 8.79811 AU		8923 Apr 02 12:58	30° \mathbb{R} Ω	
direct	8917 Feb 12 23:13	15° Π 32'50	direct	8923 Apr 28 05:52	29° Ω 25'11	
evening set	8917 May 24 13:37	22° Π 46'39		8923 May 23 17:43	0° \mathbb{N}	
			evening set	8923 Aug 07 05:30	6° \mathbb{N} 56'14	
conjunction	8917 Jun 10 07:44	24° Π 47'41 -1°59'07				
minimum elong	8917 Jun 10 07:45	24° Π 47'41 1°59'22	conjunction	8923 Aug 24 18:16	9° \mathbb{N} 06'13 -0°29'14	
max. Earth dist.	8917 Jun 10 13:38	24° Π 49'28 10.78162 AU	minimum elong	8923 Aug 24 18:17	9° \mathbb{N} 06'13 0°29'21	
morning rise	8917 Jun 27 04:01	26° Π 49'24	max. Earth dist.	8923 Aug 24 21:57	9° \mathbb{N} 07'21 10.45928 AU	
	8917 Jul 25 14:54	0° \mathfrak{S}	morning rise	8923 Sep 11 10:38	11° \mathbb{N} 17'17	
retrograde	8917 Oct 08 21:40	4° \mathfrak{S} 15'49	retrograde	8923 Dec 25 19:37	19° \mathbb{N} 07'00	
opposition	8917 Dec 18 05:55	0° \mathfrak{S} 53'19 -2°25'05	opposition	8924 Mar 03 18:03	15° \mathbb{N} 40'13 -0°19'41	
min. Earth dist.	8917 Dec 18 00:35	0° \mathfrak{S} 54'20 8.76528 AU	min. Earth dist.	8924 Mar 03 15:23	15° \mathbb{N} 40'45 8.42968 AU	
	8917 Dec 30 02:23	30° \mathbb{R} Π	direct	8924 May 10 04:45	12° \mathbb{N} 16'34	
direct	8918 Feb 25 07:46	27° Π 33'32	evening set	8924 Aug 19 16:16	19° \mathbb{N} 52'46	
	8918 Apr 20 22:16	0° \mathfrak{S}				
evening set	8918 Jun 05 17:31	4° \mathfrak{S} 48'16	conjunction	8924 Sep 06 08:15	22° \mathbb{N} 04'24 -0°02'45	
			minimum elong	8924 Sep 06 08:15	22° \mathbb{N} 04'24 0°02'48	
conjunction	8918 Jun 22 13:24	6° \mathfrak{S} 50'12 -1°55'48	behind sun begin	8924 Sep 06 01:01	22° \mathbb{N} 02'10	
minimum elong	8918 Jun 22 13:25	6° \mathfrak{S} 50'12 1°56'03	behind sun end	8924 Sep 06 15:29	22° \mathbb{N} 06'38	
max. Earth dist.	8918 Jun 22 19:01	6° \mathfrak{S} 51'54 10.74367 AU	max. Earth dist.	8924 Sep 06 10:21	22° \mathbb{N} 05'00 10.40170 AU	
morning rise	8918 Jul 09 12:13	8° \mathfrak{S} 52'59	morning rise	8924 Sep 24 03:27	24° \mathbb{N} 17'02	
retrograde	8918 Oct 21 16:50	16° \mathfrak{S} 23'01	asc. node	8924 Oct 14 02:57	26° \mathbb{N} 38'34	
opposition	8918 Dec 30 23:17	12° \mathfrak{S} 59'41 -2°17'53		8924 Nov 17 08:51	0° $\underline{\mathfrak{A}}$	
min. Earth dist.	8918 Dec 30 18:19	13° \mathfrak{S} 00'38 8.72236 AU	retrograde	8925 Jan 07 10:31	2° $\underline{\mathfrak{A}}$ 09'52	
direct	8919 Mar 09 16:32	9° \mathfrak{S} 39'32		8925 Feb 28 12:27	30° \mathbb{R} \mathbb{N}	
evening set	8919 Jun 18 00:22	16° \mathfrak{S} 56'00	opposition	8925 Mar 17 00:22	28° \mathbb{N} 42'50 0°13'38	
			min. Earth dist.	8925 Mar 16 22:54	28° \mathbb{N} 43'08 8.37515 AU	
conjunction	8919 Jul 04 22:52	18° \mathfrak{S} 59'09 -1°47'19	direct	8925 May 23 08:43	25° \mathbb{N} 18'22	
minimum elong	8919 Jul 04 22:53	18° \mathfrak{S} 59'10 1°47'32		8925 Aug 07 17:34	0° $\underline{\mathfrak{A}}$	
max. Earth dist.	8919 Jul 05 04:22	19° \mathfrak{S} 00'50 10.69657 AU	evening set	8925 Sep 02 09:18	2° $\underline{\mathfrak{A}}$ 59'52	
morning rise	8919 Jul 22 00:50	21° \mathfrak{S} 03'19				
retrograde	8919 Nov 03 13:41	28° \mathfrak{S} 37'18	conjunction	8925 Sep 20 03:53	5° $\underline{\mathfrak{A}}$ 12'57 0°24'19	
opposition	8920 Jan 12 18:04	25° \mathfrak{S} 13'06 -2°04'25	minimum elong	8925 Sep 20 03:52	5° $\underline{\mathfrak{A}}$ 12'57 0°24'19	
min. Earth dist.	8920 Jan 12 13:22	25° \mathfrak{S} 14'00 8.67106 AU	max. Earth dist.	8925 Sep 20 05:14	5° $\underline{\mathfrak{A}}$ 13'22 10.35096 AU	
direct	8920 Mar 21 05:14	21° \mathfrak{S} 52'26	morning rise	8925 Oct 08 00:59	7° $\underline{\mathfrak{A}}$ 26'50	
evening set	8920 Jun 29 11:26	29° \mathfrak{S} 11'28	retrograde	8926 Jan 21 03:22	15° $\underline{\mathfrak{A}}$ 22'09	
	8920 Jul 06 04:11	0° Ω	opposition	8926 Mar 30 09:07	11° $\underline{\mathfrak{A}}$ 55'03 0°46'39	
conjunction	8920 Jul 16 13:15	1° Ω 16'08 -1°33'50	min. Earth dist.	8926 Mar 30 08:12	11° $\underline{\mathfrak{A}}$ 55'14 8.32912 AU	
minimum elong	8920 Jul 16 13:18	1° Ω 16'09 1°34'03	direct	8926 Jun 05 17:26	8° $\underline{\mathfrak{A}}$ 29'49	
max. Earth dist.	8920 Jul 16 19:08	1° Ω 17'56 10.64212 AU	evening set	8926 Sep 16 08:20	16° $\underline{\mathfrak{A}}$ 16'32	
morning rise	8920 Aug 02 18:43	3° Ω 21'54				
retrograde	8920 Nov 15 15:46	10° Ω 59'56	conjunction	8926 Oct 04 04:46	18° $\underline{\mathfrak{A}}$ 30'45 0°50'15	
opposition	8921 Jan 24 14:28	7° Ω 34'56 -1°45'02	minimum elong	8926 Oct 04 04:44	18° $\underline{\mathfrak{A}}$ 30'44 0°50'18	
min. Earth dist.	8921 Jan 24 09:37	7° Ω 35'52 8.61343 AU	max. Earth dist.	8926 Oct 04 05:21	18° $\underline{\mathfrak{A}}$ 30'56 10.30995 AU	
direct	8921 Apr 02 18:51	4° Ω 13'39	morning rise	8926 Oct 22 02:45	20° $\underline{\mathfrak{A}}$ 45'29	
evening set	8921 Jul 12 03:31	11° Ω 36'01	retrograde	8927 Feb 03 22:50	28° $\underline{\mathfrak{A}}$ 42'22	
			opposition	8927 Apr 12 19:55	25° $\underline{\mathfrak{A}}$ 15'25 1°17'30	
conjunction	8921 Jul 29 09:01	13° Ω 42'24 -1°15'50	min. Earth dist.	8927 Apr 12 19:38	25° $\underline{\mathfrak{A}}$ 15'28 8.29421 AU	
minimum elong	8921 Jul 29 09:04	13° Ω 42'24 1°16'01	direct	8927 Jun 19 04:21	21° $\underline{\mathfrak{A}}$ 49'28	
max. Earth dist.	8921 Jul 29 15:10	13° Ω 44'17 10.58255 AU	evening set	8927 Sep 30 12:19	29° $\underline{\mathfrak{A}}$ 41'01	
	8921 Aug 08 21:40	15° Ω		8927 Oct 03 01:26	0° \mathbb{M}	
morning rise	8921 Aug 15 18:08	15° Ω 49'54	conjunction	8927 Oct 18 09:38	1° \mathbb{M} 55'56 1°13'40	
retrograde	8921 Nov 28 21:48	23° Ω 32'02	minimum elong	8927 Oct 18 09:35	1° \mathbb{M} 55'56 1°13'47	
opposition	8922 Feb 06 13:11	20° Ω 06'18 -1°20'26	max. Earth dist.	8927 Oct 18 09:05	1° \mathbb{M} 55'46 10.28100 AU	

morning rise	8927 Nov 05 07:34	4°♍11'07		retrograde	8934 May 08 07:12	2°♊21'51	
retrograde	8928 Feb 17 20:04	12°♍08'28			8934 Jul 01 16:24	30°♊	
opposition	8928 Apr 25 08:36	8°♍41'52	1°44'21	opposition	8934 Jul 14 15:11	28°♊59'31	1°59'19
min. Earth dist.	8928 Apr 25 09:18	8°♍41'44	8.27230 AU	min. Earth dist.	8934 Jul 14 20:29	28°♊58'28	8.40829 AU
direct	8928 Jul 01 18:57	5°♍15'18		direct	8934 Sep 21 20:34	25°♊32'39	
evening set	8928 Oct 13 19:36	13°♍10'52			8934 Dec 06 17:42	0°♊	
	8928 Oct 28 06:40	15°♍		evening set	8935 Jan 05 11:36	3°♊25'40	
conjunction	8928 Oct 31 16:50	15°♍26'04	1°33'10	conjunction	8935 Jan 22 23:14	5°♊36'09	1°27'49
minimum elong	8928 Oct 31 16:47	15°♍26'03	1°33'20	minimum elong	8935 Jan 22 23:16	5°♊36'10	1°28'02
max. Earth dist.	8928 Oct 31 14:39	15°♍25'22	10.26569 AU	max. Earth dist.	8935 Jan 22 16:34	5°♊34'04	10.43421 AU
morning rise	8928 Nov 18 13:50	17°♍41'15		morning rise	8935 Feb 09 07:08	7°♊45'34	
retrograde	8929 Mar 02 15:48	25°♍37'53			8935 May 02 01:51	15°♊	
opposition	8929 May 08 22:32	22°♍11'47	2°05'33	retrograde	8935 May 21 10:49	15°♊20'11	
min. Earth dist.	8929 May 09 00:44	22°♍11'21	8.26454 AU		8935 Jun 09 21:16	15°♊	
direct	8929 Jul 15 13:33	18°♍44'44		opposition	8935 Jul 27 23:45	11°♊58'34	1°37'05
evening set	8929 Oct 28 04:23	26°♍43'11		min. Earth dist.	8935 Jul 28 05:08	11°♊57'31	8.46283 AU
				direct	8935 Oct 05 11:49	8°♊32'16	
conjunction	8929 Nov 15 00:50	28°♍58'13	1°47'35		8936 Jan 07 15:50	15°♊	
minimum elong	8929 Nov 15 00:49	28°♍58'13	1°47'47	evening set	8936 Jan 18 22:03	16°♊20'52	
max. Earth dist.	8929 Nov 14 20:39	28°♍56'54	10.26481 AU				
	8929 Nov 23 03:42	0°♊		conjunction	8936 Feb 05 07:17	18°♊29'58	1°07'55
morning rise	8929 Dec 02 20:20	1°♊13'00		minimum elong	8936 Feb 05 07:20	18°♊29'59	1°08'06
retrograde	8930 Mar 16 09:12	9°♊07'44		max. Earth dist.	8936 Feb 05 00:50	18°♊27'58	10.49145 AU
opposition	8930 May 22 12:53	5°♊42'16	2°19'50	morning rise	8936 Feb 22 12:59	20°♊38'00	
min. Earth dist.	8930 May 22 16:31	5°♊41'32	8.27102 AU	retrograde	8936 Jun 02 08:51	28°♊08'04	
direct	8930 Jul 29 10:53	2°♊14'49		opposition	8936 Aug 09 05:59	24°♊47'03	1°10'18
evening set	8930 Nov 11 12:44	10°♊14'47		min. Earth dist.	8936 Aug 09 10:50	24°♊46'06	8.52140 AU
				direct	8936 Oct 18 01:20	21°♊21'25	
conjunction	8930 Nov 29 07:56	12°♊29'21	1°56'02	evening set	8937 Jan 31 02:05	29°♊04'59	
minimum elong	8930 Nov 29 07:55	12°♊29'20	1°56'17		8937 Feb 07 14:06	0°♊	
max. Earth dist.	8930 Nov 29 02:05	12°♊27'29	10.27778 AU				
morning rise	8930 Dec 17 01:27	14°♊43'24		conjunction	8937 Feb 17 08:55	1°♊12'38	0°44'55
retrograde	8931 Mar 30 00:48	22°♊35'08		minimum elong	8937 Feb 17 08:56	1°♊12'39	0°45'03
opposition	8931 Jun 05 03:01	19°♊10'24	2°26'21	max. Earth dist.	8937 Feb 17 03:20	1°♊10'55	10.55124 AU
min. Earth dist.	8931 Jun 05 07:42	19°♊09'27	8.29038 AU	morning rise	8937 Mar 06 12:27	3°♊19'17	
direct	8931 Aug 12 08:25	15°♊42'46		retrograde	8937 Jun 15 03:26	10°♊45'13	
evening set	8931 Nov 25 18:51	23°♊42'51		opposition	8937 Aug 22 09:29	7°♊24'38	0°40'29
				min. Earth dist.	8937 Aug 22 12:51	7°♊23'59	8.58106 AU
conjunction	8931 Dec 13 12:27	25°♊56'40	1°58'07	direct	8937 Oct 31 11:19	3°♊59'46	
minimum elong	8931 Dec 13 12:27	25°♊56'40	1°58'22	evening set	8938 Feb 13 00:12	11°♊38'03	
max. Earth dist.	8931 Dec 13 05:29	25°♊54'27	10.30274 AU				
morning rise	8931 Dec 31 03:36	28°♊09'44		conjunction	8938 Mar 02 04:38	13°♊44'15	0°20'03
	8932 Jan 15 08:18	0°♊		minimum elong	8938 Mar 02 04:38	13°♊44'15	0°20'07
retrograde	8932 Apr 11 14:04	5°♊57'47		max. Earth dist.	8938 Mar 02 00:59	13°♊43'08	10.61052 AU
opposition	8932 Jun 17 16:20	2°♊33'50	2°24'52	morning rise	8938 Mar 19 05:55	15°♊49'31	
min. Earth dist.	8932 Jun 17 21:23	2°♊32'49	8.32055 AU	retrograde	8938 Jun 27 20:50	23°♊11'56	
	8932 Jul 23 20:38	30°♊		opposition	8938 Sep 04 10:12	19°♊51'38	0°09'11
direct	8932 Aug 25 05:54	29°♊06'16		min. Earth dist.	8938 Sep 04 11:59	19°♊51'18	8.63889 AU
	8932 Sep 26 10:14	0°♊		direct	8938 Nov 13 15:42	16°♊27'35	
evening set	8932 Dec 08 21:20	7°♊05'12		desc. node	8938 Dec 23 00:53	17°♊43'49	
				evening set	8939 Feb 25 16:46	24°♊00'39	
conjunction	8932 Dec 26 13:09	9°♊18'04	1°53'47				
minimum elong	8932 Dec 26 13:10	9°♊18'05	1°54'02	conjunction	8939 Mar 14 18:41	26°♊05'26	-0°05'34
max. Earth dist.	8932 Dec 26 06:05	9°♊15'50	10.33794 AU	minimum elong	8939 Mar 14 18:41	26°♊05'26	0°05'33
morning rise	8933 Jan 13 01:50	11°♊30'02		behind sun begin	8939 Mar 14 11:53	26°♊03'22	
retrograde	8933 Apr 25 00:15	19°♊13'54		behind sun end	8939 Mar 15 01:30	26°♊07'30	
opposition	8933 Jul 01 04:33	15°♊50'46	2°15'36	max. Earth dist.	8939 Mar 14 17:07	26°♊04'59	10.66647 AU
min. Earth dist.	8933 Jul 01 09:38	15°♊49'46	8.36024 AU	morning rise	8939 Mar 31 17:47	28°♊09'25	
direct	8933 Sep 08 02:17	12°♊23'29			8939 Apr 16 13:04	0°♊	
evening set	8933 Dec 22 19:07	20°♊20'01		retrograde	8939 Jul 10 10:27	5°♊29'04	
				opposition	8939 Sep 17 08:37	2°♊08'58	-0°22'08
conjunction	8934 Jan 09 08:59	22°♊31'47	1°43'26	min. Earth dist.	8939 Sep 17 09:09	2°♊08'52	8.69233 AU
minimum elong	8934 Jan 09 09:01	22°♊31'48	1°43'41		8939 Oct 17 23:17	30°♊	
max. Earth dist.	8934 Jan 09 02:13	22°♊29'39	10.38229 AU	direct	8939 Nov 26 15:27	28°♊45'45	
morning rise	8934 Jan 26 19:15	24°♊42'31			8940 Jan 04 14:08	0°♊	
	8934 Mar 16 20:46	0°♊		evening set	8940 Mar 09 04:15	6°♊13'54	

conjunction	8940 Mar 26 03:38	8°♈17'21 -0°30'32	max. Earth dist.	8946 Jun 05 18:02	19°♊57'24 10.80376 AU
minimum elong	8940 Mar 26 03:37	8°♈17'20 0°30'33	morning rise	8946 Jun 22 07:27	21°♊56'46
max. Earth dist.	8940 Mar 26 03:26	8°♈17'17 10.71666 AU	retrograde	8946 Oct 03 18:32	29°♊21'06
morning rise	8940 Apr 12 00:50	10°♈20'10	opposition	8946 Dec 13 04:27	25°♊59'10 -2°26'04
retrograde	8940 Jul 21 21:53	17°♈37'59	min. Earth dist.	8946 Dec 12 22:39	26°♊00'16 8.79325 AU
opposition	8940 Sep 29 04:46	14°♈17'56 -0°52'06	direct	8947 Feb 20 09:44	22°♊39'44
min. Earth dist.	8940 Sep 29 04:38	14°♈17'58 8.73905 AU	evening set	8947 May 31 20:50	29°♊53'20
direct	8940 Dec 08 12:15	10°♈55'32		8947 Jun 01 19:16	0°♊
evening set	8941 Mar 21 11:42	18°♈19'20			
conjunction	8941 Apr 07 08:43	20°♈21'37 -0°53'56	conjunction	8947 Jun 17 15:48	1°♊54'38 -1°57'45
minimum elong	8941 Apr 07 08:41	20°♈21'36 0°54'00	minimum elong	8947 Jun 17 15:48	1°♊54'38 1°58'01
max. Earth dist.	8941 Apr 07 09:09	20°♈21'44 10.75897 AU	max. Earth dist.	8947 Jun 17 23:15	1°♊56'54 10.77712 AU
morning rise	8941 Apr 24 04:24	22°♈23'29	morning rise	8947 Jul 04 13:20	3°♊56'43
retrograde	8941 Aug 03 07:59	29°♈40'18	retrograde	8947 Oct 16 11:58	11°♊24'20
opposition	8941 Oct 11 22:44	26°♈20'13 -1°19'27	opposition	8947 Dec 25 20:36	8°♊01'46 -2°21'33
min. Earth dist.	8941 Oct 11 21:28	26°♈20'27 8.77697 AU	min. Earth dist.	8947 Dec 25 13:52	8°♊03'03 8.76118 AU
direct	8941 Dec 21 05:03	22°♈58'36	direct	8948 Mar 03 18:15	4°♊42'17
	8942 Mar 31 00:24	0°♈	evening set	8948 Jun 12 01:46	11°♊57'04
evening set	8942 Apr 02 15:49	0°♈18'43	conjunction	8948 Jun 28 23:05	13°♊59'23 -1°51'26
conjunction	8942 Apr 19 10:56	2°♈20'03 -1°14'49	minimum elong	8948 Jun 28 23:06	13°♊59'24 1°51'41
minimum elong	8942 Apr 19 10:54	2°♈20'03 1°14'56	max. Earth dist.	8948 Jun 29 07:10	14°♊01'51 10.74013 AU
max. Earth dist.	8942 Apr 19 12:53	2°♈20'39 10.79150 AU	morning rise	8948 Jul 15 23:20	16°♊02'38
morning rise	8942 May 06 05:22	4°♈21'11	retrograde	8948 Oct 28 08:38	23°♊33'51
retrograde	8942 Aug 15 17:03	11°♈37'59	opposition	8949 Jan 06 13:58	20°♊10'37 -2°10'43
opposition	8942 Oct 24 15:21	8°♈17'43 -1°43'09	min. Earth dist.	8949 Jan 06 07:08	20°♊11'56 8.71929 AU
min. Earth dist.	8942 Oct 24 12:21	8°♈18'17 8.80436 AU	direct	8949 Mar 16 04:22	16°♊50'53
direct	8943 Jan 02 19:46	4°♈56'50	evening set	8949 Jun 24 10:23	24°♊07'38
evening set	8943 Apr 14 17:27	12°♈14'00	conjunction	8949 Jul 11 10:29	26°♊11'17 -1°40'05
conjunction	8943 May 01 11:12	14°♈14'40 -1°32'22	minimum elong	8949 Jul 11 10:31	26°♊11'17 1°40'18
minimum elong	8943 May 01 11:10	14°♈14'39 1°32'31	max. Earth dist.	8949 Jul 11 17:56	26°♊13'33 10.69419 AU
max. Earth dist.	8943 May 01 15:18	14°♈15'54 10.81282 AU	morning rise	8949 Jul 28 14:05	28°♊15'57
	8943 May 07 17:07	15°♈		8949 Aug 12 11:53	0°♊
morning rise	8943 May 18 04:46	16°♈15'19	retrograde	8949 Nov 10 09:00	5°♊50'56
retrograde	8943 Aug 28 04:22	23°♈32'59	opposition	8950 Jan 19 08:58	2°♊27'03 -1°53'51
opposition	8943 Nov 06 06:58	20°♈12'26 -2°02'18	min. Earth dist.	8950 Jan 19 02:57	2°♊28'12 8.66918 AU
min. Earth dist.	8943 Nov 06 02:19	20°♈13'18 8.82003 AU		8950 Feb 24 03:51	30°♊
direct	8944 Jan 15 07:24	16°♈52'09	direct	8950 Mar 28 15:00	29°♊06'51
evening set	8944 Apr 25 17:51	24°♈07'09	evening set	8950 Apr 29 14:50	0°♊
conjunction	8944 May 12 10:47	26°♈07'27 -1°45'52		8950 Jul 06 23:27	6°♊26'21
minimum elong	8944 May 12 10:45	26°♈07'27 1°46'04	conjunction	8950 Jul 24 02:55	8°♊31'32 -1°24'01
max. Earth dist.	8944 May 12 16:12	26°♈09'06 10.82207 AU	minimum elong	8950 Jul 24 02:57	8°♊31'32 1°24'13
morning rise	8944 May 29 04:13	28°♈07'58	max. Earth dist.	8950 Jul 24 08:58	8°♊33'23 10.64100 AU
	8944 Jun 14 10:30	0°♊	morning rise	8950 Aug 10 10:16	10°♊37'51
retrograde	8944 Sep 08 16:12	5°♊27'11		8950 Sep 19 13:45	15°♊
opposition	8944 Nov 17 21:57	2°♊06'16 -2°16'10	retrograde	8950 Nov 23 11:03	18°♊16'41
min. Earth dist.	8944 Nov 17 16:48	2°♊07'14 8.82337 AU		8951 Jan 30 13:08	15°♊
	8944 Dec 18 05:17	30°♊	opposition	8951 Feb 01 05:54	14°♊52'06 -1°31'30
direct	8945 Jan 26 15:30	28°♊46'27	min. Earth dist.	8951 Feb 01 01:16	14°♊53'00 8.61261 AU
	8945 Mar 06 04:18	0°♊	direct	8951 Apr 10 05:29	11°♊31'14
evening set	8945 May 07 17:57	6°♊00'10	evening set	8951 Jun 14 12:37	15°♊
conjunction	8945 May 24 10:40	8°♊00'26 -1°54'50		8951 Jul 19 17:39	18°♊54'17
minimum elong	8945 May 24 10:39	8°♊00'26 1°55'05	conjunction	8951 Aug 06 00:53	21°♊01'11 -1°03'50
max. Earth dist.	8945 May 24 16:17	8°♊02'08 10.81899 AU	minimum elong	8951 Aug 06 00:56	21°♊01'12 1°04'00
morning rise	8945 Jun 10 04:49	10°♊01'08	max. Earth dist.	8951 Aug 06 05:59	21°♊02'45 10.58214 AU
retrograde	8945 Sep 21 03:37	17°♊22'36	morning rise	8951 Aug 23 12:01	23°♊09'15
opposition	8945 Nov 30 13:00	14°♊01'14 -2°24'13		8951 Nov 04 12:26	0°♊
min. Earth dist.	8945 Nov 30 07:42	14°♊02'14 8.81429 AU	retrograde	8951 Dec 06 16:18	0°♊51'59
direct	8946 Feb 08 00:35	10°♊41'41		8952 Jan 08 03:48	30°♊
evening set	8946 May 19 18:34	17°♊54'57	opposition	8952 Feb 14 04:55	27°♊26'44 -1°04'29
conjunction	8946 Jun 05 11:55	19°♊55'33 -1°58'52	min. Earth dist.	8952 Feb 14 01:13	27°♊27'28 8.55131 AU
minimum elong	8946 Jun 05 11:55	19°♊55'33 1°59'08	direct	8952 Apr 22 00:01	24°♊05'06
				8952 Jul 18 17:43	0°♊
			evening set	8952 Jul 31 17:54	1°♊32'27

conjunction	8952 Aug 18 04:56	3° \mathbb{M} 41'11	-0°40'20		8958 May 18 08:10	15° \mathbb{R} \mathbb{M}	
minimum elong	8952 Aug 18 04:58	3° \mathbb{M} 41'11	0°40'28	direct	8958 Jul 09 15:58	12° \mathbb{M} 45'39	
max. Earth dist.	8952 Aug 18 09:10	3° \mathbb{M} 42'29	10.51977 AU		8958 Aug 29 19:25	15° \mathbb{M}	
morning rise	8952 Sep 04 19:30	5° \mathbb{M} 50'59		evening set	8958 Oct 21 21:06	20° \mathbb{M} 41'58	
retrograde	8952 Dec 19 02:56	13° \mathbb{M} 37'32					
opposition	8953 Feb 26 06:15	10° \mathbb{M} 11'42	-0°33'56	conjunction	8958 Nov 08 18:04	22° \mathbb{M} 56'58	1°41'39
min. Earth dist.	8953 Feb 26 03:14	10° \mathbb{M} 12'18	8.48830 AU	minimum elong	8958 Nov 08 18:02	22° \mathbb{M} 56'57	1°41'51
direct	8953 May 04 20:00	6° \mathbb{M} 49'11		max. Earth dist.	8958 Nov 08 13:41	22° \mathbb{M} 55'35	10.26708 AU
evening set	8953 Aug 14 00:34	14° \mathbb{M} 21'27		morning rise	8958 Nov 26 14:19	25° \mathbb{M} 11'50	
					8959 Jan 08 11:24	0° \mathbb{Z}	
conjunction	8953 Aug 31 15:02	16° \mathbb{M} 31'56	-0°14'34	retrograde	8959 Mar 10 07:08	3° \mathbb{Z} 06'54	
minimum elong	8953 Aug 31 15:03	16° \mathbb{M} 31'56	0°14'39		8959 May 12 14:41	30° \mathbb{R} \mathbb{M}	
behind sun begin	8953 Aug 31 12:08	16° \mathbb{M} 31'03		opposition	8959 May 16 13:53	29° \mathbb{M} 40'45	2°14'11
behind sun end	8953 Aug 31 17:57	16° \mathbb{M} 32'50		min. Earth dist.	8959 May 16 17:17	29° \mathbb{M} 40'04	8.26683 AU
max. Earth dist.	8953 Aug 31 18:10	16° \mathbb{M} 32'54	10.45758 AU	direct	8959 Jul 23 10:18	26° \mathbb{M} 13'04	
morning rise	8953 Sep 18 08:38	18° \mathbb{M} 43'25			8959 Sep 29 12:34	0° \mathbb{Z}	
retrograde	8954 Jan 01 16:26	26° \mathbb{M} 33'24		evening set	8959 Nov 05 05:00	4° \mathbb{Z} 11'52	
opposition	8954 Mar 11 10:18	23° \mathbb{M} 07'05	-0°01'14				
min. Earth dist.	8954 Mar 11 08:07	23° \mathbb{M} 07'31	8.42766 AU	conjunction	8959 Nov 23 01:00	6° \mathbb{Z} 26'38	1°52'56
asc. node	8954 Mar 25 08:44	22° \mathbb{M} 01'50		minimum elong	8959 Nov 23 00:58	6° \mathbb{Z} 26'38	1°53'10
direct	8954 May 17 20:05	19° \mathbb{M} 43'36		max. Earth dist.	8959 Nov 22 19:40	6° \mathbb{Z} 24'57	10.26777 AU
evening set	8954 Aug 27 13:37	27° \mathbb{M} 21'09		morning rise	8959 Dec 10 19:22	8° \mathbb{Z} 41'00	
				retrograde	8960 Mar 23 00:40	16° \mathbb{Z} 33'55	
conjunction	8954 Sep 14 06:57	29° \mathbb{M} 33'12	0°12'20	opposition	8960 May 29 03:34	13° \mathbb{Z} 08'20	2°24'23
minimum elong	8954 Sep 14 06:56	29° \mathbb{M} 33'12	0°12'19	min. Earth dist.	8960 May 29 07:53	13° \mathbb{Z} 07'28	8.27502 AU
behind sun begin	8954 Sep 14 02:12	29° \mathbb{M} 31'44		direct	8960 Aug 05 05:19	9° \mathbb{Z} 40'18	
behind sun end	8954 Sep 14 11:40	29° \mathbb{M} 34'39		evening set	8960 Nov 18 11:38	17° \mathbb{Z} 40'09	
max. Earth dist.	8954 Sep 14 08:09	29° \mathbb{M} 33'34	10.39953 AU				
	8954 Sep 17 20:41	0° \mathbb{Z}		conjunction	8960 Dec 06 06:07	19° \mathbb{Z} 54'23	1°58'00
morning rise	8954 Oct 02 02:57	1° \mathbb{Z} 46'07		minimum elong	8960 Dec 06 06:06	19° \mathbb{Z} 54'23	1°58'15
retrograde	8955 Jan 15 07:45	9° \mathbb{Z} 38'58		max. Earth dist.	8960 Dec 05 23:46	19° \mathbb{Z} 52'22	10.28295 AU
opposition	8955 Mar 24 16:54	6° \mathbb{Z} 12'19	0°31'59	morning rise	8960 Dec 23 22:18	22° \mathbb{Z} 07'57	
min. Earth dist.	8955 Mar 24 16:19	6° \mathbb{Z} 12'26	8.37304 AU	retrograde	8961 Apr 05 15:10	29° \mathbb{Z} 57'43	
direct	8955 May 31 01:04	2° \mathbb{Z} 47'49		opposition	8961 Jun 11 17:00	26° \mathbb{Z} 32'52	2°26'39
evening set	8955 Sep 10 08:59	10° \mathbb{Z} 30'44		min. Earth dist.	8961 Jun 11 22:14	26° \mathbb{Z} 31'48	8.29722 AU
				direct	8961 Aug 19 02:38	23° \mathbb{Z} 04'42	
conjunction	8955 Sep 28 04:23	12° \mathbb{Z} 44'05	0°38'47		8961 Nov 23 21:20	0° \mathbb{Z}	
minimum elong	8955 Sep 28 04:21	12° \mathbb{Z} 44'05	0°38'49	evening set	8961 Dec 02 15:35	1° \mathbb{Z} 04'12	
max. Earth dist.	8955 Sep 28 03:21	12° \mathbb{Z} 43'46	10.34896 AU				
morning rise	8955 Oct 16 01:55	14° \mathbb{Z} 58'06		conjunction	8961 Dec 20 08:16	3° \mathbb{Z} 17'34	1°56'38
retrograde	8956 Jan 29 00:47	22° \mathbb{Z} 53'00		minimum elong	8961 Dec 20 08:17	3° \mathbb{Z} 17'35	1°56'54
opposition	8956 Apr 06 01:39	19° \mathbb{Z} 26'13	1°03'54	max. Earth dist.	8961 Dec 20 00:58	3° \mathbb{Z} 15'16	10.31180 AU
min. Earth dist.	8956 Apr 06 02:46	19° \mathbb{Z} 25'59	8.32757 AU	morning rise	8962 Jan 06 22:12	5° \mathbb{Z} 30'08	
direct	8956 Jun 12 10:00	16° \mathbb{Z} 00'43		retrograde	8962 Apr 19 01:20	13° \mathbb{Z} 15'57	
evening set	8956 Sep 23 09:34	23° \mathbb{Z} 48'48		opposition	8962 Jun 25 05:23	9° \mathbb{Z} 51'54	2°20'59
				min. Earth dist.	8962 Jun 25 11:12	9° \mathbb{Z} 50'45	8.33221 AU
conjunction	8956 Oct 11 06:15	26° \mathbb{Z} 03'06	1°03'26	direct	8962 Sep 01 23:57	6° \mathbb{Z} 23'54	
minimum elong	8956 Oct 11 06:13	26° \mathbb{Z} 03'05	1°03'32	evening set	8962 Dec 16 15:26	14° \mathbb{Z} 21'37	
max. Earth dist.	8956 Oct 11 03:33	26° \mathbb{Z} 02'15	10.30870 AU				
morning rise	8956 Oct 29 04:17	28° \mathbb{Z} 17'49		conjunction	8963 Jan 03 06:10	16° \mathbb{Z} 33'57	1°49'03
	8956 Nov 12 06:47	0° \mathbb{M}		minimum elong	8963 Jan 03 06:12	16° \mathbb{Z} 33'57	1°49'19
retrograde	8957 Feb 10 19:09	6° \mathbb{M} 13'51		max. Earth dist.	8963 Jan 02 22:29	16° \mathbb{Z} 31'31	10.35270 AU
opposition	8957 Apr 19 12:28	2° \mathbb{M} 47'05	1°32'42	morning rise	8963 Jan 20 17:47	18° \mathbb{Z} 45'19	
min. Earth dist.	8957 Apr 19 14:43	2° \mathbb{M} 46'38	8.29369 AU	retrograde	8963 May 02 08:50	26° \mathbb{Z} 26'41	
	8957 May 29 19:49	30° \mathbb{R} \mathbb{Z}		opposition	8963 Jul 08 16:25	23° \mathbb{Z} 03'30	2°07'53
direct	8957 Jun 25 23:12	29° \mathbb{Z} 20'42		min. Earth dist.	8963 Jul 08 21:47	23° \mathbb{Z} 02'26	8.37801 AU
	8957 Jul 22 23:28	0° \mathbb{M}		direct	8963 Sep 15 19:24	19° \mathbb{Z} 35'56	
evening set	8957 Oct 07 13:59	7° \mathbb{M} 13'21		evening set	8963 Dec 30 09:59	27° \mathbb{Z} 30'35	
conjunction	8957 Oct 25 11:11	9° \mathbb{M} 28'12	1°24'49	conjunction	8964 Jan 16 22:39	29° \mathbb{Z} 41'42	1°35'49
minimum elong	8957 Oct 25 11:09	9° \mathbb{M} 28'11	1°24'58	minimum elong	8964 Jan 16 22:41	29° \mathbb{Z} 41'43	1°36'04
max. Earth dist.	8957 Oct 25 07:27	9° \mathbb{M} 27'01	10.28094 AU	max. Earth dist.	8964 Jan 16 15:52	29° \mathbb{Z} 39'34	10.40337 AU
morning rise	8957 Nov 12 08:45	11° \mathbb{M} 43'12			8964 Jan 19 08:56	0° \mathbb{Z}	
	8957 Dec 10 08:06	15° \mathbb{M}		morning rise	8964 Feb 03 07:51	1° \mathbb{Z} 51'46	
retrograde	8958 Feb 24 13:08	19° \mathbb{M} 39'20		retrograde	8964 May 14 13:57	9° \mathbb{Z} 28'28	
opposition	8958 May 03 00:45	16° \mathbb{M} 12'46	1°56'36	opposition	8964 Jul 21 01:33	6° \mathbb{Z} 06'08	1°48'18
min. Earth dist.	8958 May 03 03:35	16° \mathbb{M} 12'12	8.27313 AU	min. Earth dist.	8964 Jul 21 05:58	6° \mathbb{Z} 05'16	8.43218 AU

direct	8964 Sep 28 11:31	2°≈39'14		min. Earth dist.	8970 Oct 06 05:34	20°Υ56'13	8.77131 AU
evening set	8965 Jan 11 22:47	10°≈29'50		direct	8970 Dec 15 13:48	17°Υ34'30	
				evening set	8971 Mar 28 07:34	24°Υ56'15	
conjunction	8965 Jan 29 09:19	12°≈39'37	1°17'49				
minimum elong	8965 Jan 29 09:22	12°≈39'38	1°18'02	conjunction	8971 Apr 14 03:36	26°Υ57'57	-1°05'14
max. Earth dist.	8965 Jan 29 03:57	12°≈37'56	10.46110 AU	minimum elong	8971 Apr 14 03:34	26°Υ57'56	1°05'20
morning rise	8965 Feb 15 16:08	14°≈48'19		max. Earth dist.	8971 Apr 14 05:36	26°Υ58'33	10.78867 AU
	8965 Feb 17 06:28	15°≈		morning rise	8971 Apr 30 22:23	28°Υ59'19	
retrograde	8965 May 27 14:33	22°≈20'23			8971 May 09 13:44	0°♄	
opposition	8965 Aug 03 08:26	18°≈58'52	1°23'30	retrograde	8971 Aug 10 07:37	6°♄15'58	
min. Earth dist.	8965 Aug 03 12:02	18°≈58'10	8.49196 AU	opposition	8971 Oct 19 00:56	2°♄56'22	-1°32'20
direct	8965 Oct 12 01:14	15°≈32'47		min. Earth dist.	8971 Oct 18 22:53	2°♄56'45	8.80373 AU
evening set	8966 Jan 25 05:40	23°≈18'40			8971 Dec 05 22:25	30°♄Υ	
				direct	8971 Dec 28 04:42	29°Υ35'41	
conjunction	8966 Feb 11 13:52	25°≈27'01	0°56'09		8972 Jan 19 07:26	0°♄	
minimum elong	8966 Feb 11 13:54	25°≈27'02	0°56'19	evening set	8972 Apr 08 10:37	6°♄54'07	
max. Earth dist.	8966 Feb 11 09:44	25°≈25'44	10.52288 AU				
morning rise	8966 Feb 28 18:22	27°≈34'19		conjunction	8972 Apr 25 04:51	8°♄55'01	-1°24'26
	8966 Mar 21 12:56	0°♄		minimum elong	8972 Apr 25 04:49	8°♄55'00	1°24'34
retrograde	8966 Jun 09 12:11	5°♄02'04		max. Earth dist.	8972 Apr 25 06:59	8°♄55'39	10.81427 AU
opposition	8966 Aug 16 13:02	1°♄41'18	0°54'56	morning rise	8972 May 11 22:46	10°♄55'48	
min. Earth dist.	8966 Aug 16 16:18	1°♄40'40	8.55431 AU		8972 Jun 18 15:55	15°♄	
	8966 Sep 08 08:30	30°♄≈		retrograde	8972 Aug 21 17:45	18°♄12'56	
direct	8966 Oct 25 11:17	28°≈16'08			8972 Oct 29 04:21	15°♄♄	
	8966 Dec 10 13:38	0°♄		opposition	8972 Oct 30 17:18	14°♄53'04	-1°53'43
evening set	8967 Feb 07 06:39	5°♄56'54		min. Earth dist.	8972 Oct 30 14:59	14°♄53'30	8.82285 AU
				direct	8973 Jan 08 18:31	11°♄32'56	
conjunction	8967 Feb 24 12:15	8°♄03'47	0°32'01		8973 Mar 16 09:30	15°♄	
minimum elong	8967 Feb 24 12:16	8°♄03'47	0°32'07	evening set	8973 Apr 20 11:58	18°♄48'59	
max. Earth dist.	8967 Feb 24 08:41	8°♄02'41	10.58559 AU				
morning rise	8967 Mar 13 14:32	10°♄09'41		conjunction	8973 May 07 05:04	20°♄49'23	-1°39'55
retrograde	8967 Jun 22 06:35	17°♄33'39		minimum elong	8973 May 07 05:03	20°♄49'23	1°40'06
opposition	8967 Aug 29 15:12	14°♄13'27	0°24'09	max. Earth dist.	8973 May 07 07:46	20°♄50'12	10.82614 AU
min. Earth dist.	8967 Aug 29 17:51	14°♄12'57	8.61627 AU	morning rise	8973 May 23 22:36	22°♄49'55	
direct	8967 Nov 07 17:06	10°♄49'17			8973 Aug 21 06:08	0°♄	
evening set	8968 Feb 20 01:58	18°♄24'51		retrograde	8973 Sep 03 04:18	0°♄08'23	
					8973 Sep 16 04:57	30°♄♄	
conjunction	8968 Mar 08 04:57	20°♄30'16	0°06'42	opposition	8973 Nov 12 08:48	26°♄48'05	-2°10'10
minimum elong	8968 Mar 08 04:56	20°♄30'15	0°06'45	min. Earth dist.	8973 Nov 12 05:27	26°♄48'43	8.82812 AU
behind sun begin	8968 Mar 07 22:19	20°♄28'15		direct	8974 Jan 21 05:31	23°♄28'22	
behind sun end	8968 Mar 08 11:34	20°♄32'16			8974 Apr 26 10:14	0°♄	
max. Earth dist.	8968 Mar 08 02:14	20°♄29'27	10.64636 AU	evening set	8974 May 02 12:29	0°♄42'50	
morning rise	8968 Mar 25 05:10	22°♄34'50					
desc. node	8968 Jun 14 16:02	29°♄36'27		conjunction	8974 May 19 05:15	2°♄43'06	-1°51'06
retrograde	8968 Jul 03 20:07	29°♄55'42		minimum elong	8974 May 19 05:14	2°♄43'06	1°51'19
opposition	8968 Sep 10 14:50	26°♄35'55	-0°07'20	max. Earth dist.	8974 May 19 09:39	2°♄44'26	10.82441 AU
min. Earth dist.	8968 Sep 10 16:06	26°♄35'41	8.67500 AU	morning rise	8974 Jun 04 22:56	4°♄43'41	
direct	8968 Nov 19 20:18	23°♄12'43		retrograde	8974 Sep 15 16:30	12°♄04'17	
	8969 Feb 25 13:59	0°Υ		opposition	8974 Nov 25 00:14	8°♄43'21	-2°21'02
evening set	8969 Mar 03 15:58	0°Υ43'14		min. Earth dist.	8974 Nov 24 19:33	8°♄44'14	8.82001 AU
				direct	8975 Feb 02 15:38	5°♄23'51	
conjunction	8969 Mar 20 16:30	2°Υ47'16	-0°18'46	evening set	8975 May 14 13:03	12°♄37'30	
minimum elong	8969 Mar 20 16:29	2°Υ47'15	0°18'47				
max. Earth dist.	8969 Mar 20 15:29	2°Υ46'57	10.70232 AU	conjunction	8975 May 31 06:10	14°♄37'59	-1°57'30
morning rise	8969 Apr 06 14:43	4°Υ50'36		minimum elong	8975 May 31 06:09	14°♄37'59	1°57'45
retrograde	8969 Jul 16 09:31	12°Υ09'11		max. Earth dist.	8975 May 31 11:42	14°♄39'40	10.80976 AU
opposition	8969 Sep 23 12:05	8°Υ49'38	-0°38'05	morning rise	8975 Jun 17 00:50	16°♄38'58	
min. Earth dist.	8969 Sep 23 11:33	8°Υ49'44	8.72758 AU	retrograde	8975 Sep 28 07:51	24°♄02'15	
direct	8969 Dec 02 19:57	5°Υ27'23		opposition	8975 Dec 07 15:54	20°♄40'35	-2°25'52
evening set	8970 Mar 16 01:35	12°Υ53'14		min. Earth dist.	8975 Dec 07 10:40	20°♄41'35	8.79930 AU
				direct	8976 Feb 15 00:02	17°♄21'04	
conjunction	8970 Apr 01 23:48	14°Υ56'00	-0°43'03	evening set	8976 May 25 14:55	24°♄34'46	
minimum elong	8970 Apr 01 23:47	14°Υ55'59	0°43'06				
max. Earth dist.	8970 Apr 02 00:53	14°Υ56'19	10.75060 AU	conjunction	8976 Jun 11 09:04	26°♄35'48	-1°58'50
morning rise	8970 Apr 18 20:04	16°Υ58'14		minimum elong	8976 Jun 11 09:04	26°♄35'48	1°59'06
retrograde	8970 Jul 28 21:54	24°Υ15'23		max. Earth dist.	8976 Jun 11 14:35	26°♄37'28	10.78313 AU
opposition	8970 Oct 06 07:17	20°Υ55'53	-1°06'48	morning rise	8976 Jun 28 05:36	28°♄37'33	

	8976 Jul 10 01:14	0°☾	morning rise	8982 Sep 12 11:52	13°♏03'23	
retrograde	8976 Oct 09 23:19	6°☾03'56	retrograde	8982 Dec 26 19:10	20°♏52'42	
opposition	8976 Dec 19 07:58	2°☾41'29 -2°24'23	opposition	8983 Mar 05 18:27	17°♏25'58 -0°16'23	
min. Earth dist.	8976 Dec 19 03:04	2°☾42'25 8.76707 AU	min. Earth dist.	8983 Mar 05 16:09	17°♏26'25 8.43401 AU	
	8977 Jan 29 16:13	30°♏II	direct	8983 May 12 06:14	14°♏02'18	
direct	8977 Feb 26 08:33	29°II21'44	evening set	8983 Aug 21 16:57	21°♏38'15	
	8977 Mar 25 16:43	0°☾				
evening set	8977 Jun 06 18:51	6°☾36'21	conjunction	8983 Sep 08 09:06	23°♏49'50 -0°00'02	
			minimum elong	8983 Sep 08 09:06	23°♏49'50 0°00'05	
conjunction	8977 Jun 23 14:53	8°☾38'17 -1°54'58	behind sun begin	8983 Sep 08 02:15	23°♏47'44	
minimum elong	8977 Jun 23 14:54	8°☾38'18 1°55'13	behind sun end	8983 Sep 08 15:56	23°♏51'57	
max. Earth dist.	8977 Jun 23 20:21	8°☾39'57 10.74578 AU	max. Earth dist.	8983 Sep 08 11:32	23°♏50'32 10.40599 AU	
morning rise	8977 Jul 10 13:59	10°☾41'06	asc. node	8983 Sep 08 16:44	23°♏52'12	
retrograde	8977 Oct 22 17:24	18°☾11'04	morning rise	8983 Sep 26 04:18	26°♏02'23	
opposition	8978 Jan 01 01:10	14°☾47'45 -2°16'30		8983 Oct 31 03:11	0°♏	
min. Earth dist.	8977 Dec 31 20:17	14°☾48'41 8.72471 AU	retrograde	8984 Jan 09 09:25	3°♏54'50	
direct	8978 Mar 10 19:26	11°☾27'39	opposition	8984 Mar 18 00:16	0°♏27'49 0°16'52	
evening set	8978 Jun 19 01:40	18°☾43'56	min. Earth dist.	8984 Mar 17 22:34	0°♏28'09 8.37935 AU	
				8984 Mar 23 19:49	30°♏♏	
conjunction	8978 Jul 06 00:27	20°☾47'07 -1°45'56	direct	8984 May 24 10:06	27°♏03'20	
minimum elong	8978 Jul 06 00:28	20°☾47'08 1°46'10		8984 Jul 22 10:50	0°♏	
max. Earth dist.	8978 Jul 06 06:41	20°☾49'01 10.69919 AU	evening set	8984 Sep 03 09:51	4°♏44'35	
morning rise	8978 Jul 23 02:34	22°☾51'17				
	8978 Oct 13 06:00	0°♏	conjunction	8984 Sep 21 04:33	6°♏57'37 0°26'50	
retrograde	8978 Nov 04 16:06	0°♏25'07	minimum elong	8984 Sep 21 04:32	6°♏57'36 0°26'51	
	8978 Nov 27 05:50	30°♏☾	max. Earth dist.	8984 Sep 21 06:18	6°♏58'09 10.35492 AU	
opposition	8979 Jan 13 19:45	27°☾00'57 -2°02'24	morning rise	8984 Oct 09 01:30	9°♏11'23	
min. Earth dist.	8979 Jan 13 14:25	27°☾01'58 8.67393 AU	retrograde	8985 Jan 22 03:22	17°♏06'18	
direct	8979 Mar 23 06:44	23°☾40'21	opposition	8985 Mar 31 08:32	13°♏39'12 0°49'38	
	8979 Jun 23 04:43	0°♏	min. Earth dist.	8985 Mar 31 07:22	13°♏39'26 8.33286 AU	
evening set	8979 Jul 01 12:42	0°♏59'09	direct	8985 Jun 06 16:29	10°♏13'57	
			evening set	8985 Sep 17 08:39	18°♏00'28	
conjunction	8979 Jul 18 14:48	3°♏03'50 -1°31'59				
minimum elong	8979 Jul 18 14:50	3°♏03'50 1°32'12	conjunction	8985 Oct 05 05:01	20°♏14'35 0°52'31	
max. Earth dist.	8979 Jul 18 21:33	3°♏05'54 10.64526 AU	minimum elong	8985 Oct 05 04:59	20°♏14'35 0°52'35	
morning rise	8979 Aug 04 20:23	5°♏09'35	max. Earth dist.	8985 Oct 05 05:22	20°♏14'42 10.31335 AU	
retrograde	8979 Nov 17 17:42	12°♏47'25	morning rise	8985 Oct 23 02:51	22°♏29'14	
opposition	8980 Jan 26 15:55	9°♏22'26 -1°42'30		8986 Jan 13 23:44	0°♏	
min. Earth dist.	8980 Jan 26 10:27	9°♏23'29 8.61681 AU	retrograde	8986 Feb 04 23:36	0°♏25'44	
direct	8980 Apr 03 19:47	6°♏01'12		8986 Feb 26 22:17	30°♏♏	
evening set	8980 Jul 13 04:48	13°♏23'20	opposition	8986 Apr 13 19:06	26°♏58'47 1°20'05	
	8980 Jul 26 09:54	15°♏	min. Earth dist.	8986 Apr 13 19:07	26°♏58'47 8.29730 AU	
			direct	8986 Jun 20 02:56	23°♏32'48	
conjunction	8980 Jul 30 10:28	15°♏29'42 -1°13'37		8986 Sep 19 23:13	0°♏	
minimum elong	8980 Jul 30 10:31	15°♏29'43 1°13'48	evening set	8986 Oct 01 12:17	1°♏24'12	
max. Earth dist.	8980 Jul 30 16:28	15°♏31'33 10.58620 AU				
morning rise	8980 Aug 16 19:49	17°♏37'12	conjunction	8986 Oct 19 09:26	3°♏39'02 1°15'34	
retrograde	8980 Nov 29 23:11	25°♏19'02	minimum elong	8986 Oct 19 09:24	3°♏39'01 1°15'41	
opposition	8981 Feb 07 14:20	21°♏53'20 -1°17'29	max. Earth dist.	8986 Oct 19 07:55	3°♏38'33 10.28372 AU	
min. Earth dist.	8981 Feb 07 09:38	21°♏54'16 8.55582 AU	morning rise	8986 Nov 06 07:17	5°♏54'08	
direct	8981 Apr 16 11:31	18°♏31'23	retrograde	8987 Feb 18 18:46	13°♏51'09	
evening set	8981 Jul 26 02:29	25°♏57'31	opposition	8987 Apr 27 07:33	10°♏24'35 1°46'24	
			min. Earth dist.	8987 Apr 27 09:08	10°♏24'15 8.27466 AU	
conjunction	8981 Aug 12 11:46	28°♏05'41 -0°51'30	direct	8987 Jul 03 18:53	6°♏57'58	
minimum elong	8981 Aug 12 11:48	28°♏05'41 0°51'39	evening set	8987 Oct 15 19:24	14°♏53'29	
max. Earth dist.	8981 Aug 12 16:16	28°♏07'04 10.52464 AU		8987 Oct 16 16:25	15°♏	
	8981 Aug 27 23:30	0°♏				
morning rise	8981 Aug 30 00:53	0°♏14'59	conjunction	8987 Nov 02 16:27	17°♏08'35 1°34'35	
retrograde	8981 Dec 13 08:27	8°♏00'42	minimum elong	8987 Nov 02 16:25	17°♏08'34 1°34'46	
opposition	8982 Feb 20 15:11	4°♏34'25 -0°48'21	max. Earth dist.	8987 Nov 02 12:55	17°♏07'28 10.26764 AU	
min. Earth dist.	8982 Feb 20 11:46	4°♏35'05 8.49384 AU	morning rise	8987 Nov 20 13:26	19°♏23'41	
direct	8982 Apr 29 06:04	1°♏11'38	retrograde	8988 Mar 03 13:32	27°♏20'04	
evening set	8982 Aug 08 06:28	8°♏42'26	opposition	8988 May 09 21:13	23°♏54'02 2°06'59	
			min. Earth dist.	8988 May 10 00:16	23°♏53'25 8.26613 AU	
conjunction	8982 Aug 25 19:21	10°♏52'22 -0°26'35	direct	8988 Jul 16 13:26	20°♏26'55	
minimum elong	8982 Aug 25 19:22	10°♏52'22 0°26'42	evening set	8988 Oct 29 03:59	28°♏25'23	
max. Earth dist.	8982 Aug 25 22:35	10°♏53'22 10.46357 AU		8988 Nov 10 17:06	0°♏	

conjunction	8988 Nov 16 00:19	0° \mathbb{A} 40'23	1°48'27	conjunction	8995 Feb 06 06:00	20° \approx 11'02	1°05'46
minimum elong	8988 Nov 16 00:17	0° \mathbb{A} 40'22	1°48'40	minimum elong	8995 Feb 06 06:02	20° \approx 11'03	1°05'57
max. Earth dist.	8988 Nov 15 19:23	0° \mathbb{A} 38'49	10.26603 AU	max. Earth dist.	8995 Feb 05 23:02	20° \approx 08'52	10.48991 AU
morning rise	8988 Dec 03 19:43	2° \mathbb{A} 55'06		morning rise	8995 Feb 23 11:44	22° \approx 19'06	
retrograde	8989 Mar 17 07:35	10° \mathbb{A} 49'40		retrograde	8995 Jun 04 07:18	29° \approx 49'21	
opposition	8989 May 23 11:31	7° \mathbb{A} 24'14	2°20'33	opposition	8995 Aug 11 05:01	26° \approx 28'21	1°07'28
min. Earth dist.	8989 May 23 15:14	7° \mathbb{A} 23'29	8.27200 AU	min. Earth dist.	8995 Aug 11 09:33	26° \approx 27'28	8.51919 AU
direct	8989 Jul 30 09:47	3° \mathbb{A} 56'48		direct	8995 Oct 20 01:21	23° \approx 02'46	
evening set	8989 Nov 12 12:02	11° \mathbb{A} 56'45			8996 Jan 26 14:10	0° \mathbb{H}	
				evening set	8996 Feb 02 00:58	0° \mathbb{H} 46'30	
conjunction	8989 Nov 30 07:12	14° \mathbb{A} 11'18	1°56'20	conjunction	8996 Feb 19 07:49	2° \mathbb{H} 54'12	0°42'30
minimum elong	8989 Nov 30 07:11	14° \mathbb{A} 11'17	1°56'35	minimum elong	8996 Feb 19 07:51	2° \mathbb{H} 54'12	0°42'38
max. Earth dist.	8989 Nov 30 01:36	14° \mathbb{A} 09'31	10.27862 AU	max. Earth dist.	8996 Feb 19 02:42	2° \mathbb{H} 52'37	10.54844 AU
morning rise	8989 Dec 18 00:33	16° \mathbb{A} 25'18		morning rise	8996 Mar 07 11:14	5° \mathbb{H} 00'53	
retrograde	8990 Mar 30 23:40	24° \mathbb{A} 16'57		retrograde	8996 Jun 16 03:55	12° \mathbb{H} 27'09	
opposition	8990 Jun 06 01:39	20° \mathbb{A} 52'13	2°26'22	opposition	8996 Aug 23 08:53	9° \mathbb{H} 06'33	0°37'25
min. Earth dist.	8990 Jun 06 05:48	20° \mathbb{A} 51'23	8.29124 AU	min. Earth dist.	8996 Aug 23 11:49	9° \mathbb{H} 05'59	8.57766 AU
direct	8990 Aug 13 07:42	17° \mathbb{A} 24'36		direct	8996 Nov 01 09:53	5° \mathbb{H} 41'46	
evening set	8990 Nov 26 18:04	25° \mathbb{A} 24'39		evening set	8997 Feb 13 23:19	13° \mathbb{H} 20'17	
conjunction	8990 Dec 14 11:41	27° \mathbb{A} 38'26	1°57'49	conjunction	8997 Mar 03 03:44	15° \mathbb{H} 26'32	0°17'30
minimum elong	8990 Dec 14 11:41	27° \mathbb{A} 38'26	1°58'05	minimum elong	8997 Mar 03 03:45	15° \mathbb{H} 26'33	0°17'34
max. Earth dist.	8990 Dec 14 05:28	27° \mathbb{A} 36'28	10.30377 AU	max. Earth dist.	8997 Mar 03 00:40	15° \mathbb{H} 25'36	10.60663 AU
morning rise	8991 Jan 01 02:39	29° \mathbb{A} 51'28		morning rise	8997 Mar 20 04:54	17° \mathbb{H} 31'53	
	8991 Jan 02 06:13	0° \mathbb{B}		retrograde	8997 Jun 28 20:45	24° \mathbb{H} 54'42	
retrograde	8991 Apr 13 12:25	7° \mathbb{B} 39'21		opposition	8997 Sep 05 10:05	21° \mathbb{H} 34'25	0°05'59
opposition	8991 Jun 19 14:56	4° \mathbb{B} 15'24	2°24'10	min. Earth dist.	8997 Sep 05 12:04	21° \mathbb{H} 34'02	8.63454 AU
min. Earth dist.	8991 Jun 19 19:42	4° \mathbb{B} 14'27	8.32168 AU	direct	8997 Nov 14 14:12	18° \mathbb{H} 10'25	
direct	8991 Aug 27 05:07	0° \mathbb{B} 47'49		desc. node	8997 Nov 15 18:30	18° \mathbb{H} 10'29	
evening set	8991 Dec 10 20:27	8° \mathbb{B} 46'39		evening set	8998 Feb 26 16:14	25° \mathbb{H} 43'48	
conjunction	8991 Dec 28 12:13	10° \mathbb{B} 59'29	1°52'56	conjunction	8998 Mar 15 18:03	27° \mathbb{H} 48'39	-0°08'08
minimum elong	8991 Dec 28 12:14	10° \mathbb{B} 59'30	1°53'11	minimum elong	8998 Mar 15 18:03	27° \mathbb{H} 48'39	0°08'07
max. Earth dist.	8991 Dec 28 05:25	10° \mathbb{B} 57'20	10.33910 AU	behind sun begin	8998 Mar 15 11:45	27° \mathbb{H} 46'44	
morning rise	8992 Jan 15 00:44	13° \mathbb{B} 11'23		behind sun end	8998 Mar 16 00:21	27° \mathbb{H} 50'33	
retrograde	8992 Apr 25 23:13	20° \mathbb{B} 55'05		max. Earth dist.	8998 Mar 15 16:11	27° \mathbb{H} 48'06	10.66171 AU
opposition	8992 Jul 02 03:15	17° \mathbb{B} 31'58	2°14'14	morning rise	8998 Apr 01 17:08	29° \mathbb{H} 52'43	
min. Earth dist.	8992 Jul 02 08:48	17° \mathbb{B} 30'52	8.36119 AU		8998 Apr 02 17:26	0° \mathbb{Y}	
direct	8992 Sep 09 00:41	14° \mathbb{B} 04'40		retrograde	8998 Jul 11 10:55	7° \mathbb{Y} 12'51	
evening set	8992 Dec 23 18:01	22° \mathbb{B} 01'05		opposition	8998 Sep 18 08:56	3° \mathbb{Y} 52'45	-0°25'18
conjunction	8993 Jan 10 07:43	24° \mathbb{B} 12'49	1°42'04	min. Earth dist.	8998 Sep 18 10:07	3° \mathbb{Y} 52'31	8.68724 AU
minimum elong	8993 Jan 10 07:45	24° \mathbb{B} 12'50	1°42'19	direct	8998 Nov 27 15:19	0° \mathbb{Y} 29'33	
max. Earth dist.	8993 Jan 10 00:19	24° \mathbb{B} 10'30	10.38292 AU	evening set	8999 Mar 11 04:08	7° \mathbb{Y} 58'05	
morning rise	8993 Jan 27 17:55	26° \mathbb{B} 23'31					
	8993 Feb 28 01:56	0° \approx		conjunction	8999 Mar 28 03:21	10° \mathbb{Y} 01'36	-0°33'01
retrograde	8993 May 09 06:29	4° \approx 02'45		minimum elong	8999 Mar 28 03:19	10° \mathbb{Y} 01'36	0°33'04
opposition	8993 Jul 15 13:59	0° \approx 40'26	1°57'20	max. Earth dist.	8999 Mar 28 02:26	10° \mathbb{Y} 01'19	10.71126 AU
min. Earth dist.	8993 Jul 15 20:05	0° \approx 39'14	8.40846 AU	morning rise	8999 Apr 14 00:36	12° \mathbb{Y} 04'31	
	8993 Jul 24 03:50	30° \mathbb{R} \mathbb{B}		retrograde	8999 Jul 23 22:20	19° \mathbb{Y} 22'51	
direct	8993 Sep 22 18:40	27° \mathbb{B} 13'34		opposition	8999 Oct 01 05:31	16° \mathbb{Y} 02'47	-0°55'04
	8993 Nov 20 09:37	0° \approx		min. Earth dist.	8999 Oct 01 05:28	16° \mathbb{Y} 02'47	8.73346 AU
evening set	8994 Jan 06 10:21	5° \approx 06'34		direct	8999 Dec 10 12:22	12° \mathbb{Y} 40'23	
				evening set	9000 Mar 23 11:52	20° \mathbb{Y} 04'34	
conjunction	8994 Jan 23 21:50	7° \approx 17'03	1°26'00	conjunction	9000 Apr 09 08:49	22° \mathbb{Y} 06'55	-0°56'14
minimum elong	8994 Jan 23 21:53	7° \approx 17'03	1°26'14	minimum elong	9000 Apr 09 08:47	22° \mathbb{Y} 06'54	0°56'19
max. Earth dist.	8994 Jan 23 14:08	7° \approx 14'38	10.43386 AU	max. Earth dist.	9000 Apr 09 09:30	22° \mathbb{Y} 07'07	10.75320 AU
morning rise	8994 Feb 10 05:49	9° \approx 26'28		morning rise	9000 Apr 26 04:28	24° \mathbb{Y} 08'52	
	8994 Apr 03 23:40	15° \approx			9000 Jun 24 17:28	0° \mathbb{B}	
retrograde	8994 May 22 08:12	17° \approx 01'06		retrograde	9000 Aug 05 08:18	1° \mathbb{B} 26'16	
	8994 Jul 11 08:09	15° \mathbb{R} \approx			9000 Sep 17 05:48	30° \mathbb{R} \mathbb{Y}	
opposition	8994 Jul 28 22:35	13° \approx 39'31	1°34'37	opposition	9000 Oct 13 23:56	28° \mathbb{Y} 06'07	-1°22'07
min. Earth dist.	8994 Jul 29 04:23	13° \approx 38'23	8.46189 AU	min. Earth dist.	9000 Oct 13 21:55	28° \mathbb{Y} 06'30	8.77115 AU
direct	8994 Oct 06 11:44	10° \approx 13'13		direct	9000 Dec 23 06:26	24° \mathbb{Y} 44'30	
	8994 Dec 24 16:05	15° \approx			9001 Mar 17 12:30	0° \mathbb{B}	
evening set	8995 Jan 19 20:49	18° \approx 01'55		evening set	9001 Apr 04 16:14	2° \mathbb{B} 04'58	

conjunction	9001 Apr 21 11:25	4°8'06"23 -1°16'49	max. Earth dist.	9007 Jul 02 08:59	15°51'41 10.73792 AU
minimum elong	9001 Apr 21 11:23	4°8'06"23 1°16'56	morning rise	9007 Jul 19 01:33	17°52'35
max. Earth dist.	9001 Apr 21 14:22	4°8'07"17 10.78562 AU	retrograde	9007 Oct 31 12:16	25°52'352
morning rise	9001 May 08 05:44	6°8'07"35	opposition	9008 Jan 09 16:26	22°50'34 -2°08'59
retrograde	9001 Aug 17 20:14	13°8'24"57	min. Earth dist.	9008 Jan 09 09:44	22°50'151 8.71761 AU
opposition	9001 Oct 26 16:52	10°8'04"37 -1°45'23	direct	9008 Mar 18 05:23	18°54'047
min. Earth dist.	9001 Oct 26 13:09	10°8'05"19 8.79854 AU	evening set	9008 Jun 26 12:19	25°57'30
direct	9002 Jan 04 20:56	6°8'43"43			
evening set	9002 Apr 16 18:18	14°8'01"11	conjunction	9008 Jul 13 12:37	28°50'111 -1°38'25
	9002 Apr 24 23:05	15°8'	minimum elong	9008 Jul 13 12:39	28°50'112 1°38'39
			max. Earth dist.	9008 Jul 13 19:45	28°50'322 10.69320 AU
conjunction	9002 May 03 12:01	16°8'01"56 -1°33'57		9008 Jul 29 20:41	0°0'
minimum elong	9002 May 03 11:59	16°8'01"55 1°34'07	morning rise	9008 Jul 30 16:35	0°0'05"57
max. Earth dist.	9002 May 03 16:37	16°8'03"19 10.80705 AU	retrograde	9008 Nov 12 10:10	7°0'40"53
morning rise	9002 May 20 05:34	18°8'02"40	opposition	9009 Jan 21 11:14	4°0'16"56 -1°51'31
retrograde	9002 Aug 30 06:35	25°8'20"48	min. Earth dist.	9009 Jan 21 05:28	4°0'18"03 8.66882 AU
opposition	9002 Nov 08 08:50	22°8'00"11 -2°03'59	direct	9009 Mar 30 17:23	0°0'56"41
min. Earth dist.	9002 Nov 08 04:13	22°8'01"03 8.81446 AU	evening set	9009 Jul 09 01:25	8°0'16"09
direct	9003 Jan 17 07:08	18°8'39"53			
evening set	9003 Apr 28 19:02	25°8'55"10	conjunction	9009 Jul 26 05:12	10°0'21"22 -1°21'55
			minimum elong	9009 Jul 26 05:14	10°0'21"23 1°22'07
conjunction	9003 May 15 11:51	27°8'55"32 -1°46'59	max. Earth dist.	9009 Jul 26 11:49	10°0'23"24 10.64144 AU
minimum elong	9003 May 15 11:49	27°8'55"32 1°47'12	morning rise	9009 Aug 12 12:48	12°0'27"43
max. Earth dist.	9003 May 15 16:53	27°8'57"04 10.81672 AU		9009 Sep 03 14:52	15°0'
morning rise	9003 Jun 01 05:25	29°8'56"08	retrograde	9009 Nov 25 12:17	20°0'06"25
	9003 Jun 01 18:30	0°0'	opposition	9010 Feb 03 07:59	16°0'41"48 -1°28'40
retrograde	9003 Sep 11 17:07	7°0'15"48	min. Earth dist.	9010 Feb 03 02:50	16°0'42"48 8.61385 AU
opposition	9003 Nov 21 00:12	3°0'15"48 -2°17'14		9010 Feb 26 06:24	15°0'00"00
min. Earth dist.	9003 Nov 20 19:19	3°0'15"43 8.81835 AU	direct	9010 Apr 12 08:51	13°0'20"56
direct	9004 Jan 29 17:31	0°0'13"45		9010 May 26 05:27	15°0'
evening set	9004 May 09 19:14	7°0'14"52	evening set	9010 Jul 21 19:36	20°0'43"48
conjunction	9004 May 26 11:59	9°0'14"12 -1°55'25	conjunction	9010 Aug 08 03:09	22°0'50"44 -1°01'24
minimum elong	9004 May 26 11:58	9°0'14"12 1°55'40	minimum elong	9010 Aug 08 03:11	22°0'50"44 1°01'33
max. Earth dist.	9004 May 26 17:44	9°0'15"07 10.81429 AU	max. Earth dist.	9010 Aug 08 09:28	22°0'52"40 10.58431 AU
morning rise	9004 Jun 12 06:18	11°0'14"59	morning rise	9010 Aug 25 14:22	24°0'58"47
retrograde	9004 Sep 23 06:20	19°0'11"51		9010 Oct 11 17:04	0°0'00"00
opposition	9004 Dec 02 15:21	15°0'15"22 -2°24'35	retrograde	9010 Dec 08 19:10	2°0'41"15
min. Earth dist.	9004 Dec 02 09:39	15°0'15"27 8.80997 AU		9011 Feb 06 19:49	30°0'00"00
direct	9005 Feb 10 03:02	12°0'13"04	opposition	9011 Feb 16 06:44	29°0'15"59 -1°01'19
evening set	9005 May 21 20:03	19°0'14"10	min. Earth dist.	9011 Feb 16 02:07	29°0'16"53 8.55439 AU
			direct	9011 Apr 25 01:25	25°0'54"21
conjunction	9005 Jun 07 13:38	21°0'14"51 -1°58'52		9011 Jul 05 06:13	0°0'00"00
minimum elong	9005 Jun 07 13:38	21°0'14"51 1°59'08	evening set	9011 Aug 03 19:51	3°0'00"25
max. Earth dist.	9005 Jun 07 20:45	21°0'14"70 10.79978 AU			
morning rise	9005 Jun 24 09:15	23°0'14"09	conjunction	9011 Aug 21 07:05	5°0'30"06 -0°37'40
	9005 Aug 28 18:17	0°0'	minimum elong	9011 Aug 21 07:06	5°0'30"07 0°37'48
retrograde	9005 Oct 05 20:39	1°0'10"46	max. Earth dist.	9011 Aug 21 11:51	5°0'31"35 10.52367 AU
	9005 Nov 13 17:37	30°0'00"00	morning rise	9011 Sep 07 21:45	7°0'39"54
opposition	9005 Dec 15 06:43	27°0'14"83 -2°25'43	retrograde	9011 Dec 22 05:06	15°0'26"00
min. Earth dist.	9005 Dec 14 23:57	27°0'15"00 8.78967 AU	opposition	9012 Feb 29 07:43	12°0'00"11 -0°30'34
direct	9006 Feb 22 11:27	24°0'12"91	min. Earth dist.	9012 Feb 29 04:23	12°0'00"51 8.49285 AU
	9006 May 19 02:16	0°0'	direct	9012 May 06 21:04	8°0'37"40
evening set	9006 Jun 02 22:31	1°0'14"56	evening set	9012 Aug 16 02:29	16°0'09"40
conjunction	9006 Jun 19 17:41	3°0'14"19 -1°57'11	conjunction	9012 Sep 02 17:00	18°0'20"05 -0°11'50
minimum elong	9006 Jun 19 17:42	3°0'14"19 1°57'27	minimum elong	9012 Sep 02 17:00	18°0'20"05 0°11'54
max. Earth dist.	9006 Jun 20 01:58	3°0'14"49 10.77393 AU	behind sun begin	9012 Sep 02 12:03	18°0'18"33
morning rise	9006 Jul 06 15:21	5°0'14"27	behind sun end	9012 Sep 02 21:58	18°0'21"36
retrograde	9006 Oct 18 14:41	13°0'14"16	max. Earth dist.	9012 Sep 02 19:32	18°0'20"51 10.46260 AU
opposition	9006 Dec 27 22:59	9°0'15"36 -2°20'29	morning rise	9012 Sep 20 10:44	20°0'31"29
min. Earth dist.	9006 Dec 27 15:40	9°0'15"00 8.75843 AU	retrograde	9013 Jan 03 17:25	28°0'20"59
direct	9007 Mar 06 20:33	6°0'13"04	asc. node	9013 Feb 17 03:49	26°0'44"27
evening set	9007 Jun 15 03:34	13°0'14"51	opposition	9013 Mar 13 11:26	24°0'54"45 0°02'09
			min. Earth dist.	9013 Mar 13 09:48	24°0'55"04 8.43299 AU
conjunction	9007 Jul 02 00:59	15°0'14"15 -1°50'18	direct	9013 May 19 21:34	21°0'31"16
minimum elong	9007 Jul 02 01:01	15°0'14"16 1°50'33	evening set	9013 Aug 29 15:20	29°0'08"32



























































































































	9013 Sep 05 14:24	0°♄		min. Earth dist.	9019 Jun 01 08:27	14°♊51'11	8.27861 AU
				direct	9019 Aug 08 05:50	11°♊24'14	
conjunction	9013 Sep 16 08:36	1°♄20'30 0°15'01		evening set	9019 Nov 21 12:02	19°♊24'02	
minimum elong	9013 Sep 16 08:35	1°♄20'30 0°14'59					
behind sun begin	9013 Sep 16 06:08	1°♄19'44		conjunction	9019 Dec 09 06:18	21°♊38'10	1°58'00
behind sun end	9013 Sep 16 11:02	1°♄21'15		minimum elong	9019 Dec 09 06:18	21°♊38'10	1°58'16
max. Earth dist.	9013 Sep 16 08:52	1°♄20'35 10.40508 AU		max. Earth dist.	9019 Dec 08 22:46	21°♊35'47	10.28613 AU
morning rise	9013 Oct 04 04:42	3°♄33'20		morning rise	9019 Dec 26 22:27	23°♊51'40	
retrograde	9014 Jan 17 08:28	11°♄25'41			9020 Feb 23 19:33	0°♊	
opposition	9014 Mar 26 17:41	7°♄59'09 0°35'12		retrograde	9020 Apr 07 13:22	1°♊41'12	
min. Earth dist.	9014 Mar 26 17:49	7°♄59'07 8.37872 AU			9020 May 22 04:12	30°♊♊	
direct	9014 Jun 02 02:09	4°♄34'40		opposition	9020 Jun 13 16:30	28°♊16'27	2°26'16
evening set	9014 Sep 12 10:24	12°♄17'20		min. Earth dist.	9020 Jun 13 22:22	28°♊15'16	8.29999 AU
				direct	9020 Aug 21 03:34	24°♊48'20	
conjunction	9014 Sep 30 05:48	14°♄30'35 0°41'16			9020 Nov 11 00:58	0°♊	
minimum elong	9014 Sep 30 05:46	14°♄30'35 0°41'19		evening set	9020 Dec 04 15:39	2°♊47'45	
max. Earth dist.	9014 Sep 30 04:30	14°♄30'11 10.35467 AU					
morning rise	9014 Oct 18 03:19	16°♄44'31		conjunction	9020 Dec 22 08:12	5°♊01'04	1°56'02
retrograde	9015 Jan 31 01:04	24°♄38'57		minimum elong	9020 Dec 22 08:13	5°♊01'04	1°56'19
opposition	9015 Apr 09 02:05	21°♄12'15 1°06'47		max. Earth dist.	9020 Dec 22 00:15	4°♊58'33	10.31412 AU
min. Earth dist.	9015 Apr 09 03:21	21°♄12'00 8.33326 AU		morning rise	9021 Jan 08 22:04	7°♊13'34	
direct	9015 Jun 15 11:24	17°♄46'49		retrograde	9021 Apr 21 00:34	14°♊59'13	
evening set	9015 Sep 26 10:46	25°♄34'41		opposition	9021 Jun 27 04:50	11°♊35'14	2°19'53
				min. Earth dist.	9021 Jun 27 10:32	11°♊34'05	8.33406 AU
conjunction	9015 Oct 14 07:30	27°♄48'53 1°05'35		direct	9021 Sep 03 23:48	8°♊07'16	
minimum elong	9015 Oct 14 07:28	27°♄48'52 1°05'42		evening set	9021 Dec 18 15:05	16°♊04'51	
max. Earth dist.	9015 Oct 14 05:05	27°♄48'07 10.31424 AU					
	9015 Oct 31 18:07	0°♄		conjunction	9022 Jan 05 05:49	18°♊17'10	1°47'54
morning rise	9015 Nov 01 05:23	0°♄03'29		minimum elong	9022 Jan 05 05:51	18°♊17'11	1°48'10
retrograde	9016 Feb 13 18:31	7°♄59'06		max. Earth dist.	9022 Jan 04 22:22	18°♊14'49	10.35408 AU
opposition	9016 Apr 21 12:33	4°♄32'26 1°35'05		morning rise	9022 Jan 22 17:18	20°♊28'30	
min. Earth dist.	9016 Apr 21 14:33	4°♄32'02 8.29907 AU		retrograde	9022 May 04 08:39	28°♊09'45	
direct	9016 Jun 28 00:31	1°♄06'08		opposition	9022 Jul 10 15:47	24°♊46'35	2°06'08
evening set	9016 Oct 09 15:04	8°♄58'36		min. Earth dist.	9022 Jul 10 20:45	24°♊45'35	8.37883 AU
				direct	9022 Sep 17 18:38	21°♊19'02	
conjunction	9016 Oct 27 12:14	11°♄13'21 1°26'32		evening set	9023 Jan 01 09:31	29°♊13'35	
minimum elong	9016 Oct 27 12:11	11°♄13'20 1°26'42			9023 Jan 07 15:37	0°♊	
max. Earth dist.	9016 Oct 27 08:51	11°♄12'17 10.28603 AU					
morning rise	9016 Nov 14 09:30	13°♄28'12		conjunction	9023 Jan 18 22:13	1°♊24'42	1°34'11
	9016 Nov 26 23:56	15°♄		minimum elong	9023 Jan 18 22:15	1°♊24'42	1°34'25
retrograde	9017 Feb 26 13:34	21°♄23'59		max. Earth dist.	9023 Jan 18 15:54	1°♊22'43	10.40370 AU
opposition	9017 May 05 00:38	17°♄57'33 1°58'24		morning rise	9023 Feb 05 07:14	3°♊34'44	
min. Earth dist.	9017 May 05 03:20	17°♄57'00 8.27798 AU		retrograde	9023 May 17 12:57	11°♊11'23	
	9017 Jun 18 04:27	15°♄		opposition	9023 Jul 24 00:55	7°♊49'03	1°46'01
direct	9017 Jul 11 15:28	14°♄30'31		min. Earth dist.	9023 Jul 24 05:28	7°♊48'09	8.43195 AU
	9017 Aug 04 01:18	15°♄		direct	9023 Oct 01 11:19	4°♊22'08	
evening set	9017 Oct 23 21:57	22°♄26'39		evening set	9024 Jan 14 22:14	12°♊12'41	
conjunction	9017 Nov 10 18:45	24°♄41'34 1°42'50		conjunction	9024 Feb 01 08:41	14°♊22'27	1°15'47
minimum elong	9017 Nov 10 18:43	24°♄41'34 1°43'03		minimum elong	9024 Feb 01 08:43	14°♊22'28	1°15'59
max. Earth dist.	9017 Nov 10 14:09	24°♄40'07 10.27162 AU		max. Earth dist.	9024 Feb 01 03:12	14°♊20'45	10.46039 AU
morning rise	9017 Nov 28 14:45	26°♄56'19			9024 Feb 06 08:53	15°♊	
	9017 Dec 24 13:01	0°♊		morning rise	9024 Feb 18 15:22	16°♊31'09	
retrograde	9018 Mar 12 08:13	4°♊51'04		retrograde	9024 May 29 14:29	24°♊03'14	
opposition	9018 May 18 13:40	1°♊25'03 2°15'17		opposition	9024 Aug 05 08:00	20°♊41'42	1°20'47
min. Earth dist.	9018 May 18 17:36	1°♊24'15 8.27110 AU		min. Earth dist.	9024 Aug 05 12:16	20°♊40'52	8.49076 AU
	9018 Jun 05 15:04	30°♄		direct	9024 Oct 14 00:15	17°♊15'35	
direct	9018 Jul 25 09:15	27°♄57'25		evening set	9025 Jan 27 04:55	25°♊01'26	
	9018 Sep 12 07:50	0°♊					
evening set	9018 Nov 07 05:35	5°♊56'06		conjunction	9025 Feb 13 12:57	27°♊09'48	0°53'49
				minimum elong	9025 Feb 13 12:59	27°♊09'49	0°53'58
conjunction	9018 Nov 25 01:22	8°♊10'47 1°53'32		max. Earth dist.	9025 Feb 13 08:01	27°♊08'16	10.52123 AU
minimum elong	9018 Nov 25 01:20	8°♊10'47 1°53'47		morning rise	9025 Mar 02 17:28	29°♊17'06	
max. Earth dist.	9018 Nov 24 19:05	8°♊08'48 10.27170 AU			9025 Mar 08 15:46	0°♊	
morning rise	9018 Dec 12 19:37	10°♊25'04		retrograde	9025 Jun 11 11:32	6°♊44'56	
retrograde	9019 Mar 26 00:36	18°♊17'41		opposition	9025 Aug 18 12:41	3°♊24'07	0°51'56
opposition	9019 Jun 01 03:14	14°♊52'14 2°24'45		min. Earth dist.	9025 Aug 18 16:30	3°♊23'23	8.55225 AU

	9025 Oct 22 20:05	30° \mathbb{R}	retrograde	9031 Aug 24 17:46	19° \mathbb{S} 58'02
direct	9025 Oct 27 10:21	29° \mathbb{S} 58'55	opposition	9031 Nov 02 18:07	16° \mathbb{S} 38'05 -1°55'36
	9025 Nov 01 00:59	0° \mathbb{H}	min. Earth dist.	9031 Nov 02 15:02	16° \mathbb{S} 38'40 8.82074 AU
evening set	9026 Feb 09 05:51	7° \mathbb{H} 39'44		9031 Nov 25 12:20	15° \mathbb{R} \mathbb{S}
			direct	9032 Jan 11 18:53	13° \mathbb{S} 17'58
conjunction	9026 Feb 26 11:20	9° \mathbb{H} 46'37 0°29'31		9032 Feb 26 13:24	15° \mathbb{S}
minimum elong	9026 Feb 26 11:21	9° \mathbb{H} 46'38 0°29'36	evening set	9032 Apr 22 11:55	20° \mathbb{S} 34'03
max. Earth dist.	9026 Feb 26 07:04	9° \mathbb{H} 45'18 10.58313 AU			
morning rise	9026 Mar 15 13:41	11° \mathbb{H} 52'34	conjunction	9032 May 09 05:06	22° \mathbb{S} 34'28 -1°41'13
retrograde	9026 Jun 24 04:24	19° \mathbb{H} 16'41	minimum elong	9032 May 09 05:04	22° \mathbb{S} 34'28 1°41'25
opposition	9026 Aug 31 14:48	15° \mathbb{H} 56'25 0°21'00	max. Earth dist.	9032 May 09 09:03	22° \mathbb{S} 35'40 10.82449 AU
min. Earth dist.	9026 Aug 31 17:15	15° \mathbb{H} 55'57 8.61340 AU	morning rise	9032 May 25 22:33	24° \mathbb{S} 35'01
direct	9026 Nov 09 17:45	12° \mathbb{H} 32'12		9032 Jul 18 16:07	0° \mathbb{II}
evening set	9027 Feb 22 01:10	20° \mathbb{H} 07'52	retrograde	9032 Sep 05 05:11	1° \mathbb{II} 53'44
				9032 Oct 25 12:23	30° \mathbb{R} \mathbb{S}
conjunction	9027 Mar 11 04:10	22° \mathbb{H} 13'19 0°04'08	opposition	9032 Nov 14 09:41	28° \mathbb{S} 33'21 -2°11'28
minimum elong	9027 Mar 11 04:09	22° \mathbb{H} 13'18 0°04'10	min. Earth dist.	9032 Nov 14 05:20	28° \mathbb{S} 34'10 8.82692 AU
behind sun begin	9027 Mar 10 21:10	22° \mathbb{H} 11'11	direct	9033 Jan 23 06:34	25° \mathbb{S} 13'40
behind sun end	9027 Mar 11 11:08	22° \mathbb{H} 15'26		9033 Apr 12 17:20	0° \mathbb{II}
max. Earth dist.	9027 Mar 11 01:45	22° \mathbb{H} 12'37 10.64315 AU	evening set	9033 May 04 12:37	2° \mathbb{II} 28'09
morning rise	9027 Mar 28 04:18	24° \mathbb{H} 17'54			
desc. node	9027 May 10 12:40	28° \mathbb{H} 56'56	conjunction	9033 May 21 05:26	4° \mathbb{II} 28'27 -1°51'53
	9027 May 23 15:06	0° \mathbb{Y}	minimum elong	9033 May 21 05:25	4° \mathbb{II} 28'26 1°52'07
retrograde	9027 Jul 06 20:25	1° \mathbb{Y} 39'03	max. Earth dist.	9033 May 21 10:30	4° \mathbb{II} 29'59 10.82350 AU
	9027 Aug 21 12:32	30° \mathbb{R} \mathbb{H}	morning rise	9033 Jun 06 23:08	6° \mathbb{II} 29'03
opposition	9027 Sep 13 14:41	28° \mathbb{H} 19'11 -0°10'30	retrograde	9033 Sep 17 18:51	13° \mathbb{II} 49'49
min. Earth dist.	9027 Sep 13 15:16	28° \mathbb{H} 19'04 8.67142 AU	opposition	9033 Nov 27 01:13	10° \mathbb{II} 28'53 -2°21'41
direct	9027 Nov 22 21:03	24° \mathbb{H} 55'58	min. Earth dist.	9033 Nov 26 20:22	10° \mathbb{II} 29'48 8.81942 AU
	9028 Feb 13 08:41	0° \mathbb{Y}	direct	9034 Feb 04 15:28	7° \mathbb{II} 09'25
evening set	9028 Mar 05 15:13	2° \mathbb{Y} 26'35	evening set	9034 May 16 13:25	14° \mathbb{II} 23'06
conjunction	9028 Mar 22 15:46	4° \mathbb{Y} 30'39 -0°21'18	conjunction	9034 Jun 02 06:29	16° \mathbb{II} 23'36 -1°57'45
minimum elong	9028 Mar 22 15:45	4° \mathbb{Y} 30'39 0°21'18	minimum elong	9034 Jun 02 06:29	16° \mathbb{II} 23'36 1°58'01
max. Earth dist.	9028 Mar 22 15:36	4° \mathbb{Y} 30'36 10.69850 AU	max. Earth dist.	9034 Jun 02 11:41	16° \mathbb{II} 25'10 10.80941 AU
morning rise	9028 Apr 08 13:48	6° \mathbb{Y} 34'01	morning rise	9034 Jun 19 01:19	18° \mathbb{II} 24'38
retrograde	9028 Jul 18 10:30	13° \mathbb{Y} 52'55	retrograde	9034 Sep 30 08:11	25° \mathbb{II} 48'02
opposition	9028 Sep 25 12:14	10° \mathbb{Y} 33'18 -0°41'07	opposition	9034 Dec 09 17:01	22° \mathbb{II} 26'25 -2°25'50
min. Earth dist.	9028 Sep 25 11:23	10° \mathbb{Y} 33'28 8.72360 AU	min. Earth dist.	9034 Dec 09 12:10	22° \mathbb{II} 27'20 8.79921 AU
direct	9028 Dec 04 18:20	7° \mathbb{Y} 11'03	direct	9035 Feb 16 23:57	19° \mathbb{II} 06'56
evening set	9029 Mar 18 01:04	14° \mathbb{Y} 37'02	evening set	9035 May 28 15:22	26° \mathbb{II} 20'40
conjunction	9029 Apr 03 23:12	16° \mathbb{Y} 39'50 -0°45'25	conjunction	9035 Jun 14 09:35	28° \mathbb{II} 21'44 -1°58'31
minimum elong	9029 Apr 03 23:10	16° \mathbb{Y} 39'50 0°45'28	minimum elong	9035 Jun 14 09:36	28° \mathbb{II} 21'44 1°58'47
max. Earth dist.	9029 Apr 04 00:29	16° \mathbb{Y} 40'14 10.74659 AU	max. Earth dist.	9035 Jun 14 14:54	28° \mathbb{II} 23'20 10.78332 AU
morning rise	9029 Apr 20 19:25	18° \mathbb{Y} 42'07		9035 Jun 27 23:21	0° \mathbb{S}
retrograde	9029 Jul 30 21:27	25° \mathbb{Y} 59'36	morning rise	9035 Jul 01 06:21	0° \mathbb{S} 23'31
opposition	9029 Oct 08 07:41	22° \mathbb{Y} 40'03 -1°09'34	retrograde	9035 Oct 12 23:57	7° \mathbb{S} 50'02
min. Earth dist.	9029 Oct 08 06:18	22° \mathbb{Y} 40'19 8.76743 AU	opposition	9035 Dec 22 09:11	4° \mathbb{S} 27'37 -2°23'39
direct	9029 Dec 17 13:18	19° \mathbb{Y} 18'39	min. Earth dist.	9035 Dec 22 04:18	4° \mathbb{S} 28'33 8.76750 AU
evening set	9030 Mar 30 07:18	26° \mathbb{Y} 40'35	direct	9036 Feb 29 10:20	1° \mathbb{S} 07'55
			evening set	9036 Jun 08 19:20	8° \mathbb{S} 22'31
conjunction	9030 Apr 16 03:10	28° \mathbb{Y} 42'18 -1°07'20	conjunction	9036 Jun 25 15:39	10° \mathbb{S} 24'30 -1°54'05
minimum elong	9030 Apr 16 03:08	28° \mathbb{Y} 42'18 1°07'26	minimum elong	9036 Jun 25 15:40	10° \mathbb{S} 24'31 1°54'21
max. Earth dist.	9030 Apr 16 04:49	28° \mathbb{Y} 42'48 10.78504 AU	max. Earth dist.	9036 Jun 25 21:52	10° \mathbb{S} 26'24 10.74646 AU
	9030 Apr 26 19:51	0° \mathbb{S}	morning rise	9036 Jul 12 14:54	12° \mathbb{S} 27'22
morning rise	9030 May 02 22:02	0° \mathbb{S} 43'43	retrograde	9036 Oct 24 19:18	19° \mathbb{S} 57'24
retrograde	9030 Aug 12 08:02	8° \mathbb{S} 00'42	opposition	9037 Jan 03 02:15	16° \mathbb{S} 34'07 -2°15'06
opposition	9030 Oct 21 01:34	4° \mathbb{S} 41'02 -1°34'43	min. Earth dist.	9037 Jan 02 20:42	16° \mathbb{S} 35'10 8.72560 AU
min. Earth dist.	9030 Oct 20 23:34	4° \mathbb{S} 41'25 8.80054 AU	direct	9037 Mar 12 20:13	13° \mathbb{S} 14'04
direct	9030 Dec 30 05:43	1° \mathbb{S} 20'20	evening set	9037 Jun 21 02:22	20° \mathbb{S} 30'20
evening set	9031 Apr 11 10:29	8° \mathbb{S} 38'54			
conjunction	9031 Apr 28 04:39	10° \mathbb{S} 39'49 -1°26'10	conjunction	9037 Jul 08 01:25	22° \mathbb{S} 33'33 -1°44'32
minimum elong	9031 Apr 28 04:37	10° \mathbb{S} 39'48 1°26'19	minimum elong	9037 Jul 08 01:27	22° \mathbb{S} 33'33 1°44'47
max. Earth dist.	9031 Apr 28 07:09	10° \mathbb{S} 40'34 10.81159 AU	max. Earth dist.	9037 Jul 08 08:27	22° \mathbb{S} 35'41 10.70030 AU
morning rise	9031 May 14 22:35	12° \mathbb{S} 40'38	morning rise	9037 Jul 25 03:40	24° \mathbb{S} 37'45
	9031 Jun 04 08:03	15° \mathbb{S}		9037 Sep 15 05:51	0° \mathbb{Q}

retrograde	9037 Nov 06 17:21	2°♏11'34	minimum elong	9043 Sep 24 05:01	8°♏42'15	0°29'22
	9037 Dec 30 18:53	30°♏♏	max. Earth dist.	9043 Sep 24 06:29	8°♏42'42	10.35845 AU
opposition	9038 Jan 15 20:42	28°♏47'26 -2°00'24	morning rise	9043 Oct 12 01:57	10°♏55'57	
min. Earth dist.	9038 Jan 15 14:46	28°♏48'35 8.67525 AU	retrograde	9044 Jan 25 03:47	18°♏50'27	
direct	9038 Mar 25 07:14	25°♏26'55	opposition	9044 Apr 02 07:57	15°♏23'22	0°52'36
	9038 Jun 09 08:36	0°♏	min. Earth dist.	9044 Apr 02 07:09	15°♏23'32	8.33637 AU
evening set	9038 Jul 03 13:32	2°♏45'39	direct	9044 Jun 08 15:51	11°♏58'03	
			evening set	9044 Sep 19 08:57	19°♏44'23	
conjunction	9038 Jul 20 15:47	4°♏50'22 -1°30'08				
minimum elong	9038 Jul 20 15:49	4°♏50'23 1°30'22	conjunction	9044 Oct 07 05:11	21°♏58'25	0°54'46
max. Earth dist.	9038 Jul 20 22:27	4°♏52'24 10.64687 AU	minimum elong	9044 Oct 07 05:09	21°♏58'24	0°54'50
morning rise	9038 Aug 06 21:36	6°♏56'09	max. Earth dist.	9044 Oct 07 04:28	21°♏58'11	10.31675 AU
retrograde	9038 Nov 19 19:40	14°♏33'53	morning rise	9044 Oct 25 03:00	24°♏12'58	
opposition	9039 Jan 28 16:54	11°♏08'58 -1°39'58		9044 Dec 18 12:42	0°♏	
min. Earth dist.	9039 Jan 28 11:31	11°♏10'00 8.61868 AU	retrograde	9045 Feb 06 21:58	2°♏09'02	
direct	9039 Apr 06 20:03	7°♏47'47		9045 Mar 30 06:12	30°♏♏	
	9039 Jul 14 21:01	15°♏	opposition	9045 Apr 15 18:16	28°♏42'07	1°22'39
evening set	9039 Jul 16 05:36	15°♏09'47	min. Earth dist.	9045 Apr 15 19:06	28°♏41'57	8.30059 AU
			direct	9045 Jun 22 03:24	25°♏16'03	
conjunction	9039 Aug 02 11:24	17°♏16'11 -1°11'23		9045 Sep 06 22:23	0°♏	
minimum elong	9039 Aug 02 11:26	17°♏16'11 1°11'34	evening set	9045 Oct 03 12:08	3°♏07'16	
max. Earth dist.	9039 Aug 02 16:42	17°♏17'49 10.58843 AU				
morning rise	9039 Aug 19 21:05	19°♏23'43	conjunction	9045 Oct 21 09:07	5°♏22'00	1°17'25
retrograde	9039 Dec 03 00:35	27°♏05'22	minimum elong	9045 Oct 21 09:05	5°♏21'59	1°17'33
opposition	9040 Feb 10 15:10	23°♏39'44 -1°14'33	max. Earth dist.	9045 Oct 21 06:35	5°♏21'11	10.28682 AU
min. Earth dist.	9040 Feb 10 11:03	23°♏40'32 8.55830 AU	morning rise	9045 Nov 08 06:57	7°♏37'00	
direct	9040 Apr 18 11:33	20°♏17'46		9046 Jan 26 16:18	15°♏	
evening set	9040 Jul 28 03:20	27°♏43'49	retrograde	9046 Feb 20 17:05	15°♏33'38	
				9046 Mar 17 19:37	15°♏♏	
conjunction	9040 Aug 14 12:50	29°♏51'58 -0°49'00	opposition	9046 Apr 29 06:24	12°♏07'04	1°48'25
minimum elong	9040 Aug 14 12:52	29°♏51'58 0°49'09	min. Earth dist.	9046 Apr 29 08:36	12°♏06'37	8.27760 AU
max. Earth dist.	9040 Aug 14 17:08	29°♏53'18 10.52744 AU	direct	9046 Jul 05 18:13	8°♏40'23	
	9040 Aug 15 14:51	0°♏		9046 Oct 04 15:41	15°♏	
morning rise	9040 Sep 01 02:11	2°♏01'16	evening set	9046 Oct 17 18:54	16°♏35'42	
retrograde	9040 Dec 15 07:42	9°♏46'43				
opposition	9041 Feb 22 15:37	6°♏20'28 -0°45'10	conjunction	9046 Nov 04 15:53	18°♏50'44	1°35'58
min. Earth dist.	9041 Feb 22 12:24	6°♏21'06 8.49685 AU	minimum elong	9046 Nov 04 15:51	18°♏50'44	1°36'09
direct	9041 May 01 07:45	2°♏57'42	max. Earth dist.	9046 Nov 04 11:56	18°♏49'29	10.27036 AU
evening set	9041 Aug 10 07:13	10°♏28'21	morning rise	9046 Nov 22 12:47	21°♏05'45	
			retrograde	9047 Mar 06 12:02	29°♏01'48	
conjunction	9041 Aug 27 20:20	12°♏38'17 -0°23'58	opposition	9047 May 12 19:43	25°♏35'45	2°08'22
minimum elong	9041 Aug 27 20:21	12°♏38'17 0°24'04	min. Earth dist.	9047 May 12 22:45	25°♏35'08	8.26861 AU
max. Earth dist.	9041 Aug 28 00:06	12°♏39'27 10.46677 AU	direct	9047 Jul 19 12:38	22°♏08'36	
morning rise	9041 Sep 14 12:54	14°♏49'15		9047 Oct 31 04:56	0°♏	
retrograde	9041 Dec 28 18:54	22°♏38'17	evening set	9047 Nov 01 03:14	0°♏06'55	
opposition	9042 Mar 07 18:36	19°♏11'33 -0°13'06				
min. Earth dist.	9042 Mar 07 15:51	19°♏12'06 8.43738 AU	conjunction	9047 Nov 18 23:33	2°♏21'50	1°49'17
direct	9042 May 14 07:12	15°♏47'55	minimum elong	9047 Nov 18 23:32	2°♏21'50	1°49'31
asc. node	9042 Aug 04 08:36	21°♏06'32	max. Earth dist.	9047 Nov 18 18:57	2°♏20'23	10.26825 AU
evening set	9042 Aug 23 17:30	23°♏23'37	morning rise	9047 Dec 06 18:46	4°♏36'29	
			retrograde	9048 Mar 19 05:43	12°♏30'46	
conjunction	9042 Sep 10 09:49	25°♏35'12 0°02'41	opposition	9048 May 25 09:51	9°♏05'21	2°21'14
minimum elong	9042 Sep 10 09:48	25°♏35'11 0°02'38	min. Earth dist.	9048 May 25 13:10	9°♏04'41	8.27398 AU
behind sun begin	9042 Sep 10 02:34	25°♏32'57	direct	9048 Aug 01 09:11	5°♏37'55	
behind sun end	9042 Sep 10 17:02	25°♏37'25	evening set	9048 Nov 14 11:03	13°♏37'46	
max. Earth dist.	9042 Sep 10 12:50	25°♏36'05 10.40944 AU				
morning rise	9042 Sep 28 04:57	27°♏47'40	conjunction	9048 Dec 02 06:10	15°♏52'14	1°56'36
	9042 Oct 16 20:23	0°♏	minimum elong	9048 Dec 02 06:10	15°♏52'14	1°56'51
retrograde	9043 Jan 11 10:37	5°♏39'47	max. Earth dist.	9048 Dec 02 01:09	15°♏50'39	10.28045 AU
opposition	9043 Mar 21 00:04	2°♏12'45 0°20'04	morning rise	9048 Dec 19 23:16	18°♏06'10	
min. Earth dist.	9043 Mar 20 21:58	2°♏13'11 8.38289 AU	retrograde	9049 Apr 01 21:40	25°♏57'37	
	9043 Apr 20 03:45	30°♏♏	opposition	9049 Jun 07 23:58	22°♏32'55	2°26'19
direct	9043 May 27 09:04	28°♏48'15	min. Earth dist.	9049 Jun 08 03:57	22°♏32'07	8.29304 AU
	9043 Jul 03 03:40	0°♏	direct	9049 Aug 15 06:11	19°♏05'19	
evening set	9043 Sep 06 10:20	6°♏29'17	evening set	9049 Nov 28 16:52	27°♏05'14	
conjunction	9043 Sep 24 05:03	8°♏42'15 0°29'21	conjunction	9049 Dec 16 10:23	29°♏18'58	1°57'30

minimum elong	9049 Dec 16 10:24	29° \mathbb{A} 18'58	1°57'47	evening set	9056 Feb 16 21:19	14° \mathbb{H} 59'34	
max. Earth dist.	9049 Dec 16 04:24	29° \mathbb{A} 17'04	10.30573 AU				
	9049 Dec 21 20:04	0° \mathbb{B}		conjunction	9056 Mar 05 01:36	17° \mathbb{H} 05'51	0°15'03
morning rise	9050 Jan 03 01:11	1° \mathbb{B} 31'56		minimum elong	9056 Mar 05 01:36	17° \mathbb{H} 05'52	0°15'07
retrograde	9050 Apr 15 11:40	9° \mathbb{B} 19'35		behind sun begin	9056 Mar 04 23:04	17° \mathbb{H} 05'05	
opposition	9050 Jun 21 13:15	5° \mathbb{B} 55'40	2°23'25	behind sun end	9056 Mar 05 04:08	17° \mathbb{H} 06'38	
min. Earth dist.	9050 Jun 21 18:22	5° \mathbb{B} 54'39	8.32391 AU	max. Earth dist.	9056 Mar 04 22:00	17° \mathbb{H} 04'46	10.60443 AU
direct	9050 Aug 29 02:28	2° \mathbb{B} 28'05		morning rise	9056 Mar 22 02:42	19° \mathbb{H} 11'14	
evening set	9050 Dec 12 19:04	10° \mathbb{B} 26'43		retrograde	9056 Jun 30 19:36	26° \mathbb{H} 34'23	
				opposition	9056 Sep 07 08:46	23° \mathbb{H} 14'10	0°02'57
conjunction	9050 Dec 30 10:40	12° \mathbb{B} 39'29	1°52'04	min. Earth dist.	9056 Sep 07 11:29	23° \mathbb{H} 13'38	8.63172 AU
minimum elong	9050 Dec 30 10:41	12° \mathbb{B} 39'30	1°52'20	desc. node	9056 Oct 12 11:50	20° \mathbb{H} 49'14	
max. Earth dist.	9050 Dec 30 03:20	12° \mathbb{B} 37'11	10.34162 AU	direct	9056 Nov 16 12:32	19° \mathbb{H} 50'13	
morning rise	9051 Jan 16 23:08	14° \mathbb{B} 51'20		evening set	9057 Feb 28 14:23	27° \mathbb{H} 23'51	
retrograde	9051 Apr 28 21:13	22° \mathbb{B} 34'42					
opposition	9051 Jul 05 01:26	19° \mathbb{B} 11'38	2°12'51	conjunction	9057 Mar 17 16:03	29° \mathbb{H} 28'45	-0°10'35
min. Earth dist.	9051 Jul 05 07:41	19° \mathbb{B} 10'23	8.36385 AU	minimum elong	9057 Mar 17 16:02	29° \mathbb{H} 28'45	0°10'35
direct	9051 Sep 11 23:14	15° \mathbb{B} 44'18		behind sun begin	9057 Mar 17 10:31	29° \mathbb{H} 27'04	
evening set	9051 Dec 26 16:20	23° \mathbb{B} 40'30		behind sun end	9057 Mar 17 21:34	29° \mathbb{H} 30'25	
				max. Earth dist.	9057 Mar 17 13:18	29° \mathbb{H} 27'55	10.65823 AU
conjunction	9052 Jan 13 05:51	25° \mathbb{B} 52'09	1°40'43		9057 Mar 21 21:53	0° \mathbb{Y}	
minimum elong	9052 Jan 13 05:53	25° \mathbb{B} 52'10	1°40'58	morning rise	9057 Apr 03 15:12	1° \mathbb{Y} 32'53	
max. Earth dist.	9052 Jan 12 21:31	25° \mathbb{B} 49'32	10.38552 AU	retrograde	9057 Jul 13 09:17	8° \mathbb{Y} 53'27	
morning rise	9052 Jan 30 16:03	28° \mathbb{B} 02'48		opposition	9057 Sep 20 07:54	5° \mathbb{Y} 33'22	-0°28'17
	9052 Feb 15 23:33	0° \mathbb{A}		min. Earth dist.	9057 Sep 20 09:21	5° \mathbb{Y} 33'06	8.68317 AU
retrograde	9052 May 11 02:47	5° \mathbb{A} 41'46		direct	9057 Nov 29 13:22	2° \mathbb{Y} 10'14	
opposition	9052 Jul 17 12:01	2° \mathbb{A} 19'30	1°55'23	evening set	9058 Mar 13 02:35	9° \mathbb{Y} 39'06	
min. Earth dist.	9052 Jul 17 18:20	2° \mathbb{A} 18'15	8.41079 AU				
	9052 Aug 18 21:22	30° \mathbb{R} \mathbb{B}		conjunction	9058 Mar 30 01:45	11° \mathbb{Y} 42'41	-0°35'23
direct	9052 Sep 24 18:29	28° \mathbb{B} 52'38		minimum elong	9058 Mar 30 01:43	11° \mathbb{Y} 42'40	0°35'26
	9052 Oct 31 05:43	0° \mathbb{A}		max. Earth dist.	9058 Mar 30 00:41	11° \mathbb{Y} 42'21	10.70657 AU
evening set	9053 Jan 08 08:18	6° \mathbb{A} 45'26		morning rise	9058 Apr 15 23:00	13° \mathbb{Y} 45'41	
				retrograde	9058 Jul 25 21:00	21° \mathbb{Y} 04'31	
conjunction	9053 Jan 25 19:42	8° \mathbb{A} 55'52	1°24'14	opposition	9058 Oct 03 04:46	17° \mathbb{Y} 44'26	-0°57'53
minimum elong	9053 Jan 25 19:44	8° \mathbb{A} 55'53	1°24'28	min. Earth dist.	9058 Oct 03 04:12	17° \mathbb{Y} 44'33	8.72820 AU
max. Earth dist.	9053 Jan 25 11:45	8° \mathbb{A} 53'23	10.43577 AU	direct	9058 Dec 12 12:16	14° \mathbb{Y} 22'05	
morning rise	9053 Feb 12 03:38	11° \mathbb{A} 05'15		evening set	9059 Mar 25 10:39	21° \mathbb{Y} 46'39	
	9053 Mar 18 16:05	15° \mathbb{A}					
retrograde	9053 May 24 05:47	18° \mathbb{A} 39'48		conjunction	9059 Apr 11 07:39	23° \mathbb{Y} 49'05	-0°58'24
opposition	9053 Jul 30 20:32	15° \mathbb{A} 18'13	1°32'13	minimum elong	9059 Apr 11 07:37	23° \mathbb{Y} 49'04	0°58'29
min. Earth dist.	9053 Jul 31 01:59	15° \mathbb{A} 17'09	8.46323 AU	max. Earth dist.	9059 Apr 11 09:06	23° \mathbb{Y} 49'31	10.74742 AU
	9053 Aug 03 17:39	15° \mathbb{R} \mathbb{A}		morning rise	9059 Apr 28 03:09	25° \mathbb{Y} 51'06	
direct	9053 Oct 08 10:22	11° \mathbb{A} 51'59			9059 Jun 05 10:21	0° \mathbb{B}	
	9053 Dec 10 04:47	15° \mathbb{A}		retrograde	9059 Aug 07 09:35	3° \mathbb{B} 09'06	
evening set	9054 Jan 21 18:30	19° \mathbb{A} 40'33			9059 Oct 13 12:52	30° \mathbb{R} \mathbb{Y}	
				opposition	9059 Oct 15 23:44	29° \mathbb{Y} 48'53	-1°24'37
conjunction	9054 Feb 08 03:44	21° \mathbb{A} 49'40	1°03'40	min. Earth dist.	9059 Oct 15 21:11	29° \mathbb{Y} 49'22	8.76494 AU
minimum elong	9054 Feb 08 03:46	21° \mathbb{A} 49'41	1°03'51	direct	9059 Dec 25 05:50	26° \mathbb{Y} 27'18	
max. Earth dist.	9054 Feb 07 21:11	21° \mathbb{A} 47'38	10.49063 AU		9060 Mar 01 21:11	0° \mathbb{B}	
morning rise	9054 Feb 25 09:21	23° \mathbb{A} 57'43		evening set	9060 Apr 05 15:22	3° \mathbb{B} 48'08	
	9054 Apr 26 03:28	0° \mathbb{H}					
retrograde	9054 Jun 06 06:05	1° \mathbb{H} 28'01		conjunction	9060 Apr 22 10:30	5° \mathbb{B} 49'38	-1°18'41
	9054 Jul 18 09:40	30° \mathbb{R} \mathbb{A}		minimum elong	9060 Apr 22 10:28	5° \mathbb{B} 49'38	1°18'49
opposition	9054 Aug 13 03:01	28° \mathbb{A} 07'02	1°04'44	max. Earth dist.	9060 Apr 22 13:48	5° \mathbb{B} 50'38	10.77902 AU
min. Earth dist.	9054 Aug 13 07:16	28° \mathbb{A} 06'13	8.51917 AU	morning rise	9060 May 09 04:46	7° \mathbb{B} 50'57	
direct	9054 Oct 21 22:28	24° \mathbb{A} 41'31			9060 Aug 05 14:10	15° \mathbb{B}	
	9055 Jan 14 04:50	0° \mathbb{H}		retrograde	9060 Aug 18 20:38	15° \mathbb{B} 08'53	
evening set	9055 Feb 03 22:47	2° \mathbb{H} 25'17			9060 Sep 01 03:40	15° \mathbb{R} \mathbb{B}	
				opposition	9060 Oct 27 17:09	11° \mathbb{B} 48'29	-1°47'28
conjunction	9055 Feb 21 05:38	4° \mathbb{H} 33'00	0°40'11	min. Earth dist.	9060 Oct 27 13:37	11° \mathbb{B} 49'08	8.79170 AU
minimum elong	9055 Feb 21 05:39	4° \mathbb{H} 33'01	0°40'18	direct	9061 Jan 05 18:39	8° \mathbb{B} 27'34	
max. Earth dist.	9055 Feb 21 00:50	4° \mathbb{H} 31'31	10.54769 AU		9061 Apr 11 07:03	15° \mathbb{B}	
morning rise	9055 Mar 10 08:54	6° \mathbb{H} 39'42		evening set	9061 Apr 17 17:54	15° \mathbb{B} 45'26	
retrograde	9055 Jun 19 02:10	14° \mathbb{H} 06'09					
opposition	9055 Aug 26 07:10	10° \mathbb{H} 45'37	0°34'27	conjunction	9061 May 04 11:31	17° \mathbb{B} 46'16	-1°35'26
min. Earth dist.	9055 Aug 26 10:31	10° \mathbb{H} 44'58	8.57617 AU	minimum elong	9061 May 04 11:29	17° \mathbb{B} 46'15	1°35'36
direct	9055 Nov 04 07:35	7° \mathbb{H} 20'53		max. Earth dist.	9061 May 04 15:34	17° \mathbb{B} 47'29	10.79999 AU

morning rise	9061 May 21 05:11	19° 8 47'07	opposition	9068 Jan 23 13:12	6° 0 06'01 -1°49'10
retrograde	9061 Aug 31 06:31	27° 8 05'49	min. Earth dist.	9068 Jan 23 06:55	6° 0 07'13 8.66537 AU
opposition	9061 Nov 09 09:25	23° 8 45'07 -2°05'33	direct	9068 Mar 31 20:19	2° 0 45'41
min. Earth dist.	9061 Nov 09 05:18	23° 8 45'53 8.80732 AU	evening set	9068 Jul 10 03:12	10° 0 05'15
direct	9062 Jan 18 07:45	20° 8 24'44			
evening set	9062 Apr 29 18:59	27° 8 40'27	conjunction	9068 Jul 27 07:23	12° 0 10'35 -1°19'47
			minimum elong	9068 Jul 27 07:25	12° 0 10'36 1°20'00
conjunction	9062 May 16 11:48	29° 8 40'55 -1°48'00	max. Earth dist.	9068 Jul 27 15:11	12° 0 12'59 10.63878 AU
minimum elong	9062 May 16 11:46	29° 8 40'54 1°48'14	morning rise	9068 Aug 13 15:09	14° 0 17'01
max. Earth dist.	9062 May 16 16:37	29° 8 42'22 10.80950 AU		9068 Aug 19 15:58	15° 0
	9062 May 19 02:52	0° 0	retrograde	9068 Nov 26 15:28	21° 0 55'47
morning rise	9062 Jun 02 05:30	1° 0 41'37	opposition	9069 Feb 04 09:53	18° 0 31'05 -1°25'49
retrograde	9062 Sep 12 18:21	9° 0 01'50	min. Earth dist.	9069 Feb 04 03:47	18° 0 32'16 8.61207 AU
opposition	9062 Nov 22 01:09	5° 0 40'44 -2°18'11	direct	9069 Apr 13 09:57	15° 0 10'11
min. Earth dist.	9062 Nov 21 20:01	5° 0 41'42 8.81116 AU	evening set	9069 Jul 22 21:41	22° 0 33'06
direct	9063 Jan 30 18:30	2° 0 20'46			
evening set	9063 May 11 19:27	9° 0 35'03	conjunction	9069 Aug 09 05:29	24° 0 40'05 -0°58'55
			minimum elong	9069 Aug 09 05:31	24° 0 40'06 0°59'05
conjunction	9063 May 28 12:22	11° 0 35'31 -1°55'55	max. Earth dist.	9069 Aug 09 12:28	24° 0 42'14 10.58356 AU
minimum elong	9063 May 28 12:21	11° 0 35'31 1°56'10	morning rise	9069 Aug 26 16:52	26° 0 48'11
max. Earth dist.	9063 May 28 18:59	11° 0 37'31 10.80715 AU		9069 Sep 23 20:05	0° 0
morning rise	9063 Jun 14 06:43	13° 0 36'25	retrograde	9069 Dec 09 21:35	4° 0 30'34
retrograde	9063 Sep 25 07:15	20° 0 58'48	opposition	9070 Feb 17 08:39	1° 0 05'16 -0°58'06
opposition	9063 Dec 04 16:36	17° 0 37'10 -2°24'53	min. Earth dist.	9070 Feb 17 03:30	1° 0 06'16 8.55479 AU
min. Earth dist.	9063 Dec 04 10:02	17° 0 38'24 8.80298 AU		9070 Mar 03 12:31	30° 0 4
direct	9064 Feb 12 03:37	14° 0 17'30	direct	9070 Apr 26 02:52	27° 0 43'36
evening set	9064 May 22 20:41	21° 0 31'13		9070 Jun 16 21:35	0° 0
			evening set	9070 Aug 04 22:05	5° 0 10'38
conjunction	9064 Jun 08 14:28	23° 0 32'01 -1°58'49			
minimum elong	9064 Jun 08 14:28	23° 0 32'01 1°59'06	conjunction	9070 Aug 22 09:23	7° 0 19'19 -0°34'59
max. Earth dist.	9064 Jun 08 22:24	23° 0 34'25 10.79298 AU	minimum elong	9070 Aug 22 09:25	7° 0 19'20 0°35'07
morning rise	9064 Jun 25 10:11	25° 0 33'26	max. Earth dist.	9070 Aug 22 14:02	7° 0 20'45 10.52528 AU
	9064 Aug 06 02:22	0° 0	morning rise	9070 Sep 09 00:18	9° 0 29'07
retrograde	9064 Oct 06 23:18	2° 0 58'28	retrograde	9070 Dec 23 06:56	17° 0 14'58
	9064 Dec 11 02:46	30° 0 4	opposition	9071 Mar 02 09:33	13° 0 49'09 -0°27'10
opposition	9064 Dec 16 08:10	29° 0 36'18 -2°25'19	min. Earth dist.	9071 Mar 02 06:26	13° 0 49'46 8.49557 AU
min. Earth dist.	9064 Dec 16 00:55	29° 0 37'40 8.78313 AU	direct	9071 May 08 22:58	10° 0 26'37
direct	9065 Feb 23 12:42	26° 0 16'44	evening set	9071 Aug 18 04:39	17° 0 58'26
	9065 May 03 04:05	0° 0			
evening set	9065 Jun 03 23:34	3° 0 30'42	conjunction	9071 Sep 04 19:14	20° 0 08'49 -0°09'04
			minimum elong	9071 Sep 04 19:15	20° 0 08'49 0°09'08
conjunction	9065 Jun 20 18:52	5° 0 32'12 -1°56'34	behind sun begin	9071 Sep 04 13:08	20° 0 06'57
minimum elong	9065 Jun 20 18:53	5° 0 32'12 1°56'50	behind sun end	9071 Sep 05 01:21	20° 0 10'42
max. Earth dist.	9065 Jun 21 02:59	5° 0 34'39 10.76773 AU	max. Earth dist.	9071 Sep 04 21:24	20° 0 09'28 10.46629 AU
morning rise	9065 Jul 07 16:48	7° 0 34'28	morning rise	9071 Sep 22 13:11	22° 0 20'12
retrograde	9065 Oct 19 17:26	15° 0 02'35		9071 Dec 23 10:07	0° 0
opposition	9065 Dec 29 00:43	11° 0 39'49 -2°19'24	retrograde	9072 Jan 05 19:18	0° 0 09'18
min. Earth dist.	9065 Dec 28 17:40	11° 0 41'10 8.75260 AU	asc. node	9072 Jan 11 07:08	0° 0 07'43
direct	9066 Mar 07 20:39	8° 0 20'11		9072 Jan 19 03:43	30° 0 4
evening set	9066 Jun 16 04:53	15° 0 35'12	opposition	9072 Mar 14 12:57	26° 0 43'07 0°05'33
			min. Earth dist.	9072 Mar 14 11:43	26° 0 43'22 8.43745 AU
conjunction	9066 Jul 03 02:27	17° 0 37'42 -1°49'08	direct	9072 May 20 23:09	23° 0 19'39
minimum elong	9066 Jul 03 02:29	17° 0 37'42 1°49'23		9072 Aug 22 21:28	0° 0
max. Earth dist.	9066 Jul 03 10:05	17° 0 40'01 10.73261 AU	evening set	9072 Aug 30 17:26	0° 0 56'44
morning rise	9066 Jul 20 03:21	19° 0 41'10			
retrograde	9066 Nov 01 12:51	27° 0 12'41	conjunction	9072 Sep 17 10:47	3° 0 08'37 0°17'43
opposition	9067 Jan 10 18:22	23° 0 49'17 -2°07'14	minimum elong	9072 Sep 17 10:46	3° 0 08'37 0°17'42
min. Earth dist.	9067 Jan 10 11:53	23° 0 50'31 8.71280 AU	max. Earth dist.	9072 Sep 17 11:11	3° 0 08'44 10.41012 AU
direct	9067 Mar 20 07:10	20° 0 29'23	morning rise	9072 Oct 05 06:54	5° 0 21'22
evening set	9067 Jun 28 13:50	27° 0 46'17	retrograde	9073 Jan 18 08:51	13° 0 13'17
			opposition	9073 Mar 27 18:47	9° 0 46'49 0°38'26
conjunction	9067 Jul 15 14:28	29° 0 50'06 -1°36'44	min. Earth dist.	9073 Mar 27 18:48	9° 0 46'49 8.38428 AU
minimum elong	9067 Jul 15 14:30	29° 0 50'06 1°36'58	direct	9073 Jun 03 04:35	6° 0 22'24
max. Earth dist.	9067 Jul 15 22:12	29° 0 52'27 10.68907 AU	evening set	9073 Sep 13 12:15	14° 0 04'50
	9067 Jul 16 22:55	0° 0			
morning rise	9067 Aug 01 18:43	1° 0 54'57	conjunction	9073 Oct 01 07:44	16° 0 18'00 0°43'46
retrograde	9067 Nov 14 11:58	9° 0 30'04	minimum elong	9073 Oct 01 07:42	16° 0 17'59 0°43'49

max. Earth dist.	9073 Oct 01 07:06	16°  17'48	10.36056 AU	minimum elong	9079 Dec 24 07:51	6°  43'57	1°55'42
morning rise	9073 Oct 19 05:05	18°  31'47		max. Earth dist.	9079 Dec 24 00:06	6°  41'30	10.31841 AU
retrograde	9074 Feb 01 01:14	26°  25'48		morning rise	9080 Jan 10 21:31	8°  56'21	
opposition	9074 Apr 10 02:51	22°  59'12	1°09'40	retrograde	9080 Apr 21 23:34	16°  41'41	
min. Earth dist.	9074 Apr 10 03:34	22°  59'03	8.33948 AU	opposition	9080 Jun 28 03:50	13°  17'45	2°18'46
direct	9074 Jun 16 13:05	19°  33'51		min. Earth dist.	9080 Jun 28 09:16	13°  16'40	8.33768 AU
evening set	9074 Sep 27 12:20	27°  21'26		direct	9080 Sep 04 23:25	9°  49'51	
				evening set	9080 Dec 19 14:15	17°  47'10	
conjunction	9074 Oct 15 09:03	29°  35'32	1°07'44				
minimum elong	9074 Oct 15 09:01	29°  35'31	1°07'52	conjunction	9081 Jan 06 04:58	19°  59'25	1°46'44
max. Earth dist.	9074 Oct 15 07:04	29°  34'54	10.32062 AU	minimum elong	9081 Jan 06 05:00	19°  59'25	1°47'00
	9074 Oct 18 14:43	0°  11		max. Earth dist.	9081 Jan 05 21:53	19°  57'11	10.35706 AU
morning rise	9074 Nov 02 06:43	1°  14'49'59		morning rise	9081 Jan 23 16:15	22°  31'04'41	
retrograde	9075 Feb 14 20:09	9°  14'45'09		retrograde	9081 May 05 07:17	29°  51'43	
opposition	9075 Apr 23 12:58	6°  18'37	1°37'28	opposition	9081 Jul 11 14:43	26°  28'34	2°04'24
min. Earth dist.	9075 Apr 23 14:47	6°  18'15	8.30560 AU	min. Earth dist.	9081 Jul 11 20:00	26°  27'31	8.38108 AU
direct	9075 Jun 29 23:50	2°  15'52'24		direct	9081 Sep 18 17:58	23°  01'01	
evening set	9075 Oct 11 16:27	10°  14'44'35			9081 Dec 25 18:04	0°  00	
				evening set	9082 Jan 02 08:25	0°  55'22	
conjunction	9075 Oct 29 13:28	12°  14'59'13	1°28'14	conjunction	9082 Jan 19 21:02	3°  06'26	1°32'33
minimum elong	9075 Oct 29 13:26	12°  14'59'12	1°28'24	minimum elong	9082 Jan 19 21:04	3°  06'27	1°32'48
max. Earth dist.	9075 Oct 29 09:42	12°  14'58'01	10.29256 AU	max. Earth dist.	9082 Jan 19 14:20	3°  04'20	10.40525 AU
	9075 Nov 14 13:35	15°  11'00		morning rise	9082 Feb 06 05:58	5°  16'26	
morning rise	9075 Nov 16 10:33	15°  11'13'57		retrograde	9082 May 18 12:10	12°  52'55	
retrograde	9076 Feb 28 14:46	23°  14'09'12		opposition	9082 Jul 24 23:46	9°  30'35	1°43'45
opposition	9076 May 06 00:41	19°  14'42'56	2°00'10	min. Earth dist.	9082 Jul 25 05:11	9°  29'31	8.43276 AU
min. Earth dist.	9076 May 06 03:57	19°  14'42'16	8.28452 AU	direct	9082 Oct 02 09:40	6°  03'38	
direct	9076 Jul 12 15:32	16°  14'15'58		evening set	9083 Jan 15 20:58	13°  54'03	
evening set	9076 Oct 24 22:59	24°  14'11'52			9083 Jan 24 18:44	15°  00	
conjunction	9076 Nov 11 19:31	26°  14'26'38	1°44'00	conjunction	9083 Feb 02 07:16	16°  03'48	1°13'47
minimum elong	9076 Nov 11 19:29	26°  14'26'38	1°44'13	minimum elong	9083 Feb 02 07:18	16°  03'49	1°13'59
max. Earth dist.	9076 Nov 11 13:49	26°  14'24'50	10.27802 AU	max. Earth dist.	9083 Feb 02 00:43	16°  01'45	10.46045 AU
morning rise	9076 Nov 29 15:24	28°  14'41'15		morning rise	9083 Feb 19 13:59	18°  00'12'28	
	9076 Dec 10 09:37	0°  00'00'00		retrograde	9083 May 31 12:47	25°  00'44'29	
retrograde	9077 Mar 13 07:24	6°  00'35'31		opposition	9083 Aug 07 06:52	22°  00'22'56	1°18'08
opposition	9077 May 19 13:30	3°  00'09'40	2°16'21	min. Earth dist.	9083 Aug 07 11:48	22°  00'21'58	8.49007 AU
min. Earth dist.	9077 May 19 18:18	3°  00'08'41	8.27739 AU	direct	9083 Oct 15 23:04	18°  00'56'46	
	9077 Jul 08 04:26	30°  00'00'00		evening set	9084 Jan 29 03:27	26°  00'42'33	
direct	9077 Jul 26 10:22	29°  00'14'27'07					
	9077 Aug 13 15:50	0°  00'00'00		conjunction	9084 Feb 15 11:20	28°  00'50'54	0°51'33
evening set	9077 Nov 08 06:02	7°  00'40'31		minimum elong	9084 Feb 15 11:22	28°  00'50'55	0°51'42
				max. Earth dist.	9084 Feb 15 05:37	28°  00'49'08	10.51983 AU
conjunction	9077 Nov 26 01:36	9°  00'55'04	1°54'06		9084 Feb 24 18:05	0°  00'00'00	
minimum elong	9077 Nov 26 01:34	9°  00'55'04	1°54'21	morning rise	9084 Mar 03 15:53	0°  00'58'14	
max. Earth dist.	9077 Nov 25 18:16	9°  00'52'45	10.27774 AU	retrograde	9084 Jun 12 08:44	8°  00'26'09	
morning rise	9077 Dec 13 19:47	12°  00'47'09'13		opposition	9084 Aug 19 11:37	5°  00'05'15	0°49'00
retrograde	9078 Mar 26 22:48	20°  00'47'01'25		min. Earth dist.	9084 Aug 19 15:18	5°  00'04'32	8.55012 AU
opposition	9078 Jun 02 02:43	16°  00'47'36'07	2°25'03	direct	9084 Oct 28 10:48	1°  00'40'00	
min. Earth dist.	9078 Jun 02 08:23	16°  00'47'34'58	8.28435 AU	evening set	9085 Feb 10 04:15	9°  00'42'04'49	
direct	9078 Aug 09 06:35	13°  00'47'08'11					
evening set	9078 Nov 22 12:05	21°  00'47'07'42		conjunction	9085 Feb 27 09:45	11°  00'47'27'44	0°27'04
				minimum elong	9085 Feb 27 09:45	11°  00'47'27'44	0°27'09
conjunction	9078 Dec 10 06:16	23°  00'47'21'44	1°57'57	max. Earth dist.	9085 Feb 27 05:42	11°  00'47'26'29	10.58035 AU
minimum elong	9078 Dec 10 06:15	23°  00'47'21'44	1°58'14	morning rise	9085 Mar 16 12:02	13°  00'47'33'41	
max. Earth dist.	9078 Dec 09 22:18	23°  00'47'19'13	10.29147 AU	retrograde	9085 Jun 25 03:42	20°  00'47'58'01	
morning rise	9078 Dec 27 22:18	25°  00'47'35'07		opposition	9085 Sep 01 13:48	17°  00'47'37'39	0°17'55
	9079 Feb 04 21:16	0°  00'00'00'00		min. Earth dist.	9085 Sep 01 15:42	17°  00'47'37'18	8.60993 AU
retrograde	9079 Apr 09 12:44	3°  00'47'32'41'5		direct	9085 Nov 10 17:13	14°  00'47'41'32'4	
opposition	9079 Jun 15 15:37	29°  00'47'59'36	2°25'50	evening set	9086 Feb 22 23:40	21°  00'47'41'49'09	
	9079 Jun 15 13:39	30°  00'47'00'00'00					
min. Earth dist.	9079 Jun 15 21:23	29°  00'47'58'27	8.30483 AU	conjunction	9086 Mar 12 02:42	23°  00'47'54'38	0°01'36
direct	9079 Aug 23 02:52	26°  00'47'31'34		minimum elong	9086 Mar 12 02:41	23°  00'47'54'38	0°01'39
	9079 Oct 27 14:54	0°  00'00'00'00		behind sun begin	9086 Mar 11 19:36	23°  00'47'52'29	
evening set	9079 Dec 06 15:17	4°  00'47'30'42		behind sun end	9086 Mar 12 09:46	23°  00'47'56'47	
				max. Earth dist.	9086 Mar 12 00:56	23°  00'47'54'10	10.63906 AU
conjunction	9079 Dec 24 07:50	6°  00'47'43'57	1°55'25				

morning rise	9086 Mar 29 02:42	25° K 59'16	minimum elong	9092 May 22 05:36	6° II 14'02	1°52'53
desc. node	9086 Apr 04 05:01	26° K 42'53	max. Earth dist.	9092 May 22 10:34	6° II 15'33	10.82033 AU
	9086 May 04 12:22	0° Y	morning rise	9092 Jun 07 23:28	8° II 14'44	
retrograde	9086 Jul 07 20:24	3° Y 20'42	retrograde	9092 Sep 18 19:18	15° II 35'49	
opposition	9086 Sep 14 13:56	0° Y 00'44 -0°13'34	opposition	9092 Nov 28 02:29	12° II 14'54	-2°22'17
	9086 Sep 14 17:47	30° R K	min. Earth dist.	9092 Nov 27 21:54	12° II 15'46	8.81677 AU
min. Earth dist.	9086 Sep 14 14:31	0° Y 00'37	8.66674 AU	direct	9093 Feb 05 15:26	8° II 55'28
direct	9086 Nov 23 18:38	26° K 37'29	evening set	9093 May 17 13:57	16° II 09'21	
	9087 Jan 28 17:05	0° Y				
evening set	9087 Mar 07 14:02	4° Y 08'18	conjunction	9093 Jun 03 07:02	18° II 09'54	-1°57'57
			minimum elong	9093 Jun 03 07:02	18° II 09'53	1°58'13
conjunction	9087 Mar 24 14:27	6° Y 12'25 -0°23'45	max. Earth dist.	9093 Jun 03 12:06	18° II 11'25	10.80720 AU
minimum elong	9087 Mar 24 14:26	6° Y 12'24	0°23'46	morning rise	9093 Jun 20 02:04	20° II 10'59
max. Earth dist.	9087 Mar 24 14:17	6° Y 12'21	10.69332 AU	retrograde	9093 Oct 01 09:21	27° II 34'42
morning rise	9087 Apr 10 12:25	8° Y 15'50	opposition	9093 Dec 10 18:21	24° II 13'06	-2°25'44
retrograde	9087 Jul 20 09:31	15° Y 35'08	min. Earth dist.	9093 Dec 10 13:25	24° II 14'01	8.79745 AU
opposition	9087 Sep 27 11:56	12° Y 15'26 -0°44'04	direct	9094 Feb 18 01:54	20° II 53'40	
min. Earth dist.	9087 Sep 27 11:36	12° Y 15'29	8.71806 AU	evening set	9094 May 29 16:04	28° II 07'32
direct	9087 Dec 06 17:39	8° Y 53'07		9094 Jun 14 05:54	0° G	
evening set	9088 Mar 19 00:09	16° Y 19'23				
			conjunction	9094 Jun 15 10:30	0° G 08'41	-1°58'09
conjunction	9088 Apr 04 22:04	18° Y 22'15 -0°47'43	minimum elong	9094 Jun 15 10:31	0° G 08'41	1°58'26
minimum elong	9088 Apr 04 22:03	18° Y 22'14	0°47'47	max. Earth dist.	9094 Jun 15 16:36	0° G 10'32
max. Earth dist.	9088 Apr 04 22:45	18° Y 22'27	10.74077 AU	morning rise	9094 Jul 02 07:22	2° G 10'32
morning rise	9088 Apr 21 18:21	20° Y 24'36	retrograde	9094 Oct 14 01:55	9° G 37'18	
retrograde	9088 Jul 31 21:18	27° Y 42'34	opposition	9094 Dec 23 10:40	6° G 14'54	-2°22'51
opposition	9088 Oct 09 07:44	24° Y 22'57 -1°12'15	min. Earth dist.	9094 Dec 23 04:56	6° G 15'59	8.76658 AU
min. Earth dist.	9088 Oct 09 06:36	24° Y 23'10	8.76154 AU	direct	9095 Mar 02 11:00	2° G 55'17
direct	9088 Dec 18 13:08	21° Y 01'29	evening set	9095 Jun 10 20:12	10° G 09'57	
evening set	9089 Mar 31 06:38	28° Y 23'45				
	9089 Apr 13 14:23	0° B	conjunction	9095 Jun 27 16:47	12° G 12'00	-1°53'10
conjunction	9089 Apr 17 02:26	0° B 25'32 -1°09'22	minimum elong	9095 Jun 27 16:48	12° G 12'01	1°53'26
minimum elong	9089 Apr 17 02:24	0° B 25'32	1°09'29	max. Earth dist.	9095 Jun 28 00:02	12° G 14'13
max. Earth dist.	9089 Apr 17 04:10	0° B 26'04	10.77915 AU	morning rise	9095 Jul 14 16:08	14° G 14'55
morning rise	9089 May 03 21:20	2° B 27'03	retrograde	9095 Oct 26 21:04	21° G 45'07	
retrograde	9089 Aug 13 07:40	9° B 44'31	opposition	9096 Jan 05 03:48	18° G 21'51	-2°13'39
opposition	9089 Oct 22 01:53	6° B 24'47 -1°37'02	min. Earth dist.	9096 Jan 04 21:27	18° G 23'04	8.72554 AU
min. Earth dist.	9089 Oct 21 23:13	6° B 25'17	8.79487 AU	direct	9096 Mar 13 21:18	15° G 01'54
direct	9089 Dec 31 05:37	3° B 04'05	evening set	9096 Jun 22 03:34	22° G 18'11	
evening set	9090 Apr 12 10:09	10° B 22'58				
			conjunction	9096 Jul 09 02:47	24° G 21'27	-1°43'06
conjunction	9090 Apr 29 04:22	12° B 23'56 -1°27'52	minimum elong	9096 Jul 09 02:49	24° G 21'28	1°43'20
minimum elong	9090 Apr 29 04:20	12° B 23'56	1°28'02	max. Earth dist.	9096 Jul 09 09:50	24° G 23'36
max. Earth dist.	9090 Apr 29 07:59	12° B 25'02	10.80623 AU	morning rise	9096 Jul 26 05:17	26° G 25'43
morning rise	9090 May 15 22:11	14° B 24'50	retrograde	9096 Aug 27 08:27	0° Q	
retrograde	9090 May 20 21:45	15° B	opposition	9096 Nov 07 20:03	3° Q 59'33	
opposition	9090 Aug 25 18:59	21° B 42'43	min. Earth dist.	9097 Jan 16 22:10	0° Q 35'28	-1°58'19
min. Earth dist.	9090 Nov 03 18:45	18° B 22'42 -1°57'26	direct	9097 Jan 16 16:19	0° Q 36'36	8.67614 AU
direct	9090 Nov 03 14:38	18° B 23'28	8.81592 AU	9097 Jan 24 15:29	30° R G	
evening set	9091 Jan 12 19:54	15° B 02'36	evening set	9097 Mar 26 08:03	27° G 14'59	
	9091 Apr 24 11:55	22° B 18'55		9097 May 23 01:36	0° Q	
conjunction	9091 May 11 05:06	24° B 19'24 -1°42'28	conjunction	9097 Jul 04 14:53	4° Q 33'42	
minimum elong	9091 May 11 05:05	24° B 19'24	1°42'41	minimum elong	9097 Jul 21 17:16	6° Q 38'27
max. Earth dist.	9091 May 11 10:00	24° B 20'53	10.82021 AU	max. Earth dist.	9097 Jul 21 17:18	6° Q 38'27
morning rise	9091 May 27 22:30	26° B 20'00	morning rise	9097 Jul 21 23:23	6° Q 40'19	10.64831 AU
	9091 Jun 30 10:02	0° II	retrograde	9097 Aug 07 23:25	8° Q 44'18	
retrograde	9091 Sep 07 07:23	3° II 39'07	opposition	9097 Oct 10 23:46	15° Q	
opposition	9091 Nov 16 10:44	0° II 18'42 -2°12'43	min. Earth dist.	9097 Nov 20 21:23	16° Q 21'54	
min. Earth dist.	9091 Nov 16 06:00	0° II 19'36	8.82324 AU	9098 Jan 01 08:14	15° R Q	
direct	9091 Nov 20 14:26	30° R B	direct	9098 Jan 29 18:20	12° Q 57'02	-1°37'23
evening set	9092 Jan 25 05:49	26° B 59'03	evening set	9098 Jan 29 13:23	12° Q 58'00	8.62058 AU
	9092 Mar 27 00:36	0° II		9098 Apr 07 20:34	9° Q 35'52	
conjunction	9092 May 05 12:52	4° II 13'42	conjunction	9098 Jun 30 11:11	15° Q	
				9098 Jul 17 06:53	16° Q 57'48	
conjunction	9092 May 22 05:37	6° II 14'03 -1°52'38	conjunction	9098 Aug 03 12:54	19° Q 04'12	-1°09'07

minimum elong	9098 Aug 03 12:56	19°♏04'13	1°09'18
max. Earth dist.	9098 Aug 03 18:16	19°♏05'51	10.59089 AU
morning rise	9098 Aug 20 22:50	21°♏11'45	
retrograde	9098 Dec 04 00:27	28°♏53'11	
opposition	9099 Feb 11 16:23	25°♏27'36	-1°11'34
min. Earth dist.	9099 Feb 11 12:15	25°♏28'24	8.56121 AU
direct	9099 Apr 20 14:04	22°♏05'40	
evening set	9099 Jul 30 04:37	29°♏31'31	
	9099 Aug 03 02:26	0°♏	
conjunction	9099 Aug 16 14:25	1°♏39'41	-0°46'28
minimum elong	9099 Aug 16 14:27	1°♏39'42	0°46'37
max. Earth dist.	9099 Aug 16 19:31	1°♏41'15	10.53084 AU
morning rise	9099 Sep 03 03:53	3°♏48'57	
retrograde	9099 Dec 17 08:31	11°♏34'06	
opposition	9100 Feb 24 16:25	8°♏07'52	-0°41'56
min. Earth dist.	9100 Feb 24 12:38	8°♏08'37	8.50065 AU
direct	9100 May 03 09:21	4°♏45'06	
evening set	9100 Aug 12 08:29	12°♏15'31	
conjunction	9100 Aug 29 21:48	14°♏25'25	-0°21'18
minimum elong	9100 Aug 29 21:49	14°♏25'25	0°21'24
max. Earth dist.	9100 Aug 30 02:08	14°♏26'45	10.47092 AU
morning rise	9100 Sep 16 14:23	16°♏36'21	
retrograde	9100 Dec 30 21:05	24°♏24'55	
opposition	9101 Mar 09 19:02	20°♏58'13	-0°09'48
min. Earth dist.	9101 Mar 09 15:54	20°♏58'50	8.44181 AU
direct	9101 May 16 06:39	17°♏34'35	
asc. node	9101 Jun 29 14:42	19°♏17'00	
evening set	9101 Aug 25 18:36	25°♏10'00	
conjunction	9101 Sep 12 10:54	27°♏21'29	0°05'20
minimum elong	9101 Sep 12 10:54	27°♏21'29	0°05'18
behind sun begin	9101 Sep 12 03:54	27°♏19'20	
behind sun end	9101 Sep 12 17:54	27°♏23'39	
max. Earth dist.	9101 Sep 12 13:38	27°♏22'18	10.41412 AU
morning rise	9101 Sep 30 06:04	29°♏33'54	
	9101 Oct 03 19:59	0°♏	
retrograde	9102 Jan 13 10:49	7°♏25'29	