

retrograde	8600 Mar 09 19:51	7° \nearrow 47'55		min. Earth dist.	8606 Jun 21 01:38	4° \circ 07'36	17.36794 AU
opposition	8600 May 22 18:38	5° \nearrow 44'56	0°46'54	direct	8606 Sep 04 08:48	2° \circ 03'19	
min. Earth dist.	8600 May 23 08:21	5° \nearrow 43'26	17.46723 AU	evening set	8606 Dec 08 14:28	5° \circ 31'10	
direct	8600 Aug 06 00:08	3° \nearrow 40'04		max. Earth dist.	8606 Dec 24 11:37	6° \circ 30'21	19.36872 AU
evening set	8600 Nov 08 15:25	7° \nearrow 05'20					
				conjunction	8606 Dec 25 03:25	6° \circ 32'49	0°18'54
conjunction	8600 Nov 25 07:05	8° \nearrow 06'55	0°40'39	minimum elong	8606 Dec 25 03:24	6° \circ 32'49	0°19'06
minimum elong	8600 Nov 25 07:05	8° \nearrow 06'55	0°40'50	morning rise	8607 Jan 10 13:31	7° \circ 34'05	
max. Earth dist.	8600 Nov 24 14:11	8° \nearrow 04'18	19.45202 AU	retrograde	8607 Apr 12 15:33	10° \circ 35'25	
morning rise	8600 Dec 11 21:03	9° \nearrow 08'17		opposition	8607 Jun 25 11:12	8° \circ 53'43	0°18'46
retrograde	8601 Mar 14 18:12	12° \nearrow 30'59		min. Earth dist.	8607 Jun 26 00:53	8° \circ 52'13	17.37138 AU
opposition	8601 May 27 16:37	10° \nearrow 27'59	0°43'40	direct	8607 Sep 09 10:42	6° \circ 34'55	
min. Earth dist.	8601 May 28 07:43	10° \nearrow 26'20	17.43836 AU	evening set	8607 Dec 13 18:08	10° \circ 31'55	
direct	8601 Aug 10 23:48	8° \nearrow 22'54					
evening set	8601 Nov 13 19:14	11° \nearrow 48'49		conjunction	8607 Dec 30 06:14	11° \circ 31'29	0°14'40
				minimum elong	8607 Dec 30 06:14	11° \circ 31'29	0°14'53
conjunction	8601 Nov 30 10:31	12° \nearrow 50'28	0°37'36	behind sun begin	8607 Dec 30 03:47	11° \circ 31'07	
minimum elong	8601 Nov 30 10:31	12° \nearrow 50'28	0°37'47	behind sun end	8607 Dec 30 08:41	11° \circ 31'51	
max. Earth dist.	8601 Nov 29 16:35	12° \nearrow 47'41	19.42533 AU	max. Earth dist.	8607 Dec 29 13:57	11° \circ 31'45	19.37528 AU
morning rise	8601 Dec 17 00:09	13° \nearrow 51'53		morning rise	8608 Jan 15 15:41	12° \circ 31'84	
retrograde	8602 Mar 19 18:12	17° \nearrow 14'39		retrograde	8608 Apr 16 15:27	15° \circ 34'04	
opposition	8602 Jun 01 14:59	15° \nearrow 11'39	0°40'08	opposition	8608 Jun 29 11:05	13° \circ 38'16	0°13'59
min. Earth dist.	8602 Jun 02 05:29	15° \nearrow 10'04	17.41385 AU	min. Earth dist.	8608 Jun 30 00:23	13° \circ 36'49	17.38088 AU
direct	8602 Aug 16 01:25	13° \nearrow 06'21		direct	8608 Sep 13 12:27	11° \circ 33'32	
evening set	8602 Nov 18 22:56	16° \nearrow 32'49		evening set	8608 Dec 17 21:25	15° \circ 30'36	
conjunction	8602 Dec 05 14:00	17° \nearrow 34'31	0°34'17	conjunction	8609 Jan 03 08:54	16° \circ 30'24	0°10'21
minimum elong	8602 Dec 05 14:01	17° \nearrow 34'31	0°34'30	minimum elong	8609 Jan 03 08:53	16° \circ 30'24	0°10'33
max. Earth dist.	8602 Dec 04 20:50	17° \nearrow 31'51	19.40308 AU	behind sun begin	8609 Jan 03 03:41	16° \circ 30'17	
morning rise	8602 Dec 22 02:56	18° \nearrow 35'57		behind sun end	8609 Jan 03 14:06	16° \circ 30'52	
retrograde	8603 Mar 24 17:02	21° \nearrow 58'44		max. Earth dist.	8609 Jan 02 18:14	15° \circ 35'47	19.38756 AU
opposition	8603 Jun 06 13:46	19° \nearrow 55'44	0°36'18	morning rise	8609 Jan 19 17:21	17° \circ 30'08	
min. Earth dist.	8603 Jun 07 05:05	19° \nearrow 54'03	17.39402 AU	retrograde	8609 Apr 21 15:35	20° \circ 32'50	
direct	8603 Aug 21 02:35	17° \nearrow 50'14		opposition	8609 Jul 04 11:05	18° \circ 32'42	0°09'07
evening set	8603 Nov 24 02:59	21° \nearrow 17'10		min. Earth dist.	8609 Jul 04 23:37	18° \circ 32'12	17.39567 AU
				direct	8609 Sep 18 14:31	16° \circ 31'05	
conjunction	8603 Dec 10 17:30	22° \nearrow 18'54	0°30'44	evening set	8609 Dec 23 00:34	19° \circ 34'50	
minimum elong	8603 Dec 10 17:30	22° \nearrow 18'54	0°30'56				
max. Earth dist.	8603 Dec 09 23:19	22° \nearrow 16'04	19.38589 AU	conjunction	8610 Jan 08 11:05	20° \circ 34'28	0°05'58
morning rise	8603 Dec 27 05:59	23° \nearrow 20'20		minimum elong	8610 Jan 08 11:05	20° \circ 34'28	0°06'11
retrograde	8604 Mar 28 16:43	26° \nearrow 43'04		behind sun begin	8610 Jan 08 04:43	20° \circ 34'52	
opposition	8604 Jun 10 12:37	24° \nearrow 40'04	0°32'14	behind sun end	8610 Jan 08 17:27	20° \circ 34'72	
min. Earth dist.	8604 Jun 11 03:19	24° \nearrow 38'28	17.37952 AU	max. Earth dist.	8610 Jan 07 20:13	20° \circ 34'40	19.40489 AU
direct	8604 Aug 25 04:47	22° \nearrow 34'25		morning rise	8610 Jan 24 18:43	21° \circ 34'72	
evening set	8604 Nov 28 06:56	26° \nearrow 01'45		retrograde	8610 Apr 26 15:11	25° \circ 30'59	
				opposition	8610 Jul 09 11:16	23° \circ 30'52	0°04'11
conjunction	8604 Dec 14 21:06	27° \nearrow 03'29	0°26'58	min. Earth dist.	8610 Jul 09 23:46	23° \circ 30'53	17.41545 AU
minimum elong	8604 Dec 14 21:06	27° \nearrow 03'29	0°27'10	direct	8610 Sep 23 15:42	21° \circ 30'12	
max. Earth dist.	8604 Dec 14 04:16	27° \nearrow 00'51	19.37412 AU	evening set	8610 Dec 28 03:06	24° \circ 32'17	
morning rise	8604 Dec 31 08:43	28° \nearrow 04'53					
	8605 Feb 04 01:53	0° \circ		conjunction	8611 Jan 13 12:52	25° \circ 33'28	0°01'32
retrograde	8605 Apr 02 16:02	1° \circ 27'30		minimum elong	8611 Jan 13 12:52	25° \circ 33'28	0°01'43
	8605 Jun 01 18:36	30° \nwarrow		behind sun begin	8611 Jan 13 06:10	25° \circ 32'27	
opposition	8605 Jun 15 12:00	29° \nearrow 24'34	0°27'55	behind sun end	8611 Jan 13 19:34	25° \circ 33'30	
min. Earth dist.	8605 Jun 16 02:50	29° \nearrow 22'57	17.37063 AU	max. Earth dist.	8611 Jan 12 23:17	25° \circ 32'21	19.42687 AU
direct	8605 Aug 30 06:34	27° \nearrow 18'49		morning rise	8611 Jan 29 19:34	26° \circ 33'13	
	8605 Nov 20 09:56	0° \circ		retrograde	8611 May 01 15:09	29° \circ 32'30	
evening set	8605 Dec 03 10:49	0° \circ 34'26		desc. node	8611 May 18 07:36	29° \circ 34'49	
max. Earth dist.	8605 Dec 19 06:42	1° \circ 34'52	19.36830 AU	opposition	8611 Jul 14 11:25	27° \circ 35'34	-0°00'46
				min. Earth dist.	8611 Jul 14 22:48	27° \circ 34'20	17.43937 AU
conjunction	8605 Dec 20 00:12	1° \circ 34'08	0°23'01	direct	8611 Sep 28 18:29	25° \circ 34'51	
minimum elong	8605 Dec 20 00:13	1° \circ 34'08	0°23'13	evening set	8612 Jan 02 05:27	29° \circ 31'25	
morning rise	8606 Jan 05 11:15	2° \circ 34'29			8612 Jan 14 21:26	0° \circ	
retrograde	8606 Apr 07 15:47	6° \circ 31'20					
opposition	8606 Jun 20 11:32	4° \circ 30'08	0°23'25	conjunction	8612 Jan 18 14:15	0° \circ 13'55	-0°03'01

minimum elong	8612 Jan 18 14:15	0° \approx 13'55	0°02'51	direct	8617 Oct 27 06:22	23° \approx 47'37	
behind sun begin	8612 Jan 18 07:34	0° \approx 12'53		evening set	8618 Jan 30 04:32	27° \approx 11'47	
behind sun end	8612 Jan 18 20:55	0° \approx 14'56					
max. Earth dist.	8612 Jan 18 00:49	0° \approx 11'49	19.45273 AU	conjunction	8618 Feb 15 07:40	28° \approx 11'19	-0°27'55
morning rise	8612 Feb 03 20:00	1° \approx 14'29		minimum elong	8618 Feb 15 07:40	28° \approx 11'19	0°27'47
retrograde	8612 May 05 13:10	4° \approx 35'22		max. Earth dist.	8618 Feb 15 00:40	28° \approx 10'15	19.67945 AU
opposition	8612 Jul 18 11:33	2° \approx 33'37	-0°05'42	morning rise	8618 Mar 03 07:48	29° \approx 10'27	
min. Earth dist.	8612 Jul 18 23:12	2° \approx 32'22	17.46716 AU		8618 Mar 17 09:30	0° \approx	
direct	8612 Oct 02 19:39	0° \approx 28'26		retrograde	8618 Jun 02 16:05	2° \approx 28'07	
evening set	8613 Jan 06 07:11	3° \approx 55'46		opposition	8618 Aug 16 07:30	0° \approx 27'07	-0°33'02
				min. Earth dist.	8618 Aug 16 13:56	0° \approx 26'27	17.70386 AU
conjunction	8613 Jan 22 15:05	4° \approx 56'34	-0°07'25		8618 Aug 27 01:34	30° \approx	
minimum elong	8613 Jan 22 15:05	4° \approx 56'34	0°07'14	direct	8618 Nov 01 05:24	28° \approx 22'57	
behind sun begin	8613 Jan 22 08:57	4° \approx 55'38			8619 Jan 02 22:44	0° \approx	
behind sun end	8613 Jan 22 21:13	4° \approx 57'30		evening set	8619 Feb 04 01:25	1° \approx 46'15	
max. Earth dist.	8613 Jan 22 02:32	4° \approx 54'37	19.48234 AU				
morning rise	8613 Feb 07 19:54	5° \approx 56'55		conjunction	8619 Feb 20 03:29	2° \approx 45'30	-0°31'31
retrograde	8613 May 10 12:15	9° \approx 17'23		minimum elong	8619 Feb 20 03:28	2° \approx 45'30	0°31'25
opposition	8613 Jul 23 11:35	7° \approx 15'48	-0°10'35	max. Earth dist.	8619 Feb 19 21:04	2° \approx 44'31	19.72920 AU
min. Earth dist.	8613 Jul 23 21:45	7° \approx 14'42	17.49839 AU	morning rise	8619 Mar 08 02:56	3° \approx 44'22	
direct	8613 Oct 07 23:07	5° \approx 10'47		retrograde	8619 Jun 07 11:49	7° \approx 01'24	
evening set	8614 Jan 11 08:09	8° \approx 37'39		opposition	8619 Aug 21 05:26	5° \approx 00'32	-0°36'55
				min. Earth dist.	8619 Aug 21 09:32	5° \approx 00'06	17.75542 AU
conjunction	8614 Jan 27 15:06	9° \approx 38'14	-0°11'45	direct	8619 Nov 06 05:08	2° \approx 56'36	
minimum elong	8614 Jan 27 15:06	9° \approx 38'14	0°11'35	evening set	8620 Feb 08 21:23	6° \approx 19'01	
behind sun begin	8614 Jan 27 10:20	9° \approx 37'30					
behind sun end	8614 Jan 27 19:52	9° \approx 38'58		conjunction	8620 Feb 24 22:37	7° \approx 17'58	-0°34'54
max. Earth dist.	8614 Jan 27 03:22	9° \approx 36'25	19.51522 AU	minimum elong	8620 Feb 24 22:37	7° \approx 17'58	0°34'48
morning rise	8614 Feb 12 18:55	10° \approx 38'22		max. Earth dist.	8620 Feb 24 18:43	7° \approx 17'22	19.78251 AU
retrograde	8614 May 15 08:39	13° \approx 58'21		morning rise	8620 Mar 11 21:04	8° \approx 16'33	
opposition	8614 Jul 28 11:32	11° \approx 56'55	-0°15'22	retrograde	8620 Jun 11 05:22	11° \approx 32'58	
min. Earth dist.	8614 Jul 28 21:57	11° \approx 55'48	17.53298 AU	opposition	8620 Aug 25 03:00	9° \approx 32'16	-0°40'33
direct	8614 Oct 13 00:28	9° \approx 52'03		min. Earth dist.	8620 Aug 25 06:33	9° \approx 31'53	17.81047 AU
evening set	8615 Jan 16 08:32	13° \approx 18'23		direct	8620 Nov 10 03:05	7° \approx 28'38	
				evening set	8621 Feb 12 16:35	10° \approx 50'07	
conjunction	8615 Feb 01 14:30	14° \approx 18'43	-0°16'00				
minimum elong	8615 Feb 01 14:30	14° \approx 18'43	0°15'50	conjunction	8621 Feb 28 16:46	11° \approx 48'46	-0°38'02
behind sun begin	8615 Feb 01 13:26	14° \approx 18'34		minimum elong	8621 Feb 28 16:46	11° \approx 48'46	0°37'58
behind sun end	8615 Feb 01 15:34	14° \approx 18'53		max. Earth dist.	8621 Feb 28 13:20	11° \approx 48'15	19.83929 AU
max. Earth dist.	8615 Feb 01 03:23	14° \approx 17'00	19.55147 AU	morning rise	8621 Mar 16 14:35	12° \approx 47'05	
	8615 Feb 12 15:56	15° \approx		retrograde	8621 Jun 16 00:03	16° \approx 02'53	
morning rise	8615 Feb 17 17:29	15° \approx 18'37		opposition	8621 Aug 30 00:03	14° \approx 02'22	-0°43'54
retrograde	8615 May 20 06:20	18° \approx 38'05		min. Earth dist.	8621 Aug 30 01:22	14° \approx 02'14	17.86876 AU
opposition	8615 Aug 02 10:53	16° \approx 36'45	-0°20'03	direct	8621 Nov 15 00:45	11° \approx 59'04	
min. Earth dist.	8615 Aug 02 19:34	16° \approx 35'50	17.57073 AU	evening set	8622 Feb 17 10:37	15° \approx 19'36	
	8615 Sep 14 18:03	15° \approx					
direct	8615 Oct 18 03:49	14° \approx 32'03		conjunction	8622 Mar 05 10:07	16° \approx 17'58	-0°40'56
	8615 Nov 19 21:48	15° \approx		minimum elong	8622 Mar 05 10:06	16° \approx 17'58	0°40'53
evening set	8616 Jan 21 08:08	17° \approx 57'45		max. Earth dist.	8622 Mar 05 09:18	16° \approx 17'50	19.89887 AU
				morning rise	8622 Mar 21 07:04	17° \approx 15'59	
conjunction	8616 Feb 06 13:12	18° \approx 57'50	-0°20'07	retrograde	8622 Jun 20 16:54	20° \approx 31'12	
minimum elong	8616 Feb 06 13:12	18° \approx 57'50	0°19'58	opposition	8622 Sep 03 20:42	18° \approx 30'53	-0°46'58
max. Earth dist.	8616 Feb 06 03:28	18° \approx 56'20	19.59079 AU	min. Earth dist.	8622 Sep 03 21:22	18° \approx 30'49	17.92942 AU
morning rise	8616 Feb 22 15:09	19° \approx 57'30		direct	8622 Nov 19 22:00	16° \approx 27'58	
retrograde	8616 May 24 01:19	23° \approx 16'23		evening set	8623 Feb 22 04:08	19° \approx 47'30	
opposition	8616 Aug 06 10:14	21° \approx 15'11	-0°24'34				
min. Earth dist.	8616 Aug 06 19:02	21° \approx 14'14	17.61168 AU	conjunction	8623 Mar 10 02:37	20° \approx 45'34	-0°43'34
direct	8616 Oct 22 04:16	19° \approx 10'38		minimum elong	8623 Mar 10 02:37	20° \approx 45'34	0°43'31
evening set	8617 Jan 25 06:49	22° \approx 35'36		max. Earth dist.	8623 Mar 10 02:02	20° \approx 45'28	19.96050 AU
				morning rise	8623 Mar 25 23:03	21° \approx 43'19	
conjunction	8617 Feb 10 10:48	23° \approx 35'25	-0°24'06	retrograde	8623 Jun 25 10:18	24° \approx 57'56	
minimum elong	8617 Feb 10 10:48	23° \approx 35'25	0°23'59	opposition	8623 Sep 08 16:37	22° \approx 57'49	-0°49'43
max. Earth dist.	8617 Feb 10 01:39	23° \approx 34'00	19.63344 AU	min. Earth dist.	8623 Sep 08 15:34	22° \approx 57'55	17.99183 AU
morning rise	8617 Feb 26 11:58	24° \approx 34'48		direct	8623 Nov 24 18:04	20° \approx 55'16	
retrograde	8617 May 28 22:06	27° \approx 53'06		evening set	8624 Feb 26 20:41	24° \approx 13'49	
opposition	8617 Aug 11 09:03	25° \approx 51'59	-0°28'55				
min. Earth dist.	8617 Aug 11 15:43	25° \approx 51'17	17.65598 AU	conjunction	8624 Mar 13 18:31	25° \approx 11'35	-0°45'55

minimum elong	8624 Mar 13 18:31	25° \mathbf{K} 11'35	0°45'54	opposition	8630 Oct 09 21:47	23° \mathbf{Y} 20'23	-0°59'58
max. Earth dist.	8624 Mar 13 20:19	25° \mathbf{K} 11'52	20.02339 AU	min. Earth dist.	8630 Oct 09 13:52	23° \mathbf{Y} 21'11	18.42035 AU
morning rise	8624 Mar 29 14:09	26° \mathbf{K} 09'04		direct	8630 Dec 26 01:44	21° \mathbf{Y} 20'11	
retrograde	8624 Jun 29 02:10	29° \mathbf{K} 23'04		evening set	8631 Mar 28 17:16	24° \mathbf{Y} 31'17	
opposition	8624 Sep 12 12:18	27° \mathbf{K} 23'10	-0°52'10				
min. Earth dist.	8624 Sep 12 10:32	27° \mathbf{K} 23'21	18.05505 AU	conjunction	8631 Apr 13 10:55	25° \mathbf{Y} 27'10	-0°54'11
direct	8624 Nov 28 14:32	25° \mathbf{K} 21'02		minimum elong	8631 Apr 13 10:55	25° \mathbf{Y} 27'10	0°54'17
evening set	8625 Mar 02 12:26	28° \mathbf{K} 38'31		max. Earth dist.	8631 Apr 13 18:51	25° \mathbf{Y} 28'21	20.44840 AU
				morning rise	8631 Apr 29 04:02	26° \mathbf{Y} 22'58	
conjunction	8625 Mar 18 09:20	29° \mathbf{K} 36'00	-0°47'59	retrograde	8631 Jul 30 01:52	29° \mathbf{Y} 32'56	
minimum elong	8625 Mar 18 09:20	29° \mathbf{K} 36'00	0°47'58	opposition	8631 Oct 14 13:04	27° \mathbf{Y} 33'49	-1°00'05
max. Earth dist.	8625 Mar 18 11:15	29° \mathbf{K} 36'17	20.08681 AU	min. Earth dist.	8631 Oct 14 04:34	27° \mathbf{Y} 34'41	18.47650 AU
	8625 Mar 24 23:20	0° \mathbf{Y}		direct	8631 Dec 30 15:54	25° \mathbf{Y} 33'52	
morning rise	8625 Apr 03 04:32	0° \mathbf{Y} 33'13		evening set	8632 Apr 01 03:07	28° \mathbf{Y} 43'56	
retrograde	8625 Jul 03 18:25	3° \mathbf{Y} 46'39					
opposition	8625 Sep 17 07:25	1° \mathbf{Y} 46'55	-0°54'18	conjunction	8632 Apr 16 20:34	29° \mathbf{Y} 39'36	-0°54'10
min. Earth dist.	8625 Sep 17 04:15	1° \mathbf{Y} 47'15	18.11859 AU	minimum elong	8632 Apr 16 20:34	29° \mathbf{Y} 39'36	0°54'16
	8625 Nov 08 23:19	30° \mathbf{K}		max. Earth dist.	8632 Apr 17 06:28	29° \mathbf{Y} 41'04	20.50400 AU
direct	8625 Dec 03 09:25	29° \mathbf{K} 45'08			8632 Apr 22 13:51	0° \mathbf{B}	
	8625 Dec 27 12:19	0° \mathbf{Y}		morning rise	8632 May 02 13:25	0° \mathbf{B} 35'12	
evening set	8626 Mar 07 03:17	3° \mathbf{Y} 01'36		retrograde	8632 Aug 02 12:52	3° \mathbf{B} 44'39	
				opposition	8632 Oct 18 03:46	1° \mathbf{B} 45'35	-0°59'54
conjunction	8626 Mar 22 23:40	3° \mathbf{Y} 58'47	-0°49'46	min. Earth dist.	8632 Oct 17 17:33	1° \mathbf{B} 46'38	18.53157 AU
minimum elong	8626 Mar 22 23:39	3° \mathbf{Y} 58'47	0°49'47		8632 Dec 10 06:38	30° \mathbf{R} \mathbf{Y}	
max. Earth dist.	8626 Mar 23 03:42	3° \mathbf{Y} 59'24	20.15013 AU	direct	8633 Jan 03 06:59	29° \mathbf{Y} 45'55	
morning rise	8626 Apr 07 18:11	4° \mathbf{Y} 55'45			8633 Jan 26 18:33	0° \mathbf{B}	
retrograde	8626 Jul 08 09:04	8° \mathbf{Y} 08'35		evening set	8633 Apr 05 12:14	2° \mathbf{B} 54'59	
opposition	8626 Sep 22 01:50	6° \mathbf{Y} 09'02	-0°56'06				
min. Earth dist.	8626 Sep 21 21:53	6° \mathbf{Y} 09'26	18.18158 AU	conjunction	8633 Apr 21 05:17	3° \mathbf{B} 50'26	-0°53'52
direct	8626 Dec 08 04:46	4° \mathbf{Y} 07'37		minimum elong	8633 Apr 21 05:17	3° \mathbf{B} 50'26	0°53'59
evening set	8627 Mar 11 17:30	7° \mathbf{Y} 23'01		max. Earth dist.	8633 Apr 21 15:40	3° \mathbf{B} 51'58	20.55857 AU
				morning rise	8633 May 06 22:12	4° \mathbf{B} 45'51	
conjunction	8627 Mar 27 13:04	8° \mathbf{Y} 19'56	-0°51'15	retrograde	8633 Aug 06 23:05	7° \mathbf{B} 54'50	
minimum elong	8627 Mar 27 13:04	8° \mathbf{Y} 19'56	0°51'17	opposition	8633 Oct 22 17:56	5° \mathbf{B} 55'51	-0°59'23
max. Earth dist.	8627 Mar 27 17:00	8° \mathbf{Y} 20'31	20.21266 AU	min. Earth dist.	8633 Oct 22 07:13	5° \mathbf{B} 56'56	18.58575 AU
morning rise	8627 Apr 12 07:19	9° \mathbf{Y} 16'38		direct	8634 Jan 07 18:45	3° \mathbf{B} 56'28	
retrograde	8627 Jul 13 00:09	12° \mathbf{Y} 28'53		evening set	8634 Apr 09 20:41	7° \mathbf{B} 04'35	
opposition	8627 Sep 26 19:47	10° \mathbf{Y} 29'28	-0°57'34				
min. Earth dist.	8627 Sep 26 14:54	10° \mathbf{Y} 29'58	18.24361 AU	conjunction	8634 Apr 25 13:41	7° \mathbf{B} 59'49	-0°53'17
direct	8627 Dec 12 22:20	8° \mathbf{Y} 28'24		minimum elong	8634 Apr 25 13:41	7° \mathbf{B} 59'49	0°53'24
evening set	8628 Mar 15 06:39	11° \mathbf{Y} 42'44		max. Earth dist.	8634 Apr 26 01:50	8° \mathbf{B} 01'37	20.61216 AU
				morning rise	8634 May 11 06:30	8° \mathbf{B} 55'05	
conjunction	8628 Mar 31 01:48	12° \mathbf{Y} 39'22	-0°52'27	retrograde	8634 Aug 11 09:48	12° \mathbf{B} 03'36	
minimum elong	8628 Mar 31 01:47	12° \mathbf{Y} 39'22	0°52'29	opposition	8634 Oct 27 07:13	10° \mathbf{B} 04'44	-0°58'33
max. Earth dist.	8628 Mar 31 07:36	12° \mathbf{Y} 40'15	20.27392 AU	min. Earth dist.	8634 Oct 26 18:52	10° \mathbf{B} 05'58	18.63857 AU
morning rise	8628 Apr 15 19:29	13° \mathbf{Y} 35'50		direct	8635 Jan 12 08:11	8° \mathbf{B} 05'39	
retrograde	8628 Jul 16 13:12	16° \mathbf{Y} 47'30		evening set	8635 Apr 14 04:43	11° \mathbf{B} 12'52	
opposition	8628 Sep 30 13:08	14° \mathbf{Y} 48'13	-0°58'42				
min. Earth dist.	8628 Sep 30 07:12	14° \mathbf{Y} 48'49	18.30403 AU	conjunction	8635 Apr 29 21:26	12° \mathbf{B} 07'56	-0°52'25
direct	8628 Dec 16 16:50	12° \mathbf{Y} 47'27		minimum elong	8635 Apr 29 21:26	12° \mathbf{B} 07'56	0°52'32
evening set	8629 Mar 19 19:09	16° \mathbf{Y} 00'42		max. Earth dist.	8635 Apr 30 09:56	12° \mathbf{B} 09'46	20.66417 AU
				morning rise	8635 May 15 14:26	13° \mathbf{B} 03'02	
conjunction	8629 Apr 04 13:37	16° \mathbf{Y} 57'05	-0°53'20		8635 Jun 22 20:23	15° \mathbf{B}	
minimum elong	8629 Apr 04 13:37	16° \mathbf{Y} 57'05	0°53'23	retrograde	8635 Aug 15 19:17	16° \mathbf{B} 11'10	
max. Earth dist.	8629 Apr 04 19:25	16° \mathbf{Y} 57'57	20.33360 AU		8635 Oct 11 13:58	15° \mathbf{R} \mathbf{B}	
morning rise	8629 Apr 20 07:09	17° \mathbf{Y} 53'19		opposition	8635 Oct 31 20:18	14° \mathbf{B} 12'24	-0°57'26
retrograde	8629 Jul 21 02:45	21° \mathbf{Y} 04'25		min. Earth dist.	8635 Oct 31 07:48	14° \mathbf{B} 13'39	18.68976 AU
opposition	8629 Oct 05 05:51	19° \mathbf{Y} 05'11	-0°59'30	direct	8636 Jan 16 18:23	12° \mathbf{B} 13'37	
min. Earth dist.	8629 Oct 04 23:13	19° \mathbf{Y} 05'52	18.36302 AU		8636 Apr 11 14:59	15° \mathbf{B}	
direct	8629 Dec 21 08:52	17° \mathbf{Y} 04'43		evening set	8636 Apr 17 11:58	15° \mathbf{B} 19'58	
evening set	8630 Mar 24 06:31	20° \mathbf{Y} 16'53					
				conjunction	8636 May 03 04:43	16° \mathbf{B} 14'52	-0°51'17
conjunction	8630 Apr 09 00:43	21° \mathbf{Y} 13'01	-0°53'55	minimum elong	8636 May 03 04:43	16° \mathbf{B} 14'52	0°51'26
minimum elong	8630 Apr 09 00:43	21° \mathbf{Y} 13'01	0°53'58	max. Earth dist.	8636 May 03 18:44	16° \mathbf{B} 16'55	20.71432 AU
max. Earth dist.	8630 Apr 09 08:24	21° \mathbf{Y} 14'10	20.39177 AU	morning rise	8636 May 18 21:45	17° \mathbf{B} 09'50	
morning rise	8630 Apr 24 17:54	22° \mathbf{Y} 09'02		retrograde	8636 Aug 19 05:50	20° \mathbf{B} 17'36	
retrograde	8630 Jul 25 14:21	25° \mathbf{Y} 19'33		opposition	8636 Nov 04 08:48	18° \mathbf{B} 18'57	-0°56'02

min. Earth dist.	8636 Nov 03 18:42	18°♄20'22	18.73863 AU	conjunction	8643 May 31 23:53	14°♄38'09	-0°36'49
direct	8637 Jan 20 06:17	16°♄20'29		minimum elong	8643 May 31 23:53	14°♄38'09	0°37'02
evening set	8637 Apr 21 19:00	19°♄26'00		max. Earth dist.	8643 Jun 01 15:27	14°♄40'23	20.96453 AU
				morning rise	8643 Jun 16 19:27	15°♄32'36	
conjunction	8637 May 07 11:38	20°♄20'45	-0°49'54	retrograde	8643 Sep 17 20:43	18°♄38'44	
minimum elong	8637 May 07 11:38	20°♄20'45	0°50'03	opposition	8643 Dec 04 12:48	16°♄40'16	-0°39'08
max. Earth dist.	8637 May 08 01:51	20°♄22'50	20.76187 AU	min. Earth dist.	8643 Dec 03 22:02	16°♄41'45	18.97410 AU
morning rise	8637 May 23 04:58	21°♄15'37		direct	8644 Feb 18 21:10	14°♄43'08	
retrograde	8637 Aug 23 15:00	24°♄23'04		evening set	8644 May 19 10:50	17°♄44'14	
opposition	8637 Nov 08 20:53	22°♄24'30	-0°54'21				
min. Earth dist.	8637 Nov 08 07:03	22°♄25'53	18.78483 AU	conjunction	8644 Jun 04 05:05	18°♄38'24	-0°33'57
direct	8638 Jan 24 15:38	20°♄26'19		minimum elong	8644 Jun 04 05:05	18°♄38'24	0°34'09
evening set	8638 Apr 26 01:30	23°♄31'04		max. Earth dist.	8644 Jun 04 21:16	18°♄40'44	20.98223 AU
				morning rise	8644 Jun 20 01:09	19°♄32'51	
conjunction	8638 May 11 18:19	24°♄25'42	-0°48'16	retrograde	8644 Sep 21 06:15	22°♄38'53	
minimum elong	8638 May 11 18:19	24°♄25'42	0°48'27	opposition	8644 Dec 07 22:03	20°♄40'20	-0°35'52
max. Earth dist.	8638 May 12 09:34	24°♄27'55	20.80645 AU	min. Earth dist.	8644 Dec 07 06:08	20°♄41'56	18.98973 AU
morning rise	8638 May 27 11:49	25°♄20'27		direct	8645 Feb 22 06:00	18°♄43'15	
retrograde	8638 Aug 28 01:16	28°♄27'36		evening set	8645 May 23 15:39	21°♄43'57	
opposition	8638 Nov 13 08:27	26°♄29'08	-0°52'24				
min. Earth dist.	8638 Nov 12 17:17	26°♄30'39	18.82755 AU	conjunction	8645 Jun 08 10:14	22°♄38'06	-0°30'55
direct	8639 Jan 29 02:15	24°♄31'13		minimum elong	8645 Jun 08 10:14	22°♄38'06	0°31'08
evening set	8639 Apr 30 07:49	27°♄35'15		max. Earth dist.	8645 Jun 09 02:17	22°♄40'24	20.99592 AU
				morning rise	8645 Jun 24 06:56	23°♄32'33	
conjunction	8639 May 16 00:35	28°♄29'45	-0°46'24	retrograde	8645 Sep 25 13:06	26°♄38'32	
minimum elong	8639 May 16 00:35	28°♄29'45	0°46'35	opposition	8645 Dec 12 06:58	24°♄39'54	-0°32'25
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morning rise	8639 May 31 18:26	29°♄24'25		direct	8646 Feb 26 11:26	22°♄42'52	
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retrograde	8639 Sep 01 09:57	2°♄31'19					
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min. Earth dist.	8639 Nov 17 05:13	0°♄34'22	18.86632 AU	minimum elong	8646 Jun 12 15:25	26°♄37'23	0°27'57
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direct	8640 Feb 02 11:00	28°♄35'14		morning rise	8646 Jun 28 12:40	27°♄31'52	
	8640 Apr 01 18:11	0°♄			8646 Aug 21 06:57	0°♄	
evening set	8640 May 03 13:46	1°♄38'36		retrograde	8646 Sep 29 22:18	0°♄37'49	
					8646 Nov 09 13:25	30°♄	
conjunction	8640 May 19 06:48	2°♄33'00	-0°44'19	opposition	8646 Dec 16 15:32	28°♄39'08	-0°28'50
minimum elong	8640 May 19 06:48	2°♄33'00	0°44'30	min. Earth dist.	8646 Dec 15 23:26	28°♄40'45	19.01022 AU
max. Earth dist.	8640 May 19 22:37	2°♄35'18	20.88380 AU	direct	8647 Mar 02 19:45	26°♄42'10	
morning rise	8640 Jun 04 00:54	3°♄27'35		evening set	8647 Jun 01 00:53	29°♄42'15	
retrograde	8640 Sep 04 20:02	6°♄34'16			8647 Jun 06 06:23	0°♄	
opposition	8640 Nov 21 06:36	4°♄35'54	-0°47'46				
min. Earth dist.	8640 Nov 20 14:54	4°♄37'28	18.90058 AU	conjunction	8647 Jun 16 20:25	0°♄36'26	-0°24'27
direct	8641 Feb 05 20:58	2°♄38'26		minimum elong	8647 Jun 16 20:25	0°♄36'26	0°24'40
evening set	8641 May 07 19:27	5°♄41'09		max. Earth dist.	8647 Jun 17 12:45	0°♄38'46	21.01297 AU
				morning rise	8647 Jul 02 18:20	1°♄30'57	
conjunction	8641 May 23 12:37	6°♄35'28	-0°42'01	retrograde	8647 Oct 04 05:55	4°♄36'58	
minimum elong	8641 May 23 12:37	6°♄35'28	0°42'12	min. Earth dist.	8647 Dec 20 08:58	2°♄39'45	19.01536 AU
max. Earth dist.	8641 May 24 04:06	6°♄37'43	20.91561 AU	opposition	8647 Dec 21 00:06	2°♄38'14	-0°25'07
morning rise	8641 Jun 08 07:14	7°♄30'01		direct	8648 Mar 06 00:34	0°♄41'19	
retrograde	8641 Sep 09 03:59	10°♄36'29		evening set	8648 Jun 04 05:30	3°♄41'13	
opposition	8641 Nov 25 17:11	8°♄38'07	-0°45'06				
min. Earth dist.	8641 Nov 25 02:25	8°♄39'35	18.92997 AU	conjunction	8648 Jun 20 01:40	4°♄35'26	-0°21'01
direct	8642 Feb 10 04:55	6°♄40'47		minimum elong	8648 Jun 20 01:40	4°♄35'26	0°21'15
evening set	8642 May 12 00:52	9°♄42'56		max. Earth dist.	8648 Jun 20 18:19	4°♄37'49	21.01651 AU
				morning rise	8648 Jul 06 00:13	5°♄30'00	
conjunction	8642 May 27 18:26	10°♄37'11	-0°39'31	retrograde	8648 Oct 07 15:02	8°♄36'07	
minimum elong	8642 May 27 18:26	10°♄37'11	0°39'42	opposition	8648 Dec 24 08:18	6°♄37'21	-0°21'16
max. Earth dist.	8642 May 28 10:18	10°♄39'29	20.94254 AU	min. Earth dist.	8648 Dec 23 16:09	6°♄38'58	19.01713 AU
morning rise	8642 Jun 12 13:26	11°♄31'40		direct	8649 Mar 10 08:13	4°♄40'29	
retrograde	8642 Sep 13 13:42	14°♄37'57		evening set	8649 Jun 08 10:20	7°♄40'16	
min. Earth dist.	8642 Nov 29 11:17	12°♄41'08	18.95433 AU				
opposition	8642 Nov 30 03:01	12°♄39'33	-0°42'13	conjunction	8649 Jun 24 07:02	8°♄34'32	-0°17'30
direct	8643 Feb 14 14:20	10°♄42'20		minimum elong	8649 Jun 24 07:01	8°♄34'32	0°17'43
evening set	8643 May 16 06:06	13°♄43'56		max. Earth dist.	8649 Jun 24 23:18	8°♄36'52	21.01647 AU
				morning rise	8649 Jul 10 06:21	9°♄29'11	

retrograde	8649 Oct 11 23:20	12°☾35'28			8655 May 29 20:39	0°♈	
opposition	8649 Dec 28 16:34	10°☾36'38 -0°17'20		evening set	8655 Jul 02 21:43	1°♈43'25	
min. Earth dist.	8649 Dec 28 01:39	10°☾38'08 19.01526 AU					
direct	8650 Mar 14 13:09	8°☾39'50		conjunction	8655 Jul 18 22:28	2°♈38'21 0°04'59	
evening set	8650 Jun 12 15:18	11°☾39'34		minimum elong	8655 Jul 18 22:29	2°♈38'21 0°04'48	
				behind sun begin	8655 Jul 18 16:00	2°♈37'27	
conjunction	8650 Jun 28 12:41	12°☾33'55 -0°13'54		behind sun end	8655 Jul 19 04:57	2°♈39'16	
minimum elong	8650 Jun 28 12:41	12°☾33'55 0°14'07		max. Earth dist.	8655 Jul 19 10:57	2°♈40'08 20.92578 AU	
behind sun begin	8650 Jun 28 09:24	12°☾33'28		morning rise	8655 Aug 04 02:17	3°♈33'43	
behind sun end	8650 Jun 28 15:58	12°☾34'23		retrograde	8655 Nov 06 06:25	6°♈41'41	
max. Earth dist.	8650 Jun 29 04:58	12°☾36'15 21.01277 AU		opposition	8656 Jan 22 18:06	4°♈42'19 0°07'33	
morning rise	8650 Jul 14 12:40	13°☾28'39		min. Earth dist.	8656 Jan 22 07:18	4°♈43'25 18.91011 AU	
retrograde	8650 Oct 16 08:41	16°☾35'07		direct	8656 Apr 07 03:25	2°♈45'11	
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morning rise	8651 Jul 18 19:21	17°☾28'31		min. Earth dist.	8657 Jan 25 15:40	8°♈46'22 18.87529 AU	
retrograde	8651 Oct 20 17:01	20°☾35'14		direct	8657 Apr 11 11:19	6°♈47'55	
opposition	8652 Jan 06 08:50	18°☾36'20 -0°09'12		evening set	8657 Jul 10 12:42	9°♈49'01	
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evening set	8652 Jun 20 02:12	19°☾39'26		minimum elong	8657 Jul 26 15:03	10°♈44'17 0°12'20	
				behind sun begin	8657 Jul 26 10:40	10°♈43'40	
conjunction	8652 Jul 06 00:53	20°☾33'58 -0°06'31		behind sun end	8657 Jul 26 19:26	10°♈44'53	
minimum elong	8652 Jul 06 00:53	20°☾33'58 0°06'44		max. Earth dist.	8657 Jul 27 01:42	10°♈45'48 20.85630 AU	
behind sun begin	8652 Jul 05 18:42	20°☾33'07		morning rise	8657 Aug 11 20:28	11°♈39'58	
behind sun end	8652 Jul 06 07:03	20°☾34'50		retrograde	8657 Nov 14 02:15	14°♈48'41	
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morning rise	8652 Jul 22 02:22	21°☾28'55		min. Earth dist.	8658 Jan 30 02:06	12°♈49'49 18.83641 AU	
retrograde	8652 Oct 24 03:10	24°☾35'55		direct	8658 Apr 15 17:23	10°♈51'19	
opposition	8653 Jan 09 16:59	22°☾36'57 -0°05'03		evening set	8658 Jul 14 20:49	13°♈52'49	
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conjunction	8653 Jul 10 07:42	24°☾34'50 -0°02'46			8658 Aug 03 09:16	15°♈	
minimum elong	8653 Jul 10 07:42	24°☾34'50 0°02'57		morning rise	8658 Aug 16 06:08	15°♈44'08	
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max. Earth dist.	8653 Jul 10 22:04	24°☾36'53 20.97573 AU		min. Earth dist.	8659 Feb 03 10:38	16°♈54'13 18.79423 AU	
morning rise	8653 Jul 26 09:58	25°☾29'55			8659 Apr 06 17:38	15°♈	
retrograde	8653 Oct 28 11:27	28°☾37'12		direct	8659 Apr 20 01:30	14°♈55'27	
opposition	8654 Jan 14 01:13	26°☾38'09 -0°00'52			8659 May 03 05:02	15°♈	
min. Earth dist.	8654 Jan 13 12:38	26°☾39'25 18.96534 AU		evening set	8659 Jul 19 05:33	17°♈57'27	
asc. node	8654 Mar 29 15:08	24°☾41'20					
direct	8654 Mar 30 14:06	24°☾41'19		conjunction	8659 Aug 04 09:27	18°♈53'05 0°19'51	
evening set	8654 Jun 28 14:54	27°☾41'31		minimum elong	8659 Aug 04 09:26	18°♈53'05 0°19'42	
				max. Earth dist.	8659 Aug 04 18:31	18°♈54'23 20.77204 AU	
conjunction	8654 Jul 14 14:59	28°☾36'18 0°01'09		morning rise	8659 Aug 20 16:21	19°♈49'10	
minimum elong	8654 Jul 14 14:59	28°☾36'18 0°00'57		retrograde	8659 Nov 22 23:50	22°♈58'48	
behind sun begin	8654 Jul 14 08:23	28°☾35'23		opposition	8660 Feb 08 04:44	20°♈58'34 0°23'57	
behind sun end	8654 Jul 14 21:36	28°☾37'14		min. Earth dist.	8660 Feb 07 21:14	20°♈59'20 18.74926 AU	
max. Earth dist.	8654 Jul 15 04:32	28°☾38'14 20.95347 AU		direct	8660 Apr 23 08:00	19°♈00'30	
morning rise	8654 Jul 30 18:00	29°☾31'30		evening set	8660 Jul 22 14:46	22°♈03'03	
	8654 Aug 08 08:50	0°♈					
retrograde	8654 Nov 01 22:13	2°♈39'08		conjunction	8660 Aug 07 19:29	22°♈58'54 0°23'24	
opposition	8655 Jan 18 09:31	0°♈39'57 0°03'21		minimum elong	8660 Aug 07 19:29	22°♈58'54 0°23'17	
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	8655 Feb 04 04:47	30°♈		morning rise	8660 Aug 24 03:13	23°♈55'11	
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
























































































































opposition	8661 Feb 11 13:53	25°04'55	0°27'50	conjunction	8667 Sep 07 15:35	22°07'19"44	0°44'19
min. Earth dist.	8661 Feb 11 06:19	25°05'42	18.70200 AU	minimum elong	8667 Sep 07 15:35	22°07'19"44	0°44'16
direct	8661 Apr 27 16:32	23°06'36		max. Earth dist.	8667 Sep 07 16:09	22°07'19"49	20.34883 AU
evening set	8661 Jul 27 00:48	26°09'47		morning rise	8667 Sep 24 03:53	23°07'17"43	
				retrograde	8667 Dec 27 15:16	26°07'32"20	
conjunction	8661 Aug 12 06:18	27°05'52	0°26'51	opposition	8668 Mar 12 17:34	24°07'30"55	0°50'25
minimum elong	8661 Aug 12 06:18	27°05'52	0°26'44	min. Earth dist.	8668 Mar 12 17:58	24°07'30"52	18.31809 AU
max. Earth dist.	8661 Aug 12 13:42	27°06'56	20.67753 AU	direct	8668 May 26 09:48	22°07'30"53	
morning rise	8661 Aug 28 14:43	28°02'22		evening set	8668 Aug 25 21:27	25°07'40"09	
	8661 Oct 06 14:10	0°07'					
retrograde	8661 Nov 30 23:37	1°07'13"04		conjunction	8668 Sep 11 08:11	26°07'38"03	0°46'31
	8662 Jan 27 05:31	30°08'02		minimum elong	8668 Sep 11 08:11	26°07'38"03	0°46'30
opposition	8662 Feb 15 23:20	29°01'22"28	0°31'35	max. Earth dist.	8668 Sep 11 06:23	26°07'37"47	20.28686 AU
min. Earth dist.	8662 Feb 15 17:20	29°01'33"06	18.65263 AU	morning rise	8668 Sep 27 21:11	27°07'36"18	
direct	8662 May 01 23:36	27°01'33"56			8668 Nov 15 19:29	0°01'	
	8662 Jul 26 04:30	0°07'		retrograde	8668 Dec 31 08:35	0°01'51"33	
evening set	8662 Jul 31 11:28	0°07'17"49			8669 Feb 15 17:23	30°08'07	
				opposition	8669 Mar 17 06:24	28°07'49"56	0°52'45
conjunction	8662 Aug 16 17:45	1°07'14"08	0°30'10	min. Earth dist.	8669 Mar 17 07:51	28°07'49"47	18.25519 AU
minimum elong	8662 Aug 16 17:45	1°07'14"08	0°30'03	direct	8669 May 30 22:27	26°07'49"34	
max. Earth dist.	8662 Aug 17 00:00	1°07'15"02	20.62736 AU	evening set	8669 Aug 30 14:10	29°07'59"49	
morning rise	8662 Sep 02 02:56	2°07'10"52			8669 Aug 30 15:28	0°01'	
retrograde	8662 Dec 05 13:29	5°07'22"10					
opposition	8663 Feb 20 09:10	3°07'21"25	0°35'12	conjunction	8669 Sep 16 01:41	0°01'58"01	0°48'29
min. Earth dist.	8663 Feb 20 03:14	3°07'22"02	18.60157 AU	minimum elong	8669 Sep 16 01:41	0°01'58"01	0°48'29
direct	8663 May 06 08:46	1°07'22"38		max. Earth dist.	8669 Sep 15 23:14	0°01'57"39	20.22307 AU
evening set	8663 Aug 04 22:47	4°07'27"18		morning rise	8669 Oct 02 15:00	1°01'56"31	
				retrograde	8670 Jan 05 01:10	5°01'12"23	
conjunction	8663 Aug 21 05:52	5°07'23"51	0°33'21	opposition	8670 Mar 21 19:40	3°01'10"34	0°54'48
minimum elong	8663 Aug 21 05:52	5°07'23"51	0°33'15	min. Earth dist.	8670 Mar 21 22:34	3°01'10"16	18.19080 AU
max. Earth dist.	8663 Aug 21 11:32	5°07'24"41	20.57539 AU	direct	8670 Jun 04 11:19	1°01'09"50	
morning rise	8663 Sep 06 15:43	6°07'20"50		evening set	8670 Sep 04 07:46	4°01'21"05	
retrograde	8663 Dec 10 01:54	9°07'32"46					
opposition	8664 Feb 24 19:35	7°07'31"53	0°38'39	conjunction	8670 Sep 20 19:47	5°01'19"33	0°50'11
min. Earth dist.	8664 Feb 24 15:11	7°07'32"20	18.54877 AU	minimum elong	8670 Sep 20 19:47	5°01'19"33	0°50'12
direct	8664 May 09 16:39	5°07'32"54		max. Earth dist.	8670 Sep 20 15:02	5°01'18"51	20.15842 AU
evening set	8664 Aug 08 11:08	8°07'38"23		morning rise	8670 Oct 07 09:44	6°01'18"20	
				retrograde	8671 Jan 09 18:36	9°01'34"50	
conjunction	8664 Aug 24 18:58	9°07'35"12	0°36'22	opposition	8671 Mar 26 09:30	7°01'32"47	0°56'32
minimum elong	8664 Aug 24 18:58	9°07'35"12	0°36'17	min. Earth dist.	8671 Mar 26 13:27	7°01'32"21	18.12602 AU
max. Earth dist.	8664 Aug 24 23:08	9°07'35"49	20.52184 AU	direct	8671 Jun 09 00:49	5°01'31"38	
morning rise	8664 Sep 10 05:34	10°07'32"25		evening set	8671 Sep 09 01:56	8°01'43"55	
retrograde	8664 Dec 13 17:15	13°07'45"00					
opposition	8665 Feb 28 06:09	11°07'44"00	0°41'55	conjunction	8671 Sep 25 14:44	9°01'42"41	0°51'35
min. Earth dist.	8665 Feb 28 02:16	11°07'44"25	18.49432 AU	minimum elong	8671 Sep 25 14:43	9°01'42"41	0°51'37
direct	8665 May 14 02:44	9°07'44"48		max. Earth dist.	8671 Sep 25 09:47	9°01'41"57	20.09355 AU
evening set	8665 Aug 13 00:22	12°07'51"11		morning rise	8671 Oct 12 04:57	10°01'41"42	
				retrograde	8672 Jan 14 12:30	13°01'58"48	
conjunction	8665 Aug 29 09:00	13°07'48"16	0°39'13	opposition	8672 Mar 29 23:52	11°01'56"33	0°57'58
minimum elong	8665 Aug 29 09:00	13°07'48"16	0°39'09	min. Earth dist.	8672 Mar 30 04:50	11°01'56"01	18.06130 AU
max. Earth dist.	8665 Aug 29 12:24	13°07'48"46	20.46632 AU	direct	8672 Jun 12 16:00	9°01'55"02	
morning rise	8665 Sep 14 20:09	14°07'45"45		evening set	8672 Sep 12 21:13	13°01'08"21	
retrograde	8665 Dec 18 07:09	17°07'59"00					
opposition	8666 Mar 04 17:26	15°07'57"53	0°44'58	conjunction	8672 Sep 29 10:26	14°01'07"23	0°52'42
min. Earth dist.	8666 Mar 04 15:19	15°07'58"07	18.43778 AU	minimum elong	8672 Sep 29 10:26	14°01'07"23	0°52'45
direct	8666 May 18 11:41	13°07'58"27		max. Earth dist.	8672 Sep 29 03:11	14°01'06"18	20.02924 AU
evening set	8666 Aug 17 14:28	17°07'05"46		morning rise	8672 Oct 16 01:12	15°01'06"40	
				retrograde	8673 Jan 18 05:52	18°01'24"21	
conjunction	8666 Sep 02 23:45	18°07'03"07	0°41'52	opposition	8673 Apr 03 14:38	16°01'21"53	0°59'03
minimum elong	8666 Sep 02 23:45	18°07'03"07	0°41'49	min. Earth dist.	8673 Apr 03 20:45	16°01'21"13	17.99761 AU
max. Earth dist.	8666 Sep 03 01:10	18°07'03"20	20.40875 AU	direct	8673 Jun 17 06:52	14°01'19"57	
morning rise	8666 Sep 19 11:35	19°07'00"51		evening set	8673 Sep 17 17:09	17°01'34"22	
retrograde	8666 Dec 22 23:47	22°07'14"48					
opposition	8667 Mar 09 05:14	20°07'13"32	0°47'49	conjunction	8673 Oct 04 07:03	18°01'33"40	0°53'30
min. Earth dist.	8667 Mar 09 03:55	20°07'13"40	18.37911 AU	minimum elong	8673 Oct 04 07:03	18°01'33"40	0°53'34
direct	8667 May 22 23:07	18°07'13"49		max. Earth dist.	8673 Oct 03 23:51	18°01'32"35	19.96614 AU
evening set	8667 Aug 22 05:30	21°07'22"06		morning rise	8673 Oct 20 21:55	19°01'33"11	

retrograde	8674 Jan 23 00:56	22°♄51'27		opposition	8680 May 04 16:01	18°♄05'36	0°56'26
opposition	8674 Apr 08 06:06	20°♄48'48	0°59'47	min. Earth dist.	8680 May 05 03:00	18°♄04'25	17.61878 AU
min. Earth dist.	8674 Apr 08 12:48	20°♄48'05	17.93537 AU	direct	8680 Jul 18 15:53	16°♄01'39	
direct	8674 Jun 21 23:46	18°♄46'31		evening set	8680 Oct 20 11:43	19°♄23'30	
evening set	8674 Sep 22 13:53	22°♄01'59					
				conjunction	8680 Nov 06 03:35	20°♄24'29	0°49'52
conjunction	8674 Oct 09 04:04	23°♄01'33	0°53'59	minimum elong	8680 Nov 06 03:35	20°♄24'29	0°50'02
minimum elong	8674 Oct 09 04:04	23°♄01'33	0°54'03	max. Earth dist.	8680 Nov 05 12:59	20°♄22'14	19.59665 AU
max. Earth dist.	8674 Oct 08 18:47	23°♄00'09	19.90495 AU	morning rise	8680 Nov 22 18:56	21°♄25'25	
morning rise	8674 Oct 25 19:21	24°♄01'18		retrograde	8681 Feb 24 03:56	24°♄47'11	
retrograde	8675 Jan 27 19:09	27°♄20'09		opposition	8681 May 09 11:59	22°♄44'10	0°54'34
opposition	8675 Apr 12 22:13	25°♄17'20	1°00'09	min. Earth dist.	8681 May 10 00:45	22°♄42'47	17.57572 AU
min. Earth dist.	8675 Apr 13 06:00	25°♄16'30	17.87545 AU	direct	8681 Jul 23 12:01	20°♄39'58	
direct	8675 Jun 26 16:10	23°♄14'42		evening set	8681 Oct 25 13:54	24°♄02'46	
evening set	8675 Sep 27 11:24	26°♄31'15					
				conjunction	8681 Nov 11 05:51	25°♄03'55	0°48'00
conjunction	8675 Oct 14 02:12	27°♄31'05	0°54'08	minimum elong	8681 Nov 11 05:51	25°♄03'55	0°48'10
minimum elong	8675 Oct 14 02:12	27°♄31'05	0°54'14	max. Earth dist.	8681 Nov 10 14:47	25°♄01'36	19.55495 AU
max. Earth dist.	8675 Oct 13 17:10	27°♄29'43	19.84627 AU	morning rise	8681 Nov 27 20:57	26°♄05'00	
morning rise	8675 Oct 30 17:31	28°♄31'04		retrograde	8682 Mar 01 04:37	29°♄27'05	
	8675 Nov 26 14:02	0°♄		opposition	8682 May 14 08:28	27°♄24'03	0°52'19
retrograde	8676 Feb 01 15:32	1°♄50'27		min. Earth dist.	8682 May 14 20:58	27°♄22'42	17.53538 AU
	8676 Apr 11 19:12	30°♄		direct	8682 Jul 28 11:21	25°♄19'37	
opposition	8676 Apr 16 14:47	29°♄47'32	1°00'10	evening set	8682 Oct 30 16:28	28°♄43'16	
min. Earth dist.	8676 Apr 16 22:49	29°♄46'40	17.81814 AU				
direct	8676 Jun 30 10:25	27°♄44'36		conjunction	8682 Nov 16 08:22	29°♄44'35	0°45'49
	8676 Sep 13 03:32	0°♄		minimum elong	8682 Nov 16 08:22	29°♄44'35	0°46'00
evening set	8676 Oct 01 09:58	1°♄02'13		max. Earth dist.	8682 Nov 15 16:16	29°♄42'06	19.51608 AU
					8682 Nov 20 12:03	0°♄	
conjunction	8676 Oct 18 00:58	2°♄02'19	0°53'58	morning rise	8682 Dec 02 23:11	0°♄45'47	
minimum elong	8676 Oct 18 00:58	2°♄02'19	0°54'03	retrograde	8683 Mar 06 02:41	4°♄08'08	
max. Earth dist.	8676 Oct 17 13:54	2°♄00'38	19.79046 AU	opposition	8683 May 19 05:36	2°♄05'06	0°49'43
morning rise	8676 Nov 03 16:35	3°♄02'31		min. Earth dist.	8683 May 19 19:44	2°♄03'33	17.49817 AU
retrograde	8677 Feb 05 11:19	6°♄22'26		direct	8683 Aug 02 08:27	0°♄00'24	
opposition	8677 Apr 21 08:10	4°♄19'28	0°59'48	evening set	8683 Nov 04 19:36	3°♄24'52	
min. Earth dist.	8677 Apr 21 17:29	4°♄18'27	17.76392 AU				
direct	8677 Jul 05 03:58	2°♄16'14		conjunction	8683 Nov 21 11:25	4°♄26'19	0°43'19
evening set	8677 Oct 06 09:06	5°♄34'57		minimum elong	8683 Nov 21 11:25	4°♄26'19	0°43'30
				max. Earth dist.	8683 Nov 20 18:38	4°♄23'43	19.48068 AU
conjunction	8677 Oct 23 00:33	6°♄35'17	0°53'26	morning rise	8683 Dec 08 01:57	5°♄27'37	
minimum elong	8677 Oct 23 00:33	6°♄35'17	0°53'34	retrograde	8684 Mar 10 03:47	8°♄50'10	
max. Earth dist.	8677 Oct 22 13:43	6°♄33'38	19.73774 AU	opposition	8684 May 23 02:53	6°♄47'06	0°46'47
morning rise	8677 Nov 08 16:04	7°♄35'41		min. Earth dist.	8684 May 23 16:36	6°♄45'36	17.46457 AU
retrograde	8678 Feb 10 09:23	10°♄56'08		direct	8684 Aug 06 09:12	4°♄42'10	
opposition	8678 Apr 26 02:05	8°♄53'08	0°59'03	evening set	8684 Nov 08 23:06	8°♄07'22	
min. Earth dist.	8678 Apr 26 11:26	8°♄52'07	17.71266 AU				
direct	8678 Jul 09 23:38	6°♄49'40		conjunction	8684 Nov 25 14:45	9°♄08'57	0°40'31
evening set	8678 Oct 11 09:15	10°♄09'27		minimum elong	8684 Nov 25 14:45	9°♄08'57	0°40'43
				max. Earth dist.	8684 Nov 24 21:42	9°♄06'18	19.44902 AU
conjunction	8678 Oct 28 00:48	11°♄10'01	0°52'35	morning rise	8684 Dec 12 04:46	10°♄10'19	
minimum elong	8678 Oct 28 00:48	11°♄10'01	0°52'43	retrograde	8685 Mar 15 02:01	13°♄33'00	
max. Earth dist.	8678 Oct 27 12:05	11°♄08'05	19.68798 AU	opposition	8685 May 28 00:54	11°♄29'56	0°43'30
morning rise	8678 Nov 13 16:25	12°♄10'37		min. Earth dist.	8685 May 28 15:56	11°♄28'17	17.43508 AU
	8679 Jan 11 21:21	15°♄		direct	8685 Aug 11 07:28	9°♄24'46	
retrograde	8679 Feb 15 06:33	15°♄31'33		evening set	8685 Nov 14 02:40	12°♄50'38	
	8679 Mar 22 04:18	15°♄					
opposition	8679 Apr 30 20:46	13°♄28'33	0°57'56	conjunction	8685 Nov 30 17:58	13°♄52'16	0°37'26
min. Earth dist.	8679 May 01 07:44	13°♄27'21	17.66444 AU	minimum elong	8685 Nov 30 17:58	13°♄52'16	0°37'39
direct	8679 Jul 14 18:24	11°♄24'50		max. Earth dist.	8685 Nov 30 00:14	13°♄49'31	19.42188 AU
evening set	8679 Oct 16 10:00	14°♄45'40		morning rise	8685 Dec 17 07:37	14°♄53'42	
	8679 Oct 20 09:26	15°♄		retrograde	8686 Mar 20 02:48	18°♄16'29	
				opposition	8686 Jun 01 23:07	16°♄13'23	0°39'56
conjunction	8679 Nov 02 01:52	15°♄46'27	0°51'24	min. Earth dist.	8686 Jun 02 13:25	16°♄11'49	17.41032 AU
minimum elong	8679 Nov 02 01:53	15°♄46'27	0°51'33	direct	8686 Aug 16 09:42	14°♄08'01	
max. Earth dist.	8679 Nov 01 13:02	15°♄44'29	19.64110 AU	evening set	8686 Nov 19 06:25	17°♄34'27	
morning rise	8679 Nov 18 17:21	16°♄47'14					
retrograde	8680 Feb 20 06:08	20°♄08'37		conjunction	8686 Dec 05 21:29	18°♄36'09	0°34'05

minimum elong	8686 Dec 05 21:29	18° \mathbb{A} 36'09	0°34'18	behind sun end	8693 Jan 03 21:41	17° \mathbb{B} 05'20	
max. Earth dist.	8686 Dec 05 04:25	18° \mathbb{A} 33'30	19.39961 AU	max. Earth dist.	8693 Jan 03 02:02	17° \mathbb{B} 02'17	19.38960 AU
morning rise	8686 Dec 22 10:27	19° \mathbb{A} 37'36		morning rise	8693 Jan 20 00:54	18° \mathbb{B} 05'35	
retrograde	8687 Mar 25 00:42	23° \mathbb{A} 00'24		retrograde	8693 Apr 22 00:01	21° \mathbb{B} 27'32	
opposition	8687 Jun 06 21:43	20° \mathbb{A} 57'19	0°36'04	opposition	8693 Jul 04 19:03	19° \mathbb{B} 25'16	0°08'44
min. Earth dist.	8687 Jun 07 12:53	20° \mathbb{A} 55'40	17.39076 AU	min. Earth dist.	8693 Jul 05 07:36	19° \mathbb{B} 23'54	17.39783 AU
direct	8687 Aug 21 09:14	18° \mathbb{A} 51'47		direct	8693 Sep 18 21:59	17° \mathbb{B} 19'43	
evening set	8687 Nov 24 10:21	22° \mathbb{A} 18'42		evening set	8693 Dec 23 07:57	20° \mathbb{B} 47'45	
max. Earth dist.	8687 Dec 10 07:05	23° \mathbb{A} 17'39	19.38293 AU				
conjunction	8687 Dec 11 00:53	23° \mathbb{A} 20'26	0°30'30	conjunction	8694 Jan 08 18:31	21° \mathbb{B} 49'05	0°05'38
minimum elong	8687 Dec 11 00:53	23° \mathbb{A} 20'26	0°30'44	minimum elong	8694 Jan 08 18:31	21° \mathbb{B} 49'05	0°05'50
morning rise	8687 Dec 27 13:25	24° \mathbb{A} 21'53		behind sun begin	8694 Jan 08 12:06	21° \mathbb{B} 48'07	
retrograde	8688 Mar 29 01:12	27° \mathbb{A} 44'39		behind sun end	8694 Jan 09 00:56	21° \mathbb{B} 50'04	
opposition	8688 Jun 10 20:36	25° \mathbb{A} 41'36	0°31'58	max. Earth dist.	8694 Jan 08 03:47	21° \mathbb{B} 46'48	19.40707 AU
min. Earth dist.	8688 Jun 11 10:53	25° \mathbb{A} 40'03	17.37698 AU	morning rise	8694 Jan 25 02:16	22° \mathbb{B} 50'01	
direct	8688 Aug 25 12:36	23° \mathbb{A} 35'56		retrograde	8694 Apr 26 23:02	26° \mathbb{B} 11'40	
evening set	8688 Nov 28 14:11	27° \mathbb{A} 03'16		opposition	8694 Jul 09 19:16	24° \mathbb{B} 09'34	0°03'48
max. Earth dist.	8688 Dec 14 11:54	28° \mathbb{A} 02'26	19.37208 AU	min. Earth dist.	8694 Jul 10 07:40	24° \mathbb{B} 08'13	17.41757 AU
				direct	8694 Sep 23 23:30	22° \mathbb{B} 04'07	
				evening set	8694 Dec 28 10:39	25° \mathbb{B} 31'59	
conjunction	8688 Dec 15 04:21	28° \mathbb{A} 05'00	0°26'43				
minimum elong	8688 Dec 15 04:21	28° \mathbb{A} 05'00	0°26'56	conjunction	8695 Jan 13 20:29	26° \mathbb{B} 33'10	0°01'10
morning rise	8688 Dec 31 16:00	29° \mathbb{A} 06'24		minimum elong	8695 Jan 13 20:30	26° \mathbb{B} 33'10	0°01'22
	8689 Jan 15 18:48	0° \mathbb{B}		behind sun begin	8695 Jan 13 13:48	26° \mathbb{B} 32'09	
retrograde	8689 Apr 02 23:30	2° \mathbb{B} 29'06		behind sun end	8695 Jan 14 03:12	26° \mathbb{B} 34'12	
opposition	8689 Jun 15 19:54	0° \mathbb{B} 26'09	0°27'38	max. Earth dist.	8695 Jan 13 07:07	26° \mathbb{B} 31'05	19.42888 AU
min. Earth dist.	8689 Jun 16 10:25	0° \mathbb{B} 24'34	17.36921 AU	morning rise	8695 Jan 30 03:15	27° \mathbb{B} 33'55	
	8689 Jun 25 21:09	30° \mathbb{R} \mathbb{A}			8695 Mar 17 18:40	0° \mathbb{B}	
direct	8689 Aug 30 13:39	28° \mathbb{A} 02'25		desc. node	8695 Apr 18 05:39	0° \mathbb{B} 49'58	
	8689 Nov 01 12:32	0° \mathbb{B}		retrograde	8695 May 01 23:02	0° \mathbb{B} 55'11	
evening set	8689 Dec 03 18:06	1° \mathbb{B} 48'04			8695 Jun 17 12:33	30° \mathbb{R} \mathbb{B}	
				opposition	8695 Jul 14 19:18	28° \mathbb{B} 53'15	-0°01'10
conjunction	8689 Dec 20 07:33	2° \mathbb{B} 49'46	0°22'44	min. Earth dist.	8695 Jul 15 06:50	28° \mathbb{B} 52'00	17.44125 AU
minimum elong	8689 Dec 20 07:33	2° \mathbb{B} 49'46	0°22'58	direct	8695 Sep 29 02:19	26° \mathbb{B} 47'56	
max. Earth dist.	8689 Dec 19 14:28	2° \mathbb{B} 47'06	19.36756 AU		8695 Dec 29 06:29	0° \mathbb{B}	
morning rise	8690 Jan 05 18:39	3° \mathbb{B} 51'08		evening set	8696 Jan 02 13:04	0° \mathbb{B} 15'32	
retrograde	8690 Apr 07 23:40	7° \mathbb{B} 13'43					
opposition	8690 Jun 20 19:21	5° \mathbb{B} 10'53	0°23'07	conjunction	8696 Jan 18 21:54	1° \mathbb{B} 16'32	-0°03'24
min. Earth dist.	8690 Jun 21 08:58	5° \mathbb{B} 09'24	17.36786 AU	minimum elong	8696 Jan 18 21:55	1° \mathbb{B} 16'32	0°03'12
direct	8690 Sep 04 16:22	3° \mathbb{B} 05'08		behind sun begin	8696 Jan 18 15:16	1° \mathbb{B} 15'31	
evening set	8690 Dec 08 21:40	6° \mathbb{B} 33'01		behind sun end	8696 Jan 19 04:35	1° \mathbb{B} 17'33	
				max. Earth dist.	8696 Jan 18 08:26	1° \mathbb{B} 14'26	19.45448 AU
conjunction	8690 Dec 25 10:41	7° \mathbb{B} 34'41	0°18'37	morning rise	8696 Feb 04 03:47	2° \mathbb{B} 17'06	
minimum elong	8690 Dec 25 10:41	7° \mathbb{B} 34'41	0°18'50	retrograde	8696 May 05 20:48	5° \mathbb{B} 37'56	
max. Earth dist.	8690 Dec 24 19:20	7° \mathbb{B} 32'17	19.36929 AU	opposition	8696 Jul 18 19:31	3° \mathbb{B} 36'09	-0°06'07
morning rise	8691 Jan 10 20:53	8° \mathbb{B} 35'58		min. Earth dist.	8696 Jul 19 07:08	3° \mathbb{B} 34'54	17.46877 AU
retrograde	8691 Apr 12 23:26	11° \mathbb{B} 58'23		direct	8696 Oct 03 03:59	1° \mathbb{B} 30'56	
opposition	8691 Jun 25 19:06	9° \mathbb{B} 55'44	0°18'26	evening set	8697 Jan 06 14:40	4° \mathbb{B} 58'10	
min. Earth dist.	8691 Jun 26 08:35	9° \mathbb{B} 54'16	17.37244 AU				
direct	8691 Sep 09 18:01	7° \mathbb{B} 50'01		conjunction	8697 Jan 22 22:38	5° \mathbb{B} 58'58	-0°07'48
evening set	8691 Dec 14 01:27	11° \mathbb{B} 18'04		minimum elong	8697 Jan 22 22:39	5° \mathbb{B} 58'58	0°07'37
				behind sun begin	8697 Jan 22 16:36	5° \mathbb{B} 58'03	
conjunction	8691 Dec 30 13:35	12° \mathbb{B} 19'38	0°14'22	behind sun end	8697 Jan 23 04:42	5° \mathbb{B} 59'53	
minimum elong	8691 Dec 30 13:35	12° \mathbb{B} 19'38	0°14'34	max. Earth dist.	8697 Jan 22 10:17	5° \mathbb{B} 57'03	19.48379 AU
behind sun begin	8691 Dec 30 10:48	12° \mathbb{B} 19'13		morning rise	8697 Feb 08 03:32	6° \mathbb{B} 59'19	
behind sun end	8691 Dec 30 16:23	12° \mathbb{B} 20'04		retrograde	8697 May 10 19:37	10° \mathbb{B} 19'42	
max. Earth dist.	8691 Dec 29 21:37	12° \mathbb{B} 17'09	19.37679 AU	opposition	8697 Jul 23 19:27	8° \mathbb{B} 18'03	-0°11'00
morning rise	8692 Jan 15 23:07	13° \mathbb{B} 20'50		min. Earth dist.	8697 Jul 24 05:40	8° \mathbb{B} 16'57	17.49974 AU
retrograde	8692 Apr 16 23:22	16° \mathbb{B} 43'03		direct	8697 Oct 08 07:19	6° \mathbb{B} 12'59	
opposition	8692 Jun 29 18:54	14° \mathbb{B} 40'35	0°13'38	evening set	8698 Jan 11 15:43	9° \mathbb{B} 39'44	
min. Earth dist.	8692 Jun 30 07:57	14° \mathbb{B} 39'10	17.38269 AU				
direct	8692 Sep 13 19:46	12° \mathbb{B} 34'56		conjunction	8698 Jan 27 22:43	10° \mathbb{B} 40'18	-0°12'08
evening set	8692 Dec 18 04:51	16° \mathbb{B} 03'02		minimum elong	8698 Jan 27 22:43	10° \mathbb{B} 40'18	0°11'57
				behind sun begin	8698 Jan 27 18:07	10° \mathbb{B} 39'36	
conjunction	8693 Jan 03 16:22	17° \mathbb{B} 04'31	0°10'02	behind sun end	8698 Jan 28 03:19	10° \mathbb{B} 41'00	
minimum elong	8693 Jan 03 16:23	17° \mathbb{B} 04'31	0°10'15	max. Earth dist.	8698 Jan 27 10:57	10° \mathbb{B} 38'28	19.51652 AU
behind sun begin	8693 Jan 03 11:04	17° \mathbb{B} 03'42		morning rise	8698 Feb 13 02:39	11° \mathbb{B} 40'25	

	8698 May 12 09:24	15°≈	opposition	8704 Aug 26 10:12	10°≈32'17" -0°40'56"
retrograde	8698 May 15 16:03	15°≈00'18"	min. Earth dist.	8704 Aug 26 13:30	10°≈31'56" 17.81744 AU
	8698 May 18 22:45	15°≈	direct	8704 Nov 11 09:57	8°≈28'46"
opposition	8698 Jul 28 19:12	12°≈58'47" -0°15'49"	evening set	8705 Feb 13 23:38	11°≈50'14"
min. Earth dist.	8698 Jul 29 05:33	12°≈57'40" 17.53429 AU			
direct	8698 Oct 13 08:20	10°≈53'50"	conjunction	8705 Mar 01 23:54	12°≈48'53" -0°38'23"
evening set	8699 Jan 16 15:56	14°≈20'01"	minimum elong	8705 Mar 01 23:54	12°≈48'53" 0°38'19"
	8699 Jan 27 11:31	15°≈	max. Earth dist.	8705 Mar 01 20:40	12°≈48'23" 19.84671 AU
			morning rise	8705 Mar 17 21:49	13°≈47'11"
conjunction	8699 Feb 01 22:01	15°≈20'21" -0°16'23"	retrograde	8705 Jun 17 07:30	17°≈03'01"
minimum elong	8699 Feb 01 22:01	15°≈20'21" 0°16'14"	opposition	8705 Aug 31 07:12	15°≈02'36" -0°44'17"
max. Earth dist.	8699 Feb 01 11:08	15°≈18'40" 19.55285 AU	min. Earth dist.	8705 Aug 31 08:20	15°≈02'29" 17.87644 AU
morning rise	8699 Feb 18 01:06	16°≈20'14"	direct	8705 Nov 16 08:21	12°≈59'27"
retrograde	8699 May 20 13:50	19°≈39'34"	evening set	8706 Feb 18 17:53	16°≈20'00"
opposition	8699 Aug 02 18:35	17°≈38'09" -0°20'29"			
min. Earth dist.	8699 Aug 03 03:09	17°≈37'15" 17.57221 AU	conjunction	8706 Mar 06 17:26	17°≈18'21" -0°41'16"
direct	8699 Oct 18 11:21	15°≈33'22"	minimum elong	8706 Mar 06 17:26	17°≈18'21" 0°41'12"
evening set	8700 Jan 21 15:25	18°≈58'54"	max. Earth dist.	8706 Mar 06 16:34	17°≈18'13" 19.90670 AU
			morning rise	8706 Mar 22 14:27	18°≈16'23"
conjunction	8700 Feb 06 20:32	19°≈58'59" -0°20'31"	retrograde	8706 Jun 22 00:05	21°≈31'37"
minimum elong	8700 Feb 06 20:32	19°≈58'59" 0°20'22"	opposition	8706 Sep 05 03:43	19°≈31'26" -0°47'20"
max. Earth dist.	8700 Feb 06 10:58	19°≈57'30" 19.59249 AU	min. Earth dist.	8706 Sep 05 04:34	19°≈31'21" 17.93729 AU
morning rise	8700 Feb 22 22:35	20°≈58'37"	direct	8706 Nov 21 04:00	17°≈28'39"
retrograde	8700 May 25 08:56	24°≈17'22"	evening set	8707 Feb 23 11:30	20°≈48'14"
opposition	8700 Aug 07 17:45	22°≈16'04" -0°25'00"			
min. Earth dist.	8700 Aug 08 02:19	22°≈15'09" 17.61372 AU	conjunction	8707 Mar 11 10:03	21°≈46'19" -0°43'53"
direct	8700 Oct 23 11:48	20°≈11'27"	minimum elong	8707 Mar 11 10:03	21°≈46'18" 0°43'51"
evening set	8701 Jan 26 14:02	23°≈36'16"	max. Earth dist.	8707 Mar 11 09:17	21°≈46'11" 19.96825 AU
			morning rise	8707 Mar 27 06:33	22°≈44'04"
conjunction	8701 Feb 11 18:07	24°≈36'04" -0°24'30"	retrograde	8707 Jun 26 18:07	25°≈58'42"
minimum elong	8701 Feb 11 18:07	24°≈36'04" 0°24'21"	opposition	8707 Sep 09 23:48	23°≈58'44" -0°50'05"
max. Earth dist.	8701 Feb 11 09:24	24°≈34'43" 19.63592 AU	min. Earth dist.	8707 Sep 09 22:52	23°≈58'50" 17.99935 AU
morning rise	8701 Feb 27 19:21	25°≈35'26"	direct	8707 Nov 26 01:10	21°≈56'19"
retrograde	8701 May 30 05:26	28°≈53'36"	evening set	8708 Feb 28 04:04	25°≈14'54"
opposition	8701 Aug 12 16:27	26°≈52'26" -0°29'20"			
min. Earth dist.	8701 Aug 12 22:46	26°≈51'45" 17.65903 AU	conjunction	8708 Mar 15 01:57	26°≈12'41" -0°46'14"
direct	8701 Oct 28 13:36	24°≈48'00"	minimum elong	8708 Mar 15 01:57	26°≈12'41" 0°46'12"
evening set	8702 Jan 31 11:35	28°≈12'02"	max. Earth dist.	8708 Mar 15 03:28	26°≈12'55" 20.03052 AU
			morning rise	8708 Mar 30 21:37	27°≈10'10"
conjunction	8702 Feb 16 14:47	29°≈11'34" -0°28'17"		8708 May 31 04:50	0°≈
minimum elong	8702 Feb 16 14:47	29°≈11'34" 0°28'11"	retrograde	8708 Jun 30 10:02	0°≈24'12"
max. Earth dist.	8702 Feb 16 08:06	29°≈10'32" 19.68312 AU		8708 Jul 31 08:15	30°≈
	8702 Mar 01 16:45	0°≈	opposition	8708 Sep 13 19:31	28°≈24'26" -0°52'31"
morning rise	8702 Mar 04 15:02	0°≈10'40"	min. Earth dist.	8708 Sep 13 18:09	28°≈24'35" 18.06176 AU
retrograde	8702 Jun 03 23:34	3°≈28'15"	direct	8708 Nov 29 20:29	26°≈22'24"
opposition	8702 Aug 17 14:53	1°≈27'13" -0°33'27"	evening set	8709 Mar 03 20:00	29°≈39'57"
min. Earth dist.	8702 Aug 17 20:54	1°≈26'35" 17.70822 AU		8709 Mar 09 10:10	0°≈
	8702 Sep 24 16:53	30°≈			
direct	8702 Nov 02 12:41	29°≈23'03"	conjunction	8709 Mar 19 16:58	0°≈37'25" -0°48'18"
	8702 Dec 10 10:23	0°≈	minimum elong	8709 Mar 19 16:58	0°≈37'25" 0°48'18"
evening set	8703 Feb 05 08:31	2°≈46'16"	max. Earth dist.	8709 Mar 19 18:26	0°≈37'39" 20.09296 AU
			morning rise	8709 Apr 04 12:13	1°≈34'39"
conjunction	8703 Feb 21 10:40	3°≈45'30" -0°31'53"	retrograde	8709 Jul 05 02:24	4°≈48'05"
minimum elong	8703 Feb 21 10:40	3°≈45'30" 0°31'46"	opposition	8709 Sep 18 14:34	2°≈48'28" -0°54'38"
max. Earth dist.	8703 Feb 21 04:37	3°≈44'35" 19.73427 AU	min. Earth dist.	8709 Sep 18 11:43	2°≈48'45" 18.12415 AU
morning rise	8703 Mar 09 10:10	4°≈44'21"	direct	8709 Dec 04 16:15	0°≈46'46"
retrograde	8703 Jun 08 19:03	8°≈01'20"	evening set	8710 Mar 08 10:50	4°≈03'15"
opposition	8703 Aug 22 12:35	6°≈00'29" -0°37'19"			
min. Earth dist.	8703 Aug 22 16:16	6°≈00'06" 17.76118 AU	conjunction	8710 Mar 24 07:18	5°≈00'28" -0°50'04"
direct	8703 Nov 07 12:49	3°≈56'37"	minimum elong	8710 Mar 24 07:18	5°≈00'28" 0°50'04"
evening set	8704 Feb 10 04:31	7°≈18'59"	max. Earth dist.	8710 Mar 24 10:51	5°≈01'00" 20.15497 AU
			morning rise	8710 Apr 09 01:53	5°≈57'25"
conjunction	8704 Feb 26 05:51	8°≈17'56" -0°35'15"	retrograde	8710 Jul 09 17:13	9°≈10'15"
minimum elong	8704 Feb 26 05:51	8°≈17'56" 0°35'10"	opposition	8710 Sep 23 09:06	7°≈10'46" -0°56'25"
max. Earth dist.	8704 Feb 26 02:06	8°≈17'22" 19.78895 AU	min. Earth dist.	8710 Sep 23 05:42	7°≈11'07" 18.18567 AU
morning rise	8704 Mar 13 04:23	9°≈16'31"	direct	8710 Dec 09 11:26	5°≈09'24"
retrograde	8704 Jun 12 12:22	12°≈32'54"	evening set	8711 Mar 13 01:06	8°≈24'49"

conjunction	8711 Mar 28 20:44	9° Υ 21'44	-0°51'32	retrograde	8717 Aug 08 06:46	8° Σ 55'23
minimum elong	8711 Mar 28 20:44	9° Υ 21'44	0°51'34	opposition	8717 Oct 24 00:45	6° Σ 56'24 -0°59'30
max. Earth dist.	8711 Mar 29 00:07	9° Υ 22'14	20.21596 AU	min. Earth dist.	8717 Oct 23 13:58	6° Σ 57'29 18.58733 AU
morning rise	8711 Apr 13 15:02	10° Υ 18'27		direct	8718 Jan 09 01:57	4° Σ 57'00
retrograde	8711 Jul 14 07:22	13° Υ 30'39		evening set	8718 Apr 11 04:09	8° Σ 05'06
opposition	8711 Sep 28 02:56	11° Υ 31'17	-0°57'52			
min. Earth dist.	8711 Sep 27 22:24	11° Υ 31'45	18.24614 AU	conjunction	8718 Apr 26 21:13	9° Σ 00'22 -0°53'23
direct	8711 Dec 14 05:39	9° Υ 30'12		minimum elong	8718 Apr 26 21:13	9° Σ 00'22 0°53'31
evening set	8712 Mar 16 14:16	12° Υ 44'32		max. Earth dist.	8718 Apr 27 09:20	9° Σ 02'09 20.61396 AU
				morning rise	8718 May 12 14:04	9° Σ 55'37
conjunction	8712 Apr 01 09:30	13° Υ 41'10	-0°52'42	retrograde	8718 Aug 12 17:17	13° Σ 04'05
minimum elong	8712 Apr 01 09:30	13° Υ 41'10	0°52'45	opposition	8718 Oct 28 14:14	11° Σ 05'14 -0°58'39
max. Earth dist.	8712 Apr 01 14:56	13° Υ 41'59	20.27577 AU	min. Earth dist.	8718 Oct 28 02:00	11° Σ 06'28 18.64050 AU
morning rise	8712 Apr 17 03:15	14° Υ 37'38		direct	8719 Jan 13 15:20	9° Σ 06'10
retrograde	8712 Jul 17 21:00	17° Υ 49'14		evening set	8719 Apr 15 12:12	12° Σ 13'24
opposition	8712 Oct 01 20:15	15° Υ 49'56	-0°58'58			
min. Earth dist.	8712 Oct 01 14:51	15° Υ 50'29	18.30526 AU	conjunction	8719 May 01 04:57	13° Σ 08'28 -0°52'29
direct	8712 Dec 17 23:59	13° Υ 49'09		minimum elong	8719 May 01 04:57	13° Σ 08'28 0°52'38
evening set	8713 Mar 21 02:34	17° Υ 02'21		max. Earth dist.	8719 May 01 17:11	13° Σ 10'15 20.66616 AU
				morning rise	8719 May 16 21:59	14° Σ 03'34
conjunction	8713 Apr 05 21:08	17° Υ 58'43	-0°53'34		8719 Jun 02 22:27	15° Σ
minimum elong	8713 Apr 05 21:08	17° Υ 58'43	0°53'37	retrograde	8719 Aug 17 03:30	17° Σ 11'41
max. Earth dist.	8713 Apr 06 02:38	17° Υ 59'33	20.33433 AU	opposition	8719 Nov 02 03:21	15° Σ 12'56 -0°57'30
morning rise	8713 Apr 21 14:45	18° Υ 54'57		min. Earth dist.	8719 Nov 01 14:52	15° Σ 14'12 18.69171 AU
retrograde	8713 Jul 22 09:13	22° Υ 05'58			8719 Nov 07 12:07	15° Σ 14'12
opposition	8713 Oct 06 12:53	20° Υ 06'42	-0°59'45	direct	8720 Jan 18 01:54	13° Σ 14'12
min. Earth dist.	8713 Oct 06 06:29	20° Υ 07'21	18.36334 AU		8720 Mar 24 18:22	15° Σ
direct	8713 Dec 22 16:11	18° Υ 06'09		evening set	8720 Apr 18 19:38	16° Σ 20'35
evening set	8714 Mar 25 13:57	21° Υ 18'16				
				conjunction	8720 May 04 12:27	17° Σ 15'29 -0°51'20
conjunction	8714 Apr 10 08:14	22° Υ 14'23	-0°54'07	minimum elong	8720 May 04 12:27	17° Σ 15'29 0°51'29
minimum elong	8714 Apr 10 08:13	22° Υ 14'23	0°54'12	max. Earth dist.	8720 May 05 02:15	17° Σ 17'31 20.71616 AU
max. Earth dist.	8714 Apr 10 15:52	22° Υ 15'32	20.39186 AU	morning rise	8720 May 20 05:28	18° Σ 10'27
morning rise	8714 Apr 26 01:27	23° Υ 10'24		retrograde	8720 Aug 20 13:35	21° Σ 18'13
retrograde	8714 Jul 26 21:25	26° Υ 20'48		opposition	8720 Nov 05 15:55	19° Σ 19'37 -0°56'04
opposition	8714 Oct 11 04:39	24° Υ 21'35	-1°00'11	min. Earth dist.	8720 Nov 05 02:06	19° Σ 21'00 18.74026 AU
min. Earth dist.	8714 Oct 10 21:02	24° Υ 22'22	18.42040 AU	direct	8721 Jan 21 14:06	17° Σ 21'11
direct	8714 Dec 27 08:57	22° Υ 21'18		evening set	8721 Apr 23 02:42	20° Σ 26'46
evening set	8715 Mar 30 00:42	25° Υ 32'21				
				conjunction	8721 May 08 19:22	21° Σ 21'31 -0°49'55
conjunction	8715 Apr 14 18:24	26° Υ 28'14	-0°54'23	minimum elong	8721 May 08 19:22	21° Σ 21'31 0°50'06
minimum elong	8715 Apr 14 18:24	26° Υ 28'14	0°54'27	max. Earth dist.	8721 May 09 09:06	21° Σ 23'32 20.76318 AU
max. Earth dist.	8715 Apr 15 02:17	26° Υ 29'24	20.44854 AU	morning rise	8721 May 24 12:43	22° Σ 16'23
morning rise	8715 Apr 30 11:34	27° Υ 24'02		retrograde	8721 Aug 24 23:03	25° Σ 23'51
	8715 Jun 24 21:29	0° Σ		opposition	8721 Nov 10 04:08	23° Σ 25'20 -0°54'21
retrograde	8715 Jul 31 08:41	0° Σ 33'54		min. Earth dist.	8721 Nov 09 14:34	23° Σ 26'42 18.78569 AU
	8715 Sep 06 21:31	30° Σ 33'54		direct	8722 Jan 25 23:02	21° Σ 27'11
opposition	8715 Oct 15 20:00	28° Υ 34'44	-1°00'17	evening set	8722 Apr 27 09:22	24° Σ 32'01
min. Earth dist.	8715 Oct 15 11:26	28° Υ 35'36	18.47687 AU			
direct	8715 Dec 31 22:54	26° Υ 34'43		conjunction	8722 May 13 02:11	25° Σ 26'39 -0°48'16
evening set	8716 Apr 02 10:26	29° Υ 44'45		minimum elong	8722 May 13 02:11	25° Σ 26'39 0°48'25
	8716 Apr 06 19:05	0° Σ		max. Earth dist.	8722 May 13 17:04	25° Σ 28'49 20.80673 AU
conjunction	8716 Apr 18 03:56	0° Σ 40'24	-0°54'20	morning rise	8722 May 28 19:38	26° Σ 21'24
minimum elong	8716 Apr 18 03:56	0° Σ 40'24	0°54'27	retrograde	8722 Aug 29 08:47	29° Σ 28'35
max. Earth dist.	8716 Apr 18 13:58	0° Σ 41'53	20.50463 AU	opposition	8722 Nov 14 15:38	27° Σ 30'10 -0°52'22
morning rise	8716 May 03 20:48	1° Σ 36'00		min. Earth dist.	8722 Nov 14 01:01	27° Σ 31'38 18.82719 AU
retrograde	8716 Aug 03 19:55	4° Σ 45'21		direct	8723 Jan 30 10:26	25° Σ 32'17
opposition	8716 Oct 19 10:42	2° Σ 46'17	-1°00'03	evening set	8723 May 01 15:50	28° Σ 36'25
min. Earth dist.	8716 Oct 19 00:34	2° Σ 47'18	18.53253 AU			
direct	8717 Jan 04 13:55	0° Σ 46'34		conjunction	8723 May 17 08:36	29° Σ 30'56 -0°46'22
evening set	8717 Apr 06 19:42	3° Σ 55'37		minimum elong	8723 May 17 08:36	29° Σ 30'56 0°46'33
				max. Earth dist.	8723 May 17 23:07	29° Σ 33'02 20.84611 AU
conjunction	8717 Apr 22 12:47	4° Σ 51'03	-0°54'00		8723 May 25 16:18	0° Π
minimum elong	8717 Apr 22 12:47	4° Σ 51'03	0°54'07	morning rise	8723 Jun 02 02:27	0° Π 25'36
max. Earth dist.	8717 Apr 22 23:04	4° Σ 52'34	20.55986 AU	retrograde	8723 Sep 02 17:34	3° Π 32'32
morning rise	8717 May 08 05:45	5° Σ 46'28		opposition	8723 Nov 19 03:04	1° Π 34'10 -0°50'08
				min. Earth dist.	8723 Nov 18 13:01	1° Π 35'34 18.86445 AU

	8724 Jan 03 12:47	30° 	max. Earth dist.	8730 Jun 14 15:30	27°  41'14	21.00084 AU
direct	8724 Feb 03 18:17	29°  36'30	morning rise	8730 Jun 29 20:07	28°  33'20	
	8724 Mar 05 08:25	0° 		8730 Jul 27 13:07	0° 	
evening set	8724 May 04 21:42	2°  39'57	retrograde	8730 Oct 01 05:30	1°  39'19	
				8730 Dec 09 19:51	30° 	
conjunction	8724 May 20 14:46	3°  34'22 -0°44'15	opposition	8730 Dec 17 22:28	29°  40'36 -0°28'34	
minimum elong	8724 May 20 14:46	3°  34'22 0°44'26	min. Earth dist.	8730 Dec 17 06:16	29°  42'14	19.00528 AU
max. Earth dist.	8724 May 21 06:09	3°  36'36 20.88106 AU	direct	8731 Mar 04 02:34	27°  43'35	
morning rise	8724 Jun 05 08:51	4°  28'57		8731 May 19 23:09	0° 	
retrograde	8724 Sep 06 03:05	7°  35'40	evening set	8731 Jun 02 08:31	0°  43'45	
opposition	8724 Nov 22 13:55	5°  37'19 -0°47'40				
min. Earth dist.	8724 Nov 21 22:51	5°  38'49 18.89693 AU	conjunction	8731 Jun 18 04:01	1°  37'56 -0°24'11	
direct	8725 Feb 07 04:52	3°  39'49	minimum elong	8731 Jun 18 04:01	1°  37'56 0°24'24	
evening set	8725 May 09 03:29	6°  42'38	max. Earth dist.	8731 Jun 18 20:12	1°  40'15	21.00849 AU
			morning rise	8731 Jul 04 01:55	2°  32'28	
conjunction	8725 May 24 20:39	7°  36'58 -0°41'55	retrograde	8731 Oct 05 12:39	5°  38'29	
minimum elong	8725 May 24 20:39	7°  36'58 0°42'07	opposition	8731 Dec 22 07:06	3°  39'44 -0°24'49	
max. Earth dist.	8725 May 25 11:32	7°  39'07 20.91116 AU	min. Earth dist.	8731 Dec 21 15:50	3°  41'16	19.01129 AU
morning rise	8725 Jun 09 15:16	8°  31'30	direct	8732 Mar 07 08:21	1°  42'48	
retrograde	8725 Sep 10 11:15	11°  37'59	evening set	8732 Jun 05 13:03	4°  42'45	
min. Earth dist.	8725 Nov 26 10:05	9°  41'02 18.92474 AU				
opposition	8725 Nov 27 00:17	9°  39'37 -0°44'58	conjunction	8732 Jun 21 09:14	5°  36'58 -0°20'45	
direct	8726 Feb 11 12:15	7°  42'13	minimum elong	8732 Jun 21 09:14	5°  36'58 0°20'58	
evening set	8726 May 13 08:47	10°  44'27	max. Earth dist.	8732 Jun 22 01:59	5°  39'22	21.01282 AU
			morning rise	8732 Jul 07 07:44	6°  31'33	
conjunction	8726 May 29 02:22	11°  38'43 -0°39'23	retrograde	8732 Oct 08 22:43	9°  37'41	
minimum elong	8726 May 29 02:22	11°  38'43 0°39'36	opposition	8732 Dec 25 15:24	7°  38'53 -0°20'57	
max. Earth dist.	8726 May 29 17:58	11°  40'58 20.93672 AU	min. Earth dist.	8732 Dec 24 23:13	7°  40'31	19.01371 AU
morning rise	8726 Jun 13 21:21	12°  33'13	direct	8733 Mar 11 15:30	5°  42'01	
retrograde	8726 Sep 14 20:08	15°  39'30	evening set	8733 Jun 09 18:01	8°  41'51	
opposition	8726 Dec 01 10:10	13°  41'04 -0°42'03				
min. Earth dist.	8726 Nov 30 18:53	13°  42'35 18.94804 AU	conjunction	8733 Jun 25 14:40	9°  36'07 -0°17'13	
direct	8727 Feb 15 21:40	11°  43'47	minimum elong	8733 Jun 25 14:40	9°  36'07 0°17'26	
evening set	8727 May 17 13:48	14°  45'26	max. Earth dist.	8733 Jun 26 06:49	9°  38'26	21.01334 AU
			morning rise	8733 Jul 11 13:57	10°  30'46	
conjunction	8727 Jun 02 07:33	15°  39'39 -0°36'39	retrograde	8733 Oct 13 05:48	13°  37'03	
minimum elong	8727 Jun 02 07:33	15°  39'39 0°36'52	opposition	8733 Dec 29 23:38	11°  38'14 -0°16'59	
max. Earth dist.	8727 Jun 02 22:51	15°  41'52 20.95796 AU	min. Earth dist.	8733 Dec 29 08:47	11°  39'43	19.01230 AU
morning rise	8727 Jun 18 03:07	16°  34'07	direct	8734 Mar 15 20:24	9°  41'24	
retrograde	8727 Sep 19 04:03	19°  40'16	evening set	8734 Jun 13 23:06	12°  41'12	
opposition	8727 Dec 05 19:52	17°  41'45 -0°38'56				
min. Earth dist.	8727 Dec 05 05:17	17°  43'13 18.96745 AU	conjunction	8734 Jun 29 20:26	13°  35'32 -0°13'35	
direct	8728 Feb 20 04:37	15°  44'32	minimum elong	8734 Jun 29 20:27	13°  35'32 0°13'48	
evening set	8728 May 20 18:34	18°  45'42	behind sun begin	8734 Jun 29 16:56	13°  35'03	
			behind sun end	8734 Jun 29 23:57	13°  36'02	
conjunction	8728 Jun 05 12:50	19°  39'53 -0°33'45	max. Earth dist.	8734 Jun 30 12:47	13°  37'53	21.00994 AU
minimum elong	8728 Jun 05 12:50	19°  39'53 0°33'59	morning rise	8734 Jul 15 20:21	14°  30'16	
max. Earth dist.	8728 Jun 06 04:59	19°  42'13 20.97562 AU	retrograde	8734 Oct 17 16:08	17°  36'44	
morning rise	8728 Jun 21 08:50	20°  34'21	opposition	8735 Jan 03 07:49	15°  37'54 -0°12'57	
retrograde	8728 Sep 22 12:43	23°  40'23	min. Earth dist.	8735 Jan 02 16:22	15°  39'27	19.00665 AU
opposition	8728 Dec 09 04:59	21°  41'47 -0°35'38	direct	8735 Mar 20 03:49	13°  41'06	
min. Earth dist.	8728 Dec 08 13:09	21°  43'22 18.98336 AU	evening set	8735 Jun 18 04:28	16°  40'55	
direct	8729 Feb 23 12:48	19°  44'38				
evening set	8729 May 24 23:16	22°  45'24	conjunction	8735 Jul 04 02:20	17°  35'21 -0°09'54	
			minimum elong	8735 Jul 04 02:20	17°  35'21 0°10'08	
conjunction	8729 Jun 09 17:50	23°  39'34 -0°30'42	behind sun begin	8735 Jul 03 21:02	17°  34'36	
minimum elong	8729 Jun 09 17:51	23°  39'34 0°30'55	behind sun end	8735 Jul 04 07:38	17°  36'05	
max. Earth dist.	8729 Jun 10 09:41	23°  41'50 20.98983 AU	max. Earth dist.	8735 Jul 04 17:48	17°  37'34	21.00199 AU
morning rise	8729 Jun 25 14:31	24°  34'02	morning rise	8735 Jul 20 03:02	18°  30'11	
retrograde	8729 Sep 26 20:18	27°  40'01	retrograde	8735 Oct 22 00:00	21°  36'54	
opposition	8729 Dec 13 13:57	25°  41'21 -0°32'10	opposition	8736 Jan 07 16:15	19°  38'00 -0°08'49	
min. Earth dist.	8729 Dec 12 22:54	25°  42'51 18.99598 AU	min. Earth dist.	8736 Jan 07 02:24	19°  39'23	18.99638 AU
direct	8730 Feb 27 19:10	23°  44'16	direct	8736 Mar 23 08:25	17°  41'13	
evening set	8730 May 29 03:50	26°  44'41	evening set	8736 Jun 21 10:13	20°  41'06	
conjunction	8730 Jun 13 22:57	27°  38'51 -0°27'30	conjunction	8736 Jul 07 08:52	21°  35'38 -0°06'10	
minimum elong	8730 Jun 13 22:57	27°  38'51 0°27'44	minimum elong	8736 Jul 07 08:51	21°  35'38 0°06'23	

behind sun begin	8736 Jul 07 02:37	21° $\mathring{\text{U}}$ 34'46		morning rise	8741 Aug 13 04:03	12° $\mathring{\text{U}}$ 41'05	
behind sun end	8736 Jul 07 15:05	21° $\mathring{\text{U}}$ 36'31			8741 Sep 30 20:17	15° $\mathring{\text{U}}$	
max. Earth dist.	8736 Jul 08 00:04	21° $\mathring{\text{U}}$ 37'49	20.98929 AU	retrograde	8741 Nov 15 10:27	15° $\mathring{\text{U}}$ 49'49	
morning rise	8736 Jul 23 10:14	22° $\mathring{\text{U}}$ 30'35			8742 Jan 01 03:53	15° $\mathring{\text{R}}$ $\mathring{\text{U}}$	
retrograde	8736 Oct 25 10:27	25° $\mathring{\text{U}}$ 37'34		opposition	8742 Jan 31 18:31	13° $\mathring{\text{U}}$ 50'00	0°16'20
min. Earth dist.	8737 Jan 10 10:18	23° $\mathring{\text{U}}$ 40'01	18.98106 AU	min. Earth dist.	8742 Jan 31 09:18	13° $\mathring{\text{U}}$ 50'56	18.83179 AU
opposition	8737 Jan 11 00:24	23° $\mathring{\text{U}}$ 38'36	-0°04'39	direct	8742 Apr 17 01:07	11° $\mathring{\text{U}}$ 52'22	
direct	8737 Mar 27 16:13	21° $\mathring{\text{U}}$ 41'46		evening set	8742 Jul 16 04:34	14° $\mathring{\text{U}}$ 53'56	
evening set	8737 Jun 25 16:27	24° $\mathring{\text{U}}$ 41'48			8742 Jul 17 23:36	15° $\mathring{\text{U}}$	
conjunction	8737 Jul 11 15:41	25° $\mathring{\text{U}}$ 36'28	-0°02'23	conjunction	8742 Aug 01 07:38	15° $\mathring{\text{U}}$ 49'22	0°16'37
minimum elong	8737 Jul 11 15:42	25° $\mathring{\text{U}}$ 36'28	0°02'36	minimum elong	8742 Aug 01 07:38	15° $\mathring{\text{U}}$ 49'22	0°16'27
behind sun begin	8737 Jul 11 09:05	25° $\mathring{\text{U}}$ 35'32		max. Earth dist.	8742 Aug 01 17:50	15° $\mathring{\text{U}}$ 50'50	20.81182 AU
behind sun end	8737 Jul 11 22:18	25° $\mathring{\text{U}}$ 37'23		morning rise	8742 Aug 17 13:41	16° $\mathring{\text{U}}$ 45'15	
max. Earth dist.	8737 Jul 12 05:35	25° $\mathring{\text{U}}$ 38'27	20.97126 AU	retrograde	8742 Nov 19 21:45	19° $\mathring{\text{U}}$ 54'27	
morning rise	8737 Jul 27 17:55	26° $\mathring{\text{U}}$ 31'32		opposition	8743 Feb 05 03:11	17° $\mathring{\text{U}}$ 54'25	0°20'24
retrograde	8737 Oct 29 19:07	29° $\mathring{\text{U}}$ 38'49		min. Earth dist.	8743 Feb 04 17:39	17° $\mathring{\text{U}}$ 55'24	18.79112 AU
opposition	8738 Jan 15 08:50	27° $\mathring{\text{U}}$ 39'43	-0°00'27	direct	8743 Apr 21 09:05	15° $\mathring{\text{U}}$ 56'35	
min. Earth dist.	8738 Jan 14 20:36	27° $\mathring{\text{U}}$ 40'58	18.96037 AU	evening set	8743 Jul 20 13:10	18° $\mathring{\text{U}}$ 58'39	
asc. node	8738 Feb 23 01:00	26° $\mathring{\text{U}}$ 15'41		conjunction	8743 Aug 05 16:57	19° $\mathring{\text{U}}$ 54'17	0°20'16
direct	8738 Mar 31 21:17	25° $\mathring{\text{U}}$ 42'48		minimum elong	8743 Aug 05 16:57	19° $\mathring{\text{U}}$ 54'17	0°20'07
evening set	8738 Jun 29 22:50	28° $\mathring{\text{U}}$ 43'02		max. Earth dist.	8743 Aug 06 02:18	19° $\mathring{\text{U}}$ 55'38	20.76979 AU
conjunction	8738 Jul 15 22:51	29° $\mathring{\text{U}}$ 37'49	0°01'32	morning rise	8743 Aug 21 23:48	20° $\mathring{\text{U}}$ 50'22	
minimum elong	8738 Jul 15 22:53	29° $\mathring{\text{U}}$ 37'49	0°01'21	retrograde	8743 Nov 24 07:43	24° $\mathring{\text{U}}$ 00'03	
behind sun begin	8738 Jul 15 16:16	29° $\mathring{\text{U}}$ 36'53		opposition	8744 Feb 09 12:14	21° $\mathring{\text{U}}$ 59'51	0°24'24
behind sun end	8738 Jul 16 05:30	29° $\mathring{\text{U}}$ 38'44		min. Earth dist.	8744 Feb 09 04:21	22° $\mathring{\text{U}}$ 00'40	18.74791 AU
max. Earth dist.	8738 Jul 16 12:15	29° $\mathring{\text{U}}$ 39'44	20.94801 AU	direct	8744 Apr 24 15:36	20° $\mathring{\text{U}}$ 01'49	
	8738 Jul 22 09:11	0° $\mathring{\text{U}}$		evening set	8744 Jul 23 22:27	23° $\mathring{\text{U}}$ 04'26	
morning rise	8738 Aug 01 01:47	0° $\mathring{\text{U}}$ 33'01		conjunction	8744 Aug 09 03:05	24° $\mathring{\text{U}}$ 00'17	0°23'49
retrograde	8738 Nov 03 05:31	3° $\mathring{\text{U}}$ 40'38		minimum elong	8744 Aug 09 03:05	24° $\mathring{\text{U}}$ 00'17	0°23'39
opposition	8739 Jan 19 17:08	1° $\mathring{\text{U}}$ 41'23	0°03'47	max. Earth dist.	8744 Aug 09 11:44	24° $\mathring{\text{U}}$ 01'32	20.72551 AU
min. Earth dist.	8739 Jan 19 04:40	1° $\mathring{\text{U}}$ 42'38	18.93450 AU	morning rise	8744 Aug 25 10:41	24° $\mathring{\text{U}}$ 56'35	
	8739 Mar 11 03:23	30° $\mathring{\text{R}}$ $\mathring{\text{U}}$		retrograde	8744 Nov 27 20:21	28° $\mathring{\text{U}}$ 06'47	
direct	8739 Apr 05 05:14	29° $\mathring{\text{U}}$ 44'20		opposition	8745 Feb 12 21:15	26° $\mathring{\text{U}}$ 06'25	0°28'16
	8739 Apr 29 20:44	0° $\mathring{\text{U}}$		min. Earth dist.	8745 Feb 12 13:15	26° $\mathring{\text{U}}$ 07'15	18.70249 AU
evening set	8739 Jul 04 05:42	2° $\mathring{\text{U}}$ 44'47		direct	8745 Apr 29 00:04	24° $\mathring{\text{U}}$ 08'10	
conjunction	8739 Jul 20 06:24	3° $\mathring{\text{U}}$ 39'43	0°05'23	evening set	8745 Jul 28 08:29	27° $\mathring{\text{U}}$ 11'26	
minimum elong	8739 Jul 20 06:23	3° $\mathring{\text{U}}$ 39'43	0°05'11	conjunction	8745 Aug 13 13:53	28° $\mathring{\text{U}}$ 07'31	0°27'15
behind sun begin	8739 Jul 19 23:58	3° $\mathring{\text{U}}$ 38'49		minimum elong	8745 Aug 13 13:53	28° $\mathring{\text{U}}$ 07'31	0°27'07
behind sun end	8739 Jul 20 12:49	3° $\mathring{\text{U}}$ 40'37		max. Earth dist.	8745 Aug 13 21:35	28° $\mathring{\text{U}}$ 08'38	20.67894 AU
max. Earth dist.	8739 Jul 20 18:34	3° $\mathring{\text{U}}$ 41'27	20.91976 AU	morning rise	8745 Aug 29 22:13	29° $\mathring{\text{U}}$ 04'01	
morning rise	8739 Aug 05 10:09	4° $\mathring{\text{U}}$ 35'05			8745 Sep 16 01:14	0° $\mathring{\text{U}}$ $\mathring{\text{U}}$	
retrograde	8739 Nov 07 14:33	7° $\mathring{\text{U}}$ 43'02		retrograde	8745 Dec 02 07:12	2° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 14'47	
opposition	8740 Jan 24 01:37	5° $\mathring{\text{U}}$ 43'36	0°08'00	opposition	8746 Feb 17 06:54	0° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 14'17	0°32'01
min. Earth dist.	8740 Jan 23 14:57	5° $\mathring{\text{U}}$ 44'40	18.90405 AU	min. Earth dist.	8746 Feb 17 00:36	0° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 14'56	18.65490 AU
direct	8740 Apr 08 11:03	3° $\mathring{\text{U}}$ 46'22			8746 Feb 23 01:36	30° $\mathring{\text{R}}$ $\mathring{\text{U}}$	
evening set	8740 Jul 07 12:46	6° $\mathring{\text{U}}$ 47'07		direct	8746 May 03 07:04	28° $\mathring{\text{U}}$ 15'50	
conjunction	8740 Jul 23 14:20	7° $\mathring{\text{U}}$ 42'13	0°09'10		8746 Jul 07 18:26	0° $\mathring{\text{U}}$ $\mathring{\text{U}}$	
minimum elong	8740 Jul 23 14:20	7° $\mathring{\text{U}}$ 42'13	0°08'58	evening set	8746 Aug 01 19:03	1° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 19'48	
behind sun begin	8740 Jul 23 08:40	7° $\mathring{\text{U}}$ 41'25		conjunction	8746 Aug 18 01:15	2° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 16'06	0°30'34
behind sun end	8740 Jul 23 20:01	7° $\mathring{\text{U}}$ 43'00		minimum elong	8746 Aug 18 01:15	2° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 16'06	0°30'27
max. Earth dist.	8740 Jul 24 02:04	7° $\mathring{\text{U}}$ 43'53	20.88733 AU	max. Earth dist.	8746 Aug 18 08:03	2° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 17'05	20.63040 AU
morning rise	8740 Aug 08 18:52	8° $\mathring{\text{U}}$ 37'44		morning rise	8746 Sep 03 10:19	3° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 12'50	
retrograde	8740 Nov 11 01:10	11° $\mathring{\text{U}}$ 46'04		retrograde	8746 Dec 06 21:19	6° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 24'12	
opposition	8741 Jan 27 10:00	9° $\mathring{\text{U}}$ 46'26	0°12'11	opposition	8747 Feb 21 16:49	4° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 23'34	0°35'38
min. Earth dist.	8741 Jan 26 23:05	9° $\mathring{\text{U}}$ 47'32	18.86963 AU	min. Earth dist.	8747 Feb 21 10:33	4° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 24'13	18.60530 AU
direct	8741 Apr 12 18:47	7° $\mathring{\text{U}}$ 49'01		direct	8747 May 07 16:10	2° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 24'55	
evening set	8741 Jul 11 20:30	10° $\mathring{\text{U}}$ 50'08		evening set	8747 Aug 06 06:36	5° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 29'38	
conjunction	8741 Jul 27 22:43	11° $\mathring{\text{U}}$ 45'23	0°12'55	conjunction	8747 Aug 22 13:34	6° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 26'12	0°33'44
minimum elong	8741 Jul 27 22:43	11° $\mathring{\text{U}}$ 45'23	0°12'45	minimum elong	8747 Aug 22 13:34	6° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 26'12	0°33'38
behind sun begin	8741 Jul 27 18:34	11° $\mathring{\text{U}}$ 44'48		max. Earth dist.	8747 Aug 22 19:25	6° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 27'03	20.57969 AU
behind sun end	8741 Jul 28 02:53	11° $\mathring{\text{U}}$ 45'58		morning rise	8747 Sep 07 23:18	7° $\mathring{\text{U}}$ $\mathring{\text{U}}$ 23'10	
max. Earth dist.	8741 Jul 28 09:25	11° $\mathring{\text{U}}$ 46'55	20.85107 AU				

retrograde	8747 Dec 11 09:48	10° $\mathring{\text{M}}$ 35'09		evening set	8754 Sep 05 15:23	5° $\mathring{\text{A}}$ 23'16	
opposition	8748 Feb 26 03:14	8° $\mathring{\text{M}}$ 34'24	0°39'04				
min. Earth dist.	8748 Feb 25 22:52	8° $\mathring{\text{M}}$ 34'51	18.55351 AU	conjunction	8754 Sep 22 03:20	6° $\mathring{\text{A}}$ 21'43	0°50'29
direct	8748 May 11 00:14	6° $\mathring{\text{M}}$ 35'32		minimum elong	8754 Sep 22 03:19	6° $\mathring{\text{A}}$ 21'43	0°50'30
evening set	8748 Aug 09 19:00	9° $\mathring{\text{M}}$ 41'05		max. Earth dist.	8754 Sep 21 22:45	6° $\mathring{\text{A}}$ 21'02	20.16030 AU
				morning rise	8754 Oct 08 17:13	7° $\mathring{\text{A}}$ 20'27	
conjunction	8748 Aug 26 02:45	10° $\mathring{\text{M}}$ 37'53	0°36'45	retrograde	8755 Jan 11 01:58	10° $\mathring{\text{A}}$ 36'52	
minimum elong	8748 Aug 26 02:45	10° $\mathring{\text{M}}$ 37'53	0°36'41	opposition	8755 Mar 27 17:29	8° $\mathring{\text{A}}$ 34'45	0°56'52
max. Earth dist.	8748 Aug 26 07:10	10° $\mathring{\text{M}}$ 38'32	20.52681 AU	min. Earth dist.	8755 Mar 27 21:09	8° $\mathring{\text{A}}$ 34'22	18.12799 AU
morning rise	8748 Sep 11 13:14	11° $\mathring{\text{M}}$ 35'06		direct	8755 Jun 10 10:11	6° $\mathring{\text{A}}$ 33'35	
retrograde	8748 Dec 15 01:12	14° $\mathring{\text{M}}$ 47'44		evening set	8755 Sep 10 09:36	9° $\mathring{\text{A}}$ 45'45	
opposition	8749 Mar 01 14:01	12° $\mathring{\text{M}}$ 46'51	0°42'20				
min. Earth dist.	8749 Mar 01 10:08	12° $\mathring{\text{M}}$ 47'15	18.49935 AU	conjunction	8755 Sep 26 22:17	10° $\mathring{\text{A}}$ 44'28	0°51'53
direct	8749 May 15 10:16	10° $\mathring{\text{M}}$ 47'44		minimum elong	8755 Sep 26 22:17	10° $\mathring{\text{A}}$ 44'28	0°51'55
evening set	8749 Aug 14 08:21	13° $\mathring{\text{M}}$ 54'10		max. Earth dist.	8755 Sep 26 17:28	10° $\mathring{\text{A}}$ 43'45	20.09571 AU
				morning rise	8755 Oct 13 12:27	11° $\mathring{\text{A}}$ 43'28	
conjunction	8749 Aug 30 16:50	14° $\mathring{\text{M}}$ 51'14	0°39'36	retrograde	8756 Jan 15 18:57	15° $\mathring{\text{A}}$ 00'29	
minimum elong	8749 Aug 30 16:50	14° $\mathring{\text{M}}$ 51'14	0°39'31	opposition	8756 Mar 31 07:44	12° $\mathring{\text{A}}$ 58'11	0°58'16
max. Earth dist.	8749 Aug 30 20:05	14° $\mathring{\text{M}}$ 51'42	20.47118 AU	min. Earth dist.	8756 Mar 31 12:34	12° $\mathring{\text{A}}$ 57'40	18.06379 AU
morning rise	8749 Sep 16 03:51	15° $\mathring{\text{M}}$ 48'41		direct	8756 Jun 13 23:35	10° $\mathring{\text{A}}$ 56'37	
retrograde	8749 Dec 19 15:12	19° $\mathring{\text{M}}$ 01'58		evening set	8756 Sep 14 04:46	14° $\mathring{\text{A}}$ 09'51	
opposition	8750 Mar 06 01:24	17° $\mathring{\text{M}}$ 00'56	0°45'23				
min. Earth dist.	8750 Mar 05 23:31	17° $\mathring{\text{M}}$ 01'08	18.44240 AU	conjunction	8756 Sep 30 17:54	15° $\mathring{\text{A}}$ 08'51	0°52'58
direct	8750 May 19 19:48	15° $\mathring{\text{M}}$ 01'34		minimum elong	8756 Sep 30 17:54	15° $\mathring{\text{A}}$ 08'51	0°53'00
evening set	8750 Aug 18 22:33	18° $\mathring{\text{M}}$ 08'53		max. Earth dist.	8756 Sep 30 10:59	15° $\mathring{\text{A}}$ 07'49	20.03208 AU
				morning rise	8756 Oct 17 08:35	16° $\mathring{\text{A}}$ 08'06	
conjunction	8750 Sep 04 07:45	19° $\mathring{\text{M}}$ 06'13	0°42'14	retrograde	8757 Jan 19 14:06	19° $\mathring{\text{A}}$ 25'44	
minimum elong	8750 Sep 04 07:45	19° $\mathring{\text{M}}$ 06'13	0°42'12	opposition	8757 Apr 04 22:35	17° $\mathring{\text{A}}$ 23'14	0°59'19
max. Earth dist.	8750 Sep 04 09:04	19° $\mathring{\text{M}}$ 06'24	20.41298 AU	min. Earth dist.	8757 Apr 05 04:14	17° $\mathring{\text{A}}$ 22'37	18.00089 AU
morning rise	8750 Sep 20 19:28	20° $\mathring{\text{M}}$ 03'55		direct	8757 Jun 18 15:23	15° $\mathring{\text{A}}$ 21'19	
retrograde	8750 Dec 24 07:42	23° $\mathring{\text{M}}$ 17'51		evening set	8757 Sep 19 00:33	18° $\mathring{\text{A}}$ 35'37	
opposition	8751 Mar 10 13:15	21° $\mathring{\text{M}}$ 16'38	0°48'13				
min. Earth dist.	8751 Mar 10 12:02	21° $\mathring{\text{M}}$ 16'45	18.38289 AU	conjunction	8757 Oct 05 14:19	19° $\mathring{\text{A}}$ 34'54	0°53'44
direct	8751 May 24 07:19	19° $\mathring{\text{M}}$ 16'56		minimum elong	8757 Oct 05 14:19	19° $\mathring{\text{A}}$ 34'54	0°53'49
evening set	8751 Aug 23 13:29	22° $\mathring{\text{M}}$ 25'10		max. Earth dist.	8757 Oct 05 07:30	19° $\mathring{\text{A}}$ 33'52	19.96987 AU
				morning rise	8757 Oct 22 05:07	20° $\mathring{\text{A}}$ 34'23	
conjunction	8751 Sep 08 23:29	23° $\mathring{\text{M}}$ 22'47	0°44'40	retrograde	8758 Jan 24 08:10	23° $\mathring{\text{A}}$ 52'37	
minimum elong	8751 Sep 08 23:29	23° $\mathring{\text{M}}$ 22'47	0°44'38	opposition	8758 Apr 09 14:03	21° $\mathring{\text{A}}$ 49'59	1°00'02
max. Earth dist.	8751 Sep 08 23:43	23° $\mathring{\text{M}}$ 22'49	20.35212 AU	min. Earth dist.	8758 Apr 09 20:24	21° $\mathring{\text{A}}$ 49'18	17.93966 AU
morning rise	8751 Sep 25 11:43	24° $\mathring{\text{M}}$ 20'45		direct	8758 Jun 23 06:41	19° $\mathring{\text{A}}$ 47'44	
retrograde	8751 Dec 28 22:40	27° $\mathring{\text{M}}$ 35'18		evening set	8758 Sep 23 21:20	23° $\mathring{\text{A}}$ 03'07	
opposition	8752 Mar 14 01:42	25° $\mathring{\text{M}}$ 33'52	0°50'48				
min. Earth dist.	8752 Mar 14 02:19	25° $\mathring{\text{M}}$ 33'49	18.32090 AU	conjunction	8758 Oct 10 11:25	24° $\mathring{\text{A}}$ 02'40	0°54'12
direct	8752 May 27 18:23	23° $\mathring{\text{M}}$ 33'51		minimum elong	8758 Oct 10 11:25	24° $\mathring{\text{A}}$ 02'40	0°54'17
evening set	8752 Aug 27 05:24	26° $\mathring{\text{M}}$ 43'01		max. Earth dist.	8758 Oct 10 02:34	24° $\mathring{\text{A}}$ 01'20	19.90982 AU
				morning rise	8758 Oct 27 02:38	25° $\mathring{\text{A}}$ 02'24	
conjunction	8752 Sep 12 16:03	27° $\mathring{\text{M}}$ 40'54	0°46'52	retrograde	8759 Jan 29 03:54	28° $\mathring{\text{A}}$ 21'15	
minimum elong	8752 Sep 12 16:03	27° $\mathring{\text{M}}$ 40'54	0°46'51	opposition	8759 Apr 14 06:06	26° $\mathring{\text{A}}$ 18'29	1°00'22
max. Earth dist.	8752 Sep 12 14:10	27° $\mathring{\text{M}}$ 40'37	20.28929 AU	min. Earth dist.	8759 Apr 14 13:22	26° $\mathring{\text{A}}$ 17'42	17.88090 AU
morning rise	8752 Sep 29 04:58	28° $\mathring{\text{M}}$ 39'07		direct	8759 Jun 27 23:30	24° $\mathring{\text{A}}$ 15'56	
	8752 Oct 24 01:11	0° $\mathring{\text{A}}$		evening set	8759 Sep 28 18:46	27° $\mathring{\text{A}}$ 32'25	
retrograde	8753 Jan 01 15:56	1° $\mathring{\text{A}}$ 54'18					
	8753 Mar 15 16:30	30° $\mathring{\text{R}}$ $\mathring{\text{M}}$		conjunction	8759 Oct 15 09:31	28° $\mathring{\text{A}}$ 32'15	0°54'19
opposition	8753 Mar 18 14:21	29° $\mathring{\text{M}}$ 52'38	0°53'07	minimum elong	8759 Oct 15 09:30	28° $\mathring{\text{A}}$ 32'15	0°54'25
min. Earth dist.	8753 Mar 18 15:47	29° $\mathring{\text{M}}$ 52'29	18.25729 AU	max. Earth dist.	8759 Oct 15 00:54	28° $\mathring{\text{A}}$ 30'57	19.85227 AU
direct	8753 Jun 01 07:26	27° $\mathring{\text{M}}$ 52'13		morning rise	8759 Nov 01 00:47	29° $\mathring{\text{A}}$ 32'12	
	8753 Aug 13 03:13	0° $\mathring{\text{A}}$			8759 Nov 08 23:57	0° $\mathring{\text{M}}$	
evening set	8753 Aug 31 22:03	1° $\mathring{\text{A}}$ 02'22		retrograde	8760 Feb 02 23:38	2° $\mathring{\text{M}}$ 51'37	
				opposition	8760 Apr 17 22:48	0° $\mathring{\text{M}}$ 48'48	1°00'21
conjunction	8753 Sep 17 09:27	2° $\mathring{\text{A}}$ 00'32	0°48'49	min. Earth dist.	8760 Apr 18 06:33	0° $\mathring{\text{M}}$ 47'58	17.82459 AU
minimum elong	8753 Sep 17 09:27	2° $\mathring{\text{A}}$ 00'32	0°48'49		8760 May 07 08:17	30° $\mathring{\text{R}}$ $\mathring{\text{A}}$	
max. Earth dist.	8753 Sep 17 06:53	2° $\mathring{\text{A}}$ 00'09	20.22501 AU	direct	8760 Jul 01 17:05	28° $\mathring{\text{A}}$ 45'59	
morning rise	8753 Oct 03 22:44	2° $\mathring{\text{A}}$ 59'01			8760 Aug 24 12:20	0° $\mathring{\text{M}}$	
retrograde	8754 Jan 06 07:49	6° $\mathring{\text{A}}$ 14'48		evening set	8760 Oct 02 17:23	2° $\mathring{\text{M}}$ 03'35	
opposition	8754 Mar 23 03:42	4° $\mathring{\text{A}}$ 12'55	0°55'09				
min. Earth dist.	8754 Mar 23 06:37	4° $\mathring{\text{A}}$ 12'37	18.19266 AU	conjunction	8760 Oct 19 08:18	3° $\mathring{\text{M}}$ 03'40	0°54'07
direct	8754 Jun 05 19:39	2° $\mathring{\text{A}}$ 12'08		minimum elong	8760 Oct 19 08:18	3° $\mathring{\text{M}}$ 03'40	0°54'14

max. Earth dist.	8760 Oct 18 21:34	3°M.02'02	19.79732 AU	morning rise	8766 Dec 04 06:36	1°♂48'08	
morning rise	8760 Nov 04 23:51	4°M.03'51		retrograde	8767 Mar 07 10:36	5°♂10'27	
retrograde	8761 Feb 06 19:52	7°M.23'50		opposition	8767 May 20 13:24	3°♂07'22	0°49'40
opposition	8761 Apr 22 16:06	5°M.20'58	0°59'57	min. Earth dist.	8767 May 21 03:40	3°♂05'49	17.49999 AU
min. Earth dist.	8761 Apr 23 01:09	5°M.20'00	17.77101 AU	direct	8767 Aug 03 16:52	1°♂02'39	
direct	8761 Jul 06 11:12	3°M.17'54		evening set	8767 Nov 06 02:52	4°♂27'01	
evening set	8761 Oct 07 16:38	6°M.36'37					
conjunction	8761 Oct 24 08:01	7°M.36'57	0°53'34	conjunction	8767 Nov 22 18:41	5°♂28'27	0°43'14
minimum elong	8761 Oct 24 08:01	7°M.36'57	0°53'42	minimum elong	8767 Nov 22 18:41	5°♂28'27	0°43'27
max. Earth dist.	8761 Oct 23 21:28	7°M.35'20	19.74495 AU	max. Earth dist.	8767 Nov 22 02:03	5°♂25'52	19.48210 AU
morning rise	8761 Nov 09 23:27	8°M.37'20		morning rise	8767 Dec 09 09:14	6°♂29'44	
retrograde	8762 Feb 11 17:26	11°M.57'51		retrograde	8768 Mar 11 10:43	9°♂52'13	
opposition	8762 Apr 27 10:07	9°M.54'58	0°59'11	opposition	8768 May 24 10:41	7°♂49'05	0°46'41
min. Earth dist.	8762 Apr 27 19:31	9°M.53'57	17.71982 AU	min. Earth dist.	8768 May 25 00:25	7°♂47'35	17.46566 AU
direct	8762 Jul 11 06:51	7°M.51'40		direct	8768 Aug 07 16:50	5°♂44'06	
evening set	8762 Oct 12 16:45	11°M.11'27		evening set	8768 Nov 10 06:10	9°♂09'10	
conjunction	8762 Oct 29 08:13	12°M.12'00	0°52'41	conjunction	8768 Nov 26 21:46	10°♂10'43	0°40'24
minimum elong	8762 Oct 29 08:13	12°M.12'00	0°52'50	minimum elong	8768 Nov 26 21:46	10°♂10'43	0°40'37
max. Earth dist.	8762 Oct 28 19:33	12°M.10'04	19.69490 AU	max. Earth dist.	8768 Nov 26 04:45	10°♂08'05	19.44986 AU
morning rise	8762 Nov 14 23:49	13°M.12'36		morning rise	8768 Dec 13 11:49	11°♂12'04	
retrograde	8762 Dec 17 19:31	15°M.		retrograde	8769 Mar 16 09:09	14°♂34'41	
opposition	8763 Feb 16 14:38	16°M.33'36		opposition	8769 May 29 08:31	12°♂31'31	0°43'22
min. Earth dist.	8763 Apr 20 19:54	15°R.M.		min. Earth dist.	8769 May 29 23:31	12°♂29'52	17.43579 AU
direct	8763 May 02 04:54	14°M.30'42	0°58'01	direct	8769 Aug 12 15:57	10°♂26'17	
evening set	8763 Oct 03 23:13	15°M.		evening set	8769 Nov 15 09:38	13°♂51'59	
conjunction	8763 Nov 03 09:27	16°M.48'43	0°51'28	max. Earth dist.	8769 Dec 01 07:33	14°♂50'54	19.42255 AU
minimum elong	8763 Nov 03 09:27	16°M.48'43	0°51'37	conjunction	8769 Dec 02 00:57	14°♂53'36	0°37'17
max. Earth dist.	8763 Nov 02 20:37	16°M.46'46	19.64707 AU	minimum elong	8769 Dec 02 00:57	14°♂53'36	0°37'30
morning rise	8763 Nov 20 00:52	17°M.49'29		morning rise	8769 Dec 18 14:37	15°♂55'01	
retrograde	8764 Feb 21 13:52	21°M.10'54		retrograde	8770 Mar 21 09:08	19°♂17'42	
opposition	8764 May 06 00:05	19°M.07'59	0°56'29	opposition	8770 Jun 03 06:34	17°♂14'30	0°39'45
min. Earth dist.	8764 May 06 11:19	19°M.06'46	17.62416 AU	min. Earth dist.	8770 Jun 03 20:39	17°♂12'57	17.41107 AU
direct	8764 Jul 19 23:46	17°M.04'08		direct	8770 Aug 17 17:13	15°♂09'03	
evening set	8764 Oct 21 19:21	20°M.25'57		evening set	8770 Nov 20 13:09	18°♂35'19	
conjunction	8764 Nov 07 11:09	21°M.26'55	0°49'54	max. Earth dist.	8770 Dec 06 11:22	19°♂34'23	19.40048 AU
minimum elong	8764 Nov 07 11:09	21°M.26'55	0°50'03	conjunction	8770 Dec 07 04:14	19°♂37'00	0°33'55
max. Earth dist.	8764 Nov 06 20:21	21°M.24'38	19.60139 AU	minimum elong	8770 Dec 07 04:15	19°♂37'00	0°34'09
morning rise	8764 Nov 24 02:29	22°M.27'50		morning rise	8770 Dec 23 17:16	20°♂38'26	
retrograde	8765 Feb 25 11:57	25°M.49'37		retrograde	8771 Mar 26 07:47	24°♂01'08	
opposition	8765 May 10 20:07	23°M.46'39	0°54'35	opposition	8771 Jun 08 05:11	21°♂57'57	0°35'52
min. Earth dist.	8765 May 11 09:01	23°M.45'15	17.57979 AU	min. Earth dist.	8771 Jun 08 20:06	21°♂56'19	17.39186 AU
direct	8765 Jul 24 20:26	21°M.42'30		direct	8771 Aug 22 17:32	19°♂52'20	
evening set	8765 Oct 26 21:17	25°M.05'14		evening set	8771 Nov 25 17:00	23°♂19'06	
conjunction	8765 Nov 12 13:13	26°M.06'22	0°48'00	conjunction	8771 Dec 12 07:34	24°♂20'49	0°30'18
minimum elong	8765 Nov 12 13:13	26°M.06'22	0°48'11	minimum elong	8771 Dec 12 07:34	24°♂20'49	0°30'31
max. Earth dist.	8765 Nov 11 22:13	26°M.04'04	19.55838 AU	max. Earth dist.	8771 Dec 11 14:09	24°♂18'06	19.38430 AU
morning rise	8765 Nov 29 04:18	27°M.07'27		morning rise	8771 Dec 28 20:07	25°♂22'14	
retrograde	8766 Jan 28 10:04	0°♂		retrograde	8772 Mar 30 07:38	28°♂44'55	
opposition	8766 Mar 02 11:57	0°♂29'31		opposition	8772 Jun 12 03:53	26°♂41'48	0°31'44
min. Earth dist.	8766 May 15 16:30	28°M.26'30	0°52'18	min. Earth dist.	8772 Jun 12 17:44	26°♂40'17	17.37869 AU
direct	8766 May 16 05:10	28°M.25'07	17.53818 AU	direct	8772 Aug 26 19:33	24°♂36'05	
evening set	8766 Jul 29 19:00	26°M.22'04		evening set	8772 Nov 29 20:47	28°♂03'16	
conjunction	8766 Nov 17 15:46	0°♂46'57	0°45'47	conjunction	8772 Dec 16 11:00	29°♂04'59	0°26'29
minimum elong	8766 Nov 17 15:46	0°♂46'57	0°45'58	minimum elong	8772 Dec 16 11:00	29°♂04'59	0°26'43
max. Earth dist.	8766 Nov 16 23:30	0°♂44'26	19.51836 AU	max. Earth dist.	8772 Dec 15 18:47	29°♂02'28	19.37418 AU
					8772 Dec 31 04:55	0°♂	
				morning rise	8773 Jan 01 22:43	0°♂06'23	
				retrograde	8773 Apr 04 06:49	3°♂29'01	
				opposition	8773 Jun 17 03:11	1°♂26'01	0°27'22
				min. Earth dist.	8773 Jun 17 17:24	1°♂24'28	17.37164 AU
				direct	8773 Jul 23 07:58	30°R.♂	
					8773 Aug 31 20:31	29°♂20'16	

	8773 Oct 09 17:41	0°♂	retrograde	8779 May 03 05:48	1°♂54'48
evening set	8773 Dec 05 00:30	2°♂47'48		8779 Jul 13 08:08	30°♂♂
			opposition	8779 Jul 16 02:30	29°♂52'51 -0°01'34
conjunction	8773 Dec 21 14:01	3°♂49'29 0°22'29	min. Earth dist.	8779 Jul 16 14:17	29°♂51'34 17.43894 AU
minimum elong	8773 Dec 21 14:01	3°♂49'29 0°22'43	direct	8779 Sep 30 09:32	27°♂47'30
max. Earth dist.	8773 Dec 20 21:15	3°♂46'52 19.37028 AU		8779 Dec 13 05:31	0°♂
morning rise	8774 Jan 07 01:13	4°♂50'51	evening set	8780 Jan 03 19:43	1°♂15'07
retrograde	8774 Apr 09 06:55	8°♂13'24			
opposition	8774 Jun 22 02:34	6°♂10'33 0°22'49	conjunction	8780 Jan 20 04:38	2°♂16'08 -0°03'46
min. Earth dist.	8774 Jun 22 15:51	6°♂09'06 17.37066 AU	minimum elong	8780 Jan 20 04:37	2°♂16'07 0°03'34
direct	8774 Sep 05 22:58	4°♂04'48	behind sun begin	8780 Jan 19 21:59	2°♂15'07
evening set	8774 Dec 10 04:13	7°♂32'37	behind sun end	8780 Jan 20 11:16	2°♂17'08
			max. Earth dist.	8780 Jan 19 14:42	2°♂13'57 19.45138 AU
conjunction	8774 Dec 26 17:16	8°♂34'16 0°18'21	morning rise	8780 Feb 05 10:35	3°♂16'43
minimum elong	8774 Dec 26 17:17	8°♂34'16 0°18'34	retrograde	8780 May 07 03:57	6°♂37'36
max. Earth dist.	8774 Dec 26 02:02	8°♂31'53 19.37211 AU	opposition	8780 Jul 20 02:34	4°♂35'47 -0°06'32
morning rise	8775 Jan 12 03:33	9°♂35'33	min. Earth dist.	8780 Jul 20 14:15	4°♂34'32 17.46496 AU
retrograde	8775 Apr 14 06:24	12°♂57'57	direct	8780 Oct 04 10:27	2°♂30'33
opposition	8775 Jun 27 02:13	10°♂55'18 0°18'07	evening set	8781 Jan 07 21:20	5°♂57'48
min. Earth dist.	8775 Jun 27 15:46	10°♂53'49 17.37511 AU			
direct	8775 Sep 11 00:36	8°♂49'37	conjunction	8781 Jan 24 05:27	6°♂58'37 -0°08'10
evening set	8775 Dec 15 08:03	12°♂17'36	minimum elong	8781 Jan 24 05:26	6°♂58'37 0°07'58
			behind sun begin	8781 Jan 23 23:28	6°♂57'43
conjunction	8775 Dec 31 20:14	13°♂19'10 0°14'04	behind sun end	8781 Jan 24 11:24	6°♂59'32
minimum elong	8775 Dec 31 20:14	13°♂19'10 0°14'19	max. Earth dist.	8781 Jan 23 16:54	6°♂56'40 19.47935 AU
behind sun begin	8775 Dec 31 17:12	13°♂18'42	morning rise	8781 Feb 09 10:24	7°♂59'00
behind sun end	8775 Dec 31 23:16	13°♂19'38	retrograde	8781 May 12 03:14	11°♂19'26
max. Earth dist.	8775 Dec 31 04:12	13°♂16'40 19.37917 AU	opposition	8781 Jul 25 02:26	9°♂17'44 -0°11'26
morning rise	8776 Jan 17 05:51	14°♂20'22	min. Earth dist.	8781 Jul 25 12:50	9°♂16'37 17.49474 AU
retrograde	8776 Apr 18 06:30	17°♂42'35	direct	8781 Oct 09 13:43	7°♂12'37
opposition	8776 Jul 01 02:07	15°♂40'07 0°13'18	evening set	8782 Jan 12 22:15	10°♂39'24
min. Earth dist.	8776 Jul 01 15:07	15°♂38'42 17.38464 AU			
direct	8776 Sep 15 03:03	13°♂34'29	conjunction	8782 Jan 29 05:22	11°♂40'00 -0°12'31
evening set	8776 Dec 19 11:23	17°♂02'33	minimum elong	8782 Jan 29 05:21	11°♂40'00 0°12'21
			behind sun begin	8782 Jan 29 00:57	11°♂39'19
conjunction	8777 Jan 04 22:57	18°♂04'01 0°09'43	behind sun end	8782 Jan 29 09:45	11°♂40'40
minimum elong	8777 Jan 04 22:57	18°♂04'02 0°09'56	max. Earth dist.	8782 Jan 28 17:19	11°♂38'07 19.51110 AU
behind sun begin	8777 Jan 04 17:32	18°♂03'12	morning rise	8782 Feb 14 09:26	12°♂40'09
behind sun end	8777 Jan 05 04:23	18°♂04'51		8782 Mar 30 16:33	15°♂
max. Earth dist.	8777 Jan 04 08:30	18°♂01'46 19.39096 AU	retrograde	8782 May 16 23:20	16°♂00'05
morning rise	8777 Jan 21 07:32	19°♂05'06		8782 Jul 05 00:17	15°♂♂
retrograde	8777 Apr 23 06:19	22°♂27'04	opposition	8782 Jul 30 02:09	13°♂58'30 -0°16'14
opposition	8777 Jul 06 02:16	20°♂24'48 0°08'23	min. Earth dist.	8782 Jul 30 12:30	13°♂57'23 17.52851 AU
min. Earth dist.	8777 Jul 06 15:02	20°♂23'25 17.39857 AU	direct	8782 Oct 14 14:29	11°♂53'30
direct	8777 Sep 20 05:16	18°♂19'16		8783 Jan 12 11:27	15°♂
evening set	8777 Dec 24 14:39	21°♂47'16	evening set	8783 Jan 17 22:28	15°♂19'43
max. Earth dist.	8778 Jan 09 10:09	22°♂46'15 19.40709 AU			
			conjunction	8783 Feb 03 04:40	16°♂20'05 -0°16'46
conjunction	8778 Jan 10 01:16	22°♂48'37 0°05'18	minimum elong	8783 Feb 03 04:40	16°♂20'05 0°16'36
minimum elong	8778 Jan 10 01:16	22°♂48'37 0°05'32	max. Earth dist.	8783 Feb 02 17:53	16°♂18'24 19.54689 AU
behind sun begin	8778 Jan 09 18:48	22°♂47'38	morning rise	8783 Feb 19 07:49	17°♂19'59
behind sun end	8778 Jan 10 07:43	22°♂49'36	retrograde	8783 May 21 21:09	20°♂39'22
morning rise	8778 Jan 26 09:05	23°♂49'33	opposition	8783 Aug 04 01:20	18°♂37'53 -0°20'55
retrograde	8778 Apr 28 05:53	27°♂11'13	min. Earth dist.	8783 Aug 04 09:56	18°♂36'58 17.56623 AU
opposition	8778 Jul 11 02:21	25°♂09'06 0°03'25	direct	8783 Oct 19 17:53	16°♂33'02
min. Earth dist.	8778 Jul 11 14:50	25°♂07'45 17.41686 AU	evening set	8784 Jan 22 21:57	19°♂58'37
direct	8778 Sep 25 06:53	23°♂03'39			
evening set	8778 Dec 29 17:20	26°♂31'31	conjunction	8784 Feb 08 03:09	20°♂58'43 -0°20'54
			minimum elong	8784 Feb 08 03:09	20°♂58'43 0°20'45
conjunction	8779 Jan 15 03:18	27°♂32'44 0°00'48	max. Earth dist.	8784 Feb 07 17:37	20°♂57'14 19.58670 AU
minimum elong	8779 Jan 15 03:16	27°♂32'43 0°01'01	morning rise	8784 Feb 24 05:19	21°♂58'22
behind sun begin	8779 Jan 14 20:35	27°♂31'42	retrograde	8784 May 25 15:44	25°♂17'11
behind sun end	8779 Jan 15 09:58	27°♂33'45	opposition	8784 Aug 08 00:32	23°♂15'50 -0°25'26
max. Earth dist.	8779 Jan 14 13:35	27°♂30'35 19.42736 AU	min. Earth dist.	8784 Aug 08 08:53	23°♂14'56 17.60830 AU
morning rise	8779 Jan 31 10:06	28°♂33'29	direct	8784 Oct 23 17:55	21°♂11'09
	8779 Feb 25 13:18	0°♂	evening set	8785 Jan 26 20:25	24°♂36'01
desc. node	8779 Mar 20 17:41	1°♂03'27			

conjunction	8785 Feb 12 00:36	25° \approx 35'50 -0°24'52	min. Earth dist.	8791 Sep 10 05:51	24° \approx 59'18 17.99998 AU
minimum elong	8785 Feb 12 00:36	25° \approx 35'50 0°24'44	direct	8791 Nov 26 08:23	22° \approx 56'48
max. Earth dist.	8785 Feb 11 16:19	25° \approx 34'33 19.63101 AU	evening set	8792 Feb 28 11:17	26° \approx 15'23
morning rise	8785 Feb 28 01:55	26° \approx 35'14			
retrograde	8785 May 30 12:33	29° \approx 53'28	conjunction	8792 Mar 15 09:16	27° \approx 13'10 -0°46'35
opposition	8785 Aug 12 23:12	27° \approx 52'14 -0°29'46	minimum elong	8792 Mar 15 09:16	27° \approx 13'10 0°46'34
min. Earth dist.	8785 Aug 13 05:13	27° \approx 51'36 17.65475 AU	max. Earth dist.	8792 Mar 15 10:34	27° \approx 13'22 20.03089 AU
direct	8785 Oct 28 20:19	25° \approx 47'48	morning rise	8792 Mar 31 05:01	28° \approx 10'39
evening set	8786 Jan 31 18:11	29° \approx 11'53		8792 May 04 01:09	0° \approx
	8786 Feb 13 19:40	0° \approx	retrograde	8792 Jun 30 16:28	1° \approx 24'39
				8792 Aug 30 18:24	30° \approx
conjunction	8786 Feb 16 21:27	0° \approx 11'26 -0°28'40	opposition	8792 Sep 14 02:33	29° \approx 24'52 -0°52'53
minimum elong	8786 Feb 16 21:27	0° \approx 11'26 0°28'32	min. Earth dist.	8792 Sep 14 01:26	29° \approx 24'59 18.06182 AU
max. Earth dist.	8786 Feb 16 14:59	0° \approx 10'26 19.67959 AU	direct	8792 Nov 30 04:07	27° \approx 22'49
morning rise	8786 Mar 04 21:47	1° \approx 10'34		8793 Feb 20 12:14	0° \approx
retrograde	8786 Jun 04 06:09	4° \approx 28'12	evening set	8793 Mar 04 03:11	0° \approx 40'20
opposition	8786 Aug 17 21:28	2° \approx 27'10 -0°33'52			
min. Earth dist.	8786 Aug 18 03:14	2° \approx 26'33 17.70547 AU	conjunction	8793 Mar 20 00:15	1° \approx 37'50 -0°48'37
direct	8786 Nov 02 18:49	0° \approx 22'59	minimum elong	8793 Mar 20 00:15	1° \approx 37'50 0°48'37
evening set	8787 Feb 05 15:10	3° \approx 46'16	max. Earth dist.	8793 Mar 20 01:27	1° \approx 38'01 20.09258 AU
			morning rise	8793 Apr 04 19:36	2° \approx 35'03
conjunction	8787 Feb 21 17:26	4° \approx 45'32 -0°32'15	retrograde	8793 Jul 05 09:22	5° \approx 48'28
minimum elong	8787 Feb 21 17:26	4° \approx 45'32 0°32'09	opposition	8793 Sep 18 21:37	3° \approx 48'49 -0°54'59
max. Earth dist.	8787 Feb 21 11:49	4° \approx 44'40 19.73233 AU	min. Earth dist.	8793 Sep 18 18:54	3° \approx 49'06 18.12327 AU
morning rise	8787 Mar 09 17:02	5° \approx 44'24	direct	8793 Dec 04 23:44	1° \approx 47'04
retrograde	8787 Jun 09 02:18	9° \approx 01'25	evening set	8794 Mar 08 18:10	5° \approx 03'34
opposition	8787 Aug 22 19:19	7° \approx 00'36 -0°37'44			
min. Earth dist.	8787 Aug 22 22:46	7° \approx 00'14 17.75991 AU	conjunction	8794 Mar 24 14:43	6° \approx 00'46 -0°50'23
direct	8787 Nov 07 19:01	4° \approx 56'45	minimum elong	8794 Mar 24 14:43	6° \approx 00'46 0°50'24
evening set	8788 Feb 10 11:12	8° \approx 19'10	max. Earth dist.	8794 Mar 24 17:55	6° \approx 01'15 20.15356 AU
			morning rise	8794 Apr 09 09:23	6° \approx 57'44
conjunction	8788 Feb 26 12:36	9° \approx 18'08 -0°35'37	retrograde	8794 Jul 09 23:19	10° \approx 10'31
minimum elong	8788 Feb 26 12:36	9° \approx 18'08 0°35'31	opposition	8794 Sep 23 16:02	8° \approx 11'00 -0°56'45
max. Earth dist.	8788 Feb 26 09:07	9° \approx 17'36 19.78832 AU	min. Earth dist.	8794 Sep 23 13:01	8° \approx 11'19 18.18375 AU
morning rise	8788 Mar 13 11:14	10° \approx 16'43	direct	8794 Dec 09 18:15	6° \approx 09'35
retrograde	8788 Jun 12 19:34	13° \approx 33'10	evening set	8795 Mar 13 08:27	9° \approx 24'59
opposition	8788 Aug 26 16:57	11° \approx 32'34 -0°41'21			
min. Earth dist.	8788 Aug 26 20:11	11° \approx 32'13 17.81735 AU	conjunction	8795 Mar 29 04:11	10° \approx 21'55 -0°51'50
direct	8788 Nov 11 16:32	9° \approx 29'04	minimum elong	8795 Mar 29 04:11	10° \approx 21'55 0°51'51
evening set	8789 Feb 14 06:31	12° \approx 50'35	max. Earth dist.	8795 Mar 29 07:13	10° \approx 22'22 20.21361 AU
			morning rise	8795 Apr 13 22:34	11° \approx 18'38
conjunction	8789 Mar 02 06:53	13° \approx 49'15 -0°38'45	retrograde	8795 Jul 14 14:49	14° \approx 30'48
minimum elong	8789 Mar 02 06:53	13° \approx 49'15 0°38'40	opposition	8795 Sep 28 09:55	12° \approx 31'23 -0°58'11
max. Earth dist.	8789 Mar 02 03:55	13° \approx 48'47 19.84704 AU	min. Earth dist.	8795 Sep 28 05:30	12° \approx 31'50 18.24338 AU
morning rise	8789 Mar 18 04:53	14° \approx 47'34	direct	8795 Dec 14 12:41	10° \approx 30'15
retrograde	8789 Jun 17 14:42	18° \approx 03'24	evening set	8796 Mar 16 21:29	13° \approx 44'34
opposition	8789 Aug 31 13:56	16° \approx 03'01 -0°44'41			
min. Earth dist.	8789 Aug 31 15:03	16° \approx 02'54 17.87708 AU	conjunction	8796 Apr 01 16:49	14° \approx 41'13 -0°52'59
direct	8789 Nov 16 14:49	13° \approx 59'52	minimum elong	8796 Apr 01 16:48	14° \approx 41'13 0°53'01
evening set	8790 Feb 19 00:51	17° \approx 20'27	max. Earth dist.	8796 Apr 01 22:04	14° \approx 42'01 20.27273 AU
			morning rise	8796 Apr 17 10:38	15° \approx 37'42
conjunction	8790 Mar 07 00:30	18° \approx 18'49 -0°41'38	retrograde	8796 Jul 18 03:25	18° \approx 49'16
minimum elong	8790 Mar 07 00:30	18° \approx 18'49 0°41'35	opposition	8796 Oct 02 03:13	16° \approx 49'56 -0°59'16
max. Earth dist.	8790 Mar 06 23:39	18° \approx 18'42 19.90751 AU	min. Earth dist.	8796 Oct 01 22:03	16° \approx 50'27 18.30208 AU
morning rise	8790 Mar 22 21:37	19° \approx 16'51	direct	8796 Dec 18 06:11	14° \approx 49'05
retrograde	8790 Jun 22 07:11	22° \approx 32'05	evening set	8797 Mar 21 09:52	18° \approx 02'18
opposition	8790 Sep 05 10:40	20° \approx 31'55 -0°47'43			
min. Earth dist.	8790 Sep 05 11:39	20° \approx 31'49 17.93817 AU	conjunction	8797 Apr 06 04:30	18° \approx 58'41 -0°53'49
direct	8790 Nov 21 11:27	18° \approx 29'09	minimum elong	8797 Apr 06 04:30	18° \approx 58'41 0°53'53
evening set	8791 Feb 23 18:34	21° \approx 48'44	max. Earth dist.	8797 Apr 06 09:52	18° \approx 59'30 20.33115 AU
			morning rise	8797 Apr 21 22:11	19° \approx 54'56
conjunction	8791 Mar 11 17:12	22° \approx 46'48 -0°44'14	retrograde	8797 Jul 22 17:16	23° \approx 05'56
minimum elong	8791 Mar 11 17:12	22° \approx 46'48 0°44'12	opposition	8797 Oct 06 19:40	21° \approx 06'39 -1°00'01
max. Earth dist.	8791 Mar 11 16:25	22° \approx 46'41 19.96903 AU	min. Earth dist.	8797 Oct 06 13:10	21° \approx 07'18 18.36037 AU
morning rise	8791 Mar 27 13:45	23° \approx 44'34	direct	8797 Dec 22 22:52	19° \approx 06'04
retrograde	8791 Jun 27 01:11	26° \approx 59'11	evening set	8798 Mar 25 21:14	22° \approx 18'14
opposition	8791 Sep 10 06:43	24° \approx 59'13 -0°50'28			

conjunction	8798 Apr 10 15:35	23° Υ 14'23	-0°54'21	minimum elong	8804 May 04 20:21	18° \mathcal{B} 17'54	0°51'35
minimum elong	8798 Apr 10 15:35	23° Υ 14'23	0°54'25	max. Earth dist.	8804 May 05 10:04	18° \mathcal{B} 19'55	20.71666 AU
max. Earth dist.	8798 Apr 10 23:15	23° Υ 15'32	20.38916 AU	morning rise	8804 May 20 13:23	19° \mathcal{B} 12'53	
morning rise	8798 Apr 26 08:50	24° Υ 10'24		retrograde	8804 Aug 20 21:44	22° \mathcal{B} 20'44	
retrograde	8798 Jul 27 04:44	27° Υ 20'50		opposition	8804 Nov 05 23:20	20° \mathcal{B} 22'13	-0°56'08
opposition	8798 Oct 11 11:35	25° Υ 21'38	-1°00'25	min. Earth dist.	8804 Nov 05 09:59	20° \mathcal{B} 23'33	18.74047 AU
min. Earth dist.	8798 Oct 11 03:58	25° Υ 22'25	18.41813 AU	direct	8805 Jan 21 21:04	18° \mathcal{B} 23'51	
direct	8798 Dec 27 14:59	23° Υ 21'21		evening set	8805 Apr 23 10:51	21° \mathcal{B} 29'33	
evening set	8799 Mar 30 07:59	26° Υ 32'30					
conjunction	8799 Apr 15 01:43	27° Υ 28'24	-0°54'35	conjunction	8805 May 09 03:31	22° \mathcal{B} 24'19	-0°49'58
minimum elong	8799 Apr 15 01:43	27° Υ 28'24	0°54'41	minimum elong	8805 May 09 03:31	22° \mathcal{B} 24'19	0°50'08
max. Earth dist.	8799 Apr 15 09:36	27° Υ 29'34	20.44673 AU	max. Earth dist.	8805 May 09 16:51	22° \mathcal{B} 26'16	20.76297 AU
morning rise	8799 Apr 30 18:55	28° Υ 24'13		morning rise	8805 May 24 20:53	23° \mathcal{B} 19'11	
	8799 May 30 14:50	0° \mathcal{B}		retrograde	8805 Aug 25 07:01	26° \mathcal{B} 26'42	
retrograde	8799 Jul 31 16:53	1° \mathcal{B} 34'08		opposition	8805 Nov 10 11:28	24° \mathcal{B} 28'15	-0°54'23
	8799 Oct 05 19:22	30° $\mathcal{R}\Upsilon$		min. Earth dist.	8805 Nov 09 22:19	24° \mathcal{B} 29'34	18.78500 AU
opposition	8799 Oct 16 02:55	29° Υ 35'02	-1°00'29	direct	8806 Jan 26 06:57	22° \mathcal{B} 30'08	
min. Earth dist.	8799 Oct 15 18:05	29° Υ 35'55	18.47558 AU	evening set	8806 Apr 27 17:38	25° \mathcal{B} 35'04	
direct	8800 Jan 01 05:45	27° Υ 35'04		conjunction	8806 May 13 10:30	26° \mathcal{B} 29'42	-0°48'17
	8800 Mar 20 08:42	0° \mathcal{B}		minimum elong	8806 May 13 10:30	26° \mathcal{B} 29'42	0°48'28
evening set	8800 Apr 02 17:51	0° \mathcal{B} 45'13		max. Earth dist.	8806 May 14 00:57	26° \mathcal{B} 31'49	20.80542 AU
conjunction	8800 Apr 18 11:26	1° \mathcal{B} 40'54	-0°54'30	morning rise	8806 May 29 03:56	27° \mathcal{B} 24'28	
minimum elong	8800 Apr 18 11:26	1° \mathcal{B} 40'53	0°54'37		8806 Jul 24 23:01	0° \mathcal{I}	
max. Earth dist.	8800 Apr 18 21:32	1° \mathcal{B} 42'24	20.50384 AU	retrograde	8806 Aug 29 16:49	0° \mathcal{I} 31'40	
morning rise	8800 May 04 04:20	2° \mathcal{B} 36'30			8806 Oct 05 11:27	30° $\mathcal{R}\mathcal{B}$	
retrograde	8800 Aug 04 04:08	5° \mathcal{B} 45'57		opposition	8806 Nov 14 23:13	28° \mathcal{B} 33'16	-0°52'23
opposition	8800 Oct 19 17:39	3° \mathcal{B} 46'58	-1°00'14	min. Earth dist.	8806 Nov 14 09:08	28° \mathcal{B} 34'41	18.82522 AU
min. Earth dist.	8800 Oct 19 07:33	3° \mathcal{B} 47'59	18.53221 AU	direct	8807 Jan 30 17:47	26° \mathcal{B} 35'22	
direct	8801 Jan 04 20:18	1° \mathcal{B} 47'20		evening set	8807 May 02 00:06	29° \mathcal{B} 39'33	
evening set	8801 Apr 07 03:07	4° \mathcal{B} 56'31			8807 May 07 22:41	0° \mathcal{I}	
conjunction	8801 Apr 22 20:17	5° \mathcal{B} 51'59	-0°54'09	conjunction	8807 May 17 16:53	0° \mathcal{I} 34'05	-0°46'21
minimum elong	8801 Apr 22 20:17	5° \mathcal{B} 51'59	0°54'17	minimum elong	8807 May 17 16:53	0° \mathcal{I} 34'05	0°46'33
max. Earth dist.	8801 Apr 23 06:32	5° \mathcal{B} 53'30	20.55996 AU	max. Earth dist.	8807 May 18 06:45	0° \mathcal{I} 36'06	20.84340 AU
morning rise	8801 May 08 13:18	6° \mathcal{B} 47'26		morning rise	8807 Jun 02 10:45	1° \mathcal{I} 28'45	
retrograde	8801 Aug 08 14:46	9° \mathcal{B} 56'26		retrograde	8807 Sep 03 01:38	4° \mathcal{I} 35'40	
opposition	8801 Oct 24 07:50	7° \mathcal{B} 57'34	-0°59'40	opposition	8807 Nov 19 10:42	2° \mathcal{I} 37'17	-0°50'07
min. Earth dist.	8801 Oct 23 20:59	7° \mathcal{B} 58'39	18.58770 AU	min. Earth dist.	8807 Nov 18 21:00	2° \mathcal{I} 38'39	18.86098 AU
direct	8802 Jan 09 08:51	5° \mathcal{B} 58'16		direct	8808 Feb 04 02:57	0° \mathcal{I} 39'33	
evening set	8802 Apr 11 11:45	9° \mathcal{B} 06'31		evening set	8808 May 05 06:04	3° \mathcal{I} 43'01	
conjunction	8802 Apr 27 04:52	10° \mathcal{B} 01'48	-0°53'30	conjunction	8808 May 20 23:11	4° \mathcal{I} 37'27	-0°44'12
minimum elong	8802 Apr 27 04:51	10° \mathcal{B} 01'48	0°53'39	minimum elong	8808 May 20 23:11	4° \mathcal{I} 37'27	0°44'25
max. Earth dist.	8802 Apr 27 17:01	10° \mathcal{B} 03'36	20.61454 AU	max. Earth dist.	8808 May 21 14:04	4° \mathcal{I} 39'36	20.87690 AU
morning rise	8802 May 12 21:43	10° \mathcal{B} 57'04		morning rise	8808 Jun 05 17:16	5° \mathcal{I} 32'02	
retrograde	8802 Aug 13 01:37	14° \mathcal{B} 05'39		retrograde	8808 Sep 06 10:51	8° \mathcal{I} 38'41	
opposition	8802 Oct 28 21:21	12° \mathcal{B} 06'55	-0°58'47	opposition	8808 Nov 22 21:28	6° \mathcal{I} 40'16	-0°47'36
min. Earth dist.	8802 Oct 28 09:24	12° \mathcal{B} 08'07	18.64120 AU	min. Earth dist.	8808 Nov 22 06:51	6° \mathcal{I} 41'44	18.89214 AU
direct	8803 Jan 13 22:11	10° \mathcal{B} 07'57		direct	8809 Feb 07 13:12	4° \mathcal{I} 42'40	
evening set	8803 Apr 15 20:01	13° \mathcal{B} 15'19		evening set	8809 May 09 11:44	7° \mathcal{I} 45'28	
conjunction	8803 May 01 12:48	14° \mathcal{B} 10'25	-0°52'35	conjunction	8809 May 25 04:57	8° \mathcal{I} 39'49	-0°41'50
minimum elong	8803 May 01 12:48	14° \mathcal{B} 10'25	0°52'44	minimum elong	8809 May 25 04:57	8° \mathcal{I} 39'49	0°42'03
max. Earth dist.	8803 May 02 00:53	14° \mathcal{B} 12'11	20.66693 AU	max. Earth dist.	8809 May 25 19:17	8° \mathcal{I} 41'53	20.90590 AU
	8803 May 15 15:24	15° \mathcal{B}		morning rise	8809 Jun 09 23:36	9° \mathcal{I} 34'21	
morning rise	8803 May 17 05:51	15° \mathcal{B} 05'32		retrograde	8809 Sep 10 18:52	12° \mathcal{I} 40'46	
retrograde	8803 Aug 17 11:22	18° \mathcal{B} 13'44		opposition	8809 Nov 27 07:56	10° \mathcal{I} 42'17	-0°44'52
opposition	8803 Nov 02 10:38	16° \mathcal{B} 15'07	-0°57'36	min. Earth dist.	8809 Nov 26 17:53	10° \mathcal{I} 43'41	18.91912 AU
min. Earth dist.	8803 Nov 01 22:20	16° \mathcal{B} 16'21	18.69240 AU	direct	8810 Feb 11 20:59	8° \mathcal{I} 44'46	
	8803 Dec 06 02:28	15° $\mathcal{R}\mathcal{B}$		evening set	8810 May 13 16:56	11° \mathcal{I} 46'58	
direct	8804 Jan 18 09:04	14° \mathcal{B} 16'27		conjunction	8810 May 29 10:32	12° \mathcal{I} 41'14	-0°39'16
	8804 Feb 29 04:20	15° \mathcal{B}		minimum elong	8810 May 29 10:32	12° \mathcal{I} 41'14	0°39'29
evening set	8804 Apr 19 03:30	17° \mathcal{B} 22'58		max. Earth dist.	8810 May 30 02:00	12° \mathcal{I} 43'29	20.93090 AU
conjunction	8804 May 04 20:21	18° \mathcal{B} 17'54	-0°51'24	morning rise	8810 Jun 14 05:29	13° \mathcal{I} 35'44	
				retrograde	8810 Sep 15 03:36	16° \mathcal{I} 41'57	

opposition	8810 Dec 01 17:45	14° Π 43'24	-0°41'54	conjunction	8817 Jun 25 22:59	10° \mathfrak{D} 38'35	-0°16'54
min. Earth dist.	8810 Dec 01 02:36	14° Π 44'55	18.94221 AU	minimum elong	8817 Jun 25 22:59	10° \mathfrak{D} 38'35	0°17'08
direct	8811 Feb 16 06:37	12° Π 45'59		max. Earth dist.	8817 Jun 26 14:52	10° \mathfrak{D} 40'52	21.01158 AU
evening set	8811 May 17 22:02	15° Π 47'38		morning rise	8817 Jul 11 22:14	11° \mathfrak{D} 33'15	
				retrograde	8817 Oct 13 14:38	14° \mathfrak{D} 39'36	
conjunction	8811 Jun 02 15:47	16° Π 41'51	-0°36'31	opposition	8817 Dec 30 07:31	12° \mathfrak{D} 40'52	-0°16'38
minimum elong	8811 Jun 02 15:47	16° Π 41'51	0°36'45	min. Earth dist.	8817 Dec 29 16:51	12° \mathfrak{D} 42'20	19.01047 AU
max. Earth dist.	8811 Jun 03 06:56	16° Π 44'02	20.95229 AU	direct	8818 Mar 16 03:55	10° \mathfrak{D} 44'05	
morning rise	8811 Jun 18 11:20	17° Π 36'20		evening set	8818 Jun 14 07:27	13° \mathfrak{D} 44'00	
retrograde	8811 Sep 19 11:06	20° Π 42'25					
opposition	8811 Dec 06 03:27	18° Π 43'48	-0°38'45	conjunction	8818 Jun 30 04:45	14° \mathfrak{D} 38'22	-0°13'15
min. Earth dist.	8811 Dec 05 12:47	18° Π 45'16	18.96208 AU	minimum elong	8818 Jun 30 04:45	14° \mathfrak{D} 38'22	0°13'30
direct	8812 Feb 20 12:50	16° Π 46'28		behind sun begin	8818 Jun 30 01:02	14° \mathfrak{D} 37'51	
evening set	8812 May 21 02:40	19° Π 47'39		behind sun end	8818 Jun 30 08:28	14° \mathfrak{D} 38'53	
				max. Earth dist.	8818 Jun 30 20:55	14° \mathfrak{D} 40'41	21.00789 AU
conjunction	8812 Jun 05 20:57	20° Π 41'50	-0°33'35	morning rise	8818 Jul 16 04:34	15° \mathfrak{D} 33'07	
minimum elong	8812 Jun 05 20:57	20° Π 41'50	0°33'48	retrograde	8818 Oct 18 00:14	18° \mathfrak{D} 39'41	
max. Earth dist.	8812 Jun 06 13:15	20° Π 44'11	20.97059 AU	opposition	8819 Jan 03 15:47	16° \mathfrak{D} 40'54	-0°12'34
morning rise	8812 Jun 21 16:55	21° Π 36'18		min. Earth dist.	8819 Jan 03 00:35	16° \mathfrak{D} 42'25	19.00431 AU
retrograde	8812 Sep 22 19:54	24° Π 42'17		direct	8819 Mar 20 10:52	14° \mathfrak{D} 44'09	
opposition	8812 Dec 09 12:36	22° Π 43'38	-0°35'26	evening set	8819 Jun 18 13:03	17° \mathfrak{D} 44'05	
min. Earth dist.	8812 Dec 08 20:46	22° Π 45'13	18.97872 AU				
direct	8813 Feb 23 21:31	20° Π 46'24		conjunction	8819 Jul 04 10:50	18° \mathfrak{D} 38'31	-0°09'33
evening set	8813 May 25 07:28	23° Π 47'12		minimum elong	8819 Jul 04 10:50	18° \mathfrak{D} 38'31	0°09'46
				behind sun begin	8819 Jul 04 05:25	18° \mathfrak{D} 37'46	
conjunction	8813 Jun 10 02:00	24° Π 41'23	-0°30'30	behind sun end	8819 Jul 04 16:15	18° \mathfrak{D} 39'17	
minimum elong	8813 Jun 10 02:00	24° Π 41'23	0°30'44	max. Earth dist.	8819 Jul 05 01:46	18° \mathfrak{D} 40'40	20.99920 AU
max. Earth dist.	8813 Jun 10 17:50	24° Π 43'39	20.98563 AU	morning rise	8819 Jul 20 11:28	19° \mathfrak{D} 33'22	
morning rise	8813 Jun 25 22:39	25° Π 35'50		retrograde	8819 Oct 22 08:45	22° \mathfrak{D} 40'11	
retrograde	8813 Sep 27 03:26	28° Π 41'49		min. Earth dist.	8820 Jan 07 10:41	20° \mathfrak{D} 42'41	18.99309 AU
opposition	8813 Dec 13 21:28	26° Π 43'08	-0°31'56	opposition	8820 Jan 08 00:14	20° \mathfrak{D} 41'19	-0°08'25
min. Earth dist.	8813 Dec 13 06:23	26° Π 44'38	18.99223 AU	direct	8820 Mar 23 16:40	18° \mathfrak{D} 44'33	
direct	8814 Feb 28 02:42	24° Π 46'00		evening set	8820 Jun 21 18:45	21° \mathfrak{D} 44'32	
evening set	8814 May 29 12:02	27° Π 46'29					
				conjunction	8820 Jul 07 17:21	22° \mathfrak{D} 39'05	-0°05'48
conjunction	8814 Jun 14 07:10	28° Π 40'39	-0°27'16	minimum elong	8820 Jul 07 17:21	22° \mathfrak{D} 39'05	0°06'02
minimum elong	8814 Jun 14 07:10	28° Π 40'39	0°27'30	behind sun begin	8820 Jul 07 11:04	22° \mathfrak{D} 38'13	
max. Earth dist.	8814 Jun 14 23:55	28° Π 43'04	20.99755 AU	behind sun end	8820 Jul 07 23:38	22° \mathfrak{D} 39'58	
morning rise	8814 Jun 30 04:18	29° Π 35'09		max. Earth dist.	8820 Jul 08 08:09	22° \mathfrak{D} 41'13	20.98537 AU
	8814 Jul 07 15:52	0° \mathfrak{D}		morning rise	8820 Jul 23 18:39	23° \mathfrak{D} 34'03	
retrograde	8814 Oct 01 12:21	2° \mathfrak{D} 41'08		retrograde	8820 Oct 25 19:15	26° \mathfrak{D} 41'06	
opposition	8814 Dec 18 06:07	0° \mathfrak{D} 42'26	-0°28'17	opposition	8821 Jan 11 08:28	24° \mathfrak{D} 42'07	-0°04'14
min. Earth dist.	8814 Dec 17 13:58	0° \mathfrak{D} 44'03	19.00239 AU	min. Earth dist.	8821 Jan 10 18:39	24° \mathfrak{D} 43'31	18.97646 AU
	8815 Jan 05 07:54	30° \mathfrak{R} Π		direct	8821 Mar 27 23:52	22° \mathfrak{D} 45'16	
direct	8815 Mar 04 10:35	28° Π 45'25		evening set	8821 Jun 26 00:56	25° \mathfrak{D} 45'23	
	8815 Apr 28 18:02	0° \mathfrak{D}					
evening set	8815 Jun 02 16:39	1° \mathfrak{D} 45'39		conjunction	8821 Jul 12 00:06	26° \mathfrak{D} 40'02	-0°01'59
				minimum elong	8821 Jul 12 00:06	26° \mathfrak{D} 40'02	0°02'11
conjunction	8815 Jun 18 12:08	2° \mathfrak{D} 39'51	-0°23'55	behind sun begin	8821 Jul 11 17:29	26° \mathfrak{D} 39'07	
minimum elong	8815 Jun 18 12:08	2° \mathfrak{D} 39'51	0°24'10	behind sun end	8821 Jul 12 06:43	26° \mathfrak{D} 40'58	
max. Earth dist.	8815 Jun 19 04:19	2° \mathfrak{D} 42'10	21.00599 AU	max. Earth dist.	8821 Jul 12 13:28	26° \mathfrak{D} 41'57	20.96606 AU
morning rise	8815 Jul 04 10:01	3° \mathfrak{D} 34'23		morning rise	8821 Jul 28 02:15	27° \mathfrak{D} 35'07	
retrograde	8815 Oct 05 20:42	6° \mathfrak{D} 40'27			8821 Sep 18 00:56	0° \mathfrak{Q}	
opposition	8815 Dec 22 14:50	4° \mathfrak{D} 41'45	-0°24'31	retrograde	8821 Oct 30 03:01	0° \mathfrak{Q} 42'26	
min. Earth dist.	8815 Dec 21 23:36	4° \mathfrak{D} 43'16	19.00907 AU		8821 Dec 12 05:26	30° \mathfrak{R} \mathfrak{D}	
direct	8816 Mar 07 15:35	2° \mathfrak{D} 44'49		opposition	8822 Jan 15 16:46	28° \mathfrak{D} 43'18	-0°00'00
evening set	8816 Jun 05 21:21	5° \mathfrak{D} 44'53		min. Earth dist.	8822 Jan 15 04:47	28° \mathfrak{D} 44'31	18.95462 AU
				asc. node	8822 Jan 15 21:39	28° \mathfrak{D} 42'48	
conjunction	8816 Jun 21 17:30	6° \mathfrak{D} 39'07	-0°20'28	direct	8822 Apr 01 05:50	26° \mathfrak{D} 46'20	
minimum elong	8816 Jun 21 17:30	6° \mathfrak{D} 39'07	0°20'42	evening set	8822 Jun 30 07:16	29° \mathfrak{D} 46'35	
max. Earth dist.	8816 Jun 22 10:20	6° \mathfrak{D} 41'32	21.01085 AU		8822 Jul 04 06:21	0° \mathfrak{Q}	
morning rise	8816 Jul 07 15:57	7° \mathfrak{D} 33'42					
retrograde	8816 Oct 09 05:47	10° \mathfrak{D} 39'53		conjunction	8822 Jul 16 07:16	0° \mathfrak{Q} 41'23	0°01'57
opposition	8816 Dec 25 23:05	8° \mathfrak{D} 41'11	-0°20'38	minimum elong	8822 Jul 16 07:16	0° \mathfrak{Q} 41'23	0°01'44
min. Earth dist.	8816 Dec 25 07:04	8° \mathfrak{D} 42'47	19.01189 AU	behind sun begin	8822 Jul 16 00:39	0° \mathfrak{Q} 40'27	
direct	8817 Mar 11 22:46	6° \mathfrak{D} 44'20		behind sun end	8822 Jul 16 13:53	0° \mathfrak{Q} 42'18	
evening set	8817 Jun 10 02:23	9° \mathfrak{D} 44'18		max. Earth dist.	8822 Jul 16 20:29	0° \mathfrak{Q} 43'16	20.94191 AU

morning rise	8822 Aug 01 10:05	1°Ω36'35		minimum elong	8828 Aug 09 10:59	25°Ω02'37	0°24'06
retrograde	8822 Nov 03 13:51	4°Ω44'11		max. Earth dist.	8828 Aug 09 20:00	25°Ω03'55	20.72412 AU
opposition	8823 Jan 20 01:00	2°Ω44'52	0°04'14	morning rise	8828 Aug 25 18:29	25°Ω58'53	
min. Earth dist.	8823 Jan 19 12:41	2°Ω46'07	18.92814 AU	retrograde	8828 Nov 28 04:09	29°Ω09'04	
direct	8823 Apr 05 13:36	0°Ω47'44		opposition	8829 Feb 13 05:08	27°Ω08'41	0°28'44
evening set	8823 Jul 04 13:54	3°Ω48'12		min. Earth dist.	8829 Feb 12 20:48	27°Ω09'32	18.70181 AU
				direct	8829 Apr 29 07:55	25°Ω10'25	
conjunction	8823 Jul 20 14:31	4°Ω43'08	0°05'48	evening set	8829 Jul 28 16:25	28°Ω13'40	
minimum elong	8823 Jul 20 14:31	4°Ω43'08	0°05'36				
behind sun begin	8823 Jul 20 08:09	4°Ω42'15		conjunction	8829 Aug 13 21:41	29°Ω09'44	0°27'40
behind sun end	8823 Jul 20 20:54	4°Ω44'02		minimum elong	8829 Aug 13 21:41	29°Ω09'44	0°27'32
max. Earth dist.	8823 Jul 21 02:36	4°Ω44'52	20.91334 AU	max. Earth dist.	8829 Aug 14 05:33	29°Ω10'52	20.67892 AU
morning rise	8823 Aug 05 18:14	5°Ω38'30			8829 Aug 28 10:01	0°♄	
retrograde	8823 Nov 07 21:42	8°Ω46'26		morning rise	8829 Aug 30 05:56	0°♄06'14	
opposition	8824 Jan 24 09:26	6°Ω46'54	0°08'28	retrograde	8829 Dec 02 15:29	3°♄16'59	
min. Earth dist.	8824 Jan 23 22:49	6°Ω47'59	18.89768 AU	opposition	8830 Feb 17 14:48	1°♄16'29	0°32'30
direct	8824 Apr 08 19:06	4°Ω49'35		min. Earth dist.	8830 Feb 17 08:17	1°♄17'10	18.65552 AU
evening set	8824 Jul 07 20:58	7°Ω50'20			8830 Mar 23 04:19	30°♄	
				direct	8830 May 03 14:51	29°Ω18'03	
conjunction	8824 Jul 23 22:28	8°Ω45'25	0°09'35		8830 Jun 13 01:43	0°♄	
minimum elong	8824 Jul 23 22:28	8°Ω45'25	0°09'24	evening set	8830 Aug 02 03:08	2°♄22'01	
behind sun begin	8824 Jul 23 16:55	8°Ω44'38					
behind sun end	8824 Jul 24 04:01	8°Ω46'12		conjunction	8830 Aug 18 09:14	3°♄18'19	0°30'59
max. Earth dist.	8824 Jul 24 10:25	8°Ω47'08	20.88117 AU	minimum elong	8830 Aug 18 09:14	3°♄18'19	0°30'52
morning rise	8824 Aug 09 02:53	9°Ω40'56		max. Earth dist.	8830 Aug 18 16:21	3°♄19'21	20.63159 AU
retrograde	8824 Nov 11 08:49	12°Ω49'13		morning rise	8830 Sep 03 18:11	4°♄15'02	
opposition	8825 Jan 27 17:37	10°Ω49'30	0°12'39	retrograde	8830 Dec 07 05:26	7°♄26'25	
min. Earth dist.	8825 Jan 27 06:39	10°Ω50'37	18.86382 AU	opposition	8831 Feb 22 00:46	5°♄25'48	0°36'06
direct	8825 Apr 13 03:20	8°Ω51'59		min. Earth dist.	8831 Feb 21 18:17	5°♄26'28	18.60694 AU
evening set	8825 Jul 12 04:37	11°Ω53'06		direct	8831 May 08 00:15	3°♄27'11	
				evening set	8831 Aug 06 14:43	6°♄31'55	
conjunction	8825 Jul 28 06:46	12°Ω48'21	0°13'21				
minimum elong	8825 Jul 28 06:45	12°Ω48'21	0°13'09	conjunction	8831 Aug 22 21:33	7°♄28'28	0°34'10
behind sun begin	8825 Jul 28 02:50	12°Ω47'48		minimum elong	8831 Aug 22 21:33	7°♄28'28	0°34'04
behind sun end	8825 Jul 28 10:40	12°Ω48'54		max. Earth dist.	8831 Aug 23 03:24	7°♄29'19	20.58165 AU
max. Earth dist.	8825 Jul 28 17:32	12°Ω49'54	20.84572 AU	morning rise	8831 Sep 08 07:14	8°♄25'25	
morning rise	8825 Aug 13 12:00	13°Ω44'02		retrograde	8831 Dec 11 18:07	11°♄37'26	
	8825 Sep 06 09:36	15°Ω		opposition	8832 Feb 26 11:20	9°♄36'43	0°39'32
retrograde	8825 Nov 15 17:24	16°Ω52'44		min. Earth dist.	8832 Feb 26 06:57	9°♄37'10	18.55564 AU
	8826 Jan 29 03:47	15°♄		direct	8832 May 11 08:19	7°♄37'53	
opposition	8826 Feb 01 02:14	14°Ω52'49	0°16'48	evening set	8832 Aug 10 03:15	10°♄43'27	
min. Earth dist.	8826 Jan 31 16:54	14°Ω53'46	18.82700 AU				
direct	8826 Apr 17 08:47	12°Ω55'06		conjunction	8832 Aug 26 10:54	11°♄40'15	0°37'10
	8826 Jun 29 01:21	15°Ω		minimum elong	8832 Aug 26 10:53	11°♄40'15	0°37'05
evening set	8826 Jul 16 12:29	15°Ω56'39		max. Earth dist.	8832 Aug 26 15:21	11°♄40'54	20.52894 AU
				morning rise	8832 Sep 11 21:14	12°♄37'27	
conjunction	8826 Aug 01 15:29	16°Ω52'05	0°17'03	retrograde	8832 Dec 15 09:18	15°♄50'06	
minimum elong	8826 Aug 01 15:29	16°Ω52'05	0°16'53	opposition	8833 Mar 01 22:06	13°♄49'14	0°42'47
max. Earth dist.	8826 Aug 02 02:05	16°Ω53'36	20.80761 AU	min. Earth dist.	8833 Mar 01 18:09	13°♄49'39	18.50141 AU
morning rise	8826 Aug 17 21:26	17°Ω47'57		direct	8833 May 15 18:59	11°♄50'10	
retrograde	8826 Nov 20 05:18	20°Ω57'06		evening set	8833 Aug 14 16:39	14°♄56'36	
opposition	8827 Feb 05 10:55	18°Ω57'01	0°20'53				
min. Earth dist.	8827 Feb 05 01:10	18°Ω58'01	18.78758 AU	conjunction	8833 Aug 31 01:01	15°♄53'40	0°40'00
direct	8827 Apr 21 17:14	16°Ω59'07		minimum elong	8833 Aug 31 01:01	15°♄53'40	0°39'57
evening set	8827 Jul 20 21:11	20°Ω01'09		max. Earth dist.	8833 Aug 31 04:00	15°♄54'06	20.47307 AU
				morning rise	8833 Sep 16 11:57	16°♄51'06	
conjunction	8827 Aug 06 00:52	20°Ω56'47	0°20'41	retrograde	8833 Dec 19 22:55	20°♄04'24	
minimum elong	8827 Aug 06 00:52	20°Ω56'47	0°20'31	opposition	8834 Mar 06 09:38	18°♄03'23	0°45'50
max. Earth dist.	8827 Aug 06 10:22	20°Ω58'09	20.76694 AU	min. Earth dist.	8834 Mar 06 07:48	18°♄03'34	18.44408 AU
morning rise	8827 Aug 22 07:39	21°Ω52'51		direct	8834 May 20 04:21	16°♄04'02	
retrograde	8827 Nov 24 15:14	25°Ω02'30		evening set	8834 Aug 19 06:38	19°♄11'20	
opposition	8828 Feb 09 19:56	23°Ω02'15	0°24'52				
min. Earth dist.	8828 Feb 09 11:51	23°Ω03'04	18.74582 AU	conjunction	8834 Sep 04 15:46	20°♄08'39	0°42'39
direct	8828 Apr 24 23:15	21°Ω04'10		minimum elong	8834 Sep 04 15:46	20°♄08'39	0°42'35
evening set	8828 Jul 24 06:24	24°Ω06'46		max. Earth dist.	8834 Sep 04 17:08	20°♄08'51	20.41443 AU
				morning rise	8834 Sep 21 03:23	21°♄06'21	
conjunction	8828 Aug 09 10:59	25°Ω02'37	0°24'14	retrograde	8834 Dec 24 15:15	24°♄20'17	

opposition	8835 Mar 10 21:30	22° 19 '03	0°48'39	conjunction	8841 Oct 05 21:43	20° 37 '13	0°54'00
min. Earth dist.	8835 Mar 10 20:10	22° 19 '12	18.38412 AU	minimum elong	8841 Oct 05 21:43	20° 37 '13	0°54'04
direct	8835 May 24 16:11	20° 19 '23		max. Earth dist.	8841 Oct 05 15:14	20° 36 '15	19.97536 AU
evening set	8835 Aug 23 21:35	23° 19 '27'35		morning rise	8841 Oct 22 12:26	21° 36 '42	
				retrograde	8842 Jan 24 16:22	24° 35 '56	
conjunction	8835 Sep 09 07:28	24° 19 '25'11	0°45'04	opposition	8842 Apr 09 21:56	22° 35 '21	1°00'18
minimum elong	8835 Sep 09 07:28	24° 19 '25'11	0°45'01	min. Earth dist.	8842 Apr 10 04:01	22° 35 '14'2	17.94577 AU
max. Earth dist.	8835 Sep 09 07:39	24° 19 '25'13	20.35326 AU	direct	8842 Jun 23 14:27	20° 35 '01'3	
morning rise	8835 Sep 25 19:38	25° 19 '23'08		evening set	8842 Sep 24 04:43	24° 35 '05'33	
retrograde	8835 Dec 29 06:11	28° 19 '37'41					
opposition	8836 Mar 14 09:45	26° 19 '36'15	0°51'13	conjunction	8842 Oct 10 18:45	25° 35 '05'05	0°54'26
min. Earth dist.	8836 Mar 14 10:26	26° 19 '36'11	18.32200 AU	minimum elong	8842 Oct 10 18:45	25° 35 '05'05	0°54'31
direct	8836 May 28 02:58	24° 19 '36'14		max. Earth dist.	8842 Oct 10 10:18	25° 35 '03'49	19.91649 AU
evening set	8836 Aug 27 13:20	27° 19 '45'22		morning rise	8842 Oct 27 09:56	26° 35 '04'48	
				retrograde	8843 Jan 29 11:25	29° 35 '23'39	
conjunction	8836 Sep 12 23:54	28° 19 '43'14	0°47'14	opposition	8843 Apr 14 14:04	27° 35 '20'58	1°00'37
minimum elong	8836 Sep 12 23:54	28° 19 '43'14	0°47'13	min. Earth dist.	8843 Apr 14 20:56	27° 35 '20'14	17.88801 AU
max. Earth dist.	8836 Sep 12 22:19	28° 19 '43'00	20.29047 AU	direct	8843 Jun 28 07:11	25° 35 '18'32	
morning rise	8836 Sep 29 12:43	29° 19 '41'27		evening set	8843 Sep 29 02:20	28° 35 '34'59	
	8836 Oct 04 22:32	0° 35					
retrograde	8837 Jan 01 23:14	2° 35 '56'37		conjunction	8843 Oct 15 16:59	29° 35 '34'47	0°54'32
opposition	8837 Mar 18 22:27	0° 35 '54'58	0°53'31	minimum elong	8843 Oct 15 16:59	29° 35 '34'47	0°54'38
min. Earth dist.	8837 Mar 18 23:40	0° 35 '54'50	18.25863 AU	max. Earth dist.	8843 Oct 15 08:36	29° 35 '33'31	19.85973 AU
	8837 Apr 10 11:15	30° 35 ' 19			8843 Oct 22 15:46	0° 35 ' 19	
direct	8837 Jun 01 15:35	28° 35 '54'34		morning rise	8843 Nov 01 08:11	0° 35 '34'44	
	8837 Jul 22 07:44	0° 35		retrograde	8844 Feb 03 07:38	3° 35 '54'09	
evening set	8837 Sep 01 05:44	2° 35 '04'41		opposition	8844 Apr 18 06:43	1° 35 '51'25	1°00'34
				min. Earth dist.	8844 Apr 18 14:27	1° 35 '50'35	17.83227 AU
conjunction	8837 Sep 17 17:01	3° 35 '02'50	0°49'10		8844 Jun 11 09:46	30° 35 ' 19	
minimum elong	8837 Sep 17 17:01	3° 35 '02'50	0°49'10	direct	8844 Jul 02 00:41	29° 35 '48'43	
max. Earth dist.	8837 Sep 17 14:42	3° 35 '02'29	20.22656 AU		8844 Jul 22 12:50	0° 35 ' 19	
morning rise	8837 Oct 04 06:12	4° 35 '01'18		evening set	8844 Oct 03 01:01	3° 35 '06'17	
retrograde	8838 Jan 06 15:38	7° 35 '17'05					
opposition	8838 Mar 23 11:42	5° 35 '15'13	0°55'32	conjunction	8844 Oct 19 15:52	4° 35 '06'20	0°54'18
min. Earth dist.	8838 Mar 23 14:31	5° 35 '14'55	18.19455 AU	minimum elong	8844 Oct 19 15:52	4° 35 '06'20	0°54'25
direct	8838 Jun 06 03:58	3° 35 '14'27		max. Earth dist.	8844 Oct 19 05:14	4° 35 '04'43	19.80506 AU
evening set	8838 Sep 05 23:03	6° 35 '25'33		morning rise	8844 Nov 05 07:22	5° 35 '06'30	
				retrograde	8845 Feb 07 04:00	8° 35 '26'29	
conjunction	8838 Sep 22 10:54	7° 35 '23'58	0°50'49	opposition	8845 Apr 23 00:12	6° 35 '23'42	1°00'08
minimum elong	8838 Sep 22 10:54	7° 35 '23'58	0°50'51	min. Earth dist.	8845 Apr 23 09:08	6° 35 '22'44	17.77863 AU
max. Earth dist.	8838 Sep 22 06:48	7° 35 '23'22	20.16255 AU	direct	8845 Jul 06 19:02	4° 35 '20'43	
morning rise	8838 Oct 09 00:41	8° 35 '22'42		evening set	8845 Oct 08 00:14	7° 35 '39'23	
retrograde	8839 Jan 11 09:23	11° 35 '39'07					
opposition	8839 Mar 28 01:20	9° 35 '37'01	0°57'13	conjunction	8845 Oct 24 15:33	8° 35 '39'41	0°53'44
min. Earth dist.	8839 Mar 28 04:41	9° 35 '36'40	18.13073 AU	minimum elong	8845 Oct 24 15:33	8° 35 '39'41	0°53'53
direct	8839 Jun 10 17:25	7° 35 '35'53		max. Earth dist.	8845 Oct 24 04:58	8° 35 '38'04	19.75225 AU
evening set	8839 Sep 10 17:09	10° 35 '48'01		morning rise	8845 Nov 10 06:56	9° 35 '40'03	
				retrograde	8846 Feb 12 01:39	13° 35 '40'03	
conjunction	8839 Sep 27 05:44	11° 35 '46'43	0°52'11	opposition	8846 Apr 27 18:21	10° 35 '57'44	0°59'20
minimum elong	8839 Sep 27 05:44	11° 35 '46'43	0°52'13	min. Earth dist.	8846 Apr 28 03:53	10° 35 '56'42	17.72668 AU
max. Earth dist.	8839 Sep 27 01:15	11° 35 '46'03	20.09891 AU	direct	8846 Jul 11 14:31	8° 35 '54'29	
morning rise	8839 Oct 13 19:49	12° 35 '45'42		evening set	8846 Oct 13 00:33	12° 35 '41'12	
retrograde	8840 Jan 16 03:11	16° 35 '02'44					
opposition	8840 Mar 31 15:39	14° 35 '00'27	0°58'35	conjunction	8846 Oct 29 15:57	13° 35 '14'43	0°52'49
min. Earth dist.	8840 Mar 31 20:16	13° 35 '59'57	18.06753 AU	minimum elong	8846 Oct 29 15:57	13° 35 '14'43	0°52'58
direct	8840 Jun 14 07:41	11° 35 '58'57		max. Earth dist.	8846 Oct 29 03:00	13° 35 '12'44	19.70119 AU
evening set	8840 Sep 14 12:14	15° 35 '12'08		morning rise	8846 Nov 15 07:30	14° 35 '15'17	
					8846 Nov 28 03:17	15° 35 ' 19	
conjunction	8840 Oct 01 01:15	16° 35 '11'07	0°53'15	retrograde	8847 Feb 16 22:52	17° 35 '36'15	
minimum elong	8840 Oct 01 01:15	16° 35 '11'07	0°53'18	opposition	8847 May 02 13:05	15° 35 '33'22	0°58'09
max. Earth dist.	8840 Sep 30 18:49	16° 35 '10'09	20.03635 AU	min. Earth dist.	8847 May 03 00:07	15° 35 '32'10	17.67663 AU
morning rise	8840 Oct 17 15:49	17° 35 '10'21			8847 May 15 12:43	15° 35 ' 19	
retrograde	8841 Jan 19 21:19	20° 35 '27'59		direct	8847 Jul 16 10:18	13° 35 '29'49	
opposition	8841 Apr 05 06:24	18° 35 '25'32	0°59'37		8847 Sep 14 03:01	15° 35 ' 19	
min. Earth dist.	8841 Apr 05 11:36	18° 35 '24'59	18.00578 AU	evening set	8847 Oct 18 01:25	16° 35 '40'33	
direct	8841 Jun 18 22:33	16° 35 '23'41					
evening set	8841 Sep 19 08:03	19° 35 '37'57		conjunction	8847 Nov 03 17:12	17° 35 '51'18	0°51'34

minimum elong	8847 Nov 03 17:12	17° ℳ 51'18	0°51'44	opposition	8854 Jun 03 14:32	18° ✠ 15'40	0°39'37
max. Earth dist.	8847 Nov 03 04:09	17° ℳ 49'18	19.65206 AU	min. Earth dist.	8854 Jun 04 04:13	18° ✠ 14'10	17.41366 AU
morning rise	8847 Nov 20 08:34	18° ℳ 52'02		direct	8854 Aug 18 00:57	16° ✠ 10'15	
retrograde	8848 Feb 21 21:47	22° ℳ 13'24		evening set	8854 Nov 20 20:18	19° ✠ 36'27	
opposition	8848 May 06 08:24	20° ℳ 10'28	0°56'35				
min. Earth dist.	8848 May 06 19:44	20° ℳ 09'14	17.62847 AU	conjunction	8854 Dec 07 11:22	20° ✠ 38'09	0°33'46
direct	8848 Jul 20 07:45	18° ℳ 06'37		minimum elong	8854 Dec 07 11:22	20° ✠ 38'09	0°33'59
evening set	8848 Oct 22 03:01	21° ℳ 28'18		max. Earth dist.	8854 Dec 06 18:48	20° ✠ 35'34	19.40356 AU
				morning rise	8854 Dec 24 00:27	21° ✠ 39'34	
conjunction	8848 Nov 07 18:45	22° ℳ 29'14	0°49'58	retrograde	8855 Mar 26 15:30	25° ✠ 02'18	
minimum elong	8848 Nov 07 18:45	22° ℳ 29'14	0°50'09	opposition	8855 Jun 08 12:59	22° ✠ 59'10	0°35'41
max. Earth dist.	8848 Nov 07 03:40	22° ℳ 26'56	19.60508 AU	min. Earth dist.	8855 Jun 09 03:34	22° ✠ 57'34	17.39548 AU
morning rise	8848 Nov 24 10:05	23° ℳ 30'09		direct	8855 Aug 22 24:00	20° ✠ 53'37	
retrograde	8849 Feb 25 19:24	26° ℳ 51'52		evening set	8855 Nov 26 00:06	24° ✠ 20'22	
opposition	8849 May 11 04:20	24° ℳ 48'52	0°54'38				
min. Earth dist.	8849 May 11 17:11	24° ℳ 47'28	17.58290 AU	conjunction	8855 Dec 12 14:42	25° ✠ 22'04	0°30'08
direct	8849 Jul 25 04:40	22° ℳ 44'42		minimum elong	8855 Dec 12 14:42	25° ✠ 22'04	0°30'22
evening set	8849 Oct 27 04:58	26° ℳ 07'19		max. Earth dist.	8855 Dec 11 21:49	25° ✠ 19'26	19.38848 AU
				morning rise	8855 Dec 29 03:18	26° ✠ 23'30	
conjunction	8849 Nov 12 20:54	27° ℳ 08'26	0°48'02	retrograde	8856 Mar 30 16:33	29° ✠ 46'14	
minimum elong	8849 Nov 12 20:54	27° ℳ 08'26	0°48'13	opposition	8856 Jun 12 11:46	27° ✠ 43'12	0°31'31
max. Earth dist.	8849 Nov 12 05:51	27° ℳ 06'07	19.56101 AU	min. Earth dist.	8856 Jun 13 01:13	27° ✠ 41'43	17.38335 AU
morning rise	8849 Nov 29 11:57	28° ℳ 09'29		direct	8856 Aug 27 02:40	25° ✠ 37'36	
	8850 Jan 02 02:21	0° ✠		evening set	8856 Nov 30 03:49	29° ✠ 04'46	
retrograde	8850 Mar 02 19:31	1° ✠ 31'30			8856 Dec 15 00:26	0° ✠	
	8850 May 03 19:33	30° ✠					
opposition	8850 May 16 00:38	29° ℳ 28'26	0°52'19	conjunction	8856 Dec 16 18:01	0° ✠ 06'30	0°26'17
min. Earth dist.	8850 May 16 13:19	29° ℳ 27'03	17.54042 AU	minimum elong	8856 Dec 16 18:01	0° ✠ 06'30	0°26'31
direct	8850 Jul 30 03:44	27° ℳ 23'59		max. Earth dist.	8856 Dec 16 02:11	0° ✠ 04'02	19.37930 AU
	8850 Oct 18 19:22	0° ✠		morning rise	8857 Jan 02 05:48	1° ✠ 07'54	
evening set	8850 Nov 01 07:26	0° ✠ 47'26		retrograde	8857 Apr 04 14:36	4° ✠ 30'36	
				opposition	8857 Jun 17 11:01	2° ✠ 27'42	0°27'07
conjunction	8850 Nov 17 23:17	1° ✠ 48'43	0°45'46	min. Earth dist.	8857 Jun 18 01:08	2° ✠ 26'09	17.37705 AU
minimum elong	8850 Nov 17 23:17	1° ✠ 48'43	0°45'59	direct	8857 Sep 01 03:08	0° ✠ 22'05	
max. Earth dist.	8850 Nov 17 06:54	1° ✠ 46'11	19.52031 AU	evening set	8857 Dec 05 07:43	3° ✠ 49'37	
morning rise	8850 Dec 04 14:10	2° ✠ 49'53					
retrograde	8851 Mar 07 17:22	6° ✠ 12'09		conjunction	8857 Dec 21 21:15	4° ✠ 51'19	0°22'15
opposition	8851 May 20 21:33	4° ✠ 09'01	0°49'38	minimum elong	8857 Dec 21 21:15	4° ✠ 51'19	0°22'30
min. Earth dist.	8851 May 21 11:41	4° ✠ 07'29	17.50169 AU	max. Earth dist.	8857 Dec 21 04:50	4° ✠ 48'45	19.37589 AU
direct	8851 Aug 04 01:09	2° ✠ 04'17		morning rise	8858 Jan 07 08:30	5° ✠ 52'41	
evening set	8851 Nov 06 10:18	5° ✠ 28'32		retrograde	8858 Apr 09 15:14	9° ✠ 15'17	
max. Earth dist.	8851 Nov 22 09:44	6° ✠ 27'25	19.48368 AU	opposition	8858 Jun 22 10:19	7° ✠ 12'32	0°22'32
				min. Earth dist.	8858 Jun 22 23:32	7° ✠ 11'06	17.37630 AU
conjunction	8851 Nov 23 02:08	6° ✠ 29'57	0°43'12	direct	8858 Sep 06 06:16	5° ✠ 06'55	
minimum elong	8851 Nov 23 02:08	6° ✠ 29'57	0°43'25	evening set	8858 Dec 10 11:31	8° ✠ 34'44	
morning rise	8851 Dec 09 16:39	7° ✠ 31'13		max. Earth dist.	8858 Dec 26 09:26	9° ✠ 34'01	19.37760 AU
retrograde	8852 Mar 11 18:28	10° ✠ 53'40					
opposition	8852 May 24 18:40	8° ✠ 50'30	0°46'37	conjunction	8858 Dec 27 00:36	9° ✠ 36'23	0°18'04
min. Earth dist.	8852 May 25 08:15	8° ✠ 49'01	17.46722 AU	minimum elong	8858 Dec 27 00:36	9° ✠ 36'23	0°18'20
direct	8852 Aug 08 01:32	6° ✠ 45'30		morning rise	8859 Jan 12 10:55	10° ✠ 37'40	
evening set	8852 Nov 10 13:30	10° ✠ 10'28		retrograde	8859 Apr 14 14:12	14° ✠ 00'07	
				opposition	8859 Jun 27 10:07	11° ✠ 57'32	0°17'48
conjunction	8852 Nov 27 05:06	11° ✠ 12'00	0°40'20	min. Earth dist.	8859 Jun 27 23:50	11° ✠ 56'03	17.38035 AU
minimum elong	8852 Nov 27 05:06	11° ✠ 12'00	0°40'33	direct	8859 Sep 11 07:57	9° ✠ 51'57	
max. Earth dist.	8852 Nov 26 12:13	11° ✠ 09'23	19.45155 AU	evening set	8859 Dec 15 15:22	13° ✠ 19'55	
morning rise	8852 Dec 13 19:12	12° ✠ 13'22		max. Earth dist.	8859 Dec 31 11:31	14° ✠ 18'58	19.38398 AU
retrograde	8853 Mar 16 16:25	15° ✠ 35'56					
opposition	8853 May 29 16:29	13° ✠ 32'45	0°43'16	conjunction	8860 Jan 01 03:34	14° ✠ 21'29	0°13'47
min. Earth dist.	8853 May 30 07:11	13° ✠ 31'09	17.43770 AU	minimum elong	8860 Jan 01 03:34	14° ✠ 21'29	0°14'00
direct	8853 Aug 12 23:35	11° ✠ 27'31		behind sun begin	8860 Jan 01 00:16	14° ✠ 20'58	
evening set	8853 Nov 15 16:42	14° ✠ 53'09		behind sun end	8860 Jan 01 06:52	14° ✠ 21'59	
				morning rise	8860 Jan 17 13:13	15° ✠ 22'40	
conjunction	8853 Dec 02 08:04	15° ✠ 54'46	0°37'11	retrograde	8860 Apr 18 14:24	18° ✠ 44'55	
minimum elong	8853 Dec 02 08:04	15° ✠ 54'46	0°37'24	opposition	8860 Jul 01 09:58	16° ✠ 42'29	0°12'57
max. Earth dist.	8853 Dec 01 15:10	15° ✠ 52'08	19.42476 AU	min. Earth dist.	8860 Jul 01 23:00	16° ✠ 41'04	17.38898 AU
morning rise	8853 Dec 18 21:45	16° ✠ 56'10		direct	8860 Sep 15 10:52	14° ✠ 36'55	
retrograde	8854 Mar 21 17:36	20° ✠ 18'51		evening set	8860 Dec 19 18:47	18° ✠ 04'55	

conjunction	8861 Jan 05 06:25	19°30'23" 0°09'23"	behind sun end	8866 Jan 29 16:32	12°41'07"	
minimum elong	8861 Jan 05 06:25	19°30'23" 0°09'38"	max. Earth dist.	8866 Jan 29 00:14	12°38'36"	19.50985 AU
behind sun begin	8861 Jan 05 00:53	19°30'53"	morning rise	8866 Feb 14 16:32	13°40'37"	
behind sun end	8861 Jan 05 11:56	19°30'7"14"		8866 Mar 09 16:13	15°	
max. Earth dist.	8861 Jan 04 15:50	19°30'47" 19.39473 AU	retrograde	8866 May 17 06:03	17°00'25"	
morning rise	8861 Jan 21 15:02	20°30'7"27"		8866 Jul 29 20:55	15°R	
retrograde	8861 Apr 23 13:54	23°32'9"24"	opposition	8866 Jul 30 09:09	14°58'41"	-0°16'41"
opposition	8861 Jul 06 10:04	21°32'7"08" 0°08'00"	min. Earth dist.	8866 Jul 30 19:24	14°57'35"	17.52723 AU
min. Earth dist.	8861 Jul 06 23:06	21°32'5'43" 17.40178 AU	direct	8866 Oct 14 22:34	12°53'32"	
direct	8861 Sep 20 12:43	19°32'1'36"		8866 Dec 26 02:55	15°	
evening set	8861 Dec 24 21:55	22°34'9"32"	evening set	8867 Jan 18 05:15	16°19'37"	
conjunction	8862 Jan 10 08:36	23°35'0"52" 0°04'57"	conjunction	8867 Feb 03 11:33	17°19'58"	-0°17'11"
minimum elong	8862 Jan 10 08:36	23°35'0"52" 0°05'10"	minimum elong	8867 Feb 03 11:33	17°19'58"	0°17'00"
behind sun begin	8862 Jan 10 02:06	23°34'9"52"	max. Earth dist.	8867 Feb 03 01:03	17°18'20"	19.54570 AU
behind sun end	8862 Jan 10 15:06	23°35'1'51"	morning rise	8867 Feb 19 14:46	18°19'52"	
max. Earth dist.	8862 Jan 09 17:17	23°34'8"28" 19.40964 AU	retrograde	8867 May 22 03:17	21°39'07"	
morning rise	8862 Jan 26 16:32	24°35'1'47"	opposition	8867 Aug 04 08:21	19°37'31"	-0°21'22"
retrograde	8862 Apr 28 13:30	28°31'3'25"	min. Earth dist.	8867 Aug 04 16:47	19°36'37"	17.56531 AU
opposition	8862 Jul 11 10:07	26°31'1'15" 0°03'01"	direct	8867 Oct 20 00:40	17°32'32"	
min. Earth dist.	8862 Jul 11 22:41	26°30'9"54" 17.41874 AU	evening set	8868 Jan 23 04:33	20°57'59"	
direct	8862 Sep 25 15:01	24°30'5'46"				
evening set	8862 Dec 30 00:36	27°33'3'32"	conjunction	8868 Feb 08 09:48	21°58'05"	-0°21'18"
conjunction	8863 Jan 15 10:37	28°33'4'43" 0°00'26"	minimum elong	8868 Feb 08 09:47	21°58'05"	0°21'09"
minimum elong	8863 Jan 15 10:37	28°33'4'43" 0°00'38"	max. Earth dist.	8868 Feb 08 00:24	21°56'37"	19.58611 AU
behind sun begin	8863 Jan 15 03:56	28°33'3'41"	morning rise	8868 Feb 24 12:04	22°57'44"	
behind sun end	8863 Jan 15 17:18	28°33'5'44"	retrograde	8868 May 25 22:54	26°16'27"	
max. Earth dist.	8863 Jan 14 20:49	28°33'2'34" 19.42858 AU	opposition	8868 Aug 08 07:23	24°15'00"	-0°25'53"
morning rise	8863 Jan 31 17:29	29°33'5'28"	min. Earth dist.	8868 Aug 08 15:21	24°14'09"	17.60820 AU
	8863 Feb 07 12:12	0°	direct	8868 Oct 24 00:52	22°10'15"	
desc. node	8863 Feb 18 01:28	0°36'36"	evening set	8869 Jan 27 03:02	25°35'01"	
retrograde	8863 May 03 12:38	2°56'41"	conjunction	8869 Feb 12 07:21	26°34'50"	-0°25'16"
opposition	8863 Jul 16 10:04	0°54'40" -0°01'59"	minimum elong	8869 Feb 12 07:20	26°34'50"	0°25'07"
min. Earth dist.	8863 Jul 16 22:09	0°53'21" 17.43956 AU	max. Earth dist.	8869 Feb 11 23:24	26°33'37"	19.63140 AU
	8863 Aug 07 05:57	30°R3"	morning rise	8869 Feb 28 08:44	27°34'14"	
direct	8863 Sep 30 17:09	28°34'9"14"		8869 Apr 16 13:52	0°H	
	8863 Nov 22 10:13	0°	retrograde	8869 May 30 19:18	0°H52'24"	
evening set	8864 Jan 04 02:55	2°16'43"		8869 Jul 15 12:58	30°R	
conjunction	8864 Jan 20 11:54	3°17'43" -0°04'09"	opposition	8869 Aug 13 05:52	28°51'08"	-0°30'12"
minimum elong	8864 Jan 20 11:54	3°17'43" 0°03'56"	min. Earth dist.	8869 Aug 13 11:37	28°50'32"	17.65567 AU
behind sun begin	8864 Jan 20 05:17	3°16'43"	direct	8869 Oct 29 02:00	26°46'40"	
behind sun end	8864 Jan 20 18:31	3°18'44"		8870 Jan 29 01:25	0°H	
max. Earth dist.	8864 Jan 19 21:46	3°15'31" 19.45148 AU	evening set	8870 Feb 01 00:42	0°H10'43"	
morning rise	8864 Feb 05 17:57	4°18'17"	conjunction	8870 Feb 17 04:05	1°H10'16"	-0°29'03"
retrograde	8864 May 07 10:59	7°39'05"	minimum elong	8870 Feb 17 04:05	1°H10'16"	0°28'56"
opposition	8864 Jul 20 10:02	5°37'09" -0°06'58"	max. Earth dist.	8870 Feb 16 21:40	1°H09'17"	19.68099 AU
min. Earth dist.	8864 Jul 20 21:45	5°35'53" 17.46457 AU	morning rise	8870 Mar 05 04:33	2°H09'24"	
direct	8864 Oct 04 19:08	3°31'47"	retrograde	8870 Jun 04 13:49	5°H27'01"	
evening set	8865 Jan 08 04:16	6°58'53"	opposition	8870 Aug 18 04:10	3°H25'59"	-0°34'18"
conjunction	8865 Jan 24 12:28	7°59'41" -0°08'34"	min. Earth dist.	8870 Aug 18 09:41	3°H25'24"	17.70725 AU
minimum elong	8865 Jan 24 12:28	7°59'41" 0°08'23"	direct	8870 Nov 03 01:08	1°H21'50"	
behind sun begin	8865 Jan 24 06:35	7°58'48"	evening set	8871 Feb 05 21:40	4°H45'07"	
behind sun end	8865 Jan 24 18:20	8°00'35"	conjunction	8871 Feb 22 00:02	5°H44'23"	-0°32'38"
max. Earth dist.	8865 Jan 24 00:01	7°57'45" 19.47857 AU	minimum elong	8871 Feb 22 00:02	5°H44'23"	0°32'31"
morning rise	8865 Feb 09 17:31	9°00'03"	max. Earth dist.	8871 Feb 21 18:37	5°H43'33"	19.73439 AU
retrograde	8865 May 12 09:08	12°20'22"	morning rise	8871 Mar 09 23:42	6°H43'15"	
opposition	8865 Jul 25 09:46	10°18'32" -0°11'53"	retrograde	8871 Jun 09 09:19	10°H00'18"	
min. Earth dist.	8865 Jul 25 20:18	10°17'24" 17.49365 AU	opposition	8871 Aug 23 01:57	7°H59'30"	-0°38'10"
direct	8865 Oct 09 21:26	8°13'17"	min. Earth dist.	8871 Aug 23 05:18	7°H59'09"	17.76214 AU
evening set	8866 Jan 13 05:10	11°39'54"	direct	8871 Nov 08 01:25	5°H55'43"	
conjunction	8866 Jan 29 12:20	12°40'29" -0°12'55"	evening set	8872 Feb 10 17:49	9°H18'10"	
minimum elong	8866 Jan 29 12:20	12°40'29" 0°12'43"	conjunction	8872 Feb 26 19:18	10°H17'08"	-0°36'00"
behind sun begin	8866 Jan 29 08:08	12°39'50"	minimum elong	8872 Feb 26 19:18	10°H17'08"	0°35'55"

max. Earth dist.	8872 Feb 26 15:41	10° \mathbb{X} 16'35	19.79067 AU	min. Earth dist.	8878 Sep 23 19:52	9° \mathbb{Y} 11'21	18.18235 AU
morning rise	8872 Mar 13 18:03	11° \mathbb{X} 15'44		direct	8878 Dec 10 00:59	7° \mathbb{Y} 09'36	
retrograde	8872 Jun 13 02:46	14° \mathbb{X} 32'13		evening set	8879 Mar 13 15:10	10° \mathbb{Y} 24'59	
opposition	8872 Aug 26 23:37	12° \mathbb{X} 31'40	-0°41'46				
min. Earth dist.	8872 Aug 27 02:52	12° \mathbb{X} 31'20	17.81969 AU	conjunction	8879 Mar 29 10:59	11° \mathbb{Y} 21'55	-0°52'08
direct	8872 Nov 11 22:54	10° \mathbb{X} 28'14		minimum elong	8879 Mar 29 10:59	11° \mathbb{Y} 21'55	0°52'11
evening set	8873 Feb 14 13:05	13° \mathbb{X} 49'48		max. Earth dist.	8879 Mar 29 14:02	11° \mathbb{Y} 22'22	20.21219 AU
				morning rise	8879 Apr 14 05:26	12° \mathbb{Y} 18'38	
conjunction	8873 Mar 02 13:34	14° \mathbb{X} 48'29	-0°39'08	retrograde	8879 Jul 14 20:50	15° \mathbb{Y} 30'45	
minimum elong	8873 Mar 02 13:34	14° \mathbb{X} 48'29	0°39'03	opposition	8879 Sep 28 16:19	13° \mathbb{Y} 31'16	-0°58'30
max. Earth dist.	8873 Mar 02 10:32	14° \mathbb{X} 48'01	19.84926 AU	min. Earth dist.	8879 Sep 28 11:52	13° \mathbb{Y} 31'43	18.24208 AU
morning rise	8873 Mar 18 11:39	15° \mathbb{X} 46'48		direct	8879 Dec 14 19:05	11° \mathbb{Y} 30'03	
retrograde	8873 Jun 17 21:43	19° \mathbb{X} 02'42		evening set	8880 Mar 17 04:12	14° \mathbb{Y} 44'20	
opposition	8873 Aug 31 20:40	17° \mathbb{X} 02'22	-0°45'06				
min. Earth dist.	8873 Aug 31 21:51	17° \mathbb{X} 02'15	17.87908 AU	conjunction	8880 Apr 01 23:36	15° \mathbb{Y} 40'59	-0°53'15
direct	8873 Nov 16 21:48	14° \mathbb{X} 59'18		minimum elong	8880 Apr 01 23:36	15° \mathbb{Y} 40'59	0°53'19
evening set	8874 Feb 19 07:37	18° \mathbb{X} 19'56		max. Earth dist.	8880 Apr 02 05:00	15° \mathbb{Y} 41'48	20.27173 AU
				morning rise	8880 Apr 17 17:28	16° \mathbb{Y} 37'27	
conjunction	8874 Mar 07 07:19	19° \mathbb{X} 18'19	-0°42'00	retrograde	8880 Jul 18 09:50	19° \mathbb{Y} 48'56	
minimum elong	8874 Mar 07 07:19	19° \mathbb{X} 18'19	0°41'56	opposition	8880 Oct 02 09:29	17° \mathbb{Y} 49'32	-0°59'34
max. Earth dist.	8874 Mar 07 06:08	19° \mathbb{X} 18'09	19.90921 AU	min. Earth dist.	8880 Oct 02 04:20	17° \mathbb{Y} 50'04	18.30157 AU
morning rise	8874 Mar 23 04:31	20° \mathbb{X} 16'22		direct	8880 Dec 18 13:03	15° \mathbb{Y} 48'36	
retrograde	8874 Jun 22 14:01	23° \mathbb{X} 31'39		evening set	8881 Mar 21 16:27	19° \mathbb{Y} 01'47	
opposition	8874 Sep 05 17:18	21° \mathbb{X} 31'33	-0°48'08				
min. Earth dist.	8874 Sep 05 18:33	21° \mathbb{X} 31'25	17.93956 AU	conjunction	8881 Apr 06 11:09	19° \mathbb{Y} 58'10	-0°54'04
direct	8874 Nov 21 17:51	19° \mathbb{X} 28'50		minimum elong	8881 Apr 06 11:09	19° \mathbb{Y} 58'10	0°54'08
evening set	8875 Feb 24 01:26	22° \mathbb{X} 48'30		max. Earth dist.	8881 Apr 06 16:45	19° \mathbb{Y} 59'00	20.33120 AU
				morning rise	8881 Apr 22 04:53	20° \mathbb{Y} 54'24	
conjunction	8875 Mar 12 00:09	23° \mathbb{X} 46'35	-0°44'36	retrograde	8881 Jul 22 22:53	24° \mathbb{Y} 05'18	
minimum elong	8875 Mar 12 00:09	23° \mathbb{X} 46'35	0°44'34	opposition	8881 Oct 07 01:55	22° \mathbb{Y} 05'58	-1°00'17
max. Earth dist.	8875 Mar 11 23:07	23° \mathbb{X} 46'25	19.97005 AU	min. Earth dist.	8881 Oct 06 19:06	22° \mathbb{Y} 06'40	18.36107 AU
morning rise	8875 Mar 27 20:47	24° \mathbb{X} 44'21		direct	8881 Dec 23 05:08	20° \mathbb{Y} 05'19	
retrograde	8875 Jun 27 07:59	27° \mathbb{X} 59'01		evening set	8882 Mar 26 03:50	23° \mathbb{Y} 17'27	
opposition	8875 Sep 10 13:28	25° \mathbb{X} 59'06	-0°50'51				
min. Earth dist.	8875 Sep 10 12:47	25° \mathbb{X} 59'10	18.00059 AU	conjunction	8882 Apr 10 22:14	24° \mathbb{Y} 13'35	-0°54'35
direct	8875 Nov 26 15:09	23° \mathbb{X} 56'43		minimum elong	8882 Apr 10 22:14	24° \mathbb{Y} 13'35	0°54'41
evening set	8876 Feb 28 18:07	27° \mathbb{X} 15'21		max. Earth dist.	8882 Apr 11 06:08	24° \mathbb{Y} 14'46	20.39054 AU
				morning rise	8882 Apr 26 15:30	25° \mathbb{Y} 09'35	
conjunction	8876 Mar 15 16:10	28° \mathbb{X} 13'09	-0°46'56	retrograde	8882 Jul 27 10:41	28° \mathbb{Y} 19'56	
minimum elong	8876 Mar 15 16:10	28° \mathbb{X} 13'09	0°46'54	opposition	8882 Oct 11 17:42	26° \mathbb{Y} 20'43	-1°00'40
max. Earth dist.	8876 Mar 15 17:08	28° \mathbb{X} 13'18	20.03106 AU	min. Earth dist.	8882 Oct 11 09:59	26° \mathbb{Y} 21'30	18.42024 AU
morning rise	8876 Mar 31 11:59	29° \mathbb{X} 10'39		direct	8882 Dec 27 21:29	24° \mathbb{Y} 20'24	
	8876 Apr 14 18:14	0° \mathbb{Y}		evening set	8883 Mar 30 14:38	27° \mathbb{Y} 31'30	
retrograde	8876 Jun 30 23:38	2° \mathbb{Y} 24'41					
opposition	8876 Sep 14 09:14	0° \mathbb{Y} 24'56	-0°53'16	conjunction	8883 Apr 15 08:26	28° \mathbb{Y} 27'24	-0°54'47
min. Earth dist.	8876 Sep 14 08:29	0° \mathbb{Y} 25'01	18.06157 AU	minimum elong	8883 Apr 15 08:26	28° \mathbb{Y} 27'24	0°54'53
	8876 Sep 24 11:20	30° \mathbb{X}		max. Earth dist.	8883 Apr 15 16:26	28° \mathbb{Y} 28'35	20.44955 AU
direct	8876 Nov 30 10:24	28° \mathbb{X} 22'53		morning rise	8883 May 01 01:40	29° \mathbb{Y} 23'12	
	8877 Feb 01 15:35	0° \mathbb{Y}			8883 May 11 20:20	0° \mathbb{X}	
evening set	8877 Mar 04 10:07	1° \mathbb{Y} 40'27		retrograde	8883 Jul 31 23:06	2° \mathbb{X} 33'02	
				opposition	8883 Oct 16 09:01	0° \mathbb{X} 33'56	-1°00'43
conjunction	8877 Mar 20 07:17	2° \mathbb{Y} 37'57	-0°48'58	min. Earth dist.	8883 Oct 15 23:55	0° \mathbb{X} 34'51	18.47899 AU
minimum elong	8877 Mar 20 07:17	2° \mathbb{Y} 37'57	0°48'58		8883 Oct 30 11:27	30° \mathbb{X} \mathbb{Y}	
max. Earth dist.	8877 Mar 20 08:14	2° \mathbb{Y} 38'05	20.09194 AU	direct	8884 Jan 01 11:35	28° \mathbb{Y} 33'58	
morning rise	8877 Apr 05 02:42	3° \mathbb{Y} 35'11			8884 Mar 01 01:08	0° \mathbb{X}	
retrograde	8877 Jul 05 15:53	6° \mathbb{Y} 48'35		evening set	8884 Apr 03 00:25	1° \mathbb{X} 44'04	
opposition	8877 Sep 19 04:06	4° \mathbb{Y} 48'57	-0°55'21				
min. Earth dist.	8877 Sep 19 01:38	4° \mathbb{Y} 49'12	18.12228 AU	conjunction	8884 Apr 18 18:04	2° \mathbb{X} 39'45	-0°54'42
direct	8877 Dec 05 06:06	2° \mathbb{Y} 47'11		minimum elong	8884 Apr 18 18:04	2° \mathbb{X} 39'45	0°54'49
evening set	8878 Mar 09 01:04	6° \mathbb{Y} 03'41		max. Earth dist.	8884 Apr 19 04:17	2° \mathbb{X} 41'16	20.50777 AU
				morning rise	8884 May 04 11:00	3° \mathbb{X} 35'21	
conjunction	8878 Mar 24 21:43	7° \mathbb{Y} 00'54	-0°50'42	retrograde	8884 Aug 04 10:03	6° \mathbb{X} 44'43	
minimum elong	8878 Mar 24 21:42	7° \mathbb{Y} 00'54	0°50'43	opposition	8884 Oct 19 23:45	4° \mathbb{X} 45'46	-1°00'26
max. Earth dist.	8878 Mar 25 00:41	7° \mathbb{Y} 01'21	20.15232 AU	min. Earth dist.	8884 Oct 19 13:45	4° \mathbb{X} 46'47	18.53652 AU
morning rise	8878 Apr 09 16:27	7° \mathbb{Y} 57'52		direct	8885 Jan 05 02:20	2° \mathbb{X} 46'09	
retrograde	8878 Jul 10 06:21	11° \mathbb{Y} 10'37		evening set	8885 Apr 07 09:51	5° \mathbb{X} 55'19	
opposition	8878 Sep 23 22:35	9° \mathbb{Y} 11'05	-0°57'06				
















































































































conjunction	8885 Apr 23 03:03	6°850'46 -0°54'19	minimum elong	8891 May 18 00:07	1°II33'25 0°46'36
minimum elong	8885 Apr 23 03:03	6°850'46 0°54'27	max. Earth dist.	8891 May 18 13:25	1°II35'21 20.84264 AU
max. Earth dist.	8885 Apr 23 13:09	6°852'16 20.56456 AU	morning rise	8891 Jun 02 18:00	2°II28'06
morning rise	8885 May 08 20:06	7°846'12	retrograde	8891 Sep 03 08:38	5°II35'01
retrograde	8885 Aug 08 21:58	10°855'08	opposition	8891 Nov 19 17:10	3°II36'39 -0°50'08
opposition	8885 Oct 24 13:48	8°856'19 -0°59'50	min. Earth dist.	8891 Nov 19 03:53	3°II37'59 18.85951 AU
min. Earth dist.	8885 Oct 24 02:59	8°857'25 18.59244 AU	direct	8892 Feb 04 09:48	1°II38'54
direct	8886 Jan 09 14:44	6°857'03	evening set	8892 May 05 13:07	4°II42'27
evening set	8886 Apr 11 18:34	10°805'18			
conjunction	8886 Apr 27 11:43	11°800'35 -0°53'39	conjunction	8892 May 21 06:17	5°II36'53 -0°44'12
minimum elong	8886 Apr 27 11:43	11°800'35 0°53'48	minimum elong	8892 May 21 06:17	5°II36'53 0°44'25
max. Earth dist.	8886 Apr 27 23:42	11°802'21 20.61934 AU	max. Earth dist.	8892 May 21 20:55	5°II39'00 20.87484 AU
morning rise	8886 May 13 04:36	11°855'51	morning rise	8892 Jun 06 00:23	6°II31'29
retrograde	8886 Jul 31 05:35	15°8	retrograde	8892 Sep 06 17:25	9°II38'08
	8886 Aug 13 08:04	15°804'22	opposition	8892 Nov 23 03:57	7°II39'44 -0°47'35
	8886 Aug 26 13:20	15°88	min. Earth dist.	8892 Nov 22 13:49	7°II41'09 18.88962 AU
opposition	8886 Oct 29 03:32	13°805'42 -0°58'56	direct	8893 Feb 07 20:11	5°II42'07
min. Earth dist.	8886 Oct 28 15:54	13°806'52 18.64590 AU	evening set	8893 May 09 18:49	8°II44'59
direct	8887 Jan 14 04:10	11°806'46	conjunction	8893 May 25 12:01	9°II39'20 -0°41'48
evening set	8887 Apr 16 02:49	14°814'09	minimum elong	8893 May 25 12:01	9°II39'20 0°42'02
	8887 Apr 29 04:57	15°8	max. Earth dist.	8893 May 26 02:07	9°II41'23 20.90310 AU
conjunction	8887 May 01 19:38	15°809'14 -0°52'43	morning rise	8893 Jun 10 06:40	10°II33'53
minimum elong	8887 May 01 19:38	15°809'14 0°52'53	retrograde	8893 Sep 11 01:20	13°II40'19
max. Earth dist.	8887 May 02 07:19	15°810'58 20.67142 AU	opposition	8893 Nov 27 14:15	11°II41'51 -0°44'49
morning rise	8887 May 17 12:42	16°804'22	min. Earth dist.	8893 Nov 27 00:24	11°II43'14 18.91620 AU
retrograde	8887 Aug 17 19:12	19°812'31	direct	8894 Feb 12 03:57	9°II44'19
opposition	8887 Nov 02 16:52	17°813'58 -0°57'44	evening set	8894 May 14 00:02	12°II46'37
min. Earth dist.	8887 Nov 02 04:46	17°815'11 18.69656 AU	conjunction	8894 May 29 17:38	13°II40'54 -0°39'13
direct	8888 Jan 18 15:26	15°815'21	minimum elong	8894 May 29 17:38	13°II40'54 0°39'27
evening set	8888 Apr 19 10:31	18°821'54	max. Earth dist.	8894 May 30 09:05	13°II43'08 20.92801 AU
conjunction	8888 May 05 03:24	19°816'50 -0°51'31	morning rise	8894 Jun 14 12:33	14°II35'24
minimum elong	8888 May 05 03:25	19°816'50 0°51'41	retrograde	8894 Sep 15 09:50	17°II41'39
max. Earth dist.	8888 May 05 16:41	19°818'47 20.72034 AU	min. Earth dist.	8894 Dec 01 09:12	15°II44'38 18.93948 AU
morning rise	8888 May 20 20:26	20°811'49	opposition	8894 Dec 02 00:11	15°II43'08 -0°41'50
retrograde	8888 Aug 21 04:49	23°819'38	direct	8895 Feb 16 12:40	13°II45'43
opposition	8888 Nov 06 05:34	21°821'11 -0°56'14	evening set	8895 May 18 05:01	16°II47'29
min. Earth dist.	8888 Nov 05 16:46	21°822'28 18.74361 AU	conjunction	8895 Jun 02 22:46	17°II41'42 -0°36'26
direct	8889 Jan 22 03:42	19°822'51	minimum elong	8895 Jun 02 22:46	17°II41'42 0°36'39
evening set	8889 Apr 23 17:56	22°828'36	max. Earth dist.	8895 Jun 03 13:47	17°II43'53 20.94978 AU
conjunction	8889 May 09 10:38	23°823'23 -0°50'03	morning rise	8895 Jun 18 18:18	18°II36'11
minimum elong	8889 May 09 10:38	23°823'23 0°50'15	retrograde	8895 Sep 19 17:49	21°II42'19
max. Earth dist.	8889 May 09 23:18	23°825'15 20.76542 AU	opposition	8895 Dec 06 09:53	19°II43'45 -0°38'39
morning rise	8889 May 25 04:01	24°818'16	min. Earth dist.	8895 Dec 05 19:10	19°II45'13 18.95981 AU
retrograde	8889 Aug 25 14:42	27°825'46	direct	8896 Feb 20 19:43	17°II46'27
opposition	8889 Nov 10 17:55	25°827'22 -0°54'28	evening set	8896 May 21 09:47	20°II47'44
min. Earth dist.	8889 Nov 10 05:09	25°828'39 18.78668 AU	conjunction	8896 Jun 06 04:04	21°II41'57 -0°33'28
direct	8890 Jan 26 13:35	23°829'17	minimum elong	8896 Jun 06 04:04	21°II41'57 0°33'43
evening set	8890 Apr 28 00:45	26°834'16	max. Earth dist.	8896 Jun 06 20:20	21°II44'17 20.96858 AU
conjunction	8890 May 13 17:38	27°828'55 -0°48'20	morning rise	8896 Jun 21 23:59	22°II36'25
minimum elong	8890 May 13 17:38	27°828'55 0°48'31	retrograde	8896 Sep 23 02:29	25°II42'27
max. Earth dist.	8890 May 14 07:35	27°830'58 20.80626 AU	opposition	8896 Dec 09 18:58	23°II43'52 -0°35'18
morning rise	8890 May 29 11:03	28°823'41	min. Earth dist.	8896 Dec 09 03:14	23°II45'27 18.97698 AU
retrograde	8890 Jun 29 04:01	0°II	direct	8897 Feb 24 03:23	21°II46'40
	8890 Aug 29 23:56	1°II30'53	evening set	8897 May 25 14:37	24°II47'35
	8890 Nov 03 17:03	30°88	conjunction	8897 Jun 10 09:09	25°II41'46 -0°30'22
opposition	8890 Nov 15 05:43	29°832'32 -0°52'26	minimum elong	8897 Jun 10 09:09	25°II41'46 0°30'36
min. Earth dist.	8890 Nov 14 16:14	29°833'53 18.82521 AU	max. Earth dist.	8897 Jun 11 00:45	25°II44'00 20.98414 AU
direct	8891 Jan 31 01:12	27°834'39	morning rise	8897 Jun 26 05:47	26°II36'15
	8891 Apr 20 14:45	0°II	retrograde	8897 Sep 27 10:27	29°II42'16
evening set	8891 May 02 07:18	0°II38'53	opposition	8897 Dec 14 04:03	27°II43'39 -0°31'46
conjunction	8891 May 18 00:07	1°II33'25 -0°46'23	min. Earth dist.	8897 Dec 13 12:54	27°II45'10 18.99092 AU
			direct	8898 Feb 28 09:34	25°II46'33

evening set	8898 May 29 19:10	28° Π 47'08	evening set	8904 Jun 23 02:34	22° \mathfrak{D} 45'45
conjunction	8898 Jun 14 14:16	29° Π 41'20 -0°27'07	conjunction	8904 Jul 09 01:10	23° \mathfrak{D} 40'19 -0°05'29
minimum elong	8898 Jun 14 14:17	29° Π 41'20 0°27'22	minimum elong	8904 Jul 09 01:09	23° \mathfrak{D} 40'18 0°05'42
max. Earth dist.	8898 Jun 15 06:58	29° Π 43'44 20.99636 AU	behind sun begin	8904 Jul 08 18:49	23° \mathfrak{D} 39'25
	8898 Jun 19 23:47	0° \mathfrak{D}	behind sun end	8904 Jul 09 07:29	23° \mathfrak{D} 41'12
morning rise	8898 Jun 30 11:21	0° \mathfrak{D} 35'49	max. Earth dist.	8904 Jul 09 15:31	23° \mathfrak{D} 42'22 20.97837 AU
retrograde	8898 Oct 01 19:42	3° \mathfrak{D} 41'52	morning rise	8904 Jul 25 02:23	24° \mathfrak{D} 35'16
opposition	8898 Dec 18 12:50	1° \mathfrak{D} 43'14 -0°28'06	retrograde	8904 Oct 27 01:10	27° \mathfrak{D} 42'16
min. Earth dist.	8898 Dec 17 20:46	1° \mathfrak{D} 44'51 19.00124 AU	opposition	8905 Jan 12 15:33	25° \mathfrak{D} 43'13 -0°03'52
	8899 Feb 09 02:28	30° \mathfrak{R} Π	min. Earth dist.	8905 Jan 12 02:16	25° \mathfrak{D} 44'33 18.96868 AU
direct	8899 Mar 04 17:11	29° Π 46'15	direct	8905 Mar 29 07:55	23° \mathfrak{D} 46'14
	8899 Mar 27 23:19	0° \mathfrak{D}	evening set	8905 Jun 27 08:42	26° \mathfrak{D} 46'21
evening set	8899 Jun 03 00:01	2° \mathfrak{D} 46'35			
conjunction	8899 Jun 18 19:27	3° \mathfrak{D} 40'47 -0°23'44	conjunction	8905 Jul 13 07:50	27° \mathfrak{D} 41'01 -0°01'38
minimum elong	8899 Jun 18 19:27	3° \mathfrak{D} 40'47 0°23'59	minimum elong	8905 Jul 13 07:49	27° \mathfrak{D} 41'01 0°01'52
max. Earth dist.	8899 Jun 19 11:21	3° \mathfrak{D} 43'04 21.00484 AU	behind sun begin	8905 Jul 13 01:12	27° \mathfrak{D} 40'06
morning rise	8899 Jul 04 17:18	4° \mathfrak{D} 35'20	behind sun end	8905 Jul 13 14:26	27° \mathfrak{D} 41'57
retrograde	8899 Oct 06 03:33	7° \mathfrak{D} 41'27	max. Earth dist.	8905 Jul 13 20:43	27° \mathfrak{D} 42'52 20.95773 AU
opposition	8899 Dec 22 21:34	5° \mathfrak{D} 42'47 -0°24'18	morning rise	8905 Jul 29 09:56	28° \mathfrak{D} 36'06
min. Earth dist.	8899 Dec 22 06:28	5° \mathfrak{D} 44'18 19.00782 AU		8905 Aug 25 04:02	0° Ω
direct	8900 Mar 08 22:34	3° \mathfrak{D} 45'53	retrograde	8905 Oct 31 10:09	1° Ω 43'23
evening set	8900 Jun 07 04:46	6° \mathfrak{D} 46'02	asc. node	8905 Dec 14 11:17	0° Ω 59'08
				8906 Jan 10 10:22	30° \mathfrak{R} \mathfrak{D}
conjunction	8900 Jun 23 00:54	7° \mathfrak{D} 40'17 -0°20'15	opposition	8906 Jan 16 23:56	29° \mathfrak{D} 44'08 0°00'23
minimum elong	8900 Jun 23 00:54	7° \mathfrak{D} 40'17 0°20'30	min. Earth dist.	8906 Jan 16 12:16	29° \mathfrak{D} 45'19 18.94581 AU
max. Earth dist.	8900 Jun 23 17:33	7° \mathfrak{D} 42'40 21.00937 AU	direct	8906 Apr 02 13:09	27° \mathfrak{D} 47'02
morning rise	8900 Jul 08 23:17	8° \mathfrak{D} 34'52		8906 Jun 17 02:20	0° Ω
retrograde	8900 Oct 10 13:26	11° \mathfrak{D} 41'06	evening set	8906 Jul 01 14:48	0° Ω 47'18
opposition	8900 Dec 27 06:02	9° \mathfrak{D} 42'25 -0°20'23			
min. Earth dist.	8900 Dec 26 14:22	9° \mathfrak{D} 43'59 19.01005 AU	conjunction	8906 Jul 17 14:46	1° Ω 42'06 0°02'19
direct	8901 Mar 13 06:12	7° \mathfrak{D} 45'35	minimum elong	8906 Jul 17 14:46	1° Ω 42'06 0°02'07
evening set	8901 Jun 11 09:59	10° \mathfrak{D} 45'37	behind sun begin	8906 Jul 17 08:09	1° Ω 41'11
			behind sun end	8906 Jul 17 21:23	1° Ω 43'02
conjunction	8901 Jun 27 06:30	11° \mathfrak{D} 39'55 -0°16'39	max. Earth dist.	8906 Jul 18 03:54	1° Ω 43'59 20.93282 AU
minimum elong	8901 Jun 27 06:30	11° \mathfrak{D} 39'55 0°16'54	morning rise	8906 Aug 02 17:31	2° Ω 37'19
max. Earth dist.	8901 Jun 27 21:58	11° \mathfrak{D} 42'08 21.00926 AU	retrograde	8906 Nov 04 19:58	5° Ω 44'55
morning rise	8901 Jul 13 05:40	12° \mathfrak{D} 34'35	opposition	8907 Jan 21 08:12	3° Ω 45'29 0°04'38
retrograde	8901 Oct 14 21:12	15° \mathfrak{D} 40'57	min. Earth dist.	8907 Jan 20 20:01	3° Ω 46'43 18.91892 AU
opposition	8901 Dec 31 14:29	13° \mathfrak{D} 42'14 -0°16'21	direct	8907 Apr 06 20:47	1° Ω 48'13
min. Earth dist.	8901 Dec 31 00:14	13° \mathfrak{D} 43'39 19.00757 AU	evening set	8907 Jul 05 21:32	4° Ω 48'44
direct	8902 Mar 17 11:07	11° \mathfrak{D} 45'25			
evening set	8902 Jun 15 15:14	14° \mathfrak{D} 45'24	conjunction	8907 Jul 21 22:04	5° Ω 43'40 0°06'10
			minimum elong	8907 Jul 21 22:04	5° Ω 43'40 0°05'57
conjunction	8902 Jul 01 12:30	15° \mathfrak{D} 39'46 -0°12'59	behind sun begin	8907 Jul 21 15:45	5° Ω 42'47
minimum elong	8902 Jul 01 12:30	15° \mathfrak{D} 39'46 0°13'13	behind sun end	8907 Jul 22 04:24	5° Ω 44'33
behind sun begin	8902 Jul 01 08:36	15° \mathfrak{D} 39'14	max. Earth dist.	8907 Jul 22 09:56	5° Ω 45'22 20.90413 AU
behind sun end	8902 Jul 01 16:23	15° \mathfrak{D} 40'19	morning rise	8907 Aug 07 01:43	6° Ω 39'02
max. Earth dist.	8902 Jul 02 04:17	15° \mathfrak{D} 42'02 21.00428 AU	retrograde	8907 Nov 09 05:17	9° Ω 46'59
morning rise	8902 Jul 17 12:12	16° \mathfrak{D} 34'31	opposition	8908 Jan 25 16:32	7° Ω 47'22 0°08'53
retrograde	8902 Oct 19 07:08	19° \mathfrak{D} 41'05	min. Earth dist.	8908 Jan 25 05:55	7° Ω 48'27 18.88865 AU
opposition	8903 Jan 04 22:53	17° \mathfrak{D} 42'17 -0°12'15	direct	8908 Apr 10 02:27	5° Ω 49'57
min. Earth dist.	8903 Jan 04 08:15	17° \mathfrak{D} 43'45 18.99991 AU	evening set	8908 Jul 09 04:30	8° Ω 50'46
direct	8903 Mar 21 18:59	15° \mathfrak{D} 45'28			
evening set	8903 Jun 19 20:48	18° \mathfrak{D} 45'27	conjunction	8908 Jul 25 05:57	9° Ω 45'52 0°09'58
			minimum elong	8908 Jul 25 05:56	9° Ω 45'52 0°09'46
conjunction	8903 Jul 05 18:33	19° \mathfrak{D} 39'54 -0°09'15	behind sun begin	8908 Jul 25 00:30	9° Ω 45'06
minimum elong	8903 Jul 05 18:33	19° \mathfrak{D} 39'54 0°09'30	behind sun end	8908 Jul 25 11:22	9° Ω 46'37
behind sun begin	8903 Jul 05 13:03	19° \mathfrak{D} 39'08	max. Earth dist.	8908 Jul 25 17:57	9° Ω 47'35 20.87234 AU
behind sun end	8903 Jul 06 00:04	19° \mathfrak{D} 40'40	morning rise	8908 Aug 10 10:16	10° Ω 41'23
max. Earth dist.	8903 Jul 06 08:53	19° \mathfrak{D} 41'57 20.99395 AU	retrograde	8908 Nov 12 15:58	13° Ω 49'44
morning rise	8903 Jul 21 19:09	20° \mathfrak{D} 34'44	opposition	8909 Jan 29 00:51	11° Ω 49'56 0°13'05
retrograde	8903 Oct 23 15:33	23° \mathfrak{D} 41'32	min. Earth dist.	8909 Jan 28 13:44	11° Ω 51'04 18.85533 AU
opposition	8904 Jan 09 07:26	21° \mathfrak{D} 42'37 -0°08'05	direct	8909 Apr 14 09:48	9° Ω 52'22
min. Earth dist.	8904 Jan 08 18:24	21° \mathfrak{D} 43'55 18.98692 AU	evening set	8909 Jul 13 12:03	12° Ω 53'34
direct	8904 Mar 25 00:01	19° \mathfrak{D} 45'44			
			conjunction	8909 Jul 29 14:05	13° Ω 48'50 0°13'44

minimum elong	8909 Jul 29 14:05	13° Ω 48'50	0°13'33	conjunction	8915 Aug 24 05:23	8° η 31'10	0°34'34
behind sun begin	8909 Jul 29 10:26	13° Ω 48'19		minimum elong	8915 Aug 24 05:23	8° η 31'10	0°34'28
behind sun end	8909 Jul 29 17:44	13° Ω 49'20		max. Earth dist.	8915 Aug 24 10:57	8° η 31'59	20.57620 AU
max. Earth dist.	8909 Jul 30 00:52	13° Ω 50'22	20.83756 AU	morning rise	8915 Sep 09 14:58	9° η 28'09	
morning rise	8909 Aug 14 19:15	14° Ω 44'32		retrograde	8915 Dec 13 01:46	12° η 40'17	
	8909 Aug 19 10:07	15° Ω		opposition	8916 Feb 27 19:07	10° η 39'34	0°39'59
retrograde	8909 Nov 17 01:24	17° Ω 53'19		min. Earth dist.	8916 Feb 27 15:01	10° η 40'00	18.54981 AU
opposition	8910 Feb 02 09:28	15° Ω 53'22	0°17'15	direct	8916 May 12 16:06	8° η 40'45	
min. Earth dist.	8910 Feb 01 23:55	15° Ω 54'21	18.81928 AU	evening set	8916 Aug 11 11:12	11° η 46'25	
	8910 Feb 25 00:02	15° κ δ					
direct	8910 Apr 18 16:05	13° Ω 55'38		conjunction	8916 Aug 27 18:47	12° η 43'14	0°37'35
	8910 Jun 08 10:52	15° Ω		minimum elong	8916 Aug 27 18:47	12° η 43'14	0°37'30
evening set	8910 Jul 17 20:01	16° Ω 57'17		max. Earth dist.	8916 Aug 27 23:06	12° η 43'51	20.52261 AU
				morning rise	8916 Sep 13 05:01	13° η 40'27	
conjunction	8910 Aug 02 22:56	17° Ω 52'44	0°17'27	retrograde	8916 Dec 16 17:09	16° η 53'11	
minimum elong	8910 Aug 02 22:56	17° Ω 52'44	0°17'16	opposition	8917 Mar 03 06:04	14° η 52'18	0°43'14
max. Earth dist.	8910 Aug 03 09:46	17° Ω 54'18	20.80034 AU	min. Earth dist.	8917 Mar 03 02:17	14° η 52'41	18.49457 AU
morning rise	8910 Aug 19 04:47	18° Ω 48'38		direct	8917 May 17 03:03	12° η 53'11	
retrograde	8910 Nov 21 13:17	21° Ω 57'54		evening set	8917 Aug 16 00:28	15° η 59'40	
opposition	8911 Feb 06 18:11	19° Ω 57'48	0°21'19				
min. Earth dist.	8911 Feb 06 08:11	19° Ω 58'49	18.78079 AU	conjunction	8917 Sep 01 08:44	16° η 56'44	0°40'25
direct	8911 Apr 22 23:54	17° Ω 59'55		minimum elong	8917 Sep 01 08:43	16° η 56'44	0°40'20
evening set	8911 Jul 22 04:39	21° Ω 02'04		max. Earth dist.	8917 Sep 01 11:26	16° η 57'08	20.46577 AU
				morning rise	8917 Sep 17 19:36	17° η 54'11	
conjunction	8911 Aug 07 08:16	21° Ω 57'44	0°21'05	retrograde	8917 Dec 21 06:27	21° η 07'32	
minimum elong	8911 Aug 07 08:16	21° Ω 57'44	0°20'56	opposition	8918 Mar 07 17:37	19° η 06'26	0°46'17
max. Earth dist.	8911 Aug 07 17:51	21° Ω 59'06	20.76062 AU	min. Earth dist.	8918 Mar 07 15:57	19° η 06'37	18.43640 AU
morning rise	8911 Aug 23 14:59	22° Ω 53'50		direct	8918 May 21 12:33	17° η 07'01	
retrograde	8911 Nov 25 23:20	26° Ω 03'36		evening set	8918 Aug 20 14:32	20° η 14'20	
opposition	8912 Feb 11 03:21	24° Ω 03'23	0°25'19				
min. Earth dist.	8912 Feb 10 19:04	24° Ω 04'14	18.73990 AU	conjunction	8918 Sep 05 23:35	21° η 11'39	0°43'02
direct	8912 Apr 26 06:17	22° Ω 05'20		minimum elong	8918 Sep 05 23:35	21° η 11'39	0°42'59
evening set	8912 Jul 25 13:58	25° Ω 08'05		max. Earth dist.	8918 Sep 06 01:00	21° η 11'52	20.40652 AU
				morning rise	8918 Sep 22 11:06	22° η 09'21	
conjunction	8912 Aug 10 18:28	26° Ω 03'58	0°24'38	retrograde	8918 Dec 25 22:48	25° η 23'18	
minimum elong	8912 Aug 10 18:28	26° Ω 03'58	0°24'29	opposition	8919 Mar 12 05:21	23° η 21'59	0°49'05
max. Earth dist.	8912 Aug 11 03:47	26° Ω 05'18	20.71857 AU	min. Earth dist.	8919 Mar 12 03:59	23° η 22'07	18.37612 AU
morning rise	8912 Aug 27 01:51	27° Ω 00'16		direct	8919 May 26 00:41	21° η 22'12	
	8912 Nov 08 20:10	0° η		evening set	8919 Aug 25 05:24	24° η 30'24	
retrograde	8912 Nov 29 12:24	0° η 10'35					
	8912 Dec 20 06:34	30° κ δ		conjunction	8919 Sep 10 15:11	25° η 27'59	0°45'26
opposition	8913 Feb 14 12:31	28° Ω 10'15	0°29'12	minimum elong	8919 Sep 10 15:11	25° η 27'59	0°45'24
min. Earth dist.	8913 Feb 14 04:05	28° Ω 11'07	18.69655 AU	max. Earth dist.	8919 Sep 10 15:19	25° η 28'00	20.34532 AU
direct	8913 Apr 30 15:11	26° Ω 12'03		morning rise	8919 Sep 27 03:17	26° η 25'57	
evening set	8913 Jul 30 00:08	29° Ω 15'27		retrograde	8919 Dec 30 13:09	29° η 40'30	
	8913 Aug 11 21:47	0° η		opposition	8920 Mar 15 17:41	27° η 38'56	0°51'38
				min. Earth dist.	8920 Mar 15 18:15	27° η 38'52	18.31428 AU
conjunction	8913 Aug 15 05:18	0° η 11'33	0°28'05	direct	8920 May 29 11:11	25° η 38'48	
minimum elong	8913 Aug 15 05:17	0° η 11'33	0°27'57	evening set	8920 Aug 28 21:04	28° η 47'55	
max. Earth dist.	8913 Aug 15 13:11	0° η 12'42	20.67392 AU				
morning rise	8913 Aug 31 13:28	1° η 08'04		conjunction	8920 Sep 14 07:32	29° η 45'46	0°47'36
retrograde	8913 Dec 03 23:14	4° η 18'59		minimum elong	8920 Sep 14 07:32	29° η 45'46	0°47'36
opposition	8914 Feb 18 22:23	2° η 18'33	0°32'57	max. Earth dist.	8920 Sep 14 06:17	29° η 45'35	20.28308 AU
min. Earth dist.	8914 Feb 18 15:55	2° η 19'13	18.65062 AU		8920 Sep 18 07:41	0° Ω	
direct	8914 May 04 22:00	0° η 20'10		morning rise	8920 Sep 30 20:13	0° Ω 43'59	
evening set	8914 Aug 03 10:49	3° η 24'17		retrograde	8921 Jan 03 06:36	3° Ω 59'09	
				opposition	8921 Mar 20 06:16	1° Ω 57'21	0°53'55
conjunction	8914 Aug 19 16:51	4° η 20'36	0°31'24	min. Earth dist.	8921 Mar 20 07:05	1° Ω 57'16	18.25175 AU
minimum elong	8914 Aug 19 16:51	4° η 20'36	0°31'16		8921 May 23 02:34	30° κ η	
max. Earth dist.	8914 Aug 20 00:07	4° η 21'39	20.62665 AU	direct	8921 Jun 03 00:32	29° η 56'51	
morning rise	8914 Sep 05 01:42	5° η 17'21			8921 Jun 13 20:16	0° Ω	
retrograde	8914 Dec 08 13:41	8° η 28'53		evening set	8921 Sep 02 13:31	3° Ω 06'56	
opposition	8915 Feb 23 08:31	6° η 28'19	0°36'33				
min. Earth dist.	8915 Feb 23 02:10	6° η 28'58	18.60182 AU	conjunction	8921 Sep 19 00:40	4° Ω 05'04	0°49'30
direct	8915 May 09 07:59	4° η 29'44		minimum elong	8921 Sep 19 00:40	4° Ω 05'04	0°49'31
evening set	8915 Aug 07 22:39	7° η 34'36		max. Earth dist.	8921 Sep 18 22:35	4° Ω 04'45	20.22033 AU
				morning rise	8921 Oct 05 13:47	5° Ω 03'32	

retrograde	8922 Jan 07 22:01	8° <u>♂</u> 19'18		evening set	8928 Oct 04 08:49	4° <u>♂</u> 08'38	
opposition	8922 Mar 24 19:33	6° <u>♂</u> 17'19	0°55'54				
min. Earth dist.	8922 Mar 24 22:00	6° <u>♂</u> 17'03	18.18912 AU	conjunction	8928 Oct 20 23:34	5° <u>♂</u> 08'41	0°54'29
direct	8922 Jun 07 12:07	4° <u>♂</u> 16'27		minimum elong	8928 Oct 20 23:33	5° <u>♂</u> 08'41	0°54'38
evening set	8922 Sep 07 06:40	7° <u>♂</u> 27'31		max. Earth dist.	8928 Oct 20 13:11	5° <u>♂</u> 07'07	19.81018 AU
				morning rise	8928 Nov 06 14:59	6° <u>♂</u> 08'51	
conjunction	8922 Sep 23 18:28	8° <u>♂</u> 25'56	0°51'08	retrograde	8929 Feb 08 13:02	9° <u>♂</u> 28'54	
minimum elong	8922 Sep 23 18:28	8° <u>♂</u> 25'56	0°51'09	opposition	8929 Apr 24 08:32	7° <u>♂</u> 26'13	1°00'20
max. Earth dist.	8922 Sep 23 14:56	8° <u>♂</u> 25'24	20.15798 AU	min. Earth dist.	8929 Apr 24 17:18	7° <u>♂</u> 25'17	17.78371 AU
morning rise	8922 Oct 10 08:10	9° <u>♂</u> 24'39		direct	8929 Jul 08 02:15	5° <u>♂</u> 23'22	
retrograde	8923 Jan 12 16:42	12° <u>♂</u> 41'03		evening set	8929 Oct 09 08:11	8° <u>♂</u> 42'02	
opposition	8923 Mar 29 09:16	10° <u>♂</u> 38'52	0°57'34				
min. Earth dist.	8923 Mar 29 11:58	10° <u>♂</u> 38'35	18.12710 AU	conjunction	8929 Oct 25 23:25	9° <u>♂</u> 42'20	0°53'53
direct	8923 Jun 12 02:38	8° <u>♂</u> 37'39		minimum elong	8929 Oct 25 23:25	9° <u>♂</u> 42'20	0°54'02
evening set	8923 Sep 12 00:51	11° <u>♂</u> 49'46		max. Earth dist.	8929 Oct 25 12:54	9° <u>♂</u> 40'44	19.75711 AU
				morning rise	8929 Nov 11 14:45	10° <u>♂</u> 42'42	
conjunction	8923 Sep 28 13:19	12° <u>♂</u> 48'27	0°52'29	retrograde	8930 Feb 13 10:15	14° <u>♂</u> 03'15	
minimum elong	8923 Sep 28 13:18	12° <u>♂</u> 48'27	0°52'32	opposition	8930 Apr 29 02:41	12° <u>♂</u> 00'30	0°59'30
max. Earth dist.	8923 Sep 28 09:15	12° <u>♂</u> 47'51	20.09627 AU	min. Earth dist.	8930 Apr 29 12:21	11° <u>♂</u> 59'28	17.73129 AU
morning rise	8923 Oct 15 03:19	13° <u>♂</u> 47'26		direct	8930 Jul 12 22:11	9° <u>♂</u> 57'22	
retrograde	8924 Jan 17 09:35	17° <u>♂</u> 04'27		evening set	8930 Oct 14 08:25	13° <u>♂</u> 17'04	
opposition	8924 Apr 01 23:32	15° <u>♂</u> 02'07	0°58'55				
min. Earth dist.	8924 Apr 02 03:40	15° <u>♂</u> 01'40	18.06600 AU	conjunction	8930 Oct 30 23:47	14° <u>♂</u> 17'35	0°52'57
direct	8924 Jun 15 15:32	13° <u>♂</u> 00'35		minimum elong	8930 Oct 30 23:47	14° <u>♂</u> 17'35	0°53'07
evening set	8924 Sep 15 19:53	16° <u>♂</u> 13'45		max. Earth dist.	8930 Oct 30 10:49	14° <u>♂</u> 15'36	19.70546 AU
					8930 Nov 11 14:23	15° <u>♂</u>	
conjunction	8924 Oct 02 08:51	17° <u>♂</u> 12'44	0°53'31	morning rise	8930 Nov 16 15:19	15° <u>♂</u> 18'09	
minimum elong	8924 Oct 02 08:51	17° <u>♂</u> 12'44	0°53'34	retrograde	8931 Feb 18 07:16	18° <u>♂</u> 39'09	
max. Earth dist.	8924 Oct 02 03:06	17° <u>♂</u> 11'52	20.03593 AU	opposition	8931 May 03 21:30	16° <u>♂</u> 36'20	0°58'17
morning rise	8924 Oct 18 23:21	18° <u>♂</u> 11'57		min. Earth dist.	8931 May 04 08:30	16° <u>♂</u> 35'09	17.68052 AU
retrograde	8925 Jan 21 05:23	21° <u>♂</u> 29'36			8931 Jun 15 10:57	15° <u>♂</u>	
opposition	8925 Apr 06 14:26	19° <u>♂</u> 27'09	0°59'55	direct	8931 Jul 17 18:17	14° <u>♂</u> 32'52	
min. Earth dist.	8925 Apr 06 18:56	19° <u>♂</u> 26'40	18.00645 AU		8931 Aug 18 16:24	15° <u>♂</u>	
direct	8925 Jun 20 07:07	17° <u>♂</u> 25'20		evening set	8931 Oct 19 09:14	17° <u>♂</u> 53'34	
evening set	8925 Sep 20 15:35	20° <u>♂</u> 39'35		max. Earth dist.	8931 Nov 04 12:00	18° <u>♂</u> 52'19	19.65560 AU
conjunction	8925 Oct 07 05:10	21° <u>♂</u> 38'50	0°54'15	conjunction	8931 Nov 05 00:58	18° <u>♂</u> 54'18	0°51'40
minimum elong	8925 Oct 07 05:10	21° <u>♂</u> 38'50	0°54'20	minimum elong	8931 Nov 05 00:58	18° <u>♂</u> 54'18	0°51'50
max. Earth dist.	8925 Oct 06 23:18	21° <u>♂</u> 37'57	19.97710 AU	morning rise	8931 Nov 21 16:17	19° <u>♂</u> 55'02	
morning rise	8925 Oct 23 19:50	22° <u>♂</u> 38'18		retrograde	8932 Feb 23 05:35	23° <u>♂</u> 16'25	
retrograde	8926 Jan 25 23:49	25° <u>♂</u> 56'35		opposition	8932 May 07 16:42	21° <u>♂</u> 13'31	0°56'41
opposition	8926 Apr 11 06:03	23° <u>♂</u> 54'03	1°00'34	min. Earth dist.	8932 May 08 04:08	21° <u>♂</u> 12'17	17.63171 AU
min. Earth dist.	8926 Apr 11 11:44	23° <u>♂</u> 53'27	17.94846 AU	direct	8932 Jul 21 16:01	19° <u>♂</u> 09'44	
direct	8926 Jun 24 21:50	21° <u>♂</u> 51'59		evening set	8932 Oct 23 10:45	22° <u>♂</u> 31'23	
evening set	8926 Sep 25 12:25	25° <u>♂</u> 07'20		max. Earth dist.	8932 Nov 08 11:26	23° <u>♂</u> 30'00	19.60813 AU
conjunction	8926 Oct 12 02:23	26° <u>♂</u> 06'51	0°54'39	conjunction	8932 Nov 09 02:27	23° <u>♂</u> 32'18	0°50'02
minimum elong	8926 Oct 12 02:23	26° <u>♂</u> 06'51	0°54'45	minimum elong	8932 Nov 09 02:27	23° <u>♂</u> 32'18	0°50'13
max. Earth dist.	8926 Oct 11 18:34	26° <u>♂</u> 05'40	19.92005 AU	morning rise	8932 Nov 25 17:47	24° <u>♂</u> 33'12	
morning rise	8926 Oct 28 17:30	27° <u>♂</u> 06'34		retrograde	8933 Feb 27 03:24	27° <u>♂</u> 54'56	
	8926 Dec 30 15:00	0° <u>♂</u>		opposition	8933 May 12 12:36	25° <u>♂</u> 51'56	0°54'42
retrograde	8927 Jan 30 20:26	0° <u>♂</u> 25'28		min. Earth dist.	8933 May 13 01:20	25° <u>♂</u> 50'34	17.58580 AU
	8927 Mar 03 07:28	30° <u>♂</u>		direct	8933 Jul 26 13:04	23° <u>♂</u> 47'49	
opposition	8927 Apr 15 22:07	28° <u>♂</u> 22'53	1°00'51	evening set	8933 Oct 28 12:27	27° <u>♂</u> 10'21	
min. Earth dist.	8927 Apr 16 04:35	28° <u>♂</u> 22'11	17.89224 AU				
direct	8927 Jun 29 14:33	26° <u>♂</u> 20'33		conjunction	8933 Nov 14 04:23	28° <u>♂</u> 11'28	0°48'04
evening set	8927 Sep 30 10:08	29° <u>♂</u> 37'01		minimum elong	8933 Nov 14 04:23	28° <u>♂</u> 11'28	0°48'17
	8927 Oct 06 20:33	0° <u>♂</u>		max. Earth dist.	8933 Nov 13 13:39	28° <u>♂</u> 09'12	19.56384 AU
				morning rise	8933 Nov 30 19:27	29° <u>♂</u> 12'30	
conjunction	8927 Oct 17 00:41	0° <u>♂</u> 36'50	0°54'44		8933 Dec 14 08:15	0° <u>♂</u>	
minimum elong	8927 Oct 17 00:41	0° <u>♂</u> 36'50	0°54'51	retrograde	8934 Mar 04 02:51	2° <u>♂</u> 34'30	
max. Earth dist.	8927 Oct 16 16:41	0° <u>♂</u> 35'37	19.86446 AU	opposition	8934 May 17 08:51	0° <u>♂</u> 31'26	0°52'20
morning rise	8927 Nov 02 15:50	1° <u>♂</u> 36'46		min. Earth dist.	8934 May 17 21:28	0° <u>♂</u> 30'04	17.54320 AU
retrograde	8928 Feb 04 16:22	4° <u>♂</u> 56'15			8934 May 29 12:35	30° <u>♂</u>	
opposition	8928 Apr 19 15:00	2° <u>♂</u> 53'38	1°00'47	direct	8934 Jul 31 11:43	28° <u>♂</u> 27'00	
min. Earth dist.	8928 Apr 19 22:40	2° <u>♂</u> 52'48	17.83731 AU		8934 Sep 30 02:00	0° <u>♂</u>	
direct	8928 Jul 03 07:53	0° <u>♂</u> 51'03		evening set	8934 Nov 02 14:56	1° <u>♂</u> 50'22	

conjunction	8934 Nov 19 06:44	2°♄51'38	0°45'47	retrograde	8941 Apr 05 23:04	5°♅32'28	
minimum elong	8934 Nov 19 06:44	2°♄51'38	0°45'59	opposition	8941 Jun 18 18:59	3°♅29'38	0°26'55
max. Earth dist.	8934 Nov 18 14:32	2°♄49'08	19.52318 AU	min. Earth dist.	8941 Jun 19 09:01	3°♅28'06	17.38474 AU
morning rise	8934 Dec 05 21:38	3°♄52'47		direct	8941 Sep 02 10:36	1°♅24'05	
retrograde	8935 Mar 09 01:30	7°♄15'01		evening set	8941 Dec 06 15:10	4°♅51'32	
opposition	8935 May 22 05:34	5°♄11'52	0°49'38				
min. Earth dist.	8935 May 22 19:28	5°♄10'21	17.50473 AU	conjunction	8941 Dec 23 04:45	5°♅53'13	0°22'03
direct	8935 Aug 05 09:36	3°♄07'08		minimum elong	8941 Dec 23 04:45	5°♅53'13	0°22'19
evening set	8935 Nov 07 17:41	6°♄31'17		max. Earth dist.	8941 Dec 22 12:22	5°♅50'40	19.38340 AU
				morning rise	8942 Jan 08 16:03	6°♅54'34	
conjunction	8935 Nov 24 09:30	7°♄32'41	0°43'11	retrograde	8942 Apr 10 23:35	10°♅17'08	
minimum elong	8935 Nov 24 09:30	7°♄32'41	0°43'25	opposition	8942 Jun 23 18:24	8°♅14'26	0°22'18
max. Earth dist.	8935 Nov 23 17:34	7°♄30'13	19.48696 AU	min. Earth dist.	8942 Jun 24 07:33	8°♅13'00	17.38346 AU
morning rise	8935 Dec 11 00:01	8°♄33'56		direct	8942 Sep 07 13:41	6°♅08'53	
retrograde	8936 Mar 13 01:26	11°♄56'20		evening set	8942 Dec 11 19:05	9°♅36'36	
opposition	8936 May 26 02:45	9°♄53'09	0°46'34				
min. Earth dist.	8936 May 26 16:01	9°♄51'42	17.47085 AU	conjunction	8942 Dec 28 08:11	10°♅38'15	0°17'51
direct	8936 Aug 09 09:15	7°♄48'09		minimum elong	8942 Dec 28 08:11	10°♅38'15	0°18'05
evening set	8936 Nov 11 20:43	11°♄13'00		max. Earth dist.	8942 Dec 27 16:46	10°♅35'50	19.38429 AU
				morning rise	8943 Jan 13 18:32	11°♅39'31	
conjunction	8936 Nov 28 12:15	12°♄14'30	0°40'17	retrograde	8943 Apr 15 22:32	15°♅01'55	
minimum elong	8936 Nov 28 12:15	12°♄14'30	0°40'31	opposition	8943 Jun 28 18:09	12°♅59'23	0°17'32
max. Earth dist.	8936 Nov 27 19:42	12°♄11'56	19.45558 AU	min. Earth dist.	8943 Jun 29 08:02	12°♅57'52	17.38652 AU
morning rise	8936 Dec 15 02:22	13°♄15'50		direct	8943 Sep 12 15:03	10°♅53'50	
retrograde	8937 Mar 18 00:13	16°♄38'22		evening set	8943 Dec 16 22:59	14°♅21'43	
opposition	8937 May 31 00:31	14°♄35'09	0°43'11				
min. Earth dist.	8937 May 31 14:46	14°♄33'36	17.44226 AU	conjunction	8944 Jan 02 11:14	15°♅23'16	0°13'31
direct	8937 Aug 14 07:52	12°♄29'56		minimum elong	8944 Jan 02 11:14	15°♅23'16	0°13'46
evening set	8937 Nov 17 00:01	15°♄55'26		behind sun begin	8944 Jan 02 07:45	15°♅22'44	
				behind sun end	8944 Jan 02 14:42	15°♅23'48	
conjunction	8937 Dec 03 15:22	16°♄57'02	0°37'06	max. Earth dist.	8944 Jan 01 18:56	15°♅20'44	19.38955 AU
minimum elong	8937 Dec 03 15:22	16°♄57'02	0°37'20	morning rise	8944 Jan 18 20:56	16°♅24'27	
max. Earth dist.	8937 Dec 02 23:01	16°♄54'30	19.42985 AU	retrograde	8944 Apr 19 22:40	19°♅46'39	
morning rise	8937 Dec 20 05:03	17°♄58'25		opposition	8944 Jul 02 18:03	17°♅44'14	0°12'39
retrograde	8938 Mar 23 00:31	21°♄21'02		min. Earth dist.	8944 Jul 03 07:06	17°♅42'49	17.39389 AU
opposition	8938 Jun 04 22:26	19°♄17'51	0°39'30	direct	8944 Sep 16 18:35	15°♅38'42	
min. Earth dist.	8938 Jun 05 11:41	19°♄16'24	17.41934 AU	evening set	8944 Dec 21 02:15	19°♅06'37	
direct	8938 Aug 19 08:50	17°♄12'28					
evening set	8938 Nov 22 03:37	20°♄38'34		conjunction	8945 Jan 06 13:56	20°♅08'05	0°09'07
				minimum elong	8945 Jan 06 13:56	20°♅08'05	0°09'20
conjunction	8938 Dec 08 18:41	21°♄40'14	0°33'39	behind sun begin	8945 Jan 06 08:19	20°♅07'13	
minimum elong	8938 Dec 08 18:41	21°♄40'14	0°33'55	behind sun end	8945 Jan 06 19:33	20°♅08'56	
max. Earth dist.	8938 Dec 08 02:24	21°♄37'42	19.40983 AU	max. Earth dist.	8945 Jan 05 23:05	20°♅05'46	19.39895 AU
morning rise	8938 Dec 25 07:48	22°♄41'38		morning rise	8945 Jan 22 22:38	21°♅09'08	
retrograde	8939 Mar 27 23:22	26°♄04'18		retrograde	8945 Apr 24 21:33	24°♅31'04	
opposition	8939 Jun 09 21:00	24°♄01'12	0°35'33	opposition	8945 Jul 07 18:07	22°♅28'47	0°07'41
min. Earth dist.	8939 Jun 10 11:11	23°♄59'39	17.40226 AU	min. Earth dist.	8945 Jul 08 07:24	22°♅27'21	17.40529 AU
direct	8939 Aug 24 08:16	21°♄55'44		direct	8945 Sep 21 20:42	20°♅23'17	
evening set	8939 Nov 27 07:24	25°♄22'21		evening set	8945 Dec 26 05:28	23°♅51'08	
conjunction	8939 Dec 13 22:01	26°♄24'03	0°29'59	conjunction	8946 Jan 11 16:12	24°♅52'27	0°04'39
minimum elong	8939 Dec 13 22:01	26°♄24'03	0°30'14	minimum elong	8946 Jan 11 16:13	24°♅52'28	0°04'53
max. Earth dist.	8939 Dec 13 05:35	26°♄21'29	19.39570 AU	behind sun begin	8946 Jan 11 09:40	24°♅51'28	
morning rise	8939 Dec 30 10:37	27°♄25'28		behind sun end	8946 Jan 11 22:45	24°♅53'27	
	8940 Feb 18 19:47	0°♅		max. Earth dist.	8946 Jan 11 00:35	24°♅50'01	19.41249 AU
retrograde	8940 Mar 31 23:54	0°♅48'09		morning rise	8946 Jan 28 00:13	25°♅53'23	
	8940 May 14 02:09	30°♄		retrograde	8946 Apr 29 20:52	29°♅14'58	
opposition	8940 Jun 13 19:43	28°♄45'10	0°31'20	opposition	8946 Jul 12 17:56	27°♅12'49	0°02'39
min. Earth dist.	8940 Jun 14 08:52	28°♄43'44	17.39085 AU	min. Earth dist.	8946 Jul 13 06:36	27°♅11'26	17.42093 AU
direct	8940 Aug 28 10:18	26°♄39'38		direct	8946 Sep 26 23:10	25°♅07'19	
	8940 Nov 29 15:00	0°♅		evening set	8946 Dec 31 08:05	28°♅35'01	
evening set	8940 Dec 01 11:16	0°♅06'43					
min. Earth dist.	8940 Dec 17 09:42	1°♅05'58	19.38697 AU	conjunction	8947 Jan 16 18:10	29°♅36'12	0°00'05
				minimum elong	8947 Jan 16 18:10	29°♅36'12	0°00'19
conjunction	8940 Dec 18 01:29	1°♅08'26	0°26'07	behind sun begin	8947 Jan 16 11:30	29°♅35'11	
minimum elong	8940 Dec 18 01:29	1°♅08'26	0°26'23	behind sun end	8947 Jan 17 00:50	29°♅37'13	
morning rise	8941 Jan 03 13:19	2°♅09'49		max. Earth dist.	8947 Jan 16 04:10	29°♅34'02	19.43020 AU

desc. node	8947 Jan 22 10:37	29°  57'34	direct	8952 Oct 25 07:09	23°  11'25	
	8947 Jan 23 02:10	0° 	evening set	8953 Jan 28 09:53	26°  36'11	
morning rise	8947 Feb 02 01:08	0°  36'57				
retrograde	8947 May 04 20:00	3°  58'09	conjunction	8953 Feb 13 14:19	27°  36'01	-0°25'40
opposition	8947 Jul 17 17:54	1°  56'06 -0°02'22	minimum elong	8953 Feb 13 14:19	27°  36'01	0°25'31
min. Earth dist.	8947 Jul 18 06:13	1°  54'47 17.44065 AU	max. Earth dist.	8953 Feb 13 06:42	27°  34'50	19.63331 AU
	8947 Sep 13 03:32	30°  R 	morning rise	8953 Mar 01 15:48	28°  35'25	
direct	8947 Oct 02 01:25	29°  50'40		8953 Mar 26 10:32	0° 	
	8947 Oct 20 18:50	0° 	retrograde	8953 Jun 01 03:09	1°  H53'36	
evening set	8948 Jan 05 10:11	3°  18'05		8953 Aug 11 13:28	30°  R 	
			opposition	8953 Aug 14 13:08	29°  52'23	-0°30'38
conjunction	8948 Jan 21 19:13	4°  19'05 -0°04'30	min. Earth dist.	8953 Aug 14 18:53	29°  51'46	17.65774 AU
minimum elong	8948 Jan 21 19:13	4°  19'05 0°04'17	direct	8953 Oct 30 09:19	27°  47'58	
behind sun begin	8948 Jan 21 12:38	4°  18'05		8954 Jan 12 10:50	0° 	
behind sun end	8948 Jan 22 01:49	4°  20'05	evening set	8954 Feb 02 07:43	1°  H12'00	
max. Earth dist.	8948 Jan 21 04:56	4°  16'52 19.45215 AU				
morning rise	8948 Feb 07 01:24	5°  19'40	conjunction	8954 Feb 18 11:10	2°  H11'34	-0°29'27
retrograde	8948 May 08 18:10	8°  40'26	minimum elong	8954 Feb 18 11:10	2°  H11'34	0°29'19
opposition	8948 Jul 21 17:43	6°  38'29 -0°07'22	max. Earth dist.	8954 Feb 18 04:43	2°  H10'34	19.68318 AU
min. Earth dist.	8948 Jul 22 05:23	6°  37'13 17.46490 AU	morning rise	8954 Mar 06 11:44	3°  H10'42	
direct	8948 Oct 06 02:24	4°  33'06	retrograde	8954 Jun 05 20:53	6°  H28'19	
evening set	8949 Jan 09 11:29	8°  00'08	opposition	8954 Aug 19 11:19	4°  H27'20	-0°34'44
			min. Earth dist.	8954 Aug 19 16:54	4°  H26'44	17.70941 AU
conjunction	8949 Jan 25 19:46	9°  00'57 -0°08'56	direct	8954 Nov 04 07:41	2°  H23'13	
minimum elong	8949 Jan 25 19:47	9°  00'57 0°08'43	evening set	8955 Feb 07 04:47	5°  H46'30	
behind sun begin	8949 Jan 25 14:00	9°  00'04				
behind sun end	8949 Jan 26 01:34	9°  01'50	conjunction	8955 Feb 23 07:15	6°  H45'46	-0°33'02
max. Earth dist.	8949 Jan 25 07:25	8°  59'02 19.47868 AU	minimum elong	8955 Feb 23 07:15	6°  H45'46	0°32'56
morning rise	8949 Feb 11 00:55	10°  01'19	max. Earth dist.	8955 Feb 23 01:55	6°  H44'57	19.73643 AU
retrograde	8949 May 13 17:05	13°  21'36	morning rise	8955 Mar 11 07:00	7°  H44'38	
opposition	8949 Jul 26 17:13	11°  19'45 -0°12'17	retrograde	8955 Jun 10 17:02	11°  H01'41	
min. Earth dist.	8949 Jul 27 03:51	11°  18'36 17.49369 AU	opposition	8955 Aug 24 09:12	9°  H00'55	-0°38'36
direct	8949 Oct 11 04:55	9°  14'28	min. Earth dist.	8955 Aug 24 12:45	9°  H00'32	17.76391 AU
evening set	8950 Jan 14 12:14	12°  41'02	direct	8955 Nov 09 08:31	6°  H57'08	
			evening set	8956 Feb 12 00:55	10°  H19'34	
conjunction	8950 Jan 30 19:28	13°  41'37 -0°13'18				
minimum elong	8950 Jan 30 19:28	13°  41'37 0°13'07	conjunction	8956 Feb 28 02:28	11°  H18'32	-0°36'24
behind sun begin	8950 Jan 30 15:31	13°  41'01	minimum elong	8956 Feb 28 02:27	11°  H18'32	0°36'18
behind sun end	8950 Jan 30 23:26	13°  42'14	max. Earth dist.	8956 Feb 27 22:38	11°  H17'57	19.79205 AU
max. Earth dist.	8950 Jan 30 07:24	13°  39'45 19.50990 AU	morning rise	8956 Mar 15 01:18	12°  H17'08	
morning rise	8950 Feb 15 23:47	14°  41'47	retrograde	8956 Jun 14 10:04	15°  H33'36	
	8950 Feb 21 00:36	15° 	opposition	8956 Aug 28 06:52	13°  H33'02	-0°42'12
retrograde	8950 May 18 13:22	18°  01'34	min. Earth dist.	8956 Aug 28 10:22	13°  H32'40	17.82063 AU
opposition	8950 Jul 31 16:38	15°  59'49 -0°17'07	direct	8956 Nov 13 05:58	11°  H29'36	
min. Earth dist.	8950 Aug 01 02:38	15°  58'44 17.52745 AU	evening set	8957 Feb 15 20:22	14°  H51'08	
	8950 Aug 24 22:01	15°  R 				
direct	8950 Oct 16 05:02	13°  54'39	conjunction	8957 Mar 03 20:56	15°  H49'49	-0°39'31
	8950 Dec 05 23:17	15° 	minimum elong	8957 Mar 03 20:56	15°  H49'49	0°39'26
evening set	8951 Jan 19 12:12	17°  20'42	max. Earth dist.	8957 Mar 03 17:45	15°  H49'19	19.84962 AU
			morning rise	8957 Mar 19 19:04	16°  H48'08	
conjunction	8951 Feb 04 18:34	18°  21'03 -0°17'34	retrograde	8957 Jun 19 05:07	20°  H03'59	
minimum elong	8951 Feb 04 18:34	18°  21'03 0°17'23	opposition	8957 Sep 02 03:46	18°  H03'38	-0°45'31
max. Earth dist.	8951 Feb 04 08:25	18°  19'28 19.54614 AU	min. Earth dist.	8957 Sep 02 05:18	18°  H03'28	17.87884 AU
morning rise	8951 Feb 20 21:51	19°  20'57	direct	8957 Nov 18 05:04	16°  H00'30	
retrograde	8951 May 23 11:24	22°  40'12	evening set	8958 Feb 20 14:57	19°  H21'06	
opposition	8951 Aug 05 15:42	20°  38'36 -0°21'48				
min. Earth dist.	8951 Aug 05 24:00	20°  37'43 17.56610 AU	conjunction	8958 Mar 08 14:44	20°  H19'30	-0°42'23
direct	8951 Oct 21 07:42	18°  33'39	minimum elong	8958 Mar 08 14:43	20°  H19'30	0°42'19
evening set	8952 Jan 24 11:32	21°  59'04	max. Earth dist.	8958 Mar 08 13:07	20°  H19'15	19.90826 AU
			morning rise	8958 Mar 24 12:00	21° H17'32	
conjunction	8952 Feb 09 16:51	22° 59'10 -0°21'41	retrograde	8958 Jun 23 21:16	24° H32'46	
minimum elong	8952 Feb 09 16:51	22° 59'10 0°21'32	opposition	8958 Sep 07 00:30	22° H32'36	-0°48'33
max. Earth dist.	8952 Feb 09 07:34	22° 57'44 19.58731 AU	min. Earth dist.	8958 Sep 07 02:08	22° H32'26	17.93791 AU
morning rise	8952 Feb 25 19:14	23° 58'50	direct	8958 Nov 23 01:24	20° H29'48	
retrograde	8952 May 27 06:13	27° 17'34	evening set	8959 Feb 25 08:41	23° H49'25	
opposition	8952 Aug 09 14:39	25° 16'08 -0°26'19				
min. Earth dist.	8952 Aug 09 22:22	25° 15'18 17.60977 AU	conjunction	8959 Mar 13 07:30	24° H47'30	-0°44'59

minimum elong	8959 Mar 13 07:30	24° \mathbb{H} 47'30	0°44'56	opposition	8965 Oct 08 08:25	23° \mathbb{Y} 05'27	-1°00'34
max. Earth dist.	8959 Mar 13 06:10	24° \mathbb{H} 47'18	19.96760 AU	min. Earth dist.	8965 Oct 08 01:22	23° \mathbb{Y} 06'10	18.35729 AU
morning rise	8959 Mar 29 04:11	25° \mathbb{H} 45'17		direct	8965 Dec 24 11:33	21° \mathbb{Y} 04'48	
retrograde	8959 Jun 28 15:09	28° \mathbb{H} 59'53		evening set	8966 Mar 27 10:56	24° \mathbb{Y} 17'02	
opposition	8959 Sep 11 20:35	26° \mathbb{H} 59'52	-0°51'16				
min. Earth dist.	8959 Sep 11 20:11	26° \mathbb{H} 59'55	17.99738 AU	conjunction	8966 Apr 12 05:25	25° \mathbb{Y} 13'12	-0°54'49
direct	8959 Nov 27 23:13	24° \mathbb{H} 57'23		minimum elong	8966 Apr 12 05:24	25° \mathbb{Y} 13'12	0°54'54
evening set	8960 Mar 01 01:28	28° \mathbb{H} 15'59		max. Earth dist.	8966 Apr 12 13:25	25° \mathbb{Y} 14'24	20.38745 AU
				morning rise	8966 Apr 27 22:44	26° \mathbb{Y} 09'14	
conjunction	8960 Mar 16 23:36	29° \mathbb{H} 13'47	-0°47'17	retrograde	8966 Jul 28 18:02	29° \mathbb{Y} 19'38	
minimum elong	8960 Mar 16 23:36	29° \mathbb{H} 13'47	0°47'16	opposition	8966 Oct 13 00:21	27° \mathbb{Y} 20'28	-1°00'55
max. Earth dist.	8960 Mar 17 00:05	29° \mathbb{H} 13'51	20.02711 AU	min. Earth dist.	8966 Oct 12 16:38	27° \mathbb{Y} 21'15	18.41778 AU
	8960 Mar 29 16:03	0° \mathbb{Y}		direct	8966 Dec 29 02:41	25° \mathbb{Y} 20'12	
morning rise	8960 Apr 01 19:30	0° \mathbb{Y} 11'17		evening set	8967 Mar 31 21:39	28° \mathbb{Y} 31'25	
retrograde	8960 Jul 02 05:55	3° \mathbb{Y} 25'15					
opposition	8960 Sep 15 16:13	1° \mathbb{Y} 25'23	-0°53'40	conjunction	8967 Apr 16 15:33	29° \mathbb{Y} 27'20	-0°55'00
min. Earth dist.	8960 Sep 15 15:49	1° \mathbb{Y} 25'25	18.05697 AU	minimum elong	8967 Apr 16 15:33	29° \mathbb{Y} 27'20	0°55'07
	8960 Oct 23 15:54	30° \mathbb{H}		max. Earth dist.	8967 Apr 16 23:42	29° \mathbb{Y} 28'33	20.44772 AU
direct	8960 Dec 01 18:14	29° \mathbb{H} 23'12			8967 Apr 25 19:03	0° \mathbb{H}	
	8961 Jan 08 21:01	0° \mathbb{Y}		morning rise	8967 May 02 08:50	0° \mathbb{H} 23'11	
evening set	8961 Mar 05 17:20	2° \mathbb{Y} 40'44		retrograde	8967 Aug 02 06:48	3° \mathbb{H} 33'06	
				opposition	8967 Oct 17 15:43	1° \mathbb{H} 34'04	-1°00'56
conjunction	8961 Mar 21 14:37	3° \mathbb{Y} 38'14	-0°49'18	min. Earth dist.	8967 Oct 17 06:28	1° \mathbb{H} 35'01	18.47767 AU
minimum elong	8961 Mar 21 14:37	3° \mathbb{Y} 38'14	0°49'18		8967 Dec 01 00:02	30° \mathbb{H}	
max. Earth dist.	8961 Mar 21 15:14	3° \mathbb{Y} 38'20	20.08674 AU	direct	8968 Jan 02 17:53	29° \mathbb{Y} 34'10	
morning rise	8961 Apr 06 10:08	4° \mathbb{Y} 35'28			8968 Feb 03 17:38	0° \mathbb{H}	
retrograde	8961 Jul 06 22:38	7° \mathbb{Y} 48'49		evening set	8968 Apr 04 07:39	2° \mathbb{H} 44'25	
opposition	8961 Sep 20 11:04	5° \mathbb{Y} 49'02	-0°55'44				
min. Earth dist.	8961 Sep 20 08:43	5° \mathbb{Y} 49'17	18.11656 AU	conjunction	8968 Apr 20 01:22	3° \mathbb{H} 40'08	-0°54'53
direct	8961 Dec 06 14:25	3° \mathbb{Y} 47'08		minimum elong	8968 Apr 20 01:22	3° \mathbb{H} 40'08	0°55'01
evening set	8962 Mar 10 08:12	7° \mathbb{Y} 03'36		max. Earth dist.	8968 Apr 20 11:42	3° \mathbb{H} 41'40	20.50694 AU
				morning rise	8968 May 05 18:21	4° \mathbb{H} 35'46	
conjunction	8962 Mar 26 04:55	8° \mathbb{Y} 00'49	-0°51'01	retrograde	8968 Aug 05 18:19	7° \mathbb{H} 45'12	
minimum elong	8962 Mar 26 04:55	8° \mathbb{Y} 00'49	0°51'04	opposition	8968 Oct 21 06:27	5° \mathbb{H} 46'21	-1°00'38
max. Earth dist.	8962 Mar 26 07:38	8° \mathbb{Y} 01'14	20.14626 AU	min. Earth dist.	8968 Oct 20 20:38	5° \mathbb{H} 47'21	18.53609 AU
morning rise	8962 Apr 10 23:44	8° \mathbb{Y} 57'48		direct	8969 Jan 06 08:09	3° \mathbb{H} 46'49	
retrograde	8962 Jul 11 11:56	12° \mathbb{Y} 10'29		evening set	8969 Apr 08 17:11	6° \mathbb{H} 56'07	
opposition	8962 Sep 25 05:23	10° \mathbb{Y} 10'50	-0°57'27				
min. Earth dist.	8962 Sep 25 02:49	10° \mathbb{Y} 11'06	18.17615 AU	conjunction	8969 Apr 24 10:27	7° \mathbb{H} 51'36	-0°54'29
direct	8962 Dec 11 07:58	8° \mathbb{Y} 09'13		minimum elong	8969 Apr 24 10:27	7° \mathbb{H} 51'36	0°54'39
evening set	8963 Mar 14 22:17	11° \mathbb{Y} 24'36		max. Earth dist.	8969 Apr 24 20:34	7° \mathbb{H} 53'06	20.56445 AU
				morning rise	8969 May 10 03:33	8° \mathbb{H} 47'04	
conjunction	8963 Mar 30 18:12	12° \mathbb{Y} 21'32	-0°52'26	retrograde	8969 Aug 10 05:31	11° \mathbb{H} 56'04	
minimum elong	8963 Mar 30 18:12	12° \mathbb{Y} 21'32	0°52'29	opposition	8969 Oct 25 20:44	9° \mathbb{H} 57'21	-1°00'01
max. Earth dist.	8963 Mar 30 21:11	12° \mathbb{Y} 21'59	20.20603 AU	min. Earth dist.	8969 Oct 25 09:55	9° \mathbb{H} 58'27	18.59254 AU
morning rise	8963 Apr 15 12:42	13° \mathbb{Y} 18'15		direct	8970 Jan 10 21:29	7° \mathbb{H} 58'10	
retrograde	8963 Jul 16 03:24	16° \mathbb{Y} 30'20		evening set	8970 Apr 13 01:59	11° \mathbb{H} 06'33	
opposition	8963 Sep 29 23:03	14° \mathbb{Y} 30'46	-0°58'50				
min. Earth dist.	8963 Sep 29 18:25	14° \mathbb{Y} 31'14	18.23616 AU	conjunction	8970 Apr 28 19:10	12° \mathbb{H} 01'51	-0°53'48
direct	8963 Dec 16 02:35	12° \mathbb{Y} 29'26		minimum elong	8970 Apr 28 19:10	12° \mathbb{H} 01'51	0°53'58
evening set	8964 Mar 18 11:10	15° \mathbb{Y} 43'45		max. Earth dist.	8970 Apr 29 07:09	12° \mathbb{H} 03'37	20.61952 AU
				morning rise	8970 May 14 12:03	12° \mathbb{H} 57'08	
conjunction	8964 Apr 03 06:38	16° \mathbb{Y} 40'25	-0°53'32		8970 Jun 23 23:50	15° \mathbb{H}	
minimum elong	8964 Apr 03 06:38	16° \mathbb{Y} 40'25	0°53'36	retrograde	8970 Aug 14 16:24	16° \mathbb{H} 05'43	
max. Earth dist.	8964 Apr 03 12:05	16° \mathbb{Y} 41'14	20.26618 AU		8970 Oct 07 18:58	15° \mathbb{H}	
morning rise	8964 Apr 19 00:35	17° \mathbb{Y} 36'54		opposition	8970 Oct 30 10:33	14° \mathbb{H} 07'08	-0°59'05
retrograde	8964 Jul 19 15:58	20° \mathbb{Y} 48'23		min. Earth dist.	8970 Oct 29 23:12	14° \mathbb{H} 08'16	18.64614 AU
opposition	8964 Oct 03 16:10	18° \mathbb{Y} 48'56	-0°59'52	direct	8971 Jan 15 10:57	12° \mathbb{H} 08'16	
min. Earth dist.	8964 Oct 03 10:56	18° \mathbb{Y} 49'28	18.29654 AU		8971 Apr 12 19:51	15° \mathbb{H}	
direct	8964 Dec 19 18:36	16° \mathbb{Y} 47'56		evening set	8971 Apr 17 10:28	15° \mathbb{H} 15'45	
evening set	8965 Mar 22 23:31	20° \mathbb{Y} 01'11					
				conjunction	8971 May 03 03:19	16° \mathbb{H} 10'52	-0°52'50
conjunction	8965 Apr 07 18:18	20° \mathbb{Y} 57'35	-0°54'20	minimum elong	8971 May 03 03:19	16° \mathbb{H} 10'52	0°53'01
minimum elong	8965 Apr 07 18:18	20° \mathbb{Y} 57'35	0°54'25	max. Earth dist.	8971 May 03 14:49	16° \mathbb{H} 12'33	20.67158 AU
max. Earth dist.	8965 Apr 07 23:58	20° \mathbb{Y} 58'26	20.32678 AU	morning rise	8971 May 18 20:24	17° \mathbb{H} 06'00	
morning rise	8965 Apr 23 12:05	21° \mathbb{Y} 53'51		retrograde	8971 Aug 19 02:34	20° \mathbb{H} 14'12	
retrograde	8965 Jul 24 06:01	25° \mathbb{Y} 04'46		opposition	8971 Nov 03 23:55	18° \mathbb{H} 15'42	-0°57'52

min. Earth dist.	8971 Nov 03 11:59	18°♄16'54	18.69657 AU	conjunction	8978 May 31 01:05	14°♄41'34	-0°39'09
direct	8972 Jan 19 22:36	16°♄17'07		minimum elong	8978 May 31 01:05	14°♄41'34	0°39'24
evening set	8972 Apr 20 18:11	19°♄23'45		max. Earth dist.	8978 May 31 16:40	14°♄43'49	20.92719 AU
				morning rise	8978 Jun 15 19:57	15°♄36'03	
conjunction	8972 May 06 11:07	20°♄18'41	-0°51'37	retrograde	8978 Sep 16 16:52	18°♄42'14	
minimum elong	8972 May 06 11:07	20°♄18'41	0°51'48	opposition	8978 Dec 03 07:06	16°♄43'41	-0°41'46
max. Earth dist.	8972 May 07 00:09	20°♄20'36	20.72005 AU	min. Earth dist.	8978 Dec 02 16:05	16°♄45'11	18.93920 AU
morning rise	8972 May 22 04:09	21°♄13'41		direct	8979 Feb 17 20:46	14°♄46'14	
retrograde	8972 Aug 22 12:27	24°♄21'30		evening set	8979 May 19 12:36	17°♄48'00	
opposition	8972 Nov 07 12:44	22°♄23'05	-0°56'20				
min. Earth dist.	8972 Nov 07 00:21	22°♄24'20	18.74296 AU	conjunction	8979 Jun 04 06:20	18°♄42'14	-0°36'21
direct	8973 Jan 23 10:56	20°♄24'45		minimum elong	8979 Jun 04 06:20	18°♄42'14	0°36'37
evening set	8973 Apr 25 01:42	23°♄30'32		max. Earth dist.	8979 Jun 04 21:22	18°♄44'24	20.95003 AU
				morning rise	8979 Jun 20 01:51	19°♄36'42	
conjunction	8973 May 10 18:26	24°♄25'20	-0°50'07	retrograde	8979 Sep 21 01:10	22°♄42'47	
minimum elong	8973 May 10 18:26	24°♄25'20	0°50'19	opposition	8979 Dec 07 16:45	20°♄44'14	-0°38'33
max. Earth dist.	8973 May 11 06:39	24°♄27'07	20.76435 AU	min. Earth dist.	8979 Dec 07 01:54	20°♄45'43	18.96060 AU
morning rise	8973 May 26 11:47	25°♄20'12		direct	8980 Feb 22 02:51	18°♄46'55	
retrograde	8973 Aug 26 22:04	28°♄27'40		evening set	8980 May 22 17:22	21°♄48'15	
opposition	8973 Nov 12 00:58	26°♄29'16	-0°54'32				
min. Earth dist.	8973 Nov 11 12:24	26°♄30'32	18.78518 AU	conjunction	8980 Jun 07 11:39	22°♄42'27	-0°33'22
direct	8974 Jan 27 21:22	24°♄31'07		minimum elong	8980 Jun 07 11:39	22°♄42'27	0°33'37
evening set	8974 Apr 29 08:31	27°♄36'07		max. Earth dist.	8980 Jun 08 04:02	22°♄44'48	20.96982 AU
				morning rise	8980 Jun 23 07:33	23°♄36'55	
conjunction	8974 May 15 01:27	28°♄30'46	-0°48'23	retrograde	8980 Sep 24 09:35	26°♄42'56	
minimum elong	8974 May 15 01:27	28°♄30'46	0°48'36	min. Earth dist.	8980 Dec 10 10:22	24°♄45'57	18.97860 AU
max. Earth dist.	8974 May 15 15:03	28°♄32'46	20.80440 AU	opposition	8980 Dec 11 02:00	24°♄44'23	-0°35'10
morning rise	8974 May 30 18:53	29°♄25'32		direct	8981 Feb 25 11:19	22°♄47'14	
	8974 Jun 10 01:48	0°♄		evening set	8981 May 26 22:15	25°♄48'12	
retrograde	8974 Aug 31 06:52	2°♄32'39					
opposition	8974 Nov 16 12:47	0°♄34'15	-0°52'28	conjunction	8981 Jun 11 16:45	26°♄42'23	-0°30'14
min. Earth dist.	8974 Nov 15 23:39	0°♄35'34	18.82302 AU	minimum elong	8981 Jun 11 16:45	26°♄42'23	0°30'30
	8974 Nov 30 23:37	30°♄		max. Earth dist.	8981 Jun 12 08:20	26°♄44'37	20.98609 AU
direct	8975 Feb 01 08:31	28°♄36'17		morning rise	8981 Jun 27 13:20	27°♄36'51	
	8975 Apr 01 04:48	0°♄			8981 Aug 17 14:24	0°♄	
evening set	8975 May 03 14:52	1°♄40'29		retrograde	8981 Sep 28 17:50	0°♄42'53	
					8981 Nov 11 05:24	30°♄	
conjunction	8975 May 19 07:43	2°♄35'01	-0°46'24	opposition	8981 Dec 15 11:05	28°♄44'21	-0°31'37
minimum elong	8975 May 19 07:43	2°♄35'01	0°46'37	min. Earth dist.	8981 Dec 14 19:59	28°♄45'52	18.99310 AU
max. Earth dist.	8975 May 19 20:44	2°♄36'55	20.84028 AU	direct	8982 Mar 01 16:54	26°♄47'19	
morning rise	8975 Jun 04 01:38	3°♄29'42		evening set	8982 May 31 02:59	29°♄48'00	
retrograde	8975 Sep 04 16:02	6°♄36'31			8982 Jun 03 16:00	0°♄	
min. Earth dist.	8975 Nov 20 10:54	4°♄39'23	18.85706 AU				
opposition	8975 Nov 21 00:09	4°♄38'04	-0°50'09	conjunction	8982 Jun 15 22:05	0°♄42'11	-0°26'58
direct	8976 Feb 05 17:46	2°♄40'13		minimum elong	8982 Jun 15 22:05	0°♄42'11	0°27'13
evening set	8976 May 06 20:43	5°♄43'43		max. Earth dist.	8982 Jun 16 14:46	0°♄44'35	20.99872 AU
				morning rise	8982 Jul 01 19:06	1°♄36'41	
conjunction	8976 May 22 13:54	6°♄38'09	-0°44'12	retrograde	8982 Oct 03 02:37	4°♄42'46	
minimum elong	8976 May 22 13:54	6°♄38'09	0°44'26	opposition	8982 Dec 19 20:01	2°♄44'14	-0°27'55
max. Earth dist.	8976 May 23 04:27	6°♄40'16	20.87248 AU	min. Earth dist.	8982 Dec 19 04:15	2°♄45'49	19.00365 AU
morning rise	8976 Jun 07 07:59	7°♄32'44		direct	8983 Mar 06 00:24	0°♄47'20	
retrograde	8976 Sep 08 00:10	10°♄39'17		evening set	8983 Jun 04 07:52	3°♄47'47	
opposition	8976 Nov 24 10:46	8°♄40'48	-0°47'34				
min. Earth dist.	8976 Nov 23 20:45	8°♄42'12	18.88750 AU	conjunction	8983 Jun 20 03:17	4°♄42'00	-0°23'34
direct	8977 Feb 09 03:51	6°♄43'05		minimum elong	8983 Jun 20 03:17	4°♄42'00	0°23'49
evening set	8977 May 11 02:23	9°♄45'56		max. Earth dist.	8983 Jun 20 18:57	4°♄44'14	21.00720 AU
				morning rise	8983 Jul 06 01:06	5°♄36'32	
conjunction	8977 May 26 19:35	10°♄40'16	-0°41'47	retrograde	8983 Oct 07 11:23	8°♄42'43	
minimum elong	8977 May 26 19:35	10°♄40'16	0°42'01	opposition	8983 Dec 24 04:54	6°♄44'11	-0°24'05
max. Earth dist.	8977 May 27 09:36	10°♄42'18	20.90134 AU	min. Earth dist.	8983 Dec 23 14:03	6°♄45'40	19.00995 AU
morning rise	8977 Jun 11 14:13	11°♄34'48		direct	8984 Mar 09 06:04	4°♄47'22	
retrograde	8977 Sep 12 08:43	14°♄41'09		evening set	8984 Jun 07 12:51	7°♄47'38	
opposition	8977 Nov 28 21:09	12°♄42'37	-0°44'46				
min. Earth dist.	8977 Nov 28 07:06	12°♄44'01	18.91491 AU	conjunction	8984 Jun 23 08:58	8°♄41'54	-0°20'03
direct	8978 Feb 13 11:25	10°♄45'01		minimum elong	8984 Jun 23 08:58	8°♄41'54	0°20'18
evening set	8978 May 15 07:29	13°♄47'17		max. Earth dist.	8984 Jun 24 01:17	8°♄44'14	21.01114 AU
				morning rise	8984 Jul 09 07:16	9°♄36'30	

retrograde	8984 Oct 10 20:26	12°☾42'47	conjunction	8990 Jul 17 22:46	2°♈44'58	0°02'40
opposition	8984 Dec 27 13:22	10°☾44'14 -0°20'09	minimum elong	8990 Jul 17 22:47	2°♈44'58	0°02'26
min. Earth dist.	8984 Dec 26 22:12	10°☾45'45 19.01134 AU	behind sun begin	8990 Jul 17 16:11	2°♈44'03	
direct	8985 Mar 13 12:56	8°☾47'29	behind sun end	8990 Jul 18 05:24	2°♈45'54	
evening set	8985 Jun 11 18:13	11°☾47'39	max. Earth dist.	8990 Jul 18 12:01	2°♈46'52	20.92838 AU
			morning rise	8990 Aug 03 01:27	3°♈40'11	
conjunction	8985 Jun 27 14:42	12°☾41'57 -0°16'26	retrograde	8990 Nov 05 04:12	6°♈47'47	
minimum elong	8985 Jun 27 14:42	12°☾41'57 0°16'41	opposition	8991 Jan 21 15:49	4°♈48'19	0°05'02
max. Earth dist.	8985 Jun 28 05:32	12°☾44'05 21.00996 AU	min. Earth dist.	8991 Jan 21 03:41	4°♈49'33	18.91464 AU
morning rise	8985 Jul 13 13:49	13°☾36'38	direct	8991 Apr 07 04:50	2°♈51'01	
retrograde	8985 Oct 15 05:22	16°☾43'05	evening set	8991 Jul 06 05:30	5°♈51'34	
opposition	8985 Dec 31 22:05	14°☾44'27 -0°16'05				
min. Earth dist.	8985 Dec 31 08:11	14°☾45'51 19.00756 AU	conjunction	8991 Jul 22 06:00	6°♈46'30	0°06'31
direct	8986 Mar 17 18:47	12°☾47'43	minimum elong	8991 Jul 22 05:59	6°♈46'30	0°06'19
evening set	8986 Jun 15 23:25	15°☾47'48	behind sun begin	8991 Jul 21 23:43	6°♈45'37	
			behind sun end	8991 Jul 22 12:15	6°♈47'23	
conjunction	8986 Jul 01 20:39	16°☾42'11 -0°12'44	max. Earth dist.	8991 Jul 22 17:53	6°♈48'12	20.90006 AU
minimum elong	8986 Jul 01 20:40	16°☾42'11 0°13'00	morning rise	8991 Aug 07 09:34	7°♈41'52	
behind sun begin	8986 Jul 01 16:38	16°☾41'37	retrograde	8991 Nov 09 12:29	10°♈49'49	
behind sun end	8986 Jul 02 00:42	16°☾42'45	opposition	8992 Jan 26 00:13	8°♈50'10	0°09'17
max. Earth dist.	8986 Jul 02 11:55	16°☾44'22 21.00347 AU	min. Earth dist.	8992 Jan 25 13:31	8°♈51'15	18.88486 AU
morning rise	8986 Jul 17 20:19	17°☾36'56	direct	8992 Apr 10 10:00	6°♈52'42	
retrograde	8986 Oct 19 14:57	20°☾43'34	evening set	8992 Jul 09 12:29	9°♈53'32	
opposition	8987 Jan 05 06:37	18°☾44'50 -0°11'57				
min. Earth dist.	8987 Jan 04 16:25	18°☾46'16 18.99826 AU	conjunction	8992 Jul 25 13:51	10°♈48'38	0°10'20
direct	8987 Mar 22 02:00	16°☾48'03	minimum elong	8992 Jul 25 13:51	10°♈48'38	0°10'08
evening set	8987 Jun 20 05:06	19°☾48'07	behind sun begin	8992 Jul 25 08:32	10°♈47'53	
			behind sun end	8992 Jul 25 19:09	10°♈49'23	
conjunction	8987 Jul 06 02:49	20°☾42'35 -0°08'59	max. Earth dist.	8992 Jul 26 02:03	10°♈50'23	20.86884 AU
minimum elong	8987 Jul 06 02:49	20°☾42'35 0°09'13	morning rise	8992 Aug 10 18:03	11°♈44'10	
behind sun begin	8987 Jul 05 21:14	20°☾41'48	retrograde	8992 Nov 12 23:22	14°♈52'29	
behind sun end	8987 Jul 06 08:24	20°☾43'22	opposition	8993 Jan 29 08:27	12°♈52'40	0°13'30
max. Earth dist.	8987 Jul 06 16:31	20°☾44'32 20.99156 AU	min. Earth dist.	8993 Jan 28 21:18	12°♈53'48	18.85219 AU
morning rise	8987 Jul 22 03:22	21°☾37'26	direct	8993 Apr 14 18:17	10°♈55'03	
retrograde	8987 Oct 23 23:22	24°☾44'16	evening set	8993 Jul 13 20:04	13°♈56'16	
opposition	8988 Jan 09 15:03	22°☾45'22 -0°07'46				
min. Earth dist.	8988 Jan 09 02:20	22°☾46'39 18.98383 AU	conjunction	8993 Jul 29 22:01	14°♈51'32	0°14'07
direct	8988 Mar 25 07:52	20°☾48'29	minimum elong	8993 Jul 29 22:01	14°♈51'32	0°13'55
evening set	8988 Jun 23 10:45	23°☾48'34	behind sun begin	8993 Jul 29 18:37	14°♈51'04	
			behind sun end	8993 Jul 30 01:25	14°♈52'01	
conjunction	8988 Jul 09 09:19	24°☾43'08 -0°05'11	max. Earth dist.	8993 Jul 30 08:50	14°♈53'05	20.83483 AU
minimum elong	8988 Jul 09 09:18	24°☾43'08 0°05'26		8993 Aug 01 08:37	15°♈	
behind sun begin	8988 Jul 09 02:56	24°☾42'15	morning rise	8993 Aug 15 03:06	15°♈47'14	
behind sun end	8988 Jul 09 15:41	24°☾44'02	retrograde	8993 Nov 17 08:49	18°♈56'01	
max. Earth dist.	8988 Jul 09 23:22	24°☾45'09 20.97472 AU	opposition	8994 Feb 02 17:10	16°♈56'03	0°17'40
morning rise	8988 Jul 25 10:29	25°☾38'06	min. Earth dist.	8994 Feb 02 07:31	16°♈57'02	18.81693 AU
retrograde	8988 Oct 27 09:38	28°☾45'08		8994 Apr 10 19:44	15°♈♈	
opposition	8989 Jan 12 23:17	26°☾46'04 -0°03'31	direct	8994 Apr 18 23:33	14°♈58'16	
min. Earth dist.	8989 Jan 12 10:15	26°☾47'23 18.96460 AU		8994 Apr 27 03:29	15°♈	
direct	8989 Mar 29 15:24	24°☾49'03	evening set	8994 Jul 18 03:54	17°♈59'56	
evening set	8989 Jun 27 16:44	27°☾49'14				
			conjunction	8994 Aug 03 06:47	18°♈55'23	0°17'50
conjunction	8989 Jul 13 15:47	28°☾43'54 -0°01'19	minimum elong	8994 Aug 03 06:47	18°♈55'23	0°17'40
minimum elong	8989 Jul 13 15:47	28°☾43'54 0°01'32	max. Earth dist.	8994 Aug 03 17:49	18°♈56'58	20.79833 AU
behind sun begin	8989 Jul 13 09:10	28°☾42'58	morning rise	8994 Aug 19 12:32	19°♈51'16	
behind sun end	8989 Jul 13 22:24	28°☾44'49	retrograde	8994 Nov 21 20:33	23°♈00'32	
max. Earth dist.	8989 Jul 14 04:29	28°☾45'43 20.95338 AU	opposition	8995 Feb 07 01:59	21°♈00'26	0°21'45
morning rise	8989 Jul 29 17:50	29°☾38'59	min. Earth dist.	8995 Feb 06 15:57	21°♈01'27	18.77906 AU
	8989 Aug 05 01:29	0°♈	direct	8995 Apr 23 08:02	19°♈02'31	
retrograde	8989 Oct 31 17:25	2°♈46'17	evening set	8995 Jul 22 12:43	22°♈04'42	
asc. node	8989 Nov 13 01:18	2°♈42'35				
opposition	8990 Jan 17 07:37	0°♈47'01 0°00'45	conjunction	8995 Aug 07 16:13	23°♈00'21	0°21'29
min. Earth dist.	8990 Jan 16 19:59	0°♈48'11 18.94136 AU	minimum elong	8995 Aug 07 16:13	23°♈00'21	0°21'18
	8990 Feb 06 06:12	30°♈☾	max. Earth dist.	8995 Aug 08 01:43	23°♈01'42	20.75914 AU
direct	8990 Apr 02 20:59	28°☾49'51	morning rise	8995 Aug 23 22:52	23°♈56'26	
	8990 May 26 05:48	0°♈	retrograde	8995 Nov 26 07:17	27°♈06'13	
evening set	8990 Jul 01 22:53	1°♈50'11	opposition	8996 Feb 11 11:05	25°♈05'59	0°25'45

min. Earth dist.	8996 Feb 11 02:50	25°♈06'50	18.73857 AU	conjunction	9002 Sep 07 07:33	22°♏13'56	0°43'26
direct	8996 Apr 26 14:00	23°♈07'56		minimum elong	9002 Sep 07 07:33	22°♏13'56	0°43'22
evening set	8996 Jul 25 22:03	26°♈10'42		max. Earth dist.	9002 Sep 07 09:04	22°♏14'10	20.39937 AU
				morning rise	9002 Sep 23 18:59	23°♏11'39	
conjunction	8996 Aug 11 02:29	27°♈06'34	0°25'02	retrograde	9002 Dec 27 06:16	26°♏25'38	
minimum elong	8996 Aug 11 02:29	27°♈06'34	0°24'53	opposition	9003 Mar 13 13:25	24°♏24'13	0°49'31
max. Earth dist.	8996 Aug 11 11:48	27°♈07'55	20.71730 AU	min. Earth dist.	9003 Mar 13 12:01	24°♏24'22	18.36878 AU
morning rise	8996 Aug 27 09:45	28°♈02'52		direct	9003 May 27 09:14	22°♏24'23	
	8996 Oct 05 05:56	0°♏		evening set	9003 Aug 26 13:24	25°♏32'37	
retrograde	8996 Nov 29 20:05	1°♏13'12					
	8997 Jan 26 05:04	30°♏		conjunction	9003 Sep 11 23:04	26°♏30'13	0°45'49
opposition	8997 Feb 14 20:26	29°♈12'52	0°29'38	minimum elong	9003 Sep 11 23:04	26°♏30'13	0°45'48
min. Earth dist.	8997 Feb 14 12:07	29°♈13'43	18.69519 AU	max. Earth dist.	9003 Sep 11 23:11	26°♏30'14	20.33797 AU
direct	8997 Apr 30 22:42	27°♈14'39		morning rise	9003 Sep 28 11:06	27°♏28'11	
	8997 Jul 24 23:11	0°♏			9003 Nov 20 12:11	0°♏	
evening set	8997 Jul 30 08:13	0°♏18'05		retrograde	9003 Dec 31 20:34	0°♏42'47	
					9004 Feb 12 00:19	30°♏	
conjunction	8997 Aug 15 13:15	1°♏14'10	0°28'29	opposition	9004 Mar 17 01:36	28°♏41'09	0°52'03
minimum elong	8997 Aug 15 13:15	1°♏14'10	0°28'20	min. Earth dist.	9004 Mar 17 02:11	28°♏41'05	18.30704 AU
max. Earth dist.	8997 Aug 15 20:51	1°♏15'16	20.67232 AU	direct	9004 May 30 19:50	26°♏40'57	
morning rise	8997 Aug 31 21:20	2°♏10'41		evening set	9004 Aug 30 04:56	29°♏50'08	
retrograde	8997 Dec 04 07:56	5°♏21'38			9004 Sep 02 01:11	0°♏	
opposition	8998 Feb 19 06:24	3°♏21'10	0°33'24				
min. Earth dist.	8998 Feb 19 00:08	3°♏21'49	18.64866 AU	conjunction	9004 Sep 15 15:21	0°♏48'00	0°47'58
direct	8998 May 05 06:06	1°♏22'47		minimum elong	9004 Sep 15 15:20	0°♏48'00	0°47'57
evening set	8998 Aug 03 19:08	4°♏26'55		max. Earth dist.	9004 Sep 15 14:27	0°♏47'52	20.27604 AU
				morning rise	9004 Oct 02 03:56	1°♏46'13	
conjunction	8998 Aug 20 01:04	5°♏23'14	0°31'48	retrograde	9005 Jan 04 13:41	5°♏01'27	
minimum elong	8998 Aug 20 01:04	5°♏23'14	0°31'41	opposition	9005 Mar 21 14:15	2°♏59'37	0°54'18
max. Earth dist.	8998 Aug 20 08:04	5°♏24'15	20.62414 AU	min. Earth dist.	9005 Mar 21 14:51	2°♏59'33	18.24502 AU
morning rise	8998 Sep 05 09:47	6°♏19'59		direct	9005 Jun 04 08:35	0°♏59'04	
retrograde	8998 Dec 08 21:46	9°♏31'32		evening set	9005 Sep 03 21:10	4°♏09'12	
opposition	8999 Feb 23 16:32	7°♏30'56	0°37'00				
min. Earth dist.	8999 Feb 23 10:26	7°♏31'33	18.59870 AU	conjunction	9005 Sep 20 08:14	5°♏07'21	0°49'51
direct	8999 May 09 15:47	5°♏32'19		minimum elong	9005 Sep 20 08:14	5°♏07'21	0°49'51
evening set	8999 Aug 08 06:58	8°♏37'12		max. Earth dist.	9005 Sep 20 06:24	5°♏07'05	20.21397 AU
				morning rise	9005 Oct 06 21:18	6°♏05'49	
conjunction	8999 Aug 24 13:36	9°♏33'46	0°34'59	retrograde	9006 Jan 09 05:50	9°♏21'42	
minimum elong	8999 Aug 24 13:36	9°♏33'46	0°34'53	opposition	9006 Mar 26 03:35	7°♏19'40	0°56'15
max. Earth dist.	8999 Aug 24 18:36	9°♏34'30	20.57235 AU	min. Earth dist.	9006 Mar 26 05:51	7°♏19'26	18.18323 AU
morning rise	8999 Sep 09 23:06	10°♏30'45		direct	9006 Jun 08 20:29	5°♏18'48	
retrograde	8999 Dec 13 10:25	13°♏42'54		evening set	9006 Sep 08 14:23	8°♏29'56	
opposition	9000 Feb 28 03:17	11°♏42'08	0°40'27				
min. Earth dist.	9000 Feb 27 23:27	11°♏42'32	18.54520 AU	conjunction	9006 Sep 25 02:06	9°♏28'21	0°51'27
direct	9000 May 14 00:27	9°♏43'16		minimum elong	9006 Sep 25 02:06	9°♏28'21	0°51'29
evening set	9000 Aug 12 19:26	12°♏48'56		max. Earth dist.	9006 Sep 24 23:04	9°♏27'54	20.15258 AU
				morning rise	9006 Oct 11 15:43	10°♏27'05	
conjunction	9000 Aug 29 02:55	13°♏45'45	0°37'59	retrograde	9007 Jan 14 00:09	13°♏43'35	
minimum elong	9000 Aug 29 02:55	13°♏45'45	0°37'54	opposition	9007 Mar 30 17:12	11°♏41'24	0°57'54
max. Earth dist.	9000 Aug 29 07:00	13°♏46'20	20.51726 AU	min. Earth dist.	9007 Mar 30 19:34	11°♏41'09	18.12229 AU
morning rise	9000 Sep 14 13:01	14°♏42'57		direct	9007 Jun 13 10:14	9°♏40'12	
retrograde	9000 Dec 18 01:06	17°♏55'43		evening set	9007 Sep 13 08:31	12°♏52'22	
opposition	9001 Mar 04 14:10	15°♏54'45	0°43'41				
min. Earth dist.	9001 Mar 04 10:32	15°♏55'07	18.48856 AU	conjunction	9007 Sep 29 20:54	13°♏51'05	0°52'46
direct	9001 May 18 11:35	13°♏55'34		minimum elong	9007 Sep 29 20:54	13°♏51'05	0°52'48
evening set	9001 Aug 17 08:43	17°♏02'04		max. Earth dist.	9007 Sep 29 17:10	13°♏50'32	20.09206 AU
				morning rise	9007 Oct 16 10:51	14°♏50'04	
conjunction	9001 Sep 02 16:52	17°♏59'08	0°40'49	retrograde	9008 Jan 18 17:49	18°♏07'12	
minimum elong	9001 Sep 02 16:52	17°♏59'08	0°40'45	opposition	9008 Apr 03 07:39	16°♏04'53	0°59'13
max. Earth dist.	9001 Sep 02 19:15	17°♏59'29	20.45928 AU	min. Earth dist.	9008 Apr 03 11:31	16°♏04'28	18.06241 AU
morning rise	9001 Sep 19 03:40	18°♏56'35		direct	9008 Jun 16 23:29	14°♏03'24	
retrograde	9001 Dec 22 14:15	22°♏09'58		evening set	9008 Sep 17 03:28	17°♏16'38	
opposition	9002 Mar 09 01:40	20°♏08'47	0°46'43				
min. Earth dist.	9002 Mar 09 00:09	20°♏08'56	18.42950 AU	conjunction	9008 Oct 03 16:21	18°♏15'37	0°53'47
direct	9002 May 22 21:05	18°♏09'16		minimum elong	9008 Oct 03 16:21	18°♏15'37	0°53'52
evening set	9002 Aug 21 22:32	21°♏16'37		max. Earth dist.	9008 Oct 03 11:09	18°♏14'50	20.03292 AU
				morning rise	9008 Oct 20 06:46	19°♏14'51	

retrograde	9009 Jan 22 13:15	22° <u>♂</u> 32'38		opposition	9015 May 05 05:55	17° <u>♂</u> 39'40	0°58'24
opposition	9009 Apr 07 22:35	20° <u>♂</u> 30'12	1°00'12	min. Earth dist.	9015 May 05 16:39	17° <u>♂</u> 38'30	17.67815 AU
min. Earth dist.	9009 Apr 08 02:39	20° <u>♂</u> 29'46	18.00398 AU	direct	9015 Jul 19 02:59	15° <u>♂</u> 36'07	
direct	9009 Jun 21 14:48	18° <u>♂</u> 28'26		evening set	9015 Oct 20 17:12	18° <u>♂</u> 56'44	
evening set	9009 Sep 21 23:23	21° <u>♂</u> 42'46					
conjunction	9009 Oct 08 12:52	22° <u>♂</u> 42'01	0°54'30	conjunction	9015 Nov 06 08:54	19° <u>♂</u> 57'28	0°51'45
minimum elong	9009 Oct 08 12:52	22° <u>♂</u> 42'01	0°54'35	minimum elong	9015 Nov 06 08:54	19° <u>♂</u> 57'28	0°51'56
max. Earth dist.	9009 Oct 08 07:14	22° <u>♂</u> 41'11	19.97511 AU	max. Earth dist.	9015 Nov 05 20:07	19° <u>♂</u> 55'30	19.65331 AU
morning rise	9009 Oct 25 03:30	23° <u>♂</u> 41'31		morning rise	9015 Nov 23 00:12	20° <u>♂</u> 58'11	
retrograde	9010 Jan 27 08:13	26° <u>♂</u> 59'54		retrograde	9016 Feb 24 13:37	24° <u>♂</u> 19'32	
opposition	9010 Apr 12 14:14	24° <u>♂</u> 57'25	1°00'50	opposition	9016 May 09 01:11	22° <u>♂</u> 16'32	0°56'46
min. Earth dist.	9010 Apr 12 19:48	24° <u>♂</u> 56'49	17.94686 AU	min. Earth dist.	9016 May 09 12:27	22° <u>♂</u> 15'18	17.62957 AU
direct	9010 Jun 26 05:42	22° <u>♂</u> 55'24		direct	9016 Jul 22 23:56	20° <u>♂</u> 12'40	
evening set	9010 Sep 26 20:17	26° <u>♂</u> 10'48		evening set	9016 Oct 24 18:31	23° <u>♂</u> 34'12	
conjunction	9010 Oct 13 10:11	27° <u>♂</u> 10'20	0°54'53	conjunction	9016 Nov 10 10:10	24° <u>♂</u> 35'07	0°50'06
minimum elong	9010 Oct 13 10:11	27° <u>♂</u> 10'20	0°55'00	minimum elong	9016 Nov 10 10:10	24° <u>♂</u> 35'07	0°50'18
max. Earth dist.	9010 Oct 13 02:36	27° <u>♂</u> 09'12	19.91868 AU	max. Earth dist.	9016 Nov 09 19:26	24° <u>♂</u> 32'51	19.60624 AU
morning rise	9010 Oct 30 01:14	28° <u>♂</u> 10'04		morning rise	9016 Nov 27 01:30	25° <u>♂</u> 36'01	
	9010 Dec 03 07:02	0° <u>♂</u>		retrograde	9017 Feb 28 11:20	28° <u>♂</u> 57'42	
retrograde	9011 Feb 01 04:31	1° <u>♂</u> 29'04		opposition	9017 May 13 21:00	26° <u>♂</u> 54'36	0°54'45
	9011 Apr 04 02:27	30° <u>♂</u> 9'4		min. Earth dist.	9017 May 14 09:20	26° <u>♂</u> 53'16	17.58420 AU
opposition	9011 Apr 17 06:29	29° <u>♂</u> 26'30	1°01'06	direct	9017 Jul 27 21:32	24° <u>♂</u> 50'25	
min. Earth dist.	9011 Apr 17 12:43	29° <u>♂</u> 25'50	17.89097 AU	evening set	9017 Oct 29 20:16	28° <u>♂</u> 12'51	
direct	9011 Jun 30 23:02	27° <u>♂</u> 24'12		conjunction	9017 Nov 15 12:10	29° <u>♂</u> 13'57	0°48'06
	9011 Sep 19 23:15	0° <u>♂</u>		minimum elong	9017 Nov 15 12:10	29° <u>♂</u> 13'57	0°48'19
evening set	9011 Oct 01 18:08	0° <u>♂</u> 40'43		max. Earth dist.	9017 Nov 14 21:52	29° <u>♂</u> 11'45	19.56262 AU
conjunction	9011 Oct 18 08:35	1° <u>♂</u> 40'31	0°54'56		9017 Nov 28 00:10	0° <u>♂</u>	
minimum elong	9011 Oct 18 08:34	1° <u>♂</u> 40'31	0°55'04	morning rise	9017 Dec 02 03:12	0° <u>♂</u> 14'58	
max. Earth dist.	9011 Oct 18 00:32	1° <u>♂</u> 39'18	19.86312 AU	retrograde	9018 Mar 05 10:32	3° <u>♂</u> 36'56	
morning rise	9011 Nov 03 23:39	2° <u>♂</u> 40'28		opposition	9018 May 18 17:07	1° <u>♂</u> 33'47	0°52'21
retrograde	9012 Feb 06 00:25	6° <u>♂</u> 00'01		min. Earth dist.	9018 May 19 05:29	1° <u>♂</u> 32'26	17.54246 AU
opposition	9012 Apr 20 23:25	3° <u>♂</u> 57'24	1°01'00		9018 Jun 28 09:24	30° <u>♂</u> 9'♂	
min. Earth dist.	9012 Apr 21 07:06	3° <u>♂</u> 56'34	17.83587 AU	direct	9018 Aug 01 20:06	29° <u>♂</u> 29'18	
direct	9012 Jul 04 15:56	1° <u>♂</u> 54'50			9018 Sep 04 18:48	0° <u>♂</u>	
evening set	9012 Oct 05 16:55	5° <u>♂</u> 12'25		evening set	9018 Nov 03 22:41	2° <u>♂</u> 52'35	
conjunction	9012 Oct 22 07:36	6° <u>♂</u> 12'27	0°54'39	conjunction	9018 Nov 20 14:26	3° <u>♂</u> 53'50	0°45'47
minimum elong	9012 Oct 22 07:36	6° <u>♂</u> 12'27	0°54'48	minimum elong	9018 Nov 20 14:26	3° <u>♂</u> 53'50	0°46'01
max. Earth dist.	9012 Oct 21 21:12	6° <u>♂</u> 10'53	19.80855 AU	max. Earth dist.	9018 Nov 19 22:36	3° <u>♂</u> 51'23	19.52297 AU
morning rise	9012 Nov 07 22:58	7° <u>♂</u> 12'37		morning rise	9018 Dec 07 05:21	4° <u>♂</u> 54'59	
retrograde	9013 Feb 09 21:27	10° <u>♂</u> 32'42		retrograde	9019 Mar 10 08:38	8° <u>♂</u> 17'11	
opposition	9013 Apr 25 17:02	8° <u>♂</u> 29'59	1°00'31	opposition	9019 May 23 13:55	6° <u>♂</u> 13'59	0°49'36
min. Earth dist.	9013 Apr 26 01:37	8° <u>♂</u> 29'04	17.78188 AU	min. Earth dist.	9019 May 24 03:20	6° <u>♂</u> 12'32	17.50512 AU
direct	9013 Jul 09 11:17	6° <u>♂</u> 27'06		direct	9019 Aug 06 18:03	4° <u>♂</u> 09'14	
evening set	9013 Oct 10 16:09	9° <u>♂</u> 45'43		evening set	9019 Nov 09 01:18	7° <u>♂</u> 33'19	
conjunction	9013 Oct 27 07:21	10° <u>♂</u> 46'00	0°54'02	conjunction	9019 Nov 25 17:05	8° <u>♂</u> 34'42	0°43'09
minimum elong	9013 Oct 27 07:20	10° <u>♂</u> 46'00	0°54'12	minimum elong	9019 Nov 25 17:05	8° <u>♂</u> 34'42	0°43'23
max. Earth dist.	9013 Oct 26 20:48	10° <u>♂</u> 44'24	19.75507 AU	max. Earth dist.	9019 Nov 25 01:47	8° <u>♂</u> 32'20	19.48797 AU
morning rise	9013 Nov 12 22:39	11° <u>♂</u> 46'22		morning rise	9019 Dec 12 07:34	9° <u>♂</u> 35'57	
	9014 Jan 29 17:24	15° <u>♂</u>		retrograde	9020 Mar 14 09:22	12° <u>♂</u> 58'21	
retrograde	9014 Feb 14 18:14	15° <u>♂</u> 06'55		opposition	9020 May 27 11:02	10° <u>♂</u> 55'09	0°46'31
	9014 Mar 02 21:08	15° <u>♂</u> 9'♂		min. Earth dist.	9020 May 27 23:53	10° <u>♂</u> 53'45	17.47259 AU
opposition	9014 Apr 30 11:16	13° <u>♂</u> 04'07	0°59'39	direct	9020 Aug 10 17:52	8° <u>♂</u> 50'11	
min. Earth dist.	9014 Apr 30 20:54	13° <u>♂</u> 03'05	17.72905 AU	evening set	9020 Nov 13 04:24	12° <u>♂</u> 15'00	
direct	9014 Jul 14 06:16	11° <u>♂</u> 00'55		conjunction	9020 Nov 29 19:55	13° <u>♂</u> 16'30	0°40'13
evening set	9014 Oct 15 16:27	14° <u>♂</u> 20'32		minimum elong	9020 Nov 29 19:55	13° <u>♂</u> 16'30	0°40'28
	9014 Oct 26 13:59	15° <u>♂</u>		max. Earth dist.	9020 Nov 29 03:48	13° <u>♂</u> 14'00	19.45809 AU
conjunction	9014 Nov 01 07:46	15° <u>♂</u> 21'03	0°53'04	morning rise	9020 Dec 16 10:03	14° <u>♂</u> 17'50	
minimum elong	9014 Nov 01 07:46	15° <u>♂</u> 21'03	0°53'14	retrograde	9021 Mar 19 07:49	17° <u>♂</u> 40'24	
max. Earth dist.	9014 Oct 31 18:51	15° <u>♂</u> 19'05	19.70314 AU	opposition	9021 Jun 01 08:46	15° <u>♂</u> 37'14	0°43'06
morning rise	9014 Nov 17 23:17	16° <u>♂</u> 21'37		min. Earth dist.	9021 Jun 01 22:32	15° <u>♂</u> 35'44	17.44555 AU
retrograde	9015 Feb 19 15:43	19° <u>♂</u> 42'35		direct	9021 Aug 15 15:59	13° <u>♂</u> 32'05	
				evening set	9021 Nov 18 07:37	16° <u>♂</u> 57'36	

conjunction	9021 Dec 04 23:00	17° \mathbb{A} 59'11	0°37'00	max. Earth dist.	9028 Jan 03 03:00	16° \mathbb{B} 25'02	19.39310 AU
minimum elong	9021 Dec 04 23:00	17° \mathbb{A} 59'11	0°37'16	morning rise	9028 Jan 20 05:02	17° \mathbb{B} 28'45	
max. Earth dist.	9021 Dec 04 07:17	17° \mathbb{A} 56'45	19.43389 AU	retrograde	9028 Apr 21 07:16	20° \mathbb{B} 50'59	
morning rise	9021 Dec 21 12:43	19° \mathbb{A} 00'34		opposition	9028 Jul 04 02:41	18° \mathbb{B} 48'35	0°12'21
retrograde	9022 Mar 24 09:25	22° \mathbb{A} 23'16		min. Earth dist.	9028 Jul 04 15:45	18° \mathbb{B} 47'10	17.39693 AU
opposition	9022 Jun 06 06:48	20° \mathbb{A} 20'11	0°39'23	direct	9028 Sep 18 03:00	16° \mathbb{B} 43'06	
min. Earth dist.	9022 Jun 06 19:41	20° \mathbb{A} 18'46	17.42401 AU	evening set	9028 Dec 22 10:21	20° \mathbb{B} 10'58	
direct	9022 Aug 20 16:31	18° \mathbb{A} 14'56					
evening set	9022 Nov 23 11:21	21° \mathbb{A} 41'03		conjunction	9029 Jan 07 22:05	21° \mathbb{B} 12'25	0°08'50
max. Earth dist.	9022 Dec 09 10:25	22° \mathbb{A} 40'14	19.41508 AU	minimum elong	9029 Jan 07 22:05	21° \mathbb{B} 12'25	0°09'06
				behind sun begin	9029 Jan 07 16:24	21° \mathbb{B} 11'33	
conjunction	9022 Dec 10 02:24	22° \mathbb{A} 42'43	0°33'33	behind sun end	9029 Jan 08 03:47	21° \mathbb{B} 13'17	
minimum elong	9022 Dec 10 02:24	22° \mathbb{A} 42'43	0°33'47	max. Earth dist.	9029 Jan 07 07:10	21° \mathbb{B} 10'05	19.40153 AU
morning rise	9022 Dec 26 15:33	23° \mathbb{A} 44'08		morning rise	9029 Jan 24 06:51	22° \mathbb{B} 13'28	
retrograde	9023 Mar 29 08:06	27° \mathbb{A} 06'54		retrograde	9029 Apr 26 05:48	25° \mathbb{B} 35'22	
opposition	9023 Jun 11 05:18	25° \mathbb{A} 03'56	0°35'24	opposition	9029 Jul 09 02:37	23° \mathbb{B} 33'05	0°07'21
min. Earth dist.	9023 Jun 11 19:17	25° \mathbb{A} 02'24	17.40791 AU	min. Earth dist.	9029 Jul 09 16:04	23° \mathbb{B} 31'38	17.40748 AU
direct	9023 Aug 25 15:40	22° \mathbb{A} 58'36		direct	9029 Sep 23 04:58	21° \mathbb{B} 27'35	
evening set	9023 Nov 28 15:14	26° \mathbb{A} 25'18		evening set	9029 Dec 27 13:30	24° \mathbb{B} 55'21	
				max. Earth dist.	9030 Jan 12 08:42	25° \mathbb{B} 54'14	19.41435 AU
conjunction	9023 Dec 15 05:53	27° \mathbb{A} 27'00	0°29'51				
minimum elong	9023 Dec 15 05:53	27° \mathbb{A} 27'00	0°30'07	conjunction	9030 Jan 13 00:20	25° \mathbb{B} 56'40	0°04'21
max. Earth dist.	9023 Dec 14 13:51	27° \mathbb{A} 24'30	19.40164 AU	minimum elong	9030 Jan 13 00:20	25° \mathbb{B} 56'40	0°04'36
morning rise	9023 Dec 31 18:31	28° \mathbb{A} 28'25		behind sun begin	9030 Jan 12 17:45	25° \mathbb{B} 55'40	
	9024 Jan 27 14:27	0° \mathbb{B}		behind sun end	9030 Jan 13 06:54	25° \mathbb{B} 57'40	
retrograde	9024 Apr 02 09:34	1° \mathbb{B} 51'12		morning rise	9030 Jan 29 08:26	26° \mathbb{B} 57'35	
	9024 Jun 10 17:26	30° \mathbb{R} \mathbb{A}			9030 Apr 05 00:00	0° \mathbb{B}	
opposition	9024 Jun 15 04:10	29° \mathbb{A} 48'22	0°31'10	retrograde	9030 May 01 05:26	0° \mathbb{B} 19'08	
min. Earth dist.	9024 Jun 15 17:13	29° \mathbb{A} 46'57	17.39687 AU		9030 May 27 20:51	30° \mathbb{R} \mathbb{B}	
direct	9024 Aug 29 17:34	27° \mathbb{A} 43'01		opposition	9030 Jul 14 02:29	28° \mathbb{B} 16'55	0°02'19
	9024 Nov 12 16:36	0° \mathbb{B}		min. Earth dist.	9030 Jul 14 15:01	28° \mathbb{B} 15'34	17.42251 AU
evening set	9024 Dec 02 19:06	1° \mathbb{B} 10'08		direct	9030 Sep 28 07:56	26° \mathbb{B} 11'24	
				desc. node	9030 Dec 28 17:07	29° \mathbb{B} 24'37	
conjunction	9024 Dec 19 09:19	2° \mathbb{B} 11'51	0°25'57	evening set	9031 Jan 01 16:02	29° \mathbb{B} 38'59	
minimum elong	9024 Dec 19 09:19	2° \mathbb{B} 11'51	0°26'12		9031 Jan 07 08:43	0° \mathbb{B}	
max. Earth dist.	9024 Dec 18 17:37	2° \mathbb{B} 09'24	19.39293 AU				
morning rise	9025 Jan 04 21:13	3° \mathbb{B} 13'15		conjunction	9031 Jan 18 02:13	0° \mathbb{B} 40'09	-0°00'15
retrograde	9025 Apr 07 07:58	6° \mathbb{B} 36'00		minimum elong	9031 Jan 18 02:11	0° \mathbb{B} 40'09	0°00'01
opposition	9025 Jun 20 03:34	4° \mathbb{B} 33'18	0°26'43	behind sun begin	9031 Jan 17 21:52	0° \mathbb{B} 39'31	
min. Earth dist.	9025 Jun 20 17:40	4° \mathbb{B} 31'45	17.39050 AU	behind sun end	9031 Jan 18 06:30	0° \mathbb{B} 40'47	
direct	9025 Sep 03 18:07	2° \mathbb{B} 27'54		max. Earth dist.	9031 Jan 17 12:20	0° \mathbb{B} 38'00	19.43160 AU
evening set	9025 Dec 07 23:12	5° \mathbb{B} 55'23		morning rise	9031 Feb 03 09:12	1° \mathbb{B} 40'54	
				retrograde	9031 May 06 03:37	5° \mathbb{B} 02'01	
conjunction	9025 Dec 24 12:48	6° \mathbb{B} 57'04	0°21'52	opposition	9031 Jul 19 02:19	2° \mathbb{B} 59'54	-0°02'44
minimum elong	9025 Dec 24 12:48	6° \mathbb{B} 57'04	0°22'07	min. Earth dist.	9031 Jul 19 14:38	2° \mathbb{B} 58'34	17.44201 AU
max. Earth dist.	9025 Dec 23 20:32	6° \mathbb{B} 54'31	19.38881 AU	direct	9031 Oct 03 09:40	0° \mathbb{B} 54'25	
morning rise	9026 Jan 10 00:08	7° \mathbb{B} 58'25		evening set	9032 Jan 06 18:08	4° \mathbb{B} 21'42	
retrograde	9026 Apr 12 08:47	11° \mathbb{B} 21'03					
opposition	9026 Jun 25 02:56	9° \mathbb{B} 18'28	0°22'04	conjunction	9032 Jan 23 03:15	5° \mathbb{B} 22'41	-0°04'50
min. Earth dist.	9026 Jun 25 16:10	9° \mathbb{B} 17'01	17.38848 AU	minimum elong	9032 Jan 23 03:14	5° \mathbb{B} 22'41	0°04'36
direct	9026 Sep 08 21:25	7° \mathbb{B} 13'01		behind sun begin	9032 Jan 22 20:40	5° \mathbb{B} 21'41	
evening set	9026 Dec 13 03:12	10° \mathbb{B} 40'45		behind sun end	9032 Jan 23 09:47	5° \mathbb{B} 23'41	
				max. Earth dist.	9032 Jan 22 13:07	5° \mathbb{B} 20'29	19.45359 AU
conjunction	9026 Dec 29 16:19	11° \mathbb{B} 42'23	0°17'37	morning rise	9032 Feb 08 09:30	6° \mathbb{B} 23'14	
minimum elong	9026 Dec 29 16:19	11° \mathbb{B} 42'23	0°17'54	retrograde	9032 May 10 02:18	9° \mathbb{B} 43'55	
max. Earth dist.	9026 Dec 29 00:48	11° \mathbb{B} 39'58	19.38884 AU	opposition	9032 Jul 23 02:01	7° \mathbb{B} 41'53	-0°07'44
morning rise	9027 Jan 15 02:44	12° \mathbb{B} 43'40		min. Earth dist.	9032 Jul 23 13:21	7° \mathbb{B} 40'39	17.46656 AU
retrograde	9027 Apr 17 07:13	16° \mathbb{B} 06'07		direct	9032 Oct 07 11:46	5° \mathbb{B} 36'26	
opposition	9027 Jun 30 02:51	14° \mathbb{B} 03'38	0°17'16	evening set	9033 Jan 10 19:16	9° \mathbb{B} 03'20	
min. Earth dist.	9027 Jun 30 16:54	14° \mathbb{B} 02'07	17.39059 AU				
direct	9027 Sep 13 23:25	11° \mathbb{B} 58'11		conjunction	9033 Jan 27 03:39	10° \mathbb{B} 04'07	-0°09'17
evening set	9027 Dec 18 06:58	15° \mathbb{B} 26'02		minimum elong	9033 Jan 27 03:38	10° \mathbb{B} 04'07	0°09'05
				behind sun begin	9033 Jan 26 21:58	10° \mathbb{B} 03'15	
conjunction	9028 Jan 03 19:15	16° \mathbb{B} 27'34	0°13'16	behind sun end	9033 Jan 27 09:19	10° \mathbb{B} 04'59	
minimum elong	9028 Jan 03 19:16	16° \mathbb{B} 27'34	0°13'31	max. Earth dist.	9033 Jan 26 15:40	10° \mathbb{B} 02'16	19.48066 AU
behind sun begin	9028 Jan 03 15:36	16° \mathbb{B} 27'01		morning rise	9033 Feb 12 08:52	11° \mathbb{B} 04'28	
behind sun end	9028 Jan 03 22:56	16° \mathbb{B} 28'08		retrograde	9033 May 14 23:56	14° \mathbb{B} 24'40	

opposition	9033 Jul 28 01:34	12° \approx 22'44" -0°12'41"	retrograde	9039 Jun 12 01:47	12° \approx 04'13"
min. Earth dist.	9033 Jul 28 11:56	12° \approx 21'37" 17.49613 AU	opposition	9039 Aug 25 17:21	10° \approx 03'31" -0°39'01"
direct	9033 Oct 12 13:08	10° \approx 17'24"	min. Earth dist.	9039 Aug 25 21:04	10° \approx 03'07" 17.76994 AU
evening set	9034 Jan 15 20:05	13° \approx 43'51"	direct	9039 Nov 10 15:51	7° \approx 59'49"
			evening set	9040 Feb 13 09:06	11° \approx 22'14"
conjunction	9034 Feb 01 03:23	14° \approx 44'25" -0°13'39"			
minimum elong	9034 Feb 01 03:22	14° \approx 44'25" 0°13'27"	conjunction	9040 Feb 29 10:41	12° \approx 21'13" -0°36'46"
behind sun begin	9034 Jan 31 23:38	14° \approx 43'51"	minimum elong	9040 Feb 29 10:41	12° \approx 21'13" 0°36'41"
behind sun end	9034 Feb 01 07:07	14° \approx 44'59"	max. Earth dist.	9040 Feb 29 06:28	12° \approx 20'34" 19.79767 AU
max. Earth dist.	9034 Jan 31 15:33	14° \approx 42'35" 19.51289 AU	morning rise	9040 Mar 16 09:35	13° \approx 19'48"
	9034 Feb 05 07:15	15° \approx	retrograde	9040 Jun 15 19:00	16° \approx 36'15"
morning rise	9034 Feb 17 07:45	15° \approx 44'33"	opposition	9040 Aug 29 14:53	14° \approx 35'45" -0°42'37"
retrograde	9034 May 19 21:29	19° \approx 04'15"	min. Earth dist.	9040 Aug 29 18:37	14° \approx 35'22" 17.82584 AU
opposition	9034 Aug 02 00:48	17° \approx 02'28" -0°17'31"	direct	9040 Nov 14 13:46	12° \approx 32'22"
min. Earth dist.	9034 Aug 02 10:18	17° \approx 01'26" 17.53107 AU	evening set	9041 Feb 17 04:28	15° \approx 53'54"
	9034 Oct 07 10:48	15° \approx			
direct	9034 Oct 17 14:15	14° \approx 57'17"	conjunction	9041 Mar 05 05:09	16° \approx 52'35" -0°39'53"
	9034 Oct 27 18:02	15° \approx	minimum elong	9041 Mar 05 05:08	16° \approx 52'35" 0°39'49"
evening set	9035 Jan 20 20:04	18° \approx 23'13"	max. Earth dist.	9041 Mar 05 01:40	16° \approx 52'03" 19.85425 AU
			morning rise	9041 Mar 21 03:20	17° \approx 50'54"
conjunction	9035 Feb 06 02:32	19° \approx 23'34" -0°17'55"	retrograde	9041 Jun 20 13:34	21° \approx 06'44"
minimum elong	9035 Feb 06 02:32	19° \approx 23'34" 0°17'45"	opposition	9041 Sep 03 11:50	19° \approx 06'25" -0°45'56"
max. Earth dist.	9035 Feb 05 16:47	19° \approx 22'03" 19.55045 AU	min. Earth dist.	9041 Sep 03 13:40	19° \approx 06'14" 17.88286 AU
morning rise	9035 Feb 22 05:53	20° \approx 23'27"	direct	9041 Nov 19 13:14	17° \approx 03'21"
retrograde	9035 May 24 18:35	23° \approx 42'38"	evening set	9042 Feb 21 23:04	20° \approx 23'56"
opposition	9035 Aug 06 23:55	21° \approx 41'03" -0°22'12"			
min. Earth dist.	9035 Aug 07 07:54	21° \approx 40'12" 17.57103 AU	conjunction	9042 Mar 09 22:53	21° \approx 22'19" -0°42'45"
direct	9035 Oct 22 15:17	19° \approx 36'07"	minimum elong	9042 Mar 09 22:53	21° \approx 22'19" 0°42'42"
evening set	9036 Jan 25 19:19	23° \approx 01'28"	max. Earth dist.	9042 Mar 09 20:45	21° \approx 21'59" 19.91161 AU
			morning rise	9042 Mar 25 20:14	22° \approx 20'22"
conjunction	9036 Feb 11 00:42	24° \approx 01'33" -0°22'03"	retrograde	9042 Jun 25 05:15	25° \approx 35'34"
minimum elong	9036 Feb 11 00:42	24° \approx 01'33" 0°21'53"	opposition	9042 Sep 08 08:25	23° \approx 35'25" -0°48'57"
max. Earth dist.	9036 Feb 10 15:35	24° \approx 00'08" 19.59284 AU	min. Earth dist.	9042 Sep 08 10:23	23° \approx 35'13" 17.94062 AU
morning rise	9036 Feb 27 03:11	25° \approx 01'12"	direct	9042 Nov 24 09:39	21° \approx 32'38"
retrograde	9036 May 28 15:00	28° \approx 19'53"	evening set	9043 Feb 26 16:45	24° \approx 52'14"
opposition	9036 Aug 10 22:48	26° \approx 18'30" -0°26'43"			
min. Earth dist.	9036 Aug 11 06:10	26° \approx 17'43" 17.61573 AU	conjunction	9043 Mar 14 15:41	25° \approx 50'19" -0°45'20"
direct	9036 Oct 26 15:14	24° \approx 13'50"	minimum elong	9043 Mar 14 15:40	25° \approx 50'19" 0°45'18"
evening set	9037 Jan 29 17:50	27° \approx 38'33"	max. Earth dist.	9043 Mar 14 14:01	25° \approx 50'04" 19.96970 AU
			morning rise	9043 Mar 30 12:25	26° \approx 48'05"
conjunction	9037 Feb 14 22:21	28° \approx 38'23" -0°26'02"		9043 Jun 20 01:20	0° \approx
minimum elong	9037 Feb 14 22:21	28° \approx 38'23" 0°25'52"	retrograde	9043 Jun 29 22:49	0° \approx 02'39"
max. Earth dist.	9037 Feb 14 14:58	28° \approx 37'15" 19.63961 AU		9043 Jul 09 23:24	30° \approx
morning rise	9037 Mar 02 23:54	29° \approx 37'47"	opposition	9043 Sep 13 04:22	28° \approx 02'38" -0°51'40"
	9037 Mar 09 04:22	0° \approx	min. Earth dist.	9043 Sep 13 04:17	28° \approx 02'38" 17.99889 AU
retrograde	9037 Jun 02 11:29	2° \approx 55'55"	direct	9043 Nov 29 07:10	26° \approx 00'08"
opposition	9037 Aug 15 21:10	0° \approx 54'47" -0°31'03"	evening set	9044 Mar 02 09:17	29° \approx 18'40"
min. Earth dist.	9037 Aug 16 02:54	0° \approx 54'10" 17.66423 AU		9044 Mar 13 19:24	0° \approx
	9037 Sep 07 03:19	30° \approx			
direct	9037 Oct 31 16:02	28° \approx 50'26"	conjunction	9044 Mar 18 07:31	0° \approx 16'28" -0°47'38"
	9037 Dec 23 05:25	0° \approx	minimum elong	9044 Mar 18 07:30	0° \approx 16'28" 0°47'36"
evening set	9038 Feb 03 15:46	2° \approx 14'27"	max. Earth dist.	9044 Mar 18 07:38	0° \approx 16'29" 20.02811 AU
			morning rise	9044 Apr 03 03:32	1° \approx 13'58"
conjunction	9038 Feb 19 19:16	3° \approx 14'00" -0°29'49"	retrograde	9044 Jul 03 13:34	4° \approx 27'53"
minimum elong	9038 Feb 19 19:15	3° \approx 14'00" 0°29'42"	opposition	9044 Sep 16 23:52	2° \approx 27'58" -0°54'02"
max. Earth dist.	9038 Feb 19 12:41	3° \approx 12'59" 19.68975 AU	min. Earth dist.	9044 Sep 16 23:48	2° \approx 27'58" 18.05753 AU
morning rise	9038 Mar 07 19:56	4° \approx 13'08"	direct	9044 Dec 03 02:19	0° \approx 25'44"
retrograde	9038 Jun 07 06:17	7° \approx 30'44"	evening set	9045 Mar 07 01:03	3° \approx 43'12"
opposition	9038 Aug 20 19:29	5° \approx 29'49" -0°35'09"			
min. Earth dist.	9038 Aug 21 01:02	5° \approx 29'14" 17.71592 AU	conjunction	9045 Mar 22 22:27	4° \approx 40'42" -0°49'38"
direct	9038 Nov 05 15:20	3° \approx 25'48"	minimum elong	9045 Mar 22 22:27	4° \approx 40'42" 0°49'39"
evening set	9039 Feb 08 12:48	6° \approx 49'03"	max. Earth dist.	9045 Mar 22 23:00	4° \approx 40'47" 20.08702 AU
			morning rise	9045 Apr 07 18:01	5° \approx 37'56"
conjunction	9039 Feb 24 15:20	7° \approx 48'19" -0°33'25"	retrograde	9045 Jul 08 05:31	8° \approx 51'11"
minimum elong	9039 Feb 24 15:20	7° \approx 48'19" 0°33'17"	opposition	9045 Sep 21 18:24	6° \approx 51'21" -0°56'05"
max. Earth dist.	9039 Feb 24 10:00	7° \approx 47'30" 19.74272 AU	min. Earth dist.	9045 Sep 21 16:15	6° \approx 51'35" 18.11669 AU
morning rise	9039 Mar 12 15:07	8° \approx 47'11"	direct	9045 Dec 07 21:50	4° \approx 49'23"

evening set	9046 Mar 11 15:48	8°♈05'46	max. Earth dist.	9052 Apr 21 18:51	4°♈42'21	20.51049 AU
			morning rise	9052 May 07 01:46	5°♈36'28	
conjunction	9046 Mar 27 12:35	9°♈02'59 -0°51'20	retrograde	9052 Aug 07 00:32	8°♈45'49	
minimum elong	9046 Mar 27 12:35	9°♈02'59 0°51'21	opposition	9052 Oct 22 13:24	6°♈46'58	-1°00'48
max. Earth dist.	9046 Mar 27 15:18	9°♈03'24 20.14643 AU	min. Earth dist.	9052 Oct 22 03:51	6°♈47'57	18.53948 AU
morning rise	9046 Apr 12 07:29	9°♈59'57	direct	9053 Jan 07 14:57	4°♈47'26	
retrograde	9046 Jul 12 19:18	13°♈12'33	evening set	9053 Apr 10 00:35	7°♈56'41	
opposition	9046 Sep 26 12:42	11°♈12'49 -0°57'46				
min. Earth dist.	9046 Sep 26 10:12	11°♈13'05 18.17652 AU	conjunction	9053 Apr 25 17:53	8°♈52'10	-0°54'38
direct	9046 Dec 12 15:55	9°♈11'08	minimum elong	9053 Apr 25 17:53	8°♈52'10	0°54'47
evening set	9047 Mar 16 05:38	12°♈26'26	max. Earth dist.	9053 Apr 26 03:40	8°♈53'37	20.56757 AU
			morning rise	9053 May 11 10:59	9°♈47'37	
conjunction	9047 Apr 01 01:37	13°♈23'22 -0°52'43	retrograde	9053 Aug 11 13:05	12°♈56'32	
minimum elong	9047 Apr 01 01:37	13°♈23'22 0°52'46	opposition	9053 Oct 27 03:34	10°♈57'49	-1°00'10
max. Earth dist.	9047 Apr 01 04:52	13°♈23'51 20.20670 AU	min. Earth dist.	9053 Oct 26 16:55	10°♈58'54	18.59533 AU
morning rise	9047 Apr 16 20:11	14°♈20'05	direct	9054 Jan 12 04:20	8°♈58'36	
retrograde	9047 Jul 17 10:14	17°♈32'04	evening set	9054 Apr 14 09:30	12°♈06'58	
opposition	9047 Oct 01 06:13	15°♈32'26 -0°59'08				
min. Earth dist.	9047 Oct 01 01:25	15°♈32'56 18.23724 AU	conjunction	9054 Apr 30 02:43	13°♈02'15	-0°53'56
direct	9047 Dec 17 09:36	13°♈31'03	minimum elong	9054 Apr 30 02:43	13°♈02'15	0°54'06
evening set	9048 Mar 19 18:35	16°♈45'17	max. Earth dist.	9054 Apr 30 14:16	13°♈03'57	20.62190 AU
			morning rise	9054 May 15 19:37	13°♈57'32	
conjunction	9048 Apr 04 14:06	17°♈41'57 -0°53'48		9054 Jun 03 17:04	15°♈	
minimum elong	9048 Apr 04 14:06	17°♈41'57 0°53'51	retrograde	9054 Aug 15 22:56	17°♈06'02	
max. Earth dist.	9048 Apr 04 19:40	17°♈42'47 20.26771 AU	opposition	9054 Oct 31 17:27	15°♈07'27	-0°59'13
morning rise	9048 Apr 20 08:06	18°♈38'25	min. Earth dist.	9054 Oct 31 06:33	15°♈08'33	18.64805 AU
retrograde	9048 Jul 20 22:43	21°♈49'49		9054 Nov 03 19:25	15°♈	
opposition	9048 Oct 04 23:07	19°♈50'19 -1°00'08	direct	9055 Jan 16 17:25	13°♈08'34	
min. Earth dist.	9048 Oct 04 17:52	19°♈50'52 18.29858 AU		9055 Mar 26 07:35	15°♈	
direct	9048 Dec 21 02:31	17°♈49'17	evening set	9055 Apr 18 17:54	16°♈16'02	
evening set	9049 Mar 24 06:50	21°♈02'29				
			conjunction	9055 May 04 10:47	17°♈11'08	-0°52'57
conjunction	9049 Apr 09 01:42	21°♈58'53 -0°54'34	minimum elong	9055 May 04 10:47	17°♈11'08	0°53'08
minimum elong	9049 Apr 09 01:42	21°♈58'53 0°54'38	max. Earth dist.	9055 May 04 21:48	17°♈12'45	20.67293 AU
max. Earth dist.	9049 Apr 09 07:30	21°♈59'45 20.32927 AU	morning rise	9055 May 20 03:53	18°♈06'16	
morning rise	9049 Apr 24 19:32	22°♈55'08	retrograde	9055 Aug 20 10:27	21°♈14'23	
retrograde	9049 Jul 25 12:55	26°♈05'58	opposition	9055 Nov 05 06:47	19°♈15'53	-0°57'58
opposition	9049 Oct 09 15:25	24°♈06'37 -1°00'48	min. Earth dist.	9055 Nov 04 19:08	19°♈17'03	18.69731 AU
min. Earth dist.	9049 Oct 09 08:10	24°♈07'22 18.36015 AU	direct	9056 Jan 21 05:43	17°♈17'16	
direct	9049 Dec 25 18:31	22°♈05'57	evening set	9056 Apr 22 01:43	20°♈23'52	
evening set	9050 Mar 28 18:11	25°♈18'07				
			conjunction	9056 May 07 18:41	21°♈18'49	-0°51'41
conjunction	9050 Apr 13 12:42	26°♈14'16 -0°55'01	minimum elong	9056 May 07 18:41	21°♈18'49	0°51'53
minimum elong	9050 Apr 13 12:42	26°♈14'16 0°55'08	max. Earth dist.	9056 May 08 07:14	21°♈20'40	20.72018 AU
max. Earth dist.	9050 Apr 13 20:45	26°♈15'28 20.39062 AU	morning rise	9056 May 23 11:44	22°♈13'48	
morning rise	9050 Apr 29 06:05	27°♈10'18	retrograde	9056 Aug 23 19:37	25°♈21'33	
	9050 Jul 01 18:30	0°♈	opposition	9056 Nov 08 19:25	23°♈23'06	-0°56'25
retrograde	9050 Jul 30 00:24	0°♈20'36	min. Earth dist.	9056 Nov 08 07:35	23°♈24'18	18.74252 AU
	9050 Aug 27 21:12	30°♈	direct	9057 Jan 24 17:47	21°♈24'43	
opposition	9050 Oct 14 07:18	28°♈21'26 -1°01'08	evening set	9057 Apr 26 09:09	24°♈30'30	
min. Earth dist.	9050 Oct 13 23:38	28°♈22'13 18.42118 AU				
direct	9050 Dec 30 10:10	26°♈21'09	conjunction	9057 May 12 01:56	25°♈25'17	-0°50'11
evening set	9051 Apr 02 05:01	29°♈32'19	minimum elong	9057 May 12 01:56	25°♈25'17	0°50'24
	9051 Apr 10 01:23	0°♈	max. Earth dist.	9057 May 12 13:46	25°♈27'01	20.76347 AU
conjunction	9051 Apr 17 22:58	0°♈28'14 -0°55'11	morning rise	9057 May 27 19:19	26°♈20'10	
minimum elong	9051 Apr 17 22:58	0°♈28'14 0°55'18	retrograde	9057 Aug 28 05:27	29°♈27'33	
max. Earth dist.	9051 Apr 18 07:02	0°♈29'26 20.45127 AU	opposition	9057 Nov 13 07:39	27°♈29'07	-0°54'35
morning rise	9051 May 03 16:18	1°♈24'03	min. Earth dist.	9057 Nov 12 19:20	27°♈30'21	18.78390 AU
retrograde	9051 Aug 03 13:51	4°♈33'53	direct	9058 Jan 29 04:40	25°♈30'55	
opposition	9051 Oct 18 22:35	2°♈34'52 -1°01'08	evening set	9058 Apr 30 15:44	28°♈35'54	
min. Earth dist.	9051 Oct 18 13:18	2°♈35'48 18.48127 AU				
direct	9052 Jan 04 00:46	0°♈34'56	conjunction	9058 May 16 08:42	29°♈30'34	-0°48'25
evening set	9052 Apr 05 14:58	3°♈45'09	minimum elong	9058 May 16 08:42	29°♈30'34	0°48'38
			max. Earth dist.	9058 May 16 22:12	29°♈32'32	20.80292 AU
conjunction	9052 Apr 21 08:44	4°♈40'50 -0°55'03		9058 May 24 18:24	0°♈	
minimum elong	9052 Apr 21 08:44	4°♈40'50 0°55'13	morning rise	9058 Jun 01 02:08	0°♈25'19	
			retrograde	9058 Sep 01 14:16	3°♈32'23	

opposition	9058 Nov 17 19:23	1° Π 33'56 -0°52'29	conjunction	9065 Jun 12 23:51	27° Π 42'45 -0°30'07
min. Earth dist.	9058 Nov 17 06:33	1° Π 35'13 18.82152 AU	minimum elong	9065 Jun 12 23:51	27° Π 42'45 0°30'23
	9059 Jan 01 22:29	30° \mathbb{R} 8	max. Earth dist.	9065 Jun 13 15:16	27° Π 44'58 20.99117 AU
direct	9059 Feb 02 15:51	29° \mathbb{B} 35'55	morning rise	9065 Jun 28 20:24	28° Π 37'13
	9059 Mar 05 13:26	0° Π		9065 Jul 25 03:16	0° \mathbb{E}
evening set	9059 May 04 22:06	2° Π 40'08	retrograde	9065 Sep 30 00:53	1° \mathbb{E} 43'14
				9065 Dec 10 08:56	30° \mathbb{R} Π
conjunction	9059 May 20 14:59	3° Π 34'40 -0°46'25	opposition	9065 Dec 16 17:34	29° Π 44'48 -0°31'29
minimum elong	9059 May 20 14:59	3° Π 34'40 0°46'39	min. Earth dist.	9065 Dec 16 02:28	29° Π 46'19 18.99828 AU
max. Earth dist.	9059 May 21 03:59	3° Π 36'33 20.83896 AU	direct	9066 Mar 02 23:31	27° Π 47'51
morning rise	9059 Jun 05 08:52	4° Π 29'20		9066 May 17 12:32	0° \mathbb{E}
retrograde	9059 Sep 05 22:42	7° Π 36'06	evening set	9066 Jun 01 10:04	0° \mathbb{E} 48'34
opposition	9059 Nov 22 06:32	5° Π 37'38 -0°50'08			
min. Earth dist.	9059 Nov 21 17:15	5° Π 38'58 18.85611 AU	conjunction	9066 Jun 17 05:09	1° \mathbb{E} 42'45 -0°26'50
direct	9060 Feb 07 00:56	3° Π 39'45	minimum elong	9066 Jun 17 05:09	1° \mathbb{E} 42'45 0°27'06
evening set	9060 May 08 03:49	6° Π 43'17	max. Earth dist.	9066 Jun 17 21:40	1° \mathbb{E} 45'08 21.00386 AU
			morning rise	9066 Jul 03 02:07	2° \mathbb{E} 37'14
conjunction	9060 May 23 21:01	7° Π 37'43 -0°44'11	retrograde	9066 Oct 04 09:42	5° \mathbb{E} 43'18
minimum elong	9060 May 23 21:01	7° Π 37'43 0°44'25	min. Earth dist.	9066 Dec 20 11:09	3° \mathbb{E} 46'25 19.00860 AU
max. Earth dist.	9060 May 24 11:42	7° Π 39'51 20.87199 AU	opposition	9066 Dec 21 02:36	3° \mathbb{E} 44'52 -0°27'46
morning rise	9060 Jun 08 15:05	8° Π 32'18	direct	9067 Mar 07 07:18	1° \mathbb{E} 48'01
retrograde	9060 Sep 09 07:09	11° Π 38'49	evening set	9067 Jun 05 15:11	4° \mathbb{E} 48'29
opposition	9060 Nov 25 17:11	9° Π 40'21 -0°47'32			
min. Earth dist.	9060 Nov 25 03:12	9° Π 41'45 18.88763 AU	conjunction	9067 Jun 21 10:33	5° \mathbb{E} 42'42 -0°23'24
direct	9061 Feb 10 10:40	7° Π 42'37	minimum elong	9067 Jun 21 10:33	5° \mathbb{E} 42'42 0°23'40
evening set	9061 May 12 09:24	10° Π 45'31	max. Earth dist.	9067 Jun 22 01:49	5° \mathbb{E} 44'53 21.01183 AU
			morning rise	9067 Jul 07 08:18	6° \mathbb{E} 37'14
conjunction	9061 May 28 02:35	11° Π 39'52 -0°41'44	retrograde	9067 Oct 08 18:21	9° \mathbb{E} 43'23
minimum elong	9061 May 28 02:35	11° Π 39'52 0°41'59	opposition	9067 Dec 25 11:27	7° \mathbb{E} 44'54 -0°23'55
max. Earth dist.	9061 May 28 16:44	11° Π 41'55 20.90211 AU	min. Earth dist.	9067 Dec 24 20:55	7° \mathbb{E} 46'21 19.01413 AU
morning rise	9061 Jun 12 21:10	12° Π 34'24	direct	9068 Mar 10 12:40	5° \mathbb{E} 48'07
retrograde	9061 Sep 13 15:16	15° Π 40'43	evening set	9068 Jun 08 20:14	8° \mathbb{E} 48'24
opposition	9061 Nov 30 03:28	13° Π 42'14 -0°44'43			
min. Earth dist.	9061 Nov 29 13:10	13° Π 43'40 18.91639 AU	conjunction	9068 Jun 24 16:18	9° \mathbb{E} 42'39 -0°19'52
direct	9062 Feb 14 18:33	11° Π 44'40	minimum elong	9068 Jun 24 16:18	9° \mathbb{E} 42'39 0°20'09
evening set	9062 May 16 14:32	14° Π 47'00	max. Earth dist.	9068 Jun 25 08:12	9° \mathbb{E} 44'56 21.01468 AU
			morning rise	9068 Jul 10 14:32	10° \mathbb{E} 37'14
conjunction	9062 Jun 01 08:09	15° Π 41'17 -0°39'06	retrograde	9068 Oct 12 03:26	13° \mathbb{E} 43'29
minimum elong	9062 Jun 01 08:09	15° Π 41'17 0°39'21	opposition	9068 Dec 28 20:10	11° \mathbb{E} 44'57 -0°19'56
max. Earth dist.	9062 Jun 01 23:52	15° Π 43'34 20.92938 AU	min. Earth dist.	9068 Dec 28 05:32	11° \mathbb{E} 46'25 19.01416 AU
morning rise	9062 Jun 17 02:59	16° Π 35'47	direct	9069 Mar 14 20:42	9° \mathbb{E} 48'12
retrograde	9062 Sep 17 23:29	19° Π 41'57	evening set	9069 Jun 13 01:32	12° \mathbb{E} 48'21
opposition	9062 Dec 04 13:25	17° Π 43'29 -0°41'41			
min. Earth dist.	9062 Dec 03 22:22	17° Π 44'59 18.94208 AU	conjunction	9069 Jun 28 21:58	13° \mathbb{E} 42'38 -0°16'14
direct	9063 Feb 19 02:44	15° Π 46'06	minimum elong	9069 Jun 28 21:58	13° \mathbb{E} 42'38 0°16'30
evening set	9063 May 20 19:33	18° Π 47'55	max. Earth dist.	9069 Jun 29 12:18	13° \mathbb{E} 44'41 21.01197 AU
			morning rise	9069 Jul 14 21:01	14° \mathbb{E} 37'18
conjunction	9063 Jun 05 13:18	19° Π 42'09 -0°36'16	retrograde	9069 Oct 16 11:59	17° \mathbb{E} 43'41
minimum elong	9063 Jun 05 13:18	19° Π 42'09 0°36'31	opposition	9070 Jan 02 04:54	15° \mathbb{E} 45'03 -0°15'52
max. Earth dist.	9063 Jun 06 04:21	19° Π 44'19 20.95355 AU	min. Earth dist.	9070 Jan 01 15:24	15° \mathbb{E} 46'24 19.00874 AU
morning rise	9063 Jun 21 08:48	20° Π 36'37	direct	9070 Mar 19 02:05	13° \mathbb{E} 48'15
retrograde	9063 Sep 22 08:00	23° Π 42'42	evening set	9070 Jun 17 06:50	16° \mathbb{E} 48'19
opposition	9063 Dec 08 23:07	21° Π 44'14 -0°38'27			
min. Earth dist.	9063 Dec 08 08:04	21° Π 45'44 18.96462 AU	conjunction	9070 Jul 03 04:02	17° \mathbb{E} 42'41 -0°12'31
direct	9064 Feb 23 09:51	19° Π 47'00	minimum elong	9070 Jul 03 04:02	17° \mathbb{E} 42'41 0°12'47
evening set	9064 May 24 00:24	22° Π 48'23	behind sun begin	9070 Jul 02 23:53	17° \mathbb{E} 42'06
			behind sun end	9070 Jul 03 08:11	17° \mathbb{E} 43'15
conjunction	9064 Jun 08 18:40	23° Π 42'35 -0°33'16	max. Earth dist.	9070 Jul 03 18:53	17° \mathbb{E} 44'48 21.00388 AU
minimum elong	9064 Jun 08 18:40	23° Π 42'35 0°33'33	morning rise	9070 Jul 19 03:38	18° \mathbb{E} 37'25
max. Earth dist.	9064 Jun 09 11:02	23° Π 44'57 20.97429 AU	retrograde	9070 Oct 20 20:58	21° \mathbb{E} 43'57
morning rise	9064 Jun 24 14:31	24° Π 37'03	opposition	9071 Jan 06 13:22	19° \mathbb{E} 45'10 -0°11'43
retrograde	9064 Sep 25 16:14	27° Π 43'04	min. Earth dist.	9071 Jan 05 23:43	19° \mathbb{E} 46'33 18.99797 AU
opposition	9064 Dec 12 08:19	25° Π 44'38 -0°35'03	direct	9071 Mar 23 10:00	17° \mathbb{E} 48'19
min. Earth dist.	9064 Dec 11 16:47	25° Π 46'11 18.98340 AU	evening set	9071 Jun 21 12:21	20° \mathbb{E} 48'20
direct	9065 Feb 26 17:19	23° Π 47'32			
evening set	9065 May 28 05:22	26° Π 48'34	conjunction	9071 Jul 07 10:02	21° \mathbb{E} 42'47 -0°08'45
			minimum elong	9071 Jul 07 10:02	21° \mathbb{E} 42'47 0°09'01

behind sun begin	9071 Jul 07 04:23	21°☾42'00		morning rise	9076 Aug 12 01:05	12°♌43'50	
behind sun end	9071 Jul 07 15:41	21°☾43'34			9076 Sep 28 11:16	15°♌	
max. Earth dist.	9071 Jul 07 23:22	21°☾44'41	20.99072 AU	retrograde	9076 Nov 14 06:32	15°♌52'14	
morning rise	9071 Jul 23 10:33	22°☾37'37			9077 Jan 01 05:05	15°♌♌	
retrograde	9071 Oct 25 05:45	25°☾44'22		opposition	9077 Jan 30 15:18	13°♌52'29	0°13'50
opposition	9072 Jan 10 21:50	23°☾45'24	-0°07'30	min. Earth dist.	9077 Jan 30 04:06	13°♌53'37	18.85182 AU
min. Earth dist.	9072 Jan 10 09:23	23°☾46'39	18.98252 AU	direct	9077 Apr 15 23:57	11°♌54'56	
direct	9072 Mar 26 15:29	21°☾48'26		evening set	9077 Jul 15 03:12	14°♌56'15	
evening set	9072 Jun 24 17:58	24°☾48'29			9077 Jul 16 05:51	15°♌	
conjunction	9072 Jul 10 16:27	25°☾43'02	-0°04'56	conjunction	9077 Jul 31 05:04	15°♌51'31	0°14'25
minimum elong	9072 Jul 10 16:27	25°☾43'02	0°05'10	minimum elong	9077 Jul 31 05:04	15°♌51'31	0°14'13
behind sun begin	9072 Jul 10 10:02	25°☾42'08		behind sun begin	9077 Jul 31 01:54	15°♌51'04	
behind sun end	9072 Jul 10 22:51	25°☾43'56		behind sun end	9077 Jul 31 08:13	15°♌51'57	
max. Earth dist.	9072 Jul 11 06:22	25°☾45'01	20.97310 AU	max. Earth dist.	9077 Jul 31 15:50	15°♌53'03	20.83467 AU
morning rise	9072 Jul 26 17:31	26°☾37'58		morning rise	9077 Aug 16 10:04	16°♌47'14	
retrograde	9072 Oct 28 14:40	29°☾44'56		retrograde	9077 Nov 18 16:26	19°♌56'06	
opposition	9073 Jan 14 05:56	27°☾45'49	-0°03'14	opposition	9078 Feb 04 00:09	17°♌56'13	0°18'01
min. Earth dist.	9073 Jan 13 17:10	27°☾47'06	18.96284 AU	min. Earth dist.	9078 Feb 03 14:24	17°♌57'13	18.81690 AU
direct	9073 Mar 30 22:46	25°☾48'44		direct	9078 Apr 20 06:03	15°♌58'33	
evening set	9073 Jun 28 23:58	28°☾48'53		evening set	9078 Jul 19 11:16	19°♌00'20	
conjunction	9073 Jul 14 22:54	29°☾43'33	-0°01'02	conjunction	9078 Aug 04 14:04	19°♌55'47	0°18'09
minimum elong	9073 Jul 14 22:56	29°☾43'33	0°01'17	minimum elong	9078 Aug 04 14:04	19°♌55'47	0°17'57
behind sun begin	9073 Jul 14 16:19	29°☾42'37		max. Earth dist.	9078 Aug 05 01:09	19°♌57'23	20.79838 AU
behind sun end	9073 Jul 15 05:33	29°☾44'28		morning rise	9078 Aug 20 19:43	20°♌51'41	
max. Earth dist.	9073 Jul 15 11:27	29°☾45'20	20.95162 AU	retrograde	9078 Nov 23 05:02	24°♌01'04	
	9073 Jul 19 17:19	0°♌		opposition	9079 Feb 08 09:00	22°♌01'04	0°22'07
morning rise	9073 Jul 31 00:54	0°♌38'37		min. Earth dist.	9079 Feb 07 23:05	22°♌02'05	18.77909 AU
asc. node	9073 Oct 19 18:13	3°♌41'34		direct	9079 Apr 24 14:02	20°♌03'16	
retrograde	9073 Nov 02 00:01	3°♌45'52		evening set	9079 Jul 23 20:10	23°♌05'35	
opposition	9074 Jan 18 14:19	1°♌46'34	0°01'03	conjunction	9079 Aug 08 23:35	24°♌01'16	0°21'49
min. Earth dist.	9074 Jan 18 02:38	1°♌47'45	18.93970 AU	minimum elong	9079 Aug 08 23:35	24°♌01'16	0°21'39
	9074 Mar 14 15:43	30°♌☾		max. Earth dist.	9079 Aug 09 08:55	24°♌02'36	20.75906 AU
direct	9074 Apr 04 04:14	29°☾49'21		morning rise	9079 Aug 25 06:09	24°♌57'22	
	9074 Apr 24 13:01	0°♌		retrograde	9079 Nov 27 15:19	28°♌07'17	
evening set	9074 Jul 03 05:59	2°♌49'42		opposition	9080 Feb 12 18:21	26°♌07'11	0°26'07
conjunction	9074 Jul 19 05:50	3°♌44'29	0°02'57	min. Earth dist.	9080 Feb 12 10:18	26°♌08'00	18.73822 AU
minimum elong	9074 Jul 19 05:50	3°♌44'29	0°02'43	direct	9080 Apr 27 20:25	24°♌09'14	
behind sun begin	9074 Jul 18 23:13	3°♌43'34		evening set	9080 Jul 27 05:38	27°♌12'09	
behind sun end	9074 Jul 19 12:26	3°♌45'25		conjunction	9080 Aug 12 09:57	28°♌08'01	0°25'23
max. Earth dist.	9074 Jul 19 19:02	3°♌46'23	20.92685 AU	minimum elong	9080 Aug 12 09:57	28°♌08'01	0°25'13
morning rise	9074 Aug 04 08:24	4°♌39'42		max. Earth dist.	9080 Aug 12 19:10	28°♌09'21	20.71650 AU
retrograde	9074 Nov 06 09:43	7°♌47'17		morning rise	9080 Aug 28 17:05	29°♌04'20	
opposition	9075 Jan 22 22:33	5°♌47'49	0°05'20		9080 Sep 14 17:55	0°♌	
min. Earth dist.	9075 Jan 22 10:25	5°♌49'03	18.91330 AU	retrograde	9080 Dec 01 04:44	2°♌14'49	
direct	9075 Apr 08 11:09	3°♌50'30		opposition	9081 Feb 16 03:49	0°♌14'35	0°30'01
evening set	9075 Jul 07 12:41	6°♌51'05		min. Earth dist.	9081 Feb 15 19:52	0°♌15'24	18.69385 AU
conjunction	9075 Jul 23 13:05	7°♌46'01	0°06'48		9081 Feb 22 02:12	30°♌♌	
minimum elong	9075 Jul 23 13:05	7°♌46'01	0°06'35	direct	9081 May 02 05:56	28°♌16'28	
behind sun begin	9075 Jul 23 06:52	7°♌45'09			9081 Jul 06 12:48	0°♌	
behind sun end	9075 Jul 23 19:18	7°♌46'53		evening set	9081 Jul 31 16:02	1°♌20'02	
max. Earth dist.	9075 Jul 24 00:50	7°♌47'42	20.89896 AU	conjunction	9081 Aug 16 20:57	2°♌16'08	0°28'50
morning rise	9075 Aug 08 16:35	8°♌41'23		minimum elong	9081 Aug 16 20:57	2°♌16'08	0°28'42
retrograde	9075 Nov 10 19:27	11°♌49'21		max. Earth dist.	9081 Aug 17 04:07	2°♌17'10	20.67030 AU
opposition	9076 Jan 27 06:51	9°♌49'44	0°09'36	morning rise	9081 Sep 02 04:56	3°♌12'40	
min. Earth dist.	9076 Jan 26 20:02	9°♌50'50	18.88401 AU	retrograde	9081 Dec 05 15:44	6°♌23'44	
direct	9076 Apr 11 16:47	7°♌52'17		opposition	9082 Feb 20 13:55	4°♌23'20	0°33'47
evening set	9076 Jul 10 19:41	10°♌53'13		min. Earth dist.	9082 Feb 20 08:04	4°♌23'56	18.64586 AU
conjunction	9076 Jul 26 20:58	11°♌48'19	0°10'38	direct	9082 May 06 13:02	2°♌24'59	
minimum elong	9076 Jul 26 20:59	11°♌48'19	0°10'25	evening set	9082 Aug 05 02:55	5°♌29'14	
behind sun begin	9076 Jul 26 15:46	11°♌47'35		conjunction	9082 Aug 21 08:48	6°♌25'34	0°32'10
behind sun end	9076 Jul 27 02:11	11°♌49'03		minimum elong	9082 Aug 21 08:48	6°♌25'34	0°32'02
max. Earth dist.	9076 Jul 27 09:12	11°♌50'04	20.86825 AU				

max. Earth dist.	9082 Aug 21 15:26	6° \mathring{M} 26'32	20.62045 AU	min. Earth dist.	9089 Mar 21 22:10	4° \mathring{A} 01'12	18.23794 AU
morning rise	9082 Sep 06 17:25	7° \mathring{M} 22'19		direct	9089 Jun 04 16:53	2° \mathring{A} 00'35	
retrograde	9082 Dec 10 05:52	10° \mathring{M} 33'58		evening set	9089 Sep 04 04:37	5° \mathring{A} 10'43	
opposition	9083 Feb 25 00:13	8° \mathring{M} 33'22	0°37'24				
min. Earth dist.	9083 Feb 24 18:32	8° \mathring{M} 33'58	18.59409 AU	conjunction	9089 Sep 20 15:33	6° \mathring{A} 08'51	0°50'08
direct	9083 May 10 23:53	6° \mathring{M} 34'46		minimum elong	9089 Sep 20 15:33	6° \mathring{A} 08'51	0°50'09
evening set	9083 Aug 09 14:48	9° \mathring{M} 39'43		max. Earth dist.	9089 Sep 20 13:51	6° \mathring{A} 08'36	20.20728 AU
				morning rise	9089 Oct 07 04:33	7° \mathring{A} 07'20	
conjunction	9083 Aug 25 21:20	10° \mathring{M} 36'17	0°35'20	retrograde	9090 Jan 09 12:29	10° \mathring{A} 23'14	
minimum elong	9083 Aug 25 21:20	10° \mathring{M} 36'17	0°35'14	opposition	9090 Mar 26 11:14	8° \mathring{A} 21'06	0°56'34
max. Earth dist.	9083 Aug 26 01:48	10° \mathring{M} 36'56	20.56691 AU	min. Earth dist.	9090 Mar 26 13:12	8° \mathring{A} 20'54	18.17702 AU
morning rise	9083 Sep 11 06:45	11° \mathring{M} 33'17		direct	9090 Jun 09 04:13	6° \mathring{A} 20'10	
retrograde	9083 Dec 14 17:35	14° \mathring{M} 45'29		evening set	9090 Sep 08 21:45	9° \mathring{A} 31'18	
opposition	9084 Feb 29 10:52	12° \mathring{M} 44'41	0°40'51				
min. Earth dist.	9084 Feb 29 07:23	12° \mathring{M} 45'02	18.53898 AU	conjunction	9090 Sep 25 09:25	10° \mathring{A} 29'44	0°51'43
direct	9084 May 14 08:12	10° \mathring{M} 45'45		minimum elong	9090 Sep 25 09:25	10° \mathring{A} 29'44	0°51'45
evening set	9084 Aug 13 03:11	13° \mathring{M} 51'28		max. Earth dist.	9090 Sep 25 06:47	10° \mathring{A} 29'20	20.14682 AU
				morning rise	9090 Oct 11 22:56	11° \mathring{A} 28'28	
conjunction	9084 Aug 29 10:37	14° \mathring{M} 48'17	0°38'21	retrograde	9091 Jan 14 07:27	14° \mathring{A} 45'01	
minimum elong	9084 Aug 29 10:36	14° \mathring{M} 48'17	0°38'16	opposition	9091 Mar 31 01:01	12° \mathring{A} 42'46	0°58'12
max. Earth dist.	9084 Aug 29 14:29	14° \mathring{M} 48'51	20.51044 AU	min. Earth dist.	9091 Mar 31 02:56	12° \mathring{A} 42'33	18.11696 AU
morning rise	9084 Sep 14 20:38	15° \mathring{M} 45'30		direct	9091 Jun 13 18:41	10° \mathring{A} 41'32	
retrograde	9084 Dec 18 08:28	18° \mathring{M} 58'17		evening set	9091 Sep 13 15:58	13° \mathring{A} 53'44	
opposition	9085 Mar 04 21:49	16° \mathring{M} 57'15	0°44'05				
min. Earth dist.	9085 Mar 04 18:24	16° \mathring{M} 57'36	18.48122 AU	conjunction	9091 Sep 30 04:13	14° \mathring{A} 52'27	0°53'01
direct	9085 May 18 19:38	14° \mathring{M} 57'59		minimum elong	9091 Sep 30 04:13	14° \mathring{A} 52'27	0°53'05
evening set	9085 Aug 17 16:15	18° \mathring{M} 04'29		max. Earth dist.	9091 Sep 30 00:39	14° \mathring{A} 51'55	20.08715 AU
				morning rise	9091 Oct 16 18:06	15° \mathring{A} 51'26	
conjunction	9085 Sep 03 00:19	19° \mathring{M} 01'33	0°41'10	retrograde	9092 Jan 19 00:33	19° \mathring{A} 08'39	
minimum elong	9085 Sep 03 00:19	19° \mathring{M} 01'33	0°41'05	opposition	9092 Apr 03 15:26	17° \mathring{A} 06'18	0°59'30
max. Earth dist.	9085 Sep 03 02:29	19° \mathring{M} 01'52	20.45160 AU	min. Earth dist.	9092 Apr 03 19:07	17° \mathring{A} 05'55	18.05784 AU
morning rise	9085 Sep 19 11:05	19° \mathring{M} 59'01		direct	9092 Jun 17 07:32	15° \mathring{A} 04'49	
retrograde	9085 Dec 22 21:27	23° \mathring{M} 12'24		evening set	9092 Sep 17 11:02	18° \mathring{A} 18'07	
opposition	9086 Mar 09 09:21	21° \mathring{M} 11'06	0°47'06				
min. Earth dist.	9086 Mar 09 07:54	21° \mathring{M} 11'15	18.42158 AU	conjunction	9092 Oct 03 23:51	19° \mathring{A} 17'06	0°54'01
direct	9086 May 23 05:04	19° \mathring{M} 11'30		minimum elong	9092 Oct 03 23:51	19° \mathring{A} 17'06	0°54'05
evening set	9086 Aug 22 06:07	22° \mathring{M} 18'49		max. Earth dist.	9092 Oct 03 18:59	19° \mathring{A} 16'22	20.02864 AU
				morning rise	9092 Oct 20 14:11	20° \mathring{A} 16'21	
conjunction	9086 Sep 07 15:03	23° \mathring{M} 16'10	0°43'46	retrograde	9093 Jan 22 20:49	23° \mathring{A} 34'14	
minimum elong	9086 Sep 07 15:02	23° \mathring{M} 16'10	0°43'43	opposition	9093 Apr 08 06:28	21° \mathring{A} 31'49	1°00'27
max. Earth dist.	9086 Sep 07 16:39	23° \mathring{M} 16'24	20.39133 AU	min. Earth dist.	9093 Apr 08 10:22	21° \mathring{A} 31'24	17.99981 AU
morning rise	9086 Sep 24 02:23	24° \mathring{M} 13'52		direct	9093 Jun 21 23:00	19° \mathring{A} 30'04	
retrograde	9086 Dec 27 13:24	27° \mathring{M} 27'52		evening set	9093 Sep 22 07:00	22° \mathring{A} 44'28	
opposition	9087 Mar 13 20:57	25° \mathring{M} 26'19	0°49'53				
min. Earth dist.	9087 Mar 13 19:30	25° \mathring{M} 26'29	18.36077 AU	conjunction	9093 Oct 08 20:24	23° \mathring{A} 43'45	0°54'42
direct	9087 May 27 17:14	23° \mathring{M} 26'22		minimum elong	9093 Oct 08 20:23	23° \mathring{A} 43'45	0°54'49
evening set	9087 Aug 26 20:53	26° \mathring{M} 34'35		max. Earth dist.	9093 Oct 08 14:48	23° \mathring{A} 42'54	19.97092 AU
				morning rise	9093 Oct 25 10:58	24° \mathring{A} 43'15	
conjunction	9087 Sep 12 06:27	27° \mathring{M} 32'11	0°46'09	retrograde	9094 Jan 27 15:51	28° \mathring{A} 01'46	
minimum elong	9087 Sep 12 06:27	27° \mathring{M} 32'11	0°46'06	opposition	9094 Apr 12 22:18	25° \mathring{A} 59'17	1°01'03
max. Earth dist.	9087 Sep 12 06:33	27° \mathring{M} 32'12	20.33006 AU	min. Earth dist.	9094 Apr 13 04:01	25° \mathring{A} 58'41	17.94247 AU
morning rise	9087 Sep 28 18:25	28° \mathring{M} 30'09		direct	9094 Jun 26 13:47	23° \mathring{A} 57'18	
	9087 Oct 26 17:38	0° \mathring{A}		evening set	9094 Sep 27 04:06	27° \mathring{A} 12'48	
retrograde	9088 Jan 01 03:40	1° \mathring{A} 44'45					
	9088 Mar 10 15:12	30° \mathring{R} \mathring{M}		conjunction	9094 Oct 13 17:56	28° \mathring{A} 12'21	0°55'04
opposition	9088 Mar 17 09:16	29° \mathring{M} 43'00	0°52'24	minimum elong	9094 Oct 13 17:56	28° \mathring{A} 12'20	0°55'11
min. Earth dist.	9088 Mar 17 09:41	29° \mathring{M} 42'57	18.29935 AU	max. Earth dist.	9094 Oct 13 10:24	28° \mathring{A} 11'12	19.91394 AU
direct	9088 May 31 03:32	27° \mathring{M} 42'42		morning rise	9094 Oct 30 08:54	29° \mathring{A} 12'05	
	9088 Aug 15 00:18	0° \mathring{A}			9094 Nov 13 07:48	0° \mathring{M}	
evening set	9088 Aug 30 12:15	0° \mathring{A} 51'50		retrograde	9095 Feb 01 12:54	2° \mathring{M} 31'13	
				opposition	9095 Apr 17 14:34	0° \mathring{M} 28'40	1°01'18
conjunction	9088 Sep 15 22:34	1° \mathring{A} 49'43	0°48'16	min. Earth dist.	9095 Apr 17 20:54	0° \mathring{M} 27'59	17.88579 AU
minimum elong	9088 Sep 15 22:34	1° \mathring{A} 49'43	0°48'16				
max. Earth dist.	9088 Sep 15 22:01	1° \mathring{A} 49'38	20.26858 AU	direct	9095 Apr 28 20:00	30° \mathring{R} \mathring{A}	
morning rise	9088 Oct 02 11:03	2° \mathring{A} 47'56			9095 Jul 01 06:44	28° \mathring{A} 26'23	
retrograde	9089 Jan 04 21:01	6° \mathring{A} 03'11		evening set	9095 Aug 31 08:06	0° \mathring{M}	
opposition	9089 Mar 21 21:56	4° \mathring{A} 01'13	0°54'38		9095 Oct 02 02:02	1° \mathring{M} 42'59	

conjunction	9095 Oct 18 16:24	2°♈42'48	0°55'06	minimum elong	9101 Nov 16 19:44	0°♏17'00	0°48'20
minimum elong	9095 Oct 18 16:24	2°♈42'48	0°55'14	max. Earth dist.	9101 Nov 16 05:59	0°♏14'53	19.55619 AU
max. Earth dist.	9095 Oct 18 08:11	2°♈41'34	19.85742 AU	morning rise	9101 Dec 03 10:47	1°♏18'03	
morning rise	9095 Nov 04 07:26	3°♈42'46					
retrograde	9096 Feb 06 09:01	7°♈02'27					
opposition	9096 Apr 21 07:43	4°♈59'49	1°01'10				
min. Earth dist.	9096 Apr 21 15:38	4°♈58'58	17.82963 AU				
direct	9096 Jul 04 23:59	2°♈57'14					
evening set	9096 Oct 06 00:39	6°♈14'54					
conjunction	9096 Oct 22 15:17	7°♈14'57	0°54'48				
minimum elong	9096 Oct 22 15:17	7°♈14'57	0°54'57				
max. Earth dist.	9096 Oct 22 04:56	7°♈13'23	19.80179 AU				
morning rise	9096 Nov 08 06:38	8°♈15'09					
retrograde	9097 Feb 10 05:57	11°♈35'22					
opposition	9097 Apr 26 01:21	9°♈32'37	1°00'40				
min. Earth dist.	9097 Apr 26 09:56	9°♈31'41	17.77461 AU				
direct	9097 Jul 09 18:33	7°♈29'42					
evening set	9097 Oct 11 00:01	10°♈48'24					
conjunction	9097 Oct 27 15:09	11°♈48'42	0°54'09				
minimum elong	9097 Oct 27 15:09	11°♈48'42	0°54'18				
max. Earth dist.	9097 Oct 27 04:35	11°♈47'06	19.74741 AU				
morning rise	9097 Nov 13 06:26	12°♈49'06					
	9097 Dec 24 22:52	15°♈					
retrograde	9098 Feb 15 02:56	16°♈09'46					
	9098 Apr 09 15:31	15°♈					
opposition	9098 Apr 30 19:29	14°♈06'54	0°59'46				
min. Earth dist.	9098 May 01 05:16	14°♈05'51	17.72110 AU				
direct	9098 Jul 14 14:20	12°♈03'40					
	9098 Oct 09 09:21	15°♈					
evening set	9098 Oct 16 00:14	15°♈23'21					
conjunction	9098 Nov 01 15:31	16°♈23'54	0°53'09				
minimum elong	9098 Nov 01 15:31	16°♈23'54	0°53'21				
max. Earth dist.	9098 Nov 01 02:45	16°♈21'57	19.69503 AU				
morning rise	9098 Nov 18 07:02	17°♈24'29					
retrograde	9099 Feb 19 23:44	20°♈45'34					
opposition	9099 May 05 14:12	18°♈42'35	0°58'28				
min. Earth dist.	9099 May 06 00:45	18°♈41'27	17.66998 AU				
direct	9099 Jul 19 10:38	16°♈39'00					
evening set	9099 Oct 21 00:52	19°♈59'40					
conjunction	9099 Nov 06 16:31	21°♈00'25	0°51'48				
minimum elong	9099 Nov 06 16:31	21°♈00'25	0°52'00				
max. Earth dist.	9099 Nov 06 04:00	20°♈58'30	19.64520 AU				
morning rise	9099 Nov 23 07:47	22°♈01'10					
retrograde	9100 Feb 24 21:31	25°♈22'37					
opposition	9100 May 10 09:25	23°♈19'32	0°56'48				
min. Earth dist.	9100 May 10 20:34	23°♈18'20	17.62167 AU				
direct	9100 Jul 24 08:15	21°♈15'38					
evening set	9100 Oct 26 02:13	24°♈37'13					
conjunction	9100 Nov 11 17:50	25°♈38'09	0°50'07				
minimum elong	9100 Nov 11 17:50	25°♈38'09	0°50'20				
max. Earth dist.	9100 Nov 11 03:28	25°♈35'56	19.59870 AU				
morning rise	9100 Nov 28 09:11	26°♈39'03					
	9101 Feb 24 07:50	0°♏					
retrograde	9101 Mar 01 19:04	0°♏00'50					
	9101 Mar 07 07:57	30°♈					
opposition	9101 May 15 05:08	27°♈57'40	0°54'45				
min. Earth dist.	9101 May 15 17:04	27°♈56'22	17.57717 AU				
direct	9101 Jul 29 05:39	25°♈53'25					
evening set	9101 Oct 31 03:50	29°♈15'53					
	9101 Nov 12 05:25	0°♏					
conjunction	9101 Nov 16 19:44	0°♏17'00	0°48'05				