

opposition	7600 Mar 05 16:52	16° $\mathring{\mu}$ 36'59	0°11'57	max. Earth dist.	7605 Nov 18 21:59	0° $\mathring{\mu}$ 56'06	10.28760 AU
min. Earth dist.	7600 Mar 05 14:35	16° $\mathring{\mu}$ 37'27	8.31065 AU	morning rise	7605 Dec 06 18:52	3° $\mathring{\mu}$ 11'09	
direct	7600 May 11 21:14	13° $\mathring{\mu}$ 11'53		retrograde	7606 Mar 19 04:21	10° $\mathring{\mu}$ 59'51	
evening set	7600 Aug 22 12:00	20° $\mathring{\mu}$ 59'37		opposition	7606 May 25 05:31	7° $\mathring{\mu}$ 35'34	2°30'41
				min. Earth dist.	7606 May 25 09:00	7° $\mathring{\mu}$ 34'52	8.30903 AU
conjunction	7600 Sep 09 09:25	23° $\mathring{\mu}$ 14'25	0°23'36	direct	7606 Aug 01 18:53	4° $\mathring{\mu}$ 07'39	
minimum elong	7600 Sep 09 09:24	23° $\mathring{\mu}$ 14'25	0°23'36	evening set	7606 Nov 15 12:28	12° $\mathring{\mu}$ 07'23	
max. Earth dist.	7600 Sep 09 11:22	23° $\mathring{\mu}$ 15'02	10.29159 AU				
morning rise	7600 Sep 27 08:33	25° $\mathring{\mu}$ 29'49		conjunction	7606 Dec 03 04:38	14° $\mathring{\mu}$ 20'22	2°01'47
	7600 Nov 06 05:43	0° $\mathring{\mu}$		minimum elong	7606 Dec 03 04:38	14° $\mathring{\mu}$ 20'22	2°01'53
retrograde	7601 Jan 10 10:09	3° $\mathring{\mu}$ 28'32		max. Earth dist.	7606 Dec 02 23:38	14° $\mathring{\mu}$ 18'47	10.33064 AU
opposition	7601 Mar 19 05:10	0° $\mathring{\mu}$ 01'25	0°46'34	morning rise	7606 Dec 20 17:25	16° $\mathring{\mu}$ 32'23	
min. Earth dist.	7601 Mar 19 04:10	0° $\mathring{\mu}$ 01'37	8.27532 AU	retrograde	7607 Apr 01 14:47	24° $\mathring{\mu}$ 16'11	
	7601 Mar 19 12:08	30° $\mathring{\mu}$		opposition	7607 Jun 07 17:27	20° $\mathring{\mu}$ 52'43	2°29'23
direct	7601 May 25 10:11	26° $\mathring{\mu}$ 35'27		min. Earth dist.	7607 Jun 07 21:21	20° $\mathring{\mu}$ 51'56	8.35780 AU
	7601 Jul 28 07:01	0° $\mathring{\mu}$		direct	7607 Aug 15 14:35	17° $\mathring{\mu}$ 25'01	
evening set	7601 Sep 05 17:41	4° $\mathring{\mu}$ 27'55		evening set	7607 Nov 29 10:59	25° $\mathring{\mu}$ 21'45	
conjunction	7601 Sep 23 16:18	6° $\mathring{\mu}$ 43'31	0°50'46	conjunction	7607 Dec 17 00:37	27° $\mathring{\mu}$ 33'19	1°57'37
minimum elong	7601 Sep 23 16:16	6° $\mathring{\mu}$ 43'30	0°50'47	minimum elong	7607 Dec 17 00:38	27° $\mathring{\mu}$ 33'19	1°57'43
max. Earth dist.	7601 Sep 23 15:51	6° $\mathring{\mu}$ 43'22	10.26174 AU	max. Earth dist.	7607 Dec 16 19:19	27° $\mathring{\mu}$ 31'39	10.38460 AU
morning rise	7601 Oct 11 15:47	8° $\mathring{\mu}$ 59'26		morning rise	7608 Jan 03 10:30	29° $\mathring{\mu}$ 43'47	
retrograde	7602 Jan 24 07:32	16° $\mathring{\mu}$ 58'23			7608 Jan 05 15:23	0° $\mathring{\mu}$	
opposition	7602 Apr 01 18:57	13° $\mathring{\mu}$ 31'33	1°18'51	retrograde	7608 Apr 13 19:53	7° $\mathring{\mu}$ 22'11	
min. Earth dist.	7602 Apr 01 19:46	13° $\mathring{\mu}$ 31'23	8.25203 AU	opposition	7608 Jun 20 02:52	3° $\mathring{\mu}$ 59'34	2°20'15
direct	7602 Jun 08 02:59	10° $\mathring{\mu}$ 04'50		min. Earth dist.	7608 Jun 20 07:26	3° $\mathring{\mu}$ 58'40	8.41590 AU
evening set	7602 Sep 20 02:51	18° $\mathring{\mu}$ 01'26		direct	7608 Aug 28 09:04	0° $\mathring{\mu}$ 32'16	
				evening set	7608 Dec 12 03:00	8° $\mathring{\mu}$ 24'50	
conjunction	7602 Oct 08 01:36	20° $\mathring{\mu}$ 17'21	1°15'16				
minimum elong	7602 Oct 08 01:34	20° $\mathring{\mu}$ 17'20	1°15'18	conjunction	7608 Dec 29 14:00	10° $\mathring{\mu}$ 34'52	1°47'25
max. Earth dist.	7602 Oct 07 22:57	20° $\mathring{\mu}$ 16'31	10.24508 AU	minimum elong	7608 Dec 29 14:02	10° $\mathring{\mu}$ 34'52	1°47'31
morning rise	7602 Oct 26 00:23	22° $\mathring{\mu}$ 33'18		max. Earth dist.	7608 Dec 29 08:12	10° $\mathring{\mu}$ 33'03	10.44644 AU
	7603 Jan 14 02:19	0° $\mathring{\mu}$		morning rise	7609 Jan 15 21:14	12° $\mathring{\mu}$ 43'46	
retrograde	7603 Feb 07 04:10	0° $\mathring{\mu}$ 31'26		retrograde	7609 Apr 26 19:14	20° $\mathring{\mu}$ 16'42	
	7603 Mar 03 07:18	30° $\mathring{\mu}$		opposition	7609 Jul 03 09:43	16° $\mathring{\mu}$ 54'53	2°04'07
opposition	7603 Apr 15 09:53	27° $\mathring{\mu}$ 05'03	1°46'53	min. Earth dist.	7609 Jul 03 14:25	16° $\mathring{\mu}$ 53'58	8.48016 AU
min. Earth dist.	7603 Apr 15 12:10	27° $\mathring{\mu}$ 04'35	8.24318 AU	direct	7609 Sep 11 01:19	13° $\mathring{\mu}$ 28'11	
direct	7603 Jun 21 22:35	23° $\mathring{\mu}$ 37'44		evening set	7609 Dec 25 11:50	21° $\mathring{\mu}$ 15'41	
	7603 Sep 21 05:50	0° $\mathring{\mu}$					
evening set	7603 Oct 04 13:37	1° $\mathring{\mu}$ 37'21		conjunction	7610 Jan 11 20:16	23° $\mathring{\mu}$ 24'07	1°31'58
				minimum elong	7610 Jan 11 20:19	23° $\mathring{\mu}$ 24'08	1°32'03
conjunction	7603 Oct 22 11:37	3° $\mathring{\mu}$ 53'08	1°35'37	max. Earth dist.	7610 Jan 11 14:36	23° $\mathring{\mu}$ 22'22	10.51289 AU
minimum elong	7603 Oct 22 11:35	3° $\mathring{\mu}$ 53'07	1°35'41	morning rise	7610 Jan 29 01:05	25° $\mathring{\mu}$ 31'28	
max. Earth dist.	7603 Oct 22 07:25	3° $\mathring{\mu}$ 51'48	10.24365 AU		7610 Mar 10 19:36	0° $\mathring{\mu}$	
morning rise	7603 Nov 09 08:46	6° $\mathring{\mu}$ 08'39		retrograde	7610 May 09 15:07	2° $\mathring{\mu}$ 59'16	
retrograde	7604 Feb 20 23:21	14° $\mathring{\mu}$ 04'44			7610 Jul 11 20:56	30° $\mathring{\mu}$	
opposition	7604 Apr 28 01:07	10° $\mathring{\mu}$ 38'57	2°08'58	opposition	7610 Jul 16 13:35	29° $\mathring{\mu}$ 38'09	1°42'06
min. Earth dist.	7604 Apr 28 04:21	10° $\mathring{\mu}$ 38'18	8.25001 AU	min. Earth dist.	7610 Jul 16 17:24	29° $\mathring{\mu}$ 37'24	8.54733 AU
direct	7604 Jul 04 20:50	7° $\mathring{\mu}$ 11'13		direct	7610 Sep 24 13:18	26° $\mathring{\mu}$ 12'14	
	7604 Oct 16 08:02	15° $\mathring{\mu}$			7610 Dec 03 14:20	0° $\mathring{\mu}$	
evening set	7604 Oct 18 00:17	15° $\mathring{\mu}$ 12'29		evening set	7611 Jan 07 13:46	3° $\mathring{\mu}$ 54'09	
conjunction	7604 Nov 04 20:48	17° $\mathring{\mu}$ 27'40	1°50'37	conjunction	7611 Jan 24 19:51	6° $\mathring{\mu}$ 01'04	1°12'14
minimum elong	7604 Nov 04 20:46	17° $\mathring{\mu}$ 27'39	1°50'42	minimum elong	7611 Jan 24 19:54	6° $\mathring{\mu}$ 01'05	1°12'20
max. Earth dist.	7604 Nov 04 15:42	17° $\mathring{\mu}$ 26'02	10.25804 AU	max. Earth dist.	7611 Jan 24 15:19	5° $\mathring{\mu}$ 59'40	10.58061 AU
morning rise	7604 Nov 22 15:31	19° $\mathring{\mu}$ 42'18		morning rise	7611 Feb 10 22:22	8° $\mathring{\mu}$ 06'55	
retrograde	7605 Mar 05 15:20	27° $\mathring{\mu}$ 35'11			7611 Apr 28 11:25	15° $\mathring{\mu}$	
opposition	7605 May 11 15:49	24° $\mathring{\mu}$ 10'06	2°23'49	retrograde	7611 May 22 08:34	15° $\mathring{\mu}$ 30'04	
min. Earth dist.	7605 May 11 19:15	24° $\mathring{\mu}$ 09'24	8.27238 AU		7611 Jun 15 11:58	15° $\mathring{\mu}$	
direct	7605 Jul 18 20:14	20° $\mathring{\mu}$ 42'10		opposition	7611 Jul 29 14:18	12° $\mathring{\mu}$ 09'34	1°15'33
evening set	7605 Nov 01 08:33	28° $\mathring{\mu}$ 43'30		min. Earth dist.	7611 Jul 29 17:01	12° $\mathring{\mu}$ 09'02	8.61410 AU
	7605 Nov 11 12:49	0° $\mathring{\mu}$		direct	7611 Oct 07 19:07	8° $\mathring{\mu}$ 44'33	
					7612 Jan 08 22:53	15° $\mathring{\mu}$	
conjunction	7605 Nov 19 03:04	0° $\mathring{\mu}$ 57'42	1°59'29	evening set	7612 Jan 20 09:14	16° $\mathring{\mu}$ 20'49	
minimum elong	7605 Nov 19 03:03	0° $\mathring{\mu}$ 57'42	1°59'34				

conjunction	7612 Feb 06 13:02	18° \approx 26'16	0°49'21	conjunction	7618 Apr 18 03:51	0° \approx 15'25	-1°31'15
minimum elong	7612 Feb 06 13:04	18° \approx 26'17	0°49'26	minimum elong	7618 Apr 18 03:48	0° \approx 15'24	1°31'19
max. Earth dist.	7612 Feb 06 09:56	18° \approx 25'19	10.64629 AU	max. Earth dist.	7618 Apr 18 06:42	0° \approx 16'16	10.85633 AU
morning rise	7612 Feb 23 13:22	20° \approx 30'44		morning rise	7618 May 04 21:07	2° \approx 15'28	
retrograde	7612 Jun 02 21:48	27° \approx 50'00		retrograde	7618 Aug 15 04:29	9° \approx 32'26	
opposition	7612 Aug 10 12:26	24° \approx 30'01	0°45'52	opposition	7618 Oct 24 12:20	6° \approx 12'11	-2°01'39
min. Earth dist.	7612 Aug 10 14:21	24° \approx 29'39	8.67734 AU	min. Earth dist.	7618 Oct 24 09:28	6° \approx 12'43	8.85440 AU
direct	7612 Oct 19 21:18	21° \approx 06'00		direct	7619 Jan 02 08:52	2° \approx 52'49	
evening set	7613 Jan 31 22:49	28° \approx 36'48		evening set	7619 Apr 13 09:39	10° \approx 04'56	
	7613 Feb 12 10:17	0° \approx					
conjunction	7613 Feb 18 00:14	0° \approx 40'51	0°24'30	conjunction	7619 Apr 30 01:53	12° \approx 04'47	-1°46'06
minimum elong	7613 Feb 18 00:15	0° \approx 40'51	0°24'34	minimum elong	7619 Apr 30 01:51	12° \approx 04'46	1°46'10
max. Earth dist.	7613 Feb 17 22:09	0° \approx 40'13	10.70684 AU	max. Earth dist.	7619 Apr 30 05:01	12° \approx 05'43	10.84691 AU
morning rise	7613 Mar 06 22:39	2° \approx 44'03		morning rise	7619 May 16 19:33	14° \approx 05'02	
retrograde	7613 Jun 15 09:11	10° \approx 00'24			7619 May 24 16:07	15° \approx	
opposition	7613 Aug 23 08:11	6° \approx 40'48	0°14'32	retrograde	7619 Aug 27 15:53	21° \approx 24'52	
min. Earth dist.	7613 Aug 23 09:50	6° \approx 40'29	8.73426 AU	opposition	7619 Nov 06 02:33	18° \approx 04'00	-2°17'15
direct	7613 Nov 01 19:07	3° \approx 17'47		min. Earth dist.	7619 Nov 05 23:14	18° \approx 04'37	8.83824 AU
desc. node	7614 Feb 12 07:22	10° \approx 36'25			7619 Dec 28 06:50	15° \approx	
evening set	7614 Feb 13 07:26	10° \approx 43'33		direct	7620 Jan 14 16:35	14° \approx 44'51	
					7620 Jan 31 22:31	15° \approx	
				evening set	7620 Apr 24 09:07	21° \approx 56'56	
conjunction	7614 Mar 02 06:31	12° \approx 46'21	-0°01'16				
minimum elong	7614 Mar 02 06:30	12° \approx 46'21	0°01'13	conjunction	7620 May 11 01:47	23° \approx 57'07	-1°56'27
behind sun begin	7614 Mar 01 23:27	12° \approx 44'14		minimum elong	7620 May 11 01:46	23° \approx 57'07	1°56'32
behind sun end	7614 Mar 02 13:33	12° \approx 48'28		max. Earth dist.	7620 May 11 06:07	23° \approx 58'26	10.82349 AU
max. Earth dist.	7614 Mar 02 04:41	12° \approx 45'51	10.75970 AU	morning rise	7620 May 27 20:24	25° \approx 57'56	
morning rise	7614 Mar 19 03:22	14° \approx 48'28			7620 Jul 04 04:21	0° \approx	
retrograde	7614 Jun 27 17:47	22° \approx 02'53		retrograde	7620 Sep 08 05:53	3° \approx 21'21	
opposition	7614 Sep 05 01:40	18° \approx 43'30	-0°17'05	opposition	7620 Nov 17 17:39	29° \approx 59'43	-2°27'02
min. Earth dist.	7614 Sep 05 02:40	18° \approx 43'19	8.78246 AU		7620 Nov 17 16:11	30° \approx	
direct	7614 Nov 14 12:24	15° \approx 21'26		min. Earth dist.	7620 Nov 17 13:23	0° \approx 00'32	8.80802 AU
evening set	7615 Feb 25 11:55	22° \approx 42'50		direct	7621 Jan 26 00:31	26° \approx 40'36	
					7621 Mar 31 15:22	0° \approx	
conjunction	7615 Mar 14 08:55	24° \approx 44'32	-0°26'39	evening set	7621 May 06 10:34	3° \approx 53'34	
minimum elong	7615 Mar 14 08:54	24° \approx 44'32	0°26'39				
max. Earth dist.	7615 Mar 14 08:01	24° \approx 44'16	10.80259 AU	conjunction	7621 May 23 04:28	5° \approx 54'30	-2°01'49
morning rise	7615 Mar 31 04:25	26° \approx 45'47		minimum elong	7621 May 23 04:28	5° \approx 54'30	2°01'55
	7615 Apr 29 08:18	0° \approx		max. Earth dist.	7621 May 23 09:33	5° \approx 56'03	10.78625 AU
retrograde	7615 Jul 10 01:06	3° \approx 59'20		morning rise	7621 Jun 09 00:49	7° \approx 56'13	
opposition	7615 Sep 17 17:31	0° \approx 39'59	-0°47'39	retrograde	7621 Sep 21 01:02	15° \approx 23'50	
min. Earth dist.	7615 Sep 17 17:06	0° \approx 40'03	8.81980 AU	opposition	7621 Nov 30 10:06	12° \approx 01'24	-2°30'30
	7615 Sep 26 15:43	30° \approx		min. Earth dist.	7621 Nov 30 05:30	12° \approx 02'16	8.76423 AU
direct	7615 Nov 27 04:22	27° \approx 18'48		direct	7622 Feb 07 08:46	8° \approx 42'05	
	7616 Jan 24 16:03	0° \approx		evening set	7622 May 18 15:23	15° \approx 56'56	
evening set	7616 Mar 08 13:18	4° \approx 36'34					
conjunction	7616 Mar 25 08:32	6° \approx 37'24	-0°50'44	conjunction	7622 Jun 04 11:13	17° \approx 59'00	-2°01'53
minimum elong	7616 Mar 25 08:31	6° \approx 37'24	0°50'46	minimum elong	7622 Jun 04 11:13	17° \approx 59'00	2°01'59
max. Earth dist.	7616 Mar 25 09:34	6° \approx 37'43	10.83366 AU	max. Earth dist.	7622 Jun 04 15:53	18° \approx 00'25	10.73637 AU
morning rise	7616 Apr 11 02:46	8° \approx 37'58		morning rise	7622 Jun 21 10:09	20° \approx 02'00	
retrograde	7616 Jul 21 10:14	15° \approx 51'43		retrograde	7622 Oct 03 22:31	27° \approx 34'13	
opposition	7616 Sep 29 08:14	12° \approx 32'13	-1°15'58	opposition	7622 Dec 13 04:19	24° \approx 10'56	-2°27'20
min. Earth dist.	7616 Sep 29 06:13	12° \approx 32'36	8.84476 AU	min. Earth dist.	7622 Dec 13 00:09	24° \approx 11'44	8.70886 AU
direct	7616 Dec 08 16:09	9° \approx 11'50		direct	7623 Feb 19 17:27	20° \approx 51'11	
evening set	7617 Mar 20 12:44	16° \approx 26'47		evening set	7623 May 31 00:15	28° \approx 08'51	
					7623 Jun 15 06:25	0° \approx	
conjunction	7617 Apr 06 06:31	18° \approx 27'00	-1°12'33	conjunction	7623 Jun 16 22:47	0° \approx 12'21	-1°56'27
minimum elong	7617 Apr 06 06:29	18° \approx 26'59	1°12'36	minimum elong	7623 Jun 16 22:49	0° \approx 12'21	1°56'34
max. Earth dist.	7617 Apr 06 09:00	18° \approx 27'45	10.85179 AU	max. Earth dist.	7623 Jun 17 02:44	0° \approx 13'33	10.67663 AU
morning rise	7617 Apr 22 23:55	20° \approx 27'09		morning rise	7623 Jul 04 01:04	2° \approx 16'57	
retrograde	7617 Aug 02 19:09	27° \approx 42'04		retrograde	7623 Oct 16 22:48	9° \approx 54'01	
opposition	7617 Oct 11 22:22	24° \approx 22'15	-1°40'57	opposition	7623 Dec 26 00:56	6° \approx 29'49	-2°17'25
min. Earth dist.	7617 Oct 11 19:41	24° \approx 22'46	8.85649 AU	min. Earth dist.	7623 Dec 25 21:24	6° \approx 30'30	8.64512 AU
direct	7617 Dec 21 00:10	21° \approx 02'29		direct	7624 Mar 03 06:31	3° \approx 09'26	
evening set	7618 Apr 01 11:09	28° \approx 15'33		evening set	7624 Jun 11 13:58	10° \approx 30'35	
	7618 Apr 16 00:40	0° \approx					

conjunction	7624 Jun 28 16:01	12°☾35'51	-1°45'35	opposition	7630 Mar 13 09:19	24°♊07'18	0°30'49
minimum elong	7624 Jun 28 16:03	12°☾35'51	1°45'42	min. Earth dist.	7630 Mar 13 09:07	24°♊07'21	8.27392 AU
max. Earth dist.	7624 Jun 28 20:12	12°☾37'08	10.61026 AU	direct	7630 May 19 14:39	20°♊41'09	
morning rise	7624 Jul 15 22:05	14°☾42'17		evening set	7630 Aug 30 13:10	28°♊32'06	
retrograde	7624 Oct 29 03:59	22°☾24'10			7630 Sep 11 05:18	0°♊	
opposition	7625 Jan 06 23:57	18°☾59'03	-2°00'55				
min. Earth dist.	7625 Jan 06 20:26	18°☾59'44	8.57633 AU	conjunction	7630 Sep 17 11:21	0°♊47'34	0°38'31
direct	7625 Mar 15 22:53	15°☾37'52		minimum elong	7630 Sep 17 11:20	0°♊47'34	0°38'32
evening set	7625 Jun 24 09:35	23°☾03'10		max. Earth dist.	7630 Sep 17 11:08	0°♊47'30	10.25676 AU
				morning rise	7630 Oct 05 11:01	3°♊03'32	
conjunction	7625 Jul 11 15:41	25°☾10'22	-1°29'33	retrograde	7631 Jan 18 06:04	11°♊03'12	
minimum elong	7625 Jul 11 15:44	25°☾10'23	1°29'40	opposition	7631 Mar 26 22:39	7°♊35'36	1°04'28
max. Earth dist.	7625 Jul 11 20:20	25°☾11'48	10.54050 AU	min. Earth dist.	7631 Mar 26 22:48	7°♊35'34	8.24354 AU
morning rise	7625 Jul 29 01:42	27°☾18'47		direct	7631 Jun 02 06:35	4°♊08'38	
	7625 Aug 21 06:22	0°♊		evening set	7631 Sep 13 20:54	12°♊04'01	
retrograde	7625 Nov 11 13:34	5°♊05'14					
opposition	7626 Jan 20 01:20	1°♊39'16	-1°38'19	conjunction	7631 Oct 01 19:54	14°♊20'04	1°04'27
min. Earth dist.	7626 Jan 19 21:39	1°♊39'59	8.50581 AU	minimum elong	7631 Oct 01 19:51	14°♊20'03	1°04'28
	7626 Feb 11 02:11	30°♊☾		max. Earth dist.	7631 Oct 01 19:06	14°♊19'49	10.23363 AU
direct	7626 Mar 28 17:23	28°☾17'10		morning rise	7631 Oct 19 19:13	16°♊36'16	
	7626 May 12 04:12	0°♊		retrograde	7632 Feb 01 03:40	24°♊35'36	
evening set	7626 Jul 07 11:39	5°♊47'12		opposition	7632 Apr 08 13:11	21°♊08'21	1°34'42
				min. Earth dist.	7632 Apr 08 13:48	21°♊08'13	8.22864 AU
conjunction	7626 Jul 24 21:53	7°♊56'25	-1°08'56	direct	7632 Jun 15 00:15	17°♊40'44	
minimum elong	7626 Jul 24 21:55	7°♊56'25	1°09'02	evening set	7632 Sep 27 07:23	25°♊39'37	
max. Earth dist.	7626 Jul 25 02:25	7°♊57'49	10.47069 AU				
morning rise	7626 Aug 11 11:51	10°♊06'48		conjunction	7632 Oct 15 06:06	27°♊55'44	1°26'52
	7626 Sep 25 08:30	15°♊		minimum elong	7632 Oct 15 06:03	27°♊55'43	1°26'56
retrograde	7626 Nov 25 02:24	17°♊57'26		max. Earth dist.	7632 Oct 15 04:16	27°♊55'10	10.22650 AU
	7627 Jan 27 01:25	15°♊♊			7632 Oct 31 14:35	0°♊♊	
opposition	7627 Feb 02 05:33	14°♊30'45	-1°10'28	morning rise	7632 Nov 02 04:04	0°♊♊11'42	
min. Earth dist.	7627 Feb 02 02:02	14°♊31'26	8.43697 AU	retrograde	7633 Feb 14 01:26	8°♊09'27	
direct	7627 Apr 10 16:19	11°♊07'39		opposition	7633 Apr 22 04:32	4°♊42'48	1°59'42
	7627 Jun 18 06:19	15°♊		min. Earth dist.	7633 Apr 22 06:01	4°♊42'30	8.23011 AU
evening set	7627 Jul 20 20:19	18°♊42'47		direct	7633 Jun 28 20:18	1°♊14'46	
				evening set	7633 Oct 11 18:35	9°♊15'55	
conjunction	7627 Aug 07 10:25	20°♊53'58	-0°44'34				
minimum elong	7627 Aug 07 10:27	20°♊53'58	0°44'38	conjunction	7633 Oct 29 16:01	11°♊31'36	1°44'27
max. Earth dist.	7627 Aug 07 13:50	20°♊55'02	10.40425 AU	minimum elong	7633 Oct 29 15:58	11°♊31'35	1°44'32
morning rise	7627 Aug 25 04:06	23°♊06'15		max. Earth dist.	7633 Oct 29 12:59	11°♊30'38	10.23589 AU
	7627 Nov 04 09:59	0°♊♊		morning rise	7633 Nov 16 11:50	13°♊46'51	
retrograde	7627 Dec 08 18:43	1°♊00'28			7633 Nov 26 10:14	15°♊	
	7628 Jan 12 08:26	30°♊♊		retrograde	7634 Feb 27 19:27	21°♊41'53	
opposition	7628 Feb 15 12:29	27°♊33'14	-0°38'34	opposition	7634 May 05 19:55	18°♊16'02	2°17'59
min. Earth dist.	7628 Feb 15 09:59	27°♊33'44	8.37327 AU	min. Earth dist.	7634 May 05 22:31	18°♊15'30	8.24799 AU
direct	7628 Apr 22 19:03	24°♊09'05			7634 Jun 27 18:47	15°♊♊	
	7628 Jul 18 06:25	0°♊♊		direct	7634 Jul 12 19:22	14°♊47'50	
evening set	7628 Aug 02 11:52	1°♊49'34			7634 Jul 27 20:35	15°♊	
				evening set	7634 Oct 26 04:28	22°♊49'47	
conjunction	7628 Aug 20 05:27	4°♊02'32	-0°17'36				
minimum elong	7628 Aug 20 05:27	4°♊02'32	0°17'39	conjunction	7634 Nov 12 23:57	25°♊04'37	1°56'10
max. Earth dist.	7628 Aug 20 07:20	4°♊03'08	10.34451 AU	minimum elong	7634 Nov 12 23:55	25°♊04'37	1°56'16
morning rise	7628 Sep 07 02:12	6°♊16'28		max. Earth dist.	7634 Nov 12 19:36	25°♊03'14	10.26148 AU
retrograde	7628 Dec 21 14:03	14°♊13'26		morning rise	7634 Nov 30 17:11	27°♊18'48	
opposition	7629 Feb 27 21:46	10°♊45'52	-0°04'11		7634 Dec 23 05:32	0°♊♊	
min. Earth dist.	7629 Feb 27 20:34	10°♊46'07	8.31797 AU	retrograde	7635 Mar 13 10:13	5°♊10'03	
asc. node	7629 Apr 14 00:38	7°♊47'05		opposition	7635 May 19 10:32	1°♊45'09	2°28'31
direct	7629 May 06 01:54	7°♊20'40		min. Earth dist.	7635 May 19 14:04	1°♊44'26	8.28139 AU
evening set	7629 Aug 16 09:48	15°♊06'33			7635 Jun 11 06:06	30°♊♊	
				direct	7635 Jul 26 18:42	28°♊17'01	
conjunction	7629 Sep 03 06:10	17°♊20'59	0°10'40		7635 Sep 09 16:38	0°♊♊	
minimum elong	7629 Sep 03 06:09	17°♊20'59	0°10'39	evening set	7635 Nov 09 11:04	6°♊18'10	
behind sun begin	7629 Sep 03 00:35	17°♊19'14					
behind sun end	7629 Sep 03 11:44	17°♊22'43		conjunction	7635 Nov 27 04:16	8°♊31'52	2°01'28
max. Earth dist.	7629 Sep 03 06:41	17°♊21'09	10.29446 AU	minimum elong	7635 Nov 27 04:16	8°♊31'51	2°01'34
morning rise	7629 Sep 21 05:00	19°♊36'10		max. Earth dist.	7635 Nov 26 23:06	8°♊30'13	10.30186 AU
retrograde	7630 Jan 04 09:33	27°♊34'59		morning rise	7635 Dec 14 18:41	10°♊44'42	

retrograde	7636 Mar 25 21:49	18°♄31'18		opposition	7642 Aug 18 01:17	1°♄34'01	0°28'27
opposition	7636 May 31 23:46	15°♄07'25	2°30'52	min. Earth dist.	7642 Aug 18 03:44	1°♄33'33	8.71199 AU
min. Earth dist.	7636 Jun 01 03:25	15°♄06'41	8.32828 AU		7642 Sep 08 11:24	30°♄	
direct	7636 Aug 08 16:56	11°♄39'36		direct	7642 Oct 27 11:37	28°♄10'54	
evening set	7636 Nov 22 12:53	19°♄38'23			7642 Dec 14 01:45	0°♄	
				evening set	7643 Feb 08 06:12	5°♄39'17	
conjunction	7636 Dec 10 03:39	21°♄50'43	2°00'10				
minimum elong	7636 Dec 10 03:39	21°♄50'43	2°00'16	conjunction	7643 Feb 25 06:27	7°♄42'43	0°10'09
max. Earth dist.	7636 Dec 09 22:34	21°♄49'07	10.35461 AU	minimum elong	7643 Feb 25 06:27	7°♄42'43	0°10'12
morning rise	7636 Dec 27 15:04	24°♄02'02		behind sun begin	7643 Feb 25 00:49	7°♄41'01	
	7637 Feb 22 22:44	0°♄		behind sun end	7643 Feb 25 12:06	7°♄44'25	
retrograde	7637 Apr 08 05:38	1°♄43'24		max. Earth dist.	7643 Feb 25 03:40	7°♄41'53	10.73729 AU
	7637 May 23 15:07	30°♄		morning rise	7643 Mar 14 04:01	9°♄45'23	
opposition	7637 Jun 14 10:55	28°♄20'31	2°25'10	retrograde	7643 Jun 22 17:43	17°♄01'02	
min. Earth dist.	7637 Jun 14 14:15	28°♄19'52	8.38599 AU	desc. node	7643 Jul 23 06:34	16°♄15'04	
direct	7637 Aug 22 13:25	24°♄53'14		opposition	7643 Aug 30 20:13	13°♄41'51	-0°03'15
	7637 Nov 12 10:27	0°♄		min. Earth dist.	7643 Aug 30 21:45	13°♄41'33	8.75987 AU
evening set	7637 Dec 06 08:34	2°♄48'16		direct	7643 Nov 09 06:53	10°♄19'37	
				evening set	7644 Feb 20 13:14	17°♄43'30	
conjunction	7637 Dec 23 20:51	4°♄59'06	1°52'35				
minimum elong	7637 Dec 23 20:53	4°♄59'06	1°52'42	conjunction	7644 Mar 08 11:21	19°♄45'49	-0°15'38
max. Earth dist.	7637 Dec 23 16:25	4°♄57'42	10.41681 AU	minimum elong	7644 Mar 08 11:20	19°♄45'48	0°15'36
morning rise	7638 Jan 10 05:21	7°♄08'48		behind sun begin	7644 Mar 08 09:23	19°♄45'13	
retrograde	7638 Apr 21 09:00	14°♄44'40		behind sun end	7644 Mar 08 13:17	19°♄46'23	
opposition	7638 Jun 27 19:37	11°♄22'45	2°12'01	max. Earth dist.	7644 Mar 08 09:36	19°♄45'17	10.77994 AU
min. Earth dist.	7638 Jun 27 22:34	11°♄22'10	8.45136 AU	morning rise	7644 Mar 25 07:18	21°♄47'33	
direct	7638 Sep 05 06:46	7°♄56'08		retrograde	7644 Jul 04 02:46	29°♄02'02	
evening set	7638 Dec 19 21:19	15°♄46'21		opposition	7644 Sep 11 13:38	25°♄42'49	-0°34'29
				min. Earth dist.	7644 Sep 11 14:41	25°♄42'37	8.79706 AU
conjunction	7639 Jan 06 07:08	17°♄55'35	1°39'22	direct	7644 Nov 20 23:48	22°♄21'20	
minimum elong	7639 Jan 06 07:10	17°♄55'36	1°39'28	evening set	7645 Mar 03 16:39	29°♄41'22	
max. Earth dist.	7639 Jan 06 03:21	17°♄54'24	10.48497 AU		7645 Mar 06 07:23	0°♄	
morning rise	7639 Jan 23 12:58	20°♄03'40					
retrograde	7639 May 04 08:40	27°♄34'05		conjunction	7645 Mar 20 12:42	1°♄42'45	-0°40'27
opposition	7639 Jul 11 01:28	24°♄13'02	1°52'27	minimum elong	7645 Mar 20 12:40	1°♄42'45	0°40'28
min. Earth dist.	7639 Jul 11 04:43	24°♄12'24	8.52067 AU	max. Earth dist.	7645 Mar 20 11:26	1°♄42'22	10.81116 AU
direct	7639 Sep 18 19:48	20°♄47'12		morning rise	7645 Apr 06 07:29	3°♄43'46	
evening set	7640 Jan 02 03:14	28°♄31'56		retrograde	7645 Jul 16 11:24	10°♄58'06	
	7640 Jan 14 02:36	0°♄		opposition	7645 Sep 24 05:41	7°♄38'39	-1°04'01
				min. Earth dist.	7645 Sep 24 06:18	7°♄38'32	8.82241 AU
conjunction	7640 Jan 19 10:29	0°♄39'34	1°21'24	direct	7645 Dec 03 13:36	4°♄17'46	
minimum elong	7640 Jan 19 10:31	0°♄39'35	1°21'29	evening set	7646 Mar 15 17:34	11°♄34'45	
max. Earth dist.	7640 Jan 19 06:23	0°♄38'18	10.55506 AU				
morning rise	7640 Feb 05 13:56	2°♄46'05		conjunction	7646 Apr 01 11:55	13°♄35'25	-1°03'26
retrograde	7640 May 16 03:37	10°♄11'26		minimum elong	7646 Apr 01 11:53	13°♄35'25	1°03'28
opposition	7640 Jul 23 04:10	6°♄51'07	1°27'44	max. Earth dist.	7646 Apr 01 11:23	13°♄35'15	10.82996 AU
min. Earth dist.	7640 Jul 23 07:50	6°♄50'24	8.58984 AU	morning rise	7646 Apr 18 05:54	15°♄35'58	
direct	7640 Oct 01 04:30	3°♄26'08		retrograde	7646 Jul 28 19:00	22°♄51'07	
evening set	7641 Jan 14 02:16	11°♄05'09		opposition	7646 Oct 06 20:32	19°♄31'13	-1°30'40
				min. Earth dist.	7646 Oct 06 19:58	19°♄31'19	8.83502 AU
conjunction	7641 Jan 31 06:59	13°♄11'15	0°59'46	direct	7646 Dec 16 01:01	16°♄10'49	
minimum elong	7641 Jan 31 07:01	13°♄11'15	0°59'51	evening set	7647 Mar 27 16:53	23°♄25'37	
max. Earth dist.	7641 Jan 31 02:25	13°♄09'51	10.62284 AU				
	7641 Feb 15 02:17	15°♄		conjunction	7647 Apr 13 10:08	25°♄25'51	-1°23'38
morning rise	7641 Feb 17 08:21	15°♄16'20		minimum elong	7647 Apr 13 10:06	25°♄25'51	1°23'41
retrograde	7641 May 28 17:19	22°♄37'24		max. Earth dist.	7647 Apr 13 11:26	25°♄26'15	10.83564 AU
opposition	7641 Aug 05 04:04	19°♄17'39	0°59'15	morning rise	7647 Apr 30 03:34	27°♄26'11	
min. Earth dist.	7641 Aug 05 07:33	19°♄16'59	8.65470 AU		7647 May 22 20:37	0°♄	
direct	7641 Oct 14 10:48	15°♄53'34		retrograde	7647 Aug 10 05:01	4°♄43'08	
evening set	7642 Jan 26 18:50	23°♄27'04		opposition	7647 Oct 19 11:04	1°♄22'38	-1°53'25
				min. Earth dist.	7647 Oct 19 08:53	1°♄23'02	8.83436 AU
conjunction	7642 Feb 12 21:14	25°♄31'44	0°35'37		7647 Nov 07 08:55	30°♄	
minimum elong	7642 Feb 12 21:15	25°♄31'45	0°35'42	direct	7647 Dec 28 11:41	28°♄02'35	
max. Earth dist.	7642 Feb 12 17:00	25°♄30'27	10.68442 AU		7648 Feb 15 14:46	0°♄	
morning rise	7642 Mar 01 20:40	27°♄35'31		evening set	7648 Apr 07 15:41	5°♄16'03	
	7642 Mar 22 19:21	0°♄					
retrograde	7642 Jun 10 06:28	4°♄53'24		conjunction	7648 Apr 24 08:17	7°♄16'12	-1°40'16

minimum elong	7648 Apr 24 08:15	7° 8 16'11	1°40'20	minimum elong	7654 Jul 06 13:44	20° 8 10'24	1°36'57
max. Earth dist.	7648 Apr 24 11:18	7° 8 17'06	10.82800 AU	max. Earth dist.	7654 Jul 06 19:13	20° 8 12'06	10.55483 AU
morning rise	7648 May 11 01:41	9° 8 16'36		morning rise	7654 Jul 23 22:04	22° 8 18'10	
	7648 Jul 08 02:04	15° 8			7654 Oct 29 03:17	0° 8	
retrograde	7648 Aug 21 17:30	16° 8 36'12		retrograde	7654 Nov 06 09:17	0° 8 03'27	
	7648 Oct 06 14:05	15° 8			7654 Nov 14 14:00	30° 8	
opposition	7648 Oct 31 01:50	13° 8 15'00	-2°11'22	opposition	7655 Jan 14 23:29	26° 8 37'34	-1°48'26
min. Earth dist.	7648 Oct 30 22:31	13° 8 15'38	8.82049 AU	min. Earth dist.	7655 Jan 14 18:51	26° 8 38'29	8.52299 AU
direct	7649 Jan 08 18:48	9° 8 55'10		direct	7655 Mar 23 16:41	23° 8 15'41	
	7649 Mar 31 22:00	15° 8			7655 Jun 26 05:58	0° 8	
evening set	7649 Apr 19 15:12	17° 8 08'16		evening set	7655 Jul 02 09:12	0° 8 44'21	
conjunction	7649 May 06 07:45	19° 8 08'37	-1°52'39	conjunction	7655 Jul 19 17:32	2° 8 52'50	-1°17'59
minimum elong	7649 May 06 07:44	19° 8 08'36	1°52'44	minimum elong	7655 Jul 19 17:35	2° 8 52'51	1°18'05
max. Earth dist.	7649 May 06 11:17	19° 8 09'41	10.80745 AU	max. Earth dist.	7655 Jul 19 22:31	2° 8 54'23	10.49016 AU
morning rise	7649 May 23 01:58	21° 8 09'28		morning rise	7655 Aug 06 06:01	5° 8 02'34	
retrograde	7649 Sep 03 06:29	28° 8 32'25		retrograde	7655 Nov 19 20:04	12° 8 52'05	
opposition	7649 Nov 12 17:10	25° 8 10'28	-2°23'45	opposition	7656 Jan 28 03:17	9° 8 25'40	-1°22'33
min. Earth dist.	7649 Nov 12 13:43	25° 8 11'07	8.79397 AU	min. Earth dist.	7656 Jan 27 23:17	9° 8 26'27	8.45875 AU
direct	7650 Jan 21 02:16	21° 8 50'39		direct	7656 Apr 04 15:35	6° 8 03'00	
evening set	7650 May 01 16:20	29° 8 04'21		evening set	7656 Jul 14 15:36	13° 8 36'28	
	7650 May 09 10:12	0° 8			7656 Jul 25 21:51	15° 8	
conjunction	7650 May 18 09:38	1° 8 05'16	-2°00'13	conjunction	7656 Aug 01 04:06	15° 8 46'56	-0°55'00
minimum elong	7650 May 18 09:37	1° 8 05'15	2°00'19	minimum elong	7656 Aug 01 04:08	15° 8 46'57	0°55'04
max. Earth dist.	7650 May 18 13:20	1° 8 06'23	10.77477 AU	max. Earth dist.	7656 Aug 01 09:04	15° 8 48'29	10.42781 AU
morning rise	7650 Jun 04 05:26	3° 8 06'54		morning rise	7656 Aug 18 20:24	17° 8 58'33	
retrograde	7650 Sep 15 22:56	10° 8 33'49		retrograde	7656 Dec 02 11:20	25° 8 51'46	
opposition	7650 Nov 25 09:42	7° 8 11'03	-2°29'59	opposition	7657 Feb 09 09:40	22° 8 24'55	-0°52'05
min. Earth dist.	7650 Nov 25 05:58	7° 8 11'46	8.75568 AU	min. Earth dist.	7657 Feb 09 05:54	22° 8 25'39	8.39847 AU
direct	7651 Feb 02 11:47	3° 8 51'06		direct	7657 Apr 17 17:52	19° 8 01'26	
evening set	7651 May 13 20:03	11° 8 06'15		evening set	7657 Jul 28 04:58	26° 8 39'59	
conjunction	7651 May 30 15:02	13° 8 08'07	-2°02'34	conjunction	7657 Aug 14 21:16	28° 8 52'16	-0°28'54
minimum elong	7651 May 30 15:02	13° 8 08'07	2°02'41	minimum elong	7657 Aug 14 21:17	28° 8 52'17	0°28'57
max. Earth dist.	7651 May 30 19:47	13° 8 09'34	10.73109 AU	max. Earth dist.	7657 Aug 15 02:03	28° 8 53'46	10.37082 AU
morning rise	7651 Jun 16 13:00	15° 8 10'53			7657 Aug 23 21:15	0° 8	
retrograde	7651 Sep 28 19:12	22° 8 42'13		morning rise	7657 Sep 01 16:45	1° 8 05'34	
opposition	7651 Dec 08 03:49	19° 8 18'36	-2°29'38	retrograde	7657 Dec 16 06:21	9° 8 01'41	
min. Earth dist.	7651 Dec 07 23:16	19° 8 19'28	8.70711 AU	opposition	7658 Feb 22 18:22	5° 8 34'35	-0°18'28
direct	7652 Feb 14 21:30	15° 8 58'23		min. Earth dist.	7658 Feb 22 14:54	5° 8 35'16	8.34517 AU
evening set	7652 May 25 03:31	23° 8 15'50		direct	7658 Apr 30 23:05	2° 8 10'15	
				evening set	7658 Aug 11 00:51	9° 8 53'57	
conjunction	7652 Jun 11 01:02	25° 8 18'59	-1°59'27	conjunction	7658 Aug 28 20:11	12° 8 07'46	-0°01'01
minimum elong	7652 Jun 11 01:04	25° 8 18'59	1°59'34	minimum elong	7658 Aug 28 20:12	12° 8 07'46	0°01'03
max. Earth dist.	7652 Jun 11 07:05	25° 8 20'50	10.67826 AU	behind sun begin	7658 Aug 28 12:56	12° 8 05'30	
morning rise	7652 Jun 28 01:50	27° 8 23'10		behind sun end	7658 Aug 29 03:29	12° 8 10'02	
	7652 Jul 20 21:30	0° 8		max. Earth dist.	7658 Aug 28 23:56	12° 8 08'53	10.32206 AU
retrograde	7652 Oct 10 19:24	4° 8 59'11		asc. node	7658 Sep 11 01:32	13° 8 47'30	
opposition	7652 Dec 19 23:56	1° 8 34'44	-2°22'30	morning rise	7658 Sep 15 18:03	14° 8 22'24	
min. Earth dist.	7652 Dec 19 18:31	1° 8 35'47	8.65038 AU	retrograde	7658 Dec 30 03:00	22° 8 20'31	
	7653 Jan 10 08:32	30° 8		opposition	7659 Mar 08 05:27	18° 8 53'19	0°16'31
direct	7653 Feb 26 09:37	28° 8 14'06		min. Earth dist.	7659 Mar 08 02:54	18° 8 53'50	8.30148 AU
	7653 Apr 12 22:51	0° 8		direct	7659 May 14 09:16	15° 8 28'07	
evening set	7653 Jun 06 15:38	5° 8 34'36		evening set	7659 Aug 25 02:22	23° 8 16'44	
conjunction	7653 Jun 23 16:20	7° 8 39'21	-1°50'48	conjunction	7659 Sep 11 23:50	25° 8 31'42	0°27'14
minimum elong	7653 Jun 23 16:22	7° 8 39'22	1°50'56	minimum elong	7659 Sep 11 23:48	25° 8 31'41	0°27'14
max. Earth dist.	7653 Jun 23 22:33	7° 8 41'16	10.61859 AU	max. Earth dist.	7659 Sep 12 01:38	25° 8 32'16	10.28375 AU
morning rise	7653 Jul 10 20:42	9° 8 45'14		morning rise	7659 Sep 29 23:04	27° 8 47'14	
retrograde	7653 Oct 24 00:31	17° 8 25'59			7659 Oct 18 09:40	0° 8	
opposition	7654 Jan 01 22:27	14° 8 00'45	-2°08'39	retrograde	7660 Jan 12 23:59	5° 8 46'21	
min. Earth dist.	7654 Jan 01 17:07	14° 8 01'47	8.58799 AU	opposition	7660 Mar 20 18:19	2° 8 19'14	0°50'56
direct	7654 Mar 10 23:38	10° 8 39'34		min. Earth dist.	7660 Mar 20 17:30	2° 8 19'24	8.26907 AU
evening set	7654 Jun 19 09:23	18° 8 03'50			7660 Apr 21 07:34	30° 8	
conjunction	7654 Jul 06 13:42	20° 8 10'23	-1°36'50	direct	7660 May 26 23:23	28° 8 53'11	

	7660 Jul 01 07:56	0°♄		direct	7666 Aug 17 04:31	19°♄42'55	
evening set	7660 Sep 07 08:41	6°♄46'20		evening set	7666 Dec 01 01:05	27°♄39'16	
conjunction	7660 Sep 25 07:14	9°♄02'01	0°54'07	conjunction	7666 Dec 18 14:21	29°♄50'40	1°56'26
minimum elong	7660 Sep 25 07:12	9°♄02'00	0°54'09	minimum elong	7666 Dec 18 14:22	29°♄50'41	1°56'33
max. Earth dist.	7660 Sep 25 06:23	9°♄01'44	10.25711 AU	max. Earth dist.	7666 Dec 18 08:30	29°♄48'50	10.39163 AU
morning rise	7660 Oct 13 06:46	11°♄17'59			7666 Dec 19 20:03	0°♄	
retrograde	7661 Jan 25 21:23	19°♄17'04		morning rise	7667 Jan 05 00:03	2°♄01'00	
opposition	7661 Apr 03 08:21	15°♄50'16	1°22'45	retrograde	7667 Apr 16 07:13	9°♄38'51	
min. Earth dist.	7661 Apr 03 09:30	15°♄50'02	8.24898 AU	opposition	7667 Jun 22 16:03	6°♄16'23	2°18'18
direct	7661 Jun 09 16:31	12°♄23'29		min. Earth dist.	7667 Jun 22 20:48	6°♄15'26	8.42341 AU
evening set	7661 Sep 21 18:12	20°♄20'34		direct	7667 Aug 31 00:13	2°♄49'11	
				evening set	7667 Dec 14 16:22	10°♄41'13	
conjunction	7661 Oct 09 16:52	22°♄36'30	1°18'07	conjunction	7668 Jan 01 03:06	12°♄51'05	1°45'29
minimum elong	7661 Oct 09 16:49	22°♄36'29	1°18'10	minimum elong	7668 Jan 01 03:08	12°♄51'05	1°45'36
max. Earth dist.	7661 Oct 09 14:02	22°♄35'36	10.24336 AU	max. Earth dist.	7667 Dec 31 21:03	12°♄49'11	10.45439 AU
morning rise	7661 Oct 27 15:32	24°♄52'27		morning rise	7668 Jan 18 10:13	14°♄59'49	
	7661 Dec 12 20:25	0°♄		retrograde	7668 Apr 28 07:08	22°♄32'12	
retrograde	7662 Feb 08 18:12	2°♄50'30		opposition	7668 Jul 04 22:30	19°♄10'29	2°01'19
	7662 Apr 09 13:57	30°♄		min. Earth dist.	7668 Jul 05 02:45	19°♄09'39	8.48833 AU
opposition	7662 Apr 16 23:24	29°♄24'12	1°50'04	direct	7668 Sep 12 15:29	15°♄43'55	
min. Earth dist.	7662 Apr 17 01:36	29°♄23'45	8.24273 AU	evening set	7668 Dec 27 00:31	23°♄30'45	
direct	7662 Jun 23 12:58	25°♄56'53					
	7662 Sep 02 02:08	0°♄		conjunction	7669 Jan 13 08:50	25°♄39'03	1°29'25
evening set	7662 Oct 06 05:01	3°♄56'47		minimum elong	7669 Jan 13 08:52	25°♄39'04	1°29'30
conjunction	7662 Oct 24 02:54	6°♄12'31	1°37'49	max. Earth dist.	7669 Jan 13 03:38	25°♄37'26	10.52127 AU
minimum elong	7662 Oct 24 02:51	6°♄12'30	1°37'53	morning rise	7669 Jan 30 13:24	27°♄46'13	
max. Earth dist.	7662 Oct 23 23:07	6°♄11'19	10.24425 AU		7669 Feb 18 13:32	0°♄	
morning rise	7662 Nov 10 23:45	8°♄27'58		retrograde	7669 May 11 03:31	5°♄13'25	
	7663 Jan 13 20:16	15°♄		opposition	7669 Jul 18 01:58	1°♄52'22	1°38'38
retrograde	7663 Feb 22 12:27	16°♄23'53		min. Earth dist.	7669 Jul 18 05:10	1°♄51'45	8.55567 AU
	7663 Apr 03 17:48	15°♄			7669 Aug 12 14:38	30°♄	
opposition	7663 Apr 30 14:41	12°♄58'12	2°11'13	direct	7669 Sep 26 01:48	28°♄26'35	
min. Earth dist.	7663 Apr 30 17:19	12°♄57'40	8.25169 AU		7669 Nov 08 17:21	0°♄	
direct	7663 Jul 07 11:56	9°♄30'31		evening set	7670 Jan 09 01:43	6°♄07'47	
	7663 Sep 29 11:58	15°♄					
evening set	7663 Oct 20 15:30	17°♄31'53		conjunction	7670 Jan 26 07:40	8°♄14'32	1°09'12
				minimum elong	7670 Jan 26 07:42	8°♄14'33	1°09'18
conjunction	7663 Nov 07 11:53	19°♄46'59	1°52'02	max. Earth dist.	7670 Jan 26 03:55	8°♄13'23	10.58896 AU
minimum elong	7663 Nov 07 11:51	19°♄46'58	1°52'07	morning rise	7670 Feb 12 09:53	10°♄20'13	
max. Earth dist.	7663 Nov 07 07:40	19°♄45'38	10.26065 AU		7670 Mar 27 16:27	15°♄	
morning rise	7663 Nov 25 06:13	22°♄01'31		retrograde	7670 May 23 19:32	17°♄42'48	
retrograde	7664 Mar 07 04:52	29°♄54'08			7670 Jul 22 21:57	15°♄	
opposition	7664 May 13 05:23	26°♄29'10	2°25'02	opposition	7670 Jul 31 02:24	14°♄22'20	1°11'35
min. Earth dist.	7664 May 13 08:20	26°♄28'34	8.27589 AU	min. Earth dist.	7670 Jul 31 05:03	14°♄21'50	8.62226 AU
direct	7664 Jul 20 10:13	23°♄01'18		direct	7670 Oct 09 07:41	10°♄57'25	
	7664 Oct 25 11:17	0°♄			7670 Dec 21 02:51	15°♄	
evening set	7664 Nov 02 23:34	1°♄02'33		evening set	7671 Jan 21 20:24	18°♄32'57	
conjunction	7664 Nov 20 17:53	3°♄16'40	2°00'01	conjunction	7671 Feb 07 23:59	20°♄38'13	0°46'01
minimum elong	7664 Nov 20 17:52	3°♄16'40	2°00'07	minimum elong	7671 Feb 08 00:00	20°♄38'14	0°46'06
max. Earth dist.	7664 Nov 20 13:20	3°♄15'14	10.29194 AU	max. Earth dist.	7671 Feb 07 21:00	20°♄37'18	10.65424 AU
morning rise	7664 Dec 08 09:18	5°♄29'57		morning rise	7671 Feb 25 00:09	22°♄42'31	
retrograde	7665 Mar 20 18:50	13°♄18'17			7671 May 31 10:21	0°♄	
opposition	7665 May 26 19:03	9°♄54'07	2°30'48	retrograde	7671 Jun 05 09:00	0°♄01'17	
min. Earth dist.	7665 May 26 22:41	9°♄53'24	8.31412 AU		7671 Jun 10 07:33	30°♄	
direct	7665 Aug 03 07:45	6°♄26'18		opposition	7671 Aug 13 00:09	26°♄41'19	0°41'38
evening set	7665 Nov 17 03:10	14°♄25'49		min. Earth dist.	7671 Aug 13 02:35	26°♄40'51	8.68497 AU
				direct	7671 Oct 22 09:04	23°♄17'20	
conjunction	7665 Dec 04 19:00	16°♄38'40	2°01'27		7672 Jan 27 16:41	0°♄	
minimum elong	7665 Dec 04 19:00	16°♄38'40	2°01'33	evening set	7672 Feb 03 09:23	0°♄47'26	
max. Earth dist.	7665 Dec 04 13:50	16°♄37'02	10.33643 AU				
morning rise	7665 Dec 22 07:29	18°♄50'32		conjunction	7672 Feb 20 10:31	2°♄51'19	0°21'01
retrograde	7666 Apr 03 04:22	26°♄33'49		minimum elong	7672 Feb 20 10:31	2°♄51'19	0°21'04
opposition	7666 Jun 09 06:52	23°♄10'31	2°28'25	max. Earth dist.	7672 Feb 20 07:43	2°♄50'28	10.71405 AU
min. Earth dist.	7666 Jun 09 11:14	23°♄09'39	8.36424 AU	morning rise	7672 Mar 08 08:53	4°♄54'23	

retrograde	7672 Jun 16 18:48	12° X 10'16	morning rise	7678 May 18 04:19	16° B 11'34
opposition	7672 Aug 24 19:23	8° X 50'40 0°10'13	retrograde	7678 Aug 29 01:21	23° B 31'44
min. Earth dist.	7672 Aug 24 21:19	8° X 50'18 8.74100 AU	opposition	7678 Nov 07 12:30	20° B 10'47 -2°18'44
direct	7672 Nov 03 06:18	5° X 27'40	min. Earth dist.	7678 Nov 07 08:36	20° B 11'31 8.83543 AU
desc. node	7672 Dec 24 13:10	7° X 33'05	direct	7679 Jan 16 02:26	16° B 51'40
evening set	7673 Feb 14 17:22	12° X 52'48	evening set	7679 Apr 26 17:56	24° B 03'51
conjunction	7673 Mar 03 16:14	14° X 55'26 -0°04'46	conjunction	7679 May 13 10:46	26° B 04'08 -1°57'20
minimum elong	7673 Mar 03 16:14	14° X 55'26 0°04'44	minimum elong	7679 May 13 10:45	26° B 04'07 1°57'25
behind sun begin	7673 Mar 03 09:21	14° X 53'22	max. Earth dist.	7679 May 13 15:44	26° B 05'38 10.82006 AU
behind sun end	7673 Mar 03 23:07	14° X 57'30	morning rise	7679 May 30 05:28	28° B 05'00
max. Earth dist.	7673 Mar 03 14:12	14° X 54'52 10.76583 AU		7679 Jun 15 22:14	0° II
morning rise	7673 Mar 20 13:00	16° X 57'27	retrograde	7679 Sep 10 17:21	5° II 28'50
retrograde	7673 Jun 29 02:44	24° X 11'33	opposition	7679 Nov 20 03:44	2° II 07'10 -2°27'42
opposition	7673 Sep 06 12:32	20° X 52'07 -0°21'17	min. Earth dist.	7679 Nov 19 23:04	2° II 08'02 8.80415 AU
min. Earth dist.	7673 Sep 06 13:03	20° X 52'01 8.78794 AU		7679 Dec 20 15:15	30° R 8
direct	7673 Nov 16 00:46	17° X 30'04	direct	7680 Jan 28 09:59	28° B 48'03
evening set	7674 Feb 26 21:13	24° X 50'54		7680 Mar 06 04:53	0° II
			evening set	7680 May 07 19:42	6° II 01'12
conjunction	7674 Mar 15 18:08	26° X 52'29 -0°29'58	conjunction	7680 May 24 13:42	8° II 02'14 -2°02'00
minimum elong	7674 Mar 15 18:07	26° X 52'29 0°29'58	minimum elong	7680 May 24 13:42	8° II 02'14 2°02'06
max. Earth dist.	7674 Mar 15 17:54	26° X 52'25 10.80732 AU	max. Earth dist.	7680 May 24 18:35	8° II 03'43 10.78208 AU
morning rise	7674 Apr 01 13:26	28° X 53'37	morning rise	7680 Jun 10 10:18	10° II 04'05
	7674 Apr 11 01:18	0° Y	retrograde	7680 Sep 22 12:01	17° II 32'05
retrograde	7674 Jul 11 12:03	6° Y 07'00	opposition	7680 Dec 01 20:27	14° II 09'37 -2°30'17
opposition	7674 Sep 19 04:02	2° Y 47'34 -0°51'34	min. Earth dist.	7680 Dec 01 16:09	14° II 10'26 8.75983 AU
min. Earth dist.	7674 Sep 19 03:04	2° Y 47'45 8.82375 AU	direct	7681 Feb 08 16:42	10° II 50'17
	7674 Nov 02 05:11	30° R 8	evening set	7681 May 20 00:50	18° II 05'24
direct	7674 Nov 28 14:45	29° X 26'25			
	7674 Dec 24 15:23	0° Y			
evening set	7675 Mar 10 22:19	6° Y 43'43	conjunction	7681 Jun 05 20:50	20° II 07'34 -2°01'20
conjunction	7675 Mar 27 17:27	8° Y 44'28 -0°53'46	minimum elong	7681 Jun 05 20:51	20° II 07'35 2°01'27
minimum elong	7675 Mar 27 17:25	8° Y 44'28 0°53'48	max. Earth dist.	7681 Jun 06 00:57	20° II 08'50 10.73180 AU
max. Earth dist.	7675 Mar 27 18:48	8° Y 44'53 10.83673 AU	morning rise	7681 Jun 22 20:11	22° II 10'44
morning rise	7675 Apr 13 11:31	10° Y 44'57	retrograde	7681 Oct 05 08:22	29° II 43'22
retrograde	7675 Jul 23 19:51	17° Y 58'38	opposition	7681 Dec 14 14:54	26° II 20'03 -2°26'14
opposition	7675 Oct 01 18:26	14° Y 39'04 -1°19'27	min. Earth dist.	7681 Dec 14 11:18	26° II 20'45 8.70399 AU
min. Earth dist.	7675 Oct 01 16:39	14° Y 39'24 8.84699 AU	direct	7682 Feb 21 03:59	23° II 00'17
direct	7675 Dec 11 00:59	11° Y 18'41		7682 May 29 20:51	0° B
evening set	7676 Mar 21 21:34	18° Y 33'21	evening set	7682 Jun 01 10:08	0° B 18'17
conjunction	7676 Apr 07 15:09	20° Y 33'30 -1°15'11	conjunction	7682 Jun 18 09:04	2° B 21'57 -1°55'11
minimum elong	7676 Apr 07 15:06	20° Y 33'29 1°15'14	minimum elong	7682 Jun 18 09:05	2° B 21'58 1°55'19
max. Earth dist.	7676 Apr 07 16:59	20° Y 34'03 10.85308 AU	max. Earth dist.	7682 Jun 18 13:03	2° B 23'11 10.67147 AU
morning rise	7676 Apr 24 08:34	22° Y 33'37	morning rise	7682 Jul 05 11:43	4° B 26'44
retrograde	7676 Aug 04 04:19	29° Y 48'37	retrograde	7682 Oct 18 10:11	12° B 04'15
opposition	7676 Oct 13 08:30	26° Y 28'45 -1°43'53	opposition	7682 Dec 27 11:41	8° B 40'02 -2°15'26
min. Earth dist.	7676 Oct 13 06:27	26° Y 29'08 8.85692 AU	min. Earth dist.	7682 Dec 27 08:11	8° B 40'42 8.63958 AU
direct	7676 Dec 22 10:22	23° Y 08'58	direct	7683 Mar 05 17:17	5° B 19'38
	7677 Mar 30 17:12	0° B	evening set	7683 Jun 14 00:24	12° B 41'12
evening set	7677 Apr 02 19:48	0° B 21'53	conjunction	7683 Jul 01 02:57	14° B 46'39 -1°43'37
conjunction	7677 Apr 19 12:22	2° B 21'43 -1°33'23	minimum elong	7683 Jul 01 02:59	14° B 46'40 1°43'45
minimum elong	7677 Apr 19 12:20	2° B 21'43 1°33'27	max. Earth dist.	7683 Jul 01 07:42	14° B 48'07 10.60439 AU
max. Earth dist.	7677 Apr 19 14:43	2° B 22'26 10.85585 AU	morning rise	7683 Jul 18 09:17	16° B 53'17
morning rise	7677 May 06 05:43	4° B 21'47	retrograde	7683 Oct 31 16:34	24° B 35'40
retrograde	7677 Aug 16 13:54	11° B 38'58	opposition	7684 Jan 09 11:00	21° B 10'31 -1°58'07
opposition	7677 Oct 25 22:24	8° B 18'39 -2°03'55	min. Earth dist.	7684 Jan 09 07:02	21° B 11'18 8.57015 AU
min. Earth dist.	7677 Oct 25 19:38	8° B 19'10 8.85311 AU	direct	7684 Mar 17 08:40	17° B 49'20
direct	7678 Jan 03 18:12	4° B 59'17	evening set	7684 Jun 25 20:44	25° B 15'08
evening set	7678 Apr 14 18:16	12° B 11'23	conjunction	7684 Jul 13 03:15	27° B 22'32 -1°26'59
conjunction	7678 May 01 10:36	14° B 11'15 -1°47'38	minimum elong	7684 Jul 13 03:17	27° B 22'33 1°27'06
minimum elong	7678 May 01 10:34	14° B 11'15 1°47'42	max. Earth dist.	7684 Jul 13 08:04	27° B 24'02 10.53414 AU
max. Earth dist.	7678 May 01 14:13	14° B 12'21 10.84480 AU	morning rise	7684 Jul 30 13:36	29° B 31'09
	7678 May 08 04:18	15° B	retrograde	7684 Aug 03 13:24	0° B
				7684 Nov 13 01:59	7° B 18'06

opposition	7685 Jan 21 12:50	3°♏52'07	-1°34'48	conjunction	7690 Oct 03 10:53	16°♊38'24	1°07'32
min. Earth dist.	7685 Jan 21 08:58	3°♏52'53	8.49931 AU	minimum elong	7690 Oct 03 10:50	16°♊38'23	1°07'35
direct	7685 Mar 30 04:18	0°♏30'00		max. Earth dist.	7690 Oct 03 10:11	16°♊38'10	10.23243 AU
evening set	7685 Jul 08 23:33	8°♏00'34		morning rise	7690 Oct 21 09:59	18°♊54'34	
				retrograde	7691 Feb 02 18:27	26°♊53'45	
conjunction	7685 Jul 26 10:07	10°♏10'00	-1°05'50	opposition	7691 Apr 11 02:22	23°♊26'31	1°38'12
minimum elong	7685 Jul 26 10:09	10°♏10'01	1°05'56	min. Earth dist.	7691 Apr 11 03:08	23°♊26'22	8.22836 AU
max. Earth dist.	7685 Jul 26 14:00	10°♏11'13	10.46424 AU	direct	7691 Jun 17 13:14	19°♊58'50	
morning rise	7685 Aug 13 00:32	12°♏20'36		evening set	7691 Sep 29 22:25	27°♊57'55	
	7685 Sep 04 18:32	15°♏			7691 Oct 16 01:01	0°♏	
retrograde	7685 Nov 26 15:53	20°♏11'40					
opposition	7686 Feb 03 17:28	16°♏45'00	-1°06'23	conjunction	7691 Oct 17 20:54	0°♏13'58	1°29'22
min. Earth dist.	7686 Feb 03 14:27	16°♏45'36	8.43057 AU	minimum elong	7691 Oct 17 20:51	0°♏13'57	1°29'26
	7686 Feb 26 22:35	15°♏♏		max. Earth dist.	7691 Oct 17 18:36	0°♏13'14	10.22703 AU
direct	7686 Apr 12 03:08	13°♏21'50		morning rise	7691 Nov 04 18:40	2°♏29'51	
	7686 May 25 09:24	15°♏		retrograde	7692 Feb 16 14:29	10°♏27'19	
evening set	7686 Jul 22 09:04	20°♏57'34		opposition	7692 Apr 23 17:44	7°♏00'42	2°02'23
				min. Earth dist.	7692 Apr 23 19:47	7°♏00'17	8.23155 AU
conjunction	7686 Aug 08 23:28	23°♏08'56	-0°41'06	direct	7692 Jun 30 10:53	3°♏32'34	
minimum elong	7686 Aug 08 23:29	23°♏08'57	0°41'09	evening set	7692 Oct 13 09:31	11°♏33'46	
max. Earth dist.	7686 Aug 09 01:59	23°♏09'43	10.39811 AU				
morning rise	7686 Aug 26 17:32	25°♏21'25		conjunction	7692 Oct 31 06:39	13°♏49'20	1°46'13
	7686 Oct 07 14:01	0°♏		minimum elong	7692 Oct 31 06:36	13°♏49'20	1°46'18
retrograde	7686 Dec 10 08:25	3°♏15'58		max. Earth dist.	7692 Oct 31 02:49	13°♏48'07	10.23809 AU
	7687 Feb 14 16:28	30°♏♏			7692 Nov 09 13:07	15°♏	
opposition	7687 Feb 17 00:45	29°♏48'46	-0°34'06	morning rise	7692 Nov 18 02:17	16°♏04'28	
min. Earth dist.	7687 Feb 16 22:55	29°♏49'08	8.36742 AU	retrograde	7693 Mar 01 07:42	23°♏59'04	
direct	7687 Apr 25 06:35	26°♏24'32		opposition	7693 May 07 08:53	20°♏33'15	2°19'40
	7687 Jun 29 22:49	0°♏		min. Earth dist.	7693 May 07 11:55	20°♏32'39	8.25101 AU
evening set	7687 Aug 05 01:16	4°♏05'39		direct	7693 Jul 14 09:38	17°♏04'58	
				evening set	7693 Oct 27 18:58	25°♏06'47	
conjunction	7687 Aug 22 19:08	6°♏18'45	-0°13'55				
minimum elong	7687 Aug 22 19:09	6°♏18'46	0°13'58	conjunction	7693 Nov 14 14:11	27°♏21'30	1°57'07
behind sun begin	7687 Aug 22 15:35	6°♏17'39		minimum elong	7693 Nov 14 14:09	27°♏21'29	1°57'13
behind sun end	7687 Aug 22 22:42	6°♏19'52		max. Earth dist.	7693 Nov 14 09:24	27°♏19'59	10.26517 AU
max. Earth dist.	7687 Aug 22 20:49	6°♏19'17	10.33912 AU	morning rise	7693 Dec 02 07:11	29°♏35'31	
morning rise	7687 Sep 09 16:08	8°♏32'50			7693 Dec 05 14:15	0°♏♏	
retrograde	7687 Dec 24 02:27	16°♏30'05		retrograde	7694 Mar 14 22:32	7°♏26'15	
asc. node	7688 Feb 25 21:10	13°♏24'28		opposition	7694 May 20 23:18	4°♏01'23	2°29'08
opposition	7688 Mar 01 10:23	13°♏02'32	0°00'25	min. Earth dist.	7694 May 21 02:36	4°♏00'43	8.28573 AU
min. Earth dist.	7688 Mar 01 09:17	13°♏02'45	8.31313 AU	direct	7694 Jul 28 08:34	0°♏33'13	
direct	7688 May 07 15:43	9°♏37'15		evening set	7694 Nov 11 00:49	8°♏34'01	
evening set	7688 Aug 17 23:47	17°♏23'41					
				conjunction	7694 Nov 28 17:50	10°♏47'35	2°01'32
conjunction	7688 Sep 04 20:26	19°♏38'15	0°14'22	minimum elong	7694 Nov 28 17:50	10°♏47'35	2°01'38
minimum elong	7688 Sep 04 20:25	19°♏38'14	0°14'21	max. Earth dist.	7694 Nov 28 13:02	10°♏46'04	10.30677 AU
behind sun begin	7688 Sep 04 17:15	19°♏37'15		morning rise	7694 Dec 16 07:55	13°♏00'15	
behind sun end	7688 Sep 04 23:36	19°♏39'14		retrograde	7695 Mar 28 09:43	20°♏46'18	
max. Earth dist.	7688 Sep 04 21:29	19°♏38'34	10.29023 AU	opposition	7695 Jun 03 12:10	17°♏22'26	2°30'25
morning rise	7688 Sep 22 19:19	21°♏53'31		min. Earth dist.	7695 Jun 03 15:12	17°♏21'50	8.33367 AU
retrograde	7689 Jan 05 22:20	29°♏52'31		direct	7695 Aug 11 06:38	13°♏54'38	
opposition	7689 Mar 14 22:10	26°♏24'50	0°35'20	evening set	7695 Nov 25 01:55	21°♏52'58	
min. Earth dist.	7689 Mar 14 21:30	26°♏24'58	8.27041 AU				
direct	7689 May 21 04:03	22°♏58'37		conjunction	7695 Dec 12 16:33	24°♏05'09	1°59'24
	7689 Aug 25 09:05	0°♊		minimum elong	7695 Dec 12 16:33	24°♏05'09	1°59'30
evening set	7689 Sep 01 03:49	0°♊50'01		max. Earth dist.	7695 Dec 12 12:13	24°♏03'47	10.36046 AU
				morning rise	7695 Dec 30 03:37	26°♏16'18	
conjunction	7689 Sep 19 02:10	3°♊05'34	0°42'01		7696 Jan 31 14:01	0°♊	
minimum elong	7689 Sep 19 02:08	3°♊05'34	0°42'02	retrograde	7696 Apr 09 17:00	3°♊57'06	
max. Earth dist.	7689 Sep 19 02:33	3°♊05'42	10.25396 AU	opposition	7696 Jun 15 22:56	0°♊34'16	2°23'42
morning rise	7689 Oct 07 01:42	5°♊21'33		min. Earth dist.	7696 Jun 16 01:59	0°♊33'40	8.39212 AU
retrograde	7690 Jan 19 20:27	13°♊21'14			7696 Jun 23 04:25	30°♏♏	
opposition	7690 Mar 28 11:37	9°♊53'39	1°08'35	direct	7696 Aug 24 02:21	27°♏07'01	
min. Earth dist.	7690 Mar 28 11:23	9°♊53'41	8.24157 AU		7696 Oct 22 20:27	0°♊	
direct	7690 Jun 03 18:57	6°♊26'36		evening set	7696 Dec 07 20:57	5°♊01'33	
evening set	7690 Sep 15 11:57	14°♊22'20					
				conjunction	7696 Dec 25 09:03	7°♊12'13	1°51'03



























































































































minimum elong	7696 Dec 25 09:05	7°♁12'13	1°51'09	max. Earth dist.	7703 Mar 11 17:14	21°♁50'58	10.78792 AU
max. Earth dist.	7696 Dec 25 05:01	7°♁10'57	10.42328 AU	morning rise	7703 Mar 28 15:23	23°♁53'14	
morning rise	7697 Jan 11 17:15	9°♁21'45			7703 May 31 18:17	0°♁	
retrograde	7697 Apr 22 21:07	16°♁57'03		retrograde	7703 Jul 07 11:52	1°♁07'25	
opposition	7697 Jun 29 07:22	13°♁35'14	2°09'40		7703 Aug 14 01:02	30°♁	
min. Earth dist.	7697 Jun 29 10:41	13°♁34'35	8.45797 AU	opposition	7703 Sep 14 23:00	27°♁48'17	-0°38'24
direct	7697 Sep 06 18:03	10°♁08'41		min. Earth dist.	7703 Sep 15 00:32	27°♁47'59	8.80454 AU
evening set	7697 Dec 21 09:00	17°♁58'20		direct	7703 Nov 24 08:53	24°♁26'55	
					7704 Feb 19 14:29	0°♁	
conjunction	7698 Jan 07 18:31	20°♁07'26	1°37'09	evening set	7704 Mar 06 00:40	1°♁46'26	
minimum elong	7698 Jan 07 18:33	20°♁07'27	1°37'15				
max. Earth dist.	7698 Jan 07 14:26	20°♁06'10	10.49184 AU	conjunction	7704 Mar 22 20:28	3°♁47'41	-0°43'30
morning rise	7698 Jan 25 00:10	22°♁15'22		minimum elong	7704 Mar 22 20:27	3°♁47'40	0°43'31
retrograde	7698 May 05 19:14	29°♁45'16		max. Earth dist.	7704 Mar 22 18:46	3°♁47'10	10.81792 AU
opposition	7698 Jul 12 12:55	26°♁24'19	1°49'22	morning rise	7704 Apr 08 15:13	5°♁48'36	
min. Earth dist.	7698 Jul 12 16:35	26°♁23'36	8.52771 AU	retrograde	7704 Jul 18 18:36	13°♁02'45	
direct	7698 Sep 20 07:21	22°♁58'35		opposition	7704 Sep 26 14:41	9°♁43'20	-1°07'33
	7698 Dec 28 15:37	0°♁		min. Earth dist.	7704 Sep 26 15:12	9°♁43'15	8.82845 AU
evening set	7699 Jan 03 14:11	0°♁42'45		direct	7704 Dec 05 22:32	6°♁22'36	
				evening set	7705 Mar 18 01:13	13°♁39'10	
conjunction	7699 Jan 20 21:09	2°♁50'14	1°18'39				
minimum elong	7699 Jan 20 21:12	2°♁50'15	1°18'45	conjunction	7705 Apr 03 19:31	15°♁39'44	-1°06'08
max. Earth dist.	7699 Jan 20 16:38	2°♁48'50	10.56240 AU	minimum elong	7705 Apr 03 19:29	15°♁39'43	1°06'10
morning rise	7699 Feb 07 00:33	4°♁56'38		max. Earth dist.	7705 Apr 03 19:27	15°♁39'43	10.83512 AU
retrograde	7699 May 18 12:17	12°♁21'31		morning rise	7705 Apr 20 13:20	17°♁40'11	
opposition	7699 Jul 25 15:11	9°♁01'18	1°24'05	retrograde	7705 Jul 31 03:39	24°♁55'19	
min. Earth dist.	7699 Jul 25 18:33	9°♁00'39	8.59744 AU	opposition	7705 Oct 09 05:25	21°♁35'26	-1°33'43
direct	7699 Oct 03 17:23	5°♁36'26		min. Earth dist.	7705 Oct 09 04:14	21°♁35'40	8.83932 AU
evening set	7700 Jan 16 12:32	13°♁14'51		direct	7705 Dec 18 10:40	18°♁15'09	
	7700 Jan 30 21:27	15°♁		evening set	7706 Mar 30 00:21	25°♁29'37	
conjunction	7700 Feb 02 17:05	15°♁20'48	0°56'39	conjunction	7706 Apr 15 17:35	27°♁29'49	-1°25'53
minimum elong	7700 Feb 02 17:07	15°♁20'48	0°56'45	minimum elong	7706 Apr 15 17:32	27°♁29'48	1°25'57
max. Earth dist.	7700 Feb 02 12:58	15°♁19'32	10.63085 AU	max. Earth dist.	7706 Apr 15 19:20	27°♁30'20	10.83896 AU
morning rise	7700 Feb 19 18:20	17°♁25'44		morning rise	7706 May 02 10:54	29°♁30'05	
retrograde	7700 May 31 03:48	24°♁46'22			7706 May 06 16:54	0°♁	
opposition	7700 Aug 07 14:37	21°♁26'40	0°55'15	retrograde	7706 Aug 12 14:48	6°♁47'05	
min. Earth dist.	7700 Aug 07 17:13	21°♁26'10	8.66301 AU	opposition	7706 Oct 21 19:51	3°♁26'35	-1°55'51
direct	7700 Oct 16 22:04	18°♁02'45		min. Earth dist.	7706 Oct 21 17:39	3°♁27'00	8.83674 AU
evening set	7701 Jan 29 04:28	25°♁35'31		direct	7706 Dec 30 18:56	0°♁06'38	
				evening set	7707 Apr 10 23:14	7°♁19'54	
conjunction	7701 Feb 15 06:45	27°♁40'03	0°32'18				
minimum elong	7701 Feb 15 06:46	27°♁40'03	0°32'22	conjunction	7707 Apr 27 15:44	9°♁20'00	-1°41'59
max. Earth dist.	7701 Feb 15 03:37	27°♁39'06	10.69307 AU	minimum elong	7707 Apr 27 15:42	9°♁19'59	1°42'04
morning rise	7701 Mar 04 05:55	29°♁43'40		max. Earth dist.	7707 Apr 27 18:10	9°♁20'44	10.82936 AU
	7701 Mar 06 12:44	0°♁		morning rise	7707 May 14 09:13	11°♁20'25	
retrograde	7701 Jun 12 16:11	7°♁01'04			7707 Jun 16 20:16	15°♁	
opposition	7701 Aug 20 11:27	3°♁41'45	0°24'18	retrograde	7707 Aug 25 01:10	18°♁40'07	
min. Earth dist.	7701 Aug 20 13:20	3°♁41'23	8.72071 AU	opposition	7707 Nov 03 10:33	15°♁18'55	-2°13'06
direct	7701 Oct 29 21:07	0°♁18'46		min. Earth dist.	7707 Nov 03 07:58	15°♁19'24	8.82090 AU
evening set	7702 Feb 10 15:11	7°♁46'27			7707 Nov 07 15:10	15°♁	
				direct	7708 Jan 12 02:29	11°♁59'05	
conjunction	7702 Feb 27 15:13	9°♁49'42	0°06'47		7708 Mar 13 17:20	15°♁	
minimum elong	7702 Feb 27 15:14	9°♁49'42	0°06'51	evening set	7708 Apr 21 22:48	19°♁12'09	
behind sun begin	7702 Feb 27 08:40	9°♁47'43					
behind sun end	7702 Feb 27 21:48	9°♁51'40		conjunction	7708 May 08 15:19	21°♁12'29	-1°53'46
max. Earth dist.	7702 Feb 27 12:59	9°♁49'02	10.74595 AU	minimum elong	7708 May 08 15:17	21°♁12'29	1°53'51
morning rise	7702 Mar 16 12:35	11°♁52'12		max. Earth dist.	7708 May 08 18:01	21°♁13'18	10.80690 AU
desc. node	7702 Jun 06 10:27	18°♁49'34		morning rise	7708 May 25 09:42	23°♁13'22	
retrograde	7702 Jun 25 02:18	19°♁07'27			7708 Aug 09 10:08	0°♁	
opposition	7702 Sep 02 06:00	15°♁48'20	-0°07'22	retrograde	7708 Sep 05 14:51	0°♁36'32	
min. Earth dist.	7702 Sep 02 07:48	15°♁48'00	8.76830 AU		7708 Oct 03 03:52	30°♁	
direct	7702 Nov 11 16:46	12°♁26'13		opposition	7708 Nov 15 02:00	27°♁14'32	-2°24'43
evening set	7703 Feb 22 21:39	19°♁49'29		min. Earth dist.	7708 Nov 14 23:04	27°♁15'05	8.79248 AU
				direct	7709 Jan 23 11:24	23°♁54'42	
					7709 Apr 24 05:45	0°♁	
conjunction	7703 Mar 11 19:28	21°♁51'38	-0°18'54		7709 May 03 23:57	1°♁08'25	
minimum elong	7703 Mar 11 19:27	21°♁51'38	0°18'53	evening set			




























































































































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minimum elong	7709 May 20 17:26	3° Π 09'23	2°00'46	minimum elong	7715 Aug 04 15:09	17° Ω 56'34	0°51'53
max. Earth dist.	7709 May 20 21:18	3° Π 10'33	10.77236 AU	max. Earth dist.	7715 Aug 04 20:32	17° Ω 58'15	10.41839 AU
morning rise	7709 Jun 06 13:23	5° Π 11'06		morning rise	7715 Aug 22 07:40	20° Ω 08'23	
retrograde	7709 Sep 18 07:53	12° Π 38'18		retrograde	7715 Dec 05 23:31	28° Ω 02'09	
opposition	7709 Nov 27 18:32	9° Π 15'27	-2°30'07	opposition	7716 Feb 12 20:03	24° Ω 35'10	-0°47'57
min. Earth dist.	7709 Nov 27 14:36	9° Π 16'12	8.75239 AU	min. Earth dist.	7716 Feb 12 15:52	24° Ω 36'00	8.38898 AU
direct	7710 Feb 04 20:03	5° Π 55'28		direct	7716 Apr 20 03:09	21° Ω 11'34	
evening set	7710 May 16 04:00	13° Π 10'44		evening set	7716 Jul 30 16:17	28° Ω 50'51	
					7716 Aug 08 23:02	0° η	
conjunction	7710 Jun 01 23:17	15° Π 12'42	-2°02'20	conjunction	7716 Aug 17 08:54	1° η 03'21	-0°25'27
minimum elong	7710 Jun 01 23:18	15° Π 12'42	2°02'27	minimum elong	7716 Aug 17 08:55	1° η 03'21	0°25'30
max. Earth dist.	7710 Jun 02 04:30	15° Π 14'17	10.72693 AU	max. Earth dist.	7716 Aug 17 13:36	1° η 04'49	10.36145 AU
morning rise	7710 Jun 18 21:24	17° Π 15'33		morning rise	7716 Sep 04 04:39	3° η 16'51	
retrograde	7710 Oct 01 04:22	24° Π 47'14		retrograde	7716 Dec 18 18:27	11° η 13'30	
opposition	7710 Dec 10 12:39	21° Π 23'31	-2°28'56	opposition	7717 Feb 25 05:13	7° η 46'19	-0°14'06
min. Earth dist.	7710 Dec 10 07:46	21° Π 24'27	8.70212 AU	min. Earth dist.	7717 Feb 25 01:50	7° η 47'00	8.33603 AU
direct	7711 Feb 17 06:15	18° Π 03'14		direct	7717 May 03 09:33	4° η 21'52	
evening set	7711 May 28 11:53	25° Π 20'54		asc. node	7717 Jul 27 19:22	10° η 05'53	
				evening set	7717 Aug 13 13:00	12° η 06'22	
conjunction	7711 Jun 14 09:40	27° Π 24'13	-1°58'31	conjunction	7717 Aug 31 08:32	14° η 20'23	0°02'38
minimum elong	7711 Jun 14 09:41	27° Π 24'13	1°58'38	minimum elong	7717 Aug 31 08:32	14° η 20'23	0°02'37
max. Earth dist.	7711 Jun 14 15:24	27° Π 25'58	10.67250 AU	behind sun begin	7717 Aug 31 01:15	14° η 18'07	
morning rise	7711 Jul 01 10:46	29° Π 28'32		behind sun end	7717 Aug 31 15:48	14° η 22'39	
	7711 Jul 05 20:33	0° Θ		max. Earth dist.	7717 Aug 31 11:33	14° η 21'17	10.31336 AU
retrograde	7711 Oct 14 06:05	7° Θ 04'56		morning rise	7717 Sep 18 06:38	16° η 35'12	
opposition	7711 Dec 23 09:03	3° Θ 40'23	-2°20'57	retrograde	7718 Jan 01 15:08	24° η 33'48	
min. Earth dist.	7711 Dec 23 03:54	3° Θ 41'22	8.64387 AU	opposition	7718 Mar 10 16:46	21° η 06'35	0°20'54
direct	7712 Feb 29 17:27	0° Θ 19'39		min. Earth dist.	7718 Mar 10 14:47	21° η 06'59	8.29338 AU
evening set	7712 Jun 09 00:25	7° Θ 40'29		direct	7718 May 16 20:05	17° η 41'16	
				evening set	7718 Aug 27 15:18	25° η 30'42	
conjunction	7712 Jun 26 01:21	9° Θ 45'24	-1°49'12	conjunction	7718 Sep 14 12:49	27° η 45'49	0°30'42
minimum elong	7712 Jun 26 01:23	9° Θ 45'24	1°49'19	minimum elong	7718 Sep 14 12:47	27° η 45'49	0°30'42
max. Earth dist.	7712 Jun 26 06:33	9° Θ 47'00	10.61151 AU	max. Earth dist.	7718 Sep 14 13:59	27° η 46'12	10.27649 AU
morning rise	7712 Jul 13 06:11	11° Θ 51'29		morning rise	7718 Oct 02 12:12	0° Ω 01'30	
retrograde	7712 Oct 26 10:43	19° Θ 32'38			7718 Oct 02 07:21	0° Ω	
opposition	7713 Jan 04 07:54	16° Θ 07'19	-2°06'18	retrograde	7719 Jan 15 12:58	8° Ω 01'00	
min. Earth dist.	7713 Jan 04 03:22	16° Θ 08'11	8.58028 AU	opposition	7719 Mar 24 06:04	4° Ω 33'54	0°55'05
direct	7713 Mar 13 07:47	12° Θ 45'58		min. Earth dist.	7719 Mar 24 05:35	4° Ω 34'00	8.26293 AU
evening set	7713 Jun 21 18:39	20° Θ 10'43		direct	7719 May 30 10:54	1° Ω 07'46	
				evening set	7719 Sep 10 22:08	9° Ω 01'36	
conjunction	7713 Jul 08 23:22	22° Θ 17'28	-1°34'36	conjunction	7719 Sep 28 20:42	11° Ω 17'21	0°57'17
minimum elong	7713 Jul 08 23:25	22° Θ 17'29	1°34'43	minimum elong	7719 Sep 28 20:40	11° Ω 17'21	0°57'19
max. Earth dist.	7713 Jul 09 04:17	22° Θ 18'59	10.54672 AU	max. Earth dist.	7719 Sep 28 19:59	11° Ω 17'08	10.25223 AU
morning rise	7713 Jul 26 08:14	24° Θ 25'28		morning rise	7719 Oct 16 20:13	13° Ω 33'25	
	7713 Sep 17 18:40	0° Ω		retrograde	7720 Jan 29 09:45	21° Ω 32'41	
retrograde	7713 Nov 08 18:10	2° Ω 11'13		opposition	7720 Apr 05 20:24	18° Ω 05'53	1°26'24
	7714 Jan 01 02:05	30° $\mathcal{R}\Theta$		min. Earth dist.	7720 Apr 05 21:17	18° Ω 05'43	8.24551 AU
opposition	7714 Jan 17 09:09	28° Θ 45'13	-1°45'21	direct	7720 Jun 12 05:38	14° Ω 39'03	
min. Earth dist.	7714 Jan 17 05:04	28° Θ 46'01	8.51439 AU	evening set	7720 Sep 24 08:00	22° Ω 36'35	
direct	7714 Mar 26 03:05	25° Θ 23'10					
	7714 Jun 09 23:36	0° Ω		conjunction	7720 Oct 12 06:40	24° Ω 52'32	1°20'48
evening set	7714 Jul 04 19:06	2° Ω 52'23		minimum elong	7720 Oct 12 06:37	24° Ω 52'31	1°20'51
				max. Earth dist.	7720 Oct 12 04:31	24° Ω 51'51	10.24108 AU
conjunction	7714 Jul 22 03:58	5° Ω 01'08	-1°15'13	morning rise	7720 Oct 30 05:08	27° Ω 08'29	
minimum elong	7714 Jul 22 04:00	5° Ω 01'09	1°15'19		7720 Nov 23 05:25	0° \mathcal{M}	
max. Earth dist.	7714 Jul 22 09:06	5° Ω 02'44	10.48124 AU	retrograde	7721 Feb 11 05:52	5° \mathcal{M} 06'32	
morning rise	7714 Aug 08 16:48	7° Ω 11'05		opposition	7721 Apr 19 11:33	1° \mathcal{M} 40'15	1°52'59
	7714 Nov 17 16:27	15° Ω		min. Earth dist.	7721 Apr 19 13:11	1° \mathcal{M} 39'55	8.24157 AU
retrograde	7714 Nov 22 06:57	15° Ω 01'06			7721 May 10 23:55	30° $\mathcal{R}\Omega$	
	7714 Nov 26 21:31	15° $\mathcal{R}\Omega$		direct	7721 Jun 26 02:37	28° Ω 12'54	
opposition	7715 Jan 30 13:15	11° Ω 34'33	-1°18'51		7721 Aug 10 11:28	0° \mathcal{M}	
min. Earth dist.	7715 Jan 30 09:08	11° Ω 35'22	8.44949 AU	evening set	7721 Oct 08 19:03	6° \mathcal{M} 13'07	
direct	7715 Apr 08 01:16	8° Ω 11'45					
	7715 Jul 11 18:52	15° Ω					
evening set	7715 Jul 18 02:08	15° Ω 45'51					

conjunction	7721 Oct 26 16:50	8° \mathbb{M} 28'49	1°39'49	conjunction	7728 Jan 16 20:49	27° \mathfrak{Z} 52'33	1°26'47
minimum elong	7721 Oct 26 16:48	8° \mathbb{M} 28'49	1°39'54	minimum elong	7728 Jan 16 20:52	27° \mathfrak{Z} 52'34	1°26'53
max. Earth dist.	7721 Oct 26 13:46	8° \mathbb{M} 27'51	10.24394 AU	max. Earth dist.	7728 Jan 16 16:31	27° \mathfrak{Z} 51'13	10.52705 AU
morning rise	7721 Nov 13 13:20	10° \mathbb{M} 44'12		morning rise	7728 Feb 03 01:08	29° \mathfrak{Z} 59'36	
	7721 Dec 20 18:06	15° \mathbb{M}			7728 Feb 03 02:27	0° \approx	
retrograde	7722 Feb 25 01:10	18° \mathbb{M} 40'01		retrograde	7728 May 13 14:53	7° \approx 26'25	
opposition	7722 May 03 02:57	15° \mathbb{M} 14'23	2°13'15	opposition	7728 Jul 20 14:05	4° \approx 05'27	1°35'04
min. Earth dist.	7722 May 03 05:14	15° \mathbb{M} 13'55	8.25220 AU	min. Earth dist.	7728 Jul 20 17:11	4° \approx 04'51	8.56152 AU
	7722 May 06 02:00	15° \mathfrak{R} \mathbb{M}		direct	7728 Sep 28 14:22	0° \approx 39'45	
direct	7722 Jul 09 23:49	11° \mathbb{M} 46'42		evening set	7729 Jan 11 13:22	8° \approx 20'26	
	7722 Sep 10 10:48	15° \mathbb{M}					
evening set	7722 Oct 23 05:30	19° \mathbb{M} 48'13		conjunction	7729 Jan 28 19:08	10° \approx 27'04	1°06'07
				minimum elong	7729 Jan 28 19:10	10° \approx 27'05	1°06'13
conjunction	7722 Nov 10 01:40	22° \mathbb{M} 03'16	1°53'15	max. Earth dist.	7729 Jan 28 15:36	10° \approx 25'59	10.59496 AU
minimum elong	7722 Nov 10 01:38	22° \mathbb{M} 03'16	1°53'21	morning rise	7729 Feb 14 21:10	12° \approx 32'37	
max. Earth dist.	7722 Nov 09 21:45	22° \mathbb{M} 02'02	10.26183 AU		7729 Mar 08 02:16	15° \approx	
morning rise	7722 Nov 27 19:37	24° \mathbb{M} 17'42		retrograde	7729 May 26 07:22	19° \approx 54'50	
	7723 Jan 19 20:27	0° \mathfrak{Z}		opposition	7729 Aug 02 14:29	16° \approx 34'26	1°07'34
retrograde	7723 Mar 10 18:53	2° \mathfrak{Z} 10'07		min. Earth dist.	7729 Aug 02 17:28	16° \approx 33'51	8.62826 AU
	7723 Apr 30 22:14	30° \mathfrak{R} \mathbb{M}			7729 Aug 23 20:43	15° \mathfrak{R} \approx	
opposition	7723 May 16 17:49	28° \mathbb{M} 45'15	2°26'02	direct	7729 Oct 11 19:44	13° \approx 09'36	
min. Earth dist.	7723 May 16 20:59	28° \mathbb{M} 44'37	8.27778 AU		7729 Nov 28 15:14	15° \approx	
direct	7723 Jul 23 21:53	25° \mathbb{M} 17'25		evening set	7730 Jan 24 07:30	20° \approx 44'32	
	7723 Oct 09 07:28	0° \mathfrak{Z}					
evening set	7723 Nov 06 13:19	3° \mathfrak{Z} 18'41		conjunction	7730 Feb 10 10:47	22° \approx 49'41	0°42'38
				minimum elong	7730 Feb 10 10:48	22° \approx 49'41	0°42'43
conjunction	7723 Nov 24 07:21	5° \mathfrak{Z} 32'44	2°00'24	max. Earth dist.	7730 Feb 10 07:25	22° \approx 48'39	10.66026 AU
minimum elong	7723 Nov 24 07:20	5° \mathfrak{Z} 32'43	2°00'30	morning rise	7730 Feb 27 10:52	24° \approx 53'52	
max. Earth dist.	7723 Nov 24 02:26	5° \mathfrak{Z} 31'10	10.29441 AU		7730 Apr 17 08:21	0° \mathfrak{H}	
morning rise	7723 Dec 11 22:31	7° \mathfrak{Z} 45'56		retrograde	7730 Jun 07 19:05	2° \mathfrak{H} 12'17	
retrograde	7724 Mar 23 07:24	15° \mathfrak{Z} 33'57			7730 Jul 31 10:28	30° \mathfrak{R} \approx	
opposition	7724 May 29 07:32	12° \mathfrak{Z} 09'56	2°30'44	opposition	7730 Aug 15 11:57	28° \approx 52'20	0°37'22
min. Earth dist.	7724 May 29 11:45	12° \mathfrak{Z} 09'05	8.31718 AU	min. Earth dist.	7730 Aug 15 14:30	28° \approx 51'51	8.69093 AU
direct	7724 Aug 05 21:02	8° \mathfrak{Z} 42'08		direct	7730 Oct 24 20:51	25° \approx 28'26	
evening set	7724 Nov 19 16:43	16° \mathfrak{Z} 41'35			7731 Jan 10 13:28	0° \mathfrak{H}	
				evening set	7731 Feb 05 19:57	2° \mathfrak{H} 57'57	
conjunction	7724 Dec 07 08:15	18° \mathfrak{Z} 54'19	2°00'58	conjunction	7731 Feb 22 20:52	5° \mathfrak{H} 01'41	0°17'30
minimum elong	7724 Dec 07 08:15	18° \mathfrak{Z} 54'19	2°01'05	minimum elong	7731 Feb 22 20:52	5° \mathfrak{H} 01'42	0°17'34
max. Earth dist.	7724 Dec 07 02:18	18° \mathfrak{Z} 52'27	10.34001 AU	max. Earth dist.	7731 Feb 22 17:58	5° \mathfrak{H} 00'49	10.71991 AU
morning rise	7724 Dec 24 20:34	21° \mathfrak{Z} 06'06		morning rise	7731 Mar 11 19:10	7° \mathfrak{H} 04'39	
retrograde	7725 Apr 05 15:03	28° \mathfrak{Z} 49'03		retrograde	7731 Jun 20 04:24	14° \mathfrak{H} 20'15	
opposition	7725 Jun 11 19:17	25° \mathfrak{Z} 25'52	2°27'18	opposition	7731 Aug 28 06:42	11° \mathfrak{H} 00'37	0°05'54
min. Earth dist.	7725 Jun 11 23:54	25° \mathfrak{Z} 24'57	8.36829 AU	min. Earth dist.	7731 Aug 28 08:04	11° \mathfrak{H} 00'21	8.74665 AU
direct	7725 Aug 19 18:58	21° \mathfrak{Z} 58'20		direct	7731 Nov 06 19:06	7° \mathfrak{H} 37'41	
evening set	7725 Dec 03 14:13	29° \mathfrak{Z} 54'29		desc. node	7731 Nov 06 12:12	7° \mathfrak{H} 37'41	
	7725 Dec 04 08:10	0° \mathfrak{Z}		evening set	7732 Feb 18 03:26	15° \mathfrak{H} 02'17	
conjunction	7725 Dec 21 03:14	2° \mathfrak{Z} 05'46	1°55'08	conjunction	7732 Mar 06 02:11	17° \mathfrak{H} 04'47	-0°08'14
minimum elong	7725 Dec 21 03:15	2° \mathfrak{Z} 05'46	1°55'15	minimum elong	7732 Mar 06 02:10	17° \mathfrak{H} 04'47	0°08'12
max. Earth dist.	7725 Dec 20 21:06	2° \mathfrak{Z} 03'50	10.39615 AU	behind sun begin	7732 Mar 05 19:55	17° \mathfrak{H} 02'54	
morning rise	7726 Jan 07 12:46	4° \mathfrak{Z} 15'59		behind sun end	7732 Mar 06 08:26	17° \mathfrak{H} 06'39	
retrograde	7726 Apr 18 19:14	11° \mathfrak{Z} 53'29		max. Earth dist.	7732 Mar 06 00:55	17° \mathfrak{H} 04'25	10.77122 AU
opposition	7726 Jun 25 04:29	8° \mathfrak{Z} 31'07	2°16'13	morning rise	7732 Mar 22 22:44	19° \mathfrak{H} 06'40	
min. Earth dist.	7726 Jun 25 08:43	8° \mathfrak{Z} 30'16	8.42829 AU	retrograde	7732 Jul 01 14:05	26° \mathfrak{H} 20'33	
direct	7726 Sep 02 13:16	5° \mathfrak{Z} 04'02		opposition	7732 Sep 08 23:32	23° \mathfrak{H} 01'04	-0°25'28
evening set	7726 Dec 17 04:52	12° \mathfrak{Z} 55'41		min. Earth dist.	7732 Sep 08 23:19	23° \mathfrak{H} 01'06	8.79298 AU
conjunction	7727 Jan 03 15:30	15° \mathfrak{Z} 05'27	1°43'28	direct	7732 Nov 18 12:01	19° \mathfrak{H} 39'06	
minimum elong	7727 Jan 03 15:32	15° \mathfrak{Z} 05'27	1°43'34	evening set	7733 Mar 01 06:51	26° \mathfrak{H} 59'24	
max. Earth dist.	7727 Jan 03 10:03	15° \mathfrak{Z} 03'44	10.45967 AU				
morning rise	7727 Jan 20 22:23	17° \mathfrak{Z} 14'04		conjunction	7733 Mar 18 03:37	29° \mathfrak{H} 00'52	-0°33'17
retrograde	7727 May 01 19:17	24° \mathfrak{Z} 46'05		minimum elong	7733 Mar 18 03:36	29° \mathfrak{H} 00'52	0°33'17
opposition	7727 Jul 08 10:48	21° \mathfrak{Z} 24'26	1°58'25	max. Earth dist.	7733 Mar 18 04:04	29° \mathfrak{H} 01'00	10.81197 AU
min. Earth dist.	7727 Jul 08 14:18	21° \mathfrak{Z} 23'45	8.49382 AU		7733 Mar 26 07:26	0° \mathfrak{Y}	
direct	7727 Sep 16 03:55	17° \mathfrak{Z} 57'59		morning rise	7733 Apr 03 22:41	1° \mathfrak{Y} 01'53	
evening set	7727 Dec 30 12:36	25° \mathfrak{Z} 44'22		retrograde	7733 Jul 13 21:52	8° \mathfrak{Y} 15'07	
				opposition	7733 Sep 21 14:48	4° \mathfrak{Y} 55'39	-0°55'27

min. Earth dist.	7733 Sep 21 13:46	4°♈55'50	8.82801 AU	evening set	7740 May 22 09:34	20°♊12'20	
direct	7733 Dec 01 00:11	1°♈34'33					
evening set	7734 Mar 13 07:35	8°♈51'25		conjunction	7740 Jun 08 05:50	22°♊14'35	-2°00'41
				minimum elong	7740 Jun 08 05:50	22°♊14'35	2°00'49
conjunction	7734 Mar 30 02:29	10°♈52'03	-0°56'46	max. Earth dist.	7740 Jun 08 10:05	22°♊15'53	10.73029 AU
minimum elong	7734 Mar 30 02:27	10°♈52'02	0°56'48	morning rise	7740 Jun 25 05:27	24°♊17'49	
max. Earth dist.	7734 Mar 30 03:34	10°♈52'22	10.84053 AU		7740 Aug 20 18:45	0°♊	
morning rise	7734 Apr 15 20:31	12°♈52'27		retrograde	7740 Oct 07 18:35	1°♊50'39	
retrograde	7734 Jul 26 05:26	20°♈06'03			7740 Nov 26 00:29	30°♋♊	
opposition	7734 Oct 04 04:51	16°♈46'27	-1°22'53	opposition	7740 Dec 17 00:34	28°♊27'17	-2°25'00
min. Earth dist.	7734 Oct 04 03:35	16°♈46'41	8.85036 AU	min. Earth dist.	7740 Dec 16 20:53	28°♊27'59	8.70230 AU
direct	7734 Dec 13 11:23	13°♈26'05		direct	7741 Feb 23 13:26	25°♊07'30	
evening set	7735 Mar 25 06:30	20°♈40'24			7741 May 13 16:38	0°♊	
				evening set	7741 Jun 03 19:02	2°♊25'32	
conjunction	7735 Apr 10 23:54	22°♈40'28	-1°17'45				
minimum elong	7735 Apr 10 23:51	22°♈40'27	1°17'48	conjunction	7741 Jun 20 18:22	4°♊29'19	-1°53'50
max. Earth dist.	7735 Apr 11 01:13	22°♈40'52	10.85588 AU	minimum elong	7741 Jun 20 18:24	4°♊29'20	1°53'58
morning rise	7735 Apr 27 17:22	24°♈40'32		max. Earth dist.	7741 Jun 20 23:05	4°♊30'46	10.66952 AU
	7735 Jun 19 14:13	0°♋		morning rise	7741 Jul 07 21:16	6°♊34'12	
retrograde	7735 Aug 07 13:33	1°♋55'30		retrograde	7741 Oct 20 20:31	14°♊11'55	
	7735 Sep 27 08:46	30°♋♈		opposition	7741 Dec 29 21:18	10°♊47'39	-2°13'22
opposition	7735 Oct 16 18:33	28°♈35'35	-1°46'43	min. Earth dist.	7741 Dec 29 17:17	10°♊48'26	8.63727 AU
min. Earth dist.	7735 Oct 16 16:36	28°♈35'57	8.85918 AU	direct	7742 Mar 08 02:04	7°♊27'15	
direct	7735 Dec 25 20:09	25°♈15'50		evening set	7742 Jun 16 09:48	14°♊49'00	
	7736 Mar 14 05:45	0°♋					
evening set	7736 Apr 05 04:27	2°♋28'29		conjunction	7742 Jul 03 12:42	16°♊54'34	-1°41'38
				minimum elong	7742 Jul 03 12:44	16°♊54'35	1°41'45
conjunction	7736 Apr 21 21:00	4°♋28'17	-1°35'25	max. Earth dist.	7742 Jul 03 17:30	16°♊56'03	10.60167 AU
minimum elong	7736 Apr 21 20:58	4°♋28'16	1°35'29	morning rise	7742 Jul 20 19:20	19°♊01'19	
max. Earth dist.	7736 Apr 21 23:47	4°♋29'07	10.85745 AU	retrograde	7742 Nov 03 02:40	26°♊43'54	
morning rise	7736 May 08 14:18	6°♋28'19		opposition	7743 Jan 11 20:39	23°♊18'45	-1°55'17
retrograde	7736 Aug 18 22:40	13°♋45'35		min. Earth dist.	7743 Jan 11 16:38	23°♊19'32	8.56699 AU
opposition	7736 Oct 28 08:13	10°♋25'11	-2°06'03	direct	7743 Mar 20 18:06	19°♊57'33	
min. Earth dist.	7736 Oct 28 04:52	10°♋25'49	8.85412 AU	evening set	7743 Jun 29 06:36	27°♊23'37	
direct	7737 Jan 06 04:25	7°♋05'51					
evening set	7737 Apr 17 02:45	14°♋17'47		conjunction	7743 Jul 16 13:24	29°♊31'11	-1°24'24
	7737 Apr 23 00:56	15°♋		minimum elong	7743 Jul 16 13:27	29°♊31'11	1°24'31
				max. Earth dist.	7743 Jul 16 17:22	29°♊32'24	10.53065 AU
conjunction	7737 May 03 19:10	16°♋17'39	-1°49'04		7743 Jul 20 10:32	0°♋	
minimum elong	7737 May 03 19:08	16°♋17'39	1°49'08	morning rise	7743 Aug 03 00:10	1°♋39'56	
max. Earth dist.	7737 May 03 23:31	16°♋18'58	10.84518 AU	retrograde	7743 Nov 16 13:37	9°♋27'06	
morning rise	7737 May 20 12:51	18°♋17'57		opposition	7744 Jan 24 22:50	6°♋01'09	-1°31'19
retrograde	7737 Aug 31 12:25	25°♋38'16		min. Earth dist.	7744 Jan 24 19:34	6°♋01'47	8.49544 AU
opposition	7737 Nov 09 22:14	22°♋17'17	-2°20'06	direct	7744 Apr 01 12:52	2°♋38'59	
min. Earth dist.	7737 Nov 09 17:53	22°♋18'06	8.83529 AU	evening set	7744 Jul 11 09:53	10°♋09'55	
direct	7738 Jan 18 11:33	18°♋58'11					
evening set	7738 Apr 29 02:27	26°♋10'16		conjunction	7744 Jul 28 20:45	12°♋19'30	-1°02'48
				minimum elong	7744 Jul 28 20:47	12°♋19'30	1°02'53
conjunction	7738 May 15 19:20	28°♋10'34	-1°58'06	max. Earth dist.	7744 Jul 28 23:40	12°♋20'24	10.46019 AU
minimum elong	7738 May 15 19:19	28°♋10'34	1°58'11	morning rise	7744 Aug 15 11:37	14°♋30'17	
max. Earth dist.	7738 May 16 00:10	28°♋12'02	10.81941 AU		7744 Aug 19 13:42	15°♋	
	7738 May 30 23:26	0°♊		retrograde	7744 Nov 29 03:02	22°♋21'34	
morning rise	7738 Jun 01 14:12	0°♊11'30		opposition	7745 Feb 06 03:44	18°♋54'55	-1°02'24
retrograde	7738 Sep 13 03:24	7°♊35'29		min. Earth dist.	7745 Feb 06 01:29	18°♋55'22	8.42627 AU
opposition	7738 Nov 22 13:24	4°♊13'47	-2°28'12	direct	7745 Apr 14 12:59	15°♋31'41	
min. Earth dist.	7738 Nov 22 09:03	4°♊14'36	8.80313 AU	evening set	7745 Jul 24 20:04	23°♋07'54	
direct	7739 Jan 30 17:37	0°♊54'41					
evening set	7739 May 11 04:22	8°♊07'51		conjunction	7745 Aug 11 10:51	25°♋19'25	-0°37'43
				minimum elong	7745 Aug 11 10:53	25°♋19'26	0°37'47
conjunction	7739 May 27 22:26	10°♊08'55	-2°02'04	max. Earth dist.	7745 Aug 11 13:01	25°♋20'06	10.39376 AU
minimum elong	7739 May 27 22:26	10°♊08'55	2°02'11	morning rise	7745 Aug 29 05:15	27°♋32'02	
max. Earth dist.	7739 May 28 02:44	10°♊10'14	10.78081 AU		7745 Sep 19 02:33	0°♎	
morning rise	7739 Jun 13 19:20	12°♊10'50		retrograde	7745 Dec 12 18:33	5°♎26'49	
retrograde	7739 Sep 25 20:20	19°♊39'02		opposition	7746 Feb 19 11:11	1°♎59'38	-0°29'48
opposition	7739 Dec 05 06:06	16°♊16'32	-2°29'56	min. Earth dist.	7746 Feb 19 09:37	1°♎59'57	8.36299 AU
min. Earth dist.	7739 Dec 05 02:16	16°♊17'16	8.75841 AU		7746 Mar 18 03:07	30°♎♋	
direct	7740 Feb 12 02:35	12°♊57'11		direct	7746 Apr 27 18:09	28°♋35'21	

	7746 Jun 06 15:58	0°♊		min. Earth dist.	7752 May 09 23:20	22°♊46'36	8.25203 AU
evening set	7746 Aug 07 12:56	6°♊16'59		direct	7752 Jul 16 22:19	19°♊18'51	
				evening set	7752 Oct 30 08:00	27°♊20'41	
conjunction	7746 Aug 25 07:11	8°♊30'15 -0°10'23					
minimum elong	7746 Aug 25 07:11	8°♊30'15 0°10'25		conjunction	7752 Nov 17 03:06	29°♊35'20	1°57'53
behind sun begin	7746 Aug 25 01:31	8°♊28'29		minimum elong	7752 Nov 17 03:04	29°♊35'20	1°57'59
behind sun end	7746 Aug 25 12:50	8°♊32'01		max. Earth dist.	7752 Nov 16 22:45	29°♊33'57	10.26676 AU
max. Earth dist.	7746 Aug 25 09:09	8°♊30'52 10.33475 AU			7752 Nov 20 08:45	0°♊	
morning rise	7746 Sep 12 04:17	10°♊44'26		morning rise	7752 Dec 04 19:48	1°♊49'16	
retrograde	7746 Dec 26 13:29	18°♊41'55		retrograde	7753 Mar 17 09:32	9°♊39'42	
asc. node	7747 Jan 11 19:00	18°♊28'00		opposition	7753 May 23 10:50	6°♊14'51	2°29'34
opposition	7747 Mar 04 21:08	15°♊14'22 0°04'50		min. Earth dist.	7753 May 23 13:34	6°♊14'18	8.28787 AU
min. Earth dist.	7747 Mar 04 19:43	15°♊14'39 8.30890 AU		direct	7753 Jul 30 21:30	2°♊46'40	
direct	7747 May 11 02:37	11°♊49'04		evening set	7753 Nov 13 13:27	10°♊47'21	
evening set	7747 Aug 21 12:00	19°♊35'59					
				conjunction	7753 Dec 01 06:19	13°♊00'49	2°01'28
conjunction	7747 Sep 08 08:53	21°♊50'40 0°17'52		minimum elong	7753 Dec 01 06:19	13°♊00'49	2°01'35
minimum elong	7747 Sep 08 08:52	21°♊50'40 0°17'52		max. Earth dist.	7753 Dec 01 02:18	12°♊59'32	10.30944 AU
max. Earth dist.	7747 Sep 08 10:18	21°♊51'06 10.28623 AU		morning rise	7753 Dec 18 20:02	15°♊13'22	
morning rise	7747 Sep 26 07:45	24°♊06'01		retrograde	7754 Mar 30 20:55	22°♊59'04	
	7747 Nov 20 21:25	0°♊		opposition	7754 Jun 05 23:38	19°♊35'14	2°29'49
retrograde	7748 Jan 09 11:32	2°♊05'13		min. Earth dist.	7754 Jun 06 02:25	19°♊34'40	8.33682 AU
	7748 Feb 28 22:06	30°♊		direct	7754 Aug 13 18:37	16°♊07'26	
opposition	7748 Mar 17 09:16	28°♊37'32 0°39'35		evening set	7754 Nov 27 13:59	24°♊05'29	
min. Earth dist.	7748 Mar 17 08:21	28°♊37'44 8.26677 AU					
direct	7748 May 23 14:02	25°♊11'17		conjunction	7754 Dec 15 04:25	26°♊17'34	1°58'31
	7748 Aug 08 20:11	0°♊		minimum elong	7754 Dec 15 04:26	26°♊17'34	1°58'38
evening set	7748 Sep 03 16:39	3°♊03'11		max. Earth dist.	7754 Dec 15 00:28	26°♊16'19	10.36412 AU
				morning rise	7755 Jan 01 15:12	28°♊28'35	
conjunction	7748 Sep 21 15:03	5°♊18'48 0°45'19			7755 Jan 14 05:52	0°♊	
minimum elong	7748 Sep 21 15:01	5°♊18'48 0°45'21		retrograde	7755 Apr 13 04:53	6°♊08'59	
max. Earth dist.	7748 Sep 21 15:15	5°♊18'52 10.25073 AU		opposition	7755 Jun 19 10:12	2°♊46'12	2°22'08
morning rise	7748 Oct 09 14:33	7°♊34'50		min. Earth dist.	7755 Jun 19 13:35	2°♊45'32	8.39619 AU
retrograde	7749 Jan 22 09:16	15°♊34'36			7755 Jul 30 03:27	30°♊	
opposition	7749 Mar 30 22:58	12°♊07'03 1°12'28		direct	7755 Aug 27 12:52	29°♊18'58	
min. Earth dist.	7749 Mar 30 23:04	12°♊07'02 8.23887 AU			7755 Sep 24 20:51	0°♊	
direct	7749 Jun 06 06:16	8°♊39'57		evening set	7755 Dec 11 08:26	7°♊13'07	
evening set	7749 Sep 18 01:14	16°♊36'10					
				conjunction	7755 Dec 28 20:17	9°♊23'41	1°49'25
conjunction	7749 Oct 06 00:02	18°♊52'14 1°10'26		minimum elong	7755 Dec 28 20:19	9°♊23'42	1°49'32
minimum elong	7749 Oct 05 23:59	18°♊52'13 1°10'28		max. Earth dist.	7755 Dec 28 15:53	9°♊22'18	10.42777 AU
max. Earth dist.	7749 Oct 05 22:30	18°♊51'45 10.23025 AU		morning rise	7756 Jan 15 04:21	11°♊33'07	
morning rise	7749 Oct 23 23:05	21°♊08'25		retrograde	7756 Apr 25 07:10	19°♊07'59	
retrograde	7750 Feb 05 06:12	29°♊07'35		opposition	7756 Jul 01 18:22	15°♊46'13	2°07'14
opposition	7750 Apr 13 13:59	25°♊40'25 1°41'28		min. Earth dist.	7756 Jul 01 22:07	15°♊45'28	8.46278 AU
min. Earth dist.	7750 Apr 13 15:28	25°♊40'07 8.22680 AU		direct	7756 Sep 09 05:50	12°♊19'42	
direct	7750 Jun 20 01:44	22°♊12'40		evening set	7756 Dec 23 19:57	20°♊08'57	
	7750 Sep 30 20:52	0°♊					
evening set	7750 Oct 02 11:48	0°♊12'06		conjunction	7757 Jan 10 05:12	22°♊17'55	1°34'53
				minimum elong	7757 Jan 10 05:14	22°♊17'55	1°34'59
conjunction	7750 Oct 20 10:03	2°♊28'07 1°31'41		max. Earth dist.	7757 Jan 10 00:35	22°♊16'28	10.49697 AU
minimum elong	7750 Oct 20 10:00	2°♊28'06 1°31'44		morning rise	7757 Jan 27 10:46	24°♊25'45	
max. Earth dist.	7750 Oct 20 06:56	2°♊27'08 10.22606 AU			7757 Mar 21 22:09	0°♊	
morning rise	7750 Nov 07 07:43	4°♊43'58		retrograde	7757 May 08 04:00	1°♊55'15	
retrograde	7751 Feb 19 01:54	12°♊41'21			7757 Jun 26 00:57	30°♊	
opposition	7751 Apr 27 05:27	9°♊14'46 2°04'49		opposition	7757 Jul 14 23:37	28°♊34'21	1°46'13
min. Earth dist.	7751 Apr 27 07:53	9°♊14'16 8.23128 AU		min. Earth dist.	7757 Jul 15 03:05	28°♊33'41	8.53309 AU
direct	7751 Jul 03 23:11	5°♊46'36		direct	7757 Sep 22 20:01	25°♊08'41	
evening set	7751 Oct 16 22:46	13°♊47'58			7757 Dec 12 01:46	0°♊	
	7751 Oct 26 11:56	15°♊		evening set	7758 Jan 06 00:27	2°♊52'23	
conjunction	7751 Nov 03 19:43	16°♊03'30 1°47'48		conjunction	7758 Jan 23 07:15	4°♊59'44	1°15'53
minimum elong	7751 Nov 03 19:41	16°♊03'29 1°47'53		minimum elong	7758 Jan 23 07:17	4°♊59'45	1°15'59
max. Earth dist.	7751 Nov 03 15:40	16°♊02'12 10.23845 AU		max. Earth dist.	7758 Jan 23 03:03	4°♊58'27	10.56812 AU
morning rise	7751 Nov 21 15:11	18°♊18'34		morning rise	7758 Feb 09 10:30	7°♊06'01	
retrograde	7752 Mar 03 19:26	26°♊12'57		retrograde	7758 May 20 22:31	14°♊30'34	
opposition	7752 May 09 20:32	22°♊47'10 2°21'08		opposition	7758 Jul 28 01:38	11°♊10'22	1°20'24

min. Earth dist.	7758 Jul 28 04:07	11°  09'54	8.60345 AU	opposition	7764 Oct 10 13:46	23°  37'59	-1°36'37
direct	7758 Oct 06 04:32	7°  45'38		min. Earth dist.	7764 Oct 10 12:23	23°  38'15	8.84514 AU
	7759 Jan 15 15:36	15°  44'00		direct	7764 Dec 19 17:44	20°  17'50	
evening set	7759 Jan 18 22:08	15°  23'30		evening set	7765 Mar 31 07:20	27°  31'51	
conjunction	7759 Feb 05 02:38	17°  29'19	0°53'31	conjunction	7765 Apr 17 00:23	29°  31'57	-1°28'01
minimum elong	7759 Feb 05 02:40	17°  29'20	0°53'37	minimum elong	7765 Apr 17 00:20	29°  31'56	1°28'05
max. Earth dist.	7759 Feb 04 23:40	17°  28'25	10.63732 AU	max. Earth dist.	7765 Apr 17 01:48	29°  32'22	10.84398 AU
morning rise	7759 Feb 22 03:40	19°  34'08			7765 Apr 20 21:24	0°  00'00	
retrograde	7759 Jun 02 13:35	26°  54'24		morning rise	7765 May 03 17:40	1°  32'09	
opposition	7759 Aug 10 00:47	23°  34'45	0°51'14	retrograde	7765 Aug 13 21:41	8°  49'04	
min. Earth dist.	7759 Aug 10 02:38	23°  34'24	8.66988 AU	opposition	7765 Oct 23 04:04	5°  28'36	-1°58'08
direct	7759 Oct 19 07:31	20°  31'58		min. Earth dist.	7765 Oct 23 02:25	5°  28'55	8.84099 AU
evening set	7760 Jan 31 13:39	27°  43'07		direct	7766 Jan 01 02:04	2°  08'43	
				evening set	7766 Apr 12 06:05	9°  21'42	
conjunction	7760 Feb 17 15:46	29°  47'29	0°28'58	conjunction	7766 Apr 28 22:29	11°  21'43	-1°43'34
minimum elong	7760 Feb 17 15:47	29°  47'30	0°29'03	minimum elong	7766 Apr 28 22:27	11°  21'43	1°43'39
max. Earth dist.	7760 Feb 17 13:32	29°  46'48	10.70049 AU	max. Earth dist.	7766 Apr 29 00:07	11°  22'13	10.83275 AU
	7760 Feb 19 08:42	0°  00'00		morning rise	7766 May 15 16:05	13°  22'06	
morning rise	7760 Mar 05 14:43	1°  50'59			7766 May 29 19:48	15°  00'00	
retrograde	7760 Jun 14 01:08	9°  07'57		retrograde	7766 Aug 26 08:50	20°  41'48	
opposition	7760 Aug 21 21:18	5°  48'41	0°20'10	opposition	7766 Nov 04 18:27	17°  20'37	-2°14'40
min. Earth dist.	7760 Aug 21 23:09	5°  48'19	8.72858 AU	min. Earth dist.	7766 Nov 04 16:25	17°  21'00	8.82342 AU
direct	7760 Oct 31 07:18	2°  25'48			7766 Dec 09 08:14	15°  00'00	
evening set	7761 Feb 11 23:52	9°  52'47		direct	7767 Jan 13 10:42	14°  00'50	
					7767 Feb 16 19:34	15°  00'00	
conjunction	7761 Feb 28 23:35	11°  55'52	0°03'27	evening set	7767 Apr 24 05:33	21°  08'42	
minimum elong	7761 Feb 28 23:36	11°  55'52	0°03'30				
behind sun begin	7761 Feb 28 16:36	11°  53'46		conjunction	7767 May 10 22:08	23°  14'01	-1°54'44
behind sun end	7761 Mar 01 06:36	11°  57'58		minimum elong	7767 May 10 22:07	23°  14'01	1°54'49
max. Earth dist.	7761 Feb 28 21:13	11°  55'12	10.75416 AU	max. Earth dist.	7767 May 11 00:50	23°  14'50	10.80848 AU
morning rise	7761 Mar 17 20:51	13°  58'13		morning rise	7767 May 27 16:37	25°  14'55	
desc. node	7761 Apr 19 17:09	17°  35'25			7767 Jul 11 23:11	0°  00'00	
retrograde	7761 Jun 26 11:03	21°  13'02		retrograde	7767 Sep 07 22:14	2°  38'09	
opposition	7761 Sep 03 15:33	17°  53'58	-0°11'26	opposition	7767 Nov 07 15:39	30°  00'00	
min. Earth dist.	7761 Sep 03 17:35	17°  53'35	8.77670 AU	min. Earth dist.	7767 Nov 17 09:46	29°  16'08	-2°25'31
direct	7761 Nov 13 02:09	14°  31'57		direct	7767 Nov 17 06:40	29°  16'43	8.79312 AU
evening set	7762 Feb 24 05:39	21°  54'30			7768 Jan 25 18:46	25°  56'20	
				evening set	7768 Apr 06 21:37	0°  00'00	
conjunction	7762 Mar 13 03:12	23°  56'29	-0°22'08		7768 May 05 06:42	3°  09'57	
minimum elong	7762 Mar 13 03:11	23°  56'29	0°22'07	conjunction	7768 May 22 00:23	5°  10'57	-2°01'00
max. Earth dist.	7762 Mar 13 00:46	23°  55'45	10.79624 AU	minimum elong	7768 May 22 00:22	5°  10'57	2°01'06
morning rise	7762 Mar 29 23:04	25°  57'57		max. Earth dist.	7768 May 22 04:48	5°  12'18	10.77206 AU
	7762 May 06 07:05	0°  00'00		morning rise	7768 Jun 07 20:22	7°  12'42	
retrograde	7762 Jul 08 18:33	3°  09'11'46		retrograde	7768 Sep 19 15:40	14°  00'06	
	7762 Sep 14 16:54	30°  00'00		opposition	7768 Nov 29 02:17	11°  17'11	-2°30'06
opposition	7762 Sep 16 08:02	29°  52'39	-0°42'13	min. Earth dist.	7768 Nov 28 21:56	11°  18'00	8.75118 AU
min. Earth dist.	7762 Sep 16 09:14	29°  52'25	8.81267 AU	direct	7769 Feb 06 03:45	7°  57'12	
direct	7762 Nov 25 18:00	26°  31'24		evening set	7769 May 17 10:57	15°  12'30	
	7763 Jan 31 23:50	0°  00'00					
evening set	7763 Mar 08 08:12	3°  09'50'18		conjunction	7769 Jun 03 06:25	17°  14'32	-2°01'59
				minimum elong	7769 Jun 03 06:26	17°  14'32	2°02'06
conjunction	7763 Mar 25 03:54	5°  09'51'23	-0°46'29	max. Earth dist.	7769 Jun 03 11:26	17°  16'04	10.72486 AU
minimum elong	7763 Mar 25 03:53	5°  09'51'23	0°46'30	morning rise	7769 Jun 20 04:46	19°  17'29	
max. Earth dist.	7763 Mar 25 02:45	5°  09'51'02	10.82561 AU	retrograde	7769 Oct 02 13:50	26°  14'23	
morning rise	7763 Apr 10 22:29	7°  09'52'10		opposition	7769 Dec 11 20:26	23°  12'53'37	-2°28'05
retrograde	7763 Jul 21 03:00	15°  06'04		min. Earth dist.	7769 Dec 11 15:52	23°  12'26'29	8.69919 AU
opposition	7763 Sep 28 23:12	11°  09'46'41	-1°10'59	direct	7770 Feb 18 12:35	20°  12'05'18	
min. Earth dist.	7763 Sep 28 23:00	11°  09'46'43	8.83564 AU	evening set	7770 May 29 19:08	27°  12'23'07	
direct	7763 Dec 08 08:15	8°  09'26'04					
evening set	7764 Mar 19 08:26	15°  09'42'06		conjunction	7770 Jun 15 17:06	29°  12'26'32	-1°57'30
				minimum elong	7770 Jun 15 17:08	29°  12'26'32	1°57'37
conjunction	7764 Apr 05 02:38	17°  09'42'33	-1°08'44	max. Earth dist.	7770 Jun 15 21:49	29°  12'27'58	10.66881 AU
minimum elong	7764 Apr 05 02:36	17°  09'42'32	1°08'47		7770 Jun 20 06:30	0°  00'00	
max. Earth dist.	7764 Apr 05 03:13	17°  09'42'43	10.84162 AU	morning rise	7770 Jul 02 18:37	1°  02'31'00	
morning rise	7764 Apr 21 20:15	19°  09'42'53					
retrograde	7764 Aug 01 12:34	26°  09'57'50					

retrograde	7770 Oct 15 14:00	9°  07'38		minimum elong	7776 Sep 01 19:11	16°  29'11	0°06'02
opposition	7770 Dec 24 16:56	5°  43'03	-2°19'18	behind sun begin	7776 Sep 01 12:16	16°  27'01	
min. Earth dist.	7770 Dec 24 12:42	5°  43'52	8.63936 AU	behind sun end	7776 Sep 02 02:06	16°  31'21	
direct	7771 Mar 03 00:18	2°  22'14		max. Earth dist.	7776 Sep 01 21:23	16°  29'51	10.30529 AU
evening set	7771 Jun 11 07:57	9°  43'22		morning rise	7776 Sep 19 17:33	18°  44'12	
				retrograde	7777 Jan 03 02:05	26°  43'13	
conjunction	7771 Jun 28 09:11	11°  48'25	-1°47'32	opposition	7777 Mar 12 02:26	23°  15'58	0°25'06
minimum elong	7771 Jun 28 09:13	11°  48'26	1°47'40	min. Earth dist.	7777 Mar 12 00:59	23°  16'15	8.28571 AU
max. Earth dist.	7771 Jun 28 13:44	11°  49'49	10.60635 AU	direct	7777 May 18 05:25	19°  50'31	
morning rise	7771 Jul 15 14:24	13°  54'39		evening set	7777 Aug 29 02:33	27°  40'43	
retrograde	7771 Oct 28 18:01	21°  36'09					
opposition	7772 Jan 06 15:55	18°  10'46	-2°03'53	conjunction	7777 Sep 16 00:13	29°  55'59	0°33'59
min. Earth dist.	7772 Jan 06 11:58	18°  11'32	8.57441 AU	minimum elong	7777 Sep 16 00:12	29°  55'58	0°34'00
direct	7772 Mar 14 16:32	14°  49'20		max. Earth dist.	7777 Sep 16 01:19	29°  56'20	10.26939 AU
evening set	7772 Jun 23 02:33	22°  14'26			7777 Sep 16 12:55	0°  00	
				morning rise	7777 Oct 03 23:41	2°  11'48	
conjunction	7772 Jul 10 07:44	24°  21'24	-1°32'22	retrograde	7778 Jan 16 22:56	10°  11'39	
minimum elong	7772 Jul 10 07:46	24°  21'25	1°32'29	opposition	7778 Mar 25 16:04	6°  44'33	0°59'00
max. Earth dist.	7772 Jul 10 12:51	24°  22'59	10.54029 AU	min. Earth dist.	7778 Mar 25 15:26	6°  44'41	8.25668 AU
morning rise	7772 Jul 27 16:53	26°  29'34		direct	7778 May 31 22:14	3°  18'20	
	7772 Aug 27 15:02	0°  00		evening set	7778 Sep 12 09:59	11°  12'51	
retrograde	7772 Nov 10 03:22	4°  15'43					
opposition	7773 Jan 18 17:22	0°  49'38	-1°42'16	conjunction	7778 Sep 30 08:39	13°  28'43	1°00'16
min. Earth dist.	7773 Jan 18 13:10	0°  50'27	8.50739 AU	minimum elong	7778 Sep 30 08:37	13°  28'42	1°00'18
	7773 Jan 29 09:01	30°  48'00		max. Earth dist.	7778 Sep 30 08:44	13°  28'45	10.24699 AU
direct	7773 Mar 27 10:59	27°  27'29		morning rise	7778 Oct 18 08:01	15°  44'49	
	7773 May 21 04:22	0°  00		retrograde	7779 Jan 30 19:59	23°  44'21	
evening set	7773 Jul 06 03:34	4°  57'10		opposition	7779 Apr 08 06:48	20°  17'32	1°29'50
				min. Earth dist.	7779 Apr 08 06:53	20°  17'31	8.24159 AU
conjunction	7773 Jul 23 12:54	7°  06'07	-1°12'29	direct	7779 Jun 14 16:41	16°  50'39	
minimum elong	7773 Jul 23 12:56	7°  06'08	1°12'35	evening set	7779 Sep 26 20:10	24°  48'37	
max. Earth dist.	7773 Jul 23 18:19	7°  07'48	10.47378 AU				
morning rise	7773 Aug 10 02:01	9°  16'16		conjunction	7779 Oct 14 18:50	27°  04'37	1°23'16
	7773 Oct 03 21:35	15°  00		minimum elong	7779 Oct 14 18:47	27°  04'36	1°23'20
retrograde	7773 Nov 23 17:00	17°  06'43		max. Earth dist.	7779 Oct 14 17:40	27°  04'15	10.23846 AU
	7774 Jan 14 14:14	15°  48'00		morning rise	7779 Nov 01 17:03	29°  20'32	
opposition	7774 Jan 31 21:40	13°  40'03	-1°15'14		7779 Nov 07 00:47	0°  00	
min. Earth dist.	7774 Jan 31 17:20	13°  40'55	8.44160 AU	retrograde	7780 Feb 13 17:27	7°  18'37	
direct	7774 Apr 09 08:49	10°  17'08		opposition	7780 Apr 20 22:13	3°  52'19	1°55'41
	7774 Jun 24 22:10	15°  00		min. Earth dist.	7780 Apr 20 23:21	3°  52'05	8.24025 AU
evening set	7774 Jul 19 11:20	17°  51'50		direct	7780 Jun 27 12:35	0°  00	
				evening set	7780 Oct 10 07:27	8°  25'21	
conjunction	7774 Aug 06 00:37	20°  02'44	-0°48'41				
minimum elong	7774 Aug 06 00:39	20°  02'45	0°48'46	conjunction	7780 Oct 28 05:06	10°  41'02	1°41'38
max. Earth dist.	7774 Aug 06 05:39	20°  04'18	10.41019 AU	minimum elong	7780 Oct 28 05:03	10°  41'02	1°41'43
morning rise	7774 Aug 23 17:27	22°  01'46		max. Earth dist.	7780 Oct 28 02:14	10°  40'08	10.24368 AU
	7774 Nov 24 07:40	0°  00		morning rise	7780 Nov 15 01:19	12°  56'21	
retrograde	7774 Dec 07 09:12	0°  48'57			7780 Dec 02 01:59	15°  00	
	7774 Dec 20 11:01	30°  48'00		retrograde	7781 Feb 26 13:23	20°  51'58	
opposition	7775 Feb 14 04:48	26°  01'54	-0°43'56	opposition	7781 May 04 13:39	17°  26'23	2°15'03
min. Earth dist.	7775 Feb 14 00:53	26°  02'41	8.38057 AU	min. Earth dist.	7781 May 04 16:13	17°  25'51	8.25290 AU
direct	7775 Apr 22 11:38	23°  01'80			7781 Jun 07 02:47	15°  48'00	
	7775 Jul 25 02:57	0°  00		direct	7781 Jul 11 10:12	13°  58'40	
evening set	7775 Aug 02 02:07	0°  48'07			7781 Aug 14 14:39	15°  00	
				evening set	7781 Oct 24 17:50	22°  00'18	
conjunction	7775 Aug 19 18:56	3°  10'49	-0°22'06				
minimum elong	7775 Aug 19 18:57	3°  10'49	0°22'09	conjunction	7781 Nov 11 13:43	24°  15'16	1°54'19
max. Earth dist.	7775 Aug 19 22:37	3°  11'58	10.35302 AU	minimum elong	7781 Nov 11 13:41	24°  15'15	1°54'25
morning rise	7775 Sep 06 14:59	5°  10'31		max. Earth dist.	7781 Nov 11 09:15	24°  13'51	10.26327 AU
retrograde	7775 Dec 21 04:43	13°  10'37		morning rise	7781 Nov 29 07:27	26°  10'37	
opposition	7776 Feb 27 14:29	9°  54'22	-0°09'53		7781 Dec 29 06:37	0°  00	
min. Earth dist.	7776 Feb 27 11:50	9°  54'54	8.32768 AU	retrograde	7782 Mar 12 05:18	4°  56'58	2°26'50
direct	7776 May 04 18:11	6°  53'26		opposition	7782 May 18 04:39	0°  00	
asc. node	7776 Jun 13 10:33	7°  53'26		min. Earth dist.	7782 May 18 08:23	0°  56'13	8.27992 AU
evening set	7776 Aug 14 23:29	14°  14'59			7782 May 30 02:51	30°  00'00	
				direct	7782 Jul 25 10:07	27°  10'07	
conjunction	7776 Sep 01 19:11	16°  29'11	0°06'03		7782 Sep 18 08:12	0°  00	

evening set	7782 Nov 08 01:17	5°♏30'23		conjunction	7789 Feb 11 20:04	24°♊57'16	0°39'20
				minimum elong	7789 Feb 11 20:05	24°♊57'16	0°39'25
conjunction	7782 Nov 25 19:00	7°♏44'18	2°00'38	max. Earth dist.	7789 Feb 11 16:30	24°♊56'11	10.66535 AU
minimum elong	7782 Nov 25 18:59	7°♏44'18	2°00'44	morning rise	7789 Feb 28 20:06	27°♊01'22	
max. Earth dist.	7782 Nov 25 13:22	7°♏42'31	10.29712 AU		7789 Mar 27 02:09	0°♏	
morning rise	7782 Dec 13 10:01	9°♏57'25		retrograde	7789 Jun 09 03:45	4°♏19'35	
retrograde	7783 Mar 25 17:01	17°♏45'09		opposition	7789 Aug 16 22:07	0°♏59'40	0°33'12
opposition	7783 May 31 18:20	14°♏21'13	2°30'30	min. Earth dist.	7789 Aug 17 00:09	0°♏59'16	8.69583 AU
min. Earth dist.	7783 May 31 22:44	14°♏20'20	8.32043 AU		7789 Aug 30 03:16	30°♏	
direct	7783 Aug 08 09:16	10°♏53'27		direct	7789 Oct 26 08:41	27°♊35'51	
evening set	7783 Nov 22 04:19	18°♏52'45			7789 Dec 20 10:27	0°♏	
				evening set	7790 Feb 07 04:57	5°♏04'55	
conjunction	7783 Dec 09 19:40	21°♏05'23	2°00'23				
minimum elong	7783 Dec 09 19:40	21°♏05'23	2°00'29	conjunction	7790 Feb 24 05:46	7°♏08'34	0°14'06
max. Earth dist.	7783 Dec 09 13:28	21°♏03'26	10.34371 AU	minimum elong	7790 Feb 24 05:46	7°♏08'34	0°14'10
morning rise	7783 Dec 27 07:49	23°♏17'03		behind sun begin	7790 Feb 24 02:15	7°♏07'30	
	7784 Mar 04 18:14	0°♏		behind sun end	7790 Feb 24 09:17	7°♏09'37	
retrograde	7784 Apr 07 01:25	0°♏59'40		max. Earth dist.	7790 Feb 24 03:38	7°♏07'55	10.72462 AU
	7784 May 10 20:02	30°♏		morning rise	7790 Mar 13 03:53	9°♏11'25	
opposition	7784 Jun 13 05:55	27°♏36'35	2°26'04	retrograde	7790 Jun 21 14:39	16°♏26'52	
min. Earth dist.	7784 Jun 13 10:07	27°♏35'45	8.37234 AU	opposition	7790 Aug 29 16:37	13°♏07'14	0°01'42
direct	7784 Aug 21 06:17	24°♏09'08		min. Earth dist.	7790 Aug 29 17:13	13°♏07'07	8.75109 AU
	7784 Nov 17 13:55	0°♏		desc. node	7790 Sep 19 01:45	11°♏37'44	
evening set	7784 Dec 05 01:26	2°♏05'01		direct	7790 Nov 08 04:43	9°♏44'24	
				evening set	7791 Feb 19 12:04	17°♏08'32	
conjunction	7784 Dec 22 14:22	4°♏16'13	1°53'47				
minimum elong	7784 Dec 22 14:23	4°♏16'13	1°53'54	conjunction	7791 Mar 08 10:43	19°♏10'58	-0°11'35
max. Earth dist.	7784 Dec 22 08:45	4°♏14'27	10.40056 AU	minimum elong	7791 Mar 08 10:43	19°♏10'57	0°11'33
morning rise	7785 Jan 08 23:40	6°♏26'19		behind sun begin	7791 Mar 08 05:37	19°♏09'26	
retrograde	7785 Apr 20 05:47	14°♏03'29		behind sun end	7791 Mar 08 15:48	19°♏12'29	
opposition	7785 Jun 26 15:08	10°♏41'12	2°14'05	max. Earth dist.	7791 Mar 08 10:16	19°♏10'49	10.77535 AU
min. Earth dist.	7785 Jun 26 18:46	10°♏40'29	8.43289 AU	morning rise	7791 Mar 25 07:05	21°♏12'45	
direct	7785 Sep 04 00:24	7°♏14'15		retrograde	7791 Jul 03 23:02	28°♏26'31	
evening set	7785 Dec 18 15:37	15°♏05'32		opposition	7791 Sep 11 09:13	25°♏07'01	-0°29'30
				min. Earth dist.	7791 Sep 11 08:58	25°♏07'04	8.79678 AU
conjunction	7786 Jan 05 02:09	17°♏15'12	1°41'25	direct	7791 Nov 20 20:36	21°♏45'08	
minimum elong	7786 Jan 05 02:11	17°♏15'13	1°41'32	evening set	7792 Mar 02 15:15	29°♏05'03	
max. Earth dist.	7786 Jan 04 21:30	17°♏13'45	10.46455 AU		7792 Mar 10 07:34	0°♏	
morning rise	7786 Jan 22 08:45	19°♏23'44					
retrograde	7786 May 03 05:37	26°♏55'25		conjunction	7792 Mar 19 11:46	1°♏06'24	-0°36'27
opposition	7786 Jul 09 21:27	23°♏33'53	1°55'30	minimum elong	7792 Mar 19 11:45	1°♏06'24	0°36'27
min. Earth dist.	7786 Jul 10 00:49	23°♏33'13	8.49881 AU	max. Earth dist.	7792 Mar 19 12:04	1°♏06'30	10.81537 AU
direct	7786 Sep 17 14:52	20°♏07'33		morning rise	7792 Apr 05 06:44	3°♏07'21	
evening set	7786 Dec 31 22:56	27°♏53'31		retrograde	7792 Jul 15 06:46	10°♏20'31	
				opposition	7792 Sep 23 00:20	7°♏01'02	-0°59'10
conjunction	7787 Jan 18 07:00	0°♏01'37	1°24'10	min. Earth dist.	7792 Sep 22 23:44	7°♏01'09	8.83109 AU
minimum elong	7787 Jan 18 07:03	0°♏01'37	1°24'16	direct	7792 Dec 02 10:00	3°♏39'59	
max. Earth dist.	7787 Jan 18 02:55	0°♏00'21	10.53224 AU	evening set	7793 Mar 14 15:41	10°♏56'31	
	7787 Jan 18 01:49	0°♏					
morning rise	7787 Feb 04 11:10	2°♏08'34		conjunction	7793 Mar 31 10:20	12°♏57'04	-0°59'37
retrograde	7787 May 16 01:28	9°♏35'04		minimum elong	7793 Mar 31 10:18	12°♏57'03	0°59'39
opposition	7787 Jul 23 00:36	6°♏14'12	1°31'33	max. Earth dist.	7793 Mar 31 10:58	12°♏57'15	10.84318 AU
min. Earth dist.	7787 Jul 23 04:09	6°♏13'30	8.56674 AU	morning rise	7793 Apr 17 04:22	14°♏57'25	
direct	7787 Oct 01 00:22	2°♏48'36		retrograde	7793 Jul 27 13:39	22°♏11'00	
evening set	7788 Jan 13 23:21	10°♏28'52		opposition	7793 Oct 05 14:12	18°♏51'21	-1°26'08
				min. Earth dist.	7793 Oct 05 12:58	18°♏51'35	8.85266 AU
conjunction	7788 Jan 31 04:51	12°♏35'24	1°03'05	direct	7793 Dec 14 20:02	15°♏31'01	
minimum elong	7788 Jan 31 04:53	12°♏35'25	1°03'11	evening set	7794 Mar 26 14:15	22°♏45'03	
max. Earth dist.	7788 Jan 31 00:46	12°♏34'08	10.60022 AU				
morning rise	7788 Feb 17 06:51	14°♏40'52		conjunction	7794 Apr 12 07:35	24°♏45'04	-1°20'10
	7788 Feb 19 22:32	15°♏		minimum elong	7794 Apr 12 07:33	24°♏45'03	1°20'14
retrograde	7788 May 27 16:17	22°♏02'47		max. Earth dist.	7794 Apr 12 09:18	24°♏45'35	10.85768 AU
opposition	7788 Aug 04 00:50	18°♏42'28	1°03'38	morning rise	7794 Apr 29 01:01	26°♏45'05	
min. Earth dist.	7788 Aug 04 04:05	18°♏41'50	8.63343 AU		7794 May 28 11:09	0°♏	
direct	7788 Oct 13 06:09	15°♏17'44		retrograde	7794 Aug 08 21:16	4°♏00'08	
evening set	7789 Jan 25 17:01	22°♏52'15		opposition	7794 Oct 18 03:34	0°♏40'08	-1°49'23
				min. Earth dist.	7794 Oct 18 00:57	0°♏40'37	8.86055 AU

	7794 Oct 27 03:28	30° κ Υ	opposition	7801 Jan 01 05:48	12° \mathfrak{G} 52'21 -2°11'14
direct	7794 Dec 27 05:36	27° Υ 20'24	min. Earth dist.	7801 Jan 01 01:28	12° \mathfrak{G} 53'12 8.63645 AU
	7795 Feb 23 03:47	0° \mathfrak{B}	direct	7801 Mar 10 10:17	9° \mathfrak{G} 31'56
evening set	7795 Apr 07 12:05	4° \mathfrak{B} 32'51	evening set	7801 Jun 18 18:04	16° \mathfrak{G} 53'41
conjunction	7795 Apr 24 04:41	6° \mathfrak{B} 32'36 -1°37'19	conjunction	7801 Jul 05 21:13	18° \mathfrak{G} 59'21 -1°39'36
minimum elong	7795 Apr 24 04:38	6° \mathfrak{B} 32'36 1°37'23	minimum elong	7801 Jul 05 21:15	18° \mathfrak{G} 59'22 1°39'43
max. Earth dist.	7795 Apr 24 08:16	6° \mathfrak{B} 33'41 10.85826 AU	max. Earth dist.	7801 Jul 06 01:23	19° \mathfrak{G} 00'38 10.60084 AU
morning rise	7795 May 10 21:52	8° \mathfrak{B} 32'36	morning rise	7801 Jul 23 04:15	21° \mathfrak{G} 06'12
	7795 Jul 20 10:39	15° \mathfrak{B}	retrograde	7801 Nov 05 12:29	28° \mathfrak{G} 48'47
retrograde	7795 Aug 21 08:43	15° \mathfrak{B} 49'59	opposition	7802 Jan 14 05:06	25° \mathfrak{G} 23'39 -1°52'26
	7795 Sep 22 18:45	15° \mathfrak{R} \mathfrak{B}	min. Earth dist.	7802 Jan 14 01:37	25° \mathfrak{G} 24'20 8.56600 AU
opposition	7795 Oct 30 17:02	12° \mathfrak{B} 29'31 -2°08'01	direct	7802 Mar 23 01:23	22° \mathfrak{G} 02'25
min. Earth dist.	7795 Oct 30 13:09	12° \mathfrak{B} 30'14 8.85448 AU	evening set	7802 Jul 01 15:11	29° \mathfrak{G} 28'36
direct	7796 Jan 08 13:15	9° \mathfrak{B} 10'12		7802 Jul 05 22:17	0° \mathfrak{Q}
	7796 Apr 06 14:51	15° \mathfrak{B}			
evening set	7796 Apr 18 10:22	16° \mathfrak{B} 21'57	conjunction	7802 Jul 18 22:15	1° \mathfrak{Q} 36'15 -1°21'50
			minimum elong	7802 Jul 18 22:18	1° \mathfrak{Q} 36'15 1°21'57
conjunction	7796 May 05 02:44	18° \mathfrak{B} 21'49 -1°50'21	max. Earth dist.	7802 Jul 19 01:21	1° \mathfrak{Q} 37'12 10.52959 AU
minimum elong	7796 May 05 02:43	18° \mathfrak{B} 21'49 1°50'27	morning rise	7802 Aug 05 09:26	3° \mathfrak{Q} 45'07
max. Earth dist.	7796 May 05 07:07	18° \mathfrak{B} 23'08 10.84505 AU	retrograde	7802 Nov 18 22:23	11° \mathfrak{Q} 32'17
morning rise	7796 May 21 20:27	20° \mathfrak{B} 22'08	opposition	7803 Jan 27 07:20	8° \mathfrak{Q} 06'22 -1°27'52
retrograde	7796 Sep 01 21:00	27° \mathfrak{B} 42'34	min. Earth dist.	7803 Jan 27 04:47	8° \mathfrak{Q} 06'52 8.49417 AU
opposition	7796 Nov 11 07:05	24° \mathfrak{B} 21'31 -2°21'17	direct	7803 Apr 04 21:10	4° \mathfrak{Q} 44'11
min. Earth dist.	7796 Nov 11 02:54	24° \mathfrak{B} 22'18 8.83481 AU	evening set	7803 Jul 14 18:42	12° \mathfrak{Q} 15'18
direct	7797 Jan 19 18:06	21° \mathfrak{B} 02'25			
evening set	7797 Apr 30 10:00	28° \mathfrak{B} 14'25	conjunction	7803 Aug 01 05:56	14° \mathfrak{Q} 24'59 -0°59'48
	7797 May 15 02:09	0° \mathfrak{I}	minimum elong	7803 Aug 01 05:58	14° \mathfrak{Q} 25'00 0°59'53
			max. Earth dist.	7803 Aug 01 08:41	14° \mathfrak{Q} 25'51 10.45885 AU
conjunction	7797 May 17 02:53	0° \mathfrak{I} 14'43 -1°58'44		7803 Aug 05 22:22	15° \mathfrak{Q}
minimum elong	7797 May 17 02:52	0° \mathfrak{I} 14'43 1°58'50	morning rise	7803 Aug 18 21:06	16° \mathfrak{Q} 35'51
max. Earth dist.	7797 May 17 07:08	0° \mathfrak{I} 16'00 10.81862 AU	retrograde	7803 Dec 02 10:53	24° \mathfrak{Q} 27'12
morning rise	7797 Jun 02 22:00	2° \mathfrak{I} 15'41	opposition	7804 Feb 09 12:19	21° \mathfrak{Q} 00'35 -0°58'30
retrograde	7797 Sep 14 10:56	9° \mathfrak{I} 39'50	min. Earth dist.	7804 Feb 09 10:15	21° \mathfrak{Q} 01'00 8.42479 AU
opposition	7797 Nov 23 22:11	6° \mathfrak{I} 18'05 -2°28'34	direct	7804 Apr 16 22:36	17° \mathfrak{Q} 37'21
min. Earth dist.	7797 Nov 23 18:16	6° \mathfrak{I} 18'50 8.80211 AU	evening set	7804 Jul 27 05:18	25° \mathfrak{Q} 13'47
direct	7798 Feb 01 02:29	2° \mathfrak{I} 58'57			
evening set	7798 May 12 12:01	10° \mathfrak{I} 12'07	conjunction	7804 Aug 13 20:29	27° \mathfrak{Q} 25'26 -0°34'27
			minimum elong	7804 Aug 13 20:31	27° \mathfrak{Q} 25'26 0°34'30
conjunction	7798 May 29 06:16	12° \mathfrak{I} 13'14 -2°02'01	max. Earth dist.	7804 Aug 13 23:07	27° \mathfrak{Q} 26'15 10.39224 AU
minimum elong	7798 May 29 06:16	12° \mathfrak{I} 13'14 2°02'08	morning rise	7804 Aug 31 15:04	29° \mathfrak{Q} 38'08
max. Earth dist.	7798 May 29 10:42	12° \mathfrak{I} 14'35 10.77967 AU		7804 Sep 03 14:45	0° \mathfrak{P}
morning rise	7798 Jun 15 03:24	14° \mathfrak{I} 15'12	retrograde	7804 Dec 15 04:08	7° \mathfrak{P} 32'58
retrograde	7798 Sep 27 05:11	21° \mathfrak{I} 43'32	opposition	7805 Feb 21 19:47	4° \mathfrak{P} 05'49 -0°25'39
opposition	7798 Dec 06 14:38	18° \mathfrak{I} 20'59 -2°29'26	min. Earth dist.	7805 Feb 21 17:53	4° \mathfrak{P} 06'12 8.36142 AU
min. Earth dist.	7798 Dec 06 10:35	18° \mathfrak{I} 21'45 8.75725 AU	direct	7805 Apr 30 02:28	0° \mathfrak{P} 41'32
direct	7799 Feb 13 11:27	15° \mathfrak{I} 01'37	evening set	7805 Aug 09 22:43	8° \mathfrak{P} 23'26
evening set	7799 May 24 17:20	22° \mathfrak{I} 16'46			
			conjunction	7805 Aug 27 17:13	10° \mathfrak{P} 36'48 -0°07'01
conjunction	7799 Jun 10 13:55	24° \mathfrak{I} 19'04 -1°59'56	minimum elong	7805 Aug 27 17:14	10° \mathfrak{P} 36'48 0°07'03
minimum elong	7799 Jun 10 13:56	24° \mathfrak{I} 19'05 2°00'04	behind sun begin	7805 Aug 27 10:31	10° \mathfrak{P} 34'43
max. Earth dist.	7799 Jun 10 19:04	24° \mathfrak{I} 20'39 10.72923 AU	behind sun end	7805 Aug 27 23:56	10° \mathfrak{P} 38'54
morning rise	7799 Jun 27 13:42	26° \mathfrak{I} 22'23	max. Earth dist.	7805 Aug 27 19:24	10° \mathfrak{P} 37'28 10.33318 AU
	7799 Jul 30 07:20	0° \mathfrak{G}	morning rise	7805 Sep 14 14:25	12° \mathfrak{P} 51'03
retrograde	7799 Oct 10 03:12	3° \mathfrak{G} 55'18	asc. node	7805 Nov 29 15:11	20° \mathfrak{P} 03'26
opposition	7799 Dec 19 09:04	0° \mathfrak{G} 31'52 -2°23'39	retrograde	7805 Dec 29 00:11	20° \mathfrak{P} 48'35
min. Earth dist.	7799 Dec 19 04:38	0° \mathfrak{G} 32'43 8.70138 AU	opposition	7806 Mar 07 05:54	17° \mathfrak{P} 21'05 0°09'01
	7799 Dec 26 08:25	30° \mathfrak{R} \mathfrak{I}	min. Earth dist.	7806 Mar 07 04:22	17° \mathfrak{P} 21'23 8.30737 AU
direct	7800 Feb 25 21:22	27° \mathfrak{I} 12'05	direct	7806 May 13 10:26	13° \mathfrak{P} 55'46
	7800 Apr 25 05:13	0° \mathfrak{G}	evening set	7806 Aug 23 22:14	21° \mathfrak{P} 43'03
evening set	7800 Jun 06 02:57	4° \mathfrak{G} 30'05			
			conjunction	7806 Sep 10 19:09	23° \mathfrak{P} 57'46 0°21'12
conjunction	7800 Jun 23 02:35	6° \mathfrak{G} 33'57 -1°52'25	minimum elong	7806 Sep 10 19:08	23° \mathfrak{P} 57'46 0°21'12
minimum elong	7800 Jun 23 02:37	6° \mathfrak{G} 33'57 1°52'33	max. Earth dist.	7806 Sep 10 20:03	23° \mathfrak{P} 58'03 10.28481 AU
max. Earth dist.	7800 Jun 23 07:47	6° \mathfrak{G} 35'32 10.66870 AU	morning rise	7806 Sep 28 18:02	26° \mathfrak{P} 13'10
morning rise	7800 Jul 10 05:43	8° \mathfrak{G} 38'53		7806 Oct 31 10:50	0° \mathfrak{A}
retrograde	7800 Oct 23 05:37	16° \mathfrak{G} 16'39	retrograde	7807 Jan 11 21:21	4° \mathfrak{A} 12'23

opposition	7807 Mar 20 18:13	0° <u>♁</u> 44'47	0°43'36	opposition	7813 Jun 08 08:47	21° <u>♊</u> 42'34	2°29'06
min. Earth dist.	7807 Mar 20 17:47	0° <u>♁</u> 44'53	8.26553 AU	min. Earth dist.	7813 Jun 08 12:08	21° <u>♊</u> 41'54	8.33855 AU
	7807 Mar 30 01:11	30° <u>♋</u> 17		direct	7813 Aug 16 03:17	18° <u>♊</u> 14'44	
direct	7807 May 26 23:16	27° <u>♋</u> 18'30		evening set	7813 Nov 29 23:51	26° <u>♊</u> 12'40	
	7807 Jul 22 02:16	0° <u>♁</u>					
evening set	7807 Sep 07 03:12	5° <u>♁</u> 10'46		conjunction	7813 Dec 17 14:00	28° <u>♊</u> 24'40	1°57'33
				minimum elong	7813 Dec 17 14:01	28° <u>♊</u> 24'40	1°57'41
conjunction	7807 Sep 25 01:31	7° <u>♁</u> 26'25	0°48'24	max. Earth dist.	7813 Dec 17 09:24	28° <u>♊</u> 23'13	10.36604 AU
minimum elong	7807 Sep 25 01:29	7° <u>♁</u> 26'25	0°48'25		7813 Dec 30 05:46	0° <u>♊</u>	
max. Earth dist.	7807 Sep 25 00:44	7° <u>♁</u> 26'10	10.24971 AU	morning rise	7814 Jan 04 00:38	0° <u>♊</u> 35'37	
morning rise	7807 Oct 13 01:03	9° <u>♁</u> 42'28		retrograde	7814 Apr 15 13:04	8° <u>♊</u> 15'42	
retrograde	7808 Jan 25 18:43	17° <u>♁</u> 42'13		opposition	7814 Jun 21 19:20	4° <u>♊</u> 52'57	2°20'29
opposition	7808 Apr 02 08:06	14° <u>♁</u> 14'46	1°16'03	min. Earth dist.	7814 Jun 21 23:13	4° <u>♊</u> 52'11	8.39832 AU
min. Earth dist.	7808 Apr 02 09:02	14° <u>♁</u> 14'35	8.23815 AU	direct	7814 Aug 29 23:06	1° <u>♊</u> 25'42	
direct	7808 Jun 08 15:35	10° <u>♁</u> 47'38		evening set	7814 Dec 13 17:43	9° <u>♊</u> 19'39	
evening set	7808 Sep 20 12:01	18° <u>♁</u> 44'11					
				conjunction	7814 Dec 31 05:20	11° <u>♊</u> 30'07	1°47'45
conjunction	7808 Oct 08 10:43	21° <u>♁</u> 00'16	1°13'05	minimum elong	7814 Dec 31 05:22	11° <u>♊</u> 30'08	1°47'52
minimum elong	7808 Oct 08 10:40	21° <u>♁</u> 00'15	1°13'08	max. Earth dist.	7814 Dec 31 00:18	11° <u>♊</u> 28'32	10.43008 AU
max. Earth dist.	7808 Oct 08 08:16	20° <u>♁</u> 59'29	10.22978 AU	morning rise	7815 Jan 17 13:21	13° <u>♊</u> 39'30	
morning rise	7808 Oct 26 09:44	23° <u>♁</u> 16'26		retrograde	7815 Apr 28 14:16	21° <u>♊</u> 14'06	
	7808 Dec 31 22:42	0° <u>♋</u>		opposition	7815 Jul 05 03:18	17° <u>♊</u> 52'20	2°04'47
retrograde	7809 Feb 07 15:51	1° <u>♋</u> 15'31		min. Earth dist.	7815 Jul 05 06:55	17° <u>♊</u> 51'37	8.46520 AU
	7809 Mar 17 16:35	30° <u>♋</u> 11		direct	7815 Sep 12 16:41	14° <u>♊</u> 25'49	
opposition	7809 Apr 15 23:10	27° <u>♁</u> 48'27	1°44'25	evening set	7815 Dec 27 04:47	22° <u>♊</u> 14'48	
min. Earth dist.	7809 Apr 16 01:11	27° <u>♁</u> 48'02	8.22664 AU				
direct	7809 Jun 22 11:24	24° <u>♁</u> 20'40		conjunction	7816 Jan 13 13:55	24° <u>♊</u> 23'41	1°32'37
	7809 Sep 15 12:24	0° <u>♋</u>		minimum elong	7816 Jan 13 13:58	24° <u>♊</u> 23'42	1°32'43
evening set	7809 Oct 04 22:43	2° <u>♋</u> 20'23		max. Earth dist.	7816 Jan 13 09:24	24° <u>♊</u> 22'17	10.49956 AU
				morning rise	7816 Jan 30 19:24	26° <u>♊</u> 31'27	
conjunction	7809 Oct 22 20:50	4° <u>♋</u> 36'23	1°33'45		7816 Mar 01 07:16	0° <u>♋</u>	
minimum elong	7809 Oct 22 20:48	4° <u>♋</u> 36'22	1°33'49	retrograde	7816 May 10 12:52	4° <u>♋</u> 00'43	
max. Earth dist.	7809 Oct 22 17:27	4° <u>♋</u> 35'18	10.22612 AU	opposition	7816 Jul 17 08:21	0° <u>♋</u> 39'49	1°43'06
morning rise	7809 Nov 09 18:19	6° <u>♋</u> 52'12		min. Earth dist.	7816 Jul 17 11:06	0° <u>♋</u> 39'17	8.53572 AU
retrograde	7810 Feb 21 11:11	14° <u>♋</u> 49'26			7816 Jul 25 22:21	30° <u>♋</u> 14'13	
opposition	7810 Apr 29 14:39	11° <u>♋</u> 22'56	2°06'58	direct	7816 Sep 25 04:52	27° <u>♊</u> 14'13	
min. Earth dist.	7810 Apr 29 16:57	11° <u>♋</u> 22'28	8.23166 AU		7816 Nov 23 04:01	0° <u>♋</u>	
direct	7810 Jul 06 09:41	7° <u>♋</u> 54'45		evening set	7817 Jan 08 08:52	4° <u>♋</u> 57'34	
	7810 Oct 11 18:39	15° <u>♋</u>					
evening set	7810 Oct 19 09:31	15° <u>♋</u> 56'18		conjunction	7817 Jan 25 15:38	7° <u>♋</u> 04'53	1°13'08
				minimum elong	7817 Jan 25 15:40	7° <u>♋</u> 04'53	1°13'15
conjunction	7810 Nov 06 06:23	18° <u>♋</u> 11'47	1°49'10	max. Earth dist.	7817 Jan 25 12:21	7° <u>♋</u> 03'52	10.57095 AU
minimum elong	7810 Nov 06 06:20	18° <u>♋</u> 11'46	1°49'16	morning rise	7817 Feb 11 18:41	9° <u>♋</u> 11'05	
max. Earth dist.	7810 Nov 06 02:44	18° <u>♋</u> 10'37	10.23905 AU		7817 Apr 10 05:34	15° <u>♋</u>	
morning rise	7810 Nov 24 01:32	20° <u>♋</u> 26'47		retrograde	7817 May 23 07:00	16° <u>♋</u> 35'26	
retrograde	7811 Mar 07 04:08	28° <u>♋</u> 21'01			7817 Jul 06 14:26	15° <u>♋</u>	
opposition	7811 May 13 05:44	24° <u>♋</u> 55'16	2°22'22	opposition	7817 Jul 30 10:26	13° <u>♋</u> 15'14	1°16'48
min. Earth dist.	7811 May 13 08:09	24° <u>♋</u> 54'47	8.25292 AU	min. Earth dist.	7817 Jul 30 12:19	13° <u>♋</u> 14'53	8.60637 AU
direct	7811 Jul 20 08:44	21° <u>♋</u> 26'57		direct	7817 Oct 08 12:52	9° <u>♋</u> 50'35	
evening set	7811 Nov 02 18:30	29° <u>♋</u> 28'50			7817 Dec 30 20:47	15° <u>♋</u>	
	7811 Nov 06 22:25	0° <u>♊</u>		evening set	7818 Jan 21 06:08	17° <u>♋</u> 28'04	
conjunction	7811 Nov 20 13:31	1° <u>♊</u> 43'25	1°58'29	conjunction	7818 Feb 07 10:32	19° <u>♋</u> 33'49	0°50'27
minimum elong	7811 Nov 20 13:29	1° <u>♊</u> 43'25	1°58'36	minimum elong	7818 Feb 07 10:33	19° <u>♋</u> 33'50	0°50'32
max. Earth dist.	7811 Nov 20 09:40	1° <u>♊</u> 42'12	10.26788 AU	max. Earth dist.	7818 Feb 07 08:22	19° <u>♋</u> 33'10	10.64055 AU
morning rise	7811 Dec 08 05:53	3° <u>♊</u> 57'16		morning rise	7818 Feb 24 11:23	21° <u>♋</u> 38'34	
retrograde	7812 Mar 19 19:28	11° <u>♊</u> 47'29		retrograde	7818 Jun 04 21:30	28° <u>♋</u> 58'41	
opposition	7812 May 25 20:03	8° <u>♊</u> 22'40	2°29'50	opposition	7818 Aug 12 09:33	25° <u>♋</u> 39'03	0°47'19
min. Earth dist.	7812 May 25 22:46	8° <u>♊</u> 22'07	8.28921 AU	min. Earth dist.	7818 Aug 12 11:22	25° <u>♋</u> 38'42	8.67346 AU
direct	7812 Aug 02 06:15	4° <u>♊</u> 54'27		direct	7818 Oct 21 16:36	22° <u>♋</u> 15'19	
evening set	7812 Nov 15 23:46	12° <u>♊</u> 55'05		evening set	7819 Feb 02 21:25	29° <u>♋</u> 47'06	
					7819 Feb 04 16:31	0° <u>♋</u>	
conjunction	7812 Dec 03 16:26	15° <u>♊</u> 08'30	2°01'17	conjunction	7819 Feb 19 23:19	1° <u>♋</u> 51'22	0°25'44
minimum elong	7812 Dec 03 16:26	15° <u>♊</u> 08'30	2°01'24	minimum elong	7819 Feb 19 23:20	1° <u>♋</u> 51'22	0°25'48
max. Earth dist.	7812 Dec 03 12:24	15° <u>♊</u> 07'13	10.31097 AU	max. Earth dist.	7819 Feb 19 21:07	1° <u>♋</u> 50'42	10.70458 AU
morning rise	7812 Dec 21 05:52	17° <u>♊</u> 20'57		morning rise	7819 Mar 08 22:14	3° <u>♋</u> 54'46	
retrograde	7813 Apr 02 07:00	25° <u>♊</u> 06'22					

retrograde	7819 Jun 17 09:20	11° X 11'32	morning rise	7825 May 17 22:02	15° S 21'29
opposition	7819 Aug 25 05:51	7° X 52'17 0°16'08	retrograde	7825 Aug 28 14:59	22° S 41'07
min. Earth dist.	7819 Aug 25 07:46	7° X 51'55 8.73327 AU	opposition	7825 Nov 07 01:27	19° S 19'58 -2°16'06
direct	7819 Nov 03 15:16	4° X 29'28	min. Earth dist.	7825 Nov 06 23:03	19° S 20'25 8.82762 AU
evening set	7820 Feb 15 07:18	11° X 56'00	direct	7826 Jan 15 17:16	16° S 00'17
			evening set	7826 Apr 26 11:18	23° S 12'52
conjunction	7820 Mar 03 06:48	13° X 58'57 0°00'07			
minimum elong	7820 Mar 03 06:47	13° X 58'57 0°00'10	conjunction	7826 May 13 04:03	25° S 13'10 -1°55'36
behind sun begin	7820 Mar 02 23:49	13° X 56'51	minimum elong	7826 May 13 04:02	25° S 13'09 1°55'41
behind sun end	7820 Mar 03 13:46	14° X 01'02	max. Earth dist.	7826 May 13 07:28	25° S 14'12 10.81211 AU
max. Earth dist.	7820 Mar 03 04:24	13° X 58'17 10.75946 AU	morning rise	7826 May 29 22:31	27° S 14'01
desc. node	7820 Mar 04 22:00	14° X 10'52		7826 Jun 23 12:16	0° II
morning rise	7820 Mar 20 04:02	16° X 01'13	retrograde	7826 Sep 10 05:19	4° II 37'15
retrograde	7820 Jun 28 17:18	23° X 15'46	opposition	7826 Nov 19 16:28	1° II 15'14 -2°26'10
opposition	7820 Sep 05 23:54	19° X 56'41 -0°15'23	min. Earth dist.	7826 Nov 19 12:50	1° II 15'55 8.79619 AU
min. Earth dist.	7820 Sep 06 01:22	19° X 56'24 8.78248 AU		7826 Dec 06 16:48	30° R 8
direct	7820 Nov 15 10:57	16° X 34'45	direct	7827 Jan 28 01:46	27° S 55'31
evening set	7821 Feb 26 12:35	23° X 56'46		7827 Mar 19 07:26	0° II
			evening set	7827 May 08 12:28	5° II 08'56
conjunction	7821 Mar 15 10:01	25° X 58'36 -0°25'16			
minimum elong	7821 Mar 15 10:00	25° X 58'36 0°25'16	conjunction	7827 May 25 06:14	7° II 09'56 -2°01'13
max. Earth dist.	7821 Mar 15 08:24	25° X 58'07 10.80236 AU	minimum elong	7827 May 25 06:14	7° II 09'56 2°01'19
morning rise	7821 Apr 01 05:43	27° X 59'57	max. Earth dist.	7827 May 25 10:43	7° II 11'17 10.77451 AU
	7821 Apr 18 16:28	0° Y	morning rise	7827 Jun 11 02:19	9° II 11'40
retrograde	7821 Jul 11 01:55	5° Y 13'33	retrograde	7827 Sep 22 23:32	16° II 39'03
opposition	7821 Sep 18 16:04	1° Y 54'25 -0°45'56	opposition	7827 Dec 02 08:52	13° II 16'10 -2°29'57
min. Earth dist.	7821 Sep 18 16:15	1° Y 54'23 8.81896 AU	min. Earth dist.	7827 Dec 02 04:39	13° II 16'58 8.75303 AU
	7821 Oct 15 16:27	30° R 8	direct	7828 Feb 09 09:00	9° II 56'15
direct	7821 Nov 28 03:15	28° X 33'17	evening set	7828 May 19 16:42	17° II 11'23
	7822 Jan 09 09:36	0° Y			
evening set	7822 Mar 10 14:47	5° Y 51'38	conjunction	7828 Jun 05 12:13	19° II 13'26 -2°01'32
			minimum elong	7828 Jun 05 12:14	19° II 13'26 2°01'40
conjunction	7822 Mar 27 10:25	7° Y 52'36 -0°49'21	max. Earth dist.	7828 Jun 05 16:27	19° II 14'43 10.72617 AU
minimum elong	7822 Mar 27 10:23	7° Y 52'36 0°49'23	morning rise	7828 Jun 22 10:52	21° II 16'25
max. Earth dist.	7822 Mar 27 10:18	7° Y 52'34 10.83191 AU	retrograde	7828 Oct 04 19:48	28° II 48'19
morning rise	7822 Apr 13 04:48	9° Y 53'15	opposition	7828 Dec 14 02:56	25° II 24'34 -2°27'08
retrograde	7822 Jul 23 11:07	17° Y 06'56	min. Earth dist.	7828 Dec 13 23:05	25° II 25'18 8.69992 AU
opposition	7822 Oct 01 06:53	13° Y 47'35 -1°14'18	direct	7829 Feb 20 18:02	22° II 04'15
min. Earth dist.	7822 Oct 01 06:13	13° Y 47'43 8.84188 AU	evening set	7829 Jun 01 00:51	29° II 22'01
direct	7822 Dec 10 14:35	10° Y 27'06		7829 Jun 06 06:56	0° S
evening set	7823 Mar 22 14:50	17° Y 42'39			
			conjunction	7829 Jun 17 23:02	1° S 25'28 -1°56'25
conjunction	7823 Apr 08 08:51	19° Y 42'59 -1°11'14	minimum elong	7829 Jun 17 23:04	1° S 25'29 1°56'33
minimum elong	7823 Apr 08 08:49	19° Y 42'58 1°11'17	max. Earth dist.	7829 Jun 18 03:12	1° S 26'45 10.66902 AU
max. Earth dist.	7823 Apr 08 09:31	19° Y 43'11 10.84764 AU	morning rise	7829 Jul 05 00:54	3° S 30'00
morning rise	7823 Apr 25 02:24	21° Y 43'14	retrograde	7829 Oct 17 19:42	11° S 06'41
retrograde	7823 Aug 04 18:56	28° Y 58'00	opposition	7829 Dec 26 23:13	7° S 42'05 -2°17'36
opposition	7823 Oct 13 21:15	25° Y 38'13 -1°39'24	min. Earth dist.	7829 Dec 26 19:30	7° S 42'48 8.63894 AU
min. Earth dist.	7823 Oct 13 20:14	25° Y 38'25 8.85093 AU	direct	7830 Mar 05 07:28	4° S 21'14
direct	7823 Dec 23 00:27	22° Y 18'11	evening set	7830 Jun 13 13:46	11° S 42'22
evening set	7824 Apr 02 13:30	29° Y 31'49			
	7824 Apr 06 12:38	0° S	conjunction	7830 Jun 30 15:23	13° S 47'32 -1°45'52
			minimum elong	7830 Jun 30 15:25	13° S 47'32 1°46'00
conjunction	7824 Apr 19 06:20	1° S 31'48 -1°30'03	max. Earth dist.	7830 Jun 30 20:11	13° S 49'00 10.60534 AU
minimum elong	7824 Apr 19 06:18	1° S 31'47 1°30'06	morning rise	7830 Jul 17 20:49	15° S 53'50
max. Earth dist.	7824 Apr 19 07:10	1° S 32'03 10.84943 AU	retrograde	7830 Oct 31 00:59	23° S 35'23
morning rise	7824 May 05 23:40	3° S 31'55	opposition	7831 Jan 08 21:59	20° S 09'58 -2°01'29
retrograde	7824 Aug 16 04:17	10° S 48'44	min. Earth dist.	7831 Jan 08 17:53	20° S 10'46 8.57277 AU
opposition	7824 Oct 25 11:22	7° S 28'20 -2°00'17	direct	7831 Mar 17 22:15	16° S 48'29
min. Earth dist.	7824 Oct 25 10:03	7° S 28'35 8.84610 AU	evening set	7831 Jun 26 08:33	24° S 13'41
direct	7825 Jan 03 09:33	4° S 08'33			
evening set	7825 Apr 14 12:00	11° S 21'11	conjunction	7831 Jul 13 14:05	26° S 20'44 -1°30'09
			minimum elong	7831 Jul 13 14:08	26° S 20'45 1°30'17
conjunction	7825 May 01 04:23	13° S 21'09 -1°45'02	max. Earth dist.	7831 Jul 13 19:32	26° S 22'25 10.53807 AU
minimum elong	7825 May 01 04:22	13° S 21'08 1°45'07	morning rise	7831 Jul 30 23:26	28° S 29'00
max. Earth dist.	7825 May 01 06:14	13° S 21'42 10.83742 AU		7831 Aug 12 18:24	0° S
	7825 May 14 21:33	15° S	retrograde	7831 Nov 13 10:16	6° S 15'15

opposition	7832 Jan 21 23:26	2°♏49'06 -1°39'15	conjunction	7837 Oct 02 17:16	15°♏31'53 1°02'57
min. Earth dist.	7832 Jan 21 18:57	2°♏49'59 8.50457 AU	minimum elong	7837 Oct 02 17:13	15°♏31'52 1°02'59
	7832 Mar 04 14:07	30°♏♌	max. Earth dist.	7837 Oct 02 17:47	15°♏32'03 10.24206 AU
direct	7832 Mar 29 16:27	29°♌26'53	morning rise	7837 Oct 20 16:27	17°♏48'02
	7832 Apr 23 12:46	0°♏	retrograde	7838 Feb 02 05:12	25°♏47'47
evening set	7832 Jul 08 09:49	6°♏56'45	opposition	7838 Apr 10 14:02	22°♏20'58 1°32'53
			min. Earth dist.	7838 Apr 10 13:51	22°♏21'00 8.23735 AU
conjunction	7832 Jul 25 19:26	9°♏05'49 -1°09'50	direct	7838 Jun 16 22:47	18°♏54'00
minimum elong	7832 Jul 25 19:28	9°♏05'49 1°09'56	evening set	7838 Sep 29 05:05	26°♏52'28
max. Earth dist.	7832 Jul 26 00:21	9°♏07'21 10.47044 AU			
morning rise	7832 Aug 12 08:50	11°♏16'04	conjunction	7838 Oct 17 03:37	29°♏08'30 1°25'29
	7832 Sep 14 06:02	15°♏	minimum elong	7838 Oct 17 03:34	29°♏08'29 1°25'32
retrograde	7832 Nov 25 23:30	19°♏06'39	max. Earth dist.	7838 Oct 17 02:33	29°♏08'10 10.23508 AU
opposition	7833 Feb 03 03:47	15°♏39'55 -1°11'45		7838 Oct 23 21:33	0°♌
min. Earth dist.	7833 Feb 02 23:50	15°♏40'43 8.43772 AU	morning rise	7838 Nov 04 01:39	1°♌24'26
	7833 Feb 11 14:52	15°♏♏	retrograde	7839 Feb 16 02:16	9°♌22'35
direct	7833 Apr 11 14:52	12°♏16'53	opposition	7839 Apr 24 05:47	5°♌56'17 1°58'04
	7833 Jun 07 04:29	15°♏	min. Earth dist.	7839 Apr 24 07:11	5°♌56'00 8.23794 AU
evening set	7833 Jul 21 18:02	19°♏51'52	direct	7839 Jun 30 20:13	2°♌28'48
			evening set	7839 Oct 13 16:35	10°♌29'34
conjunction	7833 Aug 08 07:31	22°♏02'54 -0°45'44			
minimum elong	7833 Aug 08 07:33	22°♏02'55 0°45'48	conjunction	7839 Oct 31 14:00	12°♌45'13 1°43'14
max. Earth dist.	7833 Aug 08 11:18	22°♏04'05 10.40588 AU	minimum elong	7839 Oct 31 13:58	12°♌45'13 1°43'18
morning rise	7833 Aug 26 00:41	24°♏15'03	max. Earth dist.	7839 Oct 31 10:34	12°♌44'08 10.24232 AU
	7833 Oct 19 14:00	0°♏	morning rise	7839 Nov 18 10:06	15°♌00'31
retrograde	7833 Dec 09 16:42	2°♏09'22		7839 Nov 18 08:27	15°♌
	7834 Jan 30 18:55	30°♏♏	retrograde	7840 Feb 29 20:39	22°♌56'01
opposition	7834 Feb 16 10:57	28°♏42'16 -0°40'08	opposition	7840 May 06 21:22	19°♌30'28 2°16'35
min. Earth dist.	7834 Feb 16 08:00	28°♏42'52 8.37579 AU	min. Earth dist.	7840 May 07 00:32	19°♌29'49 8.25239 AU
direct	7834 Apr 24 16:54	25°♏18'22	direct	7840 Jul 13 19:21	16°♌02'41
	7834 Jul 09 22:36	0°♏	evening set	7840 Oct 27 02:58	24°♌04'30
evening set	7834 Aug 04 09:10	2°♏58'44			
			conjunction	7840 Nov 13 22:37	26°♌19'25 1°55'11
conjunction	7834 Aug 22 02:10	5°♏11'33 -0°18'58	minimum elong	7840 Nov 13 22:35	26°♌19'24 1°55'17
minimum elong	7834 Aug 22 02:11	5°♏11'33 0°19'00	max. Earth dist.	7840 Nov 13 17:25	26°♌17'46 10.26337 AU
max. Earth dist.	7834 Aug 22 04:49	5°♏12'23 10.34792 AU	morning rise	7840 Dec 01 16:15	28°♌33'43
morning rise	7834 Sep 08 22:29	7°♏25'23		7840 Dec 13 10:45	0°♌
retrograde	7834 Dec 23 11:37	15°♏22'39	retrograde	7841 Mar 14 12:20	6°♌25'41
opposition	7835 Mar 01 20:50	11°♏55'21 -0°05'57	opposition	7841 May 20 12:28	3°♌00'57 2°27'26
min. Earth dist.	7835 Mar 01 18:52	11°♏55'45 8.32230 AU	min. Earth dist.	7841 May 20 16:25	3°♌00'09 8.28053 AU
asc. node	7835 May 05 05:47	8°♏31'02		7841 Jul 05 04:38	30°♏♌
direct	7835 May 08 00:52	8°♏30'36	direct	7841 Jul 27 18:43	29°♌33'06
evening set	7835 Aug 18 06:51	16°♏16'19		7841 Aug 19 07:32	0°♌
			evening set	7841 Nov 10 10:11	7°♌34'25
conjunction	7835 Sep 05 02:47	18°♏30'38 0°09'11			
minimum elong	7835 Sep 05 02:46	18°♏30'37 0°09'11	conjunction	7841 Nov 28 03:44	9°♌48'18 2°00'44
behind sun begin	7835 Sep 04 20:39	18°♏28'42	minimum elong	7841 Nov 28 03:43	9°♌48'18 2°00'50
behind sun end	7835 Sep 05 08:54	18°♏32'32	max. Earth dist.	7841 Nov 27 21:56	9°♌46'28 10.29810 AU
max. Earth dist.	7835 Sep 05 04:49	18°♏31'15 10.29974 AU	morning rise	7841 Dec 15 18:34	12°♌01'21
morning rise	7835 Sep 23 01:15	20°♏45'44	retrograde	7842 Mar 28 00:57	19°♌48'55
retrograde	7836 Jan 06 08:02	28°♏45'00	opposition	7842 Jun 03 02:13	16°♌25'03 2°30'09
opposition	7836 Mar 14 08:59	25°♏17'42 0°28'57	min. Earth dist.	7842 Jun 03 06:11	16°♌24'15 8.32172 AU
min. Earth dist.	7836 Mar 14 07:31	25°♏17'59 8.28010 AU	direct	7842 Aug 10 17:41	12°♌57'20
direct	7836 May 20 13:34	21°♏52'08	evening set	7842 Nov 24 12:56	20°♌56'36
evening set	7836 Aug 31 10:29	29°♏42'53			
	7836 Sep 02 17:32	0°♏	conjunction	7842 Dec 12 04:13	23°♌09'13 1°59'42
			minimum elong	7842 Dec 12 04:13	23°♌09'13 1°59'50
conjunction	7836 Sep 18 08:23	1°♏58'16 0°36'59	max. Earth dist.	7842 Dec 11 22:38	23°♌07'27 10.34529 AU
minimum elong	7836 Sep 18 08:21	1°♏58'15 0°37'00	morning rise	7842 Dec 29 16:09	25°♌20'49
max. Earth dist.	7836 Sep 18 09:51	1°♏58'44 10.26383 AU		7843 Feb 09 09:05	0°♌
morning rise	7836 Oct 06 07:47	4°♏14'09	retrograde	7843 Apr 10 09:14	3°♌03'18
retrograde	7837 Jan 19 05:52	12°♏14'17		7843 Jun 12 10:35	30°♏♌
opposition	7837 Mar 27 22:50	8°♏47'08 1°02'34	opposition	7843 Jun 16 13:50	29°♌40'17 2°24'47
min. Earth dist.	7837 Mar 27 21:49	8°♏47'20 8.25136 AU	min. Earth dist.	7843 Jun 16 17:30	29°♌39'33 8.37409 AU
direct	7837 Jun 03 04:53	5°♏20'50	direct	7843 Aug 24 14:47	26°♌12'55
evening set	7837 Sep 14 18:31	13°♏15'55		7843 Nov 01 18:45	0°♌
			evening set	7843 Dec 08 09:52	4°♌08'44

conjunction	7843 Dec 25 22:45	6°♁19'53	1°52'23	conjunction	7850 Mar 10 17:30	21°♁13'17	-0°14'48
minimum elong	7843 Dec 25 22:46	6°♁19'54	1°52'30	minimum elong	7850 Mar 10 17:30	21°♁13'17	0°14'47
max. Earth dist.	7843 Dec 25 17:51	6°♁18'21	10.40254 AU	behind sun begin	7850 Mar 10 14:31	21°♁12'24	
morning rise	7844 Jan 12 07:48	8°♁29'57		behind sun end	7850 Mar 10 20:28	21°♁14'11	
retrograde	7844 Apr 22 13:50	16°♁06'59		max. Earth dist.	7850 Mar 10 17:10	21°♁13'11	10.77794 AU
opposition	7844 Jun 28 23:12	12°♁44'48	2°11'57	morning rise	7850 Mar 27 13:47	23°♁15'02	
min. Earth dist.	7844 Jun 29 02:53	12°♁44'05	8.43498 AU		7850 Jun 12 11:33	0°♁	
direct	7844 Sep 06 08:35	9°♁17'56		retrograde	7850 Jul 06 06:30	0°♁28'46	
evening set	7844 Dec 20 23:55	17°♁09'08			7850 Jul 30 08:02	30°♁♁	
				opposition	7850 Sep 13 17:17	27°♁09'15	-0°33'22
conjunction	7845 Jan 07 10:17	19°♁18'45	1°39'23	min. Earth dist.	7850 Sep 13 17:24	27°♁09'14	8.79934 AU
minimum elong	7845 Jan 07 10:19	19°♁18'46	1°39'30	direct	7850 Nov 23 04:41	23°♁47'24	
max. Earth dist.	7845 Jan 07 05:42	19°♁17'19	10.46683 AU		7851 Feb 24 07:32	0°♁	
morning rise	7845 Jan 24 16:43	21°♁27'13		evening set	7851 Mar 05 22:03	1°♁07'02	
retrograde	7845 May 05 14:27	28°♁58'48					
opposition	7845 Jul 12 05:40	25°♁37'23	1°52'39	conjunction	7851 Mar 22 18:20	3°♁08'19	-0°39'28
min. Earth dist.	7845 Jul 12 09:31	25°♁36'38	8.50121 AU	minimum elong	7851 Mar 22 18:18	3°♁08'18	0°39'29
direct	7845 Sep 19 22:01	22°♁11'09		max. Earth dist.	7851 Mar 22 18:08	3°♁08'15	10.81777 AU
evening set	7846 Jan 03 06:59	29°♁56'58		morning rise	7851 Apr 08 13:19	5°♁09'12	
	7846 Jan 03 16:58	0°♁		retrograde	7851 Jul 18 13:34	12°♁22'20	
				opposition	7851 Sep 26 08:09	9°♁02'48	-1°02'42
conjunction	7846 Jan 20 14:49	2°♁05'01	1°21'37	min. Earth dist.	7851 Sep 26 07:33	9°♁02'55	8.83339 AU
minimum elong	7846 Jan 20 14:51	2°♁05'02	1°21'43	direct	7851 Dec 05 17:21	5°♁41'47	
max. Earth dist.	7846 Jan 20 10:13	2°♁03'35	10.53482 AU	evening set	7852 Mar 16 22:12	12°♁58'01	
morning rise	7846 Feb 06 18:56	4°♁11'56					
retrograde	7846 May 18 08:23	11°♁38'20		conjunction	7852 Apr 02 16:44	14°♁58'29	-1°02'19
opposition	7846 Jul 25 08:51	8°♁17'34	1°28'08	minimum elong	7852 Apr 02 16:42	14°♁58'29	1°02'22
min. Earth dist.	7846 Jul 25 12:37	8°♁16'50	8.56943 AU	max. Earth dist.	7852 Apr 02 17:42	14°♁58'47	10.84527 AU
direct	7846 Oct 03 09:05	4°♁52'05		morning rise	7852 Apr 19 10:42	16°♁58'48	
evening set	7847 Jan 16 07:04	12°♁32'10		retrograde	7852 Jul 29 19:54	24°♁12'25	
				opposition	7852 Oct 07 21:53	20°♁52'40	-1°29'12
conjunction	7847 Feb 02 12:26	14°♁38'38	1°00'08	min. Earth dist.	7852 Oct 07 19:53	20°♁53'02	8.85456 AU
minimum elong	7847 Feb 02 12:28	14°♁38'39	1°00'14	direct	7852 Dec 17 04:28	17°♁32'21	
max. Earth dist.	7847 Feb 02 08:05	14°♁37'18	10.60304 AU	evening set	7853 Mar 28 20:27	24°♁46'06	
	7847 Feb 05 09:45	15°♁					
morning rise	7847 Feb 19 14:26	16°♁44'05		conjunction	7853 Apr 14 13:48	26°♁46'03	-1°22'27
retrograde	7847 May 30 23:13	24°♁05'56		minimum elong	7853 Apr 14 13:46	26°♁46'02	1°22'31
opposition	7847 Aug 07 09:00	20°♁45'40	0°59'50	max. Earth dist.	7853 Apr 14 16:31	26°♁46'52	10.85930 AU
min. Earth dist.	7847 Aug 07 11:44	20°♁45'09	8.63625 AU	morning rise	7853 May 01 07:05	28°♁46'01	
direct	7847 Oct 16 15:51	17°♁21'03			7853 May 11 22:45	0°♁	
evening set	7848 Jan 29 00:31	24°♁55'21		retrograde	7853 Aug 11 05:38	6°♁01'06	
				opposition	7853 Oct 20 11:04	2°♁41'01	-1°51'52
conjunction	7848 Feb 15 03:30	27°♁00'18	0°36'09	min. Earth dist.	7853 Oct 20 07:44	2°♁41'38	8.86192 AU
minimum elong	7848 Feb 15 03:31	27°♁00'19	0°36'14		7853 Dec 01 05:05	30°♁♁	
max. Earth dist.	7848 Feb 15 00:36	26°♁59'25	10.66819 AU	direct	7853 Dec 29 12:59	29°♁21'17	
morning rise	7848 Mar 03 03:23	29°♁04'20			7854 Jan 26 09:15	0°♁	
	7848 Mar 10 23:26	0°♁		evening set	7854 Apr 09 18:14	6°♁33'26	
retrograde	7848 Jun 11 12:38	6°♁22'31					
opposition	7848 Aug 19 06:14	3°♁02'37	0°29'12	conjunction	7854 Apr 26 10:47	8°♁33'10	-1°39'04
min. Earth dist.	7848 Aug 19 07:31	3°♁02'22	8.69858 AU	minimum elong	7854 Apr 26 10:44	8°♁33'10	1°39'08
	7848 Oct 07 22:58	30°♁♁		max. Earth dist.	7854 Apr 26 14:34	8°♁34'19	10.85930 AU
direct	7848 Oct 28 16:28	29°♁38'56		morning rise	7854 May 13 03:57	10°♁33'09	
	7848 Nov 18 05:28	0°♁			7854 Jun 24 06:37	15°♁	
evening set	7849 Feb 09 12:12	7°♁07'42		retrograde	7854 Aug 23 15:45	17°♁50'32	
					7854 Oct 26 07:41	15°♁♁	
conjunction	7849 Feb 26 12:56	9°♁11'17	0°10'50	opposition	7854 Nov 02 00:18	14°♁29'59	-2°09'48
minimum elong	7849 Feb 26 12:56	9°♁11'17	0°10'53	min. Earth dist.	7854 Nov 01 20:35	14°♁30'40	8.85524 AU
behind sun begin	7849 Feb 26 07:33	9°♁09'40		direct	7855 Jan 10 18:38	11°♁10'39	
behind sun end	7849 Feb 26 18:19	9°♁12'55			7855 Mar 22 01:18	15°♁	
max. Earth dist.	7849 Feb 26 11:43	9°♁10'56	10.72735 AU	evening set	7855 Apr 21 16:27	18°♁22'12	
morning rise	7849 Mar 15 10:50	11°♁14'05					
retrograde	7849 Jun 23 22:08	18°♁29'30		conjunction	7855 May 08 08:44	20°♁22'02	-1°51'31
desc. node	7849 Aug 04 08:59	17°♁07'27		minimum elong	7855 May 08 08:43	20°♁22'01	1°51'36
opposition	7849 Sep 01 00:48	15°♁09'52	-0°02'19	max. Earth dist.	7855 May 08 12:33	20°♁23'10	10.84550 AU
min. Earth dist.	7849 Sep 01 01:11	15°♁09'47	8.75376 AU	morning rise	7855 May 25 02:38	22°♁22'20	
direct	7849 Nov 10 11:57	11°♁47'07		retrograde	7855 Sep 05 02:53	29°♁42'49	
evening set	7850 Feb 21 19:03	19°♁10'57		opposition	7855 Nov 14 14:17	26°♁21'41	-2°22'19

min. Earth dist.	7855 Nov 14 10:32	26°♄22'23	8.83496 AU	min. Earth dist.	7862 Jan 28 11:22	10°♄06'57	8.49386 AU
direct	7856 Jan 23 01:43	23°♄02'32		direct	7862 Apr 06 04:45	6°♄44'17	
	7856 Apr 30 15:07	0°♄		evening set	7862 Jul 16 01:30	14°♄15'32	
evening set	7856 May 02 15:55	0°♄14'23			7862 Jul 22 02:27	15°♄	
conjunction	7856 May 19 08:51	2°♄14'41	-1°59'15	conjunction	7862 Aug 02 13:07	16°♄25'19	-0°56'55
minimum elong	7856 May 19 08:51	2°♄14'41	1°59'21	minimum elong	7862 Aug 02 13:09	16°♄25'19	0°57'00
max. Earth dist.	7856 May 19 13:05	2°♄15'58	10.81852 AU	max. Earth dist.	7862 Aug 02 16:19	16°♄26'18	10.45835 AU
morning rise	7856 Jun 05 04:09	4°♄15'41		morning rise	7862 Aug 20 04:26	18°♄36'15	
retrograde	7856 Sep 16 17:55	11°♄39'54		retrograde	7862 Dec 03 18:45	26°♄27'38	
opposition	7856 Nov 26 05:14	8°♄18'04	-2°28'47	opposition	7863 Feb 10 18:45	23°♄01'04	-0°54'44
min. Earth dist.	7856 Nov 26 01:10	8°♄18'50	8.80178 AU	min. Earth dist.	7863 Feb 10 16:20	23°♄01'32	8.42410 AU
direct	7857 Feb 03 09:27	4°♄58'54		direct	7863 Apr 19 04:14	19°♄37'52	
evening set	7857 May 14 17:56	12°♄11'55		evening set	7863 Jul 29 12:27	27°♄14'29	
conjunction	7857 May 31 12:28	14°♄13'05	-2°01'52	conjunction	7863 Aug 16 03:55	29°♄26'13	-0°31'18
minimum elong	7857 May 31 12:28	14°♄13'05	2°01'59	minimum elong	7863 Aug 16 03:56	29°♄26'13	0°31'22
max. Earth dist.	7857 May 31 17:46	14°♄14'41	10.77919 AU	max. Earth dist.	7863 Aug 16 06:42	29°♄27'05	10.39140 AU
morning rise	7857 Jun 17 09:43	16°♄15'05			7863 Aug 20 15:44	0°♄	
retrograde	7857 Sep 29 11:52	23°♄43'30		morning rise	7863 Sep 02 22:36	1°♄38'59	
opposition	7857 Dec 08 21:26	20°♄20'52	-2°28'50	retrograde	7863 Dec 17 12:10	9°♄33'53	
min. Earth dist.	7857 Dec 08 16:38	20°♄21'47	8.75668 AU	opposition	7864 Feb 24 02:22	6°♄06'48	-0°21'41
direct	7858 Feb 15 17:48	17°♄01'29		min. Earth dist.	7864 Feb 24 00:21	6°♄07'12	8.36049 AU
evening set	7858 May 26 23:24	24°♄16'34		direct	7864 May 01 08:25	2°♄42'32	
				evening set	7864 Aug 11 06:17	10°♄24'44	
conjunction	7858 Jun 12 20:15	26°♄18'56	-1°59'08	conjunction	7864 Aug 29 00:56	12°♄38'10	-0°03'48
minimum elong	7858 Jun 12 20:16	26°♄18'56	1°59'16	minimum elong	7864 Aug 29 00:56	12°♄38'10	0°03'50
max. Earth dist.	7858 Jun 13 01:58	26°♄20'40	10.72869 AU	behind sun begin	7864 Aug 28 17:44	12°♄35'56	
morning rise	7858 Jun 29 20:13	28°♄22'16		behind sun end	7864 Aug 29 08:07	12°♄40'25	
	7858 Jul 13 20:16	0°♄		max. Earth dist.	7864 Aug 29 02:26	12°♄38'36	10.33220 AU
retrograde	7858 Oct 12 10:28	5°♄55'14		morning rise	7864 Sep 15 22:16	14°♄52'28	
opposition	7858 Dec 21 15:46	2°♄31'45	-2°22'15	asc. node	7864 Oct 18 13:50	18°♄37'56	
min. Earth dist.	7858 Dec 21 10:56	2°♄32'41	8.70096 AU	retrograde	7864 Dec 30 07:37	22°♄50'03	
	7859 Jan 28 05:15	30°♄		opposition	7865 Mar 08 12:37	19°♄22'39	0°12'59
direct	7859 Feb 28 03:59	29°♄11'57		min. Earth dist.	7865 Mar 08 11:40	19°♄22'51	8.30639 AU
	7859 Mar 30 14:00	0°♄		direct	7865 May 14 17:12	15°♄57'21	
evening set	7859 Jun 08 09:11	6°♄29'53		evening set	7865 Aug 25 06:16	23°♄44'59	
conjunction	7859 Jun 25 08:58	8°♄33'47	-1°50'59	conjunction	7865 Sep 12 03:10	25°♄59'45	0°24'20
minimum elong	7859 Jun 25 09:00	8°♄33'48	1°51'07	minimum elong	7865 Sep 12 03:09	25°♄59'45	0°24'20
max. Earth dist.	7859 Jun 25 13:50	8°♄35'16	10.66851 AU	max. Earth dist.	7865 Sep 12 02:56	25°♄59'41	10.28386 AU
morning rise	7859 Jul 12 12:26	10°♄38'49		morning rise	7865 Sep 30 02:10	28°♄15'11	
retrograde	7859 Oct 25 13:24	18°♄16'31			7865 Oct 14 12:47	0°♄	
opposition	7860 Jan 03 12:29	14°♄52'13	-2°09'05	retrograde	7866 Jan 13 04:43	6°♄14'26	
min. Earth dist.	7860 Jan 03 08:31	14°♄52'59	8.63637 AU	opposition	7866 Mar 22 01:04	2°♄46'57	0°47'21
direct	7860 Mar 11 15:25	11°♄31'46		min. Earth dist.	7866 Mar 22 01:28	2°♄46'52	8.26471 AU
evening set	7860 Jun 20 00:23	18°♄53'29			7866 May 01 05:08	30°♄	
conjunction	7860 Jul 07 03:46	20°♄59'12	-1°37'34	direct	7866 May 28 05:54	29°♄20'40	
minimum elong	7860 Jul 07 03:48	20°♄59'13	1°37'42		7866 Jun 24 04:32	0°♄	
max. Earth dist.	7860 Jul 07 07:19	21°♄00'18	10.60090 AU	evening set	7866 Sep 08 11:28	7°♄13'17	
morning rise	7860 Jul 24 11:13	23°♄06'08		conjunction	7866 Sep 26 09:45	9°♄28'58	0°51'16
	7860 Oct 06 13:48	0°♄		minimum elong	7866 Sep 26 09:43	9°♄28'57	0°51'18
retrograde	7860 Nov 06 18:35	0°♄48'39		max. Earth dist.	7866 Sep 26 08:11	9°♄28'28	10.24903 AU
	7860 Dec 08 05:25	30°♄		morning rise	7866 Oct 14 09:16	11°♄45'01	
opposition	7861 Jan 15 11:40	27°♄23'33	-1°49'37	retrograde	7867 Jan 27 02:28	19°♄44'47	
min. Earth dist.	7861 Jan 15 08:51	27°♄24'06	8.56597 AU	opposition	7867 Apr 04 15:05	16°♄17'26	1°19'23
direct	7861 Mar 24 08:01	24°♄02'17		min. Earth dist.	7867 Apr 04 16:25	16°♄17'10	8.23771 AU
	7861 Jun 20 11:17	0°♄		direct	7867 Jun 10 23:00	12°♄50'19	
evening set	7861 Jul 02 21:42	1°♄28'32		evening set	7867 Sep 22 20:25	20°♄47'10	
conjunction	7861 Jul 20 05:09	3°♄36'15	-1°19'19	conjunction	7867 Oct 10 19:07	23°♄03'15	1°15'32
minimum elong	7861 Jul 20 05:11	3°♄36'16	1°19'26	minimum elong	7867 Oct 10 19:04	23°♄03'14	1°15'35
max. Earth dist.	7861 Jul 20 08:15	3°♄37'13	10.52949 AU	max. Earth dist.	7867 Oct 10 16:38	23°♄02'27	10.22954 AU
morning rise	7861 Aug 06 16:39	5°♄45'12		morning rise	7867 Oct 28 18:00	25°♄19'24	
retrograde	7861 Nov 20 04:09	13°♄32'21			7867 Dec 09 02:24	0°♄	
opposition	7862 Jan 28 13:47	10°♄06'28	-1°24'30				

retrograde	7868 Feb 09 22:32	3°♍18'28		max. Earth dist.	7874 Jan 01 07:25	13°♊29'42	10.43248 AU
	7868 Apr 15 12:13	30°♈♂		morning rise	7874 Jan 18 20:12	15°♊40'31	
opposition	7868 Apr 17 06:12	29°♂51'28	1°47'07	retrograde	7874 Apr 29 21:07	23°♊14'50	
min. Earth dist.	7868 Apr 17 07:59	29°♂51'06	8.22668 AU	opposition	7874 Jul 06 10:04	19°♊53'02	2°02'22
direct	7868 Jun 23 19:52	26°♂23'42		min. Earth dist.	7874 Jul 06 13:03	19°♊52'27	8.46764 AU
	7868 Aug 28 19:50	0°♍		direct	7874 Sep 13 23:36	16°♊26'32	
evening set	7868 Oct 06 07:20	4°♍23'41		evening set	7874 Dec 28 11:23	24°♊15'09	
conjunction	7868 Oct 24 05:26	6°♍39'39	1°35'38	conjunction	7875 Jan 14 20:32	26°♊23'59	1°30'24
minimum elong	7868 Oct 24 05:23	6°♍39'38	1°35'42	minimum elong	7875 Jan 14 20:34	26°♊24'00	1°30'30
max. Earth dist.	7868 Oct 24 02:32	6°♍38'44	10.22636 AU	max. Earth dist.	7875 Jan 14 16:46	26°♊22'49	10.50212 AU
morning rise	7868 Nov 11 02:36	8°♍55'24		morning rise	7875 Feb 01 01:49	28°♊31'41	
	7869 Jan 07 12:14	15°♍			7875 Feb 13 09:52	0°♋	
retrograde	7869 Feb 22 18:02	16°♍52'34		retrograde	7875 May 12 18:58	6°♋00'40	
	7869 Apr 10 21:30	15°♈♍		opposition	7875 Jul 19 14:55	2°♋39'45	1°40'04
opposition	7869 Apr 30 21:41	13°♍26'07	2°08'54	min. Earth dist.	7875 Jul 19 17:16	2°♋39'17	8.53824 AU
min. Earth dist.	7869 Apr 30 23:37	13°♍25'43	8.23217 AU		7875 Aug 27 23:29	30°♈♊	
direct	7869 Jul 07 17:27	9°♍57'57		direct	7875 Sep 27 11:41	29°♊14'08	
	7869 Sep 25 12:43	15°♍			7875 Oct 27 17:37	0°♋	
evening set	7869 Oct 20 18:08	17°♍59'39		evening set	7876 Jan 10 15:08	6°♋57'10	
conjunction	7869 Nov 07 14:52	20°♍15'05	1°50'23	conjunction	7876 Jan 27 21:49	9°♋04'24	1°10'29
minimum elong	7869 Nov 07 14:50	20°♍15'04	1°50'28	minimum elong	7876 Jan 27 21:51	9°♋04'25	1°10'36
max. Earth dist.	7869 Nov 07 11:37	20°♍14'03	10.23978 AU	max. Earth dist.	7876 Jan 27 19:06	9°♋03'33	10.57355 AU
morning rise	7869 Nov 25 09:40	22°♍30'00		morning rise	7876 Feb 14 00:42	11°♋10'32	
	7870 Feb 15 13:55	0°♈♊			7876 Mar 19 06:21	15°♋	
retrograde	7870 Mar 08 12:19	0°♈♊24'05		retrograde	7876 May 24 13:13	18°♋34'40	
	7870 Mar 29 12:13	30°♈♍		opposition	7876 Jul 31 17:01	15°♋14'29	1°13'20
opposition	7870 May 14 12:55	26°♍58'23	2°23'25	min. Earth dist.	7876 Jul 31 19:08	15°♋14'04	8.60896 AU
min. Earth dist.	7870 May 14 15:26	26°♍57'52	8.25394 AU		7876 Aug 03 20:07	15°♈♋	
direct	7870 Jul 21 14:56	23°♍30'02		direct	7876 Oct 09 19:35	11°♋49'50	
	7870 Oct 22 12:56	0°♈♊			7876 Dec 12 12:40	15°♋	
evening set	7870 Nov 04 02:51	1°♈♊31'56		evening set	7877 Jan 22 12:04	19°♋27'00	
conjunction	7870 Nov 21 21:38	3°♈♊46'28	1°58'57	conjunction	7877 Feb 08 16:15	21°♋32'40	0°47'30
minimum elong	7870 Nov 21 21:37	3°♈♊46'28	1°59'04	minimum elong	7877 Feb 08 16:16	21°♋32'41	0°47'36
max. Earth dist.	7870 Nov 21 17:37	3°♈♊45'11	10.26913 AU	max. Earth dist.	7877 Feb 08 13:53	21°♋31'57	10.64326 AU
morning rise	7870 Dec 09 13:45	6°♈♊00'14		morning rise	7877 Feb 25 17:02	23°♋37'21	
retrograde	7871 Mar 22 03:34	13°♈♊50'12			7877 May 03 19:51	0°♈♋	
opposition	7871 May 28 03:14	10°♈♊25'25	2°29'56	retrograde	7877 Jun 06 03:39	0°♈♊57'17	
min. Earth dist.	7871 May 28 06:33	10°♈♊24'45	8.29073 AU		7877 Jul 10 02:11	30°♈♋	
direct	7871 Aug 04 13:28	6°♈♊57'10		opposition	7877 Aug 13 16:06	27°♋37'40	0°43'35
evening set	7871 Nov 18 07:54	14°♈♊57'44		min. Earth dist.	7877 Aug 13 18:12	27°♋37'16	8.67633 AU
				direct	7877 Oct 22 22:39	24°♋14'00	
conjunction	7871 Dec 06 00:18	17°♈♊11'04	2°00'59		7878 Jan 20 00:19	0°♈♋	
minimum elong	7871 Dec 06 00:18	17°♈♊11'04	2°01'06	evening set	7878 Feb 04 03:01	1°♈♋45'26	
max. Earth dist.	7871 Dec 05 19:26	17°♈♊09'31	10.31271 AU				
morning rise	7871 Dec 23 13:36	19°♈♊23'27		conjunction	7878 Feb 21 04:43	3°♈♋49'38	0°22'38
retrograde	7872 Apr 03 12:48	27°♈♊08'32		minimum elong	7878 Feb 21 04:44	3°♈♋49'38	0°22'42
opposition	7872 Jun 09 15:50	23°♈♊44'46	2°28'17	max. Earth dist.	7878 Feb 21 02:17	3°♈♋48'54	10.70774 AU
min. Earth dist.	7872 Jun 09 19:46	23°♈♊43'59	8.34049 AU	morning rise	7878 Mar 10 03:39	5°♈♋52'59	
direct	7872 Aug 17 12:06	20°♈♊16'53		retrograde	7878 Jun 18 13:31	13°♈♋09'37	
evening set	7872 Dec 01 07:34	28°♈♊14'39		opposition	7878 Aug 26 12:10	9°♈♋50'21	0°12'18
	7872 Dec 15 09:08	0°♊		min. Earth dist.	7878 Aug 26 13:39	9°♈♋50'05	8.73678 AU
				direct	7878 Nov 04 22:11	6°♈♋27'37	
conjunction	7872 Dec 18 21:30	0°♊26'33	1°56'32	desc. node	7879 Jan 20 09:13	10°♈♋51'06	
minimum elong	7872 Dec 18 21:31	0°♊26'34	1°56'40	evening set	7879 Feb 16 12:35	13°♈♋53'47	
max. Earth dist.	7872 Dec 18 16:08	0°♊24'52	10.36817 AU				
morning rise	7873 Jan 05 08:02	2°♊37'26		conjunction	7879 Mar 05 12:00	15°♈♋56'39	-0°03'03
retrograde	7873 Apr 16 18:34	10°♊17'13		minimum elong	7879 Mar 05 12:00	15°♈♋56'39	0°03'01
opposition	7873 Jun 23 02:17	6°♊54'27	2°18'49	behind sun begin	7879 Mar 05 04:59	15°♈♋54'33	
min. Earth dist.	7873 Jun 23 06:03	6°♊53'43	8.40056 AU	behind sun end	7879 Mar 05 19:01	15°♈♋58'45	
direct	7873 Aug 31 07:50	3°♊27'10		max. Earth dist.	7879 Mar 05 10:20	15°♈♋56'12	10.76343 AU
evening set	7873 Dec 15 00:48	11°♊20'50		morning rise	7879 Mar 22 09:09	17°♈♋58'50	
				retrograde	7879 Jun 30 23:14	25°♈♋13'16	
conjunction	7874 Jan 01 12:19	13°♊31'14	1°46'05	opposition	7879 Sep 08 06:00	21°♈♋54'09	-0°19'08
minimum elong	7874 Jan 01 12:21	13°♊31'14	1°46'12	min. Earth dist.	7879 Sep 08 06:25	21°♈♋54'05	8.78687 AU

direct	7879 Nov 17 18:03	18° K 32'19	direct	7886 Jan 29 04:56	29° S 50'52
evening set	7880 Feb 28 17:37	25° K 53'54		7886 Feb 11 13:38	0° II
			evening set	7886 May 09 16:38	7° II 04'06
conjunction	7880 Mar 16 14:57	27° K 55'39 -0°28'14			
minimum elong	7880 Mar 16 14:56	27° K 55'38 0°28'13	conjunction	7886 May 26 10:24	9° II 05'05 -2°01'19
max. Earth dist.	7880 Mar 16 14:36	27° K 55'32 10.80712 AU	minimum elong	7886 May 26 10:24	9° II 05'05 2°01'27
morning rise	7880 Apr 02 10:26	29° K 56'53	max. Earth dist.	7886 May 26 14:11	9° II 06'14 10.77694 AU
	7880 Apr 02 21:00	0° Y	morning rise	7886 Jun 12 06:44	11° II 06'51
retrograde	7880 Jul 12 08:10	7° Y 10'19	retrograde	7886 Sep 24 03:35	18° II 34'12
opposition	7880 Sep 19 22:01	3° Y 51'11 -0°49'25	opposition	7886 Dec 03 13:46	15° II 11'23 -2°29'42
min. Earth dist.	7880 Sep 19 21:37	3° Y 51'16 8.82397 AU	min. Earth dist.	7886 Dec 03 10:14	15° II 12'03 8.75505 AU
direct	7880 Nov 29 08:07	0° Y 30'10	direct	7887 Feb 10 13:02	11° II 51'30
evening set	7881 Mar 11 19:32	7° Y 48'05	evening set	7887 May 21 20:49	19° II 06'32
conjunction	7881 Mar 28 14:59	9° Y 48'57 -0°52'03	conjunction	7887 Jun 07 16:28	21° II 08'36 -2°01'01
minimum elong	7881 Mar 28 14:57	9° Y 48'56 0°52'05	minimum elong	7887 Jun 07 16:29	21° II 08'36 2°01'10
max. Earth dist.	7881 Mar 28 15:14	9° Y 49'01 10.83702 AU	max. Earth dist.	7887 Jun 07 20:15	21° II 09'45 10.72786 AU
morning rise	7881 Apr 14 09:15	11° Y 49'31	morning rise	7887 Jun 24 15:23	23° II 11'36
retrograde	7881 Jul 24 15:47	19° Y 03'04		7887 Sep 07 07:59	0° S
opposition	7881 Oct 02 12:41	15° Y 43'45 -1°17'23	retrograde	7887 Oct 06 23:48	0° S 43'31
min. Earth dist.	7881 Oct 02 12:14	15° Y 43'50 8.84706 AU		7887 Nov 06 00:08	30° R II
direct	7881 Dec 11 19:38	12° Y 23'22	opposition	7887 Dec 16 07:46	27° II 19'47 -2°26'07
evening set	7882 Mar 23 19:21	19° Y 38'34	min. Earth dist.	7887 Dec 16 04:14	27° II 20'28 8.70120 AU
			direct	7888 Feb 22 23:48	23° II 59'29
conjunction	7882 Apr 09 13:10	21° Y 38'48 -1°13'33		7888 May 22 06:29	0° S
minimum elong	7882 Apr 09 13:08	21° Y 38'47 1°13'37	evening set	7888 Jun 02 04:51	1° S 17'08
max. Earth dist.	7882 Apr 09 13:22	21° Y 38'52 10.85270 AU			
morning rise	7882 Apr 26 06:45	23° Y 38'58	conjunction	7888 Jun 19 03:22	3° S 20'38 -1°55'17
	7882 Jul 04 00:55	0° S	minimum elong	7888 Jun 19 03:24	3° S 20'39 1°55'26
retrograde	7882 Aug 06 00:08	0° S 53'40	max. Earth dist.	7888 Jun 19 08:01	3° S 22'03 10.66997 AU
	7882 Sep 08 14:00	30° R Y	morning rise	7888 Jul 06 05:26	5° S 25'13
opposition	7882 Oct 15 02:46	27° Y 33'56 -1°41'58	retrograde	7888 Oct 19 01:10	13° S 01'54
min. Earth dist.	7882 Oct 15 02:03	27° Y 34'05 8.85588 AU	opposition	7888 Dec 28 03:51	9° S 37'16 -2°15'50
direct	7882 Dec 24 05:46	24° Y 14'01	min. Earth dist.	7888 Dec 27 23:46	9° S 38'03 8.63951 AU
	7883 Mar 23 02:46	0° S	direct	7889 Mar 06 11:28	6° S 16'26
evening set	7883 Apr 04 17:49	1° S 27'22	evening set	7889 Jun 14 17:59	13° S 37'29
conjunction	7883 Apr 21 10:35	3° S 27'16 -1°31'54	conjunction	7889 Jul 01 19:56	15° S 42'41 -1°44'10
minimum elong	7883 Apr 21 10:32	3° S 27'15 1°31'58	minimum elong	7889 Jul 01 19:58	15° S 42'42 1°44'18
max. Earth dist.	7883 Apr 21 11:28	3° S 27'32 10.85407 AU	max. Earth dist.	7889 Jul 02 01:12	15° S 44'19 10.60555 AU
morning rise	7883 May 08 03:54	5° S 27'20	morning rise	7889 Jul 19 01:34	17° S 49'03
retrograde	7883 Aug 18 08:35	12° S 44'07	retrograde	7889 Nov 01 05:37	25° S 30'34
opposition	7883 Oct 27 16:39	9° S 23'46 -2°02'13	opposition	7890 Jan 10 02:19	22° S 05'06 -1°59'04
min. Earth dist.	7883 Oct 27 14:54	9° S 24'06 8.85046 AU	min. Earth dist.	7890 Jan 09 21:52	22° S 05'58 8.57259 AU
direct	7884 Jan 05 14:33	6° S 04'08	direct	7890 Mar 19 02:28	18° S 43'36
evening set	7884 Apr 15 16:09	13° S 16'31	evening set	7890 Jun 27 12:54	26° S 08'46
	7884 Apr 30 02:09	15° S			
conjunction	7884 May 02 08:37	15° S 16'26 -1°46'21	conjunction	7890 Jul 14 18:41	28° S 15'54 -1°27'58
minimum elong	7884 May 02 08:35	15° S 16'25 1°46'27	minimum elong	7890 Jul 14 18:43	28° S 15'55 1°28'05
max. Earth dist.	7884 May 02 11:18	15° S 17'14 10.84140 AU	max. Earth dist.	7890 Jul 14 23:42	28° S 17'27 10.53756 AU
morning rise	7884 May 19 02:10	17° S 16'43		7890 Jul 28 20:36	0° J
retrograde	7884 Aug 29 20:22	24° S 36'23	morning rise	7890 Aug 01 04:18	0° J 24'13
opposition	7884 Nov 08 06:39	21° S 15'16 -2°17'21	retrograde	7890 Nov 14 15:10	8° J 10'25
min. Earth dist.	7884 Nov 08 03:32	21° S 15'51 8.83125 AU	opposition	7891 Jan 23 03:44	4° J 44'14 -1°36'18
direct	7885 Jan 16 22:50	17° S 55'44	min. Earth dist.	7891 Jan 22 23:34	4° J 45'03 8.50368 AU
evening set	7885 Apr 27 15:23	25° S 08'05	direct	7891 Mar 31 20:35	1° J 21'57
			evening set	7891 Jul 10 14:16	8° J 51'49
conjunction	7885 May 14 08:12	27° S 08'22 -1°56'19	conjunction	7891 Jul 28 00:02	11° J 00'57 -1°07'15
minimum elong	7885 May 14 08:11	27° S 08'21 1°56'26	minimum elong	7891 Jul 28 00:04	11° J 00'58 1°07'21
max. Earth dist.	7885 May 14 11:56	27° S 09'29 10.81533 AU	max. Earth dist.	7891 Jul 28 03:55	11° J 02'09 10.46930 AU
morning rise	7885 May 31 02:43	29° S 09'12	morning rise	7891 Aug 14 13:47	13° J 11'17
	7885 Jun 07 08:28	0° II		7891 Aug 29 20:09	15° J
retrograde	7885 Sep 11 11:45	6° II 32'26	retrograde	7891 Nov 28 04:50	21° J 01'47
opposition	7885 Nov 20 21:32	3° II 10'29 -2°26'40	opposition	7892 Feb 05 08:03	17° J 35'02 -1°08'22
min. Earth dist.	7885 Nov 20 17:52	3° II 11'11 8.79901 AU	min. Earth dist.	7892 Feb 05 04:55	17° J 35'39 8.43622 AU
	7886 Jan 15 19:12	30° R S		7892 Mar 13 12:08	15° R J

direct	7892 Apr 12 18:16	14°♏11'53	morning rise	7897 Nov 05 07:14	3°♏20'42	
	7892 May 12 17:46	15°♏	retrograde	7898 Feb 17 06:32	11°♏18'51	
evening set	7892 Jul 22 22:38	21°♏46'57	opposition	7898 Apr 25 10:27	7°♏52'37	2°00'10
			min. Earth dist.	7898 Apr 25 12:23	7°♏52'13	8.23665 AU
conjunction	7892 Aug 09 12:21	23°♏58'03 -0°42'53	direct	7898 Jul 02 01:40	4°♏25'05	
minimum elong	7892 Aug 09 12:22	23°♏58'03 0°42'57	evening set	7898 Oct 14 22:29	12°♏26'05	
max. Earth dist.	7892 Aug 09 15:22	23°♏58'59 10.40416 AU				
morning rise	7892 Aug 27 05:49	26°♏10'17	conjunction	7898 Nov 01 19:41	14°♏41'42	1°44'36
	7892 Sep 29 20:06	0°♏	minimum elong	7898 Nov 01 19:39	14°♏41'42	1°44'42
retrograde	7892 Dec 10 20:27	4°♏04'31	max. Earth dist.	7898 Nov 01 15:50	14°♏40'29	10.24178 AU
opposition	7893 Feb 17 15:03	0°♏37'22 -0°36'30		7898 Nov 04 05:11	15°♏	
min. Earth dist.	7893 Feb 17 12:44	0°♏37'49 8.37375 AU	morning rise	7898 Nov 19 15:42	16°♏56'58	
	7893 Feb 25 11:14	30°♏♏	retrograde	7899 Mar 03 01:02	24°♏52'22	
direct	7893 Apr 25 21:58	27°♏13'19	opposition	7899 May 09 02:05	21°♏26'50	2°17'54
	7893 Jun 22 00:28	0°♏	min. Earth dist.	7899 May 09 05:15	21°♏26'12	8.25261 AU
evening set	7893 Aug 05 13:58	4°♏53'51	direct	7899 Jul 16 00:43	17°♏59'01	
			evening set	7899 Oct 29 08:44	26°♏00'55	
conjunction	7893 Aug 23 07:15	7°♏06'45 -0°15'59	conjunction	7899 Nov 16 04:17	28°♏15'47	1°55'53
minimum elong	7893 Aug 23 07:16	7°♏06'45 0°16'02	minimum elong	7899 Nov 16 04:15	28°♏15'47	1°56'00
max. Earth dist.	7893 Aug 23 09:51	7°♏07'34 10.34563 AU	max. Earth dist.	7899 Nov 15 23:11	28°♏14'10	10.26411 AU
morning rise	7893 Sep 10 03:41	9°♏20'37		7899 Nov 29 21:35	0°♏	
retrograde	7893 Dec 24 14:48	17°♏17'52	morning rise	7899 Dec 03 21:43	0°♏30'02	
opposition	7894 Mar 03 00:52	13°♏50'30 -0°02'15	retrograde	7900 Mar 16 17:00	8°♏21'50	
min. Earth dist.	7894 Mar 02 22:53	13°♏50'54 8.31973 AU	opposition	7900 May 22 17:07	4°♏57'08	2°27'53
asc. node	7894 Mar 27 08:29	11°♏59'38	min. Earth dist.	7900 May 22 20:42	4°♏56'25	8.28158 AU
direct	7894 May 09 06:10	10°♏25'38	direct	7900 Jul 30 00:20	1°♏29'18	
evening set	7894 Aug 19 11:48	18°♏11'33	evening set	7900 Nov 12 15:49	9°♏30'39	
conjunction	7894 Sep 06 07:57	20°♏25'56 0°12'09	conjunction	7900 Nov 30 09:17	11°♏44'29	2°00'43
minimum elong	7894 Sep 06 07:56	20°♏25'56 0°12'08	minimum elong	7900 Nov 30 09:17	11°♏44'29	2°00'51
behind sun begin	7894 Sep 06 03:06	20°♏24'25	max. Earth dist.	7900 Nov 30 04:00	11°♏42'48	10.29927 AU
behind sun end	7894 Sep 06 12:47	20°♏27'27	morning rise	7900 Dec 17 23:51	13°♏57'28	
max. Earth dist.	7894 Sep 06 10:26	20°♏26'42 10.29695 AU	retrograde	7901 Mar 30 05:20	21°♏44'55	
morning rise	7894 Sep 24 06:22	22°♏41'04	opposition	7901 Jun 05 06:56	18°♏21'06	2°29'42
	7894 Dec 10 21:43	0°♏	min. Earth dist.	7901 Jun 05 10:34	18°♏20'22	8.32287 AU
retrograde	7895 Jan 07 12:40	0°♏40'23	direct	7901 Aug 12 23:08	14°♏53'27	
	7895 Feb 04 06:39	30°♏♏	evening set	7901 Nov 26 18:23	22°♏52'44	
opposition	7895 Mar 16 13:04	27°♏13'00 0°32'32	conjunction	7901 Dec 14 09:33	25°♏05'18	1°59'00
min. Earth dist.	7895 Mar 16 11:14	27°♏13'22 8.27718 AU	minimum elong	7901 Dec 14 09:34	25°♏05'18	1°59'08
direct	7895 May 22 17:18	23°♏47'20	max. Earth dist.	7901 Dec 14 04:26	25°♏03'41	10.34640 AU
	7895 Aug 20 03:55	0°♏	morning rise	7901 Dec 31 21:12	27°♏16'51	
evening set	7895 Sep 02 15:44	1°♏38'20		7902 Jan 23 20:46	0°♏	
conjunction	7895 Sep 20 13:42	3°♏53'47 0°39'46	retrograde	7902 Apr 12 14:51	4°♏59'16	
minimum elong	7895 Sep 20 13:40	3°♏53'46 0°39'47	opposition	7902 Jun 18 18:45	1°♏36'21	2°23'30
max. Earth dist.	7895 Sep 20 15:17	3°♏54'17 10.26085 AU	min. Earth dist.	7902 Jun 18 22:37	1°♏35'35	8.37509 AU
morning rise	7895 Oct 08 13:02	6°♏09'42		7902 Jul 09 19:32	30°♏♏	
retrograde	7896 Jan 21 11:58	14°♏09'53	direct	7902 Aug 26 19:01	28°♏09'02	
opposition	7896 Mar 29 03:03	10°♏42'42 1°05'51		7902 Oct 12 23:25	0°♏	
min. Earth dist.	7896 Mar 29 02:07	10°♏42'53 8.24842 AU	evening set	7902 Dec 10 15:08	6°♏04'52	
direct	7896 Jun 04 08:08	7°♏16'18	conjunction	7902 Dec 28 03:52	8°♏16'01	1°51'01
evening set	7896 Sep 16 00:08	15°♏11'45	minimum elong	7902 Dec 28 03:53	8°♏16'02	1°51'09
conjunction	7896 Oct 03 22:48	17°♏27'44 1°05'24	max. Earth dist.	7902 Dec 27 22:45	8°♏14'25	10.40343 AU
minimum elong	7896 Oct 03 22:45	17°♏27'44 1°05'26	morning rise	7903 Jan 14 12:47	10°♏26'03	
max. Earth dist.	7896 Oct 03 22:47	17°♏27'44 10.23925 AU	retrograde	7903 Apr 25 19:37	18°♏03'03	
morning rise	7896 Oct 21 21:55	19°♏43'56	opposition	7903 Jul 02 04:15	14°♏40'59	2°09'53
retrograde	7897 Feb 03 10:14	27°♏43'43	min. Earth dist.	7903 Jul 02 08:37	14°♏40'08	8.43571 AU
opposition	7897 Apr 11 18:29	24°♏16'56 1°35'40	direct	7903 Sep 09 12:43	11°♏14'12	
min. Earth dist.	7897 Apr 11 18:53	24°♏16'51 8.23486 AU	evening set	7903 Dec 24 05:12	19°♏05'27	
direct	7897 Jun 18 03:45	20°♏49'54	conjunction	7904 Jan 10 15:21	21°♏15'03	1°37'26
evening set	7897 Sep 30 10:57	28°♏48'44	minimum elong	7904 Jan 10 15:23	21°♏15'04	1°37'33
	7897 Oct 09 21:34	0°♏	max. Earth dist.	7904 Jan 10 09:55	21°♏13'21	10.46742 AU
conjunction	7897 Oct 18 09:17	1°♏04'46 1°27'27	morning rise	7904 Jan 27 21:46	23°♏23'31	
minimum elong	7897 Oct 18 09:14	1°♏04'45 1°27'31		7904 Apr 05 13:01	0°♏	
max. Earth dist.	7897 Oct 18 07:24	1°♏04'10 10.23306 AU				

retrograde	7904 May 07 18:14	0°≈55'07		minimum elong	7910 Mar 24 23:05	5°Υ05'39	0°42'21
	7904 Jun 09 12:18	30°℞3		max. Earth dist.	7910 Mar 24 23:12	5°Υ05'41	10.81738 AU
opposition	7904 Jul 14 10:52	27°333'49	1°49'56	morning rise	7910 Apr 10 18:04	7°Υ06'33	
min. Earth dist.	7904 Jul 14 15:05	27°332'59	8.50165 AU	retrograde	7910 Jul 20 17:56	14°Υ19'50	
direct	7904 Sep 22 04:05	24°307'40		opposition	7910 Sep 28 14:02	11°Υ00'12	-1°06'02
	7904 Dec 20 11:17	0°≈		min. Earth dist.	7910 Sep 28 12:41	11°Υ00'28	8.83304 AU
evening set	7905 Jan 05 12:09	1°≈53'33		direct	7910 Dec 07 23:57	7°Υ39'11	
				evening set	7911 Mar 20 03:01	14°Υ55'18	
conjunction	7905 Jan 22 19:49	4°≈01'34	1°19'10				
minimum elong	7905 Jan 22 19:51	4°≈01'35	1°19'18	conjunction	7911 Apr 05 21:33	16°Υ55'44	-1°04'52
max. Earth dist.	7905 Jan 22 14:45	4°≈00'00	10.53514 AU	minimum elong	7911 Apr 05 21:32	16°Υ55'44	1°04'55
morning rise	7905 Feb 08 23:56	6°≈08'30		max. Earth dist.	7911 Apr 05 23:33	16°Υ56'20	10.84489 AU
retrograde	7905 May 20 13:14	13°≈35'00		morning rise	7911 Apr 22 15:22	18°Υ56'01	
opposition	7905 Jul 27 14:16	10°≈14'19	1°24'53	retrograde	7911 Aug 02 03:02	26°Υ09'46	
min. Earth dist.	7905 Jul 27 17:36	10°≈13'40	8.56960 AU	opposition	7911 Oct 11 03:48	22°Υ49'55	-1°32'05
direct	7905 Oct 05 15:32	6°≈48'57		min. Earth dist.	7911 Oct 11 01:01	22°Υ50'26	8.85421 AU
evening set	7906 Jan 18 12:01	14°≈29'01		direct	7911 Dec 20 10:36	19°Υ29'37	
	7906 Jan 22 18:19	15°≈		evening set	7912 Mar 31 01:15	26°Υ43'10	
conjunction	7906 Feb 04 17:22	16°≈35'30	0°57'21	conjunction	7912 Apr 16 18:31	28°Υ43'06	-1°24'34
minimum elong	7906 Feb 04 17:24	16°≈35'30	0°57'27	minimum elong	7912 Apr 16 18:29	28°Υ43'05	1°24'38
max. Earth dist.	7906 Feb 04 13:33	16°≈34'19	10.60314 AU	max. Earth dist.	7912 Apr 16 21:48	28°Υ44'05	10.85893 AU
morning rise	7906 Feb 21 19:16	18°≈40'56			7912 Apr 27 10:37	0°8	
retrograde	7906 Jun 02 05:30	26°≈02'56		morning rise	7912 May 03 11:43	0°843'03	
opposition	7906 Aug 09 14:33	22°≈42'42	0°56'14	retrograde	7912 Aug 13 11:07	7°858'13	
min. Earth dist.	7906 Aug 09 16:33	22°≈42'19	8.63616 AU	opposition	7912 Oct 22 17:01	4°838'02	-1°54'10
direct	7906 Oct 18 20:40	19°≈18'12		min. Earth dist.	7912 Oct 22 13:38	4°838'41	8.86165 AU
evening set	7907 Jan 31 05:30	26°≈52'27		direct	7912 Dec 31 17:04	1°818'17	
				evening set	7913 Apr 11 23:01	8°830'17	
conjunction	7907 Feb 17 08:29	28°≈57'26	0°33'08				
minimum elong	7907 Feb 17 08:30	28°≈57'26	0°33'12	conjunction	7913 Apr 28 15:26	10°829'59	-1°40'41
max. Earth dist.	7907 Feb 17 06:26	28°≈56'48	10.66802 AU	minimum elong	7913 Apr 28 15:24	10°829'58	1°40'45
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morning rise	7907 Mar 06 08:12	1°℥01'28		morning rise	7913 May 15 08:45	12°829'57	
retrograde	7907 Jun 14 17:49	8°℥19'46			7913 Jun 06 13:10	15°8	
opposition	7907 Aug 22 11:55	4°℥59'54	0°25'25	retrograde	7913 Aug 25 20:12	19°847'24	
min. Earth dist.	7907 Aug 22 13:07	4°℥59'40	8.69828 AU	opposition	7913 Nov 04 06:06	16°826'45	-2°11'27
direct	7907 Oct 31 21:14	1°℥36'17		min. Earth dist.	7913 Nov 04 02:46	16°827'23	8.85512 AU
evening set	7908 Feb 12 17:14	9°℥05'02			7913 Nov 24 04:45	15°℞8	
				direct	7914 Jan 13 00:33	13°807'21	
conjunction	7908 Feb 29 17:48	11°℥08'35	0°07'44		7914 Mar 02 01:52	15°8	
minimum elong	7908 Feb 29 17:48	11°℥08'35	0°07'47	evening set	7914 Apr 23 21:08	20°818'46	
behind sun begin	7908 Feb 29 11:26	11°℥06'40					
behind sun end	7908 Mar 01 00:11	11°℥10'30		conjunction	7914 May 10 13:27	22°818'35	-1°52'33
max. Earth dist.	7908 Feb 29 16:40	11°℥08'15	10.72698 AU	minimum elong	7914 May 10 13:25	22°818'35	1°52'39
morning rise	7908 Mar 17 15:38	13°℥11'23		max. Earth dist.	7914 May 10 17:14	22°819'44	10.84542 AU
desc. node	7908 Jun 22 01:04	20°℥26'04		morning rise	7914 May 27 07:29	24°818'54	
retrograde	7908 Jun 26 04:10	20°℥26'57			7914 Jul 23 20:32	0°II	
opposition	7908 Sep 03 06:47	17°℥07'19	-0°06'07	retrograde	7914 Sep 07 08:19	1°II39'25	
min. Earth dist.	7908 Sep 03 07:32	17°℥07'11	8.75336 AU		7914 Oct 24 03:43	30°℞8	
direct	7908 Nov 12 17:54	13°℥44'36		opposition	7914 Nov 16 19:52	28°818'11	-2°23'12
evening set	7909 Feb 23 24:00	21°℥08'21		min. Earth dist.	7914 Nov 16 15:55	28°818'56	8.83494 AU
				direct	7915 Jan 25 07:32	24°859'00	
conjunction	7909 Mar 12 22:13	23°℥10'40	-0°17'50		7915 Apr 16 17:50	0°II	
minimum elong	7909 Mar 12 22:12	23°℥10'40	0°17'49	evening set	7915 May 05 20:29	2°II10'41	
max. Earth dist.	7909 Mar 12 21:29	23°℥10'27	10.77751 AU				
morning rise	7909 Mar 29 18:32	25°℥12'24		conjunction	7915 May 22 13:36	4°II11'00	-1°59'39
	7909 May 14 15:00	0°Υ		minimum elong	7915 May 22 13:36	4°II11'00	1°59'47
retrograde	7909 Jul 08 11:35	2°Υ26'17		max. Earth dist.	7915 May 22 18:43	4°II12'33	10.81852 AU
	7909 Sep 04 01:14	30°℞℥		morning rise	7915 Jun 08 08:57	6°II12'00	
opposition	7909 Sep 15 23:20	29°℥06'44	-0°37'01	retrograde	7915 Sep 19 22:48	13°II36'15	
min. Earth dist.	7909 Sep 15 23:26	29°℥06'43	8.79895 AU	opposition	7915 Nov 29 10:39	10°II14'19	-2°28'54
direct	7909 Nov 25 10:00	25°℥44'53		min. Earth dist.	7915 Nov 29 05:45	10°II15'14	8.80186 AU
	7910 Feb 08 12:35	0°Υ		direct	7916 Feb 06 14:50	6°II55'08	
evening set	7910 Mar 08 02:56	3°Υ04'25		evening set	7916 May 16 22:29	14°II08'00	
conjunction	7910 Mar 24 23:07	5°Υ05'40	-0°42'20	conjunction	7916 Jun 02 17:13	16°II09'12	-2°01'38

minimum elong	7916 Jun 02 17:13	16° Π 09'12	2°01'46	conjunction	7922 Aug 18 08:48	1° Π 21'14	-0°28'21
max. Earth dist.	7916 Jun 02 23:17	16° Π 11'02	10.77939 AU	minimum elong	7922 Aug 18 08:49	1° Π 21'15	0°28'24
morning rise	7916 Jun 19 14:36	18° Π 11'13		max. Earth dist.	7922 Aug 18 10:46	1° Π 21'51	10.39395 AU
retrograde	7916 Oct 01 17:57	25° Π 39'38		morning rise	7922 Sep 05 03:39	3° Π 34'01	
opposition	7916 Dec 11 02:46	22° Π 16'56	-2°28'09	retrograde	7922 Dec 19 16:48	11° Π 28'43	
min. Earth dist.	7916 Dec 10 21:27	22° Π 17'57	8.75709 AU	opposition	7923 Feb 26 06:29	8° Π 01'45	-0°17'58
direct	7917 Feb 17 22:46	18° Π 57'34		min. Earth dist.	7923 Feb 26 05:05	8° Π 02'02	8.36286 AU
evening set	7917 May 29 04:01	26° Π 12'29		direct	7923 May 04 12:09	4° Π 37'32	
				evening set	7923 Aug 14 11:08	12° Π 19'45	
conjunction	7917 Jun 15 01:01	28° Π 14'53	-1°58'16				
minimum elong	7917 Jun 15 01:02	28° Π 14'53	1°58'24	conjunction	7923 Sep 01 05:49	14° Π 33'12	-0°00'46
max. Earth dist.	7917 Jun 15 06:33	28° Π 16'34	10.72943 AU	minimum elong	7923 Sep 01 05:48	14° Π 33'12	0°00'47
	7917 Jun 29 12:07	0° Ξ		behind sun begin	7923 Aug 31 22:31	14° Π 30'56	
morning rise	7917 Jul 02 01:19	0° Ξ 18'17		behind sun end	7923 Sep 01 13:04	14° Π 35'28	
retrograde	7917 Oct 14 16:36	7° Ξ 51'09		max. Earth dist.	7923 Sep 01 06:08	14° Π 33'17	10.33443 AU
opposition	7917 Dec 23 20:57	4° Ξ 27'40	-2°20'49	asc. node	7923 Sep 11 04:43	15° Π 48'16	
min. Earth dist.	7917 Dec 23 16:21	4° Ξ 28'33	8.70206 AU	morning rise	7923 Sep 19 03:19	16° Π 47'31	
direct	7918 Mar 02 07:41	1° Ξ 07'51		retrograde	7924 Jan 02 12:28	24° Π 44'54	
evening set	7918 Jun 10 13:50	8° Ξ 25'40		opposition	7924 Mar 10 16:39	21° Π 17'38	0°16'39
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conjunction	7918 Jun 27 13:48	10° Ξ 29'35	-1°49'31	direct	7924 May 16 20:55	17° Π 52'21	
minimum elong	7918 Jun 27 13:50	10° Ξ 29'36	1°49'39	evening set	7924 Aug 27 11:17	25° Π 40'05	
max. Earth dist.	7918 Jun 27 18:20	10° Ξ 30'58	10.67014 AU				
morning rise	7918 Jul 14 17:37	12° Ξ 34'39		conjunction	7924 Sep 14 08:15	27° Π 54'51	0°27'13
retrograde	7918 Oct 27 17:09	20° Ξ 12'12		minimum elong	7924 Sep 14 08:14	27° Π 54'51	0°27'13
opposition	7919 Jan 05 17:28	16° Ξ 47'54	-2°06'55	max. Earth dist.	7924 Sep 14 07:18	27° Π 54'33	10.28574 AU
min. Earth dist.	7919 Jan 05 13:51	16° Ξ 48'36	8.63846 AU		7924 Sep 30 22:11	0° Ξ	
direct	7919 Mar 14 20:52	13° Ξ 27'27		morning rise	7924 Oct 02 07:18	0° Ξ 10'16	
evening set	7919 Jun 23 04:57	20° Ξ 49'00		retrograde	7925 Jan 15 08:49	8° Ξ 09'21	
				opposition	7925 Mar 24 04:54	4° Ξ 41'59	0°50'46
conjunction	7919 Jul 10 08:39	22° Ξ 54'45	-1°35'34	min. Earth dist.	7925 Mar 24 05:43	4° Ξ 41'49	8.26642 AU
minimum elong	7919 Jul 10 08:41	22° Ξ 54'46	1°35'43	direct	7925 May 30 10:43	1° Ξ 15'44	
max. Earth dist.	7919 Jul 10 12:33	22° Ξ 55'58	10.60344 AU	evening set	7925 Sep 10 16:36	9° Ξ 08'31	
morning rise	7919 Jul 27 16:22	25° Ξ 01'42					
	7919 Sep 12 06:00	0° Ω		conjunction	7925 Sep 28 14:55	11° Ξ 24'10	0°53'53
retrograde	7919 Nov 09 23:04	2° Ω 44'02		minimum elong	7925 Sep 28 14:53	11° Ξ 24'09	0°53'55
	7920 Jan 09 19:58	30° $\mathbb{R}\Xi$		max. Earth dist.	7925 Sep 28 13:21	11° Ξ 23'40	10.25054 AU
opposition	7920 Jan 18 16:25	29° Ξ 18'56	-1°46'51	morning rise	7925 Oct 16 14:19	13° Ξ 40'11	
min. Earth dist.	7920 Jan 18 13:26	29° Ξ 19'31	8.56877 AU	retrograde	7926 Jan 29 05:32	21° Ξ 39'49	
direct	7920 Mar 26 13:23	25° Ξ 57'42		opposition	7926 Apr 06 18:56	18° Ξ 12'34	1°22'22
	7920 Jun 05 03:56	0° Ω		min. Earth dist.	7926 Apr 06 20:05	18° Ξ 12'20	8.23909 AU
evening set	7920 Jul 05 02:13	3° Ω 23'46		direct	7926 Jun 13 04:21	14° Ξ 45'29	
				evening set	7926 Sep 25 01:31	22° Ξ 42'28	
conjunction	7920 Jul 22 10:03	5° Ω 31'32	-1°16'53				
minimum elong	7920 Jul 22 10:06	5° Ω 31'32	1°16'59	conjunction	7926 Oct 13 00:12	24° Ξ 58'31	1°17'43
max. Earth dist.	7920 Jul 22 13:55	5° Ω 32'43	10.53242 AU	minimum elong	7926 Oct 13 00:10	24° Ξ 58'31	1°17'47
morning rise	7920 Aug 08 21:43	7° Ω 40'29		max. Earth dist.	7926 Oct 12 22:06	24° Ξ 57'51	10.23074 AU
	7920 Oct 30 05:00	15° Ω		morning rise	7926 Oct 30 22:51	27° Ξ 14'37	
retrograde	7920 Nov 22 09:44	15° Ω 27'26			7926 Nov 23 00:47	0° \mathbb{M}	
	7920 Dec 15 16:43	15° $\mathbb{R}\Omega$		retrograde	7927 Feb 12 02:52	5° \mathbb{M} 13'36	
opposition	7921 Jan 30 18:13	12° Ω 01'36	-1°21'15	opposition	7927 Apr 20 10:04	1° \mathbb{M} 46'40	1°49'31
min. Earth dist.	7921 Jan 30 15:16	12° Ω 02'11	8.49678 AU	min. Earth dist.	7927 Apr 20 11:38	1° \mathbb{M} 46'21	8.22778 AU
direct	7921 Apr 08 08:33	8° Ω 39'28			7927 May 13 09:40	30° $\mathbb{R}\Xi$	
	7921 Jul 08 10:51	15° Ω		direct	7927 Jun 26 23:15	28° Ξ 18'56	
evening set	7921 Jul 18 06:14	16° Ω 10'37			7927 Aug 09 22:49	0° \mathbb{M}	
				evening set	7927 Oct 09 12:32	6° \mathbb{M} 19'01	
conjunction	7921 Aug 04 18:05	18° Ω 20'25	-0°54'08				
minimum elong	7921 Aug 04 18:07	18° Ω 20'25	0°54'13	conjunction	7927 Oct 27 10:33	8° \mathbb{M} 34'58	1°37'17
max. Earth dist.	7921 Aug 04 21:22	18° Ω 21'26	10.46118 AU	minimum elong	7927 Oct 27 10:31	8° \mathbb{M} 34'58	1°37'21
morning rise	7921 Aug 22 09:32	20° Ω 31'21		max. Earth dist.	7927 Oct 27 07:42	8° \mathbb{M} 34'04	10.22732 AU
retrograde	7921 Dec 05 23:42	28° Ω 22'31		morning rise	7927 Nov 14 07:29	10° \mathbb{M} 50'39	
opposition	7922 Feb 12 22:55	24° Ω 56'02	-0°51'10		7927 Dec 20 09:26	15° \mathbb{M}	
min. Earth dist.	7922 Feb 12 20:26	24° Ω 56'32	8.42678 AU	retrograde	7928 Feb 25 23:38	18° \mathbb{M} 47'40	
direct	7922 Apr 21 08:11	21° Ω 32'54		opposition	7928 May 03 01:35	15° \mathbb{M} 21'18	2°10'34
evening set	7922 Jul 31 17:16	29° Ω 09'30		min. Earth dist.	7928 May 03 03:53	15° \mathbb{M} 20'50	8.23302 AU
	7922 Aug 07 12:48	0° Π			7928 May 07 10:36	15° $\mathbb{R}\mathbb{M}$	
				direct	7928 Jul 09 20:27	11° \mathbb{M} 53'07	





























































































































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evening set	7928 Oct 22 23:22	19°♄54'56		minimum elong	7935 Jan 30 01:31	10°≈57'36	1°08'04
				max. Earth dist.	7935 Jan 29 22:24	10°≈56'39	10.57342 AU
conjunction	7928 Nov 09 19:54	22°♄10'19	1°51'24	morning rise	7935 Feb 16 04:20	13°≈03'43	
minimum elong	7928 Nov 09 19:51	22°♄10'19	1°51'29		7935 Mar 04 16:26	15°≈	
max. Earth dist.	7928 Nov 09 15:59	22°♄09'05	10.24050 AU	retrograde	7935 May 27 17:00	20°≈27'48	
morning rise	7928 Nov 27 14:31	24°♄25'11		opposition	7935 Aug 03 21:12	17°≈07'36	1°10'01
	7929 Jan 18 00:12	0°♄		min. Earth dist.	7935 Aug 03 23:48	17°≈07'06	8.60883 AU
retrograde	7929 Mar 10 17:04	2°♄19'06			7935 Sep 02 17:40	15°≈	
	7929 May 02 18:02	30°♄		direct	7935 Oct 12 23:13	13°≈42'57	
opposition	7929 May 16 16:59	28°♄53'27	2°24'16		7935 Nov 21 14:38	15°≈	
min. Earth dist.	7929 May 16 20:18	28°♄52'47	8.25457 AU	evening set	7936 Jan 25 15:48	21°≈20'01	
direct	7929 Jul 23 19:32	25°♄25'05					
	7929 Oct 07 20:35	0°♄		conjunction	7936 Feb 11 19:46	23°≈25'39	0°44'42
evening set	7929 Nov 06 07:52	3°♄27'02		minimum elong	7936 Feb 11 19:48	23°≈25'40	0°44'47
				max. Earth dist.	7936 Feb 11 16:54	23°≈24'47	10.64321 AU
conjunction	7929 Nov 24 02:22	5°♄41'30	1°59'17	morning rise	7936 Feb 28 20:35	25°≈30'20	
minimum elong	7929 Nov 24 02:21	5°♄41'30	1°59'24		7936 Apr 10 12:13	0°♄	
max. Earth dist.	7929 Nov 23 21:20	5°♄39'54	10.26964 AU	retrograde	7936 Jun 08 06:05	2°♄50'18	
morning rise	7929 Dec 11 18:23	7°♄55'14			7936 Aug 09 10:11	30°≈	
retrograde	7930 Mar 24 06:14	15°♄45'02		opposition	7936 Aug 15 20:19	29°≈30'40	0°40'01
opposition	7930 May 30 07:20	12°♄20'17	2°29'55	min. Earth dist.	7936 Aug 15 22:06	29°≈30'19	8.67637 AU
min. Earth dist.	7930 May 30 11:16	12°♄19'29	8.29119 AU	direct	7936 Oct 25 03:46	26°≈07'01	
direct	7930 Aug 06 19:17	8°♄51'59			7937 Jan 04 11:01	0°♄	
evening set	7930 Nov 20 12:37	16°♄52'32		evening set	7937 Feb 06 06:32	3°♄38'22	
conjunction	7930 Dec 08 04:51	19°♄05'47	2°00'37	conjunction	7937 Feb 23 08:09	5°♄42'32	0°19'41
minimum elong	7930 Dec 08 04:51	19°♄05'48	2°00'45	minimum elong	7937 Feb 23 08:09	5°♄42'32	0°19'46
max. Earth dist.	7930 Dec 07 23:16	19°♄04'01	10.31309 AU	max. Earth dist.	7937 Feb 23 06:16	5°♄41'58	10.70802 AU
morning rise	7930 Dec 25 18:05	21°♄18'08		morning rise	7937 Mar 12 07:00	7°♄45'52	
retrograde	7931 Apr 06 16:15	29°♄03'05		retrograde	7937 Jun 20 17:52	15°♄02'36	
opposition	7931 Jun 12 19:52	25°♄39'17	2°27'25	opposition	7937 Aug 28 16:26	11°♄43'19	0°08'39
min. Earth dist.	7931 Jun 12 23:46	25°♄38'30	8.34079 AU	min. Earth dist.	7937 Aug 28 16:54	11°♄43'14	8.73737 AU
direct	7931 Aug 20 16:52	22°♄11'21		direct	7937 Nov 07 03:20	8°♄20'40	
	7931 Dec 03 06:42	0°♄		desc. node	7937 Dec 09 22:27	9°♄13'36	
evening set	7931 Dec 04 12:02	0°♄09'01		evening set	7938 Feb 18 15:56	15°♄46'41	
conjunction	7931 Dec 22 01:54	2°♄20'54	1°55'31	conjunction	7938 Mar 07 15:21	17°♄49'32	-0°06'00
minimum elong	7931 Dec 22 01:55	2°♄20'55	1°55'38	minimum elong	7938 Mar 07 15:21	17°♄49'32	0°05'58
max. Earth dist.	7931 Dec 21 20:36	2°♄19'14	10.36839 AU	behind sun begin	7938 Mar 07 08:38	17°♄47'31	
morning rise	7932 Jan 08 12:19	4°♄31'44		behind sun end	7938 Mar 07 22:04	17°♄51'33	
retrograde	7932 Apr 18 22:40	12°♄11'22		max. Earth dist.	7938 Mar 07 14:56	17°♄49'25	10.76448 AU
opposition	7932 Jun 25 06:19	8°♄48'33	2°17'10	morning rise	7938 Mar 24 12:19	19°♄51'41	
min. Earth dist.	7932 Jun 25 09:31	8°♄47'55	8.40062 AU	retrograde	7938 Jul 03 03:48	27°♄06'10	
direct	7932 Sep 02 12:08	5°♄21'15		opposition	7938 Sep 10 10:14	23°♄47'04	-0°22'42
evening set	7932 Dec 17 04:59	13°♄14'45		min. Earth dist.	7938 Sep 10 09:54	23°♄47'08	8.78847 AU
				direct	7938 Nov 19 20:48	20°♄25'19	
conjunction	7933 Jan 03 16:29	15°♄25'08	1°44'27	evening set	7939 Mar 02 20:58	27°♄46'43	
minimum elong	7933 Jan 03 16:31	15°♄25'09	1°44'35				
max. Earth dist.	7933 Jan 03 12:21	15°♄23'50	10.43251 AU	conjunction	7939 Mar 19 18:10	29°♄48'24	-0°31'03
morning rise	7933 Jan 21 00:09	17°♄34'23		minimum elong	7939 Mar 19 18:09	29°♄48'23	0°31'03
retrograde	7933 May 02 00:47	25°♄08'36		max. Earth dist.	7939 Mar 19 18:29	29°♄48'30	10.80932 AU
opposition	7933 Jul 08 14:12	21°♄46'45	2°00'01		7939 Mar 21 08:31	0°♄	
min. Earth dist.	7933 Jul 08 16:54	21°♄46'13	8.46753 AU	morning rise	7939 Apr 05 13:31	1°♄49'35	
direct	7933 Sep 16 04:07	18°♄20'13		retrograde	7939 Jul 15 11:35	9°♄03'00	
evening set	7933 Dec 30 15:21	26°♄08'41		opposition	7939 Sep 23 02:12	5°♄43'55	-0°52'44
				min. Earth dist.	7939 Sep 23 01:51	5°♄43'58	8.82680 AU
conjunction	7934 Jan 17 00:25	28°♄17'30	1°28'15	direct	7939 Dec 02 11:52	2°♄22'58	
minimum elong	7934 Jan 17 00:27	28°♄17'30	1°28'22	evening set	7940 Mar 13 22:44	9°♄40'39	
max. Earth dist.	7934 Jan 16 21:08	28°♄16'28	10.50203 AU				
	7934 Jan 30 19:14	0°≈		conjunction	7940 Mar 30 17:55	11°♄41'25	-0°54'37
morning rise	7934 Feb 03 05:33	0°≈25'10		minimum elong	7940 Mar 30 17:54	11°♄41'25	0°54'39
retrograde	7934 May 14 23:12	7°≈54'05		max. Earth dist.	7940 Mar 30 17:56	11°♄41'25	10.84033 AU
opposition	7934 Jul 21 19:06	4°≈33'08	1°37'10	morning rise	7940 Apr 16 12:12	13°♄41'56	
min. Earth dist.	7934 Jul 21 21:48	4°≈32'36	8.53808 AU	retrograde	7940 Jul 26 19:33	20°♄55'27	
direct	7934 Sep 29 15:38	1°≈07'30		opposition	7940 Oct 04 16:51	17°♄36'10	-1°20'19
evening set	7935 Jan 12 18:57	8°≈50'23		min. Earth dist.	7940 Oct 04 16:27	17°♄36'14	8.85081 AU

direct	7940 Dec 13 23:42	14°♈15'53	direct	7947 Feb 25 02:19	25°♊50'24
evening set	7941 Mar 25 22:14	21°♈30'48		7947 May 08 12:47	0°♊
			evening set	7947 Jun 05 07:09	3°♊07'49
conjunction	7941 Apr 11 15:55	23°♈30'58 -1°15'45			
minimum elong	7941 Apr 11 15:53	23°♈30'57 1°15'48	conjunction	7947 Jun 22 05:56	5°♊11'20 -1°54'09
max. Earth dist.	7941 Apr 11 16:21	23°♈31'06 10.85667 AU	minimum elong	7947 Jun 22 05:58	5°♊11'20 1°54'17
morning rise	7941 Apr 28 09:30	25°♈31'05	max. Earth dist.	7947 Jun 22 11:10	5°♊12'56 10.67251 AU
	7941 Jun 09 21:55	0°♈	morning rise	7947 Jul 09 08:06	7°♊15'54
retrograde	7941 Aug 08 02:33	2°♈45'45	retrograde	7947 Oct 22 03:33	14°♊52'26
	7941 Oct 09 16:26	30°♈	opposition	7947 Dec 31 06:27	11°♊27'47 -2°14'05
opposition	7941 Oct 17 06:40	29°♈26'04 -1°44'23	min. Earth dist.	7947 Dec 31 01:56	11°♊28'39 8.64173 AU
min. Earth dist.	7941 Oct 17 05:21	29°♈26'19 8.86006 AU	direct	7948 Mar 08 14:05	8°♊06'58
direct	7941 Dec 26 09:17	26°♈06'16	evening set	7948 Jun 16 20:19	15°♊27'48
	7942 Mar 07 16:05	0°♈			
evening set	7942 Apr 06 20:34	3°♈19'21	conjunction	7948 Jul 03 22:29	17°♊33'02 -1°42'30
			minimum elong	7948 Jul 03 22:31	17°♊33'03 1°42'38
conjunction	7942 Apr 23 13:22	5°♈19'12 -1°33'38	max. Earth dist.	7948 Jul 04 03:26	17°♊34'34 10.60754 AU
minimum elong	7942 Apr 23 13:19	5°♈19'11 1°33'43	morning rise	7948 Jul 21 04:23	19°♊39'26
max. Earth dist.	7942 Apr 23 15:14	5°♈19'46 10.85825 AU	retrograde	7948 Nov 03 09:09	27°♊20'43
morning rise	7942 May 10 06:34	7°♈19'12	opposition	7949 Jan 12 04:42	23°♊55'15 -1°56'43
retrograde	7942 Aug 20 12:36	14°♈35'58	min. Earth dist.	7949 Jan 12 00:34	23°♊56'03 8.57423 AU
opposition	7942 Oct 29 20:14	11°♈15'40 -2°04'01	direct	7949 Mar 21 04:12	20°♊33'42
min. Earth dist.	7942 Oct 29 17:37	11°♈16'09 8.85467 AU	evening set	7949 Jun 29 15:18	27°♊58'43
direct	7943 Jan 07 18:43	7°♈56'10			
	7943 Apr 17 14:41	15°♈	conjunction	7949 Jul 16 21:15	0°♊05'53 -1°25'51
evening set	7943 Apr 18 18:51	15°♈08'18	minimum elong	7949 Jul 16 21:17	0°♊05'53 1°25'58
				7949 Jul 16 02:15	0°♊
conjunction	7943 May 05 11:18	17°♈08'10 -1°47'34	max. Earth dist.	7949 Jul 17 01:11	0°♊07'06 10.53895 AU
minimum elong	7943 May 05 11:16	17°♈08'09 1°47'40	morning rise	7949 Aug 03 07:14	2°♊14'15
max. Earth dist.	7943 May 05 14:30	17°♈09'08 10.84549 AU	retrograde	7949 Nov 16 18:00	10°♊00'11
morning rise	7943 May 22 04:48	19°♈08'23	opposition	7950 Jan 25 05:56	6°♊33'59 -1°33'26
retrograde	7943 Sep 02 01:05	26°♈28'01	min. Earth dist.	7950 Jan 25 02:41	6°♊34'38 8.50466 AU
opposition	7943 Nov 11 10:13	23°♈06'58 -2°18'28	direct	7950 Apr 02 22:08	3°♊11'37
min. Earth dist.	7943 Nov 11 06:56	23°♈07'35 8.83526 AU	evening set	7950 Jul 12 16:35	10°♊41'25
direct	7944 Jan 20 00:55	19°♈47'34			
evening set	7944 Apr 29 17:58	26°♈59'39	conjunction	7950 Jul 30 02:34	12°♊50'34 -1°04'47
			minimum elong	7950 Jul 30 02:37	12°♊50'35 1°04'53
conjunction	7944 May 16 10:42	28°♈59'52 -1°56'57	max. Earth dist.	7950 Jul 30 05:52	12°♊51'36 10.46999 AU
minimum elong	7944 May 16 10:41	28°♈59'52 1°57'04	morning rise	7950 Aug 16 16:36	15°♊00'56
max. Earth dist.	7944 May 16 14:00	29°♈00'52 10.81921 AU		7950 Aug 16 13:32	15°♊
	7944 May 24 18:02	0°♊	retrograde	7950 Nov 30 05:50	22°♊51'14
morning rise	7944 Jun 02 05:23	1°♊00'42	opposition	7951 Feb 07 10:04	19°♊24'26 -1°05'09
retrograde	7944 Sep 13 13:54	8°♊23'51	min. Earth dist.	7951 Feb 07 07:28	19°♊24'57 8.43651 AU
opposition	7944 Nov 23 00:59	5°♊01'57 -2°27'04	direct	7951 Apr 15 21:31	16°♊01'12
min. Earth dist.	7944 Nov 22 21:47	5°♊02'34 8.80274 AU	evening set	7951 Jul 26 00:56	23°♊36'13
direct	7945 Jan 31 07:32	1°♊42'25			
evening set	7945 May 11 19:08	8°♊55'26	conjunction	7951 Aug 12 14:57	25°♊47'22 -0°40'10
			minimum elong	7951 Aug 12 14:59	25°♊47'23 0°40'15
conjunction	7945 May 28 12:59	10°♊56'23 -2°01'21	max. Earth dist.	7951 Aug 12 18:10	25°♊48'22 10.40411 AU
minimum elong	7945 May 28 12:58	10°♊56'23 2°01'29	morning rise	7951 Aug 30 08:34	27°♊59'37
max. Earth dist.	7945 May 28 16:20	10°♊57'24 10.78052 AU		7951 Sep 16 05:11	0°♊
morning rise	7945 Jun 14 09:32	12°♊58'08	retrograde	7951 Dec 13 21:35	5°♊53'43
retrograde	7945 Sep 26 06:27	20°♊25'22	opposition	7952 Feb 20 16:53	2°♊26'29 -0°33'04
opposition	7945 Dec 05 16:51	17°♊02'35 -2°29'21	min. Earth dist.	7952 Feb 20 14:28	2°♊26'58 8.37331 AU
min. Earth dist.	7945 Dec 05 13:37	17°♊03'12 8.75840 AU		7952 Mar 25 20:41	30°♊
direct	7946 Feb 12 16:52	13°♊42'45	direct	7952 Apr 28 00:45	29°♊02'22
evening set	7946 May 23 23:12	20°♊57'33		7952 May 30 18:22	0°♊
			evening set	7952 Aug 07 16:23	6°♊42'54
conjunction	7946 Jun 09 19:06	22°♊59'37 -2°00'27			
minimum elong	7946 Jun 09 19:07	22°♊59'37 2°00'36	conjunction	7952 Aug 25 09:57	8°♊55'51 -0°13'11
max. Earth dist.	7946 Jun 09 23:22	23°♊00'55 10.73097 AU	minimum elong	7952 Aug 25 09:57	8°♊55'51 0°13'14
morning rise	7946 Jun 26 18:08	25°♊02'38	behind sun begin	7952 Aug 25 05:49	8°♊54'34
	7946 Aug 12 22:29	0°♊	behind sun end	7952 Aug 25 14:06	8°♊57'09
retrograde	7946 Oct 09 03:04	2°♊34'23	max. Earth dist.	7952 Aug 25 12:51	8°♊56'46 10.34478 AU
	7946 Dec 07 14:05	30°♊	morning rise	7952 Sep 12 06:25	11°♊09'45
opposition	7946 Dec 18 10:35	29°♊10'40 -2°25'02	retrograde	7952 Dec 26 17:55	19°♊06'53
min. Earth dist.	7946 Dec 18 06:37	29°♊11'25 8.70402 AU	asc. node	7953 Feb 19 19:29	16°♊42'33

opposition	7953 Mar 05 02:34	15° \mathring{M} 39'27	0°01'13	retrograde	7959 Mar 18 19:03	10° \mathring{A} 12'15	
min. Earth dist.	7953 Mar 05 00:22	15° \mathring{M} 39'54	8.31849 AU	opposition	7959 May 24 19:26	6° \mathring{A} 47'34	2°28'12
direct	7953 May 11 07:08	12° \mathring{M} 14'29		min. Earth dist.	7959 May 24 22:34	6° \mathring{A} 46'57	8.28212 AU
evening set	7953 Aug 21 14:26	20° \mathring{M} 00'31		direct	7959 Aug 01 03:05	3° \mathring{A} 19'45	
				evening set	7959 Nov 14 18:57	11° \mathring{A} 21'08	
conjunction	7953 Sep 08 10:39	22° \mathring{M} 14'56	0°14'54	conjunction	7959 Dec 02 12:20	13° \mathring{A} 34'56	2°00'39
minimum elong	7953 Sep 08 10:38	22° \mathring{M} 14'56	0°14'53	minimum elong	7959 Dec 02 12:19	13° \mathring{A} 34'56	2°00'46
behind sun begin	7953 Sep 08 08:04	22° \mathring{M} 14'08		max. Earth dist.	7959 Dec 02 07:27	13° \mathring{A} 33'23	10.30012 AU
behind sun end	7953 Sep 08 13:12	22° \mathring{M} 15'44		morning rise	7959 Dec 20 02:38	15° \mathring{A} 47'51	
max. Earth dist.	7953 Sep 08 12:51	22° \mathring{M} 15'38	10.29531 AU	retrograde	7960 Mar 31 08:52	23° \mathring{A} 35'11	
morning rise	7953 Sep 26 09:03	24° \mathring{M} 30'05		opposition	7960 Jun 06 09:16	20° \mathring{A} 11'26	2°29'12
	7953 Nov 16 02:54	0° \mathring{A}		min. Earth dist.	7960 Jun 06 13:12	20° \mathring{A} 10'39	8.32385 AU
retrograde	7954 Jan 09 15:36	2° \mathring{A} 29'21		direct	7960 Aug 14 00:09	16° \mathring{A} 43'49	
	7954 Mar 06 11:22	30° \mathring{R} \mathring{M}		evening set	7960 Nov 27 21:22	24° \mathring{A} 43'06	
opposition	7954 Mar 18 14:45	29° \mathring{M} 01'55	0°35'52	conjunction	7960 Dec 15 12:21	26° \mathring{A} 55'39	1°58'16
min. Earth dist.	7954 Mar 18 13:12	29° \mathring{M} 02'14	8.27523 AU	minimum elong	7960 Dec 15 12:21	26° \mathring{A} 55'39	1°58'24
direct	7954 May 24 18:41	25° \mathring{M} 36'10		max. Earth dist.	7960 Dec 15 06:50	26° \mathring{A} 53'54	10.34740 AU
	7954 Aug 06 04:32	0° \mathring{A}		morning rise	7961 Jan 01 23:50	29° \mathring{A} 07'10	
evening set	7954 Sep 04 18:27	3° \mathring{A} 27'24			7961 Jan 09 04:43	0° \mathring{B}	
conjunction	7954 Sep 22 16:20	5° \mathring{A} 42'51	0°42'20	retrograde	7961 Apr 13 17:43	6° \mathring{B} 49'29	
minimum elong	7954 Sep 22 16:19	5° \mathring{A} 42'51	0°42'21	opposition	7961 Jun 19 21:17	3° \mathring{B} 26'39	2°22'12
max. Earth dist.	7954 Sep 22 17:00	5° \mathring{A} 43'04	10.25864 AU	min. Earth dist.	7961 Jun 20 01:51	3° \mathring{B} 25'44	8.37605 AU
morning rise	7954 Oct 10 15:41	7° \mathring{A} 58'48			7961 Aug 24 11:26	30° \mathring{R} \mathring{A}	
retrograde	7955 Jan 23 13:55	15° \mathring{A} 59'00		direct	7961 Aug 27 21:21	29° \mathring{A} 59'23	
opposition	7955 Apr 01 04:53	12° \mathring{A} 31'49	1°08'51		7961 Aug 31 07:24	0° \mathring{B}	
min. Earth dist.	7955 Apr 01 04:43	12° \mathring{A} 31'51	8.24607 AU	evening set	7961 Dec 11 17:49	7° \mathring{B} 55'13	
direct	7955 Jun 07 10:32	9° \mathring{A} 05'20		conjunction	7961 Dec 29 06:20	10° \mathring{B} 06'20	1°49'40
evening set	7955 Sep 19 03:01	17° \mathring{A} 01'06		minimum elong	7961 Dec 29 06:22	10° \mathring{B} 06'21	1°49'48
conjunction	7955 Oct 07 01:34	19° \mathring{A} 17'07	1°07'38	max. Earth dist.	7961 Dec 29 00:21	10° \mathring{B} 04'27	10.40428 AU
minimum elong	7955 Oct 07 01:31	19° \mathring{A} 17'06	1°07'41	morning rise	7962 Jan 15 15:15	12° \mathring{B} 16'22	
max. Earth dist.	7955 Oct 07 00:28	19° \mathring{A} 16'46	10.23681 AU	retrograde	7962 Apr 26 20:43	19° \mathring{B} 53'20	
morning rise	7955 Oct 25 00:43	21° \mathring{A} 33'19		opposition	7962 Jul 03 06:51	16° \mathring{B} 31'21	2°07'53
retrograde	7956 Feb 06 12:08	29° \mathring{A} 33'12		min. Earth dist.	7962 Jul 03 11:32	16° \mathring{B} 30'26	8.43643 AU
opposition	7956 Apr 13 20:26	26° \mathring{A} 06'26	1°38'11	direct	7962 Sep 10 16:40	13° \mathring{B} 04'37	
min. Earth dist.	7956 Apr 13 21:31	26° \mathring{A} 06'13	8.23248 AU	evening set	7962 Dec 25 07:46	20° \mathring{B} 55'53	
direct	7956 Jun 20 05:44	22° \mathring{A} 39'21		conjunction	7963 Jan 11 17:48	23° \mathring{B} 05'28	1°35'33
	7956 Sep 27 09:23	0° \mathring{M}		minimum elong	7963 Jan 11 17:50	23° \mathring{B} 05'29	1°35'40
evening set	7956 Oct 02 14:06	0° \mathring{M} 38'33		max. Earth dist.	7963 Jan 11 11:54	23° \mathring{B} 03'37	10.46799 AU
conjunction	7956 Oct 20 12:19	2° \mathring{M} 54'36	1°29'13	morning rise	7963 Jan 29 00:13	25° \mathring{B} 13'56	
minimum elong	7956 Oct 20 12:16	2° \mathring{M} 54'35	1°29'18		7963 Mar 13 16:22	0° \mathring{A}	
max. Earth dist.	7956 Oct 20 09:54	2° \mathring{M} 53'50	10.23081 AU	retrograde	7963 May 09 20:14	2° \mathring{A} 45'35	
morning rise	7956 Nov 07 10:12	5° \mathring{M} 10'33			7963 Jul 08 21:49	30° \mathring{R} \mathring{B}	
retrograde	7957 Feb 19 08:56	13° \mathring{M} 08'49		opposition	7963 Jul 16 13:29	29° \mathring{B} 24'20	1°47'19
opposition	7957 Apr 27 12:31	9° \mathring{M} 42'37	2°02'03	min. Earth dist.	7963 Jul 16 17:20	29° \mathring{B} 23'35	8.50198 AU
min. Earth dist.	7957 Apr 27 14:27	9° \mathring{M} 42'14	8.23479 AU	direct	7963 Sep 24 07:51	25° \mathring{B} 58'17	
direct	7957 Jul 04 04:19	6° \mathring{M} 15'05			7963 Dec 05 12:17	0° \mathring{A}	
evening set	7957 Oct 17 01:44	14° \mathring{M} 16'24		evening set	7964 Jan 07 14:39	3° \mathring{A} 44'09	
	7957 Oct 22 20:54	15° \mathring{M}		conjunction	7964 Jan 24 22:19	5° \mathring{A} 52'11	1°16'51
conjunction	7957 Nov 03 22:52	16° \mathring{M} 32'02	1°45'49	minimum elong	7964 Jan 24 22:21	5° \mathring{A} 52'12	1°16'58
minimum elong	7957 Nov 03 22:50	16° \mathring{M} 32'01	1°45'55	max. Earth dist.	7964 Jan 24 17:41	5° \mathring{A} 50'45	10.53531 AU
max. Earth dist.	7957 Nov 03 19:27	16° \mathring{M} 30'56	10.24046 AU	morning rise	7964 Feb 11 02:19	7° \mathring{A} 59'06	
morning rise	7957 Nov 21 18:40	18° \mathring{M} 47'16			7964 Apr 29 16:51	15° \mathring{A}	
retrograde	7958 Mar 05 03:00	26° \mathring{M} 42'43		retrograde	7964 May 21 16:54	15° \mathring{A} 25'43	
opposition	7958 May 11 04:20	23° \mathring{M} 17'13	2°19'02		7964 Jun 12 21:46	15° \mathring{R} \mathring{A}	
min. Earth dist.	7958 May 11 06:47	23° \mathring{M} 16'43	8.25201 AU	opposition	7964 Jul 28 17:10	12° \mathring{A} 05'04	1°21'49
direct	7958 Jul 18 04:02	19° \mathring{M} 49'25		min. Earth dist.	7964 Jul 28 19:52	12° \mathring{A} 04'32	8.56948 AU
evening set	7958 Oct 31 11:53	27° \mathring{M} 51'27		direct	7964 Oct 06 17:27	8° \mathring{A} 39'48	
	7958 Nov 17 11:34	0° \mathring{A}			7965 Jan 08 08:47	15° \mathring{A}	
conjunction	7958 Nov 18 07:23	0° \mathring{A} 06'18	1°56'28	evening set	7965 Jan 19 14:27	16° \mathring{A} 19'51	
minimum elong	7958 Nov 18 07:22	0° \mathring{A} 06'17	1°56'35	conjunction	7965 Feb 05 19:48	18° \mathring{A} 26'20	0°54'42
max. Earth dist.	7958 Nov 18 03:15	0° \mathring{A} 04'59	10.26415 AU	minimum elong	7965 Feb 05 19:49	18° \mathring{A} 26'20	0°54'48
morning rise	7958 Dec 06 00:34	2° \mathring{A} 20'30					

max. Earth dist.	7965 Feb 05 16:46	18° \approx 25'24	10.60286 AU	minimum elong	7971 Apr 18 21:07	0° \mathcal{B} 34'38	1°26'36
morning rise	7965 Feb 22 21:31	20° \approx 31'46		max. Earth dist.	7971 Apr 19 00:04	0° \mathcal{B} 35'31	10.85713 AU
retrograde	7965 Jun 03 08:21	27° \approx 53'55		morning rise	7971 May 05 14:25	2° \mathcal{B} 34'37	
opposition	7965 Aug 10 17:45	24° \approx 33'44	0°52'50	retrograde	7971 Aug 15 14:07	9° \mathcal{B} 49'58	
min. Earth dist.	7965 Aug 10 19:39	24° \approx 33'22	8.63564 AU	opposition	7971 Oct 24 20:48	6° \mathcal{B} 29'41	-1°56'17
direct	7965 Oct 19 23:26	21° \approx 09'18		min. Earth dist.	7971 Oct 24 17:48	6° \mathcal{B} 30'15	8.85989 AU
evening set	7966 Feb 01 08:02	28° \approx 43'32		direct	7972 Jan 02 21:04	3° \mathcal{B} 09'53	
	7966 Feb 11 20:25	0° \mathcal{H}		evening set	7972 Apr 13 01:48	10° \mathcal{B} 21'52	
conjunction	7966 Feb 18 10:55	0° \mathcal{H} 48'30	0°30'17	conjunction	7972 Apr 29 18:08	12° \mathcal{B} 21'34	-1°42'09
minimum elong	7966 Feb 18 10:56	0° \mathcal{H} 48'31	0°30'22	minimum elong	7972 Apr 29 18:06	12° \mathcal{B} 21'33	1°42'14
max. Earth dist.	7966 Feb 18 08:55	0° \mathcal{H} 47'54	10.66737 AU	max. Earth dist.	7972 Apr 29 21:26	12° \mathcal{B} 22'33	10.85731 AU
morning rise	7966 Mar 07 10:35	2° \mathcal{H} 52'33		morning rise	7972 May 16 11:33	14° \mathcal{B} 21'33	
retrograde	7966 Jun 15 21:09	10° \mathcal{H} 11'01			7972 May 21 23:09	15° \mathcal{B}	
opposition	7966 Aug 23 15:16	6° \mathcal{H} 51'10	0°21'51	retrograde	7972 Aug 26 23:35	21° \mathcal{B} 39'11	
min. Earth dist.	7966 Aug 23 16:59	6° \mathcal{H} 50'50	8.69744 AU	opposition	7972 Nov 05 09:53	18° \mathcal{B} 18'26	-2°12'55
direct	7966 Nov 02 00:28	3° \mathcal{H} 27'36		min. Earth dist.	7972 Nov 05 06:21	18° \mathcal{B} 19'06	8.85343 AU
evening set	7967 Feb 13 19:54	10° \mathcal{H} 56'20			7973 Jan 09 16:53	15° \mathcal{R} \mathcal{B}	
conjunction	7967 Mar 02 20:15	12° \mathcal{H} 59'53	0°04'51	direct	7973 Jan 14 04:12	14° \mathcal{B} 58'59	
minimum elong	7967 Mar 02 20:16	12° \mathcal{H} 59'53	0°04'53		7973 Jan 18 15:24	15° \mathcal{B}	
behind sun begin	7967 Mar 02 13:23	12° \mathcal{H} 57'49		evening set	7973 Apr 24 23:51	22° \mathcal{B} 10'22	
behind sun end	7967 Mar 03 03:09	13° \mathcal{H} 01'57		conjunction	7973 May 11 16:19	24° \mathcal{B} 10'12	-1°53'28
max. Earth dist.	7967 Mar 02 18:31	12° \mathcal{H} 59'23	10.72598 AU	minimum elong	7973 May 11 16:17	24° \mathcal{B} 10'12	1°53'34
morning rise	7967 Mar 19 18:08	15° \mathcal{H} 02'41		max. Earth dist.	7973 May 11 20:56	24° \mathcal{B} 11'36	10.84371 AU
desc. node	7967 May 12 09:24	20° \mathcal{H} 28'55		morning rise	7973 May 28 10:22	26° \mathcal{B} 10'33	
retrograde	7967 Jun 28 06:45	22° \mathcal{H} 18'25			7973 Jul 02 15:52	0° \mathcal{I}	
opposition	7967 Sep 05 10:18	18° \mathcal{H} 58'45	-0°09'40	retrograde	7973 Sep 08 11:21	3° \mathcal{I} 31'15	
min. Earth dist.	7967 Sep 05 11:12	18° \mathcal{H} 58'35	8.75220 AU	opposition	7973 Nov 17 23:30	0° \mathcal{I} 09'54	-2°23'58
direct	7967 Nov 14 20:40	15° \mathcal{H} 36'04		min. Earth dist.	7973 Nov 17 18:45	0° \mathcal{I} 10'47	8.83328 AU
evening set	7968 Feb 26 02:39	22° \mathcal{H} 59'48			7973 Nov 20 04:08	30° \mathcal{R} \mathcal{B}	
conjunction	7968 Mar 14 00:45	25° \mathcal{H} 02'06	-0°20'41	direct	7974 Jan 26 11:09	26° \mathcal{B} 50'41	
minimum elong	7968 Mar 14 00:44	25° \mathcal{H} 02'05	0°20'40		7974 Mar 30 11:12	0° \mathcal{I}	
max. Earth dist.	7968 Mar 14 00:04	25° \mathcal{H} 01'53	10.77621 AU	evening set	7974 May 06 23:19	4° \mathcal{I} 02'21	
morning rise	7968 Mar 30 21:01	27° \mathcal{H} 03'50		conjunction	7974 May 23 16:36	6° \mathcal{I} 02'42	-1°59'59
	7968 Apr 26 00:45	0° \mathcal{Y}		minimum elong	7974 May 23 16:36	6° \mathcal{I} 02'42	2°00'07
retrograde	7968 Jul 09 13:59	4° \mathcal{Y} 17'56		max. Earth dist.	7974 May 23 22:27	6° \mathcal{I} 04'28	10.81686 AU
opposition	7968 Sep 17 02:58	0° \mathcal{Y} 58'18	-0°40'25	morning rise	7974 Jun 09 11:59	8° \mathcal{I} 03'44	
min. Earth dist.	7968 Sep 17 02:23	0° \mathcal{Y} 58'24	8.79754 AU	retrograde	7974 Sep 21 03:45	15° \mathcal{I} 28'08	
	7968 Sep 30 04:38	30° \mathcal{R} \mathcal{H}		opposition	7974 Nov 30 14:14	12° \mathcal{I} 06'07	-2°28'55
direct	7968 Nov 26 14:39	27° \mathcal{H} 36'28		min. Earth dist.	7974 Nov 30 08:50	12° \mathcal{I} 07'09	8.80031 AU
	7969 Jan 20 14:38	0° \mathcal{Y}		direct	7975 Feb 07 18:03	8° \mathcal{I} 46'55	
evening set	7969 Mar 09 05:34	4° \mathcal{Y} 55'56		evening set	7975 May 19 01:26	15° \mathcal{I} 59'46	
conjunction	7969 Mar 26 01:44	6° \mathcal{Y} 57'11	-0°44'59	conjunction	7975 Jun 04 20:14	18° \mathcal{I} 01'01	-2°01'20
minimum elong	7969 Mar 26 01:42	6° \mathcal{Y} 57'10	0°45'00	minimum elong	7975 Jun 04 20:15	18° \mathcal{I} 01'01	2°01'29
max. Earth dist.	7969 Mar 26 02:51	6° \mathcal{Y} 57'31	10.81586 AU	max. Earth dist.	7975 Jun 05 02:07	18° \mathcal{I} 02'48	10.77800 AU
morning rise	7969 Apr 11 20:32	8° \mathcal{Y} 58'03		morning rise	7975 Jun 21 17:51	20° \mathcal{I} 03'06	
retrograde	7969 Jul 21 22:31	16° \mathcal{Y} 11'33		retrograde	7975 Oct 03 22:03	27° \mathcal{I} 31'36	
opposition	7969 Sep 29 17:42	12° \mathcal{Y} 51'49	-1°09'08	opposition	7975 Dec 13 06:28	24° \mathcal{I} 08'53	-2°27'25
min. Earth dist.	7969 Sep 29 15:35	12° \mathcal{Y} 52'13	8.83144 AU	min. Earth dist.	7975 Dec 13 01:21	24° \mathcal{I} 09'51	8.75593 AU
direct	7969 Dec 09 03:35	9° \mathcal{Y} 30'47		direct	7976 Feb 20 00:42	20° \mathcal{I} 49'29	
evening set	7970 Mar 21 05:44	16° \mathcal{Y} 46'51		evening set	7976 May 30 06:59	28° \mathcal{I} 04'24	
conjunction	7970 Apr 07 00:13	18° \mathcal{Y} 47'17	-1°07'13		7976 Jun 15 05:35	0° \mathcal{E}	
minimum elong	7970 Apr 07 00:11	18° \mathcal{Y} 47'17	1°07'16	conjunction	7976 Jun 16 04:07	0° \mathcal{E} 06'51	-1°57'21
max. Earth dist.	7970 Apr 07 02:46	18° \mathcal{Y} 48'03	10.84318 AU	minimum elong	7976 Jun 16 04:08	0° \mathcal{E} 06'52	1°57'31
morning rise	7970 Apr 23 17:56	20° \mathcal{Y} 47'34		max. Earth dist.	7976 Jun 16 09:17	0° \mathcal{E} 08'25	10.72865 AU
retrograde	7970 Aug 03 06:23	28° \mathcal{Y} 01'29		morning rise	7976 Jul 03 04:46	2° \mathcal{E} 10'20	
opposition	7970 Oct 12 07:31	24° \mathcal{Y} 41'33	-1°34'45	retrograde	7976 Oct 15 18:56	9° \mathcal{E} 43'16	
min. Earth dist.	7970 Oct 12 04:47	24° \mathcal{Y} 42'03	8.85248 AU	opposition	7976 Dec 25 00:34	6° \mathcal{E} 19'46	-2°19'20
direct	7970 Dec 21 12:28	21° \mathcal{Y} 21'13		min. Earth dist.	7976 Dec 24 20:14	6° \mathcal{E} 20'36	8.70169 AU
evening set	7971 Apr 02 04:05	28° \mathcal{Y} 34'45		direct	7977 Mar 03 11:32	2° \mathcal{E} 59'56	
	7971 Apr 14 02:00	0° \mathcal{B}		evening set	7977 Jun 11 16:55	10° \mathcal{E} 17'45	
conjunction	7971 Apr 18 21:10	0° \mathcal{B} 34'39	-1°26'31	conjunction	7977 Jun 28 17:12	12° \mathcal{E} 21'45	-1°48'02

minimum elong	7977 Jun 28 17:14	12° Ω 21'46	1°48'11	min. Earth dist.	7983 Mar 12 19:08	23° Π 08'39	8.31205 AU
max. Earth dist.	7977 Jun 28 22:15	12° Ω 23'18	10.67036 AU	direct	7983 May 19 00:44	19° Π 43'26	
morning rise	7977 Jul 15 21:17	14° Ω 26'52		evening set	7983 Aug 29 14:30	27° Π 31'07	
retrograde	7977 Oct 28 20:42	22° Ω 04'23					
opposition	7978 Jan 06 20:46	18° Ω 40'06	-2°04'46	conjunction	7983 Sep 16 11:37	29° Π 45'50	0°29'57
min. Earth dist.	7978 Jan 06 16:45	18° Ω 40'52	8.63930 AU	minimum elong	7983 Sep 16 11:36	29° Π 45'50	0°29'58
direct	7978 Mar 16 00:44	15° Ω 19'40		max. Earth dist.	7983 Sep 16 11:01	29° Π 45'39	10.28934 AU
evening set	7978 Jun 24 08:06	22° Ω 41'08			7983 Sep 18 08:24	0° Ω	
				morning rise	7983 Oct 04 10:36	2° Ω 01'11	
conjunction	7978 Jul 11 12:09	24° Ω 46'56	-1°33'35	retrograde	7984 Jan 17 10:18	9° Ω 59'58	
minimum elong	7978 Jul 11 12:11	24° Ω 46'57	1°33'43	opposition	7984 Mar 25 07:00	6° Ω 32'42	0°54'01
max. Earth dist.	7978 Jul 11 17:06	24° Ω 48'27	10.60495 AU	min. Earth dist.	7984 Mar 25 07:30	6° Ω 32'36	8.27000 AU
morning rise	7978 Jul 28 20:00	26° Ω 53'55		direct	7984 May 31 13:52	3° Ω 06'30	
	7978 Aug 25 01:37	0° Ω		evening set	7984 Sep 11 19:51	10° Ω 59'13	
retrograde	7978 Nov 11 03:04	4° Ω 36'06					
opposition	7979 Jan 19 19:33	1° Ω 11'01	-1°44'07	conjunction	7984 Sep 29 18:14	13° Ω 14'49	0°56'20
min. Earth dist.	7979 Jan 19 15:45	1° Ω 11'45	8.57086 AU	minimum elong	7984 Sep 29 18:12	13° Ω 14'48	0°56'22
	7979 Feb 04 08:16	30° κ Ω		max. Earth dist.	7984 Sep 29 17:02	13° Ω 14'26	10.25401 AU
direct	7979 Mar 28 15:53	27° Ω 49'50		morning rise	7984 Oct 17 17:26	15° Ω 30'44	
	7979 May 18 03:51	0° Ω		retrograde	7985 Jan 30 08:23	23° Ω 30'05	
evening set	7979 Jul 07 05:22	5° Ω 15'45		opposition	7985 Apr 07 20:56	20° Ω 02'55	1°25'10
				min. Earth dist.	7985 Apr 07 21:55	20° Ω 02'43	8.24248 AU
conjunction	7979 Jul 24 13:27	7° Ω 23'32	-1°14'29	direct	7985 Jun 14 05:28	16° Ω 35'53	
minimum elong	7979 Jul 24 13:30	7° Ω 23'33	1°14'35	evening set	7985 Sep 26 04:40	24° Ω 32'48	
max. Earth dist.	7979 Jul 24 17:42	7° Ω 24'51	10.53499 AU				
morning rise	7979 Aug 11 01:18	9° Ω 32'30		conjunction	7985 Oct 14 03:15	26° Ω 48'47	1°19'45
	7979 Oct 01 23:05	15° Ω		minimum elong	7985 Oct 14 03:12	26° Ω 48'46	1°19'49
retrograde	7979 Nov 24 12:59	17° Ω 19'14		max. Earth dist.	7985 Oct 14 00:58	26° Ω 48'03	10.23399 AU
	7980 Jan 18 12:13	15° κ Ω		morning rise	7985 Nov 01 01:40	29° Ω 04'47	
opposition	7980 Feb 01 21:09	13° Ω 53'27	-1°18'05		7985 Nov 08 13:01	0° Π	
min. Earth dist.	7980 Feb 01 17:56	13° Ω 54'05	8.49968 AU	retrograde	7986 Feb 13 06:27	7° Π 03'27	
direct	7980 Apr 09 11:26	10° Ω 31'22		opposition	7986 Apr 21 12:00	3° Π 36'36	1°51'44
	7980 Jun 23 01:22	15° Ω		min. Earth dist.	7986 Apr 21 13:58	3° Π 36'12	8.23095 AU
evening set	7980 Jul 19 09:33	18° Ω 02'23		direct	7986 Jun 28 00:44	0° Π 08'53	
				evening set	7986 Oct 10 15:30	8° Π 08'55	
conjunction	7980 Aug 05 21:32	20° Ω 12'12	-0°51'26				
minimum elong	7980 Aug 05 21:34	20° Ω 12'13	0°51'31	conjunction	7986 Oct 28 13:19	10° Π 24'46	1°38'47
max. Earth dist.	7980 Aug 06 00:07	20° Ω 13'00	10.46438 AU	minimum elong	7986 Oct 28 13:16	10° Π 24'45	1°38'52
morning rise	7980 Aug 23 13:15	22° Ω 23'09		max. Earth dist.	7986 Oct 28 09:37	10° Π 23'36	10.23034 AU
	7980 Nov 20 16:05	0° Π		morning rise	7986 Nov 15 10:06	12° Π 40'22	
retrograde	7980 Dec 07 02:59	0° Π 14'01			7986 Dec 04 17:32	15° Π	
	7980 Dec 23 13:32	30° κ Ω		retrograde	7987 Feb 27 01:15	20° Π 37'05	
opposition	7981 Feb 14 01:36	26° Ω 47'38	-0°47'42	opposition	7987 May 05 03:25	17° Π 10'47	2°12'03
min. Earth dist.	7981 Feb 13 23:42	26° Ω 48'01	8.43012 AU	min. Earth dist.	7987 May 05 06:37	17° Π 10'08	8.23593 AU
direct	7981 Apr 22 10:35	23° Ω 24'32			7987 Jun 03 05:39	15° κ Π	
	7981 Jul 24 10:36	0° Π		direct	7987 Jul 11 23:22	13° Π 42'36	
evening set	7981 Aug 01 20:37	1° Π 01'03			7987 Aug 19 09:39	15° Π	
				evening set	7987 Oct 25 02:10	21° Π 44'21	
conjunction	7981 Aug 19 12:15	3° Π 12'47	-0°25'29				
minimum elong	7981 Aug 19 12:16	3° Π 12'47	0°25'32	conjunction	7987 Nov 11 22:27	23° Π 59'39	1°52'17
max. Earth dist.	7981 Aug 19 13:17	3° Π 13'06	10.39745 AU	minimum elong	7987 Nov 11 22:25	23° Π 59'38	1°52'23
morning rise	7981 Sep 06 07:20	5° Π 25'33		max. Earth dist.	7987 Nov 11 17:21	23° Π 58'01	10.24319 AU
retrograde	7981 Dec 20 20:20	13° Π 19'56		morning rise	7987 Nov 29 17:00	26° Π 14'25	
opposition	7982 Feb 27 09:01	9° Π 53'05	-0°14'23		7988 Jan 01 00:14	0° χ	
min. Earth dist.	7982 Feb 27 08:19	9° Π 53'13	8.36640 AU	retrograde	7988 Mar 11 17:40	4° χ 08'02	
direct	7982 May 05 14:26	6° Π 28'54		opposition	7988 May 17 18:42	0° χ 42'28	2°24'58
asc. node	7982 Aug 04 03:54	12° Π 48'05		min. Earth dist.	7988 May 17 22:42	0° χ 41'39	8.25703 AU
evening set	7982 Aug 15 14:21	14° Π 11'04			7988 May 26 13:55	30° κ Π	
				direct	7988 Jul 24 22:41	27° Π 14'04	
conjunction	7982 Sep 02 09:08	16° Π 24'28	0°02'12		7988 Sep 20 14:18	0° χ	
minimum elong	7982 Sep 02 09:08	16° Π 24'28	0°02'11	evening set	7988 Nov 07 10:24	5° χ 15'56	
behind sun begin	7982 Sep 02 01:51	16° Π 22'12					
behind sun end	7982 Sep 02 16:24	16° Π 26'43		conjunction	7988 Nov 25 04:42	7° χ 30'19	1°59'32
max. Earth dist.	7982 Sep 02 09:09	16° Π 24'28	10.33803 AU	minimum elong	7988 Nov 25 04:41	7° χ 30'18	1°59'39
morning rise	7982 Sep 20 06:44	18° Π 38'44		max. Earth dist.	7988 Nov 24 22:59	7° χ 28'30	10.27179 AU
retrograde	7983 Jan 03 14:07	26° Π 35'50		morning rise	7988 Dec 12 20:36	9° χ 43'57	
opposition	7983 Mar 12 19:00	23° Π 08'40	0°20'10	retrograde	7989 Mar 25 07:25	17° χ 33'31	

opposition	7989 May 31 08:56	14°  08'46	2°29'49	min. Earth dist.	7995 Aug 17 23:09	1°  17'59	8.67408 AU
min. Earth dist.	7989 May 31 12:51	14°  07'59	8.29302 AU		7995 Sep 04 10:18	30° 	
direct	7989 Aug 07 21:30	10°  40'27		direct	7995 Oct 27 05:51	27°  54'35	
evening set	7989 Nov 21 14:45	18°  40'51			7995 Dec 17 09:07	0° 	
				evening set	7996 Feb 08 07:46	5°  26'00	
conjunction	7989 Dec 09 06:54	20°  54'04	2°00'13				
minimum elong	7989 Dec 09 06:55	20°  54'04	2°00'21	conjunction	7996 Feb 25 09:24	7°  30'12	0°16'55
max. Earth dist.	7989 Dec 09 01:28	20°  52'21	10.31457 AU	minimum elong	7996 Feb 25 09:24	7°  30'13	0°16'59
morning rise	7989 Dec 26 19:58	23°  06'21		max. Earth dist.	7996 Feb 25 08:30	7°  29'56	10.70564 AU
	7990 Mar 08 00:25	0° 		morning rise	7996 Mar 13 08:06	9°  33'34	
retrograde	7990 Apr 07 17:41	0°  51'05		retrograde	7996 Jun 21 20:27	16°  50'35	
	7990 May 08 19:32	30°  R 		opposition	7996 Aug 29 18:37	13°  31'16	0°05'13
opposition	7990 Jun 13 21:23	27°  27'16	2°26'32	min. Earth dist.	7996 Aug 29 18:34	13°  31'17	8.73496 AU
min. Earth dist.	7990 Jun 14 00:55	27°  26'34	8.34188 AU	desc. node	7996 Oct 30 22:16	10°  12'04	
direct	7990 Aug 21 19:06	23°  59'19		direct	7996 Nov 08 03:56	10°  08'41	
	7990 Nov 19 07:58	0° 		evening set	7997 Feb 19 17:14	17°  34'48	
evening set	7990 Dec 05 13:51	1°  56'50					
				conjunction	7997 Mar 08 16:33	19°  37'39	-0°08'46
conjunction	7990 Dec 23 03:44	4°  08'42	1°54'29	minimum elong	7997 Mar 08 16:33	19°  37'39	0°08'44
minimum elong	7990 Dec 23 03:45	4°  08'42	1°54'38	behind sun begin	7997 Mar 08 10:26	19°  35'49	
max. Earth dist.	7990 Dec 22 22:57	4°  07'11	10.36911 AU	behind sun end	7997 Mar 08 22:39	19°  39'29	
morning rise	7991 Jan 09 13:56	6°  19'29		max. Earth dist.	7997 Mar 08 16:43	19°  37'42	10.76224 AU
retrograde	7991 Apr 20 24:00	13°  58'58		morning rise	7997 Mar 25 13:26	21°  39'51	
opposition	7991 Jun 27 07:50	10°  36'08	2°15'33	retrograde	7997 Jul 04 05:50	28°  54'38	
min. Earth dist.	7991 Jun 27 11:02	10°  35'30	8.40089 AU	opposition	7997 Sep 11 12:42	25°  35'32	-0°26'04
direct	7991 Sep 04 14:02	7°  08'47		min. Earth dist.	7997 Sep 11 12:25	25°  35'36	8.78659 AU
evening set	7991 Dec 19 06:41	15°  02'11		direct	7997 Nov 20 22:50	22°  13'51	
				evening set	7998 Mar 03 22:29	29°  35'19	
conjunction	7992 Jan 05 18:06	17°  12'33	1°42'52		7998 Mar 07 09:31	0° 	
minimum elong	7992 Jan 05 18:08	17°  12'34	1°43'01				
max. Earth dist.	7992 Jan 05 14:03	17°  11'17	10.43238 AU	conjunction	7998 Mar 20 19:29	1°  37'00	-0°33'42
morning rise	7992 Jan 23 01:36	19°  21'46		minimum elong	7998 Mar 20 19:28	1°  37'00	0°33'43
retrograde	7992 May 03 02:45	26°  55'54		max. Earth dist.	7998 Mar 20 19:39	1°  37'03	10.80792 AU
opposition	7992 Jul 09 15:47	23°  34'02	1°57'46	morning rise	7998 Apr 06 14:54	3°  38'13	
min. Earth dist.	7992 Jul 09 19:06	23°  33'23	8.46698 AU	retrograde	7998 Jul 16 13:56	10°  51'52	
direct	7992 Sep 17 05:14	20°  07'28		opposition	7998 Sep 24 04:44	7°  32'46	-0°55'52
evening set	7992 Dec 31 16:51	27°  55'53		min. Earth dist.	7998 Sep 24 04:25	7°  32'50	8.82603 AU
	7993 Jan 17 10:42	0° 		direct	7998 Dec 03 13:43	4°  11'52	
				evening set	7999 Mar 16 00:18	11°  29'33	
conjunction	7993 Jan 18 01:44	0°  04'41	1°26'12				
minimum elong	7993 Jan 18 01:47	0°  04'41	1°26'21	conjunction	7999 Apr 01 19:22	13°  30'19	-0°57'02
max. Earth dist.	7993 Jan 17 21:47	0°  03'27	10.50113 AU	minimum elong	7999 Apr 01 19:20	13°  30'18	0°57'04
morning rise	7993 Feb 04 06:51	2°  12'21		max. Earth dist.	7999 Apr 01 19:36	13°  30'23	10.84013 AU
retrograde	7993 May 16 00:33	9°  41'16		morning rise	7999 Apr 18 13:38	15°  30'49	
opposition	7993 Jul 22 20:49	6°  20'18	1°34'25	retrograde	7999 Jul 28 20:40	22°  44'31	
min. Earth dist.	7993 Jul 23 00:05	6°  19'39	8.53687 AU	opposition	7999 Oct 06 19:26	19°  25'13	-1°23'05
direct	7993 Sep 30 16:52	2°  54'38		min. Earth dist.	7999 Oct 06 18:18	19°  25'26	8.85115 AU
evening set	7994 Jan 13 20:12	10°  37'31		direct	7999 Dec 16 02:04	16°  05'00	
				evening set	8000 Mar 26 23:43	23°  19'52	
conjunction	7994 Jan 31 02:35	12°  44'44	1°05'33				
minimum elong	7994 Jan 31 02:37	12°  44'44	1°05'40	conjunction	8000 Apr 12 17:24	25°  19'59	-1°17'49
max. Earth dist.	7994 Jan 30 22:49	12°  43'34	10.57191 AU	minimum elong	8000 Apr 12 17:22	25°  19'59	1°17'52
morning rise	7994 Feb 17 05:32	14°  50'54		max. Earth dist.	8000 Apr 12 19:00	25°  20'28	10.85741 AU
	7994 Feb 18 11:40	15° 		morning rise	8000 Apr 29 10:51	27°  20'05	
retrograde	7994 May 28 17:06	22°  15'05			8000 May 23 04:25	0° 	
opposition	7994 Aug 04 22:56	18°  54'51	1°06'53	retrograde	8000 Aug 09 05:39	4°  34'56	
min. Earth dist.	7994 Aug 05 01:25	18°  54'22	8.60702 AU	opposition	8000 Oct 18 09:14	1°  15'14	-1°46'39
direct	7994 Oct 14 02:17	15°  30'12		min. Earth dist.	8000 Oct 18 06:54	1°  15'40	8.86118 AU
evening set	7995 Jan 26 17:00	23°  07'18			8000 Nov 04 13:29	30°  R 	
				direct	8000 Dec 27 12:42	27°  19'55'31	
conjunction	7995 Feb 12 20:57	25°  12'58	0°42'03		8001 Feb 16 08:06	0° 	
minimum elong	7995 Feb 12 20:58	25°  12'59	0°42'08	evening set	8001 Apr 07 22:09	5°  08'29	
max. Earth dist.	7995 Feb 12 18:14	25°  12'08	10.64116 AU				
morning rise	7995 Mar 01 21:44	27°  17'40		conjunction	8001 Apr 24 14:56	7°  08'19	-1°35'15
	7995 Mar 25 12:08	0° 		minimum elong	8001 Apr 24 14:54	7°  08'19	1°35'20
retrograde	7995 Jun 10 08:15	4°  37'52		max. Earth dist.	8001 Apr 24 17:39	7°  09'08	10.85964 AU
opposition	7995 Aug 17 22:07	1°  18'11	0°36'39	morning rise	8001 May 11 08:03	9°  08'18	

	8001 Jul 10 17:52	15°♄	retrograde	8007 Nov 05 10:46	29°♄♂19
retrograde	8001 Aug 21 16:03	16°♄25'09	opposition	8008 Jan 14 06:17	25°♄♂42'52 -1°54'21
	8001 Oct 03 15:22	15°♄♂	min. Earth dist.	8008 Jan 14 02:46	25°♄♂43'33 8.57768 AU
opposition	8001 Oct 30 22:43	13°♄♂04'54 -2°05'43	direct	8008 Mar 22 05:12	22°♄♂21'18
min. Earth dist.	8001 Oct 30 19:45	13°♄♂05'27 8.85636 AU	evening set	8008 Jun 30 16:38	29°♄♂46'03
direct	8002 Jan 08 19:14	9°♄♂45'29		8008 Jul 02 14:41	0°♄♂
	8002 Apr 02 17:00	15°♄♂			
evening set	8002 Apr 19 20:32	16°♄♂57'30	conjunction	8008 Jul 17 22:49	1°♄♂53'11 -1°23'45
			minimum elong	8008 Jul 17 22:51	1°♄♂53'12 1°23'52
conjunction	8002 May 06 12:54	18°♄♂57'20 -1°48'41	max. Earth dist.	8008 Jul 18 02:29	1°♄♂54'19 10.54251 AU
minimum elong	8002 May 06 12:52	18°♄♂57'20 1°48'47	morning rise	8008 Aug 04 09:06	4°♄♂01'32
max. Earth dist.	8002 May 06 15:49	18°♄♂58'13 10.84739 AU	retrograde	8008 Nov 17 17:49	11°♄♂47'06
morning rise	8002 May 23 06:30	20°♄♂57'34	opposition	8009 Jan 26 07:05	8°♄♂20'55 -1°30'37
retrograde	8002 Sep 03 02:23	28°♄♂17'13	min. Earth dist.	8009 Jan 26 04:11	8°♄♂21'29 8.50817 AU
opposition	8002 Nov 12 12:42	24°♄♂56'13 -2°19'29	direct	8009 Apr 04 00:42	4°♄♂58'31
min. Earth dist.	8002 Nov 12 09:48	24°♄♂56'46 8.83738 AU	evening set	8009 Jul 13 17:49	12°♄♂28'02
direct	8003 Jan 21 02:31	21°♄♂36'53			
evening set	8003 May 01 19:37	28°♄♂48'51	conjunction	8009 Jul 31 04:06	14°♄♂37'12 -1°02'21
	8003 May 11 17:50	0°♄♂♂	minimum elong	8009 Jul 31 04:08	14°♄♂37'12 1°02'27
			max. Earth dist.	8009 Jul 31 07:51	14°♄♂38'22 10.47344 AU
conjunction	8003 May 18 12:19	0°♄♂♂49'03 -1°57'31		8009 Aug 03 05:26	15°♄♂♂
minimum elong	8003 May 18 12:19	0°♄♂♂49'03 1°57'38	morning rise	8009 Aug 17 18:14	16°♄♂47'31
max. Earth dist.	8003 May 18 15:22	0°♄♂♂49'58 10.82154 AU	retrograde	8009 Dec 01 06:24	24°♄♂37'26
morning rise	8003 Jun 04 07:09	2°♄♂♂49'52	opposition	8010 Feb 08 10:45	21°♄♂10'38 -1°02'00
retrograde	8003 Sep 15 15:58	10°♄♂♂13'01	min. Earth dist.	8010 Feb 08 07:51	21°♄♂11'12 8.43983 AU
opposition	8003 Nov 25 03:24	6°♄♂♂51'10 -2°27'23	direct	8010 Apr 16 22:54	17°♄♂47'22
min. Earth dist.	8003 Nov 25 00:15	6°♄♂♂51'45 8.80525 AU	evening set	8010 Jul 27 02:01	25°♄♂22'08
direct	8004 Feb 02 10:49	3°♄♂♂31'41			
evening set	8004 May 12 20:42	10°♄♂♂44'30	conjunction	8010 Aug 13 16:16	27°♄♂33'15 -0°37'33
			minimum elong	8010 Aug 13 16:17	27°♄♂33'16 0°37'37
conjunction	8004 May 29 14:44	12°♄♂♂45'28 -2°01'19	max. Earth dist.	8010 Aug 13 19:52	27°♄♂34'23 10.40725 AU
minimum elong	8004 May 29 14:44	12°♄♂♂45'28 2°01'28	morning rise	8010 Aug 31 09:53	29°♄♂45'28
max. Earth dist.	8004 May 29 18:47	12°♄♂♂46'41 10.78322 AU		8010 Sep 02 09:32	0°♄♂♂
morning rise	8004 Jun 15 11:23	14°♄♂♂47'12	retrograde	8010 Dec 14 23:14	7°♄♂♂39'11
retrograde	8004 Sep 27 08:39	22°♄♂♂14'21	opposition	8011 Feb 21 17:15	4°♄♂♂11'56 -0°29'45
opposition	8004 Dec 06 19:03	18°♄♂♂51'35 -2°28'56	min. Earth dist.	8011 Feb 21 14:32	4°♄♂♂12'29 8.37625 AU
min. Earth dist.	8004 Dec 06 15:11	18°♄♂♂52'19 8.76124 AU	direct	8011 Apr 30 00:29	0°♄♂♂47'47
direct	8005 Feb 13 18:30	15°♄♂♂31'49	evening set	8011 Aug 09 17:19	8°♄♂♂28'07
evening set	8005 May 25 00:46	22°♄♂♂46'23			
			conjunction	8011 Aug 27 10:58	10°♄♂♂41'02 -0°10'30
conjunction	8005 Jun 10 20:56	24°♄♂♂48'27 -1°59'50	minimum elong	8011 Aug 27 10:58	10°♄♂♂41'02 0°10'33
minimum elong	8005 Jun 10 20:57	24°♄♂♂48'27 1°59'59	behind sun begin	8011 Aug 27 05:22	10°♄♂♂39'17
max. Earth dist.	8005 Jun 11 02:03	24°♄♂♂50'01 10.73393 AU	behind sun end	8011 Aug 27 16:35	10°♄♂♂42'46
morning rise	8005 Jun 27 20:04	26°♄♂♂51'27	max. Earth dist.	8011 Aug 27 13:29	10°♄♂♂41'48 10.34746 AU
	8005 Jul 25 19:45	0°♄♂♂♂	morning rise	8011 Sep 14 07:28	12°♄♂♂54'53
retrograde	8005 Oct 10 05:02	4°♄♂♂23'03	retrograde	8011 Dec 28 18:21	20°♄♂♂51'40
opposition	8005 Dec 19 12:32	0°♄♂♂59'19 -2°23'55	asc. node	8012 Jan 16 19:21	20°♄♂♂32'30
min. Earth dist.	8005 Dec 19 07:57	1°♄♂♂00'12 8.70707 AU	opposition	8012 Mar 06 02:38	17°♄♂♂24'13 0°04'32
	8006 Jan 01 15:19	30°♄♂♂♂♂	min. Earth dist.	8012 Mar 06 00:48	17°♄♂♂24'35 8.32088 AU
direct	8006 Feb 26 04:22	27°♄♂♂39'07	direct	8012 May 12 07:31	13°♄♂♂59'11
	8006 Apr 20 07:53	0°♄♂♂♂	evening set	8012 Aug 22 15:22	21°♄♂♂45'07
evening set	8006 Jun 06 08:45	4°♄♂♂56'16			
			conjunction	8012 Sep 09 11:32	23°♄♂♂59'30 0°17'30
conjunction	8006 Jun 23 07:39	6°♄♂♂59'47 -1°52'58	minimum elong	8012 Sep 09 11:31	23°♄♂♂59'30 0°17'30
minimum elong	8006 Jun 23 07:41	6°♄♂♂59'47 1°53'07	max. Earth dist.	8012 Sep 09 12:30	23°♄♂♂59'48 10.29736 AU
max. Earth dist.	8006 Jun 23 12:47	7°♄♂♂01'21 10.67568 AU	morning rise	8012 Sep 27 10:00	26°♄♂♂14'36
morning rise	8006 Jul 10 10:02	9°♄♂♂04'21		8012 Oct 29 22:10	0°♄♂♂♂
retrograde	8006 Oct 23 06:18	16°♄♂♂40'37	retrograde	8013 Jan 10 15:25	4°♄♂♂13'32
opposition	8007 Jan 01 08:14	13°♄♂♂16'00 -2°12'19	opposition	8013 Mar 19 14:33	0°♄♂♂46'08 0°38'59
min. Earth dist.	8007 Jan 01 03:52	13°♄♂♂16'50 8.64497 AU	min. Earth dist.	8013 Mar 19 13:59	0°♄♂♂46'15 8.27693 AU
direct	8007 Mar 10 15:22	9°♄♂♂55'11		8013 Mar 29 04:42	30°♄♂♂♂♂
evening set	8007 Jun 18 21:49	17°♄♂♂15'44	direct	8013 May 25 18:45	27°♄♂♂20'18
				8013 Jul 20 13:45	0°♄♂♂♂
conjunction	8007 Jul 06 00:06	19°♄♂♂20'58 -1°40'49	evening set	8013 Sep 05 19:13	5°♄♂♂11'31
minimum elong	8007 Jul 06 00:08	19°♄♂♂20'58 1°40'58			
max. Earth dist.	8007 Jul 06 04:22	19°♄♂♂22'16 10.61095 AU	conjunction	8013 Sep 23 17:01	7°♄♂♂26'56 0°44'44
morning rise	8007 Jul 23 06:20	21°♄♂♂27'22	minimum elong	8013 Sep 23 16:59	7°♄♂♂26'56 0°44'45

max. Earth dist.	8013 Sep 23 16:25	7° <u>♂</u> 26'45	10.25997 AU	morning rise	8020 Jan 03 23:45	0° <u>♂</u> 50'52	
morning rise	8013 Oct 11 16:23	9° <u>♂</u> 42'50		retrograde	8020 Apr 14 15:52	8° <u>♂</u> 33'05	
retrograde	8014 Jan 24 13:39	17° <u>♂</u> 42'49		opposition	8020 Jun 20 21:01	5° <u>♂</u> 10'19	2°20'56
opposition	8014 Apr 02 04:31	14° <u>♂</u> 15'39	1°11'38	min. Earth dist.	8020 Jun 21 01:58	5° <u>♂</u> 09'20	8.37653 AU
min. Earth dist.	8014 Apr 02 05:08	14° <u>♂</u> 15'31	8.24707 AU	direct	8020 Aug 28 22:36	1° <u>♂</u> 43'04	
direct	8014 Jun 08 10:28	10° <u>♂</u> 49'06		evening set	8020 Dec 12 17:40	9° <u>♂</u> 38'54	
evening set	8014 Sep 20 03:31	18° <u>♂</u> 44'56					
conjunction	8014 Oct 08 02:02	21° <u>♂</u> 00'55	1°09'41	conjunction	8020 Dec 30 06:04	11° <u>♂</u> 50'00	1°48'22
minimum elong	8014 Oct 08 01:59	21° <u>♂</u> 00'54	1°09'44	minimum elong	8020 Dec 30 06:06	11° <u>♂</u> 50'00	1°48'30
max. Earth dist.	8014 Oct 08 00:27	21° <u>♂</u> 00'25	10.23745 AU	max. Earth dist.	8020 Dec 29 23:36	11° <u>♂</u> 47'58	10.40439 AU
morning rise	8014 Oct 26 01:08	23° <u>♂</u> 17'06		morning rise	8021 Jan 16 14:58	14° <u>♂</u> 00'01	
	8014 Dec 31 09:23	0° <u>♂</u>		retrograde	8021 Apr 27 20:30	21° <u>♂</u> 37'02	
retrograde	8015 Feb 07 11:35	1° <u>♂</u> 16'50		opposition	8021 Jul 04 06:41	18° <u>♂</u> 15'05	2°05'58
	8015 Mar 17 22:16	30° <u>♂</u> 1		min. Earth dist.	8021 Jul 04 11:01	18° <u>♂</u> 14'14	8.43609 AU
opposition	8015 Apr 15 19:56	27° <u>♂</u> 50'06	1°40'28	direct	8021 Sep 11 16:44	14° <u>♂</u> 48'24	
min. Earth dist.	8015 Apr 15 21:07	27° <u>♂</u> 49'52	8.23283 AU	evening set	8021 Dec 26 07:29	22° <u>♂</u> 39'40	
direct	8015 Jun 22 06:30	24° <u>♂</u> 23'00		conjunction	8022 Jan 12 17:34	24° <u>♂</u> 49'17	1°33'45
	8015 Sep 14 21:36	0° <u>♂</u>		minimum elong	8022 Jan 12 17:37	24° <u>♂</u> 49'18	1°33'53
evening set	8015 Oct 04 14:37	2° <u>♂</u> 22'21		max. Earth dist.	8022 Jan 12 12:05	24° <u>♂</u> 47'34	10.46725 AU
conjunction	8015 Oct 22 12:52	4° <u>♂</u> 38'23	1°30'50	morning rise	8022 Jan 29 23:54	26° <u>♂</u> 57'46	
minimum elong	8015 Oct 22 12:49	4° <u>♂</u> 38'23	1°30'54		8022 Feb 25 04:59	0° <u>♂</u>	
max. Earth dist.	8015 Oct 22 10:38	4° <u>♂</u> 37'41	10.23088 AU	retrograde	8022 May 10 20:54	4° <u>♂</u> 29'32	
morning rise	8015 Nov 09 10:34	6° <u>♂</u> 54'19		opposition	8022 Jul 17 13:28	1° <u>♂</u> 08'18	1°44'51
retrograde	8016 Feb 21 07:47	14° <u>♂</u> 52'31		min. Earth dist.	8022 Jul 17 16:52	1° <u>♂</u> 07'38	8.50074 AU
opposition	8016 Apr 28 11:56	11° <u>♂</u> 26'23	2°03'43		8022 Aug 01 10:14	30° <u>♂</u> 1	
min. Earth dist.	8016 Apr 28 13:31	11° <u>♂</u> 26'03	8.23473 AU	direct	8022 Sep 25 07:06	27° <u>♂</u> 42'19	
direct	8016 Jul 05 04:41	7° <u>♂</u> 58'52			8022 Nov 17 14:42	0° <u>♂</u>	
	8016 Oct 09 22:11	15° <u>♂</u>		evening set	8023 Jan 08 14:30	5° <u>♂</u> 28'15	
evening set	8016 Oct 18 02:17	16° <u>♂</u> 00'21		conjunction	8023 Jan 25 22:13	7° <u>♂</u> 36'20	1°14'40
conjunction	8016 Nov 04 23:24	18° <u>♂</u> 15'59	1°46'53	minimum elong	8023 Jan 25 22:15	7° <u>♂</u> 36'20	1°14'47
minimum elong	8016 Nov 04 23:22	18° <u>♂</u> 15'58	1°47'00	max. Earth dist.	8023 Jan 25 18:11	7° <u>♂</u> 35'04	10.53368 AU
max. Earth dist.	8016 Nov 04 20:33	18° <u>♂</u> 15'04	10.24038 AU	morning rise	8023 Feb 12 02:05	9° <u>♂</u> 43'17	
morning rise	8016 Nov 22 18:57	20° <u>♂</u> 31'10			8023 Apr 03 04:07	15° <u>♂</u>	
retrograde	8017 Mar 06 03:17	28° <u>♂</u> 26'38		retrograde	8023 May 23 16:53	17° <u>♂</u> 10'05	
opposition	8017 May 12 03:58	25° <u>♂</u> 01'11	2°20'00		8023 Jul 15 05:16	15° <u>♂</u>	
min. Earth dist.	8017 May 12 06:07	25° <u>♂</u> 00'45	8.25212 AU	opposition	8023 Jul 30 17:31	13° <u>♂</u> 49'28	1°18'55
direct	8017 Jul 19 02:58	21° <u>♂</u> 33'25		min. Earth dist.	8023 Jul 30 20:23	13° <u>♂</u> 48'54	8.56739 AU
evening set	8017 Nov 01 12:18	29° <u>♂</u> 35'31		direct	8023 Oct 08 17:43	10° <u>♂</u> 24'15	
	8017 Nov 04 18:43	0° <u>♂</u>			8023 Dec 25 16:22	15° <u>♂</u>	
conjunction	8017 Nov 19 07:41	1° <u>♂</u> 50'22	1°56'57	evening set	8024 Jan 21 14:34	18° <u>♂</u> 04'26	
minimum elong	8017 Nov 19 07:39	1° <u>♂</u> 50'21	1°57'04	conjunction	8024 Feb 07 19:48	20° <u>♂</u> 10'57	0°52'13
max. Earth dist.	8017 Nov 19 03:51	1° <u>♂</u> 49'08	10.26457 AU	minimum elong	8024 Feb 07 19:49	20° <u>♂</u> 10'57	0°52'19
morning rise	8017 Dec 07 00:39	4° <u>♂</u> 04'30		max. Earth dist.	8024 Feb 07 16:39	20° <u>♂</u> 09'59	10.60043 AU
retrograde	8018 Mar 19 20:04	11° <u>♂</u> 56'10		morning rise	8024 Feb 24 21:28	22° <u>♂</u> 16'26	
opposition	8018 May 25 19:09	8° <u>♂</u> 31'32	2°28'25	retrograde	8024 Jun 04 09:37	29° <u>♂</u> 38'50	
min. Earth dist.	8018 May 25 22:36	8° <u>♂</u> 30'51	8.28288 AU	opposition	8024 Aug 11 18:31	26° <u>♂</u> 18'41	0°49'38
direct	8018 Aug 02 01:42	5° <u>♂</u> 03'43		min. Earth dist.	8024 Aug 11 21:03	26° <u>♂</u> 18'12	8.63289 AU
evening set	8018 Nov 15 19:13	13° <u>♂</u> 05'04		direct	8024 Oct 20 23:21	22° <u>♂</u> 54'17	
conjunction	8018 Dec 03 12:25	15° <u>♂</u> 18'51	2°00'31		8025 Jan 29 08:06	0° <u>♂</u>	
minimum elong	8018 Dec 03 12:25	15° <u>♂</u> 18'50	2°00'38	evening set	8025 Feb 02 08:19	0° <u>♂</u> 28'41	
max. Earth dist.	8018 Dec 03 06:58	15° <u>♂</u> 17'07	10.30108 AU	conjunction	8025 Feb 19 11:02	2° <u>♂</u> 33'41	0°27'37
morning rise	8018 Dec 21 02:38	17° <u>♂</u> 31'45		minimum elong	8025 Feb 19 11:02	2° <u>♂</u> 33'41	0°27'42
retrograde	8019 Apr 02 08:35	25° <u>♂</u> 18'54		max. Earth dist.	8025 Feb 19 08:19	2° <u>♂</u> 32'52	10.66436 AU
opposition	8019 Jun 08 08:56	21° <u>♂</u> 55'13	2°28'39	morning rise	8025 Mar 08 10:46	4° <u>♂</u> 37'48	
min. Earth dist.	8019 Jun 08 13:37	21° <u>♂</u> 54'17	8.32482 AU	retrograde	8025 Jun 16 21:28	11° <u>♂</u> 56'33	
direct	8019 Aug 16 00:34	18° <u>♂</u> 27'34		opposition	8025 Aug 24 16:21	8° <u>♂</u> 36'42	0°18'30
evening set	8019 Nov 29 21:28	26° <u>♂</u> 26'51		min. Earth dist.	8025 Aug 24 18:16	8° <u>♂</u> 36'20	8.69423 AU
conjunction	8019 Dec 17 12:15	28° <u>♂</u> 39'21	1°57'32	direct	8025 Nov 03 00:55	5° <u>♂</u> 13'08	
minimum elong	8019 Dec 17 12:16	28° <u>♂</u> 39'22	1°57'40	evening set	8026 Feb 14 20:19	12° <u>♂</u> 42'03	
max. Earth dist.	8019 Dec 17 05:45	28° <u>♂</u> 37'18	10.34819 AU	conjunction	8026 Mar 03 20:36	14° <u>♂</u> 45'38	0°02'06
	8019 Dec 28 04:24	0° <u>♂</u>		minimum elong	8026 Mar 03 20:37	14° <u>♂</u> 45'38	0°02'08
				behind sun begin	8026 Mar 03 13:34	14° <u>♂</u> 43'31	

behind sun end	8026 Mar 04 03:41	14° H 47'46		max. Earth dist.	8032 May 12 23:30	26° S 00'24	10.84082 AU
max. Earth dist.	8026 Mar 03 18:48	14° H 45'09	10.72257 AU	morning rise	8032 May 29 11:55	27° S 59'05	
morning rise	8026 Mar 20 18:33	16° H 48'30			8032 Jun 16 03:22	0° II	
desc. node	8026 Apr 02 22:18	18° H 20'34		retrograde	8032 Sep 09 14:59	5° II 20'03	
retrograde	8026 Jun 29 06:54	24° H 04'36		opposition	8032 Nov 19 01:59	1° II 58'37	-2°24'40
opposition	8026 Sep 06 11:36	20° H 44'53	-0°13'02	min. Earth dist.	8032 Nov 18 20:35	1° II 59'38	8.83065 AU
min. Earth dist.	8026 Sep 06 11:55	20° H 44'49	8.74859 AU		8032 Dec 17 05:12	30° R 8	
direct	8026 Nov 15 23:02	17° H 22'12		direct	8033 Jan 27 13:09	28° S 39'22	
evening set	8027 Feb 27 03:18	24° H 46'06			8033 Mar 08 17:50	0° II	
				evening set	8033 May 08 01:00	5° II 51'04	
conjunction	8027 Mar 16 01:25	26° H 48'26	-0°23'22				
minimum elong	8027 Mar 16 01:24	26° H 48'26	0°23'21	conjunction	8033 May 24 18:18	7° II 51'29	-2°00'15
max. Earth dist.	8027 Mar 16 01:34	26° H 48'29	10.77244 AU	minimum elong	8033 May 24 18:17	7° II 51'29	2°00'23
morning rise	8027 Apr 01 21:34	28° H 50'13		max. Earth dist.	8033 May 25 00:04	7° II 53'13	10.81446 AU
	8027 Apr 11 20:32	0° Y		morning rise	8033 Jun 10 13:51	9° II 52'35	
retrograde	8027 Jul 11 16:55	6° Y 04'41		retrograde	8033 Sep 22 06:18	17° II 17'07	
opposition	8027 Sep 19 04:37	2° Y 44'59	-0°43'38	opposition	8033 Dec 01 16:36	13° II 55'03	-2°28'53
min. Earth dist.	8027 Sep 19 03:19	2° Y 45'13	8.79365 AU	min. Earth dist.	8033 Dec 01 11:24	13° II 56'03	8.79820 AU
	8027 Oct 31 23:55	30° R 8		direct	8034 Feb 08 18:27	10° II 35'49	
direct	8027 Nov 28 15:49	29° H 23'09		evening set	8034 May 20 03:10	17° II 48'44	
	8027 Dec 25 22:24	0° Y					
evening set	8028 Mar 10 06:29	6° Y 42'45		conjunction	8034 Jun 05 22:02	19° II 50'00	-2°01'01
				minimum elong	8034 Jun 05 22:02	19° II 50'00	2°01'10
conjunction	8028 Mar 27 02:35	8° Y 44'03	-0°47'30	max. Earth dist.	8034 Jun 06 03:29	19° II 51'40	10.77623 AU
minimum elong	8028 Mar 27 02:34	8° Y 44'02	0°47'31	morning rise	8034 Jun 22 19:56	21° II 52'10	
max. Earth dist.	8028 Mar 27 04:25	8° Y 44'36	10.81190 AU	retrograde	8034 Oct 04 23:18	29° II 20'47	
morning rise	8028 Apr 12 21:16	10° Y 44'58		opposition	8034 Dec 14 08:49	25° II 58'01	-2°26'39
retrograde	8028 Jul 23 00:25	17° Y 58'49		min. Earth dist.	8034 Dec 14 03:59	25° II 58'56	8.75448 AU
opposition	8028 Sep 30 19:46	14° Y 39'01	-1°12'04	direct	8035 Feb 21 03:39	22° II 38'34	
min. Earth dist.	8028 Sep 30 17:35	14° Y 39'25	8.82755 AU	evening set	8035 Jun 01 08:38	29° II 53'31	
direct	8028 Dec 10 03:57	11° Y 17'58			8035 Jun 02 06:25	0° S	
evening set	8029 Mar 22 06:50	18° Y 34'09					
				conjunction	8035 Jun 18 06:01	1° S 56'01	-1°56'26
conjunction	8029 Apr 08 01:10	20° Y 34'37	-1°09'27	minimum elong	8035 Jun 18 06:02	1° S 56'02	1°56'36
minimum elong	8029 Apr 08 01:08	20° Y 34'37	1°09'30	max. Earth dist.	8035 Jun 18 11:40	1° S 57'45	10.72763 AU
max. Earth dist.	8029 Apr 08 03:28	20° Y 35'19	10.83932 AU	morning rise	8035 Jul 05 06:52	3° S 59'33	
morning rise	8029 Apr 24 18:56	22° Y 34'57		retrograde	8035 Oct 17 21:26	11° S 32'33	
retrograde	8029 Aug 04 07:54	29° Y 49'13		opposition	8035 Dec 27 02:47	8° S 09'01	-2°17'51
opposition	8029 Oct 13 09:47	26° Y 29'12	-1°37'16	min. Earth dist.	8035 Dec 26 22:00	8° S 09'56	8.70112 AU
min. Earth dist.	8029 Oct 13 07:23	26° Y 29'39	8.84879 AU	direct	8036 Mar 04 14:01	4° S 49'11	
direct	8029 Dec 22 14:37	23° Y 08'49		evening set	8036 Jun 12 18:41	12° S 06'58	
	8030 Mar 31 00:39	0° S					
evening set	8030 Apr 03 05:23	0° S 22'30		conjunction	8036 Jun 29 19:19	14° S 11'01	-1°46'34
				minimum elong	8036 Jun 29 19:21	14° S 11'01	1°46'43
conjunction	8030 Apr 19 22:22	2° S 22'25	-1°28'22	max. Earth dist.	8036 Jun 30 01:27	14° S 12'54	10.67035 AU
minimum elong	8030 Apr 19 22:20	2° S 22'25	1°28'26	morning rise	8036 Jul 16 23:33	16° S 16'12	
max. Earth dist.	8030 Apr 20 01:06	2° S 23'15	10.85354 AU	retrograde	8036 Oct 29 23:21	23° S 53'40	
morning rise	8030 May 06 15:42	4° S 22'27		opposition	8037 Jan 07 22:43	20° S 29'21	-2°02'39
retrograde	8030 Aug 16 15:54	11° S 38'07		min. Earth dist.	8037 Jan 07 17:49	20° S 30'18	8.63991 AU
opposition	8030 Oct 25 23:07	8° S 17'45	-1°58'16	direct	8037 Mar 17 02:02	17° S 08'57	
min. Earth dist.	8030 Oct 25 19:53	8° S 18'21	8.85649 AU	evening set	8037 Jun 25 10:02	24° S 30'20	
direct	8031 Jan 03 22:53	4° S 57'54					
evening set	8031 Apr 15 03:11	12° S 09'59		conjunction	8037 Jul 12 14:19	26° S 36'11	-1°31'38
				minimum elong	8037 Jul 12 14:22	26° S 36'11	1°31'46
conjunction	8031 May 01 19:35	14° S 09'43	-1°43'31	max. Earth dist.	8037 Jul 12 19:48	26° S 37'51	10.60629 AU
minimum elong	8031 May 01 19:33	14° S 09'42	1°43'37	morning rise	8037 Jul 29 22:22	28° S 43'11	
max. Earth dist.	8031 May 01 23:42	14° S 10'58	10.85404 AU		8037 Aug 09 18:19	0° N	
	8031 May 08 18:39	15° S		retrograde	8037 Nov 12 05:05	6° N 25'10	
morning rise	8031 May 18 12:57	16° S 09'45		opposition	8038 Jan 20 21:20	3° N 00'06	-1°41'27
retrograde	8031 Aug 29 01:30	23° S 27'42		min. Earth dist.	8038 Jan 20 17:08	3° N 00'56	8.57291 AU
opposition	8031 Nov 07 12:20	20° S 06'50	-2°14'17		8038 Mar 09 17:27	30° R 8	
min. Earth dist.	8031 Nov 07 07:49	20° S 07'41	8.85038 AU	direct	8038 Mar 29 17:47	29° S 38'56	
direct	8032 Jan 16 06:52	16° S 47'23			8038 Apr 18 14:16	0° N	
evening set	8032 Apr 26 01:18	23° S 58'49		evening set	8038 Jul 08 07:17	7° N 04'41	
conjunction	8032 May 12 17:52	25° S 58'43	-1°54'18	conjunction	8038 Jul 25 15:28	9° N 12'29	-1°12'08
minimum elong	8032 May 12 17:51	25° S 58'42	1°54'25	minimum elong	8038 Jul 25 15:31	9° N 12'30	1°12'15

max. Earth dist.	8038 Jul 25 19:15	9°♌13'39	10.53773 AU	conjunction	8044 Oct 15 04:43	28°♊34'56	1°21'39
morning rise	8038 Aug 12 03:35	11°♌21'27		minimum elong	8044 Oct 15 04:41	28°♊34'55	1°21'43
	8038 Sep 13 09:47	15°♌		max. Earth dist.	8044 Oct 15 01:19	28°♊33'51	10.23722 AU
retrograde	8038 Nov 25 15:34	19°♌07'53			8044 Oct 26 08:53	0°♌	
opposition	8039 Feb 02 22:46	15°♌42'09	-1°14'59	morning rise	8044 Nov 02 03:02	0°♌50'51	
min. Earth dist.	8039 Feb 02 19:59	15°♌42'42	8.50290 AU	retrograde	8045 Feb 14 06:18	8°♌49'13	
	8039 Feb 11 22:42	15°♌		opposition	8045 Apr 22 12:26	5°♌22'29	1°53'47
direct	8039 Apr 11 12:14	12°♌20'03		min. Earth dist.	8045 Apr 22 15:18	5°♌21'54	8.23403 AU
	8039 Jun 06 16:55	15°♌		direct	8045 Jun 29 02:21	1°♌54'47	
evening set	8039 Jul 21 11:22	19°♌50'53		evening set	8045 Oct 11 17:01	9°♌54'46	
conjunction	8039 Aug 07 23:31	22°♌00'41	-0°48'49	conjunction	8045 Oct 29 14:35	12°♌10'33	1°40'10
minimum elong	8039 Aug 07 23:32	22°♌00'41	0°48'54	minimum elong	8045 Oct 29 14:32	12°♌10'32	1°40'15
max. Earth dist.	8039 Aug 08 01:26	22°♌01'17	10.46803 AU	max. Earth dist.	8045 Oct 29 09:49	12°♌09'02	10.23321 AU
morning rise	8039 Aug 25 15:30	24°♌11'38		morning rise	8045 Nov 16 11:17	14°♌26'03	
	8039 Oct 20 10:31	0°♌			8045 Nov 21 00:53	15°♌	
retrograde	8039 Dec 09 04:35	2°♌02'07		retrograde	8046 Feb 28 01:14	22°♌22'30	
	8040 Jan 28 20:49	30°♌		opposition	8046 May 06 03:47	18°♌56'18	2°13'25
opposition	8040 Feb 16 02:56	28°♌35'49	-0°44'21	min. Earth dist.	8046 May 06 07:32	18°♌55'33	8.23864 AU
min. Earth dist.	8040 Feb 16 01:38	28°♌36'04	8.43398 AU	direct	8046 Jul 13 00:16	15°♌28'08	
direct	8040 Apr 23 11:58	25°♌12'42		evening set	8046 Oct 26 03:24	23°♌29'49	
	8040 Jul 09 19:21	0°♌					
evening set	8040 Aug 02 22:23	2°♌49'05		conjunction	8046 Nov 12 23:34	25°♌45'03	1°53'05
conjunction	8040 Aug 20 14:14	5°♌00'46	-0°22'44	minimum elong	8046 Nov 12 23:32	25°♌45'03	1°53'12
minimum elong	8040 Aug 20 14:15	5°♌00'47	0°22'47	max. Earth dist.	8046 Nov 12 18:00	25°♌43'17	10.24565 AU
max. Earth dist.	8040 Aug 20 15:14	5°♌01'05	10.40146 AU	morning rise	8046 Nov 30 18:00	27°♌59'45	
morning rise	8040 Sep 07 09:27	7°♌13'30			8046 Dec 17 06:59	0°♌	
retrograde	8040 Dec 21 19:59	15°♌07'31		retrograde	8047 Mar 13 17:54	5°♌53'09	
opposition	8041 Feb 28 10:01	11°♌40'45	-0°10'57	opposition	8047 May 19 18:56	2°♌27'37	2°25'35
min. Earth dist.	8041 Feb 28 09:25	11°♌40'52	8.37043 AU	min. Earth dist.	8047 May 19 22:50	2°♌26'50	8.25924 AU
direct	8041 May 06 17:22	8°♌16'36			8047 Jun 22 16:55	30°♌	
asc. node	8041 Jun 28 15:31	10°♌41'07		direct	8047 Jul 26 23:39	28°♌59'15	
evening set	8041 Aug 16 16:03	15°♌58'36			8047 Aug 30 01:01	0°♌	
conjunction	8041 Sep 03 11:01	18°♌11'59	0°04'58	evening set	8047 Nov 09 11:29	7°♌01'03	
minimum elong	8041 Sep 03 11:00	18°♌11'59	0°04'56	conjunction	8047 Nov 27 05:46	9°♌15'23	1°59'43
behind sun begin	8041 Sep 03 03:56	18°♌09'46		minimum elong	8047 Nov 27 05:45	9°♌15'23	1°59'50
behind sun end	8041 Sep 03 18:05	18°♌14'11		max. Earth dist.	8047 Nov 27 00:18	9°♌13'39	10.27368 AU
max. Earth dist.	8041 Sep 03 11:29	18°♌12'07	10.34202 AU	morning rise	8047 Dec 14 21:26	11°♌28'57	
morning rise	8041 Sep 21 08:32	20°♌26'10		retrograde	8048 Mar 26 07:25	19°♌18'19	
retrograde	8042 Jan 04 14:51	28°♌22'57		opposition	8048 Jun 01 09:05	15°♌53'37	2°29'39
opposition	8042 Mar 13 19:45	24°♌55'51	0°23'30	min. Earth dist.	8048 Jun 01 12:40	15°♌52'53	8.29457 AU
min. Earth dist.	8042 Mar 13 19:31	24°♌55'54	8.31599 AU	direct	8048 Aug 08 22:35	12°♌25'19	
direct	8042 May 20 01:35	21°♌30'40		evening set	8048 Nov 22 15:35	20°♌25'39	
evening set	8042 Aug 30 16:10	29°♌18'11		conjunction	8048 Dec 10 07:42	22°♌38'49	1°59'47
	8042 Sep 05 06:32	0°♌		minimum elong	8048 Dec 10 07:43	22°♌38'49	1°59'55
conjunction	8042 Sep 17 13:20	1°♌32'53	0°32'34	max. Earth dist.	8048 Dec 10 02:43	22°♌37'15	10.31578 AU
minimum elong	8042 Sep 17 13:19	1°♌32'52	0°32'34	morning rise	8048 Dec 27 20:31	24°♌51'02	
max. Earth dist.	8042 Sep 17 13:03	1°♌32'47	10.29316 AU		8049 Feb 12 20:18	0°♌	
morning rise	8042 Oct 05 12:10	3°♌48'08		retrograde	8049 Apr 08 17:59	2°♌35'39	
retrograde	8043 Jan 18 12:27	11°♌46'36			8049 Jun 04 18:25	30°♌	
opposition	8043 Mar 27 07:37	8°♌19'24	0°57'05	opposition	8049 Jun 14 21:39	29°♌11'51	2°25'37
min. Earth dist.	8043 Mar 27 08:00	8°♌19'20	8.27373 AU	min. Earth dist.	8049 Jun 15 01:16	29°♌11'07	8.34275 AU
direct	8043 Jun 02 13:35	4°♌53'15		direct	8049 Aug 22 19:15	25°♌43'53	
evening set	8043 Sep 13 21:31	12°♌45'52			8049 Nov 04 13:37	0°♌	
conjunction	8043 Oct 01 19:49	15°♌01'24	0°58'39	evening set	8049 Dec 06 14:22	3°♌41'19	
minimum elong	8043 Oct 01 19:47	15°♌01'23	0°58'41	conjunction	8049 Dec 24 04:08	5°♌53'09	1°53'28
max. Earth dist.	8043 Oct 01 18:08	15°♌00'51	10.25758 AU	minimum elong	8049 Dec 24 04:10	5°♌53'09	1°53'36
morning rise	8043 Oct 19 18:54	17°♌17'14		max. Earth dist.	8049 Dec 23 23:18	5°♌51'38	10.36964 AU
retrograde	8044 Feb 01 09:58	25°♌16'16		morning rise	8050 Jan 10 14:12	8°♌03'54	
opposition	8044 Apr 08 21:26	21°♌49'11	1°27'48	retrograde	8050 Apr 22 01:08	15°♌43'17	
min. Earth dist.	8044 Apr 08 23:01	21°♌48'52	8.24591 AU	opposition	8050 Jun 28 08:06	12°♌20'28	2°13'56
direct	8044 Jun 15 06:09	18°♌22'10		min. Earth dist.	8050 Jun 28 11:59	12°♌19'41	8.40109 AU
evening set	8044 Sep 27 06:22	26°♌19'03		direct	8050 Sep 05 13:16	8°♌53'04	
				evening set	8050 Dec 20 07:02	16°♌46'26	

conjunction	8051 Jan 06 18:18	18° \mathfrak{Z} 56'47	1°41'19	opposition	8056 Sep 12 13:39	27° \mathfrak{H} 20'41	-0°29'16
minimum elong	8051 Jan 06 18:20	18° \mathfrak{Z} 56'48	1°41'27	min. Earth dist.	8056 Sep 12 13:32	27° \mathfrak{H} 20'42	8.78432 AU
max. Earth dist.	8051 Jan 06 13:23	18° \mathfrak{Z} 55'15	10.43224 AU	direct	8056 Nov 21 23:05	23° \mathfrak{H} 59'01	
morning rise	8051 Jan 24 01:48	21° \mathfrak{Z} 06'00			8057 Feb 21 08:54	0° \mathfrak{Y}	
retrograde	8051 May 05 02:10	28° \mathfrak{Z} 40'03		evening set	8057 Mar 04 22:31	1° \mathfrak{Y} 20'34	
opposition	8051 Jul 11 16:00	25° \mathfrak{Z} 18'12	1°55'34				
min. Earth dist.	8051 Jul 11 19:58	25° \mathfrak{Z} 17'25	8.46652 AU	conjunction	8057 Mar 21 19:24	3° \mathfrak{Y} 22'15	-0°36'14
direct	8051 Sep 19 05:51	21° \mathfrak{Z} 51'35		minimum elong	8057 Mar 21 19:23	3° \mathfrak{Y} 22'15	0°36'15
evening set	8052 Jan 02 17:00	29° \mathfrak{Z} 39'59		max. Earth dist.	8057 Mar 21 19:37	3° \mathfrak{Y} 22'19	10.80596 AU
	8052 Jan 05 10:32	0° \approx		morning rise	8057 Apr 07 14:52	5° \mathfrak{Y} 23'30	
				retrograde	8057 Jul 17 13:23	12° \mathfrak{Y} 37'25	
conjunction	8052 Jan 20 01:45	1° \approx 48'46	1°24'13	opposition	8057 Sep 25 05:43	9° \mathfrak{Y} 18'17	-0°58'51
minimum elong	8052 Jan 20 01:47	1° \approx 48'47	1°24'21	min. Earth dist.	8057 Sep 25 04:44	9° \mathfrak{Y} 18'28	8.82452 AU
max. Earth dist.	8052 Jan 19 20:57	1° \approx 47'17	10.50036 AU	direct	8057 Dec 04 14:41	5° \mathfrak{Y} 57'25	
morning rise	8052 Feb 06 06:54	3° \approx 56'28		evening set	8058 Mar 17 00:24	13° \mathfrak{Y} 15'08	
retrograde	8052 May 16 23:09	11° \approx 25'25					
opposition	8052 Jul 23 21:07	8° \approx 04'25	1°31'44	conjunction	8058 Apr 02 19:28	15° \mathfrak{Y} 15'52	-0°59'19
min. Earth dist.	8052 Jul 24 00:14	8° \approx 03'48	8.53576 AU	minimum elong	8058 Apr 02 19:26	15° \mathfrak{Y} 15'52	0°59'22
direct	8052 Oct 01 18:54	4° \approx 38'45		max. Earth dist.	8058 Apr 02 20:50	15° \mathfrak{Y} 16'17	10.83910 AU
evening set	8053 Jan 14 20:01	12° \approx 21'36		morning rise	8058 Apr 19 13:39	17° \mathfrak{Y} 16'23	
				retrograde	8058 Jul 29 22:03	24° \mathfrak{Y} 30'17	
conjunction	8053 Feb 01 02:24	14° \approx 28'49	1°03'13	opposition	8058 Oct 07 20:27	21° \mathfrak{Y} 10'56	-1°25'42
minimum elong	8053 Feb 01 02:26	14° \approx 28'50	1°03'19	min. Earth dist.	8058 Oct 07 18:15	21° \mathfrak{Y} 11'21	8.85062 AU
max. Earth dist.	8053 Jan 31 22:49	14° \approx 27'43	10.57053 AU	direct	8058 Dec 17 03:49	17° \mathfrak{Y} 50'46	
	8053 Feb 05 07:15	15° \approx		evening set	8059 Mar 28 23:54	25° \mathfrak{Y} 05'33	
morning rise	8053 Feb 18 05:19	16° \approx 35'00					
retrograde	8053 May 29 18:07	23° \approx 59'19		conjunction	8059 Apr 14 17:33	27° \mathfrak{Y} 05'40	-1°19'46
opposition	8053 Aug 05 23:16	20° \approx 39'02	1°03'51	minimum elong	8059 Apr 14 17:31	27° \mathfrak{Y} 05'39	1°19'49
min. Earth dist.	8053 Aug 06 01:05	20° \approx 38'41	8.60530 AU	max. Earth dist.	8059 Apr 14 20:09	27° \mathfrak{Y} 06'27	10.85728 AU
direct	8053 Oct 15 02:25	17° \approx 14'24		morning rise	8059 May 01 10:52	29° \mathfrak{Y} 05'45	
evening set	8054 Jan 27 16:46	24° \approx 51'30			8059 May 09 05:18	0° \mathfrak{B}	
				retrograde	8059 Aug 11 07:40	6° \mathfrak{B} 20'44	
conjunction	8054 Feb 13 20:47	26° \approx 57'12	0°39'29	opposition	8059 Oct 20 10:25	3° \mathfrak{B} 01'00	-1°48'48
minimum elong	8054 Feb 13 20:49	26° \approx 57'13	0°39'34	min. Earth dist.	8059 Oct 20 07:41	3° \mathfrak{B} 01'31	8.86144 AU
max. Earth dist.	8054 Feb 13 18:51	26° \approx 56'37	10.63923 AU		8059 Dec 10 00:44	30° \mathfrak{R} \mathfrak{Y}	
morning rise	8054 Mar 02 21:27	29° \approx 01'56		direct	8059 Dec 29 12:12	29° \mathfrak{Y} 41'22	
	8054 Mar 11 01:07	0° \mathfrak{H}			8060 Jan 17 19:47	0° \mathfrak{B}	
retrograde	8054 Jun 11 08:46	6° \mathfrak{H} 22'17		evening set	8060 Apr 08 22:26	6° \mathfrak{B} 54'14	
opposition	8054 Aug 18 22:32	3° \mathfrak{H} 02'34	0°33'25				
min. Earth dist.	8054 Aug 18 23:16	3° \mathfrak{H} 02'26	8.67187 AU	conjunction	8060 Apr 25 15:05	8° \mathfrak{B} 54'02	-1°36'47
	8054 Oct 07 13:55	30° \mathfrak{R} \approx		minimum elong	8060 Apr 25 15:03	8° \mathfrak{B} 54'01	1°36'52
direct	8054 Oct 28 05:15	29° \approx 38'59		max. Earth dist.	8060 Apr 25 17:46	8° \mathfrak{B} 54'50	10.86018 AU
	8054 Nov 17 17:38	0° \mathfrak{H}		morning rise	8060 May 12 08:16	10° \mathfrak{B} 54'01	
evening set	8055 Feb 09 07:39	7° \mathfrak{H} 10'28			8060 Jun 19 14:08	15° \mathfrak{B}	
				retrograde	8060 Aug 22 16:09	18° \mathfrak{B} 10'58	
conjunction	8055 Feb 26 09:14	9° \mathfrak{H} 14'42	0°14'15		8060 Oct 29 22:25	15° \mathfrak{R} \mathfrak{B}	
minimum elong	8055 Feb 26 09:14	9° \mathfrak{H} 14'42	0°14'19	opposition	8060 Oct 31 23:59	14° \mathfrak{B} 50'43	-2°07'17
behind sun begin	8055 Feb 26 05:51	9° \mathfrak{H} 13'40		min. Earth dist.	8060 Oct 31 21:19	14° \mathfrak{B} 51'13	8.85720 AU
behind sun end	8055 Feb 26 12:37	9° \mathfrak{H} 15'43		direct	8061 Jan 09 19:48	11° \mathfrak{B} 31'20	
max. Earth dist.	8055 Feb 26 08:41	9° \mathfrak{H} 14'32	10.70328 AU		8061 Mar 17 14:59	15° \mathfrak{B}	
morning rise	8055 Mar 15 07:51	11° \mathfrak{H} 18'05		evening set	8061 Apr 20 20:51	18° \mathfrak{B} 43'17	
retrograde	8055 Jun 23 20:45	18° \mathfrak{H} 35'20					
opposition	8055 Aug 31 19:20	15° \mathfrak{H} 16'01	0°01'55	conjunction	8061 May 07 13:09	20° \mathfrak{B} 43'06	-1°49'42
min. Earth dist.	8055 Aug 31 19:38	15° \mathfrak{H} 15'57	8.73249 AU	minimum elong	8061 May 07 13:08	20° \mathfrak{B} 43'06	1°49'49
desc. node	8055 Sep 23 16:02	13° \mathfrak{H} 36'33		max. Earth dist.	8061 May 07 15:47	20° \mathfrak{B} 43'54	10.84841 AU
direct	8055 Nov 10 04:29	11° \mathfrak{H} 53'26		morning rise	8061 May 24 06:54	22° \mathfrak{B} 43'20	
evening set	8056 Feb 21 17:12	19° \mathfrak{H} 19'38			8061 Aug 27 06:41	0° \mathfrak{I}	
				retrograde	8061 Sep 04 03:23	0° \mathfrak{I} 03'04	
conjunction	8056 Mar 09 16:19	21° \mathfrak{H} 22'30	-0°11'25		8061 Sep 12 00:31	30° \mathfrak{R} \mathfrak{B}	
minimum elong	8056 Mar 09 16:19	21° \mathfrak{H} 22'30	0°11'23	opposition	8061 Nov 13 13:54	26° \mathfrak{B} 42'05	-2°20'25
behind sun begin	8056 Mar 09 11:08	21° \mathfrak{H} 20'57		min. Earth dist.	8061 Nov 13 11:05	26° \mathfrak{B} 42'37	8.83859 AU
behind sun end	8056 Mar 09 21:29	21° \mathfrak{H} 24'03		direct	8062 Jan 22 04:05	23° \mathfrak{B} 22'47	
max. Earth dist.	8056 Mar 09 16:06	21° \mathfrak{H} 22'27	10.75979 AU		8062 Apr 27 21:43	0° \mathfrak{I}	
morning rise	8056 Mar 26 13:15	23° \mathfrak{H} 24'44		evening set	8062 May 02 19:59	0° \mathfrak{I} 34'40	
	8056 Jun 07 06:44	0° \mathfrak{Y}					
retrograde	8056 Jul 05 06:52	0° \mathfrak{Y} 39'48		conjunction	8062 May 19 12:48	2° \mathfrak{I} 34'52	-1°58'00
	8056 Aug 02 16:34	30° \mathfrak{R} \mathfrak{H}		minimum elong	8062 May 19 12:48	2° \mathfrak{I} 34'52	1°58'08

max. Earth dist.	8062 May 19 16:28	2° Π 35'58	10.82283 AU	max. Earth dist.	8068 Aug 01 09:06	16° Ω 23'14	10.47624 AU
morning rise	8062 Jun 05 07:40	4° Π 35'41		morning rise	8068 Aug 18 19:04	18° Ω 32'14	
retrograde	8062 Sep 16 16:57	11° Π 58'53		retrograde	8068 Dec 02 07:13	26° Ω 21'51	
opposition	8062 Nov 26 04:31	8° Π 37'02	-2°27'38	opposition	8069 Feb 09 10:40	22° Ω 55'03	-0°58'53
min. Earth dist.	8062 Nov 26 00:42	8° Π 37'45	8.80667 AU	min. Earth dist.	8069 Feb 09 07:24	22° Ω 55'42	8.44267 AU
direct	8063 Feb 03 11:32	5° Π 17'38		direct	8069 Apr 17 22:30	19° Ω 31'47	
evening set	8063 May 14 21:07	12° Π 30'20		evening set	8069 Jul 28 02:29	27° Ω 06'24	
conjunction	8063 May 31 15:19	14° Π 31'17	-2°01'15	conjunction	8069 Aug 14 16:49	29° Ω 17'30	-0°34'57
minimum elong	8063 May 31 15:20	14° Π 31'17	2°01'24	minimum elong	8069 Aug 14 16:50	29° Ω 17'31	0°35'01
max. Earth dist.	8063 May 31 20:17	14° Π 32'48	10.78470 AU	max. Earth dist.	8069 Aug 14 19:58	29° Ω 18'29	10.41013 AU
morning rise	8063 Jun 17 12:00	16° Π 33'02			8069 Aug 20 08:49	0° Π	
retrograde	8063 Sep 29 10:01	24° Π 00'13		morning rise	8069 Sep 01 10:32	1° Π 29'41	
opposition	8063 Dec 08 20:11	20° Π 37'26	-2°28'29	retrograde	8069 Dec 15 23:02	9° Π 23'04	
min. Earth dist.	8063 Dec 08 15:36	20° Π 38'18	8.76285 AU	opposition	8070 Feb 22 16:58	5° Π 55'51	-0°26'29
direct	8064 Feb 15 19:47	17° Π 17'44		min. Earth dist.	8070 Feb 22 14:36	5° Π 56'20	8.37911 AU
evening set	8064 May 26 01:17	24° Π 32'09		direct	8070 May 01 00:33	2° Π 31'40	
				evening set	8070 Aug 10 17:35	10° Π 11'51	
conjunction	8064 Jun 11 21:34	26° Π 34'14	-1°59'12	conjunction	8070 Aug 28 11:12	12° Π 24'43	-0°07'52
minimum elong	8064 Jun 11 21:35	26° Π 34'15	1°59'21	minimum elong	8070 Aug 28 11:12	12° Π 24'43	0°07'54
max. Earth dist.	8064 Jun 12 02:43	26° Π 35'48	10.73566 AU	behind sun begin	8070 Aug 28 04:42	12° Π 22'42	
morning rise	8064 Jun 28 20:54	28° Π 37'15		behind sun end	8070 Aug 28 17:42	12° Π 26'44	
	8064 Jul 10 16:30	0° Ξ		max. Earth dist.	8070 Aug 28 12:43	12° Π 25'11	10.35031 AU
retrograde	8064 Oct 11 07:21	6° Ξ 08'46		morning rise	8070 Sep 15 07:51	14° Π 38'32	
opposition	8064 Dec 20 13:34	2° Ξ 45'05	-2°22'47	asc. node	8070 Dec 13 01:51	22° Π 20'18	
min. Earth dist.	8064 Dec 20 09:04	2° Ξ 45'57	8.70891 AU	retrograde	8070 Dec 29 18:07	22° Π 34'59	
	8065 Jan 31 21:07	30° κ Π		opposition	8071 Mar 08 02:06	19° Π 07'33	0°07'47
direct	8065 Feb 27 04:05	29° Π 24'54		min. Earth dist.	8071 Mar 08 01:03	19° Π 07'46	8.32365 AU
	8065 Mar 25 04:02	0° Ξ		direct	8071 May 14 06:43	15° Π 42'28	
evening set	8065 Jun 07 09:22	6° Ξ 41'55		evening set	8071 Aug 24 15:28	23° Π 28'17	
conjunction	8065 Jun 24 08:22	8° Ξ 45'25	-1°51'47	conjunction	8071 Sep 11 11:39	25° Π 42'36	0°20'04
minimum elong	8065 Jun 24 08:23	8° Ξ 45'26	1°51'56	minimum elong	8071 Sep 11 11:38	25° Π 42'36	0°20'03
max. Earth dist.	8065 Jun 24 12:46	8° Ξ 46'46	10.67769 AU	max. Earth dist.	8071 Sep 11 11:43	25° Π 42'38	10.30005 AU
morning rise	8065 Jul 11 11:03	10° Ξ 50'02		morning rise	8071 Sep 29 10:12	27° Π 57'40	
retrograde	8065 Oct 24 06:46	18° Ξ 26'07			8071 Oct 16 09:26	0° Ξ	
opposition	8066 Jan 02 09:03	15° Ξ 01'33	-2°10'31	retrograde	8072 Jan 12 14:43	5° Ξ 56'14	
min. Earth dist.	8066 Jan 02 05:18	15° Ξ 02'16	8.64710 AU	opposition	8072 Mar 20 13:36	2° Ξ 28'52	0°42'03
direct	8066 Mar 11 15:37	11° Ξ 40'44		min. Earth dist.	8072 Mar 20 13:39	2° Ξ 28'51	8.27946 AU
evening set	8066 Jun 19 22:21	19° Ξ 01'10			8072 Apr 23 23:03	30° κ Π	
conjunction	8066 Jul 07 00:51	21° Ξ 06'24	-1°39'09	direct	8072 May 26 18:36	29° Π 02'58	
minimum elong	8066 Jul 07 00:53	21° Ξ 06'24	1°39'17		8072 Jun 28 07:57	0° Ξ	
max. Earth dist.	8066 Jul 07 05:02	21° Ξ 07'41	10.61328 AU	evening set	8072 Sep 06 19:07	6° Ξ 54'06	
morning rise	8066 Jul 24 07:20	23° Ξ 12'48		conjunction	8072 Sep 24 16:57	9° Ξ 09'28	0°47'04
	8066 Oct 04 15:27	0° Ω		minimum elong	8072 Sep 24 16:55	9° Ξ 09'28	0°47'06
retrograde	8066 Nov 06 10:02	0° Ω 53'35		max. Earth dist.	8072 Sep 24 16:08	9° Ξ 09'13	10.26228 AU
	8066 Dec 09 13:00	30° κ Ξ		morning rise	8072 Oct 12 16:14	11° Ξ 25'18	
opposition	8067 Jan 15 06:56	27° Ξ 28'09	-1°52'00	retrograde	8073 Jan 25 11:35	19° Ξ 24'58	
min. Earth dist.	8067 Jan 15 03:30	27° Ξ 28'49	8.58014 AU	opposition	8073 Apr 03 03:18	15° Ξ 57'49	1°14'19
direct	8067 Mar 24 07:13	24° Ξ 06'35		min. Earth dist.	8073 Apr 03 03:51	15° Ξ 57'42	8.24915 AU
	8067 Jun 19 20:58	0° Ω		direct	8073 Jun 09 10:55	12° Ξ 31'15	
evening set	8067 Jul 02 17:02	1° Ω 31'08		evening set	8073 Sep 21 03:06	20° Ξ 27'00	
conjunction	8067 Jul 19 23:33	3° Ω 38'18	-1°21'39	conjunction	8073 Oct 09 01:38	22° Ξ 42'56	1°11'40
minimum elong	8067 Jul 19 23:35	3° Ω 38'19	1°21'46	minimum elong	8073 Oct 09 01:36	22° Ξ 42'55	1°11'43
max. Earth dist.	8067 Jul 20 03:56	3° Ω 39'40	10.54513 AU	max. Earth dist.	8073 Oct 09 00:29	22° Ξ 42'34	10.23925 AU
morning rise	8067 Aug 06 09:58	5° Ω 46'40		morning rise	8073 Oct 27 00:31	24° Ξ 59'01	
retrograde	8067 Nov 19 18:55	13° Ω 32'00			8073 Dec 10 23:40	0° Π	
opposition	8068 Jan 28 07:24	10° Ω 05'49	-1°27'49	retrograde	8074 Feb 08 09:26	2° Π 58'34	
min. Earth dist.	8068 Jan 28 03:59	10° Ω 06'29	8.51090 AU		8074 Apr 10 23:18	30° κ Ξ	
direct	8068 Apr 05 00:50	6° Ω 43'26		opposition	8074 Apr 16 18:29	29° Ξ 31'50	1°42'40
evening set	8068 Jul 14 18:19	14° Ω 12'46		min. Earth dist.	8074 Apr 16 19:19	29° Ξ 31'40	8.23441 AU
	8068 Jul 21 04:33	15° Ω		direct	8074 Jun 23 05:43	26° Ξ 04'44	
conjunction	8068 Aug 01 04:52	16° Ω 21'55	-0°59'57		8074 Aug 31 08:12	0° Π	
minimum elong	8068 Aug 01 04:54	16° Ω 21'56	1°00'03	evening set	8074 Oct 05 14:04	4° Π 04'02	

conjunction	8074 Oct 23 12:17	6° \mathbb{M} 20'02	1°32'22	conjunction	8081 Jan 13 15:48	26° \mathcal{Z} 28'52	1°32'03
minimum elong	8074 Oct 23 12:14	6° \mathbb{M} 20'01	1°32'26	minimum elong	8081 Jan 13 15:50	26° \mathcal{Z} 28'52	1°32'11
max. Earth dist.	8074 Oct 23 10:22	6° \mathbb{M} 19'26	10.23225 AU	max. Earth dist.	8081 Jan 13 10:44	26° \mathcal{Z} 27'17	10.46752 AU
morning rise	8074 Nov 10 09:45	8° \mathbb{M} 35'52		morning rise	8081 Jan 30 21:57	28° \mathcal{Z} 37'20	
	8075 Jan 11 03:58	15° \mathbb{M}			8081 Feb 11 09:35	0° \approx	
retrograde	8075 Feb 22 07:31	16° \mathbb{M} 33'56		retrograde	8081 May 11 19:14	6° \approx 09'06	
	8075 Apr 06 00:29	15° \mathbb{R} \mathbb{M}		opposition	8081 Jul 18 11:53	2° \approx 47'54	1°42'30
opposition	8075 Apr 30 10:23	13° \mathbb{M} 07'48	2°05'18	min. Earth dist.	8081 Jul 18 15:40	2° \approx 47'10	8.50034 AU
min. Earth dist.	8075 Apr 30 12:00	13° \mathbb{M} 07'29	8.23595 AU		8081 Aug 29 14:12	30° \mathbb{R} \mathcal{Z}	
direct	8075 Jul 07 01:44	9° \mathbb{M} 40'17		direct	8081 Sep 26 05:29	29° \mathcal{Z} 21'57	
	8075 Sep 27 12:11	15° \mathbb{M}			8081 Oct 23 16:11	0° \approx	
evening set	8075 Oct 20 01:42	17° \mathbb{M} 41'48		evening set	8082 Jan 09 12:41	7° \approx 07'54	
conjunction	8075 Nov 06 22:41	19° \mathbb{M} 57'24	1°47'54	conjunction	8082 Jan 26 20:20	9° \approx 15'59	1°12'35
minimum elong	8075 Nov 06 22:39	19° \mathbb{M} 57'23	1°48'00	minimum elong	8082 Jan 26 20:23	9° \approx 16'00	1°12'42
max. Earth dist.	8075 Nov 06 19:36	19° \mathbb{M} 56'25	10.24150 AU	max. Earth dist.	8082 Jan 26 15:53	9° \approx 14'36	10.53262 AU
morning rise	8075 Nov 24 18:02	22° \mathbb{M} 12'32		morning rise	8082 Feb 13 00:11	11° \approx 22'58	
	8076 Feb 24 04:43	0° \mathcal{Z}			8082 Mar 16 23:54	15° \approx	
retrograde	8076 Mar 07 03:01	0° \mathcal{Z} 07'49		retrograde	8082 May 24 16:06	18° \approx 49'54	
	8076 Mar 18 23:49	30° \mathbb{R} \mathbb{M}		opposition	8082 Jul 31 16:08	15° \approx 29'19	1°16'10
opposition	8076 May 13 02:27	26° \mathbb{M} 42'26	2°20'54	min. Earth dist.	8082 Jul 31 19:50	15° \approx 28'36	8.56567 AU
min. Earth dist.	8076 May 13 05:11	26° \mathbb{M} 41'53	8.25329 AU		8082 Aug 06 23:56	15° \mathbb{R} \approx	
direct	8076 Jul 20 01:15	23° \mathbb{M} 14'39		direct	8082 Oct 09 15:32	12° \approx 04'07	
	8076 Oct 23 00:32	0° \mathcal{Z}			8082 Dec 09 14:54	15° \approx	
evening set	8076 Nov 02 11:37	1° \mathcal{Z} 16'48		evening set	8083 Jan 22 12:58	19° \approx 44'27	
conjunction	8076 Nov 20 06:45	3° \mathcal{Z} 31'34	1°57'23	conjunction	8083 Feb 08 18:03	21° \approx 51'00	0°49'51
minimum elong	8076 Nov 20 06:44	3° \mathcal{Z} 31'34	1°57'30	minimum elong	8083 Feb 08 18:04	21° \approx 51'00	0°49'58
max. Earth dist.	8076 Nov 20 02:12	3° \mathcal{Z} 30'08	10.26594 AU	max. Earth dist.	8083 Feb 08 13:54	21° \approx 49'43	10.59804 AU
morning rise	8076 Dec 07 23:36	5° \mathcal{Z} 45'41		morning rise	8083 Feb 25 19:47	23° \approx 56'32	
retrograde	8077 Mar 20 17:49	13° \mathcal{Z} 37'08			8083 Apr 28 02:38	0° \mathbb{H}	
opposition	8077 May 26 17:41	10° \mathcal{Z} 12'34	2°28'35	retrograde	8083 Jun 06 07:24	1° \mathbb{H} 19'11	
min. Earth dist.	8077 May 26 21:45	10° \mathcal{Z} 11'45	8.28461 AU		8083 Jul 16 12:42	30° \mathbb{R} \approx	
direct	8077 Aug 03 01:36	6° \mathcal{Z} 44'44		opposition	8083 Aug 13 17:26	27° \approx 59'03	0°46'37
evening set	8077 Nov 16 18:14	14° \mathcal{Z} 46'00		min. Earth dist.	8083 Aug 13 20:22	27° \approx 58'29	8.62988 AU
				direct	8083 Oct 22 22:06	24° \approx 34'41	
conjunction	8077 Dec 04 11:13	16° \mathcal{Z} 59'41	2°00'21		8084 Jan 16 16:43	0° \mathbb{H}	
minimum elong	8077 Dec 04 11:13	16° \mathcal{Z} 59'41	2°00'29	evening set	8084 Feb 04 06:53	2° \mathbb{H} 09'19	
max. Earth dist.	8077 Dec 04 05:04	16° \mathcal{Z} 57'44	10.30314 AU				
morning rise	8077 Dec 22 01:25	19° \mathcal{Z} 12'31		conjunction	8084 Feb 21 09:31	4° \mathbb{H} 14'22	0°25'05
retrograde	8078 Apr 03 05:20	26° \mathcal{Z} 59'26		minimum elong	8084 Feb 21 09:32	4° \mathbb{H} 14'22	0°25'10
opposition	8078 Jun 09 07:18	23° \mathcal{Z} 35'46	2°28'06	max. Earth dist.	8084 Feb 21 06:24	4° \mathbb{H} 13'25	10.66076 AU
min. Earth dist.	8078 Jun 09 12:07	23° \mathcal{Z} 34'48	8.32707 AU	morning rise	8084 Mar 09 09:18	6° \mathbb{H} 18'33	
direct	8078 Aug 17 00:32	20° \mathcal{Z} 08'07		retrograde	8084 Jun 17 20:14	13° \mathbb{H} 37'43	
evening set	8078 Nov 30 20:08	28° \mathcal{Z} 07'12		opposition	8084 Aug 25 15:41	10° \mathbb{H} 17'50	0°15'21
	8078 Dec 15 20:37	0° \mathcal{Z}		min. Earth dist.	8084 Aug 25 17:08	10° \mathbb{H} 17'34	8.69006 AU
				direct	8084 Nov 04 01:08	6° \mathbb{H} 54'19	
conjunction	8078 Dec 18 10:51	0° \mathcal{Z} 19'38	1°56'48	evening set	8085 Feb 15 19:01	14° \mathbb{H} 23'30	
minimum elong	8078 Dec 18 10:52	0° \mathcal{Z} 19'39	1°56'57	desc. node	8085 Feb 24 17:10	15° \mathbb{H} 27'59	
max. Earth dist.	8078 Dec 18 04:08	0° \mathcal{Z} 17'31	10.35040 AU				
morning rise	8079 Jan 04 22:18	2° \mathcal{Z} 31'05		conjunction	8085 Mar 04 19:23	16° \mathbb{H} 27'10	-0°00'34
retrograde	8079 Apr 16 14:15	10° \mathcal{Z} 13'05		minimum elong	8085 Mar 04 19:24	16° \mathbb{H} 27'10	0°00'32
opposition	8079 Jun 22 19:13	6° \mathcal{Z} 50'18	2°19'42	behind sun begin	8085 Mar 04 12:21	16° \mathbb{H} 25'03	
min. Earth dist.	8079 Jun 22 23:53	6° \mathcal{Z} 49'23	8.37843 AU	behind sun end	8085 Mar 05 02:26	16° \mathbb{H} 29'17	
direct	8079 Aug 30 20:52	3° \mathcal{Z} 23'05		max. Earth dist.	8085 Mar 04 18:14	16° \mathbb{H} 26'52	10.71789 AU
evening set	8079 Dec 14 16:05	11° \mathcal{Z} 18'44		morning rise	8085 Mar 21 17:14	18° \mathbb{H} 30'06	
				retrograde	8085 Jun 30 07:56	25° \mathbb{H} 46'40	
conjunction	8080 Jan 01 04:30	13° \mathcal{Z} 29'48	1°47'07	opposition	8085 Sep 07 11:20	22° \mathbb{H} 26'55	-0°16'12
minimum elong	8080 Jan 01 04:32	13° \mathcal{Z} 29'49	1°47'16	min. Earth dist.	8085 Sep 07 11:06	22° \mathbb{H} 26'58	8.74341 AU
max. Earth dist.	8079 Dec 31 22:23	13° \mathcal{Z} 27'53	10.40586 AU	direct	8085 Nov 16 22:02	19° \mathbb{H} 04'17	
morning rise	8080 Jan 18 13:14	15° \mathcal{Z} 39'46		evening set	8086 Feb 28 02:27	26° \mathbb{H} 28'29	
retrograde	8080 Apr 28 18:44	23° \mathcal{Z} 16'40					
opposition	8080 Jul 05 04:54	19° \mathcal{Z} 54'43	2°04'08	conjunction	8086 Mar 17 00:34	28° \mathbb{H} 30'55	-0°25'54
min. Earth dist.	8080 Jul 05 08:58	19° \mathcal{Z} 53'55	8.43695 AU	minimum elong	8086 Mar 17 00:34	28° \mathbb{H} 30'54	0°25'54
direct	8080 Sep 12 15:06	16° \mathcal{Z} 28'05		max. Earth dist.	8086 Mar 17 01:15	28° \mathbb{H} 31'07	10.76683 AU
evening set	8080 Dec 27 05:42	24° \mathcal{Z} 19'15			8086 Mar 29 06:55	0° \mathbb{Y}	
				morning rise	8086 Apr 02 20:38	0° \mathbb{Y} 32'46	

retrograde	8086 Jul 12 16:56	7°♈47'45		min. Earth dist.	8092 Dec 02 13:40	15°♊44'19	8.79358 AU
opposition	8086 Sep 20 04:46	4°♈28'00 -0°46'40		direct	8093 Feb 09 20:55	12°♊24'03	
min. Earth dist.	8086 Sep 20 03:38	4°♈28'13 8.78771 AU		evening set	8093 May 21 04:30	19°♊37'09	
direct	8086 Nov 29 14:13	1°♈06'11					
evening set	8087 Mar 12 06:05	8°♈26'10		conjunction	8093 Jun 06 23:36	21°♊38'32 -2°00'38	
				minimum elong	8093 Jun 06 23:37	21°♊38'32 2°00'47	
conjunction	8087 Mar 29 02:03	10°♈27'31 -0°49'52		max. Earth dist.	8093 Jun 07 05:32	21°♊40'20 10.77209 AU	
minimum elong	8087 Mar 29 02:01	10°♈27'31 0°49'54		morning rise	8093 Jun 23 21:43	23°♊40'47	
max. Earth dist.	8087 Mar 29 03:30	10°♈27'58 10.80567 AU			8093 Aug 29 05:57	0°♊	
morning rise	8087 Apr 14 20:46	12°♈28'32		retrograde	8093 Oct 06 01:59	1°♊09'40	
retrograde	8087 Jul 25 01:08	19°♈42'56			8093 Nov 13 13:11	30°♊	
opposition	8087 Oct 02 20:30	16°♈23'05 -1°14'50		opposition	8093 Dec 15 10:53	27°♊46'48 -2°25'50	
min. Earth dist.	8087 Oct 02 18:48	16°♈23'25 8.82119 AU		min. Earth dist.	8093 Dec 15 05:33	27°♊47'49 8.75083 AU	
direct	8087 Dec 12 04:15	13°♈02'01		direct	8094 Feb 22 05:27	24°♊27'19	
evening set	8088 Mar 23 06:42	20°♈18'34			8094 May 18 17:27	0°♊	
				evening set	8094 Jun 02 10:08	1°♊42'21	
conjunction	8088 Apr 09 00:55	22°♈19'07 -1°11'33					
minimum elong	8088 Apr 09 00:53	22°♈19'06 1°11'36		conjunction	8094 Jun 19 07:50	3°♊44'58 -1°55'29	
max. Earth dist.	8088 Apr 09 02:53	22°♈19'42 10.83284 AU		minimum elong	8094 Jun 19 07:51	3°♊44'58 1°55'39	
morning rise	8088 Apr 25 18:47	24°♈19'32		max. Earth dist.	8094 Jun 19 14:40	3°♊47'03 10.72454 AU	
	8088 Jun 22 09:25	0°♊		morning rise	8094 Jul 06 08:49	5°♊48'35	
retrograde	8088 Aug 05 08:33	1°♊34'23		retrograde	8094 Oct 18 23:39	13°♊21'44	
	8088 Sep 19 16:48	30°♊		opposition	8094 Dec 28 04:52	9°♊58'08 -2°16'20	
opposition	8088 Oct 14 10:52	28°♈14'16 -1°39'39		min. Earth dist.	8094 Dec 27 23:03	9°♊59'14 8.69866 AU	
min. Earth dist.	8088 Oct 14 08:16	28°♈14'46 8.84233 AU		direct	8095 Mar 06 15:35	6°♊38'16	
direct	8088 Dec 23 15:01	24°♈53'52		evening set	8095 Jun 14 20:23	13°♊56'05	
	8089 Mar 16 12:01	0°♊					
evening set	8089 Apr 04 05:35	2°♊07'53		conjunction	8095 Jul 01 21:15	16°♊00'13 -1°45'04	
				minimum elong	8095 Jul 01 21:17	16°♊00'14 1°45'13	
conjunction	8089 Apr 20 22:38	4°♊07'54 -1°30'06		max. Earth dist.	8095 Jul 02 04:04	16°♊02'18 10.66865 AU	
minimum elong	8089 Apr 20 22:36	4°♊07'53 1°30'10		morning rise	8095 Jul 19 01:44	18°♊05'28	
max. Earth dist.	8089 Apr 21 02:03	4°♊08'56 10.84707 AU		retrograde	8095 Nov 01 01:42	25°♊42'59	
morning rise	8089 May 07 15:58	6°♊08'01		opposition	8096 Jan 10 00:48	22°♊18'38 -2°00'29	
retrograde	8089 Aug 17 16:41	13°♊24'15		min. Earth dist.	8096 Jan 09 19:24	22°♊19'40 8.63906 AU	
opposition	8089 Oct 27 00:21	10°♊03'46 -2°00'09		direct	8096 Mar 18 04:02	18°♊58'11	
min. Earth dist.	8089 Oct 26 20:17	10°♊04'32 8.85013 AU		evening set	8096 Jun 26 11:56	26°♊19'33	
direct	8090 Jan 05 00:24	6°♊43'53					
evening set	8090 Apr 16 03:44	13°♊56'18		conjunction	8096 Jul 13 16:24	28°♊25'27 -1°29'39	
	8090 Apr 25 01:44	15°♊		minimum elong	8096 Jul 13 16:26	28°♊25'27 1°29'47	
				max. Earth dist.	8096 Jul 13 21:43	28°♊27'05 10.60647 AU	
conjunction	8090 May 02 20:15	15°♊56'08 -1°44'48			8096 Jul 26 13:15	0°♊	
minimum elong	8090 May 02 20:13	15°♊56'08 1°44'54		morning rise	8096 Jul 31 00:48	0°♊32'31	
max. Earth dist.	8090 May 03 01:19	15°♊57'40 10.84777 AU		retrograde	8096 Nov 13 08:15	8°♊14'21	
morning rise	8090 May 19 13:34	17°♊56'15		opposition	8097 Jan 21 23:17	4°♊49'17 -1°38'44	
retrograde	8090 Aug 30 04:52	25°♊14'42		min. Earth dist.	8097 Jan 21 19:16	4°♊50'04 8.57413 AU	
opposition	8090 Nov 08 13:55	21°♊53'45 -2°15'35		direct	8097 Mar 30 18:34	1°♊28'04	
min. Earth dist.	8090 Nov 08 08:45	21°♊54'43 8.84432 AU		evening set	8097 Jul 09 09:14	8°♊53'42	
direct	8091 Jan 17 07:33	18°♊34'16					
evening set	8091 Apr 28 02:10	25°♊45'57		conjunction	8097 Jul 26 17:34	11°♊01'29 -1°09'46	
				minimum elong	8097 Jul 26 17:36	11°♊01'29 1°09'53	
conjunction	8091 May 14 18:44	27°♊45'56 -1°55'04		max. Earth dist.	8097 Jul 26 21:14	11°♊02'37 10.54006 AU	
minimum elong	8091 May 14 18:43	27°♊45'56 1°55'11		morning rise	8097 Aug 13 05:58	13°♊10'28	
max. Earth dist.	8091 May 15 00:29	27°♊47'40 10.83501 AU			8097 Aug 28 17:51	15°♊	
morning rise	8091 May 31 12:54	29°♊46'26		retrograde	8097 Nov 26 16:31	20°♊56'33	
	8091 Jun 02 11:00	0°♊		opposition	8098 Feb 04 00:26	17°♊30'50 -1°11'52	
retrograde	8091 Sep 11 16:55	7°♊07'49		min. Earth dist.	8098 Feb 03 21:52	17°♊31'21 8.50620 AU	
opposition	8091 Nov 21 03:55	3°♊46'18 -2°25'17			8098 Mar 12 04:03	15°♊	
min. Earth dist.	8091 Nov 20 22:39	3°♊47'17 8.82519 AU		direct	8098 Apr 12 14:32	14°♊08'43	
direct	8092 Jan 29 13:06	0°♊27'00			8098 May 13 15:52	15°♊	
evening set	8092 May 09 02:09	7°♊38'57		evening set	8098 Jul 22 13:10	21°♊39'20	
conjunction	8092 May 25 19:31	9°♊39'26 -2°00'27		conjunction	8098 Aug 09 01:32	23°♊49'05 -0°46'11	
minimum elong	8092 May 25 19:30	9°♊39'26 2°00'35		minimum elong	8098 Aug 09 01:33	23°♊49'05 0°46'17	
max. Earth dist.	8092 May 26 00:56	9°♊41'04 10.80942 AU		max. Earth dist.	8098 Aug 09 03:59	23°♊49'51 10.47217 AU	
morning rise	8092 Jun 11 15:21	11°♊40'38		morning rise	8098 Aug 26 17:38	25°♊59'59	
retrograde	8092 Sep 23 07:06	19°♊05'32			8098 Oct 01 07:31	0°♊	
opposition	8092 Dec 02 18:39	15°♊43'22 -2°28'47		retrograde	8098 Dec 10 04:36	3°♊50'04	

opposition	8099 Feb 17 04:15	0° \mathring{M} 23'47	-0°41'00
min. Earth dist.	8099 Feb 17 02:39	0° \mathring{M} 24'06	8.43879 AU
	8099 Feb 22 04:30	30° \mathring{R} ♏	
direct	8099 Apr 25 14:50	27° \mathring{L} 00'41	
	8099 Jun 24 04:16	0° \mathring{M}	
evening set	8099 Aug 05 00:02	4° \mathring{M} 36'44	
conjunction	8099 Aug 22 16:06	6° \mathring{M} 48'24	-0°19'58
minimum elong	8099 Aug 22 16:07	6° \mathring{M} 48'24	0°20'02
max. Earth dist.	8099 Aug 22 17:56	6° \mathring{M} 48'57	10.40675 AU
morning rise	8099 Sep 09 11:18	9° \mathring{M} 01'02	
retrograde	8099 Dec 23 21:13	16° \mathring{M} 54'35	
opposition	8100 Mar 02 10:54	13° \mathring{M} 27'51	-0°07'32
min. Earth dist.	8100 Mar 02 09:43	13° \mathring{M} 28'05	8.37610 AU
direct	8100 May 08 18:09	10° \mathring{M} 03'45	
asc. node	8100 May 24 06:21	10° \mathring{M} 16'54	
evening set	8100 Aug 18 17:41	17° \mathring{M} 45'26	
conjunction	8100 Sep 05 12:42	19° \mathring{M} 58'43	0°07'41
minimum elong	8100 Sep 05 12:42	19° \mathring{M} 58'43	0°07'40
behind sun begin	8100 Sep 05 06:08	19° \mathring{M} 56'41	
behind sun end	8100 Sep 05 19:15	20° \mathring{M} 00'46	
max. Earth dist.	8100 Sep 05 13:25	19° \mathring{M} 58'56	10.34790 AU
morning rise	8100 Sep 23 10:08	22° \mathring{M} 12'49	
	8100 Dec 24 15:45	0° \mathring{L}	
retrograde	8101 Jan 06 16:52	0° \mathring{L} 09'04	
	8101 Jan 19 16:51	30° \mathring{R} ♏	
opposition	8101 Mar 15 20:14	26° \mathring{M} 42'03	0°26'48
min. Earth dist.	8101 Mar 15 19:53	26° \mathring{M} 42'07	8.32206 AU
direct	8101 May 22 01:33	23° \mathring{M} 16'54	
	8101 Aug 23 23:12	0° \mathring{L}	
evening set	8101 Sep 01 17:36	1° \mathring{L} 04'09	
conjunction	8101 Sep 19 14:39	3° \mathring{L} 18'42	0°35'07
minimum elong	8101 Sep 19 14:37	3° \mathring{L} 18'42	0°35'08
max. Earth dist.	8101 Sep 19 13:46	3° \mathring{L} 18'26	10.29931 AU
morning rise	8101 Oct 07 13:23	5° \mathring{L} 33'51	