


























































































































direct	2600 Jan 26 18:39	12°859'50		max. Earth dist.	2607 May 13 07:52	21°808'04	50.32368 AU
				retrograde	2607 Aug 23 01:03	22°835'54	
conjunction	2600 May 04 18:43	14°826'04 -16°09'14		opposition	2607 Nov 14 19:50	21°836'19	-16°07'44
minimum elong	2600 May 04 18:50	14°826'05 16°09'14		min. Earth dist.	2607 Nov 13 22:26	21°837'19	48.40367 AU
max. Earth dist.	2600 May 06 02:30	14°827'54 50.13909 AU		direct	2608 Feb 04 05:24	20°837'51	
	2600 May 30 01:53	15°8					
retrograde	2600 Aug 15 13:35	15°855'59		conjunction	2608 May 12 13:08	22°803'26	-15°26'46
	2600 Nov 03 22:59	15°88		minimum elong	2608 May 12 13:18	22°803'27	15°26'46
min. Earth dist.	2600 Nov 06 05:02	14°857'28 48.24127 AU		max. Earth dist.	2608 May 13 10:47	22°804'40	50.33094 AU
opposition	2600 Nov 07 11:14	14°856'03 -16°46'32		retrograde	2608 Aug 23 05:33	23°832'30	
direct	2601 Jan 27 21:14	13°857'20		min. Earth dist.	2608 Nov 14 04:06	22°833'53	48.40802 AU
	2601 Apr 18 16:02	15°8		opposition	2608 Nov 15 00:19	22°832'56	-16°01'16
				direct	2609 Feb 04 10:12	21°834'28	
conjunction	2601 May 05 23:54	15°823'29 -16°04'45					
minimum elong	2601 May 06 00:04	15°823'29 16°04'45		conjunction	2609 May 13 18:15	22°859'58	-15°20'27
max. Earth dist.	2601 May 07 06:50	15°825'15 50.17831 AU		minimum elong	2609 May 13 18:24	22°859'58	15°20'27
retrograde	2601 Aug 16 21:28	16°853'17		max. Earth dist.	2609 May 14 15:48	23°801'11	50.33439 AU
min. Earth dist.	2601 Nov 07 11:52	15°854'45 48.27812 AU		retrograde	2609 Aug 24 07:34	24°828'56	
opposition	2601 Nov 08 16:09	15°853'25 -16°41'42		min. Earth dist.	2609 Nov 15 09:51	23°830'16	48.40865 AU
	2602 Jan 07 02:53	15°88		opposition	2609 Nov 16 04:45	23°829'23	-15°54'34
direct	2602 Jan 28 22:46	14°854'47		direct	2610 Feb 05 18:00	22°830'54	
	2602 Feb 19 21:12	15°8					
conjunction	2602 May 07 05:21	16°820'51 -16°00'00		conjunction	2610 May 14 23:23	23°856'21	-15°13'53
minimum elong	2602 May 07 05:29	16°820'51 16°00'00		minimum elong	2610 May 14 23:34	23°856'21	15°13'52
max. Earth dist.	2602 May 08 11:55	16°822'36 50.21424 AU		max. Earth dist.	2610 May 15 19:31	23°857'29	50.33454 AU
retrograde	2602 Aug 18 00:03	17°850'33		retrograde	2610 Aug 25 13:49	25°825'14	
opposition	2602 Nov 09 20:42	16°850'46 -16°36'37		opposition	2610 Nov 17 08:56	24°825'42	-15°47'37
min. Earth dist.	2602 Nov 08 16:51	16°852'04 48.31123 AU		min. Earth dist.	2610 Nov 16 14:07	24°826'35	48.40616 AU
direct	2603 Jan 30 04:55	15°852'11		direct	2611 Feb 06 21:56	23°827'13	
conjunction	2603 May 08 10:39	17°818'11 -15°55'01		conjunction	2611 May 16 04:27	24°852'38	-15°07'04
minimum elong	2603 May 08 10:48	17°818'12 15°55'01		minimum elong	2611 May 16 04:37	24°852'38	15°07'04
max. Earth dist.	2603 May 09 14:59	17°819'49 50.24611 AU		max. Earth dist.	2611 May 16 23:31	24°853'42	50.33153 AU
retrograde	2603 Aug 19 03:28	18°847'48		retrograde	2611 Aug 26 21:33	26°821'27	
min. Earth dist.	2603 Nov 09 22:59	17°849'19 48.34004 AU		opposition	2611 Nov 18 13:22	25°821'57	-15°40'24
opposition	2603 Nov 11 01:27	17°848'05 -16°31'17		min. Earth dist.	2611 Nov 17 20:22	25°822'44	48.40065 AU
direct	2604 Jan 31 10:54	16°849'34		direct	2612 Feb 07 23:40	24°823'29	
conjunction	2604 May 08 15:59	18°815'30 -15°49'48		conjunction	2612 May 16 09:25	25°848'52	-15°00'00
minimum elong	2604 May 08 16:08	18°815'30 15°49'48		minimum elong	2612 May 16 09:37	25°848'52	15°00'00
max. Earth dist.	2604 May 09 19:59	18°817'05 50.27325 AU		max. Earth dist.	2612 May 17 04:22	25°849'56	50.32571 AU
retrograde	2604 Aug 19 07:25	19°845'01		retrograde	2612 Aug 27 00:56	27°817'38	
min. Earth dist.	2604 Nov 10 05:32	18°846'31 48.36372 AU		opposition	2612 Nov 18 17:40	26°818'10	-15°32'55
opposition	2604 Nov 11 06:13	18°845'21 -16°25'43		min. Earth dist.	2612 Nov 18 00:39	26°818'58	48.39212 AU
direct	2605 Jan 31 18:13	17°846'52		direct	2613 Feb 08 04:25	25°819'44	
				evening set	2613 May 15 13:41	26°842'21	
conjunction	2605 May 09 21:22	19°812'43 -15°44'22		conjunction	2613 May 17 14:25	26°845'07	-14°52'41
minimum elong	2605 May 09 21:32	19°812'43 15°44'23		minimum elong	2613 May 17 14:34	26°845'07	14°52'41
max. Earth dist.	2605 May 10 23:23	19°814'12 50.29530 AU		max. Earth dist.	2613 May 18 07:22	26°846'04	50.31685 AU
retrograde	2605 Aug 20 14:16	20°842'08		morning rise	2613 May 19 15:33	26°847'53	
min. Earth dist.	2605 Nov 11 10:34	19°843'39 48.38216 AU		retrograde	2613 Aug 28 04:52	28°813'52	
opposition	2605 Nov 12 10:47	19°842'31 -16°19'57		opposition	2613 Nov 19 21:57	27°814'26	-15°25'12
direct	2606 Feb 01 22:19	18°844'03		min. Earth dist.	2613 Nov 19 06:12	27°815'11	48.38052 AU
				direct	2614 Feb 09 09:05	26°816'03	
conjunction	2606 May 11 02:43	20°809'48 -15°38'44		evening set	2614 May 15 22:11	27°837'31	
minimum elong	2606 May 11 02:52	20°809'49 15°38'43					
max. Earth dist.	2606 May 12 03:04	20°811'11 50.31196 AU		conjunction	2614 May 18 19:37	27°841'26	-14°45'08
retrograde	2606 Aug 21 21:21	21°839'06		minimum elong	2614 May 18 19:48	27°841'27	14°45'08
opposition	2606 Nov 13 15:28	20°839'31 -16°13'57		max. Earth dist.	2614 May 19 12:30	27°842'23	50.30458 AU
min. Earth dist.	2606 Nov 12 17:30	20°840'33 48.39532 AU		morning rise	2614 May 21 17:32	27°845'23	
direct	2607 Feb 03 01:15	19°841'03		retrograde	2614 Aug 29 08:24	29°810'11	
				opposition	2614 Nov 21 02:16	28°810'48	-15°17'14
conjunction	2607 May 12 08:03	21°806'43 -15°32'52		min. Earth dist.	2614 Nov 20 12:03	28°811'28	48.36506 AU
minimum elong	2607 May 12 08:12	21°806'44 15°32'52		direct	2615 Feb 10 15:53	27°812'27	

evening set	2615 May 16 11:11	28° 8 33'02	conjunction	2621 May 25 07:55	4° II 17'17 -13°46'15
			minimum elong	2621 May 25 08:07	4° II 17'18 13°46'14
conjunction	2615 May 20 00:43	28° 8 37'51 -14°37'21	max. Earth dist.	2621 May 25 14:28	4° II 17'39 50.08404 AU
minimum elong	2615 May 20 00:54	28° 8 37'52 14°37'20	morning rise	2621 May 31 17:13	4° II 25'56
max. Earth dist.	2615 May 20 15:48	28° 8 38'42 50.28830 AU	retrograde	2621 Sep 04 23:27	5° II 45'58
morning rise	2615 May 23 14:47	28° 8 42'43	opposition	2621 Nov 27 08:06	4° II 46'39 -14°15'22
	2615 Aug 05 07:48	0° II	min. Earth dist.	2621 Nov 27 02:57	4° II 46'53 48.11881 AU
retrograde	2615 Aug 30 15:08	0° II 06'36	direct	2622 Feb 16 19:56	3° II 48'10
	2615 Sep 25 02:49	30° 8 8	evening set	2622 May 19 19:51	5° II 04'38
opposition	2615 Nov 22 06:26	29° 8 07'17 -15°09'03			
min. Earth dist.	2615 Nov 21 16:39	29° 8 07'56 48.34526 AU	conjunction	2622 May 26 13:12	5° II 13'43 -13°36'58
direct	2616 Feb 11 19:20	28° 8 08'57	minimum elong	2622 May 26 13:22	5° II 13'44 13°36'58
evening set	2616 May 16 02:34	29° 8 28'48	max. Earth dist.	2622 May 26 19:23	5° II 14'04 50.03458 AU
			morning rise	2622 Jun 02 07:20	5° II 22'51
conjunction	2616 May 20 05:55	29° 8 34'24 -14°29'21	retrograde	2622 Sep 06 03:55	6° II 42'23
minimum elong	2616 May 20 06:06	29° 8 34'24 14°29'21	opposition	2622 Nov 28 12:14	5° II 43'03 -14°05'38
max. Earth dist.	2616 May 20 19:23	29° 8 35'09 50.26717 AU	min. Earth dist.	2622 Nov 28 07:11	5° II 43'17 48.06628 AU
morning rise	2616 May 24 09:52	29° 8 40'02	direct	2623 Feb 17 23:31	4° II 44'31
	2616 Jun 08 09:39	0° II	evening set	2623 May 20 16:26	6° II 00'33
retrograde	2616 Aug 30 22:20	1° II 03'09			
opposition	2616 Nov 22 10:52	0° II 03'52 -15°00'38	conjunction	2623 May 27 18:15	6° II 10'07 -13°27'26
min. Earth dist.	2616 Nov 21 23:26	0° II 04'24 48.32035 AU	minimum elong	2623 May 27 18:27	6° II 10'08 13°27'26
	2616 Nov 25 21:35	30° 8 8	max. Earth dist.	2623 May 27 22:28	6° II 10'21 49.98184 AU
direct	2617 Feb 11 21:39	29° 8 05'33	morning rise	2623 Jun 03 21:04	6° II 19'44
	2617 Apr 28 01:17	0° II	retrograde	2623 Sep 07 07:50	7° II 38'48
evening set	2617 May 16 19:32	0° II 24'43	opposition	2623 Nov 29 16:26	6° II 39'26 -13°55'38
			min. Earth dist.	2623 Nov 29 12:36	6° II 39'37 48.01074 AU
conjunction	2617 May 21 11:11	0° II 31'00 -14°21'09	direct	2624 Feb 19 03:57	5° II 40'52
minimum elong	2617 May 21 11:22	0° II 31'01 14°21'08	evening set	2624 May 20 13:17	6° II 56'29
max. Earth dist.	2617 May 21 23:54	0° II 31'44 50.24085 AU			
morning rise	2617 May 26 03:24	0° II 37'20	conjunction	2624 May 27 23:29	7° II 06'31 -13°17'40
retrograde	2617 Sep 01 03:11	1° II 59'44	minimum elong	2624 May 27 23:40	7° II 06'32 13°17'40
opposition	2617 Nov 23 15:10	1° II 00'29 -14°52'01	max. Earth dist.	2624 May 28 03:40	7° II 06'45 49.92617 AU
min. Earth dist.	2617 Nov 23 04:23	1° II 00'59 48.28990 AU	morning rise	2624 Jun 04 10:34	7° II 16'36
direct	2618 Feb 13 01:06	0° II 02'09	retrograde	2624 Sep 07 09:24	8° II 35'14
evening set	2618 May 17 13:36	1° II 20'43	opposition	2624 Nov 29 20:42	7° II 35'51 -13°45'23
			min. Earth dist.	2624 Nov 29 17:58	7° II 35'58 47.95221 AU
conjunction	2618 May 22 16:25	1° II 27'39 -14°12'44	direct	2625 Feb 19 11:31	6° II 37'14
minimum elong	2618 May 22 16:36	1° II 27'39 14°12'45	evening set	2625 May 21 10:32	7° II 52'29
max. Earth dist.	2618 May 23 02:28	1° II 28'13 50.20895 AU			
morning rise	2618 May 27 19:57	1° II 34'36	conjunction	2625 May 29 04:36	8° II 02'58 -13°07'40
retrograde	2618 Sep 02 07:57	2° II 56'21	minimum elong	2625 May 29 04:49	8° II 02'59 13°07'40
opposition	2618 Nov 24 19:24	1° II 57'06 -14°43'11	max. Earth dist.	2625 May 29 07:22	8° II 03'07 49.86767 AU
min. Earth dist.	2618 Nov 24 10:21	1° II 57'31 48.25408 AU	morning rise	2625 Jun 05 23:42	8° II 13'31
direct	2619 Feb 14 05:27	0° II 58'45	retrograde	2625 Sep 08 14:53	9° II 31'43
evening set	2619 May 18 08:25	2° II 16'44	opposition	2625 Dec 01 00:55	8° II 32'20 -13°34'53
			min. Earth dist.	2625 Nov 30 22:19	8° II 32'27 47.89067 AU
conjunction	2619 May 23 21:45	2° II 24'15 -14°04'08	direct	2626 Feb 20 16:02	7° II 33'42
minimum elong	2619 May 23 21:56	2° II 24'16 14°04'07	evening set	2626 May 22 08:02	8° II 48'35
max. Earth dist.	2619 May 24 07:15	2° II 24'47 50.17180 AU			
morning rise	2619 May 29 11:47	2° II 31'48	conjunction	2626 May 30 09:56	8° II 59'30 -12°57'25
retrograde	2619 Sep 03 09:32	3° II 52'57	minimum elong	2626 May 30 10:07	8° II 59'31 12°57'24
opposition	2619 Nov 25 23:41	2° II 53'41 -14°34'09	max. Earth dist.	2626 May 30 11:22	8° II 59'35 49.80578 AU
min. Earth dist.	2619 Nov 25 16:08	2° II 54'02 48.21315 AU	morning rise	2626 Jun 07 12:55	9° II 10'30
direct	2620 Feb 15 13:03	1° II 55'17	retrograde	2626 Sep 09 21:53	10° II 28'20
evening set	2620 May 18 03:41	3° II 12'44	opposition	2626 Dec 02 05:09	9° II 28'56 -13°24'08
			min. Earth dist.	2626 Dec 02 04:43	9° II 28'57 47.82557 AU
conjunction	2620 May 24 02:44	3° II 20'48 -13°55'18	direct	2627 Feb 21 19:10	8° II 30'17
minimum elong	2620 May 24 02:55	3° II 20'48 13°55'18	evening set	2627 May 23 05:58	9° II 44'50
max. Earth dist.	2620 May 24 10:38	3° II 21'14 50.13002 AU			
morning rise	2620 May 30 02:33	3° II 28'55	conjunction	2627 May 31 15:24	9° II 56'11 -12°46'56
retrograde	2620 Sep 03 14:59	4° II 49'29	minimum elong	2627 May 31 15:36	9° II 56'12 12°46'57
opposition	2620 Nov 26 03:53	3° II 50'12 -14°24'53	max. Earth dist.	2627 May 31 16:26	9° II 56'15 49.74017 AU
min. Earth dist.	2620 Nov 25 20:44	3° II 50'32 48.16790 AU	morning rise	2627 Jun 09 01:48	10° II 07'37
direct	2621 Feb 15 18:14	2° II 51'45	retrograde	2627 Sep 11 04:06	11° II 25'04
evening set	2621 May 18 23:30	4° II 08'42	opposition	2627 Dec 03 09:25	10° II 25'40 -13°13'10
			min. Earth dist.	2627 Dec 03 09:26	10° II 25'40 47.75629 AU

direct	2628 Feb 22 22:08	9°II26'59	retrograde	2634 Sep 17 14:21	18°II05'09
evening set	2628 May 23 04:02	10°II41'14	opposition	2634 Dec 09 16:29	17°II05'26 -11°50'03
			min. Earth dist.	2634 Dec 10 01:28	17°II05'01 47.13732 AU
conjunction	2628 May 31 20:39	10°II53'00 -12°36'14	direct	2635 Mar 01 08:27	16°II06'14
minimum elong	2628 May 31 20:50	10°II53'01 12°36'14	evening set	2635 May 28 21:23	17°II18'41
max. Earth dist.	2628 May 31 19:10	10°II52'55 49.67001 AU			
morning rise	2628 Jun 09 14:30	11°II04'50	conjunction	2635 Jun 08 12:05	17°II33'07 -11°15'15
retrograde	2628 Sep 11 10:10	12°II21'57	minimum elong	2635 Jun 08 12:16	17°II33'08 11°15'15
opposition	2628 Dec 03 13:53	11°II22'33 -13°01'58	max. Earth dist.	2635 Jun 08 02:00	17°II32'33 49.04645 AU
min. Earth dist.	2628 Dec 03 15:34	11°II22'28 47.68226 AU	morning rise	2635 Jun 19 04:07	17°II47'39
direct	2629 Feb 23 01:29	10°II23'48	retrograde	2635 Sep 18 19:45	19°II02'42
evening set	2629 May 24 02:28	11°II37'46	opposition	2635 Dec 10 21:00	18°II02'56 -11°37'13
			min. Earth dist.	2635 Dec 11 06:06	18°II02'30 47.03400 AU
conjunction	2629 Jun 02 02:20	11°II49'56 -12°25'20	direct	2636 Mar 01 13:33	17°II03'39
minimum elong	2629 Jun 02 02:31	11°II49'57 12°25'20	evening set	2636 May 28 20:58	18°II15'54
max. Earth dist.	2629 Jun 02 00:13	11°II49'49 49.59475 AU			
morning rise	2629 Jun 11 03:15	12°II02'11	conjunction	2636 Jun 08 17:42	18°II30'42 -11°02'45
retrograde	2629 Sep 12 12:57	13°II18'58	minimum elong	2636 Jun 08 17:54	18°II30'43 11°02'45
opposition	2629 Dec 04 18:17	12°II19'31 -12°50'33	max. Earth dist.	2636 Jun 08 06:35	18°II30'04 48.94318 AU
min. Earth dist.	2629 Dec 04 21:35	12°II19'22 47.60287 AU	morning rise	2636 Jun 19 15:51	18°II45'36
direct	2630 Feb 24 08:14	11°II20'44	retrograde	2636 Sep 19 03:01	20°II00'26
evening set	2630 May 25 01:18	12°II34'24	opposition	2636 Dec 11 01:46	19°II00'37 -11°24'07
			min. Earth dist.	2636 Dec 11 12:38	19°II00'06 46.92798 AU
conjunction	2630 Jun 03 07:57	12°II46'58 -12°14'12	direct	2637 Mar 02 17:08	18°II01'16
minimum elong	2630 Jun 03 08:09	12°II46'59 12°14'12	evening set	2637 May 29 20:59	19°II13'21
max. Earth dist.	2630 Jun 03 03:52	12°II46'44 49.51430 AU			
morning rise	2630 Jun 12 15:48	12°II59'37	conjunction	2637 Jun 09 23:39	19°II28'31 -10°49'59
retrograde	2630 Sep 13 17:48	14°II16'04	minimum elong	2637 Jun 09 23:50	19°II28'31 10°49'59
opposition	2630 Dec 05 22:41	13°II16'35 -12°38'55	max. Earth dist.	2637 Jun 09 12:20	19°II27'52 48.83737 AU
min. Earth dist.	2630 Dec 06 02:41	13°II16'23 47.51833 AU	morning rise	2637 Jun 21 03:31	19°II43'46
direct	2631 Feb 25 13:52	12°II17'43	retrograde	2637 Sep 20 10:11	20°II58'24
evening set	2631 May 26 00:04	13°II31'06	opposition	2637 Dec 12 06:19	19°II58'32 -11°10'45
			min. Earth dist.	2637 Dec 12 17:15	19°II58'01 46.81920 AU
conjunction	2631 Jun 04 13:30	13°II44'03 -12°02'52	direct	2638 Mar 03 20:09	18°II59'08
minimum elong	2631 Jun 04 13:41	13°II44'04 12°02'53	evening set	2638 May 30 21:20	20°II11'05
max. Earth dist.	2631 Jun 04 07:40	13°II43'44 49.42864 AU			
morning rise	2631 Jun 14 04:11	13°II57'06	conjunction	2638 Jun 11 05:37	20°II26'35 -10°36'58
retrograde	2631 Sep 15 01:19	15°II13'14	minimum elong	2638 Jun 11 05:49	20°II26'36 10°36'59
opposition	2631 Dec 07 03:11	14°II13'42 -12°27'04	max. Earth dist.	2638 Jun 10 16:07	20°II25'49 48.72859 AU
min. Earth dist.	2631 Dec 07 09:22	14°II13'24 47.42888 AU	morning rise	2638 Jun 22 15:25	20°II42'12
direct	2632 Feb 26 17:01	13°II14'45	retrograde	2638 Sep 21 17:52	21°II56'38
evening set	2632 May 25 23:08	14°II27'52	opposition	2638 Dec 13 11:09	20°II56'45 -10°57'08
			min. Earth dist.	2638 Dec 13 23:36	20°II56'09 46.70730 AU
conjunction	2632 Jun 04 19:08	14°II41'12 -11°51'19	direct	2639 Mar 04 22:48	19°II57'16
minimum elong	2632 Jun 04 19:20	14°II41'13 11°51'19	evening set	2639 May 31 21:43	21°II09'06
max. Earth dist.	2632 Jun 04 12:51	14°II40'51 49.33855 AU			
morning rise	2632 Jun 14 16:16	14°II54'38	conjunction	2639 Jun 12 11:44	21°II24'58 -10°23'44
retrograde	2632 Sep 15 07:11	16°II10'27	minimum elong	2639 Jun 12 11:55	21°II24'59 10°23'43
opposition	2632 Dec 07 07:33	15°II10'52 -12°14'58	max. Earth dist.	2639 Jun 11 22:00	21°II24'11 48.61625 AU
min. Earth dist.	2632 Dec 07 13:56	15°II10'33 47.33521 AU	morning rise	2639 Jun 24 03:00	21°II40'54
direct	2633 Feb 26 20:09	14°II11'49	retrograde	2639 Sep 22 21:56	22°II55'12
evening set	2633 May 26 22:19	15°II24'42	opposition	2639 Dec 14 16:00	21°II55'16 -10°43'16
			min. Earth dist.	2639 Dec 15 05:45	21°II54'37 46.59144 AU
conjunction	2633 Jun 06 00:38	15°II38'25 -11°39'32	direct	2640 Mar 05 05:21	20°II55'43
minimum elong	2633 Jun 06 00:49	15°II38'25 11°39'32	evening set	2640 May 31 22:36	22°II07'27
max. Earth dist.	2633 Jun 05 16:12	15°II37'56 49.24448 AU			
morning rise	2633 Jun 16 04:21	15°II52'13	conjunction	2640 Jun 12 17:58	22°II23'38 -10°10'14
retrograde	2633 Sep 16 12:37	17°II07'45	minimum elong	2640 Jun 12 18:09	22°II23'39 10°10'15
opposition	2633 Dec 08 12:04	16°II08'06 -12°02'38	max. Earth dist.	2640 Jun 12 02:23	22°II22'44 48.49979 AU
min. Earth dist.	2633 Dec 08 20:00	16°II07'43 47.23793 AU	morning rise	2640 Jun 24 14:46	22°II39'55
direct	2634 Feb 28 00:32	15°II08'58	retrograde	2640 Sep 23 02:12	23°II54'03
evening set	2634 May 27 21:42	16°II21'37	opposition	2640 Dec 14 20:55	22°II54'05 -10°29'10
			min. Earth dist.	2640 Dec 15 11:25	22°II53'23 46.47115 AU
conjunction	2634 Jun 07 06:25	16°II35'43 -11°27'31	direct	2641 Mar 06 12:04	21°II54'26
minimum elong	2634 Jun 07 06:37	16°II35'43 11°27'31	evening set	2641 Jun 01 23:36	23°II06'03
max. Earth dist.	2634 Jun 06 21:48	16°II35'13 49.14691 AU	max. Earth dist.	2641 Jun 13 06:56	23°II21'35 48.37838 AU
morning rise	2634 Jun 17 16:19	16°II49'52			

conjunction	2641 Jun 14 00:22	23°II22'35 -9°56'32	min. Earth dist.	2647 Dec 23 08:41	29°II50'04 45.50020 AU
minimum elong	2641 Jun 14 00:33	23°II22'35 9°56'31	direct	2648 Mar 13 01:52	28°II50'34
morning rise	2641 Jun 26 02:34	23°II39'12		2648 Jun 06 07:35	0°☾
retrograde	2641 Sep 24 09:32	24°II53'12	evening set	2648 Jun 07 12:56	0°☾01'40
opposition	2641 Dec 16 02:07	23°II53'08 -10°14'50			
min. Earth dist.	2641 Dec 16 18:54	23°II52'20 46.34571 AU	conjunction	2648 Jun 20 23:32	0°☾20'24 -8°14'01
direct	2642 Mar 07 17:06	22°II53'24	minimum elong	2648 Jun 20 23:41	0°☾20'25 8°14'02
evening set	2642 Jun 03 00:57	24°II04'54	max. Earth dist.	2648 Jun 19 20:59	0°☾18'51 47.40378 AU
			morning rise	2648 Jul 04 11:39	0°☾39'14
conjunction	2642 Jun 15 07:00	24°II21'46 -9°42'36	retrograde	2648 Oct 01 09:14	1°☾52'26
minimum elong	2642 Jun 15 07:11	24°II21'46 9°42'36	opposition	2648 Dec 22 15:48	0°☾51'36 -8°27'32
max. Earth dist.	2642 Jun 14 12:44	24°II20'42 48.25186 AU	min. Earth dist.	2648 Dec 23 15:51	0°☾50'26 45.34809 AU
morning rise	2642 Jun 27 14:18	24°II38'43		2649 Feb 13 08:47	30°☾II
retrograde	2642 Sep 25 17:37	25°II52'33	direct	2649 Mar 14 04:51	29°II50'51
opposition	2642 Dec 17 07:08	24°II52'24 -10°00'16		2649 Apr 12 00:50	0°☾
min. Earth dist.	2642 Dec 18 00:24	24°II51'35 46.21508 AU	evening set	2649 Jun 08 15:38	1°☾01'59
direct	2643 Mar 08 20:12	23°II52'32	max. Earth dist.	2649 Jun 21 04:16	1°☾19'28 47.25168 AU
evening set	2643 Jun 04 02:31	25°II03'56			
			conjunction	2649 Jun 22 06:47	1°☾21'01 -7°58'22
conjunction	2643 Jun 16 13:31	25°II21'07 -9°28'26	minimum elong	2649 Jun 22 06:57	1°☾21'02 7°58'22
minimum elong	2643 Jun 16 13:42	25°II21'08 9°28'26	morning rise	2649 Jul 05 23:05	1°☾40'09
max. Earth dist.	2643 Jun 15 16:45	25°II19'55 48.12027 AU	retrograde	2649 Oct 02 15:28	2°☾53'19
morning rise	2643 Jun 29 02:04	25°II38'24	opposition	2649 Dec 23 21:40	1°☾52'23 -8°11'08
retrograde	2643 Sep 27 01:14	26°II52'05	min. Earth dist.	2649 Dec 24 22:31	1°☾51'10 45.19321 AU
opposition	2643 Dec 18 12:27	25°II51'50 -9°45'27	direct	2650 Mar 15 11:45	0°☾51'31
min. Earth dist.	2643 Dec 19 07:34	25°II50'55 46.07972 AU	evening set	2650 Jun 09 18:52	2°☾02'42
direct	2644 Mar 09 00:14	24°II51'49	max. Earth dist.	2650 Jun 22 09:55	2°☾20'22 47.09680 AU
evening set	2644 Jun 04 03:58	26°II03'08			
			conjunction	2650 Jun 23 14:06	2°☾22'02 -7°42'28
conjunction	2644 Jun 16 20:07	26°II20'38 -9°14'03	minimum elong	2650 Jun 23 14:15	2°☾22'02 7°42'28
minimum elong	2644 Jun 16 20:17	26°II20'38 9°14'03	morning rise	2650 Jul 07 10:43	2°☾41'28
max. Earth dist.	2644 Jun 15 22:55	26°II19'24 47.98408 AU	retrograde	2650 Oct 03 21:35	3°☾54'37
morning rise	2644 Jun 29 13:30	26°II38'13	opposition	2650 Dec 25 03:30	2°☾53'37 -7°54'28
retrograde	2644 Sep 27 04:49	27°II51'46	min. Earth dist.	2650 Dec 26 04:59	2°☾52'22 45.03541 AU
opposition	2644 Dec 18 17:47	26°II51'24 -9°30'23	direct	2651 Mar 16 18:20	1°☾52'37
min. Earth dist.	2644 Dec 19 14:03	26°II50'25 45.93995 AU	evening set	2651 Jun 10 22:17	3°☾03'52
direct	2645 Mar 10 08:16	25°II51'14			
evening set	2645 Jun 05 05:59	27°II02'28	conjunction	2651 Jun 24 21:39	3°☾23'30 -7°26'18
max. Earth dist.	2645 Jun 17 03:56	27°II18'57 47.84391 AU	minimum elong	2651 Jun 24 21:49	3°☾23'30 7°26'19
			max. Earth dist.	2651 Jun 23 16:08	3°☾21'45 46.93850 AU
conjunction	2645 Jun 18 02:50	27°II20'17 -8°59'25	morning rise	2651 Jul 08 22:19	3°☾43'14
minimum elong	2645 Jun 18 03:01	27°II20'18 8°59'25	retrograde	2651 Oct 05 04:33	4°☾56'25
morning rise	2645 Jul 01 01:08	27°II38'11	opposition	2651 Dec 26 09:42	3°☾55'19 -7°37'32
retrograde	2645 Sep 28 09:56	28°II51'36	min. Earth dist.	2651 Dec 27 13:11	3°☾53'58 44.87393 AU
opposition	2645 Dec 19 23:00	27°II51'07 -9°15'04	direct	2652 Mar 17 00:56	2°☾54'12
min. Earth dist.	2645 Dec 20 19:48	27°II50'07 45.79654 AU	evening set	2652 Jun 11 01:55	4°☾05'31
direct	2646 Mar 11 15:03	26°II50'48	max. Earth dist.	2652 Jun 23 23:09	4°☾23'40 46.77630 AU
evening set	2646 Jun 06 08:06	28°II01'59			
max. Earth dist.	2646 Jun 18 09:32	28°II18'41 47.70010 AU	conjunction	2652 Jun 25 05:18	4°☾25'27 -7°09'54
			minimum elong	2652 Jun 25 05:27	4°☾25'28 7°09'53
conjunction	2646 Jun 19 09:44	28°II20'06 -8°44'32	morning rise	2652 Jul 09 09:51	4°☾45'29
minimum elong	2646 Jun 19 09:54	28°II20'07 8°44'33	retrograde	2652 Oct 05 14:03	5°☾58'43
morning rise	2646 Jul 02 12:46	28°II38'19	opposition	2652 Dec 26 15:57	4°☾57'31 -7°20'21
retrograde	2646 Sep 29 16:21	29°II51'39	min. Earth dist.	2652 Dec 27 19:48	4°☾56'08 44.70812 AU
opposition	2646 Dec 21 04:35	28°II51'02 -8°59'30	direct	2653 Mar 18 05:08	3°☾56'15
min. Earth dist.	2646 Dec 22 03:17	28°II49'56 45.64980 AU	evening set	2653 Jun 12 06:11	5°☾07'40
direct	2647 Mar 12 20:57	27°II50'34	max. Earth dist.	2653 Jun 25 04:30	5°☾25'57 46.60933 AU
evening set	2647 Jun 07 10:20	29°II01'42			
			conjunction	2653 Jun 26 13:18	5°☾27'53 -6°53'14
conjunction	2647 Jun 20 16:35	29°II20'07 -8°29'24	minimum elong	2653 Jun 26 13:27	5°☾27'54 6°53'15
minimum elong	2647 Jun 20 16:46	29°II20'08 8°29'24	morning rise	2653 Jul 10 21:47	5°☾48'12
max. Earth dist.	2647 Jun 19 16:08	29°II18'42 47.55331 AU	retrograde	2653 Oct 07 00:07	7°☾01'29
morning rise	2647 Jul 04 00:04	29°II38'39	opposition	2653 Dec 27 22:23	6°☾00'10 -7°02'54
	2647 Jul 20 02:51	0°☾	min. Earth dist.	2653 Dec 29 04:28	5°☾58'41 44.53748 AU
retrograde	2647 Sep 30 23:40	0°☾51'54	direct	2654 Mar 19 09:04	4°☾58'45
	2647 Dec 14 19:31	30°☾II	evening set	2654 Jun 13 10:38	6°☾10'16
opposition	2647 Dec 22 10:05	29°II51'10 -8°43'39			

conjunction	2654 Jun 27 21:36	6°  30'46	-6°36'21	direct	2661 Mar 26 11:23	12°  26'41	
minimum elong	2654 Jun 27 21:45	6°  30'47	6°36'20	evening set	2661 Jun 20 01:46	13°  39'16	
max. Earth dist.	2654 Jun 26 12:07	6°  28'47	46.43736 AU	max. Earth dist.	2661 Jul 03 16:30	13°  59'03	45.12493 AU
morning rise	2654 Jul 12 09:35	6°  51'22					
retrograde	2654 Oct 08 07:04	8°  04'41		conjunction	2661 Jul 05 10:42	14°  01'38	-4°30'55
opposition	2654 Dec 29 05:02	7°  03'14	-6°45'11	minimum elong	2661 Jul 05 10:48	14°  01'39	4°30'56
min. Earth dist.	2654 Dec 30 12:11	7°  01'42	44.36175 AU	morning rise	2661 Jul 20 20:24	14°  24'06	
direct	2655 Mar 20 17:31	6°  01'39		retrograde	2661 Oct 15 17:06	15°  38'08	
evening set	2655 Jun 14 15:20	7°  13'16		opposition	2662 Jan 05 07:21	14°  35'27	-4°33'34
max. Earth dist.	2655 Jun 27 18:08	7°  31'55	46.26055 AU	min. Earth dist.	2662 Jan 06 21:47	14°  33'30	43.03121 AU
				direct	2662 Mar 27 21:53	13°  32'22	
				evening set	2662 Jun 21 08:48	14°  45'12	
				max. Earth dist.	2662 Jul 05 01:37	15°  05'12	44.92720 AU
conjunction	2655 Jun 29 05:44	7°  34'03	-6°19'12				
minimum elong	2655 Jun 29 05:53	7°  34'04	6°19'13				
morning rise	2655 Jul 13 21:22	7°  54'56					
retrograde	2655 Oct 09 14:05	9°  08'17		conjunction	2662 Jul 06 20:17	15°  07'50	-4°11'56
opposition	2655 Dec 30 11:44	8°  06'41	-6°27'13	minimum elong	2662 Jul 06 20:24	15°  07'50	4°11'57
min. Earth dist.	2655 Dec 31 19:49	8°  05'06	44.18145 AU	morning rise	2662 Jul 22 08:28	15°  30'32	
direct	2656 Mar 21 01:54	7°  04'54		retrograde	2662 Oct 17 01:53	16°  44'46	
evening set	2656 Jun 14 20:18	8°  16'38		opposition	2663 Jan 06 15:16	15°  41'56	-4°13'37
max. Earth dist.	2656 Jun 28 01:15	8°  35'29	46.07920 AU	min. Earth dist.	2663 Jan 08 05:40	15°  39'59	42.83136 AU
				direct	2663 Mar 29 05:57	14°  38'39	
				evening set	2663 Jun 22 16:10	15°  51'45	
				max. Earth dist.	2663 Jul 06 09:16	16°  11'52	44.72682 AU
conjunction	2656 Jun 29 14:12	8°  37'42	-6°01'48				
minimum elong	2656 Jun 29 14:20	8°  37'43	6°01'48				
morning rise	2656 Jul 14 09:10	8°  58'51					
retrograde	2656 Oct 09 20:31	10°  12'17		conjunction	2663 Jul 08 05:55	16°  14'38	-3°52'41
opposition	2656 Dec 30 18:37	9°  10'30	-6°08'59	minimum elong	2663 Jul 08 06:01	16°  14'38	3°52'41
min. Earth dist.	2657 Jan 01 04:42	9°  08'48	43.99696 AU	morning rise	2663 Jul 23 20:29	16°  37'34	
direct	2657 Mar 22 10:05	8°  08'31		retrograde	2663 Oct 18 13:28	17°  52'03	
evening set	2657 Jun 16 01:32	9°  20'22		opposition	2664 Jan 07 23:32	16°  49'02	-3°53'23
max. Earth dist.	2657 Jun 29 09:09	9°  39'26	45.89406 AU	min. Earth dist.	2664 Jan 09 15:57	16°  46'59	42.62872 AU
				direct	2664 Mar 29 11:12	15°  45'33	
				evening set	2664 Jun 22 23:58	16°  58'57	
				max. Earth dist.	2664 Jul 06 19:12	17°  19'17	44.52329 AU
conjunction	2657 Jun 30 22:48	9°  41'42	-5°44'09				
minimum elong	2657 Jun 30 22:56	9°  41'42	5°44'10				
morning rise	2657 Jul 15 21:00	10°  03'07					
retrograde	2657 Oct 11 04:43	11°  16'38		conjunction	2664 Jul 08 16:05	17°  22'04	-3°33'10
opposition	2658 Jan 01 01:33	10°  14'41	-5°50'28	minimum elong	2664 Jul 08 16:11	17°  22'05	3°33'11
min. Earth dist.	2658 Jan 02 11:45	10°  12'58	43.80892 AU	morning rise	2664 Jul 24 08:38	17°  45'15	
direct	2658 Mar 23 17:03	9°  12'28		retrograde	2664 Oct 19 00:19	18°  59'59	
evening set	2658 Jun 17 07:13	10°  24'28		opposition	2665 Jan 08 07:53	17°  56'48	-3°32'52
max. Earth dist.	2658 Jun 30 15:40	10°  43'39	45.70548 AU	min. Earth dist.	2665 Jan 10 00:56	17°  54'42	42.42254 AU
				direct	2665 Mar 30 19:30	16°  53'05	
				evening set	2665 Jun 24 08:26	18°  06'49	
				max. Earth dist.	2665 Jul 08 03:12	18°  27'13	44.31592 AU
conjunction	2658 Jul 02 07:29	10°  46'04	-5°26'15				
minimum elong	2658 Jul 02 07:37	10°  46'04	5°26'14				
morning rise	2658 Jul 17 08:53	11°  07'45					
retrograde	2658 Oct 12 16:28	12°  21'22		conjunction	2665 Jul 10 02:27	18°  30'10	-3°13'24
opposition	2659 Jan 02 08:41	11°  19'13	-5°31'40	minimum elong	2665 Jul 10 02:32	18°  30'10	3°13'23
min. Earth dist.	2659 Jan 03 20:38	11°  17'25	43.61791 AU	morning rise	2665 Jul 25 21:09	18°  53'35	
direct	2659 Mar 24 20:55	10°  16'47		retrograde	2665 Oct 20 12:43	20°  08'34	
evening set	2659 Jun 18 13:01	11°  28'57		opposition	2666 Jan 09 16:37	19°  05'11	-3°12'04
max. Earth dist.	2659 Jul 02 00:44	11°  48'25	45.51417 AU	min. Earth dist.	2666 Jan 11 10:59	19°  03'01	42.21238 AU
				direct	2666 Apr 01 03:34	18°  01'14	
				evening set	2666 Jun 25 17:14	19°  15'18	
				max. Earth dist.	2666 Jul 09 12:50	19°  35'52	44.10416 AU
conjunction	2659 Jul 03 16:27	11°  50'49	-5°08'05				
minimum elong	2659 Jul 03 16:34	11°  50'49	5°08'05				
morning rise	2659 Jul 18 20:37	12°  12'45					
retrograde	2659 Oct 14 01:52	13°  26'29		conjunction	2666 Jul 11 13:12	19°  38'54	-2°53'22
opposition	2660 Jan 03 16:04	12°  24'10	-5°12'36	minimum elong	2666 Jul 11 13:17	19°  38'54	2°53'22
min. Earth dist.	2660 Jan 05 04:24	12°  22'20	43.42439 AU	morning rise	2666 Jul 27 09:32	20°  02'33	
direct	2660 Mar 25 03:58	11°  21'30		retrograde	2666 Oct 21 22:13	21°  17'48	
evening set	2660 Jun 18 19:10	12°  33'52		opposition	2667 Jan 11 01:36	20°  14'13	-2°51'00
max. Earth dist.	2660 Jul 02 07:58	12°  53'28	45.32063 AU	min. Earth dist.	2667 Jan 12 21:45	20°  11'56	41.99785 AU
				direct	2667 Apr 02 13:50	19°  10'00	
				evening set	2667 Jun 27 02:28	20°  24'25	
				max. Earth dist.	2667 Jul 10 22:31	20°  45'07	43.88834 AU
conjunction	2660 Jul 04 01:19	12°  55'59	-4°49'38				
minimum elong	2660 Jul 04 01:26	12°  56'00	4°49'38				
morning rise	2660 Jul 19 08:27	13°  18'11					
retrograde	2660 Oct 14 11:03	14°  32'04		conjunction	2667 Jul 13 00:06	20°  48'14	-2°33'04
opposition	2661 Jan 03 23:36	13°  29'33	-4°53'13	minimum elong	2667 Jul 13 00:10	20°  48'15	2°33'03
min. Earth dist.	2661 Jan 05 12:35	13°  27'41	43.22886 AU	morning rise	2667 Jul 28 22:05	21°  12'06	

retrograde	2667 Oct 23 07:21	22°☾27'40	conjunction	2674 Jul 21 12:04	29°☾12'17 -0°03'46
opposition	2668 Jan 12 10:44	21°☾23'51 -2°29'38	minimum elong	2674 Jul 21 12:04	29°☾12'17 0°03'47
min. Earth dist.	2668 Jan 14 07:12	21°☾21'33 41.77944 AU	behind sun begin	2674 Jul 21 05:36	29°☾11'53
direct	2668 Apr 02 23:56	20°☾19'22	behind sun end	2674 Jul 21 18:31	29°☾12'41
evening set	2668 Jun 27 12:04	21°☾34'09	morning rise	2674 Aug 06 15:37	29°☾37'30
max. Earth dist.	2668 Jul 11 07:26	21°☾54'55 43.66859 AU		2674 Aug 21 22:02	0°♂
			asc. node	2674 Sep 20 10:30	0°♂35'25
conjunction	2668 Jul 13 11:09	21°☾58'11 -2°12'31	retrograde	2674 Oct 31 19:34	0°♂55'55
minimum elong	2668 Jul 13 11:13	21°☾58'11 2°12'31		2675 Jan 12 22:48	30°♂☾
morning rise	2668 Jul 29 10:37	22°☾22'16	opposition	2675 Jan 20 10:30	29°☾50'25 0°07'48
retrograde	2668 Oct 23 18:52	23°☾38'09	min. Earth dist.	2675 Jan 22 13:01	29°☾47'43 40.18050 AU
opposition	2669 Jan 12 20:15	22°☾34'06 -2°08'00	direct	2675 Apr 11 20:29	28°☾43'56
min. Earth dist.	2669 Jan 14 18:47	22°☾31'40 41.55745 AU		2675 Jul 05 10:23	0°♂
direct	2669 Apr 04 07:43	21°☾29'19	evening set	2675 Jul 06 21:31	0°♂02'14
evening set	2669 Jun 28 22:09	22°☾44'31	max. Earth dist.	2675 Jul 20 14:52	0°♂23'44 42.06462 AU
max. Earth dist.	2669 Jul 12 18:53	23°☾05'27 43.44551 AU			
			conjunction	2675 Jul 23 01:19	0°♂27'35 0°18'41
conjunction	2669 Jul 14 22:42	23°☾08'45 -1°51'42	minimum elong	2675 Jul 23 01:18	0°♂27'35 0°18'41
minimum elong	2669 Jul 14 22:45	23°☾08'46 1°51'41	morning rise	2675 Aug 08 04:55	0°♂52'57
morning rise	2669 Jul 30 23:17	23°☾33'02	retrograde	2675 Nov 02 12:46	2°♂11'56
retrograde	2669 Oct 25 07:02	24°☾49'16	opposition	2676 Jan 21 22:03	1°♂06'13 0°31'25
opposition	2670 Jan 14 05:47	23°☾44'58 -1°46'05	min. Earth dist.	2676 Jan 24 02:03	1°♂03'25 39.94568 AU
min. Earth dist.	2670 Jan 16 04:36	23°☾42'31 41.33244 AU		2676 Apr 05 11:40	30°♂☾
direct	2670 Apr 05 16:07	22°☾39'54	direct	2676 Apr 12 04:10	29°☾59'26
evening set	2670 Jun 30 08:52	23°☾55'32		2676 Apr 18 23:48	0°♂
max. Earth dist.	2670 Jul 14 04:27	24°☾16'31 43.21966 AU	evening set	2676 Jul 07 11:20	1°♂18'24
			max. Earth dist.	2676 Jul 21 04:27	1°♂40'01 41.82843 AU
conjunction	2670 Jul 16 10:22	24°☾19'58 -1°30'37			
minimum elong	2670 Jul 16 10:24	24°☾19'58 1°30'38	conjunction	2676 Jul 23 15:05	1°♂43'55 0°41'17
morning rise	2670 Aug 01 12:07	24°☾44'27	minimum elong	2676 Jul 23 15:04	1°♂43'55 0°41'17
retrograde	2670 Oct 26 20:34	26°☾01'02	morning rise	2676 Aug 08 18:13	2°♂09'25
opposition	2671 Jan 15 15:44	24°☾56'30 -1°23'52	retrograde	2676 Nov 03 03:25	3°♂29'00
min. Earth dist.	2671 Jan 17 15:49	24°☾53'58 41.10513 AU	opposition	2677 Jan 22 10:03	2°♂23'01 0°55'17
direct	2671 Apr 07 00:18	23°☾51'08	min. Earth dist.	2677 Jan 24 15:05	2°♂20'09 39.70823 AU
evening set	2671 Jul 01 19:44	25°☾07'14	direct	2677 Apr 13 15:46	1°♂15'57
max. Earth dist.	2671 Jul 15 16:01	25°☾28'23 42.99156 AU	evening set	2677 Jul 09 02:09	2°♂35'36
			max. Earth dist.	2677 Jul 22 16:54	2°♂57'13 41.58938 AU
conjunction	2671 Jul 17 22:14	25°☾31'52 -1°09'17			
minimum elong	2671 Jul 17 22:16	25°☾31'52 1°09'16	conjunction	2677 Jul 25 05:18	3°♂01'15 1°04'08
morning rise	2671 Aug 03 00:38	25°☾56'32	minimum elong	2677 Jul 25 05:16	3°♂01'15 1°04'08
retrograde	2671 Oct 28 07:07	27°☾13'32	morning rise	2677 Aug 10 07:59	3°♂26'54
opposition	2672 Jan 17 02:02	26°☾08'44 -1°01'22	retrograde	2677 Nov 04 18:27	4°♂47'04
min. Earth dist.	2672 Jan 19 03:01	26°☾06'09 40.87590 AU	opposition	2678 Jan 23 22:16	3°♂40'50 1°19'26
direct	2672 Apr 07 12:56	25°☾03'05	min. Earth dist.	2678 Jan 26 04:08	3°♂37'55 39.46781 AU
evening set	2672 Jul 02 07:18	26°☾19'40	direct	2678 Apr 15 04:42	2°♂33'27
max. Earth dist.	2672 Jul 16 03:22	26°☾40'56 42.76192 AU	evening set	2678 Jul 10 17:35	3°♂53'49
			max. Earth dist.	2678 Jul 24 05:58	4°♂15'25 41.34688 AU
conjunction	2672 Jul 18 10:27	26°☾44'30 -0°47'41			
minimum elong	2672 Jul 18 10:28	26°☾44'30 0°47'42	conjunction	2678 Jul 26 20:01	4°♂19'36 1°27'13
morning rise	2672 Aug 03 13:34	27°☾09'21	minimum elong	2678 Jul 26 19:59	4°♂19'36 1°27'13
retrograde	2672 Oct 28 18:43	28°☾26'47	morning rise	2678 Aug 11 21:46	4°♂45'22
opposition	2673 Jan 17 12:25	27°☾21'45 -0°38'36	retrograde	2678 Nov 06 07:15	6°♂06'10
min. Earth dist.	2673 Jan 19 13:23	27°☾19'09 40.64539 AU	opposition	2679 Jan 25 11:10	4°♂59'39 1°43'50
direct	2673 Apr 09 00:33	26°☾15'49	min. Earth dist.	2679 Jan 27 18:57	4°♂56'36 39.22399 AU
evening set	2673 Jul 03 19:28	27°☾32'56	direct	2679 Apr 16 18:56	3°♂51'55
max. Earth dist.	2673 Jul 17 14:35	27°☾54'16 42.53085 AU	evening set	2679 Jul 12 09:27	5°♂13'00
			max. Earth dist.	2679 Jul 25 20:21	5°♂34'39 41.10113 AU
conjunction	2673 Jul 19 23:05	27°☾57'57 -0°25'50			
minimum elong	2673 Jul 19 23:05	27°☾57'57 0°25'50	conjunction	2679 Jul 28 10:54	5°♂38'54 1°50'32
morning rise	2673 Aug 05 02:34	28°☾22'59	minimum elong	2679 Jul 28 10:51	5°♂38'54 1°50'32
retrograde	2673 Oct 30 06:37	29°☾40'54	morning rise	2679 Aug 13 11:32	6°♂04'47
opposition	2674 Jan 18 23:23	28°☾35'37 -0°15'32	retrograde	2679 Nov 07 20:52	7°♂26'14
min. Earth dist.	2674 Jan 21 02:02	28°☾32'55 40.41362 AU	opposition	2680 Jan 27 00:16	6°♂19'25 2°08'30
direct	2674 Apr 10 10:10	27°☾29'24	min. Earth dist.	2680 Jan 29 08:08	6°♂16'20 38.97706 AU
evening set	2674 Jul 05 08:06	28°☾47'06	direct	2680 Apr 17 08:10	5°♂11'19
max. Earth dist.	2674 Jul 19 03:39	29°☾08'35 42.29854 AU	evening set	2680 Jul 13 02:14	6°♂33'09
			max. Earth dist.	2680 Jul 26 09:27	6°♂54'43 40.85225 AU

conjunction	2680 Jul 29 02:18	6°♏59'09	2°14'05	opposition	2687 Feb 05 07:49	16°♏05'49	5°07'33
minimum elong	2680 Jul 29 02:14	6°♏59'09	2°14'05	min. Earth dist.	2687 Feb 07 20:47	16°♏02'19	37.20414 AU
morning rise	2680 Aug 14 01:38	7°♏25'07			2687 Apr 07 19:10	15°♏	
retrograde	2680 Nov 08 12:57	8°♏47'16		direct	2687 Apr 27 10:31	14°♏54'58	
opposition	2681 Jan 27 13:44	7°♏40'07	2°33'25		2687 May 16 23:38	15°♏	
min. Earth dist.	2681 Jan 29 23:36	7°♏36'55	38.72744 AU	evening set	2687 Jul 24 19:57	16°♏23'25	
direct	2681 Apr 18 19:12	6°♏31'38		max. Earth dist.	2687 Aug 06 03:56	16°♏44'33	39.06983 AU
evening set	2681 Jul 14 19:34	7°♏54'16					
max. Earth dist.	2681 Jul 28 01:16	8°♏15'52	40.60079 AU	conjunction	2687 Aug 09 02:08	16°♏49'36	5°04'24
				minimum elong	2687 Aug 09 01:58	16°♏49'36	5°04'23
conjunction	2681 Jul 30 18:14	8°♏20'20	2°37'51	morning rise	2687 Aug 24 07:00	17°♏15'44	
minimum elong	2681 Jul 30 18:09	8°♏20'20	2°37'51	retrograde	2687 Nov 19 16:23	18°♏43'57	
morning rise	2681 Aug 15 15:45	8°♏46'23		opposition	2688 Feb 07 00:34	17°♏34'26	5°33'53
retrograde	2681 Nov 10 05:08	10°♏09'15		min. Earth dist.	2688 Feb 09 14:44	17°♏30'51	36.94961 AU
opposition	2682 Jan 29 03:38	9°♏01'45	2°58'34	direct	2688 Apr 28 00:30	16°♏23'13	
min. Earth dist.	2682 Jan 31 13:55	8°♏58'31	38.47551 AU	evening set	2688 Jul 25 19:03	17°♏52'51	
direct	2682 Apr 20 08:50	7°♏52'53		max. Earth dist.	2688 Aug 06 23:16	18°♏13'53	38.81351 AU
evening set	2682 Jul 16 13:44	9°♏16'21					
max. Earth dist.	2682 Jul 29 15:34	9°♏37'51	40.34734 AU	conjunction	2688 Aug 09 21:27	18°♏18'59	5°29'22
				minimum elong	2688 Aug 09 21:16	18°♏18'58	5°29'22
conjunction	2682 Aug 01 10:19	9°♏42'29	3°01'50	morning rise	2688 Aug 24 22:07	18°♏45'02	
minimum elong	2682 Aug 01 10:13	9°♏42'28	3°01'50	retrograde	2688 Nov 20 13:02	20°♏14'21	
morning rise	2682 Aug 17 06:00	10°♏08'35		opposition	2689 Feb 07 17:48	19°♏04'31	6°00'22
retrograde	2682 Nov 12 00:05	11°♏32'12		min. Earth dist.	2689 Feb 10 08:50	19°♏00'52	36.69430 AU
opposition	2683 Jan 30 17:53	10°♏24'21	3°23'58	direct	2689 Apr 29 17:55	17°♏52'55	
min. Earth dist.	2683 Feb 02 04:55	10°♏21'04	38.22213 AU	evening set	2689 Jul 27 19:24	19°♏23'48	
direct	2683 Apr 21 22:07	9°♏15'05		max. Earth dist.	2689 Aug 08 17:43	19°♏44'36	38.55619 AU
evening set	2683 Jul 18 08:29	10°♏39'26					
max. Earth dist.	2683 Jul 31 07:48	11°♏00'56	40.09246 AU	conjunction	2689 Aug 11 17:17	19°♏49'51	5°54'26
				minimum elong	2689 Aug 11 17:05	19°♏49'50	5°54'26
conjunction	2683 Aug 03 02:59	11°♏05'37	3°26'00	morning rise	2689 Aug 26 13:40	20°♏15'49	
minimum elong	2683 Aug 03 02:53	11°♏05'36	3°26'00	retrograde	2689 Nov 22 11:46	21°♏46'17	
morning rise	2683 Aug 18 20:14	11°♏31'45		opposition	2690 Feb 09 11:40	20°♏36'06	6°27'00
retrograde	2683 Nov 13 16:15	12°♏56'11		min. Earth dist.	2690 Feb 12 03:03	20°♏32'25	36.43790 AU
opposition	2684 Feb 01 08:41	11°♏47'59	3°49'34	direct	2690 May 01 11:33	19°♏24'06	
min. Earth dist.	2684 Feb 03 20:51	11°♏44'36	37.96779 AU	evening set	2690 Jul 29 20:33	20°♏56'18	
direct	2684 Apr 22 13:13	10°♏38'18		max. Earth dist.	2690 Aug 10 13:01	21°♏16'51	38.29728 AU
evening set	2684 Jul 19 04:00	12°♏03'35					
max. Earth dist.	2684 Aug 01 00:22	12°♏25'02	39.83702 AU	conjunction	2690 Aug 13 13:43	21°♏22'14	6°19'37
				minimum elong	2690 Aug 13 13:31	21°♏22'13	6°19'37
conjunction	2684 Aug 03 19:57	12°♏29'48	3°50'22	morning rise	2690 Aug 28 05:08	21°♏48'05	
minimum elong	2684 Aug 03 19:50	12°♏29'47	3°50'22	retrograde	2690 Nov 24 07:11	23°♏19'44	
morning rise	2684 Aug 19 10:42	12°♏55'57		opposition	2691 Feb 11 06:15	22°♏09'12	6°53'44
retrograde	2684 Nov 14 08:37	14°♏21'14		min. Earth dist.	2691 Feb 13 23:19	22°♏05'23	36.18002 AU
opposition	2685 Feb 01 23:51	13°♏12'42	4°15'23	direct	2691 May 03 05:58	20°♏56'47	
min. Earth dist.	2685 Feb 04 11:44	13°♏09'18	37.71318 AU	evening set	2691 Jul 31 22:47	22°♏30'19	
direct	2685 Apr 24 05:38	12°♏02'37		max. Earth dist.	2691 Aug 12 09:48	22°♏50'39	38.03706 AU
evening set	2685 Jul 21 00:32	13°♏28'53					
max. Earth dist.	2685 Aug 02 16:29	13°♏50'13	39.58124 AU	conjunction	2691 Aug 15 10:45	22°♏56'06	6°44'52
				minimum elong	2691 Aug 15 10:32	22°♏56'05	6°44'52
conjunction	2685 Aug 05 13:34	13°♏55'07	4°14'54	morning rise	2691 Aug 29 20:54	23°♏21'48	
minimum elong	2685 Aug 05 13:26	13°♏55'07	4°14'53	retrograde	2691 Nov 26 03:26	24°♏54'41	
morning rise	2685 Aug 21 01:21	14°♏21'17		opposition	2692 Feb 13 01:14	23°♏43'47	7°20'34
	2685 Sep 15 00:59	15°♏		min. Earth dist.	2692 Feb 15 18:08	23°♏39'57	35.92100 AU
retrograde	2685 Nov 16 01:38	15°♏47'29		direct	2692 May 04 01:22	22°♏30'55	
	2686 Jan 18 17:05	15°♏		evening set	2692 Aug 02 02:02	24°♏05'50	
opposition	2686 Feb 03 15:35	14°♏38'36	4°41'23	max. Earth dist.	2692 Aug 13 05:24	24°♏25'48	37.77564 AU
min. Earth dist.	2686 Feb 06 04:56	14°♏35'07	37.45860 AU				
direct	2686 Apr 25 19:36	13°♏28'08		conjunction	2692 Aug 16 08:18	24°♏31'27	7°10'11
evening set	2686 Jul 22 21:48	14°♏55'28		minimum elong	2692 Aug 16 08:04	24°♏31'26	7°10'12
	2686 Jul 25 14:40	15°♏		morning rise	2692 Aug 30 12:52	24°♏56'57	
max. Earth dist.	2686 Aug 04 11:09	15°♏16'47	39.32557 AU	retrograde	2692 Nov 27 01:07	26°♏31'09	
				opposition	2693 Feb 13 20:57	25°♏19'51	7°47'29
conjunction	2686 Aug 07 07:44	15°♏21'41	4°39'35	min. Earth dist.	2693 Feb 16 15:32	25°♏15'53	35.66116 AU
minimum elong	2686 Aug 07 07:35	15°♏21'40	4°39'35	direct	2693 May 05 17:37	24°♏06'31	
morning rise	2686 Aug 22 16:07	15°♏47'50		evening set	2693 Aug 04 06:22	25°♏42'53	
retrograde	2686 Nov 17 19:24	17°♏15'01		max. Earth dist.	2693 Aug 15 04:04	26°♏02'36	37.51352 AU

conjunction	2693 Aug 18 06:38	26°08'16"	7°35'32"	opposition	2700 Feb 26 08:33	7°00'15"58	10°54'47"
minimum elong	2693 Aug 18 06:23	26°08'15"	7°35'32"	min. Earth dist.	2700 Mar 01 04:31	7°00'11"44	33.87338 AU
morning rise	2693 Sep 01 04:53	26°03'33"		direct	2700 May 17 23:58	5°00'59"19	
retrograde	2693 Nov 28 22:33	28°09'06"		evening set	2700 Aug 19 21:12	7°00'47"59	
opposition	2694 Feb 15 17:08	26°05'23"	8°14'26"	max. Earth dist.	2700 Aug 28 08:04	8°00'04"22	35.71523 AU
min. Earth dist.	2694 Feb 18 11:39	26°05'24"	35.40098 AU				
direct	2694 May 07 13:33	25°04'35"		conjunction	2700 Aug 31 11:39	8°00'10"31	10°30'53"
evening set	2694 Aug 06 11:52	27°02'12"8		minimum elong	2700 Aug 31 11:18	8°00'10"29	10°30'54"
max. Earth dist.	2694 Aug 17 01:19	27°04'40"45	37.25141 AU	morning rise	2700 Sep 12 00:01	8°00'32"55	
				retrograde	2700 Dec 12 08:55	10°00'19"59	
conjunction	2694 Aug 20 05:21	27°04'35"	8°00'54"	opposition	2701 Feb 28 09:44	9°00'05"23	11°20'53"
minimum elong	2694 Aug 20 05:05	27°04'34"	8°00'54"	min. Earth dist.	2701 Mar 03 05:19	9°00'01"08	33.62753 AU
morning rise	2694 Sep 02 21:07	28°01'36"		direct	2701 May 20 00:17	7°00'48"17	
retrograde	2694 Nov 30 23:47	29°04'34"		evening set	2701 Aug 22 11:45	9°00'39"04	
opposition	2695 Feb 17 14:01	28°03'25"	8°41'24"	max. Earth dist.	2701 Aug 30 10:35	9°00'54"39	35.46763 AU
min. Earth dist.	2695 Feb 20 09:11	28°03'22"	35.14139 AU				
direct	2695 May 09 08:33	27°02'07"		conjunction	2701 Sep 02 15:18	10°00'00"58	10°55'09"
evening set	2695 Aug 08 18:07	29°02'01"35		minimum elong	2701 Sep 02 14:58	10°00'00"56	10°55'09"
max. Earth dist.	2695 Aug 19 00:59	29°02'03"3	36.98995 AU	morning rise	2701 Sep 13 17:08	10°00'22"43	
				retrograde	2701 Dec 14 14:43	12°00'11"47	
conjunction	2695 Aug 22 04:40	29°02'24"	8°26'13"	opposition	2702 Mar 02 11:39	10°00'56"46	11°46'42"
minimum elong	2695 Aug 22 04:23	29°02'23"	8°26'12"	min. Earth dist.	2702 Mar 05 07:35	10°00'52"29	33.38379 AU
morning rise	2695 Sep 04 13:08	29°05'10"7		direct	2702 May 21 23:33	9°00'39"13	
	2695 Sep 09 10:52	0°00'00"		evening set	2702 Aug 25 03:42	11°00'32"14	
retrograde	2695 Dec 02 23:50	1°00'29"33		max. Earth dist.	2702 Sep 01 15:46	11°00'47"04	35.22180 AU
opposition	2696 Feb 19 11:37	0°00'16"58	9°08'19"				
min. Earth dist.	2696 Feb 22 07:19	0°00'12"52	34.88292 AU	conjunction	2702 Sep 04 19:57	11°00'53"24	11°19'07"
	2696 Mar 02 05:23	30°00'00"		minimum elong	2702 Sep 04 19:35	11°00'53"22	11°19'07"
direct	2696 May 10 06:06	29°02'02"11		morning rise	2702 Sep 15 10:13	12°00'14"26	
	2696 Jul 16 01:14	0°00'00"		retrograde	2702 Dec 16 19:24	14°00'05"35	
evening set	2696 Aug 10 01:51	0°00'43"19		opposition	2703 Mar 04 14:37	12°00'50"10	12°12'11"
max. Earth dist.	2696 Aug 20 00:32	1°00'01"50	36.73008 AU	min. Earth dist.	2703 Mar 07 11:01	12°00'45"49	33.14182 AU
				direct	2703 May 24 00:54	11°00'32"09	
conjunction	2696 Aug 23 04:36	1°00'07"47	8°51'28"	evening set	2703 Aug 27 21:14	13°00'27"27	
minimum elong	2696 Aug 23 04:18	1°00'07"46	8°51'28"	max. Earth dist.	2703 Sep 03 20:32	13°00'41"24	34.97790 AU
morning rise	2696 Sep 05 05:31	1°00'32"08					
retrograde	2696 Dec 04 01:41	3°00'12"07		conjunction	2703 Sep 07 01:04	13°00'47"49	11°42'43"
opposition	2697 Feb 20 09:37	1°00'59"06	9°35'10"	minimum elong	2703 Sep 07 00:42	13°00'47"47	11°42'43"
min. Earth dist.	2697 Feb 23 04:47	1°00'55"01	34.62652 AU	morning rise	2703 Sep 17 03:13	14°00'08"04	
direct	2697 May 12 04:20	0°00'43"50		retrograde	2703 Dec 19 03:31	16°00'01"23	
evening set	2697 Aug 12 10:43	2°00'26"43		opposition	2704 Mar 05 18:13	14°00'45"32	12°37'17"
max. Earth dist.	2697 Aug 22 00:50	2°00'44"45	36.47226 AU	min. Earth dist.	2704 Mar 08 14:07	14°00'41"12	32.90186 AU
				direct	2704 May 25 04:58	13°00'27"02	
conjunction	2697 Aug 25 05:21	2°00'50"47	9°16'36"	evening set	2704 Aug 29 16:26	15°00'24"45	
minimum elong	2697 Aug 25 05:03	2°00'50"46	9°16'35"	max. Earth dist.	2704 Sep 05 02:24	15°00'37"44	34.73590 AU
morning rise	2697 Sep 06 22:00	3°00'14"44					
retrograde	2697 Dec 06 02:29	4°00'56"21		conjunction	2704 Sep 08 07:16	15°00'44"14	12°05'55"
opposition	2698 Feb 22 08:39	3°00'42"55	10°01'53"	minimum elong	2704 Sep 08 06:53	15°00'44"12	12°05'54"
min. Earth dist.	2698 Feb 25 04:41	3°00'38"44	34.37259 AU	morning rise	2704 Sep 17 20:21	16°00'03"35	
direct	2698 May 14 03:05	2°00'27"10		retrograde	2704 Dec 20 10:50	17°00'59"09	
evening set	2698 Aug 14 20:50	4°00'11"53		opposition	2705 Mar 07 22:40	16°00'42"53	13°01'56"
max. Earth dist.	2698 Aug 24 03:00	4°00'29"28	36.21721 AU	min. Earth dist.	2705 Mar 10 19:35	16°00'38"27	32.66409 AU
				direct	2705 May 27 09:00	15°00'23"54	
conjunction	2698 Aug 27 06:37	4°00'35"30	9°41'34"	evening set	2705 Sep 01 13:35	17°00'24"08	
minimum elong	2698 Aug 27 06:18	4°00'35"29	9°41'34"	max. Earth dist.	2705 Sep 07 10:00	17°00'36"06	34.49648 AU
morning rise	2698 Sep 08 14:26	4°00'59"00					
retrograde	2698 Dec 08 04:32	6°00'42"20		conjunction	2705 Sep 10 14:12	17°00'42"36	12°28'38"
opposition	2699 Feb 24 08:14	5°00'28"30	10°28'27"	minimum elong	2705 Sep 10 13:50	17°00'42"35	12°28'38"
min. Earth dist.	2699 Feb 27 03:13	5°00'24"21	34.12155 AU	morning rise	2705 Sep 19 13:13	18°00'00"57	
direct	2699 May 16 02:48	4°00'12"18		retrograde	2705 Dec 22 18:42	19°00'58"54	
evening set	2699 Aug 17 08:18	5°00'58"57		opposition	2706 Mar 10 03:56	18°00'42"13	13°26'04"
max. Earth dist.	2699 Aug 26 04:05	6°00'15"53	35.96493 AU	min. Earth dist.	2706 Mar 12 23:42	18°00'37"49	32.42914 AU
				direct	2706 May 29 14:47	17°00'22"44	
conjunction	2699 Aug 29 08:40	6°00'22"03	10°06'21"	evening set	2706 Sep 04 12:12	19°00'25"35	
minimum elong	2699 Aug 29 08:21	6°00'22"02	10°06'20"	max. Earth dist.	2706 Sep 09 16:57	19°00'36"19	34.26008 AU
morning rise	2699 Sep 10 07:13	6°00'45"02					
retrograde	2699 Dec 10 06:51	8°00'30"11		conjunction	2706 Sep 12 21:43	19°00'42"57	12°50'49"

minimum elong	2706 Sep 12 21:19	19° <u>0</u> 42'55	12°50'49	retrograde	2713 Jan 06 21:21	4° <u>0</u> 53'43	
morning rise	2706 Sep 21 05:44	20° <u>0</u> 00'11		opposition	2713 Mar 24 16:50	3° <u>0</u> 34'14	15°53'47
retrograde	2706 Dec 25 02:08	22° <u>0</u> 00'38		min. Earth dist.	2713 Mar 27 07:30	3° <u>0</u> 30'00	30.92372 AU
opposition	2707 Mar 12 10:06	20° <u>0</u> 43'30	13°49'37	direct	2713 Jun 12 18:14	2° <u>0</u> 11'42	
min. Earth dist.	2707 Mar 15 06:33	20° <u>0</u> 39'02	32.19773 AU	max. Earth dist.	2713 Sep 25 03:31	4° <u>0</u> 36'12	32.75440 AU
direct	2707 May 31 18:42	19° <u>0</u> 23'32					
evening set	2707 Sep 07 13:05	21° <u>0</u> 29'10		conjunction	2713 Sep 28 00:56	4° <u>0</u> 42'36	15°04'38
max. Earth dist.	2707 Sep 12 03:04	21° <u>0</u> 38'43	34.02764 AU	minimum elong	2713 Sep 28 00:37	4° <u>0</u> 42'34	15°04'37
				retrograde	2714 Jan 09 12:22	7° <u>0</u> 10'04	
conjunction	2707 Sep 15 06:08	21° <u>0</u> 45'16	13°12'24	opposition	2714 Mar 27 05:15	5° <u>0</u> 50'15	16°10'51
minimum elong	2707 Sep 15 05:46	21° <u>0</u> 45'14	13°12'24	min. Earth dist.	2714 Mar 29 20:01	5° <u>0</u> 45'59	30.73347 AU
morning rise	2707 Sep 22 21:42	22° <u>0</u> 01'16		direct	2714 Jun 15 05:35	4° <u>0</u> 27'21	
retrograde	2707 Dec 27 09:57	24° <u>0</u> 04'20		max. Earth dist.	2714 Sep 27 19:11	6° <u>0</u> 53'25	32.56467 AU
opposition	2708 Mar 13 16:57	22° <u>0</u> 46'46	14°12'30				
min. Earth dist.	2708 Mar 16 12:16	22° <u>0</u> 42'21	31.97059 AU	conjunction	2714 Sep 30 14:47	6° <u>0</u> 59'43	15°19'47
direct	2708 Jun 02 00:41	21° <u>0</u> 26'19		minimum elong	2714 Sep 30 14:27	6° <u>0</u> 59'41	15°19'47
evening set	2708 Sep 09 16:06	23° <u>0</u> 34'53		retrograde	2715 Jan 12 03:34	9° <u>0</u> 28'31	
max. Earth dist.	2708 Sep 13 11:44	23° <u>0</u> 42'56	33.79993 AU	opposition	2715 Mar 29 18:29	8° <u>0</u> 08'22	16°26'42
				min. Earth dist.	2715 Apr 01 07:14	8° <u>0</u> 04'14	30.54921 AU
conjunction	2708 Sep 16 15:14	23° <u>0</u> 49'35	13°33'17	direct	2715 Jun 17 19:18	6° <u>0</u> 45'08	
minimum elong	2708 Sep 16 14:50	23° <u>0</u> 49'33	13°33'18	max. Earth dist.	2715 Sep 30 10:20	9° <u>0</u> 12'35	32.38099 AU
morning rise	2708 Sep 23 13:06	24° <u>0</u> 04'10					
retrograde	2708 Dec 28 20:21	26° <u>0</u> 10'03		conjunction	2715 Oct 03 05:34	9° <u>0</u> 18'54	15°33'44
opposition	2709 Mar 16 00:46	24° <u>0</u> 52'03	14°34'38	minimum elong	2715 Oct 03 05:16	9° <u>0</u> 18'52	15°33'44
min. Earth dist.	2709 Mar 18 19:49	24° <u>0</u> 47'37	31.74868 AU	retrograde	2716 Jan 14 19:12	11° <u>0</u> 48'59	
direct	2709 Jun 04 05:19	23° <u>0</u> 31'07		opposition	2716 Mar 31 08:31	10° <u>0</u> 28'30	16°41'14
evening set	2709 Sep 12 21:55	25° <u>0</u> 42'50		min. Earth dist.	2716 Apr 02 21:11	10° <u>0</u> 24'21	30.37101 AU
max. Earth dist.	2709 Sep 15 23:42	25° <u>0</u> 49'22	33.57773 AU	direct	2716 Jun 19 07:10	9° <u>0</u> 04'54	
				max. Earth dist.	2716 Oct 02 04:17	11° <u>0</u> 33'54	32.20366 AU
conjunction	2709 Sep 19 01:14	25° <u>0</u> 55'54	13°53'25				
minimum elong	2709 Sep 19 00:52	25° <u>0</u> 55'52	13°53'25	conjunction	2716 Oct 04 21:12	11° <u>0</u> 40'03	15°46'26
morning rise	2709 Sep 25 03:18	26° <u>0</u> 08'54		minimum elong	2716 Oct 04 20:54	11° <u>0</u> 40'01	15°46'26
retrograde	2709 Dec 31 05:26	28° <u>0</u> 17'46		retrograde	2717 Jan 16 11:31	14° <u>0</u> 11'20	
opposition	2710 Mar 18 09:31	26° <u>0</u> 59'22	14°55'54	opposition	2717 Apr 02 23:31	12° <u>0</u> 50'33	16°54'24
min. Earth dist.	2710 Mar 21 03:38	26° <u>0</u> 54'58	31.53255 AU	min. Earth dist.	2717 Apr 05 10:28	12° <u>0</u> 46'29	30.19892 AU
direct	2710 Jun 06 13:22	25° <u>0</u> 38'00		direct	2717 Jun 21 21:57	11° <u>0</u> 26'36	
evening set	2710 Sep 16 07:03	27° <u>0</u> 53'07		max. Earth dist.	2717 Oct 04 20:49	13° <u>0</u> 56'51	32.03286 AU
max. Earth dist.	2710 Sep 18 10:41	27° <u>0</u> 57'45	33.36194 AU				
				conjunction	2717 Oct 07 13:22	14° <u>0</u> 03'00	15°57'47
conjunction	2710 Sep 21 11:52	28° <u>0</u> 04'19	14°12'41	minimum elong	2717 Oct 07 13:06	14° <u>0</u> 02'59	15°57'47
minimum elong	2710 Sep 21 11:29	28° <u>0</u> 04'17	14°12'41	retrograde	2718 Jan 19 04:08	16° <u>0</u> 35'29	
morning rise	2710 Sep 26 15:39	28° <u>0</u> 15'26		opposition	2718 Apr 05 15:16	15° <u>0</u> 14'21	17°06'06
	2710 Nov 22 12:27	0° <u>0</u>		min. Earth dist.	2718 Apr 08 01:16	15° <u>0</u> 10'20	30.03355 AU
retrograde	2711 Jan 02 18:26	0° <u>0</u> 27'36		direct	2718 Jun 24 11:39	13° <u>0</u> 50'03	
	2711 Feb 14 01:23	30° <u>0</u> 8'00		max. Earth dist.	2718 Oct 07 16:27	16° <u>0</u> 21'43	31.86922 AU
opposition	2711 Mar 20 19:04	29° <u>0</u> 08'48	15°16'14				
min. Earth dist.	2711 Mar 23 11:46	29° <u>0</u> 04'29	31.32307 AU	conjunction	2718 Oct 10 06:18	16° <u>0</u> 27'40	16°07'43
direct	2711 Jun 08 21:54	27° <u>0</u> 47'01		minimum elong	2718 Oct 10 06:04	16° <u>0</u> 27'39	16°07'44
	2711 Sep 17 02:48	0° <u>0</u>		retrograde	2719 Jan 21 19:29	19° <u>0</u> 01'15	
evening set	2711 Sep 19 21:06	0° <u>0</u> 05'59		opposition	2719 Apr 08 07:48	17° <u>0</u> 39'48	17°16'14
max. Earth dist.	2711 Sep 20 23:56	0° <u>0</u> 08'25	33.15281 AU	min. Earth dist.	2719 Apr 10 16:21	17° <u>0</u> 35'52	29.87534 AU
				direct	2719 Jun 27 03:57	16° <u>0</u> 15'09	
conjunction	2711 Sep 23 23:21	0° <u>0</u> 14'53	14°31'01	max. Earth dist.	2719 Oct 10 10:38	18° <u>0</u> 48'00	31.71346 AU
minimum elong	2711 Sep 23 23:00	0° <u>0</u> 14'51	14°31'01				
morning rise	2711 Sep 28 00:41	0° <u>0</u> 23'42		conjunction	2719 Oct 12 23:34	18° <u>0</u> 53'55	16°16'10
retrograde	2712 Jan 05 06:05	2° <u>0</u> 39'34		minimum elong	2719 Oct 12 23:22	18° <u>0</u> 53'53	16°16'09
opposition	2712 Mar 22 05:38	1° <u>0</u> 20'25	15°35'33	retrograde	2720 Jan 24 14:02	21° <u>0</u> 28'31	
min. Earth dist.	2712 Mar 24 22:05	1° <u>0</u> 16'05	31.12013 AU	opposition	2720 Apr 10 00:57	20° <u>0</u> 06'45	17°24'44
	2712 May 30 18:49	30° <u>0</u> 8'00		min. Earth dist.	2720 Apr 12 07:27	20° <u>0</u> 02'57	29.72515 AU
direct	2712 Jun 10 06:34	29° <u>0</u> 58'15		direct	2720 Jun 28 19:54	18° <u>0</u> 41'46	
	2712 Jun 20 20:01	0° <u>0</u>		max. Earth dist.	2720 Oct 12 07:36	21° <u>0</u> 15'56	31.56619 AU
evening set	2712 Sep 22 21:03	2° <u>0</u> 21'55					
max. Earth dist.	2712 Sep 22 13:22	2° <u>0</u> 21'12	32.95045 AU	conjunction	2720 Oct 14 17:36	21° <u>0</u> 21'35	16°23'01
				minimum elong	2720 Oct 14 17:25	21° <u>0</u> 21'34	16°23'02
conjunction	2712 Sep 25 11:41	2° <u>0</u> 27'38	14°48'21	retrograde	2721 Jan 26 06:44	23° <u>0</u> 57'11	
minimum elong	2712 Sep 25 11:19	2° <u>0</u> 27'36	14°48'21	opposition	2721 Apr 12 18:51	22° <u>0</u> 35'06	17°31'30
morning rise	2712 Sep 28 01:31	2° <u>0</u> 33'18		min. Earth dist.	2721 Apr 15 00:08	22° <u>0</u> 31'22	29.58363 AU

direct	2721 Jul 01 12:21	21° <u>♏</u> 09'50		direct	2729 Jul 22 06:50	11° <u>♏</u> 37'38	
max. Earth dist.	2721 Oct 15 03:53	23° <u>♏</u> 45'07	31.42853 AU	max. Earth dist.	2729 Nov 05 18:58	14° <u>♏</u> 19'42	30.71250 AU
conjunction	2721 Oct 17 11:57	23° <u>♏</u> 50'38	16°28'14	conjunction	2729 Nov 07 04:09	14° <u>♏</u> 23'04	16°04'15
minimum elong	2721 Oct 17 11:49	23° <u>♏</u> 50'37	16°28'13	minimum elong	2729 Nov 07 04:18	14° <u>♏</u> 23'05	16°04'14
retrograde	2722 Jan 29 02:12	26° <u>♏</u> 27'07			2729 Nov 22 12:21	15° <u>♏</u>	
opposition	2722 Apr 15 13:24	25° <u>♏</u> 04'46	17°36'26	retrograde	2730 Feb 18 22:16	17° <u>♏</u> 03'58	
min. Earth dist.	2722 Apr 17 15:37	25° <u>♏</u> 01'15	29.45187 AU	opposition	2730 May 06 12:16	15° <u>♏</u> 40'43	17°04'39
direct	2722 Jul 04 07:47	23° <u>♏</u> 39'15		min. Earth dist.	2730 May 07 19:22	15° <u>♏</u> 38'31	28.77286 AU
max. Earth dist.	2722 Oct 18 01:38	26° <u>♏</u> 15'43	31.30114 AU		2730 May 31 12:36	15° <u>♏</u>	
conjunction	2722 Oct 20 06:43	26° <u>♏</u> 20'57	16°31'42	direct	2730 Jul 25 05:50	14° <u>♏</u> 14'38	
minimum elong	2722 Oct 20 06:37	26° <u>♏</u> 20'56	16°31'42		2730 Sep 15 13:09	15° <u>♏</u>	
retrograde	2723 Jan 31 20:32	28° <u>♏</u> 58'18		max. Earth dist.	2730 Nov 08 17:22	16° <u>♏</u> 56'54	30.66994 AU
opposition	2723 Apr 18 08:41	27° <u>♏</u> 35'42	17°39'29	conjunction	2730 Nov 10 00:44	17° <u>♏</u> 00'05	15°52'50
min. Earth dist.	2723 Apr 20 09:30	27° <u>♏</u> 32'16	29.33046 AU	minimum elong	2730 Nov 10 00:56	17° <u>♏</u> 00'06	15°52'50
direct	2723 Jul 07 02:07	26° <u>♏</u> 09'59		retrograde	2731 Feb 21 19:35	19° <u>♏</u> 41'04	
max. Earth dist.	2723 Oct 20 23:37	28° <u>♏</u> 47'31	31.18483 AU	opposition	2731 May 09 10:26	18° <u>♏</u> 17'47	16°51'36
conjunction	2723 Oct 23 01:59	28° <u>♏</u> 52'31	16°33'22	min. Earth dist.	2731 May 10 14:27	18° <u>♏</u> 15'48	28.73342 AU
minimum elong	2723 Oct 23 01:55	28° <u>♏</u> 52'30	16°33'21	direct	2731 Jul 28 03:35	16° <u>♏</u> 51'42	
	2723 Nov 21 07:30	0° <u>♏</u>		conjunction	2731 Nov 12 21:32	19° <u>♏</u> 37'04	15°39'34
retrograde	2724 Feb 03 17:15	1° <u>♏</u> 30'38		minimum elong	2731 Nov 12 21:45	19° <u>♏</u> 37'06	15°39'33
opposition	2724 Apr 20 04:13	0° <u>♏</u> 07'52	17°40'34	max. Earth dist.	2731 Nov 11 18:10	19° <u>♏</u> 34'18	30.63788 AU
min. Earth dist.	2724 Apr 22 01:31	0° <u>♏</u> 04'41	29.21981 AU	retrograde	2732 Feb 24 14:50	22° <u>♏</u> 18'01	
	2724 Apr 24 20:00	30° <u>♏</u> <u>♏</u>		opposition	2732 May 11 08:39	20° <u>♏</u> 54'42	16°36'33
direct	2724 Jul 08 22:22	28° <u>♏</u> 42'00		min. Earth dist.	2732 May 12 10:38	20° <u>♏</u> 52'52	28.70430 AU
	2724 Sep 17 07:18	0° <u>♏</u>		direct	2732 Jul 30 01:18	19° <u>♏</u> 28'39	
max. Earth dist.	2724 Oct 22 21:49	1° <u>♏</u> 20'31	31.07954 AU	conjunction	2732 Nov 14 18:00	22° <u>♏</u> 13'48	15°24'28
conjunction	2724 Oct 24 21:44	1° <u>♏</u> 25'17	16°33'12	minimum elong	2732 Nov 14 18:16	22° <u>♏</u> 13'50	15°24'29
minimum elong	2724 Oct 24 21:41	1° <u>♏</u> 25'17	16°33'13	max. Earth dist.	2732 Nov 13 16:55	22° <u>♏</u> 11'16	30.61679 AU
retrograde	2725 Feb 05 13:48	4° <u>♏</u> 04'07		retrograde	2733 Feb 26 10:47	24° <u>♏</u> 54'36	
opposition	2725 Apr 23 00:35	2° <u>♏</u> 41'13	17°39'38	opposition	2733 May 14 06:51	23° <u>♏</u> 31'16	16°19'32
min. Earth dist.	2725 Apr 24 20:27	2° <u>♏</u> 38'07	29.11990 AU	min. Earth dist.	2733 May 15 04:58	23° <u>♏</u> 29'43	28.68618 AU
direct	2725 Jul 11 17:34	1° <u>♏</u> 15'14		direct	2733 Aug 02 00:38	22° <u>♏</u> 05'16	
max. Earth dist.	2725 Oct 25 21:12	3° <u>♏</u> 54'44	30.98529 AU	conjunction	2733 Nov 17 14:11	24° <u>♏</u> 50'06	15°07'35
conjunction	2725 Oct 27 17:42	3° <u>♏</u> 59'11	16°31'10	minimum elong	2733 Nov 17 14:28	24° <u>♏</u> 50'07	15°07'34
minimum elong	2725 Oct 27 17:42	3° <u>♏</u> 59'11	16°31'10	max. Earth dist.	2733 Nov 16 17:13	24° <u>♏</u> 47'58	30.60712 AU
retrograde	2726 Feb 08 11:10	6° <u>♏</u> 38'39		retrograde	2734 Mar 01 04:59	27° <u>♏</u> 30'39	
opposition	2726 Apr 25 21:22	5° <u>♏</u> 15'38	17°36'42	opposition	2734 May 17 05:08	26° <u>♏</u> 07'19	16°00'34
min. Earth dist.	2726 Apr 27 13:54	5° <u>♏</u> 12'46	29.03042 AU	min. Earth dist.	2734 May 18 00:58	26° <u>♏</u> 05'55	28.67962 AU
direct	2726 Jul 14 15:44	3° <u>♏</u> 49'36		direct	2734 Aug 04 22:48	24° <u>♏</u> 41'24	
max. Earth dist.	2726 Oct 28 19:33	6° <u>♏</u> 29'50	30.90162 AU	evening set	2734 Nov 17 23:14	27° <u>♏</u> 19'50	
conjunction	2726 Oct 30 13:59	6° <u>♏</u> 34'05	16°27'15	conjunction	2734 Nov 20 10:02	27° <u>♏</u> 25'46	14°48'54
minimum elong	2726 Oct 30 14:02	6° <u>♏</u> 34'06	16°27'16	minimum elong	2734 Nov 20 10:22	27° <u>♏</u> 25'48	14°48'55
retrograde	2727 Feb 11 07:54	9° <u>♏</u> 14'05		max. Earth dist.	2734 Nov 19 16:06	27° <u>♏</u> 23'57	30.60970 AU
opposition	2727 Apr 28 18:34	7° <u>♏</u> 50'59	17°31'44	morning rise	2734 Nov 22 21:25	27° <u>♏</u> 31'46	
min. Earth dist.	2727 Apr 30 09:24	7° <u>♏</u> 48'15	28.95125 AU		2735 Feb 13 20:05	0° <u>♏</u> <u>♏</u>	
direct	2727 Jul 17 11:23	6° <u>♏</u> 24'55		retrograde	2735 Mar 04 01:13	0° <u>♏</u> 05'59	
max. Earth dist.	2727 Oct 31 19:51	9° <u>♏</u> 05'57	30.82843 AU		2735 Mar 22 13:57	30° <u>♏</u> <u>♏</u>	
conjunction	2727 Nov 02 10:34	9° <u>♏</u> 09'51	16°21'28	opposition	2735 May 20 02:57	28° <u>♏</u> 42'42	15°39'43
minimum elong	2727 Nov 02 10:39	9° <u>♏</u> 09'51	16°21'27	min. Earth dist.	2735 May 20 18:23	28° <u>♏</u> 41'37	28.68530 AU
retrograde	2728 Feb 14 05:14	11° <u>♏</u> 50'15		direct	2735 Aug 07 21:09	27° <u>♏</u> 16'54	
opposition	2728 Apr 30 16:10	10° <u>♏</u> 27'06	17°24'44	evening set	2735 Nov 19 02:58	29° <u>♏</u> 50'49	
min. Earth dist.	2728 May 02 04:09	10° <u>♏</u> 24'33	28.88189 AU		2735 Nov 22 22:13	0° <u>♏</u> <u>♏</u>	
direct	2728 Jul 19 10:01	9° <u>♏</u> 01'00		conjunction	2735 Nov 23 05:39	0° <u>♏</u> 00'45	14°28'31
max. Earth dist.	2728 Nov 02 18:11	11° <u>♏</u> 42'30	30.76535 AU	minimum elong	2735 Nov 23 05:58	0° <u>♏</u> 00'47	14°28'30
conjunction	2728 Nov 04 07:14	11° <u>♏</u> 46'14	16°13'48	max. Earth dist.	2735 Nov 22 15:25	29° <u>♏</u> 59'19	30.62483 AU
minimum elong	2728 Nov 04 07:22	11° <u>♏</u> 46'15	16°13'48	morning rise	2735 Nov 27 08:48	0° <u>♏</u> 10'45	
retrograde	2729 Feb 16 02:57	14° <u>♏</u> 26'58		retrograde	2736 Mar 05 19:28	2° <u>♏</u> 40'33	
opposition	2729 May 03 14:01	13° <u>♏</u> 03'45	17°15'42	opposition	2736 May 22 00:47	1° <u>♏</u> 17'21	15°17'01
min. Earth dist.	2729 May 04 23:36	13° <u>♏</u> 01'22	28.82247 AU	min. Earth dist.	2736 May 22 13:46	1° <u>♏</u> 16'26	28.70348 AU
					2736 Jul 18 11:00	30° <u>♏</u> <u>♏</u>	

direct	2736 Aug 09 19:09	29° \mathbb{M} 51'44		morning rise	2742 Dec 20 12:16	18° \mathbb{X} 02'47	
	2736 Aug 31 22:33	0° \mathbb{X}		retrograde	2743 Mar 23 23:45	20° \mathbb{X} 13'58	
evening set	2736 Nov 19 17:11	2° \mathbb{X} 22'08		opposition	2743 Jun 09 23:19	18° \mathbb{X} 52'10	11°54'45
				min. Earth dist.	2743 Jun 09 14:50	18° \mathbb{X} 52'45	29.15030 AU
conjunction	2736 Nov 25 00:49	2° \mathbb{X} 34'57	14°06'27	direct	2743 Aug 29 01:37	17° \mathbb{X} 28'35	
minimum elong	2736 Nov 25 01:11	2° \mathbb{X} 35'00	14°06'27	evening set	2743 Dec 02 10:20	19° \mathbb{X} 40'26	
max. Earth dist.	2736 Nov 24 14:13	2° \mathbb{X} 33'53	30.65276 AU				
morning rise	2736 Nov 30 08:53	2° \mathbb{X} 47'50		conjunction	2743 Dec 13 02:05	20° \mathbb{X} 05'17	10°53'19
retrograde	2737 Mar 08 14:45	5° \mathbb{X} 14'15		minimum elong	2743 Dec 13 02:28	20° \mathbb{X} 05'19	10°53'19
opposition	2737 May 24 22:12	3° \mathbb{X} 51'11	14°52'34	max. Earth dist.	2743 Dec 13 12:38	20° \mathbb{X} 06'18	31.16297 AU
min. Earth dist.	2737 May 25 07:01	3° \mathbb{X} 50'34	28.73403 AU	morning rise	2743 Dec 23 17:48	20° \mathbb{X} 30'07	
direct	2737 Aug 12 18:41	2° \mathbb{X} 25'48		retrograde	2744 Mar 25 15:19	22° \mathbb{X} 39'08	
evening set	2737 Nov 21 11:31	4° \mathbb{X} 53'06		opposition	2744 Jun 11 17:38	21° \mathbb{X} 17'34	11°21'00
				min. Earth dist.	2744 Jun 11 05:20	21° \mathbb{X} 18'24	29.25380 AU
conjunction	2737 Nov 27 19:37	5° \mathbb{X} 08'19	13°42'49	direct	2744 Aug 30 21:03	19° \mathbb{X} 54'18	
minimum elong	2737 Nov 27 19:59	5° \mathbb{X} 08'21	13°42'49	evening set	2744 Dec 03 12:19	22° \mathbb{X} 03'51	
max. Earth dist.	2737 Nov 27 12:13	5° \mathbb{X} 07'35	30.69303 AU				
morning rise	2737 Dec 04 04:02	5° \mathbb{X} 23'35		conjunction	2744 Dec 14 17:03	22° \mathbb{X} 29'47	10°21'24
retrograde	2738 Mar 11 09:32	7° \mathbb{X} 47'04		minimum elong	2744 Dec 14 17:27	22° \mathbb{X} 29'49	10°21'24
opposition	2738 May 27 19:29	6° \mathbb{X} 24'10	14°26'26	max. Earth dist.	2744 Dec 15 07:18	22° \mathbb{X} 31'10	31.27471 AU
min. Earth dist.	2738 May 28 01:35	6° \mathbb{X} 23'44	28.77675 AU	morning rise	2744 Dec 25 21:29	22° \mathbb{X} 55'42	
direct	2738 Aug 15 15:07	4° \mathbb{X} 59'02		retrograde	2745 Mar 28 03:27	25° \mathbb{X} 02'37	
evening set	2738 Nov 23 08:23	7° \mathbb{X} 23'28		opposition	2745 Jun 14 11:29	23° \mathbb{X} 41'17	10°46'20
				min. Earth dist.	2745 Jun 13 21:22	23° \mathbb{X} 42'14	29.36643 AU
conjunction	2738 Nov 30 13:56	7° \mathbb{X} 40'46	13°17'41	direct	2745 Sep 02 15:27	22° \mathbb{X} 18'21	
minimum elong	2738 Nov 30 14:19	7° \mathbb{X} 40'48	13°17'41	evening set	2745 Dec 05 14:41	24° \mathbb{X} 25'40	
max. Earth dist.	2738 Nov 30 10:31	7° \mathbb{X} 40'25	30.74530 AU				
morning rise	2738 Dec 07 19:40	7° \mathbb{X} 58'07		conjunction	2745 Dec 17 07:11	24° \mathbb{X} 52'34	9°48'42
retrograde	2739 Mar 14 04:00	10° \mathbb{X} 18'52		minimum elong	2745 Dec 17 07:32	24° \mathbb{X} 52'36	9°48'42
opposition	2739 May 30 16:18	8° \mathbb{X} 56'10	13°58'46	max. Earth dist.	2745 Dec 17 23:37	24° \mathbb{X} 54'09	31.39575 AU
min. Earth dist.	2739 May 30 18:53	8° \mathbb{X} 55'59	28.83082 AU	morning rise	2745 Dec 28 23:28	25° \mathbb{X} 19'26	
direct	2739 Aug 18 14:15	7° \mathbb{X} 31'19		retrograde	2746 Mar 30 17:15	27° \mathbb{X} 24'19	
evening set	2739 Nov 25 06:53	9° \mathbb{X} 53'02		min. Earth dist.	2746 Jun 16 10:24	26° \mathbb{X} 04'27	29.48857 AU
				opposition	2746 Jun 17 04:26	26° \mathbb{X} 03'14	10°10'53
conjunction	2739 Dec 03 07:48	10° \mathbb{X} 12'11	12°51'10	direct	2746 Sep 05 09:05	24° \mathbb{X} 40'37	
minimum elong	2739 Dec 03 08:11	10° \mathbb{X} 12'14	12°51'10	evening set	2746 Dec 07 17:00	26° \mathbb{X} 45'48	
max. Earth dist.	2739 Dec 03 06:44	10° \mathbb{X} 12'05	30.80866 AU				
morning rise	2739 Dec 11 08:57	10° \mathbb{X} 31'22		conjunction	2746 Dec 19 20:31	27° \mathbb{X} 13'33	9°15'18
retrograde	2740 Mar 15 23:09	12° \mathbb{X} 49'35		minimum elong	2746 Dec 19 20:53	27° \mathbb{X} 13'35	9°15'18
opposition	2740 Jun 01 12:39	11° \mathbb{X} 27'05	13°29'38	max. Earth dist.	2746 Dec 20 16:22	27° \mathbb{X} 15'27	31.52623 AU
min. Earth dist.	2740 Jun 01 12:15	11° \mathbb{X} 27'06	28.89581 AU	morning rise	2746 Dec 31 23:45	27° \mathbb{X} 41'17	
direct	2740 Aug 20 11:16	10° \mathbb{X} 02'32		retrograde	2747 Apr 02 05:06	29° \mathbb{X} 44'14	
evening set	2740 Nov 26 06:41	12° \mathbb{X} 21'40		opposition	2747 Jun 19 20:52	28° \mathbb{X} 23'23	9°34'44
				min. Earth dist.	2747 Jun 19 00:42	28° \mathbb{X} 24'44	29.62057 AU
conjunction	2740 Dec 05 01:21	12° \mathbb{X} 42'29	12°23'23	direct	2747 Sep 08 01:08	27° \mathbb{X} 01'07	
minimum elong	2740 Dec 05 01:45	12° \mathbb{X} 42'31	12°23'23	evening set	2747 Dec 09 19:40	29° \mathbb{X} 04'15	
max. Earth dist.	2740 Dec 05 04:16	12° \mathbb{X} 42'46	30.88267 AU				
morning rise	2740 Dec 13 19:58	13° \mathbb{X} 03'18		conjunction	2747 Dec 22 09:13	29° \mathbb{X} 32'44	8°41'18
retrograde	2741 Mar 18 15:09	15° \mathbb{X} 19'05		minimum elong	2747 Dec 22 09:33	29° \mathbb{X} 32'46	8°41'17
opposition	2741 Jun 04 08:47	13° \mathbb{X} 56'48	12°59'11	max. Earth dist.	2747 Dec 23 07:59	29° \mathbb{X} 34'54	31.66660 AU
min. Earth dist.	2741 Jun 04 05:44	13° \mathbb{X} 57'01	28.97095 AU	morning rise	2748 Jan 03 22:23	0° \mathbb{Z} 01'13	
direct	2741 Aug 23 09:04	12° \mathbb{X} 32'35			2748 Jan 03 09:23	0° \mathbb{Z}	
evening set	2741 Nov 28 07:13	14° \mathbb{X} 49'12		retrograde	2748 Apr 03 17:04	2° \mathbb{Z} 02'18	
				opposition	2748 Jun 21 12:21	0° \mathbb{Z} 41'45	8°58'00
conjunction	2741 Dec 07 18:03	15° \mathbb{X} 11'30	11°54'24	min. Earth dist.	2748 Jun 20 12:30	0° \mathbb{Z} 43'20	29.76249 AU
minimum elong	2741 Dec 07 18:26	15° \mathbb{X} 11'32	11°54'24		2748 Jul 18 23:23	30° \mathbb{R} \mathbb{X}	
max. Earth dist.	2741 Dec 07 22:55	15° \mathbb{X} 11'59	30.96666 AU	direct	2748 Sep 09 18:54	29° \mathbb{X} 19'51	
morning rise	2741 Dec 17 04:59	15° \mathbb{X} 33'48			2748 Oct 30 04:46	0° \mathbb{Z}	
retrograde	2742 Mar 21 08:52	17° \mathbb{X} 47'15		evening set	2748 Dec 10 22:28	1° \mathbb{Z} 21'00	
opposition	2742 Jun 07 04:23	16° \mathbb{X} 25'13	12°27'31				
min. Earth dist.	2742 Jun 06 21:50	16° \mathbb{X} 25'39	29.05598 AU	conjunction	2748 Dec 23 21:09	1° \mathbb{Z} 50'10	8°06'46
direct	2742 Aug 26 05:15	15° \mathbb{X} 01'18		minimum elong	2748 Dec 23 21:28	1° \mathbb{Z} 50'12	8°06'45
evening set	2742 Nov 30 08:29	17° \mathbb{X} 15'30		max. Earth dist.	2748 Dec 24 22:37	1° \mathbb{Z} 52'34	31.81674 AU
				morning rise	2749 Jan 05 19:36	2° \mathbb{Z} 19'17	
conjunction	2742 Dec 10 10:29	17° \mathbb{X} 39'09	11°24'21	retrograde	2749 Apr 06 05:37	4° \mathbb{Z} 18'36	
minimum elong	2742 Dec 10 10:53	17° \mathbb{X} 39'11	11°24'21	min. Earth dist.	2749 Jun 23 00:45	3° \mathbb{Z} 00'07	29.91447 AU
max. Earth dist.	2742 Dec 10 19:18	17° \mathbb{X} 40'01	31.06020 AU	opposition	2749 Jun 24 03:24	2° \mathbb{Z} 58'21	8°20'45

direct	2749 Sep 12 08:52	1°33'52"		retrograde	2756 Apr 20 18:31	19°32'43"	
evening set	2749 Dec 13 01:09	3°33'08"		min. Earth dist.	2756 Jul 07 21:33	18°30'27"	31.19925 AU
				opposition	2756 Jul 09 16:06	18°30'45"	3°54'40"
conjunction	2749 Dec 26 08:20	4°30'51"	7°31'48"	direct	2756 Sep 28 06:03	16°34'14"	
minimum elong	2749 Dec 26 08:38	4°30'53"	7°31'48"	evening set	2756 Dec 25 22:27	18°33'20"	
max. Earth dist.	2749 Dec 27 13:16	4°30'34"	31.97656 AU				
morning rise	2750 Jan 08 15:03	4°33'53"		conjunction	2757 Jan 09 19:37	19°30'47"	3°22'46"
retrograde	2750 Apr 08 15:56	6°33'10"		minimum elong	2757 Jan 09 19:46	19°30'47"	3°22'47"
opposition	2750 Jun 26 17:39	5°31'16"	7°43'08"	max. Earth dist.	2757 Jan 11 15:20	19°31'14"	33.29954 AU
min. Earth dist.	2750 Jun 25 12:14	5°31'11"	30.07580 AU	morning rise	2757 Jan 24 16:35	19°33'14"	
direct	2750 Sep 15 00:50	3°35'12"		retrograde	2757 Apr 22 23:30	21°32'58"	
evening set	2750 Dec 15 04:10	5°34'40"		min. Earth dist.	2757 Jul 10 04:24	20°31'12"	31.40594 AU
				opposition	2757 Jul 12 01:19	20°30'24"	3°16'55"
conjunction	2750 Dec 28 18:48	6°31'51"	6°56'31"	direct	2757 Sep 30 16:38	18°35'15"	
minimum elong	2750 Dec 28 19:05	6°31'53"	6°56'31"	evening set	2757 Dec 28 01:17	20°33'00"	
max. Earth dist.	2750 Dec 30 01:32	6°32'43"	32.14521 AU				
morning rise	2751 Jan 11 09:17	6°35'02"		conjunction	2758 Jan 12 01:08	21°30'27"	2°47'29"
retrograde	2751 Apr 11 04:25	8°34'02"		minimum elong	2758 Jan 12 01:14	21°30'27"	2°47'29"
min. Earth dist.	2751 Jun 27 22:33	7°32'35"	30.24596 AU	max. Earth dist.	2758 Jan 13 22:23	21°31'26"	33.50985 AU
opposition	2751 Jun 29 07:00	7°32'28"	7°05'13"	morning rise	2758 Jan 27 01:05	21°34'05"	
direct	2751 Sep 17 15:08	6°30'51"		retrograde	2758 Apr 25 05:38	23°32'27"	
evening set	2751 Dec 17 07:06	8°30'13"		min. Earth dist.	2758 Jul 12 11:04	22°31'05"	31.61763 AU
				opposition	2758 Jul 14 09:50	22°31'09"	2°39'26"
conjunction	2751 Dec 31 04:44	8°33'21"	6°21'00"	direct	2758 Oct 02 23:48	20°35'22"	
minimum elong	2751 Dec 31 04:59	8°33'21"	6°21'00"	evening set	2758 Dec 30 03:54	22°33'50"	
max. Earth dist.	2752 Jan 01 14:57	8°33'20"	32.32201 AU				
morning rise	2752 Jan 14 01:54	9°30'24"		conjunction	2759 Jan 14 06:08	23°30'13"	2°12'27"
retrograde	2752 Apr 12 13:39	10°35'13"		minimum elong	2759 Jan 14 06:13	23°30'13"	2°12'27"
min. Earth dist.	2752 Jun 29 09:45	9°34'01"	30.42392 AU	max. Earth dist.	2759 Jan 16 05:54	23°31'23"	33.72505 AU
opposition	2752 Jun 30 19:53	9°33'59"	6°27'07"	morning rise	2759 Jan 29 08:12	23°34'03"	
direct	2752 Sep 19 06:08	8°31'49"		retrograde	2759 Apr 27 09:08	25°32'02"	
evening set	2752 Dec 18 10:10	10°31'15"		min. Earth dist.	2759 Jul 14 17:03	24°31'03"	31.83442 AU
				opposition	2759 Jul 16 17:22	24°30'02"	2°02'17"
conjunction	2753 Jan 01 13:43	10°34'24"	5°45'20"	direct	2759 Oct 05 09:33	22°35'13"	
minimum elong	2753 Jan 01 13:57	10°34'24"	5°45'20"	evening set	2760 Jan 01 06:35	24°33'53"	
max. Earth dist.	2753 Jan 03 01:17	10°34'04"	32.50601 AU				
morning rise	2753 Jan 15 17:07	11°31'34"		conjunction	2760 Jan 16 10:15	25°30'07"	1°37'43"
retrograde	2753 Apr 14 23:10	13°30'41"		minimum elong	2760 Jan 16 10:19	25°30'07"	1°37'43"
min. Earth dist.	2753 Jul 01 18:32	11°35'01"	30.60901 AU	max. Earth dist.	2760 Jan 18 10:59	25°31'21"	33.94533 AU
opposition	2753 Jul 03 08:00	11°34'49"	5°48'56"	morning rise	2760 Jan 31 14:11	25°33'24"	
direct	2753 Sep 21 18:46	10°32'04"		retrograde	2760 Apr 28 14:52	27°32'24"	
evening set	2753 Dec 20 13:13	12°32'03"		min. Earth dist.	2760 Jul 15 21:16	26°30'16"	32.05685 AU
				opposition	2760 Jul 18 00:19	26°30'06"	1°25'29"
conjunction	2754 Jan 03 22:16	12°35'14"	5°09'37"	direct	2760 Oct 06 16:51	24°34'03"	
minimum elong	2754 Jan 03 22:28	12°35'14"	5°09'37"	evening set	2761 Jan 02 08:48	26°33'12"	
max. Earth dist.	2754 Jan 05 12:56	12°35'51"	32.69644 AU				
morning rise	2754 Jan 18 06:58	13°32'25"		conjunction	2761 Jan 17 13:43	27°30'18"	1°03'20"
retrograde	2754 Apr 17 05:36	15°31'42"		minimum elong	2761 Jan 17 13:45	27°30'18"	1°03'20"
min. Earth dist.	2754 Jul 04 04:56	13°35'23"	30.80040 AU	max. Earth dist.	2761 Jan 19 17:30	27°30'45"	34.17104 AU
opposition	2754 Jul 05 19:29	13°35'55"	5°10'45"	morning rise	2761 Feb 01 18:38	27°33'25"	
direct	2754 Sep 24 07:59	12°33'36"		retrograde	2761 Apr 30 17:39	29°31'50"	
evening set	2754 Dec 22 16:20	14°32'73"		min. Earth dist.	2761 Jul 18 02:31	28°30'44"	32.28482 AU
				opposition	2761 Jul 20 06:40	28°30'12"	0°49'07"
conjunction	2755 Jan 06 06:01	14°35'58"	4°33'54"	direct	2761 Oct 09 00:56	26°34'49"	
minimum elong	2755 Jan 06 06:12	14°35'58"	4°33'53"	evening set	2762 Jan 04 11:08	28°32'54"	
max. Earth dist.	2755 Jan 07 21:48	15°30'22"	32.89262 AU				
morning rise	2755 Jan 20 19:31	15°30'11"		conjunction	2762 Jan 19 16:31	28°35'48"	0°29'20"
retrograde	2755 Apr 19 13:22	17°32'02"		minimum elong	2762 Jan 19 16:32	28°35'49"	0°29'20"
min. Earth dist.	2755 Jul 06 12:36	16°30'45"	30.99730 AU	max. Earth dist.	2762 Jan 21 21:13	29°30'18"	34.40210 AU
opposition	2755 Jul 08 06:05	16°30'14"	4°32'38"	morning rise	2762 Feb 03 22:12	29°32'44"	
direct	2755 Sep 26 20:02	14°34'31"			2762 Feb 20 06:53	0°00'00"	
evening set	2755 Dec 24 19:27	16°33'25"		retrograde	2762 May 02 20:27	1°00'11"	15'
					2762 Jul 19 06:01	30°00'00"	
conjunction	2756 Jan 08 13:09	17°30'41"	3°58'16"	min. Earth dist.	2762 Jul 20 04:56	29°35'36"	32.51818 AU
minimum elong	2756 Jan 08 13:18	17°30'41"	3°58'16"	opposition	2762 Jul 22 12:05	29°35'13"	0°13'12"
max. Earth dist.	2756 Jan 10 07:09	17°30'08"	33.09369 AU	direct	2762 Oct 11 07:06	28°33'59"	
morning rise	2756 Jan 23 06:42	17°33'54"		desc. node	2762 Dec 05 21:05	29°32'35"	

	2762 Dec 27 03:24	0° \approx	max. Earth dist.	2769 Feb 03 09:37	11° \approx 43'48	36.11615 AU
evening set	2763 Jan 06 13:11	0° \approx 20'05	morning rise	2769 Feb 15 17:31	12° \approx 07'29	
			retrograde	2769 May 14 23:55	13° \approx 45'11	
conjunction	2763 Jan 21 18:43	0° \approx 50'46 -0°04'20	min. Earth dist.	2769 Aug 01 17:41	12° \approx 35'18	34.24429 AU
minimum elong	2763 Jan 21 18:44	0° \approx 50'46 0°04'20	opposition	2769 Aug 04 09:32	12° \approx 31'32	-3°42'25
behind sun begin	2763 Jan 21 12:28	0° \approx 50'15	direct	2769 Oct 24 06:31	11° \approx 18'06	
behind sun end	2763 Jan 22 01:00	0° \approx 51'16	evening set	2770 Jan 19 00:48	12° \approx 53'47	
max. Earth dist.	2763 Jan 24 01:55	0° \approx 55'26 34.63797 AU				
morning rise	2763 Feb 06 00:32	1° \approx 21'27	conjunction	2770 Feb 02 18:37	13° \approx 21'57	-3°44'54
retrograde	2763 May 04 20:45	3° \approx 03'08	minimum elong	2770 Feb 02 18:30	13° \approx 21'56	3°44'54
min. Earth dist.	2763 Jul 22 09:07	1° \approx 50'52 32.75630 AU	max. Earth dist.	2770 Feb 05 09:45	13° \approx 27'00	36.36712 AU
opposition	2763 Jul 24 17:02	1° \approx 47'28 -0°22'12	morning rise	2770 Feb 17 13:06	13° \approx 50'09	
direct	2763 Oct 13 13:09	0° \approx 31'40		2770 Apr 02 08:54	15° \approx	
evening set	2764 Jan 08 15:08	2° \approx 11'50	retrograde	2770 May 16 20:52	15° \approx 27'19	
				2770 Jul 02 00:50	15° \approx	
conjunction	2764 Jan 23 20:18	2° \approx 42'14 -0°37'24	min. Earth dist.	2770 Aug 03 18:25	14° \approx 17'40	34.49694 AU
minimum elong	2764 Jan 23 20:17	2° \approx 42'14 0°37'24	opposition	2770 Aug 06 10:09	14° \approx 13'56	-4°13'34
max. Earth dist.	2764 Jan 26 04:38	2° \approx 46'58 34.87812 AU	direct	2770 Oct 26 09:08	13° \approx 00'50	
morning rise	2764 Feb 08 01:44	3° \approx 12'40	evening set	2771 Jan 21 01:45	14° \approx 35'53	
retrograde	2764 May 05 21:20	4° \approx 53'34		2771 Feb 02 19:31	15° \approx	
min. Earth dist.	2764 Jul 23 11:03	3° \approx 41'47 32.99840 AU				
opposition	2764 Jul 25 21:12	3° \approx 38'16 -0°57'04	conjunction	2771 Feb 04 16:24	15° \approx 03'35	-4°14'07
direct	2764 Oct 14 18:10	2° \approx 22'53	minimum elong	2771 Feb 04 16:16	15° \approx 03'34	4°14'07
evening set	2765 Jan 09 17:07	4° \approx 02'12	max. Earth dist.	2771 Feb 07 07:59	15° \approx 08'39	36.61909 AU
			morning rise	2771 Feb 19 07:41	15° \approx 31'20	
conjunction	2765 Jan 24 21:19	4° \approx 32'18 -1°10'00	retrograde	2771 May 18 16:46	17° \approx 07'58	
minimum elong	2765 Jan 24 21:17	4° \approx 32'18 1°10'01	min. Earth dist.	2771 Aug 05 16:39	15° \approx 58'41	34.75075 AU
max. Earth dist.	2765 Jan 27 07:05	4° \approx 37'07 35.12167 AU	opposition	2771 Aug 08 10:04	15° \approx 54'52	-4°44'03
morning rise	2765 Feb 09 02:03	5° \approx 02'26		2771 Sep 21 16:09	15° \approx	
retrograde	2765 May 07 23:01	6° \approx 42'38	direct	2771 Oct 28 11:02	14° \approx 42'05	
min. Earth dist.	2765 Jul 25 13:42	5° \approx 31'15 33.24396 AU		2771 Dec 03 00:37	15° \approx	
opposition	2765 Jul 28 00:59	5° \approx 27'41 -1°31'22	evening set	2772 Jan 23 02:31	16° \approx 16'32	
direct	2765 Oct 16 20:36	4° \approx 12'44				
evening set	2766 Jan 11 18:46	5° \approx 51'14	conjunction	2772 Feb 06 13:29	16° \approx 43'45	-4°42'44
			minimum elong	2772 Feb 06 13:20	16° \approx 43'44	4°42'45
conjunction	2766 Jan 26 21:50	6° \approx 20'59 -1°42'06	max. Earth dist.	2772 Feb 09 06:02	16° \approx 48'52	36.87227 AU
minimum elong	2766 Jan 26 21:47	6° \approx 20'59 1°42'07	morning rise	2772 Feb 21 01:20	17° \approx 11'02	
max. Earth dist.	2766 Jan 29 09:24	6° \approx 25'55 35.36806 AU	retrograde	2772 May 19 13:13	18° \approx 47'12	
morning rise	2766 Feb 11 01:12	6° \approx 50'48	min. Earth dist.	2772 Aug 06 15:23	17° \approx 38'12	35.00636 AU
retrograde	2766 May 09 23:35	8° \approx 30'19	opposition	2772 Aug 09 09:35	17° \approx 34'22	-5°13'50
min. Earth dist.	2766 Jul 27 15:42	7° \approx 19'20 33.49190 AU	direct	2772 Oct 29 10:21	16° \approx 21'54	
opposition	2766 Jul 30 04:01	7° \approx 15'43 -2°05'04	evening set	2773 Jan 24 03:02	17° \approx 55'49	
direct	2766 Oct 19 00:14	6° \approx 01'11				
evening set	2767 Jan 13 20:38	7° \approx 38'55	conjunction	2773 Feb 07 10:15	18° \approx 22'32	-5°10'42
			minimum elong	2773 Feb 07 10:06	18° \approx 22'31	5°10'42
conjunction	2767 Jan 28 21:48	8° \approx 08'19 -2°13'40	max. Earth dist.	2773 Feb 10 04:27	18° \approx 27'44	37.12739 AU
minimum elong	2767 Jan 28 21:44	8° \approx 08'19 2°13'40	morning rise	2773 Feb 21 18:06	18° \approx 49'18	
max. Earth dist.	2767 Jan 31 09:31	8° \approx 13'13 35.61628 AU	retrograde	2773 May 21 09:27	20° \approx 25'04	
morning rise	2767 Feb 12 23:40	8° \approx 37'46	min. Earth dist.	2773 Aug 08 13:18	19° \approx 16'22	35.26393 AU
retrograde	2767 May 12 02:14	10° \approx 16'39	opposition	2773 Aug 11 08:27	19° \approx 12'30	-5°42'56
min. Earth dist.	2767 Jul 29 16:25	9° \approx 06'04 33.74169 AU	direct	2773 Oct 31 09:22	18° \approx 00'22	
opposition	2767 Aug 01 06:19	9° \approx 02'24 -2°38'09	evening set	2774 Jan 26 03:26	19° \approx 33'47	
direct	2767 Oct 21 00:41	7° \approx 48'15				
evening set	2768 Jan 15 22:12	9° \approx 25'16	conjunction	2774 Feb 09 06:19	19° \approx 59'59	-5°38'02
			minimum elong	2774 Feb 09 06:09	19° \approx 59'59	5°38'02
conjunction	2768 Jan 30 21:24	9° \approx 54'17 -2°44'39	max. Earth dist.	2774 Feb 12 00:46	20° \approx 05'10	37.38439 AU
minimum elong	2768 Jan 30 21:19	9° \approx 54'16 2°44'39	morning rise	2774 Feb 23 10:12	20° \approx 26'15	
max. Earth dist.	2768 Feb 02 10:58	9° \approx 59'18 35.86581 AU	retrograde	2774 May 23 07:27	22° \approx 01'38	
morning rise	2768 Feb 14 21:02	10° \approx 23'20	min. Earth dist.	2774 Aug 10 09:53	20° \approx 53'18	35.52356 AU
retrograde	2768 May 13 00:57	12° \approx 01'38	opposition	2774 Aug 13 06:47	20° \approx 49'21	-6°11'19
min. Earth dist.	2768 Jul 30 18:24	10° \approx 51'20 33.99256 AU	direct	2774 Nov 02 05:43	19° \approx 37'34	
opposition	2768 Aug 02 08:16	10° \approx 47'41 -3°10'36	evening set	2775 Jan 28 03:37	21° \approx 10'32	
direct	2768 Oct 22 03:23	9° \approx 33'54				
evening set	2769 Jan 16 23:36	11° \approx 10'14	conjunction	2775 Feb 11 02:10	21° \approx 36'13	-6°04'43
			minimum elong	2775 Feb 11 01:59	21° \approx 36'12	6°04'42
conjunction	2769 Jan 31 20:12	11° \approx 38'50 -3°15'05	max. Earth dist.	2775 Feb 13 22:32	21° \approx 41'30	37.64315 AU
minimum elong	2769 Jan 31 20:06	11° \approx 38'49 3°15'04	morning rise	2775 Feb 25 01:26	22° \approx 01'58	

retrograde	2775 May 25 02:56	23° \approx 36'59	evening set	2782 Feb 09 01:25	1° \approx 58'29
min. Earth dist.	2775 Aug 12 07:40	22° \approx 28'57 35.78473 AU			
opposition	2775 Aug 15 04:29	22° \approx 25'01 -6°39'00	conjunction	2782 Feb 21 09:10	2° \approx 20'11 -8°53'32
direct	2775 Nov 04 04:24	21° \approx 13'35	minimum elong	2782 Feb 21 08:57	2° \approx 20'10 8°53'32
evening set	2776 Jan 30 03:43	22° \approx 46'09	max. Earth dist.	2782 Feb 24 08:21	2° \approx 25'26 39.45567 AU
			morning rise	2782 Mar 05 17:42	2° \approx 41'57
conjunction	2776 Feb 12 21:25	23° \approx 11'18 -6°30'44	retrograde	2782 Jun 04 10:57	4° \approx 15'28
minimum elong	2776 Feb 12 21:14	23° \approx 11'17 6°30'45	min. Earth dist.	2782 Aug 23 01:26	3° \approx 09'26 37.60791 AU
max. Earth dist.	2776 Feb 15 17:39	23° \approx 16'32 37.90327 AU	opposition	2782 Aug 26 00:33	3° \approx 05'30 -9°33'23
morning rise	2776 Feb 26 16:00	23° \approx 36'31	direct	2782 Nov 15 01:30	1° \approx 56'22
retrograde	2776 May 25 23:05	25° \approx 11'13	evening set	2783 Feb 11 00:37	3° \approx 27'02
min. Earth dist.	2776 Aug 13 03:10	24° \approx 03'34 36.04708 AU			
opposition	2776 Aug 16 01:47	23° \approx 59'33 -7°05'59	conjunction	2783 Feb 23 01:46	3° \approx 48'07 -9°15'09
direct	2776 Nov 05 02:02	22° \approx 48'28	minimum elong	2783 Feb 23 01:34	3° \approx 48'06 9°15'09
evening set	2777 Jan 31 03:32	24° \approx 20'42	max. Earth dist.	2783 Feb 26 00:18	3° \approx 53'17 39.70855 AU
			morning rise	2783 Mar 07 03:44	4° \approx 09'16
conjunction	2777 Feb 13 16:13	24° \approx 45'18 -6°56'07	retrograde	2783 Jun 06 02:51	5° \approx 42'38
minimum elong	2777 Feb 13 16:01	24° \approx 45'17 6°56'07	min. Earth dist.	2783 Aug 24 18:23	4° \approx 36'54 37.86207 AU
max. Earth dist.	2777 Feb 16 13:55	24° \approx 50'36 38.16406 AU	opposition	2783 Aug 27 18:34	4° \approx 32'55 -9°55'37
morning rise	2777 Feb 27 05:48	25° \approx 09'57	direct	2783 Nov 16 20:37	3° \approx 24'03
retrograde	2777 May 27 17:34	26° \approx 44'25	evening set	2784 Feb 12 23:31	4° \approx 54'32
min. Earth dist.	2777 Aug 15 00:25	25° \approx 37'02 36.30995 AU			
opposition	2777 Aug 17 22:47	25° \approx 33'02 -7°32'15	conjunction	2784 Feb 24 17:55	5° \approx 15'00 -9°36'10
direct	2777 Nov 06 23:29	24° \approx 22'19	minimum elong	2784 Feb 24 17:42	5° \approx 14'59 9°36'10
evening set	2778 Feb 02 03:20	25° \approx 54'13	max. Earth dist.	2784 Feb 27 17:04	5° \approx 20'11 39.95993 AU
			morning rise	2784 Mar 07 13:13	5° \approx 35'32
conjunction	2778 Feb 15 10:46	26° \approx 18'15 -7°20'52	retrograde	2784 Jun 06 17:50	7° \approx 08'49
minimum elong	2778 Feb 15 10:35	26° \approx 18'14 7°20'52	min. Earth dist.	2784 Aug 25 12:40	6° \approx 03'15 38.11523 AU
max. Earth dist.	2778 Feb 18 08:51	26° \approx 23'34 38.42501 AU	opposition	2784 Aug 28 12:29	5° \approx 59'19 -10°17'12
morning rise	2778 Feb 28 18:58	26° \approx 42'21	direct	2784 Nov 17 15:28	4° \approx 50'43
retrograde	2778 May 29 10:19	28° \approx 16'35	evening set	2785 Feb 13 22:10	6° \approx 21'03
min. Earth dist.	2778 Aug 16 19:43	27° \approx 09'32 36.57251 AU			
opposition	2778 Aug 19 19:00	27° \approx 05'31 -7°57'50	conjunction	2785 Feb 25 09:40	6° \approx 40'53 -9°56'33
direct	2778 Nov 08 21:24	25° \approx 55'09	minimum elong	2785 Feb 25 09:28	6° \approx 40'52 9°56'33
evening set	2779 Feb 04 03:07	27° \approx 26'45	max. Earth dist.	2785 Feb 28 09:34	6° \approx 46'06 40.21058 AU
			morning rise	2785 Mar 08 21:49	7° \approx 00'47
conjunction	2779 Feb 17 04:53	27° \approx 50'13 -7°44'58	retrograde	2785 Jun 08 07:38	8° \approx 33'59
minimum elong	2779 Feb 17 04:41	27° \approx 50'12 7°44'57	min. Earth dist.	2785 Aug 27 05:23	7° \approx 28'41 38.36765 AU
max. Earth dist.	2779 Feb 20 02:54	27° \approx 55'30 38.68516 AU	opposition	2785 Aug 30 05:48	7° \approx 24'44 -10°38'06
morning rise	2779 Mar 02 07:40	28° \approx 13'45	direct	2785 Nov 19 10:48	6° \approx 16'24
retrograde	2779 May 31 05:21	29° \approx 47'46	evening set	2786 Feb 15 20:52	7° \approx 46'37
min. Earth dist.	2779 Aug 18 15:35	28° \approx 41'01 36.83417 AU			
opposition	2779 Aug 21 15:03	28° \approx 37'01 -8°22'43	conjunction	2786 Feb 27 01:03	8° \approx 05'49 -10°16'19
direct	2779 Nov 10 16:31	27° \approx 26'59	minimum elong	2786 Feb 27 00:50	8° \approx 05'48 10°16'19
evening set	2780 Feb 06 02:36	28° \approx 58'19	max. Earth dist.	2786 Mar 02 00:33	8° \approx 10'58 40.46062 AU
			morning rise	2786 Mar 10 06:08	8° \approx 25'06
conjunction	2780 Feb 18 22:41	29° \approx 21'12 -8°08'26	retrograde	2786 Jun 10 01:26	9° \approx 58'15
minimum elong	2780 Feb 18 22:29	29° \approx 21'11 8°08'27	min. Earth dist.	2786 Aug 28 21:32	8° \approx 53'12 38.61971 AU
max. Earth dist.	2780 Feb 21 21:41	29° \approx 26'31 38.94398 AU	opposition	2786 Aug 31 22:38	8° \approx 49'14 -10°58'21
morning rise	2780 Mar 02 19:29	29° \approx 44'09	direct	2786 Nov 21 01:28	7° \approx 41'11
	2780 Mar 11 23:27	0° \approx	evening set	2787 Feb 17 19:18	9° \approx 11'18
retrograde	2780 May 31 23:05	1° \approx 18'00			
min. Earth dist.	2780 Aug 19 11:32	0° \approx 11'30 37.09406 AU	conjunction	2787 Feb 28 16:14	9° \approx 29'53 -10°35'28
opposition	2780 Aug 22 10:39	0° \approx 07'32 -8°46'56	minimum elong	2787 Feb 28 16:02	9° \approx 29'52 10°35'28
	2780 Aug 28 01:39	30° \approx	max. Earth dist.	2787 Mar 03 17:02	9° \approx 35'06 40.71023 AU
direct	2780 Nov 11 12:01	28° \approx 57'49	morning rise	2787 Mar 11 13:48	9° \approx 48'31
	2781 Jan 20 21:25	0° \approx	retrograde	2787 Jun 11 16:50	11° \approx 21'39
evening set	2781 Feb 07 02:13	0° \approx 28'54	min. Earth dist.	2787 Aug 30 14:41	10° \approx 16'49 38.87107 AU
			opposition	2787 Sep 02 15:12	10° \approx 12'53 -11°17'56
conjunction	2781 Feb 19 16:05	0° \approx 51'12 -8°31'18	direct	2787 Nov 22 17:51	9° \approx 05'08
minimum elong	2781 Feb 19 15:53	0° \approx 51'11 8°31'17	evening set	2788 Feb 19 17:39	10° \approx 35'11
max. Earth dist.	2781 Feb 22 14:11	0° \approx 56'24 39.20088 AU			
morning rise	2781 Mar 04 06:57	1° \approx 13'34	conjunction	2788 Mar 01 06:50	10° \approx 53'08 -10°54'01
retrograde	2781 Jun 02 18:30	2° \approx 47'15	minimum elong	2788 Mar 01 06:37	10° \approx 53'07 10°54'01
min. Earth dist.	2781 Aug 21 05:42	1° \approx 41'02 37.35204 AU	max. Earth dist.	2788 Mar 04 06:58	10° \approx 58'15 40.95911 AU
opposition	2781 Aug 24 05:48	1° \approx 37'02 -9°10'30	morning rise	2788 Mar 11 20:45	11° \approx 11'07
direct	2781 Nov 13 05:40	0° \approx 27'37	retrograde	2788 Jun 12 09:00	12° \approx 44'15

min. Earth dist.	2788 Aug 31 05:35	11° 11 39'44	39.12157 AU	max. Earth dist.	2795 Mar 14 05:33	20° 11 19'43	42.63851 AU
opposition	2788 Sep 03 07:25	11° 11 35'45	-11°36'53	morning rise	2795 Mar 19 08:22	20° 11 28'05	
direct	2788 Nov 23 08:33	10° 11 28'17		retrograde	2795 Jun 22 07:27	22° 11 01'46	
evening set	2789 Feb 20 15:53	11° 11 58'19		min. Earth dist.	2795 Sep 10 16:06	20° 11 58'35	40.80515 AU
				opposition	2795 Sep 13 15:26	20° 11 54'50	-13°32'55
conjunction	2789 Mar 02 21:19	12° 11 15'36	-11°11'58	direct	2795 Dec 03 18:52	19° 11 49'05	
minimum elong	2789 Mar 02 21:07	12° 11 15'35	11°11'58	evening set	2796 Mar 04 03:36	21° 11 19'28	
max. Earth dist.	2789 Mar 05 22:25	12° 11 20'46	41.20683 AU				
morning rise	2789 Mar 13 03:26	12° 11 32'56		conjunction	2796 Mar 11 19:07	21° 11 31'56	-13°02'09
retrograde	2789 Jun 13 23:13	14° 11 06'06		minimum elong	2796 Mar 11 18:56	21° 11 31'55	13°02'09
min. Earth dist.	2789 Sep 01 22:27	13° 11 01'46	39.37074 AU	max. Earth dist.	2796 Mar 14 17:48	21° 11 36'45	42.86545 AU
opposition	2789 Sep 04 23:21	12° 11 57'51	-11°55'12	morning rise	2796 Mar 19 11:02	21° 11 44'25	
direct	2789 Nov 25 00:57	11° 11 50'41		retrograde	2796 Jun 22 18:43	23° 11 18'16	
evening set	2790 Feb 22 14:09	13° 11 20'43		min. Earth dist.	2796 Sep 11 06:33	22° 11 15'11	41.03289 AU
				opposition	2796 Sep 14 05:07	22° 11 11'30	-13°47'16
conjunction	2790 Mar 04 11:32	13° 11 37'21	-11°29'20	direct	2796 Dec 04 09:30	21° 11 05'56	
minimum elong	2790 Mar 04 11:19	13° 11 37'20	11°29'20	evening set	2797 Mar 06 01:58	22° 11 36'28	
max. Earth dist.	2790 Mar 07 12:20	13° 11 42'28	41.45301 AU				
morning rise	2790 Mar 14 09:27	13° 11 54'01		conjunction	2797 Mar 13 07:26	22° 11 48'11	-13°15'47
retrograde	2790 Jun 15 11:40	15° 11 27'14		minimum elong	2797 Mar 13 07:15	22° 11 48'10	13°15'48
min. Earth dist.	2790 Sep 03 13:24	14° 11 23'10	39.61783 AU	max. Earth dist.	2797 Mar 16 06:31	22° 11 53'00	43.09017 AU
opposition	2790 Sep 06 14:47	14° 11 19'15	-12°12'55	morning rise	2797 Mar 20 13:06	22° 11 59'55	
direct	2790 Nov 26 17:54	13° 11 12'20		retrograde	2797 Jun 24 04:56	24° 11 33'57	
evening set	2791 Feb 24 12:24	14° 11 42'24		min. Earth dist.	2797 Sep 12 19:47	23° 11 31'03	41.25845 AU
				opposition	2797 Sep 15 18:15	23° 11 27'21	-14°01'04
conjunction	2791 Mar 06 01:25	14° 11 58'21	-11°46'08	direct	2797 Dec 06 00:46	22° 11 22'00	
minimum elong	2791 Mar 06 01:14	14° 11 58'21	11°46'08	evening set	2798 Mar 08 00:26	23° 11 52'43	
max. Earth dist.	2791 Mar 09 01:44	15° 11 03'25	41.69671 AU				
morning rise	2791 Mar 15 15:08	15° 11 14'22		conjunction	2798 Mar 14 19:18	24° 11 03'40	-13°28'54
retrograde	2791 Jun 17 01:26	16° 11 47'39		minimum elong	2798 Mar 14 19:08	24° 11 03'39	13°28'54
min. Earth dist.	2791 Sep 05 05:08	15° 11 43'48	39.86234 AU	max. Earth dist.	2798 Mar 17 17:25	24° 11 08'23	43.31296 AU
opposition	2791 Sep 08 05:58	15° 11 39'55	-12°30'02	morning rise	2798 Mar 21 14:28	24° 11 14'38	
direct	2791 Nov 28 09:37	14° 11 33'17		retrograde	2798 Jun 25 18:29	25° 11 48'54	
evening set	2792 Feb 26 10:40	16° 11 03'22		min. Earth dist.	2798 Sep 14 08:21	24° 11 46'11	41.48232 AU
				opposition	2798 Sep 17 07:10	24° 11 42'30	-14°14'19
conjunction	2792 Mar 06 15:15	16° 11 18'39	-12°02'23	direct	2798 Dec 07 12:41	23° 11 37'21	
minimum elong	2792 Mar 06 15:03	16° 11 18'38	12°02'22	evening set	2799 Mar 09 23:03	25° 11 08'19	
max. Earth dist.	2792 Mar 09 16:03	16° 11 23'43	41.93755 AU				
morning rise	2792 Mar 15 20:15	16° 11 33'59		conjunction	2799 Mar 16 07:02	25° 11 18'28	-13°41'30
retrograde	2792 Jun 17 14:39	18° 11 07'22		minimum elong	2799 Mar 16 06:52	25° 11 18'27	13°41'31
min. Earth dist.	2792 Sep 05 20:47	17° 11 03'41	40.10349 AU	max. Earth dist.	2799 Mar 19 06:11	25° 11 23'14	43.53409 AU
opposition	2792 Sep 08 20:52	16° 11 59'51	-12°46'35	morning rise	2799 Mar 22 15:08	25° 11 28'39	
direct	2792 Nov 29 01:39	15° 11 53'28		retrograde	2799 Jun 27 07:13	27° 11 03'11	
evening set	2793 Feb 27 08:55	17° 11 23'36		min. Earth dist.	2799 Sep 15 21:54	26° 11 00'37	41.70440 AU
				opposition	2799 Sep 18 19:45	25° 11 57'00	-14°27'01
conjunction	2793 Mar 08 04:35	17° 11 38'12	-12°18'06	direct	2799 Dec 09 00:21	24° 11 52'05	
minimum elong	2793 Mar 08 04:24	17° 11 38'11	12°18'06	evening set	2800 Mar 10 22:09	26° 11 23'19	
max. Earth dist.	2793 Mar 11 03:55	17° 11 43'08	42.17487 AU				
morning rise	2793 Mar 17 00:48	17° 11 52'50		conjunction	2800 Mar 16 18:27	26° 11 32'40	-13°53'35
retrograde	2793 Jun 19 06:46	19° 11 26'19		minimum elong	2800 Mar 16 18:18	26° 11 32'39	13°53'35
min. Earth dist.	2793 Sep 07 11:03	18° 11 22'50	40.34103 AU	max. Earth dist.	2800 Mar 19 16:38	26° 11 37'20	43.75362 AU
opposition	2793 Sep 10 11:28	18° 11 19'01	-13°02'34	morning rise	2800 Mar 22 14:53	26° 11 42'01	
direct	2793 Nov 30 13:54	17° 11 12'51		retrograde	2800 Jun 27 20:26	28° 11 16'53	
evening set	2794 Mar 01 07:10	18° 11 43'03		min. Earth dist.	2800 Sep 16 09:17	27° 11 14'34	41.92474 AU
				opposition	2800 Sep 19 08:05	27° 11 10'54	-14°39'11
conjunction	2794 Mar 09 17:53	18° 11 56'57	-12°33'18	direct	2800 Dec 09 10:20	26° 11 06'13	
minimum elong	2794 Mar 09 17:41	18° 11 56'56	12°33'17	evening set	2801 Mar 12 21:28	27° 11 37'49	
max. Earth dist.	2794 Mar 12 17:38	19° 11 01'53	42.40844 AU				
morning rise	2794 Mar 18 05:00	19° 11 10'53		conjunction	2801 Mar 18 05:34	27° 11 46'18	-14°05'10
retrograde	2794 Jun 20 19:50	20° 11 44'28		minimum elong	2801 Mar 18 05:24	27° 11 46'18	14°05'10
min. Earth dist.	2794 Sep 09 02:50	19° 11 41'05	40.57477 AU	max. Earth dist.	2801 Mar 21 04:01	27° 11 50'59	43.97119 AU
opposition	2794 Sep 12 01:38	19° 11 37'21	-13°18'01	morning rise	2801 Mar 23 13:45	27° 11 54'48	
direct	2794 Dec 02 04:14	18° 11 31'24		retrograde	2801 Jun 29 06:17	29° 11 30'04	
evening set	2795 Mar 03 05:31	20° 11 01'41		min. Earth dist.	2801 Sep 17 22:44	28° 11 27'53	42.14296 AU
				opposition	2801 Sep 20 20:17	28° 11 24'18	-14°50'50
conjunction	2795 Mar 11 06:46	20° 11 14'52	-12°47'59	direct	2801 Dec 10 23:32	27° 11 19'51	
minimum elong	2795 Mar 11 06:35	20° 11 14'52	12°47'59	evening set	2802 Mar 14 21:51	28° 11 51'52	

conjunction	2802 Mar 19 16:43	28° H 59'27 -14°16'16	opposition	2808 Sep 29 02:07	6° Y 44'11 -15°59'18
minimum elong	2802 Mar 19 16:35	28° H 59'27 14°16'16	direct	2808 Dec 19 07:38	5° Y 41'06
max. Earth dist.	2802 Mar 22 15:05	29° H 04'07 44.18653 AU			
morning rise	2802 Mar 24 11:34	29° H 07'02	conjunction	2809 Mar 27 16:39	7° Y 17'27 -15°21'35
	2802 Apr 29 12:58	0° Y	minimum elong	2809 Mar 27 16:33	7° Y 17'26 15°21'35
retrograde	2802 Jun 30 14:38	0° Y 42'45	max. Earth dist.	2809 Mar 30 10:59	7° Y 21'42 45.59025 AU
	2802 Sep 03 10:40	30° R H	retrograde	2809 Jul 08 14:01	8° Y 57'38
min. Earth dist.	2802 Sep 19 10:24	29° H 40'47 42.35847 AU	min. Earth dist.	2809 Sep 27 19:55	7° Y 56'32 43.75926 AU
opposition	2802 Sep 22 07:55	29° H 37'13 -15°01'59	opposition	2809 Sep 30 12:15	7° Y 53'18 -16°07'19
direct	2802 Dec 12 13:41	28° H 33'00	direct	2809 Dec 20 20:13	6° Y 50'21
	2803 Mar 13 10:20	0° Y			
evening set	2803 Mar 16 23:11	0° Y 05'33	conjunction	2810 Mar 29 02:03	8° Y 26'15 -15°29'13
			minimum elong	2810 Mar 29 01:58	8° Y 26'15 15°29'14
conjunction	2803 Mar 21 03:30	0° Y 12'09 -14°26'53	max. Earth dist.	2810 Mar 31 18:57	8° Y 30'24 45.77670 AU
minimum elong	2803 Mar 21 03:21	0° Y 12'08 14°26'54	retrograde	2810 Jul 10 01:38	10° Y 06'01
max. Earth dist.	2803 Mar 24 00:42	0° Y 16'42 44.39887 AU	min. Earth dist.	2810 Sep 29 05:16	9° Y 05'05 43.94577 AU
morning rise	2803 Mar 25 07:47	0° Y 18'44	opposition	2810 Oct 01 21:58	9° Y 01'50 -16°14'53
retrograde	2803 Jul 02 02:49	1° Y 55'00	direct	2810 Dec 22 04:27	7° Y 59'03
min. Earth dist.	2803 Sep 20 22:32	0° Y 53'13 42.57083 AU			
opposition	2803 Sep 23 19:35	0° Y 49'41 -15°12'39	conjunction	2811 Mar 30 11:19	9° Y 34'31 -15°36'26
	2803 Nov 08 23:34	30° R H	minimum elong	2811 Mar 30 11:14	9° Y 34'31 15°36'25
direct	2803 Dec 14 01:00	29° H 45'43	max. Earth dist.	2811 Apr 02 04:36	9° Y 38'40 45.96077 AU
	2804 Jan 17 05:57	0° Y	retrograde	2811 Jul 11 11:27	11° Y 13'52
evening set	2804 Mar 18 02:20	1° Y 18'54	min. Earth dist.	2811 Sep 30 16:27	10° Y 13'00 44.12988 AU
			opposition	2811 Oct 03 07:44	10° Y 09'51 -16°22'01
conjunction	2804 Mar 21 14:10	1° Y 24'23 -14°37'04	direct	2811 Dec 23 13:11	9° Y 07'14
minimum elong	2804 Mar 21 14:03	1° Y 24'22 14°37'04			
max. Earth dist.	2804 Mar 24 11:47	1° Y 28'56 44.60773 AU	conjunction	2812 Mar 30 20:16	10° Y 42'18 -15°43'13
morning rise	2804 Mar 25 01:56	1° Y 29'51	minimum elong	2812 Mar 30 20:11	10° Y 42'17 15°43'14
retrograde	2804 Jul 02 13:40	3° Y 06'49	max. Earth dist.	2812 Apr 02 13:00	10° Y 46'23 46.14266 AU
min. Earth dist.	2804 Sep 21 11:21	2° Y 05'09 42.77922 AU	retrograde	2812 Jul 11 19:43	12° Y 21'14
opposition	2804 Sep 24 07:02	2° Y 01'42 -15°22'52	min. Earth dist.	2812 Oct 01 01:29	11° Y 20'33 44.31159 AU
direct	2804 Dec 14 13:09	0° Y 57'56	opposition	2812 Oct 03 17:13	11° Y 17'23 -16°28'42
evening set	2805 Mar 20 08:54	2° Y 31'59	direct	2812 Dec 23 22:04	10° Y 14'56
conjunction	2805 Mar 23 00:44	2° Y 36'08 -14°46'48	conjunction	2813 Apr 01 05:07	11° Y 49'37 -15°49'36
minimum elong	2805 Mar 23 00:35	2° Y 36'08 14°46'48	minimum elong	2813 Apr 01 05:03	11° Y 49'37 15°49'36
morning rise	2805 Mar 25 16:24	2° Y 40'17	max. Earth dist.	2813 Apr 03 21:07	11° Y 53'39 46.32201 AU
max. Earth dist.	2805 Mar 25 20:34	2° Y 40'33 44.81252 AU	retrograde	2813 Jul 13 04:02	13° Y 28'11
retrograde	2805 Jul 04 02:47	4° Y 18'07	min. Earth dist.	2813 Oct 02 11:49	12° Y 27'37 44.49073 AU
min. Earth dist.	2805 Sep 22 22:21	3° Y 16'38 42.98334 AU	opposition	2813 Oct 05 02:33	12° Y 24'30 -16°34'58
opposition	2805 Sep 25 18:08	3° Y 13'12 -15°32'37	direct	2813 Dec 25 07:26	11° Y 22'14
direct	2805 Dec 15 21:27	2° Y 09'37			
evening set	2806 Mar 23 00:23	3° Y 45'07	conjunction	2814 Apr 02 13:59	12° Y 56'33 -15°55'35
			minimum elong	2814 Apr 02 13:55	12° Y 56'33 15°55'36
conjunction	2806 Mar 24 11:07	3° Y 47'22 -14°56'08	max. Earth dist.	2814 Apr 05 06:12	13° Y 00'35 46.49865 AU
minimum elong	2806 Mar 24 11:01	3° Y 47'22 14°56'08	retrograde	2814 Jul 14 10:55	14° Y 34'46
morning rise	2806 Mar 25 21:41	3° Y 49'36	min. Earth dist.	2814 Oct 03 21:43	13° Y 34'20 44.66663 AU
max. Earth dist.	2806 Mar 27 06:50	3° Y 51'45 45.01285 AU	opposition	2814 Oct 06 11:39	13° Y 31'15 -16°40'50
retrograde	2806 Jul 05 14:15	5° Y 28'54	direct	2814 Dec 26 18:48	12° Y 29'10
min. Earth dist.	2806 Sep 24 11:11	4° Y 27'29 43.18294 AU			
opposition	2806 Sep 27 05:08	4° Y 24'08 -15°41'57	conjunction	2815 Apr 03 22:30	14° Y 03'07 -16°01'11
direct	2806 Dec 17 07:02	3° Y 20'44	minimum elong	2815 Apr 03 22:28	14° Y 03'07 16°01'10
			max. Earth dist.	2815 Apr 06 13:00	14° Y 07'02 46.67186 AU
conjunction	2807 Mar 25 21:14	4° Y 58'01 -15°05'02	retrograde	2815 Jul 15 21:24	15° Y 41'00
minimum elong	2807 Mar 25 21:07	4° Y 58'01 15°05'02	min. Earth dist.	2815 Oct 05 06:55	14° Y 40'43 44.83889 AU
max. Earth dist.	2807 Mar 28 16:04	5° Y 02'20 45.20892 AU	opposition	2815 Oct 07 20:36	14° Y 37'40 -16°46'19
retrograde	2807 Jul 06 21:35	6° Y 39'05	direct	2815 Dec 28 03:00	13° Y 35'46
min. Earth dist.	2807 Sep 25 21:38	5° Y 37'49 43.37832 AU			
opposition	2807 Sep 28 15:39	5° Y 34'29 -15°50'51	conjunction	2816 Apr 04 07:06	15° Y 09'23 -16°06'24
direct	2807 Dec 18 19:09	4° Y 31'14	minimum elong	2816 Apr 04 07:03	15° Y 09'22 16°06'25
			max. Earth dist.	2816 Apr 06 21:42	15° Y 13'16 46.84108 AU
conjunction	2808 Mar 26 07:00	6° Y 08'02 -15°13'31	retrograde	2816 Jul 16 07:57	16° Y 46'55
minimum elong	2808 Mar 26 06:54	6° Y 08'02 15°13'32	min. Earth dist.	2816 Oct 05 17:47	15° Y 46'42 45.00678 AU
max. Earth dist.	2808 Mar 29 00:46	6° Y 12'16 45.40112 AU	opposition	2816 Oct 08 05:31	15° Y 43'45 -16°51'25
retrograde	2808 Jul 07 05:39	7° Y 48'39	direct	2816 Dec 28 10:33	14° Y 42'02
min. Earth dist.	2808 Sep 26 09:00	6° Y 47'28 43.57031 AU			

conjunction	2817 Apr 05 15:34	16°♈15'17	-16°11'17	retrograde	2825 Jul 26 01:37	26°♈22'54	
minimum elong	2817 Apr 05 15:33	16°♈15'17	16°11'17	min. Earth dist.	2825 Oct 15 23:45	25°♈23'29	46.32486 AU
max. Earth dist.	2817 Apr 08 04:39	16°♈19'05	47.00578 AU	opposition	2825 Oct 18 04:46	25°♈20'55	-17°21'43
retrograde	2817 Jul 17 16:52	17°♈52'29		direct	2826 Jan 07 12:39	24°♈20'22	
min. Earth dist.	2817 Oct 07 02:28	16°♈52'25	45.16973 AU				
opposition	2817 Oct 09 14:09	16°♈49'29	-16°56'11	conjunction	2826 Apr 15 12:29	25°♈50'49	-16°40'03
direct	2817 Dec 29 17:36	15°♈47'54		minimum elong	2826 Apr 15 12:31	25°♈50'49	16°40'02
				max. Earth dist.	2826 Apr 17 19:08	25°♈54'07	48.30215 AU
conjunction	2818 Apr 06 23:55	17°♈20'50	-16°15'50	retrograde	2826 Jul 27 10:00	27°♈25'13	
minimum elong	2818 Apr 06 23:52	17°♈20'50	16°15'50	min. Earth dist.	2826 Oct 17 08:22	26°♈25'51	46.45471 AU
max. Earth dist.	2818 Apr 09 11:37	17°♈24'32	47.16533 AU	opposition	2826 Oct 19 11:49	26°♈23'22	-17°23'20
retrograde	2818 Jul 18 23:42	18°♈57'41		direct	2827 Jan 08 20:19	25°♈22'58	
min. Earth dist.	2818 Oct 08 12:49	17°♈57'40	45.32758 AU				
opposition	2818 Oct 10 22:36	17°♈54'49	-17°00'36	conjunction	2827 Apr 16 19:31	26°♈53'09	-16°41'34
direct	2818 Dec 31 03:17	16°♈53'23		minimum elong	2827 Apr 16 19:32	26°♈53'10	16°41'34
				max. Earth dist.	2827 Apr 19 00:37	26°♈56'21	48.42998 AU
conjunction	2819 Apr 08 08:10	18°♈25'59	-16°20'04	retrograde	2827 Jul 28 19:51	28°♈27'18	
minimum elong	2819 Apr 08 08:10	18°♈25'59	16°20'04	min. Earth dist.	2827 Oct 18 15:17	27°♈28'04	46.58076 AU
max. Earth dist.	2819 Apr 10 19:38	18°♈29'39	47.32000 AU	opposition	2827 Oct 20 18:47	27°♈25'35	-17°24'38
retrograde	2819 Jul 20 04:44	20°♈02'29		direct	2828 Jan 10 00:37	26°♈25'19	
min. Earth dist.	2819 Oct 09 21:54	19°♈02'32	45.48051 AU				
opposition	2819 Oct 12 06:52	18°♈59'44	-17°04'41	conjunction	2828 Apr 17 02:22	27°♈55'16	-16°42'46
direct	2820 Jan 01 14:40	17°♈58'26		minimum elong	2828 Apr 17 02:24	27°♈55'16	16°42'46
				max. Earth dist.	2828 Apr 19 06:32	27°♈58'23	48.55359 AU
conjunction	2820 Apr 08 15:54	19°♈30'41	-16°23'57	retrograde	2828 Jul 29 02:41	29°♈29'09	
minimum elong	2820 Apr 08 15:52	19°♈30'40	16°23'57	min. Earth dist.	2828 Oct 19 00:24	28°♈29'57	46.70233 AU
max. Earth dist.	2820 Apr 11 01:29	19°♈34'13	47.47011 AU	opposition	2828 Oct 21 01:49	28°♈27'34	-17°25'37
retrograde	2820 Jul 20 13:52	21°♈06'51		direct	2829 Jan 10 06:38	27°♈27'25	
min. Earth dist.	2820 Oct 10 06:27	20°♈07'00	45.62930 AU				
opposition	2820 Oct 12 15:02	20°♈04'13	-17°08'25	conjunction	2829 Apr 18 09:27	28°♈57'07	-16°43'41
direct	2821 Jan 01 22:35	19°♈03'02		minimum elong	2829 Apr 18 09:29	28°♈57'07	16°43'41
				max. Earth dist.	2829 Apr 20 13:01	29°♈00'12	48.67253 AU
conjunction	2821 Apr 09 23:46	20°♈34'56	-16°27'30		2829 Jun 05 12:58	0°♈	
minimum elong	2821 Apr 09 23:46	20°♈34'56	16°27'30	retrograde	2829 Jul 30 06:18	0°♈30'44	
max. Earth dist.	2821 Apr 12 09:34	20°♈38'29	47.61632 AU		2829 Sep 24 09:57	30°♈	
retrograde	2821 Jul 21 22:18	22°♈10'48		min. Earth dist.	2829 Oct 20 07:50	29°♈31'36	46.81878 AU
min. Earth dist.	2821 Oct 11 15:59	21°♈10'58	45.77437 AU	opposition	2829 Oct 22 08:28	29°♈29'16	-17°26'20
opposition	2821 Oct 13 22:52	21°♈08'17	-17°11'47	direct	2830 Jan 11 15:07	28°♈29'13	
direct	2822 Jan 03 06:45	20°♈07'13					
				conjunction	2830 Apr 19 16:18	29°♈58'40	-16°44'20
conjunction	2822 Apr 11 07:25	21°♈38'48	-16°30'42	minimum elong	2830 Apr 19 16:22	29°♈58'41	16°44'20
minimum elong	2822 Apr 11 07:24	21°♈38'48	16°30'41		2830 Apr 20 14:34	0°♈	
max. Earth dist.	2822 Apr 13 15:59	21°♈42'15	47.75929 AU	max. Earth dist.	2830 Apr 21 17:34	0°♈01'36	48.78624 AU
retrograde	2822 Jul 23 07:01	23°♈14'19		retrograde	2830 Jul 31 12:34	1°♈32'01	
min. Earth dist.	2822 Oct 12 23:18	22°♈14'38	45.91631 AU	min. Earth dist.	2830 Oct 21 15:40	0°♈32'56	46.93001 AU
opposition	2822 Oct 15 06:30	22°♈11'56	-17°14'48	opposition	2830 Oct 23 15:13	0°♈30'39	-17°26'45
direct	2823 Jan 04 12:03	21°♈10'59			2830 Nov 20 12:35	30°♈	
				direct	2831 Jan 12 22:51	29°♈30'41	
conjunction	2823 Apr 12 14:45	22°♈42'17	-16°33'33		2831 Mar 05 22:40	0°♈	
minimum elong	2823 Apr 12 14:45	22°♈42'17	16°33'33				
max. Earth dist.	2823 Apr 14 22:43	22°♈45'40	47.89917 AU	conjunction	2831 Apr 20 23:00	0°♈59'52	-16°44'43
retrograde	2823 Jul 24 14:21	24°♈17'29		minimum elong	2831 Apr 20 23:02	0°♈59'52	16°44'43
min. Earth dist.	2823 Oct 14 08:20	23°♈17'51	46.05536 AU	max. Earth dist.	2831 Apr 23 00:02	1°♈02'47	48.89477 AU
opposition	2823 Oct 16 14:08	23°♈15'14	-17°17'28	retrograde	2831 Aug 01 18:08	2°♈32'58	
direct	2824 Jan 05 18:10	22°♈14'25		min. Earth dist.	2831 Oct 22 23:59	1°♈33'51	47.03609 AU
				opposition	2831 Oct 24 21:46	1°♈31'40	-17°26'54
conjunction	2824 Apr 12 22:10	23°♈45'25	-16°36'03	direct	2832 Jan 14 07:37	0°♈31'46	
minimum elong	2824 Apr 12 22:11	23°♈45'25	16°36'03				
max. Earth dist.	2824 Apr 15 06:07	23°♈48'48	48.03642 AU	conjunction	2832 Apr 21 05:33	2°♈00'41	-16°44'49
retrograde	2824 Jul 24 18:42	25°♈20'20		minimum elong	2832 Apr 21 05:37	2°♈00'42	16°44'49
min. Earth dist.	2824 Oct 14 15:52	24°♈20'49	46.19155 AU	max. Earth dist.	2832 Apr 23 04:57	2°♈03'30	48.99865 AU
opposition	2824 Oct 16 21:28	24°♈18'13	-17°19'46	retrograde	2832 Aug 02 02:21	3°♈33'30	
direct	2825 Jan 06 04:06	23°♈17'32		min. Earth dist.	2832 Oct 23 06:23	2°♈34'28	47.13782 AU
				opposition	2832 Oct 25 04:04	2°♈32'17	-17°26'46
conjunction	2825 Apr 14 05:16	24°♈48'15	-16°38'13	direct	2833 Jan 14 12:39	1°♈32'27	
minimum elong	2825 Apr 14 05:16	24°♈48'15	16°38'14				
max. Earth dist.	2825 Apr 16 11:37	24°♈51'32	48.17084 AU	conjunction	2833 Apr 22 11:56	3°♈01'07	-16°44'38

minimum elong	2833 Apr 22 11:59	3°01'07 16°44'38	min. Earth dist.	2841 Nov 01 19:29	11°08'28"16 47.90328 AU
max. Earth dist.	2833 Apr 24 10:30	3°03'52 49.09836 AU	opposition	2841 Nov 03 08:09	11°08'26"32 -17°12'07
retrograde	2833 Aug 03 10:14	4°03'33'40	direct	2842 Jan 23 18:44	10°08'27"32
min. Earth dist.	2833 Oct 24 14:30	3°03'34'37 47.23571 AU			
opposition	2833 Oct 26 10:22	3°03'32'31 -17°26'20	conjunction	2842 May 01 18:02	11°08'54'37 -16°29'58
direct	2834 Jan 15 16:59	2°03'32'45	minimum elong	2842 May 01 18:07	11°08'54'37 16°29'58
			max. Earth dist.	2842 May 03 08:04	11°08'56'49 49.84998 AU
conjunction	2834 Apr 23 18:20	4°03'01'11 -16°44'09	retrograde	2842 Aug 12 13:08	13°08'25'28
minimum elong	2834 Apr 23 18:25	4°03'01'12 16°44'09	min. Earth dist.	2842 Nov 03 01:16	12°08'26'57 47.96768 AU
max. Earth dist.	2834 Apr 25 16:36	4°03'03'55 49.19464 AU	opposition	2842 Nov 04 13:25	12°08'25'14 -17°09'09
retrograde	2834 Aug 04 13:57	5°03'33'29	direct	2843 Jan 24 23:25	11°08'26'18
min. Earth dist.	2834 Oct 25 20:32	4°03'34'30 47.33024 AU			
opposition	2834 Oct 27 16:15	4°03'32'24 -17°25'36	conjunction	2843 May 02 23:48	12°08'53'14 -16°27'02
direct	2835 Jan 17 00:06	3°03'32'43	minimum elong	2843 May 02 23:56	12°08'53'14 16°27'02
			max. Earth dist.	2843 May 04 12:39	12°08'55'21 49.91221 AU
conjunction	2835 Apr 25 00:26	5°03'00'56 -16°43'23	retrograde	2843 Aug 13 21:35	14°08'23'55
minimum elong	2835 Apr 25 00:30	5°03'00'56 16°43'22	min. Earth dist.	2843 Nov 04 08:50	13°08'25'20 48.02688 AU
max. Earth dist.	2835 Apr 26 21:02	5°03'03'33 49.28785 AU	opposition	2843 Nov 05 18:50	13°08'23'44 -17°05'55
retrograde	2835 Aug 05 18:55	6°03'33'00	direct	2844 Jan 26 02:15	12°08'24'51
min. Earth dist.	2835 Oct 27 03:20	5°03'34'04 47.42197 AU			
opposition	2835 Oct 28 22:17	5°03'32'01 -17°24'33	conjunction	2844 May 03 05:26	13°08'51'37 -16°23'53
direct	2836 Jan 18 07:12	4°03'32'25	minimum elong	2844 May 03 05:32	13°08'51'37 16°23'52
			max. Earth dist.	2844 May 04 17:33	13°08'53'42 49.96961 AU
conjunction	2836 Apr 25 06:28	6°03'00'25 -16°42'18		2844 Jun 28 05:38	15°08'
minimum elong	2836 Apr 25 06:33	6°03'00'25 16°42'18	retrograde	2844 Aug 14 02:03	15°08'22'07
max. Earth dist.	2836 Apr 27 03:31	6°03'03'04 49.37832 AU		2844 Sep 30 12:35	15°08'
retrograde	2836 Aug 06 00:18	7°03'32'17	opposition	2844 Nov 05 23:58	14°08'22'00 -17°02'28
min. Earth dist.	2836 Oct 27 10:26	6°03'33'23 47.51081 AU	min. Earth dist.	2844 Nov 04 14:20	14°08'23'34 48.08134 AU
opposition	2836 Oct 29 04:13	6°03'31'24 -17°23'12	direct	2845 Jan 26 06:39	13°08'23'08
direct	2837 Jan 18 15:11	5°03'31'53			
			conjunction	2845 May 04 10:59	14°08'49'45 -16°20'28
conjunction	2837 Apr 26 12:29	6°03'59'43 -16°40'56	minimum elong	2845 May 04 11:07	14°08'49'46 16°20'28
minimum elong	2837 Apr 26 12:34	6°03'59'43 16°40'55	max. Earth dist.	2845 May 05 21:10	14°08'51'43 50.02256 AU
max. Earth dist.	2837 Apr 28 08:01	7°03'02'15 49.46610 AU		2845 May 11 21:36	15°08'
retrograde	2837 Aug 07 09:02	8°03'31'23	retrograde	2845 Aug 15 05:41	16°08'20'04
min. Earth dist.	2837 Oct 28 15:52	7°03'32'36 47.59686 AU	min. Earth dist.	2845 Nov 05 20:46	15°08'21'30 48.13179 AU
opposition	2837 Oct 30 09:49	7°03'30'37 -17°21'32	opposition	2845 Nov 07 05:00	15°08'19'59 -16°58'44
direct	2838 Jan 19 18:51	6°03'31'12		2845 Nov 25 05:59	15°08'18'
			direct	2846 Jan 27 13:13	14°08'21'10
conjunction	2838 Apr 27 18:27	7°03'58'52 -16°39'16		2846 Mar 30 03:04	15°08'
minimum elong	2838 Apr 27 18:32	7°03'58'52 16°39'17			
max. Earth dist.	2838 Apr 29 13:19	8°03'01'22 49.55083 AU	conjunction	2846 May 05 16:35	15°08'47'38 -16°16'48
retrograde	2838 Aug 08 15:55	9°03'30'22	minimum elong	2846 May 05 16:42	15°08'47'38 16°16'48
min. Earth dist.	2838 Oct 29 23:35	8°03'31'37 47.67969 AU	max. Earth dist.	2846 May 07 02:49	15°08'49'36 50.07172 AU
opposition	2838 Oct 31 15:35	8°03'29'43 -17°19'35	retrograde	2846 Aug 16 07:43	17°08'17'47
direct	2839 Jan 20 22:45	7°03'30'25	min. Earth dist.	2846 Nov 07 02:55	16°08'19'12 48.17856 AU
			opposition	2846 Nov 08 09:59	16°08'17'44 -16°54'45
conjunction	2839 Apr 29 00:18	8°03'57'56 -16°37'20	direct	2847 Jan 28 22:11	15°08'18'58
minimum elong	2839 Apr 29 00:25	8°03'57'56 16°37'19			
max. Earth dist.	2839 Apr 30 18:51	9°03'00'24 49.63226 AU	conjunction	2847 May 06 21:50	16°08'45'16 -16°12'53
retrograde	2839 Aug 09 19:41	10°03'29'16	minimum elong	2847 May 06 21:58	16°08'45'17 16°12'53
min. Earth dist.	2839 Oct 31 05:22	9°03'30'37 47.75875 AU	max. Earth dist.	2847 May 08 06:29	16°08'47'09 50.11760 AU
opposition	2839 Nov 01 21:07	9°03'28'44 -17°17'22	retrograde	2847 Aug 17 14:43	18°08'15'16
direct	2840 Jan 22 04:46	8°03'29'33	min. Earth dist.	2847 Nov 08 07:47	17°08'16'45 48.22222 AU
			opposition	2847 Nov 09 14:54	17°08'15'17 -16°50'30
conjunction	2840 Apr 29 06:08	9°03'56'55 -16°35'07	direct	2848 Jan 30 02:51	16°08'16'32
minimum elong	2840 Apr 29 06:13	9°03'56'56 16°35'08			
max. Earth dist.	2840 Apr 30 22:35	9°03'59'16 49.70966 AU	conjunction	2848 May 07 03:11	17°08'42'43 -16°08'42
retrograde	2840 Aug 10 00:47	11°08'28'06	minimum elong	2848 May 07 03:19	17°08'42'44 16°08'41
min. Earth dist.	2840 Oct 31 12:17	10°08'29'29 47.83359 AU	max. Earth dist.	2848 May 08 11:12	17°08'44'33 50.16040 AU
opposition	2840 Nov 02 02:39	10°08'27'40 -17°14'52	retrograde	2848 Aug 17 21:51	19°08'12'35
direct	2841 Jan 22 11:01	9°08'28'35	opposition	2848 Nov 09 19:49	18°08'12'39 -16°45'59
			min. Earth dist.	2848 Nov 08 14:31	18°08'14'02 48.26288 AU
conjunction	2841 Apr 30 12:09	10°08'55'50 -16°32'40	direct	2849 Jan 30 06:19	17°08'13'57
minimum elong	2841 Apr 30 12:16	10°08'55'50 16°32'39			
max. Earth dist.	2841 May 02 04:21	10°08'58'09 49.78241 AU	conjunction	2849 May 08 08:35	18°08'40'01 -16°04'15
retrograde	2841 Aug 11 05:22	12°08'26'51	minimum elong	2849 May 08 08:43	18°08'40'02 16°04'16

max. Earth dist.	2849 May 09 16:15	18° 8 41'50	50.20038 AU	min. Earth dist.	2857 Nov 17 17:45	26° 8 46'15	48.44288 AU
retrograde	2849 Aug 19 02:26	20° 8 09'44		direct	2858 Feb 08 02:32	25° 8 46'56	
min. Earth dist.	2849 Nov 09 19:18	19° 8 11'15	48.30046 AU				
opposition	2849 Nov 11 00:33	19° 8 09'52	-16°41'11	conjunction	2858 May 17 07:50	27° 8 12'22	-15°13'38
direct	2850 Jan 31 10:18	18° 8 11'14		minimum elong	2858 May 17 08:01	27° 8 12'23	15°13'38
				max. Earth dist.	2858 May 18 03:51	27° 8 13'30	50.36839 AU
conjunction	2850 May 09 13:48	19° 8 37'12	-15°59'32	retrograde	2858 Aug 28 00:38	28° 8 41'15	
minimum elong	2850 May 09 13:56	19° 8 37'13	15°59'32	opposition	2858 Nov 19 17:46	27° 8 41'48	-15°47'22
max. Earth dist.	2850 May 10 19:31	19° 8 38'54	50.23715 AU	min. Earth dist.	2858 Nov 19 00:07	27° 8 42'38	48.43960 AU
retrograde	2850 Aug 20 06:50	21° 8 06'48		direct	2859 Feb 09 05:37	26° 8 43'25	
min. Earth dist.	2850 Nov 11 01:16	20° 8 08'19	48.33479 AU				
opposition	2850 Nov 12 05:17	20° 8 07'00	-16°36'07	conjunction	2859 May 18 12:56	28° 8 08'48	-15°06'53
direct	2851 Feb 01 14:37	19° 8 08'25		minimum elong	2859 May 18 13:05	28° 8 08'48	15°06'52
				max. Earth dist.	2859 May 19 08:29	28° 8 09'54	50.36456 AU
conjunction	2851 May 10 19:08	20° 8 34'19	-15°54'35	retrograde	2859 Aug 29 04:55	29° 8 37'36	
minimum elong	2851 May 10 19:16	20° 8 34'20	15°54'35	opposition	2859 Nov 20 22:01	28° 8 38'11	-15°40'13
max. Earth dist.	2851 May 12 00:56	20° 8 36'01	50.27047 AU	min. Earth dist.	2859 Nov 20 04:17	28° 8 39'00	48.43303 AU
retrograde	2851 Aug 21 10:00	22° 8 03'49		direct	2860 Feb 10 09:06	27° 8 39'48	
min. Earth dist.	2851 Nov 12 07:23	21° 8 05'21	48.36526 AU				
opposition	2851 Nov 13 10:01	21° 8 04'06	-16°30'49	conjunction	2860 May 18 17:48	29° 8 05'09	-14°59'54
direct	2852 Feb 02 21:32	20° 8 05'35		minimum elong	2860 May 18 17:58	29° 8 05'10	14°59'54
				max. Earth dist.	2860 May 19 11:29	29° 8 06'09	50.35758 AU
conjunction	2852 May 11 00:19	21° 8 31'24	-15°49'23		2860 Jul 01 07:11	0° II	
minimum elong	2852 May 11 00:28	21° 8 31'24	15°49'22	retrograde	2860 Aug 29 09:02	0° II 33'54	
max. Earth dist.	2852 May 12 04:15	21° 8 32'59	50.29978 AU		2860 Oct 28 13:29	30° R 8	
retrograde	2852 Aug 21 16:15	23° 8 00'49		min. Earth dist.	2860 Nov 20 09:58	29° 8 35'15	48.42349 AU
opposition	2852 Nov 13 14:41	22° 8 01'10	-16°25'16	opposition	2860 Nov 21 02:24	29° 8 34'29	-15°32'50
min. Earth dist.	2852 Nov 12 12:34	22° 8 02'23	48.39134 AU	direct	2861 Feb 10 12:49	28° 8 36'07	
direct	2853 Feb 03 02:20	21° 8 02'42		evening set	2861 May 17 22:05	29° 8 58'42	
					2861 May 18 21:04	0° II	
conjunction	2853 May 12 05:43	22° 8 28'27	-15°43'57				
minimum elong	2853 May 12 05:51	22° 8 28'28	15°43'57	conjunction	2861 May 19 22:57	0° II 01'28	-14°52'39
max. Earth dist.	2853 May 13 08:19	22° 8 29'58	50.32415 AU	minimum elong	2861 May 19 23:08	0° II 01'28	14°52'38
retrograde	2853 Aug 22 23:47	23° 8 57'47		max. Earth dist.	2861 May 20 16:47	0° II 02'28	50.34764 AU
opposition	2853 Nov 14 19:21	22° 8 58'12	-16°19'30	morning rise	2861 May 22 00:14	0° II 04'15	
min. Earth dist.	2853 Nov 13 19:36	22° 8 59'19	48.41221 AU	retrograde	2861 Aug 30 11:04	1° II 30'10	
direct	2854 Feb 04 05:38	21° 8 59'46		opposition	2861 Nov 22 06:34	0° II 30'48	-15°25'11
				min. Earth dist.	2861 Nov 21 15:09	0° II 31'31	48.41088 AU
conjunction	2854 May 13 11:10	23° 8 25'28	-15°38'19		2861 Dec 21 04:12	30° R 8	
minimum elong	2854 May 13 11:21	23° 8 25'28	15°38'19	direct	2862 Feb 11 19:46	29° 8 32'26	
max. Earth dist.	2854 May 14 12:45	23° 8 26'55	50.34325 AU		2862 Apr 04 09:49	0° II	
retrograde	2854 Aug 24 05:13	24° 8 54'42		evening set	2862 May 18 06:41	0° II 53'52	
opposition	2854 Nov 15 23:56	23° 8 55'10	-16°13'31				
min. Earth dist.	2854 Nov 15 00:42	23° 8 56'15	48.42750 AU	conjunction	2862 May 21 03:57	0° II 57'46	-14°45'10
direct	2855 Feb 05 08:43	22° 8 56'45		minimum elong	2862 May 21 04:07	0° II 57'47	14°45'11
				max. Earth dist.	2862 May 21 20:07	0° II 58'41	50.33478 AU
conjunction	2855 May 14 16:15	24° 8 22'23	-15°32'28	morning rise	2862 May 24 01:40	1° II 01'43	
minimum elong	2855 May 14 16:24	24° 8 22'23	15°32'29	retrograde	2862 Aug 31 16:18	2° II 26'27	
max. Earth dist.	2855 May 15 15:28	24° 8 23'42	50.35677 AU	opposition	2862 Nov 23 10:48	1° II 27'07	-15°17'17
retrograde	2855 Aug 25 09:55	25° 8 51'31		min. Earth dist.	2862 Nov 22 19:40	1° II 27'50	48.39523 AU
min. Earth dist.	2855 Nov 16 07:10	24° 8 53'01	48.43742 AU	direct	2863 Feb 13 00:32	0° II 28'47	
opposition	2855 Nov 17 04:37	24° 8 52'01	-16°07'19	evening set	2863 May 18 19:29	1° II 49'19	
direct	2856 Feb 06 13:41	23° 8 53'37					
				conjunction	2863 May 22 08:49	1° II 54'07	-14°37'27
conjunction	2856 May 14 21:35	25° 8 19'11	-15°26'25	minimum elong	2863 May 22 09:00	1° II 54'08	14°37'26
minimum elong	2856 May 14 21:46	25° 8 19'11	15°26'26	max. Earth dist.	2863 May 23 00:06	1° II 54'59	50.31855 AU
max. Earth dist.	2856 May 15 20:29	25° 8 20'29	50.36510 AU	morning rise	2863 May 25 22:42	1° II 58'58	
retrograde	2856 Aug 25 11:22	26° 8 48'14		retrograde	2863 Sep 01 23:33	3° II 22'48	
opposition	2856 Nov 17 09:03	25° 8 48'44	-16°00'54	opposition	2863 Nov 24 15:11	2° II 23'30	-15°09'08
min. Earth dist.	2856 Nov 16 12:58	25° 8 49'41	48.44230 AU	min. Earth dist.	2863 Nov 24 01:57	2° II 24'07	48.37598 AU
direct	2857 Feb 06 21:51	24° 8 50'21		direct	2864 Feb 14 04:06	1° II 25'12	
				evening set	2864 May 18 10:57	2° II 44'58	
conjunction	2857 May 16 02:44	26° 8 15'50	-15°20'08				
minimum elong	2857 May 16 02:53	26° 8 15'51	15°20'08	conjunction	2864 May 22 13:59	2° II 50'32	-14°29'29
max. Earth dist.	2857 May 16 23:38	26° 8 17'01	50.36884 AU	minimum elong	2864 May 22 14:10	2° II 50'33	14°29'30
retrograde	2857 Aug 26 17:29	27° 8 44'48		max. Earth dist.	2864 May 23 04:39	2° II 51'22	50.29860 AU
opposition	2857 Nov 18 13:25	26° 8 45'20	-15°54'15	morning rise	2864 May 26 17:34	2° II 56'09	

retrograde	2864 Sep 02 06:39	4°II19'12	minimum elong	2871 May 30 02:10	9°II25'01	13°27'51
opposition	2864 Nov 24 19:17	3°II19'57 -15°00'46	max. Earth dist.	2871 May 30 07:35	9°II25'20	50.02400 AU
min. Earth dist.	2864 Nov 24 06:29	3°II20'32 48.35256 AU	morning rise	2871 Jun 06 04:18	9°II34'36	
direct	2865 Feb 14 05:26	2°II21'38	retrograde	2871 Sep 09 12:20	10°II53'34	
evening set	2865 May 19 03:50	3°II40'44	opposition	2871 Dec 02 00:51	9°II54'12	-13°56'03
			min. Earth dist.	2871 Dec 01 20:53	9°II54'23	48.05320 AU
conjunction	2865 May 23 19:08	3°II47'01 -14°21'19	direct	2872 Feb 21 15:36	8°II55'38	
minimum elong	2865 May 23 19:19	3°II47'02 14°21'19	evening set	2872 May 22 21:26	10°II11'09	
max. Earth dist.	2865 May 24 07:26	3°II47'42 50.27404 AU				
morning rise	2865 May 28 11:07	3°II53'19	conjunction	2872 May 30 07:02	10°II21'09	-13°18'08
retrograde	2865 Sep 03 12:31	5°II15'40	minimum elong	2872 May 30 07:14	10°II21'09	13°18'07
opposition	2865 Nov 25 23:37	4°II16'25 -14°52'11	max. Earth dist.	2872 May 30 11:00	10°II21'22	49.96896 AU
min. Earth dist.	2865 Nov 25 12:42	4°II16'56 48.32429 AU	morning rise	2872 Jun 06 17:37	10°II31'12	
direct	2866 Feb 15 08:34	3°II18'07	retrograde	2872 Sep 09 16:56	11°II49'43	
evening set	2866 May 19 21:49	4°II36'36	opposition	2872 Dec 02 04:54	10°II50'20	-13°45'52
			min. Earth dist.	2872 Dec 02 01:11	10°II50'31	47.99537 AU
conjunction	2866 May 25 00:24	4°II43'30 -14°12'56	direct	2873 Feb 21 20:06	9°II51'45	
minimum elong	2866 May 25 00:34	4°II43'31 14°12'56	evening set	2873 May 23 18:36	11°II06'53	
max. Earth dist.	2866 May 25 12:07	4°II44'10 50.24432 AU				
morning rise	2866 May 30 03:36	4°II50'27	conjunction	2873 May 31 12:15	11°II17'19	-13°08'11
retrograde	2866 Sep 04 13:10	6°II12'08	minimum elong	2873 May 31 12:26	11°II17'20	13°08'11
opposition	2866 Nov 27 03:52	5°II12'54 -14°43'23	max. Earth dist.	2873 May 31 15:17	11°II17'30	49.91101 AU
min. Earth dist.	2866 Nov 26 18:21	5°II13'20 48.29058 AU	morning rise	2873 Jun 08 06:56	11°II27'50	
direct	2867 Feb 16 16:24	4°II14'34	retrograde	2873 Sep 10 23:07	12°II45'57	
evening set	2867 May 20 16:40	5°II32'29	opposition	2873 Dec 03 09:12	11°II46'34	-13°35'25
			min. Earth dist.	2873 Dec 03 07:14	11°II46'40	47.93464 AU
conjunction	2867 May 26 05:33	5°II39'58 -14°04'21	direct	2874 Feb 23 00:24	10°II47'57	
minimum elong	2867 May 26 05:45	5°II39'59 14°04'21	evening set	2874 May 24 16:06	12°II02'44	
max. Earth dist.	2867 May 26 15:07	5°II40'30 50.20938 AU				
morning rise	2867 May 31 19:11	5°II47'30	conjunction	2874 Jun 01 17:26	12°II13'37	-12°57'59
retrograde	2867 Sep 05 17:23	7°II08'34	minimum elong	2874 Jun 01 17:38	12°II13'38	12°57'59
opposition	2867 Nov 28 08:06	6°II09'19 -14°34'22	max. Earth dist.	2874 Jun 01 20:09	12°II13'46	49.85031 AU
min. Earth dist.	2867 Nov 27 23:16	6°II09'44 48.25174 AU	morning rise	2874 Jun 09 19:44	12°II24'34	
direct	2868 Feb 17 22:18	5°II10'57	retrograde	2874 Sep 12 05:55	13°II42'18	
evening set	2868 May 20 11:52	6°II28'19	opposition	2874 Dec 04 13:19	12°II42'56	-13°24'44
			min. Earth dist.	2874 Dec 04 11:20	12°II43'01	47.87095 AU
conjunction	2868 May 26 10:39	6°II36'21 -13°55'33	direct	2875 Feb 24 02:23	11°II44'18	
minimum elong	2868 May 26 10:50	6°II36'22 13°55'33	evening set	2875 May 25 13:49	12°II58'46	
max. Earth dist.	2868 May 26 18:57	6°II36'49 50.16930 AU				
morning rise	2868 Jun 01 10:13	6°II44'27	conjunction	2875 Jun 02 22:36	13°II10'05	-12°47'33
retrograde	2868 Sep 06 00:04	8°II04'57	minimum elong	2875 Jun 02 22:47	13°II10'05	12°47'34
opposition	2868 Nov 28 12:25	7°II05'40 -14°25'08	max. Earth dist.	2875 Jun 02 23:16	13°II10'07	49.78647 AU
min. Earth dist.	2868 Nov 28 05:50	7°II05'58 48.20799 AU	morning rise	2875 Jun 11 08:34	13°II21'27	
direct	2869 Feb 18 02:32	6°II07'15	retrograde	2875 Sep 13 12:54	14°II38'51	
evening set	2869 May 21 07:52	7°II24'06	opposition	2875 Dec 05 17:37	13°II39'29	-13°13'47
			min. Earth dist.	2875 Dec 05 17:18	13°II39'30	47.80400 AU
conjunction	2869 May 27 15:54	7°II32'39 -13°46'32	direct	2876 Feb 25 04:18	12°II40'50	
minimum elong	2869 May 27 16:06	7°II32'40 13°46'33	evening set	2876 May 25 11:47	13°II55'01	
max. Earth dist.	2869 May 27 23:27	7°II33'05 50.12472 AU				
morning rise	2869 Jun 03 00:42	7°II41'15	conjunction	2876 Jun 03 03:59	14°II06'45	-12°36'53
retrograde	2869 Sep 07 04:55	9°II01'13	minimum elong	2876 Jun 03 04:11	14°II06'46	12°36'53
opposition	2869 Nov 29 16:24	8°II01'54 -14°15'41	max. Earth dist.	2876 Jun 03 04:28	14°II06'47	49.71900 AU
min. Earth dist.	2869 Nov 29 10:01	8°II02'12 48.15993 AU	morning rise	2876 Jun 11 21:14	14°II18'33	
direct	2870 Feb 19 05:58	7°II03'26	retrograde	2876 Sep 13 15:10	15°II35'37	
evening set	2870 May 22 04:04	8°II19'48	opposition	2876 Dec 05 21:56	14°II36'15	-13°02'37
			min. Earth dist.	2876 Dec 05 22:46	14°II36'13	47.73290 AU
conjunction	2870 May 28 20:57	8°II28'52 -13°37'18	direct	2877 Feb 25 11:07	13°II37'36	
minimum elong	2870 May 28 21:08	8°II28'52 13°37'18	evening set	2877 May 26 10:18	14°II51'30	
max. Earth dist.	2870 May 29 02:24	8°II29'10 50.07608 AU				
morning rise	2870 Jun 04 14:45	8°II37'58	conjunction	2877 Jun 04 09:29	15°II03'38	-12°26'00
retrograde	2870 Sep 08 10:24	9°II57'24	minimum elong	2877 Jun 04 09:40	15°II03'39	12°26'00
opposition	2870 Nov 30 20:39	8°II58'04 -14°05'59	max. Earth dist.	2877 Jun 04 07:51	15°II03'33	49.64712 AU
min. Earth dist.	2870 Nov 30 15:47	8°II58'18 48.10823 AU	morning rise	2877 Jun 13 09:51	15°II15'51	
direct	2871 Feb 20 08:53	7°II59'33	retrograde	2877 Sep 14 19:30	16°II32'36	
evening set	2871 May 23 00:28	9°II15'28	opposition	2877 Dec 07 02:10	15°II33'15	-12°51'13
			min. Earth dist.	2877 Dec 07 03:56	15°II33'10	47.65710 AU
conjunction	2871 May 30 01:58	9°II25'01 -13°27'50	direct	2878 Feb 26 17:05	14°II34'33	

evening set	2878 May 27 08:56	15°II48'12	opposition	2884 Dec 13 09:47	22°II15'12 -11°25'09
			min. Earth dist.	2884 Dec 13 19:38	22°II14'44 46.99268 AU
conjunction	2878 Jun 05 15:05	16°II00'44 -12°14'54	direct	2885 Mar 05 00:58	21°II15'55
minimum elong	2878 Jun 05 15:18	16°II00'45 12°14'54	evening set	2885 Jun 01 04:54	22°II27'55
max. Earth dist.	2878 Jun 05 11:57	16°II00'33 49.57007 AU			
morning rise	2878 Jun 14 22:27	16°II13'21	conjunction	2885 Jun 12 06:48	22°II43'02 -10°51'04
retrograde	2878 Sep 16 02:50	17°II29'48	minimum elong	2885 Jun 12 07:00	22°II43'03 10°51'03
opposition	2878 Dec 08 06:44	16°II30'25 -12°39'37	max. Earth dist.	2885 Jun 11 18:30	22°II42'20 48.90170 AU
min. Earth dist.	2878 Dec 08 10:46	16°II30'14 47.57596 AU	morning rise	2885 Jun 23 10:13	22°II58'14
direct	2879 Feb 27 21:08	15°II31'41	retrograde	2885 Sep 22 19:29	24°II12'47
evening set	2879 May 28 07:43	16°II45'03	opposition	2885 Dec 14 14:26	23°II12'59 -11°11'53
			min. Earth dist.	2885 Dec 15 01:50	23°II12'26 46.88352 AU
conjunction	2879 Jun 06 20:36	16°II57'59 -12°03'35	direct	2886 Mar 06 02:12	22°II13'37
minimum elong	2879 Jun 06 20:47	16°II57'59 12°03'35	evening set	2886 Jun 02 05:01	23°II25'27
max. Earth dist.	2879 Jun 06 16:28	16°II57'45 49.48779 AU			
morning rise	2879 Jun 16 10:36	17°II10'59	conjunction	2886 Jun 13 12:47	23°II40'55 -10°38'08
retrograde	2879 Sep 17 09:08	18°II27'08	minimum elong	2886 Jun 13 12:59	23°II40'55 10°38'09
opposition	2879 Dec 09 11:11	17°II27'43 -12°27'47	max. Earth dist.	2886 Jun 13 00:30	23°II40'13 48.79255 AU
min. Earth dist.	2879 Dec 09 15:36	17°II27'31 47.48949 AU	morning rise	2886 Jun 24 21:48	23°II56'27
direct	2880 Feb 29 00:08	16°II28'55	retrograde	2886 Sep 23 23:23	25°II10'48
evening set	2880 May 28 06:51	17°II42'01	opposition	2886 Dec 15 19:14	24°II10'57 -10°58'21
			min. Earth dist.	2886 Dec 16 07:19	24°II10'22 46.77135 AU
conjunction	2880 Jun 07 02:12	17°II55'19 -11°52'04	direct	2887 Mar 07 08:29	23°II11'30
minimum elong	2880 Jun 07 02:24	17°II55'20 11°52'05	evening set	2887 Jun 03 05:21	24°II23'12
max. Earth dist.	2880 Jun 06 19:39	17°II54'57 49.40026 AU			
morning rise	2880 Jun 16 22:56	18°II08'43	conjunction	2887 Jun 14 18:35	24°II39'00 -10°24'58
retrograde	2880 Sep 17 15:57	19°II24'33	minimum elong	2887 Jun 14 18:47	24°II39'01 10°24'57
opposition	2880 Dec 09 15:39	18°II25'05 -12°15'44	max. Earth dist.	2887 Jun 14 04:41	24°II38'12 48.68041 AU
min. Earth dist.	2880 Dec 09 22:03	18°II24'47 47.39809 AU	morning rise	2887 Jun 26 09:17	24°II54'53
direct	2881 Mar 01 03:05	17°II26'12	retrograde	2887 Sep 25 03:21	26°II09'03
evening set	2881 May 29 06:06	18°II39'03	opposition	2887 Dec 17 00:04	25°II09'09 -10°44'34
			min. Earth dist.	2887 Dec 17 12:48	25°II08'32 46.65601 AU
conjunction	2881 Jun 08 07:59	18°II52'44 -11°40'20	direct	2888 Mar 07 14:53	24°II09'38
minimum elong	2881 Jun 08 08:10	18°II52'45 11°40'20	evening set	2888 Jun 03 06:02	25°II21'13
max. Earth dist.	2881 Jun 08 01:05	18°II52'21 49.30798 AU	max. Earth dist.	2888 Jun 14 09:40	25°II36'28 48.56459 AU
morning rise	2881 Jun 18 11:02	19°II06'30			
retrograde	2881 Sep 18 18:15	20°II22'03	conjunction	2888 Jun 15 00:48	25°II37'21 -10°11'33
opposition	2881 Dec 10 20:09	19°II22'31 -12°03'28	minimum elong	2888 Jun 15 00:59	25°II37'21 10°11'33
min. Earth dist.	2881 Dec 11 03:41	19°II22'09 47.30209 AU	morning rise	2888 Jun 26 21:00	25°II53'34
direct	2882 Mar 02 10:10	18°II23'32	retrograde	2888 Sep 25 09:11	27°II07'36
evening set	2882 May 30 05:33	19°II36'10	opposition	2888 Dec 17 04:58	26°II07'38 -10°30'32
			min. Earth dist.	2888 Dec 17 19:51	26°II06'55 46.53670 AU
conjunction	2882 Jun 09 13:32	19°II50'12 -11°28'22	direct	2889 Mar 08 20:39	25°II08'02
minimum elong	2882 Jun 09 13:44	19°II50'13 11°28'23	evening set	2889 Jun 04 07:05	26°II19'30
max. Earth dist.	2882 Jun 09 04:45	19°II49'42 49.21150 AU			
morning rise	2882 Jun 19 22:53	20°II04'19	conjunction	2889 Jun 16 07:13	26°II35'58 -9°57'54
retrograde	2882 Sep 19 22:27	21°II19'36	minimum elong	2889 Jun 16 07:25	26°II35'59 9°57'54
opposition	2882 Dec 12 00:36	20°II20'00 -11°50'56	max. Earth dist.	2889 Jun 15 15:11	26°II35'03 48.44458 AU
min. Earth dist.	2882 Dec 12 08:40	20°II19'37 47.20226 AU	morning rise	2889 Jun 28 08:39	26°II52'32
direct	2883 Mar 03 15:35	19°II20'55	retrograde	2889 Sep 26 16:28	28°II06'25
evening set	2883 May 31 05:04	20°II33'19	opposition	2889 Dec 18 09:56	27°II06'24 -10°16'15
			min. Earth dist.	2889 Dec 19 01:10	27°II05'40 46.41276 AU
conjunction	2883 Jun 10 19:14	20°II47'43 -11°16'11	direct	2890 Mar 10 00:34	26°II06'42
minimum elong	2883 Jun 10 19:25	20°II47'44 11°16'10	evening set	2890 Jun 05 08:20	27°II18'05
max. Earth dist.	2883 Jun 10 09:24	20°II47'09 49.11131 AU			
morning rise	2883 Jun 21 10:45	21°II02'12	conjunction	2890 Jun 17 13:33	27°II34'53 -9°44'02
retrograde	2883 Sep 21 03:33	22°II17'14	minimum elong	2890 Jun 17 13:43	27°II34'53 9°44'02
opposition	2883 Dec 13 05:13	21°II17'33 -11°38'11	max. Earth dist.	2890 Jun 16 19:00	27°II33'48 48.31952 AU
min. Earth dist.	2883 Dec 13 15:05	21°II17'05 47.09900 AU	morning rise	2890 Jun 29 20:20	27°II51'46
direct	2884 Mar 03 21:41	20°II18'22	retrograde	2890 Sep 28 00:47	29°II05'31
evening set	2884 May 31 04:49	21°II30'34	opposition	2890 Dec 19 15:09	28°II05'25 -10°01'45
			min. Earth dist.	2890 Dec 20 08:32	28°II04'35 46.28370 AU
conjunction	2884 Jun 11 01:00	21°II45'19 -11°03'45	direct	2891 Mar 11 03:49	27°II05'37
minimum elong	2884 Jun 11 01:11	21°II45'19 11°03'45	evening set	2891 Jun 06 09:44	28°II16'55
max. Earth dist.	2884 Jun 10 14:47	21°II44'44 49.00803 AU			
morning rise	2884 Jun 21 22:25	22°II00'10	conjunction	2891 Jun 18 20:12	28°II34'02 -9°29'56
retrograde	2884 Sep 21 10:54	23°II14'56	minimum elong	2891 Jun 18 20:23	28°II34'02 9°29'56

max. Earth dist.	2891 Jun 18 01:06	28° Π 32'56	48.18929 AU	retrograde	2897 Oct 04 21:22	6° Θ 05'41	
morning rise	2891 Jul 01 07:55	28° Π 51'15		opposition	2897 Dec 26 05:11	5° Θ 04'49	-8°13'16
	2891 Sep 07 22:08	0° Θ		min. Earth dist.	2897 Dec 27 05:36	5° Θ 03'38	45.25998 AU
retrograde	2891 Sep 29 05:38	0° Θ 04'51		direct	2898 Mar 17 19:30	4° Θ 04'02	
	2891 Oct 20 14:41	30° κ Π		evening set	2898 Jun 12 01:46	5° Θ 15'07	
opposition	2891 Dec 20 20:21	29° Π 04'40	-9°47'00				
min. Earth dist.	2891 Dec 21 14:52	29° Π 03'46	46.14939 AU	conjunction	2898 Jun 25 20:20	5° Θ 34'23	-7°44'35
direct	2892 Mar 11 10:28	28° Π 04'44		minimum elong	2898 Jun 25 20:30	5° Θ 34'24	7°44'35
evening set	2892 Jun 06 11:29	29° Π 15'58		max. Earth dist.	2898 Jun 24 16:28	5° Θ 32'45	47.16302 AU
max. Earth dist.	2892 Jun 18 05:23	29° Π 32'10	48.05404 AU	morning rise	2898 Jul 09 16:13	5° Θ 53'45	
				retrograde	2898 Oct 06 02:27	7° Θ 06'51	
conjunction	2892 Jun 19 02:47	29° Π 33'24	-9°15'37	opposition	2898 Dec 27 11:09	6° Θ 05'54	-7°56'42
minimum elong	2892 Jun 19 02:57	29° Π 33'24	9°15'37	min. Earth dist.	2898 Dec 28 13:04	6° Θ 04'38	45.10180 AU
morning rise	2892 Jul 01 19:35	29° Π 50'56		direct	2899 Mar 19 03:27	5° Θ 04'59	
	2892 Jul 08 13:09	0° Θ		evening set	2899 Jun 13 05:00	6° Θ 16'06	
retrograde	2892 Sep 29 11:31	1° Θ 04'25		max. Earth dist.	2899 Jun 25 23:20	6° Θ 34'00	47.00498 AU
opposition	2892 Dec 21 01:37	0° Θ 04'07	-9°32'01				
min. Earth dist.	2892 Dec 21 21:04	0° Θ 03'11	46.01026 AU	conjunction	2899 Jun 27 03:43	6° Θ 35'40	-7°28'31
	2892 Dec 24 15:22	30° κ Π		minimum elong	2899 Jun 27 03:52	6° Θ 35'41	7°28'32
direct	2893 Mar 12 16:29	29° Π 04'03		morning rise	2899 Jul 11 03:39	6° Θ 55'20	
	2893 May 27 03:24	0° Θ		retrograde	2899 Oct 07 10:33	8° Θ 08'27	
evening set	2893 Jun 07 13:21	0° Θ 15'13		opposition	2899 Dec 28 17:03	7° Θ 07'24	-7°39'52
max. Earth dist.	2893 Jun 19 10:53	0° Θ 31'39	47.91397 AU	min. Earth dist.	2899 Dec 29 18:56	7° Θ 06'07	44.94099 AU
				direct	2900 Mar 20 08:27	6° Θ 06'21	
conjunction	2893 Jun 20 09:34	0° Θ 32'58	-9°01'04	evening set	2900 Jun 14 08:39	7° Θ 17'32	
minimum elong	2893 Jun 20 09:45	0° Θ 32'58	9°01'04	max. Earth dist.	2900 Jun 27 04:49	7° Θ 35'36	46.84388 AU
morning rise	2893 Jul 03 07:11	0° Θ 50'48					
retrograde	2893 Sep 30 16:33	2° Θ 04'11		conjunction	2900 Jun 28 11:14	7° Θ 37'24	-7°12'12
opposition	2893 Dec 22 06:56	1° Θ 03'47	-9°16'48	minimum elong	2900 Jun 28 11:24	7° Θ 37'25	7°12'11
min. Earth dist.	2893 Dec 23 04:26	1° Θ 02'45	45.86666 AU	morning rise	2900 Jul 12 15:16	7° Θ 57'22	
direct	2894 Mar 13 23:25	0° Θ 03'34		retrograde	2900 Oct 08 20:37	9° Θ 10'31	
evening set	2894 Jun 08 15:26	1° Θ 14'40		opposition	2900 Dec 29 23:17	8° Θ 09'21	-7°22'46
				min. Earth dist.	2900 Dec 31 03:12	8° Θ 07'59	44.77688 AU
conjunction	2894 Jun 21 16:23	1° Θ 32'44	-8°46'16	direct	2901 Mar 21 11:54	7° Θ 08'10	
minimum elong	2894 Jun 21 16:33	1° Θ 32'44	8°46'16	evening set	2901 Jun 15 12:35	8° Θ 19'27	
max. Earth dist.	2894 Jun 20 17:03	1° Θ 31'22	47.76993 AU				
morning rise	2894 Jul 04 18:37	1° Θ 50'53		conjunction	2901 Jun 29 19:09	8° Θ 39'36	-6°55'37
retrograde	2894 Oct 01 23:59	3° Θ 04'10		minimum elong	2901 Jun 29 19:18	8° Θ 39'37	6°55'37
opposition	2894 Dec 23 12:18	2° Θ 03'39	-9°01'19	max. Earth dist.	2901 Jun 28 12:23	8° Θ 37'47	46.67903 AU
min. Earth dist.	2894 Dec 24 09:53	2° Θ 02'36	45.71937 AU	morning rise	2901 Jul 14 02:49	8° Θ 59'51	
direct	2895 Mar 15 04:08	1° Θ 03'18		retrograde	2901 Oct 10 05:07	10° Θ 13'02	
evening set	2895 Jun 09 17:36	2° Θ 14'21		opposition	2901 Dec 31 05:31	9° Θ 11'46	-7°05'23
				min. Earth dist.	2902 Jan 01 10:19	9° Θ 10'21	44.60863 AU
conjunction	2895 Jun 22 23:02	2° Θ 32'43	-8°31'14	direct	2902 Mar 22 17:54	8° Θ 10'26	
minimum elong	2895 Jun 22 23:12	2° Θ 32'44	8°31'14	evening set	2902 Jun 16 16:58	9° Θ 21'49	
max. Earth dist.	2895 Jun 21 21:37	2° Θ 31'14	47.62234 AU	max. Earth dist.	2902 Jun 29 18:00	9° Θ 40'17	46.50985 AU
morning rise	2895 Jul 06 06:01	2° Θ 51'11					
retrograde	2895 Oct 03 10:07	4° Θ 04'23		conjunction	2902 Jul 01 03:06	9° Θ 42'15	-6°38'48
opposition	2895 Dec 24 17:54	3° Θ 03'45	-8°45'34	minimum elong	2902 Jul 01 03:15	9° Θ 42'16	6°38'47
min. Earth dist.	2895 Dec 25 17:12	3° Θ 02'38	45.56892 AU	morning rise	2902 Jul 15 14:34	10° Θ 02'47	
direct	2896 Mar 15 06:03	2° Θ 03'15		retrograde	2902 Oct 11 14:03	11° Θ 16'00	
evening set	2896 Jun 09 20:03	3° Θ 14'18		opposition	2903 Jan 01 12:04	10° Θ 14'36	-6°47'45
max. Earth dist.	2896 Jun 22 04:45	3° Θ 31'29	47.47179 AU	min. Earth dist.	2903 Jan 02 17:59	10° Θ 13'08	44.43592 AU
				direct	2903 Mar 24 00:21	9° Θ 13'06	
conjunction	2896 Jun 23 06:07	3° Θ 32'58	-8°15'57	evening set	2903 Jun 17 21:24	10° Θ 24'36	
minimum elong	2896 Jun 23 06:17	3° Θ 32'59	8°15'56	max. Earth dist.	2903 Jul 01 00:53	10° Θ 43'16	46.33585 AU
morning rise	2896 Jul 06 17:25	3° Θ 51'44					
retrograde	2896 Oct 03 16:07	5° Θ 04'53		conjunction	2903 Jul 02 11:13	10° Θ 45'19	-6°21'44
opposition	2896 Dec 24 23:26	4° Θ 04'08	-8°29'34	minimum elong	2903 Jul 02 11:21	10° Θ 45'19	6°21'44
min. Earth dist.	2896 Dec 25 23:14	4° Θ 02'58	45.41564 AU	morning rise	2903 Jul 17 02:10	11° Θ 06'07	
direct	2897 Mar 16 12:23	3° Θ 03'29		retrograde	2903 Oct 12 19:27	12° Θ 19'24	
evening set	2897 Jun 10 22:55	4° Θ 14'32		opposition	2904 Jan 02 18:52	11° Θ 17'51	-6°29'52
max. Earth dist.	2897 Jun 23 10:08	4° Θ 31'55	47.31867 AU	min. Earth dist.	2904 Jan 04 02:45	11° Θ 16'16	44.25833 AU
				direct	2904 Mar 24 08:59	10° Θ 16'09	
conjunction	2897 Jun 24 13:12	4° Θ 33'30	-8°00'24	evening set	2904 Jun 18 02:22	11° Θ 27'45	
minimum elong	2897 Jun 24 13:22	4° Θ 33'31	8°00'25	max. Earth dist.	2904 Jul 01 08:12	11° Θ 46'36	46.15723 AU
morning rise	2897 Jul 08 04:56	4° Θ 52'35					

conjunction	2904 Jul 02 19:38	11°☾48'44 -6°04'25	evening set	2911 Jun 25 21:26	19°☾00'43	
minimum elong	2904 Jul 02 19:47	11°☾48'45 6°04'25	max. Earth dist.	2911 Jul 09 15:58	19°☾20'52	44.81209 AU
morning rise	2904 Jul 17 13:59	12°☾09'49				
retrograde	2904 Oct 13 02:08	13°☾23'09	conjunction	2911 Jul 11 10:49	19°☾23'30	-3°55'57
opposition	2905 Jan 03 01:30	12°☾21'26 -6°11'43	minimum elong	2911 Jul 11 10:55	19°☾23'31	3°55'57
min. Earth dist.	2905 Jan 04 09:49	12°☾19'50 44.07625 AU	morning rise	2911 Jul 27 00:46	19°☾46'23	
direct	2905 Mar 25 17:00	11°☾19'32	retrograde	2911 Oct 21 19:08	21°☾00'43	
evening set	2905 Jun 19 07:41	12°☾31'15	opposition	2912 Jan 11 05:59	19°☾57'46	-3°56'50
max. Earth dist.	2905 Jul 02 14:21	12°☾50'14 45.97413 AU	min. Earth dist.	2912 Jan 12 20:58	19°☾55'47	42.71476 AU
			direct	2912 Apr 01 17:56	18°☾54'22	
conjunction	2905 Jul 04 04:11	12°☾52'30 -5°46'51	evening set	2912 Jun 26 05:17	20°☾07'36	
minimum elong	2905 Jul 04 04:18	12°☾52'31 5°46'51	max. Earth dist.	2912 Jul 09 23:46	20°☾27'52	44.61016 AU
morning rise	2905 Jul 19 01:53	13°☾13'51				
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opposition	2906 Jan 04 08:33	13°☾25'22 -5°53'17	minimum elong	2912 Jul 11 20:50	20°☾30'39	3°36'33
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direct	2906 Mar 26 21:23	12°☾23'14	retrograde	2912 Oct 22 08:01	22°☾08'21	
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minimum elong	2906 Jul 05 12:55	13°☾56'37 5°29'02	max. Earth dist.	2913 Jul 11 09:28	21°☾35'40	44.40493 AU
morning rise	2906 Jul 20 13:26	14°☾18'13				
retrograde	2906 Oct 15 21:21	15°☾31'43	conjunction	2913 Jul 13 07:10	21°☾38'31	-3°16'52
opposition	2907 Jan 05 15:38	14°☾29'38 -5°34'35	minimum elong	2913 Jul 13 07:15	21°☾38'31	3°16'51
min. Earth dist.	2907 Jan 07 02:25	14°☾27'54 43.70034 AU	morning rise	2913 Jul 29 01:17	22°☾01'52	
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evening set	2907 Jun 21 18:53	14°☾39'17	opposition	2914 Jan 12 22:56	22°☾13'28	-3°15'44
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conjunction	2907 Jul 06 21:31	15°☾01'04 -5°10'57	evening set	2914 Jun 28 22:07	22°☾23'36	
minimum elong	2907 Jul 06 21:38	15°☾01'05 5°10'56	max. Earth dist.	2914 Jul 12 18:32	22°☾44'10	44.19587 AU
morning rise	2907 Jul 22 01:18	15°☾22'56				
retrograde	2907 Oct 17 06:55	16°☾36'32	conjunction	2914 Jul 14 17:35	22°☾47'07	-2°56'55
opposition	2908 Jan 06 22:49	15°☾34'16 -5°15'37	minimum elong	2914 Jul 14 17:39	22°☾47'08	2°56'55
min. Earth dist.	2908 Jan 08 10:39	15°☾32'28 43.50780 AU	morning rise	2914 Jul 30 13:36	23°☾10'42	
direct	2908 Mar 28 11:03	14°☾31'41	retrograde	2914 Oct 25 02:04	24°☾25'53	
evening set	2908 Jun 22 00:57	15°☾43'53	opposition	2915 Jan 14 07:48	23°☾22'26	-2°54'45
max. Earth dist.	2908 Jul 05 14:02	16°☾03'27 45.40408 AU	min. Earth dist.	2915 Jan 16 02:12	23°☾20'15	42.09091 AU
			direct	2915 Apr 05 20:20	22°☾18'24	
conjunction	2908 Jul 07 06:36	16°☾05'56 -4°52'36	evening set	2915 Jun 30 07:18	23°☾32'42	
minimum elong	2908 Jul 07 06:43	16°☾05'56 4°52'36	max. Earth dist.	2915 Jul 14 03:10	23°☾53'21	43.98240 AU
morning rise	2908 Jul 22 13:06	16°☾28'03				
retrograde	2908 Oct 17 13:30	17°☾41'47	conjunction	2915 Jul 16 04:27	23°☾56'27	-2°36'43
opposition	2909 Jan 07 06:21	16°☾39'20 -4°56'21	minimum elong	2915 Jul 16 04:31	23°☾56'27	2°36'43
min. Earth dist.	2909 Jan 08 19:31	16°☾37'27 43.31266 AU	morning rise	2915 Aug 01 02:07	24°☾20'15	
direct	2909 Mar 29 21:00	15°☾36'32	retrograde	2915 Oct 26 12:51	25°☾35'45	
evening set	2909 Jun 23 07:29	16°☾48'56	opposition	2916 Jan 15 16:59	24°☾32'06	-2°33'30
max. Earth dist.	2909 Jul 06 22:32	17°☾08'42 45.20885 AU	min. Earth dist.	2916 Jan 17 13:39	24°☾29'47	41.87470 AU
			direct	2916 Apr 06 04:09	23°☾27'49	
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minimum elong	2909 Jul 08 15:55	17°☾11'14 4°33'58	max. Earth dist.	2916 Jul 14 13:54	25°☾03'18	43.76464 AU
morning rise	2909 Jul 24 00:58	17°☾33'36				
retrograde	2909 Oct 18 21:37	18°☾47'30	conjunction	2916 Jul 16 15:41	25°☾06'27	-2°16'16
opposition	2910 Jan 08 13:53	17°☾44'53 -4°36'48	minimum elong	2916 Jul 16 15:45	25°☾06'27	2°16'16
min. Earth dist.	2910 Jan 10 02:56	17°☾43'00 43.11544 AU	morning rise	2916 Aug 01 14:44	25°☾30'28	
direct	2910 Mar 31 05:08	16°☾41'52	retrograde	2916 Oct 27 00:24	26°☾46'17	
evening set	2910 Jun 24 14:23	17°☾54'31	opposition	2917 Jan 16 02:21	25°☾42'25	-2°11'58
max. Earth dist.	2910 Jul 08 06:13	18°☾14'26 45.01148 AU	min. Earth dist.	2917 Jan 17 23:24	25°☾40'04	41.65423 AU
			direct	2917 Apr 07 11:56	24°☾37'51	
conjunction	2910 Jul 10 01:11	18°☾17'04 -4°15'06	evening set	2917 Jul 02 03:00	25°☾52'56	
minimum elong	2910 Jul 10 01:17	18°☾17'04 4°15'07	max. Earth dist.	2917 Jul 15 22:47	26°☾13'47	43.54273 AU
morning rise	2910 Jul 25 12:54	18°☾39'41				
retrograde	2910 Oct 20 08:11	19°☾53'48	conjunction	2917 Jul 18 03:00	26°☾17'06	-1°55'33
opposition	2911 Jan 09 21:53	18°☾51'00 -4°16'58	minimum elong	2917 Jul 18 03:03	26°☾17'06	1°55'33
min. Earth dist.	2911 Jan 11 12:40	18°☾49'02 42.91624 AU	morning rise	2917 Aug 03 03:26	26°☾41'19	
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


























































































































opposition	2918 Jan 17 11:58	26°☾53'22	-1°50'10	behind sun end	2923 Jul 26 08:03	3°♄35'10	
min. Earth dist.	2918 Jan 19 10:43	26°☾50'56	41.43006 AU	morning rise	2923 Aug 11 08:32	4°♄00'16	
direct	2918 Apr 08 19:46	25°☾48'31		retrograde	2923 Nov 05 15:27	5°♄19'02	
evening set	2918 Jul 03 13:24	27°☾04'01		opposition	2924 Jan 25 03:41	4°♄13'21	0°26'36
max. Earth dist.	2918 Jul 17 09:57	27°☾25'01	43.31723 AU	min. Earth dist.	2924 Jan 27 07:11	4°♄10'35	40.03654 AU
				direct	2924 Apr 15 10:26	3°♄06'39	
conjunction	2918 Jul 19 14:42	27°☾28'23	-1°34'35	evening set	2924 Jul 10 15:03	4°♄25'19	
minimum elong	2918 Jul 19 14:44	27°☾28'23	1°34'35	max. Earth dist.	2924 Jul 24 07:57	4°♄46'52	41.91923 AU
morning rise	2918 Aug 04 16:01	27°☾52'48					
retrograde	2918 Oct 30 01:27	29°☾09'19		conjunction	2924 Jul 26 18:39	4°♄50'45	0°36'39
opposition	2919 Jan 18 21:53	28°☾04'56	-1°28'04	minimum elong	2924 Jul 26 18:38	4°♄50'45	0°36'39
min. Earth dist.	2919 Jan 20 21:42	28°☾02'26	41.20264 AU	morning rise	2924 Aug 11 21:59	5°♄16'11	
direct	2919 Apr 10 07:28	26°☾59'48		retrograde	2924 Nov 06 06:55	6°♄35'30	
evening set	2919 Jul 05 00:15	28°☾15'44		opposition	2925 Jan 25 15:25	5°♄29'34	0°50'22
max. Earth dist.	2919 Jul 18 20:23	28°☾36'50	43.08889 AU	min. Earth dist.	2925 Jan 27 19:38	5°♄26'45	39.79892 AU
				direct	2925 Apr 16 22:22	4°♄22'34	
conjunction	2919 Jul 21 02:25	28°☾40'18	-1°13'21	evening set	2925 Jul 12 05:28	5°♄41'54	
minimum elong	2919 Jul 21 02:27	28°☾40'18	1°13'21	max. Earth dist.	2925 Jul 25 20:47	6°♄03'30	41.68018 AU
morning rise	2919 Aug 06 04:46	29°☾04'55					
	2919 Sep 18 05:25	0°♄		conjunction	2925 Jul 28 08:40	6°♄07'29	0°59'23
retrograde	2919 Oct 31 13:48	0°♄21'48		minimum elong	2925 Jul 28 08:39	6°♄07'29	0°59'23
	2919 Dec 14 04:35	30°♄☾		morning rise	2925 Aug 13 11:21	6°♄33'04	
opposition	2920 Jan 20 07:59	29°☾17'10	-1°05'41	retrograde	2925 Nov 07 20:12	7°♄52'59	
min. Earth dist.	2920 Jan 22 08:07	29°☾14'38	40.97272 AU	opposition	2926 Jan 27 03:39	6°♄46'47	1°14'23
direct	2920 Apr 10 18:50	28°☾11'42		min. Earth dist.	2926 Jan 29 09:38	6°♄43'51	39.55887 AU
evening set	2920 Jul 05 11:46	29°☾28'06		direct	2926 Apr 18 11:41	5°♄39'29	
max. Earth dist.	2920 Jul 19 07:15	29°☾49'17	42.85802 AU	evening set	2926 Jul 13 20:35	6°♄59'31	
				max. Earth dist.	2926 Jul 27 10:35	7°♄21'10	41.43855 AU
conjunction	2920 Jul 21 14:41	29°☾52'52	-0°51'52				
minimum elong	2920 Jul 21 14:43	29°☾52'52	0°51'52	conjunction	2926 Jul 29 23:06	7°♄25'14	1°22'22
	2920 Jul 26 05:06	0°♄		minimum elong	2926 Jul 29 23:04	7°♄25'13	1°22'22
morning rise	2920 Aug 06 17:37	0°♄17'40		morning rise	2926 Aug 15 01:01	7°♄50'56	
retrograde	2920 Oct 31 23:27	1°♄34'58		retrograde	2926 Nov 09 09:51	9°♄11'29	
opposition	2921 Jan 20 18:25	0°♄30'03	-0°43'02	opposition	2927 Jan 28 16:09	8°♄05'01	1°38'40
min. Earth dist.	2921 Jan 22 20:20	0°♄27'25	40.74073 AU	min. Earth dist.	2927 Jan 30 22:15	8°♄02'04	39.31603 AU
	2921 Feb 14 07:45	30°♄☾		direct	2927 Apr 20 00:31	6°♄57'23	
direct	2921 Apr 12 05:46	29°☾24'17		evening set	2927 Jul 15 12:22	8°♄18'09	
	2921 Jun 07 01:52	0°♄		max. Earth dist.	2927 Jul 28 23:04	8°♄39'43	41.19374 AU
evening set	2921 Jul 06 23:44	0°♄41'11					
max. Earth dist.	2921 Jul 20 19:48	1°♄02'31	42.62541 AU	conjunction	2927 Jul 31 13:53	8°♄43'58	1°45'34
				minimum elong	2927 Jul 31 13:50	8°♄43'58	1°45'34
conjunction	2921 Jul 23 03:14	1°♄06'08	-0°30'07	morning rise	2927 Aug 16 14:50	9°♄09'48	
minimum elong	2921 Jul 23 03:15	1°♄06'08	0°30'08	retrograde	2927 Nov 11 01:04	10°♄31'01	
morning rise	2921 Aug 08 06:32	1°♄31'06		opposition	2928 Jan 30 05:14	9°♄24'15	2°03'13
retrograde	2921 Nov 02 10:39	2°♄48'50		min. Earth dist.	2928 Feb 01 13:25	9°♄21'10	39.07007 AU
opposition	2922 Jan 22 05:10	1°♄43'40	-0°20'06	direct	2928 Apr 20 11:18	8°♄16'16	
min. Earth dist.	2922 Jan 24 06:50	1°♄41'02	40.50723 AU	evening set	2928 Jul 16 04:52	9°♄37'47	
direct	2922 Apr 13 16:26	0°♄37'35		max. Earth dist.	2928 Jul 29 14:14	9°♄59'26	40.94573 AU
evening set	2922 Jul 08 12:12	1°♄55'01					
max. Earth dist.	2922 Jul 22 06:28	2°♄16'23	42.39135 AU	conjunction	2928 Aug 01 05:19	10°♄03'43	2°09'00
				minimum elong	2928 Aug 01 05:15	10°♄03'43	2°09'01
conjunction	2922 Jul 24 15:50	2°♄20'08	-0°08'10	morning rise	2928 Aug 17 04:48	10°♄29'38	
minimum elong	2922 Jul 24 15:50	2°♄20'08	0°08'10	retrograde	2928 Nov 11 16:48	11°♄51'32	
behind sun begin	2922 Jul 24 10:05	2°♄19'47		opposition	2929 Jan 30 18:32	10°♄44'29	2°28'00
behind sun end	2922 Jul 24 21:36	2°♄20'29		min. Earth dist.	2929 Feb 02 03:16	10°♄41'21	38.82103 AU
morning rise	2922 Aug 09 19:27	2°♄45'16		direct	2929 Apr 21 23:55	9°♄36'08	
retrograde	2922 Nov 04 02:08	4°♄03'31		evening set	2929 Jul 17 22:12	10°♄58'27	
asc. node	2922 Dec 05 17:28	3°♄51'32		max. Earth dist.	2929 Jul 31 03:43	11°♄20'00	40.69485 AU
opposition	2923 Jan 23 16:19	2°♄58'05	0°03'07				
min. Earth dist.	2923 Jan 25 19:19	2°♄55'21	40.27256 AU	conjunction	2929 Aug 02 20:57	11°♄24'28	2°32'40
direct	2923 Apr 14 23:39	1°♄51'41		minimum elong	2929 Aug 02 20:53	11°♄24'28	2°32'39
evening set	2923 Jul 10 01:12	3°♄09'42		morning rise	2929 Aug 18 19:00	11°♄50'28	
max. Earth dist.	2923 Jul 23 19:54	3°♄31'13	42.15601 AU	retrograde	2929 Nov 13 11:11	13°♄13'05	
				opposition	2930 Feb 01 08:19	12°♄05'42	2°53'02
conjunction	2923 Jul 26 05:06	3°♄34'59	0°14'10	min. Earth dist.	2930 Feb 03 18:07	12°♄02'30	38.56954 AU
minimum elong	2923 Jul 26 05:05	3°♄34'59	0°14'09	direct	2930 Apr 23 11:58	10°♄56'58	
behind sun begin	2923 Jul 26 02:08	3°♄34'48		evening set	2930 Jul 19 15:52	12°♄20'08	

max. Earth dist.	2930 Aug 01 19:09	12°Ω41'41	40.44148 AU	morning rise	2936 Aug 28 00:34	21°Ω46'25	
				retrograde	2936 Nov 23 16:36	23°Ω15'25	
conjunction	2930 Aug 04 12:57	12°Ω46'13	2°56'32	opposition	2937 Feb 10 21:02	22°Ω05'40	5°54'05
minimum elong	2930 Aug 04 12:52	12°Ω46'13	2°56'32	min. Earth dist.	2937 Feb 13 10:50	22°Ω02'06	36.78517 AU
morning rise	2930 Aug 20 08:57	13°Ω12'17		direct	2937 May 02 20:19	20°Ω54'13	
retrograde	2930 Nov 15 02:39	14°Ω35'40		evening set	2937 Jul 30 19:20	22°Ω24'41	
opposition	2931 Feb 02 22:34	13°Ω27'56	3°18'19	max. Earth dist.	2937 Aug 11 19:35	22°Ω45'33	38.64801 AU
min. Earth dist.	2931 Feb 05 09:36	13°Ω24'39	38.31596 AU				
direct	2931 Apr 25 02:54	12°Ω18'50		conjunction	2937 Aug 14 18:21	22°Ω50'43	5°48'27
evening set	2931 Jul 21 10:30	13°Ω42'52		minimum elong	2937 Aug 14 18:11	22°Ω50'43	5°48'27
max. Earth dist.	2931 Aug 03 10:54	14°Ω04'22	40.18644 AU	morning rise	2937 Aug 29 15:45	23°Ω16'41	
				retrograde	2937 Nov 25 11:49	24°Ω46'49	
conjunction	2931 Aug 06 05:24	14°Ω09'00	3°20'36	opposition	2938 Feb 12 14:49	23°Ω36'44	6°20'35
minimum elong	2931 Aug 06 05:18	14°Ω09'00	3°20'35	min. Earth dist.	2938 Feb 15 06:03	23°Ω33'04	36.53017 AU
morning rise	2931 Aug 21 23:18	14°Ω35'07		direct	2938 May 04 14:37	22°Ω24'54	
	2931 Sep 06 20:28	15°Ω		evening set	2938 Aug 01 20:02	23°Ω56'38	
retrograde	2931 Nov 16 18:34	15°Ω59'18		max. Earth dist.	2938 Aug 13 15:29	24°Ω17'20	38.39107 AU
	2932 Jan 29 00:20	15°Ω					
opposition	2932 Feb 04 12:58	14°Ω51'14	3°43'48	conjunction	2938 Aug 16 14:22	24°Ω22'34	6°13'31
min. Earth dist.	2932 Feb 07 00:02	14°Ω47'55	38.06114 AU	minimum elong	2938 Aug 16 14:09	24°Ω22'33	6°13'31
direct	2932 Apr 25 19:02	13°Ω41'43		morning rise	2938 Aug 31 07:03	24°Ω48'26	
	2932 Jul 18 03:17	15°Ω		retrograde	2938 Nov 27 08:00	26°Ω19'44	
evening set	2932 Jul 22 05:54	15°Ω06'41		opposition	2939 Feb 14 09:01	25°Ω09'19	6°47'13
max. Earth dist.	2932 Aug 04 02:17	15°Ω28'05	39.93015 AU	min. Earth dist.	2939 Feb 17 00:07	25°Ω05'37	36.27437 AU
				direct	2939 May 06 09:37	23°Ω57'04	
conjunction	2932 Aug 06 22:22	15°Ω32'52	3°44'51	evening set	2939 Aug 03 21:58	25°Ω30'07	
minimum elong	2932 Aug 06 22:15	15°Ω32'51	3°44'52	max. Earth dist.	2939 Aug 15 10:19	25°Ω50'30	38.13291 AU
morning rise	2932 Aug 22 13:43	15°Ω59'00					
retrograde	2932 Nov 17 10:39	17°Ω24'02		conjunction	2939 Aug 18 11:11	25°Ω55'56	6°38'41
opposition	2933 Feb 05 04:05	16°Ω15'37	4°09'30	minimum elong	2939 Aug 18 10:58	25°Ω55'55	6°38'41
min. Earth dist.	2933 Feb 07 16:46	16°Ω12'11	37.80557 AU	morning rise	2939 Sep 01 22:48	26°Ω21'38	
direct	2933 Apr 27 08:46	15°Ω05'42		retrograde	2939 Nov 29 04:51	27°Ω54'10	
evening set	2933 Jul 24 01:56	16°Ω31'38		opposition	2940 Feb 16 03:51	26°Ω43'23	7°13'56
max. Earth dist.	2933 Aug 05 20:02	16°Ω53'03	39.67339 AU	min. Earth dist.	2940 Feb 18 20:47	26°Ω39'34	36.01746 AU
				direct	2940 May 07 01:34	25°Ω30'42	
conjunction	2933 Aug 08 15:42	16°Ω57'50	4°09'17	evening set	2940 Aug 05 00:55	27°Ω05'09	
minimum elong	2933 Aug 08 15:34	16°Ω57'50	4°09'17	max. Earth dist.	2940 Aug 16 07:58	27°Ω25'18	37.87354 AU
morning rise	2933 Aug 24 04:05	17°Ω23'59					
retrograde	2933 Nov 19 03:08	18°Ω49'55		conjunction	2940 Aug 19 08:44	27°Ω30'46	7°03'54
opposition	2934 Feb 06 19:32	17°Ω41'10	4°35'24	minimum elong	2940 Aug 19 08:30	27°Ω30'45	7°03'54
min. Earth dist.	2934 Feb 09 07:43	17°Ω37'45	37.54987 AU	morning rise	2940 Sep 02 14:39	27°Ω56'19	
direct	2934 Apr 28 23:36	16°Ω30'52		retrograde	2940 Nov 30 01:13	29°Ω30'07	
evening set	2934 Jul 25 22:57	17°Ω57'50		opposition	2941 Feb 16 23:20	28°Ω18'57	7°40'45
max. Earth dist.	2934 Aug 07 12:11	18°Ω19'05	39.41670 AU	min. Earth dist.	2941 Feb 19 16:21	28°Ω15'05	35.75942 AU
				direct	2941 May 08 20:53	27°Ω05'49	
conjunction	2934 Aug 10 09:26	18°Ω24'01	4°33'53	evening set	2941 Aug 07 04:58	28°Ω41'41	
minimum elong	2934 Aug 10 09:17	18°Ω24'00	4°33'53	max. Earth dist.	2941 Aug 18 04:04	29°Ω01'27	37.61315 AU
morning rise	2934 Aug 25 18:45	18°Ω50'10					
retrograde	2934 Nov 20 23:07	20°Ω17'04		conjunction	2941 Aug 21 06:37	29°Ω07'06	7°29'10
opposition	2935 Feb 08 11:33	19°Ω07'58	5°01'28	minimum elong	2941 Aug 21 06:23	29°Ω07'05	7°29'10
min. Earth dist.	2935 Feb 11 00:44	19°Ω04'28	37.29466 AU	morning rise	2941 Sep 04 06:39	29°Ω32'25	
direct	2935 Apr 30 12:26	17°Ω57'16			2941 Sep 20 06:49	0°Ω	
evening set	2935 Jul 27 20:38	19°Ω25'20		retrograde	2941 Dec 02 01:20	1°Ω07'34	
max. Earth dist.	2935 Aug 09 06:58	19°Ω46'33	39.16037 AU		2942 Feb 15 23:56	30°Ω	
				opposition	2942 Feb 18 19:24	29°Ω55'59	8°07'36
conjunction	2935 Aug 12 03:50	19°Ω51'30	4°58'37	min. Earth dist.	2942 Feb 21 13:20	29°Ω52'03	35.50076 AU
minimum elong	2935 Aug 12 03:41	19°Ω51'29	4°58'37	direct	2942 May 10 14:25	28°Ω42'22	
morning rise	2935 Aug 27 09:27	20°Ω17'36			2942 Jul 29 04:27	0°Ω	
retrograde	2935 Nov 22 19:02	21°Ω45'32		evening set	2942 Aug 09 09:57	0°Ω19'44	
opposition	2936 Feb 10 04:08	20°Ω36'06	5°27'42	max. Earth dist.	2942 Aug 20 02:45	0°Ω39'12	37.35214 AU
min. Earth dist.	2936 Feb 12 17:42	20°Ω32'34	37.03977 AU				
direct	2936 May 01 04:24	19°Ω25'01		conjunction	2942 Aug 23 05:20	0°Ω44'54	7°54'27
evening set	2936 Jul 28 19:33	20°Ω54'15		minimum elong	2942 Aug 23 05:04	0°Ω44'53	7°54'26
max. Earth dist.	2936 Aug 10 00:45	21°Ω15'18	38.90434 AU	morning rise	2942 Sep 05 22:42	1°Ω09'57	
				retrograde	2942 Dec 04 00:03	2°Ω46'30	
conjunction	2936 Aug 12 22:44	21°Ω20'23	5°23'28	opposition	2943 Feb 20 16:06	1°Ω34'29	8°34'29
minimum elong	2936 Aug 12 22:33	21°Ω20'22	5°23'29	min. Earth dist.	2943 Feb 23 10:52	1°Ω30'29	35.24188 AU

direct	2943 May 12 10:27	0° \mathring{M} 20'24		retrograde	2949 Dec 16 13:28	15° \mathring{M} 05'08	
evening set	2943 Aug 11 16:11	1° \mathring{M} 59'19		opposition	2950 Mar 04 12:14	13° \mathring{M} 50'16	11°39'39
max. Earth dist.	2943 Aug 22 01:09	2° \mathring{M} 18'22	37.09131 AU	min. Earth dist.	2950 Mar 07 07:56	13° \mathring{M} 46'00	33.47784 AU
				direct	2950 May 23 22:59	12° \mathring{M} 32'55	
conjunction	2943 Aug 25 04:29	2° \mathring{M} 24'11	8°19'42	evening set	2950 Aug 26 22:42	14° \mathring{M} 25'11	
minimum elong	2943 Aug 25 04:13	2° \mathring{M} 24'10	8°19'43	max. Earth dist.	2950 Sep 03 14:12	14° \mathring{M} 40'16	35.31671 AU
morning rise	2943 Sep 07 15:01	2° \mathring{M} 48'57					
retrograde	2943 Dec 06 01:19	4° \mathring{M} 26'56		conjunction	2950 Sep 06 18:04	14° \mathring{M} 46'33	11°12'33
opposition	2944 Feb 22 13:20	3° \mathring{M} 14'30	9°01'20	minimum elong	2950 Sep 06 17:42	14° \mathring{M} 46'31	11°12'33
min. Earth dist.	2944 Feb 25 07:57	3° \mathring{M} 10'28	34.98357 AU	morning rise	2950 Sep 17 11:43	15° \mathring{M} 07'47	
direct	2944 May 13 08:10	1° \mathring{M} 59'54		retrograde	2950 Dec 18 20:58	16° \mathring{M} 58'19	
evening set	2944 Aug 12 23:31	3° \mathring{M} 40'28		opposition	2951 Mar 06 14:36	15° \mathring{M} 43'04	12°05'08
max. Earth dist.	2944 Aug 23 00:18	3° \mathring{M} 59'04	36.83104 AU	min. Earth dist.	2951 Mar 09 09:53	15° \mathring{M} 38'48	33.23580 AU
				direct	2951 May 26 01:59	14° \mathring{M} 25'16	
conjunction	2944 Aug 26 04:25	4° \mathring{M} 05'00	8°44'54	evening set	2951 Aug 29 15:41	16° \mathring{M} 19'50	
minimum elong	2944 Aug 26 04:07	4° \mathring{M} 04'59	8°44'54	max. Earth dist.	2951 Sep 05 18:52	16° \mathring{M} 34'04	35.07257 AU
morning rise	2944 Sep 08 07:22	4° \mathring{M} 29'25					
retrograde	2944 Dec 07 01:26	6° \mathring{M} 08'55		conjunction	2951 Sep 08 23:11	16° \mathring{M} 40'26	11°36'11
opposition	2945 Feb 23 11:21	4° \mathring{M} 56'03	9°28'08	minimum elong	2951 Sep 08 22:50	16° \mathring{M} 40'24	11°36'12
min. Earth dist.	2945 Feb 26 07:08	4° \mathring{M} 51'55	34.72640 AU	morning rise	2951 Sep 19 04:53	17° \mathring{M} 00'54	
direct	2945 May 15 06:17	3° \mathring{M} 40'59		retrograde	2951 Dec 21 03:50	18° \mathring{M} 53'36	
evening set	2945 Aug 15 08:06	5° \mathring{M} 23'15		opposition	2952 Mar 07 18:07	17° \mathring{M} 37'57	12°30'16
max. Earth dist.	2945 Aug 25 01:28	5° \mathring{M} 41'27	36.57235 AU	min. Earth dist.	2952 Mar 10 14:33	17° \mathring{M} 33'35	32.99557 AU
				direct	2952 May 27 04:49	16° \mathring{M} 19'42	
conjunction	2945 Aug 28 04:55	5° \mathring{M} 47'24	9°10'01	evening set	2952 Aug 31 10:32	18° \mathring{M} 16'40	
minimum elong	2945 Aug 28 04:37	5° \mathring{M} 47'22	9°10'01	max. Earth dist.	2952 Sep 07 01:15	18° \mathring{M} 30'00	34.83035 AU
morning rise	2945 Sep 09 23:47	6° \mathring{M} 11'25					
retrograde	2945 Dec 09 02:22	7° \mathring{M} 52'31		conjunction	2952 Sep 10 05:05	18° \mathring{M} 36'24	11°59'25
opposition	2946 Feb 25 10:02	6° \mathring{M} 39'14	9°54'50	minimum elong	2952 Sep 10 04:43	18° \mathring{M} 36'22	11°59'25
min. Earth dist.	2946 Feb 28 04:52	6° \mathring{M} 35'07	34.47123 AU	morning rise	2952 Sep 19 21:56	18° \mathring{M} 56'00	
direct	2946 May 17 05:11	5° \mathring{M} 23'40		retrograde	2952 Dec 22 10:16	20° \mathring{M} 50'56	
evening set	2946 Aug 17 17:44	7° \mathring{M} 07'44		opposition	2953 Mar 09 22:17	19° \mathring{M} 34'53	12°54'58
max. Earth dist.	2946 Aug 27 01:27	7° \mathring{M} 25'22	36.31581 AU	min. Earth dist.	2953 Mar 12 17:47	19° \mathring{M} 30'33	32.75732 AU
				direct	2953 May 29 09:22	18° \mathring{M} 16'10	
conjunction	2946 Aug 30 05:54	7° \mathring{M} 31'27	9°34'58	evening set	2953 Sep 03 06:55	20° \mathring{M} 15'37	
minimum elong	2946 Aug 30 05:35	7° \mathring{M} 31'25	9°34'58	max. Earth dist.	2953 Sep 09 06:56	20° \mathring{M} 27'50	34.59015 AU
morning rise	2946 Sep 11 16:16	7° \mathring{M} 55'02					
retrograde	2946 Dec 11 03:24	9° \mathring{M} 37'50		conjunction	2953 Sep 12 11:46	20° \mathring{M} 34'23	12°22'12
opposition	2947 Feb 27 09:29	8° \mathring{M} 24'08	10°21'23	minimum elong	2953 Sep 12 11:23	20° \mathring{M} 34'21	12°22'13
min. Earth dist.	2947 Mar 02 05:13	8° \mathring{M} 19'56	34.21867 AU	morning rise	2953 Sep 21 15:02	20° \mathring{M} 53'02	
direct	2947 May 19 01:52	7° \mathring{M} 08'06		retrograde	2953 Dec 24 16:59	22° \mathring{M} 50'19	
evening set	2947 Aug 20 04:49	8° \mathring{M} 54'03		opposition	2954 Mar 12 03:26	21° \mathring{M} 33'51	13°19'11
max. Earth dist.	2947 Aug 29 04:33	9° \mathring{M} 11'14	36.06199 AU	min. Earth dist.	2954 Mar 14 23:52	21° \mathring{M} 29'25	32.52146 AU
				direct	2954 May 31 12:04	20° \mathring{M} 14'39	
conjunction	2947 Sep 01 07:53	9° \mathring{M} 17'17	9°59'45	evening set	2954 Sep 06 05:07	22° \mathring{M} 16'42	
minimum elong	2947 Sep 01 07:34	9° \mathring{M} 17'15	9°59'45	max. Earth dist.	2954 Sep 11 15:39	22° \mathring{M} 27'53	34.35259 AU
morning rise	2947 Sep 13 08:55	9° \mathring{M} 40'22					
retrograde	2947 Dec 13 04:34	11° \mathring{M} 24'57		conjunction	2954 Sep 14 19:09	22° \mathring{M} 34'23	12°44'29
opposition	2948 Feb 29 09:32	10° \mathring{M} 10'51	10°47'43	minimum elong	2954 Sep 14 18:46	22° \mathring{M} 34'21	12°44'28
min. Earth dist.	2948 Mar 03 04:43	10° \mathring{M} 06'40	33.96893 AU	morning rise	2954 Sep 23 07:35	22° \mathring{M} 51'57	
direct	2948 May 20 00:51	8° \mathring{M} 54'23		retrograde	2954 Dec 26 23:49	24° \mathring{M} 51'42	
evening set	2948 Aug 21 17:25	10° \mathring{M} 42'20		opposition	2955 Mar 14 09:19	23° \mathring{M} 34'47	13°42'50
max. Earth dist.	2948 Aug 30 06:10	10° \mathring{M} 58'49	35.81106 AU	min. Earth dist.	2955 Mar 17 04:58	23° \mathring{M} 30'23	32.28837 AU
				direct	2955 Jun 02 16:48	22° \mathring{M} 15'06	
conjunction	2948 Sep 02 10:30	11° \mathring{M} 05'00	10°24'18	evening set	2955 Sep 09 05:20	24° \mathring{M} 19'52	
minimum elong	2948 Sep 02 10:10	11° \mathring{M} 04'59	10°24'17	max. Earth dist.	2955 Sep 13 22:59	24° \mathring{M} 29'42	34.11816 AU
morning rise	2948 Sep 14 01:52	11° \mathring{M} 27'33					
retrograde	2948 Dec 14 09:34	13° \mathring{M} 14'01		conjunction	2955 Sep 17 03:20	24° \mathring{M} 36'21	13°06'11
opposition	2949 Mar 02 10:25	11° \mathring{M} 59'32	11°13'49	minimum elong	2955 Sep 17 02:58	24° \mathring{M} 36'19	13°06'11
min. Earth dist.	2949 Mar 05 05:44	11° \mathring{M} 55'20	33.72217 AU	morning rise	2955 Sep 24 23:59	24° \mathring{M} 52'43	
direct	2949 May 21 22:51	10° \mathring{M} 42'37		retrograde	2955 Dec 29 08:53	26° \mathring{M} 55'03	
evening set	2949 Aug 24 07:11	12° \mathring{M} 32'41		opposition	2956 Mar 15 15:52	25° \mathring{M} 37'41	14°05'52
max. Earth dist.	2949 Sep 01 10:20	12° \mathring{M} 48'33	35.56269 AU	min. Earth dist.	2956 Mar 18 11:43	25° \mathring{M} 33'15	32.05892 AU
				direct	2956 Jun 03 20:39	26° \mathring{M} 17'30	
conjunction	2949 Sep 04 13:55	12° \mathring{M} 54'44	10°48'35	evening set	2956 Sep 11 07:47	26° \mathring{M} 25'08	
minimum elong	2949 Sep 04 13:34	12° \mathring{M} 54'43	10°48'36	max. Earth dist.	2956 Sep 15 09:33	26° \mathring{M} 33'41	33.88764 AU
morning rise	2949 Sep 15 18:40	13° \mathring{M} 16'40					

conjunction	2956 Sep 18 12:26	26° 7 40'16	13°27'14	direct	2963 Jun 19 14:41	9° 0 30'29	
minimum elong	2956 Sep 18 12:04	26° 7 40'14	13°27'13	max. Earth dist.	2963 Oct 02 06:25	11° 0 57'27	32.44479 AU
morning rise	2956 Sep 25 15:41	26° 7 55'17					
retrograde	2956 Dec 30 16:43	29° 7 00'20		conjunction	2963 Oct 05 00:46	12° 0 03'39	15°29'30
opposition	2957 Mar 17 23:31	27° 7 42'32	14°28'10	minimum elong	2963 Oct 05 00:28	12° 0 03'38	15°29'30
min. Earth dist.	2957 Mar 20 18:51	27° 7 38'05	31.83373 AU	retrograde	2964 Jan 16 13:28	14° 0 33'14	
direct	2957 Jun 06 03:54	26° 7 21'51		opposition	2964 Apr 02 04:43	13° 0 12'48	16°36'46
evening set	2957 Sep 14 12:34	28° 7 32'32		min. Earth dist.	2964 Apr 04 16:55	13° 0 08'40	30.43305 AU
max. Earth dist.	2957 Sep 17 19:13	28° 7 39'29	33.66201 AU	direct	2964 Jun 21 03:34	11° 0 49'16	
				max. Earth dist.	2964 Oct 03 21:51	14° 0 17'34	32.26559 AU
conjunction	2957 Sep 20 21:56	28° 7 46'06	13°47'33				
minimum elong	2957 Sep 20 21:33	28° 7 46'04	13°47'34	conjunction	2964 Oct 06 15:59	14° 0 23'49	15°42'30
morning rise	2957 Sep 27 06:10	28° 7 59'35		minimum elong	2964 Oct 06 15:41	14° 0 23'47	15°42'29
	2957 Oct 27 07:51	0° 0		retrograde	2965 Jan 18 05:41	16° 0 54'40	
retrograde	2958 Jan 02 04:12	1° 0 07'33		opposition	2965 Apr 04 19:21	15° 0 33'54	16°50'16
	2958 Mar 13 14:05	30° 8		min. Earth dist.	2965 Apr 07 06:35	15° 0 29'50	30.25938 AU
opposition	2958 Mar 20 07:52	29° 7 49'18	14°49'40	direct	2965 Jun 23 15:48	14° 0 10'02	
min. Earth dist.	2958 Mar 23 02:01	29° 7 44'55	31.61391 AU	max. Earth dist.	2965 Oct 06 16:14	16° 0 39'51	32.09306 AU
direct	2958 Jun 08 11:32	28° 7 28'08					
	2958 Aug 28 15:01	0° 0		conjunction	2965 Oct 09 07:53	16° 0 45'55	15°54'11
evening set	2958 Sep 17 20:31	0° 0 42'07		minimum elong	2965 Oct 09 07:38	16° 0 45'53	15°54'11
max. Earth dist.	2958 Sep 20 07:08	0° 0 47'21	33.44203 AU	retrograde	2966 Jan 20 20:25	19° 0 17'57	
				opposition	2966 Apr 07 10:51	17° 0 56'53	17°02'20
conjunction	2958 Sep 23 08:28	0° 0 53'54	14°07'03	min. Earth dist.	2966 Apr 09 21:00	17° 0 52'52	30.09221 AU
minimum elong	2958 Sep 23 08:05	0° 0 53'52	14°07'02	direct	2966 Jun 26 06:37	16° 0 32'41	
morning rise	2958 Sep 28 19:16	1° 0 05'36		max. Earth dist.	2966 Oct 09 09:27	19° 0 03'46	31.92761 AU
retrograde	2959 Jan 04 14:36	3° 0 16'44					
opposition	2959 Mar 22 17:08	1° 0 58'03	15°10'16	conjunction	2966 Oct 12 00:26	19° 0 09'49	16°04'28
min. Earth dist.	2959 Mar 25 11:07	1° 0 53'39	31.40012 AU	minimum elong	2966 Oct 12 00:11	19° 0 09'48	16°04'28
direct	2959 Jun 10 19:13	0° 0 36'25		retrograde	2967 Jan 23 14:33	21° 0 43'00	
evening set	2959 Sep 21 08:58	2° 0 54'03		opposition	2967 Apr 10 02:52	20° 0 21'38	17°12'51
max. Earth dist.	2959 Sep 22 19:38	2° 0 57'10	33.22870 AU	min. Earth dist.	2967 Apr 12 11:09	20° 0 17'44	29.93215 AU
				direct	2967 Jun 28 21:41	18° 0 57'06	
conjunction	2959 Sep 25 19:42	3° 0 03'41	14°25'39	max. Earth dist.	2967 Oct 12 05:10	21° 0 29'34	31.76956 AU
minimum elong	2959 Sep 25 19:21	3° 0 03'39	14°25'39				
morning rise	2959 Sep 30 05:31	3° 0 13'15		conjunction	2967 Oct 14 17:49	21° 0 35'25	16°13'18
retrograde	2960 Jan 07 04:27	5° 0 27'53		minimum elong	2967 Oct 14 17:37	21° 0 35'24	16°13'18
opposition	2960 Mar 24 03:13	4° 0 08'48	15°29'52	retrograde	2968 Jan 26 06:54	24° 0 09'42	
min. Earth dist.	2960 Mar 26 19:16	4° 0 04'30	31.19307 AU	opposition	2968 Apr 11 19:54	22° 0 48'01	17°21'47
direct	2960 Jun 12 06:18	2° 0 46'44		min. Earth dist.	2968 Apr 14 03:28	22° 0 44'09	29.77950 AU
evening set	2960 Sep 24 04:46	5° 0 08'41		direct	2968 Jun 30 13:06	21° 0 23'10	
max. Earth dist.	2960 Sep 24 08:33	5° 0 09'02	33.02221 AU	max. Earth dist.	2968 Oct 14 00:32	23° 0 56'51	31.61971 AU
conjunction	2960 Sep 27 07:47	5° 0 15'31	14°43'15	conjunction	2968 Oct 16 11:29	24° 0 02'36	16°20'34
minimum elong	2960 Sep 27 07:26	5° 0 15'29	14°43'15	minimum elong	2968 Oct 16 11:17	24° 0 02'34	16°20'34
morning rise	2960 Sep 30 09:59	5° 0 22'17		retrograde	2969 Jan 28 02:10	26° 0 37'53	
retrograde	2961 Jan 08 18:01	7° 0 41'05		opposition	2969 Apr 14 13:28	25° 0 15'54	17°29'01
opposition	2961 Mar 26 14:19	6° 0 21'38	15°48'23	min. Earth dist.	2969 Apr 16 18:20	25° 0 12'13	29.63514 AU
min. Earth dist.	2961 Mar 29 06:16	6° 0 17'20	30.99296 AU	direct	2969 Jul 03 08:03	23° 0 50'46	
direct	2961 Jun 14 16:15	4° 0 59'11		max. Earth dist.	2969 Oct 16 21:09	26° 0 25'41	31.47867 AU
max. Earth dist.	2961 Sep 26 23:31	7° 0 23'06	32.82295 AU				
				conjunction	2969 Oct 19 05:47	26° 0 31'13	16°26'14
conjunction	2961 Sep 29 20:39	7° 0 29'27	14°59'49	minimum elong	2969 Oct 19 05:39	26° 0 31'12	16°26'14
minimum elong	2961 Sep 29 20:19	7° 0 29'25	14°59'50	retrograde	2970 Jan 30 20:06	29° 0 07'27	
evening set	2961 Sep 29 12:43	7° 0 28'43		opposition	2970 Apr 17 07:48	27° 0 45'11	17°34'27
morning rise	2961 Sep 30 03:58	7° 0 30'08		min. Earth dist.	2970 Apr 19 11:42	27° 0 41'33	29.49986 AU
retrograde	2962 Jan 11 07:47	9° 0 56'23		direct	2970 Jul 06 01:41	26° 0 19'47	
opposition	2962 Mar 29 02:12	8° 0 36'36	16°05'46	max. Earth dist.	2970 Oct 19 18:30	28° 0 55'52	31.34755 AU
min. Earth dist.	2962 Mar 31 16:06	8° 0 32'24	30.79977 AU				
direct	2962 Jun 17 04:17	7° 0 13'46		conjunction	2970 Oct 22 00:23	29° 0 01'10	16°30'11
max. Earth dist.	2962 Sep 29 13:26	9° 0 39'08	32.63054 AU	minimum elong	2970 Oct 22 00:15	29° 0 01'09	16°30'11
					2970 Nov 16 11:45	0° 0	
conjunction	2962 Oct 02 10:12	9° 0 45'31	15°15'15	retrograde	2971 Feb 02 16:01	1° 0 38'15	
minimum elong	2962 Oct 02 09:51	9° 0 45'29	15°15'14	opposition	2971 Apr 20 02:38	0° 0 15'45	17°38'02
retrograde	2963 Jan 13 22:41	12° 0 13'47		min. Earth dist.	2971 Apr 22 03:12	0° 0 12'20	29.37446 AU
opposition	2963 Mar 31 15:03	10° 0 53'40	16°21'55				
min. Earth dist.	2963 Apr 03 04:42	10° 0 49'28	30.61326 AU	direct	2971 Jul 08 21:24	28° 0 50'07	

	2971 Sep 13 08:39	0°M		direct	2979 Jul 29 17:48	19°M.29'18	
max. Earth dist.	2971 Oct 22 15:45	1°M.27'14	31.22689 AU	max. Earth dist.	2979 Nov 13 09:37	22°M.11'42	30.65970 AU
conjunction	2971 Oct 24 19:31	1°M.32'21	16°32'22	conjunction	2979 Nov 14 14:23	22°M.14'37	15°42'36
minimum elong	2971 Oct 24 19:27	1°M.32'21	16°32'22	minimum elong	2979 Nov 14 14:37	22°M.14'39	15°42'35
retrograde	2972 Feb 05 12:15	4°M.10'14		retrograde	2980 Feb 26 07:48	24°M.55'31	
opposition	2972 Apr 21 22:07	2°M.47'31	17°39'41	opposition	2980 May 13 01:03	23°M.32'15	16°39'59
min. Earth dist.	2972 Apr 23 21:10	2°M.44'13	29.25971 AU	min. Earth dist.	2980 May 14 02:42	23°M.30'27	28.72555 AU
direct	2972 Jul 10 15:59	1°M.21'44		direct	2980 Jul 31 17:31	22°M.06'14	
max. Earth dist.	2972 Oct 24 14:56	3°M.59'57	31.11759 AU	max. Earth dist.	2980 Nov 15 09:45	24°M.48'50	30.63613 AU
conjunction	2972 Oct 26 15:04	4°M.04'44	16°32'44	conjunction	2980 Nov 16 11:05	24°M.51'24	15°28'00
minimum elong	2972 Oct 26 15:00	4°M.04'43	16°32'43	minimum elong	2980 Nov 16 11:19	24°M.51'26	15°28'00
retrograde	2973 Feb 07 08:34	6°M.43'19		retrograde	2981 Feb 28 02:55	27°M.32'11	
opposition	2973 Apr 24 18:11	5°M.20'27	17°39'20	opposition	2981 May 15 23:25	26°M.08'55	16°23'31
min. Earth dist.	2973 Apr 26 13:52	5°M.17'22	29.15597 AU	min. Earth dist.	2981 May 16 23:16	26°M.07'14	28.70478 AU
direct	2973 Jul 13 13:08	3°M.54'32		direct	2981 Aug 03 15:30	24°M.42'57	
max. Earth dist.	2973 Oct 27 12:42	6°M.33'37	31.01969 AU	max. Earth dist.	2981 Nov 18 08:57	27°M.25'32	30.62351 AU
conjunction	2973 Oct 29 10:44	6°M.38'12	16°31'13	conjunction	2981 Nov 19 07:20	27°M.27'48	15°11'36
minimum elong	2973 Oct 29 10:45	6°M.38'12	16°31'13	minimum elong	2981 Nov 19 07:38	27°M.27'50	15°11'36
retrograde	2974 Feb 10 04:52	9°M.17'27			2982 Feb 09 11:25	0°J	
opposition	2974 Apr 27 14:43	7°M.54'27	17°36'57	retrograde	2982 Mar 02 23:24	0°J.08'22	
min. Earth dist.	2974 Apr 29 08:21	7°M.51'31	29.06341 AU		2982 Mar 24 22:17	30°R.M.	
direct	2974 Jul 16 08:04	6°M.28'27		opposition	2982 May 18 21:30	28°M.45'06	16°05'07
max. Earth dist.	2974 Oct 30 12:53	9°M.08'30	30.93314 AU	min. Earth dist.	2982 May 19 17:21	28°M.43'42	28.69479 AU
conjunction	2974 Nov 01 06:59	9°M.12'43	16°27'49	direct	2982 Aug 06 15:01	27°M.19'12	
minimum elong	2974 Nov 01 07:00	9°M.12'43	16°27'49	evening set	2982 Nov 20 06:11	29°M.59'05	
retrograde	2975 Feb 13 01:29	11°M.52'29			2982 Nov 20 15:16	0°J	
opposition	2975 Apr 30 11:33	10°M.29'25	17°32'32	max. Earth dist.	2982 Nov 21 08:12	0°J.01'43	30.62206 AU
min. Earth dist.	2975 May 02 02:32	10°M.26'40	28.98154 AU	conjunction	2982 Nov 22 03:26	0°J.03'39	14°53'27
direct	2975 Jul 19 05:22	9°M.03'23		minimum elong	2982 Nov 22 03:44	0°J.03'41	14°53'27
max. Earth dist.	2975 Nov 02 11:03	11°M.44'03	30.85752 AU	morning rise	2982 Nov 24 01:16	0°J.08'17	
conjunction	2975 Nov 04 03:24	11°M.48'06	16°22'32	retrograde	2983 Mar 05 18:35	2°J.43'54	
minimum elong	2975 Nov 04 03:29	11°M.48'07	16°22'32	opposition	2983 May 21 19:26	1°J.20'39	15°44'49
retrograde	2976 Feb 15 23:06	14°M.28'20		min. Earth dist.	2983 May 22 13:08	1°J.19'25	28.69621 AU
opposition	2976 May 02 08:56	13°M.05'12	17°26'04		2983 Jul 23 00:36	30°R.M.	
min. Earth dist.	2976 May 03 21:17	13°M.02'38	28.91023 AU	direct	2983 Aug 09 13:11	29°M.54'52	
direct	2976 Jul 21 01:23	11°M.39'07			2983 Aug 26 23:26	0°J	
max. Earth dist.	2976 Nov 04 11:35	14°M.20'31	30.79251 AU	evening set	2983 Nov 21 04:41	2°J.29'41	
conjunction	2976 Nov 06 00:03	14°M.24'12	16°15'21	conjunction	2983 Nov 24 23:13	2°J.38'48	14°33'35
minimum elong	2976 Nov 06 00:09	14°M.24'12	16°15'22	minimum elong	2983 Nov 24 23:33	2°J.38'50	14°33'34
	2976 Nov 20 21:47	15°M.		max. Earth dist.	2983 Nov 24 07:47	2°J.37'15	30.63262 AU
retrograde	2977 Feb 17 18:10	17°M.04'46		morning rise	2983 Nov 28 18:15	2°J.47'59	
opposition	2977 May 05 06:47	15°M.41'35	17°17'34	retrograde	2984 Mar 07 14:20	5°J.18'39	
min. Earth dist.	2977 May 06 16:59	15°M.39'10	28.84900 AU	opposition	2984 May 23 17:17	3°J.55'28	15°22'41
	2977 May 30 20:58	15°R.M.		min. Earth dist.	2984 May 24 06:57	3°J.54'30	28.70953 AU
direct	2977 Jul 23 23:22	14°M.15'31		direct	2984 Aug 11 13:34	2°J.29'50	
	2977 Sep 13 19:30	15°M.		evening set	2984 Nov 21 17:17	5°J.01'01	
max. Earth dist.	2977 Nov 07 10:07	16°M.57'18	30.73795 AU	conjunction	2984 Nov 26 18:27	5°J.13'11	14°12'02
conjunction	2977 Nov 08 20:45	17°M.00'48	16°06'18	minimum elong	2984 Nov 26 18:48	5°J.13'13	14°12'02
minimum elong	2977 Nov 08 20:55	17°M.00'49	16°06'18	max. Earth dist.	2984 Nov 26 06:03	5°J.11'56	30.65545 AU
retrograde	2978 Feb 20 15:48	19°M.41'35		morning rise	2984 Dec 01 20:04	5°J.25'24	
opposition	2978 May 08 04:39	18°M.18'22	17°07'03	retrograde	2985 Mar 10 09:34	7°J.52'34	
min. Earth dist.	2978 May 09 11:41	18°M.16'11	28.79791 AU	opposition	2985 May 26 14:57	6°J.29'29	14°58'47
direct	2978 Jul 26 20:45	16°M.52'18		min. Earth dist.	2985 May 27 01:38	6°J.28'44	28.73528 AU
max. Earth dist.	2978 Nov 10 10:40	19°M.34'33	30.69366 AU	direct	2985 Aug 14 10:39	5°J.04'02	
conjunction	2978 Nov 11 17:39	19°M.37'41	15°55'22	evening set	2985 Nov 23 11:09	7°J.32'04	
minimum elong	2978 Nov 11 17:49	19°M.37'42	15°55'22	conjunction	2985 Nov 29 13:29	7°J.46'43	13°48'53
retrograde	2979 Feb 23 11:20	22°M.18'35		minimum elong	2985 Nov 29 13:52	7°J.46'46	13°48'53
opposition	2979 May 11 02:55	20°M.55'21	16°54'31	max. Earth dist.	2985 Nov 29 05:24	7°J.45'55	30.69094 AU
min. Earth dist.	2979 May 12 08:14	20°M.53'16	28.75669 AU	morning rise	2985 Dec 05 16:08	8°J.01'25	
				retrograde	2986 Mar 13 04:28	10°J.25'33	

opposition	2986 May 29 12:06	9°  02'38	14°33'10	max. Earth dist.	2992 Dec 17 00:42	25°  12'49	31.24837 AU
min. Earth dist.	2986 May 29 19:15	9°  02'08	28.77322 AU	morning rise	2992 Dec 27 13:25	25°  37'15	
direct	2986 Aug 17 09:58	7°  37'27		retrograde	2993 Mar 29 23:29	27°  44'45	
evening set	2986 Nov 25 07:33	10°  02'35		opposition	2993 Jun 16 05:05	26°  23'27	10°55'38
				min. Earth dist.	2993 Jun 15 15:12	26°  24'23	29.33935 AU
conjunction	2986 Dec 02 07:58	10°  19'23	13°24'13	direct	2993 Sep 04 07:16	25°  00'28	
minimum elong	2986 Dec 02 08:20	10°  19'26	13°24'13	evening set	2993 Dec 07 13:04	27°  08'29	
max. Earth dist.	2986 Dec 02 02:18	10°  18'49	30.73862 AU				
morning rise	2986 Dec 09 08:41	10°  36'13		conjunction	2993 Dec 19 02:42	27°  35'09	9°57'30
retrograde	2987 Mar 16 00:22	12°  57'37		minimum elong	2993 Dec 19 03:04	27°  35'11	9°57'29
opposition	2987 Jun 01 08:59	11°  34'53	14°05'58	max. Earth dist.	2993 Dec 19 18:07	27°  36'38	31.36583 AU
min. Earth dist.	2987 Jun 01 12:44	11°  34'37	28.82314 AU	morning rise	2993 Dec 30 16:05	28°  01'47	
direct	2987 Aug 20 07:15	10°  09'59			2994 Mar 11 22:44	0° 	
evening set	2987 Nov 27 05:48	12°  32'24		retrograde	2994 Apr 01 12:26	0°  07'15	
					2994 Apr 22 14:27	30°  R 	
conjunction	2987 Dec 05 02:04	12°  51'06	12°58'07	opposition	2994 Jun 18 22:17	28°  46'11	10°20'26
minimum elong	2987 Dec 05 02:27	12°  51'09	12°58'06	min. Earth dist.	2994 Jun 18 06:29	28°  47'14	29.45769 AU
max. Earth dist.	2987 Dec 05 00:44	12°  50'58	30.79800 AU	direct	2994 Sep 07 00:42	27°  42'31	
morning rise	2987 Dec 12 22:24	13°  09'50		evening set	2994 Dec 09 15:41	29°  42'21	
retrograde	2988 Mar 17 16:50	15°  28'39					
opposition	2988 Jun 03 05:36	14°  06'09	13°37'17	conjunction	2994 Dec 21 16:30	29°  56'53	9°24'19
min. Earth dist.	2988 Jun 03 06:41	14°  06'05	28.88422 AU	minimum elong	2994 Dec 21 16:51	29°  56'56	9°24'20
direct	2988 Aug 22 05:12	12°  41'33		max. Earth dist.	2994 Dec 22 10:51	29°  58'39	31.49224 AU
evening set	2988 Nov 28 05:19	15°  01'22			2994 Dec 23 00:52	0° 	
				morning rise	2995 Jan 02 16:56	0°  02'42'25	
conjunction	2988 Dec 06 19:33	15°  21'47	12°30'42	retrograde	2995 Apr 04 01:15	2°  02'53	
minimum elong	2988 Dec 06 19:57	15°  21'49	12°30'43	opposition	2995 Jun 21 14:47	1°  03'07'02	9°44'32
max. Earth dist.	2988 Dec 06 20:19	15°  21'52	30.86841 AU	min. Earth dist.	2995 Jun 20 19:41	1°  03'08'19	29.58503 AU
morning rise	2988 Dec 15 09:59	15°  42'12			2995 Aug 09 08:39	30°  R 	
retrograde	2989 Mar 20 11:12	17°  58'35		direct	2995 Sep 09 19:48	29°  44'42	
opposition	2989 Jun 06 01:42	16°  36'19	13°07'14		2995 Oct 10 12:47	0° 	
min. Earth dist.	2989 Jun 05 23:04	16°  36'30	28.95612 AU	evening set	2995 Dec 11 18:19	1°  03'48'26	
direct	2989 Aug 25 01:37	15°  41'20'3					
evening set	2989 Nov 30 05:37	17°  42'29'22		conjunction	2995 Dec 24 05:19	2°  03'16'45	8°50'31
				minimum elong	2995 Dec 24 05:39	2°  03'16'47	8°50'30
conjunction	2989 Dec 09 12:36	17°  51'18	12°02'04	max. Earth dist.	2995 Dec 25 02:09	2°  03'18'44	31.62766 AU
minimum elong	2989 Dec 09 13:00	17°  51'21	12°02'04	morning rise	2996 Jan 05 16:06	2°  03'45'03	
max. Earth dist.	2989 Dec 09 17:29	17°  51'47	30.94921 AU	retrograde	2996 Apr 05 14:14	4°  03'46'37	
morning rise	2989 Dec 18 19:29	18°  13'15		min. Earth dist.	2996 Jun 22 08:42	3°  03'27'28	29.72198 AU
retrograde	2990 Mar 23 03:11	20°  27'18		opposition	2996 Jun 23 06:42	3°  03'26'01	9°08'00
opposition	2990 Jun 08 21:27	19°  40'51'6	12°35'55	direct	2996 Sep 11 11:23	2°  03'04'00	
min. Earth dist.	2990 Jun 08 16:50	19°  40'53'5	29.03800 AU	evening set	2996 Dec 12 21:04	4°  03'05'43	
direct	2990 Aug 27 21:48	17°  41'20					
evening set	2990 Dec 02 06:53	19°  45'56'13		conjunction	2996 Dec 25 17:35	4°  03'34'43	8°16'10
				minimum elong	2996 Dec 25 17:55	4°  03'34'44	8°16'11
conjunction	2990 Dec 12 05:03	20°  41'19'32	11°32'20	max. Earth dist.	2996 Dec 26 18:05	4°  03'37'02	31.77272 AU
minimum elong	2990 Dec 12 05:26	20°  41'19'34	11°32'20	morning rise	2997 Jan 07 13:36	5°  03'03'41	
max. Earth dist.	2990 Dec 12 11:52	20°  41'20'12	31.03979 AU	retrograde	2997 Apr 08 01:12	7°  03'03'26	
morning rise	2990 Dec 22 03:13	20°  41'42'51		opposition	2997 Jun 25 21:48	5°  03'43'05	8°30'56
retrograde	2991 Mar 25 19:12	22°  41'54'38		min. Earth dist.	2997 Jun 24 21:01	5°  03'44'44	29.86865 AU
opposition	2991 Jun 11 16:25	21°  41'32'52	12°03'29	direct	2997 Sep 14 04:47	4°  03'21'26	
min. Earth dist.	2991 Jun 11 07:59	21°  41'33'26	29.12941 AU	evening set	2997 Dec 14 23:54	6°  03'21'13	
direct	2991 Aug 30 17:56	20°  41'09'15					
evening set	2991 Dec 04 08:35	22°  41'21'47		conjunction	2997 Dec 28 04:53	6°  03'50'48	7°41'23
				minimum elong	2997 Dec 28 05:11	6°  03'50'50	7°41'22
conjunction	2991 Dec 14 21:02	22°  41'46'21	11°01'36	max. Earth dist.	2997 Dec 29 07:18	6°  03'53'17	31.92738 AU
minimum elong	2991 Dec 14 21:25	22°  41'46'23	11°01'35	morning rise	2998 Jan 10 09:40	7°  03'20'21	
max. Earth dist.	2991 Dec 15 07:20	22°  41'47'21	31.13957 AU	retrograde	2998 Apr 10 14:09	9°  03'18'22	
morning rise	2991 Dec 25 09:16	23°  41'10'54		min. Earth dist.	2998 Jun 27 07:50	8°  03'00'10	30.02512 AU
retrograde	2992 Mar 27 08:40	25°  41'20'31		opposition	2998 Jun 28 12:07	7°  03'58'19	7°53'28
opposition	2992 Jun 13 11:10	23°  41'58'58	11°30'01	direct	2998 Sep 16 20:25	6°  03'37'03	
min. Earth dist.	2992 Jun 13 00:56	23°  41'59'40	29.22995 AU	evening set	2998 Dec 17 02:44	8°  03'35'00	
direct	2992 Sep 01 12:40	22°  41'35'41					
evening set	2992 Dec 05 10:42	24°  41'45'56		conjunction	2998 Dec 30 15:40	9°  03'05'05	7°06'13
				minimum elong	2998 Dec 30 15:57	9°  03'05'07	7°06'13
conjunction	2992 Dec 16 12:09	25°  41'11'36	10°29'57	max. Earth dist.	2998 Dec 31 21:55	9°  03'07'54	32.09143 AU
minimum elong	2992 Dec 16 12:32	25°  41'11'38	10°29'58	morning rise	2999 Jan 13 04:05	9°  03'35'08	

retrograde	2999 Apr 12 23:31	11° $\overline{3}$ 31'29		minimum elong	3006 Jan 14 23:22	23° $\overline{3}$ 56'47	2°57'14
min. Earth dist.	2999 Jun 29 19:33	10° $\overline{3}$ 13'44	30.19080 AU	max. Earth dist.	3006 Jan 16 20:26	24° $\overline{3}$ 00'46	33.44276 AU
opposition	2999 Jul 01 01:45	10° $\overline{3}$ 11'45	7°15'40	morning rise	3006 Jan 29 22:23	24° $\overline{3}$ 28'15	
direct	2999 Sep 19 11:58	8° $\overline{3}$ 50'55		retrograde	3006 Apr 28 03:15	26° $\overline{3}$ 15'08	
evening set	2999 Dec 19 05:47	10° $\overline{3}$ 47'07		min. Earth dist.	3006 Jul 15 08:03	25° $\overline{3}$ 00'39	31.55024 AU
				opposition	3006 Jul 17 05:35	24° $\overline{3}$ 57'47	2°49'48
conjunction	3000 Jan 02 01:36	11° $\overline{3}$ 17'36	6°30'47	direct	3006 Oct 05 20:05	23° $\overline{3}$ 39'53	
minimum elong	3000 Jan 02 01:52	11° $\overline{3}$ 17'37	6°30'47	evening set	3007 Jan 02 02:42	25° $\overline{3}$ 25'49	
max. Earth dist.	3000 Jan 03 09:30	11° $\overline{3}$ 20'33	32.26429 AU				
morning rise	3000 Jan 15 21:11	11° $\overline{3}$ 48'04		conjunction	3007 Jan 17 04:19	25° $\overline{3}$ 57'14	2°22'08
retrograde	3000 Apr 15 09:43	13° $\overline{3}$ 42'51		minimum elong	3007 Jan 17 04:25	25° $\overline{3}$ 57'14	2°22'09
min. Earth dist.	3000 Jul 02 04:45	12° $\overline{3}$ 25'40	30.36522 AU	max. Earth dist.	3007 Jan 19 02:13	26° $\overline{3}$ 01'15	33.65681 AU
opposition	3000 Jul 03 14:42	12° $\overline{3}$ 23'28	6°37'38	morning rise	3007 Feb 01 06:02	26° $\overline{3}$ 28'39	
direct	3000 Sep 22 01:45	11° $\overline{3}$ 03'02		retrograde	3007 Apr 30 10:01	28° $\overline{3}$ 14'25	
evening set	3000 Dec 21 08:37	12° $\overline{3}$ 57'34		min. Earth dist.	3007 Jul 17 13:20	27° $\overline{3}$ 00'22	31.76570 AU
				opposition	3007 Jul 19 13:27	26° $\overline{3}$ 57'22	2°12'34
conjunction	3001 Jan 04 10:50	13° $\overline{3}$ 28'23	5°55'11	direct	3007 Oct 08 04:58	25° $\overline{3}$ 39'51	
minimum elong	3001 Jan 04 11:05	13° $\overline{3}$ 28'25	5°55'11	evening set	3008 Jan 04 05:16	27° $\overline{3}$ 24'34	
max. Earth dist.	3001 Jan 05 22:14	13° $\overline{3}$ 31'38	32.44516 AU				
morning rise	3001 Jan 18 12:39	13° $\overline{3}$ 59'11		conjunction	3008 Jan 19 08:49	27° $\overline{3}$ 55'53	1°47'20
retrograde	3001 Apr 17 17:18	15° $\overline{3}$ 52'30		minimum elong	3008 Jan 19 08:53	27° $\overline{3}$ 55'53	1°47'19
min. Earth dist.	3001 Jul 04 15:42	14° $\overline{3}$ 35'45	30.54751 AU	max. Earth dist.	3008 Jan 21 09:38	28° $\overline{3}$ 00'07	33.87552 AU
opposition	3001 Jul 06 03:05	14° $\overline{3}$ 33'27	5°59'29	morning rise	3008 Feb 03 12:14	28° $\overline{3}$ 27'12	
direct	3001 Sep 24 15:10	13° $\overline{3}$ 13'28			3008 Apr 03 12:23	0° \approx	
evening set	3001 Dec 23 11:44	15° $\overline{3}$ 06'23		retrograde	3008 May 01 13:39	0° \approx 11'55	
					3008 May 30 04:16	30° \overline{R} $\overline{3}$	
conjunction	3002 Jan 06 19:27	15° $\overline{3}$ 37'29	5°19'29	min. Earth dist.	3008 Jul 18 19:41	28° $\overline{3}$ 58'13	31.98617 AU
minimum elong	3002 Jan 06 19:40	15° $\overline{3}$ 37'30	5°19'28	opposition	3008 Jul 20 20:45	28° $\overline{3}$ 55'10	1°35'40
max. Earth dist.	3002 Jan 08 08:24	15° $\overline{3}$ 40'51	32.63332 AU	direct	3008 Oct 09 13:58	27° $\overline{3}$ 38'02	
morning rise	3002 Jan 21 02:55	16° $\overline{3}$ 08'32		evening set	3009 Jan 05 07:42	29° $\overline{3}$ 21'35	
retrograde	3002 Apr 20 01:44	18° $\overline{3}$ 00'26					
min. Earth dist.	3002 Jul 06 23:52	16° $\overline{3}$ 44'14	30.73680 AU	conjunction	3009 Jan 20 12:23	29° $\overline{3}$ 52'45	1°12'51
opposition	3002 Jul 08 14:24	16° $\overline{3}$ 41'45	5°21'19	minimum elong	3009 Jan 20 12:26	29° $\overline{3}$ 52'46	1°12'51
direct	3002 Sep 27 03:35	15° $\overline{3}$ 22'12		max. Earth dist.	3009 Jan 22 14:14	29° $\overline{3}$ 57'03	34.09926 AU
evening set	3002 Dec 25 14:51	17° $\overline{3}$ 13'35			3009 Jan 24 00:27	0° \approx	
				morning rise	3009 Feb 04 17:14	0° \approx 23'56	
conjunction	3003 Jan 09 03:26	17° $\overline{3}$ 44'52	4°43'46	retrograde	3009 May 03 16:29	2° \approx 07'39	
minimum elong	3003 Jan 09 03:38	17° $\overline{3}$ 44'53	4°43'47	min. Earth dist.	3009 Jul 20 23:01	0° \approx 54'27	32.21203 AU
max. Earth dist.	3003 Jan 10 18:47	17° $\overline{3}$ 48'26	32.82776 AU	opposition	3009 Jul 23 03:10	0° \approx 51'13	0°59'11
morning rise	3003 Jan 23 15:49	18° $\overline{3}$ 16'08			3009 Aug 29 21:43	30° \overline{R} $\overline{3}$	
retrograde	3003 Apr 22 08:27	20° $\overline{3}$ 06'41		direct	3009 Oct 11 21:48	29° $\overline{3}$ 34'28	
min. Earth dist.	3003 Jul 09 09:30	18° $\overline{3}$ 50'54	30.93239 AU		3009 Nov 22 08:03	0° \approx	
opposition	3003 Jul 11 01:22	18° $\overline{3}$ 48'21	4°43'11	evening set	3010 Jan 07 10:04	1° \approx 16'56	
direct	3003 Sep 29 14:06	17° $\overline{3}$ 29'14					
evening set	3003 Dec 27 17:51	19° $\overline{3}$ 19'10		conjunction	3010 Jan 22 15:30	1° \approx 47'56	0°38'44
				minimum elong	3010 Jan 22 15:31	1° \approx 47'56	0°38'44
conjunction	3004 Jan 11 10:41	19° $\overline{3}$ 50'34	4°08'07	max. Earth dist.	3010 Jan 24 19:56	1° \approx 52'25	34.32814 AU
minimum elong	3004 Jan 11 10:51	19° $\overline{3}$ 50'35	4°08'06	morning rise	3010 Feb 06 21:03	2° \approx 18'56	
max. Earth dist.	3004 Jan 13 04:02	19° $\overline{3}$ 54'17	33.02793 AU	retrograde	3010 May 05 17:17	4° \approx 01'42	
morning rise	3004 Jan 26 03:13	20° $\overline{3}$ 21'57		min. Earth dist.	3010 Jul 23 03:41	2° \approx 48'53	32.44333 AU
retrograde	3004 Apr 23 14:57	22° $\overline{3}$ 11'14		opposition	3010 Jul 25 08:51	2° \approx 45'37	0°23'09
min. Earth dist.	3004 Jul 10 17:15	20° $\overline{3}$ 55'56	31.13342 AU	direct	3010 Oct 14 04:55	1° \approx 29'15	
opposition	3004 Jul 12 11:31	20° $\overline{3}$ 53'15	4°05'11	evening set	3011 Jan 09 12:16	3° \approx 10'43	
direct	3004 Oct 01 01:15	19° $\overline{3}$ 34'32					
evening set	3004 Dec 28 20:59	21° $\overline{3}$ 23'05		conjunction	3011 Jan 24 17:56	3° \approx 41'29	0°05'06
				minimum elong	3011 Jan 24 17:57	3° \approx 41'29	0°05'07
conjunction	3005 Jan 12 17:16	21° $\overline{3}$ 54'33	3°32'35	behind sun begin	3011 Jan 24 11:46	3° \approx 40'59	
minimum elong	3005 Jan 12 17:25	21° $\overline{3}$ 54'34	3°32'36	behind sun end	3011 Jan 25 00:08	3° \approx 41'58	
max. Earth dist.	3005 Jan 14 12:02	21° $\overline{3}$ 58'21	33.23300 AU	max. Earth dist.	3011 Jan 26 23:46	3° \approx 46'03	34.56229 AU
morning rise	3005 Jan 27 13:32	22° $\overline{3}$ 26'00		morning rise	3011 Feb 08 23:45	4° \approx 12'15	
retrograde	3005 Apr 25 22:21	24° $\overline{3}$ 14'04		desc. node	3011 Mar 21 00:30	5° \approx 20'56	
min. Earth dist.	3005 Jul 13 00:45	22° $\overline{3}$ 59'11	31.33957 AU	retrograde	3011 May 07 18:28	5° \approx 54'10	
opposition	3005 Jul 14 20:56	22° $\overline{3}$ 56'24	3°27'22	min. Earth dist.	3011 Jul 25 06:12	4° \approx 41'49	32.67977 AU
direct	3005 Oct 03 09:11	21° $\overline{3}$ 38'06		opposition	3011 Jul 27 13:52	4° \approx 38'25	-0°12'23
evening set	3005 Dec 30 23:49	23° $\overline{3}$ 25'18		direct	3011 Oct 16 11:00	3° \approx 22'28	
				evening set	3012 Jan 11 14:18	5° \approx 02'59	
conjunction	3006 Jan 14 23:15	23° $\overline{3}$ 56'47	2°57'15				

conjunction	3012 Jan 26 19:36	5°33'29 -0°28'13	retrograde	3018 May 19 19:47	18°21'26	
minimum elong	3012 Jan 26 19:35	5°33'29 0°28'14	min. Earth dist.	3018 Aug 06 16:13	17°11'47	34.42392 AU
max. Earth dist.	3012 Jan 29 03:07	5°38'09 34.80108 AU	opposition	3018 Aug 09 08:14	17°08'01	-4°04'53
morning rise	3012 Feb 11 01:17	6°04'00	direct	3018 Oct 29 08:10	15°54'49	
retrograde	3012 May 08 20:28	7°45'08	evening set	3019 Jan 24 01:32	17°30'06	
min. Earth dist.	3012 Jul 26 09:15	6°33'12 32.92100 AU				
opposition	3012 Jul 28 18:25	6°29'44 -0°47'24	conjunction	3019 Feb 07 17:02	17°57'56	-4°05'58
direct	3012 Oct 17 14:29	5°14'13	minimum elong	3019 Feb 07 16:54	17°57'55	4°05'58
evening set	3013 Jan 12 16:09	6°53'49	max. Earth dist.	3019 Feb 10 07:58	18°02'58	36.54667 AU
			morning rise	3019 Feb 22 09:19	18°25'49	
conjunction	3013 Jan 27 20:53	7°24'01 -1°00'58	retrograde	3019 May 21 17:06	20°02'36	
minimum elong	3013 Jan 27 20:50	7°24'01 1°00'57	min. Earth dist.	3019 Aug 08 16:09	18°53'14	34.67802 AU
max. Earth dist.	3013 Jan 30 06:31	7°28'51 35.04414 AU	opposition	3019 Aug 11 08:39	18°49'27	-4°35'32
morning rise	3013 Feb 12 01:46	7°54'15	direct	3019 Oct 31 08:29	17°36'36	
retrograde	3013 May 10 21:34	9°34'39	evening set	3020 Jan 26 02:17	19°11'16	
min. Earth dist.	3013 Jul 28 11:36	8°23'07 33.16610 AU				
opposition	3013 Jul 30 22:06	8°19'36 -1°21'51	conjunction	3020 Feb 09 14:29	19°38'38	-4°34'45
direct	3013 Oct 19 18:24	7°04'29	minimum elong	3020 Feb 09 14:20	19°38'37	4°34'45
evening set	3014 Jan 14 18:03	8°43'17	max. Earth dist.	3020 Feb 12 06:49	19°43'44	36.79976 AU
			morning rise	3020 Feb 24 03:12	20°06'02	
conjunction	3014 Jan 29 21:27	9°13'09 -1°33'12	retrograde	3020 May 22 13:40	21°42'20	
minimum elong	3014 Jan 29 21:24	9°13'09 1°33'13	min. Earth dist.	3020 Aug 09 15:11	20°33'15	34.93284 AU
max. Earth dist.	3014 Feb 01 07:37	9°17'58 35.29050 AU	opposition	3020 Aug 12 08:22	20°29'27	-5°05'31
morning rise	3014 Feb 14 01:25	9°43'03	direct	3020 Nov 01 08:46	19°16'55	
retrograde	3014 May 13 00:33	11°22'45	evening set	3021 Jan 27 03:06	20°51'02	
min. Earth dist.	3014 Jul 30 12:49	10°11'40 33.41444 AU				
opposition	3014 Aug 02 01:16	10°08'03 -1°55'42	conjunction	3021 Feb 10 11:20	21°17'53	-5°02'53
direct	3014 Oct 21 19:29	8°53'22	minimum elong	3021 Feb 10 11:11	21°17'53	5°02'53
evening set	3015 Jan 16 19:41	10°31'22	max. Earth dist.	3021 Feb 13 03:49	21°22'58	37.05371 AU
			morning rise	3021 Feb 24 20:28	21°44'49	
conjunction	3015 Jan 31 21:36	11°00'53 -2°04'54	retrograde	3021 May 24 11:57	23°20'40	
minimum elong	3015 Jan 31 21:32	11°00'53 2°04'54	min. Earth dist.	3021 Aug 11 12:34	22°11'55	35.18906 AU
max. Earth dist.	3015 Feb 03 09:56	11°05'51 35.53941 AU	opposition	3021 Aug 14 07:22	22°08'03	-5°34'49
morning rise	3015 Feb 15 23:49	11°30'26	direct	3021 Nov 03 06:29	20°55'50	
retrograde	3015 May 14 24:00	13°09'29	evening set	3022 Jan 29 03:32	22°29'27	
min. Earth dist.	3015 Aug 01 15:18	11°58'45 33.66502 AU				
opposition	3015 Aug 04 03:55	11°55'08 -2°28'57	conjunction	3022 Feb 12 07:50	22°55'48	-5°30'24
direct	3015 Oct 23 23:16	10°40'51	minimum elong	3022 Feb 12 07:40	22°55'47	5°30'24
evening set	3016 Jan 18 21:24	12°18'07	max. Earth dist.	3022 Feb 15 02:18	23°00'59	37.30906 AU
			morning rise	3022 Feb 26 12:45	23°22'13	
conjunction	3016 Feb 02 21:11	12°47'15 -2°36'03	retrograde	3022 May 26 08:01	24°57'41	
minimum elong	3016 Feb 02 21:06	12°47'15 2°36'03	min. Earth dist.	3022 Aug 13 11:05	23°49'11	35.44677 AU
max. Earth dist.	3016 Feb 05 09:31	12°52'10 35.79012 AU	opposition	3022 Aug 16 05:56	23°45'20	-6°03'24
morning rise	3016 Feb 17 21:34	13°16'25	direct	3022 Nov 05 06:06	22°33'27	
retrograde	3016 May 16 00:32	14°54'51	evening set	3023 Jan 31 03:53	24°06'37	
min. Earth dist.	3016 Aug 02 15:18	13°44'32 33.91726 AU				
opposition	3016 Aug 05 05:58	13°40'50 -3°01'35	conjunction	3023 Feb 14 03:38	24°32'27	-5°57'16
direct	3016 Oct 25 02:40	12°26'55	minimum elong	3023 Feb 14 03:28	24°32'26	5°57'16
evening set	3017 Jan 19 22:51	14°03'30	max. Earth dist.	3023 Feb 16 22:03	24°37'36	37.56595 AU
			morning rise	3023 Feb 28 04:13	24°58'20	
conjunction	3017 Feb 03 20:18	14°32'14 -3°06'37	retrograde	3023 May 28 04:51	26°33'27	
minimum elong	3017 Feb 03 20:12	14°32'13 3°06'36	min. Earth dist.	3023 Aug 15 07:01	25°25'21	35.70612 AU
max. Earth dist.	3017 Feb 06 10:22	14°37'15 36.04186 AU	opposition	3023 Aug 18 03:55	25°21'24	-6°31'17
morning rise	3017 Feb 18 18:19	15°01'00	direct	3023 Nov 07 04:26	24°09'51	
	3017 Feb 18 05:42	15°	evening set	3024 Feb 02 04:01	25°42'37	
retrograde	3017 May 17 23:06	16°38'51				
min. Earth dist.	3017 Aug 04 17:00	15°28'49 34.17040 AU	conjunction	3024 Feb 15 23:07	26°07'55	-6°23'29
opposition	3017 Aug 07 07:33	15°25'08 -3°33'33	minimum elong	3024 Feb 15 22:56	26°07'55	6°23'29
	3017 Aug 25 09:54	15°	max. Earth dist.	3024 Feb 18 19:11	26°13'10	37.82427 AU
direct	3017 Oct 27 05:33	14°11'36	morning rise	3024 Feb 29 19:03	26°33'17	
	3017 Dec 25 13:23	15°	retrograde	3024 May 28 23:30	28°08'06	
evening set	3018 Jan 22 00:16	15°47'31	min. Earth dist.	3024 Aug 16 04:42	27°00'17	35.96691 AU
			opposition	3024 Aug 19 01:33	26°56'21	-6°58'28
conjunction	3018 Feb 05 19:00	16°15'48 -3°36'36	direct	3024 Nov 08 02:34	25°45'10	
minimum elong	3018 Feb 05 18:52	16°15'47 3°36'36	evening set	3025 Feb 03 03:56	27°17'33	
max. Earth dist.	3018 Feb 08 09:16	16°20'49 36.29417 AU				
morning rise	3018 Feb 20 14:15	16°44'08	conjunction	3025 Feb 16 18:09	27°42'19	-6°49'03

minimum elong	3025 Feb 16 17:58	27° 42 '18	6°49'03	min. Earth dist.	3031 Aug 27 20:30	7° 37 '01	37.78140 AU
max. Earth dist.	3025 Feb 19 14:48	27° 47 '34	38.08379 AU	opposition	3031 Aug 30 19:25	7° 33 '06	-9°49'24
morning rise	3025 Mar 02 09:04	28° 07 '08		direct	3031 Nov 19 21:37	6° 24 '11	
retrograde	3025 May 30 16:37	29° 41 '41		evening set	3032 Feb 16 00:22	7° 54 '49	
min. Earth dist.	3025 Aug 18 00:19	28° 34 '14	36.22849 AU				
opposition	3025 Aug 20 22:31	28° 30 '15	-7°24'56	conjunction	3032 Feb 27 20:45	8° 15 '28	-9°30'17
direct	3025 Nov 10 01:23	27° 19 '25		minimum elong	3032 Feb 27 20:32	8° 15 '27	9°30'16
evening set	3026 Feb 05 03:53	28° 51 '29		max. Earth dist.	3032 Mar 01 19:26	8° 20 '38	39.87963 AU
				morning rise	3032 Mar 10 17:47	8° 36 '10	
conjunction	3026 Feb 18 12:43	29° 15 '41	-7°13'59	retrograde	3032 Jun 09 18:18	10° 09 '31	
minimum elong	3026 Feb 18 12:31	29° 15 '40	7°13'59	min. Earth dist.	3032 Aug 28 13:56	9° 03 '54	38.03374 AU
max. Earth dist.	3026 Feb 21 09:43	29° 20 '56	38.34366 AU	opposition	3032 Aug 31 13:17	8° 59 '59	-10°11'10
morning rise	3026 Mar 03 22:33	29° 39 '57		direct	3032 Nov 20 18:17	7° 51 '18	
	3026 Mar 15 10:49	0° 00 '		evening set	3033 Feb 16 23:13	9° 21 '45	
retrograde	3026 Jun 01 12:05	1° 14 '16					
min. Earth dist.	3026 Aug 19 20:25	0° 07 '08	36.49041 AU	conjunction	3033 Feb 28 12:35	9° 41 '46	-9°50'51
opposition	3026 Aug 22 19:02	0° 03 '09	-7°50'43	minimum elong	3033 Feb 28 12:22	9° 41 '46	9°50'52
	3026 Aug 25 02:57	30° 00 '		max. Earth dist.	3033 Mar 03 10:54	9° 46 '53	40.12914 AU
direct	3026 Nov 11 20:53	28° 52 '41		morning rise	3033 Mar 12 02:51	10° 01 '52	
	3027 Jan 23 21:52	0° 00 '		retrograde	3033 Jun 11 11:25	11° 35 '06	
evening set	3027 Feb 07 03:34	0° 24 '27		min. Earth dist.	3033 Aug 30 06:56	10° 29 '42	38.28495 AU
				opposition	3033 Sep 02 06:49	10° 25 '46	-10°32'16
conjunction	3027 Feb 20 07:04	0° 48 '06	-7°38'15	direct	3033 Nov 22 10:48	9° 17 '20	
minimum elong	3027 Feb 20 06:52	0° 48 '05	7°38'15	evening set	3034 Feb 18 21:51	10° 47 '38	
max. Earth dist.	3027 Feb 23 05:15	0° 53 '24	38.60350 AU				
morning rise	3027 Mar 05 11:14	1° 11 '48		conjunction	3034 Mar 02 04:12	11° 07 '01	-10°10'48
retrograde	3027 Jun 03 06:07	2° 45 '55		minimum elong	3034 Mar 02 04:00	11° 07 '00	10°10'47
min. Earth dist.	3027 Aug 21 16:38	1° 39 '04	36.75182 AU	max. Earth dist.	3034 Mar 05 03:46	11° 12 '11	40.37770 AU
opposition	3027 Aug 24 15:11	1° 35 '06	-8°15'47	morning rise	3034 Mar 13 11:11	11° 26 '29	
direct	3027 Nov 13 17:01	0° 24 '59		retrograde	3034 Jun 13 02:20	12° 59 '38	
evening set	3028 Feb 09 03:11	1° 56 '29		min. Earth dist.	3034 Sep 01 00:21	11° 54 '25	38.53530 AU
				opposition	3034 Sep 03 23:47	11° 50 '31	-10°52'42
conjunction	3028 Feb 22 00:46	2° 19 '33	-8°01'54	direct	3034 Nov 24 04:42	10° 42 '20	
minimum elong	3028 Feb 22 00:34	2° 19 '32	8°01'53	evening set	3035 Feb 20 20:28	12° 12 '30	
max. Earth dist.	3028 Feb 24 22:22	2° 24 '46	38.86246 AU				
morning rise	3028 Mar 05 23:20	2° 42 '40		conjunction	3035 Mar 03 19:20	12° 31 '16	-10°30'08
retrograde	3028 Jun 04 02:32	4° 16 '37		minimum elong	3035 Mar 03 19:08	12° 31 '15	10°30'08
min. Earth dist.	3028 Aug 22 11:19	3° 10 '06	37.01222 AU	max. Earth dist.	3035 Mar 06 18:17	12° 36 '21	40.62573 AU
opposition	3028 Aug 25 10:56	3° 06 '06	-8°40'11	morning rise	3035 Mar 14 18:59	12° 50 '05	
direct	3028 Nov 14 10:54	1° 56 '19		retrograde	3035 Jun 14 19:26	14° 23 '11	
evening set	3029 Feb 10 02:42	3° 27 '34		min. Earth dist.	3035 Sep 02 15:39	13° 18 '15	38.78528 AU
				opposition	3035 Sep 05 16:28	13° 14 '18	-11°12'30
conjunction	3029 Feb 22 18:26	3° 50 '03	-8°24'55	direct	3035 Nov 25 19:25	12° 06 '22	
minimum elong	3029 Feb 22 18:14	3° 50 '02	8°24'55	evening set	3036 Feb 22 18:42	13° 36 '27	
max. Earth dist.	3029 Feb 25 17:15	3° 55 '19	39.11992 AU				
morning rise	3029 Mar 07 10:56	4° 12 '36		conjunction	3036 Mar 04 10:06	13° 54 '35	-10°48'51
retrograde	3029 Jun 05 20:31	5° 46 '22		minimum elong	3036 Mar 04 09:53	13° 54 '34	10°48'51
min. Earth dist.	3029 Aug 24 07:30	4° 40 '03	37.27081 AU	max. Earth dist.	3036 Mar 07 10:19	13° 59 '43	40.87331 AU
opposition	3029 Aug 27 06:08	4° 36 '08	-9°03'55	morning rise	3036 Mar 15 02:11	14° 12 '45	
direct	3029 Nov 16 06:25	3° 26 '39		retrograde	3036 Jun 15 10:42	15° 45 '49	
evening set	3030 Feb 12 02:11	4° 57 '41		min. Earth dist.	3036 Sep 03 08:41	14° 41 '04	39.03478 AU
				opposition	3036 Sep 06 08:53	14° 37 '10	-11°31'38
conjunction	3030 Feb 24 11:38	5° 19 '34	-8°47'19	direct	3036 Nov 26 11:34	13° 29 '32	
minimum elong	3030 Feb 24 11:25	5° 19 '33	8°47'18	evening set	3037 Feb 23 17:03	14° 59 '34	
max. Earth dist.	3030 Feb 27 09:33	5° 24 '45	39.37539 AU				
morning rise	3030 Mar 08 21:53	5° 41 '31		conjunction	3037 Mar 06 00:41	15° 17 '02	-11°06'58
retrograde	3030 Jun 07 14:15	7° 15 '07		minimum elong	3037 Mar 06 00:28	15° 17 '01	11°06'59
min. Earth dist.	3030 Aug 26 01:14	6° 09 '06	37.52719 AU	max. Earth dist.	3037 Mar 09 00:48	15° 22 '08	41.12039 AU
opposition	3030 Aug 29 00:53	6° 05 '09	-9°26'59	morning rise	3037 Mar 16 08:53	15° 34 '32	
direct	3030 Nov 18 01:18	4° 55 '57		retrograde	3037 Jun 16 23:35	17° 07 '37	
evening set	3031 Feb 14 01:21	6° 26 '47		min. Earth dist.	3037 Sep 04 23:30	16° 03 '10	39.28345 AU
				opposition	3037 Sep 08 00:35	15° 59 '14	-11°50'07
conjunction	3031 Feb 26 04:19	6° 48 '03	-9°09'06	direct	3037 Nov 28 04:30	14° 51 '51	
minimum elong	3031 Feb 26 04:07	6° 48 '02	9°09'07	evening set	3038 Feb 25 15:16	16° 21 '53	
max. Earth dist.	3031 Mar 01 02:40	6° 53 '13	39.62847 AU				
morning rise	3031 Mar 10 08:12	7° 09 '23		conjunction	3038 Mar 07 14:51	16° 38 '41	-11°24'30
retrograde	3031 Jun 09 04:46	8° 42 '51		minimum elong	3038 Mar 07 14:39	16° 38 '40	11°24'29

max. Earth dist.	3038 Mar 10 14:53	16° ✕ 43'46	41.36639 AU	conjunction	3045 Mar 16 11:09	25° ✕ 50'41	-13°11'47
morning rise	3038 Mar 17 15:10	16° ✕ 55'32		minimum elong	3045 Mar 16 10:57	25° ✕ 50'40	13°11'47
retrograde	3038 Jun 18 13:16	18° ✕ 28'40		max. Earth dist.	3045 Mar 19 09:05	25° ✕ 55'26	43.01759 AU
min. Earth dist.	3038 Sep 06 15:24	17° ✕ 24'26	39.53099 AU	morning rise	3045 Mar 23 19:53	26° ✕ 02'39	
opposition	3038 Sep 09 16:15	17° ✕ 20'31	-12°08'00	retrograde	3045 Jun 27 09:47	27° ✕ 36'40	
direct	3038 Nov 29 20:51	16° ✕ 13'26		min. Earth dist.	3045 Sep 15 21:45	26° ✕ 33'47	41.18583 AU
evening set	3039 Feb 27 13:17	17° ✕ 43'28		opposition	3045 Sep 18 20:25	26° ✕ 30'05	-13°57'01
				direct	3045 Dec 09 02:19	25° ✕ 24'42	
conjunction	3039 Mar 09 04:45	17° ✕ 59'37	-11°41'27	evening set	3046 Mar 11 01:10	26° ✕ 55'27	
minimum elong	3039 Mar 09 04:33	17° ✕ 59'36	11°41'27				
max. Earth dist.	3039 Mar 12 05:40	18° ✕ 04'43	41.61099 AU	conjunction	3046 Mar 17 23:17	27° ✕ 06'38	-13°25'02
morning rise	3039 Mar 18 20:40	18° ✕ 15'48		minimum elong	3046 Mar 17 23:08	27° ✕ 06'37	13°25'02
retrograde	3039 Jun 20 02:36	19° ✕ 49'01		max. Earth dist.	3046 Mar 20 22:12	27° ✕ 11'25	43.24127 AU
min. Earth dist.	3039 Sep 08 07:02	18° ✕ 44'59	39.77662 AU	morning rise	3046 Mar 24 21:36	27° ✕ 17'50	
opposition	3039 Sep 11 07:33	18° ✕ 41'07	-12°25'16	retrograde	3046 Jun 28 22:58	28° ✕ 52'05	
direct	3039 Dec 01 13:09	17° ✕ 34'19		min. Earth dist.	3046 Sep 17 11:46	27° ✕ 49'18	41.41031 AU
evening set	3040 Feb 29 11:33	19° ✕ 04'22		opposition	3046 Sep 20 09:27	27° ✕ 45'41	-14°10'24
				direct	3046 Dec 10 14:37	26° ✕ 40'31	
conjunction	3040 Mar 09 18:24	19° ✕ 19'51	-11°57'49	evening set	3047 Mar 12 23:41	28° ✕ 11'28	
minimum elong	3040 Mar 09 18:13	19° ✕ 19'50	11°57'49				
max. Earth dist.	3040 Mar 12 18:14	19° ✕ 24'51	41.85347 AU	conjunction	3047 Mar 19 10:54	28° ✕ 21'52	-13°37'46
morning rise	3040 Mar 19 01:54	19° ✕ 35'22		minimum elong	3047 Mar 19 10:43	28° ✕ 21'52	13°37'45
retrograde	3040 Jun 20 18:52	21° ✕ 08'40		max. Earth dist.	3047 Mar 22 08:50	28° ✕ 26'34	43.46301 AU
min. Earth dist.	3040 Sep 08 21:27	20° ✕ 04'55	40.01996 AU	morning rise	3047 Mar 25 22:16	28° ✕ 32'17	
opposition	3040 Sep 11 22:29	20° ✕ 01'02	-12°41'56		3047 Jun 06 11:24	0° ∇	
direct	3040 Dec 02 01:47	18° ✕ 54'30		retrograde	3047 Jun 30 12:26	0° ∇ 06'48	
evening set	3041 Mar 02 09:39	20° ✕ 24'38			3047 Jul 24 15:27	30° ✕	
				min. Earth dist.	3047 Sep 18 23:28	29° ✕ 04'15	41.63299 AU
conjunction	3041 Mar 11 07:58	20° ✕ 39'25	-12°13'39	opposition	3047 Sep 21 22:10	29° ✕ 00'36	-14°23'14
minimum elong	3041 Mar 11 07:45	20° ✕ 39'25	12°13'40	direct	3047 Dec 12 01:11	27° ✕ 55'38	
max. Earth dist.	3041 Mar 14 08:27	20° ✕ 44'26	42.09319 AU	evening set	3048 Mar 13 22:32	29° ✕ 26'52	
morning rise	3041 Mar 20 06:43	20° ✕ 54'16					
retrograde	3041 Jun 22 08:44	22° ✕ 27'41		conjunction	3048 Mar 19 22:26	29° ✕ 36'28	-13°49'59
min. Earth dist.	3041 Sep 10 13:39	21° ✕ 24'04	40.26011 AU	minimum elong	3048 Mar 19 22:17	29° ✕ 36'27	13°49'59
opposition	3041 Sep 13 13:11	21° ✕ 20'17	-12°58'02	max. Earth dist.	3048 Mar 22 20:51	29° ✕ 41'09	43.68299 AU
direct	3041 Dec 03 16:16	20° ✕ 14'01		morning rise	3048 Mar 25 22:30	29° ✕ 46'04	
evening set	3042 Mar 04 08:00	21° ✕ 44'13			3048 Apr 03 17:52	0° ∇	
				retrograde	3048 Jun 30 22:45	1° ∇ 20'52	
conjunction	3042 Mar 12 21:14	21° ✕ 58'20	-12°28'58	min. Earth dist.	3048 Sep 19 13:05	0° ∇ 18'28	41.85396 AU
minimum elong	3042 Mar 12 21:03	21° ✕ 58'19	12°28'57	opposition	3048 Sep 22 10:40	0° ∇ 14'52	-14°35'33
max. Earth dist.	3042 Mar 15 20:30	22° ✕ 03'14	42.32957 AU		3048 Oct 04 12:14	30° ✕	
morning rise	3042 Mar 21 10:52	22° ✕ 12'28		direct	3048 Dec 12 14:17	29° ✕ 10'08	
retrograde	3042 Jun 23 21:45	23° ✕ 46'00			3049 Feb 16 07:21	0° ∇	
min. Earth dist.	3042 Sep 12 03:23	22° ✕ 42'38	40.49664 AU	evening set	3049 Mar 15 21:55	0° ∇ 41'41	
opposition	3042 Sep 15 03:24	22° ✕ 38'50	-13°13'36				
direct	3042 Dec 05 06:34	21° ✕ 32'48		conjunction	3049 Mar 21 09:49	0° ∇ 50'27	-14°01'41
evening set	3043 Mar 06 06:12	23° ✕ 03'07		minimum elong	3049 Mar 21 09:39	0° ∇ 50'26	14°01'41
				max. Earth dist.	3049 Mar 24 08:05	0° ∇ 55'07	43.90134 AU
conjunction	3043 Mar 14 10:11	23° ✕ 16'32	-12°43'45	morning rise	3049 Mar 26 21:42	0° ∇ 59'12	
minimum elong	3043 Mar 14 10:00	23° ✕ 16'31	12°43'45	retrograde	3049 Jul 02 07:16	2° ∇ 34'21	
max. Earth dist.	3043 Mar 17 09:16	23° ✕ 21'24	42.56224 AU	min. Earth dist.	3049 Sep 21 00:50	1° ∇ 32'10	42.07292 AU
morning rise	3043 Mar 22 14:37	23° ✕ 29'57		opposition	3049 Sep 23 22:46	1° ∇ 28'34	-14°47'19
retrograde	3043 Jun 25 09:55	25° ✕ 03'38		direct	3049 Dec 14 04:19	0° ∇ 24'03	
min. Earth dist.	3043 Sep 13 18:42	24° ✕ 00'24	40.72957 AU	evening set	3050 Mar 17 21:48	1° ∇ 55'59	
opposition	3043 Sep 16 17:34	23° ✕ 56'40	-13°28'36				
direct	3043 Dec 06 21:17	22° ✕ 50'53		conjunction	3050 Mar 22 20:47	2° ∇ 03'52	-14°12'54
evening set	3044 Mar 07 04:26	24° ✕ 21'19		minimum elong	3050 Mar 22 20:38	2° ∇ 03'51	14°12'54
				max. Earth dist.	3050 Mar 25 18:20	2° ∇ 08'28	44.11753 AU
conjunction	3044 Mar 14 22:51	24° ✕ 33'59	-12°58'01	morning rise	3050 Mar 27 19:50	2° ∇ 11'44	
minimum elong	3044 Mar 14 22:41	24° ✕ 33'58	12°58'01	retrograde	3050 Jul 03 18:44	3° ∇ 47'19	
max. Earth dist.	3044 Mar 17 21:56	24° ✕ 38'50	42.79149 AU	min. Earth dist.	3050 Sep 22 13:07	2° ∇ 45'18	42.28971 AU
morning rise	3044 Mar 22 17:32	24° ✕ 46'41		opposition	3050 Sep 25 10:43	2° ∇ 41'43	-14°58'35
retrograde	3044 Jun 25 20:14	26° ✕ 20'32		direct	3050 Dec 15 16:31	1° ∇ 37'27	
min. Earth dist.	3044 Sep 14 08:30	25° ✕ 17'28	40.95904 AU	evening set	3051 Mar 19 22:43	3° ∇ 09'51	
opposition	3044 Sep 17 07:12	25° ✕ 13'45	-13°43'05				
direct	3044 Dec 07 13:26	24° ✕ 08'10		conjunction	3051 Mar 24 07:45	3° ∇ 16'45	-14°23'38
evening set	3045 Mar 09 02:45	25° ✕ 38'45		minimum elong	3051 Mar 24 07:37	3° ∇ 16'45	14°23'38

max. Earth dist.	3051 Mar 27 05:56	3°♈21'23	44.33141 AU	direct	3058 Dec 25 08:17	11°♈04'56	
morning rise	3051 Mar 28 16:44	3°♈23'40					
retrograde	3051 Jul 05 05:06	4°♈59'46		conjunction	3059 Apr 02 16:17	12°♈40'33	-15°33'59
min. Earth dist.	3051 Sep 24 01:46	3°♈57'54	42.50372 AU	minimum elong	3059 Apr 02 16:12	12°♈40'32	15°33'59
opposition	3051 Sep 26 22:27	3°♈54'23	-15°09'22	max. Earth dist.	3059 Apr 05 08:41	12°♈44'38	45.90377 AU
direct	3051 Dec 17 05:37	2°♈50'20		retrograde	3059 Jul 14 15:15	14°♈19'59	
evening set	3052 Mar 21 01:07	4°♈23'19		min. Earth dist.	3059 Oct 03 19:52	13°♈19'06	44.07191 AU
				opposition	3059 Oct 06 11:37	13°♈15'55	-16°19'34
conjunction	3052 Mar 24 18:22	4°♈29'10	-14°33'54	direct	3059 Dec 26 16:48	12°♈13'14	
minimum elong	3052 Mar 24 18:14	4°♈29'09	14°33'55				
morning rise	3052 Mar 28 11:33	4°♈35'01		conjunction	3060 Apr 03 01:17	13°♈48'27	-15°40'54
max. Earth dist.	3052 Mar 27 15:04	4°♈33'40	44.54230 AU	minimum elong	3060 Apr 03 01:12	13°♈48'26	15°40'54
retrograde	3052 Jul 05 18:59	6°♈11'43		max. Earth dist.	3060 Apr 05 17:14	13°♈52'29	46.08451 AU
min. Earth dist.	3052 Sep 24 13:04	5°♈10'03	42.71445 AU	retrograde	3060 Jul 14 23:53	15°♈27'29	
opposition	3052 Sep 27 09:55	5°♈06'33	-15°19'40	min. Earth dist.	3060 Oct 04 06:38	14°♈26'42	44.25264 AU
direct	3052 Dec 17 14:29	4°♈02'43		opposition	3060 Oct 06 21:18	14°♈23'35	-16°26'24
evening set	3053 Mar 23 06:12	5°♈36'27		direct	3060 Dec 27 02:22	13°♈21'05	
conjunction	3053 Mar 26 05:02	5°♈41'04	-14°43'44	conjunction	3061 Apr 04 10:23	14°♈55'53	-15°47'25
minimum elong	3053 Mar 26 04:54	5°♈41'04	14°43'43	minimum elong	3061 Apr 04 10:19	14°♈55'53	15°47'25
morning rise	3053 Mar 29 03:44	5°♈45'41		max. Earth dist.	3061 Apr 07 02:33	14°♈59'56	46.26291 AU
max. Earth dist.	3053 Mar 29 01:51	5°♈45'33	44.74949 AU	retrograde	3061 Jul 16 06:06	16°♈34'34	
retrograde	3053 Jul 07 07:33	7°♈23'10		min. Earth dist.	3061 Oct 05 16:09	15°♈33'56	44.43074 AU
min. Earth dist.	3053 Sep 26 02:08	6°♈21'36	42.92113 AU	opposition	3061 Oct 08 06:28	15°♈30'49	-16°32'49
opposition	3053 Sep 28 21:07	6°♈18'12	-15°29'30	direct	3061 Dec 28 14:26	14°♈28'30	
direct	3053 Dec 18 23:53	5°♈14'34					
evening set	3054 Mar 25 17:22	6°♈49'28		conjunction	3062 Apr 05 19:04	16°♈02'56	-15°53'31
				minimum elong	3062 Apr 05 19:00	16°♈02'56	15°53'31
conjunction	3054 Mar 27 15:32	6°♈52'28	-14°53'08	max. Earth dist.	3062 Apr 08 09:43	16°♈06'52	46.43874 AU
minimum elong	3054 Mar 27 15:25	6°♈52'28	14°53'08	retrograde	3062 Jul 17 16:38	17°♈41'16	
morning rise	3054 Mar 29 13:32	6°♈55'27		min. Earth dist.	3062 Oct 07 01:27	16°♈40'47	44.60625 AU
max. Earth dist.	3054 Mar 30 11:15	6°♈56'52	44.95249 AU	opposition	3062 Oct 09 15:41	16°♈37'42	-16°38'48
retrograde	3054 Jul 08 16:03	8°♈34'07		direct	3062 Dec 29 23:08	15°♈35'33	
min. Earth dist.	3054 Sep 27 13:07	7°♈32'43	43.12323 AU				
opposition	3054 Sep 30 08:07	7°♈29'19	-15°38'55	conjunction	3063 Apr 07 03:38	17°♈09'39	-15°59'14
direct	3054 Dec 20 11:47	6°♈25'52		minimum elong	3063 Apr 07 03:35	17°♈09'38	15°59'14
				max. Earth dist.	3063 Apr 09 18:52	17°♈13'36	46.61175 AU
conjunction	3055 Mar 29 01:36	8°♈03'18	-15°02'07	retrograde	3063 Jul 19 03:24	18°♈47'38	
minimum elong	3055 Mar 29 01:30	8°♈03'18	15°02'07	min. Earth dist.	3063 Oct 08 12:09	17°♈47'15	44.77860 AU
max. Earth dist.	3055 Mar 31 20:06	8°♈07'36	45.15078 AU	opposition	3063 Oct 11 00:48	17°♈44'15	-16°44'23
retrograde	3055 Jul 10 00:42	9°♈44'30		direct	3063 Dec 31 07:14	16°♈42'18	
min. Earth dist.	3055 Sep 29 01:19	8°♈43'11	43.32069 AU				
opposition	3055 Oct 01 19:05	8°♈39'51	-15°47'54	conjunction	3064 Apr 07 12:11	18°♈16'02	-16°04'33
direct	3055 Dec 22 00:09	7°♈36'35		minimum elong	3064 Apr 07 12:08	18°♈16'02	16°04'33
				max. Earth dist.	3064 Apr 10 02:07	18°♈19'54	46.78155 AU
conjunction	3056 Mar 29 11:44	9°♈13'32	-15°10'42	retrograde	3064 Jul 19 12:56	19°♈53'42	
minimum elong	3056 Mar 29 11:37	9°♈13'32	15°10'43	min. Earth dist.	3064 Oct 08 20:38	18°♈53'30	44.94738 AU
max. Earth dist.	3056 Apr 01 06:19	9°♈17'50	45.34460 AU	opposition	3064 Oct 11 09:30	18°♈50'30	-16°49'35
retrograde	3056 Jul 10 08:39	10°♈54'17		direct	3064 Dec 31 13:47	17°♈48'43	
min. Earth dist.	3056 Sep 29 12:51	9°♈53'03	43.51365 AU				
opposition	3056 Oct 02 05:33	9°♈49'47	-15°56'28	conjunction	3065 Apr 08 20:37	19°♈22'08	-16°09'31
direct	3056 Dec 22 13:18	8°♈46'39		minimum elong	3065 Apr 08 20:35	19°♈22'08	16°09'32
				max. Earth dist.	3065 Apr 11 09:40	19°♈25'56	46.94735 AU
conjunction	3057 Mar 30 21:26	10°♈23'08	-15°18'52	retrograde	3065 Jul 20 20:37	20°♈59'28	
minimum elong	3057 Mar 30 21:21	10°♈23'08	15°18'52	min. Earth dist.	3065 Oct 10 07:17	19°♈59'20	45.11190 AU
max. Earth dist.	3057 Apr 02 14:21	10°♈27'18	45.53428 AU	opposition	3065 Oct 12 18:17	19°♈56'26	-16°54'26
retrograde	3057 Jul 11 19:52	12°♈03'26		direct	3066 Jan 01 22:35	18°♈54'50	
min. Earth dist.	3057 Sep 30 23:03	11°♈02'20	43.70283 AU				
opposition	3057 Oct 03 15:49	10°♈59'04	-16°04'36	conjunction	3066 Apr 10 04:59	20°♈27'55	-16°14'09
direct	3057 Dec 23 22:42	9°♈56'05		minimum elong	3066 Apr 10 04:57	20°♈27'55	16°14'08
				max. Earth dist.	3066 Apr 12 17:35	20°♈31'40	47.10871 AU
conjunction	3058 Apr 01 06:57	11°♈32'08	-15°26'38	retrograde	3066 Jul 22 01:30	22°♈04'54	
minimum elong	3058 Apr 01 06:50	11°♈32'07	15°26'39	min. Earth dist.	3066 Oct 11 16:27	21°♈04'53	45.27151 AU
max. Earth dist.	3058 Apr 04 00:13	11°♈36'17	45.72041 AU	opposition	3066 Oct 14 02:46	21°♈02'01	-16°58'55
retrograde	3058 Jul 13 05:54	13°♈12'00		direct	3067 Jan 03 09:41	20°♈00'34	
min. Earth dist.	3058 Oct 02 10:38	12°♈10'57	43.88872 AU				
opposition	3058 Oct 05 01:53	12°♈07'46	-16°12'18	conjunction	3067 Apr 11 13:08	21°♈33'19	-16°18'26

minimum elong	3067 Apr 11 13:06	21° Υ 33'19	16°18'26	minimum elong	3075 Apr 20 00:40	0° \mathcal{S} 00'46	16°40'37
max. Earth dist.	3067 Apr 13 23:45	21° Υ 36'56	47.26514 AU	max. Earth dist.	3075 Apr 22 06:09	0° \mathcal{S} 03'58	48.38062 AU
retrograde	3067 Jul 23 10:09	23° Υ 09'59		retrograde	3075 Jul 31 22:36	1° \mathcal{S} 34'54	
min. Earth dist.	3067 Oct 13 01:42	22° Υ 10'03	45.42627 AU	min. Earth dist.	3075 Oct 21 20:35	0° \mathcal{S} 35'32	46.53235 AU
opposition	3067 Oct 15 11:12	22° Υ 07'14	-17°03'04	opposition	3075 Oct 23 23:33	0° \mathcal{S} 33'04	-17°23'43
direct	3068 Jan 04 18:25	21° Υ 05'54			3075 Nov 23 03:01	30° \mathcal{R} Υ	
				direct	3076 Jan 13 06:33	29° Υ 32'41	
conjunction	3068 Apr 11 21:12	22° Υ 38'18	-16°22'24		3076 Mar 03 04:33	0° \mathcal{S}	
minimum elong	3068 Apr 11 21:11	22° Υ 38'18	16°22'23				
max. Earth dist.	3068 Apr 14 07:47	22° Υ 41'54	47.41673 AU	conjunction	3076 Apr 20 07:38	1° \mathcal{S} 02'39	-16°41'53
retrograde	3068 Jul 23 18:13	24° Υ 14'37		minimum elong	3076 Apr 20 07:40	1° \mathcal{S} 02'39	16°41'53
min. Earth dist.	3068 Oct 13 11:37	23° Υ 14'43	45.57615 AU	max. Earth dist.	3076 Apr 22 12:46	1° \mathcal{S} 05'50	48.50662 AU
opposition	3068 Oct 15 19:25	23° Υ 11'59	-17°06'53	retrograde	3076 Aug 01 03:48	2° \mathcal{S} 36'32	
direct	3069 Jan 05 04:18	22° Υ 10'46		min. Earth dist.	3076 Oct 22 03:46	1° \mathcal{S} 37'17	46.65653 AU
				opposition	3076 Oct 24 06:23	1° \mathcal{S} 34'51	-17°24'45
conjunction	3069 Apr 13 05:05	23° Υ 42'49	-16°26'01	direct	3077 Jan 13 13:31	0° \mathcal{S} 34'36	
minimum elong	3069 Apr 13 05:03	23° Υ 42'49	16°26'02				
max. Earth dist.	3069 Apr 15 14:00	23° Υ 46'18	47.56388 AU	conjunction	3077 Apr 21 14:28	2° \mathcal{S} 04'20	-16°42'50
retrograde	3069 Jul 25 04:21	25° Υ 18'47		minimum elong	3077 Apr 21 14:30	2° \mathcal{S} 04'20	16°42'49
min. Earth dist.	3069 Oct 14 19:23	24° Υ 18'58	45.72186 AU	max. Earth dist.	3077 Apr 23 17:42	2° \mathcal{S} 07'24	48.62853 AU
opposition	3069 Oct 17 03:10	24° Υ 16'15	-17°10'21	retrograde	3077 Aug 02 10:42	3° \mathcal{S} 37'58	
direct	3070 Jan 06 09:47	23° Υ 15'08		min. Earth dist.	3077 Oct 23 11:43	2° \mathcal{S} 38'48	46.77646 AU
				opposition	3077 Oct 25 13:05	2° \mathcal{S} 36'26	-17°25'29
conjunction	3070 Apr 14 12:41	24° Υ 46'51	-16°29'19	direct	3078 Jan 14 20:30	1° \mathcal{S} 36'19	
minimum elong	3070 Apr 14 12:41	24° Υ 46'51	16°29'19				
max. Earth dist.	3070 Apr 16 21:08	24° Υ 50'17	47.70712 AU	conjunction	3078 Apr 22 21:25	3° \mathcal{S} 05'49	-16°43'30
retrograde	3070 Jul 26 13:05	26° Υ 22'28		minimum elong	3078 Apr 22 21:28	3° \mathcal{S} 05'49	16°43'31
min. Earth dist.	3070 Oct 16 04:52	25° Υ 22'40	45.86406 AU	max. Earth dist.	3078 Apr 25 00:29	3° \mathcal{S} 08'52	48.74587 AU
opposition	3070 Oct 18 11:03	25° Υ 20'02	-17°13'28	retrograde	3078 Aug 03 16:10	4° \mathcal{S} 39'14	
direct	3071 Jan 07 15:25	24° Υ 19'01		min. Earth dist.	3078 Oct 24 20:05	3° \mathcal{S} 40'06	46.89134 AU
				opposition	3078 Oct 26 19:50	3° \mathcal{S} 37'49	-17°25'56
conjunction	3071 Apr 15 20:07	25° Υ 50'24	-16°32'16	direct	3079 Jan 16 05:36	2° \mathcal{S} 37'49	
minimum elong	3071 Apr 15 20:06	25° Υ 50'24	16°32'16				
max. Earth dist.	3071 Apr 18 04:25	25° Υ 53'49	47.84727 AU	conjunction	3079 Apr 24 04:03	4° \mathcal{S} 07'05	-16°43'54
retrograde	3071 Jul 27 16:54	27° Υ 25'41		minimum elong	3079 Apr 24 04:06	4° \mathcal{S} 07'05	16°43'53
min. Earth dist.	3071 Oct 17 12:28	26° Υ 25'59	46.00318 AU	max. Earth dist.	3079 Apr 26 05:02	4° \mathcal{S} 10'00	48.85816 AU
opposition	3071 Oct 19 18:37	26° Υ 23'21	-17°16'14	retrograde	3079 Aug 05 01:13	5° \mathcal{S} 40'15	
direct	3072 Jan 09 01:35	25° Υ 22'27		min. Earth dist.	3079 Oct 26 03:03	4° \mathcal{S} 41'13	47.00104 AU
				opposition	3079 Oct 28 02:27	4° \mathcal{S} 38'57	-17°26'06
conjunction	3072 Apr 16 03:24	26° Υ 53'31	-16°34'52	direct	3080 Jan 17 10:43	3° \mathcal{S} 39'03	
minimum elong	3072 Apr 16 03:26	26° Υ 53'31	16°34'52				
max. Earth dist.	3072 Apr 18 10:14	26° Υ 56'51	47.98458 AU	conjunction	3080 Apr 24 10:46	5° \mathcal{S} 08'05	-16°44'02
retrograde	3072 Jul 27 22:42	28° Υ 28'29		minimum elong	3080 Apr 24 10:49	5° \mathcal{S} 08'06	16°44'02
min. Earth dist.	3072 Oct 17 20:27	27° Υ 28'52	46.13969 AU	max. Earth dist.	3080 Apr 26 10:54	5° \mathcal{S} 10'56	48.96517 AU
opposition	3072 Oct 20 02:00	27° Υ 26'16	-17°18'38	retrograde	3080 Aug 05 10:12	6° \mathcal{S} 41'01	
direct	3073 Jan 09 10:28	26° Υ 25'29		min. Earth dist.	3080 Oct 26 11:46	5° \mathcal{S} 41'58	47.10559 AU
				opposition	3080 Oct 28 08:54	5° \mathcal{S} 39'49	-17°26'00
conjunction	3073 Apr 17 10:43	27° Υ 56'15	-16°37'08	direct	3081 Jan 17 14:48	4° \mathcal{S} 40'00	
minimum elong	3073 Apr 17 10:43	27° Υ 56'15	16°37'08				
max. Earth dist.	3073 Apr 19 18:01	27° Υ 59'35	48.11931 AU	conjunction	3081 Apr 25 17:23	6° \mathcal{S} 08'48	-16°43'53
retrograde	3073 Jul 29 05:30	29° Υ 30'55		minimum elong	3081 Apr 25 17:27	6° \mathcal{S} 08'49	16°43'53
min. Earth dist.	3073 Oct 19 04:59	28° Υ 31'22	46.27343 AU	max. Earth dist.	3081 Apr 27 16:39	6° \mathcal{S} 11'36	49.06742 AU
opposition	3073 Oct 21 09:19	28° Υ 28'49	-17°20'40	retrograde	3081 Aug 06 14:20	7° \mathcal{S} 41'28	
direct	3074 Jan 10 19:35	27° Υ 28'10		min. Earth dist.	3081 Oct 27 18:12	6° \mathcal{S} 42'30	47.20545 AU
				opposition	3081 Oct 29 15:07	6° \mathcal{S} 40'22	-17°25'37
conjunction	3074 Apr 18 17:41	28° Υ 58'38	-16°39'02	direct	3082 Jan 18 21:55	5° \mathcal{S} 40'38	
minimum elong	3074 Apr 18 17:43	28° Υ 58'39	16°39'03				
max. Earth dist.	3074 Apr 20 23:38	29° Υ 01'53	48.25143 AU	conjunction	3082 Apr 26 23:34	7° \mathcal{S} 09'12	-16°43'28
	3074 Jun 03 22:36	0° \mathcal{S}		minimum elong	3082 Apr 26 23:37	7° \mathcal{S} 09'12	16°43'29
retrograde	3074 Jul 30 14:33	0° \mathcal{S} 33'02		max. Earth dist.	3082 Apr 28 21:04	7° \mathcal{S} 11'53	49.16526 AU
	3074 Sep 26 17:56	30° \mathcal{R} Υ		retrograde	3082 Aug 07 18:34	8° \mathcal{S} 41'37	
min. Earth dist.	3074 Oct 20 11:42	29° Υ 33'38	46.40443 AU	min. Earth dist.	3082 Oct 29 01:41	7° \mathcal{S} 42'41	47.30138 AU
opposition	3074 Oct 22 16:26	29° Υ 31'05	-17°22'22	opposition	3082 Oct 30 21:22	7° \mathcal{S} 40'36	-17°24'57
direct	3075 Jan 12 01:07	28° Υ 30'33		direct	3083 Jan 20 05:36	6° \mathcal{S} 40'57	
	3075 Apr 19 11:59	0° \mathcal{S}					
conjunction	3075 Apr 20 00:39	0° \mathcal{S} 00'46	-16°40'37	conjunction	3083 Apr 28 05:54	8° \mathcal{S} 09'18	-16°42'46
				minimum elong	3083 Apr 28 05:59	8° \mathcal{S} 09'18	16°42'46

max. Earth dist.	3083 Apr 30 03:43	8°8'12"00	49.25950 AU	conjunction	3091 May 06 05:20	16°8'02"47	-16°26'56
retrograde	3083 Aug 08 22:52	9°8'41"30		minimum elong	3091 May 06 05:27	16°8'02"48	16°26'57
min. Earth dist.	3083 Oct 30 08:49	8°8'42"35	47.39379 AU	max. Earth dist.	3091 May 07 19:01	16°8'04"58	49.89275 AU
opposition	3083 Nov 01 03:23	8°8'40"33	-17°23'59	retrograde	3091 Aug 17 01:49	17°8'33"30	
direct	3084 Jan 21 14:45	7°8'40"59		min. Earth dist.	3091 Nov 07 13:05	16°8'34"58	48.00824 AU
				opposition	3091 Nov 09 00:18	16°8'33"19	-17°05'51
conjunction	3084 Apr 28 12:00	9°8'09"07	-16°41'46	direct	3092 Jan 29 08:16	15°8'34"24	
minimum elong	3084 Apr 28 12:03	9°8'09"07	16°41'46				
max. Earth dist.	3084 Apr 30 08:08	9°8'11"42	49.35057 AU	conjunction	3092 May 06 11:02	17°8'01"12	-16°23'49
retrograde	3084 Aug 09 06:54	10°8'41"06		minimum elong	3092 May 06 11:09	17°8'01"13	16°23'49
min. Earth dist.	3084 Oct 30 14:38	9°8'42"17	47.48315 AU	max. Earth dist.	3092 May 07 22:30	17°8'03"15	49.95164 AU
opposition	3084 Nov 01 09:17	9°8'40"15	-17°22'42	retrograde	3092 Aug 17 06:26	18°8'31"44	
direct	3085 Jan 21 19:58	8°8'40"46		min. Earth dist.	3092 Nov 07 20:15	17°8'33"10	48.06397 AU
				opposition	3092 Nov 09 05:39	17°8'31"36	-17°02'27
conjunction	3085 Apr 29 18:04	10°8'08"42	-16°40'29	direct	3093 Jan 29 13:55	16°8'32"44	
minimum elong	3085 Apr 29 18:10	10°8'08"42	16°40'28				
max. Earth dist.	3085 May 01 13:48	10°8'11"15	49.43855 AU	conjunction	3093 May 07 16:47	17°8'59"22	-16°20'29
retrograde	3085 Aug 10 14:24	11°8'40"29		minimum elong	3093 May 07 16:54	17°8'59"22	16°20'29
min. Earth dist.	3085 Oct 31 22:10	10°8'41"40	47.56945 AU	max. Earth dist.	3093 May 09 04:04	18°8'01"24	50.00538 AU
opposition	3085 Nov 02 15:04	10°8'39"43	-17°21'08	retrograde	3093 Aug 18 08:17	19°8'29"42	
direct	3086 Jan 23 00:11	9°8'40"20		min. Earth dist.	3093 Nov 09 02:37	18°8'31"07	48.11467 AU
				opposition	3093 Nov 10 10:41	18°8'29"36	-16°58'48
conjunction	3086 May 01 00:05	11°8'08"05	-16°38'53	direct	3094 Jan 30 22:25	17°8'30"46	
minimum elong	3086 May 01 00:10	11°8'08"05	16°38'53				
max. Earth dist.	3086 May 02 19:21	11°8'10"36	49.52373 AU	conjunction	3094 May 08 22:15	18°8'57"14	-16°16'54
retrograde	3086 Aug 11 20:06	12°8'39"39		minimum elong	3094 May 08 22:23	18°8'57"15	16°16'53
min. Earth dist.	3086 Nov 02 03:48	11°8'40"57	47.65274 AU	max. Earth dist.	3094 May 10 07:31	18°8'59"09	50.05462 AU
opposition	3086 Nov 03 20:45	11°8'39"00	-17°19'16	retrograde	3094 Aug 19 14:09	20°8'27"24	
direct	3087 Jan 24 04:09	10°8'39"42		min. Earth dist.	3094 Nov 10 07:54	19°8'28"50	48.16128 AU
				opposition	3094 Nov 11 15:42	19°8'27"20	-16°54'54
conjunction	3087 May 02 05:48	12°8'07"18	-16°37'01	direct	3095 Feb 01 03:42	18°8'28"31	
minimum elong	3087 May 02 05:54	12°8'07"18	16°37'01				
max. Earth dist.	3087 May 03 23:31	12°8'09"44	49.60576 AU	conjunction	3095 May 10 03:37	19°8'54"51	-16°13'04
retrograde	3087 Aug 13 01:40	13°8'38"41		minimum elong	3095 May 10 03:43	19°8'54"51	16°13'04
min. Earth dist.	3087 Nov 03 10:48	12°8'40"01	47.73279 AU	max. Earth dist.	3095 May 11 12:21	19°8'56"43	50.09991 AU
opposition	3087 Nov 05 02:31	12°8'38"09	-17°17'06	retrograde	3095 Aug 20 20:35	21°8'24"51	
direct	3088 Jan 25 09:21	11°8'38"56		opposition	3095 Nov 12 20:45	20°8'24"50	-16°50'45
				min. Earth dist.	3095 Nov 11 14:52	20°8'26"14	48.20417 AU
conjunction	3088 May 02 11:49	13°8'06"22	-16°34'53	direct	3096 Feb 02 08:43	19°8'26"03	
minimum elong	3088 May 02 11:54	13°8'06"22	16°34'52				
max. Earth dist.	3088 May 04 05:33	13°8'08"48	49.68432 AU	conjunction	3096 May 10 09:05	20°8'52"14	-16°08'58
retrograde	3088 Aug 13 04:33	14°8'37"36		minimum elong	3096 May 10 09:14	20°8'52"15	16°08'58
min. Earth dist.	3088 Nov 03 17:32	13°8'38"58	47.80891 AU	max. Earth dist.	3096 May 11 17:15	20°8'54"05	50.14192 AU
opposition	3088 Nov 05 07:58	13°8'37"09	-17°14'40	retrograde	3096 Aug 21 02:07	22°8'22"05	
direct	3089 Jan 25 17:56	12°8'38"03		min. Earth dist.	3096 Nov 11 19:30	21°8'23"31	48.24385 AU
				opposition	3096 Nov 13 01:25	21°8'22"07	-16°46'19
conjunction	3089 May 03 17:41	14°8'05"19	-16°32'28	direct	3097 Feb 02 12:04	20°8'23"22	
minimum elong	3089 May 03 17:47	14°8'05"19	16°32'29				
max. Earth dist.	3089 May 05 09:25	14°8'07"38	49.75878 AU	conjunction	3097 May 11 14:21	21°8'49"27	-16°04'37
	3089 Jun 14 20:01	15°8'		minimum elong	3097 May 11 14:29	21°8'49"27	16°04'37
retrograde	3089 Aug 14 11:32	15°8'36"23		max. Earth dist.	3097 May 12 20:48	21°8'51"11	50.18080 AU
	3089 Oct 15 19:14	15°8'8'		retrograde	3097 Aug 22 07:19	23°8'19"10	
min. Earth dist.	3089 Nov 04 23:34	14°8'37"50	47.88062 AU	min. Earth dist.	3097 Nov 13 01:41	22°8'20"36	48.28062 AU
opposition	3089 Nov 06 13:26	14°8'36"02	-17°11'58	opposition	3097 Nov 14 06:19	22°8'19"15	-16°41'38
direct	3090 Jan 27 00:01	13°8'37"01		direct	3098 Feb 03 15:42	21°8'20"33	
	3090 May 01 23:55	15°8'					
conjunction	3090 May 04 23:26	15°8'04"08	-16°29'49	conjunction	3098 May 12 19:33	22°8'46"33	-16°00'00
minimum elong	3090 May 04 23:32	15°8'04"08	16°29'49	minimum elong	3098 May 12 19:43	22°8'46"33	16°00'00
max. Earth dist.	3090 May 06 14:18	15°8'06"23	49.82835 AU	max. Earth dist.	3098 May 14 02:17	22°8'48"18	50.21686 AU
retrograde	3090 Aug 15 20:18	16°8'35"02		retrograde	3098 Aug 23 09:49	24°8'16"09	
min. Earth dist.	3090 Nov 06 07:22	15°8'36"27	47.94716 AU	min. Earth dist.	3098 Nov 14 07:13	23°8'17"37	48.31436 AU
opposition	3090 Nov 07 19:01	15°8'34"47	-17°09'02	opposition	3098 Nov 15 11:06	23°8'16"18	-16°36'40
	3090 Dec 10 14:00	15°8'8'		direct	3099 Feb 04 22:54	22°8'17"40	
direct	3091 Jan 28 04:09	14°8'35"50		conjunction	3099 May 14 00:44	23°8'43"34	-15°55'07
	3091 Mar 16 18:15	15°8'		minimum elong	3099 May 14 00:52	23°8'43"35	15°55'07
				max. Earth dist.	3099 May 15 05:45	23°8'45"14	50.25004 AU

retrograde	3099 Aug 24 15:27	25° 8 13'05	
opposition	3099 Nov 16 15:45	24° 8 13'19	-16°31'26
min. Earth dist.	3099 Nov 15 12:13	24° 8 14'37	48.34514 AU
direct	3100 Feb 06 04:22	23° 8 14'45	
conjunction	3100 May 15 05:59	24° 8 40'35	-15°49'59
minimum elong	3100 May 15 06:09	24° 8 40'36	15°50'00
max. Earth dist.	3100 May 16 10:27	24° 8 42'13	50.27988 AU
retrograde	3100 Aug 25 23:27	26° 8 10'02	
opposition	3100 Nov 17 20:29	25° 8 10'21	-16°25'56
min. Earth dist.	3100 Nov 16 18:55	25° 8 11'33	48.37226 AU
direct	3101 Feb 07 07:57	24° 8 11'51	
conjunction	3101 May 16 11:16	25° 8 37'38	-15°44'37
minimum elong	3101 May 16 11:24	25° 8 37'38	15°44'36
max. Earth dist.	3101 May 17 14:45	25° 8 39'11	50.30594 AU
retrograde	3101 Aug 27 06:06	27° 8 06'59	
min. Earth dist.	3101 Nov 17 23:36	26° 8 08'34	48.39516 AU
opposition	3101 Nov 19 00:57	26° 8 07'23	-16°20'13