

opposition	13100 Feb 03 08:30	23°♏23'17	-2°00'50	max. Earth dist.	13105 Oct 11 11:19	1°♍03'15	10.65176 AU
min. Earth dist.	13100 Feb 02 23:18	23°♏25'02	8.66857 AU	morning rise	13105 Oct 28 10:29	3°♍06'40	
direct	13100 Apr 13 12:50	20°♏02'32		retrograde	13106 Feb 09 20:39	10°♍41'37	
evening set	13100 Jul 24 03:35	27°♏26'22		opposition	13106 Apr 20 11:42	7°♍17'15	0°20'48
				min. Earth dist.	13106 Apr 20 02:59	7°♍18'56	8.64072 AU
conjunction	13100 Aug 10 00:43	29°♏29'51	-1°32'37	direct	13106 Jun 27 15:50	3°♍56'05	
minimum elong	13100 Aug 10 00:46	29°♏29'52	1°33'12	evening set	13106 Oct 06 11:38	11°♍17'33	
max. Earth dist.	13100 Aug 10 11:59	29°♏33'19	10.67507 AU				
	13100 Aug 14 02:58	0°♍		conjunction	13106 Oct 23 20:58	13°♍24'12	0°28'06
morning rise	13100 Aug 26 23:33	1°♍33'47		minimum elong	13106 Oct 23 20:57	13°♍24'11	0°28'43
retrograde	13100 Dec 08 09:32	9°♍04'38		max. Earth dist.	13106 Oct 24 07:03	13°♍27'16	10.62854 AU
opposition	13101 Feb 16 07:46	5°♍42'21	-1°45'57		13106 Nov 05 23:38	15°♍	
min. Earth dist.	13101 Feb 15 21:34	5°♍44'17	8.68190 AU	morning rise	13106 Nov 10 09:11	15°♍31'43	
direct	13101 Apr 26 08:33	2°♍21'56		retrograde	13107 Feb 22 19:35	23°♍08'02	
evening set	13101 Aug 05 13:52	9°♍43'32		opposition	13107 May 03 06:34	19°♍43'17	0°48'41
				min. Earth dist.	13107 May 02 22:53	19°♍44'47	8.61559 AU
conjunction	13101 Aug 22 12:31	11°♍47'10	-1°18'34	direct	13107 Jul 10 08:56	16°♍21'32	
minimum elong	13101 Aug 22 12:34	11°♍47'11	1°18'59	evening set	13107 Oct 19 09:31	23°♍45'13	
max. Earth dist.	13101 Aug 23 01:20	11°♍51'05	10.68531 AU				
morning rise	13101 Sep 08 13:17	13°♍51'23		conjunction	13107 Nov 05 20:41	25°♍52'37	0°49'57
retrograde	13101 Dec 21 05:33	21°♍22'34		minimum elong	13107 Nov 05 20:40	25°♍52'37	0°50'44
opposition	13102 Mar 01 05:34	17°♍59'52	-1°26'15	max. Earth dist.	13107 Nov 06 05:24	25°♍55'17	10.60152 AU
min. Earth dist.	13102 Feb 28 18:09	18°♍02'03	8.68828 AU	morning rise	13107 Nov 23 10:23	28°♍00'48	
direct	13102 May 09 03:05	14°♍39'39			13107 Dec 10 12:30	0°♌	
evening set	13102 Aug 18 00:26	21°♍59'37		retrograde	13108 Mar 06 21:01	5°♌38'35	
				opposition	13108 May 15 01:50	2°♌13'31	1°14'26
conjunction	13102 Sep 04 01:05	24°♍03'38	-1°00'57	min. Earth dist.	13108 May 14 19:33	2°♌14'45	8.58736 AU
minimum elong	13102 Sep 04 01:07	24°♍03'39	1°01'10		13108 Jun 15 02:48	30°♌	
max. Earth dist.	13102 Sep 04 15:01	24°♍07'53	10.68801 AU	direct	13108 Jul 22 02:13	28°♍51'06	
morning rise	13102 Sep 21 04:02	26°♍08'20			13108 Aug 27 12:39	0°♌	
	13102 Oct 26 04:35	0°♌		evening set	13108 Oct 31 10:57	6°♌17'36	
retrograde	13103 Jan 03 03:50	3°♌40'04					
opposition	13103 Mar 14 01:57	0°♌16'58	-1°02'39	conjunction	13108 Nov 17 23:38	8°♌25'45	1°09'34
min. Earth dist.	13103 Mar 13 14:08	0°♌19'14	8.68669 AU	minimum elong	13108 Nov 17 23:36	8°♌25'45	1°10'28
	13103 Mar 17 18:40	30°♌		max. Earth dist.	13108 Nov 18 05:42	8°♌27'37	10.57201 AU
direct	13103 May 21 18:03	26°♍56'47		morning rise	13108 Dec 05 14:33	10°♌34'36	
	13103 Jul 22 02:32	0°♌		retrograde	13109 Mar 20 00:20	18°♌13'45	
evening set	13103 Aug 30 12:03	4°♌15'57		opposition	13109 May 27 21:55	14°♌48'29	1°36'47
				min. Earth dist.	13109 May 27 18:07	14°♌49'14	8.55735 AU
conjunction	13103 Sep 16 14:50	6°♌20'29	-0°40'32	direct	13109 Aug 03 20:12	11°♌25'19	
minimum elong	13103 Sep 16 14:52	6°♌20'30	0°40'32	evening set	13109 Nov 13 15:53	18°♌55'08	
max. Earth dist.	13103 Sep 17 04:34	6°♌24'41	10.68266 AU				
morning rise	13103 Oct 03 20:15	8°♌25'49		conjunction	13109 Dec 01 05:48	21°♌03'59	1°25'55
retrograde	13104 Jan 16 00:30	15°♌58'25		minimum elong	13109 Dec 01 05:46	21°♌03'58	1°26'54
opposition	13104 Mar 25 21:39	12°♌34'55	-0°36'09	max. Earth dist.	13109 Dec 01 08:17	21°♌04'45	10.54131 AU
min. Earth dist.	13104 Mar 25 10:22	12°♌37'05	8.67738 AU	morning rise	13109 Dec 18 21:40	23°♌13'26	
direct	13104 Jun 02 08:45	9°♌14'34			13110 Feb 28 16:44	0°♌	
evening set	13104 Sep 11 01:20	16°♌33'45		retrograde	13110 Apr 02 03:31	0°♌53'48	
					13110 May 04 18:19	30°♌	
conjunction	13104 Sep 28 06:16	18°♌38'55	-0°18'14	opposition	13110 Jun 09 19:04	27°♌28'29	1°54'37
minimum elong	13104 Sep 28 06:16	18°♌38'55	0°18'01	min. Earth dist.	13110 Jun 09 18:09	27°♌28'40	8.52678 AU
max. Earth dist.	13104 Sep 28 18:41	18°♌42'42	10.67015 AU	direct	13110 Aug 16 17:49	24°♌04'30	
morning rise	13104 Oct 15 14:13	20°♌44'57			13110 Nov 13 03:53	0°♌	
retrograde	13105 Jan 27 21:55	28°♌18'40		evening set	13110 Nov 27 00:11	1°♌37'57	
opposition	13105 Apr 07 16:53	24°♌54'43	-0°07'55				
min. Earth dist.	13105 Apr 07 06:58	24°♌56'38	8.66165 AU	conjunction	13110 Dec 14 15:08	3°♌47'30	1°38'11
direct	13105 Jun 15 00:29	21°♌34'03		minimum elong	13110 Dec 14 15:06	3°♌47'29	1°39'12
asc. node	13105 Jul 20 01:18	22°♌37'23		max. Earth dist.	13110 Dec 14 14:12	3°♌47'12	10.51070 AU
evening set	13105 Sep 23 17:03	28°♌53'59		morning rise	13111 Jan 01 07:32	5°♌57'28	
	13105 Oct 02 19:54	0°♍		retrograde	13111 Apr 15 07:22	13°♌38'52	
conjunction	13105 Oct 11 00:12	0°♍59'52	0°05'04	opposition	13111 Jun 22 17:23	10°♌13'34	2°06'57
minimum elong	13105 Oct 11 00:11	0°♍59'52	0°05'30	min. Earth dist.	13111 Jun 22 19:01	10°♌13'15	8.49698 AU
behind sun begin	13105 Oct 10 17:18	0°♍57'48		direct	13111 Aug 29 18:03	6°♌48'50	
behind sun end	13105 Oct 11 07:04	1°♍01'57		evening set	13111 Dec 10 11:24	14°♌25'58	

conjunction	13111 Dec 28 03:15	16° ♁ 36'10	1°45'40	conjunction	13118 Mar 18 04:35	4° ♄ 39'49	0°43'30
minimum elong	13111 Dec 28 03:15	16° ♁ 36'10	1°46'39	minimum elong	13118 Mar 18 04:37	4° ♄ 39'50	0°43'32
max. Earth dist.	13111 Dec 27 23:42	16° ♁ 35'04	10.48166 AU	max. Earth dist.	13118 Mar 17 15:08	4° ♄ 35'37	10.41100 AU
morning rise	13112 Jan 14 19:51	18° ♁ 46'36		morning rise	13118 Apr 04 17:00	6° ♄ 50'42	
retrograde	13112 Apr 27 13:38	26° ♁ 28'44		retrograde	13118 Jul 15 12:04	14° ♄ 29'29	
opposition	13112 Jul 04 17:14	23° ♁ 03'33	2°13'02	opposition	13118 Sep 21 01:01	11° ♄ 06'54	0°39'47
min. Earth dist.	13112 Jul 04 20:36	23° ♁ 02'53	8.46944 AU	min. Earth dist.	13118 Sep 21 11:04	11° ♄ 04'55	8.41608 AU
direct	13112 Sep 10 19:38	19° ♁ 38'09		direct	13118 Nov 29 03:04	7° ♄ 40'30	
evening set	13112 Dec 23 01:02	27° ♁ 18'50		evening set	13119 Mar 14 04:21	15° ♄ 31'03	
conjunction	13113 Jan 09 17:39	29° ♁ 29'36	1°47'53	conjunction	13119 Mar 31 17:50	17° ♄ 42'12	0°20'09
minimum elong	13113 Jan 09 17:39	29° ♁ 29'37	1°48'47	minimum elong	13119 Mar 31 17:51	17° ♄ 42'13	0°19'57
max. Earth dist.	13113 Jan 09 11:55	29° ♁ 27'50	10.45567 AU	max. Earth dist.	13119 Mar 31 05:27	17° ♄ 38'20	10.42249 AU
	13113 Jan 13 19:33	0° ♁		morning rise	13119 Apr 18 04:14	19° ♄ 52'30	
morning rise	13113 Jan 27 10:10	1° ♁ 40'27		retrograde	13119 Jul 28 19:17	27° ♄ 29'55	
retrograde	13113 May 10 20:55	9° ♁ 22'56		opposition	13119 Oct 04 10:16	24° ♄ 07'45	0°10'02
opposition	13113 Jul 17 18:42	5° ♁ 58'00	2°12'28	min. Earth dist.	13119 Oct 04 19:43	24° ♄ 05'54	8.43062 AU
min. Earth dist.	13113 Jul 17 23:52	5° ♁ 56'58	8.44546 AU	direct	13119 Dec 12 15:51	20° ♄ 41'41	
direct	13113 Sep 23 23:38	2° ♁ 32'02		desc. node	13120 Feb 06 15:40	23° ♄ 14'40	
evening set	13114 Jan 05 16:50	10° ♁ 15'58		evening set	13120 Mar 26 17:13	28° ♄ 31'16	
					13120 Apr 07 15:22	0° ♄	
conjunction	13114 Jan 23 09:52	12° ♁ 27'15	1°44'39	conjunction	13120 Apr 13 04:31	0° ♄ 41'42	-0°04'15
minimum elong	13114 Jan 23 09:53	12° ♁ 27'15	1°45'26	minimum elong	13120 Apr 13 04:30	0° ♄ 41'41	0°04'40
max. Earth dist.	13114 Jan 23 01:29	12° ♁ 24'38	10.43404 AU	behind sun begin	13120 Apr 12 21:29	0° ♄ 39'31	
morning rise	13114 Feb 10 02:06	14° ♁ 38'23		behind sun end	13120 Apr 13 11:31	0° ♄ 43'52	
	13114 Feb 13 01:23	15° ♁		max. Earth dist.	13120 Apr 12 17:00	0° ♄ 38'06	10.44002 AU
retrograde	13114 May 24 04:47	22° ♁ 20'48		morning rise	13120 Apr 30 12:40	2° ♄ 51'16	
opposition	13114 Jul 30 21:49	18° ♁ 56'15	2°05'09	retrograde	13120 Aug 10 00:12	10° ♄ 27'13	
min. Earth dist.	13114 Jul 31 05:05	18° ♁ 54'48	8.42640 AU	opposition	13120 Oct 16 19:37	7° ♄ 05'26	-0°20'06
direct	13114 Oct 07 05:47	15° ♁ 29'51		min. Earth dist.	13120 Oct 17 04:43	7° ♄ 03'39	8.45071 AU
evening set	13115 Jan 19 09:54	23° ♁ 16'34		direct	13120 Dec 25 05:14	3° ♄ 39'46	
conjunction	13115 Feb 06 02:59	25° ♁ 28'13	1°36'03	evening set	13121 Apr 09 03:26	11° ♄ 27'45	
minimum elong	13115 Feb 06 03:01	25° ♁ 28'14	1°36'41	conjunction	13121 Apr 26 12:05	13° ♄ 37'16	-0°28'13
max. Earth dist.	13115 Feb 05 15:58	25° ♁ 24'47	10.41807 AU	minimum elong	13121 Apr 26 12:03	13° ♄ 37'15	0°28'49
morning rise	13115 Feb 23 18:47	27° ♁ 39'32		max. Earth dist.	13121 Apr 26 01:15	13° ♄ 33'53	10.46218 AU
	13115 Mar 15 15:28	0° ♁			13121 May 07 12:59	15° ♄	
retrograde	13115 Jun 06 13:20	5° ♁ 21'31		morning rise	13121 May 13 17:51	15° ♄ 45'58	
opposition	13115 Aug 13 02:40	1° ♁ 57'26	1°51'24	retrograde	13121 Aug 23 03:55	23° ♄ 20'37	
min. Earth dist.	13115 Aug 13 11:57	1° ♁ 55'35	8.41342 AU	opposition	13121 Oct 30 04:58	19° ♄ 59'07	-0°49'03
	13115 Sep 08 06:14	30° ♁		min. Earth dist.	13121 Oct 30 13:06	19° ♄ 57'32	8.47457 AU
direct	13115 Oct 20 14:08	28° ♁ 30'47		direct	13122 Jan 07 18:22	16° ♄ 33'55	
	13115 Dec 01 10:45	0° ♁		evening set	13122 Apr 22 10:25	24° ♄ 19'49	
evening set	13116 Feb 02 03:20	6° ♁ 19'36					
conjunction	13116 Feb 19 20:10	8° ♁ 31'28	1°22'29	conjunction	13122 May 09 16:15	26° ♄ 28'19	-0°50'41
minimum elong	13116 Feb 19 20:13	8° ♁ 31'28	1°22'57	minimum elong	13122 May 09 16:14	26° ♄ 28'18	0°51'28
max. Earth dist.	13116 Feb 19 07:04	8° ♁ 27'22	10.40869 AU	max. Earth dist.	13122 May 09 06:57	26° ♄ 25'24	10.48689 AU
morning rise	13116 Mar 08 11:18	10° ♁ 42'50		morning rise	13122 May 26 19:35	28° ♄ 36'03	
retrograde	13116 Jun 18 20:55	18° ♁ 24'01			13122 Jun 07 11:01	0° ♁	
opposition	13116 Aug 25 09:00	15° ♁ 00'26	1°31'51	retrograde	13122 Sep 05 07:02	6° ♁ 09'44	
min. Earth dist.	13116 Aug 25 19:28	14° ♁ 58'21	8.40724 AU	opposition	13122 Nov 12 13:55	2° ♁ 48'25	-1°15'24
direct	13116 Nov 02 01:30	11° ♁ 33'42		min. Earth dist.	13122 Nov 12 20:16	2° ♁ 47'11	8.49999 AU
evening set	13117 Feb 14 20:50	19° ♁ 23'56			13122 Dec 25 06:48	30° ♁	
				direct	13123 Jan 21 05:17	29° ♄ 23'48	
conjunction	13117 Mar 04 13:03	21° ♁ 35'47	1°04'40		13123 Feb 16 21:26	0° ♁	
minimum elong	13117 Mar 04 13:05	21° ♁ 35'48	1°04'55	evening set	13123 May 05 14:15	7° ♁ 07'19	
max. Earth dist.	13117 Mar 03 23:12	21° ♁ 31'27	10.40631 AU				
morning rise	13117 Mar 22 03:04	23° ♁ 47'01		conjunction	13123 May 22 17:28	9° ♁ 14'48	-1°10'31
	13117 May 22 10:46	0° ♄		minimum elong	13123 May 22 17:26	9° ♁ 14'47	1°11'25
retrograde	13117 Jul 02 03:44	1° ♄ 27'05		max. Earth dist.	13123 May 22 10:42	9° ♁ 12'41	10.51225 AU
	13117 Aug 12 16:54	30° ♁		morning rise	13123 Jun 08 18:25	11° ♁ 21'38	
opposition	13117 Sep 07 16:26	28° ♁ 04'02	1°07'33	retrograde	13123 Sep 18 09:00	18° ♁ 54'40	
min. Earth dist.	13117 Sep 08 03:00	28° ♁ 01'56	8.40814 AU	opposition	13123 Nov 25 22:13	15° ♁ 33'26	-1°37'51
direct	13117 Nov 15 14:47	24° ♁ 37'23		min. Earth dist.	13123 Nov 26 02:00	15° ♁ 32'42	8.52555 AU
	13118 Feb 07 14:49	0° ♄		direct	13124 Feb 03 15:00	12° ♁ 09'27	
evening set	13118 Feb 28 13:27	2° ♄ 28'12		evening set	13124 May 17 15:03	19° ♁ 50'24	


























































































































conjunction	13124 Jun 03 15:54	21° Π 56'55	-1°26'48			13130 Jun 17 22:54	0° Π
minimum elong	13124 Jun 03 15:52	21° Π 56'54	1°27'47	evening set		13130 Jul 31 13:40	4° Π 40'35
max. Earth dist.	13124 Jun 03 12:25	21° Π 55'49	10.53743 AU				
morning rise	13124 Jun 20 14:45	24° Π 02'54		conjunction		13130 Aug 17 11:52	6° Π 44'32 -1°25'04
	13124 Aug 18 03:08	0° Ξ		minimum elong		13130 Aug 17 11:54	6° Π 44'33 1°25'33
retrograde	13124 Sep 30 11:04	1° Ξ 35'32		max. Earth dist.		13130 Aug 18 00:16	6° Π 48'20 10.65033 AU
	13124 Nov 14 02:23	30° κ Π		morning rise		13130 Sep 03 11:49	8° Π 49'00
opposition	13124 Dec 08 05:59	28° Π 14'17	-1°55'23	retrograde		13130 Dec 16 02:50	16° Π 21'23
min. Earth dist.	13124 Dec 08 07:23	28° Π 14'01	8.55075 AU	opposition		13131 Feb 24 00:53	12° Π 58'04 -1°35'16
direct	13125 Feb 15 22:39	24° Π 50'54		min. Earth dist.		13131 Feb 23 14:00	13° Π 00'10 8.65419 AU
	13125 May 09 06:52	0° Ξ		direct		13131 May 03 23:16	9° Π 37'00
evening set	13125 May 30 12:52	2° Ξ 29'01		evening set		13131 Aug 13 01:00	16° Π 58'59
conjunction	13125 Jun 16 11:35	4° Ξ 34'38	-1°38'48	conjunction		13131 Aug 30 00:48	19° Π 03'13 -1°08'50
minimum elong	13125 Jun 16 11:34	4° Ξ 34'38	1°39'49	minimum elong		13131 Aug 30 00:51	19° Π 03'14 1°09'08
max. Earth dist.	13125 Jun 16 10:54	4° Ξ 34'26	10.56207 AU	max. Earth dist.		13131 Aug 30 13:35	19° Π 07'08 10.65527 AU
morning rise	13125 Jul 03 08:55	6° Ξ 39'54		morning rise		13131 Sep 16 03:01	21° Π 08'06
retrograde	13125 Oct 13 12:40	14° Ξ 12'14		retrograde		13131 Dec 29 00:02	28° Π 40'55
opposition	13125 Dec 21 12:51	10° Ξ 50'51	-2°07'15	opposition		13132 Mar 07 22:46	25° Π 17'14 -1°13'08
min. Earth dist.	13125 Dec 21 12:09	10° Ξ 50'59	8.57511 AU	min. Earth dist.		13132 Mar 07 11:38	25° Π 19'22 8.65618 AU
direct	13126 Mar 01 03:08	7° Ξ 28'01		direct		13132 May 15 16:12	21° Π 56'15
evening set	13126 Jun 12 07:49	15° Ξ 03'06		evening set		13132 Aug 24 12:48	29° Π 17'04
						13132 Aug 30 11:10	0° Ω
conjunction	13126 Jun 29 04:57	17° Ξ 07'59	-1°46'00	conjunction		13132 Sep 10 14:41	1° Ω 21'43 -0°49'28
minimum elong	13126 Jun 29 04:57	17° Ξ 07'59	1°47'00	minimum elong		13132 Sep 10 14:43	1° Ω 21'44 0°49'33
max. Earth dist.	13126 Jun 29 06:42	17° Ξ 08'31	10.58559 AU	max. Earth dist.		13132 Sep 11 04:12	1° Ω 25'51 10.65478 AU
morning rise	13126 Jul 16 01:32	19° Ξ 12'41		morning rise		13132 Sep 27 19:19	3° Ω 27'10
retrograde	13126 Oct 26 11:02	26° Ξ 44'48		retrograde		13133 Jan 09 20:16	11° Ω 00'39
opposition	13127 Jan 03 18:24	23° Ξ 23'08	-2°12'59	opposition		13133 Mar 20 19:41	7° Ω 36'34 -0°47'38
min. Earth dist.	13127 Jan 03 15:40	23° Ξ 23'40	8.59788 AU	min. Earth dist.		13133 Mar 20 08:01	7° Ω 38'49 8.65271 AU
direct	13127 Mar 14 07:08	20° Ξ 00'46		direct		13133 May 28 09:28	4° Ω 15'36
evening set	13127 Jun 24 24:00	27° Ξ 32'47		evening set		13133 Sep 06 01:50	11° Ω 35'55
conjunction	13127 Jul 11 20:20	29° Ξ 37'05	-1°48'09	conjunction		13133 Sep 23 06:03	13° Ω 41'09 -0°27'47
minimum elong	13127 Jul 11 20:20	29° Ξ 37'06	1°49'04	minimum elong		13133 Sep 23 06:04	13° Ω 41'09 0°27'40
max. Earth dist.	13127 Jul 12 00:41	29° Ξ 38'26	10.60711 AU	max. Earth dist.		13133 Sep 23 20:22	13° Ω 45'31 10.64880 AU
	13127 Jul 14 22:20	0° Ω		morning rise		13133 Oct 10 13:04	15° Ω 47'13
morning rise	13127 Jul 28 16:51	1° Ω 41'25		retrograde		13134 Jan 22 19:04	23° Ω 21'37
retrograde	13127 Nov 08 09:01	9° Ω 13'25		opposition		13134 Apr 02 15:45	19° Ω 57'11 -0°19'55
opposition	13128 Jan 16 22:24	5° Ω 51'24	-2°12'24	min. Earth dist.		13134 Apr 02 03:46	19° Ω 59'30 8.64393 AU
min. Earth dist.	13128 Jan 16 17:05	5° Ω 52'25	8.61800 AU	direct		13134 Jun 10 01:44	16° Ω 36'07
direct	13128 Mar 26 09:30	2° Ω 29'26		evening set		13134 Sep 18 17:11	23° Ω 56'41
evening set	13128 Jul 06 13:57	9° Ω 58'26					
conjunction	13128 Jul 23 10:17	12° Ω 02'25	-1°45'12	conjunction		13134 Oct 05 23:39	26° Ω 02'35 -0°04'50
minimum elong	13128 Jul 23 10:19	12° Ω 02'25	1°46'01	minimum elong		13134 Oct 05 23:40	26° Ω 02'35 0°04'30
max. Earth dist.	13128 Jul 23 18:01	12° Ω 04'48	10.62559 AU	behind sun begin		13134 Oct 05 16:40	26° Ω 00'28
morning rise	13128 Aug 09 07:16	14° Ω 06'34		behind sun end		13134 Oct 06 06:40	26° Ω 04'42
	13128 Aug 16 18:14	15° Ω		max. Earth dist.		13134 Oct 06 13:49	26° Ω 06'54 10.63759 AU
retrograde	13128 Nov 20 07:47	21° Ω 38'34		morning rise		13134 Oct 23 08:57	28° Ω 09'20
opposition	13129 Jan 29 00:44	18° Ω 16'07	-2°05'37			13134 Nov 08 05:20	0° \mathbb{M}
min. Earth dist.	13129 Jan 28 16:40	18° Ω 17'39	8.63456 AU	asc. node		13134 Dec 23 02:35	4° \mathbb{M} 11'13
	13129 Mar 29 00:12	15° κ Ω		retrograde		13135 Feb 04 19:09	5° \mathbb{M} 44'45
direct	13129 Apr 08 08:23	14° Ω 54'32		opposition		13135 Apr 15 11:13	2° \mathbb{M} 20'04 0°08'49
	13129 Apr 18 14:49	15° Ω		min. Earth dist.		13135 Apr 14 23:55	2° \mathbb{M} 22'16 8.63028 AU
evening set	13129 Jul 19 02:19	22° Ω 20'45				13135 May 18 18:48	30° κ Ω
				direct		13135 Jun 22 16:12	28° Ω 58'46
conjunction	13129 Aug 04 23:19	24° Ω 24'36	-1°37'23			13135 Jul 27 01:36	0° \mathbb{M}
minimum elong	13129 Aug 04 23:21	24° Ω 24'37	1°38'02	evening set		13135 Oct 01 11:16	6° \mathbb{M} 20'26
max. Earth dist.	13129 Aug 05 10:01	24° Ω 27'54	10.64023 AU				
morning rise	13129 Aug 21 21:25	26° Ω 28'48		conjunction		13135 Oct 18 19:44	8° \mathbb{M} 27'00 0°18'33
	13129 Sep 22 04:57	0° Π		minimum elong		13135 Oct 18 19:43	8° \mathbb{M} 26'59 0°19'05
retrograde	13129 Dec 03 05:22	4° Π 00'55		max. Earth dist.		13135 Oct 19 08:09	8° \mathbb{M} 30'47 10.62180 AU
opposition	13130 Feb 11 01:34	0° Π 38'02	-1°53'02	morning rise		13135 Nov 05 07:09	10° \mathbb{M} 34'26
min. Earth dist.	13130 Feb 10 15:29	0° Π 39'58	8.64685 AU			13135 Dec 16 03:03	15° \mathbb{M}
	13130 Feb 19 09:39	30° κ Ω		retrograde		13136 Feb 17 18:59	18° \mathbb{M} 11'02
direct	13130 Apr 21 04:27	27° Ω 16'45				13136 Apr 24 07:55	15° κ \mathbb{M}

opposition	13136 Apr 27 06:50	14° \mathbb{M} 46'11	0°37'14	min. Earth dist.	13142 Jul 12 23:39	0° \approx 54'33	8.47096 AU
min. Earth dist.	13136 Apr 26 21:17	14° \mathbb{M} 48'02	8.61258 AU		13142 Jul 24 13:25	30° \mathbb{R} $\overline{\mathbb{C}}$	
direct	13136 Jul 04 08:24	11° \mathbb{M} 24'33		direct	13142 Sep 18 21:16	27° $\overline{\mathbb{C}}$ 30'26	
	13136 Sep 09 01:02	15° \mathbb{M}			13142 Nov 12 15:59	0° \approx	
evening set	13136 Oct 13 08:17	18° \mathbb{M} 48'00		evening set	13142 Dec 31 10:30	5° \approx 12'37	
conjunction	13136 Oct 30 18:36	20° \mathbb{M} 55'15	0°41'02	conjunction	13143 Jan 18 03:07	7° \approx 23'30	1°46'24
minimum elong	13136 Oct 30 18:34	20° \mathbb{M} 55'15	0°41'46	minimum elong	13143 Jan 18 03:08	7° \approx 23'30	1°47'15
max. Earth dist.	13136 Oct 31 04:46	20° \mathbb{M} 58'22	10.60234 AU	max. Earth dist.	13143 Jan 17 18:33	7° \approx 20'50	10.45835 AU
morning rise	13136 Nov 17 07:51	23° \mathbb{M} 03'21		morning rise	13143 Feb 04 19:33	9° \approx 34'21	
	13137 Feb 01 06:57	0° \mathbb{A}			13143 Mar 28 02:22	15° \approx	
retrograde	13137 Mar 01 19:42	0° \mathbb{A} 41'13		retrograde	13143 May 19 01:11	17° \approx 16'24	
	13137 Mar 30 12:36	30° \mathbb{R} \mathbb{M}			13143 Jul 11 09:33	15° \mathbb{R} \approx	
opposition	13137 May 10 02:42	27° \mathbb{M} 16'17	1°04'01	opposition	13143 Jul 25 20:45	13° \approx 52'16	2°08'38
min. Earth dist.	13137 May 09 19:13	27° \mathbb{M} 17'45	8.59180 AU	min. Earth dist.	13143 Jul 26 04:03	13° \approx 50'49	8.44901 AU
direct	13137 Jul 17 02:35	23° \mathbb{M} 54'13		direct	13143 Oct 02 04:01	10° \approx 26'34	
	13137 Oct 15 00:56	0° \mathbb{A}			13143 Dec 17 09:04	15° \approx	
evening set	13137 Oct 26 08:51	1° \mathbb{A} 20'06		evening set	13144 Jan 14 02:53	18° \approx 11'42	
conjunction	13137 Nov 12 20:52	3° \mathbb{A} 28'03	1°01'42	conjunction	13144 Jan 31 19:53	20° \approx 23'03	1°39'59
minimum elong	13137 Nov 12 20:50	3° \mathbb{A} 28'03	1°02'33	minimum elong	13144 Jan 31 19:55	20° \approx 23'03	1°40'42
max. Earth dist.	13137 Nov 13 04:50	3° \mathbb{A} 30'30	10.58017 AU	max. Earth dist.	13144 Jan 31 09:14	20° \approx 19'43	10.43846 AU
morning rise	13137 Nov 30 11:29	5° \mathbb{A} 36'46		morning rise	13144 Feb 18 11:55	22° \approx 34'08	
retrograde	13138 Mar 14 22:09	13° \mathbb{A} 15'50			13144 May 14 04:51	0° \mathbb{H}	
opposition	13138 May 22 22:54	9° \mathbb{A} 50'53	1°27'54	retrograde	13144 May 31 09:34	0° \mathbb{H} 15'55	
min. Earth dist.	13138 May 22 17:18	9° \mathbb{A} 51'59	8.56886 AU		13144 Jun 17 16:04	30° \mathbb{R} \approx	
direct	13138 Jul 29 21:26	6° \mathbb{A} 28'18		opposition	13144 Aug 07 00:38	26° \approx 52'04	1°57'30
evening set	13138 Nov 08 12:57	13° \mathbb{A} 57'08		min. Earth dist.	13144 Aug 07 09:16	26° \approx 50'21	8.43140 AU
				direct	13144 Oct 14 11:10	23° \approx 25'56	
conjunction	13138 Nov 26 02:26	16° \mathbb{A} 05'45	1°19'29		13145 Jan 16 15:39	0° \mathbb{H}	
minimum elong	13138 Nov 26 02:24	16° \mathbb{A} 05'44	1°20'27	evening set	13145 Jan 26 20:06	1° \mathbb{H} 13'26	
max. Earth dist.	13138 Nov 26 08:26	16° \mathbb{A} 07'35	10.55619 AU				
morning rise	13138 Dec 13 17:55	18° \mathbb{A} 14'59		conjunction	13145 Feb 13 13:11	3° \mathbb{H} 25'05	1°28'26
retrograde	13139 Mar 28 01:39	25° \mathbb{A} 55'10		minimum elong	13145 Feb 13 13:13	3° \mathbb{H} 25'06	1°28'58
opposition	13139 Jun 04 20:01	22° \mathbb{A} 30'15	1°47'41	max. Earth dist.	13145 Feb 13 01:05	3° \mathbb{H} 21'19	10.42379 AU
min. Earth dist.	13139 Jun 04 16:10	22° \mathbb{A} 31'01	8.54461 AU	morning rise	13145 Mar 03 04:30	5° \mathbb{H} 36'18	
direct	13139 Aug 11 18:29	19° \mathbb{A} 07'06		retrograde	13145 Jun 13 17:50	13° \mathbb{H} 17'24	
evening set	13139 Nov 21 20:16	26° \mathbb{A} 39'09		opposition	13145 Aug 20 06:04	9° \mathbb{H} 53'52	1°40'18
				min. Earth dist.	13145 Aug 20 15:48	9° \mathbb{H} 51'55	8.41950 AU
conjunction	13139 Dec 09 10:52	28° \mathbb{A} 48'23	1°33'31	direct	13145 Oct 27 20:48	6° \mathbb{H} 27'24	
minimum elong	13139 Dec 09 10:50	28° \mathbb{A} 48'23	1°34'31	evening set	13146 Feb 09 13:29	14° \mathbb{H} 16'34	
max. Earth dist.	13139 Dec 09 14:02	28° \mathbb{A} 49'22	10.53132 AU				
	13139 Dec 19 03:43	0° $\overline{\mathbb{C}}$		conjunction	13146 Feb 27 06:05	16° \mathbb{H} 28'20	1°12'19
morning rise	13139 Dec 27 02:52	0° $\overline{\mathbb{C}}$ 58'06		minimum elong	13146 Feb 27 06:07	16° \mathbb{H} 28'20	1°12'39
retrograde	13140 Apr 09 06:49	8° $\overline{\mathbb{C}}$ 39'10		max. Earth dist.	13146 Feb 26 16:40	16° \mathbb{H} 24'08	10.41537 AU
opposition	13140 Jun 16 18:14	5° $\overline{\mathbb{C}}$ 14'21	2°02'20	morning rise	13146 Mar 16 20:23	18° \mathbb{H} 39'29	
min. Earth dist.	13140 Jun 16 16:54	5° $\overline{\mathbb{C}}$ 14'36	8.51985 AU	retrograde	13146 Jun 27 01:12	26° \mathbb{H} 19'34	
direct	13140 Aug 23 16:59	1° $\overline{\mathbb{C}}$ 50'32		opposition	13146 Sep 02 12:48	22° \mathbb{H} 56'22	1°17'53
evening set	13140 Dec 04 06:41	9° $\overline{\mathbb{C}}$ 25'56		min. Earth dist.	13146 Sep 02 23:47	22° \mathbb{H} 54'11	8.41422 AU
				direct	13146 Nov 10 08:19	19° \mathbb{H} 29'42	
conjunction	13140 Dec 21 22:08	11° $\overline{\mathbb{C}}$ 35'46	1°43'00	evening set	13147 Feb 23 06:06	27° \mathbb{H} 19'47	
minimum elong	13140 Dec 21 22:06	11° $\overline{\mathbb{C}}$ 35'46	1°44'00				
max. Earth dist.	13140 Dec 21 21:23	11° $\overline{\mathbb{C}}$ 35'32	10.50634 AU	conjunction	13147 Mar 12 21:41	29° \mathbb{H} 31'25	0°52'27
morning rise	13141 Jan 08 14:29	13° $\overline{\mathbb{C}}$ 45'53		minimum elong	13147 Mar 12 21:43	29° \mathbb{H} 31'25	0°52'34
retrograde	13141 Apr 22 13:14	21° $\overline{\mathbb{C}}$ 27'30		max. Earth dist.	13147 Mar 12 07:05	29° \mathbb{H} 26'51	10.41385 AU
opposition	13141 Jun 29 17:35	18° $\overline{\mathbb{C}}$ 02'51	2°11'01		13147 Mar 16 17:03	0° \mathbb{Y}	
min. Earth dist.	13141 Jun 29 19:35	18° $\overline{\mathbb{C}}$ 02'27	8.49513 AU	morning rise	13147 Mar 30 10:43	1° \mathbb{Y} 42'20	
direct	13141 Sep 05 17:12	14° $\overline{\mathbb{C}}$ 38'20		retrograde	13147 Jul 10 08:08	9° \mathbb{Y} 21'09	
evening set	13141 Dec 17 19:37	22° $\overline{\mathbb{C}}$ 17'10		opposition	13147 Sep 15 20:30	5° \mathbb{Y} 58'17	0°51'28
				min. Earth dist.	13147 Sep 16 08:08	5° \mathbb{Y} 55'58	8.41597 AU
conjunction	13142 Jan 04 11:44	24° $\overline{\mathbb{C}}$ 27'33	1°47'24	direct	13147 Nov 23 20:40	2° \mathbb{Y} 31'34	
minimum elong	13142 Jan 04 11:43	24° $\overline{\mathbb{C}}$ 27'33	1°48'21	evening set	13148 Mar 07 21:11	10° \mathbb{Y} 21'45	
max. Earth dist.	13142 Jan 04 06:29	24° $\overline{\mathbb{C}}$ 25'55	10.48168 AU				
morning rise	13142 Jan 22 04:16	26° $\overline{\mathbb{C}}$ 38'04		conjunction	13148 Mar 25 11:18	12° \mathbb{Y} 33'02	0°29'56
	13142 Feb 20 16:13	0° \approx		minimum elong	13148 Mar 25 11:19	12° \mathbb{Y} 33'02	0°29'49
retrograde	13142 May 05 19:03	4° \approx 20'00		max. Earth dist.	13148 Mar 24 20:31	12° \mathbb{Y} 28'24	10.41924 AU
opposition	13142 Jul 12 18:24	0° \approx 55'35	2°13'11	morning rise	13148 Apr 11 22:44	14° \mathbb{Y} 43'31	

retrograde	13148 Jul 22 13:32	22° Υ 20'58		conjunction	13154 Jun 11 08:21	29° Π 25'06	-1°34'15
opposition	13148 Sep 28 04:51	18° Υ 58'23	0°22'26	minimum elong	13154 Jun 11 08:19	29° Π 25'05	1°35'16
min. Earth dist.	13148 Sep 28 16:09	18° Υ 56'09	8.42449 AU	max. Earth dist.	13154 Jun 11 06:45	29° Π 24'36	10.55559 AU
direct	13148 Dec 06 10:18	15° Υ 31'47			13154 Jun 16 00:35	0° \mathfrak{E}	
evening set	13149 Mar 21 10:22	23° Υ 21'22		morning rise	13154 Jun 28 06:24	1° \mathfrak{E} 30'32	
				retrograde	13154 Oct 08 04:38	9° \mathfrak{E} 02'12	
conjunction	13149 Apr 07 22:33	25° Υ 32'03	0°05'58	opposition	13154 Dec 16 04:18	5° \mathfrak{E} 40'40	-2°02'53
minimum elong	13149 Apr 07 22:34	25° Υ 32'03	0°05'37	min. Earth dist.	13154 Dec 16 03:37	5° \mathfrak{E} 40'47	8.57130 AU
behind sun begin	13149 Apr 07 15:40	25° Υ 29'55		direct	13155 Feb 23 21:04	2° \mathfrak{E} 17'26	
behind sun end	13149 Apr 08 05:27	25° Υ 34'11		evening set	13155 Jun 07 04:02	9° \mathfrak{E} 53'01	
max. Earth dist.	13149 Apr 07 08:50	25° Υ 27'45	10.43107 AU				
morning rise	13149 Apr 25 07:53	27° Υ 41'54		conjunction	13155 Jun 24 01:49	11° \mathfrak{E} 58'01	-1°43'30
	13149 May 14 18:29	0° \mathfrak{B}		minimum elong	13155 Jun 24 01:48	11° \mathfrak{E} 58'01	1°44'30
desc. node	13149 Jul 09 09:13	4° \mathfrak{B} 40'45		max. Earth dist.	13155 Jun 24 03:57	11° \mathfrak{E} 58'41	10.58470 AU
retrograde	13149 Aug 04 17:53	5° \mathfrak{B} 17'59		morning rise	13155 Jul 10 22:37	14° \mathfrak{E} 02'46	
opposition	13149 Oct 11 13:26	1° \mathfrak{B} 55'39	-0°07'40	retrograde	13155 Oct 21 03:24	21° \mathfrak{E} 34'04	
min. Earth dist.	13149 Oct 11 23:15	1° \mathfrak{B} 53'43	8.43925 AU	opposition	13155 Dec 29 09:12	18° \mathfrak{E} 12'30	-2°11'12
	13149 Nov 06 15:43	30° \mathfrak{K} Υ		min. Earth dist.	13155 Dec 29 05:36	18° \mathfrak{E} 13'11	8.59980 AU
direct	13149 Dec 19 23:59	28° Υ 29'20		direct	13156 Mar 08 00:18	14° \mathfrak{E} 49'59	
	13150 Jan 31 12:30	0° \mathfrak{B}		evening set	13156 Jun 18 20:31	22° \mathfrak{E} 22'27	
evening set	13150 Apr 03 20:59	6° \mathfrak{B} 17'39					
				conjunction	13156 Jul 05 17:12	24° \mathfrak{E} 26'46	-1°47'47
conjunction	13150 Apr 21 06:53	8° \mathfrak{B} 27'32	-0°18'22	minimum elong	13156 Jul 05 17:12	24° \mathfrak{E} 26'46	1°48'45
minimum elong	13150 Apr 21 06:52	8° \mathfrak{B} 27'32	0°18'54	max. Earth dist.	13156 Jul 05 22:37	24° \mathfrak{E} 28'27	10.61200 AU
max. Earth dist.	13150 Apr 20 19:31	8° \mathfrak{B} 23'59	10.44867 AU	morning rise	13156 Jul 22 13:25	26° \mathfrak{E} 30'59	
morning rise	13150 May 08 13:43	10° \mathfrak{B} 36'34			13156 Aug 22 08:31	0° \mathfrak{J}	
	13150 Jun 16 24:00	15° \mathfrak{B}		retrograde	13156 Nov 02 02:31	4° \mathfrak{J} 02'04	
retrograde	13150 Aug 17 22:41	18° \mathfrak{B} 11'26		opposition	13157 Jan 10 12:59	0° \mathfrak{J} 40'24	-2°13'17
	13150 Oct 22 15:35	15° \mathfrak{R} \mathfrak{B}		min. Earth dist.	13157 Jan 10 07:07	0° \mathfrak{J} 41'31	8.62581 AU
opposition	13150 Oct 24 22:15	14° \mathfrak{B} 49'19	-0°37'14		13157 Jan 19 10:00	30° \mathfrak{R} \mathfrak{E}	
min. Earth dist.	13150 Oct 25 06:13	14° \mathfrak{B} 47'46	8.45950 AU	direct	13157 Mar 21 01:19	27° \mathfrak{E} 18'34	
direct	13151 Jan 02 11:49	11° \mathfrak{B} 23'26			13157 May 17 16:59	0° \mathfrak{J}	
	13151 Mar 11 01:39	15° \mathfrak{B}		evening set	13157 Jul 01 10:35	4° \mathfrak{J} 47'54	
evening set	13151 Apr 17 04:36	19° \mathfrak{B} 09'54					
				conjunction	13157 Jul 18 06:43	6° \mathfrak{J} 51'45	-1°47'01
conjunction	13151 May 04 11:52	21° \mathfrak{B} 18'50	-0°41'33	minimum elong	13157 Jul 18 06:44	6° \mathfrak{J} 51'45	1°47'53
minimum elong	13151 May 04 11:50	21° \mathfrak{B} 18'50	0°42'17	max. Earth dist.	13157 Jul 18 14:23	6° \mathfrak{J} 54'07	10.63636 AU
max. Earth dist.	13151 May 04 02:55	21° \mathfrak{B} 16'03	10.47116 AU	morning rise	13157 Aug 04 03:14	8° \mathfrak{J} 55'41	
morning rise	13151 May 21 16:10	23° \mathfrak{B} 26'58			13157 Oct 04 06:03	15° \mathfrak{J}	
	13151 Jul 28 00:52	0° \mathfrak{J}		retrograde	13157 Nov 15 00:46	16° \mathfrak{J} 26'39	
retrograde	13151 Aug 31 02:44	1° \mathfrak{J} 00'44			13157 Dec 27 19:46	15° \mathfrak{R} \mathfrak{J}	
	13151 Oct 04 18:01	30° \mathfrak{R} \mathfrak{B}		opposition	13158 Jan 23 15:23	13° \mathfrak{J} 04'49	-2°09'09
opposition	13151 Nov 07 06:48	27° \mathfrak{B} 38'50	-1°04'47	min. Earth dist.	13158 Jan 23 07:59	13° \mathfrak{J} 06'14	8.64831 AU
min. Earth dist.	13151 Nov 07 13:09	27° \mathfrak{B} 37'36	8.48419 AU	direct	13158 Apr 02 23:24	9° \mathfrak{J} 43'34	
direct	13152 Jan 15 21:15	24° \mathfrak{B} 13'30			13158 Jun 25 07:57	15° \mathfrak{J}	
	13152 Apr 12 20:28	0° \mathfrak{J}		evening set	13158 Jul 13 22:55	17° \mathfrak{J} 09'59	
evening set	13152 Apr 29 09:19	1° \mathfrak{J} 57'42					
				conjunction	13158 Jul 30 19:17	19° \mathfrak{J} 13'34	-1°41'16
conjunction	13152 May 16 13:45	4° \mathfrak{J} 05'36	-1°02'35	minimum elong	13158 Jul 30 19:19	19° \mathfrak{J} 13'35	1°42'00
minimum elong	13152 May 16 13:44	4° \mathfrak{J} 05'36	1°03'26	max. Earth dist.	13158 Jul 31 04:45	19° \mathfrak{J} 16'29	10.65684 AU
max. Earth dist.	13152 May 16 06:51	4° \mathfrak{J} 03'27	10.49738 AU	morning rise	13158 Aug 16 16:50	21° \mathfrak{J} 17'27	
morning rise	13152 Jun 02 15:39	6° \mathfrak{J} 12'48		retrograde	13158 Nov 27 20:16	28° \mathfrak{J} 48'23	
retrograde	13152 Sep 12 03:34	13° \mathfrak{J} 45'38		opposition	13159 Feb 05 16:04	25° \mathfrak{J} 26'19	-1°59'02
opposition	13152 Nov 19 14:44	10° \mathfrak{J} 23'56	-1°28'57	min. Earth dist.	13159 Feb 05 07:04	25° \mathfrak{J} 28'02	8.66633 AU
min. Earth dist.	13152 Nov 19 19:28	10° \mathfrak{J} 23'01	8.51202 AU	direct	13159 Apr 15 20:21	22° \mathfrak{J} 05'32	
direct	13153 Jan 28 07:23	6° \mathfrak{J} 59'14		evening set	13159 Jul 26 09:59	29° \mathfrak{J} 29'22	
evening set	13153 May 12 10:49	14° \mathfrak{J} 40'51			13159 Jul 30 15:31	0° \mathfrak{J}	
conjunction	13153 May 29 12:32	16° \mathfrak{J} 47'41	-1°20'25	conjunction	13159 Aug 12 07:24	1° \mathfrak{J} 32'56	-1°30'53
minimum elong	13153 May 29 12:30	16° \mathfrak{J} 47'40	1°21'22	minimum elong	13159 Aug 12 07:26	1° \mathfrak{J} 32'56	1°31'27
max. Earth dist.	13153 May 29 07:45	16° \mathfrak{J} 46'12	10.52600 AU	max. Earth dist.	13159 Aug 12 18:58	1° \mathfrak{J} 36'29	10.67240 AU
morning rise	13153 Jun 15 12:20	18° \mathfrak{J} 53'57		morning rise	13159 Aug 29 06:27	3° \mathfrak{J} 36'56	
retrograde	13153 Sep 25 04:07	26° \mathfrak{J} 26'07		retrograde	13159 Dec 10 17:02	11° \mathfrak{J} 08'02	
opposition	13153 Dec 02 22:03	23° \mathfrak{J} 04'32	-1°48'36	opposition	13160 Feb 18 15:17	7° \mathfrak{J} 45'38	-1°43'31
min. Earth dist.	13153 Dec 03 00:27	23° \mathfrak{J} 04'05	8.54156 AU	min. Earth dist.	13160 Feb 18 04:32	7° \mathfrak{J} 47'41	8.67881 AU
direct	13154 Feb 10 15:44	19° \mathfrak{J} 40'33		direct	13160 Apr 27 16:47	4° \mathfrak{J} 25'12	
evening set	13154 May 25 08:54	27° \mathfrak{J} 19'15		evening set	13160 Aug 06 20:31	11° \mathfrak{J} 46'51	

conjunction	13160 Aug 23 19:29	13° \mathring{M} 50'36	-1°16'21	opposition	13166 May 04 15:04	21° \mathring{M} 50'03	0°52'07
minimum elong	13160 Aug 23 19:32	13° \mathring{M} 50'37	1°16'44	min. Earth dist.	13166 May 04 07:05	21° \mathring{M} 51'36	8.61149 AU
max. Earth dist.	13160 Aug 24 09:09	13° \mathring{M} 54'47	10.68196 AU	direct	13166 Jul 11 16:49	18° \mathring{M} 28'18	
morning rise	13160 Sep 09 20:23	15° \mathring{M} 54'55		evening set	13166 Oct 20 18:50	25° \mathring{M} 52'24	
retrograde	13160 Dec 22 14:38	23° \mathring{M} 26'20					
opposition	13161 Mar 02 13:08	20° \mathring{M} 03'34	-1°23'17	conjunction	13166 Nov 07 06:05	27° \mathring{M} 59'54	0°52'35
min. Earth dist.	13161 Mar 02 01:08	20° \mathring{M} 05'51	8.68477 AU	minimum elong	13166 Nov 07 06:03	27° \mathring{M} 59'53	0°53'24
direct	13161 May 10 09:24	16° \mathring{M} 43'20		max. Earth dist.	13166 Nov 07 14:25	28° \mathring{M} 02'27	10.59740 AU
evening set	13161 Aug 19 07:25	24° \mathring{M} 03'24			13166 Nov 23 16:35	0° \mathring{Z}	
				morning rise	13166 Nov 24 19:53	0° \mathring{Z} 08'11	
conjunction	13161 Sep 05 08:15	26° \mathring{M} 07'30	-0°58'21	retrograde	13167 Mar 09 07:34	7° \mathring{Z} 46'13	
minimum elong	13161 Sep 05 08:17	26° \mathring{M} 07'31	0°58'32	opposition	13167 May 17 10:36	4° \mathring{Z} 21'12	1°17'27
max. Earth dist.	13161 Sep 05 22:23	26° \mathring{M} 11'49	10.68453 AU	min. Earth dist.	13167 May 17 04:45	4° \mathring{Z} 22'21	8.58333 AU
morning rise	13161 Sep 22 11:27	28° \mathring{M} 12'19		direct	13167 Jul 24 09:34	0° \mathring{Z} 58'45	
	13161 Oct 07 21:40	0° \mathring{Z}		evening set	13167 Nov 02 20:49	8° \mathring{Z} 25'45	
retrograde	13162 Jan 04 11:29	5° \mathring{Z} 44'16					
opposition	13162 Mar 15 09:46	2° \mathring{Z} 21'06	-0°59'15	conjunction	13167 Nov 20 09:30	10° \mathring{Z} 33'58	1°11'47
min. Earth dist.	13162 Mar 14 22:03	2° \mathring{Z} 23'21	8.68328 AU	minimum elong	13167 Nov 20 09:27	10° \mathring{Z} 33'57	1°12'43
	13162 Apr 18 11:57	30° \mathring{R} \mathring{M}		max. Earth dist.	13167 Nov 20 14:33	10° \mathring{Z} 35'31	10.56810 AU
direct	13162 May 23 00:41	29° \mathring{M} 00'52		morning rise	13167 Dec 08 00:32	12° \mathring{Z} 42'54	
	13162 Jun 25 23:52	0° \mathring{Z}		retrograde	13168 Mar 21 09:25	20° \mathring{Z} 22'17	
evening set	13162 Aug 31 19:20	6° \mathring{Z} 20'11		opposition	13168 May 29 07:02	16° \mathring{Z} 57'05	1°39'15
				min. Earth dist.	13168 May 29 03:57	16° \mathring{Z} 57'42	8.55366 AU
conjunction	13162 Sep 17 22:14	8° \mathring{Z} 24'48	-0°37'40	direct	13168 Aug 05 05:43	13° \mathring{Z} 33'52	
minimum elong	13162 Sep 17 22:16	8° \mathring{Z} 24'49	0°37'38	evening set	13168 Nov 15 02:04	21° \mathring{Z} 04'10	
max. Earth dist.	13162 Sep 18 11:23	8° \mathring{Z} 28'49	10.67933 AU				
morning rise	13162 Oct 05 04:00	10° \mathring{Z} 30'14		conjunction	13168 Dec 02 16:02	23° \mathring{Z} 13'06	1°27'38
retrograde	13163 Jan 17 08:35	18° \mathring{Z} 03'03		minimum elong	13168 Dec 02 15:59	23° \mathring{Z} 13'05	1°28'38
opposition	13163 Mar 28 05:35	14° \mathring{Z} 39'30	-0°32'29	max. Earth dist.	13168 Dec 02 18:05	23° \mathring{Z} 13'44	10.53788 AU
min. Earth dist.	13163 Mar 27 18:54	14° \mathring{Z} 41'33	8.67402 AU	morning rise	13168 Dec 20 07:58	25° \mathring{Z} 22'36	
direct	13163 Jun 04 16:34	11° \mathring{Z} 19'06			13169 Jan 31 21:58	0° \mathring{Z}	
evening set	13163 Sep 13 09:04	18° \mathring{Z} 38'30		retrograde	13169 Apr 03 12:41	3° \mathring{Z} 03'12	
					13169 Jun 06 12:37	30° \mathring{R} \mathring{Z}	
conjunction	13163 Sep 30 14:11	20° \mathring{Z} 43'46	-0°15'13	opposition	13169 Jun 11 04:25	29° \mathring{Z} 37'56	1°56'22
minimum elong	13163 Sep 30 14:11	20° \mathring{Z} 43'46	0°14'58	min. Earth dist.	13169 Jun 11 03:40	29° \mathring{Z} 38'04	8.52371 AU
behind sun begin	13163 Sep 30 11:33	20° \mathring{Z} 42'58		direct	13169 Aug 18 03:53	26° \mathring{Z} 13'56	
behind sun end	13163 Sep 30 16:50	20° \mathring{Z} 44'34			13169 Oct 25 12:52	0° \mathring{Z}	
max. Earth dist.	13163 Oct 01 02:10	20° \mathring{Z} 47'25	10.66669 AU	evening set	13169 Nov 28 10:42	3° \mathring{Z} 47'47	
morning rise	13163 Oct 17 22:24	22° \mathring{Z} 49'54					
	13164 Jan 08 12:08	0° \mathring{M}		conjunction	13169 Dec 16 01:48	5° \mathring{Z} 57'24	1°39'17
retrograde	13164 Jan 30 06:14	0° \mathring{M} 23'51		minimum elong	13169 Dec 16 01:47	5° \mathring{Z} 57'24	1°40'18
	13164 Feb 21 03:23	30° \mathring{R} \mathring{Z}		max. Earth dist.	13169 Dec 16 01:16	5° \mathring{Z} 57'14	10.50798 AU
opposition	13164 Apr 09 00:51	26° \mathring{Z} 59'53	-0°04'10	morning rise	13170 Jan 02 18:10	8° \mathring{Z} 07'25	
min. Earth dist.	13164 Apr 08 15:10	27° \mathring{Z} 01'46	8.65804 AU	retrograde	13170 Apr 16 17:59	15° \mathring{Z} 48'57	
asc. node	13164 Jun 01 22:13	23° \mathring{Z} 50'03		opposition	13170 Jun 24 02:51	12° \mathring{Z} 23'42	2°07'54
direct	13164 Jun 16 08:04	23° \mathring{Z} 39'11		min. Earth dist.	13170 Jun 24 04:04	12° \mathring{Z} 23'27	8.49469 AU
	13164 Sep 16 15:42	0° \mathring{M}		direct	13170 Aug 31 03:23	8° \mathring{Z} 58'57	
evening set	13164 Sep 25 01:11	0° \mathring{M} 59'25		evening set	13170 Dec 11 22:14	16° \mathring{Z} 36'26	
conjunction	13164 Oct 12 08:36	3° \mathring{M} 05'25	0°08'05	conjunction	13170 Dec 29 14:13	18° \mathring{Z} 46'41	1°46'05
minimum elong	13164 Oct 12 08:35	3° \mathring{M} 05'24	0°08'33	minimum elong	13170 Dec 29 14:12	18° \mathring{Z} 46'41	1°47'03
behind sun begin	13164 Oct 12 02:22	3° \mathring{M} 03'31		max. Earth dist.	13170 Dec 29 11:15	18° \mathring{Z} 45'46	10.47977 AU
behind sun end	13164 Oct 12 14:49	3° \mathring{M} 07'17		morning rise	13171 Jan 16 06:41	20° \mathring{Z} 57'08	
max. Earth dist.	13164 Oct 12 20:06	3° \mathring{M} 08'54	10.64797 AU	retrograde	13171 Apr 29 23:53	28° \mathring{Z} 39'18	
morning rise	13164 Oct 29 18:59	5° \mathring{M} 12'17		opposition	13171 Jul 07 02:53	25° \mathring{Z} 14'11	2°13'07
retrograde	13165 Feb 11 04:39	12° \mathring{M} 47'33		min. Earth dist.	13171 Jul 07 05:57	25° \mathring{Z} 13'34	8.46797 AU
opposition	13165 Apr 21 19:54	9° \mathring{M} 23'09	0°24'28	direct	13171 Sep 13 05:36	21° \mathring{Z} 48'46	
min. Earth dist.	13165 Apr 21 10:45	9° \mathring{M} 24'55	8.63681 AU	evening set	13171 Dec 25 11:59	29° \mathring{Z} 29'42	
direct	13165 Jun 29 00:28	6° \mathring{M} 01'59			13171 Dec 29 15:21	0° \mathring{Z}	
evening set	13165 Oct 07 20:16	13° \mathring{M} 23'48					
	13165 Oct 21 01:50	15° \mathring{M}		conjunction	13172 Jan 12 04:35	1° \mathring{Z} 40'30	1°47'35
				minimum elong	13172 Jan 12 04:35	1° \mathring{Z} 40'30	1°48'29
conjunction	13165 Oct 25 05:48	15° \mathring{M} 30'34	0°31'00	max. Earth dist.	13172 Jan 11 22:48	1° \mathring{Z} 38'42	10.45467 AU
minimum elong	13165 Oct 25 05:47	15° \mathring{M} 30'33	0°31'39	morning rise	13172 Jan 29 21:01	3° \mathring{Z} 51'20	
max. Earth dist.	13165 Oct 25 16:21	15° \mathring{M} 33'47	10.62448 AU	retrograde	13172 May 12 07:11	11° \mathring{Z} 33'46	
morning rise	13165 Nov 11 18:03	17° \mathring{M} 38'09		opposition	13172 Jul 19 04:31	8° \mathring{Z} 08'53	2°11'40
retrograde	13166 Feb 24 05:36	25° \mathring{M} 14'49		min. Earth dist.	13172 Jul 19 10:00	8° \mathring{Z} 07'47	8.44495 AU

direct	13172 Sep 25 09:28	4° \approx 42'53			13179 Mar 23 19:40	0° \mathbb{B}	
evening set	13173 Jan 07 03:45	12° \approx 26'56		evening set	13179 Mar 29 02:06	0° \mathbb{B} 38'26	
conjunction	13173 Jan 24 20:41	14° \approx 38'13	1°43'39	conjunction	13179 Apr 15 13:03	2° \mathbb{B} 48'43	-0°07'18
minimum elong	13173 Jan 24 20:43	14° \approx 38'14	1°44'26	minimum elong	13179 Apr 15 13:02	2° \mathbb{B} 48'43	0°07'45
max. Earth dist.	13173 Jan 24 11:38	14° \approx 35'24	10.43406 AU	behind sun begin	13179 Apr 15 06:34	2° \mathbb{B} 46'43	
	13173 Jan 27 18:42	15° \approx		behind sun end	13179 Apr 15 19:30	2° \mathbb{B} 50'43	
morning rise	13173 Feb 11 12:57	16° \approx 49'21		max. Earth dist.	13179 Apr 15 00:56	2° \mathbb{B} 44'56	10.44404 AU
retrograde	13173 May 25 15:29	24° \approx 31'35		morning rise	13179 May 02 21:05	4° \mathbb{B} 58'11	
opposition	13173 Aug 01 07:37	21° \approx 07'04	2°03'30	retrograde	13179 Aug 12 07:52	12° \mathbb{B} 33'51	
min. Earth dist.	13173 Aug 01 15:31	21° \approx 05'29	8.42690 AU	opposition	13179 Oct 19 04:21	9° \mathbb{B} 12'06	-0°23'48
direct	13173 Oct 08 15:19	17° \approx 40'37		min. Earth dist.	13179 Oct 19 13:36	9° \mathbb{B} 10'17	8.45504 AU
evening set	13174 Jan 20 20:41	25° \approx 27'21		direct	13179 Dec 27 14:51	5° \mathbb{B} 46'28	
				evening set	13180 Apr 10 11:45	13° \mathbb{B} 34'05	
conjunction	13174 Feb 07 13:41	27° \approx 38'59	1°34'24		13180 Apr 22 01:15	15° \mathbb{B}	
minimum elong	13174 Feb 07 13:43	27° \approx 38'59	1°35'01	conjunction	13180 Apr 27 20:08	15° \mathbb{B} 43'28	-0°31'06
max. Earth dist.	13174 Feb 07 02:01	27° \approx 35'20	10.41907 AU	minimum elong	13180 Apr 27 20:07	15° \mathbb{B} 43'27	0°31'45
morning rise	13174 Feb 25 05:31	29° \approx 50'17		max. Earth dist.	13180 Apr 27 09:23	15° \mathbb{B} 40'06	10.46683 AU
	13174 Feb 26 13:24	0° \mathbb{H}		morning rise	13180 May 15 01:48	17° \mathbb{B} 52'02	
retrograde	13174 Jun 07 21:59	7° \mathbb{H} 31'57		retrograde	13180 Aug 24 11:46	25° \mathbb{B} 26'25	
opposition	13174 Aug 14 12:22	4° \mathbb{H} 07'54	1°48'59	opposition	13180 Oct 31 13:26	22° \mathbb{B} 04'56	-0°52'27
min. Earth dist.	13174 Aug 14 21:52	4° \mathbb{H} 06'00	8.41482 AU	min. Earth dist.	13180 Oct 31 20:55	22° \mathbb{B} 03'28	8.47966 AU
direct	13174 Oct 22 01:31	0° \mathbb{H} 41'12		direct	13181 Jan 09 03:02	18° \mathbb{B} 39'49	
evening set	13175 Feb 03 13:50	8° \mathbb{H} 29'56		evening set	13181 Apr 23 18:21	26° \mathbb{B} 25'15	
conjunction	13175 Feb 21 06:38	10° \mathbb{H} 41'44	1°20'17	conjunction	13181 May 11 00:02	28° \mathbb{B} 33'36	-0°53'15
minimum elong	13175 Feb 21 06:40	10° \mathbb{H} 41'45	1°20'43	minimum elong	13181 May 11 00:00	28° \mathbb{B} 33'36	0°54'03
max. Earth dist.	13175 Feb 20 17:37	10° \mathbb{H} 37'40	10.41051 AU	max. Earth dist.	13181 May 10 15:41	28° \mathbb{B} 31'00	10.49248 AU
morning rise	13175 Mar 10 21:40	12° \mathbb{H} 53'03			13181 May 22 13:14	0° \mathbb{H}	
retrograde	13175 Jun 21 05:08	20° \mathbb{H} 33'55		morning rise	13181 May 28 03:06	0° \mathbb{H} 41'13	
opposition	13175 Aug 27 18:30	17° \mathbb{H} 10'20	1°28'49	retrograde	13181 Sep 06 14:00	8° \mathbb{H} 14'34	
min. Earth dist.	13175 Aug 28 04:29	17° \mathbb{H} 08'21	8.40941 AU	opposition	13181 Nov 13 22:03	4° \mathbb{H} 53'14	-1°18'18
direct	13175 Nov 04 12:47	13° \mathbb{H} 43'35		min. Earth dist.	13181 Nov 14 03:26	4° \mathbb{H} 52'11	8.50612 AU
evening set	13176 Feb 17 06:52	21° \mathbb{H} 33'35		direct	13182 Jan 22 14:28	1° \mathbb{H} 28'42	
conjunction	13176 Mar 05 23:05	23° \mathbb{H} 45'22	1°02'01	evening set	13182 May 06 21:42	9° \mathbb{H} 11'39	
minimum elong	13176 Mar 05 23:07	23° \mathbb{H} 45'23	1°02'14	conjunction	13182 May 24 00:45	11° \mathbb{H} 18'58	-1°12'39
max. Earth dist.	13176 Mar 05 10:01	23° \mathbb{H} 41'17	10.40886 AU	minimum elong	13182 May 24 00:43	11° \mathbb{H} 18'57	1°13'35
morning rise	13176 Mar 23 12:54	25° \mathbb{H} 56'31		max. Earth dist.	13182 May 23 19:04	11° \mathbb{H} 17'11	10.51880 AU
	13176 Apr 28 11:09	0° \mathbb{Y}		morning rise	13182 Jun 10 01:24	13° \mathbb{H} 25'37	
retrograde	13176 Jul 03 13:37	3° \mathbb{Y} 36'16		retrograde	13182 Sep 19 16:53	20° \mathbb{H} 58'18	
opposition	13176 Sep 09 01:44	0° \mathbb{Y} 13'10	1°04'03	opposition	13182 Nov 27 06:08	17° \mathbb{H} 37'04	-1°40'08
min. Earth dist.	13176 Sep 09 11:46	0° \mathbb{Y} 11'11	8.41098 AU	min. Earth dist.	13182 Nov 27 09:31	17° \mathbb{H} 36'24	8.53239 AU
	13176 Sep 11 20:16	30° \mathbb{R} \mathbb{H}		direct	13183 Feb 04 22:55	14° \mathbb{H} 13'08	
direct	13176 Nov 16 23:47	26° \mathbb{H} 46'32		evening set	13183 May 19 21:55	21° \mathbb{H} 53'27	
	13177 Jan 19 06:46	0° \mathbb{Y}					
evening set	13177 Mar 01 23:05	4° \mathbb{Y} 37'02		conjunction	13183 Jun 05 22:31	23° \mathbb{H} 59'49	-1°28'23
conjunction	13177 Mar 19 14:09	6° \mathbb{Y} 48'36	0°40'34	minimum elong	13183 Jun 05 22:29	23° \mathbb{H} 59'48	1°29'23
minimum elong	13177 Mar 19 14:11	6° \mathbb{Y} 48'36	0°40'33	max. Earth dist.	13183 Jun 05 19:13	23° \mathbb{H} 58'47	10.54428 AU
max. Earth dist.	13177 Mar 19 01:15	6° \mathbb{Y} 44'33	10.41415 AU	morning rise	13183 Jun 22 21:12	26° \mathbb{H} 05'39	
morning rise	13177 Apr 06 02:20	8° \mathbb{Y} 59'22			13183 Jul 27 14:39	0° \mathbb{B}	
retrograde	13177 Jul 16 21:36	16° \mathbb{Y} 37'48		retrograde	13183 Oct 02 18:43	3° \mathbb{B} 37'55	
opposition	13177 Sep 22 10:07	13° \mathbb{Y} 15'13	0°36'01	opposition	13183 Dec 10 13:33	0° \mathbb{B} 16'42	-1°56'58
min. Earth dist.	13177 Sep 22 20:13	13° \mathbb{Y} 13'13	8.41945 AU	min. Earth dist.	13183 Dec 10 15:19	0° \mathbb{B} 16'21	8.55748 AU
direct	13177 Nov 30 11:42	9° \mathbb{Y} 48'48			13183 Dec 14 04:29	30° \mathbb{R} \mathbb{H}	
evening set	13178 Mar 15 13:41	17° \mathbb{Y} 39'03		direct	13184 Feb 18 05:06	26° \mathbb{H} 53'23	
					13184 Apr 20 15:37	0° \mathbb{B}	
conjunction	13178 Apr 02 02:56	19° \mathbb{Y} 50'06	0°17'04	evening set	13184 May 31 19:19	4° \mathbb{B} 30'56	
minimum elong	13178 Apr 02 02:57	19° \mathbb{Y} 50'06	0°16'50	conjunction	13184 Jun 17 17:47	6° \mathbb{B} 36'25	-1°39'47
max. Earth dist.	13178 Apr 01 14:20	19° \mathbb{Y} 46'10	10.42607 AU	minimum elong	13184 Jun 17 17:46	6° \mathbb{B} 36'25	1°40'48
morning rise	13178 Apr 19 13:09	22° \mathbb{Y} 00'18		max. Earth dist.	13184 Jun 17 16:26	6° \mathbb{B} 36'00	10.56842 AU
retrograde	13178 Jul 30 03:00	29° \mathbb{Y} 37'21		morning rise	13184 Jul 04 15:07	8° \mathbb{B} 41'34	
opposition	13178 Oct 05 19:11	26° \mathbb{Y} 15'14	0°06'12	retrograde	13184 Oct 14 17:54	16° \mathbb{B} 13'37	
min. Earth dist.	13178 Oct 06 05:09	26° \mathbb{Y} 13'16	8.43442 AU	opposition	13184 Dec 22 19:59	12° \mathbb{B} 52'16	-2°08'03
direct	13178 Dec 14 01:42	22° \mathbb{Y} 49'10		min. Earth dist.	13184 Dec 22 19:45	12° \mathbb{B} 52'19	8.58102 AU
desc. node	13178 Dec 21 16:04	22° \mathbb{Y} 52'11					

direct	13185 Mar 02 10:33	9°  29'31	direct	13191 May 17 23:24	23°  57'54
evening set	13185 Jun 13 13:51	17°  04'10		13191 Aug 15 14:50	0° 
			evening set	13191 Aug 26 19:07	1°  18'58
conjunction	13185 Jun 30 10:53	19°  08'57 -1°46'21			
minimum elong	13185 Jun 30 10:53	19°  08'56 1°47'20	conjunction	13191 Sep 12 21:22	3°  23'47 -0°46'44
max. Earth dist.	13185 Jun 30 12:14	19°  09'21 10.59088 AU	minimum elong	13191 Sep 12 21:24	3°  23'47 0°46'47
morning rise	13185 Jul 17 07:30	21°  13'34	max. Earth dist.	13191 Sep 13 11:17	3°  28'02 10.64999 AU
retrograde	13185 Oct 27 17:07	28°  45'32	morning rise	13191 Sep 30 02:11	5°  29'20
opposition	13186 Jan 05 01:18	25°  23'55 -2°13'00	retrograde	13192 Jan 12 04:26	13°  03'14
min. Earth dist.	13186 Jan 04 22:25	25°  24'28 8.60246 AU	opposition	13192 Mar 22 02:37	9°  39'05 -0°44'08
direct	13186 Mar 15 14:56	22°  01'38	min. Earth dist.	13192 Mar 21 14:39	9°  41'23 8.64717 AU
evening set	13186 Jun 26 05:40	29°  33'17	direct	13192 May 29 16:30	6°  18'04
	13186 Jun 29 21:32	0° 	evening set	13192 Sep 07 08:39	13°  38'43
conjunction	13186 Jul 13 02:06	1°  37'34 -1°47'51			
minimum elong	13186 Jul 13 02:06	1°  37'34 1°48'46	conjunction	13192 Sep 24 13:07	15°  44'07 -0°24'52
max. Earth dist.	13186 Jul 13 06:54	1°  39'03 10.61091 AU	minimum elong	13192 Sep 24 13:08	15°  44'07 0°24'42
morning rise	13186 Jul 29 22:35	3°  41'51	max. Earth dist.	13192 Sep 25 03:33	15°  48'32 10.64260 AU
retrograde	13186 Nov 09 16:13	11°  13'49	morning rise	13192 Oct 11 20:18	17°  50'20
opposition	13187 Jan 18 05:06	7°  51'48 -2°11'38	retrograde	13193 Jan 24 04:05	25°  25'09
min. Earth dist.	13187 Jan 17 23:14	7°  52'56 8.62094 AU	opposition	13193 Apr 03 22:59	22°  00'40 -0°16'14
direct	13187 Mar 28 15:37	4°  29'58	min. Earth dist.	13193 Apr 03 11:05	22°  02'58 8.63713 AU
evening set	13187 Jul 08 19:33	11°  58'43	direct	13193 Jun 11 07:01	18°  39'30
			evening set	13193 Sep 20 00:32	26°  00'32
conjunction	13187 Jul 25 16:03	14°  02'41 -1°44'18			
minimum elong	13187 Jul 25 16:04	14°  02'42 1°45'05	conjunction	13193 Oct 07 07:07	28°  06'34 -0°01'49
max. Earth dist.	13187 Jul 26 00:11	14°  05'12 10.62766 AU	minimum elong	13193 Oct 07 07:07	28°  06'34 0°01'26
	13187 Aug 02 09:53	15° 	behind sun begin	13193 Oct 06 23:58	28°  04'24
morning rise	13187 Aug 11 13:05	16°  06'51	behind sun end	13193 Oct 07 14:16	28°  08'44
retrograde	13187 Nov 22 14:21	23°  38'53	max. Earth dist.	13193 Oct 07 20:33	28°  10'40 10.63029 AU
opposition	13188 Jan 31 07:17	20°  16'28 -2°04'08		13193 Oct 22 19:46	0° 
min. Earth dist.	13188 Jan 30 23:14	20°  18'00 8.63567 AU	morning rise	13193 Oct 24 16:40	0°  13'29
direct	13188 Apr 09 13:54	16°  54'58	asc. node	13193 Nov 05 11:07	1°  36'24
evening set	13188 Jul 20 08:00	24°  21'05	retrograde	13194 Feb 06 02:47	7°  49'22
			opposition	13194 Apr 16 18:51	4°  24'36 0°12'30
conjunction	13188 Aug 06 05:06	26°  12'45 -1°35'54	min. Earth dist.	13194 Apr 16 08:18	4°  26'39 8.62257 AU
minimum elong	13188 Aug 06 05:08	26°  12'45 1°36'32	direct	13194 Jun 23 23:23	1°  03'11
max. Earth dist.	13188 Aug 06 15:17	26°  12'45 10.64045 AU	evening set	13194 Oct 02 19:06	8°  25'23
morning rise	13188 Aug 23 03:26	28°  29'14			
	13188 Sep 04 23:26	0° 	conjunction	13194 Oct 20 03:43	10°  32'06 0°21'29
retrograde	13188 Dec 04 12:37	6°  10'28	minimum elong	13194 Oct 20 03:42	10°  32'06 0°22'04
opposition	13189 Feb 12 08:12	2°  38'37 -1°50'53	max. Earth dist.	13194 Oct 20 15:13	10°  35'37 10.61373 AU
min. Earth dist.	13189 Feb 11 22:49	2°  40'24 8.64610 AU	morning rise	13194 Nov 06 15:25	12°  39'42
	13189 Mar 24 04:53	30°  48'02		13194 Nov 26 21:45	15° 
direct	13189 Apr 22 10:23	29°  17'22	retrograde	13195 Feb 19 02:56	20°  36'47
	13189 May 21 06:03	0° 	opposition	13195 Apr 29 14:43	16°  51'50 0°40'46
evening set	13189 Aug 01 19:28	6°  41'13	min. Earth dist.	13195 Apr 29 05:50	16°  53'34 8.60423 AU
				13195 May 24 23:03	15° 
conjunction	13189 Aug 18 17:46	8°  45'15 -1°23'05	direct	13195 Jul 06 16:39	13°  30'03
minimum elong	13189 Aug 18 17:48	8°  45'15 1°23'32		13195 Aug 17 13:02	15° 
max. Earth dist.	13189 Aug 19 05:09	8°  48'45 10.64875 AU	evening set	13195 Oct 15 16:44	20°  35'06
morning rise	13189 Sep 04 18:02	10°  49'48			
retrograde	13189 Dec 17 09:36	18°  22'24	conjunction	13195 Nov 02 03:14	23°  31'31 0°43'47
opposition	13190 Feb 25 07:39	14°  59'06 -1°32'33	minimum elong	13195 Nov 02 03:13	23°  31'30 0°44'32
min. Earth dist.	13190 Feb 24 21:29	15°  01'03 8.65172 AU	max. Earth dist.	13195 Nov 02 13:15	23°  31'30 10.59372 AU
direct	13190 May 05 04:59	11°  38'01	morning rise	13195 Nov 19 16:37	25°  09'46
evening set	13190 Aug 14 06:58	19°  00'10		13196 Jan 03 22:31	0° 
			retrograde	13196 Mar 03 04:39	2°  48'07
conjunction	13190 Aug 31 07:02	21°  04'30 -1°06'26		13196 May 03 13:08	30° 
minimum elong	13190 Aug 31 07:04	21°  04'30 1°06'42	opposition	13196 May 11 10:52	29°  31'04 1°07'14
max. Earth dist.	13190 Aug 31 19:33	21°  08'20 10.65205 AU	min. Earth dist.	13196 May 11 03:19	29°  31'04 8.58307 AU
morning rise	13190 Sep 17 09:33	23°  09'30	direct	13196 Jul 18 10:19	26°  31'04 10.57134 AU
	13190 Dec 01 02:14	0° 		13196 Sep 26 23:49	0° 
retrograde	13190 Dec 30 05:54	0°  42'38	evening set	13196 Oct 27 17:50	3°  27'22
	13191 Jan 28 18:53	30° 			
opposition	13191 Mar 10 05:35	27°  18'54 -1°09'57	conjunction	13196 Nov 14 06:04	5°  35'27 1°04'06
min. Earth dist.	13191 Mar 09 18:29	27°  18'54 8.65212 AU	minimum elong	13196 Nov 14 06:02	5°  35'27 1°04'59
			max. Earth dist.	13196 Nov 14 14:36	5° 38'05 10.57134 AU
































































































































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retrograde	13197 Mar 16 06:59	15° \mathbb{A} 23'53			13203 Apr 09 20:00	0° \mathbb{H}	
opposition	13197 May 24 07:29	11° \mathbb{A} 58'48	1°30'37	retrograde	13203 Jun 02 20:23	2° \mathbb{H} 27'23	
min. Earth dist.	13197 May 24 01:22	12° \mathbb{A} 00'00	8.56015 AU		13203 Jul 28 11:29	30° \mathbb{R} \mathbb{A}	
direct	13197 Jul 31 06:23	8° \mathbb{A} 36'05		opposition	13203 Aug 09 10:52	29° \mathbb{A} 03'33	1°55'21
evening set	13197 Nov 09 22:32	16° \mathbb{A} 05'33		min. Earth dist.	13203 Aug 09 19:17	29° \mathbb{A} 01'53	8.43183 AU
				direct	13203 Oct 16 21:31	25° \mathbb{A} 37'25	
conjunction	13197 Nov 27 12:09	18° \mathbb{A} 14'18	1°21'26		13203 Dec 30 12:58	0° \mathbb{H}	
minimum elong	13197 Nov 27 12:07	18° \mathbb{A} 14'18	1°22'25	evening set	13204 Jan 29 07:16	3° \mathbb{H} 24'56	
max. Earth dist.	13197 Nov 27 18:22	18° \mathbb{A} 16'13	10.54763 AU				
morning rise	13197 Dec 15 03:37	20° \mathbb{A} 23'40		conjunction	13204 Feb 16 00:15	5° \mathbb{H} 36'34	1°26'24
retrograde	13198 Mar 29 11:47	28° \mathbb{A} 04'19		minimum elong	13204 Feb 16 00:18	5° \mathbb{H} 36'35	1°26'54
opposition	13198 Jun 06 05:02	24° \mathbb{A} 39'18	1°49'46	max. Earth dist.	13204 Feb 15 12:06	5° \mathbb{H} 32'46	10.42480 AU
min. Earth dist.	13198 Jun 06 01:10	24° \mathbb{A} 40'04	8.53639 AU	morning rise	13204 Mar 04 15:29	7° \mathbb{H} 47'45	
direct	13198 Aug 13 03:02	21° \mathbb{A} 16'00		retrograde	13204 Jun 15 04:06	15° \mathbb{H} 28'39	
evening set	13198 Nov 23 06:35	28° \mathbb{A} 48'42		opposition	13204 Aug 21 16:25	12° \mathbb{H} 05'11	1°37'26
	13198 Dec 03 00:36	0° \mathbb{B}		min. Earth dist.	13204 Aug 22 02:34	12° \mathbb{H} 03'10	8.42097 AU
conjunction	13198 Dec 10 21:10	0° \mathbb{B} 58'03	1°34'53	direct	13204 Oct 29 07:22	8° \mathbb{H} 38'45	
minimum elong	13198 Dec 10 21:09	0° \mathbb{B} 58'03	1°35'54	evening set	13205 Feb 11 00:32	16° \mathbb{H} 27'53	
max. Earth dist.	13198 Dec 10 23:48	0° \mathbb{B} 58'52	10.52355 AU	conjunction	13205 Feb 28 16:59	18° \mathbb{H} 39'36	1°09'46
morning rise	13198 Dec 28 13:14	3° \mathbb{B} 07'53		minimum elong	13205 Feb 28 17:02	18° \mathbb{H} 39'37	1°10'04
retrograde	13199 Apr 11 17:54	10° \mathbb{B} 49'19		max. Earth dist.	13205 Feb 28 02:49	18° \mathbb{H} 35'11	10.41732 AU
opposition	13199 Jun 19 03:39	7° \mathbb{B} 24'27	2°03'39	morning rise	13205 Mar 18 07:17	20° \mathbb{H} 50'43	
min. Earth dist.	13199 Jun 19 02:49	7° \mathbb{B} 24'37	8.51275 AU	retrograde	13205 Jun 28 11:29	28° \mathbb{H} 30'34	
direct	13199 Aug 26 01:20	4° \mathbb{B} 00'30		opposition	13205 Sep 03 23:06	25° \mathbb{H} 07'28	1°14'28
evening set	13199 Dec 06 17:29	11° \mathbb{B} 36'31		min. Earth dist.	13205 Sep 04 10:37	25° \mathbb{H} 05'11	8.41651 AU
conjunction	13199 Dec 24 08:53	13° \mathbb{B} 46'26	1°43'43	direct	13205 Nov 11 18:47	21° \mathbb{H} 40'52	
minimum elong	13199 Dec 24 08:52	13° \mathbb{B} 46'26	1°44'43	evening set	13206 Feb 24 17:02	29° \mathbb{H} 30'52	
max. Earth dist.	13199 Dec 24 07:35	13° \mathbb{B} 46'02	10.50008 AU		13206 Feb 28 15:47	0° \mathbb{Y}	
morning rise	13200 Jan 11 01:20	15° \mathbb{B} 56'40		conjunction	13206 Mar 14 08:27	1° \mathbb{Y} 42'27	0°49'32
retrograde	13200 Apr 23 22:35	23° \mathbb{B} 38'32		minimum elong	13206 Mar 14 08:29	1° \mathbb{Y} 42'27	0°49'36
opposition	13200 Jul 01 03:27	20° \mathbb{B} 13'51	2°11'29	max. Earth dist.	13206 Mar 13 17:22	1° \mathbb{Y} 37'43	10.41648 AU
min. Earth dist.	13200 Jul 01 05:40	20° \mathbb{B} 13'24	8.48993 AU	morning rise	13206 Mar 31 21:27	3° \mathbb{Y} 53'19	
direct	13200 Sep 07 04:11	16° \mathbb{B} 49'13		retrograde	13206 Jul 11 17:42	11° \mathbb{Y} 31'56	
evening set	13200 Dec 19 06:38	24° \mathbb{B} 28'31		opposition	13206 Sep 17 06:51	8° \mathbb{Y} 09'09	0°47'40
conjunction	13201 Jan 05 22:48	26° \mathbb{B} 38'57	1°47'24	min. Earth dist.	13206 Sep 17 18:23	8° \mathbb{Y} 06'52	8.41882 AU
minimum elong	13201 Jan 05 22:48	26° \mathbb{B} 38'57	1°48'21	direct	13206 Nov 25 07:58	4° \mathbb{Y} 42'33	
max. Earth dist.	13201 Jan 05 17:50	26° \mathbb{B} 37'25	10.47766 AU	evening set	13207 Mar 10 07:49	12° \mathbb{Y} 32'36	
morning rise	13201 Jan 23 15:22	28° \mathbb{B} 49'31		conjunction	13207 Mar 27 21:49	14° \mathbb{Y} 43'48	0°26'46
	13201 Feb 02 11:20	0° \mathbb{A}		minimum elong	13207 Mar 27 21:50	14° \mathbb{Y} 43'48	0°26'38
retrograde	13201 May 07 04:27	6° \mathbb{A} 31'33		max. Earth dist.	13207 Mar 27 07:24	14° \mathbb{Y} 39'17	10.42235 AU
opposition	13201 Jul 14 04:27	3° \mathbb{A} 07'05	2°12'45	morning rise	13207 Apr 14 09:03	16° \mathbb{Y} 54'13	
min. Earth dist.	13201 Jul 14 09:16	3° \mathbb{A} 06'08	8.46812 AU	retrograde	13207 Jul 24 22:52	24° \mathbb{Y} 31'32	
	13201 Sep 01 18:44	30° \mathbb{R} \mathbb{B}		opposition	13207 Sep 30 15:11	21° \mathbb{Y} 09'02	0°18'27
direct	13201 Sep 20 08:35	29° \mathbb{B} 41'51		min. Earth dist.	13207 Oct 01 01:50	21° \mathbb{Y} 06'56	8.42774 AU
	13201 Oct 08 19:44	0° \mathbb{A}		direct	13207 Dec 08 21:53	17° \mathbb{Y} 42'34	
evening set	13202 Jan 01 21:45	7° \mathbb{A} 24'15		evening set	13208 Mar 22 20:44	25° \mathbb{Y} 31'57	
conjunction	13202 Jan 19 14:29	9° \mathbb{A} 35'11	1°45'41	conjunction	13208 Apr 09 08:50	27° \mathbb{Y} 42'34	0°02'45
minimum elong	13202 Jan 19 14:31	9° \mathbb{A} 35'12	1°46'31	minimum elong	13208 Apr 09 08:50	27° \mathbb{Y} 42'34	0°02'22
max. Earth dist.	13202 Jan 19 06:45	9° \mathbb{A} 32'47	10.45657 AU	behind sun begin	13208 Apr 09 01:40	27° \mathbb{Y} 40'20	
morning rise	13202 Feb 06 06:49	11° \mathbb{A} 46'03		behind sun end	13208 Apr 09 16:00	27° \mathbb{Y} 44'47	
	13202 Mar 06 10:08	15° \mathbb{A}		max. Earth dist.	13208 Apr 08 19:57	27° \mathbb{Y} 38'32	10.43448 AU
retrograde	13202 May 20 12:10	19° \mathbb{A} 28'00		morning rise	13208 Apr 26 17:52	29° \mathbb{Y} 52'19	
opposition	13202 Jul 27 06:49	16° \mathbb{A} 03'51	2°07'19		13208 Apr 27 18:59	0° \mathbb{B}	
min. Earth dist.	13202 Jul 27 13:28	16° \mathbb{A} 02'31	8.44810 AU	desc. node	13208 May 21 21:14	2° \mathbb{B} 48'17	
	13202 Aug 09 21:08	15° \mathbb{R} \mathbb{A}		retrograde	13208 Aug 06 04:54	7° \mathbb{B} 28'17	
direct	13202 Oct 03 13:54	12° \mathbb{A} 38'07		opposition	13208 Oct 12 23:42	4° \mathbb{B} 06'02	-0°11'36
	13202 Nov 25 21:26	15° \mathbb{A}		min. Earth dist.	13208 Oct 13 09:06	4° \mathbb{B} 04'12	8.44271 AU
evening set	13203 Jan 15 14:11	20° \mathbb{A} 23'20		direct	13208 Dec 21 09:40	0° \mathbb{B} 39'51	
conjunction	13203 Feb 02 07:14	22° \mathbb{A} 34'42	1°38'35	evening set	13209 Apr 05 07:09	8° \mathbb{B} 27'57	
minimum elong	13203 Feb 02 07:17	22° \mathbb{A} 34'42	1°39'16	conjunction	13209 Apr 22 16:51	10° \mathbb{B} 37'45	-0°21'28
max. Earth dist.	13203 Feb 01 21:12	22° \mathbb{A} 31'34	10.43830 AU	minimum elong	13209 Apr 22 16:50	10° \mathbb{B} 37'45	0°22'02

max. Earth dist.	13209 Apr 22 05:53	10° ♁ 34'19	10.45216 AU	max. Earth dist.	13215 Jul 08 06:25	26° ♁ 35'45	10.61273 AU
morning rise	13209 May 09 23:25	12° ♁ 46'41		morning rise	13215 Jul 24 21:46	28° ♁ 38'25	
	13209 May 28 17:35	15° ♁			13215 Aug 05 08:27	0° ♁	
retrograde	13209 Aug 19 09:23	20° ♁ 21'24		retrograde	13215 Nov 04 11:45	6° ♁ 09'28	
opposition	13209 Oct 26 08:29	16° ♁ 59'23	-0°40'57	opposition	13216 Jan 12 22:22	2° ♁ 47'44	-2°12'53
min. Earth dist.	13209 Oct 26 16:44	16° ♁ 57'46	8.46296 AU	min. Earth dist.	13216 Jan 12 17:03	2° ♁ 48'45	8.62615 AU
	13209 Nov 22 13:40	15° ♁			13216 Feb 25 05:38	30° ♁	
direct	13210 Jan 03 20:56	13° ♁ 33'36		direct	13216 Mar 22 09:20	29° ♁ 25'51	
	13210 Feb 14 11:25	15° ♁			13216 Apr 17 07:06	0° ♁	
evening set	13210 Apr 18 14:33	21° ♁ 19'50		evening set	13216 Jul 02 18:46	6° ♁ 54'59	
conjunction	13210 May 05 21:28	23° ♁ 28'40	-0°44'24	conjunction	13216 Jul 19 14:54	8° ♁ 58'50	-1°46'22
minimum elong	13210 May 05 21:26	23° ♁ 28'40	0°45'09	minimum elong	13216 Jul 19 14:55	8° ♁ 58'50	1°47'13
max. Earth dist.	13210 May 05 12:08	23° ♁ 25'45	10.47453 AU	max. Earth dist.	13216 Jul 19 21:57	9° ♁ 01'00	10.63625 AU
morning rise	13210 May 23 01:34	25° ♁ 36'43		morning rise	13216 Aug 05 11:37	11° ♁ 02'48	
	13210 Jul 01 13:20	0° ♁			13216 Sep 10 02:22	15° ♁	
retrograde	13210 Sep 01 11:23	3° ♁ 10'22		retrograde	13216 Nov 16 08:03	18° ♁ 33'46	
	13210 Nov 06 06:03	30° ♁		opposition	13217 Jan 25 00:33	15° ♁ 11'51	-2°07'56
opposition	13210 Nov 08 17:01	29° ♁ 48'32	-1°08'05	min. Earth dist.	13217 Jan 24 17:18	15° ♁ 13'14	8.64773 AU
min. Earth dist.	13210 Nov 08 23:50	29° ♁ 47'12	8.48752 AU		13217 Jan 27 14:41	15° ♁	
direct	13211 Jan 17 08:14	26° ♁ 23'16		direct	13217 Apr 04 08:53	11° ♁ 50'32	
	13211 Mar 26 00:36	0° ♁			13217 Jun 06 02:51	15° ♁	
evening set	13211 May 01 18:53	4° ♁ 07'13		evening set	13217 Jul 15 06:56	19° ♁ 16'49	
conjunction	13211 May 18 22:58	6° ♁ 15'00	-1°05'02	conjunction	13217 Aug 01 03:30	21° ♁ 20'26	-1°39'59
minimum elong	13211 May 18 22:56	6° ♁ 14'59	1°05'55	minimum elong	13217 Aug 01 03:32	21° ♁ 20'27	1°40'42
max. Earth dist.	13211 May 18 15:36	6° ♁ 12'42	10.50054 AU	max. Earth dist.	13217 Aug 01 13:13	21° ♁ 23'25	10.65583 AU
morning rise	13211 Jun 05 00:45	8° ♁ 22'06		morning rise	13217 Aug 18 01:11	23° ♁ 24'21	
retrograde	13211 Sep 14 12:53	15° ♁ 54'52			13217 Oct 26 23:22	0° ♁	
opposition	13211 Nov 22 00:44	12° ♁ 33'11	-1°31'41	retrograde	13217 Nov 29 05:07	0° ♁ 55'24	
min. Earth dist.	13211 Nov 22 05:29	12° ♁ 32'16	8.51508 AU		13218 Jan 02 01:33	30° ♁	
direct	13212 Jan 30 18:04	9° ♁ 08'31		opposition	13218 Feb 07 01:11	27° ♁ 33'12	-1°57'05
evening set	13212 May 13 19:57	16° ♁ 49'51		min. Earth dist.	13218 Feb 06 15:37	27° ♁ 35'02	8.66485 AU
conjunction	13212 May 30 21:29	18° ♁ 56'36	-1°22'21	direct	13218 Apr 17 06:35	24° ♁ 12'22	
minimum elong	13212 May 30 21:27	18° ♁ 56'35	1°23'20		13218 Jul 14 02:28	0° ♁	
max. Earth dist.	13212 May 30 16:55	18° ♁ 55'10	10.52879 AU	evening set	13218 Jul 27 17:56	1° ♁ 36'05	
morning rise	13212 Jun 16 21:09	21° ♁ 02'46		conjunction	13218 Aug 13 15:38	3° ♁ 39'43	-1°29'01
retrograde	13212 Sep 26 13:35	28° ♁ 34'52		minimum elong	13218 Aug 13 15:41	3° ♁ 39'44	1°29'34
opposition	13212 Dec 04 07:48	25° ♁ 13'15	-1°50'39	max. Earth dist.	13218 Aug 14 04:00	3° ♁ 43'31	10.67055 AU
min. Earth dist.	13212 Dec 04 09:35	25° ♁ 12'55	8.54412 AU	morning rise	13218 Aug 30 14:50	5° ♁ 43'48	
direct	13213 Feb 12 01:21	21° ♁ 49'19		retrograde	13218 Dec 12 03:13	13° ♁ 15'01	
evening set	13213 May 26 17:45	29° ♁ 27'42		opposition	13219 Feb 20 00:21	9° ♁ 52'31	-1°40'54
	13213 May 31 03:22	0° ♁		min. Earth dist.	13219 Feb 19 13:02	9° ♁ 54'40	8.67659 AU
conjunction	13213 Jun 12 17:07	1° ♁ 33'29	-1°35'36	direct	13219 Apr 30 00:26	6° ♁ 32'03	
minimum elong	13213 Jun 12 17:05	1° ♁ 33'28	1°36'37	evening set	13219 Aug 09 04:43	13° ♁ 53'40	
max. Earth dist.	13213 Jun 12 16:21	1° ♁ 33'15	10.55779 AU	conjunction	13219 Aug 26 03:55	15° ♁ 57'29	-1°14'00
morning rise	13213 Jun 29 14:57	3° ♁ 38'50		minimum elong	13219 Aug 26 03:57	15° ♁ 57'30	1°14'21
retrograde	13213 Oct 09 13:21	11° ♁ 10'28		max. Earth dist.	13219 Aug 26 17:45	16° ♁ 01'43	10.67953 AU
opposition	13213 Dec 17 13:54	7° ♁ 48'52	-2°04'09	morning rise	13219 Sep 12 05:04	18° ♁ 01'54	
min. Earth dist.	13213 Dec 17 12:38	7° ♁ 49'07	8.57318 AU	retrograde	13219 Dec 24 23:39	25° ♁ 33'27	
direct	13214 Feb 25 06:44	4° ♁ 25'40		opposition	13220 Mar 03 22:10	22° ♁ 10'37	-1°20'07
evening set	13214 Jun 08 12:37	12° ♁ 00'58		min. Earth dist.	13220 Mar 03 10:17	22° ♁ 12'53	8.68218 AU
conjunction	13214 Jun 25 10:19	14° ♁ 05'55	-1°44'11	direct	13220 May 11 17:31	18° ♁ 50'20	
minimum elong	13214 Jun 25 10:18	14° ♁ 05'54	1°45'12	evening set	13220 Aug 20 15:53	26° ♁ 10'28	
max. Earth dist.	13214 Jun 25 12:54	14° ♁ 06'43	10.58619 AU	conjunction	13220 Sep 06 16:52	28° ♁ 14'39	-0°55'36
morning rise	13214 Jul 12 06:59	16° ♁ 10'35		minimum elong	13220 Sep 06 16:54	28° ♁ 14'40	0°55'45
retrograde	13214 Oct 22 13:23	23° ♁ 41'53		max. Earth dist.	13220 Sep 07 06:28	28° ♁ 18'48	10.68204 AU
opposition	13214 Dec 30 18:45	20° ♁ 20'15	-2°11'38		13220 Sep 21 03:14	0° ♁	
min. Earth dist.	13214 Dec 30 15:14	20° ♁ 20'55	8.60095 AU	morning rise	13220 Sep 23 20:25	0° ♁ 19'33	
direct	13215 Mar 10 09:30	16° ♁ 57'44		retrograde	13221 Jan 05 20:38	7° ♁ 51'39	
evening set	13215 Jun 21 04:50	24° ♁ 29'54		opposition	13221 Mar 16 18:58	4° ♁ 28'26	-0°55'41
conjunction	13215 Jul 08 01:25	26° ♁ 34'12	-1°47'48	min. Earth dist.	13221 Mar 16 07:42	4° ♁ 30'36	8.68092 AU
minimum elong	13215 Jul 08 01:25	26° ♁ 34'12	1°48'46	direct	13221 May 24 09:50	1° ♁ 08'10	
				evening set	13221 Sep 02 03:58	8° ♁ 27'32	

conjunction	13221 Sep 19 07:05	10° $\underline{\mathbf{a}}$ 32'14	-0°34'39	direct	13227 Aug 07 15:55	15° \mathbf{x} 44'35	
minimum elong	13221 Sep 19 07:07	10° $\underline{\mathbf{a}}$ 32'14	0°34'35	evening set	13227 Nov 17 12:57	23° \mathbf{x} 15'17	
max. Earth dist.	13221 Sep 19 20:03	10° $\underline{\mathbf{a}}$ 36'11	10.67724 AU				
morning rise	13221 Oct 06 13:10	12° $\underline{\mathbf{a}}$ 37'46		conjunction	13227 Dec 05 03:03	25° \mathbf{x} 24'17	1°29'19
retrograde	13222 Jan 18 17:42	20° $\underline{\mathbf{a}}$ 10'42		minimum elong	13227 Dec 05 03:01	25° \mathbf{x} 24'16	1°30'19
opposition	13222 Mar 29 14:50	16° $\underline{\mathbf{a}}$ 47'06	-0°28'41	max. Earth dist.	13227 Dec 05 05:24	25° \mathbf{x} 25'00	10.53556 AU
min. Earth dist.	13222 Mar 29 04:13	16° $\underline{\mathbf{a}}$ 49'09	8.67206 AU	morning rise	13227 Dec 22 18:55	27° \mathbf{x} 33'50	
direct	13222 Jun 06 01:16	13° $\underline{\mathbf{a}}$ 26'40			13228 Jan 12 19:15	0° \mathbf{z}	
evening set	13222 Sep 14 18:00	20° $\underline{\mathbf{a}}$ 46'10		retrograde	13228 Apr 04 23:44	5° \mathbf{z} 14'36	
				opposition	13228 Jun 12 14:24	1° \mathbf{z} 49'23	1°58'04
conjunction	13222 Oct 01 23:27	22° $\underline{\mathbf{a}}$ 51'31	-0°12'06	min. Earth dist.	13228 Jun 12 13:18	1° \mathbf{z} 49'36	8.52154 AU
minimum elong	13222 Oct 01 23:27	22° $\underline{\mathbf{a}}$ 51'31	0°11'48		13228 Jul 06 22:16	30° \mathbf{R} \mathbf{x}	
behind sun begin	13222 Oct 01 18:28	22° $\underline{\mathbf{a}}$ 50'01		direct	13228 Aug 19 13:40	28° \mathbf{x} 25'24	
behind sun end	13222 Oct 02 04:27	22° $\underline{\mathbf{a}}$ 53'02			13228 Oct 01 11:34	0° \mathbf{z}	
max. Earth dist.	13222 Oct 02 11:57	22° $\underline{\mathbf{a}}$ 55'20	10.66481 AU	evening set	13228 Nov 29 21:53	5° \mathbf{z} 59'38	
morning rise	13222 Oct 19 07:50	24° $\underline{\mathbf{a}}$ 57'44					
	13222 Dec 06 05:58	0° \mathbf{M}		conjunction	13228 Dec 17 13:05	8° \mathbf{z} 09'18	1°40'19
retrograde	13223 Jan 31 15:10	2° \mathbf{M} 31'50		minimum elong	13228 Dec 17 13:03	8° \mathbf{z} 09'18	1°41'20
	13223 Mar 31 00:55	30° \mathbf{R} $\underline{\mathbf{a}}$		max. Earth dist.	13228 Dec 17 13:02	8° \mathbf{z} 09'17	10.50595 AU
opposition	13223 Apr 11 10:01	29° $\underline{\mathbf{a}}$ 07'50	-0°00'17	morning rise	13229 Jan 04 05:20	10° \mathbf{z} 19'21	
min. Earth dist.	13223 Apr 10 23:51	29° $\underline{\mathbf{a}}$ 09'48	8.65613 AU	retrograde	13229 Apr 18 04:37	18° \mathbf{z} 01'00	
asc. node	13223 Apr 15 01:42	28° $\underline{\mathbf{a}}$ 50'55		opposition	13229 Jun 25 13:02	14° \mathbf{z} 35'48	2°08'45
direct	13223 Jun 18 17:49	25° $\underline{\mathbf{a}}$ 47'07		min. Earth dist.	13229 Jun 25 14:01	14° \mathbf{z} 35'37	8.49288 AU
	13223 Aug 30 16:59	0° \mathbf{M}		direct	13229 Sep 01 13:54	11° \mathbf{z} 11'04	
evening set	13223 Sep 27 10:33	3° \mathbf{M} 07'34		evening set	13229 Dec 13 09:43	18° \mathbf{z} 48'53	
conjunction	13223 Oct 14 18:13	5° \mathbf{M} 13'38	0°11'11	conjunction	13229 Dec 31 01:43	20° \mathbf{z} 59'10	1°46'25
minimum elong	13223 Oct 14 18:13	5° \mathbf{M} 13'38	0°11'41	minimum elong	13229 Dec 31 01:42	20° \mathbf{z} 59'10	1°47'23
behind sun begin	13223 Oct 14 13:10	5° \mathbf{M} 12'07		max. Earth dist.	13229 Dec 30 22:31	20° \mathbf{z} 58'11	10.47819 AU
behind sun end	13223 Oct 14 23:15	5° \mathbf{M} 15'10		morning rise	13230 Jan 17 18:08	23° \mathbf{z} 09'39	
max. Earth dist.	13223 Oct 15 06:14	5° \mathbf{M} 17'18	10.64593 AU		13230 Mar 30 21:54	0° $\mathbf{\approx}$	
morning rise	13223 Nov 01 04:41	7° \mathbf{M} 20'34		retrograde	13230 May 01 11:34	0° $\mathbf{\approx}$ 51'50	
retrograde	13224 Feb 13 15:21	14° \mathbf{M} 56'01			13230 Jun 02 04:51	30° \mathbf{R} \mathbf{z}	
opposition	13224 Apr 23 05:12	11° \mathbf{M} 31'38	0°28'15	opposition	13230 Jul 08 13:14	27° \mathbf{z} 26'47	2°13'05
min. Earth dist.	13224 Apr 22 19:45	11° \mathbf{M} 33'28	8.63465 AU	min. Earth dist.	13230 Jul 08 16:47	27° \mathbf{z} 26'05	8.46664 AU
direct	13224 Jun 30 09:10	8° \mathbf{M} 10'29		direct	13230 Sep 14 15:17	24° \mathbf{z} 01'20	
	13224 Oct 04 16:26	15° \mathbf{M}			13230 Dec 12 13:43	0° $\mathbf{\approx}$	
evening set	13224 Oct 09 06:01	15° \mathbf{M} 32'34		evening set	13230 Dec 26 23:42	1° $\mathbf{\approx}$ 42'32	
conjunction	13224 Oct 26 15:38	17° \mathbf{M} 39'24	0°33'57	conjunction	13231 Jan 13 16:11	3° $\mathbf{\approx}$ 53'22	1°47'12
minimum elong	13224 Oct 26 15:37	17° \mathbf{M} 39'23	0°34'38	minimum elong	13231 Jan 13 16:12	3° $\mathbf{\approx}$ 53'22	1°48'05
max. Earth dist.	13224 Oct 27 01:50	17° \mathbf{M} 42'30	10.62218 AU	max. Earth dist.	13231 Jan 13 09:29	3° $\mathbf{\approx}$ 51'17	10.45361 AU
morning rise	13224 Nov 13 04:00	19° \mathbf{M} 47'04		morning rise	13231 Jan 31 08:38	6° $\mathbf{\approx}$ 04'13	
retrograde	13225 Feb 25 16:40	27° \mathbf{M} 23'55		retrograde	13231 May 14 18:32	13° $\mathbf{\approx}$ 46'33	
opposition	13225 May 06 00:37	23° \mathbf{M} 59'13	0°55'36	opposition	13231 Jul 21 15:00	10° $\mathbf{\approx}$ 21'44	2°10'44
min. Earth dist.	13225 May 05 17:04	24° \mathbf{M} 00'41	8.60913 AU	min. Earth dist.	13231 Jul 21 21:15	10° $\mathbf{\approx}$ 20'29	8.44417 AU
direct	13225 Jul 13 00:44	20° \mathbf{M} 37'27		direct	13231 Sep 27 19:46	6° $\mathbf{\approx}$ 55'42	
evening set	13225 Oct 22 05:00	28° \mathbf{M} 01'55		evening set	13232 Jan 09 15:23	14° $\mathbf{\approx}$ 39'56	
	13225 Nov 07 09:20	0° \mathbf{x}			13232 Jan 12 09:08	15° $\mathbf{\approx}$	
conjunction	13225 Nov 08 16:17	0° \mathbf{x} 09'29	0°55'15	conjunction	13232 Jan 27 08:14	16° $\mathbf{\approx}$ 51'12	1°42'32
minimum elong	13225 Nov 08 16:16	0° \mathbf{x} 09'28	0°56'05	minimum elong	13232 Jan 27 08:16	16° $\mathbf{\approx}$ 51'13	1°43'18
max. Earth dist.	13225 Nov 08 23:41	0° \mathbf{x} 11'45	10.59499 AU	max. Earth dist.	13232 Jan 26 22:30	16° $\mathbf{\approx}$ 48'10	10.43360 AU
morning rise	13225 Nov 26 06:16	2° \mathbf{x} 17'50		morning rise	13232 Feb 14 00:31	19° $\mathbf{\approx}$ 02'21	
retrograde	13226 Mar 10 17:04	9° \mathbf{x} 56'05		retrograde	13232 May 27 00:49	26° $\mathbf{\approx}$ 44'26	
opposition	13226 May 18 20:18	6° \mathbf{x} 31'08	1°20'29	opposition	13232 Aug 02 18:08	23° $\mathbf{\approx}$ 19'57	2°01'43
min. Earth dist.	13226 May 18 15:14	6° \mathbf{x} 32'07	8.58092 AU	min. Earth dist.	13232 Aug 03 02:16	23° $\mathbf{\approx}$ 18'19	8.42671 AU
direct	13226 Jul 25 19:45	3° \mathbf{x} 08'39		direct	13232 Oct 10 03:44	19° $\mathbf{\approx}$ 53'27	
evening set	13226 Nov 04 07:22	10° \mathbf{x} 36'04		evening set	13233 Jan 22 08:05	27° $\mathbf{\approx}$ 40'14	
conjunction	13226 Nov 21 20:08	12° \mathbf{x} 44'22	1°14'01	conjunction	13233 Feb 09 01:08	29° $\mathbf{\approx}$ 51'51	1°32'38
minimum elong	13226 Nov 21 20:06	12° \mathbf{x} 44'21	1°14'58	minimum elong	13233 Feb 09 01:10	29° $\mathbf{\approx}$ 51'52	1°33'14
max. Earth dist.	13226 Nov 22 00:39	12° \mathbf{x} 45'45	10.56568 AU	max. Earth dist.	13233 Feb 08 13:35	29° $\mathbf{\approx}$ 48'15	10.41918 AU
morning rise	13226 Dec 09 11:17	14° \mathbf{x} 53'21			13233 Feb 10 03:15	0° \mathbf{H}	
retrograde	13227 Mar 23 19:35	22° \mathbf{x} 32'55		morning rise	13233 Feb 26 16:55	2° \mathbf{H} 03'08	
opposition	13227 May 31 16:51	19° \mathbf{x} 07'48	1°41'40	retrograde	13233 Jun 09 07:46	9° \mathbf{H} 44'38	
min. Earth dist.	13227 May 31 14:04	19° \mathbf{x} 08'21	8.55131 AU	opposition	13233 Aug 15 22:48	6° \mathbf{H} 20'33	1°46'26

min. Earth dist.	13233 Aug 16 07:55	6° H 18'44	8.41515 AU	minimum elong	13239 Apr 30 05:39	17° S 52'49	0°34'45
direct	13233 Oct 23 13:05	2° H 53'49		max. Earth dist.	13239 Apr 29 19:49	17° S 49'45	10.46961 AU
evening set	13234 Feb 05 01:08	10° H 42'28		morning rise	13239 May 17 11:03	20° S 01'18	
				retrograde	13239 Aug 26 20:42	27° S 35'34	
conjunction	13234 Feb 22 17:59	12° H 54'16	1°17'57	opposition	13239 Nov 02 23:28	24° S 14'04	-0°55'57
minimum elong	13234 Feb 22 18:01	12° H 54'17	1°18'21	min. Earth dist.	13239 Nov 03 06:00	24° S 12'48	8.48281 AU
max. Earth dist.	13234 Feb 22 05:36	12° H 50'24	10.41109 AU	direct	13240 Jan 11 13:59	20° S 49'02	
morning rise	13234 Mar 12 08:50	15° H 05'32		evening set	13240 Apr 25 03:49	28° S 34'10	
retrograde	13234 Jun 22 16:26	22° H 46'09			13240 May 06 17:33	0° II	
opposition	13234 Aug 29 04:51	19° H 22'32	1°25'38				
min. Earth dist.	13234 Aug 29 14:25	19° H 20'38	8.41017 AU	conjunction	13240 May 12 09:21	0° II 42'24	-0°55'53
direct	13234 Nov 05 22:42	15° H 55'45		minimum elong	13240 May 12 09:19	0° II 42'24	0°56'43
evening set	13235 Feb 18 17:55	23° H 45'35		max. Earth dist.	13240 May 12 02:07	0° II 40'09	10.49613 AU
				morning rise	13240 May 29 12:06	2° II 49'53	
conjunction	13235 Mar 08 10:04	25° H 57'21	0°59'15	retrograde	13240 Sep 08 00:27	10° II 23'05	
minimum elong	13235 Mar 08 10:06	25° H 57'22	0°59'26	opposition	13240 Nov 15 07:54	7° II 01'46	-1°21'18
max. Earth dist.	13235 Mar 07 21:21	25° H 53'23	10.40987 AU	min. Earth dist.	13240 Nov 15 12:46	7° II 00'50	8.51040 AU
morning rise	13235 Mar 25 23:39	28° H 08'26		direct	13241 Jan 23 23:47	3° II 37'18	
	13235 Apr 10 13:33	0° Y		evening set	13241 May 08 06:55	11° II 19'51	
retrograde	13235 Jul 06 00:12	5° Y 47'55					
opposition	13235 Sep 11 12:08	2° Y 24'48	1°00'25	conjunction	13241 May 25 09:41	13° II 27'03	-1°14'49
min. Earth dist.	13235 Sep 11 22:16	2° Y 22'48	8.41219 AU	minimum elong	13241 May 25 09:39	13° II 27'02	1°15'46
	13235 Oct 15 08:09	30° R H		max. Earth dist.	13241 May 25 04:29	13° II 25'25	10.52377 AU
direct	13235 Nov 19 10:06	28° H 58'07		morning rise	13241 Jun 11 10:06	15° II 33'35	
	13235 Dec 24 05:26	0° Y		retrograde	13241 Sep 21 02:13	23° II 05'57	
evening set	13236 Mar 03 09:46	6° Y 48'26		opposition	13241 Nov 28 15:50	19° II 44'46	-1°42'29
max. Earth dist.	13236 Mar 20 11:25	8° Y 55'46	10.41561 AU	min. Earth dist.	13241 Nov 28 19:18	19° II 44'05	8.53804 AU
				direct	13242 Feb 06 07:36	16° II 20'54	
conjunction	13236 Mar 21 00:38	8° Y 59'54	0°37'30	evening set	13242 May 21 06:37	24° II 00'43	
minimum elong	13236 Mar 21 00:39	8° Y 59'55	0°37'27				
morning rise	13236 Apr 07 12:41	11° Y 10'38		conjunction	13242 Jun 07 06:53	26° II 06'55	-1°30'00
retrograde	13236 Jul 18 06:41	18° Y 48'48		minimum elong	13242 Jun 07 06:51	26° II 06'54	1°31'00
opposition	13236 Sep 23 20:26	15° Y 26'12	0°32'07	max. Earth dist.	13242 Jun 07 03:20	26° II 05'48	10.55042 AU
min. Earth dist.	13236 Sep 24 07:02	15° Y 24'07	8.42111 AU	morning rise	13242 Jun 24 05:29	28° II 12'37	
direct	13236 Dec 01 23:11	11° Y 59'45			13242 Jul 09 07:21	0° S	
evening set	13237 Mar 17 00:08	19° Y 49'48		retrograde	13242 Oct 04 02:05	5° S 44'34	
				opposition	13242 Dec 11 22:54	2° S 23'23	-1°58'33
conjunction	13237 Apr 03 13:07	22° Y 00'45	0°13'53	min. Earth dist.	13242 Dec 12 00:49	2° S 23'01	8.56398 AU
minimum elong	13237 Apr 03 13:07	22° Y 00'45	0°13'36		13243 Jan 15 13:32	30° R II	
behind sun begin	13237 Apr 03 09:13	21° Y 59'32		direct	13243 Feb 19 15:06	29° II 00'09	
behind sun end	13237 Apr 03 17:01	22° Y 01'57			13243 Mar 26 02:24	0° S	
max. Earth dist.	13237 Apr 02 23:51	21° Y 56'36	10.42795 AU	evening set	13243 Jun 03 03:27	6° S 37'11	
morning rise	13237 Apr 20 23:14	24° Y 10'52					
	13237 Jun 15 23:06	0° S		conjunction	13243 Jun 20 01:45	8° S 42'32	-1°40'45
retrograde	13237 Jul 31 12:41	1° S 47'41		minimum elong	13243 Jun 20 01:43	8° S 42'31	1°41'46
	13237 Sep 16 08:35	30° R Y		max. Earth dist.	13243 Jun 20 00:24	8° S 42'07	10.57503 AU
opposition	13237 Oct 07 05:20	28° Y 25'34	0°02'14	morning rise	13243 Jul 06 23:03	10° S 47'34	
min. Earth dist.	13237 Oct 07 15:32	28° Y 23'33	8.43648 AU	retrograde	13243 Oct 17 01:54	18° S 19'20	
desc. node	13237 Nov 03 17:15	26° Y 24'31		opposition	13243 Dec 25 04:48	14° S 58'02	-2°08'50
direct	13237 Dec 15 12:16	24° Y 59'29		min. Earth dist.	13243 Dec 25 04:11	14° S 58'09	8.58759 AU
	13238 Mar 06 11:35	0° S		direct	13244 Mar 03 20:29	11° S 35'23	
evening set	13238 Mar 30 12:14	2° S 48'30		evening set	13244 Jun 14 21:31	19° S 09'32	
conjunction	13238 Apr 16 22:56	4° S 58'43	-0°10'27	conjunction	13244 Jul 01 18:34	21° S 14'13	-1°46'39
minimum elong	13238 Apr 16 22:56	4° S 58'43	0°10'57	minimum elong	13244 Jul 01 18:33	21° S 14'13	1°47'38
behind sun begin	13238 Apr 16 17:32	4° S 57'02		max. Earth dist.	13244 Jul 01 20:34	21° S 14'50	10.59720 AU
behind sun end	13238 Apr 17 04:20	5° S 00'23		morning rise	13244 Jul 18 15:05	23° S 18'44	
max. Earth dist.	13238 Apr 16 10:44	4° S 54'54	10.44631 AU		13244 Sep 27 14:18	0° J	
morning rise	13238 May 04 06:49	7° S 08'05		retrograde	13244 Oct 29 01:43	0° J 50'28	
retrograde	13238 Aug 13 17:06	14° S 43'34			13244 Nov 30 02:15	30° R S	
opposition	13238 Oct 20 14:29	11° S 21'48	-0°27'38	opposition	13245 Jan 06 09:45	27° S 28'55	-2°12'57
min. Earth dist.	13238 Oct 20 23:09	11° S 20'07	8.45753 AU	min. Earth dist.	13245 Jan 06 06:12	27° S 29'35	8.60842 AU
direct	13238 Dec 29 01:34	7° S 56'12		direct	13245 Mar 16 22:42	24° S 06'47	
	13239 Apr 06 21:49	15° S			13245 Jun 13 17:28	0° J	
evening set	13239 Apr 12 21:28	15° S 43'33		evening set	13245 Jun 27 13:01	1° J 38'00	
conjunction	13239 Apr 30 05:41	17° S 52'50	-0°34'04	conjunction	13245 Jul 14 09:30	3° J 42'12	-1°47'30

minimum elong	13245 Jul 14 09:30	3° Ω 42'12	1°48'23	morning rise	13251 Oct 14 04:09	19° Ω 54'56	
max. Earth dist.	13245 Jul 14 14:57	3° Ω 43'53	10.61642 AU	retrograde	13252 Jan 26 11:24	27° Ω 29'55	
morning rise	13245 Jul 31 05:56	5° Ω 46'25		opposition	13252 Apr 05 06:38	24° Ω 05'23	-0°12'30
retrograde	13245 Nov 11 00:16	13° Ω 18'14		min. Earth dist.	13252 Apr 04 19:35	24° Ω 07'31	8.63347 AU
opposition	13246 Jan 19 13:22	9° Ω 56'18	-2°10'47	direct	13252 Jun 12 14:42	20° Ω 44'08	
min. Earth dist.	13246 Jan 19 07:18	9° Ω 57'27	8.62591 AU	asc. node	13252 Sep 17 13:15	27° Ω 38'19	
direct	13246 Mar 29 23:26	6° Ω 34'35		evening set	13252 Sep 21 08:16	28° Ω 05'26	
evening set	13246 Jul 10 02:42	14° Ω 02'59			13252 Oct 07 01:14	0° \mathbb{M}	
	13246 Jul 17 21:56	15° Ω					
conjunction	13246 Jul 26 23:13	16° Ω 06'55	-1°43'18	conjunction	13252 Oct 08 14:58	0° \mathbb{M} 11'33	0°01'19
minimum elong	13246 Jul 26 23:14	16° Ω 06'55	1°44'04	minimum elong	13252 Oct 08 14:58	0° \mathbb{M} 11'33	0°01'44
max. Earth dist.	13246 Jul 27 07:08	16° Ω 09'21	10.63209 AU	behind sun begin	13252 Oct 08 07:49	0° \mathbb{M} 09'23	
morning rise	13246 Aug 12 20:24	18° Ω 11'03		behind sun end	13252 Oct 08 22:08	0° \mathbb{M} 13'43	
retrograde	13246 Nov 23 22:50	25° Ω 42'59		max. Earth dist.	13252 Oct 09 03:19	0° \mathbb{M} 15'19	10.62597 AU
opposition	13247 Feb 01 15:22	22° Ω 20'38	-2°02'31	morning rise	13252 Oct 26 00:49	2° \mathbb{M} 18'34	
min. Earth dist.	13247 Feb 01 07:53	22° Ω 22'04	8.63946 AU	retrograde	13253 Feb 07 10:54	9° \mathbb{M} 54'42	
direct	13247 Apr 11 21:26	18° Ω 59'14		opposition	13253 Apr 18 02:43	6° \mathbb{M} 29'52	0°16'13
evening set	13247 Jul 22 15:00	26° Ω 25'04		min. Earth dist.	13253 Apr 17 16:55	6° \mathbb{M} 31'46	8.61760 AU
				direct	13253 Jun 25 07:20	3° \mathbb{M} 08'19	
conjunction	13247 Aug 08 12:10	28° Ω 28'58	-1°34'19	evening set	13253 Oct 04 03:08	10° \mathbb{M} 30'51	
minimum elong	13247 Aug 08 12:12	28° Ω 28'58	1°34'56	conjunction	13253 Oct 21 11:59	12° \mathbb{M} 37'41	0°24'26
max. Earth dist.	13247 Aug 08 21:30	28° Ω 31'50	10.64361 AU	minimum elong	13253 Oct 21 11:58	12° \mathbb{M} 37'41	0°25'03
	13247 Aug 20 21:03	0° \mathbb{M}		max. Earth dist.	13253 Oct 21 23:14	12° \mathbb{M} 41'07	10.60814 AU
morning rise	13247 Aug 25 10:48	0° \mathbb{M} 33'15		morning rise	13253 Nov 07 23:51	14° \mathbb{M} 45'24	
retrograde	13247 Dec 06 20:14	8° \mathbb{M} 05'24			13253 Nov 10 00:45	15° \mathbb{M}	
opposition	13248 Feb 14 16:03	4° \mathbb{M} 42'36	-1°48'36	retrograde	13254 Feb 20 11:25	22° \mathbb{M} 22'47	
min. Earth dist.	13248 Feb 14 07:21	4° \mathbb{M} 44'16	8.64850 AU	opposition	13254 Apr 30 22:44	18° \mathbb{M} 57'44	0°44'17
direct	13248 Apr 23 17:08	1° \mathbb{M} 21'25		min. Earth dist.	13254 Apr 30 13:55	18° \mathbb{M} 59'27	8.59806 AU
evening set	13248 Aug 03 02:24	8° \mathbb{M} 45'07		direct	13254 Jul 08 00:29	15° \mathbb{M} 35'48	
				evening set	13254 Oct 17 01:19	23° \mathbb{M} 00'18	
conjunction	13248 Aug 20 00:53	10° \mathbb{M} 49'09	-1°20'59	conjunction	13254 Nov 03 12:05	25° \mathbb{M} 07'50	0°46'30
minimum elong	13248 Aug 20 00:56	10° \mathbb{M} 49'09	1°21'25	minimum elong	13254 Nov 03 12:04	25° \mathbb{M} 07'49	0°47'17
max. Earth dist.	13248 Aug 20 11:57	10° \mathbb{M} 52'33	10.65044 AU	max. Earth dist.	13254 Nov 03 22:21	25° \mathbb{M} 10'58	10.58695 AU
morning rise	13248 Sep 06 01:24	12° \mathbb{M} 53'44		morning rise	13254 Nov 21 01:29	27° \mathbb{M} 16'11	
retrograde	13248 Dec 18 16:04	20° \mathbb{M} 26'21			13254 Dec 14 21:10	0° \mathbb{J}	
opposition	13249 Feb 26 15:20	17° \mathbb{M} 03'04	-1°29'42	retrograde	13255 Mar 05 12:51	4° \mathbb{J} 54'54	
min. Earth dist.	13249 Feb 26 05:11	17° \mathbb{M} 05'00	8.65260 AU	opposition	13255 May 13 19:01	1° \mathbb{J} 29'43	1°10'24
direct	13249 May 06 13:32	13° \mathbb{M} 42'01		min. Earth dist.	13255 May 13 11:15	1° \mathbb{J} 31'14	8.57583 AU
evening set	13249 Aug 15 13:53	21° \mathbb{M} 04'05			13255 Jun 02 13:26	30° \mathbb{R} \mathbb{M}	
conjunction	13249 Sep 01 14:16	23° \mathbb{M} 08'28	-1°03'56	direct	13255 Jul 20 19:12	28° \mathbb{M} 07'20	
minimum elong	13249 Sep 01 14:18	23° \mathbb{M} 08'29	1°04'10		13255 Sep 05 19:25	0° \mathbb{J}	
max. Earth dist.	13249 Sep 02 03:16	23° \mathbb{M} 12'28	10.65219 AU	evening set	13255 Oct 30 02:59	5° \mathbb{J} 34'23	
morning rise	13249 Sep 18 16:55	25° \mathbb{M} 13'31					
retrograde	13249 Nov 02 09:37	0° \mathbb{J}		conjunction	13255 Nov 16 15:21	7° \mathbb{J} 42'37	1°06'28
	13249 Dec 31 14:26	2° \mathbb{J} 46'46		minimum elong	13255 Nov 16 15:18	7° \mathbb{J} 42'36	1°07'23
	13250 Mar 03 11:32	30° \mathbb{R} \mathbb{M}		max. Earth dist.	13255 Nov 16 23:44	7° \mathbb{J} 45'12	10.56363 AU
opposition	13250 Mar 11 13:13	29° \mathbb{M} 23'00	-1°06'40	morning rise	13255 Dec 04 05:57	9° \mathbb{J} 51'33	
min. Earth dist.	13250 Mar 11 01:41	29° \mathbb{M} 25'12	8.65146 AU	retrograde	13256 Mar 17 17:20	17° \mathbb{J} 31'33	
direct	13250 May 19 07:07	26° \mathbb{M} 02'00		opposition	13256 May 25 16:04	14° \mathbb{J} 06'21	1°33'16
	13250 Jul 28 22:13	0° \mathbb{J}		min. Earth dist.	13256 May 25 10:07	14° \mathbb{J} 07'31	8.55214 AU
evening set	13250 Aug 28 02:12	3° \mathbb{J} 23'03		direct	13256 Aug 01 13:55	10° \mathbb{J} 43'27	
				evening set	13256 Nov 11 08:08	18° \mathbb{J} 13'30	
conjunction	13250 Sep 14 04:43	5° \mathbb{J} 27'56	-0°43'56	conjunction	13256 Nov 28 21:45	20° \mathbb{J} 22'23	1°23'19
minimum elong	13250 Sep 14 04:44	5° \mathbb{J} 27'57	0°43'57	minimum elong	13256 Nov 28 21:43	20° \mathbb{J} 22'22	1°24'18
max. Earth dist.	13250 Sep 14 18:47	5° \mathbb{J} 32'15	10.64857 AU	max. Earth dist.	13256 Nov 29 03:07	20° \mathbb{J} 24'02	10.53939 AU
morning rise	13250 Oct 01 09:43	7° \mathbb{J} 33'36		morning rise	13256 Dec 16 13:20	22° \mathbb{J} 31'53	
retrograde	13251 Jan 13 13:30	15° \mathbb{J} 07'36			13257 Mar 15 03:12	0° \mathbb{Z}	
opposition	13251 Mar 24 10:13	11° \mathbb{J} 43'25	-0°40'33	retrograde	13257 Mar 30 22:11	0° \mathbb{Z} 12'56	
min. Earth dist.	13251 Mar 23 22:24	11° \mathbb{J} 45'41	8.64498 AU		13257 Apr 15 16:03	30° \mathbb{R} \mathbb{J}	
direct	13251 May 31 22:13	8° \mathbb{J} 22'22		opposition	13257 Jun 07 14:04	26° \mathbb{J} 47'50	1°51'45
evening set	13251 Sep 09 16:07	15° \mathbb{J} 43'09		min. Earth dist.	13257 Jun 07 10:56	26° \mathbb{J} 48'27	8.52810 AU
				direct	13257 Aug 14 11:07	23° \mathbb{J} 24'21	
conjunction	13251 Sep 26 20:42	17° \mathbb{J} 48'37	-0°21'53		13257 Nov 16 15:09	0° \mathbb{Z}	
minimum elong	13251 Sep 26 20:43	17° \mathbb{J} 48'37	0°21'41	evening set	13257 Nov 24 16:45	0° \mathbb{Z} 57'43	
max. Earth dist.	13251 Sep 27 10:17	17° \mathbb{J} 52'46	10.63967 AU				

conjunction	13257 Dec 12 07:22	3°  07'12	1°36'10	conjunction	13264 Mar 02 04:35	20°  52'55	1°07'07
minimum elong	13257 Dec 12 07:21	3°  07'11	1°37'12	minimum elong	13264 Mar 02 04:38	20°  52'56	1°07'23
max. Earth dist.	13257 Dec 12 09:02	3°  07'42	10.51532 AU	max. Earth dist.	13264 Mar 01 14:08	20°  48'24	10.41697 AU
morning rise	13257 Dec 29 23:36	5°  17'10		morning rise	13264 Mar 19 18:53	23°  04'04	
retrograde	13258 Apr 13 02:43	12°  58'59			13264 Jun 01 06:09	0° 	
opposition	13258 Jun 20 13:01	9°  34'03	2°04'52	retrograde	13264 Jun 29 21:44	0°  43'53	
min. Earth dist.	13258 Jun 20 12:45	9°  34'07	8.50473 AU		13264 Jul 28 20:41	30°  R 	
direct	13258 Aug 27 11:49	6°  09'57		opposition	13264 Sep 05 10:15	27°  18'37	1°10'55
evening set	13258 Dec 08 04:09	13°  34'41		min. Earth dist.	13264 Sep 05 21:36	27°  18'37	8.41659 AU
				direct	13264 Nov 13 07:09	23°  18'37	
conjunction	13258 Dec 25 19:40	15°  56'44	1°44'20		13265 Feb 11 15:05	0° 	
minimum elong	13258 Dec 25 19:39	15°  56'43	1°45'20	evening set	13265 Feb 26 04:41	1°  44'25	
max. Earth dist.	13258 Dec 25 18:16	15°  56'18	10.49241 AU				
morning rise	13259 Jan 12 12:10	18°  07'04		conjunction	13265 Mar 15 20:04	3°  55'59	0°46'30
retrograde	13259 Apr 26 08:31	25°  34'20		minimum elong	13265 Mar 15 20:06	3°  56'00	0°46'32
opposition	13259 Jul 03 13:15	22°  32'43	2°11'50	max. Earth dist.	13265 Mar 15 05:27	3°  51'25	10.41703 AU
min. Earth dist.	13259 Jul 03 15:13	22°  32'43	8.48282 AU	morning rise	13265 Apr 02 08:56	6°  06'51	
direct	13259 Sep 09 14:22	18°  35'54		retrograde	13265 Jul 13 04:11	13°  45'27	
evening set	13259 Dec 21 17:42	26°  39'46		opposition	13265 Sep 18 18:06	10°  45'27	0°43'44
				min. Earth dist.	13265 Sep 19 04:58	10°  45'27	8.41972 AU
conjunction	13260 Jan 08 10:01	28°  50'21	1°47'19	direct	13265 Nov 26 20:22	6°  56'16	
minimum elong	13260 Jan 08 10:01	28°  50'21	1°48'15	evening set	13266 Mar 11 19:29	14°  46'20	
max. Earth dist.	13260 Jan 08 05:55	28°  49'05	10.47131 AU				
	13260 Jan 17 19:05	0° 		conjunction	13266 Mar 29 09:24	16°  57'30	0°23'31
morning rise	13260 Jan 26 02:30	1°  01'01		minimum elong	13266 Mar 29 09:25	16°  57'31	0°23'20
retrograde	13260 May 08 15:51	8°  43'20		max. Earth dist.	13266 Mar 28 19:51	16°  53'16	10.42365 AU
opposition	13260 Jul 15 14:41	5°  18'51	2°12'13	morning rise	13266 Apr 15 20:21	19°  07'52	
min. Earth dist.	13260 Jul 15 18:42	5°  18'03	8.46271 AU	retrograde	13266 Jul 26 11:33	26°  45'10	
direct	13260 Sep 21 18:25	1°  53'33		opposition	13266 Oct 02 02:36	23°  22'45	0°14'21
evening set	13261 Jan 03 09:11	9°  36'23		min. Earth dist.	13266 Oct 02 12:45	23°  20'45	8.42939 AU
				direct	13266 Dec 10 08:10	19°  56'25	
conjunction	13261 Jan 21 02:02	11°  47'25	1°44'52	evening set	13267 Mar 25 08:16	27°  45'44	
minimum elong	13261 Jan 21 02:03	11°  47'25	1°45'41	desc. node	13267 Apr 01 19:54	28°  41'13	
max. Earth dist.	13261 Jan 20 19:05	11°  45'15	10.45218 AU				
morning rise	13261 Feb 07 18:16	13°  58'20		conjunction	13267 Apr 11 20:09	29°  56'17	-0°00'40
	13261 Feb 16 07:44	15° 		minimum elong	13267 Apr 11 20:10	29°  56'17	0°01'04
retrograde	13261 May 21 23:19	21°  40'25		behind sun begin	13267 Apr 11 13:00	29°  54'04	
opposition	13261 Jul 28 17:21	18°  16'15	2°05'53	behind sun end	13267 Apr 12 03:21	29°  58'31	
min. Earth dist.	13261 Jul 28 23:46	18°  14'58	8.44462 AU	max. Earth dist.	13267 Apr 11 07:48	29°  52'26	10.43651 AU
	13261 Sep 21 13:58	15°  R 			13267 Apr 12 08:04	0° 	
direct	13261 Oct 05 00:30	14°  50'28		morning rise	13267 Apr 29 04:55	2°  8'05'59	
	13261 Oct 18 10:33	15° 		retrograde	13267 Aug 08 16:36	9°  8'41'54	
evening set	13262 Jan 17 01:54	22°  36'00		opposition	13267 Oct 15 11:17	6°  8'19'45	-0°15'40
				min. Earth dist.	13267 Oct 15 20:47	6°  8'17'53	8.44513 AU
conjunction	13262 Feb 03 18:56	24°  47'25	1°37'04	direct	13267 Dec 23 20:27	2°  8'53'40	
minimum elong	13262 Feb 03 18:59	24°  47'25	1°37'44	evening set	13268 Apr 06 18:32	10°  8'41'39	
max. Earth dist.	13262 Feb 03 08:46	24°  44'14	10.43565 AU				
morning rise	13262 Feb 21 10:46	26°  58'32		conjunction	13268 Apr 24 03:55	12°  8'51'21	-0°24'39
	13262 Mar 19 13:18	0° 		minimum elong	13268 Apr 24 03:54	12°  8'51'21	0°25'16
retrograde	13262 Jun 04 07:26	4°  14'09		max. Earth dist.	13268 Apr 23 16:41	12°  8'47'51	10.45490 AU
opposition	13262 Aug 10 21:42	1°  16'23	1°53'06	morning rise	13268 May 11 10:19	15°  8'00'14	
min. Earth dist.	13262 Aug 11 06:33	1°  14'37	8.42981 AU		13268 May 11 09:33	15°  8'	
	13262 Aug 27 07:05	30°  R 		retrograde	13268 Aug 20 19:35	22°  8'34'52	
direct	13262 Oct 18 08:17	27°  50'13		opposition	13268 Oct 27 20:04	19°  8'12'56	-0°44'45
	13262 Dec 08 07:15	0° 		min. Earth dist.	13268 Oct 28 04:42	19°  8'11'15	8.46603 AU
evening set	13263 Jan 30 19:03	5°  13'57		direct	13269 Jan 05 09:20	15°  8'47'14	
				evening set	13269 Apr 20 01:46	23°  8'33'18	
conjunction	13263 Feb 17 11:54	7°  14'37	1°24'16				
minimum elong	13263 Feb 17 11:57	7°  14'38	1°24'45	conjunction	13269 May 07 08:20	25°  8'42'00	-0°47'19
max. Earth dist.	13263 Feb 16 23:05	7°  14'53'37	10.42340 AU	minimum elong	13269 May 07 08:18	25°  8'42'00	0°48'06
morning rise	13263 Mar 07 03:08	10°  14'00'50		max. Earth dist.	13269 May 06 22:36	25°  8'38'58	10.47782 AU
retrograde	13263 Jun 17 15:37	17°  14'41'43		morning rise	13269 May 24 12:17	27°  8'49'57	
opposition	13263 Aug 24 03:28	14°  18'19	1°34'27		13269 Jun 11 19:33	0° 	
min. Earth dist.	13263 Aug 24 14:03	14°  16'13	8.42008 AU	retrograde	13269 Sep 02 22:03	5°  12'33'1	
direct	13263 Oct 31 18:19	10°  15'54		opposition	13269 Nov 10 04:28	2°  11'01'43	-1°11'27
evening set	13264 Feb 13 12:15	18°  14'11		min. Earth dist.	13269 Nov 10 11:10	2°  11'00'25	8.49103 AU
					13269 Dec 08 04:18	30°  R 	

direct	13270 Jan 18 20:33	28° J 36'32	direct	13276 Apr 05 19:34	13° Q 59'01
	13270 Feb 28 17:04	0° II		13276 May 10 11:24	15° Q
evening set	13270 May 03 05:45	6° II 20'12	evening set	13276 Jul 16 15:34	21° Q 24'56
conjunction	13270 May 20 09:35	8° II 27'51 -1°07'31	conjunction	13276 Aug 02 12:21	23° Q 28'33 -1°38'37
minimum elong	13270 May 20 09:33	8° II 27'51 1°08'26	minimum elong	13276 Aug 02 12:23	23° Q 28'34 1°39'18
max. Earth dist.	13270 May 20 02:36	8° II 25'41 10.50417 AU	max. Earth dist.	13276 Aug 02 22:49	23° Q 31'46 10.65734 AU
morning rise	13270 Jun 06 11:09	10° II 34'51	morning rise	13276 Aug 19 10:07	25° Q 32'28
retrograde	13270 Sep 15 23:39	18° II 07'30		13276 Sep 29 12:29	0° II
opposition	13270 Nov 23 12:07	14° II 45'48 -1°34'26	retrograde	13276 Nov 30 15:24	3° II 03'24
min. Earth dist.	13270 Nov 23 16:05	14° II 45'02 8.51886 AU		13277 Feb 04 07:34	30° RQ
direct	13271 Feb 01 05:18	11° II 21'13	opposition	13277 Feb 08 10:46	29° Q 41'06 -1°55'02
evening set	13271 May 16 06:21	19° II 02'08	min. Earth dist.	13277 Feb 08 00:42	29° Q 43'01 8.66580 AU
			direct	13277 Apr 18 15:11	26° Q 20'15
conjunction	13271 Jun 02 07:45	21° II 08'46 -1°24'18		13277 Jun 25 13:23	0° II
minimum elong	13271 Jun 02 07:43	21° II 08'46 1°25'18	evening set	13277 Jul 29 02:27	3° II 43'41
max. Earth dist.	13271 Jun 02 04:13	21° II 07'40 10.53260 AU			
morning rise	13271 Jun 19 07:08	23° II 14'51	conjunction	13277 Aug 15 00:18	5° II 47'19 -1°27'05
	13271 Aug 29 23:44	0° Q	minimum elong	13277 Aug 15 00:21	5° II 47'20 1°27'36
retrograde	13271 Sep 28 23:53	0° Q 46'48	max. Earth dist.	13277 Aug 15 12:48	5° II 51'09 10.67104 AU
	13271 Oct 29 12:41	30° RQ	morning rise	13277 Aug 31 23:40	7° II 51'26
opposition	13271 Dec 06 18:56	27° II 25'09 -1°52'40	retrograde	13277 Dec 13 12:15	15° II 22'37
min. Earth dist.	13271 Dec 06 20:01	27° II 24'56 8.54796 AU	opposition	13278 Feb 21 09:49	12° II 00'02 -1°38'11
direct	13272 Feb 14 12:59	24° II 01'14	min. Earth dist.	13278 Feb 20 22:42	12° II 02'09 8.67656 AU
	13272 May 14 05:47	0° Q	direct	13278 May 01 09:19	8° II 39'32
evening set	13272 May 28 03:52	1° Q 39'12	evening set	13278 Aug 10 13:15	16° II 00'59
conjunction	13272 Jun 14 03:05	3° Q 44'52 -1°36'55	conjunction	13278 Aug 27 12:35	18° II 04'51 -1°11'35
minimum elong	13272 Jun 14 03:04	3° Q 44'52 1°37'57	minimum elong	13278 Aug 27 12:37	18° II 04'52 1°11'54
max. Earth dist.	13272 Jun 14 02:56	3° Q 44'50 10.56154 AU	max. Earth dist.	13278 Aug 28 01:43	18° II 08'52 10.67915 AU
morning rise	13272 Jul 01 00:44	5° Q 50'07	morning rise	13278 Sep 13 14:06	20° II 09'20
retrograde	13272 Oct 11 00:20	13° Q 21'34	retrograde	13278 Dec 26 09:10	27° II 40'53
opposition	13272 Dec 19 00:44	9° Q 59'55 -2°05'21	opposition	13279 Mar 06 07:27	24° II 18'00 -1°16'53
min. Earth dist.	13272 Dec 18 23:30	10° Q 00'10 8.57686 AU	min. Earth dist.	13279 Mar 05 20:15	24° II 20'09 8.68141 AU
direct	13273 Feb 26 17:25	6° Q 36'43	direct	13279 May 14 02:16	20° II 57'41
evening set	13273 Jun 09 22:22	14° Q 11'34	evening set	13279 Aug 23 00:30	28° II 17'48
				13279 Sep 06 01:38	0° Q
conjunction	13273 Jun 26 19:52	16° Q 16'25 -1°44'50	conjunction	13279 Sep 09 01:42	0° Q 22'02 -0°52'49
minimum elong	13273 Jun 26 19:51	16° Q 16'25 1°45'51	minimum elong	13279 Sep 09 01:44	0° Q 22'03 0°52'55
max. Earth dist.	13273 Jun 26 22:10	16° Q 17'08 10.58970 AU	max. Earth dist.	13279 Sep 09 14:51	0° Q 26'03 10.68108 AU
morning rise	13273 Jul 13 16:31	18° Q 21'01	morning rise	13279 Sep 26 05:36	2° Q 27'01
retrograde	13273 Oct 23 23:35	25° Q 52'06	retrograde	13280 Jan 08 05:29	9° Q 59'11
opposition	13274 Jan 01 05:24	22° Q 30'24 -2°12'00	opposition	13280 Mar 18 04:10	6° Q 35'56 -0°52'04
min. Earth dist.	13274 Jan 01 02:17	22° Q 31'00 8.60430 AU	min. Earth dist.	13280 Mar 17 17:01	6° Q 38'04 8.67977 AU
direct	13274 Mar 11 19:03	19° Q 07'52	direct	13280 May 25 18:42	3° Q 15'39
evening set	13274 Jun 22 14:05	26° Q 39'36	evening set	13280 Sep 03 12:42	10° Q 35'04
conjunction	13274 Jul 09 10:33	28° Q 43'48 -1°47'45	conjunction	13280 Sep 20 16:08	12° Q 39'50 -0°31'37
minimum elong	13274 Jul 09 10:33	28° Q 43'48 1°48'42	minimum elong	13280 Sep 20 16:09	12° Q 39'50 0°31'30
max. Earth dist.	13274 Jul 09 15:08	28° Q 45'13 10.61583 AU	max. Earth dist.	13280 Sep 21 05:38	12° Q 43'57 10.67608 AU
	13274 Jul 19 17:38	0° Q	morning rise	13280 Oct 07 22:23	14° Q 45'25
morning rise	13274 Jul 26 07:01	0° Q 47'59	retrograde	13281 Jan 20 02:17	22° Q 18'29
retrograde	13274 Nov 05 19:53	8° Q 18'51	opposition	13281 Mar 30 23:58	18° Q 54'50 -0°24'51
opposition	13275 Jan 14 08:39	4° Q 57'02 -2°12'24	min. Earth dist.	13281 Mar 30 12:50	18° Q 56'59 8.67091 AU
min. Earth dist.	13275 Jan 14 03:24	4° Q 58'02 8.62895 AU	direct	13281 Jun 07 11:19	15° Q 34'25
direct	13275 Mar 24 20:29	1° Q 35'06	evening set	13281 Sep 16 02:59	22° Q 53'59
evening set	13275 Jul 05 03:39	9° Q 03'50			
conjunction	13275 Jul 21 23:54	11° Q 07'38 -1°45'38	conjunction	13281 Oct 03 08:43	24° Q 59'26 -0°08'57
minimum elong	13275 Jul 21 23:56	11° Q 07'38 1°46'27	minimum elong	13281 Oct 03 08:43	24° Q 59'26 0°08'38
max. Earth dist.	13275 Jul 22 07:11	11° Q 09'53 10.63868 AU	behind sun begin	13281 Oct 03 02:31	24° Q 57'33
morning rise	13275 Aug 07 20:44	13° Q 11'34	behind sun end	13281 Oct 03 14:55	25° Q 01'18
	13275 Aug 23 06:02	15° Q	max. Earth dist.	13281 Oct 03 21:51	25° Q 03'26 10.66362 AU
retrograde	13275 Nov 18 17:30	20° Q 42'23	morning rise	13281 Oct 20 17:13	27° Q 05'42
opposition	13276 Jan 27 10:20	17° Q 20'22 -2°06'37		13281 Nov 15 07:47	0° II
min. Earth dist.	13276 Jan 27 02:34	17° Q 21'51 8.64971 AU	retrograde	13282 Feb 02 02:10	4° II 39'54
	13276 Mar 01 09:39	15° RQ	asc. node	13282 Feb 25 12:20	4° II 12'32

opposition	13282 Apr 12 19:09	1° <u>ℓ</u> 15'55	0°03'36	morning rise	13288 Jan 06 16:44	12° <u>♊</u> 31'51	
min. Earth dist.	13282 Apr 12 08:40	1° <u>ℓ</u> 17'56	8.65482 AU	retrograde	13288 Apr 19 16:33	20° <u>♊</u> 13'41	
	13282 Apr 29 14:06	30° <u>♈</u>		opposition	13288 Jun 26 23:29	16° <u>♊</u> 48'33	2°09'31
direct	13282 Jun 20 01:51	27° <u>♉</u> 55'13		min. Earth dist.	13288 Jun 27 00:55	16° <u>♊</u> 48'16	8.49008 AU
	13282 Aug 08 21:42	0° <u>♊</u>		direct	13288 Sep 02 23:15	13° <u>♊</u> 23'47	
evening set	13282 Sep 28 19:55	5° <u>♊</u> 15'49		evening set	13288 Dec 14 21:24	21° <u>♊</u> 01'59	
conjunction	13282 Oct 16 03:44	7° <u>♊</u> 21'58	0°14'18	conjunction	13289 Jan 01 13:21	23° <u>♊</u> 12'20	1°46'40
minimum elong	13282 Oct 16 03:43	7° <u>♊</u> 21'58	0°14'50	minimum elong	13289 Jan 01 13:20	23° <u>♊</u> 12'20	1°47'39
behind sun begin	13282 Oct 16 00:57	7° <u>♊</u> 21'08		max. Earth dist.	13289 Jan 01 09:15	23° <u>♊</u> 11'04	10.47560 AU
behind sun end	13282 Oct 16 06:29	7° <u>♊</u> 22'48		morning rise	13289 Jan 19 05:51	25° <u>♊</u> 22'52	
max. Earth dist.	13282 Oct 16 15:24	7° <u>♊</u> 25'31	10.64440 AU		13289 Mar 02 10:30	0° <u>♋</u>	
morning rise	13282 Nov 02 14:22	9° <u>♊</u> 28'59		retrograde	13289 May 02 23:13	3° <u>♋</u> 05'08	
	13282 Dec 26 07:55	15° <u>♊</u>			13289 Jul 05 20:05	30° <u>♋</u>	
retrograde	13283 Feb 15 01:49	17° <u>♊</u> 04'33		opposition	13289 Jul 09 23:57	29° <u>♋</u> 40'08	2°12'57
	13283 Apr 08 00:05	15° <u>♋</u>		min. Earth dist.	13289 Jul 10 04:13	29° <u>♋</u> 39'17	8.46433 AU
opposition	13283 Apr 25 14:25	13° <u>♊</u> 40'14	0°32'00	direct	13289 Sep 16 01:58	26° <u>♋</u> 14'39	
min. Earth dist.	13283 Apr 25 05:28	13° <u>♊</u> 41'58	8.63287 AU		13289 Nov 23 10:49	0° <u>♋</u>	
direct	13283 Jul 02 17:01	10° <u>♊</u> 19'05		evening set	13289 Dec 28 11:40	3° <u>♋</u> 56'11	
	13283 Sep 18 02:23	15° <u>♊</u>					
evening set	13283 Oct 11 15:47	17° <u>♊</u> 41'29		conjunction	13290 Jan 15 04:09	6° <u>♋</u> 07'03	1°46'43
conjunction	13283 Oct 29 01:26	19° <u>♊</u> 48'22	0°36'53	minimum elong	13290 Jan 15 04:10	6° <u>♋</u> 07'03	1°47'35
minimum elong	13283 Oct 29 01:25	19° <u>♊</u> 48'22	0°37'36	max. Earth dist.	13290 Jan 14 20:45	6° <u>♋</u> 04'45	10.45160 AU
max. Earth dist.	13283 Oct 29 10:34	19° <u>♊</u> 51'09	10.62011 AU	morning rise	13290 Feb 01 20:40	8° <u>♋</u> 17'56	
morning rise	13283 Nov 15 14:00	21° <u>♊</u> 56'07			13290 Apr 12 05:46	15° <u>♋</u>	
retrograde	13284 Feb 28 01:39	29° <u>♊</u> 33'10		retrograde	13290 May 16 04:21	16° <u>♋</u> 00'16	
opposition	13284 May 07 10:01	26° <u>♊</u> 08'32	0°59'03		13290 Jun 19 10:35	15° <u>♋</u>	
min. Earth dist.	13284 May 07 03:17	26° <u>♊</u> 09'50	8.60682 AU	opposition	13290 Jul 23 01:45	12° <u>♋</u> 35'29	2°09'42
direct	13284 Jul 14 10:39	22° <u>♊</u> 46'46		min. Earth dist.	13290 Jul 23 08:17	12° <u>♋</u> 34'11	8.44246 AU
	13284 Oct 22 00:13	0° <u>♋</u>		direct	13290 Sep 29 08:18	9° <u>♋</u> 09'24	
evening set	13284 Oct 23 15:06	0° <u>♋</u> 11'38		evening set	13290 Dec 26 03:04	15° <u>♋</u>	
					13291 Jan 11 03:23	16° <u>♋</u> 53'52	
conjunction	13284 Nov 10 02:29	2° <u>♋</u> 19'16	0°57'52	conjunction	13291 Jan 28 20:18	19° <u>♋</u> 05'10	1°41'21
minimum elong	13284 Nov 10 02:27	2° <u>♋</u> 19'15	0°58'43	minimum elong	13291 Jan 28 20:20	19° <u>♋</u> 05'11	1°42'05
max. Earth dist.	13284 Nov 10 09:18	2° <u>♋</u> 21'21	10.59244 AU	max. Earth dist.	13291 Jan 28 10:43	19° <u>♋</u> 02'11	10.43223 AU
morning rise	13284 Nov 27 16:35	4° <u>♋</u> 27'42		morning rise	13291 Feb 15 12:32	21° <u>♋</u> 16'18	
retrograde	13285 Mar 12 03:31	12° <u>♋</u> 06'11		retrograde	13291 May 29 11:19	28° <u>♋</u> 58'20	
opposition	13285 May 20 05:57	8° <u>♋</u> 41'18	1°23'28	opposition	13291 Aug 05 05:02	25° <u>♋</u> 33'50	1°59'49
min. Earth dist.	13285 May 20 01:11	8° <u>♋</u> 42'14	8.57823 AU	min. Earth dist.	13291 Aug 05 12:45	25° <u>♋</u> 32'18	8.42566 AU
direct	13285 Jul 27 05:07	5° <u>♋</u> 18'50		direct	13291 Oct 12 15:37	22° <u>♋</u> 07'19	
evening set	13285 Nov 05 17:52	12° <u>♋</u> 46'40		evening set	13292 Jan 24 19:57	29° <u>♋</u> 54'09	
					13292 Jan 25 15:07	0° <u>♌</u>	
conjunction	13285 Nov 23 06:50	14° <u>♋</u> 55'03	1°16'11	conjunction	13292 Feb 11 13:04	2° <u>♌</u> 05'47	1°30'47
minimum elong	13285 Nov 23 06:48	14° <u>♋</u> 55'02	1°17'09	minimum elong	13292 Feb 11 13:07	2° <u>♌</u> 05'48	1°31'21
max. Earth dist.	13285 Nov 23 11:36	14° <u>♋</u> 56'31	10.56279 AU	max. Earth dist.	13292 Feb 11 02:12	2° <u>♌</u> 02'24	10.41850 AU
morning rise	13285 Dec 10 21:59	17° <u>♋</u> 04'06		morning rise	13292 Feb 29 04:43	4° <u>♌</u> 17'03	
retrograde	13286 Mar 25 06:16	24° <u>♋</u> 43'56		retrograde	13292 Jun 10 20:01	11° <u>♌</u> 58'25	
opposition	13286 Jun 02 02:40	21° <u>♋</u> 18'52	1°44'02	opposition	13292 Aug 17 09:47	8° <u>♌</u> 34'18	1°43'46
min. Earth dist.	13286 Jun 01 23:35	21° <u>♋</u> 19'28	8.54834 AU	min. Earth dist.	13292 Aug 17 18:29	8° <u>♌</u> 32'34	8.41478 AU
direct	13286 Aug 09 01:40	17° <u>♋</u> 55'39		direct	13292 Oct 24 23:29	5° <u>♌</u> 07'31	
evening set	13286 Nov 18 24:00	25° <u>♋</u> 26'49		evening set	13293 Feb 06 12:58	12° <u>♌</u> 56'08	
conjunction	13286 Dec 06 14:13	27° <u>♋</u> 35'54	1°30'55	conjunction	13293 Feb 24 05:48	15° <u>♌</u> 07'55	1°15'32
minimum elong	13286 Dec 06 14:11	27° <u>♋</u> 35'53	1°31'57	minimum elong	13293 Feb 24 05:51	15° <u>♌</u> 07'56	1°15'54
max. Earth dist.	13286 Dec 06 16:54	27° <u>♋</u> 36'43	10.53247 AU	max. Earth dist.	13293 Feb 23 17:43	15° <u>♌</u> 04'08	10.41111 AU
morning rise	13286 Dec 24 06:00	29° <u>♋</u> 45'29		morning rise	13293 Mar 13 20:31	17° <u>♌</u> 19'10	
	13286 Dec 26 06:17	0° <u>♌</u>		retrograde	13293 Jun 24 03:24	24° <u>♌</u> 59'32	
retrograde	13287 Apr 07 10:22	7° <u>♌</u> 26'29		opposition	13293 Aug 30 15:49	21° <u>♌</u> 35'53	1°22'21
opposition	13287 Jun 15 00:28	4° <u>♌</u> 01'20	1°59'40	min. Earth dist.	13293 Aug 31 01:34	21° <u>♌</u> 33'57	8.41048 AU
min. Earth dist.	13287 Jun 14 23:13	4° <u>♌</u> 01'35	8.51849 AU	direct	13293 Nov 07 10:06	18° <u>♌</u> 09'02	
direct	13287 Aug 22 00:03	0° <u>♌</u> 37'21		evening set	13294 Feb 20 05:36	25° <u>♌</u> 58'47	
evening set	13287 Dec 02 09:20	8° <u>♌</u> 12'02					
conjunction	13287 Dec 20 00:32	10° <u>♌</u> 21'46	1°41'17	conjunction	13294 Mar 09 21:36	28° <u>♌</u> 10'29	0°56'23
minimum elong	13287 Dec 20 00:30	10° <u>♌</u> 21'45	1°42'18	minimum elong	13294 Mar 09 21:38	28° <u>♌</u> 10'30	0°56'32
max. Earth dist.	13287 Dec 20 00:06	10° <u>♌</u> 21'38	10.50296 AU	max. Earth dist.	13294 Mar 09 08:25	28° <u>♌</u> 06'22	10.41056 AU

	13294 Mar 24 13:05	0°♈	direct	13300 Jan 26 09:18	5°♊47'16	
morning rise	13294 Mar 27 11:06	0°♈21'32	evening set	13300 May 10 16:36	13°♊29'32	
retrograde	13294 Jul 07 10:25	8°♈00'44				
opposition	13294 Sep 12 23:11	4°♈37'37 0°56'41	conjunction	13300 May 27 19:02	15°♊36'35 -1°16'58	
min. Earth dist.	13294 Sep 13 09:52	4°♈35'29 8.41317 AU	minimum elong	13300 May 27 19:00	15°♊36'35 1°17'56	
direct	13294 Nov 20 21:59	1°♈10'51	max. Earth dist.	13300 May 27 13:43	15°♊34'56 10.52786 AU	
evening set	13295 Mar 05 21:03	9°♈00'58	morning rise	13300 Jun 13 19:22	17°♊43'02	
			retrograde	13300 Sep 23 10:49	25°♊15'16	
conjunction	13295 Mar 23 11:40	11°♈12'23 0°34'22	opposition	13300 Dec 01 02:09	21°♊54'07 -1°44'47	
minimum elong	13295 Mar 23 11:42	11°♈12'23 0°34'17	min. Earth dist.	13300 Dec 01 05:36	21°♊53'27 8.54281 AU	
max. Earth dist.	13295 Mar 22 21:48	11°♈08'03 10.41693 AU	direct	13301 Feb 08 18:54	18°♊30'21	
morning rise	13295 Apr 09 23:40	13°♈23'02	evening set	13301 May 23 15:56	26°♊09'46	
retrograde	13295 Jul 20 17:00	21°♈00'58				
opposition	13295 Sep 26 07:22	17°♈38'20 0°28'07	conjunction	13301 Jun 09 15:56	28°♊15'50 -1°31'34	
min. Earth dist.	13295 Sep 26 18:07	17°♈36'13 8.42271 AU	minimum elong	13301 Jun 09 15:54	28°♊15'49 1°32'35	
direct	13295 Dec 04 10:33	14°♈11'51	max. Earth dist.	13301 Jun 09 12:37	28°♊14'48 10.55576 AU	
evening set	13296 Mar 18 11:02	22°♈01'38		13301 Jun 23 16:20	0°♉	
			morning rise	13301 Jun 26 14:26	0°♉21'25	
conjunction	13296 Apr 04 23:50	24°♈12'31 0°10'39	retrograde	13301 Oct 06 11:25	7°♉53'10	
minimum elong	13296 Apr 04 23:50	24°♈12'31 0°10'20	opposition	13301 Dec 14 08:55	4°♉32'01 -2°00'05	
behind sun begin	13296 Apr 04 18:10	24°♈10'46	min. Earth dist.	13301 Dec 14 10:11	4°♉31'46 8.56983 AU	
behind sun end	13296 Apr 05 05:30	24°♈14'16	direct	13302 Feb 22 01:41	1°♉08'53	
max. Earth dist.	13296 Apr 04 10:33	24°♈08'22 10.42983 AU	evening set	13302 Jun 05 12:15	8°♉45'25	
morning rise	13296 Apr 22 09:51	26°♈22'35				
	13296 May 24 01:32	0°♉	conjunction	13302 Jun 22 10:27	10°♉50'38 -1°41'40	
retrograde	13296 Aug 01 22:07	3°♉59'10	minimum elong	13302 Jun 22 10:26	10°♉50'38 1°42'42	
desc. node	13296 Sep 16 16:39	2°♉16'01	max. Earth dist.	13302 Jun 22 10:05	10°♉50'31 10.58114 AU	
opposition	13296 Oct 08 16:01	0°♉37'00 -0°01'47	morning rise	13302 Jul 09 07:35	12°♉55'33	
min. Earth dist.	13296 Oct 09 01:44	0°♉35'06 8.43855 AU	retrograde	13302 Oct 19 11:21	20°♉27'05	
	13296 Oct 16 13:31	30°♉♈	opposition	13302 Dec 27 14:27	17°♉05'49 -2°09'32	
direct	13296 Dec 17 00:08	27°♈10'55	min. Earth dist.	13302 Dec 27 12:55	17°♉06'06 8.59383 AU	
	13297 Feb 14 01:16	0°♉	direct	13303 Mar 07 05:36	13°♉43'18	
evening set	13297 Mar 31 22:48	4°♉59'42	evening set	13303 Jun 18 05:52	21°♉16'58	
conjunction	13297 Apr 18 09:23	7°♉09'49 -0°13'39	conjunction	13303 Jul 05 02:55	23°♉21'32 -1°46'53	
minimum elong	13297 Apr 18 09:22	7°♉09'48 0°14'10	minimum elong	13303 Jul 05 02:55	23°♉21'32 1°47'52	
behind sun begin	13297 Apr 18 05:55	7°♉08'44	max. Earth dist.	13303 Jul 05 05:48	23°♉22'26 10.60336 AU	
behind sun end	13297 Apr 18 12:49	7°♉10'53	morning rise	13303 Jul 21 23:19	25°♉25'58	
max. Earth dist.	13297 Apr 17 21:55	7°♉06'14 10.44857 AU		13303 Sep 01 21:38	0°♊	
morning rise	13297 May 05 17:00	9°♉19'05	retrograde	13303 Nov 01 10:32	2°♊57'30	
	13297 Jun 29 01:03	15°♉		13304 Jan 04 13:09	30°♉♈	
retrograde	13297 Aug 15 03:01	16°♉54'25	opposition	13304 Jan 09 19:01	29°♉35'59 -2°12'48	
	13297 Oct 02 18:27	15°♉♉	min. Earth dist.	13304 Jan 09 15:09	29°♉36'44 8.61440 AU	
opposition	13297 Oct 22 01:06	13°♉32'38 -0°31'29	direct	13304 Mar 19 07:52	26°♉14'00	
min. Earth dist.	13297 Oct 22 09:02	13°♉31'05 8.45991 AU		13304 May 27 10:49	0°♊	
direct	13297 Dec 30 13:01	10°♉07'05	evening set	13304 Jun 29 21:11	3°♊44'47	
	13298 Mar 20 09:27	15°♉				
evening set	13298 Apr 14 07:43	17°♉54'10	conjunction	13304 Jul 16 17:35	5°♊48'54 -1°47'03	
			minimum elong	13304 Jul 16 17:36	5°♊48'54 1°47'56	
conjunction	13298 May 01 15:44	20°♉03'21 -0°37'03	max. Earth dist.	13304 Jul 16 22:58	5°♊50'34 10.62210 AU	
minimum elong	13298 May 01 15:43	20°♉03'20 0°37'46	morning rise	13304 Aug 02 14:04	7°♊53'03	
max. Earth dist.	13298 May 01 06:49	20°♉00'33 10.47216 AU		13304 Oct 22 09:21	15°♊	
morning rise	13298 May 18 20:46	22°♉11'42	retrograde	13304 Nov 13 09:53	15°♊24'40	
retrograde	13298 Aug 28 07:49	29°♉45'53		13304 Dec 05 13:43	15°♉♊	
opposition	13298 Nov 04 10:04	26°♉24'24 -0°59'27	opposition	13305 Jan 21 22:22	12°♊02'50 -2°09'49	
min. Earth dist.	13298 Nov 04 16:19	26°♉23'11 8.48560 AU	min. Earth dist.	13305 Jan 21 16:45	12°♊03'54 8.63122 AU	
direct	13299 Jan 12 23:47	22°♉59'26	direct	13305 Apr 01 07:23	8°♊41'15	
	13299 Apr 21 11:30	0°♊		13305 Jul 02 17:24	15°♊	
evening set	13299 Apr 27 13:46	0°♊44'17	evening set	13305 Jul 12 10:35	16°♊09'15	
conjunction	13299 May 14 19:00	2°♊52'25 -0°58'31	conjunction	13305 Jul 29 07:03	18°♊13'08 -1°42'13	
minimum elong	13299 May 14 18:58	2°♊52'25 0°59'22	minimum elong	13305 Jul 29 07:05	18°♊13'09 1°42'58	
max. Earth dist.	13299 May 14 12:06	2°♊50'16 10.49922 AU	max. Earth dist.	13305 Jul 29 14:13	18°♊15'21 10.63700 AU	
morning rise	13299 May 31 21:33	4°♊59'49	morning rise	13305 Aug 15 04:26	20°♊17'16	
retrograde	13299 Sep 10 10:38	12°♊32'54	retrograde	13305 Nov 26 06:56	27°♊49'01	
opposition	13299 Nov 17 18:26	9°♊11'38 -1°24'16	opposition	13306 Feb 04 00:12	24°♊26'45 -2°00'47	
min. Earth dist.	13299 Nov 17 23:25	9°♊10'40 8.51397 AU	min. Earth dist.	13306 Feb 03 17:12	24°♊28'05 8.64389 AU	

direct	13306 Apr 14 05:18	21° Ω 05'27	min. Earth dist.	13312 Apr 20 00:58	8° \mathbb{M} 37'23	8.61496 AU
evening set	13306 Jul 24 22:35	28° Ω 30'58	direct	13312 Jun 27 15:27	5° \mathbb{M} 13'51	
	13306 Aug 06 02:41	0° \mathbb{M}	evening set	13312 Oct 06 11:24	12° \mathbb{M} 36'34	
conjunction	13306 Aug 10 19:54	0° \mathbb{M} 34'50 -1°32'39	conjunction	13312 Oct 23 20:29	14° \mathbb{M} 43'28	0°27'22
minimum elong	13306 Aug 10 19:56	0° \mathbb{M} 34'50 1°33'14	minimum elong	13312 Oct 23 20:28	14° \mathbb{M} 43'28	0°28'01
max. Earth dist.	13306 Aug 11 05:04	0° \mathbb{M} 37'39 10.64756 AU	max. Earth dist.	13312 Oct 24 08:08	14° \mathbb{M} 47'02	10.60493 AU
morning rise	13306 Aug 27 18:46	2° \mathbb{M} 39'07		13312 Oct 26 02:25	15° \mathbb{M}	
retrograde	13306 Dec 09 03:08	10° \mathbb{M} 11'11	morning rise	13312 Nov 10 08:23	16° \mathbb{M} 51'13	
opposition	13307 Feb 17 00:34	6° \mathbb{M} 48'24 -1°46'12	retrograde	13313 Feb 22 19:28	24° \mathbb{M} 28'47	
min. Earth dist.	13307 Feb 16 15:43	6° \mathbb{M} 50'06 8.65185 AU	opposition	13313 May 03 06:46	21° \mathbb{M} 03'37	0°47'47
direct	13307 Apr 27 02:45	3° \mathbb{M} 27'18	min. Earth dist.	13313 May 02 21:39	21° \mathbb{M} 05'24	8.59434 AU
evening set	13307 Aug 06 09:55	10° \mathbb{M} 50'44	direct	13313 Jul 10 09:08	17° \mathbb{M} 41'35	
			evening set	13313 Oct 19 09:59	25° \mathbb{M} 06'20	
conjunction	13307 Aug 23 08:42	12° \mathbb{M} 54'48 -1°18'48	conjunction	13313 Nov 05 20:54	27° \mathbb{M} 13'58	0°49'12
minimum elong	13307 Aug 23 08:45	12° \mathbb{M} 54'48 1°19'12	minimum elong	13313 Nov 05 20:52	27° \mathbb{M} 13'57	0°50'00
max. Earth dist.	13307 Aug 23 20:16	12° \mathbb{M} 58'21 10.65320 AU	max. Earth dist.	13313 Nov 06 07:01	27° \mathbb{M} 17'04	10.58271 AU
morning rise	13307 Sep 09 09:21	14° \mathbb{M} 59'23	morning rise	13313 Nov 23 10:21	29° \mathbb{M} 22'22	
retrograde	13307 Dec 22 01:31	22° \mathbb{M} 31'56		13313 Nov 28 16:43	0° \mathbb{M}	
opposition	13308 Feb 29 23:32	19° \mathbb{M} 08'39 -1°26'44	retrograde	13314 Mar 07 22:38	7° \mathbb{M} 01'16	
min. Earth dist.	13308 Feb 29 12:56	19° \mathbb{M} 10'41 8.65468 AU	opposition	13314 May 16 03:07	3° \mathbb{M} 35'59	1°13'30
direct	13308 May 08 21:37	15° \mathbb{M} 47'41	min. Earth dist.	13314 May 15 19:40	3° \mathbb{M} 37'27	8.57114 AU
evening set	13308 Aug 17 21:27	23° \mathbb{M} 09'32	direct	13314 Jul 23 02:22	0° \mathbb{M} 13'28	
			evening set	13314 Nov 01 12:05	7° \mathbb{M} 40'53	
conjunction	13308 Sep 03 22:04	25° \mathbb{M} 13'57 -1°01'21	conjunction	13314 Nov 19 00:27	9° \mathbb{M} 49'12	1°08'46
minimum elong	13308 Sep 03 22:06	25° \mathbb{M} 13'58 1°01'33	minimum elong	13314 Nov 19 00:25	9° \mathbb{M} 49'11	1°09'42
max. Earth dist.	13308 Sep 04 11:20	25° \mathbb{M} 18'02 10.65366 AU	max. Earth dist.	13314 Nov 19 07:49	9° \mathbb{M} 51'28	10.55849 AU
morning rise	13308 Sep 21 00:52	27° \mathbb{M} 19'03	morning rise	13314 Dec 06 15:11	11° \mathbb{M} 58'14	
retrograde	13308 Oct 14 11:00	0° \mathbb{M}	retrograde	13315 Mar 21 02:33	19° \mathbb{M} 38'23	
opposition	13309 Jan 02 23:31	4° \mathbb{M} 52'13	opposition	13315 May 29 00:24	16° \mathbb{M} 13'07	1°35'51
min. Earth dist.	13309 Mar 13 21:24	1° \mathbb{M} 28'27 -1°03'16	min. Earth dist.	13315 May 28 19:21	16° \mathbb{M} 14'07	8.54665 AU
	13309 Apr 02 18:12	30° \mathbb{R} \mathbb{M}	direct	13315 Aug 04 21:47	12° \mathbb{M} 50'03	
direct	13309 May 21 13:45	28° \mathbb{M} 07'29	evening set	13315 Nov 14 17:30	20° \mathbb{M} 20'35	
	13309 Jul 07 21:07	0° \mathbb{M}				
evening set	13309 Aug 30 09:51	5° \mathbb{M} 28'26	conjunction	13315 Dec 02 07:07	22° \mathbb{M} 29'33	1°25'07
			minimum elong	13315 Dec 02 07:05	22° \mathbb{M} 29'32	1°26'08
conjunction	13309 Sep 16 12:29	7° \mathbb{M} 33'21 -0°41'04	max. Earth dist.	13315 Dec 02 11:22	22° \mathbb{M} 30'51	10.53359 AU
minimum elong	13309 Sep 16 12:31	7° \mathbb{M} 33'21 0°41'02	morning rise	13315 Dec 19 22:50	24° \mathbb{M} 39'07	
max. Earth dist.	13309 Sep 17 01:55	7° \mathbb{M} 37'27 10.64883 AU		13316 Feb 08 19:34	0° \mathbb{M}	
morning rise	13309 Oct 03 17:47	9° \mathbb{M} 39'03	retrograde	13316 Apr 02 06:09	2° \mathbb{M} 20'25	
retrograde	13310 Jan 15 21:06	17° \mathbb{M} 13'03		13316 May 27 01:07	30° \mathbb{R} \mathbb{M}	
opposition	13310 Mar 26 18:23	13° \mathbb{M} 48'51 -0°36'53	opposition	13316 Jun 09 22:39	28° \mathbb{M} 55'16	1°53'39
min. Earth dist.	13310 Mar 26 07:17	13° \mathbb{M} 50'59 8.64462 AU	min. Earth dist.	13316 Jun 09 20:13	28° \mathbb{M} 55'44	8.52211 AU
direct	13310 Jun 03 06:21	10° \mathbb{M} 27'45	direct	13316 Aug 16 20:46	25° \mathbb{M} 31'37	
evening set	13310 Sep 11 23:59	17° \mathbb{M} 48'33		13316 Oct 31 01:36	0° \mathbb{M}	
			evening set	13316 Nov 27 02:24	3° \mathbb{M} 05'30	
conjunction	13310 Sep 29 04:43	19° \mathbb{M} 54'04 -0°18'51	conjunction	13316 Dec 14 17:09	5° \mathbb{M} 15'06	1°37'23
minimum elong	13310 Sep 29 04:44	19° \mathbb{M} 54'04 0°18'36	minimum elong	13316 Dec 14 17:07	5° \mathbb{M} 15'06	1°38'25
max. Earth dist.	13310 Sep 29 17:20	19° \mathbb{M} 57'55 10.63877 AU	max. Earth dist.	13316 Dec 14 18:34	5° \mathbb{M} 15'32	10.50920 AU
morning rise	13310 Oct 16 12:29	22° \mathbb{M} 00'26	morning rise	13317 Jan 01 09:25	7° \mathbb{M} 25'09	
retrograde	13311 Jan 28 19:48	29° \mathbb{M} 35'26	retrograde	13317 Apr 15 11:48	15° \mathbb{M} 07'16	
opposition	13311 Apr 08 14:38	26° \mathbb{M} 10'52 -0°08'43	opposition	13317 Jun 22 21:50	11° \mathbb{M} 42'17	2°05'58
min. Earth dist.	13311 Apr 08 04:20	26° \mathbb{M} 12'52 8.63197 AU	min. Earth dist.	13317 Jun 22 21:32	11° \mathbb{M} 42'21	8.49858 AU
direct	13311 Jun 15 22:44	22° \mathbb{M} 49'32	direct	13317 Aug 29 21:04	8° \mathbb{M} 18'04	
asc. node	13311 Jul 31 23:34	24° \mathbb{M} 37'02	evening set	13317 Dec 10 14:13	15° \mathbb{M} 55'20	
	13311 Sep 23 03:45	0° \mathbb{M}				
evening set	13311 Sep 24 16:20	0° \mathbb{M} 10'56	conjunction	13317 Dec 28 05:56	18° \mathbb{M} 05'31	1°44'53
			minimum elong	13317 Dec 28 05:55	18° \mathbb{M} 05'31	1°45'53
conjunction	13311 Oct 11 23:15	2° \mathbb{M} 17'07 0°04'23	max. Earth dist.	13317 Dec 28 04:58	18° \mathbb{M} 05'13	10.48633 AU
minimum elong	13311 Oct 11 23:16	2° \mathbb{M} 17'07 0°04'51	morning rise	13318 Jan 14 22:23	20° \mathbb{M} 15'58	
behind sun begin	13311 Oct 11 16:18	2° \mathbb{M} 15'00	retrograde	13318 Apr 28 18:59	27° \mathbb{M} 58'31	
behind sun end	13311 Oct 12 06:14	2° \mathbb{M} 19'13	opposition	13318 Jul 05 22:21	24° \mathbb{M} 33'46	2°12'05
max. Earth dist.	13311 Oct 12 11:19	2° \mathbb{M} 20'48 10.62391 AU	min. Earth dist.	13318 Jul 05 23:57	24° \mathbb{M} 33'27	8.47695 AU
morning rise	13311 Oct 29 09:16	4° \mathbb{M} 24'11	direct	13318 Sep 11 23:12	21° \mathbb{M} 09'00	
retrograde	13312 Feb 10 18:45	12° \mathbb{M} 00'24				
opposition	13312 Apr 20 10:42	8° \mathbb{M} 35'30 0°19'56				

evening set	13318 Dec 24 04:13	28° Z 49'26		conjunction	13325 Mar 31 20:13	19° Y 09'44	0°20'18
	13319 Jan 02 18:33	0° \approx		minimum elong	13325 Mar 31 20:14	19° Y 09'44	0°20'05
				max. Earth dist.	13325 Mar 31 06:54	19° Y 05'33	10.42373 AU
conjunction	13319 Jan 10 20:37	1° \approx 00'06	1°47'09	morning rise	13325 Apr 18 06:57	21° Y 20'04	
minimum elong	13319 Jan 10 20:38	1° \approx 00'06	1°48'04	retrograde	13325 Jul 28 22:27	28° Y 57'24	
max. Earth dist.	13319 Jan 10 16:58	0° \approx 58'58	10.46582 AU	opposition	13325 Oct 04 13:24	25° Y 35'05	0°10'19
morning rise	13319 Jan 28 13:01	3° \approx 10'51		min. Earth dist.	13325 Oct 04 23:50	25° Y 33'01	8.42965 AU
retrograde	13319 May 12 02:04	10° \approx 53'27		direct	13325 Dec 12 18:33	22° Y 08'49	
opposition	13319 Jul 19 00:14	7° \approx 28'58	2°11'34	desc. node	13326 Feb 11 04:02	25° Y 05'08	
min. Earth dist.	13319 Jul 19 04:06	7° \approx 28'12	8.45783 AU	evening set	13326 Mar 27 19:17	29° Y 58'13	
direct	13319 Sep 25 03:59	4° \approx 03'38			13326 Mar 28 01:08	0° B	
evening set	13320 Jan 06 20:00	11° \approx 46'56					
				conjunction	13326 Apr 14 06:54	2° B 08'43	-0°03'57
conjunction	13320 Jan 24 12:50	13° \approx 58'03	1°44'00	minimum elong	13326 Apr 14 06:53	2° B 08'42	0°04'24
minimum elong	13320 Jan 24 12:51	13° \approx 58'03	1°44'48	behind sun begin	13326 Apr 13 23:50	2° B 06'31	
max. Earth dist.	13320 Jan 24 05:46	13° \approx 55'51	10.44811 AU	behind sun end	13326 Apr 14 13:56	2° B 10'53	
	13320 Feb 01 20:22	15° \approx		max. Earth dist.	13326 Apr 13 18:05	2° B 04'43	10.43697 AU
morning rise	13320 Feb 11 05:03	16° \approx 09'02		morning rise	13326 May 01 15:29	4° B 18'23	
retrograde	13320 May 24 10:04	23° \approx 51'15		retrograde	13326 Aug 11 02:39	11° B 54'22	
opposition	13320 Jul 31 03:16	20° \approx 27'07	2°04'23	opposition	13326 Oct 17 22:24	8° B 32'18	-0°19'39
min. Earth dist.	13320 Jul 31 10:04	20° \approx 25'46	8.44141 AU	min. Earth dist.	13326 Oct 18 08:16	8° B 30'22	8.44583 AU
direct	13320 Oct 07 09:57	17° \approx 01'17		direct	13326 Dec 26 08:19	5° B 06'17	
evening set	13321 Jan 19 12:51	24° \approx 47'08		evening set	13327 Apr 10 05:23	12° B 54'16	
conjunction	13321 Feb 06 05:49	26° \approx 58'35	1°35'31	conjunction	13327 Apr 27 14:28	15° B 03'54	-0°27'47
minimum elong	13321 Feb 06 05:51	26° \approx 58'36	1°36'10	minimum elong	13327 Apr 27 14:27	15° B 03'54	0°28'26
max. Earth dist.	13321 Feb 05 18:58	26° \approx 55'12	10.43325 AU	max. Earth dist.	13327 Apr 27 02:51	15° B 00'16	10.45581 AU
morning rise	13321 Feb 23 21:43	29° \approx 09'45			13327 Apr 27 01:59	15° B	
	13321 Mar 02 20:09	0° H		morning rise	13327 May 14 20:46	17° B 12'44	
retrograde	13321 Jun 06 18:00	6° H 51'23		retrograde	13327 Aug 24 06:29	24° B 47'27	
opposition	13321 Aug 13 07:47	3° H 27'38	1°50'47	opposition	13327 Oct 31 07:17	21° B 25'34	-0°48'29
min. Earth dist.	13321 Aug 13 17:07	3° H 25'47	8.42803 AU	min. Earth dist.	13327 Oct 31 15:45	21° B 23'55	8.46717 AU
direct	13321 Oct 20 18:23	0° H 01'27		direct	13328 Jan 08 20:40	17° B 59'57	
evening set	13322 Feb 02 06:04	7° H 49'25		evening set	13328 Apr 22 12:33	25° B 45'55	
conjunction	13322 Feb 19 22:52	10° H 01'06	1°22'07	conjunction	13328 May 09 18:54	27° B 54'34	-0°50'10
minimum elong	13322 Feb 19 22:54	10° H 01'06	1°22'34	minimum elong	13328 May 09 18:53	27° B 54'34	0°50'59
max. Earth dist.	13322 Feb 19 09:40	9° H 56'58	10.42212 AU	max. Earth dist.	13328 May 09 09:31	27° B 51'38	10.47913 AU
morning rise	13322 Mar 09 14:06	12° H 12'21		morning rise	13328 May 26 22:42	0° II 02'27	
retrograde	13322 Jun 20 00:30	19° H 53'12			13328 May 26 14:40	0° II	
opposition	13322 Aug 26 13:38	16° H 29'52	1°31'28	retrograde	13328 Sep 05 08:45	7° II 36'03	
min. Earth dist.	13322 Aug 27 00:09	16° H 27'47	8.41913 AU	opposition	13328 Nov 12 15:40	4° II 14'16	-1°14'44
direct	13322 Nov 03 06:15	13° H 03'28		min. Earth dist.	13328 Nov 12 21:36	4° II 13'07	8.49252 AU
evening set	13323 Feb 15 23:09	20° H 52'55		direct	13329 Jan 21 07:48	0° II 49'09	
				evening set	13329 May 05 16:24	8° II 32'40	
conjunction	13323 Mar 05 15:29	23° H 04'39	1°04'27	conjunction	13329 May 22 20:06	10° II 40'15	-1°09'56
minimum elong	13323 Mar 05 15:32	23° H 04'40	1°04'42	minimum elong	13329 May 22 20:04	10° II 40'14	1°10'53
max. Earth dist.	13323 Mar 05 01:27	23° H 00'16	10.41631 AU	max. Earth dist.	13329 May 22 14:08	10° II 38'23	10.50581 AU
morning rise	13323 Mar 23 05:40	25° H 15'48		morning rise	13329 Jun 08 21:23	12° II 47'10	
	13323 May 05 06:48	0° Y		retrograde	13329 Sep 18 10:11	20° II 19'51	
retrograde	13323 Jul 03 07:58	2° Y 55'40		opposition	13329 Nov 25 23:28	16° II 58'07	-1°37'07
	13323 Sep 03 02:19	30° R H		min. Earth dist.	13329 Nov 26 02:40	16° II 57'30	8.52064 AU
opposition	13323 Sep 08 20:37	29° H 32'41	1°07'23	direct	13330 Feb 03 17:13	13° II 33'36	
min. Earth dist.	13323 Sep 09 07:21	29° H 30'34	8.41613 AU	evening set	13330 May 18 16:46	21° II 14'16	
direct	13323 Nov 16 17:57	26° H 06'13					
	13324 Jan 25 21:27	0° Y					
evening set	13324 Feb 29 15:30	3° Y 56'23		conjunction	13330 Jun 04 17:59	23° II 20'49	-1°26'11
				minimum elong	13330 Jun 04 17:57	23° II 20'49	1°27'12
conjunction	13324 Mar 18 06:54	6° Y 07'59	0°43'29	max. Earth dist.	13330 Jun 04 15:15	23° II 19'58	10.53451 AU
minimum elong	13324 Mar 18 06:56	6° Y 07'59	0°43'29	morning rise	13330 Jun 21 17:08	25° II 26'48	
max. Earth dist.	13324 Mar 17 17:04	6° Y 03'39	10.41679 AU		13330 Aug 02 04:56	0° G	
morning rise	13324 Apr 04 19:33	8° Y 18'49		retrograde	13330 Oct 01 11:51	2° G 58'45	
retrograde	13324 Jul 15 16:00	15° Y 57'29			13330 Dec 04 07:00	30° R II	
opposition	13324 Sep 21 04:40	12° Y 34'50	0°39'51	opposition	13330 Dec 09 06:18	29° II 37'04	-1°54'37
min. Earth dist.	13324 Sep 21 15:12	12° Y 32'46	8.41963 AU	min. Earth dist.	13330 Dec 09 07:14	29° II 36'53	8.55005 AU
direct	13324 Nov 29 05:47	9° Y 08'25		direct	13331 Feb 16 23:22	26° II 13'11	
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

























































































































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			minimum elong	13337 Aug 29 21:32	20° \mathfrak{M} 12'51	1°09'24
conjunction	13331 Jun 17 13:05	5° \mathfrak{D} 56'24 -1°38'10	max. Earth dist.	13337 Aug 30 10:15	20° \mathfrak{M} 16'44	10.68036 AU
minimum elong	13331 Jun 17 13:03	5° \mathfrak{D} 56'24 1°39'12	morning rise	13337 Sep 15 23:19	22° \mathfrak{M} 17'21	
max. Earth dist.	13331 Jun 17 12:51	5° \mathfrak{D} 56'20 10.56376 AU	retrograde	13337 Dec 28 17:38	29° \mathfrak{M} 48'50	
morning rise	13331 Jul 04 10:41	8° \mathfrak{D} 01'36	opposition	13338 Mar 08 16:58	26° \mathfrak{M} 25'54	-1°13'35
retrograde	13331 Oct 14 10:48	15° \mathfrak{D} 32'56	min. Earth dist.	13338 Mar 08 05:53	26° \mathfrak{M} 28'02	8.68240 AU
opposition	13331 Dec 22 11:54	12° \mathfrak{D} 11'15 -2°06'29	direct	13338 May 16 11:30	23° \mathfrak{M} 05'34	
min. Earth dist.	13331 Dec 22 11:00	12° \mathfrak{D} 11'25 8.57924 AU		13338 Aug 21 19:16	0° \mathfrak{D}	
direct	13332 Mar 01 03:37	8° \mathfrak{D} 48'02	evening set	13338 Aug 25 09:08	0° \mathfrak{D} 25'32	
evening set	13332 Jun 12 08:20	16° \mathfrak{D} 22'33				
			conjunction	13338 Sep 11 10:39	2° \mathfrak{D} 29'49	-0°49'59
conjunction	13332 Jun 29 05:40	18° \mathfrak{D} 27'19 -1°45'24	minimum elong	13338 Sep 11 10:41	2° \mathfrak{D} 29'50	0°50'03
minimum elong	13332 Jun 29 05:39	18° \mathfrak{D} 27'19 1°46'25	max. Earth dist.	13338 Sep 12 00:17	2° \mathfrak{D} 33'59	10.68194 AU
max. Earth dist.	13332 Jun 29 07:38	18° \mathfrak{D} 27'55 10.59215 AU	morning rise	13338 Sep 28 14:45	4° \mathfrak{D} 34'50	
morning rise	13332 Jul 16 02:23	20° \mathfrak{D} 31'52	retrograde	13339 Jan 10 14:11	12° \mathfrak{D} 06'59	
retrograde	13332 Oct 26 08:16	28° \mathfrak{D} 02'50	opposition	13339 Mar 21 13:20	8° \mathfrak{D} 43'42	-0°48'25
opposition	13333 Jan 03 16:21	24° \mathfrak{D} 41'04 -2°12'16	min. Earth dist.	13339 Mar 21 01:39	8° \mathfrak{D} 45'57	8.68050 AU
min. Earth dist.	13333 Jan 03 13:07	24° \mathfrak{D} 41'41 8.60679 AU	direct	13339 May 29 04:45	5° \mathfrak{D} 23'26	
direct	13333 Mar 14 06:57	21° \mathfrak{D} 18'31	evening set	13339 Sep 06 21:27	12° \mathfrak{D} 42'46	
evening set	13333 Jun 24 23:40	28° \mathfrak{D} 49'53				
	13333 Jul 04 13:14	0° \mathfrak{Q}	conjunction	13339 Sep 24 01:10	14° \mathfrak{D} 47'35	-0°28'34
			minimum elong	13339 Sep 24 01:11	14° \mathfrak{D} 47'36	0°28'25
conjunction	13333 Jul 11 20:09	0° \mathfrak{Q} 54'01 -1°47'38	max. Earth dist.	13339 Sep 24 15:26	14° \mathfrak{D} 51'57	10.67681 AU
minimum elong	13333 Jul 11 20:09	0° \mathfrak{Q} 54'01 1°48'33	morning rise	13339 Oct 11 07:31	16° \mathfrak{D} 53'12	
max. Earth dist.	13333 Jul 12 01:12	0° \mathfrak{Q} 55'35 10.61832 AU	retrograde	13340 Jan 23 12:53	24° \mathfrak{D} 26'14	
morning rise	13333 Jul 28 16:37	2° \mathfrak{Q} 58'09	opposition	13340 Apr 02 08:57	21° \mathfrak{D} 02'36	-0°21'00
retrograde	13333 Nov 08 06:23	10° \mathfrak{Q} 28'55	min. Earth dist.	13340 Apr 01 21:19	21° \mathfrak{D} 04'50	8.67171 AU
opposition	13334 Jan 16 19:20	7° \mathfrak{Q} 07'00 -2°11'48	direct	13340 Jun 09 19:31	17° \mathfrak{D} 42'12	
min. Earth dist.	13334 Jan 16 13:20	7° \mathfrak{Q} 08'09 8.63139 AU	evening set	13340 Sep 18 11:53	25° \mathfrak{D} 01'43	
direct	13334 Mar 27 07:47	3° \mathfrak{Q} 45'05				
evening set	13334 Jul 07 12:56	11° \mathfrak{Q} 13'23	conjunction	13340 Oct 05 17:42	27° \mathfrak{D} 07'10	-0°05'50
			minimum elong	13340 Oct 05 17:43	27° \mathfrak{D} 07'10	0°05'29
conjunction	13334 Jul 24 09:20	13° \mathfrak{Q} 17'10 -1°44'49	behind sun begin	13340 Oct 05 10:50	27° \mathfrak{D} 05'05	
minimum elong	13334 Jul 24 09:22	13° \mathfrak{Q} 17'10 1°45'38	behind sun end	13340 Oct 06 00:35	27° \mathfrak{D} 09'14	
max. Earth dist.	13334 Jul 24 17:38	13° \mathfrak{Q} 19'43 10.64106 AU	max. Earth dist.	13340 Oct 06 06:48	27° \mathfrak{D} 11'09	10.66454 AU
	13334 Aug 07 08:33	15° \mathfrak{Q}	morning rise	13340 Oct 23 02:22	29° \mathfrak{D} 13'28	
morning rise	13334 Aug 10 06:11	15° \mathfrak{Q} 21'04		13340 Oct 29 15:49	0° \mathfrak{M}	
retrograde	13334 Nov 21 03:57	22° \mathfrak{Q} 51'45	asc. node	13341 Jan 08 20:22	6° \mathfrak{M} 12'07	
opposition	13335 Jan 29 20:39	19° \mathfrak{Q} 29'38 -2°05'13	retrograde	13341 Feb 04 11:36	6° \mathfrak{M} 47'37	
min. Earth dist.	13335 Jan 29 12:12	19° \mathfrak{Q} 31'15 8.65192 AU	opposition	13341 Apr 15 04:05	3° \mathfrak{M} 23'39	0°07'27
direct	13335 Apr 09 05:00	16° \mathfrak{Q} 08'18	min. Earth dist.	13341 Apr 14 17:54	3° \mathfrak{M} 25'37	8.65579 AU
evening set	13335 Jul 20 00:40	23° \mathfrak{Q} 33'50	direct	13341 Jun 22 09:32	0° \mathfrak{M} 02'57	
			evening set	13341 Oct 01 04:55	7° \mathfrak{M} 23'34	
conjunction	13335 Aug 05 21:35	25° \mathfrak{Q} 37'26 -1°37'10				
minimum elong	13335 Aug 05 21:37	25° \mathfrak{Q} 37'27 1°37'50	conjunction	13341 Oct 18 12:46	9° \mathfrak{M} 29'44	0°17'21
max. Earth dist.	13335 Aug 06 08:25	25° \mathfrak{Q} 40'46 10.65939 AU	minimum elong	13341 Oct 18 12:45	9° \mathfrak{M} 29'44	0°17'56
morning rise	13335 Aug 22 19:28	27° \mathfrak{Q} 41'21	max. Earth dist.	13341 Oct 18 23:32	9° \mathfrak{M} 33'01	10.64529 AU
	13335 Sep 11 18:21	0° \mathfrak{M}	morning rise	13341 Nov 04 23:39	11° \mathfrak{M} 36'46	
retrograde	13335 Dec 04 00:59	5° \mathfrak{M} 12'08		13341 Dec 05 05:01	15° \mathfrak{M}	
opposition	13336 Feb 11 20:47	1° \mathfrak{M} 49'47 -1°52'52	retrograde	13342 Feb 17 10:14	19° \mathfrak{M} 12'18	
min. Earth dist.	13336 Feb 11 10:49	1° \mathfrak{M} 51'41 8.66761 AU	opposition	13342 Apr 27 23:15	15° \mathfrak{M} 48'02	0°35'40
	13336 Mar 08 05:59	30° \mathfrak{R} 0	min. Earth dist.	13342 Apr 27 15:07	15° \mathfrak{M} 49'36	8.63358 AU
direct	13336 Apr 21 00:48	28° \mathfrak{Q} 28'55		13342 May 08 08:51	15° \mathfrak{R} 1	
	13336 Jun 02 14:59	0° \mathfrak{M}	direct	13342 Jul 05 02:23	12° \mathfrak{M} 26'52	
evening set	13336 Jul 31 11:24	5° \mathfrak{M} 52'03		13342 Aug 29 13:53	15° \mathfrak{M}	
			evening set	13342 Oct 14 01:00	19° \mathfrak{M} 49'23	
conjunction	13336 Aug 17 09:19	7° \mathfrak{M} 55'41 -1°25'05				
minimum elong	13336 Aug 17 09:21	7° \mathfrak{M} 55'42 1°25'34	conjunction	13342 Oct 31 10:45	21° \mathfrak{M} 56'18	0°39'45
max. Earth dist.	13336 Aug 17 21:18	7° \mathfrak{M} 59'22 10.67266 AU	minimum elong	13342 Oct 31 10:44	21° \mathfrak{M} 56'18	0°40'30
morning rise	13336 Sep 03 08:58	9° \mathfrak{M} 59'49	max. Earth dist.	13342 Oct 31 19:15	21° \mathfrak{M} 58'54	10.62050 AU
retrograde	13336 Dec 15 22:14	17° \mathfrak{M} 30'52	morning rise	13342 Nov 17 23:27	24° \mathfrak{M} 04'04	
opposition	13337 Feb 23 19:37	14° \mathfrak{M} 08'15 -1°35'24		13343 Jan 16 02:38	0° \mathfrak{X}	
min. Earth dist.	13337 Feb 23 09:01	14° \mathfrak{M} 10'17 8.67792 AU	retrograde	13343 Mar 02 10:50	1° \mathfrak{X} 41'07	
direct	13337 May 03 18:38	10° \mathfrak{M} 47'44		13343 Apr 17 14:04	30° \mathfrak{R} 1	
evening set	13337 Aug 12 22:00	18° \mathfrak{M} 08'57	opposition	13343 May 10 18:41	28° \mathfrak{M} 16'33	1°02'23
			min. Earth dist.	13343 May 10 12:22	28° \mathfrak{M} 17'47	8.60687 AU

direct	13343 Jul 17 19:30	24° \mathbb{M} 54'47		direct	13349 Oct 01 18:20	11° \approx 20'33	
	13343 Oct 06 20:08	0° \mathbb{A}			13349 Dec 08 03:57	15° \approx	
evening set	13343 Oct 27 00:30	2° \mathbb{A} 19'51		evening set	13350 Jan 13 14:30	19° \approx 05'17	
conjunction	13343 Nov 13 12:03	4° \mathbb{A} 27'31	1°00'23	conjunction	13350 Jan 31 07:34	21° \approx 16'41	1°40'05
minimum elong	13343 Nov 13 12:01	4° \mathbb{A} 27'30	1°01'16	minimum elong	13350 Jan 31 07:36	21° \approx 16'41	1°40'48
max. Earth dist.	13343 Nov 13 18:59	4° \mathbb{A} 29'38	10.59205 AU	max. Earth dist.	13350 Jan 30 22:28	21° \approx 13'50	10.42958 AU
morning rise	13343 Dec 01 02:07	6° \mathbb{A} 35'58		morning rise	13350 Feb 17 23:41	23° \approx 27'51	
retrograde	13344 Mar 14 12:45	14° \mathbb{A} 14'32			13350 Apr 25 09:49	0° \mathbb{H}	
opposition	13344 May 22 14:42	10° \mathbb{A} 49'42	1°26'19	retrograde	13350 May 31 22:44	1° \mathbb{H} 09'54	
min. Earth dist.	13344 May 22 09:45	10° \mathbb{A} 50'40	8.57746 AU		13350 Jul 07 20:43	30° \mathbb{R} \approx	
direct	13344 Jul 29 14:04	7° \mathbb{A} 27'15		opposition	13350 Aug 07 15:09	27° \approx 45'24	1°57'51
evening set	13344 Nov 08 03:31	14° \mathbb{A} 55'21		min. Earth dist.	13350 Aug 07 22:37	27° \approx 43'55	8.42304 AU
				direct	13350 Oct 15 01:13	24° \approx 18'50	
conjunction	13344 Nov 25 16:37	17° \mathbb{A} 03'46	1°18'15		13351 Jan 09 13:37	0° \mathbb{H}	
minimum elong	13344 Nov 25 16:35	17° \mathbb{A} 03'45	1°19'14	evening set	13351 Jan 27 07:10	2° \mathbb{H} 05'53	
max. Earth dist.	13344 Nov 25 21:34	17° \mathbb{A} 05'17	10.56159 AU				
morning rise	13344 Dec 13 07:41	19° \mathbb{A} 12'50		conjunction	13351 Feb 14 00:18	4° \mathbb{H} 17'34	1°28'53
retrograde	13345 Mar 27 15:50	26° \mathbb{A} 52'48		minimum elong	13351 Feb 14 00:21	4° \mathbb{H} 17'35	1°29'25
opposition	13345 Jun 04 11:35	23° \mathbb{A} 27'46	1°46'15	max. Earth dist.	13351 Feb 13 13:31	4° \mathbb{H} 14'13	10.41603 AU
min. Earth dist.	13345 Jun 04 08:26	23° \mathbb{A} 28'24	8.54680 AU	morning rise	13351 Mar 03 15:50	6° \mathbb{H} 28'52	
direct	13345 Aug 11 10:44	20° \mathbb{A} 04'34		retrograde	13351 Jun 14 06:28	14° \mathbb{H} 10'13	
evening set	13345 Nov 21 10:08	27° \mathbb{A} 36'03		opposition	13351 Aug 20 20:12	10° \mathbb{H} 46'06	1°41'04
				min. Earth dist.	13351 Aug 21 05:12	10° \mathbb{H} 44'18	8.41246 AU
conjunction	13345 Dec 09 00:22	29° \mathbb{A} 45'11	1°32'26	direct	13351 Oct 28 10:21	7° \mathbb{H} 19'15	
minimum elong	13345 Dec 09 00:20	29° \mathbb{A} 45'11	1°33'27	evening set	13352 Feb 10 00:13	15° \mathbb{H} 08'02	
max. Earth dist.	13345 Dec 09 02:25	29° \mathbb{A} 45'49	10.53057 AU				
	13345 Dec 11 00:28	0° \mathbb{B}		conjunction	13352 Feb 27 16:57	17° \mathbb{H} 19'50	1°13'05
morning rise	13345 Dec 26 16:08	1° \mathbb{B} 54'49		minimum elong	13352 Feb 27 17:00	17° \mathbb{H} 19'51	1°13'25
retrograde	13346 Apr 09 21:15	9° \mathbb{B} 35'55		max. Earth dist.	13352 Feb 27 04:17	17° \mathbb{H} 15'53	10.40904 AU
opposition	13346 Jun 17 09:32	6° \mathbb{B} 10'50	2°01'08	morning rise	13352 Mar 16 07:39	19° \mathbb{H} 31'06	
min. Earth dist.	13346 Jun 17 08:56	6° \mathbb{B} 10'56	8.51632 AU	retrograde	13352 Jun 26 13:55	27° \mathbb{H} 11'25	
direct	13346 Aug 24 08:03	2° \mathbb{B} 46'48		opposition	13352 Sep 02 02:23	23° \mathbb{H} 47'46	1°19'02
evening set	13346 Dec 04 19:49	10° \mathbb{B} 21'52		min. Earth dist.	13352 Sep 02 12:45	23° \mathbb{H} 45'42	8.40865 AU
				direct	13352 Nov 09 20:50	20° \mathbb{H} 20'50	
conjunction	13346 Dec 22 10:57	12° \mathbb{B} 31'39	1°42'08	evening set	13353 Feb 22 16:49	28° \mathbb{H} 10'40	
minimum elong	13346 Dec 22 10:56	12° \mathbb{B} 31'39	1°43'10		13353 Mar 09 09:08	0° \mathbb{Y}	
max. Earth dist.	13346 Dec 22 09:17	12° \mathbb{B} 31'08	10.50056 AU				
morning rise	13347 Jan 09 03:14	14° \mathbb{B} 41'49		conjunction	13353 Mar 12 08:40	0° \mathbb{Y} 22'23	0°53'31
retrograde	13347 Apr 23 02:47	22° \mathbb{B} 23'43		minimum elong	13353 Mar 12 08:42	0° \mathbb{Y} 22'24	0°53'38
opposition	13347 Jun 30 08:53	18° \mathbb{B} 58'39	2°10'09	max. Earth dist.	13353 Mar 11 18:45	0° \mathbb{Y} 18'02	10.40901 AU
min. Earth dist.	13347 Jun 30 11:13	18° \mathbb{B} 58'11	8.48752 AU	morning rise	13353 Mar 29 22:11	2° \mathbb{Y} 33'26	
direct	13347 Sep 06 08:39	15° \mathbb{B} 33'51		retrograde	13353 Jul 09 20:48	10° \mathbb{Y} 12'34	
evening set	13347 Dec 18 08:03	23° \mathbb{B} 12'26		opposition	13353 Sep 15 09:50	6° \mathbb{Y} 49'25	0°52'55
				min. Earth dist.	13353 Sep 15 20:46	6° \mathbb{Y} 47'15	8.41188 AU
conjunction	13348 Jan 04 23:59	25° \mathbb{B} 22'49	1°46'49	direct	13353 Nov 23 09:08	3° \mathbb{Y} 22'36	
minimum elong	13348 Jan 04 23:59	25° \mathbb{B} 22'49	1°47'47	evening set	13354 Mar 08 08:06	11° \mathbb{Y} 12'45	
max. Earth dist.	13348 Jan 04 19:06	25° \mathbb{B} 21'18	10.47295 AU				
morning rise	13348 Jan 22 16:33	27° \mathbb{B} 33'25		conjunction	13354 Mar 25 22:36	13° \mathbb{Y} 24'09	0°31'13
	13348 Feb 12 14:51	0° \approx		minimum elong	13354 Mar 25 22:37	13° \mathbb{Y} 24'09	0°31'06
retrograde	13348 May 05 07:41	5° \approx 15'47		max. Earth dist.	13354 Mar 25 08:44	13° \mathbb{Y} 19'48	10.41596 AU
opposition	13348 Jul 12 09:35	1° \approx 50'49	2°12'42	morning rise	13354 Apr 12 10:29	15° \mathbb{Y} 34'47	
min. Earth dist.	13348 Jul 12 14:13	1° \approx 49'54	8.46161 AU	retrograde	13354 Jul 23 02:32	23° \mathbb{Y} 12'40	
	13348 Aug 05 21:57	30° \mathbb{R} \mathbb{B}		opposition	13354 Sep 28 18:05	19° \mathbb{Y} 50'00	0°24'08
direct	13348 Sep 18 13:15	28° \mathbb{B} 25'17		min. Earth dist.	13354 Sep 29 04:17	19° \mathbb{Y} 47'59	8.42203 AU
	13348 Oct 31 12:20	0° \approx		direct	13354 Dec 06 22:36	16° \mathbb{Y} 23'30	
evening set	13348 Dec 30 22:33	6° \approx 07'10		evening set	13355 Mar 21 21:49	24° \mathbb{Y} 13'15	
conjunction	13349 Jan 17 15:10	8° \approx 18'06	1°46'09	conjunction	13355 Apr 08 10:32	26° \mathbb{Y} 24'05	0°07'24
minimum elong	13349 Jan 17 15:11	8° \approx 18'07	1°47'01	minimum elong	13355 Apr 08 10:32	26° \mathbb{Y} 24'05	0°07'03
max. Earth dist.	13349 Jan 17 07:47	8° \approx 15'49	10.44890 AU	behind sun begin	13355 Apr 08 03:54	26° \mathbb{Y} 22'02	
morning rise	13349 Feb 04 07:40	10° \approx 29'02		behind sun end	13355 Apr 08 17:10	26° \mathbb{Y} 26'08	
	13349 Mar 17 06:12	15° \approx		max. Earth dist.	13355 Apr 07 22:06	26° \mathbb{Y} 20'12	10.42950 AU
retrograde	13349 May 18 14:44	18° \approx 11'27		morning rise	13355 Apr 25 20:19	28° \mathbb{Y} 34'06	
	13349 Jul 22 16:39	15° \mathbb{R} \approx			13355 May 07 17:49	0° \mathbb{B}	
opposition	13349 Jul 25 11:33	14° \approx 46'40	2°08'34	desc. node	13355 Aug 01 14:05	6° \mathbb{B} 09'55	
min. Earth dist.	13349 Jul 25 17:49	14° \approx 45'25	8.43975 AU	retrograde	13355 Aug 05 08:25	6° \mathbb{B} 10'41	

opposition	13355 Oct 12 02:45	2°♄48'29 -0°05'49	morning rise	13361 Jul 10 16:29	15°♄04'49
min. Earth dist.	13355 Oct 12 11:43	2°♄46'44 8.43854 AU	retrograde	13361 Oct 20 20:46	22°♄36'04
	13355 Nov 23 04:02	30°♄7'	opposition	13361 Dec 29 00:32	19°♄14'49 -2°10'09
direct	13355 Dec 20 11:29	29°♄22'25	min. Earth dist.	13361 Dec 28 22:22	19°♄15'14 8.60087 AU
	13356 Jan 16 12:40	0°♄	direct	13362 Mar 08 15:48	15°♄52'25
evening set	13356 Apr 03 09:24	7°♄11'06	evening set	13362 Jun 19 14:32	23°♄25'28
conjunction	13356 Apr 20 19:51	9°♄21'11 -0°16'50	conjunction	13362 Jul 06 11:27	25°♄29'54 -1°47'04
minimum elong	13356 Apr 20 19:51	9°♄21'10 0°17'23	minimum elong	13362 Jul 06 11:27	25°♄29'54 1°48'02
max. Earth dist.	13356 Apr 20 09:16	9°♄17'52 10.44889 AU	max. Earth dist.	13362 Jul 06 14:42	25°♄30'55 10.61078 AU
morning rise	13356 May 08 03:12	11°♄30'24	morning rise	13362 Jul 23 07:51	27°♄34'13
	13356 Jun 07 13:24	15°♄		13362 Aug 13 04:52	0°♄
retrograde	13356 Aug 17 14:47	19°♄05'43	retrograde	13362 Nov 02 20:33	5°♄05'24
opposition	13356 Oct 24 11:51	15°♄43'56 -0°35'20	opposition	13363 Jan 11 04:42	1°♄43'57 -2°12'34
min. Earth dist.	13356 Oct 24 19:32	15°♄42'25 8.46057 AU	min. Earth dist.	13363 Jan 11 00:58	1°♄44'40 8.62207 AU
	13356 Nov 02 22:30	15°♄8'		13363 Feb 04 01:00	30°♄8'
direct	13357 Jan 01 22:25	12°♄18'24	direct	13363 Mar 21 16:46	28°♄22'04
	13357 Feb 28 16:33	15°♄		13363 May 05 01:43	0°♄
evening set	13357 Apr 16 18:14	20°♄05'22	evening set	13363 Jul 02 05:26	5°♄52'13
conjunction	13357 May 04 01:58	22°♄14'30 -0°40'01	conjunction	13363 Jul 19 01:45	7°♄56'14 -1°46'33
minimum elong	13357 May 04 01:57	22°♄14'29 0°40'46	minimum elong	13363 Jul 19 01:46	7°♄56'14 1°47'25
max. Earth dist.	13357 May 03 17:15	22°♄11'46 10.47317 AU	max. Earth dist.	13363 Jul 19 06:43	7°♄57'46 10.62984 AU
morning rise	13357 May 21 06:46	24°♄22'48	morning rise	13363 Aug 04 22:22	10°♄00'19
	13357 Jul 13 23:01	0°♄		13363 Sep 20 21:08	15°♄
retrograde	13357 Aug 30 18:00	1°♄56'56	retrograde	13363 Nov 15 17:41	17°♄31'31
	13357 Oct 19 03:45	30°♄8'		13364 Jan 13 05:16	15°♄8'
opposition	13357 Nov 06 20:53	28°♄35'29 -1°02'55	opposition	13364 Jan 24 07:30	14°♄09'45 -2°08'46
min. Earth dist.	13357 Nov 07 03:22	28°♄34'13 8.48705 AU	min. Earth dist.	13364 Jan 24 02:11	14°♄10'46 8.63891 AU
direct	13358 Jan 15 10:10	25°♄10'34	direct	13364 Apr 02 15:55	10°♄48'16
	13358 Apr 04 20:31	0°♄		13364 Jun 14 23:37	15°♄
evening set	13358 Apr 30 00:02	2°♄55'18	evening set	13364 Jul 13 18:25	18°♄15'43
conjunction	13358 May 17 04:55	5°♄03'20 -1°01'06	conjunction	13364 Jul 30 14:57	20°♄19'30 -1°41'04
minimum elong	13358 May 17 04:53	5°♄03'20 1°02'00	minimum elong	13364 Jul 30 14:58	20°♄19'30 1°41'48
max. Earth dist.	13358 May 16 21:46	5°♄01'06 10.50112 AU	max. Earth dist.	13364 Jul 30 22:02	20°♄21'41 10.64453 AU
morning rise	13358 Jun 03 07:20	7°♄10'40	morning rise	13364 Aug 16 12:28	22°♄23'32
retrograde	13358 Sep 12 19:42	14°♄43'45	retrograde	13364 Nov 27 14:07	29°♄54'57
opposition	13358 Nov 20 05:14	11°♄22'32 -1°27'12	opposition	13365 Feb 05 08:57	26°♄32'44 -1°58'59
min. Earth dist.	13358 Nov 20 10:10	11°♄21'35 8.51650 AU	min. Earth dist.	13365 Feb 05 01:39	26°♄34'08 8.65110 AU
direct	13359 Jan 28 21:05	7°♄58'14	direct	13365 Apr 15 15:16	23°♄11'33
evening set	13359 May 13 02:30	15°♄40'17		13365 Jul 21 03:44	0°♄
			evening set	13365 Jul 26 05:59	0°♄36'30
conjunction	13359 May 30 04:42	17°♄47'15 -1°19'04	conjunction	13365 Aug 12 03:31	2°♄40'19 -1°30'56
minimum elong	13359 May 30 04:40	17°♄47'14 1°20'04	minimum elong	13365 Aug 12 03:33	2°♄40'19 1°31'29
max. Earth dist.	13359 May 29 23:42	17°♄45'41 10.53103 AU	max. Earth dist.	13365 Aug 12 13:23	2°♄43'21 10.65443 AU
morning rise	13359 Jun 16 04:56	19°♄53'37	morning rise	13365 Aug 29 02:27	4°♄44'31
retrograde	13359 Sep 25 21:14	27°♄25'48	retrograde	13365 Dec 10 12:07	12°♄16'16
opposition	13359 Dec 03 12:46	24°♄04'40 -1°47'02	opposition	13366 Feb 18 08:53	8°♄53'32 -1°43'45
min. Earth dist.	13359 Dec 03 15:22	24°♄04'10 8.54680 AU	min. Earth dist.	13366 Feb 17 23:24	8°♄55'20 8.65822 AU
direct	13360 Feb 11 05:35	20°♄41'01	direct	13366 Apr 28 11:14	5°♄32'32
evening set	13360 May 25 01:33	28°♄20'05	evening set	13366 Aug 07 17:10	12°♄55'26
	13360 Jun 07 13:45	0°♄			
conjunction	13360 Jun 11 01:26	0°♄26'02 -1°33'05	conjunction	13366 Aug 24 16:10	14°♄59'27 -1°16'36
minimum elong	13360 Jun 11 01:24	0°♄26'02 1°34'07	minimum elong	13366 Aug 24 16:13	14°♄59'28 1°16'58
max. Earth dist.	13360 Jun 10 23:21	0°♄25'23 10.56060 AU	max. Earth dist.	13366 Aug 25 04:07	15°♄03'07 10.65909 AU
morning rise	13360 Jun 27 23:44	2°♄31'31	morning rise	13366 Sep 10 16:56	17°♄04'01
retrograde	13360 Oct 07 21:05	10°♄03'05	retrograde	13366 Dec 23 09:47	24°♄36'14
opposition	13360 Dec 15 19:13	6°♄41'56 -2°01'33	opposition	13367 Mar 03 07:23	21°♄12'59 -1°23'45
min. Earth dist.	13360 Dec 15 19:16	6°♄41'55 8.57554 AU	min. Earth dist.	13367 Mar 02 20:46	21°♄15'01 8.65995 AU
direct	13361 Feb 23 11:49	3°♄18'55	direct	13367 May 11 04:02	17°♄52'04
evening set	13361 Jun 06 21:26	10°♄54'56	evening set	13367 Aug 20 04:36	25°♄13'31
conjunction	13361 Jun 23 19:33	13°♄00'02 -1°42'32	conjunction	13367 Sep 06 05:19	27°♄17'54 -0°58'46
minimum elong	13361 Jun 23 19:32	13°♄00'01 1°43'34	minimum elong	13367 Sep 06 05:22	27°♄17'55 0°58'56
max. Earth dist.	13361 Jun 23 20:30	13°♄00'19 10.58759 AU	max. Earth dist.	13367 Sep 06 17:59	27°♄21'47 10.65836 AU

morning rise	13367 Sep 23 08:23	29° $\overline{\text{M}}$ 22'58	conjunction	13373 Nov 20 08:07	11° $\overline{\text{X}}$ 52'21	1°10'57
	13367 Sep 28 12:52	0° $\underline{\text{A}}$	minimum elong	13373 Nov 20 08:05	11° $\overline{\text{X}}$ 52'20	1°11'54
retrograde	13368 Jan 05 06:39	6° $\underline{\text{A}}$ 55'51	max. Earth dist.	13373 Nov 20 14:16	11° $\overline{\text{X}}$ 54'15	10.55481 AU
opposition	13368 Mar 15 05:00	3° $\underline{\text{A}}$ 32'07 -0°59'54	morning rise	13373 Dec 07 22:59	14° $\overline{\text{X}}$ 01'26	
min. Earth dist.	13368 Mar 14 18:12	3° $\underline{\text{A}}$ 34'12 8.65629 AU	retrograde	13374 Mar 22 08:50	21° $\overline{\text{X}}$ 41'46	
direct	13368 May 22 21:25	0° $\underline{\text{A}}$ 11'10	opposition	13374 May 30 07:22	18° $\overline{\text{X}}$ 16'28	1°38'15
evening set	13368 Aug 31 16:53	7° $\underline{\text{A}}$ 31'49	min. Earth dist.	13374 May 30 03:11	18° $\overline{\text{X}}$ 17'17	8.54239 AU
			direct	13374 Aug 06 05:49	14° $\overline{\text{X}}$ 53'17	
conjunction	13368 Sep 17 19:36	9° $\underline{\text{A}}$ 36'43 -0°38'13	evening set	13374 Nov 16 01:24	22° $\overline{\text{X}}$ 24'13	
minimum elong	13368 Sep 17 19:37	9° $\underline{\text{A}}$ 36'43 0°38'10				
max. Earth dist.	13368 Sep 18 08:03	9° $\underline{\text{A}}$ 40'31 10.65225 AU	conjunction	13374 Dec 03 15:07	24° $\overline{\text{X}}$ 33'16	1°26'49
morning rise	13368 Oct 05 01:11	11° $\underline{\text{A}}$ 42'24	minimum elong	13374 Dec 03 15:05	24° $\overline{\text{X}}$ 33'15	1°27'50
retrograde	13369 Jan 17 04:23	19° $\underline{\text{A}}$ 16'11	max. Earth dist.	13374 Dec 03 18:55	24° $\overline{\text{X}}$ 34'26	10.52873 AU
opposition	13369 Mar 28 01:44	15° $\underline{\text{A}}$ 52'00 -0°33'16	morning rise	13374 Dec 21 06:50	26° $\overline{\text{X}}$ 42'55	
min. Earth dist.	13369 Mar 27 15:21	15° $\underline{\text{A}}$ 54'00 8.64733 AU		13375 Jan 19 04:18	0° $\overline{\text{Z}}$	
direct	13369 Jun 04 13:45	12° $\underline{\text{A}}$ 30'53	retrograde	13375 Apr 04 13:58	4° $\overline{\text{Z}}$ 24'27	
evening set	13369 Sep 13 06:56	19° $\underline{\text{A}}$ 51'28	opposition	13375 Jun 12 05:44	0° $\overline{\text{Z}}$ 59'15	1°55'24
			min. Earth dist.	13375 Jun 12 03:26	0° $\overline{\text{Z}}$ 59'42	8.51679 AU
conjunction	13369 Sep 30 11:54	21° $\underline{\text{A}}$ 56'59 -0°15'53		13375 Jun 24 21:39	30° $\overline{\text{R}}$ $\overline{\text{X}}$	
minimum elong	13369 Sep 30 11:54	21° $\underline{\text{A}}$ 57'00 0°15'36	direct	13375 Aug 19 03:52	27° $\overline{\text{X}}$ 35'30	
behind sun begin	13369 Sep 30 10:12	21° $\underline{\text{A}}$ 56'29		13375 Oct 11 18:41	0° $\overline{\text{Z}}$	
behind sun end	13369 Sep 30 13:37	21° $\underline{\text{A}}$ 57'31	evening set	13375 Nov 29 10:34	5° $\overline{\text{Z}}$ 09'52	
max. Earth dist.	13369 Oct 01 00:17	22° $\underline{\text{A}}$ 00'47 10.64084 AU				
morning rise	13369 Oct 17 19:51	24° $\underline{\text{A}}$ 03'23	conjunction	13375 Dec 17 01:27	7° $\overline{\text{Z}}$ 19'34	1°38'29
	13369 Dec 16 07:27	0° $\overline{\text{M}}$	minimum elong	13375 Dec 17 01:26	7° $\overline{\text{Z}}$ 19'33	1°39'31
retrograde	13370 Jan 30 02:17	1° $\overline{\text{M}}$ 38'14	max. Earth dist.	13375 Dec 17 03:11	7° $\overline{\text{Z}}$ 20'06	10.50344 AU
	13370 Mar 16 19:17	30° $\overline{\text{R}}$ $\underline{\text{A}}$	morning rise	13376 Jan 03 17:38	9° $\overline{\text{Z}}$ 29'41	
opposition	13370 Apr 09 21:39	28° $\underline{\text{A}}$ 13'38 -0°05'02	retrograde	13376 Apr 16 20:02	17° $\overline{\text{Z}}$ 12'08	
min. Earth dist.	13370 Apr 09 11:26	28° $\underline{\text{A}}$ 15'36 8.63331 AU	opposition	13376 Jun 24 05:12	13° $\overline{\text{Z}}$ 47'06	2°06'57
asc. node	13370 Jun 14 08:53	24° $\underline{\text{A}}$ 52'43	min. Earth dist.	13376 Jun 24 04:36	13° $\overline{\text{Z}}$ 47'13	8.49255 AU
direct	13370 Jun 17 06:02	24° $\underline{\text{A}}$ 52'17	direct	13376 Aug 31 04:21	10° $\overline{\text{Z}}$ 22'48	
	13370 Sep 06 16:59	0° $\overline{\text{M}}$	evening set	13376 Dec 11 22:46	18° $\overline{\text{Z}}$ 00'37	
evening set	13370 Sep 25 23:21	2° $\overline{\text{M}}$ 13'36				
conjunction	13370 Oct 13 06:34	4° $\overline{\text{M}}$ 19'49 0°07'21	conjunction	13376 Dec 29 14:34	20° $\overline{\text{Z}}$ 10'54	1°45'20
minimum elong	13370 Oct 13 06:33	4° $\overline{\text{M}}$ 19'48 0°07'50	minimum elong	13376 Dec 29 14:34	20° $\overline{\text{Z}}$ 10'54	1°46'20
behind sun begin	13370 Oct 13 00:08	4° $\overline{\text{M}}$ 17'52	max. Earth dist.	13376 Dec 29 13:42	20° $\overline{\text{Z}}$ 10'38	10.48009 AU
behind sun end	13370 Oct 13 12:59	4° $\overline{\text{M}}$ 21'45	morning rise	13377 Jan 16 06:58	22° $\overline{\text{Z}}$ 21'26	
max. Earth dist.	13370 Oct 13 18:53	4° $\overline{\text{M}}$ 23'34 10.62449 AU		13377 Apr 21 03:08	0° \approx	
morning rise	13370 Oct 30 16:37	6° $\overline{\text{M}}$ 26'53	retrograde	13377 Apr 30 03:15	0° \approx 04'21	
retrograde	13371 Feb 12 01:50	14° $\overline{\text{M}}$ 03'02		13377 May 09 04:16	30° $\overline{\text{R}}$ $\overline{\text{Z}}$	
opposition	13371 Apr 22 17:31	10° $\overline{\text{M}}$ 38'05 0°23'32	opposition	13377 Jul 07 06:06	26° $\overline{\text{Z}}$ 39'35	2°12'14
min. Earth dist.	13371 Apr 22 07:37	10° $\overline{\text{M}}$ 40'01 8.61478 AU	min. Earth dist.	13377 Jul 07 07:50	26° $\overline{\text{Z}}$ 39'14	8.47065 AU
direct	13371 Jun 29 22:57	7° $\overline{\text{M}}$ 16'25	direct	13377 Sep 13 07:00	23° $\overline{\text{Z}}$ 14'44	
evening set	13371 Oct 08 18:37	14° $\overline{\text{M}}$ 39'10		13377 Dec 17 19:33	0° \approx	
	13371 Oct 11 15:51	15° $\overline{\text{M}}$	evening set	13377 Dec 25 13:19	0° \approx 55'46	
conjunction	13371 Oct 26 03:49	16° $\overline{\text{M}}$ 46'07 0°30'12	conjunction	13378 Jan 12 05:42	3° \approx 06'33	1°46'55
minimum elong	13371 Oct 26 03:47	16° $\overline{\text{M}}$ 46'06 0°30'53	minimum elong	13378 Jan 12 05:42	3° \approx 06'34	1°47'49
max. Earth dist.	13371 Oct 26 15:16	16° $\overline{\text{M}}$ 49'37 10.60395 AU	max. Earth dist.	13378 Jan 12 01:26	3° \approx 05'14	10.45963 AU
morning rise	13371 Nov 12 15:43	18° $\overline{\text{M}}$ 53'53	morning rise	13378 Jan 29 22:06	5° \approx 17'24	
retrograde	13372 Feb 25 03:58	26° $\overline{\text{M}}$ 31'28	retrograde	13378 May 13 11:43	13° \approx 00'20	
opposition	13372 May 04 13:35	23° $\overline{\text{M}}$ 06'16 0°51'08	opposition	13378 Jul 20 08:22	9° \approx 35'53	2°10'52
min. Earth dist.	13372 May 04 04:47	23° $\overline{\text{M}}$ 07'59 8.59266 AU	min. Earth dist.	13378 Jul 20 12:51	9° \approx 34'59	8.45195 AU
direct	13372 Jul 11 14:50	19° $\overline{\text{M}}$ 44'09	direct	13378 Sep 26 10:59	6° \approx 10'29	
evening set	13372 Oct 20 17:23	27° $\overline{\text{M}}$ 09'05	evening set	13379 Jan 08 05:28	13° \approx 54'21	
				13379 Jan 17 03:08	15° \approx	
conjunction	13372 Nov 07 04:18	29° $\overline{\text{M}}$ 16'45 0°51'46	conjunction	13379 Jan 25 22:14	16° \approx 05'34	1°43'04
minimum elong	13372 Nov 07 04:16	29° $\overline{\text{M}}$ 16'44 0°52'36	minimum elong	13379 Jan 25 22:15	16° \approx 05'34	1°43'51
max. Earth dist.	13372 Nov 07 13:21	29° $\overline{\text{M}}$ 19'31 10.58032 AU	max. Earth dist.	13379 Jan 25 14:25	16° \approx 03'08	10.44278 AU
	13372 Nov 13 01:19	0° $\overline{\text{X}}$	morning rise	13379 Feb 12 14:32	18° \approx 16'40	
morning rise	13372 Nov 24 17:52	1° $\overline{\text{X}}$ 25'13	retrograde	13379 May 26 19:01	25° \approx 59'07	
retrograde	13373 Mar 09 06:09	9° $\overline{\text{X}}$ 04'11	opposition	13379 Aug 02 11:52	22° \approx 35'01	2°02'50
opposition	13373 May 17 10:02	5° $\overline{\text{X}}$ 38'53 1°16'28	min. Earth dist.	13379 Aug 02 19:02	22° \approx 33'35	8.43683 AU
min. Earth dist.	13373 May 17 03:33	5° $\overline{\text{X}}$ 40'09 8.56812 AU	direct	13379 Oct 09 18:55	19° \approx 09'07	
direct	13373 Jul 24 08:50	2° $\overline{\text{X}}$ 16'15	evening set	13380 Jan 21 22:27	26° \approx 55'23	
evening set	13373 Nov 02 19:43	9° $\overline{\text{X}}$ 43'59				

conjunction	13380 Feb 08 15:25	29° \approx 06'55	1°33'57	direct	13385 Dec 27 18:11	7° $\mathbf{\text{B}}$ 16'01
minimum elong	13380 Feb 08 15:28	29° \approx 06'56	1°34'33	evening set	13386 Apr 11 15:09	15° $\mathbf{\text{B}}$ 03'58
max. Earth dist.	13380 Feb 08 04:31	29° \approx 03'31	10.42954 AU		13386 Apr 11 02:09	15° $\mathbf{\text{B}}$
	13380 Feb 15 17:52	0° $\mathbf{\text{H}}$				
morning rise	13380 Feb 26 07:23	1° $\mathbf{\text{H}}$ 18'09		conjunction	13386 Apr 29 00:02	17° $\mathbf{\text{B}}$ 13'35 -0°30'48
retrograde	13380 Jun 08 01:39	8° $\mathbf{\text{H}}$ 59'54		minimum elong	13386 Apr 29 00:00	17° $\mathbf{\text{B}}$ 13'34 0°31'29
opposition	13380 Aug 14 16:36	5° $\mathbf{\text{H}}$ 36'10	1°48'28	max. Earth dist.	13386 Apr 28 12:45	17° $\mathbf{\text{B}}$ 10'03 10.45616 AU
min. Earth dist.	13380 Aug 15 01:39	5° $\mathbf{\text{H}}$ 34'22	8.42509 AU	morning rise	13386 May 16 06:08	19° $\mathbf{\text{B}}$ 22'22
direct	13380 Oct 22 05:04	2° $\mathbf{\text{H}}$ 09'56		retrograde	13386 Aug 25 15:46	26° $\mathbf{\text{B}}$ 57'12
evening set	13381 Feb 03 15:50	9° $\mathbf{\text{H}}$ 58'09		opposition	13386 Nov 01 17:25	23° $\mathbf{\text{B}}$ 35'19 -0°52'04
				min. Earth dist.	13386 Nov 02 01:06	23° $\mathbf{\text{B}}$ 33'50 8.46770 AU
conjunction	13381 Feb 21 08:43	12° $\mathbf{\text{H}}$ 09'53	1°19'58	direct	13387 Jan 10 07:15	20° $\mathbf{\text{B}}$ 09'47
minimum elong	13381 Feb 21 08:46	12° $\mathbf{\text{H}}$ 09'54	1°20'23	evening set	13387 Apr 24 22:13	27° $\mathbf{\text{B}}$ 55'42
max. Earth dist.	13381 Feb 20 20:05	12° $\mathbf{\text{H}}$ 05'56	10.41985 AU		13387 May 11 14:45	0° $\mathbf{\text{II}}$
morning rise	13381 Mar 10 23:53	14° $\mathbf{\text{H}}$ 21'09				
retrograde	13381 Jun 21 09:32	22° $\mathbf{\text{H}}$ 02'03		conjunction	13387 May 12 04:28	0° $\mathbf{\text{II}}$ 04'18 -0°52'53
opposition	13381 Aug 27 22:34	18° $\mathbf{\text{H}}$ 38'43	1°28'29	minimum elong	13387 May 12 04:27	0° $\mathbf{\text{II}}$ 04'17 0°53'44
min. Earth dist.	13381 Aug 28 08:32	18° $\mathbf{\text{H}}$ 36'44	8.41730 AU	max. Earth dist.	13387 May 11 20:06	0° $\mathbf{\text{II}}$ 01'41 10.47983 AU
direct	13381 Nov 04 15:29	15° $\mathbf{\text{H}}$ 12'19		morning rise	13387 May 29 07:59	2° $\mathbf{\text{II}}$ 12'08
evening set	13382 Feb 17 08:59	23° $\mathbf{\text{H}}$ 01'54		retrograde	13387 Sep 07 18:39	9° $\mathbf{\text{II}}$ 45'50
max. Earth dist.	13382 Mar 06 11:59	25° $\mathbf{\text{H}}$ 09'30	10.41489 AU	opposition	13387 Nov 15 01:53	6° $\mathbf{\text{II}}$ 24'03 -1°17'52
				min. Earth dist.	13387 Nov 15 07:09	6° $\mathbf{\text{II}}$ 23'02 8.49335 AU
conjunction	13382 Mar 07 01:22	25° $\mathbf{\text{H}}$ 13'41	1°01'50	direct	13388 Jan 23 18:20	2° $\mathbf{\text{II}}$ 59'00
minimum elong	13382 Mar 07 01:24	25° $\mathbf{\text{H}}$ 13'42	1°02'02	evening set	13388 May 07 02:04	10° $\mathbf{\text{II}}$ 42'24
morning rise	13382 Mar 24 15:21	27° $\mathbf{\text{H}}$ 24'50				
	13382 Apr 15 15:12	0° $\mathbf{\text{Y}}$		conjunction	13388 May 24 05:36	12° $\mathbf{\text{II}}$ 49'56 -1°12'14
retrograde	13382 Jul 04 18:44	5° $\mathbf{\text{Y}}$ 04'43		minimum elong	13388 May 24 05:34	12° $\mathbf{\text{II}}$ 49'56 1°13'12
opposition	13382 Sep 10 05:53	1° $\mathbf{\text{Y}}$ 41'46	1°03'55	max. Earth dist.	13388 May 24 00:18	12° $\mathbf{\text{II}}$ 48'17 10.50674 AU
min. Earth dist.	13382 Sep 10 16:19	1° $\mathbf{\text{Y}}$ 39'42	8.41497 AU	morning rise	13388 Jun 10 06:38	14° $\mathbf{\text{II}}$ 56'47
	13382 Oct 02 15:37	30° $\mathbf{\text{R}}$ $\mathbf{\text{H}}$		retrograde	13388 Sep 19 21:13	22° $\mathbf{\text{II}}$ 29'32
direct	13382 Nov 18 02:05	28° $\mathbf{\text{H}}$ 15'19		opposition	13388 Nov 27 09:49	19° $\mathbf{\text{II}}$ 07'49 -1°39'39
	13383 Jan 02 18:32	0° $\mathbf{\text{Y}}$		min. Earth dist.	13388 Nov 27 13:03	19° $\mathbf{\text{II}}$ 07'11 8.52169 AU
evening set	13383 Mar 03 01:17	6° $\mathbf{\text{Y}}$ 05'35		direct	13389 Feb 05 02:35	15° $\mathbf{\text{II}}$ 43'20
				evening set	13389 May 20 02:23	23° $\mathbf{\text{II}}$ 23'51
conjunction	13383 Mar 20 16:35	8° $\mathbf{\text{Y}}$ 17'11	0°40'32			
minimum elong	13383 Mar 20 16:36	8° $\mathbf{\text{Y}}$ 17'12	0°40'30	conjunction	13389 Jun 06 03:18	25° $\mathbf{\text{II}}$ 30'20 -1°27'57
max. Earth dist.	13383 Mar 20 02:55	8° $\mathbf{\text{Y}}$ 12'55	10.41590 AU	minimum elong	13389 Jun 06 03:16	25° $\mathbf{\text{II}}$ 30'19 1°28'58
morning rise	13383 Apr 07 05:04	10° $\mathbf{\text{Y}}$ 28'02		max. Earth dist.	13389 Jun 06 00:27	25° $\mathbf{\text{II}}$ 29'26 10.53565 AU
retrograde	13383 Jul 18 01:26	18° $\mathbf{\text{Y}}$ 06'43		morning rise	13389 Jun 23 02:20	27° $\mathbf{\text{II}}$ 36'16
opposition	13383 Sep 23 14:13	14° $\mathbf{\text{Y}}$ 44'08	0°36'03		13389 Jul 13 12:31	0° $\mathbf{\text{E}}$
min. Earth dist.	13383 Sep 24 01:05	14° $\mathbf{\text{Y}}$ 41'59	8.41897 AU	retrograde	13389 Oct 02 21:24	5° $\mathbf{\text{E}}$ 08'14
direct	13383 Dec 01 15:21	11° $\mathbf{\text{Y}}$ 17'44		opposition	13389 Dec 10 16:45	1° $\mathbf{\text{E}}$ 46'32 -1°56'25
evening set	13384 Mar 15 16:18	19° $\mathbf{\text{Y}}$ 07'59		min. Earth dist.	13389 Dec 10 17:59	1° $\mathbf{\text{E}}$ 46'18 8.55135 AU
					13390 Jan 03 23:29	30° $\mathbf{\text{R}}$ $\mathbf{\text{II}}$
conjunction	13384 Apr 02 05:52	21° $\mathbf{\text{Y}}$ 19'07	0°17'10	direct	13390 Feb 18 09:01	28° $\mathbf{\text{II}}$ 22'40
minimum elong	13384 Apr 02 05:53	21° $\mathbf{\text{Y}}$ 19'07	0°16'54		13390 Apr 03 16:27	0° $\mathbf{\text{E}}$
max. Earth dist.	13384 Apr 01 15:57	21° $\mathbf{\text{Y}}$ 14'46	10.42331 AU	evening set	13390 Jun 01 23:28	6° $\mathbf{\text{E}}$ 00'07
morning rise	13384 Apr 19 16:31	23° $\mathbf{\text{Y}}$ 29'28				
	13384 Jun 24 17:46	0° $\mathbf{\text{B}}$		conjunction	13390 Jun 18 22:14	8° $\mathbf{\text{E}}$ 05'38 -1°39'19
retrograde	13384 Jul 30 07:11	1° $\mathbf{\text{B}}$ 06'50		minimum elong	13390 Jun 18 22:13	8° $\mathbf{\text{E}}$ 05'37 1°40'21
	13384 Sep 04 11:22	30° $\mathbf{\text{R}}$ $\mathbf{\text{Y}}$		max. Earth dist.	13390 Jun 18 21:45	8° $\mathbf{\text{E}}$ 05'29 10.56515 AU
opposition	13384 Oct 05 23:06	27° $\mathbf{\text{Y}}$ 44'34	0°06'23	morning rise	13390 Jul 05 19:51	10° $\mathbf{\text{E}}$ 10'47
min. Earth dist.	13384 Oct 06 10:02	27° $\mathbf{\text{Y}}$ 42'25	8.42945 AU	retrograde	13390 Oct 15 19:31	17° $\mathbf{\text{E}}$ 42'08
direct	13384 Dec 14 05:05	24° $\mathbf{\text{Y}}$ 18'20		opposition	13390 Dec 23 22:13	14° $\mathbf{\text{E}}$ 20'25 -2°07'29
desc. node	13384 Dec 24 11:01	24° $\mathbf{\text{Y}}$ 23'49		min. Earth dist.	13390 Dec 23 21:12	14° $\mathbf{\text{E}}$ 20'36 8.58077 AU
	13385 Mar 11 06:24	0° $\mathbf{\text{B}}$		direct	13391 Mar 03 14:52	10° $\mathbf{\text{E}}$ 57'12
evening set	13385 Mar 29 05:10	2° $\mathbf{\text{B}}$ 07'48		evening set	13391 Jun 14 17:27	18° $\mathbf{\text{E}}$ 31'29
conjunction	13385 Apr 15 16:31	4° $\mathbf{\text{B}}$ 18'16	-0°07'06	conjunction	13391 Jul 01 14:45	20° $\mathbf{\text{E}}$ 36'12 -1°45'53
minimum elong	13385 Apr 15 16:31	4° $\mathbf{\text{B}}$ 18'16	0°07'35	minimum elong	13391 Jul 01 14:44	20° $\mathbf{\text{E}}$ 36'12 1°46'53
behind sun begin	13385 Apr 15 10:00	4° $\mathbf{\text{B}}$ 16'15		max. Earth dist.	13391 Jul 01 17:08	20° $\mathbf{\text{E}}$ 36'57 10.59372 AU
behind sun end	13385 Apr 15 23:01	4° $\mathbf{\text{B}}$ 20'17		morning rise	13391 Jul 18 11:28	22° $\mathbf{\text{E}}$ 40'43
max. Earth dist.	13385 Apr 15 03:12	4° $\mathbf{\text{B}}$ 14'07	10.43696 AU		13391 Oct 13 18:04	0° $\mathbf{\text{O}}$
morning rise	13385 May 03 01:02	6° $\mathbf{\text{B}}$ 27'55		retrograde	13391 Oct 28 18:13	0° $\mathbf{\text{O}}$ 11'41
retrograde	13385 Aug 12 12:29	14° $\mathbf{\text{B}}$ 03'58			13391 Nov 12 21:41	30° $\mathbf{\text{R}}$ $\mathbf{\text{E}}$
opposition	13385 Oct 19 08:22	10° $\mathbf{\text{B}}$ 41'57	-0°23'30	opposition	13392 Jan 06 02:25	26° $\mathbf{\text{E}}$ 49'51 -2°12'25
min. Earth dist.	13385 Oct 19 18:06	10° $\mathbf{\text{B}}$ 40'02	8.44600 AU	min. Earth dist.	13392 Jan 05 22:28	26° $\mathbf{\text{E}}$ 50'36 8.60840 AU

direct	13392 Mar 15 17:26	23°  27'19	evening set	13398 Sep 08 05:47	14°  49'33	
	13392 Jun 18 05:00	0° 				
evening set	13392 Jun 26 08:35	0°  58'23	conjunction	13398 Sep 25 09:39	16°  54'24	-0°25'33
			minimum elong	13398 Sep 25 09:40	16°  54'24	0°25'21
conjunction	13392 Jul 13 05:08	3°  02'31 -1°47'25	max. Earth dist.	13398 Sep 25 23:59	16°  58'46	10.67757 AU
minimum elong	13392 Jul 13 05:09	3°  02'31 1°48'20	morning rise	13398 Oct 12 16:13	19°  00'04	
max. Earth dist.	13392 Jul 13 11:12	3°  04'23 10.61992 AU	retrograde	13399 Jan 24 21:48	26°  33'01	
morning rise	13392 Jul 30 01:34	5°  06'37	opposition	13399 Apr 04 17:30	23°  09'23	-0°17'13
retrograde	13392 Nov 09 16:17	12°  03'721	min. Earth dist.	13399 Apr 04 06:02	23°  11'35	8.67263 AU
opposition	13393 Jan 18 05:14	9°  15'22 -2°11'07	direct	13399 Jun 12 02:55	19°  04'00	
min. Earth dist.	13393 Jan 17 22:30	9°  16'39 8.63295 AU	evening set	13399 Sep 20 20:18	27°  08'28	
direct	13393 Mar 28 16:48	5°  05'329				
evening set	13393 Jul 08 21:39	13°  02'129	conjunction	13399 Oct 08 02:13	29°  13'55	-0°02'45
	13393 Jul 22 08:11	15° 	minimum elong	13399 Oct 08 02:11	29°  13'55	0°02'20
			behind sun begin	13399 Oct 07 19:03	29°  11'46	
conjunction	13393 Jul 25 18:08	15°  02'5'15 -1°43'57	behind sun end	13399 Oct 08 09:20	29°  16'04	
minimum elong	13393 Jul 25 18:09	15°  02'5'15 1°44'44	max. Earth dist.	13399 Oct 08 14:42	29°  17'43	10.66576 AU
max. Earth dist.	13393 Jul 26 02:59	15°  02'7'58 10.64260 AU		13399 Oct 14 09:20	0° 	
morning rise	13393 Aug 11 15:02	17°  02'9'08	morning rise	13399 Oct 25 11:06	1°  02'0'14	
retrograde	13393 Nov 22 13:41	24°  05'9'47	asc. node	13399 Nov 21 20:32	4°  02'25'41	
opposition	13394 Jan 31 06:26	21°  03'7'37 -2°03'44	retrograde	13400 Feb 06 19:22	8°  02'54'17	
min. Earth dist.	13394 Jan 30 21:56	21°  03'9'14 8.65341 AU	opposition	13400 Apr 17 12:33	5°  03'30'19	0°11'14
direct	13394 Apr 10 14:24	18°  01'6'17	min. Earth dist.	13400 Apr 17 02:52	5°  03'32'12	8.65732 AU
evening set	13394 Jul 21 09:11	25°  04'1'32	direct	13400 Jun 24 18:43	2°  03'09'37	
			evening set	13400 Oct 03 13:19	9°  03'30'10	
conjunction	13394 Aug 07 06:10	27°  04'5'08 -1°35'41				
minimum elong	13394 Aug 07 06:12	27°  04'5'09 1°36'19	conjunction	13400 Oct 20 21:17	11°  03'36'19	0°20'22
max. Earth dist.	13394 Aug 07 16:36	27°  04'8'21 10.66084 AU	minimum elong	13400 Oct 20 21:16	11°  03'36'19	0°20'59
morning rise	13394 Aug 24 04:20	29°  04'9'04	max. Earth dist.	13400 Oct 21 07:46	11°  03'39'31	10.64705 AU
	13394 Aug 25 16:46	0° 	morning rise	13400 Nov 07 08:19	13°  03'43'22	
retrograde	13394 Dec 05 10:39	7°  03'19'47		13400 Nov 18 05:23	15° 	
opposition	13395 Feb 13 06:18	3°  03'57'23 -1°50'40	retrograde	13401 Feb 19 18:56	21°  03'18'45	
min. Earth dist.	13395 Feb 12 20:50	3°  03'59'12 8.66894 AU	opposition	13401 Apr 30 07:31	17°  03'54'30	0°39'16
direct	13395 Apr 23 09:25	0°  03'36'30	min. Earth dist.	13401 Apr 29 23:33	17°  03'56'03	8.63545 AU
evening set	13395 Aug 02 19:47	7°  03'59'23		13401 Jun 14 18:05	15°  03'48'00	
			direct	13401 Jul 07 10:24	14°  03'33'20	
conjunction	13395 Aug 19 17:50	10°  03'03'02 -1°23'02		13401 Jul 29 22:55	15° 	
minimum elong	13395 Aug 19 17:52	10°  03'03'03 1°23'29	evening set	13401 Oct 16 09:32	21°  03'55'49	
max. Earth dist.	13395 Aug 20 05:24	10°  03'06'35 10.67390 AU				
morning rise	13395 Sep 05 17:47	12°  03'07'13	conjunction	13401 Nov 02 19:29	24°  03'02'44	0°42'32
retrograde	13395 Dec 18 06:10	19°  03'38'11	minimum elong	13401 Nov 02 19:27	24°  03'02'43	0°43'19
opposition	13396 Feb 26 04:49	16°  03'15'31 -1°32'35	max. Earth dist.	13401 Nov 03 04:20	24°  03'05'26	10.62230 AU
min. Earth dist.	13396 Feb 25 18:17	16°  03'17'32 8.67899 AU	morning rise	13401 Nov 20 08:11	26°  03'10'28	
direct	13396 May 05 03:35	12°  03'54'59		13401 Dec 24 21:03	0° 	
evening set	13396 Aug 14 06:13	20°  03'16'01	retrograde	13402 Mar 04 18:47	3°  03'47'23	
			opposition	13402 May 13 02:38	0°  03'22'51	1°05'37
conjunction	13396 Aug 31 05:59	22°  03'19'55 -1°06'37	min. Earth dist.	13402 May 12 19:59	0°  03'24'09	8.60855 AU
minimum elong	13396 Aug 31 06:01	22°  03'19'56 1°06'52		13402 May 18 00:03	30° 	
max. Earth dist.	13396 Aug 31 19:12	22°  03'23'58 10.68132 AU	direct	13402 Jul 20 03:53	27°  03'01'06	
morning rise	13396 Sep 17 08:00	24°  03'24'28		13402 Sep 18 09:49	0° 	
	13396 Nov 11 05:12	0° 	evening set	13402 Oct 29 09:13	4°  03'26'13	
retrograde	13396 Dec 30 02:09	1°  03'55'56				
	13397 Feb 18 11:29	30°  03'48'00	conjunction	13402 Nov 15 20:53	6°  03'33'53	1°02'49
opposition	13397 Mar 10 01:59	28°  03'32'56 -1°10'17	minimum elong	13402 Nov 15 20:51	6°  03'33'52	1°03'44
min. Earth dist.	13397 Mar 09 14:17	28°  03'35'11 8.68321 AU	max. Earth dist.	13402 Nov 16 04:05	6°  03'36'05	10.59345 AU
direct	13397 May 17 21:38	25°  03'12'37	morning rise	13402 Dec 03 10:52	8°  03'42'17	
	13397 Aug 04 12:41	0° 	retrograde	13403 Mar 17 20:59	16°  03'20'46	
evening set	13397 Aug 26 17:15	2°  03'32'24	opposition	13403 May 25 22:37	12°  03'55'58	1°29'02
			min. Earth dist.	13403 May 25 17:33	12°  03'56'58	8.57863 AU
conjunction	13397 Sep 12 19:05	4°  03'36'44 -0°47'10	direct	13403 Aug 01 22:25	9°  03'33'32	
minimum elong	13397 Sep 12 19:07	4°  03'36'44 0°47'12	evening set	13403 Nov 11 12:22	17°  03'01'43	
max. Earth dist.	13397 Sep 13 09:34	4°  03'41'09 10.68268 AU				
morning rise	13397 Sep 29 23:20	6°  03'41'47	conjunction	13403 Nov 29 01:25	19°  03'10'08	1°20'13
retrograde	13398 Jan 12 00:30	14°  03'13'54	minimum elong	13403 Nov 29 01:23	19°  03'10'08	1°21'13
opposition	13398 Mar 22 22:08	10°  03'50'35 -0°44'47	max. Earth dist.	13403 Nov 29 05:49	19°  03'11'29	10.56245 AU
min. Earth dist.	13398 Mar 22 09:52	10°  03'52'56 8.68119 AU	morning rise	13403 Dec 16 16:28	21°  03'19'11	
direct	13398 May 30 12:20	7°  03'30'20	retrograde	13404 Mar 30 01:38	28°  03'59'04	

opposition	13404 Jun 06 19:35	25° \mathbb{A} 34'07	1°48'20	retrograde	13410 Jun 16 15:24	16° \mathbb{H} 17'41	
min. Earth dist.	13404 Jun 06 17:01	25° \mathbb{A} 34'37	8.54743 AU	opposition	13410 Aug 23 04:56	12° \mathbb{H} 53'36	1°38'24
direct	13404 Aug 13 17:18	22° \mathbb{A} 10'53		min. Earth dist.	13410 Aug 23 14:44	12° \mathbb{H} 51'39	8.41131 AU
evening set	13404 Nov 23 19:08	29° \mathbb{A} 42'32		direct	13410 Oct 30 19:08	9° \mathbb{H} 26'43	
	13404 Nov 26 04:56	0° \mathbb{B}		evening set	13411 Feb 12 09:45	17° \mathbb{H} 15'38	
conjunction	13404 Dec 11 09:19	1° \mathbb{B} 51'40	1°33'49	conjunction	13411 Mar 02 02:21	19° \mathbb{H} 27'27	1°10'41
minimum elong	13404 Dec 11 09:17	1° \mathbb{B} 51'39	1°34'51	minimum elong	13411 Mar 02 02:23	19° \mathbb{H} 27'27	1°10'59
max. Earth dist.	13404 Dec 11 10:11	1° \mathbb{B} 51'56	10.53096 AU	max. Earth dist.	13411 Mar 01 12:51	19° \mathbb{H} 23'13	10.40791 AU
morning rise	13404 Dec 29 01:10	4° \mathbb{B} 01'18		morning rise	13411 Mar 19 17:03	21° \mathbb{H} 38'43	
retrograde	13405 Apr 12 05:26	11° \mathbb{B} 42'18		retrograde	13411 Jun 29 22:32	29° \mathbb{H} 19'00	
opposition	13405 Jun 19 17:34	8° \mathbb{B} 17'18	2°02'29	opposition	13411 Sep 05 11:15	25° \mathbb{H} 55'21	1°15'48
min. Earth dist.	13405 Jun 19 17:55	8° \mathbb{B} 17'14	8.51650 AU	min. Earth dist.	13411 Sep 05 21:57	25° \mathbb{H} 53'14	8.40752 AU
direct	13405 Aug 26 16:33	4° \mathbb{B} 53'15		direct	13411 Nov 13 06:15	22° \mathbb{H} 28'23	
evening set	13405 Dec 07 05:00	12° \mathbb{B} 28'32			13412 Feb 23 14:06	0° \mathbb{V}	
conjunction	13405 Dec 24 20:08	14° \mathbb{B} 38'19	1°42'54	evening set	13412 Feb 26 02:11	0° \mathbb{V} 18'19	
minimum elong	13405 Dec 24 20:07	14° \mathbb{B} 38'19	1°43'55	conjunction	13412 Mar 14 17:59	2° \mathbb{V} 30'02	0°50'44
max. Earth dist.	13405 Dec 24 17:38	14° \mathbb{B} 37'33	10.50051 AU	minimum elong	13412 Mar 14 18:01	2° \mathbb{V} 30'03	0°50'48
morning rise	13406 Jan 11 12:28	16° \mathbb{B} 48'28		max. Earth dist.	13412 Mar 14 03:57	2° \mathbb{V} 25'39	10.40791 AU
retrograde	13406 Apr 25 09:57	24° \mathbb{B} 30'19		morning rise	13412 Apr 01 07:27	4° \mathbb{V} 41'06	
opposition	13406 Jul 02 16:59	21° \mathbb{B} 05'19	2°10'40	retrograde	13412 Jul 12 04:28	12° \mathbb{V} 20'13	
min. Earth dist.	13406 Jul 02 19:44	21° \mathbb{B} 04'47	8.48725 AU	opposition	13412 Sep 17 18:42	8° \mathbb{V} 57'02	0°49'18
direct	13406 Sep 08 18:23	17° \mathbb{B} 40'30		min. Earth dist.	13412 Sep 18 05:16	8° \mathbb{V} 54'57	8.41077 AU
evening set	13406 Dec 20 17:17	25° \mathbb{B} 19'17		direct	13412 Nov 25 19:36	5° \mathbb{V} 30'13	
conjunction	13407 Jan 07 09:18	27° \mathbb{B} 29'42	1°46'54	evening set	13413 Mar 10 17:27	13° \mathbb{V} 20'25	
minimum elong	13407 Jan 07 09:18	27° \mathbb{B} 29'42	1°47'51	conjunction	13413 Mar 28 07:55	15° \mathbb{V} 31'48	0°28'11
max. Earth dist.	13407 Jan 07 04:28	27° \mathbb{B} 28'12	10.47249 AU	minimum elong	13413 Mar 28 07:56	15° \mathbb{V} 31'49	0°28'02
morning rise	13407 Jan 25 01:48	29° \mathbb{B} 40'17		max. Earth dist.	13413 Mar 27 18:39	15° \mathbb{V} 27'39	10.41486 AU
	13407 Jan 27 19:04	0° \mathbb{A}		morning rise	13413 Apr 14 19:35	17° \mathbb{V} 42'25	
retrograde	13407 May 08 16:30	7° \mathbb{A} 22'38		retrograde	13413 Jul 25 11:38	25° \mathbb{V} 20'19	
opposition	13407 Jul 15 17:47	3° \mathbb{A} 57'43	2°12'22	opposition	13413 Oct 01 03:01	21° \mathbb{V} 57'38	0°20'18
min. Earth dist.	13407 Jul 15 22:12	3° \mathbb{A} 56'50	8.46098 AU	min. Earth dist.	13413 Oct 01 12:40	21° \mathbb{V} 55'43	8.42094 AU
direct	13407 Sep 21 21:28	0° \mathbb{A} 32'12		direct	13413 Dec 09 07:44	18° \mathbb{V} 31'07	
evening set	13408 Jan 03 07:51	8° \mathbb{A} 14'14		evening set	13414 Mar 24 07:01	26° \mathbb{V} 20'54	
conjunction	13408 Jan 21 00:35	10° \mathbb{A} 25'13	1°45'32	conjunction	13414 Apr 10 19:37	28° \mathbb{V} 31'43	0°04'18
minimum elong	13408 Jan 21 00:36	10° \mathbb{A} 25'13	1°46'23	minimum elong	13414 Apr 10 19:38	28° \mathbb{V} 31'43	0°03'55
max. Earth dist.	13408 Jan 20 17:37	10° \mathbb{A} 23'03	10.44815 AU	behind sun begin	13414 Apr 10 12:32	28° \mathbb{V} 29'31	
morning rise	13408 Feb 07 16:58	12° \mathbb{A} 36'09		behind sun end	13414 Apr 11 02:44	28° \mathbb{V} 33'55	
	13408 Feb 28 03:50	15° \mathbb{A}		max. Earth dist.	13414 Apr 10 07:48	28° \mathbb{V} 28'02	10.42847 AU
retrograde	13408 May 21 00:10	20° \mathbb{A} 18'31			13414 Apr 22 14:02	0° \mathbb{B}	
opposition	13408 Jul 27 19:55	16° \mathbb{A} 53'48	2°07'23	morning rise	13414 Apr 28 05:08	0° \mathbb{B} 41'42	
min. Earth dist.	13408 Jul 28 02:02	16° \mathbb{A} 52'35	8.43887 AU	desc. node	13414 Jun 16 19:20	6° \mathbb{B} 00'15	
	13408 Aug 22 01:11	15° \mathbb{R} \mathbb{A}		retrograde	13414 Aug 07 18:33	8° \mathbb{B} 18'20	
direct	13408 Oct 04 02:32	13° \mathbb{A} 27'40		opposition	13414 Oct 14 11:53	4° \mathbb{B} 56'06	-0°09'39
	13408 Nov 15 14:22	15° \mathbb{A}		min. Earth dist.	13414 Oct 14 20:47	4° \mathbb{B} 54'21	8.43760 AU
evening set	13409 Jan 15 24:00	21° \mathbb{A} 12'35		direct	13414 Dec 22 19:12	1° \mathbb{B} 30'03	
conjunction	13409 Feb 02 17:05	23° \mathbb{A} 24'00	1°38'48	evening set	13415 Apr 06 18:25	9° \mathbb{B} 18'44	
minimum elong	13409 Feb 02 17:07	23° \mathbb{A} 24'01	1°39'30	conjunction	13415 Apr 24 04:39	11° \mathbb{B} 28'46	-0°19'52
max. Earth dist.	13409 Feb 02 07:51	23° \mathbb{A} 21'07	10.42863 AU	minimum elong	13415 Apr 24 04:38	11° \mathbb{B} 28'46	0°20'28
morning rise	13409 Feb 20 09:08	25° \mathbb{A} 35'11		max. Earth dist.	13415 Apr 23 18:00	11° \mathbb{B} 25'27	10.44805 AU
	13409 Apr 01 03:05	0° \mathbb{H}		morning rise	13415 May 11 11:48	13° \mathbb{B} 37'58	
retrograde	13409 Jun 03 07:36	3° \mathbb{H} 17'11			13415 May 22 20:21	15° \mathbb{B}	
	13409 Aug 08 11:21	30° \mathbb{R} \mathbb{A}		retrograde	13415 Aug 20 23:09	21° \mathbb{B} 13'21	
opposition	13409 Aug 09 23:42	29° \mathbb{A} 52'45	1°55'53	opposition	13415 Oct 27 21:04	17° \mathbb{B} 51'34	-0°38'59
min. Earth dist.	13409 Aug 10 07:40	29° \mathbb{A} 51'09	8.42198 AU	min. Earth dist.	13415 Oct 28 05:09	17° \mathbb{B} 49'59	8.45989 AU
direct	13409 Oct 17 10:02	26° \mathbb{A} 26'09			13415 Dec 10 09:08	15° \mathbb{R} \mathbb{B}	
	13409 Dec 22 23:37	0° \mathbb{H}		direct	13416 Jan 05 07:50	14° \mathbb{B} 26'02	
evening set	13410 Jan 29 16:47	4° \mathbb{H} 13'23			13416 Jan 31 03:02	15° \mathbb{B}	
conjunction	13410 Feb 16 09:48	6° \mathbb{H} 25'05	1°27'00	evening set	13416 Apr 19 03:12	22° \mathbb{B} 13'02	
minimum elong	13410 Feb 16 09:51	6° \mathbb{H} 25'06	1°27'30	conjunction	13416 May 06 10:38	24° \mathbb{B} 22'06	-0°42'50
max. Earth dist.	13410 Feb 15 22:09	6° \mathbb{H} 21'27	10.41494 AU	minimum elong	13416 May 06 10:36	24° \mathbb{B} 22'05	0°43'37
morning rise	13410 Mar 06 01:19	8° \mathbb{H} 36'23		max. Earth dist.	13416 May 06 01:22	24° \mathbb{B} 19'12	10.47261 AU

morning rise	13416 May 23 15:20	26° J 30'22	retrograde	13422 Nov 18 00:36	19° J 36'49
	13416 Jun 23 02:35	0° II	opposition	13423 Jan 26 15:57	16° J 15'04 -2°07'39
retrograde	13416 Sep 02 02:13	4° II 04'37	min. Earth dist.	13423 Jan 26 10:07	16° J 16'11 8.64521 AU
opposition	13416 Nov 09 06:05	0° II 43'10 -1°06'12		13423 Feb 12 11:13	15° R J
min. Earth dist.	13416 Nov 09 12:46	0° II 41'52 8.48671 AU	direct	13423 Apr 06 01:51	12° J 53'41
	13416 Nov 18 13:49	30° R J		13423 May 26 15:25	15° J
direct	13417 Jan 17 20:12	27° J 18'15	evening set	13423 Jul 17 01:40	20° J 20'36
	13417 Mar 16 15:15	0° II			
evening set	13417 May 02 08:51	5° II 02'59	conjunction	13423 Aug 02 22:23	22° J 24'19 -1°39'53
			minimum elong	13423 Aug 02 22:25	22° J 24'20 1°40'35
conjunction	13417 May 19 13:28	7° II 10'58 -1°03'34	max. Earth dist.	13423 Aug 03 06:21	22° J 26'47 10.65099 AU
minimum elong	13417 May 19 13:26	7° II 10'58 1°04'29	morning rise	13423 Aug 19 19:57	24° J 28'17
max. Earth dist.	13417 May 19 06:18	7° II 08'44 10.50099 AU		13423 Oct 12 12:53	0° II
morning rise	13417 Jun 05 15:46	9° II 18'16	retrograde	13423 Nov 30 22:53	1° II 59'23
retrograde	13417 Sep 15 04:51	16° II 51'29		13424 Jan 21 01:42	30° R J
opposition	13417 Nov 22 14:36	13° II 30'14 -1°29'57	opposition	13424 Feb 08 17:00	28° J 37'12 -1°57'08
min. Earth dist.	13417 Nov 22 18:53	13° II 29'25 8.51670 AU	min. Earth dist.	13424 Feb 08 08:51	28° J 38'45 8.65757 AU
direct	13418 Jan 31 06:25	10° II 06'00	direct	13424 Apr 17 23:00	25° J 16'08
evening set	13418 May 15 11:02	17° II 47'58		13424 Jul 05 05:22	0° II
			evening set	13424 Jul 28 12:59	2° II 40'32
conjunction	13418 Jun 01 13:07	19° II 54'53 -1°21'02			
minimum elong	13418 Jun 01 13:05	19° II 54'52 1°22'03	conjunction	13424 Aug 14 10:41	4° II 44'17 -1°29'11
max. Earth dist.	13418 Jun 01 09:09	19° II 53'39 10.53162 AU	minimum elong	13424 Aug 14 10:44	4° II 44'18 1°29'43
morning rise	13418 Jun 18 13:09	22° II 01'13	max. Earth dist.	13424 Aug 14 21:17	4° II 47'33 10.66090 AU
retrograde	13418 Sep 28 06:00	29° II 33'31	morning rise	13424 Aug 31 09:41	6° II 48'27
opposition	13418 Dec 05 22:08	26° II 12'22 -1°49'08	retrograde	13424 Dec 12 20:01	14° II 19'51
min. Earth dist.	13418 Dec 05 23:39	26° II 12'05 8.54793 AU	opposition	13425 Feb 20 16:40	10° II 57'09 -1°41'16
direct	13419 Feb 13 14:43	22° II 48'48	min. Earth dist.	13425 Feb 20 06:53	10° II 59'02 8.66456 AU
	13419 May 24 14:25	0° J	direct	13425 Apr 30 17:51	7° II 36'17
evening set	13419 May 28 09:59	0° J 27'42	evening set	13425 Aug 09 24:00	14° II 58'41
conjunction	13419 Jun 14 09:49	2° J 33'36 -1°34'29	conjunction	13425 Aug 26 23:05	17° II 02'38 -1°14'23
minimum elong	13419 Jun 14 09:47	2° J 33'35 1°35'31	minimum elong	13425 Aug 26 23:07	17° II 02'39 1°14'44
max. Earth dist.	13419 Jun 14 09:02	2° J 33'21 10.56240 AU	max. Earth dist.	13425 Aug 27 10:47	17° II 06'13 10.66536 AU
morning rise	13419 Jul 01 07:56	4° J 39'02	morning rise	13425 Sep 13 00:06	19° II 07'10
retrograde	13419 Oct 11 06:25	12° J 10'36	retrograde	13425 Dec 25 16:42	26° II 39'01
opposition	13419 Dec 19 04:30	8° J 49'27 -2°02'53	opposition	13426 Mar 05 14:51	23° II 15'49 -1°20'46
min. Earth dist.	13419 Dec 19 03:49	8° J 49'35 8.57818 AU	min. Earth dist.	13426 Mar 05 04:42	23° II 17'46 8.66600 AU
direct	13420 Feb 26 21:09	5° J 26'31	direct	13426 May 13 11:36	19° II 54'59
evening set	13420 Jun 09 05:45	13° J 02'13	evening set	13426 Aug 22 11:14	27° II 15'59
conjunction	13420 Jun 26 03:43	15° J 07'14 -1°43'18	conjunction	13426 Sep 08 12:05	29° II 20'19 -0°56'12
minimum elong	13420 Jun 26 03:42	15° J 07'14 1°44'19	minimum elong	13426 Sep 08 12:07	29° II 20'20 0°56'20
max. Earth dist.	13420 Jun 26 05:18	15° J 07'44 10.59111 AU	max. Earth dist.	13426 Sep 09 00:02	29° II 23'59 10.66424 AU
morning rise	13420 Jul 13 00:36	17° J 11'57		13426 Sep 13 21:46	0° J
retrograde	13420 Oct 23 06:20	24° J 43'02	morning rise	13426 Sep 25 15:27	1° J 25'22
opposition	13420 Dec 31 09:45	21° J 21'48 -2°10'41	retrograde	13427 Jan 07 13:44	8° J 57'53
min. Earth dist.	13420 Dec 31 07:32	21° J 22'14 8.60523 AU	opposition	13427 Mar 18 12:03	5° J 34'12 -0°56'33
direct	13421 Mar 10 23:48	17° J 59'28	min. Earth dist.	13427 Mar 18 01:48	5° J 36'10 8.66184 AU
evening set	13421 Jun 21 22:30	25° J 32'03	direct	13427 May 26 04:04	2° J 13'18
			evening set	13427 Sep 03 23:17	9° J 33'34
conjunction	13421 Jul 08 19:15	27° J 36'24 -1°47'10	conjunction	13427 Sep 21 02:14	11° J 38'25 -0°35'25
minimum elong	13421 Jul 08 19:15	27° J 36'24 1°48'07	minimum elong	13427 Sep 21 02:15	11° J 38'25 0°35'19
max. Earth dist.	13421 Jul 08 22:22	27° J 37'22 10.61584 AU	max. Earth dist.	13427 Sep 21 14:36	11° J 42'12 10.65749 AU
morning rise	13421 Jul 25 15:44	29° J 40'39	morning rise	13427 Oct 08 07:59	13° J 44'05
	13421 Jul 28 07:54	0° J	retrograde	13428 Jan 20 10:06	21° J 17'32
retrograde	13421 Nov 05 03:57	7° J 11'33	opposition	13428 Mar 30 08:23	17° J 53'23 -0°29'42
opposition	13422 Jan 13 13:38	3° J 50'07 -2°12'15	min. Earth dist.	13428 Mar 29 21:54	17° J 55'24 8.65217 AU
min. Earth dist.	13422 Jan 13 09:56	3° J 50'50 8.62769 AU	direct	13428 Jun 06 20:58	14° J 32'19
direct	13422 Mar 24 01:10	0° J 28'19	evening set	13428 Sep 15 13:11	21° J 52'35
evening set	13422 Jul 04 13:01	7° J 57'59			
conjunction	13422 Jul 21 09:20	10° J 01'53 -1°45'59	conjunction	13428 Oct 02 18:23	23° J 58'05 -0°12'58
minimum elong	13422 Jul 21 09:21	10° J 01'54 1°46'50	minimum elong	13428 Oct 02 18:24	23° J 58'05 0°12'39
max. Earth dist.	13422 Jul 21 14:32	10° J 03'29 10.63589 AU	behind sun begin	13428 Oct 02 13:53	23° J 56'43
morning rise	13422 Aug 07 06:05	12° J 05'54	behind sun end	13428 Oct 02 22:56	23° J 59'27
	13422 Sep 01 13:30	15° J	max. Earth dist.	13428 Oct 03 07:23	24° J 02'03 10.64527 AU

morning rise	13428 Oct 20 02:24	26° Ω 04'25			13434 Sep 11 23:02	0° \mathfrak{Z}	
	13428 Nov 24 17:14	0° \mathfrak{M}		evening set	13434 Dec 01 16:54	7° \mathfrak{Z} 09'53	
retrograde	13429 Feb 01 08:41	3° \mathfrak{M} 39'01					
opposition	13429 Apr 12 03:59	0° \mathfrak{M} 14'26	-0°01'26	conjunction	13434 Dec 19 07:50	9° \mathfrak{Z} 19'38	1°39'29
min. Earth dist.	13429 Apr 11 17:20	0° \mathfrak{M} 16'29	8.63729 AU	minimum elong	13434 Dec 19 07:49	9° \mathfrak{Z} 19'38	1°40'31
	13429 Apr 15 06:33	30° \mathfrak{R} Ω		max. Earth dist.	13434 Dec 19 09:19	9° \mathfrak{Z} 20'05	10.50056 AU
asc. node	13429 Apr 30 15:46	28° Ω 51'05		morning rise	13435 Jan 05 23:54	11° \mathfrak{Z} 29'47	
direct	13429 Jun 19 13:02	26° Ω 53'07		retrograde	13435 Apr 20 02:11	19° \mathfrak{Z} 12'19	
	13429 Aug 20 06:56	0° \mathfrak{M}		opposition	13435 Jun 27 10:37	15° \mathfrak{Z} 47'16	2°07'48
evening set	13429 Sep 28 05:34	4° \mathfrak{M} 14'10		min. Earth dist.	13435 Jun 27 10:21	15° \mathfrak{Z} 47'19	8.48909 AU
				direct	13435 Sep 03 09:39	12° \mathfrak{Z} 22'53	
conjunction	13429 Oct 15 12:55	6° \mathfrak{M} 20'22	0°10'13	evening set	13435 Dec 15 05:11	20° \mathfrak{Z} 01'01	
minimum elong	13429 Oct 15 12:54	6° \mathfrak{M} 20'22	0°10'45				
behind sun begin	13429 Oct 15 07:26	6° \mathfrak{M} 18'43		conjunction	13436 Jan 01 20:56	22° \mathfrak{Z} 11'23	1°45'41
behind sun end	13429 Oct 15 18:23	6° \mathfrak{M} 22'01		minimum elong	13436 Jan 01 20:56	22° \mathfrak{Z} 11'23	1°46'41
max. Earth dist.	13429 Oct 16 01:16	6° \mathfrak{M} 24'08	10.62797 AU	max. Earth dist.	13436 Jan 01 19:06	22° \mathfrak{Z} 10'48	10.47612 AU
morning rise	13429 Nov 01 23:02	8° \mathfrak{M} 27'25		morning rise	13436 Jan 19 13:21	24° \mathfrak{Z} 21'58	
	13430 Jan 09 16:55	15° \mathfrak{M}			13436 Mar 13 12:25	0° \mathfrak{M}	
retrograde	13430 Feb 14 09:34	16° \mathfrak{M} 03'20		retrograde	13436 May 02 10:14	2° \mathfrak{M} 05'03	
	13430 Mar 22 09:31	15° \mathfrak{R} \mathfrak{M}			13436 Jun 22 07:24	30° \mathfrak{R} \mathfrak{Z}	
opposition	13430 Apr 24 23:31	12° \mathfrak{M} 38'25	0°27'02	opposition	13436 Jul 09 11:45	28° \mathfrak{Z} 40'16	2°12'17
min. Earth dist.	13430 Apr 24 13:50	12° \mathfrak{M} 40'18	8.61774 AU	min. Earth dist.	13436 Jul 09 14:22	28° \mathfrak{Z} 39'45	8.46626 AU
direct	13430 Jul 02 03:28	9° \mathfrak{M} 16'44		direct	13436 Sep 15 11:42	25° \mathfrak{Z} 15'19	
	13430 Sep 26 21:03	15° \mathfrak{M}			13436 Dec 02 08:22	0° \mathfrak{M}	
evening set	13430 Oct 11 00:53	16° \mathfrak{M} 39'22		evening set	13436 Dec 27 20:01	2° \mathfrak{M} 56'47	
conjunction	13430 Oct 28 10:04	18° \mathfrak{M} 46'16	0°32'56	conjunction	13437 Jan 14 12:22	5° \mathfrak{M} 07'39	1°46'37
minimum elong	13430 Oct 28 10:02	18° \mathfrak{M} 46'16	0°33'39	minimum elong	13437 Jan 14 12:23	5° \mathfrak{M} 07'40	1°47'31
max. Earth dist.	13430 Oct 28 20:31	18° \mathfrak{M} 49'28	10.60633 AU	max. Earth dist.	13437 Jan 14 06:55	5° \mathfrak{M} 05'58	10.45495 AU
morning rise	13430 Nov 14 22:06	20° \mathfrak{M} 54'02		morning rise	13437 Feb 01 04:53	7° \mathfrak{M} 18'36	
retrograde	13431 Feb 27 09:31	28° \mathfrak{M} 31'23			13437 May 10 01:16	15° \mathfrak{M}	
opposition	13431 May 07 19:19	25° \mathfrak{M} 06'14	0°54'21	retrograde	13437 May 15 17:43	15° \mathfrak{M} 01'42	
min. Earth dist.	13431 May 07 11:28	25° \mathfrak{M} 07'46	8.59446 AU		13437 May 21 09:30	15° \mathfrak{R} \mathfrak{M}	
direct	13431 Jul 14 20:39	21° \mathfrak{M} 44'05		opposition	13437 Jul 22 14:14	11° \mathfrak{M} 37'16	2°10'07
evening set	13431 Oct 23 23:33	29° \mathfrak{M} 09'01		min. Earth dist.	13437 Jul 22 19:25	11° \mathfrak{M} 36'14	8.44707 AU
	13431 Oct 31 00:07	0° \mathfrak{Z}		direct	13437 Sep 28 17:33	8° \mathfrak{M} 11'48	
					13438 Jan 02 17:47	15° \mathfrak{M}	
conjunction	13431 Nov 10 10:26	1° \mathfrak{Z} 16'39	0°54'13	evening set	13438 Jan 10 12:26	15° \mathfrak{M} 56'10	
minimum elong	13431 Nov 10 10:24	1° \mathfrak{Z} 16'39	0°55'04				
max. Earth dist.	13431 Nov 10 18:20	1° \mathfrak{Z} 19'05	10.58149 AU	conjunction	13438 Jan 28 05:14	18° \mathfrak{M} 07'27	1°42'08
morning rise	13431 Nov 28 00:07	3° \mathfrak{Z} 25'06		minimum elong	13438 Jan 28 05:15	18° \mathfrak{M} 07'28	1°42'53
retrograde	13432 Mar 11 11:02	11° \mathfrak{Z} 03'57		max. Earth dist.	13438 Jan 27 21:00	18° \mathfrak{M} 04'54	10.43791 AU
opposition	13432 May 19 15:37	7° \mathfrak{Z} 38'40	1°19'15	morning rise	13438 Feb 14 21:35	20° \mathfrak{M} 18'38	
min. Earth dist.	13432 May 19 09:56	7° \mathfrak{Z} 39'47	8.56869 AU	retrograde	13438 May 29 00:15	28° \mathfrak{M} 01'21	
direct	13432 Jul 26 15:26	4° \mathfrak{Z} 15'58		opposition	13438 Aug 04 18:06	24° \mathfrak{M} 37'14	2°01'18
evening set	13432 Nov 05 01:47	11° \mathfrak{Z} 43'46		min. Earth dist.	13438 Aug 05 01:08	24° \mathfrak{M} 35'50	8.43211 AU
				direct	13438 Oct 12 02:32	21° \mathfrak{M} 11'19	
conjunction	13432 Nov 22 14:17	13° \mathfrak{Z} 52'09	1°13'00	evening set	13439 Jan 24 05:34	28° \mathfrak{M} 57'59	
minimum elong	13432 Nov 22 14:15	13° \mathfrak{Z} 52'08	1°13'59		13439 Feb 01 15:10	0° \mathfrak{H}	
max. Earth dist.	13432 Nov 22 20:06	13° \mathfrak{Z} 53'56	10.55469 AU				
morning rise	13432 Dec 10 05:09	16° \mathfrak{Z} 01'14		conjunction	13439 Feb 10 22:39	1° \mathfrak{H} 09'36	1°32'24
retrograde	13433 Mar 24 14:49	23° \mathfrak{Z} 41'31		minimum elong	13439 Feb 10 22:41	1° \mathfrak{H} 09'36	1°32'59
opposition	13433 Jun 01 12:46	20° \mathfrak{Z} 16'12	1°40'30	max. Earth dist.	13439 Feb 10 12:25	1° \mathfrak{H} 06'24	10.42525 AU
min. Earth dist.	13433 Jun 01 08:43	20° \mathfrak{Z} 16'59	8.54162 AU	morning rise	13439 Feb 28 14:32	3° \mathfrak{H} 20'53	
direct	13433 Aug 08 11:15	16° \mathfrak{Z} 52'56		retrograde	13439 Jun 11 08:50	11° \mathfrak{H} 02'51	
evening set	13433 Nov 18 07:37	24° \mathfrak{Z} 24'02		opposition	13439 Aug 17 23:10	7° \mathfrak{H} 39'04	1°46'13
				min. Earth dist.	13439 Aug 18 07:31	7° \mathfrak{H} 37'25	8.42127 AU
conjunction	13433 Dec 05 21:28	26° \mathfrak{Z} 33'07	1°28'22	direct	13439 Oct 25 11:24	4° \mathfrak{H} 12'49	
minimum elong	13433 Dec 05 21:26	26° \mathfrak{Z} 33'06	1°29'24	evening set	13440 Feb 06 23:10	12° \mathfrak{H} 01'17	
max. Earth dist.	13433 Dec 06 01:21	26° \mathfrak{Z} 34'19	10.52720 AU				
morning rise	13433 Dec 23 13:04	28° \mathfrak{Z} 42'46		conjunction	13440 Feb 24 16:09	14° \mathfrak{H} 13'05	1°17'53
	13434 Jan 03 09:38	0° \mathfrak{Z}		minimum elong	13440 Feb 24 16:11	14° \mathfrak{H} 13'06	1°18'16
retrograde	13434 Apr 06 19:31	6° \mathfrak{Z} 24'20		max. Earth dist.	13440 Feb 24 04:17	14° \mathfrak{H} 09'22	10.41659 AU
opposition	13434 Jun 14 10:58	2° \mathfrak{Z} 59'05	1°56'59	morning rise	13440 Mar 13 07:11	16° \mathfrak{H} 24'23	
min. Earth dist.	13434 Jun 14 08:35	2° \mathfrak{Z} 59'33	8.51460 AU	retrograde	13440 Jun 23 17:40	24° \mathfrak{H} 05'22	
	13434 Jul 30 17:00	30° \mathfrak{R} \mathfrak{Z}		opposition	13440 Aug 30 05:24	20° \mathfrak{H} 42'00	1°25'38
direct	13434 Aug 21 09:41	29° \mathfrak{Z} 35'16		min. Earth dist.	13440 Aug 30 15:10	20° \mathfrak{H} 40'04	8.41439 AU

direct	13440 Nov 06 21:22	17° X 15'34		minimum elong	13446 May 14 12:30	2° II 09'58	0°56'20
evening set	13441 Feb 19 16:33	25° X 05'22		max. Earth dist.	13446 May 14 04:50	2° II 07'34	10.47823 AU
				morning rise	13446 May 31 15:47	4° II 17'47	
conjunction	13441 Mar 09 08:52	27° X 17'11	0°59'20	retrograde	13446 Sep 10 04:25	11° II 51'46	
minimum elong	13441 Mar 09 08:54	27° X 17'11	0°59'30	opposition	13446 Nov 17 10:41	8° II 30'01	-1°20'49
max. Earth dist.	13441 Mar 08 19:26	27° X 12'58	10.41226 AU	min. Earth dist.	13446 Nov 17 15:57	8° II 29'00	8.49202 AU
morning rise	13441 Mar 26 22:45	29° X 28'21		direct	13447 Jan 26 01:32	5° II 05'02	
	13441 Mar 31 06:42	0° Y		evening set	13447 May 10 10:24	12° II 48'32	
retrograde	13441 Jul 07 01:28	7° Y 08'18					
opposition	13441 Sep 12 13:04	3° Y 45'22	1°00'36	conjunction	13447 May 27 13:41	14° II 56'03	-1°14'24
min. Earth dist.	13441 Sep 12 23:59	3° Y 43'12	8.41246 AU	minimum elong	13447 May 27 13:39	14° II 56'03	1°15'23
direct	13441 Nov 20 09:48	0° Y 18'53		max. Earth dist.	13447 May 27 08:16	14° II 54'22	10.50565 AU
evening set	13442 Mar 05 08:57	8° Y 09'22		morning rise	13447 Jun 13 14:38	17° II 02'55	
max. Earth dist.	13442 Mar 22 09:41	10° Y 16'28	10.41350 AU	retrograde	13447 Sep 23 05:33	24° II 35'52	
				opposition	13447 Nov 30 18:52	21° II 14'11	-1°42'01
conjunction	13442 Mar 23 00:02	10° Y 20'58	0°37'43	min. Earth dist.	13447 Nov 30 22:26	21° II 13'30	8.52092 AU
minimum elong	13442 Mar 23 00:04	10° Y 20'58	0°37'39	direct	13448 Feb 08 11:00	17° II 49'45	
morning rise	13442 Apr 09 12:28	12° Y 31'50		evening set	13448 May 22 10:48	25° II 30'20	
retrograde	13442 Jul 20 08:36	20° Y 10'39					
opposition	13442 Sep 25 21:44	16° Y 48'06	0°32'26	conjunction	13448 Jun 08 11:27	27° II 36'46	-1°29'35
min. Earth dist.	13442 Sep 26 09:09	16° Y 45'51	8.41663 AU	minimum elong	13448 Jun 08 11:26	27° II 36'46	1°30'37
direct	13442 Dec 03 23:05	13° Y 21'42		max. Earth dist.	13448 Jun 08 08:19	27° II 35'48	10.53511 AU
evening set	13443 Mar 19 00:03	21° Y 12'07		morning rise	13448 Jun 25 10:28	29° II 42'43	
					13448 Jun 27 19:20	0° Z	
conjunction	13443 Apr 05 13:25	23° Y 23'17	0°14'12	retrograde	13448 Oct 05 05:10	7° Z 14'52	
minimum elong	13443 Apr 05 13:25	23° Y 23'17	0°13'54	opposition	13448 Dec 13 01:53	3° Z 53'11	-1°58'05
behind sun begin	13443 Apr 05 09:45	23° Y 22'09		min. Earth dist.	13448 Dec 13 02:58	3° Z 52'58	8.55115 AU
behind sun end	13443 Apr 05 17:06	23° Y 24'26		direct	13449 Feb 20 19:12	0° Z 29'21	
max. Earth dist.	13443 Apr 04 22:59	23° Y 18'46	10.42106 AU	evening set	13449 Jun 04 07:45	8° Z 06'46	
morning rise	13443 Apr 23 00:03	25° Y 33'39					
	13443 Jun 01 19:50	0° Z		conjunction	13449 Jun 21 06:25	10° Z 12'15	-1°40'21
retrograde	13443 Aug 02 14:47	3° Z 11'12		minimum elong	13449 Jun 21 06:23	10° Z 12'15	1°41'23
	13443 Oct 06 22:39	30° R Y		max. Earth dist.	13449 Jun 21 06:26	10° Z 12'16	10.56524 AU
opposition	13443 Oct 09 06:52	29° Y 48'57	0°02'39	morning rise	13449 Jul 08 03:58	12° Z 17'23	
min. Earth dist.	13443 Oct 09 17:44	29° Y 46'49	8.42727 AU	retrograde	13449 Oct 18 04:52	19° Z 48'54	
desc. node	13443 Nov 11 01:46	27° Y 28'38		opposition	13449 Dec 26 07:26	16° Z 27'08	-2°08'22
direct	13443 Dec 17 12:56	26° Y 22'45		min. Earth dist.	13449 Dec 26 05:32	16° Z 27'30	8.58120 AU
	13444 Feb 23 02:48	0° Z		direct	13450 Mar 05 23:44	13° Z 03'59	
evening set	13444 Mar 31 13:04	4° Z 12'25		evening set	13450 Jun 17 01:31	20° Z 38'06	
max. Earth dist.	13444 Apr 17 11:16	6° Z 18'49	10.43485 AU				
				conjunction	13450 Jul 03 22:52	22° Z 42'48	-1°46'16
conjunction	13444 Apr 18 00:18	6° Z 22'54	-0°10'05	minimum elong	13450 Jul 03 22:52	22° Z 42'48	1°47'15
minimum elong	13444 Apr 18 00:17	6° Z 22'54	0°10'36	max. Earth dist.	13450 Jul 04 02:29	22° Z 43'55	10.59445 AU
behind sun begin	13444 Apr 17 18:44	6° Z 21'10		morning rise	13450 Jul 20 19:31	24° Z 47'18	
behind sun end	13444 Apr 18 05:50	6° Z 24'37			13450 Sep 08 03:49	0° Z	
morning rise	13444 May 05 08:40	8° Z 32'33		retrograde	13450 Oct 31 03:08	2° Z 18'20	
	13444 Jul 09 16:32	15° Z			13450 Dec 25 09:53	30° R Z	
retrograde	13444 Aug 14 19:47	16° Z 08'51		opposition	13451 Jan 08 11:32	28° Z 56'28	-2°12'29
	13444 Sep 20 16:46	15° R Z		min. Earth dist.	13451 Jan 08 06:41	28° Z 57'23	8.60943 AU
opposition	13444 Oct 21 16:25	12° Z 46'50	-0°27'10	direct	13451 Mar 19 01:54	25° Z 33'58	
min. Earth dist.	13444 Oct 22 01:32	12° Z 45'03	8.44397 AU		13451 Jun 02 17:36	0° Z	
direct	13444 Dec 30 03:01	9° Z 20'58		evening set	13451 Jun 29 16:36	3° Z 04'50	
	13445 Mar 26 19:45	15° Z					
evening set	13445 Apr 13 23:15	17° Z 09'08		conjunction	13451 Jul 16 13:11	5° Z 08'56	-1°47'08
				minimum elong	13451 Jul 16 13:12	5° Z 08'56	1°48'02
conjunction	13445 May 01 08:02	19° Z 18'44	-0°33'40	max. Earth dist.	13451 Jul 16 19:57	5° Z 11'01	10.62120 AU
minimum elong	13445 May 01 08:00	19° Z 18'43	0°34'22	morning rise	13451 Aug 02 09:37	7° Z 13'01	
max. Earth dist.	13445 Apr 30 21:37	19° Z 15'28	10.45423 AU	retrograde	13451 Nov 13 01:02	14° Z 43'44	
morning rise	13445 May 18 13:50	21° Z 27'31		opposition	13452 Jan 21 14:10	11° Z 21'43	-2°10'22
retrograde	13445 Aug 28 00:34	29° Z 02'38		min. Earth dist.	13452 Jan 21 07:18	11° Z 23'02	8.63449 AU
opposition	13445 Nov 04 01:52	25° Z 40'47	-0°55'28	direct	13452 Mar 31 01:35	7° Z 59'51	
min. Earth dist.	13445 Nov 04 08:57	25° Z 39'24	8.46593 AU		13452 Jul 07 09:28	15° Z	
direct	13446 Jan 12 15:36	22° Z 15'20		evening set	13452 Jul 11 05:31	15° Z 27'36	
evening set	13446 Apr 27 06:28	0° II 01'22					
	13446 Apr 27 01:58	0° II		conjunction	13452 Jul 28 01:58	17° Z 31'20	-1°43'01
				minimum elong	13452 Jul 28 01:59	17° Z 31'21	1°43'48
conjunction	13446 May 14 12:32	2° II 09'58	-0°55'28	max. Earth dist.	13452 Jul 28 10:37	17° Z 34'00	10.64440 AU

morning rise	13452 Aug 13 23:03	19° Ω 35'14	max. Earth dist.	13458 Oct 10 21:32	1° \mathbb{M} 20'36	10.66848 AU
retrograde	13452 Nov 24 22:48	27° Ω 05'47	morning rise	13458 Oct 27 18:24	3° \mathbb{M} 23'12	
opposition	13453 Feb 02 15:16	23° Ω 43'35 -2°02'12	retrograde	13459 Feb 09 02:20	10° \mathbb{M} 56'59	
min. Earth dist.	13453 Feb 02 07:02	23° Ω 45'09 8.65542 AU	opposition	13459 Apr 19 19:21	7° \mathbb{M} 33'02 0°14'50	
direct	13453 Apr 12 22:01	20° Ω 22'14	min. Earth dist.	13459 Apr 19 09:43	7° \mathbb{M} 34'53 8.66026 AU	
evening set	13453 Jul 23 16:43	27° Ω 47'11	direct	13459 Jun 27 01:33	4° \mathbb{M} 12'18	
			evening set	13459 Oct 05 20:07	11° \mathbb{M} 32'40	
conjunction	13453 Aug 09 13:46	29° Ω 50'46 -1°34'10	conjunction	13459 Oct 23 04:17	13° \mathbb{M} 38'47 0°23'13	
minimum elong	13453 Aug 09 13:48	29° Ω 50'46 1°34'46	minimum elong	13459 Oct 23 04:16	13° \mathbb{M} 38'47 0°23'52	
max. Earth dist.	13453 Aug 09 23:58	29° Ω 53'54 10.66306 AU	max. Earth dist.	13459 Oct 23 15:22	13° \mathbb{M} 42'10 10.65020 AU	
	13453 Aug 10 19:49	0° \mathbb{M}		13459 Nov 03 07:03	15° \mathbb{M}	
morning rise	13453 Aug 26 12:12	1° \mathbb{M} 54'43	morning rise	13459 Nov 09 15:21	15° \mathbb{M} 45'47	
retrograde	13453 Dec 07 17:28	9° \mathbb{M} 25'17	retrograde	13460 Feb 22 00:47	23° \mathbb{M} 20'55	
opposition	13454 Feb 15 14:47	6° \mathbb{M} 02'50 -1°48'27	opposition	13460 May 01 14:01	19° \mathbb{M} 56'39 0°42'40	
min. Earth dist.	13454 Feb 15 05:15	6° \mathbb{M} 04'39 8.67128 AU	min. Earth dist.	13460 May 01 05:35	19° \mathbb{M} 58'17 8.63875 AU	
direct	13454 Apr 25 18:02	2° \mathbb{M} 41'56	direct	13460 Jul 08 17:47	16° \mathbb{M} 35'29	
evening set	13454 Aug 05 03:06	10° \mathbb{M} 04'30	evening set	13460 Oct 17 16:20	23° \mathbb{M} 57'47	
conjunction	13454 Aug 22 01:24	12° \mathbb{M} 08'09 -1°21'00	conjunction	13460 Nov 04 02:25	26° \mathbb{M} 04'40 0°45'09	
minimum elong	13454 Aug 22 01:27	12° \mathbb{M} 08'10 1°21'25	minimum elong	13460 Nov 04 02:23	26° \mathbb{M} 04'40 0°45'58	
max. Earth dist.	13454 Aug 22 13:28	12° \mathbb{M} 11'51 10.67635 AU	max. Earth dist.	13460 Nov 04 11:47	26° \mathbb{M} 07'32 10.62555 AU	
morning rise	13454 Sep 08 01:32	14° \mathbb{M} 12'18	morning rise	13460 Nov 21 15:05	28° \mathbb{M} 12'21	
retrograde	13454 Dec 20 13:23	21° \mathbb{M} 43'07		13460 Dec 07 00:48	0° \mathbb{M}	
opposition	13455 Feb 28 12:46	18° \mathbb{M} 20'22 -1°29'47	retrograde	13461 Mar 06 01:49	5° \mathbb{M} 49'01	
min. Earth dist.	13455 Feb 28 01:36	18° \mathbb{M} 22'31 8.68143 AU	opposition	13461 May 14 08:54	2° \mathbb{M} 24'30 1°08'39	
direct	13455 May 08 12:52	14° \mathbb{M} 59'50	min. Earth dist.	13461 May 14 02:04	2° \mathbb{M} 25'50 8.61168 AU	
evening set	13455 Aug 17 13:22	22° \mathbb{M} 20'32		13461 Jun 17 19:43	30° \mathbb{R} \mathbb{M}	
conjunction	13455 Sep 03 13:25	24° \mathbb{M} 24'27 -1°04'10	direct	13461 Jul 21 10:11	29° \mathbb{M} 02'45	
minimum elong	13455 Sep 03 13:27	24° \mathbb{M} 24'28 1°04'23		13461 Aug 23 14:04	0° \mathbb{M}	
max. Earth dist.	13455 Sep 04 03:27	24° \mathbb{M} 28'45 10.68377 AU	evening set	13461 Oct 30 16:05	6° \mathbb{M} 27'45	
morning rise	13455 Sep 20 15:32	26° \mathbb{M} 29'00				
	13455 Oct 22 04:03	0° \mathbb{M}	conjunction	13461 Nov 17 03:45	8° \mathbb{M} 35'23 1°05'05	
retrograde	13456 Jan 02 11:20	4° \mathbb{M} 00'15	minimum elong	13461 Nov 17 03:43	8° \mathbb{M} 35'23 1°06'01	
opposition	13456 Mar 12 09:39	0° \mathbb{M} 37'12 -1°07'03	max. Earth dist.	13461 Nov 17 10:24	8° \mathbb{M} 37'26 10.59627 AU	
min. Earth dist.	13456 Mar 11 21:22	0° \mathbb{M} 39'33 8.68558 AU	morning rise	13461 Dec 04 17:46	10° \mathbb{M} 43'46	
	13456 Mar 20 13:12	30° \mathbb{R} \mathbb{M}	retrograde	13462 Mar 19 04:38	18° \mathbb{M} 22'00	
direct	13456 May 20 04:20	27° \mathbb{M} 16'53	opposition	13462 May 27 04:45	14° \mathbb{M} 57'17 1°31'33	
	13456 Jul 16 20:32	0° \mathbb{M}	min. Earth dist.	13462 May 27 00:20	14° \mathbb{M} 58'09 8.58113 AU	
evening set	13456 Aug 29 00:16	4° \mathbb{M} 36'20	direct	13462 Aug 03 03:27	11° \mathbb{M} 34'50	
			evening set	13462 Nov 12 19:16	19° \mathbb{M} 03'01	
conjunction	13456 Sep 15 02:15	6° \mathbb{M} 40'40 -0°44'25	conjunction	13462 Nov 30 08:14	21° \mathbb{M} 11'24 1°22'01	
minimum elong	13456 Sep 15 02:16	6° \mathbb{M} 40'40 0°44'25	minimum elong	13462 Nov 30 08:12	21° \mathbb{M} 11'23 1°23'01	
max. Earth dist.	13456 Sep 15 16:50	6° \mathbb{M} 45'07 10.68506 AU	max. Earth dist.	13462 Nov 30 11:27	21° \mathbb{M} 12'23 10.56454 AU	
morning rise	13456 Oct 02 06:41	8° \mathbb{M} 45'44	morning rise	13462 Dec 17 23:21	23° \mathbb{M} 20'25	
retrograde	13457 Jan 14 07:37	16° \mathbb{M} 17'37		13463 Feb 25 21:06	0° \mathbb{M}	
opposition	13457 Mar 25 05:33	12° \mathbb{M} 54'16 -0°41'16	retrograde	13463 Apr 01 07:25	1° \mathbb{M} 00'07	
min. Earth dist.	13457 Mar 24 17:27	12° \mathbb{M} 56'36 8.68353 AU		13463 May 05 23:13	30° \mathbb{R} \mathbb{M}	
direct	13457 Jun 01 18:54	9° \mathbb{M} 34'00	opposition	13463 Jun 09 01:40	27° \mathbb{M} 35'16 1°50'13	
evening set	13457 Sep 10 12:46	16° \mathbb{M} 52'59	min. Earth dist.	13463 Jun 09 00:01	27° \mathbb{M} 35'35 8.54915 AU	
conjunction	13457 Sep 27 16:44	18° \mathbb{M} 57'50 -0°22'38	direct	13463 Aug 16 00:05	24° \mathbb{M} 12'02	
minimum elong	13457 Sep 27 16:45	18° \mathbb{M} 57'50 0°22'24		13463 Nov 11 08:47	0° \mathbb{M}	
max. Earth dist.	13457 Sep 28 06:21	19° \mathbb{M} 01'58 10.68001 AU	evening set	13463 Nov 26 02:00	1° \mathbb{M} 43'46	
morning rise	13457 Oct 14 23:36	21° \mathbb{M} 03'29				
retrograde	13458 Jan 27 04:21	28° \mathbb{M} 36'12	conjunction	13463 Dec 13 16:10	3° \mathbb{M} 52'53 1°35'05	
opposition	13458 Apr 07 00:35	25° \mathbb{M} 12'34 -0°13'34	minimum elong	13463 Dec 13 16:08	3° \mathbb{M} 52'52 1°36'07	
min. Earth dist.	13458 Apr 06 13:44	25° \mathbb{M} 14'40 8.67515 AU	max. Earth dist.	13463 Dec 13 16:17	3° \mathbb{M} 52'55 10.53228 AU	
direct	13458 Jun 14 10:30	21° \mathbb{M} 52'09	morning rise	13463 Dec 31 08:03	6° \mathbb{M} 02'29	
evening set	13458 Sep 23 03:14	29° \mathbb{M} 11'26	retrograde	13464 Apr 13 10:57	13° \mathbb{M} 43'25	
	13458 Sep 29 20:44	0° \mathbb{M}	opposition	13464 Jun 20 23:38	10° \mathbb{M} 18'29 2°03'39	
asc. node	13458 Oct 05 21:26	0° \mathbb{M} 43'58	min. Earth dist.	13464 Jun 21 00:24	10° \mathbb{M} 18'20 8.51744 AU	
			direct	13464 Aug 27 23:34	6° \mathbb{M} 54'27	
conjunction	13458 Oct 10 09:17	1° \mathbb{M} 16'53 0°00'18	evening set	13464 Dec 08 11:56	14° \mathbb{M} 29'51	
minimum elong	13458 Oct 10 09:17	1° \mathbb{M} 16'53 0°00'45				
behind sun begin	13458 Oct 10 02:09	1° \mathbb{M} 14'44	conjunction	13464 Dec 26 03:11	16° \mathbb{M} 39'40 1°43'32	
behind sun end	13458 Oct 10 16:25	1° \mathbb{M} 19'02	minimum elong	13464 Dec 26 03:10	16° \mathbb{M} 39'40 1°44'34	

max. Earth dist.	13464 Dec 26 00:45	16° ♁ 38'55	10.50105 AU	conjunction	13471 Mar 17 01:22	4° ♁ 33'26	0°48'03
morning rise	13465 Jan 12 19:27	18° ♁ 49'48		minimum elong	13471 Mar 17 01:24	4° ♁ 33'26	0°48'05
retrograde	13465 Apr 26 16:52	26° ♁ 31'37		morning rise	13471 Apr 03 14:40	6° ♁ 44'29	
opposition	13465 Jul 03 23:02	23° ♁ 06'42	2°11'04	retrograde	13471 Jul 14 12:29	14° ♁ 23'41	
min. Earth dist.	13465 Jul 04 01:36	23° ♁ 06'11	8.48742 AU	opposition	13471 Sep 20 01:47	11° ♁ 00'29	0°45'48
direct	13465 Sep 10 00:22	19° ♁ 41'54		min. Earth dist.	13471 Sep 20 11:51	10° ♁ 58'30	8.40909 AU
evening set	13465 Dec 22 00:26	27° ♁ 20'52		direct	13471 Nov 28 01:59	7° ♁ 33'40	
				evening set	13472 Mar 12 00:51	15° ♁ 23'56	
conjunction	13466 Jan 08 16:33	29° ♁ 31'19	1°46'54				
minimum elong	13466 Jan 08 16:33	29° ♁ 31'19	1°47'50	conjunction	13472 Mar 29 15:16	17° ♁ 35'21	0°25'17
max. Earth dist.	13466 Jan 08 11:59	29° ♁ 29'54	10.47227 AU	minimum elong	13472 Mar 29 15:17	17° ♁ 35'21	0°25'05
	13466 Jan 12 13:06	0° ♁		max. Earth dist.	13472 Mar 29 02:29	17° ♁ 31'21	10.41323 AU
morning rise	13466 Jan 26 08:53	1° ♁ 41'54		morning rise	13472 Apr 16 02:44	19° ♁ 45'57	
retrograde	13466 May 09 23:36	9° ♁ 24'14		retrograde	13472 Jul 26 19:41	27° ♁ 23'54	
opposition	13466 Jul 16 23:57	5° ♁ 59'24	2°11'57	opposition	13472 Oct 02 10:13	24° ♁ 01'11	0°16'38
min. Earth dist.	13466 Jul 17 04:18	5° ♁ 58'32	8.46045 AU	min. Earth dist.	13472 Oct 02 19:57	23° ♁ 59'16	8.41933 AU
direct	13466 Sep 23 03:35	2° ♁ 33'55		direct	13472 Dec 10 14:00	20° ♁ 34'39	
evening set	13467 Jan 04 15:10	10° ♁ 16'11		evening set	13473 Mar 25 14:27	28° ♁ 24'30	
					13473 Apr 07 10:10	0° ♁	
conjunction	13467 Jan 22 07:52	12° ♁ 27'11	1°44'53				
minimum elong	13467 Jan 22 07:54	12° ♁ 27'11	1°45'42	conjunction	13473 Apr 12 02:53	0° ♁ 35'19	0°01'17
max. Earth dist.	13467 Jan 22 00:34	12° ♁ 24'55	10.44737 AU	minimum elong	13473 Apr 12 02:51	0° ♁ 35'18	0°00'52
morning rise	13467 Feb 09 00:09	14° ♁ 38'08		behind sun begin	13473 Apr 11 19:40	0° ♁ 33'05	
	13467 Feb 12 00:22	15° ♁		behind sun end	13473 Apr 12 10:02	0° ♁ 37'32	
retrograde	13467 May 23 07:02	22° ♁ 20'32		max. Earth dist.	13473 Apr 11 14:48	0° ♁ 31'32	10.42693 AU
opposition	13467 Jul 30 02:22	18° ♁ 55'54	2°06'11	morning rise	13473 Apr 29 12:12	2° ♁ 45'17	
min. Earth dist.	13467 Jul 30 09:00	18° ♁ 54'34	8.43787 AU	desc. node	13473 May 02 04:34	3° ♁ 04'57	
direct	13467 Oct 06 08:46	15° ♁ 29'47		retrograde	13473 Aug 09 01:03	10° ♁ 21'58	
evening set	13468 Jan 18 07:22	23° ♁ 14'56		opposition	13473 Oct 15 19:21	6° ♁ 59'44	-0°13'19
				min. Earth dist.	13473 Oct 16 04:44	6° ♁ 57'53	8.43618 AU
conjunction	13468 Feb 05 00:22	25° ♁ 26'23	1°37'31	direct	13473 Dec 24 03:12	3° ♁ 33'38	
minimum elong	13468 Feb 05 00:24	25° ♁ 26'24	1°38'11	evening set	13474 Apr 08 01:40	11° ♁ 22'21	
max. Earth dist.	13468 Feb 04 14:09	25° ♁ 23'12	10.42750 AU				
morning rise	13468 Feb 22 16:28	27° ♁ 37'36		conjunction	13474 Apr 25 11:35	13° ♁ 32'20	-0°22'46
	13468 Mar 13 20:47	0° ♁		minimum elong	13474 Apr 25 11:34	13° ♁ 32'20	0°23'24
retrograde	13468 Jun 04 15:05	5° ♁ 19'38		max. Earth dist.	13474 Apr 25 00:22	13° ♁ 28'50	10.44675 AU
opposition	13468 Aug 11 06:21	1° ♁ 55'16	1°53'56		13474 May 07 04:10	15° ♁	
min. Earth dist.	13468 Aug 11 15:10	1° ♁ 53'31	8.42069 AU	morning rise	13474 May 12 18:40	15° ♁ 41'31	
	13468 Sep 05 20:25	30° ♁		retrograde	13474 Aug 22 05:38	23° ♁ 17'01	
direct	13468 Oct 18 16:15	28° ♁ 28'40		opposition	13474 Oct 29 04:37	19° ♁ 55'11	-0°42'27
	13468 Nov 30 00:23	0° ♁		min. Earth dist.	13474 Oct 29 12:51	19° ♁ 53'34	8.45876 AU
evening set	13469 Jan 31 00:19	6° ♁ 16'08		direct	13475 Jan 06 16:11	16° ♁ 29'38	
				evening set	13475 Apr 21 10:20	24° ♁ 16'37	
conjunction	13469 Feb 17 17:15	8° ♁ 27'53	1°25'08				
minimum elong	13469 Feb 17 17:18	8° ♁ 27'53	1°25'37	conjunction	13475 May 08 17:33	26° ♁ 25'38	-0°45'30
max. Earth dist.	13469 Feb 17 04:39	8° ♁ 23'56	10.41356 AU	minimum elong	13475 May 08 17:31	26° ♁ 25'38	0°46'18
morning rise	13469 Mar 07 08:49	10° ♁ 39'13		max. Earth dist.	13475 May 08 08:12	26° ♁ 22'43	10.47162 AU
retrograde	13469 Jun 17 21:44	18° ♁ 20'32		morning rise	13475 May 25 22:09	28° ♁ 33'53	
opposition	13469 Aug 24 11:39	14° ♁ 56'31	1°35'47		13475 Jun 06 20:44	0° ♁	
min. Earth dist.	13469 Aug 24 21:51	14° ♁ 54'29	8.40980 AU	retrograde	13475 Sep 04 09:26	6° ♁ 18'14	
direct	13469 Nov 01 02:50	11° ♁ 29'38		opposition	13475 Nov 11 13:35	2° ♁ 46'44	-1°09'18
evening set	13470 Feb 13 17:15	19° ♁ 18'45		min. Earth dist.	13475 Nov 11 19:44	2° ♁ 45'32	8.48590 AU
					13475 Dec 23 11:55	30° ♁	
conjunction	13470 Mar 03 09:50	21° ♁ 30'35	1°08'21	direct	13476 Jan 20 03:30	29° ♁ 21'49	
minimum elong	13470 Mar 03 09:52	21° ♁ 30'36	1°08'37		13476 Feb 16 12:53	0° ♁	
max. Earth dist.	13470 Mar 02 20:15	21° ♁ 26'20	10.40635 AU	evening set	13476 May 03 15:52	7° ♁ 10'630	
morning rise	13470 Mar 21 00:29	23° ♁ 41'53					
	13470 May 22 15:29	0° ♁		conjunction	13476 May 20 20:23	9° ♁ 14'28	-1°05'52
retrograde	13470 Jul 01 04:18	1° ♁ 22'14		minimum elong	13476 May 20 20:21	9° ♁ 14'27	1°06'48
	13470 Aug 10 10:39	30° ♁		max. Earth dist.	13476 May 20 14:01	9° ♁ 12'28	10.50033 AU
opposition	13470 Sep 06 18:10	27° ♁ 58'36	1°12'40	morning rise	13476 Jun 06 22:28	11° ♁ 21'43	
min. Earth dist.	13470 Sep 07 04:31	27° ♁ 56'32	8.40588 AU	retrograde	13476 Sep 16 11:38	18° ♁ 55'03	
direct	13470 Nov 14 14:49	24° ♁ 31'38		opposition	13476 Nov 23 22:10	15° ♁ 33'45	-1°32'31
	13471 Feb 07 09:46	0° ♁		min. Earth dist.	13476 Nov 24 01:32	15° ♁ 33'06	8.51623 AU
evening set	13471 Feb 27 09:33	2° ♁ 21'41		direct	13477 Feb 01 14:18	12° ♁ 10'932	
max. Earth dist.	13471 Mar 16 11:58	4° ♁ 29'14	10.40627 AU	evening set	13477 May 16 17:58	19° ♁ 51'26	

conjunction	13477 Jun 02 19:55	21° Π 58'18	-1°22'52			13483 Jun 17 00:45	0° Π
minimum elong	13477 Jun 02 19:53	21° Π 58'17	1°23'53	evening set		13483 Jul 30 18:47	4° Π 41'02
max. Earth dist.	13477 Jun 02 17:04	21° Π 57'24	10.53141 AU				
morning rise	13477 Jun 19 19:42	24° Π 04'34		conjunction		13483 Aug 16 16:32	6° Π 44'43 -1°27'26
	13477 Aug 16 22:30	0° Ξ		minimum elong		13483 Aug 16 16:34	6° Π 44'44 1°27'57
retrograde	13477 Sep 29 13:34	1° Ξ 37'01		max. Earth dist.		13483 Aug 17 02:59	6° Π 47'56 10.66657 AU
	13477 Nov 13 12:23	30° κ Π		morning rise		13483 Sep 02 15:43	8° Π 48'50
opposition	13477 Dec 07 05:51	28° Π 15'50	-1°51'03	retrograde		13483 Dec 15 02:20	16° Π 19'57
min. Earth dist.	13477 Dec 07 06:51	28° Π 15'38	8.54810 AU	opposition		13484 Feb 22 23:04	12° Π 57'21 -1°38'49
direct	13478 Feb 14 22:28	24° Π 52'18		min. Earth dist.		13484 Feb 22 13:41	12° Π 59'08 8.67022 AU
	13478 May 08 03:10	0° Ξ		direct		13484 May 01 23:57	9° Π 36'33
evening set	13478 May 29 16:50	2° Ξ 31'04		evening set		13484 Aug 11 05:34	16° Π 58'34
conjunction	13478 Jun 15 16:29	4° Ξ 36'54	-1°35'45	conjunction		13484 Aug 28 04:43	19° Π 02'29 -1°12'13
minimum elong	13478 Jun 15 16:28	4° Ξ 36'54	1°36'47	minimum elong		13484 Aug 28 04:46	19° Π 02'30 1°12'32
max. Earth dist.	13478 Jun 15 16:10	4° Ξ 36'48	10.56307 AU	max. Earth dist.		13484 Aug 28 15:47	19° Π 05'52 10.67105 AU
morning rise	13478 Jul 02 14:30	6° Ξ 42'18		morning rise		13484 Sep 14 06:01	21° Π 06'59
retrograde	13478 Oct 12 14:39	14° Ξ 13'54		retrograde		13484 Dec 26 22:42	28° Π 38'33
opposition	13478 Dec 20 12:11	10° Ξ 52'45	-2°04'05	opposition		13485 Mar 06 21:01	25° Π 15'26 -1°17'50
min. Earth dist.	13478 Dec 20 11:30	10° Ξ 52'53	8.57952 AU	min. Earth dist.		13485 Mar 06 11:15	25° Π 17'18 8.67160 AU
direct	13479 Feb 28 03:14	7° Ξ 29'51		direct		13485 May 14 17:14	21° Π 54'41
evening set	13479 Jun 11 12:30	15° Ξ 05'20		evening set		13485 Aug 23 16:33	29° Π 15'19
						13485 Aug 29 20:45	0° Ω
conjunction	13479 Jun 28 10:17	17° Ξ 10'18	-1°43'57	conjunction		13485 Sep 09 17:37	1° Ω 19'38 -0°53'41
minimum elong	13479 Jun 28 10:16	17° Ξ 10'17	1°44'58	minimum elong		13485 Sep 09 17:39	1° Ω 19'38 0°53'47
max. Earth dist.	13479 Jun 28 11:49	17° Ξ 10'46	10.59322 AU	max. Earth dist.		13485 Sep 10 05:38	1° Ω 23'18 10.66975 AU
morning rise	13479 Jul 15 07:14	19° Ξ 14'59		morning rise		13485 Sep 26 21:12	3° Ω 24'39
retrograde	13479 Oct 25 12:13	26° Ξ 45'58		retrograde		13486 Jan 08 18:13	10° Ω 56'54
opposition	13480 Jan 02 17:18	23° Ξ 24'43	-2°11'05	opposition		13486 Mar 19 17:47	7° Ω 33'17 -0°53'17
min. Earth dist.	13480 Jan 02 15:02	23° Ξ 25'09	8.60818 AU	min. Earth dist.		13486 Mar 19 07:19	7° Ω 35'17 8.66716 AU
direct	13480 Mar 12 07:26	20° Ξ 02'25		direct		13486 May 27 10:33	4° Ω 12'28
evening set	13480 Jun 23 04:59	27° Ξ 34'40		evening set		13486 Sep 05 04:32	11° Ω 32'25
conjunction	13480 Jul 10 01:40	29° Ξ 38'56	-1°47'11	conjunction		13486 Sep 22 07:44	13° Ω 37'15 -0°32'41
minimum elong	13480 Jul 10 01:40	29° Ξ 38'56	1°48'08	minimum elong		13486 Sep 22 07:45	13° Ω 37'16 0°32'33
max. Earth dist.	13480 Jul 10 05:09	29° Ξ 40'00	10.61958 AU	max. Earth dist.		13486 Sep 22 20:45	13° Ω 41'14 10.66259 AU
	13480 Jul 12 21:49	0° Ω		morning rise		13486 Oct 09 13:34	15° Ω 42'52
morning rise	13480 Jul 26 22:12	1° Ω 43'07		retrograde		13487 Jan 21 16:10	23° Ω 16'04
retrograde	13480 Nov 06 09:51	9° Ω 13'51		opposition		13487 Apr 01 13:41	19° Ω 51'58 -0°26'16
opposition	13481 Jan 14 20:56	5° Ω 52'24	-2°11'52	min. Earth dist.		13487 Apr 01 02:41	19° Ω 54'05 8.65701 AU
min. Earth dist.	13481 Jan 14 16:33	5° Ω 53'14	8.63207 AU	direct		13487 Jun 09 02:34	16° Ω 31'00
direct	13481 Mar 25 09:47	2° Ω 30'38		evening set		13487 Sep 17 18:22	23° Ω 50'59
evening set	13481 Jul 05 19:08	9° Ω 59'51					
conjunction	13481 Jul 22 15:34	12° Ω 03'42	-1°45'22	conjunction		13487 Oct 04 23:43	25° Ω 56'27 -0°10'10
minimum elong	13481 Jul 22 15:35	12° Ω 03'43	1°46'12	minimum elong		13487 Oct 04 23:44	25° Ω 56'27 0°09'49
max. Earth dist.	13481 Jul 22 21:53	12° Ω 05'39	10.64077 AU	behind sun begin		13487 Oct 04 17:54	25° Ω 54'42
morning rise	13481 Aug 08 12:19	14° Ω 07'39		behind sun end		13487 Oct 05 05:33	25° Ω 58'13
	13481 Aug 15 19:51	15° Ω		max. Earth dist.		13487 Oct 05 12:53	26° Ω 00'28 10.64984 AU
retrograde	13481 Nov 19 08:15	21° Ω 38'20		morning rise		13487 Oct 22 07:48	28° Ω 02'45
opposition	13482 Jan 27 22:56	18° Ω 16'35	-2°06'30			13487 Nov 08 03:57	0° Π
min. Earth dist.	13482 Jan 27 16:09	18° Ω 17'53	8.65045 AU	retrograde		13488 Feb 03 15:11	5° Π 37'06
	13482 Mar 28 17:47	15° κ Ω		asc. node		13488 Mar 17 23:15	4° Π 07'53
direct	13482 Apr 07 08:32	14° Ω 55'18		opposition		13488 Apr 13 09:05	2° Π 12'34 0°02'03
	13482 Apr 16 21:46	15° Ω		min. Earth dist.		13488 Apr 12 22:30	2° Π 14'37 8.64159 AU
evening set	13482 Jul 18 07:34	22° Ω 21'44				13488 May 14 13:29	30° κ Ω
				direct		13488 Jun 20 16:46	28° Ω 51'19
conjunction	13482 Aug 04 04:26	24° Ω 25'24	-1°38'40			13488 Jul 27 05:19	0° Π
minimum elong	13482 Aug 04 04:28	24° Ω 25'25	1°39'21	evening set		13488 Sep 29 10:39	6° Π 12'10
max. Earth dist.	13482 Aug 04 13:17	24° Ω 28'08	10.65647 AU				
morning rise	13482 Aug 21 02:03	26° Ω 29'20		conjunction		13488 Oct 16 18:00	8° Π 18'19 0°13'00
	13482 Sep 21 08:28	0° Π		minimum elong		13488 Oct 16 18:00	8° Π 18'18 0°13'34
retrograde	13482 Dec 02 05:26	4° Π 00'08		behind sun begin		13488 Oct 16 14:04	8° Π 17'07
opposition	13483 Feb 09 23:39	0° Π 38'00	-1°55'18	behind sun end		13488 Oct 16 21:56	8° Π 19'30
min. Earth dist.	13483 Feb 09 15:08	0° Π 39'38	8.66317 AU	max. Earth dist.		13488 Oct 17 05:36	8° Π 21'51 10.63199 AU
	13483 Feb 18 08:08	30° κ Ω		morning rise		13488 Nov 03 04:18	10° Π 25'20
direct	13483 Apr 20 04:45	27° Ω 17'02				13488 Dec 15 17:08	15° Π

retrograde	13489 Feb 15 13:57	18° \mathbb{M} 00'59		retrograde	13495 May 04 13:26	4° \approx 01'16	
	13489 Apr 21 01:32	15° $\mathbb{R}\mathbb{M}$		opposition	13495 Jul 11 15:38	0° \approx 36'29	2°12'15
opposition	13489 Apr 26 04:23	14° \mathbb{M} 36'08	0°30'22	min. Earth dist.	13495 Jul 11 18:58	0° \approx 35'49	8.46438 AU
min. Earth dist.	13489 Apr 25 19:27	14° \mathbb{M} 37'52	8.62145 AU		13495 Jul 19 07:56	30° $\mathbb{R}\mathbb{Z}$	
direct	13489 Jul 03 08:31	11° \mathbb{M} 14'28		direct	13495 Sep 17 16:47	27° \mathbb{Z} 11'26	
	13489 Sep 09 18:39	15° \mathbb{M}			13495 Nov 15 00:12	0° \approx	
evening set	13489 Oct 12 05:58	18° \mathbb{M} 36'58		evening set	13495 Dec 30 00:37	4° \approx 53'05	
conjunction	13489 Oct 29 15:10	20° \mathbb{M} 43'51	0°35'32	conjunction	13496 Jan 16 17:02	7° \approx 03'59	1°46'17
minimum elong	13489 Oct 29 15:09	20° \mathbb{M} 43'50	0°36'17	minimum elong	13496 Jan 16 17:02	7° \approx 03'59	1°47'10
max. Earth dist.	13489 Oct 30 00:40	20° \mathbb{M} 46'45	10.60971 AU	max. Earth dist.	13496 Jan 16 11:11	7° \approx 02'10	10.45275 AU
morning rise	13489 Nov 16 03:22	22° \mathbb{M} 51'34		morning rise	13496 Feb 03 09:36	9° \approx 14'57	
	13490 Feb 04 19:52	0° \mathbb{Z}			13496 Mar 29 16:14	15° \approx	
retrograde	13490 Feb 28 13:56	0° \mathbb{Z} 28'41		retrograde	13496 May 16 20:24	16° \approx 58'05	
	13490 Mar 24 10:31	30° $\mathbb{R}\mathbb{M}$			13496 Jul 05 01:46	15° $\mathbb{R}\mathbb{M}$	
opposition	13490 May 08 23:48	27° \mathbb{M} 03'35	0°57'24	opposition	13496 Jul 23 18:06	13° \approx 33'37	2°09'19
min. Earth dist.	13490 May 08 16:41	27° \mathbb{M} 04'58	8.59747 AU	min. Earth dist.	13496 Jul 23 23:18	13° \approx 32'35	8.44455 AU
direct	13490 Jul 16 01:47	23° \mathbb{M} 41'24		direct	13496 Sep 29 23:01	10° \approx 08'05	
	13490 Oct 15 20:22	0° \mathbb{Z}			13496 Dec 17 22:25	15° \approx	
evening set	13490 Oct 25 04:32	1° \mathbb{Z} 06'15		evening set	13497 Jan 11 17:09	17° \approx 52'40	
conjunction	13490 Nov 11 15:31	3° \mathbb{Z} 13'52	0°56'32	conjunction	13497 Jan 29 10:06	20° \approx 04'01	1°41'11
minimum elong	13490 Nov 11 15:29	3° \mathbb{Z} 13'51	0°57'25	minimum elong	13497 Jan 29 10:08	20° \approx 04'02	1°41'56
max. Earth dist.	13490 Nov 11 23:12	3° \mathbb{Z} 16'13	10.58405 AU	max. Earth dist.	13497 Jan 29 02:15	20° \approx 01'35	10.43523 AU
morning rise	13490 Nov 29 05:12	5° \mathbb{Z} 22'16		morning rise	13497 Feb 16 02:24	22° \approx 15'14	
retrograde	13491 Mar 13 15:39	13° \mathbb{Z} 00'55		retrograde	13497 May 30 05:29	29° \approx 58'01	
opposition	13491 May 21 19:52	9° \mathbb{Z} 35'39	1°21'53	opposition	13497 Aug 05 22:09	26° \approx 33'54	1°59'47
min. Earth dist.	13491 May 21 14:12	9° \mathbb{Z} 36'45	8.57081 AU	min. Earth dist.	13497 Aug 06 04:47	26° \approx 32'34	8.42932 AU
direct	13491 Jul 28 19:50	6° \mathbb{Z} 12'55		direct	13497 Oct 13 05:56	23° \approx 07'57	
evening set	13491 Nov 07 06:35	13° \mathbb{Z} 40'40			13498 Jan 17 20:47	0° \mathbb{H}	
				evening set	13498 Jan 25 10:28	0° \mathbb{H} 54'49	
conjunction	13491 Nov 24 19:12	15° \mathbb{Z} 49'01	1°14'56	conjunction	13498 Feb 12 03:37	3° \mathbb{H} 06'30	1°30'53
minimum elong	13491 Nov 24 19:10	15° \mathbb{Z} 49'00	1°15'55	minimum elong	13498 Feb 12 03:39	3° \mathbb{H} 06'31	1°31'27
max. Earth dist.	13491 Nov 25 01:22	15° \mathbb{Z} 50'55	10.55628 AU	max. Earth dist.	13498 Feb 11 17:58	3° \mathbb{H} 03'29	10.42260 AU
morning rise	13491 Dec 12 09:57	17° \mathbb{Z} 58'03		morning rise	13498 Mar 01 19:22	5° \mathbb{H} 17'50	
retrograde	13492 Mar 25 18:46	25° \mathbb{Z} 38'12		retrograde	13498 Jun 12 14:04	12° \mathbb{H} 59'51	
opposition	13492 Jun 02 16:48	22° \mathbb{Z} 12'51	1°42'35	opposition	13498 Aug 19 03:33	9° \mathbb{H} 36'05	1°44'03
min. Earth dist.	13492 Jun 02 12:32	22° \mathbb{Z} 13'42	8.54273 AU	min. Earth dist.	13498 Aug 19 11:42	9° \mathbb{H} 34'27	8.41891 AU
direct	13492 Aug 09 16:01	18° \mathbb{Z} 49'33		direct	13498 Oct 26 15:25	6° \mathbb{H} 09'48	
evening set	13492 Nov 19 12:27	26° \mathbb{Z} 20'39		evening set	13499 Feb 08 04:11	13° \mathbb{H} 58'25	
conjunction	13492 Dec 07 02:21	28° \mathbb{Z} 29'43	1°29'49	conjunction	13499 Feb 25 21:06	16° \mathbb{H} 10'14	1°15'54
minimum elong	13492 Dec 07 02:19	28° \mathbb{Z} 29'43	1°30'50	minimum elong	13499 Feb 25 21:09	16° \mathbb{H} 10'15	1°16'15
max. Earth dist.	13492 Dec 07 05:59	28° \mathbb{Z} 30'51	10.52775 AU	max. Earth dist.	13499 Feb 25 09:17	16° \mathbb{H} 06'32	10.41473 AU
	13492 Dec 19 08:11	0° \mathbb{Z}		morning rise	13499 Mar 15 12:05	18° \mathbb{H} 21'34	
morning rise	13492 Dec 24 17:52	0° \mathbb{Z} 39'20		retrograde	13499 Jun 25 21:56	26° \mathbb{H} 02'32	
retrograde	13493 Apr 08 00:14	8° \mathbb{Z} 20'45		opposition	13499 Sep 01 10:01	22° \mathbb{H} 39'10	1°22'55
opposition	13493 Jun 15 14:50	4° \mathbb{Z} 55'29	1°58'25	min. Earth dist.	13499 Sep 01 20:12	22° \mathbb{H} 37'09	8.41297 AU
min. Earth dist.	13493 Jun 15 12:49	4° \mathbb{Z} 55'53	8.51464 AU	direct	13499 Nov 09 02:31	19° \mathbb{H} 12'41	
direct	13493 Aug 22 13:14	1° \mathbb{Z} 31'35		evening set	13500 Feb 21 21:36	27° \mathbb{H} 02'33	
evening set	13493 Dec 02 21:44	9° \mathbb{Z} 06'16					
conjunction	13493 Dec 20 12:36	11° \mathbb{Z} 16'01	1°40'22	conjunction	13500 Mar 11 13:47	29° \mathbb{H} 14'21	0°56'57
minimum elong	13493 Dec 20 12:35	11° \mathbb{Z} 16'01	1°41'24	minimum elong	13500 Mar 11 13:49	29° \mathbb{H} 14'22	0°57'05
max. Earth dist.	13493 Dec 20 12:57	11° \mathbb{Z} 16'08	10.50005 AU	max. Earth dist.	13500 Mar 10 23:38	29° \mathbb{H} 09'56	10.41121 AU
morning rise	13494 Jan 07 04:41	13° \mathbb{Z} 26'10			13500 Mar 17 15:42	0° \mathbb{Y}	
retrograde	13494 Apr 21 07:17	21° \mathbb{Z} 08'34		morning rise	13500 Mar 29 03:41	1° \mathbb{Y} 25'32	
opposition	13494 Jun 28 14:29	17° \mathbb{Z} 43'31	2°08'31	retrograde	13500 Jul 09 05:57	9° \mathbb{Y} 05'27	
min. Earth dist.	13494 Jun 28 15:11	17° \mathbb{Z} 43'22	8.48808 AU	opposition	13500 Sep 14 17:47	5° \mathbb{Y} 42'31	0°57'28
direct	13494 Sep 04 12:48	14° \mathbb{Z} 19'01		min. Earth dist.	13500 Sep 15 05:17	5° \mathbb{Y} 40'14	8.41155 AU
evening set	13494 Dec 16 09:52	21° \mathbb{Z} 57'17		direct	13500 Nov 22 14:38	2° \mathbb{Y} 16'00	
				evening set	13501 Mar 07 14:01	10° \mathbb{Y} 06'32	
conjunction	13495 Jan 03 01:33	24° \mathbb{Z} 07'38	1°45'59	conjunction	13501 Mar 25 04:57	12° \mathbb{Y} 18'08	0°35'05
minimum elong	13495 Jan 03 01:33	24° \mathbb{Z} 07'38	1°46'57	minimum elong	13501 Mar 25 04:58	12° \mathbb{Y} 18'09	0°34'59
max. Earth dist.	13495 Jan 02 22:28	24° \mathbb{Z} 06'41	10.47466 AU	max. Earth dist.	13501 Mar 24 14:00	12° \mathbb{Y} 13'27	10.41261 AU
morning rise	13495 Jan 20 18:02	26° \mathbb{Z} 18'15		morning rise	13501 Apr 11 17:22	14° \mathbb{Y} 29'00	
	13495 Feb 22 10:10	0° \approx					

retrograde	13501 Jul 22 12:52	22°♊07'51		direct	13507 Feb 10 18:03	19°♊49'57	
opposition	13501 Sep 28 02:33	18°♊45'18 0°29'04		evening set	13507 May 25 16:34	27°♊30'44	
min. Earth dist.	13501 Sep 28 14:00	18°♊43'03 8.41564 AU					
direct	13501 Dec 06 04:28	15°♊18'55		conjunction	13507 Jun 11 17:08	29°♊37'11 -1°31'02	
evening set	13502 Mar 21 05:01	23°♊09'26		minimum elong	13507 Jun 11 17:07	29°♊37'11 1°32'05	
				max. Earth dist.	13507 Jun 11 14:19	29°♊36'19 10.53288 AU	
conjunction	13502 Apr 07 18:17	25°♊20'36 0°11'26			13507 Jun 14 18:19	0°♊	
minimum elong	13502 Apr 07 18:18	25°♊20'36 0°11'06		morning rise	13507 Jun 28 16:05	1°♊43'09	
behind sun begin	13502 Apr 07 12:58	25°♊18'56		retrograde	13507 Oct 08 12:09	9°♊15'40	
behind sun end	13502 Apr 07 23:39	25°♊22'15		opposition	13507 Dec 16 08:28	5°♊53'58 -1°59'32	
max. Earth dist.	13502 Apr 07 04:06	25°♊16'09 10.41991 AU		min. Earth dist.	13507 Dec 16 08:49	5°♊53'54 8.54898 AU	
morning rise	13502 Apr 25 04:47	27°♊30'57		direct	13508 Feb 24 01:22	2°♊30'13	
	13502 May 16 05:39	0°♊		evening set	13508 Jun 06 13:39	10°♊07'45	
retrograde	13502 Aug 04 19:02	5°♊08'40					
desc. node	13502 Oct 01 19:18	2°♊31'47		conjunction	13508 Jun 23 12:19	12°♊13'16 -1°41'14	
opposition	13502 Oct 11 11:55	1°♊46'26 -0°00'47		minimum elong	13508 Jun 23 12:18	12°♊13'15 1°42'16	
min. Earth dist.	13502 Oct 11 22:11	1°♊44'25 8.42593 AU		max. Earth dist.	13508 Jun 23 13:21	12°♊13'35 10.56315 AU	
	13502 Nov 04 05:27	30°♊		morning rise	13508 Jul 10 09:43	14°♊18'26	
direct	13502 Dec 19 18:51	28°♊20'18		retrograde	13508 Oct 20 11:28	21°♊50'16	
	13503 Feb 02 09:42	0°♊		opposition	13508 Dec 28 14:19	18°♊28'28 -2°09'05	
evening set	13503 Apr 03 18:03	6°♊10'05		min. Earth dist.	13508 Dec 28 11:37	18°♊28'59 8.57925 AU	
				direct	13509 Mar 08 06:06	15°♊05'22	
conjunction	13503 Apr 21 05:15	8°♊20'35 -0°12'50		evening set	13509 Jun 19 07:27	22°♊39'31	
minimum elong	13503 Apr 21 05:14	8°♊20'34 0°13'23					
behind sun begin	13503 Apr 21 01:09	8°♊19'18		conjunction	13509 Jul 06 04:47	24°♊44'15 -1°46'32	
behind sun end	13503 Apr 21 09:18	8°♊21'50		minimum elong	13509 Jul 06 04:47	24°♊44'15 1°47'31	
max. Earth dist.	13503 Apr 20 17:00	8°♊16'45 10.43330 AU		max. Earth dist.	13509 Jul 06 09:10	24°♊45'36 10.59268 AU	
morning rise	13503 May 08 13:23	10°♊30'13		morning rise	13509 Jul 23 01:23	26°♊48'47	
	13503 Jun 18 00:04	15°♊			13509 Aug 19 22:29	0°♊	
retrograde	13503 Aug 18 01:39	18°♊06'47		retrograde	13509 Nov 02 10:40	4°♊20'04	
	13503 Oct 21 16:03	15°♊		opposition	13510 Jan 10 18:34	0°♊58'09 -2°12'26	
opposition	13503 Oct 24 21:45	14°♊44'48 -0°30'31		min. Earth dist.	13510 Jan 10 13:33	0°♊59'07 8.60790 AU	
min. Earth dist.	13503 Oct 25 06:28	14°♊43'06 8.44222 AU			13510 Jan 23 14:47	30°♊	
direct	13504 Jan 02 07:54	11°♊19'01		direct	13510 Mar 21 08:22	27°♊35'41	
	13504 Mar 10 14:14	15°♊			13510 May 14 16:22	0°♊	
evening set	13504 Apr 16 04:32	19°♊07'21		evening set	13510 Jul 01 22:38	5°♊06'31	
conjunction	13504 May 03 13:09	21°♊16'58 -0°36'16		conjunction	13510 Jul 18 19:10	7°♊10'39 -1°46'47	
minimum elong	13504 May 03 13:07	21°♊16'58 0°37'01		minimum elong	13510 Jul 18 19:11	7°♊10'39 1°47'40	
max. Earth dist.	13504 May 03 03:03	21°♊13'49 10.45227 AU		max. Earth dist.	13510 Jul 19 01:46	7°♊12'41 10.61995 AU	
morning rise	13504 May 20 18:43	23°♊25'45		morning rise	13510 Aug 04 15:45	9°♊14'46	
	13504 Jul 27 03:49	0°♊			13510 Sep 30 03:39	15°♊	
retrograde	13504 Aug 30 07:19	1°♊01'10		retrograde	13510 Nov 15 08:19	16°♊45'37	
	13504 Oct 04 00:05	30°♊			13511 Jan 01 22:28	15°♊	
opposition	13504 Nov 06 07:34	27°♊39'23 -0°58'33		opposition	13511 Jan 23 21:07	13°♊23'33 -2°09'33	
min. Earth dist.	13504 Nov 06 14:54	27°♊37'57 8.46384 AU		min. Earth dist.	13511 Jan 23 14:36	13°♊24'48 8.63354 AU	
direct	13505 Jan 14 19:26	24°♊14'01		direct	13511 Apr 03 07:18	10°♊01'40	
	13505 Apr 12 14:57	0°♊			13511 Jun 22 22:51	15°♊	
evening set	13505 Apr 29 11:59	2°♊00'18		evening set	13511 Jul 14 11:31	17°♊29'21	
conjunction	13505 May 16 17:46	4°♊08'54 -0°57'48		conjunction	13511 Jul 31 07:59	19°♊33'05 -1°42'04	
minimum elong	13505 May 16 17:45	4°♊08'53 0°58'41		minimum elong	13511 Jul 31 08:01	19°♊33'06 1°42'48	
max. Earth dist.	13505 May 16 09:40	4°♊06'22 10.47601 AU		max. Earth dist.	13511 Jul 31 16:24	19°♊35'41 10.64376 AU	
morning rise	13505 Jun 02 20:54	6°♊16'45		morning rise	13511 Aug 17 05:18	21°♊37'03	
retrograde	13505 Sep 12 09:39	13°♊51'04		retrograde	13511 Nov 28 03:44	29°♊07'39	
opposition	13505 Nov 19 16:53	10°♊29'24 -1°23'29		opposition	13512 Feb 05 22:10	25°♊45'22 -2°00'40	
min. Earth dist.	13505 Nov 19 22:35	10°♊28'17 8.48980 AU		min. Earth dist.	13512 Feb 05 13:48	25°♊46'58 8.65505 AU	
direct	13506 Jan 28 07:39	7°♊04'29		direct	13512 Apr 15 05:00	22°♊24'01	
evening set	13506 May 12 16:00	14°♊48'13		evening set	13512 Jul 25 22:34	29°♊48'49	
					13512 Jul 27 11:44	0°♊	
conjunction	13506 May 29 19:01	16°♊55'44 -1°16'20					
minimum elong	13506 May 29 18:59	16°♊55'43 1°17'20		conjunction	13512 Aug 11 19:48	1°♊52'25 -1°32'39	
max. Earth dist.	13506 May 29 13:08	16°♊53'54 10.50337 AU		minimum elong	13512 Aug 11 19:50	1°♊52'25 1°33'13	
morning rise	13506 Jun 15 19:58	19°♊02'37		max. Earth dist.	13512 Aug 12 06:38	1°♊55'44 10.66301 AU	
retrograde	13506 Sep 25 11:13	26°♊35'59		morning rise	13512 Aug 28 18:22	3°♊56'23	
opposition	13506 Dec 03 01:18	23°♊14'19 -1°44'08		retrograde	13512 Dec 10 00:00	11°♊26'58	
min. Earth dist.	13506 Dec 03 04:47	23°♊13'39 8.51868 AU		opposition	13513 Feb 17 21:31	8°♊04'25 -1°46'16	

min. Earth dist.	13513 Feb 17 11:10	8° \overline{m} 06'24	8.67148 AU	morning rise	13518 Nov 11 21:00	17° \overline{m} 44'34	
direct	13513 Apr 28 01:50	4° \overline{m} 43'30		retrograde	13519 Feb 24 06:39	25° \overline{m} 19'24	
evening set	13513 Aug 07 08:53	12° \overline{m} 05'50		opposition	13519 May 04 19:03	21° \overline{m} 55'07	0°45'53
				min. Earth dist.	13519 May 04 10:09	21° \overline{m} 56'51	8.64280 AU
conjunction	13513 Aug 24 07:28	14° \overline{m} 09'32	-1°19'00	direct	13519 Jul 11 22:55	18° \overline{m} 33'58	
minimum elong	13513 Aug 24 07:30	14° \overline{m} 09'33	1°19'23	evening set	13519 Oct 20 21:48	25° \overline{m} 56'01	
max. Earth dist.	13513 Aug 24 20:36	14° \overline{m} 13'34	10.67685 AU				
morning rise	13513 Sep 10 07:42	16° \overline{m} 13'43		conjunction	13519 Nov 07 07:52	28° \overline{m} 02'49	0°47'38
retrograde	13513 Dec 22 21:00	23° \overline{m} 44'26		minimum elong	13519 Nov 07 07:50	28° \overline{m} 02'49	0°48'28
opposition	13514 Mar 02 19:13	20° \overline{m} 21'36	-1°27'03	max. Earth dist.	13519 Nov 07 17:04	28° \overline{m} 05'38	10.62995 AU
min. Earth dist.	13514 Mar 02 07:21	20° \overline{m} 23'52	8.68214 AU		13519 Nov 23 09:41	0° \overline{m}	
direct	13514 May 10 18:19	17° \overline{m} 01'01		morning rise	13519 Nov 24 20:33	0° \overline{m} 10'26	
evening set	13514 Aug 19 19:10	24° \overline{m} 21'29		retrograde	13520 Mar 08 07:41	7° \overline{m} 46'43	
				opposition	13520 May 16 13:43	4° \overline{m} 22'15	1°11'30
conjunction	13514 Sep 05 19:24	26° \overline{m} 25'25	-1°01'46	min. Earth dist.	13520 May 16 07:16	4° \overline{m} 23'31	8.61636 AU
minimum elong	13514 Sep 05 19:26	26° \overline{m} 25'26	1°01'58	direct	13520 Jul 23 13:58	1° \overline{m} 00'30	
max. Earth dist.	13514 Sep 06 09:41	26° \overline{m} 29'47	10.68473 AU	evening set	13520 Nov 01 21:24	8° \overline{m} 25'17	
morning rise	13514 Sep 22 21:44	28° \overline{m} 29'59					
	13514 Oct 05 17:28	0° \overline{m}		conjunction	13520 Nov 19 09:00	10° \overline{m} 32'50	1°07'12
retrograde	13515 Jan 04 17:09	6° \overline{m} 01'04		minimum elong	13520 Nov 19 08:57	10° \overline{m} 32'50	1°08'09
opposition	13515 Mar 15 15:54	2° \overline{m} 37'57	-1°03'55	max. Earth dist.	13520 Nov 19 14:39	10° \overline{m} 34'34	10.60101 AU
min. Earth dist.	13515 Mar 15 03:44	2° \overline{m} 40'17	8.68673 AU	morning rise	13520 Dec 06 23:07	12° \overline{m} 41'08	
	13515 Apr 24 08:07	30° \overline{m}		retrograde	13521 Mar 21 08:27	20° \overline{m} 19'00	
direct	13515 May 23 09:46	29° \overline{m} 17'35		opposition	13521 May 29 09:16	16° \overline{m} 54'22	1°33'53
	13515 Jun 21 02:47	0° \overline{m}		min. Earth dist.	13521 May 29 05:42	16° \overline{m} 55'04	8.58582 AU
evening set	13515 Sep 01 06:01	6° \overline{m} 36'49		direct	13521 Aug 05 08:49	13° \overline{m} 31'55	
				evening set	13521 Nov 15 00:30	20° \overline{m} 59'59	
conjunction	13515 Sep 18 08:04	8° \overline{m} 41'08	-0°41'45				
minimum elong	13515 Sep 18 08:06	8° \overline{m} 41'09	0°41'42	conjunction	13521 Dec 02 13:27	23° \overline{m} 08'18	1°23'41
max. Earth dist.	13515 Sep 18 22:09	8° \overline{m} 45'26	10.68648 AU	minimum elong	13521 Dec 02 13:25	23° \overline{m} 08'17	1°24'42
morning rise	13515 Oct 05 12:48	10° \overline{m} 46'13		max. Earth dist.	13521 Dec 02 16:01	23° \overline{m} 09'05	10.56901 AU
retrograde	13516 Jan 17 13:23	18° \overline{m} 17'54		morning rise	13521 Dec 20 04:34	25° \overline{m} 17'14	
opposition	13516 Mar 27 11:36	14° \overline{m} 54'30	-0°37'52		13522 Feb 01 21:39	0° \overline{m}	
min. Earth dist.	13516 Mar 26 23:57	14° \overline{m} 56'45	8.68518 AU	retrograde	13522 Apr 03 11:00	2° \overline{m} 56'37	
direct	13516 Jun 04 01:24	11° \overline{m} 34'10			13522 Jun 05 06:29	30° \overline{m}	
evening set	13516 Sep 12 18:22	18° \overline{m} 52'56		opposition	13522 Jun 11 05:51	29° \overline{m} 31'52	1°51'56
				min. Earth dist.	13522 Jun 11 04:34	29° \overline{m} 32'07	8.55336 AU
conjunction	13516 Sep 29 22:29	20° \overline{m} 57'46	-0°19'48	direct	13522 Aug 18 05:27	26° \overline{m} 08'40	
minimum elong	13516 Sep 29 22:30	20° \overline{m} 57'46	0°19'33		13522 Oct 26 12:46	0° \overline{m}	
max. Earth dist.	13516 Sep 30 11:57	21° \overline{m} 01'52	10.68199 AU	evening set	13522 Nov 28 07:03	3° \overline{m} 40'19	
morning rise	13516 Oct 17 05:36	23° \overline{m} 03'26					
	13517 Jan 02 14:59	0° \overline{m}		conjunction	13522 Dec 15 21:17	5° \overline{m} 49'22	1°36'12
retrograde	13517 Jan 29 09:56	0° \overline{m} 35'55		minimum elong	13522 Dec 15 21:16	5° \overline{m} 49'22	1°37'15
	13517 Feb 25 10:02	30° \overline{m}		max. Earth dist.	13522 Dec 15 21:30	5° \overline{m} 49'26	10.53609 AU
opposition	13517 Apr 09 06:20	27° \overline{m} 12'15	-0°10'03	morning rise	13523 Jan 02 13:03	7° \overline{m} 58'55	
min. Earth dist.	13517 Apr 08 19:28	27° \overline{m} 14'20	8.67744 AU	retrograde	13523 Apr 16 15:50	15° \overline{m} 39'36	
direct	13517 Jun 16 16:09	23° \overline{m} 51'47		opposition	13523 Jun 24 03:41	12° \overline{m} 14'46	2°04'40
asc. node	13517 Aug 21 06:00	27° \overline{m} 19'24		min. Earth dist.	13523 Jun 24 04:15	12° \overline{m} 14'39	8.52088 AU
	13517 Sep 15 07:19	0° \overline{m}		direct	13523 Aug 31 03:34	8° \overline{m} 50'47	
evening set	13517 Sep 25 08:45	1° \overline{m} 10'52		evening set	13523 Dec 11 16:49	16° \overline{m} 26'09	
conjunction	13517 Oct 12 15:03	3° \overline{m} 16'17	0°03'11	conjunction	13523 Dec 29 08:09	18° \overline{m} 35'56	1°44'05
minimum elong	13517 Oct 12 15:03	3° \overline{m} 16'17	0°03'39	minimum elong	13523 Dec 29 08:08	18° \overline{m} 35'56	1°45'06
behind sun begin	13517 Oct 12 07:59	3° \overline{m} 14'09		max. Earth dist.	13523 Dec 29 05:56	18° \overline{m} 35'15	10.50401 AU
behind sun end	13517 Oct 12 22:07	3° \overline{m} 18'25		morning rise	13524 Jan 16 00:17	20° \overline{m} 46'01	
max. Earth dist.	13517 Oct 13 04:01	3° \overline{m} 20'14	10.67113 AU	retrograde	13524 Apr 28 21:18	28° \overline{m} 27'40	
morning rise	13517 Oct 30 00:16	5° \overline{m} 22'34		opposition	13524 Jul 06 03:01	25° \overline{m} 02'50	2°11'20
retrograde	13518 Feb 11 07:02	12° \overline{m} 56'07		min. Earth dist.	13524 Jul 06 05:34	25° \overline{m} 02'20	8.48993 AU
opposition	13518 Apr 22 00:42	9° \overline{m} 32'08	0°18'17	direct	13524 Sep 12 04:37	21° \overline{m} 38'06	
min. Earth dist.	13518 Apr 21 14:25	9° \overline{m} 34'07	8.66335 AU	evening set	13524 Dec 24 05:25	29° \overline{m} 17'07	
direct	13518 Jun 29 07:44	6° \overline{m} 11'24			13524 Dec 30 02:00	0° \overline{m}	
evening set	13518 Oct 08 01:40	13° \overline{m} 31'33					
	13518 Oct 20 06:33	15° \overline{m}		conjunction	13525 Jan 10 21:31	1° \overline{m} 27'33	1°46'49
conjunction	13518 Oct 25 09:58	15° \overline{m} 37'38	0°25'57	minimum elong	13525 Jan 10 21:31	1° \overline{m} 27'33	1°47'45
minimum elong	13518 Oct 25 09:57	15° \overline{m} 37'38	0°26'37	max. Earth dist.	13525 Jan 10 16:21	1° \overline{m} 25'57	10.47430 AU
max. Earth dist.	13518 Oct 25 21:51	15° \overline{m} 41'15	10.65374 AU	morning rise	13525 Jan 28 13:47	3° \overline{m} 38'06	
				retrograde	13525 May 12 04:16	11° \overline{m} 20'18	

opposition	13525 Jul 19 03:53	7° \approx 55'35	2°11'29	direct	13531 Dec 13 19:36	22° Υ 32'25
min. Earth dist.	13525 Jul 19 08:57	7° \approx 54'35	8.46199 AU	desc. node	13532 Mar 20 21:54	29° Υ 32'11
direct	13525 Sep 25 07:16	4° \approx 30'08			13532 Mar 24 18:01	0° \mathcal{B}
evening set	13526 Jan 06 20:06	12° \approx 12'31		evening set	13532 Mar 27 19:29	0° \mathcal{B} 22'26
conjunction	13526 Jan 24 12:43	14° \approx 23'31	1°44'12	conjunction	13532 Apr 14 07:41	2° \mathcal{B} 33'15 -0°01'35
minimum elong	13526 Jan 24 12:45	14° \approx 23'31	1°45'00	minimum elong	13532 Apr 14 07:40	2° \mathcal{B} 33'15 0°02'02
max. Earth dist.	13526 Jan 24 04:10	14° \approx 20'51	10.44846 AU	behind sun begin	13532 Apr 14 00:29	2° \mathcal{B} 31'01
	13526 Jan 29 10:13	15° \approx		behind sun end	13532 Apr 14 14:51	2° \mathcal{B} 35'28
morning rise	13526 Feb 11 05:02	16° \approx 34'27		max. Earth dist.	13532 Apr 13 18:46	2° \mathcal{B} 29'13 10.42382 AU
retrograde	13526 May 25 12:07	24° \approx 16'46		morning rise	13532 May 01 17:00	4° \mathcal{B} 43'14
opposition	13526 Aug 01 06:27	20° \approx 52'15	2°04'58	retrograde	13532 Aug 11 05:40	12° \mathcal{B} 20'06
min. Earth dist.	13526 Aug 01 14:00	20° \approx 50'44	8.43849 AU	opposition	13532 Oct 18 00:29	8° \mathcal{B} 57'49 -0°16'44
direct	13526 Oct 08 12:19	17° \approx 26'10		min. Earth dist.	13532 Oct 18 10:10	8° \mathcal{B} 55'54 8.43296 AU
evening set	13527 Jan 20 12:08	25° \approx 11'27		direct	13532 Dec 26 08:48	5° \mathcal{B} 31'39
				evening set	13533 Apr 10 06:42	13° \mathcal{B} 20'31
conjunction	13527 Feb 07 05:06	27° \approx 22'54	1°36'15		13533 Apr 23 15:07	15° \mathcal{B}
minimum elong	13527 Feb 07 05:08	27° \approx 22'55	1°36'54	conjunction	13533 Apr 27 16:26	15° \mathcal{B} 30'31 -0°25'27
max. Earth dist.	13527 Feb 06 17:54	27° \approx 19'25	10.42771 AU	minimum elong	13533 Apr 27 16:25	15° \mathcal{B} 30'31 0°26'07
morning rise	13527 Feb 24 21:15	29° \approx 34'09		max. Earth dist.	13533 Apr 27 05:05	15° \mathcal{B} 26'58 10.44346 AU
	13527 Feb 28 10:25	0° \mathcal{H}		morning rise	13533 May 14 23:25	17° \mathcal{B} 39'42
retrograde	13527 Jun 07 18:16	7° \mathcal{H} 16'09		retrograde	13533 Aug 24 10:38	25° \mathcal{B} 15'25
opposition	13527 Aug 14 10:29	3° \mathcal{H} 51'53	1°52'02	opposition	13533 Oct 31 09:57	21° \mathcal{B} 53'30 -0°45'41
min. Earth dist.	13527 Aug 14 19:45	3° \mathcal{H} 50'02	8.42044 AU	min. Earth dist.	13533 Oct 31 17:42	21° \mathcal{B} 51'59 8.45547 AU
direct	13527 Oct 21 21:48	0° \mathcal{H} 25'19		direct	13534 Jan 08 21:32	18° \mathcal{B} 27'55
evening set	13528 Feb 03 05:04	8° \mathcal{H} 12'57		evening set	13534 Apr 23 15:19	26° \mathcal{B} 15'00
conjunction	13528 Feb 20 22:05	10° \mathcal{H} 24'42	1°23'22	conjunction	13534 May 10 22:27	28° \mathcal{B} 24'02 -0°47'58
minimum elong	13528 Feb 20 22:08	10° \mathcal{H} 24'43	1°23'48	minimum elong	13534 May 10 22:25	28° \mathcal{B} 24'01 0°48'48
max. Earth dist.	13528 Feb 20 09:19	10° \mathcal{H} 20'43	10.41293 AU	max. Earth dist.	13534 May 10 13:54	28° \mathcal{B} 21'21 10.46835 AU
morning rise	13528 Mar 09 13:39	12° \mathcal{H} 36'04			13534 May 23 18:02	0° \mathcal{I}
retrograde	13528 Jun 20 01:22	20° \mathcal{H} 17'25		morning rise	13534 May 28 02:52	0° \mathcal{I} 32'18
opposition	13528 Aug 26 15:49	16° \mathcal{H} 53'27	1°33'18	retrograde	13534 Sep 06 14:09	8° \mathcal{I} 06'54
min. Earth dist.	13528 Aug 27 01:48	16° \mathcal{H} 51'27	8.40870 AU	opposition	13534 Nov 13 19:06	4° \mathcal{I} 45'17 -1°12'10
direct	13528 Nov 03 08:03	13° \mathcal{H} 26'35		min. Earth dist.	13534 Nov 14 00:28	4° \mathcal{I} 44'15 8.48271 AU
evening set	13529 Feb 15 22:05	21° \mathcal{H} 15'51		direct	13535 Jan 22 09:43	1° \mathcal{I} 20'21
				evening set	13535 May 06 20:56	9° \mathcal{I} 05'08
conjunction	13529 Mar 05 14:46	23° \mathcal{H} 27'44	1°06'09	conjunction	13535 May 24 01:23	11° \mathcal{I} 13'06 -1°07'59
minimum elong	13529 Mar 05 14:48	23° \mathcal{H} 27'45	1°06'23	minimum elong	13535 May 24 01:21	11° \mathcal{I} 13'05 1°08'57
max. Earth dist.	13529 Mar 05 01:38	23° \mathcal{H} 23'38	10.40487 AU	max. Earth dist.	13535 May 23 19:56	11° \mathcal{I} 11'24 10.49724 AU
morning rise	13529 Mar 23 05:17	25° \mathcal{H} 39'03		morning rise	13535 Jun 10 03:14	13° \mathcal{I} 20'21
	13529 May 01 03:05	0° Υ		retrograde	13535 Sep 19 18:06	20° \mathcal{I} 53'57
retrograde	13529 Jul 03 09:53	3° Υ 19'29		opposition	13535 Nov 27 03:55	17° \mathcal{I} 32'35 -1°34'54
opposition	13529 Sep 08 22:36	29° \mathcal{H} 55'51	1°09'43	min. Earth dist.	13535 Nov 27 06:59	17° \mathcal{I} 32'00 8.51333 AU
	13529 Sep 08 01:44	30° $\mathcal{R}\mathcal{H}$		direct	13536 Feb 04 19:26	14° \mathcal{I} 08'21
min. Earth dist.	13529 Sep 09 08:41	29° \mathcal{H} 53'51	8.40396 AU	evening set	13536 May 18 23:12	21° \mathcal{I} 50'19
direct	13529 Nov 16 18:23	26° \mathcal{H} 28'55				
	13530 Jan 22 01:16	0° Υ		conjunction	13536 Jun 05 00:58	23° \mathcal{I} 57'11 -1°24'32
evening set	13530 Mar 01 14:24	4° Υ 19'05		minimum elong	13536 Jun 05 00:56	23° \mathcal{I} 57'11 1°25'34
conjunction	13530 Mar 19 06:11	6° Υ 30'52	0°45'31	max. Earth dist.	13536 Jun 04 22:22	23° \mathcal{I} 56'23 10.52874 AU
minimum elong	13530 Mar 19 06:13	6° Υ 30'52	0°45'31	morning rise	13536 Jun 22 00:37	26° \mathcal{I} 03'28
max. Earth dist.	13530 Mar 18 17:01	6° Υ 26'44	10.40402 AU		13536 Jul 27 01:40	0° \mathcal{E}
morning rise	13530 Apr 05 19:19	8° Υ 41'56		retrograde	13536 Oct 01 20:01	3° \mathcal{E} 36'08
retrograde	13530 Jul 16 17:52	16° Υ 21'15		opposition	13536 Dec 09 11:55	0° \mathcal{E} 14'54 -1°52'49
opposition	13530 Sep 22 06:31	12° Υ 58'03	0°42'32	min. Earth dist.	13536 Dec 09 13:06	0° \mathcal{E} 14'41 8.54583 AU
min. Earth dist.	13530 Sep 22 16:51	12° Υ 56'00	8.40654 AU		13536 Dec 12 17:24	30° $\mathcal{R}\mathcal{I}$
direct	13530 Nov 30 05:59	9° Υ 31'11		direct	13537 Feb 17 03:04	26° \mathcal{I} 51'22
evening set	13531 Mar 15 05:48	17° Υ 21'37			13537 Apr 20 22:40	0° \mathcal{E}
conjunction	13531 Apr 01 20:04	19° Υ 33'02	0°22'34	evening set	13537 May 31 22:09	4° \mathcal{E} 30'11
minimum elong	13531 Apr 01 20:05	19° Υ 33'03	0°22'20	conjunction	13537 Jun 17 21:34	6° \mathcal{E} 36'01 -1°36'53
max. Earth dist.	13531 Apr 01 06:47	19° Υ 28'53	10.41045 AU	minimum elong	13537 Jun 17 21:32	6° \mathcal{E} 36'00 1°37'56
morning rise	13531 Apr 19 07:27	21° Υ 43'41		max. Earth dist.	13537 Jun 17 21:05	6° \mathcal{E} 35'51 10.56128 AU
retrograde	13531 Jul 29 23:46	29° Υ 21'45		morning rise	13537 Jul 04 19:37	8° \mathcal{E} 41'26
opposition	13531 Oct 05 15:09	25° Υ 59'01	0°13'12	retrograde	13537 Oct 14 19:11	16° \mathcal{E} 13'15
min. Earth dist.	13531 Oct 06 01:34	25° Υ 56'58	8.41637 AU			

opposition	13537 Dec 22 18:28	12° \mathfrak{D} 52'03	-2°05'08	opposition	13544 Mar 09 01:53	27° \mathfrak{M} 12'20	-1°14'58
min. Earth dist.	13537 Dec 22 17:41	12° \mathfrak{D} 52'12	8.57841 AU	min. Earth dist.	13544 Mar 08 15:41	27° \mathfrak{M} 14'18	8.67829 AU
direct	13538 Mar 02 09:33	9° \mathfrak{D} 29'10		direct	13544 May 16 23:00	23° \mathfrak{M} 51'43	
evening set	13538 Jun 13 17:44	17° \mathfrak{D} 04'38		evening set	13544 Aug 15 16:14	0° \mathfrak{D}	
conjunction	13538 Jun 30 15:27	19° \mathfrak{D} 09'34	-1°44'30	conjunction	13544 Aug 25 20:39	1° \mathfrak{D} 11'56	
minimum elong	13538 Jun 30 15:26	19° \mathfrak{D} 09'34	1°45'31	conjunction	13544 Sep 11 21:57	3° \mathfrak{D} 16'11	-0°51'14
max. Earth dist.	13538 Jun 30 17:25	19° \mathfrak{D} 10'10	10.59289 AU	minimum elong	13544 Sep 11 21:59	3° \mathfrak{D} 16'12	0°51'18
morning rise	13538 Jul 17 12:28	21° \mathfrak{D} 14'15		max. Earth dist.	13544 Sep 12 10:52	3° \mathfrak{D} 20'08	10.67660 AU
retrograde	13538 Oct 27 17:53	28° \mathfrak{D} 45'23		morning rise	13544 Sep 29 01:36	5° \mathfrak{D} 21'08	
opposition	13539 Jan 04 23:33	25° \mathfrak{D} 24'06	-2°11'23	retrograde	13545 Jan 10 23:26	12° \mathfrak{D} 53'03	
min. Earth dist.	13539 Jan 04 20:24	25° \mathfrak{D} 24'42	8.60880 AU	opposition	13545 Mar 21 22:13	9° \mathfrak{D} 29'31	-0°50'08
direct	13539 Mar 15 14:31	22° \mathfrak{D} 01'50		min. Earth dist.	13545 Mar 21 11:03	9° \mathfrak{D} 31'40	8.67404 AU
evening set	13539 Jun 26 10:13	29° \mathfrak{D} 33'54		direct	13545 May 29 15:25	6° \mathfrak{D} 08'51	
	13539 Jun 30 00:08	0° \mathfrak{Q}		evening set	13545 Sep 07 08:33	13° \mathfrak{D} 28'20	
conjunction	13539 Jul 13 06:57	1° \mathfrak{Q} 38'09	-1°47'07	conjunction	13545 Sep 24 11:55	15° \mathfrak{D} 33'07	-0°30'03
minimum elong	13539 Jul 13 06:57	1° \mathfrak{Q} 38'09	1°48'04	minimum elong	13545 Sep 24 11:56	15° \mathfrak{D} 33'08	0°29'53
max. Earth dist.	13539 Jul 13 11:48	1° \mathfrak{Q} 39'39	10.62119 AU	max. Earth dist.	13545 Sep 25 01:17	15° \mathfrak{D} 37'12	10.66950 AU
morning rise	13539 Jul 30 03:27	3° \mathfrak{Q} 42'19		morning rise	13545 Oct 11 17:49	17° \mathfrak{D} 38'41	
retrograde	13539 Nov 09 16:18	11° \mathfrak{Q} 13'00		retrograde	13546 Jan 23 21:11	25° \mathfrak{D} 11'27	
opposition	13540 Jan 18 03:02	7° \mathfrak{Q} 51'31	-2°11'25	opposition	13546 Apr 03 17:36	21° \mathfrak{D} 47'28	-0°22'57
min. Earth dist.	13540 Jan 17 21:23	7° \mathfrak{Q} 52'36	8.63466 AU	min. Earth dist.	13546 Apr 03 06:34	21° \mathfrak{D} 49'35	8.66385 AU
direct	13540 Mar 27 15:19	4° \mathfrak{Q} 29'51		direct	13546 Jun 11 04:57	18° \mathfrak{D} 26'35	
evening set	13540 Jul 08 00:13	11° \mathfrak{Q} 58'44		evening set	13546 Sep 19 22:14	25° \mathfrak{D} 46'12	
conjunction	13540 Jul 24 20:43	14° \mathfrak{Q} 02'32	-1°44'42	conjunction	13546 Oct 07 03:37	27° \mathfrak{D} 51'35	-0°07'29
minimum elong	13540 Jul 24 20:45	14° \mathfrak{Q} 02'33	1°45'32	minimum elong	13546 Oct 07 03:36	27° \mathfrak{D} 51'35	0°07'06
max. Earth dist.	13540 Jul 25 04:19	14° \mathfrak{Q} 04'53	10.64425 AU	behind sun begin	13546 Oct 06 21:01	27° \mathfrak{D} 49'36	
	13540 Aug 01 15:17	15° \mathfrak{Q}		behind sun end	13546 Oct 07 10:11	27° \mathfrak{D} 53'34	
morning rise	13540 Aug 10 17:26	16° \mathfrak{Q} 06'26		max. Earth dist.	13546 Oct 07 16:03	27° \mathfrak{D} 55'22	10.65660 AU
retrograde	13540 Nov 21 13:52	23° \mathfrak{Q} 36'59		morning rise	13546 Oct 24 11:51	29° \mathfrak{D} 57'49	
opposition	13541 Jan 30 04:56	20° \mathfrak{Q} 15'14	-2°05'18		13546 Oct 24 19:11	0° \mathfrak{M}	
min. Earth dist.	13541 Jan 29 21:29	20° \mathfrak{Q} 16'40	8.65469 AU	retrograde	13547 Feb 05 18:04	7° \mathfrak{M} 31'42	
direct	13541 Apr 09 13:42	16° \mathfrak{Q} 54'03		asc. node	13547 Feb 06 07:40	7° \mathfrak{M} 31'41	
evening set	13541 Jul 20 12:25	24° \mathfrak{Q} 20'06		opposition	13547 Apr 16 12:40	4° \mathfrak{M} 07'17	0°05'21
conjunction	13541 Aug 06 09:18	26° \mathfrak{Q} 23'43	-1°37'27	min. Earth dist.	13547 Apr 16 02:48	4° \mathfrak{M} 09'12	8.64818 AU
minimum elong	13541 Aug 06 09:20	26° \mathfrak{Q} 23'44	1°38'06	direct	13547 Jun 23 20:40	0° \mathfrak{M} 46'06	
max. Earth dist.	13541 Aug 06 18:25	26° \mathfrak{Q} 26'31	10.66137 AU	evening set	13547 Oct 02 14:11	8° \mathfrak{M} 06'35	
morning rise	13541 Aug 23 07:04	28° \mathfrak{Q} 27'36		conjunction	13547 Oct 19 21:33	10° \mathfrak{M} 12'39	0°15'37
	13541 Sep 05 09:16	0° \mathfrak{M}		minimum elong	13547 Oct 19 21:32	10° \mathfrak{M} 12'39	0°16'13
retrograde	13541 Dec 04 11:20	5° \mathfrak{M} 58'12		max. Earth dist.	13547 Oct 20 08:20	10° \mathfrak{M} 15'56	10.63842 AU
opposition	13542 Feb 12 05:22	2° \mathfrak{M} 36'07	-1°53'26	morning rise	13547 Nov 06 08:00	12° \mathfrak{M} 19'35	
min. Earth dist.	13542 Feb 11 20:57	2° \mathfrak{M} 37'43	8.66861 AU		13547 Nov 29 17:40	15° \mathfrak{M}	
	13542 Mar 23 08:49	30° \mathfrak{R} \mathfrak{Q}		retrograde	13548 Feb 18 16:40	19° \mathfrak{M} 54'49	
direct	13542 Apr 22 10:03	29° \mathfrak{Q} 15'15		opposition	13548 Apr 28 07:33	16° \mathfrak{M} 30'03	0°33'30
	13542 May 22 00:41	0° \mathfrak{M}		min. Earth dist.	13548 Apr 27 23:12	16° \mathfrak{M} 31'40	8.62764 AU
evening set	13542 Aug 01 23:29	6° \mathfrak{M} 38'50			13548 May 18 07:42	15° \mathfrak{R} \mathfrak{M}	
conjunction	13542 Aug 18 21:15	8° \mathfrak{M} 42'29	-1°25'43	direct	13548 Jul 05 12:31	13° \mathfrak{M} 08'25	
minimum elong	13542 Aug 18 21:17	8° \mathfrak{M} 42'30	1°26'11		13548 Aug 21 10:16	15° \mathfrak{M}	
max. Earth dist.	13542 Aug 19 07:19	8° \mathfrak{M} 45'35	10.67247 AU	evening set	13548 Oct 14 09:13	20° \mathfrak{M} 30'35	
morning rise	13542 Sep 04 20:41	10° \mathfrak{M} 46'34		conjunction	13548 Oct 31 18:34	22° \mathfrak{M} 37'22	0°37'59
retrograde	13542 Dec 17 07:03	18° \mathfrak{M} 17'22		minimum elong	13548 Oct 31 18:33	22° \mathfrak{M} 37'22	0°38'45
opposition	13543 Feb 25 04:18	14° \mathfrak{M} 54'52	-1°36'24	max. Earth dist.	13548 Nov 01 04:01	22° \mathfrak{M} 40'15	10.61560 AU
min. Earth dist.	13543 Feb 24 19:08	14° \mathfrak{M} 56'37	8.67646 AU	morning rise	13548 Nov 18 06:47	24° \mathfrak{M} 45'01	
direct	13543 May 05 04:31	11° \mathfrak{M} 34'11			13549 Jan 07 12:46	0° \mathfrak{J}	
evening set	13543 Aug 14 09:59	18° \mathfrak{M} 55'48		retrograde	13549 Mar 02 16:37	2° \mathfrak{J} 21'42	
conjunction	13543 Aug 31 09:18	20° \mathfrak{M} 59'39	-1°10'04		13549 Apr 27 08:35	30° \mathfrak{R} \mathfrak{M}	
minimum elong	13543 Aug 31 09:20	20° \mathfrak{M} 59'40	1°10'21	opposition	13549 May 11 02:25	28° \mathfrak{M} 56'39	1°00'15
max. Earth dist.	13543 Aug 31 20:34	21° \mathfrak{M} 03'06	10.67758 AU	min. Earth dist.	13549 May 10 19:17	28° \mathfrak{M} 58'02	8.60299 AU
morning rise	13543 Sep 17 10:46	23° \mathfrak{M} 04'07		direct	13549 Jul 18 04:37	25° \mathfrak{M} 34'29	
	13543 Dec 03 13:43	0° \mathfrak{D}			13549 Oct 01 01:22	0° \mathfrak{J}	
retrograde	13543 Dec 30 02:12	0° \mathfrak{D} 35'22		evening set	13549 Oct 27 07:36	2° \mathfrak{J} 59'03	
	13544 Jan 25 23:06	30° \mathfrak{R} \mathfrak{M}		conjunction	13549 Nov 13 18:43	5° \mathfrak{J} 06'35	0°58'41

minimum elong	13549 Nov 13 18:41	5°♊06'35	0°59'35	minimum elong	13556 Feb 01 12:25	21°♊54'01	1°40'59
max. Earth dist.	13549 Nov 14 02:44	5°♊09'03	10.58907 AU	max. Earth dist.	13556 Feb 01 04:40	21°♊51'36	10.43292 AU
morning rise	13549 Dec 01 08:17	7°♊14'53		morning rise	13556 Feb 19 04:36	24°♊05'15	
retrograde	13550 Mar 15 17:34	14°♊53'08			13556 Apr 16 10:32	0°♋	
opposition	13550 May 23 22:03	11°♊27'53	1°24'18	retrograde	13556 Jun 01 07:42	1°♋48'05	
min. Earth dist.	13550 May 23 16:11	11°♊29'03	8.57533 AU		13556 Jul 18 01:01	30°♋	
direct	13550 Jul 30 23:03	8°♊05'10		opposition	13556 Aug 07 23:47	28°♋23'56	1°58'18
evening set	13550 Nov 09 09:26	15°♊32'41		min. Earth dist.	13556 Aug 08 06:36	28°♋22'35	8.42663 AU
				direct	13556 Oct 15 07:33	24°♋57'57	
conjunction	13550 Nov 26 22:02	17°♊40'58	1°16'42		13557 Jan 03 23:21	0°♋	
minimum elong	13550 Nov 26 21:59	17°♊40'57	1°17'41	evening set	13557 Jan 27 12:55	2°♋45'05	
max. Earth dist.	13550 Nov 27 03:56	17°♊42'47	10.56018 AU				
morning rise	13550 Dec 14 12:41	19°♊49'54		conjunction	13557 Feb 14 06:02	4°♋56'48	1°29'27
retrograde	13551 Mar 28 21:35	27°♊29'41		minimum elong	13557 Feb 14 06:05	4°♋56'49	1°29'59
opposition	13551 Jun 05 18:44	24°♊04'21	1°44'28	max. Earth dist.	13557 Feb 13 19:52	4°♋53'37	10.41971 AU
min. Earth dist.	13551 Jun 05 14:53	24°♊05'07	8.54605 AU	morning rise	13557 Mar 03 21:46	7°♋08'11	
direct	13551 Aug 12 17:43	20°♊41'00		retrograde	13557 Jun 14 16:09	14°♋50'18	
evening set	13551 Nov 22 15:06	28°♊11'56		opposition	13557 Aug 21 05:26	11°♋26'33	1°41'58
	13551 Dec 07 08:55	0°♋		min. Earth dist.	13557 Aug 21 14:14	11°♋24'48	8.41600 AU
conjunction	13551 Dec 10 04:52	0°♋20'56	1°31'06	direct	13557 Oct 28 17:09	8°♋00'14	
minimum elong	13551 Dec 10 04:50	0°♋20'55	1°32'08	evening set	13558 Feb 10 06:45	15°♋49'07	
max. Earth dist.	13551 Dec 10 07:23	0°♋21'42	10.53044 AU				
morning rise	13551 Dec 27 20:25	2°♋30'29		conjunction	13558 Feb 27 23:33	18°♋00'59	1°14'00
retrograde	13552 Apr 10 02:55	10°♋11'34		minimum elong	13558 Feb 27 23:36	18°♋01'00	1°14'20
opposition	13552 Jun 17 16:34	6°♋46'19	1°59'41	max. Earth dist.	13558 Feb 27 10:55	17°♋57'02	10.41205 AU
min. Earth dist.	13552 Jun 17 15:34	6°♋46'31	8.51669 AU	morning rise	13558 Mar 17 14:35	20°♋12'22	
direct	13552 Aug 24 14:30	3°♋22'19		retrograde	13558 Jun 28 00:16	27°♋53'26	
evening set	13552 Dec 05 00:11	10°♋56'56		opposition	13558 Sep 03 12:13	24°♋30'05	1°20'20
				min. Earth dist.	13558 Sep 03 22:49	24°♋27'59	8.41067 AU
conjunction	13552 Dec 22 14:59	13°♋06'37	1°41'07	direct	13558 Nov 11 04:38	21°♋03'35	
minimum elong	13552 Dec 22 14:58	13°♋06'37	1°42'09	evening set	13559 Feb 24 00:07	28°♋53'36	
max. Earth dist.	13552 Dec 22 14:04	13°♋06'20	10.50143 AU		13559 Mar 04 22:57	0°♌	
morning rise	13553 Jan 09 07:09	15°♋16'44		conjunction	13559 Mar 13 16:14	1°♌05'26	0°54'43
retrograde	13553 Apr 23 07:28	22°♋58'52		minimum elong	13559 Mar 13 16:16	1°♌05'27	0°54'49
opposition	13553 Jun 30 16:00	19°♋33'47	2°09'07	max. Earth dist.	13559 Mar 13 01:50	1°♌00'56	10.40934 AU
min. Earth dist.	13553 Jun 30 17:34	19°♋33'29	8.48877 AU	morning rise	13559 Mar 31 06:11	3°♌16'40	
direct	13553 Sep 06 16:04	16°♋09'11		retrograde	13559 Jul 11 07:29	10°♌56'38	
evening set	13553 Dec 18 12:10	23°♋47'28		opposition	13559 Sep 16 20:04	7°♌33'41	0°54'32
				min. Earth dist.	13559 Sep 17 07:21	7°♌31'27	8.40996 AU
conjunction	13554 Jan 05 03:52	25°♋57'48	1°46'11	direct	13559 Nov 24 17:56	4°♌07'10	
minimum elong	13554 Jan 05 03:52	25°♋57'48	1°47'09	evening set	13560 Mar 08 16:35	11°♌57'49	
max. Earth dist.	13554 Jan 05 00:16	25°♋56'41	10.47464 AU				
morning rise	13554 Jan 22 20:20	28°♋08'23		conjunction	13560 Mar 26 07:31	14°♌09'26	0°32'36
	13554 Feb 07 14:16	0°♌		minimum elong	13560 Mar 26 07:33	14°♌09'26	0°32'28
retrograde	13554 May 06 14:17	5°♌51'15		max. Earth dist.	13560 Mar 25 16:58	14°♌04'52	10.41116 AU
opposition	13554 Jul 13 17:01	2°♌26'26	2°12'09	morning rise	13560 Apr 12 19:51	16°♌20'19	
min. Earth dist.	13554 Jul 13 20:29	2°♌25'44	8.46370 AU	retrograde	13560 Jul 23 14:35	23°♌59'15	
	13554 Aug 16 22:54	30°♌		opposition	13560 Sep 29 04:56	20°♌36'43	0°25'55
direct	13554 Sep 19 19:13	29°♌01'18		min. Earth dist.	13560 Sep 29 15:50	20°♌34'33	8.41414 AU
	13554 Oct 23 07:55	0°♌		direct	13560 Dec 07 07:49	17°♌10'22	
evening set	13555 Jan 01 02:47	6°♌43'00		evening set	13561 Mar 22 07:39	25°♌01'01	
conjunction	13555 Jan 18 19:18	8°♌53'56	1°45'55	conjunction	13561 Apr 08 20:54	27°♌12'11	0°08'52
minimum elong	13555 Jan 18 19:19	8°♌53'56	1°46'47	minimum elong	13561 Apr 08 20:55	27°♌12'12	0°08'30
max. Earth dist.	13555 Jan 18 13:44	8°♌52'12	10.45146 AU	behind sun begin	13561 Apr 08 14:38	27°♌10'15	
morning rise	13555 Feb 05 11:45	11°♌04'53		behind sun end	13561 Apr 09 03:12	27°♌14'09	
	13555 Mar 12 06:22	15°♌		max. Earth dist.	13561 Apr 08 07:23	27°♌07'58	10.41830 AU
retrograde	13555 May 19 22:52	18°♌48'00		morning rise	13561 Apr 26 07:11	29°♌22'33	
opposition	13555 Jul 26 19:32	15°♌23'29	2°08'31		13561 May 01 10:01	0°♍	
min. Earth dist.	13555 Jul 27 00:29	15°♌22'30	8.44270 AU	retrograde	13561 Aug 05 23:02	7°♍00'28	
	13555 Jul 31 17:45	15°♌		desc. node	13561 Aug 24 12:15	6°♍42'06	
direct	13555 Oct 02 23:58	11°♌57'53		opposition	13561 Oct 12 14:39	3°♍38'16	-0°04'00
	13555 Dec 02 20:50	15°♌		min. Earth dist.	13561 Oct 13 00:37	3°♍36'18	8.42414 AU
evening set	13556 Jan 14 19:20	19°♌42'36		direct	13561 Dec 20 20:20	0°♍12'11	
				evening set	13562 Apr 04 20:43	8°♍02'08	
conjunction	13556 Feb 01 12:23	21°♌54'00	1°40'15				

conjunction	13562 Apr 22 07:47	10° 8 12'39 -0°15'23	evening set	13568 Jun 20 11:20	24° 5 35'52
minimum elong	13562 Apr 22 07:46	10° 8 12'39 0°15'58			
behind sun begin	13562 Apr 22 07:13	10° 8 12'28	conjunction	13568 Jul 07 08:33	26° 5 40'38 -1°46'43
behind sun end	13562 Apr 22 08:20	10° 8 12'49	minimum elong	13568 Jul 07 08:33	26° 5 40'37 1°47'41
max. Earth dist.	13562 Apr 21 19:47	10° 8 08'54 10.43131 AU	max. Earth dist.	13568 Jul 07 12:46	26° 5 41'56 10.59005 AU
morning rise	13562 May 09 15:44	12° 8 22'19	morning rise	13568 Jul 24 05:13	28° 5 45'13
	13562 May 31 23:32	15° 8		13568 Aug 03 16:01	0° 0
retrograde	13562 Aug 19 05:25	19° 8 59'09	retrograde	13568 Nov 03 15:41	6° 0 16'45
opposition	13562 Oct 26 00:50	16° 8 37'13 -0°33'37	opposition	13569 Jan 11 23:32	2° 0 54'48 -2°12'18
min. Earth dist.	13562 Oct 26 09:54	16° 8 35'27 8.44006 AU	min. Earth dist.	13569 Jan 11 18:51	2° 0 55'42 8.60546 AU
	13562 Nov 16 14:50	15° 8		13569 Feb 27 00:34	30° 8 5
direct	13563 Jan 03 09:38	13° 8 11'30	direct	13569 Mar 22 11:41	29° 5 32'19
	13563 Feb 19 03:51	15° 8		13569 Apr 14 19:14	0° 0
evening set	13563 Apr 18 07:28	21° 8 00'05	evening set	13569 Jul 03 02:35	7° 0 03'11
conjunction	13563 May 05 15:51	23° 8 09'43 -0°38'40	conjunction	13569 Jul 19 23:06	9° 0 07'20 -1°46'23
minimum elong	13563 May 05 15:49	23° 8 09'42 0°39'27	minimum elong	13569 Jul 19 23:07	9° 0 07'20 1°47'15
max. Earth dist.	13563 May 05 05:11	23° 8 06'22 10.44991 AU	max. Earth dist.	13569 Jul 20 05:28	9° 0 09'18 10.61776 AU
morning rise	13563 May 22 21:22	25° 8 18'32	morning rise	13569 Aug 05 19:53	11° 0 11'31
	13563 Jul 04 11:14	0° 0		13569 Sep 08 21:33	15° 0
retrograde	13563 Sep 01 09:38	2° 0 54'17	retrograde	13569 Nov 16 11:36	18° 0 42'34
	13563 Nov 02 13:44	30° 8 8	opposition	13570 Jan 25 02:06	15° 0 20'25 -2°08'42
opposition	13563 Nov 08 10:57	29° 8 32'34 -1°01'23	min. Earth dist.	13570 Jan 24 19:27	15° 0 21'41 8.63157 AU
min. Earth dist.	13563 Nov 08 18:49	29° 8 31'02 8.46136 AU		13570 Jan 29 13:05	15° 8 0
direct	13564 Jan 16 23:15	26° 8 07'15	direct	13570 Apr 04 12:40	11° 0 58'29
	13564 Mar 27 05:57	0° 0		13570 Jun 04 20:39	15° 0
evening set	13564 Apr 30 15:09	3° 0 53'51	evening set	13570 Jul 15 15:30	19° 0 26'09
conjunction	13564 May 17 20:42	6° 0 02'27 -0°59'56	conjunction	13570 Aug 01 12:08	21° 0 29'56 -1°41'05
minimum elong	13564 May 17 20:40	6° 0 02'26 1°00'51	minimum elong	13570 Aug 01 12:10	21° 0 29'57 1°41'49
max. Earth dist.	13564 May 17 12:01	5° 0 59'44 10.47337 AU	max. Earth dist.	13570 Aug 01 21:08	21° 0 32'43 10.64204 AU
morning rise	13564 Jun 03 23:49	8° 0 10'20	morning rise	13570 Aug 18 09:35	23° 0 33'56
retrograde	13564 Sep 13 13:21	15° 0 45'04		13570 Oct 24 10:20	0° 0
opposition	13564 Nov 20 20:40	12° 0 23'26 -1°25'55	retrograde	13570 Nov 29 08:23	1° 0 04'40
min. Earth dist.	13564 Nov 21 02:20	12° 0 22'20 8.48707 AU		13571 Jan 05 00:22	30° 8 0
direct	13565 Jan 29 11:32	8° 0 58'36	opposition	13571 Feb 07 03:04	27° 0 42'17 -1°59'08
evening set	13565 May 13 19:15	16° 0 42'35	min. Earth dist.	13571 Feb 06 17:56	27° 0 44'02 8.65352 AU
			direct	13571 Apr 17 11:08	24° 0 20'53
conjunction	13565 May 30 22:10	18° 0 50'08 -1°18'06		13571 Jul 13 01:58	0° 0
minimum elong	13565 May 30 22:08	18° 0 50'07 1°19'06	evening set	13571 Jul 28 02:37	1° 0 45'35
max. Earth dist.	13565 May 30 16:33	18° 0 48'23 10.50055 AU			
morning rise	13565 Jun 16 23:00	20° 0 57'03	conjunction	13571 Aug 14 00:04	3° 0 49'14 -1°31'09
retrograde	13565 Sep 26 15:28	28° 0 30'50	minimum elong	13571 Aug 14 00:07	3° 0 49'15 1°31'42
opposition	13565 Dec 04 05:25	25° 0 09'12 -1°46'02	max. Earth dist.	13571 Aug 14 11:56	3° 0 52'53 10.66171 AU
min. Earth dist.	13565 Dec 04 08:06	25° 0 08'40 8.51582 AU	morning rise	13571 Aug 30 22:42	5° 0 53'15
direct	13566 Feb 11 21:28	21° 0 44'55	retrograde	13571 Dec 12 05:56	13° 0 23'53
evening set	13566 May 26 20:00	29° 0 25'53	opposition	13572 Feb 20 02:23	10° 0 01'13 -1°44'08
	13566 May 31 11:14	0° 0	min. Earth dist.	13572 Feb 19 15:18	10° 0 03'20 8.67038 AU
conjunction	13566 Jun 12 20:35	1° 0 32'23 -1°32'19	direct	13572 Apr 29 05:26	6° 0 40'17
minimum elong	13566 Jun 12 20:34	1° 0 32'23 1°33'22	evening set	13572 Aug 08 12:59	14° 0 02'28
max. Earth dist.	13566 Jun 12 18:47	1° 0 31'49 10.53000 AU	conjunction	13572 Aug 25 11:43	16° 0 06'11 -1°17'03
morning rise	13566 Jun 29 19:23	3° 0 38'23	minimum elong	13572 Aug 25 11:45	16° 0 06'12 1°17'25
retrograde	13566 Oct 09 16:15	11° 0 11'18	max. Earth dist.	13572 Aug 26 01:17	16° 0 10'21 10.67601 AU
opposition	13566 Dec 17 12:49	7° 0 49'35 -2°00'49	morning rise	13572 Sep 11 12:07	18° 0 10'25
min. Earth dist.	13566 Dec 17 12:29	7° 0 49'39 8.54611 AU	retrograde	13572 Dec 24 01:28	25° 0 41'07
direct	13567 Feb 25 05:23	4° 0 25'54	opposition	13573 Mar 04 00:04	22° 0 18'11 -1°24'25
evening set	13567 Jun 08 17:20	12° 0 03'36	min. Earth dist.	13573 Mar 03 12:11	22° 0 20'27 8.68154 AU
			direct	13573 May 11 22:30	18° 0 57'32
conjunction	13567 Jun 25 15:59	14° 0 09'09 -1°41'59	evening set	13573 Aug 20 23:18	26° 0 17'52
minimum elong	13567 Jun 25 15:58	14° 0 09'08 1°43'01			
max. Earth dist.	13567 Jun 25 17:38	14° 0 09'39 10.56031 AU	conjunction	13573 Sep 06 23:37	28° 0 21'49 -0°59'28
morning rise	13567 Jul 12 13:19	16° 0 14'20	minimum elong	13573 Sep 06 23:39	28° 0 21'50 0°59'37
retrograde	13567 Oct 22 16:54	23° 0 46'31	max. Earth dist.	13573 Sep 07 13:24	28° 0 26'02 10.68442 AU
opposition	13567 Dec 30 18:59	20° 0 24'42 -2°09'41		13573 Sep 20 10:14	0° 0
min. Earth dist.	13567 Dec 30 16:17	20° 0 25'13 8.57648 AU	morning rise	13573 Sep 24 02:16	0° 0 26'26
direct	13568 Mar 09 10:15	17° 0 01'37	retrograde	13574 Jan 05 21:27	7° 0 57'25

opposition	13574 Mar 16 20:32	4° <u>♄</u> 34'14	-1°00'53	retrograde	13580 Mar 22 11:35	22° <u>♄</u> 12'51	
min. Earth dist.	13574 Mar 16 08:51	4° <u>♄</u> 36'28	8.68664 AU	opposition	13580 May 30 12:27	18° <u>♄</u> 48'18	1°36'04
direct	13574 May 24 14:35	1° <u>♄</u> 13'46		min. Earth dist.	13580 May 30 09:00	18° <u>♄</u> 48'58	8.59043 AU
evening set	13574 Sep 02 10:07	8° <u>♄</u> 32'53		direct	13580 Aug 06 12:33	15° <u>♄</u> 25'53	
				evening set	13580 Nov 16 04:18	22° <u>♄</u> 53'48	
conjunction	13574 Sep 19 12:20	10° <u>♄</u> 37'13	-0°39'11				
minimum elong	13574 Sep 19 12:21	10° <u>♄</u> 37'13	0°39'07	conjunction	13580 Dec 03 17:21	25° <u>♄</u> 02'03	1°25'13
max. Earth dist.	13574 Sep 20 02:10	10° <u>♄</u> 41'26	10.68665 AU	minimum elong	13580 Dec 03 17:19	25° <u>♄</u> 02'02	1°26'15
morning rise	13574 Oct 06 17:18	12° <u>♄</u> 42'19		max. Earth dist.	13580 Dec 03 20:19	25° <u>♄</u> 02'57	10.57363 AU
retrograde	13575 Jan 18 17:18	20° <u>♄</u> 13'53		morning rise	13580 Dec 21 08:21	27° <u>♄</u> 10'54	
opposition	13575 Mar 29 15:57	16° <u>♄</u> 50'25	-0°34'36		13581 Jan 14 23:09	0° <u>♄</u>	
min. Earth dist.	13575 Mar 29 04:16	16° <u>♄</u> 52'39	8.68558 AU	retrograde	13581 Apr 04 14:21	4° <u>♄</u> 49'58	
direct	13575 Jun 06 05:34	13° <u>♄</u> 30'01		opposition	13581 Jun 12 08:37	1° <u>♄</u> 25'18	1°53'30
evening set	13575 Sep 14 22:23	20° <u>♄</u> 48'39		min. Earth dist.	13581 Jun 12 07:00	1° <u>♄</u> 25'37	8.55795 AU
					13581 Jun 30 23:49	30° <u>♄</u>	
conjunction	13575 Oct 02 02:45	22° <u>♄</u> 53'30	-0°17'07	direct	13581 Aug 19 08:25	28° <u>♄</u> 02'10	
minimum elong	13575 Oct 02 02:46	22° <u>♄</u> 53'30	0°16'49		13581 Oct 06 13:16	0° <u>♄</u>	
max. Earth dist.	13575 Oct 02 16:53	22° <u>♄</u> 57'48	10.68267 AU	evening set	13581 Nov 29 10:45	5° <u>♄</u> 33'43	
morning rise	13575 Oct 19 09:57	24° <u>♄</u> 59'10					
	13575 Dec 06 04:21	0° <u>♄</u>		conjunction	13581 Dec 17 01:01	7° <u>♄</u> 42'43	1°37'13
retrograde	13576 Jan 31 13:24	2° <u>♄</u> 31'33		minimum elong	13581 Dec 17 01:00	7° <u>♄</u> 42'42	1°38'16
	13576 Mar 30 00:26	30° <u>♄</u>		max. Earth dist.	13581 Dec 17 01:30	7° <u>♄</u> 42'52	10.54048 AU
opposition	13576 Apr 10 10:31	29° <u>♄</u> 07'48	-0°06'42	morning rise	13582 Jan 03 16:36	9° <u>♄</u> 52'10	
min. Earth dist.	13576 Apr 09 22:55	29° <u>♄</u> 10'02	8.67842 AU	retrograde	13582 Apr 17 18:33	17° <u>♄</u> 32'34	
direct	13576 Jun 17 21:17	25° <u>♄</u> 47'19		opposition	13582 Jun 25 06:18	14° <u>♄</u> 07'51	2°05'34
asc. node	13576 Jul 08 03:27	26° <u>♄</u> 08'53		min. Earth dist.	13582 Jun 25 06:47	14° <u>♄</u> 07'45	8.52508 AU
	13576 Aug 29 22:28	0° <u>♄</u>		direct	13582 Sep 01 06:43	10° <u>♄</u> 43'57	
evening set	13576 Sep 26 12:45	3° <u>♄</u> 06'16		evening set	13582 Dec 12 20:18	18° <u>♄</u> 19'13	
conjunction	13576 Oct 13 19:15	5° <u>♄</u> 11'42	0°05'52	conjunction	13582 Dec 30 11:33	20° <u>♄</u> 28'57	1°44'32
minimum elong	13576 Oct 13 19:15	5° <u>♄</u> 11'42	0°06'23	minimum elong	13582 Dec 30 11:33	20° <u>♄</u> 28'57	1°45'32
behind sun begin	13576 Oct 13 12:31	5° <u>♄</u> 09'41		max. Earth dist.	13582 Dec 30 08:50	20° <u>♄</u> 28'06	10.50796 AU
behind sun end	13576 Oct 14 01:59	5° <u>♄</u> 13'44		morning rise	13583 Jan 17 03:36	22° <u>♄</u> 38'57	
max. Earth dist.	13576 Oct 14 09:05	5° <u>♄</u> 15'55	10.67245 AU		13583 Apr 11 08:18	0° <u>♄</u>	
morning rise	13576 Oct 31 04:30	7° <u>♄</u> 17'59		retrograde	13583 May 01 01:05	0° <u>♄</u> 20'20	
retrograde	13577 Feb 12 12:05	14° <u>♄</u> 51'23			13583 May 20 17:05	30° <u>♄</u>	
opposition	13577 Apr 23 04:38	11° <u>♄</u> 27'23	0°21'33	opposition	13583 Jul 08 05:33	26° <u>♄</u> 55'39	2°11'31
min. Earth dist.	13577 Apr 22 17:48	11° <u>♄</u> 29'28	8.66510 AU	min. Earth dist.	13583 Jul 08 08:43	26° <u>♄</u> 55'01	8.49362 AU
direct	13577 Jun 30 11:17	8° <u>♄</u> 06'39		direct	13583 Sep 14 06:11	23° <u>♄</u> 30'58	
	13577 Oct 05 11:54	15° <u>♄</u>			13583 Dec 16 14:21	0° <u>♄</u>	
evening set	13577 Oct 09 05:50	15° <u>♄</u> 26'41		evening set	13583 Dec 26 08:48	1° <u>♄</u> 09'56	
conjunction	13577 Oct 26 14:10	17° <u>♄</u> 32'45	0°28'31	conjunction	13584 Jan 13 00:47	3° <u>♄</u> 20'19	1°46'41
minimum elong	13577 Oct 26 14:09	17° <u>♄</u> 32'45	0°29'14	minimum elong	13584 Jan 13 00:48	3° <u>♄</u> 20'19	1°47'36
max. Earth dist.	13577 Oct 27 02:00	17° <u>♄</u> 36'21	10.65598 AU	max. Earth dist.	13584 Jan 12 18:23	3° <u>♄</u> 18'20	10.47774 AU
morning rise	13577 Nov 13 01:16	19° <u>♄</u> 39'40		morning rise	13584 Jan 30 17:07	5° <u>♄</u> 30'49	
retrograde	13578 Feb 25 11:18	27° <u>♄</u> 14'15		retrograde	13584 May 13 07:14	13° <u>♄</u> 12'44	
opposition	13578 May 05 22:45	23° <u>♄</u> 50'02	0°48'56	opposition	13584 Jul 20 06:18	9° <u>♄</u> 48'11	2°10'56
min. Earth dist.	13578 May 05 14:03	23° <u>♄</u> 51'43	8.64567 AU	min. Earth dist.	13584 Jul 20 12:19	9° <u>♄</u> 46'59	8.46511 AU
direct	13578 Jul 13 01:30	20° <u>♄</u> 28'52		direct	13584 Sep 26 09:40	6° <u>♄</u> 22'46	
evening set	13578 Oct 22 01:57	27° <u>♄</u> 50'49		evening set	13585 Jan 07 23:22	14° <u>♄</u> 05'08	
					13585 Jan 15 10:29	15° <u>♄</u>	
conjunction	13578 Nov 08 11:56	29° <u>♄</u> 57'33	0°49'59				
minimum elong	13578 Nov 08 11:54	29° <u>♄</u> 57'33	0°50'50	conjunction	13585 Jan 25 15:57	16° <u>♄</u> 16'05	1°43'29
	13578 Nov 08 19:57	0° <u>♄</u>		minimum elong	13585 Jan 25 15:58	16° <u>♄</u> 16'06	1°44'16
max. Earth dist.	13578 Nov 08 20:32	0° <u>♄</u> 00'11	10.63343 AU	max. Earth dist.	13585 Jan 25 06:29	16° <u>♄</u> 13'09	10.45128 AU
morning rise	13578 Nov 26 00:43	2° <u>♄</u> 05'07		morning rise	13585 Feb 12 08:19	18° <u>♄</u> 27'01	
retrograde	13579 Mar 10 10:14	9° <u>♄</u> 41'06		retrograde	13585 May 26 13:09	26° <u>♄</u> 09'05	
opposition	13579 May 18 17:15	6° <u>♄</u> 16'42	1°14'10	opposition	13585 Aug 02 08:46	22° <u>♄</u> 44'41	2°03'44
min. Earth dist.	13579 May 18 11:18	6° <u>♄</u> 17'51	8.62039 AU	min. Earth dist.	13585 Aug 02 16:43	22° <u>♄</u> 43'06	8.44092 AU
direct	13579 Jul 25 18:31	2° <u>♄</u> 54'57		direct	13585 Oct 09 16:36	19° <u>♄</u> 18'40	
evening set	13579 Nov 04 01:17	10° <u>♄</u> 19'35		evening set	13586 Jan 21 15:11	27° <u>♄</u> 03'56	
conjunction	13579 Nov 21 12:53	12° <u>♄</u> 27'05	1°09'11	conjunction	13586 Feb 08 08:11	29° <u>♄</u> 15'22	1°35'00
minimum elong	13579 Nov 21 12:51	12° <u>♄</u> 27'04	1°10'10	minimum elong	13586 Feb 08 08:14	29° <u>♄</u> 15'22	1°35'38
max. Earth dist.	13579 Nov 21 18:18	12° <u>♄</u> 28'44	10.60538 AU	max. Earth dist.	13586 Feb 07 21:00	29° <u>♄</u> 11'52	10.42981 AU
morning rise	13579 Dec 09 03:02	14° <u>♄</u> 35'18			13586 Feb 14 07:32	0° <u>♄</u>	

morning rise	13586 Feb 26 00:17	1° K 26'34		conjunction	13592 Apr 28 18:59	17° G 22'27	-0°27'56
retrograde	13586 Jun 08 20:18	9° K 08'26		minimum elong	13592 Apr 28 18:58	17° G 22'27	0°28'37
opposition	13586 Aug 15 12:48	5° K 44'14	1°50'10	max. Earth dist.	13592 Apr 28 08:13	17° G 19'05	10.44116 AU
min. Earth dist.	13586 Aug 15 21:49	5° K 42'26	8.42213 AU	morning rise	13592 May 16 01:45	19° G 31'38	
direct	13586 Oct 23 00:39	2° K 17'44		retrograde	13592 Aug 25 12:46	27° G 07'30	
evening set	13587 Feb 04 07:59	10° K 05'17		opposition	13592 Nov 01 12:46	23° G 45'29	-0°48'39
				min. Earth dist.	13592 Nov 01 19:55	23° G 44'05	8.45289 AU
conjunction	13587 Feb 22 01:06	12° K 17'04	1°21'38	direct	13593 Jan 10 01:08	20° G 19'51	
minimum elong	13587 Feb 22 01:08	12° K 17'05	1°22'03	evening set	13593 Apr 24 17:55	28° G 07'01	
max. Earth dist.	13587 Feb 21 12:46	12° K 13'13	10.41428 AU		13593 May 09 21:44	0° II	
morning rise	13587 Mar 11 16:32	14° K 28'24					
retrograde	13587 Jun 22 05:08	22° K 09'37		conjunction	13593 May 12 00:58	0° II 16'03	-0°50'14
opposition	13587 Aug 28 18:09	18° K 45'42	1°30'54	minimum elong	13593 May 12 00:56	0° II 16'02	0°51'05
min. Earth dist.	13587 Aug 29 03:57	18° K 43'45	8.40962 AU	max. Earth dist.	13593 May 11 17:05	0° II 13'35	10.46551 AU
direct	13587 Nov 05 09:28	15° K 18'52		morning rise	13593 May 29 05:08	2° II 24'17	
evening set	13588 Feb 18 00:59	23° K 08'07		retrograde	13593 Sep 07 18:08	9° II 59'07	
				opposition	13593 Nov 14 22:12	6° II 37'26	-1°14'47
conjunction	13588 Mar 06 17:40	25° K 20'00	1°04'02	min. Earth dist.	13593 Nov 15 03:30	6° II 36'24	8.47972 AU
minimum elong	13588 Mar 06 17:43	25° K 20'01	1°04'14	direct	13594 Jan 23 11:50	3° II 12'27	
max. Earth dist.	13588 Mar 06 04:32	25° K 15'53	10.40542 AU	evening set	13594 May 07 23:34	10° II 57'19	
morning rise	13588 Mar 24 08:05	27° K 31'18					
	13588 Apr 14 08:44	0° Y		conjunction	13594 May 25 03:50	13° II 05'18	-1°09'55
retrograde	13588 Jul 04 12:40	5° Y 11'37		minimum elong	13594 May 25 03:48	13° II 05'17	1°10'53
opposition	13588 Sep 10 01:03	1° Y 48'02	1°06'55	max. Earth dist.	13594 May 24 22:21	13° II 03'35	10.49408 AU
min. Earth dist.	13588 Sep 10 11:39	1° Y 45'55	8.40406 AU	morning rise	13594 Jun 11 05:35	15° II 12'34	
	13588 Oct 03 21:51	30° R K		retrograde	13594 Sep 20 21:23	22° II 46'25	
direct	13588 Nov 17 20:48	28° K 21'04		opposition	13594 Nov 28 07:14	19° II 24'59	-1°37'02
	13589 Jan 01 03:53	0° Y		min. Earth dist.	13594 Nov 28 10:45	19° II 24'18	8.51011 AU
evening set	13589 Mar 02 17:18	6° Y 11'16		direct	13595 Feb 05 21:30	16° II 00'41	
				evening set	13595 May 21 02:00	23° II 42'49	
conjunction	13589 Mar 20 08:56	8° Y 23'01	0°43'08				
minimum elong	13589 Mar 20 08:57	8° Y 23'02	0°43'06	conjunction	13595 Jun 07 03:33	25° II 49'41	-1°26'02
max. Earth dist.	13589 Mar 19 18:58	8° Y 18'39	10.40374 AU	minimum elong	13595 Jun 07 03:31	25° II 49'41	1°27'05
morning rise	13589 Apr 06 21:59	10° Y 34'05		max. Earth dist.	13595 Jun 07 00:21	25° II 48'41	10.52544 AU
retrograde	13589 Jul 17 19:30	18° Y 13'21		morning rise	13595 Jun 24 03:13	27° II 56'01	
opposition	13589 Sep 23 09:05	14° Y 50'09	0°39'27		13595 Jul 11 14:21	0° G	
min. Earth dist.	13589 Sep 23 20:14	14° Y 47'56	8.40589 AU	retrograde	13595 Oct 03 22:06	5° G 28'58	
direct	13589 Dec 01 09:29	11° Y 23'15		opposition	13595 Dec 11 15:23	2° G 07'42	-1°54'22
evening set	13590 Mar 16 08:32	19° Y 13'41		min. Earth dist.	13595 Dec 11 16:49	2° G 07'25	8.54260 AU
					13596 Jan 10 13:36	30° R II	
conjunction	13590 Apr 02 22:36	21° Y 25'05	0°20'01	direct	13596 Feb 19 07:05	28° II 44'07	
minimum elong	13590 Apr 02 22:37	21° Y 25'05	0°19'45		13596 Mar 29 05:04	0° G	
max. Earth dist.	13590 Apr 02 08:26	21° Y 20'39	10.40944 AU	evening set	13596 Jun 02 01:01	6° G 23'07	
morning rise	13590 Apr 20 09:58	23° Y 35'43					
	13590 Jun 23 16:13	0° G		conjunction	13596 Jun 19 00:19	8° G 28'58	-1°37'52
retrograde	13590 Jul 31 02:19	1° G 13'49		minimum elong	13596 Jun 19 00:18	8° G 28'57	1°38'56
	13590 Sep 07 04:06	30° R Y		max. Earth dist.	13596 Jun 18 23:51	8° G 28'49	10.55815 AU
opposition	13590 Oct 06 17:47	27° Y 51'02	0°10'00	morning rise	13596 Jul 05 22:23	10° G 34'25	
min. Earth dist.	13590 Oct 07 04:35	27° Y 48'54	8.41505 AU	retrograde	13596 Oct 15 22:33	18° G 06'34	
direct	13590 Dec 14 22:15	24° Y 24'22		opposition	13596 Dec 23 22:13	14° G 45'19	-2°06'02
desc. node	13591 Feb 09 15:46	27° Y 01'38		min. Earth dist.	13596 Dec 23 20:47	14° G 45'36	8.57554 AU
	13591 Mar 11 00:35	0° G		direct	13597 Mar 03 13:56	11° G 22'28	
evening set	13591 Mar 29 22:05	2° G 14'24		evening set	13597 Jun 14 20:34	18° G 58'02	
conjunction	13591 Apr 16 10:09	4° G 25'12	-0°04'10	conjunction	13597 Jul 01 18:21	21° G 03'01	-1°44'56
minimum elong	13591 Apr 16 10:09	4° G 25'12	0°04'39	minimum elong	13597 Jul 01 18:21	21° G 03'01	1°45'57
behind sun begin	13591 Apr 16 03:07	4° G 23'02		max. Earth dist.	13597 Jul 01 21:24	21° G 03'58	10.59038 AU
behind sun end	13591 Apr 16 17:10	4° G 27'23		morning rise	13597 Jul 18 15:19	23° G 07'45	
max. Earth dist.	13591 Apr 15 20:59	4° G 21'05	10.42217 AU		13597 Oct 01 06:50	0° Q	
morning rise	13591 May 03 19:25	6° G 35'12		retrograde	13597 Oct 28 22:16	0° Q 39'12	
retrograde	13591 Aug 13 07:36	14° G 12'08			13597 Nov 25 23:21	30° R G	
opposition	13591 Oct 20 03:08	10° G 49'45	-0°19'54	opposition	13598 Jan 06 03:28	27° G 17'52	-2°11'35
min. Earth dist.	13591 Oct 20 12:29	10° G 47'55	8.43100 AU	min. Earth dist.	13598 Jan 05 23:11	27° G 18'41	8.60683 AU
direct	13591 Dec 28 12:07	7° G 23'33		direct	13598 Mar 16 17:21	23° G 55'40	
	13592 Apr 09 16:33	15° G			13598 Jun 15 05:05	0° Q	
evening set	13592 Apr 11 09:18	15° G 12'27		evening set	13598 Jun 27 13:13	1° Q 27'47	

conjunction	13598 Jul 14 10:04	3°Ω32'04 -1°46'59
minimum elong	13598 Jul 14 10:05	3°Ω32'04 1°47'54
max. Earth dist.	13598 Jul 14 16:09	3°Ω33'57 10.61994 AU
morning rise	13598 Jul 31 06:32	5°Ω36'16
retrograde	13598 Nov 10 20:20	13°Ω07'09
opposition	13599 Jan 19 06:59	9°Ω45'39 -2°10'54
min. Earth dist.	13599 Jan 19 00:39	9°Ω46'52 8.63423 AU
direct	13599 Mar 29 18:45	6°Ω24'02
evening set	13599 Jul 10 03:21	13°Ω52'52
	13599 Jul 19 07:42	15°Ω

conjunction	13599 Jul 26 23:51	15°Ω56'42 -1°44'01
minimum elong	13599 Jul 26 23:53	15°Ω56'42 1°44'48
max. Earth dist.	13599 Jul 27 07:50	15°Ω59'09 10.64468 AU
morning rise	13599 Aug 12 20:42	18°Ω00'37
retrograde	13599 Nov 23 18:20	25°Ω31'12
opposition	13600 Feb 01 08:59	22°Ω09'29 -2°04'06
min. Earth dist.	13600 Feb 01 01:35	22°Ω10'54 8.65591 AU
direct	13600 Apr 10 16:58	18°Ω48'22
evening set	13600 Jul 21 15:27	26°Ω14'15

conjunction	13600 Aug 07 12:19	28°Ω17'51 -1°36'13
minimum elong	13600 Aug 07 12:21	28°Ω17'52 1°36'51
max. Earth dist.	13600 Aug 07 21:16	28°Ω20'36 10.66333 AU
	13600 Aug 21 10:12	0°♍
morning rise	13600 Aug 24 10:20	0°♍21'46
retrograde	13600 Dec 05 14:40	7°♍52'20
opposition	13601 Feb 13 09:21	4°♍30'18 -1°51'36
min. Earth dist.	13601 Feb 13 00:57	4°♍31'54 8.67117 AU
direct	13601 Apr 23 12:59	1°♍09'31
evening set	13601 Aug 03 02:27	8°♍32'55

conjunction	13601 Aug 20 00:24	10°♍36'33 -1°24'01
minimum elong	13601 Aug 20 00:26	10°♍36'34 1°24'28
max. Earth dist.	13601 Aug 20 10:50	10°♍39'45 10.67561 AU
morning rise	13601 Sep 06 00:02	12°♍40'39
retrograde	13601 Dec 18 09:32	20°♍11'22