| min. Earth dist. | 9103 Dec 12 03:01 | 23° Ⅲ 30'41 | 3.98725 AU | min. Earth dist. | 9109 Jun 05 12:06 | 20° х 20′49 | 4.38396 AU |
|------------------|----------------------------------------|-----------------------|---------------------|------------------|----------------------------------------|----------------------------------|-------------|
| | | | | | | | |
| opposition | 9103 Dec 11 12:23 | 23° Ⅱ 35'31 | -1°10'04 | opposition | 9109 Jun 06 05:27 | 20° ₹ 15'06 | 1°08'19 |
| retrograde | 9103 Oct 12 13:18 | 28° Ⅱ 32'07 | | retrograde | 9109 Apr 06 19:37 | 25° х 14′51 | |
| morning rise | 9103 Jun 05 05:07 | 8° Ⅱ 42'44 | | morning rise | 9108 Dec 04 12:59 | 7° ∡ ³39'24 | |
| minimum elong | 9103 May 23 07:07 | 5° Ⅱ 38'42 | U*44 ² 6 | | 9108 Nov 22 17:37 | 5°× 7 '03'07 | 0.31209 AU |
| 3 | • | | | max. Earth dist. | | | 6.31209 AU |
| conjunction | 9103 May 23 07:08 | 5° Ⅱ 38'43 | -0°44'12 | minimum elong | 9108 Nov 21 02:21 9108 Nov 21 02:20 | 4°×741'23 | 0°44'18 |
| | | | | conjunction | 9108 Nov 21 02:21 | 4° х 41′23 | 0°44'03 |
| max. Earth dist. | 9103 May 21 18:02 | 5° Ⅱ 16'40 | 6.05854 AU | - | | | |
| evening set | 9103 May 10 09:59 | 2° Ⅱ 35′28 | | evening set | 9108 Nov 07 14:46 | 1° ∡ ′42'39 | |
| | 9103 Apr 29 07:44 | $\Pi^{\circ}0$ | | | 9108 Oct 30 19:11 | 0° ∡ 7 | |
| | 9103 Feb 03 23:19 | 15° 8 | | | 9108 Aug 04 12:57 | 15°M | |
| direct | 9103 Jan 04 12:25 | 13° 8 32'26 | | direct | 9108 Jul 04 09:00 | 13°M29'10 | |
| T' . | 9102 Dec 04 19:59 | 15°R 8 | | T | 9108 Jun 03 11:50 | 15°RM | |
| mm. Earth dist. | | _ | 4.14034 AU | opposition | , | | 0 33'40 |
| min. Earth dist. | 9102 Nov 04 13:00 9102 Nov 06 05:20 | .T. | 4.14034 AU | opposition | 9108 May 04 03:19 9108 May 05 13:15 | 18°M29'08 | 0°55'40 |
| opposition | 9102 Nov 04 19:06 | 18° 8 30'03 | -0°56'14 | min. Earth dist. | 9108 May 04 05:19 | 18°M39'51 | 4.22944 AU |
| retrograde | 9102 Sep 05 08:47 | 23° 8 24'15 | | retrograde | 9108 Mar 06 14:41 | 23° M $32'02$ | |
| | 9102 Jun 19 02:07 | 15° 8 | | | 9107 Dec 19 01:51 | 15° ™ | |
| morning rise | • | | | morning rise | | | |
| morning rise | 9102 May 02 11:38 | 4° 8 50'47 | | morning rise | 9107 Nov 01 03:25 | 4° ™ 48'27 | |
| minimum elong | 9102 Apr 19 17:25 | 1° 8 55'37 | 0°28'39 | max. Earth dist. | 9107 Oct 20 20:58 | 2°M13'49 | 6.14403 AU |
| conjunction | 9102 Apr 19 17:26 | 1° 8 55'37 | | minimum elong | 9107 Oct 18 11:49 | 1°M41'00 | 0°28'14 |
| | 0102 4 10 17 20 | 100 55125 | 0020121 | | | | |
| | .102.1pi 17 11.55 | . 024 40 | 5.22570710 | conjunction | 9107 Oct 18 11:50 | 1°M41'01 | 0°28'06 |
| max. Earth dist. | 9102 Apr 17 11:35 | _ | 6.22690 AU | | | | |
| | 9102 Apr 11 07:19 | 0° 8 | | | 9107 Oct 11 03:54 | 0° M. | |
| evening set | 9102 Apr 06 22:49 | 29° Y '00'33 | | evening set | 9107 Oct 04 20:43 | 28° ≏ 33'28 | |
| direct | 9101 Dec 02 10:51 | 10° Y 48'49 | | direct | 9107 May 31 04:40 | 9° ≏ 29'13 | |
| min. Earth dist. | 9101 Oct 03 04:32 | 15° Y 35'48 | 4.30910 AU | opposition | 9107 Apr 02 15:06 | 14° £ 27'06 | 0°23'34 |
| opposition | 9101 Oct 01 13:01 | 15° Y 48′28 | | min. Earth dist. | 9107 Mar 31 23:53 | 14° Ω 40'25 | 4.06121 AU |
| retrograde | 9101 Aug 01 15:51 | | 0024150 | retrograde | | | 4.06121 ATT |
| • | | 20° Υ 41'26 | | retrograda | 9100 Sep 27 03:28 9107 Feb 02 00:42 | 0 = 19° £ 31'27 | |
| morning rise | 9101 Mar 19 13.22 9101 Mar 31 23:18 | 3° Υ 14'24 | | morning 1150 | 9106 Sep 23 06:39 9106 Sep 27 03:28 | 29 III/33 34 0° Ω | |
| behind sun end | 9101 Mar 19 13:22 | 0° Υ 29'55 | | morning rise | 9106 Sep 13 22:30 9106 Sep 25 06:39 | 20° my 33'34 | 3.70713 AU |
| behind sun begin | 9101 Mar 18 21:49 | 0° Υ 21'22 | 3 0.51 | max. Earth dist. | 9106 Sep 13 22:50 | 26° m 52'11 | 5.98975 AU |
| minimum elong | 9101 Mar 19 05:36 | 0°Υ25'38 | 0°04'51 | behind sun end | 9106 Sep 11 03:22 9106 Sep 11 22:11 | 26° m) 23'11 | |
| conjunction | 9101 Mar 19 05:37 | 0° Y 25'39 | -0°04'53 | behind sun begin | 9106 Sep 11 05:22 | 26° m/13'13 | - |
| | | | | minimum elong | 9106 Sep 11 13:47 | 26° m) 18'12 | 0°01'23 |
| | 9101 Mar 17 07:11 | $0^{\circ}\mathbf{Y}$ | | conjunction | 9106 Sep 11 13:47 | 26° m 18'12 | 0°01'25 |
| max. Earth dist. | 9101 Mar 16 23:41 | 29° ¥ 55'51 | 6.38193 AU | | | | |
| evening set | 9101 Mar 06 10:17 | 27° ₩ 36'23 | | evening set | 9106 Aug 28 22:51 | 23°M 03'32 | |
| desc. node | 9101 Jan 01 10:02 | 15° ₩ 11'16 | | asc. node | 9106 Aug 23 16:28 | 21°M/48'48 | |
| direct | 9100 Nov 01 05:41 | 10°) €04'39 | | direct . | 9106 Apr 24 02:25 | 3° m 14'13 | |
| | - | | 4.4402/AU | ** | | - | -U 19'31 |
| min. Earth dist. | 9100 Sep 01 00:42 | 14° H 54'39 | 4.44027 AU | opposition | 9106 Feb 25 04:07 | 8° Mp 09'48 | |
| opposition | 9100 Aug 30 14:19 | 15°) €05'38 | 0°11'19 | min. Earth dist. | 9106 Feb 23 21:17 | 8° m) 20'16 | 3.93709 AU |
| retrograde | 9100 Jun 30 14:18 | 19° ¥ 58'34 | | retrograde | 9105 Dec 27 19:22 | 13° m) 12'55 | |
| morning rise | 9100 Mar 01 18:44 | 3°) 12'42 | | | 9105 Sep 19 05:25 | 0° m) | |
| minimum elong | 9100 Feb 16 22:49 | 0° ∺ 26'55 | 0°19'27 | morning rise | 9105 Aug 17 19:17 | 22° Ω 25′05 | |
| conjunction | 9100 Feb 16 22:48 | 0° ∺ 26'55 | 0°19'19 | max. Earth dist. | 9105 Aug 05 16:43 | 19° Ω 28'13 | 5.90824 AU |
| | | | | minimum elong | 9105 Aug 04 06:50 | 19° Ω 07'32 | |
| max. Earth dist. | 9100 Feb 15 06:43 | 0°π0517 | 6.47987 AU | conjunction | 9105 Aug 04 06:49 | 19° Ω 07'31 | |
| Easth dist | 9100 Feb 14 20:34 9100 Feb 15 06:43 | 0° ₩ 05'17 | C 47007 ATT | | 0105 4 04 06-40 | 100 007121 | 0926155 |
| evening sec | 9100 Feb 14 20:54 | 0° ₩ | | evening sec | 7103 Jul 21 20.37 | 15 0651 15 | |
| evening set | 9100 Feb 04 00:58 | 27° ≈ 40'17 | | evening set | 9105 Jul 21 20:39 | 15° Ω 51'13 | |
| | | | | | | | |

| conjunction | 9123 Jan 27 10:05 | 9° ≈ 38'16 | 0°33'28 | minimum elong | 9128 Jul 07 13:25 | 22° © 04'55 | 0°41'29 |
|--------------------------------|----------------------------------------|--------------------------------------------------|-------------|----------------------|----------------------------------------|---------------------------------|--------------|
| minimum elong | 9123 Jan 27 10:06 | 9° ≈ 38'17 | 0°33'41 | max. Earth dist. | 9128 Jul 07 17:27 | 22° © 07'23 | 5.91472 AU |
| max. Earth dist. | 9123 Jan 26 12:48 | 9°≈26'53 | 6.50302 AU | morning rise | 9128 Jul 20 20:38 | 25°9519'45 | 3.71472710 |
| morning rise | 9123 Feb 09 08:37 | 12° ≈ 24'07 | 0.50502710 | morning rise | 9128 Aug 09 09:49 | 0°Ω | |
| | 9123 Feb 21 16:59 | 15° ≈ | | | 9128 Nov 02 18:35 | 15°Ω | |
| retrograde | 9123 Jun 09 15:29 | 28° ≈ 57'48 | | retrograde | 9128 Nov 30 00:16 | 16° Ω 12'26 | |
| opposition | 9123 Aug 09 15:33 | 24°≈04'02 | 0°34'57 | C | 9128 Dec 27 04:56 | 15°R Ω | |
| min. Earth dist. | 9123 Aug 10 15:05 | 23° ≈ 56'31 | 4.49548 AU | opposition | 9129 Jan 28 10:53 | 11° Ω 11'37 | -0°48'28 |
| direct | 9123 Oct 11 08:47 | 19° ≈ 02'36 | | min. Earth dist. | 9129 Jan 27 18:04 | 11° Ω 17'17 | 3.90043 AU |
| | 9124 Jan 14 05:50 | 0°) € | | direct | 9129 Mar 27 10:05 | 6° Ω 17'01 | |
| evening set | 9124 Feb 13 12:31 | 6° ∺ 15'49 | | | 9129 Jun 11 20:38 | 15° Ω | |
| max. Earth dist. | 9124 Feb 24 12:43 | 8°) 38′23 | 6.46570 AU | evening set | 9129 Aug 01 08:33 | 26° Ω 25'49 | |
| | | | | | | | |
| conjunction | 9124 Feb 26 09:24 | 9° ∺ 02'35 | 0°12'52 | conjunction | 9129 Aug 14 20:30 | 29° Ω 42'41 | |
| minimum elong | 9124 Feb 26 09:24 | 9°) €02'35 | 0°13'00 | minimum elong | 9129 Aug 14 20:31 | 29° Ω 42'42 | 0°19'51 |
| behind sun begin | 9124 Feb 26 04:32 | 8°) ₹59'58 | | F . 1 . 1 | 9129 Aug 16 00:56 | 0° m) | 5 01 460 477 |
| behind sun end | 9124 Feb 26 14:16 | 9°) €05'12 | | max. Earth dist. | 9129 Aug 16 13:27 | ~ | 5.91460 AU |
| morning rise | 9124 Mar 10 04:27 | 11°) (48'35 | | morning rise | 9129 Aug 28 10:49 | 3° m 00'44 | |
| retrograde | 9124 Jul 09 07:48 | 28°) (40'54 | 0001117 | retrograde | 9130 Jan 07 03:02 | 23° Mp 42'14 | 2.05/71.411 |
| opposition | 9124 Sep 08 08:03 | 23°) (48'01 23°) (36'25 | 0°01'17 | min. Earth dist. | 9130 Mar 06 01:21 | - | 3.95671 AU |
| min. Earth dist. desc. node | 9124 Sep 09 20:21 9124 Sep 22 08:32 | 23° X 36°25 22° X 02'50 | 4.41669 AU | opposition direct | 9130 Mar 07 11:33 | 18° Mp 38'34 | -0-0/38 |
| direct | 9124 Sep 22 08.32 9124 Nov 09 20:21 | 18°) (47'17 | | asc. node | 9130 May 04 12:00 9130 May 14 15:59 | 13° Tp 42'26 13° Tp 53'12 | |
| direct | 9124 Nov 09 20:21 9125 Feb 12 18:42 | 16 χ 4/1/ | | asc. node | 9130 Aug 24 18:43 | 0° ⊡ | |
| evening set | 9125 Mar 15 01:08 | 6° Υ 25'54 | | evening set | 9130 Sep 08 09:05 | ა = 3° ჲ 24'01 | |
| max. Earth dist. | 9125 Mar 25 13:07 | 8° Υ 45'37 | 6.35044 AU | evening set | 7130 Sep 00 07.03 | J — 2401 | |
| max. Darm dist. | 7123 Will 23 15.07 | 0 1 4337 | 0.55044 710 | conjunction | 9130 Sep 22 00:48 | 6° ₽ 37'33 | 0°09'27 |
| conjunction | 9125 Mar 27 19:57 | 9° Y 16'09 | -0°11'44 | minimum elong | 9130 Sep 22 00:48 | 6° £ 37'33 | 0°09'29 |
| minimum elong | 9125 Mar 27 19:56 | 9° Υ 16'09 | 0°11'46 | behind sun begin | 9130 Sep 21 17:52 | 6° £ 33'28 | |
| behind sun begin | 9125 Mar 27 14:18 | 9° Y 13'01 | | behind sun end | 9130 Sep 22 07:44 | 6° £ 41'37 | |
| behind sun end | 9125 Mar 28 01:35 | 9° Y 19'16 | | max. Earth dist. | 9130 Sep 24 13:42 | 7° Ω 13'33 | 6.02086 AU |
| morning rise | 9125 Apr 09 13:20 | 12° Y ′06'00 | | morning rise | 9130 Oct 05 17:54 | 9° ჲ 51'30 | |
| retrograde | 9125 Aug 10 22:52 | 29° Y 46'41 | | retrograde | 9131 Feb 11 17:30 | 29° £ 32'21 | |
| opposition | 9125 Oct 10 18:12 | 24° Y 53'27 | -0°34'31 | min. Earth dist. | 9131 Apr 10 17:47 | 24° ≏ 41'22 | 4.10031 AU |
| min. Earth dist. | 9125 Oct 12 09:55 | 24° Y 40'42 | 4.27139 AU | opposition | 9131 Apr 12 08:47 | 24° ≏ 28'09 | 0°34'08 |
| direct | 9125 Dec 11 09:58 | 19° Y 54'14 | | direct | 9131 Jun 10 04:44 | 19° ≙ 29'41 | |
| | 9126 Mar 08 20:44 | 9° 8 | | | 9131 Sep 06 06:17 | 0° M | |
| evening set | 9126 Apr 15 22:42 | 8° 8 17'01 | | evening set | 9131 Oct 14 20:10 | 8°M21'27 | |
| max. Earth dist. | 9126 Apr 26 13:20 | 10° 8 43'40 | 6.18580 AU | | | | |
| | | 4.4 | | conjunction | 9131 Oct 28 10:35 | 11°M26'46 | 0°33'48 |
| conjunction | 9126 Apr 28 17:30 | 11° 8 13'50 | | minimum elong | 9131 Oct 28 10:33 | 11°M26'46 | 0°33'59 |
| minimum elong | 9126 Apr 28 17:29 | 11° 8 13'49 | 0°34'03 | max. Earth dist. | 9131 Oct 30 16:52 | 11°M57'38 | 6.18765 AU |
| morning rise | 9126 May 11 12:21 | 14° 8 10'58 | | morning rise | 9131 Nov 11 01:13 | 14°M31'48 | |
| | 9126 May 15 01:49 | 15° 8 0°Ⅱ | | | 9131 Nov 13 03:23 | 15°M | |
| | 9126 Aug 01 06:18 | 0°Щ 3°Щ03′06 | | 4 | 9132 Jan 31 18:15 | 0°×7 2°×755150 | |
| retrograde | 9126 Sep 15 06:30 9126 Oct 30 21:49 | 30°R S | | retrograde | 9132 Mar 15 13:59 9132 Apr 28 09:57 | 2° ₹ 55'59 30°RM | |
| opposition | 9126 Oct 30 21:49 9126 Nov 14 14:45 | 28° 8 08'17 | 1002'08 | min. Earth dist. | 9132 May 13 10:38 | | 4.27360 AU |
| min. Earth dist. | 9126 Nov 14 14.45 9126 Nov 15 21:15 | | 4.09887 AU | opposition | 9132 May 14 15:49 | 27°M53'46 | 1°01'09 |
| direct | 9127 Jan 13 22:58 | 23° 8 11'12 | 4.07007 AU | direct | 9132 Jul 13 19:38 | 22°M53'23 | 1 010) |
| uncet | 9127 Mar 23 07:53 | 0°II | | ancer | 9132 Sep 23 20:25 | 0° √ | |
| evening set | 9127 May 19 23:16 | 12° ∏ 26'46 | | evening set | 9132 Nov 16 23:26 | 10° х 54'32 | |
| | ,, u , -, - - | | | 0.0000 | | | |
| conjunction | 9127 Jun 01 21:41 | 15° Ⅲ 32'16 | -0°45'56 | conjunction | 9132 Nov 30 09:43 | 13° ₹ '51'02 | 0°45'57 |
| minimum elong | 9127 Jun 01 21:41 | 15° Ⅲ 32'16 | 0°46'12 | minimum elong | 9132 Nov 30 09:43 | 13° ∡ ′51′02 | 0°46'12 |
| max. Earth dist. | 9127 May 31 15:47 | 15° Ⅱ 14'20 | 6.02045 AU | max. Earth dist. | 9132 Dec 01 19:01 | 14° ₹ 09'18 | 6.35338 AU |
| morning rise | 9127 Jun 14 21:10 | 18° Ⅲ 38'41 | | morning rise | 9132 Dec 13 18:37 | 16° ₰ ⁴46'38 | |
| | 9127 Aug 05 00:53 | 0 \circ \odot | | | 9133 Feb 21 06:43 | 5°0 | |
| retrograde | 9127 Oct 23 02:08 | 8°9345'55 | | retrograde | 9133 Apr 15 07:35 | 4° る 06'36 | |
| opposition | 9127 Dec 21 21:01 | 3° 5 48'32 | | | 9133 Jun 08 04:16 | 30°₹ ৴ | |
| min. Earth dist. | 9127 Dec 22 06:32 | | 3.95633 AU | opposition | 9133 Jun 14 20:21 | 29° х 07'43 | 1°08'05 |
| | 9128 Jan 23 21:05 | 30°R∏ | | min. Earth dist. | 9133 Jun 14 07:42 | 29° √ 11'52 | 4.41928 AU |
| direct | 9128 Feb 18 18:58 | 28° ∏ 53′28 | | direct | 9133 Aug 15 06:27 | 24° ₹ 06′22 | |
| | 9128 Mar 15 13:52 | 0.22 | | | 9133 Oct 20 09:32 | 0°る | |
| evening set | 9128 Jun 24 08:37 | 18° © 51'28 | | evening set | 9133 Dec 18 23:36 | 11° る 30'55 | |
| conjunction | 9128 Jul 07 13:24 | 22° © 04'54 | -0°41'13 | conjunction | 9134 Jan 01 04:28 | 14° る 20'44 | 0°44'20 |
| conjunction | 7120 Jul 07 13.24 | 22 204 34 | 0 71 13 | conjunction | 7137 Jan 101 104.20 | 17 02044 | U TT 2U |

| opposition | 9144 May 19 03:53 9144 Jun 08 08:42 | 2° ₹ 33'24 30°R M | 1°03'20 | retrograde opposition | 9149 Aug 20 15:46 9149 Oct 20 07:24 | 9° と 09'52 4° と 16'24 | -0°43'41 |
|------------------|----------------------------------------|------------------------------------|------------|--------------------------------|----------------------------------------|------------------------------------------------|--------------|
| direct | 9144 Jul 18 12:34 9144 Aug 28 01:01 | 27°M32'51 0° <i>₹</i> | | min. Earth dist. | 9149 Oct 21 22:32 9149 Nov 29 08:40 | 4° ႘ 03'48 30° _R Υ | 4.21808 AU |
| evening set | 9144 Nov 21 14:08 | 15° ∡ °27′03 | | direct | 9149 Dec 20 15:10 9150 Jan 10 20:11 | 29° Y 17'47 0° ႘ | |
| conjunction | 9144 Dec 04 23:30 | 18° ∡ °22'20 | 0°46'30 | | 9150 Apr 12 10:15 | 15° 8 | |
| minimum elong | 9144 Dec 04 23:29 | 18° ∡ °22'20 | 0°46'46 | evening set | 9150 Apr 25 07:47 | 17° 8 57'22 | |
| max. Earth dist. | 9144 Dec 06 03:10 | 18° ∡ ³37'27 | 6.37503 AU | max. Earth dist. | 9150 May 06 03:10 | 20° 8 28'36 | 6.13155 AU |
| morning rise | 9144 Dec 18 07:42 | 21° ∡ 16'45 | | | | | |
| | 9145 Jan 29 23:58 | 0° ろ | | conjunction | 9150 May 08 03:21 | 20° 8 56'48 | |
| retrograde | 9145 Apr 19 12:53 | 8° る 29'14 | 1005106 | minimum elong | 9150 May 08 03:20 | 20° 8 56'47 | 0°38'52 |
| opposition | 9145 Jun 19 02:43 | 3°₹30'48 | 1°07'26 | morning rise | 9150 May 20 23:18 | 23° 8 56'43 | |
| min. Earth dist. | 9145 Jun 18 17:40 | 3° ප 33'46 | 4.43594 AU | | 9150 Jun 16 16:09 | 0°П | |
| | 9145 Jul 19 00:40 | 30°R ✓ | | retrograde | 9150 Sep 25 18:35 | 13° Ⅱ 12'55 | |
| direct | 9145 Aug 19 17:31 | 28° × ⁷ 29'18 | | opposition | 9150 Nov 24 23:07 | 8° Ⅱ 17'33 | |
| | 9145 Sep 20 18:31 | 0°る | | min. Earth dist. | 9150 Nov 25 23:44 | 8° Ⅱ 09'30 | 4.04866 AU |
| evening set | 9145 Dec 23 07:51 | 15° る 49'59 | | direct | 9151 Jan 23 20:22 | 3° Ⅱ 21'12 | |
| | 0146 1 05 10 10 | 10072000 | 00.4210.4 | evening set | 9151 May 30 02:23 | 22°II52'28 | 5.07020 444 |
| conjunction | 9146 Jan 05 12:10 | 18° そ 39'08 | 0°43'04 | max. Earth dist. | 9151 Jun 11 06:28 | 25°Щ48'32 | 5.97929 AU |
| minimum elong | 9146 Jan 05 12:11 | 18°る39'08 | 0°43'20 | | 0151 1 10 00 05 | 260 T 00126 | 0046126 |
| max. Earth dist. | 9146 Jan 05 11:07 | 18°る38'34 | 6.47909 AU | conjunction | 9151 Jun 12 02:25 | 26° Ⅱ 00'36 | |
| morning rise | 9146 Jan 18 14:17 | 21° る 27'11 | | minimum elong | 9151 Jun 12 02:25 | 26°Ⅲ00'36 | 0°46'43 |
| . 1 | 9146 Mar 02 05:09 | 0° ≈ | | morning rise | 9151 Jun 25 03:55 | 29° Ⅱ 09'50 | |
| retrograde | 9146 May 19 03:26 | 8°≈05'59 | 0052122 | | 9151 Jun 28 15:38 | 0°© | |
| opposition | 9146 Jul 19 01:20 | 3°≈10'38 | 0°53'33 | retrograde | 9151 Nov 03 04:06 | 19°535'24 | 1907/02 |
| min. Earth dist. | 9146 Jul 19 11:38 | 3°≈07'19 30°Ŗる | 4.50159 AU | opposition min. Earth dist. | 9152 Jan 01 19:23 9152 Jan 01 21:03 | 14° © 37'04 14° © 36'31 | 3.92909 AU |
| direct | 9146 Aug 14 20:13 9146 Sep 19 11:52 | 30 KO 28° ろ 08'58 | | direct | 9152 Feb 29 09:20 | 9°542'25 | 3.92909 AU |
| direct | 9146 Oct 25 11:10 | 28 3 08 38 0° ≈ | | | 9152 Jul 05 01:53 | 9 9 42 23 29° 9 47'17 | |
| | 9147 Jan 21 10:33 | 0 ≈ 15°≈ | | evening set | 9152 Jul 05 01.35 9152 Jul 05 22:45 | 29 994/1/ 0°Ω | |
| evening set | 9147 Jan 21 10.33 9147 Jan 22 19:08 | 15 ≈ 15°≈17'17 | | | 9132 Jul 03 22.43 | 0 86 | |
| evening set | 914/ Jan 22 19.06 | 13 🗪 1/1/ | | conjunction | 9152 Jul 18 08:49 | 3° Ω 02'16 | 0°36'30 |
| conjunction | 9147 Feb 04 18:38 | 18° ≈ 03'45 | 0°28'20 | minimum elong | 9152 Jul 18 08:51 | 3°Ω02'17 | |
| minimum elong | 9147 Feb 04 18:39 | 18°≈03'45 | 0°28'32 | max. Earth dist. | 9152 Jul 19 02:00 | 3°Ω12'47 | 5.90438 AU |
| max. Earth dist. | 9147 Feb 03 12:52 | 17°≈47'48 | 6.50170 AU | morning rise | 9152 Jul 31 18:13 | 6° Ω 18'37 | 3.70436 AC |
| morning rise | 9147 Feb 17 16:04 | 20°≈49'14 | 0.30170710 | morning rise | 9152 Sep 07 01:18 | 15° Ω | |
| morning rise | 9147 Apr 04 19:11 | 0° ∀ | | retrograde | 9152 Dec 11 00:37 | 27°Ω13'09 | |
| retrograde | 9147 Jun 18 01:33 | 7° ¥ 25'05 | | min. Earth dist. | 9153 Feb 07 10:05 | | 3.90860 AU |
| opposition | 9147 Aug 18 01:44 | 2°) (31'42 | 0°26'09 | opposition | 9153 Feb 08 09:43 | 22° Ω 11'22 | |
| min. Earth dist. | 9147 Aug 19 06:31 | 2°\(\frac{1}{2}2'30\) | 4.48051 AU | direct | 9153 Apr 07 07:06 | 17° Ω 16'33 | 0 20 02 |
| | 9147 Sep 07 19:42 | 30°R ≈ | | | 9153 Jul 11 19:09 | 0° m) | |
| direct | 9147 Oct 19 19:44 | 27° ≈ 30'20 | | evening set | 9153 Aug 12 05:03 | 7° m 19'19 | |
| | 9147 Nov 30 18:04 | 0° ∀ | | <i>3</i> | | | |
| evening set | 9148 Feb 21 22:43 | 14°)(49'03 | | conjunction | 9153 Aug 25 18:15 | 10° m 35'35 | -0°11'39 |
| max. Earth dist. | 9148 Mar 03 17:17 | 17° ¥ 09'30 | 6.43789 AU | minimum elong | 9153 Aug 25 18:16 | 10° m) 35'36 | 0°11'45 |
| | | | | behind sun begin | 9153 Aug 25 12:25 | 10° m/32'05 | |
| conjunction | 9148 Mar 05 18:55 | 17°) ₹36'33 | 0°06'09 | behind sun end | 9153 Aug 26 00:07 | 10° m 39'07 | |
| minimum elong | 9148 Mar 05 18:56 | 17°) 36′34 | 0°06'13 | max. Earth dist. | 9153 Aug 27 18:45 | 11° M 04'54 | 5.93994 AU |
| behind sun begin | 9148 Mar 05 11:22 | 17° ¥ 32′28 | | morning rise | 9153 Sep 08 09:53 | 13° m 52'55 | |
| behind sun end | 9148 Mar 06 02:29 | 17°) 40′40 | | | 9153 Nov 25 08:25 | 0∘ ⊽ | |
| morning rise | 9148 Mar 18 13:21 | 20° ∺ 23'24 | | retrograde | 9154 Jan 17 09:11 | 4° ≙ 18'46 | |
| | 9148 May 05 01:56 | 0° Y | | asc. node | 9154 Feb 01 05:34 | 3° ჲ 56'34 | |
| desc. node | 9148 Jun 12 06:21 | 5° Y 31'13 | | | 9154 Mar 12 06:57 | 30°R, Mp | |
| retrograde | 9148 Jul 18 04:55 | 7° Y °27'27 | | min. Earth dist. | 9154 Mar 16 07:09 | 29° m 27'23 | 3.99597 AU |
| opposition | 9148 Sep 17 04:23 | 2° Y 34'36 | -0°08'57 | opposition | 9154 Mar 17 20:40 | 29° m 14'37 | 0°04'57 |
| min. Earth dist. | 9148 Sep 18 18:56 | 2° Y 22'16 | 4.37752 AU | direct | 9154 May 15 01:09 | 24° m 17'49 | |
| | 9148 Oct 08 08:58 | 30° ₹ | | | 9154 Jul 15 05:24 | 0∘ ⊽ | |
| direct | 9148 Nov 18 11:42 | 27° ¥ 34'11 | | evening set | 9154 Sep 18 19:52 | 13° ≏ 44'25 | |
| | 9148 Dec 29 09:30 | 0° Υ | | | | | |
| evening set | 9149 Mar 23 19:31 | 15° Y 25'11 | | conjunction | 9154 Oct 02 11:36 | 16° ≏ 55'38 | 0°17'13 |
| max. Earth dist. | 9149 Apr 03 06:14 | 17° Ƴ 45'43 | 6.30264 AU | minimum elong | 9154 Oct 02 11:35 | 16° ≙ 55'37 | 0°17'17 |
| | | | | max. Earth dist. | 9154 Oct 05 00:50 | 17° ≏ 31'24 | 6.06973 AU |
| conjunction | 9149 Apr 05 14:10 | 18° ℃ 17'13 | | morning rise | 9154 Oct 16 04:15 | 20° ♀ 07'02 | |
| minimum elong | 9149 Apr 05 14:09 | 18° ℃ 17'13 | 0°18'35 | _ | 9154 Nov 30 13:11 | 0°M | |
| morning rise | 9149 Apr 18 07:43 | 21° Y ′09'03 | | retrograde | 9155 Feb 21 03:57 | 9°M24'32 | 4.15000 : ** |
| | 9149 May 30 00:48 | 0°B | | min. Earth dist. | 9155 Apr 20 09:45 | 4~IIL33'07 | 4.15330 AU |

| opposition | 9155 Apr 21 22:28 | 4°M20'43 | 0°43'34 | conjunction | 9161 Apr 10 01:20 | 22° Y ′54'09 | -0°21'48 |
|--------------------------------|----------------------------------------|-----------------------------------------|---------------|-----------------------------------|----------------------------------------|--------------------------|------------|
| | 9155 May 31 11:18 | 30° ₹ Ω | | minimum elong | 9161 Apr 10 01:19 | 22° Y ′54'08 | 0°21'53 |
| direct | 9155 Jun 20 03:59 | 29° £ 21'39 | | morning rise | 9161 Apr 22 19:09 | 25° Y 46′59 | |
| | 9155 Jul 09 23:56 | 0° M | | | 9161 May 11 20:10 | 0° 8 | |
| | 9155 Oct 11 06:28 | 15°M | | retrograde | 9161 Aug 25 12:56 | 13° 8 57'28 | |
| evening set | 9155 Oct 24 14:16 | 17°M56'56 | | opposition | 9161 Oct 25 04:07 | 9° 8 03'44 | |
| | | | | min. Earth dist. | 9161 Oct 26 16:52 | 8° 8 51'52 | 4.19446 AU |
| conjunction | 9155 Nov 07 03:38 | 20°M59'30 | 0°38'34 | direct | 9161 Dec 25 06:50 | 4° 8 05'23 | |
| minimum elong | 9155 Nov 07 03:37 | 20°M59'30 | 0°38'46 | | 9162 Mar 25 18:11 | 15° 8 | |
| max. Earth dist. | 9155 Nov 09 04:45 | 21°M27'05 | 6.24009 AU | evening set | 9162 Apr 30 01:39 | 22° 8 51'57 | |
| morning rise | 9155 Nov 20 16:49 | 24°M01'36 | | max. Earth dist. | 9162 May 11 01:55 | 25° 8 26'45 | 6.10928 AU |
| | 9155 Dec 18 08:07 | 0° √ | | | | | |
| retrograde | 9156 Mar 24 06:43 | 12° √ 04'55 | 4 22120 4 7 7 | conjunction | 9162 May 12 21:41 | 25° 8 52'30 | |
| min. Earth dist. | 9156 May 22 11:30 | 7° √ 11'55 | 4.32128 AU | minimum elong | 9162 May 12 21:40 | 25° 8 52'29 | 0°40'53 |
| opposition | 9156 May 23 12:25 | 7°×703'38 | 1°05'04 | morning rise | 9162 May 25 18:03 | 28° 8 53'35 | |
| direct | 9156 Jul 23 01:26 | 2°×702'54 | | . 1 | 9162 May 30 12:00 | 0°II | |
| evening set | 9156 Nov 26 01:23 | 19° ∡ 51'34 | | retrograde | 9162 Oct 01 01:59 | 18°Ⅲ19'48 13°Ⅲ24'03 | 1000112 |
| | 0156 D 00 10 11 | 220 745152 | 0047140 | opposition | 9162 Nov 30 03:49 | | |
| conjunction minimum elong | 9156 Dec 09 10:11 | 22° x 45'52 | 0°46'48 | min. Earth dist. | 9162 Dec 01 02:26 9163 Jan 28 21:10 | 13°Ⅲ16'38 8°Ⅲ27'59 | 4.02957 AU |
| 2 | 9156 Dec 09 10:11 | 22° x ⁷ 45'52 | 0°47'05 | direct | 9163 Jun 04 03:38 | 8°Щ2/39 28°Щ04'36 | |
| max. Earth dist. | 9156 Dec 10 10:25 | 22° х 59'04 | 6.39284 AU | evening set | | 28°Щ04'36 0° © | |
| morning rise | 9156 Dec 22 17:23 9157 Jan 12 06:09 | 25° メ 39'13 0°る | | | 9163 Jun 12 02:44 | 0.50 | |
| | | | | : | 0162 I 17 04:27 | 1° © 13'45 | 0946107 |
| retrograde | 9157 Apr 23 15:43 | 12°る45'49 7°る47'58 | 1°06'30 | conjunction | 9163 Jun 17 04:27 9163 Jun 17 04:27 | 1°9913'45 | 0°46'25 |
| opposition min. Earth dist. | 9157 Jun 23 06:37 9157 Jun 23 00:18 | 7° る 50'02 | 4.44828 AU | minimum elong max. Earth dist. | 9163 Jun 16 12:25 | 1°904'03 | 5.96507 AU |
| direct | | 7 33002 2° 3 46'30 | 4.44626 AU | | 9163 Jun 30 07:01 | 4°9524'06 | 3.90307 AU |
| | 9157 Aug 24 00:35 9157 Dec 27 14:19 | 2 346 30 20° る 04'52 | | morning rise | 9163 Nov 08 12:58 | 4 924 06 24°955'46 | |
| evening set | 9137 Dec 27 14.19 | 20 00432 | | retrograde opposition | 9164 Jan 07 04:05 | 19° © 56'57 | 1902!26 |
| aaniumatian | 9158 Jan 09 17:49 | 22° る 53'31 | 0°41'37 | min. Earth dist. | 9164 Jan 07 01:27 | | 3.92147 AU |
| conjunction minimum elong | 9158 Jan 09 17:50 | 22 る 33 31 22° る 53'31 | 0°41'53 | direct | 9164 Jan 07 01.27 9164 Mar 05 14:02 | 19 937 30 15°902'22 | 3.92147 AU |
| max. Earth dist. | 9158 Jan 09 17:54 | 22° る 49'49 | 6.48513 AU | unect | 9164 Jun 18 19:16 | 13 3 02 22 | |
| morning rise | 9158 Jan 22 19:25 | 22 3 4949 25° る 41'08 | 0.46313 AU | evening set | 9164 Jul 10 08:19 | 5° Ω 08'35 | |
| morning risc | 9158 Feb 12 12:04 | 23 ○ 41 08 0° ≈ | | evening set | 9104 Jul 10 08.19 | 5 66 00 55 | |
| retrograde | 9158 May 23 07:27 | 0 ∞ 12° ≈ 18'35 | | conjunction | 9164 Jul 23 16:10 | 8° Ω 24'01 | -0°33'43 |
| opposition | 9158 Jul 23 04:52 | 7°≈23'39 | 0°50'27 | minimum elong | 9164 Jul 23 16:11 | 8°Ω24'02 | 0°33'57 |
| min. Earth dist. | 9158 Jul 23 18:46 | 7°≈19'10 | 4.50127 AU | max. Earth dist. | 9164 Jul 24 13:32 | 8°Ω37'06 | 5.90404 AU |
| direct | 9158 Sep 23 17:38 | 2°≈21'59 | 1.30127 110 | morning rise | 9164 Aug 06 02:37 | 11° Ω 40'51 | 2.90101710 |
| uncet | 9159 Jan 05 06:13 | 15° ≈ | | morning rise | 9164 Aug 19 22:11 | 15° Ω | |
| evening set | 9159 Jan 26 23:45 | 19° ≈ 31'20 | | | 9164 Nov 06 01:26 | 0° m) | |
| e renning see | 7107 Van 20 25.10 | 19 10 01 20 | | retrograde | 9164 Dec 16 07:32 | 2° m/34'12 | |
| conjunction | 9159 Feb 08 22:55 | 22° ≈ 17'53 | 0°25'35 | 8 | 9165 Jan 25 15:21 | 30°R Ω | |
| minimum elong | 9159 Feb 08 22:56 | 22°≈17'54 | 0°25'46 | opposition | 9165 Feb 13 16:51 | 27° Ω 31'56 | -0°32'32 |
| max. Earth dist. | 9159 Feb 07 14:43 | 22°≈00'36 | 6.49511 AU | min. Earth dist. | 9165 Feb 12 14:57 | | 3.91553 AU |
| morning rise | 9159 Feb 21 19:46 | 25° ≈ 03'27 | | direct | 9165 Apr 12 14:43 | 22° Ω 36'51 | |
| 8 | 9159 Mar 17 13:18 | 0°) € | | | 9165 Jun 21 08:57 | 0° m) | |
| retrograde | 9159 Jun 22 06:44 | 11°) (42'19 | | evening set | 9165 Aug 17 11:36 | 12° m/36'02 | |
| opposition | 9159 Aug 22 08:09 | 6°) 49'06 | 0°21'33 | Ü | Ü | • | |
| min. Earth dist. | 9159 Aug 23 13:46 | 6°) 39'38 | 4.46827 AU | conjunction | 9165 Aug 31 01:37 | 15° m 51'59 | -0°07'34 |
| direct | 9159 Oct 24 00:23 | 1°) 47′53 | | minimum elong | 9165 Aug 31 01:37 | 15° m 51'59 | 0°07'39 |
| evening set | 9160 Feb 26 05:20 | 19° ℋ 10'40 | | behind sun begin | 9165 Aug 30 18:03 | 15° m 47'27 | |
| max. Earth dist. | 9160 Mar 07 22:35 | 21°) 30′59 | 6.42089 AU | behind sun end | 9165 Aug 31 09:11 | 15° m 56'31 | |
| | | | | max. Earth dist. | 9165 Sep 02 06:11 | 16° Mp 23'38 | 5.95349 AU |
| conjunction | 9160 Mar 10 01:12 | 21° ¥ 58'42 | 0°02'42 | morning rise | 9165 Sep 13 17:34 | 19° m 08'48 | |
| minimum elong | 9160 Mar 10 01:10 | 21°) 58'41 | 0°02'46 | Č | 9165 Nov 01 07:32 | 0∘ <u>⊽</u> | |
| behind sun begin | 9160 Mar 09 17:13 | 21°) 54'21 | | asc. node | 9165 Dec 12 12:30 | 6° ₽ 48'32 | |
| behind sun end | 9160 Mar 10 09:08 | 22°) 03'01 | | retrograde | 9166 Jan 22 09:52 | 9° ≏ 26'48 | |
| morning rise | 9160 Mar 22 19:21 | 24°){ 46′06 | | min. Earth dist. | 9166 Mar 21 07:26 | 4° ≏ 35'22 | 4.01445 AU |
| | 9160 Apr 16 10:25 | 0 ° Υ | | opposition | 9166 Mar 22 21:09 | 4° ≏ 22'33 | 0°11'00 |
| desc. node | 9160 Apr 21 16:35 | 1° Y 03'50 | | | 9166 May 01 18:26 | 30° ₽,™) | |
| retrograde | 9160 Jul 22 19:01 | 11° Y 56'59 | | direct | 9166 May 20 04:16 | 29° m 25'26 | |
| opposition | 9160 Sep 21 17:00 | 7° Y '04'09 | -0°14'05 | | 9166 Jun 07 16:13 | 0∘ ⊽ | |
| min. Earth dist. | 9160 Sep 23 08:52 | 6° Y 51′24 | 4.35674 AU | evening set | 9166 Sep 23 22:08 | 18° ≏ 45'31 | |
| direct | 9160 Nov 22 22:54 | 2° Y 03'58 | | | | | |
| evening set | 9161 Mar 28 06:45 | 20° Y 01′12 | | conjunction | 9166 Oct 07 13:41 | 21° ≏ 55'41 | 0°20'50 |
| max. Earth dist. | 9161 Apr 07 16:48 | 22° Y 22'10 | 6.27963 AU | minimum elong | 9166 Oct 07 13:40 | 21° ≏ 55'40 | 0°20'56 |
| | | | | max. Earth dist. | 9166 Oct 10 01:38 | 22° ჲ 30'31 | 6.09118 AU |
| | | | | | | | |

| morning rise | 9166 Oct 21 06:15 | 25° ≏ 05'59 | | direct | 9172 Nov 27 07:35 | 6° Ƴ 31'22 | |
|-------------------------------|----------------------------------------|--------------------------------------|-------------|--------------------------|----------------------------------------|------------------------------------------|------------|
| morning rise | 9166 Nov 11 23:48 | 0°M | | evening set | 9172 Nov 27 07:33 9173 Apr 01 16:19 | 24° Υ 32'39 | |
| retrograde | 9167 Feb 25 17:48 | 14°ML13'20 | | max. Earth dist. | 9173 Apr 12 03:54 | 24 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 6.26321 AU |
| min. Earth dist. | 9167 Apr 25 02:21 | 9°M21'55 | 4.17565 AU | max. Earm dist. | 91/3 Apr 12 03.34 | 20 1 33 01 | 0.20321 AU |
| | • | 9°M09'44 | 0°47'45 | agniunation | 0172 Apr 14 10:46 | 27° Y 26'11 | 0°24'50 |
| opposition direct | 9167 Apr 26 14:26 9167 Jun 24 23:28 | 4°ML10'21 | 0 4/43 | conjunction | 9173 Apr 14 10:46 9173 Apr 14 10:45 | 27° Y 26'11 | |
| direct | | 4 1161021 15°M | | minimum elong | | 0° 8 | 0 24 37 |
| | 9167 Sep 23 14:49 | | | | 9173 Apr 25 17:42 | 0° 8 19'43 | |
| evening set | 9167 Oct 29 09:31 | 22°M39'13 | | morning rise | 9173 Apr 27 04:34 | | |
| | 01/537 11 00 05 | 2.50M 40140 | 0040100 | | 9173 Jul 11 19:06 | 15° 8 | |
| conjunction | 9167 Nov 11 22:27 | 25°M40'40 | 0°40'32 | retrograde | 9173 Aug 30 09:13 | 18° 8 37'46 | |
| minimum elong | 9167 Nov 11 22:26 | 25°M40'39 | 0°40'45 | | 9173 Oct 19 23:27 | 15°R 8 | |
| max. Earth dist. | 9167 Nov 13 20:32 | 26°M06'27 | 6.26164 AU | opposition | 9173 Oct 29 22:16 | 13° 8 43'51 | |
| morning rise | 9167 Nov 25 10:49 | 28°M41'31 | | min. Earth dist. | 9173 Oct 31 10:48 | 13° 8 32'02 | 4.17708 AU |
| | 9167 Dec 01 09:05 | 0° ∡ | | direct | 9173 Dec 29 22:27 | 8° 8 45'48 | |
| retrograde | 9168 Mar 28 16:11 | 16° ∡ ³36′16 | | | 9174 Mar 05 18:02 | 15° 8 | |
| opposition | 9168 May 27 21:55 | 11° ∡ ³35′29 | 1°06'26 | evening set | 9174 May 04 16:12 | 27° 8 37'20 | |
| min. Earth dist. | 9168 May 26 23:47 | 11° ₹ 42'49 | 4.34031 AU | | 9174 May 14 18:53 | $\Pi^{\circ}0$ | |
| direct | 9168 Jul 27 15:34 | 6° ≯ 34'38 | | max. Earth dist. | 9174 May 15 18:21 | 0° Ⅱ 13'51 | 6.09238 AU |
| evening set | 9168 Nov 30 13:59 | 24° ≯ 18'38 | | | | | |
| | | | | conjunction | 9174 May 17 12:33 | 0° Ⅱ 38'45 | -0°42'16 |
| conjunction | 9168 Dec 13 22:02 | 27° ҂ 12'04 | 0°46'49 | minimum elong | 9174 May 17 12:32 | 0° Ⅲ 38'44 | 0°42'30 |
| minimum elong | 9168 Dec 13 22:02 | 27° ⋌ 12'04 | 0°47'06 | morning rise | 9174 May 30 09:31 | 3° Ⅱ 40'49 | |
| max. Earth dist. | 9168 Dec 14 17:42 | 27° ⋌ ¹22'44 | 6.40800 AU | retrograde | 9174 Oct 06 01:54 | 23° Ⅱ 15′09 | |
| | 9168 Dec 26 20:08 | 0°ರ | | opposition | 9174 Dec 05 03:34 | 18° Ⅱ 19'04 | -1°09'06 |
| morning rise | 9168 Dec 27 04:35 | 0° る 04'33 | | min. Earth dist. | 9174 Dec 05 22:54 | 18° Ⅱ 12'43 | 4.01476 AU |
| retrograde | 9169 Apr 27 20:33 | 17° る 06'02 | | direct | 9175 Feb 02 15:30 | 13° Ⅲ 23'15 | |
| opposition | 9169 Jun 27 12:31 | 12° る 08'37 | 1°05'11 | | 9175 May 27 03:22 | 0 \circ \odot | |
| min. Earth dist. | 9169 Jun 27 08:39 | 12° る 09'53 | 4.45898 AU | evening set | 9175 Jun 09 00:05 | 3° 5 04'09 | |
| direct | 9169 Aug 28 08:51 | 7° る 07'07 | | | | | |
| evening set | 9169 Dec 31 22:22 | 24° る 23'25 | | conjunction | 9175 Jun 22 01:39 | 6°9୍ତ14'13 | -0°45'28 |
| | | | | minimum elong | 9175 Jun 22 01:39 | 6°9314'13 | 0°45'45 |
| conjunction | 9170 Jan 14 01:21 | 27° る 11'38 | 0°39'55 | max. Earth dist. | 9175 Jun 21 13:22 | 6°906'45 | 5.95372 AU |
| minimum elong | 9170 Jan 14 01:22 | 27° る 11'38 | 0°40'10 | morning rise | 9175 Jul 05 05:10 | 9° © 25'31 | |
| max. Earth dist. | 9170 Jan 13 16:22 | 27° る 06'49 | 6.49100 AU | S | 9175 Nov 08 14:14 | $0^{\circ}\Omega$ | |
| morning rise | 9170 Jan 27 02:04 | 29° る 58'45 | | retrograde | 9175 Nov 13 17:32 | 0° £ 02'38 | |
| morning not | 9170 Jan 27 04:25 | 0°≈ | | readgrade | 9175 Nov 18 20:41 | 30°R95 | |
| | 9170 Apr 25 03:36 | 15° ≈ | | opposition | 9176 Jan 12 07:15 | 25°903'23 | -1°00'47 |
| retrograde | 9170 May 27 11:25 | 16°≈34'42 | | min. Earth dist. | 9176 Jan 12 02:21 | 25° © 05'01 | 3.91475 AU |
| retrograde | 9170 Jun 28 19:23 | 15°R≈ | | direct | 9176 Mar 10 15:34 | 20°508'48 | 3.71473710 |
| opposition | 9170 Jul 27 10:11 | 13 1 ∞ 11° ≈ 40'10 | 0°47'00 | direct | 9176 May 31 16:33 | 0°Ω | |
| min. Earth dist. | 9170 Jul 28 01:40 | 11°≈35'11 | 4.50234 AU | evening set | 9176 Jul 15 09:20 | 10° Ω 16'31 | |
| direct | 9170 Sep 27 23:58 | 6°≈38'40 | 4.30234 AU | evening set | 9170 Jul 13 09.20 | 10 061031 | |
| direct | 9170 Sep 27 23:38 9170 Dec 18 05:27 | 0 ≈36 40 15°≈ | | conjunction | 9176 Jul 28 18:18 | 13° Ω 32'32 | 0020140 |
| evening set | 9170 Dec 18 03:27 9171 Jan 31 06:05 | 13 ≈ 23°≈48'18 | | minimum elong | 9176 Jul 28 18:19 | $13^{\circ} \Omega 32'32$ | |
| max. Earth dist. | 9171 Feb 11 16:53 | 25 ≈48 18 26°≈15'35 | 6.49153 AU | max. Earth dist. | 9176 Jul 29 20:43 | 13° Ω 48'41 | |
| max. Earth dist. | 91/11/60 11 10.55 | 20 ≈1333 | 0.49133 AU | max. Earm dist. | | 15° Ω | 3.90211 AU |
| aaniumatian | 0171 Eab 12 04:21 | 2690024145 | 0°22'40 | morning rise | 9176 Aug 03 17:18 | 15 8€ 16° Ω 49'50 | |
| conjunction | 9171 Feb 13 04:31 | 26°≈34'45 | | morning rise | 9176 Aug 11 05:36 | | |
| minimum elong morning rise | 9171 Feb 13 04:32 | 26°≈34'45 29°≈20'18 | 0°22'50 | ratragrada | 9176 Oct 09 13:02 9176 Dec 21 10:43 | 0° Т р 7° Тр 42'46 | |
| morning rise | 9171 Feb 26 01:00 9171 Mar 01 03:27 | 29°≈20'18 0°) € | | retrograde opposition | 9176 Dec 21 10:43 9177 Feb 18 18:40 | | 002701 |
| | | 0 X 16° ¥ 01'06 | | * * | | 2° Mp 40'13 | |
| retrograde | 9171 Jun 26 15:15 | | 0017140 | min. Earth dist. | 9177 Feb 17 15:22 | | 3.91999 AU |
| opposition | 9171 Aug 26 15:52 | 11° 米 08'03 | 0°16'48 | 1 | 9177 Mar 11 15:28 | 30°R Ω | |
| min. Earth dist. | 9171 Aug 27 23:35 | 10° ¥ 57'55 | 4.46040 AU | direct | 9177 Apr 17 15:45 | 27° Ω 44'58 | |
| direct | 9171 Oct 28 08:47 | 6° ₩ 06'59 | | | 9177 May 24 11:34 | 0° m) | |
| evening set | 9172 Mar 01 11:54 | 23°) € 32'06 | | evening set | 9177 Aug 22 14:07 | 17° Mp 42'11 | |
| desc. node | 9172 Mar 01 16:03 | 23°) (34'22 | C 40024 477 | | 0155 0 05 04 05 | 200 - 55156 | 0000100 |
| max. Earth dist. | 9172 Mar 12 03:59 | 25° ¥ 52′10 | 6.40934 AU | conjunction | 9177 Sep 05 04:35 | 20° m 57'56 | |
| | | | | minimum elong | 9177 Sep 05 04:34 | 20° m 57'55 | 0°03'43 |
| conjunction | 9172 Mar 14 07:30 | 26° ∺ 20'27 | | behind sun begin | 9177 Sep 04 20:16 | 20° m 52'58 | |
| minimum elong | 9172 Mar 14 07:29 | 26° ₩ 20'27 | 0°00'47 | behind sun end | 9177 Sep 05 12:53 | 21° m 02'53 | |
| behind sun begin | 9172 Mar 13 23:31 | 26° ∺ 16′05 | | max. Earth dist. | 9177 Sep 07 10:06 | 21° Mp 30'03 | 5.96304 AU |
| behind sun end | 9172 Mar 14 15:28 | 26°) €24'48 | | morning rise | 9177 Sep 18 21:11 | 24° m 14'31 | |
| morning rise | 9172 Mar 27 01:20 | 29°) €08'12 | | | 9177 Oct 13 16:29 | 0∘ ত | |
| | 9172 Mar 31 00:26 | 0° Υ | | asc. node | 9177 Oct 24 14:48 | 2° £ 24'03 | |
| retrograde | 9172 Jul 27 06:05 | 16° Y 24'11 | | retrograde | 9178 Jan 27 05:18 | 14° ≏ 26'34 | |
| opposition | 9172 Sep 26 05:08 | 11° Ƴ 31'17 | | min. Earth dist. | 9178 Mar 26 02:53 | 9° ≏ 35'28 | 4.02810 AU |
| min. Earth dist. | 9172 Sep 27 20:01 | 11° Ƴ 18'50 | 4.34224 AU | opposition | 9178 Mar 27 17:38 | 9° ≏ 22'17 | 0°16'40 |
| | | | | | | | |

| direct | 0179 May 25, 02:22 | 4° £ 24'51 | | agniumation | 0194 Mar 19 12:52 | 0° Υ 43'06 | 000421 |
|-----------------------------------|----------------------------------------|--------------------------------------|------------|---------------------------|----------------------------------------|---------------------------------------|-------------|
| evening set | 9178 May 25 02:22 9178 Sep 28 21:37 | 23° £ 40'39 | | conjunction minimum elong | 9184 Mar 18 13:53 9184 Mar 18 13:53 | 0° Υ 43'06 | 0°04'19 |
| evening set | 9176 Sep 26 21.37 | 23 = 40 39 | | behind sun begin | 9184 Mar 18 06:03 | 0° Y 38'48 | 0 04 19 |
| conjunction | 9178 Oct 12 13:12 | 26° £ 50'04 | 0°24'09 | behind sun end | 9184 Mar 18 21:43 | 0° Υ 47'23 | |
| • | 9178 Oct 12 13:12 9178 Oct 12 13:11 | 26° ⊆ 50'03 | 0°24'16 | morning rise | 9184 Mar 31 07:38 | 3° Υ 31'22 | |
| minimum elong max. Earth dist. | 9178 Oct 12 13:11 9178 Oct 15 00:10 | 20 2 30 03 27° 2 24'13 | 6.10778 AU | | 9184 Jul 31 07.38 | $3 13122$ $20^{\circ}\text{Y}53'55$ | |
| | | | 6.10//8 AU | retrograde | | | 0924102 |
| morning rise | 9178 Oct 26 05:29 | 29° Ω 59'28 | | opposition | 9184 Sep 30 18:22 | 16° Υ 00'55 | |
| | 9178 Oct 26 06:24 | 0°M | | min. Earth dist. | 9184 Oct 02 10:37 | 15° Y 48'01 | 4.32238 AU |
| _ | 9179 Jan 10 00:42 | 15° M | | direct | 9184 Dec 01 18:59 | 11° Y 01'07 | |
| retrograde | 9179 Mar 02 08:56 | 18°M58'46 | | evening set | 9185 Apr 06 03:31 | 29° Y 08′23 | |
| | 9179 Apr 23 03:43 | 15°RM | | | 9185 Apr 09 22:33 | 0°8 | |
| min. Earth dist. | 9179 Apr 29 18:46 | 14°M06'56 | 4.19346 AU | max. Earth dist. | 9185 Apr 16 15:29 | 1° 8 31'40 | 6.24055 AU |
| opposition | 9179 May 01 04:54 | 13°M55'26 | 0°51'26 | | | | |
| direct | 9179 Jun 29 18:20 | 8°M55'48 | | conjunction | 9185 Apr 18 22:08 | 2° 8 02'51 | |
| | 9179 Sep 02 22:09 | 15° M ₊ | | minimum elong | 9185 Apr 18 22:07 | 2° 8 02'51 | 0°27'59 |
| evening set | 9179 Nov 03 03:25 | 27° ™ 19'43 | | morning rise | 9185 May 01 16:08 | 4° 8 57'23 | |
| | 9179 Nov 15 03:37 | 0° ∡ ¹ | | | 9185 Jun 17 21:02 | 15° 8 | |
| | | | | retrograde | 9185 Sep 04 06:46 | 23° 8 25'18 | |
| conjunction | 9179 Nov 16 15:53 | 0° ∡ ¹20′12 | 0°42'10 | opposition | 9185 Nov 03 19:21 | 18° 8 31'08 | -0°55'14 |
| minimum elong | 9179 Nov 16 15:52 | 0° ∡ ¹20′12 | 0°42'25 | min. Earth dist. | 9185 Nov 05 05:48 | 18° 8 19'58 | 4.15329 AU |
| max. Earth dist. | 9179 Nov 18 12:11 | 0° ∡ ¹44'53 | 6.27924 AU | | 9185 Dec 04 01:33 | 15° ₹ 8 | |
| morning rise | 9179 Nov 30 03:36 | 3° ∡ ¹20′02 | | direct | 9186 Jan 03 13:34 | 13° 8 33'21 | |
| retrograde | 9180 Apr 01 23:04 | 21° √ 07'29 | | | 9186 Feb 02 22:54 | 15° 8 | |
| min. Earth dist. | 9180 May 31 09:50 | 16° √ 14'01 | 4.35645 AU | | 9186 Apr 28 13:12 | 0°II | |
| opposition | 9180 Jun 01 06:54 | 16° х 07'03 | 1°07'19 | evening set | 9186 May 09 10:38 | 2° ∏ 32'15 | |
| direct | 9180 Aug 01 03:01 | 11° × 06'02 | 1 0, 1, | max. Earth dist. | 9186 May 20 16:19 | 5° I 11'39 | 6.06947 AU |
| evening set | 9180 Dec 05 02:14 | 28°×746'00 | | max. Earth dist. | 7100 Way 20 10.17 | 3 11137 | 0.00747 AC |
| evening set | 9180 Dec 03 02:14 9180 Dec 10 19:29 | 28 × 40 00 0°る | | conjunction | 9186 May 22 07:26 | 5° Ⅱ 34'52 | 0°43'41 |
| | 9100 DCC 10 19.29 | 0 0 | | minimum elong | 9186 May 22 07:26 | 5° ∏ 34'52 | |
| | 0100 D 10 00-26 | 10=220127 | 0046121 | _ | | 3 П 34 32 8° П 38'16 | 0 43 30 |
| conjunction | 9180 Dec 18 09:36 | 1°る38'37 | 0°46'31 | morning rise | 9186 Jun 04 05:09 | | |
| minimum elong | 9180 Dec 18 09:36 | 1°る38'37 | 0°46'48 | retrograde | 9186 Oct 11 09:20 | 28° Ⅲ 23'10 | 1000127 |
| max. Earth dist. | 9180 Dec 19 02:02 | 1°る47'31 | 6.42157 AU | opposition | 9186 Dec 10 08:48 | 23° Ⅱ 26'41 | |
| morning rise | 9180 Dec 31 15:16 | 4° る 30'13 | | min. Earth dist. | 9186 Dec 11 01:48 | | 3.99477 AU |
| retrograde | 9181 May 02 02:09 | 21° る 26'44 | | direct | 9187 Feb 07 17:13 | 18° ∏ 31′04 | |
| opposition | 9181 Jul 01 18:19 | 16° る 29'43 | 1°03'27 | | 9187 May 09 07:20 | 0_{\circ} වෙ | |
| min. Earth dist. | 9181 Jul 01 17:14 | 16° る 30'04 | 4.46894 AU | evening set | 9187 Jun 14 02:34 | 8° 5 18'04 | |
| direct | 9181 Sep 01 18:29 | 11° る 28'07 | | | | | |
| evening set | 9182 Jan 05 06:06 | 28° る 42'06 | | conjunction | 9187 Jun 27 05:15 | 11° © 29'19 | -0°44'26 |
| | 9182 Jan 11 08:21 | 0° ≈ | | minimum elong | 9187 Jun 27 05:16 | 11° © 29'19 | |
| | | | | max. Earth dist. | 9187 Jun 26 22:35 | 11° © 25'15 | 5.93878 AU |
| conjunction | 9182 Jan 18 08:19 | 1° ≈ 29'50 | 0°37'58 | morning rise | 9187 Jul 10 09:48 | 14° © 41'50 | |
| minimum elong | 9182 Jan 18 08:20 | 1° ≈ 29'50 | 0°38'14 | | 9187 Sep 20 00:40 | $0^{\circ}\Omega$ | |
| max. Earth dist. | 9182 Jan 17 19:01 | 1° ≈ 22'43 | 6.49634 AU | retrograde | 9187 Nov 19 05:25 | 5° Ω 25'13 | |
| morning rise | 9182 Jan 31 08:28 | 4° ≈ 16′29 | | opposition | 9188 Jan 17 16:45 | 0° Ω 25'33 | -0°57'19 |
| | 9182 Mar 27 17:13 | 15° ≈ | | min. Earth dist. | 9188 Jan 17 08:37 | 0° Ω 28'17 | 3.90682 AU |
| retrograde | 9182 May 31 16:15 | 20°≈50'54 | | | 9188 Jan 20 21:02 | 30°Rூ | |
| opposition | 9182 Jul 31 15:26 | 15°≈56'30 | 0°43'16 | direct | 9188 Mar 15 21:34 | 25°531'02 | |
| min. Earth dist. | 9182 Aug 01 09:14 | 15° ≈ 50'48 | 4.50256 AU | | 9188 May 07 20:59 | $0^{\circ}\Omega$ | |
| | 9182 Aug 08 00:26 | 15°R≈ | | | 9188 Jul 17 22:53 | 15° Ω | |
| direct | 9182 Oct 02 06:28 | 10°≈54'55 | | evening set | 9188 Jul 20 17:43 | 15° Ω 40'33 | |
| | 9182 Nov 25 22:39 | 15° ≈ | | | | | |
| evening set | 9183 Feb 04 11:33 | 28° ≈ 04'48 | | conjunction | 9188 Aug 03 03:32 | 18° Ω 57'02 | -0°27'28 |
| e vennig see | 9183 Feb 13 10:27 | 0° ∀ | | minimum elong | 9188 Aug 03 03:33 | 18° Ω 57'02 | |
| max. Earth dist. | 9183 Feb 15 20:35 | | 6.48632 AU | max. Earth dist. | 9188 Aug 04 09:24 | | 5.90257 AU |
| max. Earm dist. | 9165 FC0 15 20.55 | 0 X 3118 | 0.48032 AU | morning rise | 9188 Aug 16 16:02 | 22° Ω 14'51 | 3.90237 AU |
| aaniumatian | 9183 Feb 17 09:37 | 0° ¥ 51'14 | 0°19'35 | morning rise | - | | |
| conjunction | | | | | 9188 Sep 18 19:04 | 0°M) | |
| minimum elong | 9183 Feb 17 09:38 | 0° ¥ 51'15 | 0°19'44 | retrograde | 9188 Dec 26 17:28 | 13° Mp 06'03 | 2.02774 *** |
| morning rise | 9183 Mar 02 05:25 | 3°) €36'46 | | min. Earth dist. | 9189 Feb 22 19:44 | 8° Mp 13'33 | |
| retrograde | 9183 Jun 30 21:46 | 20° 升 19'59 | 0011154 | opposition | 9189 Feb 24 02:20 | 8° Mp 03'09 | -0~20'5/ |
| opposition | 9183 Aug 30 23:30 | 15° ¥ 26′59 | 0°11'54 | direct | 9189 Apr 22 22:59 | 3° Mp 07'42 | |
| min. Earth dist. | 9183 Sep 01 08:14 | 15°) 16'32 | 4.44977 AU | evening set | 9189 Aug 27 22:29 | 23° Mp 01'22 | |
| direct | 9183 Nov 01 14:51 | 10° ∺ 26′01 | | asc. node | 9189 Sep 02 05:40 | 24° m 17'09 | |
| desc. node | 9184 Jan 09 16:20 | 16°) 47′06 | | | | | |
| evening set | 9184 Mar 05 18:46 | 27°) 54'21 | | conjunction | 9189 Sep 10 13:29 | 26° Mp 16'38 | 0°00'37 |
| | 9184 Mar 15 07:42 | 0 ° $\mathbf{\Upsilon}$ | | minimum elong | 9189 Sep 10 13:29 | 26° Mp 16'37 | 0°00'35 |
| max. Earth dist. | 9184 Mar 16 08:20 | 0° Ƴ 13'35 | 6.39377 AU | behind sun begin | 9189 Sep 10 05:06 | 26°M 11'38 | |
| | | | | behind sun end | 9189 Sep 10 21:52 | 26° Mp 21'37 | |
| | | | | | | | |

| max. Earth dist. | 9189 Sep 12 21:45 | 26° m 50'16 | 5.97814 AU | | 9196 Feb 28 16:19 | 0°Υ | |
|--------------------------------|-----------------------------------------|----------------------------------------------------|-----------------------|-------------------|---------------------|---------------------|-------------|
| morning rise | 9189 Sep 24 06:20 | 29° m/30'10 | 3.57614710 | evening set | 9196 Mar 10 00:15 | 2° Υ 14'46 | |
| morning rise | 9189 Sep 26 04:42 | 0° ⊡ | | max. Earth dist. | 9196 Mar 20 13:07 | | 6.37369 AU |
| retrograde | 9190 Feb 01 06:27 | 0 — 19° Ω 36'03 | | max. Earth dist. | 7170 Wai 20 15.07 | 7 7 57 12 | 0.57507 110 |
| min. Earth dist. | 9190 Mar 31 04:01 | 14° ⊆ 44'50 | 4.04873 AU | conjunction | 9196 Mar 22 19:22 | 5° Ƴ 04'14 | -0°07'46 |
| opposition | 9190 Apr 01 18:30 | 14° £ 31'45 | 0°22'29 | minimum elong | 9196 Mar 22 19:22 | 5° Υ 04'14 | |
| direct | 9190 May 30 07:26 | 9° £ 34'01 | 0 22 2) | behind sun begin | 9196 Mar 22 12:10 | 5° Υ 00'16 | 0 07 10 |
| evening set | 9190 Oct 04 00:30 | 28° ≏ 42'40 | | behind sun end | 9196 Mar 23 02:33 | 5°Υ08'12 | |
| e venning sec | 9190 Oct 09 15:12 | 0°M | | morning rise | 9196 Apr 04 12:54 | 7° Υ 53'15 | |
| | , , , , , , , , , , , , , , , , , , , , | •• | | retrograde | 9196 Aug 05 11:25 | 25° Y 24'14 | |
| conjunction | 9190 Oct 17 15:53 | 1°M50'53 | 0°27'26 | opposition | 9196 Oct 05 07:44 | 20° Υ 31'09 | -0°28'54 |
| minimum elong | 9190 Oct 17 15:51 | 1°M50'52 | 0°27'34 | min. Earth dist. | 9196 Oct 06 23:58 | | 4.29772 AU |
| max. Earth dist. | 9190 Oct 20 03:28 | 2°M25'11 | 6.13212 AU | direct | 9196 Dec 06 03:39 | 15° Y 31'37 | 2>,,2110 |
| morning rise | 9190 Oct 31 07:39 | 4°M58'57 | | | 9197 Mar 24 18:16 | 0°8 | |
| | 9190 Dec 17 04:31 | 15° M ₊ | | evening set | 9197 Apr 10 15:18 | 3° 8 46'41 | |
| retrograde | 9191 Mar 06 22:06 | 23°M47'04 | | max. Earth dist. | 9197 Apr 21 03:35 | 6° 8 11'04 | 6.21310 AU |
| min. Earth dist. | 9191 May 04 10:41 | 18°M55'29 | 4.21925 AU | man. Bartir digt. | >1> / 11pr 21 05.50 | 0 01101 | 0.21310110 |
| opposition | 9191 May 05 20:39 | 18°M44'04 | 0°54'53 | conjunction | 9197 Apr 23 09:57 | 6° 8 42'19 | -0°30'41 |
| оррожной | 9191 Jun 06 12:32 | 15°RM | 0 3 1 3 3 | minimum elong | 9197 Apr 23 09:56 | 6° 8 42'18 | 0°30'50 |
| direct | 9191 Jul 04 13:24 | 13°M44'14 | | morning rise | 9197 May 06 04:25 | 9° 8 38'09 | 0 30 20 |
| | 9191 Aug 01 23:00 | 15°M₁ | | | 9197 May 30 04:34 | 15° 8 | |
| | 9191 Oct 29 17:49 | 0° ⊼ ¹ | | retrograde | 9197 Sep 09 08:42 | 28° 8 18'05 | |
| evening set | 9191 Nov 07 22:01 | 2° × ⁷ 00'31 | | opposition | 9197 Nov 08 18:26 | 23° 8 23'39 | -0°58'33 |
| evening set | 7171 NOV 07 22.01 | 2 × 0031 | | min. Earth dist. | 9197 Nov 10 03:44 | 23° 8 12'50 | 4.12502 AU |
| conjunction | 9191 Nov 21 09:40 | 4° ∡ °59'38 | 0°43'36 | direct | 9198 Jan 08 08:17 | 18° 8 26'10 | 4.12302 AU |
| minimum elong | 9191 Nov 21 09:40 9191 Nov 21 09:39 | 4° 🖈 59'38 | 0°43'52 | direct | 9198 Apr 10 23:41 | 0° I I | |
| max. Earth dist. | 9191 Nov 21 09.39 9191 Nov 23 01:47 | 4 x ·3938 5° x ⁷ 21'53 | 6.30437 AU | avanina aat | - | 0 H 7°H34'08 | |
| | | 3 x ·21 33 7° x 58′04 | 0.3043 / AU | evening set | 9198 May 14 07:24 | | C 04200 ATT |
| morning rise | 9191 Dec 04 20:36 | | | max. Earth dist. | 9198 May 25 18:11 | 10° Ⅱ 17′28 | 6.04309 AU |
| retrograde | 9192 Apr 06 06:52 | 25° 🖈 35'58 | 1007150 | | 0100 14 07 05 04 | 100 T 20116 | 0044140 |
| opposition | 9192 Jun 05 15:19 | 20°×736'00 | 1°07'52 | conjunction | 9198 May 27 05:04 | 10° Ⅲ 38'16 | |
| min. Earth dist. | 9192 Jun 04 21:33 | 20°× 7 41'52 | 4.37891 AU | minimum elong | 9198 May 27 05:04 | 10° Ⅱ 38'16 | 0°45'06 |
| direct | 9192 Aug 05 17:03 | 15° ₹ 34'52 | | morning rise | 9198 Jun 09 03:34 | 13° Ⅱ 43'13 | |
| | 9192 Nov 24 15:38 | 0°る | | | 9198 Aug 28 16:58 | 0°© | |
| evening set | 9192 Dec 09 12:37 | 3° る 08'57 | | retrograde | 9198 Oct 16 20:19 | 3°539'54 | |
| | | | | | 9198 Dec 05 21:07 | 30°RⅡ | |
| conjunction | 9192 Dec 22 19:16 | 6° ろ 00'34 | 0°46'01 | opposition | 9198 Dec 15 17:02 | 28° Ⅱ 43'03 | |
| minimum elong | 9192 Dec 22 19:16 | 6° る 00'34 | 0°46'18 | min. Earth dist. | 9198 Dec 16 06:35 | 28° Ⅱ 38'35 | 3.97314 AU |
| max. Earth dist. | 9192 Dec 23 08:13 | 6° る 07'33 | 6.43962 AU | direct | 9199 Feb 12 19:54 | 23° Ⅱ 47'44 | |
| morning rise | 9193 Jan 05 00:02 | 8° る 51'07 | | | 9199 Apr 17 15:42 | 0 \circ \odot | |
| retrograde | 9193 May 06 03:36 | 25° る 41'52 | | evening set | 9199 Jun 19 08:41 | 13° © 41'22 | |
| opposition | 9193 Jul 05 22:11 | 20° る 45'14 | 1°01'27 | | | | |
| min. Earth dist. | 9193 Jul 05 23:09 | 20°る44'56 | 4.48152 AU | conjunction | 9199 Jul 02 12:17 | 16° © 53'48 | -0°43'01 |
| direct | 9193 Sep 06 00:26 | 15° る 43'37 | | minimum elong | 9199 Jul 02 12:18 | 16° © 53'48 | 0°43'18 |
| | 9193 Dec 26 13:26 | 0° ≈ | | max. Earth dist. | 9199 Jul 02 10:09 | 16° © 52'30 | 5.92401 AU |
| evening set | 9194 Jan 09 11:10 | 2° ≈ 54'50 | | morning rise | 9199 Jul 15 18:13 | 20° 5 07'36 | |
| | | | | | 9199 Aug 27 15:07 | $0^{\circ}\Omega$ | |
| conjunction | 9194 Jan 22 12:43 | 5° ≈ 42'02 | 0°35'53 | retrograde | 9199 Nov 24 17:53 | 10° Ω 56'48 | |
| minimum elong | 9194 Jan 22 12:44 | 5° ≈ 42'03 | 0°36'07 | opposition | 9200 Jan 23 05:21 | 5° £ 56′33 | -0°53'17 |
| max. Earth dist. | 9194 Jan 21 19:49 | 5° ≈ 33'00 | 6.50253 AU | min. Earth dist. | 9200 Jan 22 16:24 | 6° Ω 00'55 | 3.90086 AU |
| morning rise | 9194 Feb 04 12:03 | 8° ≈ 28'12 | | direct | 9200 Mar 21 06:53 | 1° Ω 02'01 | |
| | 9194 Mar 08 10:26 | 15° ≈ | | | 9200 Jun 30 00:41 | 15° Ω | |
| retrograde | 9194 Jun 04 18:57 | 25° ≈ 01'22 | | evening set | 9200 Jul 26 04:49 | 21° Ω 12'07 | |
| opposition | 9194 Aug 04 18:34 | 20° ≈ 07'18 | 0°39'25 | | | | |
| min. Earth dist. | 9194 Aug 05 15:26 | 20° ≈ 00'37 | 4.50193 AU | conjunction | 9200 Aug 08 15:42 | 24° Ω 28'54 | -0°23'50 |
| direct | 9194 Oct 06 11:04 | 15° ≈ 05'46 | | minimum elong | 9200 Aug 08 15:43 | 24° Ω 28'55 | 0°24'00 |
| | 9195 Jan 28 21:16 | 0° ∀ | | max. Earth dist. | 9200 Aug 10 03:57 | 24° Ω 51′02 | 5.90612 AU |
| evening set | 9195 Feb 08 15:00 | 2°) 16′32 | | morning rise | 9200 Aug 22 04:59 | 27° Ω 46'55 | |
| max. Earth dist. | 9195 Feb 19 18:32 | 4°) 40′25 | 6.47868 AU | - | 9200 Aug 31 10:26 | 0° m | |
| | | | | retrograde | 9201 Jan 01 03:23 | 18° m)34'18 | |
| conjunction | 9195 Feb 21 12:27 | 5°) €03'02 | 0°16'29 | min. Earth dist. | 9201 Feb 28 03:24 | | 3.94019 AU |
| minimum elong | 9195 Feb 21 12:27 | 5° ₩ 03'02 | 0°16'37 | opposition | 9201 Mar 01 11:38 | 13° m 30'57 | |
| morning rise | 9195 Mar 06 07:59 | 7°) 48'43 | | direct | 9201 Apr 28 10:33 | 8° mp 35'11 | |
| retrograde | | | | asc. node | 9201 Jul 11 07:16 | 16° Mp 41'51 | |
| | 9195 Jul 05 05:23 | 24° H 35'37 | | asc. node | | | |
| • | 9195 Jul 05 05:23 9195 Sep 04 05:52 | 24° 米 35'37 19° 米 42'41 | 0°07'00 | | | - | |
| opposition | 9195 Sep 04 05:52 | 19° ∺ 42'41 | 0°07'00 4 43545 AU | evening set | 9201 Sep 02 07:57 | 28° m 23'08 | |
| opposition min. Earth dist. | 9195 Sep 04 05:52 9195 Sep 05 16:49 | 19° 米 42'41 19° 米 31'31 | 0°07'00 4.43545 AU | | | - | |
| opposition | 9195 Sep 04 05:52 | 19° ∺ 42'41 | | | 9201 Sep 02 07:57 | 28° m 23'08 | 0°04'52 |

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|------------------|-------------------|---------------------|------------|------------------|-------------------|---------------------|------------|
| morning rise | 9212 Aug 27 16:23 | 3° m/ 13'37 | | | 9218 Apr 25 00:39 | 0° ∀ | |
| retrograde | 9213 Jan 06 08:15 | 23° m 54'23 | | retrograde | 9218 Jun 13 04:54 | 3° ¥ 29'46 | |
| min. Earth dist. | 9213 Mar 05 06:20 | | 3.95788 AU | | 9218 Aug 02 02:24 | 30°R≈ | |
| opposition | 9213 Mar 06 17:15 | 18° m 50'47 | | opposition | 9218 Aug 13 04:35 | 28° ≈ 36'10 | 0°31'05 |
| direct | 9213 May 03 16:53 | 13° m 54'44 | | min. Earth dist. | 9218 Aug 14 06:36 | 28° ≈ 27'50 | 4.48837 AU |
| asc. node | 9213 May 21 07:30 | 14° m) 26'25 | | direct | 9218 Oct 14 22:16 | 23° ≈ 34'44 | |
| | 9213 Aug 23 03:15 | 0∘ ⊽ | | | 9218 Dec 23 17:59 | 0°) € | |
| evening set | 9213 Sep 07 13:53 | 3° ॒ 35'37 | | evening set | 9219 Feb 17 01:51 | 10°) 50'40 | |
| Ü | 1 | | | max. Earth dist. | 9219 Feb 27 23:57 | 13°) 12'31 | 6.45308 AU |
| conjunction | 9213 Sep 21 05:15 | 6° ₽ 49'00 | 0°08'52 | | | | |
| minimum elong | 9213 Sep 21 05:14 | 6° ₽ 48'59 | 0°08'54 | conjunction | 9219 Mar 01 22:34 | 13°) 37'49 | 0°09'56 |
| behind sun begin | 9213 Sep 20 22:05 | 6° ₽ 44'47 | | minimum elong | 9219 Mar 01 22:35 | 13°) €37'50 | 0°10'03 |
| behind sun end | 9213 Sep 21 12:23 | 6° £ 53'12 | | behind sun begin | 9219 Mar 01 16:09 | 13°) €34'21 | |
| max. Earth dist. | 9213 Sep 23 16:21 | 7° ≏ 23'57 | 6.02112 AU | behind sun end | 9219 Mar 02 05:01 | 13°) (41'18 | |
| morning rise | 9213 Oct 04 22:18 | 10° ♀ 02'53 | | morning rise | 9219 Mar 14 17:25 | 16°) €24'15 | |
| retrograde | 9214 Feb 10 22:26 | 29° ≏ 44'10 | | Z . | 9219 May 27 00:48 | $_0$ ° \mathbf{Y} | |
| min. Earth dist. | 9214 Apr 10 00:13 | 24° £ 52'59 | 4.09946 AU | retrograde | 9219 Jul 14 01:28 | 3° Y 21'44 | |
| opposition | 9214 Apr 11 14:44 | 24° Ω 39'55 | 0°33'16 | desc. node | 9219 Aug 10 02:59 | 2° Y 14'58 | |
| direct | 9214 Jun 09 10:54 | 19° ≏ 41'29 | | | 9219 Aug 31 23:01 | 30° ₽ ₩ | |
| | 9214 Sep 04 11:44 | 0°M | | opposition | 9219 Sep 13 01:29 | 28°) €28'52 | -0°03'08 |
| evening set | 9214 Oct 14 00:35 | 8°M33'18 | | min. Earth dist. | 9219 Sep 14 14:33 | | 4.39938 AU |
| <i>8</i> | | | | direct | 9219 Nov 14 11:22 | 23° ¥ 28'15 | |
| conjunction | 9214 Oct 27 15:11 | 11° M 38'44 | 0°33'16 | | 9220 Jan 23 02:53 | 0°Υ | |
| minimum elong | 9214 Oct 27 15:09 | 11°M38'43 | 0°33'27 | evening set | 9220 Mar 18 18:20 | 11° Υ 12'29 | |
| max. Earth dist. | 9214 Oct 29 22:50 | 12°M10'23 | 6.18578 AU | max. Earth dist. | 9220 Mar 29 05:54 | | 6.32970 AU |
| morning rise | 9214 Nov 10 05:40 | 14°M43'50 | | | | | |
| morning rise | 9214 Nov 11 10:25 | 15°M | | conjunction | 9220 Mar 31 13:09 | 14° Y 03'32 | -0°14'39 |
| | 9215 Jan 29 07:09 | 0° ₹ | | minimum elong | 9220 Mar 31 13:08 | 14°\mathcal{Y}03'32 | |
| retrograde | 9215 Mar 15 20:29 | 3° ₹ '09'17 | | behind sun begin | 9220 Mar 31 09:42 | 14° Υ 01'37 | |
| | 9215 Apr 30 12:07 | 30°RML | | behind sun end | 9220 Mar 31 16:34 | 14°Υ05'27 | |
| opposition | 9215 May 14 22:25 | 28°M07'03 | 1°00'32 | morning rise | 9220 Apr 13 06:42 | 16° Y 54'17 | |
| min. Earth dist. | 9215 May 13 16:45 | 28°M16'58 | 4.27085 AU | | 9220 Jun 18 18:50 | 0°8 | |
| direct | 9215 Jul 14 01:28 | 23°MJ06'46 | | retrograde | 9220 Aug 15 01:37 | 4° 8 43'27 | |
| | 9215 Sep 22 18:35 | 0° ∡ ¹ | | C | 9220 Oct 13 12:15 | 30° ₹ Υ | |
| evening set | 9215 Nov 17 04:55 | 11° ∡ ′08'38 | | opposition | 9220 Oct 14 18:57 | 29° Y 50'08 | -0°38'25 |
| | | | | min. Earth dist. | 9220 Oct 16 10:42 | 29° Y 37'21 | 4.24861 AU |
| conjunction | 9215 Nov 30 15:08 | 14° ∡ °05′17 | 0°45'38 | direct | 9220 Dec 15 07:50 | 24° Y 51'09 | |
| minimum elong | 9215 Nov 30 15:08 | 14° ∡ °05′17 | 0°45'54 | | 9221 Feb 13 05:10 | 0° 8 | |
| max. Earth dist. | 9215 Dec 01 23:15 | 14° ∡ ¹22'55 | 6.34988 AU | evening set | 9221 Apr 19 22:18 | 13° 8 21'12 | |
| morning rise | 9215 Dec 14 00:23 | 17° ∡ °01′08 | | | 9221 Apr 27 01:12 | 15° 8 | |
| | 9216 Feb 19 18:22 | 0°ರ | | max. Earth dist. | 9221 Apr 30 14:42 | 15° 8 49'39 | 6.16290 AU |
| retrograde | 9216 Apr 14 15:57 | 4° る 22'45 | | | | | |
| | 9216 Jun 09 13:32 | 30°₽ ⋌ 7 | | conjunction | 9221 May 02 17:27 | 16° 8 19'08 | -0°35'54 |
| opposition | 9216 Jun 14 04:05 | 29° х 23′46 | 1°07'50 | minimum elong | 9221 May 02 17:26 | 16° 8 19'07 | 0°36'07 |
| min. Earth dist. | 9216 Jun 13 15:50 | 29° ∡ ¹27'48 | 4.41547 AU | morning rise | 9221 May 15 12:47 | 19° 8 17'26 | |
| direct | 9216 Aug 14 13:59 | 24° ∡ ¹22'25 | | | 9221 Jul 04 05:19 | Π °0 | |
| | 9216 Oct 17 22:46 | 0°ಕ | | retrograde | 9221 Sep 19 16:21 | 8° Ⅱ 19′23 | |
| evening set | 9216 Dec 18 06:11 | 11° る 47'57 | | opposition | 9221 Nov 18 23:25 | 3° Ⅱ 24′22 | |
| | | | | min. Earth dist. | 9221 Nov 20 03:15 | | 4.07800 AU |
| conjunction | 9216 Dec 31 11:27 | 14° る 38'01 | 0°44'17 | | 9221 Dec 17 20:07 | 30° ₹ 8 | |
| minimum elong | 9216 Dec 31 11:28 | 14° る 38'01 | 0°44'35 | direct | 9222 Jan 18 03:07 | 28° 8 27'35 | |
| max. Earth dist. | 9216 Dec 31 15:30 | 14° る 40'12 | 6.46478 AU | | 9222 Feb 18 04:53 | Π °0 | |
| morning rise | 9217 Jan 13 14:35 | 17° る 27'01 | | evening set | 9222 May 24 06:28 | 17° Ⅱ 49'45 | |
| | 9217 Mar 21 12:45 | 0° ≈ | | max. Earth dist. | 9222 Jun 05 03:46 | 20° ∏ 40'49 | 6.00367 AU |
| retrograde | 9217 May 14 09:05 | 4°≈10'15 | | | | | |
| | 9217 Jul 08 08:14 | 30°Ŗる | | conjunction | 9222 Jun 06 05:30 | 20° ∏ 56'18 | |
| opposition | 9217 Jul 14 05:42 | 29° る 14'27 | | minimum elong | 9222 Jun 06 05:29 | | 0°46'24 |
| min. Earth dist. | 9217 Jul 14 12:37 | 29° る 12'13 | 4.49422 AU | morning rise | 9222 Jun 19 05:44 | 24° ∏ 03'49 | |
| direct | 9217 Sep 14 13:12 | 24° る 12'49 | | | 9222 Jul 14 16:03 | 0 \circ \odot | |
| | 9217 Nov 19 14:31 | 0° ≈ | | retrograde | 9222 Oct 27 18:21 | 14° © 18'17 | |
| evening set | 9218 Jan 17 21:53 | 11° ≈ 22′20 | | opposition | 9222 Dec 26 11:30 | 9° © 20'32 | |
| | | | | min. Earth dist. | 9222 Dec 26 17:55 | | 3.94563 AU |
| conjunction | 9218 Jan 30 22:11 | 14° ≈ 09'06 | 0°31'11 | direct | 9223 Feb 23 06:35 | 4° © 25'38 | |
| minimum elong | 9218 Jan 30 22:12 | 14° ≈ 09'07 | 0°31'24 | evening set | 9223 Jun 29 21:14 | 24° © 26'15 | |
| max. Earth dist. | 9218 Jan 29 20:47 | 13° ≈ 55'31 | 6.50191 AU | | | | |
| | 9218 Feb 03 21:12 | 15° ≈ | | conjunction | 9223 Jul 13 02:53 | 27° © 40'16 | |
| morning rise | 9218 Feb 12 20:25 | 16° ≈ 54'53 | | minimum elong | 9223 Jul 13 02:55 | 27° © 40'16 | 0°39'26 |
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|------------------|-------------------|------------------------------|------------|-------------------|-------------------|------------------------------|------------|
| max. Earth dist. | 9223 Jul 13 12:46 | | 5.91130 AU | conjunction | 9229 Jan 04 19:44 | 18° る 57'40 | 0°43'04 |
| | 9223 Jul 22 15:31 | $0^{\circ}\Omega$ | | minimum elong | 9229 Jan 04 19:45 | 18° る 57'40 | 0°43'20 |
| morning rise | 9223 Jul 26 10:56 | 0° Ω 55'39 | | max. Earth dist. | 9229 Jan 04 18:29 | 18°る57'00 | 6.47332 AU |
| | 9223 Sep 28 14:14 | 15° Ω | | morning rise | 9229 Jan 17 22:19 | 21° ප් 46'06 | |
| retrograde | 9223 Dec 05 15:23 | 21° Ω 48'33 | | | 9229 Feb 27 18:13 | 0° ≈ | |
| min. Earth dist. | 9224 Feb 02 05:48 | 16° Ω 53'59 | 3.90487 AU | retrograde | 9229 May 18 14:24 | 8° ≈ 26'55 | |
| opposition | 9224 Feb 03 01:24 | 16° Ω 47'22 | -0°43'59 | opposition | 9229 Jul 18 10:49 | 3° ≈ 31'35 | 0°53'44 |
| 11 | 9224 Feb 16 15:32 | 15°RΩ | | min. Earth dist. | 9229 Jul 18 20:56 | 3° ≈ 28'19 | 4.49768 AU |
| direct | 9224 Mar 31 23:57 | 11° Ω 52'41 | | | 9229 Aug 17 22:05 | 30°Ŗる | |
| ancet | 9224 May 14 16:32 | 15° Ω | | direct | 9229 Sep 18 21:02 | 28°る30'00 | |
| | 9224 Jul 28 16:29 | 0° m) | | uncet | 9229 Oct 21 01:52 | 28 ⊙ 30 00 | |
| | | | | | | 0 ≈ 15°≈ | |
| evening set | 9224 Aug 05 21:52 | 1° m 58'27 | | | 9230 Jan 19 02:00 | | |
| | | | | evening set | 9230 Jan 22 04:20 | 15° ≈ 39'24 | |
| conjunction | 9224 Aug 19 10:11 | 5° Mp 14'58 | | max. Earth dist. | 9230 Feb 03 01:00 | 18° ≈ 11'29 | 6.50038 AU |
| minimum elong | 9224 Aug 19 10:12 | 5° Mp 14'58 | 0°16'22 | | | | |
| max. Earth dist. | 9224 Aug 21 05:49 | 5° Mp 41′26 | 5.92608 AU | conjunction | 9230 Feb 04 04:13 | 18° ≈ 26′04 | 0°28'34 |
| morning rise | 9224 Sep 02 01:00 | 8° Mp 32'38 | | minimum elong | 9230 Feb 04 04:14 | 18° ≈ 26′04 | 0°28'47 |
| retrograde | 9225 Jan 11 09:44 | 29° m 07'14 | | morning rise | 9230 Feb 17 01:46 | 21° ≈ 11'42 | |
| min. Earth dist. | 9225 Mar 10 08:20 | 24° Mp 15'31 | 3.97368 AU | | 9230 Apr 02 02:20 | 0° ∀ | |
| opposition | 9225 Mar 11 20:06 | 24° Mp 03'20 | -0°02'14 | retrograde | 9230 Jun 17 09:55 | 7°)(47'47 | |
| asc. node | 9225 Mar 31 21:30 | 21° mp 28'21 | | opposition | 9230 Aug 17 11:20 | 2° 升 54'25 | 0°26'38 |
| direct | 9225 May 08 22:06 | 19° m) 06'56 | | min. Earth dist. | 9230 Aug 18 13:53 | 2°) 45′56 | 4.48230 AU |
| | 9225 Aug 04 23:49 | 0∘ ⊽ | | min. Zartir digt. | 9230 Sep 10 18:42 | 30°R≈ | 0250110 |
| evening set | 9225 Sep 12 17:45 | 8° ≏ 41'53 | | direct | 9230 Oct 19 04:02 | 27°≈53'12 | |
| evening set | 7223 Sep 12 17.43 | 0 =41 99 | | uncet | 9230 Nov 26 15:59 | 0° \ | |
| conjunction | 9225 Sep 26 09:25 | 11° ≏ 54'24 | 0012146 | evening set | 9231 Feb 21 08:21 | 15°) 11'11 | |
| · | • | 11° ⊆ 54'23 | | Č | 9231 Mar 04 05:09 | 17°) 32'42 | 6.44306 AU |
| minimum elong | 9225 Sep 26 09:24 | | 0°12'48 | max. Earth dist. | 9231 Mai 04 03.09 | 17 X 3242 | 0.44300 AU |
| behind sun begin | 9225 Sep 26 04:18 | 11° £ 51'24 | | | 022134 06 04 25 | 170 / 50122 | 0006125 |
| behind sun end | 9225 Sep 26 14:31 | 11° ≏ 57'23 | | conjunction | 9231 Mar 06 04:35 | 17° ¥ 58'33 | 0°06'35 |
| max. Earth dist. | 9225 Sep 28 22:12 | 12° △ 30'09 | 6.04134 AU | minimum elong | 9231 Mar 06 04:35 | 17° ¥ 58'33 | 0°06'40 |
| morning rise | 9225 Oct 10 02:15 | 15° ≏ 07'14 | | behind sun begin | 9231 Mar 05 21:08 | 17° ¥ 54'30 | |
| | 9225 Dec 22 03:08 | 0° M | | behind sun end | 9231 Mar 06 12:02 | 18°) €02'35 | |
| retrograde | 9226 Feb 15 16:28 | 4° ™ 38′29 | | morning rise | 9231 Mar 18 23:02 | 20°) 45′13 | |
| | 9226 Apr 13 05:33 | 30° ₹ Ω | | | 9231 May 03 12:42 | 0 ° $\mathbf{\gamma}$ | |
| min. Earth dist. | 9226 Apr 14 19:29 | 29° ≏ 47'11 | 4.12186 AU | desc. node | 9231 Jun 20 15:36 | 6° Ƴ 36'12 | |
| opposition | 9226 Apr 16 09:10 | 29° ≏ 34'26 | 0°38'08 | retrograde | 9231 Jul 18 13:06 | 7° Ƴ 47'07 | |
| direct | 9226 Jun 14 09:07 | 24° ₽ 35'45 | | opposition | 9231 Sep 17 12:31 | 2° Y 54′20 | -0°08'09 |
| | 9226 Aug 13 20:48 | 0° M | | min. Earth dist. | 9231 Sep 19 02:54 | 2° Y 42′05 | 4.38597 AU |
| evening set | 9226 Oct 18 21:54 | 13°M20'46 | | | 9231 Oct 11 19:34 | 30° Ŗ ₩ | |
| | 9226 Oct 26 05:44 | 15° M ₊ | | direct | 9231 Nov 18 22:01 | 27° ¥ 53'59 | |
| | | | | | 9231 Dec 26 19:35 | $0^{\circ}\mathbf{\Upsilon}$ | |
| conjunction | 9226 Nov 01 11:56 | 16°M25'00 | 0°35'47 | evening set | 9232 Mar 23 03:15 | 15° Ƴ 41'59 | |
| minimum elong | 9226 Nov 01 11:54 | 16° M 24'59 | 0°36'00 | max. Earth dist. | 9232 Apr 02 13:38 | 18° Ƴ 02'01 | 6.31389 AU |
| max. Earth dist. | 9226 Nov 03 16:06 | 16°M54'30 | 6.20827 AU | | r | | |
| morning rise | 9226 Nov 15 02:00 | 19°M28'53 | | conjunction | 9232 Apr 04 21:49 | 18° Ƴ 33'33 | -0°17'55 |
| morning rise | 9227 Jan 04 15:01 | 0° x 7 | | minimum elong | 9232 Apr 04 21:48 | 18° Υ 33'33 | |
| retrograde | 9227 Mar 20 05:45 | 7° ∡ 745'02 | | morning rise | 9232 Apr 17 15:24 | 21° Υ 24'57 | 0 17 57 |
| min. Earth dist. | 9227 May 18 05:50 | 2° × 52'25 | 4.29164 AU | morning rise | 9232 May 28 02:37 | 0°8 | |
| | • | 2° × ³² 23 | | ratra arada | • | 9° 8 21'07 | |
| opposition | 9227 May 19 09:26 | | 1 0243 | retrograde | 9232 Aug 19 17:44 | | 00.42141 |
| t' . | 9227 Jun 10 01:09 | 30°RM. | | opposition | 9232 Oct 19 11:29 | 4° 8 27'37 | |
| direct | 9227 Jul 18 16:38 | 27°M42'43 | | min. Earth dist. | 9232 Oct 21 01:25 | | 4.23142 AU |
| | 9227 Aug 26 16:58 | 0° ∡ ¹ | | | 9232 Dec 01 15:54 | 30° ₹ Υ | |
| evening set | 9227 Nov 21 18:58 | 15° ∡ ³39'17 | | direct | 9232 Dec 19 20:30 | 29° Y 28'53 | |
| | | | | | 9233 Jan 07 01:56 | 0° 8 | |
| conjunction | 9227 Dec 05 04:42 | 18° ∡ ³35′00 | | | 9233 Apr 11 01:39 | 15° 8 | |
| minimum elong | 9227 Dec 05 04:41 | 18° ∡ ′35′00 | 0°46'30 | evening set | 9233 Apr 24 11:38 | 18° 8 03'49 | |
| max. Earth dist. | 9227 Dec 06 10:01 | 18° ∡ ′51′03 | 6.36758 AU | max. Earth dist. | 9233 May 05 07:47 | 20° 8 34'58 | 6.14577 AU |
| morning rise | 9227 Dec 18 12:59 | 21° ₹ ′29'48 | | | | | |
| | 9228 Jan 28 23:24 | 5°0 | | conjunction | 9233 May 07 07:04 | 21° 8 02'33 | -0°38'03 |
| retrograde | 9228 Apr 18 21:19 | 8° る 45'12 | | minimum elong | 9233 May 07 07:03 | 21° 8 02'32 | 0°38'17 |
| opposition | 9228 Jun 18 10:32 | 3°₹46'47 | 1°07'16 | morning rise | 9233 May 20 02:36 | 24° 8 01'42 | |
| min. Earth dist. | 9228 Jun 18 00:33 | 3° る 50'03 | 4.42899 AU | | 9233 Jun 15 12:27 | $\Pi^{\circ}0$ | |
| | 9228 Jul 21 08:50 | 30°₽ ,≯ | | retrograde | 9233 Sep 24 17:24 | 13° I I1'46 | |
| direct | 9228 Aug 18 23:44 | 28° х 45′28 | | opposition | 9233 Nov 23 22:10 | 8° Ⅱ 16'29 | -1°05'56 |
| | 9228 Sep 16 21:57 | 8°0 | | min. Earth dist. | 9233 Nov 25 00:46 | 8° Ⅱ 07'48 | 4.06224 AU |
| evening set | 9228 Dec 22 15:20 | 16° පි 08'12 | | direct | 9234 Jan 22 22:36 | 3° Ⅱ 19'58 | |
| Ç | | | | evening set | 9234 May 29 01:21 | 22° Ⅱ 46'30 | |
| | | | | _ | • | | |

| max. Earth dist. | 9234 Jun 10 01:40 | 25° II 39'52 | 5.99068 AU | minimum elong | 9239 Dec 09 17:21 | 23° 🗷 03'09 | 0°46'47 |
|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| · · · · · · · · · · · · | 0224 I 11 00.50 | 250 π 52155 | 0046111 | max. Earth dist. | 9239 Dec 10 18:57 | 23° 🖈 17'07 | 6.38220 AU |
| conjunction | 9234 Jun 11 00:58 | 25° I 53'55 | | morning rise | 9239 Dec 23 01:00 | 25° ₹ 57'05 | |
| minimum elong | 9234 Jun 11 00:58 | 25° Ⅱ 53'55 | 0°46'28 | | 9240 Jan 11 02:11 | 0° ろ | |
| morning rise | 9234 Jun 24 02:10 | 29° Ⅱ 02'27 | | retrograde | 9240 Apr 23 02:05 | 13° පි 06'56 | |
| | 9234 Jun 28 02:25 | 0 \circ \odot | | opposition | 9240 Jun 22 16:33 | 8° る 08'50 | 1°06'17 |
| retrograde | 9234 Nov 01 20:41 | 19° © 23'07 | | min. Earth dist. | 9240 Jun 22 08:39 | 8° る 11'25 | 4.44055 AU |
| opposition | 9234 Dec 31 14:08 | 14° 5 24'57 | -1°06'04 | direct | 9240 Aug 23 08:27 | 3° ⋜ 07′21 | |
| min. Earth dist. | 9234 Dec 31 16:51 | 14° 5 24'02 | 3.93691 AU | evening set | 9240 Dec 26 23:43 | 20° る 27'25 | |
| direct | 9235 Feb 28 04:57 | 9° 5 30'10 | | | | | |
| evening set | 9235 Jul 04 21:14 | 29° © 32'50 | | conjunction | 9241 Jan 09 03:36 | 23° る 16'21 | 0°41'34 |
| 8 | 9235 Jul 06 17:53 | $0^{\circ}\Omega$ | | minimum elong | 9241 Jan 09 03:36 | 23° る 16'21 | 0°41'50 |
| |) = 00 17.00 | ° 00 | | max. Earth dist. | 9241 Jan 09 00:24 | 23° る 14'38 | 6.48098 AU |
| agniumation | 9235 Jul 18 03:46 | 2° Ω 47'27 | 0026151 | morning rise | 9241 Jan 22 05:16 | 26° පි 04'10 | 0.40070 AC |
| conjunction | | | | morning rise | | | |
| minimum elong | 9235 Jul 18 03:47 | 2° Ω 47'27 | | | 9241 Feb 10 00:23 | 0° ≈ | |
| max. Earth dist. | 9235 Jul 18 17:15 | 2° Ω 55'42 | 5.90774 AU | retrograde | 9241 May 22 17:38 | 12° ≈ 42'30 | |
| morning rise | 9235 Jul 31 12:46 | 6° Ω 03'27 | | opposition | 9241 Jul 22 15:38 | 7° ≈ 47'26 | 0°50'33 |
| | 9235 Sep 08 00:09 | 15° Ω | | min. Earth dist. | 9241 Jul 23 03:29 | 7° ≈ 43'37 | 4.50078 AU |
| retrograde | 9235 Dec 10 18:32 | 26° Ω 57'21 | | direct | 9241 Sep 23 03:29 | 2°≈45'50 | |
| min. Earth dist. | 9236 Feb 07 06:29 | 22° Ω 02'56 | 3.90683 AU | | 9242 Jan 02 17:34 | 15° ≈ | |
| opposition | 9236 Feb 08 03:45 | 21° Ω 55'44 | -0°39'03 | evening set | 9242 Jan 26 10:03 | 19° ≈ 54'43 | |
| direct | 9236 Apr 06 02:31 | 17° Ω 00'52 | | max. Earth dist. | 9242 Feb 07 01:51 | 22° ≈ 24'22 | 6.49831 AU |
| direct | 9236 Jul 11 16:28 | 0° m | | max. Lartii dist. | 7242100 07 01.51 | 22 7012422 | 0.47031710 |
| | | | | : | 0242 E-1- 00-00-10 | 22941110 | 0025147 |
| evening set | 9236 Aug 10 23:51 | 7° m 05'13 | | conjunction | 9242 Feb 08 09:10 | 22°≈41'10 | 0°25'47 |
| | | | | minimum elong | 9242 Feb 08 09:11 | 22° ≈ 41′10 | 0°25'58 |
| conjunction | 9236 Aug 24 13:05 | 10° Mp 21'47 | | morning rise | 9242 Feb 21 06:18 | 25° ≈ 26'41 | |
| minimum elong | 9236 Aug 24 13:06 | 10° m 21'47 | 0°12'33 | | 9242 Mar 15 02:16 | 0° ℋ | |
| behind sun begin | 9236 Aug 24 07:46 | 10° m) 18'34 | | retrograde | 9242 Jun 21 16:58 | 12°) €04'02 | |
| behind sun end | 9236 Aug 24 18:25 | 10° m 25'00 | | opposition | 9242 Aug 21 17:48 | 7° ₩ 10'44 | 0°22'01 |
| max. Earth dist. | 9236 Aug 26 12:40 | 10° m 50'35 | 5.93352 AU | min. Earth dist. | 9242 Aug 22 23:01 | 7°) €01'24 | 4.47488 AU |
| morning rise | 9236 Sep 07 04:25 | 13° m 39'19 | | direct | 9242 Oct 23 11:35 | 2°) 09'31 | |
| 3 | 9236 Nov 25 09:26 | $0 \circ \overline{\mathbf{v}}$ | | evening set | 9243 Feb 25 14:08 | 19°) 29'49 | |
| retrograde | 9237 Jan 16 08:25 | ა — 4° ჲ 08'58 | | max. Earth dist. | 9243 Mar 08 08:51 | 21° H 50'36 | 6.43049 AU |
| • | 9237 Feb 11 21:54 | 2° £ 58'49 | | max. Lartii dist. | 7243 Wai 00 00.31 | 21 7(3030 | 0.43047 AC |
| asc. node | | | | | 0242 M 10 10 06 | 220 17120 | 0002110 |
| | 9237 Mar 09 23:23 | 30°R, My | | conjunction | 9243 Mar 10 10:06 | 22°) 17'30 | 0°03'10 |
| min. Earth dist. | 9237 Mar 15 05:45 | 29° Mp 17'18 | 3.98575 AU | minimum elong | 9243 Mar 10 10:06 | 22°) 17′30 | 0°03'13 |
| opposition | 9237 Mar 16 17:59 | 29° Mp 04'58 | 0°03'38 | behind sun begin | 9243 Mar 10 02:10 | 22°) 13'11 | |
| direct | 9237 May 13 21:13 | 24°M/08'18 | | behind sun end | 9243 Mar 10 18:02 | 22°) €21'49 | |
| | 9237 Jul 14 21:58 | 0∘ ত | | morning rise | 9243 Mar 23 04:12 | 25°) €04'31 | |
| evening set | 9237 Sep 17 17:48 | 13° ≏ 39'05 | | | 9243 Apr 15 08:47 | $0^{\circ}\mathbf{\Upsilon}$ | |
| | | | | desc. node | 9243 Apr 29 22:37 | 2° Y 53'52 | |
| conjunction | 9237 Oct 01 09:30 | 16° £ 50'56 | 0°16'23 | retrograde | 9243 Jul 22 23:12 | 12° Ƴ 11'44 | |
| minimum elong | 9237 Oct 01 09:28 | 16° ≙ 50'55 | 0°16'27 | opposition | 9243 Sep 21 23:21 | 7° Ƴ 18'51 | -0°13'14 |
| max. Earth dist. | 9237 Oct 03 21:20 | 17° £ 25'59 | 6.05673 AU | min. Earth dist. | 9243 Sep 23 13:33 | 7° Y 06'39 | 4.36884 AU |
| morning rise | 9237 Oct 05 21:20 9237 Oct 15 02:29 | 20° ⊆ 03'04 | 0.03073710 | direct | 9243 Nov 23 05:27 | 2° Υ 18'40 | 1.50001710 |
| morning risc | | 0°M | | | 9244 Mar 27 12:29 | 20° Υ 11'48 | |
| . 1 | 9237 Nov 29 15:24 | | | evening set | | | (20227 AII |
| retrograde | 9238 Feb 20 06:28 | 9°M26'23 | 4.12000 4.77 | max. Earth dist. | 9244 Apr 06 23:29 | 22° Ƴ 32'51 | 6.29327 AU |
| min. Earth dist. | 9238 Apr 19 11:12 | 4°M35'09 | 4.13908 AU | | 00444 | 222222 | 0001:00 |
| opposition | 9238 Apr 21 00:41 | 4°M22'28 | 0°42'32 | conjunction | 9244 Apr 09 06:57 | 23° Y ′04'09 | |
| | 9238 May 31 00:02 | 30° ₹ Ω | | minimum elong | 9244 Apr 09 06:56 | 23° Y 04′08 | 0°21'15 |
| direct | 9238 Jun 19 03:35 | 29° ≏ 23'28 | | morning rise | 9244 Apr 22 00:34 | 25° Y 56′22 | |
| | 9238 Jul 08 11:44 | 0° M | | | 9244 May 10 09:38 | 0°B | |
| | 9238 Oct 09 22:06 | 15° M ₊ | | retrograde | 9244 Aug 24 14:48 | 14° 8 01'33 | |
| evening set | 9238 Oct 23 16:54 | 18°ML03'32 | | opposition | 9244 Oct 24 05:53 | 9° 8 07'53 | -0°46'52 |
| S | | | | | | | |
| conjunction | | | | | | _ | 4 20848 AU |
| minimum elong | 9238 Nov 06 06:38 | 21°M,06'51 | 0°37'58 | min. Earth dist. | 9244 Oct 25 20:07 | 8° 8 55'34 | 4.20848 AU |
| | 9238 Nov 06 06:38 9238 Nov 06 06:36 | 21°M.06'51 | 0°37'58 | | 9244 Oct 25 20:07 9244 Dec 24 11:50 | 8° と 55'34 4° と 09'25 | 4.20848 AU |
| Č | 9238 Nov 06 06:36 | 21°M06'51 | 0°38'11 | min. Earth dist. direct | 9244 Oct 25 20:07 9244 Dec 24 11:50 9245 Mar 24 18:02 | 8° と 55'34 4° と 09'25 15° と | 4.20848 AU |
| max. Earth dist. | 9238 Nov 06 06:36 9238 Nov 08 08:51 | 21°M06'51 21°M35'10 | | min. Earth dist. direct | 9244 Oct 25 20:07 9244 Dec 24 11:50 9245 Mar 24 18:02 9245 Apr 29 03:09 | 8°\delta55'34 4°\delta09'25 15°\delta 22°\delta51'21 | |
| Č | 9238 Nov 06 06:36 9238 Nov 08 08:51 9238 Nov 19 20:00 | 21°M06'51 21°M35'10 24°M09'40 | 0°38'11 | min. Earth dist. direct | 9244 Oct 25 20:07 9244 Dec 24 11:50 9245 Mar 24 18:02 | 8° と 55'34 4° と 09'25 15° と | 4.20848 AU 6.12239 AU |
| max. Earth dist. morning rise | 9238 Nov 06 06:36 9238 Nov 08 08:51 9238 Nov 19 20:00 9238 Dec 16 17:37 | 21°M.06'51 21°M.35'10 24°M.09'40 0° ✓ | 0°38'11 | min. Earth dist. direct evening set max. Earth dist. | 9244 Oct 25 20:07 9244 Dec 24 11:50 9245 Mar 24 18:02 9245 Apr 29 03:09 9245 May 10 00:49 | 8°\delta55'34 4°\delta99'25 15°\delta 22°\delta51'21 25°\delta24'11 | 6.12239 AU |
| max. Earth dist. morning rise retrograde | 9238 Nov 06 06:36 9238 Nov 08 08:51 9238 Nov 19 20:00 9238 Dec 16 17:37 9239 Mar 24 15:50 | 21°M06'51 21°M35'10 24°M09'40 | 0°38'11 6.22605 AU | min. Earth dist. direct evening set max. Earth dist. conjunction | 9244 Oct 25 20:07 9244 Dec 24 11:50 9245 Mar 24 18:02 9245 Apr 29 03:09 9245 May 10 00:49 9245 May 11 22:57 | 8°\delta55'34 4°\delta09'25 15°\delta 22°\delta51'21 25°\delta51'14 | 6.12239 AU -0°40′04 |
| max. Earth dist. morning rise | 9238 Nov 06 06:36 9238 Nov 08 08:51 9238 Nov 19 20:00 9238 Dec 16 17:37 | 21°M.06'51 21°M.35'10 24°M.09'40 0° ✓ | 0°38'11 | min. Earth dist. direct evening set max. Earth dist. | 9244 Oct 25 20:07 9244 Dec 24 11:50 9245 Mar 24 18:02 9245 Apr 29 03:09 9245 May 10 00:49 | 8°\delta55'34 4°\delta09'25 15°\delta 22°\delta51'21 25°\delta51'14 25°\delta51'14 | 6.12239 AU |
| max. Earth dist. morning rise retrograde | 9238 Nov 06 06:36 9238 Nov 08 08:51 9238 Nov 19 20:00 9238 Dec 16 17:37 9239 Mar 24 15:50 | 21°M.06'51 21°M.35'10 24°M.09'40 0°\$\overline{A}\$ 12°\$\verline{A}\$18'08 | 0°38'11 6.22605 AU | min. Earth dist. direct evening set max. Earth dist. conjunction | 9244 Oct 25 20:07 9244 Dec 24 11:50 9245 Mar 24 18:02 9245 Apr 29 03:09 9245 May 10 00:49 9245 May 11 22:57 | 8°\delta55'34 4°\delta09'25 15°\delta 22°\delta51'21 25°\delta51'14 | 6.12239 AU -0°40′04 |
| max. Earth dist. morning rise retrograde opposition | 9238 Nov 06 06:36 9238 Nov 08 08:51 9238 Nov 19 20:00 9238 Dec 16 17:37 9239 Mar 24 15:50 9239 May 23 19:19 | 21°M06'51 21°M35'10 24°M09'40 0°\$\sqrt{1} 12°\$\sqrt{1}8'08 7°\$\sqrt{1}6'43 | 0°38'11 6.22605 AU 1°04'29 | min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong | 9244 Oct 25 20:07 9244 Dec 24 11:50 9245 Mar 24 18:02 9245 Apr 29 03:09 9245 May 10 00:49 9245 May 11 22:57 9245 May 11 22:56 | 8°\delta55'34 4°\delta09'25 15°\delta 22°\delta51'21 25°\delta51'14 25°\delta51'14 | 6.12239 AU -0°40′04 |
| max. Earth dist. morning rise retrograde opposition min. Earth dist. direct | 9238 Nov 06 06:36 9238 Nov 08 08:51 9238 Nov 19 20:00 9238 Dec 16 17:37 9239 Mar 24 15:50 9239 May 23 19:19 9239 May 22 17:53 | 21°M06'51 21°M35'10 24°M09'40 0° ~ 12° ~ 18'08 7° ~ 16'43 7° ~ 25'10 | 0°38'11 6.22605 AU 1°04'29 | min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise | 9244 Oct 25 20:07 9244 Dec 24 11:50 9245 Mar 24 18:02 9245 Apr 29 03:09 9245 May 10 00:49 9245 May 11 22:57 9245 May 11 22:56 9245 May 24 19:07 9245 May 29 16:40 | 8°\delta55'34 4°\delta09'25 15°\delta 22°\delta51'21 25°\delta24'11 25°\delta51'14 25°\delta51'13 28°\delta51'39 0°\delta | 6.12239 AU -0°40′04 |
| max. Earth dist. morning rise retrograde opposition min. Earth dist. | 9238 Nov 06 06:36 9238 Nov 08 08:51 9238 Nov 19 20:00 9238 Dec 16 17:37 9239 Mar 24 15:50 9239 May 23 19:19 9239 May 22 17:53 9239 Jul 23 06:53 | 21°M06'51 21°M35'10 24°M09'40 0° × 12° × 18'08 7° × 16'43 7° × 25'10 2° × 16'03 | 0°38'11 6.22605 AU 1°04'29 | min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde | 9244 Oct 25 20:07 9244 Dec 24 11:50 9245 Mar 24 18:02 9245 Apr 29 03:09 9245 May 10 00:49 9245 May 11 22:57 9245 May 11 22:56 9245 May 24 19:07 9245 May 29 16:40 9245 Sep 29 20:38 | 8°\delta55'34 4°\delta09'25 15°\delta 22°\delta51'21 25°\delta24'11 25°\delta51'14 25°\delta51'13 28°\delta51'39 0°\pi 18°\pi12'23 | 6.12239 AU -0°40'04 0°40'18 |
| max. Earth dist. morning rise retrograde opposition min. Earth dist. direct | 9238 Nov 06 06:36 9238 Nov 08 08:51 9238 Nov 19 20:00 9238 Dec 16 17:37 9239 Mar 24 15:50 9239 May 23 19:19 9239 May 22 17:53 9239 Jul 23 06:53 | 21°M06'51 21°M35'10 24°M09'40 0° × 12° × 18'08 7° × 16'43 7° × 25'10 2° × 16'03 | 0°38'11 6.22605 AU 1°04'29 | min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise | 9244 Oct 25 20:07 9244 Dec 24 11:50 9245 Mar 24 18:02 9245 Apr 29 03:09 9245 May 10 00:49 9245 May 11 22:57 9245 May 11 22:56 9245 May 24 19:07 9245 May 29 16:40 | 8°\delta55'34 4°\delta09'25 15°\delta 22°\delta51'21 25°\delta24'11 25°\delta51'14 25°\delta51'13 28°\delta51'39 0°\pi 18°\pi 12'23 13°\pi 16'47 | 6.12239 AU -0°40'04 0°40'18 |

| | 9268 Dec 05 15:02 | 15° R ႘ | | | 9274 Jul 30 01:05 | 15°M | |
|-------------------------------|----------------------------------------|------------------------------------------|-----------------------|---------------------------|----------------------------------------|------------------------------------------|-------------|
| direct | 9269 Jan 02 19:31 | 13° 8 45'44 | | | 9274 Oct 28 02:05 | 0° ∡ 7 | |
| | 9269 Jan 30 20:52 | 15° 8 | | evening set | 9274 Nov 07 02:11 | 2° ҂ 11′27 | |
| | 9269 Apr 26 21:28 | $\Pi^{\circ}0$ | | | | | |
| evening set | 9269 May 08 16:58 | 2° Ⅱ 45'00 | | conjunction | 9274 Nov 20 14:06 | 5° х 10'46 | 0°43'12 |
| max. Earth dist. | 9269 May 19 22:44 | 5° Ⅱ 24'24 | 6.06986 AU | minimum elong | 9274 Nov 20 14:05 | 5° √ 10'45 | 0°43'28 |
| | 00/03/ | 50T 15110 | 00.4241.0 | max. Earth dist. | 9274 Nov 22 07:55 | 5° х 33′57 | 6.30162 AU |
| conjunction | 9269 May 21 13:57 | 5° Ⅱ 47'40 5° Ⅱ 47'39 | | morning rise | 9274 Dec 04 01:01 | 8° 🗷 09'20 | |
| minimum elong morning rise | 9269 May 21 13:56 9269 Jun 03 11:31 | 3 П 4739 8° П 51'01 | 0 43 33 | retrograde opposition | 9275 Apr 06 12:17 9275 Jun 05 21:47 | 25° ₹ 48'37 20° ₹ 48'34 | 1°07'30 |
| retrograde | 9269 Oct 10 14:26 | 28° II 35'21 | | min. Earth dist. | 9275 Jun 05 02:55 | 20° × 54'48 | 4.37571 AU |
| opposition | 9269 Dec 09 13:29 | 23° II 39'04 | -1°09'17 | direct | 9275 Aug 05 21:54 | 15° × ⁷ 47'30 | 57571110 |
| min. Earth dist. | 9269 Dec 10 06:49 | 23° Ⅲ 33'22 | 3.99516 AU | | 9275 Nov 23 19:33 | 0°ರ | |
| direct | 9270 Feb 06 21:52 | 18° Ⅱ 43'31 | | evening set | 9275 Dec 09 18:06 | 3° ප 22'21 | |
| | 9270 May 07 14:06 | 0ංම | | | | | |
| evening set | 9270 Jun 13 08:56 | 8°930'47 | | conjunction | 9275 Dec 23 00:47 | 6° る 14'07 | 0°45'53 |
| | | | | minimum elong | 9275 Dec 23 00:47 | 6° ප 14'07 | 0°46'11 |
| conjunction | 9270 Jun 26 11:18 | 11°9541'55 | | max. Earth dist. | 9275 Dec 23 13:04 | 6° る 20'45 | 6.43626 AU |
| minimum elong | 9270 Jun 26 11:19 | 11° © 41'55 | 0°44'40 | morning rise | 9276 Jan 05 05:52 | 9° る 04'55 | |
| max. Earth dist. | 9270 Jun 26 03:06 | 11°936'55 | 5.93924 AU | retrograde | 9276 May 05 12:18 | 25° る 57'04 | 1001100 |
| morning rise | 9270 Jul 09 15:50 | 14°954'22 | | opposition | 9276 Jul 05 05:43 | 21°る00'21 | 1°01'29 |
| | 9270 Sep 18 00:38 9270 Nov 18 08:58 | 0° Ω 5° Ω 37'13 | | min. Earth dist. | 9276 Jul 05 07:14 | 20°る59'51 15°る58'43 | 4.47830 AU |
| retrograde opposition | 9270 Nov 18 08:38 9271 Jan 16 21:41 | 0°Ω37'35 | 0057122 | direct | 9276 Sep 05 08:15 9276 Dec 24 13:29 | 0°≈ | |
| min. Earth dist. | 9271 Jan 16 21:41 9271 Jan 16 12:54 | | 3.90745 AU | evening set | 9270 Dec 24 13:29 9277 Jan 08 17:55 | 0 ∞ 3°≈10'44 | |
| mm. Earth dist. | 9271 Jan 21 14:06 | 30°RS | 3.90743710 | evening set | 7277 Juli 00 17.33 | 3 7010 44 | |
| direct | 9271 Mar 16 02:36 | 25°9643'04 | | conjunction | 9277 Jan 21 19:46 | 5°≈58'10 | 0°36'01 |
| | 9271 May 06 19:58 | 0°N | | minimum elong | 9277 Jan 21 19:47 | 5°≈58'10 | 0°36'16 |
| | 9271 Jul 17 08:55 | 15° Ω | | max. Earth dist. | 9277 Jan 21 03:20 | 5° ≈ 49'23 | 6.49975 AU |
| evening set | 9271 Jul 20 23:13 | 15° Ω 52′20 | | morning rise | 9277 Feb 03 19:23 | 8° ≈ 44'32 | |
| | | | | | 9277 Mar 06 07:37 | 15° ≈ | |
| conjunction | 9271 Aug 03 08:56 | 19° Ω 08'41 | -0°27'47 | retrograde | 9277 Jun 04 02:44 | 25° ≈ 18'39 | |
| minimum elong | 9271 Aug 03 08:57 | | 0°28'00 | opposition | 9277 Aug 04 02:26 | 20° ≈ 24'28 | 0°39'48 |
| max. Earth dist. | 9271 Aug 04 15:41 | 19° Ω 27'29 | 5.90347 AU | min. Earth dist. | 9277 Aug 04 22:12 | 20° ≈ 18′07 | 4.49994 AU |
| morning rise | 9271 Aug 16 21:01 | 22° Ω 26'18 | | direct | 9277 Oct 05 17:27 | 15°≈22'55 | |
| . 1 | 9271 Sep 18 03:35 | 0° m/y | | | 9278 Jan 26 19:21 | 0°) { | |
| retrograde | 9271 Dec 26 23:07 | 13° M) 16'59 | 2.02052.411 | evening set | 9278 Feb 07 23:01 | 2°) 34'17 | C 47770 ATT |
| min. Earth dist. opposition | 9272 Feb 23 01:51 9272 Feb 24 07:28 | 8° Mp 24'08 8° Mp 14'05 | 3.92853 AU | max. Earth dist. | 9278 Feb 19 04:41 | 4° ¥ 59'17 | 6.47779 AU |
| direct | 9272 Apr 22 05:42 | 3°M)18'38 | -0 21 39 | conjunction | 9278 Feb 20 20:45 | 5° ¥ 20'55 | 0°16'50 |
| evening set | 9272 Aug 27 02:54 | 23° M) 11'37 | | minimum elong | 9278 Feb 20 20:46 | 5° ∺ 20'56 | 0°16'59 |
| | 32723306 27 3200 | | | morning rise | 9278 Mar 05 16:22 | 8°) €06'42 | |
| conjunction | 9272 Sep 09 17:40 | 26° Mp 26'44 | 0°00'02 | retrograde | 9278 Jul 04 13:41 | 24°) 53′42 | |
| minimum elong | 9272 Sep 09 17:41 | 26° Mp 26'44 | 0°00'01 | opposition | 9278 Sep 03 13:50 | 20°) € 00'47 | 0°07'38 |
| behind sun begin | 9272 Sep 09 12:11 | 26° Mp 23'29 | | min. Earth dist. | 9278 Sep 05 00:40 | 19°) 49'40 | 4.43583 AU |
| behind sun end | 9272 Sep 09 23:11 | 26° m 29'59 | | direct | 9278 Nov 05 04:06 | 14° ¥ 59′53 | |
| asc. node | 9272 Sep 09 06:28 | 26° Mp 20° 03 | | desc. node | 9278 Nov 26 13:30 | 15°) 40′42 | |
| max. Earth dist. | 9272 Sep 12 02:43 | 27° Mp 00'49 | 5.97847 AU | | 9279 Feb 26 15:01 | 0° Υ | |
| morning rise | 9272 Sep 23 10:19 | 29° m/42'34 | | evening set | 9279 Mar 10 08:52 | 2° Υ 32'51 | |
| | 9272 Sep 24 15:46 | 0° ⊽ | | max. Earth dist. | 9279 Mar 20 20:53 | 4° Ƴ 51'49 | 6.37539 AU |
| retrograde | 9273 Jan 31 10:29 | 19° Ω 46'03 | 4.04040.411 | | 0270 M 22 02.59 | 5° Ƴ 22'18 | 0007117 |
| min. Earth dist. opposition | 9273 Mar 30 08:17 9273 Mar 31 23:38 | 14° ♀ 55'05 14° ♀ 41'43 | 4.04848 AU 0°21'35 | conjunction minimum elong | 9279 Mar 23 03:58 9279 Mar 23 03:57 | 5° γ ′22′18 5° γ ′22′18 | |
| direct | 9273 May 29 11:19 | 9° £ 44'02 | 0 21 33 | behind sun begin | 9279 Mar 22 20:38 | 5°Υ18'16 | 0 0/18 |
| evening set | 9273 Oct 03 04:21 | 28° £ 52'23 | | behind sun end | 9279 Mar 23 11:16 | 5° Υ 26'19 | |
| J. Ching Sec | 9273 Oct 03 04:21 9273 Oct 08 02:09 | 0°M | | morning rise | 9279 Apr 04 21:47 | 8° Υ 11'19 | |
| | | *** | | retrograde | 9279 Aug 05 19:11 | 25° Υ 41'24 | |
| conjunction | 9273 Oct 16 19:30 | 2°ML00'34 | 0°26'51 | opposition | 9279 Oct 05 15:05 | 20° Ƴ 48'19 | -0°28'09 |
| minimum elong | 9273 Oct 16 19:29 | 2°ML00'33 | 0°26'59 | min. Earth dist. | 9279 Oct 07 07:02 | 20° Y 35'30 | 4.30078 AU |
| max. Earth dist. | 9273 Oct 19 05:40 | 2°M34'03 | 6.13099 AU | direct | 9279 Dec 06 11:36 | 15° Ƴ 48'43 | |
| morning rise | 9273 Oct 30 11:22 | 5°ML08'41 | | | 9280 Mar 22 20:14 | 9° 8 | |
| | 9273 Dec 15 11:29 | 15° M ₊ | | evening set | 9280 Apr 09 23:21 | 4° 8 02'56 | |
| retrograde | 9274 Mar 06 03:52 | 23°M57'47 | | max. Earth dist. | 9280 Apr 20 13:01 | 6° 8 27'55 | 6.21747 AU |
| min. Earth dist. | 9274 May 03 17:14 | 19°M05'49 | 4.21723 AU | | 0000 4 | eat 1= | 000000 |
| opposition | 9274 May 05 02:25 | 18°M54'39 | 0°54'09 | conjunction | 9280 Apr 22 18:13 | 6° 8 58'27 | |
| direct | 9274 Jun 07 20:07 | 15°RM. | | minimum elong | 9280 Apr 22 18:12 | 6° 8 58'26 | 0~30'20 |
| direct | 9274 Jul 03 19:31 | 13° M 54'49 | | morning rise | 9280 May 05 12:31 | 9° 8 54'04 | |

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|------------------|-------------------|------------------------|------------|------------------|-------------------|------------------------------|------------|
| | 9280 May 28 07:53 | 15° 8 | | direct | 9286 Jul 08 12:23 | 18°M36'18 | |
| retrograde | 9280 Sep 08 13:45 | 28° 8 31'46 | | | 9286 Oct 10 19:45 | 0° ∡ 7 | |
| opposition | 9280 Nov 08 00:01 | 23° 8 37'28 | -0°57'51 | evening set | 9286 Nov 11 18:17 | 6° ∡ ¹46'54 | |
| min. Earth dist. | 9280 Nov 09 09:27 | 23° 8 26'38 | 4.13059 AU | · · | | | |
| direct | 9281 Jan 07 14:37 | 18° 8 39'59 | | conjunction | 9286 Nov 25 05:22 | 9° ∡ ¹45'05 | 0°44'23 |
| | 9281 Apr 09 06:24 | $\Pi^{\circ}0$ | | minimum elong | 9286 Nov 25 05:21 | 9° ∡ ¹45'05 | 0°44'39 |
| evening set | 9281 May 13 14:06 | 7° Ⅱ 46′13 | | max. Earth dist. | 9286 Nov 26 18:08 | 10° ₹ 05'23 | 6.32153 AU |
| max. Earth dist. | 9281 May 24 23:00 | 10° Ⅲ 28'17 | 6.04929 AU | morning rise | 9286 Dec 08 15:41 | 12° ∡ ⁴42'33 | |
| | | | | | 9287 Mar 29 11:56 | ರ°0 | |
| conjunction | 9281 May 26 11:27 | 10° Ⅲ 50′00 | -0°44'29 | retrograde | 9287 Apr 10 18:47 | 0° る 14'32 | |
| minimum elong | 9281 May 26 11:26 | 10° Ⅱ 49'59 | 0°44'46 | | 9287 Apr 23 00:40 | 30°₽ ⋌ 7 | |
| morning rise | 9281 Jun 08 09:54 | 13° Ⅱ 54'37 | | opposition | 9287 Jun 10 05:07 | 25° ∡ 14'59 | 1°07'44 |
| | 9281 Aug 26 19:48 | 0°€ | | min. Earth dist. | 9287 Jun 09 13:29 | 25° ₹ 20′08 | 4.39193 AU |
| retrograde | 9281 Oct 15 22:28 | 3° 5 548'16 | | direct | 9287 Aug 10 09:46 | 20° ∡ 13'48 | |
| | 9281 Dec 06 03:03 | 30° Ŗ Ⅱ | | | 9287 Nov 06 05:52 | 0°ප | |
| opposition | 9281 Dec 14 20:30 | 28° Ⅱ 51'30 | -1°09'18 | evening set | 9287 Dec 14 04:12 | 7° る 45'04 | |
| min. Earth dist. | 9281 Dec 15 09:56 | 28° Ⅱ 47'04 | 3.97937 AU | | | | |
| direct | 9282 Feb 12 00:53 | 23° Ⅱ 56′08 | | conjunction | 9287 Dec 27 10:22 | 10° පි 36'10 | 0°45'10 |
| | 9282 Apr 16 02:45 | 0°ಲಾ | | minimum elong | 9287 Dec 27 10:22 | 10° පි 36'10 | 0°45'29 |
| evening set | 9282 Jun 18 12:40 | 13° © 47'39 | | max. Earth dist. | 9287 Dec 27 19:56 | 10° る 41'19 | 6.44778 AU |
| C | | | | morning rise | 9288 Jan 09 14:31 | 13° る 26'12 | |
| conjunction | 9282 Jul 01 16:07 | 16° © 59'42 | -0°43'03 | C | 9288 Apr 27 03:09 | 0° ≈ | |
| minimum elong | 9282 Jul 01 16:08 | 16° © 59'42 | | retrograde | 9288 May 09 15:12 | 0° ≈ 14'46 | |
| max. Earth dist. | 9282 Jul 01 14:38 | 16° © 58'47 | 5.92982 AU | Ü | 9288 May 22 03:30 | 30°Ŗる | |
| morning rise | 9282 Jul 14 21:32 | 20°©13'02 | | opposition | 9288 Jul 09 10:28 | 25° る 18'31 | 0°59'14 |
| C | 9282 Aug 26 09:37 | $\Omega^{\circ}\Omega$ | | min. Earth dist. | 9288 Jul 09 13:39 | 25° る 17'29 | 4.48475 AU |
| retrograde | 9282 Nov 23 19:54 | 10° Ω 59'38 | | direct | 9288 Sep 09 14:34 | 20° ට 16'59 | |
| opposition | 9283 Jan 22 07:04 | 5° £ 59'32 | -0°53'39 | | 9288 Dec 07 03:30 | 0° ≈ | |
| min. Earth dist. | 9283 Jan 21 19:49 | | 3.90549 AU | evening set | 9289 Jan 13 00:48 | 7° ≈ 28'11 | |
| direct | 9283 Mar 21 10:27 | 1° Ω 05'02 | | max. Earth dist. | 9289 Jan 25 05:38 | 10° ≈ 04'29 | 6.50089 AU |
| | 9283 Jun 29 23:26 | 15° Ω | | | | | |
| evening set | 9283 Jul 26 06:28 | 21° Ω 13'34 | | conjunction | 9289 Jan 26 01:54 | 10° ≈ 15'19 | 0°33'46 |
| Č | | | | minimum elong | 9289 Jan 26 01:55 | 10°≈15'20 | 0°34'00 |
| conjunction | 9283 Aug 08 16:59 | 24° Ω 30′02 | -0°24'18 | morning rise | 9289 Feb 08 00:58 | 13° ≈ 01'27 | |
| minimum elong | 9283 Aug 08 17:00 | 24° Ω 30′03 | | 8 2 | 9289 Feb 17 09:38 | 15° ≈ | |
| max. Earth dist. | 9283 Aug 10 03:57 | 24° Ω 51'22 | 5.90898 AU | retrograde | 9289 Jun 08 09:13 | 29° ≈ 35'51 | |
| morning rise | 9283 Aug 22 06:01 | 27° Ω 47'47 | | opposition | 9289 Aug 08 08:26 | 24°≈42'00 | 0°35'44 |
| C | 9283 Aug 31 10:01 | 0° m) | | min. Earth dist. | 9289 Aug 09 07:04 | 24° ≈ 34'45 | 4.49602 AU |
| retrograde | 9284 Jan 01 03:40 | 18° m)34'16 | | direct | 9289 Oct 10 01:25 | 19° ≈ 40'36 | |
| min. Earth dist. | 9284 Feb 28 04:05 | | 3.94104 AU | | 9290 Jan 09 16:05 | 0° ∀ | |
| opposition | 9284 Feb 29 12:30 | 13° Mp 31'06 | -0°15'35 | evening set | 9290 Feb 12 05:10 | 6° ¥ 53'34 | |
| direct | 9284 Apr 27 10:44 | 8° mp 35'25 | | max. Earth dist. | 9290 Feb 23 07:47 | 9°) 17'18 | 6.46927 AU |
| asc. node | 9284 Jul 19 21:26 | 18° Mp 36'28 | | | | | |
| evening set | 9284 Sep 01 08:27 | 28° Mp 23'17 | | conjunction | 9290 Feb 25 02:25 | 9°) 40′22 | 0°13'37 |
| • | 9284 Sep 08 03:23 | 0∘ ⊽ | | minimum elong | 9290 Feb 25 02:26 | 9°) 40′22 | 0°13'45 |
| | • | | | behind sun begin | 9290 Feb 24 22:09 | 9°) 38′04 | |
| conjunction | 9284 Sep 14 23:26 | 1° م 37'39 | 0°04'10 | behind sun end | 9290 Feb 25 06:42 | 9°) 42'40 | |
| minimum elong | 9284 Sep 14 23:26 | 1° ≏ 37'40 | 0°04'10 | morning rise | 9290 Mar 09 21:41 | 12° ¥ 26′20 | |
| behind sun begin | 9284 Sep 14 15:11 | 1° ≏ 32'46 | | retrograde | 9290 Jul 08 22:28 | 29°) (17′04 | |
| behind sun end | 9284 Sep 15 07:42 | 1° ≏ 42'33 | | opposition | 9290 Sep 07 23:23 | 24°) 24'12 | 0°02'39 |
| max. Earth dist. | 9284 Sep 17 08:28 | 2° ₽ 11'36 | 5.99651 AU | min. Earth dist. | 9290 Sep 09 10:19 | 24°) (13′02 | 4.42349 AU |
| morning rise | 9284 Sep 28 16:19 | 4° £ 52'41 | | desc. node | 9290 Oct 06 22:15 | 21°)(02'25 | |
| retrograde | 9285 Feb 05 06:06 | 24° ≏ 46'49 | | direct | 9290 Nov 09 11:48 | 19°) €23'30 | |
| min. Earth dist. | 9285 Apr 04 06:04 | 19° ≏ 55'36 | 4.06992 AU | | 9291 Feb 09 12:21 | $0^{\circ}\mathbf{\Upsilon}$ | |
| opposition | 9285 Apr 05 20:40 | 19° ≏ 42'29 | 0°27'03 | evening set | 9291 Mar 14 17:03 | 7° Y ′00'02 | |
| direct | 9285 Jun 03 12:16 | 14° ≏ 44'29 | | max. Earth dist. | 9291 Mar 25 06:14 | 9° Y 20'06 | 6.36027 AU |
| | 9285 Sep 21 10:03 | 0°M | | | | | |
| evening set | 9285 Oct 08 03:36 | 3°M45'57 | | conjunction | 9291 Mar 27 11:58 | 9° Y 49'58 | -0°10'41 |
| Č | | | | minimum elong | 9291 Mar 27 11:58 | 9° Y 49'58 | 0°10'43 |
| conjunction | 9285 Oct 21 18:39 | 6°M53'00 | 0°29'53 | behind sun begin | 9291 Mar 27 05:48 | 9° Y 46'33 | |
| minimum elong | 9285 Oct 21 18:38 | 6°M53'00 | 0°30'02 | behind sun end | 9291 Mar 27 18:07 | 9° Y ′53′22 | |
| max. Earth dist. | 9285 Oct 24 04:32 | 7°M26'09 | 6.15396 AU | morning rise | 9291 Apr 09 05:27 | 12° Y ′39'29 | |
| morning rise | 9285 Nov 04 09:52 | 9°M59'51 | | - C | 9291 Jul 28 08:29 | 0°8 | |
| - | 9285 Nov 26 22:49 | 15°M | | retrograde | 9291 Aug 10 10:36 | 0°816'00 | |
| retrograde | 9286 Mar 10 15:31 | 28°M38'59 | | = | 9291 Aug 23 12:09 | 30°RƳ | |
| min. Earth dist. | 9286 May 08 07:29 | 23°M46'59 | 4.23959 AU | opposition | 9291 Oct 10 06:10 | 25° Y ′22'50 | -0°32'50 |
| opposition | 9286 May 09 15:25 | 23°M36'17 | | min. Earth dist. | 9291 Oct 11 22:01 | 25° Y 10'03 | 4.28384 AU |
| | | | | | | | |

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|----------------------|-------------------|-------------------------|----------------|------------------|--------------------|---------------------|------------|
| direct | 9291 Dec 11 00:31 | 20° Y 23'33 | | direct | 9297 Jun 08 07:40 | 19° ≏ 34'29 | |
| | 9292 Mar 05 03:10 | 0°8 | | | 9297 Sep 03 18:52 | 0° M | |
| evening set | 9292 Apr 14 11:40 | 8° 8 42'26 | | evening set | 9297 Oct 12 23:39 | 8°M30'55 | |
| max. Earth dist. | 9292 Apr 25 01:37 | 11° 8 08'14 | 6.19997 AU | | | | |
| | | | | conjunction | 9297 Oct 26 14:19 | 11° M 37'03 | 0°32'34 |
| conjunction | 9292 Apr 27 06:26 | 11° 8 38'40 | -0°32'48 | minimum elong | 9297 Oct 26 14:17 | 11°ML37'02 | 0°32'45 |
| minimum elong | 9292 Apr 27 06:24 | 11° 8 38'39 | 0°32'58 | max. Earth dist. | 9297 Oct 28 21:17 | 12°M08'23 | 6.17171 AU |
| morning rise | 9292 May 10 01:08 | 14° 8 35'09 | 0 3200 | morning rise | 9297 Nov 09 05:18 | 14°M42'56 | 0.17171110 |
| morning risc | 9292 May 11 20:33 | 15° 8 | | morning risc | 9297 Nov 10 11:31 | 15°M | |
| | • | | | | | | |
| | 9292 Jul 28 04:53 | 0°II | | | 9298 Jan 27 22:51 | 0° ∡ 7 | |
| retrograde | 9292 Sep 13 11:28 | 3° Ⅱ 20′53 | | retrograde | 9298 Mar 15 00:46 | 3° ≯ 14'05 | |
| | 9292 Oct 31 15:26 | 30° ₹ 8 | | | 9298 Apr 30 07:11 | 30°RM₊ | |
| opposition | 9292 Nov 12 21:29 | 28° 8 26'13 | -1°00'39 | min. Earth dist. | 9298 May 12 19:42 | 28°M21'52 | 4.25690 AU |
| min. Earth dist. | 9292 Nov 14 04:23 | 28° 8 16'11 | 4.11382 AU | opposition | 9298 May 14 02:02 | 28° M 11'42 | 0°59'47 |
| direct | 9293 Jan 12 08:20 | 23° 8 28'59 | | direct | 9298 Jul 13 02:50 | 23°M11'28 | |
| | 9293 Mar 20 05:05 | $\Pi^{\circ}0$ | | | 9298 Sep 21 06:07 | 0° ∡ ¹ | |
| evening set | 9293 May 18 07:34 | 12° ∏ 39'46 | | evening set | 9298 Nov 16 08:33 | 11° √ 17'38 | |
| max. Earth dist. | • | 15° Ⅱ 25'34 | 6.03482 AU | evening set | 7270 140V 10 00.55 | 11 × 17 30 | |
| max. Earm dist. | 9293 May 29 21:59 | 13 1123 34 | 0.03482 AU | | 0200 N 20 10 15 | 140 71450 | 0045114 |
| | | | | conjunction | 9298 Nov 29 19:15 | 14° √ 14'59 | 0°45'14 |
| conjunction | 9293 May 31 05:35 | 15° Ⅱ 44'26 | | minimum elong | 9298 Nov 29 19:15 | 14° ⊀ 14'58 | 0°45'30 |
| minimum elong | 9293 May 31 05:34 | 15° Ⅱ 44'26 | 0°45'34 | max. Earth dist. | 9298 Dec 01 06:01 | 14° ∡ ³34′07 | 6.33732 AU |
| morning rise | 9293 Jun 13 04:32 | 18° Ⅱ 49'58 | | morning rise | 9298 Dec 13 04:41 | 17° ∡ 11′28 | |
| | 9293 Aug 02 13:44 | 0°© | | | 9299 Feb 17 12:53 | 0° ろ | |
| retrograde | 9293 Oct 21 02:59 | 8° © 50'34 | | retrograde | 9299 Apr 15 00:19 | 4° る 37'19 | |
| opposition | 9293 Dec 19 22:51 | 3°953'24 | -1°08'44 | | 9299 Jun 11 17:11 | 30°R. ✓ | |
| min. Earth dist. | 9293 Dec 20 10:23 | | 3.96867 AU | opposition | 9299 Jun 14 11:32 | 29° ₹ 38'13 | 1°07'32 |
| iiiii. Eartii tiist. | | | 3.90607 AU | * * | | | |
| | 9294 Jan 22 23:54 | 30°RⅡ | | min. Earth dist. | 9299 Jun 13 21:40 | 29° ⋌ ¹42'47 | 4.40508 AU |
| direct | 9294 Feb 17 00:04 | 28° Ⅱ 58'12 | | direct | 9299 Aug 14 19:29 | 24° ∡ ³36′59 | |
| | 9294 Mar 13 20:46 | 0 \circ \odot | | | 9299 Oct 16 13:31 | 0°ප | |
| evening set | 9294 Jun 23 11:35 | 18° © 52'13 | | evening set | 9299 Dec 18 13:27 | 12° る 05'12 | |
| | | | | | | | |
| conjunction | 9294 Jul 06 15:48 | 22°904'57 | -0°41'25 | conjunction | 9299 Dec 31 18:48 | 14° る 55'39 | 0°44'11 |
| minimum elong | 9294 Jul 06 15:49 | 22°904'57 | 0°41'43 | minimum elong | 9299 Dec 31 18:48 | 14° る 55'39 | 0°44'28 |
| max. Earth dist. | 9294 Jul 06 17:22 | 22°905'54 | 5.92384 AU | max. Earth dist. | 9299 Dec 31 23:37 | 14° る 58'14 | 6.45731 AU |
| morning rise | 9294 Jul 19 22:20 | 25°919'02 | 3.72304710 | morning rise | 9300 Jan 13 22:25 | 17° る 45'04 | 0.43731710 |
| morning rise | | | | morning rise | | | |
| | 9294 Aug 08 13:35 | 0° N | | | 9300 Mar 19 15:41 | 0° ≈ | |
| | 9294 Nov 02 13:33 | 15° Ω | | retrograde | 9300 May 14 19:46 | 4° ≈ 30'27 | |
| retrograde | 9294 Nov 28 22:42 | 16° Ω 07'52 | | | 9300 Jul 11 08:17 | 30°Ŗ る | |
| | 9294 Dec 25 06:17 | 15° R Ω | | opposition | 9300 Jul 14 15:11 | 29° る 34'31 | 0°56'39 |
| opposition | 9295 Jan 27 09:56 | 11° Ω 07′21 | -0°49'32 | min. Earth dist. | 9300 Jul 14 21:20 | 29° る 32'32 | 4.49009 AU |
| min. Earth dist. | 9295 Jan 26 19:18 | 11° Ω 12'16 | 3.90516 AU | direct | 9300 Sep 14 22:24 | 24° る 32'54 | |
| direct | 9295 Mar 26 10:44 | 6° Ω 12'44 | | | 9300 Nov 17 18:51 | 0° ≈ | |
| | 9295 Jun 11 06:51 | 15°Ω | | evening set | 9301 Jan 18 06:40 | 11° ≈ 43'06 | |
| evening set | 9295 Jul 31 08:08 | 26° Ω 20'26 | | max. Earth dist. | 9301 Jan 30 09:10 | 14° ≈ 18'09 | 6.50149 AU |
| evening set | 9293 Jul 31 00.00 | 20 862020 | | max. Earm dist. | 9301 Jan 30 09.10 | 14 ~1009 | 0.30149 AU |
| | | 0 | | | | | |
| conjunction | 9295 Aug 13 19:27 | 29° Ω 37'03 | | conjunction | 9301 Jan 31 07:20 | 14° ≈ 30′01 | 0°31'19 |
| minimum elong | 9295 Aug 13 19:28 | 29° Ω 37'03 | | minimum elong | 9301 Jan 31 07:21 | 14° ≈ 30′01 | 0°31'33 |
| max. Earth dist. | 9295 Aug 15 08:44 | 29° Ω 59'46 | 5.91429 AU | | 9301 Feb 02 15:20 | 15° ≈ | |
| | 9295 Aug 15 09:08 | 0° m y | | morning rise | 9301 Feb 13 05:39 | 17° ≈ 15'52 | |
| morning rise | 9295 Aug 27 09:17 | 2° m 54'53 | | | 9301 Apr 22 20:46 | 0°) € | |
| retrograde | 9296 Jan 06 02:43 | 23°m/37'39 | | retrograde | 9301 Jun 13 12:27 | 3° ¥ 50′29 | |
| min. Earth dist. | 9296 Mar 04 02:46 | 18° m) 45'24 | 3.95126 AU | Z . | 9301 Aug 05 06:30 | 30°R≈ | |
| opposition | 9296 Mar 05 11:45 | 18° m) 34'10 | | opposition | 9301 Aug 13 13:40 | 28°≈56'47 | 0°31'28 |
| ** | | - | -0 0943 | * * | • | | |
| direct | 9296 May 02 11:36 | 13° m 38'10 | | min. Earth dist. | 9301 Aug 14 13:14 | 28°≈49'14 | 4.49166 AU |
| asc. node | 9296 Jun 01 08:53 | 15° m 07'57 | | direct | 9301 Oct 15 06:15 | 23°≈55'26 | |
| | 9296 Aug 22 22:29 | 0ಂ ⊽ | | | 9301 Dec 22 01:20 | 0° ∀ | |
| evening set | 9296 Sep 06 08:43 | 3° ഫ 22'10 | | evening set | 9302 Feb 17 10:31 | 11°) 09'57 | |
| | | | | max. Earth dist. | 9302 Feb 28 10:44 | 13°) 32'44 | 6.45991 AU |
| conjunction | 9296 Sep 20 00:14 | 6° £ 36′04 | 0°07'58 | | | | |
| minimum elong | 9296 Sep 20 00:13 | 6° £ 36'04 | 0°07'59 | conjunction | 9302 Mar 02 07:15 | 13° ¥ 56'53 | 0°10'20 |
| behind sun begin | 9296 Sep 19 16:46 | 6° ₽ 31'40 | . . | minimum elong | 9302 Mar 02 07:15 | 13° X 56'53 | 0°10'26 |
| • | = | | | _ | | 13° ¥ 53'30 | 0 1020 |
| behind sun end | 9296 Sep 20 07:41 | 6° £ 40′28 | C 01070 + ** | behind sun begin | 9302 Mar 02 00:59 | | |
| max. Earth dist. | 9296 Sep 22 11:21 | 7° £ 11'07 | 6.01079 AU | behind sun end | 9302 Mar 02 13:31 | 14°) €00'16 | |
| morning rise | 9296 Oct 03 17:09 | 9° £ 50'27 | | morning rise | 9302 Mar 15 02:08 | 16°) (43′03 | |
| retrograde | 9297 Feb 09 23:09 | 29° ≏ 36'57 | | | 9302 May 25 05:59 | 0° Y | |
| min. Earth dist. | 9297 Apr 08 23:21 | 24° ₽ 45'43 | 4.08669 AU | retrograde | 9302 Jul 14 08:21 | 3° Y 37'52 | |
| opposition | 9297 Apr 10 13:36 | 24° ≏ 32'45 | 0°32'04 | desc. node | 9302 Aug 18 05:46 | 1° Y 49'08 | |
| | - | | | | - | | |

| | 9302 Sep 03 10:36 | 30° ₹ | | min. Earth dist. | 9308 Mar 10 05:34 | 240 mm () 2120 | 3.96394 AU |
|--------------------------------|----------------------------------------|----------------------------------------|------------------------|--------------------------------|----------------------------------------|-----------------------------------------|-----------------------|
| opposition | 9302 Sep 13 08:29 | 28° ¥ 45′02 | 0.002,53 | opposition | 9308 Mar 11 16:17 | 23° m 51'40 | |
| min. Earth dist. | 9302 Sep 14 21:28 | 28°\(\frac{43}{33}\)13 | 4.40925 AU | asc. node | 9308 Apr 12 07:55 | 20° Mp 06'04 | -0 0331 |
| direct | 9302 Nov 14 20:38 | 23°) (44'28 | 4.40723710 | direct | 9308 May 08 16:44 | 18° m 55'27 | |
| ancer | 9303 Jan 21 22:15 | 0°Υ | | ancet | 9308 Aug 05 13:40 | 0° ರ | |
| evening set | 9303 Mar 20 00:35 | 11° Υ 25'16 | | evening set | 9308 Sep 12 14:45 | ა <u>—</u> 8° ჲ 34'33 | |
| max. Earth dist. | 9303 Mar 30 11:32 | 13° Ƴ 44'44 | 6.34190 AU | 844 | ı | | |
| | | | | conjunction | 9308 Sep 26 06:18 | 11° ≏ 47'38 | 0°11'55 |
| conjunction | 9303 Apr 01 19:16 | 14° Ƴ 15'49 | -0°14'03 | minimum elong | 9308 Sep 26 06:17 | 11° ≏ 47'37 | 0°11'58 |
| minimum elong | 9303 Apr 01 19:16 | 14° Ƴ 15'49 | 0°14'06 | behind sun begin | 9308 Sep 26 00:36 | 11° ≏ 44'17 | |
| behind sun begin | 9303 Apr 01 15:14 | 14° Ƴ 13'35 | | behind sun end | 9308 Sep 26 11:58 | 11° ≏ 50'58 | |
| behind sun end | 9303 Apr 01 23:18 | 14° Ƴ 18′04 | | max. Earth dist. | 9308 Sep 28 17:42 | 12° ≙ 22'40 | 6.02925 AU |
| morning rise | 9303 Apr 14 12:51 | 17° Y 06′05 | | morning rise | 9308 Oct 09 23:25 | 15° ഫ 01'09 | |
| | 9303 Jun 19 00:33 | 0° 8 | | | 9308 Dec 22 08:04 | 0° M | |
| retrograde | 9303 Aug 16 02:15 | 4° 8 50'33 | | retrograde | 9309 Feb 15 17:36 | 4°M37'55 | |
| opposition | 9303 Oct 15 21:42 | 29° Ƴ 57'13 | -0°37'25 | | 9309 Apr 13 04:55 | 30° ₹ Ω | |
| | 9303 Oct 15 13:02 | 30° ₹Ƴ | | min. Earth dist. | 9309 Apr 14 19:34 | 29° £ 46'55 | 4.10914 AU |
| min. Earth dist. | 9303 Oct 17 12:26 | 29° Ƴ 44'46 | 4.26235 AU | opposition | 9309 Apr 16 10:11 | 29° ഫ 33'50 | 0°37'03 |
| direct | 9303 Dec 16 11:50 | 24° Y 58′09 | | direct | 9309 Jun 14 07:59 | 24° £ 35'15 | |
| | 9304 Feb 13 18:16 | 0°8 | | | 9309 Aug 13 18:49 | 0°M₊ | |
| evening set | 9304 Apr 20 00:38 | 13° 8 23'37 | | evening set | 9309 Oct 18 22:55 | 13°M24'27 | |
| | 9304 Apr 26 23:58 | 15° 8 | | | 9309 Oct 25 23:50 | 15°M | |
| max. Earth dist. | 9304 Apr 30 17:40 | 15° 8 51'54 | 6.17707 AU | | | | |
| | | | | conjunction | 9309 Nov 01 13:15 | 16°M29'19 | 0°35'09 |
| conjunction | 9304 May 02 19:43 | 16° 8 20'53 | | minimum elong | 9309 Nov 01 13:14 | 16°M29'19 | 0°35'22 |
| minimum elong | 9304 May 02 19:42 | 16° 8 20'52 | 0°35′29 | max. Earth dist. | 9309 Nov 03 19:08 | 16°M59'54 | 6.19640 AU |
| morning rise | 9304 May 15 14:38 | 19° 8 18'28 | | morning rise | 9309 Nov 15 03:27 | 19°M33'48 | |
| | 9304 Jul 04 09:35 | 0°Ⅲ 8°Ⅲ14'35 | | | 9310 Jan 04 01:56 | 0° द्र 7 7° द्र7 54′23 | |
| retrograde | 9304 Sep 19 13:59 | 8° П 14'33 3° П 19'43 | 1902111 | retrograde | 9310 Mar 20 12:48 | | 4 20150 ATT |
| opposition min. Earth dist. | 9304 Nov 18 21:05 9304 Nov 20 02:57 | | 4.09125 AU | min. Earth dist. opposition | 9310 May 18 10:13 9310 May 19 14:35 | 3° 尽 01'52 2° 尽 52'24 | 4.28158 AU 1°02'05 |
| iiiii. Eartii tist. | 9304 Nov 20 02.37 9304 Dec 16 22:53 | 30°R В | 4.09123 AU | opposition | 9310 Jun 11 15:14 | 30°RM | 1 02 03 |
| direct | 9304 Dec 10 22:53 9305 Jan 18 03:53 | 28° 8 22'48 | | direct | 9310 Jul 11 13:14 9310 Jul 18 20:37 | 27°M51'58 | |
| direct | 9305 Feb 19 01:41 | 0°II | | direct | 9310 Aug 25 09:57 | 0° √ | |
| evening set | 9305 May 24 04:18 | 17° Ⅱ 40'37 | | evening set | 9310 Nov 21 23:30 | 15° ⋌ 751'02 | |
| max. Earth dist. | 9305 Jun 04 21:38 | 20° I I28'56 | 6.01461 AU | evening sec |)310110V 21 23.30 | 13 7 31 02 | |
| man. Darvir alov. | 7500 Van 0. 21.50 | 20 22000 | 0.01101110 | conjunction | 9310 Dec 05 09:21 | 18° ∡ °47'07 | 0°45'52 |
| conjunction | 9305 Jun 06 02:55 | 20° Ⅱ 46'30 | -0°45'47 | minimum elong | 9310 Dec 05 09:20 | 18° ҂ ′47'07 | 0°46'10 |
| minimum elong | 9305 Jun 06 02:55 | 20° Ⅱ 46'30 | | max. Earth dist. | 9310 Dec 06 16:15 | 19° х 04'03 | 6.36000 AU |
| morning rise | 9305 Jun 19 02:56 | 23° ∏ 53′24 | | morning rise | 9310 Dec 18 18:01 | 21° ҂ ′42′20 | |
| | 9305 Jul 15 09:18 | 0ංම | | C | 9311 Jan 28 00:09 | 8°0 | |
| retrograde | 9305 Oct 27 09:44 | 14° © 03'18 | | retrograde | 9311 Apr 20 04:21 | 8° る 59'57 | |
| opposition | 9305 Dec 26 05:05 | 9° 5 05'43 | -1°07'40 | opposition | 9311 Jun 19 17:37 | 4° る 01'14 | 1°07'00 |
| min. Earth dist. | 9305 Dec 26 12:26 | 9° 5 03'17 | 3.95305 AU | min. Earth dist. | 9311 Jun 19 06:08 | 4° る 05'00 | 4.42427 AU |
| direct | 9306 Feb 23 00:50 | 4°গু10'44 | | | 9311 Jul 25 14:47 | 30°R. ✓ | |
| evening set | 9306 Jun 29 15:35 | 24°509'24 | | direct | 9311 Aug 20 05:13 | 28° ₹ 59'50 | |
| | | | | | 9311 Sep 15 03:19 | 0°₹ | |
| conjunction | 9306 Jul 12 20:51 | 27° © 23'05 | | evening set | 9311 Dec 23 21:18 | 16° る 23'07 | |
| minimum elong | 9306 Jul 12 20:53 | 27° 5 23'06 | 0°39'42 | _ | | — | |
| max. Earth dist. | 9306 Jul 13 03:34 | 27° © 27'11 | 5.91443 AU | conjunction | 9312 Jan 06 02:00 | 19° る 12'43 | 0°43'00 |
| | 9306 Jul 23 13:44 | 0°N | | minimum elong | 9312 Jan 06 02:01 | 19°る12'43 | 0°43'18 |
| morning rise | 9306 Jul 26 04:29 | 0° £ 38′09 | | max. Earth dist. | 9312 Jan 06 04:04 | 19°る13'49 | 6.47167 AU |
| . 1 | 9306 Sep 29 23:32 | 15° Ω | | morning rise | 9312 Jan 19 04:35 | 22° る 01'14 | |
| retrograde | 9306 Dec 05 08:49 | 21° Ω 30'34 | 0044150 | | 9312 Feb 27 15:53 | 0° ≈ | |
| opposition min. Earth dist. | 9307 Feb 02 18:30 | 16° Ω 29'34 | -0°44'50 3.90307 AU | retrograde | 9312 May 18 20:38 9312 Jul 18 17:53 | 8°≈42'08 | 0°53'52 |
| mm. Earm alst. | 9307 Feb 02 01:23 9307 Feb 14 00:30 | 16°8€35′21 15°RΩ | 3.7030 / AU | opposition min. Earth dist. | 9312 Jul 18 17:53 9312 Jul 19 02:25 | 3°≈46'34 3°≈43'48 | 0°53′52 4.49870 AU |
| direct | 9307 Apr 01 18:47 | 13 ₹87 11° Ω 34'53 | | mm. Darm tist. | 9312 Jul 19 02.23 9312 Aug 21 01:38 | っ ≈4548 30°Ŗる | т.т/0/U AU |
| 311001 | 9307 Apr 01 18:47 9307 May 17 13:09 | 11 % 34 33 | | direct | 9312 Aug 21 01:38 9312 Sep 19 03:30 | 30 KO 28° 石 44'55 | |
| | 9307 Jul 30 13:47 | 0° mp | | | 9312 Oct 18 11:44 | 20° ≈ | |
| evening set | 9307 Aug 06 15:48 | 1° m y42'19 | | | 9313 Jan 18 05:40 | 0 ~ 15° ≈ | |
| | | | | evening set | 9313 Jan 22 10:21 | 15°≈53'16 | |
| conjunction | 9307 Aug 20 04:07 | 4° m 59'06 | -0°16'59 | max. Earth dist. | 9313 Feb 03 06:53 | 18° ≈ 25'11 | 6.50354 AU |
| minimum elong | 9307 Aug 20 04:07 | 4° m/59'07 | | | | | |
| max. Earth dist. | 9307 Aug 21 22:56 | 5° m/ 25'08 | 5.91983 AU | conjunction | 9313 Feb 04 10:12 | 18° ≈ 39'48 | 0°28'48 |
| morning rise | 9307 Sep 02 18:38 | 8° Mp 16'59 | | minimum elong | 9313 Feb 04 10:13 | 18° ≈ 39'49 | 0°29'01 |
| retrograde | 9308 Jan 12 07:37 | 28° m 55'20 | | morning rise | 9313 Feb 17 08:04 | 21° ≈ 25′23 | |
| | | | | | | | |

| | 9313 Apr 01 03:22 | 0°) { | | retrograde | 9318 Dec 10 21:47 | 27° Ω 00'04 | |
|---------------------|----------------------------------------|----------------------|--------------|-----------------------|----------------------------------------|---------------------------|-----------------------|
| retrograde | 9313 Apr 01 03:22 9313 Jun 17 16:19 | 8° ∺ 00'07 | | min. Earth dist. | 9319 Feb 07 08:54 | $27^{\circ} \Omega 05'39$ | 3.90252 AU |
| • | | 3° ¥ 06'33 | 0°27'10 | opposition | 9319 Feb 07 08:34 9319 Feb 08 05:43 | 21° Ω 58'38 | |
| opposition | 9313 Aug 17 17:02 | | | direct | | | -0 3939 |
| min. Earth dist. | 9313 Aug 18 19:57 | 2°) 57'57 | 4.48692 AU | direct | 9319 Apr 07 03:34 | 17° Ω 03'52 | |
| t' . | 9313 Sep 13 00:03 | 30°R≈ | | | 9319 Jul 12 11:39 | 0° Mp | |
| direct | 9313 Oct 19 11:05 | 28°≈05'09 | | evening set | 9319 Aug 12 02:51 | 7° Mp 10'11 | |
| | 9313 Nov 24 23:53 | 0°) (| | | | | |
| evening set | 9314 Feb 21 13:19 | 15°) €21'26 | C 44050 4XX | conjunction | 9319 Aug 25 15:47 | 10° m 26'53 | |
| max. Earth dist. | 9314 Mar 04 10:35 | 17°) (42′58 | 6.44852 AU | minimum elong | 9319 Aug 25 15:47 | 10° m 26'54 | 0°13'04 |
| | | | | behind sun begin | 9319 Aug 25 10:50 | 10° m 23'54 | |
| conjunction | 9314 Mar 06 09:47 | 18°) €08'38 | 0°07'04 | behind sun end | 9319 Aug 25 20:45 | 10° m 29'53 | |
| minimum elong | 9314 Mar 06 09:47 | 18°) €08'38 | 0°07'09 | max. Earth dist. | 9319 Aug 27 13:53 | 10° m 54'50 | 5.92845 AU |
| behind sun begin | 9314 Mar 06 02:26 | 18°) (04′39 | | morning rise | 9319 Sep 08 07:11 | 13° M 44'41 | |
| behind sun end | 9314 Mar 06 17:08 | 18° ¥ 12'37 | | | 9319 Nov 25 17:57 | 0∘ ⊽ | |
| morning rise | 9314 Mar 19 04:16 | 20° ¥ 55′06 | | retrograde | 9320 Jan 17 11:44 | 4° ≏ 16'40 | |
| | 9314 May 02 22:01 | 0° Y | | asc. node | 9320 Feb 20 15:47 | 2° ≏ 23'10 | |
| desc. node | 9314 Jun 29 12:59 | 7° Y 21′05 | | | 9320 Mar 11 02:50 | 30°R, Mp | |
| retrograde | 9314 Jul 18 15:06 | 7° Y 54'53 | | min. Earth dist. | 9320 Mar 15 09:09 | 29° m 25'19 | 3.98053 AU |
| opposition | 9314 Sep 17 15:53 | 3° Y ′02'00 | -0°07'19 | opposition | 9320 Mar 16 22:15 | 29° m 12'42 | 0°02'48 |
| min. Earth dist. | 9314 Sep 19 05:24 | 2° Y 50'00 | 4.39177 AU | direct | 9320 May 14 00:24 | 24° m 16'08 | |
| | 9314 Oct 13 04:53 | 30° Ŗ ₩ | | | 9320 Jul 14 06:13 | 0∘ ⊽ | |
| direct | 9314 Nov 19 00:55 | 28°) (01'31 | | evening set | 9320 Sep 17 21:54 | 13° ≏ 48'39 | |
| | 9314 Dec 25 19:36 | $0^{\circ}\Upsilon$ | | • | • | | |
| evening set | 9315 Mar 24 06:59 | 15° Ƴ 47'47 | | conjunction | 9320 Oct 01 13:36 | 17° ≏ 00'42 | 0°15'49 |
| max. Earth dist. | 9315 Apr 03 17:37 | 18° Ƴ 07'46 | 6.31946 AU | minimum elong | 9320 Oct 01 13:36 | 17° ≏ 00'41 | 0°15'53 |
| | 1 | | | max. Earth dist. | 9320 Oct 04 02:22 | 17° ≏ 36'21 | 6.05201 AU |
| conjunction | 9315 Apr 06 01:34 | 18° Ƴ 39'10 | -0°17'18 | morning rise | 9320 Oct 15 06:26 | 20° £ 13'01 | |
| minimum elong | 9315 Apr 06 01:34 | 18° Y '39'09 | | | 9320 Nov 28 21:51 | 0° M | |
| morning rise | 9315 Apr 18 19:08 | 21° Y '30'18 | V 17 == | retrograde | 9321 Feb 20 14:16 | 9° ™ 38'28 | |
| morning rise | 9315 May 28 20:49 | 0°8 | | min. Earth dist. | 9321 Apr 19 17:48 | 4°M47'08 | 4.13514 AU |
| retrograde | 9315 Aug 20 20:23 | 9° 8 24'15 | | opposition | 9321 Apr 21 07:06 | 4°M34'31 | 0°41'46 |
| opposition | 9315 Oct 20 12:56 | 4° 8 30'47 | -0°41'47 | оррозіцоп | 9321 Apr 21 07:00 9321 Jun 03 18:21 | 30°R ⊡ | 0 41 40 |
| min. Earth dist. | 9315 Oct 22 04:38 | 4°818'00 | 4.23618 AU | direct | 9321 Jun 19 10:12 | 29° £ 35'38 | |
| iiiii. Lartii dist. | 9315 Dec 03 15:33 | 4 ⊘ 18 00 | 4.23016 AU | uncet | 9321 Jul | 29 = 33 38 | |
| direct | 9315 Dec 03 13:55 9315 Dec 20 23:55 | 29° Υ 31'54 | | | 9321 Oct 09 03:47 | 15°M | |
| direct | | | | avanina aat | | 18°M16'30 | |
| | 9316 Jan 07 06:30 | 0°8 | | evening set | 9321 Oct 23 22:01 | 18-116-10-30 | |
| . , | 9316 Apr 11 00:28 | 15° 8 | | | 0221 N 07 11 47 | 210M 10/50 | 0027120 |
| evening set | 9316 Apr 24 14:06 | 18° 8 05'41 | 6 1 4007 ATT | conjunction | 9321 Nov 06 11:47 | 21°M19'58 | 0°37'30 |
| max. Earth dist. | 9316 May 05 07:51 | 20° 8 35'20 | 6.14927 AU | minimum elong | 9321 Nov 06 11:45 | 21°M19'57 | |
| | 021616 07 00 22 | 210 4017 | 0027121 | max. Earth dist. | 9321 Nov 08 15:43 | | 6.22314 AU |
| conjunction | 9316 May 07 09:32 | 21° 8 04'17 | | morning rise | 9321 Nov 20 01:18 | 24°M22'57 | |
| minimum elong | 9316 May 07 09:31 | 21° 8 04'16 | 0°3′/45 | | 9321 Dec 15 21:06 | 0° ∡ 7 | |
| morning rise | 9316 May 20 05:08 | 24° 8 03'18 | | retrograde | 9322 Mar 24 21:48 | 12° ∡ ³32'37 | |
| | 9316 Jun 15 12:36 | 0° П | | min. Earth dist. | 9322 May 22 23:27 | 7° ∡ 740'03 | 4.30677 AU |
| retrograde | 9316 Sep 24 16:19 | 13° Ⅱ 11'40 | | opposition | 9322 May 24 02:24 | 7° ∡ ³31'04 − | 1°03'57 |
| opposition | 9316 Nov 23 22:01 | 8° ∏ 16′29 | | direct | 9322 Jul 23 12:07 | 2° ∡ ³30′28 | |
| min. Earth dist. | 9316 Nov 25 00:43 | | 4.06420 AU | evening set | 9322 Nov 26 14:03 | 20° х 22′46 | |
| direct | 9317 Jan 22 22:01 | 3° Ⅱ 19'51 | | | | _ | |
| evening set | 9317 May 29 03:10 | 22° ∏ 46′27 | | conjunction | 9322 Dec 09 23:08 | 23° ∡ 17'39 | 0°46'14 |
| max. Earth dist. | 9317 Jun 10 02:26 | 25° Ⅱ 39'11 | 5.99092 AU | minimum elong | 9322 Dec 09 23:08 | 23° ∡ 17'39 | 0°46'33 |
| | | | | max. Earth dist. | 9322 Dec 11 01:46 | 23° ∡ 32'11 | 6.38179 AU |
| conjunction | 9317 Jun 11 02:40 | 25° Ⅱ 53'49 | | morning rise | 9322 Dec 23 06:51 | 26° ∡ 11'38 | |
| minimum elong | 9317 Jun 11 02:40 | 25° Ⅱ 53'49 | 0°46'16 | | 9323 Jan 10 04:00 | 0°₹ | |
| morning rise | 9317 Jun 24 03:40 | 29° Ⅱ 02'15 | | retrograde | 9323 Apr 24 10:09 | 13° る 21'46 | |
| | 9317 Jun 28 04:17 | 0 \circ ∞ | | opposition | 9323 Jun 23 23:45 | 8° る 23'37 | 1°06'07 |
| retrograde | 9317 Nov 01 21:45 | 19° © 22'47 | | min. Earth dist. | 9323 Jun 23 15:43 | 8° පි 26'14 | 4.44120 AU |
| opposition | 9317 Dec 31 14:22 | 14° © 24'45 | -1°06'05 | direct | 9323 Aug 24 15:51 | 3° る 22'11 | |
| min. Earth dist. | 9317 Dec 31 18:42 | 14° 5 23'18 | 3.93524 AU | evening set | 9323 Dec 28 05:22 | 20° る 41'36 | |
| direct | 9318 Feb 28 06:42 | 9° 5 29'55 | | | | | |
| evening set | 9318 Jul 04 23:02 | 29° © 33'52 | | conjunction | 9324 Jan 10 09:16 | 23° る 30'30 | 0°41'35 |
| | 9318 Jul 06 17:57 | $0^{\circ}\Omega$ | | minimum elong | 9324 Jan 10 09:17 | 23° る 30'30 | 0°41'52 |
| | | | | max. Earth dist. | 9324 Jan 10 06:01 | 23° る 28'45 | 6.48249 AU |
| conjunction | 9318 Jul 18 05:33 | 2° Ω 48'36 | -0°37'04 | morning rise | 9324 Jan 23 11:14 | 26° ප 18'21 | |
| minimum elong | | 2° Ω 48'37 | | - | 9324 Feb 10 02:48 | 0° ≈ | |
| | 9318 Jul 18 05:35 | 2 364031 | 0 3/19 | | 7524100 10 02.40 | 0 | |
| max. Earth dist. | 9318 Jul 18 05:35 9318 Jul 18 18:55 | 2° Ω 56'47 | 5.90452 AU | retrograde | 9324 May 23 00:15 | 12°≈56′20 | |
| max. Earth dist. | | | | retrograde opposition | | | 0°50'46 |
| | 9318 Jul 18 18:55 | 2° Ω 56'47 | | - | 9324 May 23 00:15 | 12° ≈ 56′20 | 0°50'46 4.50301 AU |

| T' | 02246 22 00 15 | 20 50120 | | | 0220 4 06 01 22 | 110 02 4112 | |
|------------------|----------------------------------------|-----------------------------------------|-------------|------------------|----------------------------------------|----------------------------------------|------------|
| direct | 9324 Sep 23 09:15 | 2°≈59'28 | | morning rise | 9330 Aug 06 01:22 | 11° Ω 34'13 | |
| | 9325 Jan 01 20:47 | 15° ≈ | | | 9330 Aug 20 07:46 | 15° Ω | |
| evening set | 9325 Jan 26 15:21 | 20°≈07'31 | C 50100 ATT | | 9330 Nov 06 18:15 | 0° M) | |
| max. Earth dist. | 9325 Feb 07 09:04 | 22° ≈ 38'00 | 6.50108 AU | retrograde | 9330 Dec 16 06:34 | 2° m/29'00 | |
| | | | | | 9331 Jan 24 21:26 | 30°R€ | |
| conjunction | 9325 Feb 08 14:47 | 22°≈53'56 | 0°26'04 | opposition | 9331 Feb 13 16:06 | 27° Ω 27'00 | |
| minimum elong | 9325 Feb 08 14:48 | 22° ≈ 53'57 | 0°26'16 | min. Earth dist. | 9331 Feb 12 15:24 | 27° Ω 35′22 | 3.90940 AU |
| morning rise | 9325 Feb 21 11:54 | 25° ≈ 39'23 | | direct | 9331 Apr 12 13:22 | 22° Ω 32′02 | |
| | 9325 Mar 14 07:17 | 0° ∀ | | | 9331 Jun 21 17:07 | 0° т р | |
| retrograde | 9325 Jun 21 21:13 | 12° 升 15′50 | | evening set | 9331 Aug 17 12:06 | 12° Mp 34'18 | |
| opposition | 9325 Aug 21 22:46 | 7°) 22′31 | 0°22'36 | | | | |
| min. Earth dist. | 9325 Aug 23 03:24 | 7° ¥ 13′22 | 4.47789 AU | conjunction | 9331 Aug 31 01:44 | 15° m 50'33 | -0°08'54 |
| direct | 9325 Oct 23 15:41 | 2° ∺ 21'15 | | minimum elong | 9331 Aug 31 01:44 | 15° m 50'33 | 0°08'59 |
| evening set | 9326 Feb 25 19:17 | 19°) 40'45 | | behind sun begin | 9331 Aug 30 18:36 | 15° Mp 46'16 | |
| max. Earth dist. | 9326 Mar 08 12:55 | 22° ₩ 00'53 | 6.43343 AU | behind sun end | 9331 Aug 31 08:52 | 15° ™ 54'50 | |
| | | | | max. Earth dist. | 9331 Sep 02 04:19 | 16° Mp 21'05 | 5.94370 AU |
| conjunction | 9326 Mar 10 15:14 | 22° ¥ 28′21 | 0°03'40 | morning rise | 9331 Sep 13 17:26 | 19° № 07'44 | |
| minimum elong | 9326 Mar 10 15:14 | 22° ∺ 28′22 | 0°03'44 | | 9331 Nov 01 05:43 | 0∘ ত | |
| behind sun begin | 9326 Mar 10 07:21 | 22° 升 24'04 | | asc. node | 9331 Dec 31 20:31 | 8° ≏ 44'13 | |
| behind sun end | 9326 Mar 10 23:08 | 22° 升 32'39 | | retrograde | 9332 Jan 22 14:32 | 9° £ 30'50 | |
| morning rise | 9326 Mar 23 09:36 | 25° ¥ 15′20 | | min. Earth dist. | 9332 Mar 20 11:51 | 4° £ 39'20 | 4.00216 AU |
| 8 | 9326 Apr 14 17:31 | 0°Υ | | opposition | 9332 Mar 22 01:07 | 4° £ 26'39 | 0°08'52 |
| desc. node | 9326 May 08 17:56 | 4° Υ '40'03 | | оррозион | 9332 May 02 02:02 | 30°R, My | 0 0032 |
| retrograde | 9326 Jul 23 04:43 | 12° Υ 21'27 | | direct | 9332 May 19 07:26 | 29° m 29'43 | |
| opposition | 9326 Sep 22 03:18 | 7° Υ 28'36 | -0°12'24 | direct | 9332 Jun 05 13:12 | ე∘ 亞 | |
| min. Earth dist. | 9326 Sep 23 18:46 | | 4.37136 AU | evening set | 9332 Sep 23 01:36 | 0 – 18° ⊆ 54'05 | |
| | 9326 Nov 23 10:36 | 2° Υ 28'15 | 4.3/130 AU | evening set | 9332 Sep 23 01.30 | 16 = 34 03 | |
| direct | | 2° γ 28 15 20° γ 20'56 | | | 0222 0-4 06 17-11 | 229 0 04152 | 0010127 |
| evening set | 9327 Mar 28 17:04 | | (20521 ATT | conjunction | 9332 Oct 06 17:11 | 22° ♀ 04'52 | 0°19'27 |
| max. Earth dist. | 9327 Apr 08 03:17 | 22° Y 41′26 | 6.29521 AU | minimum elong | 9332 Oct 06 17:10 | 22° Ω 04'52 | 0°19'33 |
| | 0007 1 10 11 15 | 2220012117 | 0000104 | max. Earth dist. | 9332 Oct 09 06:30 | 22° Ω 40'37 | 6.07767 AU |
| conjunction | 9327 Apr 10 11:45 | 23° Y 13'17 | | morning rise | 9332 Oct 20 09:44 | 25° ≙ 15'49 | |
| minimum elong | 9327 Apr 10 11:44 | 23° Y 13'16 | 0°20'40 | | 9332 Nov 10 07:41 | 0°M | |
| morning rise | 9327 Apr 23 05:25 | 26° Y 05′27 | | retrograde | 9333 Feb 25 04:07 | 14°M29'13 | |
| | 9327 May 10 21:59 | 0° 8 | | min. Earth dist. | 9333 Apr 24 10:39 | 9°M37'59 | 4.16226 AU |
| retrograde | 9327 Aug 25 16:58 | 14° 8 09'39 | | opposition | 9333 Apr 25 23:44 | 9° ™ 25'28 | 0°45'59 |
| opposition | 9327 Oct 25 08:44 | 9° 8 16'02 | -0°46'03 | direct | 9333 Jun 24 06:15 | 4°M26'16 | |
| min. Earth dist. | 9327 Oct 26 22:40 | 9° 8 03'48 | 4.20984 AU | | 9333 Sep 21 09:59 | 15° M ₊ | |
| direct | 9327 Dec 25 13:43 | 4° 8 17'29 | | evening set | 9333 Oct 28 17:04 | 22°M58'49 | |
| | 9328 Mar 24 06:30 | 15° 8 | | | | | |
| evening set | 9328 Apr 29 07:49 | 22° 8 59'34 | | conjunction | 9333 Nov 11 06:10 | 26°M00'52 | 0°39'31 |
| max. Earth dist. | 9328 May 10 04:58 | 25° 8 32'04 | 6.12307 AU | minimum elong | 9333 Nov 11 06:08 | 26°M00'51 | 0°39'46 |
| | | | | max. Earth dist. | 9333 Nov 13 05:50 | 26°M27'36 | 6.24935 AU |
| conjunction | 9328 May 12 03:36 | 25° 8 59'25 | -0°39'36 | morning rise | 9333 Nov 24 18:57 | 29°M02'24 | |
| minimum elong | 9328 May 12 03:35 | 25° 8 59'25 | 0°39'50 | | 9333 Nov 29 02:57 | 0° ∡ ¹ | |
| morning rise | 9328 May 24 23:46 | 28° 8 59'49 | | retrograde | 9334 Mar 29 05:51 | 17° ∡ ¹01'53 | |
| _ | 9328 May 29 07:18 | $\Pi^{\circ}0$ | | min. Earth dist. | 9334 May 27 11:36 | 12° ∡ ¹08'34 | 4.32994 AU |
| retrograde | 9328 Sep 30 00:31 | 18° Ⅱ 19'58 | | opposition | 9334 May 28 11:03 | 12° ₹ 100'46 | 1°05'23 |
| opposition | 9328 Nov 29 03:17 | 13° Ⅲ 24'27 | -1°07'03 | direct | 9334 Jul 28 02:19 | 6° ₹ ¹59'59 | |
| min. Earth dist. | 9328 Nov 30 03:51 | 13° Ⅱ 16′24 | 4.04052 AU | evening set | 9334 Dec 01 00:56 | 24° ₹ '46'14 | |
| direct | 9329 Jan 27 23:11 | 8° Ⅲ 28′10 | | | | | |
| evening set | 9329 Jun 03 05:39 | 28° Ⅱ 02'03 | | conjunction | 9334 Dec 14 09:23 | 27° ∡ ¹40'07 | 0°46'20 |
| 8 | 9329 Jun 11 09:17 | 0°9 | | minimum elong | 9334 Dec 14 09:23 | 27° ҂ ¹40′07 | 0°46'39 |
| max. Earth dist. | 9329 Jun 15 11:17 | | 5.97233 AU | max. Earth dist. | 9334 Dec 15 08:17 | 27° х 52'34 | 6.40020 AU |
| | | | | | 9334 Dec 25 03:06 | 0°る | |
| conjunction | 9329 Jun 16 06:07 | 1°510'42 | -0°45'48 | morning rise | 9334 Dec 27 16:14 | 0° ರ 33'01 | |
| minimum elong | 9329 Jun 16 06:07 | 1°910'42 | | retrograde | 9335 Apr 28 11:37 | 17° ප 337'05 | |
| morning rise | 9329 Jun 29 08:06 | 4°920'28 | 0 700/ | opposition | 9335 Apr 28 11.37 9335 Jun 28 03:30 | 17 3 3703 | 1°04'55 |
| retrograde | 9329 Nov 07 10:50 | 24°9548'59 | | min. Earth dist. | 9335 Jun 27 21:42 | 12 3 3922 12° る 41'15 | 4.45396 AU |
| opposition | 9329 Nov 07 10:30 9330 Jan 06 01:37 | 19°950'31 | 1903152 | direct | | 7° る 37'52 | 4.43370 AU |
| ** | | | | | 9335 Aug 28 21:53 | | |
| min. Earth dist. | 9330 Jan 06 01:38 | | 3.92428 AU | evening set | 9336 Jan 01 11:19 | 24° る 54'44 | |
| direct | 9330 Mar 05 13:37 | 14°955'53 | | | 02261 14 14 2 : | 2707/2000 | 0040100 |
| | 9330 Jun 19 06:11 | 0° Ω | | conjunction | 9336 Jan 14 14:34 | 27°₹43'08 | 0°40'00 |
| evening set | 9330 Jul 10 08:01 | 5° Ω 02'12 | | minimum elong | 9336 Jan 14 14:35 | 27°る43'08 | 0°40'17 |
| | 0000 * * * * * * * * * * * * * * * * * | 00.04 | 000 4:22 | max. Earth dist. | 9336 Jan 14 07:13 | 27° පි 39'12 | 6.48883 AU |
| conjunction | 9330 Jul 23 15:22 | 8° Ω 17'30 | | | 9336 Jan 25 06:28 | 0° ≈ | |
| minimum elong | 9330 Jul 23 15:24 | 8° Ω 17'31 | | morning rise | 9336 Jan 27 15:45 | 0° ≈ 30′29 | |
| max. Earth dist. | 9330 Jul 24 09:21 | 8° 6 128'31 | 5.90226 AU | | 9336 Apr 19 10:53 | 15° ≈ | |
| | | | | | | | |

| 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 1975 | retrograde | 9336 May 27 03:14 | 17° ≈ 06'59 | | min. Earth dist. | 9342 Jan 11 07:03 | 25°व्हाउ'11 | 3.91759 AU |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|-------------------------|------------|------------------|-------------------|---------------------|------------|
| opposition 935 Alor 27 163 Per Part 197 Per Part 19 | renograde | • | | | | | | 3.71737110 |
| sim fand and officed 938 Sep 27 14 84 27 98 97 78 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 500278 | opposition | | • | 0°47'30 | | | | |
| direct 9336 Dec 14 pl.97 Privations command 9342 Jul 2 8 218 1574 Jul 2 9 319 exeming cat 9337 pl.91 pl.83 24494736 minimum clong 9342 Jul 2 8 2319 1574 Jul 2 9 2319 82319 Jul 2 9 2339 1574 Jul 2 9 2319 82319 Jul 2 9 2339 1574 Jul 2 9 2319 82318 Jul 2 1 8 2319 1574 Jul 2 9 2319 82318 Jul 2 8 2339 1574 Jul 2 9 2319 82318 Jul 2 1 8 2319 1574 Jul 2 9 23 | ** | | | | evening set | • | | |
| 1933 1933 1934 1949 1956 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 1960 | | | | | <i>8</i> | | | |
| Perminer 937, Perminer 9 | | | | | conjunction | 9342 Jul 28 23:18 | 13° Ω 40'17 | -0°31'26 |
| Pase Field die 93.7 Feb 1 0.600 20°es/9732 6.94019 AU max Farth die 9342 Aug 03 90 15°2, 12°0 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10°0, 10 | evening set | 9337 Jan 30 19:43 | 24° ≈ 19'36 | | | 9342 Jul 28 23:19 | 13° Ω 40'18 | 0°31'40 |
| Companion | • | 9337 Feb 11 08:00 | 26° ≈ 47'32 | 6.49419 AU | _ | 9342 Jul 29 23:39 | 13° Ω 55'11 | 5.90329 AU |
| Designation 93,77 feb 12 833 27% and/006 0°2272 10°24 20°40 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 20°14 | | | | | | | | |
| maimum clong 937 Feb 2 1834 27*e4006 0*2272 recognade 9342 Dec 21 1447 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,071 7*98,0 | conjunction | 9337 Feb 12 18:33 | 27°≈06'05 | 0°23'16 | morning rise | | | |
| | · | 9337 Feb 12 18:34 | 27° ≈ 06'06 | 0°23'27 | S | _ | | |
| 1937 1978 26 1970 1974 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1978 1 | · · | 9337 Feb 25 15:23 | 29° ≈ 51'40 | | retrograde | 9342 Dec 21 14:47 | | |
| opposition in Earth dist. 9337 Aug. 27 11.51 1119-8807 of 177-99 943 May 21 1200 20% Last 1200 | C | 9337 Feb 26 07:00 | 0° ∀ | | • | 9343 Feb 18 23:16 | 2° m/47'57 | -0°28'30 |
| opposition in Earth dist. 9337 Aug. 27 11.51 1119-8807 of 177-99 943 May 21 1200 20% Last 1200 | retrograde | 9337 Jun 26 04:36 | 16°) 31′18 | | min. Earth dist. | 9343 Feb 17 20:59 | 2° m 56'52 | 3.91799 AU |
| sim. Earth dist. 9337 Aug 2 21 11-51 (a) 14-96/565 (a) 12-96-96/565 (a) 13-93 Aug 2 13-22 (a) 14-96/565 (a) 14-96-96 (a) | opposition | 9337 Aug 26 05:05 | 11° ∺ 38′07 | 0°17'59 | | 9343 Mar 13 00:20 | | |
| Second 938 Mar 02 01 12 24° MOVIA 12 12 12 12 12 12 12 1 | | - | 11° ∺ 28'17 | 4.46494 AU | direct | 9343 Apr 17 21:09 | 27° Ω 52'49 | |
| max. Earth dist. 9338 Mar 12 18.33 26°942170 6.41540 AU conjunction 9343 Sep 05 08.55 21°190644 0°04155 conjunction 9338 Mar 14 21.11 26°944878 0°0013 minimum elong 9343 Sep 05 08.55 21°190644 0°04155 behind sun begin 9338 Mar 14 21.13 26°944378 behind sun begin 9343 Sep 05 00.45 21°190173 1110173 descende 9338 Mar 18 05.00 26°944378 behind sun begin 9343 Sep 07 14.41 21°190846 59878 AU descende 9338 Mar 18 05.00 26°943735 morning rise 9338 Mar 19 10.00 27°1473222 enorming rise 9338 Mar 19 10.20 6°079 asc. node 9343 Not 10 20.40 6°403731 opposition 9338 Sep 26 15.59 11°975707 0°1725 min. Earth dist. 9344 Mar 27 13.00 19°42584 40°2216 direct 9338 Nov 27 19:23 6°77508 40°2216 9444 Mar 27 13.00 40°2334 94°34 Okt 11 18:24 27°40344 0°22174 conjunction 9339 Apr 21 15:50 27°67949 0°23107 0°1125 | direct | 9337 Oct 27 21:04 | 6°) 36′56 | | | 9343 May 23 13:22 | 0° m) | |
| Conjunction 9.338 Mar 14 21:11 26°H48'S6 0°00'13 minimum ellong 9.343 Sep 05 08:55 21°B06'44 0°04'55 minimum ellong 9.343 Sep 05 08:55 21°B06'44 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°04'55 0°0 | evening set | 9338 Mar 02 01:21 | 24° ℋ 00'44 | | evening set | 9343 Aug 22 18:48 | 17° m 50'58 | |
| Conjunction 9.318 Mar 14 21:11 26°H4875 0°0015 behind sun begin 9.343 Sep 0.5 08.55 21°B0054 0°0475 behind sun begin 9.338 Mar 15 05:08 26°H4878 behind sun end 9.343 Sep 0.5 17:04 21°B1137 1708 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 1808 | max. Earth dist. | 9338 Mar 12 18:33 | 26°) €21'10 | 6.41540 AU | | | | |
| minimum elong 9.38 Mar 14 21:13 26°H48'S1 0°00'15 behind sun begin 9348 Sep 05 0.045 21°B0'151 7 17 17 18 18 19 18 19 18 18 19 18 18 | | | | | conjunction | 9343 Sep 05 08:55 | 21° Mp 06'44 | -0°04'50 |
| Debind sun equal 9338 Mar 14 1317 26"444"38 Debind sun end 9348 Sep 05 17:04 21" % 1378 25" 8787 NU diese, node 9338 Mar 15 0:508 26" % 5316 max. Earth dist. 9343 Sep 07 14:13 21" % 138" 8 5.9878 NU diese, node 9348 Mar 15 10:508 27" % 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" 13:13 29" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" % 36" | conjunction | 9338 Mar 14 21:11 | 26°) 48′56 | 0°00'13 | minimum elong | 9343 Sep 05 08:55 | 21°Mp06'44 | 0°04'55 |
| behind sun end 9.38 Mar 18 0.508 26°H 53°H 6 max. Earth dist. 934 Sep 0.7 14.13 21°m 3846 5.95878 AU desc. node 9338 Mar 18 0.255 27°H 31°B 5 morning rise 9343 Rov 10 20.40 6°A 0.33°H au 72 16.13 29°H 36°H 1 20°H 36°H 1 20° | minimum elong | 9338 Mar 14 21:13 | 26°) 48′57 | 0°00'15 | behind sun begin | 9343 Sep 05 00:45 | 21° m 01'51 | |
| desc. node 9338 Mar 18 0.255 27°H3135 moming rise 9343 Sep 19 01.06 24°mp.232 1 1 1 1 1 1 1 1 1 | behind sun begin | 9338 Mar 14 13:17 | 26°) 44'38 | | behind sun end | 9343 Sep 05 17:04 | 21° m)11'37 | |
| moming rise 9338 Mar 27 15:13 29°H 36'S sec. node 9343 Not 13 03:47 0°L 20 10°L 2 | behind sun end | 9338 Mar 15 05:08 | 26°) 53′16 | | max. Earth dist. | 9343 Sep 07 14:13 | 21°M)38'46 | 5.95878 AU |
| Part | desc. node | 9338 Mar 18 02:55 | 27°) €31'35 | | morning rise | 9343 Sep 19 01:06 | 24° m/23'22 | |
| retrograde opposition 9338 Jul 27 17-41 16-9°4958 retrograde opposition 9338 Sp 26 15-59 11-9°5707 -0°1725 min. Earth dist. 9344 Mar 25 10:08 9°44656 4,02206 AU min. Earth dist. 9338 Nov 27 19-23 6°95705 direct 9343 May 24 08:41 4*23633 4*23633 cvening set 9339 Apr 12 15:02 27°9°1758 6,27107 AU conjunction 9339 Apr 12 15:02 27°9°1758 6,27107 AU conjunction 9339 Apr 12 23:04 27°9°1946 -0°2343 minimum elong minimum elong 9339 Apr 14 23:05 27°9°1946 -0°2343 minimum elong 9339 Apr 14 23:04 27°9°1946 -0°2343 minimum elong 9339 Apr 14 23:05 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 0°8°20 | morning rise | 9338 Mar 27 15:13 | 29°) (36′31 | | | 9343 Oct 13 03:47 | 0∘ 亚 | |
| Poposition P | | 9338 Mar 29 10:20 | 0 ° $\mathbf{\gamma}$ | | asc. node | 9343 Nov 10 20:40 | 6° ≏ 03'31 | |
| min. Earth dist. 9338 Sep 28 07:20 11 °°V-44'32 4.3494's AU opposition 9344 May 24 08:44 4°£45'633 cevening set 9338 Nov 27 19:23 6°V'S'70'S cevening set 9344 Sep 28 03:00 22°£45'83 cevening set 9344 Sep 28 03:00 22°£40'S'3 cevening set 9345 Sep 24 12:26 18°£10'S'3 cevening set 9345 Sep 24 12:26 18°£10'S'3 cevening set 9345 Sep 24 12:26 18°£10'S'3 cevening set 9346 May 12 23:33 cep 2785 Sep cevening set 9345 Sep 23 23 24 24 25 24 cevening set 9345 Sep 24 12:26 18°£10'S'3 cevening set 9346 May 12 23:33 cep 2785 Sep cevening set 9345 Sep 23 23 24 24 cep 23 23 25 25 25 25 25 25 25 25 25 25 25 25 25 | retrograde | 9338 Jul 27 17:41 | 16° Ƴ 49'58 | | retrograde | 9344 Jan 27 13:00 | 14° ≙ 38'00 | |
| direct 9338 Nov 27 19:23 6°V5705 direct 9344 May 24 08:41 4°Ω3633 revening set ovening set 9334 Nor 23 03:02 23°Ω4V13 revening set ovening set 9344 Nor 28 03:02 23°Ω4V33 revening set ovening set 9344 Nor 11 18:23 23°Ω4V33 revening set ovening set 9344 Oct 11 18:24 27°Ω4940 0°22154 conjunction 9339 Apr 14 23:05 27°V4946 -0°2343 minimum clong minimum clong opath 14 23:04 27°V4946 -0°2343 minimum clong opath 14 10.533 27°Ω4380 6°2010 AU morning rise 9339 Apr 17 17:01 0°B4301 max. Earth dist. 9344 Oct 24 11:15 0°IL. pretrograde 9339 Apr 24 12:52 0°B4301 morning rise 9345 Man 07 10:17 15°IL. retrograde 9339 Apr 30 6:49 18°85727 retrograde 9345 Man 07 10:17 15°IL. opposition 9339 Oct 31 19:05 13°E5140 4.18513 AU opposition 9345 Mar 01 18:27 19°IL/1306 0°4951 direct 9340 May 12 23:33 0°C 31 19:05 13°E5140 4.18513 AU opposition 9345 Mar 01 18:27 9°IL/1306 | opposition | 9338 Sep 26 15:59 | 11° Y 57'07 | -0°17'25 | min. Earth dist. | 9344 Mar 25 10:08 | 9° ≏ 46'56 | 4.02206 AU |
| cenning set 9339 Apr 12 15:02 24°Y5630 evening set 9344 Sep 28 03:02 23°26403 max. Earth dist. 9339 Apr 12 15:02 27°Y1758 6.27107 AU conjunction 9344 Oct 11 18:24 27°40344 0°2254 conjunction 9339 Apr 14 23:05 27°Y4945 0°2313 minimum elong 9344 Oct 11 18:23 27°20343 0°2302 minimum elong 9339 Apr 14 23:05 27°Y4945 0°2351 max. Earth dist. 9344 Oct 14 16:53 27°240343 0°2302 morning rise 9339 Apr 27 17:01 0°84301 morning rise 9344 Oct 25 10:44 0°III.1330 16°18 retrograde 9339 Aug 30 16:49 18°85727 retrograde 9345 Apr 24 19:26 15°RL opposition 9339 Oct 30 06:01 14°803739 -0°5002 min. Earth dist. 9345 Apr 24 19:26 15°RL opposition 9339 Oct 30 06:01 14°80379 -0°5002 min. Earth dist. 9345 Apr 24 19:26 15°RL opposition 9339 Oct 30 06:01 14°80379 -0°5002 min. Earth dist. 9345 Apr 30 15:03 14°R11345 4.18546 AU | min. Earth dist. | 9338 Sep 28 07:20 | 11° Y 44'32 | 4.34945 AU | opposition | 9344 Mar 27 00:49 | 9° ≙ 33'47 | 0°14'46 |
| max. Earth dist. | direct | 9338 Nov 27 19:23 | 6° Ƴ 57'05 | | direct | 9344 May 24 08:41 | 4° ≙ 36'33 | |
| conjunction 9339 Apr 14 23:05 27°P(4946 - 0°23'43) minimum elong 9344 Oct 11 18:24 27° Δ9343 0°22502 minimum elong 9339 Apr 14 23:04 27°P(4946 - 0°23'43) minimum elong 9344 Oct 11 18:24 27° Δ9343 0°2302 morning rise 9339 Apr 24 12:52 0°B max. Earth dist. 9344 Oct 24 11:15 0°ML333 27° Δ9343 6.1040 AU 9339 Jul 30 19 18:33 15°B morning rise 9345 Jan 07 10:17 15°ML 7 retrograde 9339 Aug 30 16:49 18°B5727 retrograde 9345 Apr 30 15:20 19°ML636 opposition 9339 Oct 22 22:19 15°RC 9345 Apr 30 15:03 14°ML2452 4.18513 AU opposition 9339 Oct 31 19:05 13°B514 4.18513 AU opposition 9345 Apr 30 15:03 14°ML2452 4.18546 AU min. Earth dist. 9339 Dec 30 07:13 9°B0525 direct 9345 Apr 30 15:03 14°ML2452 4.18546 AU evening set 9340 May 16 22:44 0°B15459 evening set 9345 Apr 30 15:03 14°ML393 0°B133 0°B134 0°B1 | evening set | 9339 Apr 02 04:33 | 24° Ƴ 56'30 | | evening set | 9344 Sep 28 03:02 | 23° ≙ 54'03 | |
| Conjunction 9339 Apr 14 23.05 27° 49'46 0°23'43 minimum elong 9344 Oct 11 18.23 27° 23'803 6.10040 AU 9339 Apr 24 12.52 0°28 max. Earth dist. 9344 Oct 14 18.23 27° 23'803 6.10040 AU 9339 Apr 24 12.52 0°28 max. Earth dist. 9344 Oct 24 11:5 0°1L 0°1L 18° L 18 | max. Earth dist. | 9339 Apr 12 15:02 | 27° Ƴ 17'58 | 6.27107 AU | | | | |
| minimum elong 9339 Apr 14 23:04 27°P'49'45 0°23'51 max. Earth dist. 9344 Oct 14 05:33 27°Ω38'03 6.10040 AU 9339 Apr 24 12:52 0°8 9344 Oct 24 11:15 0°π. morning rise 9339 Apr 27 17:01 0°8 d3'01 morning rise 9344 Oct 12 51 0:44 0°π. L13'30 retrograde 9339 Aug 30 16:49 18°85727 retrograde 9345 Mar 01 18:27 19°π. L6'36 poposition 9339 Oct 22 22:19 15°π 8 9345 Apr 29 0:41:11 14°π. 24'52 4.18546 AU min. Earth dist. 9339 Oct 30 0:601 14°8'03'39 -0°50'02 min. Earth dist. 9339 Apr 28 11 19:05 13°851'40 4.18513 AU opposition 9345 Apr 20 0:22 9°π. L13'30 0°49'51 direct 9339 Mar 0 07:13 9°8'05'25 direct 9345 Mar 0 10:03 14°π. L13'06 0°49'51 direct 9345 Mar 0 10:03 15°% 15°π. evening set 9340 Mar 0 30'7:31 15°8 evening set 9345 Nov 02 11:03 27°π. 39'30 \ max. Earth dist. 9340 May 15 03:43 0°π. S0'π. | | | | | conjunction | 9344 Oct 11 18:24 | 27° ≏ 03'44 | 0°22'54 |
| morning rise 9339 Apr 24 12:52 0°B morning rise 9344 Oct 25 10:44 0°IL 13'0 0°IL 13'0 | conjunction | 9339 Apr 14 23:05 | 27° Y 49'46 | -0°23'43 | minimum elong | 9344 Oct 11 18:23 | 27° ≏ 03'43 | 0°23'02 |
| morning rise 9339 Apr 27 17:01 0°B43'01 morning rise 9344 Oct 25 10:44 0°IL13'30 1°CB1'330 1°CB1 | minimum elong | 9339 Apr 14 23:04 | 27° Ƴ 49'45 | 0°23'51 | max. Earth dist. | 9344 Oct 14 05:33 | 27° ≏ 38'03 | 6.10040 AU |
| Partrograde 9339 Jul 09 18:33 15°B retrograde 9345 Jan 07 10:17 15°M 15°M 18°B 15°R retrograde 9345 Apr 24 19:26 15°R | | 9339 Apr 24 12:52 | 9° 8 | | | 9344 Oct 24 11:15 | 0°M₊ | |
| Petrograde 9339 Aug 30 16:49 18°B 57'27 retrograde 9345 Mar 01 18:27 19°M.16'36 15°RM. 9339 Oct 22 22:19 15°RØ 15°RØ 9345 Apr 24 19:26 15°RM. 15°RØ | morning rise | 9339 Apr 27 17:01 | 0° 8 43'01 | | morning rise | 9344 Oct 25 10:44 | 0°ML13'30 | |
| 9339 Oct 22 22:19 15°RB 9345 Apr 24 19:26 15°RIL Opposition 9339 Oct 30 06:01 14°B03'39 -0°50'02 min. Earth dist. 9345 Apr 29 04:11 14°IL;24′52 4.18546 AU min. Earth dist. 9339 Oct 31 19:05 13°B51'40 4.18513 AU opposition 9345 Apr 29 04:11 14°IL;24′52 4.18546 AU direct 9339 Dcc 30 07:13 9°80'525 direct 9345 Apr 30 15:03 14°IL;13′18 verning set 9340 Mar 03 07:31 15°B 9345 Aug 31 09:28 15°IL verning set 9340 May 04 02:24 27°854′59 evening set 9345 Nov 12 23:19 0°\$\mathbb{Z}\$ max. Earth dist. 9340 May 15 03:43 0°IL 0°I | | 9339 Jul 09 18:33 | 15° 8 | | | 9345 Jan 07 10:17 | 15° M ₊ | |
| opposition 9339 Oct 30 06:01 14°B03'39 -0°50'02 min. Earth dist. 9345 Apr 29 04:11 14°IL24'52 4.18546 AU min. Earth dist. 9339 Oct 31 19:05 13°S51'40 4.18513 AU opposition 9345 Apr 30 15:03 14°IL13'06 0°49'51 direct 9340 Mar 03 07:31 9°S05'25 direct 9345 Aug 31 09:22 9°IL13'38 9°IL13'38 evening set 9340 May 04 02:24 27°B54'59 evening set 9345 Nov 02 11:03 27°IL39'30 - max. Earth dist. 9340 May 15 03:43 0°IL30'43 6.10002 AU conjunction 9345 Nov 12 23:19 0°X 0°41'17 conjunction 9340 May 16 22:44 0°IL56'04 0°41'23 minimum elong 9345 Nov 15 23:45 0°X4'0'25 0°41'33 morning rise 9340 May 16 22:43 0°IL56'04 0°41'38 max. Earth dist. 9345 Nov 17 21:37 1°X0'022 0°41'33 morning rise 9340 May 16 22:43 0°IL56'04 0°41'38 max. Earth dist. 9345 Nov 17 21:37 1°X0'022 0°41'33 evetorgrade 9340 Oct 05 06:55 23°IL88'08 retrograde | retrograde | 9339 Aug 30 16:49 | 18° 8 57'27 | | retrograde | 9345 Mar 01 18:27 | 19° M ₊16'36 | |
| min. Earth dist. 9339 Oct 31 19:05 13° ₺51'40 4.18513 AU opposition 9345 Apr 30 15:03 14° IL13'06 0°49'51 direct 9339 Dec 30 07:13 9° ₺05'25 direct 9345 Jun 29 02:22 9° IL13'38 9340 Mar 03 07:31 15° ₺ 9345 Aug 31 09:28 15° IL 9345 Nov 12 23:19 0° IL 9340 May 12 23:33 0° IL 9340 May 12 23:33 0° IL 9340 May 15 03:43 0° IL 9340 May 15 03:43 0° IL 9340 May 16 03:43 0° IL 9340 May 16 22:44 0° IL56'04 -0°41'23 minimum elong 9345 Nov 15 23:45 0° IL37'43 max. Earth dist. 9340 May 16 22:43 0° IL56'04 0°41'38 max. Earth dist. 9345 Nov 17 21:37 1° I№ 0602 6.27120 AU morning rise 9340 May 16 22:43 0° IL56'04 0°41'38 max. Earth dist. 9346 Apr 02 11:56 21° IN 31'41 0°06'27 min. Earth dist. 9340 May 29 19:27 3° IL57'43 morning rise 9346 Apr 02 11:56 21° IN 31'41 0°06'27 min. Earth dist. 9340 Dec 04 08:39 18° IL32'19 -1°08'12 opposition 9346 Jun 01 19:26 16° IN 31'04 1°06'27 min. Earth dist. 9340 Dec 05 05:45 18° IL25'24 4.02134 AU min. Earth dist. 9346 May 31 21:29 16° IL56' Il° IN 30'11 0° Il 19:06 10° Il | | 9339 Oct 22 22:19 | 15° ₹ 8 | | | 9345 Apr 24 19:26 | 15°RM | |
| direct 9339 Dec 30 07:13 9°805'25 direct 9345 Jun 29 02:22 9°IL3'38 9340 May 04 02:24 27°854'59 evening set 9346 May 04 02:24 27°854'59 evening set 9345 Nov 02 11:03 27°IL3'930 9340 May 12 23:33 0°IL 9340 May 12 23:33 0°IL 9345 Nov 12 23:19 0°₹ | opposition | 9339 Oct 30 06:01 | 14° 8 03'39 | -0°50'02 | min. Earth dist. | 9345 Apr 29 04:11 | 14°M24'52 | 4.18546 AU |
| evening set | min. Earth dist. | 9339 Oct 31 19:05 | _ | 4.18513 AU | opposition | 9345 Apr 30 15:03 | | 0°49'51 |
| evening set 9340 May 04 02:24 27° 854'59 evening set 9345 Nov 02 11:03 27° 11:39'30 | direct | 9339 Dec 30 07:13 | | | direct | | 9° IL 13′38 | |
| max. Earth dist. 9340 May 12 23:33 0° | | | | | | 9345 Aug 31 09:28 | | |
| max. Earth dist. 9340 May 15 03:43 0°II 30'43 6.10002 AU conjunction 9345 Nov 15 23:45 0° ₹40'26 0°41'17 conjunction 9340 May 16 22:44 0°II 56'04 -0°41'23 minimum elong 9345 Nov 15 23:44 0° ₹40'25 0°41'33 minimum elong 9340 May 16 22:43 0°II 56'04 0°41'38 max. Earth dist. 9345 Nov 17 21:37 1° ₹06'02 6.27120 AU morning rise 9340 May 29 19:27 3°II 57'43 morning rise 9345 Nov 29 11:41 3° ₹40'42 retrograde 9340 Oct 05 06:55 23°II 28'08 retrograde 9340 Apr 02 11:56 21° ₹31'41 opposition 9340 Dec 04 08:39 18°II 32'19 -1°08'12 opposition 9346 Jun 01 19:26 16° ₹31'04 1°06'27 min. Earth dist. 9340 Dec 05 05:45 18°II 25'24 4.02134 AU min. Earth dist. 9346 Aug 01 13:55 11° ₹30'11 evening set 9341 Jun 08 07:45 3° № € evening set 9346 Dec 09 05:44 0° ₹38'20 4.34886 AU direct 9346 Dec 09 05:44 0° ₹38'20 4.34886 AU minimum elong 9341 Jun 21 08:54 6° № 525'23 -0°45'15 conjunction 9346 Dec 18 20:09 05' ₹40'53 0° 46'10 minimum elong 9341 Jun 21 08:54 6° № 525'23 -0°45'15 conjunction 9346 Dec 18 20:09 2° ₹04'53 0° 46'28 max. Earth dist. 9341 Jun 20 18:16 6° № 616'30 5.95866 AU max. Earth dist. 9347 Jun 01 02:19 4° ₹56'65 eya41 Nov 02 10:06 0° № Fetrograde 9347 May 02 16:43 21° ₹56'07 retrograde 9341 Nov 02 10:06 0° № 0 retrograde 9347 Jun 01 02:19 4° ₹56'56 eya41 Nov 02 10:06 0° № 0 retrograde 9347 Jul 02 08:35 16° ₹58'52 1° 03'22 eya41 Nov 02 10:06 0° № 0 retrograde 9347 Jul 02 08:35 16° ₹58'52 1° 03'22 eya41 Nov 02 10:06 0° № 0 retrograde 9347 Jul 02 08:35 16° ₹59'34 4.46363 AU discording the minimum elong 9341 Jul 02 06:27 16° ₹59'34 4.46363 AU discording the minimum elong 9341 Jul 02 06:27 16° ₹59'34 4.46363 AU discording the minimum elong 9341 Jul 02 06:27 16° ₹59'34 4.46363 AU discording the minimum elong 9341 Jul 02 06:27 16° ₹59'34 4.46363 AU discording the minimum elong 9341 Jul 02 06:27 16° ₹59'34 4.46363 AU discording the minimum elong 9341 Jul 02 06:27 16° ₹59'34 4.46363 AU discording the minimum elong 9341 Jul 02 06:27 16° ₹59'34 4.46363 AU discording the minimum elong 9341 Jul 02 06:27 16° ₹59'34 4.46363 AU discor | evening set | - | | | evening set | 9345 Nov 02 11:03 | | |
| Conjunction 9340 May 16 22:44 0° \$\bar{\text{\$\subset 5}}\$ (0° \$\subset 4') (0° \$\bar{\text{\$\subset 1}}\$ (23) (13) (13) (13) (13) (13) (14) (14) (14) (14) (14) (14) (14) (14 | | • | | | | 9345 Nov 12 23:19 | 0° ≯ ¹ | |
| conjunction 9340 May 16 22:44 0° \$\overline{\text{T}}\$56'04 -0°41'23 minimum elong 9345 Nov 15 23:44 0° \$\vertic{\text{\$\sigma}}\$40'25 0°41'33 max. Earth dist. 9345 Nov 17 21:37 1° \$\vertic{\text{\$\sigma}}\$06'02 6.27120 AU morning rise 9340 May 29 19:27 3° \$\overline{\text{\$\sigma}}\$57'43 morning rise 9345 Nov 29 11:41 3° \$\vertic{\text{\$\sigma}}\$40'42 retrograde 9340 Oct 05 06:55 23° \$\overline{\text{\$\sigma}}\$128'08 retrograde 9346 Apr 02 11:56 21° \$\vertic{\text{\$\sigma}}\$31'14 opposition 9340 Dec 04 08:39 18° \$\overline{\text{\$\sigma}}\$125'24 4.02134 AU min. Earth dist. 9346 May 31 21:29 16° \$\vertic{\text{\$\sigma}}\$38'20 4.34886 AU direct 9341 Feb 01 23:07 13° \$\overline{\text{\$\sigma}}\$136'24 direct 9346 Dec 05 12:32 29° \$\vertic{\text{\$\sigma}}\$11'15 evening set 9341 Jun 08 07:45 3° \$\overline{\sigma}\$15'44 minimum elong 9346 Dec 09 05:44 0° \$\overline{\text{\$\sigma}}\$ 0° 46'10 minimum elong 9341 Jun 21 08:54 6° \$\overline{\sigma}\$25'23 0° 45'34 minimum elong 9346 Dec 18 20:10 2° \$\overline{\text{\$\sigma}}\$0'46'28 max. Earth dist. 9341 Jun 20 18:16 6° \$\overline{\sigma}\$6'16 morning rise 9347 Jun 01 02:19 4° \$\overline{\text{\$\sigma}}\$56'07 retrograde 9341 Nov 22 0:50 0° \$\overline{\text{\$\sigma}}\$10'49 opposition 9347 Jul 02 08:35 16° \$\overline{\text{\$\sigma}}\$5934 4.46363 AU d.46363 AU | max. Earth dist. | 9340 May 15 03:43 | 0°Д30'43 | 6.10002 AU | | | | |
| minimum elong morning rise 9340 May 16 22:43 0°用56'04 0°41'38 max. Earth dist. 9345 Nov 17 21:37 1°🛪 06'02 6.27120 AU morning rise 9340 May 29 19:27 3°用57'43 morning rise 9345 Nov 29 11:41 3°🛪 40'42 retrograde 9340 Oct 05 06:55 23°用28'08 retrograde 9346 Apr 02 11:56 21°🛪 31'41 opposition 9340 Dec 04 08:39 18°用32'19 -1°08'12 opposition 9346 Jun 01 19:26 16°🛪 31'04 1°06'27 min. Earth dist. 9340 Dec 05 05:45 18°用25'24 4.02134 AU min. Earth dist. 9346 May 31 21:29 16°🛪 38'20 4.34886 AU direct 9341 Feb 01 23:07 13°用36'24 direct 9346 Aug 01 13:55 11°🛪 30'11 9341 May 25 15:00 0°⑤ evening set 9341 Jun 08 07:45 3°⑤15'44 evening set 9346 Dec 09 05:44 0°⑤ state of the conjunction 9341 Jun 08 07:45 3°⑤15'44 minimum elong 9346 Dec 18 20:09 2°⑤04'53 0°46'10 minimum elong 9341 Jun 21 08:54 6°⑤25'23 0°45'34 minimum elong 9346 Dec 18 20:10 2°⑤04'53 0°46'28 max. Earth dist. 9341 Jun 20 18:16 6°⑤16'30 5.95866 AU max. Earth dist. 9346 Dec 19 13:42 2°⑤14'23 6.41487 AU morning rise 9341 Jul 04 12:01 9°⑥36'16 morning rise 9347 Jun 01 02:19 4°⑤56'56 9341 Nov 02 10:06 0°Ω retrograde 9347 May 02 16:43 21°⑤56'07 retrograde 9341 Nov 12 20:50 0°Ω10'49 opposition 9347 Jul 02 08:35 16°⑤58'52 1°03'22 9341 Nov 23 07:07 30°R© min. Earth dist. 9347 Jul 02 06:27 16°⑤59'34 4.46363 AU | | 004035 45 55 | 00. | 004455 | · | | | |
| morning rise 9340 May 29 19:27 3° I 57'43 morning rise 9345 Nov 29 11:41 3° I 40'42 retrograde 9340 Oct 05 06:55 23° I 28'08 retrograde 9346 Apr 02 11:56 21° I 31'41 opposition 9340 Dec 04 08:39 18° I 32'19 -1°08'12 opposition 9346 Jun 01 19:26 16° I 31'04 1°06'27 min. Earth dist. 9340 Dec 05 05:45 18° I 25'24 4.02134 AU min. Earth dist. 9346 Aug 01 13:55 11° I 38' I 30'11 9341 Feb 01 23:07 13° I 36'24 direct 9346 Aug 01 13:55 11° I 30'11 9341 May 25 15:00 0° □ evening set 9346 Dec 05 12:32 29° I 11'53 evening set 9341 Jun 08 07:45 3° □ 15'44 | , | • | | | - C | | | |
| retrograde 9340 Oct 05 06:55 23° | · · | • | | 0°41'38 | | | | 6.27120 AU |
| opposition 9340 Dec 04 08:39 18°耳32'19 -1°08'12 opposition 9346 Jun 01 19:26 16°柔31'04 1°06'27 min. Earth dist. 9340 Dec 05 05:45 18°耳25'24 4.02134 AU min. Earth dist. 9346 May 31 21:29 16°柔38'20 4.34886 AU direct 9341 Feb 01 23:07 13°耳36'24 direct 9346 Aug 01 13:55 11°柔30'11 9341 May 25 15:00 0°⑤ evening set 9341 Jun 08 07:45 3°⑤15'44 9346 Dec 09 05:44 0°♂ conjunction 9341 Jun 21 08:54 6°⑤25'23 -0°45'15 conjunction 9346 Dec 18 20:09 2°♂04'53 0°46'10 minimum elong 9341 Jun 21 08:54 6°⑤25'23 0°45'34 minimum elong 9346 Dec 18 20:10 2°♂04'53 0°46'28 max. Earth dist. 9341 Jun 20 18:16 6°⑤16'30 5.95866 AU max. Earth dist. 9346 Dec 19 13:42 2°♂14'23 6.41487 AU morning rise 9341 Jul 04 12:01 9°⑤36'16 morning rise 9347 Jun 01 02:19 4°♂56'56 9341 Nov 02 10:06 0° \(\Omega\) retrograde 9347 Jul 02 08:35 16°♂58'52 1°03'22 9341 Nov 23 07:07 30°R© min. Earth dist. 9347 Jul 02 06:27 16°♂59'34 4.46363 AU | • | | | | - | | | |
| min. Earth dist. 9340 Dec 05 05:45 18°用25'24 4.02134 AU min. Earth dist. 9346 May 31 21:29 16°承38'20 4.34886 AU direct 9346 Aug 01 13:55 11°承30'11 9341 May 25 15:00 0°⑤ evening set 9341 Jun 08 07:45 3°⑤15'44 9346 Dec 09 05:44 0°⑤ conjunction 9341 Jun 21 08:54 6°⑤25'23 -0°45'15 conjunction 9346 Dec 18 20:09 2°♂04'53 0°46'10 minimum elong 9341 Jun 21 08:54 6°⑥25'23 0°45'34 minimum elong 9346 Dec 18 20:10 2°♂04'53 0°46'28 max. Earth dist. 9341 Jun 20 18:16 6°⑥16'30 5.95866 AU max. Earth dist. 9346 Dec 19 13:42 2°♂14'23 6.41487 AU morning rise 9341 Nov 02 10:06 0°Ω retrograde 9341 Nov 02 10:06 0°Ω retrograde 9347 Jul 02 08:35 16°♂58'52 1°03'22 9341 Nov 23 07:07 30°№ min. Earth dist. 9347 Jul 02 08:35 16°♂559'34 4.46363 AU | | | | 1000112 | • | • | | 100/107 |
| direct 9341 Feb 01 23:07 13° II 36'24 direct 9346 Aug 01 13:55 11° ₹30'11 evening set 9341 May 25 15:00 0° 5 evening set 9346 Dec 05 12:32 29° ₹11'53 evening set 9341 Jun 08 07:45 3° 515'44 9346 Dec 09 05:44 0° ₹5 conjunction 9341 Jun 21 08:54 6° 525'23 -0° 45'15 conjunction 9346 Dec 18 20:09 2° ₹04'53 0° 46'10 minimum elong 9341 Jun 21 08:54 6° 525'23 0° 45'34 minimum elong 9346 Dec 18 20:10 2° ₹04'53 0° 46'28 max. Earth dist. 9341 Jun 20 18:16 6° 516'30 5.95866 AU max. Earth dist. 9346 Dec 19 13:42 2° ₹14'23 6.41487 AU morning rise 9341 Nov 02 10:06 0° Ω retrograde 9347 May 02 16:43 21° ₹56'07 retrograde 9341 Nov 23 07:07 30° ₹5 min. Earth dist. 9347 Jul 02 08:35 16° ₹58'52 1° 03'22 9341 Nov 23 07:07 30° ₹5 min. Earth dist. 9347 Jul 02 06:27 16° ₹59'34 4.46363 AU | | | | | | | | |
| evening set 9341 May 25 15:00 0°⑤ evening set 9346 Dec 05 12:32 29°₹11'53 9346 Dec 09 05:44 0°♂ conjunction 9341 Jun 21 08:54 6°⑤25'23 -0°45'15 conjunction 9346 Dec 18 20:09 2°♂04'53 0°46'10 minimum elong 9341 Jun 21 08:54 6°⑤25'23 0°45'34 minimum elong 9346 Dec 18 20:10 2°♂04'53 0°46'28 max. Earth dist. 9341 Jun 20 18:16 6°⑥16'30 5.95866 AU max. Earth dist. 9346 Dec 19 13:42 2°♂14'23 6.41487 AU morning rise 9341 Jul 04 12:01 9°⑤36'16 morning rise 9347 Jan 01 02:19 4°♂56'56 9341 Nov 02 10:06 0°Ω retrograde 9347 May 02 16:43 21°♂56'07 retrograde 9341 Nov 23 07:07 30°₨ min. Earth dist. 9347 Jul 02 08:35 16°♂58'52 1°03'22 9341 Nov 23 07:07 30°₨ min. Earth dist. 9347 Jul 02 06:27 16°♂59'34 4.46363 AU | | | | 4.02134 AU | | - | | 4.34886 AU |
| evening set 9341 Jun 08 07:45 3°⑤15'44 9346 Dec 09 05:44 0°⑤ conjunction 9341 Jun 21 08:54 6°⑤25'23 -0°45'15 conjunction 9346 Dec 18 20:09 2°♂04'53 0°46'10 minimum elong 9341 Jun 21 08:54 6°⑥25'23 0°45'34 minimum elong 9346 Dec 18 20:10 2°♂04'53 0°46'28 max. Earth dist. 9341 Jun 20 18:16 6°⑥16'30 5.95866 AU max. Earth dist. 9346 Dec 19 13:42 2°♂14'23 6.41487 AU morning rise 9341 Jul 04 12:01 9°⑥36'16 morning rise 9347 Jun 01 02:19 4°♂56'56 9341 Nov 02 10:06 0°ん retrograde 9347 May 02 16:43 21°♂56'07 retrograde 9341 Nov 23 07:07 30°₨ min. Earth dist. 9347 Jul 02 08:35 16°♂58'52 1°03'22 9341 Nov 23 07:07 30°₨ min. Earth dist. 9347 Jul 02 06:27 16°♂59'34 4.46363 AU | direct | | | | | • | | |
| conjunction 9341 Jun 21 08:54 6°\$25'23 -0°45'15 conjunction 9346 Dec 18 20:09 2°\$04'53 0°46'10 minimum elong 9341 Jun 21 08:54 6°\$25'23 0°45'34 minimum elong 9346 Dec 18 20:10 2°\$04'53 0°46'28 max. Earth dist. 9341 Jun 20 18:16 6°\$16'30 5.95866 AU max. Earth dist. 9346 Dec 19 13:42 2°\$14'23 6.41487 AU morning rise 9341 Jul 04 12:01 9°\$36'16 morning rise 9347 Jun 01 02:19 4°\$56'56 9341 Nov 02 10:06 0°\$\Omega\$ retrograde 9347 May 02 16:43 21°\$56'07 retrograde 9341 Nov 23 07:07 30°\$\$\sigma\$ min. Earth dist. 9347 Jul 02 08:35 16°\$58'52 1°03'22 min. Earth dist. 9347 Jul 02 06:27 16°\$\$\sigma\$59'34 4.46363 AU | . , | • | | | evening set | | | |
| minimum elong max. Earth dist. 9341 Jun 20 18:16 6°至25'23 0°45'34 minimum elong 9346 Dec 18 20:10 2°苞04'53 0°46'28 max. Earth dist. 9341 Jun 20 18:16 6°至16'30 5.95866 AU max. Earth dist. 9346 Dec 19 13:42 2°适14'23 6.41487 AU morning rise 9341 Jul 04 12:01 9°至36'16 morning rise 9347 Jan 01 02:19 4°云56'56 9341 Nov 02 10:06 0°Ω retrograde 9347 May 02 16:43 21°云56'07 retrograde 9341 Nov 12 20:50 0°Ω10'49 opposition 9347 Jul 02 08:35 16°云58'52 1°03'22 9341 Nov 23 07:07 30°RS min. Earth dist. 9347 Jul 02 06:27 16°云59'34 4.46363 AU | evening set | 9541 Jun U8 U/:45 | 15'44ع" د | | | 9340 Dec 09 05:44 | 0,0 | |
| minimum elong max. Earth dist. 9341 Jun 20 18:16 6°\$16'30 5.95866 AU max. Earth dist. 9346 Dec 18 20:10 2°\$04'53 0°46'28 max. Earth dist. 9346 Dec 19 13:42 2°\$14'23 6.41487 AU morning rise 9341 Jul 04 12:01 9°\$36'16 morning rise 9347 Jul 01 02:19 4°\$56'56 9341 Nov 02 10:06 0°\$\Omega\$ retrograde 9347 May 02 16:43 21°\$56'07 retrograde 9341 Nov 12 20:50 0°\$\Omega\$10'49 opposition 9347 Jul 02 08:35 16°\$58'52 1°03'22 min. Earth dist. 9347 Jul 02 06:27 16°\$59'34 4.46363 AU | | 0241 Jr. 21 00 54 | (00000000 | 0045115 | aaminus -ti | 0246 D 10 20 00 | 20-20-4152 | 0046110 |
| max. Earth dist. 9341 Jun 20 18:16 6°氧16'30 5.95866 AU max. Earth dist. 9346 Dec 19 13:42 2°Ѣ14'23 6.41487 AU morning rise 9341 Jul 04 12:01 9°氧36'16 morning rise 9347 Jan 01 02:19 4°Ѣ56'56 retrograde 9341 Nov 02 10:06 0°Ω retrograde 9347 May 02 16:43 21°Ѣ56'07 retrograde 9341 Nov 12 20:50 0°Ω10'49 opposition 9347 Jul 02 08:35 16°Ѣ58'52 1°03'22 9341 Nov 23 07:07 30°₨ min. Earth dist. 9347 Jul 02 06:27 16°Ѣ59'34 4.46363 AU | | | | | • | | | |
| morning rise 9341 Jul 04 12:01 9°多36'16 morning rise 9347 Jan 01 02:19 4°る56'56 9341 Nov 02 10:06 0° Ω retrograde 9347 May 02 16:43 21°る56'07 retrograde 9341 Nov 12 20:50 0° Ω10'49 opposition 9347 Jul 02 08:35 16°る58'52 1°03'22 9341 Nov 23 07:07 30° RS min. Earth dist. 9347 Jul 02 06:27 16°る59'34 4.46363 AU | • | | | | • | | | |
| 9341 Nov 02 10:06 0°Ω retrograde 9347 May 02 16:43 21°\overline{3}56'07 retrograde 9341 Nov 12 20:50 0°\Overline{1}01'49 opposition 9347 Jul 02 08:35 16°\overline{5}58'52 1°03'22 min. Earth dist. 9347 Jul 02 06:27 16°\overline{5}59'34 4.46363 AU | | | | 3.93800 AU | | | | 0.4148/ AU |
| retrograde 9341 Nov 12 20:50 0° 幻10'49 opposition 9347 Jul 02 08:35 16° さいいっと 1° 03'22 opposition 9341 Nov 23 07:07 30° RS min. Earth dist. 9347 Jul 02 06:27 16° さいっと 4.46363 AU | morning rise | | | | • | | | |
| 9341 Nov 23 07:07 30°Rの min. Earth dist. 9347 Jul 02 06:27 16°る59'34 4.46363 AU | ratrograda | | | | | • | | 1902122 |
| | renograde | | | | • • | | | |
| opposition 9542 Jan 11 11.00 25 211 30 -1 01 07 direct 954/ Sep 02 07:00 11 35721 | onnosition | | | 1001107 | | | | 4.40303 AU |
| | орровшон | 2344 Jan 11 11:00 | 11730 عد | -1 010/ | direct | 9347 Sep 02 07:00 | 11 03/21 | |

| evening set | 9348 Jan 05 18:28 9348 Jan 09 11:51 | 29° る 12'26 0°≈ | | conjunction minimum elong | 9353 Jun 26 07:39 9353 Jun 26 07:40 | 11°\$28'38 11°\$28'38 | -0°44'22 0°44'40 |
|----------------------|----------------------------------------|---------------------------|-------------|---------------------------|-----------------------------------------|--------------------------------|---------------------|
| | 7540 Juli 07 11.51 | 0 /01 | | max. Earth dist. | 9353 Jun 25 22:40 | 11°923'10 | 5.95014 AU |
| conjunction | 9348 Jan 18 21:11 | 2° ≈ 00'28 | 0°38'09 | morning rise | 9353 Jul 09 11:30 | 14°9540'17 | 2.92011110 |
| minimum elong | 9348 Jan 18 21:12 | 2°≈00'29 | 0°38'26 | morning rise | 9353 Sep 19 12:03 | 0°Ω | |
| max. Earth dist. | 9348 Jan 18 10:11 | 1°≈54'36 | 6.49293 AU | retrograde | 9353 Nov 18 02:07 | 5°Ω18'38 | |
| morning rise | 9348 Jan 31 21:42 | 4°≈47'26 | 0.47275710 | opposition | 9354 Jan 16 14:45 | 0°Ω19'11 | -0°57'58 |
| morning rise | 9348 Mar 24 02:40 | 15° ≈ | | min. Earth dist. | 9354 Jan 16 08:47 | 0° Ω 21'11 | 3.91464 AU |
| retrograde | 9348 May 31 07:09 | 21° ≈ 23'08 | | mm. Lurtii dist. | 9354 Jan 19 00:05 | 30°R95 | 3.91101710 |
| opposition | 9348 Jul 31 06:06 | 16°≈28'36 | 0°43'55 | direct | 9354 Mar 15 21:59 | 25°\$24'37 | |
| min. Earth dist. | 9348 Jul 31 22:19 | 16°≈23'23 | 4.50142 AU | direct | 9354 May 08 14:45 | 0°Ω | |
| iiiii. Lattii tiist. | 9348 Aug 11 22:16 | 10 ≈ 23 23 | 4.30142 AO | | 9354 Jul 18 11:50 | 15° Ω | |
| direct | 9348 Oct 01 19:23 | 13 ‰ 11°≈27'05 | | evening set | 9354 Jul 20 16:11 | 15° Ω 31'46 | |
| uncci | 9348 Nov 21 12:27 | 11 ≈ 27 03 | | evening set | 9334 Jul 20 10.11 | 13 6631 40 | |
| | 9349 Feb 04 01:39 | 13 ≈ 28°≈37'09 | | - | 0254 A 02 01-25 | 18° Ω 47'47 | 0020122 |
| evening set | | 28 ≈3709 0° H | | conjunction | 9354 Aug 03 01:25 | | |
| Double dies | 9349 Feb 10 12:28 | | C 40704 ATT | minimum elong | 9354 Aug 03 01:27 | 18° Ω 47'48 | 0°28'36 |
| max. Earth dist. | 9349 Feb 15 12:16 | 1° ∺ 04'26 | 6.48784 AU | max. Earth dist. | 9354 Aug 04 04:46 | 19° Ω 04'29 | 5.90604 AU |
| | 0240 5 1 45 00 02 | 101/20112 | 0000116 | morning rise | 9354 Aug 16 13:15 | 22° Ω 05'08 | |
| conjunction | 9349 Feb 17 00:03 | 1°) €23'42 | 0°20'16 | | 9354 Sep 19 10:04 | 0° m) | |
| minimum elong | 9349 Feb 17 00:03 | 1°) €23'42 | 0°20'25 | retrograde | 9354 Dec 26 15:02 | 12° m 55'41 | |
| morning rise | 9349 Mar 01 20:16 | 4°) €09'19 | | opposition | 9355 Feb 23 23:59 | 7° m 53'01 | |
| retrograde | 9349 Jun 30 12:44 | 20°) 51′48 | | min. Earth dist. | 9355 Feb 22 19:06 | 8° Mg 02'49 | 3.92634 AU |
| opposition | 9349 Aug 30 13:13 | 15°) 58'48 | 0°13'10 | direct | 9355 Apr 22 21:11 | 2° m 57'39 | |
| min. Earth dist. | 9349 Aug 31 21:28 | 15°) 48′30 | 4.45417 AU | evening set | 9355 Aug 27 19:43 | 22° m 52'18 | |
| direct | 9349 Nov 01 04:57 | 10° ¥ 57'50 | | | | | |
| desc. node | 9350 Jan 25 03:53 | 20°) €08'00 | | conjunction | 9355 Sep 10 10:16 | 26° Mp 07'39 | -0°00'55 |
| evening set | 9350 Mar 06 08:55 | 28°) €24'52 | | minimum elong | 9355 Sep 10 10:15 | 26° Mp 07'39 | 0°00'58 |
| | 9350 Mar 13 14:43 | 0 ° Υ | | behind sun begin | 9355 Sep 10 01:52 | 26° Mp 02'39 | |
| max. Earth dist. | 9350 Mar 16 23:35 | 0° Ƴ 44'28 | 6.40111 AU | behind sun end | 9355 Sep 10 18:39 | 26° My 12'39 | |
| | | | | max. Earth dist. | 9355 Sep 12 15:49 | 26° m 39'44 | 5.97179 AU |
| conjunction | 9350 Mar 19 04:19 | 1° Y 13'28 | -0°03'19 | asc. node | 9355 Sep 22 20:56 | 29° Mp 06'03 | |
| minimum elong | 9350 Mar 19 04:17 | 1° Y 13'27 | 0°03'18 | morning rise | 9355 Sep 24 02:51 | 29° m 23'48 | |
| behind sun begin | 9350 Mar 18 20:22 | 1° Y 09'07 | | | 9355 Sep 26 15:58 | 0∘ 亚 | |
| behind sun end | 9350 Mar 19 12:13 | 1° Y 17'48 | | retrograde | 9356 Feb 01 06:54 | 19° ≏ 31'24 | |
| morning rise | 9350 Mar 31 22:15 | 4° Υ ′01'32 | | min. Earth dist. | 9356 Mar 30 05:26 | 14° ≏ 40'03 | 4.03819 AU |
| retrograde | 9350 Aug 01 07:58 | 21° Y '20'56 | | opposition | 9356 Mar 31 19:22 | 14° ≏ 27'08 | 0°20'14 |
| opposition | 9350 Oct 01 05:32 | 16° Ƴ 27'58 | -0°22'22 | direct | 9356 May 29 06:28 | 9° ഫ 29'35 | |
| min. Earth dist. | 9350 Oct 02 20:46 | 16° Ƴ 15′23 | 4.33260 AU | evening set | 9356 Oct 03 00:01 | 28° ≏ 42'02 | |
| direct | 9350 Dec 02 06:38 | 11° Y ′28'07 | | <i>3</i> · · · | 9356 Oct 08 15:26 | 0° M | |
| evening set | 9351 Apr 06 15:34 | 29° Y '32'14 | | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | |
| | 9351 Apr 08 16:45 | 0°8 | | conjunction | 9356 Oct 16 15:29 | 1° M 50'54 | 0°26'02 |
| max. Earth dist. | 9351 Apr 17 04:24 | _ | 6.25307 AU | minimum elong | 9356 Oct 16 15:27 | 1°ML50'53 | 0°26'10 |
| man zarm uiot. | 700111p1 17 01.21 | . 00000 | 0.20307110 | max. Earth dist. | 9356 Oct 19 02:51 | 2°M25'11 | 6.11834 AU |
| conjunction | 9351 Apr 19 10:15 | 2° 8 26'14 | -0°26'41 | morning rise | 9356 Oct 30 07:23 | 4°M59'41 | 0.1103.1110 |
| minimum elong | 9351 Apr 19 10:14 | 2° 8 26'13 | | morning rise | 9356 Dec 15 22:17 | 15°M | |
| morning rise | 9351 May 02 04:08 | 5° 8 20'13 | 0 2031 | retrograde | 9357 Mar 06 05:28 | 23°M54'26 | |
| morning rise | 9351 Jun 16 12:58 | 15° 8 | | min. Earth dist. | 9357 May 03 16:46 | 19°M02'45 | 4.20360 AU |
| retrograde | 9351 Sep 04 12:57 | 23° 8 42'34 | | opposition | 9357 May 05 02:48 | 18°ML51'19 | 0°53'14 |
| opposition | 9351 Nov 04 02:05 | 18° 8 48'31 | -0°53'36 | оррозион | 9357 Jun 07 03:56 | 15°RM | 0 33 14 |
| min. Earth dist. | 9351 Nov 04 02:03 9351 Nov 05 13:21 | | 4.16737 AU | direct | 9357 Jul 03 17:03 | 13°M51'40 | |
| mm. Larm dist. | 9351 Dec 07 17:44 | 15°R と | 4.10/3/ AO | direct | 9357 Jul 30 13:40 | 15°M | |
| direct | 9351 Dec 07 17:44 9352 Jan 03 23:17 | 13° K 50'38 | | | 9357 Oct 28 00:37 | 15 IIC 0° ∡ 7 | |
| direct | 9352 Jan 31 02:57 | 15° 8 | | evening set | 9357 Nov 07 02:34 | 2° ∡ 12'48 | |
| | 9352 Jan 31 02.37 9352 Apr 26 22:14 | 0° Ⅱ | | evening set | 9337 NOV 07 02.34 | 2 8 1240 | |
| | | 0 П 2°П45'02 | | - | 0257 Nov. 20, 14-26 | 59.713147 | 0942142 |
| evening set | 9352 May 08 18:50 | | (00200 ATT | conjunction | 9357 Nov 20 14:36 | 5° х 12'47 | 0°42'42 |
| max. Earth dist. | 9352 May 19 22:27 | 5° Ⅱ 22'44 | 6.08389 AU | minimum elong | 9357 Nov 20 14:35 | 5° 🖈 12'47 | 0°42'59 |
| aaniumstiss | 0252 M 21 15 21 | 50TT 40155 | 0042150 | max. Earth dist. | 9357 Nov 22 08:06 | 5° × ⁷ 35'52 | 6.28810 AU |
| conjunction | 9352 May 21 15:21 | 5° Ⅱ 46'55 | | morning rise | 9357 Dec 04 02:05 | 8° 🖈 12'07 | |
| minimum elong | 9352 May 21 15:20 | 5°∏46'55 | 0 45 0/ | retrograde | 9358 Apr 06 18:23 | 25° 🖈 56'26 | 4 26242 ATT |
| morning rise | 9352 Jun 03 12:44 | 8° ∏ 49'32 | | min. Earth dist. | 9358 Jun 05 07:13 | 21°×702'35 | 4.36343 AU |
| retrograde | 9352 Oct 10 09:09 | 28° ∏ 27'37 | 1000147 | opposition | 9358 Jun 06 02:26 | 20° ₹ 56'14 | 1°07'05 |
| opposition | 9352 Dec 09 10:15 | 23° ∏ 31′21 | | direct | 9358 Aug 06 01:07 | 15° ∡ 55'13 | |
| min. Earth dist. | 9352 Dec 10 04:18 | | 4.00832 AU | | 9358 Nov 23 03:16 | 0°る | |
| direct | 9353 Feb 06 21:31 | 18° Ⅲ 35'35 | | evening set | 9358 Dec 09 22:28 | 3° そ 33'35 | |
| | 9353 May 08 07:34 | 0.20 | | | 0050 = | | 004=11= |
| evening set | 9353 Jun 13 05:34 | 8° © 18'11 | | conjunction | 9358 Dec 23 05:38 | 6° る 25'56 | |
| | | | | minimum elong | 9358 Dec 23 05:38 | 6° る 25'56 | 0°46'01 |

min. Earth dist.

9364 Dec 15 06:19

28°**Д**32'18 3.99005 AU

| conjunction | 9370 Dec 27 14:38 | 10° පි 46'14 | 0°45'03 | max. Earth dist. | 9376 May 29 18:37 | 15° Ⅱ 19′09 | 6.03636 AU |
|---------------------|-----------------------------------------|-----------------------------------|-----------------------|------------------|----------------------------------------|-----------------------------------------|-----------------------|
| minimum elong | 9370 Dec 27 14:38 | 10° ප් 46'14 | 0°45'22 | | | | |
| max. Earth dist. | 9370 Dec 28 00:53 | 10° る 51'45 | 6.44364 AU | conjunction | 9376 May 31 05:23 | 15° Ⅲ 39'55 | |
| morning rise | 9371 Jan 09 19:12 | 13° る 36'32 | | minimum elong | 9376 May 31 05:22 | 15° Ⅱ 39'55 | 0°45'14 |
| | 9371 Apr 24 05:42 | 0° ≈ | | morning rise | 9376 Jun 13 04:22 | 18° ∏ 45′22 | |
| retrograde | 9371 May 10 21:48 | 0°≈26'03 | | | 9376 Aug 02 23:13 | 0.2 0.2 | |
| | 9371 May 27 11:38 | 30°Rる | | retrograde | 9376 Oct 20 23:42 | 8°545'10 | |
| opposition | 9371 Jul 10 16:23 | 25°₹29'33 | 0°59'18 | opposition | 9376 Dec 19 20:24 | 3°548'10 | |
| min. Earth dist. | 9371 Jul 10 19:00 | 25°る28'42 | 4.48356 AU | min. Earth dist. | 9376 Dec 20 08:07 | 3°544'18 | 3.96813 AU |
| direct | 9371 Sep 10 20:40 | 20° る 27'55 | | | 9377 Jan 21 20:06 | 30°RII | |
| | 9371 Dec 07 09:20 | 0° ≈ 7° ≈ 38'40 | | direct | 9377 Feb 16 21:05 | 28°Ⅲ52'55 0° © | |
| evening set | 9372 Jan 14 05:22 | / ≈38 40 | | avanina aat | 9377 Mar 14 20:43 9377 Jun 23 11:18 | 18° 5 48'03 | |
| conjunction | 9372 Jan 27 06:48 | 10° ≈ 25'50 | 0°33'57 | evening set | 93//Juli 23 11.16 | 16 94603 | |
| minimum elong | 9372 Jan 27 06:49 | 10 ≈25 50 10°≈25'50 | 0°34'12 | conjunction | 9377 Jul 06 15:23 | 22°500'50 | 00/11/32 |
| max. Earth dist. | 9372 Jan 26 13:17 | 10 ≈25 30 10°≈16'28 | 6.50248 AU | minimum elong | 9377 Jul 06 15:24 | 22° © 00'51 | 0°41'51 |
| morning rise | 9372 Feb 09 05:55 | 10 ≈10 28 13°≈11'55 | 0.30248 AU | max. Earth dist. | 9377 Jul 06 15:49 | 22° © 01'06 | 5.92136 AU |
| morning risc | 9372 Feb 17 18:45 | 15 ∞11 55 15°≈ | | morning rise | 9377 Jul 19 21:39 | 25°9514'57 | 3.92130 AO |
| retrograde | 9372 Jun 08 12:11 | 15 ≈ 29° ≈ 45'26 | | morning risc | 9377 Aug 08 19:28 | 23 3 1437 | |
| opposition | 9372 July 08 12:11 9372 Aug 08 13:08 | 24°≈51'22 | 0°36'12 | | 9377 Nov 03 02:55 | 15° Ω | |
| min. Earth dist. | 9372 Aug 09 09:57 | 24°≈44'42 | 4.49987 AU | retrograde | 9377 Nov 28 22:54 | 16° Ω 05'05 | |
| direct | 9372 Oct 10 05:14 | 19°≈49'53 | 1.19907710 | renograde | 9377 Dec 24 16:30 | 15°RΩ | |
| direct | 9373 Jan 09 02:48 | 0° ∀ | | opposition | 9378 Jan 27 09:14 | 11° Ω 04'42 | -0°50'04 |
| evening set | 9373 Feb 12 09:13 | 7° ₩ 01'16 | | min. Earth dist. | 9378 Jan 26 20:03 | 11° Ω 09'09 | 3.90086 AU |
| max. Earth dist. | 9373 Feb 23 12:41 | | 6.47474 AU | direct | 9378 Mar 26 11:16 | 6° Ω 10'09 | 3.90000710 |
| man. Darun dige. |)5/51 0 0 2 5 12.11 | , ,(2010 | 0.17.17.110 | | 9378 Jun 11 10:14 | 15° Ω | |
| conjunction | 9373 Feb 25 06:32 | 9°) 47′52 | 0°14'05 | evening set | 9378 Jul 31 08:39 | 26° Ω 19'59 | |
| minimum elong | 9373 Feb 25 06:32 | 9°) (47'52 | 0°14'13 | evening sec |)5 / 0 va i | 20 0013 03 | |
| behind sun begin | 9373 Feb 25 02:41 | 9°)(45'48 | | conjunction | 9378 Aug 13 19:58 | 29° Ω 36'51 | -0°21'18 |
| behind sun end | 9373 Feb 25 10:23 | 9°) (49′56 | | minimum elong | 9378 Aug 13 19:59 | 29° Ω 36'51 | 0°21'30 |
| morning rise | 9373 Mar 10 01:54 | 12°) €33'39 | | max. Earth dist. | 9378 Aug 15 10:06 | 0° m 00'06 | 5.90879 AU |
| retrograde | 9373 Jul 09 01:27 | 29°) €22'18 | | | 9378 Aug 15 09:56 | 0° m/ | |
| opposition | 9373 Sep 08 01:59 | 24°) 29′22 | 0°03'29 | morning rise | 9378 Aug 27 09:35 | 2° m 54'53 | |
| min. Earth dist. | 9373 Sep 09 13:47 | 24°) 17'57 | 4.42979 AU | retrograde | 9379 Jan 06 05:38 | 23° m 40'15 | |
| desc. node | 9373 Oct 16 11:08 | 20° ¥ 20'53 | | min. Earth dist. | 9379 Mar 05 04:36 | 18° m) 48'08 | 3.94527 AU |
| direct | 9373 Nov 09 16:21 | 19° ¥ 28'33 | | opposition | 9379 Mar 06 13:40 | 18° Mp 36'53 | -0°10'38 |
| | 9374 Feb 09 07:15 | $0^{\circ}\Upsilon$ | | direct | 9379 May 03 12:12 | 13° m 41'02 | |
| evening set | 9374 Mar 14 19:38 | 7° Y 03'10 | | asc. node | 9379 Jun 10 18:40 | 16° Mp 05'24 | |
| max. Earth dist. | 9374 Mar 25 07:04 | 9° Y 22'05 | 6.36667 AU | | 9379 Aug 23 16:24 | 0∘ ত | |
| | | | | evening set | 9379 Sep 07 11:01 | 3° £ 27'16 | |
| conjunction | 9374 Mar 27 14:35 | 9° Ƴ 52'52 | -0°10'02 | | | | |
| minimum elong | 9374 Mar 27 14:35 | 9° Ƴ 52'52 | 0°10'05 | conjunction | 9379 Sep 21 02:17 | 6° £ 41'24 | 0°07'21 |
| behind sun begin | 9374 Mar 27 08:09 | 9° Ƴ 49'19 | | minimum elong | 9379 Sep 21 02:16 | 6° ≏ 41'23 | 0°07'22 |
| behind sun end | 9374 Mar 27 21:01 | 9° Ƴ 56′25 | | behind sun begin | 9379 Sep 20 18:37 | 6° ≙ 36'52 | |
| morning rise | 9374 Apr 09 08:14 | 12° Ƴ 42'11 | | behind sun end | 9379 Sep 21 09:54 | 6° ≙ 45'54 | |
| | 9374 Jul 28 06:53 | 9° 8 | | max. Earth dist. | 9379 Sep 23 12:42 | 7° ≙ 16'04 | 6.00474 AU |
| retrograde | 9374 Aug 10 09:51 | 0° 8 16'13 | | morning rise | 9379 Oct 04 19:20 | 9° £ 56'05 | |
| | 9374 Aug 23 13:38 | 30° ₹ Υ | | retrograde | 9380 Feb 11 02:34 | 29° ≏ 45'12 | |
| opposition | 9374 Oct 10 06:17 | 25° Y '23'02 | | min. Earth dist. | 9380 Apr 09 02:43 | 24° £ 54'16 | 4.08127 AU |
| min. Earth dist. | 9374 Oct 11 21:53 | 25° Y 10′20 | 4.28980 AU | opposition | 9380 Apr 10 17:59 | 24° ≙ 40'56 | 0°31'12 |
| direct | 9374 Dec 11 00:57 | 20° Y 23'35 | | direct | 9380 Jun 08 11:14 | 19° ≙ 42'46 | |
| | 9375 Mar 06 05:45 | 0° 8 | | | 9380 Sep 03 04:28 | 0°M | |
| evening set | 9375 Apr 15 12:35 | 8° 8 40'58 | | evening set | 9380 Oct 13 03:12 | 8°M40'35 | |
| max. Earth dist. | 9375 Apr 26 02:52 | 11° 8 06'43 | 6.20496 AU | | | | |
| | | | | conjunction | 9380 Oct 26 17:59 | 11°M46'55 | 0°32'02 |
| conjunction | 9375 Apr 28 07:30 | 11° 8 37'01 | | minimum elong | 9380 Oct 26 17:57 | 11°M46'55 | 0°32'14 |
| minimum elong | 9375 Apr 28 07:29 | 11° 8 37'01 | 0*32/22 | max. Earth dist. | 9380 Oct 29 02:42 | 12°M 19'19 | 6.16748 AU |
| morning rise | 9375 May 11 02:01 | 14° 8 33'15 | | morning rise | 9380 Nov 09 08:51 | 14°M53'00 | |
| | 9375 May 13 00:49 | 15° 8 0°π | | | 9380 Nov 09 21:15 | 15°M | |
| ratrograda | 9375 Jul 29 14:55 | 0°П 3°П16'53 | | ratragrada | 9381 Jan 26 17:14 | 0°⊀ ⁷ 3°∗ 7 125152 | |
| retrograde | 9375 Sep 14 10:51 9375 Nov 01 00:48 | 3°Д16'53 | | retrograde | 9381 Mar 15 07:54 9381 May 02 02:17 | 3° ₹ 25'52 30° RM | |
| opposition | 9375 Nov 13 19:45 | 28° 6 22'23 | _0°50'53 | min. Earth dist. | 9381 May 02 02:17 9381 May 13 01:15 | | 4.25401 AU |
| min. Earth dist. | 9375 Nov 15 19.43 9375 Nov 15 04:38 | | -0 3933 4.11730 AU | opposition | 9381 May 14 08:04 | 28°M23'23 | 4.23401 AU 0°59'10 |
| direct | 9376 Jan 13 08:14 | 28 8 11 42 | т.11/30 AU | direct | 9381 Jul 13 08:39 | 28 IIC23 23 23°M23'14 | 0 37 10 |
| ancei | 9376 Mar 20 14:13 | 23 Ο 23 02 0° Π | | ancei | 9381 Sep 20 07:12 | 23 11623 14 0° x 7 | |
| evening set | 9376 May 18 07:33 | 12° ∏ 35'22 | | evening set | 9381 Nov 16 13:01 | 11° × ⁷ 29'39 | |
| J 1 J 11111 5 J J L | 7570 111uy 10 07.55 | | | oronnig set | ,501 1404 10 15.01 | 11 / 4/37 | |

| · · · · · · · · · · · · | 0201 N 20 22-42 | 149.727104 | 0044155 | J:4 | 0206 D 15 14.50 | 25° Y 01'34 | |
|-------------------------|-----------------------------------------|-----------------------------------------|------------|-------------------|----------------------------------------|-----------------------------------------|------------|
| conjunction | 9381 Nov 29 23:42 | 14° × 27'04 | | direct | 9386 Dec 15 14:50 | | |
| minimum elong | 9381 Nov 29 23:41 | 14° 🗷 27'03 | 0°45'12 | | 9387 Feb 12 12:08 | 0° 8 | |
| max. Earth dist. | 9381 Dec 01 11:16 | 14° 🗷 46'39 | 6.33580 AU | evening set | 9387 Apr 20 03:22 | 13° 8 26'43 | |
| morning rise | 9381 Dec 13 09:24 | 17° ∡ ¹23'41 | | | 9387 Apr 26 21:20 | 15° 8 | |
| | 9382 Feb 16 08:48 | 0°ਰ | | max. Earth dist. | 9387 Apr 30 18:14 | 15° 8 53'43 | 6.17842 AU |
| retrograde | 9382 Apr 15 05:57 | 4°る50'08 | | | | | |
| | 9382 Jun 13 13:52 | 30°₹ ৴ | | conjunction | 9387 May 02 22:29 | 16° 8 23'58 | |
| opposition | 9382 Jun 14 17:43 | 29° ₹ 50'50 | 1°07'16 | minimum elong | 9387 May 02 22:28 | 16° 8 23'57 | 0°34'56 |
| min. Earth dist. | 9382 Jun 14 02:59 | 29° ₹ 55'41 | 4.40494 AU | morning rise | 9387 May 15 17:33 | 19° 8 21'31 | |
| direct | 9382 Aug 15 00:37 | 24° ∡ ¹49'34 | | | 9387 Jul 04 06:31 | Π $^{\circ}0$ | |
| | 9382 Oct 15 10:14 | 0°ರ | | retrograde | 9387 Sep 19 13:52 | 8° Ⅱ 16'44 | |
| evening set | 9382 Dec 18 18:01 | 12° る 17'15 | | opposition | 9387 Nov 18 21:40 | 3° Ⅱ 21'56 | -1°02'33 |
| | | | | min. Earth dist. | 9387 Nov 20 03:20 | 3° Ⅱ 12'16 | 4.09160 AU |
| conjunction | 9382 Dec 31 23:37 | 15° ට 07'42 | 0°44'08 | | 9387 Dec 17 08:41 | 30° ₹ 8 | |
| minimum elong | 9382 Dec 31 23:37 | 15° පි 07'43 | 0°44'27 | direct | 9388 Jan 18 03:47 | 28° 8 24'54 | |
| max. Earth dist. | 9383 Jan 01 06:47 | 15° ⋜ 11'34 | 6.45855 AU | | 9388 Feb 18 18:25 | $\Pi^{\circ}0$ | |
| morning rise | 9383 Jan 14 03:11 | 17° る 57'05 | | evening set | 9388 May 23 07:05 | 17° Ⅱ 43'19 | |
| 3 | 9383 Mar 18 13:12 | 0° ≈ | | max. Earth dist. | 9388 Jun 04 00:16 | 20° Ⅲ 31'33 | 6.01408 AU |
| retrograde | 9383 May 15 00:28 | 4°≈42'05 | | max. Bartii dist. | 7500 Juli 01 00:10 | 20 13133 | 0.01100710 |
| retrograde | 9383 Jul 13 01:30 | 30°R₹ | | conjunction | 9388 Jun 05 05:41 | 20° Ⅱ 49'13 | -0°45'32 |
| opposition | 9383 Jul 14 20:42 | 29° ♂ 46'03 | 0°56'48 | minimum elong | 9388 Jun 05 05:41 | 20° I I49'13 | 0°45'49 |
| min. Earth dist. | 9383 Jul 14 20:42 9383 Jul 15 01:50 | 29° 石 44'23 | 4.49243 AU | morning rise | 9388 Jun 18 05:31 | 20 H 4913 | 0 43 49 |
| | | | 4.49243 AU | morning rise | | | |
| direct | 9383 Sep 15 03:25 | 24° る 44'27 | | | 9388 Jul 14 06:56 | 0°95 | |
| | 9383 Nov 16 18:31 | 0° ≈ | | retrograde | 9388 Oct 26 12:00 | 14°905'53 | 1005125 |
| evening set | 9384 Jan 18 11:00 | 11° ≈ 53'31 | | opposition | 9388 Dec 25 06:20 | 9° © 08'27 | |
| | | | | min. Earth dist. | 9388 Dec 25 15:00 | | 3.95175 AU |
| conjunction | 9384 Jan 31 11:37 | 14° ≈ 40′19 | 0°31'34 | direct | 9389 Feb 22 03:42 | 4°©13'25 | |
| minimum elong | 9384 Jan 31 11:38 | 14° ≈ 40′20 | 0°31'49 | evening set | 9389 Jun 28 18:25 | 24°©12'58 | |
| max. Earth dist. | 9384 Jan 30 12:43 | 14° ≈ 28′04 | 6.50464 AU | | | | |
| | 9384 Feb 02 00:25 | 15° ≈ | | conjunction | 9389 Jul 11 23:37 | 27° © 26'41 | -0°39'35 |
| morning rise | 9384 Feb 13 10:15 | 17° ≈ 26′08 | | minimum elong | 9389 Jul 11 23:38 | 27° 5 26'42 | 0°39'52 |
| | 9384 Apr 20 21:53 | 0° ∀ | | max. Earth dist. | 9389 Jul 12 06:30 | 27° © 30'53 | 5.91281 AU |
| retrograde | 9384 Jun 12 17:37 | 3° ¥ 59'44 | | | 9389 Jul 22 10:27 | $0 ^{\circ} \Omega$ | |
| | 9384 Aug 05 15:52 | 30° R ≈ | | morning rise | 9389 Jul 25 07:00 | 0° Ω 41'44 | |
| opposition | 9384 Aug 12 17:57 | 29° ≈ 05'55 | 0°32'01 | | 9389 Sep 28 17:01 | 15° Ω | |
| min. Earth dist. | 9384 Aug 13 18:11 | 28°≈58'09 | 4.49527 AU | retrograde | 9389 Dec 04 11:40 | 21° Ω 34'30 | |
| direct | 9384 Oct 14 11:37 | 24°≈04'25 | | opposition | 9390 Feb 01 20:50 | 16° Ω 33'38 | -0°45'23 |
| | 9384 Dec 20 07:51 | 0° ∀ | | min. Earth dist. | 9390 Feb 01 03:32 | 16° Ω 39'27 | 3.90156 AU |
| evening set | 9385 Feb 16 14:08 | 11°) 17'45 | | | 9390 Feb 13 15:41 | 15°R Ω | |
| max. Earth dist. | 9385 Feb 27 14:41 | 1.1 | 6.46366 AU | direct | 9390 Mar 31 20:28 | 11° Ω 39'01 | |
| | 7 2 2 2 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | 9390 May 16 04:12 | 15° Ω | |
| conjunction | 9385 Mar 01 11:10 | 14°) €04'36 | 0°10'50 | | 9390 Jul 29 09:05 | 0° m/y | |
| minimum elong | 9385 Mar 01 11:10 | 14° H 04'37 | 0°10'56 | evening set | 9390 Aug 05 18:48 | 1° Mp 46'56 | |
| behind sun begin | 9385 Mar 01 05:08 | 14° X 04'37 | 0 10 30 | evening set | 9390 Aug 03 16.46 | 1 11/4030 | |
| behind sun begin | 9385 Mar 01 17:13 | 14° H 07'52 | | conjunction | 9390 Aug 19 06:42 | 5° m 03'38 | 001720 |
| | | 14 X 07 32 16° X 50'41 | | v | Č | • | |
| morning rise | 9385 Mar 14 06:07 | 16° π 3041 | | minimum elong | 9390 Aug 19 06:42 | 5° Mp 03'39 | 0°17'39 |
| . 1 | 9385 May 23 14:16 | | | max. Earth dist. | 9390 Aug 21 00:08 | 5° Mp 28'50 | 5.91844 AU |
| retrograde | 9385 Jul 13 09:48 | 3° Y 44'05 | | morning rise | 9390 Sep 01 21:10 | 8° Tp 21'31 | |
| desc. node | 9385 Aug 26 15:12 | 0° Υ 55'44 | | retrograde | 9391 Jan 11 09:13 | 29° Mp 00'20 | |
| | 9385 Sep 03 09:20 | 30° ₹ | | min. Earth dist. | 9391 Mar 10 08:02 | 24° Mp 08'39 | 3.96268 AU |
| opposition | 9385 Sep 12 10:59 | 28° ¥ 51′10 | | opposition | 9391 Mar 11 19:25 | 23° Mp 56'36 | -0°04'26 |
| min. Earth dist. | 9385 Sep 13 23:17 | | 4.41287 AU | asc. node | 9391 Apr 20 21:10 | 19° Mp 33'42 | |
| direct | 9385 Nov 13 22:25 | 23° ¥ 50′29 | | direct | 9391 May 08 19:45 | 19° Mp 00′24 | |
| | 9386 Jan 20 11:35 | $\mathbf{\gamma}_{0}$ | | | 9391 Aug 05 07:01 | 0∘ ত | |
| evening set | 9386 Mar 19 03:45 | 11° Y 30'23 | | evening set | 9391 Sep 12 17:12 | 8° ₾ 39'33 | |
| max. Earth dist. | 9386 Mar 29 14:56 | 13° Ƴ 49'50 | 6.34506 AU | | | | |
| | | | | conjunction | 9391 Sep 26 08:42 | 11° ≏ 52'37 | 0°11'16 |
| conjunction | 9386 Mar 31 22:32 | 14° Y 20′50 | -0°13'25 | minimum elong | 9391 Sep 26 08:41 | 11° ≏ 52'37 | 0°11'19 |
| minimum elong | 9386 Mar 31 22:32 | 14° Y 20'50 | 0°13'28 | behind sun begin | 9391 Sep 26 02:37 | 11° ≏ 49'03 | |
| behind sun begin | 9386 Mar 31 17:58 | 14° Ƴ 18'18 | | behind sun end | 9391 Sep 26 14:44 | 11° ≏ 56'10 | |
| behind sun end | 9386 Apr 01 03:05 | 14° Ƴ 23'21 | | max. Earth dist. | 9391 Sep 28 20:52 | 12° ≏ 28'09 | 6.02810 AU |
| morning rise | 9386 Apr 13 16:08 | 17° Ƴ 10'59 | | morning rise | 9391 Oct 10 01:30 | 15° ≏ 06'05 | |
| 5 | 9386 Jun 17 16:57 | 0°8 | | 5 | 9391 Dec 21 20:36 | 0° M | |
| retrograde | 9386 Aug 15 05:04 | 4° 8 54'04 | | retrograde | 9392 Feb 15 22:28 | 4°M43'36 | |
| opposition | 9386 Oct 14 23:05 | 0° 8 00'48 | -0°36'30 | | 9392 Apr 13 01:26 | 30° Ŗ Ω | |
| -LL 20111011 | 9386 Oct 15 01:34 | 30° R Υ | | min. Earth dist. | 9392 Apr 14 00:08 | 29° £ 52'19 | 4.10780 AU |
| min. Earth dist. | 9386 Oct 15 01:34 9386 Oct 16 15:33 | | 4.26470 AU | opposition | 9392 Apr 14 00:08 9392 Apr 15 14:09 | 29° ⊆ 3219 29° ⊆ 39'27 | 0°36'08 |
| Darm dist. | 7500 OCC 10 15.55 | 27 I T/ TO | 1.201/0 AU | оррозний | 7572 ripi 15 17.09 | 27 -3721 | 3 30 00 |

| direct | 9392 Jun 13 12:34 | 24° £ 40'56 | | opposition | 9397 Sep 16 21:15 | 3° Ƴ 14'54 | -0°06'32 |
|------------------|----------------------------------------|--------------------------------|------------|------------------|----------------------------------------|-----------------------------------------|------------|
| direct | 9392 Aug 12 07:56 | 0° M | | min. Earth dist. | 9397 Sep 18 11:27 | | 4.39307 AU |
| evening set | 9392 Oct 18 01:11 | 13°MJ30'05 | | mm. Darun digu | 9397 Oct 14 14:34 | 30°R) € | 57507110 |
| e vennig sec | 9392 Oct 24 16:02 | 15° M ₊ | | direct | 9397 Nov 18 07:11 | 28°) 14'23 | |
| | | | | | 9397 Dec 22 22:02 | $0^{\circ}\Upsilon$ | |
| conjunction | 9392 Oct 31 15:27 | 16°M35'00 | 0°34'36 | evening set | 9398 Mar 23 13:04 | 16° Ƴ 00'31 | |
| minimum elong | 9392 Oct 31 15:25 | 16°M35'00 | 0°34'49 | max. Earth dist. | 9398 Apr 02 23:54 | 18° Y 20'31 | 6.32183 AU |
| max. Earth dist. | 9392 Nov 02 22:05 | 17°ML06'00 | 6.19463 AU | | • | | |
| morning rise | 9392 Nov 14 05:45 | 19° M 39'35 | | conjunction | 9398 Apr 05 07:53 | 18° Ƴ 51'53 | -0°16'44 |
| | 9393 Jan 02 15:08 | 0° ∡ ¹ | | minimum elong | 9398 Apr 05 07:52 | 18° Ƴ 51'53 | 0°16'48 |
| retrograde | 9393 Mar 19 15:56 | 8° ₹ 01'18 | | morning rise | 9398 Apr 18 01:30 | 21° Y '42'59 | |
| opposition | 9393 May 18 18:59 | 2° ∡ 759'12 | 1°01'27 | | 9398 May 27 01:47 | $0^{\circ}S$ | |
| min. Earth dist. | 9393 May 17 13:37 | 3° 渘 09'01 | 4.27950 AU | retrograde | 9398 Aug 19 23:52 | 9° 8 35'42 | |
| | 9393 Jun 11 21:06 | 30°RML | | opposition | 9398 Oct 19 17:16 | 4° 8 42'18 | -0°40'57 |
| direct | 9393 Jul 17 23:17 | 27°M58'51 | | min. Earth dist. | 9398 Oct 21 07:55 | 4° 8 29'52 | 4.23978 AU |
| | 9393 Aug 23 11:19 | 0° ∡ ¹ | | | 9398 Dec 06 21:28 | 30° ₹Ƴ | |
| evening set | 9393 Nov 21 02:23 | 15° ∡ ¹58'18 | | direct | 9398 Dec 20 03:27 | 29° Ƴ 43'25 | |
| | | | | | 9399 Jan 02 10:47 | 9° 8 | |
| conjunction | 9393 Dec 04 12:22 | 18° ∡ 754'31 | 0°45'34 | | 9399 Apr 10 10:40 | 15° 8 | |
| minimum elong | 9393 Dec 04 12:21 | 18° ∡ 754'31 | 0°45'53 | evening set | 9399 Apr 24 19:34 | 18° 8 16'17 | |
| max. Earth dist. | 9393 Dec 05 19:35 | 19° ∡ 11'38 | 6.35773 AU | max. Earth dist. | 9399 May 05 13:51 | 20° 8 46'05 | 6.15384 AU |
| morning rise | 9393 Dec 17 21:08 | 21° ∡ ⁴49'53 | | | | | |
| | 9394 Jan 26 10:51 | 0°ප | | conjunction | 9399 May 07 14:57 | 21° 8 14'40 | |
| retrograde | 9394 Apr 19 10:34 | 9° ප 08'44 | | minimum elong | 9399 May 07 14:56 | 21° 8 14'40 | 0°37'16 |
| opposition | 9394 Jun 18 22:38 | 4° ප 10'00 | 1°06'48 | morning rise | 9399 May 20 10:28 | 24° 8 13'28 | |
| min. Earth dist. | 9394 Jun 18 11:26 | 4° る 13'41 | 4.42187 AU | | 9399 Jun 14 23:53 | $\Pi^{\circ}0$ | |
| | 9394 Jul 26 18:58 | 30°₹ ৴ | | retrograde | 9399 Sep 24 20:05 | 13° Ⅱ 19'37 | |
| direct | 9394 Aug 19 10:04 | 29° ₹ 08'41 | | opposition | 9399 Nov 24 00:55 | 8° Ⅱ 24'31 | |
| | 9394 Sep 12 06:21 | 0°ಕ | | min. Earth dist. | 9399 Nov 25 04:41 | | 4.06938 AU |
| evening set | 9394 Dec 23 01:15 | 16° る 32'35 | | direct | 9400 Jan 23 03:03 | 3° Ⅱ 27'50 | |
| | | _ | | evening set | 9400 May 29 06:57 | 22° I 52'48 | |
| conjunction | 9395 Jan 05 06:04 | 19° ろ 22'21 | 0°43'01 | max. Earth dist. | 9400 Jun 10 05:40 | 25° Ⅱ 44'59 | 5.99631 AU |
| minimum elong | 9395 Jan 05 06:05 | 19° る 22'21 | 0°43'19 | | | | |
| max. Earth dist. | 9395 Jan 05 07:46 | 19° る 23'16 | 6.46925 AU | conjunction | 9400 Jun 11 06:21 | 25° Ⅱ 59'51 | |
| morning rise | 9395 Jan 18 09:01 | 22° る 11'05 | | minimum elong | 9400 Jun 11 06:21 | 25° Ⅱ 59'51 | 0°46'04 |
| | 9395 Feb 25 22:31 | 0° ≈ | | morning rise | 9400 Jun 24 07:05 | 29° Ⅱ 07'56 | |
| retrograde | 9395 May 19 02:51 | 8°≈53'06 | 005406 | | 9400 Jun 27 22:14 | 0°95 | |
| opposition | 9395 Jul 18 23:26 | 3°≈57'27 | 0°54'06 | retrograde | 9400 Nov 01 22:05 | 19°525'37 | 1006103 |
| min. Earth dist. | 9395 Jul 19 07:36 | 3°≈54'49 | 4.49660 AU | opposition | 9400 Dec 31 15:15 | 14°927'45 | |
| T' . | 9395 Aug 23 12:38 | 30°Rる | | min. Earth dist. | 9400 Dec 31 19:46 | 14°926'15 | 3.94049 AU |
| direct | 9395 Sep 19 07:50 9395 Oct 16 09:29 | 28°る55'49 0°≈ | | direct | 9401 Feb 28 08:03 | 9° © 32'56 29° © 35'03 | |
| | 9396 Jan 17 12:40 | 0°≈ 15°≈ | | evening set | 9401 Jul 05 00:36 9401 Jul 06 17:36 | 29° Ω 0° Ω | |
| evening set | 9396 Jan 22 15:13 | 15 ≈ 16° ≈ 04'49 | | | 9401 Jul 00 17.30 | 0 86 | |
| evening set | 9390 Jan 22 13.13 | 10 20449 | | conjunction | 9401 Jul 18 06:36 | 2° Ω 49'23 | -0°37'17 |
| conjunction | 9396 Feb 04 15:28 | 18° ≈ 51'32 | 0°29'05 | minimum elong | 9401 Jul 18 06:37 | 2°Ω49'23 | |
| minimum elong | 9396 Feb 04 15:29 | 18°≈51'33 | 0°29'19 | max. Earth dist. | 9401 Jul 18 17:43 | 2° Ω 56'11 | 5.90896 AU |
| max. Earth dist. | 9396 Feb 03 14:03 | 18°≈37'55 | 6.50207 AU | morning rise | 9401 Jul 31 15:09 | 6° Ω 05'06 | 3.70070710 |
| morning rise | 9396 Feb 17 13:23 | 21°≈37'14 | | | 9401 Sep 07 23:17 | 15° Ω | |
| 8 | 9396 Mar 30 06:25 | 0°) € | | retrograde | 9401 Dec 10 19:16 | 26° £ 58'33 | |
| retrograde | 9396 Jun 16 21:37 | 8° 升 12'33 | | min. Earth dist. | 9402 Feb 07 08:43 | 22° Ω 04'09 | 3.90558 AU |
| opposition | 9396 Aug 16 22:36 | 3°) 19′01 | 0°27'44 | opposition | 9402 Feb 08 05:24 | 21° Ω 57'09 | |
| min. Earth dist. | 9396 Aug 18 00:33 | 3°) €10'43 | 4.48628 AU | direct | 9402 Apr 07 04:06 | 17° Ω 02'23 | |
| | 9396 Sep 14 08:44 | 30°R≈ | | | 9402 Jul 12 15:26 | 0° m) | |
| direct | 9396 Oct 18 15:14 | 28° ≈ 17'41 | | evening set | 9402 Aug 12 02:11 | 7° m) 07'34 | |
| | 9396 Nov 22 01:50 | 0°) € | | J | 2 | | |
| evening set | 9397 Feb 20 19:17 | 15°) 34′20 | | conjunction | 9402 Aug 25 14:57 | 10° m/24'05 | -0°13'35 |
| max. Earth dist. | 9397 Mar 03 16:13 | | 6.44882 AU | minimum elong | 9402 Aug 25 14:58 | 10° m) 24'05 | |
| | | | | behind sun begin | 9402 Aug 25 10:33 | 10° m) 21'25 | |
| conjunction | 9397 Mar 05 15:47 | 18°) 21′35 | 0°07'33 | behind sun end | 9402 Aug 25 19:23 | 10° m) 26'46 | |
| minimum elong | 9397 Mar 05 15:48 | 18°) 21′36 | 0°07'38 | max. Earth dist. | 9402 Aug 27 13:02 | 10° m 52'01 | 5.92993 AU |
| behind sun begin | 9397 Mar 05 08:34 | 18°) (17′41 | | morning rise | 9402 Sep 08 05:53 | 13° m 41'38 | |
| behind sun end | 9397 Mar 05 23:02 | 18°) €25'30 | | | 9402 Nov 26 01:09 | 0∘ ⊽ | |
| morning rise | 9397 Mar 18 10:36 | 21° ₩ 08'09 | | retrograde | 9403 Jan 17 12:20 | 4° ≙ 13'30 | |
| | 9397 Apr 30 23:46 | $0^{\circ}\mathbf{\Upsilon}$ | | asc. node | 9403 Mar 02 15:00 | 1° ≏ 10'52 | |
| desc. node | 9397 Jul 07 03:44 | 7° Y 56'56 | | | 9403 Mar 11 17:08 | 30°R, Mp | |
| retrograde | 9397 Jul 17 22:07 | 8° Y 07'43 | | min. Earth dist. | 9403 Mar 16 10:20 | 29° m 21'43 | 3.98014 AU |
| | | | | | | | |

| opposition | 9403 Mar 17 22:01 | 29° m 09'35 | 0°01'41 | conjunction | 9409 Mar 10 22:15 | 22°) (42'45 | 0°04'10 |
|-----------------------------------|----------------------------------------|------------------------------------------|--------------------|----------------------------|----------------------------------------|------------------------------------------|-------------|
| direct | 9403 May 15 01:26 | 24° m) 13'05 | 0 01 11 | minimum elong | 9409 Mar 10 22:16 | 22°) (42'46 | 0°04'14 |
| | 9403 Jul 15 13:00 | 0∘ ⊽ | | behind sun begin | 9409 Mar 10 14:25 | 22°) 38'30 | |
| evening set | 9403 Sep 18 20:37 | 13° Ω 45'36 | | behind sun end | 9409 Mar 11 06:07 | 22°) (47'02 | |
| Č | 1 | | | morning rise | 9409 Mar 23 16:37 | 25°) 29'42 | |
| conjunction | 9403 Oct 02 12:08 | 16° ≏ 57'41 | 0°15'03 | C | 9409 Apr 13 21:08 | $0^{\circ}\mathbf{Y}$ | |
| minimum elong | 9403 Oct 02 12:07 | 16° ≏ 57'41 | 0°15'08 | desc. node | 9409 May 17 12:18 | 6° Y 22'23 | |
| behind sun begin | 9403 Oct 02 09:33 | 16° ≙ 56'11 | | retrograde | 9409 Jul 23 09:29 | 12° Y 34'37 | |
| behind sun end | 9403 Oct 02 14:42 | 16° ≙ 59'11 | | opposition | 9409 Sep 22 08:59 | 7° Ƴ 41'49 | -0°11'35 |
| max. Earth dist. | 9403 Oct 05 00:55 | 17° ≏ 33'22 | 6.04964 AU | min. Earth dist. | 9409 Sep 23 22:53 | 7° Ƴ 29'42 | 4.37680 AU |
| morning rise | 9403 Oct 16 04:56 | 20° ≙ 10′05 | | direct | 9409 Nov 23 15:55 | 2° Y 41'35 | |
| | 9403 Nov 30 01:22 | 0° M | | evening set | 9410 Mar 28 23:09 | 20° Y 32'24 | |
| retrograde | 9404 Feb 21 13:57 | 9° ™ 37'07 | | max. Earth dist. | 9410 Apr 08 10:06 | 22° Y 53'06 | 6.30367 AU |
| min. Earth dist. | 9404 Apr 19 17:46 | 4° ™ 46′00 | 4.13124 AU | | | | |
| opposition | 9404 Apr 21 07:51 | 4° ™ 33'07 | 0°40'45 | conjunction | 9410 Apr 10 17:40 | 23° Y 24'23 | -0°19'58 |
| | 9404 Jun 03 08:50 | 30°Ŗ 죠 | | minimum elong | 9410 Apr 10 17:40 | 23° Y 24'22 | 0°20'04 |
| direct | 9404 Jun 19 09:03 | 29° ≏ 34'18 | | morning rise | 9410 Apr 23 11:24 | 26° Y 16′13 | |
| | 9404 Jul 05 13:16 | 0°M | | | 9410 May 10 08:49 | 9° 8 | |
| | 9404 Oct 09 04:08 | 15°M | | retrograde | 9410 Aug 25 20:10 | 14° 8 16'47 | |
| evening set | 9404 Oct 23 21:34 | 18°M16'17 | | opposition | 9410 Oct 25 11:51 | 9° 8 23'12 | |
| | | | | min. Earth dist. | 9410 Oct 27 01:54 | _ | 4.22089 AU |
| conjunction | 9404 Nov 06 11:19 | 21°M19'58 | 0°36'55 | direct | 9410 Dec 25 19:15 | 4° 8 24'37 | |
| minimum elong | 9404 Nov 06 11:18 | 21°M19'57 | 0°37'09 | | 9411 Mar 25 00:33 | 15° 8 | |
| max. Earth dist. | 9404 Nov 08 14:20 | 21°M48'46 | 6.21798 AU | evening set | 9411 Apr 30 10:42 | 23° 8 02'44 | |
| morning rise | 9404 Nov 20 01:00 | 24°M23'15 | | max. Earth dist. | 9411 May 11 08:10 | 25° 8 34'58 | 6.13593 AU |
| _ | 9404 Dec 15 19:28 | 0° ∡ | | | | | |
| retrograde | 9405 Mar 25 01:51 | 12° ₹ 35'25 | | conjunction | 9411 May 13 06:26 | 26° 8 02'00 | |
| min. Earth dist. | 9405 May 23 02:57 | 7° √ 42'28 | 4.30076 AU | minimum elong | 9411 May 13 06:25 | 26° 8 01'59 | 0°39'18 |
| opposition | 9405 May 24 05:07 | 7° , 7³33'44 | 1°03'21 | morning rise | 9411 May 26 02:17 | 29° 8 01'43 | |
| direct | 9405 Jul 23 14:37 | 2° 🗷 33'10 | | . 1 | 9411 May 30 06:48 | 0°II | |
| evening set | 9405 Nov 26 15:29 | 20° ∡ 127'07 | | retrograde | 9411 Sep 30 20:39 | 18° Ⅱ 16'02 | 1007122 |
| | 0405 D 10 00-52 | 220.72222 | 0045150 | opposition | 9411 Nov 30 01:32 | 13° Ⅲ 20'38 13° Ⅲ 12'34 | |
| conjunction | 9405 Dec 10 00:53 | 23° ₹ 22'22 | 0°45'58 0°46'17 | min. Earth dist. direct | 9411 Dec 01 02:14 | 13°Щ12'34 8°Щ24'17 | 4.05415 AU |
| minimum elong max. Earth dist. | 9405 Dec 10 00:53 | 23° ⊀ 22'22 23° ⊀ 37'37 | 6.37531 AU | | 9412 Jan 28 22:55 9412 Jun 03 03:57 | 8° П 2417 27° П 53'17 | |
| max. Earth dist. | 9405 Dec 11 04:48 9405 Dec 23 08:52 | 26° x 16'43 | 0.3/331 AU | evening set | 9412 Jun 03 03:37 9412 Jun 11 22:38 | 2/°Щ33/1/ 0°9 | |
| morning rise | 9406 Jan 09 19:46 | 20 x 1043 0°る | | max. Earth dist. | 9412 Jun 15 06:40 | 0°5548'20 | 5.98510 AU |
| retrograde | 9406 Apr 24 13:53 | 0 3 13° る 29'22 | | max. Lattii uist. | 9412 Juli 13 00.40 | 0 34020 | 3.96310 AU |
| opposition | 9406 Jun 24 04:04 | | 1°05'59 | conjunction | 9412 Jun 16 03:52 | 1° © 01'08 | -0°45'37 |
| min. Earth dist. | 9406 Jun 23 18:46 | 8°る34'05 | 4.43484 AU | minimum elong | 9412 Jun 16 03:53 | 1°501'08 | 0°45'57 |
| direct | 9406 Aug 24 17:47 | 3° る 29'39 | 1.15101710 | morning rise | 9412 Jun 29 05:31 | 4°9510'07 | 0 1337 |
| evening set | 9406 Dec 28 09:10 | 20°る50'50 | | retrograde | 9412 Nov 07 02:40 | 24°533'06 | |
| e venning see | 7.00 BC 20 07.10 | 20 00000 | | opposition | 9413 Jan 05 19:17 | 19° © 34'45 | -1°04'01 |
| conjunction | 9407 Jan 10 13:21 | 23° る 40'03 | 0°41'38 | min. Earth dist. | 9413 Jan 05 20:34 | | 3.93450 AU |
| minimum elong | 9407 Jan 10 13:22 | 23° る 40'03 | 0°41'56 | direct | 9413 Mar 05 09:57 | 14°5540'00 | |
| max. Earth dist. | 9407 Jan 10 11:17 | 23° る 38'57 | 6.47685 AU | | 9413 Jun 20 07:59 | $0^{\circ}\Omega$ | |
| morning rise | 9407 Jan 23 15:32 | 26° පි 28'13 | | evening set | 9413 Jul 10 01:27 | 4° Ω 42'56 | |
| | 9407 Feb 09 11:25 | 0° ≈ | | _ | | | |
| retrograde | 9407 May 24 07:13 | 13° ≈ 08′08 | | conjunction | 9413 Jul 23 08:32 | 7° Ω 57'44 | -0°34'48 |
| opposition | 9407 Jul 24 03:57 | 8° ≈ 12'53 | 0°51'03 | minimum elong | 9413 Jul 23 08:33 | 7° Ω 57'45 | 0°35'04 |
| min. Earth dist. | 9407 Jul 24 15:02 | 8° ≈ 09'19 | 4.49854 AU | max. Earth dist. | 9413 Jul 24 01:20 | 8° Ω 08'01 | 5.90892 AU |
| direct | 9407 Sep 24 14:31 | 3° ≈ 11'19 | | morning rise | 9413 Aug 05 17:51 | 11° Ω 13'52 | |
| | 9408 Jan 02 00:39 | 15° ≈ | | | 9413 Aug 21 11:13 | 15° Ω | |
| evening set | 9408 Jan 27 21:08 | 20° ≈ 20′33 | | | 9413 Nov 09 14:29 | 0° m | |
| | | | | retrograde | 9413 Dec 15 22:58 | 2°№06'35 | |
| conjunction | 9408 Feb 09 20:43 | 23° ≈ 07'12 | 0°26'22 | | 9414 Jan 21 05:52 | 30° R Ω | |
| minimum elong | 9408 Feb 09 20:44 | 23° ≈ 07'12 | | min. Earth dist. | 9414 Feb 12 09:51 | 27° Ω 12'18 | 3.91156 AU |
| max. Earth dist. | 9408 Feb 08 14:52 | 22° ≈ 51'11 | 6.49832 AU | opposition | 9414 Feb 13 07:54 | 27° Ω 04'51 | -0°35'15 |
| morning rise | 9408 Feb 22 18:17 | 25°≈52'53 | | direct | 9414 Apr 12 06:21 | 22° Ω 09'57 | |
| | 9408 Mar 13 10:52 | 0° ∀ | | | 9414 Jun 23 07:55 | 0° т р | |
| retrograde | 9408 Jun 22 04:57 | 12°) € 30'07 | | evening set | 9414 Aug 17 03:45 | 12° m 12'09 | |
| opposition | 9408 Aug 22 05:20 | 7°) (36′45 | | _ | | | |
| min. Earth dist. | 9408 Aug 23 09:10 | 7°) (27'51 | 4.47740 AU | conjunction | 9414 Aug 30 17:02 | 15° m 28'24 | |
| direct | 9408 Oct 23 21:38 | 2°) (35'31 | | minimum elong | 9414 Aug 30 17:03 | 15° m 28'24 | 0°09'52 |
| evening set | 9409 Feb 26 01:57 | 19°) ₹55'07 | c 10.5=0 :== | behind sun begin | 9414 Aug 30 10:16 | 15° m 24'19 | |
| max. Earth dist. | 9409 Mar 08 22:38 | 22° 犬 16'47 | 6.43573 AU | behind sun end | 9414 Aug 30 23:50 | 15° Mp 32'29 | E 04112 411 |
| | | | | max. Earth dist. | 9414 Sep 01 16:59 | 15° m 57'21 | 5.94113 AU |

| marning rise | 9414 Sep 13 08:38 | 100 mm 45120 | | direct | 9420 Oct 28 03:59 | 6° ¥ 52'00 | |
|------------------|----------------------------------------|------------------------|-------------|-------------------|-------------------|---------------------|---------------|
| morning rise | 1 | 18° Mp 45'39 | | | | | |
| | 9414 Nov 02 15:37 | 0∘ ʊ | | evening set | 9421 Mar 02 07:32 | 24°) 14'14 | C 100 11 1 TT |
| asc. node | 9415 Jan 13 11:59 | 9° Ω 03'18 | | max. Earth dist. | 9421 Mar 13 00:47 | 26°) 34'32 | 6.42244 AU |
| retrograde | 9415 Jan 22 07:46 | 9° Ω 11'05 | | | | | |
| min. Earth dist. | 9415 Mar 21 05:15 | 4° ≏ 19'44 | 3.99544 AU | conjunction | 9421 Mar 15 03:21 | 27° ∺ 02'12 | 0°00'44 |
| opposition | 9415 Mar 22 18:20 | 4° ≏ 07'08 | 0°07'27 | minimum elong | 9421 Mar 15 03:19 | 27° ∺ 02'11 | 0°00'46 |
| | 9415 Apr 27 21:27 | 30°R, Mp | | behind sun begin | 9421 Mar 14 19:21 | 26° ¥ 57'51 | |
| direct | 9415 May 19 22:42 | 29° Mp 10'21 | | behind sun end | 9421 Mar 15 11:17 | 27°) €06'32 | |
| | 9415 Jun 11 03:41 | 0。 ত | | desc. node | 9421 Mar 26 18:09 | 29°) 34′37 | |
| evening set | 9415 Sep 23 18:55 | 18° ≏ 37'48 | | morning rise | 9421 Mar 27 21:33 | 29° ∺ 49'32 | |
| | | | | | 9421 Mar 28 16:47 | 0 ° Υ | |
| conjunction | 9415 Oct 07 10:27 | 21° ≏ 49'04 | 0°18'33 | retrograde | 9421 Jul 27 21:17 | 17° Ƴ 00'00 | |
| minimum elong | 9415 Oct 07 10:26 | 21° ≏ 49'03 | 0°18'39 | opposition | 9421 Sep 26 19:53 | 12° Ƴ 07'04 | -0°16'33 |
| max. Earth dist. | 9415 Oct 09 21:25 | 22° £ 23'33 | 6.06759 AU | min. Earth dist. | 9421 Sep 28 10:32 | 11° Ƴ 54'42 | 4.35940 AU |
| morning rise | 9415 Oct 21 03:08 | 25° ♀ 00'34 | | direct | 9421 Nov 28 00:45 | 7° Y 06'56 | |
| 8 | 9415 Nov 12 03:18 | 0°M | | evening set | 9422 Apr 02 08:10 | 25° Y ′02'53 | |
| retrograde | 9416 Feb 26 03:07 | 14°M19'05 | | max. Earth dist. | 9422 Apr 12 20:13 | 27° Y 24'48 | 6.28328 AU |
| min. Earth dist. | 9416 Apr 24 09:08 | 9°M27'32 | 4.14999 AU | max. Earth dist. | 7422 Apr 12 20.15 | 27 12440 | 0.20320710 |
| | | 9°M15'21 | | | 0422 4 15 02-40 | 27° Y 55'40 | 0922105 |
| opposition | 9416 Apr 25 21:12 | | 0°44'53 | conjunction | 9422 Apr 15 02:49 | | |
| direct | 9416 Jun 24 02:33 | 4°M16'16 | | minimum elong | 9422 Apr 15 02:48 | 27° Y 55'40 | 0°23'13 |
| | 9416 Sep 21 21:29 | 15°M | | | 9422 Apr 24 06:42 | 0° 8 | |
| evening set | 9416 Oct 28 14:07 | 22°M53'07 | | morning rise | 9422 Apr 27 20:28 | 0° 8 48'20 | |
| | | | | | 9422 Jul 09 15:21 | 15° 8 | |
| conjunction | 9416 Nov 11 03:37 | 25° ™ 55'54 | 0°38'55 | retrograde | 9422 Aug 30 14:31 | 18° 8 57'36 | |
| minimum elong | 9416 Nov 11 03:36 | 25°M55'53 | 0°39'10 | | 9422 Oct 22 22:19 | 15° ₹ 8 | |
| max. Earth dist. | 9416 Nov 13 05:20 | 26°M23'51 | 6.23612 AU | opposition | 9422 Oct 30 05:39 | 14° 8 03'49 | -0°49'03 |
| morning rise | 9416 Nov 24 16:38 | 28°M58'08 | | min. Earth dist. | 9422 Oct 31 18:37 | 13° 8 51'54 | 4.19885 AU |
| - | 9416 Nov 29 08:01 | 0° ∡ ¹ | | direct | 9422 Dec 30 08:38 | 9° 8 05'31 | |
| retrograde | 9417 Mar 29 07:44 | 17° ∡ ¹02'53 | | | 9423 Mar 04 11:48 | 15° 8 | |
| min. Earth dist. | 9417 May 27 11:36 | 12° х 10′01 | 4.31701 AU | evening set | 9423 May 05 02:04 | 27° 8 50'18 | |
| opposition | 9417 May 28 12:43 | 12° × 1001 | 1°04'50 | evening sec | 9423 May 14 07:47 | 0°Ⅱ | |
| direct | 9417 Jul 28 00:45 | 7° ₹ '01'02 | 1 0130 | max. Earth dist. | 9423 May 16 01:08 | 0° П 24'17 | 6.11388 AU |
| evening set | 9417 Dec 01 02:37 | 24° x 51'11 | | max. Lartii dist. | 7423 May 10 01.00 | 0 112417 | 0.11300 AC |
| evening set | 941/ Dec 01 02.3/ | 24 X 31 11 | | | 0422 M 17 22-00 | 00πε0120 | 0940151 |
| . ,. | 0417 D 14 11 15 | 270 745120 | 0046105 | conjunction | 9423 May 17 22:00 | 0° I 50'38 | |
| conjunction | 9417 Dec 14 11:15 | 27° 🖈 45'39 | 0°46'05 | minimum elong | 9423 May 17 21:59 | 0° I I50'38 | 0°41'07 |
| minimum elong | 9417 Dec 14 11:15 | 27° х 45'39 | 0°46'24 | morning rise | 9423 May 30 18:33 | 3° Ⅱ 51'34 | |
| max. Earth dist. | 9417 Dec 15 10:29 | 27° ∡ ′58'19 | 6.38859 AU | retrograde | 9423 Oct 05 23:59 | 23° Ⅱ 15'59 | |
| | 9417 Dec 24 18:10 | 0°ප | | opposition | 9423 Dec 05 03:14 | 18° Ⅱ 20'11 | |
| morning rise | 9417 Dec 27 18:35 | 0° る 39'12 | | min. Earth dist. | 9423 Dec 06 01:24 | | 4.03394 AU |
| retrograde | 9418 Apr 28 18:34 | 17° る 47'08 | | direct | 9424 Feb 02 20:46 | 13° Ⅲ 24'01 | |
| opposition | 9418 Jun 28 08:35 | 12° る 49'16 | 1°04'49 | | 9424 May 26 13:32 | 0 \circ \odot | |
| min. Earth dist. | 9418 Jun 28 02:31 | 12° る 51'15 | 4.44442 AU | evening set | 9424 Jun 08 02:36 | 2°959'06 | |
| direct | 9418 Aug 29 02:17 | 7° る 47'50 | | max. Earth dist. | 9424 Jun 20 11:53 | 5° © 58'39 | 5.96880 AU |
| evening set | 9419 Jan 01 16:10 | 25° පි 07'11 | | | | | |
| - | | | | conjunction | 9424 Jun 21 03:32 | 6°ഇ08'08 | -0°45'10 |
| conjunction | 9419 Jan 14 19:47 | 27° る 55'59 | 0°40'02 | minimum elong | 9424 Jun 21 03:33 | 6°€08'08 | 0°45'29 |
| minimum elong | 9419 Jan 14 19:48 | 27° る 55'59 | 0°40'20 | morning rise | 9424 Jul 04 06:02 | 9° © 18'17 | |
| max. Earth dist. | 9419 Jan 14 14:37 | 27° る 53'13 | 6.48207 AU | retrograde | 9424 Nov 12 12:07 | 29°5548'31 | |
| man zam usv. | 9419 Jan 24 11:20 | 0°≈ | 0.1020,110 | opposition | 9425 Jan 11 02:11 | 24°5649'43 | -1°01'27 |
| morning rise | 9419 Jan 27 21:16 | 0°≈43'42 | | min. Earth dist. | 9425 Jan 11 00:56 | 24°950'08 | 3.92402 AU |
| morning risc | | 0 ∞43 42 15°≈ | | | 9425 Mar 10 13:24 | 19° 9 55'03 | 3.92402 AU |
| | 9419 Apr 18 12:03 | | | direct | | | |
| retrograde | 9419 May 28 09:42 | 17° ≈ 22'03 | | | 9425 Jun 01 19:20 | 0° N | |
| | 9419 Jul 07 10:53 | 15°R≈ | | evening set | 9425 Jul 15 06:30 | 10° Ω 00'36 | |
| opposition | 9419 Jul 28 07:43 | 12° ≈ 27′04 | 0°47'45 | | | | |
| min. Earth dist. | 9419 Jul 28 20:13 | 12° ≈ 23′02 | 4.49926 AU | conjunction | 9425 Jul 28 14:27 | 13° Ω 16′02 | |
| direct | 9419 Sep 28 18:51 | 7° ≈ 25'30 | | minimum elong | 9425 Jul 28 14:28 | 13° Ω 16′02 | |
| | 9419 Dec 14 15:02 | 15° ≈ | | max. Earth dist. | 9425 Jul 29 10:56 | | 5.90521 AU |
| evening set | 9420 Feb 01 02:08 | 24° ≈ 35′06 | | | 9425 Aug 04 16:31 | 15° Ω | |
| max. Earth dist. | 9420 Feb 12 17:54 | 27° ≈ 04'50 | 6.49435 AU | morning rise | 9425 Aug 11 01:00 | 16° Ω 32'50 | |
| | | | | | 9425 Oct 10 20:17 | 0° m) | |
| conjunction | 9420 Feb 14 01:14 | 27° ≈ 21'40 | 0°23'33 | retrograde | 9425 Dec 21 04:56 | 7° m 25'45 | |
| minimum elong | 9420 Feb 14 01:15 | 27° ≈ 21'41 | 0°23'44 | opposition | 9426 Feb 18 14:10 | 2° m 23'36 | -0°29'42 |
| morning rise | 9420 Feb 26 22:09 | 0°) €07'17 | | min. Earth dist. | 9426 Feb 17 12:34 | | 3.91528 AU |
| | 9420 Feb 26 08:29 | 0° ∀ | | | 9426 Mar 09 02:08 | 30°R Ω | |
| retrograde | 9420 Jun 26 10:58 | 16°) 46′22 | | direct | 9426 Apr 17 11:11 | 27° Ω 28'30 | |
| opposition | 9420 Aug 26 11:25 | 10 X 4022 | 0°18'34 | anoci | 9426 May 26 13:57 | 0° m) | |
| min. Earth dist. | 9420 Aug 26 11:23 9420 Aug 27 17:08 | 11° X 33'08 | 4.46868 AU | evening set | 9426 Aug 22 10:22 | 17° Mp 28'30 | |
| mm. Earm uist. | 7720 Aug 21 11.00 | 11 14339 | T. TUOUG AU | evening set | 7720 Aug 22 10.22 | 1/ 111/2030 | |

| aaniumatian | 0426 Cap. 05 00:17 | 200 m 44122 | 0905145 | minimum elong | 9432 Feb 18 03:13 | 1°) 29'42 | 0920152 |
|------------------|----------------------------------------|--------------------------|-------------|------------------|----------------------------------------|-------------------------|--------------|
| conjunction | 9426 Sep 05 00:17 | 20° Mp 44'32 | | · · | | | 0 20 32 |
| minimum elong | 9426 Sep 05 00:18 | 20° Mp 44'32 | 0°05'50 | morning rise | 9432 Mar 01 23:37 | 4°) €15'11 | |
| behind sun begin | 9426 Sep 04 16:18 | 20° m/39'44 | | retrograde | 9432 Jun 30 13:49 | 20° ₩ 55'52 | |
| behind sun end | 9426 Sep 05 08:17 | 20° Mp 49'20 | | opposition | 9432 Aug 30 15:12 | 16° 米 02'42 | |
| max. Earth dist. | 9426 Sep 07 02:33 | 21° Mp 14'48 | 5.95188 AU | min. Earth dist. | 9432 Aug 31 22:24 | 15°) 52'44 | 4.46039 AU |
| morning rise | 9426 Sep 18 16:23 | 24° Mp 01'28 | | direct | 9432 Nov 01 06:46 | 11° 米 01′36 | |
| | 9426 Oct 14 08:44 | 0∘ ಹ | | desc. node | 9433 Feb 04 16:38 | 22° 升 12′07 | |
| asc. node | 9426 Nov 23 11:10 | 8° 亞 06'29 | | evening set | 9433 Mar 06 10:34 | 28° ∺ 26'39 | |
| retrograde | 9427 Jan 27 08:11 | 14° ≙ 20'12 | | | 9433 Mar 13 13:30 | 0 ° $\mathbf{\gamma}$ | |
| min. Earth dist. | 9427 Mar 26 05:57 | 9° ≏ 28'45 | 4.01183 AU | max. Earth dist. | 9433 Mar 17 02:42 | 0° Ƴ 46'45 | 6.40817 AU |
| opposition | 9427 Mar 27 19:12 | 9° ≙ 16'04 | 0°13'24 | | | | |
| direct | 9427 May 25 02:41 | 4° ₽ 18'58 | | conjunction | 9433 Mar 19 06:09 | 1° Ƴ 15'01 | -0°02'39 |
| evening set | 9427 Sep 28 21:35 | 23° ₽ 40'33 | | minimum elong | 9433 Mar 19 06:08 | 1° Ƴ 15′01 | 0°02'38 |
| | | | | behind sun begin | 9433 Mar 18 22:11 | 1° Ƴ 10'40 | |
| conjunction | 9427 Oct 12 13:13 | 26° ♀ 50'52 | 0°22'04 | behind sun end | 9433 Mar 19 14:06 | 1° Ƴ 19'22 | |
| minimum elong | 9427 Oct 12 13:12 | 26° ♀ 50'51 | 0°22'11 | morning rise | 9433 Mar 31 24:00 | 4° Ƴ 02'49 | |
| max. Earth dist. | 9427 Oct 15 01:51 | 27° ₽ 26′08 | 6.08829 AU | retrograde | 9433 Aug 01 06:57 | 21° Υ 19'31 | |
| morning rise | 9427 Oct 26 05:34 | 0°ML01'16 | | opposition | 9433 Oct 01 04:52 | 16° Y 26'35 | -0°21'19 |
| morning rise | 9427 Oct 26 03:31 | 0°M | | min. Earth dist. | 9433 Oct 02 20:53 | 16° Υ 13'47 | 4.33974 AU |
| | 9428 Jan 09 06:12 | 15°ML | | direct | 9433 Dec 02 07:22 | 11° Y 26'39 | 1.55) / 1710 |
| retrograde | 9428 Mar 01 18:29 | 19°ML09'43 | | evening set | 9434 Apr 06 15:31 | 29° Υ 28'47 | |
| retrograde | | | | evening set | • | 0° 8 | |
| : E 4 E 4 | 9428 Apr 23 21:48 | 15°RM | 4 17207 ATT | E 41 E 4 | 9434 Apr 08 22:53 | | 6 25040 ATT |
| min. Earth dist. | 9428 Apr 29 02:00 | 14°M 18'23 | 4.17307 AU | max. Earth dist. | 9434 Apr 17 01:46 | 1°050'30 | 6.25949 AU |
| opposition | 9428 Apr 30 14:04 | 14°M06'14 | 0°48'52 | | 0.404.4 | 201 /20120 | 000 (100 |
| direct | 9428 Jun 28 22:36 | 9° ™ .06'58 | | conjunction | 9434 Apr 19 10:03 | 2° 8 22'30 | |
| | 9428 Aug 31 20:21 | 15° M ₊ | | minimum elong | 9434 Apr 19 10:02 | 2° 8 22'29 | 0°26'09 |
| evening set | 9428 Nov 02 09:53 | 27°M36'45 | | morning rise | 9434 May 02 04:05 | 5° 8 16'15 | |
| | 9428 Nov 13 02:21 | 0° ∡ 7 | | | 9434 Jun 16 22:58 | 15° 8 | |
| | | | | retrograde | 9434 Sep 04 09:26 | 23° 8 36'02 | |
| conjunction | 9428 Nov 15 22:38 | 0° ∡ ³38'14 | 0°40'45 | opposition | 9434 Nov 03 23:00 | 18° 8 42'02 | -0°52'40 |
| minimum elong | 9428 Nov 15 22:37 | 0° ∡ ³38′13 | 0°41'01 | min. Earth dist. | 9434 Nov 05 10:57 | 18° 8 30'24 | 4.17238 AU |
| max. Earth dist. | 9428 Nov 17 20:41 | 1° ₹ 03'59 | 6.25977 AU | | 9434 Dec 06 07:31 | 15° ₹ ႘ | |
| morning rise | 9428 Nov 29 11:04 | 3° ∡ ³39′10 | | direct | 9435 Jan 03 21:36 | 13° 8 43'57 | |
| retrograde | 9429 Apr 02 15:42 | 21° ₮ 34'20 | | | 9435 Feb 01 08:47 | 15° ∀ | |
| opposition | 9429 Jun 01 22:12 | 16° ∡ ³33'31 | 1°05'59 | | 9435 Apr 28 09:51 | $\Pi^{\circ}0$ | |
| min. Earth dist. | 9429 May 31 23:38 | 16° ∡ ¹41'00 | 4.33944 AU | evening set | 9435 May 09 17:08 | 2° I I37'20 | |
| direct | 9429 Aug 01 15:38 | 11° ∡ ³32'40 | | max. Earth dist. | 9435 May 20 20:23 | 5° Ⅱ 14'38 | 6.08711 AU |
| evening set | 9429 Dec 05 14:26 | 29° х 16'42 | | | ,, | | |
| evening sec | 9429 Dec 08 22:37 | 0°පි | | conjunction | 9435 May 22 13:47 | 5° Ⅱ 39'05 | -0°42'22 |
| | 7427 Dec 00 22.57 | ٠ ٠ | | minimum elong | 9435 May 22 13:46 | 5° Ⅱ 39'05 | 0°42'40 |
| conjunction | 9429 Dec 18 22:29 | 2° ට 10'06 | 0°45'59 | morning rise | 9435 Jun 04 10:52 | 8° ∏ 41′29 | 0 42 40 |
| 3 | 9429 Dec 18 22:30 | 2°る10'06 | 0°46'17 | retrograde | 9435 Oct 11 06:06 | 28° I I18'03 | |
| minimum elong | | 2°る10'06 2°る21'35 | 6.40828 AU | U | | 28 H1803 23°H22'00 | 1000125 |
| max. Earth dist. | 9429 Dec 19 19:39 | | 6.40828 AU | opposition | 9435 Dec 10 05:55 | | |
| morning rise | 9430 Jan 01 04:47 | 5° そ 02'30 | | min. Earth dist. | 9435 Dec 11 02:04 | 23° Ⅱ 15'22 | 4.00933 AU |
| retrograde | 9430 May 02 20:10 | 22°る03'36 | | direct | 9436 Feb 07 18:18 | 18° Ⅱ 26′09 | |
| opposition | 9430 Jul 02 12:54 | 17° る 06'09 | 1°03'21 | _ | 9436 May 08 22:05 | 0°€ | |
| min. Earth dist. | 9430 Jul 02 08:22 | 17° る 07'38 | 4.46008 AU | evening set | 9436 Jun 13 03:22 | 8° © 09'17 | |
| direct | 9430 Sep 02 09:21 | 12° る 04'41 | | | | | |
| evening set | 9431 Jan 05 21:54 | 29° る 20'07 | | conjunction | 9436 Jun 26 05:10 | 11° © 19'43 | |
| | 9431 Jan 09 00:53 | 0° ≈ | | minimum elong | 9436 Jun 26 05:11 | 11° © 19'43 | 0°44'41 |
| | | | | max. Earth dist. | 9436 Jun 25 16:47 | 11° © 12'11 | 5.94872 AU |
| conjunction | 9431 Jan 19 00:39 | 2° ≈ 08'13 | 0°38'18 | morning rise | 9436 Jul 09 09:01 | 14° © 31'24 | |
| minimum elong | 9431 Jan 19 00:40 | 2° ≈ 08'13 | 0°38'35 | | 9436 Sep 20 05:50 | $0^{\circ}\Omega$ | |
| max. Earth dist. | 9431 Jan 18 14:56 | 2° ≈ 03'00 | 6.49256 AU | retrograde | 9436 Nov 17 21:46 | 5° Ω 10′20 | |
| morning rise | 9431 Feb 01 01:27 | 4° ≈ 55'16 | | opposition | 9437 Jan 16 11:16 | 0° Ω 11'05 | -0°58'23 |
| | 9431 Mar 24 12:07 | 15° ≈ | | min. Earth dist. | 9437 Jan 16 05:20 | 0° Ω 13'04 | 3.91094 AU |
| retrograde | 9431 Jun 01 11:59 | 21° ≈ 30'43 | | | 9437 Jan 17 20:22 | 30°Rூ | |
| opposition | 9431 Aug 01 10:14 | 16° ≈ 36′03 | 0°44'20 | direct | 9437 Mar 15 17:43 | 25° © 16'31 | |
| min. Earth dist. | 9431 Aug 02 02:17 | 16° ≈ 30'53 | 4.50382 AU | | 9437 May 09 07:30 | 0° Ω | |
| and | 9431 Aug 14 02:27 | 15°R≈ | | | 9437 Jul 18 20:05 | 15° Ω | |
| direct | 9431 Aug 14 02:27 9431 Oct 03 00:44 | 13 ‰ 11°≈34'29 | | evening set | 9437 Jul 18 20:03 9437 Jul 20 14:32 | 15° Ω 25'47 | |
| 311000 | 9431 Nov 21 17:43 | 11 ≈3429 15°≈ | | oronnig set | / 15 / 541 20 1T.JZ | 10 UL2JT/ | |
| avaning set | | 13 ≈ 28°≈43'16 | | conjunction | 0427 Aug 02 22:20 | 18° Ω 41'59 | 0.28.20 |
| evening set | 9432 Feb 05 04:39 | 28°≈43°16 0° \ | | conjunction | 9437 Aug 02 23:38 | | |
| may Faul 11 / | 9432 Feb 11 04:12 | | 6 40247 411 | minimum elong | 9437 Aug 02 23:39 | 18° Ω 42'00 | 0°29'04 |
| max. Earth dist. | 9432 Feb 16 15:52 | 1 * 大 10'42 | 6.49247 AU | max. Earth dist. | 9437 Aug 04 01:59 | 18° Ω 58'07 | 5.90060 AU |
| | 0422 E 1 10 02 15 | 101/2011 | 0020142 | morning rise | 9437 Aug 16 11:13 | 21° Ω 59'31 | |
| conjunction | 9432 Feb 18 03:12 | 1° ¥ 29'41 | 0~20'42 | | 9437 Sep 19 16:53 | 0° m | |
| | | | | | | | |

| Section Sect | retrograde | 9437 Dec 26 15:34 | 12° m 52'46 | | evening set | 9444 Feb 09 09:26 | 2° ¥ 57'39 | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|--------------------|--------------|-------------------|-----------------------|----------------------|----------------------|
| Marchand 9438 Par 22 19.4 279628 27942 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 279529 27 | • | | • | 0°22!40 | C | | | 6 19501 ATT |
| direct centage set of signature centage set of | | | | | max. Earth dist. | 9444 100 20 10.30 | 3 /(2319 | 0.46391 AU |
| Section Para | | | | 3.91902 AU | agniunation | 0444 Fab. 22, 07:24 | 50¥ 11/05 | 0017!20 |
| Compunetion | | • | - | | | | | |
| columnation 9438 Sep 10 1024 2°80°751 0°90°150 composition 9444 Sep 03 252 0°970°250 0°90°250 behind sunegei 9438 Sep 10 1059 2°80°10°25 composition 9444 Sep 05 08.29 0°970°25 10°918 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 0°90°25 | evening set | 9438 Aug 27 19.47 | 22 IIJ 32 09 | | | | | 0 1/46 |
| minimationing belindis sub legit of behind sub legit of behind sub legit of behind sub legit of sub legit of behind sub legit of sub legit | aaniumatian | 0429 Can 10 10:24 | 260 m 07151 | 0901126 | - | | | |
| Deshind same Mark Sep 10 al 20 20 20 20 20 20 20 2 | 3 | * | | | - | | | 0000100 |
| Machine and | - | • | | 0 01 38 | ** | | | |
| max End disk 448 Sep 12 (73) 26° [84] 10 506464 AU 4945 Feb 25 (50) 77 (20) 77 (20) 78 (20) 78 (20) 79 (20) 78 (20) 78 (20) 79 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) 78 (20) | C | • | -• | | | • | | 4.44/30 AU |
| 1948 1948 1940 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 1941 | | - | | FOCACA ATT | | | | |
| Section Sect | | * | | 5.96464 AU | desc. node | | | |
| 1-2-1-1 | morning rise | • | - | | . , | | | |
| retrograde | | • | | | • | | | 6 200 72 1 XX |
| min Earth disk 949 May 10 7072 44°A4'18'2 40°A 30'AU conjunction 948 May 12 12'2 5°Q'3792 0°P0005 direct 9439 May 30 0708 9°A3'317 10°B00 10°B00 9445 Mar 23 04'8 5°Q'319 0°C direct 9439 Oct 00 00'71 20°B4'74'8 10°B00 9445 Mar 23 04'8 5°Q'319 0°C vering see 9439 Oct 00 00'71 20°B4'74'8 10°B00 9445 Mar 23 04'8 5°Q'319 0°C conjunction 9439 Oct 00 00'71 10°B6'80' 0°2526 opposition 9445 Oct 00'10.15 20°C'25'8' 0°C minimum elong 9439 Oct 10 17'12' 10°B.56'8' 0°2526 opposition 945 Oct 01'10' 0°C'30'' | | | | | max. Earth dist. | 9445 Mar 21 06:01 | 554.07.30 | 6.389/3 AU |
| opposition 943 May 03 not 02 1446 4°B-34074 1°B-64 minimum dong 9445 Mar ≥ 3 1048 5°P-3719 1°C-370319 1°C | • | | | 4.021.40.477 | | 0.44534 00 10 00 | 50000 5100 | 000 (10.5 |
| officed 943 May 3 0 700 s °Pa33717 s behind sum begin 9445 Mar 23 0148 s 5°P3719 s 75°P4178 s | | | | | · | | | |
| evening set 943 Oct 0 9 071 28° 2473 behind sun off 9445 Apr 25 0613 8°P298 conjunction 9439 Oct 0 9 071 1 ° III.5648 0°2526 opposition 9443 Oct 0 7 1726 1°III.5678 0°2526 opposition 9443 Oct 0 7 1015 0°70°4712 3°178°5710 0°2612 20°70°5710 0°27612 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 3°188°54 | • • | • | | 0°19'16 | _ | | | 0.06.06 |
| 1943 1945 1971 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 | | • | | | U | | | |
| conjunction 943 Oct 17 17.25 1"B.564 % 92526 minimum open 9445 Oct 05 1831 20"75761 20*2182 minimum elong 9439 Oct 17 17.25 1"B.564 % 0"2255 mm. Earth dist 9445 Oct 07 10.15 20"74*12 24165 AU morning rise 939 Oct 30 0335 2"BL3100 611237 AU direct 9445 Dec 60 71.01 15" VE 4 retrograde 939 Oct 31 06 0948 15"BL | evening set | | | | | | | |
| eonjunction 943 Pot 17 17:25 178.5648 0°2575 min. Earth dist 9445 Oct 07 10:15 20°75716 0°26712 max. Earth dist 9439 Oct 21 09:33 5°80674 11237 AU drefter 9445 Dec 06 17:19 15°87572 31685 AU morning fee 939 Oct 31 09:33 5°80674 11237 AU cerning set 9446 Mar 23 15:44 0°8 15°87572 15°87572 15°87572 15°8074 15°87572 9446 Mar 23 15:44 0°8 15°87673 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 15°8074 | | 9439 Oct 09 07:31 | 0° m | | - | • | | |
| minimum elong 943 Oct 17 1/724 1°E,5647 0°2535 min Earth dist. 9445 Oct 07 1015 20°74412 4.3168 AU max. Earth dist. 9439 Oct 20 0435 2°E,0370 11237 AU tircet 9445 Oct 06 1019 15°P°5729 18°P°5729 retrograde 9440 May 05 023 15°E,0278 covening set 9446 Apr 21 16:03 4°E0643 62339 AU min. Earth dist. 9440 May 05 0235 19°E,11724 4.8988 AU vereing set 9446 Apr 21 16:03 4°E0643 623394 AU opposition 9440 Jul 09 01:15 15°E,E 4°E020 conjunction 9446 Apr 23 22:21 7°E0131 0°2904 direct 9440 Jul 03 21:17 14°E00002 conjunction 9446 Apr 23 22:21 7°E0131 0°2904 evening set 9440 Nov 05 23:22 15°E crocklease 9440 May 06 16:31 9*E529 16°E92 19°E52 18°E52 18°E52 18°E52 18°E52 18°E52 14°E52 18°E52 18°E52 18°E52 18°E52 18°E52 18°E52 18°E52 18°E52 18 | | | | | • | • | | |
| max. Earth dist. 9439 Oct 20 0433 29Ba 1905 5 29Ba 19Ba 19Ba 19Ba 19Ba 19Ba 19Ba 19Ba 1 | | | | | ** | | | |
| morning rise | minimum elong | 9439 Oct 17 17:24 | 1° M 56'47 | 0°25'35 | min. Earth dist. | 9445 Oct 07 10:15 | | 4.31685 AU |
| retrograde | max. Earth dist. | 9439 Oct 20 04:35 | 2°M31'00 | 6.11237 AU | direct | 9445 Dec 06 17:19 | | |
| retrograde | morning rise | 9439 Oct 31 09:33 | 5° ™ 05'54 | | | 9446 Mar 23 15:44 | 9° 8 | |
| min. Earth dist. 9440 May 05 20:35 19°RL 124 4.1989 R J 92520 conjunction 9446 Apr 23 22:25 7°B0132 0°28514 conjunction 9446 Apr 23 22:21 7°B0131 0°2904 direct 9440 Jul 03 21:17 14°RL0002 conjunction 9446 May 06 16:31 9°85624 15°B 400 15°B 9440 Value 15°B 400 Value 400 Value 15°B 400 Value 400 Value 15°B 400 Value 40 | | 9439 Dec 16 09:48 | 15° ™ | | evening set | 9446 Apr 11 03:36 | _ | |
| opposition 9440 May 05 07:27 18 mL 59:40 0°5230 conjunction 9446 Apr 23 2:22 7°80133 0°28754 direct 9440 Jul 03 21:17 14 mL 10002 morning rise 9446 May 06 16:31 9°85624 0°2904 evening set 9440 Nov 20 16:33 2°8721154 retrograde 9446 Nov 10 08:50 28°82711 28°82711 conjunction 9440 Nov 20 17:58 5°82203 0°4219 direct 9447 Nov 10 08:50 28°82130 -5'606 minimum elong 9440 Nov 20 17:58 5°82203 0°4219 min. Earth dist. 9447 Nov 10 08:50 18°83714 18'83514 max. Earth dist. 9440 Nov 20 17:58 5°82203 0°4219 min. Earth dist. 9447 May 14 13:30 0°11676 18'85714 max. Earth dist. 9440 Nov 20 17:58 5°82203 0°4219 max. Earth dist. 9447 May 14 13:30 0°11676 18'85714 min. Earth dist. 9441 Jun 60 50:24 25°80484 8'82213 4'2371 4'47 May 14 13:30 19°11606 9'43736 10°11600 9'43736 10°11600 9'447 May 27 | retrograde | 9440 Mar 06 09:23 | 24°M02'58 | | max. Earth dist. | 9446 Apr 21 16:07 | 6° 8 30'30 | 6.23394 AU |
| direct 9440 Jun 09 01:15 15°RIL minimum clong 9446 Agr 23 22:21 7°801'31 0°29'04 direct 9440 Jul 03 21:77 14″BL0002 morning rise 9446 May 06 16:31 9°856'24 "Call 18 PS 65'24 9440 Nov 22 17:18 0°74 retrograde 9446 Key 09 10:42 28°82711 28°82711 evening set 9440 Nov 20 17:59 5°72'203 0°42'19 mine and dist 9446 Nov 08 21:37 22°82'135 414605 AU conjunction 9440 Nov 20 17:59 5°72'203 0°42'19 direct 9447 Jan 08 15:48 18°85'13'14 max. Earth dist. 9440 Nov 21 17:59 5°72'203 0°42'19 direct 9447 Jan 08 15:48 18°85'15'14 max. Earth dist. 9440 Nov 22 14:12 5°72'203 0°42'19 max. Earth dist. 9447 Apr 10 20:31 0°11'10'10'10'10'10'10'10'10'10'10'10'10'1 | min. Earth dist. | 9440 May 03 20:35 | 19°M11'24 | 4.19898 AU | | | | |
| direct 9440 Jul 03 21:77 14°M.00° 15°M. 14°M.00° 15°M. 9446 May 20 90.42 15°B. 16°B. 16°B. 1446 Nov 08 21:37 23°B.330 23°B.330 25°B.300 25°B.008 23°B.203 23°B.330 25°B.008 23°B.203 23°B.2 | opposition | 9440 May 05 07:27 | 18°M59'40 | 0°52'30 | conjunction | 9446 Apr 23 22:22 | 7° 8 01'32 | -0°28'54 |
| 240 240 241 242 232 232 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 242 | | 9440 Jun 09 01:15 | 15°RM | | minimum elong | 9446 Apr 23 22:21 | 7° 8 01'31 | 0°29'04 |
| evening set 9440 Nov 0 7 05.43 2°,2°11 + 1 retrograde 9446 Nov 0 8 10.42 2°,2°12 + 1 retrograde 9446 Nov 0 8 10.52 2°,2°12 + 1 retrograde 9446 Nov 0 8 10.53 2°,2°12 + 1 400 Nov 10 0.50 2°,2°23 0.0°5000 0°,5°000 conjunction 9440 Nov 20 17.59 5°,2°2203 0°4219 direct 9447 Nov 10 08.51 18°,8′314 14605 AU morning rise 9440 Nov 20 17.58 5°,2°,2003 0°4217 evening set 9447 May 14 13.30 0°T16/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/55 1716/54 1716/54 1716/54 </td <td>direct</td> <td>9440 Jul 03 21:17</td> <td>14°M00'02</td> <td></td> <td>morning rise</td> <td>9446 May 06 16:31</td> <td>9°856'24</td> <td></td> | direct | 9440 Jul 03 21:17 | 14°M00'02 | | morning rise | 9446 May 06 16:31 | 9° 8 56'24 | |
| evening set | | 9440 Jul 28 23:20 | 15° M ₊ | | | 9446 May 29 09:42 | 15° 8 | |
| conjunction 9440 Nov 20 17:59 5° #2203 0°4219 direct 9447 Jan 08 15:48 18° 83314 4 minimum elong 9440 Nov 20 17:58 5° #2203 0°4219 direct 9447 Jan 08 15:48 18° 83314 - max. Earth dist. 9440 Nov 20 17:58 5° #2203 0°4237 evening set 9447 Apr 10 20:31 0°L morning rise 9440 Nov 22 14:12 5° #2640 6.28524 AU evening set 9447 May 14 13:30 7° £13655 min. Earth dist. 9441 Nu 06 11:19 21° #3131 436229 AU conjunction 9447 May 27 10:37 10° £1600 0°4339 opposition 9441 Nu 06 07:51 12° #36626 1°663 minimum elong 9447 May 27 10:37 10° £1400 0°4378 direct 9441 Nu 06 05:51 16° #36525 16° 6343 minimum elong 9447 May 27 10:37 10° £1400 0°4378 evening set 9441 Dec 10 02:20 0°55 6° 63545 0°4536 opposition 9447 Dec 04 16:12 30°*21 20°*21 evening set 9441 Dec 23 09:27 6° 63545< | | 9440 Oct 27 11:18 | 0° ∡ ¹ | | retrograde | 9446 Sep 09 10:42 | 28° 8 27'11 | |
| conjunction 9440 Nov 20 17:59 5° \$2203 0°42'19 direct 9447 Apr 10 20:31 0°E 35'14 | evening set | 9440 Nov 07 05:43 | 2° ∡ ¹21'54 | | opposition | 9446 Nov 08 21:37 | 23° 8 33'00 | -0°56'06 |
| minimum elong max. Earth dist. amount first compined rise to p444 Nov 22 14:12 5° A6'40 6.28524 AU evening set max. Earth dist. 9447 May 14 13:30 7° 113655 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 1100 110 | - | | | | min. Earth dist. | 9446 Nov 10 08:50 | 23° 8 21'35 | 4.14605 AU |
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| moming rise 9440 Dec 04 05;24 8°×21'31 max. Earth dist. 9447 May 25 19:12 10° Π16'36 6.06233 AU retrograde 9441 Apr 06 23:35 26°×06'48 min. Earth dist. 9441 Jun 05 11:19 21°×71'31 4.36229 AU conjunction 9447 May 27 10:36 10° Π40'01 -0°43'39 opposition 9441 Aug 06 05:51 16°×05'28 morming rise 9447 May 27 10:36 10° Π40'00 0°43'58 direct 9441 Nov 22 12:00 0°°E eretrograde 9447 Oct 16 14:2 3°©31'39 10° Π40'0 0°45'6 evening set 9441 Dec 10 02:21 3°E34'32 0°45'36 opposition 9447 Oct 16 14:2 3°©31'39 1°0°8'U conjunction 9441 Dec 23 09:27 6°E35'45 0°45'56 opposition 9447 Dec 16 16:12 30°8'II 1°0°8'U conjunction 9441 Dec 23 09:27 6°E34'97 0°45'55 min. Earth dist. 9447 Dec 16 16:16 3°23'12 1°08'41 max. Earth dist. 9442 Jan 05 15:02 9°E27'07 evening set 9448 Feb 12 19:0 23°T3'93'1 94'10'10'10'10'10'10'10'10'10'10'10' | minimum elong | 9440 Nov 20 17:58 | 5° ∡ ¹22'03 | 0°42'37 | | 9447 Apr 10 20:31 | $\Pi^{\circ}0$ | |
| retrograde 9441 Apr 06 23:35 26**R0648 | max. Earth dist. | 9440 Nov 22 14:12 | 5° ∡ ¹46'40 | 6.28524 AU | evening set | 9447 May 14 13:30 | 7° Ⅱ 36'55 | |
| Petrograde 9441 Apr 06 23:35 26 x 0648 21 x 061 21 x 13 13 21 x 13 21 x 13 13 21 x 13 21 x 13 13 21 x 13 | morning rise | 9440 Dec 04 05:24 | 8° ∡ 121'31 | | max. Earth dist. | 9447 May 25 19:12 | 10° Ⅱ 16'36 | 6.06233 AU |
| min. Earth dist. 9441 Jun 05 11:19 21°×13'13 4.36229 AU conjunction 9447 May 27 10:35 10°π40'01 0°043'39 opposition 9441 Jun 06 07:51 21°×06'26 1°06'43 minimum elong 9447 May 27 10:36 10°π40'00 0°43'58 direct 9441 Nav 22 12:00 10°₹0 morning rise 9447 Duc 09 08:41 13°π43'58 10°π40'01 0°47 10°π40'01 <td>•</td> <td>9441 Apr 06 23:35</td> <td>26°₰06'48</td> <td></td> <td></td> <td>Ž</td> <td></td> <td></td> | • | 9441 Apr 06 23:35 | 26° ₰ 06'48 | | | Ž | | |
| opposition 9441 Jun 06 07:51 21° X06′26 1°0643 minimum elong 9447 Jun 09 08:41 10° H40′00 0°43′58 direct 9441 Aug 06 05:51 16° X05′28 morning rise 9447 Jun 09 08:41 13° H43′54 12° H43′54 evening set 9441 Dec 10 02:21 3° G43′26 retrograde 9447 Oct 16 14:22 3° G31′39 3° G41′26 conjunction 9441 Dec 23 09:27 6° G35′45 0°45′36 opposition 9447 Dec 16 16:05:06 28° H29′59 3.98871 AU minimum elong 9441 Dec 23 09:27 6° G35′45 0°45′55 min. Earth dist. 9447 Dec 16 16:05:06 28° H29′59 3.98871 AU max. Earth dist. 9441 Dec 24 00:55 6° G4′07 6.2667 AU direct 9448 Feb 12 19:40 23° H39′39 98871 AU retrograde 9442 Jun 06 17:59 21° G25′90 1°01′30 evening set 9448 Jun 18 08:09 13° G29′01 1°04′31 direct 9442 Jun 06 17:10 21° C25′25 4.47302 AU conjunction 9448 Jun 10 11:02 16° G40′35 0°43′11 direct 9443 Jun 23 | • | - | 21° х 13′13 | 4.36229 AU | conjunction | 9447 May 27 10:37 | 10° Ⅱ 40′01 | -0°43'39 |
| direct 9441 Aug 06 05:51 06° 80'528 moming rise 9447 Jun 09 08:41 03:1 13° 143'54 13° 143'54 447 Aug 29 10:31 0° 60' 60' 60' 60' 60' 60' 60' 60' 60' 60' | opposition | 9441 Jun 06 07:51 | 21° ₹ 06'26 | 1°06'43 | minimum elong | • | 10° Ⅱ 40′00 | 0°43'58 |
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| evening set | | • | | | | | | |
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| Conjunction 9441 Dec 23 09:27 6°₹35′45 0°45′36 Opposition 9447 Dec 15 13:19 28°∏35′12 -1°08′41 minimum elong 9441 Dec 23 09:27 6°₹35′45 0°45′55 min. Earth dist. 9447 Dec 16 05:06 28°∏29′59 3.98871 AU max. Earth dist. 9441 Dec 24 00:55 6°₹44′07 6.42667 AU direct 9448 Feb 12 19:40 23°∏39′39 morning rise 9442 Jan 05 15:02 9°₹27′07 evening set 9448 Apr 17 13:40 0°€ retrograde 9442 May 07 00:29 26°₹22′11 evening set 9448 Jun 18 08:09 13°€29′01 opposition 9442 Jul 06 17:10 21°₹25′25 4.47302 AU conjunction 9448 Jul 01 11:02 16°€40′36 -0°43′11 direct 9442 Sep 06 18:46 16°₹23′34 447302 AU minimum elong 9448 Jul 01 11:02 16°€40′37 0°43′30 evening set 9443 Jan 10 04:25 3°≈36′08 morning rise 9448 Jul 01 15:53 19°€53′27 evening set 9443 Jan 10 04:25 3°≈36′08 morning rise 9448 Jul 01 05:19 16°€37′07 5.93461 AU evening set 9443 Jan 23 06:39 6°≈23′44 0°36′18 retrograde 9448 Nov 23 11:26 10°Ω38′13 minimum elong 9443 Jan 23 06:30 6°≈23′45 0°36′35 opposition 9449 Jan 21 23:02 5°Ω38′28 -0°54′42 max. Earth dist. 9443 Feb 05 06:35 9°≈10′15 6°≈10′56 6.49915 AU min. Earth dist. 9449 Jan 21 13:59 5°Ω41′30 3.90522 AU morning rise 9443 Mar 05 14:27 15′≈ 15′≈ evening set 9449 Mar 21 03:49 0°Ω43′58 retrograde 9443 Mar 05 14:27 15′≈ 15′≈ evening set 9449 Mar 21 03:49 0°Ω43′58 retrograde 9443 Aug 06 08:04 20°≈44′02 4.50387 AU conjunction 9449 Aug 08 10:29 24°Ω10′14 -0°25′26 direct 9443 Aug 06 08:04 20°≈44′02 4.50387 AU conjunction 9449 Aug 08 10:20 24°Ω10′14 -0°25′26 direct 9443 Aug 06 08:04 20°≈44′02 4.50387 AU conjunction 9449 Aug 08 10:30 24°Ω10′15 0°25′38 | | , | | | | | | |
| minimum elong | conjunction | 9441 Dec 23 09:27 | 6°₹35'45 | 0°45'36 | opposition | | • | -1°08'41 |
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| retrograde 9442 May 07 00:29 26°\$\frac{3}{2}2'11 | | | | 0.12007110 | 4.1.000 | | | |
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| evening set 9443 Jan 10 04:25 3°≈36'08 morning rise 9448 Jul 14 15:53 19°©53'27 9448 Aug 27 17:48 0°Ω conjunction 9443 Jan 23 06:39 6°≈23'44 0°36'18 retrograde 9448 Nov 23 11:26 10°Ω38'13 minimum elong 9443 Jan 23 06:40 6°≈23'45 0°36'35 opposition 9449 Jan 21 23:02 5°Ω38'28 -0°54'42 max. Earth dist. 9443 Jan 22 17:55 6°≈16'56 6.49915 AU min. Earth dist. 9449 Jan 21 13:59 5°Ω41'30 3.90522 AU morning rise 9443 Feb 05 06:35 9°≈10'15 direct 9449 Mar 21 03:49 0°Ω43'58 retrograde 9443 Jun 05 13:51 25°≈44'10 evening set 9449 Jul 01 04:51 15°Ω retrograde 9443 Aug 05 14:14 20°≈49'45 0°40'35 min. Earth dist. 9443 Aug 06 08:04 20°≈44'02 4.50387 AU conjunction 9449 Aug 08 10:29 24°Ω10'14 -0°25'26 direct 9449 Aug 08 10:30 24°Ω10'15 0°25'38 | direct | - | | | | | | |
| conjunction 9443 Jan 23 06:39 6°≈23'44 0°36'18 retrograde 9448 Nov 23 11:26 10°Ω38'13 minimum elong 9443 Jan 23 06:40 6°≈23'45 0°36'35 opposition 9449 Jan 21 23:02 5°Ω38'28 -0°54'42 max. Earth dist. 9443 Jan 22 17:55 6°≈16'56 6.49915 AU min. Earth dist. 9449 Jan 21 13:59 5°Ω41'30 3.90522 AU morning rise 9443 Feb 05 06:35 9°≈10'15 direct 9449 Mar 21 03:49 0°Ω43'58 retrograde 9443 Jun 05 13:51 25°≈44'10 evening set 9449 Jul 01 04:51 15°Ω retrograde 9443 Aug 05 14:14 20°≈49'45 0°40'35 min. Earth dist. 9443 Aug 06 08:04 20°≈44'02 4.50387 AU conjunction 9449 Aug 08 10:29 24°Ω10'14 -0°25'26 direct 9449 Aug 08 10:30 24°Ω10'15 0°25'38 | avaning got | | | | | | | 3.93401 AU |
| conjunction 9443 Jan 23 06:39 6°≈23'44 0°36'18 retrograde 9448 Nov 23 11:26 10°Ω38'13 Inchestion minimum elong 9443 Jan 23 06:40 6°≈23'45 0°36'35 opposition 9449 Jan 21 23:02 5°Ω38'28 -0°54'42 max. Earth dist. 9443 Jan 22 17:55 6°≈16'56 6.49915 AU min. Earth dist. 9449 Jan 21 13:59 5°Ω41'30 3.90522 AU morning rise 9443 Feb 05 06:35 9°≈10'15 direct 9449 Mar 21 03:49 0°Ω43'58 0°Ω43'58 retrograde 9443 Jun 05 14:27 15°≈ evening set 9449 Jul 01 04:51 15°Ω retrograde 9443 Aug 05 14:14 20°≈49'45 0°40'35 evening set 9449 Jul 26 00:22 20°Ω53'43 opposition 9443 Aug 06 08:04 20°≈49'45 0°40'35 conjunction 9449 Aug 08 10:29 24°Ω10'14 -0°25'26 direct 9449 Aug 08 10:29 24°Ω10'15 0°25'38 0 | evening set | 9443 Jan 10 04.23 | <i>3</i> ≈3008 | | morning rise | | | |
| minimum elong 9443 Jan 23 06:40 6°≈23'45 0°36'35 opposition 9449 Jan 21 23:02 5° Ω38'28 -0°54'42 max. Earth dist. 9443 Jan 22 17:55 6°≈16'56 6.49915 AU min. Earth dist. 9449 Jan 21 13:59 5° Ω41'30 3.90522 AU morning rise 9443 Feb 05 06:35 9°≈10'15 direct 9449 Mar 21 03:49 0° Ω43'58 retrograde 9443 Jun 05 14:27 15°≈ evening set 9449 Jul 01 04:51 15°Ω opposition 9443 Aug 05 14:14 20°≈44'10 evening set 9449 Jul 26 00:22 20°Ω53'43 min. Earth dist. 9443 Aug 06 08:04 20°≈44'02 4.50387 AU conjunction 9449 Aug 08 10:29 24°Ω10'14 -0°25'26 direct 9443 Oct 07 05:10 15°≈48'12 minimum elong 9449 Aug 08 10:30 24°Ω10'15 0°25'38 | · · · · · · · · · | 0442 I 22 06:20 | (%22144 | 0027110 | | • | | |
| max. Earth dist. 9443 Jan 22 17:55 $6^{\circ} \approx 16'56$ 6.49915 AU min. Earth dist. 9449 Jan 21 13:59 $5^{\circ} \Omega 41'30$ 3.90522 AU morning rise 9443 Feb 05 06:35 $9^{\circ} \approx 10'15$ direct 9449 Mar 21 03:49 $0^{\circ} \Omega 43'58$ $0^{\circ} \Omega 43'58$ retrograde 9443 Jun 05 13:51 $25^{\circ} \approx 44'10$ evening set 9449 Jul 01 04:51 $15^{\circ} \Omega$ opposition 9443 Aug 05 14:14 $20^{\circ} \approx 44'10$ o°40'35 min. Earth dist. 9443 Aug 06 08:04 $20^{\circ} \approx 44'10$ conjunction 9449 Aug 08 10:29 $24^{\circ} \Omega 10'14$ $-0^{\circ} 25'26$ direct 9443 Oct 07 05:10 $15^{\circ} \approx 48'12$ minimum elong 9449 Aug 08 10:30 $24^{\circ} \Omega 10'15$ 0°25'38 | | | | | • | | | 0054142 |
| morning rise 9443 Feb 05 06:35 9° \approx 10'15 direct 9449 Mar 21 03:49 0° Ω 43'58 retrograde 9443 Jun 05 13:51 25° \approx 44'10 evening set 9449 Jul 01 04:51 15° Ω retrograde 9443 Aug 05 14:14 20° \approx 49'45 0°40'35 min. Earth dist. 9443 Aug 06 08:04 20° \approx 44'02 4.50387 AU conjunction 9449 Aug 08 10:29 24° Ω 10'14 -0°25'26 direct 9443 Oct 07 05:10 15° \approx 48'12 minimum elong 9449 Aug 08 10:30 24° Ω 10'15 0°25'38 | _ | | | | ** | | | |
| 9443 Mar 05 14:27 15° ≈ 9449 Jul 01 04:51 15° Ω retrograde 9443 Jun 05 13:51 25° ≈44'10 evening set 9449 Jul 26 00:22 20° Ω53'43 opposition 9443 Aug 05 14:14 20° ≈49'45 0°40'35 min. Earth dist. 9443 Aug 06 08:04 20° ≈44'02 4.50387 AU conjunction 9449 Aug 08 10:29 24° Ω10'14 -0°25'26 direct 9443 Oct 07 05:10 15° ≈48'12 minimum elong 9449 Aug 08 10:30 24° Ω10'15 0°25'38 | | | | 0.47713 AU | | | | 3.90322 AU |
| retrograde 9443 Jun 05 13:51 25°≈44'10 evening set 9449 Jul 26 00:22 20°Ω53'43 opposition 9443 Aug 05 14:14 20°≈49'45 0°40'35 min. Earth dist. 9443 Aug 06 08:04 20°≈44'02 4.50387 AU conjunction 9449 Aug 08 10:29 24°Ω10'14 -0°25'26 direct 9443 Oct 07 05:10 15°≈48'12 minimum elong 9449 Aug 08 10:30 24°Ω10'15 0°25'38 | тютнид гіѕе | | | | unect | | | |
| opposition 9443 Aug 05 14:14 20°≈49'45 0°40'35 min. Earth dist. 9443 Aug 06 08:04 20°≈44'02 4.50387 AU conjunction 9449 Aug 08 10:29 24°Ω10'14 -0°25'26 direct 9443 Oct 07 05:10 15°≈48'12 minimum elong 9449 Aug 08 10:30 24°Ω10'15 0°25'38 | matria am- J- | | | | avanin+ | | | |
| min. Earth dist. 9443 Aug 06 08:04 20°≈44′02 4.50387 AU conjunction 9449 Aug 08 10:29 24°Ω10′14 -0°25′26 direct 9443 Oct 07 05:10 15°≈48′12 minimum elong 9449 Aug 08 10:30 24°Ω10′15 0°25′38 | - | | | 0940125 | evening set | 9449 Jul 26 00:22 | 20° 6 (35'43 | |
| direct 9443 Oct 07 05:10 15°≈48'12 minimum elong 9449 Aug 08 10:30 24°Ω10'15 0°25'38 | ** | - | | | | 0440 4 00 10 20 | 240 0 1 200 1 | 0005107 |
| | | = | | 4.3038/ AU | • | - | | |
| 9444 Jan 26 U8:10 U°T max. Earth dist. 9449 Aug 09 19:11 24°6\(230'\)13 5.90398 AU | airect | | | | Č | • | | |
| | | 9444 Jan 26 08:10 | υ° π | | ınax. Earth dist. | 9449 Aug 09 19:11 | 24° 36 30'13 | 3.90398 AU |

| morning rise | 9449 Aug 21 22:58 | 27° Ω 28'00 | | opposition | 9455 Aug 09 17:57 | 25° ≈ 01'42 | 0°36'43 |
|------------------|--------------------|---------------------|-----------------------------------------|------------------|------------------------|---------------------|-------------|
| morning 1130 | 9449 Sep 01 11:46 | 0°m | | min. Earth dist. | 9455 Aug 10 15:14 | 24°≈54'52 | 4.49908 AU |
| retrograde | 9449 Dec 31 23:48 | 18° m 17'39 | | direct | 9455 Oct 11 10:24 | 20°≈00'11 | 4.47700710 |
| min. Earth dist. | 9450 Feb 28 00:53 | 13° m 25'10 | 3.93189 AU | direct | 9456 Jan 09 09:06 | 0° ∀ | |
| opposition | 9450 Mar 01 07:44 | 13° mp 14'41 | | evening set | 9456 Feb 13 13:40 | 7° ₩ 11'51 | |
| direct | 9450 Apr 28 05:26 | 8° m 19'10 | 0 17 10 | max. Earth dist. | 9456 Feb 24 18:09 | 9°) 36'20 | 6.47466 AU |
| asc. node | 9450 Aug 11 03:48 | 23° Mp 02'44 | | man. Darm dige. | 7.00100 2. 10.07 | , , (3020 | 0.17.100110 |
| evening set | 9450 Sep 02 04:11 | 28° mp 10'55 | | conjunction | 9456 Feb 26 11:21 | 9°) 58'35 | 0°14'33 |
| | 9450 Sep 09 19:19 | 0∘ ⊽ | | minimum elong | 9456 Feb 26 11:21 | 9° ¥ 58'35 | 0°14'41 |
| | , | | | behind sun begin | 9456 Feb 26 08:00 | 9°) 56'47 | |
| conjunction | 9450 Sep 15 18:57 | 1° £ 25'47 | 0°02'36 | behind sun end | 9456 Feb 26 14:42 | 10°) €00'23 | |
| minimum elong | 9450 Sep 15 18:57 | 1° £ 25'47 | 0°02'35 | morning rise | 9456 Mar 10 06:53 | 12°) (44'27 | |
| behind sun begin | 9450 Sep 15 10:35 | 1° £ 20'48 | | retrograde | 9456 Jul 09 05:02 | 29°) 33'02 | |
| behind sun end | 9450 Sep 16 03:20 | 1° £ 30'46 | | opposition | 9456 Sep 08 06:17 | 24°) (40'05 | 0°04'16 |
| max. Earth dist. | 9450 Sep 18 03:18 | 1° £ 59'25 | 5.98422 AU | min. Earth dist. | 9456 Sep 09 16:49 | 24°) (29'04 | 4.43061 AU |
| morning rise | 9450 Sep 29 11:45 | 4° £ 41'23 | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | desc. node | 9456 Oct 25 10:03 | 20°) (00'45 | |
| retrograde | 9451 Feb 06 06:58 | 24° £ 41'33 | | direct | 9456 Nov 09 19:23 | 19°) (39'15 | |
| min. Earth dist. | 9451 Apr 05 06:06 | 19° £ 50'34 | 4.05590 AU | | 9457 Feb 08 14:09 | 0°Υ | |
| opposition | 9451 Apr 06 21:19 | 19° £ 37'14 | 0°24'49 | evening set | 9457 Mar 15 00:43 | 7°Υ13'50 | |
| direct | 9451 Jun 04 10:26 | 14° £ 39'28 | 0 2 , | max. Earth dist. | 9457 Mar 25 13:20 | 9° Y 33'19 | 6.36846 AU |
| | 9451 Sep 22 11:56 | 0°M | | man. Barar alov. |) 10 / 11 III 20 13.20 | , , , , , , | 0.500.0110 |
| evening set | 9451 Oct 09 03:06 | 3°M45'25 | | conjunction | 9457 Mar 27 19:48 | 10° Y 03'31 | -0°09'27 |
| e venning see |) 151 OCC 07 05.00 | 3 110 .5 25 | | minimum elong | 9457 Mar 27 19:48 | 10° Y 03'31 | 0°09'30 |
| conjunction | 9451 Oct 22 18:12 | 6°M53'09 | 0°28'31 | behind sun begin | 9457 Mar 27 13:09 | 9° Ƴ 59'51 | |
| minimum elong | 9451 Oct 22 18:11 | 6°M53'08 | 0°28'41 | behind sun end | 9457 Mar 28 02:27 | 10° Y 07'12 | |
| max. Earth dist. | 9451 Oct 25 04:54 | 7°M26'53 | 6.13953 AU | morning rise | 9457 Apr 09 13:32 | 12° Υ 52'49 | |
| morning rise | 9451 Nov 05 09:39 | 10°M00'45 | 0.10900 110 | | 9457 Jul 24 22:16 | 0°8 | |
| 8 | 9451 Nov 27 19:01 | 15° ™ | | retrograde | 9457 Aug 10 14:50 | 0° 8 25'54 | |
| retrograde | 9452 Mar 10 22:40 | 28°M46'05 | | | 9457 Aug 27 05:48 | 30°RƳ | |
| opposition | 9452 May 09 21:24 | 23°M43'09 | 0°55'38 | opposition | 9457 Oct 10 10:04 | 25° Y 32'49 | -0°30'58 |
| min. Earth dist. | 9452 May 08 12:33 | 23°M54'11 | 4.22602 AU | min. Earth dist. | 9457 Oct 12 02:35 | 25° Υ 19'49 | 4.29250 AU |
| direct | 9452 Jul 08 16:28 | 18°M43'19 | | direct | 9457 Dec 11 06:10 | 20° Υ 33'19 | , |
| | 9452 Oct 10 04:51 | 0° ∡ ¹ | | | 9458 Mar 05 15:10 | 0°8 | |
| evening set | 9452 Nov 11 21:57 | 6° ₹ 757'22 | | evening set | 9458 Apr 15 17:19 | 8° 8 50'00 | |
| | | | | max. Earth dist. | 9458 Apr 26 06:25 | 11° 8 15'00 | 6.20849 AU |
| conjunction | 9452 Nov 25 09:25 | 9° √ 56'11 | 0°43'33 | | r | | |
| minimum elong | 9452 Nov 25 09:25 | 9° ∡ 756'11 | 0°43'51 | conjunction | 9458 Apr 28 12:13 | 11° 8 45'56 | -0°31'37 |
| max. Earth dist. | 9452 Nov 27 01:11 | 10° √ 18'12 | 6.30986 AU | minimum elong | 9458 Apr 28 12:12 | 11° 8 45'55 | 0°31'49 |
| morning rise | 9452 Dec 08 20:09 | 12° ∡ 754'18 | | morning rise | 9458 May 11 06:51 | 14° 8 42'02 | |
| S | 9453 Mar 24 06:43 | 0°ರ | | C | 9458 May 12 14:16 | 15° 8 | |
| retrograde | 9453 Apr 11 04:06 | 0° る 30'36 | | | 9458 Jul 28 20:32 | 0° I I | |
| Ü | 9453 Apr 29 00:03 | 30°R. ✓ | | retrograde | 9458 Sep 14 12:07 | 3° Ⅱ 23'47 | |
| opposition | 9453 Jun 10 14:16 | 25° х 30'44 | 1°07'02 | Z . | 9458 Nov 02 02:00 | 30° ₹ 8 | |
| min. Earth dist. | 9453 Jun 09 20:32 | 25° х 36′36 | 4.38283 AU | opposition | 9458 Nov 13 22:07 | 28° 8 29'19 | -0°59'10 |
| direct | 9453 Aug 10 16:12 | 20° ∡ ¹29'37 | | min. Earth dist. | 9458 Nov 15 06:07 | 28° 8 18'56 | 4.12162 AU |
| | 9453 Nov 05 00:49 | 6°0 | | direct | 9459 Jan 13 10:23 | 23° 8 31'54 | |
| evening set | 9453 Dec 14 11:10 | 8° ප 02'41 | | | 9459 Mar 21 03:10 | Π $^{\circ}0$ | |
| | | | | evening set | 9459 May 19 11:09 | 12° Ⅱ 40'57 | |
| conjunction | 9453 Dec 27 17:42 | 10° る 54'09 | 0°44'58 | max. Earth dist. | 9459 May 30 22:54 | 15° Ⅱ 24'57 | 6.04117 AU |
| minimum elong | 9453 Dec 27 17:43 | 10°る54'10 | 0°45'18 | | | | |
| max. Earth dist. | 9453 Dec 28 05:44 | 11° る 00'39 | 6.44180 AU | conjunction | 9459 Jun 01 08:55 | 15° Ⅱ 45'15 | -0°44'36 |
| morning rise | 9454 Jan 09 22:19 | 13° 石 44'36 | | minimum elong | 9459 Jun 01 08:55 | 15° Ⅱ 45'15 | 0°44'55 |
| | 9454 Apr 21 17:11 | 0° ≈ | | morning rise | 9459 Jun 14 07:39 | 18° Ⅱ 50′23 | |
| retrograde | 9454 May 11 02:09 | 0° ≈ 35'04 | | | 9459 Aug 03 17:47 | 0° © | |
| | 9454 May 30 09:38 | 30°R₹ | | retrograde | 9459 Oct 22 00:48 | 8°547'39 | |
| opposition | 9454 Jul 10 20:58 | 25° る 38'33 | 0°59'25 | opposition | 9459 Dec 20 21:13 | 3° 5 50'44 | -1°08'21 |
| min. Earth dist. | 9454 Jul 10 22:48 | 25° る 37'57 | 4.48192 AU | min. Earth dist. | 9459 Dec 21 10:18 | 3° 5 46'25 | 3.97292 AU |
| direct | 9454 Sep 11 00:10 | 20°る37'00 | | | 9460 Jan 23 09:39 | 30° Ŗ Ⅱ | |
| | 9454 Dec 06 16:56 | 0°≈ | | direct | 9460 Feb 18 00:21 | 28° Ⅱ 55′24 | |
| evening set | 9455 Jan 14 09:09 | 7° ≈ 48'09 | | | 9460 Mar 14 11:16 | 0ංම | |
| - | | | | evening set | 9460 Jun 23 12:54 | 18°548'53 | |
| conjunction | 9455 Jan 27 10:38 | 10° ≈ 35′25 | 0°34'11 | | | | |
| minimum elong | 9455 Jan 27 10:39 | 10° ≈ 35′25 | 0°34'26 | conjunction | 9460 Jul 06 16:46 | 22°501'20 | -0°41'38 |
| max. Earth dist. | 9455 Jan 26 16:14 | 10° ≈ 25'34 | 6.50118 AU | minimum elong | 9460 Jul 06 16:47 | 22° © 01'21 | 0°41'57 |
| morning rise | 9455 Feb 09 10:08 | 13° ≈ 21'41 | | max. Earth dist. | 9460 Jul 06 16:33 | 22° © 01'13 | 5.92570 AU |
| - | 9455 Feb 17 04:16 | 15° ≈ | | morning rise | 9460 Jul 19 22:42 | 25° © 15'05 | |
| retrograde | 9455 Jun 09 18:22 | 29° ≈ 55'48 | | - | 9460 Aug 08 20:46 | $0^{\circ}\Omega$ | |
| - | | | | | | | |

| | 9460 Nov 03 11:47 | 15° Ω | | retrograde | 9466 May 15 05:48 | 4°≈50'00 | |
|--------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------|--------------------|--------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------|
| retrograde | 9460 Nov 28 21:58 | 16° Ω 02'57 | | retrograde | 9466 Jul 14 06:12 | 30°Rる | |
| retrograde | 9460 Dec 24 05:11 | 10 0. 02 37 | | opposition | 9466 Jul 15 01:09 | 29°る53'52 | 0°56'59 |
| opposition | | 13 κοι 11° Ω 02'42 | 0950124 | min. Earth dist. | | 29 る 53 32 | 4.48730 AU |
| | 9461 Jan 27 08:42 | | | | 9466 Jul 15 05:45 | | 4.46/30 AU |
| min. Earth dist. | 9461 Jan 26 19:37 | | 3.90442 AU | direct | 9466 Sep 15 06:21 | 24° る 52'16 | |
| direct | 9461 Mar 26 10:50 | 6° Ω 08'09 | | | 9466 Nov 16 00:06 | 0°≈ | |
| | 9461 Jun 11 15:40 | 15° Ω | | evening set | 9467 Jan 18 15:14 | 12° ≈ 02'53 | |
| evening set | 9461 Jul 31 08:14 | 26° Ω 16'39 | | | | | |
| | | | | conjunction | 9467 Jan 31 16:16 | 14° ≈ 49'58 | 0°31'49 |
| conjunction | 9461 Aug 13 19:02 | 29° Ω 33'12 | | minimum elong | 9467 Jan 31 16:17 | 14° ≈ 49'59 | 0°32'05 |
| minimum elong | 9461 Aug 13 19:03 | 29° Ω 33'12 | | max. Earth dist. | 9467 Jan 30 19:40 | 14° ≈ 38'57 | 6.50071 AU |
| max. Earth dist. | 9461 Aug 15 06:43 | 29° Ω 54'57 | 5.91103 AU | | 9467 Feb 01 11:00 | 15° ≈ | |
| | 9461 Aug 15 15:00 | 0° m y | | morning rise | 9467 Feb 13 15:00 | 17° ≈ 36′01 | |
| morning rise | 9461 Aug 27 08:28 | 2° Mp 50'59 | | | 9467 Apr 20 21:02 | 0° ∀ | |
| retrograde | 9462 Jan 06 03:03 | 23° Mp 35'40 | | retrograde | 9467 Jun 13 22:54 | 4° ₩ 10'53 | |
| min. Earth dist. | 9462 Mar 05 03:53 | 18° m 43'30 | 3.94589 AU | | 9467 Aug 08 08:46 | 30° ₹ ≈ | |
| opposition | 9462 Mar 06 12:48 | 18° m 32'19 | -0°11'41 | opposition | 9467 Aug 13 23:19 | 29° ≈ 17'06 | 0°32'33 |
| direct | 9462 May 03 11:48 | 13° Mp 36'28 | | min. Earth dist. | 9467 Aug 14 22:10 | 29° ≈ 09'47 | 4.49304 AU |
| asc. node | 9462 Jun 20 21:44 | 17° m) 21'41 | | direct | 9467 Oct 15 15:20 | 24° ≈ 15'45 | |
| | 9462 Aug 23 23:29 | 0° <u>∿</u> | | | 9467 Dec 20 07:46 | 0° ∀ | |
| evening set | 9462 Sep 07 09:23 | ა <u>ი</u> 22'22 | | evening set | 9468 Feb 17 19:54 | 11°) 29'49 | |
| e vennig set | 7102 Sep 07 07.23 | 3 —22 22 | | max. Earth dist. | 9468 Feb 28 20:54 | | 6.46357 AU |
| conjunction | 9462 Sep 21 00:34 | 6° ₽ 36'27 | 0°06'35 | max. Lattii dist. | 7400100 20 20.54 | 13 /(3233 | 0.40337 AC |
| - | • | 6° £ 36'27 | 0°06'37 | agnismation | 0469 Mar 01 16:50 | 14° ¥ 16'46 | 0°11'17 |
| minimum elong | 9462 Sep 21 00:33 | | 0 0037 | conjunction | 9468 Mar 01 16:59 | 14 X 1646 14° X 16'47 | |
| behind sun begin | 9462 Sep 20 16:44 | 6° Ω 31'49 | | minimum elong | 9468 Mar 01 17:00 | | 0°11'24 |
| behind sun end | 9462 Sep 21 08:23 | 6° Ω 41'05 | | behind sun begin | 9468 Mar 01 11:11 | 14°) 13′39 | |
| max. Earth dist. | 9462 Sep 23 11:10 | 7° Ω 11'16 | 6.00378 AU | behind sun end | 9468 Mar 01 22:49 | 14° 米 19'55 | |
| morning rise | 9462 Oct 04 17:16 | 9° ≙ 51'04 | | morning rise | 9468 Mar 14 12:18 | 17° 米 02'58 | |
| retrograde | 9463 Feb 11 03:40 | 29° ≏ 41'11 | | | 9468 May 22 09:08 | 0° Υ | |
| min. Earth dist. | 9463 Apr 10 03:41 | 24° ≏ 49'55 | 4.07873 AU | retrograde | 9468 Jul 13 16:40 | 3° Y 56′13 | |
| opposition | 9463 Apr 11 17:57 | 24° ≏ 36'56 | 0°30'05 | desc. node | 9468 Sep 04 09:35 | 0° Y 06′17 | |
| direct | 9463 Jun 09 11:37 | 19° ≏ 38'50 | | | 9468 Sep 05 05:45 | 30° Ŗ ₩ | |
| | 9463 Sep 04 10:35 | 0° M ₊ | | opposition | 9468 Sep 12 16:23 | 29°) €03'24 | -0°00'45 |
| evening set | 9463 Oct 14 01:53 | 8° M 37'18 | | min. Earth dist. | 9468 Sep 14 04:40 | 28° ¥ 51'48 | 4.41531 AU |
| | | | | direct | 9468 Nov 14 04:40 | 24°) €02'45 | |
| conjunction | 9463 Oct 27 16:34 | 11° M 43'48 | 0°31'22 | | 9469 Jan 19 11:37 | $0^{\circ}\mathbf{\Upsilon}$ | |
| minimum elong | 9463 Oct 27 16:33 | 11° M 43'47 | 0°31'34 | evening set | 9469 Mar 19 09:35 | 11° Y 41'59 | |
| max. Earth dist. | 9463 Oct 30 01:22 | 12° M ₊16'15 | 6.16344 AU | max. Earth dist. | 9469 Mar 29 21:57 | 14° Ƴ 01'56 | 6.35028 AU |
| morning rise | 9463 Nov 10 07:36 | 14°M.50'05 | | | | | |
| | 9463 Nov 11 01:06 | 15° ™ | | conjunction | 9469 Apr 01 04:34 | 14° Y ′32'19 | -0°12'50 |
| | 9464 Jan 27 21:24 | 0° ∡ 7 | | minimum elong | 9469 Apr 01 04:33 | 14° Y '32'19 | |
| retrograde | 9464 Mar 15 08:13 | 3° х 25′04 | | behind sun begin | 9469 Mar 31 23:35 | 14° Υ 29'34 | 0 1231 |
| retrograde | 9464 May 02 01:08 | 30°RM | | behind sun end | 9469 Apr 01 09:31 | 14° Υ 35'04 | |
| min. Earth dist. | 9464 May 13 01:48 | 28°M33'03 | 4.24901 AU | morning rise | 9469 Apr 13 22:10 | 17° Υ 22'18 | |
| opposition | 9464 May 14 09:24 | 28°M22'28 | 0°58'25 | morning risc | 9469 Jun 16 20:40 | 0°8 | |
| • • | • | | 0 38 23 | | | 5° 8 03'00 | |
| direct | 9464 Jul 13 08:01 | 23°M22'22 | | retrograde | 9469 Aug 15 07:08 | _ | 0025125 |
| | 9464 Sep 20 08:05 | 0°×7 | | opposition | 9469 Oct 15 02:34 | 0° 8 09'48 | -0°35'35 |
| evening set | 9464 Nov 16 13:05 | 11° ∡ °30′10 | | | 9469 Oct 16 09:05 | 30°₹ Υ | 4.00000 4.77 |
| | | | | min. Earth dist. | 9469 Oct 16 17:18 | 29° Y ′57′22 | 4.27289 AU |
| conjunction | 9464 Nov 29 23:58 | 14° ₹ 27'53 | 0°44'32 | direct | 9469 Dec 15 18:06 | 25° Y 10′39 | |
| minimum elong | 9464 Nov 29 23:58 | 14° ∡ °27'52 − | 0°44'51 | | 9470 Feb 11 18:50 | 0°8 | |
| max. Earth dist. | 9464 Dec 01 11:52 | 14° ∡ 747'41 | 6.33022 AU | evening set | 9470 Apr 20 07:22 | 13° 8 33'04 | |
| morning rise | 9464 Dec 13 09:49 | 17° ∡ ¹24'49 | | | 9470 Apr 26 14:44 | 15° 8 | |
| | 9465 Feb 16 03:39 | 0°₹ | | max. Earth dist. | 9470 Apr 30 23:31 | 16° 8 00'27 | 6.18907 AU |
| retrograde | 9465 Apr 15 10:30 | 4° る 53'38 | | | | | |
| opposition | 9465 Jun 14 20:49 | 29° ∡ 54'17 | 1°07'00 | conjunction | 9470 May 03 02:20 | 16° 8 29'49 | -0°34'09 |
| min. Earth dist. | 9465 Jun 14 06:17 | 29° ₹ ′59'04 | 4.39912 AU | minimum elong | 9470 May 03 02:19 | 16° 8 29'49 | 0°34'22 |
| | 9465 Jun 14 03:25 | 30°₽ ✓ | | morning rise | 9470 May 15 21:12 | 19° 8 26'51 | |
| direct | 9465 Aug 15 03:10 | 24° ₹ ′53'04 | | | 9470 Jul 04 02:20 | $\Pi^{\circ}0$ | |
| | 9465 Oct 15 01:42 | 8°0 | | retrograde | 9470 Sep 19 14:05 | 8° Ⅱ 17'20 | |
| | 7703 000 13 01.72 | - | | • | 9470 Nov 18 21:39 | 3° Ⅱ 22'38 | -1°01'46 |
| evening set | 9465 Dec 18 20:19 | 12° る 22'23 | | opposition | 77/U INOV 10 21.37 | J 1122 JA | -1 01 70 |
| evening set | | 12° る 22'23 | | opposition min. Earth dist. | | 3° Ⅱ 12'40 | |
| | 9465 Dec 18 20:19 | | 0°44'06 | min. Earth dist. | 9470 Nov 20 04:16 | 3° Ⅱ 12'40 | 4.10393 AU |
| conjunction | 9465 Dec 18 20:19 9466 Jan 01 02:05 | 15° පි 13'10 | 0°44'06 0°44'26 | min. Earth dist. | 9470 Nov 20 04:16 9470 Dec 17 12:24 | 3°∏12'40 30°R 8 | |
| conjunction minimum elong | 9465 Dec 18 20:19 9466 Jan 01 02:05 9466 Jan 01 02:05 | 15°පි13'10 15°පි13'10 | 0°44'26 | • • | 9470 Nov 20 04:16 9470 Dec 17 12:24 9471 Jan 18 06:45 | 3°∏12'40 30°R ႘ 28° ႘ 25'33 | |
| conjunction minimum elong max. Earth dist. | 9465 Dec 18 20:19 9466 Jan 01 02:05 9466 Jan 01 02:05 9466 Jan 01 09:06 | 15°පි13'10 15°පි13'10 15°පි16'57 | | min. Earth dist. | 9470 Nov 20 04:16 9470 Dec 17 12:24 9471 Jan 18 06:45 9471 Feb 18 18:57 | 3°∏12'40 30°R ୪ 28° ∀ 25'33 0°∏ | |
| conjunction minimum elong | 9465 Dec 18 20:19 9466 Jan 01 02:05 9466 Jan 01 02:05 | 15°පි13'10 15°පි13'10 | 0°44'26 | min. Earth dist. | 9470 Nov 20 04:16 9470 Dec 17 12:24 9471 Jan 18 06:45 | 3°∏12'40 30°R ႘ 28° ႘ 25'33 0°∏ 17°∏39'31 | |

| . ,. | 0471 1 06 05 21 | 200T 44144 | 0045112 | | 0476 D 04 11 25 | 100 7 52140 | 0045122 |
|-----------------------------------|----------------------------------------|-------------------------------------------|------------|---------------------------------|----------------------------------------|------------------------------------------|------------|
| conjunction | 9471 Jun 06 05:21 | 20° I I44'44 | | minimum elong | 9476 Dec 04 11:35 | 18° ₹ 53'49 | |
| minimum elong | 9471 Jun 06 05:21 | 20° Ⅱ 44'43 | 0°45'32 | max. Earth dist. | 9476 Dec 05 20:43 | 19° √ 12'02 | 6.34552 AU |
| morning rise | 9471 Jun 19 04:49 | 23° ∏ 50′50 | | morning rise | 9476 Dec 17 20:45 | 21° ∡ ′49'51 | |
| | 9471 Jul 15 17:31 | 0°€ | | | 9477 Jan 26 07:47 | 0°る | |
| retrograde | 9471 Oct 27 05:14 | 13° © 54'44 | | retrograde | 9477 Apr 19 13:17 | 9° ප 13'00 | |
| opposition | 9471 Dec 26 01:24 | 8° 9 57'27 | | opposition | 9477 Jun 19 01:22 | 4° る 14'04 | 1°06'37 |
| min. Earth dist. | 9471 Dec 26 10:39 | | 3.96370 AU | min. Earth dist. | 9477 Jun 18 12:20 | 4° る 18'21 | 4.41095 AU |
| direct | 9472 Feb 22 24:00 | 4° © 02'23 | | | 9477 Jul 27 20:14 | 30°₽ ⋌ | |
| evening set | 9472 Jun 28 13:36 | 23° © 57'45 | | direct | 9477 Aug 19 09:46 | 29° ∡ 12'47 | |
| | | | | | 9477 Sep 11 06:48 | 0°ප | |
| conjunction | 9472 Jul 11 18:11 | 27° © 10'45 | | evening set | 9477 Dec 23 03:57 | 16° る 39'42 | |
| minimum elong | 9472 Jul 11 18:12 | 27° © 10'45 | 0°40'07 | | | | |
| max. Earth dist. | 9472 Jul 11 21:50 | 27°©12'58 | 5.92236 AU | conjunction | 9478 Jan 05 09:06 | 19° る 29'55 | 0°43'00 |
| | 9472 Jul 23 07:45 | 0 $^{\circ}$ Ω | | minimum elong | 9478 Jan 05 09:06 | 19° る 29'56 | 0°43'18 |
| morning rise | 9472 Jul 25 01:09 | 0° Ω 25'07 | | max. Earth dist. | 9478 Jan 05 12:47 | 19° る 31'55 | 6.46054 AU |
| | 9472 Sep 30 04:56 | 15° Ω | | morning rise | 9478 Jan 18 12:19 | 22° る 19'06 | |
| retrograde | 9472 Dec 04 01:42 | 21° Ω 14'07 | | | 9478 Feb 25 07:05 | 0° ≈ | |
| opposition | 9473 Feb 01 12:43 | 16° Ω 13'24 | -0°46'11 | retrograde | 9478 May 19 09:13 | 9° ≈ 03'41 | |
| min. Earth dist. | 9473 Jan 31 20:52 | 16° Ω 18'45 | 3.90736 AU | opposition | 9478 Jul 19 04:37 | 4° ≈ 07'55 | 0°54'18 |
| | 9473 Feb 10 17:09 | 15°R Ω | | min. Earth dist. | 9478 Jul 19 11:49 | 4° ≈ 05'35 | 4.49055 AU |
| direct | 9473 Mar 31 14:05 | 11° Ω 18'46 | | | 9478 Aug 26 01:09 | 30°Ŗる | |
| | 9473 May 18 06:56 | 15° Ω | | direct | 9478 Sep 19 12:11 | 29° ろ 06'20 | |
| | 9473 Jul 30 13:11 | 0° m | | | 9478 Oct 14 04:03 | 0° ≈ | |
| evening set | 9473 Aug 05 10:25 | 1° m 25'05 | | | 9479 Jan 16 19:17 | 15° ≈ | |
| - | - | | | evening set | 9479 Jan 22 20:13 | 16° ≈ 16′39 | |
| conjunction | 9473 Aug 18 22:07 | 4° Mp 41'34 | -0°18'16 | | | | |
| minimum elong | 9473 Aug 18 22:08 | 4° Mp 41'35 | 0°18'27 | conjunction | 9479 Feb 04 20:36 | 19° ≈ 03'33 | 0°29'20 |
| max. Earth dist. | 9473 Aug 20 14:15 | 5° m 05'59 | 5.92007 AU | minimum elong | 9479 Feb 04 20:37 | 19° ≈ 03'34 | 0°29'34 |
| morning rise | 9473 Sep 01 12:03 | 7° m 59'11 | | max. Earth dist. | 9479 Feb 03 19:51 | 18° ≈ 50'17 | 6.49913 AU |
| retrograde | 9474 Jan 11 02:32 | 28° m 38'29 | | morning rise | 9479 Feb 17 18:56 | 21° ≈ 49'29 | |
| min. Earth dist. | 9474 Mar 10 02:21 | 23° m 46'16 | 3.95993 AU | 3 | 9479 Mar 30 08:45 | 0°) | |
| opposition | 9474 Mar 11 11:33 | 23° m 34'59 | | retrograde | 9479 Jun 18 04:12 | 8°) 25'18 | |
| asc. node | 9474 May 03 10:50 | 18° m) 41'34 | | opposition | 9479 Aug 18 04:22 | 3°) (31'36 | 0°28'15 |
| direct | 9474 May 08 12:25 | 18° mp 38'55 | | min. Earth dist. | 9479 Aug 19 05:09 | 3° ¥ 23'40 | 4.48669 AU |
| | 9474 Aug 06 14:06 | 0∘ ⊽ | | min. Burm uist. | 9479 Sep 17 20:38 | 30°R≈ | |
| evening set | 9474 Sep 12 09:02 | 8° ₽ 19'39 | | direct | 9479 Oct 19 20:31 | 28° ≈ 30'14 | |
| e vennig see | y.,,.sep 12 0y.02 | 0 —17 37 | | | 9479 Nov 21 01:08 | 0° ∀ | |
| conjunction | 9474 Sep 26 00:22 | 11° ჲ 33'00 | 0°10'20 | evening set | 9480 Feb 22 00:44 | 15°) 46'17 | |
| minimum elong | 9474 Sep 26 00:21 | 11° ⊆ 33'00 | 0°10'22 | max. Earth dist. | 9480 Mar 04 00:59 | 18° X 10 17 | 6.45270 AU |
| behind sun begin | 9474 Sep 25 17:48 | 11° ⊆ 29'08 | 0 10 22 | max. Earth dist. | 7400 Mar 04 00.57 | 10 7(0) 10 | 0.43270710 |
| behind sun end | 9474 Sep 26 06:54 | 11° ⊆ 36'51 | | conjunction | 9480 Mar 05 21:34 | 18°) 33′30 | 0°08'01 |
| max. Earth dist. | 9474 Sep 28 11:04 | 11° ⊆ 30'31' 12° ⊆ 07'42 | 6.02130 AU | minimum elong | 9480 Mar 05 21:35 | 18° X 33'30 | 0°08'05 |
| morning rise | 9474 Oct 09 17:16 | 14° Ω 46'50 | 0.02130 AC | behind sun begin | 9480 Mar 05 14:29 | 18° H 29'40 | 0 00 03 |
| morning risc | 9474 Dec 23 09:13 | 0°M | | behind sun end | 9480 Mar 06 04:41 | 18°) 37'20 | |
| retrograde | 9475 Feb 15 17:22 | 4°M28'13 | | morning rise | 9480 Mar 18 16:20 | 21° X 19'55 | |
| retrograde | 9475 Apr 11 23:09 | 30°RΩ | | morning risc | 9480 Apr 30 05:26 | 0° Υ | |
| min. Earth dist. | 9475 Apr 14 18:44 | 29° £ 37'10 | 4.09802 AU | desc. node | 9480 Jul 15 20:59 | 8° Υ 17'07 | |
| opposition | 9475 Apr 16 09:09 | 29° £ 24'08 | 0°34'53 | retrograde | 9480 Jul 18 00:59 | 8° Υ 17'33 | |
| direct | 9475 Jun 14 04:59 | 24° £ 25'46 | 0 34 33 | opposition | 9480 Sep 17 01:21 | 3° Υ 24'41 | -0°05'43 |
| direct | 9475 Aug 14 12:34 | 0°M | | min. Earth dist. | 9480 Sep 18 13:56 | | 4.40027 AU |
| evening set | 9475 Oct 18 19:56 | 13°M18'33 | | mm. Lattii dist. | 9480 Oct 16 12:14 | 30° ₹ | 4.4002/ AC |
| evening set | 9475 Oct 18 19:30 9475 Oct 26 06:40 | 15°M | | direct | 9480 Oct 10 12:14 9480 Nov 18 11:13 | 28° ¥ 24'10 | |
| | 9473 OCI 20 00.40 | 15 116 | | direct | 9480 Dec 21 10:55 | 26 χ24 10 0° Υ | |
| agniumation | 9475 Nov 01 10:19 | 160 m 24104 | 0°33'53 | ovening set | 9481 Mar 23 17:18 | 16° Υ 07'44 | |
| conjunction | | 16°M24'04 | 0°34'06 | evening set max. Earth dist. | | 18° Υ 27'42 | 6.33181 AU |
| minimum elong max. Earth dist. | 9475 Nov 01 10:18 | 16°M24'03 16°M54'39 | 6.18293 AU | max. Earth dist. | 9481 Apr 03 04:35 | 10 12/42 | 0.33181 AU |
| | 9475 Nov 03 16:03 | 10 IIL3439 19°IL29'17 | 0.16293 AU | agniumation | 0491 Apr. 05 11:57 | 18° Ƴ 58'40 | 0016107 |
| morning rise | 9475 Nov 15 00:52 | | | conjunction | 9481 Apr 05 11:57 | | |
| retrograde | 9476 Jan 04 04:30 9476 Mar 19 17:28 | 0° ⊀ 7° ⊀ 56'05 | | minimum elong morning rise | 9481 Apr 05 11:56 9481 Apr 18 05:37 | 18° Y 58'40 21° Y 49'21 | 0 1012 |
| • | | | 1°00'44 | morning rise | = | | |
| opposition min. Earth dist. | 9476 May 18 18:18 | 2° ₹ 53'54 3° ₹ 03'32 | 4.26702 AU | retrogrado | 9481 May 26 19:24 | 0° と 9° と 37'52 | |
| mm. Earm dist. | 9476 May 17 13:31 | | 4.20/02 AU | retrograde | 9481 Aug 20 00:46 | | 0020150 |
| direct | 9476 Jun 10 23:58 | 30°RM | | opposition | 9481 Oct 19 18:13 | 4° 8 44'28 | |
| direct | 9476 Jul 17 21:21 | 27°M53'38 | | min. Earth dist. | 9481 Oct 21 09:18 | 4° 8 31'53 | 4.25181 AU |
| | 9476 Aug 24 02:45 | 0°⊀ 15°.75€(157 | | J:4 | 9481 Dec 07 20:43 | 30°R℃ | |
| evening set | 9476 Nov 21 01:13 | 15° ∡ 56′57 | | direct | 9481 Dec 20 07:06 | 29° Ƴ 45'29 | |
| | 0476 D 04 11 26 | 100 75050 | 0045114 | | 9482 Jan 01 17:01 | 0°8 | |
| conjunction | 9476 Dec 04 11:36 | 18° ≯ 53'50 | 0°45'14 | | 9482 Apr 10 14:16 | 15° 8 | |
| | | | | | | | |

| evening set | 9482 Apr 24 20:15 | 18° 8 14'06 | | evening set | 9487 Oct 23 17:42 | 18° M 07'36 | |
|------------------|-------------------|---------------------|------------|------------------|---------------------|------------------------------|------------|
| max. Earth dist. | 9482 May 05 14:16 | | 6.16700 AU | evening sec | y 107 000 25 17.1.2 | 10 110 7 50 | |
| | , <u>.</u> , | | | conjunction | 9487 Nov 06 07:46 | 21° M 11'57 | 0°36'17 |
| conjunction | 9482 May 07 15:34 | 21° 8 11'53 | -0°36'26 | minimum elong | 9487 Nov 06 07:45 | 21°M11'56 | 0°36'31 |
| minimum elong | 9482 May 07 15:33 | 21° 8 11'53 | 0°36'42 | max. Earth dist. | 9487 Nov 08 13:16 | 21°M42'14 | 6.20587 AU |
| morning rise | 9482 May 20 10:47 | 24° 8 10'00 | | morning rise | 9487 Nov 19 21:36 | 24°M15'53 | |
| Č | 9482 Jun 15 08:35 | $\Pi^{\circ}0$ | | C | 9487 Dec 16 04:19 | 0° ∡ ¹ | |
| retrograde | 9482 Sep 24 13:47 | 13° Ⅱ 10′22 | | retrograde | 9488 Mar 24 02:25 | 12° ∡ ³32'53 | |
| opposition | 9482 Nov 23 20:58 | 8° Ⅱ 15′20 | -1°03'59 | min. Earth dist. | 9488 May 22 01:23 | 7° ∡ ¹40'33 | 4.28987 AU |
| min. Earth dist. | 9482 Nov 25 00:55 | 8° Ⅱ 06'14 | 4.08269 AU | opposition | 9488 May 23 05:38 | 7° ∡ ³31'08 | 1°02'45 |
| direct | 9483 Jan 23 00:35 | 3° Ⅱ 18'33 | | direct | 9488 Jul 22 11:58 | 2° ∡ ³30'45 | |
| evening set | 9483 May 29 03:17 | 22° Ⅲ 38'54 | | evening set | 9488 Nov 25 15:27 | 20° ∡ ¹27'45 | |
| max. Earth dist. | 9483 Jun 09 23:09 | 25° Ⅲ 28'58 | 6.00833 AU | | | | |
| | | | | conjunction | 9488 Dec 09 00:59 | 23° ∡¹ 23'27 | 0°45'42 |
| conjunction | 9483 Jun 11 02:12 | 25° Ⅱ 45'13 | -0°45'30 | minimum elong | 9488 Dec 09 00:58 | 23° ∡ ¹23'27 | 0°46'02 |
| minimum elong | 9483 Jun 11 02:12 | 25° Ⅱ 45'13 | 0°45'50 | max. Earth dist. | 9488 Dec 10 05:48 | 23° ∡ ³39'14 | 6.36667 AU |
| morning rise | 9483 Jun 24 02:36 | 28° Ⅲ 52'34 | | morning rise | 9488 Dec 22 09:21 | 26° ⊀ 18'18 | |
| | 9483 Jun 28 19:53 | 0 \circ \odot | | | 9489 Jan 08 16:25 | ರ°0 | |
| retrograde | 9483 Nov 01 12:21 | 19° © 05'02 | | retrograde | 9489 Apr 23 18:28 | 13° る 33'50 | |
| opposition | 9483 Dec 31 06:56 | 14° © 07'17 | -1°06'05 | opposition | 9489 Jun 23 07:13 | 8° る 35'22 | 1°05'54 |
| min. Earth dist. | 9483 Dec 31 13:07 | 14° © 05'14 | 3.94972 AU | min. Earth dist. | 9489 Jun 22 21:23 | 8°₹38'35 | 4.42897 AU |
| direct | 9484 Feb 28 02:42 | 9° © 12'18 | | direct | 9489 Aug 23 20:35 | 3°₹34'01 | |
| evening set | 9484 Jul 03 16:37 | 29° © 11'32 | | evening set | 9489 Dec 27 11:16 | 20° る 56'20 | |
| | 9484 Jul 07 00:18 | $0^{\circ}\Omega$ | | | | | |
| | | | | conjunction | 9490 Jan 09 15:43 | 23° る 45'45 | 0°41'43 |
| conjunction | 9484 Jul 16 22:23 | 2° Ω 25'25 | -0°37'39 | minimum elong | 9490 Jan 09 15:44 | 23° る 45'46 | 0°42'01 |
| minimum elong | 9484 Jul 16 22:24 | 2° Ω 25′26 | 0°37'56 | max. Earth dist. | 9490 Jan 09 16:06 | 23° る 45'58 | 6.47411 AU |
| max. Earth dist. | 9484 Jul 17 08:14 | 2° Ω 31'27 | 5.91454 AU | morning rise | 9490 Jan 22 18:07 | 26° ප 34'07 | |
| morning rise | 9484 Jul 30 06:16 | 5° Ω 40'37 | | | 9490 Feb 08 02:28 | 0° ≈ | |
| | 9484 Sep 08 12:50 | 15° Ω | | retrograde | 9490 May 23 09:48 | 13° ≈ 14'36 | |
| retrograde | 9484 Dec 09 10:18 | 26° Ω 32'15 | | opposition | 9490 Jul 23 07:18 | 8° ≈ 19'08 | 0°51'24 |
| opposition | 9485 Feb 06 19:38 | 21° Ω 31′06 | -0°41'21 | min. Earth dist. | 9490 Jul 23 16:20 | 8° ≈ 16'13 | 4.49894 AU |
| min. Earth dist. | 9485 Feb 06 01:29 | 21° Ω 37'14 | 3.90677 AU | direct | 9490 Sep 23 16:18 | 3° ≈ 17'34 | |
| direct | 9485 Apr 05 19:20 | 16° Ω 36′23 | | | 9490 Dec 31 15:25 | 15° ≈ | |
| | 9485 Jul 13 04:18 | 0° m ∕ | | evening set | 9491 Jan 26 23:31 | 20° ≈ 26′04 | |
| evening set | 9485 Aug 10 16:38 | 6° Mp 41′52 | | | | | |
| | | | | conjunction | 9491 Feb 08 23:18 | 23° ≈ 12'37 | 0°26'46 |
| conjunction | 9485 Aug 24 05:01 | 9° ™ 58′24 | -0°14'27 | minimum elong | 9491 Feb 08 23:19 | 23° ≈ 12'38 | 0°27'00 |
| minimum elong | 9485 Aug 24 05:02 | 9° m 58′24 | 0°14'34 | max. Earth dist. | 9491 Feb 07 20:08 | 22° ≈ 58′04 | 6.50171 AU |
| behind sun begin | 9485 Aug 24 01:30 | 9° m ,56′17 | | morning rise | 9491 Feb 21 20:52 | 25° ≈ 58'12 | |
| behind sun end | 9485 Aug 24 08:33 | 10° m 00'32 | | | 9491 Mar 13 03:33 | 0° ∀ | |
| max. Earth dist. | 9485 Aug 26 00:04 | 10° m 24'31 | 5.92654 AU | retrograde | 9491 Jun 22 06:41 | 12°) €33'59 | |
| morning rise | 9485 Sep 06 19:51 | 13° Mp 16'04 | | opposition | 9491 Aug 22 07:15 | 7°) (40′30 | |
| | 9485 Nov 27 08:43 | 0 ்⊽ | | min. Earth dist. | 9491 Aug 23 10:36 | 7°) 31'46 | 4.48312 AU |
| retrograde | 9486 Jan 16 04:07 | 3° ჲ 50'32 | | direct | 9491 Oct 24 00:23 | 2° ₩ 39'14 | |
| | 9486 Mar 07 12:57 | 30°R Mp | | evening set | 9492 Feb 26 03:12 | 19° ¥ 56'43 | |
| asc. node | 9486 Mar 14 04:51 | 29° Mp 06'17 | | max. Earth dist. | 9492 Mar 07 22:50 | 22° ∺ 17'37 | 6.44294 AU |
| min. Earth dist. | 9486 Mar 15 02:28 | 28° Mp 58'56 | 3.97284 AU | | | | |
| opposition | 9486 Mar 16 14:06 | 28° Mp 46'49 | 0°00'16 | conjunction | 9492 Mar 09 23:27 | 22°) 44'05 | 0°04'49 |
| direct | 9486 May 13 15:36 | 23° Mp 50'28 | | minimum elong | 9492 Mar 09 23:28 | 22°) 44'06 | 0°04'53 |
| | 9486 Jul 16 06:59 | 0∘ ರ | | behind sun begin | 9492 Mar 09 15:42 | 22°) 39′53 | |
| evening set | 9486 Sep 17 13:00 | 13° ≏ 26'19 | | behind sun end | 9492 Mar 10 07:14 | 22°) 48'18 | |
| | | | | morning rise | 9492 Mar 22 18:04 | 25°) 30′48 | |
| conjunction | 9486 Oct 01 04:29 | 16° ≏ 38'54 | 0°14'08 | | 9492 Apr 12 21:22 | $0^{\circ}\mathbf{\Upsilon}$ | |
| minimum elong | 9486 Oct 01 04:28 | 16° ≏ 38'53 | 0°14'13 | desc. node | 9492 May 27 18:56 | 8° Y 08'11 | |
| behind sun begin | 9486 Oct 01 00:38 | 16° ≏ 36'38 | | retrograde | 9492 Jul 22 08:49 | 12° Y 32′59 | |
| behind sun end | 9486 Oct 01 08:18 | 16° ≏ 41'08 | | opposition | 9492 Sep 21 08:07 | 7° Y 40'05 | |
| max. Earth dist. | 9486 Oct 03 15:21 | 17° ≏ 13'33 | 6.03937 AU | min. Earth dist. | 9492 Sep 22 22:21 | 7° Y 27'51 | 4.38465 AU |
| morning rise | 9486 Oct 14 21:20 | 19° £ 51'50 | | direct | 9492 Nov 22 16:16 | 2°Υ39'39 | |
| _ | 9486 Nov 30 03:06 | 0°M | | evening set | 9493 Mar 27 22:20 | 20° Y 28′06 | |
| retrograde | 9487 Feb 20 12:02 | 9°M24'03 | | max. Earth dist. | 9493 Apr 07 09:31 | 22° Y 48'36 | 6.31134 AU |
| min. Earth dist. | 9487 Apr 19 15:03 | 4°M32'43 | 4.11933 AU | _ | | | |
| opposition | 9487 Apr 21 04:19 | 4°M20'06 | 0°39'36 | conjunction | 9493 Apr 09 17:04 | 23° Y 19'48 | |
| | 9487 May 30 12:22 | 30° ₹ Ω | | minimum elong | 9493 Apr 09 17:03 | 23° Y 19'48 | 0°19'19 |
| direct | 9487 Jun 19 04:38 | 29° £ 21′28 | | morning rise | 9493 Apr 22 10:38 | 26° Y 11'18 | |
| | 9487 Jul 08 23:09 | 0°M | | | 9493 May 09 18:02 | 0°8 | |
| | 9487 Oct 09 17:10 | 15°M | | retrograde | 9493 Aug 24 15:17 | 14° 8 08'44 | |
| | | | | | | | |

| annagitian | 0402 Oct 24 07:57 | 9° 8 15'11 | 0944102 | direct | 9499 Jun 24 04:00 | 4°M21'12 | |
|------------------|----------------------------------------|---------------------------------|-------------|------------------|----------------------------------------|---------------------------|------------|
| opposition | 9493 Oct 24 07:57 | | | direct | | | |
| min. Earth dist. | 9493 Oct 25 22:37 | _ | 4.22770 AU | | 9499 Sep 21 12:23 | 15°M | |
| direct | 9493 Dec 24 16:03 | 4° 8 16'28 | | evening set | 9499 Oct 28 16:35 | 22°M59'26 | |
| | 9494 Mar 24 15:57 | 15° 8 | | | | | |
| evening set | 9494 Apr 29 08:05 | 22° 8 52'47 | | conjunction | 9499 Nov 11 05:58 | 26°M02'24 | 0°38'26 |
| max. Earth dist. | 9494 May 10 02:51 | 25° 8 23'19 | 6.14108 AU | minimum elong | 9499 Nov 11 05:57 | 26°M02'23 | 0°38'42 |
| | | | | max. Earth dist. | 9499 Nov 13 07:52 | 26°M30'29 | 6.23142 AU |
| conjunction | 9494 May 12 03:36 | 25° 8 51'47 | -0°38'29 | morning rise | 9499 Nov 24 19:15 | 29°M04'54 | |
| minimum elong | 9494 May 12 03:35 | 25° 8 51'46 | 0°38'44 | | 9499 Nov 28 22:19 | 0° ∡ ¹ | |
| morning rise | 9494 May 24 23:29 | 28° 8 51'15 | | retrograde | 9500 Mar 29 12:42 | 17° √ 11'19 | |
| | 9494 May 29 22:16 | $\Pi^{\circ}0$ | | opposition | 9500 May 28 17:41 | 12° ₹ 09'52 | 1°04'21 |
| retrograde | 9494 Sep 29 14:55 | 18° Ⅲ 03′21 | | min. Earth dist. | 9500 May 27 16:08 | 12° ∡ 18′22 | 4.31421 AU |
| opposition | 9494 Nov 28 19:46 | 13° Ⅱ 08'00 | -1°05'47 | direct | 9500 Jul 28 05:47 | 7° ₹ 09'12 | |
| min. Earth dist. | 9494 Nov 29 21:57 | 12° Ⅱ 59'27 | 4.05692 AU | evening set | 9500 Dec 01 05:46 | 24° ₹ 59'24 | |
| direct | 9495 Jan 27 19:04 | 8° Ⅱ 11'26 | | <i>8</i> | | | |
| evening set | 9495 Jun 03 00:00 | 27° I I40'16 | | conjunction | 9500 Dec 14 14:42 | 27° х 53'57 | 0°45'53 |
| evening sec | 9495 Jun 12 16:21 | 0°9 | | minimum elong | 9500 Dec 14 14:42 | 27° х 53'57 | 0°46'13 |
| | 7475 Juli 12 10.21 | 0 | | max. Earth dist. | 9500 Dec 14 14:42 9500 Dec 15 16:59 | 28°×708'17 | 6.38787 AU |
| aaniumatian | 0405 Jun 15 24:00 | 000540105 | 0945120 | max. Earth dist. | 9500 Dec 13 16:39 9500 Dec 24 06:14 | 28 × 08 17 0° る | 0.38787 AU |
| conjunction | 9495 Jun 15 24:00 | 0°548'05 | | | | | |
| minimum elong | 9495 Jun 15 24:00 | 0°548'05 | 0°45'50 | morning rise | 9500 Dec 27 22:02 | 0°る47'33 | |
| max. Earth dist. | 9495 Jun 15 01:48 | 0° © 34'41 | 5.98531 AU | retrograde | 9501 Apr 28 21:52 | 17° る 55'38 | |
| morning rise | 9495 Jun 29 01:19 | 3° © 56'57 | | opposition | 9501 Jun 28 13:19 | 12° る 57'36 | 1°04'46 |
| retrograde | 9495 Nov 06 22:37 | 24°©19'43 | | min. Earth dist. | 9501 Jun 28 05:21 | 13° る 00'12 | 4.44561 AU |
| opposition | 9496 Jan 05 13:40 | 19° © 21'35 | -1°04'15 | direct | 9501 Aug 29 05:42 | 7° る 56'10 | |
| min. Earth dist. | 9496 Jan 05 17:01 | 19° 5 20'28 | 3.93202 AU | evening set | 9502 Jan 01 19:26 | 25° る 14'31 | |
| direct | 9496 Mar 04 04:39 | 14° © 26'46 | | | | | |
| | 9496 Jun 20 00:37 | $0 {\circ} \Omega$ | | conjunction | 9502 Jan 14 23:02 | 28° ප 03'13 | 0°40'10 |
| evening set | 9496 Jul 08 21:57 | 4° Ω 31'28 | | minimum elong | 9502 Jan 14 23:03 | 28° ප 03'13 | 0°40'28 |
| C | | | | max. Earth dist. | 9502 Jan 14 18:13 | 28° ろ 00'38 | 6.48500 AU |
| conjunction | 9496 Jul 22 04:43 | 7° Ω 46'23 | -0°35'11 | | 9502 Jan 24 01:15 | 0° ≈ | |
| minimum elong | 9496 Jul 22 04:44 | 7° Ω 46'24 | 0°35'28 | morning rise | 9502 Jan 28 00:45 | 0°≈50'52 | |
| max. Earth dist. | 9496 Jul 22 18:40 | 7° Ω 54'56 | 5.90391 AU | morning rise | 9502 Apr 17 17:08 | 15° ≈ | |
| morning rise | 9496 Aug 04 14:01 | 11° Ω 02'42 | 3.70371710 | retrograde | 9502 May 28 13:57 | 17°≈28'15 | |
| morning risc | • | 11 80 02 42 | | renograde | 9502 Jul 08 12:48 | 17 ≈28 13 15°R≈ | |
| | 9496 Aug 21 01:39 9496 Nov 09 20:23 | | | | | • | 0949100 |
| | | 0° mp | | opposition | 9502 Jul 28 11:27 | 12°≈33'09 | 0°48'09 |
| retrograde | 9496 Dec 14 19:24 | 1° m 57'44 | | min. Earth dist. | 9502 Jul 29 00:17 | 12°≈29'01 | 4.50349 AU |
| | 9497 Jan 18 18:15 | 30°R€ | | direct | 9502 Sep 28 23:59 | 7° ≈ 31'33 | |
| min. Earth dist. | 9497 Feb 11 06:18 | 27° Ω 03'42 | 3.90467 AU | | 9502 Dec 14 05:25 | 15° ≈ | |
| opposition | 9497 Feb 12 04:44 | 26° Ω 56'07 | -0°36'09 | evening set | 9503 Feb 01 04:23 | 24° ≈ 39'28 | |
| direct | 9497 Apr 11 01:58 | 22° Ω 01'15 | | max. Earth dist. | 9503 Feb 12 20:15 | 27° ≈ 09'04 | 6.49949 AU |
| | 9497 Jun 22 21:06 | 0° mp | | | | | |
| evening set | 9497 Aug 16 01:57 | 12°Mp06'24 | | conjunction | 9503 Feb 14 03:38 | 27° ≈ 25'54 | 0°23'59 |
| | | | | minimum elong | 9503 Feb 14 03:39 | 27° ≈ 25'54 | 0°24'10 |
| conjunction | 9497 Aug 29 15:10 | 15° m 23'00 | -0°10'28 | | 9503 Feb 26 03:24 | 0° ∀ | |
| minimum elong | 9497 Aug 29 15:10 | 15° m 23'00 | 0°10'34 | morning rise | 9503 Feb 27 00:44 | 0° ℋ 11'23 | |
| behind sun begin | 9497 Aug 29 08:42 | 15° Mp 19'06 | | retrograde | 9503 Jun 27 11:43 | 16°) 48'48 | |
| behind sun end | 9497 Aug 29 21:39 | 15° Mp 26'54 | | opposition | 9503 Aug 27 13:04 | 11°) 55′26 | 0°19'22 |
| max. Earth dist. | 9497 Aug 31 14:24 | 15° m 51'36 | 5.93322 AU | min. Earth dist. | 9503 Aug 28 18:01 | 11°){ 46′10 | 4.47437 AU |
| morning rise | 9497 Sep 12 06:38 | 18° m) 40'36 | | direct | 9503 Oct 29 05:16 | 6°) 54'11 | |
| morning not | 9497 Nov 01 20:53 | 0ಂ ಹ | | evening set | 9504 Mar 02 08:42 | 24°) 14'42 | |
| retrograde | 9498 Jan 21 09:01 | ა _ 9° ჲ 09'40 | | max. Earth dist. | 9504 Mar 13 03:08 | 26° H 35'23 | 6.42823 AU |
| asc. node | | 9° £ 09'35 | | max. Earth dist. | 9304 Mai 13 03.00 | 20 13323 | 0.42823 AU |
| | 9498 Jan 22 05:48 | | 2.00721 ATT | | 0504 M 15 04.45 | 279 1 02120 | 0001124 |
| min. Earth dist. | 9498 Mar 20 06:20 | 4° £ 18'04 | 3.98721 AU | conjunction | 9504 Mar 15 04:45 | 27°) €02'30 | 0°01'24 |
| opposition | 9498 Mar 21 18:53 | 4° £ 05'38 | 0°06'24 | minimum elong | 9504 Mar 15 04:44 | 27° ₩ 02'30 | 0°01'27 |
| | 9498 Apr 26 13:17 | 30°R, Mp | | behind sun begin | 9504 Mar 14 20:45 | 26° ∺ 58′09 | |
| direct | 9498 May 18 23:16 | 29° Mp 08'54 | | behind sun end | 9504 Mar 15 12:43 | 27° ₩ 06'50 | |
| | 9498 Jun 10 10:25 | 0∘ ⊽ | | morning rise | 9504 Mar 27 22:55 | 29°) 49′39 | |
| evening set | 9498 Sep 22 19:28 | 18° ≏ 39'02 | | | 9504 Mar 28 17:59 | 0 ° $\mathbf{\Upsilon}$ | |
| | | | | desc. node | 9504 Apr 06 20:14 | 1° Y 57'38 | |
| conjunction | 9498 Oct 06 11:08 | 21° ≏ 50'41 | 0°17'52 | retrograde | 9504 Jul 27 20:31 | 16° Ƴ 58′01 | |
| minimum elong | 9498 Oct 06 11:07 | 21° ≏ 50'40 | 0°17'59 | opposition | 9504 Sep 26 19:15 | 12° Y 05'08 | -0°15'30 |
| max. Earth dist. | 9498 Oct 09 00:34 | 22° ≏ 26'39 | 6.05994 AU | min. Earth dist. | 9504 Sep 28 10:45 | 11° Y 52'31 | 4.36475 AU |
| morning rise | 9498 Oct 20 03:46 | 25° ≏ 02'32 | | direct | 9504 Nov 28 01:05 | 7° Ƴ 04'55 | |
| 0* | 9498 Nov 10 23:30 | 0°M | | evening set | 9505 Apr 02 08:21 | 24° Y 59'34 | |
| retrograde | 9499 Feb 25 06:29 | 14°M24'01 | | max. Earth dist. | 9505 Apr 12 17:48 | 27° Υ 19'56 | 6.28762 AU |
| min. Earth dist. | 9499 Apr 24 10:55 | 9°M32'54 | 4.14362 AU | Darm dist. | | _, 11750 | 3.23,02710 |
| opposition | 9499 Apr 26 00:38 | 9°M20'10 | 0°44'03 | conjunction | 9505 Apr 15 02:55 | 27° Ƴ 52'11 | 0022122 |
| оррознин | 7777 Apr 20 00.38 | > 11620 10 | U TT UJ | conjunction | 7505 Apr 15 02.55 | 41 J411 | 0 22 22 |
| | | | | | | | |

| minimum elong | 9505 Apr 15 02:54 | 27° Ƴ 52'11 | 0°22'31 | morning rise | 9510 Oct 26 07:13 | 0°M06'05 | |
|-------------------|-------------------|----------------------------------|------------|-----------------------------------|----------------------------------------|----------------------|--------------------|
| minimum ciong | 9505 Apr 24 13:18 | 0° 8 | 0 22 31 | morning risc | 9511 Jan 08 17:04 | 15°M | |
| morning rise | 9505 Apr 27 20:47 | 0° 8 44'44 | | retrograde | 9511 Mar 02 20:57 | 19°M15'44 | |
| morning 1150 | 9505 Jul 10 04:17 | 15° 8 | | rouogrado | 9511 Apr 25 19:08 | 15°RM | |
| retrograde | 9505 Aug 30 12:30 | 18° 8 52'19 | | min. Earth dist. | 9511 Apr 30 05:18 | 14°M24'20 | 4.17085 AU |
| | 9505 Oct 22 03:33 | 15° R 8 | | opposition | 9511 May 01 17:38 | 14°M12'05 | 0°48'01 |
| opposition | 9505 Oct 30 03:25 | 13° 8 58'34 | -0°48'06 | direct | 9511 Jun 30 02:17 | 9° ጤ 12'49 | |
| min. Earth dist. | 9505 Oct 31 17:08 | 13° 8 46'23 | 4.20169 AU | | 9511 Sep 01 08:30 | 15°M | |
| direct | 9505 Dec 30 07:25 | 9° 8 00'05 | | evening set | 9511 Nov 03 11:43 | 27°M42'43 | |
| | 9506 Mar 04 23:41 | 15° ∀ | | | 9511 Nov 13 17:31 | 0° ≯ ¹ | |
| evening set | 9506 May 05 01:19 | 27° 8 44'40 | | | | | |
| | 9506 May 14 16:48 | $\Pi^{\circ}0$ | | conjunction | 9511 Nov 17 00:39 | 0° х 44′18 | 0°40'16 |
| max. Earth dist. | 9506 May 16 00:17 | 0° Ⅱ 18′28 | 6.11508 AU | minimum elong | 9511 Nov 17 00:38 | 0° ₰ ′44'18 | 0°40'33 |
| | | | | max. Earth dist. | 9511 Nov 19 00:39 | 1° ₰ 11'10 | 6.25797 AU |
| conjunction | 9506 May 17 21:27 | 0°耳45′00 | -0°40'21 | morning rise | 9511 Nov 30 12:57 | 3° ҂ 45′18 | |
| minimum elong | 9506 May 17 21:26 | 0° Ⅱ 44'59 | 0°40'38 | retrograde | 9512 Apr 02 19:33 | 21° ₹ 41'25 | |
| morning rise | 9506 May 30 17:48 | 3° Ⅱ 45'51 | | min. Earth dist. | 9512 Jun 01 02:52 | 16° ₰ ⁴48'15 | 4.33791 AU |
| retrograde | 9506 Oct 05 22:30 | 23° Ⅱ 09'37 | | opposition | 9512 Jun 02 02:14 | 16° ₰ ′40′30 | 1°05'30 |
| opposition | 9506 Dec 05 00:34 | 18° Ⅱ 14'02 | -1°07'10 | direct | 9512 Aug 01 18:52 | 11° ₹ 39'43 | |
| min. Earth dist. | 9506 Dec 06 00:22 | | 4.03339 AU | evening set | 9512 Dec 05 16:53 | 29° х 23′47 | |
| direct | 9507 Feb 02 18:40 | 13° Ⅱ 17'51 | | | 9512 Dec 08 11:56 | 8°0 | |
| | 9507 May 27 21:47 | 0ంల | | | | | |
| evening set | 9507 Jun 09 02:13 | 2°954'04 | | conjunction | 9512 Dec 19 00:54 | 2° る 17'15 | |
| max. Earth dist. | 9507 Jun 21 08:19 | 5° © 51'53 | 5.96653 AU | minimum elong | 9512 Dec 19 00:54 | 2° る 17'15 | 0°46'08 |
| | | | | max. Earth dist. | 9512 Dec 19 21:12 | 2° る 28'17 | 6.40687 AU |
| conjunction | 9507 Jun 22 02:55 | 6° ≤ 03'09 | | morning rise | 9513 Jan 01 07:34 | 5° る 09'49 | |
| minimum elong | 9507 Jun 22 02:56 | 6° © 03'09 | 0°45'26 | retrograde | 9513 May 03 01:06 | 22° る 11'42 | |
| morning rise | 9507 Jul 05 05:29 | 9° © 13'25 | | opposition | 9513 Jul 02 17:10 | 17° る 14'07 | 1°03'20 |
| retrograde | 9507 Nov 13 09:39 | 29° © 44'31 | | min. Earth dist. | 9513 Jul 02 13:06 | 17° る 15'27 | 4.45885 AU |
| opposition | 9508 Jan 12 00:32 | 24°9545'55 | | direct | 9513 Sep 02 13:55 | 12°る12'36 | |
| min. Earth dist. | 9508 Jan 11 22:59 | 24°5946'26 | 3.92047 AU | evening set | 9514 Jan 06 00:58 | 29° ට 28'12 | |
| direct | 9508 Mar 10 11:01 | 19° 9 51'17 | | | 9514 Jan 08 12:47 | 0° ≈ | |
| | 9508 Jun 02 00:27 | 0° Ω 9° Ω 58'52 | | | 0514 I 10 04:05 | 291 (125 | 0929126 |
| evening set | 9508 Jul 15 06:51 | 9- 81 5852 | | conjunction | 9514 Jan 19 04:05 9514 Jan 19 04:06 | 2°≈16'25 | 0°38'26 0°38'45 |
| conjunction | 9508 Jul 28 14:42 | 13° Ω 14'27 | 0922121 | minimum elong max. Earth dist. | 9514 Jan 19 04:06 9514 Jan 18 20:04 | 2°≈16'26 2°≈12'08 | 6.49161 AU |
| minimum elong | 9508 Jul 28 14:44 | $13^{\circ} \Omega 14'27$ | | morning rise | 9514 Feb 01 04:57 | 5°≈03'34 | 0.49101 AU |
| max. Earth dist. | 9508 Jul 29 11:14 | $13^{\circ} \Omega 27'01$ | 5.90106 AU | morning risc | 9514 Mar 23 19:56 | 15°≈ | |
| max. Lartii dist. | 9508 Aug 04 19:05 | 15° Ω | 3.90100 AC | retrograde | 9514 Jun 01 14:50 | 21°≈39'28 | |
| morning rise | 9508 Aug 11 00:57 | 16° Ω 31'22 | | opposition | 9514 Aug 01 14:19 | 16° ≈ 44'42 | 0°44'45 |
| morning 1150 | 9508 Oct 10 21:17 | 0° m) | | min. Earth dist. | 9514 Aug 02 05:05 | 16° ≈ 39'57 | 4.50332 AU |
| retrograde | 9508 Dec 21 06:50 | 7° m) 26'09 | | | 9514 Aug 15 11:18 | 15°R≈ | |
| opposition | 9509 Feb 18 15:00 | 2° m/24'05 | -0°30'32 | direct | 9514 Oct 03 03:21 | 11° ≈ 43'08 | |
| min. Earth dist. | 9509 Feb 17 14:15 | | 3.91098 AU | | 9514 Nov 20 18:14 | 15° ≈ | |
| | 9509 Mar 09 04:38 | 30° ₽ Ω | | evening set | 9515 Feb 05 08:31 | 28° ≈ 52'01 | |
| direct | 9509 Apr 17 13:12 | 27° Ω 29'05 | | | 9515 Feb 10 15:46 | 0° ∀ | |
| | 9509 May 26 12:21 | 0° m | | max. Earth dist. | 9515 Feb 16 20:16 | 1°) (19′44 | 6.49255 AU |
| evening set | 9509 Aug 22 11:30 | 17° m 30'35 | | | | | |
| | | | | conjunction | 9515 Feb 18 07:11 | 1°) 38′30 | 0°21'07 |
| conjunction | 9509 Sep 05 01:23 | 20° Mp 46'46 | -0°06'24 | minimum elong | 9515 Feb 18 07:12 | 1°) 38′30 | 0°21'18 |
| minimum elong | 9509 Sep 05 01:23 | 20° Mp 46'46 | 0°06'29 | morning rise | 9515 Mar 03 03:50 | 4° ¥ 24'05 | |
| behind sun begin | 9509 Sep 04 17:31 | 20° My $42'02$ | | retrograde | 9515 Jul 01 18:38 | 21°) 04'40 | |
| behind sun end | 9509 Sep 05 09:15 | 20° m 51'29 | | opposition | 9515 Aug 31 19:07 | 16°) 1 1′30 | 0°14'43 |
| max. Earth dist. | 9509 Sep 07 05:33 | 21°Mp18'12 | 5.94795 AU | min. Earth dist. | 9515 Sep 02 02:59 | 16° ∺ 01'19 | 4.46108 AU |
| morning rise | 9509 Sep 18 17:16 | 24° Mp 03'49 | | direct | 9515 Nov 02 11:46 | 11° ∺ 10′21 | |
| | 9509 Oct 14 04:48 | 0∘ ಹ | | desc. node | 9516 Feb 15 04:41 | 24° ∺ 14'28 | |
| asc. node | 9509 Dec 02 22:09 | 9° ≏ 42'56 | | evening set | 9516 Mar 06 14:50 | 28°) 35′17 | |
| retrograde | 9510 Jan 27 10:48 | 14° £ 24'10 | | | 9516 Mar 13 02:00 | 0° Υ | |
| min. Earth dist. | 9510 Mar 26 07:36 | 9° £ 33'00 | 4.00862 AU | max. Earth dist. | 9516 Mar 17 06:00 | 0° Y 54'50 | 6.40950 AU |
| opposition | 9510 Mar 27 21:47 | 9° £ 20'01 | 0°12'22 | | | | |
| direct | 9510 May 25 03:51 | 4° £ 23'01 | | conjunction | 9516 Mar 19 10:34 | 1° Y 23'41 | |
| evening set | 9510 Sep 28 23:25 | 23° ≏ 45'13 | | minimum elong | 9516 Mar 19 10:34 | 1° Υ 23'41 | 0°02'02 |
| | 0510.0 : 12 14 15 | 260 2 550 | 0021122 | behind sun begin | 9516 Mar 19 02:35 | 1° Υ 19'19 | |
| conjunction | 9510 Oct 12 14:45 | 26° £ 55'34 | | behind sun end | 9516 Mar 19 18:33 | 1°Υ28'02 | |
| minimum elong | 9510 Oct 12 14:44 | 26° £ 55'34 | | morning rise | 9516 Apr 01 04:43 | 4°Υ11'31 | |
| max. Earth dist. | 9510 Oct 15 02:40 | 27° Ω 30'27 | 6.08561 AU | retrograde | 9516 Aug 01 09:49 | 21° Y 27'28 | 0020124 |
| | 9510 Oct 25 20:40 | 0° M | | opposition | 9516 Oct 01 07:57 | 16° Ƴ 34'30 | -U ZUZ4 |

| min. Earth dist. direct | 9516 Oct 02 23:13 9516 Dec 02 10:17 | 16° Ƴ 21'55 11° Ƴ 34'27 | 4.34181 AU | evening set | 9522 Oct 04 00:36 9522 Oct 09 13:09 | 28° ≏ 43'32 0° ™ | |
|----------------------------|----------------------------------------|------------------------------------------|-------------|---------------------------------|----------------------------------------|------------------------------------------|------------|
| evening set | 9517 Apr 06 19:44 | 29° Ƴ 36'11 | | | | | |
| | 9517 Apr 08 14:01 | 0° 8 | | conjunction | 9522 Oct 17 15:56 | 1°M52'44 | |
| max. Earth dist. | 9517 Apr 17 07:33 | 1° 8 58'39 | 6.26230 AU | minimum elong | 9522 Oct 17 15:55 | 1°M52'44 | 0°24'52 |
| agniumation | 0517 Apr 10 14:29 | 2° 8 29'51 | 0°25!24 | max. Earth dist. | 9522 Oct 20 03:49 | 2°M27'24 5°M01'55 | 6.10964 AU |
| conjunction minimum elong | 9517 Apr 19 14:28 9517 Apr 19 14:27 | | | morning rise | 9522 Oct 31 07:51 9522 Dec 16 15:23 | 15°M | |
| morning rise | 9517 May 02 08:23 | 5° 8 23'28 | 0 23 33 | retrograde | 9523 Mar 07 11:20 | 24°ML00'43 | |
| morning rise | 9517 Jun 16 13:06 | 15° 8 | | min. Earth dist. | 9523 May 04 21:44 | 19°ML09'03 | 4.19520 AU |
| retrograde | 9517 Sep 04 12:13 | 23° 8 41'41 | | opposition | 9523 May 06 08:20 | 18°ML57'25 | 0°51'37 |
| opposition | 9517 Nov 04 01:07 | 18° 8 47'47 | -0°51'51 | ** | 9523 Jun 09 14:48 | 15°RM | |
| min. Earth dist. | 9517 Nov 05 13:55 | 18° 8 35'53 | 4.17590 AU | direct | 9523 Jul 04 21:41 | 13°M57'54 | |
| | 9517 Dec 07 13:13 | 15° ₹ 8 | | | 9523 Jul 30 09:44 | 15°M | |
| direct | 9518 Jan 04 00:55 | 13° 8 49'39 | | | 9523 Oct 28 13:01 | 0° ∡ ¹ | |
| | 9518 Jan 31 09:26 | 15° 8 | | evening set | 9523 Nov 08 05:08 | 2° ∡ 120'47 | |
| | 9518 Apr 28 04:45 | $\Pi^{\circ}0$ | | | | | |
| evening set | 9518 May 09 20:38 | 2° Ⅱ 42'04 | | conjunction | 9523 Nov 21 17:23 | 5° х 21′09 | 0°41'50 |
| max. Earth dist. | 9518 May 20 21:59 | 5° Ⅱ 18'10 | 6.09106 AU | minimum elong | 9523 Nov 21 17:22 | 5° ₹ 21'08 | 0°42'09 |
| | | _ | | max. Earth dist. | 9523 Nov 23 13:13 | 5° ∡ ¹45'33 | 6.28055 AU |
| conjunction | 9518 May 22 17:06 | 5° Ⅱ 43'37 | | morning rise | 9523 Dec 05 05:06 | 8° ∡ 120'55 | |
| minimum elong | 9518 May 22 17:05 | 5° Ⅱ 43'36 | 0°42'15 | retrograde | 9524 Apr 07 01:41 | 26° ₹ 08'26 | |
| morning rise | 9518 Jun 04 14:17 | 8° Ⅱ 45'50 | | opposition | 9524 Jun 06 10:06 | 21° х 07'58 | 1°06'18 |
| retrograde | 9518 Oct 11 05:29 | 28° Ⅲ 20'11 23° Ⅲ 24'11 | 1909101 | min. Earth dist. | 9524 Jun 05 13:15 | 21° ₹ 14'52 16° ₹ 07'01 | 4.35716 AU |
| opposition | 9518 Dec 10 06:33 | | 4.01348 AU | direct | 9524 Aug 06 06:38 | 16°×'0/'01 0°る | |
| min. Earth dist. direct | 9518 Dec 11 02:07 9519 Feb 07 19:12 | 23° П 17'45 18° П 28'15 | 4.01348 AU | evening set | 9524 Nov 22 07:50 9524 Dec 10 03:25 | 0°る 3° る 46'27 | |
| direct | 9519 May 09 21:34 | 10 п 2013 | | evening set | 9324 Dec 10 03.23 | 3 04027 | |
| evening set | 9519 Jun 14 05:18 | 8°910'10 | | conjunction | 9524 Dec 23 10:54 | 6° る 39'05 | 0°45'28 |
| evening set | 7517 Juli 14 05.10 | 0 31010 | | minimum elong | 9524 Dec 23 10:54 | 6° る 39'06 | 0°45'48 |
| conjunction | 9519 Jun 27 07:00 | 11° 5 20'19 | -0°44'19 | max. Earth dist. | 9524 Dec 24 04:07 | 6° ප 48'25 | 6.42153 AU |
| minimum elong | 9519 Jun 27 07:01 | 11°520'19 | 0°44'39 | morning rise | 9525 Jan 05 16:35 | 9° ට 30'44 | |
| max. Earth dist. | 9519 Jun 26 19:03 | 11°513'03 | 5.95277 AU | retrograde | 9525 May 07 04:08 | 26° る 27'52 | |
| morning rise | 9519 Jul 10 10:26 | 14° © 31'38 | | opposition | 9525 Jul 06 21:27 | 21° る 30'48 | 1°01'35 |
| | 9519 Sep 21 09:03 | $0^{\circ}\Omega$ | | min. Earth dist. | 9525 Jul 06 19:49 | 21° る 31'20 | 4.46814 AU |
| retrograde | 9519 Nov 18 21:43 | 5° Ω 08'27 | | direct | 9525 Sep 06 20:49 | 16° る 29'19 | |
| opposition | 9520 Jan 17 10:50 | 0° Ω 09'18 | -0°58'39 | | 9525 Dec 23 11:46 | 0° ≈ | |
| min. Earth dist. | 9520 Jan 17 06:24 | 0° Ω 10'48 | 3.91437 AU | evening set | 9526 Jan 10 07:36 | 3° ≈ 43′21 | |
| | 9520 Jan 18 14:39 | 30° ₹ 5 | | | | | |
| direct | 9520 Mar 15 19:27 | 25° © 14'44 | | conjunction | 9526 Jan 23 09:55 | 6° ≈ 31'12 | 0°36'30 |
| | 9520 May 09 13:19 | $0^{\circ}\Omega$ | | minimum elong | 9526 Jan 23 09:56 | 6°≈31'12 | 0°36'46 |
| | 9520 Jul 19 01:03 | 15° Ω | | max. Earth dist. | 9526 Jan 22 20:27 | 6°≈23'59 | 6.49487 AU |
| evening set | 9520 Jul 20 14:32 | 15° Ω 22'47 | | morning rise | 9526 Feb 05 10:18 | 9°≈18'01 | |
| conjunction | 9520 Aug 02 23:21 | 18° Ω 38'43 | 0920115 | retrograde | 9526 Mar 05 01:46 9526 Jun 05 20:10 | 15° ≈ 25° ≈ 53'29 | |
| minimum elong | 9520 Aug 02 23:23 9520 Aug 02 23:23 | 18°Ω38'44 | 0°29'29 | opposition | 9526 Aug 05 18:55 | 23 ≈53 29 20°≈59'03 | 0°41'03 |
| max. Earth dist. | 9520 Aug 04 01:26 | 18° Ω 54'40 | | min. Earth dist. | 9526 Aug 06 12:57 | 20°≈53'16 | 4.50058 AU |
| morning rise | 9520 Aug 16 10:35 | 21°Ω55'58 | 3.90307 110 | direct | 9526 Oct 07 09:46 | 15°≈57'33 | 4.30030710 |
| | 9520 Sep 19 22:58 | 0° m) | | | 9527 Jan 25 16:48 | 0°) € | |
| retrograde | 9520 Dec 26 14:20 | 12° m/ 48'09 | | evening set | 9527 Feb 09 13:58 | 3°) €08'04 | |
| opposition | 9521 Feb 23 22:31 | 7° m) 45'40 | -0°24'44 | max. Earth dist. | 9527 Feb 20 23:07 | 5°) 34'41 | 6.48409 AU |
| min. Earth dist. | 9521 Feb 22 18:39 | 7° m 55'07 | 3.92097 AU | | | | |
| direct | 9521 Apr 22 19:59 | 2° m/50'27 | | conjunction | 9527 Feb 22 12:19 | 5°) 54'43 | 0°18'04 |
| evening set | 9521 Aug 27 18:34 | 22° m 47'12 | | minimum elong | 9527 Feb 22 12:20 | 5°) 54'43 | 0°18'14 |
| | | | | morning rise | 9527 Mar 07 08:28 | 8°) 40′28 | |
| conjunction | 9521 Sep 10 08:45 | 26° Mp 02'44 | | retrograde | 9527 Jul 06 01:59 | 25° ∺ 24'49 | |
| minimum elong | 9521 Sep 10 08:44 | 26° Mp 02'44 | 0°02'23 | opposition | 9527 Sep 05 03:18 | 20°) 31′48 | 0°09'52 |
| behind sun begin | 9521 Sep 10 00:21 | 25° m 57'44 | | min. Earth dist. | 9527 Sep 06 11:31 | 20° H 21'31 | 4.44768 AU |
| behind sun end | 9521 Sep 10 17:07 | 26° Mp 07'44 | 5.06450 133 | direct | 9527 Nov 06 17:38 | 15°) 30'54 | |
| max. Earth dist. | 9521 Sep 12 13:52 | 26° M) 34'37 | 5.96458 AU | desc. node | 9527 Dec 24 23:44 | 18° ¥ 47'18 0° Ƴ | |
| morning rise | 9521 Sep 24 01:06 | 29° Mp 19'07 0° <u> </u> | | ovening set | 9528 Feb 26 00:19 9528 Mar 10 22:36 | 3° Υ 00'08 | |
| asc. node | 9521 Sep 26 21:58 9521 Oct 12 09:56 | 3° £ 37'02 | | evening set max. Earth dist. | 9528 Mar 10 22:36 9528 Mar 21 13:34 | 5° Υ 20'09 | 6.39229 AU |
| retrograde | 9522 Feb 01 08:16 | 19° £ 30′20 | | max. Earm uist. | 7520 IVIAI 21 15.54 | J 12009 | 0.37447 AU |
| min. Earth dist. | 9522 Mar 31 06:46 | 19 ⊆ 30 20 14° ⊆ 39'12 | 4.02989 AU | conjunction | 9528 Mar 23 18:01 | 5° Ƴ 49'04 | -0°05'31 |
| opposition | 9522 Apr 01 21:20 | 14° £ 26'04 | 0°18'08 | minimum elong | 9528 Mar 23 18:01 | | 0°05'32 |
| direct | 9522 May 30 06:39 | 9° £ 28'43 | | behind sun begin | 9528 Mar 23 10:21 | 5° Υ 44'52 | - |
| | - | | | · · | | | |

| behind sun end | 9528 Mar 24 01:41 | 5° Y 53'17 | | opposition | 9534 Apr 06 15:18 | 19° Ω 19'01 | 0°23'28 |
|------------------|--------------------|---------------------|--------------|----------------------------|--------------------|---------------------|------------|
| morning rise | 9528 Apr 05 11:56 | 8° Ƴ 37'31 | | direct | 9534 Jun 04 04:16 | 14° ≏ 21'21 | |
| retrograde | 9528 Aug 06 01:56 | 26° Y ′00′38 | | | 9534 Sep 23 09:59 | 0°M₊ | |
| opposition | 9528 Oct 05 22:35 | 21° Y 07'43 | -0°25'19 | evening set | 9534 Oct 08 20:27 | 3°M29'52 | |
| min. Earth dist. | 9528 Oct 07 14:33 | 20° Ƴ 54'55 | 4.32200 AU | | | | |
| direct | 9528 Dec 06 23:01 | 16° Ƴ 08'01 | | conjunction | 9534 Oct 22 11:31 | 6° ™ 38′03 | 0°27'42 |
| | 9529 Mar 23 03:10 | 8° | | minimum elong | 9534 Oct 22 11:30 | 6°M38′02 | 0°27'53 |
| evening set | 9529 Apr 11 08:19 | 4° 8 15'37 | | max. Earth dist. | 9534 Oct 24 21:30 | 7°M11'26 | 6.13005 AU |
| max. Earth dist. | 9529 Apr 21 20:27 | 6°₩38'59 | 6.24159 AU | morning rise | 9534 Nov 05 03:13 | 9° ጤ 46'10 | |
| | r | | | <i>y y y y y y y y y y</i> | 9534 Nov 28 14:17 | 15° ™ | |
| conjunction | 9529 Apr 24 03:01 | 7° 8 10'07 | -0°28'19 | retrograde | 9535 Mar 11 19:47 | 28°M35'57 | |
| minimum elong | 9529 Apr 24 03:00 | 7°810'07 | | min. Earth dist. | 9535 May 09 09:13 | 23°M44'12 | 4.21493 AU |
| _ | - | | 0 28 29 | | • | | |
| morning rise | 9529 May 06 21:14 | 10° 8 04'41 | | opposition | 9535 May 10 18:44 | 23°M32'56 | 0°54'45 |
| | 9529 May 29 00:03 | 15° 8 | | direct | 9535 Jul 09 11:11 | 18°M33'11 | |
| retrograde | 9529 Sep 09 10:27 | 28° 8 31'56 | | | 9535 Oct 11 16:49 | 0° ∡ | |
| opposition | 9529 Nov 08 23:03 | 23° 8 37'48 | -0°55'17 | evening set | 9535 Nov 12 18:49 | 6° ₹ 50'49 | |
| min. Earth dist. | 9529 Nov 10 08:54 | 23° 8 26'50 | 4.15603 AU | | | | |
| direct | 9530 Jan 08 17:53 | 18° 8 40'01 | | conjunction | 9535 Nov 26 06:35 | 9° ∡ 750′14 | 0°43'07 |
| | 9530 Apr 10 17:37 | $\Pi^{\circ}0$ | | minimum elong | 9535 Nov 26 06:35 | 9° ∡ 750'14 | 0°43'25 |
| evening set | 9530 May 14 15:13 | 7° Ⅱ 38'09 | | max. Earth dist. | 9535 Nov 27 23:07 | 10° √ 12'44 | 6.29825 AU |
| max. Earth dist. | 9530 May 25 22:05 | 10° Ⅱ 18'04 | 6.07383 AU | morning rise | 9535 Dec 09 17:32 | 12° ∡ °48'57 | |
| max. Earth dist. | 7550 May 25 22.05 | 10 11001 | 0.07505710 | morning rise | 9536 Mar 24 15:17 | 0°る | |
| | 0520 M 27, 12-10 | 10° Ⅱ 40'38 | 0042115 | 4 1- | | 0° る 29'41 | |
| conjunction | 9530 May 27 12:10 | | | retrograde | 9536 Apr 11 07:16 | | |
| minimum elong | 9530 May 27 12:09 | 10° Ⅱ 40′38 | 0°43'34 | | 9536 Apr 28 19:21 | 30°₹ ৴ | |
| morning rise | 9530 Jun 09 09:49 | 13° Ⅱ 43'51 | | opposition | 9536 Jun 10 15:26 | | 1°06'43 |
| | 9530 Aug 29 20:56 | 0 \circ 6 | | min. Earth dist. | 9536 Jun 09 21:28 | 25° ∡ ³35'38 | 4.37164 AU |
| retrograde | 9530 Oct 16 11:47 | 3° 5 26'18 | | direct | 9536 Aug 10 16:00 | 20° ∡ ¹28'39 | |
| | 9530 Dec 03 20:09 | 30°R Ⅱ | | | 9536 Nov 04 23:12 | 8°0 | |
| opposition | 9530 Dec 15 10:45 | 28° Ⅲ 29'55 | -1°08'19 | evening set | 9536 Dec 14 11:56 | 8° る 04'51 | |
| min. Earth dist. | 9530 Dec 16 04:04 | 28° Ⅲ 24'12 | 4.00056 AU | _ | | | |
| direct | 9531 Feb 12 20:20 | 23° Ⅲ 34'16 | | conjunction | 9536 Dec 27 18:42 | 10° る 56'51 | 0°44'53 |
| | 9531 Apr 19 03:51 | 0°9 | | minimum elong | 9536 Dec 27 18:43 | 10° る 56'51 | 0°45'14 |
| ovening set | 9531 Jun 19 05:26 | 13°919'14 | | max. Earth dist. | 9536 Dec 28 07:28 | 10 3 03144 | 6.43183 AU |
| evening set | 9331 Juli 19 03.20 | 13 501914 | | | | | 0.43163 AU |
| | 0.501 X 1 00 05 50 | 1.60-2010.6 | 00.4044.5 | morning rise | 9537 Jan 09 23:50 | 13° ප් 47'51 | |
| conjunction | 9531 Jul 02 07:53 | 16° © 30'06 | | | 9537 Apr 20 04:55 | 0° ≈ | |
| minimum elong | 9531 Jul 02 07:54 | 16°ഇ30'06 | 0°43'35 | retrograde | 9537 May 11 06:56 | 0° ≈ 41'30 | |
| max. Earth dist. | 9531 Jul 02 00:26 | 16° © 25'33 | 5.94541 AU | | 9537 Jun 01 06:55 | 30°Ŗる | |
| morning rise | 9531 Jul 15 12:18 | 19° 5 42'13 | | opposition | 9537 Jul 11 00:44 | 25° る 44'47 | 0°59'33 |
| | 9531 Aug 29 14:40 | $0^{\circ}\Omega$ | | min. Earth dist. | 9537 Jul 11 01:28 | 25° る 44'33 | 4.47393 AU |
| retrograde | 9531 Nov 24 03:21 | 10° Ω 22'03 | | direct | 9537 Sep 11 02:04 | 20° ප් 43'13 | |
| opposition | 9532 Jan 22 16:21 | 5° Ω 22'29 | -0°55'13 | | 9537 Dec 06 04:06 | 0° ≈ | |
| min. Earth dist. | 9532 Jan 22 08:01 | 5°Ω25'16 | 3.91370 AU | evening set | 9538 Jan 14 12:46 | 7°≈56'24 | |
| direct | 9532 Mar 20 22:06 | 0° Ω 27'56 | 3.91370110 | evening sec | 7550 Juli 11 12:10 | 7 70 30 2 1 | |
| direct | 9532 Jul 02 06:12 | 15° Ω | | conjunction | 9538 Jan 27 14:40 | 10° ≈ 44'00 | 0°34'23 |
| . , | | | | , | | | |
| evening set | 9532 Jul 25 17:32 | 20° Ω 34'48 | | minimum elong | 9538 Jan 27 14:41 | 10° ≈ 44′00 | 0°34'39 |
| | | | | max. Earth dist. | 9538 Jan 26 23:28 | 10° ≈ 35'51 | 6.49588 AU |
| conjunction | 9532 Aug 08 03:01 | 23° Ω 50'49 | | morning rise | 9538 Feb 09 14:17 | 13° ≈ 30′32 | |
| minimum elong | 9532 Aug 08 03:03 | 23° Ω 50'49 | 0°26'17 | | 9538 Feb 16 15:29 | 15° ≈ | |
| max. Earth dist. | 9532 Aug 09 07:52 | 24° Ω 08'26 | 5.90899 AU | | 9538 Jun 01 23:12 | 0° ∀ | |
| morning rise | 9532 Aug 21 15:09 | 27° Ω 08'09 | | retrograde | 9538 Jun 09 23:06 | 0° 米 05′59 | |
| | 9532 Sep 02 13:32 | 0° m) | | | 9538 Jun 17 23:13 | 30°R≈ | |
| retrograde | 9532 Dec 31 14:12 | 17° m/56'27 | | opposition | 9538 Aug 09 22:57 | 25°≈11'47 | 0°37'11 |
| opposition | 9533 Feb 28 23:49 | 12° m 53'36 | -0°19'02 | min. Earth dist. | 9538 Aug 10 18:21 | 25°≈05'34 | 4.49681 AU |
| min. Earth dist. | 9533 Feb 27 18:18 | | 3.93278 AU | direct | 9538 Oct 11 13:55 | 20°≈10'20 | , 001110 |
| | | 7° Mp 58'06 | 3.93276 AU | direct | 9539 Jan 08 15:58 | 0° \ | |
| direct | 9533 Apr 27 22:19 | | | | | | |
| asc. node | 9533 Aug 23 20:21 | 25° m/42'41 | | evening set | 9539 Feb 13 18:44 | 7°) (22'17 | |
| evening set | 9533 Sep 01 19:39 | 27° m 49'57 | | max. Earth dist. | 9539 Feb 25 00:10 | 9°) (47′17 | 6.47563 AU |
| | 9533 Sep 10 21:47 | 0∘ ⊽ | | | | | |
| | | | | conjunction | 9539 Feb 26 16:26 | 10° ₩ 09'01 | 0°14'58 |
| conjunction | 9533 Sep 15 10:23 | 1° ≙ 04'55 | 0°01'39 | minimum elong | 9539 Feb 26 16:26 | 10°) €09'02 | 0°15'07 |
| minimum elong | 9533 Sep 15 10:23 | 1° ≙ 04'55 | 0°01'38 | behind sun begin | 9539 Feb 26 13:38 | 10°) €07'32 | |
| behind sun begin | 9533 Sep 15 01:59 | 0° £ 59'55 | | behind sun end | 9539 Feb 26 19:14 | 10° ℋ 10'32 | |
| behind sun end | 9533 Sep 15 18:46 | 1° ♀ 09'54 | | morning rise | 9539 Mar 11 12:17 | 12°) 54'57 | |
| max. Earth dist. | 9533 Sep 17 18:00 | 1° £ 38'09 | 5.98114 AU | retrograde | 9539 Jul 10 10:37 | 29°) (42'43 | |
| morning rise | 9533 Sep 29 02:48 | 4° £ 20'33 | 2.2.2.1.1.10 | opposition | 9539 Sep 09 10:49 | 24°) (42'44 | 0°05'00 |
| retrograde | 9534 Feb 06 02:37 | 24° £ 23'13 | | min. Earth dist. | 9539 Sep 10 21:10 | 24°) (4944 | 4.43478 AU |
| - | | | 4.04022 411 | | - | | 7.734/0 AU |
| min. Earth dist. | 9534 Apr 05 01:33 | 19° ≙ 31'50 | 4.04932 AU | desc. node | 9539 Nov 04 04:11 | 19° ∺ 53'09 | |

| direct | 9539 Nov 11 01:06 | 19° ¥ 48'51 | | opposition | 9545 Mar 06 04:03 | 18° m 08'06 | 0012102 |
|-------------------|----------------------------------------|-------------------------------------|--------------|------------------|----------------------------------------|---------------------------------|------------|
| direct | 9540 Feb 09 00:46 | 0° Υ | | direct | 9545 May 03 02:52 | 13° M) 12'25 | -0 13 03 |
| evening set | 9540 Mar 15 05:07 | 7° Υ 21'52 | | asc. node | 9545 Jul 03 15:49 | 19° m 03'17 | |
| max. Earth dist. | 9540 Mar 25 18:58 | 9° Υ 41'48 | 6.37560 AU | ase. Houe | 9545 Aug 25 05:13 | 0° ರ | |
| max. Dartii dist. | 75 10 Mai 25 10.50 | 7 1 11 10 | 0.57500110 | evening set | 9545 Sep 07 00:39 | ა — 3° ჲ 00'26 | |
| conjunction | 9540 Mar 28 00:23 | 10° Y 11'21 | -0°08'52 | evening sec | >0.0 Sep 07 00.5> | 2 —0020 | |
| minimum elong | 9540 Mar 28 00:23 | 10° Υ 11'21 | 0°08'55 | conjunction | 9545 Sep 20 15:38 | 6° £ 14'50 | 0°05'39 |
| behind sun begin | 9540 Mar 27 17:31 | 10° Y ′07'34 | 0 0022 | minimum elong | 9545 Sep 20 15:38 | 6° £ 14'50 | 0°05'40 |
| behind sun end | 9540 Mar 28 07:14 | 10° Y 15′07 | | behind sun begin | 9545 Sep 20 07:36 | 6° £ 10′05 | |
| morning rise | 9540 Apr 09 18:08 | 13° Y ′00′22 | | behind sun end | 9545 Sep 20 23:40 | 6° ₽ 19'36 | |
| 8 | 9540 Jul 23 14:26 | 0°8 | | max. Earth dist. | 9545 Sep 23 00:27 | 6° £ 48'38 | 5.99608 AU |
| retrograde | 9540 Aug 10 14:52 | 0° 8 30'20 | | morning rise | 9545 Oct 04 08:27 | 9° ഫ 29'53 | |
| C | 9540 Aug 28 16:36 | 30° ₹Ƴ | | retrograde | 9546 Feb 10 22:11 | 29° ≏ 24'17 | |
| opposition | 9540 Oct 10 11:53 | 25° Ƴ 37'14 | -0°30'02 | min. Earth dist. | 9546 Apr 09 21:36 | 24° £ 33'20 | 4.06847 AU |
| min. Earth dist. | 9540 Oct 12 02:51 | 25° Y ′24'44 | 4.30233 AU | opposition | 9546 Apr 11 12:26 | 24° ≏ 20'09 | 0°28'48 |
| direct | 9540 Dec 11 08:08 | 20° Ƴ 37'43 | | direct | 9546 Jun 09 03:36 | 19° ≙ 22'14 | |
| | 9541 Mar 05 12:06 | 9° 8 | | | 9546 Sep 05 08:53 | 0°M | |
| evening set | 9541 Apr 15 19:24 | 8° 8 51'05 | | evening set | 9546 Oct 13 20:21 | 8°M24'39 | |
| max. Earth dist. | 9541 Apr 26 09:26 | 11° 8 16'14 | 6.22022 AU | | | | |
| | | | | conjunction | 9546 Oct 27 11:11 | 11°M31'45 | 0°30'37 |
| conjunction | 9541 Apr 28 14:09 | 11° 8 46'29 | -0°31'01 | minimum elong | 9546 Oct 27 11:10 | 11°MJ31'44 | 0°30'50 |
| minimum elong | 9541 Apr 28 14:08 | 11° 8 46'28 | 0°31'13 | max. Earth dist. | 9546 Oct 29 19:38 | 12°M04'06 | 6.15189 AU |
| morning rise | 9541 May 11 08:34 | 14° 8 42'01 | | morning rise | 9546 Nov 10 02:23 | 14°M38'40 | |
| | 9541 May 12 16:07 | 15° 8 | | | 9546 Nov 11 16:00 | 15° M ₊ | |
| | 9541 Jul 29 07:11 | $\Pi^{\circ}0$ | | | 9547 Jan 28 17:06 | 0° ∡ ¹ | |
| retrograde | 9541 Sep 14 10:09 | 3° Ⅱ 18'45 | | retrograde | 9547 Mar 16 09:25 | 3° ҂ 18'44 | |
| | 9541 Nov 01 07:09 | 30° ₹ 8 | | | 9547 May 02 03:57 | 30°RM₊ | |
| opposition | 9541 Nov 13 20:04 | 28° 8 24'22 | | min. Earth dist. | 9547 May 14 00:56 | 28°M26'40 | 4.23750 AU |
| min. Earth dist. | 9541 Nov 15 05:22 | 28° 8 13'34 | 4.13427 AU | opposition | 9547 May 15 08:22 | 28°M16'07 | 0°57'39 |
| direct | 9542 Jan 13 11:28 | 23° 8 26'51 | | direct | 9547 Jul 14 05:44 | 23°M16'12 | |
| | 9542 Mar 21 17:11 | $\Pi^{\circ}0$ | | | 9547 Sep 21 16:46 | 0° ∡ ¹ | |
| evening set | 9542 May 19 09:06 | 12° Ⅱ 31'31 | | evening set | 9547 Nov 17 11:18 | 11° ∡ ¹27'29 | |
| max. Earth dist. | 9542 May 30 18:56 | 15° Ⅱ 13'56 | 6.05361 AU | | | | |
| | | | | conjunction | 9547 Nov 30 22:29 | 14° ∡ ¹25'45 | 0°44'11 |
| conjunction | 9542 Jun 01 06:37 | 15° Ⅱ 35'10 | | minimum elong | 9547 Nov 30 22:28 | 14° ∡ ¹25'45 | 0°44'30 |
| minimum elong | 9542 Jun 01 06:36 | 15° Ⅱ 35'09 | 0°44'33 | max. Earth dist. | 9547 Dec 02 12:56 | 14° ≯ 47'00 | 6.31999 AU |
| morning rise | 9542 Jun 14 05:02 | 18° Ⅱ 39'36 | | morning rise | 9547 Dec 14 08:40 | 17° ∡ 23'16 | |
| | 9542 Aug 04 17:33 | 0ංම | | | 9548 Feb 17 01:45 | 0° ठ | |
| retrograde | 9542 Oct 21 16:00 | 8° 9 31'17 | | retrograde | 9548 Apr 15 12:08 | 4°る55'45 | |
| opposition | 9542 Dec 20 14:24 | 3° © 34'33 | | opposition | 9548 Jun 14 22:45 | 29° ∡ 56'12 | 1°06'47 |
| min. Earth dist. | 9542 Dec 21 04:04 | | 3.98396 AU | min. Earth dist. | 9548 Jun 14 05:57 | 0° ට 01'44 | 4.39121 AU |
| | 9543 Jan 20 00:18 | 30°Ŗ Ⅱ | | | 9548 Jun 14 11:13 | 30°Ŗ ⋌ ¹ | |
| direct | 9543 Feb 17 18:31 | 28° Ⅱ 39'08 | | direct | 9548 Aug 15 02:13 | 24° ₹ 55'06 | |
| | 9543 Mar 18 10:03 | 0.ee | | | 9548 Oct 14 19:13 | 0°る | |
| evening set | 9543 Jun 24 06:35 | 18° © 29'01 | | evening set | 9548 Dec 18 21:26 | 12° る 26'15 | |
| | 0542 1 1 07 00 54 | 2106 40151 | 0041140 | | 0540 1 01 02 20 | 150-715110 | 0044106 |
| conjunction | 9543 Jul 07 09:54 | 21°540'51 | | conjunction | 9549 Jan 01 03:28 | 15° る 17'19 | |
| minimum elong | 9543 Jul 07 09:55 9543 Jul 07 06:40 | 21°9540'52 | | minimum elong | 9549 Jan 01 03:28 | 15° る 17'19 | 0°44'26 |
| max. Earth dist. | 9543 Jul 20 15:26 | 21°938'53 | 5.93405 AU | max. Earth dist. | 9549 Jan 01 12:55 | 15° る 22'25 | 6.44798 AU |
| morning rise | | 24°954'01 | | morning rise | 9549 Jan 14 07:40 | 18°る07'21 0°≈ | |
| | 9543 Aug 11 02:33 9543 Nov 09 15:46 | 0° Ω 15° Ω | | retrograde | 9549 Mar 17 10:31 9549 May 15 09:39 | 0°≈ 4°≈55'44 | |
| ratragrada | 9543 Nov 29 11:26 | 15° Ω 38'38 | | opposition | 9549 Jul 15 04:14 | 4 ≈33 44 29° る 59'27 | 0°57'15 |
| retrograde | 9543 Dec 19 05:29 | 15 ° €38 38 | | min. Earth dist. | 9549 Jul 15 07:45 | 29° る 58'18 | 4.48567 AU |
| opposition | 9544 Jan 27 23:11 | 13 ₹87 10° Ω 38'35 | 0°51'18 | min. Earth dist. | 9549 Jul 15 02:31 | 29 038 18 30°Rる | 4.46307 AU |
| min. Earth dist. | 9544 Jan 27 11:54 | | 3.90887 AU | direct | 9549 Sep 15 09:02 | 30 KG 24° る 57'53 | |
| direct | 9544 Mar 26 03:22 | 5° Ω 43'59 | 3.7000 / AU | direct | 9549 Nov 15 11:21 | 24 O 3733 | |
| 311000 | 9544 Jun 13 07:43 | 15° Ω | | evening set | 9550 Jan 18 17:21 | 0 ≈ 12°≈08'18 | |
| evening set | 9544 Jul 30 22:53 | 25° Ω 51'32 | | evening set | /550 Jan 10 1/.21 | 12 ~00 10 | |
| ovening set | /JTT 301 JU 44.JJ | 20 000132 | | conjunction | 9550 Jan 31 18:27 | 14° ≈ 55'22 | 0°32'10 |
| conjunction | 9544 Aug 13 09:30 | 29° Ω 07'56 | -0°22'36 | minimum elong | 9550 Jan 31 18:28 | 14 ≈55'22 | 0°32'25 |
| minimum elong | 9544 Aug 13 09:31 | $29^{\circ} \Omega 0756$ | | max. Earth dist. | 9550 Jan 30 22:28 | 14 ≈33 22 14°≈44'40 | 6.50224 AU |
| max. Earth dist. | 9544 Aug 14 20:03 | $29^{\circ}\Omega 29'00$ | | max. Darm dist. | 9550 Feb 01 03:07 | 14 ∞44 40 15°≈ | 0.50227 AU |
| Zurur dist. | 9544 Aug 16 22:53 | 0° m) | 2.,1132.110 | morning rise | 9550 Feb 13 17:31 | 17°≈41'26 | |
| morning rise | 9544 Aug 26 22:23 | 2° m) 25'31 | | | 9550 Apr 20 09:56 | 0° \ | |
| retrograde | 9545 Jan 05 19:32 | 23° m) 11'12 | | retrograde | 9550 Jun 14 01:24 | 4° | |
| min. Earth dist. | 9545 Mar 04 21:05 | - | 3.94197 AU | | 9550 Aug 09 00:45 | 30°R≈ | |
| | | | 2.5 .15, .10 | | | * | |

| opposition | 0550 Aug 14 01:24 | 29° ≈ 21'25 | 0°33'14 | | 9555 Oct 02 10:01 | 15° Ω | |
|--------------------------------|---------------------|------------------------|-------------|-------------------|-------------------|---------------------------------------|------------|
| opposition min. Earth dist. | 9550 Aug 14 01:34 | 29 ≈21 23 29°≈14'22 | | | | 13 δι 20° Ω 59'52 | |
| | 9550 Aug 14 23:32 | | 4.49741 AU | retrograde | 9555 Dec 04 22:05 | | 00.47100 |
| direct | 9550 Oct 15 17:30 | 24°≈19'56 | | opposition | 9556 Feb 02 07:30 | 15° Ω 59'20 | |
| | 9550 Dec 20 00:14 | 0°) { | | min. Earth dist. | 9556 Feb 01 17:15 | 16° Ω 04'08 | 3.90103 AU |
| evening set | 9551 Feb 17 21:00 | 11°) 32'06 | C 48000 AXX | | 9556 Feb 09 16:57 | 15°R Ω | |
| max. Earth dist. | 9551 Mar 01 00:36 | 13° A 56'16 | 6.47029 AU | direct | 9556 Mar 31 08:35 | 11° Ω 04'43 | |
| | | | | | 9556 May 19 15:08 | 15° Ω | |
| conjunction | 9551 Mar 02 18:23 | 14°) 18'51 | 0°11'54 | | 9556 Jul 31 04:21 | 0° m) | |
| minimum elong | 9551 Mar 02 18:24 | 14° 米 18′52 | 0°12'01 | evening set | 9556 Aug 05 06:58 | 1° Mp 14'03 | |
| behind sun begin | 9551 Mar 02 12:55 | 14° ¥ 15'55 | | | | | |
| behind sun end | 9551 Mar 02 23:53 | 14° ∺ 21'49 | | conjunction | 9556 Aug 18 18:23 | 4° ™ 30'51 | |
| morning rise | 9551 Mar 15 13:38 | 17°) €04'47 | | minimum elong | 9556 Aug 18 18:25 | 4° m) 30'52 | 0°19'08 |
| | 9551 May 23 09:53 | 0° Υ | | max. Earth dist. | 9556 Aug 20 08:42 | 4° m) 54'11 | 5.91172 AU |
| retrograde | 9551 Jul 14 14:48 | 3° Y 55'22 | | morning rise | 9556 Sep 01 08:24 | 7° m 48'53 | |
| | 9551 Sep 06 02:13 | 30° ₹ | | retrograde | 9557 Jan 11 00:45 | 28° m 32'01 | |
| opposition | 9551 Sep 13 15:54 | 29° ₩ 02'25 | 0°00'18 | min. Earth dist. | 9557 Mar 09 23:52 | 23° Mp 40'10 | 3.95066 AU |
| min. Earth dist. | 9551 Sep 15 03:19 | 28° ∺ 51′06 | 4.42361 AU | opposition | 9557 Mar 11 10:04 | 23° m 28'33 | -0°06'57 |
| desc. node | 9551 Sep 16 22:41 | 28° ∺ 37'17 | | direct | 9557 May 08 09:06 | 18° m 32'33 | |
| direct | 9551 Nov 15 04:20 | 24° ∺ 01'38 | | asc. node | 9557 May 13 15:15 | 18° m 35'25 | |
| | 9552 Jan 20 16:35 | 0 ° Υ | | | 9557 Aug 06 20:57 | 0∘ ত | |
| evening set | 9552 Mar 19 08:57 | 11° Y 38'06 | | evening set | 9557 Sep 12 08:13 | 8° ≏ 16'42 | |
| max. Earth dist. | 9552 Mar 29 20:28 | 13° Ƴ 57'17 | 6.35912 AU | | | | |
| | | | | conjunction | 9557 Sep 25 23:34 | 11° ≏ 30′29 | 0°09'36 |
| conjunction | 9552 Apr 01 03:50 | 14° Y ′28'04 | -0°12'04 | minimum elong | 9557 Sep 25 23:34 | 11° ≏ 30′29 | 0°09'38 |
| minimum elong | 9552 Apr 01 03:49 | 14° Y 28'03 | 0°12'08 | behind sun begin | 9557 Sep 25 16:41 | 11° ≏ 26′26 | |
| behind sun begin | 9552 Mar 31 22:23 | 14° Ƴ 25′03 | | behind sun end | 9557 Sep 26 06:26 | 11° ≏ 34'32 | |
| behind sun end | 9552 Apr 01 09:16 | 14° Y 31'04 | | max. Earth dist. | 9557 Sep 28 10:15 | 12° ♀ 05'17 | 6.01209 AU |
| morning rise | 9552 Apr 13 21:34 | 17° Ƴ 17'41 | | morning rise | 9557 Oct 09 16:28 | 14° ≏ 44'46 | |
| - | 9552 Jun 17 12:34 | 0°B | | | 9557 Dec 23 07:54 | 0° M . | |
| retrograde | 9552 Aug 15 04:04 | 4° 8 54'54 | | retrograde | 9558 Feb 15 20:46 | 4°M30'05 | |
| opposition | 9552 Oct 14 22:54 | 0° 8 01'39 | -0°34'26 | · · | 9558 Apr 12 06:45 | 30° ₹ Ω | |
| | 9552 Oct 15 04:02 | 30° ₹ Υ | | min. Earth dist. | 9558 Apr 14 21:15 | 29° ₽ 38'52 | 4.08962 AU |
| min. Earth dist. | 9552 Oct 16 15:12 | 29° Ƴ 48'42 | 4.28124 AU | opposition | 9558 Apr 16 11:31 | 29° ₽ 25'53 | 0°33'55 |
| direct | 9552 Dec 15 16:50 | 25° Y ′02'14 | | direct | 9558 Jun 14 07:12 | 24° ≏ 27'34 | |
| | 9553 Feb 12 15:47 | 0°8 | | | 9558 Aug 14 07:51 | 0° M | |
| evening set | 9553 Apr 20 04:18 | 13° 8 22'11 | | evening set | 9558 Oct 18 21:38 | 13°M22'42 | |
| e venning sec | 9553 Apr 27 06:51 | 15° 8 | | evening sec | 9558 Oct 26 00:48 | 15°M | |
| max. Earth dist. | 9553 Apr 30 18:43 | 15° 8 48'18 | 6.19612 AU | | | | |
| man zarm and. | 7000 Tipi 00 To. 15 | 10 0 10 10 | 0.17012110 | conjunction | 9558 Nov 01 12:11 | 16°ML28'34 | 0°33'19 |
| conjunction | 9553 May 02 23:21 | 16° 8 18'38 | -0°33'27 | minimum elong | 9558 Nov 01 12:10 | 16°M28'33 | 0°33'34 |
| minimum elong | 9553 May 02 23:20 | 16° 8 18'38 | | max. Earth dist. | 9558 Nov 03 20:54 | 17°ML00'53 | 6.17607 AU |
| morning rise | 9553 May 15 18:05 | 19° 8 15'19 | 0 33 11 | morning rise | 9558 Nov 15 02:46 | 19°MJ34'07 | 0.17007710 |
| morning rise | 9553 Jul 05 02:08 | 0°II | | morning 1130 | 9559 Jan 03 18:01 | 0° ⊼ | |
| retrograde | 9553 Sep 19 06:14 | 8° Ⅱ 02'43 | | retrograde | 9559 Mar 20 21:06 | 8° ∡ ¹03'22 | |
| opposition | 9553 Nov 18 15:12 | 3° П 08'04 | -1°00'58 | opposition | 9559 May 19 22:49 | 3°×701'01 | 1°00'08 |
| min. Earth dist. | 9553 Nov 19 22:32 | | 4.10900 AU | min. Earth dist. | 9559 May 18 15:49 | 3° ∡ 0101 3° ∡ 11'23 | 4.26222 AU |
| iiiii. Lattii dist. | 9553 Dec 14 18:04 | 30°R ႘ | 4.10700 AC | min. Lattii dist. | 9559 Jun 13 06:59 | 30°RM | 4.20222 AU |
| direct | 9554 Jan 18 00:42 | 28° 8 10'47 | | direct | 9559 Jul 18 23:43 | 28°M00'51 | |
| uncet | 9554 Feb 21 01:16 | 0°Ⅱ | | direct | 9559 Aug 24 02:37 | 0° √ | |
| evening set | 9554 May 24 02:15 | 17° Ⅱ 23'40 | | evening set | 9559 Nov 22 04:27 | 16° ∡ 104'55 | |
| • | | | 6.02933 AU | evening set | 9339 NOV 22 04.27 | 10 × 04 33 | |
| max. Earth dist. | 9554 Jun 04 15:27 | 20 д08 38 | 0.02933 AU | aaniumatian | 9559 Dec 05 14:47 | 100.701154 | 0944157 |
| : | 0554 I 0(00:22 | 200 T 20141 | 0044155 | conjunction | | 19° 🗷 01'54 | 0°44'57 |
| conjunction | 9554 Jun 06 00:23 | 20° Ⅱ 28'41 | | minimum elong | 9559 Dec 05 14:47 | 19° √ 01'54 | 0°45'17 |
| minimum elong | 9554 Jun 06 00:23 | 20° Ⅱ 28'40 | 0°45'15 | max. Earth dist. | 9559 Dec 07 00:40 | 19° 🗷 20'32 | 6.34306 AU |
| morning rise | 9554 Jun 18 23:45 | 23° Ⅱ 34'36 | | morning rise | 9559 Dec 19 00:10 | 21° ₹ ′58′06 | |
| | 9554 Jul 16 17:51 | 0°© | | | 9560 Jan 26 17:35 | 0°る | |
| retrograde | 9554 Oct 26 22:28 | 13°937'26 | | retrograde | 9560 Apr 19 19:11 | 9° る 22'03 | |
| opposition | 9554 Dec 25 18:15 | 8°9540'15 | | opposition | 9560 Jun 19 06:35 | 4°る22'56 | 1°06'26 |
| min. Earth dist. | 9554 Dec 26 05:22 | | 3.96296 AU | min. Earth dist. | 9560 Jun 18 17:19 | 4°る27'17 | 4.41075 AU |
| direct | 9555 Feb 22 18:43 | 3°544'59 | | T | 9560 Jul 30 07:03 | 30°₹ ⋌ 7 | |
| evening set | 9555 Jun 29 08:29 | 23° © 41'32 | | direct | 9560 Aug 19 15:26 | 29° х 21'40 | |
| | | | 004045 | | 9560 Sep 09 03:39 | 0°る | |
| conjunction | 9555 Jul 12 13:04 | 26°\$54'40 | | evening set | 9560 Dec 23 07:20 | 16° る 47'56 | |
| minimum elong | 9555 Jul 12 13:05 | 26°\$54'41 | 0°40'24 | | | | |
| max. Earth dist. | 9555 Jul 12 15:59 | | 5.91863 AU | conjunction | 9561 Jan 05 12:40 | 19° る 38'09 | 0°43'02 |
| morning rise | 9555 Jul 25 19:42 | 0° Ω 09'05 | | minimum elong | 9561 Jan 05 12:41 | 19° る 38'09 | 0°43'21 |
| | 9555 Jul 25 04:43 | $0 {\circ} \Omega$ | | max. Earth dist. | 9561 Jan 05 18:15 | 19° る 41'08 | 6.46247 AU |
| | | | | | | | |

| minimum elong | 9571 Dec 10 03:42 | 23° ∡ ³30'49 | 0°45'47 | direct | 9578 Jan 27 20:57 | 8° Ⅱ 14'15 | |
|----------------------------------------|----------------------------------------|-----------------------------------------|------------------------|--------------------------------|----------------------------------------|------------------------------------------|-----------------------|
| max. Earth dist. | 9571 Dec 10 03:42 9571 Dec 11 10:45 | 23° х 3049 23° х 47'49 | 6.36542 AU | evening set | 9578 Jun 03 02:33 | 27° Ⅱ 42'11 | |
| morning rise | 9571 Dec 11 10:43 9571 Dec 23 12:04 | 26° × 25'44 | 0.30342 AU | evening set | 9578 Jun 12 15:46 | 0°95 | |
| morning risc | 9571 Dec 23 12:04 9572 Jan 09 05:01 | 20 x 25 44 0°る | | max. Earth dist. | 9578 Jun 15 01:59 | | 5.98871 AU |
| retrograde | 9572 Apr 23 21:32 | 13°₹41'52 | | max. Earth dist. | 7576 Juli 15 01.57 | 0 333 08 | 3.76671 AC |
| opposition | 9572 Jun 23 11:35 | 8°중43'13 | 1°05'44 | conjunction | 9578 Jun 16 02:14 | 0° © 49'45 | -0°45'18 |
| min. Earth dist. | 9572 Jun 23 00:23 | 8° ਰ 46'54 | 4.42817 AU | minimum elong | 9578 Jun 16 02:14 | 0°949'45 | |
| direct | 9572 Aug 23 23:28 | 3°₹41'53 | 4.42017 110 | morning rise | 9578 Jun 29 03:32 | 3°958'25 | 0 43 40 |
| evening set | 9572 Dec 27 14:27 | 21° る 04'03 | | retrograde | 9578 Nov 06 20:59 | 24° © 19'21 | |
| evening see | 7572 Bec 27 11.27 | 21 00.03 | | opposition | 9579 Jan 05 13:38 | 19° © 21'18 | -1°04'18 |
| conjunction | 9573 Jan 09 18:56 | 23° ප 53'31 | 0°41'46 | min. Earth dist. | 9579 Jan 05 16:35 | 19° 5 20'19 | 3.93505 AU |
| minimum elong | 9573 Jan 09 18:57 | 23°る53'32 | 0°42'05 | direct | 9579 Mar 05 05:06 | 14°526'28 | 3.93303 110 |
| max. Earth dist. | 9573 Jan 09 18:58 | 23° る 53'32 | 6.47371 AU | ancet | 9579 Jun 21 03:21 | 0°Ω | |
| morning rise | 9573 Jan 22 21:37 | 26° ප් 41'59 | 0.17371110 | evening set | 9579 Jul 09 22:52 | 4°Ω30'20 | |
| morning rise | 9573 Feb 07 14:40 | 0°≈ | | evening set | 7577 Jul 07 22.32 | 4 063020 | |
| retrograde | 9573 May 23 15:04 | 13°≈22'43 | | conjunction | 9579 Jul 23 05:25 | 7° Ω 45'02 | -0°35'27 |
| opposition | 9573 Jul 23 11:35 | 8°≈27'10 | 0°51'41 | minimum elong | 9579 Jul 23 05:27 | 7°Ω45'02 | |
| min. Earth dist. | 9573 Jul 23 21:17 | 8°≈24'02 | 4.49887 AU | max. Earth dist. | 9579 Jul 23 19:29 | 7°Ω53'38 | 5.90637 AU |
| direct | 9573 Sep 23 21:38 | 3°≈25'33 | 4.47007 AU | morning rise | 9579 Aug 05 14:15 | 11° Ω 01'03 | 3.70037 AC |
| direct | 9573 Dec 31 02:55 | 5 ~ 25 55 | | morning risc | 9579 Aug 22 04:53 | 11° Ω 01'03 | |
| evening set | 9574 Jan 27 03:06 | 20°≈33'55 | | | 9579 Nov 11 05:32 | 0° m) | |
| max. Earth dist. | 9574 Feb 07 23:45 | 23°≈05'54 | 6.50196 AU | retrograde | 9579 Dec 15 19:26 | 1° m) 55'02 | |
| max. Earth dist. |)3/41 0 0 0/ 23.43 | 23 70.03 34 | 0.50170710 | retrograde | 9580 Jan 19 07:33 | 30°RΩ | |
| conjunction | 9574 Feb 09 03:06 | 23° ≈ 20'33 | 0°27'07 | min. Earth dist. | 9580 Feb 12 07:24 | | 3.90615 AU |
| minimum elong | 9574 Feb 09 03:07 | 23°≈20'33 | 0°27'21 | opposition | 9580 Feb 13 04:24 | 26°Ω53'32 | |
| morning rise | 9574 Feb 22 00:56 | 26°≈06'12 | 0 27 21 | direct | 9580 Apr 11 03:32 | 21° Ω 58'45 | 0 30 33 |
| morning rise | 9574 Mar 12 16:05 | 0° ∀ | | ancet | 9580 Jun 23 02:46 | 0° m | |
| retrograde | 9574 Jun 22 10:07 | 12°) (41'54 | | evening set | 9580 Aug 16 01:23 | 12° m)03'21 | |
| opposition | 9574 Aug 22 11:05 | 7°) (48'19 | 0°24'38 | evening set |)300 / lug 10 01.23 | 12 1000 21 | |
| min. Earth dist. | 9574 Aug 23 13:35 | 7° ₩ 39'50 | 4.48386 AU | conjunction | 9580 Aug 29 14:22 | 15° m 19'48 | -0°11'06 |
| direct | 9574 Oct 24 03:17 | 2° H 46'58 | 4.40300 AC | minimum elong | 9580 Aug 29 14:22 | 15° Mp 19'49 | 0°11'13 |
| evening set | 9575 Feb 26 07:04 | 20°) 04'18 | | behind sun begin | 9580 Aug 29 08:14 | 15° Mp 16'07 | 0 11 15 |
| max. Earth dist. | 9575 Mar 09 04:27 | 22°)(26'01 | 6.44426 AU | behind sun end | 9580 Aug 29 20:31 | 15° mp 23'31 | |
| max. Earth dist. | 9575 Mai 09 01.27 | 22 /(2001 | 0.11120710 | max. Earth dist. | 9580 Aug 31 14:10 | 15° Mp 48'44 | 5.93360 AU |
| conjunction | 9575 Mar 11 03:39 | 22°) 51'43 | 0°05'22 | morning rise | 9580 Sep 12 05:32 | 18°M)37'16 | 3.73300 AC |
| minimum elong | 9575 Mar 11 03:38 | 22°) 51'43 | 0°05'26 | morning rise | 9580 Nov 02 02:21 | 0° ⊡ | |
| behind sun begin | 9575 Mar 10 19:57 | 22°)(31'43' | 0 03 20 | retrograde | 9581 Jan 21 08:42 | ა _ 9° ჲ 06'33 | |
| behind sun end | 9575 Mar 11 11:20 | 22° X 55'53 | | asc. node | 9581 Feb 01 02:40 | 8° £ 54'52 | |
| morning rise | 9575 Mar 23 22:16 | 25°\(\frac{1}{33}\)35 | | min. Earth dist. | 9581 Mar 20 05:54 | | 3.98656 AU |
| morning rise | 9575 Apr 13 11:05 | 0°Υ | | opposition | 9581 Mar 21 18:50 | 4° £ 02'37 | 0°05'18 |
| desc. node | 9575 Jun 07 10:33 | 9° Υ 33'36 | | оррозион | 9581 Apr 25 22:10 | 30°RM⊅ | 0 05 10 |
| retrograde | 9575 Jul 23 12:03 | 12° Υ 39'58 | | direct | 9581 May 18 22:08 | 29° Mp 06'02 | |
| opposition | 9575 Sep 22 11:15 | 7° Υ 47'06 | -0°09'37 | direct | 9581 Jun 11 01:43 | ೨೨ ಗ್ಗ√00 02 0° ೧ | |
| min. Earth dist. | 9575 Sep 24 01:40 | 7° Υ 34'49 | 4.38656 AU | evening set | 9581 Sep 22 18:27 | 0 — 18° ≏ 36'17 | |
| direct | 9575 Nov 23 19:46 | 2° Υ 46'38 | 1.50050710 | evening sec | 2001 Sep 22 10.27 | 10 = 30 17 | |
| evening set | 9576 Mar 28 02:29 | 20° Υ 34'45 | | conjunction | 9581 Oct 06 09:48 | 21° ≏ 47'55 | 0°17'08 |
| max. Earth dist. | 9576 Apr 07 12:10 | | 6.31372 AU | minimum elong | 9581 Oct 06 09:47 | 21° ⊆ 47'54 | 0°17'15 |
| max. Darm dist. | 757071pr 07 12.10 | 22 3121 | 0.51572110 | max. Earth dist. | 9581 Oct 08 21:30 | 22° £ 22'54 | 6.05811 AU |
| conjunction | 9576 Apr 09 21:10 | 23° Y 26'24 | -0°18'36 | morning rise | 9581 Oct 20 02:31 | 24° ⊆ 59'52 | |
| minimum elong | 9576 Apr 09 21:10 | 23° Υ 26'24 | | morning rise | 9581 Nov 11 02:42 | 0°M | |
| morning rise | 9576 Apr 22 15:00 | 26° Υ 17'52 | 0 10 45 | retrograde | 9582 Feb 25 06:38 | 14°M22'45 | |
| morning rise | 9576 May 09 10:22 | 0°8 | | min. Earth dist. | 9582 Apr 24 12:10 | 9°M31'29 | 4.14076 AU |
| retrograde | 9576 Aug 24 17:55 | 14° 8 14'05 | | opposition | 9582 Apr 26 01:30 | 9°M18'51 | 0°43'04 |
| opposition | 9576 Oct 24 10:08 | 9° 8 20'34 | -0°43'11 | direct | 9582 Jun 24 04:49 | 4°M19'58 | 0 .5 0 . |
| min. Earth dist. | 9576 Oct 26 00:52 | 9° 8 08'05 | 4.23048 AU | ancet | 9582 Sep 21 13:40 | 15°M | |
| direct | 9576 Dec 24 19:15 | 4° 8 21'44 | 25510710 | evening set | 9582 Oct 28 15:55 | 22°M58'56 | |
| | 9577 Mar 24 09:39 | 15° 8 | | | | 1100000 | |
| evening set | 9577 Apr 29 11:36 | 22° 8 57'31 | | conjunction | 9582 Nov 11 05:30 | 26°M02'06 | 0°37'53 |
| max. Earth dist. | 9577 May 10 07:20 | 25° 8 28'26 | 6.14424 AU | minimum elong | 9582 Nov 11 05:39 | 26°M02'05 | 0°38'09 |
| max. Lutin dist. | 2511 may 10 01.20 | 25 02626 | 3.1 1 12 T AU | max. Earth dist. | 9582 Nov 11 03:29 9582 Nov 13 08:54 | 26°M31'04 | 6.22783 AU |
| conjunction | 9577 May 12 07:18 | 25° 8 56'25 | -0°37'58 | morning rise | 9582 Nov 24 18:40 | 29°M04'46 | 5.22765 AC |
| minimum elong | 9577 May 12 07:17 | 25° 8 56'24 | | morning 1150 | 9582 Nov 28 21:56 | 29 11€04 40 0° 🔏 | |
| morning rise | 7511 1viay 12 01.11 | | 0 00 17 | retrograde | 9583 Mar 29 14:53 | 0 x ⁴ 17° x ⁴13'05 | |
| morning HSC | 9577 May 25 02.50 | 780× | | | | | |
| _ | 9577 May 25 02:58 9577 May 29 18:06 | 28° ႘ 55'42 0°π | | - | | | 1°03'47 |
| retroorade | 9577 May 29 18:06 | $\Pi^{\circ}0$ | | opposition | 9583 May 28 19:48 | 12° ₹ 11'36 | 1°03'47 4 31014 AU |
| retrograde | 9577 May 29 18:06 9577 Sep 29 16:24 | 0° П 18° П 06'01 | -1°05'13 | opposition min. Earth dist. | 9583 May 28 19:48 9583 May 27 17:38 | 12° ⊀ 11'36 12° ≮ 20'19 | 1°03'47 4.31014 AU |
| retrograde opposition min. Earth dist. | 9577 May 29 18:06 | 0°П 18°П06'01 13°П10'50 | -1°05'13 4.06041 AU | opposition | 9583 May 28 19:48 | 12° ₹ 11'36 | |

max. Earth dist.

morning rise

9589 May 17 00:38

conjunction

0°**Д**49'55 -0°39'53

9594 Nov 17 20:01

9594 Nov 29 09:23

1°**₹**01'44

3°**х** 36′45

6.24767 AU

| retrograde | 9595 Apr 02 20:02 | 21° ₹ 37'11 | | | 9601 Jan 30 11:00 | 15° 8 |
|------------------|-------------------|---------------------|------------|------------------|-------------------|-------------------------------|
| min. Earth dist. | 9595 Jun 01 02:26 | 16° ≯ ¹44'01 | 4.32721 AU | | 9601 Apr 27 10:20 | 0°II |
| | | | | | - | 2° I I38'28 |
| opposition | 9595 Jun 02 02:15 | 16° ∡ 36′07 | 1°05'02 | evening set | 9601 May 08 20:39 | |
| direct | 9595 Aug 01 16:47 | 11° ≯ 35'23 | | max. Earth dist. | 9601 May 19 22:45 | 5° Ⅱ 14'34 6.10300 AU |
| evening set | 9595 Dec 05 16:11 | 29° ҂ 22'38 | | | | |
| | 9595 Dec 08 13:14 | 0°ರ | | conjunction | 9601 May 21 16:58 | 5° Ⅱ 39'25 -0°41'30 |
| | | | | minimum elong | 9601 May 21 16:57 | 5° Ⅱ 39'25 0°41'49 |
| conjunction | 9595 Dec 19 00:40 | 2°る16'40 | 0°45'38 | morning rise | 9601 Jun 03 13:43 | 8° Ⅱ 40'57 |
| minimum elong | 9595 Dec 19 00:40 | 2° ට 16'40 | 0°45'59 | retrograde | 9601 Oct 10 01:20 | 28° I 10'06 |
| • | | | | = | | |
| max. Earth dist. | 9595 Dec 19 23:23 | 2° る 29'02 | 6.39675 AU | opposition | 9601 Dec 09 02:10 | 23° I 14'13 -1°07'34 |
| morning rise | 9596 Jan 01 07:32 | 5° る 09'45 | | min. Earth dist. | 9601 Dec 09 23:38 | 23° Ⅱ 07'10 4.02500 AU |
| retrograde | 9596 May 02 04:30 | 22°る15'11 | | | | |
| opposition | 9596 Jul 01 19:59 | 17° る 17'31 | 1°03'22 | | | |
| min. Earth dist. | 9596 Jul 01 14:33 | 17° る 19'17 | 4.45005 AU | | | |
| direct | 9596 Sep 01 14:44 | 12° る 16'05 | | | | |
| | 9597 Jan 05 03:39 | 29° ප 34'06 | | | | |
| evening set | | | | | | |
| | 9597 Jan 07 04:18 | 0° ≈ | | | | |
| | | | | | | |
| conjunction | 9597 Jan 18 06:54 | 2° ≈ 22'41 | 0°38'35 | | | |
| minimum elong | 9597 Jan 18 06:55 | 2° ≈ 22'41 | 0°38'54 | | | |
| max. Earth dist. | 9597 Jan 17 23:00 | 2° ≈ 18'27 | 6.48472 AU | | | |
| morning rise | 9597 Jan 31 08:17 | 5°≈10'15 | 0.10172110 | | | |
| morning rise | | | | | | |
| | 9597 Mar 22 05:39 | 15° ≈ | | | | |
| retrograde | 9597 May 31 21:07 | 21° ≈ 48′13 | | | | |
| opposition | 9597 Jul 31 18:56 | 16° ≈ 53′21 | 0°45'09 | | | |
| min. Earth dist. | 9597 Aug 01 09:21 | 16° ≈ 48'43 | 4.49882 AU | | | |
| | 9597 Aug 15 20:24 | 15°R≈ | | | | |
| direct | 9597 Oct 02 07:45 | 11° ≈ 51'48 | | | | |
| direct | | | | | | |
| | 9597 Nov 18 17:21 | 15° ≈ | | | | |
| evening set | 9598 Feb 04 12:58 | 29° ≈ 01'47 | | | | |
| | 9598 Feb 09 01:58 | 0° ℋ | | | | |
| max. Earth dist. | 9598 Feb 16 03:16 | 1°) 30′51 | 6.49087 AU | | | |
| | | | | | | |
| conjunction | 9598 Feb 17 12:01 | 1° ¥ 48'27 | 0°21'29 | | | |
| minimum elong | 9598 Feb 17 12:02 | 1°) 48′27 | 0°21'40 | | | |
| • | | | 0 21 40 | | | |
| morning rise | 9598 Mar 02 08:48 | 4°) (34′10 | | | | |
| retrograde | 9598 Jun 30 22:26 | 21° ℋ 14'58 | | | | |
| opposition | 9598 Aug 30 23:48 | 16°) €21'43 | 0°15'24 | | | |
| min. Earth dist. | 9598 Sep 01 05:29 | 16°) 12′14 | 4.46250 AU | | | |
| direct | 9598 Nov 01 15:04 | 11° ¥ 20'38 | | | | |
| desc. node | 9599 Feb 23 05:10 | 26°) 15′16 | | | | |
| | | | | | | |
| evening set | 9599 Mar 06 19:37 | 28°) 44'56 | | | | |
| | 9599 Mar 12 13:21 | $0^{\circ}\Upsilon$ | | | | |
| max. Earth dist. | 9599 Mar 17 13:08 | 1° Ƴ 05'37 | 6.41398 AU | | | |
| | | | | | | |
| conjunction | 9599 Mar 19 15:27 | 1° Y 33'13 | -0°01'31 | | | |
| minimum elong | 9599 Mar 19 15:28 | 1° Y 33'13 | | | | |
| behind sun begin | 9599 Mar 19 07:29 | 1° Y 28'52 | | | | |
| behind sun end | 9599 Mar 19 23:27 | 1° Υ 37'34 | | | | |
| | | | | | | |
| morning rise | 9599 Apr 01 09:41 | 4° Y 20'55 | | | | |
| retrograde | 9599 Aug 01 13:21 | 21° Y 34'53 | | | | |
| opposition | 9599 Oct 01 11:08 | 16° Ƴ 41'58 | -0°19'32 | | | |
| min. Earth dist. | 9599 Oct 03 02:35 | 16° Ƴ 29'21 | 4.34908 AU | | | |
| direct | 9599 Dec 02 15:22 | 11° Ƴ 41'57 | | | | |
| | 9600 Apr 05 23:03 | 29° Υ 41'15 | | | | |
| evening set | - | | | | | |
| | 9600 Apr 07 08:26 | 0°8 | | | | |
| max. Earth dist. | 9600 Apr 16 10:12 | 2° 8 03'04 | 6.27183 AU | | | |
| | | | | | | |
| conjunction | 9600 Apr 18 17:43 | 2° 8 34'31 | -0°24'48 | | | |
| minimum elong | 9600 Apr 18 17:42 | 2° 8 34'31 | | | | |
| morning rise | 9600 May 01 11:42 | 5° 8 27'46 | . = . 50 | | | |
| morning 1150 | | | | | | |
| | 9600 Jun 15 10:13 | 15° 8 | | | | |
| retrograde | 9600 Sep 03 10:09 | 23° 8 41'52 | | | | |
| opposition | 9600 Nov 03 00:49 | 18° 8 48'01 | | | | |
| min. Earth dist. | 9600 Nov 04 12:38 | 18° 8 36'26 | 4.18711 AU | | | |
| | 9600 Dec 06 14:42 | 15°R ∀ | | | | |
| 1 | 0001 1 02 01 41 | 120 40140 | | | | |

direct

9601 Jan 03 01:41

13°**8**49'49