| -                     |  |  | · ·                 | •                   |  |                                    |             |
|-----------------------|--|--|---------------------|---------------------|--|------------------------------------|-------------|
| superior conj         | 2601 Jul 23 17:52                      | 0° <b>Ω</b> 59'43                        | 0°53'07             | minimum elong       | 2603 Dec 16 00:24                      | 23° <b>₹</b> 02'28                 | 0°08'37     |
| minimum elong         | 2601 Jul 23 09:16                      | 0° <b>£</b> 33'16                        |                     | transit middle      | 2603 Dec 16 00:24                      | 23° <b>×</b> *02'28                | 0°08'37     |
| g                     | 2601 Aug 16 06:48                      | 0° m)                                    | 0 02 .0             | transit begin       | 2603 Dec 15 20:54                      | 23°×02'47                          | 0 0037      |
| evening rise          | 2601 Aug 28 15:04                      | 15° <b>m</b> ) 14'31                     |                     | transit end         | 2603 Dec 16 03:54                      | 22° <b>×</b> <sup>7</sup> 57'09    |             |
| evening rise          | 2601 Sep 09 13:49                      | 0∘ <b>ಹ</b>                              |                     | min. Earth dist.    | 2603 Dec 16 02:31                      |                                    | 0.26499 AU  |
|                       | 2601 Oct 03 20:35                      | 0°M                                      |                     | morning rise        | 2603 Dec 10 02:31<br>2603 Dec 22 04:50 | 19° <b>x</b> 26'32                 | 0.20499 AU  |
| desc. node            | 2601 Oct 03 20:33<br>2601 Oct 19 05:55 | 18°M59'34                                |                     | direct              | 2604 Jan 05 12:22                      | 15° <b>×</b> 20 32                 |             |
| desc. node            |  |  |                     |                     |  |                                    | 4.0         |
|                       | 2601 Oct 28 04:09                      | 0° <b>∡</b>                              |                     | greatest brilliancy | 2604 Jan 15 16:36                      | 17° <b>₹</b> 21'23                 | -4.9m       |
|                       | 2601 Nov 21 13:20                      | ි.<br>ව°0                                |                     |                     | 2604 Feb 05 01:11                      | 0° <b>ਰ</b>                        | 4.60.5010.0 |
|                       | 2601 Dec 16 01:55                      | 0° <b>≈</b>                              |                     | morning max el      | 2604 Feb 25 00:19                      | 18°る24'02                          | 46°52′22    |
|                       | 2602 Jan 09 22:54                      | 0° <b>)</b> €                            |                     |                     | 2604 Mar 07 04:33                      | 0° <b>≈</b>                        |             |
|                       | 2602 Feb 04 16:31                      | 0° <b>Υ</b>                              |                     |                     | 2604 Apr 03 04:35                      | 0° <b>∀</b>                        |             |
| asc. node             | 2602 Feb 09 09:06                      | 5° <b>Y</b> 16′29                        |                     | desc. node          | 2604 Apr 05 00:58                      | 2° <b>)</b> €07'09                 |             |
| evening max el        | 2602 Mar 02 14:52                      | 27° <b>Y</b> 55'52                       | 46°37'46            |                     | 2604 Apr 28 23:31                      | 0° <b>Υ</b>                        |             |
|                       | 2602 Mar 04 16:42                      | $9^{\circ}$ 8                            |                     |                     | 2604 May 24 06:19                      | $9^{\circ}$ 8                      |             |
| greatest brilliancy   | 2602 Apr 11 00:12                      | 28° <b>8</b> 05'54                       | -4.8m               |                     | 2604 Jun 18 06:51                      | $\Pi$ $^{\circ}0$                  |             |
|                       | 2602 Apr 18 04:37                      | $\Pi$ $^{\circ}0$                        |                     |                     | 2604 Jul 13 02:37                      | 0∘ <b>ௐ</b>                        |             |
| retrograde            | 2602 Apr 21 18:41                      | 0° <b>Ⅱ</b> 15′12                        |                     | asc. node           | 2604 Jul 27 04:18                      | 17° <b>©</b> 07'07                 |             |
|                       | 2602 Apr 25 07:13                      | 30°R₩                                    |                     |                     | 2604 Aug 06 17:19                      | $\mathfrak{O}^{\circ}\mathfrak{O}$ |             |
| evening set           | 2602 May 07 16:31                      | 25° <b>8</b> 17'04                       |                     | morning set         | 2604 Aug 23 23:33                      | 21° <b>Ω</b> 12′12                 |             |
| inferior conj         | 2602 May 13 01:13                      | 22° <b>8</b> 00'45                       | 4°19'52             |                     | 2604 Aug 31 02:42                      | o°mp                               |             |
| minimum elong         | 2602 May 13 09:39                      | 21° <b>8</b> 47'30                       | 4°17'39             |                     | 2604 Sep 24 07:34                      | 0∘ <b>⊽</b>                        |             |
| min. Earth dist.      | 2602 May 13 00:30                      | 22° <b>8</b> 01'53                       |                     | max. Earth dist.    | 2604 Sep 26 07:59                      | 2° <b>ჲ</b> 30′29                  | 1.72417 AU  |
| morning rise          | 2602 May 19 03:10                      | 18° <b>8</b> 20'58                       |                     |                     |  |                                    |             |
| desc. node            | 2602 May 31 22:26                      | 13° <b>8</b> 57'13                       |                     | superior conj       | 2604 Sep 29 16:25                      | 6° <b>£</b> 40'40                  | 1°22'29     |
| direct                | 2602 Jun 03 08:45                      | 13° <b>8</b> 50'11                       |                     | minimum elong       | 2604 Sep 29 20:58                      | 6° <b>£</b> 54'50                  | 1°22'25     |
| greatest brilliancy   | 2602 Jun 13 08:32                      | 15° <b>8</b> 39'10                       | -4.7m               | minimum clong       | 2604 Oct 18 09:29                      | 0° <b>™</b>                        | 1 22 23     |
| greatest billiancy    | 2602 Jul 15 08:32<br>2602 Jul 06 19:07 | 0° <b>Ⅱ</b>                              | <del>-4</del> ./III | evening rise        | 2604 Nov 07 01:16                      | 24°M32'52                          |             |
| morning may al        | 2602 Jul 22 03:52                      | 13° <b>Ⅲ</b> 38′18                       | 45942!10            | evening rise        | 2604 Nov 11 09:58                      | 0° <b>x</b> <sup>7</sup>           |             |
| morning max el        |  | 0°Θ                                      | 43 43 10            | 4 4-                |  | 5° <b>∡</b> ¹24'38                 |             |
|                       | 2602 Aug 07 11:41                      |  |                     | desc. node          | 2604 Nov 15 17:51                      |                                    |             |
| 1                     | 2602 Sep 03 22:06                      | 0°N                                      |                     |                     | 2604 Dec 05 09:58                      | ව°0                                |             |
| asc. node             | 2602 Sep 22 01:57                      | 20° <b>£</b> 58′07                       |                     |                     | 2604 Dec 29 10:22                      | 0° <b>≈</b>                        |             |
|                       | 2602 Sep 29 17:40                      | 0° m/                                    |                     |                     | 2605 Jan 22 12:57                      | 0° <b>)</b> €                      |             |
|                       | 2602 Oct 24 15:17                      | 0° <b>™</b>                              |                     |                     | 2605 Feb 15 21:20                      | 0° <b>Υ</b>                        |             |
|                       | 2602 Nov 17 23:43                      | 0°M                                      |                     | asc. node           | 2605 Mar 08 20:56                      | 25° <b>Y</b> 23'45                 |             |
|                       | 2602 Dec 12 00:55                      | 0° <b>∡</b>                              |                     |                     | 2605 Mar 12 17:30                      | 0°8                                |             |
|                       | 2603 Jan 04 22:51                      | 0°ಕ                                      |                     |                     | 2605 Apr 07 11:51                      | 0° <b>∏</b>                        |             |
| desc. node            | 2603 Jan 11 15:26                      | 8° <b>පි</b> 24'30                       |                     |                     | 2605 May 05 04:43                      | $0$ $\circ$ $\odot$                |             |
| morning set           | 2603 Jan 19 19:31                      | 18° <b>る</b> 40'35                       |                     | evening max el      | 2605 May 12 12:09                      | 7° <b>©</b> 16'33                  | 45°36'58    |
|                       | 2603 Jan 28 19:45                      | 0° <b>≈</b>                              |                     |                     | 2605 Jun 09 00:27                      | $0^{\circ}\Omega$                  |             |
|                       | 2603 Feb 21 17:06                      | 0° <b>∀</b>                              |                     | greatest brilliancy | 2605 Jun 19 09:48                      | 5° <b>Ω</b> 17'07                  | -4.7m       |
|                       |  |  |                     | desc. node          | 2605 Jun 28 10:29                      | 7° <b>Ω</b> 20'51                  |             |
| superior conj         | 2603 Mar 02 07:19                      | 10° <b>) (</b> 46′13                     |                     | retrograde          | 2605 Jun 30 06:49                      | 7° <b>Ω</b> 24'46                  |             |
| minimum elong         | 2603 Mar 02 02:52                      | 10° <b>)</b> 32′19                       | 1°24'46             | evening set         | 2605 Jul 15 21:25                      | 2° <b>Ω</b> 45'45                  |             |
| max. Earth dist.      | 2603 Mar 05 23:04                      |  | 1.71607 AU          |                     | 2605 Jul 20 12:30                      | 30° <b>₹</b> 5                     |             |
|                       | 2603 Mar 17 16:17                      | $0$ ° $\mathbf{\Upsilon}$                |                     | inferior conj       | 2605 Jul 21 19:29                      | 29° <b>5</b> 011'29                | -5°08'44    |
|                       | 2603 Apr 10 18:46                      | $9^{\circ}$ 8                            |                     | minimum elong       | 2605 Jul 21 10:08                      | 29° <b>5</b> 26'10                 | 5°06'31     |
| evening rise          | 2603 Apr 11 08:53                      | 0° <b>8</b> 43'48                        |                     | min. Earth dist.    | 2605 Jul 21 16:07                      | 29° <b>©</b> 16'47                 | 0.29027 AU  |
| asc. node             | 2603 May 04 18:44                      | 29° <b>8</b> 38'34                       |                     | morning rise        | 2605 Jul 26 22:47                      | 26° <b>©</b> 03'23                 |             |
|                       | 2603 May 05 01:42                      | $\Pi^{\circ}0$                           |                     | direct              | 2605 Aug 12 11:02                      | 20° <b>©</b> 54'14                 |             |
|                       | 2603 May 29 13:51                      | $0$ $\circ$ $\odot$                      |                     | greatest brilliancy | 2605 Aug 22 20:42                      | 22° <b>©</b> 50'38                 | -4.7m       |
|                       | 2603 Jun 23 08:09                      | $0^{\circ}\Omega$                        |                     |                     | 2605 Sep 05 09:16                      | $0^{\circ}\Omega$                  |             |
|                       | 2603 Jul 18 10:45                      | 0° <b>m</b>                              |                     | morning max el      | 2605 Sep 30 14:55                      | 21° <b>Ω</b> 19'30                 | 46°03'23    |
|                       | 2603 Aug 13 02:23                      | 0∘ <b>⊽</b>                              |                     | Č                   | 2605 Oct 09 06:15                      | 0° <b>m</b>                        |             |
| desc. node            | 2603 Aug 24 08:08                      | 12° <b>♀</b> 50'40                       |                     | asc. node           | 2605 Oct 19 13:42                      | 10° m 55'06                        |             |
|                       | 2603 Sep 08 17:02                      | 0° <b>M</b>                              |                     |                     | 2605 Nov 05 15:18                      | $0 \circ \overline{\mathbf{v}}$    |             |
| evening max el        | 2603 Oct 06 16:31                      | 29°M13'34                                | 46°32'05            |                     | 2605 Dec 01 02:51                      | 0°M                                |             |
| 2. Jung man of        | 2603 Oct 07 11:36                      | 0° <b>₹</b>                              | .0 52 05            |                     | 2605 Dec 25 18:15                      | 0° <b>⊼</b>                        |             |
| greatest brilliancy   | 2603 Nov 15 21:27                      | 28° <b>₹</b> 58'17                       | -4 9m               |                     | 2606 Jan 19 00:27                      | 0°ප<br>ව°0                         |             |
| greatest brilliancy   | 2603 Nov 19 12:02                      | 20 ×·301/                                | ·T./III             | desc. node          | 2606 Feb 08 03:22                      | 0 3<br>25° <b>る</b> 02'27          |             |
| retrograda            |  | 0°る41'32                                 |                     | uese. Houe          |  | 25° <b>℃</b> 02′27                 |             |
| retrograde            | 2603 Nov 25 12:24                      |  |                     |                     | 2606 Feb 12 02:53                      | 0° <b>∺</b>                        |             |
| arranict              | 2603 Dec 01 08:28                      | 30°₹ <b>₹</b> 7                          |                     |                     | 2606 Mar 08 04:28                      | 0° <del>Υ</del><br>0° <b>Υ</b>     |             |
| evening set asc. node | 2603 Dec 09 19:51                      | 26° <b>∡</b> 38'50                       |                     |                     | 2606 Apr 01 06:54                      |                                    |             |
| are node              | 2602 D 15 11 10                        |  |                     |                     |  |                                    |             |
| inferior conj         | 2603 Dec 15 11:19<br>2603 Dec 16 00:44 | 23° <b>х</b> 22′23<br>23° <b>х</b> 01′57 | 0000144             | morning set         | 2606 Apr 05 22:02<br>2606 Apr 25 11:20 | 5° <b>Y</b> 45'17<br>0° <b>と</b>   |             |

| superior conj       | 2606 May 14 06:01                      | 23° <b>8</b> 12'29           |            | morning rise        | 2608 Oct 03 20:43                      | 5° <b>Ω</b> 00'53          |            |
|---------------------|--|------------------------------|------------|---------------------|--|----------------------------|------------|
| minimum elong       | 2606 May 14 14:11                      | 23° <b>8</b> 37'40           | 0°40'56    |                     | 2608 Oct 14 20:46                      | 30°₽, Mp                   |            |
| max. Earth dist.    | 2606 May 16 17:38                      | 26° <b>8</b> 16'19           | 1.73101 AU | direct              | 2608 Oct 21 11:44                      | 29° Mp 06'17               |            |
|                     | 2606 May 19 18:12                      | $\Pi$ $^{\circ}0$            |            |                     | 2608 Oct 28 07:30                      | 0∘ <b>⊽</b>                |            |
| asc. node           | 2606 Jun 01 06:39                      | 15° <b>Ⅱ</b> 25'07           |            | greatest brilliancy | 2608 Nov 01 16:05                      | 1° <b>≏</b> 25′28          | -4.8m      |
|                     | 2606 Jun 13 03:17                      | 0°ಲ                          |            | asc. node           | 2608 Nov 16 01:31                      | 9° <b>≏</b> 43'09          |            |
| evening rise        | 2606 Jun 20 11:18                      | 9° <b>©</b> 00'23            |            |                     | 2608 Dec 09 00:18                      | $0^{\circ}$ M.             |            |
|                     | 2606 Jul 07 14:06                      | $0^{\circ}\Omega$            |            | morning max el      | 2608 Dec 11 01:24                      | 2°M03'39                   | 46°46'52   |
|                     | 2606 Aug 01 02:47                      | 0° <b>m</b>                  |            |                     | 2609 Jan 05 19:32                      | 0° <b>∡</b> ¹              |            |
|                     | 2606 Aug 25 18:21                      | 0∘ <b>⊽</b>                  |            |                     | 2609 Jan 31 12:15                      | 0°ප                        |            |
|                     | 2606 Sep 19 14:34                      | 0°M                          |            |                     | 2609 Feb 25 10:31                      | 0° <b>≈</b>                |            |
| desc. node          | 2606 Sep 20 20:02                      | 1°M28'32                     |            | desc. node          | 2609 Mar 07 15:07                      | 12° <b>≈</b> 23'42         |            |
|                     | 2606 Oct 14 17:45                      | 0° <b>∡</b> ¹                |            |                     | 2609 Mar 22 01:11                      | 0° <b>∀</b>                |            |
|                     | 2606 Nov 09 08:43                      | 8°0                          |            |                     | 2609 Apr 15 13:00                      | $_{0}$ ° $\gamma$          |            |
|                     | 2606 Dec 06 01:59                      | 0° <b>≈</b>                  |            |                     | 2609 May 10 00:15                      | 0°8                        |            |
| evening max el      | 2606 Dec 18 09:51                      | 12° <b>≈</b> 57'37           | 47°16'41   |                     | 2609 Jun 03 11:45                      | 0° <b>I</b> I              |            |
| δ ·                 | 2607 Jan 05 11:15                      | 0° <b>)</b> €                |            | morning set         | 2609 Jun 14 21:16                      | 13° <b>Ⅱ</b> 57'57         |            |
| asc. node           | 2607 Jan 11 23:19                      | 5° <b>)</b> 13'31            |            |                     | 2609 Jun 27 23:02                      | 0°95                       |            |
| greatest brilliancy | 2607 Jan 28 03:26                      | 14° <b>)</b> (40'58          | -4.9m      | asc. node           | 2609 Jun 28 18:29                      | 0°\$59'39                  |            |
| retrograde          | 2607 Feb 07 08:33                      | 16° <b>)</b> (41'09          | 1.7111     | max. Earth dist.    | 2609 Jul 19 23:20                      | 27° <b>©</b> 02'14         | 1.73519 AU |
| evening set         | 2607 Feb 24 21:33                      | 10° <b>)</b> (42'53          |            | max. Earth dist.    | 2007 341 17 25.20                      | 27 30211                   | 1.75517710 |
| min. Earth dist.    | 2607 Feb 27 11:29                      | 9° <b>\</b> 07'36            | 0.27368 AU | superior conj       | 2609 Jul 21 12:11                      | 28° <b>©</b> 55'33         | 0°50'36    |
| inferior conj       | 2607 Feb 28 04:44                      | 8° <b>H</b> 40'41            | 8°42'46    | minimum elong       | 2609 Jul 21 12:11<br>2609 Jul 21 03:45 | 28° <b>©</b> 29'37         | 0°50'17    |
| minimum elong       | 2607 Feb 28 04:44<br>2607 Feb 28 00:17 | 8° <del>)(</del> 40'41'      | 8°42'28    | minimum ciong       | 2609 Jul 21 03:43<br>2609 Jul 22 09:08 | 28 <b>3</b> 2937           | 0 30 17    |
| •                   | 2607 Mar 03 03:13                      | 6° <b>X</b> 51'54            | 0 42 20    |                     | 2609 Jul 22 09:08<br>2609 Aug 15 17:31 | 0° <b>m</b> y              |            |
| morning rise        |  |                              |            |                     | · ·                                    | -•                         |            |
| direct              | 2607 Mar 20 19:25                      | 0° <b>)</b> 50′50            | 4.0        | evening rise        | 2609 Aug 26 09:09                      | 13° Mp 08'54               |            |
| greatest brilliancy | 2607 Mar 29 21:44                      | 2° <b>)</b> (23'39           | -4.8m      |                     | 2609 Sep 09 00:40                      | 0∘ <b>亚</b>                |            |
| desc. node          | 2607 May 03 12:45                      | 26° <b>)</b> €29'11          |            |                     | 2609 Oct 03 07:41                      | 0°M                        |            |
|                     | 2607 May 07 05:59                      | 0° <b>Υ</b>                  |            | desc. node          | 2609 Oct 18 08:00                      | 18°M31'05                  |            |
| morning max el      | 2607 May 09 06:40                      | 1° <b>Y</b> 57'35            | 46°11'01   |                     | 2609 Oct 27 15:37                      | 0° <b>∡</b>                |            |
|                     | 2607 Jun 05 05:26                      | 0°B                          |            |                     | 2609 Nov 21 01:18                      | 0°ප                        |            |
|                     | 2607 Jul 01 23:37                      | 0°Ⅲ                          |            |                     | 2609 Dec 15 14:35                      | 0° <b>≈</b>                |            |
|                     | 2607 Jul 27 18:54                      | 0ಂ <b>ತಾ</b>                 |            |                     | 2610 Jan 09 12:44                      | 0° <b>∀</b>                |            |
|                     | 2607 Aug 21 23:29                      | $0^{\circ}\Omega$            |            |                     | 2610 Feb 04 08:42                      | 0° <b>Υ</b>                |            |
| asc. node           | 2607 Aug 24 16:05                      | 3° <b>Ω</b> 14'32            |            | asc. node           | 2610 Feb 08 11:02                      | 4° <b>Y</b> 35'00          |            |
|                     | 2607 Sep 15 16:27                      | O° Mp                        |            | evening max el      | 2610 Feb 28 07:04                      | 25° <b>Ƴ</b> 41'17         | 46°39'58   |
|                     | 2607 Oct 10 00:21                      | 0∘ <b>ত</b>                  |            |                     | 2610 Mar 04 15:45                      | 0°8                        |            |
| morning set         | 2607 Nov 02 23:31                      | 29° <b>≙</b> 51'54           |            | greatest brilliancy | 2610 Apr 08 16:40                      | 25° <b>8</b> 53'04         | -4.8m      |
|                     | 2607 Nov 03 02:07                      | 0°M                          |            | retrograde          | 2610 Apr 19 11:09                      | 28° <b>8</b> 01'55         |            |
|                     | 2607 Nov 27 00:26                      | 0° <b>∡</b> ¹                |            | evening set         | 2610 May 05 10:54                      | 23° <b>8</b> 00'29         |            |
| max. Earth dist.    | 2607 Dec 11 14:34                      | 18° <b>∡</b> 19'58           | 1.71198 AU | inferior conj       | 2610 May 10 16:56                      | 19° <b>8</b> 47'40         | 4°37'46    |
|                     |  |                              |            | minimum elong       | 2610 May 11 01:46                      | 19° <b>8</b> 33'46         | 4°35'31    |
| superior conj       | 2607 Dec 12 15:20                      | 19° <b>∡</b> ³37'49          | 0°03'52    | min. Earth dist.    | 2610 May 10 15:50                      | 19° <b>8</b> 49'22         | 0.28514 AU |
| minimum elong       | 2607 Dec 12 16:19                      | 19° <b>∡¹</b> 40'57          | 0°03'49    | morning rise        | 2610 May 16 17:05                      | 16° <b>8</b> 10'25         |            |
| behind sun begin    | 2607 Dec 11 14:54                      | 18° <b>∡</b> ¹21'01          |            | desc. node          | 2610 May 31 00:34                      | 11° <b>8</b> 38'57         |            |
| behind sun end      | 2607 Dec 13 17:44                      | 21° <b>∡</b> ¹00′52          |            | direct              | 2610 Jun 01 00:34                      | 11° <b>8</b> 37'46         |            |
| desc. node          | 2607 Dec 14 05:44                      | 21° <b>∡</b> ³38'35          |            | greatest brilliancy | 2610 Jun 10 22:26                      | 13° <b>8</b> 25'22         | -4.7m      |
|                     | 2607 Dec 20 21:14                      | o°ප                          |            |                     | 2610 Jul 07 02:21                      | $\Pi^{\circ}0$             |            |
|                     | 2608 Jan 13 17:46                      | 0° <b>≈</b>                  |            | morning max el      | 2610 Jul 19 19:51                      | 11° <b>Ⅱ</b> 28'18         | 45°43'15   |
| evening rise        | 2608 Jan 22 21:56                      | 11° <b>≈</b> 31'41           |            |                     | 2610 Aug 07 05:17                      | 0°€                        |            |
| -                   | 2608 Feb 06 15:15                      | 0° <b>∀</b>                  |            |                     | 2610 Sep 03 12:10                      | $0^{\circ}\Omega$          |            |
|                     | 2608 Mar 01 15:33                      | $0^{\circ}\mathbf{\Upsilon}$ |            | asc. node           | 2610 Sep 21 03:55                      | 20° <b>Ω</b> 26′01         |            |
|                     | 2608 Mar 25 21:11                      | 0°8                          |            |                     | 2610 Sep 29 06:13                      | 0° <b>m</b>                |            |
| asc. node           | 2608 Apr 05 08:52                      | 12° <b>8</b> 51'27           |            |                     | 2610 Oct 24 03:05                      | 0° <del>ٽ</del>            |            |
|                     | 2608 Apr 19 11:13                      | 0°II                         |            |                     | 2610 Nov 17 11:08                      | 0°M                        |            |
|                     | 2608 May 14 13:32                      | 0°©                          |            |                     | 2610 Dec 11 12:09                      | 0° <b>∡</b> 7              |            |
|                     | 2608 Jun 09 11:07                      | $0^{\circ}\Omega$            |            |                     | 2611 Jan 04 09:58                      | 0°ප                        |            |
|                     | 2608 Jul 06 21:30                      | 0° m)                        |            | desc. node          | 2611 Jan 10 17:30                      | <sup>0</sup> ਰ<br>7°ਰ56'11 |            |
| evening max el      | 2608 Jul 22 08:00                      | 15° Mp 29'01                 | 45°32'14   | morning set         | 2611 Jan 17 05:37                      | 16° <b>පි</b> 06'45        |            |
| desc. node          | 2608 Jul 25 22:24                      | 13° mp 52'11                 | 10 04 1T   | morning set         | 2611 Jan 28 06:48                      | 0°≈                        |            |
| acsc. Hour          | 2608 Jul 25 22:24<br>2608 Aug 07 18:49 | 0° <b>⊡</b>                  |            |                     | 2611 Jan 28 06:48<br>2611 Feb 21 04:06 | 0° <b>∺</b>                |            |
| grantast builli     | •                                      |                              | 4.7m       |                     | 2011 100 21 04.00                      | υ <b>/</b> (               |            |
| greatest brilliancy | 2608 Aug 30 14:58                      | 13° <b>Ω</b> 34'03           | -4.7m      | gunariar ac-:       | 2611 Eak 27 10:20                      | 00W16127                   | 1924100    |
| retrograde          | 2608 Sep 09 01:50                      | 15° <b>£</b> 11'02           |            | superior conj       | 2611 Feb 27 18:30                      | 8°¥16'27                   |            |
| evening set         | 2608 Sep 26 23:24                      | 9° <b>Ω</b> 12'29            | 0020150    | minimum elong       | 2611 Feb 27 13:05                      | 7° <b>¥</b> 59'29          |            |
| inferior conj       | 2608 Sep 30 05:17                      | 7° <b>£</b> 14'02            |            | max. Earth dist.    | 2611 Mar 03 10:44                      |                            | 1.71564 AU |
| minimum elong       | 2608 Sep 30 10:11                      | 7° <b>Ω</b> 06'29            |            | :·                  | 2611 Mar 17 03:16                      | 0°Υ<br>20°W21125           |            |
| min. Earth dist.    | 2608 Oct 01 00:52                      | o~ <b>≥≤</b> 43'51           | 0.28205 AU | evening rise        | 2611 Apr 08 21:59                      | 28° <b>Y</b> 21'25         |            |

|                     | 2611 Apr 10 05:46                      | 0° <b>႘</b>             |            |                     | 2613 Sep 06 03:48                      | 0°N                           |            |
|---------------------|--|-------------------------|------------|---------------------|--|-------------------------------|------------|
| asc. node           | 2611 Apr 10 03:40<br>2611 May 03 20:50 | 29° <b>8</b> 10'57      |            | morning max el      | 2613 Sep 00 05:48<br>2613 Sep 28 05:50 | 19° <b>Ω</b> 04'49            | 46002107   |
| asc. Houe           | 2611 May 04 12:48                      | 0° <b>Ⅱ</b>             |            | morning max er      | 2613 Oct 09 01:26                      | 0°M)                          | 40 02 07   |
|                     | 2611 May 04 12:48<br>2611 May 29 01:09 | 0ಂ <b>ತಾ</b>            |            | asc. node           | 2613 Oct 18 15:54                      | עוי ט<br>10° <b>m</b> y 14'37 |            |
|                     |  | 0° <b>U</b>             |            | asc. Houe           |  | 0° <b>⊽</b>                   |            |
|                     | 2611 Jun 22 19:50                      |                         |            |                     | 2613 Nov 05 06:13                      | 0° <b>M</b>                   |            |
|                     | 2611 Jul 17 23:13                      | 0° <b>m</b> )           |            |                     | 2613 Nov 30 16:07                      |                               |            |
|                     | 2611 Aug 12 16:16                      | 0° <b>™</b>             |            |                     | 2613 Dec 25 06:41                      | 0° <b>⊼</b>                   |            |
| desc. node          | 2611 Aug 23 10:05                      | 12° <b>£</b> 14'17      |            | 1 1                 | 2614 Jan 18 12:23                      | 0°る                           |            |
|                     | 2611 Sep 08 09:47                      | 0°M                     | 46000140   | desc. node          | 2614 Feb 07 05:17                      | 24° <b>る</b> 32'06            |            |
| evening max el      | 2611 Oct 04 06:01                      | 26°M51'36               | 46°29'40   |                     | 2614 Feb 11 14:29                      | 0° <b>≈</b>                   |            |
| 1 . 1111            | 2611 Oct 07 12:15                      | 0° <b>⊼</b> ¹           | 4.0        |                     | 2614 Mar 07 15:48                      | 0° <b>ℋ</b><br>0° <b>Ƴ</b>    |            |
| greatest brilliancy | 2611 Nov 13 11:17                      | 26° ₹ 32′22             | -4.9m      | . ,                 | 2614 Mar 31 18:02                      |                               |            |
| retrograde          | 2611 Nov 23 00:03                      | 28° 🖈 13'38             |            | morning set         | 2614 Apr 03 11:48                      | 3° <b>Y</b> 24'25             |            |
| evening set         | 2611 Dec 07 09:08                      | 24° 🖈 10'14             | 0015147    |                     | 2614 Apr 24 22:19                      | $9^{\circ}$ 8                 |            |
| inferior conj       | 2611 Dec 13 13:09                      | 20° ₹34'36              |            |                     | 2(14)( 11 22 12                        | 210                           | 0044112    |
| minimum elong       | 2611 Dec 13 13:45                      | 20° 🗷 33'40             |            | superior conj       | 2614 May 11 22:12                      | 21° <b>8</b> 00'42            |            |
| transit middle      | 2611 Dec 13 13:45                      | 20°×33'40               | 0°15'35    | minimum elong       | 2614 May 12 06:49                      | 21° <b>8</b> 27'16            |            |
| transit begin       | 2611 Dec 13 12:15                      | 20° <b>∡</b> 35'57      |            | max. Earth dist.    | 2614 May 14 10:43                      | _                             | 1.73062 AU |
| transit end         | 2611 Dec 13 15:15                      | 20° <b>∡</b> 31'24      |            |                     | 2614 May 19 05:07                      | 0°II                          |            |
| min. Earth dist.    | 2611 Dec 13 16:46                      | 20° <b>∡</b> 29'04      | 0.26514 AU | asc. node           | 2614 May 31 08:43                      | 14° <b>Ⅱ</b> 57'53            |            |
| asc. node           | 2611 Dec 14 13:25                      | 19° <b>∡</b> 57'38<br>− |            |                     | 2614 Jun 12 14:12                      | 0°€                           |            |
| morning rise        | 2611 Dec 19 18:07                      | 16° <b>∡</b> 757'33     |            | evening rise        | 2614 Jun 18 05:32                      | 6°955'24                      |            |
| direct              | 2612 Jan 03 00:44                      | 12° <b>∡</b> 55'11      |            |                     | 2614 Jul 07 01:10                      | $0^{\circ}\Omega$             |            |
| greatest brilliancy | 2612 Jan 13 07:11                      | 14° <b>∡</b> 55′08      | -4.9m      |                     | 2614 Jul 31 14:07                      | 0°Щ                           |            |
|                     | 2612 Feb 05 12:45                      | 0° <b>ප</b>             |            |                     | 2614 Aug 25 06:09                      | 0₀ <b>⊽</b>                   |            |
| morning max el      | 2612 Feb 22 12:31                      | 15° <b>る</b> 56'00      | 46°53'11   |                     | 2614 Sep 19 03:03                      | 0°M₊                          |            |
|                     | 2612 Mar 06 23:47                      | 0° <b>≈</b>             |            | desc. node          | 2614 Sep 19 22:07                      | 0°M57'12                      |            |
|                     | 2612 Apr 02 19:43                      | 0° <b>∀</b>             |            |                     | 2614 Oct 14 07:19                      | 0°⊀                           |            |
| desc. node          | 2612 Apr 04 03:05                      | 1° <b>¥</b> 30′11       |            |                     | 2614 Nov 09 00:11                      | 0°₹                           |            |
|                     | 2612 Apr 28 12:50                      | $0^{\circ}\Upsilon$     |            |                     | 2614 Dec 05 21:33                      | 0° <b>≈</b>                   |            |
|                     | 2612 May 23 18:38                      | $0^{\circ}S$            |            | evening max el      | 2614 Dec 15 23:43                      | 10° <b>≈</b> 32'38            | 47°16'33   |
|                     | 2612 Jun 17 18:32                      | $\Pi^{\circ}0$          |            |                     | 2615 Jan 05 23:12                      | 0° <b>∀</b>                   |            |
|                     | 2612 Jul 12 13:52                      | $0$ $\circ$ $\odot$     |            | asc. node           | 2615 Jan 11 01:18                      | 3° <b>¥</b> 55′02             |            |
| asc. node           | 2612 Jul 26 06:15                      | 16° <b>©</b> 39'16      |            | greatest brilliancy | 2615 Jan 25 17:27                      | 12° <b>升</b> 15′32            | -4.9m      |
|                     | 2612 Aug 06 04:19                      | $0 {\circ} \Omega$      |            | retrograde          | 2615 Feb 04 22:49                      | 14° <b>) (</b> 16′13          |            |
| morning set         | 2612 Aug 21 16:48                      | 19° <b>Ω</b> 03'50      |            | evening set         | 2615 Feb 22 08:07                      | 8° <b>升</b> 22'48             |            |
|                     | 2612 Aug 30 13:36                      | 0° <b>m</b>             |            | min. Earth dist.    | 2615 Feb 25 00:31                      | 6° <b>){</b> 44'07            | 0.27315 AU |
|                     | 2612 Sep 23 18:29                      | 0∘ <b>⊽</b>             |            | inferior conj       | 2615 Feb 25 18:20                      | 6° <b>)</b> 16′23             | 8°37'46    |
| max. Earth dist.    | 2612 Sep 23 23:14                      | 0° <b>≙</b> 14'47       | 1.72470 AU | minimum elong       | 2615 Feb 25 13:04                      | 6° <b>)</b> 24'35             | 8°37'22    |
|                     |  |                         |            | morning rise        | 2615 Feb 28 18:13                      | 4° <b>)</b> €25'49            |            |
| superior conj       | 2612 Sep 27 08:44                      | 4° <b>£</b> 28'08       | 1°23'13    |                     | 2615 Mar 09 16:03                      | 30°R <b>≈</b>                 |            |
| minimum elong       | 2612 Sep 27 12:34                      | 4° <b>≙</b> 40'05       | 1°23'11    | direct              | 2615 Mar 18 08:17                      | 28° <b>≈</b> 27'11            |            |
|                     | 2612 Oct 17 20:31                      | 0° <b>M</b> .           |            |                     | 2615 Mar 27 10:11                      | 0° <b>∀</b>                   |            |
| evening rise        | 2612 Nov 04 14:28                      | 22°M09'24               |            | greatest brilliancy | 2615 Mar 27 10:39                      | 0° <b>)</b> €00'23            | -4.8m      |
|                     | 2612 Nov 10 21:09                      | 0° <b>∡</b> 7           |            | desc. node          | 2615 May 02 14:50                      | 25° <b>)</b> 34'14            |            |
| desc. node          | 2612 Nov 14 19:58                      | 4° <b>∡</b> ¹56'13      |            | morning max el      | 2615 May 06 21:22                      | 29° <b>) (</b> 40′01          | 46°12'41   |
|                     | 2612 Dec 04 21:19                      | 0° <b>ರ</b>             |            |                     | 2615 May 07 05:34                      | $0$ ° $\mathbf{\Upsilon}$     |            |
|                     | 2612 Dec 28 21:55                      | 0° <b>≈</b>             |            |                     | 2615 Jun 04 21:45                      | $9^{\circ}$ 8                 |            |
|                     | 2613 Jan 22 00:47                      | 0° <b>∀</b>             |            |                     | 2615 Jul 01 13:19                      | $\Pi^{\circ}0$                |            |
|                     | 2613 Feb 15 09:38                      | $0^{\circ}$ Y           |            |                     | 2615 Jul 27 07:20                      | $0$ $\circ$ $\odot$           |            |
| asc. node           | 2613 Mar 07 22:58                      | 24° <b>Y</b> 51′03      |            |                     | 2615 Aug 21 11:14                      | $0$ $^{\circ}$ $\Omega$       |            |
|                     | 2613 Mar 12 06:41                      | $0^{\circ}S$            |            | asc. node           | 2615 Aug 23 18:05                      | 2° <b>Ω</b> 45'15             |            |
|                     | 2613 Apr 07 02:52                      | $\Pi^{\circ}0$          |            |                     | 2615 Sep 15 03:51                      | O° My                         |            |
|                     | 2613 May 05 00:42                      | $0$ $\circ$ $\odot$     |            |                     | 2615 Oct 09 11:35                      | 0∘ <b>ত</b>                   |            |
| evening max el      | 2613 May 10 02:54                      | 5° <b>5</b> 02'06       | 45°38'15   | morning set         | 2615 Oct 31 13:48                      | 27° <b>≙</b> 31'38            |            |
|                     | 2613 Jun 10 08:55                      | $0^{\circ}\Omega$       |            |                     | 2615 Nov 02 13:15                      | 0°M₊                          |            |
| greatest brilliancy | 2613 Jun 17 01:40                      | 3° <b>Ω</b> 07'13       | -4.7m      |                     | 2615 Nov 26 11:34                      | 0°₺                           |            |
| retrograde          | 2613 Jun 27 22:51                      | 5° <b>Ω</b> 15'38       |            | max. Earth dist.    | 2615 Dec 09 01:28                      | 15° <b>≯</b> 48'11            | 1.71221 AU |
| desc. node          | 2613 Jun 27 12:33                      | 5° <b>Ω</b> 15'26       |            |                     |  |                               |            |
| evening set         | 2613 Jul 13 11:43                      | 0° <b>Ω</b> 38'55       |            | superior conj       | 2615 Dec 10 02:07                      | 17° <b>∡</b> *05'43           | 0°07'47    |
|                     | 2613 Jul 14 15:12                      | 30° <b>₹</b> 5          |            | minimum elong       | 2615 Dec 10 04:08                      | 17° <b>∡</b> 12′02            | 0°07'40    |
| inferior conj       | 2613 Jul 19 11:50                      | 27° <b>©</b> 02'06      |            | behind sun begin    | 2615 Dec 09 05:01                      | 15° <b>₹</b> 59'21            |            |
| minimum elong       | 2613 Jul 19 02:44                      | 27° <b>©</b> 16'22      | 4°50'21    | behind sun end      | 2615 Dec 11 03:15                      | 18° <b>≯</b> 24'42            |            |
| min. Earth dist.    | 2613 Jul 19 08:34                      | 27° <b>5</b> 07'14      | 0.29025 AU | desc. node          | 2615 Dec 13 07:44                      | 21° <b>₹</b> 09'40            |            |
| morning rise        | 2613 Jul 24 17:38                      | 23° <b>©</b> 50'24      |            |                     | 2615 Dec 20 08:25                      | 0°ರ                           |            |
| direct              | 2613 Aug 10 02:43                      | 18° <b>5</b> 44'41      |            |                     | 2616 Jan 13 05:02                      | 0° <b>≈</b>                   |            |
| greatest brilliancy | 2613 Aug 20 13:20                      | 20°541'33               | -4.7m      | evening rise        | 2616 Jan 20 08:05                      | 8° <b>≈</b> 57'23             |            |
|                     |  |                         |            |                     |  |                               |            |

|                     |                   | >/                           |             |                     |                   |                      |            |
|---------------------|-------------------|------------------------------|-------------|---------------------|-------------------|----------------------|------------|
|                     | 2616 Feb 06 02:36 | 0° <b>∀</b>                  |             |                     | 2618 Sep 03 02:06 | $0^{\circ}\Omega$    |            |
|                     | 2616 Mar 01 02:59 | $0$ ° $\mathbf{\Upsilon}$    |             | asc. node           | 2618 Sep 20 06:07 | 19° <b>Ω</b> 54'43   |            |
|                     | 2616 Mar 25 08:49 | $8^{\circ 0}$                |             |                     | 2618 Sep 28 18:45 | 0° <b>m</b> y        |            |
| asc. node           | 2616 Apr 04 11:01 | 12° <b>8</b> 22'05           |             |                     | 2618 Oct 23 14:56 | 0∘ <b>⊽</b>          |            |
|                     | 2616 Apr 18 23:14 | $\Pi^{\circ}0$               |             |                     | 2618 Nov 16 22:39 | 0°M                  |            |
|                     | 2616 May 14 02:20 | 0°95                         |             |                     | 2618 Dec 10 23:31 | 0° <b>⊼</b>          |            |
|                     | 2616 Jun 09 01:34 | 0°N                          |             |                     | 2619 Jan 03 21:14 | °ਨ<br>ਨ              |            |
|                     |                   |                              |             | 4 4-                |                   | 7°る27'09             |            |
|                     | 2616 Jul 06 15:59 | 0° m/)                       | 45021104    | desc. node          | 2619 Jan 09 19:30 |                      |            |
| evening max el      | 2616 Jul 19 23:43 | 13° <b>m</b> 17'09           | 45°31'04    | morning set         | 2619 Jan 14 15:16 | 13° <b>る</b> 30'59   |            |
| desc. node          | 2616 Jul 25 00:19 | 17° <b>m</b> 58'59           |             |                     | 2619 Jan 27 17:58 | 0° <b>≈</b>          |            |
|                     | 2616 Aug 08 06:58 | 0∘ <b>⊽</b>                  |             |                     | 2619 Feb 20 15:10 | 0° <b>∀</b>          |            |
| greatest brilliancy | 2616 Aug 28 03:25 | 11° <b>≏</b> 16'49           | -4.7m       |                     |                   |                      |            |
| retrograde          | 2616 Sep 06 16:12 | 12° <b>≙</b> 54'57           |             | superior conj       | 2619 Feb 25 05:19 | 5° <b>)</b> 45′15    | -1°23'01   |
| evening set         | 2616 Sep 24 15:01 | 6° <b>£</b> 54'19            |             | minimum elong       | 2619 Feb 24 22:57 | 5° <b>¥</b> 25'20    | 1°22'55    |
| inferior conj       | 2616 Sep 27 19:55 | 4° <b>£</b> 57'05            | -8°33'07    | max. Earth dist.    | 2619 Feb 28 20:42 |                      | 1.71515 AU |
| minimum elong       | 2616 Sep 28 00:02 | 4° <b>£</b> 50'42            |             | max. Dartif dist.   | 2619 Mar 16 14:17 | 0°Υ                  | 1.71313710 |
| _                   | •                 |                              |             |                     |                   | 25°Υ58'06            |            |
| min. Earth dist.    | 2616 Sep 28 14:25 | 4° <b>£</b> 28'31            | 0.28267 AU  | evening rise        | 2619 Apr 06 10:49 |                      |            |
| morning rise        | 2616 Oct 01 08:52 | 2° <b>£</b> 47'28            |             |                     | 2619 Apr 09 16:47 | 0°B                  |            |
|                     | 2616 Oct 06 11:41 | 30° <b>Ŗ</b> ₩               |             | asc. node           | 2619 May 02 22:55 | 28° <b>8</b> 43'12   |            |
| direct              | 2616 Oct 19 03:40 | 26° Mp 48'42                 |             |                     | 2619 May 03 23:54 | $\Pi$ $^{\circ}0$    |            |
| greatest brilliancy | 2616 Oct 30 06:19 | 29° Mp 06'23                 | -4.8m       |                     | 2619 May 28 12:26 | $0$ $\circ$ $\odot$  |            |
|                     | 2616 Nov 01 08:53 | 0∘ <b>⊽</b>                  |             |                     | 2619 Jun 22 07:32 | $0^{\circ}\Omega$    |            |
| asc. node           | 2616 Nov 15 03:33 | 8° <b>£</b> 29'04            |             |                     | 2619 Jul 17 11:41 | 0° m/                |            |
| morning max el      | 2616 Dec 08 16:36 | 29° <b>£</b> 43'52           | 46°45'37    |                     | 2619 Aug 12 06:11 | 0∘ <b>ರ</b><br>೧.ಗಿ  |            |
| morning max cr      |                   |                              | 40 43 37    | desc. node          | •                 |                      |            |
|                     | 2616 Dec 08 22:58 | 0°M                          |             | desc. node          | 2619 Aug 22 12:14 | 11° <b>≏</b> 38'33   |            |
|                     | 2617 Jan 05 11:56 | 0° <b>∡</b>                  |             |                     | 2619 Sep 08 02:45 | $0^{\circ}$ M        |            |
|                     | 2617 Jan 31 02:21 | 0°ಕ                          |             | evening max el      | 2619 Oct 01 18:25 | 24°M27'26            | 46°27'06   |
|                     | 2617 Feb 24 23:27 | 0° <b>≈</b>                  |             |                     | 2619 Oct 07 14:04 | 0° <b>∡</b> ¹        |            |
| desc. node          | 2617 Mar 06 17:14 | 11° <b>≈</b> 51'48           |             | greatest brilliancy | 2619 Nov 11 00:59 | 24° <b>₰</b> 06'19   | -4.9m      |
|                     | 2617 Mar 21 13:23 | 0° <b>∀</b>                  |             | retrograde          | 2619 Nov 20 11:24 | 25° <b>∡</b> ¹45'50  |            |
|                     | 2617 Apr 15 00:41 | $0^{\circ}\mathbf{\Upsilon}$ |             | evening set         | 2619 Dec 04 22:28 | 21° <b>х</b> 40′56   |            |
|                     | 2617 May 09 11:34 | 0°8                          |             | inferior conj       | 2619 Dec 11 01:27 | 18° <b>₹</b> '07'01  | -0°40'14   |
|                     | 2617 Jun 02 22:47 | 0°II                         |             | minimum elong       | 2619 Dec 11 03:00 | 18° <b>∡</b> 04'39   |            |
|                     |                   |                              |             | Č                   |                   |                      |            |
| morning set         | 2617 Jun 12 15:07 | 11° <b>Ⅱ</b> 52'00           |             | min. Earth dist.    | 2619 Dec 11 07:07 | 17° <b>₹</b> 58'24   | 0.26541 AU |
|                     | 2617 Jun 27 09:54 | 0ංම                          |             | asc. node           | 2619 Dec 13 15:24 | 16° <b>₹</b> 33'16   |            |
| asc. node           | 2617 Jun 27 20:28 | 0°932'25                     |             | morning rise        | 2619 Dec 17 07:07 | 14° <b>≯</b> 28'42   |            |
| max. Earth dist.    | 2617 Jul 17 21:51 | 25° <b>©</b> 10'37           | 1.73530 AU  | direct              | 2619 Dec 31 12:51 | 10° <b>∡</b> ¹26'45  |            |
|                     |                   |                              |             | greatest brilliancy | 2620 Jan 10 22:20 | 12° <b>₹</b> ¹29'08  | -4.9m      |
| superior conj       | 2617 Jul 19 06:41 | 26°951'34                    | 0°48'03     |                     | 2620 Feb 05 21:31 | 8°0                  |            |
| minimum elong       | 2617 Jul 18 22:29 | 26°926'21                    | 0°47'44     | morning max el      | 2620 Feb 20 00:57 | 13° <b>る</b> 27'56   | 46°54'03   |
|                     | 2617 Jul 21 19:57 | $0^{\circ}\Omega$            |             | . 8                 | 2620 Mar 06 18:36 | 0° <b>≈</b>          |            |
|                     | 2617 Aug 15 04:24 | 0° <b>m</b> )                |             |                     | 2620 Apr 02 10:41 | 0° <b>∀</b>          |            |
|                     | Č                 |                              |             | 1 1                 | -                 | 0° <b>)</b> 53′28    |            |
| evening rise        | 2617 Aug 24 03:23 | 11° Mp 03'13                 |             | desc. node          | 2620 Apr 03 05:13 |                      |            |
|                     | 2617 Sep 08 11:43 | 0∘ <b>⊽</b>                  |             |                     | 2620 Apr 28 02:01 | 0° <b>Υ</b>          |            |
|                     | 2617 Oct 02 19:03 | 0°M₊                         |             |                     | 2620 May 23 06:47 | 0°8                  |            |
| desc. node          | 2617 Oct 17 10:07 | 18°ML01'53                   |             |                     | 2620 Jun 17 06:02 | $\Pi$ $\circ 0$      |            |
|                     | 2617 Oct 27 03:22 | 0° <b>∡</b> ¹                |             |                     | 2620 Jul 12 00:57 | $0$ $\circ$ $\infty$ |            |
|                     | 2617 Nov 20 13:34 | 0°ರ                          |             | asc. node           | 2620 Jul 25 08:20 | 16°©12'15            |            |
|                     | 2617 Dec 15 03:34 | 0° <b>≈</b>                  |             |                     | 2620 Aug 05 15:08 | $0 { m ^o} \Omega$   |            |
|                     | 2618 Jan 09 02:53 | 0° <b>∀</b>                  |             | morning set         | 2620 Aug 19 10:25 | 16° <b>Ω</b> 57'10   |            |
|                     | 2618 Feb 04 01:20 | $0^{\circ}\Upsilon$          |             | morning out         | 2620 Aug 30 00:19 | 0° m)                |            |
| asc. node           | 2618 Feb 07 13:05 | 3°Υ52'59                     |             | max. Earth dist.    | 2620 Sep 21 17:07 |                      | 1.72520 AU |
|                     |                   |                              | 46040110    | max. Earth dist.    | =                 |                      | 1.72320 AU |
| evening max el      | 2618 Feb 25 22:41 | 23° <b>Y</b> 24'40           | 46°42'12    |                     | 2620 Sep 23 05:12 | 0∘ <b>⊽</b>          |            |
|                     | 2618 Mar 04 16:00 | $_{0\circ}$ 8                |             |                     |                   |                      |            |
| greatest brilliancy | 2618 Apr 06 09:44 | 23° <b>8</b> 40'36           | -4.8m       | superior conj       | 2620 Sep 25 01:32 | 2° <b>≏</b> 17'49    | 1°23'49    |
| retrograde          | 2618 Apr 17 03:09 | 25° <b>8</b> 48'16           |             | minimum elong       | 2620 Sep 25 04:41 | 2° <b>≏</b> 27'34    | 1°23'48    |
| evening set         | 2618 May 03 05:26 | 20° <b>8</b> 43'35           |             |                     | 2620 Oct 17 07:20 | $0^{\circ}$ M        |            |
| inferior conj       | 2618 May 08 08:43 | 17° <b>8</b> 34'24           | 4°55'15     | evening rise        | 2620 Nov 02 04:13 | 19° <b>M</b> 48'27   |            |
| minimum elong       | 2618 May 08 17:53 | 17° <b>8</b> 19'58           | 4°52'59     | Č                   | 2620 Nov 10 08:07 | 0° <b>⊼</b>          |            |
| min. Earth dist.    | 2618 May 08 07:30 | 17° <b>8</b> 36'18           | 0.28484 AU  | desc. node          | 2620 Nov 13 21:59 | 4° <b>≯</b> ¹28'06   |            |
|                     | •                 | 17 <b>8</b> 59'46            | 5.20-107 AU | desc. Hode          |                   | 4 x 2800             |            |
| morning rise        | 2618 May 14 06:48 |                              |             |                     | 2620 Dec 04 08:30 |                      |            |
| direct              | 2618 May 29 16:12 | 9° <b>8</b> 25'12            |             |                     | 2620 Dec 28 09:21 | 0° <b>≈</b>          |            |
| desc. node          | 2618 May 30 02:35 | 9° <b>8</b> 25'25            |             |                     | 2621 Jan 21 12:34 | 0° <b>∀</b>          |            |
| greatest brilliancy | 2618 Jun 08 12:42 | 11° <b>8</b> 11'36           | -4.7m       |                     | 2621 Feb 14 21:55 | $0$ ° $\Upsilon$     |            |
|                     | 2618 Jul 07 07:29 | $\Pi$ $^{\circ}0$            |             | asc. node           | 2621 Mar 07 01:06 | 24° <b>Y</b> 18'45   |            |
| morning max el      | 2618 Jul 17 11:03 | 9° <b>Ⅱ</b> 16′16            | 45°43'27    |                     | 2621 Mar 11 19:52 | 0°8                  |            |
|                     | 2618 Aug 06 22:32 | 0°ಅ                          |             |                     | 2621 Apr 06 17:57 | $\Pi^{\circ}0$       |            |
|                     | Č                 |                              |             |                     |                   |                      |            |

|                                 | 2621 May 04 21:08                      | 0ං <b>ම</b>                                  |            |                                | 2623 Oct 08 22:23                      | 0∘ <b>⊽</b>                              |                    |
|---------------------------------|--|--|------------|--------------------------------|--|--|--------------------|
| evening max el                  | 2621 May 07 17:54                      | 2°548'51                                     | 45°39'53   | morning set                    | 2623 Oct 29 04:19                      | 25° <b>≏</b> 13'27                       |                    |
|                                 | 2621 Jun 12 08:51                      | $0^{\circ}\Omega$                            |            |                                | 2623 Nov 02 00:01                      | $0^{\circ}$ M                            |                    |
| greatest brilliancy             | 2621 Jun 14 17:07                      | 0° <b>Ω</b> 57'44                            | -4.7m      |                                | 2623 Nov 25 22:20                      | 0° <b>∡</b> ¹                            |                    |
| retrograde                      | 2621 Jun 25 15:30                      | 3° <b>Ω</b> 07'38                            |            | max. Earth dist.               | 2623 Dec 06 10:17                      | 13° <b>∡</b> 11'12                       | 1.71241 AU         |
| desc. node                      | 2621 Jun 26 14:31                      | 3° <b>Ω</b> 06'33                            |            |                                | 2(22 D 07 12-25                        | 1.40.70.00                               | 0011127            |
| evening set                     | 2621 Jul 08 06:48<br>2621 Jul 11 02:18 | 30° <b>₹©</b><br>28° <b>©</b> 32'48          |            | superior conj<br>minimum elong | 2623 Dec 07 13:25<br>2623 Dec 07 16:24 | 14° <b>х</b> 36′26<br>14° <b>х</b> 45′48 | 0°11'37<br>0°11'29 |
| inferior conj                   | 2621 Jul 17 04:17                      | 26 \$3246<br>24°\$53'42                      | -4°36'07   | behind sun begin               | 2623 Dec 07 10:24<br>2623 Dec 06 21:50 | 13° <b>×</b> <sup>7</sup> 47'28          | 0 11 29            |
| minimum elong                   | 2621 Jul 16 19:28                      | 25° <b>©</b> 07'28                           | 4°33'55    | behind sun end                 | 2623 Dec 08 10:57                      | 15° × 44'08                              |                    |
| min. Earth dist.                | 2621 Jul 17 00:50                      | 24°959'05                                    | 0.29020 AU | desc. node                     | 2623 Dec 12 09:45                      | 20°×742'04                               |                    |
| morning rise                    | 2621 Jul 22 12:32                      | 21° <b>©</b> 38'41                           |            |                                | 2623 Dec 19 19:13                      | 8°0                                      |                    |
| direct                          | 2621 Aug 07 18:44                      | 16°536'08                                    |            |                                | 2624 Jan 12 15:53                      | 0° <b>≈</b>                              |                    |
| greatest brilliancy             | 2621 Aug 18 05:50                      | 18° <b>©</b> 33'29                           | -4.7m      | evening rise                   | 2624 Jan 17 18:35                      | 6° <b>≈</b> 25'32                        |                    |
|                                 | 2621 Sep 06 17:08                      | $0^{\circ}\Omega$                            |            |                                | 2624 Feb 05 13:31                      | 0° <b>)</b> €                            |                    |
| morning max el                  | 2621 Sep 25 21:50                      | 16° <b>Ω</b> 53'58                           | 46°00'57   |                                | 2624 Feb 29 14:00                      | 0° <b>Υ</b>                              |                    |
|                                 | 2621 Oct 08 19:43                      | 0° <b>m</b> ∕                                |            |                                | 2624 Mar 24 20:04                      | 0° <b>8</b>                              |                    |
| asc. node                       | 2621 Oct 17 17:51                      | 9° m/35'00                                   |            | asc. node                      | 2624 Apr 03 13:01                      | 11° <b>8</b> 53'18                       |                    |
|                                 | 2621 Nov 04 20:35                      | 0∘ <b>⊽</b>                                  |            |                                | 2624 Apr 18 10:56                      | 0° <b>I</b>                              |                    |
|                                 | 2621 Nov 30 04:55                      | 0° <b>M</b><br>0° <b>₹</b>                   |            |                                | 2624 May 13 14:54                      | 0°©                                      |                    |
|                                 | 2621 Dec 24 18:43                      | 0° <b>ズ</b><br>0°る                           |            |                                | 2624 Jun 08 15:52                      | 0° <b>Ω</b>                              |                    |
| desc. node                      | 2622 Jan 17 23:58<br>2622 Feb 06 07:26 | 0°る<br>24° <b>る</b> 03'22                    |            | evening max el                 | 2624 Jul 06 10:34<br>2624 Jul 17 15:12 | 0° <b>Т</b> р<br>11° <b>Тр</b> 05'48     | 45°30'07           |
| desc. Hode                      | 2622 Feb 11 01:48                      | 24 003 22<br>0°≈                             |            | desc. node                     | 2624 Jul 24 02:28                      | 17° Mp 06'23                             | 45 3007            |
|                                 | 2622 Mar 07 02:54                      | 0° <b>₩</b>                                  |            | dese. Hode                     | 2624 Aug 08 22:30                      | 0° <b>ம</b>                              |                    |
|                                 | 2622 Mar 31 04:58                      | 0° <b>Υ</b>                                  |            | greatest brilliancy            | 2624 Aug 25 16:37                      | 9° <b>ჲ</b> 02'01                        | -4.7m              |
| morning set                     | 2622 Apr 01 00:58                      | 1° <b>Y</b> 02'12                            |            | retrograde                     | 2624 Sep 04 06:22                      | 10° <b>≏</b> 40'41                       |                    |
| C                               | 2622 Apr 24 09:05                      | $9^{\circ}$ 8                                |            | evening set                    | 2624 Sep 22 06:33                      | 4° <b>≙</b> 38'40                        |                    |
|                                 |  |  |            | inferior conj                  | 2624 Sep 25 10:46                      | 2° <b>≏</b> 42'08                        | -8°36'31           |
| superior conj                   | 2622 May 09 13:51                      | 18° <b>8</b> 47'49                           | -0°47'08   | minimum elong                  | 2624 Sep 25 14:05                      | 2° <b>ჲ</b> 36'59                        | 8°36'22            |
| minimum elong                   | 2622 May 09 22:52                      | 19° <b>8</b> 15'40                           |            | min. Earth dist.               | 2624 Sep 26 04:18                      | 2° <b>≏</b> 14'58                        | 0.28324 AU         |
| max. Earth dist.                | 2622 May 12 03:42                      |  | 1.73018 AU | morning rise                   | 2624 Sep 28 21:27                      | 0° <b>ჲ</b> 35'36                        |                    |
|                                 | 2622 May 18 15:47                      | $\Pi^{\circ}$ 0                              |            |                                | 2624 Sep 29 21:35                      | 30°R, Mp                                 |                    |
| asc. node                       | 2622 May 30 10:40                      | 14° <b>Ⅱ</b> 31'05                           |            | direct                         | 2624 Oct 16 19:29                      | 24° m/33'12                              | 4.0                |
|                                 | 2622 Jun 12 00:52                      | 0°95   |            | greatest brilliancy            | 2624 Oct 27 20:49                      | 26° Mp 49'18                             | -4.8m              |
| evening rise                    | 2622 Jun 15 23:27<br>2622 Jul 06 11:57 | 4°≌50'21<br>0°Ω                              |            | asc. node                      | 2624 Nov 03 10:47<br>2624 Nov 14 05:34 | 0° <b>ჲ</b><br>7° <b>ჲ</b> 18'31         |                    |
|                                 | 2622 Jul 31 01:10                      | 0° <b>m</b> )                                |            | morning max el                 | 2624 Dec 06 07:01                      | 7 <b>=</b> 18 31 27° <b>£</b> 23'29      | 46°44'19           |
|                                 | 2622 Aug 24 17:39                      | 0∘ <del>⊽</del>                              |            | morning max ci                 | 2624 Dec 08 20:16                      | 0°M                                      | 40 44 19           |
|                                 | 2622 Sep 18 15:14                      | 0° <b>M</b> ₊                                |            |                                | 2625 Jan 05 03:38                      | 0° <b>₹</b>                              |                    |
| desc. node                      | 2622 Sep 19 00:13                      | 0°M26'55                                     |            |                                | 2625 Jan 30 15:55                      | ਨ°0                                      |                    |
|                                 | 2622 Oct 13 20:37                      | 0° <b>∡</b> ¹                                |            |                                | 2625 Feb 24 11:53                      | 0° <b>≈</b>                              |                    |
|                                 | 2622 Nov 08 15:25                      | ರ°0  |            | desc. node                     | 2625 Mar 05 19:20                      | 11° <b>≈</b> 21'15                       |                    |
|                                 | 2622 Dec 05 17:10                      | 0° <b>≈</b>                                  |            |                                | 2625 Mar 21 01:06                      | 0° <b>)</b>                              |                    |
| evening max el                  | 2622 Dec 13 14:29                      | 8° <b>≈</b> 11′28                            | 47°16'15   |                                | 2625 Apr 14 11:55                      | $0^{\circ}$ Y                            |                    |
|                                 | 2623 Jan 06 14:21                      | 0° <b>∀</b>                                  |            |                                | 2625 May 08 22:28                      | 0°8                                      |                    |
| asc. node                       | 2623 Jan 10 03:19                      | 2° <b>∺</b> 35′28                            |            |                                | 2625 Jun 02 09:29                      | 0°Щ                                      |                    |
| greatest brilliancy             | 2623 Jan 23 06:43                      | 9° <b>¥</b> 50′29                            | -4.9m      | morning set                    | 2625 Jun 10 08:47                      | 9° <b>Ⅱ</b> 46'26                        |                    |
| retrograde                      | 2623 Feb 02 13:16                      | 11° <b>光</b> 52'08<br>6° <b>光</b> 03'57      |            | asc. node                      | 2625 Jun 26 22:34<br>2625 Jun 26 20:29 | 0°506'23<br>0°5                          |                    |
| evening set<br>min. Earth dist. | 2623 Feb 19 18:20<br>2623 Feb 22 13:11 | 6 <del>X</del> 0337<br>4° <del>X</del> 21'47 | 0.27267 AU | max. Earth dist.               | 2625 Jul 15 18:05                      | 0 S<br>23°S12'55                         | 1.73539 AU         |
| inferior conj                   | 2623 Feb 23 07:50                      | 3° <b>¥</b> 52′50                            | 8°31'49    | max. Earth dist.               | 2023 Jul 13 18.03                      | 23 3 12 33                               | 1.73339 AU         |
| minimum elong                   | 2623 Feb 23 01:47                      | 4° <b>₩</b> 02'13                            |            | superior conj                  | 2625 Jul 17 00:58                      | 24°9547'52                               | 0°45'26            |
| morning rise                    | 2623 Feb 26 09:29                      | 1° <b>¥</b> 59'54                            | 0 31 10    | minimum elong                  | 2625 Jul 16 17:02                      | 24°9523'28                               | 0°45'05            |
|                                 | 2623 Mar 01 21:56                      | 30°R≈  |            |                                | 2625 Jul 21 06:28                      | 0° <b>Ω</b>                              |                    |
| direct                          | 2623 Mar 15 21:43                      | 26°≈04'22                                    |            |                                | 2625 Aug 14 14:58                      | 0° <b>m</b>                              |                    |
| greatest brilliancy             | 2623 Mar 24 23:10                      | 27° <b>≈</b> 37′20                           | -4.8m      | evening rise                   | 2625 Aug 21 21:25                      | 8° m 57'57                               |                    |
|                                 | 2623 Mar 30 17:22                      | 0° <b>∀</b>                                  |            |                                | 2625 Sep 07 22:28                      | 0∘ <b>ত</b>                              |                    |
| desc. node                      | 2623 May 01 16:50                      | 24° <b>)</b> 40′50                           |            |                                | 2625 Oct 02 06:05                      | 0°M₊                                     |                    |
| morning max el                  | 2623 May 04 12:29                      | 27° <b>∺</b> 24'07                           | 46°14'11   | desc. node                     | 2625 Oct 16 12:04                      | 17°M33'10                                |                    |
|                                 | 2623 May 07 03:52                      | 0° <b>Υ</b>                                  |            |                                | 2625 Oct 26 14:50                      | 0° <b>∡</b> 7                            |                    |
|                                 | 2623 Jun 04 13:32                      | 0° <b>B</b>                                  |            |                                | 2625 Nov 20 01:34                      | % ප                                      |                    |
|                                 | 2623 Jul 01 02:37                      | 0° <b>Ⅱ</b>                                  |            |                                | 2625 Dec 14 16:19                      | 0° <b>≈</b>                              |                    |
|                                 | 2623 Jul 26 19:23                      | 0. O<br>0.ಎ                                  |            |                                | 2626 Jan 08 16:51                      | 0° <b>ℋ</b><br>0° <b>Ƴ</b>               |                    |
| asa nada                        | 2623 Aug 20 22:35                      | 0° <b>Ω</b><br>2° <b>Ω</b> 17'39             |            | asc. node                      | 2626 Feb 03 17:55                      | 3°Υ11'52                                 |                    |
| asc. node                       | 2623 Aug 22 20:14<br>2623 Sep 14 14:50 | 2° <b>3</b> (1/39                            |            | asc. node<br>evening max el    | 2626 Feb 06 15:16<br>2626 Feb 23 13:27 | 3°γ11'52<br>21° <b>Υ</b> '06'47          | 46°41'23           |
|                                 | 2023 Sep 14 14.30                      | U III  |            | evening max ci                 | 2020100 23 13.27                       | 41 TUU4/                                 | TU TT 43           |

|                     | 2626 Mar 04 17:00                      | 0°8                                  |            | aumorior coni                  | 2629 Cam 22 19:00                      | 0° <b>≙</b> 06'47                  | 1°24'18    |
|---------------------|--|--------------------------------------|------------|--------------------------------|--|------------------------------------|------------|
| greatest brilliancy | 2626 Mar 04 17:00<br>2626 Apr 04 03:04 | 21° <b>8</b> 29'25                   | -4.8m      | superior conj<br>minimum elong | 2628 Sep 22 18:09<br>2628 Sep 22 20:34 | 0° <b>2</b> 14'18                  | 1°24'17    |
| retrograde          | 2626 Apr 14 18:43                      | 21 <b>6</b> 29 23 23° <b>6</b> 35'45 | -4.6111    | minimum elong                  | 2628 Sep 22 20.34<br>2628 Sep 22 15:58 | 0° <b>உ</b>                        | 1 241/     |
| evening set         | 2626 May 01 00:01                      | 18° <b>8</b> 27'38                   |            |                                | 2628 Oct 16 18:13                      | 0 <b>==</b><br>0° <b>M</b> ₊       |            |
| inferior conj       | 2626 May 06 00:33                      | 15° <b>8</b> 22'18                   | 5012110    | evening rise                   | 2628 Oct 30 17:46                      | 17° <b>M</b> L26'44                |            |
| minimum elong       | 2626 May 06 09:59                      | 15° <b>8</b> 07'25                   | 5°10'01    | evening rise                   | 2628 Nov 09 19:10                      | 0° <b>√</b>                        |            |
| •                   | •                                      | 15° <b>8</b> 24'04                   | 0.28456 AU | daga mada                      |  | 0 <b>x</b> .<br>3° <b>x</b> 759'50 |            |
| min. Earth dist.    | 2626 May 05 23:26                      | _                                    | 0.28430 AU | desc. node                     | 2628 Nov 12 23:59                      | 0° <b>る</b>                        |            |
| morning rise        | 2626 May 11 20:23                      | 11° <b>8</b> 50'28                   |            |                                | 2628 Dec 03 19:44                      |                                    |            |
| direct              | 2626 May 27 07:27                      | 7° <b>8</b> 13'40                    |            |                                | 2628 Dec 27 20:50                      | 0° <b>≈</b>                        |            |
| desc. node          | 2626 May 29 04:36                      | 7° <b>8</b> 17'46                    | 4.7        |                                | 2629 Jan 21 00:24                      | 0° <b>)</b> €                      |            |
| greatest brilliancy | 2626 Jun 06 03:34                      | _                                    | -4.7m      |                                | 2629 Feb 14 10:17                      | 0° <b>Υ</b>                        |            |
|                     | 2626 Jul 07 10:26                      | 0°II                                 |            | asc. node                      | 2629 Mar 06 03:03                      | 23° <b>Y</b> 45'33                 |            |
| morning max el      | 2626 Jul 15 01:41                      | 7° <b>Ⅱ</b> 03′28                    | 45°43'38   |                                | 2629 Mar 11 09:12                      | 0°B                                |            |
|                     | 2626 Aug 06 15:10                      | 0ංම                                  |            |                                | 2629 Apr 06 09:20                      | 0°II                               |            |
|                     | 2626 Sep 02 15:42                      | $0$ $^{\circ}\Omega$                 |            |                                | 2629 May 04 18:23                      | ი <sub>ა</sub> ფ                   |            |
| asc. node           | 2626 Sep 19 08:05                      | 19° <b>Ω</b> 23'24                   |            | evening max el                 | 2629 May 05 09:42                      | 0° <b>©</b> 37'21                  | 45°41'36   |
|                     | 2626 Sep 28 06:59                      | 0° <b>т</b> р                        |            | greatest brilliancy            | 2629 Jun 12 08:18                      | 28° <b>©</b> 47'45                 | -4.7m      |
|                     | 2626 Oct 23 02:30                      | 0∘ <b>⊽</b>                          |            |                                | 2629 Jun 16 01:54                      | $0$ $\circ$ $\Omega$               |            |
|                     | 2626 Nov 16 09:53                      | 0°M₊                                 |            | retrograde                     | 2629 Jun 23 08:26                      | 0° <b>Ω</b> 59'18                  |            |
|                     | 2626 Dec 10 10:36                      | 0° <b>∡</b> ¹                        |            | desc. node                     | 2629 Jun 25 16:38                      | 0° <b>Ω</b> 52'47                  |            |
|                     | 2627 Jan 03 08:13                      | 0°ප                                  |            |                                | 2629 Jun 30 09:15                      | 30° <b>₹</b> 5                     |            |
| desc. node          | 2627 Jan 08 21:35                      | 6° <b>ප</b> 59'10                    |            | evening set                    | 2629 Jul 08 17:04                      | 26°526'16                          |            |
| morning set         | 2627 Jan 12 00:59                      | 10° <b>පි</b> 56'11                  |            | inferior conj                  | 2629 Jul 14 20:39                      | 22°5944'56                         | -4°19'14   |
|                     | 2627 Jan 27 04:53                      | 0° <b>≈</b>                          |            | minimum elong                  | 2629 Jul 14 12:13                      | 22° <b>9</b> 58'07                 | 4°17'04    |
|                     | 2627 Feb 20 02:02                      | 0° <b>∀</b>                          |            | min. Earth dist.               | 2629 Jul 14 16:44                      | 22° <b>©</b> 51'03                 | 0.29014 AU |
|                     |  |                                      |            | morning rise                   | 2629 Jul 20 07:21                      | 19° <b>5</b> 26'46                 |            |
| superior conj       | 2627 Feb 22 16:12                      | 3° <b>ℋ</b> 14'56                    | -1°21'51   | direct                         | 2629 Aug 05 11:16                      | 14° <b>©</b> 27'23                 |            |
| minimum elong       | 2627 Feb 22 08:56                      | 2° <b>升</b> 52'08                    | 1°21'44    | greatest brilliancy            | 2629 Aug 15 21:41                      | 16°924'36                          | -4.7m      |
| max. Earth dist.    | 2627 Feb 26 03:18                      | 7° <b>)</b> €35'21                   | 1.71468 AU | ,                              | 2629 Sep 07 03:07                      | $0^{\circ}\Omega$                  |            |
|                     | 2627 Mar 16 01:06                      | $0^{\circ}\Upsilon$                  |            | morning max el                 | 2629 Sep 23 14:12                      | 14° <b>Ω</b> 43'53                 | 45°59'35   |
| evening rise        | 2627 Apr 03 23:39                      | 23° <b>Y</b> 35'22                   |            |                                | 2629 Oct 08 13:44                      | 0° m/y                             |            |
| o ronning rise      | 2627 Apr 09 03:36                      | 0°8                                  |            | asc. node                      | 2629 Oct 16 19:52                      | 8° <b>m</b> ) 55'27                |            |
| asc. node           | 2627 May 02 00:53                      | 28° <b>8</b> 15'50                   |            | ase. node                      | 2629 Nov 04 11:00                      | 0∘ <mark>ರ</mark>                  |            |
| use. Houe           | 2627 May 02 00:35<br>2627 May 03 10:46 | 0°II                                 |            |                                | 2629 Nov 29 17:53                      | 0° <b>M</b> -                      |            |
|                     | 2627 May 27 23:32                      | 0<br>. ಹ                             |            |                                | 2629 Dec 24 06:55                      | 0° <b>⊼</b> ¹                      |            |
|                     | 2627 Jun 21 19:05                      | 0° <b>U</b>                          |            |                                | 2630 Jan 17 11:44                      | 0∘ਤ                                |            |
|                     | 2627 Jul 17 00:04                      | 0° <b>m</b>                          |            | desc. node                     | 2630 Feb 05 09:30                      | 23° <b>云</b> 33'53                 |            |
|                     | 2627 Aug 11 20:09                      | 0° <del>ت</del>                      |            | desc. node                     | 2630 Feb 10 13:16                      | 0° <b>≈</b>                        |            |
| desc. node          | 2627 Aug 11 20:09<br>2627 Aug 21 14:17 | 0 <b>=</b><br>11° <b>⊆</b> 02'32     |            |                                | 2630 Mar 06 14:09                      | 0 <b>≈</b><br>0° <b>∺</b>          |            |
| desc. node          | Ü                                      | 0°M                                  |            | marning sat                    | 2630 Mar 29 13:55                      | 28° <b>H</b> 38'43                 |            |
|                     | 2627 Sep 07 19:59                      |                                      | 46924144   | morning set                    |  | 28°π3843<br>0° <b>Υ</b>            |            |
| evening max el      | 2627 Sep 29 06:36                      | 22°M03'10                            | 40 24 44   |                                | 2630 Mar 30 16:03                      |                                    |            |
| 4 41 711            | 2627 Oct 07 17:15                      | 0° 🗖                                 | 4.0        |                                | 2630 Apr 23 20:02                      | $0^{\circ}$ 8                      |            |
| greatest brilliancy | 2627 Nov 08 14:19                      | 21° 🖈 40'26                          | -4.9m      |                                | 2620.16 07 05 10                       | 1.00                               | 00.40150   |
| retrograde          | 2627 Nov 17 23:09                      | 23° 🖈 18'59                          |            | superior conj                  | 2630 May 07 05:19                      | 16° <b>8</b> 33'40                 |            |
| evening set         | 2627 Dec 02 12:03                      | 19° 🖈 11'53                          |            | minimum elong                  | 2630 May 07 14:42                      | 17° <b>8</b> 02'38                 |            |
| inferior conj       | 2627 Dec 08 13:49                      | 15°× <b>7</b> 40'02                  |            | max. Earth dist.               | 2630 May 09 22:00                      | 19° <b>8</b> 53'26                 | 1.72976 AU |
| minimum elong       | 2627 Dec 08 16:17                      | 15° 🗷 36'17                          | 1°03'42    | ,                              | 2630 May 18 02:39                      | 0°II                               |            |
| min. Earth dist.    | 2627 Dec 08 21:15                      | 15° 🗷 28'44                          | 0.26572 AU | asc. node                      | 2630 May 29 12:48                      | 14° <b>Ⅱ</b> 04'09                 |            |
| asc. node           | 2627 Dec 12 17:28                      | 13°×11'07                            |            |                                | 2630 Jun 11 11:45                      | 0°©                                |            |
| morning rise        | 2627 Dec 14 20:00                      | 12° <b>∡</b> *01'02                  |            | evening rise                   | 2630 Jun 13 17:18                      | 2°5544'26                          |            |
| direct              | 2627 Dec 29 01:12                      | 7° <b>∡</b> 758'47                   |            |                                | 2630 Jul 05 22:57                      | $0$ $^{\circ}$ $\Omega$            |            |
| greatest brilliancy | 2628 Jan 08 13:21                      | 10° <b>∡</b> 03'43                   | -4.9m      |                                | 2630 Jul 30 12:27                      | 0° <b>m</b> ∕                      |            |
|                     | 2628 Feb 06 03:40                      | 0° <b>ろ</b>                          |            |                                | 2630 Aug 24 05:23                      | 0∘ <b>⊽</b>                        |            |
| morning max el      | 2628 Feb 17 14:12                      | 11° <b>る</b> 02'18                   | 46°54'48   | desc. node                     | 2630 Sep 18 02:10                      | 29° <b>≏</b> 55'22                 |            |
|                     | 2628 Mar 06 12:50                      | 0° <b>≈</b>                          |            |                                | 2630 Sep 18 03:43                      | 0° <b>M</b> .                      |            |
| desc. node          | 2628 Apr 02 07:06                      | 0° <b>₩</b> 16'33                    |            |                                | 2630 Oct 13 10:19                      | 0° <b>∡</b> 7                      |            |
|                     | 2628 Apr 02 01:23                      | 0° <b>ℋ</b>                          |            |                                | 2630 Nov 08 07:17                      | 0°ಕ                                |            |
|                     | 2628 Apr 27 15:02                      | $0$ ° $\mathbf{\gamma}$              |            |                                | 2630 Dec 05 13:55                      | 0° <b>≈</b>                        |            |
|                     | 2628 May 22 18:49                      | $0^{\circ}S$                         |            | evening max el                 | 2630 Dec 11 05:44                      | 5° <b>≈</b> 50'10                  | 47°15'46   |
|                     | 2628 Jun 16 17:26                      | $\Pi^{\circ}0$                       |            |                                | 2631 Jan 07 11:40                      | 0° <b>\</b>                        |            |
|                     | 2628 Jul 11 11:57                      | 0°€                                  |            | asc. node                      | 2631 Jan 09 05:27                      | 1° <b>米</b> 11′51                  |            |
| asc. node           | 2628 Jul 24 10:26                      | 15° <b>5</b> 45'30                   |            | greatest brilliancy            | 2631 Jan 20 19:56                      | 7° <b>∺</b> 23'39                  | -4.9m      |
|                     | 2628 Aug 05 01:55                      | $0^{\circ}\Omega$                    |            | retrograde                     | 2631 Jan 31 03:30                      | 9° <b>∺</b> 25'49                  |            |
| morning set         | 2628 Aug 17 03:58                      | 14° <b>Ω</b> 50′21                   |            | evening set                    | 2631 Feb 17 04:06                      | 3° <b>)</b> 43′32                  |            |
|                     | 2628 Aug 29 11:02                      | 0° <b>m</b>                          |            | min. Earth dist.               | 2631 Feb 20 01:38                      | 1° <b>¥</b> 57′26                  | 0.27213 AU |
| max. Earth dist.    | 2628 Sep 19 11:53                      | 26° Mp 03'35                         | 1.72572 AU | inferior conj                  | 2631 Feb 20 21:05                      | 1° <b>∺</b> 27'17                  | 8°24'52    |
|                     |  |                                      |            | minimum elong                  | 2631 Feb 20 14:19                      | 1° <b>)</b> 37′46                  | 8°24'09    |
|                     |  |                                      |            |                                |  |                                    |            |

|                                | 2631 Feb 23 05:49                      | 30°R <b>≈</b>                     |            | minimum elong                     | 2633 Jul 14 11:33                      | 22° <b>©</b> 19'20                                    | 0°42'24               |
|--------------------------------|--|-----------------------------------|------------|-----------------------------------|--|---|-----------------------|
| morning rise                   | 2631 Feb 24 00:47                      | 29° <b>≈</b> 31'27                |            |                                   | 2633 Jul 20 17:23                      | $0^{\circ}\Omega$                                     |                       |
| direct                         | 2631 Mar 13 11:10                      | 23° <b>≈</b> 39'54                |            |                                   | 2633 Aug 14 01:57                      | 0° <b>™</b>   |                       |
| greatest brilliancy            | 2631 Mar 22 11:12                      | 25° <b>≈</b> 12′09                | -4.8m      | evening rise                      | 2633 Aug 19 15:35                      | 6° Mp 51'55   |                       |
|                                | 2631 Apr 01 15:50                      | 0° <b>∀</b>                       |            |                                   | 2633 Sep 07 09:37                      | 0∘ <b>ত</b>   |                       |
| desc. node                     | 2631 Apr 30 18:55                      | 23° <b>)</b> (47'44               |            |                                   | 2633 Oct 01 17:32                      | 0° <b>M</b>   |                       |
| morning max el                 | 2631 May 02 02:46                      | 25° <b>)</b> €05'09               | 46°15'39   | desc. node                        | 2633 Oct 15 14:09                      | 17°M03'48   |                       |
|                                | 2631 May 07 01:41                      | 0° <b>႘</b>                       |            |                                   | 2633 Oct 26 02:40                      | 0°る   |                       |
|                                | 2631 Jun 04 05:23<br>2631 Jun 30 16:08 | 0°II                              |            |                                   | 2633 Nov 19 13:55<br>2633 Dec 14 05:27 | 0°≈   |                       |
|                                | 2631 Jul 26 07:42                      | 0ಂ <b>ತಾ</b>                      |            |                                   | 2634 Jan 08 07:20                      | 0° <b>∺</b>   |                       |
|                                | 2631 Aug 20 10:15                      | $0^{\circ}\Omega$                 |            |                                   | 2634 Feb 03 11:18                      | 0°Υ   |                       |
| asc. node                      | 2631 Aug 21 22:12                      | 1° <b>Ω</b> 48'32                 |            | asc. node                         | 2634 Feb 05 17:09                      | 2° <b>Y</b> 28'08                                     |                       |
|                                | 2631 Sep 14 02:07                      | 0° <b>m</b> p                     |            | evening max el                    | 2634 Feb 21 03:14                      | 18° <b>Y</b> 44'48                                    | 46°46'26              |
|                                | 2631 Oct 08 09:29                      | 0∘ <b>ত</b>                       |            |                                   | 2634 Mar 04 20:06                      | $0^{\circ}$ 8   |                       |
| morning set                    | 2631 Oct 26 19:03                      | 22° <b>ჲ</b> 55'00                |            | greatest brilliancy               | 2634 Apr 01 20:16                      | 19° <b>8</b> 16'03                                    | -4.8m                 |
|                                | 2631 Nov 01 11:04                      | 0°M₊                              |            | retrograde                        | 2634 Apr 12 10:09                      | 21° <b>8</b> 21'17                                    |                       |
|                                | 2631 Nov 25 09:26                      | 0° <b>∡</b>                       |            | evening set                       | 2634 Apr 28 18:30                      | 16° <b>8</b> 09'20                                    |                       |
| max. Earth dist.               | 2631 Dec 03 16:45                      | 10° <b>₹</b> 25'46                | 1.71269 AU | inferior conj                     | 2634 May 03 16:14                      | 13° <b>8</b> 08'13                                    |                       |
| avmariar aani                  | 2631 Dec 05 00:46                      | 12° <b>₹</b> 06'18                | 0°15'26    | minimum elong                     | 2634 May 04 01:54                      | 12° <b>8</b> 52'58                                    | 5°26'42<br>0.28428 AU |
| superior conj<br>minimum elong | 2631 Dec 05 00:40<br>2631 Dec 05 04:40 | 12 × 00 18<br>12° × 18'35         | 0°15'15    | min. Earth dist.<br>morning rise  | 2634 May 03 15:21<br>2634 May 09 09:38 | 9° <b>8</b> 39'32                                     | 0.28428 AU            |
| behind sun begin               | 2631 Dec 03 04.40<br>2631 Dec 04 19:33 | 12 <b>x</b> 18 33                 | 0 13 13    | direct                            | 2634 May 24 22:06                      | 5° <b>8</b> 00'00                                     |                       |
| behind sun end                 | 2631 Dec 05 13:47                      | 12° <b>×</b> <sup>7</sup> 47'13   |            | desc. node                        | 2634 May 28 06:43                      | 5° <b>8</b> 12'54                                     |                       |
| desc. node                     | 2631 Dec 11 11:54                      | 20° × 13'43                       |            | greatest brilliancy               | 2634 Jun 03 18:41                      | 6° <b>8</b> 45'49                                     | -4.7m                 |
|                                | 2631 Dec 19 06:25                      | 8°0                               |            | ,                                 | 2634 Jul 07 12:27                      | 0°II  |                       |
|                                | 2632 Jan 12 03:09                      | 0° <b>≈</b>                       |            | morning max el                    | 2634 Jul 12 16:13                      | 4° <b>∏</b> 49'04                                     | 45°43'58              |
| evening rise                   | 2632 Jan 15 04:40                      | 3° <b>≈</b> 50'58                 |            |                                   | 2634 Aug 06 07:53                      | $0$ $\circ$ $\odot$                                   |                       |
|                                | 2632 Feb 05 00:51                      | 0° <b>)</b> €                     |            |                                   | 2634 Sep 02 05:32                      | $0$ $^{\circ}$ $\Omega$                               |                       |
|                                | 2632 Feb 29 01:27                      | 0° <b>Υ</b>                       |            | asc. node                         | 2634 Sep 18 10:04                      | 18° <b>Ω</b> 51'13                                    |                       |
|                                | 2632 Mar 24 07:45                      | 0°8                               |            |                                   | 2634 Sep 27 19:31                      | 0° m/y  |                       |
| asc. node                      | 2632 Apr 02 15:01                      | 11° <b>8</b> 23'20                |            |                                   | 2634 Oct 22 14:22                      | 0∘ <b>亚</b>   |                       |
|                                | 2632 Apr 17 23:05                      | 0°©<br>0°∏                        |            |                                   | 2634 Nov 15 21:26                      | 0° <b>M</b><br>0° <b>⊀</b>                            |                       |
|                                | 2632 May 13 03:57<br>2632 Jun 08 06:46 | 0°Ω<br>0 €3                       |            |                                   | 2634 Dec 09 21:57<br>2635 Jan 02 19:28 | 0 ×.<br>0°ਤ   |                       |
|                                | 2632 Jul 06 06:08                      | 0° <b>m</b> y                     |            | desc. node                        | 2635 Jan 07 23:39                      | 6° <b>る</b> 30'23                                     |                       |
| evening max el                 | 2632 Jul 15 05:56                      | 8° <b>m</b> ) 51'24               | 45°29'13   | morning set                       | 2635 Jan 09 11:09                      | 8° <b>る</b> 22'00                                     |                       |
| desc. node                     | 2632 Jul 23 04:32                      | 16° <b>m</b> ) 11'16              |            | S                                 | 2635 Jan 26 16:03                      | 0° <b>≈</b>   |                       |
|                                | 2632 Aug 09 20:08                      | 0∘ <b>⊽</b>                       |            |                                   | 2635 Feb 19 13:09                      | 0° <b>)</b> €   |                       |
| greatest brilliancy            | 2632 Aug 23 06:30                      | 6° <b>₽</b> 47'02                 | -4.7m      |                                   |  |   |                       |
| retrograde                     | 2632 Sep 01 20:19                      | 8° <b>≏</b> 25'48                 |            | superior conj                     | 2635 Feb 20 03:12                      | 0° <b>)</b> 44′05                                     |                       |
| evening set                    | 2632 Sep 19 21:50                      | 2° <b>ഫ</b> 22'58                 |            | minimum elong                     | 2635 Feb 19 19:04                      | 0° <b>¥</b> 18'35                                     |                       |
| inferior conj                  | 2632 Sep 23 01:44                      | 0° <b>£</b> 26'40                 |            | max. Earth dist.                  | 2635 Feb 23 08:34                      | 4° <b>)</b> (46'39                                    | 1.71429 AU            |
| minimum elong                  | 2632 Sep 23 04:15                      | 0° <b>Ω</b> 22'47                 | 8°38'59    |                                   | 2635 Mar 15 12:12                      | 0° <b>Υ</b><br>21° <b>Υ</b> 11'09                     |                       |
| min. Earth dist.               | 2632 Sep 23 18:56<br>2632 Sep 23 18:38 | 30°RM)<br>0° <b>≏</b> 00'28       | 0.28377 AU | evening rise                      | 2635 Apr 01 12:20<br>2635 Apr 08 14:43 | 0° <b>8</b>   |                       |
| morning rise                   | 2632 Sep 26 10:29                      | 28° Mp 22'45                      | 0.26377 AU | asc. node                         | 2635 May 01 02:59                      | 27° <b>8</b> 47'54                                    |                       |
| direct                         | 2632 Oct 14 10:47                      | 22° Mp 17'07                      |            | use. Houe                         | 2635 May 02 02:59                      | 0°Ⅱ   |                       |
| greatest brilliancy            | 2632 Oct 25 11:50                      | 24° m 32'12                       | -4.8m      |                                   | 2635 May 27 10:57                      | 0<br>. ಹ  |                       |
|                                | 2632 Nov 04 20:18                      | 0∘ <b>⊽</b>                       |            |                                   | 2635 Jun 21 06:59                      | $0^{\circ}\Omega$                                     |                       |
| asc. node                      | 2632 Nov 13 07:40                      | 6° <b>Ω</b> 09'15                 |            |                                   | 2635 Jul 16 12:51                      | 0° <b>™</b>   |                       |
| morning max el                 | 2632 Dec 03 20:25                      | 24° <b>≏</b> 59'38                | 46°42'58   |                                   | 2635 Aug 11 10:34                      | 0∘ <b>⊽</b>   |                       |
|                                | 2632 Dec 08 17:11                      | 0°M₊                              |            | desc. node                        | 2635 Aug 20 16:13                      | 10° <b>≏</b> 25'05                                    |                       |
|                                | 2633 Jan 04 19:28                      | 0° <b>∡</b>                       |            |                                   | 2635 Sep 07 13:55                      | 0° <b>™</b>   |                       |
|                                | 2633 Jan 30 05:47                      | ව°0                               |            | evening max el                    | 2635 Sep 26 19:16                      | 19°M39'37   | 46°22'23              |
| desc. node                     | 2633 Feb 24 00:42                      | 0° <b>≈</b><br>10° <b>≈</b> 48'50 |            | araataat brillianas               | 2635 Oct 07 22:35                      | 0° ⊀<br>19° ⊀ 13'26                                   | -4.9m                 |
| desc. node                     | 2633 Mar 04 21:16<br>2633 Mar 20 13:16 | 10 ≈48 30<br>0° <b>∺</b>          |            | greatest brilliancy<br>retrograde | 2635 Nov 06 03:07<br>2635 Nov 15 11:30 | 19 <b>x</b> ·13 20<br>20° <b>x</b> <sup>7</sup> 51'41 | -4.9111               |
|                                | 2633 Apr 13 23:35                      | 0° <b>Υ</b>                       |            | evening set                       | 2635 Nov 30 01:50                      | 16° <b>x</b> 42'03                                    |                       |
|                                | 2633 May 08 09:48                      | 0°8                               |            | inferior conj                     | 2635 Dec 06 02:09                      | 13° <b>₹</b> 12'25                                    | -1°28'42              |
|                                | 2633 Jun 01 20:35                      | 0°II                              |            | minimum elong                     | 2635 Dec 06 05:32                      | 13° <b>∡</b> 1223                                     |                       |
| morning set                    | 2633 Jun 08 02:11                      | 7° <b>Ⅱ</b> 38'49                 |            | min. Earth dist.                  | 2635 Dec 06 11:02                      | 12° <b>∡</b> ′58′55                                   | 0.26604 AU            |
| asc. node                      | 2633 Jun 26 00:37                      | 29° <b>Ⅱ</b> 39'04                |            | asc. node                         | 2635 Dec 11 19:32                      | 9° <b>∡</b> ′50′58                                    |                       |
|                                | 2633 Jun 26 07:26                      | 0°©                               |            | morning rise                      | 2635 Dec 12 08:41                      | 9° <b>∡</b> ³33'17                                    |                       |
| max. Earth dist.               | 2633 Jul 13 13:08                      | 21° <b>©</b> 10'29                | 1.73548 AU | direct                            | 2635 Dec 26 14:01                      | 5° <b>∡</b> ³30′18                                    |                       |
|                                | 2/22 1 1 14 12 11                      | 2205-42142                        | 0042144    | greatest brilliancy               | 2636 Jan 06 03:45                      | 7° <b>∡</b> ³37'13                                    | -4.9m                 |
| superior conj                  | 2633 Jul 14 19:11                      | 22° <b>©</b> 42'49                | 0°42'44    |                                   | 2636 Feb 06 07:59                      | 0°₹   |                       |

| morning max el                | 2636 Feb 15 04:22                      | 8° <b>පි</b> 38'43                  | 46°55'38              |                     | 2638 Oct 12 24:00                      | 0° <b>⊼</b>                          |            |
|-------------------------------|--|-------------------------------------|-----------------------|---------------------|--|--------------------------------------|------------|
| 1 1                           | 2636 Mar 06 06:44                      | 0°≈<br>20040122                     |                       |                     | 2638 Nov 07 23:14                      | 5°0                                  |            |
| desc. node                    | 2636 Apr 01 09:15                      | 29°≈40'22                           |                       |                     | 2638 Dec 05 11:13                      | 0°≈                                  | 47915102   |
|                               | 2636 Apr 01 16:01                      | 0° <b>∀</b><br>0° <b>Υ</b>          |                       | evening max el      | 2638 Dec 08 20:49<br>2639 Jan 08 07:25 | 3°≈28'52<br>29°≈45'24                | 4/15/03    |
|                               | 2636 Apr 27 04:05<br>2636 May 22 06:58 | 0°8                                 |                       | asc. node           | 2639 Jan 08 16:36                      | 29 <b>≈</b> 43 24<br>0° <b>∀</b>     |            |
|                               | 2636 Jun 16 04:59                      | 0°II                                |                       | greatest brilliancy | 2639 Jan 18 09:41                      | 0 <del>X</del><br>4° <b>){</b> 57'47 | 4 0m       |
|                               | 2636 Jul 10 23:07                      | 0°©                                 |                       | retrograde          | 2639 Jan 28 17:23                      | 6° <b>)</b> 59'34                    | -4.9111    |
| asc. node                     | 2636 Jul 23 12:24                      | 15° <b>©</b> 17'49                  |                       | evening set         | 2639 Feb 14 13:41                      | 1° <b>¥</b> 23'52                    |            |
| use. Houe                     | 2636 Aug 04 12:51                      | 0°Ω                                 |                       | evening sec         | 2639 Feb 16 20:56                      | 30°R≈                                |            |
| morning set                   | 2636 Aug 14 21:29                      | 12° <b>Ω</b> 43'09                  |                       | min. Earth dist.    | 2639 Feb 17 14:24                      | 29°≈32'57                            | 0.27156 AU |
| morning sec                   | 2636 Aug 28 21:53                      | 0° m)                               |                       | inferior conj       | 2639 Feb 18 10:18                      | 29°≈02'05                            | 8°16'54    |
| max. Earth dist.              | 2636 Sep 17 06:58                      | 24° Mp 00'04                        | 1.72621 AU            | minimum elong       | 2639 Feb 18 02:51                      | 29° <b>≈</b> 13'39                   | 8°16'02    |
|                               |  | 4                                   |                       | morning rise        | 2639 Feb 21 16:19                      | 27°≈02'50                            |            |
| superior conj                 | 2636 Sep 20 10:49                      | 27° m 55'37                         | 1°24'39               | direct              | 2639 Mar 11 00:26                      | 21°≈15'55                            |            |
| minimum elong                 | 2636 Sep 20 12:29                      | 28° m) 00'48                        |                       | greatest brilliancy | 2639 Mar 19 23:34                      | 22° <b>≈</b> 47'31                   | -4.9m      |
|                               | 2636 Sep 22 02:51                      | 0∘ <b>⊽</b>                         |                       |                     | 2639 Apr 02 23:03                      | 0° <b>∀</b>                          |            |
|                               | 2636 Oct 16 05:13                      | 0° <b>M</b>                         |                       | morning max el      | 2639 Apr 29 16:08                      | 22° <b>)</b> 44'26                   | 46°17'18   |
| evening rise                  | 2636 Oct 28 07:31                      | 15°ML05'14                          |                       | desc. node          | 2639 Apr 29 21:00                      | 22° <b>)</b> 56'19                   |            |
|                               | 2636 Nov 09 06:20                      | 0° <b>∡¹</b>                        |                       |                     | 2639 May 06 22:26                      | $0^{\circ}$ Y                        |            |
| desc. node                    | 2636 Nov 12 02:07                      | 3° <b>∡</b> ³31'30                  |                       |                     | 2639 Jun 03 20:40                      | 0°8                                  |            |
|                               | 2636 Dec 03 07:06                      | 0° <b>ට</b>                         |                       |                     | 2639 Jun 30 05:13                      | $\Pi^{\circ}0$                       |            |
|                               | 2636 Dec 27 08:27                      | 0° <b>≈</b>                         |                       |                     | 2639 Jul 25 19:40                      | $0$ $\circ$ $\odot$                  |            |
|                               | 2637 Jan 20 12:19                      | 0° <b>∀</b>                         |                       |                     | 2639 Aug 19 21:36                      | $0 {\circ} \Omega$                   |            |
|                               | 2637 Feb 13 22:43                      | $0^{\circ}\Upsilon$                 |                       | asc. node           | 2639 Aug 21 00:14                      | 1° <b>Ω</b> 20′24                    |            |
| asc. node                     | 2637 Mar 05 05:06                      | 23° <b>Y</b> 12'40                  |                       |                     | 2639 Sep 13 13:09                      | O° My                                |            |
|                               | 2637 Mar 10 22:35                      | $9^{\circ}$ 8                       |                       |                     | 2639 Oct 07 20:22                      | 0∘ <b>⊽</b>                          |            |
|                               | 2637 Apr 06 00:54                      | $\Pi^{\circ}0$                      |                       | morning set         | 2639 Oct 24 09:50                      | 20° <b>≏</b> 37'29                   |            |
| evening max el                | 2637 May 03 02:20                      | 28° <b>Ⅱ</b> 27'55                  | 45°43'13              |                     | 2639 Oct 31 21:54                      | 0° <b>M</b> ₊                        |            |
|                               | 2637 May 04 16:24                      | 0ංම                                 |                       |                     | 2639 Nov 24 20:18                      | 0° <b>⊼</b>                          |            |
| greatest brilliancy           | 2637 Jun 09 23:53                      | 26° <b>©</b> 38'20                  | -4.7m                 | max. Earth dist.    | 2639 Nov 30 22:31                      | 7° <b>∡</b> ³39'01                   | 1.71300 AU |
| retrograde                    | 2637 Jun 21 01:31                      | 28°950'53                           |                       |                     |  |                                      |            |
| desc. node                    | 2637 Jun 24 18:40                      | 28°934'24                           |                       | superior conj       | 2639 Dec 02 12:16                      | 9° <b>×</b> 37'33                    | 0°19'13    |
| evening set                   | 2637 Jul 06 08:09                      | 24°519'48                           | 1001151               | minimum elong       | 2639 Dec 02 17:04                      | 9° 🖈 52'36                           | 0°18'58    |
| inferior conj                 | 2637 Jul 12 13:07                      | 20°536'11                           |                       | desc. node          | 2639 Dec 10 13:53                      | 19° <b>₹</b> 45'41                   |            |
| minimum elong                 | 2637 Jul 12 05:06                      | 20°548'44                           | 3°59'49<br>0.29007 AU |                     | 2639 Dec 18 17:21                      | 5°0                                  |            |
| min. Earth dist.              | 2637 Jul 12 08:37                      | 20°543'13                           | 0.29007 AU            |                     | 2640 Jan 11 14:10                      | 0°≈                                  |            |
| morning rise                  | 2637 Jul 18 02:09                      | 17°©14'59<br>12°©18'56              |                       | evening rise        | 2640 Jan 12 14:47                      | 1°≈17'19<br>0° <b>米</b>              |            |
| direct<br>greatest brilliancy | 2637 Aug 03 04:14<br>2637 Aug 13 13:05 | 12 \$18 36<br>14° \$15'13           | 4.7m                  |                     | 2640 Feb 04 11:57<br>2640 Feb 28 12:41 | 0°Υ<br>0°Υ                           |            |
| greatest offinalicy           | 2637 Sep 07 10:24                      | 0°Ω                                 | -4./III               |                     | 2640 Mar 23 19:12                      | 0°8                                  |            |
| morning max el                | 2637 Sep 21 06:35                      | 12° <b>Ω</b> 34'00                  | 45°58'13              | asc. node           | 2640 Apr 01 17:09                      | 10° <b>8</b> 54'33                   |            |
| morning max cr                | 2637 Oct 08 07:20                      | 0° M)                               | 43 36 13              | asc. node           | 2640 Apr 17 10:59                      | 0°II                                 |            |
| asc. node                     | 2637 Oct 15 22:03                      | 8° Mp 16'47                         |                       |                     | 2640 May 12 16:44                      | 0°50                                 |            |
| use. noue                     | 2637 Nov 04 01:14                      | 0° <b>⊽</b>                         |                       |                     | 2640 Jun 07 21:25                      | $0^{\circ}\Omega$                    |            |
|                               | 2637 Nov 29 06:43                      | 0° <b>M</b> .                       |                       |                     | 2640 Jul 06 01:48                      | 0° m)                                |            |
|                               | 2637 Dec 23 19:03                      | 0° <b>∡</b> ¹                       |                       | evening max el      | 2640 Jul 12 19:56                      | 6° m 36'35                           | 45°28'20   |
|                               | 2638 Jan 16 23:26                      | 0°ರ                                 |                       | desc. node          | 2640 Jul 22 06:28                      | 15° Mp 15'57                         |            |
| desc. node                    | 2638 Feb 04 11:26                      | 23° <b>る</b> 04'03                  |                       |                     | 2640 Aug 11 01:01                      | 0∘ <b>⊽</b>                          |            |
|                               | 2638 Feb 10 00:41                      | 0° <b>≈</b>                         |                       | greatest brilliancy | 2640 Aug 20 20:28                      | 4° <b>£</b> 33'29                    | -4.7m      |
|                               | 2638 Mar 06 01:20                      | 0° <b>)</b> €                       |                       | retrograde          | 2640 Aug 30 10:20                      | 6° <b>£</b> 12'39                    |            |
| morning set                   | 2638 Mar 27 03:06                      | 26° <b>∺</b> 16'14                  |                       | evening set         | 2640 Sep 17 12:49                      | 0° <b>ჲ</b> 09'20                    |            |
|                               | 2638 Mar 30 03:01                      | $\mathbf{\gamma}_0$                 |                       |                     | 2640 Sep 17 19:02                      | 30°₽.₩                               |            |
|                               | 2638 Apr 23 06:50                      | $0^{\circ}$ 8                       |                       | inferior conj       | 2640 Sep 20 16:53                      | 28° Mp 12'47                         | -8°40'40   |
|                               |  |                                     |                       | minimum elong       | 2640 Sep 20 18:34                      | 28° Mp 10'10                         | 8°40'38    |
| superior conj                 | 2638 May 04 21:01                      | 14° <b>8</b> 20'35                  |                       | min. Earth dist.    | 2640 Sep 21 09:18                      | 27° Mp 47'16                         | 0.28434 AU |
| minimum elong                 | 2638 May 05 06:41                      | 14° <b>8</b> 50'28                  |                       | morning rise        | 2640 Sep 24 00:05                      | 26° Mp 10'58                         |            |
| max. Earth dist.              | 2638 May 07 18:36                      |                                     | 1.72932 AU            | direct              | 2640 Oct 12 01:53                      | 20° m 02'19                          |            |
| _                             | 2638 May 17 13:23                      | 0°II                                |                       | greatest brilliancy | 2640 Oct 23 03:37                      | 22° Mp 17'18                         | -4.8m      |
| asc. node                     | 2638 May 28 14:51                      | 13° <b>Ⅱ</b> 37'28                  |                       | 4                   | 2640 Nov 05 19:43                      | 0∘ <b>ʊ</b>                          |            |
|                               | 2638 Jun 10 22:30                      | 0.20<br>0.20                        |                       | asc. node           | 2640 Nov 12 09:41                      | 5° <b>Ω</b> 02'33                    | 46041126   |
| evening rise                  | 2638 Jun 11 11:20                      | 0°939'25                            |                       | morning max el      | 2640 Dec 01 09:58                      | 22° <b>£</b> 37'03                   | 46°41'39   |
|                               | 2638 Jul 05 09:51                      | 0° <b>Ω</b>                         |                       |                     | 2640 Dec 08 13:09                      | 0° <b>M</b><br>0° <i>≯</i>           |            |
|                               | 2638 Jul 29 23:38                      | 0 <b>்⊽</b><br>0°™                  |                       |                     | 2641 Jan 04 10:46<br>2641 Jan 29 19:13 | 0°₹'                                 |            |
| desc. node                    | 2638 Aug 23 17:03                      | ე° <u>ა</u> 24'30                   |                       |                     | 2641 Jan 29 19:13<br>2641 Feb 23 13:07 | 0°≈                                  |            |
| uesc. noue                    | 2638 Sep 17 04:16<br>2638 Sep 17 16:09 | 29° <b>±</b> 24°30<br>0° <b>M</b> ₊ |                       | desc. node          | 2641 Feb 23 13:07<br>2641 Mar 03 23:23 | 0°≈<br>10°≈18'08                     |            |
|                               | 2030 Sep 17 10.09                      | O IIG                               |                       | dese. Hode          | 2071 IVIAI UJ 23.23                    | 10 ~1000                             |            |

|                      | 2641 Mar 20 01:02  | 0° <b>∀</b>                         |             | retrograde          | 2643 Nov 13 00:15                      | 18° <b>∡</b> ¹25'49       |             |
|----------------------|--------------------|-------------------------------------|-------------|---------------------|--|---------------------------|-------------|
|                      | 2641 Apr 13 10:54  | 0° <b>Υ</b>                         |             | evening set         | 2643 Nov 27 15:56                      | 16 <b>x</b> 23 49         |             |
|                      | 2641 May 07 20:47  | 0°8                                 |             | inferior conj       | 2643 Dec 03 14:33                      | 14 <b>★</b> 13 30         | -1°52'31    |
|                      | 2641 Jun 01 07:19  | $0^{\circ}\Pi$                      |             | minimum elong       | 2643 Dec 03 18:49                      | 10° <b>x</b> 40°02        |             |
| morning set          | 2641 Jun 05 19:41  | 5° <b>Ⅱ</b> 32'28                   |             | min. Earth dist.    | 2643 Dec 04 00:33                      | 10°×30'53                 | 0.26643 AU  |
| asc. node            | 2641 Jun 25 02:36  | 29° <b>I</b> 12'39                  |             | morning rise        | 2643 Dec 09 21:12                      | 7°×707'05                 | 0.20043710  |
| use. Houe            | 2641 Jun 25 18:01  | 0°9                                 |             | asc. node           | 2643 Dec 10 21:31                      | 6° <b>∡</b> ³35'36        |             |
| max. Earth dist.     | 2641 Jul 11 08:47  | 19° <b>©</b> 11'02                  | 1.73554 AU  | direct              | 2643 Dec 24 03:28                      | 3°×703'10                 |             |
| max. Dartii dist.    | 2011341 11 00.17   | 17 - 11 02                          | 1.75551110  | greatest brilliancy | 2644 Jan 03 17:47                      | 5° <b>×</b> 11'11         | -4.9m       |
| superior conj        | 2641 Jul 12 13:41  | 20°939'50                           | 0°39'59     | greatest orimane y  | 2644 Feb 06 10:25                      | 0°る                       | 1.5111      |
| minimum elong        | 2641 Jul 12 06:22  | 20°517'23                           | 0°39'40     | morning max el      | 2644 Feb 12 19:05                      | 6° <b>ප</b> 17'06         | 46°56'09    |
| minimum ciong        | 2641 Jul 20 03:54  | 0°Ω                                 | 0 37 10     | morning max or      | 2644 Mar 06 00:05                      | 0° <b>≈</b>               | 10 30 0)    |
|                      | 2641 Aug 13 12:32  | 0° <b>m</b> )                       |             | desc. node          | 2644 Mar 31 11:21                      | 29°≈04'43                 |             |
| evening rise         | 2641 Aug 17 10:10  | 4° <b>m</b> ) 48'31                 |             | dese. Hode          | 2644 Apr 01 06:19                      | 0° <b>∀</b>               |             |
| evening rise         | 2641 Sep 06 20:24  | 0° <b>ت</b>                         |             |                     | 2644 Apr 26 16:52                      | 0° <b>Υ</b>               |             |
|                      | 2641 Oct 01 04:38  | 0° <b>m</b> .                       |             |                     | 2644 May 21 18:50                      | 0°8                       |             |
| desc. node           | 2641 Oct 14 16:16  | 16°M35'28                           |             |                     | 2644 Jun 15 16:16                      | 0°II                      |             |
| desc. flode          | 2641 Oct 25 14:12  | 10 ll <b>c</b> 33 28                |             |                     | 2644 Jul 10 10:02                      | 0° <b>©</b>               |             |
|                      | 2641 Nov 19 02:01  | 0°る                                 |             | asc. node           | 2644 Jul 22 14:27                      | 14°951'04                 |             |
|                      |                    | 0°≈                                 |             | asc. node           |  | 14 \$31 04<br>0°Ω         |             |
|                      | 2641 Dec 13 18:21  | 0 <b>≈</b>                          |             |                     | 2644 Aug 03 23:34                      |                           |             |
|                      | 2642 Jan 07 21:39  | 0° <b>Υ</b>                         |             | morning set         | 2644 Aug 12 15:11                      | 10° <b>Ω</b> 37'13        |             |
| ,                    | 2642 Feb 03 04:41  |                                     |             | D d F               | 2644 Aug 28 08:30                      | 0° m/                     | 1.72662.444 |
| asc. node            | 2642 Feb 04 19:15  | 1° <b>Υ</b> 45'22                   | 4.60.4012.5 | max. Earth dist.    | 2644 Sep 15 00:47                      | 21°11053'27               | 1.72663 AU  |
| evening max el       | 2642 Feb 18 16:35  | 16° <b>Y</b> 22'41                  | 46°48'35    |                     | 26446 10.02.51                         | 250m 46126                | 100.4150    |
|                      | 2642 Mar 05 00:29  | 0°8                                 |             | superior conj       | 2644 Sep 18 03:51                      | 25° m 46'26               |             |
| greatest brilliancy  | 2642 Mar 30 12:58  | 17° <b>8</b> 02'47                  | -4.8m       | minimum elong       | 2644 Sep 18 04:48                      | 25° m/49'20               | 1°24'53     |
| retrograde           | 2642 Apr 10 01:46  | 19° <b>8</b> 07'39                  |             |                     | 2644 Sep 21 13:30                      | 0∘ <b>⊽</b>               |             |
| evening set          | 2642 Apr 26 12:56  | 13° <b>8</b> 51'26                  |             |                     | 2644 Oct 15 15:57                      | 0°M                       |             |
| inferior conj        | 2642 May 01 07:50  | 10° <b>8</b> 54'45                  |             | evening rise        | 2644 Oct 25 21:41                      | 12°M46'03                 |             |
| minimum elong        | 2642 May 01 17:40  | 10° <b>8</b> 39'15                  | 5°42'55     |                     | 2644 Nov 08 17:13                      | 0°⊀                       |             |
| min. Earth dist.     | 2642 May 01 07:03  | 10° <b>8</b> 56'00                  | 0.28401 AU  | desc. node          | 2644 Nov 11 04:06                      | 3° <b>∡</b> °03′38        |             |
| morning rise         | 2642 May 06 22:40  | 7° <b>8</b> 29'42                   |             |                     | 2644 Dec 02 18:13                      | 0°ಕ                       |             |
| direct               | 2642 May 22 12:36  | 2° <b>8</b> 46'46                   |             |                     | 2644 Dec 26 19:52                      | 0° <b>≈</b>               |             |
| desc. node           | 2642 May 27 08:44  | 3° <b>8</b> 13'17                   |             |                     | 2645 Jan 20 00:07                      | 0° <b>∀</b>               |             |
| greatest brilliancy  | 2642 Jun 01 09:48  | 4° <b>8</b> 33'01                   | -4.7m       |                     | 2645 Feb 13 11:05                      | $0$ ° $\Upsilon$          |             |
|                      | 2642 Jul 07 12:44  | $\Pi$ $\circ 0$                     |             | asc. node           | 2645 Mar 04 07:13                      | 22° <b>Ƴ</b> 40′02        |             |
| morning max el       | 2642 Jul 10 07:30  | 2° <b>Ⅱ</b> 37'31                   | 45°44'33    |                     | 2645 Mar 10 12:01                      | $9^{\circ}$ 8             |             |
|                      | 2642 Aug 05 23:52  | 0ංම                                 |             |                     | 2645 Apr 05 16:39                      | $\Pi$ $^{\circ}0$         |             |
|                      | 2642 Sep 01 18:47  | $0$ $\circ$ $\Omega$                |             | evening max el      | 2645 Apr 30 18:54                      | 26° <b>Ⅱ</b> 18′20        | 45°44'56    |
| asc. node            | 2642 Sep 17 12:15  | 18° <b>Ω</b> 21'03                  |             |                     | 2645 May 04 15:19                      | 0∘ <b>ௐ</b>               |             |
|                      | 2642 Sep 27 07:33  | O° <b>m</b> y                       |             | greatest brilliancy | 2645 Jun 07 16:01                      | 24° <b>©</b> 29'28        | -4.7m       |
|                      | 2642 Oct 22 01:49  | 0∘ <b>ত</b>                         |             | retrograde          | 2645 Jun 18 18:11                      | 26°5942'02                |             |
|                      | 2642 Nov 15 08:37  | 0°M                                 |             | desc. node          | 2645 Jun 23 20:39                      | 26°©10'55                 |             |
|                      | 2642 Dec 09 09:00  | 0°⊀                                 |             | evening set         | 2645 Jul 03 23:14                      | 22°©12'59                 |             |
|                      | 2643 Jan 02 06:26  | ರ°0                                 |             | inferior conj       | 2645 Jul 10 05:24                      | 18° <b>©</b> 27'15        | -3°44'14    |
| morning set          | 2643 Jan 06 21:05  | 5° <b>⋜</b> 47'48                   |             | minimum elong       | 2645 Jul 09 21:50                      | 18° <b>©</b> 39'06        | 3°42'14     |
| desc. node           | 2643 Jan 07 01:39  | 6° <b>ප</b> 02'10                   |             | min. Earth dist.    | 2645 Jul 10 00:33                      | 18° <b>©</b> 34'50        | 0.28996 AU  |
|                      | 2643 Jan 26 02:57  | 0° <b>≈</b>                         |             | morning rise        | 2645 Jul 15 20:37                      | 15° <b>©</b> 02'52        |             |
|                      |                    |                                     |             | direct              | 2645 Jul 31 20:57                      | 10° <b>©</b> 10'21        |             |
| superior conj        | 2643 Feb 17 13:38  | 28° <b>≈</b> 12'11                  | -1°19'00    | greatest brilliancy | 2645 Aug 11 04:04                      | 12° <b>©</b> 05'12        | -4.7m       |
| minimum elong        | 2643 Feb 17 04:43  | 27° <b>≈</b> 44'11                  | 1°18'49     |                     | 2645 Sep 07 15:26                      | $0^{\circ}\Omega$         |             |
|                      | 2643 Feb 18 24:00  | 0° <b>∀</b>                         |             | morning max el      | 2645 Sep 18 22:16                      | 10° <b>Ω</b> 22'44        | 45°57'01    |
| max. Earth dist.     | 2643 Feb 20 13:23  | 1° <b>¥</b> 57'17                   | 1.71391 AU  | •                   | 2645 Oct 08 00:25                      | o° mp                     |             |
|                      | 2643 Mar 14 23:02  | $_0$ ° $oldsymbol{\gamma}$          |             | asc. node           | 2645 Oct 14 23:58                      | 7° m 38'09                |             |
| evening rise         | 2643 Mar 30 00:37  | 18° <b>Ƴ</b> 46'35                  |             |                     | 2645 Nov 03 15:09                      | 0∘ <u>⊽</u>               |             |
| Č                    | 2643 Apr 08 01:34  | 0°8                                 |             |                     | 2645 Nov 28 19:17                      | 0°M                       |             |
| asc. node            | 2643 Apr 30 05:02  | 27° <b>8</b> 20'36                  |             |                     | 2645 Dec 23 06:55                      | 0° <b>∡</b> ¹             |             |
|                      | 2643 May 02 08:55  | 0°II                                |             |                     | 2646 Jan 16 10:55                      | 0° <b>ට</b>               |             |
|                      | 2643 May 26 22:08  | 0°e                                 |             | desc. node          | 2646 Feb 03 13:34                      | 22° <b>る</b> 35'26        |             |
|                      | 2643 Jun 20 18:38  | $0 {\circ} {\mathfrak O}$           |             |                     | 2646 Feb 09 11:56                      | 0°≈                       |             |
|                      | 2643 Jul 16 01:23  | 0° <b>m</b>                         |             |                     | 2646 Mar 05 12:25                      | 0° <b>∀</b>               |             |
|                      | 2643 Aug 11 00:46  | 0∘ <del>⊽</del>                     |             | morning set         | 2646 Mar 24 15:46                      | 23° <b>)</b> 52'12        |             |
| desc. node           | 2643 Aug 19 18:24  | 0 <b>==</b><br>9° <b>£</b> 49'06    |             | morning set         | 2646 Mar 29 13:56                      | 23 χ 32 12<br>0° <b>Υ</b> |             |
| acse. Houc           | 2643 Sep 07 07:48  | 9 <b>==</b> 4900                    |             |                     | 2646 Apr 22 17:38                      | 0°8                       |             |
| evening max el       | 2643 Sep 24 08:50  | 17° <b>M</b> L19'47                 | 46°20'05    |                     | 20-то гърг 22 17.30                    | v O                       |             |
| Svening max ci       | 2643 Oct 08 05:25  | 17 llG1947<br>0° <b>√</b>           | 10 20 03    | superior conj       | 2646 May 02 12:06                      | 12° <b>8</b> 05'34        | -0°55'27    |
| greatest brilliancy  | 2643 Nov 03 15:25  | 0 <b>x</b> .<br>16° <b>x</b> 747'34 | -4 9m       | minimum elong       | 2646 May 02 12:00<br>2646 May 02 22:01 | 12° <b>8</b> 36'13        |             |
| Sicurest offillation | 2073 110V 03 13.23 | 10 11 14                            | 7.7111      | mminum clong        | 2070 141ay 02 22.01                    | 12 030 13                 | 0 00 00     |

| max. Earth dist.         | 2646 May 05 14:47                      | 15° <b>8</b> 56'23                      | 1.72884 AU  | direct              | 2648 Oct 09 16:53                      | 17° <b>m</b> 46'35                     |             |
|--------------------------|--|---|-------------|---------------------|--|--|-------------|
|                          | 2646 May 17 00:06                      | $\Pi^{\circ}0$                          |             | greatest brilliancy | 2648 Oct 20 19:27                      | 20° <b>m</b> 01'55                     | -4.8m       |
| asc. node                | 2646 May 27 16:48                      | 13° <b>Ⅱ</b> 10′27                      |             |                     | 2648 Nov 06 13:22                      | 0∘ <b>⊽</b>                            |             |
| evening rise             | 2646 Jun 09 04:46                      | 28° <b>Ⅲ</b> 32'31                      |             | asc. node           | 2648 Nov 11 11:43                      | 3° <b>丘</b> 56'53                      |             |
|                          | 2646 Jun 10 09:15                      | $0$ $\circ$ $\odot$                     |             | morning max el      | 2648 Nov 29 00:21                      | 20° <b>£</b> 16′03                     | 46°40'24    |
|                          | 2646 Jul 04 20:45                      | $0^{\circ}\Omega$                       |             |                     | 2648 Dec 08 08:46                      | 0° <b>M</b>                            |             |
|                          | 2646 Jul 29 10:51                      | 0° <b>m</b> p                           |             |                     | 2649 Jan 04 02:06                      | 0° <b>∡</b> ¹                          |             |
|                          | 2646 Aug 23 04:46                      | 0∘ <b>ত</b>                             |             |                     | 2649 Jan 29 08:43                      | 0°ප                                    |             |
| desc. node               | 2646 Sep 16 06:21                      | 28° <b>≙</b> 53'30                      |             |                     | 2649 Feb 23 01:37                      | 0° <b>≈</b>                            |             |
|                          | 2646 Sep 17 04:39                      | 0° <b>M</b> .                           |             | desc. node          | 2649 Mar 03 01:28                      | 9° <b>≈</b> 46'56                      |             |
|                          | 2646 Oct 12 13:47                      | 0°⊀                                     |             |                     | 2649 Mar 19 12:52                      | 0° <b>ℋ</b>                            |             |
|                          | 2646 Nov 07 15:22                      | 0°ರ                                     |             |                     | 2649 Apr 12 22:19                      | $0^{\circ}$ Y                          |             |
|                          | 2646 Dec 05 09:07                      | 0° <b>≈</b>                             |             |                     | 2649 May 07 07:54                      | $0^{\circ}S$                           |             |
| evening max el           | 2646 Dec 06 11:09                      | 1° <b>≈</b> 06'09                       | 47°14'23    |                     | 2649 May 31 18:15                      | $\Pi^{\circ}0$                         |             |
| asc. node                | 2647 Jan 07 09:27                      | 28°≈16'45                               |             | morning set         | 2649 Jun 03 13:09                      | 3° <b>Ⅱ</b> 25'19                      |             |
|                          | 2647 Jan 10 09:48                      | 0° <b>∀</b>                             |             | asc. node           | 2649 Jun 24 04:43                      | 28° <b>Ⅱ</b> 45'58                     |             |
| greatest brilliancy      | 2647 Jan 16 00:01                      | 2° <b>)</b> 33′16                       | -4.9m       |                     | 2649 Jun 25 04:50                      | 0ංම                                    |             |
| retrograde               | 2647 Jan 26 06:54                      | 4° <b>)</b> 34′02                       |             | max. Earth dist.    | 2649 Jul 09 05:12                      | 17° <b>©</b> 13'09                     | 1.73564 AU  |
|                          | 2647 Feb 10 09:15                      | 30° <b>R</b> ≈                          |             |                     |  |  |             |
| evening set              | 2647 Feb 11 23:19                      | 29° <b>≈</b> 05'07                      |             | superior conj       | 2649 Jul 10 07:59                      | 18° <b>©</b> 35'27                     | 0°37'11     |
| min. Earth dist.         | 2647 Feb 15 03:40                      | 27°≈08'45                               | 0.27104 AU  | minimum elong       | 2649 Jul 10 01:04                      | 18° <b>©</b> 14'10                     | 0°36'52     |
| inferior conj            | 2647 Feb 15 23:41                      | 26° <b>≈</b> 37'40                      | 8°08'05     |                     | 2649 Jul 19 14:42                      | $0^{\circ}\Omega$                      |             |
| minimum elong            | 2647 Feb 15 15:35                      | 26°≈50'14                               | 8°07'01     |                     | 2649 Aug 12 23:24                      | 0°Щ                                    |             |
| morning rise             | 2647 Feb 19 08:10                      | 24° <b>≈</b> 34'36                      |             | evening rise        | 2649 Aug 15 04:34                      | 2° <b>m</b> 43'47                      |             |
| direct                   | 2647 Mar 08 13:17                      | 18° <b>≈</b> 52'30                      |             |                     | 2649 Sep 06 07:29                      | 0ಂ <b>ಹ</b>                            |             |
| greatest brilliancy      | 2647 Mar 17 12:43                      | 20°≈23'58                               | -4.9m       |                     | 2649 Sep 30 16:03                      | 0° <b>M</b> ₊                          |             |
|                          | 2647 Apr 03 21:28                      | 0° <b>∀</b>                             |             | desc. node          | 2649 Oct 13 18:12                      | 16°M05'45                              |             |
| morning max el           | 2647 Apr 27 04:51                      | 20° <b>)</b> €21'44                     | 46°18'44    |                     | 2649 Oct 25 02:03                      | 0° <b>∡</b>                            |             |
| desc. node               | 2647 Apr 28 22:59                      | 22° <b>)</b> €05'27                     |             |                     | 2649 Nov 18 14:28                      | 0°ಕ                                    |             |
|                          | 2647 May 06 18:35                      | 0° <b>Υ</b>                             |             |                     | 2649 Dec 13 07:39                      | 0° <b>≈</b>                            |             |
|                          | 2647 Jun 03 11:53                      | 0°B                                     |             |                     | 2650 Jan 07 12:25                      | 0° <b>∀</b>                            |             |
|                          | 2647 Jun 29 18:22                      | 0°Щ                                     |             |                     | 2650 Feb 02 22:45                      | 0° <b>Υ</b>                            |             |
|                          | 2647 Jul 25 07:44                      | 0°99                                    |             | asc. node           | 2650 Feb 03 21:25                      | 1° <b>Y</b> 01'32                      |             |
|                          | 2647 Aug 19 09:03                      | 0°N                                     |             | evening max el      | 2650 Feb 16 06:58                      | 14° <b>Y</b> 02'30                     | 46°50'54    |
| asc. node                | 2647 Aug 20 02:23                      | 0° <b>£</b> 52′21                       |             |                     | 2650 Mar 05 07:08                      | 0° <b>8</b>                            |             |
|                          | 2647 Sep 13 00:16                      | 0° Mp                                   |             | greatest brilliancy | 2650 Mar 28 05:11                      | 14° <b>8</b> 48'41                     | -4.8m       |
|                          | 2647 Oct 07 07:19                      | 0∘ <b>⊽</b>                             |             | retrograde          | 2650 Apr 07 18:01                      | 16° <b>8</b> 54'01                     |             |
| morning set              | 2647 Oct 22 00:34                      | 18° <b>≏</b> 19'30                      |             | evening set         | 2650 Apr 24 07:33                      | 11° <b>8</b> 33'18                     | 6000112     |
|                          | 2647 Oct 31 08:49                      | 0° <b>M</b> .                           |             | inferior conj       | 2650 Apr 28 23:35                      | 8° <b>8</b> 41'05                      |             |
| Earth diet               | 2647 Nov 24 07:16                      | 0°⊀ <sup>7</sup>                        | 1.71220 ATT | minimum elong       | 2650 Apr 29 09:31                      | 8° <b>8</b> 25'27                      |             |
| max. Earth dist.         | 2647 Nov 28 04:45                      | 4°×'53'26                               | 1.71329 AU  | min. Earth dist.    | 2650 Apr 28 22:29                      | 8° <b>8</b> 42'49                      | 0.28374 AU  |
|                          | 264731 20 00 02                        | 70 700120                               | 0022155     | morning rise        | 2650 May 04 11:45                      | 5° <b>8</b> 20'07                      |             |
| superior conj            | 2647 Nov 30 00:02                      |   | 0°22'55     | direct              | 2650 May 20 03:37                      | 0° <b>8</b> 33'23                      |             |
| minimum elong desc. node | 2647 Nov 30 05:40<br>2647 Dec 09 15:55 | 7° <b>₹</b> 27'00<br>19° <b>₹</b> 17'33 | 0°22'39     | desc. node          | 2650 May 26 10:45<br>2650 May 30 00:31 | 1° <b>8</b> 18'00<br>2° <b>8</b> 19'42 | 4.7         |
| desc. node               |  | 0°る                                     |             | greatest brilliancy | ,                                      | 2 <b>O</b> 1942<br>0° <b>I</b>         | -4./111     |
| avanina riaa             | 2647 Dec 18 04:22<br>2648 Jan 10 01:14 | 0 3<br>28° <b>る</b> 44'39               |             | marning may al      | 2650 Jul 07 12:08<br>2650 Jul 07 23:48 | 0° <b>Ⅱ</b> 27'47                      | 15011157    |
| evening rise             | 2648 Jan 11 01:13                      | 28 <b>○</b> 44 39 0° <b>≈</b>           |             | morning max el      | 2650 Aug 05 15:53                      | 0 <b>11</b> 2747<br>0°9                | 43 44 37    |
|                          | 2648 Feb 03 23:04                      | 0 <b>≈</b><br>0° <b>H</b>               |             |                     | 2650 Sep 01 08:18                      | 0° <b>U</b>                            |             |
|                          | 2648 Feb 27 23:56                      | 0° <b>Υ</b>                             |             | asc. node           | 2650 Sep 16 14:13                      | 17° <b>Ω</b> 49'13                     |             |
|                          | 2648 Mar 23 06:45                      | 0°8                                     |             | asc. Houc           | 2650 Sep 26 19:54                      | 0° Mp                                  |             |
| asc. node                | 2648 Mar 31 19:07                      | 10° <b>8</b> 24'59                      |             |                     | 2650 Oct 21 13:36                      | 0° <del>ت</del>                        |             |
| asc. node                | 2648 Apr 16 23:03                      | 0° <b>Ⅱ</b>                             |             |                     | 2650 Nov 14 20:06                      | 0° <b>™</b>                            |             |
|                          | 2648 May 12 05:47                      | 0°ಅ                                     |             |                     | 2650 Dec 08 20:21                      | 0° <b>⊼</b>                            |             |
|                          | 2648 Jun 07 12:32                      | 0°Ω                                     |             |                     | 2651 Jan 01 17:41                      | 0°ਤ<br>0°ਤ                             |             |
|                          | 2648 Jul 05 22:28                      | 0° mp                                   |             | morning set         | 2651 Jan 04 07:03                      | 3° <b>ਰ</b> 12'51                      |             |
| evening max el           | 2648 Jul 10 09:39                      | 4° Mp 20'17                             | 45°27'38    | desc. node          | 2651 Jan 06 03:45                      | 5°る33'25                               |             |
| desc. node               | 2648 Jul 21 08:39                      | 14° Mp 19'03                            | .5 27 50    | acce. node          | 2651 Jan 25 14:09                      | 0°≈                                    |             |
| acce. node               | 2648 Aug 12 19:46                      | 0° <del>ت</del>                         |             |                     | 2001.001 20 17.07                      | J . J .                                |             |
| greatest brilliancy      | 2648 Aug 18 09:58                      | 0 <b>=</b><br>2° <b>£</b> 18'35         | -4 7m       | superior conj       | 2651 Feb 14 23:57                      | 25°≈38'51                              | -1°17'19    |
| retrograde               | 2648 Aug 28 00:38                      | 3° <b>£</b> 58'50                       | ,           | minimum elong       | 2651 Feb 14 14:19                      | 25°≈08'34                              |             |
|                          | 2648 Sep 11 10:48                      | 30°R, Mp                                |             | max. Earth dist.    | 2651 Feb 17 19:37                      | 29°≈11'13                              | 1.71354 AU  |
| evening set              | 2648 Sep 15 03:18                      | 27° Mp 55'19                            |             | Zartii dibt.        | 2651 Feb 18 11:10                      | 0° <b>∺</b>                            | 1.,155 1110 |
| inferior conj            | 2648 Sep 18 07:56                      | 25° m 58'03                             | -8°41'26    |                     | 2651 Mar 14 10:10                      | 0° <b>Υ</b>                            |             |
| minimum elong            | 2648 Sep 18 08:46                      | 25° m 56'45                             |             | evening rise        | 2651 Mar 27 12:59                      | 16° <b>Y</b> 21'16                     |             |
| min. Earth dist.         | 2648 Sep 18 23:47                      |   | 0.28490 AU  |                     | 2651 Apr 07 12:41                      | 0°8                                    |             |
| morning rise             | 2648 Sep 21 14:00                      | 23° m 57'57                             |             | asc. node           | 2651 Apr 29 07:02                      | 26° <b>8</b> 52'24                     |             |
| <i>5</i> 3-              | -P                                     | 4 /                                     |             |                     | r                                      | <del>-</del>                           |             |

|                     | 2651 May 01 20:06 | $\Pi$ $\circ 0$                 |             |                     | 2654 Jan 15 22:44 | 0°₹                              |             |
|---------------------|-------------------|---------------------------------|-------------|---------------------|-------------------|----------------------------------|-------------|
|                     | 2651 May 26 09:34 | 0ංම                             |             | desc. node          | 2654 Feb 02 15:39 | 22° <b>る</b> 05'40               |             |
|                     | 2651 Jun 20 06:35 | $0^{\circ}\Omega$               |             |                     | 2654 Feb 08 23:29 | 0° <b>≈</b>                      |             |
|                     | 2651 Jul 15 14:17 | 0° <b>m</b>                     |             |                     | 2654 Mar 04 23:45 | 0° <b>)</b> €                    |             |
|                     | 2651 Aug 10 15:30 | 0∘ <b>ত</b>                     |             | morning set         | 2654 Mar 22 04:11 | 21° <b>¥</b> 26'33               |             |
| desc. node          | 2651 Aug 18 20:25 | 9° <b>£</b> 11'15               |             | C                   | 2654 Mar 29 01:05 | $0^{\circ}$ Y                    |             |
|                     | 2651 Sep 07 02:37 | 0°M                             |             |                     | 2654 Apr 22 04:40 | 0°B                              |             |
| evening max el      | 2651 Sep 21 23:20 | 15°ML01'11                      | 46°17'41    |                     | r                 |                                  |             |
| e vennig man er     | 2651 Oct 08 15:29 | 0° <b>∡</b> 7                   | .0 1, .1    | superior conj       | 2654 Apr 30 03:12 | 9° <b>8</b> 49'44                | -0°58'05    |
| greatest brilliancy | 2651 Nov 01 03:47 | 14° <b>×</b> <sup>7</sup> 20'48 | -4.8m       | minimum elong       | 2654 Apr 30 13:17 | 10° <b>B</b> 20'55               |             |
| retrograde          | 2651 Nov 10 12:56 | 15° 🖈 58'38                     | -4.0111     | max. Earth dist.    | 2654 May 03 09:54 | . •                              | 1.72833 AU  |
| evening set         |                   |                                 |             | max. Earm dist.     | •                 | 0° <b>Ⅱ</b>                      | 1.72833 AU  |
| C                   | 2651 Nov 25 06:15 | 11° <b>х</b> 43'49              | 2017/01     | 1                   | 2654 May 16 11:05 |                                  |             |
| inferior conj       | 2651 Dec 01 02:57 | 8° <b>∡</b> 18'34               |             | asc. node           | 2654 May 26 18:57 | 12° <b>Ⅱ</b> 43'21               |             |
| minimum elong       | 2651 Dec 01 08:03 | 8° <b>√</b> 10'49               |             | evening rise        | 2654 Jun 06 22:14 | 26° <b>Ⅲ</b> 25'01               |             |
| min. Earth dist.    | 2651 Dec 01 13:57 |                                 | 0.26683 AU  |                     | 2654 Jun 09 20:15 | 0°99                             |             |
| morning rise        | 2651 Dec 07 09:25 | 4° <b>∡</b> ³39'54              |             |                     | 2654 Jul 04 07:52 | $0$ ° $\Omega$                   |             |
| asc. node           | 2651 Dec 09 23:36 | 3° <b>≯</b> 22'50               |             |                     | 2654 Jul 28 22:13 | 0° <b>™</b>                      |             |
| direct              | 2651 Dec 21 17:02 | 0° <b>₹</b> 35'10               |             |                     | 2654 Aug 22 16:37 | 0∘ <b>⊽</b>                      |             |
| greatest brilliancy | 2652 Jan 01 07:25 | 2° <b>҂</b> 43'32               | -4.9m       | desc. node          | 2654 Sep 15 08:18 | 28° <b>≏</b> 21'37               |             |
|                     | 2652 Feb 06 11:54 | 0°ප                             |             |                     | 2654 Sep 16 17:21 | 0° <b>M</b> ₊                    |             |
| morning max el      | 2652 Feb 10 09:25 | 3° <b>⋜</b> 53′26               | 46°56'34    |                     | 2654 Oct 12 03:53 | 0° <b>∡</b> ¹                    |             |
|                     | 2652 Mar 05 17:26 | 0° <b>≈</b>                     |             |                     | 2654 Nov 07 08:04 | 0°₹                              |             |
| desc. node          | 2652 Mar 30 13:16 | 28° <b>≈</b> 27'52              |             | evening max el      | 2654 Dec 04 00:31 | 28° <b>る</b> 39'51               | 47°13'22    |
|                     | 2652 Mar 31 20:48 | 0° <b>∀</b>                     |             |                     | 2654 Dec 05 08:21 | 0° <b>≈</b>                      |             |
|                     | 2652 Apr 26 05:53 | $_0$ ° $\boldsymbol{\gamma}$    |             | asc. node           | 2655 Jan 06 11:36 | 26° <b>≈</b> 43'23               |             |
|                     | 2652 May 21 06:57 | 0°8                             |             |                     | 2655 Jan 13 07:01 | 0° <b>)</b> €                    |             |
|                     | 2652 Jun 15 03:47 | 0°II                            |             | greatest brilliancy | 2655 Jan 13 14:36 | 0° <b>₩</b> 07'11                | -4.9m       |
|                     | 2652 Jul 09 21:10 | 0<br>. ಹ                        |             | retrograde          | 2655 Jan 23 19:48 | 2° <b>\</b> 06'32                | 4.7111      |
| asc. node           | 2652 Jul 21 16:35 | 14°923'52                       |             | renograde           | 2655 Feb 02 22:40 | 2 7(00 32<br>30°R≈               |             |
| asc. node           |                   |                                 |             |                     |                   |                                  |             |
| . ,                 | 2652 Aug 03 10:30 | 0°Ω                             |             | evening set         | 2655 Feb 09 08:32 | 26°≈44'27                        | 0.27051 ATT |
| morning set         | 2652 Aug 10 09:09 | 8° <b>Ω</b> 31'25               |             | min. Earth dist.    | 2655 Feb 12 17:07 | 24°≈42'00                        | 0.27051 AU  |
| e a e               | 2652 Aug 27 19:24 | 0° <b>m</b>                     | 1.70710.433 | inferior conj       | 2655 Feb 13 12:47 | 24°≈11'27                        | 7°58'11     |
| max. Earth dist.    | 2652 Sep 12 17:03 | 19° Mp 41'10                    | 1.72712 AU  | minimum elong       | 2655 Feb 13 04:07 | 24° <b>≈</b> 24'55               | 7°56'55     |
|                     |                   |                                 |             | morning rise        | 2655 Feb 16 23:59 | 22° <b>≈</b> 04'16               |             |
| superior conj       | 2652 Sep 15 21:04 | 23°M 36'54                      |             | direct              | 2655 Mar 06 01:23 | 16° <b>≈</b> 27'01               |             |
| minimum elong       | 2652 Sep 15 21:17 | 23° <b>m</b> 37'35              | 1°24'58     | greatest brilliancy | 2655 Mar 15 02:15 | 17° <b>≈</b> 59'17               | -4.9m       |
|                     | 2652 Sep 21 00:28 | 0∘ <b>ত</b>                     |             |                     | 2655 Apr 04 14:38 | 0° <b>∀</b>                      |             |
|                     | 2652 Oct 15 03:03 | 0° <b>M</b>                     |             | morning max el      | 2655 Apr 24 17:08 | 17° <b>¥</b> 57′00               | 46°20'23    |
| evening rise        | 2652 Oct 23 11:48 | 10°M25'35                       |             | desc. node          | 2655 Apr 28 01:06 | 21° <b>¥</b> 15′02               |             |
|                     | 2652 Nov 08 04:30 | 0° <b>∡</b> ¹                   |             |                     | 2655 May 06 14:22 | $0^{\circ}$ Y                    |             |
| desc. node          | 2652 Nov 10 06:09 | 2° <b>∡</b> ³34'50              |             |                     | 2655 Jun 03 03:03 | 0°8                              |             |
|                     | 2652 Dec 02 05:43 | 0°రె                            |             |                     | 2655 Jun 29 07:33 | $\Pi^{\circ}0$                   |             |
|                     | 2652 Dec 26 07:38 | 0° <b>≈</b>                     |             |                     | 2655 Jul 24 19:51 | 0∘ <b>©</b>                      |             |
|                     | 2653 Jan 19 12:17 | 0° <b>)</b> €                   |             |                     | 2655 Aug 18 20:33 | $0^{\circ}\Omega$                |             |
|                     | 2653 Feb 12 23:50 | 0°Υ                             |             | asc. node           | 2655 Aug 19 04:20 | 0° <b>Ω</b> 23'32                |             |
| asc. node           | 2653 Mar 03 09:10 | 22° <b>Υ</b> 05'40              |             |                     | 2655 Sep 12 11:24 | 0° m)                            |             |
| use. node           | 2653 Mar 10 01:53 | 0°8                             |             |                     | 2655 Oct 06 18:18 | 0∘ <del>ت</del><br>مار           |             |
|                     | 2653 Apr 05 09:00 | 0°II                            |             | morning set         | 2655 Oct 19 15:48 | 0 <b>—</b><br>16° <b>≏</b> 03'07 |             |
| evening max el      | •                 | 24° <b>II</b> 07'28             | 15016112    | morning set         | 2655 Oct 30 19:46 | 0°™                              |             |
| evening max er      | 2653 Apr 28 11:20 |                                 | 43 40 43    |                     |                   |                                  |             |
| 4 41 711            | 2653 May 04 15:37 | 0°©                             | 4.7         | E 41 E 4            | 2655 Nov 23 18:17 | 0° द्र <sup>7</sup>              | 1 71260 ATT |
| greatest brilliancy | 2653 Jun 05 08:58 | 22°521'10                       | -4.7m       | max. Earth dist.    | 2655 Nov 25 14:27 | 2° <b>≯</b> 18'36                | 1.71369 AU  |
| retrograde          | 2653 Jun 16 10:36 | 24°933'09                       |             |                     |                   |                                  |             |
| desc. node          | 2653 Jun 22 22:48 | 23° <b>©</b> 42'40              |             | superior conj       | 2655 Nov 27 12:04 | 4° <b>⋌</b> ¹41'50<br>–          |             |
| evening set         | 2653 Jul 01 14:46 | 20° <b>©</b> 05'59              |             | minimum elong       | 2655 Nov 27 18:29 | 5° <b>∡</b> 01'57                | 0°26'15     |
| inferior conj       | 2653 Jul 07 21:57 | 16°©18'32                       | -3°26'26    | desc. node          | 2655 Dec 08 18:04 | 18° <b>∡</b> ¹49'32              |             |
| minimum elong       | 2653 Jul 07 14:53 | 16° <b>©</b> 29'37              | 3°24'30     |                     | 2655 Dec 17 15:29 | 0°₹                              |             |
| min. Earth dist.    | 2653 Jul 07 17:05 | 16° <b>©</b> 26'10              | 0.28980 AU  | evening rise        | 2656 Jan 07 11:35 | 26° <b>る</b> 11'14               |             |
| morning rise        | 2653 Jul 13 15:12 | 12° <b>©</b> 50'58              |             |                     | 2656 Jan 10 12:26 | 0° <b>≈</b>                      |             |
| direct              | 2653 Jul 29 13:30 | 8° <b>5</b> 02'04               |             |                     | 2656 Feb 03 10:22 | 0° <b>∀</b>                      |             |
| greatest brilliancy | 2653 Aug 08 19:32 | 9° <b>9</b> 55'40               | -4.7m       |                     | 2656 Feb 27 11:23 | $0$ ° $\Upsilon$                 |             |
| •                   | 2653 Sep 07 18:47 | $0^{\circ}\Omega$               |             |                     | 2656 Mar 22 18:28 | 0°8                              |             |
| morning max el      | 2653 Sep 16 13:10 | 8° <b>Ω</b> 09'14               | 45°55'42    | asc. node           | 2656 Mar 30 21:09 | 9° <b>8</b> 55'07                |             |
| <i>5</i>            | 2653 Oct 07 17:22 | 0° m/                           |             |                     | 2656 Apr 16 11:17 | 0°Ⅱ                              |             |
| asc. node           | 2653 Oct 14 02:03 | 6° m 59'39                      |             |                     | 2656 May 11 19:00 | 0°®                              |             |
|                     | 2653 Nov 03 05:13 | 0∘ <b>ಹ</b>                     |             |                     | 2656 Jun 07 03:55 | 0° <b>U</b>                      |             |
|                     | 2653 Nov 28 08:06 | 0° <b>™</b>                     |             |                     | 2656 Jul 05 19:50 | 0° <b>m</b> )                    |             |
|                     | 2653 Dec 22 19:07 | 0° <b>⊼</b> 7                   |             | evening max el      | 2656 Jul 08 00:05 | 2°My05'53                        | 45°27'10    |
|                     | 2000 DOC 22 17.0/ | · ^                             |             | CVCIIII'S IIIax CI  | 2000 Jul 00 00.00 | ∠ iiy∪333                        | -TJ 2/10    |

| desc. node                        | 2656 Jul 20 10:40                      | 13° <b>m</b> 20'39        |            | morning set         | 2659 Jan 01 17:41                      | 0° <b>る</b> 41'07                 |             |
|-----------------------------------|--|---------------------------|------------|---------------------|--|-----------------------------------|-------------|
|                                   | 2656 Aug 15 18:20                      | 0∘ <b>ত</b>               |            | desc. node          | 2659 Jan 05 05:47                      | 5° <b>る</b> 05'30                 |             |
| greatest brilliancy               | 2656 Aug 15 23:08                      | 0° <b>≙</b> 04'05         | -4.7m      |                     | 2659 Jan 25 01:01                      | 0° <b>≈</b>                       |             |
| retrograde                        | 2656 Aug 25 15:45                      | 1° <b>≏</b> 46'11         |            |                     |  |                                   |             |
|                                   | 2656 Sep 04 03:23                      | 30°R, M⊅                  |            | superior conj       | 2659 Feb 12 10:32                      | 23° <b>≈</b> 07'18                |             |
| evening set                       | 2656 Sep 12 17:43                      | 25° Mp 42'51              |            | minimum elong       | 2659 Feb 12 00:15                      | 22° <b>≈</b> 35′00                |             |
| inferior conj                     | 2656 Sep 15 23:14                      | 23° Mp 44'24              |            | max. Earth dist.    | 2659 Feb 15 05:39                      |                                   | 1.71324 AU  |
| minimum elong                     | 2656 Sep 15 23:14                      | 23° Mp 44'24              |            |                     | 2659 Feb 17 22:00                      | 0° <b>∀</b>                       |             |
| min. Earth dist.                  | 2656 Sep 16 14:12                      | 23°My21'12                | 0.28540 AU |                     | 2659 Mar 13 21:00                      | $0^{\circ}\mathbf{\Upsilon}$      |             |
| morning rise                      | 2656 Sep 19 04:33                      | 21°Mp45'36                |            | evening rise        | 2659 Mar 25 01:16                      | 13° <b>Y</b> 56′23                |             |
| direct                            | 2656 Oct 07 08:28                      | 15° <b>m</b> 32'07        |            |                     | 2659 Apr 06 23:34                      | $9^{\circ}$ 8                     |             |
| greatest brilliancy               | 2656 Oct 18 11:08                      | 17° <b>m</b> 47'38        | -4.8m      | asc. node           | 2659 Apr 28 09:09                      | 26° <b>8</b> 25'11                |             |
|                                   | 2656 Nov 07 02:07                      | 0∘ <b>ত</b>               |            |                     | 2659 May 01 07:06                      | $\Pi$ $^{\circ}0$                 |             |
| asc. node                         | 2656 Nov 10 13:49                      | 2° <b>£</b> 53'44         |            |                     | 2659 May 25 20:50                      | $0$ $\circ$ $\odot$               |             |
| morning max el                    | 2656 Nov 26 15:43                      | 17° <b>≙</b> 58'27        | 46°39'02   |                     | 2659 Jun 19 18:22                      | $0 {\circ} \Omega$                |             |
|                                   | 2656 Dec 08 03:37                      | 0°M                       |            |                     | 2659 Jul 15 03:04                      | O° Mp                             |             |
|                                   | 2657 Jan 03 17:04                      | 0° <b>∡</b> ¹             |            |                     | 2659 Aug 10 06:09                      | 0° <b>⊽</b>                       |             |
|                                   | 2657 Jan 28 22:03                      | ರ°0                       |            | desc. node          | 2659 Aug 17 22:22                      | 8° <b>₤</b> 33'37                 |             |
|                                   | 2657 Feb 22 14:03                      | 0° <b>≈</b>               |            |                     | 2659 Sep 06 21:37                      | $0^{\circ}$ M.                    |             |
| desc. node                        | 2657 Mar 02 03:23                      | 9° <b>≈</b> 15'18         |            | evening max el      | 2659 Sep 19 13:52                      | 12°M43'35                         | 46°15'19    |
|                                   | 2657 Mar 19 00:44                      | 0° <b>∀</b>               |            |                     | 2659 Oct 09 04:23                      | 0° <b>∡</b> ¹                     |             |
|                                   | 2657 Apr 12 09:46                      | $0$ ° $\mathbf{\gamma}$   |            | greatest brilliancy | 2659 Oct 29 16:42                      | 11° <b>∡</b> 756′02               | -4.8m       |
|                                   | 2657 May 06 19:02                      | $B_{\circ 0}$             |            | retrograde          | 2659 Nov 08 01:14                      | 13° <b>∡</b> ³32'47               |             |
|                                   | 2657 May 31 05:09                      | $\Pi^{\circ}0$            |            | evening set         | 2659 Nov 22 20:51                      | 9° <b>∡</b> 15'30                 |             |
| morning set                       | 2657 Jun 01 06:12                      | 1° <b>Ⅱ</b> 16'55         |            | inferior conj       | 2659 Nov 28 15:27                      | 5° <b>₹</b> 52'41                 | -2°39'15    |
| asc. node                         | 2657 Jun 23 06:45                      | 28° <b>Ⅱ</b> 19'13        |            | minimum elong       | 2659 Nov 28 21:21                      | 5° <b>х</b> 43′43                 | 2°37'26     |
|                                   | 2657 Jun 24 15:35                      | 0ංම                       |            | min. Earth dist.    | 2659 Nov 29 03:38                      | 5° <b>х</b> 34′09                 | 0.26720 AU  |
| max. Earth dist.                  | 2657 Jul 07 03:14                      | 15° <b>©</b> 20'24        | 1.73569 AU | morning rise        | 2659 Dec 04 21:25                      | 2° <b>҂</b> 14'23                 |             |
|                                   |  |                           |            | asc. node           | 2659 Dec 09 01:40                      | 0° <b>∡</b> 16'05                 |             |
| superior conj                     | 2657 Jul 08 02:01                      | 16°530'26                 | 0°34'18    |                     | 2659 Dec 09 18:00                      | 30°RM                             |             |
| minimum elong                     | 2657 Jul 07 19:30                      | 16°9510'24                | 0°34'00    | direct              | 2659 Dec 19 06:28                      | 28°M08'49                         |             |
|                                   | 2657 Jul 19 01:25                      | 0°N                       |            |                     | 2659 Dec 29 02:33                      | 0° <b>∡</b> 7                     |             |
|                                   | 2657 Aug 12 10:12                      | 0° m/                     |            | greatest brilliancy | 2659 Dec 29 21:17                      | 0° <b>∡</b> 17'31                 | -4.9m       |
| evening rise                      | 2657 Aug 12 23:02                      | 0° mp 39'33               |            | greatest simulary   | 2660 Feb 06 11:37                      | 0°ਰ                               | ,           |
| evening rise                      | 2657 Sep 05 18:28                      | 0∘ <b>ಹ</b>               |            | morning max el      | 2660 Feb 07 22:56                      | 1°る29'00                          | 46°57'00    |
|                                   | 2657 Sep 30 03:19                      | 0° <b>m</b> .             |            | morning max er      | 2660 Mar 05 09:56                      | 0°≈                               | 40 37 00    |
| desc. node                        | 2657 Oct 12 20:18                      | 15°M237'03                |            | desc. node          | 2660 Mar 29 15:24                      | 27°≈53'14                         |             |
| dese. Hode                        | 2657 Oct 24 13:44                      | 0° <b>⊼</b>               |            | dese. Hode          | 2660 Mar 31 10:40                      | 0° <b>∀</b>                       |             |
|                                   | 2657 Nov 18 02:42                      | °ੁਤ                       |            |                     | 2660 Apr 25 18:25                      | 0∘Υ                               |             |
|                                   | 2657 Dec 12 20:47                      | 0°≈                       |            |                     | 2660 May 20 18:40                      | 0°8                               |             |
|                                   | 2658 Jan 07 03:10                      | 0° <b>∺</b>               |            |                     | 2660 Jun 14 15:00                      | 0°II                              |             |
| asc. node                         | 2658 Feb 02 23:18                      | 0° <b>Υ</b> 16'37         |            |                     | 2660 Jul 09 08:02                      | 0°©                               |             |
| asc. node                         | 2658 Feb 02 17:08                      | 0° <b>Υ</b>               |            | asc. node           | 2660 Jul 20 18:32                      | 13°956'56                         |             |
| avanina may al                    | 2658 Feb 13 22:10                      | 0 γ<br>11° <b>Υ</b> 44'28 | 46°52'50   | asc. node           |  | 0°Ω                               |             |
| evening max el                    | 2658 Mar 05 16:26                      | 0° <b>8</b>               | 40 32 30   | morning set         | 2660 Aug 02 21:11<br>2660 Aug 08 02:44 | 6° <b>Ω</b> 25'17                 |             |
| araataat brillianay               | 2658 Mar 25 20:42                      | 12° <b>8</b> 32'58        | -4.8m      | morning set         | C                                      | 0° <b>m</b>                       |             |
| greatest brilliancy               |  | 12 <b>3</b> 32 38         | -4.6111    | may Earth dist      | 2660 Aug 27 06:01                      | 0 my<br>17° my 26′05              | 1 72750 AII |
| retrograde<br>evening set         | 2658 Apr 05 10:17<br>2658 Apr 22 01:50 | 9° <b>8</b> 13'45         |            | max. Earth dist.    | 2660 Sep 10 08:04                      | 17 11/2003                        | 1.72758 AU  |
| inferior conj                     | 2658 Apr 26 14:53                      | 6° <b>8</b> 25'59         | 6°16'01    | superior conj       | 2660 Sep 13 14:04                      | 21° <b>m</b> 27'51                | 1°24'56     |
| •                                 | •                                      | 6° <b>8</b> 10'16         | 6°13'54    | minimum elong       | •                                      | ~                                 | 1°24'56     |
| minimum elong<br>min. Earth dist. | 2658 Apr 27 00:53                      | 6° <b>8</b> 28'34         | 0.28347 AU | minimum clong       | 2660 Sep 13 13:33                      | 21° <b>™</b> 26'16<br>0° <b>≏</b> | 1 24 30     |
|                                   | 2658 Apr 26 13:15                      | 3° <b>8</b> 09'25         | 0.26347 AU |                     | 2660 Sep 20 11:06                      | 0°M                               |             |
| morning rise                      | 2658 May 02 00:14                      | 3°RY                      |            |                     | 2660 Oct 14 13:48                      |                                   |             |
| T' '                              | 2658 May 08 15:14                      |                           |            | evening rise        | 2660 Oct 21 01:54                      | 8°M06'14                          |             |
| direct                            | 2658 May 17 18:39                      | 28° <b>Y</b> 18'46        |            | 1 1                 | 2660 Nov 07 15:26                      | 0° ⊀ <b>7</b>                     |             |
| desc. node                        | 2658 May 25 12:51                      | 29° <b>Y</b> 26′01        |            | desc. node          | 2660 Nov 09 08:15                      | 2° <b>₹</b> 07'14                 |             |
|                                   | 2658 May 27 08:58                      | 0° <b>8</b>               | 4.7        |                     | 2660 Dec 01 16:53                      | ිර<br>ව                           |             |
| greatest brilliancy               | 2658 May 27 14:20                      | 0° <b>8</b> 04'33         | -4.7m      |                     | 2660 Dec 25 19:05                      | 0° <b>≈</b>                       |             |
| morning max el                    | 2658 Jul 05 16:16                      | _                         | 45°45'29   |                     | 2661 Jan 19 00:04                      | 0° <b>)</b> €                     |             |
|                                   | 2658 Jul 07 10:32                      | 0° <b>I</b> I             |            | 1                   | 2661 Feb 12 12:11                      | 0° <b>Υ</b>                       |             |
|                                   | 2658 Aug 05 07:30                      | 0° <b>©</b>               |            | asc. node           | 2661 Mar 02 11:15                      | 21° <b>Υ</b> 33'01                |             |
|                                   | 2658 Aug 31 21:29                      | 0° <b>Ω</b>               |            |                     | 2661 Mar 09 15:22                      | 8°0                               |             |
| asc. node                         | 2658 Sep 15 16:12                      | 17° <b>Ω</b> 18'15        |            |                     | 2661 Apr 05 01:08                      | 0°II                              | 45040110    |
|                                   | 2658 Sep 26 07:58                      | 0° <b>™</b>               |            | evening max el      | 2661 Apr 26 02:47                      | 21° <b>II</b> 55'20               | 45°48'19    |
|                                   | 2658 Oct 21 01:06                      | 0∘ <b>亚</b>               |            |                     | 2661 May 04 16:39                      | 0ಂಲ<br>100                        | 4.7         |
|                                   | 2658 Nov 14 07:18                      | 0°M                       |            | greatest brilliancy | 2661 Jun 03 01:57                      | 20°513'30                         | -4./m       |
|                                   | 2658 Dec 08 07:22                      | 0° <b>∡</b>               |            | retrograde          | 2661 Jun 14 02:27                      | 22°524'51                         |             |
|                                   | 2659 Jan 01 04:36                      | 0°ප                       |            | desc. node          | 2661 Jun 22 00:47                      | 21°©10'07                         |             |

| ovening set                             | 2661 Jun 29 06:15 | 17° <b>©</b> 59'08                |            |                     | 2663 Dec 17 02:23                      | გ∘ე                             |            |
|---|-------------------|-----------------------------------|------------|---------------------|--|---------------------------------|------------|
| evening set                             | 2661 Jul 05 14:22 |                                   | 2000105    | ovanina rias        | 2664 Jan 04 21:53                      | 0 3<br>23° <b>る</b> 38'27       |            |
| inferior conj                           | 2661 Jul 05 07:50 | 14°©10'22<br>14°©20'37            |            | evening rise        |  | 23 <b>O</b> 3827<br>0° <b>≈</b> |            |
| minimum elong<br>min. Earth dist.       | 2661 Jul 05 09:52 | 14 \$2037<br>14°\$17'27           | 0.28969 AU |                     | 2664 Jan 09 23:24<br>2664 Feb 02 21:27 | 0 <b>≈</b><br>0° <b>∀</b>       |            |
|   |                   |                                   | 0.28909 AU |                     |  | 0°Υ                             |            |
| morning rise                            | 2661 Jul 11 09:33 | 10°939'41                         |            |                     | 2664 Feb 26 22:38<br>2664 Mar 22 05:59 | 0° <b>8</b>                     |            |
| direct                                  | 2661 Jul 27 05:32 | 5°954'05                          | 4.7        | 1-                  |  | _                               |            |
| greatest brilliancy                     | 2661 Aug 06 11:38 | 7°947'16                          | -4.7m      | asc. node           | 2664 Mar 29 23:16                      | 9° <b>8</b> 26'07               |            |
|   | 2661 Sep 07 20:21 | 0° <b>Ω</b>                       | 45054122   |                     | 2664 Apr 15 23:18                      | 0° <b>∏</b>                     |            |
| morning max el                          | 2661 Sep 14 03:34 | 5° <b>Ω</b> 55'14                 | 45°54'33   |                     | 2664 May 11 08:03                      | 0° <b>©</b>                     |            |
|   | 2661 Oct 07 09:42 | 0° <b>m</b>                       |            |                     | 2664 Jun 06 19:13                      | 0°N                             | 4500 (140  |
| asc. node                               | 2661 Oct 13 04:12 | 6° m/22'33                        |            | evening max el      | 2664 Jul 05 15:13                      | 29° <b>£</b> 54′03              | 45°26'42   |
|   | 2661 Nov 02 18:48 | 0° <b>™</b>                       |            |                     | 2664 Jul 05 17:43                      | 0° m/y                          |            |
|   | 2661 Nov 27 20:29 | 0° <b>M</b> ₅                     |            | desc. node          | 2664 Jul 19 12:37                      | 12°My21'23                      |            |
|   | 2661 Dec 22 06:52 | 0° <b>∡</b>                       |            | greatest brilliancy | 2664 Aug 13 11:33                      | 27° <b>m</b> 49'22              | -4.7m      |
|   | 2662 Jan 15 10:09 | 0°₹                               |            | retrograde          | 2664 Aug 23 07:02                      | 29° <b>m</b> 33'42              |            |
| desc. node                              | 2662 Feb 01 17:34 | 21° <b>る</b> 36'35                |            | evening set         | 2664 Sep 10 07:39                      | 23° Tp 31'07                    |            |
|   | 2662 Feb 08 10:38 | 0° <b>≈</b>                       |            | inferior conj       | 2664 Sep 13 14:25                      | 21° <b>m</b> 30'48              | -8°40'36   |
|   | 2662 Mar 04 10:41 | 0° <b>∀</b>                       |            | minimum elong       | 2664 Sep 13 13:37                      | 21°M)32'02                      |            |
| morning set                             | 2662 Mar 19 16:40 | 19° <b>₩</b> 02'12                |            | min. Earth dist.    | 2664 Sep 14 04:09                      | 21°Mp09'31                      | 0.28594 AU |
|   | 2662 Mar 28 11:50 | $0$ ° $\mathbf{\gamma}$           |            | morning rise        | 2664 Sep 16 19:24                      | 19° <b>m</b> 32'37              |            |
|   | 2662 Apr 21 15:16 | $9^{\circ}$ 8                     |            | direct              | 2664 Oct 05 00:31                      | 13° <b>m</b> ) 17'47            |            |
|   |                   |                                   |            | greatest brilliancy | 2664 Oct 16 02:17                      | 15° Mp32'48                     | -4.8m      |
| superior conj                           | 2662 Apr 27 18:27 | 7° <b>8</b> 35'42                 | -1°00'37   |                     | 2664 Nov 07 11:37                      | 0∘ <b>ত</b>                     |            |
| minimum elong                           | 2662 Apr 28 04:38 | 8° <b>8</b> 07'13                 | 1°00'15    | asc. node           | 2664 Nov 09 15:50                      | 1° <b>≏</b> 51'49               |            |
| max. Earth dist.                        | 2662 May 01 03:56 | 11° <b>8</b> 47'46                | 1.72782 AU | morning max el      | 2664 Nov 24 07:39                      | 15° <b>≏</b> 42'26              | 46°37'37   |
|   | 2662 May 15 21:38 | $\Pi^{\circ}0$                    |            |                     | 2664 Dec 07 22:01                      | 0°M                             |            |
| asc. node                               | 2662 May 25 20:59 | 12° <b>Ⅲ</b> 17′08                |            |                     | 2665 Jan 03 07:50                      | 0° <b>∡</b> ¹                   |            |
| evening rise                            | 2662 Jun 04 15:44 | 24° <b>Ⅱ</b> 18'44                |            |                     | 2665 Jan 28 11:14                      | 5°0                             |            |
| -                                       | 2662 Jun 09 06:51 | 0°ಅ                               |            |                     | 2665 Feb 22 02:19                      | 0° <b>≈</b>                     |            |
|   | 2662 Jul 03 18:39 | $0^{\circ}\Omega$                 |            | desc. node          | 2665 Mar 01 05:34                      | 8° <b>≈</b> 44'52               |            |
|   | 2662 Jul 28 09:19 | 0° m                              |            |                     | 2665 Mar 18 12:26                      | 0° <b>)</b> €                   |            |
|   | 2662 Aug 22 04:16 | 0∘ <u>⊽</u>                       |            |                     | 2665 Apr 11 21:04                      | o°Υ                             |            |
| desc. node                              | 2662 Sep 14 10:24 | 27° <b>£</b> 50'46                |            |                     | 2665 May 06 06:03                      | 0°8                             |            |
| *************************************** | 2662 Sep 16 05:52 | 0°M                               |            | morning set         | 2665 May 29 23:25                      | 29° <b>8</b> 09'18              |            |
|   | 2662 Oct 11 17:51 | 0° <b>⊼</b> ¹                     |            | morning sec         | 2665 May 30 15:56                      | 0°II                            |            |
|   | 2662 Nov 07 00:46 | °5                                |            | asc. node           | 2665 Jun 22 08:44                      | 27° <b>I</b> I52'37             |            |
| evening max el                          | 2662 Dec 01 13:16 | 26° <b>පි</b> 13'03               | 47°12'26   | ase. node           | 2665 Jun 24 02:14                      | 0°95                            |            |
| evening max er                          | 2662 Dec 05 08:14 | 0°≈                               | 47 12 20   | max. Earth dist.    | 2665 Jul 05 02:44                      | 13° <b>©</b> 32'28              | 1.73569 AU |
| asc. node                               | 2663 Jan 05 13:32 | 0 <b>~</b><br>25° <b>≈</b> 07'08  |            | max. Lartii dist.   | 2003 Jul   03   02.44                  | 13 332 20                       | 1.75507 AC |
| greatest brilliancy                     | 2663 Jan 11 04:52 | 27°≈41'27                         | -4.9m      | superior conj       | 2665 Jul 05 20:15                      | 14° <b>©</b> 26'16              | 0°31'23    |
| retrograde                              | 2663 Jan 21 08:38 | 27 ≈41 27<br>29°≈39'59            | -4.9111    | minimum elong       | 2665 Jul 05 14:11                      | 14°907'38                       | 0°31'06    |
| •                                       | 2663 Feb 06 17:32 |                                   |            | minimum clong       | 2665 Jul 18 12:01                      | 0°Ω                             | 0 31 00    |
| evening set<br>min. Earth dist.         | 2663 Feb 10 06:31 | 24°≈24'20<br>22°≈15'49            | 0.27001 AU | evening rise        | 2665 Aug 10 17:46                      | 28° <b>Ω</b> 36'27              |            |
| inferior conj                           | 2663 Feb 11 01:48 | 22 ≈1349<br>21°≈45'55             | 7°47'13    | evening rise        | 2665 Aug 11 20:54                      | 0° Mp                           |            |
| minimum elong                           | 2663 Feb 10 16:37 | 21 ≈43 33<br>22°≈00'10            | 7°45'47    |                     | 2665 Sep 05 05:25                      | 0∘ <del>ت</del><br>۱۱۱۸         |            |
| •                                       | 2663 Feb 14 15:56 | 19°≈34'31                         | / 434/     |                     |  | 0°M                             |            |
| morning rise<br>direct                  | 2663 Mar 03 13:18 | 19 ≈34 31<br>14°≈01'56            |            | desc. node          | 2665 Sep 29 14:37<br>2665 Oct 11 22:24 | 15°M08'06                       |            |
| greatest brilliancy                     | 2663 Mar 12 15:55 | 14 ≈01 30<br>15°≈35'31            | -4.9m      | desc. node          | 2665 Oct 24 01:30                      | 0° <b>√</b> 1                   |            |
| greatest brilliancy                     |                   | 0° <b>\</b>                       | -4.9111    |                     |  | 0°중                             |            |
|   | 2663 Apr 05 03:02 |                                   | 46922112   |                     | 2665 Nov 17 15:08                      | 0°≈                             |            |
| morning max el                          | 2663 Apr 22 06:06 | 15° <b>¥</b> 34'50                | 46°22'12   |                     | 2665 Dec 12 10:09                      | 0 ≈<br>0° <b>)</b> (            |            |
| desc. node                              | 2663 Apr 27 03:09 | 20° <b>¥</b> 26′20<br>0° <b>Ƴ</b> |            | 1                   | 2666 Jan 06 18:12                      |                                 |            |
|   | 2663 May 06 09:11 |                                   |            | asc. node           | 2666 Feb 02 01:24                      | 29° <b>)</b> (31′29             |            |
|   | 2663 Jun 02 17:37 | 8°0                               |            |                     | 2666 Feb 02 12:04                      | 0° <b>Υ</b>                     | 16054155   |
|   | 2663 Jun 28 20:16 | 0°II                              |            | evening max el      | 2666 Feb 11 14:01                      | 9° <b>Y</b> 27'53               | 46°54'55   |
|   | 2663 Jul 24 07:36 | 0.22<br>0.22                      |            |                     | 2666 Mar 06 05:00                      | 0° <b>8</b>                     | 4.0        |
| asc. node                               | 2663 Aug 18 06:23 | 29° <b>©</b> 55'50                |            | greatest brilliancy | 2666 Mar 23 12:21                      | 10° <b>8</b> 17'29              | -4.8m      |
|   | 2663 Aug 18 07:45 | $0^{\circ}\Omega$                 |            | retrograde          | 2666 Apr 03 02:34                      | 12° <b>8</b> 23'39              |            |
|   | 2663 Sep 11 22:19 | 0° <b>m</b>                       |            | evening set         | 2666 Apr 19 20:16                      | 6° <b>8</b> 54'14               | <020:12    |
|   | 2663 Oct 06 05:05 | 0∘ <b>⊽</b>                       |            | inferior conj       | 2666 Apr 24 06:15                      | 4° <b>8</b> 10'51               | 6°30'43    |
| morning set                             | 2663 Oct 17 06:50 | 13° <b>Ω</b> 46'39                |            | minimum elong       | 2666 Apr 24 16:15                      | 3° <b>8</b> 55'08               | 6°28'42    |
|   | 2663 Oct 30 06:33 | 0°M,                              |            | min. Earth dist.    | 2666 Apr 24 03:52                      | 4° <b>8</b> 14'35               | 0.28315 AU |
| max. Earth dist.                        | 2663 Nov 23 01:55 | 29°M49'57                         | 1.71404 AU | morning rise        | 2666 Apr 29 12:34                      | 0° <b>8</b> 58'48               |            |
|   | 2663 Nov 23 05:07 | 0°⊀                               |            |                     | 2666 May 01 07:23                      | 30° <b>₹</b> Υ                  |            |
|   |                   |                                   |            | direct              | 2666 May 15 10:04                      | 26° <b>Y</b> ′04'18             |            |
| superior conj                           | 2663 Nov 24 23:54 | 2° <b>≯</b> 14'19                 |            | desc. node          | 2666 May 24 14:52                      | 27° <b>Y</b> 38′07              |            |
| minimum elong                           | 2663 Nov 25 07:02 | 2° <b>х¹</b> 36'42                | 0°29'49    | greatest brilliancy | 2666 May 25 03:48                      | 27° <b>Y</b> 48'54              | -4.8m      |
| desc. node                              | 2663 Dec 07 20:01 | 18° <b>≮</b> 21'36                |            |                     | 2666 May 30 09:45                      | $9^{\circ}$ 8                   |            |
|   |                   |                                   |            |                     |  |                                 |            |

| morning max el                | 2666 Jul 03 08:32<br>2666 Jul 07 08:04 | 26° <b>႘</b> 08'44<br>0°Ⅱ               | 45°46'03             |                                   | 2669 Jan 18 12:15<br>2669 Feb 12 01:02 | 0° <b>ℋ</b><br>0° <b>Ƴ</b>               |            |
|-------------------------------|--|---|----------------------|-----------------------------------|--|--|------------|
|                               | 2666 Aug 04 22:51                      | $0$ ം ${f U}$                           |                      | asc. node                         | 2669 Mar 01 13:20                      | 20° <b>Y</b> 58'45<br>0° <b>と</b>        |            |
| asc. node                     | 2666 Aug 31 10:35<br>2666 Sep 14 18:23 | 0 <b>δ</b> ε<br>16° <b>Ω</b> 47'54      |                      |                                   | 2669 Mar 09 05:27<br>2669 Apr 04 18:05 | 0°II                                     |            |
| use. Hode                     | 2666 Sep 25 20:01                      | 0°m                                     |                      | evening max el                    | 2669 Apr 23 17:26                      | 19° <b>Ⅱ</b> 39'48                       | 45°50'14   |
|                               | 2666 Oct 20 12:39                      | 0∘ <b>⊽</b>                             |                      | C                                 | 2669 May 04 19:40                      | 0°®                                      |            |
|                               | 2666 Nov 13 18:36                      | $0^{\circ}$ M.                          |                      | greatest brilliancy               | 2669 May 31 18:50                      | 18° <b>©</b> 04'38                       | -4.7m      |
|                               | 2666 Dec 07 18:34                      | 0° <b>∡</b> 7                           |                      | retrograde                        | 2669 Jun 11 18:30                      | 20°©15'51                                |            |
| morning set                   | 2666 Dec 30 04:00<br>2666 Dec 31 15:45 | 28°♂07'36<br>0°る                        |                      | desc. node<br>evening set         | 2669 Jun 21 02:47<br>2669 Jun 26 21:58 | 18° <b>©</b> 32'12<br>15° <b>©</b> 51'00 |            |
| desc. node                    | 2667 Jan 04 07:48                      | 0 3<br>4° <b>る</b> 36'47                |                      | inferior conj                     | 2669 Jul 03 06:52                      | 13 931 00<br>12°901'22                   | -2°49'33   |
| dese. Hode                    | 2667 Jan 24 12:08                      | 0°≈                                     |                      | minimum elong                     | 2669 Jul 03 00:54                      | 12°5510'44                               |            |
|                               |  |   |                      | min. Earth dist.                  | 2669 Jul 03 02:47                      | 12° <b>©</b> 07'47                       | 0.28955 AU |
| superior conj                 | 2667 Feb 09 20:35                      | 20° <b>≈</b> 33'18                      | -1°13'27             | morning rise                      | 2669 Jul 09 03:54                      | 8° <b>5</b> 27'53                        |            |
| minimum elong                 | 2667 Feb 09 09:46                      | 19° <b>≈</b> 59'19                      |                      | direct                            | 2669 Jul 24 21:18                      | 3° <b>5</b> 45'08                        |            |
| max. Earth dist.              | 2667 Feb 12 15:17                      | 24°≈02'47                               | 1.71289 AU           | greatest brilliancy               | 2669 Aug 04 04:18                      | 5° <b>©</b> 38'40                        | -4.7m      |
|                               | 2667 Feb 17 09:05<br>2667 Mar 13 08:03 | 0° <b>ℋ</b><br>0° <b>Ƴ</b>              |                      | morning max el                    | 2669 Sep 07 20:59<br>2669 Sep 11 18:21 | 0° <b>Ω</b><br>3° <b>Ω</b> 41'19         | 45°53'32   |
| evening rise                  | 2667 Mar 22 13:05                      | 11° <b>Υ</b> 29'25                      |                      | morning max er                    | 2669 Oct 07 02:02                      | 0°m)                                     | 43 33 32   |
|                               | 2667 Apr 06 10:37                      | 0°8                                     |                      | asc. node                         | 2669 Oct 12 06:07                      | 5° <b>m</b> ) 44'17                      |            |
| asc. node                     | 2667 Apr 27 11:09                      | 25° <b>8</b> 57'07                      |                      |                                   | 2669 Nov 02 08:33                      | 0∘ <b>⊽</b>                              |            |
|                               | 2667 Apr 30 18:16                      | $\Pi^{\circ}0$                          |                      |                                   | 2669 Nov 27 09:05                      | 0° <b>M</b> ₊                            |            |
|                               | 2667 May 25 08:17                      | 0°©                                     |                      |                                   | 2669 Dec 21 18:53                      | 0° <b>∡</b>                              |            |
|                               | 2667 Jun 19 06:23                      | 0° <b>N</b>                             |                      | 1 1                               | 2670 Jan 14 21:49                      | 0°る                                      |            |
|                               | 2667 Jul 14 16:04<br>2667 Aug 09 21:07 | 0 <b>் ⊽</b><br>0° M                    |                      | desc. node                        | 2670 Jan 31 19:43<br>2670 Feb 07 22:06 | 21°る07'24<br>0°≈                         |            |
| desc. node                    | 2667 Aug 17 00:33                      | 0 <b>==</b><br>7° <b>£</b> 55'56        |                      |                                   | 2670 Mar 03 21:59                      | 0° <b>∺</b>                              |            |
|                               | 2667 Sep 06 17:15                      | 0° <b>M</b> ,                           |                      | morning set                       | 2670 Mar 17 04:40                      | 16° <b>)</b> 34′58                       |            |
| evening max el                | 2667 Sep 17 03:38                      | 10°M24'01                               | 46°12'52             | -                                 | 2670 Mar 27 22:59                      | $0^{\circ}$ Y                            |            |
|                               | 2667 Oct 09 21:42                      | 0° <b>∡</b> ¹                           |                      |                                   | 2670 Apr 21 02:19                      | $0^{\circ}$ 8                            |            |
| greatest brilliancy           | 2667 Oct 27 06:01                      | 9° <b>x</b> <sup>7</sup> 31'43          | -4.8m                |                                   | 2670 4 25 00 12                        | 501 21 0142                              | 1000104    |
| retrograde                    | 2667 Nov 05 12:55<br>2667 Nov 20 11:41 | 11° <b>尽</b> 06'56<br>6° <b>尽</b> 46'51 |                      | superior conj                     | 2670 Apr 25 09:13                      | 5° <b>8</b> 18'43                        |            |
| evening set<br>inferior conj  | 2667 Nov 26 04:06                      | 3° <b>х</b> 26'47                       | -3°01'56             | minimum elong<br>max. Earth dist. | 2670 Apr 25 19:27<br>2670 Apr 28 19:05 | 9° <b>8</b> 32'06                        | 1.72729 AU |
| minimum elong                 | 2667 Nov 26 10:44                      | 3° <b>х</b> 16'40                       | 2°59'54              | max. Earth dist.                  | 2670 May 15 08:38                      | 0°Ⅱ                                      | 1.72727110 |
| min. Earth dist.              | 2667 Nov 26 17:43                      | 3° <b>∡</b> 06′01                       | 0.26767 AU           | asc. node                         | 2670 May 24 22:56                      | 11° <b>Ⅱ</b> 49'20                       |            |
| morning rise                  | 2667 Dec 02 09:17                      | 29°M48'56                               |                      | evening rise                      | 2670 Jun 02 08:46                      | 22° <b>Ⅱ</b> 09'51                       |            |
|                               | 2667 Dec 02 01:01                      | 30°RM                                   |                      |                                   | 2670 Jun 08 17:53                      | 0° <b>©</b>                              |            |
| asc. node                     | 2667 Dec 08 03:38                      | 27°M14'06                               |                      |                                   | 2670 Jul 03 05:49                      | 0° <b>Ω</b>                              |            |
| direct<br>greatest brilliancy | 2667 Dec 16 19:39<br>2667 Dec 27 11:56 | 25°M42'06<br>27°M51'44                  | -4.9m                |                                   | 2670 Jul 27 20:48<br>2670 Aug 21 16:19 | 0° <b>െ</b><br>0°ആ                       |            |
| greatest orimancy             | 2668 Jan 01 04:29                      | 0°×7                                    | - <del>4</del> .7III | desc. node                        | 2670 Sep 13 12:28                      | ა <u> </u>                               |            |
| morning max el                | 2668 Feb 05 11:35                      | 29° <b>₹</b> '01'02                     | 46°57'16             |                                   | 2670 Sep 15 18:50                      | 0° <b>™</b>                              |            |
|                               | 2668 Feb 06 10:46                      | 0°ප                                     |                      |                                   | 2670 Oct 11 08:19                      | 0° <b>∡</b> ¹                            |            |
|                               | 2668 Mar 05 02:35                      | 0° <b>≈</b>                             |                      |                                   | 2670 Nov 06 18:06                      | 0°ಕ                                      |            |
| desc. node                    | 2668 Mar 28 17:29                      | 27°≈17'24<br>0° <b>)</b> €              |                      | evening max el                    | 2670 Nov 29 02:27                      | 23° <b>⋜</b> 46'51                       | 47°11'32   |
|                               | 2668 Mar 31 00:49<br>2668 Apr 25 07:13 | 0° <b>Υ</b>                             |                      | asc. node                         | 2670 Dec 05 09:33<br>2671 Jan 04 15:36 | 0° <b>≈</b><br>23° <b>≈</b> 26'59        |            |
|                               | 2668 May 20 06:39                      | 0°8                                     |                      | greatest brilliancy               | 2671 Jan 08 18:32                      | 25°≈14'31                                | -4.9m      |
|                               | 2668 Jun 14 02:26                      | 0°Ⅲ                                     |                      | retrograde                        | 2671 Jan 18 22:00                      | 27° <b>≈</b> 13'12                       |            |
|                               | 2668 Jul 08 19:08                      | 0ಂತ                                     |                      | evening set                       | 2671 Feb 04 02:39                      | 22° <b>≈</b> 03'33                       |            |
| asc. node                     | 2668 Jul 19 20:37                      | 13° <b>5</b> 29'39                      |                      | min. Earth dist.                  | 2671 Feb 07 19:43                      | 19° <b>≈</b> 49'31                       | 0.26955 AU |
|                               | 2668 Aug 02 08:06                      | 0° <b>Ω</b>                             |                      | inferior conj                     | 2671 Feb 08 14:55                      | 19°≈19'50                                | 7°35'20    |
| morning set                   | 2668 Aug 05 20:31<br>2668 Aug 26 16:52 | 4° <b>№</b> 19'02<br>0° <b>™</b>        |                      | minimum elong<br>morning rise     | 2671 Feb 08 05:16<br>2671 Feb 12 08:08 | 19°≈34'45<br>17°≈04'13                   | 7°33'42    |
| max. Earth dist.              | 2668 Sep 08 00:04                      | 15° Mp 13'20                            | 1.72804 AU           | direct                            | 2671 Mar 01 01:41                      | 11°≈36'14                                |            |
|                               |  | 5 -0                                    |                      | greatest brilliancy               | 2671 Mar 10 05:26                      | 13°≈10'59                                | -4.9m      |
| superior conj                 | 2668 Sep 11 07:33                      | 19° <b>m</b> 19'36                      | 1°24'46              | -                                 | 2671 Apr 05 12:35                      | 0° <b>)</b> €                            |            |
| minimum elong                 | 2668 Sep 11 06:19                      | 19° <b>m</b> 15'47                      | 1°24'46              | morning max el                    | 2671 Apr 19 20:07                      | 13° <b>)</b> 14′07                       | 46°23'48   |
|                               | 2668 Sep 19 21:59                      | 0° <b>™</b>                             |                      | desc. node                        | 2671 Apr 26 05:09                      | 19° <b>)</b> 37'18                       |            |
| ovonini                       | 2668 Oct 14 00:47                      | 0°M                                     |                      |                                   | 2671 May 06 03:56                      | 0°Υ<br>0°¥                               |            |
| evening rise                  | 2668 Oct 18 16:37<br>2668 Nov 07 02:37 | 5° <b>M</b> .48'10<br>0° <b>∡</b> 7     |                      |                                   | 2671 Jun 02 08:28<br>2671 Jun 28 09:21 | 0°H                                      |            |
| desc. node                    | 2668 Nov 08 10:13                      | 0 <b>x</b> ⁴<br>1° <b>x</b> ³38'29      |                      |                                   | 2671 Jul 23 19:42                      | 0°©                                      |            |
|                               | 2668 Dec 01 04:20                      | 0°₹                                     |                      | asc. node                         | 2671 Aug 17 08:30                      | 29° <b>©</b> 27'26                       |            |
|                               | 2668 Dec 25 06:51                      | 0° <b>≈</b>                             |                      |                                   | 2671 Aug 17 19:16                      | $0^{\circ}\Omega$                        |            |
|                               |  |   |                      |                                   |  |  |            |

|                     | 2671 Sep 11 09:30                      | 0° <b>m</b>                       |                        | evening set                       | 2674 Apr 17 14:46                      | 4° <b>8</b> 34'47                        |            |
|---------------------|--|-----------------------------------|------------------------|-----------------------------------|--|--|------------|
|                     | 2671 Oct 05 16:09                      | 0∘ <del>ত</del><br>بالا           |                        | inferior conj                     | 2674 Apr 21 21:39                      | 1° <b>8</b> 55'42                        | 6°44'45    |
| morning set         | 2671 Oct 14 22:08                      | 0 <b>==</b><br>11° <b>£</b> 30'18 |                        | minimum elong                     | 2674 Apr 22 07:34                      | 1° <b>8</b> 40'07                        |            |
| morning set         | 2671 Oct 14 22:08<br>2671 Oct 29 17:38 | 0°M                               |                        | min. Earth dist.                  | 2674 Apr 21 18:36                      | 2° <b>8</b> 00'31                        | 0.28280 AU |
| max. Earth dist.    | 2671 Nov 20 13:52                      |                                   | 1.71439 AU             | mm. Lartii dist.                  | 2674 Apr 25 00:08                      | 2 <b>3</b> 0° <b>₹</b> Υ                 | 0.20200 AC |
| max. Latin dist.    | 20/11/07/20 15.52                      | 27 11021 30                       | 1./1 <del>4</del> 3/A0 | morning rise                      | 2674 Apr 27 00:46                      | 28° <b>Y</b> 48'11                       |            |
| superior conj       | 2671 Nov 22 12:09                      | 29°M47'10                         | 0°33'39                | direct                            | 2674 May 13 01:31                      | 23°Y50'01                                |            |
| minimum elong       | 2671 Nov 22 12:59<br>2671 Nov 22 19:56 | 0° <b>₹</b> 11'36                 |                        | greatest brilliancy               | 2674 May 22 17:14                      | 25° <b>Υ</b> 33'08                       | -4.8m      |
| minimum crong       | 2671 Nov 22 16:14                      | 0° <b>⊼</b> 1130                  | 0 33 10                | desc. node                        | 2674 May 23 16:53                      | 25°Υ54'09                                | 1.0111     |
| desc. node          | 2671 Dec 06 22:04                      | 17° <b>×</b> 753'01               |                        | dese. Hode                        | 2674 Jun 01 04:54                      | 0°8                                      |            |
|                     | 2671 Dec 16 13:34                      | 0°る                               |                        | morning max el                    | 2674 Jun 30 23:55                      | 23° <b>8</b> 56'44                       | 45°46'31   |
| evening rise        | 2672 Jan 02 08:35                      | 21° <b>පි</b> 06'04               |                        | 5 5                               | 2674 Jul 07 04:52                      | 0°II                                     |            |
| Č                   | 2672 Jan 09 10:38                      | 0° <b>≈</b>                       |                        |                                   | 2674 Aug 04 14:05                      | 0°ಅ                                      |            |
|                     | 2672 Feb 02 08:46                      | 0° <b>)</b> €                     |                        |                                   | 2674 Aug 30 23:42                      | $0^{\circ}\Omega$                        |            |
|                     | 2672 Feb 26 10:08                      | $_0$ ° $\gamma$                   |                        | asc. node                         | 2674 Sep 13 20:18                      | 16° <b>Ω</b> 16'34                       |            |
|                     | 2672 Mar 21 17:47                      | 0° <b>႘</b>                       |                        |                                   | 2674 Sep 25 08:08                      | O° Mp                                    |            |
| asc. node           | 2672 Mar 29 01:14                      | 8° <b>8</b> 55'46                 |                        |                                   | 2674 Oct 20 00:14                      | 0∘ <b>⊽</b>                              |            |
|                     | 2672 Apr 15 11:40                      | $\Pi^{\circ}0$                    |                        |                                   | 2674 Nov 13 05:55                      | 0° <b>M</b>                              |            |
|                     | 2672 May 10 21:31                      | 0°€                               |                        | greatest brilliancy               | 2674 Dec 04 14:30                      | 26°M41'49                                | -3.9m      |
|                     | 2672 Jun 06 11:09                      | $0^{\circ}\Omega$                 |                        |                                   | 2674 Dec 07 05:44                      | 0° <b>≯</b> ¹                            |            |
| evening max el      | 2672 Jul 03 07:12                      | 27° <b>Ω</b> 43'13                | 45°26'20               | morning set                       | 2674 Dec 27 14:24                      | 25° <b>х</b> 34′30                       |            |
|                     | 2672 Jul 05 16:58                      | O° Mp                             |                        |                                   | 2674 Dec 31 02:52                      | 8°0                                      |            |
| desc. node          | 2672 Jul 18 14:48                      | 11°M)20'13                        |                        | desc. node                        | 2675 Jan 03 09:54                      | 4° <b>る</b> 08'29                        |            |
| greatest brilliancy | 2672 Aug 11 00:20                      | 25° Mp 34'32                      | -4.7m                  |                                   | 2675 Jan 23 23:13                      | 0° <b>≈</b>                              |            |
| retrograde          | 2672 Aug 20 22:28                      | 27° m/20'43                       |                        |                                   |  |  |            |
| evening set         | 2672 Sep 07 21:26                      | 21° Mp 19'46                      |                        | superior conj                     | 2675 Feb 07 06:38                      | 17° <b>≈</b> 59'19                       | -1°11'16   |
| inferior conj       | 2672 Sep 11 05:45                      | 19° Mp 16'56                      | -8°38'56               | minimum elong                     | 2675 Feb 06 19:23                      | 17° <b>≈</b> 23'59                       | 1°10'57    |
| minimum elong       | 2672 Sep 11 04:09                      | 19° <b>m</b> 19'25                |                        | max. Earth dist.                  | 2675 Feb 09 22:52                      | 21° <b>≈</b> 21′04                       | 1.71257 AU |
| min. Earth dist.    | 2672 Sep 11 18:01                      | 18° <b>™</b> 57'56                | 0.28640 AU             |                                   | 2675 Feb 16 20:09                      | 0° <b>∀</b>                              |            |
| morning rise        | 2672 Sep 14 10:43                      | 17° <b>m</b> ∤18'47               |                        |                                   | 2675 Mar 12 19:05                      | $0^{\circ}\Upsilon$                      |            |
| direct              | 2672 Oct 02 16:58                      | 11°Mp03'32                        |                        | evening rise                      | 2675 Mar 20 00:46                      | 9° <b>Ƴ</b> 01'49                        |            |
| greatest brilliancy | 2672 Oct 13 16:50                      | 13° <b>m</b> 17'04                | -4.8m                  |                                   | 2675 Apr 05 21:39                      | $_{0\circ}$ 8                            |            |
|                     | 2672 Nov 07 18:43                      | 0。 <b>ಹ</b>                       |                        | asc. node                         | 2675 Apr 26 13:09                      | 25° <b>8</b> 29'05                       |            |
| asc. node           | 2672 Nov 08 17:52                      | 0° <b>ჲ</b> 50'56                 |                        |                                   | 2675 Apr 30 05:25                      | $\Pi$ °0                                 |            |
| morning max el      | 2672 Nov 21 23:27                      | 13° <b>≏</b> 25'48                | 46°36'02               |                                   | 2675 May 24 19:42                      | 0ಂತಾ                                     |            |
|                     | 2672 Dec 07 16:11                      | 0°M₊                              |                        |                                   | 2675 Jun 18 18:22                      | $0$ $^{\circ}\Omega$                     |            |
|                     | 2673 Jan 02 22:37                      | 0° <b>∡</b>                       |                        |                                   | 2675 Jul 14 05:08                      | 0° <b>m</b> y                            |            |
|                     | 2673 Jan 28 00:30                      | 0°る                               |                        |                                   | 2675 Aug 09 12:18                      | 0∘ <b>⊽</b>                              |            |
|                     | 2673 Feb 21 14:43                      | 0° <b>≈</b>                       |                        | desc. node                        | 2675 Aug 16 02:32                      | 7° <b>Ω</b> 17'19                        |            |
| desc. node          | 2673 Feb 28 07:34                      | 8°≈13'30                          |                        |                                   | 2675 Sep 06 13:33                      | 0°M                                      |            |
|                     | 2673 Mar 18 00:16                      | 0° <b>∀</b>                       |                        | evening max el                    | 2675 Sep 14 16:29                      | 8°M02'15                                 | 46°10'24   |
|                     | 2673 Apr 11 08:30                      | $^{\circ \gamma}$                 |                        | 1 2112                            | 2675 Oct 10 21:04                      | 0° ⊀ <sup>7</sup>                        | 4.0        |
|                     | 2673 May 05 17:12                      | 0°8                               |                        | greatest brilliancy               | 2675 Oct 24 19:39                      | 7°×707'52                                | -4.8m      |
| morning set         | 2673 May 27 16:40                      | 27° <b>8</b> 01'14<br>0° <b>Ⅱ</b> |                        | retrograde<br>evening set         | 2675 Nov 03 00:30                      | 8° <b>水</b> 41'34<br>4° <b>水</b> 18'12   |            |
| aga mada            | 2673 May 30 02:53                      | 0 H<br>27°H25'49                  |                        | Č                                 | 2675 Nov 18 02:40                      |  | 2024102    |
| asc. node           | 2673 Jun 21 10:51<br>2673 Jun 23 13:04 | 27° <b>Ш</b> 25°49<br>0° <b>©</b> |                        | inferior conj                     | 2675 Nov 23 16:47<br>2675 Nov 24 00:07 | 1° <b>∡</b> *01'19<br>0° <b>∡</b> *50'08 |            |
| max. Earth dist.    | 2673 Jul 23 13:04<br>2673 Jul 03 01:49 | 0 55<br>11°5942'36                | 1.73570 AU             | minimum elong<br>min. Earth dist. | 2675 Nov 24 00:07<br>2675 Nov 24 07:59 | 0° <b>x</b> °30'08<br>0° <b>x</b> ³38'07 |            |
| max. Earm dist.     | 2073 Jul 03 01.49                      | 11 3042 30                        | 1.75570 AU             | IIIII. Eartii dist.               | 2675 Nov 25 09:04                      | 30°RM                                    | 0.20813 AU |
| superior conj       | 2673 Jul 03 14:21                      | 12° <b>©</b> 21'06                | 0°28'25                | morning rise                      | 2675 Nov 29 20:57                      | 27°M24'22                                |            |
| minimum elong       | 2673 Jul 03 08:46                      | 12° <b>5</b> 03'59                | 0°28'09                | asc. node                         | 2675 Dec 07 05:43                      | 24°M17'43                                |            |
| minimum ciong       | 2673 Jul 17 22:50                      | 0°Ω                               | 0 20 0)                | direct                            | 2675 Dec 14 08:24                      | 23°M15'41                                |            |
| evening rise        | 2673 Aug 08 12:21                      | 26° <b>Ω</b> 32'16                |                        | greatest brilliancy               | 2675 Dec 25 02:59                      | 25°M26'57                                | -4.9m      |
| e vening rise       | 2673 Aug 11 07:50                      | 0° m                              |                        | greatest orimaney                 | 2676 Jan 03 00:11                      | 0° <b>√</b>                              | 1.7111     |
|                     | 2673 Sep 04 16:33                      | 0∘ <b>ರ</b><br>೧.ಗ                |                        | morning max el                    | 2676 Feb 02 23:53                      | 26° <b>х</b> 32'33                       | 46°57'31   |
|                     | 2673 Sep 29 02:04                      | 0°M                               |                        | morning max or                    | 2676 Feb 06 08:50                      | 0°る                                      | 10 37 31   |
| desc. node          | 2673 Oct 11 00:20                      | 14°MJ38'16                        |                        |                                   | 2676 Mar 04 18:47                      | 0° <b>≈</b>                              |            |
|                     | 2673 Oct 23 13:26                      | 0° <b>∡</b> 7                     |                        | desc. node                        | 2676 Mar 27 19:24                      | 26° <b>≈</b> 41'51                       |            |
|                     | 2673 Nov 17 03:42                      | 0° <b>ਠ</b>                       |                        |                                   | 2676 Mar 30 14:40                      | 0° <b>∀</b>                              |            |
|                     | 2673 Dec 11 23:44                      | 0° <b>≈</b>                       |                        |                                   | 2676 Apr 24 19:48                      | 0°Υ                                      |            |
|                     | 2674 Jan 06 09:34                      | 0° <b>)</b> €                     |                        |                                   | 2676 May 19 18:26                      | 0°8                                      |            |
| asc. node           | 2674 Feb 01 03:32                      | 28° <b>)</b> (45'28               |                        |                                   | 2676 Jun 13 13:41                      | 0°II                                     |            |
|                     | 2674 Feb 02 07:38                      | $0^{\circ}\mathbf{\Upsilon}$      |                        |                                   | 2676 Jul 08 06:04                      | 0ಂತಾ                                     |            |
| evening max el      | 2674 Feb 09 06:00                      | 7° <b>Ƴ</b> 11'08                 | 46°56'51               | asc. node                         | 2676 Jul 18 22:43                      | 13°503'02                                |            |
| -                   | 2674 Mar 06 21:58                      | $8^{\circ}$ 0                     |                        |                                   | 2676 Aug 01 18:51                      | $0^{\circ}\Omega$                        |            |
| greatest brilliancy | 2674 Mar 21 04:30                      | 8° <b>8</b> 02'23                 | -4.8m                  | morning set                       | 2676 Aug 03 14:23                      | 2° <b>Ω</b> 13′38                        |            |
| retrograde          | 2674 Mar 31 18:31                      | 10° <b>8</b> 08'07                |                        |                                   | 2676 Aug 26 03:34                      | 0° m                                     |            |
|                     |  |                                   |                        |                                   |  |  |            |

| may Forth dist      | 2676 Cap 05 19:09                      | 12°m,07!25             | 1 72954 ATT  | direct              | 2670 Eab. 26, 14:22                    | 9° <b>≈</b> 10'17               |             |
|---------------------|--|------------------------|--------------|---------------------|--|---------------------------------|-------------|
| max. Earth dist.    | 2676 Sep 05 18:08                      | 13 11/0/23             | 1.72854 AU   | greatest brilliancy | 2679 Feb 26 14:22<br>2679 Mar 07 18:11 | 9 ≈1017<br>10°≈45'39            | -4.9m       |
| superior conj       | 2676 Sep 09 01:04                      | 17° <b>m</b> 11'57     | 1°24'20      | greatest orimancy   | 2679 Apr 05 19:18                      | 10 <b>≈</b> 43 39               | -4.9111     |
| minimum elong       | 2676 Sep 08 23:09                      | 17° Mp 06'01           | 1°24'29      | morning max el      | 2679 Apr 17 10:24                      |                                 | 46°25'26    |
| minimum ciong       | 2676 Sep 19 08:44                      | 0∘ <b>⊽</b>            | 1 242)       | desc. node          | 2679 Apr 25 07:16                      | 18° <b>)</b> 50'10              | 40 23 20    |
|                     | 2676 Oct 13 11:40                      | o° <b>m</b> .          |              | dese. Hode          | 2679 May 05 21:54                      | 0°Υ                             |             |
| evening rise        | 2676 Oct 16 07:21                      | 3°M230'35              |              |                     | 2679 Jun 01 22:48                      | 0°8                             |             |
| evening rise        | 2676 Nov 06 13:42                      | 0° <b>⊼</b>            |              |                     | 2679 Jun 27 21:59                      | 0°II                            |             |
| desc. node          | 2676 Nov 07 12:18                      | 1° <b>×</b> 10'24      |              |                     | 2679 Jul 23 07:24                      | 0°50                            |             |
| acse. noue          | 2676 Nov 30 15:40                      | 0° <del>ප</del>        |              | asc. node           | 2679 Aug 16 10:27                      | 28° <b>©</b> 59'31              |             |
|                     | 2676 Dec 24 18:28                      | 0° <b>≈</b>            |              | use. Houe           | 2679 Aug 17 06:26                      | 0°Ω                             |             |
|                     | 2677 Jan 18 00:16                      | 0° <b>)</b> €          |              |                     | 2679 Sep 10 20:22                      | 0° m)                           |             |
|                     | 2677 Feb 11 13:43                      | 0° <b>Υ</b>            |              |                     | 2679 Oct 05 02:53                      | 0∘ <b>ರ</b><br>೧.ಗಿ             |             |
| asc. node           | 2677 Feb 28 15:16                      | 20° <b>Υ</b> 24'30     |              | morning set         | 2679 Oct 12 13:48                      | ∘ <b>–</b><br>9° <b>Ω</b> 16'18 |             |
| use. Hode           | 2677 Mar 08 19:28                      | 0°8                    |              | morning sec         | 2679 Oct 29 04:21                      | 0°M                             |             |
|                     | 2677 Apr 04 11:10                      | 0°II                   |              | max. Earth dist.    | 2679 Nov 18 01:45                      |                                 | 1.71477 AU  |
| evening max el      | 2677 Apr 21 07:58                      | 17° <b>I</b> I24'34    | 45°52'12     | man. Bartii dige.   | 2079 1101 10 01.10                     | 2. 110.0.0.                     | 1.,11,,,110 |
| evening man er      | 2677 May 05 00:11                      | 0°೯                    | .0 0212      | superior conj       | 2679 Nov 20 00:40                      | 27°M22'04                       | 0°37'04     |
| greatest brilliancy | 2677 May 29 11:15                      | 15° <b>9</b> 55'41     | -4.7m        | minimum elong       | 2679 Nov 20 09:02                      | 27°M48'17                       | 0°36'42     |
| retrograde          | 2677 Jun 09 10:58                      | 18° <b>©</b> 07'33     | 1.7111       | minimum crong       | 2679 Nov 22 03:01                      | 0° <b>√</b>                     | 0 30 12     |
| desc. node          | 2677 Jun 20 04:56                      | 15°950'24              |              | desc. node          | 2679 Dec 06 00:13                      | 17° <b>×7</b> 25'47             |             |
| evening set         | 2677 Jun 24 13:47                      | 13°9643'05             |              | dese. Hode          | 2679 Dec 16 00:26                      | 0°る                             |             |
| inferior conj       | 2677 Jun 30 23:19                      | 9°952'56               | -2°30'47     | evening rise        | 2679 Dec 30 19:09                      | 18° <b>る</b> 34'10              |             |
| minimum elong       | 2677 Jun 30 17:57                      | 10°901'21              | 2°29'15      | evening rise        | 2680 Jan 08 21:37                      | 0°≈                             |             |
| min. Earth dist.    | 2677 Jun 30 19:30                      | 9°958'55               | 0.28942 AU   |                     | 2680 Feb 01 19:52                      | 0° <b>)</b> €                   |             |
| morning rise        | 2677 Jul 06 22:08                      | 6°917'01               | 0.207 .2 7 2 |                     | 2680 Feb 25 21:24                      | 0°Υ                             |             |
| direct              | 2677 Jul 22 12:59                      | 1°936'41               |              |                     | 2680 Mar 21 05:21                      | 0°8                             |             |
| greatest brilliancy | 2677 Aug 01 20:55                      | 3°930'55               | -4.7m        | asc. node           | 2680 Mar 28 03:17                      | 8° <b>8</b> 26'23               |             |
| 8                   | 2677 Sep 07 20:09                      | $0^{\circ}\Omega$      | .,,          |                     | 2680 Apr 14 23:48                      | 0°II                            |             |
| morning max el      | 2677 Sep 09 09:43                      | 1° <b>Ω</b> 29'49      | 45°52'35     |                     | 2680 May 10 10:49                      | 0°9                             |             |
| morning man er      | 2677 Oct 06 17:48                      | 0°m/                   |              |                     | 2680 Jun 06 03:02                      | $0^{\circ}\Omega$               |             |
| asc. node           | 2677 Oct 11 08:11                      | 5° m 07'35             |              | evening max el      | 2680 Jun 30 23:16                      | 25° <b>Ω</b> 33'28              | 45°25'59    |
|                     | 2677 Nov 01 21:57                      | 0∘ <b>⊽</b>            |              | *                   | 2680 Jul 05 16:56                      | 0° m)                           |             |
|                     | 2677 Nov 26 21:26                      | 0° <b>M</b>            |              | desc. node          | 2680 Jul 17 16:48                      | 10° <b>m</b> ) 18'05            |             |
|                     | 2677 Dec 21 06:41                      | 0° <b>∡</b> 7          |              | greatest brilliancy | 2680 Aug 08 13:50                      | 23° m/21'32                     | -4.7m       |
|                     | 2678 Jan 14 09:18                      | 0°ප                    |              | retrograde          | 2680 Aug 18 13:37                      | 25° m 08'41                     |             |
| desc. node          | 2678 Jan 30 21:47                      | 20° <b>る</b> 38'35     |              | evening set         | 2680 Sep 05 10:58                      | 19° mp 10'12                    |             |
|                     | 2678 Feb 07 09:20                      | 0° <b>≈</b>            |              | inferior conj       | 2680 Sep 08 21:07                      | 17° <b>m</b> ) 04'18            | -8°36'37    |
|                     | 2678 Mar 03 08:59                      | 0° <b>)</b> €          |              | minimum elong       | 2680 Sep 08 18:43                      | 17° mp 08'02                    |             |
| morning set         | 2678 Mar 14 16:21                      | 14° <b>₩</b> 07'29     |              | min. Earth dist.    | 2680 Sep 09 08:05                      | -•                              | 0.28681 AU  |
|                     | 2678 Mar 27 09:50                      | 0°Υ                    |              | morning rise        | 2680 Sep 12 02:20                      | 15° mp 05'35                    |             |
|                     | 2678 Apr 20 13:05                      | 0°8                    |              | direct              | 2680 Sep 30 09:20                      | 8° m 50'40                      |             |
|                     |  |                        |              | greatest brilliancy | 2680 Oct 11 07:11                      | 11° Mp 02'15                    | -4.8m       |
| superior conj       | 2678 Apr 22 23:49                      | 3° <b>8</b> 02'02      | -1°05'26     | asc. node           | 2680 Nov 07 19:57                      | 29° <b>m</b> 52'41              |             |
| minimum elong       | 2678 Apr 23 10:03                      | 3° <b>8</b> 33'43      |              |                     | 2680 Nov 07 23:12                      | 0∘ <b>⊽</b>                     |             |
| max. Earth dist.    | 2678 Apr 26 09:39                      | 7° <b>8</b> 15'23      | 1.72679 AU   | morning max el      | 2680 Nov 19 14:20                      | 11° <b>≏</b> 08'05              | 46°34'31    |
|                     | 2678 May 14 19:21                      | 0°II                   |              |                     | 2680 Dec 07 09:31                      | 0°M                             |             |
| asc. node           | 2678 May 24 01:05                      | 11° <b>Ⅲ</b> 23′02     |              |                     | 2681 Jan 02 12:52                      | 0° <b>∡</b> 7                   |             |
| evening rise        | 2678 May 31 01:48                      | 20° <b>Ⅱ</b> 01'46     |              |                     | 2681 Jan 27 13:21                      | 0°₹                             |             |
| <i>8</i> 11         | 2678 Jun 08 04:38                      | 0ಂತ                    |              |                     | 2681 Feb 21 02:48                      | 0° <b>≈</b>                     |             |
|                     | 2678 Jul 02 16:43                      | $0^{\circ}\Omega$      |              | desc. node          | 2681 Feb 27 09:32                      | 7°≈42'53                        |             |
|                     | 2678 Jul 27 08:01                      | 0° m)                  |              |                     | 2681 Mar 17 11:50                      | 0° <b>)</b> €                   |             |
|                     | 2678 Aug 21 04:05                      | 0∘ <b>⊽</b>            |              |                     | 2681 Apr 10 19:42                      | 0° <b>Υ</b>                     |             |
| desc. node          | 2678 Sep 12 14:26                      | 26° <b>≏</b> 47'07     |              |                     | 2681 May 05 04:06                      | 0°8                             |             |
|                     | 2678 Sep 15 07:32                      | 0°M                    |              | morning set         | 2681 May 25 09:36                      | 24° <b>8</b> 52'55              |             |
|                     | 2678 Oct 10 22:37                      | 0° <b>∡</b> 7          |              | morning sec         | 2681 May 29 13:34                      | 0°II                            |             |
|                     | 2678 Nov 06 11:31                      | 0°⋜                    |              | asc. node           | 2681 Jun 20 12:53                      | 26° <b>Ⅲ</b> 59'37              |             |
| evening max el      | 2678 Nov 26 16:21                      | 21° <b>る</b> 23'08     | 47°10'26     |                     | 2681 Jun 22 23:37                      | 0ಂತಿ                            |             |
|                     | 2678 Dec 05 12:03                      | 0°≈                    | 0-0          |                     | == == == == == == == == == == == =     |                                 |             |
| asc. node           | 2679 Jan 03 17:43                      | 21°≈43'02              |              | superior conj       | 2681 Jul 01 08:16                      | 10°516'14                       | 0°25'24     |
| greatest brilliancy | 2679 Jan 06 07:29                      | 21°≈46'42              | -4.9m        | minimum elong       | 2681 Jul 01 03:13                      | 10°500'44                       | 0°25'09     |
| retrograde          | 2679 Jan 16 11:37                      | 22 ≈40 42<br>24°≈46'00 | 1.7111       | max. Earth dist.    | 2681 Jul 01 00:00                      | 9°950'52                        | 1.73566 AU  |
| evening set         | 2679 Feb 01 11:30                      | 19°≈42'17              |              | max. Darui dist.    | 2681 Jul 17 09:24                      | 0°Ω                             | 1.,5500 AU  |
| min. Earth dist.    | 2679 Feb 05 08:22                      | 17°≈23'06              | 0.26908 AU   | evening rise        | 2681 Aug 06 06:55                      | 24° <b>Ω</b> 28'51              |             |
| inferior conj       | 2679 Feb 06 03:43                      | 17 ≈23 00<br>16°≈53'18 | 7°22'28      | Croning Hisc        | 2681 Aug 10 18:31                      | 0° m                            |             |
| minimum elong       | 2679 Feb 05 17:42                      | 10 ≈33 18<br>17°≈08'43 | 7°20'38      |                     | 2681 Sep 04 03:27                      | 0∘ <del>ত</del><br>بالا         |             |
| morning rise        | 2679 Feb 03 17.42<br>2679 Feb 10 00:10 | 17 ≈08 43<br>14°≈33'22 | 1 20 30      |                     | 2681 Sep                               | 0°M                             |             |
| morning risc        | 20//100 10 00.10                       | 17 ~33 44              |              |                     | 2001 Dep 20 13.19                      | O IIO                           |             |

| desc. node                     | 2681 Oct 10 02:27                      | 14°ML09'43                           |            |                                | 2684 Mar 04 10:34                      | 0° <b>≈</b>                  |            |
|--------------------------------|--|--------------------------------------|------------|--------------------------------|--|------------------------------|------------|
| dese. Hode                     | 2681 Oct 23 01:07                      | 0° <b>x</b> <sup>7</sup>             |            | desc. node                     | 2684 Mar 26 21:35                      | 26°≈07'45                    |            |
|                                | 2681 Nov 16 16:02                      | °ੇਂਤ                                 |            | dese. Hode                     | 2684 Mar 30 04:15                      | 0° <b>\</b>                  |            |
|                                | 2681 Dec 11 13:05                      | 0° <b>≈</b>                          |            |                                | 2684 Apr 24 08:11                      | 0° <b>Υ</b>                  |            |
|                                | 2682 Jan 06 00:47                      | 0° <b>∀</b>                          |            |                                | 2684 May 19 06:06                      | 0°8                          |            |
| asc. node                      | 2682 Jan 31 05:26                      | 27° <b>)</b> 58'58                   |            |                                | 2684 Jun 13 00:54                      | 0°II                         |            |
| asc. node                      | 2682 Feb 02 03:30                      | 0° <b>Υ</b>                          |            |                                | 2684 Jul 07 16:58                      | 0°9                          |            |
| evening max el                 | 2682 Feb 06 20:59                      | 4°Υ52'24                             | 46°58'31   | asc. node                      | 2684 Jul 18 00:40                      | 12°936'00                    |            |
| evening max er                 | 2682 Mar 07 20:40                      | 0°8                                  | 40 3031    | morning set                    | 2684 Aug 01 08:12                      | 0°\O8'00                     |            |
| greatest brilliancy            | 2682 Mar 18 21:06                      | 5° <b>8</b> 47'56                    | -4.8m      | morning set                    | 2684 Aug 01 05:36                      | 0° <b>Ω</b>                  |            |
| retrograde                     | 2682 Mar 29 09:54                      | 7° <b>8</b> 52'28                    | -4.0111    |                                | 2684 Aug 25 14:15                      | 0° <b>m</b> )                |            |
| evening set                    | 2682 Apr 15 09:10                      | 2° <b>8</b> 15'18                    |            | max. Earth dist.               | 2684 Sep 03 14:08                      | 0 my<br>11° My 07'39         | 1.72900 AU |
| evening set                    | 2682 Apr 19 00:39                      | 30°RΥ                                |            | max. Earth dist.               | 2004 Sep 03 14.00                      | 11 11007 39                  | 1.72900 AU |
| inforior coni                  | •                                      | 29° <b>Υ</b> 40'35                   | 6°58'20    | gunariar agni                  | 2604 Can 06 10:22                      | 150 m 04/12                  | 1°24'05    |
| inferior conj<br>minimum elong | 2682 Apr 19 12:58<br>2682 Apr 19 22:44 | 29 Υ 40 33<br>29° <b>Υ</b> 25'13     | 6°56'33    | superior conj<br>minimum elong | 2684 Sep 06 18:32<br>2684 Sep 06 15:56 | 15° Mp 04'13<br>14° Mp 56'11 | 1°24'03    |
| min. Earth dist.               | _                                      | $29^{\circ}$ <b>Y</b> $46'00$        | 0.28246 AU | minimum ciong                  | •                                      | 0∘ <b>⊽</b>                  | 1 24 03    |
|                                | 2682 Apr 19 09:32                      | 29 <b>Υ</b> 46 00 26° <b>Υ</b> 37'43 | 0.28240 AU |                                | 2684 Sep 18 19:27                      | 0° <b>M</b>                  |            |
| morning rise                   | 2682 Apr 24 12:40                      |                                      |            |                                | 2684 Oct 12 22:33                      |                              |            |
| direct                         | 2682 May 10 16:30                      | 21° <b>Υ</b> 35'43                   | 4.0        | evening rise                   | 2684 Oct 13 22:14                      | 1°M13'39                     |            |
| greatest brilliancy            | 2682 May 20 07:04                      | 23°Y17'43                            | -4.8m      | 1 1                            | 2684 Nov 06 00:49                      | 0° ⊀ <b>7</b>                |            |
| desc. node                     | 2682 May 22 19:01                      | 24° <b>Y</b> 14'07                   |            | desc. node                     | 2684 Nov 06 14:23                      | 0° <b>х</b> 42′17            |            |
|                                | 2682 Jun 02 10:23                      | 0° <b>8</b>                          | 45045100   |                                | 2684 Nov 30 03:03                      | 600                          |            |
| morning max el                 | 2682 Jun 28 14:20                      | 21° <b>8</b> 42'33                   | 45°47'08   |                                | 2684 Dec 24 06:10                      | 0° <b>≈</b>                  |            |
|                                | 2682 Jul 07 00:49                      | 0°Щ                                  |            |                                | 2685 Jan 17 12:21                      | 0° <b>∀</b>                  |            |
|                                | 2682 Aug 04 04:53                      | 0°©                                  |            | _                              | 2685 Feb 11 02:29                      | 0° <b>Υ</b>                  |            |
|                                | 2682 Aug 30 12:31                      | $0$ $^{\circ}\Omega$                 |            | asc. node                      | 2685 Feb 27 17:24                      | 19° <b>Y</b> 50'43           |            |
| asc. node                      | 2682 Sep 12 22:22                      | 15° <b>Ω</b> 46′26                   |            |                                | 2685 Mar 08 09:35                      | 0°B                          |            |
|                                | 2682 Sep 24 19:59                      | 0°Щ                                  |            |                                | 2685 Apr 04 04:33                      | $\Pi^{\circ}0$               |            |
|                                | 2682 Oct 19 11:37                      | 0∘ <b>ত</b>                          |            | evening max el                 | 2685 Apr 18 23:04                      | 15° <b>Ⅱ</b> 10′53           | 45°54'12   |
|                                | 2682 Nov 12 17:02                      | 0°M₊                                 |            |                                | 2685 May 05 06:41                      | $0$ $\circ$ $\odot$          |            |
|                                | 2682 Dec 06 16:43                      | 0° <b>⊼</b>                          |            | greatest brilliancy            | 2685 May 27 03:13                      | 13° <b>5</b> 46'19           | -4.7m      |
| greatest brilliancy            | 2682 Dec 07 17:55                      | 1° <b>∡</b> 18'59                    | -3.9m      | retrograde                     | 2685 Jun 07 03:55                      | 15° <b>©</b> 59'19           |            |
| morning set                    | 2682 Dec 25 01:16                      | 23° <b>҂</b> 03'25                   |            | desc. node                     | 2685 Jun 19 06:55                      | 13° <b>5</b> 04'53           |            |
|                                | 2682 Dec 30 13:46                      | 0°ප                                  |            | evening set                    | 2685 Jun 22 05:50                      | 11° <b>©</b> 34'56           |            |
| desc. node                     | 2683 Jan 02 11:56                      | 3° <b>る</b> 40'37                    |            | inferior conj                  | 2685 Jun 28 15:48                      | 7° <b>5</b> 644'21           | -2°11'43   |
|                                | 2683 Jan 23 10:05                      | 0° <b>≈</b>                          |            | minimum elong                  | 2685 Jun 28 11:04                      | 7° <b>9</b> 51'46            | 2°10'21    |
|                                |  |                                      |            | min. Earth dist.               | 2685 Jun 28 11:58                      | 7° <b>©</b> 50'21            | 0.28931 AU |
| superior conj                  | 2683 Feb 04 17:04                      | 15° <b>≈</b> 27'16                   | -1°08'57   | morning rise                   | 2685 Jul 04 16:22                      | 4°906'20                     |            |
| minimum elong                  | 2683 Feb 04 05:28                      | 14° <b>≈</b> 50′50                   | 1°08'36    |                                | 2685 Jul 15 00:34                      | 30° <b>Ŗ</b> Ⅱ               |            |
| max. Earth dist.               | 2683 Feb 07 04:42                      | 18° <b>≈</b> 34'36                   | 1.71226 AU | direct                         | 2685 Jul 20 05:09                      | 29° <b>Ⅱ</b> 28'05           |            |
|                                | 2683 Feb 16 06:59                      | 0° <b>∀</b>                          |            |                                | 2685 Jul 25 13:22                      | $0$ $\circ$                  |            |
|                                | 2683 Mar 12 05:55                      | $0$ ° $\mathbf{\Upsilon}$            |            | greatest brilliancy            | 2685 Jul 30 13:14                      | 1° <b>5</b> 22'42            | -4.7m      |
| evening rise                   | 2683 Mar 17 12:33                      | 6° <b>Y</b> 35'06                    |            | morning max el                 | 2685 Sep 07 02:07                      | 29° <b>5</b> 20'37           | 45°51'37   |
|                                | 2683 Apr 05 08:33                      | $9^{\circ}$ 8                        |            |                                | 2685 Sep 07 18:28                      | $0 ^{\circ} \Omega$          |            |
| asc. node                      | 2683 Apr 25 15:17                      | 25° <b>8</b> 01'47                   |            |                                | 2685 Oct 06 09:27                      | 0° <b>m</b> y                |            |
|                                | 2683 Apr 29 16:27                      | $\Pi$ $\circ 0$                      |            | asc. node                      | 2685 Oct 10 10:20                      | 4° Mp 31'02                  |            |
|                                | 2683 May 24 07:04                      | 0°ಲ                                  |            |                                | 2685 Nov 01 11:20                      | 0∘ <b>ত</b>                  |            |
|                                | 2683 Jun 18 06:19                      | $0 {\circ} \Omega$                   |            |                                | 2685 Nov 26 09:48                      | 0° <b>M</b>                  |            |
|                                | 2683 Jul 13 18:11                      | O° Mp                                |            |                                | 2685 Dec 20 18:33                      | 0° <b>∡</b> ¹                |            |
|                                | 2683 Aug 09 03:33                      | 0∘ <b>ত</b>                          |            |                                | 2686 Jan 13 20:52                      | 0°ප                          |            |
| desc. node                     | 2683 Aug 15 04:32                      | 6° <b>£</b> 38'43                    |            | desc. node                     | 2686 Jan 29 23:42                      | 20° <b>පි</b> 08'57          |            |
|                                | 2683 Sep 06 10:22                      | $0^{\circ}$ M,                       |            |                                | 2686 Feb 06 20:40                      | 0° <b>≈</b>                  |            |
| evening max el                 | 2683 Sep 12 04:36                      | 5°M39'14                             | 46°08'03   |                                | 2686 Mar 02 20:08                      | 0° <b>∀</b>                  |            |
|                                | 2683 Oct 12 05:05                      | 0° <b>∡</b> ¹                        |            | morning set                    | 2686 Mar 12 04:04                      | 11° <b>∺</b> 39'36           |            |
| greatest brilliancy            | 2683 Oct 22 09:11                      | 4° <b>∡</b> ¹44'29                   | -4.8m      |                                | 2686 Mar 26 20:49                      | $0^{\circ}$ Y                |            |
| retrograde                     | 2683 Oct 31 12:25                      | 6° <b>∡</b> 17′07                    |            |                                | 2686 Apr 19 23:57                      | $_{0\circ}$ 8                |            |
| evening set                    | 2683 Nov 15 17:49                      | 1° <b>∡</b> ¹49'50                   |            |                                |  |                              |            |
|                                | 2683 Nov 18 22:22                      | 30°RM                                |            | superior conj                  | 2686 Apr 20 14:33                      | 0° <b>8</b> 45'16            | -1°07'41   |
| inferior conj                  | 2683 Nov 21 05:34                      | 28°M36'28                            | -3°45'45   | minimum elong                  | 2686 Apr 21 00:42                      | 1° <b>8</b> 16'42            | 1°07'22    |
| minimum elong                  | 2683 Nov 21 13:31                      | 28°M24'20                            | 3°43'27    | max. Earth dist.               | 2686 Apr 24 01:28                      | 5° <b>8</b> 02'11            | 1.72626 AU |
| min. Earth dist.               | 2683 Nov 21 22:19                      | 28°M10'54                            | 0.26867 AU |                                | 2686 May 14 06:11                      | $\Pi^{\circ}0$               |            |
| morning rise                   | 2683 Nov 27 08:31                      | 25°M00'55                            |            | asc. node                      | 2686 May 23 03:07                      | 10° <b>Ⅱ</b> 55'58           |            |
| asc. node                      | 2683 Dec 06 07:49                      | 21°M27'34                            |            | evening rise                   | 2686 May 28 19:02                      | 17° <b>Ⅱ</b> 53'58           |            |
| direct                         | 2683 Dec 11 21:08                      | 20°M49'33                            |            | -                              | 2686 Jun 07 15:31                      | 0ංම                          |            |
| greatest brilliancy            | 2683 Dec 22 18:16                      | 23°M02'59                            | -4.9m      |                                | 2686 Jul 02 03:46                      | $0^{\circ}\Omega$            |            |
| -                              | 2684 Jan 04 06:01                      | 0° <b>∡</b> ¹                        |            |                                | 2686 Jul 26 19:25                      | 0° <b>m</b> )                |            |
| morning max el                 | 2684 Jan 31 13:02                      | 24° <b>х</b> ⁴06′30                  | 46°57'58   |                                | 2686 Aug 20 16:06                      | 0∘ <u>⊽</u>                  |            |
| Ç                              | 2684 Feb 06 05:58                      | 0°ರ                                  |            | desc. node                     | 2686 Sep 11 16:32                      | 26° <b>≙</b> 15'13           |            |
|                                |  |                                      |            |                                | *                                      |                              |            |

|                     | 2686 Sep 14 20:33 | 0°M₊                            |             | morning set         | 2689 May 23 02:30 | 22° <b>8</b> 43'17                      |            |
|---------------------|-------------------|---------------------------------|-------------|---------------------|-------------------|---|------------|
|                     | 2686 Oct 10 13:18 | 0° <b>⊼</b>                     |             |                     | 2689 May 29 00:37 | $\Pi$ $\circ$ 0                         |            |
|                     | 2686 Nov 06 05:34 | 0°₹                             |             | asc. node           | 2689 Jun 19 14:53 | 26° <b>Ⅲ</b> 32'11                      |            |
| evening max el      | 2686 Nov 24 06:59 | 19° <b>る</b> 00'52              | 47°09'14    |                     | 2689 Jun 22 10:32 | 0° <b>©</b>                             |            |
|                     | 2686 Dec 05 16:26 | 0° <b>≈</b>                     |             |                     |                   |   |            |
| asc. node           | 2687 Jan 02 19:39 | 19° <b>≈</b> 54'05              |             | superior conj       | 2689 Jun 29 02:19 | 8° <b>©</b> 10'46                       | 0°22'20    |
| greatest brilliancy | 2687 Jan 03 20:09 | 20°≈17'53                       | -4.9m       | minimum elong       | 2689 Jun 28 21:50 | 7° <b>9</b> 56'57                       | 0°22'08    |
| retrograde          | 2687 Jan 14 01:17 | 22°≈17'43                       |             | max. Earth dist.    | 2689 Jun 28 20:35 | 7° <b>9</b> 53'10                       | 1.73555 AU |
| evening set         | 2687 Jan 29 20:26 | 17°≈19'57                       |             |                     | 2689 Jul 16 20:18 | $0^{\circ}\Omega$                       |            |
| min. Earth dist.    | 2687 Feb 02 20:52 | 14° <b>≈</b> 55'42              | 0.26862 AU  | evening rise        | 2689 Aug 04 01:42 | 22° <b>Ω</b> 25'10                      |            |
| inferior conj       | 2687 Feb 03 16:25 | 14°≈25'38                       | 7°08'36     | 0.108               | 2689 Aug 10 05:30 | 0° <b>m</b> )                           |            |
| minimum elong       | 2687 Feb 03 06:08 | 14° <b>≈</b> 41'27              | 7°06'36     |                     | 2689 Sep 03 14:40 | 0∘ <del>⊽</del>                         |            |
| •                   | 2687 Feb 07 16:12 | 14 ≈41 27<br>12°≈01'13          | 7 00 30     |                     | *                 | 0° <b>™</b>                             |            |
| morning rise        |                   |                                 |             | 1 1                 | 2689 Sep 28 00:53 |   |            |
| direct              | 2687 Feb 24 03:23 | 6°≈43'24                        | 4.0         | desc. node          | 2689 Oct 09 04:32 | 13°M39'55                               |            |
| greatest brilliancy | 2687 Mar 05 06:30 | 8°≈18'41                        | -4.9m       |                     | 2689 Oct 22 13:12 | 0° <b>∡</b> 7                           |            |
|                     | 2687 Apr 06 00:19 | 0° <b>∀</b>                     |             |                     | 2689 Nov 16 04:51 | 0°ಕ                                     |            |
| morning max el      | 2687 Apr 15 00:42 | 8° <b>∺</b> 34'36               | 46°27'07    |                     | 2689 Dec 11 03:00 | 0° <b>≈</b>                             |            |
| desc. node          | 2687 Apr 24 09:18 | 18° <b>) (</b> 02′47            |             |                     | 2690 Jan 05 16:44 | 0° <b>∀</b>                             |            |
|                     | 2687 May 05 15:44 | $0$ ° $\mathbf{\Upsilon}$       |             | asc. node           | 2690 Jan 30 07:33 | 27° <b>∺</b> 10′59                      |            |
|                     | 2687 Jun 01 13:12 | $9^{\circ}$ 8                   |             |                     | 2690 Feb 02 00:32 | $0$ ° $\mathbf{\Upsilon}$               |            |
|                     | 2687 Jun 27 10:46 | $\Pi^{\circ}0$                  |             | evening max el      | 2690 Feb 04 10:49 | 2° <b>Y</b> 29'13                       | 47°00'13   |
|                     | 2687 Jul 22 19:17 | 0ಂತಾ                            |             |                     | 2690 Mar 09 05:29 | 0°8                                     |            |
| asc. node           | 2687 Aug 15 12:32 | 28° <b>©</b> 31'21              |             | greatest brilliancy | 2690 Mar 16 13:51 | 3° <b>8</b> 31'53                       | -4.9m      |
|                     | 2687 Aug 16 17:48 | $0^{\circ}\Omega$               |             | retrograde          | 2690 Mar 27 00:50 | 5° <b>8</b> 35'04                       |            |
|                     | 2687 Sep 10 07:28 | 0° <b>m</b> )                   |             |                     | 2690 Apr 12 23:18 | 30°R <b>Ƴ</b>                           |            |
|                     | 2687 Oct 04 13:55 | 0∘ <del>⊽</del>                 |             | evening set         | 2690 Apr 13 03:22 | 29° <b>Υ</b> ′53'55                     |            |
| morning set         | 2687 Oct 10 05:29 | ი <b>—</b><br>7° <b>ჲ</b> 01'26 |             | inferior conj       | 2690 Apr 17 04:07 | 27° <b>Υ</b> 23'43                      | 7°11'18    |
| morning set         |                   |                                 |             |                     | •                 | 27 <b>γ</b> 23 43<br>27° <b>γ</b> 08'40 |            |
| To de the           | 2687 Oct 28 15:23 | 0°M                             | 1 71512 411 | minimum elong       | 2690 Apr 17 13:40 |   | 7°09'38    |
| max. Earth dist.    | 2687 Nov 15 11:11 | 22°M19'21                       | 1.71513 AU  | min. Earth dist.    | 2690 Apr 17 00:32 | 27° <b>Y</b> ′29′22                     | 0.28212 AU |
|                     |                   |                                 |             | morning rise        | 2690 Apr 22 00:17 | 24° <b>Y</b> °25'41                     |            |
| superior conj       | 2687 Nov 17 13:16 | 24°M56'19                       | 0°40'24     | direct              | 2690 May 08 06:45 | 19° <b>Y</b> 19'28                      |            |
| minimum elong       | 2687 Nov 17 22:07 | 25°M24'05                       | 0°40'00     | greatest brilliancy | 2690 May 17 21:13 | 21° <b>Y</b> ′01′00                     | -4.8m      |
|                     | 2687 Nov 21 14:06 | 0° <b>∡</b> ¹                   |             | desc. node          | 2690 May 21 21:00 | 22° <b>Y</b> 36'00                      |            |
| desc. node          | 2687 Dec 05 02:10 | 16° <b>₰</b> 57'00              |             |                     | 2690 Jun 03 08:30 | $9^{\circ}$ 8                           |            |
|                     | 2687 Dec 15 11:36 | ರ°0                             |             | morning max el      | 2690 Jun 26 04:19 | 19° <b>8</b> 25'55                      | 45°47'58   |
| evening rise        | 2687 Dec 28 05:38 | 16° <b>පි</b> 01'03             |             |                     | 2690 Jul 06 20:38 | $\Pi^{\circ}$ 0                         |            |
|                     | 2688 Jan 08 08:53 | 0° <b>≈</b>                     |             |                     | 2690 Aug 03 19:53 | 0°9                                     |            |
|                     | 2688 Feb 01 07:17 | 0° <b>)</b> €                   |             |                     | 2690 Aug 30 01:34 | $0^{\circ}\Omega$                       |            |
|                     | 2688 Feb 25 09:02 | $0^{\circ}\Upsilon$             |             | asc. node           | 2690 Sep 12 00:30 | 15°Ω15'48                               |            |
|                     | 2688 Mar 20 17:18 | 0°8                             |             | use. Houe           | 2690 Sep 24 08:05 | 0° m)                                   |            |
| asc. node           | 2688 Mar 27 05:24 | 7° <b>8</b> 56'05               |             |                     | 2690 Oct 18 23:13 | 0∘ <b>ت</b><br>مار                      |            |
| asc. node           |                   |                                 |             |                     |                   |   |            |
|                     | 2688 Apr 14 12:20 | 0° <b>I</b> I                   |             |                     | 2690 Nov 12 04:25 | 0°M₊                                    |            |
|                     | 2688 May 10 00:32 | 0° <b>©</b>                     |             | 1 - 1111            | 2690 Dec 06 04:00 | 0° <b>∡</b> 7                           | 2.0        |
|                     | 2688 Jun 05 19:29 | 0°N                             |             | greatest brilliancy | 2690 Dec 09 07:01 | 3° <b>₹</b> ′55'19                      | -3.9m      |
| evening max el      | 2688 Jun 28 14:57 | 23° <b>Ω</b> 22'06              | 45°25'42    | morning set         | 2690 Dec 22 11:57 | 20° <b>∡</b> ³30'41                     |            |
|                     | 2688 Jul 05 18:24 | 0° <b>m</b>                     |             |                     | 2690 Dec 30 01:01 | 0°ප                                     |            |
| desc. node          | 2688 Jul 16 18:46 | 9° <b>™</b> 13'47               |             | desc. node          | 2691 Jan 01 13:57 | 3° <b>る</b> 11'35                       |            |
| greatest brilliancy | 2688 Aug 06 04:02 | 21°Mp08'58                      | -4.7m       |                     | 2691 Jan 22 21:19 | 0° <b>≈</b>                             |            |
| retrograde          | 2688 Aug 16 04:29 | 22° Mp 56'32                    |             |                     |                   |   |            |
| evening set         | 2688 Sep 03 00:27 | 17° <b>m</b> 00'59              |             | superior conj       | 2691 Feb 02 03:00 | 12° <b>≈</b> 52′26                      | -1°06'27   |
| inferior conj       | 2688 Sep 06 12:43 | 14° <b>m</b> 51'38              | -8°33'33    | minimum elong       | 2691 Feb 01 15:08 | 12° <b>≈</b> 15'10                      | 1°06'05    |
| minimum elong       | 2688 Sep 06 09:33 | 14° Mp 56'34                    |             | max. Earth dist.    | 2691 Feb 04 06:21 | 15° <b>≈</b> 33'47                      | 1.71200 AU |
| min. Earth dist.    | 2688 Sep 06 22:43 | -                               | 0.28721 AU  |                     | 2691 Feb 15 18:12 | 0° <b>)</b> €                           |            |
| morning rise        | 2688 Sep 09 18:31 | 12° m 51'45                     |             |                     | 2691 Mar 11 17:07 | 0° <b>Υ</b>                             |            |
| direct              | 2688 Sep 28 01:26 | 6° Mp 37'41                     |             | evening rise        | 2691 Mar 14 23:48 | 4° <b>Υ</b> ′05'32                      |            |
|                     | •                 | -                               | -4.8m       | evening rise        |                   | 4 1 03 32<br>0° <b>と</b>                |            |
| greatest brilliancy | 2688 Oct 08 22:08 | 8° Mp 47'36                     | -4.6111     | 1                   | 2691 Apr 04 19:46 |   |            |
| asc. node           | 2688 Nov 06 21:58 | 28° <b>m</b> 54'34              |             | asc. node           | 2691 Apr 24 17:16 | 24° <b>8</b> 33'00                      |            |
|                     | 2688 Nov 08 02:24 | 0∘ <b>ত</b>                     |             |                     | 2691 Apr 29 03:50 | $\Pi$ $\circ$ 0                         |            |
| morning max el      | 2688 Nov 17 04:33 | 8° <b>≏</b> 47'43               | 46°32'53    |                     | 2691 May 23 18:47 | 0°®                                     |            |
|                     | 2688 Dec 07 02:54 | 0°M₊                            |             |                     | 2691 Jun 17 18:39 | $0$ $\circ$ $\Omega$                    |            |
|                     | 2689 Jan 02 03:21 | 0°⊀                             |             |                     | 2691 Jul 13 07:39 | 0° <b>™</b>                             |            |
|                     | 2689 Jan 27 02:30 | ರ∘ರ                             |             |                     | 2691 Aug 08 19:20 | 0∘ <b>ত</b>                             |            |
|                     | 2689 Feb 20 15:11 | 0° <b>≈</b>                     |             | desc. node          | 2691 Aug 14 06:41 | 5° <b>≏</b> 59'27                       |            |
| desc. node          | 2689 Feb 26 11:43 | 7° <b>≈</b> 11'57               |             |                     | 2691 Sep 06 08:12 | 0° <b>M</b> ₊                           |            |
|                     | 2689 Mar 16 23:43 | 0° <b>)</b> €                   |             | evening max el      | 2691 Sep 09 17:05 | 3°M16'50                                | 46°05'56   |
|                     | 2689 Apr 10 07:14 | 0° <b>Υ</b>                     |             | <i>3</i> 2-         | 2691 Oct 14 04:29 | 0° <b>∡</b> 7                           |            |
|                     | 2689 May 04 15:21 | 0° <b>8</b>                     |             | greatest brilliancy | 2691 Oct 19 22:10 | 2° <b>×</b> <sup>7</sup> 20'32          | -4.8m      |
|                     | _00,uj 0 : 10.21  | ŷ <b>O</b>                      |             | or carest or mainey | _0,1 000 1, 22.10 | - 7 20 32                               |            |

| retrograde          | 2691 Oct 29 00:52                      | 3° <b>∡</b> 52'56                    |            | superior conj                     | 2694 Apr 18 04:46                      | 28° <b>Y</b> ′26'43        | -1°09'50              |
|---------------------|--|--------------------------------------|------------|-----------------------------------|--|----------------------------|-----------------------|
|                     | 2691 Nov 12 04:04                      | 30°RM₊                               |            | minimum elong                     | 2694 Apr 18 14:46                      | 28° <b>Y</b> ′57'42        |                       |
| evening set         | 2691 Nov 13 09:11                      | 29°M21'15                            |            | _                                 | 2694 Apr 19 10:51                      | 0° <b>႘</b>                |                       |
| inferior conj       | 2691 Nov 18 18:27                      | 26°M11'33                            | -4°06'49   | max. Earth dist.                  | 2694 Apr 21 17:48                      | 2° <b>8</b> 50'20          | 1.72578 AU            |
| minimum elong       | 2691 Nov 19 02:58                      | 25°M58'33                            | 4°04'24    |                                   | 2694 May 13 17:02                      | $\Pi$ °0                   |                       |
| min. Earth dist.    | 2691 Nov 19 12:23                      | 25°M44'14                            | 0.26925 AU | asc. node                         | 2694 May 22 05:05                      | 10° <b>Ⅱ</b> 28'36         |                       |
| morning rise        | 2691 Nov 24 20:01                      | 22°M37'58                            |            | evening rise                      | 2694 May 26 11:40                      | 15° <b>Ⅱ</b> 44'11         |                       |
| asc. node           | 2691 Dec 05 09:45                      | 18°M43'25                            |            |                                   | 2694 Jun 07 02:24                      | 0ಂತಾ                       |                       |
| direct              | 2691 Dec 09 10:26                      | 18°M23'21                            |            |                                   | 2694 Jul 01 14:49                      | $0^{\circ}\Omega$          |                       |
| greatest brilliancy | 2691 Dec 20 09:21                      | 20°M38'42                            | -4.9m      |                                   | 2694 Jul 26 06:51                      | 0° <b>m</b> )              |                       |
|                     | 2692 Jan 05 03:52                      | 0° <b>∡</b> 7                        |            |                                   | 2694 Aug 20 04:10                      | 0∘ <b>⊽</b>                |                       |
| morning max el      | 2692 Jan 29 03:15                      | 21° <b>∡</b> 42′28                   | 46°58'04   | desc. node                        | 2694 Sep 10 18:34                      | 25° <b>Ω</b> 43'01         |                       |
|                     | 2692 Feb 06 02:42                      | % ප                                  |            |                                   | 2694 Sep 14 09:37                      | 0°M                        |                       |
| 1 1                 | 2692 Mar 04 02:27                      | 0°≈                                  |            |                                   | 2694 Oct 10 04:06                      | 0° <b>₹</b>                |                       |
| desc. node          | 2692 Mar 25 23:36                      | 25° <b>≈</b> 32'24<br>0° <b>)</b> €  |            | avanina may al                    | 2694 Nov 05 23:54                      | 0°궁<br>16°궁40'18           | 47000105              |
|                     | 2692 Mar 29 18:02<br>2692 Apr 23 20:50 | 0° <b>Υ</b>                          |            | evening max el                    | 2694 Nov 21 22:05<br>2694 Dec 05 22:29 | 0°≈                        | 47°08'05              |
|                     | 2692 May 18 18:00                      | 0°8                                  |            | greatest brilliancy               | 2695 Jan 01 09:19                      | 0 ∞<br>17°≈50'44           | -4.9m                 |
|                     | 2692 Jun 12 12:19                      | 0°U                                  |            | asc. node                         | 2695 Jan 01 09:19<br>2695 Jan 01 21:45 | 17 ≈30 44<br>18°≈02'02     | -4.9111               |
|                     | 2692 Jul 07 04:06                      | 0°©                                  |            | retrograde                        | 2695 Jan 11 14:58                      | 19°≈50'22                  |                       |
| asc. node           | 2692 Jul 17 02:45                      | 12°508'42                            |            | evening set                       | 2695 Jan 27 05:39                      | 13°≈58'47                  |                       |
| morning set         | 2692 Jul 30 01:52                      | 28° <b>©</b> 01'20                   |            | min. Earth dist.                  | 2695 Jan 31 09:41                      | 12°≈29'16                  | 0.26814 AU            |
| morning sec         | 2692 Jul 31 16:32                      | 0°N                                  |            | inferior conj                     | 2695 Feb 01 05:14                      | 11°≈59'11                  | 6°53'56               |
|                     | 2692 Aug 25 01:07                      | 0° mp                                |            | minimum elong                     | 2695 Jan 31 18:46                      | 12°≈15'17                  | 6°51'48               |
| max. Earth dist.    | 2692 Sep 01 10:35                      | 9° m 08'40                           | 1.72941 AU | morning rise                      | 2695 Feb 05 08:19                      | 9° <b>≈</b> 30'08          |                       |
|                     | •                                      |                                      |            | direct                            | 2695 Feb 21 16:27                      | 4°≈17'57                   |                       |
| superior conj       | 2692 Sep 04 12:02                      | 12° Mp 56'02                         | 1°23'33    | greatest brilliancy               | 2695 Mar 02 19:03                      | 5°≈52'56                   | -4.9m                 |
| minimum elong       | 2692 Sep 04 08:46                      | 12° m 45'56                          | 1°23'31    |                                   | 2695 Apr 06 03:11                      | 0° <b>∀</b>                |                       |
|                     | 2692 Sep 18 06:22                      | $0$ o $\overline{\mathbf{v}}$        |            | morning max el                    | 2695 Apr 12 14:20                      | 6° <b>)</b> 13′28          | 46°28'30              |
| evening rise        | 2692 Oct 11 13:24                      | 28° <b>≏</b> 57'15                   |            | desc. node                        | 2695 Apr 23 11:18                      | 17° <b>)(</b> 16'49        |                       |
|                     | 2692 Oct 12 09:34                      | $0^{\circ}$ M                        |            |                                   | 2695 May 05 08:57                      | $0^{\circ}$ Y              |                       |
| desc. node          | 2692 Nov 05 16:21                      | 0° <b>≯</b> 13′28                    |            |                                   | 2695 Jun 01 03:18                      | $9^{\circ}$ 8              |                       |
|                     | 2692 Nov 05 12:02                      | 0°⊀                                  |            |                                   | 2695 Jun 26 23:21                      | $\Pi$ °0                   |                       |
|                     | 2692 Nov 29 14:31                      | 8°0                                  |            |                                   | 2695 Jul 22 07:00                      | $0$ $\circ$ $\odot$        |                       |
|                     | 2692 Dec 23 17:57                      | 0° <b>≈</b>                          |            | asc. node                         | 2695 Aug 14 14:39                      | 28°9503'48                 |                       |
|                     | 2693 Jan 17 00:36                      | 0° <b>∀</b>                          |            |                                   | 2695 Aug 16 05:00                      | $0$ ° $\Omega$             |                       |
|                     | 2693 Feb 10 15:31                      | 0° <b>Υ</b>                          |            |                                   | 2695 Sep 09 18:24                      | 0° <b>m</b> y              |                       |
| asc. node           | 2693 Feb 26 19:27                      | 19° <b>Y</b> 15′52                   |            |                                   | 2695 Oct 04 00:45                      | 0∘ <b>⊽</b>                |                       |
|                     | 2693 Mar 08 00:06                      | 0° <b>B</b>                          |            | morning set                       | 2695 Oct 07 20:56                      | 4° <b>Ω</b> 46'33          |                       |
|                     | 2693 Apr 03 22:39                      | 0°Ⅲ<br>12°Ⅲ58'04                     | 45956120   | Family 33-4                       | 2695 Oct 28 02:14                      | 0°M<br>10°M 27/02          | 1 71552 ATT           |
| evening max el      | 2693 Apr 16 14:51                      | 12°Щ38'04<br>0° <b>©</b>             | 45°56'20   | max. Earth dist.                  | 2695 Nov 12 18:15                      | 19°M37'02                  | 1.71552 AU            |
| greatest brilliancy | 2693 May 05 16:12<br>2693 May 24 18:59 | 0°59<br>11°5935'44                   | -4.7m      | superior conj                     | 2695 Nov 15 01:57                      | 22°M31'33                  | 0°43'39               |
| retrograde          | 2693 Jun 04 20:55                      | 11 \$33 44<br>13°\$49'42             | -4./111    | minimum elong                     | 2695 Nov 15 01:37<br>2695 Nov 15 11:14 | 23°M00'38                  | 0°43'14               |
| desc. node          | 2693 Jun 18 08:54                      | 10°9514'13                           |            | minimum clong                     | 2695 Nov 21 01:00                      | 23 11 <b>0</b> 00 38       | 0 43 14               |
| evening set         | 2693 Jun 19 21:52                      | 9° <b>©</b> 25'26                    |            | desc. node                        | 2695 Dec 04 04:13                      | 16° <b>≯</b> ¹29'08        |                       |
| inferior conj       | 2693 Jun 26 08:01                      | 5° <b>©</b> 34'28                    | -1°52'18   |                                   | 2695 Dec 14 22:33                      | 0°る                        |                       |
| minimum elong       | 2693 Jun 26 03:57                      | 5° <b>©</b> 40'50                    | 1°51'07    | evening rise                      | 2695 Dec 25 16:14                      | 13° <b>る</b> 29'02         |                       |
| min. Earth dist.    | 2693 Jun 26 03:59                      | 5° <b>5</b> 40'47                    | 0.28916 AU | -                                 | 2696 Jan 07 19:55                      | 0°≈                        |                       |
| morning rise        | 2693 Jul 02 10:12                      | 1° <b>5</b> 54'32                    |            |                                   | 2696 Jan 31 18:25                      | 0° <b>)</b> €              |                       |
|                     | 2693 Jul 06 04:52                      | 30°R <b>Ⅱ</b>                        |            |                                   | 2696 Feb 24 20:19                      | $0^{\circ}$ Y              |                       |
| direct              | 2693 Jul 17 21:29                      | 27° <b>Ⅱ</b> 18′23                   |            |                                   | 2696 Mar 20 04:54                      | $0^{\circ}$ 8              |                       |
| greatest brilliancy | 2693 Jul 28 04:39                      | 29° <b>Ⅱ</b> 12'41                   | -4.7m      | asc. node                         | 2696 Mar 26 07:21                      | 7° <b>8</b> 26'20          |                       |
|                     | 2693 Jul 30 06:11                      | $0$ $\circ$ $\odot$                  |            |                                   | 2696 Apr 14 00:34                      | $\Pi$ °0                   |                       |
| morning max el      | 2693 Sep 04 18:45                      | 27° <b>©</b> 11'43                   | 45°50'41   |                                   | 2696 May 09 14:03                      | 0ಂತಾ                       |                       |
|                     | 2693 Sep 07 16:07                      | $0$ $^{\circ}$ $\Omega$              |            |                                   | 2696 Jun 05 11:59                      | $0$ $^{\circ}$ $\Omega$    |                       |
|                     | 2693 Oct 06 00:56                      | 0° <b>т</b> р                        |            | evening max el                    | 2696 Jun 26 05:51                      | 21° <b>Ω</b> 09′23         | 45°25'23              |
| asc. node           | 2693 Oct 09 12:15                      | 3° m 53'58                           |            |                                   | 2696 Jul 05 21:05                      | 0° m/y                     |                       |
|                     | 2693 Nov 01 00:39                      | 0∘ <b>亚</b>                          |            | desc. node                        | 2696 Jul 15 20:57                      | 8° Mp 08'46                | 4.7                   |
|                     | 2693 Nov 25 22:07                      | 0°M.                                 |            | greatest brilliancy               | 2696 Aug 03 18:34                      | 18° Mp 57'07               | -4.7m                 |
|                     | 2693 Dec 20 06:20                      | 0° <b>₹</b>                          |            | retrograde                        | 2696 Aug 13 19:02                      | 20° Mp 44'59               |                       |
| daga = -1-          | 2694 Jan 13 08:20                      | 0°る                                  |            | evening set                       | 2696 Aug 31 13:32                      | 14° Mp 52'45               | 0020124               |
| desc. node          | 2694 Jan 29 01:53                      | 19° <b>る</b> 40'26                   |            | inferior conj                     | 2696 Sep 04 04:16                      | 12° Mp 39'38               |                       |
|                     | 2694 Feb 06 07:55                      | 0° <b>∺</b>                          |            | minimum elong<br>min. Earth dist. | 2696 Sep 04 00:21                      | 12° Mp 45'45               | 8°29'21<br>0.28760 AU |
| morning set         | 2694 Mar 02 07:13<br>2694 Mar 09 15:37 | 0° <del>X</del><br>9° <b>X</b> 11'13 |            | min. Earth dist.<br>morning rise  | 2696 Sep 04 13:38<br>2696 Sep 07 10:59 | 12° m/25'01<br>10° m/38'06 | 0.20/00 AU            |
| morning set         |  | 9° <b>π</b> 1113                     |            | •                                 | •                                      |                            |                       |
|                     | 2694 Mar 26 07:48                      | ()°. V                               |            | direct                            | 2696 Sep 25 16:55                      | 4° Mp 25'12                |                       |

| greatest brilliancy | 2696 Oct 06 13:36                      | 6° Mp 34'16                       | -4.8m      |                               | 2699 Apr 04 06:36                      | 0° <b>႘</b>              |            |
|---------------------|--|-----------------------------------|------------|-------------------------------|--|--------------------------|------------|
| asc. node           | 2696 Nov 06 00:02                      | 27° Mp 58'35                      | -4.0111    | asc. node                     | 2699 Apr 23 19:17                      | 24° <b>8</b> 05'37       |            |
| use. Houe           | 2696 Nov 08 03:48                      | 0° <b>⊡</b>                       |            | use. Hode                     | 2699 Apr 28 14:47                      | 0°Ⅱ                      |            |
| morning max el      | 2696 Nov 14 18:13                      | ° <b>-</b> 26'49                  | 46°31'18   |                               | 2699 May 23 06:03                      | 0.<br>0                  |            |
| morning max er      | 2696 Dec 06 19:38                      | 0°M                               | 10 31 10   |                               | 2699 Jun 17 06:32                      | $0^{\circ}\Omega$        |            |
|                     | 2697 Jan 01 17:23                      | 0° <b>⊼</b> 7                     |            |                               | 2699 Jul 12 20:43                      | 0° m)                    |            |
|                     | 2697 Jan 26 15:13                      | °<br>ਨ<br>ਹ                       |            |                               | 2699 Aug 08 10:54                      | 0∘ <b>ত</b><br>0°.       |            |
|                     | 2697 Feb 20 03:08                      | 0° <b>≈</b>                       |            | desc. node                    | 2699 Aug 13 08:40                      | 5° <b>ഫ</b> 20'29        |            |
| desc. node          | 2697 Feb 25 13:42                      | 6°≈41'42                          |            |                               | 2699 Sep 06 06:29                      | 0°M                      |            |
|                     | 2697 Mar 16 11:10                      | 0° <b>)</b> €                     |            | evening max el                | 2699 Sep 07 06:36                      | 0°M58'11                 | 46°03'39   |
|                     | 2697 Apr 09 18:18                      | 0° <b>Υ</b>                       |            | greatest brilliancy           | 2699 Oct 17 10:32                      | 29°M56'55                |            |
|                     | 2697 May 04 02:08                      | 0°8                               |            | 8                             | 2699 Oct 17 14:22                      | 0° <b>×</b> <sup>7</sup> |            |
| morning set         | 2697 May 20 19:31                      | 20° <b>8</b> 35'21                |            | retrograde                    | 2699 Oct 26 13:44                      | 1°×729'33                |            |
| S                   | 2697 May 28 11:12                      | 0°Щ                               |            | C                             | 2699 Nov 04 04:44                      | 30°RM                    |            |
| asc. node           | 2697 Jun 18 17:00                      | 26° <b>Ⅱ</b> 06'22                |            | evening set                   | 2699 Nov 11 00:39                      | 26°M53'23                |            |
|                     | 2697 Jun 21 21:03                      | 0°ಅ                               |            | inferior conj                 | 2699 Nov 16 07:15                      | 23°M47'20                | -4°27'17   |
|                     |  |                                   |            | minimum elong                 | 2699 Nov 16 16:18                      | 23°M33'34                |            |
| superior conj       | 2697 Jun 26 20:24                      | 6°506'34                          | 0°19'16    | min. Earth dist.              | 2699 Nov 17 02:02                      | 23°M18'47                | 0.26986 AU |
| minimum elong       | 2697 Jun 26 16:29                      | 5° <b>©</b> 54'33                 | 0°19'04    | morning rise                  | 2699 Nov 22 07:16                      | 20°M16'08                |            |
| max. Earth dist.    | 2697 Jun 26 16:06                      | 5° <b>©</b> 53'22                 | 1.73551 AU | asc. node                     | 2699 Dec 04 11:52                      | 16°M05'52                |            |
|                     | 2697 Jul 16 06:50                      | $0^{\circ}\Omega$                 |            | direct                        | 2699 Dec 07 00:15                      | 15°M58'02                |            |
| evening rise        | 2697 Aug 01 20:23                      | 20° <b>Ω</b> 22'21                |            | greatest brilliancy           | 2699 Dec 17 23:48                      | 18°M14'33                | -4.9m      |
| 8 21                | 2697 Aug 09 16:10                      | 0° m)                             |            | 8                             | 2700 Jan 05 19:46                      | 0° <b>∡</b> 7            |            |
|                     | 2697 Sep 03 01:34                      | 0∘ <u>v</u>                       |            | morning max el                | 2700 Jan 26 18:15                      | 19° <b>х</b> 21′23       | 46°58'08   |
|                     | 2697 Sep 27 12:08                      | 0°M                               |            | 5 5                           | 2700 Feb 05 22:27                      | 0°8                      |            |
| desc. node          | 2697 Oct 08 06:28                      | 13°M10'40                         |            |                               | 2700 Mar 04 17:44                      | 0° <b>≈</b>              |            |
|                     | 2697 Oct 22 00:59                      | 0° <b>⊼</b>                       |            | desc. node                    | 2700 Mar 26 01:33                      | 24°≈58'05                |            |
|                     | 2697 Nov 15 17:23                      | 0°ెవ                              |            |                               | 2700 Mar 30 07:23                      | 0° <b>)</b> €            |            |
|                     | 2697 Dec 10 16:42                      | 0° <b>≈</b>                       |            |                               | 2700 Apr 24 09:03                      | $0^{\circ}\Upsilon$      |            |
|                     | 2698 Jan 05 08:33                      | 0° <b>)</b> €                     |            |                               | 2700 May 19 05:31                      | 0°8                      |            |
| asc. node           | 2698 Jan 29 09:40                      | 26° <b>)</b> 23′24                |            |                               | 2700 Jun 12 23:21                      | 0°II                     |            |
|                     | 2698 Feb 01 21:51                      | o°Υ                               |            |                               | 2700 Jul 07 14:49                      | 0°9                      |            |
| evening max el      | 2698 Feb 02 00:21                      | 0° <b>Υ</b> 06'21                 | 47°02'01   | asc. node                     | 2700 Jul 17 04:50                      | 11° <b>©</b> 42'35       |            |
| C                   | 2698 Mar 11 05:21                      | 0°8                               |            | morning set                   | 2700 Jul 28 20:01                      | 25° <b>©</b> 57'23       |            |
| greatest brilliancy | 2698 Mar 14 06:33                      | 1° <b>8</b> 17'10                 | -4.9m      | 3                             | 2700 Aug 01 03:06                      | $0^{\circ}\Omega$        |            |
| retrograde          | 2698 Mar 24 16:02                      | 3° <b>8</b> 19'32                 |            |                               | 2700 Aug 25 11:38                      | 0° m/p                   |            |
| C                   | 2698 Apr 06 12:23                      | 30° <b>₹</b> Υ                    |            | max. Earth dist.              | 2700 Aug 31 07:23                      | 7° <b>m</b> ) 11'54      | 1.72984 AU |
| evening set         | 2698 Apr 10 21:37                      | 27° <b>Y</b> '34'16               |            |                               | C                                      | •                        |            |
| inferior conj       | 2698 Apr 14 19:25                      | 25° <b>Y</b> ′08'41               | 7°23'27    | superior conj                 | 2700 Sep 03 05:53                      | 10° <b>m</b> 50'01       | 1°22'54    |
| minimum elong       | 2698 Apr 15 04:41                      | 24° <b>Y</b> ′54'05               | 7°21'56    | minimum elong                 | 2700 Sep 03 01:59                      | 10° m 37'59              | 1°22'52    |
| min. Earth dist.    | 2698 Apr 14 15:40                      | 25° <b>Ƴ</b> 14'37                | 0.28174 AU | C                             | 2700 Sep 18 16:57                      | 0∘ <mark>⊽</mark>        |            |
| morning rise        | 2698 Apr 19 11:59                      | 22° <b>Y</b> 15'48                |            | evening rise                  | 2700 Oct 10 04:46                      | 26° <b>≏</b> 42'18       |            |
| direct              | 2698 May 05 20:46                      | 17° <b>Y</b> ′04'57               |            | C                             | 2700 Oct 12 20:21                      | o°M.                     |            |
| greatest brilliancy | 2698 May 15 11:39                      | 18° <b>Ƴ</b> 46'31                | -4.8m      | desc. node                    | 2700 Nov 05 18:27                      | 29°M45'40                |            |
| desc. node          | 2698 May 20 23:01                      | 21° <b>Y</b> °03'18               |            |                               | 2700 Nov 05 23:03                      | 0° <b>∡</b> ¹            |            |
|                     | 2698 Jun 03 24:00                      | 0°8                               |            |                               | 2700 Nov 30 01:49                      | 8°0                      |            |
| morning max el      | 2698 Jun 23 18:56                      | 17° <b>8</b> 12'27                | 45°48'47   |                               | 2700 Dec 24 05:34                      | 0° <b>≈</b>              |            |
| S                   | 2698 Jul 06 15:14                      | 0° <b>Ⅱ</b>                       |            |                               | 2701 Jan 17 12:42                      | 0° <b>)</b> €            |            |
|                     | 2698 Aug 03 10:11                      | 0°ಲಾ                              |            |                               | 2701 Feb 11 04:24                      | $0^{\circ}$ Y            |            |
|                     | 2698 Aug 29 14:07                      | $0^{\circ}\Omega$                 |            | asc. node                     | 2701 Feb 26 21:23                      | 18° <b>Ƴ</b> 41'12       |            |
| asc. node           | 2698 Sep 11 02:25                      | 14° <b>Ω</b> 45'45                |            |                               | 2701 Mar 08 14:32                      | 0° <b>႘</b>              |            |
|                     | 2698 Sep 23 19:46                      | 0° <b>m</b>                       |            |                               | 2701 Apr 04 16:54                      | $\Pi^{\circ}0$           |            |
|                     | 2698 Oct 18 10:28                      | 0∘ <b>ত</b>                       |            | evening max el                | 2701 Apr 15 07:35                      | 10° <b>Ⅱ</b> 48'16       | 45°58'30   |
|                     | 2698 Nov 11 15:25                      | 0° <b>M</b> ₊                     |            |                               | 2701 May 07 04:33                      | 0°ಲಾ                     |            |
|                     | 2698 Dec 05 14:54                      | 0° <b>∡</b> ″                     |            | greatest brilliancy           | 2701 May 23 11:23                      | 9° <b>5</b> 26'59        | -4.7m      |
| greatest brilliancy | 2698 Dec 09 22:55                      | 5° <b>∡</b> ¹26'19                | -3.9m      | retrograde                    | 2701 Jun 03 14:03                      | 11° <b>5</b> 341'13      |            |
| morning set         | 2698 Dec 19 22:39                      | 17° <b>∡</b> °59′13               |            | desc. node                    | 2701 Jun 18 11:04                      | 7° <b>5</b> 21'42        |            |
| -                   | 2698 Dec 29 11:54                      | 5°0                               |            | evening set                   | 2701 Jun 18 14:20                      | 7° <b>©</b> 17'14        |            |
| desc. node          | 2698 Dec 31 16:03                      | 2° <b>ප්</b> 44'01                |            | inferior conj                 | 2701 Jun 25 00:27                      | 3°\$25'56                | -1°32'51   |
|                     | 2699 Jan 22 08:11                      | 0° <b>≈</b>                       |            | minimum elong                 | 2701 Jun 24 21:03                      | 3° <b>©</b> 31'14        |            |
|                     |  |                                   |            | min. Earth dist.              | 2701 Jun 24 20:10                      |                          | 0.28895 AU |
| superior conj       | 2699 Jan 30 12:48                      | 10° <b>≈</b> 18'17                | -1°03'49   |                               | 2701 Jun 30 16:43                      | 30°RⅡ                    |            |
| minimum elong       | 2699 Jan 30 00:48                      | 9° <b>≈</b> 40'32                 |            | morning rise                  | 2701 Jul 01 04:04                      | 29° <b>Ⅱ</b> 44'11       |            |
| max. Earth dist.    |  |                                   |            | -                             |  |                          |            |
| max. Earth dist.    | 2699 Feb 01 08:49                      | 12° <b>≈</b> 36'37                | 1.71179 AU | direct                        | 2701 Jul 16 14:13                      | 25° <b>Ⅱ</b> 10'19       |            |
| max. Earm dist.     | 2699 Feb 01 08:49<br>2699 Feb 15 05:03 | 12° <b>≈</b> 36'37<br>0° <b>米</b> | 1.71179 AU | direct<br>greatest brilliancy | 2701 Jul 16 14:13<br>2701 Jul 26 19:44 | 25°Ⅲ10'19<br>27°Ⅲ03'32   | -4.7m      |
| max. Earth dist.    |  |                                   | 1.71179 AU |                               |  |                          | -4.7m      |
| evening rise        | 2699 Feb 15 05:03                      | 0° <b>)</b> €                     | 1.71179 AU |                               | 2701 Jul 26 19:44                      | 27° <b>Ⅱ</b> 03'32       |            |

|                     | 2701 Sep 08 12:32                      | $0 {\circ} \mathcal{N}$           |             |                     | 2704 May 10 03:58                      | $0$ $\circ$                       |            |
|---------------------|--|-----------------------------------|-------------|---------------------|--|-----------------------------------|------------|
|                     | 2701 Oct 06 15:51                      | 0° <b>m</b>                       |             |                     | 2704 Jun 06 05:04                      | $0^{\circ}\Omega$                 |            |
| asc. node           | 2701 Oct 09 14:20                      | 3° Mp 18'37                       |             | evening max el      | 2704 Jun 24 20:12                      | 18° <b>Ω</b> 54'49                | 45°25'19   |
|                     | 2701 Nov 01 13:38                      | 0∘ <b>亚</b>                       |             |                     | 2704 Jul 07 01:43                      | 0° <b>m</b>                       |            |
|                     | 2701 Nov 26 10:15                      | 0°M                               |             | desc. node          | 2704 Jul 15 22:55                      | 7° <b>m</b> )01'13                |            |
|                     | 2701 Dec 20 18:02                      | 0° <b>∡</b> 7                     |             | greatest brilliancy | 2704 Aug 02 09:00                      | 16° <b>m</b> 44'56                | -4.7m      |
|                     | 2702 Jan 13 19:44                      | 0°ප                               |             | retrograde          | 2704 Aug 12 09:52                      | 18° <b>m</b> 33'43                |            |
| desc. node          | 2702 Jan 29 03:53                      | 19° <b>る</b> 11'30                |             | evening set         | 2704 Aug 30 02:32                      | 12° <b>m</b> 44'49                |            |
|                     | 2702 Feb 06 19:06                      | 0° <b>≈</b>                       |             | inferior conj       | 2704 Sep 02 19:59                      | 10° <b>m</b> 27'47                | -8°24'54   |
|                     | 2702 Mar 02 18:14                      | 0° <b>∀</b>                       |             | minimum elong       | 2704 Sep 02 15:19                      | 10° <b>m</b> 35'04                | 8°24'36    |
| morning set         | 2702 Mar 08 02:47                      | 6° <b>)</b> 41′51                 |             | min. Earth dist.    | 2704 Sep 03 04:50                      | 10° <b>m</b> y 14'00              | 0.28793 AU |
|                     | 2702 Mar 26 18:41                      | $0$ ° $\Upsilon$                  |             | morning rise        | 2704 Sep 06 03:55                      | 8° Mg 24′23                       |            |
|                     |  |                                   |             | direct              | 2704 Sep 24 08:23                      | 2° <b>m</b> 12'44                 |            |
| superior conj       | 2702 Apr 16 18:45                      | 26° <b>Ƴ</b> 07'38                | -1°11'54    | greatest brilliancy | 2704 Oct 05 05:43                      | 4° <b>™</b> 21'51                 | -4.8m      |
| minimum elong       | 2702 Apr 17 04:31                      | 26° <b>Ƴ</b> 37'57                | 1°11'38     | asc. node           | 2704 Nov 06 02:05                      | 27° <b>m</b> 03'43                |            |
|                     | 2702 Apr 19 21:39                      | 0° <b>႘</b>                       |             |                     | 2704 Nov 09 04:00                      | 0∘ <b>ত</b>                       |            |
| max. Earth dist.    | 2702 Apr 20 11:36                      | 0° <b>8</b> 43'17                 | 1.72525 AU  | morning max el      | 2704 Nov 13 08:17                      | 4° <b>≙</b> 06'57                 | 46°29'54   |
|                     | 2702 May 14 03:48                      | $\Pi^{\circ}0$                    |             |                     | 2704 Dec 07 12:07                      | 0° <b>M</b> .                     |            |
| asc. node           | 2702 May 22 07:13                      | 10° <b>Ⅲ</b> 02′03                |             |                     | 2705 Jan 02 07:22                      | 0° <b>∡</b> ¹                     |            |
| evening rise        | 2702 May 25 04:13                      | 13° <b>∏</b> 34'21                |             |                     | 2705 Jan 27 04:03                      | 0°రె                              |            |
|                     | 2702 Jun 07 13:12                      | 0°ಅ                               |             |                     | 2705 Feb 20 15:19                      | 0° <b>≈</b>                       |            |
|                     | 2702 Jul 02 01:48                      | $0^{\circ}\Omega$                 |             | desc. node          | 2705 Feb 25 15:40                      | 6° <b>≈</b> 10'36                 |            |
|                     | 2702 Jul 26 18:10                      | 0° m)                             |             |                     | 2705 Mar 16 22:55                      | 0° <b>)</b> €                     |            |
|                     | 2702 Aug 20 16:07                      | 0° <u>v</u>                       |             |                     | 2705 Apr 10 05:43                      | 0° <b>Υ</b>                       |            |
| desc. node          | 2702 Sep 10 20:34                      | 25° <b>£</b> 11'09                |             |                     | 2705 May 04 13:17                      | 0°B                               |            |
|                     | 2702 Sep 14 22:37                      | 0°M                               |             | morning set         | 2705 May 19 11:57                      | 18° <b>8</b> 24'22                |            |
|                     | 2702 Oct 10 18:57                      | 0° <b>⊼</b> 7                     |             | morning sec         | 2705 May 28 22:09                      | 0°II                              |            |
|                     | 2702 Nov 06 18:39                      | ਰ<br>ਹ°ਰ                          |             | asc. node           | 2705 Jun 18 19:00                      | 25° <b>I</b> 39'10                |            |
| evening max el      | 2702 Nov 20 12:36                      | 14° <b>る</b> 18'09                | 47°06'25    | use. Houe           | 2705 Jun 22 07:54                      | 0°99                              |            |
| evening max or      | 2702 Dec 07 07:03                      | 0°≈                               | 17 00 23    |                     | 2700 3411 22 07.51                     | ů <b>O</b>                        |            |
| greatest brilliancy | 2702 Dec 30 22:53                      | 15° <b>≈</b> 23'01                | -4.9m       | superior conj       | 2705 Jun 25 14:07                      | 4°900'16                          | 0°16'08    |
| asc. node           | 2702 Dec 30 22:33<br>2703 Jan 01 23:49 | 16° <b>≈</b> 04'19                | -4.7111     | minimum elong       | 2705 Jun 25 10:48                      | 3°950'06                          |            |
| retrograde          | 2703 Jan 10 03:49                      | 17° <b>≈</b> 21'24                |             | max. Earth dist.    | 2705 Jun 25 11:30                      | 3°952'14                          | 1.73543 AU |
| evening set         | 2703 Jan 25 14:39                      | 17 ∞21 24<br>12°≈36'06            |             | max. Larm dist.     | 2705 Jul 16 17:42                      | 0°Ω                               | 1.75545 AO |
| min. Earth dist.    | 2703 Jan 29 22:48                      | 12 ≈30 00<br>10°≈00'38            | 0.26770 AU  | evening rise        | 2705 Jul 31 15:03                      | 18° <b>Ω</b> 18'36                |            |
| inferior conj       | 2703 Jan 29 22:48<br>2703 Jan 30 17:46 | 9° <b>≈</b> 31'24                 |             | evening rise        | 2705 Aug 10 03:09                      | 0° m)                             |            |
| minimum elong       | 2703 Jan 30 17:40<br>2703 Jan 30 07:12 | 9°≈47'42                          |             |                     | 2705 Sep 03 12:47                      | 0∘ <del>ত</del><br>المار          |            |
| morning rise        | 2703 Feb 04 00:09                      | 9 ≈47 42<br>6°≈57'28              | 0 33 39     |                     | 2705 Sep 03 12.47<br>2705 Sep 27 23:43 | 0 <b>==</b><br>0°M                |            |
| direct              | 2703 Feb 04 00:09<br>2703 Feb 20 04:51 | 0 ≈5728<br>1°≈51'01               |             | dasa nada           | 2705 Sep 27 23:45<br>2705 Oct 08 08:35 | 12°M41'10                         |            |
|                     |  |                                   | 4.0         | desc. node          |  | 0° <b>√</b>                       |            |
| greatest brilliancy | 2703 Mar 01 08:06                      | 3°≈26'18<br>0°¥                   | -4.9111     |                     | 2705 Oct 22 13:03                      | 0°る                               |            |
|                     | 2703 Apr 07 04:54                      | 3° <b>∺</b> 48'31                 | 46920102    |                     | 2705 Nov 16 06:12                      |                                   |            |
| morning max el      | 2703 Apr 11 02:47                      |                                   | 40°30'03    |                     | 2705 Dec 11 06:41                      | 0° <b>≈</b>                       |            |
| desc. node          | 2703 Apr 23 13:25                      | 16° <b>)</b> 31′21<br>0° <b>Υ</b> |             |                     | 2706 Jan 06 00:48                      | 0° <b>)</b><br>25°₩22147          |            |
|                     | 2703 May 06 01:57                      |                                   |             | asc. node           | 2706 Jan 29 11:33                      | 25° <b>)</b> 33'47                | 47902122   |
|                     | 2703 Jun 01 17:19                      | 0° <b>Β</b>                       |             | evening max el      | 2706 Jan 31 14:01                      | 27° <b>¥</b> 43'01<br>0° <b>Ƴ</b> | 47°03'32   |
|                     | 2703 Jun 27 11:54                      | 0° <b>I</b> I                     |             | 4 41 70             | 2706 Feb 02 20:18                      |                                   | 4.0        |
| 1                   | 2703 Jul 22 18:42                      | 0°©                               |             | greatest brilliancy | 2706 Mar 12 22:27                      | 28° <b>Y</b> 59'49                | -4.9m      |
| asc. node           | 2703 Aug 14 16:33                      | 27° <b>©</b> 35'31                |             | . 1                 | 2706 Mar 16 00:04                      | 0°8                               |            |
|                     | 2703 Aug 16 16:12                      | 0° <b>Ω</b>                       |             | retrograde          | 2706 Mar 23 07:18                      | 1° <b>8</b> 02'10                 |            |
|                     | 2703 Sep 10 05:20                      | 0° <b>m</b> )                     |             |                     | 2706 Mar 30 09:27                      | 30° <b>₹</b> Υ                    |            |
| . ,                 | 2703 Oct 04 11:34                      | 0∘ <b>⊽</b>                       |             | evening set         | 2706 Apr 09 15:35                      | 25° <b>Y</b> 12′28                | 7024150    |
| morning set         | 2703 Oct 06 13:00                      | 2° <b>Ω</b> 33'38                 |             | inferior conj       | 2706 Apr 13 10:30                      | 22° <b>Y</b> 51'31                | 7°34'59    |
| F 4 F               | 2703 Oct 28 13:04                      | 0°M                               | 1 51506 177 | minimum elong       | 2706 Apr 13 19:25                      | 22° <b>Y</b> 37'29                | 7°33'37    |
| max. Earth dist.    | 2703 Nov 11 03:29                      | 17°11L01'34                       | 1.71596 AU  | min. Earth dist.    | 2706 Apr 13 06:24                      | 22° <b>Y</b> 57'58                | 0.28144 AU |
|                     |  |                                   |             | morning rise        | 2706 Apr 17 23:27                      | 20° <b>Y</b> ′04′06               |            |
| superior conj       | 2703 Nov 13 15:20                      | 20°M09'02                         |             | direct              | 2706 May 04 10:49                      | 14° <b>Y</b> 48'04                |            |
| minimum elong       | 2703 Nov 14 00:57                      | 20°M39'11                         | 0°46'21     | greatest brilliancy | 2706 May 14 01:54                      | 16° <b>Y</b> 29'54                | -4.8m      |
|                     | 2703 Nov 21 11:54                      | 0° <b>⊼</b>                       |             | desc. node          | 2706 May 21 01:09                      | 19° <b>Ƴ</b> 32'07                |            |
| desc. node          | 2703 Dec 04 06:21                      | 16° <b>∡</b> 01'21                |             |                     | 2706 Jun 05 12:23                      | 0° <b>8</b>                       |            |
|                     | 2703 Dec 15 09:34                      | 0°る                               |             | morning max el      | 2706 Jun 22 10:20                      | 14° <b>8</b> 59'09                | 45°49'42   |
| evening rise        | 2703 Dec 24 03:08                      | 10° <b>る</b> 57'43                |             |                     | 2706 Jul 07 09:57                      | 0°II                              |            |
|                     | 2704 Jan 08 07:05                      | 0° <b>≈</b>                       |             |                     | 2706 Aug 04 00:48                      | 0°99                              |            |
|                     | 2704 Feb 01 05:45                      | 0° <b>∀</b>                       |             |                     | 2706 Aug 30 03:00                      | $0$ $\circ$ $\Omega$              |            |
|                     | 2704 Feb 25 07:52                      | 0° <b>Υ</b>                       |             | asc. node           | 2706 Sep 11 04:29                      | 14° <b>Ω</b> 15′07                |            |
|                     | 2704 Mar 20 16:48                      | 0°8                               |             |                     | 2706 Sep 24 07:47                      | 0° <b>m</b> )                     |            |
| asc. node           | 2704 Mar 26 09:24                      | 6° <b>8</b> 56'01                 |             |                     | 2706 Oct 18 22:02                      | 0∘ <b>⊽</b>                       |            |
|                     | 2704 Apr 14 13:07                      | $\Pi$ °0                          |             |                     | 2706 Nov 12 02:45                      | 0° <b>M</b>                       |            |
|                     |  |                                   |             |                     |  |                                   |            |

|                     | 270( D 0( 02.00                        | 00.7                         |            |                     | 2700 I 16 06.55                        | 50007147                         |            |
|---------------------|--|------------------------------|------------|---------------------|--|----------------------------------|------------|
|                     | 2706 Dec 06 02:08                      | 0° ⊀ <sup>7</sup>            | 2.0        | evening set         | 2709 Jun 16 06:55                      | 5°907'47                         |            |
| greatest brilliancy | 2706 Dec 11 07:22                      | 6° <b>⋌</b> ³32'57           | -3.9m      | desc. node          | 2709 Jun 17 13:01                      | 4° <b>©</b> 25'23                |            |
| morning set         | 2706 Dec 18 10:01                      | 15° <b>∡</b> ¹28'55          |            | inferior conj       | 2709 Jun 22 16:49                      | 1° <b>©</b> 16'20                |            |
|                     | 2706 Dec 29 23:04                      | 0°ප                          |            | minimum elong       | 2709 Jun 22 14:08                      | 1° <b>5</b> 20'32                |            |
| desc. node          | 2706 Dec 31 18:04                      | 2° <b>る</b> 15'14            |            | min. Earth dist.    | 2709 Jun 22 12:33                      |                                  | 0.28878 AU |
|                     | 2707 Jan 22 19:19                      | 0° <b>≈</b>                  |            |                     | 2709 Jun 24 17:44                      | 30° <b>Ŗ</b> Ⅱ                   |            |
|                     |  |                              |            | morning rise        | 2709 Jun 28 21:43                      | 27° <b>Ⅱ</b> 32'39               |            |
| superior conj       | 2707 Jan 28 23:01                      | 7° <b>≈</b> 44'32            | -1°01'04   | direct              | 2709 Jul 14 06:50                      | 23° <b>Ⅱ</b> 01′08               |            |
| minimum elong       | 2707 Jan 28 10:58                      | 7° <b>≈</b> 06'38            | 1°00'38    | greatest brilliancy | 2709 Jul 24 10:57                      | 24° <b>Ⅱ</b> 53'09               | -4.7m      |
| max. Earth dist.    | 2707 Jan 30 15:52                      | 9° <b>≈</b> 53'00            | 1.71160 AU |                     | 2709 Aug 03 22:47                      | $0$ $\circ$ $\odot$              |            |
|                     | 2707 Feb 15 16:09                      | 0° <b>)</b> €                |            | morning max el      | 2709 Sep 01 02:48                      | 22°952'09                        | 45°48'46   |
| evening rise        | 2707 Mar 10 22:36                      | 29° <b>₩</b> 08'38           |            | -                   | 2709 Sep 08 08:48                      | $0^{\circ}\Omega$                |            |
| C                   | 2707 Mar 11 15:03                      | $0^{\circ}\mathbf{\Upsilon}$ |            |                     | 2709 Oct 06 07:00                      | 0° <b>m</b> )                    |            |
|                     | 2707 Apr 04 17:49                      | 0°8                          |            | asc. node           | 2709 Oct 08 16:28                      | 2° m) 42'29                      |            |
| asc. node           | 2707 Apr 23 21:24                      | 23° <b>8</b> 37'12           |            | use. Iroue          | 2709 Nov 01 02:54                      | 0∘ <b>ʊ</b>                      |            |
| use. Houe           | 2707 Apr 29 02:12                      | 0°Ⅱ                          |            |                     | 2709 Nov 25 22:37                      | o° <b>m</b>                      |            |
|                     | 2707 May 23 17:49                      | 0° <b>©</b>                  |            |                     | 2709 Dec 20 05:56                      | 0° <b>∡</b> 7                    |            |
|                     | 2707 Jun 17 18:59                      | 0° <b>U</b>                  |            |                     | 2710 Jan 13 07:21                      | %ਰ                               |            |
|                     |  |                              |            | 1 1-                |  | 18° <b>云</b> 41'43               |            |
|                     | 2707 Jul 13 10:26                      | 0° <b>m</b> )                |            | desc. node          | 2710 Jan 28 05:51                      |                                  |            |
|                     | 2707 Aug 09 03:16                      | 0∘ <b>⊽</b>                  |            |                     | 2710 Feb 06 06:29                      | 0° <b>≈</b>                      |            |
| desc. node          | 2707 Aug 13 10:40                      | 4° <b>≙</b> 39'49            |            |                     | 2710 Mar 02 05:28                      | 0° <b>∀</b>                      |            |
| evening max el      | 2707 Sep 05 20:51                      | 28° <b>≏</b> 40'11           | 46°01'31   | morning set         | 2710 Mar 05 13:59                      | 4° <b>)</b> 11'49                |            |
|                     | 2707 Sep 07 06:17                      | 0° <b>M</b>                  |            |                     | 2710 Mar 26 05:46                      | $0^{\circ}$ Y                    |            |
| greatest brilliancy | 2707 Oct 15 22:40                      | 27° <b>M</b> 32'18           | -4.8m      |                     |  |                                  |            |
| retrograde          | 2707 Oct 25 02:44                      | 29° <b>™</b> 05'10           |            | superior conj       | 2710 Apr 14 08:52                      | 23° <b>Y</b> 48'21               | -1°13'50   |
| evening set         | 2707 Nov 09 16:18                      | 24° <b>M</b> 24'41           |            | minimum elong       | 2710 Apr 14 18:19                      | 24° <b>Y</b> °17'42              | 1°13'35    |
| inferior conj       | 2707 Nov 14 20:06                      | 21°M22'12                    | -4°47'13   | max. Earth dist.    | 2710 Apr 18 05:55                      | 28° <b>Y</b> 37'08               | 1.72468 AU |
| minimum elong       | 2707 Nov 15 05:35                      | 21°ML07'46                   | 4°44'41    |                     | 2710 Apr 19 08:37                      | 0°8                              |            |
| min. Earth dist.    | 2707 Nov 15 15:25                      | 20°M52'49                    | 0.27045 AU |                     | 2710 May 13 14:44                      | $\Pi^{\circ}0$                   |            |
| morning rise        | 2707 Nov 20 18:15                      | 17° <b>M</b> 53'36           |            | asc. node           | 2710 May 21 09:13                      | 9° <b>Ⅲ</b> 34'32                |            |
| asc. node           | 2707 Dec 04 13:55                      | 13°M33'20                    |            | evening rise        | 2710 May 22 20:50                      | 11° <b>Ⅱ</b> 24'09               |            |
| direct              | 2707 Dec 05 14:25                      | 13°M32'02                    |            |                     | 2710 Jun 07 00:11                      | 0.ಪ                              |            |
| greatest brilliancy | 2707 Dec 16 13:47                      | 15°M48'50                    | -4.9m      |                     | 2710 Jul 01 12:59                      | $0 {\circ} \Omega$               |            |
| greatest orimancy   | 2708 Jan 07 08:04                      | 0° <b>₹</b>                  | 4.7111     |                     | 2710 Jul 26 05:47                      | 0°m)                             |            |
| morning max el      | 2708 Jan 25 09:16                      | 16° <b>∡</b> 59'32           | 46°58'14   |                     | 2710 Jul 20 03:47<br>2710 Aug 20 04:24 | 0∘ <b>ত</b>                      |            |
| morning max er      |  | 10 x・3932<br>0°る             | 40 38 14   | 1 1-                | Č                                      | 0 <u>≈</u><br>24° <b>Ω</b> 38'33 |            |
|                     | 2708 Feb 06 17:56                      |                              |            | desc. node          | 2710 Sep 09 22:40                      |                                  |            |
|                     | 2708 Mar 04 09:05                      | 0° <b>≈</b>                  |            |                     | 2710 Sep 14 12:01                      | 0°M                              |            |
| desc. node          | 2708 Mar 25 03:43                      | 24°≈23'53                    |            |                     | 2710 Oct 10 10:17                      | 0° <b>∡</b>                      |            |
|                     | 2708 Mar 29 20:51                      | 0° <b>∺</b>                  |            |                     | 2710 Nov 06 14:12                      | 0° <b>ろ</b>                      |            |
|                     | 2708 Apr 23 21:29                      | 0° <b>Ƴ</b>                  |            | evening max el      | 2710 Nov 18 02:11                      | 11° <b>る</b> 53'06               | 47°04'52   |
|                     | 2708 May 18 17:19                      | $0^{\circ}$ 8                |            |                     | 2710 Dec 07 18:51                      | 0° <b>≈</b>                      |            |
|                     | 2708 Jun 12 10:45                      | $\Pi$ $^{\circ}0$            |            | greatest brilliancy | 2710 Dec 28 12:54                      | 12° <b>≈</b> 55'25               | -4.9m      |
|                     | 2708 Jul 07 01:57                      | $0$ $\circ$ $\odot$          |            | asc. node           | 2711 Jan 01 01:45                      | 14° <b>≈</b> 01′21               |            |
| asc. node           | 2708 Jul 16 06:48                      | 11°9514'47                   |            | retrograde          | 2711 Jan 07 16:09                      | 14° <b>≈</b> 52'14               |            |
| morning set         | 2708 Jul 26 13:52                      | 23° <b>©</b> 51'17           |            | evening set         | 2711 Jan 22 23:53                      | 10° <b>≈</b> 12'48               |            |
|                     | 2708 Jul 31 14:04                      | $0^{\circ}\Omega$            |            | min. Earth dist.    | 2711 Jan 27 12:20                      | 7° <b>≈</b> 31'20                | 0.26727 AU |
|                     | 2708 Aug 24 22:33                      | 0° <b>m</b> y                |            | inferior conj       | 2711 Jan 28 06:24                      | 7° <b>≈</b> 03'29                | 6°21'51    |
| max. Earth dist.    | 2708 Aug 29 02:04                      | 5° <b>m</b> 07'29            | 1.73023 AU | minimum elong       | 2711 Jan 27 19:47                      | 7°≈19'50                         | 6°19'26    |
|                     | -                                      |                              |            | morning rise        | 2711 Feb 01 16:03                      | 4° <b>≈</b> 24'41                |            |
| superior conj       | 2708 Aug 31 23:27                      | 8° Mp 42'03                  | 1°22'08    |                     | 2711 Feb 12 06:12                      | 30°Rる                            |            |
| minimum elong       | 2708 Aug 31 18:59                      | 8° m) 28'12                  |            | direct              | 2711 Feb 17 16:50                      | 29° <b>පි</b> 23'41              |            |
| 8                   | 2708 Sep 18 03:56                      | 0∘ <b>⊽</b>                  |            |                     | 2711 Feb 23 06:40                      | 0° <b>≈</b>                      |            |
| evening rise        | 2708 Oct 07 20:00                      | 24° <b>Ω</b> 25'50           |            | greatest brilliancy | 2711 Feb 26 21:53                      | 1° <b>≈</b> 00'06                | -4 9m      |
| evening rise        | 2708 Oct 12 07:30                      | 0°M.                         |            | greatest orimaney   | 2711 Apr 07 05:27                      | 0° <b>∀</b>                      | 1.7111     |
| desc. node          | 2708 Oct 12 07:30<br>2708 Nov 04 20:31 | 29°M16'42                    |            | morning max el      | 2711 Apr 07 03:27<br>2711 Apr 08 14:53 | 1° <b>)</b> 22′13                | 46°31'41   |
| desc. node          |  | 29 1161042<br>0° <b>√</b> 1  |            | desc. node          | =                                      | 15° <b>)</b> 46'08               | 40 3141    |
|                     | 2708 Nov 05 10:26                      |                              |            | desc. node          | 2711 Apr 22 15:28                      |                                  |            |
|                     | 2708 Nov 29 13:28                      | 0° <del>3</del>              |            |                     | 2711 May 05 18:43                      | 0°Υ<br>                          |            |
|                     | 2708 Dec 23 17:33                      | 0° <b>≈</b>                  |            |                     | 2711 Jun 01 07:16                      | 0° <b>B</b>                      |            |
|                     | 2709 Jan 17 01:08                      | 0° <b>)</b> €                |            |                     | 2711 Jun 27 00:25                      | 0° <b>I</b>                      |            |
| _                   | 2709 Feb 10 17:38                      | 0°Υ<br>100 <b>°</b> Ω        |            | _                   | 2711 Jul 22 06:25                      | 0°®                              |            |
| asc. node           | 2709 Feb 25 23:31                      | 18° <b>Y</b> ′06′10          |            | asc. node           | 2711 Aug 13 18:41                      | 27° <b>©</b> 07'43               |            |
|                     | 2709 Mar 08 05:22                      | 0°8                          |            |                     | 2711 Aug 16 03:28                      | $0$ $^{\circ}$ $\Omega$          |            |
|                     | 2709 Apr 04 11:52                      | $\Pi$ °0                     |            |                     | 2711 Sep 09 16:24                      | 0° <b>™</b>                      |            |
| evening max el      | 2709 Apr 13 00:07                      | 8° <b>Ⅲ</b> 37′12            | 46°00'33   |                     | 2711 Oct 03 22:34                      | 0∘ <b>⊽</b>                      |            |
|                     | 2709 May 07 21:38                      | $0$ $\circ$ $50$             |            | morning set         | 2711 Oct 04 04:53                      | 0° <b>≏</b> 19'37                |            |
| greatest brilliancy | 2709 May 21 04:11                      | 7° <b>5</b> 17'49            | -4.7m      |                     | 2711 Oct 28 00:04                      | $0^{\circ}$ M                    |            |
| retrograde          | 2709 Jun 01 06:39                      | 9° <b>5</b> 31'33            |            | max. Earth dist.    | 2711 Nov 08 13:42                      | 14°M28'45                        | 1.71641 AU |
|                     |  |                              |            |                     |  |                                  |            |

| superior conj                           | 2711 Nov 11 04:31                      | 17° <b>M</b> 45'27                              | 0°49'46     | direct              | 2714 May 02 01:17                      | 12° <b>Y</b> 31'36   |             |
|---|--|---|-------------|---------------------|--|----------------------|-------------|
| minimum elong                           | 2711 Nov 11 14:26                      | 18°M16'30                                       | 0°49'23     | greatest brilliancy | 2714 May 11 15:34                      | 14° <b>Ƴ</b> 13'15   | -4.8m       |
|   | 2711 Nov 20 22:57                      | 0° <b>∡</b> 7                                   |             | desc. node          | 2714 May 20 03:09                      | 18° <b>Ƴ</b> 04'38   |             |
| desc. node                              | 2711 Dec 03 08:19                      | 15° <b>∡</b> ³32'40                             |             |                     | 2714 Jun 05 21:13                      | $8^{\circ}$          |             |
|   | 2711 Dec 14 20:42                      | 5°0   |             | morning max el      | 2714 Jun 20 02:27                      | 12° <b>8</b> 48'23   | 45°50'38    |
| evening rise                            | 2711 Dec 21 13:51                      | 8° <b>る</b> 25'43                               |             | •                   | 2714 Jul 07 03:53                      | $\Pi^{\circ}0$       |             |
| S                                       | 2712 Jan 07 18:19                      | 0° <b>≈</b>                                     |             |                     | 2714 Aug 03 14:56                      | 0°ಅ                  |             |
|   | 2712 Jan 31 17:08                      | 0° <b>)</b> €                                   |             |                     | 2714 Aug 29 15:30                      | $0^{\circ}\Omega$    |             |
|   | 2712 Feb 24 19:27                      | 0° <b>Υ</b>                                     |             | asc. node           | 2714 Sep 10 06:37                      | 13° <b>Ω</b> 45'41   |             |
|   | 2712 Mar 20 04:44                      | 0°8   |             | use. Houe           | 2714 Sep 23 19:27                      | 0°m/                 |             |
| asa nada                                | 2712 Mar 20 04:44<br>2712 Mar 25 11:30 | 6° <b>8</b> 25'44                               |             |                     | 2714 Sep 23 19:27<br>2714 Oct 18 09:16 | 0∘ <b>⊽</b><br>0 ııĭ |             |
| asc. node                               |  | 0 <b>O</b> 23 44<br>0° <b>I</b>                 |             |                     |  | 0°M                  |             |
|   | 2712 Apr 14 01:44                      |   |             |                     | 2714 Nov 11 13:48                      |                      |             |
|   | 2712 May 09 17:59                      | 0°©   |             |                     | 2714 Dec 05 13:07                      | 0° <b>∡</b> 7        |             |
|   | 2712 Jun 05 22:27                      | $0$ $\circ$ $\Omega$                            |             | greatest brilliancy | 2714 Dec 11 06:44                      | 7° <b>∡</b> 11'54    | -3.9m       |
| evening max el                          | 2712 Jun 22 10:37                      | 16° <b>Ω</b> 40'44                              | 45°25'24    | morning set         | 2714 Dec 15 21:20                      | 12° <b>∡</b> ′59'10  |             |
|   | 2712 Jul 07 08:16                      | 0° mp   |             |                     | 2714 Dec 29 10:03                      | 0°₹                  |             |
| desc. node                              | 2712 Jul 15 00:56                      | 5° m 52'20                                      |             | desc. node          | 2714 Dec 30 20:06                      | 1° <b>る</b> 47'07    |             |
| greatest brilliancy                     | 2712 Jul 30 22:43                      | 14° Mp 32′28                                    | -4.7m       |                     | 2715 Jan 22 06:18                      | 0° <b>≈</b>          |             |
| retrograde                              | 2712 Aug 10 01:13                      | 16° Mp 23′08                                    |             |                     |  |                      |             |
| evening set                             | 2712 Aug 27 15:23                      | 10° <b>m</b> 37'30                              |             | superior conj       | 2715 Jan 26 08:40                      | 5° <b>≈</b> 09'26    | -0°58'08    |
| inferior conj                           | 2712 Aug 31 11:46                      | 8° Mp 16'19                                     | -8°19'31    | minimum elong       | 2715 Jan 25 20:42                      | 4° <b>≈</b> 31'45    | 0°57'41     |
| minimum elong                           | 2712 Aug 31 06:24                      | 8° Mp 24'40                                     | 8°19'05     | max. Earth dist.    | 2715 Jan 27 23:38                      | 7°≈11'57             | 1.71143 AU  |
| min. Earth dist.                        | 2712 Aug 31 19:48                      | 8° mp 03'48                                     | 0.28832 AU  |                     | 2715 Feb 15 03:06                      | 0° <b>∀</b>          |             |
| morning rise                            | 2712 Sep 03 21:13                      | 6° Mp 10'44                                     | 0.20032110  | evening rise        | 2715 Mar 08 09:33                      | 26° <b>)</b> 38'48   |             |
| direct                                  | 2712 Sep 03 21:13<br>2712 Sep 22 00:07 | 0° mp 00'35                                     |             | evening rise        | 2715 Mar 11 01:59                      | 0° <b>Υ</b>          |             |
|   | -                                      | -   | 4 9         |                     |  | 0°8                  |             |
| greatest brilliancy                     | 2712 Oct 02 21:58                      | 2° Mp 10'01                                     | -4.8m       | 1                   | 2715 Apr 04 04:48                      |                      |             |
| asc. node                               | 2712 Nov 05 04:07                      | 26° Mp 09'46                                    |             | asc. node           | 2715 Apr 22 23:23                      | 23° <b>8</b> 09'14   |             |
|   | 2712 Nov 09 03:11                      | 0° <b>⊽</b>                                     | 4.600.010.1 |                     | 2715 Apr 28 13:21                      | 0° <b>Ⅱ</b>          |             |
| morning max el                          | 2712 Nov 10 23:18                      | 1° <b>≏</b> 49'26                               | 46°28'21    |                     | 2715 May 23 05:20                      | 0°€                  |             |
|   | 2712 Dec 07 04:24                      | 0°M   |             |                     | 2715 Jun 17 07:09                      | $0^{\circ}\Omega$    |             |
|   | 2713 Jan 01 21:17                      | 0°⊀   |             |                     | 2715 Jul 12 23:53                      | O° Mp                |             |
|   | 2713 Jan 26 16:49                      | 0°₹   |             |                     | 2715 Aug 08 19:29                      | 0∘ <b>ত</b>          |             |
|   | 2713 Feb 20 03:24                      | 0° <b>≈</b>                                     |             | desc. node          | 2715 Aug 12 12:51                      | 4° <b>≏</b> 00'26    |             |
| desc. node                              | 2713 Feb 24 17:52                      | 5° <b>≈</b> 40'31                               |             | evening max el      | 2715 Sep 03 11:41                      | 26° <b>£</b> 25'05   | 45°59'25    |
|   | 2713 Mar 16 10:32                      | 0° <b>∀</b>                                     |             |                     | 2715 Sep 07 06:37                      | $0^{\circ}$ M.       |             |
|   | 2713 Apr 09 16:59                      | $0^{\circ}\mathbf{\Upsilon}$                    |             | greatest brilliancy | 2715 Oct 13 11:09                      | 25°M10'19            | -4.8m       |
|   | 2713 May 04 00:17                      | 0° <b>႘</b>                                     |             | retrograde          | 2715 Oct 22 15:39                      | 26°M42'58            |             |
| morning set                             | 2713 May 17 04:25                      | 16° <b>8</b> 13'47                              |             | evening set         | 2715 Nov 07 08:20                      | 21°M58'23            |             |
| 3                                       | 2713 May 28 08:57                      | 0°П   |             | inferior conj       | 2715 Nov 12 09:15                      | 18°M59'27            | -5°06'21    |
| asc. node                               | 2713 Jun 17 21:00                      | 25° <b>I</b> I12'23                             |             | minimum elong       | 2715 Nov 12 19:05                      | 18°M44'27            |             |
| asc. node                               | 2713 Jun 21 18:36                      | 0°9   |             | min. Earth dist.    | 2715 Nov 12 15:05<br>2715 Nov 13 05:00 | 18°M29'20            | 0.27107 AU  |
|   | 2/13 Juli 21 10.30                     | 0 3   |             | morning rise        |  |                      | 0.2/10/ AC  |
|   | 2712 I 22 00.00                        | 10054155  | 0012150     | Č                   | 2715 Nov 18 05:18                      | 15°M33'29            |             |
| superior conj                           | 2713 Jun 23 08:00                      | 1°954'55  |             | direct              | 2715 Dec 03 04:55                      | 11°M08'32            |             |
| minimum elong                           | 2713 Jun 23 05:19                      | 1°546'38  | 0°12'51     | asc. node           | 2715 Dec 03 15:53                      | 11°M08'47            | 4.0         |
| behind sun begin                        | 2713 Jun 22 15:52                      | 1° <b>©</b> 05'19                               |             | greatest brilliancy | 2715 Dec 14 03:52                      | 13°M25'02            | -4.9m       |
| behind sun end                          | 2713 Jun 23 18:46                      | 2° <b>©</b> 27'57                               |             |                     | 2716 Jan 07 16:40                      | 0° <b>∡</b> ¹        |             |
| max. Earth dist.                        | 2713 Jun 23 07:55                      | 1° <b>©</b> 54'39                               | 1.73532 AU  | morning max el      | 2716 Jan 22 23:34                      | 14° <b>∡</b> ³36'48  | 46°57'56    |
|   | 2713 Jul 16 04:24                      | $0^{\circ}\Omega$                               |             |                     | 2716 Feb 06 12:35                      | 0∘ಕ                  |             |
| evening rise                            | 2713 Jul 29 10:02                      | 16° <b>Ω</b> 16′25                              |             |                     | 2716 Mar 03 24:00                      | 0° <b>≈</b>          |             |
|   | 2713 Aug 09 13:57                      | 0° <b>m</b>                                     |             | desc. node          | 2716 Mar 24 05:43                      | 23° <b>≈</b> 49'58   |             |
|   | 2713 Sep 02 23:50                      | 0∘ <b>ত</b>                                     |             |                     | 2716 Mar 29 10:01                      | 0° <b>ℋ</b>          |             |
|   | 2713 Sep 27 11:09                      | $0^{\circ}$ M.                                  |             |                     | 2716 Apr 23 09:38                      | $0$ ° $\Upsilon$     |             |
| desc. node                              | 2713 Oct 07 10:40                      | 12°M11'52                                       |             |                     | 2716 May 18 04:48                      | $8^{\circ}$          |             |
|   | 2713 Oct 22 01:04                      | 0° <b>∡</b> ¹                                   |             |                     | 2716 Jun 11 21:48                      | $\Pi^{\circ}0$       |             |
|   | 2713 Nov 15 19:02                      | 0°ರ   |             |                     | 2716 Jul 06 12:43                      | 0°99                 |             |
|   | 2713 Dec 10 20:47                      | 0° <b>≈</b>                                     |             | asc. node           | 2716 Jul 15 08:54                      | 10°5548'33           |             |
|   | 2714 Jan 05 17:19                      | 0° <b>)</b> €                                   |             | morning set         | 2716 Jul 24 07:51                      | 21°5946'41           |             |
| asc. node                               | 2714 Jan 28 13:43                      | 24° <b>)</b> 44'15                              |             |                     | 2716 Jul 31 00:40                      | 0°Ω                  |             |
|   | 2714 Jan 29 04:37                      | 24 <del>X</del> 44 13<br>25° <del>X</del> 22'14 | 17005115    |                     |  | 0°Mp                 |             |
| evening max el                          |  | 25°π22'14<br>0° <b>Υ</b>                        | +/ 03 13    | more E-uth 1' t     | 2716 Aug 24 09:06                      |                      | 1 720/0 411 |
| , | 2714 Feb 02 19:36                      |   | 4.0         | max. Earth dist.    | 2716 Aug 26 19:24                      | 3~11 <b>0</b> 00'05  | 1.73060 AU  |
| greatest brilliancy                     | 2714 Mar 10 13:41                      | 26° <b>Y</b> 42'02                              | -4.9m       |                     |  |                      |             |
| retrograde                              | 2714 Mar 20 23:02                      | 28° <b>Y</b> 45'07                              |             | superior conj       | 2716 Aug 29 17:24                      | 6° Mp 36′26          |             |
| evening set                             | 2714 Apr 07 09:29                      | 22° <b>Υ</b> 50'58                              |             | minimum elong       | 2716 Aug 29 12:21                      | 6° <b>™</b> 20'49    | 1°21'11     |
| inferior conj                           | 2714 Apr 11 01:31                      | 20° <b>Ƴ</b> 34'35                              | 7°45'53     |                     | 2716 Sep 17 14:33                      | 0。 <b>ত</b>          |             |
| minimum elong                           | 2714 Apr 11 10:02                      | 20° <b>Y</b> 21'11                              | 7°44'39     | evening rise        | 2716 Oct 05 11:43                      | 22° <b>♀</b> 12'12   |             |
| min. Earth dist.                        | 2714 Apr 10 20:42                      | 20° <b>Y</b> 42'09                              | 0.28109 AU  |                     | 2716 Oct 11 18:16                      | $0^{\circ}$ M.       |             |
| morning rise                            | 2714 Apr 15 10:49                      | 17° <b>Y</b> 52'52                              |             | desc. node          | 2716 Nov 03 22:29                      | 28°M48'46            |             |
| -                                       | ÷                                      |   |             |                     |  |                      |             |

|                     |  | <b>-</b>                     |             |  |  | >                            |             |
|---------------------|--|------------------------------|-------------|--|--|------------------------------|-------------|
|                     | 2716 Nov 04 21:24                      | 0° <b>∡</b> ¹                |             | desc. node   | 2719 Apr 21 17:28                      | 15° <b>米</b> 02'27           |             |
|                     | 2716 Nov 29 00:43                      | 0°ප                          |             |  | 2719 May 05 10:51                      | $0$ ° $\Upsilon$             |             |
|                     | 2716 Dec 23 05:09                      | 0° <b>≈</b>                  |             |  | 2719 May 31 20:51                      | $9^{\circ}$ 8                |             |
|                     | 2717 Jan 16 13:17                      | 0° <b>∀</b>                  |             |  | 2719 Jun 26 12:41                      | $\Pi^{\circ}0$               |             |
|                     | 2717 Feb 10 06:40                      | $0$ ° $\Upsilon$             |             |  | 2719 Jul 21 17:54                      | $0$ $\circ$ $\odot$          |             |
| asc. node           | 2717 Feb 25 01:34                      | 17° <b>Y</b> 31'30           |             | asc. node  | 2719 Aug 12 20:46                      | 26°540'30                    |             |
|                     | 2717 Mar 07 20:10                      | 0°B                          |             |  | 2719 Aug 15 14:30                      | $0^{\circ}\Omega$            |             |
|                     | 2717 Apr 04 07:09                      | 0°II                         |             |  | 2719 Sep 09 03:11                      | 0° m)                        |             |
| evening max el      | 2717 Apr 10 15:54                      | 6° <b>Ⅱ</b> 24'38            | 46°02'38    | morning set  | 2719 Oct 01 20:47                      | 28° Mp 06'40                 |             |
| evening max er      |  | 0°95                         | 40 02 30    | morning set  | 2719 Oct 01 20:47<br>2719 Oct 03 09:16 | 28 II <b>y</b> 00 40         |             |
| 4 41 711            | 2717 May 08 20:26                      |                              | 4.0         |  |  |                              |             |
| greatest brilliancy | 2717 May 18 21:35                      | 5°909'51                     | -4.8m       | P 4 F 4  | 2719 Oct 27 10:47                      | 0°M                          | 1.71600 444 |
| retrograde          | 2717 May 29 22:46                      | 7° <b>©</b> 22'30            |             | max. Earth dist.   | 2719 Nov 06 02:53                      | 12°M06'03                    | 1.71688 AU  |
| evening set         | 2717 Jun 13 23:38                      | 2° <b>9</b> 58'47            |             |  |  |                              |             |
| desc. node          | 2717 Jun 16 15:02                      | 1° <b>©</b> 27'15            |             | superior conj  | 2719 Nov 08 17:52                      | 15°M23'15                    | 0°52'42     |
|                     | 2717 Jun 18 23:47                      | 30°Ŗ <b>Ⅱ</b>                |             | minimum elong  | 2719 Nov 09 04:00                      | 15° <b>M</b> 54'57           | 0°52'18     |
| inferior conj       | 2717 Jun 20 09:12                      | 29° <b>Ⅱ</b> 07'34           | -0°53'25    |  | 2719 Nov 20 09:45                      | 0° <b>∡</b> ¹                |             |
| minimum elong       | 2717 Jun 20 07:14                      | 29° <b>Ⅱ</b> 10'40           | 0°52'50     | desc. node   | 2719 Dec 02 10:23                      | 15° <b>₹</b> 05'04           |             |
| min. Earth dist.    | 2717 Jun 20 05:15                      | 29° <b>Ⅱ</b> 13'46           | 0.28856 AU  |  | 2719 Dec 14 07:36                      | 0°₹                          |             |
| morning rise        | 2717 Jun 26 15:10                      | 25° <b>Ⅲ</b> 22'02           |             | evening rise   | 2719 Dec 19 00:53                      | 5° <b>る</b> 55'25            |             |
| direct              | 2717 Jul 11 23:01                      | 20° <b>Ⅱ</b> 52'49           |             | , and the second | 2720 Jan 07 05:20                      | 0° <b>≈</b>                  |             |
| greatest brilliancy | 2717 Jul 22 02:35                      | 22° <b>Ⅱ</b> 44'05           | -4 7m       |  | 2720 Jan 31 04:17                      | 0° <b>)</b> €                |             |
| greatest similare)  | 2717 Aug 04 23:17                      | 0°9                          | ,           |  | 2720 Feb 24 06:48                      | 0° <b>Υ</b>                  |             |
| morning max el      | 2717 Aug 04 23:17<br>2717 Aug 29 17:33 | 20° <b>©</b> 39'46           | 15017156    |  | 2720 Mar 19 16:27                      | %8<br>0°B                    |             |
| morning max ci      | •                                      |                              | 45 47 50    | 4-   |  |                              |             |
|                     | 2717 Sep 08 04:00                      | 0° <b>N</b>                  |             | asc. node  | 2720 Mar 24 13:28                      | 5° <b>8</b> 55'47            |             |
|                     | 2717 Oct 05 21:32                      | 0° <b>m</b>                  |             |  | 2720 Apr 13 14:11                      | 0°II                         |             |
| asc. node           | 2717 Oct 07 18:22                      | 2° mp 07'14                  |             |  | 2720 May 09 07:57                      | 0°99                         |             |
|                     | 2717 Oct 31 15:39                      | 0∘ <b>ত</b>                  |             |  | 2720 Jun 05 16:04                      | $0$ $\circ$ $\Omega$         |             |
|                     | 2717 Nov 25 10:32                      | 0°M₊                         |             | evening max el   | 2720 Jun 20 01:42                      | 14° <b>Ω</b> 28'41           | 45°25'32    |
|                     | 2717 Dec 19 17:23                      | 0° <b>⊼</b>                  |             |  | 2720 Jul 07 17:14                      | 0° <b>m</b> )                |             |
|                     | 2718 Jan 12 18:31                      | 0°ප                          |             | desc. node   | 2720 Jul 14 03:06                      | 4° <b>m</b> 41'59            |             |
| desc. node          | 2718 Jan 27 08:01                      | 18° <b>る</b> 13'55           |             | greatest brilliancy  | 2720 Jul 28 12:07                      | 12° <b>m</b> 19'58           | -4.7m       |
|                     | 2718 Feb 05 17:29                      | 0° <b>≈</b>                  |             | retrograde   | 2720 Aug 07 17:10                      | 14° <b>m</b> 12'52           |             |
|                     | 2718 Mar 01 16:20                      | 0° <b>)</b> €                |             | evening set  | 2720 Aug 25 04:06                      | 8° <b>m</b> 30'44            |             |
| morning set         | 2718 Mar 03 01:05                      | 1° <b>) (</b> 42′29          |             | inferior conj  | 2720 Aug 29 03:31                      | 6° Mp 05'10                  | -8°13'20    |
| -                   | 2718 Mar 25 16:33                      | $0^{\circ}\mathbf{\Upsilon}$ |             | minimum elong  | 2720 Aug 28 21:31                      | 6° Mp 14′29                  | 8°12'48     |
|                     |  |                              |             | min. Earth dist.   | 2720 Aug 29 10:27                      | 5° <b>m</b> 54'24            | 0.28865 AU  |
| superior conj       | 2718 Apr 11 22:43                      | 21° <b>Y</b> 29'02           | -1°15'39    | morning rise   | 2720 Sep 01 14:45                      | 3° m 57'05                   |             |
| minimum elong       | 2718 Apr 12 07:46                      | 21° <b>Y</b> 57'09           |             |  | 2720 Sep 09 05:06                      | 30°R <b>Ω</b>                |             |
| max. Earth dist.    | 2718 Apr 15 22:08                      |                              | 1.72413 AU  | direct   | 2720 Sep 19 16:12                      | 27° <b>Ω</b> 48'56           |             |
| max. Earth dist.    | 2718 Apr 18 19:20                      | 0°8                          | 1.72415710  | greatest brilliancy  | 2720 Sep 30 13:39                      | 29° <b>Ω</b> 58'12           | 4 8m        |
|                     |  | 0°II                         |             | greatest offinancy   | 2720 Sep 30 15:32                      |                              | -4.0111     |
| 1                   | 2718 May 13 01:24                      |                              |             | 1  | 1                                      | 0°M)                         |             |
| asc. node           | 2718 May 20 11:13                      | 9° <b>Ⅱ</b> 07'47            |             | asc. node  | 2720 Nov 04 06:10                      | 25° Mp 17'32                 | 46006147    |
| evening rise        | 2718 May 20 12:58                      | 9° <b>Ⅱ</b> 13'08            |             | morning max el   | 2720 Nov 08 15:00                      | 29° m/34'30                  | 46°26'47    |
|                     | 2718 Jun 06 10:55                      | 0.00                         |             |  | 2720 Nov 09 01:12                      | 0∘ <b>⊽</b>                  |             |
|                     | 2718 Jun 30 23:55                      | $0$ $\circ$ $\Omega$         |             |  | 2720 Dec 06 20:12                      | 0° <b>M</b>                  |             |
|                     | 2718 Jul 25 17:06                      | O° Mp                        |             |  | 2721 Jan 01 10:54                      | 0° <b>∡</b>                  |             |
|                     | 2718 Aug 19 16:25                      | 0∘ <b>⊽</b>                  |             |  | 2721 Jan 26 05:21                      | 0°₹                          |             |
| desc. node          | 2718 Sep 09 00:41                      | 24° <b>≏</b> 06'39           |             |  | 2721 Feb 19 15:18                      | 0° <b>≈</b>                  |             |
|                     | 2718 Sep 14 01:10                      | 0°M                          |             | desc. node   | 2721 Feb 23 19:49                      | 5° <b>≈</b> 10′06            |             |
|                     | 2718 Oct 10 01:28                      | 0° <b>∡</b> ¹                |             |  | 2721 Mar 15 21:59                      | 0° <b>∀</b>                  |             |
|                     | 2718 Nov 06 09:52                      | 0° <b>ට</b>                  |             |  | 2721 Apr 09 04:05                      | $0^{\circ}\mathbf{\Upsilon}$ |             |
| evening max el      | 2718 Nov 15 15:02                      | 9° <b>ප</b> 27'31            | 47°03'19    |  | 2721 May 03 11:08                      | 0°B                          |             |
| C                   | 2718 Dec 08 09:48                      | 0° <b>≈</b>                  |             | morning set  | 2721 May 14 20:58                      | 14° <b>8</b> 03'45           |             |
| greatest brilliancy | 2718 Dec 26 03:05                      | 10° <b>≈</b> 29'24           | -4.9m       | Č  | 2721 May 27 19:39                      | 0°II                         |             |
| asc. node           | 2718 Dec 31 03:53                      | 11°≈55'02                    | ,           | asc. node  | 2721 Jun 16 23:08                      | 24° <b>Ⅱ</b> 46'12           |             |
| retrograde          | 2719 Jan 05 04:29                      | 12°≈24'57                    |             | ase. node  | 2721 Juli 10 25.00                     | 24 1140 12                   |             |
| evening set         | 2719 Jan 03 04.29<br>2719 Jan 20 09:24 | 12 ≈24 37<br>7°≈50'39        |             | superior conj  | 2721 Jun 21 01:48                      | 29° <b>∏</b> 49'25           | 0°09'48     |
| •                   |  |                              | 0.26600 ATT |  |  |                              |             |
| min. Earth dist.    | 2719 Jan 25 02:08                      | 5°≈03'29                     | 0.26689 AU  | minimum elong  | 2721 Jun 20 23:45                      | 29° <b>Ⅱ</b> 43'07           | 0°09'42     |
| inferior conj       | 2719 Jan 25 19:10                      | 4°≈37'17                     | 6°04'35     | behind sun begin   | 2721 Jun 20 05:34                      | 28° <b>Ⅱ</b> 47'13           |             |
| minimum elong       | 2719 Jan 25 08:36                      | 4°≈53'32                     | 6°02'05     | behind sun end   | 2721 Jun 21 17:56                      | 0° <b>©</b> 39'01            |             |
| morning rise        | 2719 Jan 30 08:05                      | 1° <b>≈</b> 53'47            |             | max. Earth dist.   | 2721 Jun 21 05:48                      | 0° <b>©</b> 01'43            | 1.73525 AU  |
|                     | 2719 Feb 02 22:22                      | 30°₹ <b>⋜</b>                |             |  | 2721 Jun 21 05:15                      | $0$ $\circ$ $\odot$          |             |
| direct              | 2719 Feb 15 04:44                      | 26° <b>る</b> 57'46           |             |  | 2721 Jul 15 15:05                      | $0$ $^{\circ}$ $\Omega$      |             |
| greatest brilliancy | 2719 Feb 24 12:08                      | 28° <b>る</b> 35'57           | -4.9m       | evening rise   | 2721 Jul 27 04:54                      | 14° <b>Ω</b> 13'55           |             |
|                     | 2719 Feb 28 01:45                      | 0° <b>≈</b>                  |             |  | 2721 Aug 09 00:46                      | 0° <b>™</b>                  |             |
| morning max el      | 2719 Apr 06 03:17                      | 28° <b>≈</b> 57'35           | 46°33'13    |  | 2721 Sep 02 10:53                      | 0∘ <b>⊽</b>                  |             |
| -                   | 2719 Apr 07 04:26                      | 0° <b>)</b>                  |             |  | 2721 Sep 26 22:35                      | $0^{\circ}$ M                |             |
|                     |  |                              |             |  |  |                              |             |

| desc. node             | 2721 Oct 06 12:36                      | 11° <b>M</b> .42'12          |            |                           | 2724 May 17 16:33                      | 0° <b>႘</b>                            |             |
|------------------------|--|------------------------------|------------|---------------------------|--|--|-------------|
| dese. Hode             | 2721 Oct 00 12:30<br>2721 Oct 21 13:05 | 0°×7                         |            |                           | 2724 Jun 11 09:07                      | 0°II                                   |             |
|                        | 2721 Nov 15 07:54                      | °<br>ਨ<br>ਹ                  |            |                           | 2724 Jul 05 23:44                      | 0°©                                    |             |
|                        | 2721 Dec 10 11:00                      | 0° <b>≈</b>                  |            | asc. node                 | 2724 Jul 14 10:58                      | 10°521'22                              |             |
|                        | 2722 Jan 05 10:08                      | 0° <b>)</b> €                |            | morning set               | 2724 Jul 22 01:54                      | 19°541'34                              |             |
| evening max el         | 2722 Jan 26 20:04                      | 23° <b>)</b> €03'30          | 47°06'47   |                           | 2724 Jul 30 11:31                      | $0^{\circ}\Omega$                      |             |
| asc. node              | 2722 Jan 27 15:47                      | 23° <b>)</b> 53′32           |            |                           | 2724 Aug 23 19:56                      | 0° <b>m</b> )                          |             |
|                        | 2722 Feb 02 20:02                      | $0^{\circ}\mathbf{\Upsilon}$ |            | max. Earth dist.          | 2724 Aug 24 12:48                      | 0° m 52'07                             | 1.73100 AU  |
| greatest brilliancy    | 2722 Mar 08 04:32                      | 24° <b>Y</b> 23'28           | -4.9m      |                           |  |  |             |
| retrograde             | 2722 Mar 18 14:54                      | 26° <b>Y</b> 27'22           |            | superior conj             | 2724 Aug 27 11:26                      | 4° <b>m</b> 30'18                      | 1°20'16     |
| evening set            | 2722 Apr 05 03:10                      | 20° <b>Y</b> 29'06           |            | minimum elong             | 2724 Aug 27 05:50                      | 4° Mp 13'01                            | 1°20'11     |
| inferior conj          | 2722 Apr 08 16:23                      | 18° <b>Ƴ</b> 17'01           | 7°55'59    |                           | 2724 Sep 17 01:29                      | 0∘ <b>⊽</b>                            |             |
| minimum elong          | 2722 Apr 09 00:28                      | 18° <b>Ƴ</b> 04′20           | 7°54'55    | evening rise              | 2724 Oct 03 03:28                      | 19° <b>≙</b> 57'39                     |             |
| min. Earth dist.       | 2722 Apr 08 10:32                      | 18° <b>Y</b> 26′12           | 0.28071 AU |                           | 2724 Oct 11 05:23                      | 0°M                                    |             |
| morning rise           | 2722 Apr 12 22:01                      | 15° <b>Ƴ</b> 41'01           |            | desc. node                | 2724 Nov 03 00:35                      | 28°M19′59                              |             |
| direct                 | 2722 Apr 29 16:03                      | 10° <b>Ƴ</b> 14'48           |            |                           | 2724 Nov 04 08:47                      | 0°⊀                                    |             |
| greatest brilliancy    | 2722 May 09 04:28                      | 11° <b>Y</b> 55′26           | -4.8m      |                           | 2724 Nov 28 12:22                      | 0°ಕ                                    |             |
| desc. node             | 2722 May 19 05:10                      | 16° <b>Ƴ</b> 39'55           |            |                           | 2724 Dec 22 17:10                      | 0° <b>≈</b>                            |             |
|                        | 2722 Jun 06 03:37                      | 0° <b>8</b>                  |            |                           | 2725 Jan 16 01:50                      | 0° <b>∀</b>                            |             |
| morning max el         | 2722 Jun 17 18:27                      | 10° <b>8</b> 37'15           | 45°51'34   |                           | 2725 Feb 09 20:09                      | 0°Υ                                    |             |
|                        | 2722 Jul 06 21:26                      | 0° <b>Ⅱ</b>                  |            | asc. node                 | 2725 Feb 24 03:30                      | 16° <b>Y</b> 55'16                     |             |
|                        | 2722 Aug 03 05:01                      | 0°€                          |            |                           | 2725 Mar 07 11:30                      | 0°B                                    |             |
|                        | 2722 Aug 29 04:03                      | 0°Ω                          |            |                           | 2725 Apr 04 03:26                      | 0°II                                   |             |
| asc. node              | 2722 Sep 09 08:32                      | 13° <b>Ω</b> 15'16           |            | evening max el            | 2725 Apr 08 06:39                      | 4° <b>Ⅱ</b> 08'19                      | 46°04'45    |
|                        | 2722 Sep 23 07:14                      | 0° <b>m</b>                  |            | 1 '11'                    | 2725 May 10 05:16                      | 0.2000<br>0.20                         | 4.0         |
|                        | 2722 Oct 17 20:38                      | 0∘ <b>亚</b>                  |            | greatest brilliancy       | 2725 May 16 15:03                      | 3°500'36                               | -4.8m       |
|                        | 2722 Nov 11 00:58                      | 0° <b>M</b><br>0° <b>∡</b>   |            | retrograde                | 2725 May 27 14:40                      | 5°512'19                               |             |
| araataat brillianay    | 2722 Dec 05 00:12<br>2722 Dec 10 16:38 | 0°×'<br>7°× <b>7</b> 08'14   | 2 0        | evening set               | 2725 Jun 11 16:24<br>2725 Jun 13 02:28 | 0°548′09<br>30°R∏                      |             |
| greatest brilliancy    | 2722 Dec 10 16.38<br>2722 Dec 13 08:44 | 10°×729'30                   | -3.9111    | desc. node                | 2725 Jun 15 02.28<br>2725 Jun 15 17:11 | 28° <b>∏</b> 25'42                     |             |
| morning set            | 2722 Dec 13 08.44<br>2722 Dec 28 21:07 | 10 x·2930                    |            | inferior conj             | 2725 Jun 18 01:31                      | 26° <b>I</b> 57'37                     | 0022127     |
| desc. node             | 2722 Dec 28 21:07<br>2722 Dec 29 22:13 | 0 3<br>1°る18'56              |            | minimum elong             | 2725 Jun 18 00:17                      | 26° <b>I</b> I59'33                    |             |
| desc. Hode             | 2722 Dec 29 22:13<br>2723 Jan 21 17:21 | 0°≈                          |            | min. Earth dist.          | 2725 Jun 17 22:07                      |  | 0.28835 AU  |
|                        | 2723 Juli 21 17.21                     | 0 /01                        |            | morning rise              | 2725 Jun 24 08:25                      | 23° <b>II</b> 10'27                    | 0.20033 110 |
| superior conj          | 2723 Jan 23 18:20                      | 2° <b>≈</b> 34'04            | -0°55'05   | direct                    | 2725 Jul 09 14:42                      | 18° <b>I</b> I43'09                    |             |
| minimum elong          | 2723 Jan 23 06:33                      | 1°≈57'00                     |            | greatest brilliancy       | 2725 Jul 19 18:39                      | 20° <b>I</b> I34'21                    | -4.7m       |
| max. Earth dist.       | 2723 Jan 25 08:29                      |                              | 1.71129 AU | greatest erimane,         | 2725 Aug 05 17:50                      | 0°ಅ                                    | ,           |
|                        | 2723 Feb 14 14:09                      | 0° <b>∀</b>                  |            | morning max el            | 2725 Aug 27 07:55                      | 18°925'30                              | 45°47'15    |
| evening rise           | 2723 Mar 05 20:29                      | 24° <b>)</b> (08'21          |            |                           | 2725 Sep 07 23:03                      | $0^{\circ}\Omega$                      |             |
| Č                      | 2723 Mar 10 13:04                      | $0^{\circ}\mathbf{\Upsilon}$ |            |                           | 2725 Oct 05 12:14                      | 0° <b>m</b> )                          |             |
|                        | 2723 Apr 03 15:57                      | $9^{\circ}$ 8                |            | asc. node                 | 2725 Oct 06 20:30                      | 1° <b>m</b> 31'48                      |             |
| asc. node              | 2723 Apr 22 01:25                      | 22° <b>8</b> 40'53           |            |                           | 2725 Oct 31 04:43                      | 0° <b>⊽</b>                            |             |
|                        | 2723 Apr 28 00:40                      | $\Pi^{\circ}0$               |            |                           | 2725 Nov 24 22:49                      | 0°M                                    |             |
|                        | 2723 May 22 17:00                      | $0$ $\circ$ $\odot$          |            |                           | 2725 Dec 19 05:15                      | 0° <b>∡</b> ¹                          |             |
|                        | 2723 Jun 16 19:31                      | $0^{\circ}\Omega$            |            |                           | 2726 Jan 12 06:08                      | ರ°0                                    |             |
|                        | 2723 Jul 12 13:39                      | 0° <b>™</b>                  |            | desc. node                | 2726 Jan 26 10:01                      | 17° <b>る</b> 44'08                     |             |
|                        | 2723 Aug 08 12:17                      | 0∘ <b>⊽</b>                  |            |                           | 2726 Feb 05 04:54                      | 0° <b>≈</b>                            |             |
| desc. node             | 2723 Aug 11 14:47                      | 3° <b>≏</b> 19'12            |            | morning set               | 2726 Feb 28 11:41                      | 29°≈10′13                              |             |
| evening max el         | 2723 Sep 01 01:56                      | 24° <b>≏</b> 07'42           | 45°57'08   |                           | 2726 Mar 01 03:35                      | 0° <b>∀</b>                            |             |
|                        | 2723 Sep 07 08:39                      | 0°M                          |            |                           | 2726 Mar 25 03:41                      | $0^{\circ}\mathbf{\Upsilon}$           |             |
| greatest brilliancy    | 2723 Oct 11 00:08                      | 22°M47'49                    | -4.8m      |                           |  | 2 2                                    |             |
| retrograde             | 2723 Oct 20 03:57                      | 24°M19'36                    |            | superior conj             | 2726 Apr 09 12:19                      | 19° <b>Y</b> 07'44                     |             |
| evening set            | 2723 Nov 05 00:23                      | 19°M30'54                    | 500.4150   | minimum elong             | 2726 Apr 09 20:55                      |  | 1°17'09     |
| inferior conj          | 2723 Nov 09 22:21                      | 16°M35'42                    |            | max. Earth dist.          | 2726 Apr 13 12:44                      | 24° <b>Y</b> 07'15                     | 1.72356 AU  |
| minimum elong          | 2723 Nov 10 08:27                      | 16°M20'15                    |            |                           | 2726 Apr 18 06:23                      | 8°0                                    |             |
| min. Earth dist.       | 2723 Nov 10 18:45                      | 16°M04'30                    | 0.27168 AU |                           | 2726 May 12 12:26                      | 0°П<br>7°П00'26                        |             |
| morning rise<br>direct | 2723 Nov 15 16:00<br>2723 Nov 30 18:52 | 13°M12'31<br>8°M44'00        |            | evening rise<br>asc. node | 2726 May 18 04:55<br>2726 May 19 13:21 | 7° <b>П</b> 00'26<br>8° <b>П</b> 40'17 |             |
| asc. node              | 2723 Nov 30 18:32<br>2723 Dec 02 18:00 | 8°11L44'00<br>8°11L48'39     |            | asc. noue                 | 2726 May 19 13:21<br>2726 Jun 05 22:02 | 8°Д4017<br>0°9                         |             |
| greatest brilliancy    | 2723 Dec 02 18:00<br>2723 Dec 11 18:08 | 11°M00'24                    | -4.9m      |                           | 2726 Jun 30 11:15                      | 0° <b>U</b>                            |             |
| Siculosi offilialicy   | 2724 Jan 07 23:14                      | 0°×7                         | т./Ш       |                           | 2726 Jul 25 04:51                      | 0° <b>m</b>                            |             |
| morning max el         | 2724 Jan 20 12:42                      | 12° <b>₹</b> 10'14           | 46°57'41   |                           | 2726 Aug 19 04:51                      | 0∘ <b>ʊ</b>                            |             |
| morning max or         | 2724 Feb 06 07:01                      | ිදු 10 14<br>0°පි            | .0 0 / 11  | desc. node                | 2726 Sep 08 02:41                      | 23° <b>≏</b> 33'28                     |             |
|                        | 2724 Mar 03 14:56                      | 0° <b>≈</b>                  |            |                           | 2726 Sep 13 14:46                      | 0°M                                    |             |
| desc. node             | 2724 Mar 23 07:42                      | 23°≈15'30                    |            |                           | 2726 Oct 09 17:14                      | 0° <b>∡</b> 7                          |             |
|                        |  |                              |            |                           |  |  |             |
|                        | 2724 Mar 28 23:19                      | 0° <b>∀</b>                  |            |                           | 2726 Nov 06 06:40                      | 0°る                                    |             |
|                        | 2724 Mar 28 23:19<br>2724 Apr 22 21:59 | 0° <b>Υ</b><br>0° <b>Υ</b>   |            | evening max el            | 2726 Nov 06 06:40<br>2726 Nov 13 03:24 | 0°る<br>6°る59'30                        | 47°01'33    |

|                                   | 2726 Dec 09 06:52                      | 0° <b>≈</b>                          |            | morning set                        | 2729 May 12 13:09                      | 11° <b>8</b> 51'42                             |            |
|-----------------------------------|--|--------------------------------------|------------|------------------------------------|--|--|------------|
| greatest brilliancy               | 2726 Dec 23 16:30                      | 8° <b>≈</b> 00'20                    | -4.9m      |                                    | 2729 May 27 06:36                      | 0°Щ  |            |
| asc. node                         | 2726 Dec 30 05:56                      | 9° <b>≈</b> 40'57                    |            | asc. node                          | 2729 Jun 16 01:08                      | 24° <b>Ⅱ</b> 18'54                             |            |
| retrograde                        | 2727 Jan 02 16:48                      | 9° <b>≈</b> 55'17                    |            |                                    |  |  |            |
| evening set                       | 2727 Jan 17 18:40                      | 5° <b>≈</b> 25'29                    |            | superior conj                      | 2729 Jun 18 19:16                      | 27° <b>Ⅱ</b> 42'12                             |            |
| min. Earth dist.                  | 2727 Jan 22 15:29                      | 2° <b>≈</b> 33'03                    | 0.26655 AU | minimum elong                      | 2729 Jun 18 17:53                      | 27° <b>Ⅱ</b> 37'56                             | 0°06'31    |
| inferior conj                     | 2727 Jan 23 07:33                      | 2°≈08'23                             | 5°46'18    | behind sun begin                   | 2729 Jun 17 20:55                      | 26°Ⅲ33'28                                      |            |
| minimum elong                     | 2727 Jan 22 21:08<br>2727 Jan 26 20:25 | 2°≈24'24<br>30°Ŗる                    | 5°43'43    | behind sun end<br>max. Earth dist. | 2729 Jun 19 14:51                      | 28° <b>Ⅱ</b> 42'25<br>28° <b>Ⅱ</b> 11'05       | 1.73510 AU |
| morning rise                      | 2727 Jan 27 23:49                      | 30 KC<br>29° <b>る</b> 20'27          |            | max. Earm dist.                    | 2729 Jun 19 04:40<br>2729 Jun 20 16:06 | 28 <b>п</b> 1103                               | 1./3310 AU |
| direct                            | 2727 Feb 12 16:28                      | 24° <b>る</b> 28'58                   |            |                                    | 2729 Jul 15 01:57                      | 0°Ω  |            |
| greatest brilliancy               | 2727 Feb 22 01:59                      | 26° <b>る</b> 09'03                   | -4.9m      | evening rise                       | 2729 Jul 24 23:38                      | 12° <b>Ω</b> 10'28                             |            |
|                                   | 2727 Mar 02 10:24                      | 0° <b>≈</b>                          |            | C                                  | 2729 Aug 08 11:46                      | 0° <b>m</b>                                    |            |
| morning max el                    | 2727 Apr 03 16:13                      | 26° <b>≈</b> 32'33                   | 46°34'53   |                                    | 2729 Sep 01 22:09                      | 0∘ <b>⊽</b>                                    |            |
|                                   | 2727 Apr 07 03:07                      | 0° <b>∀</b>                          |            |                                    | 2729 Sep 26 10:16                      | $0^{\circ}$ M                                  |            |
| desc. node                        | 2727 Apr 20 19:35                      | 14° <b>) (</b> 18′14                 |            | desc. node                         | 2729 Oct 05 14:44                      | 11°ML12'31                                     |            |
|                                   | 2727 May 05 03:10                      | 0° <b>Υ</b>                          |            |                                    | 2729 Oct 21 01:20                      | 0° <b>∡</b>                                    |            |
|                                   | 2727 May 31 10:41                      | 0° <b>8</b>                          |            |                                    | 2729 Nov 14 20:59                      | 5°0  |            |
|                                   | 2727 Jun 26 01:13                      | 0° <b>Ⅱ</b>                          |            |                                    | 2729 Dec 10 01:26                      | 0° <b>≈</b>                                    |            |
| aga mada                          | 2727 Jul 21 05:42                      | 0°ତ<br>26°ତୀ1'41                     |            | avanina may al                     | 2730 Jan 05 03:19                      | 0° <b>∺</b><br>20° <b>∺</b> 45'01              | 47°08'05   |
| asc. node                         | 2727 Aug 11 22:41<br>2727 Aug 15 01:52 | 20 <b>3</b> 1141<br>0° <b>Ω</b>      |            | evening max el<br>asc. node        | 2730 Jan 24 11:44<br>2730 Jan 26 17:41 | 20 <del>X</del> 4301<br>23° <del>X</del> 01'18 | 47 08 03   |
|                                   | 2727 Sep 08 14:19                      | 0°m)                                 |            | asc. node                          | 2730 Feb 02 21:48                      | 25 <b>γ</b> (0118                              |            |
| morning set                       | 2727 Sep 00 14:17<br>2727 Sep 29 13:02 | 25° m 53'50                          |            | greatest brilliancy                | 2730 Mar 05 19:33                      | 22° <b>Υ</b> '04'39                            | -4.9m      |
|                                   | 2727 Oct 02 20:18                      | 0∘ <b>ʊ</b>                          |            | retrograde                         | 2730 Mar 16 06:34                      | 24° <b>Υ</b> '08'44                            |            |
|                                   | 2727 Oct 26 21:49                      | 0°M                                  |            | evening set                        | 2730 Apr 02 20:42                      | 18° <b>Y</b> ′06'52                            |            |
| max. Earth dist.                  | 2727 Nov 03 18:15                      | 9° <b>M</b> 49'16                    | 1.71732 AU | inferior conj                      | 2730 Apr 06 07:11                      | 15° <b>Y</b> 58'46                             | 8°05'24    |
|                                   |  |                                      |            | minimum elong                      | 2730 Apr 06 14:45                      | 15° <b>Y</b> 46'54                             | 8°04'29    |
| superior conj                     | 2727 Nov 06 07:35                      | 13°M01'13                            | 0°55'30    | min. Earth dist.                   | 2730 Apr 06 00:15                      | 16° <b>Ƴ</b> 09'39                             | 0.28033 AU |
| minimum elong                     | 2727 Nov 06 17:49                      | 13°M33'17                            | 0°55'07    | morning rise                       | 2730 Apr 10 09:05                      | 13° <b>Y</b> ′28′21                            |            |
|                                   | 2727 Nov 19 20:51                      | 0° <b>∡</b> 7                        |            | direct                             | 2730 Apr 27 06:59                      | 7° <b>Υ</b> 57'28                              |            |
| desc. node                        | 2727 Dec 01 12:29                      | 14° <b>∡</b> ³36'37                  |            | greatest brilliancy                | 2730 May 06 17:12                      | 9° <b>Y</b> 36'39                              | -4.8m      |
| avanina risa                      | 2727 Dec 13 18:50<br>2727 Dec 16 12:06 | 0°궁<br>3°궁24'46                      |            | desc. node                         | 2730 May 18 07:17<br>2730 Jun 06 08:13 | 15° <b>Y</b> 17'34<br>0° <b>と</b>              |            |
| evening rise                      | 2728 Jan 06 16:43                      | 3 O2440<br>0°≈                       |            | morning max el                     | 2730 Jun 15 09:48                      | 8° <b>8</b> 24'01                              | 45°52'28   |
|                                   | 2728 Jan 30 15:50                      | 0° <b>∀</b>                          |            | morning max ci                     | 2730 Jul 06 14:46                      | 0°II   | 73 32 20   |
|                                   | 2728 Feb 23 18:34                      | 0°Υ                                  |            |                                    | 2730 Aug 02 19:03                      | 0<br>. ಅ                                       |            |
|                                   | 2728 Mar 19 04:36                      | 0°8                                  |            |                                    | 2730 Aug 28 16:35                      | $0^{\circ}\Omega$                              |            |
| asc. node                         | 2728 Mar 23 15:32                      | 5° <b>8</b> 24'52                    |            | asc. node                          | 2730 Sep 08 10:38                      | 12° <b>Ω</b> 45′23                             |            |
|                                   | 2728 Apr 13 03:06                      | $\Pi^{\circ}0$                       |            |                                    | 2730 Sep 22 18:59                      | 0° <b>m</b>                                    |            |
|                                   | 2728 May 08 22:27                      | $0$ $\circ$                          |            |                                    | 2730 Oct 17 07:59                      | 0∘ <b>ত</b>                                    |            |
|                                   | 2728 Jun 05 10:31                      | $0$ $\circ$ $\Omega$                 |            |                                    | 2730 Nov 10 12:08                      | 0° <b>M</b> -                                  |            |
| evening max el                    | 2728 Jun 17 17:31                      | 12° <b>Ω</b> 17'29                   | 45°25'48   |                                    | 2730 Dec 04 11:18                      | 0° ⊀ <sup>7</sup>                              | 2.0        |
| daga mada                         | 2728 Jul 08 05:56                      | 0°Mp<br>2°m⊳20115                    |            | greatest brilliancy                | 2730 Dec 10 00:35                      | 6° ₹ 58'23<br>8° ₹ 00'47                       | -3.9m      |
| desc. node<br>greatest brilliancy | 2728 Jul 13 05:03<br>2728 Jul 26 01:29 | 3° To 28'15<br>10° To 06'38          | -4.7m      | morning set                        | 2730 Dec 10 20:27<br>2730 Dec 28 08:11 | 8 x・0047<br>0°る                                |            |
| retrograde                        | 2728 Aug 05 09:15                      | 12° Mp 01'37                         | -4.7111    | desc. node                         | 2730 Dec 28 08:11<br>2730 Dec 29 00:11 | 0°る50'22                                       |            |
| evening set                       | 2728 Aug 22 16:43                      | 6° m) 23'24                          |            | dese. Hode                         | 2730 BCC 25 00:11                      | 0 05022  |            |
| inferior conj                     | 2728 Aug 26 19:16                      | 3°m/53'07                            | -8°06'27   | superior conj                      | 2731 Jan 21 04:23                      | 0°≈00'04                                       | -0°51'56   |
| minimum elong                     | 2728 Aug 26 12:40                      | 4° الله 03′23                        | 8°05'47    | minimum elong                      | 2731 Jan 20 16:54                      | 29° <b>る</b> 23'57                             | 0°51'29    |
| min. Earth dist.                  | 2728 Aug 27 00:50                      | 3°Mp44'28                            | 0.28893 AU |                                    | 2731 Jan 21 04:22                      | 0° <b>≈</b>                                    |            |
| morning rise                      | 2728 Aug 30 08:28                      | 1°Mp42'12                            |            | max. Earth dist.                   | 2731 Jan 22 15:29                      | 1° <b>≈</b> 50′29                              | 1.71110 AU |
|                                   | 2728 Sep 02 07:37                      | 30°RΩ                                |            |                                    | 2731 Feb 14 01:08                      | 0° <b>∀</b>                                    |            |
| direct                            | 2728 Sep 17 08:42                      | 25° <b>Ω</b> 36'36                   | 4.0        | evening rise                       | 2731 Mar 03 07:37                      | 21° <b>)</b> (38'40                            |            |
| greatest brilliancy               | 2728 Sep 28 04:37                      | 27° <b>Ω</b> 44'52                   | -4.8m      |                                    | 2731 Mar 10 00:03                      | 0° <b>Υ</b>                                    |            |
| asc. node                         | 2728 Oct 03 05:48<br>2728 Nov 03 08:15 | 0° <b>Т</b> р<br>24° <b>Тр</b> 25'37 |            | asc. node                          | 2731 Apr 03 03:02                      | 0°8<br>22°812'59                               |            |
| morning max el                    | 2728 Nov 06 07:01                      | 24 III 23 37<br>27° III 19'52        | 46°25'17   | ase. Houc                          | 2731 Apr 21 03:32<br>2731 Apr 27 11:57 | 0°Ⅱ  |            |
| morning max ci                    | 2728 Nov 08 07:01<br>2728 Nov 08 22:40 | 0° <u>0</u>                          | 10 23 17   |                                    | 2731 May 22 04:39                      | 0°©  |            |
|                                   | 2728 Dec 06 11:57                      | 0°M                                  |            |                                    | 2731 Jun 16 07:55                      | $0^{\circ}\Omega$                              |            |
|                                   | 2729 Jan 01 00:35                      | 0° <b>∡</b> 7                        |            |                                    | 2731 Jul 12 03:29                      | 0°m)   |            |
|                                   | 2729 Jan 25 18:02                      | ರ°0                                  |            |                                    | 2731 Aug 08 05:19                      | 0∘ <b>⊽</b>                                    |            |
|                                   | 2729 Feb 19 03:24                      | 0° <b>≈</b>                          |            | desc. node                         | 2731 Aug 10 16:50                      | 2° <b>£</b> 38′05                              |            |
| desc. node                        | 2729 Feb 22 21:49                      | 4° <b>≈</b> 39'10                    |            | evening max el                     | 2731 Aug 29 15:14                      | 21° <b>≏</b> 48′29                             | 45°54'58   |
|                                   | 2729 Mar 15 09:41                      | 0° <b>)</b> €                        |            |                                    | 2731 Sep 07 12:03                      | 0°M  |            |
|                                   | 2729 Apr 08 15:28                      | $^{\circ \gamma}$                    |            | greatest brilliancy                | 2731 Oct 08 13:41                      | 20°M26'43                                      | -4.8m      |
|                                   | 2729 May 02 22:15                      | 0° <b>8</b>                          |            | retrograde                         | 2731 Oct 17 16:03                      | 21°M57'20                                      |            |

| evening set         | 2731 Nov 02 16:34                      | 17° <b>M</b> .04'13                |               |                        | 2734 Mar 24 14:30                      | $0^{\circ}\mathbf{\Upsilon}$        |             |
|---------------------|--|------------------------------------|---------------|------------------------|--|-------------------------------------|-------------|
| inferior conj       | 2731 Nov 07 11:35                      | 14°M12'59                          | -5°42'34      |                        |  |                                     |             |
| minimum elong       | 2731 Nov 07 21:53                      | 13°ML57'12                         | 5°40'05       | superior conj          | 2734 Apr 07 01:55                      | 16° <b>Ƴ</b> 47'29                  | -1°18'54    |
| min. Earth dist.    | 2731 Nov 08 08:54                      | 13°ML40'20                         | 0.27232 AU    | minimum elong          | 2734 Apr 07 10:00                      | 17° <b>Ƴ</b> 12'38                  | 1°18'44     |
| morning rise        | 2731 Nov 13 02:38                      | 10°M52'49                          |               | max. Earth dist.       | 2734 Apr 11 01:10                      | 21° <b>Y</b> 43'32                  | 1.72295 AU  |
| direct              | 2731 Nov 28 08:24                      | 6°M20'11                           |               |                        | 2734 Apr 17 17:05                      | $0^{\circ}S$                        |             |
| asc. node           | 2731 Dec 01 20:02                      | 6°M34'35                           |               |                        | 2734 May 11 23:05                      | $\Pi^{\circ}0$                      |             |
| greatest brilliancy | 2731 Dec 09 09:04                      | 8°M37'14                           | -4.9m         | evening rise           | 2734 May 15 20:59                      | 4° <b>Ⅱ</b> 49'20                   |             |
|                     | 2732 Jan 08 03:36                      | 0° <b>∡</b> ¹                      |               | asc. node              | 2734 May 18 15:21                      | 8° <b>Ⅱ</b> 13'38                   |             |
| morning max el      | 2732 Jan 18 01:28                      | 9° <b>х¹</b> 43′03                 | 46°57'33      |                        | 2734 Jun 05 08:44                      | $0$ $\circ$ $\odot$                 |             |
|                     | 2732 Feb 06 00:51                      | 0°ಕ                                |               |                        | 2734 Jun 29 22:11                      | $0^{\circ}\Omega$                   |             |
|                     | 2732 Mar 03 05:29                      | 0° <b>≈</b>                        |               |                        | 2734 Jul 24 16:13                      | 0° <b>m</b> ∕                       |             |
| desc. node          | 2732 Mar 22 09:50                      | 22° <b>≈</b> 42'20                 |               |                        | 2734 Aug 18 16:57                      | 0∘ <b>⊽</b>                         |             |
|                     | 2732 Mar 28 12:16                      | 0° <b>∀</b>                        |               | desc. node             | 2734 Sep 07 04:47                      | 23° <b>≙</b> 01'33                  |             |
|                     | 2732 Apr 22 10:02                      | 0° <b>Υ</b>                        |               |                        | 2734 Sep 13 04:07                      | 0° <b>M</b> ₊                       |             |
|                     | 2732 May 17 04:00                      | 0.8                                |               |                        | 2734 Oct 09 08:53                      | 0° <b>∡</b> ¹                       |             |
|                     | 2732 Jun 10 20:11                      | 0° <b>Ⅱ</b>                        |               |                        | 2734 Nov 06 03:44                      | 0°る<br>                             |             |
|                     | 2732 Jul 05 10:32                      | 0°9                                |               | evening max el         | 2734 Nov 10 16:28                      | 4°る34'44                            | 46°59'53    |
| asc. node           | 2732 Jul 13 12:55                      | 9°954'26                           |               |                        | 2734 Dec 10 10:47                      | 0° <b>≈</b>                         | 4.0         |
| morning set         | 2732 Jul 19 19:53                      | 17° <b>©</b> 36'46                 |               | greatest brilliancy    | 2734 Dec 21 05:22                      | 5°≈31'56                            | -4.9m       |
| The state of        | 2732 Jul 29 22:10                      | 0°N                                | 1.721.40 4.77 | asc. node              | 2734 Dec 29 07:52                      | 7°≈22'33                            |             |
| max. Earth dist.    | 2732 Aug 22 06:48                      |                                    | 1.73140 AU    | retrograde             | 2734 Dec 31 05:42                      | 7°≈26'59                            |             |
|                     | 2732 Aug 23 06:33                      | 0° <b>m</b>                        |               | evening set            | 2735 Jan 15 04:10                      | 3°≈01'07                            | 0.26626.444 |
|                     | 2722 A 25 05-27                        | 20 m 2 4150                        | 1910100       | min. Earth dist.       | 2735 Jan 20 04:32                      |                                     | 0.26626 AU  |
| superior conj       | 2732 Aug 25 05:27                      | 2° m 24'50                         |               | : <i>c</i> :           | 2735 Jan 20 07:14                      | 30°R♂                               | 5927121     |
| minimum elong       | 2732 Aug 24 23:21                      | 2°№06'01<br>0° <u>മ</u>            | 1°19'04       | inferior conj          | 2735 Jan 20 19:56                      | 29°る40'33<br>29°る56'12              | 5°27'21     |
| avanina riaa        | 2732 Sep 16 12:11                      | 0° <b>22</b><br>17° <b>2</b> 44'24 |               | minimum elong          | 2735 Jan 20 09:43<br>2735 Jan 25 15:31 | 29°る3012<br>26°る48'24               | 5-2443      |
| evening rise        | 2732 Sep 30 19:20<br>2732 Oct 10 16:16 | 0°M                                |               | morning rise<br>direct | 2735 Feb 10 04:41                      | 20 34824<br>22° <b>る</b> 01'16      |             |
| desc. node          | 2732 Oct 10 10:10<br>2732 Nov 02 02:38 | 27°M51'50                          |               | greatest brilliancy    | 2735 Feb 10 04.41<br>2735 Feb 19 15:23 | 22 301 10<br>23° <b>る</b> 42'45     | 4 0m        |
| desc. Hode          | 2732 Nov 02 02.38<br>2732 Nov 03 19:55 | 27 IIG31 30<br>0° <b>⊼</b>         |               | greatest orimancy      | 2735 Mar 03 22:28                      | 23 <b>3</b> 4243                    | -4.9111     |
|                     | 2732 Nov 03 19:33<br>2732 Nov 27 23:49 | 0°ਤ<br>ਰਾ                          |               | morning max el         | 2735 Apr 01 06:16                      | 0 ∞<br>24°≈11'21                    | 46°36'30    |
|                     | 2732 Nov 27 25:49<br>2732 Dec 22 05:00 | 0° <b>≈</b>                        |               | morning max cr         | 2735 Apr 07 00:10<br>2735 Apr 07 00:31 | 0° <b>\</b>                         | 40 30 30    |
|                     | 2732 Jan 15 14:13                      | 0° <b>₩</b>                        |               | desc. node             | 2735 Apr 19 21:35                      | 13° <b>¥</b> 35′20                  |             |
|                     | 2733 Feb 09 09:26                      | 0° <b>Υ</b>                        |               | dese. Hode             | 2735 May 04 18:49                      | 0° <b>Υ</b>                         |             |
| asc. node           | 2733 Feb 23 05:39                      | 16° <b>Y</b> 20′21                 |               |                        | 2735 May 30 23:58                      | 0°8                                 |             |
|                     | 2733 Mar 07 02:41                      | 0°8                                |               |                        | 2735 Jun 25 13:16                      | 0°II                                |             |
|                     | 2733 Apr 03 23:54                      | 0°II                               |               |                        | 2735 Jul 20 17:01                      | 0°ಅ                                 |             |
| evening max el      | 2733 Apr 05 20:49                      | 1° <b>∏</b> 51'41                  | 46°07'01      | asc. node              | 2735 Aug 11 00:49                      | 25°544'55                           |             |
| C                   | 2733 May 12 05:24                      | 0°©                                |               |                        | 2735 Aug 14 12:46                      | $0^{\circ}\Omega$                   |             |
| greatest brilliancy | 2733 May 14 08:17                      | 0°952'30                           | -4.8m         |                        | 2735 Sep 08 01:02                      | 0° <b>m</b>                         |             |
| retrograde          | 2733 May 25 06:59                      | 3°503'58                           |               | morning set            | 2735 Sep 27 05:27                      | 23° <b>m</b> 42'47                  |             |
|                     | 2733 Jun 06 18:14                      | 30° <b>Ŗ</b> Ⅱ                     |               |                        | 2735 Oct 02 06:58                      | 0∘ <b>ऌ</b>                         |             |
| evening set         | 2733 Jun 09 09:29                      | 28° <b>Ⅲ</b> 38'45                 |               |                        | 2735 Oct 26 08:30                      | 0° <b>M</b>                         |             |
| desc. node          | 2733 Jun 14 19:06                      | 25° <b>Ⅱ</b> 25'15                 |               | max. Earth dist.       | 2735 Nov 01 08:00                      | 7°M28'36                            | 1.71778 AU  |
| inferior conj       | 2733 Jun 15 18:01                      | 24° <b>Ⅱ</b> 49'16                 |               |                        |  |                                     |             |
| minimum elong       | 2733 Jun 15 17:31                      | 24° <b>Ⅱ</b> 50′03                 | 0°13'28       | superior conj          | 2735 Nov 03 21:24                      | 10°M40'40                           | 0°58'12     |
| transit middle      | 2733 Jun 15 17:31                      | 24° <b>Ⅱ</b> 50′03                 | 0°13'28       | minimum elong          | 2735 Nov 04 07:41                      | 11°M12'52                           | 0°57'49     |
| transit begin       | 2733 Jun 15 15:15                      | 24° <b>∏</b> 53'37                 |               |                        | 2735 Nov 19 07:37                      | 0° <b>∡</b> ¹                       |             |
| transit end         | 2733 Jun 15 19:47                      | 24° <b>Ⅱ</b> 46′29                 |               | desc. node             | 2735 Nov 30 14:27                      | 14° <b>∡</b> 08'49                  |             |
| min. Earth dist.    | 2733 Jun 15 15:09                      | 24° <b>Ⅱ</b> 53'46                 | 0.28817 AU    |                        | 2735 Dec 13 05:43                      | 0°る                                 |             |
| morning rise        | 2733 Jun 22 01:45                      | 21° <b>I</b> I00'50                |               | evening rise           | 2735 Dec 13 23:16                      | 0°る55'04                            |             |
| direct              | 2733 Jul 07 06:18                      | 16° <b>Ⅱ</b> 34'54                 |               |                        | 2736 Jan 06 03:44                      | 0° <b>≈</b>                         |             |
| greatest brilliancy | 2733 Jul 17 11:15                      | 18° <b>Ⅱ</b> 26'37                 | -4.7m         |                        | 2736 Jan 30 03:01                      | 0° <b>∀</b>                         |             |
|                     | 2733 Aug 06 07:04                      | 0°95                               | 45046125      |                        | 2736 Feb 23 06:00                      | 0° <b>Υ</b>                         |             |
| morning max el      | 2733 Aug 24 23:11                      | 16°9514'23                         | 45°46'35      | 1                      | 2736 Mar 18 16:27                      | 0°8                                 |             |
|                     | 2733 Sep 07 17:13                      | 0° <b>Ω</b>                        |               | asc. node              | 2736 Mar 22 17:37                      | 4° <b>႘</b> 54'55<br>0°Ⅱ            |             |
| asc. node           | 2733 Oct 05 02:27<br>2733 Oct 05 22:34 | 0° Mp<br>0° Mp 57′26               |               |                        | 2736 Apr 12 15:45<br>2736 May 08 12:45 | 0ംഉ<br>0.П                          |             |
| asc. node           |  | 0° <b>⊡</b>                        |               |                        | 2736 May 08 12.43<br>2736 Jun 05 04:59 | 0° <b>U</b><br>0 €3                 |             |
|                     | 2733 Oct 30 17:21<br>2733 Nov 24 10:43 | 0° <b>M</b>                        |               | evening max el         | 2736 Jun 05 04:39<br>2736 Jun 15 10:03 | 0° <b>δ</b> ι<br>10° <b>Ω</b> 09'20 | 45°26'14    |
|                     | 2733 Nov 24 10.43<br>2733 Dec 18 16:44 | 0° <b>⊼</b> 1                      |               | evening max ci         | 2736 Jul 08 22:03                      | 0° <b>m</b> )                       | TJ 2014     |
|                     | 2734 Jan 11 17:22                      | 0°중                                |               | desc. node             | 2736 Jul 12 07:05                      | 0 my<br>2° My 14′01                 |             |
| desc. node          | 2734 Jan 25 11:59                      | 17°る15'20                          |               | greatest brilliancy    | 2736 Jul 23 15:24                      | 7° Mp 55'45                         | -4.7m       |
| acce. noue          | 2734 Feb 04 15:58                      | 0°≈                                |               | retrograde             | 2736 Aug 03 01:20                      | 9° <b>m</b> <sub>2</sub> 52'10      | , 111       |
| morning set         | 2734 Feb 25 22:09                      | 26°≈38'24                          |               | evening set            | 2736 Aug 20 05:31                      | 4° Mp 18'16                         |             |
| 0                   | 2734 Feb 28 14:32                      | 0° <b>∀</b>                        |               | inferior conj          | 2736 Aug 24 11:12                      | 1° Mp 43'03                         | -7°59'00    |
|                     |  |                                    |               | · ·                    |  | 0.0                                 |             |

| minimum elong                      | 2736 Aug 24 04:02                      | 1° <b>m</b> 54'12                        | 7°58'12     | max. Earth dist.    | 2739 Jan 19 18:39                      | 28° <b>ප</b> 55'03                  | 1.71100 AU |
|------------------------------------|--|--|-------------|---------------------|--|-------------------------------------|------------|
| min. Earth dist.                   | 2736 Aug 24 15:23                      | 1° Mp 36'31                              | 0.28918 AU  | max. Earth dist.    | 2739 Jan 20 15:18                      | 28 <b>⊙</b> 55 05                   | 1./1100 AC |
| iiiii. Lattii dist.                | 2736 Aug 27 05:53                      | 30°RΩ                                    | 0.20710 AU  |                     | 2739 Feb 13 12:05                      | 0° <b>∺</b>                         |            |
| morning rise                       | 2736 Aug 28 02:27                      | 29° <b>£</b> 28'59                       |             | evening rise        | 2739 Feb 28 18:08                      | 19° <b>₩</b> 07'03                  |            |
| direct                             | 2736 Sep 15 01:31                      | 23° <b>Ω</b> 26′29                       |             | evening rise        | 2739 Mar 09 11:02                      | 0°Υ                                 |            |
| greatest brilliancy                | 2736 Sep 25 19:13                      | 25° <b>Ω</b> 32'49                       | -4.8m       |                     | 2739 Apr 02 14:06                      | 0°8                                 |            |
| 8                                  | 2736 Oct 04 19:37                      | 0° m)                                    |             | asc. node           | 2739 Apr 20 05:29                      | 21° <b>8</b> 44'39                  |            |
| asc. node                          | 2736 Nov 02 10:14                      | 23° m 35'34                              |             |                     | 2739 Apr 26 23:13                      | 0°II                                |            |
| morning max el                     | 2736 Nov 03 22:47                      | 25° m 05'58                              | 46°23'31    |                     | 2739 May 21 16:20                      | 0° <b>©</b>                         |            |
| •                                  | 2736 Nov 08 18:59                      | 0∘ <b>⊽</b>                              |             |                     | 2739 Jun 15 20:22                      | $0^{\circ}\Omega$                   |            |
|                                    | 2736 Dec 06 03:11                      | 0°M                                      |             |                     | 2739 Jul 11 17:29                      | 0° <b>m</b> )                       |            |
|                                    | 2736 Dec 31 13:55                      | 0° <b>∡</b> 7                            |             |                     | 2739 Aug 07 22:42                      | 0∘ <b>⊽</b>                         |            |
|                                    | 2737 Jan 25 06:25                      | 0°₹                                      |             | desc. node          | 2739 Aug 09 19:00                      | 1° <b>≏</b> 56'51                   |            |
|                                    | 2737 Feb 18 15:11                      | 0°≈                                      |             | evening max el      | 2739 Aug 27 04:02                      | 19° <b>≏</b> 28'26                  | 45°53'00   |
| desc. node                         | 2737 Feb 22 00:00                      | 4° <b>≈</b> 09'45                        |             |                     | 2739 Sep 07 17:07                      | $0^{\circ}$ M                       |            |
|                                    | 2737 Mar 14 21:03                      | 0° <b>∀</b>                              |             | greatest brilliancy | 2739 Oct 06 03:23                      | 18°M06'39                           | -4.8m      |
|                                    | 2737 Apr 08 02:31                      | $0^{\circ}\mathbf{\Upsilon}$             |             | retrograde          | 2739 Oct 15 04:23                      | 19°M36'26                           |            |
|                                    | 2737 May 02 09:05                      | 0°8                                      |             | evening set         | 2739 Oct 31 08:56                      | 14°MJ38'31                          |            |
| morning set                        | 2737 May 10 05:08                      | 9° <b>8</b> 39'51                        |             | inferior conj       | 2739 Nov 05 01:04                      | 11°ML51'30                          |            |
| _                                  | 2737 May 26 17:17                      | 0°II                                     |             | minimum elong       | 2739 Nov 05 11:28                      | 11°MJ35'32                          |            |
| asc. node                          | 2737 Jun 15 03:08                      | 23° <b>II</b> 52'28                      |             | min. Earth dist.    | 2739 Nov 05 23:18                      | 11°ML17'25                          | 0.27297 AU |
|                                    | 0505 X 16 10 11                        | 0.50 T 0.510 ¢                           | 0000100     | morning rise        | 2739 Nov 10 13:22                      | 8°M34'46                            |            |
| superior conj                      | 2737 Jun 16 12:41                      | 25° <b>I</b> 35'36                       | 0°03'22     | direct              | 2739 Nov 25 21:53                      | 3°M57'23                            |            |
| minimum elong                      | 2737 Jun 16 11:58                      | 25° <b>II</b> 33'25                      | 0°03'19     | asc. node           | 2739 Nov 30 22:00                      | 4°M26'44                            | 4.0        |
| behind sun begin                   | 2737 Jun 15 13:33                      | 24° <b>Ⅲ</b> 24'29<br>26° <b>Ⅲ</b> 42'22 |             | greatest brilliancy | 2739 Dec 07 00:30                      | 6°M15'44<br>0° <i>₹</i> 7           | -4.9m      |
| behind sun end<br>max. Earth dist. | 2737 Jun 17 10:24<br>2737 Jun 17 03:10 | 26° <b>H</b> 42'22<br>26° <b>H</b> 20'09 | 1 72400 AII | morning may al      | 2740 Jan 08 06:07<br>2740 Jan 15 14:37 | 0° <b>x</b> ¹<br>7° <b>x</b> ¹17'09 | 46°57'13   |
| max. Earm dist.                    | 2737 Jun 20 02:42                      | 0°95                                     | 1.73490 AU  | morning max el      | 2740 Feb 05 18:15                      | 7 x·1709                            | 40 3/13    |
|                                    | 2737 Jul 14 12:32                      | 0°Ω                                      |             |                     | 2740 Net 03 18:15<br>2740 Mar 02 19:56 | 0°≈                                 |            |
| evening rise                       | 2737 Jul 22 18:27                      | 10° <b>Ω</b> 08'10                       |             | desc. node          | 2740 Mar 21 11:50                      | 0 <b>~</b><br>22° <b>≈</b> 08'34    |            |
| evening rise                       | 2737 Aug 07 22:28                      | 0°M)                                     |             | desc. node          | 2740 Mar 28 01:16                      | 0° <b>₩</b>                         |            |
|                                    | 2737 Sep 01 09:06                      | 0∘ <b>ত</b><br>೧.1%                      |             |                     | 2740 Apr 21 22:10                      | 0° <b>Υ</b>                         |            |
|                                    | 2737 Sep 25 21:39                      | 0°M                                      |             |                     | 2740 May 16 15:34                      | 0°8                                 |            |
| desc. node                         | 2737 Oct 04 16:47                      | 10° <b>M</b> ₊43'29                      |             |                     | 2740 Jun 10 07:20                      | 0°II                                |            |
|                                    | 2737 Oct 20 13:21                      | 0° <b>∡</b> 7                            |             |                     | 2740 Jul 04 21:25                      | 0ංම                                 |            |
|                                    | 2737 Nov 14 09:55                      | 0°ರ                                      |             | asc. node           | 2740 Jul 12 15:02                      | 9° <b>©</b> 27'43                   |            |
|                                    | 2737 Dec 09 15:50                      | 0°≈                                      |             | morning set         | 2740 Jul 17 13:37                      | 15°930'54                           |            |
|                                    | 2738 Jan 04 20:42                      | 0° <b>)</b>                              |             |                     | 2740 Jul 29 08:55                      | $0^{\circ}\Omega$                   |            |
| evening max el                     | 2738 Jan 22 03:03                      | 18° <b>)</b> €25'48                      | 47°09'17    | max. Earth dist.    | 2740 Aug 20 02:10                      | 26° <b>Ω</b> 45′04                  | 1.73178 AU |
| asc. node                          | 2738 Jan 25 19:51                      | 22° <b>₩</b> 09'02                       |             |                     |  |                                     |            |
|                                    | 2738 Feb 03 00:55                      | $0$ ° $\Upsilon$                         |             | superior conj       | 2740 Aug 22 23:25                      | 0° <b>m</b> )18'54                  | 1°17'57    |
| greatest brilliancy                | 2738 Mar 03 11:07                      | 19° <b>Y</b> 46'30                       | -4.9m       | minimum elong       | 2740 Aug 22 16:52                      | 29° <b>Ω</b> 58'38                  | 1°17'49    |
| retrograde                         | 2738 Mar 13 21:42                      | 21° <b>Y</b> 49'53                       |             |                     | 2740 Aug 22 17:18                      | 0° <b>™</b>                         |            |
| evening set                        | 2738 Mar 31 14:00                      | 15° <b>Y</b> 44'52                       |             |                     | 2740 Sep 15 23:02                      | 0∘ <b>⊽</b>                         |            |
| inferior conj                      | 2738 Apr 03 21:52                      | 13° <b>Y</b> 40′32                       |             | evening rise        | 2740 Sep 28 11:30                      | 15° <b>≏</b> 31'47                  |            |
| minimum elong                      | 2738 Apr 04 04:51                      | 13° <b>Y</b> 29'33                       | 8°13'22     |                     | 2740 Oct 10 03:16                      | 0° <b>M</b> ₊                       |            |
| min. Earth dist.                   | 2738 Apr 03 14:04                      | 13° <b>Y</b> 52'48                       | 0.27991 AU  | desc. node          | 2740 Nov 01 04:37                      | 27°M23'15                           |            |
| morning rise                       | 2738 Apr 07 20:00                      | 11°Y15'35                                |             |                     | 2740 Nov 03 07:07                      | 0° <b>∡</b>                         |            |
| direct                             | 2738 Apr 24 21:33                      | 5° <b>Υ</b> 40'15                        | 4.0         |                     | 2740 Nov 27 11:18                      | 0° <b>ට</b>                         |            |
| greatest brilliancy                | 2738 May 04 06:00                      | 7° <b>Y</b> 17'59<br>13° <b>Y</b> 57'54  | -4.8m       |                     | 2740 Dec 21 16:54                      | 0° <b>€</b>                         |            |
| desc. node                         | 2738 May 17 09:17<br>2738 Jun 06 10:57 | 0° <b>8</b>                              |             |                     | 2741 Jan 15 02:43<br>2741 Feb 08 22:58 | 0° <b>Υ</b><br>0° <b>Υ</b>          |            |
| morning max el                     | 2738 Jun 13 00:12                      | 6° <b>8</b> 08'41                        | 45°53'25    | asc. node           | 2741 Feb 08 22:38<br>2741 Feb 22 07:40 | 15° <b>Υ</b> 44'16                  |            |
| morning max ci                     | 2738 Jul 06 07:35                      | 0°II                                     | 45 55 25    | asc. node           | 2741 Nar 06 18:18                      | 0°8                                 |            |
|                                    | 2738 Aug 02 08:45                      | 0°©                                      |             | evening max el      | 2741 Mar 00 10:10<br>2741 Apr 03 11:11 | 29° <b>8</b> 34'38                  | 46°09'16   |
|                                    | 2738 Aug 28 04:51                      | $0^{\circ}\Omega$                        |             | evening max er      | 2741 Apr 03 21:28                      | 0°II                                | 10 05 10   |
| asc. node                          | 2738 Sep 07 12:43                      | 12° <b>Ω</b> 16′05                       |             | greatest brilliancy | 2741 May 12 00:53                      | 28° <b>Ⅱ</b> 42'09                  | -4.8m      |
|                                    | 2738 Sep 22 06:30                      | 0° mp                                    |             | 5                   | 2741 May 16 02:10                      | 0°9                                 |            |
|                                    | 2738 Oct 16 19:07                      | 0∘ <b>⊽</b>                              |             | retrograde          | 2741 May 22 23:28                      | 0° <b>©</b> 53'58                   |            |
|                                    | 2738 Nov 09 23:07                      | 0°M₊                                     |             | -                   | 2741 May 29 15:57                      | 30°RⅡ                               |            |
|                                    | 2738 Dec 03 22:15                      | 0°⊀                                      |             | evening set         | 2741 Jun 07 02:26                      | 26° <b>Ⅱ</b> 27'18                  |            |
| morning set                        | 2738 Dec 08 08:20                      | 5° <b>∡</b> ³33'03                       |             | inferior conj       | 2741 Jun 13 10:15                      | 22° <b>II</b> 39'09                 | 0°06'30    |
|                                    | 2738 Dec 27 19:07                      | 0°ರ                                      |             | minimum elong       | 2741 Jun 13 10:30                      | 22° <b>Ⅲ</b> 38'46                  | 0°06'26    |
| desc. node                         | 2738 Dec 28 02:15                      | 0° <b>る</b> 22'26                        |             | transit middle      | 2741 Jun 13 10:30                      | 22° <b>Ⅱ</b> 38'46                  | 0°06'26    |
|                                    |  |  |             | transit begin       | 2741 Jun 13 06:46                      | 22° <b>Ⅱ</b> 44'37                  |            |
| superior conj                      | 2739 Jan 18 14:13                      | 27° <b>る</b> 25'36                       |             | transit end         | 2741 Jun 13 14:13                      | 22° <b>II</b> 32'55                 |            |
| minimum elong                      | 2739 Jan 18 03:07                      | 26° <b>る</b> 50'44                       | 0°48'12     | min. Earth dist.    | 2741 Jun 13 07:45                      | 22° <b>Ⅱ</b> 43'05                  | 0.28800 AU |

| desc. node                                   | 2741 Jun 13 21:11  | 22° <b>Ⅲ</b> 22'00   |             | evening rise   | 2743 Dec 11 10:27   | 28° <b>∡</b> ¹24'19  |   |
|--|--|--|-------------|--|---|--|---|
| morning rise                                 | 2741 Jun 19 18:43  | 18° <b>Ⅱ</b> 49'51   |             |  | 2743 Dec 12 16:58   | 0°ප  |   |
| direct                                       | 2741 Jul 04 21:44  | 14° <b>Ⅲ</b> 24'48   |             |  | 2744 Jan 05 15:07   | 0° <b>≈</b>  |   |
| greatest brilliancy                          | 2741 Jul 15 03:25  | 16° <b>Ⅱ</b> 17'10   | -4.7m       |  | 2744 Jan 29 14:31   | 0° <b>∀</b>  |   |
|  | 2741 Aug 06 17:23  | $0$ $\circ$ $\odot$  |             |  | 2744 Feb 22 17:41   | $0$ ° $\Upsilon$   |   |
| morning max el                               | 2741 Aug 22 15:06  | 14° <b>5</b> 04'04   | 45°46'01    |  | 2744 Mar 18 04:34   | 0° <b>႘</b>  |   |
|  | 2741 Sep 07 11:16  | $0^{\circ}\Omega$  |             | asc. node  | 2744 Mar 21 19:35   | 4° <b>8</b> 23'54  |   |
|  | 2741 Oct 04 16:47  | 0° <b>m</b> )  |             |  | 2744 Apr 12 04:43   | $\Pi$ $^{\circ}0$  |   |
| asc. node                                    | 2741 Oct 05 00:31  | 0° <b>m</b> 22'09  |             |  | 2744 May 08 03:31   | $0$ $\circ$ $\odot$  |   |
|  | 2741 Oct 30 06:10  | 0∘ <b>亚</b>  |             |  | 2744 Jun 05 00:24   | $0 ^{\circ} \Omega$  |   |
|  | 2741 Nov 23 22:46  | 0° <b>M</b> ₊  |             | evening max el   | 2744 Jun 13 02:33   | 7° <b>Ω</b> 59'48  | 45°26'27                                  |
|  | 2741 Dec 18 04:21  | 0° <b>∡</b> ¹  |             |  | 2744 Jul 09 20:48   | 0° <b>m</b> y  |   |
|  | 2742 Jan 11 04:43  | 5°0  |             | desc. node   | 2744 Jul 11 09:15   | 0° mp 56'16  |   |
| desc. node                                   | 2742 Jan 24 14:10  | 16° <b>පි</b> 46'51  |             | greatest brilliancy  | 2744 Jul 21 06:02   | 5° <b>m</b> ) 44'14  | -4.7m                                     |
|  | 2742 Feb 04 03:10  | 0° <b>≈</b> ≈  |             | retrograde   | 2744 Jul 31 16:57   | 7° <b>m</b> ) 41'12  |   |
| morning set                                  | 2742 Feb 23 08:47  | 24° <b>≈</b> 06'37   |             | evening set  | 2744 Aug 17 18:14   | 2° m/ 12'00  |   |
| 8  | 2742 Feb 28 01:37  | 0° <b>∀</b>  |             | C  | 2744 Aug 21 08:59   | 30°RΩ  |   |
|  | 2742 Mar 24 01:30  | 0° <b>Y</b>  |             | inferior conj  | 2744 Aug 22 03:07   | 29° <b>Ω</b> 31'44   | -7°50'49                                  |
|  |  |  |             | minimum elong  | 2744 Aug 21 19:27   | 29° <b>Ω</b> 43'41   | 7°49'53                                   |
| superior conj                                | 2742 Apr 04 15:20  | 14° <b>Y</b> °25'48  | -1°20'19    | min. Earth dist.   | 2744 Aug 22 06:21   | 29° <b>Ω</b> 26'41   | 0.28941 AU                                |
| minimum elong                                | 2742 Apr 04 22:49  | 14° <b>Y</b> ′49′05  |             | morning rise   | 2744 Aug 25 20:35   | 27°Ω14'06  | 0.207 11110                               |
| max. Earth dist.                             | 2742 Apr 08 12:50  |  | 1.72244 AU  | direct   | 2744 Sep 12 18:03   | 21°Ω15'09  |   |
| man. Darm dist.                              | 2742 Apr 17 04:01  | 0°8  | 1.,2210     | greatest brilliancy  | 2744 Sep 23 09:59   | 23°Ω19'36  | -4 8m                                     |
|  | 2742 May 11 10:01  | 0°II   |             | greatest stillars  | 2744 Oct 05 22:47   | 0° m)  |   |
| evening rise                                 | 2742 May 13 12:40  | 2° <b>I</b> I36'03   |             | morning max el   | 2744 Nov 01 13:35   | 22° m/48'32  | 46°21'47                                  |
| asc. node                                    | 2742 May 17 17:20  | 7° <b>Ⅱ</b> 46'02  |             | asc. node  | 2744 Nov 01 12:19   | 22° m/ 45'23   | 10 21 17                                  |
| ase. Houe                                    | 2742 Jun 04 19:47  | ე°ფ  |             | ase. Houe  | 2744 Nov 08 15:07   | 0° <b>ي</b><br>0°  |   |
|  | 2742 Jun 29 09:28  | 0° <b>U</b>  |             |  | 2744 Dec 05 18:35   | 0° <b>m</b> .  |   |
|  | 2742 Jul 24 03:58  | 0° <b>m</b> )  |             |  | 2744 Dec 03 18:33<br>2744 Dec 31 03:31  | 0° <b>∡</b> 7  |   |
|  | 2742 Jul 24 05:38<br>2742 Aug 18 05:28   | 0∘ <b>⊽</b>  |             |  | 2745 Jan 24 19:05   | %ਰ   |   |
| desc. node                                   | 2742 Aug 18 03.28<br>2742 Sep 06 06:48   | 0 <b>==</b><br>22° <b>₽</b> 28'10  |             |  | 2745 Feb 18 03:16   | 0°≈  |   |
| desc. flode                                  | 2742 Sep 00 00:48<br>2742 Sep 12 17:56   | 0°M  |             | desc. node   | 2745 Feb 21 01:56   | 0 ∞<br>3°≈38'33  |   |
|  | 2742 Sep 12 17:30<br>2742 Oct 09 01:09   | 0° <b>⊼</b> 1  |             | desc. Hode   | 2745 Mar 14 08:42   | 0° <b>∺</b>  |   |
|  | 2742 Oct 09 01:09<br>2742 Nov 06 01:58   | 0° <b>ろ</b>  |             |  |   | 0°Υ  |   |
| avanina may al                               |  | 0 3<br>2° <b>る</b> 12'04   | 46°58'15    |  | 2745 Apr 07 13:50   | 0° <b>8</b>  |   |
| evening max el                               | 2742 Nov 08 06:40  | 2 012 04<br>0°≈  | 40 36 13    | marning act  | 2745 May 01 20:09<br>2745 May 07 21:28  | 7° <b>8</b> 28'18  |   |
| areatast brillianas                          | 2742 Dec 12 03:11<br>2742 Dec 18 18:05   | 0 ≈<br>3°≈02'52  | -4.9m       | morning set  | •   | 7 <b>О</b> 28 18   |   |
| greatest brilliancy                          | 2742 Dec 18 18:03<br>2742 Dec 28 10:02   | 3 ≈02 32<br>4°≈57'59   | -4.9111     |  | 2745 May 26 04:12   | υщ   |   |
| asc. node                                    |  |  |             | aumorior coni  | 2745 Jun 14 06:22   | 23° <b>Ⅱ</b> 29'04   | 000007                                    |
| retrograde                                   | 2742 Dec 28 19:03  | 4°≈58'09   |             | superior conj  | 2745 Jun 14 06:23<br>2745 Jun 14 06:20  | 23° <b>II</b> 29'04<br>23° <b>II</b> 28'57   |   |
| evening set                                  | 2743 Jan 12 14:03<br>2743 Jan 13 15:59   | 0°≈36'08<br>30°R <b>ರ</b>  |             | minimum elong<br>behind sun begin  |   | 23 <b>H</b> 28 37<br>22° <b>H</b> 19'44  | 0 00 07                                   |
| i. Danda diad                                |  | • -  | 0.26502 ATT | C  | 2745 Jun 13 07:50   |  |   |
| min. Earth dist.                             | 2743 Jan 17 17:30  |  | 0.26593 AU  | behind sun end   | 2745 Jun 15 04:51   | 24° <b>∏</b> 38'10   |   |
| inferior conj                                | 2743 Jan 18 08:22  | 27° <b>る</b> 12'17   |             | asc. node  | 2745 Jun 14 05:17   | 23° <b>∏</b> 25'42   | 1 72472 ATT                               |
| minimum elong                                | 2743 Jan 17 22:28  | 27° <b>る</b> 27'24   | 5-05-05     | max. Earth dist.   | 2745 Jun 15 01:32   | 24° <b>Ⅱ</b> 27'58<br>0° <b>©</b>  | 1.73473 AU                                |
| morning rise                                 | 2743 Jan 23 07:11<br>2743 Feb 07 17:26   | 24°る16'02<br>19°る33'25   |             |  | 2745 Jun 19 13:34   | 0°Ω  |   |
| direct                                       |  |  | 4.0         |  | 2745 Jul 13 23:27   |  |   |
| greatest brilliancy                          | 2743 Feb 17 04:17  | 21° <b>る</b> 15'35<br>0°≈  | -4.9m       | evening rise   | 2745 Jul 20 13:22<br>2745 Aug 07 09:32  | 8° <b>Ω</b> 05'10  |   |
| marning may al                               | 2743 Mar 05 00:09<br>2743 Mar 29 20:37   |  | 16927156    |  | _   | 0 <b>்</b> ச<br>0 <b>்ம்</b>   |   |
| morning max el                               |  | 21°≈50′29  | 40 37 30    |  | 2745 Aug 31 20:27   |  |   |
| desc. node                                   | 2743 Apr 06 21:19<br>2743 Apr 18 23:38   | 0° <b>\</b><br>12° <b>\</b> 52'33  |             | desc. node   | 2745 Sep 25 09:26<br>2745 Oct 03 18:44  | 0°ጤ<br>10°ጤ13'00   |   |
| desc. node                                   | •  | 12 <b>π</b> 3233   |             | desc. node   |   | 10 ll€13 00<br>0° <b>⊼</b>   |   |
|  | 2743 May 04 10:26  |  |             |  | 2745 Oct 20 01:48   | 0° <b>X</b> '  |   |
|  | 2743 May 30 13:27<br>2743 Jun 25 01:36   | 0°H<br>0°8   |             |  | 2745 Nov 13 23:18   |  |   |
|  |  | О"Щ  |             |  | 2745 Dec 09 06:46   | 0° <b>≈</b>  |   |
|  |  |  |             |  |   | 00M  |   |
| aca nodo                                     | 2743 Jul 20 04:41  | 0ංම  |             | ovonina ma1  | 2746 Jan 04 14:52   | 0° <b>)</b><br>16° <b>¥</b> 03'20  | 47010124                                  |
| asc. node                                    | 2743 Jul 20 04:41<br>2743 Aug 10 02:53   | 0°ତ<br>25°ତ16'47   |             | evening max el   | 2746 Jan 04 14:52<br>2746 Jan 19 17:37  | 16° <b>∺</b> 03′29   | 47°10'24                                  |
| asc. node                                    | 2743 Jul 20 04:41<br>2743 Aug 10 02:53<br>2743 Aug 14 00:03  | 0°S<br>25°S16'47<br>0° <b>Ω</b>  |             | evening max el asc. node   | 2746 Jan 04 14:52<br>2746 Jan 19 17:37<br>2746 Jan 24 21:54   | 16° <b>)</b> 03′29<br>21° <b>)</b> 14′26   | 47°10'24                                  |
|  | 2743 Jul 20 04:41<br>2743 Aug 10 02:53<br>2743 Aug 14 00:03<br>2743 Sep 07 12:06   | 0°5<br>25°516'47<br>0° <b>Ω</b><br>0° <b>M</b>   |             | asc. node  | 2746 Jan 04 14:52<br>2746 Jan 19 17:37<br>2746 Jan 24 21:54<br>2746 Feb 03 06:14  | 16°¥03'29<br>21°¥14'26<br>0° <b>Υ</b>  |   |
| asc. node                                    | 2743 Jul 20 04:41<br>2743 Aug 10 02:53<br>2743 Aug 14 00:03<br>2743 Sep 07 12:06<br>2743 Sep 24 21:42  | 0°©<br>25°©16'47<br>0°N<br>0°M<br>21°M30'17  |             | asc. node greatest brilliancy  | 2746 Jan 04 14:52<br>2746 Jan 19 17:37<br>2746 Jan 24 21:54<br>2746 Feb 03 06:14<br>2746 Mar 01 03:22   | 16°¥03'29<br>21°¥14'26<br>0° <b>°</b><br>17° <b>°</b> 28'10  |   |
|  | 2743 Jul 20 04:41<br>2743 Aug 10 02:53<br>2743 Aug 14 00:03<br>2743 Sep 07 12:06<br>2743 Sep 24 21:42<br>2743 Oct 01 17:58   | 0°©<br>25°©16'47<br>0°N<br>0°M<br>21°M30'17<br>0°Ω   |             | asc. node greatest brilliancy retrograde   | 2746 Jan 04 14:52<br>2746 Jan 19 17:37<br>2746 Jan 24 21:54<br>2746 Feb 03 06:14<br>2746 Mar 01 03:22<br>2746 Mar 11 12:32  | 16°¥03'29<br>21°¥14'26<br>0° <b>°</b><br>17° <b>°</b> 28'10<br>19° <b>°</b> 30'16  |   |
| morning set                                  | 2743 Jul 20 04:41<br>2743 Aug 10 02:53<br>2743 Aug 14 00:03<br>2743 Sep 07 12:06<br>2743 Sep 24 21:42<br>2743 Oct 01 17:58<br>2743 Oct 25 19:31  | 0°5<br>25°516'47<br>0° <b>N</b><br>0°M<br>21°M30'17<br>0°Ω<br>0°M  | 1 71022 AV  | asc. node greatest brilliancy retrograde evening set   | 2746 Jan 04 14:52<br>2746 Jan 19 17:37<br>2746 Jan 24 21:54<br>2746 Feb 03 06:14<br>2746 Mar 01 03:22<br>2746 Mar 11 12:32<br>2746 Mar 29 07:14   | 16°¥03'29<br>21°¥14'26<br>0°℃<br>17°℃28'10<br>19°℃30'16<br>13°℃22'30   | -4.9m                                     |
|  | 2743 Jul 20 04:41<br>2743 Aug 10 02:53<br>2743 Aug 14 00:03<br>2743 Sep 07 12:06<br>2743 Sep 24 21:42<br>2743 Oct 01 17:58   | 0°5<br>25°516'47<br>0° <b>N</b><br>0°M<br>21°M30'17<br>0°Ω<br>0°M  | 1.71823 AU  | asc. node greatest brilliancy retrograde evening set min. Earth dist.  | 2746 Jan 04 14:52<br>2746 Jan 19 17:37<br>2746 Jan 24 21:54<br>2746 Feb 03 06:14<br>2746 Mar 01 03:22<br>2746 Mar 11 12:32<br>2746 Mar 29 07:14<br>2746 Apr 01 04:22  | 16° ¥ 03'29<br>21° ¥ 14'26<br>0° Υ<br>17° Υ 28'10<br>19° Υ 30'16<br>13° Υ 22'30<br>11° Υ 34'49   | -4.9m<br>0.27944 AU                       |
| morning set max. Earth dist.                 | 2743 Jul 20 04:41<br>2743 Aug 10 02:53<br>2743 Aug 14 00:03<br>2743 Sep 07 12:06<br>2743 Sep 24 21:42<br>2743 Oct 01 17:58<br>2743 Oct 25 19:31<br>2743 Oct 29 19:48   | 0°50<br>25°5016'47<br>0°A<br>0°M<br>21°M30'17<br>0°A<br>0°M<br>5°M00'50                                  |             | greatest brilliancy<br>retrograde<br>evening set<br>min. Earth dist.<br>inferior conj                          | 2746 Jan 04 14:52<br>2746 Jan 19 17:37<br>2746 Jan 24 21:54<br>2746 Feb 03 06:14<br>2746 Mar 01 03:22<br>2746 Mar 11 12:32<br>2746 Mar 29 07:14<br>2746 Apr 01 04:22<br>2746 Apr 01 12:40   | 16° ★03'29<br>21° ★14'26<br>0° ❤<br>17° ❤28'10<br>19° ❤30'16<br>13° ❤22'30<br>11° ❤34'49<br>11° ❤21'44                                     | -4.9m<br>0.27944 AU<br>8°22'03            |
| morning set  max. Earth dist.  superior conj | 2743 Jul 20 04:41<br>2743 Aug 10 02:53<br>2743 Aug 14 00:03<br>2743 Sep 07 12:06<br>2743 Sep 24 21:42<br>2743 Oct 01 17:58<br>2743 Oct 25 19:31<br>2743 Oct 29 19:48<br>2743 Nov 01 11:14                      | 0°50<br>25°5016'47<br>0°10<br>0°10<br>21°10/30'17<br>0°10<br>0°11<br>5°100'50                            | 1°00'47     | greatest brilliancy<br>retrograde<br>evening set<br>min. Earth dist.<br>inferior conj<br>minimum elong         | 2746 Jan 04 14:52<br>2746 Jan 19 17:37<br>2746 Jan 24 21:54<br>2746 Feb 03 06:14<br>2746 Mar 01 03:22<br>2746 Mar 11 12:32<br>2746 Mar 29 07:14<br>2746 Apr 01 04:22<br>2746 Apr 01 12:40<br>2746 Apr 01 19:02                      | 16° ★03'29<br>21° ★14'26<br>0° ♀<br>17° ♀28'10<br>19° ♀30'16<br>13° ♀22'30<br>11° ♀34'49<br>11° ♀21'44<br>11° ♀11'44                       | -4.9m<br>0.27944 AU<br>8°22'03            |
| morning set max. Earth dist.                 | 2743 Jul 20 04:41<br>2743 Aug 10 02:53<br>2743 Aug 14 00:03<br>2743 Sep 07 12:06<br>2743 Sep 24 21:42<br>2743 Oct 01 17:58<br>2743 Oct 25 19:31<br>2743 Oct 29 19:48<br>2743 Nov 01 11:14<br>2743 Nov 01 21:30 | 0°50<br>25°5016'47<br>0°10<br>0°10<br>21°10/30'17<br>0°12<br>0°11<br>5°1100'50<br>8°1119'13<br>8°1151'19 | 1°00'47     | asc. node greatest brilliancy retrograde evening set min. Earth dist. inferior conj minimum elong morning rise | 2746 Jan 04 14:52<br>2746 Jan 19 17:37<br>2746 Jan 24 21:54<br>2746 Feb 03 06:14<br>2746 Mar 01 03:22<br>2746 Mar 11 12:32<br>2746 Mar 29 07:14<br>2746 Apr 01 04:22<br>2746 Apr 01 12:40<br>2746 Apr 01 19:02<br>2746 Apr 05 07:06 | 16° ¥ 03'29<br>21° ¥ 14'26<br>0° Υ<br>17° Υ 28'10<br>19° Υ 30'16<br>13° Υ 22'30<br>11° Υ 34'49<br>11° Υ 21'44<br>11° Υ 11'44<br>9° Υ 02'06 | -4.9m<br>0.27944 AU<br>8°22'03            |
| morning set  max. Earth dist.  superior conj | 2743 Jul 20 04:41<br>2743 Aug 10 02:53<br>2743 Aug 14 00:03<br>2743 Sep 07 12:06<br>2743 Sep 24 21:42<br>2743 Oct 01 17:58<br>2743 Oct 25 19:31<br>2743 Oct 29 19:48<br>2743 Nov 01 11:14                      | 0°50<br>25°5016'47<br>0°10<br>0°10<br>21°10/30'17<br>0°10<br>0°11<br>5°100'50                            | 1°00'47     | greatest brilliancy<br>retrograde<br>evening set<br>min. Earth dist.<br>inferior conj<br>minimum elong         | 2746 Jan 04 14:52<br>2746 Jan 19 17:37<br>2746 Jan 24 21:54<br>2746 Feb 03 06:14<br>2746 Mar 01 03:22<br>2746 Mar 11 12:32<br>2746 Mar 29 07:14<br>2746 Apr 01 04:22<br>2746 Apr 01 12:40<br>2746 Apr 01 19:02                      | 16° ★03'29<br>21° ★14'26<br>0° ♀<br>17° ♀28'10<br>19° ♀30'16<br>13° ♀22'30<br>11° ♀34'49<br>11° ♀21'44<br>11° ♀11'44                       | -4.9m<br>0.27944 AU<br>8°22'03<br>8°21'25 |

| desc. node          | 2746 May 16 11:20                      | 12° <b>Y</b> 40′15                |            |                           | 2749 Jan 14 15:25                      | 0° <b>∀</b>                              |             |
|---------------------|--|-----------------------------------|------------|---------------------------|--|--|-------------|
|                     | 2746 Jun 06 12:25                      | 0° <b>8</b>                       |            |                           | 2749 Feb 08 12:43                      | 0° <b>Υ</b>                              |             |
| morning max el      | 2746 Jun 10 14:02                      |                                   | 45°54'32   | asc. node                 | 2749 Feb 21 09:38                      | 15° <b>Y</b> 07'29                       |             |
|                     | 2746 Jul 06 00:14                      | 0°II                              |            |                           | 2749 Mar 06 10:16                      | 0°8                                      |             |
|                     | 2746 Aug 01 22:32                      | 0°©                               |            | evening max el            | 2749 Apr 01 02:29                      | 27° <b>8</b> 19'42                       | 46°11'39    |
| 1                   | 2746 Aug 27 17:18                      | 0°N                               |            | 4 41 711                  | 2749 Apr 03 19:56                      | 0°Ⅱ<br>260Ⅲ21124                         | 4.0         |
| asc. node           | 2746 Sep 06 14:39                      | 11° <b>Ω</b> 45'36<br>0° <b>m</b> |            | greatest brilliancy       | 2749 May 09 17:08                      | 26° <b>Ⅲ</b> 31'24<br>28° <b>Ⅲ</b> 44'02 | -4.8m       |
|                     | 2746 Sep 21 18:17<br>2746 Oct 16 06:33 | 0∘ <b>⊽</b>                       |            | retrograde<br>evening set | 2749 May 20 16:25<br>2749 Jun 04 19:39 | 28 H44 02<br>24°H15'48                   |             |
|                     | 2746 Nov 09 10:23                      | 0°M                               |            | inferior conj             | 2749 Jun 11 02:31                      | 20° <b>I</b> 13'48                       | 0°26'40     |
|                     | 2746 Dec 03 09:27                      | 0° <b>⊼</b> 7                     |            | minimum elong             | 2749 Jun 11 02:31<br>2749 Jun 11 03:31 | 20° <b>I</b> 127'31                      | 0°26'22     |
| morning set         | 2746 Dec 05 05:27                      | 3° <b>∡</b> 104'22                |            | min. Earth dist.          | 2749 Jun 11 00:06                      | 20° <b>I</b> I32'51                      | 0.28779 AU  |
| desc. node          | 2746 Dec 27 04:22                      | 29° <b>×</b> <sup>7</sup> 53'55   |            | desc. node                | 2749 Jun 12 23:19                      | 19° <b>Ⅱ</b> 19'06                       | 0.20777710  |
| dese. Hode          | 2746 Dec 27 06:18                      | 0° <b>ਰ</b>                       |            | morning rise              | 2749 Jun 17 11:35                      | 16° <b>∏</b> 39'18                       |             |
|                     |  |                                   |            | direct                    | 2749 Jul 02 13:39                      | 12° <b>Ⅱ</b> 14'53                       |             |
| superior conj       | 2747 Jan 15 23:59                      | 24° <b>ප</b> 50'11                | -0°45'17   | greatest brilliancy       | 2749 Jul 12 19:07                      | 14° <b>Ⅲ</b> 07′28                       | -4.7m       |
| minimum elong       | 2747 Jan 15 13:22                      | 24° <b>ට</b> 16'49                |            | 8                         | 2749 Aug 07 00:46                      | 0°ಅ                                      |             |
| max. Earth dist.    | 2747 Jan 16 20:49                      | 25° <b>⋜</b> 55'44                | 1.71093 AU | morning max el            | 2749 Aug 20 07:54                      | 11° <b>©</b> 56'23                       | 45°45'34    |
|                     | 2747 Jan 20 02:29                      | 0° <b>≈</b>                       |            | C                         | 2749 Sep 07 04:45                      | $0^{\circ}\Omega$                        |             |
|                     | 2747 Feb 12 23:17                      | 0° <b>\</b>                       |            | asc. node                 | 2749 Oct 04 02:38                      | 29° <b>Ω</b> 47'59                       |             |
| evening rise        | 2747 Feb 26 04:40                      | 16° <b>)</b> 34′38                |            |                           | 2749 Oct 04 06:49                      | o° mp                                    |             |
| _                   | 2747 Mar 08 22:17                      | $0^{\circ}\mathbf{\Upsilon}$      |            |                           | 2749 Oct 29 18:47                      | 0∘ <b>ত</b>                              |             |
|                     | 2747 Apr 02 01:26                      | $8^{\circ}$ 0                     |            |                           | 2749 Nov 23 10:43                      | 0°M                                      |             |
| asc. node           | 2747 Apr 19 07:34                      | 21° <b>8</b> 16'00                |            |                           | 2749 Dec 17 15:57                      | 0° <b>∡</b> ¹                            |             |
|                     | 2747 Apr 26 10:43                      | $\Pi^{\circ}0$                    |            |                           | 2750 Jan 10 16:07                      | 8°0                                      |             |
|                     | 2747 May 21 04:12                      | 0ංම                               |            | desc. node                | 2750 Jan 23 16:09                      | 16° <b>る</b> 17'37                       |             |
|                     | 2747 Jun 15 09:01                      | $0^{\circ}\Omega$                 |            |                           | 2750 Feb 03 14:24                      | 0° <b>≈</b>                              |             |
|                     | 2747 Jul 11 07:44                      | 0° <b>m</b> ∕                     |            | morning set               | 2750 Feb 20 18:58                      | 21° <b>≈</b> 33'13                       |             |
|                     | 2747 Aug 07 16:39                      | 0∘ <b>⊽</b>                       |            |                           | 2750 Feb 27 12:43                      | 0° <b>ℋ</b>                              |             |
| desc. node          | 2747 Aug 08 20:56                      | 1° <b>≙</b> 14'05                 |            |                           | 2750 Mar 23 12:29                      | $0$ ° $\Upsilon$                         |             |
| evening max el      | 2747 Aug 24 16:46                      | 17° <b>≏</b> 07'53                | 45°50'56   |                           |  |  |             |
|                     | 2747 Sep 08 00:39                      | 0°M₊                              |            | superior conj             | 2750 Apr 02 04:19                      | 12° <b>Υ</b> 02'44                       |             |
| greatest brilliancy | 2747 Oct 03 16:32                      | 15°M45'24                         | -4.8m      | minimum elong             | 2750 Apr 02 11:08                      | 12° <b>Y</b> 23′59                       |             |
| retrograde          | 2747 Oct 12 17:04                      | 17°ML15'07                        |            | max. Earth dist.          | 2750 Apr 06 01:41                      |  | 1.72190 AU  |
| evening set         | 2747 Oct 29 01:19                      | 12°M11'57                         |            |                           | 2750 Apr 16 14:55                      | 0° <b>8</b>                              |             |
| inferior conj       | 2747 Nov 02 14:32                      | 9°M29'17                          |            |                           | 2750 May 10 20:54                      | 0°II                                     |             |
| minimum elong       | 2747 Nov 03 01:00                      | 9°M13'15                          |            | evening rise              | 2750 May 11 04:12                      | 0° <b>П</b> 22'30                        |             |
| min. Earth dist.    | 2747 Nov 03 13:32                      | 8°M.54'03                         | 0.27369 AU | asc. node                 | 2750 May 16 19:30                      | 7°∏19'09<br>0°∽                          |             |
| morning rise        | 2747 Nov 08 00:00                      | 6°M16'28                          |            |                           | 2750 Jun 04 06:45                      | 0ა <b>V</b>                              |             |
| direct<br>asc. node | 2747 Nov 23 11:38<br>2747 Nov 30 00:08 | 1°M33'43<br>2°M23'06              |            |                           | 2750 Jun 28 20:41<br>2750 Jul 23 15:36 | 0° <b>m</b> y                            |             |
| greatest brilliancy | 2747 Nov 30 00:08<br>2747 Dec 04 16:00 | 3°M53'42                          | -4.9m      |                           | 2750 Aug 17 17:51                      | 0∘ <b>ت</b><br>۱۱۱۸                      |             |
| greatest offinalicy | 2748 Jan 08 07:34                      | 0° <b>√</b>                       | -4.9111    | desc. node                | 2750 Sep 05 08:49                      | 0 <b>=</b><br>21° <b>⊆</b> 55'20         |             |
| morning max el      | 2748 Jan 13 04:45                      | 4° <b>₹</b> 753'02                | 46°56'55   | dese. Hode                | 2750 Sep 12 07:38                      | 0°M                                      |             |
| morning max or      | 2748 Feb 05 11:31                      | 0°る                               | 10 20 23   |                           | 2750 Oct 08 17:25                      | 0° <b>⊼</b> 7                            |             |
|                     | 2748 Mar 02 10:23                      | 0° <b>≈</b>                       |            | evening max el            | 2750 Nov 05 21:31                      | 29° <b>₹</b> '51'48                      | 46°56'17    |
| desc. node          | 2748 Mar 20 13:51                      | 21° <b>≈</b> 34'34                |            | evening man er            | 2750 Nov 06 00:49                      | ੈ°ਰ<br>ਹ°ਰ                               | .0 0017     |
|                     | 2748 Mar 27 14:19                      | 0° <b>\</b>                       |            |                           | 2750 Dec 14 19:30                      | 0° <b>≈</b>                              |             |
|                     | 2748 Apr 21 10:22                      | 0° <b>Υ</b>                       |            | greatest brilliancy       | 2750 Dec 16 06:40                      | 0° <b>≈</b> 33'59                        | -4.9m       |
|                     | 2748 May 16 03:12                      | $9^{\circ}$ 8                     |            | retrograde                | 2750 Dec 26 08:04                      | 2° <b>≈</b> 29'00                        |             |
|                     | 2748 Jun 09 18:33                      | $\Pi^{\circ}0$                    |            | asc. node                 | 2750 Dec 27 12:02                      | 2° <b>≈</b> 27'19                        |             |
|                     | 2748 Jul 04 08:21                      | 0°©                               |            |                           | 2751 Jan 06 07:50                      | 30°Rる                                    |             |
| asc. node           | 2748 Jul 11 17:06                      | 9° <b>5</b> 00'41                 |            | evening set               | 2751 Jan 10 00:02                      | 28° <b>る</b> 10'50                       |             |
| morning set         | 2748 Jul 15 07:46                      | 13° <b>5</b> 26'09                |            | inferior conj             | 2751 Jan 15 20:39                      | 24° <b>る</b> 43'43                       | 4°47'12     |
|                     | 2748 Jul 28 19:42                      | $0^{\circ}\Omega$                 |            | minimum elong             | 2751 Jan 15 11:09                      | 24° <b>る</b> 58'14                       | 4°44'36     |
| max. Earth dist.    | 2748 Aug 17 23:59                      | 24° <b>Ω</b> 51′02                | 1.73214 AU | min. Earth dist.          | 2751 Jan 15 06:28                      | 25° <b>る</b> 05'23                       | 0.26568 AU  |
|                     |  | _                                 |            | morning rise              | 2751 Jan 20 22:37                      | 21° <b>る</b> 43'19                       |             |
| superior conj       | 2748 Aug 20 17:46                      | 28° <b>Ω</b> 14'05                |            | direct                    | 2751 Feb 05 06:20                      | 17° <b>る</b> 05'22                       |             |
| minimum elong       | 2748 Aug 20 10:46                      | 27° <b>£</b> 52′28                | 1°16'29    | greatest brilliancy       | 2751 Feb 14 17:14                      | 18° <b>る</b> 47'53                       | -4.9m       |
|                     | 2748 Aug 22 04:05                      | 0° Mp                             |            |                           | 2751 Mar 05 19:11                      | 0°≈                                      | 4.000.011.0 |
|                     | 2748 Sep 15 09:54                      | 0° <b>⊽</b>                       |            | morning max el            | 2751 Mar 27 10:27                      | 19°≈28'08                                | 46°39'19    |
| evening rise        | 2748 Sep 26 04:03                      | 13° <b>£</b> 20′20                |            |                           | 2751 Apr 06 17:28                      | 0° <del>)(</del>                         |             |
| dogo r 1-           | 2748 Oct 09 14:20                      | 0°M                               |            | desc. node                | 2751 Apr 18 01:45                      | 12° <b>升</b> 10′29                       |             |
| desc. node          | 2748 Oct 31 06:45                      | 26° <b>™</b> 54'48<br>0° <b>҂</b> |            |                           | 2751 May 04 01:46                      | 0° <b>႘</b>                              |             |
|                     | 2748 Nov 02 18:27                      | 0°ਣਾ                              |            |                           | 2751 May 30 02:41<br>2751 Jun 24 13:43 | 0°U                                      |             |
|                     | 2748 Nov 26 22:58<br>2748 Dec 21 04:59 | 0° <b>∞</b>                       |            |                           | 2751 Jun 24 13:43<br>2751 Jul 19 16:08 | 0₀ <b>©</b><br>0∘п                       |             |
|                     | 2170 DCC 21 04.39                      | · ~                               |            |                           | 2131 Jul 19 10.00                      | υ - <b>3</b>                             |             |

| asc. node                      | 2751 Aug 09 04:50                      | 24° <b>©</b> 48'56                       |                  | evening max el      | 2754 Jan 17 07:08                      | 13° <b>)</b> 39'54                 | 47°11'22   |
|--------------------------------|--|--|------------------|---------------------|--|------------------------------------|------------|
| asc. node                      | 2751 Aug 13 11:06                      | 0°Ω                                      |                  | asc. node           | 2754 Jan 23 23:50                      | 20° <b>¥</b> 19'50                 | 4/ 1122    |
|                                | 2751 Sep 06 22:56                      | 0° m)                                    |                  | use. Houe           | 2754 Feb 03 13:04                      | 0°Υ                                |            |
| morning set                    | 2751 Sep 22 14:25                      | 19° <b>m</b> ) 20'04                     |                  | greatest brilliancy | 2754 Feb 26 19:26                      | 15°Υ10'26                          | -4.9m      |
| <i>5 5 1 1 1 1 1 1 1 1 1 1</i> | 2751 Oct 01 04:41                      | 0∘ <u>⊽</u>                              |                  | retrograde          | 2754 Mar 09 02:58                      | 17° <b>Y</b> °11′26                |            |
|                                | 2751 Oct 25 06:15                      | 0°M                                      |                  | evening set         | 2754 Mar 27 00:00                      | 11° <b>Y</b> ′01'06                |            |
| max. Earth dist.               | 2751 Oct 27 06:47                      | 2°M31'37                                 | 1.71867 AU       | inferior conj       | 2754 Mar 30 03:21                      | 9° <b>Y</b> 03'36                  | 8°29'00    |
|                                |  |  |                  | minimum elong       | 2754 Mar 30 09:01                      | 8° <b>Y</b> 54'41                  | 8°28'31    |
| superior conj                  | 2751 Oct 30 01:47                      | 6° <b>™</b> 00'58                        | 1°03'13          | min. Earth dist.    | 2754 Mar 29 18:46                      | 9° <b>Y</b> 17'08                  | 0.27906 AU |
| minimum elong                  | 2751 Oct 30 11:55                      | 6° <b>™</b> 32'41                        | 1°02'52          | morning rise        | 2754 Apr 02 18:13                      | 6° <b>Ƴ</b> 49'07                  |            |
|                                | 2751 Nov 18 05:34                      | 0° <b>∡</b> ¹                            |                  | direct              | 2754 Apr 20 01:06                      | 1° <b>Y</b> 04'51                  |            |
| desc. node                     | 2751 Nov 28 18:39                      | 13° <b>∡</b> 12'51                       |                  | greatest brilliancy | 2754 Apr 29 09:21                      | 2° <b>Y</b> '41'40                 | -4.8m      |
| evening rise                   | 2751 Dec 08 22:05                      | 25° <b>₹</b> 55'56                       |                  | desc. node          | 2754 May 15 13:26                      | 11° <b>Y</b> 25'33                 |            |
|                                | 2751 Dec 12 03:56                      | 8°0                                      |                  |                     | 2754 Jun 06 12:26                      | $0^{\circ}$ 8                      |            |
|                                | 2752 Jan 05 02:14                      | 0° <b>≈</b>                              |                  | morning max el      | 2754 Jun 08 03:52                      | 1° <b>8</b> 34'24                  | 45°55'40   |
|                                | 2752 Jan 29 01:49                      | 0° <b>∀</b>                              |                  |                     | 2754 Jul 05 16:22                      | $\Pi$ °0                           |            |
|                                | 2752 Feb 22 05:16                      | $0^{\circ}$ Y                            |                  |                     | 2754 Aug 01 11:56                      | $0$ $\circ$                        |            |
|                                | 2752 Mar 17 16:37                      | 0°8                                      |                  |                     | 2754 Aug 27 05:24                      | $0^{\circ}\Omega$                  |            |
| asc. node                      | 2752 Mar 20 21:40                      | 3° <b>8</b> 53'30                        |                  | asc. node           | 2754 Sep 05 16:47                      | 11° <b>Ω</b> 16'42                 |            |
|                                | 2752 Apr 11 17:39                      | $\Pi$ °0                                 |                  |                     | 2754 Sep 21 05:41                      | 0° <b>™</b>                        |            |
|                                | 2752 May 07 18:19                      | $0$ $\circ$ $\odot$                      |                  |                     | 2754 Oct 15 17:37                      | 0∘ <b>⊽</b>                        |            |
|                                | 2752 Jun 04 20:09                      | $0$ $^{\circ}\Omega$                     |                  |                     | 2754 Nov 08 21:19                      | 0°M₊                               |            |
| evening max el                 | 2752 Jun 10 18:17                      | 5° <b>Ω</b> 49'02                        | 45°26'51         |                     | 2754 Dec 02 20:19                      | 0° <b>∡</b>                        |            |
| desc. node                     | 2752 Jul 10 11:10                      | 29° <b>Ω</b> 36′28                       |                  | morning set         | 2754 Dec 03 08:18                      | 0° <b>∡</b> ³37'37<br>_            |            |
|                                | 2752 Jul 11 03:50                      | 0°Ту                                     |                  | desc. node          | 2754 Dec 26 06:20                      | 29° <b>∡</b> ¹26′04                |            |
| greatest brilliancy            | 2752 Jul 18 21:11                      | 3° Tp 34'10                              | -4.7m            |                     | 2754 Dec 26 17:07                      | 0°る                                |            |
| retrograde                     | 2752 Jul 29 08:10                      | 5° Tp 31'22                              |                  |                     |  |                                    |            |
| evening set                    | 2752 Aug 15 07:00                      | 0° TD 06'53                              |                  | superior conj       | 2755 Jan 13 10:05                      | 22°る17'01                          |            |
|                                | 2752 Aug 15 11:43                      | 30°R€                                    | <b>5</b> 0.41150 | minimum elong       | 2755 Jan 13 00:02                      | 21°₹45'25                          |            |
| inferior conj                  | 2752 Aug 19 19:07                      | 27° <b>Ω</b> 21'42                       |                  | max. Earth dist.    | 2755 Jan 14 00:32                      | 23° <b>る</b> 02'29                 | 1.71086 AU |
| minimum elong                  | 2752 Aug 19 11:00                      | 27° <b>Ω</b> 34'23                       |                  |                     | 2755 Jan 19 13:16                      | 0° <b>≈</b>                        |            |
| min. Earth dist.               | 2752 Aug 19 21:45                      | 27° <b>Ω</b> 17'35                       | 0.28957 AU       |                     | 2755 Feb 12 10:04                      | 0° <b>)</b><br>14° <b>¥</b> 04!42  |            |
| morning rise<br>direct         | 2752 Aug 23 14:53                      | 25° <b>Ω</b> 00'21<br>19° <b>Ω</b> 05'01 |                  | evening rise        | 2755 Feb 23 15:34<br>2755 Mar 08 09:06 | 14° <b>)</b> €04'43<br>0° <b>°</b> |            |
| greatest brilliancy            | 2752 Sep 10 10:10<br>2752 Sep 21 01:26 | 21°Ω08'16                                | 1 9m             |                     | 2755 Apr 01 12:21                      | 0° <b>8</b>                        |            |
| greatest billiancy             | 2752 Oct 06 18:02                      | 0° m                                     | -4.0111          | asc. node           | 2755 Apr 18 09:40                      | 20° <b>8</b> 48'31                 |            |
| morning max el                 | 2752 Oct 30 03:43                      | 20° Mp 30'41                             | 46°20'17         | asc. node           | 2755 Apr 25 21:52                      | 20 <b>О</b> 40 31                  |            |
| asc. node                      | 2752 Oct 30 05:43                      | 21° mp 57'09                             | 40 20 17         |                     | 2755 May 20 15:48                      | 0ಂ <b>ತಾ</b>                       |            |
| ase. Hode                      | 2752 Nov 08 10:11                      | 0° <u>م</u>                              |                  |                     | 2755 Jun 14 21:29                      | $0 {\circ} {\mathfrak O}$          |            |
|                                | 2752 Dec 05 09:20                      | 0°M                                      |                  |                     | 2755 Jul 10 21:54                      | 0° m)                              |            |
|                                | 2752 Dec 30 16:34                      | 0° <b>⊼</b> 7                            |                  |                     | 2755 Aug 07 10:46                      | 0∘ <b>⊽</b>                        |            |
|                                | 2753 Jan 24 07:16                      | 0°る                                      |                  | desc. node          | 2755 Aug 07 22:59                      | 0° <b>Ω</b> 31'45                  |            |
|                                | 2753 Feb 17 14:56                      | 0° <b>≈</b>                              |                  | evening max el      | 2755 Aug 22 06:00                      | 14° <b>≏</b> 49'30                 | 45°49'08   |
| desc. node                     | 2753 Feb 20 03:58                      | 3°≈08'53                                 |                  | Ü                   | 2755 Sep 08 10:30                      | 0°M                                |            |
|                                | 2753 Mar 13 20:00                      | 0° <b>)</b> €                            |                  | greatest brilliancy | 2755 Oct 01 04:58                      | 13°M24'31                          | -4.8m      |
|                                | 2753 Apr 07 00:52                      | $0$ ° $\Upsilon$                         |                  | retrograde          | 2755 Oct 10 06:15                      | 14°M54'55                          |            |
|                                | 2753 May 01 06:59                      | 0°8                                      |                  | evening set         | 2755 Oct 26 17:43                      | 9°M46'20                           |            |
| morning set                    | 2753 May 05 13:12                      | 5° <b>8</b> 15'28                        |                  | inferior conj       | 2755 Oct 31 03:58                      | 7° <b>M</b> 07'58                  | -6°30'55   |
|                                | 2753 May 25 14:53                      | $\Pi$ °0                                 |                  | minimum elong       | 2755 Oct 31 14:25                      | 6°M52′00                           | 6°28'43    |
|                                |  |  |                  | min. Earth dist.    | 2755 Nov 01 03:19                      | 6°M32'16                           | 0.27439 AU |
| superior conj                  | 2753 Jun 11 23:32                      | 21° <b>Ⅱ</b> 21'41                       |                  | morning rise        | 2755 Nov 05 10:29                      | 3°M59'29                           |            |
| minimum elong                  | 2753 Jun 12 00:13                      | 21° <b>Ⅱ</b> 23'45                       | 0°03'09          |                     | 2755 Nov 14 19:00                      | 30°Ŗ <u>Ω</u>                      |            |
| behind sun begin               | 2753 Jun 11 01:40                      | 20° <b>Ⅱ</b> 14'27                       |                  | direct              | 2755 Nov 21 01:57                      | 29° <b>≙</b> 11'06                 |            |
| behind sun end                 | 2753 Jun 12 22:45                      | 22° <b>Ⅱ</b> 33'03                       |                  |                     | 2755 Nov 27 13:16                      | $0^{\circ}$ M                      |            |
| max. Earth dist.               | 2753 Jun 12 21:47                      | 22° <b>Ⅱ</b> 30′05                       | 1.73449 AU       | asc. node           | 2755 Nov 29 02:10                      | 0°M25'05                           |            |
| asc. node                      | 2753 Jun 13 07:16                      | 22° <b>∏</b> 59'11                       |                  | greatest brilliancy | 2755 Dec 02 07:02                      | 1°M32'14                           | -4.9m      |
|                                | 2753 Jun 19 00:10                      | 0°€                                      |                  |                     | 2756 Jan 08 07:25                      | 0° <b>∡</b> ¹                      |            |
|                                | 2753 Jul 13 10:04                      | $0$ ° $\Omega$                           |                  | morning max el      | 2756 Jan 10 19:47                      | 2° <b>∡</b> ³32'19                 | 46°56'37   |
| evening rise                   | 2753 Jul 18 07:56                      | 6° <b>Ω</b> 02'01                        |                  |                     | 2756 Feb 05 04:04                      | ್ತ                                 |            |
|                                | 2753 Aug 06 20:17                      | 0° <b>m</b> y                            |                  |                     | 2756 Mar 02 00:18                      | 0° <b>≈</b>                        |            |
|                                | 2753 Aug 31 07:30                      | 0∘ <b>亚</b>                              |                  | desc. node          | 2756 Mar 19 15:59                      | 21°≈02'15                          |            |
|                                | 2753 Sep 24 20:56                      | 0°M                                      |                  |                     | 2756 Mar 27 02:54                      | 0° <b>){</b>                       |            |
| desc. node                     | 2753 Oct 02 20:52                      | 9° <b>ጤ</b> 44'01                        |                  |                     | 2756 Apr 20 22:09                      | $^{\circ \gamma}$                  |            |
|                                | 2753 Oct 19 13:56                      | 0° <b>∡</b><br>0° <b>≥</b>               |                  |                     | 2756 May 15 14:27                      | 0° <b>Β</b>                        |            |
|                                | 2753 Nov 13 12:21                      | 6°0                                      |                  |                     | 2756 Jun 09 05:27                      | 0° <b>∏</b>                        |            |
|                                | 2753 Dec 08 21:22                      | 0° <b>≈</b>                              |                  | aga noda            | 2756 Jul 03 19:02                      | 0°©                                |            |
|                                | 2754 Jan 04 08:54                      | 0° <b>)</b> €                            |                  | asc. node           | 2756 Jul 10 19:04                      | 8° <b>©</b> 34'05                  |            |

| . ,                 | 2756 1 1 12 01 41                      | 110601100            |                    | · r d r d  | 2750 1 12 10 40                        | 220=225114             | 0.26541 ATT           |
|---------------------|--|----------------------|--------------------|--|--|------------------------|-----------------------|
| morning set         | 2756 Jul 13 01:41                      | 11°521'23            |                    | min. Earth dist.   | 2759 Jan 12 19:40                      |                        | 0.26541 AU            |
| Dardh diad          | 2756 Jul 28 06:17                      | 0°Ω                  | 1.73248 AU         | morning rise<br>direct   | 2759 Jan 18 13:48<br>2759 Feb 02 18:53 | 19°る10'27<br>14°る37'13 |                       |
| max. Earth dist.    | 2756 Aug 15 21:26                      | 22 8630 29           | 1./3246 AU         | greatest brilliancy  | 2759 Feb 12 06:28                      | 14 <b>3</b> 3713       | 4.0m                  |
| superior conj       | 2756 Aug 18 11:46                      | 26° <b>Ω</b> 08'47   | 1015112            | greatest billiancy   | 2759 Mar 06 09:24                      | 0°≈                    | -4.9111               |
| minimum elong       | 2756 Aug 18 04:23                      | 25°Ω46'00            | 1°15'12<br>1°15'02 | morning max el   | 2759 Mar 24 23:20                      | 0 ∞<br>17°≈03'13       | 46°40'41              |
| minimum clong       | 2756 Aug 21 14:39                      | 0° m)                | 1 13 02            | morning max ci   | 2759 Apr 06 12:59                      | 0° <b>∺</b>            | 40 40 41              |
|                     | 2756 Sep 14 20:35                      | 0° <del>م</del>      |                    | desc. node   | 2759 Apr 17 03:45                      | 11° <b>)</b> 28'40     |                       |
| evening rise        | 2756 Sep 23 20:20                      | 11° <b>≏</b> 08'43   |                    | desc. node   | 2759 May 03 16:51                      | 0°Υ                    |                       |
| e vennig rise       | 2756 Oct 09 01:12                      | 0°M                  |                    |  | 2759 May 29 15:49                      | 0°8                    |                       |
| desc. node          | 2756 Oct 30 08:46                      | 26°M26'41            |                    |  | 2759 Jun 24 01:45                      | 0°II                   |                       |
|                     | 2756 Nov 02 05:34                      | 0° <b>⊼</b>          |                    |  | 2759 Jul 19 03:32                      | 0°©                    |                       |
|                     | 2756 Nov 26 10:25                      | 0°⋜                  |                    | asc. node  | 2759 Aug 08 06:59                      | 24°521'47              |                       |
|                     | 2756 Dec 20 16:53                      | 0° <b>≈</b>          |                    |  | 2759 Aug 12 22:08                      | $0^{\circ}\Omega$      |                       |
|                     | 2757 Jan 14 03:57                      | 0° <b>)</b> €        |                    |  | 2759 Sep 06 09:48                      | 0° m)                  |                       |
|                     | 2757 Feb 08 02:18                      | $0$ ° $\Upsilon$     |                    | morning set  | 2759 Sep 20 06:58                      | 17° <b>m</b> 09'07     |                       |
| asc. node           | 2757 Feb 20 11:48                      | 14° <b>Ƴ</b> 31'49   |                    | , and the second | 2759 Sep 30 15:31                      | 0∘ <u>v</u>            |                       |
|                     | 2757 Mar 06 02:09                      | 0° <b>႘</b>          |                    | max. Earth dist.   | 2759 Oct 24 16:25                      | 29° <b>≏</b> 57'44     | 1.71918 AU            |
| evening max el      | 2757 Mar 29 18:34                      | 25° <b>8</b> 07'38   | 46°14'04           |  | 2759 Oct 24 17:09                      | $0^{\circ}$ M          |                       |
| •                   | 2757 Apr 03 18:56                      | $\Pi^{\circ}0$       |                    |  |  |                        |                       |
| greatest brilliancy | 2757 May 07 09:14                      | 24° <b>Ⅲ</b> 21'35   | -4.8m              | superior conj  | 2759 Oct 27 16:09                      | 3°M41'47               | 1°05'32               |
| retrograde          | 2757 May 18 09:29                      | 26° <b>Ⅲ</b> 34'52   |                    | minimum elong  | 2759 Oct 28 02:06                      | 4° <b>™</b> 12'54      | 1°05'13               |
| evening set         | 2757 Jun 02 13:03                      | 22° <b>Ⅲ</b> 05′05   |                    |  | 2759 Nov 17 16:34                      | 0°∡7                   |                       |
| inferior conj       | 2757 Jun 08 18:48                      | 18° <b>Ⅲ</b> 19'41   | 0°46'41            | desc. node   | 2759 Nov 27 20:35                      | 12° <b>∡</b> ⁴44'18    |                       |
| minimum elong       | 2757 Jun 08 20:31                      | 18° <b>Ⅱ</b> 16'59   | 0°46'11            | evening rise   | 2759 Dec 06 09:21                      | 23° <b>₹</b> ¹25'56    |                       |
| min. Earth dist.    | 2757 Jun 08 16:12                      | 18° <b>Ⅲ</b> 23'44   | 0.28761 AU         |  | 2759 Dec 11 15:04                      | 5°0                    |                       |
| desc. node          | 2757 Jun 12 01:14                      | 16° <b>Ⅱ</b> 18'14   |                    |  | 2760 Jan 04 13:30                      | 0° <b>≈</b>            |                       |
| morning rise        | 2757 Jun 15 04:18                      | 14° <b>Ⅱ</b> 29'38   |                    |  | 2760 Jan 28 13:16                      | 0° <b>)</b> €          |                       |
| direct              | 2757 Jun 30 06:06                      | 10° <b>Ⅱ</b> 05'49   |                    |  | 2760 Feb 21 17:00                      | $0$ ° $\Upsilon$       |                       |
| greatest brilliancy | 2757 Jul 10 10:20                      | 11° <b>Ⅱ</b> 57'51   | -4.7m              |  | 2760 Mar 17 04:50                      | $0^{\circ}$ 8          |                       |
|                     | 2757 Aug 07 05:44                      | 0                    |                    | asc. node  | 2760 Mar 19 23:44                      | 3° <b>8</b> 22'35      |                       |
| morning max el      | 2757 Aug 18 00:48                      | 9° <b>©</b> 49'22    | 45°44'55           |  | 2760 Apr 11 06:48                      | $\Pi$ °0               |                       |
|                     | 2757 Sep 06 21:46                      | $0$ $^{\circ}\Omega$ |                    |  | 2760 May 07 09:25                      | 0ಂತಾ                   |                       |
| asc. node           | 2757 Oct 03 04:42                      | 29° <b>Ω</b> 14'06   |                    |  | 2760 Jun 04 16:38                      | $0$ ° $\Omega$         |                       |
|                     | 2757 Oct 03 20:39                      | 0° <b>™</b>          |                    | evening max el   | 2760 Jun 08 09:18                      | 3° <b>Ω</b> 36′18      | 45°27'25              |
|                     | 2757 Oct 29 07:16                      | 0∘ <b>⊽</b>          |                    | desc. node   | 2760 Jul 09 13:15                      | 28° <b>Ω</b> 14'20     |                       |
|                     | 2757 Nov 22 22:31                      | 0°M                  |                    |  | 2760 Jul 13 01:55                      | 0° <b>m</b> )          |                       |
|                     | 2757 Dec 17 03:23                      | 0° ⊀ <sup>7</sup>    |                    | greatest brilliancy  | 2760 Jul 16 12:27                      | 1° Th 24'14            | -4.7m                 |
|                     | 2758 Jan 10 03:20                      | 0°る                  |                    | retrograde   | 2760 Jul 26 23:28                      | 3° Tp 22'02            |                       |
| desc. node          | 2758 Jan 22 18:07                      | 15°₹48'52            |                    |  | 2760 Aug 09 04:22                      | 30°RΩ                  |                       |
|                     | 2758 Feb 03 01:29                      | 0° <b>≈</b>          |                    | evening set  | 2760 Aug 12 19:54                      | 28° <b>Ω</b> 01'57     | 7022120               |
| morning set         | 2758 Feb 18 05:06                      | 19° <b>≈</b> 00'08   |                    | inferior conj  | 2760 Aug 17 11:19                      | 25° <b>Ω</b> 11'59     |                       |
|                     | 2758 Feb 26 23:41<br>2758 Mar 22 23:19 | 0° <b>Υ</b>          |                    | minimum elong<br>min. Earth dist.  | 2760 Aug 17 02:46<br>2760 Aug 17 13:28 | 25°Ω25'21<br>25°Ω08'37 | 7°31'18<br>0.28976 AU |
|                     | 2/36 Widi 22 23.19                     | 0 1                  |                    | morning rise   | 2760 Aug 21 09:29                      | 23° <b>Ω</b> 46'51     | 0.28970 AU            |
| superior conj       | 2758 Mar 30 17:18                      | 9° <b>Ƴ</b> 39'55    | 1°22'45            | direct   | 2760 Sep 08 02:05                      | 16°Ω55'01              |                       |
| minimum elong       | 2758 Mar 30 17:18<br>2758 Mar 30 23:24 | 9° <b>Υ</b> 58'58    |                    | greatest brilliancy  | 2760 Sep 18 17:36                      | 18° <b>Ω</b> 57'52     | -4.8m                 |
| max. Earth dist.    | 2758 Apr 03 16:12                      |                      | 1.72134 AU         | greatest orimaney  | 2760 Oct 07 08:27                      | 0° m)                  | 4.0111                |
| Zurur dist.         | 2758 Apr 05 10:12<br>2758 Apr 16 01:40 | 0°8                  | 1.,215.110         | morning max el   | 2760 Oct 27 17:41                      | עיי<br>18° My 11'57    | 46°18'35              |
| evening rise        | 2758 May 08 19:47                      | 28° <b>8</b> 09'26   |                    | asc. node  | 2760 Oct 30 16:24                      | 21° mp 08'55           | .0 1035               |
| evening rise        | 2758 May 10 07:39                      | 0°II                 |                    | use. noue  | 2760 Nov 08 05:00                      | 0∘ <b>⊽</b>            |                       |
| asc. node           | 2758 May 15 21:28                      | 6° <b>П</b> 52'09    |                    |  | 2760 Dec 05 00:14                      | 0°M                    |                       |
|                     | 2758 Jun 03 17:36                      | 0°ಅ                  |                    |  | 2760 Dec 30 05:53                      | 0° <b>∡</b> ¹          |                       |
|                     | 2758 Jun 28 07:47                      | $0^{\circ}\Omega$    |                    |  | 2761 Jan 23 19:45                      | ರ°0                    |                       |
|                     | 2758 Jul 23 03:12                      | 0° <b>m</b> )        |                    |  | 2761 Feb 17 02:52                      | 0° <b>≈</b>            |                       |
|                     | 2758 Aug 17 06:16                      | 0∘ <b>⊽</b>          |                    | desc. node   | 2761 Feb 19 06:09                      | 2° <b>≈</b> 38'46      |                       |
| desc. node          | 2758 Sep 04 10:55                      | 21° <b>≏</b> 22'25   |                    |  | 2761 Mar 13 07:32                      | 0° <b>∀</b>            |                       |
|                     | 2758 Sep 11 21:29                      | 0°M                  |                    |  | 2761 Apr 06 12:07                      | $0^{\circ}$ Y          |                       |
|                     | 2758 Oct 08 10:04                      | 0° <b>∡</b> 7        |                    |  | 2761 Apr 30 18:02                      | $0^{\circ}$ 8          |                       |
| evening max el      | 2758 Nov 03 12:10                      | 27° <b>∡</b> ³30'55  | 46°54'19           | morning set  | 2761 May 03 04:49                      | 3° <b>8</b> 01'33      |                       |
|                     | 2758 Nov 06 00:48                      | ರ°0                  |                    |  | 2761 May 25 01:48                      | $\Pi^{\circ}0$         |                       |
| greatest brilliancy | 2758 Dec 13 19:42                      | 28° <b>る</b> 05'31   | -4.9m              |  |  |                        |                       |
| retrograde          | 2758 Dec 23 20:37                      | 29° <b>る</b> 59'27   |                    | superior conj  | 2761 Jun 09 16:53                      | 19° <b>Ⅱ</b> 14′06     | -0°06'25              |
| asc. node           | 2758 Dec 26 14:00                      | 29° <b>る</b> 50'19   |                    | minimum elong  | 2761 Jun 09 18:15                      | 19° <b>∏</b> 18′18     | 0°06'22               |
| evening set         | 2759 Jan 07 10:13                      | 25° <b>る</b> 45'06   |                    | behind sun begin   | 2761 Jun 08 21:01                      | 18° <b>Ⅱ</b> 13'01     |                       |
| inferior conj       | 2759 Jan 13 08:52                      | 22° <b>る</b> 15'03   | 4°26'12            | behind sun end   | 2761 Jun 10 15:28                      | 20° <b>Ⅱ</b> 23'35     |                       |
| minimum elong       | 2759 Jan 12 23:50                      | 22° <b>る</b> 28'51   | 4°23'38            | max. Earth dist.   | 2761 Jun 10 16:45                      | 20° <b>Ⅱ</b> 27'31     | 1.73424 AU            |

| asc. node           | 2761 Jun 12 09:16                      | 22° <b>II</b> 32'04             |            | asc. node                         | 2763 Nov 28 04:08                      | 28° <b>£</b> 31'36                |            |
|---------------------|--|---------------------------------|------------|-----------------------------------|--|-----------------------------------|------------|
| asc. node           | 2761 Jun 18 11:00                      | 0°9                             |            | greatest brilliancy               | 2763 Nov 29 21:34                      | 29° <b>⊆</b> 10'16                | -4 9m      |
|                     | 2761 Jul 12 20:55                      | $0^{\circ}\Omega$               |            | greatest orimaney                 | 2763 Dec 01 20:02                      | 0°M                               | 1.5111     |
| evening rise        | 2761 Jul 16 02:47                      | 3° <b>Ω</b> 59'07               |            |                                   | 2764 Jan 08 06:29                      | 0° <b>∡</b> 7                     |            |
|                     | 2761 Aug 06 07:17                      | 0° m/                           |            | morning max el                    | 2764 Jan 08 11:12                      | 0° <b>√</b> 11'59                 | 46°55'57   |
|                     | 2761 Aug 30 18:47                      | 0∘ <u>⊽</u>                     |            |                                   | 2764 Feb 04 20:41                      | 0°₹                               |            |
|                     | 2761 Sep 24 08:43                      | 0°M                             |            |                                   | 2764 Mar 01 14:33                      | 0° <b>≈</b>                       |            |
| desc. node          | 2761 Oct 01 22:54                      | 9°M13'54                        |            | desc. node                        | 2764 Mar 18 17:56                      | 20°≈28'08                         |            |
|                     | 2761 Oct 19 02:24                      | 0°⊀                             |            |                                   | 2764 Mar 26 15:54                      | 0° <b>∀</b>                       |            |
|                     | 2761 Nov 13 01:51                      | 5°0                             |            |                                   | 2764 Apr 20 10:23                      | $0^{\circ}\mathbf{\Upsilon}$      |            |
|                     | 2761 Dec 08 12:38                      | 0° <b>≈</b>                     |            |                                   | 2764 May 15 02:08                      | $9^{\circ}$ 8                     |            |
|                     | 2762 Jan 04 03:59                      | 0° <b>∀</b>                     |            |                                   | 2764 Jun 08 16:44                      | $\Pi$ $^{\circ}$ 0                |            |
| evening max el      | 2762 Jan 14 20:28                      | 11° <b>)</b> 14'11              | 47°12'20   |                                   | 2764 Jul 03 06:03                      | $0$ $\circ$ $\odot$               |            |
| asc. node           | 2762 Jan 23 02:00                      | 19° <b>)</b> 23′01              |            | asc. node                         | 2764 Jul 09 21:11                      | 8° <b>©</b> 06'58                 |            |
|                     | 2762 Feb 03 23:21                      | $0^{\circ}\Upsilon$             |            | morning set                       | 2764 Jul 10 19:34                      | 9° <b>©</b> 15'33                 |            |
| greatest brilliancy | 2762 Feb 24 10:59                      | 12° <b>Y</b> 50'07              | -4.9m      |                                   | 2764 Jul 27 17:11                      | $0 ^{\circ} \Omega$               |            |
| retrograde          | 2762 Mar 06 17:25                      | 14° <b>Y</b> 50'48              |            | max. Earth dist.                  | 2764 Aug 13 18:43                      | 21° <b>Ω</b> 00′27                | 1.73278 AU |
| evening set         | 2762 Mar 24 16:22                      | 8° <b>Y</b> 37'58               |            |                                   |  |                                   |            |
| inferior conj       | 2762 Mar 27 17:52                      | 6° <b>Ƴ</b> 43'34               |            | superior conj                     | 2764 Aug 16 05:53                      | 24° <b>Ω</b> 02'57                | 1°13'41    |
| minimum elong       | 2762 Mar 27 22:46                      | 6° <b>Ƴ</b> 35'51               |            | minimum elong                     | 2764 Aug 15 22:10                      | 23° <b>Ω</b> 39'08                | 1°13'29    |
| min. Earth dist.    | 2762 Mar 27 08:50                      | 6° <b>Ƴ</b> 57'45               | 0.27863 AU |                                   | 2764 Aug 21 01:34                      | O° My                             |            |
| morning rise        | 2762 Mar 31 05:21                      | 4° <b>Ƴ</b> 34'17               |            |                                   | 2764 Sep 14 07:35                      | 0ಂ <b>ರಾ</b>                      |            |
|                     | 2762 Apr 09 18:22                      | 30° <b>₹</b>                    |            | evening rise                      | 2764 Sep 21 13:00                      | 8° <b>≏</b> 57'18                 |            |
| direct              | 2762 Apr 17 14:26                      | 28° <b>)</b> (45'19             |            |                                   | 2764 Oct 08 12:22                      | 0°M                               |            |
|                     | 2762 Apr 25 18:27                      | 0° <b>Υ</b>                     |            | desc. node                        | 2764 Oct 29 10:44                      | 25°M57'35                         |            |
| greatest brilliancy | 2762 Apr 26 23:09                      | 0° <b>Υ</b> 22'29               | -4.8m      |                                   | 2764 Nov 01 16:58                      | 0° <b>∡</b>                       |            |
| desc. node          | 2762 May 14 15:25                      | 10° <b>Y</b> 11'39              |            |                                   | 2764 Nov 25 22:09                      | 0°る                               |            |
| morning max el      | 2762 Jun 05 18:15                      | 29° <b>Y</b> 17'40              | 45°56'58   |                                   | 2764 Dec 20 05:05                      | 0° <b>≈</b>                       |            |
|                     | 2762 Jun 06 11:46                      | 8°0                             |            |                                   | 2765 Jan 13 16:49                      | 0° <b>)</b> €                     |            |
|                     | 2762 Jul 05 08:32                      | 0° <b>Ⅱ</b>                     |            |                                   | 2765 Feb 07 16:22                      | 0°Υ                               |            |
|                     | 2762 Aug 01 01:31                      | 0° <b>©</b>                     |            | asc. node                         | 2765 Feb 19 13:47                      | 13° <b>Y</b> 54'10                |            |
| 1                   | 2762 Aug 26 17:43                      | 0° <b>Ω</b>                     |            |                                   | 2765 Mar 05 18:45                      | 0°8                               | 46016110   |
| asc. node           | 2762 Sep 04 18:50                      | 10° <b>Ω</b> 46'47              |            | evening max el                    | 2765 Mar 27 11:01                      | 22° <b>႘</b> 54'53<br>0° <b>Ⅱ</b> | 46°16'19   |
|                     | 2762 Sep 20 17:21                      | 0 <b>் ⊽</b><br>0° M            |            | araataat hrillianay               | 2765 Apr 03 19:40                      | 0°П<br>22°П10'35                  | 4 9        |
|                     | 2762 Oct 15 04:57<br>2762 Nov 08 08:31 | 0°M                             |            | greatest brilliancy<br>retrograde | 2765 May 05 01:51<br>2765 May 16 02:15 | 24° <b>I</b> I23'36               | -4.0111    |
| morning set         | 2762 Nov 30 20:44                      | 28°M10'58                       |            | evening set                       | 2765 May 31 06:31                      | 19° <b>I</b> I52'30               |            |
| morning set         | 2762 Dec 02 07:29                      | 20 IIC1030<br>0°⊀7              |            | inferior conj                     | 2765 Jun 06 10:55                      | 16° <b>Ⅱ</b> 08'33                | 1°06'48    |
| desc. node          | 2762 Dec 02 07:25<br>2762 Dec 25 08:25 | 28° <b>×</b> <sup>7</sup> 57'26 |            | minimum elong                     | 2765 Jun 06 13:22                      |                                   | 1°06'05    |
| dese. Hode          | 2762 Dec 26 04:18                      | 0°る                             |            | min. Earth dist.                  | 2765 Jun 06 08:13                      |                                   | 0.28737 AU |
|                     | 2702 BCC 20 04.10                      | <b>° O</b>                      |            | desc. node                        | 2765 Jun 11 03:18                      | 13° <b>I</b> I16'41               | 0.20737710 |
| superior conj       | 2763 Jan 10 19:55                      | 19° <b>ප්</b> 41'39             | -0°38'15   | morning rise                      | 2765 Jun 12 20:40                      | 12° <b>I</b> I18'17               |            |
| minimum elong       | 2763 Jan 10 10:32                      | 19° <b>る</b> 12'08              |            | direct                            | 2765 Jun 27 22:29                      | 7° <b>I</b> 55'16                 |            |
| max. Earth dist.    | 2763 Jan 11 06:08                      |                                 |            | greatest brilliancy               | 2765 Jul 08 01:07                      | 9° <b>Ⅱ</b> 46'16                 | -4.7m      |
|                     | 2763 Jan 19 00:29                      | 0° <b>≈</b>                     |            | 8                                 | 2765 Aug 07 09:22                      | 0ಂತಾ                              |            |
|                     | 2763 Feb 11 21:19                      | 0° <b>)</b> €                   |            | morning max el                    | 2765 Aug 15 16:47                      | 7° <b>©</b> 39'17                 | 45°44'23   |
| evening rise        | 2763 Feb 21 01:57                      | 11° <b>)</b> 31'41              |            | C                                 | 2765 Sep 06 14:44                      | $0^{\circ}\Omega$                 |            |
|                     | 2763 Mar 07 20:23                      | $0^{\circ}\mathbf{\Upsilon}$    |            | asc. node                         | 2765 Oct 02 06:38                      | 28° <b>Ω</b> 39'18                |            |
|                     | 2763 Mar 31 23:43                      | $9^{\circ}$ 8                   |            |                                   | 2765 Oct 03 10:35                      | O° Mp                             |            |
| asc. node           | 2763 Apr 17 11:37                      | 20° <b>8</b> 19'18              |            |                                   | 2765 Oct 28 19:54                      | 0∘ <b>ত</b>                       |            |
|                     | 2763 Apr 25 09:27                      | $\Pi^{\circ}0$                  |            |                                   | 2765 Nov 22 10:29                      | $0^{\circ}$ M                     |            |
|                     | 2763 May 20 03:50                      | $0$ $\circ$ $\odot$             |            |                                   | 2765 Dec 16 14:59                      | 0° <b>∡</b> ¹                     |            |
|                     | 2763 Jun 14 10:24                      | $0^{\circ}\Omega$               |            |                                   | 2766 Jan 09 14:43                      | 0°ප                               |            |
|                     | 2763 Jul 10 12:36                      | 0° <b>m</b>                     |            | desc. node                        | 2766 Jan 21 20:18                      | 15° <b>පි</b> 20'16               |            |
| desc. node          | 2763 Aug 07 01:08                      | 29° <b>m</b> 48'12              |            |                                   | 2766 Feb 02 12:44                      | 0° <b>≈</b>                       |            |
|                     | 2763 Aug 07 05:43                      | 0∘ <b>ত</b>                     |            | morning set                       | 2766 Feb 15 15:32                      | 16° <b>≈</b> 27′23                |            |
| evening max el      | 2763 Aug 19 20:26                      | 12° <b>ჲ</b> 33′28              | 45°47'28   |                                   | 2766 Feb 26 10:49                      | 0° <b>∀</b>                       |            |
|                     | 2763 Sep 09 00:03                      | 0° <b>M</b> ₊                   |            |                                   | 2766 Mar 22 10:22                      | $0^{\circ}\mathbf{\Upsilon}$      |            |
| greatest brilliancy | 2763 Sep 28 17:08                      | 11°M03'33                       | -4.8m      |                                   |  |                                   |            |
| retrograde          | 2763 Oct 07 20:04                      | 12°M35'00                       |            | superior conj                     | 2766 Mar 28 06:09                      | 7° <b>Y</b> 16′00                 |            |
| evening set         | 2763 Oct 24 10:25                      | 7° <b>M</b> 21'17               |            | minimum elong                     | 2766 Mar 28 11:28                      | 7° <b>Y</b> 32'34                 |            |
| inferior conj       | 2763 Oct 28 17:43                      | 4°M46'57                        |            | max. Earth dist.                  | 2766 Apr 01 07:52                      | 12° <b>Y</b> 20′29                | 1.72083 AU |
| minimum elong       | 2763 Oct 29 04:03                      |                                 |            |                                   | 2766 Apr 15 12:40                      | 0°8                               |            |
| min. Earth dist.    | 2763 Oct 29 16:52                      |                                 | 0.27510 AU | evening rise                      | 2766 May 06 10:54                      | 25° <b>8</b> 54'02                |            |
| morning rise        | 2763 Nov 02 21:10                      | 1°M42'57                        |            | •                                 | 2766 May 09 18:39                      | 0°II                              |            |
| 4:                  | 2763 Nov 06 03:23                      | 30°R <b>Ω</b>                   |            | asc. node                         | 2766 May 14 23:30                      | 6° <b>Ⅱ</b> 24'27                 |            |
| direct              | 2763 Nov 18 16:57                      | 26° <b>≏</b> 49'07              |            |                                   | 2766 Jun 03 04:43                      | 0ං <b>වෙ</b>                      |            |

|                              |  | 0  |             |                                   |  |  |            |
|------------------------------|--|--|-------------|-----------------------------------|--|--|------------|
|                              | 2766 Jun 27 19:10                      | $0$ $\circ$ $\Omega$                     |             |                                   | 2769 Jan 23 08:02                      | 0°ප                                      |            |
|                              | 2766 Jul 22 15:03                      | 0° <b>m</b> )                            |             |                                   | 2769 Feb 16 14:38                      | 0° <b>≈</b>                              |            |
|                              | 2766 Aug 16 18:57                      | 0∘ <b>⊽</b>                              |             | desc. node                        | 2769 Feb 18 08:04                      | 2°≈08'21                                 |            |
| desc. node                   | 2766 Sep 03 12:55                      | 20° <b>≏</b> 48'28                       |             |                                   | 2769 Mar 12 18:55                      | 0° <b>)</b> €                            |            |
|                              | 2766 Sep 11 11:40                      | 0°M<br>0°. <b>₹</b>                      |             |                                   | 2769 Apr 05 23:13                      | 0°Υ<br>•••                               |            |
|                              | 2766 Oct 08 03:13                      | 0°×7                                     | 46050115    |                                   | 2769 Apr 30 04:55                      | 0°8                                      |            |
| evening max el               | 2766 Nov 01 02:01                      | 25° <b>₹</b> 07'44                       | 46°52'15    | morning set                       | 2769 Apr 30 20:27                      | 0° <b>8</b> 48'01                        |            |
| 4 41 711                     | 2766 Nov 06 02:06                      | 0°る                                      | 4.0         |                                   | 2769 May 24 12:32                      | $\Pi$ $^{\circ}$ 0                       |            |
| greatest brilliancy          | 2766 Dec 11 09:27                      | 25° <b>る</b> 37'51                       | -4.9m       |                                   | 27(0 1 07 10 12                        | 170 <b>T</b> 07100                       | 0000140    |
| retrograde<br>asc. node      | 2766 Dec 21 08:43<br>2766 Dec 25 16:09 | 27°る30'05<br>27°る07'18                   |             | superior conj                     | 2769 Jun 07 10:13<br>2769 Jun 07 12:17 | 17° <b>Ⅲ</b> 07'00<br>17° <b>Ⅲ</b> 13'21 | 0°09'34    |
| evening set                  | 2767 Jan 04 20:48                      | 27 <b>3</b> 07 18<br>23° <b>る</b> 19'11  |             | minimum elong<br>behind sun begin | 2769 Jun 06 17:41                      | 17 <b>Ш</b> 1321<br>16° <b>Ш</b> 16'10   | 0 09 34    |
| inferior conj                | 2767 Jan 04 20.48<br>2767 Jan 10 21:14 | 23 <b>3</b> 1911<br>19° <b>3</b> 46'45   | 4°04'42     | behind sun end                    | 2769 Jun 08 06:52                      | 18° <b>Ⅱ</b> 10′30                       |            |
| minimum elong                | 2767 Jan 10 21:14<br>2767 Jan 10 12:45 | 19° <b>ろ</b> 59'44                       | 4°02'13     | max. Earth dist.                  | 2769 Jun 08 11:56                      | 18° <b>Д</b> 26'06                       | 1.73401 AU |
| min. Earth dist.             | 2767 Jan 10 12.43<br>2767 Jan 10 09:25 | 19 03944<br>20°る04'50                    | 0.26516 AU  | asc. node                         | 2769 Jun 11 11:25                      | 22° <b>Ⅱ</b> 05'52                       | 1./3401 AU |
| morning rise                 | 2767 Jan 16 05:00                      | 20 <b>ප</b> 0430                         | 0.20310 AC  | asc. node                         | 2769 Jun 17 21:40                      | 0°95                                     |            |
| direct                       | 2767 Jan 31 07:04                      | 12° <b>る</b> 09'17                       |             |                                   | 2769 Jul 12 07:37                      | $0 {\circ} \mathcal{O}$                  |            |
| greatest brilliancy          | 2767 Feb 09 20:24                      | 13°る53'30                                | -4 9m       | evening rise                      | 2769 Jul 13 21:38                      | 1° <b>Ω</b> 56'40                        |            |
| greatest offinaley           | 2767 Mar 06 19:59                      | 0° <b>≈</b>                              | 1.7111      | evening rise                      | 2769 Aug 05 18:10                      | 0°m)                                     |            |
| morning max el               | 2767 Mar 22 11:14                      | 14° <b>≈</b> 35'41                       | 46°42'01    |                                   | 2769 Aug 30 05:59                      | 0∘ <del>⊽</del>                          |            |
| morning man er               | 2767 Apr 06 07:58                      | 0° <b>∀</b>                              | .0 .201     |                                   | 2769 Sep 23 20:23                      | 0°M                                      |            |
| desc. node                   | 2767 Apr 16 05:47                      | 10° <b>¥</b> 47'16                       |             | desc. node                        | 2769 Oct 01 00:52                      | 8°M43'53                                 |            |
|                              | 2767 May 03 07:48                      | 0° <b>Υ</b>                              |             |                                   | 2769 Oct 18 14:45                      | 0° <b>⊼</b> 7                            |            |
|                              | 2767 May 29 04:56                      | 0°8                                      |             |                                   | 2769 Nov 12 15:15                      | 0°ප                                      |            |
|                              | 2767 Jun 23 13:53                      | 0°П                                      |             |                                   | 2769 Dec 08 03:51                      | 0° <b>≈</b>                              |            |
|                              | 2767 Jul 18 15:03                      | 0∘ <b>ௐ</b>                              |             |                                   | 2770 Jan 03 23:19                      | 0° <b>)</b> €                            |            |
| asc. node                    | 2767 Aug 07 09:01                      | 23° <b>©</b> 53'57                       |             | evening max el                    | 2770 Jan 12 10:16                      | 8° <b>)</b> 50′24                        | 47°13'15   |
|                              | 2767 Aug 12 09:17                      | $0^{\circ}\Omega$                        |             | asc. node                         | 2770 Jan 22 04:00                      | 18° <b>¥</b> 25'17                       |            |
|                              | 2767 Sep 05 20:43                      | 0° <b>m</b> )                            |             |                                   | 2770 Feb 04 12:44                      | $0^{\circ}$ Y                            |            |
| morning set                  | 2767 Sep 17 23:31                      | 14° <b>m</b> 58'03                       |             | greatest brilliancy               | 2770 Feb 22 01:49                      | 10° <b>Y</b> ′29'31                      | -4.9m      |
| -                            | 2767 Sep 30 02:22                      | 0∘ <b>⊽</b>                              |             | retrograde                        | 2770 Mar 04 08:18                      | 12° <b>Y</b> '30'44                      |            |
| max. Earth dist.             | 2767 Oct 22 05:00                      | 27° <b>₽</b> 33'07                       | 1.71970 AU  | evening set                       | 2770 Mar 22 08:22                      | 6° <b>Y</b> 15'35                        |            |
|                              | 2767 Oct 24 04:02                      | $0^{\circ}$ M.                           |             | inferior conj                     | 2770 Mar 25 08:17                      | 4° <b>Y</b> 23'52                        | 8°40'37    |
|                              |  |  |             | minimum elong                     | 2770 Mar 25 12:26                      | 4° <b>Υ</b> 17'21                        | 8°40'21    |
| superior conj                | 2767 Oct 25 06:45                      | 1° <b>M</b> 23'25                        | 1°07'44     | min. Earth dist.                  | 2770 Mar 24 22:31                      | 4° <b>Υ</b> 39'11                        | 0.27820 AU |
| minimum elong                | 2767 Oct 25 16:29                      | 1°M53'50                                 | 1°07'27     | morning rise                      | 2770 Mar 28 16:40                      | 2° <b>Y</b> 19'34                        |            |
|                              | 2767 Nov 17 03:35                      | 0° <b>⊀</b> ¹                            |             |                                   | 2770 Apr 01 19:59                      | 30° <b>₹</b>                             |            |
| desc. node                   | 2767 Nov 26 22:41                      | 12° <b>⊀</b> 16'15                       |             | direct                            | 2770 Apr 15 04:02                      | 26° <b>∺</b> 26′10                       |            |
| evening rise                 | 2767 Dec 03 21:00                      | 20° <b>₰</b> 57'12                       |             | greatest brilliancy               | 2770 Apr 24 12:27                      | 28° <b>∺</b> 03′26                       | -4.8m      |
|                              | 2767 Dec 11 02:14                      | 0°る                                      |             |                                   | 2770 Apr 29 08:14                      | 0° <b>Υ</b>                              |            |
|                              | 2768 Jan 04 00:48                      | 0° <b>≈</b>                              |             | desc. node                        | 2770 May 13 17:29                      | 9° <b>Y</b> ′00'46                       |            |
|                              | 2768 Jan 28 00:43                      | 0° <b>∀</b>                              |             | morning max el                    | 2770 Jun 03 09:22                      | 27° <b>Y</b> ′03'34                      | 45°58'20   |
|                              | 2768 Feb 21 04:42                      | 0° <b>Υ</b>                              |             |                                   | 2770 Jun 06 09:48                      | 0° <b>8</b>                              |            |
|                              | 2768 Mar 16 17:02                      | 0°8                                      |             |                                   | 2770 Jul 05 00:05                      | 0°II                                     |            |
| asc. node                    | 2768 Mar 19 01:42                      | 2° <b>8</b> 51'27                        |             |                                   | 2770 Jul 31 14:40                      | 0°©                                      |            |
|                              | 2768 Apr 10 19:58                      | 0°Ⅱ                                      |             |                                   | 2770 Aug 26 05:43                      | 0°N                                      |            |
|                              | 2768 May 07 00:41                      | 0° <b>©</b>                              |             | asc. node                         | 2770 Sep 03 20:47                      | 10° <b>Ω</b> 17'22                       |            |
| ·                            | 2768 Jun 04 13:51                      | 0°Ω                                      | 45007157    |                                   | 2770 Sep 20 04:45                      | 0° <b>m</b> )                            |            |
| evening max el               | 2768 Jun 05 23:48                      | 1° <b>Ω</b> 22'13                        | 45-27:56    |                                   | 2770 Oct 14 16:04                      | ი∘ <b>ო</b><br>0∘ <b>ত</b>               |            |
| desc. node                   | 2768 Jul 08 15:22                      | 26° <b>Ω</b> 49'16<br>29° <b>Ω</b> 13'36 | 4.7         | marning gat                       | 2770 Nov 07 19:29                      | 0°ጤ<br>25°ጤ45'23                         |            |
| greatest brilliancy          | 2768 Jul 14 03:22                      | 0° m)                                    | -4./m       | morning set                       | 2770 Nov 28 09:15                      | 25°111645°25<br>0° <b>√</b> 1            |            |
| ratragrada                   | 2768 Jul 16 12:22<br>2768 Jul 24 15:06 | 1°Mg 12'36                               |             | desc. node                        | 2770 Dec 01 18:24<br>2770 Dec 24 10:31 | 0 <b>x</b> .<br>28° <b>x</b> 29'49       |            |
| retrograde                   | 2768 Aug 01 11:26                      | 30°RΩ                                    |             | desc. Hode                        | 2770 Dec 24 10.31<br>2770 Dec 25 15:12 | 28 X・2949                                |            |
| avaning sat                  | 2768 Aug 10 08:43                      | 25° <b>Ω</b> 56'37                       |             |                                   | 2770 Dec 23 13.12                      | 0.0                                      |            |
| evening set<br>inferior conj | 2768 Aug 15 03:27                      | 23° <b>Ω</b> 02'04                       | -7°22'22    | superior conj                     | 2771 Jan 08 05:41                      | 17° <b>る</b> 07'04                       | -0°34'36   |
| minimum elong                | 2768 Aug 14 18:32                      | 23° <b>Ω</b> 16'00                       |             | minimum elong                     | 2771 Jan 07 21:02                      | 16°る39'51                                |            |
| min. Earth dist.             | 2768 Aug 15 05:09                      |  | 0.28994 AU  | max. Earth dist.                  | 2771 Jan 08 14:48                      | 10 <b>3</b> 35'45                        |            |
| morning rise                 | 2768 Aug 19 04:09                      | 22° <b>Ω</b> 33'11                       | J.20777110  | urur.tii dist.                    | 2771 Jan 18 11:23                      | 0° <b>≈</b>                              | 1.,10,2 AU |
| direct                       | 2768 Sep 05 17:49                      | 14° <b>Ω</b> 44'46                       |             |                                   | 2771 Feb 11 08:15                      | 0° <b>∺</b>                              |            |
| greatest brilliancy          | 2768 Sep 16 10:05                      | 16° <b>Ω</b> 47'55                       | -4.8m       | evening rise                      | 2771 Feb 18 12:22                      | 8° <b>)</b> 59'43                        |            |
| or carest or mainey          | 2768 Oct 07 19:09                      | 0°m)                                     |             | - ,g 1100                         | 2771 Mar 07 07:23                      | 0° <b>Υ</b>                              |            |
| morning max el               | 2768 Oct 25 08:07                      | 15° Mp 54'43                             | 46°17'03    |                                   | 2771 Mar 31 10:49                      | 0°8                                      |            |
| asc. node                    | 2768 Oct 29 18:28                      | 20° m) 21'50                             | <del></del> | asc. node                         | 2771 Apr 16 13:41                      | 19° <b>8</b> 51'14                       |            |
| <del></del>                  | 2768 Nov 07 23:16                      | 0° <b>⊽</b>                              |             |                                   | 2771 Apr 24 20:45                      | 0°П                                      |            |
|                              | 2768 Dec 04 14:49                      | 0° <b>™</b>                              |             |                                   | 2771 May 19 15:36                      | 0°®                                      |            |
|                              | 2768 Dec 29 18:58                      | 0° <b>∡</b> 7                            |             |                                   | 2771 Jun 13 23:04                      | 0°N                                      |            |
|                              | 2700 DCC 27 10.50                      |  |             |                                   |  |  |            |

|                     | 2771 1 1 10 02 00                      | 00 <b>m</b> -                                       |            | 1 1                 | 2774 1 20 22 16                        | 140751140                       |             |
|---------------------|--|---|------------|---------------------|--|---------------------------------|-------------|
|                     | 2771 Jul 10 03:08                      | 0° m/y  |            | desc. node          | 2774 Jan 20 22:16                      | 14°る51'40                       |             |
| desc. node          | 2771 Aug 06 03:04                      | 29° m 04'23   |            |                     | 2774 Feb 01 23:46                      | 0° <b>≈</b>                     |             |
|                     | 2771 Aug 07 00:50                      | 0∘ <b>⊽</b>   |            | morning set         | 2774 Feb 13 01:27                      | 13°≈53'36                       |             |
| evening max el      | 2771 Aug 17 11:13                      | 10° <b>≏</b> 19'13                                  | 45°45'38   |                     | 2774 Feb 25 21:43                      | 0° <b>∀</b>                     |             |
|                     | 2771 Sep 09 17:46                      | 0°M₊  |            |                     | 2774 Mar 21 21:09                      | $0^{\circ}$ Y                   |             |
| greatest brilliancy | 2771 Sep 26 05:13                      | 8°M43'14  | -4.8m      |                     |  |                                 |             |
| retrograde          | 2771 Oct 05 09:36                      | 10°M15'15   |            | superior conj       | 2774 Mar 25 18:38                      | 4° <b>Ƴ</b> 51'39               | -1°24'36    |
| evening set         | 2771 Oct 22 03:00                      | 4°M56'45  |            | minimum elong       | 2774 Mar 25 23:05                      | 5° <b>℃</b> 05'31               | 1°24'33     |
| inferior conj       | 2771 Oct 26 07:18                      | 2°M26'19  | -6°59'07   | max. Earth dist.    | 2774 Mar 29 23:03                      | 10° <b>Y</b> ′04'42             | 1.72025 AU  |
| minimum elong       | 2771 Oct 26 17:28                      | 2°M10'45  | 6°57'12    |                     | 2774 Apr 14 23:24                      | 0°8                             |             |
| min. Earth dist.    | 2771 Oct 27 06:08                      | 1°M51'21  | 0.27580 AU | evening rise        | 2774 May 04 01:45                      | 23° <b>8</b> 38'33              |             |
|                     | 2771 Oct 30 08:23                      | 30° <b>₹</b> Ω                                      |            | Ü                   | 2774 May 09 05:24                      | 0° <b>I</b> I                   |             |
| morning rise        | 2771 Oct 31 07:29                      | 29° <b>£</b> 26'49                                  |            | asc. node           | 2774 May 14 01:37                      | 5° <b>Ⅱ</b> 57'55               |             |
| direct              | 2771 Nov 16 07:55                      | 24° <b>₽</b> 27'39                                  |            |                     | 2774 Jun 02 15:36                      | 0.2<br>T                        |             |
| asc. node           | 2771 Nov 27 06:16                      | 26° <b>♀</b> 42'48                                  |            |                     | 2774 Jun 27 06:19                      | $0^{\circ}\Omega$               |             |
| greatest brilliancy | 2771 Nov 27 00:10<br>2771 Nov 27 11:31 | 26° <b>⊆</b> 48'00                                  | -4.9m      |                     | 2774 Jul 22 02:41                      | 0° m)                           |             |
| greatest offinality |  | 20 <b>=</b> 48 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | -4.9111    |                     |  | 0° <b>ت</b><br>س                |             |
|                     | 2771 Dec 04 00:12                      |   | 46055110   |                     | 2774 Aug 16 07:26                      |                                 |             |
| morning max el      | 2772 Jan 06 02:05                      | 27°M51'01   | 46°55'19   | desc. node          | 2774 Sep 02 14:58                      | 20° <b>Ω</b> 15'25              |             |
|                     | 2772 Jan 08 04:25                      | 0° <b>∡</b>   |            |                     | 2774 Sep 11 01:41                      | 0° <b>™</b>                     |             |
|                     | 2772 Feb 04 12:43                      | 0°₹   |            |                     | 2774 Oct 07 20:23                      | 0° <b>∡</b>                     |             |
|                     | 2772 Mar 01 04:17                      | 0° <b>≈</b>   |            | evening max el      | 2774 Oct 29 14:41                      | 22° <b>∡</b> ⁴42'38             | 46°50'03    |
| desc. node          | 2772 Mar 17 20:00                      | 19° <b>≈</b> 55'36                                  |            |                     | 2774 Nov 06 04:25                      | 0°る                             |             |
|                     | 2772 Mar 26 04:27                      | 0° <b>∀</b>   |            | greatest brilliancy | 2774 Dec 08 23:14                      | 23° <b>る</b> 10'44              | -4.9m       |
|                     | 2772 Apr 19 22:11                      | $0$ ° $\mathbf{\gamma}$                             |            | retrograde          | 2774 Dec 18 20:20                      | 25° <b>る</b> 01'12              |             |
|                     | 2772 May 14 13:25                      | $B_{\circ 0}$                                       |            | asc. node           | 2774 Dec 24 18:09                      | 24° <b>る</b> 18'27              |             |
|                     | 2772 Jun 08 03:39                      | $\Pi^{\circ}0$                                      |            | evening set         | 2775 Jan 02 07:26                      | 20° <b>る</b> 53'00              |             |
|                     | 2772 Jul 02 16:44                      | 0°9   |            | inferior conj       | 2775 Jan 08 09:30                      | 17° <b>る</b> 18'44              | 3°42'26     |
| morning set         | 2772 Jul 08 13:38                      | 7° <b>©</b> 11'18                                   |            | minimum elong       | 2775 Jan 08 01:38                      | 17° <b>る</b> 30'47              | 3°40'06     |
| asc. node           | 2772 Jul 08 23:12                      | 7°940'36  |            | min. Earth dist.    | 2775 Jan 07 23:21                      | 17° <b>る</b> 34'17              | 0.26500 AU  |
| use. Houe           | 2772 Jul 27 03:45                      | 0°N   |            | morning rise        | 2775 Jan 13 20:00                      | 14°る06'03                       | 0.20300710  |
| may Earth dist      |  | 19° <b>Ω</b> 03'17                                  | 1.73305 AU | direct              | 2775 Jan 28 18:50                      | 9°る41'12                        |             |
| max. Earth dist.    | 2772 Aug 11 15:15                      | 19 8603 17  | 1./3303 AU |                     |  |                                 | 4.0         |
|                     | 2772 4 14 00 12                        | 210 0 50152   | 1012102    | greatest brilliancy | 2775 Feb 07 10:50                      | 11° <b>る</b> 27'23              | -4.9m       |
| superior conj       | 2772 Aug 14 00:12                      | 21° <b>Ω</b> 58'53                                  | 1°12'03    |                     | 2775 Mar 07 03:40                      | 0° <b>≈</b>                     |             |
| minimum elong       | 2772 Aug 13 16:11                      |   | 1°11'50    | morning max el      | 2775 Mar 19 23:04                      | 12° <b>≈</b> 07'58              | 46°43'26    |
|                     | 2772 Aug 20 12:07                      | 0° <b>m</b>   |            |                     | 2775 Apr 06 02:20                      | 0° <b>∀</b>                     |             |
|                     | 2772 Sep 13 18:15                      | 0∘ <b>ত</b>   |            | desc. node          | 2775 Apr 15 07:54                      | 10° <b>)</b> €06'57             |             |
| evening rise        | 2772 Sep 19 05:49                      | 6° <b>≏</b> 47'30                                   |            |                     | 2775 May 02 22:24                      | $0$ ° $\Upsilon$                |             |
|                     | 2772 Oct 07 23:14                      | 0°M.  |            |                     | 2775 May 28 17:47                      | 0°8                             |             |
| desc. node          | 2772 Oct 28 12:53                      | 25°M29'48   |            |                     | 2775 Jun 23 01:45                      | $\Pi^{\circ}0$                  |             |
|                     | 2772 Nov 01 04:08                      | 0° <b>∡</b> ¹                                       |            |                     | 2775 Jul 18 02:20                      | $0$ $\circ$ $\mathfrak{S}$      |             |
|                     | 2772 Nov 25 09:41                      | 0°రె  |            | asc. node           | 2775 Aug 06 10:57                      | 23° <b>©</b> 26'27              |             |
|                     | 2772 Dec 19 17:04                      | 0° <b>≈</b>   |            |                     | 2775 Aug 11 20:13                      | $0^{\circ}\Omega$               |             |
|                     | 2773 Jan 13 05:29                      | 0° <b>)</b> €                                       |            |                     | 2775 Sep 05 07:28                      | 0° m)                           |             |
|                     | 2773 Feb 07 06:13                      | 0° <b>Υ</b>   |            | morning set         | 2775 Sep 15 16:16                      | 12° Mp 48'12                    |             |
| asc. node           | 2773 Feb 18 15:46                      | 13° <b>Y</b> 17'12                                  |            | morning set         | 2775 Sep 19 10:10<br>2775 Sep 29 13:03 | 12 مورون م<br>0°                |             |
| asc. node           |  |   |            | F 41 F 4            | =                                      |                                 | 1 72010 ATT |
|                     | 2773 Mar 05 11:17                      | 0° <b>8</b>   | 46010125   | max. Earth dist.    | 2775 Oct 19 20:09                      | 25°221/04                       | 1.72018 AU  |
| evening max el      | 2773 Mar 25 02:52                      | _   | 46°18'35   |                     | 0777 0 . 00 01 14                      | 200 2 0 0 150                   | 1000110     |
|                     | 2773 Apr 03 21:14                      | 0° <b>I</b>   |            | superior conj       | 2775 Oct 22 21:44                      | 29° <b>Ω</b> 06'50              | 1°09'48     |
| greatest brilliancy | 2773 May 02 19:03                      | 20° <b>Ⅱ</b> 01'12                                  | -4.8m      | minimum elong       | 2775 Oct 23 07:12                      | 29° <b>≏</b> 36'21              | 1°09'31     |
| retrograde          | 2773 May 13 18:32                      | 22° <b>Ⅱ</b> 13'11                                  |            |                     | 2775 Oct 23 14:46                      | 0° <b>M</b>                     |             |
| evening set         | 2773 May 29 00:07                      | 17° <b>Ⅱ</b> 40'40                                  |            |                     | 2775 Nov 16 14:25                      | 0° <b>∡</b> ¹                   |             |
| inferior conj       | 2773 Jun 04 03:03                      | 13° <b>Ⅱ</b> 58′22                                  | 1°26'59    | desc. node          | 2775 Nov 26 00:47                      | 11° <b>∡</b> ¹48'47             |             |
| minimum elong       | 2773 Jun 04 06:13                      | 13° <b>Ⅱ</b> 53'23                                  | 1°26'02    | evening rise        | 2775 Dec 01 09:04                      | 18° <b>∡</b> ³30'31             |             |
| min. Earth dist.    | 2773 Jun 04 00:29                      | 14° <b>Ⅲ</b> 02'25                                  | 0.28712 AU |                     | 2775 Dec 10 13:11                      | 0° <b>ප</b>                     |             |
| desc. node          | 2773 Jun 10 05:27                      | 10° <b>Ⅱ</b> 17'57                                  |            |                     | 2776 Jan 03 11:55                      | 0° <b>≈</b>                     |             |
| morning rise        | 2773 Jun 10 12:48                      | 10° <b>Ⅱ</b> 07'53                                  |            |                     | 2776 Jan 27 12:03                      | 0° <b>∀</b>                     |             |
| direct              | 2773 Jun 25 14:40                      | 5° <b>Ⅱ</b> 45'39                                   |            |                     | 2776 Feb 20 16:21                      | 0° <b>Υ</b>                     |             |
| greatest brilliancy | 2773 Jul 05 16:03                      | 7° <b>II</b> 35'35                                  | -4 7m      |                     | 2776 Mar 16 05:14                      | 0°8                             |             |
| 5. Catest Offinancy | 2773 Jul 03 10:03<br>2773 Aug 07 11:01 | 0°9   | 1./111     | asc. node           | 2776 Mar 18 03:48                      | 2° <b>8</b> 20'47               |             |
| morning mercal      | •                                      |   | 15012150   | asc. Hout           |  | 2° <b>G</b> 2047<br>0° <b>Ⅱ</b> |             |
| morning max el      | 2773 Aug 13 07:59                      | 5°928'14  | 43 43 39   |                     | 2776 Apr 10 09:10                      |                                 |             |
| _                   | 2773 Sep 06 07:00                      | 0°N   |            |                     | 2776 May 06 16:05                      | 0°©                             | 45050115    |
| asc. node           | 2773 Oct 01 08:46                      | 28° <b>Ω</b> 06′21                                  |            | evening max el      | 2776 Jun 03 14:33                      | 29° <b>©</b> 09'02              | 45°28'43    |
|                     | 2773 Oct 03 00:02                      | 0° <b>т</b> р                                       |            |                     | 2776 Jun 04 11:46                      | $0$ ° $\Omega$                  |             |
|                     | 2773 Oct 28 08:07                      | 0ಂ <b>ಹ</b>   |            | desc. node          | 2776 Jul 07 17:18                      | 25° <b>Ω</b> 21'26              |             |
|                     | 2773 Nov 21 22:06                      | $0^{\circ}$ M                                       |            | greatest brilliancy | 2776 Jul 11 17:45                      | 27° <b>Ω</b> 02'42              | -4.7m       |
|                     | 2773 Dec 16 02:19                      | 0° <b>∡</b> ¹                                       |            | retrograde          | 2776 Jul 22 07:16                      | 29° <b>Ω</b> 03'33              |             |
|                     | 2774 Jan 09 01:53                      | ರ°0   |            | evening set         | 2776 Aug 07 21:33                      | 23° <b>Ω</b> 51′24              |             |
|                     |  |   |            | -                   | -                                      |                                 |             |

| inferior conj       | 2776 Aug 12 19:33                      | 20° <b>Ω</b> 52'20                     | -7°11'32   | superior conj       | 2779 Jan 05 15:46  | 14° <b>る</b> 32'57  |                    |
|---------------------|--|--|------------|---------------------|--------------------|---------------------|--------------------|
| minimum elong       | 2776 Aug 12 10:20                      | 21° <b>Ω</b> 06'43                     |            | minimum elong       | 2779 Jan 05 07:55  | 14° <b>る</b> 08'17  | 0°30'31            |
| min. Earth dist.    | 2776 Aug 12 20:33                      | 20° <b>Ω</b> 50'46                     | 0.29011 AU | max. Earth dist.    | 2779 Jan 05 23:26  | 14° <b>る</b> 57'06  | 1.71090 AU         |
| morning rise        | 2776 Aug 16 22:55                      | 18° <b>Ω</b> 19'42                     |            |                     | 2779 Jan 17 22:26  | 0° <b>≈</b>         |                    |
| direct              | 2776 Sep 03 09:46                      | 12° <b>Ω</b> 34'38                     |            |                     | 2779 Feb 10 19:18  | 0° <b>∀</b>         |                    |
| greatest brilliancy | 2776 Sep 14 02:16                      | 14° <b>Ω</b> 37'59                     | -4.8m      | evening rise        | 2779 Feb 15 23:05  | 6° <b>¥</b> 28'14   |                    |
| 8                   | 2776 Oct 08 02:55                      | 0° m                                   |            | <b>3</b>            | 2779 Mar 06 18:28  | 0° <b>Υ</b>         |                    |
| morning max el      | 2776 Oct 22 23:36                      | 13° mp 40'28                           | 46°15'40   |                     | 2779 Mar 30 22:01  | 0°8                 |                    |
| asc. node           | 2776 Oct 28 20:31                      | 19° m/35'38                            | 10 15 10   | asc. node           | 2779 Apr 15 15:48  | 19° <b>8</b> 22'54  |                    |
| asc. node           | 2776 Nov 07 17:00                      | 0∘ <b>ʊ</b>                            |            | asc. node           | •                  | 0°Ⅱ                 |                    |
|                     |  | 0° <b>m</b>                            |            |                     | 2779 Apr 24 08:12  | 0°©                 |                    |
|                     | 2776 Dec 04 05:09                      |  |            |                     | 2779 May 19 03:34  |                     |                    |
|                     | 2776 Dec 29 07:51                      | 0° <b>∡</b>                            |            |                     | 2779 Jun 13 12:02  | 0° <b>N</b>         |                    |
|                     | 2777 Jan 22 20:09                      | 0°₹                                    |            |                     | 2779 Jul 09 18:05  | 0° <b>m</b> )       |                    |
|                     | 2777 Feb 16 02:16                      | 0° <b>≈</b>                            |            | desc. node          | 2779 Aug 05 05:10  | 28° <b>m</b> 19'46  |                    |
| desc. node          | 2777 Feb 17 10:07                      | 1° <b>≈</b> 38'44                      |            |                     | 2779 Aug 06 20:47  | 0∘ <b>⊽</b>         |                    |
|                     | 2777 Mar 12 06:14                      | 0° <b>ℋ</b>                            |            | evening max el      | 2779 Aug 15 02:08  | 8° <b>ഫ</b> 04'42   | 45°43'53           |
|                     | 2777 Apr 05 10:18                      | $0$ ° $\mathbf{\gamma}$                |            |                     | 2779 Sep 10 18:02  | 0° <b>M</b>         |                    |
| morning set         | 2777 Apr 28 11:42                      | 28° <b>Ƴ</b> 33'04                     |            | greatest brilliancy | 2779 Sep 23 18:05  | 6°M23'46            | -4.8m              |
|                     | 2777 Apr 29 15:49                      | $6^{\circ}B$                           |            | retrograde          | 2779 Oct 02 22:52  | 7° <b>M</b> 55'38   |                    |
|                     | 2777 May 23 23:17                      | $\Pi^{\circ}0$                         |            | evening set         | 2779 Oct 19 19:47  | 2°M32'37            |                    |
|                     | •                                      |  |            | inferior conj       | 2779 Oct 23 21:10  | 0°M06'00            | -7°11'59           |
| superior conj       | 2777 Jun 05 03:11                      | 14° <b>Ⅱ</b> 58'39                     | -0°12'56   | minimum elong       | 2779 Oct 24 07:04  | 29° <b>♀</b> 50'47  | 7°10'13            |
| minimum elong       | 2777 Jun 05 05:56                      | 15° <b>Ⅱ</b> 07'08                     |            |                     | 2779 Oct 24 01:04  | 30° <b>₽</b> Ω      |                    |
| behind sun begin    | 2777 Jun 04 16:04                      | 14° <b>I</b> I24'27                    | 0 12 .,    | min. Earth dist.    | 2779 Oct 24 19:49  | 29° <b>₽</b> 31'14  | 0.27649 AU         |
| behind sun end      | 2777 Jun 05 19:48                      | 15° <b>∏</b> 49'48                     |            | morning rise        | 2779 Oct 28 17:57  | 27° <b>⊆</b> 10'56  | 0.27017110         |
| max. Earth dist.    | 2777 Jun 06 07:24                      | 16° <b>Ⅱ</b> 25'27                     | 1.73376 AU | direct              | 2779 Nov 13 22:54  | 22° <b>⊆</b> 06'31  |                    |
|                     |  |  | 1.73370 AU |                     |                    |                     | 4.0                |
| asc. node           | 2777 Jun 10 13:23                      | 21° <b>II</b> 39'04                    |            | greatest brilliancy | 2779 Nov 25 01:46  | 24° <b>£</b> 25'54  | -4.9m              |
|                     | 2777 Jun 17 08:21                      | 0°©                                    |            | asc. node           | 2779 Nov 26 08:17  | 24° <b>£</b> 57'45  |                    |
| evening rise        | 2777 Jul 11 16:17                      | 29° <b>©</b> 53'41                     |            |                     | 2779 Dec 05 10:42  | 0°M                 |                    |
|                     | 2777 Jul 11 18:21                      | $0$ $^{\circ}\Omega$                   |            | morning max el      | 2780 Jan 03 16:17  | 25° <b>M</b> 27'43  | 46°54'35           |
|                     | 2777 Aug 05 05:05                      | 0° <b>т</b> р                          |            |                     | 2780 Jan 08 01:46  | 0° <b>∡</b>         |                    |
|                     | 2777 Aug 29 17:15                      | 0∘ <b>ত</b>                            |            |                     | 2780 Feb 04 04:43  | 0°₹                 |                    |
|                     | 2777 Sep 23 08:09                      | 0°M₊                                   |            |                     | 2780 Feb 29 18:08  | 0° <b>≈</b>         |                    |
| desc. node          | 2777 Sep 30 03:01                      | 8°M14'15                               |            | desc. node          | 2780 Mar 16 22:07  | 19° <b>≈</b> 22'49  |                    |
|                     | 2777 Oct 18 03:13                      | 0° <b>∡</b> ¹                          |            |                     | 2780 Mar 25 17:08  | 0° <b>∀</b>         |                    |
|                     | 2777 Nov 12 04:47                      | ರ°0                                    |            |                     | 2780 Apr 19 10:07  | $0^{\circ}$ Y       |                    |
|                     | 2777 Dec 07 19:16                      | 0° <b>≈</b>                            |            |                     | 2780 May 14 00:51  | 0° <b>႘</b>         |                    |
|                     | 2778 Jan 03 19:08                      | 0° <b>∀</b>                            |            |                     | 2780 Jun 07 14:45  | $\Pi^{\circ}0$      |                    |
| evening max el      | 2778 Jan 10 01:01                      | 6° <b>ℋ</b> 29'22                      | 47°14'09   |                     | 2780 Jul 02 03:38  | 0°€                 |                    |
| asc. node           | 2778 Jan 21 05:58                      | 17° <b>¥</b> 26′27                     |            | morning set         | 2780 Jul 06 07:48  | 5° <b>©</b> 06'37   |                    |
|                     | 2778 Feb 05 06:30                      | 0° <b>Υ</b>                            |            | asc. node           | 2780 Jul 08 01:12  | 7° <b>©</b> 13'26   |                    |
| greatest brilliancy | 2778 Feb 19 16:09                      | 8° <b>Υ</b> 08'35                      | -4.9m      |                     | 2780 Jul 26 14:34  | 0°N                 |                    |
| retrograde          | 2778 Mar 01 23:43                      | 10° <b>Υ</b> 10'49                     | ,          | max. Earth dist.    | 2780 Aug 09 10:01  | 16° <b>Ω</b> 59'57  | 1.73333 AU         |
| evening set         | 2778 Mar 20 00:05                      | 3° <b>Υ</b> 53'51                      |            | max. Earth dist.    | 2700 1145 07 10.01 | 10 003737           | 1.75555710         |
| inferior conj       | 2778 Mar 22 22:46                      | 2° <b>Υ</b> 04'10                      | 8°45'00    | superior conj       | 2780 Aug 11 18:35  | 19° <b>Ω</b> 54'14  | 1°10'20            |
| minimum elong       | 2778 Mar 23 02:08                      | 1° <b>Υ</b> 58'53                      | 8°44'51    | minimum elong       | •                  | 19° <b>Ω</b> 28'46  | 1°10'20<br>1°10'06 |
| C                   |  |  |            | minimum elong       | 2780 Aug 11 10:19  |                     | 1 10 00            |
| min. Earth dist.    | 2778 Mar 22 11:52                      | 2° <b>Υ</b> 21'13<br>0° <b>Υ</b> 04'21 | 0.27778 AU |                     | 2780 Aug 19 22:57  | 0° <b>m</b> )       |                    |
| morning rise        | 2778 Mar 26 04:22                      |  |            |                     | 2780 Sep 13 05:11  | 0° <b>亞</b>         |                    |
| T                   | 2778 Mar 26 07:15                      | 30° <b>₹</b>                           |            | evening rise        | 2780 Sep 16 22:40  | 4° <b>£</b> 37'03   |                    |
| direct              | 2778 Apr 12 18:15                      | 24° <b>₩</b> 07'08                     |            |                     | 2780 Oct 07 10:22  | 0° <b>™</b>         |                    |
| greatest brilliancy | 2778 Apr 22 01:19                      | 25° <b>)</b> 43'48                     | -4.8m      | desc. node          | 2780 Oct 27 14:54  | 25° <b>™</b> 00'47  |                    |
|                     | 2778 May 01 07:52                      | $0^{\circ}$ Y                          |            |                     | 2780 Oct 31 15:33  | 0° <b>∡</b>         |                    |
| desc. node          | 2778 May 12 19:36                      | 7° <b>Ƴ</b> 51'51                      |            |                     | 2780 Nov 24 21:30  | 0°₹                 |                    |
| morning max el      | 2778 Jun 01 01:04                      | 24° <b>Ƴ</b> 50′29                     | 45°59'33   |                     | 2780 Dec 19 05:24  | 0° <b>≈</b>         |                    |
|                     | 2778 Jun 06 07:08                      | $9^{\circ}$ 8                          |            |                     | 2781 Jan 12 18:32  | 0° <b>)</b> €       |                    |
|                     | 2778 Jul 04 15:34                      | $\Pi$ $^{\circ}0$                      |            |                     | 2781 Feb 06 20:32  | $0^{\circ}$ Y       |                    |
|                     | 2778 Jul 31 03:53                      | 0°ಅ                                    |            | asc. node           | 2781 Feb 17 17:56  | 12° <b>Y</b> 39'33  |                    |
|                     | 2778 Aug 25 17:47                      | $0^{\circ}\Omega$                      |            |                     | 2781 Mar 05 04:27  | $9^{\circ}$ 8       |                    |
| asc. node           | 2778 Sep 02 22:56                      | 9° <b>Ω</b> 48'21                      |            | evening max el      | 2781 Mar 22 17:58  | 18° <b>8</b> 25'19  | 46°20'56           |
|                     | 2778 Sep 19 16:15                      | 0° <b>m</b>                            |            | -                   | 2781 Apr 04 00:34  | 0°Щ                 |                    |
|                     | 2778 Oct 14 03:16                      | 0∘ <u>⊽</u>                            |            | greatest brilliancy | 2781 Apr 30 12:52  | 17° <b>Ⅱ</b> 52'01  | -4.8m              |
|                     | 2778 Nov 07 06:35                      | 0°M                                    |            | retrograde          | 2781 May 11 10:39  | 20° <b>Ⅱ</b> 02'38  |                    |
| morning set         | 2778 Nov 25 22:00                      | 23°M20'14                              |            | evening set         | 2781 May 26 18:01  | 15° <b>Ⅲ</b> 28'25  |                    |
| <i>5</i>            | 2778 Dec 01 05:27                      | 0° <b>%</b>                            |            | inferior conj       | 2781 Jun 01 19:23  | 11° <b>II</b> 48'08 | 1°46'47            |
| desc. node          | 2778 Dec 23 12:29                      | 28° <b>×</b> 701'18                    |            | minimum elong       | 2781 Jun 01 23:15  | 11° <b>II</b> 42'02 | 1°45'39            |
| Less. House         | 2778 Dec 25 12:29<br>2778 Dec 25 02:14 | 0°중                                    |            | min. Earth dist.    | 2781 Jun 01 17:11  | 11° <b>II</b> 51'35 | 0.28687 AU         |
|                     | 2770 200 23 02.14                      | ÿ <b>O</b>                             |            | morning rise        | 2781 Jun 08 04:55  | 7° <b>П</b> 57'32   | 3.2000/ AU         |
|                     |  |  |            | morning 1150        | 2/01 Juli 00 04.33 | , 113132            |                    |

| desc. node          | 2781 Jun 09 07:21                      | 7° <b>Ⅱ</b> 22'24                      |                      |                     | 2784 Jan 26 23:42 | 0° <b>∀</b>          |                     |
|---------------------|--|--|----------------------|---------------------|-------------------|----------------------|---------------------|
| direct              | 2781 Jun 23 06:33                      | 3° <b>Ⅱ</b> 35'53                      |                      |                     | 2784 Feb 20 04:21 | $0$ ° $\Upsilon$     |                     |
| greatest brilliancy | 2781 Jul 03 07:36                      | 5° <b>Ⅱ</b> 25'10                      | -4.7m                |                     | 2784 Mar 15 17:47 | 0°B                  |                     |
|                     | 2781 Aug 07 11:41                      | $0$ $\circ$ $6$                        |                      | asc. node           | 2784 Mar 17 05:51 | 1° <b>8</b> 48'53    |                     |
| morning max el      | 2781 Aug 10 22:45                      | 3° <b>5</b> 015'21                     | 45°43'34             |                     | 2784 Apr 09 22:48 | $\Pi^{\circ}0$       |                     |
| •                   | 2781 Sep 05 23:18                      | $0^{\circ}\Omega$                      |                      |                     | 2784 May 06 08:05 | 0°ಅ                  |                     |
| asc. node           | 2781 Sep 30 10:50                      | 27° <b>Ω</b> 32'25                     |                      | evening max el      | 2784 Jun 01 06:19 | 26° <b>©</b> 57'37   | 45°29'41            |
|                     | 2781 Oct 02 13:43                      | 0° m)                                  |                      | v , v               | 2784 Jun 04 10:56 | 0°N                  |                     |
|                     | 2781 Oct 27 20:38                      | 0∘ <b>⊽</b>                            |                      | desc. node          | 2784 Jul 06 19:25 | 23° <b>Ω</b> 50'28   |                     |
|                     | 2781 Oct 27 20:38<br>2781 Nov 21 10:01 | 0°M                                    |                      | greatest brilliancy | 2784 Jul 09 08:00 | 24°Ω51'19            | -4.7m               |
|                     |  | 0° <b>⊼</b> 1                          |                      | -                   | 2784 Jul 19 23:57 |                      | <del>-4</del> ./III |
|                     | 2781 Dec 15 13:55                      |  |                      | retrograde          |                   | 26° <b>Ω</b> 54'16   |                     |
|                     | 2782 Jan 08 13:18                      | 0° <b>ろ</b>                            |                      | evening set         | 2784 Aug 05 10:37 | 21° <b>Ω</b> 45'59   |                     |
| desc. node          | 2782 Jan 20 00:18                      | 14° <b>る</b> 22'24                     |                      | inferior conj       | 2784 Aug 10 11:46 | 18° <b>Ω</b> 42'26   |                     |
|                     | 2782 Feb 01 11:05                      | 0° <b>≈</b>                            |                      | minimum elong       | 2784 Aug 10 02:18 | 18° <b>Ω</b> 57'12   | 6°58'33             |
| morning set         | 2782 Feb 10 11:12                      | 11° <b>≈</b> 18′15                     |                      | min. Earth dist.    | 2784 Aug 10 11:46 | 18° <b>Ω</b> 42'26   | 0.29022 AU          |
|                     | 2782 Feb 25 08:56                      | 0° <b>∀</b>                            |                      | morning rise        | 2784 Aug 14 17:49 | 16° <b>Ω</b> 06′03   |                     |
|                     | 2782 Mar 21 08:16                      | $0^{\circ}\mathbf{\Upsilon}$           |                      | direct              | 2784 Sep 01 02:12 | 10° <b>Ω</b> 24'36   |                     |
|                     |  |  |                      | greatest brilliancy | 2784 Sep 11 17:50 | 12° <b>Ω</b> 27'24   | -4.8m               |
| superior conj       | 2782 Mar 23 07:06                      | 2° <b>Y</b> 26'09                      | -1°25'17             | · ,                 | 2784 Oct 08 08:31 | O° mp                |                     |
| minimum elong       | 2782 Mar 23 10:40                      | 2° <b>Υ</b> 37'15                      |                      | morning max el      | 2784 Oct 20 15:52 | 11° m) 28'05         | 46°14'04            |
| max. Earth dist.    | 2782 Mar 27 11:24                      | 7° <b>Υ</b> 38'56                      | 1.71966 AU           | asc. node           | 2784 Oct 27 22:33 | 18° <b>m</b> ) 49'36 | .0 1.0.             |
| max. Lattii dist.   |  | 0° <b>8</b>                            | 1./1700 AC           | asc. node           | 2784 Nov 07 10:33 | 0° <b>⊽</b>          |                     |
|                     | 2782 Apr 14 10:27                      |  |                      |                     |                   |                      |                     |
| evening rise        | 2782 May 01 16:34                      | 21° <b>8</b> 21'59                     |                      |                     | 2784 Dec 03 19:35 | 0°M                  |                     |
| _                   | 2782 May 08 16:28                      | 0° <b>Π</b>                            |                      |                     | 2784 Dec 28 20:57 | 0° <b>∡</b>          |                     |
| asc. node           | 2782 May 13 03:36                      | 5° <b>Ⅱ</b> 30′00                      |                      |                     | 2785 Jan 22 08:30 | 0°る                  |                     |
|                     | 2782 Jun 02 02:45                      | $0$ $\circ$ $\odot$                    |                      |                     | 2785 Feb 15 14:08 | 0° <b>≈</b>          |                     |
|                     | 2782 Jun 26 17:44                      | $0 {\circ} \Omega$                     |                      | desc. node          | 2785 Feb 16 12:18 | 1° <b>≈</b> 08'46    |                     |
|                     | 2782 Jul 21 14:37                      | 0° <b>m</b> ∕                          |                      |                     | 2785 Mar 11 17:46 | 0° <b>∀</b>          |                     |
|                     | 2782 Aug 15 20:18                      | 0∘ <b>⊽</b>                            |                      |                     | 2785 Apr 04 21:34 | $0$ ° $\Upsilon$     |                     |
| desc. node          | 2782 Sep 01 17:03                      | 19° <b>≏</b> 41'16                     |                      | morning set         | 2785 Apr 26 02:42 | 26° <b>Ƴ</b> 16'44   |                     |
|                     | 2782 Sep 10 16:14                      | 0°M                                    |                      |                     | 2785 Apr 29 02:54 | 0°8                  |                     |
|                     | 2782 Oct 07 14:20                      | 0° <b>∡</b> ¹                          |                      |                     | 2785 May 23 10:14 | $\Pi^{\circ}0$       |                     |
| evening max el      | 2782 Oct 27 02:57                      | 20° <b>∡</b> 15'41                     | 46°47'56             |                     | Ž                 |                      |                     |
| <i>5 5</i>          | 2782 Nov 06 08:49                      | 0°ਰ                                    |                      | superior conj       | 2785 Jun 02 20:01 | 12° <b>∏</b> 49′09   | -0°16'10            |
| greatest brilliancy | 2782 Dec 06 12:55                      | 20° <b>る</b> 42'35                     | -4.9m                | minimum elong       | 2785 Jun 02 23:28 | 12° <b>∏</b> 59'46   |                     |
| retrograde          | 2782 Dec 00 12:33<br>2782 Dec 16 08:17 | 20° <b>ろ</b> 31'49                     | - <del>1</del> .7III | max. Earth dist.    | 2785 Jun 04 03:50 | 14° <b>∏</b> 27'03   | 1.73350 AU          |
| •                   |  | 22 <b>3</b> 3149<br>21° <b>る</b> 22'59 |                      | asc. node           |                   | 21° <b>II</b> 11'50  | 1.75550 AU          |
| asc. node           | 2782 Dec 23 20:08                      |  |                      | asc. node           | 2785 Jun 09 15:26 |                      |                     |
| evening set         | 2782 Dec 30 18:20                      | 18°る25'30                              | 2010145              |                     | 2785 Jun 16 19:15 | 0.22<br>0.22         |                     |
| inferior conj       | 2783 Jan 05 21:49                      | 14° <b>∃</b> 49'56                     |                      | evening rise        | 2785 Jul 09 11:00 | 27° <b>©</b> 50'14   |                     |
| minimum elong       | 2783 Jan 05 14:37                      | 15° <b>る</b> 00'56                     |                      |                     | 2785 Jul 11 05:17 | $0$ $\circ$ $\Omega$ |                     |
| min. Earth dist.    | 2783 Jan 05 13:16                      | 15° <b>る</b> 02'59                     | 0.26489 AU           |                     | 2785 Aug 04 16:10 | 0° <b>m</b> ∕        |                     |
| morning rise        | 2783 Jan 11 10:56                      | 11° <b>る</b> 33'42                     |                      |                     | 2785 Aug 29 04:38 | 0∘ <b>⊽</b>          |                     |
| direct              | 2783 Jan 26 06:31                      | 7° <b>る</b> 12'06                      |                      |                     | 2785 Sep 22 20:01 | 0° <b>M</b> ₊        |                     |
| greatest brilliancy | 2783 Feb 05 01:21                      | 9° <b>ප</b> 00'36                      | -4.9m                | desc. node          | 2785 Sep 29 05:02 | 7° <b>M</b> 43'50    |                     |
|                     | 2783 Mar 07 09:30                      | 0° <b>≈</b>                            |                      |                     | 2785 Oct 17 15:50 | 0° <b>∡</b> ¹        |                     |
| morning max el      | 2783 Mar 17 11:51                      | 9° <b>≈</b> 41'32                      | 46°44'45             |                     | 2785 Nov 11 18:34 | 0°రె                 |                     |
| Č                   | 2783 Apr 05 20:37                      | 0° <b>)</b> €                          |                      |                     | 2785 Dec 07 11:08 | 0° <b>≈</b>          |                     |
| desc. node          | 2783 Apr 14 09:55                      | 9° <b>¥</b> 25'48                      |                      |                     | 2786 Jan 03 15:56 | 0° <b>)</b> €        |                     |
|                     | 2783 May 02 13:10                      | 0°Υ                                    |                      | evening max el      | 2786 Jan 07 16:31 | 4° <b>)</b> €09'17   | 47°14'49            |
|                     | 2783 May 28 06:53                      | 0°8                                    |                      | asc. node           | 2786 Jan 20 08:09 | 16° <b>)</b> €25'45  | .,,                 |
|                     | 2783 Jun 22 13:53                      | 0°II                                   |                      | use. Houe           | 2786 Feb 06 07:25 | 0°Υ                  |                     |
|                     |  | 0°©                                    |                      | arantant brillianav |                   | 5° <b>Υ</b> 45'57    | -4.9m               |
| 1                   | 2783 Jul 17 13:52                      |  |                      | greatest brilliancy | 2786 Feb 17 06:16 |                      | -4.9111             |
| asc. node           | 2783 Aug 05 13:08                      | 22° <b>©</b> 59'01                     |                      | retrograde          | 2786 Feb 27 14:57 | 7° <b>Y</b> 48'49    |                     |
|                     | 2783 Aug 11 07:23                      | $0$ ° $\Omega$                         |                      | evening set         | 2786 Mar 17 15:07 | 1° <b>Y</b> 30′57    |                     |
|                     | 2783 Sep 04 18:27                      | 0° <b>™</b>                            |                      | min. Earth dist.    | 2786 Mar 20 00:44 | 0° <b>Υ</b> 01'40    | 0.27732 AU          |
| morning set         | 2783 Sep 13 09:14                      | 10° Mp 38'14                           |                      |                     | 2786 Mar 20 01:48 | 30° <b>₹</b>         |                     |
|                     | 2783 Sep 29 00:01                      | 0∘ <b>⊽</b>                            |                      | inferior conj       | 2786 Mar 20 12:55 | 29° <b>)</b> 42′38   | 8°48'34             |
| max. Earth dist.    | 2783 Oct 17 12:22                      | 23° <b>ჲ</b> 03′28                     | 1.72071 AU           | minimum elong       | 2786 Mar 20 15:27 | 29° <b>)</b> 38′40   | 8°48'29             |
|                     |  |  |                      | morning rise        | 2786 Mar 23 15:58 | 27° <b>)</b> 46′49   |                     |
| superior conj       | 2783 Oct 20 12:47                      | 26° <b>≏</b> 49'27                     | 1°11'44              | direct              | 2786 Apr 10 08:25 | 21° <b>)</b> 46′35   |                     |
| minimum elong       | 2783 Oct 20 21:52                      | 27° <b>≙</b> 17'50                     | 1°11'29              | greatest brilliancy | 2786 Apr 19 13:22 | 23° <b>¥</b> 21'57   | -4.8m               |
| Č                   | 2783 Oct 23 01:48                      | 0°M                                    |                      | - ·                 | 2786 May 02 16:28 | 0°Υ                  |                     |
|                     | 2783 Nov 16 01:35                      | 0° <b>⊼</b> 7                          |                      | desc. node          | 2786 May 11 21:35 | 6° <b>Ƴ</b> 43'47    |                     |
| desc. node          | 2783 Nov 25 02:45                      | 11° <b>√</b> 19'51                     |                      | morning max el      | 2786 May 29 16:15 | 22° <b>Y</b> 35'33   | 46°00'46            |
| evening rise        | 2783 Nov 28 21:02                      | 16° <b>₹</b> '02'30                    |                      | morning man or      | 2786 Jun 06 03:56 | 0° <b>8</b>          | .0 00 10            |
| - 1 Oming 1150      | 2783 Dec 10 00:29                      | 0°る                                    |                      |                     | 2786 Jul 04 06:56 | 0°II                 |                     |
|                     | 2784 Jan 02 23:22                      | 0°≈                                    |                      |                     | 2786 Jul 30 17:05 | 0°©                  |                     |
|                     | 2104 Jan 02 23.22                      | 0 ~~                                   |                      |                     | 2/00 Jul 30 1/.03 | وت ∪                 |                     |

|  | 2786 Aug 25 05:53                      | 0°N                                       |            |                     | 2789 Mar 04 21:46                      | 0° <b>႘</b>                              |                     |
|--|--|---|------------|---------------------|--|--|---------------------|
| asc. node  | 2786 Sep 02 00:57                      | 9° <b>Ω</b> 18'50                         |            | evening max el      | 2789 Mar 20 08:11                      | 16° <b>8</b> 07'14                       | 46022107            |
| asc. node  | 2786 Sep 02 00.37<br>2786 Sep 19 03:45 | 0° <b>m</b> )                             |            | evening max er      |  | 0° <b>I</b>                              | 40 23 07            |
|  |  |   |            | 4 41 111            | 2789 Apr 04 05:37                      |  | 4.0                 |
|  | 2786 Oct 13 14:28                      | 0° <b>™</b>                               |            | greatest brilliancy | 2789 Apr 28 06:27                      | 15° <b>Ⅱ</b> 42'15                       | -4.8m               |
| . ,  | 2786 Nov 06 17:38                      | 0°M                                       |            | retrograde          | 2789 May 09 02:26                      | 17° <b>I</b> I51'42                      |                     |
| morning set  | 2786 Nov 23 11:05                      | 20°M56'14                                 |            | evening set         | 2789 May 24 11:45                      | 13° <b>Ⅱ</b> 15'19                       | 2006125             |
|  | 2786 Nov 30 16:28                      | 0° <b>∡</b> ¹                             |            | inferior conj       | 2789 May 30 11:28                      | 9° <b>∏</b> 37'28                        |                     |
| desc. node   | 2786 Dec 22 14:34                      | 27° <b>₹</b> 33'11                        |            | minimum elong       | 2789 May 30 16:01                      | 9° <b>∏</b> 30'19                        | 2°05'18             |
|  | 2786 Dec 24 13:16                      | 0°ප                                       |            | min. Earth dist.    | 2789 May 30 09:53                      | 9° <b>∏</b> 39'58                        | 0.28665 AU          |
|  |  | _   |            | morning rise        | 2789 Jun 05 20:37                      | 5° <b>Ⅱ</b> 47'05                        |                     |
| superior conj  | 2787 Jan 03 01:51                      | 11° <b>ろ</b> 58'52                        |            | desc. node          | 2789 Jun 08 09:27                      | 4° <b>Ⅱ</b> 29'04                        |                     |
| minimum elong  | 2787 Jan 02 18:53                      | 11° <b>පි</b> 37'00                       |            | direct              | 2789 Jun 20 21:42                      | 1° <b>Ⅱ</b> 25'30                        |                     |
| max. Earth dist.   | 2787 Jan 03 06:32                      | 12° <b>る</b> 13'36                        | 1.71096 AU | greatest brilliancy | 2789 Jun 30 23:26                      | 3° <b>Ⅱ</b> 14'57                        | -4.7m               |
|  | 2787 Jan 17 09:31                      | 0° <b>≈</b>                               |            |                     | 2789 Aug 07 11:03                      | 0  |                     |
|  | 2787 Feb 10 06:26                      | 0° <b>∀</b>                               |            | morning max el      | 2789 Aug 08 13:25                      | 1°502'33                                 | 45°43'18            |
| evening rise   | 2787 Feb 13 09:19                      | 3° <b>¥</b> 54'55                         |            |                     | 2789 Sep 05 15:06                      | $0^{\circ}\Omega$                        |                     |
|  | 2787 Mar 06 05:39                      | $0^{\circ}\mathbf{\Upsilon}$              |            | asc. node           | 2789 Sep 29 12:47                      | 26° <b>Ω</b> 59'07                       |                     |
|  | 2787 Mar 30 09:18                      | $9^{\circ}$ 8                             |            |                     | 2789 Oct 02 03:01                      | 0° <b>m</b>                              |                     |
| asc. node  | 2787 Apr 14 17:44                      | 18° <b>8</b> 53'49                        |            |                     | 2789 Oct 27 08:48                      | 0∘ <b>ত</b>                              |                     |
|  | 2787 Apr 23 19:44                      | $\Pi$ $^{\circ}0$                         |            |                     | 2789 Nov 20 21:37                      | 0°M                                      |                     |
|  | 2787 May 18 15:37                      | 0ංම                                       |            |                     | 2789 Dec 15 01:12                      | 0° <b>∡</b> ¹                            |                     |
|  | 2787 Jun 13 01:07                      | $0^{\circ}\Omega$                         |            |                     | 2790 Jan 08 00:24                      | ರ°0                                      |                     |
|  | 2787 Jul 09 09:16                      | 0° <b>m</b>                               |            | desc. node          | 2790 Jan 19 02:26                      | 13° <b>る</b> 54'38                       |                     |
| desc. node   | 2787 Aug 04 07:17                      | 27° <b>m</b> 34'36                        |            |                     | 2790 Jan 31 22:01                      | 0° <b>≈</b>                              |                     |
|  | 2787 Aug 06 17:23                      | 0∘ <b>ত</b>                               |            | morning set         | 2790 Feb 07 21:17                      | 8° <b>≈</b> 45'04                        |                     |
| evening max el   | 2787 Aug 12 16:31                      | 5° <b>≙</b> 49'01                         | 45°42'13   |                     | 2790 Feb 24 19:45                      | 0° <b>ℋ</b>                              |                     |
|  | 2787 Sep 12 03:39                      | 0° <b>M</b> .                             |            |                     |  |  |                     |
| greatest brilliancy  | 2787 Sep 21 07:36                      | 4°ML05'35                                 | -4.8m      | superior conj       | 2790 Mar 20 19:42                      | 0° <b>Ƴ</b> 02'11                        | -1°25'49            |
| retrograde   | 2787 Sep 30 11:48                      | 5°M36'55                                  |            | minimum elong       | 2790 Mar 20 22:20                      | 0° <b>Υ</b> 10′24                        | 1°25'48             |
| evening set  | 2787 Oct 17 12:36                      | 0°M09'35                                  |            |                     | 2790 Mar 20 19:00                      | $_{0}$ $^{\circ}$ $\Upsilon$             |                     |
| , and the second | 2787 Oct 17 19:10                      | 30° <b>Ŗ</b> Ω                            |            | max. Earth dist.    | 2790 Mar 24 21:45                      | 5° <b>Y</b> 08′05                        | 1.71914 AU          |
| inferior conj  | 2787 Oct 21 11:10                      | 27° <b>Ω</b> 46'47                        | -7°23'56   |                     | 2790 Apr 13 21:10                      | 0°8                                      |                     |
| minimum elong  | 2787 Oct 21 20:44                      | 27° <b>₽</b> 32'03                        |            | evening rise        | 2790 Apr 29 07:13                      | 19° <b>8</b> 05'50                       |                     |
| min. Earth dist.   | 2787 Oct 22 09:52                      | 27° <b>£</b> 11'51                        |            | <i>3</i> 23         | 2790 May 08 03:13                      | 0°II                                     |                     |
| morning rise   | 2787 Oct 26 04:27                      | 24° <b>£</b> 56'13                        |            | asc. node           | 2790 May 12 05:39                      | 5° <b>Ⅱ</b> 03'10                        |                     |
| direct   | 2787 Nov 11 13:23                      | 19° <b>£</b> 46'28                        |            |                     | 2790 Jun 01 13:38                      | 0°50                                     |                     |
| greatest brilliancy  | 2787 Nov 22 16:26                      | 22° <b>♀</b> 05'19                        | -4.9m      |                     | 2790 Jun 26 04:54                      | $0^{\circ}\Omega$                        |                     |
| asc. node  | 2787 Nov 25 10:17                      | 23° <b>♀</b> 17'24                        | 1.7111     |                     | 2790 Jul 21 02:19                      | 0° <b>m</b>                              |                     |
| use. Houe  | 2787 Dec 06 10:51                      | 0°ML                                      |            |                     | 2790 Aug 15 08:58                      | 0∘ <del>⊽</del>                          |                     |
| morning max el   | 2788 Jan 01 05:38                      | 23°ML02'55                                | 46°53'46   | desc. node          | 2790 Aug 31 19:03                      | 0 <b>—</b><br>19° <b>≏</b> 07'31         |                     |
| morning max er   | 2788 Jan 07 22:09                      | 0° <b>⊼</b> ¹                             | 40 33 40   | dese. Hode          | 2790 Sep 10 06:38                      | 0°ML                                     |                     |
|  | 2788 Feb 03 20:18                      | 0°ਤ<br>ਹ •                                |            |                     | 2790 Oct 07 08:23                      | 0° <b>⊼</b> 7                            |                     |
|  | 2788 Feb 29 07:45                      | 0° <b>≈</b>                               |            | evening max el      | 2790 Oct 07 08:25<br>2790 Oct 24 15:36 | 17° <b>×7</b> 50'51                      | 46°45'51            |
| desc. node   | 2788 Mar 16 00:04                      | 0 <b>~</b><br>18° <b>≈</b> 49'55          |            | evening max er      | 2790 Nov 06 14:45                      | 0°る                                      | 40 43 31            |
| dese. Hode   | 2788 Mar 25 05:41                      | 0° <b>\</b>                               |            | greatest brilliancy | 2790 Dec 04 02:08                      | 18° <b>る</b> 14'52                       | -4.9m               |
|  | 2788 Apr 18 21:59                      | 0° <b>Υ</b>                               |            | retrograde          | 2790 Dec 04 02:08<br>2790 Dec 13 20:40 | 10 <b>3</b> 1432<br>20° <b>る</b> 03'31   | <del>-4</del> .7III |
|  | 2788 May 13 12:13                      | %8<br>0°8                                 |            | asc. node           | 2790 Dec 13 20:40<br>2790 Dec 22 22:19 | 20 <b>ප</b> 0331                         |                     |
|  | 2788 Jun 07 01:45                      | 0°II                                      |            | evening set         | 2790 Dec 28 05:24                      | 15° <b>る</b> 58'32                       |                     |
|  | 2788 Jul 01 14:25                      | 0°©                                       |            | inferior conj       | 2790 Dec 28 03:24<br>2791 Jan 03 10:02 | 13 <b>3</b> 3832                         | 2°56'41             |
| morning set  | 2788 Jul 04 01:33                      | 3° <b>5</b> 01'01                         |            | minimum elong       | 2791 Jan 03 03:34                      | 12 <b>3</b> 22 02                        |                     |
| asc. node  | 2788 Jul 04 01:33<br>2788 Jul 07 03:20 | 6°947'01                                  |            | min. Earth dist.    | 2791 Jan 03 03:54<br>2791 Jan 03 02:56 | 12 <b>ප</b> 31 54<br>12° <b>පි</b> 32'51 | 0.26478 AU          |
| asc. Houc  | 2788 Jul 26 01:16                      | 0°Ω                                       |            | morning rise        | 2791 Jan 09 01:41                      | 9° <b>ප</b> 02'42                        | 0.20478 AU          |
| max. Earth dist.   | 2788 Aug 07 04:16                      |   | 1.73361 AU | direct              | 2791 Jan 23 18:32                      | 9 002 42<br>4° <b>る</b> 43'54            |                     |
| max. Earm dist.  | 2788 Aug 07 04.10                      | 14 6633 23                                | 1.73301 AU |                     | 2791 Feb 02 15:27                      | 6° <b>る</b> 34'33                        | -4.9m               |
| avnariar aani  | 2700 Aug 00 12:45                      | 17° <b>Ω</b> 49'26                        | 1°08'30    | greatest brilliancy | 2791 Feb 02 13.27<br>2791 Mar 07 12:50 | 0°≈                                      | -4.9111             |
| superior conj  | 2788 Aug 09 12:45                      | 17 <b>δ 2</b> 49 26<br>17° <b>Ω</b> 23'21 | 1°08'16    |                     | 2791 Mar 15 01:34                      | 0 ≈<br>7°≈18'55                          | 46°46'11            |
| minimum elong  | 2788 Aug 09 04:17                      |   | 1 08 10    | morning max el      |  |  | 40 40 11            |
|  | 2788 Aug 19 09:40                      | 0° <b>™</b><br>0° <b>0</b>                |            | dono J-             | 2791 Apr 05 13:55                      | 0° <b>\</b><br>8° <b>\</b> 46\41         |                     |
| avaniri-   | 2788 Sep 12 15:59                      | 0° <u>ი</u>                               |            | desc. node          | 2791 Apr 13 11:57                      | 8° <b>)</b> 46'41                        |                     |
| evening rise   | 2788 Sep 14 15:35                      | 2° <b>£</b> 27'16                         |            |                     | 2791 May 02 03:16                      | 0°Υ<br>0°Σ                               |                     |
| daga == -1-  | 2788 Oct 06 21:21                      | 0°M                                       |            |                     | 2791 May 27 19:27                      | 0° <b>Β</b>                              |                     |
| desc. node   | 2788 Oct 26 16:53                      | 24°M32'12                                 |            |                     | 2791 Jun 22 01:35                      | 0° <b>∏</b>                              |                     |
|  | 2788 Oct 31 02:48                      | 0°⊀ <sup>7</sup>                          |            | 1                   | 2791 Jul 17 01:01                      | 0.ಪ                                      |                     |
|  | 2788 Nov 24 09:07                      | 5°0                                       |            | asc. node           | 2791 Aug 04 15:08                      | 22° <b>©</b> 32'01                       |                     |
|  | 2788 Dec 18 17:29                      | 0° <b>≈</b>                               |            |                     | 2791 Aug 10 18:12                      | 0° <b>N</b>                              |                     |
|  | 2789 Jan 12 07:21                      | 0° <b>∀</b>                               |            | •                   | 2791 Sep 04 05:06                      | 0°M)                                     |                     |
| 1  | 2789 Feb 06 10:42                      | 0° <b>Υ</b>                               |            | morning set         | 2791 Sep 11 02:01                      | 8° m/28'53                               |                     |
| asc. node  | 2789 Feb 16 19:55                      | 12° <b>Y</b> 01'48                        |            |                     | 2791 Sep 28 10:38                      | 0∘ <b>ರ</b>                              |                     |

| max. Earth dist.    | 2791 Oct 15 04:44                      | 20° <b>£</b> 51'33         | 1.72120 AU | minimum elong       | 2794 Mar 18 04:40                      | 27° <b>∺</b> 18'58         | 8°51'20     |
|---------------------|--|----------------------------|------------|---------------------|--|----------------------------|-------------|
|                     |  | <b>.</b>                   |            | morning rise        | 2794 Mar 21 03:47                      | 25° <b>∺</b> 29'09         |             |
| superior conj       | 2791 Oct 18 03:42                      | 24° <b>£</b> 32'56         |            | direct              | 2794 Apr 07 22:27                      | 19° <b>)</b> €26'41        |             |
| minimum elong       | 2791 Oct 18 12:23                      | 25° <b>Ω</b> 00'00         | 1°13′20    | greatest brilliancy | 2794 Apr 17 01:34                      | 21° <b>)</b> (00'41        | -4.8m       |
|                     | 2791 Oct 22 12:30                      | 0°M                        |            | 1 1                 | 2794 May 03 15:27                      | 0°Υ                        |             |
| 1 1                 | 2791 Nov 15 12:24                      | 0° ⊀ <sup>7</sup>          |            | desc. node          | 2794 May 10 23:38                      | 5°Υ38'33                   | 46002110    |
| desc. node          | 2791 Nov 24 04:51                      | 10° ₹ 52'26                |            | morning max el      | 2794 May 27 06:44                      | 20° <b>Y</b> 19'41         | 46°02'10    |
| evening rise        | 2791 Nov 26 09:00                      | 13° <b>メ</b> 35'39<br>0°る  |            |                     | 2794 Jun 05 23:40                      | 0°B<br>8°0                 |             |
|                     | 2791 Dec 09 11:27                      | 0° <b>≈</b>                |            |                     | 2794 Jul 03 21:42                      | 0.<br>0.П                  |             |
|                     | 2792 Jan 02 10:29<br>2792 Jan 26 11:01 | 0° <b>∺</b>                |            |                     | 2794 Jul 30 05:50<br>2794 Aug 24 17:39 | 0°€                        |             |
|                     | 2792 Feb 19 15:57                      | 0°Υ                        |            | asc. node           | 2794 Aug 24 17.39<br>2794 Sep 01 02:55 | 8° <b>Ω</b> 50'02          |             |
|                     | 2792 Feb 19 13.37<br>2792 Mar 15 05:56 | 0° <b>8</b>                |            | asc. node           | 2794 Sep 01 02:33<br>2794 Sep 18 15:00 | 0° Mp                      |             |
| asc. node           | 2792 Mar 16 07:51                      | 1° <b>8</b> 18'11          |            |                     | 2794 Sep 18 13:00<br>2794 Oct 13 01:29 | 0∘ <b>ʊ</b><br>0 ıñ        |             |
| asc. node           | 2792 Apr 09 12:01                      | 0°II                       |            |                     | 2794 Oct 13 01:29<br>2794 Nov 06 04:32 | 0°M                        |             |
|                     | 2792 May 05 23:46                      | 0° <b>©</b>                |            | morning set         | 2794 Nov 21 00:06                      | 18°M32'30                  |             |
| evening max el      | 2792 May 29 22:54                      | 24°5649'35                 | 45°30'31   | morning set         | 2794 Nov 30 03:20                      | 0° <b>√</b>                |             |
| evening max er      | 2792 Jun 04 10:35                      | 0°Ω                        | 43 3031    | desc. node          | 2794 Dec 21 16:40                      | 27° <b>₹</b> 105'32        |             |
| desc. node          | 2792 Jul 05 21:31                      | 22° <b>Ω</b> 17'28         |            | dese. Hode          | 2794 Dec 24 00:09                      | 0°る                        |             |
| greatest brilliancy | 2792 Jul 06 22:24                      | 22°Ω41'16                  | -4.7m      |                     | 2774 Dec 24 00.07                      | <b>0 0</b>                 |             |
| retrograde          | 2792 Jul 17 16:32                      | 24° <b>Ω</b> 45'51         | ,          | superior conj       | 2794 Dec 31 11:54                      | 9° <b>ට</b> 25'15          | -0°23'17    |
| evening set         | 2792 Aug 02 23:48                      | 19° <b>Ω</b> 41'36         |            | minimum elong       | 2794 Dec 31 05:53                      | 9° <b>⋜</b> 06'18          |             |
| inferior conj       | 2792 Aug 08 03:58                      | 16° <b>Ω</b> 33'29         | -6°48'11   | max. Earth dist.    | 2794 Dec 31 11:04                      | 9° <b>ප</b> 22'38          | 1.71102 AU  |
| minimum elong       | 2792 Aug 07 18:19                      | 16° <b>Ω</b> 48'33         | 6°46'27    | man. Bartii dige.   | 2795 Jan 16 20:26                      | 0°≈                        | 1.,1102110  |
| min. Earth dist.    | 2792 Aug 08 02:56                      | 16° <b>Ω</b> 35'06         | 0.29033 AU |                     | 2795 Feb 09 17:25                      | 0° <b>∀</b>                |             |
| morning rise        | 2792 Aug 12 12:44                      | 13° <b>£</b> 53′13         |            | evening rise        | 2795 Feb 10 19:26                      | 1° <b>)</b> 21'40          |             |
| direct              | 2792 Aug 29 19:04                      | 8° <b>Ω</b> 15'39          |            | <i>5</i>            | 2795 Mar 05 16:41                      | $_{0}^{\circ}\gamma$       |             |
| greatest brilliancy | 2792 Sep 09 08:59                      | 10° <b>Ω</b> 17'16         | -4.8m      |                     | 2795 Mar 29 20:27                      | 0°8                        |             |
| · ·                 | 2792 Oct 08 11:53                      | 0° mp                      |            | asc. node           | 2795 Apr 13 19:50                      | 18° <b>8</b> 25'35         |             |
| morning max el      | 2792 Oct 18 08:07                      | 9° Mp 16'44                | 46°12'26   |                     | 2795 Apr 23 07:09                      | $\Pi^{\circ}0$             |             |
| asc. node           | 2792 Oct 27 00:37                      | 18° <b>m</b> 05'18         |            |                     | 2795 May 18 03:33                      | 0ಂತಾ                       |             |
|                     | 2792 Nov 07 03:24                      | 0∘ <b>ত</b>                |            |                     | 2795 Jun 12 14:04                      | $0^{\circ}\Omega$          |             |
|                     | 2792 Dec 03 09:31                      | 0°M                        |            |                     | 2795 Jul 09 00:24                      | 0° <b>m</b>                |             |
|                     | 2792 Dec 28 09:36                      | 0°⊀                        |            | desc. node          | 2795 Aug 03 09:13                      | 26° Mp 49'02               |             |
|                     | 2793 Jan 21 20:27                      | 0°ರ                        |            |                     | 2795 Aug 06 14:24                      | 0∘ <b>⊽</b>                |             |
|                     | 2793 Feb 15 01:38                      | 0° <b>≈</b>                |            | evening max el      | 2795 Aug 10 06:03                      | 3° <b>₽</b> 32'03          | 45°40'30    |
| desc. node          | 2793 Feb 15 14:11                      | 0° <b>≈</b> 38'56          |            |                     | 2795 Sep 14 05:33                      | $0^{\circ}$ M              |             |
|                     | 2793 Mar 11 04:56                      | 0° <b>)</b> €              |            | greatest brilliancy | 2795 Sep 18 21:16                      | 1°M48'16                   | -4.8m       |
|                     | 2793 Apr 04 08:28                      | $0$ ° $\Upsilon$           |            | retrograde          | 2795 Sep 28 00:38                      | 3°M19'10                   |             |
| morning set         | 2793 Apr 23 17:58                      | 24° <b>Y</b> ′02'20        |            |                     | 2795 Oct 11 03:04                      | 30° <b>₹</b> Ω             |             |
|                     | 2793 Apr 28 13:35                      | $9^{\circ}$ 8              |            | evening set         | 2795 Oct 15 05:24                      | 27° <b>≏</b> 47'18         |             |
|                     | 2793 May 22 20:46                      | $\Pi^{\circ}0$             |            | inferior conj       | 2795 Oct 19 01:19                      | 25° <b>≏</b> 28'18         | -7°35'00    |
|                     |  |                            |            | minimum elong       | 2795 Oct 19 10:28                      | 25° <b>≙</b> 14'12         | 7°33'35     |
| superior conj       | 2793 May 31 13:05                      | 10° <b>Ⅱ</b> 41'34         |            | min. Earth dist.    | 2795 Oct 20 00:17                      | 24° <b>£</b> 52'55         | 0.27786 AU  |
| minimum elong       | 2793 May 31 17:12                      | 10° <b>Ⅱ</b> 54'16         | 0°19'12    | morning rise        | 2795 Oct 23 15:07                      | 22° <b>≏</b> 42'24         |             |
| max. Earth dist.    | 2793 Jun 02 02:32                      | 12° <b>∏</b> 36′50         | 1.73322 AU | direct              | 2795 Nov 09 03:43                      | 17° <b>≏</b> 26'45         |             |
| asc. node           | 2793 Jun 08 17:34                      | 20° <b>∏</b> 46′09         |            | greatest brilliancy | 2795 Nov 20 07:59                      | 19° <b>≏</b> 46'03         | -4.9m       |
|                     | 2793 Jun 16 05:44                      | 0.2                        |            | asc. node           | 2795 Nov 24 12:25                      | 21° <b>△</b> 40'58         |             |
| evening rise        | 2793 Jul 07 05:53                      | 25°5548'29                 |            |                     | 2795 Dec 07 04:40                      | 0° <b>™</b>                |             |
|                     | 2793 Jul 10 15:50                      | $0^{\circ}\Omega$          |            | morning max el      | 2795 Dec 29 18:59                      | 20°M37'53                  | 46°52'58    |
|                     | 2793 Aug 04 02:56                      | 0° <b>m</b>                |            |                     | 2796 Jan 07 17:59                      | 0°⊀¹                       |             |
|                     | 2793 Aug 28 15:46                      | 0∘ <b>亚</b>                |            |                     | 2796 Feb 03 11:42                      | ිර<br>ව                    |             |
|                     | 2793 Sep 22 07:40                      | 0°M                        |            | 1 1                 | 2796 Feb 28 21:17                      | 0°≈                        |             |
| desc. node          | 2793 Sep 28 07:00                      | 7°M14'01                   |            | desc. node          | 2796 Mar 15 02:09                      | 18°≈17'34                  |             |
|                     | 2793 Oct 17 04:15                      | 0° <b>⊀</b><br>0° <b>⋜</b> |            |                     | 2796 Mar 24 18:10                      | 0° <b>ℋ</b><br>0° <b>Ƴ</b> |             |
|                     | 2793 Nov 11 08:12                      | ිද<br>ව°0                  |            |                     | 2796 Apr 18 09:46                      |                            |             |
|                     | 2793 Dec 07 02:59<br>2794 Jan 03 13:11 | 0° <b>∺</b>                |            |                     | 2796 May 12 23:32<br>2796 Jun 06 12:45 | 0°Ⅱ<br>8°0                 |             |
| evening max el      | 2794 Jan 03 13:11<br>2794 Jan 05 08:02 | 1° <b>∺</b> 49'52          | A7°15'17   |                     | 2796 Jun 06 12:45<br>2796 Jul 01 01:12 | 0₀ <b>©</b><br>0∘п         |             |
| asc. node           | 2794 Jan 19 10:08                      | 15° <b>H</b> 23'52         | +/ 1J1/    | morning set         | 2796 Jul 01 01:12<br>2796 Jul 01 19:33 | 0°956'13                   |             |
| 450. HOUC           | 2794 Feb 07 17:59                      | 13 χ23 32<br>0° <b>Υ</b>   |            | asc. node           | 2796 Jul 06 05:20                      | 6°\$20'17                  |             |
| greatest brilliancy | 2794 Feb                               | 3° <b>Υ</b> 24'25          | -4.9m      | 450. HOUC           | 2796 Jul 25 11:56                      | 0°Ω                        |             |
| retrograde          | 2794 Feb 25 05:50                      | 5° <b>Υ</b> 27'03          | 7.7111     | max. Earth dist.    | 2796 Aug 04 23:56                      | 12° <b>Ω</b> 55'26         | 1.73386 AU  |
|                     | 2794 Mar 13 20:01                      | 30° <b>₹</b>               |            | Zartii dist.        | 2,7011ug 01 23.30                      | 0633 20                    | 1.,2300710  |
| evening set         | 2794 Mar 15 25:01<br>2794 Mar 15 05:46 | 29° <b>)</b> (09'10        |            | superior conj       | 2796 Aug 07 07:20                      | 15° <b>Ω</b> 46'03         | 1°06'37     |
| min. Earth dist.    | 2794 Mar 17 13:49                      |                            | 0.27680 AU | minimum elong       | 2796 Aug 06 22:42                      | 15° <b>Ω</b> 19'27         | 1°06'20     |
| inferior conj       | 2794 Mar 18 02:59                      | 27° <b>H</b> 21'35         |            |                     | 2796 Aug 18 20:19                      | 0° m                       | <del></del> |
| J                   | /                                      |                            | -          |                     |  | 4                          |             |

| evening rise        | 2796 Sep 12 09:02   | 0° <b>ჲ</b> 19'23         |                      | morning max el      | 2799 Mar 12 16:04                      | 4° <b>≈</b> 56'45            | 46°47'21    |
|---------------------|---------------------|---------------------------|----------------------|---------------------|--|------------------------------|-------------|
|                     | 2796 Sep 12 02:46   | 0∘ <b>⊽</b>               |                      |                     | 2799 Apr 05 07:24                      | 0° <b>∀</b>                  |             |
|                     | 2796 Oct 06 08:21   | 0° <b>M</b> ₊             |                      | desc. node          | 2799 Apr 12 14:04                      | 8° <b>)</b> €06'43           |             |
| desc. node          | 2796 Oct 25 19:02   | 24°M03'56                 |                      |                     | 2799 May 01 17:43                      | $0^{\circ}\mathbf{\Upsilon}$ |             |
|                     | 2796 Oct 30 14:09   | 0° <b>∡</b> 7             |                      |                     | 2799 May 27 08:23                      | 0°8                          |             |
|                     |                     | 0°ਤ                       |                      |                     | •                                      | 0°II                         |             |
|                     | 2796 Nov 23 20:53   |                           |                      |                     | 2799 Jun 21 13:37                      |                              |             |
|                     | 2796 Dec 18 05:48   | 0° <b>≈</b>               |                      |                     | 2799 Jul 16 12:30                      | $0_{\circ}$ වෙ               |             |
|                     | 2797 Jan 11 20:27   | 0° <b>ℋ</b>               |                      | asc. node           | 2799 Aug 03 17:05                      | 22° <b>©</b> 03'50           |             |
|                     | 2797 Feb 06 01:14   | $0$ ° $\mathbf{\Upsilon}$ |                      |                     | 2799 Aug 10 05:21                      | $0 {\circ} \mathcal{N}$      |             |
| asc. node           | 2797 Feb 15 21:54   | 11° <b>Y</b> 23'12        |                      |                     | 2799 Sep 03 16:05                      | 0° <b>m</b> )                |             |
|                     | 2797 Mar 04 15:39   | 0°8                       |                      | morning set         | 2799 Sep 08 19:07                      | 6° m 19'35                   |             |
| evening max el      | 2797 Mar 17 22:06   | 13° <b>8</b> 47'50        | 46°25'30             |                     | 2799 Sep 27 21:34                      | 0∘ <b>⊽</b>                  |             |
| evening max er      |                     | 0°Ⅱ                       | 40 23 30             | Earth diat          | •                                      |                              | 1 72164 ATT |
|                     | 2797 Apr 04 13:04   |                           |                      | max. Earth dist.    | 2799 Oct 12 19:56                      | 18-223507                    | 1.72164 AU  |
| greatest brilliancy | 2797 Apr 25 23:33   | 13° <b>Ⅱ</b> 31'21        | -4.8m                |                     |  |                              |             |
| retrograde          | 2797 May 06 18:30   | 15° <b>Ⅱ</b> 40′29        |                      | superior conj       | 2799 Oct 15 19:14                      | 22° <b>£</b> 17'26           | 1°15'13     |
| evening set         | 2797 May 22 05:36   | 11° <b>Ⅱ</b> 01′23        |                      | minimum elong       | 2799 Oct 16 03:27                      | 22° <b>≏</b> 43'04           | 1°15'02     |
| inferior conj       | 2797 May 28 03:34   | 7° <b>Ⅱ</b> 26′20         | 2°26'24              |                     | 2799 Oct 21 23:29                      | 0°M₊                         |             |
| minimum elong       | 2797 May 28 08:46   | 7° <b>Ⅱ</b> 18′08         | 2°24'54              |                     | 2799 Nov 14 23:29                      | 0° <b>⊼</b> ¹                |             |
| min. Earth dist.    | 2797 May 28 02:30   | 7° <b>Ⅲ</b> 28'00         | 0.28641 AU           | desc. node          | 2799 Nov 23 06:54                      | 10° <b>₹</b> 24'02           |             |
|                     | •                   | 7 <b>П</b> 26 00          | 0.20041 AC           |                     |  | 10 × 2402<br>11°× 709'55     |             |
| morning rise        | 2797 Jun 03 12:12   |                           |                      | evening rise        | 2799 Nov 23 21:34                      |                              |             |
| desc. node          | 2797 Jun 07 11:34   | 1° <b>Ⅱ</b> 39'10         |                      |                     | 2799 Dec 08 22:40                      | 0°る                          |             |
|                     | 2797 Jun 12 08:05   | 30°₹ <b>႘</b>             |                      |                     | 2800 Jan 01 21:54                      | 0° <b>≈</b>                  |             |
| direct              | 2797 Jun 18 12:42   | 29° <b>8</b> 14'28        |                      |                     | 2800 Jan 25 22:41                      | 0° <b>∀</b>                  |             |
|                     | 2797 Jun 24 22:31   | $\Pi^{\circ}0$            |                      |                     | 2800 Feb 19 04:01                      | $0^{\circ}\Upsilon$          |             |
| greatest brilliancy | 2797 Jun 28 15:25   | 1° <b>Ⅱ</b> 04'31         | -4 7m                |                     | 2800 Mar 14 18:36                      | 0°8                          |             |
| morning max el      | 2797 Aug 06 05:03   | 28° <b>I</b>  51'51       |                      | asc. node           | 2800 Mar 15 09:55                      | 0° <b>8</b> 46'08            |             |
| morning max er      | •                   |                           | 43 43 16             | asc. noue           |  | _                            |             |
|                     | 2797 Aug 07 09:32   | 0°9                       |                      |                     | 2800 Apr 09 01:53                      | 0°Щ                          |             |
|                     | 2797 Sep 05 06:43   | $0^{\circ}\Omega$         |                      |                     | 2800 May 05 16:21                      | $0$ $\circ$ $\odot$          |             |
| asc. node           | 2797 Sep 28 14:54   | 26° <b>Ω</b> 26′21        |                      | evening max el      | 2800 May 27 15:42                      | 22° <b>©</b> 40'18           | 45°31'31    |
|                     | 2797 Oct 01 16:17   | 0° <b>m</b> )             |                      |                     | 2800 Jun 04 12:09                      | $0^{\circ}\Omega$            |             |
|                     | 2797 Oct 26 21:00   | 0∘ <b>⊽</b>               |                      | greatest brilliancy | 2800 Jul 04 13:20                      | 20° <b>Ω</b> 30'21           | -4.7m       |
|                     | 2797 Nov 20 09:18   | 0°M                       |                      | desc. node          | 2800 Jul 04 23:25                      | 20° <b>Ω</b> 39'30           |             |
|                     |                     | 0° <b>⊼</b> ¹             |                      |                     |  | 20° <b>€</b> 35'35'          |             |
|                     | 2797 Dec 14 12:39   |                           |                      | retrograde          | 2800 Jul 15 08:47                      |                              |             |
|                     | 2798 Jan 07 11:44   | 0°₹                       |                      | evening set         | 2800 Jul 31 13:05                      | 17° <b>Ω</b> 35'42           |             |
| desc. node          | 2798 Jan 18 04:24   | 13° <b>る</b> 25'24        |                      | inferior conj       | 2800 Aug 05 20:06                      | 14° <b>Ω</b> 23'06           |             |
|                     | 2798 Jan 31 09:15   | 0° <b>≈</b>               |                      | minimum elong       | 2800 Aug 05 10:20                      | 14° <b>Ω</b> 38′22           | 6°33'51     |
| morning set         | 2798 Feb 05 06:53   | 6° <b>≈</b> 09'19         |                      | min. Earth dist.    | 2800 Aug 05 18:12                      | 14° <b>Ω</b> 26′05           | 0.29037 AU  |
| · ·                 | 2798 Feb 24 06:53   | 0° <b>∀</b>               |                      | morning rise        | 2800 Aug 10 07:34                      | 11° <b>Ω</b> 38'47           |             |
|                     | 2770100 21 00.03    | ٠,٨                       |                      | direct              | 2800 Aug 27 11:54                      | 6° <b>Ω</b> 05'26            |             |
|                     | 2700 Mar. 10, 07,41 | 270W25111                 | 100/111              |                     | •                                      | 8°Ω05'24                     | 4 0         |
| superior conj       | 2798 Mar 18 07:41   | 27° <b>)</b> (35'11       |                      | greatest brilliancy | 2800 Sep 06 23:51                      |                              | -4.8m       |
| minimum elong       | 2798 Mar 18 09:19   | 27° <b>)</b> (40′17       | 1°26′10              |                     | 2800 Oct 08 14:12                      | 0°Щ                          |             |
|                     | 2798 Mar 20 06:03   | $0$ ° $\mathbf{\Upsilon}$ |                      | morning max el      | 2800 Oct 15 23:42                      | 7° <b>ነው</b> 02'44           | 46°10'55    |
| max. Earth dist.    | 2798 Mar 22 05:32   | 2° <b>Y</b> 28'14         | 1.71859 AU           | asc. node           | 2800 Oct 26 02:41                      | 17° <b>m</b> 20'31           |             |
|                     | 2798 Apr 13 08:10   | $6^\circ$                 |                      |                     | 2800 Nov 06 20:19                      | 0∘ <b>ত</b>                  |             |
| evening rise        | 2798 Apr 26 21:26   | 16° <b>8</b> 47'26        |                      |                     | 2800 Dec 02 23:39                      | 0°M                          |             |
| evening rise        | 2798 May 07 14:15   | 0°Ⅱ                       |                      |                     | 2800 Dec 27 22:28                      | 0° <b>⊼</b> ¹                |             |
| ,                   | •                   |                           |                      |                     |  |                              |             |
| asc. node           | 2798 May 11 07:46   | 4° <b>Ⅱ</b> 35'39         |                      |                     | 2801 Jan 21 08:38                      | 0°ප                          |             |
|                     | 2798 Jun 01 00:49   | 0ಂತಾ                      |                      | desc. node          | 2801 Feb 14 16:17                      | 0° <b>≈</b> 08'57            |             |
|                     | 2798 Jun 25 16:21   | $0$ $^{\circ}$ $\Omega$   |                      |                     | 2801 Feb 14 13:24                      | 0°≈                          |             |
|                     | 2798 Jul 20 14:19   | 0° <b>m</b> y             |                      |                     | 2801 Mar 10 16:25                      | 0° <b>∀</b>                  |             |
|                     | 2798 Aug 14 21:56   | 0∘ <b>⊽</b>               |                      |                     | 2801 Apr 03 19:46                      | $0^{\circ}\mathbf{\Upsilon}$ |             |
| desc. node          | 2798 Aug 30 21:06   | 18° <b>≏</b> 33'11        |                      | morning set         | 2801 Apr 21 08:42                      | 21° <b>Υ</b> 44'53           |             |
| dese. Hode          | 2798 Sep 09 21:24   | 0°M                       |                      | morning sec         | 2801 Apr 28 00:43                      | 0° <b>8</b>                  |             |
|                     | •                   |                           |                      |                     | •                                      |                              |             |
|                     | 2798 Oct 07 03:03   | 0° <b>∡</b>               |                      |                     | 2801 May 22 07:47                      | $\Pi$ °0                     |             |
| evening max el      | 2798 Oct 22 05:11   | 15° <b>≯</b> 28'13        | 46°43'42             |                     |  |                              |             |
|                     | 2798 Nov 06 23:12   | 0°ರ                       |                      | superior conj       | 2801 May 29 05:31                      | 8° <b>Ⅲ</b> 30′33            | -0°22'38    |
| greatest brilliancy | 2798 Dec 01 14:37   | 15° <b>る</b> 45'57        | -4.9m                | minimum elong       | 2801 May 29 10:19                      | 8° <b>Ⅱ</b> 45'17            | 0°22'24     |
| retrograde          | 2798 Dec 11 09:18   | 17° <b>る</b> 34'35        |                      | max. Earth dist.    | 2801 May 31 00:14                      |                              | 1.73290 AU  |
| asc. node           | 2798 Dec 22 00:15   | 17 <b>3</b> 5433          |                      | asc. node           | 2801 Jun 07 19:30                      | 20° <b>Ⅱ</b> 18'22           | 222,3710    |
|                     |                     |                           |                      | use. Houe           |  |                              |             |
| evening set         | 2798 Dec 25 16:45   | 13° <b>る</b> 30'32        | 202210 5             |                     | 2801 Jun 15 16:41                      | 0°95                         |             |
| inferior conj       | 2798 Dec 31 22:14   | 9° <b>る</b> 53'10         |                      | evening rise        | 2801 Jul 05 00:11                      | 23°5643'33                   |             |
| minimum elong       | 2798 Dec 31 16:32   | 10°る01'49                 | 2°31'19              |                     | 2801 Jul 10 02:51                      | $0 {\circ} \Omega$           |             |
| min. Earth dist.    | 2798 Dec 31 16:16   | 10° <b>ට</b> 02'14        | 0.26479 AU           |                     | 2801 Aug 03 14:09                      | O° Mp                        |             |
| morning rise        | 2799 Jan 06 16:19   | 6° <b>ප</b> 31'00         |                      |                     | 2801 Aug 28 03:20                      | 0∘ <b>⊽</b>                  |             |
| direct              | 2799 Jan 21 07:18   | 2° <b>る</b> 14'46         |                      |                     | 2801 Sep 21 19:46                      | 0°M                          |             |
| greatest brilliancy | 2799 Jan 31 05:12   | 4° <b>る</b> 06'55         | -4.9m                | desc. node          | 2801 Sep 27 19:40<br>2801 Sep 27 09:09 | 6°M43'24                     |             |
| greatest billiancy  |                     |                           | ~ <del>~</del> .7111 | acsc. Hout          | -                                      |                              |             |
|                     | 2799 Mar 07 15:14   | 0° <b>≈</b>               |                      |                     | 2801 Oct 16 17:08                      | 0°⊀                          |             |

|                     | 2801 Nov 10 22:19   | 0°₹  |             |                     | 2804 Apr 17 21:35   | 0°Υ                              |            |
|---------------------|---|--|-------------|---------------------|---|----------------------------------|------------|
|                     | 2801 Nov 10 22.19<br>2801 Dec 06 19:23                      | 0°≈  |             |                     |   | 0°8                              |            |
| evening max el      | 2802 Jan 02 23:00   | 0 ≈<br>29°≈28'20                                 | 47°15'43    |                     | 2804 May 12 10:53<br>2804 Jun 05 23:48                      | 0°II                             |            |
| evening max er      | 2802 Jan 03 11:26   | 29 <b>≈</b> 28 20<br>0° <b>∀</b>                 | 4/ 1343     | morning set         | 2804 Jun 29 13:26   | 28° <b>∏</b> 50'36               |            |
| aga mada            | 2802 Jan 18 12:07   | 14° <b>¥</b> 20′05                               |             | morning set         | 2804 Jun 30 12:05   | 20 H3030                         |            |
| asc. node           | 2802 Feb 09 23:06   | 14 <b>π</b> 2003                                 |             | asa nada            | 2804 Jul  | 5°\$53'08                        |            |
| areatest brillianss | 2802 Feb  | 0 γ<br>1° <b>Υ</b> 03'04                         | -4.9m       | asc. node           | 2804 Jul  | 0°Ω                              |            |
| greatest brilliancy | 2802 Feb 12 12:00<br>2802 Feb 22 20:17                      | 3° <b>Υ</b> 04'51                                | -4.9111     | max. Earth dist.    |   | 10° <b>Ω</b> 56'33               | 1.73415 AU |
| retrograde          |   | 30° <b>₹</b>                                     |             | max. Earth dist.    | 2804 Aug 02 20:08   | 10 863033                        | 1./3413 AU |
| . ,                 | 2802 Mar 07 02:27   |  |             |                     | 2004 4 05 01 20   | 120 0 41120                      | 1004127    |
| evening set         | 2802 Mar 12 20:05   | 26° <b>)</b> 47′53                               | 0.27/22 ATT | superior conj       | 2804 Aug 05 01:39   | 13° <b>Ω</b> 41′20               | 1°04'36    |
| min. Earth dist.    | 2802 Mar 15 03:23   | 25° <b>)</b> (21'59                              |             | minimum elong       | 2804 Aug 04 16:54   | 13° <b>Ω</b> 14'22               | 1°04′19    |
| inferior conj       | 2802 Mar 15 17:14   | 25°\(\)(00'17                                    | 8°53'10     |                     | 2804 Aug 18 07:09   | 0° Mp                            |            |
| minimum elong       | 2802 Mar 15 18:03   | 24° <b>)</b> 59'01                               | 8°53'09     | evening rise        | 2804 Sep 10 02:16   | 28° Mp 10'24                     |            |
| morning rise        | 2802 Mar 18 16:14   | 23° <b>)</b> 10′27                               |             |                     | 2804 Sep 11 13:42   | 0∘ <b>亚</b>                      |            |
| direct              | 2802 Apr 05 12:17   | 17° <b>₩</b> 06'26                               | 4.0         |                     | 2804 Oct 05 19:31   | 0°M                              |            |
| greatest brilliancy | 2802 Apr 14 14:35   | 18° <b>)</b> 39'32                               | -4.8m       | desc. node          | 2804 Oct 24 21:01   | 23°M34'48                        |            |
|                     | 2802 May 04 08:51   | 0° <b>Υ</b>                                      |             |                     | 2804 Oct 30 01:38   | 0° <b>∡</b> 7                    |            |
| desc. node          | 2802 May 10 01:45   | 4° <b>Y</b> 34'17                                |             |                     | 2804 Nov 23 08:46   | 0°る                              |            |
| morning max el      | 2802 May 24 20:25   | 18° <b>Y</b> 00′36                               | 46°03'21    |                     | 2804 Dec 17 18:13   | 0° <b>≈</b>                      |            |
|                     | 2802 Jun 05 19:16   | 0°8  |             |                     | 2805 Jan 11 09:40   | 0° <b>∀</b>                      |            |
|                     | 2802 Jul 03 12:45   | $\Pi^{\circ}0$                                   |             |                     | 2805 Feb 05 15:57   | 0° <b>Υ</b>                      |            |
|                     | 2802 Jul 29 18:57   | 0°€  |             | asc. node           | 2805 Feb 15 00:04   | 10° <b>Y</b> ′44'45              |            |
|                     | 2802 Aug 24 05:46   | $0^{\circ}\Omega$                                |             |                     | 2805 Mar 04 09:57   | 0°8                              |            |
| asc. node           | 2802 Aug 31 05:04   | 8° <b>Ω</b> 20'44                                |             | evening max el      | 2805 Mar 15 12:38   | 11° <b>8</b> 30'05               | 46°28'03   |
|                     | 2802 Sep 18 02:35   | O° My  |             |                     | 2805 Apr 04 23:09   | $\Pi$ $^{\circ}0$                |            |
|                     | 2802 Oct 12 12:47   | 0∘ <b>⊽</b>                                      |             | greatest brilliancy | 2805 Apr 23 16:03   | 11° <b>Ⅱ</b> 20′09               | -4.8m      |
|                     | 2802 Nov 05 15:43   | 0° <b>M</b>                                      |             | retrograde          | 2805 May 04 11:04   | 13° <b>Ⅲ</b> 29'48               |            |
| morning set         | 2802 Nov 18 13:11   | 16° <b>™</b> 08'07                               |             | evening set         | 2805 May 19 23:39   | 8° <b>Ⅱ</b> 47'39                |            |
|                     | 2802 Nov 29 14:29   | 0° <b>∡</b> ¹                                    |             | inferior conj       | 2805 May 25 19:44   | 5° <b>Ⅱ</b> 15'33                | 2°45'51    |
| desc. node          | 2802 Dec 20 18:37   | 26° <b>尽</b> 36'33                               |             | minimum elong       | 2805 May 26 01:35   | 5° <b>Ⅱ</b> 06′22                | 2°44'11    |
|                     | 2802 Dec 23 11:19   | ರ°0  |             | min. Earth dist.    | 2805 May 25 18:51   | 5° <b>Ⅱ</b> 16′56                | 0.28620 AU |
|                     |   |  |             | morning rise        | 2805 Jun 01 03:45   | 1° <b>Ⅲ</b> 26′53                |            |
| superior conj       | 2802 Dec 28 22:16   | 6° <b>る</b> 51'49                                | -0°19'26    |                     | 2805 Jun 03 23:46   | 30° <b>₹</b> 8                   |            |
| minimum elong       | 2802 Dec 28 17:12   | 6° <b>る</b> 35'52                                | 0°19'11     | desc. node          | 2805 Jun 06 13:28   | 28° <b>8</b> 54'19               |            |
| max. Earth dist.    | 2802 Dec 28 13:33   | 6° <b>る</b> 24'22                                | 1.71108 AU  | direct              | 2805 Jun 16 04:10   | 27° <b>8</b> 03'47               |            |
|                     | 2803 Jan 16 07:37   | 0° <b>≈</b>                                      |             | greatest brilliancy | 2805 Jun 26 07:09   | 28° <b>8</b> 54'20               | -4.7m      |
| evening rise        | 2803 Feb 08 05:53   | 28° <b>≈</b> 48'45                               |             |                     | 2805 Jun 29 02:51   | $\Pi^{\circ}0$                   |            |
|                     | 2803 Feb 09 04:35   | 0° <b>∀</b>                                      |             | morning max el      | 2805 Aug 03 21:30   | 26° <b>Ⅱ</b> 43'17               | 45°43'05   |
|                     | 2803 Mar 05 03:54   | $0^{\circ}\mathbf{\Upsilon}$                     |             | -                   | 2805 Aug 07 07:06   | $0$ $\circ$ $\mathfrak{S}$       |            |
|                     | 2803 Mar 29 07:48   | 0° <b>႘</b>                                      |             |                     | 2805 Sep 04 22:08   | $0^{\circ}\Omega$                |            |
| asc. node           | 2803 Apr 12 21:54   | 17° <b>8</b> 56'37                               |             | asc. node           | 2805 Sep 27 16:56   | 25° <b>Ω</b> 53'18               |            |
|                     | 2803 Apr 22 18:48   | $\Pi^{\circ}$                                    |             |                     | 2805 Oct 01 05:30   | 0° <b>m</b> )                    |            |
|                     | 2803 May 17 15:48   | 0°ಅ  |             |                     | 2805 Oct 26 09:12   | 0∘ <mark>⊽</mark>                |            |
|                     | 2803 Jun 12 03:27   | $0^{\circ}\Omega$                                |             |                     | 2805 Nov 19 21:00   | 0° <b>M</b>                      |            |
|                     | 2803 Jul 08 16:09   | 0° <b>m</b>                                      |             |                     | 2805 Dec 14 00:04   | 0° <b>∡</b> ¹                    |            |
| desc. node          | 2803 Aug 02 11:20   | 26° m 02'09                                      |             |                     | 2806 Jan 06 22:59   | 0°ಕ                              |            |
|                     | 2803 Aug 06 12:42   | 0∘ <u>⊽</u>                                      |             | desc. node          | 2806 Jan 17 06:27   | 12° <b>る</b> 56'45               |            |
| evening max el      | 2803 Aug 07 19:03   | 1° <b>≏</b> 12'48                                | 45°38'59    |                     | 2806 Jan 30 20:23   | 0° <b>≈</b>                      |            |
| greatest brilliancy | 2803 Sep 16 10:32   | 29° <b>ഫ</b> 29'39                               |             | morning set         | 2806 Feb 02 16:27   | 3° <b>≈</b> 33'45                |            |
| · ·                 | 2803 Sep 18 03:53   | 0°M  |             | Z .                 | 2806 Feb 23 17:54   | 0° <b>)</b> €                    |            |
| retrograde          | 2803 Sep 25 13:43   | 1°M00'50   |             |                     |   |                                  |            |
|                     | 2803 Oct 02 18:06   | 30° <b>Ŗ</b> Ω                                   |             | superior conj       | 2806 Mar 15 19:34   | 25° <b>)</b> €08'04              | -1°26'23   |
| evening set         | 2803 Oct 12 22:01   | 25° <b>≏</b> 24'13                               |             | minimum elong       | 2806 Mar 15 20:11   | 25° <b>)</b> 10′01               |            |
| inferior conj       | 2803 Oct 16 15:26   | 23° <b>⊆</b> 09'04                               | -7°45'16    | max. Earth dist.    | 2806 Mar 19 14:19   | 29° <b>)</b> 51'38               | 1.71807 AU |
| minimum elong       | 2803 Oct 17 00:07   | 22° <b>£</b> 55'40                               |             | man. Bartin dist.   | 2806 Mar 19 17:00   | 0°Υ                              | 1.,100,110 |
| min. Earth dist.    | 2803 Oct 17 14:34   | 22° <b>£</b> 33'25                               |             |                     | 2806 Apr 12 19:04   | 0°8                              |            |
| morning rise        | 2803 Oct 21 01:46   | 20° <b>£</b> 28'04                               | 0.27007110  | evening rise        | 2806 Apr 24 11:43   | 14° <b>8</b> 29'34               |            |
| direct              | 2803 Nov 06 17:59   | 15° <b>⊆</b> 06'12                               |             | 3.0                 | 2806 May 07 01:09   | 14 <b>О</b> 27 34                |            |
| greatest brilliancy | 2803 Nov 00 17:39<br>2803 Nov 17 23:44                      | 13 <b>≅</b> 00 12 17° <b>£</b> 26'36             | -4.9m       | asc. node           | 2806 May 10 09:43   | 4° <b>Ⅱ</b> 08'07                |            |
| asc. node           | 2803 Nov 17 23:44<br>2803 Nov 23 14:24                      | 20° <b>£</b> 07'07                               |             |                     | 2806 May 31 11:49   | 0°95                             |            |
| 200. Hode           | 2803 Nov 23 14.24<br>2803 Dec 07 18:17                      | 0°M  |             |                     | 2806 Jun 25 03:40   | 0°Ω                              |            |
| morning max el      | 2803 Dec 27 08:48   | 18°M13'36  | 46°52'12    |                     | 2806 Jul 20 02:13   | 0° <b>m</b> )                    |            |
| morning max ci      | 2804 Jan 07 13:27   | 10 IIC1330                                       | TU J2 12    |                     | 2806 Aug 14 10:54   | 0∘ <del>ত</del><br>المار         |            |
|                     | 2804 Feb 03 03:04   | 0°중  |             | desc. node          | 2806 Aug 29 23:12   | 0 <b>=</b><br>17° <b>£</b> 59'01 |            |
|                     | 2007100 03 03.04  |  |             | dese. Houc          | •   |                                  |            |
|                     | 2804 Feb. 28 10:40  | 0°≈≈   |             |                     | 2806 Sen 09 12:10   | ()~III.                          |            |
| desc node           | 2804 Feb 28 10:49<br>2804 Mar 14 04:15                      | 0°≈<br>17°≈45'08                                 |             |                     | 2806 Sep 09 12:19<br>2806 Oct 06 22:14                      | 0°M√<br>0°√ <b>7</b>             |            |
| desc. node          | 2804 Feb 28 10:49<br>2804 Mar 14 04:15<br>2804 Mar 24 06:39 | 0° <b>≈</b><br>17° <b>≈</b> 45'08<br>0° <b>米</b> |             | evening max el      | 2806 Sep 09 12:19<br>2806 Oct 06 22:14<br>2806 Oct 19 19:33 | 0° द्रौ<br>13° द्रौ 07'42        | 46°41'29   |

|                     | 2806 Nov 07 10:38                      | 0°ಕ                                  |            |                     | 2809 May 21 18:25                      | 0°Щ                                     |            |
|---------------------|--|--------------------------------------|------------|---------------------|--|---|------------|
| greatest brilliancy | 2806 Nov 29 02:56                      | 13° <b>る</b> 17'02                   | -4.9m      |                     |  |   |            |
| retrograde          | 2806 Dec 08 22:02                      | 15° <b>පි</b> 05'30                  |            | superior conj       | 2809 May 26 22:05                      | 6° <b>Ⅲ</b> 21′00                       | -0°25'50   |
| asc. node           | 2806 Dec 21 02:16                      | 12° <b>る</b> 05'29                   |            | minimum elong       | 2809 May 27 03:31                      | 6° <b>Ⅱ</b> 37'43                       | 0°25'35    |
| evening set         | 2806 Dec 23 04:20                      | 11° <b>る</b> 02'31                   |            | max. Earth dist.    | 2809 May 28 21:19                      | 8° <b>Ⅱ</b> 46′27                       | 1.73254 AU |
| inferior conj       | 2806 Dec 29 10:19                      | 7° <b>る</b> 24'22                    | 2°09'09    | asc. node           | 2809 Jun 06 21:35                      | 19° <b>Ⅱ</b> 52'06                      |            |
| minimum elong       | 2806 Dec 29 05:27                      | 7° <b>る</b> 31'45                    | 2°07'37    |                     | 2809 Jun 15 03:17                      | $0$ $\circ$ $\mathfrak{S}$              |            |
| min. Earth dist.    | 2806 Dec 29 05:24                      | 7° <b>る</b> 31'49                    | 0.26476 AU | evening rise        | 2809 Jul 02 18:43                      | 21° <b>5</b> 540'24                     |            |
| morning rise        | 2807 Jan 04 06:37                      | 3° <b>る</b> 59'32                    |            |                     | 2809 Jul 09 13:31                      | $0$ $^{\circ}$ $\Omega$                 |            |
|                     | 2807 Jan 15 11:50                      | 30°₹ <b>৴</b>                        |            |                     | 2809 Aug 03 00:59                      | 0° <b>m</b>                             |            |
| direct              | 2807 Jan 18 20:17                      | 29° <b>∡</b> ¹46′03                  |            |                     | 2809 Aug 27 14:30                      | 0∘ <b>ত</b>                             |            |
|                     | 2807 Jan 22 05:55                      | 0°ප                                  |            |                     | 2809 Sep 21 07:28                      | $0^{\circ}$ M                           |            |
| greatest brilliancy | 2807 Jan 28 18:27                      | 1° <b>る</b> 38'58                    | -4.9m      | desc. node          | 2809 Sep 26 11:11                      | 6°M13'42                                |            |
|                     | 2807 Mar 07 16:01                      | 0° <b>≈</b>                          |            |                     | 2809 Oct 16 05:41                      | 0° <b>∡</b>                             |            |
| morning max el      | 2807 Mar 10 06:11                      | 2° <b>≈</b> 34'15                    | 46°48'26   |                     | 2809 Nov 10 12:13                      | 0° <b>ろ</b>                             |            |
|                     | 2807 Apr 05 00:17                      | 0° <b>∀</b>                          |            |                     | 2809 Dec 06 11:49                      | 0° <b>≈</b>                             |            |
| desc. node          | 2807 Apr 11 16:05                      | 7° <b>∺</b> 27'38                    |            | evening max el      | 2809 Dec 31 12:56                      | 27°≈04'34                               | 47°15'52   |
|                     | 2807 May 01 07:46                      | 0° <b>Υ</b>                          |            |                     | 2810 Jan 03 10:27                      | 0° <b>∀</b>                             |            |
|                     | 2807 May 26 20:59                      | 0°8                                  |            | asc. node           | 2810 Jan 17 14:17                      | 13° <b>¥</b> 15′23                      |            |
|                     | 2807 Jun 21 01:21                      | 0°П                                  |            | greatest brilliancy | 2810 Feb 10 03:21                      | 28° <b>)</b> (41'43                     | -4.9m      |
|                     | 2807 Jul 15 23:41                      | 0ංම                                  |            |                     | 2810 Feb 14 10:14                      | 0° <b>Υ</b>                             |            |
| asc. node           | 2807 Aug 02 19:17                      | 21° <b>©</b> 37'17                   |            | retrograde          | 2810 Feb 20 10:07                      | 0° <b>Υ</b> 42'21                       |            |
|                     | 2807 Aug 09 16:11                      | $0^{\circ}\Omega$                    |            |                     | 2810 Feb 26 06:17                      | 30° <b>Ŗ</b> ₩                          |            |
|                     | 2807 Sep 03 02:47                      | 0° <b>m</b>                          |            | evening set         | 2810 Mar 10 09:39                      | 24° <b>)</b> €27'08                     |            |
| morning set         | 2807 Sep 06 12:23                      | 4° mp 11'40                          |            | min. Earth dist.    | 2810 Mar 12 17:02                      | 23° <b>)</b> €01'09                     | 0.27581 AU |
|                     | 2807 Sep 27 08:17                      | 0° <b>⊽</b>                          |            | inferior conj       | 2810 Mar 13 07:15                      | 22° <b>)</b> (38′52                     | 8°53'58    |
| max. Earth dist.    | 2807 Oct 10 09:10                      | 16° <b>≏</b> 13′20                   | 1.72216 AU | minimum elong       | 2810 Mar 13 07:10                      | 22° <b>)</b> (39′00                     | 8°53'59    |
|                     | 2007 0 . 12 10 10                      | 200 2 02140                          | 1016146    | morning rise        | 2810 Mar 16 04:52                      | 20° <b>)</b> €51'01                     |            |
| superior conj       | 2807 Oct 13 10:49                      | 20° <b>Ω</b> 02'49                   | 1°16'46    | direct              | 2810 Apr 03 01:20                      | 14° <b>)</b> (45'54                     | 4.0        |
| minimum elong       | 2807 Oct 13 18:30                      | 20° <b>£</b> 26'46                   | 1°16'36    | greatest brilliancy | 2810 Apr 12 03:56                      | 16° <b>)</b> € 18'54                    | -4.8m      |
|                     | 2807 Oct 21 10:17                      | 0° <b>M</b><br>0° <b>₹</b>           |            |                     | 2810 May 04 21:33                      | 0°Υ<br>2° <b>W</b> 22106                |            |
|                     | 2807 Nov 14 10:25                      | 0° <b>√</b> 7<br>89. <b>√7</b> 4214€ |            | desc. node          | 2810 May 09 03:44                      | 3° <b>Y</b> 32'06<br>15° <b>Y</b> 40'36 | 46904147   |
| evening rise        | 2807 Nov 21 09:51                      | 8° 🖈 43'46                           |            | morning max el      | 2810 May 22 09:27                      |   | 46°04'47   |
| desc. node          | 2807 Nov 22 08:54<br>2807 Dec 08 09:44 | 9° <b>メ</b> 55'53<br>0° <b>る</b>     |            |                     | 2810 Jun 05 13:55                      | 0°B<br>0°B                              |            |
|                     | 2808 Jan 01 09:08                      | 0°≈                                  |            |                     | 2810 Jul 03 03:11<br>2810 Jul 29 07:34 | 0.2€                                    |            |
|                     | 2808 Jan 25 10:10                      | 0° <b>∺</b>                          |            |                     | 2810 Aug 23 17:27                      | 0°€<br>0°€                              |            |
|                     | 2808 Feb 18 15:50                      | 0° <b>Υ</b>                          |            | asc. node           | 2810 Aug 30 07:04                      | 7° <b>Ω</b> 52'15                       |            |
| asc. node           | 2808 Mar 14 11:58                      | 0° <b>8</b> 14'49                    |            | asc. Houc           | 2810 Sep 17 13:45                      | 0°m)                                    |            |
| asc. node           | 2808 Mar 14 07:03                      | 0°8                                  |            |                     | 2810 Oct 11 23:41                      | 0∘ <del>ত</del><br>س                    |            |
|                     | 2808 Apr 08 15:33                      | 0°II                                 |            |                     | 2810 Nov 05 02:30                      | 0° <b>m</b> .                           |            |
|                     | 2808 May 05 08:50                      | 0°©                                  |            | morning set         | 2810 Nov 16 02:49                      | 13°M46'41                               |            |
| evening max el      | 2808 May 25 08:11                      | 20° <b>©</b> 31'21                   | 45°32'33   | morning set         | 2810 Nov 29 01:15                      | 0° <b>⊼</b>                             |            |
| e venning man er    | 2808 Jun 04 14:36                      | 0°Ω                                  | 3233       | desc. node          | 2810 Dec 19 20:45                      | 26° <b>х</b> 09′17                      |            |
| greatest brilliancy | 2808 Jul 02 05:10                      | 18° <b>Ω</b> 22'00                   | -4.7m      |                     | 2810 Dec 22 22:08                      | 0°ਰ                                     |            |
| desc. node          | 2808 Jul 04 01:35                      | 18° <b>Ω</b> 59'57                   |            |                     |  | • •                                     |            |
| retrograde          | 2808 Jul 13 00:52                      | 20° <b>£</b> 27'32                   |            | superior conj       | 2810 Dec 26 08:48                      | 4° <b>る</b> 19'58                       | -0°15'33   |
| evening set         | 2808 Jul 29 02:43                      | 15° <b>Ω</b> 31'39                   |            | minimum elong       | 2810 Dec 26 04:43                      | 4° <b>る</b> 07'08                       | 0°15'22    |
| inferior conj       | 2808 Aug 03 12:30                      | 12° <b>Ω</b> 14'46                   | -6°22'38   | behind sun begin    | 2810 Dec 25 19:44                      | 3°₹38'52                                |            |
| minimum elong       | 2808 Aug 03 02:40                      | 12° <b>Ω</b> 30′10                   | 6°20'43    | behind sun end      | 2810 Dec 26 13:42                      | 4° <b>る</b> 35'24                       |            |
| min. Earth dist.    | 2808 Aug 03 10:01                      | 12° <b>Ω</b> 18'40                   | 0.29039 AU | max. Earth dist.    | 2810 Dec 25 18:00                      | 3° <b>る</b> 33'27                       | 1.71127 AU |
| morning rise        | 2808 Aug 08 02:36                      | 9° <b>Ω</b> 26'19                    |            |                     | 2811 Jan 15 18:30                      | 0° <b>≈</b>                             |            |
| direct              | 2808 Aug 25 04:36                      | 3° <b>Ω</b> 57′21                    |            | evening rise        | 2811 Feb 05 16:05                      | 26° <b>≈</b> 15'52                      |            |
| greatest brilliancy | 2808 Sep 04 15:10                      | 5° <b>Ω</b> 55'46                    | -4.7m      |                     | 2811 Feb 08 15:31                      | 0° <b>)</b>                             |            |
|                     | 2808 Oct 08 14:37                      | 0° <b>m</b>                          |            |                     | 2811 Mar 04 14:54                      | $0^{\circ}$ Y                           |            |
| morning max el      | 2808 Oct 13 14:22                      | 4° <b>™</b> 47'50                    | 46°09'15   |                     | 2811 Mar 28 18:56                      | $9^{\circ}$ 8                           |            |
| asc. node           | 2808 Oct 25 04:41                      | 16° Mp 37′25                         |            | asc. node           | 2811 Apr 11 23:52                      | 17° <b>8</b> 28'02                      |            |
|                     | 2808 Nov 06 12:32                      | 0∘ <b>⊽</b>                          |            |                     | 2811 Apr 22 06:14                      | $\Pi^{\circ}0$                          |            |
|                     | 2808 Dec 02 13:21                      | $0^{\circ}$ M.                       |            |                     | 2811 May 17 03:49                      | $0$ $\circ$ $\odot$                     |            |
|                     | 2808 Dec 27 11:02                      | 0° <b>∡</b> ¹                        |            |                     | 2811 Jun 11 16:37                      | $0^{\circ}\Omega$                       |            |
|                     | 2809 Jan 20 20:34                      | 0°ರ                                  |            |                     | 2811 Jul 08 07:47                      | 0° <b>m</b>                             |            |
| desc. node          | 2809 Feb 13 18:27                      | 29° <b>る</b> 39'53                   |            | desc. node          | 2811 Aug 01 13:26                      | 25° <b>m</b> 15'39                      |            |
|                     | 2809 Feb 14 00:55                      | 0° <b>≈</b>                          |            | evening max el      | 2811 Aug 05 08:32                      | 28° <b>m</b> 56'05                      | 45°37'39   |
|                     | 2809 Mar 10 03:38                      | 0° <b>)</b> €                        |            |                     | 2811 Aug 06 11:25                      | 0∘ <b>亚</b>                             |            |
|                     | 2809 Apr 03 06:44                      | $0$ ° $\mathbf{\gamma}$              |            | greatest brilliancy | 2811 Sep 13 23:26                      | 27° <b>≏</b> 12'29                      | -4.8m      |
| morning set         | 2809 Apr 18 23:19                      | 19° <b>Y</b> 28′00                   |            | retrograde          | 2811 Sep 23 03:39                      | 28° <b>≏</b> 44'46                      |            |
|                     | 2809 Apr 27 11:29                      | $9^{\circ}$ 8                        |            | evening set         | 2811 Oct 10 14:45                      | 23° <b>ჲ</b> 03′26                      |            |
|                     |  |                                      |            |                     |  |   |            |

| inforior coni                     | 2011 Oat 14 05:40                      | 200 0 51152                              | 795 4122   | may Forth dist             | 2014 Mar. 17, 02:20                    | 270¥25!27                          | 1 71761 ATT |
|-----------------------------------|--|--|------------|----------------------------|--|------------------------------------|-------------|
| inferior conj                     | 2811 Oct 14 05:48                      | 20° <b>£</b> 51'52<br>20° <b>£</b> 39'16 |            | max. Earth dist.           | 2814 Mar 17 02:20<br>2814 Mar 19 03:49 | 27° <b>)</b> €25'27<br>0° <b>°</b> | 1.71761 AU  |
| minimum elong<br>min. Earth dist. | 2811 Oct 14 13:59<br>2811 Oct 15 04:42 | 20° <b>£</b> 16'38                       |            |                            | 2814 Mai 19 03:49<br>2814 Apr 12 05:53 | 0°8                                |             |
| morning rise                      | 2811 Oct 13 04:42<br>2811 Oct 18 12:47 | 20 <b>=</b> 10 38<br>18° <b>£</b> 15'54  | 0.27920 AU | evening rise               | 2814 Apr 22 01:58                      | 12° <b>8</b> 11'43                 |             |
| direct                            | 2811 Nov 04 08:49                      | 18 <b>≅</b> 13 34<br>12° <b>£</b> 47'49  |            | evening rise               | 2814 May 06 12:01                      | 0°Ⅱ                                |             |
| greatest brilliancy               | 2811 Nov 04 08.49<br>2811 Nov 15 15:16 | 12 <b>=</b> 4749<br>15° <b>⊆</b> 09'01   | -4.9m      | asc. node                  | 2814 May 09 11:48                      | 3° <b>∏</b> 41'01                  |             |
| asc. node                         | 2811 Nov 22 16:25                      | 18° <b>⊆</b> 38'21                       | -4.7111    | asc. node                  | 2814 May 30 22:50                      | 0°95                               |             |
| asc. node                         | 2811 Dec 08 03:43                      | 0°M                                      |            |                            | 2814 Jun 24 14:59                      | 0°N                                |             |
| morning max el                    | 2811 Dec 24 23:37                      | 15°M53'27                                | 46°51'22   |                            | 2814 Jul 19 14:09                      | 0° m)                              |             |
| morning max or                    | 2812 Jan 07 07:55                      | 0° <b>√</b>                              | 10 31 22   |                            | 2814 Aug 13 23:55                      | 0∘ <del>ত</del><br>من              |             |
|                                   | 2812 Feb 02 17:51                      | °5                                       |            | desc. node                 | 2814 Aug 29 01:11                      | ა <b>—</b><br>17° <b>ჲ</b> 24'29   |             |
|                                   | 2812 Feb 27 23:58                      | 0° <b>≈</b>                              |            | acse. noue                 | 2814 Sep 09 03:22                      | 0°M                                |             |
| desc. node                        | 2812 Mar 13 06:12                      | 17° <b>≈</b> 13'06                       |            |                            | 2814 Oct 06 17:53                      | 0° <b>⊼</b> 7                      |             |
|                                   | 2812 Mar 23 18:53                      | 0° <b>)</b> €                            |            | evening max el             | 2814 Oct 17 10:10                      | 10° <b>х</b> 48′09                 | 46°39'12    |
|                                   | 2812 Apr 17 09:11                      | $_{0}$ $^{\circ}$ $\gamma$               |            | <i>5</i>                   | 2814 Nov 08 01:40                      | 0°ਰ                                |             |
|                                   | 2812 May 11 22:03                      | 0°8                                      |            | greatest brilliancy        | 2814 Nov 26 15:46                      | 10° <b>る</b> 49'21                 | -4.9m       |
|                                   | 2812 Jun 05 10:40                      | 0° <b>I</b> I                            |            | retrograde                 | 2814 Dec 06 10:35                      | 12° <b>る</b> 36'53                 |             |
| morning set                       | 2812 Jun 27 07:11                      | 26° <b>Ⅱ</b> 45'15                       |            | asc. node                  | 2814 Dec 20 04:28                      | 8° <b>ප</b> 50'31                  |             |
| C                                 | 2812 Jun 29 22:45                      | 0°ಲ                                      |            | evening set                | 2814 Dec 20 16:21                      | 8° <b>ප</b> 34'56                  |             |
| asc. node                         | 2812 Jul 04 09:29                      | 5° <b>©</b> 27'10                        |            | inferior conj              | 2814 Dec 26 22:32                      | 4° <b>ප</b> 56'11                  | 1°45'03     |
|                                   | 2812 Jul 24 09:18                      | $0^{\circ}\Omega$                        |            | minimum elong              | 2814 Dec 26 18:33                      | 5° <b>る</b> 02'15                  | 1°43'46     |
| max. Earth dist.                  | 2812 Jul 31 18:17                      | 9° <b>Ω</b> 04'29                        | 1.73439 AU | min. Earth dist.           | 2814 Dec 26 18:52                      | 5° <b>る</b> 01'47                  | 0.26475 AU  |
|                                   |  |  |            | morning rise               | 2815 Jan 01 20:49                      | 1° <b>る</b> 28'42                  |             |
| superior conj                     | 2812 Aug 02 19:58                      | 11° <b>Ω</b> 37'26                       | 1°02'30    |                            | 2815 Jan 04 20:25                      | 30°₽ <b>,</b> ⊀                    |             |
| minimum elong                     | 2812 Aug 02 11:09                      | 11° <b>Ω</b> 10′16                       | 1°02'13    | direct                     | 2815 Jan 16 09:16                      | 27° <b>҂</b> 18′00                 |             |
|                                   | 2812 Aug 17 17:44                      | O° Mp                                    |            | greatest brilliancy        | 2815 Jan 26 07:56                      | 29° <b>∡</b> 11'30                 | -4.9m       |
| evening rise                      | 2812 Sep 07 19:49                      | 26° Mp 03'13                             |            |                            | 2815 Jan 28 08:59                      | 5°0                                |             |
|                                   | 2812 Sep 11 00:25                      | 0∘ <b>ত</b>                              |            |                            | 2815 Mar 07 15:34                      | 0° <b>≈</b>                        |             |
|                                   | 2812 Oct 05 06:27                      | $0^{\circ}$ M,                           |            | morning max el             | 2815 Mar 07 19:25                      | 0° <b>≈</b> 09'39                  | 46°49'31    |
| desc. node                        | 2812 Oct 23 23:02                      | 23°M06'28                                |            |                            | 2815 Apr 04 16:45                      | 0° <b>)</b> €                      |             |
|                                   | 2812 Oct 29 12:53                      | 0° <b>∡</b> ¹                            |            | desc. node                 | 2815 Apr 10 18:07                      | 6° <b>){</b> 49'13                 |             |
|                                   | 2812 Nov 22 20:24                      | 0°ප                                      |            |                            | 2815 Apr 30 21:37                      | $0^{\circ}$ Y                      |             |
|                                   | 2812 Dec 17 06:22                      | 0° <b>≈</b>                              |            |                            | 2815 May 26 09:31                      | $0^{\circ}S$                       |             |
|                                   | 2813 Jan 10 22:40                      | 0° <b>∀</b>                              |            |                            | 2815 Jun 20 13:06                      | $\Pi$ °0                           |             |
|                                   | 2813 Feb 05 06:35                      | $0$ ° $\Upsilon$                         |            |                            | 2815 Jul 15 10:56                      | $0$ $\circ$                        |             |
| asc. node                         | 2813 Feb 14 02:02                      | 10° <b>Y</b> 06′06                       |            | asc. node                  | 2815 Aug 01 21:16                      | 21° <b>©</b> 09'44                 |             |
|                                   | 2813 Mar 04 04:33                      | 0° <b>8</b>                              |            |                            | 2815 Aug 09 03:09                      | $0$ $\circ$ $\Omega$               |             |
| evening max el                    | 2813 Mar 13 04:02                      | 9° <b>8</b> 14'49                        | 46°30'19   |                            | 2815 Sep 02 13:36                      | 0° <b>™</b>                        |             |
|                                   | 2813 Apr 05 12:43                      | 0°II                                     |            | morning set                | 2815 Sep 04 05:31                      | 2° m 03'08                         |             |
| greatest brilliancy               | 2813 Apr 21 08:06                      | 9° <b>Ⅱ</b> 08'10                        | -4.8m      |                            | 2815 Sep 26 19:04                      | 0∘ <b>⊽</b>                        |             |
| retrograde                        | 2813 May 02 03:48                      | 11° <b>Ⅱ</b> 18'30                       |            | max. Earth dist.           | 2815 Oct 07 22:08                      | 13° <b>≏</b> 50'35                 | 1.72265 AU  |
| evening set                       | 2813 May 17 17:40                      | 6° <b>Ⅱ</b> 33'17                        | 2005112    |                            | 2015 0 . 11 02 20                      | 1.70 0 40100                       | 1010110     |
| inferior conj                     | 2813 May 23 11:41                      | 3° <b>Ⅱ</b> 04'07                        |            | superior conj              | 2815 Oct 11 02:29                      | 17° <b>Ω</b> 48'23                 | 1°18'10     |
| minimum elong                     | 2813 May 23 18:08                      | 2° <b>∏</b> 53'59                        |            | minimum elong              | 2815 Oct 11 09:36                      | 18° <b>Ω</b> 10'33                 | 1°18'02     |
| min. Earth dist.                  | 2813 May 23 10:42                      | 3° <b>Ⅱ</b> 05'39                        | 0.28598 AU |                            | 2815 Oct 20 21:09                      | 0°M                                |             |
|                                   | 2813 May 28 12:21                      | 30°R <b>と</b><br>29° <b>と</b> 16'57      |            |                            | 2815 Nov 13 21:24                      | 0° 🗖 17/55                         |             |
| morning rise<br>desc. node        | 2813 May 29 18:55                      | 29° <b>8</b> 13'06                       |            | evening rise<br>desc. node | 2815 Nov 18 22:17                      | 6° ₹ 17'55<br>9° ₹ 27'51           |             |
| direct                            | 2813 Jun 05 15:37<br>2813 Jun 13 20:01 | 24° <b>8</b> 52'39                       |            | desc. node                 | 2815 Nov 21 11:00<br>2815 Dec 07 20:55 | 9 x·2/31                           |             |
| greatest brilliancy               | 2813 Jun 23 22:13                      | 24° <b>8</b> 43'09                       | 4.7m       |                            | 2815 Dec 31 20:31                      | 0°≈                                |             |
| greatest offinality               | 2813 Jul 01 06:17                      | 0°Ⅱ                                      | -4.7111    |                            | 2816 Jan 24 21:47                      | 0° <b>∺</b>                        |             |
| morning max el                    | 2813 Aug 01 14:10                      | 24° <b>∏</b> 35'34                       | 45°43'00   |                            | 2816 Feb 18 03:49                      | 0°Υ                                |             |
| morning max ci                    | 2813 Aug 07 14:10<br>2813 Aug 07 03:48 | 0°95                                     | 43 43 00   | asc. node                  | 2816 Mar 13 13:58                      | 29° <b>Υ</b> '42'57                |             |
|                                   | 2813 Sep 04 13:09                      | $0^{\circ}\Omega$                        |            | use. Hode                  | 2816 Mar 13 19:39                      | 0°8                                |             |
| asc. node                         | 2813 Sep 26 18:56                      | 25° <b>Ω</b> 20'50                       |            |                            | 2816 Apr 08 05:25                      | 0°II                               |             |
| ase. Hode                         | 2813 Sep 30 18:27                      | 0° m                                     |            |                            | 2816 May 05 01:47                      | 0°©                                |             |
|                                   | 2813 Oct 25 21:11                      | 0∘ <b>ರ</b>                              |            | evening max el             | 2816 May 22 23:40                      | 18° <b>©</b> 19'25                 | 45°33'29    |
|                                   | 2813 Nov 19 08:30                      | 0°M                                      |            | -0                         | 2816 Jun 04 18:59                      | 0°Ω                                |             |
|                                   | 2813 Dec 13 11:19                      | 0° <b>⊼</b> ¹                            |            | greatest brilliancy        | 2816 Jun 29 21:16                      | 16° <b>Ω</b> 13'02                 | -4.7m       |
|                                   | 2814 Jan 06 10:04                      | 0°ਤ                                      |            | desc. node                 | 2816 Jul 03 03:39                      | 17° <b>Ω</b> 15'51                 |             |
| desc. node                        | 2814 Jan 16 08:36                      | 12° <b>る</b> 28'52                       |            | retrograde                 | 2816 Jul 10 16:31                      | 18° <b>Ω</b> 18'29                 |             |
|                                   | 2814 Jan 30 07:20                      | 0°≈                                      |            | evening set                | 2816 Jul 26 16:21                      | 13° <b>Ω</b> 26'27                 |             |
| morning set                       | 2814 Jan 31 02:32                      | 1°≈00'16                                 |            | inferior conj              | 2816 Aug 01 04:50                      | 10° <b>Ω</b> 05'38                 | -6°09'02    |
| Z .                               | 2814 Feb 23 04:46                      | 0° <b>)</b> €                            |            | minimum elong              | 2816 Jul 31 18:58                      | 10° <b>Ω</b> 21'06                 |             |
|                                   |  |  |            | min. Earth dist.           | 2816 Aug 01 02:09                      | 10° <b>Ω</b> 09'51                 | 0.29041 AU  |
| superior conj                     | 2814 Mar 13 07:36                      | 22° <b>)</b> (41'46                      | -1°26'24   | morning rise               | 2816 Aug 05 21:33                      | 7° <b>Ω</b> 13′02                  |             |
| minimum elong                     | 2814 Mar 13 07:13                      | 22° <b>)</b> 40′34                       |            | direct                     | 2816 Aug 22 20:46                      | 1° <b>Ω</b> 48'15                  |             |
| -                                 |  |  |            |                            | -                                      |                                    |             |

|                     | 2016 0 02 07 00                       | 20045155            | 4.5         |                     | 2010.14                                | 0014                                   |            |
|---------------------|---------------------------------------|---------------------|-------------|---------------------|--|--|------------|
| greatest brilliancy | 2816 Sep 02 07:08                     | 3° <b>Ω</b> 45'57   | -4.7m       | _                   | 2819 Mar 28 06:27                      | 0° <b>8</b>                            |            |
|                     | 2816 Oct 08 14:15                     | 0° <b>m</b> )       |             | asc. node           | 2819 Apr 11 01:59                      | 16° <b>8</b> 58'45                     |            |
| morning max el      | 2816 Oct 11 04:18                     | 2°m/30'23           | 46°07'46    |                     | 2819 Apr 21 18:04                      | $\Pi$ °0                               |            |
| asc. node           | 2816 Oct 24 06:47                     | 15° <b>m</b> 54'25  |             |                     | 2819 May 16 16:16                      | $0$ $\circ$                            |            |
|                     | 2816 Nov 06 04:43                     | 0∘ <b>⊽</b>         |             |                     | 2819 Jun 11 06:15                      | $0 {\circ} \Omega$                     |            |
|                     | 2816 Dec 02 03:08                     | 0° <b>M</b>         |             |                     | 2819 Jul 08 00:02                      | 0° <b>m</b> y                          |            |
|                     | 2816 Dec 26 23:42                     | 0° <b>∡</b> ¹       |             | desc. node          | 2819 Jul 31 15:22                      | 24° <b>m</b> 27'01                     |            |
|                     | 2817 Jan 20 08:38                     | 0°ರ                 |             | evening max el      | 2819 Aug 02 22:39                      | 26° Mp 40'01                           | 45°36'21   |
| desc. node          | 2817 Feb 12 20:19                     | 29° <b>る</b> 09'23  |             |                     | 2819 Aug 06 11:37                      | 0∘ <b>ত</b>                            |            |
|                     | 2817 Feb 13 12:36                     | 0° <b>≈</b>         |             | greatest brilliancy | 2819 Sep 11 11:36                      | 24° <b>≏</b> 53'36                     | -4.8m      |
|                     | 2817 Mar 09 15:02                     | 0° <b>∀</b>         |             | retrograde          | 2819 Sep 20 17:59                      | 26° <b>≏</b> 27'24                     |            |
|                     | 2817 Apr 02 17:54                     | $0^{\circ}\Upsilon$ |             | evening set         | 2819 Oct 08 07:15                      | 20° <b>£</b> 41'36                     |            |
| morning set         | 2817 Apr 16 13:54                     | 17° <b>Ƴ</b> 10'18  |             | inferior conj       | 2819 Oct 11 20:04                      | 18° <b>Ω</b> 33'14                     | -8°03'01   |
| morning sec         | 2817 Apr 26 22:27                     | 0°8                 |             | minimum elong       | 2819 Oct 12 03:41                      | 18° <b>≏</b> 21'31                     |            |
|                     | 2817 May 21 05:15                     | 0°II                |             | min. Earth dist.    | 2819 Oct 12 03:41<br>2819 Oct 12 18:18 | 17° <b>£</b> 59'03                     | 0.27997 AU |
|                     | 2017 Way 21 03.13                     | υд                  |             |                     | 2819 Oct 12 18:18<br>2819 Oct 15 23:46 | 17 <b>≥</b> 3903<br>16° <b>⊆</b> 02'15 | 0.27997 AU |
|                     | 2017 Mars 24 14.46                    | 49 <b>T</b> 11100   | 0920150     | morning rise        |  |  |            |
| superior conj       | 2817 May 24 14:46                     | 4° <b>Ⅱ</b> 11'09   |             | direct              | 2819 Nov 02 00:04                      | 10° <b>£</b> 28'07                     | 4.0        |
| minimum elong       | 2817 May 24 20:48                     | 4° <b>Ⅱ</b> 29'46   |             | greatest brilliancy | 2819 Nov 13 06:10                      | 12° <b>≏</b> 49'19                     | -4.9m      |
| max. Earth dist.    | 2817 May 26 17:25                     | 6° <b>Ⅱ</b> 47'09   | 1.73216 AU  | asc. node           | 2819 Nov 21 18:34                      | 17° <b>≏</b> 11'20                     |            |
| asc. node           | 2817 Jun 05 23:42                     | 19° <b>Ⅱ</b> 25'18  |             |                     | 2819 Dec 08 11:14                      | 0° <b>M</b>                            |            |
|                     | 2817 Jun 14 14:06                     | 0                   |             | morning max el      | 2819 Dec 22 15:10                      | 13°M33'45                              | 46°50'25   |
| evening rise        | 2817 Jun 30 13:17                     | 19° <b>5</b> 36'40  |             |                     | 2820 Jan 07 02:29                      | 0° <b>∡</b> 7                          |            |
|                     | 2817 Jul 09 00:26                     | $0^{\circ}\Omega$   |             |                     | 2820 Feb 02 08:55                      | 8°0                                    |            |
|                     | 2817 Aug 02 12:08                     | 0° <b>m</b> )       |             |                     | 2820 Feb 27 13:25                      | 0° <b>≈</b>                            |            |
|                     | 2817 Aug 27 02:01                     | 0∘ <b>⊽</b>         |             | desc. node          | 2820 Mar 12 08:18                      | 16° <b>≈</b> 40′29                     |            |
|                     | 2817 Sep 20 19:33                     | 0°M₊                |             |                     | 2820 Mar 23 07:23                      | 0° <b>)</b> €                          |            |
| desc. node          | 2817 Sep 25 13:09                     | 5°M42'44            |             |                     | 2820 Apr 16 21:05                      | 0°Υ                                    |            |
| dese. Hode          | 2817 Oct 15 18:37                     | 0° <b>∡</b> 7       |             |                     | 2820 May 11 09:32                      | %8<br>0°8                              |            |
|                     | 2817 Nov 10 02:34                     | °ਤ<br>ਹ°ਤ           |             |                     | 2820 Jun 04 21:52                      | 0°II                                   |            |
|                     |                                       |                     |             |                     |  |  |            |
|                     | 2817 Dec 06 04:51                     | 0°≈                 | 4701 (100   | morning set         | 2820 Jun 25 01:00                      | 24° <b>∏</b> 38'59                     |            |
| evening max el      | 2817 Dec 29 01:51                     | 24°≈37'21           | 47°16'02    |                     | 2820 Jun 29 09:45                      | 0.20                                   |            |
|                     | 2818 Jan 03 10:51                     | 0° <b>∺</b>         |             | asc. node           | 2820 Jul 03 11:28                      | 4° <b>9</b> 59'34                      |            |
| asc. node           | 2818 Jan 16 16:16                     | 12° <b>)</b> 07′40  |             |                     | 2820 Jul 23 20:12                      | $0$ $\circ$ $\Omega$                   |            |
| greatest brilliancy | 2818 Feb 07 18:27                     | 26° <b>升</b> 18′52  | -4.9m       | max. Earth dist.    | 2820 Jul 29 17:08                      | 7° <b>Ω</b> 13'29                      | 1.73457 AU |
| retrograde          | 2818 Feb 17 23:50                     | 28° <b>ℋ</b> 18'48  |             |                     |  |  |            |
| evening set         | 2818 Mar 07 22:37                     | 22° <b>∺</b> 05'45  |             | superior conj       | 2820 Jul 31 14:22                      | 9° <b>Ω</b> 32'45                      | 1°00'20    |
| inferior conj       | 2818 Mar 10 21:12                     | 20° <b>升</b> 16′10  | 8°53'51     | minimum elong       | 2820 Jul 31 05:31                      | 9° <b>Ω</b> 05'31                      | 1°00'01    |
| minimum elong       | 2818 Mar 10 20:11                     | 20° <b>升</b> 17'45  | 8°53'51     |                     | 2820 Aug 17 04:38                      | o°mp                                   |            |
| min. Earth dist.    | 2818 Mar 10 06:40                     | 20° <b>)</b> 38′55  | 0.27532 AU  | evening rise        | 2820 Sep 05 13:31                      | 23° m 55'33                            |            |
| morning rise        | 2818 Mar 13 17:55                     | 18° <b>∺</b> 29'43  |             | Z .                 | 2820 Sep 10 11:27                      | 0∘ <u>v</u>                            |            |
| direct              | 2818 Mar 31 14:06                     | 12° <b>)</b> €23'48 |             |                     | 2820 Oct 04 17:44                      | 0°M₊                                   |            |
| greatest brilliancy | 2818 Apr 09 17:32                     | 13° <b>¥</b> 57'18  | -4.8m       | desc. node          | 2820 Oct 23 01:11                      | 22°M37'30                              |            |
| greatest orimancy   | 2818 May 05 07:27                     | 0° <b>Υ</b>         | -4.0111     | dese. Hode          | 2820 Oct 29 00:31                      | 0° <b>√</b>                            |            |
| 4 4-                | · · · · · · · · · · · · · · · · · · · | 2° <b>Υ</b> 30'39   |             |                     |  | 0° <b>ਨ</b>                            |            |
| desc. node          | 2818 May 08 05:50                     |                     | 46006122    |                     | 2820 Nov 22 08:29                      |  |            |
| morning max el      | 2818 May 19 22:49                     | 13° <b>Y</b> 20′15  | 46°06'23    |                     | 2820 Dec 16 19:01                      | 0° <b>≈</b>                            |            |
|                     | 2818 Jun 05 08:27                     | 0° <b>8</b>         |             |                     | 2821 Jan 10 12:13                      | 0° <b>∀</b>                            |            |
|                     | 2818 Jul 02 17:47                     | $\Pi^{\circ}0$      |             |                     | 2821 Feb 04 21:51                      | 0° <b>Υ</b>                            |            |
|                     | 2818 Jul 28 20:26                     | 0ಂತ                 |             | asc. node           | 2821 Feb 13 04:03                      | 9° <b>Y</b> 26'00                      |            |
|                     | 2818 Aug 23 05:25                     | $0^{\circ}\Omega$   |             |                     | 2821 Mar 04 00:07                      | $9^{\circ}$ 8                          |            |
| asc. node           | 2818 Aug 29 09:04                     | 7° <b>Ω</b> 22'44   |             | evening max el      | 2821 Mar 10 19:53                      | 6° <b>8</b> 59'24                      | 46°32'45   |
|                     | 2818 Sep 17 01:15                     | 0° <b>m</b> )       |             |                     | 2821 Apr 06 07:40                      | $\Pi^{\circ}0$                         |            |
|                     | 2818 Oct 11 10:57                     | 0∘ <b>ত</b>         |             | greatest brilliancy | 2821 Apr 19 00:12                      | 6° <b>Ⅱ</b> 55'10                      | -4.8m      |
|                     | 2818 Nov 04 13:40                     | 0° <b>M</b> .       |             | retrograde          | 2821 Apr 29 20:32                      | 9° <b>Ⅱ</b> 05'43                      |            |
| morning set         | 2818 Nov 13 16:18                     | 11°M23'39           |             | evening set         | 2821 May 15 11:45                      | 4° <b>Ⅱ</b> 17'34                      |            |
|                     | 2818 Nov 28 12:24                     | 0° <b>∡</b> ¹       |             | inferior conj       | 2821 May 21 03:31                      | 0° <b>П</b> 51'16                      | 3°24'25    |
| desc. node          | 2818 Dec 18 22:49                     | 25° <b>х</b> 40′35  |             | minimum elong       | 2821 May 21 10:32                      | 0° <b>П</b> 40'16                      |            |
| dese. Hode          | 2818 Dec 22 09:19                     | 25 × 40 33          |             | min. Earth dist.    | 2821 May 21 02:11                      |  | 0.28573 AU |
| Easth dist          |                                       |                     | 1 71142 ATT | iiiii. Latui uist.  | •                                      |  | 0.26575 AU |
| max. Earth dist.    | 2818 Dec 23 01:18                     | 0.030.1             | 1.71143 AU  |                     | 2821 May 22 12:17                      | 30°R8                                  |            |
|                     | 2010 P 22 12 2=                       | 107                 | 0011120     | morning rise        | 2821 May 27 09:45                      | 27° <b>8</b> 05'47                     |            |
| superior conj       | 2818 Dec 23 19:07                     | 1° <b>る</b> 46'19   |             | desc. node          | 2821 Jun 04 17:42                      | 23° <b>8</b> 35'17                     |            |
| minimum elong       | 2818 Dec 23 16:03                     | 1° <b>る</b> 36'41   | 0°11'29     | direct              | 2821 Jun 11 12:01                      | 22° <b>8</b> 40'21                     |            |
| behind sun begin    | 2818 Dec 22 21:12                     | 0° <b>る</b> 37'24   |             | greatest brilliancy | 2821 Jun 21 12:36                      | 24° <b>8</b> 29'56                     | -4.7m      |
| behind sun end      | 2818 Dec 24 10:54                     | 2° <b>る</b> 35'59   |             |                     | 2821 Jul 02 16:47                      | $\Pi$ °0                               |            |
|                     | 2819 Jan 15 05:43                     | 0° <b>≈</b>         |             | morning max el      | 2821 Jul 30 06:39                      | 22° <b>II</b> 26'25                    | 45°42'58   |
| evening rise        | 2819 Feb 03 02:14                     | 23° <b>≈</b> 41'49  |             |                     | 2821 Aug 07 00:10                      | $0$ $\circ$ $\odot$                    |            |
| -                   | 2819 Feb 08 02:47                     | 0° <b>)</b> €       |             |                     | 2821 Sep 04 04:16                      | $0^{\circ}\Omega$                      |            |
|                     | 2819 Mar 04 02:14                     | 0° <b>Υ</b>         |             | asc. node           | 2821 Sep 25 21:03                      | 24° <b>Ω</b> 48'07                     |            |
|                     | 2017 Mai 07 02.17                     | · 1                 |             |                     | _02. 50p 25 21.05                      | 00100/                                 |            |

|                     | 2821 Sep 30 07:33                      | 0° m                          |            |                     | 2824 May 04 19:10                      | 0° <b>©</b>                      |            |
|---------------------|--|-------------------------------|------------|---------------------|--|----------------------------------|------------|
|                     | 2821 Sep 30 07:33<br>2821 Oct 25 09:22 | 0∘ <b>ʊ</b><br>○ '₩           |            | evening max el      | 2824 May 20 14:25                      | 16° <b>©</b> 05'29               | 45°34'42   |
|                     | 2821 Nov 18 20:14                      | 0° <b>m</b>                   |            | evening max er      | 2824 Jun 05 01:27                      | 0°Ω                              | 73 37 72   |
|                     | 2821 Dec 12 22:50                      | 0°× <b>7</b> 1                |            | greatest brilliancy | 2824 Jun 27 13:16                      | 14° <b>Ω</b> 03'56               | -4.7m      |
|                     | 2822 Jan 05 21:27                      | °ਨ<br>ਨ                       |            | desc. node          | 2824 Jul 02 05:33                      | 15° <b>Ω</b> 27'55               | 1.7111     |
| desc. node          | 2822 Jan 15 10:32                      | 11° <b>る</b> 59'19            |            | retrograde          | 2824 Jul 08 08:19                      | 16° <b>Ω</b> 09'47               |            |
| morning set         | 2822 Jan 28 12:09                      | 28° <b>る</b> 24'19            |            | evening set         | 2824 Jul 24 06:07                      | 11° <b>Ω</b> 21'05               |            |
| Č                   | 2822 Jan 29 18:36                      | 0° <b>≈</b>                   |            | inferior conj       | 2824 Jul 29 21:13                      | 7° <b>Ω</b> 56'44                | -5°55'00   |
|                     | 2822 Feb 22 15:57                      | 0° <b>∀</b>                   |            | minimum elong       | 2824 Jul 29 11:23                      | 8° <b>Ω</b> 12'09                |            |
|                     |  |                               |            | min. Earth dist.    | 2824 Jul 29 18:26                      | 8° <b>Ω</b> 01'06                | 0.29042 AU |
| superior conj       | 2822 Mar 10 18:59                      | 20° <b>升</b> 12′24            | -1°26'17   | morning rise        | 2824 Aug 03 16:34                      | 5° <b>Ω</b> 00'09                |            |
| minimum elong       | 2822 Mar 10 17:34                      | 20° <b>)</b> €07'55           | 1°26'16    |                     | 2824 Aug 16 07:36                      | 30°Rூ                            |            |
| max. Earth dist.    | 2822 Mar 14 14:59                      | 25° <b>)</b> €00'10           | 1.71710 AU | direct              | 2824 Aug 20 12:36                      | 29° <b>5</b> 39'14               |            |
|                     | 2822 Mar 18 14:56                      | $0^{\circ}$ Y                 |            |                     | 2824 Aug 24 19:39                      | $0$ $^{\circ}\Omega$             |            |
|                     | 2822 Apr 11 16:57                      | 0°8                           |            | greatest brilliancy | 2824 Aug 30 23:35                      | 1° <b>Ω</b> 36′57                | -4.7m      |
| evening rise        | 2822 Apr 19 15:39                      | 9° <b>8</b> 51'15             |            |                     | 2824 Oct 08 12:49                      | 0° <b>™</b>                      |            |
|                     | 2822 May 05 23:07                      | $\Pi$ $^{\circ}0$             |            | morning max el      | 2824 Oct 08 18:39                      | 0° Mp 14'15                      | 46°06'22   |
| asc. node           | 2822 May 08 13:54                      | 3° <b>Ⅱ</b> 13'16             |            | asc. node           | 2824 Oct 23 08:50                      | 15° <b>Tp</b> 12'03              |            |
|                     | 2822 May 30 10:05                      | $0$ $\circ$ $\odot$           |            |                     | 2824 Nov 05 20:32                      | 0∘ <b>⊽</b>                      |            |
|                     | 2822 Jun 24 02:35                      | $0 {\circ} \Omega$            |            |                     | 2824 Dec 01 16:40                      | $0^{\circ}$ M                    |            |
|                     | 2822 Jul 19 02:23                      | O° Mp                         |            |                     | 2824 Dec 26 12:10                      | 0° <b>∡</b> ¹                    |            |
|                     | 2822 Aug 13 13:16                      | 0∘ <b>ত</b>                   |            |                     | 2825 Jan 19 20:29                      | 0°ප                              |            |
| desc. node          | 2822 Aug 28 03:15                      | 16° <b>≙</b> 49'25            |            | desc. node          | 2825 Feb 11 22:27                      | 28° <b>る</b> 40'13               |            |
|                     | 2822 Sep 08 18:49                      | 0°M                           |            |                     | 2825 Feb 13 00:05                      | 0° <b>≈</b>                      |            |
|                     | 2822 Oct 06 14:17                      | 0° <b>∡</b> 7                 |            |                     | 2825 Mar 09 02:16                      | 0° <b>∀</b>                      |            |
| evening max el      | 2822 Oct 15 00:06                      | 8° <b>∡</b> ¹26'42            | 46°36'50   |                     | 2825 Apr 02 04:55                      | $0^{\circ}$ Y                    |            |
|                     | 2822 Nov 08 21:55                      | 0°8                           |            | morning set         | 2825 Apr 14 04:10                      | 14° <b>Y</b> 51'51               |            |
| greatest brilliancy | 2822 Nov 24 05:00                      | 8° <b>る</b> 21'57             | -4.9m      |                     | 2825 Apr 26 09:18                      | 0°8                              |            |
| retrograde          | 2822 Dec 03 22:32                      | 10° <b>る</b> 07'53            |            |                     | 2825 May 20 16:00                      | $\Pi$ $\circ 0$                  |            |
| evening set         | 2822 Dec 18 04:35                      | 6° <b>පි</b> 06'41            |            |                     |  | _                                |            |
| asc. node           | 2822 Dec 19 06:22                      | 5° <b>る</b> 31'42             |            | superior conj       | 2825 May 22 07:07                      | 2° <b>∐</b> 00'35                |            |
| inferior conj       | 2822 Dec 24 10:46                      | 2° <b>る</b> 27'46             | 1°20'47    | minimum elong       | 2825 May 22 13:45                      | 2° <b>Ⅲ</b> 21'01                |            |
| minimum elong       | 2822 Dec 24 07:41                      | 2° <b>る</b> 32'28             | 1°19'47    | max. Earth dist.    | 2825 May 24 10:58                      | 4° <b>Ⅱ</b> 40'20                | 1.73178 AU |
| min. Earth dist.    | 2822 Dec 24 08:37                      | 2°₹31'02                      | 0.26481 AU | asc. node           | 2825 Jun 05 01:40                      | 18° <b>Ⅲ</b> 58'21               |            |
|                     | 2822 Dec 28 13:46                      | 30°₹ <b>⋌</b> 7               |            |                     | 2825 Jun 14 00:48                      | 0°©                              |            |
| morning rise        | 2822 Dec 30 10:47                      | 28° 🖈 57'37                   |            | evening rise        | 2825 Jun 28 07:32                      | 17° <b>©</b> 32'28               |            |
| direct              | 2823 Jan 13 21:48                      | 24° 🖈 49'30                   | 4.0        |                     | 2825 Jul 08 11:12                      | 0° <b>N</b>                      |            |
| greatest brilliancy | 2823 Jan 23 21:56                      | 26° <b>₹</b> 43'56            | -4.9m      |                     | 2825 Aug 01 23:07                      | 0° <b>m</b>                      |            |
|                     | 2823 Jan 30 21:50                      | 0°る                           | 46950127   |                     | 2825 Aug 26 13:22                      | 0∘ <b>™</b>                      |            |
| morning max el      | 2823 Mar 05 07:48<br>2823 Mar 07 14:26 | 27° <b>る</b> 41'55<br>0°≈     | 46 30 27   | desc. node          | 2825 Sep 20 07:30<br>2825 Sep 24 15:17 | 0°ጤ<br>5°ጤ12'46                  |            |
|                     | 2823 Apr 04 09:14                      | 0 <b>≈</b>                    |            | desc. node          | 2825 Oct 15 07:28                      | 0° <b>√</b>                      |            |
| desc. node          | 2823 Apr 09 20:13                      | 6° <b>)</b> 10′31             |            |                     | 2825 Nov 09 16:53                      | 0°る                              |            |
| desc. Hode          | 2823 Apr 30 11:36                      | 0° <b>Υ</b>                   |            |                     | 2825 Nov 09 10:55<br>2825 Dec 05 21:58 | 0° <b>≈</b>                      |            |
|                     | 2823 May 25 22:09                      | 0°8                           |            | evening max el      | 2825 Dec 05 21:56<br>2825 Dec 26 15:05 | 0 <b>∞</b><br>22° <b>≈</b> 11'55 | 47°16'15   |
|                     | 2823 Jun 20 00:55                      | 0°II                          |            | evening max er      | 2826 Jan 03 12:05                      | 0° <b>)</b> €                    | 17 10 13   |
|                     | 2823 Jul 14 22:15                      | 0.<br>0.                      |            | asc. node           | 2826 Jan 15 18:17                      | 10° <b>¥</b> 59'17               |            |
| asc. node           | 2823 Jul 31 23:15                      | 20°5541'58                    |            | greatest brilliancy | 2826 Feb 05 09:03                      | 23° <b>)</b> 56'29               | -4.9m      |
| × <del></del>       | 2823 Aug 08 14:10                      | 0° <b>Ω</b>                   |            | retrograde          | 2826 Feb 15 14:02                      | 25° <b>X</b> 56'37               |            |
| morning set         | 2823 Sep 01 22:41                      | 29° <b>Ω</b> 54'25            |            | evening set         | 2826 Mar 05 11:10                      | 19° <b>)</b> 46′05               |            |
| Č                   | 2823 Sep 02 00:29                      | O° Mp                         |            | inferior conj       | 2826 Mar 08 11:12                      | 17° <b>¥</b> 54'36               | 8°52'47    |
|                     | 2823 Sep 26 05:57                      | $0$ ° $\mathbf{\overline{v}}$ |            | minimum elong       | 2826 Mar 08 09:17                      | 17° <b>)</b> € 57'34             | 8°52'43    |
| max. Earth dist.    | 2823 Oct 05 11:32                      | 11° <b>≏</b> 29'03            | 1.72315 AU | min. Earth dist.    | 2826 Mar 07 20:06                      | 18° <b>¥</b> 18′10               | 0.27485 AU |
|                     |  |                               |            | morning rise        | 2826 Mar 11 07:34                      | 16° <b>¥</b> 08'54               |            |
| superior conj       | 2823 Oct 08 18:28                      | 15° <b>≏</b> 34'48            | 1°19'27    | direct              | 2826 Mar 29 03:07                      | 10° <b>)</b> 02'47               |            |
| minimum elong       | 2823 Oct 09 01:01                      | 15° <b>≏</b> 55'09            |            | greatest brilliancy | 2826 Apr 07 06:56                      | 11° <b>)</b> 36′44               | -4.8m      |
|                     | 2823 Oct 20 08:04                      | 0°M                           |            |                     | 2826 May 05 14:13                      | $0^{\circ}$ Y                    |            |
|                     | 2823 Nov 13 08:26                      | 0° <b>∡</b> ¹                 |            | desc. node          | 2826 May 07 07:54                      | 1° <b>Y</b> '31'40               |            |
| evening rise        | 2823 Nov 16 11:07                      | 3° <b>х</b> 53′27             |            | morning max el      | 2826 May 17 13:06                      | 11° <b>Y</b> ′02'58              | 46°07'52   |
| desc. node          | 2823 Nov 20 13:03                      | 8° <b>₹</b> 59'38             |            |                     | 2826 Jun 05 02:14                      | $0^{\circ}$ 8                    |            |
|                     | 2823 Dec 07 08:05                      | 5°0                           |            |                     | 2826 Jul 02 07:57                      | $\Pi$ $\circ 0$                  |            |
|                     | 2823 Dec 31 07:54                      | 0° <b>≈</b>                   |            |                     | 2826 Jul 28 08:57                      | $0$ $\circ$ $\odot$              |            |
|                     | 2824 Jan 24 09:27                      | 0° <b>)</b> €                 |            |                     | 2826 Aug 22 17:04                      | $0^{\circ}\Omega$                |            |
|                     | 2824 Feb 17 15:52                      | 0° <b>Υ</b>                   |            | asc. node           | 2826 Aug 28 11:14                      | 6° <b>Ω</b> 54'40                |            |
| asc. node           | 2824 Mar 12 16:04                      | 29° <b>Y</b> 11′04            |            |                     | 2826 Sep 16 12:25                      | 0° <b>™</b>                      |            |
|                     | 2824 Mar 13 08:23                      | 0°B                           |            |                     | 2826 Oct 10 21:52                      | 0∘ <b>⊽</b>                      |            |
|                     | 2824 Apr 07 19:31                      | $\Pi$ °0                      |            |                     | 2826 Nov 04 00:30                      | 0°M₊                             |            |
|                     |  |                               |            |                     |  |                                  |            |

| morning set                    | 2826 Nov 11 05:58                      | 9°M02'15                                 |            | evening set                       | 2829 May 13 06:05                      | 2° <b>∏</b> 03'27                        |             |
|--------------------------------|--|--|------------|-----------------------------------|--|--|-------------|
| morning set                    | 2826 Nov 27 23:15                      | 9 11 <b>0</b> 02 13                      |            | evening set                       | 2829 May 16 16:29                      | 30°R <b>8</b>                            |             |
| desc. node                     | 2826 Dec 18 00:47                      | 25° <b>∡</b> 12'32                       |            | inferior conj                     | 2829 May 18 19:29                      | 28° <b>8</b> 40'09                       | 3°43'18     |
| max. Earth dist.               | 2826 Dec 20 10:47                      |  | 1.71161 AU | minimum elong                     | 2829 May 19 03:02                      | 28° <b>8</b> 28'18                       | 3°41'14     |
| max. Earth dist.               | 2020 Bee 20 10.17                      | 20 % 1133                                | 1.71101710 | min. Earth dist.                  | 2829 May 18 17:55                      | 28° <b>8</b> 42'36                       | 0.28544 AU  |
| superior conj                  | 2826 Dec 21 05:37                      | 29° <b>尽</b> 14'08                       | -0°07'42   | morning rise                      | 2829 May 25 00:27                      | 24° <b>8</b> 56'22                       | 0.200 120   |
| minimum elong                  | 2826 Dec 21 03:35                      | 29° <b>∡</b> 107'45                      |            | desc. node                        | 2829 Jun 03 19:35                      | 21° <b>8</b> 04'13                       |             |
| behind sun begin               | 2826 Dec 20 04:11                      | 27° <b>∡</b> 754'11                      |            | direct                            | 2829 Jun 09 04:04                      | 20° <b>8</b> 29'57                       |             |
| behind sun end                 | 2826 Dec 22 02:58                      | 0° <b>る</b> 21'20                        |            | greatest brilliancy               | 2829 Jun 19 02:51                      | 22° <b>8</b> 18'11                       | -4.7m       |
|                                | 2826 Dec 21 20:11                      | 5°0                                      |            |                                   | 2829 Jul 03 16:25                      | $\Pi^{\circ}0$                           |             |
|                                | 2827 Jan 14 16:37                      | 0° <b>≈</b>                              |            | morning max el                    | 2829 Jul 27 22:25                      | 20° <b>Ⅲ</b> 17′03                       | 45°42'51    |
| evening rise                   | 2827 Jan 31 12:38                      | 21° <b>≈</b> 09'35                       |            |                                   | 2829 Aug 06 19:20                      | $0$ $\circ$ $\odot$                      |             |
|                                | 2827 Feb 07 13:42                      | 0° <b>∺</b>                              |            |                                   | 2829 Sep 03 18:43                      | $0^{\circ}\Omega$                        |             |
|                                | 2827 Mar 03 13:12                      | $0$ ° $\Upsilon$                         |            | asc. node                         | 2829 Sep 24 23:04                      | 24° <b>Ω</b> 16′24                       |             |
|                                | 2827 Mar 27 17:34                      | 0°8                                      |            |                                   | 2829 Sep 29 20:12                      | 0° <b>m</b>                              |             |
| asc. node                      | 2827 Apr 10 04:02                      | 16° <b>8</b> 30'36                       |            |                                   | 2829 Oct 24 21:10                      | 0∘ <b>⊽</b>                              |             |
|                                | 2827 Apr 21 05:31                      | $\Pi$ °0                                 |            |                                   | 2829 Nov 18 07:36                      | $0^{\circ}$ M                            |             |
|                                | 2827 May 16 04:21                      | 0ಂತಾ                                     |            |                                   | 2829 Dec 12 09:58                      | 0° <b>∡</b>                              |             |
|                                | 2827 Jun 10 19:36                      | $0$ $\circ$ $\Omega$                     |            |                                   | 2830 Jan 05 08:26                      | 0°ಕ                                      |             |
|                                | 2827 Jul 07 16:11                      | 0° <b>m</b>                              |            | desc. node                        | 2830 Jan 14 12:37                      | 11° <b>⋜</b> 31'26                       |             |
| desc. node                     | 2827 Jul 30 17:30                      | 23° <b>m</b> 39'04                       |            | morning set                       | 2830 Jan 25 21:46                      | 25° <b>る</b> 49'34                       |             |
| evening max el                 | 2827 Jul 31 13:52                      | 24° <b>m</b> 27'49                       | 45°35'09   |                                   | 2830 Jan 29 05:30                      | 0° <b>≈</b>                              |             |
| 1 '11'                         | 2827 Aug 06 12:33                      | 0∘ <b>ʊ</b>                              | 4.0        |                                   | 2830 Feb 22 02:47                      | 0° <b>\</b>                              |             |
| greatest brilliancy            | 2827 Sep 08 23:53                      | 22° <b>Ω</b> 36'28                       | -4.8m      |                                   | 2020 M 00 07 20                        | 170 1 42152                              | 1025150     |
| retrograde                     | 2827 Sep 18 08:29                      | 24° <b>Ω</b> 11'35                       |            | superior conj                     | 2830 Mar 08 06:20                      | 17° <b>)</b> 43′52<br>17° <b>)</b> 36′05 |             |
| evening set                    | 2827 Oct 05 23:45<br>2827 Oct 09 10:30 | 18° <b>£</b> 21'55<br>16° <b>£</b> 16'22 | 0010140    | minimum elong<br>max. Earth dist. | 2830 Mar 08 03:51                      | 22° <b>)</b> € 33'53                     | 1.71660 AU  |
| inferior conj<br>minimum elong | 2827 Oct 09 10:30<br>2827 Oct 09 17:31 | 16° <b>£</b> 16′22                       |            | max. Earth dist.                  | 2830 Mar 12 03:02<br>2830 Mar 18 01:43 | 22°π33'33<br>0°Υ                         | 1./1000 AU  |
| min. Earth dist.               | 2827 Oct 10 07:47                      | 16 <b>2</b> 03 33                        | 0.28065 AU |                                   | 2830 Apr 11 03:43                      | 0°8                                      |             |
| morning rise                   | 2827 Oct 10 07:47<br>2827 Oct 13 10:59 | 13° <b>⊆</b> 43'37'                      | 0.28003 AU | evening rise                      | 2830 Apr 17 05:11                      | 7° <b>8</b> 31'11                        |             |
| direct                         | 2827 Oct 13 10:39<br>2827 Oct 30 15:46 | 8° <b>£</b> 10′26                        |            | evening rise                      | 2830 May 05 09:54                      | 0° <b>П</b>                              |             |
| greatest brilliancy            | 2827 Nov 10 20:30                      | 10° <b>⊆</b> 30'37                       | -4 8m      | asc. node                         | 2830 May 07 15:51                      | 2° <b>II</b> 46'05                       |             |
| asc. node                      | 2827 Nov 20 20:32                      | 15° <b>Ω</b> 48'22                       |            | use. noue                         | 2830 May 29 21:00                      | 0°95                                     |             |
|                                | 2827 Dec 08 16:00                      | 0°M₊                                     |            |                                   | 2830 Jun 23 13:50                      | $0^{\circ}\Omega$                        |             |
| morning max el                 | 2827 Dec 20 06:47                      | 11°M15'44                                | 46°49'16   |                                   | 2830 Jul 18 14:17                      | 0° m)                                    |             |
| Č                              | 2828 Jan 06 20:10                      | 0°⊀                                      |            |                                   | 2830 Aug 13 02:21                      | 0∘ <u>v</u>                              |             |
|                                | 2828 Feb 01 23:23                      | ರ°0                                      |            | desc. node                        | 2830 Aug 27 05:20                      | 16° <b>≙</b> 15′10                       |             |
|                                | 2828 Feb 27 02:22                      | 0° <b>≈</b>                              |            |                                   | 2830 Sep 08 10:10                      | $0^{\circ}$ M                            |             |
| desc. node                     | 2828 Mar 11 10:22                      | 16° <b>≈</b> 09'08                       |            |                                   | 2830 Oct 06 11:04                      | 0° <b>∡</b> ¹                            |             |
|                                | 2828 Mar 22 19:25                      | 0° <b>∺</b>                              |            | evening max el                    | 2830 Oct 12 13:12                      | 6° <b>₺</b> 03'59                        | 46°34'21    |
|                                | 2828 Apr 16 08:31                      | $0$ ° $\Upsilon$                         |            |                                   | 2830 Nov 10 01:02                      | 0°ರ                                      |             |
|                                | 2828 May 10 20:33                      | $9^{\circ}$ 8                            |            | greatest brilliancy               | 2830 Nov 21 18:49                      | 5° <b>る</b> 55'54                        | -4.9m       |
|                                | 2828 Jun 04 08:36                      | $\Pi$ °0                                 |            | retrograde                        | 2830 Dec 01 10:04                      | 7° <b>る</b> 39'48                        |             |
| morning set                    | 2828 Jun 22 18:58                      | 22° <b>Ⅱ</b> 34'36                       |            | evening set                       | 2830 Dec 15 17:01                      | 3° <b>る</b> 38'47                        |             |
|                                | 2828 Jun 28 20:19                      | 0  |            | asc. node                         | 2830 Dec 18 08:25                      | 2° <b>る</b> 10'23                        |             |
| asc. node                      | 2828 Jul 02 13:29                      | 4° <b>©</b> 33'27                        |            | inferior conj                     | 2830 Dec 21 23:01                      | 0° <b>ට</b> 00'16                        | 0°56'17     |
|                                | 2828 Jul 23 06:41                      | 0°Ω                                      |            | minimum elong                     | 2830 Dec 21 20:52                      | 0°る03'34                                 | 0°55'35     |
| max. Earth dist.               | 2828 Jul 27 15:24                      | 5° <b>Ω</b> 22'03                        | 1.73477 AU | i m d r d                         | 2830 Dec 21 23:12                      | 30°₹ <b>⋌</b>                            | 0.26400 444 |
| gunarior cor:                  | 2020 151 20 00.47                      | 70 0 2012 1                              | 0050105    | min. Earth dist.                  | 2830 Dec 21 22:47                      | 0° <b>る</b> 00'38                        | 0.26490 AU  |
| superior conj                  | 2828 Jul 29 08:46                      | 7° <b>Ω</b> 29'21                        |            | morning rise                      | 2830 Dec 28 00:34                      | 26° <b>√</b> 27'41                       |             |
| minimum elong                  | 2828 Jul 28 23:57<br>2828 Aug 16 15:09 | 7° <b>Ω</b> 02'12<br>0° <b>m</b>         | 0°57'45    | direct<br>greatest brilliancy     | 2831 Jan 11 09:51<br>2831 Jan 21 12:31 | 22° <b>х</b> 21'37<br>24° <b>х</b> 17'50 | -4.9m       |
| evening rise                   | 2828 Sep 03 07:12                      | رانا 0<br>21° <b>m</b> 49'02             |            | greatest billiancy                | 2831 Feb 01 12:03                      | 24 <b>メ</b> ・1730<br>0° <b>る</b>         | -4.9111     |
| evening rise                   | 2828 Sep 09 22:06                      | 20° <u>م</u>                             |            | morning max el                    | 2831 Mar 02 19:45                      | 25°る13'41                                | 46°51'24    |
|                                | 2828 Oct 04 04:39                      | 0° <b>m</b>                              |            | morning max ci                    | 2831 Mar 07 12:07                      | 0° <b>≈</b>                              | 40 31 24    |
| desc. node                     | 2828 Oct 22 03:09                      | 22°M09'10                                |            |                                   | 2831 Apr 04 01:09                      | 0° <b>∀</b>                              |             |
| acco. noue                     | 2828 Oct 28 11:46                      | 0° <b>⊼</b>                              |            | desc. node                        | 2831 Apr 08 22:14                      | 5° <b>)</b> 32'39                        |             |
|                                | 2828 Nov 21 20:10                      | 0°ප                                      |            |                                   | 2831 Apr 30 01:11                      | 0° <b>Υ</b>                              |             |
|                                | 2828 Dec 16 07:20                      | 0° <b>≈</b>                              |            |                                   | 2831 May 25 10:29                      | 0°8                                      |             |
|                                | 2829 Jan 10 01:30                      | 0° <b>)</b> €                            |            |                                   | 2831 Jun 19 12:28                      | 0°II                                     |             |
|                                | 2829 Feb 04 12:56                      | 0° <b>Υ</b>                              |            |                                   | 2831 Jul 14 09:18                      | 0ಂತಾ                                     |             |
| asc. node                      | 2829 Feb 12 06:12                      | 8° <b>Y</b> 47'01                        |            | asc. node                         | 2831 Jul 31 01:25                      | 20°515'33                                |             |
|                                | 2829 Mar 03 19:49                      | 0°8                                      |            |                                   | 2831 Aug 08 00:55                      | $0^{\circ}\Omega$                        |             |
| evening max el                 | 2829 Mar 08 11:59                      | 4° <b>8</b> 45'41                        | 46°35'07   | morning set                       | 2831 Aug 30 16:05                      | 27° <b>Ω</b> 47'19                       |             |
|                                | 2829 Apr 07 08:36                      | $\Pi$ °0                                 |            |                                   | 2831 Sep 01 11:07                      | 0° <b>™</b>                              |             |
| greatest brilliancy            | 2829 Apr 16 17:07                      | 4° <b>∏</b> 44'30                        | -4.8m      |                                   | 2831 Sep 25 16:35                      | 0∘ <b>⊽</b>                              |             |
| retrograde                     | 2829 Apr 27 13:08                      | 6° <b>∏</b> 54'21                        |            | max. Earth dist.                  | 2831 Oct 03 03:24                      | 9° <b>≏</b> 15'56                        | 1.72370 AU  |

| superior conj       | 2831 Oct 06 10:41                      | 13° <b>≏</b> 22'38            | 1920125     | direct              | 2834 Mar 26 16:11                      | 7° <b>)</b> (39′50                |             |
|---------------------|--|-------------------------------|-------------|---------------------|--|-----------------------------------|-------------|
| minimum elong       | 2831 Oct 06 10:41<br>2831 Oct 06 16:35 | 13° <b>£</b> 22 38            |             | greatest brilliancy | 2834 Apr 04 19:30                      | 9° <b>)</b> 13'45                 | -4.8m       |
| minimum clong       | 2831 Oct 00 10:33<br>2831 Oct 19 18:48 | 0°M                           | 1 20 30     | greatest billiancy  | 2834 May 05 19:17                      | 9 <b>γ</b> (1343                  | -4.0111     |
|                     | 2831 Nov 12 19:19                      | 0° <b>⊼</b> 1                 |             | desc. node          | 2834 May 06 09:53                      | 0° <b>Υ</b> 32'53                 |             |
| evening rise        | 2831 Nov 12 19:19<br>2831 Nov 14 00:05 | 1° <b>∡</b> ¹29'53            |             | morning max el      | 2834 May 15 03:56                      | 8° <b>Υ</b> 46'09                 | 46°09'24    |
| desc. node          | 2831 Nov 14 00:03<br>2831 Nov 19 15:02 | 8° <b>₹</b> 31'37             |             | morning max er      | 2834 Jun 04 19:51                      | 0° <b>8</b>                       | 40 09 24    |
| desc. node          | 2831 Nov 19 13.02<br>2831 Dec 06 19:09 | 0°중                           |             |                     | 2834 Jul 01 22:10                      | 0°U                               |             |
|                     |  | 0°≈                           |             |                     | 2834 Jul 27 21:37                      | 0.<br>о п                         |             |
|                     | 2831 Dec 30 19:10<br>2832 Jan 23 20:59 | 0 <b>≈</b>                    |             |                     |  | 0°Ω<br>0 €3                       |             |
|                     |  | 0 <del>Υ</del><br>0° <b>Υ</b> |             | 1-                  | 2834 Aug 22 04:53                      | 6° <b>Ω</b> 25'23                 |             |
| 1-                  | 2832 Feb 17 03:49                      | 0° γ<br>28° <b>Υ</b> 39'12    |             | asc. node           | 2834 Aug 27 13:10                      |                                   |             |
| asc. node           | 2832 Mar 11 18:05                      | 0° <b>8</b>                   |             |                     | 2834 Sep 15 23:46                      | 0° <b>ഫ</b><br>0°ആ                |             |
|                     | 2832 Mar 12 21:03                      |                               |             |                     | 2834 Oct 10 08:57                      |                                   |             |
|                     | 2832 Apr 07 09:39                      | 0° <b>Ⅱ</b>                   |             |                     | 2834 Nov 03 11:29                      | 0°M                               |             |
|                     | 2832 May 04 12:52                      | 0°95                          | 45026101    | morning set         | 2834 Nov 08 20:11                      | 6°M42'14                          |             |
| evening max el      | 2832 May 18 05:09                      | 13°951'44                     | 45°36'01    |                     | 2834 Nov 27 10:14                      | 0°×7                              |             |
| 1 '11'              | 2832 Jun 05 10:19                      | 0°N                           | 4.7         | desc. node          | 2834 Dec 17 02:54                      | 24° 🖈 44'34                       | 1.71101.411 |
| greatest brilliancy | 2832 Jun 25 04:55                      | 11° <b>Ω</b> 54'42            | -4.7m       | max. Earth dist.    | 2834 Dec 17 21:46                      | 25° <b>х</b> 43′50                | 1.71181 AU  |
| desc. node          | 2832 Jul 01 07:44                      | 13° <b>Ω</b> 36'32            |             |                     |  | <b>-</b>                          |             |
| retrograde          | 2832 Jul 06 00:37                      | 14° <b>Ω</b> 01'40            |             | superior conj       | 2834 Dec 18 16:28                      | 26° <b>⊀</b> '42'38               |             |
| evening set         | 2832 Jul 21 20:01                      | 9° <b>Ω</b> 15'51             |             | minimum elong       | 2834 Dec 18 15:27                      | 26° <b>₹</b> 39'27                | 0°03'45     |
| inferior conj       | 2832 Jul 27 13:38                      | 5° <b>Ω</b> 48'18             |             | behind sun begin    | 2834 Dec 17 13:56                      | 25° <b>∡</b> 19'13                |             |
| minimum elong       | 2832 Jul 27 03:53                      | 6° <b>Ω</b> 03'32             |             | behind sun end      | 2834 Dec 19 16:58                      | 27° <b>₹</b> 59'42                |             |
| min. Earth dist.    | 2832 Jul 27 10:40                      |                               | 0.29040 AU  |                     | 2834 Dec 21 07:14                      | 0°ಕ                               |             |
| morning rise        | 2832 Aug 01 11:37                      | 2° <b>Ω</b> 47'57             |             |                     | 2835 Jan 14 03:43                      | 0° <b>≈</b>                       |             |
|                     | 2832 Aug 06 22:11                      | 30° <b>₹</b> ∽                |             | evening rise        | 2835 Jan 28 22:59                      | 18° <b>≈</b> 36′21                |             |
| direct              | 2832 Aug 18 04:20                      | 27° <b>©</b> 30'40            |             |                     | 2835 Feb 07 00:52                      | 0° <b>∀</b>                       |             |
| greatest brilliancy | 2832 Aug 28 16:02                      | 29° <b>5</b> 28'42            | -4.7m       |                     | 2835 Mar 03 00:29                      | $0$ ° $\Upsilon$                  |             |
|                     | 2832 Aug 30 01:04                      | $0^{\circ}\Omega$             |             |                     | 2835 Mar 27 05:02                      | 0°B                               |             |
| morning max el      | 2832 Oct 06 09:49                      | 28° <b>Ω</b> 00'51            | 46°05'01    | asc. node           | 2835 Apr 09 05:59                      | 16° <b>8</b> 01'00                |             |
|                     | 2832 Oct 08 10:17                      | O° <b>m</b>                   |             |                     | 2835 Apr 20 17:20                      | $\Pi^{\circ}0$                    |             |
| asc. node           | 2832 Oct 22 10:50                      | 14° <b>m</b> 30'32            |             |                     | 2835 May 15 16:51                      | $0$ $\circ$ $\odot$               |             |
|                     | 2832 Nov 05 11:58                      | 0∘ <b>ত</b>                   |             |                     | 2835 Jun 10 09:26                      | $0^{\circ}\Omega$                 |             |
|                     | 2832 Dec 01 06:02                      | $0^{\circ}$ M.                |             |                     | 2835 Jul 07 09:02                      | O° <b>m</b> y                     |             |
|                     | 2832 Dec 26 00:34                      | 0° <b>∡</b> ¹                 |             | evening max el      | 2835 Jul 29 05:27                      | 22° m 15'25                       | 45°33'58    |
|                     | 2833 Jan 19 08:22                      | 0°ප                           |             | desc. node          | 2835 Jul 29 19:34                      | 22° <b>m</b> 49'03                |             |
| desc. node          | 2833 Feb 11 00:34                      | 28° <b>ප</b> 10'53            |             |                     | 2835 Aug 06 15:22                      | 0∘ <b>⊽</b>                       |             |
|                     | 2833 Feb 12 11:37                      | 0° <b>≈</b>                   |             | greatest brilliancy | 2835 Sep 06 12:38                      | 20° <b>₽</b> 19'03                | -4.8m       |
|                     | 2833 Mar 08 13:31                      | 0° <b>∀</b>                   |             | retrograde          | 2835 Sep 15 22:37                      | 21° <b>≏</b> 54'51                |             |
|                     | 2833 Apr 01 15:57                      | $_0$ $^{\circ}$ $^{\circ}$    |             | evening set         | 2835 Oct 03 16:08                      | 16° <b>≏</b> 01'56                |             |
| morning set         | 2833 Apr 11 17:57                      | 12° <b>Y</b> 31'41            |             | inferior conj       | 2835 Oct 07 00:59                      | 13° <b>≏</b> 58'53                | -8°17'32    |
| S                   | 2833 Apr 25 20:10                      | 0°8                           |             | minimum elong       | 2835 Oct 07 07:20                      | 13° <b>≏</b> 49'05                |             |
|                     | r                                      |                               |             | min. Earth dist.    | 2835 Oct 07 21:22                      | 13° <b>Ω</b> 27'26                | 0.28126 AU  |
| superior conj       | 2833 May 19 23:10                      | 29° <b>8</b> 48'54            | -0°35'15    | morning rise        | 2835 Oct 10 22:17                      | 11° <b>Ω</b> 37'00                | 0.20120110  |
| minimum elong       | 2833 May 20 06:22                      | 0° <b>I</b> 11'05             |             | direct              | 2835 Oct 28 07:25                      | 5° <b>£</b> 52'21                 |             |
| mmmum viong         | 2833 May 20 02:46                      | 0° <b>I</b>                   | 0 3 . 00    | greatest brilliancy | 2835 Nov 08 10:31                      | 8° <b>Ω</b> 10'54                 | -4.8m       |
| max. Earth dist.    | 2833 May 22 03:55                      | 2° <b>I</b> I31'31            | 1.73141 AU  | asc. node           | 2835 Nov 19 22:34                      | 14° <b>≏</b> 27'28                | 1.0111      |
| asc. node           | 2833 Jun 04 03:42                      | 18° <b>Ⅲ</b> 31'30            | 1.75111110  | use. Houe           | 2835 Dec 08 19:16                      | 0° <b>™</b>                       |             |
| use. Houe           | 2833 Jun 13 11:35                      | 0°9                           |             | morning max el      | 2835 Dec 17 21:43                      | 8°M55'30                          | 46°48'11    |
| evening rise        | 2833 Jun 26 01:42                      | 15° <b>©</b> 27'47            |             | morning max or      | 2836 Jan 06 13:40                      | 0° <b>∡</b> 7                     | 10 10 11    |
| evening rise        | 2833 Jul 07 22:04                      | 0°Ω                           |             |                     | 2836 Feb 01 13:55                      | 0°る                               |             |
|                     | 2833 Aug 01 10:10                      | 0° <b>m</b>                   |             |                     | 2836 Feb 26 15:30                      | 0° <b>≈</b>                       |             |
|                     | 2833 Aug 01 10:10<br>2833 Aug 26 00:47 | 0° <del>ت</del>               |             | desc. node          | 2836 Mar 10 12:20                      | 0 ∞<br>15°≈36'36                  |             |
|                     | 2833 Sep 19 19:30                      | 0°M                           |             | desc. Hode          | 2836 Mar 22 07:44                      | 0° <b>∀</b>                       |             |
| desc. node          | 2833 Sep 13 17:17<br>2833 Sep 23 17:17 | 4°M42'18                      |             |                     | 2836 Apr 15 20:18                      | 0°Υ                               |             |
| desc. node          | 2833 Oct 14 20:25                      | 4 11642 18<br>0° <b>₹</b>     |             |                     | -                                      | 0°8                               |             |
|                     |  | 0°ろ                           |             |                     | 2836 May 10 07:58<br>2836 Jun 03 19:44 | 0°II                              |             |
|                     | 2833 Nov 09 07:24                      |                               |             |                     |  |                                   |             |
| ovonina ma1         | 2833 Dec 05 15:35                      | 0°≈<br>10°≈48'00              | 47016110    | morning set         | 2836 Jun 20 12:34                      | 20° <b>Ⅲ</b> 27'51<br>0° <b>©</b> |             |
| evening max el      | 2833 Dec 24 05:08                      | 19° <b>≈</b> 48'00            | 47°16'12    | 000 m-J-            | 2836 Jun 28 07:15                      |                                   |             |
|                     | 2834 Jan 03 15:03                      | 0° <b>∀</b>                   |             | asc. node           | 2836 Jul 01 15:36                      | 4°506'26                          |             |
| asc. node           | 2834 Jan 14 20:26                      | 9° <b>¥</b> 48'10             | 4.0m-       | may E-uth 11 t      | 2836 Jul 22 17:33                      | 0°Ω<br>2°Ω26'08                   | 1 72402 411 |
| greatest brilliancy | 2834 Feb 02 22:49                      | 21°\(\frac{1}{3}31'38         | -4.7Ifl     | max. Earth dist.    | 2836 Jul 25 12:35                      | 3° <b>Ω</b> 26′08                 | 1.73492 AU  |
| retrograde          | 2834 Feb 13 04:28                      | 23°\(\frac{1}{32}\)32'31      |             |                     | 202611 27 22 2                         | 50 <b>02</b> 40 5                 | 0055142     |
| evening set         | 2834 Mar 02 22:50                      | 17° <b>H</b> 25'09            | 0.07407.433 | superior conj       | 2836 Jul 27 02:55                      | 5° <b>Ω</b> 24'01                 | 0°55'43     |
| min. Earth dist.    | 2834 Mar 05 08:55                      |                               | 0.27437 AU  | minimum elong       | 2836 Jul 26 18:10                      | 4° <b>Ω</b> 57'08                 | U~55'24     |
| inferior conj       | 2834 Mar 06 00:49                      | 15° <b>¥</b> 30′59            |             |                     | 2836 Aug 16 02:03                      | 0° Mp                             |             |
| minimum elong       | 2834 Mar 05 22:02                      | 15° <b>¥</b> 35′20            | 8°50'28     | evening rise        | 2836 Sep 01 00:49                      | 19° <b>m</b> 41'08                |             |
| morning rise        | 2834 Mar 08 21:23                      | 13° <b>¥</b> 45′17            |             |                     | 2836 Sep 09 09:11                      | 0∘ <b>⊽</b>                       |             |
|                     |  |                               |             |                     |  |                                   |             |

|                     | 2026 Oat 02 15:50                      | 0°M                                    |            |                     | 2920 Mar 07 00:20   | 0° <b>≈</b>                        |             |
|---------------------|--|--|------------|---------------------|---|------------------------------------|-------------|
| JJ.                 | 2836 Oct 03 15:58                      | 21°M39'48                              |            |                     | 2839 Mar 07 09:20   | 0 ≈<br>0° <b>)</b>                 |             |
| desc. node          | 2836 Oct 21 05:10                      | 21°االہ39'48<br>0°ا <b>ح</b>           |            | 44-                 | 2839 Apr 03 17:02   | 0° <b>π</b><br>4° <b>) (</b> 54'36 |             |
|                     | 2836 Oct 27 23:25                      | 0°궁                                    |            | desc. node          | 2839 Apr 08 00:17   | 4 χ3436<br>0°Υ                     |             |
|                     | 2836 Nov 21 08:13<br>2836 Dec 15 19:58 | 0°≈                                    |            |                     | 2839 Apr 29 14:52   | 0° <b>8</b>                        |             |
|                     | 2837 Jan 09 15:07                      | 0 <b>≈</b><br>0° <b>∀</b>              |            |                     | 2839 May 24 22:58<br>2839 Jun 19 00:14                      | 0°U                                |             |
|                     |  | 0 <b>Υ</b><br>0° <b>Υ</b>              |            |                     |   | 0°©                                |             |
| asc. node           | 2837 Feb 04 04:30                      | 8° <b>Υ</b> 06'18                      |            | asc. node           | 2839 Jul 13 20:38<br>2839 Jul 30 03:23                      | 19° <b>9</b> 647'32                |             |
| asc. Houe           | 2837 Feb 11 08:09<br>2837 Mar 03 16:31 | 0° <b>8</b>                            |            | asc. Houe           | 2839 Aug 07 12:00   | 19 <b>3</b> 47 32                  |             |
| avanina may al      |  | 2° <b>8</b> 29'11                      | 46027112   | morning got         | 2839 Aug 07 12:00<br>2839 Aug 28 09:20                      | 25° <b>Ω</b> 38'42                 |             |
| evening max el      | 2837 Mar 06 03:27                      | 2° <b>0</b> 2911                       | 40-3/12    | morning set         | 0   |                                    |             |
|                     | 2837 Apr 08 21:11                      | 0°П<br>2°П32'37                        | 4.0        |                     | 2839 Aug 31 22:05   | 0 <b>்</b> ச<br>0°™                |             |
| greatest brilliancy | 2837 Apr 14 10:24                      | 2° <b>П</b> 32'37<br>4° <b>П</b> 41'05 | -4.8m      | Fauth diat          | 2839 Sep 25 03:32   |                                    | 1 72422 ATT |
| retrograde          | 2837 Apr 25 05:01                      |  |            | max. Earth dist.    | 2839 Sep 30 20:50   | 7° <b>ჲ</b> 06'43                  | 1.72422 AU  |
|                     | 2837 May 10 15:32                      | 30°R8                                  |            |                     | 2020 0 4 04 02 44   | 110 0 00104                        | 1021126     |
| evening set         | 2837 May 11 00:25                      | 29° <b>8</b> 47'22                     | 4001154    | superior conj       | 2839 Oct 04 02:44   | 11° <b>Ω</b> 09'04                 | 1°21'36     |
| inferior conj       | 2837 May 16 11:21                      | 26° <b>8</b> 27'17                     |            | minimum elong       | 2839 Oct 04 07:59   | 11° <b>Ω</b> 25'24                 | 1°21'32     |
| minimum elong       | 2837 May 16 19:23                      | 26° <b>8</b> 14'38                     | 3°59'45    |                     | 2839 Oct 19 05:50   | 0°M                                |             |
| min. Earth dist.    | 2837 May 16 09:53                      | 26° <b>8</b> 29'35                     | 0.28518 AU | evening rise        | 2839 Nov 11 13:03   | 29°M05'33                          |             |
| morning rise        | 2837 May 22 14:50                      | 22° <b>8</b> 45'15                     |            |                     | 2839 Nov 12 06:29   | 0° <b>∡</b>                        |             |
| desc. node          | 2837 Jun 02 21:46                      | 18° <b>8</b> 35'52                     |            | desc. node          | 2839 Nov 18 17:10   | 8° <b>∡</b> '03'11                 |             |
| direct              | 2837 Jun 06 19:43                      | 18° <b>8</b> 17'42                     |            |                     | 2839 Dec 06 06:31   | 0°ಕ                                |             |
| greatest brilliancy | 2837 Jun 16 17:29                      | 20° <b>8</b> 04'54                     | -4.7m      |                     | 2839 Dec 30 06:46   | 0° <b>≈</b>                        |             |
|                     | 2837 Jul 04 10:41                      | $\Pi$ $^{\circ}0$                      |            |                     | 2840 Jan 23 08:50   | 0° <b>∀</b>                        |             |
| morning max el      | 2837 Jul 25 13:19                      | 18° <b>Ⅱ</b> 03'56                     | 45°42'49   |                     | 2840 Feb 16 16:02   | $0$ ° $\Upsilon$                   |             |
|                     | 2837 Aug 06 14:32                      | 0                                      |            | asc. node           | 2840 Mar 10 20:05   | 28° <b>Y</b> ′06'40                |             |
|                     | 2837 Sep 03 09:29                      | $0 {\circ} \Omega$                     |            |                     | 2840 Mar 12 09:58   | 0°8                                |             |
| asc. node           | 2837 Sep 24 01:04                      | 23° <b>Ω</b> 43′27                     |            |                     | 2840 Apr 07 00:04   | $\Pi$ $^{\circ}0$                  |             |
|                     | 2837 Sep 29 09:11                      | o° mp                                  |            |                     | 2840 May 04 07:04   | $0$ $\circ$ $\infty$               |             |
|                     | 2837 Oct 24 09:19                      | 0∘ <b>⊽</b>                            |            | evening max el      | 2840 May 15 20:33   | 11° <b>©</b> 39'29                 | 45°37'24    |
|                     | 2837 Nov 17 19:20                      | $0^{\circ}$ M.                         |            |                     | 2840 Jun 05 22:28   | $\mathfrak{O}^{\circ}\mathfrak{O}$ |             |
|                     | 2837 Dec 11 21:27                      | 0° <b>∡</b> ¹                          |            | greatest brilliancy | 2840 Jun 22 20:01   | 9° <b>Ω</b> 44'39                  | -4.7m       |
|                     | 2838 Jan 04 19:45                      | 8°0                                    |            | desc. node          | 2840 Jun 30 09:46   | 11° <b>Ω</b> 40'42                 |             |
| desc. node          | 2838 Jan 13 14:44                      | 11° <b>る</b> 02'37                     |            | retrograde          | 2840 Jul 03 17:22   | 11° <b>Ω</b> 53'22                 |             |
| morning set         | 2838 Jan 23 07:48                      | 23° <b>る</b> 14'58                     |            | evening set         | 2840 Jul 19 10:10   | 7° <b>Ω</b> 10′07                  |             |
|                     | 2838 Jan 28 16:42                      | 0° <b>≈</b>                            |            | inferior conj       | 2840 Jul 25 06:07   | 3° <b>Ω</b> 39'29                  | -5°25'11    |
|                     | 2838 Feb 21 13:54                      | 0° <b>)</b> €                          |            | minimum elong       | 2840 Jul 24 20:31   | 3° <b>Ω</b> 54'29                  | 5°23'00     |
|                     |  |  |            | min. Earth dist.    | 2840 Jul 25 02:45   | 3° <b>Ω</b> 44'45                  | 0.29043 AU  |
| superior conj       | 2838 Mar 05 18:03                      | 15° <b>)</b> 15′36                     | -1°25'29   | morning rise        | 2840 Jul 30 06:45   | 0° <b>Ω</b> 35'32                  |             |
| minimum elong       | 2838 Mar 05 14:33                      | 15° <b>)</b> €04'38                    | 1°25'28    |                     | 2840 Jul 31 07:47   | 30° <b>₹</b> 5                     |             |
| max. Earth dist.    | 2838 Mar 09 14:04                      | 20° <b>)</b> €03'38                    | 1.71610 AU | direct              | 2840 Aug 15 20:37   | 25° <b>5</b> 21'39                 |             |
|                     | 2838 Mar 17 12:47                      | $0^{\circ}\mathbf{\Upsilon}$           |            | greatest brilliancy | 2840 Aug 26 08:26   | 27° <b>5</b> 19'56                 | -4.7m       |
|                     | 2838 Apr 10 14:46                      | 0°B                                    |            |                     | 2840 Sep 01 09:24   | $0^{\circ}\Omega$                  |             |
| evening rise        | 2838 Apr 14 18:49                      | 5° <b>8</b> 10'22                      |            | morning max el      | 2840 Oct 04 02:02   | 25° <b>Ω</b> 49'28                 | 46°03'37    |
|                     | 2838 May 04 21:00                      | $\Pi$ $^{\circ}0$                      |            |                     | 2840 Oct 08 07:18   | 0° <b>™</b>                        |             |
| asc. node           | 2838 May 06 17:57                      | 2° <b>Ⅱ</b> 18'17                      |            | asc. node           | 2840 Oct 21 12:56   | 13° <b>m</b> 48'59                 |             |
|                     | 2838 May 29 08:18                      | 0°€                                    |            |                     | 2840 Nov 05 03:27   | 0∘ <b>ত</b>                        |             |
|                     | 2838 Jun 23 01:31                      | $0^{\circ}\Omega$                      |            |                     | 2840 Nov 30 19:31   | 0° <b>M</b> ₊                      |             |
|                     | 2838 Jul 18 02:40                      | 0° <b>m</b>                            |            |                     | 2840 Dec 25 13:06   | 0° <b>∡</b> ¹                      |             |
|                     | 2838 Aug 12 15:59                      | 0∘ <b>⊽</b>                            |            |                     | 2841 Jan 18 20:22   | 0°ප                                |             |
| desc. node          | 2838 Aug 26 07:19                      | 15° <b>≏</b> 39'06                     |            | desc. node          | 2841 Feb 10 02:29   | 27° <b>る</b> 40'25                 |             |
|                     | 2838 Sep 08 02:13                      | 0°M                                    |            |                     | 2841 Feb 11 23:17   | 0° <b>≈</b>                        |             |
|                     | 2838 Oct 06 09:07                      | 0° <b>∡</b> ¹                          |            |                     | 2841 Mar 08 00:55   | 0° <b>)</b> €                      |             |
| evening max el      | 2838 Oct 10 01:28                      | 3° <b>∡</b> ³38'12                     | 46°31'55   |                     | 2841 Apr 01 03:06   | $0^{\circ}\mathbf{\Upsilon}$       |             |
| -                   | 2838 Nov 11 16:26                      | 8°0                                    |            | morning set         | 2841 Apr 09 07:52   | 10° <b>Y</b> 11′26                 |             |
| greatest brilliancy | 2838 Nov 19 08:37                      | 3° <b>る</b> 28'37                      | -4.9m      | C                   | 2841 Apr 25 07:08   | 0°8                                |             |
| retrograde          | 2838 Nov 28 21:32                      | 5° <b>ප</b> 10'46                      |            |                     | •   |                                    |             |
| evening set         | 2838 Dec 13 05:35                      | 1° <b>ප</b> 09'10                      |            | superior conj       | 2841 May 17 15:29   | 27° <b>8</b> 37'45                 | -0°38'17    |
| -                   | 2838 Dec 15 07:47                      | 30°R. <b>✓</b>                         |            | minimum elong       | 2841 May 17 23:13   | 28° <b>8</b> 01'37                 |             |
| asc. node           | 2838 Dec 17 10:35                      | 28° <b>₹</b> '45'23                    |            | Č                   | 2841 May 19 13:36   | 0°Щ                                |             |
| inferior conj       | 2838 Dec 19 11:13                      | 27° <b>∡</b> ³31'37                    | 0°31'40    | max. Earth dist.    | 2841 May 19 22:40   | 0° <b>Ⅱ</b> 27'57                  | 1.73100 AU  |
| minimum elong       | 2838 Dec 19 10:00                      | 27° <b>х</b> 33′29                     | 0°31'17    | asc. node           | 2841 Jun 03 05:51   | 18° <b>Ⅱ</b> 04'51                 |             |
| min. Earth dist.    | 2838 Dec 19 13:03                      | 27° <b>₹</b> 28'51                     | 0.26502 AU |                     | 2841 Jun 12 22:24   | 0<br>ಲ                             |             |
| morning rise        | 2838 Dec 25 14:07                      | 23° <b>₹</b> 57'01                     |            | evening rise        | 2841 Jun 23 20:15   | 13° <b>©</b> 24'10                 |             |
| direct              | 2839 Jan 08 21:39                      | 19° <b>₹</b> 52'16                     |            | <b>U</b> .          | 2841 Jul 07 08:59   | $0^{\circ}\Omega$                  |             |
| greatest brilliancy |  |  |            |                     |   |                                    |             |
|                     | 2839 Jan 19 03:24                      | 21° <b>х</b> 50'59                     | -4.9m      |                     | 2841 Jul 31 21:19   | 0° <b>m</b> y                      |             |
| · ·                 | 2839 Jan 19 03:24<br>2839 Feb 02 15:29 |  | -4.9m      |                     |   | 0ം <b>ट</b><br>0ംമം                |             |
| morning max el      |  | 21°ダ50'59<br>0°る<br>22°る45'53          |            |                     | 2841 Jul 31 21:19<br>2841 Aug 25 12:20<br>2841 Sep 19 07:41 | -•                                 |             |

| 11-                 | 2041 C 22 10-10     | 49 <b>m</b> 11110                |                     |                     | 2044 A 15 07.52                        | 0° <b>Υ</b>                           |            |
|---------------------|---------------------|----------------------------------|---------------------|---------------------|--|---------------------------------------|------------|
| desc. node          | 2841 Sep 22 19:18   | 4°M11'19                         |                     |                     | 2844 Apr 15 07:52                      |                                       |            |
|                     | 2841 Oct 14 09:37   | 0° <b>∡</b>                      |                     |                     | 2844 May 09 19:09                      | 0° <b>8</b>                           |            |
|                     | 2841 Nov 08 22:14   | 0°ಕ                              |                     |                     | 2844 Jun 03 06:38                      | 0°Щ                                   |            |
|                     | 2841 Dec 05 09:43   | 0° <b>≈</b>                      |                     | morning set         | 2844 Jun 18 06:22                      | 18° <b>Ⅲ</b> 22'19                    |            |
| evening max el      | 2841 Dec 21 20:06   | 17° <b>≈</b> 26′16               | 47°16'08            |                     | 2844 Jun 27 17:58                      | 0                                     |            |
|                     | 2842 Jan 03 19:47   | 0° <b>∀</b>                      |                     | asc. node           | 2844 Jun 30 17:35                      | 3° <b>©</b> 39'40                     |            |
| asc. node           | 2842 Jan 13 22:22   | 8° <b>)</b> 34'19                |                     |                     | 2844 Jul 22 04:10                      | $0^{\circ}\Omega$                     |            |
| greatest brilliancy | 2842 Jan 31 12:20   | 19° <b>₩</b> 06'18               | -4.9m               | max. Earth dist.    | 2844 Jul 23 08:31                      | 1° <b>Ω</b> 27'11                     | 1.73502 AU |
| retrograde          | 2842 Feb 10 19:11   | 21° <b>)</b> 07'59               |                     |                     |  |                                       |            |
| evening set         | 2842 Feb 28 10:08   | 15° <b>)</b> €04'33              |                     | superior conj       | 2844 Jul 24 21:28                      | 3° <b>Ω</b> 20'48                     | 0°53'19    |
| min. Earth dist.    | 2842 Mar 02 21:32   | 13° <b>)</b> 33′17               | 0.27386 AU          | minimum elong       | 2844 Jul 24 12:51                      | 2° <b>Ω</b> 54'19                     | 0°52'59    |
| inferior conj       | 2842 Mar 03 14:26   | 13° <b>)</b> 07′01               | 8°47'31             | -                   | 2844 Aug 15 12:41                      | 0° m/                                 |            |
| minimum elong       | 2842 Mar 03 10:45   | 13° <b>)</b> 12'43               | 8°47'19             | evening rise        | 2844 Aug 29 18:56                      | 17° <b>m</b> 35'50                    |            |
| morning rise        | 2842 Mar 06 11:35   | 11° <b>)</b> 20'41               |                     | <b>3</b>            | 2844 Sep 08 19:57                      | 0∘ <del>⊽</del>                       |            |
| direct              | 2842 Mar 24 05:42   | 5° <b>)</b> 16'44                |                     |                     | 2844 Oct 03 03:00                      | o° <b>m</b>                           |            |
| greatest brilliancy | 2842 Apr 02 07:43   | 6° <b>¥</b> 50'04                | -4.8m               | desc. node          | 2844 Oct 20 07:20                      | 21°M11'44                             |            |
| desc. node          | 2842 May 05 12:01   | 29° <b>)</b> 35'41               | - <del>-</del> 0111 | desc. node          | 2844 Oct 27 10:49                      | 21 ll⊍11 <del>14</del><br>0° <b>√</b> |            |
| desc. Hode          | •                   | 29 <b>γ</b> (3341                |                     |                     |  | 0°중                                   |            |
|                     | 2842 May 05 22:35   |                                  | 46011102            |                     | 2844 Nov 20 20:06                      |                                       |            |
| morning max el      | 2842 May 12 19:07   | 6° <b>Y</b> 30′12                | 46°11'02            |                     | 2844 Dec 15 08:31                      | 0° <b>≈</b>                           |            |
|                     | 2842 Jun 04 13:02   | 0° <b>8</b>                      |                     |                     | 2845 Jan 09 04:44                      | 0° <b>∀</b>                           |            |
|                     | 2842 Jul 01 12:10   | $\Pi^{\circ}0$                   |                     |                     | 2845 Feb 03 20:11                      | 0° <b>Υ</b>                           |            |
|                     | 2842 Jul 27 10:06   | 0                                |                     | asc. node           | 2845 Feb 10 10:12                      | 7° <b>Y</b> 25'42                     |            |
|                     | 2842 Aug 21 16:34   | $0 ^{\circ} \Omega$              |                     | evening max el      | 2845 Mar 03 17:53                      | 0° <b>8</b> 10'16                     | 46°39'25   |
| asc. node           | 2842 Aug 26 15:13   | 5° <b>Ω</b> 56'44                |                     |                     | 2845 Mar 03 13:48                      | $9^{\circ}$ 8                         |            |
|                     | 2842 Sep 15 11:00   | O° Mp                            |                     |                     | 2845 Apr 11 06:09                      | $\Pi^{\circ}0$                        |            |
|                     | 2842 Oct 09 20:00   | 0∘ <b>⊽</b>                      |                     | greatest brilliancy | 2845 Apr 12 03:54                      | 0° <b>Ⅲ</b> 21′20                     | -4.8m      |
|                     | 2842 Nov 02 22:29   | 0°M,                             |                     | retrograde          | 2845 Apr 22 20:34                      | 2° <b>Ⅲ</b> 28′20                     |            |
| morning set         | 2842 Nov 06 10:23   | 4°M22'09                         |                     | •                   | 2845 May 03 22:32                      | 30° <b>₹</b> 8                        |            |
| Č                   | 2842 Nov 26 21:15   | 0° <b>₹</b> ¹                    |                     | evening set         | 2845 May 08 18:45                      | 27° <b>8</b> 31'29                    |            |
| max. Earth dist.    | 2842 Dec 15 05:50   | 23° <b>х</b> 03'38               | 1.71200 AU          | inferior conj       | 2845 May 14 03:10                      | 24° <b>8</b> 14'57                    | 4°20'11    |
| max. Lutin dist.    | 2012 Dec 13 03.50   | 23 7 03 30                       | 1.71200110          | minimum elong       | 2845 May 14 11:37                      | 24° <b>8</b> 01'37                    | 4°17'58    |
| superior conj       | 2842 Dec 16 03:13   | 24° <b>҂</b> 10′52               | 0°00'11             | min. Earth dist.    | 2845 May 14 02:03                      | 24° <b>8</b> 16'42                    | 0.28490 AU |
| minimum elong       | 2842 Dec 16 03:14   | 24° × 10′55                      | 0°00'10             | morning rise        | 2845 May 20 04:56                      | 20° <b>8</b> 34'54                    | 0.28490 AU |
| •                   |                     |                                  | 0 00 10             | •                   | •                                      |                                       |            |
| behind sun begin    | 2842 Dec 15 01:26   | 22° <b>х</b> 49'49               |                     | desc. node          | 2845 Jun 01 23:50                      | 16° <b>8</b> 12'56                    |            |
| behind sun end      | 2842 Dec 17 05:02   | 25° <b>₹</b> 32'02               |                     | direct              | 2845 Jun 04 10:44                      | 16° <b>8</b> 05'50                    |            |
| desc. node          | 2842 Dec 16 05:01   | 24° <b>х</b> 16′33               |                     | greatest brilliancy | 2845 Jun 14 08:34                      | 17° <b>8</b> 52'41                    | -4.7m      |
|                     | 2842 Dec 20 18:17   | 0°る                              |                     |                     | 2845 Jul 04 23:56                      | 0°П                                   |            |
|                     | 2843 Jan 13 14:48   | 0° <b>≈</b>                      |                     | morning max el      | 2845 Jul 23 04:00                      | 15° <b>Ⅱ</b> 51′04                    | 45°43'04   |
| evening rise        | 2843 Jan 26 09:06   | 16° <b>≈</b> 02'31               |                     |                     | 2845 Aug 06 08:51                      | $0$ $\circ$                           |            |
|                     | 2843 Feb 06 12:00   | 0° <b>∀</b>                      |                     |                     | 2845 Sep 02 23:40                      | $0$ $^{\circ}$ $\Omega$               |            |
|                     | 2843 Mar 02 11:43   | $0$ ° $\mathbf{\Upsilon}$        |                     | asc. node           | 2845 Sep 23 03:11                      | 23° <b>Ω</b> 12'11                    |            |
|                     | 2843 Mar 26 16:27   | $8^{\circ}$ 0                    |                     |                     | 2845 Sep 28 21:42                      | 0° <b>m</b> ∕                         |            |
| asc. node           | 2843 Apr 08 08:07   | 15° <b>8</b> 32'09               |                     |                     | 2845 Oct 23 21:02                      | 0∘ <b>⊽</b>                           |            |
|                     | 2843 Apr 20 05:07   | $\Pi^{\circ}0$                   |                     |                     | 2845 Nov 17 06:39                      | 0° <b>M</b> ₊                         |            |
|                     | 2843 May 15 05:17   | 0ಂತಾ                             |                     |                     | 2845 Dec 11 08:34                      | 0° <b>∡</b> 7                         |            |
|                     | 2843 Jun 09 23:12   | $0^{\circ}\Omega$                |                     |                     | 2846 Jan 04 06:46                      | 0°ჳ                                   |            |
|                     | 2843 Jul 07 01:56   | 0° m/                            |                     | desc. node          | 2846 Jan 12 16:41                      | 10° <b>る</b> 34'07                    |            |
| evening max el      | 2843 Jul 26 20:42   | 20° m 03'07                      | 45°32'49            | morning set         | 2846 Jan 20 17:26                      | 20° <b>る</b> 39'54                    |            |
| desc. node          | 2843 Jul 28 21:32   | 21° m 58'43                      |                     |                     | 2846 Jan 28 03:40                      | 0° <b>≈</b>                           |            |
| dese. Hode          | 2843 Aug 06 19:24   | 0∘ <b>ರ</b>                      |                     |                     | 2846 Feb 21 00:49                      | 0° <b>∀</b>                           |            |
| grantast brillianav | 2843 Sep 04 02:00   |                                  | -4.8m               |                     | 2040 1 00 21 00.49                     | 0 /                                   |            |
| greatest brilliancy | •                   | 18° <b>△</b> 03'43               | -4.6111             |                     | 2046 Mar 02 05:07                      | 120W 45155                            | 102450     |
| retrograde          | 2843 Sep 13 12:28   | 19° <b>£</b> 39'43               |                     | superior conj       | 2846 Mar 03 05:07                      | 12° <b>)</b> 45'55                    |            |
| evening set         | 2843 Oct 01 08:28   | 13° <b>£</b> 44'05               |                     | minimum elong       | 2846 Mar 03 00:36                      | 12° <b>)</b> (31'46                   |            |
| inferior conj       | 2843 Oct 04 15:45   | 11° <b>≏</b> 43'03               |                     | max. Earth dist.    | 2846 Mar 06 20:45                      | 17° <b>)</b> €20'20                   | 1.71561 AU |
| minimum elong       | 2843 Oct 04 21:24   | 11° <b>≏</b> 34'19               |                     |                     | 2846 Mar 16 23:38                      | 0° <b>Υ</b>                           |            |
| min. Earth dist.    | 2843 Oct 05 11:28   | 11° <b>≏</b> 12'34               | 0.28190 AU          |                     | 2846 Apr 10 01:35                      | $9^{\circ}$ 8                         |            |
| morning rise        | 2843 Oct 08 10:05   | 9° <b>£</b> 25'12                |                     | evening rise        | 2846 Apr 12 07:48                      | 2° <b>8</b> 48'12                     |            |
| direct              | 2843 Oct 25 23:01   | 3° <b>ჲ</b> 35'48                |                     |                     | 2846 May 04 07:52                      | $\Pi$ $^{\circ}0$                     |            |
| greatest brilliancy | 2843 Nov 06 01:19   | 5° <b>≙</b> 53'06                | -4.8m               | asc. node           | 2846 May 05 20:02                      | 1° <b>Ⅱ</b> 51'16                     |            |
| asc. node           | 2843 Nov 19 00:43   | 13° <b>≏</b> 09'54               |                     |                     | 2846 May 28 19:20                      | $0$ $\circ$ $\odot$                   |            |
|                     | 2843 Dec 08 20:55   | 0°M                              |                     |                     | 2846 Jun 22 12:57                      | $0^{\circ}\Omega$                     |            |
| morning max el      | 2843 Dec 15 11:58   | 6°M33'45                         | 46°46'52            |                     | 2846 Jul 17 14:47                      | 0° m)                                 |            |
| <i>5</i> 2-         | 2844 Jan 06 06:45   | 0° <b>∡</b> 7                    |                     |                     | 2846 Aug 12 05:20                      | 0∘ <b>⊽</b>                           |            |
|                     | 2844 Feb 01 04:14   | ∘ੰਤ                              |                     | desc. node          | 2846 Aug 25 09:24                      | ა <b>_</b><br>15° <b>ჲ</b> 04'18      |            |
|                     | 2844 Feb 26 04:26   | 0°≈                              |                     | acse. Hode          | 2846 Sep 07 18:03                      | 0°M                                   |            |
| desc. node          | 2844 Mar 09 14:28   | 0 ∞<br>15°≈05'04                 |                     |                     | 2846 Oct 06 07:22                      | 0° <b>∤</b> 7                         |            |
| desc. Houe          | 2844 Mar 21 19:51   | 13 <b>≈</b> 03 04<br>0° <b>∺</b> |                     | evening max el      | 2846 Oct 06 07.22<br>2846 Oct 07 13:56 | 0 <b>x</b> .<br>1° <b>x</b> 14'50     | 46°20!41   |
|                     | 2077 IVIAI 21 17.J1 | υ <b>Λ</b>                       |                     | Croning max ci      | 2070 OCI U/ 13.30                      | 1 7 14 30                             | TU 47 TI   |

|                     | 204631 14 04 10                        | 007                              |            |                     | 2040 F. J. 11, 10, 22                  | 00.                      |             |
|---------------------|--|----------------------------------|------------|---------------------|--|--------------------------|-------------|
|                     | 2846 Nov 14 04:10                      | 0°る                              | 4.0        |                     | 2849 Feb 11 10:33                      | 0° <b>≈</b>              |             |
| greatest brilliancy | 2846 Nov 16 21:57                      | 1°る03'07                         | -4.9m      |                     | 2849 Mar 07 11:56                      | 0° <b>)</b> €            |             |
| retrograde          | 2846 Nov 26 09:36                      | 2°る44'29                         |            | . ,                 | 2849 Mar 31 13:57                      | 0°Υ<br>7° <b>Υ</b> 51110 |             |
| . ,                 | 2846 Dec 08 02:48                      | 30°₹ <b>⋌</b> 7                  |            | morning set         | 2849 Apr 06 21:34                      | 7° <b>Y</b> 51'18        |             |
| evening set         | 2846 Dec 10 18:38                      | 28° 🖈 41'33                      | 0007110    |                     | 2849 Apr 24 17:50                      | $0^{\circ}$ 8            |             |
| inferior conj       | 2846 Dec 16 23:42                      | 25° 🗷 05'16                      | 0°07'18    |                     | 204034 45 05 40                        | 0.501.40.510.6           | 0041110     |
| minimum elong       | 2846 Dec 16 23:25                      | 25° <b>₹</b> 05'41               | 0°07'12    | superior conj       | 2849 May 15 07:19                      | 25° <b>8</b> 25'36       |             |
| transit middle      | 2846 Dec 16 23:25                      |                                  | 0°07'12    | minimum elong       | 2849 May 15 15:33                      | 25° <b>8</b> 51'01       |             |
| transit begin       | 2846 Dec 16 19:45                      | 25° <b>∡</b> 11'17<br>−          |            | max. Earth dist.    | 2849 May 17 17:50                      | 28° <b>8</b> 26'11       | 1.73063 AU  |
| transit end         | 2846 Dec 17 03:06                      | 25° <b>≯</b> 00'05               |            |                     | 2849 May 19 00:15                      | $\Pi^{\circ}0$           |             |
| asc. node           | 2846 Dec 16 12:29                      | 25° <b>≯</b> 22'19               |            | asc. node           | 2849 Jun 02 07:47                      | 17° <b>Ⅱ</b> 38′07       |             |
| min. Earth dist.    | 2846 Dec 17 03:14                      | 24° <b>₹</b> 59'53               | 0.26525 AU |                     | 2849 Jun 12 09:02                      | 0ංම                      |             |
| morning rise        | 2846 Dec 23 03:48                      | 21° <b>≯</b> 29′10               |            | evening rise        | 2849 Jun 21 14:14                      | 11° <b>©</b> 19'21       |             |
| direct              | 2847 Jan 06 10:07                      | 17° <b>∡</b> ¹25'01              |            |                     | 2849 Jul 06 19:42                      | $0$ $^{\circ}$ $\Omega$  |             |
| greatest brilliancy | 2847 Jan 16 18:24                      |                                  | -4.9m      |                     | 2849 Jul 31 08:16                      | O° <b>m</b> p            |             |
|                     | 2847 Feb 03 10:53                      | 8°0                              |            |                     | 2849 Aug 24 23:41                      | 0∘ <b>ऌ</b>              |             |
| morning max el      | 2847 Feb 25 21:58                      | 20° <b>る</b> 22'07               | 46°53'24   |                     | 2849 Sep 18 19:43                      | 0° <b>M</b>              |             |
|                     | 2847 Mar 07 05:31                      | 0° <b>≈</b>                      |            | desc. node          | 2849 Sep 21 21:26                      | 3° <b>M</b> ₊41'19       |             |
|                     | 2847 Apr 03 08:27                      | 0° <b>∀</b>                      |            |                     | 2849 Oct 13 22:40                      | 0° <b>∡¹</b>             |             |
| desc. node          | 2847 Apr 07 02:23                      | 4° <b>升</b> 17'37                |            |                     | 2849 Nov 08 13:00                      | 0°ರ                      |             |
|                     | 2847 Apr 29 04:13                      | $0^{\circ}$ Y                    |            |                     | 2849 Dec 05 03:58                      | 0° <b>≈</b>              |             |
|                     | 2847 May 24 11:10                      | $B_{00}$                         |            | evening max el      | 2849 Dec 19 11:45                      | 15° <b>≈</b> 07'15       | 47°16'02    |
|                     | 2847 Jun 18 11:42                      | $\Pi$ $^{\circ}0$                |            |                     | 2850 Jan 04 02:05                      | 0° <b>)</b> €            |             |
|                     | 2847 Jul 13 07:38                      | $0$ $\circ$ $\mathfrak{S}$       |            | asc. node           | 2850 Jan 13 00:26                      | 7° <b>)</b> 19'36        |             |
| asc. node           | 2847 Jul 29 05:24                      | 19° <b>5</b> 20'38               |            | greatest brilliancy | 2850 Jan 29 02:02                      | 16° <b>)</b> 42′25       | -4.9m       |
|                     | 2847 Aug 06 22:45                      | $0^{\circ}\Omega$                |            | retrograde          | 2850 Feb 08 09:45                      | 18° <b>)</b> 44′28       |             |
| morning set         | 2847 Aug 26 02:41                      | 23° <b>Ω</b> 31′28               |            | evening set         | 2850 Feb 25 21:11                      | 12° <b>)</b> 45′46       |             |
| C                   | 2847 Aug 31 08:43                      | 0° <b>m</b>                      |            | min. Earth dist.    | 2850 Feb 28 10:16                      | 11° <b>¥</b> 11'58       | 0.27333 AU  |
|                     | 2847 Sep 24 14:09                      | 0∘ <u>v</u>                      |            | inferior conj       | 2850 Mar 01 04:06                      | 10° <b>)</b> 44'14       | 8°43'33     |
| max. Earth dist.    | 2847 Sep 28 14:56                      | 5° <b>ഫ</b> 00'43                | 1.72468 AU | minimum elong       | 2850 Feb 28 23:36                      | 10° <b>)</b> 51'14       | 8°43'14     |
|                     |  |                                  |            | morning rise        | 2850 Mar 04 02:15                      | 8° <b>¥</b> 56'30        |             |
| superior conj       | 2847 Oct 01 19:08                      | 8° <b>ჲ</b> 57'38                | 1°22'28    | direct              | 2850 Mar 21 19:33                      | 2° <b>₩</b> 55'02        |             |
| minimum elong       | 2847 Oct 01 23:42                      | 9° <b>£</b> 11'53                |            | greatest brilliancy | 2850 Mar 30 19:55                      | 4° <b>)</b> €27'22       | -4 8m       |
| minimum viong       | 2847 Oct 18 16:30                      | 0°M                              | 10         | desc. node          | 2850 May 04 14:04                      | 28° <b>)</b> (40'24      |             |
| evening rise        | 2847 Nov 09 02:33                      | 26°M44'09                        |            | dese. Hode          | 2850 May 06 00:01                      | 0°Υ                      |             |
| evening rise        | 2847 Nov 11 17:16                      | 20 الا <del>مجها</del><br>0° الا |            | morning max el      | 2850 May 10 09:38                      | 4° <b>Υ</b> 13'18        | 46°12'22    |
| desc. node          | 2847 Nov 17 17:10<br>2847 Nov 17 19:11 | 7° <b>×</b> <sup>7</sup> 35'39   |            | morning max ci      | 2850 Jun 04 05:41                      | 0° <b>8</b>              | 40 12 22    |
| desc. node          | 2847 Dec 05 17:29                      | 0° <b>る</b>                      |            |                     | 2850 Jul 01 01:54                      | 0°II                     |             |
|                     | 2847 Dec 03 17:29<br>2847 Dec 29 17:58 | 0°≈                              |            |                     | 2850 Jul 26 22:26                      | 0°©                      |             |
|                     | 2848 Jan 22 20:20                      | 0 <b>∞</b><br>0° <b>∀</b>        |            |                     | 2850 Aug 21 04:07                      | 0° <b>U</b>              |             |
|                     | 2848 Feb 16 03:59                      | 0° <b>Υ</b>                      |            | asc. node           | 2850 Aug 25 17:21                      | 5° <b>Ω</b> 28'38        |             |
| aga mada            |  | 27° <b>Υ</b> 35'01               |            | asc. Houe           | 2850 Sep 14 22:07                      |                          |             |
| asc. node           | 2848 Mar 09 22:12                      |                                  |            |                     | 2850 Sep 14 22:07<br>2850 Oct 09 06:54 | 0° <b>m</b> )            |             |
|                     | 2848 Mar 11 22:43                      | 0°B<br>0°B                       |            |                     |  | 0∘ <b>亚</b>              |             |
|                     | 2848 Apr 06 14:28                      |                                  |            |                     | 2850 Nov 02 09:19                      | 0°M                      |             |
|                     | 2848 May 04 01:38                      | 0°9                              | 45020152   | morning set         | 2850 Nov 04 00:27                      | 2°M02'16                 |             |
| evening max el      | 2848 May 13 12:40                      | 9° <b>©</b> 29'17                | 45*38*33   | E d E d             | 2850 Nov 26 08:07                      | 0° <b>⊼</b> 7            | 1 71220 ATT |
|                     | 2848 Jun 06 14:41                      | 0°Ω<br>7°Ω24120                  | 4.7        | max. Earth dist.    | 2850 Dec 12 10:59                      | 20° <b>∡</b> 14'47       | 1.71220 AU  |
| greatest brilliancy | 2848 Jun 20 10:49                      | 7° <b>Ω</b> 34'30                | -4.7m      |                     | 2050 D 12 14.05                        | 219.720157               | 0904107     |
| desc. node          | 2848 Jun 29 11:42                      | 9° <b>Ω</b> 40'36                |            | superior conj       | 2850 Dec 13 14:05                      | 21° <b>х</b> 39'57       |             |
| retrograde          | 2848 Jul 01 10:12                      | 9° <b>Ω</b> 44'57                |            | minimum elong       | 2850 Dec 13 15:09                      | 21° <b>х</b> 43'17       | 0°04'05     |
| evening set         | 2848 Jul 17 00:18                      | 5° <b>Ω</b> 04'19                | 5000126    | behind sun begin    | 2850 Dec 12 13:54                      | 20° <b>₹</b> 23'58       |             |
| inferior conj       | 2848 Jul 22 22:22                      | 1° <b>Ω</b> 30'39                |            | behind sun end      | 2850 Dec 14 16:23                      | 23° 🗷 02'35              |             |
| minimum elong       | 2848 Jul 22 12:58                      | 1° <b>Ω</b> 45'20                |            | desc. node          | 2850 Dec 15 06:55                      | 23° <b>∡</b> 748'16      |             |
| min. Earth dist.    | 2848 Jul 22 18:20                      |                                  | 0.29039 AU |                     | 2850 Dec 20 05:12                      | ರ್∘ರ                     |             |
|                     | 2848 Jul 25 08:44                      | 30° <b>₹</b> 55                  |            |                     | 2851 Jan 13 01:45                      | 0° <b>≈</b>              |             |
| morning rise        | 2848 Jul 28 01:37                      | 28° <b>©</b> 23'14               |            | evening rise        | 2851 Jan 23 19:18                      | 13° <b>≈</b> 29'19       |             |
| direct              | 2848 Aug 13 13:11                      | 23° <b>©</b> 12'53               |            |                     | 2851 Feb 05 22:59                      | 0° <b>∀</b>              |             |
| greatest brilliancy | 2848 Aug 23 23:59                      | 25°510'43                        | -4.7m      |                     | 2851 Mar 01 22:47                      | 0° <b>Υ</b>              |             |
|                     | 2848 Sep 02 21:12                      | 0° <b>Ω</b>                      |            |                     | 2851 Mar 26 03:43                      | 0° <b>8</b>              |             |
| morning max el      | 2848 Oct 01 18:33                      | 23° <b>Ω</b> 39'48               | 46°02'17   | asc. node           | 2851 Apr 07 10:10                      | 15° <b>8</b> 03'36       |             |
|                     | 2848 Oct 08 03:17                      | 0° <b>т</b> р                    |            |                     | 2851 Apr 19 16:45                      | $\Pi^{\circ}0$           |             |
| asc. node           | 2848 Oct 20 14:59                      | 13° <b>m</b> 08'40               |            |                     | 2851 May 14 17:39                      | 0ංම                      |             |
|                     | 2848 Nov 04 18:22                      | 0∘ <b>⊽</b>                      |            |                     | 2851 Jun 09 13:03                      | $0^{\circ}\Omega$        |             |
|                     | 2848 Nov 30 08:33                      | 0°M₊                             |            |                     | 2851 Jul 06 19:15                      | 0° <b>m</b>              |             |
|                     | 2848 Dec 25 01:13                      | 0°⊀                              |            | evening max el      | 2851 Jul 24 11:06                      | 17° <b>m</b> 48'32       | 45°31'38    |
|                     | 2849 Jan 18 07:58                      | 0°ප                              |            | desc. node          | 2851 Jul 27 23:40                      | 21° <b>m</b> 07'35       |             |
| desc. node          | 2849 Feb 09 04:36                      | 27° <b>る</b> 11'52               |            |                     | 2851 Aug 07 01:33                      | 0∘ <b>⊽</b>              |             |
|                     |  |                                  |            |                     |  |                          |             |

| greatest brilliancy              | 2851 Sep 01 15:44                      | 15° <b>≏</b> 48'23                       | -4.7m                 | superior conj       | 2854 Feb 28 16:05                      | 10° <b>¥</b> 15'12                 | -1°24'00   |
|----------------------------------|--|--|-----------------------|---------------------|--|------------------------------------|------------|
| retrograde                       | 2851 Sep 11 01:59                      | 17° <b>£</b> 24'24                       | ,                     | minimum elong       | 2854 Feb 28 10:34                      | 9° <b>)</b> 57'54                  |            |
| evening set                      | 2851 Sep 29 00:26                      | 11° <b>£</b> 26′24                       |                       | max. Earth dist.    | 2854 Mar 04 01:52                      |                                    | 1.71517 AU |
| inferior conj                    | 2851 Oct 02 06:28                      | 9° <b>£</b> 27'06                        | -8°28'27              |                     | 2854 Mar 16 10:42                      | 0° <b>Υ</b>                        |            |
| minimum elong                    | 2851 Oct 02 11:20                      | 9° <b>₽</b> 19'33                        |                       | evening rise        | 2854 Apr 09 20:46                      | 0° <b>8</b> 25'17                  |            |
| min. Earth dist.                 | 2851 Oct 03 01:45                      | 8° <b>£</b> 57'13                        | 0.28251 AU            | Ü                   | 2854 Apr 09 12:37                      | 0°8                                |            |
| morning rise                     | 2851 Oct 05 22:00                      | 7° <b>£</b> 13'05                        |                       |                     | 2854 May 03 18:57                      | $\Pi^{\circ}0$                     |            |
| direct                           | 2851 Oct 23 14:01                      | 1° <b>≏</b> 19'02                        |                       | asc. node           | 2854 May 04 22:00                      | 1° <b>Ⅱ</b> 23'13                  |            |
| greatest brilliancy              | 2851 Nov 03 16:32                      | 3° <b>£</b> 35'49                        | -4.8m                 |                     | 2854 May 28 06:35                      | $0$ $\circ$ $\odot$                |            |
| asc. node                        | 2851 Nov 18 02:40                      | 11° <b>≙</b> 54'12                       |                       |                     | 2854 Jun 22 00:35                      | $0^{\circ}\Omega$                  |            |
|                                  | 2851 Dec 08 21:17                      | 0°M                                      |                       |                     | 2854 Jul 17 03:10                      | 0° <b>™</b>                        |            |
| morning max el                   | 2851 Dec 13 01:15                      | 4° <b>ጤ</b> 09'41                        | 46°45'37              |                     | 2854 Aug 11 19:04                      | 0∘ <b>⊽</b>                        |            |
|                                  | 2852 Jan 05 23:29                      | 0° <b>∡</b> ¹                            |                       | desc. node          | 2854 Aug 24 11:29                      | 14° <b>≏</b> 28'16                 |            |
|                                  | 2852 Jan 31 18:22                      | ರ∘ರ                                      |                       |                     | 2854 Sep 07 10:31                      | $0^{\circ}$ M                      |            |
|                                  | 2852 Feb 25 17:15                      | 0° <b>≈</b>                              |                       | evening max el      | 2854 Oct 05 02:55                      | 28°M51'38                          | 46°27'18   |
| desc. node                       | 2852 Mar 08 16:30                      | 14° <b>≈</b> 33′28                       |                       |                     | 2854 Oct 06 07:08                      | 0° <b>∡</b> 7                      |            |
|                                  | 2852 Mar 21 07:53                      | 0° <b>∀</b>                              |                       | greatest brilliancy | 2854 Nov 14 10:34                      | 28° <b>₮</b> 35'08                 | -4.9m      |
|                                  | 2852 Apr 14 19:22                      | $0$ ° $\Upsilon$                         |                       |                     | 2854 Nov 20 04:43                      | ರ°0                                |            |
|                                  | 2852 May 09 06:16                      | $9^{\circ}$ 8                            |                       | retrograde          | 2854 Nov 23 21:55                      | 0° <b>ප</b> 16'16                  |            |
|                                  | 2852 Jun 02 17:30                      | $\Pi$ $^{\circ}0$                        |                       |                     | 2854 Nov 27 13:40                      | 30°₽ <b>✓</b>                      |            |
| morning set                      | 2852 Jun 16 00:10                      | 16° <b>Ⅱ</b> 16'48                       |                       | evening set         | 2854 Dec 08 07:41                      | 26° <b>х</b> 11′43                 |            |
|                                  | 2852 Jun 27 04:40                      | 0°ಅ                                      |                       | inferior conj       | 2854 Dec 14 11:54                      | 22° <b>∡</b> ³36′50                | -0°17'20   |
| asc. node                        | 2852 Jun 29 19:38                      | 3° <b>©</b> 13'08                        |                       | minimum elong       | 2854 Dec 14 12:34                      | 22° <b>∡</b> ³35'49                | 0°17'07    |
| max. Earth dist.                 | 2852 Jul 21 03:25                      | 29° <b>5</b> 24'54                       | 1.73518 AU            | min. Earth dist.    | 2854 Dec 14 16:52                      | 22° <b>х</b> 29'17                 | 0.26549 AU |
|                                  | 2852 Jul 21 14:50                      | $0^{\circ}\Omega$                        |                       | asc. node           | 2854 Dec 15 14:34                      | 21° <b>₹</b> 56′23                 |            |
|                                  |  |  |                       | morning rise        | 2854 Dec 20 17:02                      | 18° <b>₹</b> 59'44                 |            |
| superior conj                    | 2852 Jul 22 15:55                      | 1° <b>Ω</b> 17'08                        | 0°50'51               | direct              | 2855 Jan 03 22:57                      | 14° <b>₹</b> 55'52                 |            |
| minimum elong                    | 2852 Jul 22 07:28                      | 0° <b>Ω</b> 51'10                        | 0°50'30               | greatest brilliancy | 2855 Jan 14 08:39                      | 16° <b>₹</b> 59'02                 | -4.9m      |
|                                  | 2852 Aug 14 23:25                      | O° <b>m</b> y                            |                       |                     | 2855 Feb 04 01:58                      | 8°0                                |            |
| evening rise                     | 2852 Aug 27 12:53                      | 15° <b>m</b> 29'42                       |                       | morning max el      | 2855 Feb 23 12:09                      | 17° <b>る</b> 58'29                 | 46°54'14   |
|                                  | 2852 Sep 08 06:52                      | 0。 <b>ಹ</b>                              |                       |                     | 2855 Mar 07 01:27                      | 0° <b>≈</b>                        |            |
|                                  | 2852 Oct 02 14:11                      | 0°M₊                                     |                       |                     | 2855 Apr 02 23:57                      | 0° <b>∀</b>                        |            |
| desc. node                       | 2852 Oct 19 09:17                      | 20°M42'37                                |                       | desc. node          | 2855 Apr 06 04:23                      | 3° <b>)</b> (39′49                 |            |
|                                  | 2852 Oct 26 22:20                      | 0° <b>∡</b>                              |                       |                     | 2855 Apr 28 17:44                      | 0° <b>Υ</b>                        |            |
|                                  | 2852 Nov 20 08:07                      | 0°₹                                      |                       |                     | 2855 May 23 23:34                      | 0°B                                |            |
|                                  | 2852 Dec 14 21:14                      | 0° <b>≈</b>                              |                       |                     | 2855 Jun 17 23:25                      | $\Pi$ °0                           |            |
|                                  | 2853 Jan 08 18:34                      | 0° <b>∀</b>                              |                       |                     | 2855 Jul 12 18:54                      | 0ა <b>ௐ</b>                        |            |
|                                  | 2853 Feb 03 12:14                      | 0° <b>Υ</b>                              |                       | asc. node           | 2855 Jul 28 07:35                      | 18°953'28                          |            |
| asc. node                        | 2853 Feb 09 12:21                      | 6° <b>Y</b> 44'36                        |                       |                     | 2855 Aug 06 09:45                      | 0°Ω                                |            |
| evening max el                   | 2853 Mar 01 07:42                      | 27° <b>Y</b> 49′22                       | 46°41'41              | morning set         | 2855 Aug 23 20:20                      | 21° <b>Ω</b> 24'26                 |            |
|                                  | 2853 Mar 03 12:01                      | 0°8                                      |                       |                     | 2855 Aug 30 19:37                      | 0° my                              |            |
| greatest brilliancy              | 2853 Apr 09 21:13                      | 28° <b>8</b> 09'26                       | -4.8m                 |                     | 2855 Sep 24 01:04                      | 0∘ <b>⊽</b>                        |            |
|                                  | 2853 Apr 16 20:54                      | 0°II                                     |                       | max. Earth dist.    | 2855 Sep 26 09:16                      | 2° <b>£</b> 54'34                  | 1.72519 AU |
| retrograde                       | 2853 Apr 20 12:13                      | 0° <b>Ⅱ</b> 15'32                        |                       |                     | 2055 0 20 11 40                        | 60.0.45147                         | 1000114    |
| . ,                              | 2853 Apr 24 02:10                      | 30°R <b>8</b>                            |                       | superior conj       | 2855 Sep 29 11:40                      | 6° <b>Ω</b> 45'47                  |            |
| evening set                      | 2853 May 06 13:10                      | 25° <b>8</b> 15'07                       | 4020105               | minimum elong       | 2855 Sep 29 15:33                      | 6° <b>Ω</b> 57'52                  | 1°23'11    |
| inferior conj                    | 2853 May 11 19:02                      | 22° <b>8</b> 02'29                       | 4°38'05               |                     | 2855 Oct 18 03:32                      | 0°M                                |            |
| minimum elong                    | 2853 May 12 03:53                      | 21° <b>8</b> 48'33                       | 4°35'49<br>0.28462 AU | evening rise        | 2855 Nov 06 15:58                      | 24°M21'16<br>0°⊀                   |            |
| min. Earth dist.<br>morning rise | 2853 May 11 18:19<br>2853 May 17 18:55 | 22° <b>8</b> 03'38<br>18° <b>8</b> 24'49 | 0.26402 AU            | desc. node          | 2855 Nov 11 04:29<br>2855 Nov 16 21:12 | 0 <b>x</b> ⁴<br>7° <b>x</b> ¹06'48 |            |
| desc. node                       | 2853 Jun 01 01:44                      | 13° <b>8</b> 54'49                       |                       | desc. node          | 2855 Dec 05 04:54                      | 7 x 00 48                          |            |
| direct                           | 2853 Jun 02 01:30                      | 13° <b>8</b> 53'40                       |                       |                     | 2855 Dec 05 04:34<br>2855 Dec 29 05:37 | 0°≈                                |            |
| greatest brilliancy              | 2853 Jun 12 00:03                      | 15° <b>8</b> 40'49                       | -4.7m                 |                     | 2856 Jan 22 08:16                      | 0 <b>∞</b><br>0° <b>∺</b>          |            |
| greatest offinality              | 2853 Jul                               | 0° <b>Ⅱ</b>                              | -4.7111               |                     | 2856 Feb 15 16:22                      | 0°Υ                                |            |
| morning max el                   | 2853 Jul 03 09:49<br>2853 Jul 20 18:54 | 13° <b>Ⅱ</b> 38'27                       | 45°43'17              | asc. node           | 2856 Mar 09 00:12                      | 27° <b>Υ</b> '01'46                |            |
| morning max ci                   | 2853 Aug 06 02:50                      | 0°95                                     | 43 43 17              | asc. node           | 2856 Mar 11 11:56                      | 0°8                                |            |
|                                  | 2853 Aug 00 02:50<br>2853 Sep 02 13:54 | 0°Ω                                      |                       |                     | 2856 Apr 06 05:25                      | 0°II                               |            |
| asc. node                        | 2853 Sep 02 15:54<br>2853 Sep 22 05:12 | 22° <b>Ω</b> 40'02                       |                       |                     | 2856 May 03 21:04                      | 0°©                                |            |
| 250. Hode                        | 2853 Sep 28 10:24                      | 0° M)                                    |                       | evening max el      | 2856 May 11 05:25                      | 7° <b>©</b> 19'39                  | 45°40'27   |
|                                  | 2853 Oct 23 09:00                      | 0∘ <b>ʊ</b><br>೧.㎡                       |                       | s. chang man of     | 2856 Jun 07 13:11                      | 0°Ω                                | .5 .02/    |
|                                  | 2853 Nov 16 18:13                      | 0° <b>m</b> .                            |                       | greatest brilliancy | 2856 Jun 18 02:20                      | 5° <b>Ω</b> 24'33                  | -4.7m      |
|                                  | 2853 Dec 10 19:55                      | 0° <b>⊼</b> ¹                            |                       | desc. node          | 2856 Jun 28 13:53                      | 7° <b>Ω</b> 35'35                  |            |
|                                  | 2854 Jan 03 18:00                      | °ੇਂ<br>ਰ°ੇਂ                              |                       | retrograde          | 2856 Jun 29 03:08                      | 7° <b>Ω</b> 35'56                  |            |
| desc. node                       | 2854 Jan 11 18:47                      | 10°පි05'34                               |                       | evening set         | 2856 Jul 14 14:50                      | 2° <b>Ω</b> 58'03                  |            |
| morning set                      | 2854 Jan 18 03:00                      | 18° <b>පි</b> 03'57                      |                       | 5. timing 500       | 2856 Jul 19 14:03                      | 30°R95                             |            |
|                                  | 2854 Jan 27 14:49                      | 0°≈                                      |                       | inferior conj       | 2856 Jul 20 14:46                      | 29° <b>5</b> 21'24                 | -4°53'35   |
|                                  | 2854 Feb 20 11:55                      | 0° <b>∀</b>                              |                       | minimum elong       | 2856 Jul 20 05:39                      | 29° <b>©</b> 35'39                 |            |
|                                  |  | - /\                                     |                       | crong               |  |                                    | <b></b>    |

| : E 4 E 4                          | 2056 1 1 20 10 02                      | 200520146                               | 0.20020 411 |                     | 2050 1 12 12 56   | 00                   |            |
|------------------------------------|--|---|-------------|---------------------|-------------------|----------------------|------------|
| min. Earth dist.                   | 2856 Jul 20 10:03                      | 29°528'46                               | 0.29030 AU  |                     | 2859 Jan 12 12:56 | 0° <b>≈</b>          |            |
| morning rise                       | 2856 Jul 25 20:33                      | 26° <b>©</b> 10'29                      |             | evening rise        | 2859 Jan 21 05:38 | 10°≈55'38            |            |
| direct                             | 2856 Aug 11 06:09                      | 21° <b>©</b> 03'58                      |             |                     | 2859 Feb 05 10:16 | 0° <b>∀</b>          |            |
| greatest brilliancy                | 2856 Aug 21 15:07                      | 23° <b>©</b> 00'34                      | -4.7m       |                     | 2859 Mar 01 10:13 | $0^{\circ}$ Y        |            |
|                                    | 2856 Sep 03 22:43                      | $0 {\circ} \Omega$                      |             |                     | 2859 Mar 25 15:20 | $9^{\circ}$ 8        |            |
| morning max el                     | 2856 Sep 29 10:38                      | 21° <b>Ω</b> 28'37                      | 46°00'51    | asc. node           | 2859 Apr 06 12:07 | 14° <b>8</b> 33'36   |            |
|                                    | 2856 Oct 07 22:56                      | 0° <b>m</b> )                           |             |                     | 2859 Apr 19 04:45 | $\Pi^{\circ}$        |            |
| asc. node                          | 2856 Oct 19 16:59                      | 12° <b>m</b> 27'49                      |             |                     | 2859 May 14 06:23 | 0°©                  |            |
|                                    | 2856 Nov 04 09:23                      | 0∘ <b>⊽</b>                             |             |                     | 2859 Jun 09 03:20 | $0^{\circ}\Omega$    |            |
|                                    | 2856 Nov 29 21:51                      | 0° <b>M</b> .                           |             |                     | 2859 Jul 06 13:12 | 0° m                 |            |
|                                    | 2856 Dec 24 13:42                      | 0° <b>∡</b> ¹                           |             | evening max el      | 2859 Jul 22 00:46 | 15° <b>m</b> ) 31'43 | 45°30'41   |
|                                    | 2857 Jan 17 20:00                      | 0°ਤ                                     |             | desc. node          | 2859 Jul 27 01:43 | 20° m) 14'42         | 13 30 11   |
| desc. node                         | 2857 Feb 08 06:43                      | 26° <b>පි</b> 41'53                     |             | dese. Hode          | 2859 Aug 07 10:21 | 0° <u>ت</u>          |            |
| uese. Houe                         |  | 20° <b>≈</b>                            |             |                     | •                 |                      | 4.7        |
|                                    | 2857 Feb 10 22:16                      |   |             | greatest brilliancy | 2859 Aug 30 05:36 | 13° <b>£</b> 33'13   | -4.7m      |
|                                    | 2857 Mar 06 23:23                      | 0° <b>∀</b>                             |             | retrograde          | 2859 Sep 08 15:53 | 15° <b>≙</b> 09'40   |            |
|                                    | 2857 Mar 31 01:10                      | 0° <b>Υ</b>                             |             | evening set         | 2859 Sep 26 16:21 | 9° <b>₾</b> 09'26    |            |
| morning set                        | 2857 Apr 04 10:55                      | 5° <b>Y</b> 28'49                       |             | inferior conj       | 2859 Sep 29 21:26 | 7° <b>≙</b> 11'35    |            |
|                                    | 2857 Apr 24 04:54                      | $_{0\circ}$ 8                           |             | minimum elong       | 2859 Sep 30 01:32 | 7° <b>≏</b> 05'13    | 8°32'26    |
|                                    |  |   |             | min. Earth dist.    | 2859 Sep 30 16:22 | 6° <b>≙</b> 42'14    | 0.28309 AU |
| superior conj                      | 2857 May 12 22:58                      | 23° <b>8</b> 11'46                      | -0°44'18    | morning rise        | 2859 Oct 03 10:28 | 5° <b>≏</b> 01'10    |            |
| minimum elong                      | 2857 May 13 07:39                      | 23° <b>8</b> 38'34                      | 0°43'56     |                     | 2859 Oct 14 07:22 | 30°R, Mp             |            |
| max. Earth dist.                   | 2857 May 15 14:48                      | 26° <b>8</b> 28'50                      | 1.73021 AU  | direct              | 2859 Oct 21 04:55 | 29° <b>m</b> 02'34   |            |
|                                    | 2857 May 18 11:14                      | $\Pi^{\circ}0$                          |             |                     | 2859 Oct 28 07:27 | 0∘ <b>⊽</b>          |            |
| asc. node                          | 2857 Jun 01 09:52                      | 17° <b>Ⅱ</b> 10'49                      |             | greatest brilliancy | 2859 Nov 01 08:21 | 1° <b>≏</b> 19'34    | -4.8m      |
|                                    | 2857 Jun 11 20:01                      | 0°9                                     |             | asc. node           | 2859 Nov 17 04:44 | 10° <b>≏</b> 40'51   |            |
| evening rise                       | 2857 Jun 19 08:14                      | 9° <b>©</b> 13'33                       |             |                     | 2859 Dec 08 20:35 | 0° <b>M</b>          |            |
| evening rise                       | 2857 Jul 06 06:46                      | 0°Ω                                     |             | morning max el      | 2859 Dec 10 14:55 | 1°ML46'35            | 46°44'30   |
|                                    | 2857 Jul 30 19:33                      | 0° <b>m</b> )                           |             | morning max cr      | 2860 Jan 05 15:56 | 0° <b>∡</b> 7        | 40 44 30   |
|                                    |  | 0∘ <b>⊽</b>                             |             |                     | 2860 Jan 31 08:24 | 0°る                  |            |
|                                    | 2857 Aug 24 11:22                      |   |             |                     |                   |                      |            |
|                                    | 2857 Sep 18 08:04                      | 0°M                                     |             |                     | 2860 Feb 25 06:06 | 0° <b>≈</b>          |            |
| desc. node                         | 2857 Sep 20 23:25                      | 3°M₀09'56                               |             | desc. node          | 2860 Mar 07 18:28 | 14°≈01'21            |            |
|                                    | 2857 Oct 13 12:06                      | 0° <b>∡</b> ′                           |             |                     | 2860 Mar 20 20:02 | 0° <b>∀</b>          |            |
|                                    | 2857 Nov 08 04:15                      | 0° <b>ප</b>                             |             |                     | 2860 Apr 14 07:03 | 0° <b>Υ</b>          |            |
|                                    | 2857 Dec 04 23:07                      | 0° <b>≈</b>                             |             |                     | 2860 May 08 17:36 | $0^{\circ}S$         |            |
| evening max el                     | 2857 Dec 17 02:47                      | 12° <b>≈</b> 45′09                      | 47°15'27    |                     | 2860 Jun 02 04:33 | $\Pi^{\circ}0$       |            |
|                                    | 2858 Jan 04 11:36                      | 0° <b>∀</b>                             |             | morning set         | 2860 Jun 13 17:35 | 14° <b>Ⅱ</b> 09'29   |            |
| asc. node                          | 2858 Jan 12 02:34                      | 6° <b>₩</b> 00'43                       |             |                     | 2860 Jun 26 15:31 | 0ංම                  |            |
| greatest brilliancy                | 2858 Jan 26 15:59                      | 14° <b>¥</b> 16'35                      | -4.9m       | asc. node           | 2860 Jun 28 21:45 | 2° <b>5</b> 46'22    |            |
| retrograde                         | 2858 Feb 05 23:35                      | 16° <b>¥</b> 18′06                      |             | max. Earth dist.    | 2860 Jul 18 23:07 | 27° <b>5</b> 24'48   | 1.73530 AU |
| evening set                        | 2858 Feb 23 07:32                      | 10° <b>¥</b> 25′03                      |             |                     |                   |                      |            |
| min. Earth dist.                   | 2858 Feb 25 23:06                      | 8° <b>升</b> 47'28                       | 0.27280 AU  | superior conj       | 2860 Jul 20 10:09 | 29°512'29            | 0°48'16    |
| inferior conj                      | 2858 Feb 26 17:27                      | 8° <b>)</b> 18′54                       | 8°38'28     | minimum elong       | 2860 Jul 20 01:54 | 28°947'09            | 0°47'57    |
| minimum elong                      | 2858 Feb 26 12:09                      | 8° <b>∺</b> 27'09                       | 8°38'03     | g                   | 2860 Jul 21 01:36 | 0°Ω                  | 0 1, 0,    |
| morning rise                       | 2858 Mar 01 17:00                      | 6° <b>∺</b> 28'59                       | 0 30 03     |                     | 2860 Aug 14 10:15 | 0° m/y               |            |
| direct                             | 2858 Mar 19 08:49                      | 0° <b>∺</b> 30'51                       |             | evening rise        | 2860 Aug 25 06:57 | 13° <b>m</b> ) 23'46 |            |
|                                    |  | 2° <b>₩</b> 02'29                       | -4.8m       | evening rise        | •                 | 0° <b>⊽</b>          |            |
| greatest brilliancy                | 2858 Mar 28 08:21                      |   | -4.6111     |                     | 2860 Sep 07 17:51 |                      |            |
| desc. node                         | 2858 May 03 16:04                      | 27° <b>)</b> 44'34<br>0° <b>°</b>       |             | 1 1                 | 2860 Oct 02 01:26 | 0°M                  |            |
|                                    | 2858 May 06 00:49                      |   | 46010154    | desc. node          | 2860 Oct 18 11:19 | 20°M13'31            |            |
| morning max el                     | 2858 May 07 22:54                      | 1° <b>Y</b> 51'41                       | 46°13'54    |                     | 2860 Oct 26 09:57 | 0° <b>∡</b>          |            |
|                                    | 2858 Jun 03 22:27                      | 0°8                                     |             |                     | 2860 Nov 19 20:12 | 0°る                  |            |
|                                    | 2858 Jun 30 15:51                      | $\Pi$ $^{\circ}0$                       |             |                     | 2860 Dec 14 10:00 | 0° <b>≈</b>          |            |
|                                    | 2858 Jul 26 10:59                      | $0 \circ \mathfrak{S}$                  |             |                     | 2861 Jan 08 08:29 | 0° <b>∀</b>          |            |
|                                    | 2858 Aug 20 15:54                      | $0$ $\circ$ $\Omega$                    |             |                     | 2861 Feb 03 04:29 | $0^{\circ}$ Y        |            |
| asc. node                          | 2858 Aug 24 19:19                      | 4° <b>Ω</b> 59'17                       |             | asc. node           | 2861 Feb 08 14:17 | 6° <b>Ƴ</b> 02'36    |            |
|                                    | 2858 Sep 14 09:28                      | O° <b>m</b> p                           |             | evening max el      | 2861 Feb 26 21:27 | 25° <b>Y</b> 28'19   | 46°43'47   |
|                                    | 2858 Oct 08 18:02                      | 0∘ <b>⊽</b>                             |             |                     | 2861 Mar 03 11:08 | $_{0\circ}$ 8        |            |
| morning set                        | 2858 Nov 01 15:07                      | 29° <b>₽</b> 43'32                      |             | greatest brilliancy | 2861 Apr 07 13:44 | 25° <b>8</b> 56'03   | -4.8m      |
| -                                  | 2858 Nov 01 20:23                      | 0°M₊                                    |             | retrograde          | 2861 Apr 18 04:01 | 28° <b>8</b> 02'08   |            |
|                                    | 2858 Nov 25 19:11                      | 0° <b>∡</b> ¹                           |             | evening set         | 2861 May 04 07:30 | 22° <b>8</b> 57'40   |            |
| max. Earth dist.                   | 2858 Dec 09 16:08                      |   | 1.71249 AU  | inferior conj       | 2861 May 09 10:45 | 19° <b>8</b> 49'10   | 4°55'40    |
|                                    | 0 / 10.00                              | , 20 22                                 |             | minimum elong       | 2861 May 09 19:56 | 19° <b>8</b> 34'42   | 4°53'22    |
| superior conj                      | 2858 Dec 11 01:32                      | 19° <b>∡</b> 10'16                      | 0°07'58     | min. Earth dist.    | 2861 May 09 10:13 | 19° <b>8</b> 50'01   | 0.28439 AU |
| minimum elong                      | 2858 Dec 11 01:32<br>2858 Dec 11 03:35 | 19 <b>x</b> 10 10<br>19° <b>x</b> 16'42 |             | morning rise        | 2861 May 15 08:38 | 16° <b>8</b> 14'23   | 0.2043) AU |
| •                                  |  |   | 0 0/32      | direct              | •                 | 10 <b>8</b> 14 23    |            |
| behind sun begin<br>behind sun end | 2858 Dec 10 04:43                      | 18° 🗷 04'53                             |             |                     | 2861 May 30 16:16 |                      |            |
|                                    | 2858 Dec 12 02:26                      | 20° × 28'31                             |             | desc. node          | 2861 May 31 03:55 | 11° <b>8</b> 40'48   | 4.7        |
| desc. node                         | 2858 Dec 14 09:05                      | 23° <b>₹</b> 20'11                      |             | greatest brilliancy | 2861 Jun 09 15:25 | 13° <b>8</b> 28'16   | -4./m      |
|                                    | 2858 Dec 19 16:19                      | 0°₹                                     |             |                     | 2861 Jul 05 17:11 | $\Pi$ $^{\circ}$ 0   |            |
|                                    |  |   |             |                     |                   |                      |            |

| morning max el      | 2861 Jul 18 10:32                      | 11° <b>II</b> 27'17              | 45°43'39   |                               | 2864 Mar 11 00:52                      | 0° <b>8</b>                          |                   |
|---------------------|--|----------------------------------|------------|-------------------------------|--|--------------------------------------|-------------------|
|                     | 2861 Aug 05 20:28                      | 0°ಅ                              |            |                               | 2864 Apr 05 20:08                      | 0°II                                 |                   |
|                     | 2861 Sep 02 03:58                      | $0^{\circ}\Omega$                |            |                               | 2864 May 03 16:38                      | 0°©                                  |                   |
| asc. node           | 2861 Sep 21 07:12                      | 22° <b>Ω</b> 08'12               |            | evening max el                | 2864 May 08 22:02                      | 5° <b>©</b> 10'46                    | 45°41'56          |
|                     | 2861 Sep 27 22:57                      | 0° <b>m</b> )                    |            |                               | 2864 Jun 08 19:43                      | $0^{\circ}\Omega$                    |                   |
|                     | 2861 Oct 22 20:48                      | 0∘ <b>亚</b>                      |            | greatest brilliancy           | 2864 Jun 15 18:24                      | 3° <b>Ω</b> 16′17                    | -4.7m             |
|                     | 2861 Nov 16 05:39                      | 0°M₊                             |            | retrograde                    | 2864 Jun 26 19:39                      | 5° <b>Ω</b> 27'43                    |                   |
|                     | 2861 Dec 10 07:08                      | 0° <b>∡</b> ¹                    |            | desc. node                    | 2864 Jun 27 15:52                      | 5° <b>Ω</b> 26′53                    |                   |
|                     | 2862 Jan 03 05:05                      | 0°₹                              |            | evening set                   | 2864 Jul 12 05:31                      | 0° <b>£</b> 52′37                    |                   |
| desc. node          | 2862 Jan 10 20:52                      | 9° <b>る</b> 37'19                |            |                               | 2864 Jul 13 18:18                      | 30° <b>₹</b> 5                       |                   |
| morning set         | 2862 Jan 15 13:03                      | 15° <b>る</b> 29'54               |            | inferior conj                 | 2864 Jul 18 07:10                      | 27° <b>©</b> 13'06                   | -4°37'05          |
|                     | 2862 Jan 27 01:49                      | 0° <b>≈</b>                      |            | minimum elong                 | 2864 Jul 17 22:22                      | 27° <b>©</b> 26'53                   |                   |
|                     | 2862 Feb 19 22:51                      | 0° <b>ℋ</b>                      |            | min. Earth dist.              | 2864 Jul 18 02:02                      | 27° <b>©</b> 21'09                   | 0.29023 AU        |
|                     |  | >.                               |            | morning rise                  | 2864 Jul 23 15:22                      | 23° <b>©</b> 58'36                   |                   |
| superior conj       | 2862 Feb 26 03:17                      | 7° <b>)</b> 45'40                |            | direct                        | 2864 Aug 08 23:01                      | 18°956'02                            |                   |
| minimum elong       | 2862 Feb 25 20:48                      | 7° <b>∺</b> 25′20                |            | greatest brilliancy           | 2864 Aug 19 06:21                      | 20° <b>©</b> 51'13                   | -4.7m             |
| max. Earth dist.    | 2862 Mar 01 08:44                      | 11°π48′26<br>0° <b>Υ</b>         | 1.71476 AU |                               | 2864 Sep 04 17:02                      | 0° <b>N</b>                          | 45050127          |
|                     | 2862 Mar 15 21:34                      | 28° <b>Y</b> 03'17               |            | morning max el                | 2864 Sep 27 01:56                      | 19° <b>Ω</b> 16'18                   | 45°59'27          |
| evening rise        | 2862 Apr 07 09:53                      | 0° <b>8</b>                      |            | asc. node                     | 2864 Oct 07 17:44                      | 0°M)                                 |                   |
|                     | 2862 Apr 08 23:29<br>2862 May 03 05:54 | 0°II                             |            | asc. node                     | 2864 Oct 18 19:04<br>2864 Nov 03 23:55 | 11° <b>™</b> 48'27<br>0° <b>≏</b>    |                   |
| asc. node           | 2862 May 04 00:05                      | 0° <b>П</b> 55'58                |            |                               | 2864 Nov 29 10:42                      | 0°M                                  |                   |
| asc. node           | 2862 May 27 17:45                      | 0°9                              |            |                               | 2864 Dec 24 01:45                      | 0° <b>⊼</b>                          |                   |
|                     | 2862 Jun 21 12:11                      | $0 {\circ} {\mathfrak O}$        |            |                               | 2865 Jan 17 07:36                      | ⊙ੰਤ                                  |                   |
|                     | 2862 Jul 16 15:30                      | 0° <b>m</b> )                    |            | desc. node                    | 2865 Feb 07 08:36                      | 26°る12'27                            |                   |
|                     | 2862 Aug 11 08:47                      | 0∘ <u>⊽</u>                      |            |                               | 2865 Feb 10 09:34                      | 0° <b>≈</b>                          |                   |
| desc. node          | 2862 Aug 23 13:27                      | 13° <b>≏</b> 52'08               |            |                               | 2865 Mar 06 10:27                      | 0° <b>)</b> €                        |                   |
|                     | 2862 Sep 07 03:05                      | 0° <b>M</b> .                    |            |                               | 2865 Mar 30 12:02                      | $0^{\circ}\mathbf{\Upsilon}$         |                   |
| evening max el      | 2862 Oct 02 16:44                      | 26°M31'26                        | 46°25'01   | morning set                   | 2865 Apr 02 00:10                      | 3° <b>Y</b> 07'05                    |                   |
|                     | 2862 Oct 06 07:43                      | 0° <b>∡</b> ¹                    |            |                               | 2865 Apr 23 15:37                      | $9^{\circ}$ 8                        |                   |
| greatest brilliancy | 2862 Nov 11 22:49                      | 26° <b>₹</b> 07'58               | -4.9m      |                               |  |                                      |                   |
| retrograde          | 2862 Nov 21 10:34                      | 27° <b>∡</b> ¹49'03              |            | superior conj                 | 2865 May 10 14:38                      | 20° <b>8</b> 59'05                   | -0°47'13          |
| evening set         | 2862 Dec 05 21:04                      | 23° <b>х</b> 42'50               |            | minimum elong                 | 2865 May 10 23:42                      | 21° <b>8</b> 27'07                   | 0°46'50           |
| inferior conj       | 2862 Dec 12 00:08                      | 20° <b>∡</b> 09'18               |            | max. Earth dist.              | 2865 May 13 12:00                      | _                                    | 1.72974 AU        |
| minimum elong       | 2862 Dec 12 01:45                      | 20° <b>∡</b> 06'51               | 0°41'21    |                               | 2865 May 17 21:51                      | $\Pi^{\circ 0}$                      |                   |
| min. Earth dist.    | 2862 Dec 12 06:14                      | 20° <b>∡</b> 00'02               | 0.26577 AU | asc. node                     | 2865 May 31 11:58                      | 16° <b>∏</b> 44'46                   |                   |
| asc. node           | 2862 Dec 14 16:42                      | 18° <b>∡</b> 32'07               |            |                               | 2865 Jun 11 06:37                      | 0.20                                 |                   |
| morning rise        | 2862 Dec 18 06:04                      | 16° <b>∡</b> 31'29               |            | evening rise                  | 2865 Jun 17 02:12                      | 7° <b>©</b> 08'48                    |                   |
| direct              | 2863 Jan 01 12:15                      | 12° <b>×</b> <sup>7</sup> 27'51  | 4.0        |                               | 2865 Jul 05 17:28                      | 0° <b>N</b>                          |                   |
| greatest brilliancy | 2863 Jan 11 22:23                      | 14° <b>メ</b> 32'01<br>0°る        | -4.9m      |                               | 2865 Jul 30 06:30<br>2865 Aug 23 22:47 | 0 <b>் ம</b><br>0 <b>் மி</b>        |                   |
| morning max el      | 2863 Feb 04 12:56<br>2863 Feb 21 02:39 | 0 3<br>15° <b>る</b> 36'25        | 16055102   |                               | 2865 Sep 17 20:12                      | 0°M                                  |                   |
| morning max ci      | 2863 Mar 06 20:31                      | 0°≈                              | 40 33 03   | desc. node                    | 2865 Sep 20 01:26                      | 2°M39'25                             |                   |
|                     | 2863 Apr 02 14:55                      | 0° <b>∀</b>                      |            | dese. Hode                    | 2865 Oct 13 01:20                      | 0° <b>⊼</b>                          |                   |
| desc. node          | 2863 Apr 05 06:25                      | 3° <b>)</b> €03'14               |            |                               | 2865 Nov 07 19:24                      | ි<br>ව°0                             |                   |
|                     | 2863 Apr 28 06:50                      | $0^{\circ}\Upsilon$              |            |                               | 2865 Dec 04 18:23                      | 0° <b>≈</b>                          |                   |
|                     | 2863 May 23 11:37                      | 0°8                              |            | evening max el                | 2865 Dec 14 16:40                      | 10° <b>≈</b> 21'16                   | 47°14'55          |
|                     | 2863 Jun 17 10:50                      | $\Pi^{\circ}0$                   |            | -                             | 2866 Jan 04 23:44                      | 0° <b>)</b> €                        |                   |
|                     | 2863 Jul 12 05:55                      | 0ංම                              |            | asc. node                     | 2866 Jan 11 04:29                      | 4° <b>)</b> 40′08                    |                   |
| asc. node           | 2863 Jul 27 09:30                      | 18° <b>5</b> 26'12               |            | greatest brilliancy           | 2866 Jan 24 06:27                      | 11° <b>∺</b> 52′27                   | -4.9m             |
|                     | 2863 Aug 05 20:33                      | $0$ $^{\circ}\Omega$             |            | retrograde                    | 2866 Feb 03 12:56                      | 13° <b>¥</b> 52'51                   |                   |
| morning set         | 2863 Aug 21 13:50                      | 19° <b>Ω</b> 17'45               |            | evening set                   | 2866 Feb 20 17:36                      | 8° <b>₩</b> 05'57                    |                   |
|                     | 2863 Aug 30 06:18                      | 0° <b>m</b> ∕                    |            | min. Earth dist.              | 2866 Feb 23 12:17                      | 6° <b>∺</b> 23'39                    | 0.27227 AU        |
|                     | 2863 Sep 23 11:44                      | 0∘ <b>ত</b>                      |            | inferior conj                 | 2866 Feb 24 06:49                      | 5° <b>) €</b> 54'47                  | 8°32'25           |
| max. Earth dist.    | 2863 Sep 24 01:57                      | 0° <b>ჲ</b> 44'11                | 1.72565 AU | minimum elong                 | 2866 Feb 24 00:43                      | 6° <b>)</b> €04'17                   | 8°31'52           |
| annori              | 2062 9 27 04 11                        | 40 0 2 414 4                     | 1022151    | morning rise                  | 2866 Feb 27 08:05                      | 4° <b>)</b> €02'11                   |                   |
| superior conj       | 2863 Sep 27 04:11                      | 4° <b>£</b> 34'44                |            | direct                        | 2866 Mar 07 06:55                      | 30°R≈<br>28°2207'40                  |                   |
| minimum elong       | 2863 Sep 27 07:20<br>2863 Oct 17 14:16 | 4° <b>≏</b> 44'33<br>0° <b>ጤ</b> | 1 43 49    | direct<br>greatest brilliancy | 2866 Mar 16 21:32<br>2866 Mar 25 21:27 | 28°≈07'40<br>29°≈39'17               | -4.8m             |
| evening rise        | 2863 Oct 17 14:16<br>2863 Nov 04 05:25 | 21°M59'32                        |            | greatest brilliancy           | 2866 Mar 26 21:37                      | 29° <b>≈</b> 39°17<br>0° <b>)</b> €  | <del></del> .0111 |
| evening 1150        | 2863 Nov 10 15:23                      | 21 IIG3932<br>0° <b>√</b>        |            | desc. node                    | 2866 May 02 18:11                      | 0 <del>X</del><br>26° <b>¥</b> 51'16 |                   |
| desc. node          | 2863 Nov 15 13:23<br>2863 Nov 15 23:19 | 6° <b>∡</b> 739'15               |            | morning max el                | 2866 May 05 11:23                      | 20 <b>X</b> 31 10 29° <b>X</b> 29'03 | 46°15'30          |
| acce. node          | 2863 Dec 04 16:01                      | 0° <b>ろ</b>                      |            | morning max or                | 2866 May 06 00:02                      | 0° <b>Υ</b>                          | .0 10 50          |
|                     | 2863 Dec 28 16:59                      | 0° <b>≈</b>                      |            |                               | 2866 Jun 03 14:29                      | 0°8                                  |                   |
|                     |  |                                  |            |                               |  |                                      |                   |
|                     | 2864 Jan 21 19:55                      | 0° <b>∀</b>                      |            |                               | 2866 Jun 30 05:15                      | $\Pi^{\circ}0$                       |                   |
|                     | 2864 Jan 21 19:55<br>2864 Feb 15 04:28 | 0° <b>ℋ</b><br>0° <b>Ƴ</b>       |            |                               | 2866 Jul 30 05:15<br>2866 Jul 25 23:04 | 0.2<br>0.П                           |                   |
| asc. node           |  |                                  |            |                               |  |                                      |                   |

| asc. node                               | 2866 Aug 23 21:21 | 4° <b>Ω</b> 31'22                |            | asc. node                               | 2869 Feb 07 16:20 | 5° <b>Y</b> 20'31   |            |
|---|-------------------|----------------------------------|------------|---|-------------------|---------------------|------------|
| asc. node                               | 2866 Sep 13 20:26 | 0° Mp                            |            | evening max el                          | 2869 Feb 24 11:52 | 23°Υ09'05           | 46°46'07   |
|   | 2866 Oct 08 04:51 | 0° <del>ت</del><br>الأس          |            | evening max er                          | 2869 Mar 03 11:14 | 0° <b>8</b>         | 40 40 07   |
| morning set                             | 2866 Oct 30 05:34 | 0 <b>—</b><br>27° <b>Ω</b> 25'02 |            | greatest brilliancy                     | 2869 Apr 05 05:42 | 23° <b>8</b> 42'13  | -4.8m      |
| morning set                             | 2866 Nov 01 07:10 | 0°M                              |            | retrograde                              | 2869 Apr 15 20:17 | 25° <b>8</b> 48'52  | 4.0111     |
|   | 2866 Nov 25 06:00 | 0° <b>⊼</b> ¹                    |            | evening set                             | 2869 May 02 01:52 | 20° <b>8</b> 40'07  |            |
| max. Earth dist.                        | 2866 Dec 06 22:05 | 14° <b>∡</b> °39'19              | 1.71277 AU | inferior conj                           | 2869 May 07 02:22 | 17° <b>8</b> 35'46  | 5°12'47    |
| max. Earth dist.                        | 2000 BCC 00 22.03 | 11 7 37 17                       | 1./12//110 | minimum elong                           | 2869 May 07 11:51 | 17° <b>8</b> 20'52  | 5°10'29    |
| superior conj                           | 2866 Dec 08 12:46 | 16° <b>х</b> 40'48               | 0°11'50    | min. Earth dist.                        | 2869 May 07 01:35 | 17° <b>8</b> 37'00  | 0.28413 AU |
| minimum elong                           | 2866 Dec 08 15:47 | 16° <b>₹</b> ′50'16              | 0°11'40    | morning rise                            | 2869 May 12 22:07 | 14° <b>8</b> 04'21  |            |
| behind sun begin                        | 2866 Dec 07 21:36 | 15° <b>∡</b> 53′09               |            | direct                                  | 2869 May 28 07:22 | 9° <b>8</b> 27'23   |            |
| behind sun end                          | 2866 Dec 09 09:58 | 17° <b>∡</b> °47'23              |            | desc. node                              | 2869 May 30 05:57 | 9° <b>8</b> 31'46   |            |
| desc. node                              | 2866 Dec 13 11:07 | 22° <b>×</b> 52'33               |            | greatest brilliancy                     | 2869 Jun 07 06:06 | 11° <b>8</b> 15'12  | -4.7m      |
|   | 2866 Dec 19 03:10 | 0°る                              |            | 8                                       | 2869 Jul 05 22:14 | 0°II                |            |
|   | 2867 Jan 11 23:50 | 0° <b>≈</b>                      |            | morning max el                          | 2869 Jul 16 02:56 | 9° <b>Ⅱ</b> 18'16   | 45°44'01   |
| evening rise                            | 2867 Jan 18 15:45 | 8° <b>≈</b> 22'20                |            |   | 2869 Aug 05 13:35 | 0°©                 |            |
|   | 2867 Feb 04 21:14 | 0° <b>∀</b>                      |            |   | 2869 Sep 01 17:47 | 0°N                 |            |
|   | 2867 Feb 28 21:18 | 0° <b>Υ</b>                      |            | asc. node                               | 2869 Sep 20 09:18 | 21° <b>Ω</b> 37'06  |            |
|   | 2867 Mar 25 02:39 | 0°8                              |            | use. noue                               | 2869 Sep 27 11:20 | 0° m)               |            |
| asc. node                               | 2867 Apr 05 14:14 | 14° <b>8</b> 05'04               |            |   | 2869 Oct 22 08:28 | 0∘ <del>⊽</del>     |            |
| ase. noue                               | 2867 Apr 18 16:28 | 0°Ⅱ                              |            |   | 2869 Nov 15 16:57 | 0°M                 |            |
|   | 2867 May 13 18:52 | 0<br>. ದ                         |            |   | 2869 Dec 09 18:16 | 0° <b>₹</b>         |            |
|   | 2867 Jun 08 17:25 | $0^{\circ}\Omega$                |            |   | 2870 Jan 02 16:08 | °<br>ਨ<br>ਹ         |            |
|   | 2867 Jul 06 07:13 | 0° m)                            |            | desc. node                              | 2870 Jan 09 22:49 | 9° <b>る</b> 08'47   |            |
| evening max el                          | 2867 Jul 19 14:14 | 13° m) 15'31                     | 45°29'53   | morning set                             | 2870 Jan 12 23:00 | 12° <b>る</b> 55'38  |            |
| desc. node                              | 2867 Jul 26 03:41 | 19° <b>m</b> ) 21'38             |            |   | 2870 Jan 26 12:50 | 0° <b>≈</b>         |            |
| *************************************** | 2867 Aug 07 21:41 | 0∘ <b>ರ</b>                      |            |   | 2870 Feb 19 09:49 | 0° <b>∀</b>         |            |
| greatest brilliancy                     | 2867 Aug 27 18:50 | 11° <b>Ω</b> 18'26               | -4.7m      |   |                   | * /.                |            |
| retrograde                              | 2867 Sep 06 06:10 | 12° <b>£</b> 56'06               |            | superior conj                           | 2870 Feb 23 13:55 | 5° <b>)</b> 14'04   | -1°21'48   |
| evening set                             | 2867 Sep 24 07:49 | 6° <b>£</b> 53'52                |            | minimum elong                           | 2870 Feb 23 06:32 | 4° <b>)</b> 50′54   |            |
| inferior conj                           | 2867 Sep 27 12:21 | 4° <b>£</b> 56'58                | -8°35'55   | max. Earth dist.                        | 2870 Feb 26 16:30 | 9° <b>₩</b> 08'00   | 1.71437 AU |
| minimum elong                           | 2867 Sep 27 15:40 | 4° <b>Ω</b> 51'49                |            |   | 2870 Mar 15 08:30 | 0°Υ                 |            |
| min. Earth dist.                        | 2867 Sep 28 06:43 | 4° <b>£</b> 28'30                | 0.28372 AU | evening rise                            | 2870 Apr 04 22:27 | 25° <b>Y</b> ′39'24 |            |
| morning rise                            | 2867 Sep 30 23:15 | 2° <b>£</b> 49'47                |            | 0.0000                                  | 2870 Apr 08 10:24 | 0°8                 |            |
| morning rise                            | 2867 Oct 06 02:37 | 30°R.M)                          |            |   | 2870 May 02 16:52 | 0°II                |            |
| direct                                  | 2867 Oct 18 19:57 | 26° Mp 46'51                     |            | asc. node                               | 2870 May 03 02:09 | 0° <b>Ⅲ</b> 28'31   |            |
| greatest brilliancy                     | 2867 Oct 30 00:11 | 29° mg 04'22                     | -4.8m      |   | 2870 May 27 04:58 | 0°©                 |            |
| 8                                       | 2867 Nov 01 04:47 | 0∘ <b>ʊ</b>                      |            |   | 2870 Jun 20 23:50 | $0^{\circ}\Omega$   |            |
| asc. node                               | 2867 Nov 16 06:50 | 9° <b>Ω</b> 30'16                |            |   | 2870 Jul 16 03:57 | 0° m)               |            |
| morning max el                          | 2867 Dec 08 05:25 | 29° <b>Ω</b> 26'12               | 46°43'15   |   | 2870 Aug 10 22:41 | 0∘ <del>⊽</del>     |            |
|   | 2867 Dec 08 18:45 | 0°M                              |            | desc. node                              | 2870 Aug 22 15:34 | 13° <b>≏</b> 15'58  |            |
|   | 2868 Jan 05 07:57 | 0° <b>⊼</b> 7                    |            |   | 2870 Sep 06 20:00 | 0°M                 |            |
|   | 2868 Jan 30 22:10 | 0°ප                              |            | evening max el                          | 2870 Sep 30 07:14 | 24°M13'07           | 46°22'44   |
|   | 2868 Feb 24 18:42 | 0° <b>≈</b>                      |            | * · · · · · · · · · · · · · · · · · · · | 2870 Oct 06 09:34 | 0° <b>∡</b> 7       | ==         |
| desc. node                              | 2868 Mar 06 20:36 | 13° <b>≈</b> 30'30               |            | greatest brilliancy                     | 2870 Nov 09 11:19 | 23° <b>х</b> 41'44  | -4.9m      |
|   | 2868 Mar 20 07:54 | 0° <b>∀</b>                      |            | retrograde                              | 2870 Nov 18 23:17 | 25° <b>х</b> 22′17  |            |
|   | 2868 Apr 13 18:27 | 0° <b>Υ</b>                      |            | evening set                             | 2870 Dec 03 10:50 | 21° <b>×</b> 14'30  |            |
|   | 2868 May 08 04:38 | 0°8                              |            | inferior conj                           | 2870 Dec 09 12:31 | 17° <b>х</b> 42′23  | -1°06'05   |
|   | 2868 Jun 01 15:20 | 0° <b>I</b>                      |            | minimum elong                           | 2870 Dec 09 15:03 | 17° <b>х</b> 38'32  | 1°05'15    |
| morning set                             | 2868 Jun 11 10:56 | 12° <b>Ⅱ</b> 02'37               |            | min. Earth dist.                        | 2870 Dec 09 19:42 | 17° <b>∡</b> ³31'30 | 0.26606 AU |
| <i>5 5 1 1 1 1 1 1 1 1 1 1</i>          | 2868 Jun 26 02:09 | 0°ಅ                              |            | asc. node                               | 2870 Dec 13 18:36 | 15° <b>∡</b> 10'33  |            |
| asc. node                               | 2868 Jun 27 23:42 | 2° <b>©</b> 19'45                |            | morning rise                            | 2870 Dec 15 18:58 | 14° <b>∡</b> ¹03'55 |            |
| max. Earth dist.                        | 2868 Jul 16 19:57 | 25°\$28'46                       | 1.73540 AU | direct                                  | 2870 Dec 30 01:42 | 10° <b>∡</b> ¹00'35 |            |
|   |                   |                                  |            | greatest brilliancy                     | 2871 Jan 09 11:59 | 12° <b>₹</b> '05'03 | -4.9m      |
| superior conj                           | 2868 Jul 18 04:27 | 27° <b>©</b> 08'40               | 0°45'38    | 8                                       | 2871 Feb 04 21:01 | 0°궁                 |            |
| minimum elong                           | 2868 Jul 17 20:27 | 26°5544'06                       | 0°45'19    | morning max el                          | 2871 Feb 18 16:41 | 13° <b>る</b> 12'53  | 46°55'33   |
|   | 2868 Jul 20 12:10 | 0° <b>Ω</b>                      |            |   | 2871 Mar 06 15:13 | 0° <b>≈</b>         |            |
|   | 2868 Aug 13 20:52 | 0° m)                            |            |   | 2871 Apr 02 05:52 | 0° <b>∀</b>         |            |
| evening rise                            | 2868 Aug 23 01:15 | 11° <b>m</b> ) 19'20             |            | desc. node                              | 2871 Apr 04 08:32 | 2° <b>¥</b> 26'40   |            |
|   | 2868 Sep 07 04:38 | 0° <u>م</u>                      |            |   | 2871 Apr 27 20:01 | 0° <b>Υ</b>         |            |
|   | 2868 Oct 01 12:30 | 0° <b>m</b>                      |            |   | 2871 May 22 23:47 | %8<br>0°8           |            |
| desc. node                              | 2868 Oct 17 13:29 | 19°M45'23                        |            |   | 2871 Jun 16 22:21 | 0°II                |            |
| 3050. Houe                              | 2868 Oct 25 21:24 | 19 11 <b>0</b> 4323              |            |   | 2871 Jul 11 17:03 | 0ಂ <b>ತಾ</b>        |            |
|   | 2868 Nov 19 08:11 | °ਨ<br>ਨ                          |            | asc. node                               | 2871 Jul 26 11:33 | 17° <b>©</b> 59'02  |            |
|   | 2868 Dec 13 22:46 | 0° <b>≈</b>                      |            |   | 2871 Aug 05 07:26 | 0°Ω                 |            |
|   | 2869 Jan 07 22:28 | 0° <b>∺</b>                      |            | morning set                             | 2871 Aug 19 07:22 | 17° <b>Ω</b> 10'47  |            |
|   | 2869 Feb 02 20:58 | 0° <b>Υ</b>                      |            | morning set                             | 2871 Aug 29 17:06 | 0°m)                |            |
|   | _00,100 02 20.00  | v 1                              |            |   |                   | יאָיי י             |            |

| max. Earth dist.               | 2871 Sep 21 16:42                      | 28° <b>m</b> 27'24               | 1.72610 AU | inferior conj                    | 2874 Feb 21 20:20                      | 3° <b>)</b> (30′26                     | 8°25'30    |
|--------------------------------|--|----------------------------------|------------|----------------------------------|--|--|------------|
|                                | 2871 Sep 22 22:32                      | 0∘ <b>ত</b>                      |            | minimum elong                    | 2874 Feb 21 13:29                      | 3° <b>)</b> 41′07                      | 8°24'46    |
|                                |  |                                  |            | morning rise                     | 2874 Feb 24 23:36                      | 1° <b>)</b> 34′50                      |            |
| superior conj                  | 2871 Sep 24 20:57                      | 2° <b>£</b> 24'04                | 1°24'19    |                                  | 2874 Feb 27 17:36                      | 30° <b>R</b> ≈                         |            |
| minimum elong                  | 2871 Sep 24 23:23                      | 2° <b>£</b> 31'38                | 1°24'19    | direct                           | 2874 Mar 14 09:58                      | 25° <b>≈</b> 44′03                     |            |
|                                | 2871 Oct 17 01:10                      | 0°M₊                             |            | greatest brilliancy              | 2874 Mar 23 11:02                      | 27°≈16′16                              | -4.9m      |
| evening rise                   | 2871 Nov 01 19:12                      | 19°M38'24                        |            |                                  | 2874 Mar 29 21:53                      | 0° <b>∀</b>                            |            |
|                                | 2871 Nov 10 02:26                      | 0° <b>∡</b> ¹                    |            | desc. node                       | 2874 May 01 20:14                      | 25° <b>∺</b> 58′21                     |            |
| desc. node                     | 2871 Nov 15 01:19                      | 6° <b>≯</b> 10'55                |            | morning max el                   | 2874 May 03 00:02                      | 27° <b>)</b> €06'04                    | 46°17'06   |
|                                | 2871 Dec 04 03:16                      | 0°ಕ                              |            |                                  | 2874 May 05 22:30                      | 0° <b>Υ</b>                            |            |
|                                | 2871 Dec 28 04:27                      | 0° <b>≈</b>                      |            |                                  | 2874 Jun 03 06:32                      | 0°8                                    |            |
|                                | 2872 Jan 21 07:42                      | 0° <b>)</b> €                    |            |                                  | 2874 Jun 29 18:51                      | 0°II                                   |            |
|                                | 2872 Feb 14 16:46                      | 0° <b>Υ</b>                      |            |                                  | 2874 Jul 25 11:27                      | 0°©                                    |            |
| asc. node                      | 2872 Mar 07 04:19                      | 25° <b>Y</b> 56'38               |            |                                  | 2874 Aug 19 14:55                      | 0° <b>Ω</b>                            |            |
|                                | 2872 Mar 10 14:07                      | 8°0                              |            | asc. node                        | 2874 Aug 22 23:30                      | 4° <b>Ω</b> 02'50                      |            |
|                                | 2872 Apr 05 11:21                      | 0°©<br>0°∏                       |            |                                  | 2874 Sep 13 07:43                      | 0 <b>் ம</b><br>0° <b>மி</b>           |            |
|                                | 2872 May 03 13:11                      |                                  | 45942120   |                                  | 2874 Oct 07 15:58                      |  |            |
| evening max el                 | 2872 May 06 14:08                      | 2° <b>©</b> 59'38<br>0° <b>Ω</b> | 45-45-29   | morning set                      | 2874 Oct 27 20:10                      | 25° <b>≏</b> 06'11<br>0° <b>™</b>      |            |
| greatest brilliancy            | 2872 Jun 10 17:53<br>2872 Jun 13 11:12 | 0 3ℓ<br>1° <b>Ω</b> 07'59        | 4.7m       |                                  | 2874 Oct 31 18:15<br>2874 Nov 24 17:07 | 0°11℃                                  |            |
| retrograde                     | 2872 Jun 24 11:49                      | 3° <b>Ω</b> 18'51                | -4. /III   | max. Earth dist.                 | 2874 Nov 24 17:07<br>2874 Dec 04 07:08 | 0 <b>x</b> .<br>12° <b>x</b> 02'00     | 1.71311 AU |
| desc. node                     | 2872 Jun 24 11:49<br>2872 Jun 26 17:50 | 3° <b>Ω</b> 12'54                |            | max. Earm dist.                  | 28/4 Dec 04 07.08                      | 12 × 02 00                             | 1./1311 AU |
| desc. Hode                     | 2872 Jul                               | 30°R≌                            |            | superior conj                    | 2874 Dec 06 00:10                      | 14° <b>√</b> 10'52                     | 0°15'38    |
| evening set                    | 2872 Jul 07 12:11<br>2872 Jul 09 20:24 | 28° <b>©</b> 46'18               |            | minimum elong                    | 2874 Dec 06 00:10<br>2874 Dec 06 04:07 | 14° × 10° 32                           | 0°15'27    |
| inferior conj                  | 2872 Jul 15 23:38                      | 25° <b>5</b> 04'20               | -4°20'19   | behind sun begin                 | 2874 Dec 05 19:56                      | 13° <b>×</b> 57'33                     | 0 1327     |
| minimum elong                  | 2872 Jul 15 15:12                      | 25°917'35                        |            | behind sun end                   | 2874 Dec 06 12:18                      | 14° <b>∡</b> °48'57                    |            |
| min. Earth dist.               | 2872 Jul 15 18:25                      | 25°©12'31                        |            | desc. node                       | 2874 Dec 12 13:05                      | 22° <b>×</b> <sup>7</sup> 23'40        |            |
| morning rise                   | 2872 Jul 21 10:08                      | 21°5946'14                       | 0.27012110 | dese. Hode                       | 2874 Dec 18 14:20                      | 0°る                                    |            |
| direct                         | 2872 Aug 06 15:26                      | 16°9547'36                       |            |                                  | 2875 Jan 11 11:04                      | 0° <b>≈</b>                            |            |
| greatest brilliancy            | 2872 Aug 16 21:57                      | 18°541'38                        | -4.7m      | evening rise                     | 2875 Jan 16 02:04                      | 5° <b>≈</b> 48'40                      |            |
| 8                              | 2872 Sep 05 06:57                      | $0^{\circ}\Omega$                |            | <i>8</i>                         | 2875 Feb 04 08:33                      | 0° <b>)</b> €                          |            |
| morning max el                 | 2872 Sep 24 16:30                      | 17° <b>Ω</b> 01'38               | 45°58'05   |                                  | 2875 Feb 28 08:43                      | $_0$ ° $\Upsilon$                      |            |
| C                              | 2872 Oct 07 12:17                      | 0° <b>m</b> y                    |            |                                  | 2875 Mar 24 14:15                      | $0^{\circ}$ 8                          |            |
| asc. node                      | 2872 Oct 17 21:08                      | 11° <b>m</b> 08'45               |            | asc. node                        | 2875 Apr 04 16:16                      | 13° <b>8</b> 35'24                     |            |
|                                | 2872 Nov 03 14:31                      | 0∘ <b>ত</b>                      |            |                                  | 2875 Apr 18 04:28                      | $\Pi^{\circ}0$                         |            |
|                                | 2872 Nov 28 23:44                      | 0°M                              |            |                                  | 2875 May 13 07:42                      | 0ಂ <b>ತಾ</b>                           |            |
|                                | 2872 Dec 23 14:00                      | 0° <b>∡</b> ¹                    |            |                                  | 2875 Jun 08 07:59                      | $0^{\circ}\Omega$                      |            |
|                                | 2873 Jan 16 19:23                      | 0°ರ                              |            |                                  | 2875 Jul 06 02:05                      | 0° <b>т</b> р                          |            |
| desc. node                     | 2873 Feb 06 10:46                      | 25° <b>る</b> 43'21               |            | evening max el                   | 2875 Jul 17 04:44                      | 11° <b>m</b> 01'00                     | 45°29'07   |
|                                | 2873 Feb 09 21:02                      | 0° <b>≈</b>                      |            | desc. node                       | 2875 Jul 25 05:50                      | 18° Mp 26′52                           |            |
|                                | 2873 Mar 05 21:40                      | 0° <b>∀</b>                      |            |                                  | 2875 Aug 08 13:30                      | 0∘ <b>⊽</b>                            |            |
|                                | 2873 Mar 29 23:05                      | $0^{\circ}\mathbf{\Upsilon}$     |            | greatest brilliancy              | 2875 Aug 25 07:41                      | 9° <b>ഫ</b> 02'36                      | -4.7m      |
| morning set                    | 2873 Mar 30 13:24                      | 0° <b>Y</b> 44'33                |            | retrograde                       | 2875 Sep 03 21:10                      | 10° <b>≙</b> 42'05                     |            |
|                                | 2873 Apr 23 02:34                      | $9^{\circ}$ 8                    |            | evening set                      | 2875 Sep 21 23:04                      | 4° <b>£</b> 38'23                      |            |
|                                |  |                                  |            | inferior conj                    | 2875 Sep 25 03:26                      | 2° <b>£</b> 41'50                      |            |
| superior conj                  | 2873 May 08 06:12                      | 18° <b>8</b> 45'12               |            | minimum elong                    | 2875 Sep 25 05:56                      | 2° <b>£</b> 37'57                      |            |
| minimum elong max. Earth dist. | 2873 May 08 15:37                      | 19° <b>8</b> 14'19               | 1.72928 AU | min. Earth dist.<br>morning rise | 2875 Sep 25 20:52<br>2875 Sep 28 12:33 | 2° <b>≙</b> 14'51<br>0° <b>≙</b> 37'30 | 0.28432 AU |
| max. Earm dist.                | 2873 May 11 07:15                      | 0° <b>Ⅱ</b>                      | 1.72928 AU | morning rise                     | 2875 Sep 28 12.33<br>2875 Sep 29 13:52 |  |            |
| asc. node                      | 2873 May 17 08:45<br>2873 May 30 13:55 | 16° <b>Ⅱ</b> 17'16               |            | direct                           | 2875 Oct 16 11:34                      | 30°R Mp<br>24° Mp 30'50                |            |
| asc. node                      | 2873 Jun 10 17:31                      | 0°9                              |            | greatest brilliancy              | 2875 Oct 10 11:34<br>2875 Oct 27 15:39 | 24 11/30 30<br>26° 11/48'22            | -4 8m      |
| evening rise                   | 2873 Jun 14 19:54                      | 5° <b>5</b> 02'13                |            | greatest oriniancy               | 2875 Nov 03 06:40                      | 0° <b>ت</b>                            | T.0111     |
| e vennig rise                  | 2873 Jul 05 04:28                      | 0° <b>Ω</b>                      |            | asc. node                        | 2875 Nov 15 08:48                      | 8° <b>ഫ</b> 20'38                      |            |
|                                | 2873 Jul 29 17:45                      | 0° <b>m</b> )                    |            | morning max el                   | 2875 Dec 05 20:57                      | 27° <b>≏</b> 07'51                     | 46°41'54   |
|                                | 2873 Aug 23 10:31                      | 0∘ <b>ಹ</b>                      |            | morning man vi                   | 2875 Dec 08 16:24                      | 0°M                                    | .0 .10 .   |
|                                | 2873 Sep 17 08:41                      | 0° <b>M</b> .                    |            |                                  | 2876 Jan 05 00:01                      | 0° <b>∡</b> 7                          |            |
| desc. node                     | 2873 Sep 19 03:33                      | 2°M08'13                         |            |                                  | 2876 Jan 30 12:06                      | 0°ರ                                    |            |
|                                | 2873 Oct 12 15:00                      | 0° <b>∡</b> ¹                    |            |                                  | 2876 Feb 24 07:32                      | 0°≈                                    |            |
|                                | 2873 Nov 07 11:05                      | 8°0                              |            | desc. node                       | 2876 Mar 05 22:38                      | 12° <b>≈</b> 58'29                     |            |
|                                | 2873 Dec 04 14:35                      | 0° <b>≈</b>                      |            |                                  | 2876 Mar 19 20:03                      | 0° <b>)</b> €                          |            |
| evening max el                 | 2873 Dec 12 05:59                      | 7° <b>≈</b> 55'00                | 47°14'22   |                                  | 2876 Apr 13 06:06                      | $0$ ° $\mathbf{\gamma}$                |            |
|                                | 2874 Jan 05 16:20                      | 0° <b>)</b> €                    |            |                                  | 2876 May 07 15:55                      | 0°8                                    |            |
| asc. node                      | 2874 Jan 10 06:35                      | 3° <b>)</b> 16′31                |            |                                  | 2876 Jun 01 02:21                      | $\Pi^{\circ}0$                         |            |
| greatest brilliancy            | 2874 Jan 21 21:17                      | 9° <b>∺</b> 28′01                | -4.9m      | morning set                      | 2876 Jun 09 04:36                      | 9° <b>Ⅱ</b> 55'57                      |            |
| retrograde                     | 2874 Feb 01 02:13                      | 11° <b>∺</b> 27′21               |            |                                  | 2876 Jun 25 13:01                      | $0$ $\circ$ $\odot$                    |            |
| evening set                    | 2874 Feb 18 03:35                      | 5° <b>)</b> 46′43                |            | asc. node                        | 2876 Jun 27 01:47                      | 1° <b>9</b> 52'49                      |            |
| min. Earth dist.               | 2874 Feb 21 01:50                      | 3° <b>¥</b> 59'15                | 0.27173 AU | max. Earth dist.                 | 2876 Jul 14 18:45                      | 23° <b>©</b> 37'59                     | 1.73551 AU |

| superior conj                     | 2876 Jul 15 22:56                      | 25° <b>©</b> 04'37            | 0°42'58    |                     | 2879 Feb 05 02:59                      | 0°ჳ                               |            |
|-----------------------------------|--|-------------------------------|------------|---------------------|--|-----------------------------------|------------|
| minimum elong                     | 2876 Jul 15 15:14                      | 24°9340'57                    | 0°42'38    | morning max el      | 2879 Feb 16 05:43                      | 10° <b>る</b> 46'20                | 46°56'01   |
|                                   | 2876 Jul 19 23:00                      | 0° <b>N</b>                   |            |                     | 2879 Mar 06 09:33                      | 0° <b>≈</b>                       |            |
|                                   | 2876 Aug 13 07:47                      | 0° m/                         |            |                     | 2879 Apr 01 20:43                      | 0° <b>)</b> €                     |            |
| evening rise                      | 2876 Aug 20 19:45                      | 9° <b>m</b> ) 14'37           |            | desc. node          | 2879 Apr 03 10:31                      | 1° <b>)(</b> 49'49                |            |
| Č                                 | 2876 Sep 06 15:44                      | $0$ o $\overline{\mathbf{v}}$ |            |                     | 2879 Apr 27 09:11                      | 0° <b>Ƴ</b>                       |            |
|                                   | 2876 Sep 30 23:52                      | 0°M,                          |            |                     | 2879 May 22 11:59                      | 0°B                               |            |
| desc. node                        | 2876 Oct 16 15:25                      | 19° <b>M</b> .15'38           |            |                     | 2879 Jun 16 09:56                      | $\Pi$ $^{\circ}0$                 |            |
|                                   | 2876 Oct 25 09:09                      | 0° <b>∡</b> ¹                 |            |                     | 2879 Jul 11 04:13                      | 0°€                               |            |
|                                   | 2876 Nov 18 20:30                      | ರ°ರ                           |            | asc. node           | 2879 Jul 25 13:42                      | 17° <b>©</b> 32'05                |            |
|                                   | 2876 Dec 13 11:52                      | 0° <b>≈</b>                   |            |                     | 2879 Aug 04 18:21                      | $0^{\circ}\Omega$                 |            |
|                                   | 2877 Jan 07 12:54                      | 0° <b>∀</b>                   |            | morning set         | 2879 Aug 17 01:11                      | 15° <b>Ω</b> 04'43                |            |
|                                   | 2877 Feb 02 14:06                      | $0$ ° $\Upsilon$              |            |                     | 2879 Aug 29 03:53                      | 0° <b>™</b>                       |            |
| asc. node                         | 2877 Feb 06 18:28                      | 4° <b>Ƴ</b> 37'14             |            | max. Earth dist.    | 2879 Sep 19 08:05                      | 26° <b>m</b> 12'43                | 1.72659 AU |
| evening max el                    | 2877 Feb 22 03:24                      | 20° <b>Ƴ</b> 51'38            | 46°48'19   |                     | 2879 Sep 22 09:20                      | 0∘ <b>ত</b>                       |            |
|                                   | 2877 Mar 03 12:58                      | $9^{\circ}$ 8                 |            |                     |  |                                   |            |
| greatest brilliancy               | 2877 Apr 02 21:36                      | 21° <b>8</b> 27'23            | -4.8m      | superior conj       | 2879 Sep 22 14:04                      | 0° <b>≏</b> 14'42                 | 1°24'41    |
| retrograde                        | 2877 Apr 13 12:55                      | 23° <b>8</b> 34'30            |            | minimum elong       | 2879 Sep 22 15:47                      | 0° <b>£</b> 20'02                 | 1°24'41    |
| evening set                       | 2877 Apr 29 20:19                      | 18° <b>8</b> 21'41            |            |                     | 2879 Oct 16 12:05                      | 0° <b>M</b> ₊                     |            |
| inferior conj                     | 2877 May 04 17:57                      | 15° <b>8</b> 21'27            | 5°29'31    | evening rise        | 2879 Oct 30 09:14                      | 17° <b>M</b> ₊18'03               |            |
| minimum elong                     | 2877 May 05 03:40                      | 15° <b>8</b> 06'11            | 5°27'15    |                     | 2879 Nov 09 13:32                      | 0° <b>⊀</b> ¹                     |            |
| min. Earth dist.                  | 2877 May 04 16:40                      | 15° <b>8</b> 23'28            | 0.28383 AU | desc. node          | 2879 Nov 14 03:20                      | 5° <b>х</b> 42′30                 |            |
| morning rise                      | 2877 May 10 11:23                      | 11° <b>8</b> 53'41            |            |                     | 2879 Dec 03 14:36                      | 0°ಕ                               |            |
| direct                            | 2877 May 25 22:50                      | 7° <b>8</b> 13'37             |            |                     | 2879 Dec 27 16:01                      | 0° <b>≈</b>                       |            |
| desc. node                        | 2877 May 29 07:53                      | 7° <b>8</b> 26'49             |            |                     | 2880 Jan 20 19:36                      | 0° <b>∀</b>                       |            |
| greatest brilliancy               | 2877 Jun 04 20:04                      | 9° <b>8</b> 00'43             | -4.7m      |                     | 2880 Feb 14 05:11                      | $0^{\circ}$ Y                     |            |
|                                   | 2877 Jul 06 01:39                      | $\Pi$ $^{\circ}0$             |            | asc. node           | 2880 Mar 06 06:19                      | 25° <b>Y</b> 23'11                |            |
| morning max el                    | 2877 Jul 13 19:28                      | 7° <b>Ⅱ</b> 09'13             | 45°44'26   |                     | 2880 Mar 10 03:31                      | 0°8                               |            |
|                                   | 2877 Aug 05 06:30                      | 0°€                           |            |                     | 2880 Apr 05 02:50                      | $\Pi$ °0                          |            |
|                                   | 2877 Sep 01 07:39                      | $0^{\circ}\Omega$             |            |                     | 2880 May 03 10:32                      | $0$ $\circ$                       |            |
| asc. node                         | 2877 Sep 19 11:19                      | 21° <b>Ω</b> 05′15            |            | evening max el      | 2880 May 04 05:18                      | 0° <b>©</b> 45'53                 | 45°45'04   |
|                                   | 2877 Sep 26 23:52                      | 0° <b>m</b>                   |            | greatest brilliancy | 2880 Jun 11 04:08                      | 28°\$59'30                        | -4.7m      |
|                                   | 2877 Oct 21 20:21                      | 0∘ <b>⊽</b>                   |            |                     | 2880 Jun 14 05:00                      | $0$ ° $\Omega$                    |            |
|                                   | 2877 Nov 15 04:29                      | 0°M                           |            | retrograde          | 2880 Jun 22 03:43                      | 1° <b>Ω</b> 09'53                 |            |
|                                   | 2877 Dec 09 05:36                      | 0° <b>∡</b> 7                 |            | desc. node          | 2880 Jun 25 20:01                      | 0° <b>Ω</b> 53'55                 |            |
|                                   | 2878 Jan 02 03:23                      | 0°る                           |            |                     | 2880 Jun 29 19:54                      | 30°Rூ                             |            |
| desc. node                        | 2878 Jan 09 00:57                      | 8° <b>る</b> 40'14             |            | evening set         | 2880 Jul 07 11:21                      | 26°539'27                         | 1000106    |
| morning set                       | 2878 Jan 10 09:00                      | 10° <b>る</b> 20'56            |            | inferior conj       | 2880 Jul 13 16:03                      | 22°555'31                         |            |
|                                   | 2878 Jan 26 00:02                      | 0° <b>≈</b>                   |            | minimum elong       | 2880 Jul 13 08:01                      | 23°508'09                         |            |
|                                   | 2878 Feb 18 20:59                      | 0° <b>∀</b>                   |            | min. Earth dist.    | 2880 Jul 13 11:08                      |                                   | 0.28997 AU |
|                                   | 2070 E-L 21 00-22                      | 201/41116                     | 1920127    | morning rise        | 2880 Jul 19 04:45                      | 19°533'56                         |            |
| superior conj                     | 2878 Feb 21 00:22                      | 2° <b>)</b> 41'16             |            | direct              | 2880 Aug 04 07:15                      | 14°538'58                         | 4.7        |
| minimum elong<br>max. Earth dist. | 2878 Feb 20 16:07<br>2878 Feb 24 02:15 | 2°¥15′25                      | 1.71401 AU | greatest brilliancy | 2880 Aug 14 14:03<br>2880 Sep 05 17:10 | 16° <b>©</b> 32'41<br>0° <b>Ω</b> | -4.7m      |
| max. Earth dist.                  | 2878 Mar 14 19:37                      | 0° <b>Υ</b>                   | 1./1401 AU | morning max el      | 2880 Sep 22 06:47                      | 14° <b>Ω</b> 46'39                | 45°56'58   |
| evening rise                      | 2878 Apr 02 10:53                      | 23° <b>Υ</b> 14'18            |            | morning max ci      | 2880 Scp 22 00:47<br>2880 Oct 07 06:12 | 0°m)                              | 45 50 56   |
| evening rise                      | 2878 Apr 07 21:31                      | 0° <b>8</b>                   |            | asc. node           | 2880 Oct 07 00:12<br>2880 Oct 16 23:07 | 10° <b>m</b> ) 29'43              |            |
| asc. node                         | 2878 May 02 04:07                      | 0° <b>Д</b> 00'10             |            | ase. node           | 2880 Nov 03 04:47                      | 0° <b>⊡</b>                       |            |
| use. Houe                         | 2878 May 02 04:04                      | 0°II                          |            |                     | 2880 Nov 28 12:33                      | 0° <b>™</b>                       |            |
|                                   | 2878 May 26 16:21                      | 0°©                           |            |                     | 2880 Dec 23 02:07                      | 0° <b>⊼</b> ′                     |            |
|                                   | 2878 Jun 20 11:38                      | $0^{\circ}\Omega$             |            |                     | 2881 Jan 16 07:06                      | ਰ°0<br>ਰ°0                        |            |
|                                   | 2878 Jul 15 16:32                      | 0° <b>m</b>                   |            | desc. node          | 2881 Feb 05 12:50                      | 00<br>25° <b>る</b> 14'05          |            |
|                                   | 2878 Aug 10 12:47                      | 0∘ <b>⊽</b>                   |            |                     | 2881 Feb 09 08:27                      | 0° <b>≈</b>                       |            |
| desc. node                        | 2878 Aug 21 17:37                      | 12° <b>♀</b> 39'07            |            |                     | 2881 Mar 05 08:51                      | 0° <b>∀</b>                       |            |
|                                   | 2878 Sep 06 13:23                      | 0°M                           |            | morning set         | 2881 Mar 28 02:03                      | 28° <b>)</b> 20'12                |            |
| evening max el                    | 2878 Sep 27 21:35                      | 21°M54'09                     | 46°20'14   | . 8                 | 2881 Mar 29 10:06                      | 0° <b>Υ</b>                       |            |
|                                   | 2878 Oct 06 13:08                      | 0° <b>∡</b> 7                 |            |                     | 2881 Apr 22 13:27                      | 0°8                               |            |
| greatest brilliancy               | 2878 Nov 07 00:25                      | 21° <b>₹</b> 15'48            | -4.9m      |                     | 1 ,                                    | -                                 |            |
| retrograde                        | 2878 Nov 16 11:27                      | 22° <b>₹</b> '54'56           |            | superior conj       | 2881 May 05 21:26                      | 16° <b>8</b> 30'33                | -0°52'51   |
| evening set                       | 2878 Dec 01 00:49                      | 18° <b>∡</b> ⁴45'34           |            | minimum elong       | 2881 May 06 07:09                      | 17° <b>8</b> 00'35                |            |
| inferior conj                     | 2878 Dec 07 00:57                      | 15° <b>₹</b> 15'13            | -1°30'06   | max. Earth dist.    | 2881 May 09 00:44                      |                                   | 1.72880 AU |
| minimum elong                     | 2878 Dec 07 04:23                      | 15° <b>₹</b> 09'59            | 1°29'01    |                     | 2881 May 16 19:33                      | 0°II                              |            |
| min. Earth dist.                  | 2878 Dec 07 09:31                      | 15° <b>∡</b> 02'10            | 0.26638 AU | asc. node           | 2881 May 29 16:01                      | 15° <b>Ⅱ</b> 50'35                |            |
| asc. node                         | 2878 Dec 12 20:42                      | 11° <b>∡</b> ′50′39           |            |                     | 2881 Jun 10 04:19                      | $0$ $\circ$ $\odot$               |            |
| morning rise                      | 2878 Dec 13 07:37                      | 11° <b>∡</b> ³36′05           |            | evening rise        | 2881 Jun 12 13:25                      | 2° <b>©</b> 55'23                 |            |
| direct                            | 2878 Dec 27 14:52                      | 7° <b>∡</b> ³33′00            |            |                     | 2881 Jul 04 15:22                      | $0^{\circ}\Omega$                 |            |
| greatest brilliancy               | 2879 Jan 07 02:01                      | 9° <b>∡</b> ³38′02            | -4.9m      |                     | 2881 Jul 29 04:55                      | 0° <b>™</b>                       |            |
|                                   |  |                               |            |                     |  |                                   |            |

|                       | 2881 Aug 22 22:08 | 0∘ <b>⊽</b>                      |            |                     | 2884 Jan 30 01:28 | 0°₹                          |            |
|-----------------------|-------------------|----------------------------------|------------|---------------------|-------------------|------------------------------|------------|
|                       | 2881 Sep 16 21:01 | 0°M₊                             |            |                     | 2884 Feb 23 19:53 | 0° <b>≈</b>                  |            |
| desc. node            | 2881 Sep 18 05:32 | 1° <b>M</b> 37'08                |            | desc. node          | 2884 Mar 05 00:36 | 12° <b>≈</b> 27'40           |            |
|                       | 2881 Oct 12 04:30 | 0° <b>∡</b> ¹                    |            |                     | 2884 Mar 19 07:47 | 0° <b>∀</b>                  |            |
|                       | 2881 Nov 07 02:42 | 0°ප                              |            |                     | 2884 Apr 12 17:24 | $0^{\circ}\mathbf{\Upsilon}$ |            |
|                       | 2881 Dec 04 11:09 | 0° <b>≈</b>                      |            |                     | 2884 May 07 02:54 | 0°8                          |            |
| evening max el        | 2881 Dec 09 18:45 | 5°≈28'08                         | 47°13'35   |                     | 2884 May 31 13:05 | 0° <b>I</b> I                |            |
| <b>3</b>              | 2882 Jan 06 14:31 | 0° <b>)</b> €                    |            | morning set         | 2884 Jun 06 21:49 | 7° <b>Ⅱ</b> 48'41            |            |
| asc. node             | 2882 Jan 09 08:41 | 1° <b>¥</b> 50′10                |            | morning out         | 2884 Jun 24 23:36 | 0°95                         |            |
| greatest brilliancy   | 2882 Jan 19 11:30 | 7° <b>¥</b> 02'34                | -4.9m      | asc. node           | 2884 Jun 26 03:53 | 1° <b>5</b> 26'49            |            |
|                       | 2882 Jan 29 15:25 | 9° <b>H</b> 01'26                | -4.9111    | max. Earth dist.    | 2884 Jul 12 18:07 |                              | 1.73557 AU |
| retrograde            |                   | 3°¥26'57                         |            | max. Earth dist.    | 2004 Jul 12 10.07 | 21 2049 32                   | 1./333/ AU |
| evening set           | 2882 Feb 15 12:59 |                                  |            |                     |                   |                              |            |
| min. Earth dist.      | 2882 Feb 18 15:07 | 1° <b>)</b> (34′02               | 0.27126 AU | superior conj       | 2884 Jul 13 16:55 | 22° <b>©</b> 59'55           | 0°40'11    |
| inferior conj         | 2882 Feb 19 09:34 | 1° <b>∺</b> 05'23                | 8°17'23    | minimum elong       | 2884 Jul 13 09:33 | 22° <b>©</b> 37'17           | 0°39'52    |
| minimum elong         | 2882 Feb 19 02:01 | 1° <b>升</b> 17′07                | 8°16'28    |                     | 2884 Jul 19 09:33 | $0$ $^{\circ}$ $\Omega$      |            |
|                       | 2882 Feb 21 03:50 | 30° <b>R</b> ≈                   |            |                     | 2884 Aug 12 18:24 | 0° <b>m</b> y                |            |
| morning rise          | 2882 Feb 22 15:15 | 29° <b>≈</b> 06′19               |            | evening rise        | 2884 Aug 18 13:57 | 7° <b>™</b> 09'57            |            |
| direct                | 2882 Mar 11 22:05 | 23° <b>≈</b> 19′27               |            |                     | 2884 Sep 06 02:32 | 0∘ <b>⊽</b>                  |            |
| greatest brilliancy   | 2882 Mar 21 00:33 | 24° <b>≈</b> 52'44               | -4.9m      |                     | 2884 Sep 30 10:57 | 0°M                          |            |
|                       | 2882 Mar 31 17:16 | 0° <b>)</b> €                    |            | desc. node          | 2884 Oct 15 17:28 | 18° <b>M</b> ₊47'04          |            |
| morning max el        | 2882 Apr 30 13:21 | 24° <b>)</b> 44'40               | 46°18'47   |                     | 2884 Oct 24 20:38 | 0° <b>⊼</b> 7                |            |
| desc. node            | 2882 Apr 30 22:13 | 25° <b>H</b> 06'23               | 40 10 47   |                     | 2884 Nov 18 08:31 | °<br>ਨ<br>ਹ                  |            |
| desc. node            | •                 | 23 <b>γ</b> (0023                |            |                     |                   |                              |            |
|                       | 2882 May 05 20:05 |                                  |            |                     | 2884 Dec 13 00:39 | 0° <b>≈</b>                  |            |
|                       | 2882 Jun 02 22:11 | 0°8                              |            |                     | 2885 Jan 07 02:59 | 0° <b>∀</b>                  |            |
|                       | 2882 Jun 29 08:10 | $\Pi$ °0                         |            |                     | 2885 Feb 02 07:01 | 0° <b>Υ</b>                  |            |
|                       | 2882 Jul 24 23:33 | $0$ $\circ$                      |            | asc. node           | 2885 Feb 05 20:25 | 3° <b>Y</b> 54'25            |            |
|                       | 2882 Aug 19 02:21 | $0 {\circ} \Omega$               |            | evening max el      | 2885 Feb 19 19:26 | 18° <b>Ƴ</b> 36'48           | 46°50'21   |
| asc. node             | 2882 Aug 22 01:25 | 3° <b>Ω</b> 34'22                |            |                     | 2885 Mar 03 15:32 | 0°B                          |            |
|                       | 2882 Sep 12 18:46 | 0° <b>™</b>                      |            | greatest brilliancy | 2885 Mar 31 13:32 | 19° <b>8</b> 13'40           | -4.8m      |
|                       | 2882 Oct 07 02:50 | 0∘ <b>⊽</b>                      |            | retrograde          | 2885 Apr 11 05:15 | 21° <b>8</b> 20'43           |            |
| morning set           | 2882 Oct 25 11:12 | 22° <b>≏</b> 49'36               |            | evening set         | 2885 Apr 27 14:46 | 16° <b>8</b> 03'57           |            |
| . 8                   | 2882 Oct 31 05:03 | 0°M                              |            | inferior conj       | 2885 May 02 09:27 |                              | 5°45'52    |
|                       | 2882 Nov 24 03:55 | 0° <b>⊼</b> 7                    |            | minimum elong       | 2885 May 02 19:21 |                              | 5°43'36    |
| max. Earth dist.      | 2882 Dec 01 19:23 | 9° <b>∡</b> ³35'48               | 1.71342 AU | min. Earth dist.    | 2885 May 02 07:35 |                              | 0.28356 AU |
| max. Earth dist.      | 2002 DCC 01 19.23 | 9 🗴 33 40                        | 1./1342 AU |                     | •                 | 9° <b>8</b> 43'43            | 0.28330 AU |
|                       | 2002 D 02 12-00   | 110.7/42!10                      | 0010122    | morning rise        | 2885 May 08 00:21 |                              |            |
| superior conj         | 2882 Dec 03 12:00 | 11° <b>х</b> 43'19               | 0°19'22    | direct              | 2885 May 23 14:27 | 5° <b>8</b> 00'36            |            |
| minimum elong         | 2882 Dec 03 16:49 | 11° <b>₹</b> 58'29               | 0°19'08    | desc. node          | 2885 May 28 10:04 | 5° <b>8</b> 27'13            |            |
| desc. node            | 2882 Dec 11 15:15 | 21° <b>∡</b> ′56'30              |            | greatest brilliancy | 2885 Jun 02 09:42 | 6° <b>8</b> 46'22            | -4.7m      |
|                       | 2882 Dec 18 01:10 | 0°ප                              |            |                     | 2885 Jul 06 03:16 | $\Pi$ °0                     |            |
|                       | 2883 Jan 10 21:59 | 0° <b>≈</b>                      |            | morning max el      | 2885 Jul 11 11:35 | 4° <b>Ⅱ</b> 59'47            | 45°44'45   |
| evening rise          | 2883 Jan 13 12:40 | 3°≈16′53                         |            |                     | 2885 Aug 04 22:51 | $0$ $\circ$                  |            |
|                       | 2883 Feb 03 19:35 | 0° <b>∀</b>                      |            |                     | 2885 Aug 31 21:07 | $0^{\circ}\Omega$            |            |
|                       | 2883 Feb 27 19:54 | $0^{\circ}$ Y                    |            | asc. node           | 2885 Sep 18 13:21 | 20° <b>Ω</b> 34'29           |            |
|                       | 2883 Mar 24 01:40 | 0° <b>႘</b>                      |            |                     | 2885 Sep 26 12:02 | 0° <b>m</b> )                |            |
| asc. node             | 2883 Apr 03 18:14 | 13° <b>8</b> 06'02               |            |                     | 2885 Oct 21 07:52 | 0∘ <b>⊽</b>                  |            |
|                       | 2883 Apr 17 16:18 | $\Pi^{\circ}0$                   |            |                     | 2885 Nov 14 15:40 | 0° <b>M</b>                  |            |
|                       | 2883 May 12 20:25 | 0°©                              |            |                     | 2885 Dec 08 16:38 | 0° <b>∡</b> 7                |            |
|                       | 2883 Jun 07 22:31 | $0^{\circ}\Omega$                |            |                     | 2886 Jan 01 14:19 | ි<br>ව°0                     |            |
|                       | 2883 Jul 05 21:14 | 0° mp                            |            | morning set         | 2886 Jan 07 19:14 | 。3<br>7° <b>る</b> 47'58      |            |
| avanina may al        | 2883 Jul 14 19:56 |                                  | 45°28'30   | desc. node          | 2886 Jan 08 03:00 | 8° <b>る</b> 12'25            |            |
| evening max el        |                   | 8° Mp 48'55                      | 45 28 30   | desc. node          |                   |                              |            |
| desc. node            | 2883 Jul 24 07:51 | 17° Tp 31'19                     |            |                     | 2886 Jan 25 10:53 | 0° <b>≈</b>                  |            |
|                       | 2883 Aug 09 10:23 | 0∘ <b>⊽</b>                      |            |                     |                   |                              |            |
| greatest brilliancy   | 2883 Aug 22 20:06 | 6° <b>≏</b> 47'08                | -4.7m      | superior conj       | 2886 Feb 18 11:06 | 0° <b>)</b> 10′31            |            |
| retrograde            | 2883 Sep 01 12:18 | 8° <b>≏</b> 28'33                |            | minimum elong       | 2886 Feb 18 02:05 | 29° <b>≈</b> 42'12           | 1°18'44    |
| evening set           | 2883 Sep 19 13:58 | 2° <b>≏</b> 23'59                |            |                     | 2886 Feb 18 07:45 | 0° <b>∀</b>                  |            |
| inferior conj         | 2883 Sep 22 18:23 | 0° <b>≏</b> 27'16                | -8°40'05   | max. Earth dist.    | 2886 Feb 21 12:57 | 4° <b>)</b> €02'18           | 1.71360 AU |
| minimum elong         | 2883 Sep 22 20:04 | 0° <b>ჲ</b> 24'39                | 8°40'02    |                     | 2886 Mar 14 06:20 | $0^{\circ}$ Y                |            |
| min. Earth dist.      | 2883 Sep 23 10:36 | 0° <b>ჲ</b> 02'10                | 0.28486 AU | evening rise        | 2886 Mar 30 23:30 | 20° <b>Ƴ</b> 50′56           |            |
|                       | 2883 Sep 23 12:00 | 30°R Mp                          |            | -                   | 2886 Apr 07 08:14 | 0°8                          |            |
| morning rise          | 2883 Sep 26 01:59 | 28° m/25'18                      |            | asc. node           | 2886 May 01 06:15 | 29° <b>8</b> 33'24           |            |
| direct                | 2883 Oct 14 03:26 | 22° m 15'35                      |            |                     | 2886 May 01 14:53 | 0°II                         |            |
| greatest brilliancy   | 2883 Oct 25 06:21 | 24° m/32'20                      | -4 8m      |                     | 2886 May 26 03:26 | 0°©                          |            |
| or carest oriminately | 2883 Nov 04 15:17 | 0° <u>Ω</u>                      |            |                     | 2886 Jun 19 23:11 | 0°Ω                          |            |
| asc. node             | 2883 Nov 14 10:53 | 0 <b>==</b><br>7° <b>£</b> 14'00 |            |                     | 2886 Jul 15 04:56 | 0°m)                         |            |
|                       |                   |                                  | 46040141   |                     |                   | 0ം <b>⊽</b>                  |            |
| morning max el        | 2883 Dec 03 12:57 | 24° <b>£</b> 52'03               | 40 4041    | d 1                 | 2886 Aug 10 02:48 |                              |            |
|                       | 2883 Dec 08 12:52 | 0°M.                             |            | desc. node          | 2886 Aug 20 19:36 | 12° <b>⊆</b> 02'27           |            |
|                       | 2884 Jan 04 15:23 | 0° <b>⊀</b>                      |            |                     | 2886 Sep 06 06:54 | 0°M₊                         |            |
|                       |                   |                                  |            |                     |                   |                              |            |

| evening max el      | 2886 Sep 25 11:05                      | 19° <b>M</b> 33'50               | 46°17'45   | superior conj             | 2889 May 03 12:47                      | 14° <b>8</b> 16'21                     | -0°55'33        |
|---------------------|--|----------------------------------|------------|---------------------------|--|--|-----------------|
|                     | 2886 Oct 06 18:11                      | 0° <b>∡</b>                      |            | minimum elong             | 2889 May 03 22:44                      | 14° <b>8</b> 47'07                     |                 |
| greatest brilliancy | 2886 Nov 04 13:57                      | 18° <b>₹</b> 51'12               | -4.9m      | max. Earth dist.          | 2889 May 06 16:27                      | 18° <b>8</b> 10'19                     | 1.72826 AU      |
| retrograde          | 2886 Nov 13 22:57                      | 20° <b>≯</b> 28'30               |            |                           | 2889 May 16 06:16                      | $\Pi$ °0                               |                 |
| evening set         | 2886 Nov 28 14:57                      | 16° <b>∡</b> 17'07               |            | asc. node                 | 2889 May 28 18:07                      | 15° <b>Ⅱ</b> 24′06                     |                 |
| inferior conj       | 2886 Dec 04 13:23                      | 12° <b>∡</b> °48'57              |            |                           | 2889 Jun 09 15:01                      | 0∘ <b>ௐ</b>                            |                 |
| minimum elong       | 2886 Dec 04 17:41                      |                                  | 1°52'37    | evening rise              | 2889 Jun 10 07:07                      | 0°5549'28                              |                 |
| min. Earth dist.    | 2886 Dec 04 23:40                      | 12° <b>∡</b> ³33′16              | 0.26673 AU |                           | 2889 Jul 04 02:11                      | $0$ $^{\circ}\Omega$                   |                 |
| morning rise        | 2886 Dec 10 19:58                      | 9° <b>∡</b> 09'22                |            |                           | 2889 Jul 28 16:02                      | 0° m/                                  |                 |
| asc. node           | 2886 Dec 11 22:50                      | 8° <b>∡</b> 34'42                |            |                           | 2889 Aug 22 09:45                      | 0∘ <b>⊽</b>                            |                 |
| direct              | 2886 Dec 25 03:33                      | 5°×706'01                        | 4.0        | 1 1                       | 2889 Sep 16 09:27                      | 0°M                                    |                 |
| greatest brilliancy | 2887 Jan 04 16:38                      | 7° <b>≯</b> 12'22                | -4.9m      | desc. node                | 2889 Sep 17 07:34                      | 1°M05'56                               |                 |
|                     | 2887 Feb 05 06:44                      | 0°궁                              | 46056120   |                           | 2889 Oct 11 18:12                      | 0° <b>⊼</b>                            |                 |
| morning max el      | 2887 Feb 13 18:10                      | 8°る18'54                         | 46°56'39   |                           | 2889 Nov 06 18:42                      | 5°0                                    |                 |
|                     | 2887 Mar 06 03:09                      | 0° <b>₩</b>                      |            |                           | 2889 Dec 04 08:34                      | 0°≈<br>2°≈ •02!2°                      | 47912152        |
| daga mada           | 2887 Apr 01 11:02                      | 0° <b>X</b><br>1° <b>X</b> 14'24 |            | evening max el            | 2889 Dec 07 08:06                      | 3°≈02'28<br>0°¥                        | 47°12'52        |
| desc. node          | 2887 Apr 02 12:35                      | 1 χ1424<br>0° <b>Υ</b>           |            | asa mada                  | 2890 Jan 07 21:24<br>2890 Jan 08 10:37 | 0° <b>X</b> 20'09                      |                 |
|                     | 2887 Apr 26 21:54                      | 0° <b>8</b>                      |            | asc. node                 | 2890 Jan 08 10:37<br>2890 Jan 17 01:04 | 4° <b>H</b> 35'48                      | -4.9m           |
|                     | 2887 May 21 23:47<br>2887 Jun 15 21:10 | 0°II                             |            | greatest brilliancy       |  | 4 € 33 48<br>6° € 34'58                | -4.9111         |
|                     | 2887 Jul 10 15:07                      | 0°9                              |            | retrograde<br>evening set | 2890 Jan 27 04:58<br>2890 Feb 12 22:07 | 1° <b>∺</b> 06'30                      |                 |
| asc. node           | 2887 Jul 10 15:07<br>2887 Jul 24 15:38 | 17° <b>5</b> 05'12               |            | evening set               | 2890 Feb 12 22:07<br>2890 Feb 14 18:28 | 1 7(00 30<br>30°R≈                     |                 |
| asc. node           | 2887 Aug 04 05:03                      | 17 <b>3</b> 03 12<br>0° <b>Ω</b> |            | min. Earth dist.          | 2890 Feb 14 18:28<br>2890 Feb 16 04:01 | 30 k≈<br>29°≈08'23                     | 0.27079 AU      |
| morning set         | 2887 Aug 14 18:51                      | 12° <b>Ω</b> 58'47               |            | inferior conj             | 2890 Feb 16 22:39                      | 29 ≈08 23<br>28°≈39'33                 | 8°08'13         |
| morning set         | 2887 Aug 28 14:29                      | 0°M)                             |            | minimum elong             | 2890 Feb 16 14:27                      | 28°≈52'15                              | 8°07'08         |
| max. Earth dist.    | 2887 Sep 16 23:57                      |                                  | 1.72709 AU | morning rise              | 2890 Feb 20 07:00                      | 26°≈36'49                              | 0 07 00         |
| max. Earth dist.    | 2007 Sep 10 25.57                      | 24 ily000/                       | 1.72707 AU | direct                    | 2890 Mar 09 10:30                      | 20°≈54'03                              |                 |
| superior conj       | 2887 Sep 20 07:04                      | 28° m 05'33                      | 1°24'55    | greatest brilliancy       | 2890 Mar 18 13:38                      | 22°≈28'11                              | -4.9m           |
| minimum elong       | 2887 Sep 20 08:03                      | 28° Mp 08'35                     |            | greatest orimancy         | 2890 Apr 01 23:19                      | 0° <b>∀</b>                            | 4.7111          |
| minimum ciong       | 2887 Sep 21 19:57                      | 0° <b>⊽</b>                      | 1 2131     | morning max el            | 2890 Apr 28 03:37                      | 22° <b>¥</b> 25'12                     | 46°20'32        |
|                     | 2887 Oct 15 22:49                      | o° <b>m</b> .                    |            | desc. node                | 2890 Apr 30 00:22                      | 24° <b>)</b> 15'28                     | 10 20 32        |
| evening rise        | 2887 Oct 27 23:12                      | 14°M58'13                        |            | acse. noue                | 2890 May 05 17:01                      | 0°Υ                                    |                 |
| e vennig rise       | 2887 Nov 09 00:29                      | 0° <b>∡</b> 7                    |            |                           | 2890 Jun 02 13:41                      | 0°8                                    |                 |
| desc. node          | 2887 Nov 13 05:27                      | 5° <b>⊀</b> 14'53                |            |                           | 2890 Jun 28 21:26                      | 0°II                                   |                 |
|                     | 2887 Dec 03 01:46                      | 0°⋜                              |            |                           | 2890 Jul 24 11:38                      | 0°95                                   |                 |
|                     | 2887 Dec 27 03:28                      | 0° <b>≈</b>                      |            |                           | 2890 Aug 18 13:46                      | $0^{\circ}\Omega$                      |                 |
|                     | 2888 Jan 20 07:23                      | 0° <b>∀</b>                      |            | asc. node                 | 2890 Aug 21 03:30                      | 3° <b>Ω</b> 06′15                      |                 |
|                     | 2888 Feb 13 17:31                      | $0$ ° $\Upsilon$                 |            |                           | 2890 Sep 12 05:52                      | 0° <b>m</b>                            |                 |
| asc. node           | 2888 Mar 05 08:21                      | 24° <b>Y</b> 50'16               |            |                           | 2890 Oct 06 13:48                      | 0∘ <del>⊽</del>                        |                 |
|                     | 2888 Mar 09 16:50                      | $8^{\circ}$                      |            | morning set               | 2890 Oct 23 02:17                      | 20° <b>≏</b> 32'47                     |                 |
|                     | 2888 Apr 04 18:15                      | $\Pi^{\circ}0$                   |            |                           | 2890 Oct 30 16:01                      | $0^{\circ}$ M                          |                 |
| evening max el      | 2888 May 01 20:01                      | 28° <b>Ⅲ</b> 31′58               | 45°46'50   |                           | 2890 Nov 23 14:55                      | 0° <b>∡</b> ¹                          |                 |
|                     | 2888 May 03 08:17                      | $0$ $\circ$ $\odot$              |            | max. Earth dist.          | 2890 Nov 29 06:39                      | 7° <b>∡</b> 05'51                      | 1.71375 AU      |
| greatest brilliancy | 2888 Jun 08 20:40                      | 26°©51'38                        | -4.7m      |                           |  |  |                 |
| retrograde          | 2888 Jun 19 19:54                      | 29° <b>©</b> 02'23               |            | superior conj             | 2890 Nov 30 23:41                      | 9° <b>х</b> 14'37                      | 0°23'06         |
| desc. node          | 2888 Jun 24 21:59                      | 28° <b>©</b> 31'40               |            | minimum elong             | 2890 Dec 01 05:20                      | 9° <b>∡</b> ³32'23                     | 0°22'49         |
| evening set         | 2888 Jul 05 02:36                      | 24° <b>©</b> 33'23               |            | desc. node                | 2890 Dec 10 17:15                      | 21° <b>₹</b> ′28′03                    |                 |
| inferior conj       | 2888 Jul 11 08:39                      | 20° <b>©</b> 47'53               | -3°45'32   |                           | 2890 Dec 17 12:15                      | 0°ප                                    |                 |
| minimum elong       | 2888 Jul 11 01:04                      | 20° <b>©</b> 59'48               |            |                           | 2891 Jan 10 09:08                      | 0° <b>≈</b>                            |                 |
| min. Earth dist.    | 2888 Jul 11 04:02                      | 20°©55'09                        | 0.28988 AU | evening rise              | 2891 Jan 10 22:57                      | 0° <b>≈</b> 43'24                      |                 |
| morning rise        | 2888 Jul 16 23:31                      | 17° <b>©</b> 23'06               |            |                           | 2891 Feb 03 06:50                      | 0° <b>)</b> €                          |                 |
| direct              | 2888 Aug 01 23:07                      | 12° <b>©</b> 31'17               |            |                           | 2891 Feb 27 07:18                      | 0° <b>Υ</b>                            |                 |
| greatest brilliancy | 2888 Aug 12 06:52                      | 14° <b>©</b> 25'26               | -4.7m      |                           | 2891 Mar 23 13:19                      | 0°8                                    |                 |
|                     | 2888 Sep 06 00:23                      | $0$ $\circ$ $\Omega$             |            | asc. node                 | 2891 Apr 02 20:22                      | 12° <b>8</b> 36'26                     |                 |
| morning max el      | 2888 Sep 19 21:48                      | 12° <b>Ω</b> 33'51               | 45°55'47   |                           | 2891 Apr 17 04:25                      | 0°Щ                                    |                 |
|                     | 2888 Oct 06 23:39                      | 0° <b>m</b>                      |            |                           | 2891 May 12 09:26                      | 0°©                                    |                 |
| asc. node           | 2888 Oct 16 01:14                      | 9° m 51'36                       |            |                           | 2891 Jun 07 13:25                      | 0° <b>N</b>                            |                 |
|                     | 2888 Nov 02 18:52                      | 0∘ <b>љ</b>                      |            |                           | 2891 Jul 05 17:07                      | 0°M)                                   | 45000100        |
|                     | 2888 Nov 28 01:16                      | 0°M.<br>0°. <b>7</b>             |            | evening max el            | 2891 Jul 12 11:59                      | 6° Mp 38'38                            | 45°28'02        |
|                     | 2888 Dec 22 14:08                      | 0°る                              |            | desc. node                | 2891 Jul 23 09:51                      | 16° Mp 34'24                           |                 |
| daga = -1-          | 2889 Jan 15 18:42                      |                                  |            | areata-t b-:11'           | 2891 Aug 10 15:06                      | 0° <b>⊡</b>                            | 1 7             |
| desc. node          | 2889 Feb 04 14:45                      | 24°₹44'34                        |            | greatest brilliancy       | 2891 Aug 20 08:56                      | 4° <b>Ω</b> 32'34                      | -4.7m           |
|                     | 2889 Feb 08 19:47                      | 0° <b>∺</b>                      |            | retrograde                | 2891 Aug 30 03:28                      | 6° <b>£</b> 15'33<br>0° <b>£</b> 10'57 |                 |
| morning set         | 2889 Mar 04 19:59<br>2889 Mar 25 14:33 | 0°π<br>25°₩55'25                 |            | evening set               | 2891 Sep 17 04:49<br>2891 Sep 17 12:07 | 0° <u>≥2</u> 10′37<br>30°RM)           |                 |
| morning set         | 2889 Mar 28 21:03                      | 25 <b>π</b> 3323<br>0° <b>Υ</b>  |            | inferior conj             | 2891 Sep 17 12.07<br>2891 Sep 20 09:39 | 28° Mp 13'22                           | -8°40'55        |
|                     | 2889 Apr 22 00:16                      | 0°8                              |            | minimum elong             | 2891 Sep 20 09.39<br>2891 Sep 20 10:33 | 28° Mp 11'59                           |                 |
|                     | 2007 Apr 22 00.10                      | v O                              |            | minimum ciong             | 2071 Sep 20 10.33                      | 20 mg 11 39                            | 5 70 <i>5</i> 7 |

| : E 4 E 4   | 2001 0 21 00 20   | 270 m. 50122   | 0.20520 ATT  |  | 2004 4 06 10 26  | no.  |  |
|---|---|--|--|--|--|--|--|
| min. Earth dist.  | 2891 Sep 21 00:30   | -  | 0.28539 AU   | ,  | 2894 Apr 06 19:26  | 0°8  |  |
| morning rise  | 2891 Sep 23 16:07   | 26° Mp 13'01   |  | asc. node  | 2894 Apr 30 08:16  | 29° <b>8</b> 04'51   |  |
| direct  | 2891 Oct 11 19:55   | 20° mp 01'12   | 4.0  |  | 2894 May 01 02:12  | 0°II   |  |
| greatest brilliancy   | 2891 Oct 22 20:53   | 22° m 16'19  | -4.8m  |  | 2894 May 25 14:59  | 0°99   |  |
|   | 2891 Nov 05 14:40   | 0∘ <b>⊽</b>  |  |  | 2894 Jun 19 11:12  | $0$ $^{\circ}\Omega$   |  |
| asc. node   | 2891 Nov 13 12:59   | 6° <b>≏</b> 08'47  |  |  | 2894 Jul 14 17:50  | 0° <b>m</b> ∕  |  |
| morning max el  | 2891 Dec 01 04:39   | 22° <b>≏</b> 34'56   | 46°39'04   |  | 2894 Aug 09 17:22  | 0∘ <b>ಹ</b>  |  |
|   | 2891 Dec 08 08:59   | 0° <b>M</b> ₊  |  | desc. node   | 2894 Aug 19 21:41  | 11° <b>≏</b> 24'42   |  |
|   | 2892 Jan 04 06:54   | 0°⊀  |  |  | 2894 Sep 06 01:12  | 0° <b>M</b>  |  |
|   | 2892 Jan 29 15:09   | 0°ಕ  |  | evening max el   | 2894 Sep 22 23:52  |  | 46°15'28   |
|   | 2892 Feb 23 08:34   | 0° <b>≈</b>  |  |  | 2894 Oct 07 01:41  | 0° <b>∡</b> 7  |  |
| desc. node  | 2892 Mar 04 02:44   | 11° <b>≈</b> 56′16   |  | greatest brilliancy  | 2894 Nov 02 03:48  | 16° <b>∡</b> ¹26'57  | -4.8m  |
|   | 2892 Mar 18 19:50   | 0° <b>∀</b>  |  | retrograde   | 2894 Nov 11 10:38  | 18° <b>∡</b> 02'41   |  |
|   | 2892 Apr 12 05:01   | $0$ ° $\Upsilon$   |  | evening set  | 2894 Nov 26 05:30  | 13° <b>∡</b> ¹48'37  |  |
|   | 2892 May 06 14:11   | 0°8  |  | inferior conj  | 2894 Dec 02 02:07  | 10° <b>≯</b> 23'05   | -2°17'14   |
|   | 2892 May 31 00:07   | $\Pi$ $^{\circ}0$  |  | minimum elong  | 2894 Dec 02 07:15  | 10° <b>≯</b> 15'16   | 2°15'38  |
| morning set   | 2892 Jun 04 15:03   | 5° <b>Ⅱ</b> 40′28  |  | min. Earth dist.   | 2894 Dec 02 14:10  | 10° <b>∡</b> °04'43  | 0.26714 AU   |
|   | 2892 Jun 24 10:30   | 0°©  |  | morning rise   | 2894 Dec 08 08:25  | 6° <b>∡</b> ¹43'28   |  |
| asc. node   | 2892 Jun 25 05:49   | 0°\$59'18  |  | asc. node  | 2894 Dec 11 00:42  | 5° <b>∡</b> ¹23'46   |  |
| max. Earth dist.  | 2892 Jul 10 16:47   | 19° <b>5</b> 58'34   | 1.73556 AU   | direct   | 2894 Dec 22 16:13  | 2° <b>∡</b> ³39'11   |  |
|   |   |  |  | greatest brilliancy  | 2895 Jan 02 07:56  | 4° <b>∡</b> °47'33   | -4.9m  |
| superior conj   | 2892 Jul 11 11:05   | 20°©54'49  | 0°37'22  |  | 2895 Feb 05 09:10  | 0°₹  |  |
| minimum elong   | 2892 Jul 11 04:06   | 20°533'21  | 0°37'04  | morning max el   | 2895 Feb 11 06:45  | 5°る50'52   | 46°56'59   |
| Z .   | 2892 Jul 18 20:24   | $0^{\circ}\Omega$  |  | Ü  | 2895 Mar 05 20:44  | 0° <b>≈</b>  |  |
|   | 2892 Aug 12 05:19   | 0° mp  |  |  | 2895 Apr 01 01:39  | 0° <b>₩</b>  |  |
| evening rise  | 2892 Aug 16 08:28   | 5° m 05'28   |  | desc. node   | 2895 Apr 01 14:39  | 0° <b>)</b> 37′59  |  |
| 0.0000  | 2892 Sep 05 13:36   | 0∘ <b>⊽</b>  |  |  | 2895 Apr 26 11:02  | 0° <b>Υ</b>  |  |
|   | 2892 Sep 29 22:18   | 0°M  |  |  | 2895 May 21 12:01  | 0°8  |  |
| desc. node  | 2892 Oct 14 19:37   | 18° <b>M</b> 17'59   |  |  | 2895 Jun 15 08:50  | $0^{\circ} \Pi$  |  |
| desc. Hode  | 2892 Oct 24 08:25   | 0° <b>√</b>  |  |  | 2895 Jul 10 02:23  | 0°©  |  |
|   | 2892 Nov 17 20:55   | ⊙ੰਤ  |  | asc. node  | 2895 Jul 23 17:41  | 16°937'34  |  |
|   | 2892 Dec 12 13:56   | 0°≈  |  | asc. node  | 2895 Aug 03 16:05  | 0°Ω  |  |
|   | 2893 Jan 06 17:44   | 0° <b>∀</b>  |  | morning set  | 2895 Aug 12 12:17  | 10° <b>Ω</b> 51'07   |  |
|   | 2893 Feb 02 00:54   | 0° <b>Υ</b>  |  | morning set  | 2895 Aug 28 01:25  | 0° <b>m</b> )  |  |
| asc. node   | 2893 Feb 02 00:34<br>2893 Feb 04 22:29  | 3° <b>Υ</b> 09'41  |  | max. Earth dist.   | 2895 Sep 14 17:24  | -•   | 1.72756 AU   |
|   | 2893 Feb 04 22.29<br>2893 Feb 17 11:08  | 16° <b>Υ</b> 19'12   | 46°52'19   | max. Earm dist.  | 2093 Sep 14 17.24  | 21 III 3130  | 1.72730 AU   |
| evening max el  |   |  |  |  |  |  |  |
|   |   |  | 40 32 17   | superior coni  | 2905 San 19 00:07  | 250 m 55121  | 1°25'00  |
| areatest brillianav   | 2893 Mar 03 20:36   | 0° <b>8</b>  |  | superior conj  | 2895 Sep 18 00:07  | ••   | 1°25'00  |
| greatest brilliancy   | 2893 Mar 03 20:36<br>2893 Mar 29 05:59  | 0° <b>と</b><br>16° <b>と</b> 58'35  | -4.8m  | superior conj<br>minimum elong   | 2895 Sep 18 00:22  | 25° <b>m</b> 56'19   | 1°25'00<br>1°25'01   |
| retrograde  | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01   | 0°8<br>16°858'35<br>19°804'44  |  |  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55   | 25° Mp 56'19<br>0° <u>Ω</u>  |  |
| retrograde<br>evening set   | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10  | 0° <b>8</b><br>16° <b>8</b> 58'35<br>19° <b>8</b> 04'44<br>13° <b>8</b> 44'14  | -4.8m  | minimum elong  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55<br>2895 Oct 15 09:53  | 25° ന 56'19<br>0° <u>മ</u><br>0° സ   |  |
| retrograde<br>evening set<br>inferior conj  | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48   | 0°8<br>16°858'35<br>19°804'44<br>13°844'14<br>10°852'13  | -4.8m<br>6°01'43   |  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55<br>2895 Oct 15 09:53<br>2895 Oct 25 13:33   | 25° m 56'19<br>0° Ω<br>0° M<br>12° M 38'47   |  |
| retrograde<br>evening set<br>inferior conj<br>minimum elong   | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49  | 0°8<br>16°858'35<br>19°804'44<br>13°844'14<br>10°852'13<br>10°836'28   | -4.8m<br>6°01'43<br>5°59'31                                    | minimum elong  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55<br>2895 Oct 15 09:53<br>2895 Oct 25 13:33<br>2895 Nov 08 11:42  | 25° m 56'19<br>0° <u>a</u><br>0° m<br>12° m 38'47<br>0° <del>x</del> 1   |  |
| retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.   | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34   | 0°8<br>16°858'35<br>19°804'44<br>13°844'14<br>10°852'13<br>10°836'28<br>10°855'43  | -4.8m<br>6°01'43   | minimum elong  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55<br>2895 Oct 15 09:53<br>2895 Oct 25 13:33<br>2895 Nov 08 11:42<br>2895 Nov 12 07:26   | 25° m 56'19<br>0° Ω<br>0° M<br>12° m 38'47<br>0° ♂<br>4° √ 45'59   |  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise  | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54  | 0°8<br>16°858'35<br>19°804'44<br>13°844'14<br>10°852'13<br>10°836'28<br>10°855'43<br>7°831'55  | -4.8m<br>6°01'43<br>5°59'31                                    | minimum elong  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55<br>2895 Oct 15 09:53<br>2895 Oct 25 13:33<br>2895 Nov 08 11:42<br>2895 Nov 12 07:26<br>2895 Dec 02 13:10  | 25° m 56'19<br>0° Ω<br>0° M<br>12° M 38'47<br>0° ♂<br>4° ♂ 45'59<br>0° ♂   |  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct   | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50  | -4.8m<br>6°01'43<br>5°59'31                                    | minimum elong  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55<br>2895 Oct 15 09:53<br>2895 Oct 25 13:33<br>2895 Nov 08 11:42<br>2895 Nov 12 07:26<br>2895 Dec 02 13:10<br>2895 Dec 26 15:06   | 25° m 56'19<br>0° Ω<br>0° M<br>12° M 38'47<br>0° ℤ<br>4° ℤ 45'59<br>0° ℤ<br>0° ℤ<br>0° ℤ   |  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node  | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44<br>2893 May 27 12:04  | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19   | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | minimum elong  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55<br>2895 Oct 15 09:53<br>2895 Oct 25 13:33<br>2895 Nov 08 11:42<br>2895 Nov 12 07:26<br>2895 Dec 02 13:10<br>2895 Dec 26 15:06<br>2896 Jan 19 19:24  | 25° m 56'19<br>0° Ω<br>0° M<br>12° M 38'47<br>0° ℤ<br>4° ℤ 45'59<br>0° ℤ<br>0° ℤ<br>0° ℤ<br>0° ℤ   |  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct   | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44<br>2893 May 27 12:04<br>2893 May 30 23:20   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14  | -4.8m<br>6°01'43<br>5°59'31                                    | minimum elong evening rise desc. node  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55<br>2895 Oct 15 09:53<br>2895 Oct 25 13:33<br>2895 Nov 08 11:42<br>2895 Nov 12 07:26<br>2895 Dec 02 13:10<br>2895 Dec 26 15:06<br>2896 Jan 19 19:24<br>2896 Feb 13 06:07   | 25° m 56'19<br>0° Ω<br>0° M<br>12° M 38'47<br>0° ¾<br>4° ¾ 45'59<br>0° ♂<br>0° ⋈<br>0° भ<br>0° भ<br>0° Υ   |  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy  | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44<br>2893 May 27 12:04<br>2893 May 30 23:20<br>2893 Jul 06 04:08  | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°II   | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | minimum elong  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55<br>2895 Oct 15 09:53<br>2895 Oct 25 13:33<br>2895 Nov 08 11:42<br>2895 Nov 12 07:26<br>2895 Dec 02 13:10<br>2895 Dec 26 15:06<br>2896 Jan 19 19:24<br>2896 Feb 13 06:07<br>2896 Mar 04 10:25  | 25° m 56'19<br>0° Ω<br>0° M<br>12° M 38'47<br>0° ¾<br>4° ¾ 45'59<br>0° ౘ<br>0° ¥<br>0° भ<br>0° भ<br>24° Υ 16'28  |  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node  | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44<br>2893 May 27 12:04<br>2893 May 30 23:20<br>2893 Jul 06 04:08<br>2893 Jul 09 02:48   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°∏ 2°∏46'52   | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | minimum elong evening rise desc. node  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55<br>2895 Oct 15 09:53<br>2895 Oct 25 13:33<br>2895 Nov 08 11:42<br>2895 Nov 12 07:26<br>2895 Dec 02 13:10<br>2895 Dec 26 15:06<br>2896 Jan 19 19:24<br>2896 Feb 13 06:07<br>2896 Mar 04 10:25<br>2896 Mar 09 06:32   | 25° m 56'19<br>0° Ω<br>0° M<br>12° M 38'47<br>0° ¾<br>4° ¾ 45'59<br>0° ੴ<br>0° ₩<br>0° ₩<br>0° ₩<br>24° ₩ 16'28<br>0° ੴ  |  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy  | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44<br>2893 May 27 12:04<br>2893 May 30 23:20<br>2893 Jul 06 04:08<br>2893 Jul 09 02:48<br>2893 Aug 04 15:19  | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°Ⅱ 2°Ⅱ46'52 0°55  | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | minimum elong evening rise desc. node  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55<br>2895 Oct 15 09:53<br>2895 Oct 25 13:33<br>2895 Nov 08 11:42<br>2895 Nov 12 07:26<br>2895 Dec 02 13:10<br>2895 Dec 26 15:06<br>2896 Jan 19 19:24<br>2896 Feb 13 06:07<br>2896 Mar 04 10:25<br>2896 Mar 09 06:32<br>2896 Apr 04 10:20  | 25° m 56'19<br>0° 血<br>0° 肌<br>12° m 38'47<br>0° ズ<br>4° ズ 45'59<br>0° 云<br>0° ※<br>0° Y<br>24° Y 16'28<br>0° B<br>0° B  | 1°25'01  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el                                   | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44<br>2893 May 27 12:04<br>2893 May 30 23:20<br>2893 Jul 06 04:08<br>2893 Jul 09 02:48<br>2893 Aug 04 15:19<br>2893 Aug 31 10:49   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°Ⅲ 2°Ⅲ46'52 0°\$ 0°\$   | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | minimum elong evening rise desc. node  | 2895 Sep 18 00:22<br>2895 Sep 21 06:55<br>2895 Oct 15 09:53<br>2895 Oct 25 13:33<br>2895 Nov 08 11:42<br>2895 Nov 12 07:26<br>2895 Dec 02 13:10<br>2895 Dec 26 15:06<br>2896 Jan 19 19:24<br>2896 Feb 13 06:07<br>2896 Mar 04 10:25<br>2896 Mar 09 06:32<br>2896 Apr 04 10:20<br>2896 Apr 29 10:46   | 25° m 56'19<br>0° Ω<br>0° M<br>12° M 38'47<br>0° ℤ<br>4° ℤ 45'59<br>0° ℤ<br>0° ℋ<br>0° ℋ<br>0° ℋ<br>0° ℋ<br>24° ♈ 16'28<br>0° ੴ<br>0° Ⅲ<br>26° Ⅲ 16'43   |  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy  | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44<br>2893 May 27 12:04<br>2893 May 30 23:20<br>2893 Jul 06 04:08<br>2893 Jul 09 02:48<br>2893 Aug 04 15:19<br>2893 Aug 31 10:49<br>2893 Sep 17 15:26  | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°II 2°II46'52 0°\$6 0°\$0 20°\$03'05  | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | minimum elong evening rise desc. node asc. node  | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33  | 25° m 56'19 0° Ω 0° M 12° M 38'47 0° √ 4° √ 45'59 0° ♂ 0° ₩ 0° ϒ 24° ϒ 16'28 0° ੴ 0° Π 26° Π 16'43 0° ©  | 1°25'01<br>45°48'36  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el                                   | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44<br>2893 May 27 12:04<br>2893 May 30 23:20<br>2893 Jul 06 04:08<br>2893 Jul 09 02:48<br>2893 Aug 04 15:19<br>2893 Aug 31 10:49<br>2893 Sep 17 15:26<br>2893 Sep 26 00:28   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°II 2°II46'52 0°© 0°Ω 20°Ω03'05 0°ID  | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | evening rise desc. node asc. node evening max el greatest brilliancy   | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32  | 25° m 56'19 0° Ω 0° M 12° M 38'47 0° √ 4° √ 45'59 0° ♂ 0° ₩ 0° ϒ 24° ϒ 16'28 0° ϒ 24° ϒ 16'43 0° © 24° S41'10  | 1°25'01<br>45°48'36  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el                                   | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44<br>2893 May 27 12:04<br>2893 May 30 23:20<br>2893 Jul 06 04:08<br>2893 Jul 09 02:48<br>2893 Aug 04 15:19<br>2893 Aug 31 10:49<br>2893 Sep 17 15:26<br>2893 Sep 26 00:28<br>2893 Oct 20 19:39  | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°II 2°II46'52 0°\$ 0°Ω 20°Ω03'05 0°\$ 0°Ω   | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | evening rise desc. node asc. node evening max el greatest brilliancy retrograde  | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 17 12:20  | 25° m 56'19 0° Ω 0° M 12° M 38'47 0° ℤ 4° ℤ 45'59 0° ℤ 0° ℋ 0° ℋ 0° ℋ 24° ♈ 16'28 0° ℋ 26° I 16'43 0° ⑨ 24° № 41'10 26° ⑨ 52'56  | 1°25'01<br>45°48'36  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el                                   | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44<br>2893 May 27 12:04<br>2893 May 30 23:20<br>2893 Jul 06 04:08<br>2893 Aug 04 15:19<br>2893 Aug 04 15:19<br>2893 Aug 31 10:49<br>2893 Sep 17 15:26<br>2893 Cct 20 19:39<br>2893 Nov 14 03:07  | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°II 2°II46'52 0°\$ 0°\$ 0°\$ 20°\$\O3'05 0°\$ 0°\$ 0°\$ 0°\$ 0°\$ 0°\$ 0°\$ 0°\$ 0°\$ 0°\$  | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node   | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 17 12:20 2896 Jun 23 23:57  | 25° m 56'19 0° Ω 0° M 12° M 38'47 0° ¾ 4° ¾ 45'59 0° ☒ 0° ※ 0° ¥ 0° Y 24° Y 16'28 0° ☒ 0° ☒ 26° M 16'43 0° ⑨ 24° № 41'10 26° ⑨ 52'56 26° ⑨ 02'41   | 1°25'01<br>45°48'36  |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el                                   | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44<br>2893 May 27 12:04<br>2893 May 30 23:20<br>2893 Jul 06 04:08<br>2893 Jul 09 02:48<br>2893 Aug 04 15:19<br>2893 Aug 31 10:49<br>2893 Sep 17 15:26<br>2893 Oct 20 19:39<br>2893 Nov 14 03:07<br>2893 Dec 08 03:56   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°∏ 2°∏46'52 0°\$ 0°\$ 20°\$\O303'05 0°\$\O300'\$ | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node evening set   | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 17 12:20 2896 Jun 23 23:57 2896 Jul 02 17:44  | 25° m 56'19 0° n 0° m 12° m 38'47 0° √ 4° √ 45'59 0° ♂ 0° ₩ 0° ₩ 0° ₩ 26° ₩ 16'28 0° ₩ 26° M 16'43 0° © 24° Ø 41'10 26° Ø 52'56 26° Ø 02'41 22° Ø 25'01  | 1°25'01<br>45°48'36<br>-4.7m   |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el asc. node                         | 2893 Mar 03 20:36<br>2893 Mar 29 05:59<br>2893 Apr 08 21:01<br>2893 Apr 25 09:10<br>2893 Apr 30 00:48<br>2893 Apr 30 10:49<br>2893 Apr 29 22:34<br>2893 May 05 12:54<br>2893 May 21 05:44<br>2893 May 27 12:04<br>2893 May 30 23:20<br>2893 Jul 06 04:08<br>2893 Jul 09 02:48<br>2893 Aug 04 15:19<br>2893 Aug 31 10:49<br>2893 Sep 17 15:26<br>2893 Oct 20 19:39<br>2893 Nov 14 03:07<br>2893 Dec 08 03:56<br>2894 Jan 01 01:34  | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°用 2°用46'52 0°9 0°A 20°A03'05 0°m 0°9 0°M 0°4 0°M   | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node evening set inferior conj   | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 17 12:20 2896 Jun 23 23:57 2896 Jul 02 17:44 2896 Jul 09 00:58  | 25° m 56'19 0° n 0° m 12° m 38'47 0° √ 4° √ 45'59 0° ♂ 0° ₩ 0° ₩ 0° ₩ 26° ₩ 16'28 0° ₩ 26° M 16'43 0° © 24° © 41'10 26° © 52'56 26° © 02'41 22° © 25'01 18° © 38'13  | 1°25'01<br>45°48'36<br>-4.7m   |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el asc. node                         | 2893 Mar 03 20:36 2893 Mar 29 05:59 2893 Apr 08 21:01 2893 Apr 25 09:10 2893 Apr 30 00:48 2893 Apr 30 10:49 2893 Apr 29 22:34 2893 May 05 12:54 2893 May 21 05:44 2893 May 27 12:04 2893 May 27 12:04 2893 May 30 23:20 2893 Jul 06 04:08 2893 Jul 09 02:48 2893 Aug 04 15:19 2893 Aug 31 10:49 2893 Sep 17 15:26 2893 Sep 26 00:28 2893 Oct 20 19:39 2893 Nov 14 03:07 2893 Dec 08 03:56 2894 Jan 01 01:34 2894 Jan 05 05:32   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°用 2°用46'52 0°9 0°ん 20°ん03'05 0°順 0°年 0°所 0°3   | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node evening set inferior conj minimum elong   | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 17 12:20 2896 Jun 23 23:57 2896 Jul 09 00:58 2896 Jul 08 17:51  | 25° m 56'19 0° n 0° m 12° m 38'47 0° √ 4° √ 45'59 0° ♂ 0° ₩ 0° ₩ 0° ₩ 24° ₩ 16'28 0° ₩ 26° M 16'43 0° © 24° © 41'10 26° © 52'56 26° © 02'41 22° © 25'01 18° © 38'13 18° © 49'22  | 1°25'01<br>45°48'36<br>-4.7m<br>-3°27'31<br>3°25'36                        |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el asc. node                         | 2893 Mar 03 20:36 2893 Mar 29 05:59 2893 Apr 08 21:01 2893 Apr 25 09:10 2893 Apr 30 00:48 2893 Apr 30 10:49 2893 Apr 29 22:34 2893 May 05 12:54 2893 May 21 05:44 2893 May 27 12:04 2893 May 27 12:04 2893 May 30 23:20 2893 Jul 06 04:08 2893 Jul 09 02:48 2893 Aug 04 15:19 2893 Aug 31 10:49 2893 Sep 17 15:26 2893 Sep 26 00:28 2893 Oct 20 19:39 2893 Nov 14 03:07 2893 Dec 08 03:56 2894 Jan 01 01:34 2894 Jan 05 05:32 2894 Jan 07 04:57   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°用 2°用46'52 0°© 0°ん 20°ん03'05 0°順 0°ふ 0°所 0°ふ 0°所 0°ふ 5°중14'11 7°중43'14   | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node evening set inferior conj minimum elong min. Earth dist.  | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 17 12:20 2896 Jun 23 23:57 2896 Jul 02 17:44 2896 Jul 09 00:58 2896 Jul 08 17:51 2896 Jul 08 20:26  | 25° m 56'19 0° n 0° m 12° m 38'47 0° √ 4° √ 45'59 0° ♂ 0° ₩ 0° ₩ 0° ₩ 24° ₩ 16'28 0° ₩ 0° m 26° m 16'43 0° © 24° Ø 41'10 26° © 52'56 26° © 02'41 22° © 25'01 18° © 38'13 18° © 49'22 18° © 45'19   | 1°25'01<br>45°48'36<br>-4.7m   |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el asc. node                         | 2893 Mar 03 20:36 2893 Mar 29 05:59 2893 Apr 08 21:01 2893 Apr 25 09:10 2893 Apr 30 00:48 2893 Apr 30 10:49 2893 Apr 29 22:34 2893 May 05 12:54 2893 May 21 05:44 2893 May 27 12:04 2893 May 27 12:04 2893 May 30 23:20 2893 Jul 06 04:08 2893 Jul 09 02:48 2893 Aug 04 15:19 2893 Aug 31 10:49 2893 Sep 17 15:26 2893 Sep 26 00:28 2893 Oct 20 19:39 2893 Nov 14 03:07 2893 Dec 08 03:56 2894 Jan 01 01:34 2894 Jan 05 05:32   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°用 2°用46'52 0°9 0°ん 20°ん03'05 0°順 0°年 0°所 0°3   | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU                      | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node evening set inferior conj minimum elong min. Earth dist. morning rise   | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 17 12:20 2896 Jun 23 23:57 2896 Jul 02 17:44 2896 Jul 09 00:58 2896 Jul 08 17:51 2896 Jul 08 20:26 2896 Jul 14 17:58  | 25° m 56'19 0° Ω 0° m 12° m 38'47 0° ♂ 4° ♂ 45'59 0° ♂ 0° ₩ 0° ₩ 0° ₩ 24° ₩ 16'28 0° ੴ 0° II 26° II 16'43 0° © 24° © 41'10 26° © 52'56 26° © 02'41 22° © 25'01 18° © 38'13 18° © 49'22 18° © 45'19 15° © 10'35   | 1°25'01<br>45°48'36<br>-4.7m<br>-3°27'31<br>3°25'36                        |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el asc. node                         | 2893 Mar 03 20:36 2893 Mar 29 05:59 2893 Apr 08 21:01 2893 Apr 25 09:10 2893 Apr 30 00:48 2893 Apr 30 10:49 2893 Apr 29 22:34 2893 May 05 12:54 2893 May 21 05:44 2893 May 27 12:04 2893 May 30 23:20 2893 Jul 06 04:08 2893 Jul 06 04:08 2893 Jul 09 02:48 2893 Aug 04 15:19 2893 Aug 31 10:49 2893 Sep 17 15:26 2893 Sep 26 00:28 2893 Oct 20 19:39 2893 Nov 14 03:07 2893 Dec 08 03:56 2894 Jan 01 01:34 2894 Jan 05 05:32 2894 Jan 07 04:57 2894 Jan 07 04:57 2894 Jan 24 22:08   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°II 2°II46'52 0°\$ 0°\$\alpha 20°\alpha 03'05 0°\$\bar{0}\alpha 0°\alpha                                      | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU<br>-4.7m<br>45°45'12 | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node evening set inferior conj minimum elong min. Earth dist. morning rise direct                                    | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 04 10:20 2896 Apr 04 10:20 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 17 12:20 2896 Jun 23 23:57 2896 Jul 02 17:44 2896 Jul 09 00:58 2896 Jul 08 17:51 2896 Jul 08 20:26 2896 Jul 14 17:58 2896 Jul 30 14:47  | 25° m 56'19 0° n 0° m 12° m 38'47 0° √ 4° √ 45'59 0° ♂ 0° ₩ 0° ₩ 0° ₩ 0° ₩ 24° Ŷ 16'28 0° ੴ 0° II 26° II 16'43 0° © 24° © 41'10 26° © 52'56 26° © 02'41 22° © 25'01 18° © 38'13 18° © 49'22 18° © 45'19 15° © 10'35 10° © 21'33  | 1°25'01<br>45°48'36<br>-4.7m<br>-3°27'31<br>3°25'36<br>0.28977 AU          |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el asc. node                         | 2893 Mar 03 20:36 2893 Mar 29 05:59 2893 Apr 08 21:01 2893 Apr 25 09:10 2893 Apr 30 00:48 2893 Apr 30 10:49 2893 Apr 29 22:34 2893 May 05 12:54 2893 May 27 12:04 2893 May 27 12:04 2893 May 30 23:20 2893 Jul 06 04:08 2893 Jul 06 04:08 2893 Aug 04 15:19 2893 Aug 04 15:19 2893 Aug 31 10:49 2893 Sep 17 15:26 2893 Sep 26 00:28 2893 Oct 20 19:39 2893 Nov 14 03:07 2893 Dec 08 03:56 2894 Jan 01 01:34 2894 Jan 05 05:32 2894 Jan 07 04:57 2894 Jan 24 22:08   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°Ⅲ 2°Ⅲ46'52 0°% 0°№ 0°№ 0°№ 0°№ 0°№ 0°% 10°% 10°% 117°843'14 0°%  | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU<br>-4.7m<br>45°45'12 | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node evening set inferior conj minimum elong min. Earth dist. morning rise   | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 17 12:20 2896 Jun 23 23:57 2896 Jul 02 17:44 2896 Jul 09 00:58 2896 Jul 08 17:51 2896 Jul 08 20:26 2896 Jul 14 17:58 2896 Jul 30 14:47 2896 Aug 09 23:19  | 25° m 56'19 0° n 0° m 12° m 38'47 0° √ 4° √ 45'59 0° ♂ 0° ₩ 0° ₩ 0° ₩ 0° ₩ 24° Ŷ 16'28 0° ੴ 0° II 26° II 16'43 0° © 24° © 41'10 26° © 52'56 26° © 02'41 22° © 25'01 18° © 38'13 18° © 49'22 18° © 45'19 15° © 10'35 10° © 21'33 12° © 16'20  | 1°25'01<br>45°48'36<br>-4.7m<br>-3°27'31<br>3°25'36<br>0.28977 AU          |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el asc. node                         | 2893 Mar 03 20:36 2893 Mar 29 05:59 2893 Apr 08 21:01 2893 Apr 25 09:10 2893 Apr 30 00:48 2893 Apr 30 10:49 2893 Apr 29 22:34 2893 May 05 12:54 2893 May 21 05:44 2893 May 27 12:04 2893 May 30 23:20 2893 Jul 06 04:08 2893 Jul 06 04:08 2893 Aug 04 15:19 2893 Aug 31 10:49 2893 Aug 31 10:49 2893 Sep 17 15:26 2893 Sep 26 00:28 2893 Oct 20 19:39 2893 Nov 14 03:07 2893 Dec 08 03:56 2894 Jan 01 01:34 2894 Jan 05 05:32 2894 Jan 07 04:57 2894 Feb 15 21:27 2894 Feb 15 11:45   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°Ⅲ 2°Ⅲ46'52 0°© 0°№ 0°№ 0°№ 0°№ 0°№ 0°% 10°% 10°% 10°% 10°% 10°% 10°% 10°%  | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU<br>-4.7m<br>45°45'12 | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node evening set inferior conj minimum elong min. Earth dist. morning rise direct greatest brilliancy                | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 04 10:20 2896 Apr 04 10:20 2896 Apr 04 10:20 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 07:33 2896 Jun 07:33 2896 Jun 08 17:51 2896 Jul 08 17:51 2896 Jul 08 17:51 2896 Jul 08 20:26 2896 Jul 14 17:58 2896 Jul 30 14:47 2896 Aug 09 23:19 2896 Sep 06 05:56                      | 25° m 56'19 0° n 0° m 12° m 38'47 0° √ 4° √ 45'59 0° ♂ 0° ₩ 0° ϒ 24° ϒ 16'28 0° ϒ 24° ϒ 16'28 0° Β 24° Θ 11 26° Θ 52'56 26° Θ 02'41 22° Θ 25'01 18° Θ 38'13 18° Θ 49'22 18° Θ 45'19 15° Θ 10'35 10° Θ 21'33 12° Θ 16'20 0° Ω   | 1°25'01<br>45°48'36<br>-4.7m<br>-3°27'31<br>3°25'36<br>0.28977 AU<br>-4.7m |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el asc. node                         | 2893 Mar 03 20:36 2893 Mar 29 05:59 2893 Apr 08 21:01 2893 Apr 25 09:10 2893 Apr 30 00:48 2893 Apr 30 10:49 2893 Apr 29 22:34 2893 May 05 12:54 2893 May 21 05:44 2893 May 27 12:04 2893 May 30 23:20 2893 Jul 06 04:08 2893 Jul 06 04:08 2893 Aug 04 15:19 2893 Aug 04 15:19 2893 Aug 31 10:49 2893 Sep 17 15:26 2893 Sep 26 00:28 2893 Oct 20 19:39 2893 Nov 14 03:07 2893 Dec 08 03:56 2894 Jan 01 01:34 2894 Jan 05 05:32 2894 Jan 07 04:57 2894 Jan 24 22:08 2894 Feb 15 21:27 2894 Feb 15 11:45 2894 Feb 17 18:58                   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°用 2°用46'52 0°9 0°1 20°103'05 0°10 0°4 0°55'514'11 7°543'14 0°≈ 27°≈37'08 27°≈37'08 27°≈06'39 0°升   | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU<br>-4.7m<br>45°45'12 | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node evening set inferior conj minimum elong min. Earth dist. morning rise direct                                    | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 07:33 2896 Jun 08 17:51 2896 Jul 08 17:51 2896 Jul 08 20:26 2896 Jul 08 20:26 2896 Jul 14 17:58 2896 Jul 09 03:56 2896 Sep 06 05:56 2896 Sep 17 13:26   | 25° m 56'19 0° n 0° m 12° m 38'47 0° √ 4° √ 45'59 0° ♂ 0° ₩ 0° ₩ 0° ₩ 0° ₩ 24° Ŷ 16'28 0° ੴ 24° § 116'43 0° © 24° § 41'10 26° § 52'56 26° § 02'41 22° § 25'01 18° § 38'13 18° § 49'22 18° § 45'19 15° § 10'35 10° § 21'33 12° § 16'20 0° № 10° № 21'45   | 1°25'01<br>45°48'36<br>-4.7m<br>-3°27'31<br>3°25'36<br>0.28977 AU<br>-4.7m |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el asc. node                         | 2893 Mar 03 20:36 2893 Mar 29 05:59 2893 Apr 08 21:01 2893 Apr 25 09:10 2893 Apr 30 00:48 2893 Apr 30 10:49 2893 Apr 29 22:34 2893 May 05 12:54 2893 May 21 05:44 2893 May 27 12:04 2893 May 30 23:20 2893 Jul 06 04:08 2893 Jul 06 04:08 2893 Aug 04 15:19 2893 Aug 04 15:19 2893 Aug 31 10:49 2893 Sep 17 15:26 2893 Sep 26 00:28 2893 Oct 20 19:39 2893 Nov 14 03:07 2893 Dec 08 03:56 2894 Jan 01 01:34 2894 Jan 05 05:32 2894 Jan 07 04:57 2894 Feb 15 21:27 2894 Feb 15 11:45 2894 Feb 17 18:58 2894 Feb 18 20:31                   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°用 2°用46'52 0°9 0°0 20°0303'05 0°m 0°4 0°5 5°514'11 7°543'14 0°≈ 27°≈37'08 27°≈37'08 27°≈06'39 0°升 1°米20'13   | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU<br>-4.7m<br>45°45'12 | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node evening set inferior conj minimum elong min. Earth dist. morning rise direct greatest brilliancy                | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 29 10:46 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 07:33 2896 Jun 08 17:51 2896 Jul 09 00:58 2896 Jul 08 17:51 2896 Jul 08 20:26 2896 Jul 14 17:58 2896 Jul 30 14:47 2896 Aug 09 23:19 2896 Sep 06 05:56 2896 Sep 17 13:26 2896 Oct 06 17:01 | 25° m 56'19 0° n 0° m 12° m 38'47 0° √ 4° √ 45'59 0° ♂ 0° ₩ 0° ₩ 0° ₩ 24° Ŷ 16'28 0° ੴ 24° Ŷ 16'28 0° Ø 24° Ø 41'10 26° Ø 52'56 26° Ø 02'41 22° Ø 25'01 18° Ø 38'13 18° Ø 49'22 18° Ø 45'19 15° Ø 10'35 10° Ø 21'33 12° Ø 16'20 0° Ω 10° Ω 21'45 0° m  | 1°25'01<br>45°48'36<br>-4.7m<br>-3°27'31<br>3°25'36<br>0.28977 AU<br>-4.7m |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el asc. node  morning set desc. node | 2893 Mar 03 20:36 2893 Mar 29 05:59 2893 Apr 08 21:01 2893 Apr 25 09:10 2893 Apr 30 00:48 2893 Apr 30 10:49 2893 Apr 29 22:34 2893 May 05 12:54 2893 May 21 05:44 2893 May 27 12:04 2893 May 30 23:20 2893 Jul 06 04:08 2893 Jul 06 04:08 2893 Aug 04 15:19 2893 Aug 04 15:19 2893 Aug 31 10:49 2893 Sep 17 15:26 2893 Sep 26 00:28 2893 Oct 20 19:39 2893 Nov 14 03:07 2893 Dec 08 03:56 2894 Jan 01 01:34 2894 Jan 05 05:32 2894 Jan 07 04:57 2894 Feb 15 21:27 2894 Feb 15 11:45 2894 Feb 15 11:45 2894 Feb 18 20:31 2894 Mar 13 17:31 | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°用 2°用46'52 0°9 0°A 20°A03'05 0°m 0°4 0°5 5°514'11 7°543'14 0°≈ 27°≈37'08 27°≈06'39 0°升 1°景20'13 0°Y  | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU<br>-4.7m<br>45°45'12 | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node evening set inferior conj minimum elong min. Earth dist. morning rise direct greatest brilliancy                | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 04 10:20 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 07:33 2896 Jun 08 17:51 2896 Jul 08 17:51 2896 Jul 08 20:26 2896 Jul 08 20:26 2896 Jul 14 17:58 2896 Jul 09 03:56 2896 Sep 06 05:56 2896 Sep 17 13:26   | 25° m 56'19 0° ₽ 0° M 12° M 38'47 0° ₹ 4° ₹ 45'59 0° ₹ 0° ¥ 0° ¥ 0° ¥ 0° ¥ 0° ¥ 0° ¥ 0° ¥ 16'28 0° \$ 0° II 26° II 16'43 0° \$ 24° \$ 41'10 26° \$ 52'56 26° \$ 02'41 22° \$ 25'01 18° \$ 38'13 18° \$ 49'22 18° \$ 45'19 15° \$ 10'35 10° \$ 21'33 12° \$ 16'20 0° \$ 10° \$ 21'45 0° \$ 10' \$ 12'52 | 1°25'01<br>45°48'36<br>-4.7m<br>-3°27'31<br>3°25'36<br>0.28977 AU<br>-4.7m |
| retrograde evening set inferior conj minimum elong min. Earth dist. morning rise direct desc. node greatest brilliancy morning max el asc. node  morning set desc. node | 2893 Mar 03 20:36 2893 Mar 29 05:59 2893 Apr 08 21:01 2893 Apr 25 09:10 2893 Apr 30 00:48 2893 Apr 30 10:49 2893 Apr 29 22:34 2893 May 05 12:54 2893 May 21 05:44 2893 May 27 12:04 2893 May 30 23:20 2893 Jul 06 04:08 2893 Jul 06 04:08 2893 Aug 04 15:19 2893 Aug 04 15:19 2893 Aug 31 10:49 2893 Sep 17 15:26 2893 Sep 26 00:28 2893 Oct 20 19:39 2893 Nov 14 03:07 2893 Dec 08 03:56 2894 Jan 01 01:34 2894 Jan 05 05:32 2894 Jan 07 04:57 2894 Feb 15 21:27 2894 Feb 15 11:45 2894 Feb 17 18:58 2894 Feb 18 20:31                   | 0°8 16°858'35 19°804'44 13°844'14 10°852'13 10°836'28 10°855'43 7°831'55 2°845'50 3°830'19 4°830'14 0°用 2°用46'52 0°9 0°0 20°0303'05 0°m 0°4 0°5 5°514'11 7°543'14 0°≈ 27°≈37'08 27°≈37'08 27°≈06'39 0°升 1°米20'13   | -4.8m<br>6°01'43<br>5°59'31<br>0.28323 AU<br>-4.7m<br>45°45'12 | evening rise  desc. node  asc. node  evening max el  greatest brilliancy retrograde desc. node evening set inferior conj minimum elong min. Earth dist. morning rise direct greatest brilliancy morning max el | 2895 Sep 18 00:22 2895 Sep 21 06:55 2895 Oct 15 09:53 2895 Oct 25 13:33 2895 Nov 08 11:42 2895 Nov 12 07:26 2895 Dec 02 13:10 2895 Dec 02 13:10 2895 Dec 26 15:06 2896 Jan 19 19:24 2896 Feb 13 06:07 2896 Mar 04 10:25 2896 Mar 09 06:32 2896 Apr 29 10:46 2896 Apr 29 10:46 2896 May 03 07:33 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 06 12:32 2896 Jun 07:33 2896 Jun 08 17:51 2896 Jul 09 00:58 2896 Jul 08 17:51 2896 Jul 08 20:26 2896 Jul 14 17:58 2896 Jul 30 14:47 2896 Aug 09 23:19 2896 Sep 06 05:56 2896 Sep 17 13:26 2896 Oct 06 17:01 | 25° m 56'19 0° n 0° m 12° m 38'47 0° √ 4° √ 45'59 0° ♂ 0° ₩ 0° ₩ 0° ₩ 24° Ŷ 16'28 0° ੴ 24° Ŷ 16'28 0° Ø 24° Ø 41'10 26° Ø 52'56 26° Ø 02'41 22° Ø 25'01 18° Ø 38'13 18° Ø 49'22 18° Ø 45'19 15° Ø 10'35 10° Ø 21'33 12° Ø 16'20 0° Ω 10° Ω 21'45 0° m  | 1°25'01<br>45°48'36<br>-4.7m<br>-3°27'31<br>3°25'36<br>0.28977 AU<br>-4.7m |

|                     | 2896 Nov 27 14:06                      | 0° <b>M</b> .              |            |                     | 2899 Jul 05 13:37                      | 0° m)                              |            |
|---------------------|--|----------------------------|------------|---------------------|--|------------------------------------|------------|
|                     | 2896 Dec 22 02:16                      | 0° <b>⊼</b> ¹              |            | evening max el      | 2899 Jul 10 03:53                      | ربان<br>4° ا% 28'02                | 45°27'21   |
|                     | 2897 Jan 15 06:24                      | °ਤੇ                        |            | desc. node          | 2899 Jul 22 11:58                      | 15° m) 36'29                       | 43 27 21   |
| desc. node          | 2897 Feb 03 16:55                      | 24° <b>ප</b> 15'34         |            | dese. Hode          | 2899 Aug 12 08:59                      | 0° <b>⊡</b>                        |            |
| dese. node          | 2897 Feb 08 07:11                      | 0°≈                        |            | greatest brilliancy | 2899 Aug 17 22:16                      | ა <b>—</b><br>2° <b>ჲ</b> 18'21    | -4.7m      |
|                     | 2897 Mar 04 07:11                      | 0° <b>)</b> €              |            | retrograde          | 2899 Aug 27 18:08                      | 4° <b>£</b> 02'08                  | ,          |
| morning set         | 2897 Mar 23 03:04                      | 23° <b>)</b> € 30'15       |            | renogrado           | 2899 Sep 11 05:30                      | 30°R.M)                            |            |
| morning sec         | 2897 Mar 28 08:07                      | 0°Υ                        |            | evening set         | 2899 Sep 14 19:10                      | 27° m 58'25                        |            |
|                     | 2897 Apr 21 11:14                      | 0°8                        |            | inferior conj       | 2899 Sep 18 00:49                      | 25° m 59'20                        | -8°40'54   |
|                     |  |                            |            | minimum elong       | 2899 Sep 18 00:52                      | 25° m 59'14                        |            |
| superior conj       | 2897 May 01 03:52                      | 12° <b>8</b> 00'44         | -0°58'10   | min. Earth dist.    | 2899 Sep 18 14:29                      | 25° m) 38'07                       | 0.28587 AU |
| minimum elong       | 2897 May 01 14:00                      | 12° <b>8</b> 32'07         |            | morning rise        | 2899 Sep 21 06:27                      | 24° m) 00'00                       | 0.20000    |
| max. Earth dist.    | 2897 May 04 07:30                      | 15° <b>8</b> 54'44         |            | direct              | 2899 Oct 09 12:05                      | 17° <b>m</b> ) 46'50               |            |
|                     | 2897 May 15 17:11                      | 0°II                       |            | greatest brilliancy | 2899 Oct 20 11:18                      | 20° m) 00'08                       | -4.8m      |
| asc. node           | 2897 May 27 20:02                      | 14° <b>I</b> I56'26        |            | greatest stimule)   | 2899 Nov 06 07:54                      | 0∘ <b>⊽</b>                        |            |
| evening rise        | 2897 Jun 08 00:25                      | 28° <b>I</b> I41'36        |            | asc. node           | 2899 Nov 12 14:55                      | ა —<br>5° <b>ჲ</b> 05'04           |            |
|                     | 2897 Jun 09 01:56                      | 0ංම<br>                    |            | morning max el      | 2899 Nov 28 19:12                      | 20° <b>£</b> 15′18                 | 46°37'32   |
|                     | 2897 Jul 03 13:15                      | 0°N                        |            | morning man er      | 2899 Dec 08 04:22                      | 0°M                                | .0 5, 52   |
|                     | 2897 Jul 28 03:23                      | 0° m                       |            |                     | 2900 Jan 03 22:01                      | 0° <b>⊼</b> 7                      |            |
|                     | 2897 Aug 21 21:37                      | 0∘ <b>ʊ</b>                |            |                     | 2900 Jan 29 04:30                      | %ਰ                                 |            |
|                     | 2897 Sep 15 22:07                      | 0° <b>m</b>                |            |                     | 2900 Feb 22 20:58                      | 0° <b>≈</b>                        |            |
| desc. node          | 2897 Sep 15 22:07<br>2897 Sep 16 09:40 | 0°M34'23                   |            | desc. node          | 2900 Pco 22 20:38<br>2900 Mar 04 04:45 | 0 ∞<br>11°≈25'17                   |            |
| desc. node          | 2897 Sep 16 09.40<br>2897 Oct 11 08:11 | 0 1163423<br>0° <b>√</b> 7 |            | desc. node          |  | 11 <b>≈</b> 23 17<br>0° <b>)</b> € |            |
|                     |  | 0°ਤ                        |            |                     | 2900 Mar 19 07:38                      | 0 K<br>0°Υ                         |            |
|                     | 2897 Nov 06 11:06                      |                            |            |                     | 2900 Apr 12 16:21                      |                                    |            |
| ·                   | 2897 Dec 04 06:54                      | 0°≈                        | 47012110   |                     | 2900 May 07 01:10                      | 0° <b>B</b>                        |            |
| evening max el      | 2897 Dec 04 22:33                      | 0°≈39'36                   | 47°12'10   |                     | 2900 May 31 10:52                      | 0°П                                |            |
| asc. node           | 2898 Jan 07 12:43                      | 28°≈47'19                  |            | morning set         | 2900 Jun 03 08:29                      | 3° <b>Ⅱ</b> 33'45                  |            |
|                     | 2898 Jan 09 18:33                      | 0° <b>)</b> ( °°12°        | 4.0        |                     | 2900 Jun 24 21:07                      | 0° <b>©</b>                        |            |
| greatest brilliancy | 2898 Jan 14 14:09                      | 2° <b>₩</b> 08'39          | -4.9m      | asc. node           | 2900 Jun 25 07:55                      | 0° <b>©</b> 33'11                  |            |
| retrograde          | 2898 Jan 24 19:01                      | 4° <b>)</b> €08'38         |            | max. Earth dist.    | 2900 Jul 09 14:37                      | 18° <b>©</b> 05'38                 | 1.73559 AU |
|                     | 2898 Feb 08 02:54                      | 30°R≈                      |            |                     |  |                                    |            |
| evening set         | 2898 Feb 10 07:17                      | 28°≈46'19                  |            | superior conj       | 2900 Jul 10 05:20                      | 18°950'52                          | 0°34'31    |
| min. Earth dist.    | 2898 Feb 13 16:39                      | 26° <b>≈</b> 43'24         | 0.27028 AU | minimum elong       | 2900 Jul 09 22:47                      | 18° <b>©</b> 30'43                 | 0°34'13    |
| inferior conj       | 2898 Feb 14 11:46                      | 26°≈13'53                  | 7°58'11    |                     | 2900 Jul 19 07:01                      | $0$ $\circ$ $\Omega$               |            |
| minimum elong       | 2898 Feb 14 02:59                      | 26° <b>≈</b> 27'26         | 7°56'55    |                     | 2900 Aug 12 16:01                      | 0° <b>™</b>                        |            |
| morning rise        | 2898 Feb 17 22:57                      | 24°≈07'19                  |            | evening rise        | 2900 Aug 15 02:57                      | 3° <b>m</b> 01'30                  |            |
| direct              | 2898 Mar 06 23:31                      | 18° <b>≈</b> 29'07         |            |                     | 2900 Sep 06 00:29                      | 0∘ <b>⊽</b>                        |            |
| greatest brilliancy | 2898 Mar 16 02:09                      | 20° <b>≈</b> 03'24         | -4.9m      |                     | 2900 Sep 30 09:30                      | 0° <b>M</b>                        |            |
|                     | 2898 Apr 02 20:52                      | 0° <b>∀</b>                |            | desc. node          | 2900 Oct 14 21:32                      | 17° <b>M</b> 48'42                 |            |
| morning max el      | 2898 Apr 25 18:19                      | 20° <b>)</b> €07'10        | 46°22'05   |                     | 2900 Oct 24 20:03                      | 0° <b>∡</b> ¹                      |            |
| desc. node          | 2898 Apr 29 02:22                      | 23° <b>)</b> €25'31        |            |                     | 2900 Nov 18 09:09                      | 0°₹                                |            |
|                     | 2898 May 05 13:08                      | $0$ ° $\Upsilon$           |            |                     | 2900 Dec 13 03:03                      | 0° <b>≈</b>                        |            |
|                     | 2898 Jun 02 04:55                      | $9^{\circ}$ 8              |            |                     | 2901 Jan 07 08:21                      | 0° <b>∀</b>                        |            |
|                     | 2898 Jun 28 10:37                      | $\Pi^{\circ}0$             |            |                     | 2901 Feb 02 18:51                      | $0^{\circ}$ Y                      |            |
|                     | 2898 Jul 23 23:44                      | $0$ $\circ$ $\odot$        |            | asc. node           | 2901 Feb 05 00:35                      | 2° <b>Y</b> 25'26                  |            |
|                     | 2898 Aug 18 01:16                      | $0^{\circ}\Omega$          |            | evening max el      | 2901 Feb 16 02:00                      | 14° <b>Ƴ</b> 00'14                 | 46°54'14   |
| asc. node           | 2898 Aug 20 05:37                      | 2° <b>Ω</b> 38'06          |            |                     | 2901 Mar 05 03:17                      | 0° <b>႘</b>                        |            |
|                     | 2898 Sep 11 17:01                      | 0° <b>m</b> p              |            | greatest brilliancy | 2901 Mar 27 22:59                      | 14° <b>8</b> 45'07                 | -4.8m      |
|                     | 2898 Oct 06 00:47                      | 0∘ <b>ত</b>                |            | retrograde          | 2901 Apr 07 12:22                      | 16° <b>8</b> 49'53                 |            |
| morning set         | 2898 Oct 20 17:17                      | 18° <b>≙</b> 15'53         |            | evening set         | 2901 Apr 24 03:40                      | 11° <b>8</b> 25'40                 |            |
|                     | 2898 Oct 30 02:57                      | o° <b>m</b> ₊              |            | inferior conj       | 2901 Apr 28 16:16                      | 8° <b>呂</b> 37'57                  | 6°17'00    |
|                     | 2898 Nov 23 01:53                      | 0° <b>∡</b> ¹              |            | minimum elong       | 2901 Apr 29 02:18                      | 8° <b>8</b> 22'08                  | 6°14'53    |
| max. Earth dist.    | 2898 Nov 26 16:37                      | 4° <b>∡</b> °32′03         | 1.71408 AU | min. Earth dist.    | 2901 Apr 28 13:55                      | 8° <b>8</b> 41'40                  | 0.28288 AU |
|                     |  |                            |            | morning rise        | 2901 May 04 01:21                      | 5° <b>8</b> 21'36                  |            |
| superior conj       | 2898 Nov 28 11:28                      | 6° <b>⊀</b> ¹46'27         | 0°26'45    | direct              | 2901 May 19 20:40                      | 0° <b>8</b> 32'20                  |            |
| minimum elong       | 2898 Nov 28 17:53                      | 7° <b>∡</b> 106'37         | 0°26'26    | desc. node          | 2901 May 27 14:01                      | 1° <b>8</b> 39'02                  |            |
| desc. node          | 2898 Dec 09 19:14                      | 20° <b>х</b> 59'40         |            | greatest brilliancy | 2901 May 29 13:31                      | 2° <b>8</b> 15'54                  | -4.8m      |
|                     | 2898 Dec 16 23:17                      | 0°ප                        |            | 5                   | 2901 Jul 07 03:18                      | 0°II                               |            |
| evening rise        | 2899 Jan 08 09:21                      | 28° <b>ට</b> 10'23         |            | morning max el      | 2901 Jul 07 17:10                      | 0° <b>П</b> 33'03                  | 45°45'44   |
|                     | 2899 Jan 09 20:15                      | 0°≈                        |            |                     | 2901 Aug 05 07:02                      | 0.2<br>2                           |            |
|                     | 2899 Feb 02 18:01                      | 0° <b>₩</b>                |            |                     | 2901 Sep 01 00:01                      | $0 {\circ} {\mathfrak O}$          |            |
|                     | 2899 Feb 26 18:35                      | 0° <b>Υ</b>                |            | asc. node           | 2901 Sep 17 17:26                      | 19° <b>Ω</b> 32'32                 |            |
|                     | 2899 Mar 23 00:49                      | 0°8                        |            |                     | 2901 Sep 26 12:32                      | 0° m)                              |            |
| asc. node           | 2899 Apr 01 22:23                      | 12° <b>8</b> 06'57         |            |                     | 2901 Oct 21 07:08                      | 0° <del>ت</del><br>مار             |            |
| 450. HOGO           | 2899 Apr 16 16:23                      | 0° <b>Ⅱ</b>                |            |                     | 2901 Nov 14 14:19                      | 0° <b>™</b>                        |            |
|                     | 2899 May 11 22:21                      | 0°©                        |            |                     | 2901 Nov 14 14:19<br>2901 Dec 08 14:59 | 0° <b>⊼</b> ¹                      |            |
|                     | 2899 Jun 07 04:24                      | 0° <b>U</b>                |            |                     | 2901 Dec 08 14:39<br>2902 Jan 01 12:32 | 0 × 0<br>ව                         |            |
|                     | 2077 Juli 07 04.24                     | · 06                       |            |                     | 2702 Jan 01 12.32                      | υ <b>Ο</b>                         |            |

| morning set         | 2902 Jan 03 15:42                      | 2°る40'50              |              | minimum elong                  | 2904 Jul 07 10:52                      | 16° <b>©</b> 40'27           | 3°07'29               |
|---------------------|--|-----------------------|--------------|--------------------------------|--|------------------------------|-----------------------|
| desc. node          | 2902 Jan 07 07:07                      | 7° <b>る</b> 15'37     |              | min. Earth dist.               | 2904 Jul 07 10:32<br>2904 Jul 07 12:43 | 16°937'33                    | 0.28963 AU            |
| dese. Hode          | 2902 Jan 25 09:02                      | 0°≈                   |              | morning rise                   | 2904 Jul 13 12:31                      | 10 <b>3</b> 57 55            | 0.20703710            |
|                     | 2902 3un 23 09.02                      | 0 / 0 /               |              | direct                         | 2904 Jul 29 07:07                      | 8°513'33                     |                       |
| superior conj       | 2902 Feb 14 07:43                      | 25°≈04'35             | -1°15'21     | greatest brilliancy            | 2904 Aug 08 15:26                      | 10°908'32                    | -4 7m                 |
| minimum elong       | 2902 Feb 13 21:23                      | 24°≈32'10             |              | greatest stilliane;            | 2904 Sep 07 08:58                      | 0°Ω                          | ,                     |
| max. Earth dist.    | 2902 Feb 17 01:51                      | 28°≈32'16             | 1.71290 AU   | morning max el                 | 2904 Sep 16 05:54                      | 8° <b>Ω</b> 13'16            | 45°53'43              |
| man. Darun uibt.    | 2902 Feb 18 05:49                      | 0° <b>∀</b>           | 1., 12, 0110 | morning mun vi                 | 2904 Oct 07 09:32                      | 0° m                         | .0 00 .0              |
|                     | 2902 Mar 14 04:20                      | $0^{\circ}\Upsilon$   |              | asc. node                      | 2904 Oct 15 05:15                      | 8° m/35'44                   |                       |
| evening rise        | 2902 Mar 26 23:12                      | 15° <b>Ƴ</b> 57'16    |              |                                | 2904 Nov 02 22:41                      | 0∘ <b>⊽</b>                  |                       |
| <i>8</i> 11         | 2902 Apr 07 06:16                      | 0°8                   |              |                                | 2904 Nov 28 02:31                      | 0°M                          |                       |
| asc. node           | 2902 Apr 30 10:14                      | 28° <b>8</b> 37'16    |              |                                | 2904 Dec 22 14:05                      | 0° <b>∡</b> ¹                |                       |
|                     | 2902 May 01 13:08                      | $\Pi^{\circ}0$        |              |                                | 2905 Jan 15 17:53                      | 8°0                          |                       |
|                     | 2902 May 26 02:09                      | 0ංම                   |              | desc. node                     | 2905 Feb 03 18:58                      | 23° <b>♂</b> 46'46           |                       |
|                     | 2902 Jun 19 22:49                      | $0^{\circ}\Omega$     |              |                                | 2905 Feb 08 18:25                      | 0° <b>≈</b>                  |                       |
|                     | 2902 Jul 15 06:21                      | 0° <b>m</b> p         |              |                                | 2905 Mar 04 18:13                      | 0° <b>)</b> €                |                       |
|                     | 2902 Aug 10 07:41                      | 0∘ <b>ত</b>           |              | morning set                    | 2905 Mar 21 15:03                      | 21° <b>)</b> €03'56          |                       |
| desc. node          | 2902 Aug 19 23:45                      | 10° <b>≏</b> 47'46    |              |                                | 2905 Mar 28 18:59                      | $0^{\circ}\mathbf{\Upsilon}$ |                       |
|                     | 2902 Sep 06 19:34                      | 0°M₊                  |              |                                | 2905 Apr 21 21:58                      | $9^{\circ}$ 8                |                       |
| evening max el      | 2902 Sep 21 11:56                      | 14°M47'50             | 46°12'57     |                                |  |                              |                       |
|                     | 2902 Oct 08 11:34                      | 0°⊀                   |              | superior conj                  | 2905 Apr 29 18:36                      | 9° <b>8</b> 44'39            | -1°00'44              |
| greatest brilliancy | 2902 Oct 31 17:05                      | 14° <b>₰</b> 02'25    | -4.8m        | minimum elong                  | 2905 Apr 30 04:52                      | 10° <b>8</b> 16'27           | 1°00'22               |
| retrograde          | 2902 Nov 09 22:20                      | 15° <b>∡</b> ³37'11   |              | max. Earth dist.               | 2905 May 03 00:20                      | 13° <b>8</b> 45'17           | 1.72733 AU            |
| evening set         | 2902 Nov 24 19:56                      | 11° <b>∡</b> 19'47    |              |                                | 2905 May 16 03:50                      | $\Pi^{\circ}0$               |                       |
| inferior conj       | 2902 Nov 30 14:37                      | 7° <b>∡</b> 757'15    | -2°40'18     | asc. node                      | 2905 May 27 22:09                      | 14° <b>Ⅲ</b> 30′07           |                       |
| minimum elong       | 2902 Nov 30 20:32                      | 7° <b>∡</b> ¹48'14    | 2°38'29      | evening rise                   | 2905 Jun 06 17:41                      | 26° <b>Ⅲ</b> 34′28           |                       |
| min. Earth dist.    | 2902 Dec 01 04:22                      | 7° <b>∡</b> ³36′17    | 0.26762 AU   |                                | 2905 Jun 09 12:36                      | 0ංම                          |                       |
| morning rise        | 2902 Dec 06 20:27                      | 4° <b>⋌</b> 18′08     |              |                                | 2905 Jul 04 00:03                      | $0 ^{\circ} \Omega$          |                       |
| asc. node           | 2902 Dec 11 02:51                      | 2° <b>҂</b> 16′52     |              |                                | 2905 Jul 28 14:29                      | 0° <b>m</b> ∕                |                       |
| direct              | 2902 Dec 21 04:46                      | 0° <b>≯</b> 12'08     |              |                                | 2905 Aug 22 09:13                      | 0∘ <b>ত</b>                  |                       |
| greatest brilliancy | 2902 Dec 31 23:09                      | 2° <b>҂</b> 22'57     | -4.9m        | desc. node                     | 2905 Sep 16 11:39                      | 0°M03'20                     |                       |
|                     | 2903 Feb 06 10:01                      | 0°ಕ                   |              |                                | 2905 Sep 16 10:32                      | 0°M₊                         |                       |
| morning max el      | 2903 Feb 09 19:50                      | 3° <b>る</b> 24'45     | 46°57'31     |                                | 2905 Oct 11 21:57                      | 0°⊀                          |                       |
|                     | 2903 Mar 06 13:38                      | 0° <b>≈</b>           |              |                                | 2905 Nov 07 03:26                      | 0°₹                          |                       |
| desc. node          | 2903 Apr 01 16:40                      | 0° <b>)</b> €02'49    |              | evening max el                 | 2905 Dec 03 13:29                      | 28° <b>る</b> 18'44           | 47°11'03              |
|                     | 2903 Apr 01 15:42                      | 0° <b>∀</b>           |              |                                | 2905 Dec 05 05:51                      | 0° <b>≈</b>                  |                       |
|                     | 2903 Apr 26 23:40                      | 0° <b>Υ</b>           |              | asc. node                      | 2906 Jan 07 14:48                      | 27°≈11'11                    |                       |
|                     | 2903 May 21 23:48                      | 0° <b>8</b>           |              | greatest brilliancy            | 2906 Jan 13 02:54                      | 29°≈41′09                    | -4.9m                 |
|                     | 2903 Jun 15 20:03                      | U°0<br>II°0           |              |                                | 2906 Jan 13 23:49                      | 0° <b>∀</b>                  |                       |
| ,                   | 2903 Jul 10 13:14                      | 0°9                   |              | retrograde                     | 2906 Jan 23 08:50                      | 1° <b>)</b> (41'41           |                       |
| asc. node           | 2903 Jul 23 19:50                      | 16°911'27             |              | . ,                            | 2906 Feb 01 09:03                      | 30°R≈                        |                       |
|                     | 2903 Aug 04 02:41                      | 0° <b>Ω</b>           |              | evening set                    | 2906 Feb 08 16:11                      | 26°≈25'47                    | 0.26092 ATT           |
| morning set         | 2903 Aug 11 06:11                      | 8° <b>Ω</b> 46'08     |              | min. Earth dist.               | 2906 Feb 12 05:05                      | 24°≈17'46                    | 0.26982 AU<br>7°47'06 |
| max. Earth dist.    | 2903 Aug 28 11:56<br>2903 Sep 13 13:45 | 0° Mp<br>19° Mp 53′05 | 1.72805 AU   | inferior conj<br>minimum elong | 2906 Feb 13 00:38<br>2906 Feb 12 15:22 | 23°≈47'36<br>24°≈01'55       | 7°45'38               |
| max. Earth dist.    | 2903 Sep 13 13.43                      | 19 110 33 03          | 1.72803 AU   | morning rise                   | 2906 Feb 16 14:52                      | 24 ≈01 55<br>21°≈36'50       | 7 43 36               |
| superior conj       | 2903 Sep 16 17:34                      | 23° m 48'05           | 1°24'58      | direct                         | 2906 Mar 05 12:44                      | 16°≈03'43                    |                       |
| minimum elong       | 2903 Sep 16 17:34<br>2903 Sep 16 17:06 | 23° M) 46'38          | 1°24'59      | greatest brilliancy            | 2906 Mar 14 14:25                      | 10 ≈03 43<br>17°≈37'41       | -4.9m                 |
| minimum clong       | 2903 Sep 10 17:00<br>2903 Sep 21 17:28 | 0° <b>⊡</b>           | 1 2137       | 51041051 Offinality            | 2906 Apr 04 13:00                      | 0° <b>H</b>                  | 1.7111                |
|                     | 2903 Oct 15 20:36                      | 0° <b>™</b>           |              | morning max el                 | 2906 Apr 24 08:33                      | 17° <b>)</b> (47'49          | 46°23'41              |
| evening rise        | 2903 Oct 24 04:14                      | 10°ML21'29            |              | desc. node                     | 2906 Apr 29 04:23                      | 22° <b>H</b> 36'28           | .0 25 .1              |
|                     | 2903 Nov 08 22:37                      | 0° <b>∡</b> ¹         |              |                                | 2906 May 06 08:39                      | 0°Υ                          |                       |
| desc. node          | 2903 Nov 12 09:29                      | 4° <b>≯</b> 18'13     |              |                                | 2906 Jun 02 19:50                      | 0°8                          |                       |
|                     | 2903 Dec 03 00:20                      | ರ°0                   |              |                                | 2906 Jun 28 23:33                      | 0° <b>I</b> I                |                       |
|                     | 2903 Dec 27 02:33                      | 0° <b>≈</b>           |              |                                | 2906 Jul 24 11:36                      | 0ಂತಾ                         |                       |
|                     | 2904 Jan 20 07:13                      | 0° <b>∀</b>           |              |                                | 2906 Aug 18 12:32                      | $0^{\circ}\Omega$            |                       |
|                     | 2904 Feb 13 18:32                      | $0^{\circ}\Upsilon$   |              | asc. node                      | 2906 Aug 20 07:32                      | 2° <b>Ω</b> 09'55            |                       |
| asc. node           | 2904 Mar 04 12:25                      | 23° <b>Ƴ</b> 43'10    |              |                                | 2906 Sep 12 03:58                      | 0° m/                        |                       |
|                     | 2904 Mar 09 20:03                      | 0°8                   |              |                                | 2906 Oct 06 11:36                      | 0∘ <del>⊽</del>              |                       |
|                     | 2904 Apr 05 02:18                      | 0°II                  |              | morning set                    | 2906 Oct 19 08:51                      | 16° <b>≏</b> 01'21           |                       |
| evening max el      | 2904 Apr 28 02:13                      | 24° <b>Ⅱ</b> 04′26    | 45°50'35     |                                | 2906 Oct 30 13:43                      | 0° <b>M</b>                  |                       |
|                     | 2904 May 04 07:21                      | 0°ಅ                   |              |                                | 2906 Nov 23 12:40                      | 0°⊀                          |                       |
| greatest brilliancy | 2904 Jun 05 04:17                      | 22°532'04             | -4.7m        | max. Earth dist.               | 2906 Nov 25 01:32                      | 1° <b>≯</b> 55'35            | 1.71441 AU            |
| retrograde          | 2904 Jun 16 05:23                      | 24°5945'11            |              |                                |  |                              |                       |
| desc. node          | 2904 Jun 24 02:09                      | 23° <b>©</b> 30'51    |              | superior conj                  | 2906 Nov 26 23:59                      | 4° <b>≯</b> 21'15            | 0°30'17               |
| evening set         | 2904 Jul 01 09:16                      | 20°518'08             |              | minimum elong                  | 2906 Nov 27 07:06                      | 4° <b>х</b> 43′36            | 0°29'57               |
| inferior conj       | 2904 Jul 07 17:27                      | 16° <b>©</b> 30'09    | -3°09'18     | desc. node                     | 2906 Dec 09 21:23                      | 20° <b>∡</b> 32′24           |                       |
|                     |  |                       |              |                                |  |                              |                       |

|                                | 2906 Dec 17 10:08                      | 0°ರ                          |            | greatest brilliancy               | 2909 May 27 04:17                      | 0° <b>8</b> 01'24                | -4.8m      |
|--------------------------------|--|------------------------------|------------|-----------------------------------|--|----------------------------------|------------|
| evening rise                   | 2907 Jan 06 20:05                      | 25° <b>る</b> 38'54           |            | 8                                 | 2909 May 27 02:39                      | 0°8                              |            |
| C                              | 2907 Jan 10 07:13                      | 0°≈                          |            | morning max el                    | 2909 Jul 05 07:32                      | 28° <b>8</b> 18'12               | 45°46'21   |
|                                | 2907 Feb 03 05:08                      | 0° <b>)</b> €                |            | -                                 | 2909 Jul 07 01:52                      | $\Pi^{\circ}0$                   |            |
|                                | 2907 Feb 27 05:52                      | $0^{\circ}\mathbf{\Upsilon}$ |            |                                   | 2909 Aug 04 22:49                      | $0$ $\circ$ $\odot$              |            |
|                                | 2907 Mar 23 12:22                      | $9^{\circ}$ 8                |            |                                   | 2909 Aug 31 13:23                      | $0^{\circ}\Omega$                |            |
| asc. node                      | 2907 Apr 02 00:21                      | 11° <b>8</b> 37'13           |            | asc. node                         | 2909 Sep 16 19:28                      | 19° <b>Ω</b> 01'32               |            |
|                                | 2907 Apr 17 04:27                      | $\Pi^{\circ}0$               |            |                                   | 2909 Sep 26 00:44                      | 0° <b>m</b>                      |            |
|                                | 2907 May 12 11:25                      | $0$ $\circ$                  |            |                                   | 2909 Oct 20 18:45                      | 0∘ <b>⊽</b>                      |            |
|                                | 2907 Jun 07 19:37                      | $0^{\circ}\Omega$            |            |                                   | 2909 Nov 14 01:39                      | $0^{\circ}$ M                    |            |
|                                | 2907 Jul 06 10:47                      | 0° <b>m</b>                  |            |                                   | 2909 Dec 08 02:12                      | 0°⊀                              |            |
| evening max el                 | 2907 Jul 08 19:04                      | 2°Mp 15'48                   | 45°26'53   | greatest brilliancy               | 2909 Dec 12 14:10                      | 5° <b>∡</b> ³38'24               | -3.9m      |
| desc. node                     | 2907 Jul 22 13:59                      | 14° <b>m</b> 37'17           |            |                                   | 2909 Dec 31 23:42                      | 0°る                              |            |
|                                | 2907 Aug 16 05:51                      | 0∘ <b>⊽</b>                  |            | morning set                       | 2910 Jan 01 02:10                      | 0°る07'44                         |            |
| greatest brilliancy            | 2907 Aug 16 12:25                      | 0° <b>£</b> 05'38            | -4.7m      | desc. node                        | 2910 Jan 06 09:07                      | 6°₹46'54                         |            |
| retrograde                     | 2907 Aug 26 08:39                      | 1° <b>≏</b> 49'41            |            |                                   | 2910 Jan 24 20:08                      | 0° <b>≈</b>                      |            |
| . ,                            | 2907 Sep 05 00:36                      | 30°R∭0                       |            |                                   | 2010 F 1 11 10 12                      | 22022104                         | 1012120    |
| evening set                    | 2907 Sep 13 09:25                      | 25° Mp 47'24                 | 0940!15    | superior conj                     | 2910 Feb 11 18:12<br>2910 Feb 11 07:19 | 22°≈32'04<br>21°≈57'55           |            |
| inferior conj<br>minimum elong | 2907 Sep 16 16:12<br>2907 Sep 16 15:26 | 23° m/46'20<br>23° m/47'32   |            | minimum elong<br>max. Earth dist. | 2910 Feb 11 07:19<br>2910 Feb 14 05:11 | 21°≈37'33<br>25°≈37'19           | 1.71256 AU |
| min. Earth dist.               | 2907 Sep 10 13:20<br>2907 Sep 17 05:01 | 23° Mp 26'24                 |            | max. Earth dist.                  | 2910 Feb 14 03:11<br>2910 Feb 17 16:51 | 23 <b>≈</b> 37 19<br>0° <b>∺</b> | 1./1230 AU |
| morning rise                   | 2907 Sep 17 03:01<br>2907 Sep 19 21:19 | 23 m/2024<br>21° m/47'30     | 0.28032 AU |                                   | 2910 Mar 13 15:21                      | 0°Υ                              |            |
| direct                         | 2907 Scp 19 21:19<br>2907 Oct 08 03:51 | 15° Mp 33'23                 |            | evening rise                      | 2910 Mar 13 13:21<br>2910 Mar 24 11:15 | 13° <b>Υ</b> 30'56               |            |
| greatest brilliancy            | 2907 Oct 19 02:20                      | 17° <b>m</b> 45'18           | -4 8m      | evening rise                      | 2910 Apr 06 17:19                      | 0°8                              |            |
| greatest offinaley             | 2907 Nov 07 20:33                      | 0∘ <b>ರ</b>                  | 1.0111     | asc. node                         | 2910 Apr 29 12:22                      | 28° <b>8</b> 09'31               |            |
| asc. node                      | 2907 Nov 12 17:01                      | 4° <b>ഫ</b> 03'39            |            | use. House                        | 2910 May 01 00:19                      | 0°II                             |            |
| morning max el                 | 2907 Nov 27 09:06                      | 17° <b>£</b> 54'22           | 46°36'08   |                                   | 2910 May 25 13:36                      | 0° <b>©</b>                      |            |
| 5 5                            | 2907 Dec 08 23:06                      | 0° <b>M</b>                  |            |                                   | 2910 Jun 19 10:48                      | $0^{\circ}\Omega$                |            |
|                                | 2908 Jan 04 12:51                      | 0° <b>∡</b> ¹                |            |                                   | 2910 Jul 14 19:17                      | 0° m/y                           |            |
|                                | 2908 Jan 29 17:42                      | 0°ರ                          |            |                                   | 2910 Aug 09 22:30                      | 0∘ <b>⊽</b>                      |            |
|                                | 2908 Feb 23 09:17                      | 0°≈                          |            | desc. node                        | 2910 Aug 19 01:44                      | 10° <b>ჲ</b> 09'22               |            |
| desc. node                     | 2908 Mar 03 06:44                      | 10° <b>≈</b> 54′21           |            |                                   | 2910 Sep 06 14:46                      | $0^{\circ}$ M                    |            |
|                                | 2908 Mar 18 19:24                      | 0° <b>∀</b>                  |            | evening max el                    | 2910 Sep 19 00:32                      | 12°M25'22                        | 46°10'45   |
|                                | 2908 Apr 12 03:43                      | $0^{\circ}\mathbf{\Upsilon}$ |            |                                   | 2910 Oct 09 01:07                      | 0° <b>∡</b>                      |            |
|                                | 2908 May 06 12:14                      | $9^{\circ}$ 8                |            | greatest brilliancy               | 2910 Oct 29 05:55                      | 11° <b>₹</b> 37'22               | -4.8m      |
|                                | 2908 May 30 21:44                      | $\Pi^{\circ}0$               |            | retrograde                        | 2910 Nov 07 10:47                      | 13° <b>∡</b> 11′58               |            |
| morning set                    | 2908 Jun 01 01:33                      | 1° <b>Ⅱ</b> 25′26            |            | evening set                       | 2910 Nov 22 10:44                      | 8° <b>₰</b> ′50'48               |            |
| asc. node                      | 2908 Jun 24 10:00                      | 0° <b>©</b> 06'35            |            | inferior conj                     | 2910 Nov 28 03:18                      | 5° <b>₹</b> 31'21                | -3°02'53   |
|                                | 2908 Jun 24 07:51                      | 0ಂತಾ                         |            | minimum elong                     | 2910 Nov 28 09:58                      | 5° <b>≯</b> 21'12                |            |
|                                |  |                              |            | min. Earth dist.                  | 2910 Nov 28 18:20                      | 5° <b>∡</b> °08'30               | 0.26812 AU |
| superior conj                  | 2908 Jul 07 23:22                      | 16° <b>©</b> 45'56           |            | morning rise                      | 2910 Dec 04 08:29                      | 1° <b>∡</b> 753′19               |            |
| minimum elong                  | 2908 Jul 07 17:16                      | 16° <b>©</b> 27'11           | 0°31'18    | _                                 | 2910 Dec 08 06:42                      | 30°RM                            |            |
| max. Earth dist.               | 2908 Jul 07 10:35                      | 16°906'39                    | 1.73556 AU | asc. node                         | 2910 Dec 10 04:56                      | 29°M15'28                        |            |
|                                | 2908 Jul 18 17:43                      | 0° <b>N</b>                  |            | direct                            | 2910 Dec 18 18:01                      | 27°M45'03                        | 4.0        |
|                                | 2908 Aug 12 02:47                      | 0° m/                        |            | greatest brilliancy               | 2910 Dec 29 14:01                      | 29°M57'49                        | -4.9m      |
| evening rise                   | 2908 Aug 12 21:24<br>2908 Sep 05 11:28 | 0° Mp 57'17                  |            |                                   | 2910 Dec 29 16:16                      | 0°⋜                              |            |
|                                | 2908 Sep 05 11:28<br>2908 Sep 29 20:47 | 0° <b>™</b><br>0° <b>亚</b>   |            | morning max el                    | 2911 Feb 06 09:57<br>2911 Feb 07 10:13 | 0°8<br>1° <b>3</b> 01'15         | 16057156   |
| desc. node                     | 2908 Oct 13 23:36                      | 17°M19'36                    |            | morning max cr                    | 2911 Mar 06 06:28                      | 0°≈                              | 40 37 30   |
| dese. Hode                     | 2908 Oct 13 23:30<br>2908 Oct 24 07:48 | 0° <b>₹</b>                  |            | desc. node                        | 2911 Mar 31 18:42                      | 0 ∞<br>29°≈27'10                 |            |
|                                | 2908 Oct 24 07:48<br>2908 Nov 17 21:31 | 0°중                          |            | desc. Houc                        | 2911 Mai 31 18:42<br>2911 Apr 01 05:53 | 29 <b>≈</b> 27 10<br>0° <b>H</b> |            |
|                                | 2908 Dec 12 16:19                      | 0° <b>≈</b>                  |            |                                   | 2911 Apr 26 12:28                      | 0°Υ                              |            |
|                                | 2909 Jan 06 23:09                      | 0° <b>∀</b>                  |            |                                   | 2911 May 21 11:48                      | 0°8                              |            |
|                                | 2909 Feb 02 13:14                      | 0°Υ                          |            |                                   | 2911 Jun 15 07:32                      | 0°II                             |            |
| asc. node                      | 2909 Feb 04 02:33                      | 1° <b>Υ</b> 40'13            |            |                                   | 2911 Jul 10 00:23                      | 0°©                              |            |
| evening max el                 | 2909 Feb 13 15:48                      | 11° <b>Y</b> 38'23           | 46°56'01   | asc. node                         | 2911 Jul 22 21:45                      | 15° <b>©</b> 43'37               |            |
| Č                              | 2909 Mar 05 12:38                      | 0°8                          |            |                                   | 2911 Aug 03 13:39                      | $0^{\circ}\Omega$                |            |
| greatest brilliancy            | 2909 Mar 25 15:57                      | 12° <b>8</b> 31'05           | -4.8m      | morning set                       | 2911 Aug 08 23:59                      | 6° <b>Ω</b> 39'46                |            |
| retrograde                     | 2909 Apr 05 03:31                      | 14° <b>8</b> 34'39           |            | -                                 | 2911 Aug 27 22:50                      | 0° <b>m</b>                      |            |
| evening set                    | 2909 Apr 21 22:08                      | 9° <b>8</b> 06'23            |            | max. Earth dist.                  | 2911 Sep 11 09:50                      | 17° <b>m</b> 52'48               | 1.72848 AU |
| inferior conj                  | 2909 Apr 26 07:44                      | 6° <b>8</b> 23'09            | 6°31'44    |                                   |  |                                  |            |
| minimum elong                  | 2909 Apr 26 17:45                      | 6° <b>8</b> 07'22            | 6°29'42    | superior conj                     | 2911 Sep 14 10:51                      | 21°M 39'01                       | 1°24'49    |
| min. Earth dist.               | 2909 Apr 26 05:25                      | 6° <b>8</b> 26'48            | 0.28259 AU | minimum elong                     | 2911 Sep 14 09:40                      | 21°M 35'22                       | 1°24'49    |
| morning rise                   | 2909 May 01 13:41                      | 3° <b>8</b> 11'00            |            |                                   | 2911 Sep 21 04:24                      | 0∘ <b>⊽</b>                      |            |
|                                | 2909 May 08 05:39                      | 30° <b>₹</b> Υ               |            |                                   | 2911 Oct 15 07:39                      | 0°M₊                             |            |
| direct                         | 2909 May 17 11:12                      | 28° <b>Y</b> 17'59           |            | evening rise                      | 2911 Oct 21 18:50                      | 8°M03'00                         |            |
| desc. node                     | 2909 May 26 16:13                      | 29° <b>Y</b> 51′21           |            |                                   | 2911 Nov 08 09:51                      | 0° <b>⊼</b>                      |            |
|                                |  |                              |            |                                   |  |                                  |            |

| desc. node          | 2911 Nov 11 11:35   | 3° <b>х</b> 49′40                        |            |                             | 2914 Jul 23 23:43   | $0$ $\circ$ $\odot$                    |            |
|---------------------|---|--|------------|-----------------------------|---|--|------------|
|                     | 2911 Dec 02 11:48   | 0°ප                                      |            |                             | 2914 Aug 18 00:04   | $0 {\circ} \Omega$                     |            |
|                     | 2911 Dec 26 14:19   | 0° <b>≈</b>                              |            | asc. node                   | 2914 Aug 19 09:39   | 1° <b>Ω</b> 41'33                      |            |
|                     | 2912 Jan 19 19:24   | 0° <b>∀</b>                              |            |                             | 2914 Sep 11 15:11   | 0° <b>m</b> ∕                          |            |
|                     | 2912 Feb 13 07:21   | $0^{\circ}$ Y                            |            |                             | 2914 Oct 05 22:41   | 0∘ <b>ರ</b>                            |            |
| asc. node           | 2912 Mar 03 14:27   | 23° <b>Y</b> 08'47                       |            | morning set                 | 2914 Oct 17 00:18   | 13° <b>≏</b> 45'30                     |            |
|                     | 2912 Mar 09 10:02   | $B_{00}$                                 |            |                             | 2914 Oct 30 00:48   | $0^{\circ}$ M.                         |            |
|                     | 2912 Apr 04 18:55   | $\Pi$ $^{\circ}0$                        |            | max. Earth dist.            | 2914 Nov 22 08:16   | 29° <b>M</b> 11'21                     | 1.71479 AU |
| evening max el      | 2912 Apr 25 18:26   | 21° <b>Ⅱ</b> 52'58                       | 45°52'37   |                             | 2914 Nov 22 23:48   | 0° <b>∡</b> ¹                          |            |
|                     | 2912 May 04 08:47   | $0$ $\circ$                              |            |                             |   |  |            |
| greatest brilliancy | 2912 Jun 02 19:58   | 20° <b>©</b> 21'56                       | -4.7m      | superior conj               | 2914 Nov 24 12:20   | 1° <b>∡</b> ¹54'34                     | 0°33'47    |
| retrograde          | 2912 Jun 13 22:29   | 22° <b>©</b> 36'07                       |            | minimum elong               | 2914 Nov 24 20:06   | 2° <b>∡</b> 18'55                      | 0°33'25    |
| desc. node          | 2912 Jun 23 04:05   | 20° <b>©</b> 53'33                       |            | desc. node                  | 2914 Dec 08 23:24   | 20° <b>∡</b> °03'33                    |            |
| evening set         | 2912 Jun 29 00:57   | 18° <b>©</b> 09'59                       |            |                             | 2914 Dec 16 21:20   | 8°0                                    |            |
| inferior conj       | 2912 Jul 05 09:50   | 14° <b>©</b> 20'46                       | -2°50'44   | evening rise                | 2915 Jan 04 06:26   | 23° <b>පි</b> 05'11                    |            |
| minimum elong       | 2912 Jul 05 03:49   | 14° <b>©</b> 30'10                       | 2°49'03    |                             | 2915 Jan 09 18:30   | 0° <b>≈</b>                            |            |
| min. Earth dist.    | 2912 Jul 05 04:41   | 14° <b>©</b> 28'49                       | 0.28950 AU |                             | 2915 Feb 02 16:31   | 0° <b>∀</b>                            |            |
| morning rise        | 2912 Jul 11 06:52   | 10°9548'08                               |            |                             | 2915 Feb 26 17:24   | $0^{\circ}$ Y                          |            |
| direct              | 2912 Jul 26 23:52   | 6° <b>ॐ</b> 04'25                        |            |                             | 2915 Mar 23 00:11   | 0° <b>႘</b>                            |            |
| greatest brilliancy | 2912 Aug 06 06:53   | 7° <b>©</b> 58'48                        | -4.7m      | asc. node                   | 2915 Apr 01 02:30   | 11° <b>8</b> 07'12                     |            |
|                     | 2912 Sep 07 11:03   | $0^{\circ}\Omega$                        |            |                             | 2915 Apr 16 16:48   | $\Pi^{\circ}0$                         |            |
| morning max el      | 2912 Sep 13 22:28   | 6° <b>Ω</b> 03'52                        | 45°52'35   |                             | 2915 May 12 00:50   | $0$ $\circ$ $\odot$                    |            |
|                     | 2912 Oct 07 02:15   | o° mp                                    |            |                             | 2915 Jun 07 11:19   | $0^{\circ}\Omega$                      |            |
| asc. node           | 2912 Oct 14 07:22   | 7° <b>™</b> 57'58                        |            |                             | 2915 Jul 06 09:01   | 0° <b>™</b>                            |            |
|                     | 2912 Nov 02 12:39   | 0∘ <b>ত</b>                              |            | evening max el              | 2915 Jul 06 09:33   | 0°Mp01'16                              | 45°26'32   |
|                     | 2912 Nov 27 15:16   | 0° <b>M</b>                              |            | desc. node                  | 2915 Jul 21 16:00   | 13° <b>m</b> 36'11                     |            |
|                     | 2912 Dec 22 02:13   | 0° <b>∡</b> 7                            |            | greatest brilliancy         | 2915 Aug 14 02:49   | 27° <b>m</b> 52'47                     | -4.7m      |
|                     | 2913 Jan 15 05:37   | 0°ප                                      |            | retrograde                  | 2915 Aug 23 23:07   | 29° <b>m</b> 37'15                     |            |
| desc. node          | 2913 Feb 02 20:54   | 23° <b>る</b> 16'42                       |            | evening set                 | 2915 Sep 10 23:22   | 23° Mp 36'45                           |            |
|                     | 2913 Feb 08 05:54   | 0° <b>≈</b>                              |            | inferior conj               | 2915 Sep 14 07:42   | 21°M 33'20                             |            |
|                     | 2913 Mar 04 05:33   | 0° <b>∀</b>                              |            | minimum elong               | 2915 Sep 14 06:07   | 21° <b>m</b> 35'48                     |            |
| morning set         | 2913 Mar 19 02:54   | 18° <b>¥</b> 36′03                       |            | min. Earth dist.            | 2915 Sep 14 19:53   | 21°M) 14'21                            | 0.28676 AU |
|                     | 2913 Mar 28 06:11   | 0° <b>Υ</b>                              |            | morning rise                | 2915 Sep 17 12:42   | 19° <b>m</b> 34'28                     |            |
|                     | 2913 Apr 21 09:02   | $9^{\circ}$ 8                            |            | direct                      | 2915 Oct 05 19:15   | 13° <b>m</b> 19'45                     |            |
|                     |   |  |            | greatest brilliancy         | 2915 Oct 16 17:59   | 15° To 31'07                           | -4.8m      |
| superior conj       | 2913 Apr 27 09:14   | 7° <b>8</b> 27'05                        |            |                             | 2915 Nov 08 06:06   | 0∘ <b>⊽</b>                            |            |
| minimum elong       | 2913 Apr 27 19:33   | 7° <b>8</b> 59'03                        |            | asc. node                   | 2915 Nov 11 19:07   | 3° <b>Ω</b> 03'13                      | 46024124   |
| max. Earth dist.    | 2913 Apr 30 18:18   |  | 1.72682 AU | morning max el              | 2915 Nov 24 22:39   | 15° <b>Ω</b> 32'05                     | 46°34'34   |
| 1                   | 2913 May 15 14:49   | 0° <b>П</b>                              |            |                             | 2915 Dec 08 17:36   | 0°M<br>0°. <b>7</b>                    |            |
| asc. node           | 2913 May 27 00:13<br>2913 Jun 04 10:54                      | 14° <b>Ⅲ</b> 02'41<br>24° <b>Ⅲ</b> 26'10 |            |                             | 2916 Jan 04 03:46<br>2916 Jan 29 07:04                      | 0°る                                    |            |
| evening rise        |   | 0°95                                     |            |                             |   | 0°≈                                    |            |
|                     | 2913 Jun 08 23:36<br>2913 Jul 03 11:11                      | 0°Ω<br>0 €3                              |            | desc. node                  | 2916 Feb 22 21:47<br>2916 Mar 02 08:54                      | 0 ≈<br>10°≈23'22                       |            |
|                     | 2913 Jul 28 01:57   | 0° <b>m</b> y                            |            | uese. Houe                  | 2916 Mar 18 07:19   | 10 <b>≈</b> 23 22                      |            |
|                     | 2913 Aug 21 21:14   | 0° <b>ت</b><br>الله                      |            |                             | 2916 Apr 11 15:12   | 0°Υ                                    |            |
| desc. node          | 2913 Sep 15 13:41   | 29° <b>₽</b> 31'09                       |            |                             | 2916 May 05 23:25   | %8<br>0°B                              |            |
| dese. Hode          | 2913 Sep 15 13:41<br>2913 Sep 15 23:25                      | 0°M                                      |            | morning set                 | 2916 May 29 18:26   | 29° <b>8</b> 16'08                     |            |
|                     | 2913 Oct 11 12:17   | 0° <b>⊼</b> 7                            |            | morning sec                 | 2916 May 30 08:42   | 0°П                                    |            |
|                     | 2913 Nov 06 20:32   | 5°0                                      |            | asc. node                   | 2916 Jun 23 11:57   | 29° <b>∏</b> 39'12                     |            |
| evening max el      | 2913 Dec 01 04:26   | 25° <b>る</b> 56'49                       | 47°09'59   |                             | 2916 Jun 23 18:43   | 0ಂತಾ                                   |            |
| <i>y</i>            | 2913 Dec 05 06:20   | 0° <b>≈</b>                              |            | max. Earth dist.            | 2916 Jul 05 05:16   | 14° <b>©</b> 03'21                     | 1.73552 AU |
| asc. node           | 2914 Jan 06 16:44   | 25° <b>≈</b> 30'13                       |            |                             |   |  |            |
| greatest brilliancy | 2914 Jan 10 16:07   | 27°≈13'15                                | -4.9m      | superior conj               | 2916 Jul 05 17:25   | 14° <b>5</b> 540'40                    | 0°28'36    |
| retrograde          | 2914 Jan 20 22:23   | 29° <b>≈</b> 13'29                       |            | minimum elong               | 2916 Jul 05 11:48   | 14° <b>©</b> 23'25                     | 0°28'21    |
| evening set         | 2914 Feb 06 01:09   | 24° <b>≈</b> 04'19                       |            |                             | 2916 Jul 18 04:33   | $0^{\circ}\Omega$                      |            |
| min. Earth dist.    | 2914 Feb 09 17:46   | 21° <b>≈</b> 50'48                       | 0.26933 AU | evening rise                | 2916 Aug 10 16:00   | 28° <b>Ω</b> 53'17                     |            |
| inferior conj       | 2914 Feb 10 13:30   | 21° <b>≈</b> 20′21                       | 7°35'06    |                             | 2916 Aug 11 13:41   | 0° <b>m</b> y                          |            |
| minimum elong       | 2914 Feb 10 03:49   | 21° <b>≈</b> 35'17                       | 7°33'27    |                             | 2916 Sep 04 22:31   | 0∘ <b>⊽</b>                            |            |
| morning rise        | 2914 Feb 14 06:50   | 19° <b>≈</b> 05'03                       |            |                             | 2916 Sep 29 08:09   | $0^{\circ}$ M.                         |            |
| direct              | 2914 Mar 03 01:48   | 13° <b>≈</b> 37'30                       |            | desc. node                  | 2916 Oct 13 01:44   | 16°M50'32                              |            |
| greatest brilliancy | 2914 Mar 12 02:53   | 15° <b>≈</b> 11'05                       | -4.9m      |                             | 2916 Oct 23 19:39   | 0°⊀                                    |            |
|                     | 2914 Apr 05 01:27   | 0° <b>)</b> €                            |            |                             | 2916 Nov 17 10:01   | 5°0                                    |            |
| morning max el      | 2914 Apr 21 21:52   | 15° <b>¥</b> 25′06                       | 46°25'10   |                             | 2916 Dec 12 05:47   | 0° <b>≈</b>                            |            |
| desc. node          | 2914 Apr 28 06:32   | 21° <b>)</b> 47'43                       |            |                             | 2917 Jan 06 14:19   | 0° <b>∀</b>                            |            |
|                     |   | 0.000                                    |            |                             | 2017 F 1 02 00 21   | $0^{\circ}\Upsilon$                    |            |
|                     | 2914 May 06 03:56   | 0° <b>Υ</b>                              |            |                             | 2917 Feb 02 08:21   |  |            |
|                     | 2914 May 06 03:56<br>2914 Jun 02 10:53<br>2914 Jun 28 12:41 | 0°Β<br>0°γγ                              |            | asc. node<br>evening max el | 2917 Feb 02 08:21<br>2917 Feb 03 04:37<br>2917 Feb 11 05:04 | 0° <b>Υ</b> 54'01<br>9° <b>Υ</b> 14'22 | 46°57'52   |

|                     | 2917 Mar 06 01:39                      | 0° <b>႘</b>                       |            |                           | 2919 Aug 03 00:20                      | 0°N                              |            |
|---------------------|--|-----------------------------------|------------|---------------------------|--|----------------------------------|------------|
| greatest brilliancy | 2917 Mar 00 01:39<br>2917 Mar 23 08:28 | 10° <b>8</b> 15'32                | 1 8m       | morning set               | 2919 Aug 06 17:42                      | 4° <b>Ω</b> 34'03                |            |
| retrograde          | 2917 Apr 02 18:45                      | 12° <b>8</b> 18'30                | -4.0111    | morning set               | 2919 Aug 27 09:27                      | 0°m)                             |            |
| evening set         | 2917 Apr 19 16:25                      | 6° <b>8</b> 45'50                 |            | max. Earth dist.          | 2919 Sep 09 05:05                      | 15° <b>m</b> ) 50'48             | 1.72891 AU |
| inferior conj       | 2917 Apr 23 22:59                      | 4° <b>8</b> 07'21                 | 6°45'54    | max. Bartii dist.         | 2)1) Sep 0) 03.03                      | 13 11/20 10                      | 1.72071710 |
| minimum elong       | 2917 Apr 24 08:56                      | 3° <b>8</b> 51'41                 | 6°43'58    | superior conj             | 2919 Sep 12 04:10                      | 19° <b>m</b> 30'56               | 1°24'33    |
| min. Earth dist.    | 2917 Apr 23 20:39                      | 4° <b>8</b> 11'03                 | 0.28228 AU | minimum elong             | 2919 Sep 12 02:17                      | 19° m) 25'06                     |            |
| morning rise        | 2917 Apr 29 01:42                      | 0° <b>8</b> 59'50                 |            | Č                         | 2919 Sep 20 15:05                      | 0∘ <u>⊽</u>                      |            |
|                     | 2917 Apr 30 20:55                      | 30° <b>₹</b> Υ                    |            |                           | 2919 Oct 14 18:27                      | $0^{\circ}$ M                    |            |
| direct              | 2917 May 15 01:16                      | 26° <b>Y</b> 02'33                |            | evening rise              | 2919 Oct 19 09:38                      | 5°M45'56                         |            |
| greatest brilliancy | 2917 May 24 18:54                      | 27° <b>Y</b> 46'14                | -4.8m      | -                         | 2919 Nov 07 20:50                      | 0°⊀                              |            |
| desc. node          | 2917 May 25 18:12                      | 28° <b>Y</b> 06'54                |            | desc. node                | 2919 Nov 10 13:33                      | 3° <b>҂</b> 21′30                |            |
|                     | 2917 May 30 03:18                      | 0°8                               |            |                           | 2919 Dec 01 22:59                      | 5°0                              |            |
| morning max el      | 2917 Jul 02 22:20                      | 26° <b>8</b> 04'15                | 45°47'05   |                           | 2919 Dec 26 01:47                      | 0° <b>≈</b>                      |            |
|                     | 2917 Jul 06 23:35                      | $\Pi^{\circ}0$                    |            |                           | 2920 Jan 19 07:16                      | 0° <b>∀</b>                      |            |
|                     | 2917 Aug 04 14:20                      | $0$ $\circ$ $\odot$               |            |                           | 2920 Feb 12 19:53                      | $0^{\circ}$ Y                    |            |
|                     | 2917 Aug 31 02:36                      | $0^{\circ}\Omega$                 |            | asc. node                 | 2920 Mar 02 16:33                      | 22° <b>Y</b> 35'26               |            |
| asc. node           | 2917 Sep 15 21:34                      | 18° <b>Ω</b> 30'58                |            |                           | 2920 Mar 08 23:48                      | $0^{\circ}$ 8                    |            |
|                     | 2917 Sep 25 12:51                      | 0° <b>™</b>                       |            |                           | 2920 Apr 04 11:31                      | $\Pi$ °0                         |            |
|                     | 2917 Oct 20 06:17                      | 0∘ <b>⊽</b>                       |            | evening max el            | 2920 Apr 23 11:09                      | 19° <b>Ⅱ</b> 43′24               | 45°54'32   |
|                     | 2917 Nov 13 12:53                      | 0° <b>M</b> ₊                     |            |                           | 2920 May 04 11:19                      | 0                                |            |
|                     | 2917 Dec 07 13:19                      | 0°⊀                               |            | greatest brilliancy       | 2920 May 31 12:20                      | 18° <b>©</b> 13'11               | -4.7m      |
| greatest brilliancy | 2917 Dec 14 22:57                      | 9° <b>∡</b> 16'56                 | -3.9m      | retrograde                | 2920 Jun 11 15:27                      | 20° <b>©</b> 27'26               |            |
| morning set         | 2917 Dec 29 12:48                      | 27° <b>∡</b> ³35′29               |            | desc. node                | 2920 Jun 22 06:05                      | 18° <b>©</b> 12'25               |            |
|                     | 2917 Dec 31 10:46                      | 0°ಕ                               |            | evening set               | 2920 Jun 26 16:49                      | 16° <b>©</b> 02'23               |            |
| desc. node          | 2918 Jan 05 11:07                      | 6° <b>る</b> 18'24                 |            | inferior conj             | 2920 Jul 03 02:11                      | 12° <b>©</b> 12'04               |            |
|                     | 2918 Jan 24 07:10                      | 0° <b>≈</b>                       |            | minimum elong             | 2920 Jul 02 20:47                      | 12° <b>©</b> 20'31               |            |
|                     |  |                                   |            | min. Earth dist.          | 2920 Jul 02 20:45                      |                                  | 0.28932 AU |
| superior conj       | 2918 Feb 09 04:19                      | 19° <b>≈</b> 58′28                |            | morning rise              | 2920 Jul 09 01:03                      | 8° <b>©</b> 37'00                |            |
| minimum elong       | 2918 Feb 08 17:00                      | 19°≈22'52                         |            | direct                    | 2920 Jul 24 16:35                      | 3°956'13                         |            |
| max. Earth dist.    | 2918 Feb 11 08:19                      | 22°≈41'50                         | 1.71231 AU | greatest brilliancy       | 2920 Aug 03 21:52                      | 5° <b>©</b> 49'19                | -4.7m      |
|                     | 2918 Feb 17 03:51                      | 0° <b>ℋ</b><br>0° <b>Ƴ</b>        |            |                           | 2920 Sep 07 11:23                      | 0° <b>Ω</b>                      | 45051107   |
|                     | 2918 Mar 13 02:20                      | • •                               |            | morning max el            | 2920 Sep 11 14:27                      | 3° <b>Ω</b> 54'13                | 45°51'27   |
| evening rise        | 2918 Mar 21 22:46<br>2918 Apr 06 04:20 | 11° <b>Y</b> 02'59<br>0° <b>と</b> |            | asc. node                 | 2920 Oct 06 18:16<br>2920 Oct 13 09:24 | 0° <b>ዀ</b><br>7° <b>ሙ</b> 21'25 |            |
| asc. node           | 2918 Apr 06 04.20<br>2918 Apr 28 14:23 | 27° <b>8</b> 41'32                |            | asc. node                 | 2920 Oct 13 09.24<br>2920 Nov 02 02:06 | 0° <b>ت</b><br>1∭2123            |            |
| asc. Houe           | 2918 Apr 30 11:26                      | 0°II                              |            |                           | 2920 Nov 27 03:36                      | 0 <b>==</b><br>0°M₊              |            |
|                     | 2918 May 25 00:58                      | 0ಂ <b>ತಾ</b>                      |            |                           | 2920 Dec 21 13:56                      | 0° <b>⊼</b> ¹                    |            |
|                     | 2918 Jun 18 22:42                      | 0° <b>U</b>                       |            |                           | 2921 Jan 14 16:58                      | %ਰ                               |            |
|                     | 2918 Jul 14 08:12                      | 0° m/y                            |            | desc. node                | 2921 Feb 01 23:03                      | 22° <b>る</b> 48'35               |            |
|                     | 2918 Aug 09 13:24                      | 0∘ <b>ರ</b><br>೧.ಬಿ               |            | dese. Hode                | 2921 Feb 07 17:00                      | 0°≈                              |            |
| desc. node          | 2918 Aug 18 03:51                      | 9° <b>₽</b> 31'23                 |            |                           | 2921 Mar 03 16:27                      | 0° <b>∀</b>                      |            |
|                     | 2918 Sep 06 10:22                      | 0°M                               |            | morning set               | 2921 Mar 16 15:01                      | 16° <b>¥</b> 10′21               |            |
| evening max el      | 2918 Sep 16 14:10                      | 10°M06'08                         | 46°08'37   | 8                         | 2921 Mar 27 16:56                      | $0^{\circ}\Upsilon$              |            |
| C                   | 2918 Oct 09 18:48                      | 0°⊀                               |            |                           | 2921 Apr 20 19:41                      | 0°8                              |            |
| greatest brilliancy | 2918 Oct 26 18:22                      | 9° <b>х</b> 13′03                 | -4.8m      |                           | •                                      |                                  |            |
| retrograde          | 2918 Nov 04 23:49                      | 10° <b>∡</b> °47'48               |            | superior conj             | 2921 Apr 24 23:56                      | 5° <b>8</b> 10'53                | -1°05'33   |
| evening set         | 2918 Nov 20 01:49                      | 6° <b>≯</b> 22'53                 |            | minimum elong             | 2921 Apr 25 10:13                      | 5° <b>8</b> 42'48                | 1°05'14    |
| inferior conj       | 2918 Nov 25 16:03                      | 3° <b>х</b> 06′30                 | -3°25'00   | max. Earth dist.          | 2921 Apr 28 13:24                      | 9° <b>8</b> 35'45                | 1.72633 AU |
| minimum elong       | 2918 Nov 25 23:25                      | 2° <b>∡</b> 55′19                 | 3°22'48    |                           | 2921 May 15 01:25                      | $\Pi$ $^{\circ}0$                |            |
| min. Earth dist.    | 2918 Nov 26 07:59                      | 2° <b>∡</b> ⁴42'19                | 0.26863 AU | asc. node                 | 2921 May 26 02:10                      | 13° <b>Ⅱ</b> 35'59               |            |
|                     | 2918 Nov 30 22:20                      | 30°RM                             |            | evening rise              | 2921 Jun 02 03:57                      | 22° <b>Ⅱ</b> 18′20               |            |
| morning rise        | 2918 Dec 01 20:22                      | 29°M29'56                         |            |                           | 2921 Jun 08 10:14                      | $0$ $\circ$ $\odot$              |            |
| asc. node           | 2918 Dec 09 06:49                      | 26°M20'57                         |            |                           | 2921 Jul 02 21:59                      | $0$ $^{\circ}\Omega$             |            |
| direct              | 2918 Dec 16 07:47                      | 25°M19'19                         |            |                           | 2921 Jul 27 13:03                      | 0° <b>™</b>                      |            |
| greatest brilliancy | 2918 Dec 27 04:15                      | 27°M33'04                         | -4.9m      |                           | 2921 Aug 21 08:53                      | 0∘ <b>ত</b>                      |            |
|                     | 2919 Jan 01 10:19                      | 0° <b>⊼</b>                       |            | desc. node                | 2921 Sep 14 15:48                      | 29° <b>Ω</b> 00'16               |            |
| morning max el      | 2919 Feb 05 01:09                      | 28° <b>∡</b> 740′08               | 46°58'07   |                           | 2921 Sep 15 11:58                      | 0°M                              |            |
|                     | 2919 Feb 06 08:32                      | 0° <b>ප</b>                       |            |                           | 2921 Oct 11 02:21                      | 0° <b>⊼</b>                      |            |
| 1 1                 | 2919 Mar 05 22:44                      | 0°≈                               |            |                           | 2921 Nov 06 13:33                      | 0°る                              | 47000143   |
| desc. node          | 2919 Mar 30 20:48                      | 28°≈52'27                         |            | evening max el            | 2921 Nov 28 18:51                      | 23°₹34'35                        | 4 / 508 42 |
|                     | 2919 Mar 31 19:44                      | 0° <b>∀</b>                       |            | 000 mc 1-                 | 2921 Dec 05 07:34                      | 0°≈<br>22°2046146                |            |
|                     | 2919 Apr 26 01:03                      | 0°Υ<br>0°¥                        |            | asc. node                 | 2922 Jan 05 18:52                      | 23°≈46'46                        | 4.0        |
|                     | 2919 May 20 23:36                      | 0°B<br>0°B                        |            | greatest brilliancy       | 2922 Jan 08 06:04                      | 24°≈47'17<br>26°≈46'21           | -4.9m      |
|                     | 2919 Jun 14 18:48<br>2919 Jul 09 11:16 | 0ംខ<br>0.п                        |            | retrograde<br>evening set | 2922 Jan 18 11:29<br>2922 Feb 03 10:11 | 26°≈46'21<br>21°≈44'05           |            |
| asc. node           | 2919 Jul 09 11:16<br>2919 Jul 21 23:50 | 15° <b>©</b> 17'05                |            | min. Earth dist.          | 2922 Feb 03 10:11<br>2922 Feb 07 06:56 | 21°≈44°05<br>19°≈24'30           | 0.26881 AU |
| asc. nouc           | 2)1) Jul 21 23.30                      | 15 -21/03                         |            | mm. Darm uist.            | 2722100 07 00.30                       | 17 ~~24 30                       | 0.20001 AU |

| inferior conj       | 2922 Feb 08 02:22                      | 18° <b>≈</b> 54′28                 | 7°22'09    |                     | 2924 Aug 11 00:18 | 0° <b>m</b> )             |            |
|---------------------|--|------------------------------------|------------|---------------------|-------------------|---------------------------|------------|
| minimum elong       | 2922 Feb 07 16:20                      | 19° <b>≈</b> 09'58                 | 7°20'19    |                     | 2924 Sep 04 09:21 | 0∘ <b>ত</b>               |            |
| morning rise        | 2922 Feb 11 22:51                      | 16° <b>≈</b> 34'28                 |            |                     | 2924 Sep 28 19:20 | $0^{\circ}$ M             |            |
| direct              | 2922 Feb 28 14:16                      | 11° <b>≈</b> 12'36                 |            | desc. node          | 2924 Oct 12 03:39 | 16° <b>M</b> 21'24        |            |
| greatest brilliancy | 2922 Mar 09 15:53                      | 12° <b>≈</b> 46′16                 | -4.9m      |                     | 2924 Oct 23 07:19 | 0° <b>∡</b> ¹             |            |
|                     | 2922 Apr 05 10:02                      | 0° <b>∀</b>                        |            |                     | 2924 Nov 16 22:22 | 0°ಕ                       |            |
| morning max el      | 2922 Apr 19 10:17                      | 13° <b>)</b> €01'29                | 46°26'47   |                     | 2924 Dec 11 19:07 | 0° <b>≈</b>               |            |
| desc. node          | 2922 Apr 27 08:30                      | 21° <b>)</b> €00'51                |            |                     | 2925 Jan 06 05:28 | 0° <b>∀</b>               |            |
|                     | 2922 May 05 22:08                      | $0$ ° $\Upsilon$                   |            | asc. node           | 2925 Feb 02 06:42 | 0° <b>Ƴ</b> 07'41         |            |
|                     | 2922 Jun 02 01:14                      | 0° <b>႘</b>                        |            |                     | 2925 Feb 02 03:48 | <b>0°Ƴ</b>                |            |
|                     | 2922 Jun 28 01:18                      | $\Pi$ $^{\circ}0$                  |            | evening max el      | 2925 Feb 08 18:55 | 6° <b>Ƴ</b> 52'19         | 46°59'39   |
|                     | 2922 Jul 23 11:23                      | $0$ $\circ$ $\odot$                |            |                     | 2925 Mar 06 18:54 | $0^{\circ}$ 8             |            |
|                     | 2922 Aug 17 11:11                      | $\mathfrak{O}^{\circ}\mathfrak{O}$ |            | greatest brilliancy | 2925 Mar 21 00:23 | 7° <b>엉</b> 59'21         | -4.9m      |
| asc. node           | 2922 Aug 18 11:44                      | 1° <b>Ω</b> 14'15                  |            | retrograde          | 2925 Mar 31 10:17 | 10° <b>8</b> 02'28        |            |
|                     | 2922 Sep 11 02:01                      | 0° <b>m</b> y                      |            | evening set         | 2925 Apr 17 10:34 | 4° <b>8</b> 25'12         |            |
|                     | 2922 Oct 05 09:23                      | 0∘ <b>⊽</b>                        |            | inferior conj       | 2925 Apr 21 14:07 | 1° <b>8</b> 51'29         | 6°59'26    |
| morning set         | 2922 Oct 14 15:43                      | 11° <b>≏</b> 30'55                 |            | minimum elong       | 2925 Apr 21 23:55 | 1° <b>8</b> 36'05         | 6°57'38    |
| Č                   | 2922 Oct 29 11:27                      | 0°M                                |            | min. Earth dist.    | 2925 Apr 21 11:29 | 1° <b>8</b> 55'38         | 0.28195 AU |
| max. Earth dist.    | 2922 Nov 19 16:36                      | 26°M33'26                          | 1.71522 AU |                     | 2925 Apr 24 13:46 | 30° <b>₽</b> Υ            |            |
|                     |  |                                    |            | morning rise        | 2925 Apr 26 13:30 | 28° <b>Y</b> ′49'03       |            |
| superior conj       | 2922 Nov 22 00:51                      | 29°M29'41                          | 0°37'11    | direct              | 2925 May 12 15:29 | 23° <b>Y</b> ′47'02       |            |
| minimum elong       | 2922 Nov 22 09:11                      | 29°M55'48                          | 0°36'48    | greatest brilliancy | 2925 May 22 09:04 | 25° <b>Υ</b> '30'54       | -4.8m      |
| minimum crong       | 2922 Nov 22 10:31                      | 0° <b>⊼</b> ¹                      | 0 50 10    | desc. node          | 2925 May 24 20:09 | 26° <b>Y</b> ′26'33       | 1.011      |
| desc. node          | 2922 Dec 08 01:22                      | 19° <b>х</b> 35'50                 |            | dese. Hode          | 2925 May 31 22:12 | 0° <b>と</b>               |            |
| dese. Hode          | 2922 Dec 16 08:10                      | 0°る                                |            | morning max el      | 2925 Jun 30 13:57 | 23° <b>8</b> 52'49        | 45°48'00   |
| evening rise        | 2923 Jan 01 16:56                      | 0 C<br>20°る33'09                   |            | morning max cr      | 2925 Jul 06 20:17 | 23 <b>О</b> 32 <b>4</b> ) | 43 4000    |
| evening rise        | 2923 Jan 01 10:30<br>2923 Jan 09 05:27 | 20 <b>⊘</b> 33 09                  |            |                     | 2925 Aug 04 05:23 | 0°©                       |            |
|                     |  | 0 ≈<br>0° <b>)</b> (               |            |                     | •                 | 0°€<br>0°€                |            |
|                     | 2923 Feb 02 03:34                      | 0 X<br>0°Υ                         |            | aga mada            | 2925 Aug 30 15:30 | 18° <b>Ω</b> 00'40        |            |
|                     | 2923 Feb 26 04:35                      | • •                                |            | asc. node           | 2925 Sep 14 23:33 |                           |            |
| 1                   | 2923 Mar 22 11:37                      | 0°8                                |            |                     | 2925 Sep 25 00:44 | 0° <b>m</b> )             |            |
| asc. node           | 2923 Mar 31 04:29                      | 10° <b>8</b> 37'57                 |            |                     | 2925 Oct 19 17:40 | 0∘ <b>亚</b>               |            |
|                     | 2923 Apr 16 04:46                      | 0°∏                                |            |                     | 2925 Nov 13 00:03 | 0°M√                      |            |
|                     | 2923 May 11 13:54                      | 0°©                                |            |                     | 2925 Dec 07 00:22 | 0° <b>∡</b> 7             | • •        |
|                     | 2923 Jun 07 02:47                      | 0°N                                |            | greatest brilliancy | 2925 Dec 16 03:59 | 11° <b>∡</b> 28'47        | -3.9m      |
| evening max el      | 2923 Jul 03 23:45                      | 27° <b>Ω</b> 47'19                 | 45°26'11   | morning set         | 2925 Dec 26 23:31 | 25° <b>∡</b> '03'48       |            |
|                     | 2923 Jul 06 07:41                      | 0° <b>m</b>                        |            |                     | 2925 Dec 30 21:46 | 0° <b>ろ</b>               |            |
| desc. node          | 2923 Jul 20 18:07                      | 12°Mp34'56                         |            | desc. node          | 2926 Jan 04 13:16 | 5° <b>る</b> 50'36         |            |
| greatest brilliancy | 2923 Aug 11 16:57                      | 25° Mp 40'47                       | -4.7m      |                     | 2926 Jan 23 18:07 | 0° <b>≈</b>               |            |
| retrograde          | 2923 Aug 21 13:55                      | 27° Mp 26'19                       |            |                     |                   |                           |            |
| evening set         | 2923 Sep 08 13:02                      | 21°Mp27'51                         |            | superior conj       | 2926 Feb 06 14:16 | 17° <b>≈</b> 24'28        |            |
| inferior conj       | 2923 Sep 11 23:19                      | 19° <b>m</b> 21'39                 |            | minimum elong       | 2926 Feb 06 02:36 | 16° <b>≈</b> 47'48        | 1°08'25    |
| minimum elong       | 2923 Sep 11 20:56                      | 19° <b>m</b> 25'22                 |            | max. Earth dist.    | 2926 Feb 08 14:41 | 19° <b>≈</b> 56'38        | 1.71210 AU |
| min. Earth dist.    | 2923 Sep 12 10:52                      | 19° <b>m</b> 03'39                 | 0.28720 AU |                     | 2926 Feb 16 14:47 | 0° <b>∀</b>               |            |
| morning rise        | 2923 Sep 15 04:38                      | 17° <b>m</b> 22'17                 |            |                     | 2926 Mar 12 13:17 | 0° <b>Υ</b>               |            |
| direct              | 2923 Oct 03 10:38                      | 11° Mp 07'20                       |            | evening rise        | 2926 Mar 19 10:14 | 8° <b>Y</b> 34'56         |            |
| greatest brilliancy | 2923 Oct 14 10:05                      | 13°Mp 18'50                        | -4.8m      |                     | 2926 Apr 05 15:21 | $0^{\circ}S$              |            |
|                     | 2923 Nov 08 12:35                      | 0∘ <b>ত</b>                        |            | asc. node           | 2926 Apr 27 16:21 | 27° <b>8</b> 13'28        |            |
| asc. node           | 2923 Nov 10 21:02                      | 2° <b>≏</b> 04'55                  |            |                     | 2926 Apr 29 22:34 | $\Pi$ °0                  |            |
| morning max el      | 2923 Nov 22 12:56                      | 13° <b>≏</b> 12'50                 | 46°33'04   |                     | 2926 May 24 12:22 | $0$ $\circ$ $\odot$       |            |
|                     | 2923 Dec 08 11:17                      | 0°M₊                               |            |                     | 2926 Jun 18 10:37 | $0$ $^{\circ}$ $\Omega$   |            |
|                     | 2924 Jan 03 18:09                      | 0° <b>∡</b> 7                      |            |                     | 2926 Jul 13 21:09 | 0° <b>m</b>               |            |
|                     | 2924 Jan 28 20:00                      | 0°ප                                |            |                     | 2926 Aug 09 04:26 | 0∘ <b>⊽</b>               |            |
|                     | 2924 Feb 22 09:55                      | 0° <b>≈</b>                        |            | desc. node          | 2926 Aug 17 05:52 | 8° <b>≏</b> 53'01         |            |
| desc. node          | 2924 Mar 01 10:52                      | 9° <b>≈</b> 52'46                  |            |                     | 2926 Sep 06 06:33 | 0° <b>M</b>               |            |
|                     | 2924 Mar 17 18:54                      | 0° <b>∀</b>                        |            | evening max el      | 2926 Sep 14 04:36 | 7° <b>™</b> 49'08         | 46°06'21   |
|                     | 2924 Apr 11 02:23                      | $0^{\circ}$ Y                      |            |                     | 2926 Oct 10 18:44 | 0° <b>∡</b>               |            |
|                     | 2924 May 05 10:17                      | 0°B                                |            | greatest brilliancy | 2926 Oct 24 06:38 | 6° <b>≯</b> ¹48'36        | -4.8m      |
| morning set         | 2924 May 27 11:27                      | 27° <b>8</b> 08'08                 |            | retrograde          | 2926 Nov 02 12:42 | 8° <b>≯</b> 23′15         |            |
|                     | 2924 May 29 19:21                      | $\Pi^{\circ}0$                     |            | evening set         | 2926 Nov 17 17:03 | 3° <b>∡</b> ′54'41        |            |
| asc. node           | 2924 Jun 22 14:03                      | 29° <b>Ⅱ</b> 13'18                 |            | inferior conj       | 2926 Nov 23 04:47 | 0° <b>∡</b> 1'20          | -3°46'36   |
|                     | 2924 Jun 23 05:15                      | $0$ $\circ$ $\odot$                |            | minimum elong       | 2926 Nov 23 12:47 | 0° <b>∡</b> ¹29'11        | 3°44'17    |
|                     |  |                                    |            | min. Earth dist.    | 2926 Nov 23 21:27 | 0° <b>≯</b> 16′00         | 0.26918 AU |
| superior conj       | 2924 Jul 03 11:37                      | 12° <b>©</b> 36'52                 | 0°25'37    |                     | 2926 Nov 24 07:59 | 30°RM                     |            |
| minimum elong       | 2924 Jul 03 06:31                      | 12° <b>©</b> 21'12                 | 0°25'22    | morning rise        | 2926 Nov 29 07:56 | 27°M06'21                 |            |
| max. Earth dist.    | 2924 Jul 03 01:25                      | 12° <b>©</b> 05'31                 | 1.73550 AU | asc. node           | 2926 Dec 08 08:59 | 23°M31'26                 |            |
|                     | 2924 Jul 17 15:04                      | $0^{\circ}\Omega$                  |            | direct              | 2926 Dec 13 21:50 | 22°M53'22                 |            |
| evening rise        | 2924 Aug 08 10:48                      | 26° <b>Ω</b> 50′50                 |            | greatest brilliancy | 2926 Dec 24 18:09 | 25°M07'20                 | -4.9m      |
| -                   | -                                      |                                    |            |                     |                   |                           |            |

|                     | 2927 Jan 03 03:18                      | 0° <b>∡</b> ¹                |            | desc. node          | 2929 Sep 13 17:44                      | 28° <b>≏</b> 27'47       |            |
|---------------------|--|------------------------------|------------|---------------------|--|--------------------------|------------|
| morning max el      | 2927 Feb 02 15:50                      | 26° <b>⊀</b> 17'48           | 46°58'11   |                     | 2929 Sep 15 00:56                      | 0° <b>M</b>              |            |
|                     | 2927 Feb 06 06:26                      | ರ°0                          |            |                     | 2929 Oct 10 16:54                      | 0° <b>∡</b> ¹            |            |
|                     | 2927 Mar 05 14:53                      | 0° <b>≈</b>                  |            |                     | 2929 Nov 06 07:15                      | 0°ರ                      |            |
| desc. node          | 2927 Mar 29 22:47                      | 28° <b>≈</b> 17'16           |            | evening max el      | 2929 Nov 26 08:06                      | 21° <b>පි</b> 08'38      | 47°07'17   |
|                     | 2927 Mar 31 09:35                      | 0° <b>∀</b>                  |            |                     | 2929 Dec 05 10:36                      | 0° <b>≈</b>              |            |
|                     | 2927 Apr 25 13:42                      | $_{0}$ $^{\circ}$ $\Upsilon$ |            | asc. node           | 2930 Jan 04 20:53                      | 21° <b>≈</b> 57'44       |            |
|                     | 2927 May 20 11:30                      | 0°8                          |            | greatest brilliancy | 2930 Jan 05 20:12                      | 22° <b>≈</b> 20'11       | -4.9m      |
|                     | 2927 Jun 14 06:11                      | 0°П                          |            | retrograde          | 2930 Jan 15 23:58                      | 24° <b>≈</b> 17'45       |            |
|                     | 2927 Jul 08 22:18                      | 0<br>ಲ                       |            | evening set         | 2930 Jan 31 19:06                      | 19° <b>≈</b> 22'00       |            |
| asc. node           | 2927 Jul 21 01:56                      | 14°950'06                    |            | min. Earth dist.    | 2930 Feb 04 20:24                      | 16°≈56'00                | 0.26838 AU |
| use. Houe           | 2927 Aug 02 11:09                      | 0°Ω                          |            | inferior conj       | 2930 Feb 05 15:07                      | 16° <b>≈</b> 27'03       | 7°08'15    |
| morning set         | 2927 Aug 02 11:37                      | 2° <b>Ω</b> 28'38            |            | minimum elong       | 2930 Feb 05 04:48                      | 16°≈43'00                | 7°06'15    |
| morning set         | 2927 Aug 26 20:12                      | 0°m                          |            | morning rise        | 2930 Feb 09 14:50                      | 14°≈02'11                | 7 00 13    |
| max. Earth dist.    | 2927 Sep 06 23:29                      | •                            | 1.72930 AU | direct              | 2930 Feb 26 02:14                      | 8°≈45'42                 |            |
| max. Earth dist.    | 2927 Sep 00 23.29                      | 13 11/43 30                  | 1.72930 AU |                     |  | 0 ≈43 42<br>10°≈20'26    | -4.9m      |
|                     | 2027 8 00 21.49                        | 1.70 m. 2.212.4              | 1924100    | greatest brilliancy | 2930 Mar 07 05:38                      | 10°≈20′26<br>0° <b>∺</b> | -4.9m      |
| superior conj       | 2927 Sep 09 21:48                      | 17° m 23'34                  |            |                     | 2930 Apr 05 16:54                      |                          | 46020122   |
| minimum elong       | 2927 Sep 09 19:15                      | 17° <b>m</b> 15'40           | 1°24'08    | morning max el      | 2930 Apr 16 22:23                      | 10° <b>)</b> ₹35'14      | 46°28'23   |
|                     | 2927 Sep 20 01:52                      | 0∘ <b>⊽</b>                  |            | desc. node          | 2930 Apr 26 10:32                      | 20° <b>)</b> 13′14       |            |
|                     | 2927 Oct 14 05:24                      | 0°M                          |            |                     | 2930 May 05 16:28                      | 0° <b>Υ</b>              |            |
| evening rise        | 2927 Oct 17 00:43                      | 3°M29'25                     |            |                     | 2930 Jun 01 15:56                      | 0° <b>8</b>              |            |
|                     | 2927 Nov 07 07:59                      | 0°⊀                          |            |                     | 2930 Jun 27 14:17                      | $\Pi$ °0                 |            |
| desc. node          | 2927 Nov 09 15:37                      | 2° <b>≯</b> ′53′08           |            |                     | 2930 Jul 22 23:26                      | 0                        |            |
|                     | 2927 Dec 01 10:24                      | 0°₹                          |            |                     | 2930 Aug 16 22:43                      | $0$ $\circ$ $\Omega$     |            |
|                     | 2927 Dec 25 13:31                      | 0° <b>≈</b>                  |            | asc. node           | 2930 Aug 17 13:39                      | 0° <b>Ω</b> 45'13        |            |
|                     | 2928 Jan 18 19:27                      | 0° <b>∀</b>                  |            |                     | 2930 Sep 10 13:15                      | 0° <b>m</b> þ            |            |
|                     | 2928 Feb 12 08:46                      | $0$ ° $\Upsilon$             |            |                     | 2930 Oct 04 20:28                      | 0∘ <b>ত</b>              |            |
| asc. node           | 2928 Mar 01 18:31                      | 22° <b>Ƴ</b> 00'41           |            | morning set         | 2930 Oct 12 07:20                      | 9° <b>≙</b> 15'39        |            |
|                     | 2928 Mar 08 13:59                      | $8^{\circ}$                  |            |                     | 2930 Oct 28 22:30                      | 0° <b>M</b> ₊            |            |
|                     | 2928 Apr 04 04:45                      | $\Pi^{\circ}0$               |            | max. Earth dist.    | 2930 Nov 17 03:32                      | 24°ML02'33               | 1.71561 AU |
| evening max el      | 2928 Apr 21 03:25                      | 17° <b>Ⅲ</b> 31'43           | 45°56'28   |                     |  |                          |            |
|                     | 2928 May 04 15:58                      | 0°ಅ                          |            | superior conj       | 2930 Nov 19 13:47                      | 27°MJ05'04               | 0°40'29    |
| greatest brilliancy | 2928 May 29 05:13                      | 16° <b>©</b> 03'59           | -4.7m      | minimum elong       | 2930 Nov 19 22:37                      | 27°M32'46                | 0°40'06    |
| retrograde          | 2928 Jun 09 07:50                      | 18° <b>©</b> 17'29           |            | Č                   | 2930 Nov 21 21:36                      | 0° <b>∡¹</b>             |            |
| desc. node          | 2928 Jun 21 08:16                      | 15°525'40                    |            | desc. node          | 2930 Dec 07 03:32                      | 19° <b>√</b> 07'39       |            |
| evening set         | 2928 Jun 24 08:46                      | 13°953'28                    |            | dese. node          | 2930 Dec 15 19:20                      | 0°ਰ                      |            |
| inferior conj       | 2928 Jun 30 18:28                      | 10° <b>©</b> 02'19           | -2°12'42   | evening rise        | 2930 Dec 30 03:53                      | 00<br>18° <b>ろ</b> 01'41 |            |
| minimum elong       | 2928 Jun 30 13:42                      | 10° <b>©</b> 02'17           |            | evening rise        | 2931 Jan 08 16:43                      | 0°≈                      |            |
| min. Earth dist.    | 2928 Jun 30 13:42<br>2928 Jun 30 13:07 |                              | 0.28911 AU |                     | 2931 Feb 01 14:57                      | 0° <b>∺</b>              |            |
|                     | 2928 Jul 06 18:57                      | 6°9524'42                    | 0.28911 AU |                     | 2931 Feb 01 14:37<br>2931 Feb 25 16:09 | 0° <b>Υ</b>              |            |
| morning rise        |  |                              |            |                     | 2931 Nar 21 23:31                      | 0°8                      |            |
| direct              | 2928 Jul 22 08:57                      | 1°546'56<br>3°538'50         | 4.7        |                     |  |                          |            |
| greatest brilliancy | 2928 Aug 01 13:01                      |                              | -4./m      | asc. node           | 2931 Mar 30 06:27                      | 10° <b>8</b> 07'14       |            |
|                     | 2928 Sep 07 10:57                      | 0° <b>Ω</b>                  | 45050121   |                     | 2931 Apr 15 17:17                      | 0°II                     |            |
| morning max el      | 2928 Sep 09 05:36                      | 1° <b>Ω</b> 41'45            | 45°50'31   |                     | 2931 May 11 03:35                      | 0°©                      |            |
|                     | 2928 Oct 06 10:15                      | 0° m/y                       |            |                     | 2931 Jun 06 19:04                      | 0°N                      |            |
| asc. node           | 2928 Oct 12 11:22                      | 6° Mp 44′20                  |            | evening max el      | 2931 Jul 01 14:01                      | 25° <b>Ω</b> 32'05       | 45°26'05   |
|                     | 2928 Nov 01 15:40                      | 0∘ <b>亚</b>                  |            |                     | 2931 Jul 06 08:03                      | 0° <b>m</b> )            |            |
|                     | 2928 Nov 26 16:05                      | 0° <b>M</b>                  |            | desc. node          | 2931 Jul 19 20:06                      | 11° <b>m</b> ) 30'17     |            |
|                     | 2928 Dec 21 01:52                      | 0° <b>∡</b> 7                |            | greatest brilliancy | 2931 Aug 09 06:19                      | 23° m/26'29              | -4.7m      |
|                     | 2929 Jan 14 04:36                      | 0°₹                          |            | retrograde          | 2931 Aug 19 05:07                      | 25° My 13'53             |            |
| desc. node          | 2929 Feb 01 01:05                      | 22° <b>る</b> 18'58           |            | evening set         | 2931 Sep 06 02:16                      | 19° <b>m</b> 17'36       |            |
|                     | 2929 Feb 07 04:26                      | 0° <b>≈</b>                  |            | inferior conj       | 2931 Sep 09 14:46                      | 17° <b>m</b> ) 08'15     |            |
|                     | 2929 Mar 03 03:44                      | 0° <b>∀</b>                  |            | minimum elong       | 2931 Sep 09 11:36                      | 17° Mp 13'11             | 8°33'02    |
| morning set         | 2929 Mar 14 02:29                      | 13° <b>)</b> √41′20          |            | min. Earth dist.    | 2931 Sep 10 01:28                      | 16° <b>m</b> 51'36       | 0.28762 AU |
|                     | 2929 Mar 27 04:04                      | $0$ ° $\mathbf{\Upsilon}$    |            | morning rise        | 2931 Sep 12 20:43                      | 15° <b>m</b> 08'03       |            |
|                     | 2929 Apr 20 06:42                      | $9^{\circ}$ 8                |            | direct              | 2931 Oct 01 02:09                      | 8° <b>m</b> 53'09        |            |
|                     |  |                              |            | greatest brilliancy | 2931 Oct 12 01:56                      | 11° <b>M</b> 04'54       | -4.8m      |
| superior conj       | 2929 Apr 22 14:04                      | 2° <b>8</b> 51'48            | -1°07'50   |                     | 2931 Nov 08 17:36                      | 0∘ <b>⊽</b>              |            |
| minimum elong       | 2929 Apr 23 00:16                      | 3° <b>8</b> 23'26            | 1°07'32    | asc. node           | 2931 Nov 09 23:11                      | 1° <b>≏</b> 07'01        |            |
| max. Earth dist.    | 2929 Apr 26 07:53                      | 7° <b>8</b> 30'13            | 1.72579 AU | morning max el      | 2931 Nov 20 04:10                      | 10° <b>≙</b> 54'58       | 46°31'45   |
|                     | 2929 May 14 12:22                      | $\Pi^{\circ}0$               |            |                     | 2931 Dec 08 04:59                      | 0° <b>M</b>              |            |
| asc. node           | 2929 May 25 04:17                      | 13° <b>Ⅱ</b> 08'39           |            |                     | 2932 Jan 03 08:43                      | 0° <b>∡</b> ¹            |            |
| evening rise        | 2929 May 30 20:31                      | 20° <b>Ⅱ</b> 07'53           |            |                     | 2932 Jan 28 09:09                      | ರ°0                      |            |
| -                   | 2929 Jun 07 21:14                      | 0ಂತಾ                         |            |                     | 2932 Feb 21 22:17                      | 0° <b>≈</b>              |            |
|                     | 2929 Jul 02 09:10                      | $0^{\circ}\Omega$            |            | desc. node          | 2932 Feb 29 12:52                      | 9° <b>≈</b> 21'32        |            |
|                     | 2929 Jul 27 00:35                      | 0° m/                        |            |                     | 2932 Mar 17 06:44                      | 0° <b>)</b>              |            |
|                     | 2929 Aug 20 20:58                      | 0∘ <b>ರ</b><br>೧.ಗ           |            |                     | 2932 Apr 10 13:51                      | 0° <b>Υ</b>              |            |
|                     | 1115 20 20.00                          |                              |            |                     |  | - •                      |            |

|                     | 2022.16 04.21.20                       | 001                          |            |                     | 2024.0 . 21.10.12                      | 10 30 110 5             | 4.0        |
|---------------------|--|------------------------------|------------|---------------------|--|-------------------------|------------|
|                     | 2932 May 04 21:30                      | 0° <b>8</b>                  |            | greatest brilliancy | 2934 Oct 21 19:13                      | 4° <b>₹</b> ¹24'25      | -4.8m      |
| morning set         | 2932 May 25 04:07                      | 24° <b>8</b> 57'44           |            | retrograde          | 2934 Oct 31 01:07                      | 5° <b>∡</b> 58′23       |            |
|                     | 2932 May 29 06:24                      | $\Pi^{\circ}0$               |            | evening set         | 2934 Nov 15 08:25                      | 1° <b>∡</b> ¹26′18      |            |
| asc. node           | 2932 Jun 21 16:07                      | 28° <b>Ⅱ</b> 46′02           |            |                     | 2934 Nov 17 20:42                      | 30°RM₊                  |            |
|                     | 2932 Jun 22 16:11                      | 0° <b>©</b>                  |            | inferior conj       | 2934 Nov 20 17:32                      | 28°M16'05               | -4°07'39   |
|                     | 2)32 Juli 22 10.11                     | 0 3                          |            | minimum elong       | 2934 Nov 21 02:05                      | 28°ML03'03              | 4°05'14    |
|                     | 2022 1 1 01 05 22                      | 100620120                    | 000000     | C                   |  |                         |            |
| superior conj       | 2932 Jul 01 05:23                      | 10° <b>©</b> 30'29           | 0°22'33    | min. Earth dist.    | 2934 Nov 21 11:00                      | 27°M49'28               | 0.26974 AU |
| minimum elong       | 2932 Jul 01 00:50                      | 10° <b>©</b> 16'30           | 0°22'19    | morning rise        | 2934 Nov 26 19:13                      | 24°M42'44               |            |
| max. Earth dist.    | 2932 Jun 30 22:25                      | 10°909'04                    | 1.73546 AU | asc. node           | 2934 Dec 07 11:02                      | 20°M47'25               |            |
|                     | 2932 Jul 17 01:58                      | $0^{\circ}\Omega$            |            | direct              | 2934 Dec 11 11:45                      | 20°M27'22               |            |
| evening rise        | 2932 Aug 06 05:21                      | 24° <b>Ω</b> 46'30           |            | greatest brilliancy | 2934 Dec 22 08:07                      | 22°M41'20               | -4 9m      |
| e vennig rise       | 2932 Aug 10 11:17                      | 0° m)                        |            | greatest stimule;   | 2935 Jan 04 07:58                      | 0° <b>₹</b>             | ,          |
|                     | •                                      |                              |            |                     |  |                         | 46050115   |
|                     | 2932 Sep 03 20:34                      | 0∘ <b>⊽</b>                  |            | morning max el      | 2935 Jan 31 05:47                      | 23° <b>∡</b> ′53′19     | 46°58'15   |
|                     | 2932 Sep 28 06:56                      | 0°M₊                         |            |                     | 2935 Feb 06 03:40                      | 0°₹                     |            |
| desc. node          | 2932 Oct 11 05:44                      | 15°M51'34                    |            |                     | 2935 Mar 05 06:50                      | 0° <b>≈</b>             |            |
|                     | 2932 Oct 22 19:25                      | 0° <b>∡</b> ″                |            | desc. node          | 2935 Mar 29 00:50                      | 27° <b>≈</b> 42'25      |            |
|                     | 2932 Nov 16 11:07                      | აი                           |            |                     | 2935 Mar 30 23:20                      | 0° <b>₩</b>             |            |
|                     | 2932 Dec 11 08:53                      | 0° <b>≈</b>                  |            |                     | 2935 Apr 25 02:14                      | 0° <b>Υ</b>             |            |
|                     |  |                              |            |                     | *                                      |                         |            |
|                     | 2933 Jan 05 21:04                      | 0° <b>∀</b>                  |            |                     | 2935 May 19 23:16                      | 0° <b>8</b>             |            |
| asc. node           | 2933 Feb 01 08:40                      | 29° <b>∺</b> 19'54           |            |                     | 2935 Jun 13 17:27                      | $\Pi$ °0                |            |
|                     | 2933 Feb 02 00:00                      | $0^{\circ}\mathbf{\Upsilon}$ |            |                     | 2935 Jul 08 09:15                      | $0$ $\circ$ $\odot$     |            |
| evening max el      | 2933 Feb 06 09:50                      | 4° <b>Y</b> 32'37            | 47°01'30   | asc. node           | 2935 Jul 20 03:51                      | 14°522'43               |            |
| Č                   | 2933 Mar 07 18:25                      | 0°႘                          |            |                     | 2935 Aug 01 21:57                      | $0^{\circ}\Omega$       |            |
| greatest brilliancy | 2933 Mar 18 15:43                      | 5° <b>8</b> 42'19            | -4.9m      | morning set         | 2935 Aug 02 05:38                      | 0° <b>Ω</b> 23'34       |            |
|                     |  | _                            | -4.7111    | morning set         | •                                      |                         |            |
| retrograde          | 2933 Mar 29 02:22                      | 7° <b>8</b> 46'13            |            |                     | 2935 Aug 26 06:57                      | 0° <b>m</b> )           |            |
| evening set         | 2933 Apr 15 04:50                      | 2° <b>8</b> 04'18            |            | max. Earth dist.    | 2935 Sep 04 15:47                      | 11° <b>m</b> 34'37      | 1.72973 AU |
|                     | 2933 Apr 18 13:35                      | 30° <b>ŖƳ</b>                |            |                     |  |                         |            |
| inferior conj       | 2933 Apr 19 05:22                      | 29° <b>Ƴ</b> 35'14           | 7°12'20    | superior conj       | 2935 Sep 07 15:29                      | 15° <b>M</b> ) 16'25    | 1°23'38    |
| minimum elong       | 2933 Apr 19 14:57                      | 29° <b>Ƴ</b> 20'11           | 7°10'40    | minimum elong       | 2935 Sep 07 12:18                      | 15° Mp 06'31            | 1°23'36    |
| min. Earth dist.    | 2933 Apr 19 02:00                      | 29° <b>Y</b> ′40'31          | 0.28166 AU |                     | 2935 Sep 19 12:41                      | 0∘ <b>ত</b>             |            |
| morning rise        | 2933 Apr 24 01:20                      | 26° <b>Y</b> ′38′06          |            |                     | 2935 Oct 13 16:20                      | 0°M                     |            |
| direct              | 2933 May 10 06:21                      | 21° <b>Υ</b> 31'15           |            | evening rise        | 2935 Oct 14 15:47                      | 1°M12'52                |            |
|                     | •                                      |                              | 4.0        | evening rise        |  |                         |            |
| greatest brilliancy | 2933 May 19 22:51                      | 23° <b>Y</b> 14'41           | -4.8m      |                     | 2935 Nov 06 19:07                      | 0° <b>⋌</b> ¹           |            |
| desc. node          | 2933 May 23 22:22                      | 24° <b>Y</b> '49'38          |            | desc. node          | 2935 Nov 08 17:42                      | 2° <b>∡</b> ¹24'55      |            |
|                     | 2933 Jun 02 03:54                      | $9^{\circ}$ 8                |            |                     | 2935 Nov 30 21:48                      | 0°₹                     |            |
| morning max el      | 2933 Jun 28 06:25                      | 21° <b>8</b> 42'39           | 45°48'42   |                     | 2935 Dec 25 01:16                      | 0°≈                     |            |
|                     | 2933 Jul 06 16:37                      | $\Pi^{\circ}0$               |            |                     | 2936 Jan 18 07:39                      | 0° <b>∀</b>             |            |
|                     | 2933 Aug 03 20:33                      | 0∘ <b>ௐ</b>                  |            |                     | 2936 Feb 11 21:40                      | 0° <b>Υ</b>             |            |
|                     | 2933 Aug 30 04:38                      | $0 {\circ} \mathcal{O}$      |            | asc. node           | 2936 Feb 29 20:34                      | 21° <b>Y</b> ′26'13     |            |
| 1                   | •                                      |                              |            | asc. Houc           |  |                         |            |
| asc. node           | 2933 Sep 14 01:36                      | 17° <b>Ω</b> 29'47           |            |                     | 2936 Mar 08 04:13                      | 0° <b>8</b>             |            |
|                     | 2933 Sep 24 12:52                      | 0° <b>m</b> ∕                |            |                     | 2936 Apr 03 22:10                      | $\Pi$ °0                |            |
|                     | 2933 Oct 19 05:17                      | 0∘ <b>⊽</b>                  |            | evening max el      | 2936 Apr 18 19:10                      | 15° <b>Ⅱ</b> 19'15      | 45°58'35   |
|                     | 2933 Nov 12 11:26                      | $0^{\circ}$ M                |            |                     | 2936 May 04 22:16                      | $0$ $\circ$ $\odot$     |            |
|                     | 2933 Dec 06 11:38                      | 0° <b>∡</b> 7                |            | greatest brilliancy | 2936 May 26 22:39                      | 13° <b>9</b> 56'31      | -4.7m      |
| greatest brilliancy | 2933 Dec 16 12:35                      | 12° <b>∡</b> ³35'53          | -3.9m      | retrograde          | 2936 Jun 07 00:00                      | 16° <b>ഇ</b> 09'10      |            |
| morning set         | 2933 Dec 16 12:33<br>2933 Dec 24 10:22 | 22° <b>₹</b> 31'52           | 3.7111     | desc. node          | 2936 Jun 20 10:10                      | 12° <b>©</b> 37'15      |            |
| morning set         |  |                              |            |                     |  |                         |            |
|                     | 2933 Dec 30 08:58                      | 0°る                          |            | evening set         | 2936 Jun 22 01:10                      | 11°9545'47              |            |
| desc. node          | 2934 Jan 03 15:14                      | 5° <b>る</b> 21'36            |            | inferior conj       | 2936 Jun 28 11:04                      | 7° <b>9</b> 54'15       | -1°53'35   |
|                     | 2934 Jan 23 05:15                      | 0° <b>≈</b>                  |            | minimum elong       | 2936 Jun 28 06:57                      | 8°900'42                | 1°52'23    |
|                     |  |                              |            | min. Earth dist.    | 2936 Jun 28 06:02                      | 8° <b>5</b> 02'09       | 0.28891 AU |
| superior conj       | 2934 Feb 04 00:19                      | 14° <b>≈</b> 50′12           | -1°06'16   | morning rise        | 2936 Jul 04 13:01                      | 4°9514'12               |            |
| minimum elong       | 2934 Feb 03 12:25                      | 14° <b>≈</b> 12'46           |            | Č                   | 2936 Jul 15 20:15                      | 30°RⅡ                   |            |
| max. Earth dist.    | 2934 Feb 05 23:27                      |                              | 1.71183 AU | direct              | 2936 Jul 20 01:12                      | 29° <b>∏</b> 39'14      |            |
| max. Earm dist.     |  |                              | 1./1103 AU | direct              |  |                         |            |
|                     | 2934 Feb 16 01:52                      | 0° <b>)</b> €                |            |                     | 2936 Jul 24 08:14                      | 0° <b>©</b>             |            |
|                     | 2934 Mar 12 00:21                      | 0° <b>Υ</b>                  |            | greatest brilliancy | 2936 Jul 30 05:00                      | 1° <b>5</b> 30'30       | -4.7m      |
| evening rise        | 2934 Mar 16 21:55                      | 6° <b>Ƴ</b> 07'13            |            | morning max el      | 2936 Sep 06 20:22                      | 29° <b>©</b> 29'02      | 45°49'28   |
|                     | 2934 Apr 05 02:26                      | 0°B                          |            |                     | 2936 Sep 07 09:14                      | $0$ $^{\circ}$ $\Omega$ |            |
| asc. node           | 2934 Apr 26 18:29                      | 26° <b>8</b> 45'40           |            |                     | 2936 Oct 06 01:51                      | o∘ <b>m</b> y           |            |
|                     | 2934 Apr 29 09:46                      | 0°II                         |            | asc. node           | 2936 Oct 11 13:30                      | 6° Mp 08'19             |            |
|                     | 2934 May 23 23:52                      | 0ಂ <b>ತಾ</b>                 |            |                     | 2936 Nov 01 05:01                      | 0∘ <b>⊽</b>             |            |
|                     | •                                      |                              |            |                     |  |                         |            |
|                     | 2934 Jun 17 22:42                      | 0° <b>Q</b>                  |            |                     | 2936 Nov 26 04:25                      | 0° <b>™</b>             |            |
|                     | 2934 Jul 13 10:22                      | 0° <b>m</b> )                |            |                     | 2936 Dec 20 13:39                      | 0° <b>∡</b>             |            |
|                     | 2934 Aug 08 19:53                      | 0∘ <b>⊽</b>                  |            |                     | 2937 Jan 13 16:03                      | 0°ಕ                     |            |
| desc. node          | 2934 Aug 16 07:52                      | 8° <b>≏</b> 13'37            |            | desc. node          | 2937 Jan 31 03:02                      | 21° <b>る</b> 49'42      |            |
|                     |  |                              |            |                     |  |                         |            |
|                     | 2934 Sep 06 03:38                      | 0° <b>M</b> ₊                |            |                     | 2937 Feb 06 15:41                      | 0° <b>≈</b>             |            |
| evening max el      | 2934 Sep 06 03:38<br>2934 Sep 11 19:15 | 0°ጤ<br>5°ጤ32'12              | 46°04'05   |                     | 2937 Feb 06 15:41<br>2937 Mar 02 14:49 | 0° <b>€</b>             |            |
| evening max el      | •                                      |                              | 46°04'05   | morning set         |  |                         |            |

|                     | 2027 Mar. 26, 15,01                    | 0° <b>Υ</b>                       |             |                        | 2020 9 10 12:27                        | 120 m = 5140                     |            |
|---------------------|--|-----------------------------------|-------------|------------------------|--|----------------------------------|------------|
|                     | 2937 Mar 26 15:01                      | 0° <b>∀</b>                       |             | morning rise<br>direct | 2939 Sep 10 13:27<br>2939 Sep 28 18:29 | 12° Mp 55'48                     |            |
|                     | 2937 Apr 19 17:31                      | 0.0                               |             | greatest brilliancy    | 2939 Sep 28 18.29<br>2939 Oct 09 17:27 | 6° Mp 41'41<br>8° Mp 53'00       | -4.8m      |
| superior conj       | 2937 Apr 20 04:17                      | 0° <b>8</b> 33'27                 | 1°10'01     | greatest billiancy     | 2939 Oct 09 17.27<br>2939 Nov 08 20:07 | 0∘ <b>⊽</b>                      | -4.0111    |
| minimum elong       | 2937 Apr 20 04:17<br>2937 Apr 20 14:19 | 1° <b>8</b> 04'33                 |             | asc. node              | 2939 Nov 09 01:12                      | o <b>_</b><br>0° <b>ჲ</b> 11'46  |            |
| max. Earth dist.    | 2937 Apr 24 00:12                      | 5° <b>8</b> 18'31                 | 1.72519 AU  | morning max el         | 2939 Nov 17 20:10                      | 8° <b>£</b> 40'45                | 46°30'06   |
| mar. Barur dist.    | 2937 May 13 23:07                      | 0°II                              | 1.,72019110 | morning must be        | 2939 Dec 07 21:52                      | 0°M                              | .0 50 00   |
| asc. node           | 2937 May 24 06:20                      | 12° <b>Ⅱ</b> 41'56                |             |                        | 2940 Jan 02 22:48                      | 0° <b>∡</b> ¹                    |            |
| evening rise        | 2937 May 28 13:13                      | 17° <b>Ⅱ</b> 58'32                |             |                        | 2940 Jan 27 21:59                      | 0°ರ                              |            |
|                     | 2937 Jun 07 08:00                      | $0$ $\circ$ $\odot$               |             |                        | 2940 Feb 21 10:21                      | 0° <b>≈</b>                      |            |
|                     | 2937 Jul 01 20:05                      | $0^{\circ}\Omega$                 |             | desc. node             | 2940 Feb 28 15:00                      | 8° <b>≈</b> 51′28                |            |
|                     | 2937 Jul 26 11:49                      | 0° <b>™</b>                       |             |                        | 2940 Mar 16 18:17                      | 0° <b>)</b> €                    |            |
|                     | 2937 Aug 20 08:47                      | 0∘ <b>⊽</b>                       |             |                        | 2940 Apr 10 01:01                      | $0^{\circ}$ Y                    |            |
| desc. node          | 2937 Sep 12 19:49                      | 27° <b>£</b> 56′18                |             |                        | 2940 May 04 08:24                      | 0° <b>8</b>                      |            |
|                     | 2937 Sep 14 13:45                      | 0°M                               |             | morning set            | 2940 May 22 20:38                      | 22° <b>8</b> 47'52               |            |
|                     | 2937 Oct 10 07:24                      | 0° ⊀ <sup>7</sup>                 |             |                        | 2940 May 28 17:06                      | 0°II                             |            |
|                     | 2937 Nov 06 01:11                      | 0°る                               | 47005150    | asc. node              | 2940 Jun 20 18:03                      | 28° <b>Ⅱ</b> 19'28               |            |
| evening max el      | 2937 Nov 23 20:51                      | 18°る42'00                         | 47°05'50    |                        | 2940 Jun 22 02:47                      | 0ංම                              |            |
| greatest brilliancy | 2937 Dec 05 15:07<br>2938 Jan 03 10:15 | 0° <b>≈</b><br>19° <b>≈</b> 53'19 | -4.9m       | superior conj          | 2940 Jun 28 23:10                      | 8°925'10                         | 0°19'26    |
| asc. node           | 2938 Jan 03 10:13                      | 19 ≈33 19<br>20°≈04'40            | -4.9111     | minimum elong          | 2940 Jun 28 19:12                      |                                  | 0°19'14    |
| retrograde          | 2938 Jan 13 12:22                      | 21° <b>≈</b> 49'49                |             | max. Earth dist.       | 2940 Jun 28 20:41                      | 8°917'32                         | 1.73538 AU |
| evening set         | 2938 Jan 29 04:02                      | 16°≈59'59                         |             | max. Earth dist.       | 2940 Jul 16 12:32                      | 0°Ω                              | 1.75550710 |
| min. Earth dist.    | 2938 Feb 02 09:56                      | 14° <b>≈</b> 27'49                | 0.26797 AU  | evening rise           | 2940 Aug 04 00:11                      | 22° <b>Ω</b> 44'12               |            |
| inferior conj       | 2938 Feb 03 03:51                      | 14° <b>≈</b> 00′10                | 6°53'27     | C                      | 2940 Aug 09 21:54                      | 0° <b>m</b> )                    |            |
| minimum elong       | 2938 Feb 02 17:20                      | 14° <b>≈</b> 16′24                | 6°51'16     |                        | 2940 Sep 03 07:24                      | 0∘ <b>⊽</b>                      |            |
| morning rise        | 2938 Feb 07 06:53                      | 11° <b>≈</b> 30′33                |             |                        | 2940 Sep 27 18:06                      | 0° <b>M</b> .                    |            |
| direct              | 2938 Feb 23 14:01                      | 6° <b>≈</b> 19′07                 |             | desc. node             | 2940 Oct 10 07:52                      | 15°M23'18                        |            |
| greatest brilliancy | 2938 Mar 04 19:37                      | 7° <b>≈</b> 55'32                 | -4.9m       |                        | 2940 Oct 22 07:05                      | 0° <b>∡</b> ¹                    |            |
|                     | 2938 Apr 05 21:21                      | 0° <b>∀</b>                       |             |                        | 2940 Nov 15 23:30                      | 0°ಕ                              |            |
| morning max el      | 2938 Apr 14 11:00                      | 8° <b> ★</b> 10'55                | 46°30'04    |                        | 2940 Dec 10 22:23                      | 0° <b>≈</b>                      |            |
| desc. node          | 2938 Apr 25 12:41                      | 19° <b>)</b> €27'27               |             |                        | 2941 Jan 05 12:38                      | 0° <b>∺</b>                      |            |
|                     | 2938 May 05 10:03                      | 0° <b>Υ</b>                       |             | asc. node              | 2941 Jan 31 10:45                      | 28° <b>)</b> 32′02               |            |
|                     | 2938 Jun 01 06:07                      | 0°H<br>8°0                        |             |                        | 2941 Feb 01 20:43                      | 0° <b>Υ</b><br>2° <b>Υ</b> 15'08 | 47902105   |
|                     | 2938 Jun 27 02:51<br>2938 Jul 22 11:05 | 0₀ <b>©</b><br>0∘П                |             | evening max el         | 2941 Feb 04 01:32<br>2941 Mar 09 03:26 | 0°8                              | 47°03'05   |
|                     | 2938 Aug 16 09:50                      | 0°Ω                               |             | greatest brilliancy    | 2941 Mar 16 06:50                      | 3° <b>8</b> 24'47                | -4.9m      |
| asc. node           | 2938 Aug 16 15:46                      | 0° <b>Ω</b> 17'59                 |             | retrograde             | 2941 Mar 26 18:18                      | 5° <b>8</b> 29'09                | 4.7111     |
| use. Houe           | 2938 Sep 10 00:05                      | 0° m)                             |             | Tellogiade             | 2941 Apr 12 11:19                      | 30°RY                            |            |
|                     | 2938 Oct 04 07:11                      | 0∘ <b>⊽</b>                       |             | evening set            | 2941 Apr 12 22:49                      | 29° <b>Ƴ</b> 42'53               |            |
| morning set         | 2938 Oct 09 23:17                      | 7° <b>ჲ</b> 02'41                 |             | inferior conj          | 2941 Apr 16 20:16                      | 27° <b>Ƴ</b> 18′23               | 7°24'41    |
| -                   | 2938 Oct 28 09:14                      | $0^{\circ}$ M                     |             | minimum elong          | 2941 Apr 17 05:36                      | 27° <b>Ƴ</b> 03'45               | 7°23'09    |
| max. Earth dist.    | 2938 Nov 14 16:24                      | 21°M38'36                         | 1.71608 AU  | min. Earth dist.       | 2941 Apr 16 16:02                      | 27° <b>Y</b> 25'02               | 0.28131 AU |
|                     |  |                                   |             | morning rise           | 2941 Apr 21 12:41                      | 24° <b>Y</b> 26'40               |            |
| superior conj       | 2938 Nov 17 02:48                      | 24°M41'37                         | 0°43'42     | direct                 | 2941 May 07 21:13                      | 19° <b>Ƴ</b> 15′08               |            |
| minimum elong       | 2938 Nov 17 12:05                      | 25°M10'40                         | 0°43'19     | greatest brilliancy    | 2941 May 17 11:50                      | 20° <b>Ƴ</b> 57′28               | -4.8m      |
|                     | 2938 Nov 21 08:25                      | 0° <b>∡</b>                       |             | desc. node             | 2941 May 23 00:18                      | 23° <b>Y</b> 15'51               |            |
| desc. node          | 2938 Dec 06 05:31                      | 18° <b>∡</b> ³39'44               |             |                        | 2941 Jun 03 01:17                      | 0°8                              | 45040100   |
|                     | 2938 Dec 15 06:16                      | 0°る                               |             | morning max el         | 2941 Jun 25 22:28                      | 19° <b>8</b> 32'06               | 45°49'30   |
| evening rise        | 2938 Dec 27 14:40                      | 15°る30'23<br>0°≈                  |             |                        | 2941 Jul 06 12:03                      | 0° <b>©</b>                      |            |
|                     | 2939 Jan 08 03:45<br>2939 Feb 01 02:06 | 0 ≈<br>0° <b>)</b> (              |             |                        | 2941 Aug 03 11:12<br>2941 Aug 29 17:20 | 0° <b>U</b>                      |            |
|                     | 2939 Feb 25 03:28                      | 0°Υ                               |             | asc. node              | 2941 Aug 29 17:20<br>2941 Sep 13 03:39 | 17° <b>Ω</b> 00'01               |            |
|                     | 2939 Mar 21 11:10                      | %8<br>0°8                         |             | ase. node              | 2941 Sep 24 00:35                      | 0° <b>m</b> )                    |            |
| asc. node           | 2939 Mar 29 08:37                      | 9° <b>8</b> 37'55                 |             |                        | 2941 Oct 18 16:31                      | 0∘ <b>⊽</b>                      |            |
|                     | 2939 Apr 15 05:32                      | 0°Щ                               |             |                        | 2941 Nov 11 22:25                      | 0° <b>M</b> .                    |            |
|                     | 2939 May 10 17:02                      | 0ಂ <b>ತಾ</b>                      |             |                        | 2941 Dec 05 22:31                      | 0° <b>∡</b> 7                    |            |
|                     | 2939 Jun 06 11:12                      | $0^{\circ}\Omega$                 |             | greatest brilliancy    | 2941 Dec 16 04:07                      | 12° <b>∡</b> ¹50'35              | -3.9m      |
| evening max el      | 2939 Jun 29 05:25                      | 23° <b>Ω</b> 21′02                | 45°26'12    | morning set            | 2941 Dec 21 21:44                      | 20° <b>∡</b> ¹02'44              |            |
|                     | 2939 Jul 06 09:02                      | 0° <b>m</b>                       |             |                        | 2941 Dec 29 19:48                      | ರ∘ರ                              |            |
| desc. node          | 2939 Jul 18 22:08                      | 10° <b>m</b> 25'41                |             | desc. node             | 2942 Jan 02 17:15                      | 4° <b>る</b> 53'49                |            |
| greatest brilliancy | 2939 Aug 06 19:28                      | 21° Mp 14'05                      | -4.7m       |                        | 2942 Jan 22 16:05                      | 0° <b>≈</b>                      |            |
| retrograde          | 2939 Aug 16 21:03                      | 23° m 03'51                       |             |                        |  |                                  |            |
| evening set         | 2939 Sep 03 15:36                      | 17° Mp 10'10                      | 0000100     | superior conj          | 2942 Feb 01 10:18                      | 12°≈16'30                        |            |
| inferior conj       | 2939 Sep 07 06:32                      | 14° Mp 57'17                      |             | minimum elong          | 2942 Jan 31 22:16                      | 11°≈38'41                        |            |
| minimum elong       | 2939 Sep 07 02:37                      | 15° Mp 03'22                      |             | max. Earth dist.       | 2942 Feb 03 08:28                      | 14° <b>≈</b> 41'38               | 1.71167 AU |
| min. Earth dist.    | 2939 Sep 07 15:58                      | 14"110/42'37                      | 0.28801 AU  |                        | 2942 Feb 15 12:43                      | 0° <b>∀</b>                      |            |

|                     | 2942 Mar 11 11:14 | 0° <b>Υ</b>                      |             |                        | 2944 Jul 29 14:17                      | 0°9                          |             |
|---------------------|-------------------|----------------------------------|-------------|------------------------|--|------------------------------|-------------|
| evening rise        | 2942 Mar 14 09:02 | 3° <b>Υ</b> 38'05                |             | morning max el         | 2944 Sep 04 10:51                      | 27° <b>©</b> 15'21           | 45°48'40    |
| evening rise        | 2942 Apr 04 13:22 | 0° <b>8</b>                      |             | morning max cr         | 2944 Sep 07 06:49                      | 0°Ω                          | 43 40 40    |
| asc. node           | 2942 Apr 25 20:28 | 26° <b>8</b> 17'51               |             |                        | 2944 Oct 05 17:14                      | 0° m/y                       |             |
| use. Houe           | 2942 Apr 28 20:50 | 0°II                             |             | asc. node              | 2944 Oct 10 15:32                      | 5° Mp 32'17                  |             |
|                     | 2942 May 23 11:13 | 0°ಅ                              |             | use. House             | 2944 Oct 31 18:15                      | 0∘ <b>ರ</b>                  |             |
|                     | 2942 Jun 17 10:40 | 0°N                              |             |                        | 2944 Nov 25 16:40                      | 0° <b>M</b>                  |             |
|                     | 2942 Jul 12 23:29 | 0° m/                            |             |                        | 2944 Dec 20 01:21                      | 0° <b>∡</b> 7                |             |
|                     | 2942 Aug 08 11:21 | 0∘ <u>⊽</u>                      |             |                        | 2945 Jan 13 03:26                      | 0°ರ                          |             |
| desc. node          | 2942 Aug 15 09:59 | 7° <b>£</b> 34'48                |             | desc. node             | 2945 Jan 30 05:12                      | 21° <b>る</b> 21'18           |             |
|                     | 2942 Sep 06 01:09 | 0° <b>M</b> .                    |             |                        | 2945 Feb 06 02:51                      | 0° <b>≈</b>                  |             |
| evening max el      | 2942 Sep 09 09:27 | 3°ML15'06                        | 46°01'55    |                        | 2945 Mar 02 01:49                      | 0° <b>)</b> €                |             |
|                     | 2942 Oct 14 05:19 | 0° <b>∡</b> ¹                    |             | morning set            | 2945 Mar 09 01:12                      | 8° <b>)</b> 43′38            |             |
| greatest brilliancy | 2942 Oct 19 08:41 | 2° <b>∡</b> 02'57                | -4.8m       |                        | 2945 Mar 26 01:52                      | $0^{\circ}\mathbf{\Upsilon}$ |             |
| retrograde          | 2942 Oct 28 13:23 | 3° <b>∡</b> ³35'44               |             |                        |  |                              |             |
|                     | 2942 Nov 11 03:00 | 30°RM₊                           |             | superior conj          | 2945 Apr 17 18:36                      | 28° <b>Y</b> 15'26           | -1°12'02    |
| evening set         | 2942 Nov 13 00:15 | 29°ML00'02                       |             | minimum elong          | 2945 Apr 18 04:22                      | 28° <b>Y</b> 45'46           | 1°11'47     |
| inferior conj       | 2942 Nov 18 06:41 | 25°M53'13                        | -4°28'02    |                        | 2945 Apr 19 04:17                      | 0° <b>႘</b>                  |             |
| minimum elong       | 2942 Nov 18 15:43 | 25°M39'25                        |             | max. Earth dist.       | 2945 Apr 21 15:00                      | 3° <b>8</b> 02'10            | 1.72467 AU  |
| min. Earth dist.    | 2942 Nov 19 01:08 | 25°M25'02                        | 0.27026 AU  |                        | 2945 May 13 09:53                      | $\Pi^{\circ}0$               |             |
| morning rise        | 2942 Nov 24 06:37 | 22°M21'41                        |             | asc. node              | 2945 May 23 08:17                      | 12° <b>Ⅱ</b> 14'43           |             |
| asc. node           | 2942 Dec 06 12:56 | 18°M11'33                        |             | evening rise           | 2945 May 26 05:44                      | 15° <b>Ⅱ</b> 48'24           |             |
| direct              | 2942 Dec 09 01:32 | 18°M03'45                        |             |                        | 2945 Jun 06 18:51                      | $0$ $\circ$                  |             |
| greatest brilliancy | 2942 Dec 19 22:42 | 20°M18'03                        | -4.9m       |                        | 2945 Jul 01 07:08                      | $0$ $^{\circ}$ $\Omega$      |             |
|                     | 2943 Jan 05 04:02 | 0° <b>∡</b> ¹                    |             |                        | 2945 Jul 25 23:14                      | 0° <b>т</b> р                |             |
| morning max el      | 2943 Jan 28 18:48 | 21° <b>х</b> 27'37               | 46°58'06    |                        | 2945 Aug 19 20:48                      | 0∘ <b>ರ</b>                  |             |
|                     | 2943 Feb 05 23:44 | 0°₹                              |             | desc. node             | 2945 Sep 11 21:54                      | 27° <b>≏</b> 24'18           |             |
|                     | 2943 Mar 04 22:13 | 0° <b>≈</b>                      |             |                        | 2945 Sep 14 02:46                      | 0°M₊                         |             |
| desc. node          | 2943 Mar 28 02:55 | 27°≈08'27                        |             |                        | 2945 Oct 09 22:13                      | 0°⊀                          |             |
|                     | 2943 Mar 30 12:45 | 0° <b>∀</b>                      |             |                        | 2945 Nov 05 19:40                      | 0°ಕ                          |             |
|                     | 2943 Apr 24 14:35 | 0°Υ                              |             | evening max el         | 2945 Nov 21 09:41                      | 16° <b>る</b> 15'30           | 47°04'27    |
|                     | 2943 May 19 10:56 | 0.8                              |             |                        | 2945 Dec 05 21:46                      | 0° <b>≈</b>                  |             |
|                     | 2943 Jun 13 04:38 | 0° <b>Ⅱ</b>                      |             | greatest brilliancy    | 2945 Dec 31 23:47                      | 17°≈25'35                    | -4.9m       |
|                     | 2943 Jul 07 20:07 | 0.22                             |             | asc. node              | 2946 Jan 03 01:00                      | 18°≈06'57                    |             |
| asc. node           | 2943 Jul 19 05:59 | 13°956'16                        |             | retrograde             | 2946 Jan 11 01:10                      | 19°≈21'53                    |             |
| morning set         | 2943 Jul 30 23:20 | 28°917'55                        |             | evening set            | 2946 Jan 26 13:05                      | 14°≈37'22                    | 0.26755 ATT |
|                     | 2943 Aug 01 08:37 | 0° <b>N</b>                      |             | min. Earth dist.       | 2946 Jan 30 23:11                      | 11°≈59'40                    | 0.26755 AU  |
|                     | 2943 Aug 25 17:35 | 0° m/)                           | 1 72015 ATT | inferior conj          | 2946 Jan 31 16:32                      | 11°≈32'59                    | 6°37'39     |
| max. Earth dist.    | 2943 Sep 02 08:04 | 9° <b>™</b> 23'40                | 1.73015 AU  | minimum elong          | 2946 Jan 31 05:54<br>2946 Feb 04 22:57 | 11°≈49'21<br>8°≈58'50        | 6°35'21     |
| superior conj       | 2943 Sep 05 09:09 | 13° <b>m</b> 09'38               | 1°23'00     | morning rise<br>direct | 2946 Feb  21  02:01                    | 8 ≈58 30<br>3°≈52'12         |             |
| minimum elong       | 2943 Sep 05 05:18 | 13 m/0938<br>12° m/57'46         |             | greatest brilliancy    | 2946 Mar 02 09:14                      | 5°≈30'11                     | -4.9m       |
| minimum clong       | 2943 Sep 18 23:23 | ე° <b>亞</b>                      | 1 22 37     | greatest oriniancy     | 2946 Apr 06 00:05                      | 0° <b>∺</b>                  | -4.9111     |
| evening rise        | 2943 Oct 12 07:04 | 0 <b>—</b><br>28° <b>≏</b> 57'31 |             | morning max el         | 2946 Apr 12 00:29                      | 5° <b>)</b> 48'40            | 46°31'47    |
| evening rise        | 2943 Oct 13 03:10 | 0° <b>™</b> .                    |             | desc. node             | 2946 Apr 24 14:39                      | 18° <b>)</b> (41'53          | 40 31 47    |
|                     | 2943 Nov 06 06:08 | 0° <b>∡</b> 7                    |             | dese. node             | 2946 May 05 03:14                      | 0°Υ                          |             |
| desc. node          | 2943 Nov 07 19:40 | 1° <b>×</b> 756'41               |             |                        | 2946 May 31 20:13                      | 0°8                          |             |
|                     | 2943 Nov 30 09:03 | 0°る                              |             |                        | 2946 Jun 26 15:28                      | 0°II                         |             |
|                     | 2943 Dec 24 12:50 | 0° <b>≈</b>                      |             |                        | 2946 Jul 21 22:54                      | 0ಂತಾ                         |             |
|                     | 2944 Jan 17 19:40 | 0° <b>∀</b>                      |             | asc. node              | 2946 Aug 15 17:51                      | 29° <b>©</b> 49'57           |             |
|                     | 2944 Feb 11 10:26 | $0^{\circ}\mathbf{\Upsilon}$     |             |                        | 2946 Aug 15 21:10                      | $0^{\circ}\Omega$            |             |
| asc. node           | 2944 Feb 28 22:39 | 20° <b>Y</b> ′52'09              |             |                        | 2946 Sep 09 11:09                      | 0° <b>m</b> p                |             |
|                     | 2944 Mar 07 18:27 | $8^{\circ}$ 0                    |             |                        | 2946 Oct 03 18:07                      | 0∘ <b>ত</b>                  |             |
|                     | 2944 Apr 03 15:58 | $\Pi^{\circ}0$                   |             | morning set            | 2946 Oct 07 15:04                      | 4° <b>£</b> 48'33            |             |
| evening max el      | 2944 Apr 16 09:52 | 13° <b>Ⅱ</b> 03'52               | 46°00'27    |                        | 2946 Oct 27 20:10                      | 0°M                          |             |
|                     | 2944 May 05 07:20 | 0°©                              |             | max. Earth dist.       | 2946 Nov 12 06:17                      | 19° <b>M</b> 17'21           | 1.71651 AU  |
| greatest brilliancy | 2944 May 24 15:51 | 11°9547'45                       | -4.7m       |                        |  |                              |             |
| retrograde          | 2944 Jun 04 15:52 | 13° <b>©</b> 59'45               |             | superior conj          | 2946 Nov 14 15:44                      | 22°M17'18                    | 0°46'51     |
| evening set         | 2944 Jun 19 17:23 | 9° <b>5</b> 36'30                |             | minimum elong          | 2946 Nov 15 01:22                      | 22°M47'27                    | 0°46'26     |
| desc. node          | 2944 Jun 19 12:13 | 9° <b>5</b> 43'32                |             |                        | 2946 Nov 20 19:25                      | 0° <b>∡</b> ¹                |             |
| inferior conj       | 2944 Jun 26 03:22 | 5°545'00                         | -1°33'57    | desc. node             | 2946 Dec 05 07:31                      | 18° <b>∡</b> 11'19           |             |
| minimum elong       | 2944 Jun 25 23:57 | 5° <b>©</b> 50'23                |             |                        | 2946 Dec 14 17:23                      | 0°ಕ                          |             |
| min. Earth dist.    | 2944 Jun 25 22:56 | 5° <b>©</b> 51'59                | 0.28873 AU  | evening rise           | 2946 Dec 25 01:28                      | 12° <b>る</b> 58'39           |             |
| morning rise        | 2944 Jul 02 06:42 | 2°502'45                         |             |                        | 2947 Jan 07 14:59                      | 0° <b>≈</b>                  |             |
|                     | 2944 Jul 06 09:25 | 30°RⅡ                            |             |                        | 2947 Jan 31 13:26                      | 0° <b>∀</b>                  |             |
| direct              | 2944 Jul 17 16:46 | 27° <b>II</b> 30'11              | 4.7         |                        | 2947 Feb 24 14:59                      | 0° <b>Υ</b>                  |             |
| greatest brilliancy | 2944 Jul 27 21:19 | 29° <b>Ⅱ</b> 21'40               | -4./m       |                        | 2947 Mar 20 23:00                      | 0° <b>8</b>                  |             |

| asc. node                        | 2947 Mar 28 10:35                      | 9° <b>8</b> 07'31                    |   |                     | 2949 Oct 18 04:07                      | 0 <b>∘</b> ⊽               |            |
|----------------------------------|--|--------------------------------------|---|---------------------|--|----------------------------|------------|
|                                  | 2947 Apr 14 18:00                      | $\Pi^{\circ}0$                       |   |                     | 2949 Nov 11 09:50                      | $0^{\circ}$ M              |            |
|                                  | 2947 May 10 06:45                      | $0$ $\circ$ $\odot$                  |   |                     | 2949 Dec 05 09:50                      | 0° <b>∡</b> ¹              |            |
|                                  | 2947 Jun 06 03:52                      | $0 ^{\circ} \Omega$                  |   | greatest brilliancy | 2949 Dec 15 14:16                      | 12° <b>҂</b> 747′00        | -3.9m      |
| evening max el                   | 2947 Jun 26 21:24                      | 21° <b>Ω</b> 10′38                   | 45°26'09                                | morning set         | 2949 Dec 19 08:50                      | 17° <b>∡</b> ³31′26        |            |
|                                  | 2947 Jul 06 11:50                      | 0° <b>m</b>                          |   |                     | 2949 Dec 29 07:03                      | 0°ಕ                        |            |
| desc. node                       | 2947 Jul 18 00:15                      | 9° Mp 18′20                          |   | desc. node          | 2950 Jan 01 19:25                      | 4° <b>ප</b> 25'14          |            |
| greatest brilliancy              | 2947 Aug 04 08:29                      | 19° Mp 00′20                         | -4.7m                                   |                     | 2950 Jan 22 03:18                      | 0° <b>≈</b>                |            |
| retrograde                       | 2947 Aug 14 12:51                      | 20° <b>m</b> 52'08                   |   |                     |  |                            |            |
| evening set                      | 2947 Sep 01 04:33                      | 15° <b>m</b> 01'41                   |   | superior conj       | 2950 Jan 29 20:04                      | 9° <b>≈</b> 41'02          |            |
| inferior conj                    | 2947 Sep 04 22:06                      | 12° m 44'43                          |   | minimum elong       | 2950 Jan 29 08:02                      |                            | 1°00'24    |
| minimum elong                    | 2947 Sep 04 17:30                      | 12° m 51'53                          |   | max. Earth dist.    | 2950 Jan 31 15:15                      |                            | 1.71145 AU |
| min. Earth dist.                 | 2947 Sep 05 06:06                      | 12° m/32'18                          | 0.28838 AU                              |                     | 2950 Feb 14 23:56                      | 0° <b>∀</b><br>0° <b>Υ</b> |            |
| morning rise                     | 2947 Sep 08 06:19                      | 10° Mp 41'22                         |   |                     | 2950 Mar 10 22:27                      | 0°γ¹<br>1° <b>Υ</b> 07'26  |            |
| direct                           | 2947 Sep 26 11:01                      | 4° Mp 28'49                          | -4.8m                                   | evening rise        | 2950 Mar 11 20:01                      | 0°8                        |            |
| greatest brilliancy<br>asc. node | 2947 Oct 07 08:14<br>2947 Nov 08 03:11 | 6° Mp 38'51<br>29° Mp 16'13          | -4.0111                                 | asc. node           | 2950 Apr 04 00:38                      | 25° <b>8</b> 49'05         |            |
| asc. Houe                        | 2947 Nov 08 03:11<br>2947 Nov 08 21:46 | 0° <b>⊡</b>                          |   | asc. node           | 2950 Apr 24 22:29<br>2950 Apr 28 08:15 | 23 <b>O</b> 4903           |            |
| morning max el                   | 2947 Nov 08 21.40<br>2947 Nov 15 12:04 | 0 <b>==</b><br>6° <b>£</b> 25'18     | 46°28'30                                |                     | 2950 Apr 28 08.15<br>2950 May 22 22:56 | 0°©                        |            |
| morning max cr                   | 2947 Nov 13 12:04<br>2947 Dec 07 14:49 | 0°M                                  | 40 28 30                                |                     | 2950 Jun 16 23:00                      | 0° <b>U</b>                |            |
|                                  | 2948 Jan 02 13:04                      | 0° <b>∡</b> 7                        |   |                     | 2950 Jul 12 12:59                      | 0° <b>m</b> )              |            |
|                                  | 2948 Jan 27 10:59                      | °5                                   |   |                     | 2950 Aug 08 03:20                      | 0∘ <b>⊽</b>                |            |
|                                  | 2948 Feb 20 22:38                      | 0° <b>≈</b>                          |   | desc. node          | 2950 Aug 14 12:01                      | ° <b>≏</b> 54'33           |            |
| desc. node                       | 2948 Feb 27 17:00                      | 8°≈20'14                             |   | dese. Hode          | 2950 Sep 05 23:54                      | 0°M                        |            |
|                                  | 2948 Mar 16 06:04                      | 0° <b>)</b> €                        |   | evening max el      | 2950 Sep 06 22:30                      |                            | 45°59'36   |
|                                  | 2948 Apr 09 12:26                      | $0^{\circ}\mathbf{\Upsilon}$         |   | greatest brilliancy | 2950 Oct 16 22:14                      | 29°M40'23                  | -4.8m      |
|                                  | 2948 May 03 19:32                      | 0° <b>႘</b>                          |   | · ·                 | 2950 Oct 17 23:56                      | 0° <b>∡</b> ¹              |            |
| morning set                      | 2948 May 20 13:22                      | 20° <b>8</b> 37'50                   |   | retrograde          | 2950 Oct 26 01:13                      | 1° <b>∡</b> 11'53          |            |
| -                                | 2948 May 28 04:03                      | $\Pi^{\circ}0$                       |   | -                   | 2950 Nov 02 19:52                      | 30° <b>ŖM</b> ₽            |            |
| asc. node                        | 2948 Jun 19 20:12                      | 27° <b>II</b> 52'45                  |   | evening set         | 2950 Nov 10 16:02                      | 26°M32'04                  |            |
|                                  | 2948 Jun 21 13:36                      | $0$ $\circ$ $\odot$                  |   | inferior conj       | 2950 Nov 15 19:44                      | 23°M28'58                  | -4°47'48   |
|                                  |  |                                      |   | minimum elong       | 2950 Nov 16 05:11                      | 23°M14'30                  | 4°45'15    |
| superior conj                    | 2948 Jun 26 17:05                      | 6° <b>©</b> 19'27                    | 0°16'18                                 | min. Earth dist.    | 2950 Nov 16 15:25                      | 22°M58'51                  | 0.27089 AU |
| minimum elong                    | 2948 Jun 26 13:43                      | 6° <b>5</b> 09'06                    | 0°16'09                                 | morning rise        | 2950 Nov 21 17:43                      | 19° <b>M</b> 59'34         |            |
| max. Earth dist.                 | 2948 Jun 26 20:25                      | 6° <b>5</b> 29'40                    | 1.73529 AU                              | asc. node           | 2950 Dec 05 15:07                      | 15°M39'32                  |            |
|                                  | 2948 Jul 15 23:21                      | $0^{\circ}\Omega$                    |   | direct              | 2950 Dec 06 14:50                      | 15°M38'21                  |            |
| evening rise                     | 2948 Aug 01 19:05                      | 20° <b>Ω</b> 41'09                   |   | greatest brilliancy | 2950 Dec 17 13:53                      | 17°M53'51                  | -4.9m      |
|                                  | 2948 Aug 09 08:52                      | 0° <b>m</b>                          |   |                     | 2951 Jan 05 19:46                      | 0° <b>∡</b> ¹              |            |
|                                  | 2948 Sep 02 18:36                      | 0∘ <b>⊽</b>                          |   | morning max el      | 2951 Jan 26 07:19                      | 18° <b>∡</b> 58'56         | 46°58'03   |
|                                  | 2948 Sep 27 05:42                      | 0°M                                  |   |                     | 2951 Feb 05 19:46                      | 5°0                        |            |
| desc. node                       | 2948 Oct 09 09:46                      | 14°M52'59                            |   |                     | 2951 Mar 04 13:51                      | 0° <b>≈</b>                |            |
|                                  | 2948 Oct 21 19:12                      | 0° <b>∡</b>                          |   | desc. node          | 2951 Mar 27 04:55                      | 26° <b>≈</b> 33'19         |            |
|                                  | 2948 Nov 15 12:22                      | 5°0                                  |   |                     | 2951 Mar 30 02:26                      | 0° <b>ℋ</b><br>0° <b>Ƴ</b> |            |
|                                  | 2948 Dec 10 12:24<br>2949 Jan 05 04:49 | 0° <b>≈</b><br>0° <b>∀</b>           |   |                     | 2951 Apr 24 03:11                      | 0° <b>8</b>                |            |
| asc. node                        | 2949 Jan 30 12:50                      | 0 <del>X</del><br>27° <b>¥</b> 42'23 |   |                     | 2951 May 18 22:50<br>2951 Jun 12 16:03 | 0°II                       |            |
| evening max el                   | 2949 Feb 01 17:18                      | 29° <b>H</b> 56'46                   | 47°04'35                                |                     | 2951 Jul 07 07:13                      | 0°©                        |            |
| evening max er                   | 2949 Feb 01 18:35                      | 25 <b>γ</b> (30 <b>4</b> 0           | 47 0433                                 | asc. node           | 2951 Jul 18 08:03                      | 13° <b>5</b> 28'55         |            |
|                                  | 2949 Mar 11 06:16                      | 0°8                                  |   | morning set         | 2951 Jul 28 17:21                      | 26°512'23                  |            |
| greatest brilliancy              | 2949 Mar 13 22:18                      | 1° <b>8</b> 06'41                    | -4.9m                                   | morning sec         | 2951 Jul 31 19:33                      | 0° <b>Ω</b>                |            |
| retrograde                       | 2949 Mar 24 09:55                      | 3° <b>8</b> 10'50                    | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                     | 2951 Aug 25 04:27                      | 0° <b>m</b> p              |            |
|                                  | 2949 Apr 05 21:28                      | 30° <b>R</b> Υ                       |   | max. Earth dist.    | 2951 Aug 31 02:39                      |                            | 1.73055 AU |
| evening set                      | 2949 Apr 10 16:48                      | 27° <b>Υ</b> 20'36                   |   |                     | C                                      | •                          |            |
| inferior conj                    | 2949 Apr 14 11:12                      | 25° <b>Y</b> 00′30                   | 7°36'20                                 | superior conj       | 2951 Sep 03 03:11                      | 11° Mp 03'26               | 1°22'14    |
| minimum elong                    | 2949 Apr 14 20:12                      | 24° <b>Y</b> 46'23                   | 7°34'57                                 | minimum elong       | 2951 Sep 02 22:45                      | 10° <b>m</b> 49'41         | 1°22'11    |
| min. Earth dist.                 | 2949 Apr 14 06:07                      | 25° <b>Ƴ</b> 08′28                   | 0.28093 AU                              | _                   | 2951 Sep 18 10:18                      | 0∘ <b>ত</b>                |            |
| morning rise                     | 2949 Apr 18 23:54                      | 22° <b>Ƴ</b> 14'11                   |   | evening rise        | 2951 Oct 09 22:48                      | 26° <b>≏</b> 42'59         |            |
| direct                           | 2949 May 05 12:15                      | 16° <b>Ƴ</b> 58′09                   |   |                     | 2951 Oct 12 14:13                      | $0^{\circ}$ M              |            |
| greatest brilliancy              | 2949 May 15 00:44                      | 18° <b>Ƴ</b> 39′02                   | -4.8m                                   |                     | 2951 Nov 05 17:25                      | 0° <b>∡</b> ¹              |            |
| desc. node                       | 2949 May 22 02:20                      | 21° <b>Y</b> 44'27                   |   | desc. node          | 2951 Nov 06 21:45                      | 1° <b>≯</b> 28′03          |            |
|                                  | 2949 Jun 03 17:35                      | $0^{\circ}$ 8                        |   |                     | 2951 Nov 29 20:39                      | 0°ಕ                        |            |
| morning max el                   | 2949 Jun 23 13:43                      | 17° <b>8</b> 18'40                   | 45°50'24                                |                     | 2951 Dec 24 00:48                      | 0° <b>≈</b>                |            |
|                                  | 2949 Jul 06 07:13                      | 0° <b>I</b>                          |   |                     | 2952 Jan 17 08:08                      | 0° <b>∀</b>                |            |
|                                  | 2949 Aug 03 01:57                      | 0°9                                  |   | _                   | 2952 Feb 10 23:40                      | 0° <b>Υ</b>                |            |
|                                  | 2949 Aug 29 06:15                      | 0°N                                  |   | asc. node           | 2952 Feb 28 00:37                      | 20° <b>Y</b> 16′21         |            |
| asc. node                        | 2949 Sep 12 05:40                      | 16° <b>Ω</b> 29'14                   |   |                     | 2952 Mar 07 09:13                      | 0° <b>B</b>                |            |
|                                  | 2949 Sep 23 12:37                      | 0° <b>т</b> р                        |   |                     | 2952 Apr 03 10:32                      | 0°П                        |            |

| evening set         | 2957 Apr 08 10:43                      | 24° <b>Ƴ</b> 59'43               |            | minimum elong                 | 2959 Aug 31 16:00                      | 8° m 42'04                   | 1°21'18    |
|---------------------|--|----------------------------------|------------|-------------------------------|--|------------------------------|------------|
| inferior conj       | 2957 Apr 12 02:10                      | 22° <b>Υ</b> 43'51               | 7°47'14    | mmmum vieng                   | 2959 Sep 17 20:54                      | 0∘ <b>⊽</b>                  | 1 21 10    |
| minimum elong       | 2957 Apr 12 10:44                      | 22° <b>Υ</b> 30'23               | 7°46'01    | evening rise                  | 2959 Oct 07 14:24                      | 24° <b>₽</b> 29'09           |            |
| min. Earth dist.    | 2957 Apr 11 20:26                      | 22°Υ′52'53                       | 0.28056 AU | 8                             | 2959 Oct 12 00:58                      | 0°M                          |            |
| morning rise        | 2957 Apr 16 11:05                      | 20° <b>Y</b> ′02'54              |            |                               | 2959 Nov 05 04:22                      | 0° <b>∡</b> 7                |            |
| direct              | 2957 May 03 03:01                      | 14° <b>Ƴ</b> 42'25               |            | desc. node                    | 2959 Nov 05 23:49                      | 1° <b>₹</b> 00′25            |            |
| greatest brilliancy | 2957 May 12 14:02                      | 16° <b>Ƴ</b> 22'00               | -4.8m      |                               | 2959 Nov 29 07:54                      | 8°0                          |            |
| desc. node          | 2957 May 21 04:29                      | 20° <b>Ƴ</b> 17′20               |            |                               | 2959 Dec 23 12:25                      | 0° <b>≈</b>                  |            |
|                     | 2957 Jun 04 05:16                      | $9^{\circ}$ 8                    |            |                               | 2960 Jan 16 20:16                      | 0° <b>)</b> €                |            |
| morning max el      | 2957 Jun 21 04:06                      | 15° <b>8</b> 03'55               | 45°51'12   |                               | 2960 Feb 10 12:37                      | $0^{\circ}\mathbf{\Upsilon}$ |            |
|                     | 2957 Jul 06 01:34                      | $\Pi^{\circ}0$                   |            | asc. node                     | 2960 Feb 27 02:41                      | 19° <b>Ƴ</b> 41'41           |            |
|                     | 2957 Aug 02 16:13                      | $0$ $\circ$ $\odot$              |            |                               | 2960 Mar 06 23:46                      | $9^{\circ}$ 8                |            |
|                     | 2957 Aug 28 18:47                      | $0^{\circ}\Omega$                |            |                               | 2960 Apr 03 05:10                      | $\Pi$ °0                     |            |
| asc. node           | 2957 Sep 11 07:43                      | 15° <b>Ω</b> 59'33               |            | evening max el                | 2960 Apr 11 14:42                      | 8° <b>Ⅱ</b> 31'14            | 46°04'56   |
|                     | 2957 Sep 23 00:17                      | 0° <b>m</b> ∕                    |            |                               | 2960 May 06 12:11                      | $0_{\circ}$ වෙ               |            |
|                     | 2957 Oct 17 15:20                      | 0∘ <b>⊽</b>                      |            | greatest brilliancy           | 2960 May 20 00:59                      | 7° <b>9</b> 28'47            | -4.8m      |
|                     | 2957 Nov 10 20:49                      | 0°M₊                             |            | retrograde                    | 2960 May 31 00:55                      | 9° <b>©</b> 41'43            |            |
|                     | 2957 Dec 04 20:44                      | 0° <b>∡</b> ¹                    |            | evening set                   | 2960 Jun 15 02:26                      | 5° <b>©</b> 17'14            |            |
| greatest brilliancy | 2957 Dec 14 07:14                      | 11° <b>∡</b> 50'42               | -3.9m      | desc. node                    | 2960 Jun 17 16:16                      | 3°548'28                     |            |
| morning set         | 2957 Dec 16 20:07                      | 15° <b>∡</b> *01'55              |            | inferior conj                 | 2960 Jun 21 12:07                      | 1°526'45                     |            |
|                     | 2957 Dec 28 17:55                      | 0°る<br>                          |            | minimum elong                 | 2960 Jun 21 10:06                      | 1°529'54                     |            |
| desc. node          | 2957 Dec 31 21:21                      | 3° <b>る</b> 57'12                |            | min. Earth dist.              | 2960 Jun 21 08:18                      | 1°932'44                     | 0.28836 AU |
|                     | 2958 Jan 21 14:08                      | 0° <b>≈</b>                      |            |                               | 2960 Jun 23 19:45                      | 30°RⅡ                        |            |
|                     | 2050 1 27 06 05                        | <b>5</b> 0 0 <b>5</b> 122        | 0057154    | morning rise                  | 2960 Jun 27 17:56                      | 27° <b>Ⅱ</b> 41'19           |            |
| superior conj       | 2958 Jan 27 06:05                      | 7°≈07'33                         |            | direct                        | 2960 Jul 13 00:04                      | 23° <b>Ⅱ</b> 12'04           | 4.7        |
| minimum elong       | 2958 Jan 26 18:09                      | 6°≈30'02                         |            | greatest brilliancy           | 2960 Jul 23 06:07                      | 25° <b>Ⅱ</b> 04'48           | -4./m      |
| max. Earth dist.    | 2958 Jan 28 18:27                      | 9° <b>≈</b> 01'55<br>0° <b>米</b> | 1.71125 AU |                               | 2960 Aug 02 10:25                      | 0°ഇ<br>22° <b>ഇ</b> 54'26    | 45047117   |
| arranina riaa       | 2958 Feb 14 10:45<br>2958 Mar 09 07:09 | 28° <b>升</b> 38'24               |            | morning max el                | 2960 Aug 30 18:18                      | 0°Ω                          | 45°47'17   |
| evening rise        | 2958 Mar 10 09:15                      | 28 π3824<br>0° <b>Υ</b>          |            |                               | 2960 Sep 06 23:38<br>2960 Oct 04 23:18 | 0°Mp                         |            |
|                     | 2958 Apr 03 11:29                      | 0°8                              |            | asc. node                     | 2960 Oct 04 23:18<br>2960 Oct 08 19:38 | رابا 0<br>4°Mp21'15          |            |
| asc. node           | 2958 Apr 03 11:29<br>2958 Apr 24 00:37 | 25° <b>8</b> 21'59               |            | asc. node                     | 2960 Oct 30 20:24                      | 0° <b>ت</b>                  |            |
| asc. Houc           | 2958 Apr 24 00:37<br>2958 Apr 27 19:14 | 0° <b>Ⅱ</b>                      |            |                               | 2960 Nov 24 16:58                      | 0°M                          |            |
|                     | 2958 May 22 10:16                      | 0°©                              |            |                               | 2960 Dec 19 00:43                      | 0° <b>⊼</b> ¹                |            |
|                     | 2958 Jun 16 11:00                      | $0 {\circ} {\mathfrak O}$        |            |                               | 2961 Jan 12 02:16                      | °5<br>ਹ°ਤ                    |            |
|                     | 2958 Jul 12 02:16                      | 0° m/p                           |            | desc. node                    | 2961 Jan 28 09:10                      | 20° <b>පි</b> 23'05          |            |
|                     | 2958 Aug 07 19:15                      | 0∘ <del>⊽</del>                  |            |                               | 2961 Feb 05 01:20                      | 0° <b>≈</b>                  |            |
| desc. node          | 2958 Aug 13 13:59                      | 6° <b>£</b> 14'36                |            |                               | 2961 Mar 01 00:00                      | 0° <b>)</b> €                |            |
| evening max el      | 2958 Sep 04 10:54                      | 28° <b>≏</b> 33'21               | 45°57'30   | morning set                   | 2961 Mar 03 22:39                      | 3° <b>)</b> 41′08            |            |
| Č                   | 2958 Sep 05 23:14                      | 0° <b>M</b>                      |            | Č                             | 2961 Mar 24 23:47                      | $0^{\circ}\mathbf{\Upsilon}$ |            |
| greatest brilliancy | 2958 Oct 14 11:45                      | 27° <b>M</b> 19'17               | -4.8m      |                               |  |                              |            |
| retrograde          | 2958 Oct 23 13:22                      | 28°M49'58                        |            | superior conj                 | 2961 Apr 12 21:59                      | 23° <b>Y</b> 34'47           | -1°15'48   |
| evening set         | 2958 Nov 08 07:58                      | 24°ML05'31                       |            | minimum elong                 | 2961 Apr 13 07:05                      | 24° <b>Y</b> 03'04           | 1°15'35    |
| inferior conj       | 2958 Nov 13 08:55                      | 21°MJ06'26                       | -5°06'45   | max. Earth dist.              | 2961 Apr 16 16:38                      | 28° <b>Y</b> 16'27           | 1.72356 AU |
| minimum elong       | 2958 Nov 13 18:43                      | 20°M51'26                        | 5°04'13    |                               | 2961 Apr 18 02:00                      | $9^{\circ}$ 8                |            |
| min. Earth dist.    | 2958 Nov 14 05:45                      | 20°MJ34'33                       | 0.27152 AU |                               | 2961 May 12 07:31                      | $\Pi^{\circ}0$               |            |
| morning rise        | 2958 Nov 19 04:46                      | 17°ML39'39                       |            | evening rise                  | 2961 May 21 14:06                      | 11° <b>Ⅱ</b> 26′01           |            |
| direct              | 2958 Dec 04 04:00                      | 13°M14'29                        |            | asc. node                     | 2961 May 21 12:26                      | 11° <b>Ⅱ</b> 20′56           |            |
| asc. node           | 2958 Dec 04 17:07                      | 13°M14'50                        |            |                               | 2961 Jun 05 16:35                      | 0∘ <b>©</b>                  |            |
| greatest brilliancy | 2958 Dec 15 05:19                      | 15°M31'41                        | -4.9m      |                               | 2961 Jun 30 05:13                      | $0^{\circ}\Omega$            |            |
|                     | 2959 Jan 06 06:56                      | 0° <b>∡</b>                      |            |                               | 2961 Jul 24 22:01                      | 0° <b>т</b> у                |            |
| morning max el      | 2959 Jan 23 20:32                      | 16° <b>∡</b> 33'20               | 46°57'57   |                               | 2961 Aug 18 20:51                      | 0∘ <b>⊽</b>                  |            |
|                     | 2959 Feb 05 14:45                      | 0°⋜                              |            | desc. node                    | 2961 Sep 10 01:56                      | 26° <b>£</b> 19'52           |            |
|                     | 2959 Mar 04 04:49                      | 0° <b>≈</b>                      |            |                               | 2961 Sep 13 04:58                      | 0°M                          |            |
| desc. node          | 2959 Mar 26 06:57                      | 25°≈59'45                        |            |                               | 2961 Oct 09 04:15                      | 0° <b>∡</b>                  |            |
|                     | 2959 Mar 29 15:36                      | 0° <b>∀</b>                      |            | avani: 1                      | 2961 Nov 05 09:57                      | 0°る                          | 47901122   |
|                     | 2959 Apr 23 15:18                      | 0° <b>႘</b>                      |            | evening max el                | 2961 Nov 16 13:29                      | 11°る29'02<br>0°≈             | 4/ 01/25   |
|                     | 2959 May 18 10:16<br>2959 Jun 12 03:02 | 0°D                              |            | grantest brillians            | 2961 Dec 06 19:00<br>2961 Dec 27 00:58 | 0°≈<br>12°≈27'58             | 4.0m       |
|                     | 2959 Jun 12 03:02<br>2959 Jul 06 17:55 | 0₀ <b>©</b><br>0∘П               |            | greatest brilliancy asc. node | 2961 Dec 27 00:58<br>2962 Jan 01 04:58 | 12°≈27'58<br>13°≈55'50       | -4.9m      |
| asc. node           | 2959 Jul 06 17:55<br>2959 Jul 17 09:59 | 13° <b>5</b> 02'17               |            | retrograde                    | 2962 Jan 01 04:38<br>2962 Jan 06 03:40 | 13°≈33'30<br>14°≈25'05       |            |
| morning set         | 2959 Jul 26 11:13                      | 24°907'33                        |            | evening set                   | 2962 Jan 21 07:21                      | 9°≈50'23                     |            |
| morning sot         | 2959 Jul 31 06:07                      | 0°Ω                              |            | min. Earth dist.              | 2962 Jan 26 00:38                      | 7°≈03'00                     | 0.26685 AU |
|                     | 2959 Aug 24 15:00                      | 0° <b>m</b> )                    |            | inferior conj                 | 2962 Jan 26 17:29                      | 6°≈37'13                     | 6°03'30    |
| max. Earth dist.    | 2959 Aug 28 22:16                      |                                  | 1.73097 AU | minimum elong                 | 2962 Jan 26 06:52                      | 6°≈53'27                     | 6°00'57    |
|                     |  | 4                                |            | morning rise                  | 2962 Jan 31 06:44                      | 3°≈54'09                     |            |
| superior conj       | 2959 Aug 31 21:01                      | 8° <b>m</b> 57'34                | 1°21'22    | <b>2</b>                      | 2962 Feb 09 00:45                      | 30°Rる                        |            |
| . J                 | 5                                      |                                  |            |                               |  | • -                          |            |

| direct                        | 2962 Feb 16 03:20                      | 28° <b>る</b> 57'15               |            |                     | 2964 Aug 08 06:27                      | 0° m                              |            |
|-------------------------------|--|----------------------------------|------------|---------------------|--|-----------------------------------|------------|
| direct                        | 2962 Feb 23 11:33                      | 0°≈                              |            |                     | 2964 Sep 01 16:41                      | 0° <b>ت</b><br>الله               |            |
| greatest brilliancy           | 2962 Feb 25 10:57                      | 0°≈36'36                         | -4.9m      |                     | 2964 Sep 26 04:32                      | 0°M                               |            |
| greatest similare             | 2962 Apr 06 01:43                      | 0° <b>∀</b>                      | ,          | desc. node          | 2964 Oct 07 13:59                      | 13°M54'47                         |            |
| morning max el                | 2962 Apr 07 04:48                      |                                  | 46°34'50   |                     | 2964 Oct 20 19:07                      | 0° <b>∡</b> 7                     |            |
| desc. node                    | 2962 Apr 22 18:50                      | 17° <b>)</b> € 12'39             |            |                     | 2964 Nov 14 13:51                      | 5°0                               |            |
|                               | 2962 May 04 12:47                      | $_0$ ° $\gamma$                  |            |                     | 2964 Dec 09 16:21                      | 0° <b>≈</b>                       |            |
|                               | 2962 May 31 00:04                      | 0°8                              |            |                     | 2965 Jan 04 13:33                      | 0° <b>)</b> €                     |            |
|                               | 2962 Jun 25 16:28                      | 0° <b>I</b> I                    |            | evening max el      | 2965 Jan 27 22:29                      | 25° <b>)</b> 14'44                | 47°07'12   |
|                               | 2962 Jul 20 22:15                      | 0°ಲ                              |            | asc. node           | 2965 Jan 28 16:53                      | 26° <b>₭</b> 01'28                |            |
| asc. node                     | 2962 Aug 13 21:54                      | 28°\$54'22                       |            |                     | 2965 Feb 01 16:27                      | $0^{\circ}\mathbf{Y}$             |            |
|                               | 2962 Aug 14 19:32                      | $0^{\circ}\Omega$                |            | greatest brilliancy | 2965 Mar 09 06:37                      | 26° <b>Ƴ</b> 32'44                | -4.9m      |
|                               | 2962 Sep 08 08:58                      | 0° <b>m</b>                      |            | retrograde          | 2965 Mar 19 15:49                      | 28° <b>Y</b> 34'40                |            |
| morning set                   | 2962 Oct 02 23:25                      | 0° <b>£</b> 23'52                |            | evening set         | 2965 Apr 06 04:24                      | 22° <b>Y</b> 37'14                |            |
|                               | 2962 Oct 02 15:44                      | 0० <b>⊽</b>                      |            | inferior conj       | 2965 Apr 09 16:58                      | 20° <b>Y</b> 25'38                | 7°57'32    |
|                               | 2962 Oct 26 17:48                      | $0^{\circ}$ M.                   |            | minimum elong       | 2965 Apr 10 01:04                      | 20° <b>Y</b> 12'53                | 7°56'27    |
| max. Earth dist.              | 2962 Nov 07 06:37                      | 14°M25'06                        | 1.71735 AU | min. Earth dist.    | 2965 Apr 09 10:53                      | 20° <b>Y</b> 35'13                | 0.28015 AU |
|                               |  |                                  |            | morning rise        | 2965 Apr 13 22:01                      | 17° <b>Y</b> 50'08                |            |
| superior conj                 | 2962 Nov 09 18:45                      | 17° <b>M</b> 33'17               | 0°52'45    | direct              | 2965 Apr 30 16:58                      | 12° <b>Y</b> 25'00                |            |
| minimum elong                 | 2962 Nov 10 04:50                      | 18° <b>M</b> 04'51               | 0°52'22    | greatest brilliancy | 2965 May 10 03:39                      | 14° <b>Y</b> 03'56                | -4.8m      |
|                               | 2962 Nov 19 17:13                      | 0° <b>∡</b> ¹                    |            | desc. node          | 2965 May 20 06:25                      | 18° <b>Y</b> 51'38                |            |
| desc. node                    | 2962 Dec 03 11:38                      | 17° <b>∡</b> 15'35               |            |                     | 2965 Jun 04 14:19                      | 0° <b>8</b>                       |            |
|                               | 2962 Dec 13 15:23                      | 0°ප                              |            | morning max el      | 2965 Jun 18 17:45                      | 12° <b>8</b> 46'20                | 45°52'11   |
| evening rise                  | 2962 Dec 19 23:40                      | 7° <b>る</b> 57'49                |            |                     | 2965 Jul 05 19:42                      | $\Pi$ $^{\circ}0$                 |            |
|                               | 2963 Jan 06 13:11                      | 0° <b>≈</b>                      |            |                     | 2965 Aug 02 06:33                      | $0$ $\circ$                       |            |
|                               | 2963 Jan 30 11:55                      | 0° <b>ℋ</b>                      |            |                     | 2965 Aug 28 07:28                      | $0$ ° $\Omega$                    |            |
|                               | 2963 Feb 23 13:54                      | $0$ ° $\mathbf{\gamma}$          |            | asc. node           | 2965 Sep 10 09:46                      | 15° <b>Ω</b> 29'18                |            |
|                               | 2963 Mar 19 22:40                      | $9^{\circ}$ 8                    |            |                     | 2965 Sep 22 12:09                      | 0° m/y                            |            |
| asc. node                     | 2963 Mar 26 14:43                      | 8° <b>8</b> 07'19                |            |                     | 2965 Oct 17 02:47                      | 0∘ <b>⊽</b>                       |            |
|                               | 2963 Apr 13 19:03                      | $\Pi^{\circ}0$                   |            |                     | 2965 Nov 10 08:03                      | $0^{\circ}$ M                     |            |
|                               | 2963 May 09 10:32                      | 0°©                              |            |                     | 2965 Dec 04 07:51                      | 0°⊀                               |            |
|                               | 2963 Jun 05 14:05                      | $0$ $^{\circ}\Omega$             |            | greatest brilliancy | 2965 Dec 12 19:03                      | 10° <b>∡</b> ³37'35               | -3.9m      |
| evening max el                | 2963 Jun 22 05:50                      | 16° <b>Ω</b> 51'21               | 45°26'29   | morning set         | 2965 Dec 14 07:49                      | 12° <b>∡</b> °33′02               |            |
|                               | 2963 Jul 06 22:29                      | 0° <b>m</b>                      |            |                     | 2965 Dec 28 05:00                      | 0° <b>ろ</b>                       |            |
| desc. node                    | 2963 Jul 16 04:17                      | 6° M 58'33                       |            | desc. node          | 2965 Dec 30 23:23                      | 3° <b>る</b> 28'43                 |            |
| greatest brilliancy           | 2963 Jul 30 12:55                      | 14° Mp 37'15                     | -4.7m      |                     | 2966 Jan 21 01:14                      | 0° <b>≈</b>                       |            |
| retrograde                    | 2963 Aug 09 19:56                      | 16° Mp 30'42                     |            |                     |  |                                   |            |
| evening set                   | 2963 Aug 27 06:28                      | 10° mp 48'21                     | 0010101    | superior conj       | 2966 Jan 24 16:09                      | 4°≈33'21                          |            |
| inferior conj                 | 2963 Aug 31 05:42                      | 8° Mp 22'18                      |            | minimum elong       | 2966 Jan 24 04:24                      | 3°≈56'25                          |            |
| minimum elong                 | 2963 Aug 30 23:45                      | 8° Mp 31'34                      |            | max. Earth dist.    | 2966 Jan 25 20:05                      |                                   | 1.71115 AU |
| min. Earth dist.              | 2963 Aug 31 11:15                      | 8° Mp 13'38                      | 0.28894 AU |                     | 2966 Feb 13 21:52                      | 0° <b>)</b> (07117                |            |
| morning rise                  | 2963 Sep 03 16:58                      | 6° Mp 13'58                      |            | evening rise        | 2966 Mar 06 17:58                      | 26° <b>米</b> 07'17<br>0° <b>Ƴ</b> |            |
| direct<br>greatest brilliancy | 2963 Sep 21 20:04<br>2963 Oct 02 13:32 | 0° ሺ 06'14<br>2° ሺ 12'27         | -4.8m      |                     | 2966 Mar 09 20:24<br>2966 Apr 02 22:41 | 0° <b>8</b>                       |            |
| asc. node                     | 2963 Nov 06 07:20                      | 27° my 30'21                     | -4.0111    | asc. node           | 2966 Apr 23 02:34                      | 24° <b>8</b> 53'12                |            |
| asc. Houe                     | 2963 Nov 08 20:52                      | 0° <b>⊡</b>                      |            | asc. Houe           | 2966 Apr 27 06:35                      | 0° <b>Ⅱ</b>                       |            |
| morning max el                | 2963 Nov 08 20:32<br>2963 Nov 10 17:54 | 0 <b>==</b><br>1° <b>£</b> 51'29 | 46°25'00   |                     | 2966 May 21 21:59                      | 0°9                               |            |
| morning max ci                | 2963 Dec 06 23:18                      | 0°M                              | 40 23 07   |                     | 2966 Jun 15 23:24                      | 0°N                               |            |
|                               | 2964 Jan 01 16:46                      | 0° <b>⊼</b>                      |            |                     | 2966 Jul 11 16:00                      | 0°mp                              |            |
|                               | 2964 Jan 26 12:22                      | °5                               |            |                     | 2966 Aug 07 11:49                      | 0∘ <b>ʊ</b>                       |            |
|                               | 2964 Feb 19 22:38                      | 0°≈                              |            | desc. node          | 2966 Aug 12 16:07                      | o <b>_</b><br>5° <b>_</b> 33'37   |            |
| desc. node                    | 2964 Feb 25 21:08                      | 7° <b>≈</b> 19'41                |            | evening max el      | 2966 Sep 01 23:34                      | 26° <b>Ω</b> 12'11                | 45°55'30   |
|                               | 2964 Mar 15 05:09                      | 0° <b>)</b> €                    |            |                     | 2966 Sep 06 00:05                      | 0°M                               |            |
|                               | 2964 Apr 08 10:52                      | $_{0}^{\circ}\gamma$             |            | greatest brilliancy | 2966 Oct 12 00:57                      | 24°M57'18                         | -4.8m      |
|                               | 2964 May 02 17:30                      | 0°8                              |            | retrograde          | 2966 Oct 21 02:07                      | 26°M27'51                         |            |
| morning set                   | 2964 May 15 22:02                      | 16° <b>8</b> 15'57               |            | evening set         | 2966 Nov 06 00:04                      | 21°M38'26                         |            |
| C                             | 2964 May 27 01:39                      | $\Pi^{\circ}0$                   |            | inferior conj       | 2966 Nov 10 22:12                      | 18° <b>M</b> 43'30                | -5°25'04   |
| asc. node                     | 2964 Jun 18 00:10                      | 26° <b>Ⅱ</b> 59'11               |            | minimum elong       | 2966 Nov 11 08:17                      | 18°M28'05                         |            |
|                               | 2964 Jun 20 11:00                      | 0ಂತಾ                             |            | min. Earth dist.    | 2966 Nov 11 19:57                      | 18°M10'16                         | 0.27217 AU |
|                               |  |                                  |            | morning rise        | 2966 Nov 16 15:46                      | 15°M19'53                         |            |
| superior conj                 | 2964 Jun 22 04:09                      | 2° <b>5</b> 06'26                | 0°09'56    | direct              | 2966 Dec 01 17:38                      | 10°M50'11                         |            |
| minimum elong                 | 2964 Jun 22 02:04                      | 2°500'02                         | 0°09'50    | asc. node           | 2966 Dec 03 19:03                      | 10°M55'16                         |            |
| behind sun begin              | 2964 Jun 21 07:59                      | 1° <b>5</b> 04'27                |            | greatest brilliancy | 2966 Dec 12 20:36                      | 13°M09'05                         | -4.9m      |
| behind sun end                | 2964 Jun 22 20:09                      | 2° <b>©</b> 55'36                |            |                     | 2967 Jan 06 15:25                      | 0° <b>∡</b> ″                     |            |
| max. Earth dist.              | 2964 Jun 22 15:52                      | 2° <b>5</b> 42'26                | 1.73498 AU | morning max el      | 2967 Jan 21 10:46                      | 14° <b>₹</b> 09'45                | 46°57'49   |
|                               | 2964 Jul 14 20:44                      | $0^{\circ}\Omega$                |            |                     | 2967 Feb 05 09:31                      | ರ°0                               |            |
| evening rise                  | 2964 Jul 28 08:19                      | 16° <b>Ω</b> 34'23               |            |                     | 2967 Mar 03 19:55                      | 0° <b>≈</b>                       |            |
|                               |  |                                  |            |                     |  |                                   |            |

| 11-                 | 2077 Mar 25 00:02 | 25% -25/26          |            |                     | 20(0,0-4,00,10-50 | 00.7                         |            |
|---------------------|-------------------|---------------------|------------|---------------------|-------------------|------------------------------|------------|
| desc. node          | 2967 Mar 25 09:02 | 25°≈25'26           |            |                     | 2969 Oct 08 19:50 | 0° <b>∡</b>                  |            |
|                     | 2967 Mar 29 05:01 | 0° <b>∀</b>         |            |                     | 2969 Nov 05 06:13 | 0°ප                          |            |
|                     | 2967 Apr 23 03:45 | $0^{\circ}$ Y       |            | evening max el      | 2969 Nov 14 04:21 | 9° <b>る</b> 07'40            | 46°59'38   |
|                     | 2967 May 17 22:04 | 0°8                 |            |                     | 2969 Dec 07 11:38 | 0° <b>≈</b>                  |            |
|                     | 2967 Jun 11 14:24 | $\Pi^{\circ}0$      |            | greatest brilliancy | 2969 Dec 24 13:47 | 9° <b>≈</b> 58'44            | -4.9m      |
|                     | 2967 Jul 06 04:59 | 0°ಅ                 |            | asc. node           | 2969 Dec 31 07:07 | 11° <b>≈</b> 41'33           |            |
| asc. node           | 2967 Jul 16 12:06 | 12° <b>©</b> 35'12  |            | retrograde          | 2970 Jan 03 16:52 | 11° <b>≈</b> 55'30           |            |
| morning set         | 2967 Jul 24 05:01 | 22° <b>©</b> 01'25  |            | evening set         | 2970 Jan 18 16:47 | 7°≈25'51                     |            |
| morning set         |                   | 0°Ω                 |            | •                   | 2970 Jan 23 13:29 | 4°≈33'30                     | 0.26648 AU |
|                     | 2967 Jul 30 17:02 |                     |            | min. Earth dist.    |                   |                              |            |
|                     | 2967 Aug 24 01:52 | 0° <b>m</b>         |            | inferior conj       | 2970 Jan 24 05:51 | 4°≈08'25                     | 5°45'11    |
| max. Earth dist.    | 2967 Aug 26 19:42 | 3°m/23'15           | 1.73136 AU | minimum elong       | 2970 Jan 23 19:25 | 4° <b>≈</b> 24'25            | 5°42'35    |
|                     |                   |                     |            | morning rise        | 2970 Jan 28 22:27 | 1° <b>≈</b> 20'48            |            |
| superior conj       | 2967 Aug 29 14:52 | 6° Mp 50′45         | 1°20'23    |                     | 2970 Jan 31 10:49 | 30°Ŗる                        |            |
| minimum elong       | 2967 Aug 29 09:18 | 6° Mp 33′34         | 1°20'17    | direct              | 2970 Feb 13 16:08 | 26° <b>පි</b> 29'13          |            |
| •                   | 2967 Sep 17 07:51 | 0∘ <b>⊽</b>         |            | greatest brilliancy | 2970 Feb 22 23:35 | 28° <b>る</b> 08'37           | -4.9m      |
| evening rise        | 2967 Oct 05 06:18 | 22° <b>£</b> 15′08  |            |                     | 2970 Feb 27 12:15 | 0° <b>≈</b>                  |            |
| evening rise        | 2967 Oct 11 12:05 | 0°M                 |            | morning max el      | 2970 Apr 04 18:24 | 28° <b>≈</b> 43'54           | 46°36'24   |
|                     |                   | 0° <b>⊼</b> ¹       |            | morning max cr      | •                 | 0° <b>)</b>                  | 40 30 24   |
|                     | 2967 Nov 04 15:43 |                     |            |                     | 2970 Apr 06 00:59 |                              |            |
| desc. node          | 2967 Nov 05 01:46 | 0° <b>∡</b> 31'14   |            | desc. node          | 2970 Apr 21 20:46 | 16° <b>¥</b> 28'15           |            |
|                     | 2967 Nov 28 19:31 | 0°る                 |            |                     | 2970 May 04 05:11 | 0° <b>Ƴ</b>                  |            |
|                     | 2967 Dec 23 00:24 | 0° <b>≈</b>         |            |                     | 2970 May 30 13:53 | $9^{\circ}$ 8                |            |
|                     | 2968 Jan 16 08:43 | 0° <b>∀</b>         |            |                     | 2970 Jun 25 04:59 | $\Pi^{\circ}0$               |            |
|                     | 2968 Feb 10 01:55 | $0^{\circ}$ Y       |            |                     | 2970 Jul 20 10:01 | 0°©                          |            |
| asc. node           | 2968 Feb 26 04:46 | 19° <b>Ƴ</b> 06'00  |            | asc. node           | 2970 Aug 12 23:57 | 28° <b>©</b> 26'13           |            |
| use. noue           | 2968 Mar 06 14:48 | 0°8                 |            | use. Iroue          | 2970 Aug 14 06:51 | 0°Ω                          |            |
|                     |                   | 0°II                |            |                     | =                 |                              |            |
|                     | 2968 Apr 03 00:42 |                     | 4.00.000   |                     | 2970 Sep 07 20:02 | 0° m)                        |            |
| evening max el      | 2968 Apr 09 06:19 | 6° <b>∏</b> 17'21   | 46°07'07   | morning set         | 2970 Sep 30 15:44 | 28° <b>m</b> 11'33           |            |
|                     | 2968 May 07 11:03 | 0                   |            |                     | 2970 Oct 02 02:41 | 0∘ <b>ত</b>                  |            |
| greatest brilliancy | 2968 May 17 17:07 | 5° <b>ॐ</b> 18′02   | -4.8m      |                     | 2970 Oct 26 04:47 | 0° <b>M</b>                  |            |
| retrograde          | 2968 May 28 18:01 | 7° <b>©</b> 31'49   |            | max. Earth dist.    | 2970 Nov 04 16:20 | 11°M51'00                    | 1.71780 AU |
| evening set         | 2968 Jun 12 19:13 | 3° <b>5</b> 06'30   |            |                     |                   |                              |            |
| desc. node          | 2968 Jun 16 18:20 | 0°947'04            |            | superior conj       | 2970 Nov 07 08:32 | 15° <b>M</b> .11'46          | 0°55'33    |
|                     | 2968 Jun 18 00:43 | 30°R∏               |            | minimum elong       | 2970 Nov 07 18:44 | 15°M43'40                    | 0°55'10    |
| inferior conj       | 2968 Jun 19 04:26 | 29° <b>Ⅱ</b> 16'39  | 0034133    | minimum ciong       | 2970 Nov 19 04:17 | 0° <b>₹</b>                  | 0 33 10    |
| •                   |                   |                     |            |                     |                   |                              |            |
| minimum elong       | 2968 Jun 19 03:09 | 29° <b>Ⅱ</b> 18'39  |            | desc. node          | 2970 Dec 02 13:40 | 16° <b>⊀</b> ¹47'08          |            |
| min. Earth dist.    | 2968 Jun 19 00:34 | 29° <b>∐</b> 22'42  | 0.28817 AU |                     | 2970 Dec 13 02:33 | 0°ಕ                          |            |
| morning rise        | 2968 Jun 25 11:20 | 25° <b>Ⅱ</b> 30′07  |            | evening rise        | 2970 Dec 17 10:45 | 5° <b>る</b> 26'47            |            |
| direct              | 2968 Jul 10 16:16 | 21° <b>Ⅱ</b> 02'11  |            |                     | 2971 Jan 06 00:30 | 0° <b>≈</b>                  |            |
| greatest brilliancy | 2968 Jul 20 21:44 | 22° <b>Ⅱ</b> 54'53  | -4.7m      |                     | 2971 Jan 29 23:23 | 0° <b>∀</b>                  |            |
|                     | 2968 Aug 03 12:12 | 0°ಲಾ                |            |                     | 2971 Feb 23 01:35 | $0^{\circ}\mathbf{\Upsilon}$ |            |
| morning max el      | 2968 Aug 28 11:03 | 20°546'05           | 45°46'34   |                     | 2971 Mar 19 10:43 | 0° <b>႘</b>                  |            |
| <i>S</i>            | 2968 Sep 06 19:20 | $0^{\circ}\Omega$   |            | asc. node           | 2971 Mar 25 16:41 | 7° <b>8</b> 36'19            |            |
|                     | 2968 Oct 04 14:14 | 0° my               |            | use. Hode           | 2971 Apr 13 07:46 | 0°П                          |            |
| 1                   |                   |                     |            |                     | •                 |                              |            |
| asc. node           | 2968 Oct 07 21:38 | 3° Mp 45'22         |            |                     | 2971 May 09 00:42 | 0° <b>©</b>                  |            |
|                     | 2968 Oct 30 09:32 | 0∘ <b>⊽</b>         |            |                     | 2971 Jun 05 07:50 | $0$ ° $\Omega$               |            |
|                     | 2968 Nov 24 05:14 | 0°M₊                |            | evening max el      | 2971 Jun 19 21:17 | 14° <b>Ω</b> 39'36           | 45°26'37   |
|                     | 2968 Dec 18 12:33 | 0° <b>∡</b> 7       |            |                     | 2971 Jul 07 07:24 | 0° <b>m</b> y                |            |
|                     | 2969 Jan 11 13:50 | 0°る                 |            | desc. node          | 2971 Jul 15 06:22 | 5° <b>m</b> 45'35            |            |
| desc. node          | 2969 Jan 27 11:19 | 19° <b>る</b> 54'03  |            | greatest brilliancy | 2971 Jul 28 03:57 | 12°M/26'31                   | -4.7m      |
|                     | 2969 Feb 04 12:42 | 0° <b>≈</b>         |            | retrograde          | 2971 Aug 07 11:04 | 14° mg 20'15                 |            |
|                     | 2969 Feb 28 11:12 | 0° <b>∀</b>         |            | evening set         | 2971 Aug 24 19:24 | 8° m) 42'16                  |            |
| morning set         | 2969 Mar 01 09:37 | 1° <b>∀</b> 10'11   |            | inferior conj       | 2971 Aug 28 21:42 | 6° m) 11'32                  | -8°06'38   |
| morning set         |                   | 0°Υ                 |            |                     | •                 | -                            |            |
|                     | 2969 Mar 24 10:50 | 0-1                 |            | minimum elong       | 2971 Aug 28 15:10 | 6° TD 21'45                  |            |
|                     |                   |                     |            | min. Earth dist.    | 2971 Aug 29 02:38 | 6° m 03'50                   | 0.28921 AU |
| superior conj       | 2969 Apr 10 11:44 | 21° <b>Y</b> 14'05  |            | morning rise        | 2971 Sep 01 10:49 | 4° Mp 00′08                  |            |
| minimum elong       | 2969 Apr 10 20:23 | 21° <b>Y</b> '40'57 | 1°17'18    |                     | 2971 Sep 09 05:38 | $30^\circ$ R $\Omega$        |            |
| max. Earth dist.    | 2969 Apr 14 07:40 | 25° <b>Y</b> 59'53  | 1.72305 AU | direct              | 2971 Sep 19 12:03 | 27° <b>Q</b> 55'13           |            |
|                     | 2969 Apr 17 12:58 | 0° <b>႘</b>         |            | greatest brilliancy | 2971 Sep 30 05:08 | 0° m, 00'20                  | -4.8m      |
|                     | 2969 May 11 18:29 | 0° <b>Ⅱ</b>         |            | •                   | 2971 Sep 30 04:46 | 0° <b>m</b> )                |            |
| evening rise        | 2969 May 19 06:17 | 9° <b>∏</b> 14'18   |            | asc. node           | 2971 Nov 05 09:18 | 26° mp 38'17                 |            |
| asc. node           | 2969 May 20 14:25 | 10° <b>I</b> I53'13 |            | morning max el      | 2971 Nov 08 07:54 | 20° m <sub>2</sub> 33'17     | 46°23'30   |
| use. Houe           | •                 |                     |            | morning max ci      |                   | -                            | -tu 23 30  |
|                     | 2969 Jun 05 03:38 | 0° <b>©</b>         |            |                     | 2971 Nov 08 19:06 | ი∘ <b>ফ</b>                  |            |
|                     | 2969 Jun 29 16:28 | $0$ ° $\Omega$      |            |                     | 2971 Dec 06 15:17 | 0° <b>M</b> ₊                |            |
|                     | 2969 Jul 24 09:39 | 0° <b>™</b>         |            |                     | 2972 Jan 01 06:34 | 0° <b>∡</b>                  |            |
|                     | 2969 Aug 18 09:09 | 0∘ <b>⊽</b>         |            |                     | 2972 Jan 26 01:06 | 0°ಕ                          |            |
| desc. node          | 2969 Sep 09 04:00 | 25° <b>≏</b> 46'54  |            |                     | 2972 Feb 19 10:43 | 0° <b>≈</b>                  |            |
|                     | 2969 Sep 12 18:26 | $0^{\circ}$ M       |            | desc. node          | 2972 Feb 24 23:07 | 6° <b>≈</b> 48'47            |            |
|                     | •                 |                     |            |                     |                   |                              |            |

|                     | 2972 Mar 14 16:49                      | 0° <b>)</b> {                     |            |                     | 2974 Sep 06 01:52                      | 0°M                               |            |
|---------------------|--|-----------------------------------|------------|---------------------|--|-----------------------------------|------------|
|                     | 2972 Apr 07 22:13                      | 0°Υ                               |            | greatest brilliancy | 2974 Oct 09 13:23                      | 22°M35'37                         | -4.8m      |
|                     | 2972 May 02 04:35                      | 0°8                               |            | retrograde          | 2974 Oct 18 15:19                      | 24°M06'44                         |            |
| morning set         | 2972 May 13 14:20                      | 14° <b>8</b> 04'31                |            | evening set         | 2974 Nov 03 16:17                      | 19°M12'09                         |            |
| Č                   | 2972 May 26 12:32                      | 0°II                              |            | inferior conj       | 2974 Nov 08 11:32                      | 16°M21'19                         | -5°42'42   |
| asc. node           | 2972 Jun 17 02:20                      | 26° <b>Ⅱ</b> 32'47                |            | minimum elong       | 2974 Nov 08 21:50                      | 16°M05'36                         |            |
|                     |  |                                   |            | min. Earth dist.    | 2974 Nov 09 09:46                      | 15° <b>™</b> 47'23                | 0.27288 AU |
| superior conj       | 2972 Jun 19 21:55                      | 0° <b>©</b> 00'30                 | 0°06'44    | morning rise        | 2974 Nov 14 02:40                      | 13°M01'16                         |            |
| minimum elong       | 2972 Jun 19 20:30                      | 29° <b>Ⅱ</b> 56′07                | 0°06'41    | direct              | 2974 Nov 29 07:57                      | 8°M26'45                          |            |
| behind sun begin    | 2972 Jun 18 23:36                      | 28° <b>Ⅲ</b> 51'54                |            | asc. node           | 2974 Dec 02 21:14                      | 8° <b>M</b> 41'51                 |            |
| behind sun end      | 2972 Jun 20 17:23                      | 1° <b>5</b> 00'21                 |            | greatest brilliancy | 2974 Dec 10 11:30                      | 10°M46'42                         | -4.9m      |
|                     | 2972 Jun 19 21:45                      | 0°ಅ                               |            |                     | 2975 Jan 06 21:22                      | 0°⊀                               |            |
| max. Earth dist.    | 2972 Jun 20 12:12                      |                                   | 1.73478 AU | morning max el      | 2975 Jan 19 02:00                      | 11° <b>∡</b> ⁴49'08               | 46°57'32   |
|                     | 2972 Jul 14 07:29                      | $0^{\circ}\Omega$                 |            |                     | 2975 Feb 05 03:41                      | 0°る                               |            |
| evening rise        | 2972 Jul 26 03:18                      | 14° <b>Ω</b> 31'57                |            |                     | 2975 Mar 03 10:40                      | 0°≈                               |            |
|                     | 2972 Aug 07 17:20                      | 0° <b>m</b>                       |            | desc. node          | 2975 Mar 24 11:02                      | 24°≈51'42                         |            |
|                     | 2972 Sep 01 03:50                      | 0∘ <b>亚</b>                       |            |                     | 2975 Mar 28 18:08                      | 0° <b>Υ</b>                       |            |
| daga mada           | 2972 Sep 25 16:05                      | 0° <b>ጤ</b><br>13° <b>ጤ</b> 24'42 |            |                     | 2975 Apr 22 15:54                      | 0°8                               |            |
| desc. node          | 2972 Oct 06 15:54<br>2972 Oct 20 07:14 | 13 1162442<br>0° <b>x</b> 7       |            |                     | 2975 May 17 09:36<br>2975 Jun 11 01:31 | 0°U                               |            |
|                     | 2972 Oct 20 07:14<br>2972 Nov 14 02:47 | 0°る                               |            |                     | 2975 Jul 05 15:50                      | 0°©                               |            |
|                     | 2972 Dec 09 06:38                      | 0° <b>≈</b>                       |            | asc. node           | 2975 Jul 15 14:09                      | 12° <b>©</b> 08'35                |            |
|                     | 2973 Jan 04 06:29                      | 0° <b>∀</b>                       |            | morning set         | 2975 Jul 21 22:56                      | 12 <b>3</b> 06 33                 |            |
| evening max el      | 2973 Jan 25 11:49                      | 22° <b>¥</b> 49'57                | 47°08'23   | morning sec         | 2975 Jul 30 03:43                      | 0°N                               |            |
| asc. node           | 2973 Jan 27 18:56                      | 25° <b>)</b> (1907)               | ., 0025    |                     | 2975 Aug 23 12:30                      | 0° m)                             |            |
|                     | 2973 Feb 01 17:11                      | 0° <b>Υ</b>                       |            | max. Earth dist.    | 2975 Aug 24 17:23                      | -•                                | 1.73168 AU |
| greatest brilliancy | 2973 Mar 06 22:52                      |                                   | -4.9m      |                     |  | 4                                 |            |
| retrograde          | 2973 Mar 17 06:23                      | 26° <b>Ƴ</b> 15'37                |            | superior conj       | 2975 Aug 27 08:56                      | 4° Mp 45′26                       | 1°19'17    |
| evening set         | 2973 Apr 03 21:52                      | 20° <b>Y</b> 14'34                |            | minimum elong       | 2975 Aug 27 02:51                      | 4° <b>m</b> 26'39                 | 1°19'11    |
| inferior conj       | 2973 Apr 07 07:43                      | 18° <b>Ƴ</b> 07'12                | 8°06'59    |                     | 2975 Sep 16 18:31                      | 0∘ <b>⊽</b>                       |            |
| minimum elong       | 2973 Apr 07 15:17                      | 17° <b>Y</b> 55'18                | 8°06'04    | evening rise        | 2975 Oct 02 22:32                      | 20° <b>ჲ</b> 03'10                |            |
| min. Earth dist.    | 2973 Apr 07 01:27                      | 18° <b>Ƴ</b> 17'05                | 0.27977 AU |                     | 2975 Oct 10 22:53                      | $0^{\circ}$ M                     |            |
| morning rise        | 2973 Apr 11 08:56                      | 15° <b>Ƴ</b> 37'15                |            | desc. node          | 2975 Nov 04 03:53                      | 0° <b>∡</b> °03′29                |            |
| direct              | 2973 Apr 28 06:29                      | 10° <b>Y</b> ′07'06               |            |                     | 2975 Nov 04 02:46                      | 0° <b>∡</b>                       |            |
| greatest brilliancy | 2973 May 07 17:39                      | 11° <b>Y</b> 46'05                | -4.8m      |                     | 2975 Nov 28 06:54                      | 0°ಕ                               |            |
| desc. node          | 2973 May 19 08:29                      | 17° <b>Y</b> ′28'48               |            |                     | 2975 Dec 22 12:10                      | 0° <b>≈</b>                       |            |
|                     | 2973 Jun 04 20:51                      | 0°8                               |            |                     | 2976 Jan 15 21:02                      | 0° <b>∀</b>                       |            |
| morning max el      | 2973 Jun 16 07:50                      | 10° <b>8</b> 29'46                | 45°53'25   | Ī                   | 2976 Feb 09 15:08                      | 0°Υ                               |            |
|                     | 2973 Jul 05 13:20                      | 0° <b>©</b><br>∏                  |            | asc. node           | 2976 Feb 25 06:43<br>2976 Mar 06 05:51 | 18° <b>Ƴ</b> 30'12<br>0° <b>႘</b> |            |
|                     | 2973 Aug 01 20:37<br>2973 Aug 27 19:58 | 0°Ω<br>0 30                       |            |                     | 2976 Mai 06 03.31<br>2976 Apr 02 20:39 | 0°U                               |            |
| asc. node           | 2973 Sep 09 11:47                      | 14° <b>Ω</b> 59'25                |            | evening max el      | 2976 Apr 06 22:31                      | 0 H<br>4°H05'22                   | 46°09'24   |
| use. Hode           | 2973 Sep 33 11:47<br>2973 Sep 21 23:51 | 0° m                              |            | evening max er      | 2976 May 08 18:42                      | 0°95                              | 40 07 24   |
|                     | 2973 Oct 16 14:06                      | 0∘ <b>⊽</b>                       |            | greatest brilliancy | 2976 May 15 09:16                      | 3° <b>©</b> 07'44                 | -4.8m      |
|                     | 2973 Nov 09 19:11                      | 0°M                               |            | retrograde          | 2976 May 26 10:56                      | 5° <b>©</b> 21'51                 |            |
|                     | 2973 Dec 03 18:55                      | 0° <b>∡</b> ¹                     |            | evening set         | 2976 Jun 10 12:01                      | 0° <b>©</b> 55'49                 |            |
| greatest brilliancy | 2973 Dec 11 14:01                      | 9° <b>∡</b> ¹47'04                | -3.9m      | -                   | 2976 Jun 12 03:19                      | 30°RⅡ                             |            |
| morning set         | 2973 Dec 11 19:30                      | 10° <b>∡</b> °04'15               |            | desc. node          | 2976 Jun 15 20:30                      | 27° <b>∏</b> 44'14                |            |
|                     | 2973 Dec 27 16:01                      | 5°0                               |            | inferior conj       | 2976 Jun 16 20:32                      | 27° <b>Ⅱ</b> 06'36                | -0°14'19   |
| desc. node          | 2973 Dec 30 01:34                      | 3° <b>る</b> 00'54                 |            | minimum elong       | 2976 Jun 16 20:01                      | 27° <b>Ⅱ</b> 07'26                |            |
|                     | 2974 Jan 20 12:15                      | 0° <b>≈</b>                       |            | transit middle      | 2976 Jun 16 20:01                      | 27° <b>Ⅱ</b> 07'26                | 0°14'10    |
|                     |  |                                   |            | transit begin       | 2976 Jun 16 18:01                      | 27° <b>Ⅱ</b> 10'33                |            |
| superior conj       | 2974 Jan 22 01:56                      | 1°≈58'34                          |            | transit end         | 2976 Jun 16 22:00                      | 27° <b>Ⅲ</b> 04'19                |            |
| minimum elong       | 2974 Jan 21 14:29                      | 1°≈22'30                          |            | min. Earth dist.    | 2976 Jun 16 16:33                      | 27° <b>Ⅱ</b> 12'51                | 0.28796 AU |
| max. Earth dist.    | 2974 Jan 22 23:38                      |                                   | 1.71107 AU | morning rise        | 2976 Jun 23 04:22                      | 23° <b>Ⅱ</b> 19'04                |            |
| avanina riga        | 2974 Feb 13 08:53                      | 0° <b>)</b> (                     |            | direct              | 2976 Jul 08 08:36                      | 18° <b>∏</b> 52'30                | 4.7        |
| evening rise        | 2974 Mar 04 04:38<br>2974 Mar 09 07:27 | 23° <b>)</b> 36′02<br>0° <b>°</b> |            | greatest brilliancy | 2976 Jul 18 12:42<br>2976 Aug 04 06:51 | 20° <b>∏</b> 44'28<br>0° <b>©</b> | -4.7m      |
|                     | 2974 Mar 09 07:27<br>2974 Apr 02 09:47 | 0° <b>∀</b>                       |            | morning max el      | 2976 Aug 04 06:31<br>2976 Aug 26 03:37 | 18° <b>©</b> 38'02                | 45°46'00   |
| asc. node           | 2974 Apr 02 04:36                      | 24° <b>8</b> 24'54                |            | morning max or      | 2976 Sep 06 14:09                      | 0°Ω                               | 15 10 00   |
| 300. 110 <b>u</b> 0 | 2974 Apr 26 17:52                      | 0°II                              |            |                     | 2976 Oct 04 04:39                      | 0° <b>m</b> )                     |            |
|                     | 2974 May 21 09:37                      | 0ಂ <b>ತಾ</b>                      |            | asc. node           | 2976 Oct 04 04:39<br>2976 Oct 06 23:38 | 3°Mp 10'43                        |            |
|                     | 2974 Jun 15 11:44                      | $0^{\circ}\Omega$                 |            | -                   | 2976 Oct 29 22:13                      | 0∘ <b>⊽</b>                       |            |
|                     | 2974 Jul 11 05:40                      | 0° mp                             |            |                     | 2976 Nov 23 17:06                      | 0°M                               |            |
|                     | 2974 Aug 07 04:25                      | 0∘ <b>⊽</b>                       |            |                     | 2976 Dec 17 24:00                      | 0° <b>∡</b> ″                     |            |
| desc. node          | 2974 Aug 11 18:08                      | 4° <b>£</b> 52'37                 |            |                     | 2977 Jan 11 01:04                      | ರ°0                               |            |
| evening max el      | 2974 Aug 30 13:04                      | 23° <b>ჲ</b> 54'06                | 45°53'35   | desc. node          | 2977 Jan 26 13:19                      | 19° <b>る</b> 25'29                |            |
|                     |  |                                   |            |                     |  |                                   |            |

|                     | 2077 F. 1 . 02 . 22 . 47               | 00.                                  |             |                                | 2070 4 05 02 04                        | 100m 10H (                              |            |
|---------------------|--|--------------------------------------|-------------|--------------------------------|--|---|------------|
| . ,                 | 2977 Feb 03 23:47                      | 0°≈                                  |             | retrograde                     | 2979 Aug 05 02:04                      | 12° Mp 10'16                            |            |
| morning set         | 2977 Feb 26 20:06                      | 28°≈38'26<br>0° <b>)</b> €           |             | evening set                    | 2979 Aug 22 08:03                      | 6° M) 36'29                             | 7050100    |
|                     | 2977 Feb 27 22:08<br>2977 Mar 23 21:40 | 0 <b>Υ</b><br>0° <b>Υ</b>            |             | inferior conj<br>minimum elong | 2979 Aug 26 13:36<br>2979 Aug 26 06:29 | 4° Mp 01'06<br>4° Mp 12'13              |            |
|                     | 29// Wiai 23 21.40                     | 0 1                                  |             | min. Earth dist.               | 2979 Aug 26 18:04                      | 3° Mp 54'07                             | 0.28946 AU |
| superior conj       | 2977 Apr 08 00:52                      | 18° <b>Y</b> 52'01                   | -1°10'03    | morning rise                   | 2979 Aug 20 18:04<br>2979 Aug 30 04:45 | 1° Mp 46'29                             | 0.28940 AU |
| minimum elong       | 2977 Apr 08 08:58                      | 19° <b>Υ</b> 17'13                   |             | morning rise                   | 2979 Sep 02 06:59                      | 30°R <b>Ω</b>                           |            |
| max. Earth dist.    | 2977 Apr 11 23:23                      | 23° <b>Y</b> 46'06                   | 1.72251 AU  | direct                         | 2979 Sep 17 03:37                      | 25° <b>Ω</b> 44'20                      |            |
| mar. Barur dist.    | 2977 Apr 16 23:43                      | 0°8                                  | 1.,,2201110 | greatest brilliancy            | 2979 Sep 27 21:14                      | 27° <b>Ω</b> 49'18                      | -4.8m      |
|                     | 2977 May 11 05:13                      | 0°II                                 |             | greatest simules               | 2979 Oct 02 19:41                      | 0° m)                                   |            |
| evening rise        | 2977 May 16 21:55                      | 7° <b>Ⅱ</b> 01'34                    |             | asc. node                      | 2979 Nov 04 11:29                      | 25° mp 48'13                            |            |
| asc. node           | 2977 May 19 16:33                      | 10° <b>Ⅱ</b> 26'46                   |             | morning max el                 | 2979 Nov 05 21:56                      | 27° m) 13'21                            | 46°22'01   |
|                     | 2977 Jun 04 14:26                      | 0°ಅ                                  |             | Č                              | 2979 Nov 08 16:18                      | 0∘ <u>⊽</u>                             |            |
|                     | 2977 Jun 29 03:28                      | $0^{\circ}\Omega$                    |             |                                | 2979 Dec 06 06:48                      | 0° <b>M</b>                             |            |
|                     | 2977 Jul 23 21:03                      | o∘ <b>m</b> p                        |             |                                | 2979 Dec 31 19:59                      | 0° <b>∡</b> ¹                           |            |
|                     | 2977 Aug 17 21:15                      | 0∘ <b>⊽</b>                          |             |                                | 2980 Jan 25 13:27                      | 0°ರ                                     |            |
| desc. node          | 2977 Sep 08 05:58                      | 25° <b>£</b> 14'25                   |             |                                | 2980 Feb 18 22:27                      | 0° <b>≈</b>                             |            |
|                     | 2977 Sep 12 07:42                      | $0^{\circ}$ M                        |             | desc. node                     | 2980 Feb 24 01:08                      | 6° <b>≈</b> 19'05                       |            |
|                     | 2977 Oct 08 11:15                      | 0° <b>∡</b> ¹                        |             |                                | 2980 Mar 14 04:07                      | 0° <b>)</b>                             |            |
|                     | 2977 Nov 05 02:38                      | 8°0                                  |             |                                | 2980 Apr 07 09:15                      | $0^{\circ}$ Y                           |            |
| evening max el      | 2977 Nov 11 18:55                      | 6° <b>る</b> 46'59                    | 46°57'53    |                                | 2980 May 01 15:24                      | $0^{\circ}S$                            |            |
|                     | 2977 Dec 08 09:01                      | 0° <b>≈</b>                          |             | morning set                    | 2980 May 11 06:24                      | 11° <b>8</b> 52'58                      |            |
| greatest brilliancy | 2977 Dec 22 03:09                      | 7° <b>≈</b> 31'48                    | -4.9m       |                                | 2980 May 25 23:12                      | $\Pi$ °0                                |            |
| asc. node           | 2977 Dec 30 09:06                      | 9° <b>≈</b> 23'14                    |             | asc. node                      | 2980 Jun 16 04:21                      | 26° <b>Ⅱ</b> 06′25                      |            |
| retrograde          | 2978 Jan 01 05:39                      | 9° <b>≈</b> 27'23                    |             |                                |  |   |            |
| evening set         | 2978 Jan 16 02:34                      | 5° <b>≈</b> 02'37                    |             | superior conj                  | 2980 Jun 17 15:23                      | 27° <b>Ⅱ</b> 54'05                      | 0°03'31    |
| min. Earth dist.    | 2978 Jan 21 02:50                      | 2° <b>≈</b> 05'06                    | 0.26616 AU  | minimum elong                  | 2980 Jun 17 14:37                      | 27° <b>Ⅱ</b> 51'46                      | 0°03'29    |
| inferior conj       | 2978 Jan 21 18:22                      | 1° <b>≈</b> 41'17                    | 5°26'10     | behind sun begin               | 2980 Jun 16 16:13                      | 26° <b>Ⅱ</b> 42'53                      |            |
| minimum elong       | 2978 Jan 21 08:11                      | 1°≈56'55                             | 5°23'32     | behind sun end                 | 2980 Jun 18 13:02                      | 29° <b>Ⅱ</b> 00'38                      |            |
|                     | 2978 Jan 24 13:08                      | 30°Rる                                |             | max. Earth dist.               | 2980 Jun 18 06:51                      | 28° <b>Ⅱ</b> 41'40                      | 1.73462 AU |
| morning rise        | 2978 Jan 26 14:11                      | 28° <b>る</b> 49'00                   |             |                                | 2980 Jun 19 08:20                      | 0ංම                                     |            |
| direct              | 2978 Feb 11 04:45                      | 24° <b>る</b> 02'41                   |             |                                | 2980 Jul 13 18:05                      | $0$ $^{\circ}\Omega$                    |            |
| greatest brilliancy | 2978 Feb 20 13:00                      | 25° <b>る</b> 42'34                   | -4.9m       | evening rise                   | 2980 Jul 23 21:54                      | 12° <b>Ω</b> 28'57                      |            |
|                     | 2978 Mar 01 14:52                      | 0° <b>≈</b>                          |             |                                | 2980 Aug 07 04:05                      | 0° <b>m</b> )                           |            |
| morning max el      | 2978 Apr 02 07:08                      | 26°≈19'33                            | 46°37'41    |                                | 2980 Aug 31 14:51                      | 0° <b>™</b>                             |            |
|                     | 2978 Apr 05 23:00                      | 0° <b>)</b> (                        |             |                                | 2980 Sep 25 03:31                      | 0°M                                     |            |
| desc. node          | 2978 Apr 20 22:52                      | 15° <b>)</b> (45'33                  |             | desc. node                     | 2980 Oct 05 18:01                      | 12°M55'35                               |            |
|                     | 2978 May 03 21:04                      | $^{\circ \gamma}$                    |             |                                | 2980 Oct 19 19:16                      | 0° <b>∡</b> ¹                           |            |
|                     | 2978 May 30 03:22                      | 0° <b>Β</b>                          |             |                                | 2980 Nov 13 15:40                      | 5°0                                     |            |
|                     | 2978 Jun 24 17:12                      | 0° <b>©</b><br>∏°0                   |             |                                | 2980 Dec 08 20:55                      | 0° <b>€</b>                             |            |
| aga mada            | 2978 Jul 19 21:29<br>2978 Aug 12 01:54 | 0 <del>3</del><br>27° <b>9</b> 58'39 |             | avanina may al                 | 2981 Jan 03 23:33<br>2981 Jan 23 01:22 | 0 K<br>20°¥26′26                        | 47°09'44   |
| asc. node           | 2978 Aug 12 01:54<br>2978 Aug 13 17:52 | 27 <b>3</b> 38 39                    |             | evening max el<br>asc. node    | 2981 Jan 26 20:56                      | 20 <b>H</b> 26 26<br>24° <b>H</b> 16'44 | 4/ 0944    |
|                     | 2978 Sep 07 06:49                      | 0° <b>m</b> )                        |             | asc. node                      | 2981 Feb 01 18:51                      | 24 <b>γ</b> (1044<br>0° <b>γ</b>        |            |
| morning set         | 2978 Sep 28 07:58                      | 25° mp 59'50                         |             | greatest brilliancy            | 2981 Mar 04 14:37                      | 21° <b>Υ</b> '57'10                     | -4 9m      |
| morning set         | 2978 Oct 01 13:23                      | ე∘ <b>ი</b>                          |             | retrograde                     | 2981 Mar 14 21:22                      | 23° <b>Y</b> '57'58                     | 4.7111     |
|                     | 2978 Oct 25 15:29                      | 0° <b>m</b>                          |             | evening set                    | 2981 Apr 01 15:15                      | 17° <b>Υ</b> 53'15                      |            |
| max. Earth dist.    | 2978 Nov 02 01:54                      |                                      | 1.71823 AU  | inferior conj                  | 2981 Apr 04 22:37                      | 15° <b>Y</b> 49'56                      | 8°15'31    |
|                     |  | ,                                    |             | minimum elong                  | 2981 Apr 05 05:35                      | 15° <b>Ƴ</b> 38'58                      | 8°14'46    |
| superior conj       | 2978 Nov 04 22:36                      | 12°M52'09                            | 0°58'14     | min. Earth dist.               | 2981 Apr 04 15:53                      | 16° <b>Ƴ</b> 00'31                      | 0.27939 AU |
| minimum elong       | 2978 Nov 05 08:50                      | 13°M24'10                            | 0°57'51     | morning rise                   | 2981 Apr 08 20:07                      | 13° <b>Y</b> 25'38                      |            |
| C                   | 2978 Nov 18 15:03                      | 0° <b>∡</b> ¹                        |             | direct                         | 2981 Apr 25 20:14                      | 7° <b>Y</b> ′50′13                      |            |
| desc. node          | 2978 Dec 01 15:48                      | 16° <b>∡</b> ¹20′00                  |             | greatest brilliancy            | 2981 May 05 07:41                      | 9° <b>Ƴ</b> 29'25                       | -4.8m      |
|                     | 2978 Dec 12 13:24                      | o°ප                                  |             | desc. node                     | 2981 May 18 10:38                      | 16° <b>Ƴ</b> 09'48                      |            |
| evening rise        | 2978 Dec 14 22:12                      | 2° <b>る</b> 58'06                    |             |                                | 2981 Jun 05 00:58                      | $9^{\circ}$ 8                           |            |
|                     | 2979 Jan 05 11:27                      | 0° <b>≈</b>                          |             | morning max el                 | 2981 Jun 13 22:53                      | 8° <b>8</b> 16'08                       | 45°54'28   |
|                     | 2979 Jan 29 10:30                      | 0° <b>∀</b>                          |             |                                | 2981 Jul 05 06:25                      | $\Pi$ °0                                |            |
|                     | 2979 Feb 22 12:57                      | $0^{\circ}$ Y                        |             |                                | 2981 Aug 01 10:27                      | 0ಂಣ                                     |            |
|                     | 2979 Mar 18 22:31                      | $0^{\circ}$ 8                        |             |                                | 2981 Aug 27 08:20                      | $0^{\circ}\Omega$                       |            |
| asc. node           | 2979 Mar 24 18:43                      | 7° <b>8</b> 06'16                    |             | asc. node                      | 2981 Sep 08 13:50                      | 14° <b>Ω</b> 29'56                      |            |
|                     | 2979 Apr 12 20:20                      | $\Pi$ °0                             |             |                                | 2981 Sep 21 11:29                      | 0° <b>m</b> ∕                           |            |
|                     | 2979 May 08 14:50                      | $0$ $\circ$ $\odot$                  |             |                                | 2981 Oct 16 01:20                      | 0∘ <b>亚</b>                             |            |
|                     | 2979 Jun 05 01:51                      | $0$ ° $\Omega$                       |             |                                | 2981 Nov 09 06:14                      | 0° <b>M</b> ₊                           |            |
| evening max el      | 2979 Jun 17 11:52                      | 12° <b>Ω</b> 26′07                   | 45°26'55    |                                | 2981 Dec 03 05:53                      | 0° <b>∡</b> ¹                           |            |
|                     | 2979 Jul 07 19:17                      | 0° <b>m</b>                          |             | morning set                    | 2981 Dec 09 07:11                      | 7° <b>∡</b> ³35'47                      |            |
| desc. node          | 2979 Jul 14 08:21                      | 4° <b>™</b> 30'38                    |             |                                | 2981 Dec 27 02:59                      | 0°ಕ                                     |            |
| greatest brilliancy | 2979 Jul 25 18:46                      | 10° <b>m</b> 15'47                   | -4.7m       | desc. node                     | 2981 Dec 29 03:29                      | 2° <b>る</b> 32'28                       |            |

| superior conj                           | 2982 Jan 19 11:41                      | 29° <b>る</b> 23'42                | -0°48'23   | transit end         | 2984 Jun 14 16:54                      | 24° <b>∏</b> 50'37                |            |
|---|--|-----------------------------------|------------|---------------------|--|-----------------------------------|------------|
| minimum elong                           | 2982 Jan 19 00:37                      | 28° <b>ප්</b> 48'52               |            | min. Earth dist.    | 2984 Jun 14 08:50                      | 25° <b>I</b> I03'16               | 0.28770 AU |
|   | 2982 Jan 19 23:13                      | 0° <b>≈</b>                       |            | desc. node          | 2984 Jun 14 22:22                      | 24° <b>Ⅱ</b> 42'02                |            |
| max. Earth dist.                        | 2982 Jan 20 05:33                      | 0° <b>≈</b> 19'53                 | 1.71099 AU | morning rise        | 2984 Jun 20 21:24                      | 21° <b>Ⅲ</b> 08′24                |            |
|   | 2982 Feb 12 19:51                      | 0° <b>)</b> €                     |            | direct              | 2984 Jul 06 01:09                      | 16° <b>Ⅱ</b> 43'25                |            |
| evening rise                            | 2982 Mar 01 15:27                      | 21° <b>∺</b> 05'31                |            | greatest brilliancy | 2984 Jul 16 03:38                      | 18° <b>Ⅲ</b> 34′09                | -4.7m      |
|   | 2982 Mar 08 18:24                      | $0$ ° $\mathbf{Y}$                |            |                     | 2984 Aug 04 20:41                      | $0$ $\circ$ $60$                  |            |
|   | 2982 Apr 01 20:47                      | 0°8                               |            | morning max el      | 2984 Aug 23 19:34                      | 16° <b>©</b> 28'21                | 45°45'16   |
| asc. node                               | 2982 Apr 21 06:45                      | 23° <b>8</b> 57'21                |            |                     | 2984 Sep 06 08:36                      | $0^{\circ}\Omega$                 |            |
|   | 2982 Apr 26 05:02                      | 0° <b>I</b> I                     |            |                     | 2984 Oct 03 19:05                      | 0° m)                             |            |
|   | 2982 May 20 21:11                      | $0 _{\circ}$ ೮<br>$0 _{\circ}$ ತಿ |            | asc. node           | 2984 Oct 06 01:46                      | 2°₱36'06<br>0°₽                   |            |
|   | 2982 Jun 15 00:04<br>2982 Jul 10 19:27 | 0°a≀<br>0°mp                      |            |                     | 2984 Oct 29 11:05<br>2984 Nov 23 05:13 | 0° <b>™</b>                       |            |
|   | 2982 Jul 10 19.27<br>2982 Aug 06 21:24 | 0∘ <del>ত</del><br>بانا           |            |                     | 2984 Nov 23 03:13<br>2984 Dec 17 11:43 | 0° <b>⊼</b> ¹                     |            |
| desc. node                              | 2982 Aug 10 20:09                      | ა <b>—</b><br>4° <b>Ω</b> 10'55   |            |                     | 2985 Jan 10 12:33                      | 0°ਰ                               |            |
| evening max el                          | 2982 Aug 28 03:33                      | 21° <b>Ω</b> 38'18                | 45°51'41   | desc. node          | 2985 Jan 25 15:19                      | 18° <b>ろ</b> 56'12                |            |
| • · • · · · · · · · · · · · · · · · · · | 2982 Sep 06 05:18                      | 0°M                               |            |                     | 2985 Feb 03 11:06                      | 0° <b>≈</b>                       |            |
| greatest brilliancy                     | 2982 Oct 07 01:28                      | 20°M13'44                         | -4.8m      | morning set         | 2985 Feb 24 06:24                      | 26° <b>≈</b> 05'19                |            |
| retrograde                              | 2982 Oct 16 04:45                      | 21°M45'31                         |            | -                   | 2985 Feb 27 09:19                      | 0° <b>)</b> €                     |            |
| evening set                             | 2982 Nov 01 08:38                      | 16°M46'00                         |            |                     | 2985 Mar 23 08:45                      | $0^{\circ}$ Y                     |            |
| inferior conj                           | 2982 Nov 06 00:53                      | 13°M59'07                         | -5°59'29   |                     |  |                                   |            |
| minimum elong                           | 2982 Nov 06 11:19                      | 13°M43'11                         | 5°57'05    | superior conj       | 2985 Apr 05 13:55                      | 16° <b>Y</b> ′28'51               |            |
| min. Earth dist.                        | 2982 Nov 06 23:14                      | 13°M25'00                         | 0.27357 AU | minimum elong       | 2985 Apr 05 21:25                      | 16° <b>Y</b> ′52'12               |            |
| morning rise                            | 2982 Nov 11 13:24                      | 10°M42'48                         |            | max. Earth dist.    | 2985 Apr 09 15:12                      | 21° <b>Y</b> '31'38               | 1.72195 AU |
| direct                                  | 2982 Nov 26 22:39                      | 6° <b>™</b> 03'34                 |            |                     | 2985 Apr 16 10:44                      | 0°8                               |            |
| asc. node                               | 2982 Dec 01 23:13                      | 6°M33'31                          | 4.0        |                     | 2985 May 10 16:13                      | 0°Ⅱ<br>4°Ⅲ 47147                  |            |
| greatest brilliancy                     | 2982 Dec 08 01:47                      | 8°M23'35                          | -4.9m      | evening rise        | 2985 May 14 13:30                      | 4° <b>Ⅱ</b> 47'47                 |            |
| morning max el                          | 2983 Jan 07 01:29<br>2983 Jan 16 17:22 | 0° <b>∡</b><br>9° <b>∡</b> 28'46  | 46°57'05   | asc. node           | 2985 May 18 18:34<br>2985 Jun 04 01:29 | 9° <b>Ⅱ</b> 59'08<br>0° <b>©</b>  |            |
| morning max er                          | 2983 Feb 04 21:31                      | 9 <b>メ</b> ・2840                  | 40 37 03   |                     | 2985 Jun 28 14:41                      | 0° <b>U</b>                       |            |
|   | 2983 Pc0 04 21:31<br>2983 Mar 03 01:19 | 0°≈                               |            |                     | 2985 Jul 23 08:40                      | 0°m)                              |            |
| desc. node                              | 2983 Mar 23 13:05                      | 24°≈18'05                         |            |                     | 2985 Aug 17 09:36                      | 0∘ <b>⊽</b>                       |            |
| acce. noue                              | 2983 Mar 28 07:14                      | 0° <b>∀</b>                       |            | desc. node          | 2985 Sep 07 08:05                      | ა —<br>24° <b>ჲ</b> 41'26         |            |
|   | 2983 Apr 22 04:03                      | $0^{\circ}\Upsilon$               |            |                     | 2985 Sep 11 21:21                      | 0° <b>M</b>                       |            |
|   | 2983 May 16 21:07                      | 0°8                               |            |                     | 2985 Oct 08 03:16                      | 0° <b>∡</b> ⊓                     |            |
|   | 2983 Jun 10 12:37                      | $\Pi$ $^{\circ}0$                 |            |                     | 2985 Nov 05 00:16                      | ರ°0                               |            |
|   | 2983 Jul 05 02:41                      | $0$ $\circ$ $\odot$               |            | evening max el      | 2985 Nov 09 08:38                      | 4° <b>る</b> 22'55                 | 46°55'50   |
| asc. node                               | 2983 Jul 14 16:06                      | 11° <b>5</b> 641'34               |            |                     | 2985 Dec 09 15:27                      | 0° <b>≈</b>                       |            |
| morning set                             | 2983 Jul 19 17:07                      | 17° <b>©</b> 52'06                |            | greatest brilliancy | 2985 Dec 19 16:54                      | 5° <b>≈</b> 03'33                 | -4.9m      |
|   | 2983 Jul 29 14:27                      | 0°N                               | . ====     | asc. node           | 2985 Dec 29 11:05                      | 6°≈57'19                          |            |
| max. Earth dist.                        | 2983 Aug 22 13:46                      | 29° <b>Ω</b> 30'51                | 1.73204 AU | retrograde          | 2985 Dec 29 17:37                      | 6°≈57'25                          |            |
|   | 2983 Aug 22 23:13                      | 0° <b>m</b> p                     |            | evening set         | 2986 Jan 13 12:20                      | 2°≈37'10                          |            |
| superior conj                           | 2983 Aug 25 03:06                      | 2° m 40'07                        | 1010105    | min. Earth dist.    | 2986 Jan 17 23:41<br>2986 Jan 18 16:27 | 30°Rる<br>29°る34'21                | 0.26587 AU |
| minimum elong                           | 2983 Aug 24 20:33                      |                                   | 1°17'58    | inferior conj       | 2986 Jan 19 06:43                      | 29° <b>る</b> 12'27                | 5°06'26    |
| minimum ciong                           | 2983 Sep 16 05:19                      | 0° <b>ي</b><br>0°                 | 1 17 50    | minimum elong       | 2986 Jan 18 20:50                      | 29° <b>る</b> 27'37                | 5°03'47    |
| evening rise                            | 2983 Sep 30 14:43                      | 17° <b>≏</b> 50'36                |            | morning rise        | 2986 Jan 24 05:39                      | 26° <b>る</b> 15'32                | 0 00 17    |
| <i>y</i>                                | 2983 Oct 10 09:52                      | 0°M                               |            | direct              | 2986 Feb 08 16:43                      | 21° <b>る</b> 34'12                |            |
| desc. node                              | 2983 Nov 03 05:57                      | 29°M35'02                         |            | greatest brilliancy | 2986 Feb 18 02:54                      | 23° <b>る</b> 15'22                | -4.9m      |
|   | 2983 Nov 03 14:00                      | 0° <b>∡</b> ¹                     |            |                     | 2986 Mar 03 01:20                      | 0° <b>≈</b>                       |            |
|   | 2983 Nov 27 18:28                      | 5°0                               |            | morning max el      | 2986 Mar 30 19:00                      | 23° <b>≈</b> 51'36                | 46°39'07   |
|   | 2983 Dec 22 00:09                      | 0° <b>≈</b>                       |            |                     | 2986 Apr 05 20:39                      | 0° <b>∀</b>                       |            |
|   | 2984 Jan 15 09:36                      | 0° <b>∀</b>                       |            | desc. node          | 2986 Apr 20 00:59                      | 15° <b>)</b> €02'23               |            |
| _                                       | 2984 Feb 09 04:39                      | 0° <b>Υ</b>                       |            |                     | 2986 May 03 13:05                      | 0° <b>Υ</b>                       |            |
| asc. node                               | 2984 Feb 24 08:48                      | 17° <b>Y</b> 53'55                |            |                     | 2986 May 29 17:05                      | 0° <b>B</b>                       |            |
|   | 2984 Mar 05 21:19                      | 0° <b>Β</b>                       |            |                     | 2986 Jun 24 05:41                      | 0°II                              |            |
|   | 2984 Apr 02 17:26                      | 0°П<br>1°П 5 4100                 | 46011145   |                     | 2986 Jul 19 09:13                      | 0°©                               |            |
| evening max el                          | 2984 Apr 04 15:12<br>2984 May 10 18:13 | 1°Ⅲ54'00<br>0°©                   | 46°11'45   | asc. node           | 2986 Aug 11 04:02<br>2986 Aug 13 05:08 | 27° <b>©</b> 30'52<br>0° <b>Ω</b> |            |
| greatest brilliancy                     | 2984 May 13 02:10                      | 0°958'18                          | -4.8m      |                     | 2986 Sep 06 17:50                      | 0° <b>m</b> )                     |            |
| retrograde                              | 2984 May 24 03:46                      | 3°9512'00                         | 7.0111     | morning set         | 2986 Sep 26 00:33                      | 23° Mp 48'29                      |            |
|   | 2984 Jun 05 19:55                      | 30°R∏                             |            |                     | 2986 Oct 01 00:21                      | 0° <b>⊽</b>                       |            |
| evening set                             | 2984 Jun 08 05:13                      | 28° <b>∏</b> 45'21                |            |                     | 2986 Oct 25 02:30                      | 0° <b>™</b>                       |            |
| inferior conj                           | 2984 Jun 14 12:53                      | 24° <b>Ⅱ</b> 56'55                | 0°05'40    | max. Earth dist.    | 2986 Oct 30 14:17                      | 6°M51'40                          | 1.71877 AU |
| minimum elong                           | 2984 Jun 14 13:05                      | 24° <b>∏</b> 56'35                | 0°05'36    |                     |  |                                   |            |
| transit middle                          | 2984 Jun 14 13:05                      | 24° <b>Ⅱ</b> 56'35                | 0°05'36    | superior conj       | 2986 Nov 02 12:56                      | 10°M32'25                         | 1°00'47    |
| transit begin                           | 2984 Jun 14 09:17                      | 25° <b>Ⅱ</b> 02'33                |            | minimum elong       | 2986 Nov 02 23:08                      | 11° <b>M</b> 04'20                | 1°00'26    |

|                     | 2006 N 10 02 10                        | 00.7                      |             | 1                   | 2000 4 22 10 02    | 500020124                    |            |
|---------------------|--|---------------------------|-------------|---------------------|--------------------|------------------------------|------------|
|                     | 2986 Nov 18 02:10                      | 0° <b>⊼</b>               |             | direct              | 2989 Apr 23 10:02  | 5°Υ30'34                     |            |
| desc. node          | 2986 Nov 30 17:46                      | 15° <b>∡</b> ′51′05       |             | greatest brilliancy | 2989 May 02 20:57  | 7° <b>Y</b> ′09'46           | -4.8m      |
| evening rise        | 2986 Dec 12 09:37                      | 0° <b>る</b> 28'05         |             | desc. node          | 2989 May 17 12:33  | 14° <b>Y</b> 51′05           |            |
|                     | 2986 Dec 12 00:39                      | 0°₹                       |             |                     | 2989 Jun 05 04:04  | $9^{\circ}$ 8                |            |
|                     | 2987 Jan 04 22:50                      | 0° <b>≈</b>               |             | morning max el      | 2989 Jun 11 14:18  | 6° <b>8</b> 02'01            | 45°55'41   |
|                     | 2987 Jan 28 22:04                      | 0° <b>ℋ</b>               |             |                     | 2989 Jul 04 23:32  | $\Pi$ $^{\circ}0$            |            |
|                     | 2987 Feb 22 00:46                      | $0$ ° $\mathbf{\Upsilon}$ |             |                     | 2989 Aug 01 00:27  | 0°€                          |            |
|                     | 2987 Mar 18 10:45                      | $9^{\circ}$ 8             |             |                     | 2989 Aug 26 20:54  | $0^{\circ}\Omega$            |            |
| asc. node           | 2987 Mar 23 20:49                      | 6° <b>8</b> 35'09         |             | asc. node           | 2989 Sep 07 15:54  | 13° <b>Ω</b> 59'50           |            |
|                     | 2987 Apr 12 09:22                      | $\Pi^{\circ}0$            |             |                     | 2989 Sep 20 23:17  | o° mp                        |            |
|                     | 2987 May 08 05:31                      | 0ം <b>ഉ</b>               |             |                     | 2989 Oct 15 12:44  | 0∘ <b>⊽</b>                  |            |
|                     | 2987 Jun 04 20:43                      | $0^{\circ}\Omega$         |             |                     | 2989 Nov 08 17:26  | 0°M                          |            |
| evening max el      | 2987 Jun 15 02:29                      | 10° <b>Ω</b> 11'48        | 45°27'27    |                     | 2989 Dec 02 16:59  | 0° <b>⊼</b>                  |            |
| e venning man er    | 2987 Jul 08 11:41                      | 0°m/                      | 2, 2,       | morning set         | 2989 Dec 06 19:38  | 5° <b>х</b> 09′24            |            |
| desc. node          | 2987 Jul 13 10:25                      | 3° Mp 12'57               |             | morning set         | 2989 Dec 26 14:04  | 0°る                          |            |
| greatest brilliancy | 2987 Jul 13 10:23<br>2987 Jul 23 09:19 | 8° Mp 04'19               | -4.7m       | desc. node          | 2989 Dec 28 05:32  | 0 3<br>2° <b>る</b> 04'06     |            |
|                     |  |                           | -4./111     | desc. Hode          | 2909 Dec 20 03.32  | 2 00400                      |            |
| retrograde          | 2987 Aug 02 17:46                      | 10° Mp 00'24              |             |                     | 2000 7 16 21 46    | 260-740120                   | 0045101    |
| evening set         | 2987 Aug 19 20:53                      | 4° <b>m</b> 30'37         |             | superior conj       | 2990 Jan 16 21:46  | 26°₹49'29                    |            |
| inferior conj       | 2987 Aug 24 05:44                      | 1° <b>m</b> 50'37         |             | minimum elong       | 2990 Jan 16 11:12  | 26° <b>ප</b> 16'13           |            |
| minimum elong       | 2987 Aug 23 22:04                      | 2° Mg 02'34               | 7°50'06     | max. Earth dist.    | 2990 Jan 17 14:45  | 27° <b>る</b> 42'55           | 1.71099 AU |
| min. Earth dist.    | 2987 Aug 24 09:31                      | 1° <b>Mp</b> 44'43        | 0.28967 AU  |                     | 2990 Jan 19 10:19  | 0°≈                          |            |
|                     | 2987 Aug 27 05:06                      | $30^\circ$ R $\Omega$     |             |                     | 2990 Feb 12 06:59  | 0° <b>∀</b>                  |            |
| morning rise        | 2987 Aug 27 23:04                      | 29° <b>Ω</b> 32'49        |             | evening rise        | 2990 Feb 27 02:15  | 18° <b>)</b> 34′07           |            |
| direct              | 2987 Sep 14 19:27                      | 23° <b>Ω</b> 33'28        |             |                     | 2990 Mar 08 05:34  | $0^{\circ}\mathbf{\Upsilon}$ |            |
| greatest brilliancy | 2987 Sep 25 13:37                      | 25° <b>Ω</b> 38'43        | -4.8m       |                     | 2990 Apr 01 08:03  | 0°8                          |            |
|                     | 2987 Oct 04 10:48                      | 0° m                      |             | asc. node           | 2990 Apr 20 08:41  | 23° <b>8</b> 28'10           |            |
| morning max el      | 2987 Nov 03 12:43                      | 24° m 56'16               | 46°20'28    |                     | 2990 Apr 25 16:30  | 0°II                         |            |
| asc. node           | 2987 Nov 03 13:27                      | 24° m 58'07               |             |                     | 2990 May 20 09:03  | 0°©                          |            |
| use. Houe           | 2987 Nov 08 12:58                      | 0∘ <b>ರ</b>               |             |                     | 2990 Jun 14 12:42  | $0^{\circ}\Omega$            |            |
|                     | 2987 Dec 05 22:20                      | 0° <b>™</b>               |             |                     | 2990 Jul 10 09:37  | 0° mp                        |            |
|                     | 2987 Dec 03 22:20<br>2987 Dec 31 09:37 | 0° <b>⊼</b>               |             |                     | 2990 Aug 06 14:59  | 0∘ <b>ت</b><br>۱۱۱۸          |            |
|                     |  | 0°ろ                       |             | 4 4-                | •                  |                              |            |
|                     | 2988 Jan 25 02:09                      |                           |             | desc. node          | 2990 Aug 09 22:15  | 3° <b>£</b> 28′25            | 45040151   |
|                     | 2988 Feb 18 10:34                      | 0° <b>≈</b>               |             | evening max el      | 2990 Aug 25 18:27  | 19° <b>£</b> 23′08           | 45°49'51   |
| desc. node          | 2988 Feb 23 03:17                      | 5°≈48'29                  |             |                     | 2990 Sep 06 10:44  | 0°M                          |            |
|                     | 2988 Mar 13 15:52                      | 0° <b>∀</b>               |             | greatest brilliancy | 2990 Oct 04 13:56  | 17°M52'26                    | -4.8m      |
|                     | 2988 Apr 06 20:41                      | $0$ ° $\mathbf{\gamma}$   |             | retrograde          | 2990 Oct 13 18:06  | 19° <b>M</b> 24'24           |            |
|                     | 2988 May 01 02:35                      | $0^{\circ}$ 8             |             | evening set         | 2990 Oct 30 01:10  | 14°M20'19                    |            |
| morning set         | 2988 May 08 22:03                      | 9° <b>8</b> 38'52         |             | inferior conj       | 2990 Nov 03 14:23  | 11° <b>M</b> 37'18           | -6°15'36   |
|                     | 2988 May 25 10:13                      | $\Pi$ $^{\circ}0$         |             | minimum elong       | 2990 Nov 04 00:51  | 11°M21'18                    | 6°13'18    |
|                     |  |                           |             | min. Earth dist.    | 2990 Nov 04 12:44  | 11°M03'08                    | 0.27421 AU |
| superior conj       | 2988 Jun 15 08:37                      | 25° <b>Ⅱ</b> 45'57        | 0°00'14     | morning rise        | 2990 Nov 09 00:01  | 8°M24'49                     |            |
| minimum elong       | 2988 Jun 15 08:35                      | 25° <b>Ⅱ</b> 45'49        | 0°00'13     | direct              | 2990 Nov 24 13:29  | 3°M41'02                     |            |
| behind sun begin    | 2988 Jun 14 09:51                      | 24° <b>Ⅲ</b> 35'55        |             | asc. node           | 2990 Dec 01 01:11  | 4°M30'28                     |            |
| behind sun end      | 2988 Jun 16 07:19                      | 26° <b>Ⅲ</b> 55'43        |             | greatest brilliancy | 2990 Dec 05 15:48  | 6°M00'25                     | -4.9m      |
| asc. node           | 2988 Jun 15 06:18                      | 25° <b>II</b> 38'47       |             | greatest offinalley | 2991 Jan 07 03:52  | 0° <b>⊼</b> 7                | 1.7111     |
| max. Earth dist.    | 2988 Jun 16 01:57                      | 26° <b>I</b> I39'13       | 1 72442 ATT | marning may al      |                    | 7° <b>₹</b> 106'40           | 46°56'36   |
| max. Earm dist.     |  | 20 <b>п</b> 3913          | 1.73442 AU  | morning max el      | 2991 Jan 14 07:56  | 7 x・00 40<br>0°る             | 40 30 30   |
|                     | 2988 Jun 18 19:16                      |                           |             |                     | 2991 Feb 04 14:53  |                              |            |
|                     | 2988 Jul 13 05:02                      | 0°N                       |             |                     | 2991 Mar 02 15:45  | 0° <b>≈</b>                  |            |
| evening rise        | 2988 Jul 21 16:39                      | 10° <b>Ω</b> 25′23        |             | desc. node          | 2991 Mar 22 15:09  | 23°≈44'41                    |            |
|                     | 2988 Aug 06 15:09                      | 0° <b>m</b>               |             |                     | 2991 Mar 27 20:15  | 0° <b>∀</b>                  |            |
|                     | 2988 Aug 31 02:10                      | 0∘ <b>⊽</b>               |             |                     | 2991 Apr 21 16:13  | 0° <b>Υ</b>                  |            |
|                     | 2988 Sep 24 15:13                      | 0°M₊                      |             |                     | 2991 May 16 08:44  | $8^{\circ 0}$                |            |
| desc. node          | 2988 Oct 04 20:05                      | 12°M25'37                 |             |                     | 2991 Jun 09 23:51  | $\Pi$ $^{\circ}0$            |            |
|                     | 2988 Oct 19 07:33                      | 0° <b>∡</b> ¹             |             |                     | 2991 Jul 04 13:39  | $0$ $\circ$ $\odot$          |            |
|                     | 2988 Nov 13 04:52                      | 0°₹                       |             | asc. node           | 2991 Jul 13 18:15  | 11° <b>©</b> 14'49           |            |
|                     | 2988 Dec 08 11:38                      | 0° <b>≈</b>               |             | morning set         | 2991 Jul 17 10:53  | 15°5546'13                   |            |
|                     | 2989 Jan 03 17:23                      | 0° <b>∀</b>               |             | •                   | 2991 Jul 29 01:15  | $0^{\circ}\Omega$            |            |
| evening max el      | 2989 Jan 20 15:30                      | 18° <b>)</b> €03'07       | 47°10'44    | max. Earth dist.    | 2991 Aug 20 08:44  | 27° <b>Ω</b> 28'02           | 1.73234 AU |
| asc. node           | 2989 Jan 25 23:01                      | 23° <b>H</b> 21'58        |             |                     | 2991 Aug 22 09:59  | 0° m                         |            |
| 450. HOUC           | 2989 Feb 01 22:41                      | 23 <b>χ</b> 21 38         |             |                     | 2771 11ug 22 07.39 | עויי                         |            |
| grantast brillians  |  | 0 γ<br>19° <b>Υ</b> 36'10 | -4.9m       | superior comi       | 2001 Aug 22 20.59  | 0° mp 33'54                  | 1016146    |
| greatest brilliancy | 2989 Mar 02 05:26                      |                           | -4.7111     | superior conj       | 2991 Aug 22 20:58  | -•                           |            |
| retrograde          | 2989 Mar 12 12:26                      | 21° <b>Υ</b> 37'33        |             | minimum elong       | 2991 Aug 22 14:01  | 0° Mp 12'26                  | 1°16'37    |
| evening set         | 2989 Mar 30 08:03                      | 15° <b>Y</b> 29'17        |             |                     | 2991 Sep 15 16:09  | 0∘ <b>⊽</b>                  |            |
| min. Earth dist.    | 2989 Apr 02 05:37                      | 13° <b>Y</b> 41′28        | 0.27902 AU  | evening rise        | 2991 Sep 28 06:50  | 15° <b>Ω</b> 37'49           |            |
| inferior conj       | 2989 Apr 02 13:04                      | 13° <b>Y</b> 29'47        | 8°23'23     |                     | 2991 Oct 09 20:53  | $0^{\circ}$ M                |            |
| minimum elong       | 2989 Apr 02 19:25                      | 13° <b>Y</b> 19′52        | 8°22'46     | desc. node          | 2991 Nov 02 07:53  | 29°M06'04                    |            |
| morning rise        | 2989 Apr 06 06:57                      | 11° <b>Y</b> 11'14        |             |                     | 2991 Nov 03 01:16  | 0° <b>∡</b> ″                |            |
|                     |  |                           |             |                     |                    |                              |            |

|                     | 2991 Nov 27 06:01                      | 0°ಕ                                  |            |                     | 2994 May 03 04:24                      | $0^{\circ}\mathbf{\Upsilon}$ |            |
|---------------------|--|--------------------------------------|------------|---------------------|--|------------------------------|------------|
|                     | 2991 Nov 27 00:01<br>2991 Dec 21 12:04 | 0°≈                                  |            |                     | 2994 May 29 06:15                      | 0°8                          |            |
|                     | 2991 Dec 21 12:04<br>2992 Jan 14 22:03 | 0 <b>≈</b><br>0° <b>∺</b>            |            |                     | 2994 Jun 23 17:44                      | 0°II                         |            |
|                     | 2992 Jan 14 22:03<br>2992 Feb 08 18:05 | 0°Υ                                  |            |                     | 2994 Jul 18 20:35                      | 0°©                          |            |
| asc. node           | 2992 Feb 23 10:52                      | 17° <b>Y</b> 17'55                   |            | asc. node           | 2994 Aug 10 06:04                      | 27° <b>5</b> 03'37           |            |
| use. Houe           | 2992 Mar 05 12:50                      | 0°8                                  |            | asc. node           | 2994 Aug 12 16:07                      | 0°Ω                          |            |
| evening max el      | 2992 Apr 02 06:59                      | 29° <b>8</b> 40'31                   | 46°13'48   |                     | 2994 Sep 06 04:37                      | 0° <b>m</b>                  |            |
| evening max or      | 2992 Apr 02 14:52                      | 0°II                                 | 10 13 10   | morning set         | 2994 Sep 23 16:56                      | 21° <b>m</b> )37'19          |            |
| greatest brilliancy | 2992 May 10 19:26                      | 28° <b>II</b> 48'53                  | -4.8m      | morning sec         | 2994 Sep 30 11:03                      | 0∘ <b>ರ</b>                  |            |
| 8                   | 2992 May 14 10:24                      | 0°ಅ                                  |            |                     | 2994 Oct 24 13:13                      | 0°M                          |            |
| retrograde          | 2992 May 21 19:51                      | 1°901'26                             |            | max. Earth dist.    | 2994 Oct 28 04:52                      | 4°M33'44                     | 1.71926 AU |
| Ü                   | 2992 May 28 23:13                      | 30° <b>Ŗ</b> Ⅱ                       |            |                     |  |                              |            |
| evening set         | 2992 Jun 05 22:23                      | 26° <b>Ⅲ</b> 34'01                   |            | superior conj       | 2994 Oct 31 03:07                      | 8° <b>M</b> 13'11            | 1°03'14    |
| inferior conj       | 2992 Jun 12 05:02                      | 22° <b>Ⅱ</b> 46'39                   | 0°25'53    | minimum elong       | 2994 Oct 31 13:14                      | 8° <b>M</b> 44'49            | 1°02'54    |
| minimum elong       | 2992 Jun 12 06:00                      | 22° <b>Ⅱ</b> 45′09                   | 0°25'37    | -                   | 2994 Nov 17 12:58                      | 0° <b>∡</b> ¹                |            |
| min. Earth dist.    | 2992 Jun 12 01:17                      | 22° <b>II</b> 52'33                  | 0.28747 AU | desc. node          | 2994 Nov 29 19:49                      | 15° <b>₹</b> 23'28           |            |
| desc. node          | 2992 Jun 14 00:28                      | 21° <b>Ⅱ</b> 38'41                   |            | evening rise        | 2994 Dec 09 21:02                      | 27° <b>₹</b> 59'14           |            |
| morning rise        | 2992 Jun 18 14:04                      | 18° <b>Ⅱ</b> 57'08                   |            |                     | 2994 Dec 11 11:34                      | 0°ರ                          |            |
| direct              | 2992 Jul 03 17:14                      | 14° <b>Ⅱ</b> 33'40                   |            |                     | 2995 Jan 04 09:55                      | 0° <b>≈</b>                  |            |
| greatest brilliancy | 2992 Jul 13 18:54                      | 16° <b>Ⅲ</b> 23'33                   | -4.7m      |                     | 2995 Jan 28 09:19                      | 0° <b>)</b> €                |            |
|                     | 2992 Aug 05 07:06                      | 0ංම                                  |            |                     | 2995 Feb 21 12:16                      | $0$ ° $\Upsilon$             |            |
| morning max el      | 2992 Aug 21 10:27                      | 14°©15'55                            | 45°44'40   |                     | 2995 Mar 17 22:38                      | 0°8                          |            |
|                     | 2992 Sep 06 02:35                      | $0^{\circ}\Omega$                    |            | asc. node           | 2995 Mar 22 22:47                      | 6° <b>8</b> 04'39            |            |
|                     | 2992 Oct 03 09:18                      | 0° <b>m</b> y                        |            |                     | 2995 Apr 11 22:02                      | $\Pi^{\circ}0$               |            |
| asc. node           | 2992 Oct 05 03:46                      | 2°Mp01'34                            |            |                     | 2995 May 07 19:52                      | $0$ $\circ$ $\odot$          |            |
|                     | 2992 Oct 28 23:44                      | 0∘ <b>⊽</b>                          |            |                     | 2995 Jun 04 15:33                      | $0$ $^{\circ}$ $\Omega$      |            |
|                     | 2992 Nov 22 17:08                      | 0° <b>M</b> ₊                        |            | evening max el      | 2995 Jun 12 17:26                      | 7° <b>Ω</b> 59'44            | 45°27'58   |
|                     | 2992 Dec 16 23:15                      | 0° <b>∡</b> ¹                        |            |                     | 2995 Jul 09 09:05                      | 0° <b>m</b> ∕                |            |
|                     | 2993 Jan 09 23:51                      | 0° <b>ರ</b>                          |            | desc. node          | 2995 Jul 12 12:30                      | 1°₩ 54'06                    |            |
| desc. node          | 2993 Jan 24 17:26                      | 18° <b>る</b> 27'53                   |            | greatest brilliancy | 2995 Jul 20 23:12                      | 5° Mp 53′14                  | -4.7m      |
|                     | 2993 Feb 02 22:12                      | 0° <b>≈</b>                          |            | retrograde          | 2995 Jul 31 09:56                      | 7° <b>™</b> 51'29            |            |
| morning set         | 2993 Feb 21 16:57                      | 23° <b>≈</b> 33'37                   |            | evening set         | 2995 Aug 17 09:35                      | 2° m 25'36                   |            |
|                     | 2993 Feb 26 20:15                      | 0° <b>∀</b>                          |            |                     | 2995 Aug 21 09:30                      | 30°R <b>Ω</b>                |            |
|                     | 2993 Mar 22 19:33                      | $0^{\circ}\mathbf{\Upsilon}$         |            | inferior conj       | 2995 Aug 21 21:46                      | 29° <b>Ω</b> 40'54           |            |
|                     |  |                                      |            | minimum elong       | 2995 Aug 21 13:38                      | 29° <b>£</b> 53′33           |            |
| superior conj       | 2993 Apr 03 03:13                      | 14° <b>Υ</b> 07'14                   |            | min. Earth dist.    | 2995 Aug 22 00:36                      | 29° <b>Ω</b> 36'28           | 0.28991 AU |
| minimum elong       | 2993 Apr 03 10:02                      | 14° <b>Y</b> 28′28                   |            | morning rise        | 2995 Aug 25 17:31                      | 27° <b>Ω</b> 19'42           |            |
| max. Earth dist.    | 2993 Apr 07 07:16                      | 19° <b>Y</b> 18'45                   | 1.72139 AU | direct              | 2995 Sep 12 11:34                      | 21° <b>Ω</b> 23'18           | 4.0        |
|                     | 2993 Apr 15 21:29                      | 0° <b>B</b>                          |            | greatest brilliancy | 2995 Sep 23 05:40                      | 23° <b>£</b> 28'36           | -4.8m      |
|                     | 2993 May 10 02:58                      | 0°Ⅱ<br>2°Ⅲ24124                      |            |                     | 2995 Oct 05 13:36                      | 0°M)                         | 46010155   |
| evening rise        | 2993 May 12 05:04                      | 2° <b>∏</b> 34'34                    |            | morning max el      | 2995 Nov 01 04:23                      | 22° Mp 42'22                 | 46°18'55   |
| asc. node           | 2993 May 17 20:32<br>2993 Jun 03 12:19 | 9° <b>Ⅱ</b> 32'04<br>0° <b>©</b>     |            | asc. node           | 2995 Nov 02 15:27                      | 24°№09'39<br>0° <u>മ</u>     |            |
|                     | 2993 Jun 03 12:19<br>2993 Jun 28 01:45 | 0° <b>U</b>                          |            |                     | 2995 Nov 08 08:42                      | 0° <b>M</b>                  |            |
|                     | 2993 Jul 28 01:43<br>2993 Jul 22 20:11 | 0° <b>m</b> p                        |            |                     | 2995 Dec 05 13:21<br>2995 Dec 30 22:48 | 0°11℃                        |            |
|                     | 2993 Jul 22 20:11<br>2993 Aug 16 21:53 | 0∘ <b>⊽</b><br>مار                   |            |                     | 2996 Jan 24 14:24                      | 0° <b>ਠ</b>                  |            |
| desc. node          | 2993 Sep 06 10:07                      | 0 <del>=</del><br>24° <b>₽</b> 08'36 |            |                     | 2996 Feb 17 22:16                      | 0°≈                          |            |
| dese. Hode          | 2993 Sep 11 10:56                      | 0° <b>™</b>                          |            | desc. node          | 2996 Feb 22 05:14                      | 5°≈18'37                     |            |
|                     | 2993 Oct 07 19:21                      | 0° <b>∡</b> 7                        |            | dese. Hode          | 2996 Mar 13 03:11                      | 0° <b>∺</b>                  |            |
|                     | 2993 Nov 04 22:27                      | 0°ਤ                                  |            |                     | 2996 Apr 06 07:43                      | 0° <b>Υ</b>                  |            |
| evening max el      | 2993 Nov 06 21:12                      | 1° <b>る</b> 56'46                    | 46°53'50   |                     | 2996 Apr 30 13:22                      | 0°8                          |            |
|                     | 2993 Dec 11 10:58                      | 0° <b>≈</b>                          |            | morning set         | 2996 May 06 13:48                      | 7° <b>8</b> 26'10            |            |
| greatest brilliancy | 2993 Dec 17 06:44                      | 2°≈36'03                             | -4.9m      |                     | 2996 May 24 20:48                      | 0°II                         |            |
| retrograde          | 2993 Dec 27 05:23                      | 4° <b>≈</b> 28'22                    |            |                     | ,                                      |                              |            |
| asc. node           | 2993 Dec 28 13:15                      | 4° <b>≈</b> 26'14                    |            | superior conj       | 2996 Jun 13 02:03                      | 23° <b>∏</b> 39'38           | -0°03'03   |
| evening set         | 2994 Jan 10 22:15                      | 0°≈11'53                             |            | minimum elong       | 2996 Jun 13 02:41                      | 23° <b>Ⅱ</b> 41'35           |            |
| C                   | 2994 Jan 11 06:57                      | 30°Ŗ₹                                |            | behind sun begin    | 2996 Jun 12 04:03                      | 22° <b>Ⅲ</b> 31′58           |            |
| inferior conj       | 2994 Jan 16 19:01                      | 26°る44'23                            | 4°45'58    | behind sun end      | 2996 Jun 14 01:19                      | 24° <b>∏</b> 51'11           |            |
| minimum elong       | 2994 Jan 16 09:33                      | 26° <b>る</b> 58'55                   | 4°43'20    | max. Earth dist.    | 2996 Jun 13 22:58                      | 24° <b>Ⅱ</b> 43'59           | 1.73421 AU |
| min. Earth dist.    | 2994 Jan 16 06:14                      | 27°る04'00                            | 0.26560 AU | asc. node           | 2996 Jun 14 08:27                      | 25° <b>Ⅱ</b> 13′08           |            |
| morning rise        | 2994 Jan 21 21:01                      | 23° <b>る</b> 43'06                   |            |                     | 2996 Jun 18 05:46                      | 0ಂತಾ                         |            |
| direct              | 2994 Feb 06 04:19                      | 19° <b>පි</b> 06'14                  |            |                     | 2996 Jul 12 15:33                      | $0^{\circ}\Omega$            |            |
| greatest brilliancy | 2994 Feb 15 17:11                      | 20° <b>る</b> 49'25                   | -4.9m      | evening rise        | 2996 Jul 19 11:36                      | 8° <b>Ω</b> 23'51            |            |
|                     | 2994 Mar 04 01:32                      | 0° <b>≈</b>                          |            |                     | 2996 Aug 06 01:50                      | 0°Щ                          |            |
| morning max el      | 2994 Mar 28 07:01                      | 21° <b>≈</b> 24'54                   | 46°40'44   |                     | 2996 Aug 30 13:08                      | 0∘ <b>ত</b>                  |            |
|                     | 2994 Apr 05 17:08                      | 0° <b>∀</b>                          |            |                     | 2996 Sep 24 02:38                      | $0^{\circ}$ M                |            |
| desc. node          | 2994 Apr 19 02:54                      | 14° <b>∺</b> 20′27                   |            | desc. node          | 2996 Oct 03 22:01                      | 11°M55'59                    |            |
|                     |  |                                      |            |                     |  |                              |            |

| -                   |                   |                              |            |                     |                   |                        |            |
|---------------------|-------------------|------------------------------|------------|---------------------|-------------------|------------------------|------------|
|                     | 2996 Oct 18 19:37 | 0° <b>∡</b> ¹                |            |                     | 2999 Jul 04 00:24 | 0° <b>©</b>            |            |
|                     | 2996 Nov 12 17:53 | 0°ರ                          |            | asc. node           | 2999 Jul 12 20:15 | 10° <b>©</b> 48'17     |            |
|                     | 2996 Dec 08 02:14 | 0° <b>≈</b>                  |            | morning set         | 2999 Jul 15 04:54 | 13° <b>©</b> 41'45     |            |
|                     | 2997 Jan 03 11:15 | 0° <b>₩</b>                  |            | Ü                   | 2999 Jul 28 11:52 | $0^{\circ}\Omega$      |            |
| evening max el      | 2997 Jan 18 06:29 | 15° <b>¥</b> 42'58           | 47°11'49   | max. Earth dist.    | 2999 Aug 18 02:57 | 25° <b>Ω</b> 23'38     | 1.73263 AU |
| asc. node           | 2997 Jan 25 01:04 | 22° <b>¥</b> 27'10           |            |                     | Ü                 |                        |            |
|                     | 2997 Feb 02 03:53 | $_0$ ° $\boldsymbol{\gamma}$ |            | superior conj       | 2999 Aug 20 15:20 | 28° <b>Ω</b> 29'52     | 1°15'22    |
| greatest brilliancy | 2997 Feb 27 19:45 | 17° <b>Ƴ</b> 15'42           | -4.9m      | minimum elong       | 2999 Aug 20 07:59 | 28° <b>Ω</b> 07'12     | 1°15'11    |
| retrograde          | 2997 Mar 10 03:50 | 19° <b>Ƴ</b> 18′02           |            | C                   | 2999 Aug 21 20:33 | 0° <b>m</b> )          |            |
| evening set         | 2997 Mar 28 00:40 | 13° <b>Ƴ</b> 06'33           |            |                     | 2999 Sep 15 02:48 | 0∘ <b>⊽</b>            |            |
| inferior conj       | 2997 Mar 31 03:30 | 11° <b>Y</b> 10'31           | 8°30'29    | evening rise        | 2999 Sep 25 23:32 | 13° <b>≏</b> 27'33     |            |
| minimum elong       | 2997 Mar 31 09:10 | 11° <b>Y</b> 01'38           | 8°29'59    | C                   | 2999 Oct 09 07:42 | 0° <b>M</b> .          |            |
| min. Earth dist.    | 2997 Mar 30 18:57 | 11° <b>Y</b> 23'52           | 0.27861 AU | desc. node          | 2999 Nov 01 10:01 | 28°M38'18              |            |
| morning rise        | 2997 Apr 03 17:52 | 8° <b>Y</b> 57'31            |            |                     | 2999 Nov 02 12:23 | 0° <b>∡</b> ¹          |            |
| direct              | 2997 Apr 21 00:19 | 3° <b>Y</b> 12′01            |            |                     | 2999 Nov 26 17:29 | 0°ರ                    |            |
| greatest brilliancy | 2997 Apr 30 09:37 | 4° <b>Ƴ</b> 50'27            | -4.8m      |                     | 2999 Dec 20 23:59 | 0° <b>≈</b>            |            |
| desc. node          | 2997 May 16 14:38 | 13° <b>Ƴ</b> 36'18           |            |                     | 3000 Jan 14 10:36 | 0° <b>₩</b>            |            |
|                     | 2997 Jun 05 05:10 | 0°8                          |            |                     | 3000 Feb 08 07:42 | $0^{\circ}$ Y          |            |
| morning max el      | 2997 Jun 09 06:03 | 3° <b>8</b> 49'55            | 45°56'56   | asc. node           | 3000 Feb 22 12:50 | 16° <b>Ƴ</b> 41'08     |            |
| S                   | 2997 Jul 04 15:51 | 0°Ⅱ                          |            |                     | 3000 Mar 06 04:40 | 0° <b>႘</b>            |            |
|                     | 2997 Jul 31 13:52 | 0ංම                          |            | evening max el      | 3000 Mar 31 21:47 | 27° <b>8</b> 24'19     | 46°16'06   |
|                     | 2997 Aug 26 08:59 | $0^{\circ}\Omega$            |            | Ü                   | 3000 Apr 03 13:09 | 0°II                   |            |
| asc. node           | 2997 Sep 06 17:52 | 13° <b>Ω</b> 30'49           |            | greatest brilliancy | 3000 May 09 13:06 | 26° <b>Ⅱ</b> 40′00     | -4.8m      |
|                     | 2997 Sep 20 10:42 | 0° mp                        |            | retrograde          | 3000 May 20 11:46 | 28° <b>Ⅲ</b> 51'19     |            |
|                     | 2997 Oct 14 23:49 | 0∘ <u>⊽</u>                  |            | evening set         | 3000 Jun 04 15:46 | 24° <b>Ⅲ</b> 22'42     |            |
|                     | 2997 Nov 08 04:21 | 0° <b>M</b> .                |            | inferior conj       | 3000 Jun 10 21:19 | 20° <b>Ⅱ</b> 36'49     | 0°46'05    |
|                     | 2997 Dec 02 03:52 | 0° <b>∡</b> ¹                |            | minimum elong       | 3000 Jun 10 23:00 | 20° <b>Ⅱ</b> 34'09     | 0°45'34    |
| morning set         | 2997 Dec 04 07:53 | 2° <b>∡</b> 743′06           |            | min. Earth dist.    | 3000 Jun 10 18:05 | 20° <b>Ⅱ</b> 41'55     | 0.28721 AU |
| 5 - 5               | 2997 Dec 26 00:57 | 0°ರ                          |            | desc. node          | 3000 Jun 14 02:36 | 18° <b>Ⅲ</b> 36'41     |            |
| desc. node          | 2997 Dec 27 07:41 | 1° <b>る</b> 36'38            |            | morning rise        | 3000 Jun 17 06:38 | 16° <b>Ⅱ</b> 46'30     |            |
|                     |                   | -                            |            | direct              | 3000 Jul 02 08:56 | 12° <b>Ⅱ</b> 24'13     |            |
| superior conj       | 2998 Jan 14 07:29 | 24° <b>る</b> 14'46           | -0°41'31   | greatest brilliancy | 3000 Jul 12 10:44 | 14° <b>Ⅱ</b> 13'52     | -4.7m      |
| minimum elong       | 2998 Jan 13 21:30 | 23°る43'22                    | 0°41'04    | ,                   | 3000 Aug 06 14:35 | 0°©                    |            |
| max. Earth dist.    | 2998 Jan 14 22:52 | 25° <b>පි</b> 03'10          | 1.71093 AU | morning max el      | 3000 Aug 20 01:00 | 12° <b>©</b> 02'56     | 45°44'16   |
|                     | 2998 Jan 18 21:13 | 0° <b>≈</b>                  |            | Ü                   | 3000 Sep 06 20:01 | $0^{\circ}\Omega$      |            |
|                     | 2998 Feb 11 17:52 | 0° <b>∀</b>                  |            |                     | 3000 Oct 03 23:14 | 0° m/                  |            |
| evening rise        | 2998 Feb 24 12:41 | 16° <b>₩</b> 02'24           |            | asc. node           | 3000 Oct 05 05:45 | 1° <b>m</b> 27'34      |            |
| C                   | 2998 Mar 07 16:28 | $0^{\circ}$ Y                |            |                     | 3000 Oct 29 12:14 | 0∘ <mark>⊽</mark>      |            |
|                     | 2998 Mar 31 19:01 | $0^{\circ}S$                 |            |                     | 3000 Nov 23 04:57 | $0^{\circ}$ M          |            |
| asc. node           | 2998 Apr 19 10:44 | 23° <b>8</b> 00'16           |            |                     | 3000 Dec 17 10:43 | 0° <b>∡</b> ¹          |            |
|                     | 2998 Apr 25 03:42 | $\Pi$ $^{\circ}0$            |            |                     | 3001 Jan 10 11:07 | 0°ರ                    |            |
|                     | 2998 May 19 20:40 | 0ංම                          |            | desc. node          | 3001 Jan 24 19:25 | 17° <b>る</b> 59'02     |            |
|                     | 2998 Jun 14 01:05 | $0^{\circ}\Omega$            |            |                     | 3001 Feb 03 09:20 | 0° <b>≈</b>            |            |
|                     | 2998 Jul 09 23:32 | o° mp                        |            | morning set         | 3001 Feb 20 03:00 | 20° <b>≈</b> 59'54     |            |
|                     | 2998 Aug 06 08:30 | 0∘ <b>⊽</b>                  |            |                     | 3001 Feb 27 07:18 | 0° <b>₩</b>            |            |
| desc. node          | 2998 Aug 09 00:16 | 2° <b>₽</b> 46'22            |            |                     | 3001 Mar 23 06:32 | $0^{\circ}$ $\Upsilon$ |            |
| evening max el      | 2998 Aug 23 09:04 | 17° <b>≏</b> 08'30           | 45°47'56   |                     |                   |                        |            |
| -                   | 2998 Sep 06 17:47 | 0° <b>M</b> ₊                |            | superior conj       | 3001 Apr 01 15:57 | 11° <b>Y</b> '43'18    | -1°22'54   |
| greatest brilliancy | 2998 Oct 02 02:50 | 15°M33'03                    | -4.8m      | minimum elong       | 3001 Apr 01 22:00 | 12° <b>Y</b> 02'10     | 1°22'49    |
| retrograde          | 2998 Oct 11 06:57 | 17° <b>ML</b> 04'38          |            | max. Earth dist.    | 3001 Apr 05 19:53 | 16° <b>Ƴ</b> 54'37     | 1.72080 AU |
| evening set         | 2998 Oct 27 17:49 | 11°ML56'02                   |            |                     | 3001 Apr 16 08:23 | $9^{\circ}$ 8          |            |
| inferior conj       | 2998 Nov 01 04:02 | 9° <b>M</b> ₊16'53           | -6°30'54   | evening rise        | 3001 May 10 20:03 | 0° <b>Ⅱ</b> 19'11      |            |
| minimum elong       | 2998 Nov 01 14:27 | 9° <b>M</b> 00'54            | 6°28'42    |                     | 3001 May 10 13:50 | $\Pi^{\circ}0$         |            |
| min. Earth dist.    | 2998 Nov 02 02:30 | 8°M42'25                     | 0.27492 AU | asc. node           | 3001 May 17 22:40 | 9° <b>Ⅱ</b> 05'06      |            |
| morning rise        | 2998 Nov 06 10:37 | 6°ML08'12                    |            |                     | 3001 Jun 03 23:16 | $0$ $\circ$ $\odot$    |            |
| direct              | 2998 Nov 22 04:11 | 1° <b>M</b> .19'44           |            |                     | 3001 Jun 28 12:56 | $0^{\circ}\Omega$      |            |
| asc. node           | 2998 Nov 30 03:21 | 2°M33'10                     |            |                     | 3001 Jul 23 07:49 | 0° <b>m</b> ∕          |            |
| greatest brilliancy | 2998 Dec 03 06:12 | 3°M38'29                     | -4.9m      |                     | 3001 Aug 17 10:18 | 0∘ <b>ত</b>            |            |
|                     | 2999 Jan 07 04:49 | 0° <b>∡</b> ¹                |            | desc. node          | 3001 Sep 06 12:05 | 23° <b>≏</b> 35'15     |            |
| morning max el      | 2999 Jan 11 21:41 | 4° <b>∡</b> ¹42'39           | 46°55'57   |                     | 3001 Sep 12 00:43 | 0° <b>M</b> .          |            |
|                     | 2999 Feb 04 07:52 | 0°ಕ                          |            |                     | 3001 Oct 08 11:43 | 0° <b>∡</b> ¹          |            |
|                     | 2999 Mar 02 05:59 | 0° <b>≈</b>                  |            | evening max el      | 3001 Nov 05 09:30 | 29° <b>х</b> 30′22     | 46°51'55   |
| desc. node          | 2999 Mar 21 17:08 | 23° <b>≈</b> 11'33           |            |                     | 3001 Nov 05 21:29 | ರ∘ರ                    |            |
|                     | 2999 Mar 27 09:04 | 0° <b>)</b> €                |            |                     | 3001 Dec 15 10:50 | 0° <b>≈</b>            |            |
|                     | 2999 Apr 21 04:10 | $0^{\circ}$ Y                |            | greatest brilliancy | 3001 Dec 15 20:16 | 0° <b>≈</b> 08'38      | -4.9m      |
|                     | 2999 May 15 20:07 | $0^{\circ}$ 8                |            | retrograde          | 3001 Dec 25 17:35 | 2° <b>≈</b> 00'08      |            |
|                     | 2999 Jun 09 10:51 | $\Pi^{\circ}0$               |            | asc. node           | 3001 Dec 28 15:11 | 1° <b>≈</b> 49'49      |            |
|                     |                   |                              |            |                     |                   |                        |            |

|                     | 3002 Jan 04 15:32                      | 30°Rる                      |            | minimum elong                             | 3004 Jun 11 20:29                      | 21° <b>Ⅱ</b> 35′09              | 0°06'15    |
|---------------------|--|----------------------------|------------|---|--|---------------------------------|------------|
| evening set         | 3002 Jan 09 08:33                      | 27° <b>る</b> 46'32         |            | behind sun begin                          | 3004 Jun 10 23:07                      | 20° <b>Ⅲ</b> 29'25              |            |
| inferior conj       | 3002 Jan 15 07:29                      | 24° <b>る</b> 16'42         | 4°24'53    | behind sun end                            | 3004 Jun 12 17:50                      | 22° <b>Ⅱ</b> 40'52              |            |
| minimum elong       | 3002 Jan 14 22:29                      | 24° <b>る</b> 30'29         | 4°22'20    | max. Earth dist.                          | 3004 Jun 12 20:27                      | 22° <b>Ⅱ</b> 48'54              | 1.73400 AU |
| min. Earth dist.    | 3002 Jan 14 20:01                      | 24° <b>る</b> 34'15         | 0.26544 AU | asc. node                                 | 3004 Jun 14 10:28                      | 24° <b>Ⅱ</b> 45'48              |            |
| morning rise        | 3002 Jan 20 12:30                      | 21° <b>る</b> 11'25         |            |   | 3004 Jun 18 16:39                      | 0ංම                             |            |
| direct              | 3002 Feb 04 16:15                      | 16° <b>る</b> 38'20         |            |   | 3004 Jul 13 02:28                      | 0°N                             |            |
| greatest brilliancy | 3002 Feb 14 07:37                      | 18° <b>る</b> 23'42         | -4.9m      | evening rise                              | 3004 Jul 18 06:16                      | 6° <b>Ω</b> 20'13               |            |
| 8                   | 3002 Mar 05 19:31                      | 0° <b>≈</b>                |            | 5 / 4 · · · · · · · · · · · · · · · · · · | 3004 Aug 06 12:53                      | 0° m)                           |            |
| morning max el      | 3002 Mar 26 20:00                      | 18° <b>≈</b> 59'52         | 46°42'07   |   | 3004 Aug 31 00:28                      | 0∘ <u>ಹ</u>                     |            |
| morning man or      | 3002 Apr 06 13:14                      | 0° <b>∀</b>                | .0 .20,    |   | 3004 Sep 24 14:24                      | 0° <b>M</b>                     |            |
| desc. node          | 3002 Apr 19 05:01                      | 13° <b>)</b> (38'44        |            | desc. node                                | 3004 Oct 04 00:09                      | 11°ML25'57                      |            |
| dese. Hour          | 3002 May 03 19:50                      | 0°Υ                        |            | dese. Hour                                | 3004 Oct 19 08:03                      | 0° <b>∡</b> 7                   |            |
|                     | 3002 May 29 19:39                      | 0°8                        |            |   | 3004 Nov 13 07:19                      | 0°ਰ                             |            |
|                     | 3002 Jun 24 05:59                      | 0°II                       |            |   | 3004 Dec 08 17:20                      | 0° <b>≈</b>                     |            |
|                     | 3002 Jul 19 08:08                      | 0.©                        |            |   | 3005 Jan 04 05:52                      | 0° <b>∀</b>                     |            |
| asc. node           | 3002 Aug 10 08:01                      | 26°535'37                  |            | evening max el                            | 3005 Jan 16 22:10                      | 13° <b>¥</b> 23'47              | 47°12'47   |
| ase. Hode           | 3002 Aug 13 03:15                      | 0°Ω                        |            | asc. node                                 | 3005 Jan 25 03:04                      | 21°\(\frac{1}{3}\) 30'23        | 4/ 124/    |
|                     | 3002 Aug 13 03:13<br>3002 Sep 06 15:33 | 0°m)                       |            | asc. nouc                                 | 3005 Feb 03 11:36                      | 0° <b>Υ</b>                     |            |
| morning set         | 3002 Sep 00 13:33<br>3002 Sep 22 09:33 | 19° Mp 26'26               |            | greatest brilliancy                       | 3005 Feb 26 10:16                      | 14° <b>Υ</b> 54'55              | -4.9m      |
| morning set         | 3002 Sep 22 09:55<br>3002 Sep 30 21:56 | 0° <b>⊽</b>                |            | retrograde                                | 3005 Mar 08 19:20                      | 16° <b>Υ</b> 57'46              | -4.9111    |
|                     | 3002 Sep 30 21:30<br>3002 Oct 25 00:08 | 0° <b>m</b> .              |            | evening set                               | 3005 Mar 26 17:08                      | 10° <b>Υ</b> 43'48              |            |
| max. Earth dist.    | 3002 Oct 25 00:08<br>3002 Oct 26 20:56 |                            | 1.71972 AU | inferior conj                             | 3005 Mar 29 18:01                      | 8° <b>Y</b> 50'40               | 8°36'37    |
| max. Earm dist.     | 3002 Oct 20 20.30                      | 2 1161930                  | 1./19/2 AU | minimum elong                             | 3005 Mar 29 18:01<br>3005 Mar 29 22:59 | 8° <b>Y</b> 42'55               | 8°36'15    |
| superior conj       | 3002 Oct 29 17:45                      | 5°M54'48                   | 1°05'33    | min. Earth dist.                          | 3005 Mar 29 08:15                      | 9° <b>Υ</b> 05'58               | 0.27818 AU |
|                     | 3002 Oct 29 17.43<br>3002 Oct 30 03:43 | 6°M25'57                   | 1°05'13    |   |  | 6° <b>Υ</b> 42'48               | 0.27616 AU |
| minimum elong       |  | 0 1162337<br>0° <b>x</b> 7 | 1 03 13    | morning rise<br>direct                    | 3005 Apr 02 05:03                      | 0° <b>Υ</b> 53'09               |            |
| desc. node          | 3002 Nov 17 23:57                      | 14° <b>∡</b> 55'30         |            |   | 3005 Apr 19 14:57                      | 0° γ 33 09<br>2° <b>Υ</b> 30'07 | -4.8m      |
| evening rise        | 3002 Nov 29 21:56<br>3002 Dec 08 09:02 | 25° <b>₹</b> 31'45         |            | greatest brilliancy<br>desc. node         | 3005 Apr 28 22:00<br>3005 May 16 16:46 | 12° <b>Υ</b> 23'11              | -4.6111    |
| evening rise        | 3002 Dec 11 22:39                      | 23 <b>メ</b> ・31 43         |            | desc. Hode                                | 3005 Jun 06 05:26                      | 0° <b>8</b>                     |            |
|                     | 3002 Dec 11 22:39<br>3003 Jan 04 21:08 | 0°≈                        |            | morning max el                            | 3005 Jun 07 21:24                      | 1° <b>8</b> 35'49               | 45°57'59   |
|                     | 3003 Jan 28 20:44                      | 0 <b>∞</b><br>0° <b>∀</b>  |            | morning max ci                            | 3005 Jul 05 08:17                      | 0°Ⅱ                             | 45 57 59   |
|                     | 3003 Feb 21 23:59                      | 0°Υ                        |            |   | 3005 Aug 01 03:37                      | 0°©                             |            |
|                     | 3003 Nar 18 10:50                      | %8<br>0°8                  |            |   | 3005 Aug 26 21:27                      | 0° <b>Ω</b>                     |            |
| asc. node           | 3003 Mar 23 00:49                      | 5° <b>8</b> 33'29          |            | asc. node                                 | 3005 Sep 06 19:58                      | 13° <b>Ω</b> 00'56              |            |
| ase. Hode           | 3003 Apr 12 11:07                      | 0°П                        |            | ase. Houe                                 | 3005 Sep 00 17:30<br>3005 Sep 20 22:28 | 0° <b>m</b> )                   |            |
|                     | 3003 May 08 10:49                      | 0.©                        |            |   | 3005 Oct 15 11:13                      | 0∘ <del>⊽</del>                 |            |
|                     | 3003 Jun 05 11:27                      | $0^{\circ}\Omega$          |            |   | 3005 Nov 08 15:35                      | o° <b>n</b> L                   |            |
| evening max el      | 3003 Jun 11 09:16                      | 5° <b>Ω</b> 48'41          | 45°28'43   | morning set                               | 3005 Dec 02 20:18                      | 0° <b>∡</b> 716'28              |            |
| evening max or      | 3003 Jul 11 15:35                      | 0° my                      | 13 20 13   | morning sec                               | 3005 Dec 02 15:03                      | 0° <b>∡</b> 7                   |            |
| desc. node          | 3003 Jul 12 14:28                      | 0° mp 31'34                |            |   | 3005 Dec 26 12:09                      | 0°ਰ                             |            |
| greatest brilliancy | 3003 Jul 19 13:06                      | 3° Mp 41'18                | -4.7m      | desc. node                                | 3005 Dec 27 09:37                      | 1° <b>る</b> 07'30               |            |
| retrograde          | 3003 Jul 30 02:26                      | 5° mp 41'38                | ,          | dese. Hour                                | 3000 200 27 09.37                      | 1 30,50                         |            |
| evening set         | 3003 Aug 15 22:24                      | 0° mp 19'49                |            | superior conj                             | 3006 Jan 12 17:24                      | 21° <b>る</b> 39'44              | -0°37'56   |
| <i>8</i> - 11       | 3003 Aug 16 11:58                      | 30°R <b>Ω</b>              |            | minimum elong                             | 3006 Jan 12 08:06                      | 21° <b>る</b> 10'28              |            |
| inferior conj       | 3003 Aug 20 13:49                      | 27°Ω30'20                  | -7°32'44   | max. Earth dist.                          | 3006 Jan 13 04:40                      |                                 | 1.71090 AU |
| minimum elong       | 3003 Aug 20 05:18                      | 27° <b>Ω</b> 43'37         |            |   | 3006 Jan 19 08:25                      | 0° <b>≈</b>                     |            |
| min. Earth dist.    | 3003 Aug 20 15:27                      | 27° <b>Ω</b> 27'47         | 0.29008 AU |   | 3006 Feb 12 05:04                      | 0° <b>∀</b>                     |            |
| morning rise        | 3003 Aug 24 12:03                      | 25° <b>Ω</b> 05'37         |            | evening rise                              | 3006 Feb 22 23:12                      | 13° <b>¥</b> 29'46              |            |
| direct              | 3003 Sep 11 04:07                      | 19° <b>Ω</b> 12'33         |            | C   | 3006 Mar 08 03:41                      | $0^{\circ}$ $\Upsilon$          |            |
| greatest brilliancy | 3003 Sep 21 21:00                      | 21° <b>Ω</b> 17'05         | -4.8m      |   | 3006 Apr 01 06:19                      | 0°B                             |            |
|                     | 3003 Oct 07 09:31                      | 0° <b>m</b> )              |            | asc. node                                 | 3006 Apr 19 12:51                      | 22° <b>8</b> 31'38              |            |
| morning max el      | 3003 Oct 30 20:35                      | 20°m/29'16                 | 46°17'21   |   | 3006 Apr 25 15:13                      | 0°II                            |            |
| asc. node           | 3003 Nov 02 17:37                      | 23° m) 21'45               |            |   | 3006 May 20 08:38                      | 0ංම                             |            |
|                     | 3003 Nov 09 04:08                      | 0∘ <u>⊽</u>                |            |   | 3006 Jun 14 13:54                      | 0°N                             |            |
|                     | 3003 Dec 06 04:25                      | 0°M                        |            |   | 3006 Jul 10 14:02                      | 0° <b>m</b> )                   |            |
|                     | 3003 Dec 31 12:08                      | 0°⊀                        |            |   | 3006 Aug 07 02:58                      | 0∘ <del>ত</del>                 |            |
|                     | 3004 Jan 25 02:50                      | 0°る                        |            | desc. node                                | 3006 Aug 09 02:17                      | 2° <b>ഫ</b> 02'25               |            |
|                     | 3004 Feb 18 10:10                      | 0° <b>≈</b>                |            | evening max el                            | 3006 Aug 21 22:58                      | 14° <b>£</b> 50'52              | 45°46'04   |
| desc. node          | 3004 Feb 22 07:17                      | 4° <b>≈</b> 48'19          |            | <i>U</i> -                                | 3006 Sep 08 04:11                      | 0° <b>M</b> ,                   |            |
|                     | 3004 Mar 13 14:43                      | 0° <b>)</b> €              |            | greatest brilliancy                       | 3006 Sep 30 16:26                      | 13°M13'26                       | -4.8m      |
|                     | 3004 Apr 06 18:59                      | 0°Υ                        |            | retrograde                                | 3006 Oct 09 19:36                      | 14° <b>M</b> .44'11             |            |
|                     | 3004 May 01 00:26                      | 0°8                        |            | evening set                               | 3006 Oct 26 10:33                      | 9°M31'03                        |            |
| morning set         | 3004 May 05 05:24                      | 5° <b>8</b> 11'58          |            | inferior conj                             | 3006 Oct 30 17:48                      | 6°M55'55                        | -6°45'19   |
|                     | 3004 May 25 07:44                      | $\Pi^{\circ}0$             |            | minimum elong                             | 3006 Oct 31 04:07                      | 6° <b>M</b> ₊40'03              | 6°43'16    |
|                     |  |                            |            | min. Earth dist.                          | 3006 Oct 31 16:40                      | 6° <b>M</b> 20'46               | 0.27559 AU |
| superior conj       | 3004 Jun 11 19:08                      | 21° <b>Ⅱ</b> 30′59         | -0°06'20   | morning rise                              | 3006 Nov 04 21:11                      | 3° <b>M</b> ₅51'14              |            |
|                     |  |                            |            |   |  |                                 |            |

|  | 2006 N. 12 14 47  | 2005 0   |  | 1   | 2000 14 17 00 40   | 00 Т 2 7 11 7  |   |
|--|---|--|--|---|--|--|---|
|  | 3006 Nov 13 14:47   | 30° <b>₹</b> Ω   |  | asc. node   | 3009 May 17 00:40  | 8° <b>Ⅲ</b> 37'17  |   |
| direct   | 3006 Nov 20 18:18   | 28° <b>≏</b> 57'47   |  |   | 3009 Jun 03 10:20  | 0°©  |   |
|  | 3006 Nov 28 02:30   | $0^{\circ}$ M  |  |   | 3009 Jun 28 00:14  | $0$ $^{\circ}\Omega$   |   |
| asc. node  | 3006 Nov 30 05:19   | 0° <b>™</b> 39'31  |  |   | 3009 Jul 22 19:34  | 0° <b>m</b> ⁄  |   |
| greatest brilliancy  | 3006 Dec 01 21:06   | 1°ML16'31  | -4.9m  |   | 3009 Aug 16 22:52  | 0∘ <b>ত</b>  |   |
|  | 3007 Jan 08 04:54   | 0° <b>∡</b> ¹  |  | desc. node  | 3009 Sep 05 14:13  | 23° <b>ഫ</b> 01'55   |   |
| morning max el   | 3007 Jan 10 10:45   | 2° <b>∡</b> 16′01  | 46°55'16   |   | 3009 Sep 11 14:43  | $0^{\circ}$ M  |   |
|  | 3007 Feb 05 00:48   | 0°ჳ  |  |   | 3009 Oct 08 04:33  | 0° <b>∡</b> ¹  |   |
|  | 3007 Mar 02 20:20   | 0° <b>≈</b>  |  | evening max el  | 3009 Nov 02 22:21  | 27° <b>х</b> 04′53   | 46°49'53  |
| desc. node   | 3007 Mar 21 19:14   | 22°≈38'03  |  |   | 3009 Nov 05 21:51  | 0°ප  |   |
| dese. Hode   | 3007 Mar 27 22:04   | 0° <b>∀</b>  |  | greatest brilliancy   | 3009 Dec 13 09:09  | 。3<br>27° <b>る</b> 39'27   | -4.9m   |
|  | 3007 Apr 21 16:21   | 0° <b>Υ</b>  |  | retrograde  | 3009 Dec 23 06:08  | 29° <b>る</b> 30'45   | - <del>4</del> .7III  |
|  | *   |  |  | •   |  |  |   |
|  | 3007 May 16 07:45   | 0° <b>B</b>  |  | asc. node   | 3009 Dec 27 17:13  | 29°る06'07  |   |
|  | 3007 Jun 09 22:06   | 0°II   |  | evening set   | 3010 Jan 06 18:51  | 25° <b>る</b> 19'36   | 400040  |
|  | 3007 Jul 04 11:25   | 0∘ <b>ௐ</b>  |  | inferior conj   | 3010 Jan 12 19:41  | 21° <b>る</b> 47'44   | 4°03'06   |
| asc. node  | 3007 Jul 12 22:14   | 10° <b>©</b> 20'49   |  | minimum elong   | 3010 Jan 12 11:13  | 22° <b>ろ</b> 00'39   | 4°00'38   |
| morning set  | 3007 Jul 13 22:57   | 11° <b>©</b> 36'31   |  | min. Earth dist.  | 3010 Jan 12 09:19  | 22° <b>ろ</b> 03'33   | 0.26527 AU  |
|  | 3007 Jul 28 22:45   | $0^{\circ}\Omega$  |  | morning rise  | 3010 Jan 18 03:40  | 18° <b>る</b> 38'47   |   |
| max. Earth dist.   | 3007 Aug 16 21:02   | 23° <b>Ω</b> 17'56   | 1.73297 AU   | direct  | 3010 Feb 02 04:20  | 14° <b>る</b> 09'16   |   |
|  |   |  |  | greatest brilliancy   | 3010 Feb 11 21:18  | 15° <b>る</b> 56'24   | -4.9m   |
| superior conj  | 3007 Aug 19 09:40   | 26° <b>Ω</b> 24'49   | 1°13'50  |   | 3010 Mar 06 09:11  | 0° <b>≈</b>  |   |
| minimum elong  | 3007 Aug 19 01:58   | 26° <b>Ω</b> 01'05   | 1°13'39  | morning max el  | 3010 Mar 24 09:46  | 16° <b>≈</b> 36'36   | 46°43'31  |
| minimum crong  | 3007 Aug 22 07:26   | 0° m)  | 1 1337   | morning max er  | 3010 Apr 06 08:46  | 0° <b>∀</b>  | 10 1331   |
|  | 3007 Aug 22 07:20<br>3007 Sep 15 13:46  | 0∘ <del>ت</del><br>الأس  |  | desc. node  | 3010 Apr 00 08:40<br>3010 Apr 18 07:08   | 12° <b>)</b> 57'34   |   |
|  | •   |  |  | desc. Hode  | •  | 12 <b>γ</b> (3/34)   |   |
| evening rise   | 3007 Sep 24 16:10   | 11° <b>≏</b> 16′08   |  |   | 3010 May 03 11:02  |  |   |
|  | 3007 Oct 09 18:52   | 0° <b>™</b>  |  |   | 3010 May 29 08:54  | 0°8  |   |
| desc. node   | 3007 Nov 01 12:04   | 28°M09'16  |  |   | 3010 Jun 23 18:09  | 0° <b>I</b> I  |   |
|  | 3007 Nov 02 23:48   | 0° <b>∡</b> 7  |  |   | 3010 Jul 18 19:38  | $0$ $\circ$ $\odot$  |   |
|  | 3007 Nov 27 05:14   | 0°₹  |  | asc. node   | 3010 Aug 09 10:10  | 26° <b>©</b> 08'18   |   |
|  | 3007 Dec 21 12:10   | 0° <b>≈</b>  |  |   | 3010 Aug 12 14:21  | $0$ $\circ$ $\Omega$   |   |
|  | 3008 Jan 14 23:25   | 0° <b>∀</b>  |  |   | 3010 Sep 06 02:26  | 0° <b>™</b>  |   |
|  | 3008 Feb 08 21:40   | $0^{\circ}$ Y  |  | morning set   | 3010 Sep 20 02:26  | 17° Mp 16′37   |   |
| asc. node  | 3008 Feb 22 14:55   | 16° <b>Ƴ</b> 03'48   |  |   | 3010 Sep 30 08:46  | 0∘ <b>ত</b>  |   |
|  | 2000 17 07 21 01  |  |  |   |  |  |   |
|  | 3008 Mar 05 21:01   | 0°8  |  |   | 3010 Oct 24 11:00  | 0° <b>M</b> ₊  |   |
| evening max el   | 3008 Mar 05 21:01<br>3008 Mar 29 11:54  | 0°8<br>25°805'33   | 46°18'24   | max. Earth dist.  | 3010 Oct 24 11:00<br>3010 Oct 24 12:56   | 0°11L<br>0°11L06'01  | 1.72022 AU  |
| evening max el   |   |  | 46°18'24   | max. Earth dist.  |  |  | 1.72022 AU  |
| C  | 3008 Mar 29 11:54<br>3008 Apr 03 12:43  | 25° <b>8</b> 05'33   | 46°18'24<br>-4.8m                                  |   | 3010 Oct 24 12:56  | 0° <b>M</b> 06'01  | 1.72022 AU<br>1°07'44   |
| greatest brilliancy  | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35   | 25° <b>8</b> 05'33<br>0°П<br>24°П29'59   |  | superior conj   | 3010 Oct 24 12:56<br>3010 Oct 27 08:31   | 0°M06'01<br>3°M37'01   | 1°07'44   |
| greatest brilliancy<br>retrograde  | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47  | 25° <b>8</b> 05'33<br>0°П<br>24°П29'59<br>26°П40'31  |  |   | 3010 Oct 24 12:56<br>3010 Oct 27 08:31<br>3010 Oct 27 18:15  | 0°M06'01<br>3°M37'01<br>4°M07'23   |   |
| greatest brilliancy<br>retrograde<br>evening set   | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47<br>3008 Jun 02 09:12   | 25°805'33<br>0°II<br>24°II29'59<br>26°II40'31<br>22°II10'13  | -4.8m  | superior conj<br>minimum elong  | 3010 Oct 24 12:56<br>3010 Oct 27 08:31<br>3010 Oct 27 18:15<br>3010 Nov 17 10:56   | 0°M.06'01<br>3°M.37'01<br>4°M.07'23<br>0° ₹  | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj  | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47<br>3008 Jun 02 09:12<br>3008 Jun 08 13:32  | 25° <b>8</b> 05'33<br>0°П<br>24°П29'59<br>26°П40'31<br>22°П10'13<br>18°П26'15  | -4.8m<br>1°06'11                                   | superior conj<br>minimum elong<br>desc. node  | 3010 Oct 24 12:56<br>3010 Oct 27 08:31<br>3010 Oct 27 18:15<br>3010 Nov 17 10:56<br>3010 Nov 28 23:54  | 0°M.06'01<br>3°M.37'01<br>4°M.07'23<br>0° ₹<br>14° ₹ 27'02   | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong   | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47<br>3008 Jun 02 09:12<br>3008 Jun 08 13:32<br>3008 Jun 08 15:58   | 25° 805'33<br>0° Π<br>24° Π29'59<br>26° Π40'31<br>22° Π10'13<br>18° Π22'15<br>18° Π22'25   | -4.8m<br>1°06'11<br>1°05'27                        | superior conj<br>minimum elong  | 3010 Oct 24 12:56<br>3010 Oct 27 08:31<br>3010 Oct 27 18:15<br>3010 Nov 17 10:56<br>3010 Nov 28 23:54<br>3010 Dec 05 20:52   | 0°M06'01<br>3°M37'01<br>4°M07'23<br>0° ₹<br>14° ₹27'02<br>23° ₹03'45   | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.   | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47<br>3008 Jun 02 09:12<br>3008 Jun 08 13:32<br>3008 Jun 08 15:58<br>3008 Jun 08 10:53  | 25° 805'33<br>0° Π<br>24° Π29'59<br>26° Π40'31<br>22° Π10'13<br>18° Π26'15<br>18° Π22'25<br>18° Π30'24   | -4.8m<br>1°06'11<br>1°05'27                        | superior conj<br>minimum elong<br>desc. node  | 3010 Oct 24 12:56<br>3010 Oct 27 08:31<br>3010 Oct 27 18:15<br>3010 Nov 17 10:56<br>3010 Nov 28 23:54<br>3010 Dec 05 20:52<br>3010 Dec 11 09:46  | 0°M06'01<br>3°M37'01<br>4°M07'23<br>0°\$7<br>14°\$727'02<br>23°\$703'45<br>0°\$5   | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node   | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47<br>3008 Jun 02 09:12<br>3008 Jun 08 13:32<br>3008 Jun 08 15:58<br>3008 Jun 08 10:53<br>3008 Jun 13 04:30   | 25° <b>8</b> 05'33<br>0° <b>П</b><br>24° <b>П</b> 29'59<br>26° <b>П</b> 40'31<br>22° <b>П</b> 10'13<br>18° <b>П</b> 26'15<br>18° <b>П</b> 22'25<br>18° <b>П</b> 30'24<br>15° <b>П</b> 35'47  | -4.8m<br>1°06'11<br>1°05'27                        | superior conj<br>minimum elong<br>desc. node  | 3010 Oct 24 12:56<br>3010 Oct 27 08:31<br>3010 Oct 27 18:15<br>3010 Nov 17 10:56<br>3010 Nov 28 23:54<br>3010 Dec 05 20:52<br>3010 Dec 11 09:46<br>3011 Jan 04 08:25   | 0°M06'01  3°M37'01  4°M07'23  0°  14° №27'02  23° №03'45  0°  0°  0°  0°  ∞  | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise   | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47<br>3008 Jun 02 09:12<br>3008 Jun 08 13:32<br>3008 Jun 08 15:58<br>3008 Jun 08 10:53<br>3008 Jun 13 04:30<br>3008 Jun 14 23:01  | 25°\( 805'33\) 0°\( \pi\) 24°\( \pi\) 29'59 26°\( \pi\) 40'31 22°\( \pi\) 10'13 18°\( \pi\) 22'25 18°\( \pi\) 30'24 15°\( \pi\) 35'47 14°\( \pi\) 35'29  | -4.8m<br>1°06'11<br>1°05'27                        | superior conj<br>minimum elong<br>desc. node  | 3010 Oct 24 12:56<br>3010 Oct 27 08:31<br>3010 Oct 27 18:15<br>3010 Nov 17 10:56<br>3010 Nov 28 23:54<br>3010 Dec 05 20:52<br>3010 Dec 11 09:46<br>3011 Jan 04 08:25<br>3011 Jan 28 08:12  | 0°M06'01  3°M37'01  4°M07'23  0°  14°  227'02  23°  303'45  0°  0°  0°  0°  €  | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise<br>direct   | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47<br>3008 Jun 02 09:12<br>3008 Jun 08 13:32<br>3008 Jun 08 15:58<br>3008 Jun 08 10:53<br>3008 Jun 13 04:30<br>3008 Jun 14 23:01<br>3008 Jun 30 00:12   | 25°\( 805'33\) 0°\( \pi\) 24°\( \pi\) 29'59 26°\( \pi\) 40'31 22°\( \pi\) 10'13 18°\( \pi\) 22'25 18°\( \pi\) 30'24 15°\( \pi\) 35'47 14°\( \pi\) 35'29 10°\( \pi\) 13'54  | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU          | superior conj<br>minimum elong<br>desc. node  | 3010 Oct 24 12:56<br>3010 Oct 27 08:31<br>3010 Oct 27 18:15<br>3010 Nov 17 10:56<br>3010 Nov 28 23:54<br>3010 Dec 05 20:52<br>3010 Dec 11 09:46<br>3011 Jan 04 08:25<br>3011 Jan 28 08:12<br>3011 Feb 21 11:42   | 0°M06'01<br>3°M37'01<br>4°M07'23<br>0°ズ<br>14°ズ27'02<br>23°ズ03'45<br>0°云<br>0°云<br>0°↔<br>0°升  | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise   | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47<br>3008 Jun 02 09:12<br>3008 Jun 08 13:32<br>3008 Jun 08 10:53<br>3008 Jun 08 10:53<br>3008 Jun 13 04:30<br>3008 Jun 14 23:01<br>3008 Jun 30 00:12<br>3008 Jul 10 02:48  | 25°\( 805'33\) 0°\( \mathbb{I}\) 24°\( \mathbb{I}\) 29'59 26°\( \mathbb{I}\) 40'31 22°\( \mathbb{I}\) 10'13 18°\( \mathbb{I}\) 22'25 18°\( \mathbb{I}\) 30'24 15°\( \mathbb{I}\) 35'47 14°\( \mathbb{I}\) 35'29 10°\( \mathbb{I}\) 13'54 12°\( \mathbb{I}\) 03'52  | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU          | superior conj<br>minimum elong<br>desc. node  | 3010 Oct 24 12:56<br>3010 Oct 27 08:31<br>3010 Oct 27 18:15<br>3010 Nov 17 10:56<br>3010 Nov 28 23:54<br>3010 Dec 05 20:52<br>3010 Dec 11 09:46<br>3011 Jan 04 08:25<br>3011 Jan 28 08:12<br>3011 Feb 21 11:42<br>3011 Mar 17 23:01  | 0°M06'01 3°M37'01 4°M07'23 0°  14°  14°  27'02 23°  30'  0°  0°  0°  0°  0°  0°  0°  0°  0°  | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise<br>direct   | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47<br>3008 Jun 02 09:12<br>3008 Jun 08 13:32<br>3008 Jun 08 15:58<br>3008 Jun 08 10:53<br>3008 Jun 13 04:30<br>3008 Jun 14 23:01<br>3008 Jun 30 00:12   | 25° 805'33<br>0° Ш<br>24° Щ29'59<br>26° Щ40'31<br>22° Щ10'13<br>18° Щ26'15<br>18° Щ22'25<br>18° Щ30'24<br>15° Щ35'47<br>14° Щ35'29<br>10° Щ13'54<br>12° Щ03'52<br>0° ©   | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj<br>minimum elong<br>desc. node  | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 22 02:56   | 0°M06'01 3°M37'01 4°M07'23 0° ₹ 14° ₹27'02 23° ₹03'45 0° ₹ 0° ₹ 0° ¥ 0° ¥ 5° ₹02'41  | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise<br>direct   | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47<br>3008 Jun 02 09:12<br>3008 Jun 08 13:32<br>3008 Jun 08 15:58<br>3008 Jun 08 10:53<br>3008 Jun 13 04:30<br>3008 Jun 14 23:01<br>3008 Jun 30 00:12<br>3008 Jul 10 02:48<br>3008 Aug 06 20:03<br>3008 Aug 17 15:51  | 25°\805'33 0°\II 24°\II29'59 26°\II40'31 22°\II10'13 18°\II26'15 18°\II22'25 18°\II35'47 14°\II35'29 10°\II13'54 12°\II03'52 0°\GO 9°\GO50'08  | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj<br>minimum elong<br>desc. node<br>evening rise  | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 22 02:56 3011 Apr 12 00:12   | 0°M06'01  3°M37'01  4°M07'23 0°   14°   27'02  23°  303'45 0°  0°  0°  0°  0°  0°  0°  0°  0°  0°  | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise<br>direct<br>greatest brilliancy  | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47<br>3008 Jun 02 09:12<br>3008 Jun 08 13:32<br>3008 Jun 08 15:58<br>3008 Jun 08 10:53<br>3008 Jun 13 04:30<br>3008 Jun 14 23:01<br>3008 Jun 30 00:12<br>3008 Jul 10 02:48<br>3008 Aug 06 20:03   | 25° 805'33<br>0° Ш<br>24° Щ29'59<br>26° Щ40'31<br>22° Щ10'13<br>18° Щ26'15<br>18° Щ22'25<br>18° Щ30'24<br>15° Щ35'47<br>14° Щ35'29<br>10° Щ13'54<br>12° Щ03'52<br>0° ©   | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj<br>minimum elong<br>desc. node<br>evening rise  | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 22 02:56   | 0°M06'01 3°M37'01 4°M07'23 0° ₹ 14° ₹27'02 23° ₹03'45 0° ₹ 0° ₹ 0° ¥ 0° ¥ 5° ₹02'41  | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise<br>direct<br>greatest brilliancy  | 3008 Mar 29 11:54<br>3008 Apr 03 12:43<br>3008 May 07 06:35<br>3008 May 18 03:47<br>3008 Jun 02 09:12<br>3008 Jun 08 13:32<br>3008 Jun 08 15:58<br>3008 Jun 08 10:53<br>3008 Jun 13 04:30<br>3008 Jun 14 23:01<br>3008 Jun 30 00:12<br>3008 Jul 10 02:48<br>3008 Aug 06 20:03<br>3008 Aug 17 15:51  | 25°\805'33 0°\II 24°\II29'59 26°\II40'31 22°\II10'13 18°\II26'15 18°\II22'25 18°\II35'47 14°\II35'29 10°\II13'54 12°\II03'52 0°\GO 9°\GO50'08  | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj<br>minimum elong<br>desc. node<br>evening rise  | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 22 02:56 3011 Apr 12 00:12   | 0°M06'01  3°M37'01  4°M07'23 0°   14°   27'02  23°  303'45 0°  0°  0°  0°  0°  0°  0°  0°  0°  0°  | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise<br>direct<br>greatest brilliancy  | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 10:53 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 30 00:12 3008 Jul 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18   | 25° 805'33<br>0° II<br>24° II 29'59<br>26° II 40'31<br>22° II 10'13<br>18° II 22'25<br>18° II 30'24<br>15° II 35'47<br>14° II 35'29<br>10° II 13'54<br>12° II 03'52<br>0° 9<br>9° \$550'08<br>0° Ω   | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj<br>minimum elong<br>desc. node<br>evening rise  | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 22 02:56 3011 Apr 12 00:12 3011 May 08 01:52   | 0°M.06'01  3°M.37'01  4°M.07'23  0°   14°   227'02  23°   303'45  0°   0°   0°   0°   0°   0°   0°   0°  | 1°07'44   |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise<br>direct<br>greatest brilliancy<br>morning max el  | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 10:53 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16   | 25° 805'33<br>0° II<br>24° II 29'59<br>26° II 40'31<br>22° II 10'13<br>18° II 22'25<br>18° II 30'24<br>15° II 35'47<br>14° II 35'29<br>10° II 13'54<br>12° II 03'52<br>0° 99<br>9° 9550'08<br>0° Ω<br>0° II 00' II | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj<br>minimum elong<br>desc. node<br>evening rise  | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 22 02:56 3011 Apr 12 00:12 3011 May 08 01:52 3011 Jun 05 07:52   | 0°M.06'01  3°M.37'01  4°M.07'23  0° ♂  14° ₹27'02  23° ₹03'45  0° ♂  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  | 1°07'44<br>1°07'27  |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise<br>direct<br>greatest brilliancy<br>morning max el  | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 10:53 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 04 07:54 3008 Oct 29 00:55   | 25° 805'33 0° Π 24° Π29'59 26° Π40'31 22° Π10'13 18° Π26'15 18° Π30'24 15° Π35'47 14° Π35'29 10° Π13'54 12° Π03'52 0° Φ 9° Φ50'08 0° Ω 0° M 0° M 0° M53'35   | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj<br>minimum elong<br>desc. node<br>evening rise<br>asc. node   | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 22 02:56 3011 Apr 12 00:12 3011 May 08 01:52 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34   | 0° 11.06'01  3° 11.37'01  4° 11.07'23  0° ₹  14° ₹27'02  23° ₹03'45  0° ₹  0° ₹  0° ¥  0° ¥  0° ¥  0° ¥  0° ¥  3° \$02'41  0° \$0  3° \$039'49  29° \$06'58  | 1°07'44<br>1°07'27  |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise<br>direct<br>greatest brilliancy<br>morning max el  | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 10:53 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59   | 25° 805'33 0° Π 24° Π29'59 26° Π40'31 22° Π10'13 18° Π22'25 18° Π30'24 15° Π35'47 14° Π35'29 10° Π13'54 12° Π03'52 0° © 9° © 50'08 0° Ω 0° M 0° M 0° M 0° M 0° M 0° M  | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj<br>minimum elong<br>desc. node<br>evening rise<br>asc. node   | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 22 02:56 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15   | 0°M.06'01  3°M.37'01  4°M.07'23  0° ♂  14° ₹27'02  23° ₹03'45  0° ♂  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  3° ₩  0° Ø  3° Ø  | 1°07'44<br>1°07'27<br>45°29'28  |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise<br>direct<br>greatest brilliancy<br>morning max el  | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24   | 25° 805'33 0° II 24° II 29'59 26° II 40'31 22° II 10'13 18° II 22'25 18° II 30'24 15° II 35'47 14° II 35'29 10° II 13'54 12° II 03'52 0° II 0° II 00' II 00                            | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj minimum elong  desc. node evening rise  asc. node  evening max el desc. node greatest brilliancy  | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 22 02:56 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25   | 0°M06'01 3°M37'01 4°M07'23 0° 🛪 14° 🛪 27'02 23° 🛪 03'45 0° 🛪 0° ዃ 0° ϒ  | 1°07'44<br>1°07'27  |
| greatest brilliancy retrograde evening set inferior conj minimum elong min. Earth dist. desc. node morning rise direct greatest brilliancy morning max el asc. node  | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Jul 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33   | 25°805'33 0°用 24°用29'59 26°用40'31 22°用10'13 18°用26'15 18°用30'24 15°用35'47 14°用35'29 10°用13'54 12°用03'52 0°野 9°野50'08 0°凡 0°所 0°所 0°所 0°所 0°所 0°所   | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj<br>minimum elong<br>desc. node<br>evening rise<br>asc. node   | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 12 00:12 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25 3011 Jul 27 18:52   | 0°M.06'01  3°M.37'01  4°M.07'23 0° 🛪  14° 🛪 27'02  23° 🛪 03'45 0° 🛪 0° ዃ 0° ϒ   | 1°07'44<br>1°07'27<br>45°29'28  |
| greatest brilliancy<br>retrograde<br>evening set<br>inferior conj<br>minimum elong<br>min. Earth dist.<br>desc. node<br>morning rise<br>direct<br>greatest brilliancy<br>morning max el  | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Jul 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33 3009 Jan 23 21:28   | 25° 805'33 0° II 24° II 29'59 26° II 40'31 22° II 10'13 18° II 22'25 18° II 30'24 15° II 35'47 14° II 35'29 10° II 13'54 12° II 03'52 0° II  | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj<br>minimum elong<br>desc. node<br>evening rise<br>asc. node<br>evening max el<br>desc. node<br>greatest brilliancy<br>retrograde  | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 22 02:56 3011 Apr 12 00:12 3011 May 08 01:52 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25 3011 Jul 27 18:52 3011 Aug 10 05:51   | 0°M.06'01  3°M.37'01  4°M.07'23 0° ⊀  14° ₹27'02 23° ₹03'45 0° ₹ 0° ¥ 0° ¥ 0° ¥ 0° ¥ 0° ¥ 0° ¥ 0° ¶ 0° Ø 3° £039'49 29° £06'58 0° \$\mathbf{m}\$ 1° \$\mathbf{m}\$30'18 3° \$\mathbf{m}\$32'07 30° \$\mathbf{L}\$  | 1°07'44<br>1°07'27<br>45°29'28  |
| greatest brilliancy retrograde evening set inferior conj minimum elong min. Earth dist. desc. node morning rise direct greatest brilliancy morning max el  asc. node   | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Jul 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33 3009 Jan 23 21:28 3009 Feb 02 20:36   | 25° 805'33 0° II 24° II 29'59 26° II 40'31 22° II 10'13 18° II 22'25 18° II 30'24 15° II 35'47 14° II 35'29 10° II 13'54 12° II 03'52 0° © 9° © 50'08 0° Ω 0° II 0° II 0° II 0° II 13'54 12° II 03'52 13'50'08 0° Ω 0° II  | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj minimum elong  desc. node evening rise  asc. node  evening max el desc. node  greatest brilliancy retrograde evening set  | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 22 02:56 3011 Apr 12 00:12 3011 May 08 01:52 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25 3011 Jul 27 18:52 3011 Aug 10 05:51 3011 Aug 13 11:17   | 0°M.06'01  3°M.37'01  4°M.07'23  0° ✓  14° ✓ 27'02  23° ✓ 303'45  0° ⋈  0° ⋈  0° ⋈  5° ⋈ 02'41  0° Ш  0° ⋈  3° № 39'49  29° № 658  0° ₥  1° ₥ 30'18  3° ₥ 32'07  30° №  28° № 14'45  | 1°07'44<br>1°07'27<br>45°29'28<br>-4.7m   |
| greatest brilliancy retrograde evening set inferior conj minimum elong min. Earth dist. desc. node morning rise direct greatest brilliancy morning max el asc. node  | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Jul 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 09 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33 3009 Jan 23 21:28 3009 Feb 02 20:36 3009 Feb 17 12:52   | 25° 805'33 0° II 24° II 29'59 26° II 40'31 22° II 10'13 18° II 22'25 18° II 30'24 15° II 35'47 14° II 35'29 10° II 13'54 12° II 03'52 0° © 9° © 50'08 0° II 0° II 0° II 0° II 0° II 13'54 12° II 03'52 17° II 0° II 18' II 0° II 18' II 08' II 08' II 08' II 18' II 08' II 08' II 08' II 18' II 08' II                             | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj minimum elong  desc. node evening rise  asc. node  evening max el desc. node  greatest brilliancy retrograde  evening set inferior conj   | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 12 00:12 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25 3011 Jul 27 18:52 3011 Aug 10 05:51 3011 Aug 13 11:17 3011 Aug 18 05:54   | 0°M.06'01  3°M.37'01  4°M.07'23  0°   14°  27'02  23°  303'45  0°  0°  0°  0°  0°  0°  0°  0°  0°  0°  | 1°07'44<br>1°07'27<br>45°29'28<br>-4.7m   |
| greatest brilliancy retrograde evening set inferior conj minimum elong min. Earth dist. desc. node morning rise direct greatest brilliancy morning max el  asc. node   | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 30 00:12 3008 Jul 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33 3009 Feb 02 20:36 3009 Feb 17 12:52 3009 Feb 26 18:27   | 25° 805'33 0° II 24° II 29'59 26° II 40'31 22° II 10'13 18° II 22'25 18° II 30'24 15° II 35'47 14° II 35'29 10° II 13'54 12° II 03'52 0° II  | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj minimum elong  desc. node evening rise  asc. node  evening max el desc. node  greatest brilliancy retrograde  evening set inferior conj minimum elong   | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 17 23:01 3011 Mar 22 02:56 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25 3011 Jul 27 18:52 3011 Aug 10 05:51 3011 Aug 13 11:17 3011 Aug 18 05:54 3011 Aug 17 21:01   | 0°M.06'01  3°M.37'01  4°M.07'23  0° ♂  14° ₹27'02  23° ₹03'45  0° ♂  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  3° № 39'49  29° £06'58  0° №  1° ™ 30'18  3° ™ 32'07  30° №  28° £14'45  25° £20'20  25° £34'11   | 1°07'44<br>1°07'27<br>45°29'28<br>-4.7m<br>-7°22'36<br>7°21'17                        |
| greatest brilliancy retrograde evening set inferior conj minimum elong min. Earth dist. desc. node morning rise direct greatest brilliancy morning max el  asc. node   | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Jul 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 09 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33 3009 Jan 23 21:28 3009 Feb 02 20:36 3009 Feb 17 12:52   | 25° 805'33 0° II 24° II 29'59 26° II 40'31 22° II 10'13 18° II 22'25 18° II 30'24 15° II 35'47 14° II 35'29 10° II 13'54 12° II 03'52 0° © 9° © 50'08 0° II 0° II 0° II 0° II 0° II 13'54 12° II 03'52 17° II 0° II 18' II 0° II 18' II 08' II 08' II 08' II 18' II 08' II 08' II 08' II 18' II 08' II                             | -4.8m<br>1°06'11<br>1°05'27<br>0.28697 AU<br>-4.7m | superior conj minimum elong  desc. node evening rise  asc. node  evening max el desc. node  greatest brilliancy retrograde  evening set inferior conj minimum elong min. Earth dist.  | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 17 23:01 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25 3011 Jul 17 03:25 3011 Aug 10 05:51 3011 Aug 11 11:17 3011 Aug 11 11:17 3011 Aug 11 05:54 3011 Aug 17 21:01 3011 Aug 18 06:18   | 0°M.06'01  3°M.37'01  4°M.07'23  0° ♂  14° ₹27'02  23° ₹03'45  0° ♂  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  3° № 39'49  29° № 6'58  0° №  1° № 30'18  3° № 32'07  30° №  28° № 14'45  25° № 20'20  25° № 34'11  25° № 19'42   | 1°07'44<br>1°07'27<br>45°29'28<br>-4.7m   |
| greatest brilliancy retrograde evening set inferior conj minimum elong min. Earth dist. desc. node morning rise direct greatest brilliancy morning max el  asc. node  desc. node morning set                                   | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33 3009 Jan 23 21:28 3009 Feb 02 20:36 3009 Feb 17 12:52 3009 Feb 26 18:27 3009 Mar 22 17:36   | 25°805'33 0°用 24°用29'59 26°用40'31 22°用10'13 18°用26'15 18°用22'25 18°用30'24 15°用35'47 14°用35'29 10°用13'54 12°用03'52 0°野 9°野50'08 0°和 0°聊 0°聊53'35 0°配 0°™ 0°™ 17°♂29'54 0°≈ 18°≈25'10 0°升  | -4.8m  1°06'11 1°05'27 0.28697 AU  -4.7m  45°43'54 | superior conj minimum elong  desc. node evening rise  asc. node  evening max el desc. node  greatest brilliancy retrograde  evening set inferior conj minimum elong min. Earth dist. morning rise   | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 12 00:12 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25 3011 Jul 17 03:25 3011 Jul 27 18:52 3011 Aug 10 05:51 3011 Aug 18 05:54 3011 Aug 18 06:18 3011 Aug 18 06:18 3011 Aug 22 06:41   | 0°M.06'01  3°M.37'01  4°M.07'23  0° ₹  14° ₹27'02  23° ₹03'45  0° ₹  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  29° ₩  1° M.30'18  3° M.39'49  29° \$\O6'58  0° \$\O6'58  0° \$\O6'58  28° \$\O14'45  25° \$\O2'20  25° \$\O34'11  25° \$\O19'42  22° \$\O51'53   | 1°07'44<br>1°07'27<br>45°29'28<br>-4.7m<br>-7°22'36<br>7°21'17                        |
| greatest brilliancy retrograde evening set inferior conj minimum elong min. Earth dist. desc. node morning rise direct greatest brilliancy morning max el  asc. node  desc. node  morning set                                  | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33 3009 Jan 23 21:28 3009 Feb 02 20:36 3009 Feb 17 12:52 3009 Mar 20 04:35   | 25° 805'33 0° II 24° II 29'59 26° II 40'31 22° II 10'13 18° II 22'25 18° II 30'24 15° II 35'47 14° II 35'29 10° II 13'54 12° II 03'52 0° II 00° II 0                            | -4.8m  1°06'11 1°05'27 0.28697 AU  -4.7m  45°43'54 | superior conj minimum elong  desc. node evening rise  asc. node  evening max el desc. node  greatest brilliancy retrograde  evening set inferior conj minimum elong min. Earth dist. morning rise direct                                    | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Apr 12 00:12 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 05 07:52 3011 Jul 11 16:34 3011 Jul 11 16:34 3011 Jul 17 03:25 3011 Jul 17 03:25 3011 Jul 17 03:25 3011 Aug 10 05:51 3011 Aug 11 11:17 3011 Aug 11 05:54 3011 Aug 12 06:41 3011 Aug 22 06:41 3011 Sep 08 20:55   | 0°M.06'01  3°M.37'01  4°M.07'23  0° ₹  14° ₹27'02  23° ₹03'45  0° ₹  0° ₩  0° ₩  0° ₩  0° ₩  0° \$\mathbb{0} \text{302'41}  0° \$\mathbb{0} \text{303'49}  29° \$\mathbb{0} \text{606'58}  0° \$\mathbb{0} \text{10 m} \text{30'18}  3° \$\mathbb{0} \text{30'18}  3° \$\mathbb{0} \text{30'18}  28° \$\mathbb{0} \text{14'45}  25° \$\mathbb{0} \text{20'20}  25° \$\mathbb{0} \text{34'11}  25° \$\mathbb{0} \text{15'53}  17° \$\mathbb{0} \text{02'39} | 1°07'44<br>1°07'27<br>45°29'28<br>-4.7m<br>-7°22'36<br>7°21'17<br>0.29020 AU          |
| greatest brilliancy retrograde evening set inferior conj minimum elong min. Earth dist. desc. node morning rise direct greatest brilliancy morning max el  asc. node  desc. node morning set                                   | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33 3009 Jan 23 21:28 3009 Feb 02 20:36 3009 Feb 17 12:52 3009 Feb 26 18:27 3009 Mar 22 17:36   | 25° 805'33 0° II 24° II 29'59 26° II 40'31 22° II 10'13 18° II 22'25 18° II 30'24 15° II 35'47 14° II 35'29 10° II 13'54 12° II 03'52 0° II 00° II 0                            | -4.8m  1°06'11 1°05'27 0.28697 AU  -4.7m  45°43'54 | superior conj minimum elong  desc. node evening rise  asc. node  evening max el desc. node  greatest brilliancy retrograde  evening set inferior conj minimum elong min. Earth dist. morning rise   | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 12 00:12 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25 3011 Jul 17 03:25 3011 Jul 27 18:52 3011 Aug 10 05:51 3011 Aug 18 05:54 3011 Aug 18 06:18 3011 Aug 18 06:18 3011 Aug 22 06:41   | 0°M.06'01  3°M.37'01  4°M.07'23  0° ₹  14° ₹27'02  23° ₹03'45  0° ₹  0° ₩  0° ₩  0° ₩  0° ₩  0° ₩  29° ₩  1° M.30'18  3° M.39'49  29° \$\O6'58  0° \$\O6'58  0° \$\O6'58  28° \$\O14'45  25° \$\O2'20  25° \$\O34'11  25° \$\O19'42  22° \$\O51'53   | 1°07'44<br>1°07'27<br>45°29'28<br>-4.7m<br>-7°22'36<br>7°21'17                        |
| greatest brilliancy retrograde evening set inferior conj minimum elong min. Earth dist. desc. node morning rise direct greatest brilliancy morning max el  asc. node  desc. node  morning set                                  | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33 3009 Jan 23 21:28 3009 Feb 02 20:36 3009 Feb 17 12:52 3009 Mar 20 04:35   | 25° 805'33 0° II 24° II 29'59 26° II 40'31 22° II 10'13 18° II 22'25 18° II 30'24 15° II 35'47 14° II 35'29 10° II 13'54 12° II 03'52 0° II 00° II 0°                            | -4.8m  1°06'11 1°05'27 0.28697 AU  -4.7m  45°43'54 | superior conj minimum elong  desc. node evening rise  asc. node  evening max el desc. node  greatest brilliancy retrograde  evening set inferior conj minimum elong min. Earth dist. morning rise direct                                    | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Apr 12 00:12 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25 3011 Jul 17 03:25 3011 Jul 27 18:52 3011 Aug 10 05:51 3011 Aug 11 05:54 3011 Aug 11 05:54 3011 Aug 12 06:41 3011 Aug 22 06:41 3011 Sep 08 20:55 3011 Sep 19 11:42 3011 Oct 08 00:00                   | 0°M.06'01  3°M.37'01  4°M.07'23  0° ₹  14° ₹27'02  23° ₹03'45  0° ₹  0° ₩  0° ₩  0° ₩  0° ₩  0° \$\mathbb{0} \text{302'41}  0° \$\mathbb{0} \text{303'49}  29° \$\mathbb{0} \text{606'58}  0° \$\mathbb{0} \text{10 m} \text{30'18}  3° \$\mathbb{0} \text{30'18}  3° \$\mathbb{0} \text{30'18}  28° \$\mathbb{0} \text{14'45}  25° \$\mathbb{0} \text{20'20}  25° \$\mathbb{0} \text{34'11}  25° \$\mathbb{0} \text{15'53}  17° \$\mathbb{0} \text{02'39} | 1°07'44<br>1°07'27<br>45°29'28<br>-4.7m<br>-7°22'36<br>7°21'17<br>0.29020 AU          |
| greatest brilliancy retrograde evening set inferior conj minimum elong min. Earth dist. desc. node morning rise direct greatest brilliancy morning max el  asc. node  desc. node  superior conj minimum elong                  | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 04 07:54 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33 3009 Jan 23 21:28 3009 Feb 02 20:36 3009 Feb 17 12:52 3009 Feb 17 12:52 3009 Mar 30 04:35 3009 Mar 30 09:51   | 25° 805'33 0° II 24° II 29'59 26° II 40'31 22° II 10'13 18° II 22'25 18° II 30'24 15° II 35'47 14° II 35'29 10° II 13'54 12° II 03'52 0° II 00° II 0                            | -4.8m  1°06'11 1°05'27 0.28697 AU  -4.7m  45°43'54 | superior conj minimum elong  desc. node evening rise  asc. node  evening max el desc. node  greatest brilliancy retrograde  evening set inferior conj minimum elong min. Earth dist. morning rise direct                                    | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Apr 12 00:12 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25 3011 Jul 17 03:25 3011 Jul 27 18:52 3011 Aug 10 05:51 3011 Aug 11 05:54 3011 Aug 11 06:18 3011 Aug 12 06:41 3011 Sep 08 20:55 3011 Sep 19 11:42   | 0°M.06'01  3°M.37'01  4°M.07'23  0° ₹  14° ₹27'02  23° ₹03'45  0° ₹  0° ¥  0° ¥  0° ¥  0° ¥  0° ¥  0° ¥  0° ¥  0° ¶  1° ™30'18  3° ™32'07  30° RΩ  28° Ω14'45  25° Ω20'20  25° Ω34'11  25° Ω19'42  22° Ω51'53  17° Ω02'39  19° Ω05'32  | 1°07'44<br>1°07'27<br>45°29'28<br>-4.7m<br>-7°22'36<br>7°21'17<br>0.29020 AU          |
| greatest brilliancy retrograde evening set inferior conj minimum elong min. Earth dist. desc. node morning rise direct greatest brilliancy morning max el  asc. node  desc. node  superior conj minimum elong                  | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 14 23:01 3008 Jul 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33 3009 Jan 23 21:28 3009 Feb 02 20:36 3009 Feb 17 12:52 3009 Feb 17 12:52 3009 Mar 30 04:35 3009 Mar 30 09:51 3009 Apr 03 06:10                                     | 25° 805'33 0° II 24° II 29'59 26° II 40'31 22° II 10'13 18° II 22'25 18° II 30'24 15° II 35'47 14° II 35'29 10° II 13'54 12° II 03'52 0° II 00° II 0°                            | -4.8m  1°06'11 1°05'27 0.28697 AU  -4.7m  45°43'54 | superior conj minimum elong  desc. node evening rise  asc. node  evening max el desc. node  greatest brilliancy retrograde  evening set inferior conj minimum elong min. Earth dist. morning rise direct greatest brilliancy                | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Apr 12 00:12 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25 3011 Jul 17 03:25 3011 Jul 27 18:52 3011 Aug 10 05:51 3011 Aug 11 05:54 3011 Aug 11 05:54 3011 Aug 12 06:41 3011 Aug 22 06:41 3011 Sep 08 20:55 3011 Sep 19 11:42 3011 Oct 08 00:00                   | 0°M.06'01  3°M.37'01  4°M.07'23  0° ₹  14° ₹27'02  23° ₹03'45  0° ₹  0° ¥  0° ¥  0° ¥  0° ¥  0° ¥  0° ¥  0° ¥  0° ¶  1° ™30'18  3° ™32'07  30° RΩ  28° Ω14'45  25° Ω20'20  25° Ω34'11  25° Ω19'42  22° Ω51'53  17° Ω02'39  19° Ω05'32  0° ™  | 1°07'44<br>1°07'27<br>45°29'28<br>-4.7m<br>-7°22'36<br>7°21'17<br>0.29020 AU<br>-4.8m |
| greatest brilliancy retrograde evening set inferior conj minimum elong min. Earth dist. desc. node morning rise direct greatest brilliancy morning max el  asc. node  desc. node  superior conj minimum elong max. Earth dist. | 3008 Mar 29 11:54 3008 Apr 03 12:43 3008 May 07 06:35 3008 May 18 03:47 3008 Jun 02 09:12 3008 Jun 08 13:32 3008 Jun 08 15:58 3008 Jun 08 10:53 3008 Jun 13 04:30 3008 Jun 14 23:01 3008 Jun 10 02:48 3008 Jul 10 02:48 3008 Aug 06 20:03 3008 Aug 17 15:51 3008 Sep 06 13:18 3008 Oct 03 13:16 3008 Oct 04 07:54 3008 Oct 04 07:54 3008 Oct 29 00:55 3008 Nov 22 16:59 3008 Dec 16 22:24 3009 Jan 09 22:33 3009 Jan 23 21:28 3009 Feb 02 20:36 3009 Feb 17 12:52 3009 Feb 17 12:52 3009 Mar 30 04:35 3009 Mar 30 09:51 3009 Apr 03 06:10 3009 Apr 15 19:24 | 25° 805'33 0° II 24° II 29'59 26° II 40'31 22° II 10'13 18° II 22'25 18° II 30'24 15° II 35'47 14° II 35'29 10° II 13'54 12° II 03'52 0° II 0°                             | -4.8m  1°06'11 1°05'27 0.28697 AU  -4.7m  45°43'54 | superior conj minimum elong  desc. node evening rise  asc. node  evening max el desc. node  greatest brilliancy retrograde  evening set inferior conj minimum elong min. Earth dist. morning rise direct greatest brilliancy morning max el | 3010 Oct 24 12:56  3010 Oct 27 08:31 3010 Oct 27 18:15 3010 Nov 17 10:56 3010 Nov 28 23:54 3010 Dec 05 20:52 3010 Dec 11 09:46 3011 Jan 04 08:25 3011 Jan 28 08:12 3011 Feb 21 11:42 3011 Mar 17 23:01 3011 Mar 22 02:56 3011 Apr 12 00:12 3011 Jun 05 07:52 3011 Jun 05 07:52 3011 Jun 09 01:53 3011 Jul 11 16:34 3011 Jul 13 12:15 3011 Jul 17 03:25 3011 Jul 17 03:25 3011 Jul 27 18:52 3011 Aug 10 05:51 3011 Aug 10 05:51 3011 Aug 18 05:54 3011 Aug 18 06:18 3011 Aug 18 06:18 3011 Sep 08 20:55 3011 Sep 19 11:42 3011 Oct 08 00:00 3011 Oct 28 12:30 | 0°M.06'01  3°M.37'01  4°M.07'23  0° ₹  14° ₹27'02  23° ₹03'45  0° ₹  0° ¥  0° ¥  0° ¥  0° ¥  0° ¥  0° ¥  0° ¶  1° ™ 30'18  3° ™ 32'07  30° R Ω  28° Ω14'45  25° Ω20'20  25° Ω34'11  25° Ω19'42  22° Ω51'53  17° Ω02'39  19° Ω05'32  0° ™  18° № 16'20  | 1°07'44<br>1°07'27<br>45°29'28<br>-4.7m<br>-7°22'36<br>7°21'17<br>0.29020 AU<br>-4.8m |

|                                   | 3011 Dec 05 19:06  | 0°M₊                              |            |                     | 3014 May 19 20:19   | 0°9                                      |            |
|-----------------------------------|--|-----------------------------------|------------|---------------------|---|--|------------|
|                                   | 3011 Dec 31 01:14  | 0° <b>∡</b> ¹                     |            |                     | 3014 Jun 14 02:27   | $0^{\circ}\Omega$                        |            |
|                                   | 3012 Jan 24 15:07  | 0° <b>ප</b>                       |            |                     | 3014 Jul 10 04:20   | 0°Щ                                      |            |
|                                   | 3012 Feb 17 21:57  | 0° <b>≈</b>                       |            |                     | 3014 Aug 06 21:29   | 0₀ <b>ಹ</b>                              |            |
| desc. node                        | 3012 Feb 21 09:25  | 4° <b>≈</b> 18'38                 |            | desc. node          | 3014 Aug 08 04:24   | 1° <b>≏</b> 19'18                        |            |
|                                   | 3012 Mar 13 02:09  | 0° <b>ℋ</b>                       |            | evening max el      | 3014 Aug 19 12:06   | 12° <b>≏</b> 32'36                       | 45°44'17   |
|                                   | 3012 Apr 06 06:06  | $0^{\circ}\Upsilon$               |            |                     | 3014 Sep 08 17:26   | 0°M                                      |            |
|                                   | 3012 Apr 30 11:19  | $8^{\circ}$                       |            | greatest brilliancy | 3014 Sep 28 06:16   | 10°M55'23                                | -4.8m      |
| morning set                       | 3012 May 02 20:43  | 2° <b>8</b> 57'26                 |            | retrograde          | 3014 Oct 07 08:18   | 12°M25'29                                |            |
|                                   | 3012 May 24 18:28  | $\Pi$ $^{\circ}$ 0                |            | evening set         | 3014 Oct 24 03:19   | 7°M07'32                                 |            |
|                                   |  |                                   |            | inferior conj       | 3014 Oct 28 07:41   | 4°M36'34                                 | -6°58'54   |
| superior conj                     | 3012 Jun 09 12:03  | 19° <b>Ⅱ</b> 22'30                | -0°09'36   | minimum elong       | 3014 Oct 28 17:48   | 4°M21'00                                 | 6°57'00    |
| minimum elong                     | 3012 Jun 09 14:07  | 19° <b>Ⅱ</b> 28'50                | 0°09'30    | min. Earth dist.    | 3014 Oct 29 07:07   | 4°M00'30                                 | 0.27626 AU |
| behind sun begin                  | 3012 Jun 08 19:24  | 18° <b>Ⅲ</b> 31'15                |            | morning rise        | 3014 Nov 02 07:45   | 1°M36'12                                 |            |
| behind sun end                    | 3012 Jun 10 08:49  | 20° <b>Ⅲ</b> 26′24                |            |                     | 3014 Nov 05 07:39   | 30°₽ <b>₽</b>                            |            |
| max. Earth dist.                  | 3012 Jun 10 18:54  | 20° <b>Ⅱ</b> 57'24                | 1.73376 AU | direct              | 3014 Nov 18 08:13   | 26° <b>₽</b> 37'11                       |            |
| asc. node                         | 3012 Jun 13 12:27  | 24° <b>Ⅱ</b> 19′02                |            | asc. node           | 3014 Nov 29 07:18   | 28° <b>£</b> 51'34                       |            |
|                                   | 3012 Jun 18 03:19  | 0°ම                               |            | greatest brilliancy | 3014 Nov 29 12:35   | 28° <b>≏</b> 56'46                       | -4.9m      |
|                                   | 3012 Jul 12 13:11  | $0^{\circ}\Omega$                 |            | ,                   | 3014 Dec 01 22:55   | 0°M                                      |            |
| evening rise                      | 3012 Jul 16 00:56  | 4° <b>Ω</b> 17'12                 |            | morning max el      | 3015 Jan 07 23:59   | 29°M51'11                                | 46°54'47   |
| Ü                                 | 3012 Aug 05 23:45  | 0° mp                             |            | Ü                   | 3015 Jan 08 03:27   | 0° <b>√</b>                              |            |
|                                   | 3012 Aug 30 11:35  | 0∘ <u>⊽</u>                       |            |                     | 3015 Feb 04 16:56   | ರ°0                                      |            |
|                                   | 3012 Sep 24 01:57  | 0°M₊                              |            |                     | 3015 Mar 02 10:03   | 0° <b>≈</b>                              |            |
| desc. node                        | 3012 Oct 03 02:13  | 10°M56'32                         |            | desc. node          | 3015 Mar 20 21:16   | 22°≈05'52                                |            |
|                                   | 3012 Oct 18 20:15  | 0° <b>∡</b> ¹                     |            |                     | 3015 Mar 27 10:33   | 0° <b>)</b> €                            |            |
|                                   | 3012 Nov 12 20:33  | 0° <b>ට</b>                       |            |                     | 3015 Apr 21 04:05   | 0°Υ                                      |            |
|                                   | 3012 Dec 08 08:19  | 0° <b>≈</b>                       |            |                     | 3015 May 15 19:00   | 0°8                                      |            |
|                                   | 3012 Dec 00 00:19  | 0° <b>\</b>                       |            |                     | 3015 Jun 09 09:01   | 0°II                                     |            |
| evening max el                    | 3013 Jan 14 13:32  | 11° <b>)</b> 04'12                | 47°13'23   |                     | 3015 Jul 03 22:05   | 0°©                                      |            |
| asc. node                         | 3013 Jan 24 05:09  | 20° <b>)</b> 33'04                | 17 13 23   | morning set         | 3015 Jul 11 16:47   | 9° <b>9</b> 31'39                        |            |
| asc. node                         | 3013 Feb 03 21:56  | 20 <b>γ</b> (33 0 <del>4</del>    |            | asc. node           | 3015 Jul 12 00:23   | 9° <b>9</b> 54'57                        |            |
| greatest brilliancy               | 3013 Feb 24 01:14  | 12° <b>Υ</b> 34'27                | -4.9m      | asc. node           | 3015 Jul 28 09:17   | 0°Ω                                      |            |
| retrograde                        | 3013 New 24 01:14<br>3013 Mar 06 10:13   | 14° <b>Υ</b> 36'49                | 4.7111     | max. Earth dist.    | 3015 Aug 14 16:43   |  | 1.73328 AU |
| evening set                       | 3013 Mar 24 09:04  | 8° <b>Υ</b> 21'13                 |            | max. Lartii dist.   | 3013 Aug 14 10.43   | 21 661017                                | 1.73328 AC |
| inferior conj                     | 3013 Mar 27 08:18  | 6° <b>Υ</b> 30'26                 | 8°41'58    | superior conj       | 3015 Aug 17 03:52   | 24° <b>Ω</b> 20'36                       | 1012113    |
| minimum elong                     | 3013 Mar 27 08:18<br>3013 Mar 27 12:28   | 6° <b>Υ</b> 23'54                 |            | minimum elong       | 3015 Aug 16 19:52   | 24° <b>ι</b> 20'30<br>23° <b>Ω</b> 55'57 |            |
| min. Earth dist.                  | 3013 Mar 26 21:34  | 6° <b>Υ</b> 47'14                 |            | minimum ciong       | 3015 Aug 21 17:56   | 0°m)                                     | 1 1201     |
| morning rise                      | 3013 Mar 20 21:34<br>3013 Mar 30 16:06   | 4° <b>Υ</b> 27'19                 | 0.27773 AO |                     | 3015 Sep 15 00:23   | 0∘ <b>⊽</b>                              |            |
| morning risc                      | 3013 Mai 30 10:00<br>3013 Apr 08 19:27   | 30°R <b>)</b> €                   |            | avaning rica        | 3015 Sep 13 00:23   | 9° <b>≏</b> 06'27                        |            |
| direct                            | 3013 Apr 08 19.27<br>3013 Apr 17 05:10   | 28° <b>₩</b> 34'02                |            | evening rise        | 3015 Oct 09 05:42   | 9 <b>=</b> 00 27<br>0° <b>M</b>          |            |
| direct                            | 3013 Apr 17 03:10<br>3013 Apr 25 22:35   | 28 <b>π</b> 34 02<br>0° <b>Υ</b>  |            | daga mada           |   | 27°M41'00                                |            |
| areatest brillianss               |  | 0° <b>Υ</b> 09'37                 | -4.8m      | desc. node          | 3015 Oct 31 14:01<br>3015 Nov 02 10:54                      | 27 11 <b>€</b> 41 00                     |            |
| greatest brilliancy<br>desc. node | 3013 Apr 26 10:26  | 11° <b>Υ</b> 12'06                | -4.6111    |                     | 3015 Nov 26 16:40   | 0° <b>ਨ</b>                              |            |
|                                   | 3013 May 15 18:41<br>3013 Jun 05 11:36   | 29° <b>Y</b> 19′22                | 45°59'11   |                     |   | 0°≈                                      |            |
| morning max el                    | 3013 Jun 06 04:24  | 0° <b>8</b>                       | 43 39 11   |                     | 3015 Dec 21 00:01<br>3016 Jan 14 11:55                      | 0 <b>≈</b><br>0° <b>H</b>                |            |
|                                   | 3013 Jul 05 00:08  | 0°II                              |            |                     | 3016 Feb 08 11:18   | 0°Υ                                      |            |
|                                   |  | 0°©                               |            | aga mada            | 3016 Feb 21 17:00   | 15° <b>Υ</b> 27'34                       |            |
|                                   | 3013 Jul 31 16:56<br>3013 Aug 26 09:31   | 0° <b>U</b>                       |            | asc. node           | 3016 Mar 05 13:09   | 0° <b>8</b>                              |            |
| asc. node                         | •  | 12° <b>Ω</b> 31'57                |            | evening max el      | 3016 Mar 27 01:59   | 22° <b>8</b> 48'01                       | 46°20'39   |
| asc. node                         | 3013 Sep 05 22:00  |                                   |            | evening max er      | 3016 Apr 03 12:51   | 0° <b>Ⅱ</b>                              | 40 20 39   |
|                                   | 3013 Sep 20 09:54<br>3013 Oct 14 22:17   | 0 <b>்⊽</b><br>0°™                |            | greatest brilliancy | 3016 May 04 23:31   | 22° <b>∏</b> 20'19                       | -4.8m      |
|                                   | 3013 Oct 14 22:17<br>3013 Nov 08 02:28   | 0° <b>m</b>                       |            | retrograde          | 3016 May 15 20:07   | 24° <b>II</b> 30'49                      | -4.0111    |
| marning act                       |  | 27°ML52'18                        |            | •                   | · ·   | 19° <b>∏</b> 58′20                       |            |
| morning set                       | 3013 Nov 30 09:09  |                                   |            | evening set         | 3016 May 31 02:45   |  | 1926112    |
|                                   | 3013 Dec 02 01:52  | 0° <b>♂</b><br>0°る                |            | inferior conj       | 3016 Jun 06 05:45   | 16° <b>Ⅱ</b> 16'33                       |            |
| 11-                               | 3013 Dec 25 22:58  |                                   |            | minimum elong       | 3016 Jun 06 08:54   | 16° <b>Ⅱ</b> 11'36                       | 1°25'18    |
| desc. node                        | 3013 Dec 26 11:43  | 0° <b>る</b> 40'05                 |            | min. Earth dist.    | 3016 Jun 06 03:35   | 10 <b>Ⅲ</b> 1930<br>12° <b>Ⅲ</b> 37'44   | 0.28677 AU |
|                                   | 2014 I 10 02.41  | 100=207104                        | 0924110    | desc. node          | 3016 Jun 12 06:37   |  |            |
| superior conj                     | 3014 Jan 10 03:41  | 19° <b>ろ</b> 07'04                |            | morning rise        | 3016 Jun 12 15:18   | 12° <b>Ⅱ</b> 25'45                       |            |
| minimum elong                     | 3014 Jan 09 19:08  | 18° <b>る</b> 40'11                |            | direct              | 3016 Jun 27 15:26   | 8° <b>Ⅱ</b> 04'16                        | 1 7        |
| max. Earth dist.                  | 3014 Jan 10 09:03  | 19° <b>る</b> 23'56                | 1.71092 AU | greatest brilliancy | 3016 Jul 07 18:59   | 9°Ⅲ54'56<br>0° <b>©</b>                  | -4.7m      |
|                                   |  | 0° <b>≈</b>                       |            |                     | 3016 Aug 06 23:15   | 0°≌<br>7°≌40'36                          | 45042127   |
|                                   | 3014 Jan 18 19:16  | 00M                               |            |                     |   |  |            |
| ovonini                           | 3014 Feb 11 15:56  | 0° <b>)</b><br>10° <b>¥</b> 58'02 |            | morning max el      | 3016 Aug 15 07:41   |  | 43 43 37   |
| evening rise                      | 3014 Feb 11 15:56<br>3014 Feb 20 09:41   | 10° <b>¥</b> 58′02                |            |                     | 3016 Sep 06 05:52   | $0^{\circ}\Omega$                        | 43 43 37   |
| evening rise                      | 3014 Feb 11 15:56<br>3014 Feb 20 09:41<br>3014 Mar 07 14:36                      | 10° <b>)</b> 58'02<br>0° <b>Υ</b> |            | asc. node           | 3016 Sep 06 05:52<br>3016 Oct 03 09:53                      | 0° <b>Л</b><br>0° <b>™</b> 20'21         | 43 43 37   |
| -                                 | 3014 Feb 11 15:56<br>3014 Feb 20 09:41<br>3014 Mar 07 14:36<br>3014 Mar 31 17:21 | 10°¥58'02<br>0°Υ<br>0°Β           |            |                     | 3016 Sep 06 05:52<br>3016 Oct 03 09:53<br>3016 Oct 03 02:50 | 0° <b>N</b><br>0°M20'21<br>0°M           | 43 43 37   |
| evening rise                      | 3014 Feb 11 15:56<br>3014 Feb 20 09:41<br>3014 Mar 07 14:36                      | 10° <b>)</b> 58'02<br>0° <b>Υ</b> |            |                     | 3016 Sep 06 05:52<br>3016 Oct 03 09:53                      | 0° <b>Л</b><br>0° <b>™</b> 20'21         | 43 43 37   |

|                     | 2016 D 16 00-42                        | 08.7                          |            |                                | 2010 I-1 16 17.10                      | 00 <b>m</b> s                           |            |
|---------------------|--|-------------------------------|------------|--------------------------------|--|---|------------|
|                     | 3016 Dec 16 09:43                      | 0°る                           |            |                                | 3019 Jul 16 17:10                      | 0°Mp                                    |            |
| JJ.                 | 3017 Jan 09 09:40<br>3017 Jan 22 23:35 | 0°る<br>17° <b>る</b> 01'56     |            | retrograde                     | 3019 Jul 25 11:02                      | 1°№23'16<br>30°R <b>Ω</b>               |            |
| desc. node          | 3017 Jan 22 23.33<br>3017 Feb 02 07:34 | 0°≈                           |            | avaning gat                    | 3019 Aug 02 19:59<br>3019 Aug 11 00:25 | 30 και<br>26°Ω10'27                     |            |
| morning sat         | 3017 Feb 02 07:34<br>3017 Feb 14 22:57 | 0 ≈<br>15°≈52'00              |            | evening set                    | •                                      | 20 <b>δ</b> <i>l</i> 10 27<br>23°Ω11'09 | 7012/01    |
| morning set         | 3017 Feb 14 22.37<br>3017 Feb 26 05:17 | 13 ≈32 00<br>0° <b>H</b>      |            | inferior conj<br>minimum elong | 3019 Aug 15 22:08<br>3019 Aug 15 12:58 | 23°Ω25'30                               |            |
|                     | 3017 Feb 26 03:17<br>3017 Mar 22 04:19 | 0 <del>Υ</del><br>0° <b>Υ</b> |            | min. Earth dist.               | •                                      | 23°Ω12'00                               |            |
|                     | 301 / Mai 22 04.19                     | 0 1                           |            |                                | 3019 Aug 15 21:36                      | 23 <b>∂</b> €12 00 20° <b>Ω</b> 38'45   | 0.29031 AU |
| aumorior comi       | 3017 Mar 27 17:25                      | 6° <b>Ƴ</b> 55'35             | 1924142    | morning rise<br>direct         | 3019 Aug 20 01:27                      | 20 <b>δι</b> 38 43                      |            |
| superior conj       |  | 7° <b>Υ</b> 09'23             |            |                                | 3019 Sep 06 13:48                      |   | 4.0        |
| minimum elong       | 3017 Mar 27 21:50                      |                               |            | greatest brilliancy            | 3019 Sep 17 02:37                      | 16° <b>Ω</b> 54'36                      | -4.8m      |
| max. Earth dist.    | 3017 Mar 31 16:20                      | 11° <b>Y</b> 51'39            | 1.71969 AU |                                | 3019 Oct 08 10:41                      | 0° Mp                                   | 46014102   |
|                     | 3017 Apr 15 06:04                      | 0°8                           |            | morning max el                 | 3019 Oct 26 03:55                      | 16° Mp 02'15                            | 46°14'02   |
| evening rise        | 3017 May 06 02:09                      | 25° <b>8</b> 48'57            |            | asc. node                      | 3019 Oct 31 21:36                      | 21° m/48'41                             |            |
|                     | 3017 May 09 11:30                      | 0°II                          |            |                                | 3019 Nov 08 16:59                      | 0∘ <b>亚</b>                             |            |
| asc. node           | 3017 May 16 02:41                      | 8° <b>Ⅱ</b> 10′36             |            |                                | 3019 Dec 05 09:37                      | 0° <b>™</b>                             |            |
|                     | 3017 Jun 02 21:06                      | 0°©                           |            |                                | 3019 Dec 30 14:14                      | 0° <b>∡</b> 7                           |            |
|                     | 3017 Jun 27 11:16                      | $0 {\circ} \Omega$            |            |                                | 3020 Jan 24 03:20                      | 0°る                                     |            |
|                     | 3017 Jul 22 07:06                      | 0° <b>m</b> p                 |            |                                | 3020 Feb 17 09:43                      | 0° <b>≈</b>                             |            |
|                     | 3017 Aug 16 11:15                      | 0∘ <b>ত</b>                   |            | desc. node                     | 3020 Feb 20 11:23                      | 3°≈48′27                                |            |
| desc. node          | 3017 Sep 04 16:14                      | 22° <b>≏</b> 28'53            |            |                                | 3020 Mar 12 13:35                      | 0° <b>∀</b>                             |            |
|                     | 3017 Sep 11 04:36                      | 0°M₊                          |            |                                | 3020 Apr 05 17:17                      | $0^{\circ}\mathbf{\Upsilon}$            |            |
|                     | 3017 Oct 07 21:25                      | 0°⊀                           |            |                                | 3020 Apr 29 22:17                      | 0°B                                     |            |
| evening max el      | 3017 Oct 31 12:09                      | 24° <b>√</b> 42'51            | 46°47'51   | morning set                    | 3020 Apr 30 11:59                      | 0° <b>8</b> 42'23                       |            |
|                     | 3017 Nov 05 23:04                      | 0°₹                           |            |                                | 3020 May 24 05:16                      | $\Pi$ $^{\circ}0$                       |            |
| greatest brilliancy | 3017 Dec 10 21:39                      | 25° <b>る</b> 10'48            | -4.9m      |                                |  |   |            |
| retrograde          | 3017 Dec 20 19:01                      | 27°る02'07                     |            | superior conj                  | 3020 Jun 07 05:03                      | 17° <b>Ⅱ</b> 14'00                      |            |
| asc. node           | 3017 Dec 26 19:22                      | 26°る17'12                     |            | minimum elong                  | 3020 Jun 07 07:48                      | 17° <b>Ⅱ</b> 22'29                      | 0°12'44    |
| evening set         | 3018 Jan 04 05:27                      | 22°る53'10                     |            | behind sun begin               | 3020 Jun 06 17:47                      | 16° <b>Ⅱ</b> 39'19                      |            |
| inferior conj       | 3018 Jan 10 07:52                      | 19° <b>る</b> 19'22            | 3°40'49    | behind sun end                 | 3020 Jun 07 21:50                      | 18° <b>Ⅲ</b> 05'40                      |            |
| minimum elong       | 3018 Jan 10 00:01                      | 19° <b>ට</b> 31'19            | 3°38'28    | max. Earth dist.               | 3020 Jun 08 17:03                      | 19° <b>Ⅲ</b> 04'49                      | 1.73343 AU |
| min. Earth dist.    | 3018 Jan 09 22:26                      | 19° <b>ට</b> 33'43            | 0.26514 AU | asc. node                      | 3020 Jun 12 14:36                      | 23° <b>Ⅲ</b> 52'39                      |            |
| morning rise        | 3018 Jan 15 18:42                      | 16° <b>පි</b> 06'56           |            |                                | 3020 Jun 17 14:02                      | 0∘ <b>ௐ</b>                             |            |
| direct              | 3018 Jan 30 17:00                      | 11° <b>ප්</b> 40'53           |            |                                | 3020 Jul 11 23:56                      | $0^{\circ}\Omega$                       |            |
| greatest brilliancy | 3018 Feb 09 10:38                      | 13° <b>る</b> 29'09            | -4.9m      | evening rise                   | 3020 Jul 13 19:41                      | 2° <b>Ω</b> 14'22                       |            |
|                     | 3018 Mar 06 19:07                      | 0° <b>≈</b>                   |            |                                | 3020 Aug 05 10:39                      | O° Mp                                   |            |
| morning max el      | 3018 Mar 22 00:13                      | 14° <b>≈</b> 15'40            | 46°44'58   |                                | 3020 Aug 29 22:48                      | 0∘ <b>ত</b>                             |            |
|                     | 3018 Apr 06 03:32                      | 0° <b>∀</b>                   |            |                                | 3020 Sep 23 13:39                      | $0^{\circ}$ M                           |            |
| desc. node          | 3018 Apr 17 09:02                      | 12° <b>升</b> 16′57            |            | desc. node                     | 3020 Oct 02 04:08                      | 10°M26'10                               |            |
|                     | 3018 May 03 01:46                      | $0$ ° $\mathbf{\Upsilon}$     |            |                                | 3020 Oct 18 08:41                      | 0° <b>∡</b> ¹                           |            |
|                     | 3018 May 28 21:48                      | $6^{\circ}B$                  |            |                                | 3020 Nov 12 10:04                      | 5°0                                     |            |
|                     | 3018 Jun 23 06:01                      | $\Pi^{\circ}0$                |            |                                | 3020 Dec 07 23:43                      | 0° <b>≈</b>                             |            |
|                     | 3018 Jul 18 06:54                      | 0°ಅ                           |            |                                | 3021 Jan 03 20:18                      | 0° <b>∀</b>                             |            |
| asc. node           | 3018 Aug 08 12:11                      | 25° <b>5</b> 41'07            |            | evening max el                 | 3021 Jan 12 04:00                      | 8° <b>)</b> (41′34                      | 47°13'56   |
|                     | 3018 Aug 12 01:16                      | $0^{\circ}\Omega$             |            | asc. node                      | 3021 Jan 23 07:11                      | 19° <b>) (</b> 33′44                    |            |
|                     | 3018 Sep 05 13:11                      | 0° <b>m</b> )                 |            |                                | 3021 Feb 04 12:10                      | $0^{\circ}\mathbf{\Upsilon}$            |            |
| morning set         | 3018 Sep 17 19:20                      | 15° <b>m</b> 07'22            |            | greatest brilliancy            | 3021 Feb 21 16:36                      | 10° <b>Ƴ</b> 13'34                      | -4.9m      |
|                     | 3018 Sep 29 19:28                      | 0∘ <b>ত</b>                   |            | retrograde                     | 3021 Mar 04 00:30                      | 12° <b>Ƴ</b> 14'48                      |            |
| max. Earth dist.    | 3018 Oct 22 02:55                      | 27° <b>£</b> 46′25            | 1.72068 AU | evening set                    | 3021 Mar 22 00:35                      | 5° <b>Y</b> 58′10                       |            |
|                     | 3018 Oct 23 21:44                      | 0° <b>M</b> ₊                 |            | inferior conj                  | 3021 Mar 24 22:29                      | 4° <b>Ƴ</b> 09'16                       | 8°46'33    |
|                     |  |                               |            | minimum elong                  | 3021 Mar 25 01:50                      | 4° <b>Υ</b> 04'01                       | 8°46'23    |
| superior conj       | 3018 Oct 24 23:23                      | 1°ML20'01                     | 1°09'48    | min. Earth dist.               | 3021 Mar 24 11:10                      | 4° <b>Ƴ</b> 27'01                       | 0.27727 AU |
| minimum elong       | 3018 Oct 25 08:48                      | 1°M49'26                      | 1°09'32    | morning rise                   | 3021 Mar 28 03:18                      | 2° <b>Y</b> 10'29                       |            |
|                     | 3018 Nov 16 21:45                      | 0° <b>∡</b> ¹                 |            |                                | 3021 Mar 31 23:35                      | 30°Ŗ <b>ℋ</b>                           |            |
| desc. node          | 3018 Nov 28 01:58                      | 13° <b>₹</b> '59'20           |            | direct                         | 3021 Apr 14 18:45                      | 26° <b>)</b> 13′48                      |            |
| evening rise        | 3018 Dec 03 08:44                      | 20° <b>∡</b> ³36′18           |            | greatest brilliancy            | 3021 Apr 23 23:22                      | 27° <b>)(</b> 48'31                     | -4.8m      |
| -                   | 3018 Dec 10 20:45                      | 0°ರ                           |            | •                              | 3021 Apr 29 07:50                      | $0^{\circ}\Upsilon$                     |            |
|                     | 3019 Jan 03 19:35                      | 0° <b>≈</b>                   |            | desc. node                     | 3021 May 14 20:49                      | 10° <b>Ƴ</b> 02'36                      |            |
|                     | 3019 Jan 27 19:36                      | 0° <b>∀</b>                   |            | morning max el                 | 3021 Jun 03 01:09                      | 27° <b>Y</b> '00'18                     | 46°00'32   |
|                     | 3019 Feb 20 23:23                      | $0^{\circ}\mathbf{\Upsilon}$  |            | -                              | 3021 Jun 06 02:44                      | 0°8                                     |            |
|                     | 3019 Mar 17 11:10                      | 0°8                           |            |                                | 3021 Jul 04 15:59                      | 0° <b>Ⅱ</b>                             |            |
| asc. node           | 3019 Mar 21 04:53                      | 4° <b>8</b> 31'29             |            |                                | 3021 Jul 31 06:20                      | 0ಂತಾ                                    |            |
|                     | 3019 Apr 11 13:16                      | 0°II                          |            |                                | 3021 Aug 25 21:43                      | $0^{\circ}\Omega$                       |            |
|                     | 3019 May 07 16:59                      | 0°9                           |            | asc. node                      | 3021 Sep 05 00:00                      | 12° <b>Ω</b> 02'24                      |            |
|                     | 3019 Jun 05 04:47                      | 0°N                           |            |                                | 3021 Sep 19 21:27                      | 0° my                                   |            |
| evening max el      | 3019 Jun 06 18:37                      | 1° <b>£</b> 31'44             | 45°30'14   |                                | 3021 Oct 14 09:31                      | 0∘ <b>⊽</b>                             |            |
| desc. node          | 3019 Jul 10 18:37                      | 27° <b>Ω</b> 40'06            |            |                                | 3021 Nov 07 13:35                      | 0°M                                     |            |
| greatest brilliancy | 3019 Jul 14 18:25                      | 29° <b>Ω</b> 20'46            | -4.7m      | morning set                    | 3021 Nov 27 21:53                      | 25°M26'55                               |            |
| 5                   |  |                               |            | <i>5</i>                       |  |   |            |

|                                   |  |                                  |                       |                               |  | 🗕                                      |                       |
|-----------------------------------|--|----------------------------------|-----------------------|-------------------------------|--|--|-----------------------|
|                                   | 3021 Dec 01 12:59                      | 0° <b>∡</b>                      |                       | inferior conj                 | 3024 Jun 03 21:44                      | 14° <b>∐</b> 04'40                     |                       |
|                                   | 3021 Dec 25 10:06                      | 0°る                              |                       | minimum elong                 | 3024 Jun 04 01:36                      | 13° <b>Ⅱ</b> 58'36                     | 1°45'13               |
| desc. node                        | 3021 Dec 25 13:49                      | 0°る11'43                         |                       | min. Earth dist.              | 3024 Jun 03 19:45                      | 14° <b>Ⅱ</b> 07'47                     | 0.28655 AU            |
|                                   | 2022 1 07 12 12                        | 160720141                        | 0020126               | morning rise                  | 3024 Jun 10 07:13                      | 10° <b>Ⅱ</b> 14'16                     |                       |
| superior conj                     | 3022 Jan 07 13:43                      | 16°₹32'41                        |                       | desc. node                    | 3024 Jun 11 08:42                      | 9° <b>Ⅱ</b> 40'15<br>5° <b>Ⅱ</b> 52'30 |                       |
| minimum elong<br>max. Earth dist. | 3022 Jan 07 05:59<br>3022 Jan 07 11:28 | 16° <b>そ</b> 08'21               | 1.71098 AU            | direct<br>greatest brilliancy | 3024 Jun 25 06:55<br>3024 Jul 05 10:32 | 5°Щ32'30<br>7°Щ43'35                   | 1.7m                  |
| max. Earm dist.                   | 3022 Jan 07 11.28<br>3022 Jan 18 06:24 | 10 O23 34<br>0°≈                 | 1./1098 AU            | greatest offinality           | 3024 Aug 07 01:34                      | / <b>п</b> 43 33                       | -4. /III              |
|                                   | 3022 Feb 11 03:05                      | 0° <b>)</b> €                    |                       | morning max el                | 3024 Aug 13 00:14                      | 5° <b>9</b> 31'31                      | 45°43'24              |
| evening rise                      | 3022 Feb 17 19:52                      | 8° <b>)</b> 24′25                |                       | morning max or                | 3024 Sep 05 22:36                      | 0°Ω                                    | 15 15 21              |
| e vennig rise                     | 3022 Mar 07 01:48                      | 0°Υ                              |                       | asc. node                     | 3024 Oct 02 11:53                      | 29° <b>Ω</b> 46'10                     |                       |
|                                   | 3022 Mar 31 04:42                      | 0°8                              |                       |                               | 3024 Oct 02 16:40                      | 0° m)                                  |                       |
| asc. node                         | 3022 Apr 17 16:51                      | 21° <b>8</b> 34'19               |                       |                               | 3024 Oct 28 01:46                      | 0∘ <del>⊽</del>                        |                       |
|                                   | 3022 Apr 24 14:04                      | $\Pi^{\circ}0$                   |                       |                               | 3024 Nov 21 16:35                      | $0^{\circ}$ M                          |                       |
|                                   | 3022 May 19 08:24                      | $0$ $\circ$ $\odot$              |                       |                               | 3024 Dec 15 21:20                      | 0° <b>∡</b> ¹                          |                       |
|                                   | 3022 Jun 13 15:25                      | $0^{\circ}\Omega$                |                       |                               | 3025 Jan 08 21:06                      | 8°0                                    |                       |
|                                   | 3022 Jul 09 19:07                      | 0° <b>m</b>                      |                       | desc. node                    | 3025 Jan 22 01:32                      | 16° <b>る</b> 32'24                     |                       |
|                                   | 3022 Aug 06 16:49                      | 0。 <b>亚</b>                      |                       |                               | 3025 Feb 01 18:52                      | 0° <b>≈</b>                            |                       |
| desc. node                        | 3022 Aug 07 06:25                      | 0° <b>£</b> 34'33                |                       | morning set                   | 3025 Feb 12 08:48                      | 13° <b>≈</b> 16′54                     |                       |
| evening max el                    | 3022 Aug 17 01:04                      | 10° <b>♀</b> 13'22               | 45°42'44              |                               | 3025 Feb 25 16:31                      | 0° <b>∀</b>                            |                       |
|                                   | 3022 Sep 09 11:32                      | 0°M₊                             |                       |                               | 3025 Mar 21 15:29                      | $0^{\circ}$ Y                          |                       |
| greatest brilliancy               | 3022 Sep 25 19:32                      | 8°M36'29                         | -4.8m                 |                               |  |  |                       |
| retrograde                        | 3022 Oct 04 21:23                      | 10°M06'51                        |                       | superior conj                 | 3025 Mar 25 05:36                      | 4° <b>Υ</b> 29'00                      |                       |
| evening set                       | 3022 Oct 21 20:06                      | 4°M43'42                         | 7011127               | minimum elong                 | 3025 Mar 25 09:06                      | 4° <b>Y</b> 39'56                      | 1°25'22<br>1.71918 AU |
| inferior conj                     | 3022 Oct 25 21:43                      | 2°M16'55                         |                       | max. Earth dist.              | 3025 Mar 29 02:17                      | 0° <b>8</b>                            | 1./1918 AU            |
| minimum elong<br>min. Earth dist. | 3022 Oct 26 07:33<br>3022 Oct 26 21:28 | 2°M01'46<br>1°M40'23             | 7°09'53<br>0.27699 AU | evening rise                  | 3025 Apr 14 17:10<br>3025 May 03 16:38 | 23° <b>8</b> 31'11                     |                       |
| min. Earth dist.                  | 3022 Oct 20 21:28<br>3022 Oct 29 15:48 | 1 11C40 23<br>30°RΩ              | 0.27099 AU            | evening rise                  | 3025 May 08 22:36                      | 0° <b>Ⅱ</b>                            |                       |
| morning rise                      | 3022 Oct 29 13:48<br>3022 Oct 30 18:28 | 29° <b>£</b> 21'12               |                       | asc. node                     | 3025 May 05 22:30<br>3025 May 15 04:47 | 7° <b>Ⅱ</b> 42'50                      |                       |
| direct                            | 3022 Nov 15 22:28                      | 24° <b>£</b> 16'07               |                       | use. Houe                     | 3025 Jun 02 08:18                      | 0°95                                   |                       |
| greatest brilliancy               | 3022 Nov 27 04:20                      | 26° <b>Ω</b> 36'56               | -4.9m                 |                               | 3025 Jun 26 22:44                      | $0^{\circ}\Omega$                      |                       |
| asc. node                         | 3022 Nov 28 09:30                      | 27° <b>Ω</b> 07'17               |                       |                               | 3025 Jul 21 19:06                      | 0° m)                                  |                       |
|                                   | 3022 Dec 04 00:49                      | $0^{\circ}$ M                    |                       |                               | 3025 Aug 16 00:08                      | 0∘ <b>⊽</b>                            |                       |
| morning max el                    | 3023 Jan 05 14:12                      | 27°M27'44                        | 46°54'03              | desc. node                    | 3025 Sep 03 18:13                      | 21° <b>≏</b> 54'22                     |                       |
|                                   | 3023 Jan 08 01:34                      | 0° <b>∡</b> ¹                    |                       |                               | 3025 Sep 10 19:02                      | $0^{\circ}$ M                          |                       |
|                                   | 3023 Feb 04 09:16                      | 0° <b>ප</b>                      |                       |                               | 3025 Oct 07 15:00                      | 0° <b>∡</b> ¹                          |                       |
|                                   | 3023 Mar 02 00:08                      | 0° <b>≈</b>                      |                       | evening max el                | 3025 Oct 29 02:50                      | 22° <b>∡</b> *22'24                    | 46°45'53              |
| desc. node                        | 3023 Mar 19 23:16                      | 21° <b>≈</b> 32'19               |                       |                               | 3025 Nov 06 02:01                      | 0°ಕ                                    |                       |
|                                   | 3023 Mar 26 23:25                      | 0° <b>)</b> €                    |                       | greatest brilliancy           | 3025 Dec 08 10:09                      | 22°る41'56                              | -4.9m                 |
|                                   | 3023 Apr 20 16:13                      | $^{\circ \gamma}$                |                       | retrograde                    | 3025 Dec 18 07:57                      | 24°る33'00                              |                       |
|                                   | 3023 May 15 06:38                      | 0° <b>Β</b>                      |                       | asc. node                     | 3025 Dec 25 21:18                      | 23° <b>る</b> 22'15                     |                       |
|                                   | 3023 Jun 08 20:18<br>3023 Jul 03 09:08 | 0°€<br>0°∏                       |                       | evening set<br>inferior conj  | 3026 Jan 01 16:28<br>3026 Jan 07 20:07 | 20° <b>ට</b> 26'15<br>16°ට50'38        | 3°18'07               |
| morning set                       | 3023 Jul 09 10:30                      | 7° <b>5</b> 25'09                |                       | minimum elong                 | 3026 Jan 07 12:57                      | 10 03038<br>17°る01'32                  |                       |
| asc. node                         | 3023 Jul 11 02:22                      | 9° <b>5</b> 27'18                |                       | min. Earth dist.              | 3026 Jan 07 11:36                      | 17° <b>ठ</b> 01'32                     | 0.26502 AU            |
| use. Houe                         | 3023 Jul 27 20:12                      | 0°Ω                              |                       | morning rise                  | 3026 Jan 13 09:38                      | 17 <b>さ</b> 0337                       | 0.20302710            |
| max. Earth dist.                  | 3023 Aug 12 13:35                      | 19° <b>Ω</b> 21'06               | 1.73354 AU            | direct                        | 3026 Jan 28 06:03                      | 9° <b>る</b> 12'23                      |                       |
|                                   | C                                      |                                  |                       | greatest brilliancy           | 3026 Feb 06 23:49                      | 11° <b>ට</b> 01'12                     | -4.9m                 |
| superior conj                     | 3023 Aug 14 22:08                      | 22° <b>Ω</b> 15′21               | 1°10'30               |                               | 3026 Mar 07 02:39                      | 0° <b>≈</b>                            |                       |
| minimum elong                     | 3023 Aug 14 13:52                      | 21° <b>Ω</b> 49′52               | 1°10'16               | morning max el                | 3026 Mar 19 14:14                      | 11° <b>≈</b> 52'45                     | 46°46'03              |
|                                   | 3023 Aug 21 04:50                      | 0° <b>m</b>                      |                       |                               | 3026 Apr 05 22:09                      | 0° <b>∀</b>                            |                       |
|                                   | 3023 Sep 14 11:22                      | 0。 <b>ত</b>                      |                       | desc. node                    | 3026 Apr 16 11:11                      | 11° <b>¥</b> 36′22                     |                       |
| evening rise                      | 3023 Sep 20 02:02                      | 6° <b>£</b> 56'42                |                       |                               | 3026 May 02 16:42                      | 0° <b>Υ</b>                            |                       |
|                                   | 3023 Oct 08 16:52                      | 0°M                              |                       |                               | 3026 May 28 10:59                      | 0.8                                    |                       |
| desc. node                        | 3023 Oct 30 16:09                      | 27°M12'18                        |                       |                               | 3026 Jun 22 18:13                      | 0°II                                   |                       |
|                                   | 3023 Nov 01 22:21                      | 0°⊀<br>0° <b>=</b>               |                       | 1                             | 3026 Jul 17 18:28                      | 0°©                                    |                       |
|                                   | 3023 Nov 26 04:29                      | 0°S                              |                       | asc. node                     | 3026 Aug 07 14:08                      | 25°©12'51                              |                       |
|                                   | 3023 Dec 20 12:19<br>3024 Jan 14 00:57 | 0° <b>≫</b>                      |                       |                               | 3026 Aug 11 12:29<br>3026 Sep 05 00:13 | 0° <b>Ω</b><br>0° <b>m</b>             |                       |
|                                   | 3024 Jan 14 00:37<br>3024 Feb 08 01:36 | 0° <b>Υ</b>                      |                       | morning set                   | 3026 Sep 05 00:13<br>3026 Sep 15 12:04 | บาเม<br>12° <b>ก</b> ว 56'48           |                       |
| asc. node                         | 3024 Feb 08 01.36<br>3024 Feb 20 18:57 | 0 <b>γ</b><br>14° <b>Υ</b> 49'02 |                       | morning set                   | 3026 Sep 13 12.04<br>3026 Sep 29 06:26 | 12 1₩3048                              |                       |
|                                   | 3024 Mar 05 06:11                      | 0°8                              |                       | max. Earth dist.              | 3026 Oct 19 14:32                      | 0 <u>—</u><br>25° <b>≏</b> 18'41       | 1.72114 AU            |
| evening max el                    | 3024 Mar 24 16:45                      | 20° <b>8</b> 30'29               | 46°23'06              | and the dist.                 |  |  |                       |
| <i>3</i>                          | 3024 Apr 03 14:58                      | 0°II                             |                       | superior conj                 | 3026 Oct 22 14:23                      | 29° <b>ჲ</b> 02'43                     | 1°11'45               |
| greatest brilliancy               | 3024 May 02 15:43                      | 20° <b>Ⅲ</b> 07'57               | -4.8m                 | minimum elong                 | 3026 Oct 22 23:27                      | 29° <b>₽</b> 31'01                     | 1°11'30               |
| retrograde                        | 3024 May 13 12:39                      | 22° <b>Ⅱ</b> 19'04               |                       | -                             | 3026 Oct 23 08:45                      | $0^{\circ}$ M                          |                       |
| evening set                       | 3024 May 28 20:15                      | 17° <b>Ⅱ</b> 44'07               |                       |                               | 3026 Nov 16 08:51                      | 0° <b>∡</b> ¹                          |                       |
|                                   |  |                                  |                       |                               |  |  |                       |

| desc. node          | 2026 Nov. 27, 04:04                    | 120,7120,57                                |            | morning may al         | 2020 May 21 14:25                      | 24° <b>Ƴ</b> 41'33                       | 46°01'51   |
|---------------------|--|--|------------|------------------------|--|--|------------|
| evening rise        | 3026 Nov 27 04:04<br>3026 Nov 30 20:49 | 13° <b>∡</b> 130'57<br>18° <b>∡</b> 108'48 |            | morning max el         | 3029 May 31 14:35<br>3029 Jun 05 23:58 | 0° <b>8</b>                              | 40 01 31   |
| evening rise        | 3026 Nov 30 20.49<br>3026 Dec 10 07:58 | 18 x·0848                                  |            |                        | 3029 Jul 04 07:23                      | 0°II                                     |            |
|                     | 3020 Dec 10 07:38<br>3027 Jan 03 06:57 | 0°≈  |            |                        | 3029 Jul 30 19:30                      | 0°©                                      |            |
|                     | 3027 Jan 03 00:37<br>3027 Jan 27 07:08 | 0 <b>≈</b><br>0° <b>∺</b>                  |            |                        | 3029 Aug 25 09:47                      | 0° <b>U</b>                              |            |
|                     | 3027 Feb 20 11:13                      | 0° <b>Υ</b>                                |            | asc. node              | 3029 Sep 04 02:05                      | 11° <b>Ω</b> 33'22                       |            |
|                     | 3027 Mar 16 23:31                      | 0°8  |            | asc. node              | =                                      | 0° m)                                    |            |
| 1-                  |  | 4° <b>8</b> 00'05                          |            |                        | 3029 Sep 19 08:54                      | 0∘ <b>⊽</b>                              |            |
| asc. node           | 3027 Mar 20 06:57                      | 4 <b>3</b> 00 03<br>0° <b>I</b>            |            |                        | 3029 Oct 13 20:39                      | 0°M                                      |            |
|                     | 3027 Apr 11 02:39                      |  |            |                        | 3029 Nov 07 00:35                      |  |            |
|                     | 3027 May 07 08:37                      | 0°©  | 45021100   | morning set            | 3029 Nov 25 10:41                      | 23°M02'10                                |            |
| evening max el      | 3027 Jun 04 10:45                      | 29° <b>5</b> 21'07                         | 45°31'00   |                        | 3029 Nov 30 23:57                      | 0° <b>∡</b> 7                            |            |
|                     | 3027 Jun 05 02:54                      | 0°N  |            | desc. node             | 3029 Dec 24 15:45                      | 29° <b>∡</b> ⁴43'13                      |            |
| desc. node          | 3027 Jul 09 20:35                      | 26° <b>Ω</b> 09'03                         |            |                        | 3029 Dec 24 21:05                      | 0°₹                                      |            |
| greatest brilliancy | 3027 Jul 12 09:55                      | 27° <b>Ω</b> 10'41                         | -4.7m      |                        |  | _  |            |
| retrograde          | 3027 Jul 23 02:38                      | 29° <b>Ω</b> 13'19                         |            | superior conj          | 3030 Jan 04 23:46                      | 13° <b>る</b> 58'47                       |            |
| evening set         | 3027 Aug 08 13:31                      | 24° <b>Ω</b> 05'05                         |            | minimum elong          | 3030 Jan 04 16:54                      | 13° <b>る</b> 37'09                       |            |
| inferior conj       | 3027 Aug 13 14:18                      | 21° <b>Ω</b> 01′05                         |            | max. Earth dist.       | 3030 Jan 04 15:10                      |  | 1.71108 AU |
| minimum elong       | 3027 Aug 13 04:53                      | 21° <b>Ω</b> 15'50                         |            |                        | 3030 Jan 17 17:24                      | 0° <b>≈</b>                              |            |
| min. Earth dist.    | 3027 Aug 13 13:12                      | 21° <b>Ω</b> 02'49                         | 0.29039 AU |                        | 3030 Feb 10 14:06                      | 0° <b>∀</b>                              |            |
| morning rise        | 3027 Aug 17 20:12                      | 18° <b>Ω</b> 24'32                         |            | evening rise           | 3030 Feb 15 06:10                      | 5° <b>¥</b> 51'37                        |            |
| direct              | 3027 Sep 04 06:08                      | 12° <b>Ω</b> 43'37                         |            |                        | 3030 Mar 06 12:50                      | $0$ ° $\Upsilon$                         |            |
| greatest brilliancy | 3027 Sep 14 17:59                      | 14° <b>Ω</b> 43'17                         | -4.8m      |                        | 3030 Mar 30 15:49                      | $9^{\circ}$ 8                            |            |
|                     | 3027 Oct 08 18:49                      | 0° <b>m</b> )                              |            | asc. node              | 3030 Apr 16 18:59                      | 21° <b>8</b> 06'22                       |            |
| morning max el      | 3027 Oct 23 18:14                      | 13° <b>m</b> 44'58                         | 46°12'23   |                        | 3030 Apr 24 01:25                      | $\Pi^{\circ}0$                           |            |
| asc. node           | 3027 Oct 30 23:46                      | 21° Mp 03'04                               |            |                        | 3030 May 18 20:11                      | $0$ $\circ$ $\odot$                      |            |
|                     | 3027 Nov 08 10:57                      | 0∘ <b>亚</b>                                |            |                        | 3030 Jun 13 04:08                      | $0^{\circ}\Omega$                        |            |
|                     | 3027 Dec 05 00:08                      | 0° <b>M</b> .                              |            |                        | 3030 Jul 09 09:48                      | 0° <b>m</b> )                            |            |
|                     | 3027 Dec 30 03:17                      | 0° <b>∡</b> ¹                              |            | desc. node             | 3030 Aug 06 08:25                      | 29° m 49'48                              |            |
|                     | 3028 Jan 23 15:36                      | 0°ರ  |            |                        | 3030 Aug 06 12:28                      | 0∘ <u>⊽</u>                              |            |
|                     | 3028 Feb 16 21:29                      | 0° <b>≈</b>                                |            | evening max el         | 3030 Aug 14 14:37                      | 7° <b>£</b> 56'21                        | 45°41'09   |
| desc. node          | 3028 Feb 19 13:25                      | 3°≈18'25                                   |            | <i>5</i>               | 3030 Sep 10 11:40                      | 0° <b>M</b>                              |            |
|                     | 3028 Mar 12 00:59                      | 0° <b>∀</b>                                |            | greatest brilliancy    | 3030 Sep 23 08:12                      | 6°ML17'45                                | -4.8m      |
|                     | 3028 Apr 05 04:25                      | 0° <b>Υ</b>                                |            | retrograde             | 3030 Oct 02 11:05                      | 7° <b>M</b> 49'06                        |            |
| morning set         | 3028 Apr 28 03:17                      | 28° <b>Y</b> ′27′24                        |            | evening set            | 3030 Oct 19 12:51                      | 2°M20'44                                 |            |
| morning sec         | 3028 Apr 29 09:13                      | 0°8  |            | inferior conj          | 3030 Oct 23 11:45                      | 29° <b>£</b> 58'00                       | -7°23'29   |
|                     | 3028 May 23 16:05                      | 0°II                                       |            | minimum elong          | 3030 Oct 23 11:43                      | 29° <b>£</b> 43'21                       |            |
|                     | 3020 Way 23 10.03                      | 0 Д  |            | minimum clong          | 3030 Oct 23 21:17<br>3030 Oct 23 10:27 | 30°R <b>≏</b>                            | / 2134     |
| superior conj       | 3028 Jun 04 21:57                      | 15° <b>Ⅱ</b> 05'05                         | 0°16'07    | min. Earth dist.       | 3030 Oct 24 11:28                      | 29° <b>£</b> 21'34                       | 0.27773 AU |
| minimum elong       | 3028 Jun 04 21:37<br>3028 Jun 05 01:24 | 15 <b>H</b> 05 05 15° <b>H</b> 15'42       |            |                        | 3030 Oct 24 11:28<br>3030 Oct 28 05:11 | 29 <b>=</b> 21 34<br>27° <b>⊆</b> 07'13  | 0.27773 AU |
| max. Earth dist.    | 3028 Jun 06 13:41                      |  | 1.73314 AU | morning rise<br>direct | 3030 Nov 13 13:13                      | 21° <b>£</b> 55′56                       |            |
| asc. node           |  | 23° <b>II</b> 25'32                        | 1./3314 AU |                        |  | 21° <b>⊆</b> 33'30<br>24° <b>⊆</b> 17'41 | -4.9m      |
| asc. node           | 3028 Jun 11 16:35<br>3028 Jun 17 00:49 | 23 <b>п</b> 23 32<br>0° <b>9</b>           |            | greatest brilliancy    | 3030 Nov 24 19:42                      | 24 <b>≗</b> 1741<br>25° <b>≗</b> 27'20   | -4.9111    |
|                     |  |  |            | asc. node              | 3030 Nov 27 11:24                      |  |            |
|                     | 3028 Jul 11 10:46                      | 0° <b>N</b>                                |            |                        | 3030 Dec 05 09:35                      | 0°M                                      | 46052115   |
| evening rise        | 3028 Jul 11 14:11                      | 0° <b>Ω</b> 10'31                          |            | morning max el         | 3031 Jan 03 05:13                      | 25°M07'18                                | 46°53'15   |
|                     | 3028 Aug 04 21:38                      | 0° <b>m</b> )                              |            |                        | 3031 Jan 07 22:35                      | 0° <b>∡</b> 7                            |            |
|                     | 3028 Aug 29 10:05                      | ია <b>დ</b>                                |            |                        | 3031 Feb 04 01:02                      | 5°0                                      |            |
|                     | 3028 Sep 23 01:26                      | 0°M  |            |                        | 3031 Mar 01 13:47                      | 0° <b>≈</b>                              |            |
| desc. node          | 3028 Oct 01 06:17                      | 9° <b>M</b> 56′20                          |            | desc. node             | 3031 Mar 19 01:21                      | 21°≈00'00                                |            |
|                     | 3028 Oct 17 21:13                      | 0° <b>∡</b> ¹                              |            |                        | 3031 Mar 26 11:55                      | 0° <b>∀</b>                              |            |
|                     | 3028 Nov 11 23:46                      | 0°ප  |            |                        | 3031 Apr 20 03:59                      | 0° <b>Υ</b>                              |            |
|                     | 3028 Dec 07 15:22                      | 0° <b>≈</b>                                |            |                        | 3031 May 14 17:53                      | 0° <b>8</b>                              |            |
|                     | 3029 Jan 03 16:28                      | 0° <b>∀</b>                                |            |                        | 3031 Jun 08 07:11                      | $\Pi^{\circ}0$                           |            |
| evening max el      | 3029 Jan 09 17:46                      | 6° <b>∺</b> 17'09                          | 47°14'31   |                        | 3031 Jul 02 19:47                      | 0ංම                                      |            |
| asc. node           | 3029 Jan 22 09:12                      | 18° <b>∺</b> 33'10                         |            | morning set            | 3031 Jul 07 04:35                      | 5° <b>5</b> 20'57                        |            |
|                     | 3029 Feb 05 07:00                      | $\mathbf{\gamma}_0$                        |            | asc. node              | 3031 Jul 10 04:22                      | 9° <b>©</b> 00'54                        |            |
| greatest brilliancy | 3029 Feb 19 08:23                      | 7° <b>Ƴ</b> 53'30                          | -4.9m      |                        | 3031 Jul 27 06:43                      | $0 {\circ} \Omega$                       |            |
| retrograde          | 3029 Mar 01 14:42                      | 9° <b>Ƴ</b> 53'36                          |            | max. Earth dist.       | 3031 Aug 10 12:05                      | 17° <b>Ω</b> 30'05                       | 1.73384 AU |
| evening set         | 3029 Mar 19 15:51                      | 3° <b>Y</b> 36'30                          |            |                        |  |  |            |
| min. Earth dist.    | 3029 Mar 22 01:12                      | 2° <b>Ƴ</b> 07'19                          | 0.27678 AU | superior conj          | 3031 Aug 12 16:35                      | 20° <b>Ω</b> 11'51                       | 1°08'42    |
| inferior conj       | 3029 Mar 22 12:50                      | 1° <b>Y</b> 49'03                          | 8°50'08    | minimum elong          | 3031 Aug 12 08:06                      | 19° <b>Ω</b> 45'41                       | 1°08'27    |
| minimum elong       | 3029 Mar 22 15:21                      | 1° <b>Y</b> 45'06                          | 8°50'02    |                        | 3031 Aug 20 15:22                      | 0° <b>m</b> )                            |            |
|                     | 3029 Mar 25 11:08                      | 30° <b>₹</b> ₩                             |            |                        | 3031 Sep 13 22:02                      | 0∘ <b>⊽</b>                              |            |
| morning rise        | 3029 Mar 25 15:02                      | 29° <b>)</b> 54′06                         |            | evening rise           | 3031 Sep 17 19:17                      | 4° <b>≏</b> 48'28                        |            |
| direct              | 3029 Apr 12 07:57                      | 23° <b>)</b> 54′23                         |            |                        | 3031 Oct 08 03:45                      | 0°M₊                                     |            |
| greatest brilliancy | 3029 Apr 21 12:57                      | 25° <b>)</b> 29′01                         | -4.8m      | desc. node             | 3031 Oct 29 18:11                      | 26°M44'08                                |            |
| ,                   | 3029 May 01 05:40                      | $0^{\circ}\Upsilon$                        |            |                        | 3031 Nov 01 09:31                      | 0° <b>∡</b> ¹                            |            |
| desc. node          | 3029 May 13 22:54                      | 8° <b>Ƴ</b> 55'46                          |            |                        | 3031 Nov 25 16:00                      | 0°ರ                                      |            |
|                     | -                                      |  |            |                        |  |  |            |

|                     | 3031 Dec 20 00:20                      | 0° <b>≈</b>                  |            |                     | 3034 Aug 10 23:18                      | $0^{\circ}\Omega$                      |            |
|---------------------|--|------------------------------|------------|---------------------|--|--|------------|
|                     | 3031 Dec 20 00:20<br>3032 Jan 13 13:43 | 0 <b>≈</b><br>0° <b>∺</b>    |            |                     | 3034 Sep 04 10:51                      | 0°Mp                                   |            |
|                     | 3032 Jan 13 13:43<br>3032 Feb 07 15:41 | 0                            |            | morning set         | 3034 Sep 04 10.31<br>3034 Sep 13 05:20 | 10°Mp49'10                             |            |
| asc. node           | 3032 Feb 19 21:02                      | 14° <b>Υ</b> 11'37           |            | morning set         | 3034 Sep 28 17:01                      | 0° <b>⊽</b>                            |            |
| use. Houe           | 3032 Mar 04 23:11                      | 0°8                          |            | max. Earth dist.    | 3034 Oct 17 03:05                      | o <b>—</b><br>22° <b>Ω</b> 55'08       | 1.72166 AU |
| evening max el      | 3032 Mar 22 08:35                      | 18° <b>8</b> 16'39           | 46°25'33   | max. Dartii dist.   | 3034 Oct 17 03.03                      | 22 =33 00                              | 1.72100710 |
| evening max er      | 3032 Apr 03 18:07                      | 0°II                         | 40 23 33   | superior conj       | 3034 Oct 20 06:01                      | 26° <b>≏</b> 48'39                     | 1°13'32    |
| greatest brilliancy | 3032 Apr 30 07:56                      | 17° <b>Ⅱ</b> 56'57           | -4.8m      | minimum elong       | 3034 Oct 20 14:39                      | 27° <b>£</b> 15'36                     |            |
| retrograde          | 3032 May 11 05:39                      | 20°II08'42                   | 1.0111     | minimum crong       | 3034 Oct 22 19:22                      | 0°M                                    | 1 13 17    |
| evening set         | 3032 May 26 14:03                      | 15° <b>Ⅲ</b> 31'22           |            |                     | 3034 Nov 15 19:37                      | 0° <b>⊼</b>                            |            |
| inferior conj       | 3032 Jun 01 13:50                      | 11° <b>∏</b> 54'14           | 2°06'17    | desc. node          | 3034 Nov 26 06:02                      | 13° <b>₹</b> 03'11                     |            |
| minimum elong       | 3032 Jun 01 18:24                      | 11° <b>Ⅱ</b> 47'06           | 2°04'57    | evening rise        | 3034 Nov 28 09:12                      | 15° <b>∡</b> ′43'18                    |            |
| min. Earth dist.    | 3032 Jun 01 11:43                      | 11° <b>Ⅱ</b> 57'33           | 0.28629 AU | C                   | 3034 Dec 09 18:54                      | 8°0                                    |            |
| morning rise        | 3032 Jun 07 23:05                      | 8° <b>Ⅱ</b> 04'35            |            |                     | 3035 Jan 02 18:05                      | 0° <b>≈</b>                            |            |
| desc. node          | 3032 Jun 10 10:36                      | 6° <b>Ⅱ</b> 48'07            |            |                     | 3035 Jan 26 18:30                      | 0° <b>)</b> €                          |            |
| direct              | 3032 Jun 22 22:57                      | 3° <b>Ⅱ</b> 42'30            |            |                     | 3035 Feb 19 22:52                      | $0^{\circ}$ Y                          |            |
| greatest brilliancy | 3032 Jul 03 01:31                      | 5° <b>Ⅲ</b> 33'15            | -4.7m      |                     | 3035 Mar 16 11:43                      | 0°8                                    |            |
|                     | 3032 Aug 07 01:49                      | 0∘ <b>©</b>                  |            | asc. node           | 3035 Mar 19 09:02                      | 3° <b>8</b> 29'19                      |            |
| morning max el      | 3032 Aug 10 17:07                      | 3°524'54                     | 45°43'10   |                     | 3035 Apr 10 15:55                      | $\Pi^{\circ}0$                         |            |
|                     | 3032 Sep 05 14:28                      | $0^{\circ}\Omega$            |            |                     | 3035 May 07 00:13                      | 0° <b>©</b>                            |            |
| asc. node           | 3032 Oct 01 14:01                      | 29° <b>Ω</b> 13'52           |            | evening max el      | 3035 Jun 02 02:06                      | 27° <b>5</b> 09'20                     | 45°31'55   |
|                     | 3032 Oct 02 05:56                      | 0° <b>m</b>                  |            | -                   | 3035 Jun 05 01:36                      | $0^{\circ}\Omega$                      |            |
|                     | 3032 Oct 27 13:55                      | 0∘ <b>⊽</b>                  |            | desc. node          | 3035 Jul 08 22:42                      | 24° <b>Ω</b> 36′06                     |            |
|                     | 3032 Nov 21 04:11                      | $0^{\circ}$ M                |            | greatest brilliancy | 3035 Jul 10 01:50                      | 25° <b>Ω</b> 02'05                     | -4.7m      |
|                     | 3032 Dec 15 08:37                      | 0° <b>∡</b> ¹                |            | retrograde          | 3035 Jul 20 18:13                      | 27° <b>Ω</b> 04'56                     |            |
|                     | 3033 Jan 08 08:11                      | 8°0                          |            | evening set         | 3035 Aug 06 02:50                      | 22° <b>Ω</b> 00'57                     |            |
| desc. node          | 3033 Jan 21 03:37                      | 16° <b>පි</b> 04'17          |            | inferior conj       | 3035 Aug 11 06:40                      | 18° <b>Ω</b> 52'36                     | -6°48'51   |
|                     | 3033 Feb 01 05:50                      | 0°≈                          |            | minimum elong       | 3035 Aug 10 21:03                      | 19° <b>Ω</b> 07'40                     | 6°47'09    |
| morning set         | 3033 Feb 09 18:33                      | 10° <b>≈</b> 42'36           |            | min. Earth dist.    | 3035 Aug 11 05:15                      | 18° <b>Ω</b> 54'49                     | 0.29042 AU |
|                     | 3033 Feb 25 03:23                      | 0° <b>)</b> €                |            | morning rise        | 3035 Aug 15 15:10                      | 16° <b>Ω</b> 11'58                     |            |
|                     | 3033 Mar 21 02:17                      | $0^{\circ}\mathbf{\Upsilon}$ |            | direct              | 3035 Sep 01 22:11                      | 10° <b>Ω</b> 35′07                     |            |
|                     |  |                              |            | greatest brilliancy | 3035 Sep 12 10:02                      | 12° <b>Ω</b> 34'14                     | -4.8m      |
| superior conj       | 3033 Mar 22 17:35                      | 2° <b>Y</b> ′02'49           | -1°25'55   |                     | 3035 Oct 09 00:02                      | O° Mp                                  |            |
| minimum elong       | 3033 Mar 22 20:09                      | 2° <b>Y</b> 10'48            | 1°25'55    | morning max el      | 3035 Oct 21 08:13                      | 11° <b>M</b> )28'11                    | 46°10'54   |
| max. Earth dist.    | 3033 Mar 26 14:27                      | 6° <b>Y</b> 52'50            | 1.71868 AU | asc. node           | 3035 Oct 30 01:42                      | 20° <b>m</b> 18'43                     |            |
|                     | 3033 Apr 14 03:55                      | 0°B                          |            |                     | 3035 Nov 08 04:04                      | 0∘ <b>ত</b>                            |            |
| evening rise        | 3033 May 01 07:03                      | 21° <b>8</b> 14'16           |            |                     | 3035 Dec 04 14:07                      | 0° <b>M</b>                            |            |
|                     | 3033 May 08 09:20                      | $\Pi$ $\circ 0$              |            |                     | 3035 Dec 29 15:58                      | 0°⊀                                    |            |
| asc. node           | 3033 May 14 06:46                      | 7° <b>Ⅱ</b> 15'48            |            |                     | 3036 Jan 23 03:37                      | 0°రె                                   |            |
|                     | 3033 Jun 01 19:08                      | $0$ $\circ$ $\odot$          |            |                     | 3036 Feb 16 09:05                      | 0° <b>≈</b>                            |            |
|                     | 3033 Jun 26 09:49                      | $0^{\circ}\Omega$            |            | desc. node          | 3036 Feb 18 15:33                      | 2° <b>≈</b> 49'07                      |            |
|                     | 3033 Jul 21 06:40                      | 0° <b>™</b>                  |            |                     | 3036 Mar 11 12:17                      | 0° <b>)</b> €                          |            |
|                     | 3033 Aug 15 12:36                      | 0∘ <b>⊽</b>                  |            |                     | 3036 Apr 04 15:26                      | $0$ ° $\Upsilon$                       |            |
| desc. node          | 3033 Sep 02 20:21                      | 21° <b>≏</b> 21'32           |            | morning set         | 3036 Apr 25 17:58                      | 26° <b>Y</b> 10'46                     |            |
|                     | 3033 Sep 10 09:08                      | 0°M₊                         |            |                     | 3036 Apr 28 20:02                      | 0°8                                    |            |
|                     | 3033 Oct 07 08:32                      | 0° <b>∡</b>                  |            |                     | 3036 May 23 02:47                      | $\Pi$ °0                               |            |
| evening max el      | 3033 Oct 26 17:31                      | 20° <b>∡</b> '02'59          | 46°43'31   |                     |  |  |            |
|                     | 3033 Nov 06 06:15                      | 0°ಕ                          |            | superior conj       | 3036 Jun 02 14:32                      | 12° <b>∏</b> 55'36                     |            |
| greatest brilliancy | 3033 Dec 05 23:00                      | 20°る14'06                    | -4.9m      | minimum elong       | 3036 Jun 02 18:40                      | 13° <b>Ⅱ</b> 08'18                     |            |
| retrograde          | 3033 Dec 15 20:19                      | 22° <b>ろ</b> 04'06           |            | max. Earth dist.    | 3036 Jun 04 08:45                      | 15° <b>Ⅱ</b> 05'35                     | 1.73280 AU |
| asc. node           | 3033 Dec 24 23:20                      | 20° <b>る</b> 21'42           |            | asc. node           | 3036 Jun 10 18:34                      | 22° <b>∏</b> 58'52                     |            |
| evening set         | 3033 Dec 30 03:37                      | 17°る59'32                    |            |                     | 3036 Jun 16 11:28                      | 0°©                                    |            |
| inferior conj       | 3034 Jan 05 08:15                      | 14°る22'22                    | 2°54'49    | evening rise        | 3036 Jul 09 08:37                      | 28° <b>©</b> 06'55                     |            |
| minimum elong       | 3034 Jan 05 01:50                      | 14°る32'09                    | 2°52'50    |                     | 3036 Jul 10 21:27                      | 0° <b>N</b>                            |            |
| min. Earth dist.    | 3034 Jan 05 00:57                      | 14° <b>る</b> 33'29           | 0.26494 AU |                     | 3036 Aug 04 08:29                      | 0° <b>m</b> y                          |            |
| morning rise        | 3034 Jan 11 00:14                      | 11° <b>る</b> 03'07           |            |                     | 3036 Aug 28 21:14                      | 0∘ <b>m</b>                            |            |
| direct              | 3034 Jan 25 18:47                      | 6°る44'22                     | 4.0        |                     | 3036 Sep 22 13:04                      | 0°M                                    |            |
| greatest brilliancy | 3034 Feb 04 13:15                      | 8° <b>る</b> 33'47            | -4.9m      | desc. node          | 3036 Sep 30 08:20                      | 9°M26'46                               |            |
|                     | 3034 Mar 07 07:43                      | 0°≈<br>0°≈ •27!4€            | 46047111   |                     | 3036 Oct 17 09:35                      | 0° <b>∡</b> ¹                          |            |
| morning max el      | 3034 Mar 17 03:11                      | 9° <b>≈</b> 27'46            | 46~4/11    |                     | 3036 Nov 11 13:17                      | ිද<br>ව°00                             |            |
| 1 1                 | 3034 Apr 05 16:00                      | 0° <b>)</b> ( 57!00          |            |                     | 3036 Dec 07 06:59                      | 0° <b>≈</b>                            |            |
| desc. node          | 3034 Apr 15 13:16                      | 10° <b>)</b> €57'00          |            | ·                   | 3037 Jan 03 13:04                      | 0° <b>)</b> (51132                     | 4701 4146  |
|                     | 3034 May 02 07:06                      | 0°Υ<br>                      |            | evening max el      | 3037 Jan 07 06:53                      | 3° <b>¥</b> 51'32                      | 47°14'46   |
|                     | 3034 May 27 23:44                      | 0° <b>Η</b>                  |            | asc. node           | 3037 Jan 21 11:17                      | 17° <b>)</b> 31'31<br>0° <b>℃</b>      |            |
|                     | 3034 Jun 22 05:59                      | 0° <b>∏</b>                  |            |                     | 3037 Feb 06 08:41                      |  | 4.0-       |
| 000 m-J-            | 3034 Jul 17 05:39                      | 0°55                         |            | greatest brilliancy | 3037 Feb 16 23:32                      | 5° <b>Υ</b> 32'06<br>7° <b>Υ</b> 31'40 | -4.9m      |
| asc. node           | 3034 Aug 06 16:18                      | 24° <b>©</b> 46'18           |            | retrograde          | 3037 Feb 27 04:37                      | / 13140                                |            |

| . ,                 | 2027 M 17 07 10   | 100014121                          |                |                     | 2020 4 10 10 41   | 100 0000                         | 1006146     |
|---------------------|-------------------|------------------------------------|----------------|---------------------|-------------------|----------------------------------|-------------|
| evening set         | 3037 Mar 17 06:18 | 1°Υ14'31                           |                | superior conj       | 3039 Aug 10 10:41 | 18°Ω06'28                        | 1°06'46     |
|                     | 3037 Mar 19 06:24 | 30° <b>₹</b>                       | 0.05(0.0 1.11) | minimum elong       | 3039 Aug 10 02:02 | 17° <b>Ω</b> 39'49               | 1°06'31     |
| min. Earth dist.    | 3037 Mar 19 14:58 | 29° <b>)</b> 46′36                 | 0.27636 AU     |                     | 3039 Aug 20 02:09 | 0° m/                            |             |
| inferior conj       | 3037 Mar 20 02:56 | 29° <b>)</b> €27'51                |                |                     | 3039 Sep 13 08:56 | 0∘ <b>⊽</b>                      |             |
| minimum elong       | 3037 Mar 20 04:33 | 29° <b>∺</b> 25′18                 | 8°52'38        | evening rise        | 3039 Sep 15 12:22 | 2° <b>₽</b> 39'03                |             |
| morning rise        | 3037 Mar 23 02:58 | 27° <b>)</b> ₹36′15                |                |                     | 3039 Oct 07 14:53 | $0^{\circ}$ M                    |             |
| direct              | 3037 Apr 09 20:56 | 21° <b>)</b> 33'39                 |                | desc. node          | 3039 Oct 28 20:09 | 26°M15′02                        |             |
| greatest brilliancy | 3037 Apr 19 02:41 | 23° <b>)</b> €08'49                | -4.8m          |                     | 3039 Oct 31 20:56 | 0° <b>∡</b> 7                    |             |
|                     | 3037 May 02 13:07 | $0^{\circ}$ Y                      |                |                     | 3039 Nov 25 03:47 | 0°ಕ                              |             |
| desc. node          | 3037 May 13 00:50 | 7° <b>Ƴ</b> 49'49                  |                |                     | 3039 Dec 19 12:36 | 0° <b>≈</b>                      |             |
| morning max el      | 3037 May 29 04:20 | 22° <b>Y</b> 23'00                 | 46°03'19       |                     | 3040 Jan 13 02:43 | 0° <b>∀</b>                      |             |
|                     | 3037 Jun 05 20:36 | 0°B                                |                |                     | 3040 Feb 07 06:02 | $0^{\circ}$ Y                    |             |
|                     | 3037 Jul 03 22:38 | $\Pi$ $^{\circ}0$                  |                | asc. node           | 3040 Feb 18 23:08 | 13° <b>Y</b> 33'36               |             |
|                     | 3037 Jul 30 08:35 | $0$ $\circ$ $\odot$                |                |                     | 3040 Mar 04 16:38 | 0°8                              |             |
|                     | 3037 Aug 24 21:46 | $\mathfrak{O}^{\circ}\mathfrak{O}$ |                | evening max el      | 3040 Mar 20 00:45 | 16° <b>8</b> 03'10               | 46°27'48    |
| asc. node           | 3037 Sep 03 04:07 | 11° <b>Ω</b> 04'18                 |                |                     | 3040 Apr 03 23:16 | $\Pi^{\circ}0$                   |             |
|                     | 3037 Sep 18 20:17 | o° mp                              |                | greatest brilliancy | 3040 Apr 28 00:15 | 15° <b>Ⅱ</b> 45'19               | -4.8m       |
|                     | 3037 Oct 13 07:44 | 0∘ <del>⊽</del>                    |                | retrograde          | 3040 May 08 22:23 | 17° <b>Ⅲ</b> 57'04               |             |
|                     | 3037 Nov 06 11:31 | 0°M                                |                | evening set         | 3040 May 24 07:56 | 13° <b>Ⅱ</b> 17'27               |             |
| morning set         | 3037 Nov 23 00:08 | 20°M39'48                          |                | inferior conj       | 3040 May 30 05:50 | 9° <b>Ⅱ</b> 42'35                | 2°26'04     |
|                     | 3037 Nov 30 10:51 | 0° <b>⊼</b>                        |                | minimum elong       | 3040 May 30 11:03 | 9° <b>∏</b> 34'24                |             |
| desc. node          | 3037 Dec 23 17:51 | 29° <b>х</b> 15′36                 |                | min. Earth dist.    | 3040 May 30 03:33 | 9° <b>Ⅱ</b> 46'11                | 0.28608 AU  |
| dese. Hode          | 3037 Dec 24 07:59 | 0° <b>ප</b>                        |                | morning rise        | 3040 Jun 05 14:38 | 5° <b>Ⅱ</b> 53'44                | 0.20000 710 |
|                     | 3037 DCC 24 07.37 | 0 0                                |                | desc. node          | 3040 Jun 09 12:46 | 3° <b>I</b> I58'01               |             |
| superior conj       | 3038 Jan 02 10:21 | 11° <b>る</b> 26'48                 | 0023102        | direct              | 3040 Jun 20 15:13 | 1° <b>I</b> I31'20               |             |
|                     | 3038 Jan 02 04:23 | 11 <b>3</b> 2048                   |                |                     | 3040 Jun 30 16:13 | 3° <b>Ⅱ</b> 21'09                | -4.7m       |
| minimum elong       |                   |                                    |                | greatest brilliancy |                   | 3 <b>п</b> 2109                  | -4. /III    |
| max. Earth dist.    | 3038 Jan 01 23:21 |                                    | 1.71121 AU     |                     | 3040 Aug 07 01:31 |                                  | 45042152    |
|                     | 3038 Jan 17 04:19 | 0° <b>≈</b>                        |                | morning max el      | 3040 Aug 08 09:26 | 1° <b>©</b> 15'37                | 45°42'53    |
|                     | 3038 Feb 10 01:04 | 0° <b>)</b> {                      |                |                     | 3040 Sep 05 06:32 | 0° <b>N</b>                      |             |
| evening rise        | 3038 Feb 12 16:46 | 3° <b>)</b> € 19'53                |                | asc. node           | 3040 Sep 30 16:00 | 28° <b>Ω</b> 40'08               |             |
|                     | 3038 Mar 05 23:54 | 0° <b>Υ</b>                        |                |                     | 3040 Oct 01 19:29 | 0° m)                            |             |
|                     | 3038 Mar 30 03:03 | 0°8                                |                |                     | 3040 Oct 27 02:20 | 0∘ <b>⊽</b>                      |             |
| asc. node           | 3038 Apr 15 20:53 | 20° <b>8</b> 37'19                 |                |                     | 3040 Nov 20 16:02 | 0° <b>M</b>                      |             |
|                     | 3038 Apr 23 12:55 | $\Pi$ $^{\circ}0$                  |                |                     | 3040 Dec 14 20:10 | 0° <b>∡</b>                      |             |
|                     | 3038 May 18 08:12 | $0$ $\circ$ $\odot$                |                |                     | 3041 Jan 07 19:33 | 0°ಕ                              |             |
|                     | 3038 Jun 12 17:09 | $0 {\circ} \Omega$                 |                | desc. node          | 3041 Jan 20 05:43 | 15° <b>る</b> 35'23               |             |
|                     | 3038 Jul 09 00:54 | O° <b>m</b> y                      |                |                     | 3041 Jan 31 17:04 | 0° <b>≈</b>                      |             |
| desc. node          | 3038 Aug 05 10:33 | 29° <b>m</b> 04'11                 |                | morning set         | 3041 Feb 07 04:32 | 8° <b>≈</b> 08'06                |             |
|                     | 3038 Aug 06 08:59 | 0∘ <b>⊽</b>                        |                |                     | 3041 Feb 24 14:30 | 0° <b>∀</b>                      |             |
| evening max el      | 3038 Aug 12 04:54 | 5° <b>≏</b> 40'49                  | 45°39'46       |                     |                   |                                  |             |
|                     | 3038 Sep 11 21:43 | $0^{\circ}$ M.                     |                | superior conj       | 3041 Mar 20 05:49 | 29° <b>∺</b> 36′36               | -1°26'17    |
| greatest brilliancy | 3038 Sep 20 20:21 | 3°M58'28                           | -4.8m          | minimum elong       | 3041 Mar 20 07:24 | 29° <b>)</b> 41′33               | 1°26'17     |
| retrograde          | 3038 Sep 30 01:12 | 5° <b>™</b> 31′08                  |                |                     | 3041 Mar 20 13:19 | $0^{\circ}$ $\Upsilon$           |             |
| evening set         | 3038 Oct 17 05:36 | 29° <b>≏</b> 57'47                 |                | max. Earth dist.    | 3041 Mar 24 05:08 | 4° <b>Y</b> '34'26               | 1.71815 AU  |
|                     | 3038 Oct 17 04:04 | 30° <b>₽</b> Ω                     |                |                     | 3041 Apr 13 14:53 | 0°8                              |             |
| inferior conj       | 3038 Oct 21 01:47 | 27° <b>£</b> 38'52                 | -7°34'34       | evening rise        | 3041 Apr 28 21:38 | 18° <b>8</b> 56'59               |             |
| minimum elong       | 3038 Oct 21 10:57 | 27° <b>≏</b> 24'48                 | 7°33'10        | Ü                   | 3041 May 07 20:19 | 0°II                             |             |
| min. Earth dist.    | 3038 Oct 22 01:03 | 27° <b>Ω</b> 03'10                 |                | asc. node           | 3041 May 13 08:49 | 6° <b>Ⅱ</b> 48'13                |             |
| morning rise        | 3038 Oct 25 15:51 | 24° <b>≏</b> 53'07                 |                |                     | 3041 Jun 01 06:16 | 0°©                              |             |
| direct              | 3038 Nov 11 04:24 | 19° <b>£</b> 35'48                 |                |                     | 3041 Jun 25 21:17 | $0^{\circ}\Omega$                |             |
| greatest brilliancy | 3038 Nov 22 10:25 | 21° <b>⊆</b> 57'33                 | -4 9m          |                     | 3041 Jul 20 18:41 | 0° m)                            |             |
| asc. node           | 3038 Nov 26 13:27 | 23° <b>⊆</b> 50'55                 | 4.7111         |                     | 3041 Aug 15 01:34 | 0∘ <del>ت</del><br>مار           |             |
| ase. Houe           | 3038 Dec 06 09:07 | 0°M                                |                | desc. node          | 3041 Sep 01 22:21 | ა <b>_</b><br>20° <b>ჲ</b> 46'49 |             |
| morning max el      | 3038 Dec 30 09:07 | 22°M48'11                          | 46°52'34       | desc. node          | 3041 Sep 09 23:51 | 0°M                              |             |
| morning max er      |                   | 0° <b>×</b> 7                      | 40 32 34       |                     | =                 | 0° <b>∕</b> 7¹                   |             |
|                     | 3039 Jan 07 18:56 | 0° <b>⊼</b> .                      |                |                     | 3041 Oct 07 02:57 |                                  | 46041114    |
|                     | 3039 Feb 03 16:33 |                                    |                | evening max el      | 3041 Oct 24 07:13 | 17° <b>∡</b> 740′07              | 46°41'14    |
|                     | 3039 Mar 01 03:19 | 0°≈                                |                |                     | 3041 Nov 06 12:57 | 0°る                              | 4.0         |
| desc. node          | 3039 Mar 18 03:24 | 20°≈27'37                          |                | greatest brilliancy | 3041 Dec 03 12:26 | 17° <b>3</b> 46'04               | -4.9m       |
|                     | 3039 Mar 26 00:24 | 0° <b>)</b> €                      |                | retrograde          | 3041 Dec 13 08:08 | 19° <b>る</b> 34'19               |             |
|                     | 3039 Apr 19 15:50 | 0° <b>Υ</b>                        |                | asc. node           | 3041 Dec 24 01:29 | 17° <b>る</b> 14'36               |             |
|                     | 3039 May 14 05:19 | 0°8                                |                | evening set         | 3041 Dec 27 15:03 | 15° <b>පි</b> 31'35              |             |
|                     | 3039 Jun 07 18:18 | 0°Щ                                |                | inferior conj       | 3042 Jan 02 20:27 | 11° <b>る</b> 53'21               | 2°31'17     |
|                     | 3039 Jul 02 06:40 | $0$ $\circ$ $\odot$                |                | minimum elong       | 3042 Jan 02 14:49 | 12° <b>る</b> 01'56               |             |
| morning set         | 3039 Jul 04 22:17 | 3° <b>©</b> 14'49                  |                | min. Earth dist.    | 3042 Jan 02 14:44 | 12° <b>る</b> 02'04               | 0.26487 AU  |
| asc. node           | 3039 Jul 09 06:31 | 8° <b>5</b> 34'12                  |                | morning rise        | 3042 Jan 08 14:41 | 8° <b>る</b> 30'42                |             |
|                     | 3039 Jul 26 17:30 | $0$ $^{\circ}$ $\Omega$            |                | direct              | 3042 Jan 23 07:04 | 4° <b>る</b> 15'22                |             |
| max. Earth dist.    | 3039 Aug 08 10:15 | 15° <b>Ω</b> 37'19                 | 1.73407 AU     | greatest brilliancy | 3042 Feb 02 03:18 | 6° <b>ප</b> 06'01                | -4.9m       |

|                     | 3042 Mar 07 11:23 | 0° <b>≈</b>                  |            |                     | 3044 Oct 16 22:24                      | 0° <b>∡</b> ¹                    |            |
|---------------------|-------------------|------------------------------|------------|---------------------|--|----------------------------------|------------|
| morning max el      | 3042 Mar 14 15:16 | 6°≈59'29                     | 46°48'25   |                     | 3044 Nov 11 03:21                      | 0° <b>ਰ</b>                      |            |
| morning man er      | 3042 Apr 05 09:46 | 0° <b>)</b> €                | .0 .0 20   |                     | 3044 Dec 06 23:15                      | 0° <b>≈</b>                      |            |
| desc. node          | 3042 Apr 14 15:11 | 10° <b>)</b> 16'42           |            |                     | 3045 Jan 03 10:48                      | 0° <b>)</b> €                    |            |
|                     | 3042 May 01 21:36 | 0°Υ                          |            | evening max el      | 3045 Jan 04 20:18                      | 1° <b>)</b> 25'41                | 47°15'14   |
|                     | 3042 May 27 12:39 | 0°8                          |            | asc. node           | 3045 Jan 20 13:19                      | 16° <b>)</b> €27'10              |            |
|                     | 3042 Jun 21 18:00 | 0°II                         |            |                     | 3045 Feb 07 21:43                      | $0^{\circ}\Upsilon$              |            |
|                     | 3042 Jul 16 17:08 | 0°ಅ                          |            | greatest brilliancy | 3045 Feb 14 14:00                      | 3° <b>Y</b> 08'56                | -4.9m      |
| asc. node           | 3042 Aug 05 18:18 | 24°518'14                    |            | retrograde          | 3045 Feb 24 18:57                      | 5° <b>Ƴ</b> 08'58                |            |
|                     | 3042 Aug 10 10:29 | $0^{\circ}\Omega$            |            | 8                   | 3045 Mar 12 22:40                      | 30°₽ <b>)</b> €                  |            |
|                     | 3042 Sep 03 21:53 | 0° <b>m</b> )                |            | evening set         | 3045 Mar 14 20:18                      | 28° <b>)</b> 52′03               |            |
| morning set         | 3042 Sep 10 22:18 | 8° m 39'23                   |            | min. Earth dist.    | 3045 Mar 17 04:18                      | 27° <b>¥</b> 25'25               | 0.27591 AU |
| C                   | 3042 Sep 28 04:00 | 0∘ <u>⊽</u>                  |            | inferior conj       | 3045 Mar 17 16:59                      | 27° <b>)</b> €05'36              | 8°54'24    |
| max. Earth dist.    | 3042 Oct 14 16:17 | 20° <b>ჲ</b> 32'24           | 1.72217 AU | minimum elong       | 3045 Mar 17 17:42                      | 27° <b>)</b> €04'28              | 8°54'23    |
|                     |                   |                              |            | morning rise        | 3045 Mar 20 15:15                      | 25° <b>)</b> 16′56               |            |
| superior conj       | 3042 Oct 17 21:25 | 24° <b>£</b> 32'45           | 1°15'13    | direct              | 3045 Apr 07 10:06                      | 19° <b>)</b> 11'55               |            |
| minimum elong       | 3042 Oct 18 05:36 | 24° <b>£</b> 58'14           | 1°15'01    | greatest brilliancy | 3045 Apr 16 15:54                      | 20° <b>)</b> 47′23               | -4.8m      |
| S                   | 3042 Oct 22 06:24 | 0°M                          |            |                     | 3045 May 03 12:08                      | $_{0}$ ° $\gamma$                |            |
|                     | 3042 Nov 15 06:45 | 0° <b>∡</b> ¹                |            | desc. node          | 3045 May 12 03:00                      | 6° <b>Ƴ</b> 45'25                |            |
| desc. node          | 3042 Nov 25 08:08 | 12° <b>₹</b> 34'43           |            | morning max el      | 3045 May 26 19:03                      | 20° <b>Y</b> 06′08               | 46°04'51   |
| evening rise        | 3042 Nov 25 21:25 | 13° <b>∡</b> 16'17           |            |                     | 3045 Jun 05 16:48                      | 0°8                              |            |
| Č                   | 3042 Dec 09 06:12 | ರ°0                          |            |                     | 3045 Jul 03 13:51                      | 0°II                             |            |
|                     | 3043 Jan 02 05:35 | 0° <b>≈</b>                  |            |                     | 3045 Jul 29 21:44                      | 0ಂತಾ                             |            |
|                     | 3043 Jan 26 06:13 | 0° <b>)</b> €                |            |                     | 3045 Aug 24 09:50                      | $0^{\circ}\Omega$                |            |
|                     | 3043 Feb 19 10:54 | $_{0}$ $^{\circ}$ $\Upsilon$ |            | asc. node           | 3045 Sep 02 06:08                      | 10° <b>Ω</b> 34'52               |            |
|                     | 3043 Mar 16 00:18 | 0°8                          |            |                     | 3045 Sep 18 07:47                      | 0° m/                            |            |
| asc. node           | 3043 Mar 18 10:59 | 2° <b>8</b> 57'00            |            |                     | 3045 Oct 12 18:57                      | $0 \circ \overline{\mathbf{v}}$  |            |
|                     | 3043 Apr 10 05:36 | 0° <b>I</b> I                |            |                     | 3045 Nov 05 22:40                      | 0°M₊                             |            |
|                     | 3043 May 06 16:23 | 0°ಅ                          |            | morning set         | 3045 Nov 20 13:32                      | 18°M16'32                        |            |
| evening max el      | 3043 May 30 16:41 | 24°954'54                    | 45°32'55   | C                   | 3045 Nov 29 21:59                      | 0° <b>√</b>                      |            |
| <i>3</i>            | 3043 Jun 05 01:39 | $0^{\circ}\Omega$            |            | desc. node          | 3045 Dec 22 19:59                      | 28° <b>√</b> 47'12               |            |
| greatest brilliancy | 3043 Jul 07 17:22 | 22° <b>Ω</b> 52'15           | -4.7m      |                     | 3045 Dec 23 19:09                      | 8°0                              |            |
| desc. node          | 3043 Jul 08 00:45 | 22° <b>Ω</b> 58'59           |            |                     |  |                                  |            |
| retrograde          | 3043 Jul 18 10:02 | 24° <b>Ω</b> 55'59           |            | superior conj       | 3045 Dec 30 20:30                      | 8° <b>る</b> 52'34                | -0°19'09   |
| evening set         | 3043 Aug 03 16:12 | 19° <b>Ω</b> 55'43           |            | minimum elong       | 3045 Dec 30 15:30                      | 8° <b>ප</b> 36'52                |            |
| inferior conj       | 3043 Aug 08 23:02 | 16° <b>Ω</b> 43'15           | -6°36'26   | max. Earth dist.    | 3045 Dec 30 08:09                      | 8° <b>る</b> 13'43                | 1.71135 AU |
| minimum elong       | 3043 Aug 08 13:16 | 16° <b>Ω</b> 58'33           | 6°34'36    |                     | 3046 Jan 16 15:30                      | 0° <b>≈</b>                      |            |
| min. Earth dist.    | 3043 Aug 08 21:20 | 16° <b>Ω</b> 45'55           | 0.29051 AU |                     | 3046 Feb 09 12:16                      | 0° <b>)</b> €                    |            |
| morning rise        | 3043 Aug 13 10:12 | 13° <b>Ω</b> 58'39           |            | evening rise        | 3046 Feb 10 02:56                      | 0° <b>)</b> 46′02                |            |
| direct              | 3043 Aug 30 14:05 | 8° <b>Ω</b> 25'32            |            | Z .                 | 3046 Mar 05 11:10                      | $0^{\circ}\Upsilon$              |            |
| greatest brilliancy | 3043 Sep 10 02:38 | 10° <b>Ω</b> 24'49           | -4.7m      |                     | 3046 Mar 29 14:27                      | 0°8                              |            |
| ,                   | 3043 Oct 09 03:57 | 0° <b>m</b> )                |            | asc. node           | 3046 Apr 14 23:00                      | 20° <b>8</b> 08'25               |            |
| morning max el      | 3043 Oct 18 22:44 | 9° m 11'26                   | 46°09'24   |                     | 3046 Apr 23 00:34                      | 0°Ⅲ                              |            |
| asc. node           | 3043 Oct 29 03:45 | 19° m 33'54                  |            |                     | 3046 May 17 20:23                      | 0°ಅ                              |            |
|                     | 3043 Nov 07 21:20 | 0∘ <u>⊽</u>                  |            |                     | 3046 Jun 12 06:20                      | $0^{\circ}\Omega$                |            |
|                     | 3043 Dec 04 04:26 | 0°M                          |            |                     | 3046 Jul 08 16:15                      | 0° <b>m</b> )                    |            |
|                     | 3043 Dec 29 04:58 | 0° <b>∡</b> ¹                |            | desc. node          | 3046 Aug 04 12:33                      | 28° m 17'34                      |            |
|                     | 3044 Jan 22 15:56 | 0°ರ                          |            |                     | 3046 Aug 06 06:10                      | 0∘ <u>⊽</u>                      |            |
|                     | 3044 Feb 15 20:57 | 0° <b>≈</b>                  |            | evening max el      | 3046 Aug 09 20:06                      | 3° <b>£</b> 27'45                | 45°38'29   |
| desc. node          | 3044 Feb 17 17:31 | 2°≈18'29                     |            | Ü                   | 3046 Sep 14 00:36                      | 0°M                              |            |
|                     | 3044 Mar 10 23:49 | 0° <b>)</b> €                |            | greatest brilliancy | 3046 Sep 18 08:39                      | 1°M40'14                         | -4.8m      |
|                     | 3044 Apr 04 02:44 | $_{0}$ $^{\circ}$ $\Upsilon$ |            | retrograde          | 3046 Sep 27 15:30                      | 3°M14'00                         |            |
| morning set         | 3044 Apr 23 08:38 | 23° <b>Y</b> 53'00           |            | 8                   | 3046 Oct 10 11:55                      | 30° <b>₹</b> Ω                   |            |
| . 8                 | 3044 Apr 28 07:08 | 0°8                          |            | evening set         | 3046 Oct 14 22:29                      | 27° <b>Ω</b> 36'10               |            |
|                     | 3044 May 22 13:45 | 0°II                         |            | inferior conj       | 3046 Oct 18 16:06                      | 25° <b>Ω</b> 20'41               | -7°44'42   |
|                     | ,                 |                              |            | minimum elong       | 3046 Oct 19 00:48                      | 25° <b>Ω</b> 07'18               |            |
| superior conj       | 3044 May 31 07:18 | 10° <b>Ⅱ</b> 45'50           | -0°22'35   | min. Earth dist.    | 3046 Oct 19 14:32                      |                                  | 0.27913 AU |
| minimum elong       | 3044 May 31 12:06 | 11° <b>Ⅱ</b> 00'36           |            | morning rise        | 3046 Oct 23 02:46                      | 22° <b>£</b> 39'46               |            |
| max. Earth dist.    | 3044 Jun 02 02:58 | 13° <b>I</b> 00'18           | 1.73244 AU | direct              | 3046 Nov 08 20:02                      | 17° <b>Ω</b> 16'50               |            |
| asc. node           | 3044 Jun 09 20:45 | 22° <b>I</b> 32'04           |            | greatest brilliancy | 3046 Nov 20 00:42                      | 19° <b>£</b> 37'29               | -4.9m      |
| <del></del>         | 3044 Jun 15 22:22 | 0°ඉ                          |            | asc. node           | 3046 Nov 25 15:37                      | 22° <b>≏</b> 18'22               |            |
| evening rise        | 3044 Jul 07 03:18 | 26°903'27                    |            |                     | 3046 Dec 07 02:27                      | 0°M                              |            |
|                     | 3044 Jul 10 08:23 | 0°Ω                          |            | morning max el      | 3046 Dec 29 12:12                      | 20°M28'46                        | 46°51'27   |
|                     | 3044 Aug 03 19:35 | 0° <b>m</b>                  |            |                     | 3047 Jan 07 14:47                      | 0°×7                             | .0 512/    |
|                     | 3044 Aug 28 08:40 | 0° <del>ت</del>              |            |                     | 3047 Feb 03 08:03                      | %<br>ਨ<br>ਨ                      |            |
|                     | 3044 Sep 22 01:04 | 0°M                          |            |                     | 3047 Feb 28 16:56                      | 0°≈                              |            |
| desc. node          | 3044 Sep 29 10:17 | 8°M55'49                     |            | desc. node          | 3047 Pco 28 10:30<br>3047 Mar 17 05:25 | 0 <b>∞</b><br>19° <b>≈</b> 54'44 |            |
| acce. House         | 5050p 27 10.17    | 5 IIG55 T)                   |            | acce. Hour          | 55., 1.141 1, 05.25                    | .,                               |            |

|                           | 3047 Mar 25 12:59                      | 0° <b>)</b> €                            |             | evening max el                 | 3049 Oct 21 20:13                      | 15° <b>∡</b> 16'46  | 46°39'01           |
|---------------------------|--|--|-------------|--------------------------------|--|---|--------------------|
|                           | 3047 Apr 19 03:44                      | $0^{\circ}\mathbf{\Upsilon}$             |             |                                | 3049 Nov 06 21:28                      | 8°0   |                    |
|                           | 3047 May 13 16:44                      | $9^{\circ}$ 8                            |             | greatest brilliancy            | 3049 Dec 01 02:22                      | 15° <b>る</b> 20'21  | -4.9m              |
|                           | 3047 Jun 07 05:23                      | $\Pi$ $^{\circ}0$                        |             | retrograde                     | 3049 Dec 10 19:52                      | 17° <b>る</b> 06'46  |                    |
|                           | 3047 Jul 01 17:32                      | $0$ $\circ$ $\odot$                      |             | asc. node                      | 3049 Dec 23 03:24                      | 14° <b>る</b> 04'58  |                    |
| morning set               | 3047 Jul 02 16:09                      | 1° <b>5</b> 09'19                        |             | evening set                    | 3049 Dec 25 02:57                      | 13° <b>る</b> 05'10  |                    |
| asc. node                 | 3047 Jul 08 08:30                      | 8° <b>©</b> 07'06                        |             | inferior conj                  | 3049 Dec 31 08:54                      | 9° <b>る</b> 26'27   |                    |
|                           | 3047 Jul 26 04:15                      | 0°N                                      |             | minimum elong                  | 3049 Dec 31 04:06                      | 9°₹33'46  | 2°06'05            |
| max. Earth dist.          | 3047 Aug 06 07:39                      | 13° <b>Ω</b> 42′22                       | 1.73424 AU  | min. Earth dist.               | 3049 Dec 31 04:58                      | 9° <b>る</b> 32'27   | 0.26487 AU         |
|                           | 2047 4 00 05 05                        | 160 000112                               | 1004147     | morning rise                   | 3050 Jan 06 05:13                      | 6°る00'42  |                    |
| superior conj             | 3047 Aug 08 05:05                      | 16°Ω02'13<br>15°Ω35'14                   | 1°04'47     | direct                         | 3050 Jan 20 19:11                      | 1°る48'12<br>3°る40'45  | 4.0                |
| minimum elong             | 3047 Aug 07 20:19<br>3047 Aug 19 12:54 | 0°M)                                     | 1 04 30     | greatest brilliancy            | 3050 Jan 30 18:01<br>3050 Mar 07 13:01 | 0°≈   | -4.9111            |
|                           | 3047 Sep 12 19:47                      | 0∘ <b>⊽</b>                              |             | morning max el                 | 3050 Mar 12 03:12                      | 0 ∞<br>4°≈31'44   | 46°49'26           |
| evening rise              | 3047 Sep 12 15:47<br>3047 Sep 13 05:53 | o° <b>⊡</b> 31'16                        |             | morning max er                 | 3050 Apr 05 02:49                      | 0° <b>∀</b>   | 40 47 20           |
| e vennig rise             | 3047 Oct 07 01:54                      | 0°M                                      |             | desc. node                     | 3050 Apr 13 17:21                      | 9° <b>¥</b> 38'12   |                    |
| desc. node                | 3047 Oct 27 22:19                      | 25°M46'55                                |             |                                | 3050 May 01 11:43                      | $0^{\circ}$ Y   |                    |
|                           | 3047 Oct 31 08:15                      | 0° <b>∡</b> ¹                            |             |                                | 3050 May 27 01:16                      | 0° <b>႘</b>   |                    |
|                           | 3047 Nov 24 15:30                      | ರ°0                                      |             |                                | 3050 Jun 21 05:45                      | $\Pi$ $^{\circ}0$   |                    |
|                           | 3047 Dec 19 00:53                      | 0° <b>≈</b>                              |             |                                | 3050 Jul 16 04:19                      | $0$ $\circ$ $\odot$   |                    |
|                           | 3048 Jan 12 15:50                      | 0° <b>∀</b>                              |             | asc. node                      | 3050 Aug 04 20:17                      | 23° <b>©</b> 51'06  |                    |
|                           | 3048 Feb 06 20:37                      | $0$ ° $\mathbf{Y}$                       |             |                                | 3050 Aug 09 21:20                      | $0^{\circ}\Omega$   |                    |
| asc. node                 | 3048 Feb 18 01:04                      | 12° <b>Υ</b> 54'28                       |             |                                | 3050 Sep 03 08:34                      | 0° <b>™</b>   |                    |
|                           | 3048 Mar 04 10:36                      | 0°8                                      |             | morning set                    | 3050 Sep 08 15:17                      | 6° Mp 30′44   |                    |
| evening max el            | 3048 Mar 17 16:43                      | 13° <b>8</b> 48'39                       | 46°30'05    |                                | 3050 Sep 27 14:39                      | 0∘ <b>⊽</b>   |                    |
| 1 '11'                    | 3048 Apr 04 06:46                      | 0° <b>П</b>                              | 4.0         | max. Earth dist.               | 3050 Oct 12 07:50                      | 18° <b>≏</b> 18'07  | 1.72269 AU         |
| greatest brilliancy       | 3048 Apr 25 17:12                      | 13° <b>Ⅱ</b> 34'05                       | -4.8m       |                                | 2050 0-4 15 12-02                      | 220 0 1 0127  | 1017145            |
| retrograde<br>evening set | 3048 May 06 14:42<br>3048 May 22 01:52 | 15° <b>П</b> 44'56<br>11° <b>П</b> 03'10 |             | superior conj<br>minimum elong | 3050 Oct 15 13:03<br>3050 Oct 15 20:44 | 22° <b>£</b> 18'37<br>22° <b>£</b> 42'35                    | 1°16'45<br>1°16'36 |
| inferior conj             | 3048 May 27 21:45                      | 7° <b>II</b> 30'46                       | 2°45'45     | minimum clong                  | 3050 Oct 13 20:44<br>3050 Oct 21 17:05 | 0° <b>M</b>   | 1 10 30            |
| minimum elong             | 3048 May 28 03:36                      | 7° <b>Ⅱ</b> 21'35                        |             |                                | 3050 Nov 14 17:33                      | 0° <b>⊼</b> ¹   |                    |
| min. Earth dist.          | 3048 May 27 19:25                      | 7° <b>∏</b> 34'25                        | 0.28579 AU  | evening rise                   | 3050 Nov 23 10:04                      | 10° <b>√</b> 51'49  |                    |
| morning rise              | 3048 Jun 03 05:51                      | 3° <b>Ⅱ</b> 42'46                        |             | desc. node                     | 3050 Nov 24 10:11                      | 12° <b>✓</b> 07'13  |                    |
| desc. node                | 3048 Jun 08 14:49                      | 1° <b>Ⅱ</b> 11'46                        |             |                                | 3050 Dec 08 17:09                      | ರ°0   |                    |
|                           | 3048 Jun 12 12:35                      | 30° <b>₹</b> 8                           |             |                                | 3051 Jan 01 16:41                      | 0° <b>≈</b>   |                    |
| direct                    | 3048 Jun 18 07:14                      | 29° <b>8</b> 20'13                       |             |                                | 3051 Jan 25 17:31                      | 0° <b>)</b> €   |                    |
|                           | 3048 Jun 24 05:46                      | $\Pi^{\circ}0$                           |             |                                | 3051 Feb 18 22:33                      | $0$ ° $\Upsilon$  |                    |
| greatest brilliancy       | 3048 Jun 28 06:44                      | 1° <b>Ⅱ</b> 08'52                        |             |                                | 3051 Mar 15 12:34                      | $9^{\circ}$ 8   |                    |
| morning max el            | 3048 Aug 06 00:49                      | 29° <b>∏</b> 04'32                       | 45°42'44    | asc. node                      | 3051 Mar 17 13:05                      | 2° <b>8</b> 26'12   |                    |
|                           | 3048 Aug 07 00:01                      | 0°©                                      |             |                                | 3051 Apr 09 19:04                      | 0°Щ   |                    |
|                           | 3048 Sep 04 22:07                      | 0°Ω                                      |             |                                | 3051 May 06 08:32                      | 0°©   |                    |
| asc. node                 | 3048 Sep 29 18:02                      | 28° <b>Ω</b> 07'23                       |             | evening max el                 | 3051 May 28 07:27                      | 22°5641'44  | 45°34'00           |
|                           | 3048 Oct 01 08:42<br>3048 Oct 26 14:28 | 0 <b>் ம</b><br>0 <b>் மி</b>            |             | greatest brilliancy            | 3051 Jun 05 02:35<br>3051 Jul 05 08:29 | 0°Ω<br>20°Ω42'37  | -4.7m              |
|                           | 3048 Nov 20 03:36                      | 0°M                                      |             | desc. node                     | 3051 Jul 07 02:44                      | $20^{\circ} \Omega^{42} 37$<br>$21^{\circ} \Omega^{18'} 59$ | -4. /111           |
|                           | 3048 Dec 14 07:26                      | 0° <b>⊼</b> 7                            |             | retrograde                     | 3051 Jul 16 02:23                      | 22° <b>Ω</b> 47'51  |                    |
|                           | 3049 Jan 07 06:40                      | ੈ°ਤ                                      |             | evening set                    | 3051 Aug 01 05:38                      | 17° <b>Ω</b> 51'00  |                    |
| desc. node                | 3049 Jan 19 07:41                      | 15° <b>පි</b> 06'47                      |             | inferior conj                  | 3051 Aug 06 15:22                      | 14° <b>Ω</b> 34'41  | -6°23'26           |
|                           | 3049 Jan 31 04:06                      | 0°≈                                      |             | minimum elong                  | 3051 Aug 06 05:31                      | 14° <b>Ω</b> 50'06  | 6°21'30            |
| morning set               | 3049 Feb 04 14:22                      | 5° <b>≈</b> 33'44                        |             | min. Earth dist.               | 3051 Aug 06 13:13                      | 14° <b>Ω</b> 38′02  | 0.29056 AU         |
|                           | 3049 Feb 24 01:29                      | 0° <b>∀</b>                              |             | morning rise                   | 3051 Aug 11 05:14                      | 11° <b>Ω</b> 46′16  |                    |
|                           |  |  |             | direct                         | 3051 Aug 28 05:58                      | 6° <b>Ω</b> 16'48   |                    |
| superior conj             | 3049 Mar 17 17:36                      | 27° <b>)</b> (09'13                      |             | greatest brilliancy            | 3051 Sep 07 19:02                      | 8° <b>Ω</b> 16′24   | -4.7m              |
| minimum elong             | 3049 Mar 17 18:09                      | 27° <b>)</b> 10′58                       | 1°26'28     |                                | 3051 Oct 09 05:45                      | 0° <b>m</b> )   |                    |
| F 4 F                     | 3049 Mar 20 00:13                      | 0° <b>Υ</b>                              | 1.515(1.17) | morning max el                 | 3051 Oct 16 13:59                      | 6° m 58'01  | 46°07'57           |
| max. Earth dist.          | 3049 Mar 21 17:52                      | 2° <b>Y</b> 10′09<br>0° <b>႘</b>         | 1.71764 AU  | asc. node                      | 3051 Oct 28 05:56                      | 18°₯51'16<br>0°₽  |                    |
| evening rise              | 3049 Apr 13 01:44<br>3049 Apr 26 11:29 | 16° <b>8</b> 37'44                       |             |                                | 3051 Nov 07 13:47<br>3051 Dec 03 18:09 | 0° <b>11</b>  |                    |
| evening rise              | 3049 Apr 26 11:29<br>3049 May 07 07:11 | 0°Ⅱ                                      |             |                                | 3051 Dec 03 18:09<br>3051 Dec 28 17:29 | 0°11L<br>0° <b>√</b> 7                                      |                    |
| asc. node                 | 3049 May 12 10:56                      | 6° <b>Ⅱ</b> 21'14                        |             |                                | 3052 Jan 22 03:47                      | 0°ප<br>ව  |                    |
| 250. Hode                 | 3049 May 31 17:15                      | 0°95                                     |             |                                | 3052 Feb 15 08:22                      | 0°≈   |                    |
|                           | 3049 Jun 25 08:33                      | $0^{\circ}\Omega$                        |             | desc. node                     | 3052 Feb 16 19:33                      | 1° <b>≈</b> 49'24   |                    |
|                           | 3049 Jul 20 06:31                      | 0° mp                                    |             |                                | 3052 Mar 10 10:54                      | 0° <b>∀</b>   |                    |
|                           | 3049 Aug 14 14:22                      | 0∘ <u>⊽</u>                              |             |                                | 3052 Apr 03 13:34                      | $0^{\circ}$ $\Upsilon$                                      |                    |
| desc. node                | 3049 Sep 01 00:20                      | 20° <b>≙</b> 12'39                       |             | morning set                    | 3052 Apr 20 23:18                      | 21° <b>Y</b> 36'25  |                    |
|                           | 3049 Sep 09 14:26                      | 0°M                                      |             |                                | 3052 Apr 27 17:49                      | 0°8   |                    |
|                           | 3049 Oct 06 21:25                      | 0° <b>∡</b> ¹                            |             |                                | 3052 May 22 00:20                      | $\Pi$ °0  |                    |
|                           |  |  |             |                                |  |   |                    |

| gumariar agni                     | 2052 May 29, 22,54                     | 00∏26!26  | 0025140               | inforior coni                     | 2054 Oat 16 06:22                      | 229 0 02104                              | 705 4100           |
|-----------------------------------|--|---|-----------------------|-----------------------------------|--|--|--------------------|
| superior conj                     | 3052 May 28 23:54                      | 8°П36'36<br>8°П53'22                            |                       | inferior conj                     | 3054 Oct 16 06:23                      | 23° <b>£</b> 03'04<br>22° <b>£</b> 50'27 | 7°53'03            |
| minimum elong<br>max. Earth dist. | 3052 May 29 05:21                      | 8 <b>П</b> 33 22<br>10° <b>П</b> 55'27          |                       | minimum elong<br>min. Earth dist. | 3054 Oct 16 14:34                      | 22° <b>£</b> 30'27                       | 0.27979 AU         |
| asc. node                         | 3052 May 30 20:59<br>3052 Jun 08 22:42 | 22° <b>I</b> 05'38                              | 1./3214 AU            | morning rise                      | 3054 Oct 17 04:10<br>3054 Oct 20 13:35 | 22 <b>2</b> 29 29 20° <b>2</b> 26'51     | 0.27979 AU         |
| asc. Houe                         | 3052 Jun 15 08:56                      | 0°95  |                       | direct                            | 3054 Nov 06 11:26                      | 20 <b>=</b> 20 31<br>14° <b>£</b> 58'33  |                    |
| evening rise                      | 3052 Jul 04 21:45                      | 24°900'15                                       |                       | greatest brilliancy               | 3054 Nov 17 14:49                      | 17° <b>⊆</b> 17'46                       | 4.0m               |
| evening rise                      | 3052 Jul 09 19:00                      | 24 <b>3</b> 00 13                               |                       | asc. node                         | 3054 Nov 17 14.49<br>3054 Nov 24 17:32 | 20° <b>£</b> 49'05                       | -4.9111            |
|                                   | 3052 Aug 03 06:21                      | 0° <b>m</b> p                                   |                       | asc. node                         | 3054 Nov 24 17:32<br>3054 Dec 07 15:07 | 20 = 4903<br>0°M                         |                    |
|                                   | 3052 Aug 03 00:21<br>3052 Aug 27 19:47 | 0∘ <b>⊽</b><br>رااا                             |                       | morning max el                    | 3054 Dec 07 13:07<br>3054 Dec 27 02:41 |  | 46°50'19           |
|                                   | 3052 Sep 21 12:43                      | 0° <b>™</b>                                     |                       | morning max ci                    | 3055 Jan 07 09:48                      | 0° <b>√</b>                              | 40 30 19           |
| desc. node                        | 3052 Sep 28 12:25                      | 8°ML26'31                                       |                       |                                   | 3055 Feb 02 23:03                      | %<br>%<br>%                              |                    |
| desc. node                        | 3052 Sep 28 12:23<br>3052 Oct 16 10:53 | 0° <b>⊼</b>                                     |                       |                                   | 3055 Feb 28 06:11                      | 0°≈                                      |                    |
|                                   | 3052 Nov 10 17:07                      | 0°る   |                       | desc. node                        | 3055 Mar 16 07:29                      | 0 ∞<br>19°≈22'52                         |                    |
|                                   | 3052 Nov 10 17:07<br>3052 Dec 06 15:23 | 0°≈   |                       | desc. Hode                        | 3055 Mar 25 01:16                      | 19 <b>≈</b> 22 32                        |                    |
| evening max el                    | 3052 Dec 00 13:23<br>3053 Jan 02 10:39 | 0 ≈<br>29°≈03'27                                | 17015121              |                                   | 3055 Apr 18 15:24                      | 0°Υ                                      |                    |
| evening max er                    | 3053 Jan 02 10:39<br>3053 Jan 03 08:56 | 29 <b>≈</b> 03 27<br>0° <b>∺</b>                | 4/ 13 34              |                                   | 3055 May 13 03:56                      | 0°8                                      |                    |
| asc. node                         | 3053 Jan 19 15:21                      | 0 X<br>15° <b>¥</b> 22'15                       |                       |                                   | 3055 Jun 06 16:15                      | 0°U                                      |                    |
| asc. Houe                         | 3053 Feb 10 06:19                      | 13 <b>γ</b> (22 13 0° <b>γ</b>                  |                       | morning set                       | 3055 Jun 30 10:07                      | 0 H<br>29°H04'40                         |                    |
| arrantant brillianas              | 3053 Feb 10 00.19<br>3053 Feb 12 03:57 | 0 <b>γ</b><br>0° <b>Υ</b> 46'11                 | -4.9m                 | morning set                       | 3055 Jul 01 04:10                      | 29 П04 40<br>0°9                         |                    |
| greatest brilliancy               | 3053 Feb 12 03.57<br>3053 Feb 22 09:50 | 2° <b>Υ</b> 47'08                               | -4.9111               | asc. node                         | 3055 Jul 07 10:29                      | 0 €<br>7° <b>©</b> 40'39                 |                    |
| retrograde                        |  | 2 14/08<br>30°R <del>X</del>                    |                       | asc. node                         | 3055 Jul 25 14:48                      | / 94039<br>0°Ω                           |                    |
| avanina aat                       | 3053 Mar 06 00:55<br>3053 Mar 12 09:43 | 26° <b>₩</b> 31'11                              |                       | may Earth dist                    | 3055 Aug 04 04:03                      |  | 1.73445 AU         |
| evening set                       |  | 25°\(\frac{1}{25}\)                             | 0.27543 AU            | max. Earth dist.                  | 3033 Aug 04 04.03                      | 11 0644 33                               | 1./3443 AU         |
| min. Earth dist.                  | 3053 Mar 14 17:14                      | 24° <b>H</b> 44'10                              | 0.27543 AU<br>8°55'08 | superior conj                     | 2055 Aug 05 22:20                      | 13° <b>Ω</b> 58'37                       | 1°02'42            |
| 5                                 | 3053 Mar 15 06:55                      | 24° <del>X</del> 44'25                          |                       |                                   | 3055 Aug 05 23:30                      |  | 1°02'42<br>1°02'24 |
| minimum elong                     | 3053 Mar 15 06:45                      | 24 <del>X</del> 44 23<br>22° <del>X</del> 57'41 | 8 33 08               | minimum elong                     | 3055 Aug 05 14:40                      |  | 1 02 24            |
| morning rise                      | 3053 Mar 18 03:57                      | 16° <b>H</b> 51'12                              |                       | avanina risa                      | 3055 Aug 18 23:30                      | 0°Mp                                     |                    |
| direct                            | 3053 Apr 04 23:38                      | 18° <b>∺</b> 26'18                              | -4.8m                 | evening rise                      | 3055 Sep 10 23:21                      | 28° Mp 23'38<br>0° <u>₽</u>              |                    |
| greatest brilliancy               | 3053 Apr 14 04:24                      | 18 <b>π</b> 2018                                | -4.0111               |                                   | 3055 Sep 12 06:32<br>3055 Oct 06 12:52 | 0°M                                      |                    |
| 1 1-                              | 3053 May 04 04:34                      | 5° <b>Υ</b> 43'38                               |                       | JJ.                               |  | 25°M18'26                                |                    |
| desc. node                        | 3053 May 11 05:02                      | 17° <b>Υ</b> 51'35                              | 46°06'19              | desc. node                        | 3055 Oct 27 00:19                      | 25°11618'26                              |                    |
| morning max el                    | 3053 May 24 10:11                      | 0.8   | 40-00 19              |                                   | 3055 Oct 30 19:31                      | 0° <b>ਨ</b>                              |                    |
|                                   | 3053 Jun 05 11:54<br>3053 Jul 03 04:28 | 0°U   |                       |                                   | 3055 Nov 24 03:11<br>3055 Dec 18 13:07 | 0° <b>≈</b>                              |                    |
|                                   |  | 0°©   |                       |                                   | 3056 Jan 12 04:56                      | 0 <b>≈</b><br>0° <b>∀</b>                |                    |
|                                   | 3053 Jul 29 10:27                      | 0∘0   |                       |                                   |  | 0° <b>π</b><br>0° <b>Υ</b>               |                    |
| 1-                                | 3053 Aug 23 21:34                      |   |                       | 1-                                | 3056 Feb 06 11:16                      | 12° <b>Υ</b> 15'44                       |                    |
| asc. node                         | 3053 Sep 01 08:13                      | 10° <b>Ω</b> 06′29                              |                       | asc. node                         | 3056 Feb 17 03:11                      |  |                    |
|                                   | 3053 Sep 17 18:59                      | 0° <b>m</b> )                                   |                       |                                   | 3056 Mar 04 04:53                      | 0° <b>8</b>                              | 46022110           |
|                                   | 3053 Oct 12 05:52                      | 0∘ <b>亚</b>                                     |                       | evening max el                    | 3056 Mar 15 07:49                      | 11° <b>8</b> 31'58                       | 46°32'18           |
|                                   | 3053 Nov 05 09:28                      | 0°M   |                       |                                   | 3056 Apr 04 16:57                      | 0° <b>Ⅱ</b>                              | 4 0                |
| morning set                       | 3053 Nov 18 02:59                      | 15°M54'43                                       |                       | greatest brilliancy               | 3056 Apr 23 10:44                      | 11° <b>Ⅲ</b> 23'27<br>13° <b>Ⅲ</b> 32'47 | -4.8m              |
| 1 1                               | 3053 Nov 29 08:47                      | 0° ⊀ <b>7</b>                                   |                       | retrograde                        | 3056 May 04 06:33                      | 13°Щ32'47<br>8°Щ48'42                    |                    |
| desc. node                        | 3053 Dec 21 21:52                      | 28° <b>⊀</b> 19'09                              |                       | evening set                       | 3056 May 19 19:54                      |  | 200511.0           |
| To all III                        | 3053 Dec 23 05:57                      | 0°る   | 1.71151 437           | inferior conj                     | 3056 May 25 13:39                      | 5° <b>Ⅱ</b> 19'03                        | 3°05'18            |
| max. Earth dist.                  | 3053 Dec 27 17:28                      | 5° <b>る</b> 38'00                               | 1.71151 AU            | minimum elong                     | 3056 May 25 20:06                      | 5° <b>Ⅱ</b> 08'54                        |                    |
|                                   | 2052 7 20 06 44                        | 60 <b>-7</b> 10144                              | 0015115               | min. Earth dist.                  | 3056 May 25 11:35                      | 5° <b>Ⅱ</b> 22'18                        | 0.28549 AU         |
| superior conj                     | 3053 Dec 28 06:44                      | 6° <b>る</b> 19'44                               |                       | morning rise                      | 3056 May 31 20:48                      | 1° <b>Ⅱ</b> 32'00                        |                    |
| minimum elong                     | 3053 Dec 28 02:45                      | 6° <b>る</b> 07'11<br>5° <b>る</b> 34'54          | 0°15'03               | 1 1                               | 3056 Jun 03 21:32                      | 30°R8                                    |                    |
| behind sun begin                  | 3053 Dec 27 16:29                      |   |                       | desc. node                        | 3056 Jun 07 16:45                      | 28° <b>8</b> 29'55                       |                    |
| behind sun end                    | 3053 Dec 28 13:00                      | 6° <b>る</b> 39'27                               |                       | direct                            | 3056 Jun 15 22:44                      | 27° <b>8</b> 09'07                       | 4.7                |
|                                   | 3054 Jan 16 02:21                      | 0° <b>≈</b>                                     |                       | greatest brilliancy               | 3056 Jun 25 21:33                      | 28° <b>8</b> 56'56                       | -4./m              |
| evening rise                      | 3054 Feb 07 13:10                      | 28°≈13'16                                       |                       |                                   | 3056 Jun 28 15:00                      | 0°П                                      | 45040141           |
|                                   | 3054 Feb 08 23:10                      | 0° <b>)</b> €                                   |                       | morning max el                    | 3056 Aug 03 15:26                      | 26° <b>∏</b> 51'44                       | 45°42'41           |
|                                   | 3054 Mar 04 22:08                      | 0° <b>Υ</b>                                     |                       |                                   | 3056 Aug 06 21:34                      | 0° <b>©</b>                              |                    |
|                                   | 3054 Mar 29 01:32                      | 0° <b>8</b>                                     |                       |                                   | 3056 Sep 04 13:25                      | 0° <b>Ω</b>                              |                    |
| asc. node                         | 3054 Apr 14 01:06                      | 19° <b>8</b> 40'28                              |                       | asc. node                         | 3056 Sep 28 20:09                      | 27° <b>Ω</b> 35'05                       |                    |
|                                   | 3054 Apr 22 11:54                      | 0°II  |                       |                                   | 3056 Sep 30 21:50                      | 0° <b>m</b>                              |                    |
|                                   | 3054 May 17 08:15                      | 0°©   |                       |                                   | 3056 Oct 26 02:36                      | 0∘ <b>亚</b>                              |                    |
|                                   | 3054 Jun 11 19:18                      | 0° <b>N</b>                                     |                       |                                   | 3056 Nov 19 15:14                      | 0°M                                      |                    |
|                                   | 3054 Jul 08 07:33                      | 0° Mp   |                       |                                   | 3056 Dec 13 18:48                      | 0° <b>∡</b> 7                            |                    |
| desc. node                        | 3054 Aug 03 14:35                      | 27° m/30'49                                     |                       |                                   | 3057 Jan 06 17:52                      | 0°る                                      |                    |
|                                   | 3054 Aug 06 03:57                      | 0∘ <b>⊽</b>                                     |                       | desc. node                        | 3057 Jan 18 09:46                      | 14° <b>る</b> 38'18                       |                    |
| evening max el                    | 3054 Aug 07 11:23                      |   | 45°37'02              |                                   | 3057 Jan 30 15:12                      | 0° <b>≈</b>                              |                    |
| greatest brilliancy               | 3054 Sep 15 21:33                      | 29° <b>£</b> 23'05                              | -4.8m                 | morning set                       | 3057 Feb 01 23:58                      | 2°≈58'20                                 |                    |
| _                                 | 3054 Sep 18 00:27                      | 0°M,  |                       |                                   | 3057 Feb 23 12:29                      | 0° <b>∀</b>                              |                    |
| retrograde                        | 3054 Sep 25 05:19                      | 0° <b>M</b> 57′06                               |                       |                                   |  |  |                    |
|                                   | 3054 Oct 02 03:49                      | 30° <b>₹</b> Ω                                  |                       | superior conj                     | 3057 Mar 15 05:13                      | 24° <b>)</b> (41'13                      |                    |
| evening set                       | 3054 Oct 12 15:14                      | 25° <b>≏</b> 15'18                              |                       | minimum elong                     | 3057 Mar 15 04:43                      | 24° <b>)</b> 39'41                       | 1°26'30            |

| max. Earth dist.       | 3057 Mar 19 04:43                      | 20°¥30'50  | 1.71712 AU       | greatest brilliancy | 3059 Sep 05 10:52                       | 6° <b>Ω</b> 06'30            | -1 7m      |
|------------------------|--|--|------------------|---------------------|---|------------------------------|------------|
| max. Latin dist.       | 3057 Mar 19 04:43                      | 20 <b>γ</b> (3) 30   | 1./1/12 AO       | greatest orimancy   | 3059 Oct 09 06:36                       | 0° <b>m</b>                  | -4.7111    |
|                        | 3057 Apr 12 12:39                      | 0°8  |                  | morning max el      | 3059 Oct 14 06:11                       | 4° Mp 46'15                  | 46°06'36   |
| evening rise           | 3057 Apr 24 01:12                      | 14° <b>8</b> 17'44   |                  | asc. node           | 3059 Oct 27 07:49                       | 18° Mp 07'34                 | 40 00 30   |
| e vening rise          | 3057 May 06 18:08                      | 0° <b>Ⅱ</b>  |                  | use. Houe           | 3059 Nov 07 06:14                       | 0∘ <b>ರ</b>                  |            |
| asc. node              | 3057 May 11 12:54                      | 5° <b>Ⅱ</b> 53'31  |                  |                     | 3059 Dec 03 08:02                       | o° <b>m</b> .                |            |
| ase. Hode              | 3057 May 31 04:21                      | 0°9  |                  |                     | 3059 Dec 28 06:15                       | 0° <b>⊼</b> ¹                |            |
|                        | 3057 Jun 24 19:57                      | $0^{\circ}\Omega$  |                  |                     | 3060 Jan 21 15:57                       | ੁੱਤ                          |            |
|                        | 3057 Jul 19 18:28                      | 0° m/y   |                  |                     | 3060 Feb 14 20:09                       | 0° <b>≈</b>                  |            |
|                        | 3057 Aug 14 03:19                      | 0∘ <b>ರ</b><br>೧.ಗ   |                  | desc. node          | 3060 Feb 15 21:41                       | 1°≈19'23                     |            |
| desc. node             | 3057 Aug 31 02:30                      | 0 <b>—</b><br>19° <b>Ω</b> 38'27                             |                  | dese. Hode          | 3060 Mar 09 22:24                       | 0° <b>∀</b>                  |            |
| desc. node             | 3057 Sep 09 05:18                      | 0°M  |                  |                     | 3060 Apr 03 00:50                       | 0° <b>Υ</b>                  |            |
|                        | 3057 Oct 06 16:37                      | 0° <b>⊼</b> ¹  |                  | morning set         | 3060 Apr 18 13:25                       | 19° <b>Υ</b> 16'50           |            |
| evening max el         | 3057 Oct 19 08:20                      | 12° <b>х</b> 50'48   | 46°36'36         | morning sec         | 3060 Apr 27 04:54                       | 0° <b>8</b>                  |            |
| evening max er         | 3057 Nov 07 09:29                      | 0°る  | 40 30 30         |                     | 3060 May 21 11:18                       | 0°II                         |            |
| greatest brilliancy    | 3057 Nov 28 15:57                      | 00<br>12° <b>る</b> 52'51                                     | -4.9m            |                     | 3000 May 21 11.10                       | ν д                          |            |
| retrograde             | 3057 Dec 08 07:27                      | 14° <b>る</b> 37'48   | 4.7111           | superior conj       | 3060 May 26 16:06                       | 6° <b>Ⅱ</b> 24'53            | -0°28'59   |
| asc. node              | 3057 Dec 00 07:27<br>3057 Dec 22 05:29 | 14 <b>3</b> 57 48 10° <b>る</b> 48'38                         |                  | minimum elong       | 3060 May 26 22:10                       | 6° <b>Ⅱ</b> 43'36            |            |
| evening set            | 3057 Dec 22 03:29<br>3057 Dec 22 14:44 | 10°る4838   |                  | max. Earth dist.    | 3060 May 28 16:21                       | 8° <b>П</b> 53'35            |            |
| inferior conj          | 3057 Dec 28 21:03                      | 6°る57'52   | 10/2/21          | asc. node           | 3060 Jun 08 00:42                       | 21° <b>II</b> 38'14          | 1.73179 AU |
| 3                      | 3057 Dec 28 21:03<br>3057 Dec 28 17:08 | 7°る3'50  | 1°42'06          | asc. node           | 3060 Jun 14 19:51                       | 0°9                          |            |
| minimum elong          |  | 7°る03'50   |                  |                     | 3060 Juli 14 19.31<br>3060 Jul 02 16:04 | 0 55<br>21°555'33            |            |
| min. Earth dist.       | 3057 Dec 28 19:01                      | 7° <b>る</b> 0038<br>3° <b>る</b> 29'24                        | 0.26493 AU       | evening rise        |   | 21° <b>£</b> 33333           |            |
| morning rise           | 3058 Jan 03 19:20                      |  |                  |                     | 3060 Jul 09 05:58                       |                              |            |
| T' 4                   | 3058 Jan 12 12:29                      | 30°₹ <b>⋌</b> ¹  |                  |                     | 3060 Aug 02 17:32                       | 0° <b>m</b>                  |            |
| direct                 | 3058 Jan 18 06:51                      | 29° <b>₹</b> 19'01   |                  |                     | 3060 Aug 27 07:19                       | 0° <b>™</b>                  |            |
|                        | 3058 Jan 24 04:59                      | 0°る  | 4.0              |                     | 3060 Sep 21 00:48                       | 0°M                          |            |
| greatest brilliancy    | 3058 Jan 28 08:44                      | 1°る14'02   | -4.9m            | desc. node          | 3060 Sep 27 14:26                       | 7°M55'39                     |            |
|                        | 3058 Mar 07 13:47                      | 0° <b>≈</b>  |                  |                     | 3060 Oct 15 23:48                       | 0° <b>⊼</b>                  |            |
| morning max el         | 3058 Mar 09 15:45                      | 2°≈04'27   | 46°50'36         |                     | 3060 Nov 10 07:21                       | 0°ಕ                          |            |
|                        | 3058 Apr 04 19:47                      | 0° <b>∀</b>  |                  |                     | 3060 Dec 06 08:08                       | 0° <b>≈</b>                  |            |
| desc. node             | 3058 Apr 12 19:24                      | 8° <b>¥</b> 59'07  |                  | evening max el      | 3060 Dec 31 01:48                       | 26° <b>≈</b> 42'09           | 47°15'38   |
|                        | 3058 May 01 01:52                      | 0° <b>Υ</b>  |                  |                     | 3061 Jan 03 08:26                       | 0° <b>∀</b>                  |            |
|                        | 3058 May 26 14:00                      | 0°8  |                  | asc. node           | 3061 Jan 18 17:24                       | 14° <b>) 1</b> 4′21          |            |
|                        | 3058 Jun 20 17:38                      | $\Pi$ $^{\circ}0$  |                  | greatest brilliancy | 3061 Feb 09 17:31                       | 28° <b>∺</b> 21'18           | -4.9m      |
|                        | 3058 Jul 15 15:42                      | 0  |                  |                     | 3061 Feb 15 15:45                       | $0$ ° $\Upsilon$             |            |
| asc. node              | 3058 Aug 03 22:26                      | 23° <b>©</b> 23'46   |                  | retrograde          | 3061 Feb 20 00:38                       | 0° <b>Y</b> 23′01            |            |
|                        | 3058 Aug 09 08:23                      | $0^{\circ}\Omega$  |                  |                     | 3061 Feb 24 07:20                       | 30°Ŗ <b>ℋ</b>                |            |
|                        | 3058 Sep 02 19:27                      | 0° <b>m</b>  |                  | evening set         | 3061 Mar 09 22:27                       | 24° <b>ℋ</b> 09'00           |            |
| morning set            | 3058 Sep 06 08:32                      | 4° Mp 22′16  |                  | min. Earth dist.    | 3061 Mar 12 05:50                       | 22° <b>)</b> 43′36           | 0.27496 AU |
|                        | 3058 Sep 27 01:29                      | 0∘ <b>ত</b>  |                  | inferior conj       | 3061 Mar 12 20:38                       | 22° <b>ℋ</b> 20'32           | 8°54'52    |
| max. Earth dist.       | 3058 Oct 10 01:41                      | 16° <b>≏</b> 10'22   | 1.72321 AU       | minimum elong       | 3061 Mar 12 19:35                       | 22° <b>ℋ</b> 22'10           | 8°54'51    |
|                        |  |  |                  | morning rise        | 3061 Mar 15 16:54                       | 20° <b>∺</b> 35'24           |            |
| superior conj          | 3058 Oct 13 04:56                      | 20° <b>≏</b> 04'41   | 1°18'10          | direct              | 3061 Apr 02 13:25                       | 14° <b>∺</b> 28'28           |            |
| minimum elong          | 3058 Oct 13 12:05                      | 20° <b>£</b> 26'55   | 1°18'01          | greatest brilliancy | 3061 Apr 11 16:26                       | 16° <b>₩</b> 02'36           | -4.8m      |
|                        | 3058 Oct 21 04:00                      | $0^{\circ}$ M.   |                  |                     | 3061 May 04 17:37                       | $0$ ° $\Upsilon$             |            |
|                        | 3058 Nov 14 04:37                      | 0° <b>∡</b> ¹  |                  | desc. node          | 3061 May 10 06:59                       | 4° <b>Ƴ</b> 41'26            |            |
| evening rise           | 3058 Nov 20 22:55                      | 8° <b>∡</b> 127′11   |                  | morning max el      | 3061 May 22 01:11                       | 15° <b>Ƴ</b> 35′02           | 46°07'46   |
| desc. node             | 3058 Nov 23 12:10                      | 11° <b>∡</b> ³38'37  |                  |                     | 3061 Jun 05 07:03                       | $8^{\circ}$                  |            |
|                        | 3058 Dec 08 04:25                      | 0°ප  |                  |                     | 3061 Jul 02 19:21                       | $\Pi$ $^{\circ}0$            |            |
|                        | 3059 Jan 01 04:09                      | 0° <b>≈</b>  |                  |                     | 3061 Jul 28 23:28                       | 0°€                          |            |
|                        | 3059 Jan 25 05:13                      | 0° <b>∀</b>  |                  |                     | 3061 Aug 23 09:36                       | $0^{\circ}\Omega$            |            |
|                        | 3059 Feb 18 10:36                      | $0^{\circ}\mathbf{\Upsilon}$                                 |                  | asc. node           | 3061 Aug 31 10:14                       | 9° <b>Ω</b> 36'57            |            |
|                        | 3059 Mar 15 01:15                      | 0° <b>႘</b>  |                  |                     | 3061 Sep 17 06:30                       | 0° <b>m</b>                  |            |
| asc. node              | 3059 Mar 16 15:09                      | 1° <b>8</b> 54'05  |                  |                     | 3061 Oct 11 17:08                       | 0∘ <b>⊽</b>                  |            |
|                        | 3059 Apr 09 08:59                      | 0° <b>I</b> I  |                  |                     | 3061 Nov 04 20:38                       | 0°M                          |            |
|                        | 3059 May 06 01:19                      | 0°ಅ  |                  | morning set         | 3061 Nov 15 16:54                       | 13°M33'16                    |            |
| evening max el         | 3059 May 25 22:56                      | 20°529'25  | 45°35'17         |                     | 3061 Nov 28 19:54                       | 0° <b>⊼</b> ¹                |            |
|                        | 3059 Jun 05 05:21                      | 0° <b>Ω</b>  | <del>+ -</del> / | desc. node          | 3061 Dec 21 00:01                       | 27° <b>х</b> 50'58           |            |
| greatest brilliancy    | 3059 Jul 02 23:12                      | 18° <b>Ω</b> 31'37   | -4.7m            |                     | 3061 Dec 22 17:05                       | 0°る                          |            |
| desc. node             | 3059 Jul 06 04:50                      | 19° <b>£</b> 31'37   |                  | max. Earth dist.    | 3061 Dec 25 01:52                       |                              | 1.71164 AU |
| retrograde             | 3059 Jul 13 19:05                      | 20° <b>Ω</b> 38'43   |                  | max. Darm dist.     | 5001 <b>Dec</b> 25 01.52                | 2 03030                      | 1.,1107 AU |
| evening set            | 3059 Jul 29 19:10                      | 20 <b>∂</b> €3843  |                  | superior conj       | 3061 Dec 25 17:32                       | 3°₹47'46                     | -0°11'21   |
| inferior conj          | 3059 Aug 04 07:38                      | $13^{\circ} \Omega 430^{\circ}$<br>$12^{\circ} \Omega 25'02$ | -6°09'47         | minimum elong       | 3061 Dec 25 14:33                       | 3°る4740                      |            |
| minimum elong          | 3059 Aug 04 07:38<br>3059 Aug 03 21:46 | $12^{\circ} \Omega 40'28$                                    |                  | behind sun begin    | 3061 Dec 24 19:21                       | 2°る38'01                     | 0 1113     |
| min. Earth dist.       | 3059 Aug 04 04:48                      | 12 <b>∂ℓ</b> 40 28<br>12° <b>Ω</b> 29'28                     | 0.29057 AU       | behind sun begin    | 3061 Dec 24 19.21<br>3061 Dec 26 09:46  | 2 33801<br>4° <b>る</b> 38'46 |            |
|                        | -                                      | 9° <b>Ω</b> 32'52  | 0.4903 / AU      | ocinna sull ella    |   | 4°€3846                      |            |
| morning rise<br>direct | 3059 Aug 09 00:15<br>3059 Aug 25 22:12 | 4° <b>Ω</b> 07'02  |                  | evening rise        | 3062 Jan 15 13:30<br>3062 Feb 04 23:40  | 0°≈<br>25°≈40'22             |            |
| uncei                  | 3039 Aug 23 22.12                      | 7 060/02   |                  | evening rise        | JUUL 1 CU U4 23.40                      | ∠J <b>~~</b> 40 ∠∠           |            |

|                     | 20/2 5 1 00 10 22                      | 001/                         |             |                     | 2064.2            | 00.0                |             |
|---------------------|--|------------------------------|-------------|---------------------|-------------------|---------------------|-------------|
|                     | 3062 Feb 08 10:23                      | 0° <b>∀</b>                  |             |                     | 3064 Sep 04 04:41 | $0$ ° $\Omega$      |             |
|                     | 3062 Mar 04 09:27                      | $0$ ° $\mathbf{Y}$           |             | asc. node           | 3064 Sep 27 22:07 | 27° <b>Ω</b> 02'02  |             |
|                     | 3062 Mar 28 13:00                      | 0°8                          |             |                     | 3064 Sep 30 11:00 | 0° <b>m</b> )       |             |
| asc. node           | 3062 Apr 13 03:00                      | 19° <b>8</b> 10'42           |             |                     | 3064 Oct 25 14:47 | 0∘ <b>⊽</b>         |             |
|                     | 3062 Apr 21 23:40                      | $\Pi^{\circ}0$               |             |                     | 3064 Nov 19 02:55 | 0° <b>M</b>         |             |
|                     | 3062 May 16 20:35                      | 0ಂತಾ                         |             |                     | 3064 Dec 13 06:13 | 0° <b>∡</b> ¹       |             |
|                     | 3062 Jun 11 08:47                      | $0^{\circ}\Omega$            |             |                     | 3065 Jan 06 05:09 | აი                  |             |
|                     | 3062 Jul 07 23:31                      | 0° mp                        |             | desc. node          | 3065 Jan 17 11:50 | 14° <b>る</b> 09'34  |             |
| desc. node          | 3062 Aug 02 16:41                      | 26° Mp 42'28                 |             | morning set         | 3065 Jan 30 09:39 | 0°≈22'48            |             |
|                     | •                                      | -                            | 45025142    | morning set         |                   |                     |             |
| evening max el      | 3062 Aug 05 02:11                      | 29° Mp 00'54                 | 45°35'42    |                     | 3065 Jan 30 02:23 | 0° <b>≈</b>         |             |
|                     | 3062 Aug 06 03:03                      | 0∘ <b>ত</b>                  |             |                     | 3065 Feb 22 23:35 | 0° <b>∀</b>         |             |
| greatest brilliancy | 3062 Sep 13 11:04                      | 27° <b>≏</b> 06'03           | -4.8m       |                     |                   |                     |             |
| retrograde          | 3062 Sep 22 18:44                      | 28° <b>≏</b> 39'53           |             | superior conj       | 3065 Mar 12 16:59 | 22° <b>)</b> 13′28  | -1°26'20    |
| evening set         | 3062 Oct 10 07:58                      | 22° <b>♀</b> 54'22           |             | minimum elong       | 3065 Mar 12 15:28 | 22° <b>)</b> €08'42 | 1°26'20     |
| inferior conj       | 3062 Oct 13 20:50                      | 20° <b>≏</b> 45'12           | -8°02'39    | max. Earth dist.    | 3065 Mar 16 12:44 | 27° <b>₩</b> 00'30  | 1.71657 AU  |
| minimum elong       | 3062 Oct 14 04:27                      | 20° <b>ഫ</b> 33'25           |             |                     | 3065 Mar 18 22:09 | 0° <b>Υ</b>         |             |
| min. Earth dist.    | 3062 Oct 14 18:17                      | 20° <b>£</b> 12'02           | 0.28044 AU  |                     | 3065 Apr 11 23:34 | 0°8                 |             |
|                     |  |                              | 0.20044 AC  |                     |                   |                     |             |
| morning rise        | 3062 Oct 18 00:38                      | 18° <b>£</b> 13'32           |             | evening rise        | 3065 Apr 21 15:03 | 11° <b>8</b> 58'04  |             |
| direct              | 3062 Nov 04 02:33                      | 12° <b>Ω</b> 39'52           |             |                     | 3065 May 06 05:05 | 0°Щ                 |             |
| greatest brilliancy | 3062 Nov 15 05:35                      | 14° <b>≏</b> 58'09           | -4.9m       | asc. node           | 3065 May 10 14:57 | 5° <b>Ⅱ</b> 26′07   |             |
| asc. node           | 3062 Nov 23 19:36                      | 19° <b>≏</b> 22'10           |             |                     | 3065 May 30 15:27 | 0                   |             |
|                     | 3062 Dec 08 00:53                      | $0^{\circ}$ M                |             |                     | 3065 Jun 24 07:23 | $0^{\circ}\Omega$   |             |
| morning max el      | 3062 Dec 24 16:30                      | 15°M43'59                    | 46°49'21    |                     | 3065 Jul 19 06:29 | 0° <b>m</b> )       |             |
| Ü                   | 3063 Jan 07 04:36                      | 0° <b>∡</b> ¹                |             |                     | 3065 Aug 13 16:24 | 0∘ <u>⊽</u>         |             |
|                     | 3063 Feb 02 14:06                      | 5°0                          |             | desc. node          | 3065 Aug 30 04:28 | 19° <b>≏</b> 03'20  |             |
|                     | 3063 Feb 27 19:35                      | 0° <b>≈</b>                  |             | dese. Hode          | 3065 Sep 08 20:25 | 0° <b>M</b>         |             |
| 1 1.                |  | 0 ∞<br>18°≈50'20             |             |                     |                   | 0° <b>⊼</b> ¹       |             |
| desc. node          | 3063 Mar 15 09:31                      |                              |             |                     | 3065 Oct 06 12:22 |                     | 4.600.410.1 |
|                     | 3063 Mar 24 13:44                      | 0° <b>∀</b>                  |             | evening max el      | 3065 Oct 16 20:45 | 10° <b>∡</b> ¹25'55 | 46°34'21    |
|                     | 3063 Apr 18 03:16                      | $0$ ° $\mathbf{Y}$           |             |                     | 3065 Nov 08 01:21 | 0°₹                 |             |
|                     | 3063 May 12 15:24                      | $9^{\circ}$ 8                |             | greatest brilliancy | 3065 Nov 26 05:06 | 10° <b>る</b> 25'18  | -4.9m       |
|                     | 3063 Jun 06 03:24                      | $\Pi$ $^{\circ}0$            |             | retrograde          | 3065 Dec 05 19:33 | 12° <b>そ</b> 09'31  |             |
| morning set         | 3063 Jun 28 03:53                      | 26° <b>∏</b> 58′28           |             | evening set         | 3065 Dec 20 02:51 | 8° <b>る</b> 07'56   |             |
| •                   | 3063 Jun 30 15:07                      | 0ಂಣ                          |             | asc. node           | 3065 Dec 21 07:35 | 7° <b>る</b> 29'05   |             |
| asc. node           | 3063 Jul 06 12:39                      | 7° <b>©</b> 13'48            |             | inferior conj       | 3065 Dec 26 09:17 |                     | 1°19'01     |
| use. Hode           | 3063 Jul 25 01:39                      | 0°Ω                          |             | minimum elong       | 3065 Dec 26 06:15 |                     | 1°18'02     |
| Double died         |  |                              | 1.72461 ATT | Č                   |                   |                     |             |
| max. Earth dist.    | 3063 Aug 01 23:14                      | 9° <b>Ω</b> 42'55            | 1.73461 AU  | min. Earth dist.    | 3065 Dec 26 08:55 | 4° <b>る</b> 30'12   | 0.26505 AU  |
|                     |  | _                            |             | morning rise        | 3066 Jan 01 09:23 | 0° <b>궁</b> 58'56   |             |
| superior conj       | 3063 Aug 03 17:48                      | 11° <b>Ω</b> 53'54           | 1°00'31     |                     | 3066 Jan 03 07:26 | 30°₽ <b>⋌</b> 7     |             |
| minimum elong       | 3063 Aug 03 08:57                      | 11° <b>Ω</b> 26'40           | 1°00'14     | direct              | 3066 Jan 15 19:03 | 26° <b>∡</b> ′50′03 |             |
|                     | 3063 Aug 18 10:21                      | 0° <b>m</b> p                |             | greatest brilliancy | 3066 Jan 25 23:19 | 28° <b>х</b> 47'29  | -4.9m       |
| evening rise        | 3063 Sep 08 16:51                      | 26° ₩ 15'32                  |             |                     | 3066 Jan 28 21:42 | 0°₹                 |             |
| -                   | 3063 Sep 11 17:31                      | 0∘ <b>ত</b>                  |             | morning max el      | 3066 Mar 07 05:34 | 29° <b>る</b> 40'24  | 46°51'45    |
|                     | 3063 Oct 06 00:05                      | 0°M                          |             |                     | 3066 Mar 07 13:21 | 0° <b>≈</b>         |             |
| desc. node          | 3063 Oct 26 02:17                      | 24°M49'04                    |             |                     | 3066 Apr 04 12:23 | 0° <b>)</b> €       |             |
| desc. node          | 3063 Oct 20 02:17<br>3063 Oct 30 07:04 | 24 الا <del>م</del> ح 0° الم |             | desc. node          | 3066 Apr 11 21:20 | 8° <b>∺</b> 20'12   |             |
|                     |  |                              |             | desc. Hode          | •                 |                     |             |
|                     | 3063 Nov 23 15:09                      | 5°0                          |             |                     | 3066 Apr 30 15:48 | 0° <b>Υ</b>         |             |
|                     | 3063 Dec 18 01:39                      | 0° <b>≈</b>                  |             |                     | 3066 May 26 02:32 | 0°8                 |             |
|                     | 3064 Jan 11 18:19                      | 0° <b>∀</b>                  |             |                     | 3066 Jun 20 05:22 | $\Pi$ °0            |             |
|                     | 3064 Feb 06 02:14                      | $0$ ° $\mathbf{Y}$           |             |                     | 3066 Jul 15 02:55 | $0$ $\circ$ $\odot$ |             |
| asc. node           | 3064 Feb 16 05:14                      | 11° <b>Y</b> 36'06           |             | asc. node           | 3066 Aug 03 00:24 | 22° <b>©</b> 56'22  |             |
|                     | 3064 Mar 03 23:44                      | $B_{\circ 0}$                |             |                     | 3066 Aug 08 19:19 | $0^{\circ}\Omega$   |             |
| evening max el      | 3064 Mar 12 22:04                      | 9° <b>8</b> 12'49            | 46°34'30    |                     | 3066 Sep 02 06:14 | 0° <b>m</b> )       |             |
| <b>3</b>            | 3064 Apr 05 06:45                      | 0°Щ                          |             | morning set         | 3066 Sep 04 01:53 | 2° m/ 14'29         |             |
| greatest brilliancy | 3064 Apr 21 04:25                      | 9° <b>Ⅱ</b> 12'45            | -4.8m       | morning sec         | 3066 Sep 26 12:14 | 0° <b>ت</b>         |             |
|                     | •                                      | 11° <b>Ⅱ</b> 20'41           | -4.0111     | Fauth 4int          | -                 |                     | 1 70070 ATT |
| retrograde          | 3064 May 01 22:18                      |                              |             | max. Earth dist.    | 3066 Oct 07 19:21 | 14° <b>≏</b> 02'25  | 1.72370 AU  |
| evening set         | 3064 May 17 14:08                      | 6° <b>Ⅲ</b> 33'50            |             |                     |                   | _                   |             |
| inferior conj       | 3064 May 23 05:42                      | 3° <b>Ⅱ</b> 07'19            |             | superior conj       | 3066 Oct 10 20:54 | 17° <b>≏</b> 51'20  |             |
| minimum elong       | 3064 May 23 12:43                      | 2° <b>∏</b> 56′15            | 3°22'28     | minimum elong       | 3066 Oct 11 03:27 | 18° <b>≏</b> 11'42  | 1°19'19     |
| min. Earth dist.    | 3064 May 23 04:09                      | 3° <b>Ⅱ</b> 09'45            | 0.28524 AU  |                     | 3066 Oct 20 14:48 | 0° <b>M</b> ₊       |             |
|                     | 3064 May 28 08:17                      | 30° <b>₹</b> 8               |             |                     | 3066 Nov 13 15:34 | 0° <b>∡</b> ¹       |             |
| morning rise        | 3064 May 29 11:43                      | 29° <b>8</b> 21'26           |             | evening rise        | 3066 Nov 18 11:50 | 6° <b>∡</b> 03'19   |             |
| desc. node          | 3064 Jun 06 18:54                      | 25° <b>8</b> 52'28           |             | desc. node          | 3066 Nov 22 14:17 | 11° <b>✓</b> 10'52  |             |
| direct              | 3064 Jun 13 13:55                      | 24° <b>8</b> 57'44           |             |                     | 3066 Dec 07 15:32 | 0°る                 |             |
|                     |  | 24° <b>8</b> 45'28           | 4.7m        |                     |                   | 0°≈                 |             |
| greatest brilliancy | 3064 Jun 23 13:09                      |                              | -4.7m       |                     | 3066 Dec 31 15:28 |                     |             |
|                     | 3064 Jun 30 19:49                      | 0°II                         |             |                     | 3067 Jan 24 16:47 | 0° <b>\</b>         |             |
| morning max el      | 3064 Aug 01 06:12                      | 24° <b>∏</b> 38'37           | 45°42'42    |                     | 3067 Feb 17 22:33 | 0° <b>Υ</b>         |             |
|                     | 3064 Aug 06 18:33                      | 0                            |             |                     | 3067 Mar 14 13:52 | $0^{\circ}$ 8       |             |
|                     |  |                              |             |                     |                   |                     |             |

| asc. node           | 3067 Mar 15 17:05 | 1° <b>8</b> 21'50                 |            | morning set         | 3069 Nov 13 06:53 | 11°ML13'03                   |            |
|---------------------|-------------------|-----------------------------------|------------|---------------------|-------------------|------------------------------|------------|
|                     | 3067 Apr 08 22:53 | $\Pi$ $\circ 0$                   |            |                     | 3069 Nov 28 06:44 | 0° <b>∡</b> ¹                |            |
|                     | 3067 May 05 18:13 | 0ಂ <b>ತಾ</b>                      |            | desc. node          | 3069 Dec 20 02:07 | 27° <b>∡¹</b> 23'25          |            |
| evening max el      | 3067 May 23 15:22 | 18° <b>©</b> 20'08                | 45°36'40   |                     | 3069 Dec 22 03:57 | 8°0                          |            |
| •                   | 3067 Jun 05 09:25 | $0^{\circ}\Omega$                 |            | max. Earth dist.    | 3069 Dec 22 06:30 | 0° <b>ರ</b> 08'01            | 1.71183 AU |
| greatest brilliancy | 3067 Jun 30 14:01 | 16° <b>Ω</b> 21'54                | -4.7m      |                     |                   |                              |            |
| desc. node          | 3067 Jul 05 06:52 | 17° <b>Ω</b> 47'16                | 1.7111     | superior conj       | 3069 Dec 23 04:15 | 1° <b>る</b> 16'23            | 0°07'27    |
|                     | 3067 Jul 11 12:02 | 18° <b>Ω</b> 30'41                |            |                     | 3069 Dec 23 02:18 | 1°る10'23                     |            |
| retrograde          |                   |                                   |            | minimum elong       |                   |                              | 0 0/21     |
| evening set         | 3067 Jul 27 09:02 | 13° <b>Ω</b> 40′24                |            | behind sun begin    | 3069 Dec 22 02:47 | 29° <b>∡</b> 56′22           |            |
| inferior conj       | 3067 Aug 02 00:03 | 10° <b>Ω</b> 16′34                |            | behind sun end      | 3069 Dec 24 01:48 | 2° <b>る</b> 24'07            |            |
| minimum elong       | 3067 Aug 01 14:12 | 10° <b>£</b> 31′56                | 5°53'39    |                     | 3070 Jan 15 00:24 | 0° <b>≈</b>                  |            |
| min. Earth dist.    | 3067 Aug 01 20:20 | 10° <b>Ω</b> 22'22                | 0.29057 AU | evening rise        | 3070 Feb 02 09:44 | 23° <b>≈</b> 06'49           |            |
| morning rise        | 3067 Aug 06 19:22 | 7° <b>Ω</b> 20'40                 |            |                     | 3070 Feb 07 21:21 | 0° <b>∀</b>                  |            |
| direct              | 3067 Aug 23 15:01 | 1° <b>Ω</b> 58'39                 |            |                     | 3070 Mar 03 20:29 | $0^{\circ}\mathbf{\Upsilon}$ |            |
| greatest brilliancy | 3067 Sep 03 02:16 | 3° <b>£</b> 57′13                 | -4 7m      |                     | 3070 Mar 28 00:11 | 0°8                          |            |
| groutest orimane)   | 3067 Oct 09 06:01 | 0° m                              | ,          | asc. node           | 3070 Apr 12 05:08 | 18° <b>8</b> 42'25           |            |
| morning max el      | 3067 Oct 11 22:48 |                                   | 46°05'05   | ase. Houe           | 3070 Apr 21 11:10 | 0°Ⅱ                          |            |
| •                   |                   |                                   | 40 03 03   |                     | •                 |                              |            |
| asc. node           | 3067 Oct 26 09:55 | 17° m 25'31                       |            |                     | 3070 May 16 08:42 | 0°©                          |            |
|                     | 3067 Nov 06 22:12 | 0∘ <b>ত</b>                       |            |                     | 3070 Jun 10 22:05 | $0^{\circ}\Omega$            |            |
|                     | 3067 Dec 02 21:38 | 0°M₊                              |            |                     | 3070 Jul 07 15:25 | 0° <b>m</b>                  |            |
|                     | 3067 Dec 27 18:46 | 0° <b>∡</b> ¹                     |            | desc. node          | 3070 Aug 01 18:42 | 25° <b>m</b> 54'06           |            |
|                     | 3068 Jan 21 03:52 | 8°0                               |            | evening max el      | 3070 Aug 02 16:17 | 26° Mp 45'47                 | 45°34'31   |
|                     | 3068 Feb 14 07:40 | 0° <b>≈</b>                       |            |                     | 3070 Aug 06 02:45 | 0∘ <b>ত</b>                  |            |
| desc. node          | 3068 Feb 14 23:39 | 0° <b>≈</b> 49'46                 |            | greatest brilliancy | 3070 Sep 11 00:54 | 24° <b>£</b> 50'55           | -4.8m      |
|                     | 3068 Mar 09 09:38 | 0° <b>∀</b>                       |            | retrograde          | 3070 Sep 20 08:09 | 26° <b>£</b> 24'39           |            |
|                     | 3068 Apr 02 11:51 | 0° <b>Υ</b>                       |            | evening set         | 3070 Oct 08 00:36 | 20° <b>£</b> 35'38           |            |
| . ,                 | •                 |                                   |            | •                   |                   |                              | 0010111    |
| morning set         | 3068 Apr 16 03:25 | 16° <b>Y</b> 57′26                |            | inferior conj       | 3070 Oct 11 11:29 | 18° <b>£</b> 29'19           |            |
|                     | 3068 Apr 26 15:46 | 0°B                               |            | minimum elong       | 3070 Oct 11 18:28 | 18° <b>≏</b> 18'30           |            |
|                     | 3068 May 20 22:02 | $\Pi$ $^{\circ}0$                 |            | min. Earth dist.    | 3070 Oct 12 08:45 | 17° <b>£</b> 56′24           | 0.28108 AU |
|                     |                   |                                   |            | morning rise        | 3070 Oct 15 12:00 | 16° <b>≏</b> 02'08           |            |
| superior conj       | 3068 May 24 08:15 | 4° <b>Ⅱ</b> 13'37                 | -0°32'09   | direct              | 3070 Nov 01 17:20 | 10° <b>£</b> 23′02           |            |
| minimum elong       | 3068 May 24 14:56 | 4° <b>∏</b> 34'14                 | 0°31'51    | greatest brilliancy | 3070 Nov 12 21:00 | 12° <b>≏</b> 41'07           | -4.8m      |
| max. Earth dist.    | 3068 May 26 12:44 | 6° <b>Ⅱ</b> 55'29                 | 1.73140 AU | asc. node           | 3070 Nov 22 21:44 | 17° <b>≏</b> 59'38           |            |
| asc. node           | 3068 Jun 07 02:52 | 21° <b>Ⅱ</b> 12'05                |            |                     | 3070 Dec 08 07:27 | 0°M                          |            |
| use. Houe           | 3068 Jun 14 06:30 | 0°95                              |            | morning max el      | 3070 Dec 22 05:58 | 13°M20'33                    | 46°48'10   |
| avanina riaa        | 3068 Jun 30 10:27 | 19° <b>9</b> 51'56                |            | morning max ci      |                   | 13 ll <b>c</b> 20 33         | 40 46 10   |
| evening rise        |                   |                                   |            |                     | 3071 Jan 06 22:35 |                              |            |
|                     | 3068 Jul 08 16:40 | $0$ $^{\circ}$ $\Omega$           |            |                     | 3071 Feb 02 04:42 | 0° <b>ප</b>                  |            |
|                     | 3068 Aug 02 04:24 | 0° <b>™</b>                       |            |                     | 3071 Feb 27 08:39 | 0° <b>≈</b>                  |            |
|                     | 3068 Aug 26 18:34 | 0∘ <b>⊽</b>                       |            | desc. node          | 3071 Mar 14 11:32 | 18° <b>≈</b> 18'33           |            |
|                     | 3068 Sep 20 12:38 | 0° <b>M</b>                       |            |                     | 3071 Mar 24 01:54 | 0° <b>∀</b>                  |            |
| desc. node          | 3068 Sep 26 16:25 | 7°M25'25                          |            |                     | 3071 Apr 17 14:51 | $0$ ° $\mathbf{\gamma}$      |            |
|                     | 3068 Oct 15 12:30 | 0° <b>∡</b> ¹                     |            |                     | 3071 May 12 02:32 | 0°8                          |            |
|                     | 3068 Nov 09 21:29 | 8°0                               |            |                     | 3071 Jun 05 14:14 | $\Pi^{\circ}0$               |            |
|                     | 3068 Dec 06 00:58 | 0° <b>≈</b>                       |            | morning set         | 3071 Jun 25 21:25 | 24° <b>Ⅲ</b> 52'26           |            |
| evening max el      | 3068 Dec 28 17:20 | 24°≈22'33                         | 17015138   | morning set         | 3071 Jun 30 01:46 | 0°95                         |            |
| evening max er      |                   |                                   | 4/ 13 36   | 1                   |                   |                              |            |
|                     | 3069 Jan 03 08:42 | 0° <b>)</b> (                     |            | asc. node           | 3071 Jul 05 14:36 | 6°5947'13                    |            |
| asc. node           | 3069 Jan 17 19:26 | 13° <b>)</b> €05'19               |            |                     | 3071 Jul 24 12:14 | $0^{\circ}\Omega$            |            |
| greatest brilliancy | 3069 Feb 07 07:27 | 25° <b>)</b> 57'39                | -4.9m      | max. Earth dist.    | 3071 Jul 30 17:54 | 7° <b>&amp; l</b> 40'12      | 1.73478 AU |
| retrograde          | 3069 Feb 17 15:11 | 27° <b>¥</b> 59′27                |            |                     |                   |                              |            |
| evening set         | 3069 Mar 07 10:44 | 21° <b>) (</b> 48′26              |            | superior conj       | 3071 Aug 01 12:07 | 9° <b>Ω</b> 50'05            | 0°58'16    |
| inferior conj       | 3069 Mar 10 10:21 | 19° <b>)</b> 57′42                | 8°53'42    | minimum elong       | 3071 Aug 01 03:17 | 9° <b>Ω</b> 22'56            | 0°57'57    |
| minimum elong       | 3069 Mar 10 08:23 | 20° <b>)</b> €00'45               | 8°53'39    |                     | 3071 Aug 17 20:57 | 0° <b>m</b> )                |            |
| min. Earth dist.    | 3069 Mar 09 18:33 | 20° <b>¥</b> 22'19                | 0.27447 AU | evening rise        | 3071 Sep 06 10:35 | 24° Mp 09'08                 |            |
| morning rise        | 3069 Mar 13 06:15 | 18° <b>)</b> 13′08                |            | 8                   | 3071 Sep 11 04:13 | 0∘ <del>⊽</del>              |            |
| direct              | 3069 Mar 31 03:12 | 12° <b>)</b> (15'06'44            |            |                     | 3071 Sep 11 04:13 | 0° <b>M</b>                  |            |
|                     |                   |                                   | 4.0        | 1                   |                   |                              |            |
| greatest brilliancy | 3069 Apr 09 04:32 | 13° <b>)</b> 39'41<br>0° <b>°</b> | -4.8m      | desc. node          | 3071 Oct 25 04:27 | 24°M21'25                    |            |
|                     | 3069 May 05 02:55 |                                   |            |                     | 3071 Oct 29 18:16 | 0° <b>∡</b>                  |            |
| desc. node          | 3069 May 09 09:10 | 3° <b>Y</b> 42′10                 |            |                     | 3071 Nov 23 02:47 | 0°ಕ                          |            |
| morning max el      | 3069 May 19 15:36 | 13° <b>Ƴ</b> 17'50                | 46°09'10   |                     | 3071 Dec 17 13:55 | 0° <b>≈</b>                  |            |
|                     | 3069 Jun 05 01:21 | $8^{\circ}$ 0                     |            |                     | 3072 Jan 11 07:31 | 0° <b>∀</b>                  |            |
|                     | 3069 Jul 02 09:43 | $\Pi^{\circ}0$                    |            |                     | 3072 Feb 05 17:10 | $0$ ° $\mathbf{\gamma}$      |            |
|                     | 3069 Jul 28 12:04 | 0ಂಣ                               |            | asc. node           | 3072 Feb 15 07:11 | 10° <b>Ƴ</b> 56'17           |            |
|                     | 3069 Aug 22 21:15 | $0^{\circ}\Omega$                 |            |                     | 3072 Mar 03 18:58 | 0°8                          |            |
| asc. node           | 3069 Aug 30 12:14 | 9° <b>Ω</b> 08'29                 |            | evening max el      | 3072 Mar 10 11:53 | 6° <b>8</b> 52'47            | 46°36'45   |
| 350. HOGO           | 3069 Sep 16 17:38 | 0° Mp                             |            | Croning max of      |                   | 0°Ⅱ                          | 10 30 43   |
|                     | -                 |                                   |            |                     | 3072 Apr 06 01:13 |                              | 4.0.       |
|                     | 3069 Oct 11 04:02 | 0∘ <b>亚</b>                       |            | greatest brilliancy | 3072 Apr 18 21:32 | 7° <b>I</b> 101'12           | -4.8m      |
|                     | 3069 Nov 04 07:27 | 0°M₊                              |            | retrograde          | 3072 Apr 29 13:59 | 9°Ⅱ08′28                     |            |
|                     |                   |                                   |            |                     |                   |                              |            |

| . ,                 | 2072 M 15 00 12                        | 40 <b>TT</b> 10110         |             |                     | 2074 0 + 00 12 51                      | 1.50 0 20101            | 1920125    |
|---------------------|--|----------------------------|-------------|---------------------|--|-------------------------|------------|
| evening set         | 3072 May 15 08:12                      | 4° <b>Ⅱ</b> 18'19          |             | superior conj       | 3074 Oct 08 12:51                      | 15° <b>Ω</b> 38'01      |            |
| inferior conj       | 3072 May 20 21:31                      | 0° <b>∏</b> 55'18          |             | minimum elong       | 3074 Oct 08 18:46                      | 15° <b>≏</b> 56′28      | 1°20'30    |
| minimum elong       | 3072 May 21 05:04                      | 0° <b>Ⅱ</b> 43'25          | 3°41'18     |                     | 3074 Oct 20 01:37                      | $0^{\circ}$ M           |            |
| min. Earth dist.    | 3072 May 20 20:27                      | 0° <b>Ⅱ</b> 56'59          | 0.28499 AU  |                     | 3074 Nov 13 02:30                      | 0° <b>∡</b> 7           |            |
|                     | 3072 May 22 08:44                      | 30° <b>₹</b> 8             |             | evening rise        | 3074 Nov 16 00:50                      | 3° <b>∡</b> ³39'42      |            |
| morning rise        | 3072 May 27 02:15                      | 27° <b>8</b> 11'03         |             | desc. node          | 3074 Nov 21 16:20                      | 10° <b>∡</b> ¹42'58     |            |
| desc. node          | 3072 Jun 05 20:57                      | 23° <b>8</b> 19'32         |             |                     | 3074 Dec 07 02:37                      | აი                      |            |
| direct              | 3072 Jun 11 04:37                      | 22° <b>8</b> 45'55         |             |                     | 3074 Dec 31 02:43                      | 0° <b>≈</b>             |            |
| greatest brilliancy | 3072 Jun 21 04:45                      | 24° <b>8</b> 34'09         | -4.7m       |                     | 3075 Jan 24 04:16                      | 0° <b>∀</b>             |            |
| greatest brilliancy |  | _                          | -4./111     |                     |  | 0°Υ                     |            |
|                     | 3072 Jul 02 06:16                      | 0°II                       | 45040150    |                     | 3075 Feb 17 10:25                      |                         |            |
| morning max el      | 3072 Jul 29 21:23                      | 22° <b>∏</b> 27′00         | 45°42'50    |                     | 3075 Mar 14 02:26                      | 0°8                     |            |
|                     | 3072 Aug 06 14:39                      | 0                          |             | asc. node           | 3075 Mar 14 19:13                      | 0° <b>8</b> 50'23       |            |
|                     | 3072 Sep 03 19:32                      | $0 {\circ} \Omega$         |             |                     | 3075 Apr 08 12:51                      | $\Pi$ $^{\circ}0$       |            |
| asc. node           | 3072 Sep 27 00:09                      | 26° <b>Ω</b> 30′03         |             |                     | 3075 May 05 11:28                      | $0$ $\circ$ $\odot$     |            |
|                     | 3072 Sep 29 23:51                      | 0° <b>m</b>                |             | evening max el      | 3075 May 21 08:20                      | 16° <b>©</b> 11'52      | 45°37'54   |
|                     | 3072 Oct 25 02:40                      | 0∘ <b>ত</b>                |             |                     | 3075 Jun 05 15:37                      | $0^{\circ}\Omega$       |            |
|                     | 3072 Nov 18 14:18                      | 0°M                        |             | greatest brilliancy | 3075 Jun 28 05:19                      | 14° <b>Ω</b> 12'11      | -4.7m      |
|                     | 3072 Dec 12 17:20                      | 0° <b>∡</b> 7              |             | desc. node          | 3075 Jul 04 08:52                      | 15° <b>Ω</b> 55'28      |            |
|                     | 3073 Jan 05 16:08                      | 0°ਤ                        |             | retrograde          | 3075 Jul 09 04:40                      | 16° <b>Ω</b> 21'49      |            |
|                     |  |                            |             | ~                   |  |                         |            |
| desc. node          | 3073 Jan 16 13:49                      | 13° <b>⋜</b> 41'25         |             | evening set         | 3075 Jul 24 22:57                      | 11° <b>Ω</b> 35'01      |            |
| morning set         | 3073 Jan 27 19:29                      | 27° <b>る</b> 48'35         |             | inferior conj       | 3075 Jul 30 16:21                      | 8° <b>Ω</b> 07'28       |            |
|                     | 3073 Jan 29 13:18                      | 0° <b>≈</b>                |             | minimum elong       | 3075 Jul 30 06:36                      | 8° <b>Ω</b> 22'42       | 5°39'00    |
|                     | 3073 Feb 22 10:26                      | 0° <b>∀</b>                |             | min. Earth dist.    | 3075 Jul 30 11:53                      | 8° <b>Ω</b> 14'26       | 0.29055 AU |
|                     |  |                            |             | morning rise        | 3075 Aug 04 14:19                      | 5° <b>Ω</b> 07'45       |            |
| superior conj       | 3073 Mar 10 04:27                      | 19° <b>)</b> 45'11         | -1°26'01    |                     | 3075 Aug 18 09:35                      | 30°Rூ                   |            |
| minimum elong       | 3073 Mar 10 01:53                      | 19° <b>)</b> €37'09        | 1°26'00     | direct              | 3075 Aug 21 07:58                      | 29°5549'49              |            |
| max. Earth dist.    | 3073 Mar 13 18:15                      | 24° <b>)</b> 13'48         | 1.71613 AU  | 4.1.000             | 3075 Aug 24 07:23                      | 0°Ω                     |            |
| max. Lartii dist.   | 3073 Mar 18 08:58                      | 0°Υ                        | 1./1013 AO  | arantaat brillianav | _                                      | 1° <b>Ω</b> 46'57       | 4.7        |
|                     |  |                            |             | greatest brilliancy | 3075 Aug 31 17:17                      |                         | -4./III    |
|                     | 3073 Apr 11 10:22                      | 0° <b>8</b>                |             |                     | 3075 Oct 09 04:34                      | 0° <b>™</b>             |            |
| evening rise        | 3073 Apr 19 04:23                      | 9° <b>8</b> 37'10          |             | morning max el      | 3075 Oct 09 14:37                      | 0° <b>m</b> 24′27       | 46°03'32   |
|                     | 3073 May 05 15:56                      | $\Pi$ $^{\circ}0$          |             | asc. node           | 3075 Oct 25 12:04                      | 16° Mp 43'55            |            |
| asc. node           | 3073 May 09 17:03                      | 4° <b>∏</b> 59'11          |             |                     | 3075 Nov 06 14:01                      | 0∘ <b>ত</b>             |            |
|                     | 3073 May 30 02:28                      | $0$ $\circ$ $\mathfrak{S}$ |             |                     | 3075 Dec 02 11:12                      | $0^{\circ}$ M           |            |
|                     | 3073 Jun 23 18:43                      | $0^{\circ}\Omega$          |             |                     | 3075 Dec 27 07:18                      | 0° <b>∡</b> ¹           |            |
|                     | 3073 Jul 18 18:27                      | O° Mp                      |             |                     | 3076 Jan 20 15:48                      | ರ°0                     |            |
|                     | 3073 Aug 13 05:29                      | 0∘ <b>ರ</b><br>∘ .ಚ        |             |                     | 3076 Feb 13 19:11                      | 0° <b>≈</b>             |            |
| desc. node          | 3073 Aug 19 05:29<br>3073 Aug 29 06:30 | 18° <b>≏</b> 28'29         |             | desc. node          | 3076 Feb 14 01:43                      | 0°≈20'20                |            |
| desc. Hode          | •                                      |                            |             | desc. Hode          |  |                         |            |
|                     | 3073 Sep 08 11:37                      | 0°M                        |             |                     | 3076 Mar 08 20:51                      | 0° <b>∀</b>             |            |
|                     | 3073 Oct 06 08:34                      | 0°⊀                        |             |                     | 3076 Apr 01 22:51                      | 0° <b>Υ</b>             |            |
| evening max el      | 3073 Oct 14 10:17                      | 8° <b>≯</b> 04'32          | 46°32'14    | morning set         | 3076 Apr 13 17:42                      | 14° <b>Ƴ</b> 38'57      |            |
|                     | 3073 Nov 08 22:10                      | 0°る                        |             |                     | 3076 Apr 26 02:36                      | 0°B                     |            |
| greatest brilliancy | 3073 Nov 23 17:49                      | 7° <b>る</b> 58'25          | -4.9m       |                     | 3076 May 20 08:47                      | $\Pi^{\circ}0$          |            |
| retrograde          | 3073 Dec 03 08:14                      | 9° <b>ප්</b> 42'31         |             |                     |  |                         |            |
| evening set         | 3073 Dec 17 15:23                      | 5° <b>る</b> 40'23          |             | superior conj       | 3076 May 22 00:31                      | 2° <b>Ⅱ</b> 02'35       | -0°35'15   |
| asc. node           | 3073 Dec 20 09:31                      | 4° <b>る</b> 08'24          |             | minimum elong       | 3076 May 22 07:46                      | 2° <b>∏</b> 24'57       |            |
| inferior conj       | 3073 Dec 23 21:38                      | 2° <b>る</b> 02'35          | 0°54'42     | max. Earth dist.    | 3076 May 24 10:25                      |                         | 1.73104 AU |
| minimum elong       |  | 2°る02'35                   | 0°54'00     | asc. node           | 3076 Jun 06 04:50                      | 20° <b>∏</b> 45'07      | 1./3104 AU |
| _                   | 3073 Dec 23 19:32                      |                            |             | asc. node           |  |                         |            |
| min. Earth dist.    | 3073 Dec 23 22:33                      | 2° <b>ට</b> 01'11          | 0.26517 AU  |                     | 3076 Jun 13 17:14                      | 0°95                    |            |
|                     | 3073 Dec 27 07:22                      | 30°₹ <b>৴</b>              |             | evening rise        | 3076 Jun 28 04:46                      | 17° <b>©</b> 47'41      |            |
| morning rise        | 3073 Dec 29 23:24                      | 28° <b>≯</b> 30'05         |             |                     | 3076 Jul 08 03:29                      | $0$ $^{\circ}$ $\Omega$ |            |
| direct              | 3074 Jan 13 08:03                      | 24° <b>₹</b> 22'32         |             |                     | 3076 Aug 01 15:27                      | 0° <b>m</b> y           |            |
| greatest brilliancy | 3074 Jan 23 13:23                      | 26° <b>≮</b> ¹21'37        | -4.9m       |                     | 3076 Aug 26 06:00                      | 0∘ <b>ত</b>             |            |
|                     | 3074 Jan 31 03:57                      | 0°ප                        |             |                     | 3076 Sep 20 00:41                      | 0° <b>M</b> ₊           |            |
| morning max el      | 3074 Mar 04 20:04                      | 27° <b>る</b> 19'03         | 46°52'38    | desc. node          | 3076 Sep 25 18:34                      | 6°M55'05                |            |
|                     | 3074 Mar 07 11:36                      | 0° <b>≈</b>                |             |                     | 3076 Oct 15 01:28                      | 0° <b>⊼</b>             |            |
|                     | 3074 Mai 07 11:30<br>3074 Apr 04 04:27 | 0° <b>∺</b>                |             |                     | 3076 Nov 09 11:57                      | %<br>ਨ<br>ਹ             |            |
|                     | •                                      |                            |             |                     |  |                         |            |
| desc. node          | 3074 Apr 10 23:31                      | 7° <b>)</b> 42′54          |             |                     | 3076 Dec 05 18:20                      | 0°≈                     | 47015120   |
|                     | 3074 Apr 30 05:28                      | 0° <b>Υ</b>                |             | evening max el      | 3076 Dec 26 08:22                      | 22°≈00'58               | 47°15'30   |
|                     | 3074 May 25 14:58                      | 0°B                        |             |                     | 3077 Jan 03 10:27                      | 0° <b>∀</b>             |            |
|                     | 3074 Jun 19 17:02                      | $\Pi$ $^{\circ}0$          |             | asc. node           | 3077 Jan 16 21:29                      | 11° <b>∺</b> 53'47      |            |
|                     | 3074 Jul 14 14:07                      | $0$ $\circ$ $\odot$        |             | greatest brilliancy | 3077 Feb 04 22:05                      | 23° <b>)</b> 34′17      | -4.9m      |
| asc. node           | 3074 Aug 02 02:26                      | 22° <b>5</b> 29'16         |             | retrograde          | 3077 Feb 15 05:20                      | 25° <b>)</b> 35′15      |            |
|                     | 3074 Aug 08 06:12                      | $0^{\circ}\Omega$          |             | evening set         | 3077 Mar 04 22:39                      | 19° <b>)</b> 28′13      |            |
| morning set         | 3074 Sep 01 19:03                      | 0° m 06'26                 |             | min. Earth dist.    | 3077 Mar 07 07:43                      | 18° <b>)</b> €00'08     | 0.27391 AU |
|                     | 3074 Sep 01 16:58                      | 0° mp                      |             | inferior conj       | 3077 Mar 08 00:06                      | 17° <b>)</b> 34'36      | 8°51'42    |
|                     | 3074 Sep 25 22:57                      | 0∘ <b>ʊ</b>                |             | minimum elong       | 3077 Mar 08 00:00<br>3077 Mar 07 21:15 | 17° <b>X</b> 34'30      |            |
| may Forth 1:-4      | •                                      |                            | 1 72/17 411 | •                   |  |                         | 0 21 33    |
| max. Earth dist.    | 3074 Oct 05 11:50                      | 11 == 30/33                | 1.72417 AU  | morning rise        | 3077 Mar 10 20:03                      | 15° <b>¥</b> 49'50      |            |

| direct              | 2077 Mar 29 16:26 | 9° <b>){</b> 44'47          |                         |                     | 3079 Oct 04 22:14 | 0° <b>M</b>             |                      |
|---------------------|-------------------|-----------------------------|-------------------------|---------------------|-------------------|-------------------------|----------------------|
| direct              | 3077 Mar 28 16:36 |                             | 4.0                     | 1 1                 |                   |                         |                      |
| greatest brilliancy | 3077 Apr 06 17:11 | 11° <b>)</b> € 16'57        | -4.8m                   | desc. node          | 3079 Oct 24 06:26 | 23°M51'57               |                      |
|                     | 3077 May 05 09:41 | 0° <b>Υ</b>                 |                         |                     | 3079 Oct 29 05:52 | 0° <b>∡</b> ¹           |                      |
| desc. node          | 3077 May 08 11:11 | 2° <b>Y</b> '43'48          |                         |                     | 3079 Nov 22 14:51 | 0°ಕ                     |                      |
| morning max el      | 3077 May 17 05:00 | 10° <b>Y</b> 57'53          | 46°10'39                |                     | 3079 Dec 17 02:37 | 0° <b>≈</b>             |                      |
|                     | 3077 Jun 04 19:14 | $9^{\circ}$ 8               |                         |                     | 3080 Jan 10 21:11 | 0° <b>ℋ</b>             |                      |
|                     | 3077 Jul 02 00:00 | $\Pi$ $^{\circ}0$           |                         |                     | 3080 Feb 05 08:40 | $0$ ° $\Upsilon$        |                      |
|                     | 3077 Jul 28 00:44 | $0$ $\circ$ $\odot$         |                         | asc. node           | 3080 Feb 14 09:19 | 10° <b>Ƴ</b> 15′29      |                      |
|                     | 3077 Aug 22 09:05 | $0^{\circ}\Omega$           |                         |                     | 3080 Mar 03 15:10 | $9^{\circ}$ 8           |                      |
| asc. node           | 3077 Aug 29 14:21 | 8° <b>Ω</b> 39'45           |                         | evening max el      | 3080 Mar 08 01:59 | 4° <b>8</b> 32'22       | 46°39'02             |
|                     | 3077 Sep 16 05:00 | 0° m)                       |                         | <i>y</i>            | 3080 Apr 07 03:10 | 0° <b>I</b> I           |                      |
|                     | 3077 Oct 10 15:11 | 0∘ <b>⊽</b>                 |                         | greatest brilliancy | 3080 Apr 16 14:07 | 4° <b>∏</b> 47'54       | -4.8m                |
|                     | 3077 Nov 03 18:31 | 0° <b>m</b>                 |                         | retrograde          | 3080 Apr 27 06:06 | 6° <b>I</b> 55'18       | - <del>4</del> .0111 |
|                     |                   |                             |                         | =                   | •                 |                         |                      |
| morning set         | 3077 Nov 10 20:48 | 8°M51'56                    |                         | evening set         | 3080 May 13 02:23 | 2° <b>Ⅱ</b> 01'30       |                      |
|                     | 3077 Nov 27 17:47 | 0° <b>∡</b> 7               |                         |                     | 3080 May 16 11:37 | 30° <b>₹</b> 8          |                      |
| desc. node          | 3077 Dec 19 04:02 | 26° <b>≯</b> 54'38          |                         | inferior conj       | 3080 May 18 13:20 | 28° <b>8</b> 42'13      | 4°02'07              |
| max. Earth dist.    | 3077 Dec 19 10:12 | 27° <b>∡</b> 13'59          | 1.71206 AU              | minimum elong       | 3080 May 18 21:23 | 28° <b>8</b> 29'34      | 3°59'57              |
|                     |                   |                             |                         | min. Earth dist.    | 3080 May 18 12:31 | 28° <b>8</b> 43'30      | 0.28472 AU           |
| superior conj       | 3077 Dec 20 14:59 | 28° <b>∡</b> ¹44'26         | -0°03'32                | morning rise        | 3080 May 24 16:39 | 25° <b>8</b> 00'06      |                      |
| minimum elong       | 3077 Dec 20 14:03 | 28° <b>∡</b> ⁴41'31         | 0°03'29                 | desc. node          | 3080 Jun 04 22:54 | 20° <b>8</b> 50'44      |                      |
| behind sun begin    | 3077 Dec 19 12:33 | 27° <b>∡</b> ¹21'22         |                         | direct              | 3080 Jun 08 19:32 | 20° <b>8</b> 32'59      |                      |
| behind sun end      | 3077 Dec 21 15:33 | 0° <b>る</b> 01'40           |                         | greatest brilliancy | 3080 Jun 18 20:07 | 22° <b>8</b> 21'47      | -4 7m                |
| oeiiiia san ena     | 3077 Dec 21 15:01 | 0°る                         |                         | greatest similare y | 3080 Jul 03 07:11 | 0°II                    | 1.7111               |
|                     |                   | 0°≈                         |                         | morning max el      | 3080 Jul 27 13:26 | 20° <b>Ⅱ</b> 16'49      | 45942100             |
|                     | 3078 Jan 14 11:33 |                             |                         | morning max er      |                   |                         | 43 43 09             |
| evening rise        | 3078 Jan 30 19:48 | 20°≈32'30                   |                         |                     | 3080 Aug 06 10:22 | 0°©                     |                      |
|                     | 3078 Feb 07 08:34 | 0° <b>∀</b>                 |                         |                     | 3080 Sep 03 10:25 | $0^{\circ}\Omega$       |                      |
|                     | 3078 Mar 03 07:48 | $0^{\circ}\mathbf{Y}$       |                         | asc. node           | 3080 Sep 26 02:17 | 25° <b>Ω</b> 57'48      |                      |
|                     | 3078 Mar 27 11:37 | $9^{\circ}$ 8               |                         |                     | 3080 Sep 29 12:51 | 0° <b>m</b> )           |                      |
| asc. node           | 3078 Apr 11 07:12 | 18° <b>8</b> 13'18          |                         |                     | 3080 Oct 24 14:49 | 0∘ <b>ত</b>             |                      |
|                     | 3078 Apr 20 22:53 | $\Pi^{\circ}0$              |                         |                     | 3080 Nov 18 02:01 | 0° <b>M</b> .           |                      |
|                     | 3078 May 15 21:02 | 0ಂತಾ                        |                         |                     | 3080 Dec 12 04:50 | 0° <b>∡</b> ¹           |                      |
|                     | 3078 Jun 10 11:40 | $\Omega^{\circ}\Omega$      |                         |                     | 3081 Jan 05 03:31 | 0°ರ                     |                      |
|                     | 3078 Jul 07 07:48 | 0° m                        |                         | desc. node          | 3081 Jan 15 15:55 | 13° <b>る</b> 12'29      |                      |
| evening max el      | 3078 Jul 31 05:45 | 24° <b>m</b> ) 28'34        | 45°33'16                | morning set         | 3081 Jan 25 05:06 | 25° <b>る</b> 12'28      |                      |
| desc. node          | 3078 Jul 31 20:44 | 25° Mp 04'14                | 43 33 10                | morning set         | 3081 Jan 29 00:36 | 0°≈                     |                      |
| desc. Hode          |                   | -•                          |                         |                     |                   |                         |                      |
| 1                   | 3078 Aug 06 03:59 | 0∘ <b>ʊ</b>                 | 4.0                     |                     | 3081 Feb 21 21:38 | 0° <b>ℋ</b>             |                      |
| greatest brilliancy | 3078 Sep 08 14:33 | 22° <b>△</b> 34'46          | -4.8m                   |                     |                   |                         |                      |
| retrograde          | 3078 Sep 17 21:47 | 24° <b>Ω</b> 08'56          |                         | superior conj       | 3081 Mar 07 15:34 | 17° <b>¥</b> 14'43      |                      |
| evening set         | 3078 Oct 05 17:04 | 18° <b>≏</b> 16'21          |                         | minimum elong       | 3081 Mar 07 11:56 | 17° <b>∺</b> 03'22      |                      |
| inferior conj       | 3078 Oct 09 02:13 | 16° <b>≙</b> 12'43          | -8°16'54                | max. Earth dist.    | 3081 Mar 11 01:35 | 21° <b>∺</b> 31'35      | 1.71569 AU           |
| minimum elong       | 3078 Oct 09 08:31 | 16° <b>≙</b> 02'58          | 8°16'18                 |                     | 3081 Mar 17 20:06 | $0$ ° $\Upsilon$        |                      |
| min. Earth dist.    | 3078 Oct 09 23:19 | 15° <b>≏</b> 40'03          | 0.28176 AU              |                     | 3081 Apr 10 21:29 | $8^{\circ}$ 0           |                      |
| morning rise        | 3078 Oct 12 23:38 | 13° <b>≏</b> 50'00          |                         | evening rise        | 3081 Apr 16 17:38 | 7° <b>8</b> 14'57       |                      |
| direct              | 3078 Oct 30 08:07 | 8° <b>≏</b> 05'16           |                         |                     | 3081 May 05 03:07 | $\Pi^{\circ}$ 0         |                      |
| greatest brilliancy | 3078 Nov 10 13:00 | 10° <b>≏</b> 24'02          | -4.8m                   | asc. node           | 3081 May 08 19:01 | 4° <b>Ⅱ</b> 30'47       |                      |
| asc. node           | 3078 Nov 21 23:39 | 16° <b>≏</b> 38'25          |                         |                     | 3081 May 29 13:48 | 0ം <b>ഉ</b>             |                      |
|                     | 3078 Dec 08 12:22 | 0°M                         |                         |                     | 3081 Jun 23 06:22 | 0°N                     |                      |
| morning max el      | 3078 Dec 19 19:47 | 10°M57'05                   | 46°47'03                |                     | 3081 Jul 18 06:41 | 0° m/y                  |                      |
| morning max ci      | 3079 Jan 06 16:30 | 10 ll€3703<br>0° <b>√</b> 7 | 10 7/05                 |                     | 3081 Aug 12 18:51 | 0∘ <del>ত</del><br>اللا |                      |
|                     |                   | %ਰ                          |                         | 4 4-                | •                 |                         |                      |
|                     | 3079 Feb 01 19:27 |                             |                         | desc. node          | 3081 Aug 28 08:38 | 17° <b>£</b> 53'11      |                      |
|                     | 3079 Feb 26 21:56 | 0° <b>≈</b>                 |                         |                     | 3081 Sep 08 03:15 | 0° <b>M</b> ₊           |                      |
| desc. node          | 3079 Mar 13 13:39 | 17° <b>≈</b> 46′19          |                         |                     | 3081 Oct 06 05:44 | 0° <b>∡</b> ¹           |                      |
|                     | 3079 Mar 23 14:20 | 0° <b>∀</b>                 |                         | evening max el      | 3081 Oct 12 00:27 | 5° <b>≯</b> ′44'16      | 46°29'51             |
|                     | 3079 Apr 17 02:41 | $0^{\circ}$ Y               |                         |                     | 3081 Nov 10 03:18 | 0°₹                     |                      |
|                     | 3079 May 11 13:57 | 0°8                         |                         | greatest brilliancy | 3081 Nov 21 06:02 | 5° <b>る</b> 30'02       | -4.9m                |
|                     | 3079 Jun 05 01:19 | $\Pi$ °0                    |                         | retrograde          | 3081 Nov 30 20:52 | 7°る14'02                |                      |
| morning set         | 3079 Jun 23 15:19 | 22° <b>∐</b> 46'41          |                         | evening set         | 3081 Dec 15 04:05 | 3° <b>ට</b> 11'17       |                      |
| -                   | 3079 Jun 29 12:39 | 0∘ <b>ௐ</b>                 |                         | asc. node           | 3081 Dec 19 11:37 | 0° <b>る</b> 43'47       |                      |
| asc. node           | 3079 Jul 04 16:39 | 6° <b>©</b> 20'13           |                         |                     | 3081 Dec 20 16:39 | 30°R <i>X</i> ¹         |                      |
|                     | 3079 Jul 23 23:02 | 0°N                         |                         | inferior conj       | 3081 Dec 21 09:50 | 29° <b>х</b> 33'56      | 0°30'02              |
| max. Earth dist.    | 3079 Jul 28 14:35 | 5° <b>Ω</b> 42'58           | 1.73496 AU              | minimum elong       | 3081 Dec 21 08:40 | 29° <b>х</b> 35'42      | 0°29'40              |
| max. Earth dist.    | 5017 Jul 20 14.55 | J 0642 JO                   | 1.75 <del>7</del> 70 AU | •                   |                   |                         |                      |
| aumonia '           | 2070 1-1 20 06 46 | 70 0 46126                  | 0055150                 | min. Earth dist.    | 3081 Dec 21 11:54 | 29° 🗷 30'49             | 0.26537 AU           |
| superior conj       | 3079 Jul 30 06:46 | 7° <b>Ω</b> 46'36           |                         | morning rise        | 3081 Dec 27 13:03 | 25° 🖈 59'49             |                      |
| minimum elong       | 3079 Jul 29 22:00 | 7° <b>Ω</b> 19'38           | 0°55'38                 | direct              | 3082 Jan 10 21:19 | 21° <b>×</b> 753'34     |                      |
|                     | 3079 Aug 17 07:48 | 0° <b>m</b> y               |                         | greatest brilliancy | 3082 Jan 21 03:03 | 23° <b>х</b> 53'34      | -4.9m                |
|                     | •                 |                             |                         | greatest orimaney   |                   |                         | 1.7111               |
| evening rise        | 3079 Sep 04 04:42 | 22°M 03'05                  |                         |                     | 3082 Feb 01 16:15 | 0°⋜                     |                      |
| evening rise        | •                 |                             |                         | morning max el      |                   |                         |                      |

|                     | 3082 Mar 07 09:32             | 0° <b>≈</b>                  |            | desc. node          | 3084 Sep 24 20:33                      | 6°M24'13               |            |
|---------------------|-------------------------------|------------------------------|------------|---------------------|--|------------------------|------------|
|                     | 3082 Apr 03 20:39             | 0° <b>∀</b>                  |            |                     | 3084 Oct 14 14:27                      | 0° <b>∡</b> ¹          |            |
| desc. node          | 3082 Apr 10 01:32             | 7° <b>₩</b> 04'21            |            |                     | 3084 Nov 09 02:27                      | ರ∘ರ                    |            |
|                     | 3082 Apr 29 19:21             | $0^{\circ}\mathbf{\Upsilon}$ |            |                     | 3084 Dec 05 11:55                      | 0° <b>≈</b>            |            |
|                     | 3082 May 25 03:36             | 0°8                          |            | evening max el      | 3084 Dec 23 22:13                      | 19° <b>≈</b> 36'43     | 47°15'05   |
|                     | 3082 Jun 19 04:55             | 0°II                         |            | <i>5</i>            | 3085 Jan 03 13:32                      | 0° <b>)</b> €          |            |
|                     | 3082 Jul 14 01:30             | 0.ee                         |            | asc. node           | 3085 Jan 15 23:33                      | 10° <b>)</b> 40′23     |            |
| aga mada            |                               | 22° <b>©</b> 01'50           |            |                     |  | 21° <del>X</del> 10'38 | 4.000      |
| asc. node           | 3082 Aug 01 04:34             |                              |            | greatest brilliancy | 3085 Feb 02 12:47                      |                        | -4.9111    |
| _                   | 3082 Aug 07 17:17             | $0^{\circ}\Omega$            |            | retrograde          | 3085 Feb 12 18:43                      | 23° <b>)</b> 10′31     |            |
| morning set         | 3082 Aug 30 12:41             | 27° <b>Ω</b> 59'18           |            | evening set         | 3085 Mar 02 09:52                      | 17° <b>∺</b> 08'08     |            |
|                     | 3082 Sep 01 03:52             | 0° <b>m</b>                  |            | min. Earth dist.    | 3085 Mar 04 21:06                      | 15° <b>)</b> 36′49     | 0.27344 AU |
|                     | 3082 Sep 25 09:48             | 0。 <b>ত</b>                  |            | inferior conj       | 3085 Mar 05 13:41                      | 15° <b>升</b> 10′55     | 8°48'29    |
| max. Earth dist.    | 3082 Oct 03 03:51             | 9° <b>£</b> 37'40            | 1.72462 AU | minimum elong       | 3085 Mar 05 09:58                      | 15° <b>)</b> 16′43     | 8°48'17    |
|                     |                               |                              |            | morning rise        | 3085 Mar 08 10:16                      | 13° <b>¥</b> 25′06     |            |
| superior conj       | 3082 Oct 06 05:21             | 13° <b>≏</b> 26'10           | 1°21'36    | direct              | 3085 Mar 26 05:27                      | 7° <b>¥</b> 21'55      |            |
| minimum elong       | 3082 Oct 06 10:37             | 13° <b>≏</b> 42'35           |            | greatest brilliancy | 3085 Apr 04 06:30                      | 8° <b>)</b> €54'08     | -4.8m      |
| minimum ciong       | 3082 Oct 19 12:33             | 0°M                          | 1 21 32    | greatest orimaney   | 3085 May 05 14:36                      | 0°Υ                    | 1.0111     |
|                     |                               |                              |            | 1 1                 | •                                      | 1° <b>Υ</b> 46'03      |            |
|                     | 3082 Nov 12 13:36             | 0° 🖍                         |            | desc. node          | 3085 May 07 13:08                      |                        | 46010110   |
| evening rise        | 3082 Nov 13 14:14             | 1° <b>≯</b> 16'55            |            | morning max el      | 3085 May 14 17:40                      | 8° <b>Ƴ</b> 35'22      | 46°12'10   |
| desc. node          | 3082 Nov 20 18:18             | 10° <b>≯</b> 14'18           |            |                     | 3085 Jun 04 12:52                      | $8^{\circ 0}$          |            |
|                     | 3082 Dec 06 13:55             | 0°ප                          |            |                     | 3085 Jul 01 14:13                      | $\Pi$ $\circ 0$        |            |
|                     | 3082 Dec 30 14:14             | 0° <b>≈</b>                  |            |                     | 3085 Jul 27 13:20                      | $0$ $\circ$ $\odot$    |            |
|                     | 3083 Jan 23 16:05             | 0° <b>∀</b>                  |            |                     | 3085 Aug 21 20:49                      | $0 { m ^o} \Omega$     |            |
|                     | 3083 Feb 16 22:40             | $_{0}$ $^{\circ}$ $\Upsilon$ |            | asc. node           | 3085 Aug 28 16:21                      | 8° <b>Ω</b> 10′57      |            |
| asc. node           | 3083 Mar 13 21:15             | 0° <b>8</b> 17'34            |            |                     | 3085 Sep 15 16:17                      | 0° m                   |            |
| uov. nouv           | 3083 Mar 13 15:24             | 0°8                          |            |                     | 3085 Oct 10 02:13                      | 0∘ <b>ರ</b><br>∘ .ಗ    |            |
|                     |                               | 0°II                         |            |                     |  | 0° <b>m</b> .          |            |
|                     | 3083 Apr 08 03:15             |                              |            |                     | 3085 Nov 03 05:26                      |                        |            |
|                     | 3083 May 05 05:24             | 0.20                         |            | morning set         | 3085 Nov 08 11:03                      | 6°M32'17               |            |
| evening max el      | 3083 May 19 00:52             | 14° <b>©</b> 01'46           | 45°39'16   |                     | 3085 Nov 27 04:40                      | 0°⊀                    |            |
|                     | 3083 Jun 06 00:36             | $0^{\circ}\Omega$            |            | max. Earth dist.    | 3085 Dec 16 16:41                      | 24° <b>₹</b> 29'20     | 1.71229 AU |
| greatest brilliancy | 3083 Jun 25 21:20             | 12° <b>Ω</b> 02'50           | -4.7m      |                     |  |                        |            |
| desc. node          | 3083 Jul 03 10:58             | 13° <b>Ω</b> 59'12           |            | superior conj       | 3085 Dec 18 02:14                      | 26° <b>х</b> 14′46     | 0°00'24    |
| retrograde          | 3083 Jul 06 20:57             | 14° <b>Ω</b> 12'29           |            | minimum elong       | 3085 Dec 18 02:19                      | 26° <b>₹</b> 15'01     | 0°00'24    |
| evening set         | 3083 Jul 22 13:06             | 9° <b>Ω</b> 29'11            |            | behind sun begin    | 3085 Dec 17 00:31                      | 24° <b>∡</b> ¹53'57    |            |
| inferior conj       | 3083 Jul 28 08:42             | 5°Ω58'08                     | -5°26'05   | behind sun end      | 3085 Dec 19 04:07                      | 27° <b>х</b> 36'04     |            |
| minimum elong       | 3083 Jul 27 23:07             | 6°Ω13'08                     |            | desc. node          | 3085 Dec 19 04:07                      | 26°×727'19             |            |
|                     |                               |                              |            | desc. node          |  |                        |            |
| min. Earth dist.    | 3083 Jul 28 03:48             | 6° <b>Ω</b> 05'49            | 0.29045 AU |                     | 3085 Dec 21 01:55                      | ರ್∘ರ                   |            |
| morning rise        | 3083 Aug 02 09:14             | 2° <b>Ω</b> 54'30            |            |                     | 3086 Jan 13 22:30                      | 0° <b>≈</b>            |            |
|                     | 3083 Aug 08 03:36             | 30° <b>₹</b> 5               |            | evening rise        | 3086 Jan 28 06:22                      | 18° <b>≈</b> 00'27     |            |
| direct              | 3083 Aug 19 00:40             | 27° <b>©</b> 40'53           |            |                     | 3086 Feb 06 19:35                      | 0° <b>∀</b>            |            |
| greatest brilliancy | 3083 Aug 29 08:28             | 29° <b>©</b> 36'33           | -4.7m      |                     | 3086 Mar 02 18:54                      | $0^{\circ}$ Y          |            |
|                     | 3083 Aug 30 09:39             | $0^{\circ}\Omega$            |            |                     | 3086 Mar 26 22:55                      | $6^\circB$             |            |
| morning max el      | 3083 Oct 07 05:36             | 28° <b>Ω</b> 10'27           | 46°02'12   | asc. node           | 3086 Apr 10 09:08                      | 17° <b>8</b> 44'00     |            |
| Ü                   | 3083 Oct 09 02:17             | 0° <b>m</b> )                |            |                     | 3086 Apr 20 10:32                      | 0°Ⅲ                    |            |
| asc. node           | 3083 Oct 24 13:57             | 16° Mp 02'05                 |            |                     | 3086 May 15 09:21                      | 0°9                    |            |
| use. Houe           |                               | 0° <b>⊡</b>                  |            |                     | •                                      | 0° <b>U</b>            |            |
|                     | 3083 Nov 06 05:34             |                              |            |                     | 3086 Jun 10 01:19                      |                        |            |
|                     | 3083 Dec 02 00:39             | 0°M                          |            |                     | 3086 Jul 07 00:26                      | 0° <b>m</b>            | 45022110   |
|                     | 3083 Dec 26 19:46             | 0° <b>∡</b>                  |            | evening max el      | 3086 Jul 28 19:11                      | 22° Tp 11'39           | 45°32'18   |
|                     | 3084 Jan 20 03:44             | 0°る                          |            | desc. node          | 3086 Jul 30 22:50                      | 24° Mp 13'57           |            |
| desc. node          | 3084 Feb 13 03:49             | 29° <b>る</b> 50'45           |            |                     | 3086 Aug 06 06:29                      | 0∘ <b>ত</b>            |            |
|                     | 3084 Feb 13 06:47             | 0° <b>≈</b>                  |            | greatest brilliancy | 3086 Sep 06 03:31                      | 20° <b>≏</b> 18'28     | -4.7m      |
|                     | 3084 Mar 08 08:13             | 0° <b>∀</b>                  |            | retrograde          | 3086 Sep 15 11:55                      | 21° <b>≏</b> 53'55     |            |
|                     | 3084 Apr 01 10:02             | $0^{\circ}\mathbf{\Upsilon}$ |            | evening set         | 3086 Oct 03 09:15                      | 15° <b>≏</b> 57'50     |            |
| morning set         | 3084 Apr 11 07:17             | 12° <b>Ƴ</b> 17'41           |            | inferior conj       | 3086 Oct 06 16:53                      | 13° <b>≏</b> 56'34     | -8°22'50   |
|                     | 3084 Apr 25 13:37             | 0°8                          |            | minimum elong       | 3086 Oct 06 22:29                      | 13° <b>≏</b> 47'54     |            |
|                     | 500 ( ripi 25 15.5 /          | v O                          |            | min. Earth dist.    | 3086 Oct 00 22:29<br>3086 Oct 07 13:30 | 13° <b>⊆</b> 47'34     | 0.28240 AU |
| avmani ·            | 2004 M 10 16 14               | 200 40124                    | 0020122    |                     |  |                        | 0.20240 AU |
| superior conj       | 3084 May 19 16:14             | 29° <b>8</b> 49'24           |            | morning rise        | 3086 Oct 10 11:24                      | 11° <b>Ω</b> 38'17     |            |
| minimum elong       | 3084 May 20 00:01             | 0° <b>Ⅱ</b> 13'24            | 0~38'00    | direct              | 3086 Oct 27 23:06                      | 5° <b>Ω</b> 48'01      |            |
|                     | 3084 May 19 19:40             | $\Pi^{\circ}0$               |            | greatest brilliancy | 3086 Nov 08 04:43                      | 8° <b>≏</b> 07'29      | -4.8m      |
| max. Earth dist.    | 3084 May 22 07:15             | 3° <b>Ⅱ</b> 03'50            | 1.73061 AU | asc. node           | 3086 Nov 21 01:46                      | 15° <b>≏</b> 20'37     |            |
| asc. node           | 3084 Jun 05 06:51             | 20° <b>Ⅱ</b> 17'58           |            |                     | 3086 Dec 08 15:15                      | 0°M                    |            |
|                     | 3084 Jun 13 04:05             | $0$ $\circ$ $\odot$          |            | morning max el      | 3086 Dec 17 10:30                      | 8°M36'51               | 46°46'04   |
| evening rise        | 3084 Jun 25 22:41             | 15° <b>©</b> 41'55           |            |                     | 3087 Jan 06 09:43                      | 0° <b>∡</b> ¹          |            |
| -                   | 3084 Jul 07 14:24             | $0^{\circ}\Omega$            |            |                     | 3087 Feb 01 09:42                      | 0°ರ                    |            |
|                     | 3084 Aug 01 02:35             | 0° m/y                       |            |                     | 3087 Feb 26 10:46                      | 0° <b>≈</b>            |            |
|                     | 3084 Aug 25 17:30             | 0∘ <b>ʊ</b><br>ი ო           |            | desc. node          | 3087 Mar 12 15:38                      | 17°≈14'57              |            |
|                     | 3084 Sep 19 12:46             | 0° <b>m</b> .                |            | dese. Houe          | 3087 Mar 23 02:21                      | 0° <b>)</b>            |            |
|                     | эоо <del>т</del> ыср 19 12.40 | O IIG                        |            |                     | 3007 IVIGI 23 U2.21                    | υ <b>Λ</b>             |            |

|                     | 3087 Apr 16 14:09                      | $0$ ° $\Upsilon$                        |                     |                                | 3089 Nov 11 20:24                      | 0°ರ                                |            |
|---------------------|--|---|---------------------|--------------------------------|--|------------------------------------|------------|
|                     | 3087 May 11 01:02                      | 0°8                                     |                     | greatest brilliancy            | 3089 Nov 18 18:33                      | 3° <b>る</b> 03'15                  | -4.9m      |
|                     | 3087 Jun 04 12:09                      | $\Pi^{\circ}0$                          |                     | retrograde                     | 3089 Nov 28 09:18                      | 4° <b>る</b> 46'28                  |            |
| morning set         | 3087 Jun 21 08:46                      | 20° <b>Ⅱ</b> 40′09                      |                     | evening set                    | 3089 Dec 12 17:02                      | 0° <b>ჳ</b> 43'13                  |            |
|                     | 3087 Jun 28 23:20                      | $0$ $\circ$ $\mathfrak{S}$              |                     |                                | 3089 Dec 14 00:43                      | 30°₽ <b>⋌</b> 7                    |            |
| asc. node           | 3087 Jul 03 18:47                      | 5° <b>©</b> 54'07                       |                     | inferior conj                  | 3089 Dec 18 22:01                      | 27° <b>∡</b> ¹06′29                | 0°05'24    |
|                     | 3087 Jul 23 09:38                      | $0^{\circ}\Omega$                       |                     | minimum elong                  | 3089 Dec 18 21:48                      | 27° <b>∡</b> ¹06'48                | 0°05'21    |
| max. Earth dist.    | 3087 Jul 26 11:48                      | 3° <b>Ω</b> 48′04                       | 1.73512 AU          | transit middle                 | 3089 Dec 18 21:48                      | 27° <b>∡</b> ¹06'48                | 0°05'21    |
|                     |  |   |                     | transit begin                  | 3089 Dec 18 17:56                      | 27° <b>∡</b> 12'40                 |            |
| superior conj       | 3087 Jul 28 00:54                      | 5° <b>Ω</b> 42'10                       | 0°53'32             | transit end                    | 3089 Dec 19 01:40                      | 27° <b>∡</b> ¹00'56                |            |
| minimum elong       | 3087 Jul 27 16:15                      | 5° <b>Ω</b> 15'32                       | 0°53'12             | asc. node                      | 3089 Dec 18 13:42                      | 27° <b>∡</b> 19'06                 |            |
| -                   | 3087 Aug 16 18:25                      | o°mp                                    |                     | min. Earth dist.               | 3089 Dec 19 01:17                      | 27° <b>∡</b> 01'31                 | 0.26556 AU |
| evening rise        | 3087 Sep 01 22:28                      | 19° m 56'50                             |                     | morning rise                   | 3089 Dec 25 02:24                      | 23° <b>∡</b> ³30'47                |            |
|                     | 3087 Sep 10 01:57                      | 0∘ <b>⊽</b>                             |                     | direct                         | 3090 Jan 08 10:29                      | 19° <b>∡</b> ¹25'55                |            |
|                     | 3087 Oct 04 09:13                      | 0°M                                     |                     | greatest brilliancy            | 3090 Jan 18 16:37                      | 21° <b>∡</b> ¹26′25                | -4.9m      |
| desc. node          | 3087 Oct 23 08:25                      | 23°M23'18                               |                     | ž ,                            | 3090 Feb 02 17:27                      | 0°₹                                |            |
|                     | 3087 Oct 28 17:12                      | 0° <b>∡</b> ¹                           |                     | morning max el                 | 3090 Feb 27 23:58                      | 22° <b>る</b> 31'41                 | 46°54'13   |
|                     | 3087 Nov 22 02:41                      | 0° <b>ට</b>                             |                     | . <i>&amp;</i>                 | 3090 Mar 07 06:15                      | 0° <b>≈</b>                        |            |
|                     | 3087 Dec 16 15:03                      | 0° <b>≈</b>                             |                     |                                | 3090 Apr 03 12:11                      | 0° <b>)</b> €                      |            |
|                     | 3088 Jan 10 10:35                      | 0° <b>∀</b>                             |                     | desc. node                     | 3090 Apr 09 03:29                      | 6° <b>¥</b> 27'09                  |            |
|                     | 3088 Feb 04 23:57                      | 0°Υ                                     |                     | acce. noue                     | 3090 Apr 29 08:41                      | 0° <b>Υ</b>                        |            |
| asc. node           | 3088 Feb 13 11:22                      | 9° <b>Υ</b> 35'21                       |                     |                                | 3090 May 24 15:45                      | 0°8                                |            |
| use. Houe           | 3088 Mar 03 11:28                      | 0°8                                     |                     |                                | 3090 Jun 18 16:20                      | 0°II                               |            |
| evening max el      | 3088 Mar 05 16:51                      | 2° <b>8</b> 15'13                       | 46°41'22            |                                | 3090 Jul 13 12:28                      | 0°©                                |            |
| evening max er      | 3088 Apr 08 14:58                      | 0°II                                    | 10 11 22            | asc. node                      | 3090 Jul 31 06:32                      | 21° <b>9</b> 35'07                 |            |
| greatest brilliancy | 3088 Apr 14 06:01                      | 2° <b>П</b> 35'10                       | -4.8m               | use. Houe                      | 3090 Aug 07 03:59                      | 0° <b>Ω</b>                        |            |
| retrograde          | 3088 Apr 24 22:34                      | 4° <b>∏</b> 43'17                       | 4.0111              | morning set                    | 3090 Aug 28 06:09                      | 25° <b>Ω</b> 52'43                 |            |
| retrograde          | 3088 May 10 10:31                      | 30°R <b>8</b>                           |                     | morning set                    | 3090 Aug 31 14:27                      | 0°m)                               |            |
| evening set         | 3088 May 10 20:39                      | 29° <b>8</b> 45'38                      |                     |                                | 3090 Sep 24 20:24                      | 0° <del>ت</del><br>مار             |            |
| inferior conj       | 3088 May 16 05:06                      | 26° <b>8</b> 30'03                      | 4°20'26             | max. Earth dist.               | 3090 Sep 24 20:24<br>3090 Sep 30 17:42 | 0 <b>=</b><br>7° <b>ჲ</b> 18'35    | 1.72512 AU |
| minimum elong       | 3088 May 16 13:36                      | 26° <b>8</b> 16'43                      | 4°18'11             | max. Earm dist.                | 3090 Sep 30 17.42                      | / = 1833                           | 1.72312 AU |
| min. Earth dist.    | 3088 May 16 04:07                      | 26° <b>8</b> 31'36                      | 0.28449 AU          | gunariar agni                  | 3090 Oct 03 21:43                      | 11° <b>≏</b> 14'47                 | 102220     |
| morning rise        | 3088 May 22 06:52                      | 20° <b>8</b> 50'29                      | 0.26449 AU          | superior conj<br>minimum elong | 3090 Oct 03 21:43<br>3090 Oct 04 02:18 |                                    | 1°22'26    |
| desc. node          | 3088 Jun 04 01:02                      | 18° <b>8</b> 28'02                      |                     | minimum clong                  | 3090 Oct 04 02:18<br>3090 Oct 18 23:15 | 0°M                                | 1 22 20    |
| direct              | 3088 Jun 04 01:02                      | 18° <b>8</b> 21'05                      |                     | avanina riaa                   | 3090 Oct 18 23:13<br>3090 Nov 11 03:22 | 28°M54'14                          |            |
|                     | 3088 Jun 16 11:02                      | 20° <b>8</b> 09'56                      | 4.7m                | evening rise                   |  | 20 11634 14<br>0° 🗷                |            |
| greatest brilliancy | 3088 Jul 16 11:02<br>3088 Jul 04 01:01 | 20 <b>O</b> 09 30<br>0° <b>Ⅱ</b>        | <del>-4</del> ./III | desc. node                     | 3090 Nov 12 00:26<br>3090 Nov 19 20:25 | 0 <b>x</b> .<br>9° <b>x</b> 746'57 |            |
|                     | 3088 Jul 25 06:02                      | 0 <u>П</u><br>18° <b>П</b> 08'51        | 45942117            | desc. node                     |  | 9 <b>x</b> ·4637<br>0° <b>る</b>    |            |
| morning max el      |  | 0.62                                    | 43 43 17            |                                | 3090 Dec 06 00:55                      | 0° <b>≈</b>                        |            |
|                     | 3088 Aug 06 05:13<br>3088 Sep 03 00:50 | 0°Ω<br>0 33                             |                     |                                | 3090 Dec 30 01:27                      | 0 <b>≈</b><br>0° <b>∺</b>          |            |
| aca mada            | 3088 Sep 05 00:30<br>3088 Sep 25 04:13 | 25° <b>Ω</b> 25'59                      |                     |                                | 3091 Jan 23 03:36<br>3091 Feb 16 10:37 | 0 K<br>0°Υ                         |            |
| asc. node           | 1                                      | 0°M)                                    |                     | aca mada                       | 3091 Mar 12 23:12                      | 29° <b>Υ</b> 45'18                 |            |
|                     | 3088 Sep 29 01:30<br>3088 Oct 24 02:35 | 0∘ <b>⊽</b>                             |                     | asc. node                      | 3091 Mar 12 23.12<br>3091 Mar 13 04:06 | 0° <b>8</b>                        |            |
|                     | 3088 Nov 17 13:20                      | 0° <b>™</b>                             |                     |                                | 3091 Apr 07 17:27                      | 0°II                               |            |
|                     | 3088 Dec 11 15:57                      | 0° <b>/</b> <sup>7</sup>                |                     |                                | 3091 May 04 23:19                      | 0°©                                |            |
|                     | 3089 Jan 04 14:31                      | 0° <b>ਨ</b>                             |                     | evening max el                 | 3091 May 16 16:38                      | 11°©50'51                          | 45°40'44   |
| desc. node          | 3089 Jan 04 14:51                      | 12°る44'32                               |                     | evening max ci                 | 3091 Jun 06 12:02                      | 0°Ω                                | 43 40 44   |
| morning set         | 3089 Jan 22 14:50                      | 12 <b>3</b> 44 32<br>22° <b>る</b> 37'55 |                     | greatest brilliancy            | 3091 Jun 23 13:57                      | 9° <b>Ω</b> 55'28                  | -4.7m      |
| morning set         | 3089 Jan 28 11:30                      | 0° <b>≈</b>                             |                     | desc. node                     | 3091 Jul 02 13:00                      | 12°Ω00'12                          | -4./111    |
|                     | 3089 Feb 21 08:27                      | 0 <b>∞</b>                              |                     | retrograde                     | 3091 Jul 02 13:00<br>3091 Jul 04 12:59 | 12° <b>Ω</b> 04'47                 |            |
|                     | 3009 1 00 21 00.27                     | 0 /                                     |                     | evening set                    | 3091 Jul                               | 7° <b>Ω</b> 24'38                  |            |
| superior conj       | 3089 Mar 05 02:43                      | 14° <b>)</b> 45′27                      | 1°24'50             | inferior conj                  | 3091 Jul 26 01:13                      | 3°Ω50'28                           | 5°10'37    |
| minimum elong       | 3089 Mar 04 22:04                      | 14° <del>X</del> (43'27'                |                     | minimum elong                  | 3091 Jul 25 15:51                      | 4° <b>Ω</b> 05'11                  |            |
| max. Earth dist.    |  |   | 1.71523 AU          | min. Earth dist.               |  | 3°Ω58'24                           | 0.29037 AU |
| max. Earm dist.     | 3089 Mar 08 11:14<br>3089 Mar 17 06:49 | 16 <b>γ</b> (3/46                       | 1./1323 AU          |                                | 3091 Jul 25 20:10<br>3091 Jul 31 04:13 | 0° <b>Ω</b> 42'56                  | 0.29037 AU |
|                     |  | 0°8                                     |                     | morning rise                   |  |                                    |            |
| avanina riaa        | 3089 Apr 10 08:11                      | 4° <b>8</b> 54'19                       |                     | direct                         | 3091 Aug 01 10:48                      | 30°Rூ<br>25°ጬ22127                 |            |
| evening rise        | 3089 Apr 14 06:58                      | 4 <b>O</b> 34 19                        |                     | direct                         | 3091 Aug 16 17:03                      | 25°533'27                          | 4.7        |
| 1-                  | 3089 May 04 13:51                      |   |                     | greatest brilliancy            | 3091 Aug 27 00:19                      | 27°528'10                          | -4.7m      |
| asc. node           | 3089 May 07 21:06                      | 4° <b>∏</b> 04'08                       |                     |                                | 3091 Sep 01 19:35                      | 0°N                                | 46900142   |
|                     | 3089 May 29 00:42                      | 0°©                                     |                     | morning max el                 | 3091 Oct 04 19:53                      | 25° <b>Ω</b> 55'31                 | 46°00'42   |
|                     | 3089 Jun 22 17:38                      | 0° <b>N</b>                             |                     | 1                              | 3091 Oct 08 22:56                      | 0°M)                               |            |
|                     | 3089 Jul 17 18:38                      | 0° <b>m</b>                             |                     | asc. node                      | 3091 Oct 23 16:05                      | 15° <b>m</b> 21'58                 |            |
| 4 1                 | 3089 Aug 12 08:02                      | 0° <u>Ω</u>                             |                     |                                | 3091 Nov 05 20:44                      | 0∘ <b>™</b>                        |            |
| desc. node          | 3089 Aug 27 10:35                      | 17° <b>Ω</b> 17'54                      |                     |                                | 3091 Dec 01 13:52                      | 0°M<br>0°. <b>₹</b>                |            |
|                     | 3089 Sep 07 18:50                      | 0°M                                     |                     |                                | 3091 Dec 26 08:02                      | 0° <b>⊼</b>                        |            |
| avanin 1            | 3089 Oct 06 03:20                      | 0° 🔏<br>2°.₹25!22                       | 46007120            | daga = - 1-                    | 3092 Jan 19 15:27                      | 0°る                                |            |
| evening max el      | 3089 Oct 09 14:51                      | 3° <b>≯</b> 25'32                       | 40-2/32             | desc. node                     | 3092 Feb 12 05:48                      | 29° <b>る</b> 21'31                 |            |

|                     | 2002 Eab 12 19:00                      | 0° <b>≈</b>                |            | grantant brillianay | 3094 Sep 03 16:10 | 18° <b>≏</b> 02'44   | 4.7m       |
|---------------------|--|----------------------------|------------|---------------------|-------------------|----------------------|------------|
|                     | 3092 Feb 12 18:09                      | 0 <b>≈</b><br>0° <b>∀</b>  |            | greatest brilliancy |                   |                      | -4. /III   |
|                     | 3092 Mar 07 19:19                      | 0° <b>Υ</b>                |            | retrograde          | 3094 Sep 13 02:55 | 19° <b>Ω</b> 39'58   |            |
|                     | 3092 Mar 31 20:57                      |                            |            | evening set         | 3094 Oct 01 01:23 | 13° <b>Ω</b> 40'52   | 0007144    |
| morning set         | 3092 Apr 08 20:45                      | 9° <b>Y</b> 56'37          |            | inferior conj       | 3094 Oct 04 07:48 | 11° <b>≏</b> 41'25   |            |
|                     | 3092 Apr 25 00:24                      | $9^{\circ}$ 8              |            | minimum elong       | 3094 Oct 04 12:42 | 11° <b>△</b> 33'51   | 8°27'24    |
|                     |  |                            |            | min. Earth dist.    | 3094 Oct 05 03:29 | 11° <b>≏</b> 11'01   | 0.28304 AU |
| superior conj       | 3092 May 17 08:04                      | 27° <b>8</b> 37'10         |            | morning rise        | 3094 Oct 07 23:44 | 9° <b>≏</b> 27'09    |            |
| minimum elong       | 3092 May 17 16:20                      | 28° <b>8</b> 02'42         | 0°41'02    | direct              | 3094 Oct 25 14:45 | 3° <b>ჲ</b> 31'56    |            |
|                     | 3092 May 19 06:20                      | $\Pi$ $^{\circ}0$          |            | greatest brilliancy | 3094 Nov 05 19:56 | 5° <b>≏</b> 51'13    | -4.8m      |
| max. Earth dist.    | 3092 May 20 02:29                      | 1° <b>Ⅲ</b> 02'12          | 1.73014 AU | asc. node           | 3094 Nov 20 03:51 | 14° <b>≏</b> 05'37   |            |
| asc. node           | 3092 Jun 04 09:00                      | 19° <b>Ⅲ</b> 51'52         |            |                     | 3094 Dec 08 16:39 | 0° <b>M</b>          |            |
|                     | 3092 Jun 12 14:42                      | $0$ $\circ$ $\mathfrak{S}$ |            | morning max el      | 3094 Dec 15 02:10 | 6° <b>™</b> 19'09    | 46°44'44   |
| evening rise        | 3092 Jun 23 16:44                      | 13° <b>5</b> 37'14         |            |                     | 3095 Jan 06 02:42 | 0° <b>∡</b> ¹        |            |
|                     | 3092 Jul 07 01:05                      | $\Omega^{\circ}\Omega$     |            |                     | 3095 Feb 01 00:01 | 0°ჳ                  |            |
|                     | 3092 Jul 31 13:29                      | 0° m/y                     |            |                     | 3095 Feb 25 23:47 | 0° <b>≈</b>          |            |
|                     | 3092 Aug 25 04:49                      | 0∘ <u>v</u>                |            | desc. node          | 3095 Mar 11 17:40 | 16° <b>≈</b> 42'59   |            |
|                     | 3092 Sep 19 00:44                      | 0°M                        |            |                     | 3095 Mar 22 14:35 | 0° <b>∀</b>          |            |
| desc. node          | 3092 Sep 23 22:33                      | 5°M53'46                   |            |                     | 3095 Apr 16 01:51 | 0° <b>Υ</b>          |            |
| desc. Hode          | 3092 Oct 14 03:26                      | 0° <b>⊼</b> 7              |            |                     | 3095 May 10 12:19 | 0°8                  |            |
|                     | 3092 Oct 14 03:20<br>3092 Nov 08 17:06 | 0°중                        |            |                     | •                 | 0°U                  |            |
|                     |  |                            |            | . ,                 | 3095 Jun 03 23:09 |                      |            |
|                     | 3092 Dec 05 05:57                      | 0°≈                        |            | morning set         | 3095 Jun 19 02:11 | 18° <b>Ⅱ</b> 32'59   |            |
| evening max el      | 3092 Dec 21 11:09                      | 17°≈09'56                  | 47°14'42   | _                   | 3095 Jun 28 10:10 | 0° <b>©</b>          |            |
|                     | 3093 Jan 03 18:26                      | 0° <b>∀</b>                |            | asc. node           | 3095 Jul 02 20:42 | 5° <b>©</b> 26'53    |            |
| asc. node           | 3093 Jan 15 01:33                      | 9° <b>∺</b> 24'30          |            |                     | 3095 Jul 22 20:24 | $0^{\circ}\Omega$    |            |
| greatest brilliancy | 3093 Jan 31 03:26                      | 18° <b>) √</b> 46′32       | -4.9m      | max. Earth dist.    | 3095 Jul 24 10:24 | 1° <b>Ω</b> 56'49    | 1.73523 AU |
| retrograde          | 3093 Feb 10 07:56                      | 20° <b>)</b> 45′35         |            |                     |                   |                      |            |
| evening set         | 3093 Feb 27 20:33                      | 14° <b>¥</b> 48'15         |            | superior conj       | 3095 Jul 25 19:09 | 3° <b>Ω</b> 37'34    | 0°51'02    |
| min. Earth dist.    | 3093 Mar 02 10:25                      | 13° <b>)</b> 13′05         | 0.27293 AU | minimum elong       | 3095 Jul 25 10:39 | 3° <b>Ω</b> 11′25    | 0°50'42    |
| inferior conj       | 3093 Mar 03 03:09                      | 12° <b>)</b> 47′00         | 8°44'19    | -                   | 3095 Aug 16 05:13 | 0° m/                |            |
| minimum elong       | 3093 Mar 02 22:34                      | 12° <b>)</b> 54′09         | 8°44'01    | evening rise        | 3095 Aug 30 16:37 | 17° <b>m</b> ) 51'16 |            |
| morning rise        | 3093 Mar 06 00:45                      | 10° <b>) (</b> 59'41       |            | <b>3</b>            | 3095 Sep 09 12:52 | 0∘ <u>⊽</u>          |            |
| direct              | 3093 Mar 23 17:48                      | 4° <b>)</b> 58'38          |            |                     | 3095 Oct 03 20:22 | 0°M                  |            |
| greatest brilliancy | 3093 Apr 01 19:56                      | 6° <b>∺</b> 31'29          | -4.8m      | desc. node          | 3095 Oct 22 10:35 | 22°M54'47            |            |
| greatest offinality | 3093 May 05 17:38                      | 0° <b>Υ</b>                | 4.0111     | dese. Hode          | 3095 Oct 28 04:43 | 0° <b>√</b>          |            |
| desc. node          | -                                      | 0° <b>Υ</b> 50'30          |            |                     | 3095 Nov 21 14:41 | 0°る                  |            |
|                     | 3093 May 06 15:21                      | 6°Υ13'25                   | 46012140   |                     |                   |                      |            |
| morning max el      | 3093 May 12 06:31                      |                            | 46°13'48   |                     | 3095 Dec 16 03:45 | 0° <b>≈</b>          |            |
|                     | 3093 Jun 04 05:58                      | 0° <b>8</b>                |            |                     | 3096 Jan 10 00:22 | 0° <b>)</b> €        |            |
|                     | 3093 Jul 01 04:09                      | 0°Щ                        |            |                     | 3096 Feb 04 15:50 | 0° <b>Υ</b>          |            |
|                     | 3093 Jul 27 01:45                      | 0ಂತಾ                       |            | asc. node           | 3096 Feb 12 13:19 | 8° <b>Y</b> 53'20    |            |
|                     | 3093 Aug 21 08:24                      | $0^{\circ}\Omega$          |            |                     | 3096 Mar 03 09:02 | $9^{\circ}$ 8        |            |
| asc. node           | 3093 Aug 27 18:22                      | 7° <b>Ω</b> 42'37          |            | evening max el      | 3096 Mar 03 08:35 | 29° <b>Y</b> ′58'53  | 46°43'34   |
|                     | 3093 Sep 15 03:25                      | 0° Mp                      |            |                     | 3096 Apr 11 00:49 | $\Pi^{\circ}0$       |            |
|                     | 3093 Oct 09 13:09                      | 0∘ <b>⊽</b>                |            | greatest brilliancy | 3096 Apr 11 21:52 | 0°Ⅲ20'42             | -4.8m      |
|                     | 3093 Nov 02 16:19                      | $0^{\circ}$ M              |            | retrograde          | 3096 Apr 22 15:06 | 2° <b>Ⅱ</b> 29'12    |            |
| morning set         | 3093 Nov 06 01:27                      | 4°M13'20                   |            |                     | 3096 May 03 16:19 | 30° <b>₹</b> 8       |            |
|                     | 3093 Nov 26 15:34                      | 0° <b>∡</b> ¹              |            | evening set         | 3096 May 08 14:53 | 27° <b>8</b> 27'54   |            |
| max. Earth dist.    | 3093 Dec 14 01:08                      | 21° <b>∡</b> 50′39         | 1.71260 AU | inferior conj       | 3096 May 13 20:40 | 24° <b>8</b> 15'58   | 4°38'29    |
|                     |  |                            |            | minimum elong       | 3096 May 14 05:35 | 24° <b>8</b> 02'01   | 4°36'12    |
| superior conj       | 3093 Dec 15 13:17                      | 23° <b>х</b> ⁴44′12        | 0°04'20    | min. Earth dist.    | 3096 May 13 19:15 | 24° <b>8</b> 18'12   | 0.28421 AU |
| minimum elong       | 3093 Dec 15 14:23                      | 23° <b>₹</b> 47'41         | 0°04'16    | morning rise        | 3096 May 19 20:40 | 20° <b>8</b> 39'15   |            |
| behind sun begin    | 3093 Dec 13 14:25<br>3093 Dec 14 13:16 | 22°×728'46                 | 0 0410     | desc. node          | 3096 Jun 03 03:04 | 16° <b>8</b> 08'45   |            |
| behind sun end      | 3093 Dec 14 15:10<br>3093 Dec 16 15:30 | 25° × 06'36                |            | direct              | 3096 Jun 04 02:39 | 16° <b>8</b> 07'36   |            |
|                     |  |                            |            |                     |                   |                      | 4.7        |
| desc. node          | 3093 Dec 17 08:14                      | 25° <b>₹</b> 59'10         |            | greatest brilliancy | 3096 Jun 14 01:04 | 17° <b>8</b> 55'39   | -4.7m      |
|                     | 3093 Dec 20 12:54                      | % ප                        |            |                     | 3096 Jul 04 14:50 | 0°II                 | 45040104   |
|                     | 3094 Jan 13 09:33                      | 0° <b>≈</b>                |            | morning max el      | 3096 Jul 22 22:27 | 15° <b>Ⅲ</b> 59'31   | 45°43'31   |
| evening rise        | 3094 Jan 25 16:29                      | 15° <b>≈</b> 26'45         |            |                     | 3096 Aug 05 23:54 | 0₀ <b>ௐ</b>          |            |
|                     | 3094 Feb 06 06:42                      | 0° <b>∀</b>                |            |                     | 3096 Sep 02 15:21 | $0^{\circ}\Omega$    |            |
|                     | 3094 Mar 02 06:06                      | $0$ ° $\Upsilon$           |            | asc. node           | 3096 Sep 24 06:17 | 24° <b>Ω</b> 53'57   |            |
|                     | 3094 Mar 26 10:17                      | 0°8                        |            |                     | 3096 Sep 28 14:18 | 0° <b>™</b>          |            |
| asc. node           | 3094 Apr 09 11:15                      | 17° <b>8</b> 15'07         |            |                     | 3096 Oct 23 14:33 | 0∘ <b>ত</b>          |            |
|                     | 3094 Apr 19 22:15                      | $\Pi^{\circ}0$             |            |                     | 3096 Nov 17 00:53 | $0^{\circ}$ M        |            |
|                     | 3094 May 14 21:46                      | $0$ $\circ$ $\odot$        |            |                     | 3096 Dec 11 03:17 | 0° <b>∡</b> ¹        |            |
|                     | 3094 Jun 09 15:08                      | $0^{\circ}\Omega$          |            |                     | 3097 Jan 04 01:45 | 8°0                  |            |
|                     | 3094 Jul 06 17:24                      | 0° m/                      |            | desc. node          | 3097 Jan 13 19:56 | 12° <b>る</b> 15'36   |            |
| evening max el      | 3094 Jul 26 09:39                      | 19° <b>m</b> 57'32         | 45°31'32   | morning set         | 3097 Jan 20 01:01 | 20° <b>る</b> 03'59   |            |
| desc. node          | 3094 Jul 30 00:50                      | 23° m 22'41                | -          | <i>5</i>            | 3097 Jan 27 22:40 | 0° <b>≈</b>          |            |
|                     | 3094 Aug 06 10:30                      | 0° <u>م</u>                |            |                     | 3097 Feb 20 19:34 | 0° <b>∀</b>          |            |
|                     | 207.1146 00 10.50                      | ~ <del>-</del>             |            |                     | 507, 100 20 17.54 | ~ //                 |            |

|  | 3097 Mar 02 13:42  | 12° <b>₩</b> 14'34  | 1922/50    |   | 3099 Jul 26 10:36   | 2000   |                     |
|--|--|---|------------|---|---|--|---------------------|
| superior conj                              | 3097 Mar 02 13.42<br>3097 Mar 02 08:05   | 12 <b>X</b> 14 34<br>11° <b>X</b> 56'56                     |            |   | 3099 Jul 28 23:05   | 30°Rூ<br>28°€29'55   |                     |
| minimum elong<br>max. Earth dist.          | 3097 Mar 02 08:03<br>3097 Mar 05 22:03   |   | 1.71485 AU | morning rise<br>direct                              | 3099 Jul 28 23:03<br>3099 Aug 14 08:54                      | 28 <b>3</b> 29 33  |                     |
| max. Earth dist.                           | 3097 Mar 16 17:55  | 0° <b>Υ</b>   | 1.71465 AU | greatest brilliancy                                 | 3099 Aug 24 16:39   | 25° <b>©</b> 18'53   | -4.7m               |
|  | 3097 Apr 09 19:17  | 0°8   |            | greatest orimancy                                   | 3099 Sep 03 09:16   | 0°Ω  | <del>-4</del> ./III |
| evening rise                               | 3097 Apr 11 19:48  | 2° <b>8</b> 30'41   |            | morning max el                                      | 3099 Oct 02 10:03   | 23° <b>Ω</b> 39'16   | 45°59'25            |
| e vening rise                              | 3097 May 04 01:01  | 0°Ⅱ   |            | morning max or                                      | 3099 Oct 08 19:20   | 0°m  | 10 37 20            |
| asc. node                                  | 3097 May 06 23:10  | 3° <b>I</b> I36'02  |            | asc. node   | 3099 Oct 22 18:11   | 14° <b>m</b> ) 41'21   |                     |
|  | 3097 May 28 12:02  | 0ಂಣ<br>   |            |   | 3099 Nov 05 12:00   | 0∘ <b>ಹ</b>  |                     |
|  | 3097 Jun 22 05:19  | $0^{\circ}\Omega$   |            |   | 3099 Dec 01 03:15   | 0°M  |                     |
|  | 3097 Jul 17 07:01  | 0° <b>m</b> )   |            |   | 3099 Dec 25 20:32   | 0° <b>⊼</b>  |                     |
|  | 3097 Aug 11 21:42  | 0∘ <del>⊽</del>   |            |   | 3100 Jan 19 03:25   | 8°0  |                     |
| desc. node                                 | 3097 Aug 26 12:38  | 16° <b>≏</b> 41'38  |            | desc. node  | 3100 Feb 11 07:50   | 28° <b>る</b> 51'39   |                     |
|  | 3097 Sep 07 11:04  | 0° <b>M</b> .   |            |   | 3100 Feb 12 05:46   | 0° <b>≈</b>  |                     |
|  | 3097 Oct 06 02:11  | 0° <b>∡</b> ¹   |            |   | 3100 Mar 08 06:42   | 0° <b>)</b> €  |                     |
| evening max el                             | 3097 Oct 07 05:07  | 1° <b>∡</b> *05'43  | 46°25'11   |   | 3100 Apr 01 08:07   | $0^{\circ}\mathbf{\Upsilon}$                                   |                     |
|  | 3097 Nov 14 15:11  | 0°ರ   |            | morning set   | 3100 Apr 07 10:16   | 7° <b>Ƴ</b> 34'51  |                     |
| greatest brilliancy                        | 3097 Nov 16 07:54  | 0° <b>ප</b> 37'15   | -4.9m      |   | 3100 Apr 25 11:24   | $8^{\circ}$ 0  |                     |
| retrograde                                 | 3097 Nov 25 21:27  | 2° <b>る</b> 18'56   |            |   |   |  |                     |
|  | 3097 Dec 06 14:59  | 30°R <b>✓</b>   |            | superior conj                                       | 3100 May 15 23:55   | 25° <b>8</b> 24'13   | -0°44'21            |
| evening set                                | 3097 Dec 10 06:28  | 28° <b>∡</b> 15′01  |            | minimum elong                                       | 3100 May 16 08:38   | 25° <b>8</b> 51'08   | 0°43'59             |
| inferior conj                              | 3097 Dec 16 10:29  | 24° <b>∡</b> ³39'17   | -0°18'56   | max. Earth dist.                                    | 3100 May 18 20:15   | 28° <b>8</b> 55'10   | 1.72971 AU          |
| minimum elong                              | 3097 Dec 16 11:13  | 24° <b>₹</b> 38'10  | 0°18'42    |   | 3100 May 19 17:15   | $\Pi$ $^{\circ}0$  |                     |
| min. Earth dist.                           | 3097 Dec 16 15:13  | 24° <b>∡</b> ³32′05   | 0.26577 AU | asc. node   | 3100 Jun 04 10:56   | 19° <b>Ⅱ</b> 24'12   |                     |
| asc. node                                  | 3097 Dec 17 15:38  | 23° <b>∡</b> 54'59  |            |   | 3100 Jun 13 01:37   | 0ං <b>ව</b>  |                     |
| morning rise                               | 3097 Dec 22 15:45  | 21° <b>∡</b> 02'03  |            | evening rise  | 3100 Jun 22 10:38   | 11° <b>©</b> 31'14   |                     |
| direct                                     | 3098 Jan 05 23:28  | 16° <b>∡</b> 758′27   |            |   | 3100 Jul 07 12:07   | $0$ $^{\circ}$ $\Omega$  |                     |
| greatest brilliancy                        | 3098 Jan 16 06:42  | 18° <b>∡</b> 59'39  | -4.9m      |   | 3100 Aug 01 00:45   | 0° mp  |                     |
|  | 3098 Feb 03 12:11  | 0°る<br>   |            |   | 3100 Aug 25 16:29   | 0∘ <b>亚</b>  |                     |
| morning max el                             | 3098 Feb 25 12:39  | 20° <b>る</b> 04'36  | 46°54'50   |   | 3100 Sep 19 13:02   | 0°M  |                     |
|  | 3098 Mar 07 02:33  | 0° <b>≈</b>   |            | desc. node  | 3100 Sep 24 00:41   | 5°M22'47   |                     |
|  | 3098 Apr 03 03:48  | 0° <b>∀</b>   |            |   | 3100 Oct 14 16:45   | 0° <b>∡</b> 7  |                     |
| desc. node                                 | 3098 Apr 08 05:40  | 5° <b>ℋ</b> 49'59<br>0° <b>Ƴ</b>                            |            |   | 3100 Nov 09 08:11   | ි.<br>ව°0  |                     |
|  | 3098 Apr 28 22:18  | 0° <b>8</b>   |            | arranina marral                                     | 3100 Dec 06 00:39<br>3100 Dec 20 00:01                      | 0° <b>≈</b><br>14° <b>≈</b> 42'31                              | 47°14'17            |
|  | 3098 May 24 04:16<br>3098 Jun 18 04:10   | 0°II  |            | evening max el                                      | 3100 Dec 20 00:01<br>3101 Jan 05 01:43                      | 14 <b>≈</b> 42 31<br>0° <b>)</b> €                             | 4/ 141/             |
|  | 3098 Jul 18 04.10<br>3098 Jul 12 23:50   | 0°©   |            | asc. node   | 3101 Jan 15 03:36   | 8° <b>)</b> €05'46   |                     |
| asc. node                                  | 3098 Jul 30 08:33  | 21° <b>©</b> 07'19  |            | greatest brilliancy                                 | 3101 Jan 29 17:46   | 16° <b>X</b> 21'19   | -4.9m               |
| asc. node                                  | 3098 Aug 06 15:03  | 0°Ω   |            | retrograde  | 3101 Jan 25 17:40<br>3101 Feb 08 21:32                      | 18° <b>)</b> (21'1)  | <del>-4</del> .7III |
| morning set                                | 3098 Aug 25 23:32  | 23° <b>Ω</b> 44'47  |            | evening set   | 3101 Feb 26 06:52   | 12° <b>H</b> 28'05   |                     |
| morning sec                                | 3098 Aug 31 01:23  | 0°m)  |            | min. Earth dist.                                    | 3101 Feb 28 23:39   | 10° <b>)</b> 48′52   | 0.27244 AU          |
|  | 3098 Sep 24 07:20  | 0∘ <del>ಹ</del>   |            | inferior conj                                       | 3101 Mar 01 16:38   | 10° <b>)</b> €22'27  | 8°39'11             |
| max. Earth dist.                           | 3098 Sep 28 08:19  |   | 1.72561 AU | minimum elong                                       | 3101 Mar 01 11:12   | 10° <b>)</b> 30′54   | 8°38'45             |
|  | 1  |   |            | morning rise  | 3101 Mar 04 15:43   | 8° <b>)</b> 33′08  |                     |
| superior conj                              | 3098 Oct 01 14:16  | 9° <b>≙</b> 03'04   | 1°23'14    | direct  | 3101 Mar 22 06:14   | 2° <b>)</b> 34'37  |                     |
| minimum elong                              | 3098 Oct 01 18:09  | 9° <b>£</b> 15'09   | 1°23'12    | greatest brilliancy                                 | 3101 Mar 31 09:15   | 4° <b>)</b> €08'16   | -4.8m               |
| _  | 3098 Oct 18 10:17  | 0°M₊  |            | desc. node  | 3101 May 06 17:19   | 29° <b>升</b> 55′15   |                     |
| evening rise                               | 3098 Nov 08 16:54  | 26°M31'51   |            |   | 3101 May 06 19:19   | $0$ ° $\Upsilon$   |                     |
|  | 3098 Nov 11 11:37  | 0° <b>∡</b> ¹   |            | morning max el                                      | 3101 May 10 20:09   | 3° <b>Y</b> 52'58  | 46°15'31            |
| desc. node                                 | 3098 Nov 18 22:26  | 9° <b>∡</b> 18′09   |            |   | 3101 Jun 04 22:52   | $8^{\circ}$ 0  |                     |
|  | 3098 Dec 05 12:16  | ರ°0   |            |   | 3101 Jul 01 18:05   | $\Pi^{\circ}0$   |                     |
|  | 3098 Dec 29 13:00  | 0° <b>≈</b>   |            |   | 3101 Jul 27 14:17   | 0  |                     |
|  | 3099 Jan 22 15:26  | 0° <b>∀</b>   |            |   | 3101 Aug 21 20:11   | $0^{\circ}\Omega$  |                     |
|  | 3099 Feb 15 22:54  | $0^{\circ}\mathbf{\Upsilon}$                                |            | asc. node   | 3101 Aug 27 20:28   | 7° <b>Ω</b> 13'51  |                     |
| asc. node                                  | 3099 Mar 12 01:20  | 29° <b>Y</b> 12'39  |            |   | 3101 Sep 15 14:47   | O° My  |                     |
|  | 3099 Mar 12 17:10  | 0°B   |            |   | 3101 Oct 10 00:18   | 0∘ <b>亚</b>  |                     |
|  | 3099 Apr 07 08:09  | 0° <b>Ⅱ</b>   |            |   | 3101 Nov 03 03:22   | 0°M  |                     |
|  | 3099 May 04 18:09  | 0.20<br>0.20  | 4504500    | morning set   | 3101 Nov 04 15:57   | 1°M54'11   |                     |
| evening max el                             | 3099 May 14 07:37  | 9° <b>5</b> 36'38   | 45°42'06   | pp  | 3101 Nov 27 02:37   | 0° 🗷   | 1.71200 : **        |
| ,    | 3099 Jun 07 04:21  | 0° <b>Ω</b>   | 4.7        | max. Earth dist.                                    | 3101 Dec 12 12:51   | 19° <b>≯</b> 21'50   | 1.71289 AU          |
| greatest brilliancy                        | 3099 Jun 21 06:33  | 7° <b>Ω</b> 46'18   | -4.7m      |   | 2101 D 14 00 27   | 210 71222  | 0000112             |
| daga :: - 1 -                              |  | 00 0 5 510 5  |            |   |   |  |                     |
| desc. node                                 | 3099 Jul 01 14:59  | 9° <b>Ω</b> 55'07   |            | superior conj                                       | 3101 Dec 14 00:25   | 21° 🗷 13'32  | 0°08'12             |
| retrograde                                 | 3099 Jul 01 14:59<br>3099 Jul 02 04:51   | 9° <b>Ω</b> 55'30   |            | minimum elong                                       | 3101 Dec 14 02:31   | 21° <b>₹</b> ′20′10  | 0°08'06             |
| retrograde<br>evening set                  | 3099 Jul 01 14:59<br>3099 Jul 02 04:51<br>3099 Jul 17 17:57                      | 9° <b>£</b> 55'30<br>5° <b>£</b> 18'02                      | -4°54'30   | minimum elong<br>behind sun begin                   | 3101 Dec 14 02:31<br>3101 Dec 13 03:54                      | 21° <b>尽</b> 20'10<br>20° <b>尽</b> 09'06                       |                     |
| retrograde<br>evening set<br>inferior conj | 3099 Jul 01 14:59<br>3099 Jul 02 04:51<br>3099 Jul 17 17:57<br>3099 Jul 23 17:39 | 9° <b>Ω</b> 55'30<br>5° <b>Ω</b> 18'02<br>1° <b>Ω</b> 41'12 |            | minimum elong<br>behind sun begin<br>behind sun end | 3101 Dec 14 02:31<br>3101 Dec 13 03:54<br>3101 Dec 15 01:08 | 21° <b>尽</b> 20'10<br>20° <b>尽</b> 09'06<br>22° <b>尽</b> 31'13 |                     |
| retrograde<br>evening set                  | 3099 Jul 01 14:59<br>3099 Jul 02 04:51<br>3099 Jul 17 17:57                      | 9°N55'30<br>5°N18'02<br>1°N41'12<br>1°N55'32                |            | minimum elong<br>behind sun begin                   | 3101 Dec 14 02:31<br>3101 Dec 13 03:54                      | 21° <b>尽</b> 20'10<br>20° <b>尽</b> 09'06                       |                     |

3102 Jan 13 20:43 0°≈