



Astrodienst Ephemeris Tables for the year 1789

tropical geocentric zodiac

contains Sun, Moon, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, True Node, Moon's Node, Lilith, Chiron

Programming
Dieter Koch and Alois Treindl
based on Swiss Ephemeris
Code D5EPX

ASTRODIENST EPHEMERIS for the year 1789
geocentric

JANUARY 1789

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♊ | ♋ | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ | ♈ | ♉ | Day |
|------|---------|-----------------------|--------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|------|
| T 1 | 6 44 14 | 11 ²⁸ 7'13 | 0 ⁴⁸ 32 | 27 ⁴⁷ 48 | 4 ⁴⁷ 47 | 10 ²⁸ 9 | 26 ⁰ R33 | 6 ⁴⁸ 42 | 3 ⁰ R44 | 23 ¹² 9 | 16 ¹⁶ 16 | 7 ⁰ R17 | 5 ⁵⁷ 58 | 17 ⁵⁵ 53 | 16 ⁰ R46 | T 1 |
| F 2 | 6 48 11 | 12 ⁰ 8'24 | 12 ⁰ 24 | 29 ⁰ 19 | 6 ⁰ 0 | 10 ⁵⁵ 26 | 26 ⁵⁶ 26 | 6 ⁴⁸ 36 | 3 ⁰ R42 | 23 ¹⁰ 10 | 16 ¹⁷ 17 | 7 ⁰ R12 | 5 ⁵⁵ 17 | 17 ⁵⁹ 59 | 16 ¹¹ 43 | F 2 |
| S 3 | 6 52 7 | 13 ⁰ 9'34 | 24 ⁰ 21 | 0 ⁵¹ 51 | 7 ⁰ 14 | 11 ⁴¹ 26 | 26 ¹⁸ 18 | 6 ⁵³ 34 | 3 ⁰ 40 | 23 ¹¹ 11 | 16 ¹⁹ 19 | 7 ⁰ 9 | 5 ⁵² 18 | 18 ⁰ 6 | 16 ⁴⁰ 40 | S 3 |
| S 4 | 6 56 4 | 14 ⁰ 10'44 | 6 ⁰ 26 | 2 ⁰ 23 | 8 ⁰ 27 | 12 ²⁷ 26 | 26 ¹⁰ 10 | 6 ⁵⁸ 37 | 3 ⁰ 37 | 23 ¹¹ 11 | 16 ²⁰ 20 | 7 ⁰ 7 | 5 ⁴⁸ 18 | 18 ¹³ 13 | 16 ³⁶ 36 | S 4 |
| M 5 | 7 0 1 | 15 ⁰ 11'54 | 18 ⁰ 45 | 3 ⁰ 55 | 9 ⁰ 41 | 13 ¹³ 26 | 26 ³ 3 | 7 ⁰ 4 | 3 ⁰ 35 | 23 ¹² 12 | 16 ²² 22 | 7 ⁰ D 7 | 5 ⁴⁵ 18 | 18 ¹⁹ 19 | 16 ³³ 33 | M 5 |
| T 6 | 7 3 57 | 16 ⁰ 13'03 | 1 ⁰ 22 | 5 ⁰ 28 | 10 ⁵⁴ 13 | 13 ⁵⁹ 25 | 25 ⁵⁵ 7 | 9 ⁰ 9 | 3 ⁰ 32 | 23 ¹³ 13 | 16 ²³ 23 | 7 ⁰ 8 | 5 ⁴² 18 | 18 ²⁶ 26 | 16 ³⁰ 30 | T 6 |
| W 7 | 7 7 54 | 17 ⁰ 14'11 | 14 ⁰ 21 | 7 ⁰ 1 | 12 ⁰ 7 | 14 ⁴⁶ 25 | 25 ⁴⁷ 7 | 15 ⁰ 15 | 3 ⁰ 30 | 23 ¹³ 13 | 16 ²⁵ 25 | 7 ⁰ 9 | 5 ³⁹ 18 | 18 ³³ 33 | 16 ²⁷ 27 | W 7 |
| T 8 | 7 11 50 | 18 ⁰ 15'19 | 27 ⁰ 47 | 8 ⁰ 34 | 13 ²¹ 15 | 15 ³² 25 | 25 ³⁹ 7 | 20 ⁰ 20 | 3 ⁰ 27 | 23 ¹⁴ 14 | 16 ²⁶ 26 | 7 ⁰ 10 | 5 ³⁶ 18 | 18 ⁴⁰ 40 | 16 ²⁴ 24 | T 8 |
| F 9 | 7 15 47 | 19 ⁰ 16'27 | 11 ⁰ 41 | 10 ⁰ 8 | 14 ³⁵ 16 | 16 ¹⁸ 25 | 25 ³¹ 7 | 26 ⁰ 26 | 3 ⁰ 25 | 23 ¹⁴ 14 | 16 ²⁸ 28 | 7 ⁰ R11 | 5 ³³ 18 | 18 ⁴⁶ 46 | 16 ²¹ 21 | F 9 |
| S 10 | 7 19 43 | 20 ⁰ 17'34 | 26 ⁰ 4 | 11 ⁰ 43 | 15 ⁴⁸ 17 | 17 ⁰ 5 | 25 ²³ 7 | 32 ⁰ 32 | 3 ⁰ 22 | 23 ¹⁵ 15 | 16 ³⁰ 30 | 7 ⁰ 9 | 5 ²⁹ 18 | 18 ⁵³ 53 | 16 ¹⁸ 18 | S 10 |
| S 11 | 7 23 40 | 21 ⁰ 18'40 | 10 ⁰ 50 | 13 ⁰ 18 | 17 ⁰ 2 | 17 ⁵¹ 25 | 25 ¹⁵ 7 | 37 ⁰ 37 | 3 ⁰ 20 | 23 ¹⁵ 15 | 16 ³¹ 31 | 7 ⁰ 6 | 5 ²⁶ 19 | 19 ⁰ 0 | 16 ¹⁵ 15 | S 11 |
| M 12 | 7 27 36 | 22 ⁰ 19'46 | 25 ⁰ 54 | 14 ⁰ 53 | 18 ⁰ 15 | 18 ³⁷ 25 | 25 ⁷ 7 | 43 ⁰ 43 | 3 ⁰ 17 | 23 ¹⁶ 16 | 16 ³³ 33 | 7 ⁰ 0 | 5 ²³ 19 | 19 ⁶ 6 | 16 ¹² 12 | M 12 |
| T 13 | 7 31 33 | 23 ⁰ 20'52 | 11 ⁰ 6 | 16 ⁰ 29 | 19 ⁰ 29 | 19 ²⁴ 24 | 24 ⁵⁹ 7 | 49 ⁰ 49 | 3 ⁰ 15 | 23 ¹⁶ 16 | 16 ³⁵ 35 | 6 ⁰ 53 | 5 ²⁰ 19 | 19 ¹³ 13 | 16 ¹⁰ 10 | T 13 |
| W 14 | 7 35 30 | 24 ⁰ 21'56 | 26 ⁰ 16 | 18 ⁰ 6 | 20 ⁰ 43 | 20 ¹⁰ 24 | 24 ⁵¹ 7 | 55 ⁰ 55 | 3 ⁰ 12 | 23 ¹⁶ 16 | 16 ³⁶ 36 | 6 ⁰ 45 | 5 ¹⁷ 19 | 19 ²⁰ 20 | 16 ⁷ 7 | W 14 |
| T 15 | 7 39 26 | 25 ⁰ 23'01 | 11 ⁰ 14 | 19 ⁰ 42 | 21 ⁰ 57 | 20 ⁵⁷ 24 | 24 ⁴³ 8 | 1 ⁰ 1 | 3 ⁰ 9 | 23 ¹⁷ 17 | 16 ³⁸ 38 | 6 ⁰ 38 | 5 ¹⁴ 19 | 19 ²⁷ 27 | 16 ⁴ 4 | T 15 |
| F 16 | 7 43 23 | 26 ⁰ 24'05 | 25 ⁰ 51 | 21 ⁰ 20 | 23 ⁰ 10 | 21 ⁴³ 24 | 24 ³⁵ 8 | 7 ⁰ 8 | 3 ⁰ 7 | 23 ¹⁷ 17 | 16 ⁴⁰ 40 | 6 ⁰ 33 | 5 ¹⁰ 19 | 19 ³³ 33 | 16 ² 2 | F 16 |
| S 17 | 7 47 19 | 27 ⁰ 25'09 | 10 ⁰ 4 | 22 ⁰ 58 | 24 ⁰ 24 | 22 ³⁰ 24 | 24 ²⁷ 8 | 13 ⁰ 13 | 3 ⁰ 4 | 23 ¹⁷ 17 | 16 ⁴¹ 41 | 6 ⁰ 29 | 5 ⁷ 19 | 19 ⁴⁰ 40 | 15 ⁵⁹ 59 | S 17 |
| S 18 | 7 51 16 | 28 ⁰ 26'12 | 23 ⁰ 51 | 24 ⁰ 37 | 25 ⁰ 38 | 23 ¹⁶ 24 | 24 ¹⁹ 8 | 20 ⁰ 20 | 3 ⁰ 2 | 23 ¹⁸ 18 | 16 ⁴³ 43 | 6 ⁰ D28 | 5 ⁴ 19 | 19 ⁴⁷ 47 | 15 ⁵⁷ 57 | S 18 |
| M 19 | 7 55 12 | 29 ⁰ 27'15 | 7 ⁰ 12 | 26 ⁰ 16 | 26 ⁰ 52 | 24 ⁰ 3 | 24 ¹¹ 8 | 26 ⁰ 26 | 2 ⁰ 59 | 23 ¹⁸ 18 | 16 ⁴⁵ 45 | 6 ⁰ 28 | 5 ¹ 19 | 19 ⁵³ 53 | 15 ⁵⁴ 54 | M 19 |
| T 20 | 7 59 9 | 0 ⁰ 28'18 | 20 ⁰ 12 | 27 ⁰ 56 | 28 ⁰ 6 | 24 ⁵⁰ 24 | 24 ³ 8 | 32 ⁰ 32 | 2 ⁰ 56 | 23 ¹⁸ 18 | 16 ⁴⁶ 46 | 6 ⁰ 29 | 4 ⁵⁸ 20 | 20 ⁰ 0 | 15 ⁵² 52 | T 20 |
| W 21 | 8 3 5 | 1 ⁰ 29'20 | 2 ⁰ 53 | 29 ⁰ 36 | 29 ⁰ 20 | 25 ³⁶ 23 | 23 ⁵⁵ 8 | 38 ⁰ 38 | 2 ⁰ 54 | 23 ¹⁸ 18 | 16 ⁴⁸ 48 | 6 ⁰ R30 | 4 ⁵⁴ 20 | 20 ⁷ 7 | 15 ⁵⁰ 50 | W 21 |
| T 22 | 8 7 2 | 2 ⁰ 30'21 | 15 ⁰ 18 | 1 ⁰ 17 | 0 ⁰ 34 | 26 ²³ 23 | 23 ⁴⁷ 8 | 45 ⁰ 45 | 2 ⁰ 51 | 23 ¹⁸ 18 | 16 ⁵⁰ 50 | 6 ⁰ 29 | 4 ⁵¹ 20 | 20 ¹⁴ 14 | 15 ⁴⁷ 47 | T 22 |
| F 23 | 8 10 59 | 3 ⁰ 31'22 | 27 ⁰ 33 | 2 ⁰ 59 | 1 ⁰ 48 | 27 ¹⁰ 23 | 23 ³⁹ 8 | 51 ⁰ 51 | 2 ⁰ 49 | 23 ¹⁸ 18 | 16 ⁵² 52 | 6 ⁰ 27 | 4 ⁴⁸ 20 | 20 ²⁰ 20 | 15 ⁴⁵ 45 | F 23 |
| S 24 | 8 14 55 | 4 ⁰ 32'23 | 9 ⁰ 39 | 4 ⁰ 41 | 3 ⁰ 2 | 27 ⁵⁷ 23 | 23 ³¹ 8 | 58 ⁰ 58 | 2 ⁰ 46 | 23 ¹⁸ 18 | 16 ⁵³ 53 | 6 ⁰ 22 | 4 ⁴⁵ 20 | 20 ²⁷ 27 | 15 ⁴³ 43 | S 24 |
| S 25 | 8 18 52 | 5 ⁰ 33'22 | 21 ⁰ 39 | 6 ⁰ 24 | 4 ⁰ 16 | 28 ⁴³ 23 | 23 ²³ 9 | 4 ⁰ 4 | 2 ⁰ 43 | 23 ¹⁸ 18 | 16 ⁵⁵ 55 | 6 ⁰ 14 | 4 ⁴² 20 | 20 ³⁴ 34 | 15 ⁴¹ 41 | S 25 |
| M 26 | 8 22 48 | 6 ⁰ 34'21 | 3 ⁰ 35 | 8 ⁰ 8 | 5 ⁰ 30 | 29 ³⁰ 23 | 23 ¹⁶ 9 | 11 ⁰ 11 | 2 ⁰ 41 | 23 ¹⁸ 18 | 16 ⁵⁷ 57 | 6 ⁰ 4 | 4 ³⁹ 20 | 20 ⁴¹ 41 | 15 ³⁹ 39 | M 26 |
| T 27 | 8 26 45 | 7 ⁰ 35'18 | 15 ⁰ 29 | 9 ⁰ 52 | 6 ⁰ 44 | 0 ⁰ 17 | 23 ⁰ 8 | 17 ⁰ 17 | 2 ⁰ 38 | 23 ¹⁸ 18 | 16 ⁵⁹ 59 | 5 ⁰ 52 | 4 ³⁵ 20 | 20 ⁴⁷ 47 | 15 ³⁷ 37 | T 27 |
| W 28 | 8 30 41 | 8 ⁰ 36'14 | 27 ⁰ 20 | 11 ⁰ 37 | 7 ⁰ 58 | 1 ⁰ 4 | 23 ⁰ 1 | 24 ⁰ 24 | 2 ⁰ 35 | 23 ¹⁸ 18 | 17 ⁰ 0 | 5 ⁰ 39 | 4 ³² 20 | 20 ⁵⁴ 54 | 15 ³⁵ 35 | W 28 |
| T 29 | 8 34 38 | 9 ⁰ 37'10 | 9 ⁰ 12 | 13 ⁰ 22 | 9 ⁰ 12 | 1 ⁰ 51 | 22 ⁵³ 9 | 31 ⁰ 31 | 2 ⁰ 33 | 23 ¹⁸ 18 | 17 ⁰ 2 | 5 ⁰ 26 | 4 ²⁹ 21 | 21 ⁰ 1 | 15 ³⁴ 34 | T 29 |
| F 30 | 8 38 34 | 10 ⁰ 38'04 | 21 ⁰ 6 | 15 ⁰ 8 | 10 ⁰ 26 | 2 ⁰ 38 | 22 ⁴⁶ 9 | 37 ⁰ 37 | 2 ⁰ 30 | 23 ¹⁷ 17 | 17 ⁰ 4 | 5 ⁰ 15 | 4 ²⁶ 21 | 21 ⁷ 7 | 15 ³² 32 | F 30 |
| S 31 | 8 42 31 | 11 ⁰ 38'56 | 3 ⁰ 4 | 16 ⁰ 55 | 11 ⁰ 40 | 3 ⁰ 25 | 22 ³⁸ 9 | 44 ⁰ 44 | 2 ⁰ 28 | 23 ¹⁷ 17 | 17 ⁰ 6 | 5 ⁰ 14 | 4 ²³ 21 | 21 ¹⁴ 14 | 15 ³¹ 31 | S 31 |

| Day | ☉ | ☽ | | ♊ | | ♋ | | ♌ | | ♍ | | ♎ | | ♏ | | ♐ | | ♑ | | ♒ | ♓ | ♈ | ♉ | |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|-------|-------|-------|------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | decl | decl | decl | lat |
| T 1 | 23s 0 | 6s28 | 5n 9 | 23s58 | 0s31 | 19s20 | 1n49 | 23s56 | 0s52 | 21n17 | 0n26 | 10s44 | 1s48 | 19n56 | 0n37 | 7s26 | 1n41 | 24s 5 | 8s30 | 21s33 | 21s20 | 10s50 | 16n59 | 5s51 |
| F 2 | 22 55 | 2 8 | 5 10 | 24 6 | 0 38 | 19 35 | 1 46 | 23 53 | 0 52 | 21 19 | 0 26 | 10 42 | 1 48 | 19 57 | 0 37 | 7 27 | 1 41 | 24 4 | 8 30 | 21 32 | 21 19 | 10 47 | 16 59 | 5 51 |
| S 3 | 22 49 | 2n18 | 4 57 | 24 12 | 0 45 | 19 50 | 1 44 | 23 49 | 0 52 | 21 20 | 0 26 | 10 40 | 1 48 | 19 58 | 0 37 | 7 27 | 1 42 | 24 4 | 8 30 | 21 32 | 21 18 | 10 45 | 16 58 | 5 51 |
| S 4 | 22 43 | 6 43 | 4 32 | 24 17 | 0 51 | 20 3 | 1 42 | 23 45 | 0 53 | 21 22 | 0 26 | 10 38 | 1 48 | 19 58 | 0 37 | 7 27 | 1 42 | 24 3 | 8 30 | 21 31 | 21 18 | 10 43 | 16 58 | 5 51 |
| M 5 | 22 36 | 10 56 | 3 53 | 24 21 | 0 57 | 20 17 | 1 40 | 23 41 | 0 53 | 21 24 | 0 26 | 10 36 | 1 48 | 19 59 | 0 37 | 7 27 | 1 42 | 24 2 | 8 30 | 21 31 | 21 17 | 10 41 | 16 58 | 5 51 |
| T 6 | 22 29 | 14 48 | 3 2 | 24 24 | 1 3 | 20 29 | 1 38 | 23 37 | 0 54 | 21 25 | 0 26 | 10 34 | 1 48 | 19 59 | 0 37 | 7 27 | 1 42 | 24 2 | 8 30 | 21 31 | 21 17 | 10 38 | 16 58 | 5 51 |
| W 7 | 22 21 | 18 5 | 2 1 | 24 25 | 1 9 | 20 42 | 1 35 | 23 32 | 0 54 | 21 27 | 0 27 | 10 32 | 1 48 | 20 0 | 0 37 | 7 27 | 1 42 | 24 1 | 8 30 | 21 32 | 21 16 | 10 36 | 16 58 | 5 51 |
| T 8 | 22 13 | 20 31 | 0 51 | 24 25 | 1 14 | 20 53 | 1 33 | 23 28 | 0 54 | 21 28 | 0 27 | 10 30 | 1 48 | 20 0 | 0 37 | 7 28 | 1 42 | 24 1 | 8 30 | 21 32 | 21 16 | 10 34 | 16 58 | 5 50 |
| F 9 | 22 5 | 21 49 | 0s24 | 24 24 | 1 19 | 21 4 | 1 31 | 23 22 | 0 55 | 21 30 | 0 27 | 10 27 | 1 48 | 20 1 | 0 37 | 7 28 | 1 42 | 24 0 | 8 30 | 21 32 | 21 15 | 10 32 | 16 57 | 5 50 |
| S 10 | 21 56 | 21 44 | 1 40 | 24 21 | 1 24 | 21 15 | 1 28 | 23 17 | 0 55 | 21 32 | 0 27 | 10 25 | 1 48 | 20 2 | 0 37 | 7 28 | 1 42 | 24 0 | 8 30 | 21 32 | 21 15 | 10 29 | 16 57 | 5 50 |
| S 11 | 21 47 | 20 10 | 2 52 | 24 17 | 1 29 | 21 25 | 1 26 | 23 11 | 0 55 | 21 33 | 0 27 | 10 23 | 1 47 | 20 2 | 0 37 | 7 28 | 1 42 | 23 59 | 8 30 | 21 31 | 21 14 | 10 27 | 16 57 | 5 50 |
| M 12 | 21 37 | 17 11 | 3 52 | 24 11 | 1 34 | 21 34 | 1 23 | 23 5 | 0 56 | 21 35 | 0 27 | 10 21 | 1 47 | 20 3 | 0 37 | 7 28 | 1 42 | 23 59 | 8 30 | 21 30 | 21 13 | 10 25 | 16 57 | 5 50 |
| T 13 | 21 27 | 13 1 | 4 37 | 24 4 | 1 38 | 21 43 | 1 20 | 22 59 | 0 56 | 21 36 | 0 27 | 10 18 | 1 47 | 20 4 | 0 37 | 7 28 | 1 42 | 23 58 | 8 30 | 21 29 | 21 13 | 10 22 | 16 57 | 5 50 |
| W 14 | 21 16 | 8 2 | 5 2 | 23 55 | 1 42 | 21 51 | 1 18 | 22 53 | 0 56 | 21 38 | 0 28 | 10 16 | 1 47 | 20 4 | 0 37 | 7 28 | 1 42 | 23 58 | 8 30 | 21 28 | 21 12 | 10 20 | 16 57 | 5 49 |
| T 15 | 21 5 | 2 38 | 5 6 | 23 45 | 1 46 | 21 58 | 1 15 | 22 46 | 0 57 | 21 40 | 0 28 | 10 14 | 1 47 | 20 5 | 0 37 | 7 28 | 1 42 | 23 57 | 8 30 | 21 27 | 21 12 | 10 18 | 16 57 | 5 49 |
| F 16 | 20 54 | 2s47 | 4 50 | 23 34 | 1 49 | 22 5 | 1 12 | 22 39 | 0 57 | 21 41 | 0 28 | 10 11 | 1 47 | 20 5 | 0 37 | 7 28 | 1 42 | 23 56 | 8 30 | 21 26 | 21 11 | 10 16 | 16 57 | 5 49 |
| S 17 | 20 42 | 7 55 | 4 17 | 23 21 | 1 52 | 22 11 | 1 10 | 22 32 | 0 58 | 21 43 | 0 28 | 10 9 | 1 47 | 20 6 | 0 37 | 7 28 | 1 42 | 23 56 | 8 30 | 21 25 | 21 11 | 10 13 | 16 57 | 5 49 |
| S 18 | 20 30 | 12 30 | 3 29 | 23 7 | 1 55 | 22 17 | 1 7 | 22 24 | 0 58 | 21 44 | 0 28 | 10 7 | 1 47 | 20 7 | 0 37 | 7 28 | 1 42 | 23 55 | 8 30 | 21 25 | 21 10 | 10 11 | 16 57 | 5 48 |
| M 19 | 20 17 | 16 18 | 2 31 | 22 51 | 1 57 | 22 22 | 1 4 | 22 17 | 0 58 | 21 46 | 0 28 | 10 4 | 1 47 | 20 7 | 0 37 | 7 28 | 1 42 | 23 55 | 8 30 | 21 25 | 21 9 | 10 9 | 16 57 | 5 48 |
| T 20 | 20 4 | 19 12 | 1 26 | 22 33 | 2 0 | 22 26 | 1 1 | 22 9 | 0 58 | 21 47 | 0 28 | 10 2 | 1 47 | 20 8 | 0 37 | 7 28 | 1 43 | 23 54 | 8 30 | 21 25 | 21 9 | 10 6 | 16 57 | 5 48 |
| W 21 | 19 51 | 21 4 | 0 19 | 22 14 | 2 1 | 22 29 | 0 58 | 22 0 | 0 59 | 21 49 | 0 28 | 9 59 | 1 47 | 20 8 | 0 37 | 7 28 | 1 43 | 23 54 | 8 30 | 21 25 | 21 8 | 10 4 | 16 57 | 5 48 |
| T 22 | 19 37 | 21 52 | 0n47 | 21 53 | 2 3 | 22 32 | 0 56 | 21 52 | 0 59 | 21 50 | 0 29 | 9 57 | 1 47 | 20 9 | 0 37 | 7 28 | 1 43 | 23 53 | 8 30 | 21 25 | 21 8 | 10 2 | 16 57 | 5 47 |
| F 23 | 19 23 | 21 36 | 1 50 | 21 31 | 2 4 | 22 35 | 0 53 | 21 43 | 0 59 | 21 52 | 0 29 | 9 54 | 1 47 | 20 10 | 0 37 | 7 28 | 1 43 | 23 53 | 8 30 | 21 25 | 21 7 | 10 0 | 16 57 | 5 47 |
| S 24 | 19 9 | 20 20 | 2 48 | 21 8 | 2 5 | 22 36 | 0 50 | 21 34 | 1 0 | 21 53 | 0 29 | 9 52 | 1 47 | 20 10 | 0 37 | 7 28 | 1 43 | 23 52 | 8 30 | 21 24 | 21 7 | 9 57 | 16 57 | 5 47 |
| S 25 | 18 54 | 18 9 | 3 37 | 20 42 | 2 5 | 22 37 | 0 47 | 21 25 | 1 0 | 21 55 | 0 29 | 9 49 | 1 47 | 20 11 | 0 37 | 7 28 | 1 43 | 23 52 | 8 30 | 21 22 | 21 6 | 9 55 | 16 57 | 5 47 |
| M 26 | 18 39 | 15 13 | 4 16 | 20 15 | 2 5 | 22 37 | 0 44 | 21 16 | 1 0 | 21 56 | 0 29 | 9 47 | 1 47 | 20 11 | 0 37 | 7 28 | 1 43 | 23 51 | 8 30 | 21 21 | 21 5 | 9 53 | 16 57 | 5 46 |
| T 27 | 18 24 | 11 41 | 4 44 | 19 47 | 2 4 | 22 37 | 0 41 | 21 6 | 1 1 | 21 57 | 0 29 | 9 44 | 1 47 | 20 12 | 0 37 | 7 28 | 1 43 | 23 50 | 8 30 | 21 18 | 21 5 | 9 50 | 16 57 | 5 46 |
| W 28 | 18 8 | 7 43 | 4 59 | 19 17 | 2 3 | 22 36 | 0 38 | 20 56 | 1 1 | 21 59 | 0 29 | 9 42 | 1 46 | 20 13 | 0 37 | 7 28 | 1 43 | 23 50 | 8 30 | 21 16 | 21 4 | 9 48 | 16 57 | 5 46 |
| T 29 | 17 52 | 3 28 | 5 2 | 18 46 | 1 2 | 22 34 | 0 35 | 20 46 | 1 1 | 22 0 | 0 29 | 9 39 | 1 46 | 20 13 | 0 37 | 7 28 | 1 43 | 23 49 | 8 30 | 21 14 | 21 4 | 9 46 | 16 57 | 5 46 |
| F 30 | 17 35 | 0n56 | 4 51 | 18 13 | 1 59 | 22 31 | 0 32 | 20 35 | 1 1 | 22 2 | 0 29 | 9 37 | 1 46 | 20 14 | 0 37 | 7 28 | 1 43 | 23 49 | 8 30 | 21 12 | 21 3 | 9 43 | 16 57 | 5 45 |
| S 31 | 17s19 | 5n19 | 4n28 | 17s38 | 1s56 | 22s28 | 0n29 | 20s25 | 1s 2 | 22n 3 | 0n29 | 9s34 | 1s46 | 20n14 | 0n37 | 7s28 | 1n43 | 23s48 | 8s30 | 21s10 | 21s 2 | 9s41 | 16n58 | 5s45 |

ASTRODIENST EPHEMERIS for the year 1789

geocentric

FEBRUARY 1789

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|-----------------------|----------------------|----------------------|---------------------|---------------------|----------------------|---------------------|---------------------|----------------------|---------------------|---------------------|--------------------|---------------------|-----------------------|------|
| S 1 | 8 46 28 | 12 ³⁹ 48 | 15 ¹⁷ 9 | 18 ⁴² 54 | 12 ³⁵ 4 | 4 ⁴² 12 | 22 ²⁰ R31 | 9 ⁴⁵ 51 | 2 ²⁰ R25 | 23 ²⁰ R17 | 17 ⁴⁸ 8 | 5 ⁰⁰ R 0 | 4 ⁴⁷ 20 | 21 ⁴² 21 | 15 ²⁰ R29 | S 1 |
| M 2 | 8 50 24 | 13 ⁴⁰ 38 | 27 ²⁰ 26 | 20 ²⁰ 29 | 14 ⁴⁰ 8 | 4 ⁴⁵ 59 | 22 ²⁰ 24 | 9 ⁴⁸ 58 | 2 ²⁰ 23 | 23 ²⁰ 17 | 17 ⁴⁹ 9 | 4 ⁴⁷ 56 | 4 ⁴⁶ 16 | 21 ⁴² 28 | 15 ²⁰ II28 | M 2 |
| T 3 | 8 54 21 | 14 ⁴¹ 26 | 9 ⁴⁸ 57 | 22 ²⁰ 17 | 15 ²⁰ 23 | 5 ⁴⁶ 46 | 22 ²⁰ 17 | 10 ⁴⁵ 5 | 2 ²⁰ 20 | 23 ²⁰ 16 | 17 ⁴⁹ 11 | 4 ⁴⁸ D55 | 4 ⁴⁶ 13 | 21 ⁴³ 34 | 15 ²⁰ 26 | T 3 |
| W 4 | 8 58 17 | 15 ⁴² 13 | 22 ²⁰ 49 | 24 ⁴⁰ 5 | 16 ²⁰ 37 | 6 ⁴³ 33 | 22 ²⁰ 10 | 10 ⁴⁵ 12 | 2 ²⁰ 17 | 23 ²⁰ 16 | 17 ⁴⁹ 13 | 4 ⁴⁸ 55 | 4 ⁴⁶ 10 | 21 ⁴³ 41 | 15 ²⁰ 25 | W 4 |
| T 5 | 9 2 14 | 16 ⁴² 59 | 6 ⁴⁸ II 5 | 25 ²⁰ 53 | 17 ²⁰ 51 | 7 ²⁰ 20 | 22 ²⁰ 4 | 10 ⁴⁵ 19 | 2 ²⁰ 15 | 23 ²⁰ 16 | 17 ⁴⁹ 15 | 4 ⁴⁸ R55 | 4 ⁴⁶ 7 | 21 ⁴³ 48 | 15 ²⁰ 24 | T 5 |
| F 6 | 9 6 10 | 17 ⁴³ 43 | 19 ²⁰ 50 | 27 ²⁰ 41 | 19 ²⁰ 5 | 8 ²⁰ 7 | 21 ²⁰ 57 | 10 ⁴⁵ 26 | 2 ²⁰ 12 | 23 ²⁰ 15 | 17 ⁴⁹ 16 | 4 ⁴⁸ 54 | 4 ⁴⁶ 4 | 21 ⁴³ 54 | 15 ²⁰ 23 | F 6 |
| S 7 | 9 10 7 | 18 ⁴⁴ 25 | 4 ⁴⁸ 3 | 29 ²⁰ 29 | 20 ²⁰ 19 | 8 ²⁰ 54 | 21 ²⁰ 50 | 10 ⁴⁵ 33 | 2 ²⁰ 10 | 23 ²⁰ 15 | 17 ⁴⁹ 18 | 4 ⁴⁸ 51 | 4 ⁴⁶ 0 | 22 ²⁰ 1 | 15 ²⁰ 22 | S 7 |
| S 8 | 9 14 3 | 19 ⁴⁵ 06 | 18 ⁴⁵ | 1 ⁴⁸ 16 | 21 ²⁰ 33 | 9 ²⁰ 41 | 21 ²⁰ 44 | 10 ⁴⁵ 40 | 2 ²⁰ 7 | 23 ²⁰ 14 | 17 ⁴⁹ 20 | 4 ⁴⁸ 46 | 3 ⁴⁵ 57 | 22 ²⁰ 8 | 15 ²⁰ 21 | S 8 |
| M 9 | 9 18 0 | 20 ⁴⁵ 45 | 3 ⁴⁸ 49 | 3 ⁴⁰ 3 | 22 ²⁰ 48 | 10 ²⁰ 28 | 21 ²⁰ 38 | 10 ⁴⁵ 47 | 2 ²⁰ 5 | 23 ²⁰ 14 | 17 ⁴⁹ 22 | 4 ⁴⁸ 37 | 3 ⁴⁵ 54 | 22 ²⁰ 15 | 15 ²⁰ 20 | M 9 |
| T 10 | 9 21 57 | 21 ⁴⁶ 22 | 19 ²⁰ 9 | 4 ⁴⁹ 24 | 24 ²⁰ 2 | 11 ²⁰ 15 | 21 ²⁰ 32 | 10 ⁴⁵ 54 | 2 ²⁰ 3 | 23 ²⁰ 13 | 17 ⁴⁹ 24 | 4 ⁴⁸ 27 | 3 ⁴⁵ 51 | 22 ²⁰ 21 | 15 ²⁰ 19 | T 10 |
| W11 | 9 25 53 | 22 ⁴⁶ 58 | 4 ⁴⁹ 31 | 6 ⁴³ 33 | 25 ²⁰ 16 | 12 ²⁰ 2 | 21 ²⁰ 26 | 11 ²⁰ 1 | 2 ²⁰ 0 | 23 ²⁰ 12 | 17 ⁴⁹ 25 | 4 ⁴⁸ 16 | 3 ⁴⁸ 48 | 22 ²⁰ 28 | 15 ²⁰ 18 | W11 |
| T 12 | 9 29 50 | 23 ⁴⁷ 33 | 19 ²⁰ 45 | 8 ⁴⁶ 16 | 26 ²⁰ 30 | 12 ²⁰ 49 | 21 ²⁰ 20 | 11 ²⁰ 8 | 1 ⁵⁰ 58 | 23 ²⁰ 12 | 17 ⁴⁹ 27 | 4 ⁴⁸ 5 | 3 ⁴⁵ 45 | 22 ²⁰ 35 | 15 ²⁰ 18 | T 12 |
| F 13 | 9 33 46 | 24 ⁴⁸ 06 | 4 ⁴⁹ 40 | 9 ⁴⁵ 56 | 27 ²⁰ 44 | 13 ²⁰ 36 | 21 ²⁰ 14 | 11 ²⁰ 15 | 1 ⁵⁵ 55 | 23 ²⁰ 11 | 17 ⁴⁹ 29 | 3 ⁴⁸ 56 | 3 ⁴¹ 41 | 22 ²⁰ 41 | 15 ²⁰ 17 | F 13 |
| S 14 | 9 37 43 | 25 ⁴⁸ 38 | 19 ²⁰ 8 | 11 ²⁰ 34 | 28 ²⁰ 59 | 14 ²⁰ 23 | 21 ²⁰ 9 | 11 ²⁰ 22 | 1 ⁵³ 23 | 23 ²⁰ 11 | 17 ⁴⁹ 31 | 3 ⁴⁹ 3 | 3 ³⁸ 38 | 22 ²⁰ 48 | 15 ²⁰ 17 | S 14 |
| S 15 | 9 41 39 | 26 ⁴⁹ 09 | 3 ⁴⁸ 6 | 13 ²⁰ 9 | 0 ⁴⁸ 13 | 15 ²⁰ 11 | 21 ²⁰ 3 | 11 ²⁰ 30 | 1 ⁵¹ 23 | 23 ²⁰ 10 | 17 ⁴⁹ 32 | 3 ⁴⁵ 3 | 3 ³⁵ 35 | 22 ²⁰ 55 | 15 ²⁰ 16 | S 15 |
| M16 | 9 45 36 | 27 ⁴⁹ 39 | 16 ²⁰ 35 | 14 ²⁰ 40 | 1 ²⁰ 27 | 15 ²⁰ 58 | 20 ²⁰ 58 | 11 ²⁰ 37 | 1 ⁴⁹ 23 | 23 ²⁰ 9 | 17 ⁴⁹ 34 | 3 ⁴³ 3 | 3 ³² 32 | 23 ²⁰ 2 | 15 ²⁰ 16 | M16 |
| T 17 | 9 49 32 | 28 ⁵⁰ 07 | 29 ²⁰ 37 | 16 ²⁰ 6 | 2 ⁴¹ 24 | 16 ²⁰ 45 | 20 ²⁰ 53 | 11 ²⁰ 44 | 1 ⁴⁶ 23 | 23 ²⁰ 8 | 17 ⁴⁹ 36 | 3 ⁴³ 3 | 3 ²⁹ 29 | 23 ²⁰ 8 | 15 ²⁰ 16 | T 17 |
| W18 | 9 53 29 | 29 ⁵⁰ 34 | 12 ⁴⁷ 16 | 17 ²⁰ 28 | 3 ⁵⁶ 16 | 17 ²⁰ 32 | 20 ²⁰ 48 | 11 ²⁰ 51 | 1 ⁴⁴ 23 | 23 ²⁰ 7 | 17 ⁴⁹ 38 | 3 ⁴³ 3 | 3 ²⁶ 26 | 23 ²⁰ 15 | 15 ²⁰ 16 | W18 |
| T 19 | 9 57 26 | 0 ⁵⁰ 59 | 24 ²⁰ 37 | 18 ²⁰ 44 | 5 ¹⁰ 10 | 18 ²⁰ 19 | 20 ²⁰ 44 | 11 ²⁰ 59 | 1 ⁴² 23 | 23 ²⁰ 7 | 17 ⁴⁹ 39 | 3 ⁴² 3 | 3 ²² 22 | 23 ²⁰ 22 | 15 ²⁰ D15 | T 19 |
| F 20 | 10 1 22 | 1 ⁵¹ 23 | 6 ⁴⁸ 45 | 19 ²⁰ 54 | 6 ²⁴ 19 | 19 ²⁰ 7 | 20 ²⁰ 39 | 12 ²⁰ 6 | 1 ⁴⁰ 23 | 23 ²⁰ 6 | 17 ⁴⁹ 41 | 3 ³⁸ 3 | 3 ¹⁹ 19 | 23 ²⁰ 29 | 15 ²⁰ 15 | F 20 |
| S 21 | 10 5 19 | 2 ⁵¹ 46 | 18 ²⁰ 44 | 20 ²⁰ 56 | 7 ³⁸ 19 | 19 ²⁰ 54 | 20 ²⁰ 35 | 12 ²⁰ 13 | 1 ³⁸ 23 | 23 ²⁰ 5 | 17 ⁴⁹ 43 | 3 ³² 3 | 3 ¹⁶ 16 | 23 ²⁰ 35 | 15 ²⁰ 16 | S 21 |
| S 22 | 10 9 15 | 3 ⁵² 07 | 0 ⁴⁸ 38 | 21 ²⁰ 52 | 8 ⁵³ 20 | 20 ²⁰ 41 | 20 ²⁰ 31 | 12 ²⁰ 20 | 1 ³⁵ 23 | 23 ²⁰ 4 | 17 ⁴⁹ 45 | 3 ²³ 3 | 3 ¹³ 13 | 23 ²⁰ 42 | 15 ²⁰ 16 | S 22 |
| M23 | 10 13 12 | 4 ⁵² 27 | 12 ²⁰ 29 | 22 ²⁰ 39 | 10 ²⁰ 7 | 21 ²⁰ 28 | 20 ²⁰ 27 | 12 ²⁰ 28 | 1 ³³ 23 | 23 ²⁰ 3 | 17 ⁴⁹ 46 | 3 ¹¹ 3 | 3 ¹⁰ 10 | 23 ²⁰ 49 | 15 ²⁰ 16 | M23 |
| T 24 | 10 17 8 | 5 ⁵² 45 | 24 ²⁰ 20 | 23 ²⁰ 17 | 11 ²⁰ 21 | 22 ²⁰ 15 | 20 ²⁰ 23 | 12 ²⁰ 35 | 1 ³¹ 23 | 23 ²⁰ 2 | 17 ⁴⁹ 48 | 2 ⁵⁷ 3 | 3 ⁶ 6 | 23 ²⁰ 55 | 15 ²⁰ 16 | T 24 |
| W25 | 10 21 5 | 6 ⁵³ 01 | 6 ⁴⁸ 13 | 23 ²⁰ 47 | 12 ²⁰ 36 | 23 ²⁰ 3 | 20 ²⁰ 19 | 12 ²⁰ 42 | 1 ²⁹ 23 | 23 ²⁰ 1 | 17 ⁴⁹ 50 | 2 ⁴² 3 | 3 ³ 3 | 24 ²⁰ 2 | 15 ²⁰ 17 | W25 |
| T 26 | 10 25 1 | 7 ⁵³ 15 | 18 ²⁰ 9 | 24 ²⁰ 7 | 13 ²⁰ 50 | 23 ²⁰ 50 | 20 ²⁰ 16 | 12 ²⁰ 50 | 1 ²⁷ 23 | 23 ²⁰ 0 | 17 ⁴⁹ 52 | 2 ²⁷ 3 | 3 ⁰ 0 | 24 ²⁰ 9 | 15 ²⁰ 17 | T 26 |
| F 27 | 10 28 58 | 8 ⁵³ 27 | 0 ⁴⁸ 8 | 24 ²⁰ 18 | 15 ²⁰ 4 | 24 ²⁰ 37 | 20 ²⁰ 12 | 12 ²⁰ 57 | 1 ²⁵ 22 | 22 ²⁰ 59 | 17 ⁴⁹ 53 | 2 ¹⁴ 3 | 2 ⁵⁷ 3 | 24 ²⁰ 16 | 15 ²⁰ 18 | F 27 |
| S 28 | 10 32 55 | 9 ⁴⁸ 53'38 | 12 ⁴⁷ 13 | 24 ²⁰ R19 | 16 ⁴⁸ 18 | 25 ⁴⁸ 24 | 20 ²⁰ 20 | 13 ⁴⁸ 4 | 1 ⁴⁸ 23 | 22 ⁴⁸ 58 | 17 ⁴⁸ 55 | 2 ⁴⁷ 3 | 2 ⁴⁷ 54 | 24 ⁴⁸ 22 | 15 ⁴⁸ II18 | S 28 |

| Day | ☉ | ☾ | | ♀ | | ♀ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | |
|-----|---|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|---|--|
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ASTRODIENST EPHEMERIS for the year 1789
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MARCH 1789

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|------|----------|----------|-------|--------|-------|-------|--------|-------|------|-------|-------|--------|------|-------|-------|------|
| S 1 | 10 36 51 | 10♈53'47 | 24♉25 | 24♈11 | 17♋33 | 26♌12 | 20♍6 | 13♎12 | 1♏22 | 22♐57 | 17♑57 | 1♒55 | 2♓51 | 24♈29 | 15♉19 | S 1 |
| M 2 | 10 40 48 | 11°53'53 | 6♈47 | 23♈54 | 18°47 | 26°59 | 20♈4 | 13°19 | 1♏20 | 22♐56 | 17°58 | 1♒50 | 2°47 | 24°36 | 15°20 | M 2 |
| T 3 | 10 44 44 | 12°53'58 | 19°21 | 23°29 | 20° 1 | 27°46 | 20° 1 | 13°27 | 1°18 | 22°55 | 18° 0 | 1°48 | 2°44 | 24°42 | 15°21 | T 3 |
| W 4 | 10 48 41 | 13°54'00 | 2♉12 | 22°55 | 21°16 | 28°33 | 19°59 | 13°34 | 1°16 | 22°53 | 18° 1 | 1°D47 | 2°41 | 24°49 | 15°22 | W 4 |
| T 5 | 10 52 37 | 14°54'00 | 15°23 | 22°15 | 22°30 | 29°21 | 19°57 | 13°41 | 1°15 | 22°52 | 18° 3 | 1°R47 | 2°38 | 24°56 | 15°23 | T 5 |
| F 6 | 10 56 34 | 15°53'58 | 28°57 | 21°28 | 23°44 | 0♈8 | 19°55 | 13°49 | 1°13 | 22°51 | 18° 5 | 1°47 | 2°35 | 25° 3 | 15°24 | F 6 |
| S 7 | 11 0 30 | 16°53'54 | 12♈58 | 20°37 | 24°58 | 0°55 | 19°53 | 13°56 | 1°11 | 22°50 | 18° 6 | 1°45 | 2°31 | 25° 9 | 15°25 | S 7 |
| S 8 | 11 4 27 | 17°53'48 | 27°24 | 19°42 | 26°13 | 1°42 | 19°51 | 14° 3 | 1°10 | 22°48 | 18° 8 | 1°40 | 2°28 | 25°16 | 15°27 | S 8 |
| M 9 | 11 8 24 | 18°53'39 | 12♉14 | 18°44 | 27°27 | 2°29 | 19°50 | 14°11 | 1° 8 | 22°47 | 18°10 | 1°32 | 2°25 | 25°23 | 15°28 | M 9 |
| T 10 | 11 12 20 | 19°53'28 | 27°21 | 17°46 | 28°41 | 3°17 | 19°49 | 14°18 | 1° 7 | 22°46 | 18°11 | 1°23 | 2°22 | 25°30 | 15°29 | T 10 |
| W 11 | 11 16 17 | 20°53'15 | 12♊35 | 16°48 | 29°55 | 4° 4 | 19°48 | 14°25 | 1° 5 | 22°45 | 18°13 | 1°12 | 2°19 | 25°36 | 15°31 | W 11 |
| T 12 | 11 20 13 | 21°53'00 | 27°47 | 15°51 | 1♈10 | 4°51 | 19°47 | 14°33 | 1° 4 | 22°43 | 18°14 | 1° 2 | 2°16 | 25°43 | 15°33 | T 12 |
| F 13 | 11 24 10 | 22°52'43 | 12♊44 | 14°58 | 2°24 | 5°38 | 19°46 | 14°40 | 1° 3 | 22°42 | 18°16 | 0°53 | 2°12 | 25°50 | 15°34 | F 13 |
| S 14 | 11 28 6 | 23°52'24 | 27°19 | 14° 7 | 3°38 | 6°25 | 19°46 | 14°47 | 1° 1 | 22°41 | 18°17 | 0°47 | 2° 9 | 25°56 | 15°36 | S 14 |
| S 15 | 11 32 3 | 24°52'03 | 11♊27 | 13°22 | 4°52 | 7°12 | 19°46 | 14°55 | 1° 0 | 22°39 | 18°19 | 0°43 | 2° 6 | 26° 3 | 15°38 | S 15 |
| M 16 | 11 35 59 | 25°51'41 | 25° 4 | 12°41 | 6° 6 | 8° 0 | 19°D46 | 15° 2 | 0°59 | 22°38 | 18°20 | 0°D41 | 2° 3 | 26°10 | 15°40 | M 16 |
| T 17 | 11 39 56 | 26°51'17 | 8♊14 | 12° 6 | 7°21 | 8°47 | 19°46 | 15° 9 | 0°58 | 22°36 | 18°22 | 0°41 | 2° 0 | 26°17 | 15°42 | T 17 |
| W 18 | 11 43 52 | 27°50'51 | 20°58 | 11°36 | 8°35 | 9°34 | 19°46 | 15°17 | 0°57 | 22°35 | 18°23 | 0°42 | 1°57 | 26°23 | 15°44 | W 18 |
| T 19 | 11 47 49 | 28°50'23 | 3♋22 | 11°13 | 9°49 | 10°21 | 19°47 | 15°24 | 0°56 | 22°33 | 18°25 | 0°R42 | 1°53 | 26°30 | 15°46 | T 19 |
| F 20 | 11 51 46 | 29°49'54 | 15°31 | 10°56 | 11° 3 | 11° 8 | 19°48 | 15°31 | 0°55 | 22°32 | 18°26 | 0°41 | 1°50 | 26°37 | 15°48 | F 20 |
| S 21 | 11 55 42 | 0♈49'23 | 27°29 | 10°44 | 12°18 | 11°55 | 19°49 | 15°38 | 0°54 | 22°30 | 18°27 | 0°37 | 1°47 | 26°43 | 15°50 | S 21 |
| S 22 | 11 59 39 | 1°48'50 | 9♋22 | 10°D39 | 13°32 | 12°42 | 19°50 | 15°45 | 0°53 | 22°29 | 18°29 | 0°31 | 1°44 | 26°50 | 15°53 | S 22 |
| M 23 | 12 3 35 | 2°48'15 | 21°12 | 10°40 | 14°46 | 13°29 | 19°51 | 15°53 | 0°52 | 22°27 | 18°30 | 0°23 | 1°41 | 26°57 | 15°55 | M 23 |
| T 24 | 12 7 32 | 3°47'38 | 3♈4 | 10°46 | 16° 0 | 14°16 | 19°53 | 16° 0 | 0°51 | 22°26 | 18°31 | 0°13 | 1°37 | 27° 4 | 15°58 | T 24 |
| W 25 | 12 11 28 | 4°46'59 | 14°59 | 10°58 | 17°14 | 15° 3 | 19°54 | 16° 7 | 0°50 | 22°24 | 18°33 | 0° 2 | 1°34 | 27°10 | 16° 0 | W 25 |
| T 26 | 12 15 25 | 5°46'18 | 27° 1 | 11°14 | 18°29 | 15°50 | 19°56 | 16°14 | 0°50 | 22°23 | 18°34 | 29♌51 | 1°31 | 27°17 | 16° 3 | T 26 |
| F 27 | 12 19 21 | 6°45'35 | 9♈9 | 11°36 | 19°43 | 16°37 | 19°58 | 16°21 | 0°49 | 22°21 | 18°35 | 29°41 | 1°28 | 27°24 | 16° 6 | F 27 |
| S 28 | 12 23 18 | 7°44'50 | 21°26 | 12° 3 | 20°57 | 17°24 | 20° 1 | 16°28 | 0°48 | 22°20 | 18°37 | 29°33 | 1°25 | 27°31 | 16° 8 | S 28 |
| S 29 | 12 27 15 | 8°44'04 | 3♉51 | 12°34 | 22°11 | 18°11 | 20° 3 | 16°35 | 0°48 | 22°18 | 18°38 | 29°28 | 1°22 | 27°37 | 16°11 | S 29 |
| M 30 | 12 31 11 | 9°43'14 | 16°26 | 13° 9 | 23°25 | 18°58 | 20° 6 | 16°42 | 0°47 | 22°16 | 18°39 | 29°25 | 1°18 | 27°44 | 16°14 | M 30 |
| T 31 | 12 35 8 | 10♈42'23 | 29♈14 | 13♈48 | 24♈39 | 19♈45 | 20♈8 | 16♈49 | 0♉47 | 22♐15 | 18♐40 | 29°D24 | 1♊15 | 27♐51 | 16♉17 | T 31 |

| Day | ☉ | ☽ | ♊ | ♋ | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ | ♈ | ♉ | Day |
|------|------|------------|-----------|------------|------------|------------|-----------|------------|-----------|------------|-------------|------------|----------|----------|-----|
| | decl | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | |
| S 1 | 7s29 | 12n19 3n 4 | 0n37 3n11 | 16s22 0s49 | 13s50 1s 6 | 22n29 0n31 | 8s15 1s46 | 20n29 0n37 | 7s19 1n45 | 23s35 8s33 | 20s34 20s45 | 8s34 17n 6 | 5s35 | | |
| M 2 | 7 6 | 15 49 2 8 | 0 39 3 20 | 16 1 0 51 | 13 34 1 6 | 22 29 0 31 | 8 12 1 46 | 20 29 0 37 | 7 18 1 45 | 23 34 8 33 | 20 33 20 44 | 8 32 17 7 | 5 35 | | |
| T 3 | 6 43 | 18 38 1 5 | 0 35 3 28 | 15 40 0 53 | 13 18 1 6 | 22 29 0 31 | 8 9 1 47 | 20 30 0 37 | 7 18 1 45 | 23 34 8 33 | 20 33 20 44 | 8 30 17 7 | 5 34 | | |
| W 4 | 6 20 | 20 35 0s 2 | 0 28 3 34 | 15 18 0 55 | 13 2 1 6 | 22 30 0 31 | 8 6 1 47 | 20 30 0 37 | 7 17 1 45 | 23 34 8 33 | 20 33 20 43 | 8 27 17 7 | 5 34 | | |
| T 5 | 5 57 | 21 29 1 11 | 0 15 3 38 | 14 56 0 57 | 12 45 1 6 | 22 30 0 31 | 8 4 1 47 | 20 31 0 37 | 7 17 1 45 | 23 33 8 33 | 20 33 20 43 | 8 25 17 8 | 5 34 | | |
| F 6 | 5 34 | 21 9 2 19 | 0s 1 3 40 | 14 33 0 59 | 12 28 1 6 | 22 30 0 31 | 8 1 1 47 | 20 31 0 37 | 7 16 1 45 | 23 33 8 33 | 20 32 20 42 | 8 23 17 8 | 5 33 | | |
| S 7 | 5 11 | 19 31 3 20 | 0 21 3 40 | 14 10 1 1 | 12 12 1 6 | 22 31 0 32 | 7 58 1 47 | 20 31 0 37 | 7 16 1 45 | 23 33 8 33 | 20 32 20 41 | 8 20 17 9 | 5 33 | | |
| S 8 | 4 47 | 16 37 4 10 | 0 45 3 38 | 13 47 1 3 | 11 55 1 6 | 22 31 0 32 | 7 55 1 47 | 20 32 0 37 | 7 15 1 45 | 23 32 8 34 | 20 31 20 41 | 8 18 17 9 | 5 33 | | |
| M 9 | 4 24 | 12 35 4 45 | 1 11 3 34 | 13 23 1 5 | 11 38 1 6 | 22 31 0 32 | 7 53 1 47 | 20 32 0 37 | 7 15 1 45 | 23 32 8 34 | 20 30 20 40 | 8 16 17 10 | 5 32 | | |
| T 10 | 4 0 | 7 42 5 1 | 1 39 3 28 | 12 59 1 6 | 11 21 1 6 | 22 31 0 32 | 7 50 1 47 | 20 32 0 37 | 7 14 1 45 | 23 32 8 34 | 20 28 20 39 | 8 13 17 10 | 5 32 | | |
| W 11 | 3 37 | 2 17 4 56 | 2 9 3 20 | 12 34 1 8 | 11 4 1 6 | 22 32 0 32 | 7 47 1 47 | 20 32 0 37 | 7 14 1 45 | 23 31 8 34 | 20 25 20 39 | 8 11 17 11 | 5 32 | | |
| T 12 | 3 13 | 3s15 4 30 | 2 39 3 10 | 12 10 1 10 | 10 46 1 6 | 22 32 0 32 | 7 44 1 47 | 20 33 0 37 | 7 13 1 45 | 23 31 8 34 | 20 23 20 38 | 8 9 17 11 | 5 31 | | |
| F 13 | 2 50 | 8 30 3 46 | 3 10 2 59 | 11 44 1 11 | 10 29 1 6 | 22 32 0 32 | 7 41 1 47 | 20 33 0 37 | 7 13 1 45 | 23 31 8 35 | 20 22 20 38 | 8 6 17 12 | 5 31 | | |
| S 14 | 2 26 | 13 8 2 47 | 3 41 2 47 | 11 19 1 13 | 10 12 1 6 | 22 32 0 32 | 7 39 1 47 | 20 33 0 37 | 7 12 1 45 | 23 30 8 35 | 20 20 20 37 | 8 4 17 12 | 5 31 | | |
| S 15 | 2 2 | 16 52 1 41 | 4 10 2 34 | 10 53 1 14 | 9 54 1 6 | 22 32 0 32 | 7 36 1 47 | 20 34 0 37 | 7 11 1 45 | 23 30 8 35 | 20 19 20 36 | 8 2 17 13 | 5 30 | | |
| M 16 | 1 39 | 19 32 0 30 | 4 39 2 20 | 10 27 1 16 | 9 36 1 6 | 22 32 0 32 | 7 33 1 47 | 20 34 0 37 | 7 11 1 45 | 23 30 8 35 | 20 19 20 36 | 7 59 17 13 | 5 30 | | |
| T 17 | 1 15 | 21 3 0n40 | 5 6 2 6 | 10 1 1 17 | 9 19 1 6 | 22 32 0 32 | 7 30 1 47 | 20 34 0 37 | 7 10 1 45 | 23 29 8 35 | 20 19 20 35 | 7 57 17 14 | 5 30 | | |
| W 18 | 0 51 | 21 24 1 46 | 5 31 1 51 | 9 34 1 18 | 9 1 1 6 | 22 32 0 32 | 7 28 1 47 | 20 34 0 37 | 7 10 1 45 | 23 29 8 35 | 20 19 20 34 | 7 55 17 15 | 5 29 | | |
| T 19 | 0 28 | 20 40 2 45 | 5 54 1 36 | 9 7 1 19 | 8 43 1 6 | 22 32 0 32 | 7 25 1 48 | 20 34 0 37 | 7 9 1 45 | 23 29 8 36 | 20 19 20 34 | 7 52 17 15 | 5 29 | | |
| F 20 | 0 4 | 19 0 3 35 | 6 14 1 20 | 8 40 1 20 | 8 25 1 6 | 22 32 0 32 | 7 22 1 48 | 20 35 0 37 | 7 9 1 46 | 23 29 8 36 | 20 19 20 33 | 7 50 17 16 | 5 29 | | |
| S 21 | 0n20 | 16 31 4 15 | 6 33 1 5 | 8 13 1 22 | 8 7 1 6 | 22 32 0 32 | 7 19 1 48 | 20 35 0 37 | 7 8 1 46 | 23 28 8 36 | 20 18 20 32 | 7 48 17 16 | 5 28 | | |
| S 22 | 0 43 | 13 22 4 44 | 6 48 0 50 | 7 45 1 23 | 7 49 1 6 | 22 31 0 32 | 7 17 1 48 | 20 35 0 37 | 7 7 1 46 | 23 28 8 36 | 20 17 20 32 | 7 45 17 17 | 5 28 | | |
| M 23 | 1 7 | 9 42 5 0 | 7 2 0 35 | 7 17 1 23 | 7 31 1 6 | 22 31 0 32 | 7 14 1 48 | 20 35 0 37 | 7 7 1 46 | 23 28 8 37 | 20 15 20 31 | 7 43 17 17 | 5 28 | | |
| T 24 | 1 31 | 5 40 5 4 | 7 13 0 21 | 6 49 1 24 | 7 12 1 6 | 22 31 0 32 | 7 11 1 48 | 20 35 0 37 | 7 6 1 46 | 23 28 8 37 | 20 13 20 31 | 7 41 17 18 | 5 27 | | |
| W 25 | 1 54 | 1 24 4 54 | 7 21 0 7 | 6 21 1 25 | 6 54 1 6 | 22 31 0 32 | 7 9 1 48 | 20 35 0 37 | 7 6 1 46 | 23 27 8 37 | 20 11 20 30 | 7 38 17 18 | 5 27 | | |
| T 26 | 2 18 | 2n58 4 31 | 7 27 0s 6 | 5 53 1 26 | 6 36 1 5 | 22 31 0 32 | 7 6 1 48 | 20 36 0 37 | 7 5 1 46 | 23 27 8 37 | 20 8 20 29 | 7 36 17 19 | 5 27 | | |
| F 27 | 2 41 | 7 15 3 56 | 7 31 0 19 | 5 24 1 27 | 6 17 1 5 | 22 30 0 32 | 7 3 1 48 | 20 36 0 37 | 7 5 1 46 | 23 27 8 37 | 20 6 20 29 | 7 34 17 20 | 5 26 | | |
| S 28 | 3 5 | 11 17 3 9 | 7 33 0 32 | 4 56 1 27 | 5 59 1 5 | 22 30 0 32 | 7 1 1 48 | 20 36 0 37 | 7 4 1 46 | 23 27 8 38 | 20 5 20 28 | 7 32 17 20 | 5 26 | | |
| S 29 | 3 28 | 14 54 2 13 | 7 32 0 44 | 4 27 1 28 | 5 40 1 5 | 22 30 0 32 | 6 58 1 49 | 20 36 0 37 | 7 3 1 46 | 23 27 8 38 | 20 4 20 27 | 7 29 17 21 | 5 26 | | |
| M 30 | 3 51 | 17 53 1 9 | 7 29 0 55 | 3 58 1 28 | 5 22 1 5 | 22 29 0 32 | 6 55 1 49 | 20 36 0 37 | 7 3 1 46 | 23 26 8 38 | 20 3 20 27 | 7 27 17 21 | 5 25 | | |
| T 31 | 4n15 | 20n 1 0n 1 | 7s24 1s 6 | 3s29 1s29 | 5s 3 1s 5 | 22n29 0n32 | 6s53 1s49 | 20n36 0n37 | 7s 2 1n46 | 23s26 8s38 | 20s 3 20s26 | 7s25 17n22 | 5s25 | | |

Julian Day Number = 2374538.5, Delta T = 21.78 sec
Ecliptic obliquity = 23°27'56, Nutation = 0°00'16, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 21°47'48, Lahiri = 20°54'48Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1789

geocentric

APRIL 1789

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|
| W 1 | 12 39 4 | 11°41'30 | 12°15 | 14°31 | 25°54 | 20°32 | 20°11 | 16°56 | 0°47 | 22°13 | 18°42 | 29°25 | 1°12 | 27°57 | 16°20 | W 1 |
| T 2 | 12 43 1 | 12°40'34 | 25°31 | 15°18 | 27° 8 | 21°19 | 20°15 | 17° 3 | 0°46 | 22°12 | 18°43 | 29°26 | 1° 9 | 28° 4 | 16°23 | T 2 |
| F 3 | 12 46 57 | 13°39'36 | 9°5 | 16° 8 | 28°22 | 22° 6 | 20°18 | 17°10 | 0°46 | 22°10 | 18°44 | 29°27 | 1° 6 | 28°11 | 16°26 | F 3 |
| S 4 | 12 50 54 | 14°38'35 | 22°59 | 17° 1 | 29°36 | 22°52 | 20°22 | 17°17 | 0°46 | 22° 8 | 18°45 | 29°27 | 1° 2 | 28°18 | 16°30 | S 4 |
| S 5 | 12 54 50 | 15°37'33 | 7°12 | 17°57 | 0°50 | 23°39 | 20°25 | 17°23 | 0°46 | 22° 7 | 18°46 | 29°25 | 0°59 | 28°24 | 16°33 | S 5 |
| M 6 | 12 58 47 | 16°36'27 | 21°42 | 18°56 | 2° 4 | 24°26 | 20°29 | 17°30 | 0°46 | 22° 5 | 18°47 | 29°21 | 0°56 | 28°31 | 16°36 | M 6 |
| T 7 | 13 2 44 | 17°35'20 | 6°26 | 19°58 | 3°18 | 25°13 | 20°33 | 17°37 | 0°45 | 22° 4 | 18°48 | 29°16 | 0°53 | 28°38 | 16°40 | T 7 |
| W 8 | 13 6 40 | 18°34'10 | 21°18 | 21° 2 | 4°32 | 25°59 | 20°37 | 17°44 | 0°45 | 22° 2 | 18°49 | 29°10 | 0°50 | 28°44 | 16°43 | W 8 |
| T 9 | 13 10 37 | 19°32'58 | 6°19 | 22° 9 | 5°46 | 26°46 | 20°42 | 17°50 | 0°46 | 22° 0 | 18°50 | 29° 3 | 0°47 | 28°51 | 16°47 | T 9 |
| F 10 | 13 14 33 | 20°31'44 | 20°52 | 23°19 | 7° 0 | 27°33 | 20°46 | 17°57 | 0°46 | 21°59 | 18°51 | 28°58 | 0°43 | 28°58 | 16°50 | F 10 |
| S 11 | 13 18 30 | 21°30'28 | 5°18 | 24°30 | 8°14 | 28°19 | 20°51 | 18° 4 | 0°46 | 21°57 | 18°52 | 28°55 | 0°40 | 29° 5 | 16°54 | S 11 |
| S 12 | 13 22 26 | 22°29'10 | 19°21 | 25°44 | 9°28 | 29° 6 | 20°56 | 18°10 | 0°46 | 21°55 | 18°53 | 28°53 | 0°37 | 29°11 | 16°58 | S 12 |
| M13 | 13 26 23 | 23°27'51 | 3° 0 | 27° 0 | 10°42 | 29°52 | 21° 1 | 18°17 | 0°46 | 21°54 | 18°54 | 28°52 | 0°34 | 29°18 | 17° 1 | M13 |
| T 14 | 13 30 19 | 24°26'29 | 16°14 | 28°19 | 11°56 | 0°39 | 21° 6 | 18°23 | 0°47 | 21°52 | 18°55 | 28°53 | 0°31 | 29°25 | 17° 5 | T 14 |
| W15 | 13 34 16 | 25°25'06 | 29° 3 | 29°39 | 13°10 | 1°25 | 21°12 | 18°29 | 0°47 | 21°50 | 18°56 | 28°55 | 0°28 | 29°32 | 17° 9 | W15 |
| T 16 | 13 38 13 | 26°23'41 | 11°32 | 1°1 | 14°24 | 2°12 | 21°17 | 18°36 | 0°47 | 21°49 | 18°57 | 28°56 | 0°24 | 29°38 | 17°13 | T 16 |
| F 17 | 13 42 9 | 27°22'15 | 23°45 | 2°25 | 15°38 | 2°58 | 21°23 | 18°42 | 0°48 | 21°47 | 18°58 | 28°57 | 0°21 | 29°45 | 17°17 | F 17 |
| S 18 | 13 46 6 | 28°20'47 | 5°46 | 3°52 | 16°52 | 3°44 | 21°29 | 18°48 | 0°48 | 21°45 | 18°59 | 28°57 | 0°18 | 29°52 | 17°21 | S 18 |
| S 19 | 13 50 2 | 29°19'17 | 17°40 | 5°20 | 18° 6 | 4°31 | 21°35 | 18°55 | 0°49 | 21°44 | 18°59 | 28°56 | 0°15 | 29°58 | 17°25 | S 19 |
| M20 | 13 53 59 | 0°17'45 | 29°32 | 6°50 | 19°20 | 5°17 | 21°41 | 19° 1 | 0°50 | 21°42 | 19° 0 | 28°53 | 0°12 | 0°12 | 17°29 | M20 |
| T 21 | 13 57 55 | 1°16'12 | 11°26 | 8°21 | 20°34 | 6° 3 | 21°47 | 19° 7 | 0°50 | 21°41 | 19° 1 | 28°49 | 0° 8 | 0°12 | 17°33 | T 21 |
| W22 | 14 1 52 | 2°14'37 | 23°25 | 9°55 | 21°48 | 6°50 | 21°53 | 19°13 | 0°51 | 21°39 | 19° 2 | 28°45 | 0° 5 | 0°19 | 17°38 | W22 |
| T 23 | 14 5 48 | 3°13'01 | 5°32 | 11°30 | 23° 2 | 7°36 | 22° 0 | 19°19 | 0°52 | 21°37 | 19° 2 | 28°40 | 0° 2 | 0°25 | 17°42 | T 23 |
| F 24 | 14 9 45 | 4°11'22 | 17°50 | 13° 7 | 24°16 | 8°22 | 22° 7 | 19°25 | 0°53 | 21°36 | 19° 3 | 28°36 | 29°59 | 0°32 | 17°46 | F 24 |
| S 25 | 14 13 41 | 5° 9'42 | 0°20 | 14°46 | 25°30 | 9° 8 | 22°14 | 19°31 | 0°54 | 21°34 | 19° 4 | 28°33 | 29°56 | 0°39 | 17°51 | S 25 |
| S 26 | 14 17 38 | 6° 8'01 | 13° 2 | 16°27 | 26°44 | 9°54 | 22°20 | 19°37 | 0°55 | 21°33 | 19° 4 | 28°31 | 29°53 | 0°46 | 17°55 | S 26 |
| M27 | 14 21 35 | 7° 6'17 | 25°57 | 18° 9 | 27°58 | 10°40 | 22°28 | 19°43 | 0°56 | 21°31 | 19° 5 | 28°30 | 29°49 | 0°52 | 17°59 | M27 |
| T 28 | 14 25 31 | 8° 4'32 | 9°12 | 19°54 | 29°12 | 11°26 | 22°35 | 19°48 | 0°57 | 21°29 | 19° 6 | 28°31 | 29°46 | 0°59 | 18° 4 | T 28 |
| W29 | 14 29 28 | 9° 2'45 | 22°27 | 21°40 | 0°26 | 12°12 | 22°42 | 19°54 | 0°58 | 21°28 | 19° 6 | 28°32 | 29°43 | 1° 6 | 18° 9 | W29 |
| T 30 | 14 33 24 | 10° 0'55 | 6° 1 | 23°28 | 1°40 | 12°58 | 22°50 | 20°10 | 0°59 | 21°26 | 19° 7 | 28°33 | 29°40 | 1°12 | 18°13 | T 30 |

| Day | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|--------|--------|------|------|------|-------|------|------|-------|-------|------|------|-------|-------|------|------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | |
| W 1 | 4n38 | 21n 9 | 1s 9 | 7s16 | 1s16 | 3s 0 | 1s29 | 4s45 | 1s 5 | 22n28 | 0n32 | 6s50 | 1s49 | 20n36 | 0n37 | 7s 1 |
| T 2 | 5 1 21 | 7 2 16 | 7 7 | 1 26 | 2 30 | 1 29 | 4 26 | 1 4 | 22 28 | 0 32 | 6 48 | 1 49 | 20 36 | 0 37 | 7 1 | 1 46 |
| F 3 | 5 1 24 | 19 52 | 3 18 | 6 56 | 1 35 | 2 1 | 1 29 | 4 7 | 1 4 | 22 27 | 0 32 | 6 45 | 1 49 | 20 36 | 0 37 | 7 0 |
| S 4 | 5 47 | 17 25 | 4 9 | 6 43 | 1 43 | 1 32 | 1 29 | 3 49 | 1 4 | 22 27 | 0 32 | 6 42 | 1 49 | 20 36 | 0 37 | 7 0 |
| S 5 | 6 9 | 13 52 | 4 46 | 6 29 | 1 51 | 1 2 | 1 29 | 3 30 | 1 4 | 22 26 | 0 32 | 6 40 | 1 49 | 20 36 | 0 37 | 6 59 |
| M 6 | 6 32 | 9 27 | 5 6 | 6 12 | 1 59 | 0 33 | 1 29 | 3 11 | 1 4 | 22 26 | 0 32 | 6 37 | 1 49 | 20 36 | 0 36 | 6 58 |
| T 7 | 6 55 | 4 24 | 5 7 | 5 54 | 2 5 | 0 3 | 1 29 | 2 53 | 1 3 | 22 25 | 0 32 | 6 35 | 1 50 | 20 36 | 0 36 | 6 58 |
| W 8 | 7 17 | 0s56 | 4 47 | 5 34 | 2 11 | 0n26 | 1 29 | 2 34 | 1 3 | 22 24 | 0 32 | 6 32 | 1 50 | 20 36 | 0 36 | 6 57 |
| T 9 | 7 39 | 6 14 | 4 7 | 5 13 | 2 17 | 0 56 | 1 29 | 2 15 | 1 3 | 22 24 | 0 32 | 6 30 | 1 50 | 20 36 | 0 36 | 6 57 |
| F 10 | 8 2 | 11 7 | 3 12 | 4 50 | 2 22 | 1 25 | 1 29 | 1 56 | 1 3 | 22 23 | 0 32 | 6 27 | 1 50 | 20 36 | 0 36 | 6 56 |
| S 11 | 8 24 | 15 16 | 2 5 | 4 25 | 2 26 | 1 55 | 1 28 | 1 38 | 1 3 | 22 22 | 0 32 | 6 25 | 1 50 | 20 36 | 0 36 | 6 55 |
| S 12 | 8 46 | 18 25 | 0 52 | 3 59 | 2 30 | 2 24 | 1 28 | 1 19 | 1 2 | 22 22 | 0 32 | 6 22 | 1 50 | 20 36 | 0 36 | 6 55 |
| M13 | 9 7 | 20 25 | 0n23 | 3 32 | 2 33 | 2 54 | 1 28 | 1 0 | 1 2 | 22 21 | 0 32 | 6 20 | 1 50 | 20 36 | 0 36 | 6 54 |
| T 14 | 9 29 | 21 12 | 1 33 | 3 3 | 2 36 | 3 23 | 1 27 | 0 41 | 1 2 | 22 20 | 0 32 | 6 18 | 1 51 | 20 36 | 0 36 | 6 53 |
| W15 | 9 50 | 20 50 | 2 37 | 2 33 | 2 38 | 3 53 | 1 27 | 0 23 | 1 2 | 22 19 | 0 32 | 6 15 | 1 51 | 20 36 | 0 36 | 6 53 |
| T 16 | 10 12 | 19 27 | 3 32 | 2 2 | 2 40 | 4 22 | 1 26 | 0 4 | 1 1 | 22 18 | 0 32 | 6 13 | 1 51 | 20 36 | 0 36 | 6 52 |
| F 17 | 10 33 | 17 10 | 4 16 | 1 30 | 2 41 | 4 51 | 1 25 | 0n15 | 1 1 | 22 18 | 0 32 | 6 11 | 1 51 | 20 35 | 0 36 | 6 52 |
| S 18 | 10 54 | 14 12 | 4 48 | 0 56 | 2 41 | 5 20 | 1 24 | 0 34 | 1 1 | 22 17 | 0 32 | 6 8 | 1 51 | 20 35 | 0 36 | 6 51 |
| S 19 | 11 15 | 10 41 | 5 7 | 0 21 | 2 41 | 5 49 | 1 24 | 0 52 | 1 0 | 22 16 | 0 32 | 6 6 | 1 51 | 20 35 | 0 36 | 6 50 |
| M20 | 11 35 | 6 46 | 5 13 | 0n15 | 2 41 | 6 18 | 1 23 | 1 11 | 1 0 | 22 15 | 0 32 | 6 4 | 1 51 | 20 35 | 0 36 | 6 50 |
| T 21 | 11 56 | 2 35 | 5 5 | 0 53 | 2 39 | 6 47 | 1 22 | 1 30 | 1 0 | 22 14 | 0 32 | 6 1 | 1 52 | 20 35 | 0 36 | 6 49 |
| W22 | 12 16 | 1n44 | 4 44 | 1 31 | 2 38 | 7 15 | 1 21 | 1 48 | 0 59 | 22 13 | 0 32 | 5 59 | 1 52 | 20 35 | 0 36 | 6 49 |
| T 23 | 12 36 | 6 2 | 4 11 | 2 10 | 2 35 | 7 44 | 1 20 | 2 7 | 0 59 | 22 12 | 0 32 | 5 57 | 1 52 | 20 34 | 0 36 | 6 48 |
| F 24 | 12 56 | 10 10 | 3 25 | 2 50 | 2 33 | 8 12 | 1 19 | 2 25 | 0 59 | 22 11 | 0 32 | 5 55 | 1 52 | 20 34 | 0 36 | 6 47 |
| S 25 | 13 15 | 13 55 | 2 29 | 3 32 | 2 29 | 8 40 | 1 17 | 2 44 | 0 58 | 22 9 | 0 32 | 5 53 | 1 52 | 20 34 | 0 36 | 6 47 |
| S 26 | 13 35 | 17 6 | 1 24 | 4 14 | 2 26 | 9 8 | 1 16 | 3 2 | 0 58 | 22 8 | 0 32 | 5 50 | 1 53 | 20 34 | 0 36 | 6 46 |
| M27 | 13 54 | 19 30 | 0 14 | 4 57 | 2 21 | 9 36 | 1 15 | 3 21 | 0 58 | 22 7 | 0 32 | 5 48 | 1 53 | 20 33 | 0 36 | 6 46 |
| T 28 | 14 13 | 20 53 | 0s58 | 5 41 | 2 16 | 10 3 | 1 13 | 3 39 | 0 57 | 22 6 | 0 32 | 5 46 | 1 53 | 20 33 | 0 36 | 6 45 |
| W29 | 14 32 | 21 7 | 2 8 | 6 26 | 2 11 | 10 31 | 1 12 | 3 57 | 0 57 | 22 5 | 0 32 | 5 44 | 1 53 | 20 33 | 0 36 | 6 45 |
| T 30 | 14n50 | 20n 8 | 3s12 | 7n11 | 2s 5 | 10n58 | 1s11 | 4n15 | 0s57 | 22n 4 | 0n32 | 5s42 | 1s53 | 20n33 | 0n36 | 6s44 |

Julian Day Number = 2374569.5, Delta T = 21.76 sec

Ecliptic obliquity = 23°27'56, Nutation = 0°00'15, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 21°47'52, Lahiri = 20°54'52Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1789
geocentric

MAY 1789

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------|-------|-------|-------|-------|-------|-------|------|--------|--------|--------|-------|------|-------|------|
| F 1 | 14 37 21 | 10♂59'04 | 19♂47 | 25♂17 | 2♂54 | 13♂44 | 22♂57 | 20♂5 | 1♂0 | 21°R25 | 19♂7 | 28♂34 | 29♂37 | 1♂19 | 18♂18 | F 1 |
| S 2 | 14 41 17 | 11°57'11 | 3♂45 | 27° 9 | 4° 8 | 14°30 | 23° 5 | 20°11 | 1° 1 | 21°23 | 19° 8 | 28°35 | 29°34 | 1°26 | 18°22 | S 2 |
| S 3 | 14 45 14 | 12°55'16 | 17°53 | 29° 2 | 5°21 | 15°16 | 23°13 | 20°16 | 1° 3 | 21°22 | 19° 8 | 28°R35 | 29°30 | 1°33 | 18°27 | S 3 |
| M 4 | 14 49 10 | 13°53'19 | 2♂11 | 0♂57 | 6°35 | 16° 1 | 23°21 | 20°21 | 1° 4 | 21°20 | 19° 8 | 28°34 | 29°27 | 1°39 | 18°32 | M 4 |
| T 5 | 14 53 7 | 14°51'20 | 16°34 | 2°54 | 7°49 | 16°47 | 23°29 | 20°27 | 1° 6 | 21°19 | 19° 9 | 28°33 | 29°24 | 1°46 | 18°37 | T 5 |
| W 6 | 14 57 4 | 15°49'19 | 1♂0 | 4°53 | 9° 3 | 17°33 | 23°38 | 20°32 | 1° 7 | 21°17 | 19° 9 | 28°32 | 29°21 | 1°53 | 18°41 | W 6 |
| T 7 | 15 1 0 | 16°47'16 | 15°23 | 6°53 | 10°17 | 18°18 | 23°46 | 20°37 | 1° 9 | 21°16 | 19°10 | 28°30 | 29°18 | 1°59 | 18°46 | T 7 |
| F 8 | 15 4 57 | 17°45'11 | 29°39 | 8°56 | 11°31 | 19° 4 | 23°55 | 20°42 | 1°10 | 21°14 | 19°10 | 28°29 | 29°14 | 2° 6 | 18°51 | F 8 |
| S 9 | 15 8 53 | 18°43'05 | 13♂42 | 10°59 | 12°44 | 19°49 | 24° 3 | 20°47 | 1°12 | 21°13 | 19°10 | 28°28 | 29°11 | 2°13 | 18°56 | S 9 |
| S 10 | 15 12 50 | 19°40'57 | 27°30 | 13° 5 | 13°58 | 20°35 | 24°12 | 20°52 | 1°13 | 21°12 | 19°10 | 28°D28 | 29° 8 | 2°20 | 19° 1 | S 10 |
| M 11 | 15 16 46 | 20°38'48 | 10♂58 | 15°11 | 15°12 | 21°20 | 24°21 | 20°57 | 1°15 | 21°10 | 19°11 | 28°28 | 29° 5 | 2°26 | 19° 6 | M 11 |
| T 12 | 15 20 43 | 21°36'37 | 24° 6 | 17°19 | 16°26 | 22° 6 | 24°30 | 21° 2 | 1°17 | 21° 9 | 19°11 | 28°29 | 29° 2 | 2°33 | 19°11 | T 12 |
| W 13 | 15 24 39 | 22°34'26 | 6♂55 | 19°28 | 17°40 | 22°51 | 24°39 | 21° 7 | 1°19 | 21° 8 | 19°11 | 28°29 | 28°59 | 2°40 | 19°16 | W 13 |
| T 14 | 15 28 36 | 23°32'13 | 19°25 | 21°38 | 18°53 | 23°36 | 24°48 | 21°11 | 1°21 | 21° 6 | 19°11 | 28°30 | 28°55 | 2°47 | 19°21 | T 14 |
| F 15 | 15 32 33 | 24°29'58 | 1♂40 | 23°49 | 20° 7 | 24°22 | 24°57 | 21°16 | 1°22 | 21° 5 | 19°11 | 28°30 | 28°52 | 2°53 | 19°26 | F 15 |
| S 16 | 15 36 29 | 25°27'43 | 13°43 | 26° 0 | 21°21 | 25° 7 | 25° 7 | 21°21 | 1°24 | 21° 4 | 19°11 | 28°30 | 28°49 | 3° 0 | 19°31 | S 16 |
| S 17 | 15 40 26 | 26°25'26 | 25°39 | 28°12 | 22°35 | 25°52 | 25°16 | 21°25 | 1°26 | 21° 2 | 19°12 | 28°R31 | 28°46 | 3° 7 | 19°37 | S 17 |
| M 18 | 15 44 22 | 27°23'08 | 7♂33 | 0♂23 | 23°49 | 26°37 | 25°26 | 21°29 | 1°28 | 21° 1 | 19°12 | 28°31 | 28°43 | 3°13 | 19°42 | M 18 |
| T 19 | 15 48 19 | 28°20'50 | 19°28 | 2°34 | 25° 2 | 27°22 | 25°36 | 21°34 | 1°30 | 21° 0 | 19°12 | 28°D30 | 28°40 | 3°20 | 19°47 | T 19 |
| W 20 | 15 52 15 | 29°18'30 | 1♂29 | 4°45 | 26°16 | 28° 7 | 25°45 | 21°38 | 1°33 | 20°59 | 19°R12 | 28°31 | 28°36 | 3°27 | 19°52 | W 20 |
| T 21 | 15 56 12 | 0♂16'09 | 13°40 | 6°55 | 27°30 | 28°52 | 25°55 | 21°42 | 1°35 | 20°57 | 19°12 | 28°31 | 28°33 | 3°34 | 19°57 | T 21 |
| F 22 | 16 0 8 | 1°13'47 | 26° 5 | 9° 3 | 28°44 | 29°37 | 26° 5 | 21°46 | 1°37 | 20°56 | 19°12 | 28°31 | 28°30 | 3°40 | 20° 3 | F 22 |
| S 23 | 16 4 5 | 2°11'24 | 8♂46 | 11°10 | 29°57 | 0♂22 | 26°15 | 21°50 | 1°39 | 20°55 | 19°12 | 28°31 | 28°27 | 3°47 | 20° 8 | S 23 |
| S 24 | 16 8 2 | 3° 9'00 | 21°44 | 13°16 | 1♂11 | 1° 6 | 26°26 | 21°54 | 1°41 | 20°54 | 19°11 | 28°31 | 28°24 | 3°54 | 20°13 | S 24 |
| M 25 | 16 11 58 | 4° 6'35 | 5♂0 | 15°20 | 2°25 | 1°51 | 26°36 | 21°58 | 1°44 | 20°53 | 19°11 | 28°R31 | 28°20 | 4° 0 | 20°19 | M 25 |
| T 26 | 16 15 55 | 5° 4'09 | 18°32 | 17°22 | 3°39 | 2°36 | 26°46 | 22° 2 | 1°46 | 20°52 | 19°11 | 28°31 | 28°17 | 4° 7 | 20°24 | T 26 |
| W 27 | 16 19 51 | 6° 1'41 | 2♂20 | 19°21 | 4°52 | 3°20 | 26°57 | 22° 5 | 1°49 | 20°51 | 19°11 | 28°30 | 28°14 | 4°14 | 20°29 | W 27 |
| T 28 | 16 23 48 | 6°59'13 | 16°19 | 21°19 | 6° 6 | 4° 5 | 27° 7 | 22° 9 | 1°51 | 20°50 | 19°11 | 28°30 | 28°11 | 4°21 | 20°35 | T 28 |
| F 29 | 16 27 44 | 7°56'43 | 0♂28 | 23°14 | 7°20 | 4°50 | 27°18 | 22°12 | 1°54 | 20°49 | 19°11 | 28°29 | 28° 8 | 4°27 | 20°40 | F 29 |
| S 30 | 16 31 41 | 8°54'12 | 14°42 | 25° 6 | 8°34 | 5°34 | 27°29 | 22°16 | 1°56 | 20°48 | 19°10 | 28°28 | 28° 5 | 4°34 | 20°46 | S 30 |
| S 31 | 16 35 37 | 9♂51'40 | 28♂57 | 26♂56 | 9♂47 | 6♂18 | 27♂39 | 22♂19 | 1♂59 | 20♂47 | 19♂10 | 28♂27 | 28♂1 | 4♂41 | 20♂51 | S 31 |

| Day | ☉ | ☾ | | ♂ | | ♀ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|------|------|-------|------|-------|-------|------|-------|------|-----|------|-----|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat |
| F 1 | 15n 8 | 17n56 | 4s 6 | 7n57 | 1s59 | 11n24 | 1s 9 | 4n34 | 0s56 | 22n 2 | 0n32 | 5s40 | 1s53 | 20n32 | 0n36 | 6s43 | 1n46 | 23s26 | 8s47 | 19s52 | 20s 5 | 6s12 | 17n40 | 5s18 | | | |
| S 2 | 15 26 | 14 41 | 4 47 | 8 44 | 1 52 | 11 51 | 1 8 | 4 52 | 0 56 | 22 1 | 0 32 | 5 38 | 1 54 | 20 32 | 0 36 | 6 43 | 1 46 | 23 26 | 8 47 | 19 52 | 20 5 | 6 10 | 17 41 | 5 18 | | | |
| S 3 | 15 44 | 10 33 | 5 10 | 9 31 | 1 45 | 12 17 | 1 6 | 5 10 | 0 56 | 22 0 | 0 32 | 5 36 | 1 54 | 20 32 | 0 36 | 6 42 | 1 46 | 23 26 | 8 47 | 19 52 | 20 4 | 6 8 | 17 41 | 5 18 | | | |
| M 4 | 16 1 | 5 48 | 5 15 | 10 18 | 1 37 | 12 43 | 1 4 | 5 28 | 0 55 | 21 58 | 0 32 | 5 34 | 1 54 | 20 31 | 0 36 | 6 42 | 1 46 | 23 26 | 8 48 | 19 52 | 20 3 | 6 5 | 17 42 | 5 17 | | | |
| T 5 | 16 19 | 0 41 | 5 0 | 11 6 | 1 29 | 13 9 | 1 3 | 5 46 | 0 55 | 21 57 | 0 32 | 5 32 | 1 54 | 20 31 | 0 36 | 6 41 | 1 46 | 23 26 | 8 48 | 19 52 | 20 3 | 6 3 | 17 42 | 5 17 | | | |
| W 6 | 16 36 | 4s28 | 4 27 | 11 54 | 1 20 | 13 34 | 1 1 | 6 3 | 0 54 | 21 55 | 0 32 | 5 30 | 1 54 | 20 31 | 0 36 | 6 41 | 1 46 | 23 26 | 8 48 | 19 51 | 20 2 | 6 1 | 17 43 | 5 17 | | | |
| T 7 | 16 52 | 9 23 | 3 36 | 12 43 | 1 11 | 13 59 | 0 59 | 6 21 | 0 54 | 21 54 | 0 32 | 5 29 | 1 55 | 20 30 | 0 36 | 6 40 | 1 46 | 23 26 | 8 48 | 19 51 | 20 1 | 5 58 | 17 43 | 5 17 | | | |
| F 8 | 17 9 | 13 44 | 2 33 | 13 31 | 1 2 | 14 24 | 0 57 | 6 39 | 0 53 | 21 53 | 0 32 | 5 27 | 1 55 | 20 30 | 0 36 | 6 40 | 1 46 | 23 27 | 8 49 | 19 51 | 20 1 | 5 56 | 17 44 | 5 17 | | | |
| S 9 | 17 25 | 17 15 | 1 21 | 14 19 | 0 52 | 14 48 | 0 56 | 6 57 | 0 53 | 21 51 | 0 32 | 5 25 | 1 55 | 20 30 | 0 36 | 6 39 | 1 46 | 23 27 | 8 49 | 19 50 | 20 0 | 5 54 | 17 44 | 5 17 | | | |
| S 10 | 17 40 | 19 43 | 0 5 | 15 7 | 0 42 | 15 12 | 0 54 | 7 14 | 0 53 | 21 50 | 0 32 | 5 23 | 1 55 | 20 29 | 0 36 | 6 39 | 1 46 | 23 27 | 8 49 | 19 50 | 19 59 | 5 51 | 17 45 | 5 17 | | | |
| M11 | 17 56 | 20 59 | 1n 9 | 15 54 | 0 32 | 15 35 | 0 52 | 7 32 | 0 52 | 21 48 | 0 32 | 5 21 | 1 55 | 20 29 | 0 36 | 6 38 | 1 46 | 23 27 | 8 50 | 19 50 | 19 59 | 5 49 | 17 45 | 5 17 | | | |
| T 12 | 18 11 | 21 3 | 2 17 | 16 41 | 0 22 | 15 58 | 0 50 | 7 49 | 0 52 | 21 46 | 0 32 | 5 20 | 1 56 | 20 28 | 0 36 | 6 38 | 1 46 | 23 27 | 8 50 | 19 51 | 19 58 | 5 47 | 17 46 | 5 16 | | | |
| W13 | 18 26 | 20 0 | 3 17 | 17 26 | 0 11 | 16 21 | 0 48 | 8 6 | 0 51 | 21 45 | 0 32 | 5 18 | 1 56 | 20 28 | 0 36 | 6 37 | 1 46 | 23 28 | 8 50 | 19 51 | 19 57 | 5 44 | 17 46 | 5 16 | | | |
| T 14 | 18 41 | 18 0 | 4 6 | 18 11 | 0 1 | 16 44 | 0 46 | 8 23 | 0 51 | 21 43 | 0 32 | 5 16 | 1 56 | 20 28 | 0 36 | 6 37 | 1 45 | 23 28 | 8 51 | 19 51 | 19 56 | 5 42 | 17 47 | 5 16 | | | |
| F 15 | 18 55 | 15 13 | 4 43 | 18 55 | 0n10 | 17 6 | 0 44 | 8 40 | 0 50 | 21 42 | 0 32 | 5 15 | 1 56 | 20 27 | 0 35 | 6 36 | 1 45 | 23 28 | 8 51 | 19 51 | 19 56 | 5 40 | 17 47 | 5 16 | | | |
| S 16 | 19 9 | 11 50 | 5 7 | 19 37 | 0 20 | 17 27 | 0 42 | 8 57 | 0 50 | 21 40 | 0 32 | 5 13 | 1 56 | 20 27 | 0 35 | 6 36 | 1 45 | 23 28 | 8 51 | 19 51 | 19 55 | 5 37 | 17 48 | 5 16 | | | |
| S 17 | 19 23 | 8 1 | 5 17 | 20 17 | 0 31 | 17 48 | 0 39 | 9 14 | 0 49 | 21 38 | 0 32 | 5 12 | 1 57 | 20 26 | 0 35 | 6 35 | 1 45 | 23 29 | 8 51 | 19 51 | 19 54 | 5 35 | 17 48 | 5 16 | | | |
| M18 | 19 36 | 3 54 | 5 13 | 20 55 | 0 41 | 18 9 | 0 37 | 9 31 | 0 49 | 21 36 | 0 32 | 5 10 | 1 57 | 20 26 | 0 35 | 6 35 | 1 45 | 23 29 | 8 52 | 19 51 | 19 54 | 5 33 | 17 49 | 5 16 | | | |
| T 19 | 19 49 | 0n22 | 4 56 | 21 32 | 0 51 | 18 29 | 0 35 | 9 48 | 0 48 | 21 35 | 0 32 | 5 9 | 1 57 | 20 25 | 0 35 | 6 35 | 1 45 | 23 29 | 8 52 | 19 51 | 19 53 | 5 30 | 17 49 | 5 16 | | | |
| W20 | 20 1 | 4 40 | 4 26 | 22 6 | 1 0 | 18 48 | 0 33 | 10 4 | 0 48 | 21 33 | 0 32 | 5 7 | 1 57 | 20 25 | 0 35 | 6 34 | 1 45 | 23 29 | 8 52 | 19 51 | 19 52 | 5 28 | 17 50 | 5 16 | | | |
| T 21 | 20 14 | 8 50 | 3 44 | 22 38 | 1 9 | 19 7 | 0 31 | 10 21 | 0 47 | 21 31 | 0 32 | 5 6 | 1 58 | 20 24 | 0 35 | 6 34 | 1 45 | 23 30 | 8 53 | 19 51 | 19 52 | 5 26 | 17 50 | 5 16 | | | |
| F 22 | 20 26 | 12 44 | 2 50 | 23 7 | 1 18 | 19 26 | 0 28 | 10 37 | 0 47 | 21 29 | 0 32 | 5 4 | 1 58 | 20 24 | 0 35 | 6 33 | 1 45 | 23 30 | 8 53 | 19 51 | 19 51 | 5 23 | 17 51 | 5 16 | | | |
| S 23 | 20 37 | 16 8 | 1 47 | 23 33 | 1 26 | 19 44 | 0 26 | 10 53 | 0 46 | 21 27 | 0 32 | 5 3 | 1 58 | 20 23 | 0 35 | 6 33 | 1 45 | 23 30 | 8 53 | 19 51 | 19 50 | 5 21 | 17 51 | 5 16 | | | |
| S 24 | 20 49 | 18 49 | 0 38 | 23 57 | 1 33 | 20 2 | 0 24 | 11 9 | 0 46 | 21 25 | 0 32 | 5 2 | 1 58 | 20 23 | 0 35 | 6 32 | 1 45 | 23 31 | 8 53 | 19 51 | 19 49 | 5 19 | 17 51 | 5 16 | | | |
| M25 | 20 59 | 20 34 | 0s36 | 24 19 | 1 40 | 20 19 | 0 22 | 11 25 | 0 45 | 21 23 | 0 32 | 5 0 | 1 59 | 20 22 | 0 35 | 6 32 | 1 45 | 23 31 | 8 54 | 19 51 | 19 49 | 5 17 | 17 52 | 5 16 | | | |
| T 26 | 21 10 | 21 10 | 1 49 | 24 37 | 1 46 | 20 35 | 0 19 | 11 41 | 0 45 | 21 21 | 0 33 | 4 59 | 1 59 | 20 22 | 0 35 | 6 32 | 1 45 | 23 31 | 8 54 | 19 51 | 19 48 | 5 14 | 17 52 | 5 16 | | | |
| W27 | 21 20 | 20 30 | 2 56 | 24 53 | 1 51 | 20 51 | 0 17 | 11 57 | 0 44 | 21 19 | 0 33 | 4 58 | 1 59 | 20 21 | 0 35 | 6 31 | 1 45 | 23 32 | 8 54 | 19 51 | 19 47 | 5 12 | 17 53 | 5 16 | | | |
| T 28 | 21 30 | 18 35 | 3 55 | 25 7 | 1 56 | 21 7 | 0 15 | 12 12 | 0 44 | 21 17 | 0 33 | 4 57 | 1 59 | 20 20 | 0 35 | 6 31 | 1 45 | 23 32 | 8 55 | 19 51 | 19 47 | 5 10 | 17 53 | 5 16 | | | |
| F 29 | 21 39 | 15 31 | 4 39 | 25 17 | 2 0 | 21 21 | 0 12 | 12 28 | 0 43 | 21 15 | 0 33 | 4 55 | 1 59 | 20 20 | 0 35 | 6 31 | 1 45 | 23 32 | 8 55 | 19 51 | 19 46 | 5 7 | 17 53 | 5 16 | | | |
| S 30 | 21 48 | 11 32 | 5 7 | 25 25 | 2 3 | 21 36 | 0 10 | 12 43 | 0 43 | 21 13 | 0 33 | 4 54 | 2 0 | 20 19 | 0 35 | 6 30 | 1 45 | 23 33 | 8 55 | 19 50 | 19 45 | 5 5 | 17 54 | 5 16 | | | |
| S 31 | 21n57 | 6n54 | 5s16 | 25n31 | 2n 5 | 21n49 | 0s 8 | 12n59 | 0s42 | 21n11 | 0n33 | 4s53 | 2s 0 | 20n19 | 0n35 | 6s30 | 1n45 | 23s33 | 8s56 | 19s50 | 19s44 | 5s 3 | 17n54 | 5s16 | | | |

ASTRODIENST EPHEMERIS for the year 1789
geocentric

JUNE 1789

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|-----------|--------|--------|--------|-------|--------|-------|-------|--------|--------|---------|--------|------|--------|------|
| M 1 | 16 39 34 | 10II49'06 | 13II12 | 28II44 | 11II 1 | 78 3 | 275050 | 22822 | 2281 | 20°R46 | 19°R10 | 28°D27 | 27II58 | 4848 | 20II56 | M 1 |
| T 2 | 16 43 31 | 11°46'31 | 27°23 | 0029 | 12°15 | 7°47 | 28° 1 | 22°25 | 2° 4 | 20°45 | 19° 9 | 28°II27 | 27°55 | 4°54 | 21° 2 | T 2 |
| W 3 | 16 47 27 | 12°43'55 | 11°29 | 2°11 | 13°29 | 8°31 | 28°12 | 22°28 | 2° 7 | 20°44 | 19° 9 | 28°28 | 27°52 | 5° 1 | 21° 7 | W 3 |
| T 4 | 16 51 24 | 13°41'17 | 25°26 | 3°50 | 14°42 | 9°15 | 28°23 | 22°31 | 2° 9 | 20°43 | 19° 9 | 28°29 | 27°49 | 5° 8 | 21°13 | T 4 |
| F 5 | 16 55 20 | 14°38'39 | 9II14 | 5°27 | 15°56 | 9°59 | 28°34 | 22°34 | 2°12 | 20°42 | 19° 8 | 28°30 | 27°45 | 5°14 | 21°18 | F 5 |
| S 6 | 16 59 17 | 15°36'00 | 22°51 | 7° 1 | 17°10 | 10°43 | 28°46 | 22°37 | 2°15 | 20°42 | 19° 8 | 28°R31 | 27°42 | 5°21 | 21°24 | S 6 |
| S 7 | 17 3 13 | 16°33'20 | 6814 | 8°32 | 18°23 | 11°27 | 28°57 | 22°40 | 2°18 | 20°41 | 19° 7 | 28°31 | 27°39 | 5°28 | 21°29 | S 7 |
| M 8 | 17 7 10 | 17°30'39 | 19°24 | 10° 0 | 19°37 | 12°11 | 29° 8 | 22°42 | 2°20 | 20°40 | 19° 7 | 28°30 | 27°36 | 5°35 | 21°35 | M 8 |
| T 9 | 17 11 7 | 18°27'57 | 2319 | 11°26 | 20°51 | 12°55 | 29°20 | 22°45 | 2°23 | 20°39 | 19° 6 | 28°28 | 27°33 | 5°41 | 21°40 | T 9 |
| W10 | 17 15 3 | 19°25'15 | 14°58 | 12°49 | 22° 5 | 13°39 | 29°31 | 22°47 | 2°26 | 20°39 | 19° 6 | 28°25 | 27°30 | 5°48 | 21°46 | W10 |
| T 11 | 17 19 0 | 20°22'32 | 27°24 | 14° 9 | 23°18 | 14°23 | 29°43 | 22°50 | 2°29 | 20°38 | 19° 5 | 28°22 | 27°26 | 5°55 | 21°51 | T 11 |
| F 12 | 17 22 56 | 21°19'49 | 9837 | 15°25 | 24°32 | 15° 6 | 29°54 | 22°52 | 2°32 | 20°37 | 19° 5 | 28°18 | 27°23 | 6° 2 | 21°57 | F 12 |
| S 13 | 17 26 53 | 22°17'05 | 21°39 | 16°39 | 25°46 | 15°50 | 006 6 | 22°54 | 2°35 | 20°37 | 19° 4 | 28°15 | 27°20 | 6° 8 | 22° 2 | S 13 |
| S 14 | 17 30 49 | 23°14'21 | 3835 | 17°50 | 26°59 | 16°34 | 0°18 | 22°56 | 2°38 | 20°36 | 19° 4 | 28°13 | 27°17 | 6°15 | 22° 8 | S 14 |
| M15 | 17 34 46 | 24°11'36 | 15°29 | 18°58 | 28°13 | 17°17 | 0°30 | 22°58 | 2°41 | 20°36 | 19° 3 | 28°11 | 27°14 | 6°22 | 22°14 | M15 |
| T 16 | 17 38 42 | 25° 8'51 | 27°23 | 20° 3 | 29°27 | 18° 1 | 0°42 | 23° 0 | 2°44 | 20°35 | 19° 2 | 28°D11 | 27°11 | 6°28 | 22°19 | T 16 |
| W17 | 17 42 39 | 26° 6'07 | 9°Y24 | 21° 4 | 00840 | 18°44 | 0°53 | 23° 1 | 2°47 | 20°35 | 19° 2 | 28°12 | 27° 7 | 6°35 | 22°25 | W17 |
| T 18 | 17 46 35 | 27° 3'21 | 21°36 | 22° 3 | 1°54 | 19°27 | 1° 5 | 23° 3 | 2°51 | 20°34 | 19° 1 | 28°13 | 27° 4 | 6°42 | 22°30 | T 18 |
| F 19 | 17 50 32 | 28° 0'36 | 48 3 | 22°57 | 3° 8 | 20°11 | 1°18 | 23° 5 | 2°54 | 20°34 | 19° 0 | 28°15 | 27° 1 | 6°49 | 22°36 | F 19 |
| S 20 | 17 54 29 | 28°57'51 | 16°49 | 23°49 | 4°22 | 20°54 | 1°30 | 23° 6 | 2°57 | 20°33 | 18°59 | 28°16 | 26°58 | 6°55 | 22°41 | S 20 |
| S 21 | 17 58 25 | 29°55'05 | 29°58 | 24°36 | 5°35 | 21°37 | 1°42 | 23° 7 | 3° 0 | 20°33 | 18°59 | 28°R16 | 26°55 | 7° 2 | 22°47 | S 21 |
| M22 | 18 2 22 | 0052'20 | 13II29 | 25°20 | 6°49 | 22°20 | 1°54 | 23° 9 | 3° 3 | 20°33 | 18°58 | 28°15 | 26°51 | 7° 9 | 22°52 | M22 |
| T 23 | 18 6 18 | 1°49'34 | 27°22 | 26° 0 | 8° 3 | 23° 3 | 2° 6 | 23°10 | 3° 7 | 20°33 | 18°57 | 28°13 | 26°48 | 7°15 | 22°58 | T 23 |
| W24 | 18 10 15 | 2°46'48 | 11835 | 26°36 | 9°17 | 23°46 | 2°18 | 23°11 | 3°10 | 20°32 | 18°56 | 28° 9 | 26°45 | 7°22 | 23° 3 | W24 |
| T 25 | 18 14 11 | 3°44'02 | 26° 2 | 27° 8 | 10°30 | 24°29 | 2°31 | 23°12 | 3°13 | 20°32 | 18°55 | 28° 4 | 26°42 | 7°29 | 23° 9 | T 25 |
| F 26 | 18 18 8 | 4°41'15 | 10838 | 27°36 | 11°44 | 25°12 | 2°43 | 23°13 | 3°17 | 20°32 | 18°55 | 27°59 | 26°39 | 7°36 | 23°14 | F 26 |
| S 27 | 18 22 5 | 5°38'28 | 25°15 | 28° 0 | 12°58 | 25°54 | 2°56 | 23°13 | 3°20 | 20°32 | 18°54 | 27°54 | 26°36 | 7°42 | 23°20 | S 27 |
| S 28 | 18 26 1 | 6°35'41 | 9II47 | 28°19 | 14°11 | 26°37 | 3° 8 | 23°14 | 3°23 | 20°32 | 18°53 | 27°50 | 26°32 | 7°49 | 23°25 | S 28 |
| M29 | 18 29 58 | 7°32'53 | 24°10 | 28°34 | 15°25 | 27°20 | 3°21 | 23°15 | 3°27 | 20°31 | 18°52 | 27°48 | 26°29 | 7°56 | 23°30 | M29 |
| T 30 | 18 33 54 | 8830'05 | 8820 | 28844 | 16839 | 288 2 | 38233 | 23815 | 38230 | 20831 | 18851 | 27°D47 | 26II26 | 88 3 | 23II36 | T 30 |

| Day | ☉ | ☾ | | ♂ | | ♀ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|------|------|-------|------|-------|-------|------|-------|------|-----|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat |
| M 1 | 22n 5 | 1n54 | 5s 6 | 25n34 | 2n 7 | 22n 2 | 0s 5 | 13n14 | 0s41 | 21n 9 | 0n33 | 4s52 | 2s 0 | 20n18 | 0n35 | 6s30 | 1n45 | 23s33 | 8s56 | 19s50 | 19s44 | 5s 0 | 17n54 | 5s16 | |
| T 2 | 22 13 | 3s12 | 4 37 | 25 36 | 2 8 | 22 14 | 0 3 | 13 29 | 0 41 | 21 7 | 0 33 | 4 51 | 2 0 | 20 18 | 0 35 | 6 29 | 1 45 | 23 34 | 8 56 | 19 50 | 19 43 | 4 58 | 17 55 | 5 16 | |
| W 3 | 22 21 | 8 6 | 3 51 | 25 35 | 2 8 | 22 26 | 0 0 | 13 43 | 0 40 | 21 5 | 0 33 | 4 50 | 2 1 | 20 17 | 0 35 | 6 29 | 1 45 | 23 34 | 8 56 | 19 50 | 19 42 | 4 56 | 17 55 | 5 16 | |
| T 4 | 22 28 | 12 32 | 2 53 | 25 31 | 2 7 | 22 37 | 0n 2 | 13 58 | 0 40 | 21 2 | 0 33 | 4 49 | 2 1 | 20 16 | 0 35 | 6 29 | 1 45 | 23 34 | 8 57 | 19 51 | 19 42 | 4 53 | 17 55 | 5 16 | |
| F 5 | 22 35 | 16 14 | 1 44 | 25 27 | 2 5 | 22 48 | 0 4 | 14 12 | 0 39 | 21 0 | 0 33 | 4 48 | 2 1 | 20 16 | 0 35 | 6 29 | 1 45 | 23 35 | 8 57 | 19 51 | 19 41 | 4 51 | 17 56 | 5 16 | |
| S 6 | 22 41 | 19 0 | 0 31 | 25 20 | 2 3 | 22 57 | 0 7 | 14 27 | 0 39 | 20 58 | 0 33 | 4 47 | 2 1 | 20 15 | 0 35 | 6 28 | 1 45 | 23 35 | 8 57 | 19 51 | 19 40 | 4 49 | 17 56 | 5 16 | |
| S 7 | 22 47 | 20 41 | 0n43 | 25 11 | 2 0 | 23 7 | 0 9 | 14 41 | 0 38 | 20 56 | 0 33 | 4 47 | 2 2 | 20 14 | 0 35 | 6 28 | 1 45 | 23 36 | 8 57 | 19 51 | 19 39 | 4 46 | 17 56 | 5 16 | |
| M 8 | 22 53 | 21 10 | 1 53 | 25 1 | 1 56 | 23 15 | 0 12 | 14 55 | 0 37 | 20 53 | 0 33 | 4 46 | 2 2 | 20 14 | 0 35 | 6 28 | 1 45 | 23 36 | 8 58 | 19 51 | 19 39 | 4 44 | 17 57 | 5 16 | |
| T 9 | 22 58 | 20 31 | 2 56 | 24 50 | 1 52 | 23 23 | 0 14 | 15 9 | 0 37 | 20 51 | 0 33 | 4 45 | 2 2 | 20 13 | 0 35 | 6 28 | 1 44 | 23 36 | 8 58 | 19 50 | 19 38 | 4 42 | 17 57 | 5 16 | |
| W10 | 23 3 | 18 50 | 3 48 | 24 37 | 1 47 | 23 30 | 0 16 | 15 23 | 0 36 | 20 49 | 0 33 | 4 44 | 2 2 | 20 12 | 0 35 | 6 27 | 1 44 | 23 37 | 8 58 | 19 50 | 19 37 | 4 39 | 17 57 | 5 16 | |
| T 11 | 23 7 | 16 18 | 4 29 | 24 23 | 1 41 | 23 36 | 0 19 | 15 36 | 0 36 | 20 46 | 0 33 | 4 44 | 2 3 | 20 12 | 0 35 | 6 27 | 1 44 | 23 37 | 8 59 | 19 49 | 19 37 | 4 37 | 17 58 | 5 16 | |
| F 12 | 23 11 | 13 5 | 4 57 | 24 8 | 1 34 | 23 42 | 0 21 | 15 50 | 0 35 | 20 44 | 0 33 | 4 43 | 2 3 | 20 11 | 0 35 | 6 27 | 1 44 | 23 38 | 8 59 | 19 48 | 19 36 | 4 35 | 17 58 | 5 16 | |
| S 13 | 23 14 | 9 23 | 5 12 | 23 52 | 1 27 | 23 47 | 0 23 | 16 3 | 0 34 | 20 41 | 0 33 | 4 42 | 2 3 | 20 10 | 0 35 | 6 27 | 1 44 | 23 38 | 8 59 | 19 48 | 19 35 | 4 32 | 17 58 | 5 16 | |
| S 14 | 23 18 | 5 21 | 5 12 | 23 35 | 1 19 | 23 51 | 0 25 | 16 16 | 0 34 | 20 39 | 0 33 | 4 42 | 2 3 | 20 10 | 0 35 | 6 27 | 1 44 | 23 39 | 8 59 | 19 47 | 19 34 | 4 30 | 17 58 | 5 16 | |
| M15 | 23 20 | 1 7 | 5 0 | 23 17 | 1 11 | 23 55 | 0 28 | 16 29 | 0 33 | 20 36 | 0 33 | 4 41 | 2 4 | 20 9 | 0 35 | 6 27 | 1 44 | 23 39 | 9 0 | 19 47 | 19 34 | 4 28 | 17 58 | 5 16 | |
| T 16 | 23 23 | 3n 9 | 4 34 | 22 59 | 1 1 | 23 58 | 0 30 | 16 42 | 0 32 | 20 34 | 0 33 | 4 41 | 2 4 | 20 8 | 0 35 | 6 26 | 1 44 | 23 40 | 9 0 | 19 47 | 19 33 | 4 25 | 17 59 | 5 16 | |
| W17 | 23 24 | 7 21 | 3 56 | 22 40 | 0 51 | 24 0 | 0 32 | 16 54 | 0 32 | 20 31 | 0 33 | 4 40 | 2 4 | 20 7 | 0 35 | 6 26 | 1 44 | 23 40 | 9 0 | 19 47 | 19 32 | 4 23 | 17 59 | 5 16 | |
| T 18 | 23 26 | 11 19 | 3 7 | 22 20 | 0 41 | 24 2 | 0 34 | 17 7 | 0 31 | 20 29 | 0 33 | 4 40 | 2 5 | 20 7 | 0 35 | 6 26 | 1 44 | 23 40 | 9 0 | 19 47 | 19 31 | 4 21 | 17 59 | 5 17 | |
| F 19 | 23 27 | 14 54 | 2 9 | 22 0 | 0 30 | 24 2 | 0 37 | 17 19 | 0 30 | 20 26 | 0 33 | 4 40 | 2 5 | 20 6 | 0 35 | 6 26 | 1 44 | 23 41 | 9 1 | 19 47 | 19 31 | 4 18 | 17 59 | 5 17 | |
| S 20 | 23 28 | 17 53 | 1 2 | 21 40 | 0 18 | 24 2 | 0 39 | 17 31 | 0 30 | 20 23 | 0 33 | 4 39 | 2 5 | 20 5 | 0 35 | 6 26 | 1 44 | 23 41 | 9 1 | 19 48 | 19 30 | 4 16 | 17 59 | 5 17 | |
| S 21 | 23 28 | 20 1 | 0s 9 | 21 20 | 0 6 | 24 2 | 0 41 | 17 43 | 0 29 | 20 21 | 0 33 | 4 39 | 2 5 | 20 4 | 0 35 | 6 26 | 1 44 | 23 42 | 9 1 | 19 48 | 19 29 | 4 14 | 18 0 | 5 17 | |
| M22 | 23 28 | 21 5 | 1 22 | 20 59 | 0s 7 | 24 0 | 0 43 | 17 55 | 0 28 | 20 18 | 0 33 | 4 39 | 2 6 | 20 4 | 0 35 | 6 26 | 1 44 | 23 42 | 9 1 | 19 48 | 19 29 | 4 12 | 18 0 | 5 17 | |
| T 23 | 23 27 | 20 54 | 2 32 | 20 39 | 0 20 | 23 58 | 0 45 | 18 6 | 0 28 | 20 15 | 0 33 | 4 39 | 2 6 | 20 3 | 0 35 | 6 26 | 1 44 | 23 43 | 9 2 | 19 47 | 19 28 | 4 9 | 18 0 | 5 17 | |
| W24 | 23 26 | 19 24 | 3 34 | 20 18 | 0 33 | 23 56 | 0 47 | 18 18 | 0 27 | 20 13 | 0 33 | 4 38 | 2 6 | 20 2 | 0 35 | 6 26 | 1 44 | 23 43 | 9 2 | 19 46 | 19 27 | 4 7 | 18 0 | 5 17 | |
| T 25 | 23 25 | 16 39 | 4 24 | 19 59 | 0 48 | 23 52 | 0 49 | 18 29 | 0 26 | 20 10 | 0 33 | 4 38 | 2 6 | 20 1 | 0 35 | 6 26 | 1 44 | 23 44 | 9 2 | 19 45 | 19 26 | 4 5 | 18 0 | 5 17 | |
| F 26 | 23 23 | 12 50 | 4 56 | 19 39 | 1 2 | 23 48 | 0 51 | 18 40 | 0 26 | 20 7 | 0 33 | 4 38 | 2 7 | 20 1 | 0 35 | 6 26 | 1 44 | 23 44 | 9 2 | 19 44 | 19 26 | 4 2 | 18 0 | 5 18 | |
| S 27 | 23 21 | 8 15 | 5 10 | 19 20 | 1 17 | 23 43 | 0 53 | 18 51 | 0 25 | 20 4 | 0 34 | 4 38 | 2 7 | 20 0 | 0 35 | 6 26 | 1 44 | 23 45 | 9 3 | 19 43 | 19 25 | 4 0 | 18 0 | 5 18 | |
| S 28 | 23 18 | 3 13 | 5 4 | 19 1 | 1 32 | 23 37 | 0 55 | 19 2 | 0 24 | 20 1 | 0 34 | 4 38 | 2 7 | 19 59 | 0 35 | 6 26 | 1 44 | 23 45 | 9 3 | 19 42 | 19 24 | 3 58 | 18 1 | 5 18 | |
| M29 | 23 15 | 1s56 | 4 38 | 18 43 | 1 47 | 23 31 | 0 57 | 19 12 | 0 24 | 19 58 | 0 34 | 4 38 | 2 7 | 19 58 | 0 35 | 6 26 | 1 43 | 23 46 | 9 3 | 19 41 | 19 23 | 3 55 | 18 1 | 5 18 | |
| T 30 | 23n12 | 6s55 | 3s56 | 18n26 | 2s 3 | 23n24 | 0n59 | 19n22 | 0s23 | 19n56 | 0n34 | 4s38 | 2s 8 | 19n57 | 0n35 | 6s26 | 1n43 | 23s46 | 9s 3 | 19s41 | 19s23 | 3s53 | 18n 1 | 5s18 | |

ASTRODIENST EPHEMERIS for the year 1789
geocentric

JULY 1789

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♊ | ♋ | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ | ♈ | ♉ | Day |
|------|----------|----------------------|---------------------|--------------------|--------------------|----------------------|-------------------|--------------------|-------------------|--------------------|---------------------|--------------------|--------------------|--------------------|----------------------|------|
| W 1 | 18 37 51 | 9 ⁵ 27'16 | 22 ¹ 15 | 28 ⁵ 50 | 17 ⁵ 53 | 28 ⁸ 45 | 3 ⁰ 46 | 23 ¹ 15 | 3 ⁰ 34 | 20°R31 | 18°R50 | 27 ¹ 48 | 26 ¹ 23 | 8 ¹ 9 | 23 ¹ 41 | W 1 |
| T 2 | 18 41 47 | 10°24'27 | 5 ¹ 56 | 28°R50 | 19° 6 | 29°27 | 3°58 | 23°16 | 3°37 | 20°D31 | 18° 4 49 | 27°49 | 26°20 | 8°16 | 23°47 | T 2 |
| F 3 | 18 45 44 | 11°21'38 | 19°22 | 28°46 | 20°20 | 0 ¹ II 9 | 4°11 | 23°16 | 3°41 | 20 ¹ 31 | 18°48 | 27°50 | 26°17 | 8°23 | 23°52 | F 3 |
| S 4 | 18 49 40 | 12°18'49 | 2 ¹ 35 | 28°38 | 21°34 | 0°52 | 4°24 | 23°R16 | 3°44 | 20°31 | 18°47 | 27°R50 | 26°13 | 8°29 | 23°57 | S 4 |
| S 5 | 18 53 37 | 13°16'00 | 15°36 | 28°25 | 22°47 | 1°34 | 4°36 | 23°16 | 3°48 | 20°32 | 18°46 | 27°49 | 26°10 | 8°36 | 24° 3 | S 5 |
| M 6 | 18 57 34 | 14°13'11 | 28°24 | 28° 7 | 24° 1 | 2°16 | 4°49 | 23°16 | 3°51 | 20°32 | 18°45 | 27°45 | 26° 7 | 8°43 | 24° 8 | M 6 |
| T 7 | 19 1 30 | 15°10'22 | 11 ¹ 3 | 27°45 | 25°15 | 2°58 | 5° 2 | 23°15 | 3°55 | 20°32 | 18°44 | 27°39 | 26° 4 | 8°50 | 24°13 | T 7 |
| W 8 | 19 5 27 | 16° 7'33 | 23°29 | 27°20 | 26°29 | 3°40 | 5°15 | 23°15 | 3°58 | 20°32 | 18°43 | 27°32 | 26° 1 | 8°56 | 24°19 | W 8 |
| T 9 | 19 9 23 | 17° 4'44 | 5 ¹ 45 | 26°50 | 27°42 | 4°22 | 5°28 | 23°15 | 4° 2 | 20°32 | 18°42 | 27°23 | 25°57 | 9° 3 | 24°24 | T 9 |
| F 10 | 19 13 20 | 18° 1'56 | 17°52 | 26°18 | 28°56 | 5° 4 | 5°41 | 23°14 | 4° 5 | 20°33 | 18°41 | 27°14 | 25°54 | 9°10 | 24°29 | F 10 |
| S 11 | 19 17 16 | 18°59'08 | 29°51 | 25°42 | 0 ¹ 10 | 5°46 | 5°53 | 23°13 | 4° 9 | 20°33 | 18°40 | 27° 5 | 25°51 | 9°16 | 24°35 | S 11 |
| S 12 | 19 21 13 | 19°56'21 | 11 ¹ 45 | 25° 5 | 1°23 | 6°27 | 6° 6 | 23°13 | 4°13 | 20°33 | 18°38 | 26°58 | 25°48 | 9°23 | 24°40 | S 12 |
| M13 | 19 25 9 | 20°53'34 | 23°37 | 24°25 | 2°37 | 7° 9 | 6°19 | 23°12 | 4°16 | 20°33 | 18°37 | 26°52 | 25°45 | 9°30 | 24°45 | M13 |
| T 14 | 19 29 6 | 21°50'48 | 5 ¹ 30 | 23°45 | 3°51 | 7°51 | 6°32 | 23°11 | 4°20 | 20°34 | 18°36 | 26°48 | 25°42 | 9°37 | 24°50 | T 14 |
| W15 | 19 33 3 | 22°48'02 | 17°29 | 23° 5 | 5° 5 | 8°32 | 6°45 | 23°10 | 4°23 | 20°34 | 18°35 | 26°47 | 25°38 | 9°43 | 24°55 | W15 |
| T 16 | 19 36 59 | 23°45'17 | 29°38 | 22°25 | 6°18 | 9°14 | 6°58 | 23° 9 | 4°27 | 20°35 | 18°34 | 26°D47 | 25°35 | 9°50 | 25° 0 | T 16 |
| F 17 | 19 40 56 | 24°42'33 | 12 ¹ 8 | 21°46 | 7°32 | 9°55 | 7°11 | 23° 7 | 4°31 | 20°35 | 18°33 | 26°48 | 25°32 | 9°57 | 25° 5 | F 17 |
| S 18 | 19 44 52 | 25°39'50 | 24°49 | 21° 8 | 8°46 | 10°36 | 7°24 | 23° 6 | 4°34 | 20°36 | 18°31 | 26°R48 | 25°29 | 10° 3 | 25°10 | S 18 |
| S 19 | 19 48 49 | 26°37'08 | 8 ¹ II 0 | 20°34 | 9°59 | 11°18 | 7°38 | 23° 5 | 4°38 | 20°36 | 18°30 | 26°48 | 25°26 | 10°10 | 25°15 | S 19 |
| M20 | 19 52 45 | 27°34'26 | 21°37 | 20° 2 | 11°13 | 11°59 | 7°51 | 23° 3 | 4°42 | 20°37 | 18°29 | 26°45 | 25°23 | 10°17 | 25°20 | M20 |
| T 21 | 19 56 42 | 28°31'45 | 5 ¹ 32 | 19°34 | 12°27 | 12°40 | 8° 4 | 23° 2 | 4°45 | 20°37 | 18°28 | 26°40 | 25°19 | 10°24 | 25°25 | T 21 |
| W22 | 20 0 38 | 29°29'05 | 20°12 | 19°11 | 13°41 | 13°21 | 8°17 | 23° 0 | 4°49 | 20°38 | 18°27 | 26°33 | 25°16 | 10°30 | 25°30 | W22 |
| T 23 | 20 4 35 | 0 ¹ 26'26 | 5 ¹ 1 | 18°52 | 14°54 | 14° 2 | 8°30 | 22°58 | 4°53 | 20°39 | 18°25 | 26°25 | 25°13 | 10°37 | 25°35 | T 23 |
| F 24 | 20 8 32 | 1°23'47 | 20° 1 | 18°39 | 16° 8 | 14°43 | 8°43 | 22°56 | 4°57 | 20°39 | 18°24 | 26°15 | 25°10 | 10°44 | 25°40 | F 24 |
| S 25 | 20 12 28 | 2°21'09 | 5 ¹ 11 | 18°31 | 17°22 | 15°23 | 8°56 | 22°54 | 5° 0 | 20°40 | 18°23 | 26° 6 | 25° 7 | 10°51 | 25°45 | S 25 |
| S 26 | 20 16 25 | 3°18'32 | 19°55 | 18°D28 | 18°36 | 16° 4 | 9°10 | 22°52 | 5° 4 | 20°41 | 18°21 | 25°58 | 25° 3 | 10°57 | 25°50 | S 26 |
| M27 | 20 20 21 | 4°15'55 | 4 ¹ 33 | 18°32 | 19°49 | 16°45 | 9°23 | 22°50 | 5° 8 | 20°42 | 18°20 | 25°53 | 25° 0 | 11° 4 | 25°54 | M27 |
| T 28 | 20 24 18 | 5°13'18 | 18°50 | 18°42 | 21° 3 | 17°25 | 9°36 | 22°48 | 5°11 | 20°43 | 18°19 | 25°50 | 24°57 | 11°11 | 25°59 | T 28 |
| W29 | 20 28 14 | 6°10'43 | 2 ¹ 46 | 18°58 | 22°17 | 18° 6 | 9°49 | 22°45 | 5°15 | 20°43 | 18°18 | 25°D49 | 24°54 | 11°17 | 26° 4 | W29 |
| T 30 | 20 32 11 | 7° 8'07 | 16°21 | 19°21 | 23°30 | 18°46 | 10° 2 | 22°43 | 5°19 | 20°44 | 18°16 | 25°49 | 24°51 | 11°24 | 26° 8 | T 30 |
| F 31 | 20 36 7 | 8°15'33 | 29 ¹ 36 | 19°50 | 24°14 | 19 ¹ II27 | 10°15 | 22 ¹ 40 | 5°22 | 20°45 | 18° 1 15 | 25°R49 | 24 ¹ 48 | 11 ¹ 31 | 26 ¹ II13 | F 31 |

| Day | ☉ | ☾ | | ♊ | | ♋ | | ♌ | | ♍ | | ♎ | | ♏ | | ♐ | | ♑ | | ♒ | ♓ | ♈ | ♉ | ♊ | ♋ | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|------|------|-------|------|-------|-------|------|-------|------|------|------|------|-----|------|------|------|------|-----|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | decl | decl | decl | lat | decl | decl | decl | lat | decl | decl | decl | decl | lat |
| W 1 | 23n 8 | 11s28 | 3s 1 | 18n10 | 2s18 | 23n16 | 1n 1 | 19n32 | 0s22 | 19n53 | 0n34 | 4s38 | 2s 8 | 19n57 | 0n35 | 6s26 | 1n43 | 23s47 | 9s 3 | 19s41 | 19s22 | 3s51 | 18n 1 | 5s18 | | | | | | | | | |
| T 2 | 23 3 | 15 20 | 1 56 | 17 54 | 2 34 | 23 8 | 1 2 | 19 42 | 0 22 | 19 50 | 0 34 | 4 38 | 2 8 | 19 56 | 0 35 | 6 26 | 1 43 | 23 47 | 9 4 | 19 42 | 19 21 | 3 48 | 18 1 | 5 19 | | | | | | | | | |
| F 3 | 22 59 | 18 19 | 0 46 | 17 40 | 2 49 | 22 59 | 1 4 | 19 52 | 0 21 | 19 47 | 0 34 | 4 39 | 2 9 | 19 55 | 0 35 | 6 26 | 1 43 | 23 48 | 9 4 | 19 42 | 19 20 | 3 46 | 18 1 | 5 19 | | | | | | | | | |
| S 4 | 22 54 | 20 17 | 0n26 | 17 27 | 3 4 | 22 49 | 1 6 | 20 1 | 0 20 | 19 44 | 0 34 | 4 39 | 2 9 | 19 54 | 0 35 | 6 26 | 1 43 | 23 48 | 9 4 | 19 42 | 19 20 | 3 44 | 18 1 | 5 19 | | | | | | | | | |
| S 5 | 22 48 | 21 7 | 1 34 | 17 16 | 3 19 | 22 39 | 1 7 | 20 11 | 0 19 | 19 41 | 0 34 | 4 39 | 2 9 | 19 53 | 0 35 | 6 26 | 1 43 | 23 49 | 9 4 | 19 42 | 19 19 | 3 41 | 18 1 | 5 19 | | | | | | | | | |
| M 6 | 22 42 | 20 50 | 2 37 | 17 5 | 3 33 | 22 28 | 1 9 | 20 20 | 0 19 | 19 38 | 0 34 | 4 39 | 2 9 | 19 52 | 0 35 | 6 26 | 1 43 | 23 50 | 9 5 | 19 41 | 19 18 | 3 39 | 18 1 | 5 20 | | | | | | | | | |
| T 7 | 22 36 | 19 30 | 3 31 | 16 56 | 3 46 | 22 16 | 1 10 | 20 29 | 0 18 | 19 35 | 0 34 | 4 40 | 2 10 | 19 52 | 0 35 | 6 26 | 1 43 | 23 50 | 9 5 | 19 40 | 19 17 | 3 37 | 18 1 | 5 20 | | | | | | | | | |
| W 8 | 22 29 | 17 15 | 4 14 | 16 49 | 3 59 | 22 3 | 1 12 | 20 38 | 0 17 | 19 32 | 0 34 | 4 40 | 2 10 | 19 51 | 0 35 | 6 26 | 1 43 | 23 51 | 9 5 | 19 38 | 19 17 | 3 34 | 18 1 | 5 20 | | | | | | | | | |
| T 9 | 22 22 | 14 15 | 4 45 | 16 43 | 4 11 | 21 50 | 1 13 | 20 46 | 0 16 | 19 29 | 0 34 | 4 41 | 2 10 | 19 50 | 0 35 | 6 26 | 1 43 | 23 51 | 9 5 | 19 36 | 19 16 | 3 32 | 18 1 | 5 20 | | | | | | | | | |
| F 10 | 22 15 | 10 42 | 5 2 | 16 38 | 4 21 | 21 37 | 1 15 | 20 54 | 0 16 | 19 25 | 0 34 | 4 41 | 2 10 | 19 49 | 0 35 | 6 27 | 1 43 | 23 52 | 9 5 | 19 34 | 19 15 | 3 30 | 18 1 | 5 20 | | | | | | | | | |
| S 11 | 22 7 | 6 46 | 5 6 | 16 35 | 4 31 | 21 23 | 1 16 | 21 3 | 0 15 | 19 22 | 0 34 | 4 41 | 2 11 | 19 48 | 0 35 | 6 27 | 1 43 | 23 52 | 9 6 | 19 32 | 19 14 | 3 28 | 18 1 | 5 21 | | | | | | | | | |
| S 12 | 21 59 | 2 36 | 4 56 | 16 34 | 4 39 | 21 8 | 1 17 | 21 11 | 0 14 | 19 19 | 0 34 | 4 42 | 2 11 | 19 47 | 0 35 | 6 27 | 1 43 | 23 53 | 9 6 | 19 30 | 19 14 | 3 25 | 18 1 | 5 21 | | | | | | | | | |
| M13 | 21 50 | 1n39 | 4 34 | 16 34 | 4 46 | 20 52 | 1 18 | 21 18 | 0 13 | 19 16 | 0 34 | 4 43 | 2 11 | 19 46 | 0 35 | 6 27 | 1 43 | 23 53 | 9 6 | 19 29 | 19 13 | 3 23 | 18 1 | 5 21 | | | | | | | | | |
| T 14 | 21 41 | 5 51 | 3 59 | 16 36 | 4 51 | 20 36 | 1 20 | 21 26 | 0 13 | 19 13 | 0 34 | 4 43 | 2 11 | 19 46 | 0 35 | 6 27 | 1 43 | 23 54 | 9 6 | 19 28 | 19 12 | 3 21 | 18 1 | 5 21 | | | | | | | | | |
| W15 | 21 32 | 9 52 | 3 15 | 16 39 | 4 54 | 20 19 | 1 21 | 21 33 | 0 12 | 19 10 | 0 34 | 4 44 | 2 12 | 19 45 | 0 35 | 6 27 | 1 43 | 23 54 | 9 6 | 19 27 | 19 11 | 3 18 | 18 1 | 5 22 | | | | | | | | | |
| T 16 | 21 22 | 13 32 | 2 20 | 16 44 | 4 56 | 20 2 | 1 22 | 21 40 | 0 11 | 19 6 | 0 34 | 4 45 | 2 12 | 19 44 | 0 35 | 6 28 | 1 43 | 23 55 | 9 6 | 19 27 | 19 11 | 3 16 | 18 1 | 5 22 | | | | | | | | | |
| F 17 | 21 12 | 16 43 | 1 18 | 16 50 | 4 56 | 19 44 | 1 23 | 21 47 | 0 10 | 19 3 | 0 35 | 4 45 | 2 12 | 19 43 | 0 35 | 6 28 | 1 43 | 23 55 | 9 7 | 19 28 | 19 10 | 3 14 | 18 0 | 5 22 | | | | | | | | | |
| S 18 | 21 2 | 19 10 | 0 11 | 16 57 | 4 54 | 19 26 | 1 24 | 21 54 | 0 10 | 19 0 | 0 35 | 4 46 | 2 12 | 19 42 | 0 35 | 6 28 | 1 42 | 23 56 | 9 7 | 19 28 | 19 9 | 3 11 | 18 0 | 5 23 | | | | | | | | | |
| S 19 | 20 51 | 20 41 | 1s 0 | 17 6 | 4 51 | 19 7 | 1 24 | 22 1 | 0 9 | 18 57 | 0 35 | 4 47 | 2 13 | 19 41 | 0 35 | 6 28 | 1 42 | 23 56 | 9 7 | 19 28 | 19 8 | 3 9 | 18 0 | 5 23 | | | | | | | | | |
| M20 | 20 40 | 21 4 | 2 8 | 17 15 | 4 46 | 18 48 | 1 25 | 22 7 | 0 8 | 18 53 | 0 35 | 4 48 | 2 13 | 19 40 | 0 35 | 6 29 | 1 42 | 23 57 | 9 7 | 19 27 | 19 8 | 3 7 | 18 0 | 5 23 | | | | | | | | | |
| T 21 | 20 29 | 20 9 | 3 12 | 17 26 | 4 39 | 18 28 | 1 26 | 22 13 | 0 7 | 18 50 | 0 35 | 4 49 | 2 13 | 19 39 | 0 35 | 6 29 | 1 42 | 23 58 | 9 7 | 19 26 | 19 7 | 3 5 | 18 0 | 5 23 | | | | | | | | | |
| W22 | 20 17 | 17 55 | 4 5 | 17 37 | 4 31 | 18 7 | 1 27 | 22 19 | 0 7 | 18 47 | 0 35 | 4 49 | 2 13 | 19 39 | 0 35 | 6 29 | 1 42 | 23 58 | 9 7 | 19 24 | 19 6 | 3 2 | 18 0 | 5 24 | | | | | | | | | |
| T 23 | 20 5 | 14 28 | 4 42 | 17 49 | 4 22 | 17 46 | 1 27 | 22 25 | 0 6 | 18 43 | 0 35 | 4 50 | 2 14 | 19 38 | 0 35 | 6 30 | 1 42 | 23 59 | 9 7 | 19 22 | 19 5 | 3 0 | 18 0 | 5 24 | | | | | | | | | |
| F 24 | 19 52 | 10 4 | 5 1 | 18 1 | 4 11 | 17 25 | 1 28 | 22 30 | 0 5 | 18 40 | 0 35 | 4 51 | 2 14 | 19 37 | 0 35 | 6 30 | 1 42 | 23 59 | 9 8 | 19 20 | 19 5 | 2 58 | 17 59 | 5 24 | | | | | | | | | |
| S 25 | 19 39 | 5 2 | 4 59 | 18 14 | 3 59 | 17 3 | 1 28 | 22 36 | 0 4 | 18 36 | 0 35 | 4 52 | 2 14 | 19 36 | 0 35 | 6 30 | 1 42 | 24 0 | 9 8 | 19 18 | 19 4 | 2 55 | 17 59 | 5 25 | | | | | | | | | |
| S 26 | 19 26 | 0s15 | 4 37 | 18 27 | 3 47 | 16 40 | 1 29 | 22 41 | 0 3 | 18 33 | 0 35 | 4 53 | 2 14 | 19 35 | 0 35 | 6 31 | 1 42 | 24 0 | 9 8 | 19 16 | 19 3 | 2 53 | 17 59 | 5 25 | | | | | | | | | |
| M27 | 19 13 | 5 26 | 3 57 | 18 40 | 3 33 | 16 18 | 1 29 | 22 46 | 0 3 | 18 30 | 0 35 | 4 55 | 2 15 | 19 34 | 0 35 | 6 31 | 1 42 | 24 1 | 9 8 | 19 15 | 19 2 | 2 51 | 17 59 | 5 25 | | | | | | | | | |
| T 28 | 18 59 | 10 13 | 3 3 | 18 52 | 3 19 | 15 54 | 1 29 | 22 50 | 0 2 | 18 26 | 0 35 | 4 56 | 2 15 | 19 33 | 0 35 | 6 31 | 1 42 | 24 1 | 9 8 | 19 14 | 19 2 | 2 48 | 17 59 | 5 26 | | | | | | | | | |
| W29 | 18 45 | 14 19 | 1 59 | 19 5 | 3 4 | 15 31 | 1 29 | 22 55 | 0 1 | 18 23 | 0 35 | 4 57 | 2 15 | 19 32 | 0 35 | 6 32 | 1 42 | 24 2 | 9 8 | 19 14 | 19 1 | 2 46 | 17 59 | 5 26 | | | | | | | | | |
| T 30 | 18 31 | 17 33 | 0 50 | 19 17 | 2 49 | 15 6 | 1 30 | 22 59 | 0 0 | 18 19 | 0 35 | 4 58 | 2 15 | 19 31 | 0 35 | 6 32 | 1 42 | 24 2 | 9 8 | 19 14 | 19 0 | 2 44 | 17 58 | 5 26 | | | | | | | | | |
| F 31 | 18n16 | 19s46 | 0n20 | 19n28 | 2s33 | 14n42 | 1n30 | 23n 3 | 0n 1 | 18n16 | 0n36 | 4s59 | 2s16 | 19n30 | 0n35 | 6s32 | 1n42 | 24s 3 | 9s 8 | 19s14 | 18s59 | 2s42 | 17n58 | 5s27 | | | | | | | | | |

ASTRODIENST EPHEMERIS for the year 1789
geocentric

AUGUST 1789

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------|-------|-------|-------|-------|-------|--------|------|-------|--------|--------|-------|-------|-------|------|
| S 1 | 20 40 4 | 9♌ 2'59 | 12♊34 | 20♉26 | 25♏58 | 20♏ 7 | 10♏29 | 22°R38 | 5♏26 | 20♏46 | 18°R14 | 25°R48 | 24♏44 | 11♏38 | 26♏17 | S 1 |
| S 2 | 20 44 1 | 10° 0'26 | 25°17 | 21° 8 | 27°11 | 20°47 | 10°42 | 22♏35 | 5°30 | 20°47 | 18°12 | 25♏45 | 24°41 | 11°44 | 26°22 | S 2 |
| M 3 | 20 47 57 | 10°57'54 | 7♋49 | 21°56 | 28°25 | 21°27 | 10°55 | 22°32 | 5°34 | 20°48 | 18°11 | 25°39 | 24°38 | 11°51 | 26°26 | M 3 |
| T 4 | 20 51 54 | 11°55'22 | 20°11 | 22°50 | 29°39 | 22° 7 | 11° 8 | 22°29 | 5°37 | 20°49 | 18°10 | 25°30 | 24°35 | 11°58 | 26°31 | T 4 |
| W 5 | 20 55 50 | 12°52'52 | 2♌24 | 23°50 | 0♏52 | 22°47 | 11°22 | 22°26 | 5°41 | 20°50 | 18° 8 | 25°19 | 24°32 | 12° 4 | 26°35 | W 5 |
| T 6 | 20 59 47 | 13°50'22 | 14°30 | 24°57 | 2° 6 | 23°27 | 11°35 | 22°23 | 5°45 | 20°51 | 18° 7 | 25° 6 | 24°29 | 12°11 | 26°40 | T 6 |
| F 7 | 21 3 43 | 14°47'54 | 26°30 | 26° 9 | 3°20 | 24° 7 | 11°48 | 22°20 | 5°48 | 20°52 | 18° 6 | 24°53 | 24°25 | 12°18 | 26°44 | F 7 |
| S 8 | 21 7 40 | 15°45'27 | 8♏26 | 27°27 | 4°33 | 24°46 | 12° 1 | 22°17 | 5°52 | 20°54 | 18° 4 | 24°40 | 24°22 | 12°25 | 26°48 | S 8 |
| S 9 | 21 11 36 | 16°43'01 | 20°17 | 28°50 | 5°47 | 25°26 | 12°14 | 22°14 | 5°56 | 20°55 | 18° 3 | 24°28 | 24°19 | 12°31 | 26°52 | S 9 |
| M10 | 21 15 33 | 17°40'36 | 2♏ 8 | 0♏17 | 7° 1 | 26° 5 | 12°27 | 22°10 | 5°59 | 20°56 | 18° 2 | 24°19 | 24°16 | 12°38 | 26°56 | M10 |
| T 11 | 21 19 30 | 18°38'13 | 14° 0 | 1°50 | 8°14 | 26°45 | 12°41 | 22° 7 | 6° 3 | 20°57 | 18° 0 | 24°13 | 24°13 | 12°45 | 27° 0 | T 11 |
| W12 | 21 23 26 | 19°35'51 | 25°58 | 3°27 | 9°28 | 27°24 | 12°54 | 22° 4 | 6° 7 | 20°58 | 17°59 | 24° 9 | 24° 9 | 12°51 | 27° 4 | W12 |
| T 13 | 21 27 23 | 20°33'31 | 8♏ 6 | 5° 8 | 10°41 | 28° 4 | 13° 7 | 22° 0 | 6°10 | 21° 0 | 17°58 | 24° 7 | 24° 6 | 12°58 | 27° 8 | T 13 |
| F 14 | 21 31 19 | 21°31'13 | 20°28 | 6°53 | 11°55 | 28°43 | 13°20 | 21°56 | 6°14 | 21° 1 | 17°56 | 24° 7 | 24° 3 | 13° 5 | 27°12 | F 14 |
| S 15 | 21 35 16 | 22°28'56 | 3♏10 | 8°41 | 13° 9 | 29°22 | 13°33 | 21°53 | 6°17 | 21° 2 | 17°55 | 24° 7 | 24° 0 | 13°12 | 27°16 | S 15 |
| S 16 | 21 39 12 | 23°26'40 | 16°17 | 10°32 | 14°22 | 0♏ 1 | 13°46 | 21°49 | 6°21 | 21° 4 | 17°54 | 24° 6 | 23°57 | 13°18 | 27°20 | S 16 |
| M17 | 21 43 9 | 24°24'27 | 29°52 | 12°25 | 15°36 | 0°40 | 13°59 | 21°45 | 6°25 | 21° 5 | 17°52 | 24° 3 | 23°54 | 13°25 | 27°24 | M17 |
| T 18 | 21 47 5 | 25°22'15 | 13♏57 | 14°20 | 16°49 | 1°19 | 14°12 | 21°41 | 6°28 | 21° 7 | 17°51 | 23°57 | 23°50 | 13°32 | 27°28 | T 18 |
| W19 | 21 51 2 | 26°20'05 | 28°30 | 16°17 | 18° 3 | 1°57 | 14°26 | 21°38 | 6°32 | 21° 8 | 17°50 | 23°49 | 23°47 | 13°38 | 27°31 | W19 |
| T 20 | 21 54 59 | 27°17'56 | 13♏27 | 18°15 | 19°16 | 2°36 | 14°39 | 21°34 | 6°35 | 21° 9 | 17°48 | 23°39 | 23°44 | 13°45 | 27°35 | T 20 |
| F 21 | 21 58 55 | 28°15'48 | 28°39 | 20°14 | 20°30 | 3°15 | 14°52 | 21°30 | 6°39 | 21°11 | 17°47 | 23°28 | 23°41 | 13°52 | 27°38 | F 21 |
| S 22 | 22 2 52 | 29°13'43 | 13♏56 | 22°13 | 21°44 | 3°53 | 15° 5 | 21°25 | 6°42 | 21°12 | 17°46 | 23°17 | 23°38 | 13°59 | 27°42 | S 22 |
| S 23 | 22 6 48 | 0♏11'38 | 29° 6 | 24°12 | 22°57 | 4°32 | 15°18 | 21°21 | 6°46 | 21°14 | 17°45 | 23° 8 | 23°35 | 14° 5 | 27°45 | S 23 |
| M24 | 22 10 45 | 1° 9'35 | 14♏ 0 | 26°12 | 24°11 | 5°10 | 15°31 | 21°17 | 6°49 | 21°16 | 17°43 | 23° 2 | 23°31 | 14°12 | 27°49 | M24 |
| T 25 | 22 14 41 | 2° 7'34 | 28°31 | 28°11 | 25°24 | 5°48 | 15°43 | 21°13 | 6°53 | 21°17 | 17°42 | 22°58 | 23°28 | 14°19 | 27°52 | T 25 |
| W26 | 22 18 38 | 3° 5'33 | 12♏36 | 0♏10 | 26°38 | 6°26 | 15°56 | 21° 9 | 6°56 | 21°19 | 17°41 | 22°56 | 23°25 | 14°25 | 27°55 | W26 |
| T 27 | 22 22 34 | 4° 3'34 | 26°14 | 2° 8 | 27°51 | 7° 4 | 16° 9 | 21° 4 | 6°59 | 21°20 | 17°39 | 22°D56 | 23°22 | 14°32 | 27°58 | T 27 |
| F 28 | 22 26 31 | 5° 1'37 | 9♏27 | 4° 5 | 29° 5 | 7°42 | 16°22 | 21° 0 | 7° 3 | 21°22 | 17°38 | 22°R56 | 23°19 | 14°39 | 28° 1 | F 28 |
| S 29 | 22 30 28 | 5°59'41 | 22°20 | 6° 1 | 0♏18 | 8°20 | 16°35 | 20°56 | 7° 6 | 21°24 | 17°37 | 22°55 | 23°15 | 14°46 | 28° 4 | S 29 |
| S 30 | 22 34 24 | 6°57'46 | 4♏55 | 7°57 | 1°31 | 8°58 | 16°48 | 20°51 | 7°10 | 21°25 | 17°36 | 22°52 | 23°12 | 14°52 | 28° 7 | S 30 |
| M31 | 22 38 21 | 7♏55'52 | 17♏16 | 9♏51 | 2♏45 | 9♏36 | 17♏ 0 | 20♏47 | 7♏13 | 21°27 | 17°34 | 22♏47 | 23♏ 9 | 14°59 | 28°10 | M31 |

| Day | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|------|------|-------|------|-------|-------|------|-------|------|-----|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat |
| S 1 | 18n 1 | 20s53 | 1n28 | 19n39 | 2s17 | 14n17 | 1n30 | 23n 7 | 0n 2 | 18n12 | 0n36 | 5s 0 | 2s16 | 19n30 | 0n35 | 6s33 | 1n42 | 24s 3 | 9s 9 | 19s14 | 18s58 | 2s39 | 17n58 | 5s27 | |
| S 2 | 17 45 | 20 54 | 2 29 | 19 48 | 2 1 | 13 52 | 1 30 | 23 11 | 0 2 | 18 9 | 0 36 | 5 2 | 2 16 | 19 29 | 0 35 | 6 33 | 1 42 | 24 4 | 9 9 | 19 13 | 18 58 | 2 37 | 17 58 | 5 27 | |
| M 3 | 17 30 | 19 52 | 3 23 | 19 57 | 1 45 | 13 26 | 1 29 | 23 15 | 0 3 | 18 5 | 0 36 | 5 3 | 2 16 | 19 28 | 0 35 | 6 34 | 1 42 | 24 4 | 9 9 | 19 12 | 18 57 | 2 35 | 17 57 | 5 28 | |
| T 4 | 17 14 | 17 54 | 4 6 | 20 4 | 1 29 | 13 0 | 1 29 | 23 18 | 0 4 | 18 1 | 0 36 | 5 4 | 2 16 | 19 27 | 0 35 | 6 34 | 1 42 | 24 5 | 9 9 | 19 10 | 18 56 | 2 32 | 17 57 | 5 28 | |
| W 5 | 16 58 | 15 9 | 4 37 | 20 9 | 1 14 | 12 34 | 1 29 | 23 21 | 0 5 | 17 58 | 0 36 | 5 6 | 2 17 | 19 26 | 0 35 | 6 34 | 1 42 | 24 5 | 9 9 | 19 7 | 18 55 | 2 30 | 17 57 | 5 29 | |
| T 6 | 16 41 | 11 47 | 4 55 | 20 13 | 0 58 | 12 7 | 1 29 | 23 24 | 0 6 | 17 54 | 0 36 | 5 7 | 2 17 | 19 25 | 0 35 | 6 35 | 1 41 | 24 6 | 9 9 | 19 4 | 18 55 | 2 28 | 17 56 | 5 29 | |
| F 7 | 16 25 | 7 59 | 5 0 | 20 14 | 0 43 | 11 40 | 1 28 | 23 27 | 0 7 | 17 51 | 0 36 | 5 9 | 2 17 | 19 24 | 0 35 | 6 35 | 1 41 | 24 6 | 9 9 | 19 1 | 18 54 | 2 26 | 17 56 | 5 29 | |
| S 8 | 16 8 | 3 55 | 4 52 | 20 14 | 0 28 | 11 13 | 1 28 | 23 29 | 0 7 | 17 47 | 0 36 | 5 10 | 2 17 | 19 23 | 0 35 | 6 36 | 1 41 | 24 7 | 9 9 | 18 57 | 18 53 | 2 23 | 17 56 | 5 30 | |
| S 9 | 15 51 | 0n18 | 4 31 | 20 11 | 0 14 | 10 45 | 1 27 | 23 31 | 0 8 | 17 44 | 0 36 | 5 11 | 2 17 | 19 22 | 0 35 | 6 36 | 1 41 | 24 7 | 9 9 | 18 55 | 18 52 | 2 21 | 17 56 | 5 30 | |
| M10 | 15 33 | 4 29 | 3 58 | 20 6 | 0 0 | 10 17 | 1 27 | 23 34 | 0 9 | 17 40 | 0 36 | 5 13 | 2 18 | 19 22 | 0 35 | 6 37 | 1 41 | 24 8 | 9 9 | 18 52 | 18 51 | 2 19 | 17 55 | 5 31 | |
| T 11 | 15 15 | 8 31 | 3 15 | 19 59 | 0n13 | 9 49 | 1 26 | 23 35 | 0 10 | 17 36 | 0 36 | 5 14 | 2 18 | 19 21 | 0 35 | 6 37 | 1 41 | 24 8 | 9 9 | 18 51 | 18 51 | 2 16 | 17 55 | 5 31 | |
| W12 | 14 57 | 12 16 | 2 23 | 19 49 | 0 25 | 9 21 | 1 25 | 23 37 | 0 11 | 17 33 | 0 36 | 5 16 | 2 18 | 19 20 | 0 35 | 6 38 | 1 41 | 24 9 | 9 9 | 18 50 | 18 50 | 2 14 | 17 55 | 5 31 | |
| T 13 | 14 39 | 15 32 | 1 24 | 19 36 | 0 36 | 8 52 | 1 24 | 23 39 | 0 12 | 17 29 | 0 37 | 5 18 | 2 18 | 19 19 | 0 35 | 6 38 | 1 41 | 24 9 | 9 9 | 18 49 | 18 49 | 2 12 | 17 54 | 5 32 | |
| F 14 | 14 21 | 18 12 | 0 19 | 19 20 | 0 47 | 8 23 | 1 23 | 23 40 | 0 13 | 17 25 | 0 37 | 5 19 | 2 18 | 19 18 | 0 35 | 6 39 | 1 41 | 24 10 | 9 9 | 18 49 | 18 48 | 2 9 | 17 54 | 5 32 | |
| S 15 | 14 2 | 20 2 | 0s48 | 19 1 | 0 57 | 7 54 | 1 22 | 23 41 | 0 13 | 17 22 | 0 37 | 5 21 | 2 19 | 19 17 | 0 35 | 6 39 | 1 41 | 24 10 | 9 10 | 18 49 | 18 48 | 2 7 | 17 54 | 5 33 | |
| S 16 | 13 43 | 20 52 | 1 54 | 18 40 | 1 6 | 7 25 | 1 21 | 23 42 | 0 14 | 17 18 | 0 37 | 5 22 | 2 19 | 19 16 | 0 35 | 6 40 | 1 41 | 24 11 | 9 10 | 18 49 | 18 47 | 2 5 | 17 53 | 5 33 | |
| M17 | 13 24 | 20 31 | 2 57 | 18 17 | 1 14 | 6 55 | 1 20 | 23 43 | 0 15 | 17 14 | 0 37 | 5 24 | 2 19 | 19 15 | 0 35 | 6 41 | 1 41 | 24 11 | 9 10 | 18 48 | 18 46 | 2 3 | 17 53 | 5 34 | |
| T 18 | 13 5 | 18 54 | 3 51 | 17 50 | 1 21 | 6 25 | 1 19 | 23 44 | 0 16 | 17 11 | 0 37 | 5 26 | 2 19 | 19 14 | 0 35 | 6 41 | 1 41 | 24 12 | 9 10 | 18 47 | 18 45 | 2 0 | 17 52 | 5 34 | |
| W19 | 12 45 | 16 3 | 4 32 | 17 22 | 1 27 | 5 55 | 1 18 | 23 44 | 0 17 | 17 7 | 0 37 | 5 27 | 2 19 | 19 14 | 0 35 | 6 42 | 1 41 | 24 12 | 9 10 | 18 45 | 18 44 | 1 58 | 17 52 | 5 35 | |
| T 20 | 12 25 | 12 5 | 4 56 | 16 50 | 1 32 | 5 25 | 1 16 | 23 44 | 0 18 | 17 3 | 0 37 | 5 29 | 2 19 | 19 13 | 0 35 | 6 42 | 1 41 | 24 13 | 9 10 | 18 42 | 18 44 | 1 56 | 17 52 | 5 35 | |
| F 21 | 12 5 | 7 17 | 4 59 | 16 17 | 1 37 | 4 55 | 1 15 | 23 44 | 0 19 | 16 59 | 0 37 | 5 31 | 2 20 | 19 12 | 0 35 | 6 43 | 1 41 | 24 13 | 9 10 | 18 40 | 18 43 | 1 54 | 17 51 | 5 35 | |
| S 22 | 11 45 | 2 0 | 4 41 | 15 42 | 1 40 | 4 25 | 1 14 | 23 44 | 0 20 | 16 56 | 0 37 | 5 33 | 2 20 | 19 11 | 0 35 | 6 43 | 1 41 | 24 13 | 9 10 | 18 37 | 18 42 | 1 51 | 17 51 | 5 36 | |
| S 23 | 11 25 | 3s22 | 4 4 | 15 5 | 1 43 | 3 54 | 1 12 | 23 44 | 0 21 | 16 52 | 0 38 | 5 34 | 2 20 | 19 10 | 0 35 | 6 44 | 1 41 | 24 14 | 9 10 | 18 35 | 18 41 | 1 49 | 17 50 | 5 36 | |
| M24 | 11 4 | 8 27 | 3 10 | 14 27 | 1 45 | 3 24 | 1 11 | 23 43 | 0 22 | 16 48 | 0 38 | 5 36 | 2 20 | 19 9 | 0 35 | 6 45 | 1 41 | 24 14 | 9 10 | 18 33 | 18 40 | 1 47 | 17 50 | 5 37 | |
| T 25 | 10 44 | 12 55 | 2 5 | 13 47 | 1 46 | 2 53 | 1 9 | 23 43 | 0 22 | 16 44 | 0 38 | 5 38 | 2 20 | 19 8 | 0 35 | 6 45 | 1 41 | 24 15 | 9 10 | 18 32 | 18 40 | 1 44 | 17 50 | 5 37 | |
| W26 | 10 23 | 16 30 | 0 54 | 13 5 | 1 46 | 2 22 | 1 7 | 23 42 | 0 23 | 16 41 | 0 38 | 5 40 | 2 20 | 19 8 | 0 35 | 6 46 | 1 41 | 24 15 | 9 10 | 18 32 | 18 39 | 1 42 | 17 49 | 5 38 | |
| T 27 | 10 2 | 19 3 | 0n17 | 12 23 | 1 46 | 1 51 | 1 6 | 23 41 | 0 24 | 16 37 | 0 38 | 5 42 | 2 20 | 19 7 | 0 35 | 6 47 | 1 41 | 24 15 | 9 10 | 18 32 | 18 38 | 1 40 | 17 49 | 5 38 | |
| F 28 | 9 41 | 20 28 | 1 26 | 11 39 | 1 45 | 1 21 | 1 4 | 23 40 | 0 25 | 16 33 | 0 38 | 5 43 | 2 21 | 19 6 | 0 35 | 6 47 | 1 41 | 24 16 | 9 10 | 18 32 | 18 37 | 1 38 | 17 48 | 5 39 | |
| S 29 | 9 19 | 20 46 | 2 29 | 10 55 | 1 44 | 0 50 | 1 2 | 23 38 | 0 26 | 16 29 | 0 38 | 5 45 | 2 21 | 19 5 | 0 35 | 6 48 | 1 41 | 24 16 | 9 10 | 18 31 | 18 36 | 1 35 | 17 48 | 5 39 | |
| S 30 | 8 58 | 20 0 | 3 23 | 10 10 | 1 42 | 0 19 | 1 0 | 23 37 | 0 27 | 16 26 | 0 38 | 5 47 | 2 21 | 19 4 | 0 35 | 6 49 | 1 40 | 24 17 | 9 10 | 18 31 | 18 36 | 1 33 | 17 47 | 5 40 | |
| M31 | 8n36 | 18s17 | 4n 6 | 9n24 | 1n39 | 0s12 | 0n58 | 23n35 | 0n28 | 16n22 | 0n38 | 5s49 | 2s21 | 19n 3 | 0n35 | 6s49 | 1n40 | 24s17 | 9s10 | 18s29 | 18s35 | 1s31 | 17n47 | 5s40 | |

ASTRODIENST EPHEMERIS for the year 1789
geocentric

SEPTEMBER 1789

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------|-------|-------|-------|-------|-------|--------|------|-------|--------|--------|-------|-------|-------|------|
| T 1 | 22 42 17 | 8♍54'01 | 29♌27 | 11♍45 | 3♊58 | 10♌13 | 17♏13 | 20°R42 | 7♏16 | 21♎29 | 17°R33 | 22°R38 | 23♌6 | 15♋6 | 28♏13 | T 1 |
| W 2 | 22 46 14 | 9°52'10 | 11♋31 | 13°37 | 5°12 | 10°51 | 17°26 | 20♋38 | 7°19 | 21°31 | 17°32 | 22♌28 | 23°3 | 15°12 | 28°16 | W 2 |
| T 3 | 22 50 10 | 10°50'21 | 23°29 | 15°28 | 6°25 | 11°28 | 17°38 | 20°33 | 7°23 | 21°32 | 17°31 | 22°15 | 23°0 | 15°19 | 28°19 | T 3 |
| F 4 | 22 54 7 | 11°48'34 | 5♋24 | 17°18 | 7°38 | 12°5 | 17°51 | 20°29 | 7°26 | 21°34 | 17°30 | 22°2 | 22°56 | 15°26 | 28°21 | F 4 |
| S 5 | 22 58 3 | 12°46'49 | 17°16 | 19°7 | 8°52 | 12°42 | 18°4 | 20°24 | 7°29 | 21°36 | 17°28 | 21°50 | 22°53 | 15°33 | 28°24 | S 5 |
| S 6 | 23 2 0 | 13°45'05 | 29°8 | 20°55 | 10°5 | 13°19 | 18°16 | 20°20 | 7°32 | 21°38 | 17°27 | 21°38 | 22°50 | 15°39 | 28°26 | S 6 |
| M 7 | 23 5 56 | 14°43'23 | 11♍0 | 22°41 | 11°18 | 13°56 | 18°29 | 20°15 | 7°35 | 21°40 | 17°26 | 21°29 | 22°47 | 15°46 | 28°29 | M 7 |
| T 8 | 23 9 53 | 15°41'44 | 22°55 | 24°27 | 12°32 | 14°33 | 18°41 | 20°11 | 7°39 | 21°42 | 17°25 | 21°23 | 22°44 | 15°53 | 28°31 | T 8 |
| W 9 | 23 13 50 | 16°40'06 | 4♌57 | 26°11 | 13°45 | 15°10 | 18°53 | 20°6 | 7°42 | 21°44 | 17°24 | 21°19 | 22°40 | 15°59 | 28°34 | W 9 |
| T 10 | 23 17 46 | 17°38'30 | 17°7 | 27°54 | 14°58 | 15°47 | 19°6 | 20°1 | 7°45 | 21°45 | 17°23 | 21°D18 | 22°37 | 16°6 | 28°36 | T 10 |
| F 11 | 23 21 43 | 18°36'57 | 29°30 | 29°36 | 16°11 | 16°23 | 19°18 | 19°57 | 7°48 | 21°47 | 17°22 | 21°18 | 22°34 | 16°13 | 28°38 | F 11 |
| S 12 | 23 25 39 | 19°35'25 | 12♏11 | 1♊17 | 17°25 | 17°0 | 19°30 | 19°52 | 7°51 | 21°49 | 17°20 | 21°19 | 22°31 | 16°20 | 28°40 | S 12 |
| S 13 | 23 29 36 | 20°33'56 | 25°13 | 2°57 | 18°38 | 17°36 | 19°42 | 19°47 | 7°54 | 21°51 | 17°19 | 21°R19 | 22°28 | 16°26 | 28°42 | S 13 |
| M14 | 23 33 32 | 21°32'29 | 8♌41 | 4°36 | 19°51 | 18°12 | 19°55 | 19°43 | 7°57 | 21°53 | 17°18 | 21°18 | 22°25 | 16°33 | 28°44 | M14 |
| T 15 | 23 37 29 | 22°31'05 | 22°37 | 6°14 | 21°4 | 18°48 | 20°7 | 19°38 | 8°0 | 21°55 | 17°17 | 21°14 | 22°21 | 16°40 | 28°46 | T 15 |
| W16 | 23 41 25 | 23°29'42 | 7♏1 | 7°50 | 22°18 | 19°24 | 20°19 | 19°33 | 8°2 | 21°57 | 17°16 | 21°9 | 22°18 | 16°46 | 28°48 | W16 |
| T 17 | 23 45 22 | 24°28'22 | 21°51 | 9°26 | 23°31 | 20°0 | 20°31 | 19°29 | 8°5 | 21°59 | 17°15 | 21°1 | 22°15 | 16°53 | 28°49 | T 17 |
| F 18 | 23 49 19 | 25°27'03 | 6♍59 | 11°1 | 24°44 | 20°36 | 20°43 | 19°24 | 8°8 | 22°1 | 17°14 | 20°53 | 22°12 | 17°0 | 28°51 | F 18 |
| S 19 | 23 53 15 | 26°25'47 | 22°16 | 12°35 | 25°57 | 21°12 | 20°55 | 19°20 | 8°11 | 22°3 | 17°13 | 20°44 | 22°9 | 17°7 | 28°52 | S 19 |
| S 20 | 23 57 12 | 27°24'33 | 7♊31 | 14°8 | 27°10 | 21°47 | 21°6 | 19°15 | 8°14 | 22°6 | 17°12 | 20°37 | 22°6 | 17°13 | 28°54 | S 20 |
| M21 | 0 1 8 | 28°23'20 | 22°33 | 15°40 | 28°23 | 22°23 | 21°18 | 19°11 | 8°16 | 22°8 | 17°11 | 20°32 | 22°2 | 17°20 | 28°55 | M21 |
| T 22 | 0 5 5 | 29°22'10 | 7♌14 | 17°11 | 29°36 | 22°58 | 21°30 | 19°6 | 8°19 | 22°10 | 17°10 | 20°29 | 21°59 | 17°27 | 28°57 | T 22 |
| W23 | 0 9 1 | 0♊21'01 | 21°29 | 18°41 | 0♌49 | 23°33 | 21°41 | 19°1 | 8°22 | 22°12 | 17°9 | 20°D29 | 21°56 | 17°33 | 28°58 | W23 |
| T 24 | 0 12 58 | 1°19'54 | 5♌16 | 20°10 | 2°2 | 24°8 | 21°53 | 18°57 | 8°24 | 22°14 | 17°9 | 20°29 | 21°53 | 17°40 | 28°59 | T 24 |
| F 25 | 0 16 54 | 2°18'49 | 18°35 | 21°38 | 3°15 | 24°43 | 22°4 | 18°53 | 8°27 | 22°16 | 17°8 | 20°30 | 21°50 | 17°47 | 29°0 | F 25 |
| S 26 | 0 20 51 | 3°17'46 | 1♌31 | 23°5 | 4°28 | 25°18 | 22°16 | 18°48 | 8°29 | 22°18 | 17°7 | 20°R31 | 21°46 | 17°53 | 29°1 | S 26 |
| S 27 | 0 24 48 | 4°16'45 | 14°5 | 24°31 | 5°41 | 25°52 | 22°27 | 18°44 | 8°32 | 22°20 | 17°6 | 20°31 | 21°43 | 18°0 | 29°2 | S 27 |
| M28 | 0 28 44 | 5°15'45 | 26°24 | 25°56 | 6°54 | 26°27 | 22°38 | 18°39 | 8°34 | 22°22 | 17°5 | 20°28 | 21°40 | 18°7 | 29°3 | M28 |
| T 29 | 0 32 41 | 6°14'47 | 8♋30 | 27°20 | 8°7 | 27°1 | 22°50 | 18°35 | 8°36 | 22°25 | 17°4 | 20°24 | 21°37 | 18°14 | 29°3 | T 29 |
| W30 | 0 36 37 | 7♊13'50 | 20°29 | 28°43 | 9♌20 | 27°36 | 23°1 | 18°31 | 8°39 | 22°27 | 17°4 | 20°18 | 21°34 | 18°14 | 29°4 | W30 |

| Day | ☉ | ☾ | | ♂ | | ♀ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | |
|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|------|------|-------|------|-------|-------|------|-------|------|-----|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat |
| T 1 | 8n15 | 15s46 | 4n37 | 8n38 | 1n36 | 0s44 | 0n56 | 23n33 | 0n29 | 16n18 | 0n39 | 5s51 | 2s21 | 19n 3 | 0n35 | 6s50 | 1n40 | 24s17 | 9s10 | 18s27 | 18s34 | 1s29 | 17n46 | 5s41 | |
| W 2 | 7 53 | 12 36 | 4 56 | 7 52 | 1 32 | 1 15 | 0 54 | 23 31 | 0 30 | 16 14 | 0 39 | 5 53 | 2 21 | 19 2 | 0 35 | 6 51 | 1 40 | 24 18 | 9 10 | 18 24 | 18 33 | 1 26 | 17 46 | 5 41 | |
| T 3 | 7 31 | 8 58 | 5 1 | 7 5 | 1 28 | 1 46 | 0 52 | 23 29 | 0 31 | 16 11 | 0 39 | 5 55 | 2 21 | 19 1 | 0 35 | 6 51 | 1 40 | 24 18 | 9 10 | 18 21 | 18 32 | 1 24 | 17 45 | 5 42 | |
| F 4 | 7 8 | 5 0 | 4 53 | 6 18 | 1 24 | 2 17 | 0 49 | 23 27 | 0 32 | 16 7 | 0 39 | 5 56 | 2 21 | 19 0 | 0 35 | 6 52 | 1 40 | 24 18 | 9 10 | 18 18 | 18 32 | 1 22 | 17 45 | 5 42 | |
| S 5 | 6 46 | 0 51 | 4 33 | 5 31 | 1 19 | 2 48 | 0 47 | 23 24 | 0 33 | 16 3 | 0 39 | 5 58 | 2 21 | 18 59 | 0 35 | 6 53 | 1 40 | 24 19 | 9 9 | 18 15 | 18 31 | 1 19 | 17 44 | 5 43 | |
| S 6 | 6 24 | 3n19 | 4 0 | 4 44 | 1 14 | 3 19 | 0 45 | 23 21 | 0 34 | 15 59 | 0 39 | 6 0 | 2 21 | 18 59 | 0 35 | 6 53 | 1 40 | 24 19 | 9 9 | 18 12 | 18 30 | 1 17 | 17 44 | 5 43 | |
| M 7 | 6 1 | 7 23 | 3 17 | 3 57 | 1 9 | 3 50 | 0 43 | 23 19 | 0 35 | 15 56 | 0 39 | 6 2 | 2 22 | 18 58 | 0 35 | 6 54 | 1 40 | 24 19 | 9 9 | 18 9 | 18 29 | 1 15 | 17 43 | 5 44 | |
| T 8 | 5 39 | 11 10 | 2 25 | 3 10 | 1 3 | 4 20 | 0 40 | 23 16 | 0 36 | 15 52 | 0 39 | 6 4 | 2 22 | 18 57 | 0 35 | 6 55 | 1 40 | 24 20 | 9 9 | 18 8 | 18 28 | 1 13 | 17 43 | 5 45 | |
| W 9 | 5 16 | 14 32 | 1 26 | 2 24 | 0 57 | 4 51 | 0 38 | 23 13 | 0 37 | 15 48 | 0 39 | 6 6 | 2 22 | 18 56 | 0 35 | 6 56 | 1 40 | 24 20 | 9 9 | 18 7 | 18 28 | 1 10 | 17 42 | 5 45 | |
| T 10 | 4 53 | 17 19 | 0 22 | 1 37 | 0 51 | 5 22 | 0 35 | 23 9 | 0 38 | 15 44 | 0 40 | 6 8 | 2 22 | 18 55 | 0 35 | 6 56 | 1 40 | 24 20 | 9 9 | 18 6 | 18 27 | 1 8 | 17 42 | 5 46 | |
| F 11 | 4 30 | 19 21 | 0s44 | 0 50 | 0 45 | 5 52 | 0 33 | 23 6 | 0 39 | 15 41 | 0 40 | 6 10 | 2 22 | 18 55 | 0 36 | 6 57 | 1 40 | 24 21 | 9 9 | 18 6 | 18 26 | 1 6 | 17 41 | 5 46 | |
| S 12 | 4 8 | 20 28 | 1 49 | 0 4 | 0 38 | 6 23 | 0 30 | 23 2 | 0 40 | 15 37 | 0 40 | 6 11 | 2 22 | 18 54 | 0 36 | 6 58 | 1 40 | 24 21 | 9 9 | 18 7 | 18 25 | 1 4 | 17 41 | 5 47 | |
| S 13 | 3 45 | 20 32 | 2 51 | 0s42 | 0 31 | 6 53 | 0 27 | 22 59 | 0 41 | 15 33 | 0 40 | 6 13 | 2 22 | 18 53 | 0 36 | 6 59 | 1 40 | 24 21 | 9 9 | 18 7 | 18 24 | 1 1 | 17 40 | 5 47 | |
| M14 | 3 21 | 19 26 | 3 45 | 1 27 | 0 25 | 7 23 | 0 25 | 22 55 | 0 42 | 15 30 | 0 40 | 6 15 | 2 22 | 18 52 | 0 36 | 6 59 | 1 40 | 24 21 | 9 9 | 18 6 | 18 24 | 0 59 | 17 40 | 5 48 | |
| T 15 | 2 58 | 17 9 | 4 28 | 2 12 | 0 18 | 7 53 | 0 22 | 22 51 | 0 43 | 15 26 | 0 40 | 6 17 | 2 22 | 18 52 | 0 36 | 7 0 | 1 40 | 24 22 | 9 9 | 18 5 | 18 23 | 0 57 | 17 39 | 5 48 | |
| W16 | 2 35 | 13 45 | 4 56 | 2 57 | 0 10 | 8 23 | 0 19 | 22 47 | 0 44 | 15 22 | 0 40 | 6 19 | 2 22 | 18 51 | 0 36 | 7 1 | 1 40 | 24 22 | 9 9 | 18 4 | 18 22 | 0 55 | 17 39 | 5 49 | |
| T 17 | 2 12 | 9 25 | 5 3 | 3 42 | 0 3 | 8 53 | 0 16 | 22 43 | 0 45 | 15 18 | 0 41 | 6 21 | 2 22 | 18 50 | 0 36 | 7 2 | 1 40 | 24 22 | 9 9 | 18 2 | 18 21 | 0 52 | 17 38 | 5 49 | |
| F 18 | 1 49 | 4 25 | 4 54 | 4 26 | 0s4 | 9 23 | 0 14 | 22 38 | 0 46 | 15 15 | 0 41 | 6 23 | 2 22 | 18 50 | 0 36 | 7 2 | 1 40 | 24 22 | 9 9 | 18 0 | 18 20 | 0 50 | 17 38 | 5 50 | |
| S 19 | 1 25 | 0s55 | 4 21 | 5 9 | 0 11 | 9 52 | 0 11 | 22 34 | 0 47 | 15 11 | 0 41 | 6 24 | 2 22 | 18 49 | 0 36 | 7 3 | 1 40 | 24 23 | 9 8 | 17 57 | 18 19 | 0 48 | 17 37 | 5 51 | |
| S 20 | 1 2 | 6 11 | 3 30 | 5 52 | 0 19 | 10 21 | 0 8 | 22 29 | 0 48 | 15 7 | 0 41 | 6 26 | 2 22 | 18 48 | 0 36 | 7 4 | 1 40 | 24 23 | 9 8 | 17 56 | 18 19 | 0 46 | 17 37 | 5 51 | |
| M21 | 0 38 | 11 1 | 2 24 | 6 34 | 0 26 | 10 50 | 0 5 | 22 25 | 0 49 | 15 4 | 0 41 | 6 28 | 2 22 | 18 48 | 0 36 | 7 5 | 1 40 | 24 23 | 9 8 | 17 54 | 18 18 | 0 43 | 17 36 | 5 52 | |
| T 22 | 0 15 | 15 3 | 1 11 | 7 16 | 0 34 | 11 19 | 0 2 | 22 20 | 0 50 | 15 0 | 0 41 | 6 30 | 2 22 | 18 47 | 0 36 | 7 6 | 1 40 | 24 23 | 9 8 | 17 53 | 18 17 | 0 41 | 17 35 | 5 52 | |
| W23 | 0s8 | 18 4 | 0n5 | 7 57 | 0 41 | 11 47 | 0s1 | 22 15 | 0 51 | 14 57 | 0 41 | 6 32 | 2 22 | 18 46 | 0 36 | 7 6 | 1 40 | 24 23 | 9 8 | 17 53 | 18 16 | 0 39 | 17 35 | 5 53 | |
| T 24 | 0 32 | 19 54 | 1 19 | 8 38 | 0 48 | 12 15 | 0 4 | 22 10 | 0 52 | 14 53 | 0 41 | 6 33 | 2 22 | 18 46 | 0 36 | 7 7 | 1 40 | 24 24 | 9 8 | 17 53 | 18 15 | 0 37 | 17 34 | 5 53 | |
| F 25 | 0 55 | 20 33 | 2 26 | 9 18 | 0 56 | 12 43 | 0 7 | 22 5 | 0 53 | 14 49 | 0 42 | 6 35 | 2 22 | 18 45 | 0 36 | 7 8 | 1 40 | 24 24 | 9 8 | 17 54 | 18 15 | 0 34 | 17 34 | 5 54 | |
| S 26 | 1 19 | 20 4 | 3 23 | 9 58 | 1 3 | 13 11 | 0 10 | 21 59 | 0 54 | 14 46 | 0 42 | 6 37 | 2 22 | 18 44 | 0 36 | 7 9 | 1 40 | 24 24 | 9 8 | 17 54 | 18 14 | 0 32 | 17 33 | 5 55 | |
| S 27 | 1 42 | 18 36 | 4 9 | 10 36 | 1 11 | 13 38 | 0 13 | 21 54 | 0 55 | 14 42 | 0 42 | 6 38 | 2 22 | 18 44 | 0 36 | 7 10 | 1 40 | 24 24 | 9 8 | 17 54 | 18 13 | 0 30 | 17 33 | 5 55 | |
| M28 | 2 6 | 16 17 | 4 42 | 11 14 | 1 18 | 14 5 | 0 16 | 21 49 | 0 56 | 14 39 | 0 42 | 6 40 | 2 22 | 18 43 | 0 36 | 7 10 | 1 40 | 24 24 | 9 7 | 17 53 | 18 12 | 0 28 | 17 32 | 5 56 | |
| T 29 | 2 29 | 13 17 | 5 2 | 11 52 | 1 25 | 14 32 | 0 19 | 21 43 | 0 57 | 14 35 | 0 42 | 6 42 | 2 22 | 18 43 | 0 36 | 7 11 | 1 40 | 24 24 | 9 7 | 17 52 | 18 11 | 0 25 | 17 31 | 5 56 | |
| W30 | 2s52 | 9s48 | 5n9 | 12s28 | 1s32 | 14s58 | 0s22 | 21n37 | 0n59 | 14n32 | 0n42 | 6s43 | 2s22 | 18n42 | 0n36 | 7s12 | 1n40 | 24s24 | 9s7 | 17s50 | 18s10 | 0s23 | 17n31 | 5s57 | |

ASTRODIENST EPHEMERIS for the year 1789
geocentric

OCTOBER 1789

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|----------|-------|--------|-------|-------|-------|--------|------|-------|--------|--------|-------|-------|--------|------|
| T 1 | 0 40 34 | 8♌12'56 | 2♋23 | 0♍5 | 10♌33 | 28♏10 | 23♏12 | 18°R27 | 8♌41 | 22♏29 | 17°R 3 | 20°R11 | 21♌31 | 18♋27 | 29♏5 | T 1 |
| F 2 | 0 44 30 | 9°12'03 | 14°14 | 1°26 | 11°46 | 28°44 | 23°23 | 18♋22 | 8°43 | 22°31 | 17°2 | 20♌3 | 21°27 | 18°34 | 29°5 | F 2 |
| S 3 | 0 48 27 | 10°11'13 | 26°7 | 2°46 | 12°59 | 29°17 | 23°34 | 18°18 | 8°46 | 22°33 | 17°2 | 19°55 | 21°24 | 18°40 | 29°6 | S 3 |
| S 4 | 0 52 23 | 11°10'24 | 8♏9 | 4°4 | 14°12 | 29°51 | 23°44 | 18°14 | 8°48 | 22°36 | 17°1 | 19°48 | 21°21 | 18°47 | 29°6 | S 4 |
| M 5 | 0 56 20 | 12°9'37 | 19°59 | 5°21 | 15°24 | 0♏25 | 23°55 | 18°10 | 8°50 | 22°38 | 17°0 | 19°43 | 21°18 | 18°54 | 29°6 | M 5 |
| T 6 | 1 0 16 | 13°8'53 | 2♋2 | 6°37 | 16°37 | 0°58 | 24°6 | 18°6 | 8°52 | 22°40 | 17°0 | 19°39 | 21°15 | 19°1 | 29°6 | T 6 |
| W 7 | 1 4 13 | 14°8'10 | 14°13 | 7°51 | 17°50 | 1°31 | 24°16 | 18°2 | 8°54 | 22°42 | 16°59 | 19°D38 | 21°11 | 19°7 | 29°7 | W 7 |
| T 8 | 1 8 10 | 15°7'30 | 26°33 | 9°4 | 19°3 | 2°4 | 24°27 | 17°58 | 8°56 | 22°44 | 16°58 | 19°38 | 21°8 | 19°14 | 29°R 7 | T 8 |
| F 9 | 1 12 6 | 16°6'52 | 9♏5 | 10°15 | 20°15 | 2°37 | 24°37 | 17°55 | 8°58 | 22°47 | 16°58 | 19°39 | 21°5 | 19°21 | 29°6 | F 9 |
| S 10 | 1 16 3 | 17°6'17 | 21°52 | 11°25 | 21°28 | 3°10 | 24°47 | 17°51 | 9°0 | 22°49 | 16°57 | 19°41 | 21°2 | 19°27 | 29°6 | S 10 |
| S 11 | 1 19 59 | 18°5'44 | 4♏56 | 12°32 | 22°40 | 3°43 | 24°58 | 17°47 | 9°2 | 22°51 | 16°57 | 19°42 | 20°59 | 19°34 | 29°6 | S 11 |
| M12 | 1 23 56 | 19°5'13 | 18°21 | 13°37 | 23°53 | 4°15 | 25°8 | 17°44 | 9°3 | 22°53 | 16°56 | 19°R43 | 20°56 | 19°41 | 29°6 | M12 |
| T 13 | 1 27 52 | 20°4'44 | 2♏9 | 14°40 | 25°6 | 4°48 | 25°18 | 17°40 | 9°5 | 22°56 | 16°56 | 19°42 | 20°52 | 19°47 | 29°5 | T 13 |
| W14 | 1 31 49 | 21°4'18 | 16°19 | 15°41 | 26°18 | 5°20 | 25°28 | 17°36 | 9°7 | 22°58 | 16°55 | 19°41 | 20°49 | 19°54 | 29°5 | W14 |
| T 15 | 1 35 45 | 22°3'54 | 0♏51 | 16°39 | 27°31 | 5°52 | 25°37 | 17°33 | 9°9 | 23°0 | 16°55 | 19°38 | 20°46 | 20°1 | 29°4 | T 15 |
| F 16 | 1 39 42 | 23°3'32 | 15°40 | 17°33 | 28°43 | 6°24 | 25°47 | 17°30 | 9°10 | 23°2 | 16°55 | 19°34 | 20°43 | 20°8 | 29°4 | F 16 |
| S 17 | 1 43 39 | 24°3'12 | 0♌40 | 18°24 | 29°56 | 6°55 | 25°57 | 17°26 | 9°12 | 23°5 | 16°54 | 19°30 | 20°40 | 20°14 | 29°3 | S 17 |
| S 18 | 1 47 35 | 25°2'55 | 15°42 | 19°12 | 1♌8 | 7°27 | 26°6 | 17°23 | 9°13 | 23°7 | 16°54 | 19°27 | 20°37 | 20°21 | 29°2 | S 18 |
| M19 | 1 51 32 | 26°2'40 | 0♍17 | 19°56 | 2°21 | 7°58 | 26°16 | 17°20 | 9°15 | 23°9 | 16°54 | 19°25 | 20°33 | 20°28 | 29°1 | M19 |
| T 20 | 1 55 28 | 27°2'26 | 15°17 | 20°35 | 3°33 | 8°29 | 26°25 | 17°17 | 9°16 | 23°11 | 16°53 | 19°D24 | 20°30 | 20°34 | 29°0 | T 20 |
| W21 | 1 59 25 | 28°2'15 | 29°36 | 21°8 | 4°45 | 9°0 | 26°34 | 17°14 | 9°17 | 23°13 | 16°53 | 19°24 | 20°27 | 20°41 | 28°59 | W21 |
| T 22 | 2 3 21 | 29°2'05 | 13♌29 | 21°37 | 5°58 | 9°31 | 26°43 | 17°11 | 9°19 | 23°16 | 16°53 | 19°25 | 20°24 | 20°48 | 28°58 | T 22 |
| F 23 | 2 7 18 | 0♍1'58 | 26°56 | 21°59 | 7°10 | 10°1 | 26°52 | 17°9 | 9°20 | 23°18 | 16°53 | 19°27 | 20°21 | 20°55 | 28°57 | F 23 |
| S 24 | 2 11 14 | 1°1'51 | 9♏57 | 22°15 | 8°22 | 10°31 | 27°1 | 17°6 | 9°21 | 23°20 | 16°52 | 19°28 | 20°17 | 21°1 | 28°55 | S 24 |
| S 25 | 2 15 11 | 2°1'47 | 22°37 | 22°23 | 9°34 | 11°2 | 27°10 | 17°3 | 9°22 | 23°22 | 16°52 | 19°29 | 20°14 | 21°8 | 28°54 | S 25 |
| M26 | 2 19 8 | 3°1'44 | 4♏57 | 22°R24 | 10°47 | 11°31 | 27°18 | 17°1 | 9°23 | 23°25 | 16°52 | 19°R29 | 20°11 | 21°15 | 28°53 | M26 |
| T 27 | 2 23 4 | 4°1'43 | 17°4 | 22°16 | 11°59 | 12°1 | 27°27 | 16°58 | 9°25 | 23°27 | 16°52 | 19°29 | 20°8 | 21°21 | 28°51 | T 27 |
| W28 | 2 27 1 | 5°1'43 | 29°2 | 21°59 | 13°11 | 12°31 | 27°35 | 16°56 | 9°26 | 23°29 | 16°52 | 19°28 | 20°5 | 21°28 | 28°50 | W28 |
| T 29 | 2 30 57 | 6°1'45 | 10♋54 | 21°33 | 14°23 | 13°0 | 27°43 | 16°54 | 9°26 | 23°31 | 16°52 | 19°26 | 20°2 | 21°35 | 28°48 | T 29 |
| F 30 | 2 34 54 | 7°1'49 | 22°45 | 20°57 | 15°35 | 13°29 | 27°51 | 16°52 | 9°27 | 23°33 | 16°D52 | 19°24 | 19°58 | 21°41 | 28°46 | F 30 |
| S 31 | 2 38 50 | 8♍1'54 | 4♏39 | 20♍12 | 16♌47 | 13♏58 | 27♏59 | 16♋50 | 9♏28 | 23♏36 | 16°52 | 19♍22 | 19♍55 | 21♋48 | 28♏44 | S 31 |

| Day | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | decl | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat |
| T 1 | 3s16 | 5s56 | 5n 2 | 13s 4 | 1s39 | 15s24 | 0s25 | 21n32 | 1n 0 | 14n28 | 0n43 | 6s45 | 2s22 | 18n41 | 0n36 | 7s13 |
| F 2 | 3 39 | 1 52 | 4 42 | 13 39 | 1 46 | 15 50 | 0 28 | 21 26 | 1 1 | 14 25 | 0 43 | 6 47 | 2 22 | 18 41 | 0 36 | 7 14 |
| S 3 | 4 2 | 2n16 | 4 10 | 14 13 | 1 53 | 16 15 | 0 31 | 21 20 | 1 2 | 14 21 | 0 43 | 6 48 | 2 22 | 18 40 | 0 36 | 7 15 |
| S 4 | 4 26 | 6 21 | 3 27 | 14 46 | 2 0 | 16 40 | 0 34 | 21 14 | 1 3 | 14 18 | 0 43 | 6 50 | 2 22 | 18 40 | 0 36 | 7 15 |
| M 5 | 4 49 | 10 12 | 2 34 | 15 18 | 2 6 | 17 4 | 0 38 | 21 8 | 1 4 | 14 15 | 0 43 | 6 51 | 2 22 | 18 39 | 0 36 | 7 16 |
| T 6 | 5 12 | 13 40 | 1 34 | 15 50 | 2 13 | 17 28 | 0 41 | 21 2 | 1 5 | 14 11 | 0 43 | 6 53 | 2 22 | 18 39 | 0 36 | 7 17 |
| W 7 | 5 35 | 16 36 | 0 30 | 16 20 | 2 19 | 17 52 | 0 44 | 20 55 | 1 6 | 14 8 | 0 44 | 6 54 | 2 22 | 18 38 | 0 36 | 7 18 |
| T 8 | 5 58 | 18 48 | 0s38 | 16 49 | 2 25 | 18 15 | 0 47 | 20 49 | 1 8 | 14 4 | 0 44 | 6 56 | 2 21 | 18 38 | 0 36 | 7 19 |
| F 9 | 6 21 | 20 7 | 1 44 | 17 17 | 2 30 | 18 38 | 0 50 | 20 43 | 1 9 | 14 1 | 0 44 | 6 57 | 2 21 | 18 37 | 0 36 | 7 19 |
| S 10 | 6 44 | 20 26 | 2 47 | 17 44 | 2 36 | 19 0 | 0 53 | 20 36 | 1 10 | 13 58 | 0 44 | 6 59 | 2 21 | 18 37 | 0 36 | 7 20 |
| S 11 | 7 6 | 19 40 | 3 43 | 18 10 | 2 41 | 19 22 | 0 56 | 20 30 | 1 11 | 13 55 | 0 44 | 7 0 | 2 21 | 18 36 | 0 36 | 7 21 |
| M12 | 7 29 | 17 47 | 4 28 | 18 34 | 2 46 | 19 43 | 0 59 | 20 23 | 1 12 | 13 51 | 0 44 | 7 1 | 2 21 | 18 36 | 0 37 | 7 22 |
| T 13 | 7 51 | 14 51 | 4 59 | 18 58 | 2 50 | 20 4 | 1 2 | 20 17 | 1 14 | 13 48 | 0 45 | 7 3 | 2 21 | 18 35 | 0 37 | 7 23 |
| W14 | 8 14 | 10 59 | 5 13 | 19 19 | 2 54 | 20 24 | 1 5 | 20 10 | 1 15 | 13 45 | 0 45 | 7 4 | 2 21 | 18 35 | 0 37 | 7 24 |
| T 15 | 8 36 | 6 23 | 5 8 | 19 39 | 2 57 | 20 44 | 1 8 | 20 3 | 1 16 | 13 42 | 0 45 | 7 5 | 2 21 | 18 35 | 0 37 | 7 24 |
| F 16 | 8 58 | 1 19 | 4 42 | 19 58 | 3 0 | 21 3 | 1 11 | 19 56 | 1 17 | 13 39 | 0 45 | 7 6 | 2 21 | 18 34 | 0 37 | 7 25 |
| S 17 | 9 20 | 3s53 | 3 57 | 20 15 | 3 3 | 21 22 | 1 14 | 19 50 | 1 18 | 13 36 | 0 45 | 7 7 | 2 21 | 18 34 | 0 37 | 7 26 |
| S 18 | 9 42 | 8 53 | 2 55 | 20 30 | 3 4 | 21 40 | 1 17 | 19 43 | 1 20 | 13 33 | 0 45 | 7 9 | 2 20 | 18 34 | 0 37 | 7 27 |
| M19 | 10 4 | 13 17 | 1 42 | 20 43 | 3 6 | 21 58 | 1 20 | 19 36 | 1 21 | 13 30 | 0 46 | 7 10 | 2 20 | 18 33 | 0 37 | 7 28 |
| T 20 | 10 26 | 16 48 | 0 23 | 20 54 | 3 6 | 22 15 | 1 23 | 19 29 | 1 22 | 13 27 | 0 46 | 7 11 | 2 20 | 18 33 | 0 37 | 7 29 |
| W21 | 10 47 | 19 10 | 0n56 | 21 3 | 3 5 | 22 31 | 1 26 | 19 22 | 1 23 | 13 24 | 0 46 | 7 12 | 2 20 | 18 32 | 0 37 | 7 29 |
| T 22 | 11 9 | 20 18 | 2 9 | 21 9 | 3 4 | 22 47 | 1 29 | 19 15 | 1 25 | 13 21 | 0 46 | 7 13 | 2 20 | 18 32 | 0 37 | 7 30 |
| F 23 | 11 30 | 20 13 | 3 13 | 21 12 | 3 2 | 23 2 | 1 31 | 19 8 | 1 26 | 13 18 | 0 46 | 7 14 | 2 20 | 18 32 | 0 37 | 7 31 |
| S 24 | 11 51 | 19 2 | 4 4 | 21 13 | 2 58 | 23 16 | 1 34 | 19 1 | 1 27 | 13 15 | 0 47 | 7 15 | 2 20 | 18 32 | 0 37 | 7 32 |
| S 25 | 12 11 | 16 56 | 4 42 | 21 11 | 2 53 | 23 30 | 1 37 | 18 54 | 1 29 | 13 12 | 0 47 | 7 16 | 2 20 | 18 31 | 0 37 | 7 33 |
| M26 | 12 32 | 14 6 | 5 6 | 21 5 | 2 47 | 23 44 | 1 39 | 18 47 | 1 30 | 13 9 | 0 47 | 7 17 | 2 19 | 18 31 | 0 37 | 7 33 |
| T 27 | 12 53 | 10 43 | 5 16 | 20 55 | 2 39 | 23 56 | 1 42 | 18 40 | 1 31 | 13 7 | 0 47 | 7 17 | 2 19 | 18 31 | 0 37 | 7 34 |
| W28 | 13 13 | 6 57 | 5 12 | 20 42 | 2 30 | 24 8 | 1 45 | 18 33 | 1 33 | 13 4 | 0 47 | 7 18 | 2 19 | 18 31 | 0 37 | 7 35 |
| T 29 | 13 33 | 2 57 | 4 54 | 20 25 | 2 20 | 24 19 | 1 47 | 18 26 | 1 34 | 13 1 | 0 48 | 7 19 | 2 19 | 18 30 | 0 37 | 7 36 |
| F 30 | 13 52 | 1n10 | 4 24 | 20 3 | 2 7 | 24 30 | 1 50 | 18 19 | 1 35 | 12 59 | 0 48 | 7 19 | 2 19 | 18 30 | 0 37 | 7 37 |
| S 31 | 14s12 | 5n15 | 3n43 | 19s37 | 1s53 | 24s40 | 1s52 | 18n12 | 1n37 | 12n56 | 0n48 | 7s20 | 2s19 | 18n30 | 0n37 | 7s37 |

Julian Day Number = 2374752.5, Delta T = 21.68 sec
Ecliptic obliquity = 23°27'55, Nutation = 0°00'13, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 21°48'17, Lahiri = 20°55'18Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1789

geocentric

NOVEMBER 1789

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|----------|--------|--------|--------|--------|-------|--------|-------|--------|--------|--------|--------|--------|--------|------|
| S 1 | 2 42 47 | 9♉ 2'01 | 16°V37 | 19°R17 | 17°♂59 | 14°♂26 | 28°♂7 | 16°R48 | 9°♂29 | 23°♂38 | 16°♂52 | 19°R21 | 19°♂52 | 21°♂55 | 28°R42 | S 1 |
| M 2 | 2 46 43 | 10° 2'10 | 28°44 | 18°♂15 | 19°10 | 14°55 | 28°15 | 16°♂46 | 9°30 | 23°40 | 16°52 | 19°♂19 | 19°49 | 22° 2 | 28°♂40 | M 2 |
| T 3 | 2 50 40 | 11° 2'20 | 10°♂59 | 17° 5 | 20°22 | 15°23 | 28°22 | 16°44 | 9°30 | 23°42 | 16°52 | 19°19 | 19°46 | 22° 8 | 28°38 | T 3 |
| W 4 | 2 54 37 | 12° 2'33 | 23°25 | 15°50 | 21°34 | 15°51 | 28°30 | 16°42 | 9°31 | 23°44 | 16°52 | 19°D19 | 19°43 | 22°15 | 28°36 | W 4 |
| T 5 | 2 58 33 | 13° 2'47 | 6°♂3 | 14°31 | 22°46 | 16°18 | 28°37 | 16°41 | 9°31 | 23°46 | 16°52 | 19°19 | 19°39 | 22°22 | 28°34 | T 5 |
| F 6 | 3 2 30 | 14° 3'03 | 18°53 | 13°11 | 23°57 | 16°46 | 28°44 | 16°39 | 9°32 | 23°49 | 16°52 | 19°20 | 19°36 | 22°28 | 28°32 | F 6 |
| S 7 | 3 6 26 | 15° 3'21 | 1°♂57 | 11°53 | 25° 9 | 17°13 | 28°51 | 16°38 | 9°32 | 23°51 | 16°53 | 19°20 | 19°33 | 22°35 | 28°29 | S 7 |
| S 8 | 3 10 23 | 16° 3'41 | 15°14 | 10°40 | 26°20 | 17°40 | 28°58 | 16°37 | 9°33 | 23°53 | 16°53 | 19°21 | 19°30 | 22°42 | 28°27 | S 8 |
| M 9 | 3 14 19 | 17° 4'03 | 28°46 | 9°32 | 27°32 | 18° 6 | 29° 5 | 16°36 | 9°33 | 23°55 | 16°53 | 19°21 | 19°27 | 22°48 | 28°24 | M 9 |
| T 10 | 3 18 16 | 18° 4'27 | 12°♂33 | 8°33 | 28°43 | 18°33 | 29°11 | 16°35 | 9°33 | 23°57 | 16°53 | 19°21 | 19°23 | 22°55 | 28°22 | T 10 |
| W11 | 3 22 12 | 19° 4'53 | 26°35 | 7°45 | 29°55 | 18°59 | 29°18 | 16°34 | 9°34 | 23°59 | 16°54 | 19°21 | 19°20 | 23° 2 | 28°19 | W11 |
| T 12 | 3 26 9 | 20° 5'20 | 10°♂50 | 7° 7 | 1°♂6 | 19°24 | 29°24 | 16°33 | 9°34 | 24° 1 | 16°54 | 19°21 | 19°17 | 23° 9 | 28°17 | T 12 |
| F 13 | 3 30 6 | 21° 5'50 | 25°16 | 6°41 | 2°17 | 19°50 | 29°30 | 16°32 | 9°34 | 24° 3 | 16°54 | 19°21 | 19°14 | 23°15 | 28°14 | F 13 |
| S 14 | 3 34 2 | 22° 6'21 | 9°♂50 | 6°26 | 3°28 | 20°15 | 29°36 | 16°31 | 9°R34 | 24° 5 | 16°55 | 19°21 | 19°11 | 23°22 | 28°11 | S 14 |
| S 15 | 3 37 59 | 23° 6'54 | 24°25 | 6°D23 | 4°39 | 20°40 | 29°42 | 16°31 | 9°34 | 24° 7 | 16°55 | 19°22 | 19° 8 | 23°29 | 28° 8 | S 15 |
| M16 | 3 41 55 | 24° 7'29 | 8°♂58 | 6°31 | 5°50 | 21° 5 | 29°48 | 16°31 | 9°34 | 24° 9 | 16°56 | 19°22 | 19° 4 | 23°35 | 28° 5 | M16 |
| T 17 | 3 45 52 | 25° 8'06 | 23°21 | 6°49 | 7° 1 | 21°29 | 29°53 | 16°30 | 9°34 | 24°11 | 16°56 | 19°R22 | 19° 1 | 23°42 | 28° 2 | T 17 |
| W18 | 3 49 48 | 26° 8'44 | 7°♂29 | 7°17 | 8°12 | 21°53 | 29°58 | 16°30 | 9°34 | 24°13 | 16°57 | 19°22 | 18°58 | 23°49 | 27°59 | W18 |
| T 19 | 3 53 45 | 27° 9'23 | 21°18 | 7°53 | 9°23 | 22°16 | 0°♂4 | 16°D30 | 9°33 | 24°15 | 16°57 | 19°21 | 18°55 | 23°55 | 27°56 | T 19 |
| F 20 | 3 57 41 | 28°10'04 | 4°♂46 | 8°36 | 10°34 | 22°40 | 0° 9 | 16°30 | 9°33 | 24°17 | 16°58 | 19°20 | 18°52 | 24° 2 | 27°53 | F 20 |
| S 21 | 4 1 38 | 29°10'46 | 17°50 | 9°27 | 11°45 | 23° 3 | 0°13 | 16°30 | 9°33 | 24°19 | 16°58 | 19°19 | 18°49 | 24° 9 | 27°50 | S 21 |
| S 22 | 4 5 35 | 0°♂11'29 | 0°♂34 | 10°23 | 12°55 | 23°25 | 0°18 | 16°30 | 9°32 | 24°21 | 16°59 | 19°17 | 18°45 | 24°16 | 27°47 | S 22 |
| M23 | 4 9 31 | 1°12'13 | 12°58 | 11°24 | 14° 6 | 23°47 | 0°23 | 16°31 | 9°32 | 24°23 | 16°59 | 19°16 | 18°42 | 24°22 | 27°43 | M23 |
| T 24 | 4 13 28 | 2°12'59 | 25° 7 | 12°30 | 15°16 | 24° 9 | 0°27 | 16°31 | 9°31 | 24°25 | 17° 0 | 19°15 | 18°39 | 24°29 | 27°40 | T 24 |
| W25 | 4 17 24 | 3°13'45 | 7°♂6 | 13°39 | 16°26 | 24°31 | 0°31 | 16°32 | 9°31 | 24°27 | 17° 1 | 19°D15 | 18°36 | 24°36 | 27°37 | W25 |
| T 26 | 4 21 21 | 4°14'32 | 18°58 | 14°52 | 17°37 | 24°52 | 0°35 | 16°32 | 9°30 | 24°28 | 17° 1 | 19°16 | 18°33 | 24°42 | 27°33 | T 26 |
| F 27 | 4 25 17 | 5°15'20 | 0°♂49 | 16° 8 | 18°47 | 25°12 | 0°39 | 16°33 | 9°30 | 24°30 | 17° 2 | 19°17 | 18°29 | 24°49 | 27°30 | F 27 |
| S 28 | 4 29 14 | 6°16'09 | 12°44 | 17°26 | 19°57 | 25°33 | 0°42 | 16°34 | 9°29 | 24°32 | 17° 3 | 19°18 | 18°26 | 24°56 | 27°26 | S 28 |
| S 29 | 4 33 10 | 7°16'59 | 24°45 | 18°46 | 21° 6 | 25°53 | 0°46 | 16°35 | 9°28 | 24°34 | 17° 4 | 19°20 | 18°23 | 25° 2 | 27°23 | S 29 |
| M30 | 4 37 7 | 8°17'50 | 6°♂58 | 20°♂8 | 22°♂16 | 26°♂12 | 0°♂49 | 16°♂36 | 9°♂27 | 24°♂36 | 17°♂4 | 19°♂21 | 18°♂20 | 25°♂9 | 27°♂19 | M30 |

| Day | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | |
| S 1 | 14s31 | 9n11 | 2n51 | 19s 7 | 1s37 | 24s49 | 1s54 | 18n 5 | 1n38 | 12n54 | 0n48 | 7s21 | 2s18 | 18n30 | 0n37 | S 1 |
| M 2 | 14 50 | 12 46 | 1 52 | 18 33 | 1 19 | 24 58 | 1 57 | 17 58 | 1 40 | 12 51 | 0 48 | 7 21 | 2 18 | 18 30 | 0 37 | M 2 |
| T 3 | 15 9 | 15 52 | 0 46 | 17 55 | 1 1 | 25 5 | 1 59 | 17 51 | 1 41 | 12 49 | 0 49 | 7 22 | 2 18 | 18 30 | 0 37 | T 3 |
| W 4 | 15 28 | 18 17 | 0s23 | 17 15 | 0 41 | 25 12 | 2 1 | 17 44 | 1 42 | 12 46 | 0 49 | 7 22 | 2 18 | 18 29 | 0 37 | W 4 |
| T 5 | 15 46 | 19 50 | 1 32 | 16 32 | 0 20 | 25 19 | 2 3 | 17 37 | 1 44 | 12 44 | 0 49 | 7 23 | 2 18 | 18 29 | 0 37 | T 5 |
| F 6 | 16 4 | 20 24 | 2 37 | 15 49 | 0n 0 | 25 25 | 2 5 | 17 30 | 1 45 | 12 42 | 0 49 | 7 23 | 2 18 | 18 29 | 0 38 | F 6 |
| S 7 | 16 22 | 19 52 | 3 35 | 15 5 | 0 21 | 25 29 | 2 7 | 17 23 | 1 47 | 12 40 | 0 50 | 7 23 | 2 17 | 18 29 | 0 38 | S 7 |
| S 8 | 16 40 | 18 14 | 4 23 | 14 24 | 0 40 | 25 34 | 2 9 | 17 16 | 1 48 | 12 37 | 0 50 | 7 24 | 2 17 | 18 29 | 0 38 | S 8 |
| M 9 | 16 57 | 15 34 | 4 57 | 13 45 | 0 59 | 25 37 | 2 11 | 17 10 | 1 50 | 12 35 | 0 50 | 7 24 | 2 17 | 18 29 | 0 38 | M 9 |
| T 10 | 17 14 | 12 1 | 5 15 | 13 10 | 1 16 | 25 40 | 2 12 | 17 3 | 1 51 | 12 33 | 0 50 | 7 24 | 2 17 | 18 29 | 0 38 | T 10 |
| W11 | 17 31 | 7 44 | 5 15 | 12 40 | 1 32 | 25 42 | 2 14 | 16 56 | 1 53 | 12 31 | 0 50 | 7 25 | 2 17 | 18 29 | 0 38 | W11 |
| T 12 | 17 47 | 2 57 | 4 56 | 12 15 | 1 45 | 25 43 | 2 16 | 16 49 | 1 54 | 12 29 | 0 51 | 7 25 | 2 17 | 18 29 | 0 38 | T 12 |
| F 13 | 18 3 | 2s 3 | 4 17 | 11 55 | 1 57 | 25 44 | 2 17 | 16 43 | 1 56 | 12 27 | 0 51 | 7 25 | 2 16 | 18 29 | 0 38 | F 13 |
| S 14 | 18 19 | 7 0 | 3 22 | 11 42 | 2 6 | 25 44 | 2 19 | 16 36 | 1 57 | 12 25 | 0 51 | 7 25 | 2 16 | 18 29 | 0 38 | S 14 |
| S 15 | 18 34 | 11 33 | 2 14 | 11 33 | 2 14 | 25 43 | 2 20 | 16 30 | 1 59 | 12 24 | 0 51 | 7 25 | 2 16 | 18 29 | 0 38 | S 15 |
| M16 | 18 49 | 15 24 | 0 57 | 11 31 | 2 20 | 25 41 | 2 21 | 16 23 | 2 1 | 12 22 | 0 52 | 7 25 | 2 16 | 18 29 | 0 38 | M16 |
| T 17 | 19 4 | 18 16 | 0n22 | 11 33 | 2 24 | 25 39 | 2 22 | 16 17 | 2 2 | 12 20 | 0 52 | 7 25 | 2 16 | 18 29 | 0 38 | T 17 |
| W18 | 19 19 | 19 57 | 1 39 | 11 39 | 2 26 | 25 36 | 2 23 | 16 11 | 2 4 | 12 18 | 0 52 | 7 25 | 2 15 | 18 29 | 0 38 | W18 |
| T 19 | 19 33 | 20 23 | 2 48 | 11 50 | 2 27 | 25 32 | 2 24 | 16 5 | 2 5 | 12 17 | 0 52 | 7 25 | 2 15 | 18 29 | 0 38 | T 19 |
| F 20 | 19 46 | 19 37 | 3 46 | 12 4 | 2 27 | 25 27 | 2 25 | 15 59 | 2 7 | 12 15 | 0 53 | 7 24 | 2 15 | 18 29 | 0 38 | F 20 |
| S 21 | 20 0 | 17 48 | 4 30 | 12 21 | 2 26 | 25 22 | 2 26 | 15 53 | 2 9 | 12 14 | 0 53 | 7 24 | 2 15 | 18 30 | 0 38 | S 21 |
| S 22 | 20 13 | 15 10 | 5 0 | 12 40 | 2 24 | 25 16 | 2 26 | 15 47 | 2 10 | 12 12 | 0 53 | 7 24 | 2 15 | 18 30 | 0 38 | S 22 |
| M23 | 20 25 | 11 54 | 5 15 | 13 2 | 2 21 | 25 9 | 2 27 | 15 41 | 2 12 | 12 11 | 0 53 | 7 24 | 2 15 | 18 30 | 0 38 | M23 |
| T 24 | 20 38 | 8 12 | 5 15 | 13 26 | 2 17 | 25 2 | 2 27 | 15 35 | 2 14 | 12 10 | 0 54 | 7 23 | 2 14 | 18 30 | 0 38 | T 24 |
| W25 | 20 49 | 4 15 | 5 2 | 13 51 | 2 13 | 24 54 | 2 28 | 15 30 | 2 16 | 12 8 | 0 54 | 7 23 | 2 14 | 18 30 | 0 38 | W25 |
| T 26 | 21 1 | 0 9 | 4 35 | 14 17 | 2 8 | 24 45 | 2 28 | 15 24 | 2 17 | 12 7 | 0 54 | 7 23 | 2 14 | 18 30 | 0 38 | T 26 |
| F 27 | 21 12 | 3n57 | 3 57 | 14 44 | 2 2 | 24 36 | 2 28 | 15 19 | 2 19 | 12 6 | 0 54 | 7 22 | 2 14 | 18 31 | 0 38 | F 27 |
| S 28 | 21 23 | 7 56 | 3 9 | 15 11 | 1 56 | 24 25 | 2 28 | 15 14 | 2 21 | 12 5 | 0 55 | 7 22 | 2 14 | 18 31 | 0 38 | S 28 |
| S 29 | 21 33 | 11 38 | 2 12 | 15 39 | 1 50 | 24 15 | 2 28 | 15 9 | 2 23 | 12 4 | 0 55 | 7 21 | 2 13 | 18 31 | 0 38 | S 29 |
| M30 | 21s43 | 14n55 | 1n 8 | 16s 8 | 1n44 | 24s 3 | 2s28 | 15n 4 | 2n25 | 12n 3 | 0n55 | 7s20 | 2s13 | 18n31 | 0n38 | M30 |

Julian Day Number = 2374783.5, Delta T = 21.67 sec
 Ecliptic obliquity = 23°27'54, Nutation = 0°00'12, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 21°48'21, Lahiri = 20°55'22Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1789
geocentric

DECEMBER 1789

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|----------|-------|-------|-------|-------|-------|-------|------|-------|-------|--------|-------|-------|-------|------|
| T 1 | 4 41 4 | 9♌18'42 | 19♋25 | 21♍32 | 23♎26 | 26♊31 | 0♍52 | 16♋37 | 9♍26 | 24♎37 | 17♏5 | 19♍22 | 18♍17 | 25♋16 | 27♍16 | T 1 |
| W 2 | 4 45 0 | 10°19'36 | 2♊8 | 22°57 | 24°35 | 26°50 | 0°55 | 16°38 | 9♊26 | 24°39 | 17°6 | 19♍21 | 18°14 | 25°22 | 27♊12 | W 2 |
| T 3 | 4 48 57 | 11°20'30 | 15°6 | 24°23 | 25°45 | 27°8 | 0°58 | 16°40 | 9°25 | 24°41 | 17°7 | 19°19 | 18°10 | 25°29 | 27°8 | T 3 |
| F 4 | 4 52 53 | 12°21'25 | 28°21 | 25°50 | 26°54 | 27°26 | 1°0 | 16°41 | 9°24 | 24°42 | 17°8 | 19°17 | 18°7 | 25°36 | 27°5 | F 4 |
| S 5 | 4 56 50 | 13°22'21 | 11♏51 | 27°17 | 28°3 | 27°43 | 1°3 | 16°43 | 9°22 | 24°44 | 17°9 | 19°13 | 18°4 | 25°43 | 27°1 | S 5 |
| S 6 | 5 0 46 | 14°23'18 | 25°33 | 28°46 | 29°12 | 28°0 | 1°5 | 16°45 | 9°21 | 24°46 | 17°10 | 19°9 | 18°1 | 25°49 | 26°57 | S 6 |
| M 7 | 5 4 43 | 15°24'16 | 9♊25 | 0♌15 | 0♏21 | 28°16 | 1°7 | 16°46 | 9°20 | 24°47 | 17°11 | 19°6 | 17°58 | 25°56 | 26°53 | M 7 |
| T 8 | 5 8 39 | 16°25'16 | 23°25 | 1°45 | 1°30 | 28°32 | 1°9 | 16°48 | 9°19 | 24°49 | 17°12 | 19°3 | 17°55 | 26°3 | 26°49 | T 8 |
| W 9 | 5 12 36 | 17°26'16 | 7♍31 | 3°15 | 2°38 | 28°48 | 1°10 | 16°50 | 9°18 | 24°50 | 17°13 | 19°1 | 17°51 | 26°9 | 26°46 | W 9 |
| T 10 | 5 16 33 | 18°27'18 | 21°39 | 4°45 | 3°46 | 29°3 | 1°12 | 16°53 | 9°16 | 24°52 | 17°14 | 19°D 1 | 17°48 | 26°16 | 26°42 | T 10 |
| F 11 | 5 20 29 | 19°28'21 | 5♎49 | 6°16 | 4°55 | 29°17 | 1°13 | 16°55 | 9°15 | 24°53 | 17°15 | 19°1 | 17°45 | 26°23 | 26°38 | F 11 |
| S 12 | 5 24 26 | 20°29'24 | 19°59 | 7°47 | 6°3 | 29°31 | 1°14 | 16°57 | 9°14 | 24°55 | 17°16 | 19°3 | 17°42 | 26°29 | 26°34 | S 12 |
| S 13 | 5 28 22 | 21°30'29 | 4♍7 | 9°18 | 7°11 | 29°44 | 1°15 | 17°0 | 9°12 | 24°56 | 17°17 | 19°4 | 17°39 | 26°36 | 26°30 | S 13 |
| M14 | 5 32 19 | 22°31'35 | 18°10 | 10°50 | 8°18 | 29°57 | 1°15 | 17°2 | 9°11 | 24°58 | 17°18 | 19°R 5 | 17°35 | 26°43 | 26°26 | M14 |
| T 15 | 5 36 15 | 23°32'41 | 2♌5 | 12°21 | 9°26 | 0♍9 | 1°16 | 17°5 | 9°9 | 24°59 | 17°19 | 19°4 | 17°32 | 26°50 | 26°22 | T 15 |
| W16 | 5 40 12 | 24°33'48 | 15°51 | 13°53 | 10°33 | 0°20 | 1°16 | 17°7 | 9°7 | 25°0 | 17°21 | 19°2 | 17°29 | 26°56 | 26°18 | W16 |
| T 17 | 5 44 8 | 25°34'56 | 29°23 | 15°26 | 11°40 | 0°31 | 1°R16 | 17°10 | 9°6 | 25°2 | 17°22 | 18°57 | 17°26 | 27°3 | 26°14 | T 17 |
| F 18 | 5 48 5 | 26°36'04 | 12♎40 | 16°58 | 12°47 | 0°42 | 1°16 | 17°13 | 9°4 | 25°3 | 17°23 | 18°51 | 17°23 | 27°10 | 26°11 | F 18 |
| S 19 | 5 52 2 | 27°37'13 | 25°39 | 18°31 | 13°54 | 0°52 | 1°15 | 17°16 | 9°2 | 25°4 | 17°24 | 18°44 | 17°20 | 27°16 | 26°7 | S 19 |
| S 20 | 5 55 58 | 28°38'22 | 8♏20 | 20°4 | 15°0 | 1°1 | 1°15 | 17°19 | 9°1 | 25°6 | 17°25 | 18°37 | 17°16 | 27°23 | 26°3 | S 20 |
| M21 | 5 59 55 | 29°39'31 | 20°45 | 21°37 | 16°7 | 1°9 | 1°14 | 17°23 | 8°59 | 25°7 | 17°27 | 18°30 | 17°13 | 27°30 | 25°59 | M21 |
| T 22 | 6 3 51 | 0♎40'40 | 2♋55 | 23°10 | 17°13 | 1°17 | 1°13 | 17°26 | 8°57 | 25°8 | 17°28 | 18°25 | 17°10 | 27°36 | 25°55 | T 22 |
| W23 | 6 7 48 | 1°41'50 | 14°54 | 24°43 | 18°19 | 1°24 | 1°12 | 17°29 | 8°55 | 25°9 | 17°29 | 18°21 | 17°7 | 27°43 | 25°51 | W23 |
| T 24 | 6 11 44 | 2°42'59 | 26°46 | 26°17 | 19°24 | 1°31 | 1°11 | 17°33 | 8°53 | 25°10 | 17°31 | 18°19 | 17°4 | 27°50 | 25°47 | T 24 |
| F 25 | 6 15 41 | 3°44'08 | 8♋36 | 27°51 | 20°29 | 1°37 | 1°9 | 17°36 | 8°51 | 25°11 | 17°32 | 18°D19 | 17°0 | 27°56 | 25°43 | F 25 |
| S 26 | 6 19 37 | 4°45'18 | 20°29 | 29°26 | 21°34 | 1°42 | 1°7 | 17°40 | 8°49 | 25°12 | 17°33 | 18°20 | 16°57 | 28°3 | 25°39 | S 26 |
| S 27 | 6 23 34 | 5°46'27 | 2♋31 | 1♎0 | 22°39 | 1°46 | 1°5 | 17°44 | 8°47 | 25°13 | 17°35 | 18°22 | 16°54 | 28°10 | 25°35 | S 27 |
| M28 | 6 27 31 | 6°47'36 | 14°46 | 2°35 | 23°44 | 1°50 | 1°3 | 17°48 | 8°45 | 25°14 | 17°36 | 18°R23 | 16°51 | 28°16 | 25°32 | M28 |
| T 29 | 6 31 27 | 7°48'45 | 27°18 | 4°10 | 24°48 | 1°53 | 1°1 | 17°52 | 8°43 | 25°15 | 17°38 | 18°22 | 16°48 | 28°23 | 25°28 | T 29 |
| W30 | 6 35 24 | 8°49'54 | 10♊12 | 5°46 | 25°52 | 1°55 | 0°59 | 17°56 | 8°41 | 25°16 | 17°39 | 18°20 | 16°45 | 28°30 | 25°24 | W30 |
| T 31 | 6 39 20 | 9♎51'03 | 23♊27 | 7♎22 | 26♏55 | 1♍57 | 0♍56 | 18♋0 | 8♊39 | 25♎17 | 17♏40 | 18♍15 | 16♍41 | 28♋37 | 25♊20 | T 31 |

| Day | ☉ | ☾ | ♀ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|------|------|-------|------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat |
| T 1 | 21s52 | 17n36 | 0s 0 | 16s36 | 1n37 | 23s51 | 2s28 | 14n59 | 2n26 | 12n 2 | 0n55 | 7s20 | 2s13 | 18n32 | 0n39 | 7s59 | 1n41 | 24s14 | 8s57 |
| W 2 | 22 1 | 19 28 | 1 10 | 17 4 | 1 30 | 23 38 | 2 27 | 14 54 | 2 28 | 12 2 | 0 56 | 7 19 | 2 13 | 18 32 | 0 39 | 8 0 | 1 41 | 24 14 | 8 57 |
| T 3 | 22 10 | 20 22 | 2 17 | 17 32 | 1 23 | 23 25 | 2 27 | 14 50 | 2 30 | 12 1 | 0 56 | 7 18 | 2 13 | 18 32 | 0 39 | 8 0 | 1 41 | 24 13 | 8 57 |
| F 4 | 22 18 | 20 9 | 3 18 | 18 0 | 1 16 | 23 11 | 2 26 | 14 45 | 2 32 | 12 0 | 0 56 | 7 18 | 2 12 | 18 33 | 0 39 | 8 1 | 1 41 | 24 13 | 8 56 |
| S 5 | 22 26 | 18 47 | 4 10 | 18 28 | 1 9 | 22 56 | 2 25 | 14 41 | 2 34 | 12 0 | 0 56 | 7 17 | 2 12 | 18 33 | 0 39 | 8 1 | 1 41 | 24 12 | 8 56 |
| S 6 | 22 33 | 16 20 | 4 48 | 18 54 | 1 1 | 22 41 | 2 24 | 14 37 | 2 36 | 11 59 | 0 57 | 7 16 | 2 12 | 18 33 | 0 39 | 8 2 | 1 41 | 24 12 | 8 56 |
| M 7 | 22 40 | 12 57 | 5 9 | 19 21 | 0 54 | 22 26 | 2 23 | 14 33 | 2 38 | 11 59 | 0 57 | 7 15 | 2 12 | 18 34 | 0 39 | 8 3 | 1 41 | 24 11 | 8 56 |
| T 8 | 22 46 | 8 48 | 5 13 | 19 46 | 0 47 | 22 9 | 2 22 | 14 29 | 2 40 | 11 58 | 0 57 | 7 14 | 2 12 | 18 34 | 0 39 | 8 3 | 1 41 | 24 11 | 8 56 |
| W 9 | 22 52 | 4 9 | 4 57 | 20 11 | 0 39 | 21 52 | 2 21 | 14 26 | 2 42 | 11 58 | 0 57 | 7 13 | 2 11 | 18 34 | 0 39 | 8 4 | 1 41 | 24 11 | 8 56 |
| T 10 | 22 58 | 0s44 | 4 24 | 20 35 | 0 32 | 21 35 | 2 19 | 14 22 | 2 44 | 11 58 | 0 58 | 7 12 | 2 11 | 18 35 | 0 39 | 8 4 | 1 41 | 24 10 | 8 55 |
| F 11 | 23 3 | 5 36 | 3 35 | 20 58 | 0 25 | 21 17 | 2 18 | 14 19 | 2 46 | 11 57 | 0 58 | 7 11 | 2 11 | 18 35 | 0 39 | 8 5 | 1 41 | 24 10 | 8 55 |
| S 12 | 23 7 | 10 10 | 2 33 | 21 21 | 0 17 | 20 58 | 2 16 | 14 16 | 2 48 | 11 57 | 0 58 | 7 10 | 2 11 | 18 35 | 0 39 | 8 5 | 1 41 | 24 9 | 8 55 |
| S 13 | 23 12 | 14 10 | 1 21 | 21 42 | 0 10 | 20 39 | 2 14 | 14 14 | 2 50 | 11 57 | 0 58 | 7 9 | 2 11 | 18 36 | 0 39 | 8 6 | 1 41 | 24 9 | 8 55 |
| M14 | 23 15 | 17 20 | 0 5 | 22 3 | 0 3 | 20 20 | 2 12 | 14 11 | 2 52 | 11 57 | 0 59 | 7 8 | 2 11 | 18 36 | 0 39 | 8 6 | 1 41 | 24 8 | 8 55 |
| T 15 | 23 18 | 19 27 | 1n10 | 22 22 | 0s 4 | 20 0 | 2 10 | 14 9 | 2 54 | 11 57 | 0 59 | 7 7 | 2 10 | 18 37 | 0 39 | 8 6 | 1 41 | 24 8 | 8 55 |
| W16 | 23 21 | 20 23 | 2 21 | 22 40 | 0 11 | 19 39 | 2 8 | 14 6 | 2 56 | 11 58 | 0 59 | 7 5 | 2 10 | 18 37 | 0 39 | 8 7 | 1 42 | 24 7 | 8 55 |
| T 17 | 23 23 | 20 6 | 3 22 | 22 58 | 0 18 | 19 19 | 2 5 | 14 5 | 2 58 | 11 58 | 0 59 | 7 4 | 2 10 | 18 38 | 0 39 | 8 7 | 1 42 | 24 7 | 8 55 |
| F 18 | 23 25 | 18 42 | 4 11 | 23 14 | 0 25 | 18 57 | 2 3 | 14 3 | 3 0 | 11 58 | 1 0 | 7 3 | 2 10 | 18 38 | 0 39 | 8 8 | 1 42 | 24 6 | 8 54 |
| S 19 | 23 27 | 16 22 | 4 45 | 23 29 | 0 31 | 18 35 | 2 0 | 14 1 | 3 2 | 11 58 | 1 0 | 7 1 | 2 10 | 18 39 | 0 39 | 8 8 | 1 42 | 24 6 | 8 54 |
| S 20 | 23 27 | 13 17 | 5 5 | 23 43 | 0 38 | 18 13 | 1 57 | 14 0 | 3 5 | 11 59 | 1 0 | 7 0 | 2 9 | 18 39 | 0 39 | 8 9 | 1 42 | 24 5 | 8 54 |
| M21 | 23 28 | 9 42 | 5 9 | 23 56 | 0 44 | 17 51 | 1 54 | 13 59 | 3 7 | 11 59 | 1 1 | 6 59 | 2 9 | 18 40 | 0 39 | 8 9 | 1 42 | 24 5 | 8 54 |
| T 22 | 23 28 | 5 47 | 5 0 | 24 7 | 0 50 | 17 28 | 1 51 | 13 58 | 3 9 | 12 0 | 1 1 | 6 57 | 2 9 | 18 40 | 0 39 | 8 9 | 1 42 | 24 4 | 8 54 |
| W23 | 23 27 | 1 41 | 4 37 | 24 18 | 0 56 | 17 4 | 1 48 | 13 58 | 3 11 | 12 1 | 1 1 | 6 56 | 2 9 | 18 41 | 0 39 | 8 10 | 1 42 | 24 4 | 8 54 |
| T 24 | 23 26 | 2n26 | 4 3 | 24 27 | 1 2 | 16 40 | 1 45 | 13 57 | 3 13 | 12 1 | 1 1 | 6 54 | 2 9 | 18 41 | 0 39 | 8 10 | 1 42 | 24 3 | 8 54 |
| F 25 | 23 25 | 6 27 | 3 18 | 24 34 | 1 8 | 16 16 | 1 41 | 13 57 | 3 16 | 12 2 | 1 2 | 6 52 | 2 9 | 18 42 | 0 39 | 8 10 | 1 42 | 24 3 | 8 54 |
| S 26 | 23 23 | 10 15 | 2 25 | 24 41 | 1 13 | 15 52 | 1 37 | 13 58 | 3 18 | 12 3 | 1 2 | 6 51 | 2 8 | 18 42 | 0 39 | 8 11 | 1 42 | 24 2 | 8 54 |
| S 27 | 23 20 | 13 41 | 1 25 | 24 46 | 1 18 | 15 27 | 1 34 | 13 58 | 3 20 | 12 4 | 1 2 | 6 49 | 2 8 | 18 43 | 0 39 | 8 11 | 1 42 | 24 2 | 8 53 |
| M28 | 23 17 | 16 36 | 0 20 | 24 50 | 1 23 | 15 2 | 1 30 | 13 59 | 3 22 | 12 5 | 1 2 | 6 48 | 2 8 | 18 44 | 0 39 | 8 11 | 1 42 | 24 1 | 8 53 |
| T 29 | 23 14 | 18 48 | 0s48 | 24 52 | 1 28 | 14 37 | 1 26 | 14 0 | 3 25 | 12 6 | 1 3 | 6 46 | 2 8 | 18 44 | 0 39 | 8 12 | 1 42 | 24 0 | 8 53 |
| W30 | 23 10 | 20 7 | 1 55 | 24 53 | 1 33 | 14 11 | 1 21 | 14 1 | 3 27 | 12 7 | 1 3 | 6 44 | 2 8 | 18 45 | 0 39 | 8 12 | 1 42 | 24 0 | 8 53 |
| T 31 | 23s 6 | 20n21 | 2s57 | 24s53 | 1s37 | 13s45 | 1s17 | 14n 3 | 3n29 | 12n 8 | 1n 3 | 6s42 | 2s 8 | 18n45 | 0n39 | 8s12 | 1n42 | 23s59 | 8s53 |

Julian Day Number = 2374813.5, Delta T = 21.66 sec
Ecliptic obliquity = 23°27'53, Nutation = 0°00'12, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 21°48'25, Lahiri = 20°55'26Greg. Calendar