# Astrodienst Ephemeris Tables

## for the year 1686

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 AG, Dammstr. 23, CH-8702 Zollikon / Zürich, www.astro.com / order@astro.com

# ASTRODIENST EPHEMERIS for the year 1686
# geocentric

## JANUARY 1686 GC

**00:00 UT**

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T 1 | 6 44 0 | 11♑ 7'22 | 4♈23 | 24♑50 | 25♒ 3 | 12♓32 | 16♏35 | 0♎ 5 | 6°R31 | 2♓ 8 | 20°R12 | 19°R 7 | 18♊ 5 | 26♊51 | 7°R48 | T 1 |
| W 2 | 6 47 56 | 12° 8'32 | 17° 9 | 26°25 | 26°13 | 13°16 | 16°45 | 0° 6 | 6♉30 | 2° 9 | 20♋11 | 19°D 7 | 18° 2 | 26°57 | 7♉47 | W 2 |
| T 3 | 6 51 53 | 13° 9'42 | 29°35 | 28° 1 | 27°22 | 14° 1 | 16°55 | 0° 6 | 6°29 | 2°11 | 20°10 | 19♊ 8 | 17°59 | 27° 4 | 7°46 | T 3 |
| F 4 | 6 55 50 | 14°10'51 | 11♉44 | 29°35 | 28°31 | 14°45 | 17° 5 | 0° 7 | 6°29 | 2°12 | 20° 9 | 19° 9 | 17°56 | 27°11 | 7°46 | F 4 |
| S 5 | 6 59 46 | 15°12'00 | 23°42 | 1♒ 8 | 29°40 | 15°30 | 17°14 | 0° 7 | 6°28 | 2°14 | 20° 7 | 19°11 | 17°53 | 27°17 | 7°45 | S 5 |
| S 6 | 7 3 43 | 16°13'09 | 5♊33 | 2°39 | 0♓49 | 16°14 | 17°24 | 0° 8 | 6°28 | 2°16 | 20° 6 | 19°13 | 17°49 | 27°24 | 7°44 | S 6 |
| M 7 | 7 7 39 | 17°14'17 | 17°20 | 4° 9 | 1°58 | 16°59 | 17°33 | 0° 8 | 6°27 | 2°18 | 20° 5 | 19°R14 | 17°46 | 27°31 | 7°44 | M 7 |
| T 8 | 7 11 36 | 18°15'24 | 29° 7 | 5°36 | 3° 7 | 17°43 | 17°43 | 0° 8 | 6°27 | 2°19 | 20° 3 | 19°13 | 17°43 | 27°37 | 7°43 | T 8 |
| W 9 | 7 15 32 | 19°16'31 | 10♋57 | 7° 1 | 4°15 | 18°27 | 17°52 | 0°R 8 | 6°27 | 2°21 | 20° 2 | 19°11 | 17°40 | 27°44 | 7°43 | W 9 |
| T 10 | 7 19 29 | 20°17'38 | 22°51 | 8°23 | 5°23 | 19°12 | 18° 1 | 0° 8 | 6°27 | 2°23 | 20° 1 | 19° 8 | 17°37 | 27°50 | 7°42 | T 10 |
| F 11 | 7 23 25 | 21°18'44 | 4♌52 | 9°41 | 6°31 | 19°56 | 18°10 | 0° 8 | 6°26 | 2°25 | 19°59 | 19° 2 | 17°34 | 27°57 | 7°42 | F 11 |
| S 12 | 7 27 22 | 22°19'49 | 17° 1 | 10°54 | 7°39 | 20°41 | 18°19 | 0° 7 | 6°26 | 2°26 | 19°58 | 18°56 | 17°30 | 28° 4 | 7°42 | S 12 |
| S 13 | 7 31 19 | 23°20'54 | 29°20 | 12° 3 | 8°46 | 21°25 | 18°28 | 0° 7 | 6°26 | 2°28 | 19°57 | 18°50 | 17°27 | 28°10 | 7°41 | S 13 |
| M14 | 7 35 15 | 24°21'59 | 11♍50 | 13° 5 | 9°54 | 22° 9 | 18°37 | 0° 6 | 6°D26 | 2°30 | 19°56 | 18°44 | 17°24 | 28°17 | 7°41 | M14 |
| T 15 | 7 39 12 | 25°23'03 | 24°33 | 14° 1 | 11° 1 | 22°53 | 18°45 | 0° 6 | 6°26 | 2°32 | 19°54 | 18°39 | 17°21 | 28°24 | 7°41 | T 15 |
| W16 | 7 43 8 | 26°24'07 | 7♎30 | 14°50 | 12° 8 | 23°38 | 18°54 | 0° 5 | 6°26 | 2°34 | 19°53 | 18°35 | 17°18 | 28°30 | 7°D41 | W16 |
| T 17 | 7 47 5 | 27°25'10 | 20°44 | 15°30 | 13°15 | 24°22 | 19° 2 | 0° 4 | 6°27 | 2°36 | 19°52 | 18°34 | 17°15 | 28°37 | 7°41 | T 17 |
| F 18 | 7 51 1 | 28°26'13 | 4♏17 | 16° 0 | 14°21 | 25° 6 | 19°10 | 0° 3 | 6°27 | 2°38 | 19°50 | 18°D34 | 17°11 | 28°44 | 7°41 | F 18 |
| S 19 | 7 54 58 | 29°27'15 | 18°11 | 16°21 | 15°27 | 25°50 | 19°18 | 0° 2 | 6°27 | 2°40 | 19°49 | 18°35 | 17° 8 | 28°50 | 7°41 | S 19 |
| S 20 | 7 58 54 | 0♒28'17 | 2♐25 | 16°R31 | 16°33 | 26°34 | 19°26 | 0° 1 | 6°27 | 2°42 | 19°48 | 18°36 | 17° 5 | 28°57 | 7°41 | S 20 |
| M21 | 8 2 51 | 1°29'19 | 16°59 | 16°30 | 17°39 | 27°19 | 19°34 | 29♍59 | 6°28 | 2°44 | 19°46 | 18°R37 | 17° 2 | 29° 4 | 7°42 | M21 |
| T 22 | 8 6 48 | 2°30'20 | 1♑49 | 16°17 | 18°45 | 28° 3 | 19°42 | 29°58 | 6°28 | 2°46 | 19°45 | 18°36 | 16°59 | 29°10 | 7°42 | T 22 |
| W23 | 8 10 44 | 3°31'20 | 16°49 | 15°53 | 19°50 | 28°47 | 19°49 | 29°57 | 6°28 | 2°48 | 19°44 | 18°33 | 16°55 | 29°17 | 7°43 | W23 |
| T 24 | 8 14 41 | 4°32'19 | 1♒51 | 15°18 | 20°55 | 29°31 | 19°57 | 29°55 | 6°29 | 2°50 | 19°43 | 18°28 | 16°52 | 29°24 | 7°43 | T 24 |
| F 25 | 8 18 37 | 5°33'17 | 16°45 | 14°33 | 21°59 | 0♈15 | 20° 4 | 29°54 | 6°30 | 2°52 | 19°41 | 18°21 | 16°49 | 29°30 | 7°44 | F 25 |
| S 26 | 8 22 34 | 6°34'14 | 1♓23 | 13°38 | 23° 4 | 0°59 | 20°11 | 29°52 | 6°30 | 2°54 | 19°40 | 18°13 | 16°46 | 29°37 | 7°44 | S 26 |
| S 27 | 8 26 30 | 7°35'10 | 15°38 | 12°37 | 24° 8 | 1°43 | 20°18 | 29°50 | 6°31 | 2°56 | 19°39 | 18° 5 | 16°43 | 29°44 | 7°45 | S 27 |
| M28 | 8 30 27 | 8°36'05 | 29°25 | 11°29 | 25°11 | 2°27 | 20°25 | 29°48 | 6°32 | 2°58 | 19°38 | 17°58 | 16°40 | 29°50 | 7°46 | M28 |
| T 29 | 8 34 23 | 9°36'58 | 12♈44 | 10°17 | 26°15 | 3°11 | 20°32 | 29°46 | 6°32 | 3° 0 | 19°36 | 17°52 | 16°36 | 29°57 | 7°46 | T 29 |
| W30 | 8 38 20 | 10°37'50 | 25°36 | 9° 4 | 27°18 | 3°55 | 20°38 | 29°44 | 6°33 | 3° 3 | 19°35 | 17°49 | 16°33 | 0♋ 3 | 7°47 | W30 |
| T 31 | 8 42 17 | 11♒38'40 | 8♉ 5 | 7♒51 | 28♓21 | 4♈39 | 20♏45 | 29♍41 | 6♉34 | 3♓ 5 | 19♋34 | 17°D48 | 16♊30 | 0♋10 | 7♉48 | T 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 1 | 2s55 | 5s 5 | 23s12 | 2s 2 | 14s42 | 1s36 | 7s34 | 0s45 | 15s50 | 1n 2 | 2n 4 | 2n17 | 13n18 | 0s26 | 11s26 | 0s45 | 23n11 | 1n14 | 23n 2 | 22n57 | 24n14 | 12n27 | 1s47 |
| W 2 | 22 56 | 2n27 | 4 39 | 22 51 | 1 59 | 14 16 | 1 33 | 7 16 | 0 44 | 15 53 | 1 2 | 2 4 | 2 18 | 13 18 | 0 26 | 11 26 | 0 45 | 23 11 | 1 14 | 23 2 | 22 56 | 24 15 | 12 26 | 1 47 |
| T 3 | 22 50 | 7 35 | 4 1 | 22 28 | 1 55 | 13 49 | 1 30 | 6 58 | 0 43 | 15 55 | 1 2 | 2 4 | 2 18 | 13 18 | 0 26 | 11 25 | 0 45 | 23 11 | 1 14 | 23 2 | 22 56 | 24 16 | 12 26 | 1 47 |
| F 4 | 22 43 | 12 20 | 3 12 | 22 4 | 1 50 | 13 22 | 1 27 | 6 40 | 0 42 | 15 58 | 1 2 | 2 4 | 2 18 | 13 18 | 0 26 | 11 25 | 0 45 | 23 11 | 1 14 | 23 2 | 22 56 | 24 17 | 12 26 | 1 47 |
| S 5 | 22 37 | 16 32 | 2 16 | 21 39 | 1 45 | 12 55 | 1 24 | 6 21 | 0 41 | 16 1 | 1 2 | 2 4 | 2 19 | 13 18 | 0 26 | 11 24 | 0 45 | 23 12 | 1 14 | 23 2 | 22 56 | 24 18 | 12 26 | 1 47 |
| S 6 | 22 30 | 20 2 | 1 15 | 21 12 | 1 39 | 12 28 | 1 21 | 6 3 | 0 40 | 16 3 | 1 3 | 2 4 | 2 19 | 13 18 | 0 26 | 11 23 | 0 45 | 23 12 | 1 14 | 23 2 | 22 55 | 24 19 | 12 25 | 1 47 |
| M 7 | 22 22 | 22 42 | 0 10 | 20 45 | 1 32 | 12 0 | 1 18 | 5 45 | 0 39 | 16 6 | 1 3 | 2 5 | 2 19 | 13 17 | 0 26 | 11 23 | 0 45 | 23 12 | 1 14 | 23 3 | 22 55 | 24 20 | 12 25 | 1 47 |
| T 8 | 22 14 | 24 23 | 0n54 | 20 16 | 1 24 | 11 32 | 1 14 | 5 27 | 0 38 | 16 8 | 1 3 | 2 5 | 2 20 | 13 17 | 0 26 | 11 22 | 0 45 | 23 12 | 1 15 | 23 3 | 22 55 | 24 21 | 12 25 | 1 47 |
| W 9 | 22 6 | 24 58 | 1 56 | 19 46 | 1 16 | 11 4 | 1 11 | 5 8 | 0 37 | 16 11 | 1 3 | 2 5 | 2 20 | 13 17 | 0 26 | 11 21 | 0 45 | 23 13 | 1 15 | 23 2 | 22 54 | 24 22 | 12 25 | 1 47 |
| T 10 | 21 57 | 24 24 | 2 54 | 19 16 | 1 6 | 10 35 | 1 7 | 4 50 | 0 36 | 16 13 | 1 3 | 2 5 | 2 20 | 13 17 | 0 26 | 11 21 | 0 45 | 23 13 | 1 15 | 23 2 | 22 54 | 24 23 | 12 25 | 1 47 |
| F 11 | 21 47 | 22 42 | 3 44 | 18 45 | 0 56 | 10 7 | 1 3 | 4 31 | 0 35 | 16 16 | 1 3 | 2 6 | 2 20 | 13 17 | 0 26 | 11 20 | 0 45 | 23 13 | 1 15 | 23 2 | 22 54 | 24 24 | 12 25 | 1 47 |
| S 12 | 21 38 | 19 58 | 4 25 | 18 14 | 0 44 | 9 38 | 0 59 | 4 13 | 0 34 | 16 18 | 1 3 | 2 6 | 2 21 | 13 17 | 0 26 | 11 19 | 0 45 | 23 14 | 1 15 | 23 1 | 22 54 | 24 25 | 12 25 | 1 47 |
| S 13 | 21 27 | 16 18 | 4 54 | 17 43 | 0 32 | 9 9 | 0 55 | 3 55 | 0 33 | 16 20 | 1 3 | 2 7 | 2 21 | 13 17 | 0 26 | 11 19 | 0 45 | 23 14 | 1 15 | 23 1 | 22 53 | 24 26 | 12 25 | 1 47 |
| M14 | 21 17 | 11 53 | 5 9 | 17 12 | 0 18 | 8 40 | 0 51 | 3 36 | 0 32 | 16 23 | 1 3 | 2 7 | 2 21 | 13 17 | 0 26 | 11 18 | 0 45 | 23 14 | 1 15 | 23 0 | 22 53 | 24 27 | 12 25 | 1 47 |
| T 15 | 21 6 | 6 54 | 5 10 | 16 43 | 0 4 | 8 10 | 0 47 | 3 18 | 0 31 | 16 25 | 1 4 | 2 7 | 2 21 | 13 17 | 0 26 | 11 17 | 0 45 | 23 14 | 1 15 | 23 0 | 22 53 | 24 28 | 12 25 | 1 47 |
| W16 | 20 55 | 1 32 | 4 55 | 16 14 | 0n11 | 7 41 | 0 42 | 2 59 | 0 30 | 16 27 | 1 4 | 2 8 | 2 22 | 13 17 | 0 26 | 11 17 | 0 45 | 23 15 | 1 15 | 22 59 | 22 52 | 24 29 | 12 25 | 1 47 |
| T 17 | 20 43 | 4s 2 | 4 24 | 15 47 | 0 27 | 7 11 | 0 38 | 2 41 | 0 29 | 16 29 | 1 4 | 2 9 | 2 22 | 13 17 | 0 25 | 11 16 | 0 45 | 23 15 | 1 15 | 22 59 | 22 52 | 24 29 | 12 25 | 1 47 |
| F 18 | 20 31 | 9 33 | 3 38 | 15 22 | 0 44 | 6 41 | 0 33 | 2 22 | 0 28 | 16 31 | 1 4 | 2 9 | 2 22 | 13 17 | 0 25 | 11 15 | 0 45 | 23 15 | 1 15 | 22 59 | 22 52 | 24 30 | 12 25 | 1 47 |
| S 19 | 20 18 | 14 45 | 2 38 | 14 59 | 1 2 | 6 11 | 0 29 | 2 4 | 0 27 | 16 33 | 1 4 | 2 10 | 2 23 | 13 18 | 0 25 | 11 15 | 0 45 | 23 15 | 1 15 | 22 59 | 22 51 | 24 31 | 12 25 | 1 47 |
| S 20 | 20 5 | 19 16 | 1 27 | 14 39 | 1 19 | 5 41 | 0 24 | 1 45 | 0 26 | 16 35 | 1 4 | 2 11 | 2 23 | 13 18 | 0 25 | 11 14 | 0 45 | 23 16 | 1 15 | 22 59 | 22 51 | 24 32 | 12 25 | 1 47 |
| M21 | 19 52 | 22 42 | 0 9 | 14 22 | 1 37 | 5 11 | 0 19 | 1 27 | 0 25 | 16 37 | 1 4 | 2 11 | 2 23 | 13 18 | 0 25 | 11 13 | 0 45 | 23 16 | 1 15 | 22 59 | 22 51 | 24 33 | 12 25 | 1 47 |
| T 22 | 19 38 | 24 39 | 1s11 | 14 9 | 1 55 | 4 41 | 0 14 | 1 8 | 0 24 | 16 39 | 1 4 | 2 12 | 2 23 | 13 18 | 0 25 | 11 12 | 0 45 | 23 16 | 1 15 | 22 59 | 22 51 | 24 34 | 12 25 | 1 47 |
| W23 | 19 24 | 24 51 | 2 27 | 13 59 | 2 13 | 4 10 | 0 9 | 0 50 | 0 23 | 16 41 | 1 4 | 2 13 | 2 24 | 13 18 | 0 25 | 11 12 | 0 45 | 23 16 | 1 15 | 22 59 | 22 50 | 24 35 | 12 25 | 1 47 |
| T 24 | 19 10 | 23 14 | 3 32 | 13 54 | 2 30 | 3 40 | 0 4 | 0 31 | 0 22 | 16 43 | 1 5 | 2 14 | 2 24 | 13 18 | 0 25 | 11 11 | 0 45 | 23 17 | 1 16 | 22 59 | 22 50 | 24 36 | 12 25 | 1 47 |
| F 25 | 18 55 | 20 1 | 4 23 | 13 52 | 2 45 | 3 10 | 0n 1 | 0 13 | 0 21 | 16 45 | 1 5 | 2 15 | 2 24 | 13 19 | 0 25 | 11 10 | 0 45 | 23 17 | 1 16 | 22 58 | 22 50 | 24 37 | 12 26 | 1 47 |
| S 26 | 18 40 | 15 35 | 4 55 | 13 53 | 3 0 | 2 39 | 0 7 | 0n 5 | 0 20 | 16 47 | 1 5 | 2 16 | 2 25 | 13 19 | 0 25 | 11 9 | 0 45 | 23 17 | 1 16 | 22 57 | 22 49 | 24 38 | 12 26 | 1 47 |
| S 27 | 18 24 | 10 24 | 5 7 | 13 59 | 3 12 | 2 9 | 0 12 | 0 24 | 0 19 | 16 49 | 1 5 | 2 17 | 2 25 | 13 19 | 0 25 | 11 9 | 0 45 | 23 17 | 1 16 | 22 57 | 22 49 | 24 39 | 12 26 | 1 47 |
| M28 | 18 9 | 4 51 | 5 2 | 14 7 | 3 23 | 1 38 | 0 18 | 0 42 | 0 18 | 16 50 | 1 5 | 2 18 | 2 25 | 13 19 | 0 25 | 11 8 | 0 45 | 23 17 | 1 16 | 22 56 | 22 49 | 24 39 | 12 26 | 1 47 |
| T 29 | 17 52 | 0n45 | 4 39 | 14 19 | 3 31 | 1 8 | 0 24 | 1 0 | 0 17 | 16 52 | 1 5 | 2 19 | 2 25 | 13 20 | 0 25 | 11 7 | 0 45 | 23 18 | 1 16 | 22 56 | 22 48 | 24 40 | 12 27 | 1 47 |
| W30 | 17 36 | 6 8 | 4 4 | 14 32 | 3 36 | 0 38 | 0 29 | 1 19 | 0 16 | 16 53 | 1 5 | 2 20 | 2 26 | 13 20 | 0 25 | 11 6 | 0 45 | 23 18 | 1 16 | 22 55 | 22 48 | 24 41 | 12 27 | 1 47 |
| T 31 | 17s19 | 11n 7 | 3s17 | 14s48 | 3n40 | 0s 7 | 0n35 | 1n37 | 0s15 | 16s55 | 1n 5 | 2n21 | 2n26 | 13n20 | 0s25 | 11s 6 | 0s45 | 23n18 | 1n16 | 22n55 | 22n48 | 24n42 | 12n27 | 1s47 |

Julian Day Number = 2336859.5, Delta T = 20.39 sec
Ecliptic obliquity = 23°28'50, Nutation = - 0°00'16, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°21'26, Lahiri = 19°28'26Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1686
# geocentric

## FEBRUARY 1686 GC

**00:00 UT**

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F 1 | 8 46 13 | 12♒39'29 | 20♉15 | 6°R41 | 29♓23 | 5♈23 | 20♏51 | 29°R39 | 6♉35 | 3♓ 7 | 19°R33 | 17♊48 | 16♊27 | 0♋17 | 7♉49 | F 1 |
| S 2 | 8 50 10 | 13°40'16 | 2♊12 | 5♒34 | 0♈25 | 6° 6 | 20°57 | 29♏36 | 6°36 | 3° 9 | 19♋32 | 17°49 | 16°24 | 0°23 | 7°50 | S 2 |
| S 3 | 8 54 6 | 14°41'02 | 14° 1 | 4°33 | 1°26 | 6°50 | 21° 3 | 29°34 | 6°37 | 3°11 | 19°30 | 17°R50 | 16°21 | 0°30 | 7°51 | S 3 |
| M 4 | 8 58 3 | 15°41'47 | 25°47 | 3°39 | 2°28 | 7°34 | 21° 9 | 29°31 | 6°38 | 3°13 | 19°29 | 17°49 | 16°17 | 0°37 | 7°53 | M 4 |
| T 5 | 9 1 59 | 16°42'30 | 7♋35 | 2°51 | 3°28 | 8°18 | 21°14 | 29°28 | 6°39 | 3°16 | 19°28 | 17°47 | 16°14 | 0°43 | 7°54 | T 5 |
| W 6 | 9 5 56 | 17°43'11 | 19°29 | 2°12 | 4°28 | 9° 1 | 21°20 | 29°26 | 6°40 | 3°18 | 19°27 | 17°42 | 16°11 | 0°50 | 7°55 | W 6 |
| T 7 | 9 9 52 | 18°43'51 | 1♌31 | 1°41 | 5°28 | 9°45 | 21°25 | 29°23 | 6°42 | 3°20 | 19°26 | 17°35 | 16° 8 | 0°57 | 7°56 | T 7 |
| F 8 | 9 13 49 | 19°44'29 | 13°43 | 1°18 | 6°28 | 10°29 | 21°30 | 29°20 | 6°43 | 3°22 | 19°25 | 17°25 | 16° 5 | 1° 3 | 7°58 | F 8 |
| S 9 | 9 17 46 | 20°45'06 | 26° 7 | 1° 2 | 7°27 | 11°12 | 21°35 | 29°17 | 6°44 | 3°24 | 19°24 | 17°14 | 16° 1 | 1°10 | 7°59 | S 9 |
| S 10 | 9 21 42 | 21°45'41 | 8♍43 | 0°55 | 8°25 | 11°56 | 21°40 | 29°13 | 6°46 | 3°27 | 19°23 | 17° 2 | 15°58 | 1°17 | 8° 1 | S 10 |
| M11 | 9 25 39 | 22°46'15 | 21°31 | 0°D54 | 9°23 | 12°39 | 21°45 | 29°10 | 6°47 | 3°29 | 19°22 | 16°50 | 15°55 | 1°23 | 8° 3 | M11 |
| T 12 | 9 29 35 | 23°46'48 | 4♎31 | 1° 1 | 10°20 | 13°23 | 21°49 | 29° 7 | 6°48 | 3°31 | 19°21 | 16°40 | 15°52 | 1°30 | 8° 4 | T 12 |
| W13 | 9 33 32 | 24°47'19 | 17°42 | 1°14 | 11°17 | 14° 6 | 21°53 | 29° 3 | 6°50 | 3°33 | 19°19 | 16°32 | 15°49 | 1°37 | 8° 6 | W13 |
| T 14 | 9 37 28 | 25°47'49 | 1♏ 5 | 1°33 | 12°13 | 14°50 | 21°58 | 29° 0 | 6°52 | 3°36 | 19°18 | 16°27 | 15°46 | 1°43 | 8° 8 | T 14 |
| F 15 | 9 41 25 | 26°48'17 | 14°40 | 1°57 | 13° 9 | 15°33 | 22° 2 | 28°56 | 6°53 | 3°38 | 19°17 | 16°24 | 15°42 | 1°50 | 8°10 | F 15 |
| S 16 | 9 45 21 | 27°48'45 | 28°28 | 2°27 | 14° 4 | 16°16 | 22° 5 | 28°53 | 6°55 | 3°40 | 19°16 | 16°D24 | 15°39 | 1°56 | 8°11 | S 16 |
| S 17 | 9 49 18 | 28°49'11 | 12♐29 | 3° 1 | 14°58 | 17° 0 | 22° 9 | 28°49 | 6°56 | 3°43 | 19°15 | 16°R24 | 15°36 | 2° 3 | 8°13 | S 17 |
| M18 | 9 53 15 | 29°49'35 | 26°44 | 3°40 | 15°52 | 17°43 | 22°13 | 28°45 | 6°58 | 3°45 | 19°15 | 16°24 | 15°33 | 2°10 | 8°15 | M18 |
| T 19 | 9 57 11 | 0♓49'59 | 11♑10 | 4°24 | 16°45 | 18°26 | 22°16 | 28°41 | 7° 0 | 3°47 | 19°14 | 16°21 | 15°30 | 2°16 | 8°17 | T 19 |
| W20 | 10 1 8 | 1°50'21 | 25°46 | 5°10 | 17°37 | 19° 9 | 22°19 | 28°38 | 7° 2 | 3°49 | 19°13 | 16°17 | 15°27 | 2°23 | 8°20 | W20 |
| T 21 | 10 5 4 | 2°50'41 | 10♒24 | 6° 1 | 18°29 | 19°52 | 22°22 | 28°34 | 7° 4 | 3°52 | 19°12 | 16° 9 | 15°23 | 2°30 | 8°22 | T 21 |
| F 22 | 10 9 1 | 3°51'00 | 24°59 | 6°55 | 19°20 | 20°36 | 22°25 | 28°30 | 7° 6 | 3°54 | 19°11 | 15°59 | 15°20 | 2°36 | 8°24 | F 22 |
| S 23 | 10 12 57 | 4°51'17 | 9♓24 | 7°51 | 20°10 | 21°19 | 22°27 | 28°26 | 7° 8 | 3°56 | 19°10 | 15°47 | 15°17 | 2°43 | 8°26 | S 23 |
| S 24 | 10 16 54 | 5°51'32 | 23°31 | 8°51 | 20°59 | 22° 2 | 22°30 | 28°21 | 7°10 | 3°58 | 19° 9 | 15°35 | 15°14 | 2°50 | 8°29 | S 24 |
| M25 | 10 20 50 | 6°51'45 | 7♈16 | 9°53 | 21°48 | 22°45 | 22°32 | 28°17 | 7°12 | 4° 1 | 19° 8 | 15°23 | 15°11 | 2°56 | 8°31 | M25 |
| T 26 | 10 24 47 | 7°51'56 | 20°35 | 10°57 | 22°35 | 23°28 | 22°34 | 28°13 | 7°14 | 4° 3 | 19° 8 | 15°14 | 15° 7 | 3° 3 | 8°33 | T 26 |
| W27 | 10 28 44 | 8°52'05 | 3♉30 | 12° 4 | 23°22 | 24°11 | 22°36 | 28° 9 | 7°16 | 4° 5 | 19° 7 | 15° 7 | 15° 4 | 3°10 | 8°36 | W27 |
| T 28 | 10 32 40 | 9♓52'12 | 16♉ 2 | 13♒13 | 24♈ 8 | 24♈54 | 22♏37 | 28♏ 4 | 7♉18 | 4♓ 8 | 19♋ 6 | 15♊ 3 | 15♊ 1 | 3♋16 | 8♉38 | T 28 |

| 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 |
| F 1 | 17s 2 | 15n33 | 2s23 | 15s 5 | 3n41 | 0n23 | 0n41 | 1n55 | 0s14 | 16s57 | 1n 6 | 2n22 | 2n26 | 13n21 | 0s25 | 11s 5 | 0s45 | 23n18 | 1n16 | 22n55 | 22n47 | 24n43 | 12n28 | 1s47 |
| S 2 | 16 45 | 19 17 | 1 23 | 15 22 | 3 39 | 0 53 | 0 47 | 2 14 | 0 13 | 16 58 | 1 6 | 2 24 | 2 26 | 13 21 | 0 25 | 11 4 | 0 45 | 23 19 | 1 16 | 22 55 | 22 47 | 24 44 | 12 28 | 1 47 |
| S 3 | 16 27 | 22 11 | 0 20 | 15 40 | 3 36 | 1 23 | 0 53 | 2 32 | 0 12 | 16 59 | 1 6 | 2 25 | 2 27 | 13 21 | 0 25 | 11 3 | 0 45 | 23 19 | 1 16 | 22 55 | 22 47 | 24 44 | 12 28 | 1 47 |
| M 4 | 16 10 | 24 7 | 0n43 | 15 58 | 3 30 | 1 53 | 1 0 | 2 50 | 0 11 | 17 1 | 1 6 | 2 26 | 2 27 | 13 22 | 0 25 | 11 2 | 0 45 | 23 19 | 1 16 | 22 55 | 22 46 | 24 45 | 12 29 | 1 47 |
| T 5 | 15 51 | 24 59 | 1 44 | 16 16 | 3 23 | 2 23 | 1 6 | 3 8 | 0 11 | 17 2 | 1 6 | 2 27 | 2 27 | 13 22 | 0 25 | 11 2 | 0 45 | 23 19 | 1 16 | 22 55 | 22 46 | 24 46 | 12 29 | 1 47 |
| W 6 | 15 33 | 24 43 | 2 41 | 16 33 | 3 14 | 2 53 | 1 12 | 3 26 | 0 10 | 17 3 | 1 6 | 2 29 | 2 27 | 13 22 | 0 25 | 11 1 | 0 45 | 23 20 | 1 16 | 22 55 | 22 46 | 24 47 | 12 30 | 1 47 |
| T 7 | 15 14 | 23 17 | 3 31 | 16 49 | 3 5 | 3 23 | 1 19 | 3 44 | 0 9 | 17 5 | 1 6 | 2 30 | 2 27 | 13 23 | 0 25 | 11 0 | 0 45 | 23 20 | 1 16 | 22 54 | 22 45 | 24 48 | 12 30 | 1 46 |
| F 8 | 14 55 | 20 46 | 4 13 | 17 4 | 2 54 | 3 53 | 1 25 | 4 2 | 0 8 | 17 6 | 1 7 | 2 32 | 2 28 | 13 23 | 0 25 | 10 59 | 0 45 | 23 20 | 1 16 | 22 53 | 22 45 | 24 49 | 12 31 | 1 46 |
| S 9 | 14 36 | 17 16 | 4 43 | 17 19 | 2 43 | 4 22 | 1 32 | 4 20 | 0 7 | 17 7 | 1 7 | 2 33 | 2 28 | 13 24 | 0 25 | 10 58 | 0 45 | 23 20 | 1 16 | 22 52 | 22 45 | 24 49 | 12 31 | 1 46 |
| S 10 | 14 17 | 12 56 | 5 0 | 17 32 | 2 31 | 4 51 | 1 39 | 4 38 | 0 6 | 17 8 | 1 7 | 2 34 | 2 28 | 13 24 | 0 25 | 10 58 | 0 45 | 23 20 | 1 16 | 22 51 | 22 44 | 24 50 | 12 32 | 1 46 |
| M11 | 13 57 | 7 59 | 5 2 | 17 44 | 2 19 | 5 20 | 1 46 | 4 56 | 0 5 | 17 9 | 1 7 | 2 36 | 2 28 | 13 25 | 0 25 | 10 57 | 0 45 | 23 21 | 1 17 | 22 50 | 22 44 | 24 51 | 12 32 | 1 46 |
| T 12 | 13 37 | 2 37 | 4 48 | 17 55 | 2 7 | 5 49 | 1 52 | 5 13 | 0 5 | 17 10 | 1 7 | 2 37 | 2 29 | 13 25 | 0 25 | 10 56 | 0 45 | 23 21 | 1 17 | 22 49 | 22 44 | 24 52 | 12 33 | 1 46 |
| W13 | 13 17 | 2s58 | 4 20 | 18 4 | 1 54 | 6 18 | 1 59 | 5 31 | 0 4 | 17 11 | 1 7 | 2 39 | 2 29 | 13 26 | 0 25 | 10 55 | 0 45 | 23 21 | 1 17 | 22 48 | 22 43 | 24 53 | 12 33 | 1 46 |
| T 14 | 12 57 | 8 29 | 3 36 | 18 12 | 1 42 | 6 47 | 2 6 | 5 49 | 0 3 | 17 12 | 1 7 | 2 41 | 2 29 | 13 26 | 0 25 | 10 54 | 0 45 | 23 21 | 1 17 | 22 47 | 22 43 | 24 53 | 12 34 | 1 46 |
| F 15 | 12 36 | 13 43 | 2 40 | 18 19 | 1 29 | 7 15 | 2 14 | 6 6 | 0 2 | 17 13 | 1 8 | 2 42 | 2 29 | 13 27 | 0 25 | 10 54 | 0 45 | 23 21 | 1 17 | 22 47 | 22 43 | 24 54 | 12 34 | 1 46 |
| S 16 | 12 15 | 18 20 | 1 34 | 18 24 | 1 17 | 7 43 | 2 21 | 6 24 | 0 1 | 17 14 | 1 8 | 2 44 | 2 29 | 13 27 | 0 25 | 10 53 | 0 45 | 23 22 | 1 17 | 22 47 | 22 42 | 24 55 | 12 35 | 1 46 |
| S 17 | 11 54 | 21 59 | 0 21 | 18 28 | 1 5 | 8 11 | 2 28 | 6 41 | 0 0 | 17 15 | 1 8 | 2 45 | 2 30 | 13 28 | 0 25 | 10 52 | 0 45 | 23 22 | 1 17 | 22 47 | 22 42 | 24 56 | 12 36 | 1 46 |
| M18 | 11 33 | 24 21 | 0s55 | 18 31 | 0 53 | 8 38 | 2 35 | 6 58 | 0n 0 | 17 15 | 1 8 | 2 47 | 2 30 | 13 29 | 0 25 | 10 51 | 0 45 | 23 22 | 1 17 | 22 47 | 22 42 | 24 56 | 12 36 | 1 46 |
| T 19 | 11 12 | 25 8 | 2 7 | 18 32 | 0 41 | 9 5 | 2 42 | 7 15 | 0 1 | 17 16 | 1 8 | 2 49 | 2 30 | 13 29 | 0 25 | 10 50 | 0 45 | 23 22 | 1 17 | 22 47 | 22 41 | 24 57 | 12 37 | 1 46 |
| W20 | 10 50 | 24 11 | 3 12 | 18 32 | 0 30 | 9 32 | 2 50 | 7 33 | 0 2 | 17 17 | 1 8 | 2 51 | 2 30 | 13 30 | 0 25 | 10 49 | 0 45 | 23 22 | 1 17 | 22 46 | 22 41 | 24 58 | 12 38 | 1 46 |
| T 21 | 10 29 | 21 35 | 4 5 | 18 30 | 0 19 | 9 59 | 2 57 | 7 50 | 0 3 | 17 17 | 1 8 | 2 52 | 2 30 | 13 31 | 0 24 | 10 49 | 0 45 | 23 22 | 1 17 | 22 46 | 22 41 | 24 58 | 12 38 | 1 46 |
| F 22 | 10 7 | 17 37 | 4 41 | 18 27 | 0 8 | 10 26 | 3 5 | 8 7 | 0 4 | 17 18 | 1 9 | 2 54 | 2 30 | 13 31 | 0 24 | 10 48 | 0 45 | 23 23 | 1 17 | 22 45 | 22 40 | 24 59 | 12 39 | 1 46 |
| S 23 | 9 45 | 12 40 | 4 59 | 18 23 | 0s 2 | 10 52 | 3 12 | 8 24 | 0 4 | 17 18 | 1 9 | 2 56 | 2 31 | 13 32 | 0 24 | 10 47 | 0 45 | 23 23 | 1 17 | 22 43 | 22 40 | 25 0 | 12 40 | 1 46 |
| S 24 | 9 23 | 7 8 | 4 58 | 18 17 | 0 12 | 11 17 | 3 20 | 8 41 | 0 5 | 17 19 | 1 9 | 2 58 | 2 31 | 13 33 | 0 24 | 10 46 | 0 45 | 23 23 | 1 17 | 22 42 | 22 40 | 25 1 | 12 41 | 1 46 |
| M25 | 9 0 | 1 24 | 4 40 | 18 10 | 0 22 | 11 43 | 3 27 | 8 57 | 0 6 | 17 19 | 1 9 | 2 59 | 2 31 | 13 33 | 0 24 | 10 45 | 0 45 | 23 23 | 1 17 | 22 41 | 22 39 | 25 1 | 12 41 | 1 46 |
| T 26 | 8 38 | 4n15 | 4 6 | 18 1 | 0 32 | 12 8 | 3 35 | 9 14 | 0 7 | 17 20 | 1 9 | 3 1 | 2 31 | 13 34 | 0 24 | 10 45 | 0 45 | 23 23 | 1 17 | 22 40 | 22 39 | 25 2 | 12 42 | 1 46 |
| W27 | 8 16 | 9 33 | 3 21 | 17 51 | 0 41 | 12 32 | 3 43 | 9 31 | 0 8 | 17 20 | 1 9 | 3 3 | 2 31 | 13 35 | 0 24 | 10 44 | 0 45 | 23 23 | 1 17 | 22 39 | 22 39 | 25 3 | 12 43 | 1 46 |
| T 28 | 7s53 | 14n19 | 2s27 | 17s40 | 0s49 | 12n56 | 3n50 | 9n47 | 0n 8 | 17s20 | 1n 9 | 3n 5 | 2n31 | 13n35 | 0s24 | 10s43 | 0s45 | 23n24 | 1n17 | 22n38 | 22n38 | 25n 3 | 12n44 | 1s46 |

Julian Day Number = 2336890.5, Delta T = 20.35 sec
Ecliptic obliquity = 23°28'51, Nutation = - 0°00'15, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°21'30, Lahiri = 19°28'31Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1686
# geocentric

## MARCH 1686 GC — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F 1 | 10 36 37 | 10♓52'17 | 28♉15 | 14♒24 | 24♈52 | 25♈36 | 22♏39 | 28°R 0 | 7♉20 | 4♓10 | 19°R 5 | 15°R 1 | 14♊58 | 3♋23 | 8♉41 | F 1 |
| S 2 | 10 40 33 | 11°52'20 | 10♊14 | 15°37 | 25°36 | 26°19 | 22°40 | 27♏56 | 7°23 | 4°12 | 19♋ 5 | 15♊ 1 | 14°55 | 3°30 | 8°44 | S 2 |
| S 3 | 10 44 30 | 12°52'20 | 22° 4 | 16°52 | 26°19 | 27° 2 | 22°41 | 27°51 | 7°25 | 4°14 | 19° 4 | 15° 1 | 14°52 | 3°36 | 8°46 | S 3 |
| M 4 | 10 48 26 | 13°52'19 | 3♋52 | 18° 8 | 27° 0 | 27°45 | 22°42 | 27°47 | 7°27 | 4°17 | 19° 3 | 15° 0 | 14°48 | 3°43 | 8°49 | M 4 |
| T 5 | 10 52 23 | 14°52'15 | 15°42 | 19°27 | 27°41 | 28°28 | 22°43 | 27°42 | 7°30 | 4°19 | 19° 2 | 14°57 | 14°45 | 3°50 | 8°52 | T 5 |
| W 6 | 10 56 19 | 15°52'09 | 27°39 | 20°46 | 28°20 | 29°10 | 22°43 | 27°38 | 7°32 | 4°21 | 19° 2 | 14°52 | 14°42 | 3°56 | 8°55 | W 6 |
| T 7 | 11 0 16 | 16°52'01 | 9♌47 | 22° 8 | 28°58 | 29°53 | 22°44 | 27°33 | 7°34 | 4°23 | 19° 1 | 14°44 | 14°39 | 4° 3 | 8°58 | T 7 |
| F 8 | 11 4 13 | 17°51'51 | 22° 9 | 23°31 | 29°34 | 0♉35 | 22°R44 | 27°28 | 7°37 | 4°26 | 19° 1 | 14°33 | 14°36 | 4°10 | 9° 0 | F 8 |
| S 9 | 11 8 9 | 18°51'39 | 4♍47 | 24°55 | 0♉10 | 1°18 | 22°44 | 27°24 | 7°39 | 4°28 | 19° 0 | 14°21 | 14°33 | 4°16 | 9° 3 | S 9 |
| S 10 | 11 12 6 | 19°51'25 | 17°42 | 26°21 | 0°44 | 2° 0 | 22°43 | 27°19 | 7°42 | 4°30 | 19° 0 | 14° 7 | 14°29 | 4°23 | 9° 6 | S 10 |
| M11 | 11 16 2 | 20°51'08 | 0♎51 | 27°48 | 1°16 | 2°43 | 22°43 | 27°15 | 7°45 | 4°32 | 18°59 | 13°54 | 14°26 | 4°29 | 9° 9 | M11 |
| T 12 | 11 19 59 | 21°50'50 | 14°14 | 29°16 | 1°47 | 3°25 | 22°42 | 27°10 | 7°47 | 4°34 | 18°58 | 13°43 | 14°23 | 4°36 | 9°12 | T 12 |
| W13 | 11 23 55 | 22°50'30 | 27°48 | 0♓46 | 2°16 | 4° 8 | 22°42 | 27° 5 | 7°50 | 4°37 | 18°58 | 13°34 | 14°20 | 4°43 | 9°16 | W13 |
| T 14 | 11 27 52 | 23°50'08 | 11♏31 | 2°18 | 2°44 | 4°50 | 22°41 | 27° 0 | 7°53 | 4°39 | 18°58 | 13°28 | 14°17 | 4°49 | 9°19 | T 14 |
| F 15 | 11 31 48 | 24°49'44 | 25°22 | 3°50 | 3°10 | 5°32 | 22°40 | 26°56 | 7°55 | 4°41 | 18°57 | 13°25 | 14°13 | 4°56 | 9°22 | F 15 |
| S 16 | 11 35 45 | 25°49'18 | 9♐18 | 5°24 | 3°35 | 6°15 | 22°38 | 26°51 | 7°58 | 4°43 | 18°57 | 13°D24 | 14°10 | 5° 3 | 9°25 | S 16 |
| S 17 | 11 39 42 | 26°48'51 | 23°20 | 6°59 | 3°57 | 6°57 | 22°37 | 26°46 | 8° 1 | 4°45 | 18°56 | 13°R24 | 14° 7 | 5° 9 | 9°28 | S 17 |
| M18 | 11 43 38 | 27°48'22 | 7♑27 | 8°36 | 4°18 | 7°39 | 22°35 | 26°42 | 8° 4 | 4°47 | 18°56 | 13°23 | 14° 4 | 5°16 | 9°32 | M18 |
| T 19 | 11 47 35 | 28°47'52 | 21°37 | 10°13 | 4°37 | 8°21 | 22°33 | 26°37 | 8° 6 | 4°50 | 18°56 | 13°22 | 14° 1 | 5°23 | 9°35 | T 19 |
| W20 | 11 51 31 | 29°47'19 | 5♒49 | 11°53 | 4°53 | 9° 3 | 22°31 | 26°32 | 8° 9 | 4°52 | 18°55 | 13°17 | 13°58 | 5°29 | 9°39 | W20 |
| T 21 | 11 55 28 | 0♈46'45 | 20° 2 | 13°33 | 5° 8 | 9°45 | 22°29 | 26°27 | 8°12 | 4°54 | 18°55 | 13°11 | 13°54 | 5°36 | 9°42 | T 21 |
| F 22 | 11 59 24 | 1°46'09 | 4♓10 | 15°15 | 5°21 | 10°27 | 22°26 | 26°23 | 8°15 | 4°56 | 18°55 | 13° 1 | 13°51 | 5°43 | 9°45 | F 22 |
| S 23 | 12 3 21 | 2°45'31 | 18° 9 | 16°58 | 5°32 | 11° 9 | 22°24 | 26°18 | 8°18 | 4°58 | 18°55 | 12°50 | 13°48 | 5°49 | 9°49 | S 23 |
| S 24 | 12 7 17 | 3°44'51 | 1♈54 | 18°42 | 5°40 | 11°51 | 22°21 | 26°13 | 8°21 | 5° 0 | 18°54 | 12°39 | 13°45 | 5°56 | 9°52 | S 24 |
| M25 | 12 11 14 | 4°44'08 | 15°23 | 20°28 | 5°46 | 12°33 | 22°18 | 26° 9 | 8°24 | 5° 2 | 18°54 | 12°28 | 13°42 | 6° 3 | 9°56 | M25 |
| T 26 | 12 15 10 | 5°43'24 | 28°32 | 22°15 | 5°50 | 13°15 | 22°15 | 26° 4 | 8°27 | 5° 4 | 18°54 | 12°19 | 13°38 | 6° 9 | 10° 0 | T 26 |
| W27 | 12 19 7 | 6°42'38 | 11♉20 | 24° 4 | 5°R51 | 13°57 | 22°11 | 26° 0 | 8°30 | 5° 6 | 18°54 | 12°12 | 13°35 | 6°16 | 10° 3 | W27 |
| T 28 | 12 23 4 | 7°41'49 | 23°50 | 25°54 | 5°50 | 14°39 | 22° 8 | 25°55 | 8°33 | 5° 8 | 18°54 | 12° 8 | 13°32 | 6°23 | 10° 7 | T 28 |
| F 29 | 12 27 0 | 8°40'58 | 6♊ 2 | 27°45 | 5°47 | 15°20 | 22° 4 | 25°50 | 8°36 | 5°10 | 18°54 | 12° 6 | 13°29 | 6°29 | 10°11 | F 29 |
| S 30 | 12 30 57 | 9°40'05 | 18° 2 | 29°38 | 5°41 | 16° 2 | 22° 0 | 25°46 | 8°39 | 5°12 | 18°54 | 12°D 6 | 13°26 | 6°36 | 10°14 | S 30 |
| S 31 | 12 34 53 | 10♈39'10 | 29♊54 | 1♈32 | 5♉32 | 16♉44 | 21♏56 | 25♏41 | 8♉43 | 5♓14 | 18♋53 | 12♊ 7 | 13♊23 | 6♋43 | 10♉18 | 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 |
| F 1 | 7s30 | 18n23 | 1s28 | 17s27 | 0s57 | 13n20 | 3n58 | 10n 3 | 0n 9 | 17s21 | 1n10 | 3n 7 | 2n32 | 13n36 | 0s24 | 10s42 | 0s45 | 23n24 | 1n17 | 22n38 | 22n38 | 25n 4 | 12n45 | 1s46 |
| S 2 | 7 7 | 21 36 | 0 25 | 17 13 | 1 5 | 13 44 | 4 6 | 10 20 | 0 10 | 17 21 | 1 10 | 3 9 | 2 32 | 13 37 | 0 24 | 10 41 | 0 45 | 23 24 | 1 17 | 22 38 | 22 38 | 25 5 | 12 45 | 1 46 |
| S 3 | 6 44 | 23 52 | 0n37 | 16 58 | 1 13 | 14 7 | 4 14 | 10 36 | 0 11 | 17 21 | 1 10 | 3 11 | 2 32 | 13 38 | 0 24 | 10 40 | 0 45 | 23 24 | 1 17 | 22 38 | 22 37 | 25 5 | 12 46 | 1 46 |
| M 4 | 6 21 | 25 4 | 1 38 | 16 41 | 1 20 | 14 29 | 4 21 | 10 52 | 0 11 | 17 21 | 1 10 | 3 12 | 2 32 | 13 38 | 0 24 | 10 40 | 0 45 | 23 24 | 1 17 | 22 38 | 22 37 | 25 6 | 12 47 | 1 46 |
| T 5 | 5 58 | 25 7 | 2 35 | 16 23 | 1 27 | 14 51 | 4 29 | 11 8 | 0 12 | 17 21 | 1 10 | 3 14 | 2 32 | 13 39 | 0 24 | 10 39 | 0 45 | 23 24 | 1 17 | 22 38 | 22 36 | 25 7 | 12 48 | 1 46 |
| W 6 | 5 35 | 24 1 | 3 25 | 16 4 | 1 33 | 15 12 | 4 37 | 11 24 | 0 13 | 17 21 | 1 10 | 3 16 | 2 32 | 13 40 | 0 24 | 10 38 | 0 45 | 23 24 | 1 17 | 22 37 | 22 36 | 25 7 | 12 49 | 1 46 |
| T 7 | 5 12 | 21 47 | 4 7 | 15 43 | 1 39 | 15 33 | 4 45 | 11 40 | 0 13 | 17 21 | 1 10 | 3 18 | 2 32 | 13 41 | 0 24 | 10 37 | 0 45 | 23 24 | 1 18 | 22 36 | 22 36 | 25 8 | 12 50 | 1 46 |
| F 8 | 4 48 | 18 32 | 4 38 | 15 21 | 1 44 | 15 54 | 4 52 | 11 55 | 0 14 | 17 21 | 1 11 | 3 20 | 2 32 | 13 42 | 0 24 | 10 36 | 0 45 | 23 25 | 1 18 | 22 35 | 22 35 | 25 8 | 12 51 | 1 46 |
| S 9 | 4 25 | 14 21 | 4 56 | 14 58 | 1 50 | 16 13 | 5 0 | 12 11 | 0 15 | 17 21 | 1 11 | 3 22 | 2 32 | 13 43 | 0 24 | 10 36 | 0 45 | 23 25 | 1 18 | 22 34 | 22 35 | 25 9 | 12 52 | 1 46 |
| S 10 | 4 1 | 9 28 | 4 59 | 14 33 | 1 54 | 16 33 | 5 8 | 12 26 | 0 16 | 17 20 | 1 11 | 3 24 | 2 33 | 13 43 | 0 24 | 10 35 | 0 45 | 23 25 | 1 18 | 22 32 | 22 35 | 25 10 | 12 53 | 1 46 |
| M11 | 3 38 | 4 3 | 4 47 | 14 7 | 1 59 | 16 51 | 5 15 | 12 41 | 0 16 | 17 20 | 1 11 | 3 26 | 2 33 | 13 44 | 0 24 | 10 34 | 0 45 | 23 25 | 1 18 | 22 31 | 22 34 | 25 10 | 12 54 | 1 46 |
| T 12 | 3 14 | 1s38 | 4 19 | 13 40 | 2 3 | 17 9 | 5 23 | 12 57 | 0 17 | 17 20 | 1 11 | 3 28 | 2 33 | 13 45 | 0 24 | 10 33 | 0 45 | 23 25 | 1 18 | 22 29 | 22 34 | 25 11 | 12 55 | 1 46 |
| W13 | 2 51 | 7 21 | 3 36 | 13 11 | 2 6 | 17 26 | 5 30 | 13 12 | 0 18 | 17 20 | 1 11 | 3 30 | 2 33 | 13 46 | 0 24 | 10 32 | 0 45 | 23 25 | 1 18 | 22 28 | 22 34 | 25 12 | 12 56 | 1 46 |
| T 14 | 2 27 | 12 47 | 2 40 | 12 41 | 2 9 | 17 43 | 5 37 | 13 27 | 0 18 | 17 19 | 1 11 | 3 32 | 2 33 | 13 47 | 0 24 | 10 32 | 0 45 | 23 25 | 1 18 | 22 27 | 22 33 | 25 12 | 12 57 | 1 46 |
| F 15 | 2 3 | 17 37 | 1 34 | 12 10 | 2 12 | 17 59 | 5 45 | 13 41 | 0 19 | 17 19 | 1 12 | 3 34 | 2 33 | 13 48 | 0 24 | 10 31 | 0 45 | 23 25 | 1 18 | 22 27 | 22 33 | 25 13 | 12 58 | 1 46 |
| S 16 | 1 40 | 21 32 | 0 22 | 11 37 | 2 14 | 18 14 | 5 52 | 13 56 | 0 20 | 17 18 | 1 12 | 3 36 | 2 33 | 13 49 | 0 24 | 10 30 | 0 45 | 23 25 | 1 18 | 22 27 | 22 32 | 25 13 | 12 59 | 1 46 |
| S 17 | 1 16 | 24 11 | 0s52 | 11 4 | 2 16 | 18 28 | 5 59 | 14 11 | 0 20 | 17 18 | 1 12 | 3 37 | 2 33 | 13 50 | 0 24 | 10 29 | 0 45 | 23 26 | 1 18 | 22 27 | 22 32 | 25 14 | 13 0 | 1 46 |
| M18 | 0 52 | 25 20 | 2 4 | 10 29 | 2 17 | 18 42 | 6 6 | 14 25 | 0 21 | 17 17 | 1 12 | 3 39 | 2 33 | 13 51 | 0 24 | 10 29 | 0 45 | 23 26 | 1 18 | 22 27 | 22 32 | 25 14 | 13 1 | 1 46 |
| T 19 | 0 29 | 24 50 | 3 8 | 9 52 | 2 18 | 18 55 | 6 12 | 14 39 | 0 22 | 17 17 | 1 12 | 3 41 | 2 33 | 13 52 | 0 24 | 10 28 | 0 45 | 23 26 | 1 18 | 22 27 | 22 31 | 25 15 | 13 2 | 1 46 |
| W20 | 0 5 | 22 44 | 4 0 | 9 15 | 2 18 | 19 7 | 6 19 | 14 53 | 0 22 | 17 16 | 1 12 | 3 43 | 2 33 | 13 52 | 0 24 | 10 27 | 0 46 | 23 26 | 1 18 | 22 26 | 22 31 | 25 15 | 13 3 | 1 46 |
| T 21 | 0n19 | 19 13 | 4 38 | 8 36 | 2 18 | 19 18 | 6 25 | 15 7 | 0 23 | 17 15 | 1 12 | 3 45 | 2 33 | 13 53 | 0 24 | 10 26 | 0 46 | 23 26 | 1 18 | 22 25 | 22 31 | 25 16 | 13 4 | 1 46 |
| F 22 | 0 42 | 14 38 | 4 58 | 7 56 | 2 18 | 19 28 | 6 31 | 15 21 | 0 24 | 17 15 | 1 12 | 3 47 | 2 33 | 13 54 | 0 24 | 10 26 | 0 46 | 23 26 | 1 18 | 22 24 | 22 30 | 25 17 | 13 5 | 1 46 |
| S 23 | 1 6 | 9 18 | 5 1 | 7 15 | 2 17 | 19 37 | 6 37 | 15 35 | 0 24 | 17 14 | 1 13 | 3 49 | 2 33 | 13 55 | 0 24 | 10 25 | 0 46 | 23 26 | 1 18 | 22 23 | 22 30 | 25 17 | 13 6 | 1 46 |
| S 24 | 1 30 | 3 36 | 4 45 | 6 33 | 2 15 | 19 45 | 6 43 | 15 49 | 0 25 | 17 13 | 1 13 | 3 51 | 2 33 | 13 56 | 0 24 | 10 24 | 0 46 | 23 26 | 1 18 | 22 21 | 22 29 | 25 18 | 13 7 | 1 46 |
| M25 | 1 53 | 2n 9 | 4 14 | 5 49 | 2 13 | 19 52 | 6 48 | 16 2 | 0 25 | 17 12 | 1 13 | 3 53 | 2 33 | 13 57 | 0 24 | 10 23 | 0 46 | 23 26 | 1 18 | 22 20 | 22 29 | 25 18 | 13 8 | 1 46 |
| T 26 | 2 17 | 7 42 | 3 30 | 5 5 | 2 11 | 19 58 | 6 53 | 16 15 | 0 26 | 17 11 | 1 13 | 3 54 | 2 33 | 13 58 | 0 24 | 10 23 | 0 46 | 23 26 | 1 18 | 22 19 | 22 29 | 25 19 | 13 9 | 1 46 |
| W27 | 2 40 | 12 47 | 2 36 | 4 19 | 2 8 | 20 3 | 6 57 | 16 29 | 0 27 | 17 10 | 1 13 | 3 56 | 2 33 | 13 59 | 0 24 | 10 22 | 0 46 | 23 26 | 1 18 | 22 18 | 22 28 | 25 19 | 13 10 | 1 46 |
| T 28 | 3 4 | 17 13 | 1 36 | 3 32 | 2 4 | 20 6 | 7 2 | 16 42 | 0 27 | 17 9 | 1 13 | 3 58 | 2 33 | 14 0 | 0 24 | 10 21 | 0 46 | 23 26 | 1 18 | 22 17 | 22 28 | 25 20 | 13 11 | 1 46 |
| F 29 | 3 27 | 20 49 | 0 32 | 2 44 | 2 0 | 20 9 | 7 5 | 16 54 | 0 28 | 17 8 | 1 13 | 4 0 | 2 33 | 14 1 | 0 24 | 10 20 | 0 46 | 23 26 | 1 18 | 22 17 | 22 27 | 25 20 | 13 13 | 1 47 |
| S 30 | 3 50 | 23 28 | 0n32 | 1 55 | 1 56 | 20 10 | 7 9 | 17 7 | 0 28 | 17 7 | 1 13 | 4 2 | 2 33 | 14 2 | 0 24 | 10 20 | 0 46 | 23 26 | 1 18 | 22 17 | 22 27 | 25 21 | 13 14 | 1 47 |
| S 31 | 4n13 | 25n 3 | 1n34 | 1s 5 | 1s51 | 20n10 | 7n12 | 17n20 | 0n29 | 17s 6 | 1n13 | 4n 3 | 2n33 | 14n 3 | 0s24 | 10s19 | 0s46 | 23n26 | 1n18 | 22n17 | 22n27 | 25n21 | 13n15 | 1s47 |

Julian Day Number = 2336918.5, Delta T = 20.31 sec
Ecliptic obliquity = 23°28'51, Nutation = - 0°00'16, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°21'34, Lahiri = 19°28'35Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1686
# geocentric

## APRIL 1686 GC — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M 1 | 12 38 50 | 11♈38'12 | 11♋42 | 3♈28 | 5°R21 | 17♉25 | 21°R52 | 25°R37 | 8♉46 | 5♓16 | 18°D53 | 12°R 7 | 13♊19 | 6♋49 | 10♉22 | M 1 |
| T 2 | 12 42 46 | 12°37'12 | 23°33 | 5°25 | 5♉ 8 | 18° 7 | 21♏48 | 25♏33 | 8°49 | 5°18 | 18♋53 | 12♊ 7 | 13°16 | 6°56 | 10°26 | T 2 |
| W 3 | 12 46 43 | 13°36'10 | 5♌32 | 7°23 | 4°52 | 18°49 | 21°43 | 25°28 | 8°52 | 5°20 | 18°54 | 12° 4 | 13°13 | 7° 3 | 10°29 | W 3 |
| T 4 | 12 50 39 | 14°35'05 | 17°44 | 9°22 | 4°34 | 19°30 | 21°39 | 25°24 | 8°55 | 5°22 | 18°54 | 11°59 | 13°10 | 7° 9 | 10°33 | T 4 |
| F 5 | 12 54 36 | 15°33'58 | 0♍12 | 11°23 | 4°13 | 20°12 | 21°34 | 25°20 | 8°59 | 5°23 | 18°54 | 11°52 | 13° 7 | 7°16 | 10°37 | F 5 |
| S 6 | 12 58 33 | 16°32'49 | 12°59 | 13°25 | 3°50 | 20°53 | 21°29 | 25°15 | 9° 2 | 5°25 | 18°54 | 11°44 | 13° 4 | 7°23 | 10°41 | S 6 |
| S 7 | 13 2 29 | 17°31'37 | 26° 6 | 15°29 | 3°25 | 21°34 | 21°24 | 25°11 | 9° 5 | 5°27 | 18°54 | 11°34 | 13° 0 | 7°29 | 10°45 | S 7 |
| M 8 | 13 6 26 | 18°30'24 | 9♎34 | 17°33 | 2°58 | 22°16 | 21°18 | 25° 7 | 9° 8 | 5°29 | 18°54 | 11°25 | 12°57 | 7°36 | 10°49 | M 8 |
| T 9 | 13 10 22 | 19°29'08 | 23°19 | 19°38 | 2°29 | 22°57 | 21°13 | 25° 3 | 9°12 | 5°31 | 18°54 | 11°17 | 12°54 | 7°42 | 10°53 | T 9 |
| W10 | 13 14 19 | 20°27'51 | 7♏18 | 21°44 | 1°58 | 23°38 | 21° 8 | 24°59 | 9°15 | 5°32 | 18°54 | 11°11 | 12°51 | 7°49 | 10°57 | W10 |
| T 11 | 13 18 15 | 21°26'31 | 21°27 | 23°51 | 1°25 | 24°20 | 21° 2 | 24°55 | 9°18 | 5°34 | 18°55 | 11° 7 | 12°48 | 7°56 | 11° 1 | T 11 |
| F 12 | 13 22 12 | 22°25'10 | 5♐42 | 25°58 | 0°51 | 25° 1 | 20°56 | 24°51 | 9°22 | 5°36 | 18°55 | 11°D 5 | 12°44 | 8° 2 | 11° 5 | F 12 |
| S 13 | 13 26 8 | 23°23'47 | 19°59 | 28° 5 | 0°16 | 25°42 | 20°50 | 24°47 | 9°25 | 5°38 | 18°55 | 11° 5 | 12°41 | 8° 9 | 11° 9 | S 13 |
| S 14 | 13 30 5 | 24°22'23 | 4♑15 | 0♉12 | 29♈40 | 26°23 | 20°44 | 24°43 | 9°28 | 5°39 | 18°56 | 11° 7 | 12°38 | 8°16 | 11°13 | S 14 |
| M15 | 13 34 2 | 25°20'57 | 18°27 | 2°18 | 29° 3 | 27° 4 | 20°38 | 24°40 | 9°32 | 5°41 | 18°56 | 11° 8 | 12°35 | 8°22 | 11°17 | M15 |
| T 16 | 13 37 58 | 26°19'29 | 2♒34 | 4°24 | 28°25 | 27°45 | 20°32 | 24°36 | 9°35 | 5°42 | 18°56 | 11°R 8 | 12°32 | 8°29 | 11°21 | T 16 |
| W17 | 13 41 55 | 27°18'00 | 16°35 | 6°29 | 27°47 | 28°26 | 20°25 | 24°32 | 9°39 | 5°44 | 18°57 | 11° 6 | 12°29 | 8°36 | 11°25 | W17 |
| T 18 | 13 45 51 | 28°16'29 | 0♓27 | 8°33 | 27° 9 | 29° 7 | 20°19 | 24°29 | 9°42 | 5°46 | 18°57 | 11° 2 | 12°25 | 8°42 | 11°29 | T 18 |
| F 19 | 13 49 48 | 29°14'56 | 14°11 | 10°35 | 26°32 | 29°48 | 20°12 | 24°25 | 9°45 | 5°47 | 18°57 | 10°57 | 12°22 | 8°49 | 11°33 | F 19 |
| S 20 | 13 53 44 | 0♉13'22 | 27°43 | 12°35 | 25°55 | 0♊29 | 20° 5 | 24°22 | 9°49 | 5°49 | 18°58 | 10°51 | 12°19 | 8°56 | 11°37 | S 20 |
| S 21 | 13 57 41 | 1°11'46 | 11♈ 2 | 14°32 | 25°18 | 1°10 | 19°59 | 24°19 | 9°52 | 5°50 | 18°58 | 10°44 | 12°16 | 9° 2 | 11°41 | S 21 |
| M22 | 14 1 37 | 2°10'08 | 24° 8 | 16°28 | 24°43 | 1°51 | 19°52 | 24°16 | 9°56 | 5°52 | 18°59 | 10°38 | 12°13 | 9° 9 | 11°45 | M22 |
| T 23 | 14 5 34 | 3° 8'28 | 6♉58 | 18°20 | 24° 8 | 2°31 | 19°45 | 24°12 | 9°59 | 5°53 | 18°59 | 10°32 | 12°10 | 9°16 | 11°50 | T 23 |
| W24 | 14 9 31 | 4° 6'47 | 19°33 | 20° 9 | 23°35 | 3°12 | 19°38 | 24° 9 | 10° 3 | 5°55 | 19° 0 | 10°29 | 12° 6 | 9°22 | 11°54 | W24 |
| T 25 | 14 13 27 | 5° 5'03 | 1♊53 | 21°55 | 23° 4 | 3°53 | 19°31 | 24° 6 | 10° 6 | 5°56 | 19° 1 | 10°27 | 12° 3 | 9°29 | 11°58 | T 25 |
| F 26 | 14 17 24 | 6° 3'18 | 14° 0 | 23°38 | 22°34 | 4°34 | 19°23 | 24° 3 | 10°10 | 5°57 | 19° 1 | 10°D26 | 12° 0 | 9°36 | 12° 2 | F 26 |
| S 27 | 14 21 20 | 7° 1'31 | 25°58 | 25°17 | 22° 6 | 5°14 | 19°16 | 24° 1 | 10°13 | 5°59 | 19° 2 | 10°27 | 11°57 | 9°42 | 12° 6 | S 27 |
| S 28 | 14 25 17 | 7°59'42 | 7♋49 | 26°52 | 21°40 | 5°55 | 19° 9 | 23°58 | 10°17 | 6° 0 | 19° 2 | 10°29 | 11°54 | 9°49 | 12°10 | S 28 |
| M29 | 14 29 13 | 8°57'51 | 19°37 | 28°24 | 21°16 | 6°35 | 19° 1 | 23°55 | 10°20 | 6° 1 | 19° 3 | 10°31 | 11°50 | 9°56 | 12°15 | M29 |
| T 30 | 14 33 10 | 9♉55'58 | 1♌29 | 29♉51 | 20♈54 | 7♊16 | 18♏54 | 23♏53 | 10♉24 | 6♓ 2 | 19♋ 4 | 10♊32 | 11♊47 | 10♋ 2 | 12♉19 | T 30 |

| Day | ☉ | ☽ | | ☿ | | ♀ | | ♂ | | ♃ | | ♄ | | ♅ | | ♆ | | ♇ | | ☊ | ☊ | ⚸ | ⚷ | | 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 | |
| M 1 | 4n37 | 25n29 | 2n32 | 0s14 | 1s45 | 20n 8 | 7n14 | 17n32 | 0n30 | 17s 5 | 1n14 | 4n 5 | 2n33 | 14n 4 | 0s24 | 10s18 | 0s46 | 23n26 | 1n18 | 22n17 | 22n26 | 25n21 | 13n16 | 1s47 | M 1 |
| T 2 | 5 0 | 24 45 | 3 23 | 0n38 | 1 39 | 20 5 | 7 16 | 17 44 | 0 30 | 17 4 | 1 14 | 4 7 | 2 33 | 14 5 | 0 24 | 10 18 | 0 46 | 23 26 | 1 18 | 22 17 | 22 26 | 25 22 | 13 17 | 1 47 | T 2 |
| W 3 | 5 23 | 22 54 | 4 6 | 1 31 | 1 33 | 20 1 | 7 17 | 17 56 | 0 31 | 17 2 | 1 14 | 4 9 | 2 33 | 14 6 | 0 24 | 10 17 | 0 46 | 23 26 | 1 18 | 22 17 | 22 26 | 25 22 | 13 18 | 1 47 | W 3 |
| T 4 | 5 46 | 19 58 | 4 39 | 2 25 | 1 26 | 19 55 | 7 17 | 18 8 | 0 31 | 17 1 | 1 14 | 4 10 | 2 33 | 14 7 | 0 24 | 10 16 | 0 46 | 23 27 | 1 18 | 22 16 | 22 25 | 25 23 | 13 19 | 1 47 | T 4 |
| F 5 | 6 8 | 16 5 | 4 59 | 3 19 | 1 18 | 19 47 | 7 17 | 18 20 | 0 32 | 17 0 | 1 14 | 4 12 | 2 33 | 14 9 | 0 24 | 10 16 | 0 46 | 23 27 | 1 19 | 22 15 | 22 25 | 25 23 | 13 21 | 1 47 | F 5 |
| S 6 | 6 31 | 11 24 | 5 5 | 4 14 | 1 10 | 19 39 | 7 16 | 18 32 | 0 32 | 16 58 | 1 14 | 4 13 | 2 33 | 14 10 | 0 24 | 10 15 | 0 46 | 23 27 | 1 19 | 22 14 | 22 24 | 25 24 | 13 22 | 1 47 | S 6 |
| S 7 | 6 54 | 6 4 | 4 56 | 5 9 | 1 2 | 19 28 | 7 15 | 18 43 | 0 33 | 16 57 | 1 14 | 4 15 | 2 33 | 14 11 | 0 24 | 10 14 | 0 46 | 23 27 | 1 19 | 22 13 | 22 24 | 25 24 | 13 23 | 1 47 | S 7 |
| M 8 | 7 16 | 0 21 | 4 30 | 6 5 | 0 53 | 19 17 | 7 12 | 18 54 | 0 33 | 16 56 | 1 14 | 4 17 | 2 33 | 14 12 | 0 24 | 10 14 | 0 46 | 23 27 | 1 19 | 22 11 | 22 24 | 25 25 | 13 24 | 1 47 | M 8 |
| T 9 | 7 38 | 5s32 | 3 48 | 7 2 | 0 43 | 19 4 | 7 9 | 19 5 | 0 34 | 16 54 | 1 14 | 4 18 | 2 33 | 14 13 | 0 24 | 10 13 | 0 46 | 23 27 | 1 19 | 22 10 | 22 23 | 25 25 | 13 25 | 1 47 | T 9 |
| W10 | 8 0 | 11 16 | 2 52 | 7 58 | 0 34 | 18 49 | 7 5 | 19 16 | 0 35 | 16 53 | 1 14 | 4 20 | 2 32 | 14 14 | 0 23 | 10 13 | 0 46 | 23 27 | 1 19 | 22 9 | 22 23 | 25 25 | 13 26 | 1 47 | W10 |
| T 11 | 8 23 | 16 29 | 1 44 | 8 54 | 0 23 | 18 33 | 7 1 | 19 27 | 0 35 | 16 51 | 1 14 | 4 21 | 2 32 | 14 15 | 0 23 | 10 12 | 0 46 | 23 27 | 1 19 | 22 9 | 22 22 | 25 26 | 13 28 | 1 47 | T 11 |
| F 12 | 8 44 | 20 49 | 0 29 | 9 50 | 0 13 | 18 16 | 6 55 | 19 38 | 0 36 | 16 50 | 1 14 | 4 23 | 2 32 | 14 16 | 0 23 | 10 11 | 0 46 | 23 27 | 1 19 | 22 9 | 22 22 | 25 26 | 13 29 | 1 47 | F 12 |
| S 13 | 9 6 | 23 54 | 0s48 | 10 46 | 0 3 | 17 57 | 6 49 | 19 48 | 0 36 | 16 48 | 1 14 | 4 24 | 2 32 | 14 17 | 0 23 | 10 11 | 0 46 | 23 27 | 1 19 | 22 9 | 22 21 | 25 27 | 13 30 | 1 47 | S 13 |
| S 14 | 9 28 | 25 27 | 2 2 | 11 41 | 0n 8 | 17 37 | 6 42 | 19 58 | 0 37 | 16 46 | 1 14 | 4 26 | 2 32 | 14 18 | 0 23 | 10 10 | 0 46 | 23 27 | 1 19 | 22 9 | 22 21 | 25 27 | 13 31 | 1 47 | S 14 |
| M15 | 9 49 | 25 19 | 3 8 | 12 36 | 0 19 | 17 17 | 6 34 | 20 8 | 0 37 | 16 45 | 1 14 | 4 27 | 2 32 | 14 19 | 0 23 | 10 10 | 0 46 | 23 27 | 1 19 | 22 9 | 22 21 | 25 27 | 13 32 | 1 47 | M15 |
| T 16 | 10 11 | 23 33 | 4 2 | 13 29 | 0 30 | 16 55 | 6 25 | 20 18 | 0 38 | 16 43 | 1 14 | 4 28 | 2 32 | 14 20 | 0 23 | 10 9 | 0 46 | 23 27 | 1 19 | 22 9 | 22 20 | 25 28 | 13 34 | 1 47 | T 16 |
| W17 | 10 32 | 20 22 | 4 42 | 14 21 | 0 41 | 16 32 | 6 16 | 20 28 | 0 38 | 16 41 | 1 15 | 4 30 | 2 32 | 14 21 | 0 23 | 10 8 | 0 46 | 23 27 | 1 19 | 22 9 | 22 20 | 25 28 | 13 35 | 1 47 | W17 |
| T 18 | 10 53 | 16 4 | 5 4 | 15 12 | 0 52 | 16 9 | 6 6 | 20 37 | 0 39 | 16 40 | 1 15 | 4 31 | 2 32 | 14 23 | 0 23 | 10 8 | 0 46 | 23 26 | 1 19 | 22 8 | 22 19 | 25 28 | 13 36 | 1 47 | T 18 |
| F 19 | 11 14 | 10 59 | 5 9 | 16 0 | 1 2 | 15 45 | 5 55 | 20 47 | 0 39 | 16 38 | 1 15 | 4 32 | 2 32 | 14 24 | 0 23 | 10 7 | 0 46 | 23 26 | 1 19 | 22 8 | 22 19 | 25 29 | 13 37 | 1 47 | F 19 |
| S 20 | 11 34 | 5 26 | 4 56 | 16 48 | 1 13 | 15 21 | 5 44 | 20 56 | 0 40 | 16 36 | 1 15 | 4 33 | 2 31 | 14 25 | 0 23 | 10 7 | 0 46 | 23 26 | 1 19 | 22 7 | 22 19 | 25 29 | 13 38 | 1 48 | S 20 |
| S 21 | 11 55 | 0n16 | 4 27 | 17 33 | 1 23 | 14 57 | 5 32 | 21 5 | 0 40 | 16 34 | 1 15 | 4 35 | 2 31 | 14 26 | 0 23 | 10 6 | 0 46 | 23 26 | 1 19 | 22 6 | 22 18 | 25 29 | 13 40 | 1 48 | S 21 |
| M22 | 12 15 | 5 53 | 3 45 | 18 16 | 1 32 | 14 32 | 5 19 | 21 14 | 0 41 | 16 32 | 1 15 | 4 36 | 2 31 | 14 27 | 0 23 | 10 6 | 0 46 | 23 26 | 1 19 | 22 5 | 22 18 | 25 30 | 13 41 | 1 48 | M22 |
| T 23 | 12 35 | 11 9 | 2 52 | 18 56 | 1 41 | 14 7 | 5 6 | 21 22 | 0 41 | 16 30 | 1 15 | 4 37 | 2 31 | 14 28 | 0 23 | 10 5 | 0 46 | 23 26 | 1 19 | 22 4 | 22 17 | 25 30 | 13 42 | 1 48 | T 23 |
| W24 | 12 55 | 15 52 | 1 51 | 19 35 | 1 50 | 13 42 | 4 53 | 21 31 | 0 41 | 16 28 | 1 15 | 4 38 | 2 31 | 14 29 | 0 23 | 10 5 | 0 46 | 23 26 | 1 19 | 22 3 | 22 17 | 25 30 | 13 43 | 1 48 | W24 |
| T 25 | 13 14 | 19 49 | 0 47 | 20 10 | 1 58 | 13 18 | 4 39 | 21 39 | 0 42 | 16 27 | 1 15 | 4 39 | 2 31 | 14 30 | 0 23 | 10 4 | 0 46 | 23 26 | 1 19 | 22 3 | 22 17 | 25 31 | 13 44 | 1 48 | T 25 |
| F 26 | 13 34 | 22 51 | 0n19 | 20 44 | 2 5 | 12 54 | 4 26 | 21 47 | 0 42 | 16 25 | 1 15 | 4 40 | 2 31 | 14 31 | 0 23 | 10 4 | 0 47 | 23 26 | 1 19 | 22 3 | 22 16 | 25 31 | 13 46 | 1 48 | F 26 |
| S 27 | 13 53 | 24 49 | 1 24 | 21 15 | 2 11 | 12 30 | 4 11 | 21 55 | 0 43 | 16 23 | 1 15 | 4 41 | 2 30 | 14 32 | 0 23 | 10 3 | 0 47 | 23 26 | 1 19 | 22 3 | 22 16 | 25 31 | 13 47 | 1 48 | S 27 |
| S 28 | 14 12 | 25 39 | 2 24 | 21 43 | 2 17 | 12 7 | 3 57 | 22 2 | 0 43 | 16 21 | 1 15 | 4 42 | 2 30 | 14 33 | 0 23 | 10 3 | 0 47 | 23 26 | 1 19 | 22 3 | 22 15 | 25 31 | 13 48 | 1 48 | S 28 |
| M29 | 14 31 | 25 19 | 3 18 | 22 9 | 2 22 | 11 45 | 3 43 | 22 10 | 0 44 | 16 19 | 1 14 | 4 43 | 2 30 | 14 35 | 0 23 | 10 2 | 0 47 | 23 26 | 1 19 | 22 4 | 22 15 | 25 32 | 13 49 | 1 48 | M29 |
| T 30 | 14n49 | 23n50 | 4n 4 | 22n32 | 2n26 | 11n23 | 3n29 | 22n17 | 0n44 | 16s17 | 1n14 | 4n44 | 2n30 | 14n36 | 0s23 | 10s 2 | 0s47 | 23n26 | 1n19 | 22n 4 | 22n14 | 25n32 | 13n50 | 1s48 | T 30 |

Julian Day Number = 2336949.5, Delta T = 20.27 sec
Ecliptic obliquity = 23°28'51, Nutation = - 0°00'17, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°21'38, Lahiri = 19°28'39Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1686
# geocentric

## MAY 1686 GC — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W 1 | 14 37 6 | 10♉54'04 | 13♌28 | 1♊15 | 20°R35 | 7♊57 | 18°R47 | 23°R50 | 10♉27 | 6♓ 4 | 19♋ 4 | 10°R32 | 11♊44 | 10♋ 9 | 12♉23 | W 1 |
| T 2 | 14 41 3 | 11°52'07 | 25°39 | 2°34 | 20♈18 | 8°37 | 18♏39 | 23♍48 | 10°30 | 6° 5 | 19° 5 | 10♊31 | 11°41 | 10°16 | 12°27 | T 2 |
| F 3 | 14 45 0 | 12°50'08 | 8♍ 8 | 3°50 | 20° 3 | 9°17 | 18°32 | 23°46 | 10°34 | 6° 6 | 19° 6 | 10°29 | 11°38 | 10°22 | 12°31 | F 3 |
| S 4 | 14 48 56 | 13°48'07 | 20°57 | 5° 1 | 19°51 | 9°58 | 18°24 | 23°43 | 10°37 | 6° 7 | 19° 7 | 10°26 | 11°35 | 10°29 | 12°36 | S 4 |
| S 5 | 14 52 53 | 14°46'05 | 4♎ 9 | 6° 7 | 19°41 | 10°38 | 18°16 | 23°41 | 10°41 | 6° 8 | 19° 8 | 10°22 | 11°31 | 10°36 | 12°40 | S 5 |
| M 6 | 14 56 49 | 15°44'00 | 17°45 | 7°10 | 19°33 | 11°18 | 18° 9 | 23°39 | 10°44 | 6° 9 | 19° 8 | 10°19 | 11°28 | 10°42 | 12°44 | M 6 |
| T 7 | 15 0 46 | 16°41'54 | 1♏44 | 8° 7 | 19°28 | 11°59 | 18° 1 | 23°37 | 10°48 | 6°10 | 19° 9 | 10°15 | 11°25 | 10°49 | 12°48 | T 7 |
| W 8 | 15 4 42 | 17°39'47 | 16° 2 | 9° 1 | 19°26 | 12°39 | 17°53 | 23°36 | 10°51 | 6°11 | 19°10 | 10°13 | 11°22 | 10°56 | 12°52 | W 8 |
| T 9 | 15 8 39 | 18°37'38 | 0♐35 | 9°49 | 19°D25 | 13°19 | 17°46 | 23°34 | 10°55 | 6°12 | 19°11 | 10°12 | 11°19 | 11° 2 | 12°57 | T 9 |
| F 10 | 15 12 35 | 19°35'27 | 15°16 | 10°33 | 19°27 | 13°59 | 17°38 | 23°32 | 10°58 | 6°13 | 19°12 | 10°D12 | 11°15 | 11° 9 | 13° 1 | F 10 |
| S 11 | 15 16 32 | 20°33'16 | 29°59 | 11°13 | 19°32 | 14°40 | 17°31 | 23°31 | 11° 2 | 6°14 | 19°13 | 10°12 | 11°12 | 11°16 | 13° 5 | S 11 |
| S 12 | 15 20 29 | 21°31'03 | 14♑37 | 11°48 | 19°39 | 15°20 | 17°23 | 23°29 | 11° 5 | 6°15 | 19°14 | 10°14 | 11° 9 | 11°22 | 13° 9 | S 12 |
| M13 | 15 24 25 | 22°28'49 | 29° 5 | 12°17 | 19°47 | 16° 0 | 17°15 | 23°28 | 11° 8 | 6°16 | 19°15 | 10°15 | 11° 6 | 11°29 | 13°13 | M13 |
| T 14 | 15 28 22 | 23°26'33 | 13♒21 | 12°42 | 19°58 | 16°40 | 17° 8 | 23°27 | 11°12 | 6°17 | 19°16 | 10°16 | 11° 3 | 11°36 | 13°17 | T 14 |
| W15 | 15 32 18 | 24°24'17 | 27°21 | 13° 3 | 20°12 | 17°20 | 17° 0 | 23°25 | 11°15 | 6°18 | 19°17 | 10°R16 | 11° 0 | 11°42 | 13°22 | W15 |
| T 16 | 15 36 15 | 25°21'59 | 11♓ 5 | 13°18 | 20°27 | 18° 0 | 16°53 | 23°24 | 11°19 | 6°18 | 19°18 | 10°15 | 10°56 | 11°49 | 13°26 | T 16 |
| F 17 | 15 40 11 | 26°19'41 | 24°33 | 13°28 | 20°44 | 18°40 | 16°45 | 23°24 | 11°22 | 6°19 | 19°19 | 10°14 | 10°53 | 11°56 | 13°30 | F 17 |
| S 18 | 15 44 8 | 27°17'21 | 7♈45 | 13°34 | 21° 3 | 19°20 | 16°38 | 23°23 | 11°25 | 6°20 | 19°20 | 10°13 | 10°50 | 12° 2 | 13°34 | S 18 |
| S 19 | 15 48 4 | 28°15'00 | 20°43 | 13°R35 | 21°23 | 20° 0 | 16°30 | 23°22 | 11°29 | 6°21 | 19°21 | 10°11 | 10°47 | 12° 9 | 13°38 | S 19 |
| M20 | 15 52 1 | 29°12'38 | 3♉26 | 13°32 | 21°46 | 20°40 | 16°23 | 23°21 | 11°32 | 6°21 | 19°22 | 10° 9 | 10°44 | 12°16 | 13°42 | M20 |
| T 21 | 15 55 58 | 0♊10'16 | 15°56 | 13°24 | 22°10 | 21°19 | 16°16 | 23°21 | 11°35 | 6°22 | 19°23 | 10° 8 | 10°41 | 12°22 | 13°46 | T 21 |
| W22 | 15 59 54 | 1° 7'52 | 28°14 | 13°11 | 22°36 | 21°59 | 16° 9 | 23°20 | 11°39 | 6°22 | 19°24 | 10° 8 | 10°37 | 12°29 | 13°50 | W22 |
| T 23 | 16 3 51 | 2° 5'27 | 10♊22 | 12°55 | 23° 4 | 22°39 | 16° 1 | 23°20 | 11°42 | 6°23 | 19°25 | 10°D 7 | 10°34 | 12°36 | 13°54 | T 23 |
| F 24 | 16 7 47 | 3° 3'00 | 22°22 | 12°35 | 23°33 | 23°19 | 15°54 | 23°20 | 11°45 | 6°23 | 19°27 | 10° 7 | 10°31 | 12°42 | 13°58 | F 24 |
| S 25 | 16 11 44 | 4° 0'33 | 4♋15 | 12°11 | 24° 3 | 23°59 | 15°47 | 23°20 | 11°49 | 6°24 | 19°28 | 10° 8 | 10°28 | 12°49 | 14° 2 | S 25 |
| S 26 | 16 15 40 | 4°58'04 | 16° 4 | 11°45 | 24°35 | 24°38 | 15°41 | 23°D20 | 11°52 | 6°24 | 19°29 | 10° 9 | 10°25 | 12°56 | 14° 6 | S 26 |
| M27 | 16 19 37 | 5°55'35 | 27°53 | 11°16 | 25° 8 | 25°18 | 15°34 | 23°20 | 11°55 | 6°25 | 19°30 | 10° 9 | 10°21 | 13° 2 | 14°10 | M27 |
| T 28 | 16 23 33 | 6°53'04 | 9♌45 | 10°46 | 25°42 | 25°58 | 15°27 | 23°20 | 11°58 | 6°25 | 19°31 | 10° 9 | 10°18 | 13° 9 | 14°14 | T 28 |
| W29 | 16 27 30 | 7°50'31 | 21°44 | 10°13 | 26°18 | 26°37 | 15°20 | 23°20 | 12° 2 | 6°26 | 19°33 | 10°10 | 10°15 | 13°16 | 14°18 | W29 |
| T 30 | 16 31 27 | 8°47'57 | 3♍54 | 9°40 | 26°55 | 27°17 | 15°14 | 23°21 | 12° 5 | 6°26 | 19°34 | 10°10 | 10°12 | 13°22 | 14°22 | T 30 |
| F 31 | 16 35 23 | 9♊45'23 | 16♍20 | 9♊ 6 | 27♈33 | 27♊56 | 15♏ 7 | 23♍21 | 12♉ 8 | 6♓26 | 19♋35 | 10♊10 | 10♊ 9 | 13♋29 | 14♉26 | 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 |
| W 1 | 15n 7 | 21n16 | 4n40 | 22n53 | 2n29 | 11n 3 | 3n14 | 22n24 | 0n45 | 16s15 | 1n14 | 4n45 | 2n30 | 14n37 | 0s23 | 10s 2 | 0s47 | 23n26 | 1n19 | 22n 4 | 22n14 | 25n32 | 13n52 | 1s48 |
| T 2 | 15 25 | 17 45 | 5 3 | 23 11 | 2 32 | 10 43 | 3 0 | 22 31 | 0 45 | 16 13 | 1 14 | 4 45 | 2 30 | 14 38 | 0 23 | 10 1 | 0 47 | 23 26 | 1 19 | 22 4 | 22 14 | 25 33 | 13 53 | 1 48 |
| F 3 | 15 43 | 13 23 | 5 13 | 23 28 | 2 33 | 10 24 | 2 46 | 22 38 | 0 45 | 16 11 | 1 14 | 4 46 | 2 29 | 14 39 | 0 23 | 10 1 | 0 47 | 23 26 | 1 19 | 22 4 | 22 13 | 25 33 | 13 54 | 1 49 |
| S 4 | 16 1 | 8 19 | 5 9 | 23 41 | 2 34 | 10 7 | 2 32 | 22 44 | 0 46 | 16 9 | 1 14 | 4 47 | 2 29 | 14 40 | 0 23 | 10 0 | 0 47 | 23 26 | 1 19 | 22 3 | 22 13 | 25 33 | 13 55 | 1 49 |
| S 5 | 16 18 | 2 45 | 4 47 | 23 53 | 2 33 | 9 50 | 2 18 | 22 51 | 0 46 | 16 7 | 1 14 | 4 47 | 2 29 | 14 41 | 0 23 | 10 0 | 0 47 | 23 26 | 1 20 | 22 3 | 22 12 | 25 33 | 13 56 | 1 49 |
| M 6 | 16 35 | 3s 8 | 4 10 | 24 2 | 2 32 | 9 35 | 2 4 | 22 57 | 0 47 | 16 5 | 1 14 | 4 48 | 2 29 | 14 42 | 0 23 | 10 0 | 0 47 | 23 25 | 1 20 | 22 2 | 22 12 | 25 33 | 13 58 | 1 49 |
| T 7 | 16 51 | 9 2 | 3 16 | 24 10 | 2 29 | 9 20 | 1 51 | 23 3 | 0 47 | 16 3 | 1 14 | 4 49 | 2 29 | 14 43 | 0 23 | 9 59 | 0 47 | 23 25 | 1 20 | 22 2 | 22 11 | 25 34 | 13 59 | 1 49 |
| W 8 | 17 8 | 14 36 | 2 9 | 24 15 | 2 26 | 9 7 | 1 38 | 23 8 | 0 47 | 16 1 | 1 14 | 4 49 | 2 29 | 14 44 | 0 23 | 9 59 | 0 47 | 23 25 | 1 20 | 22 1 | 22 11 | 25 34 | 14 0 | 1 49 |
| T 9 | 17 24 | 19 27 | 0 53 | 24 18 | 2 22 | 8 55 | 1 25 | 23 14 | 0 48 | 15 58 | 1 14 | 4 50 | 2 28 | 14 45 | 0 23 | 9 59 | 0 47 | 23 25 | 1 20 | 22 1 | 22 10 | 25 34 | 14 1 | 1 49 |
| F 10 | 17 40 | 23 8 | 0s28 | 24 19 | 2 16 | 8 44 | 1 12 | 23 19 | 0 48 | 15 56 | 1 14 | 4 50 | 2 28 | 14 47 | 0 23 | 9 58 | 0 47 | 23 25 | 1 20 | 22 1 | 22 10 | 25 34 | 14 2 | 1 49 |
| S 11 | 17 55 | 25 16 | 1 47 | 24 18 | 2 10 | 8 35 | 1 0 | 23 24 | 0 49 | 15 54 | 1 14 | 4 51 | 2 28 | 14 48 | 0 23 | 9 58 | 0 47 | 23 25 | 1 20 | 22 1 | 22 10 | 25 35 | 14 3 | 1 49 |
| S 12 | 18 10 | 25 38 | 2 59 | 24 16 | 2 2 | 8 26 | 0 48 | 23 29 | 0 49 | 15 52 | 1 14 | 4 51 | 2 28 | 14 49 | 0 23 | 9 58 | 0 47 | 23 25 | 1 20 | 22 1 | 22 9 | 25 35 | 14 5 | 1 49 |
| M13 | 18 25 | 24 16 | 3 58 | 24 11 | 1 54 | 8 19 | 0 36 | 23 34 | 0 49 | 15 50 | 1 14 | 4 51 | 2 28 | 14 50 | 0 23 | 9 57 | 0 47 | 23 25 | 1 20 | 22 1 | 22 9 | 25 35 | 14 6 | 1 49 |
| T 14 | 18 40 | 21 21 | 4 42 | 24 5 | 1 44 | 8 12 | 0 25 | 23 38 | 0 50 | 15 48 | 1 13 | 4 52 | 2 27 | 14 51 | 0 23 | 9 57 | 0 47 | 23 25 | 1 20 | 22 2 | 22 8 | 25 35 | 14 7 | 1 50 |
| W15 | 18 54 | 17 14 | 5 8 | 23 57 | 1 34 | 8 7 | 0 14 | 23 42 | 0 50 | 15 46 | 1 13 | 4 52 | 2 27 | 14 52 | 0 23 | 9 57 | 0 47 | 23 25 | 1 20 | 22 2 | 22 8 | 25 35 | 14 8 | 1 50 |
| T 16 | 19 8 | 12 17 | 5 16 | 23 48 | 1 22 | 8 3 | 0 3 | 23 47 | 0 51 | 15 44 | 1 13 | 4 52 | 2 27 | 14 53 | 0 23 | 9 57 | 0 47 | 23 24 | 1 20 | 22 2 | 22 7 | 25 35 | 14 9 | 1 50 |
| F 17 | 19 22 | 6 51 | 5 6 | 23 37 | 1 10 | 8 0 | 0s 7 | 23 50 | 0 51 | 15 42 | 1 13 | 4 52 | 2 27 | 14 54 | 0 23 | 9 56 | 0 47 | 23 24 | 1 20 | 22 1 | 22 7 | 25 36 | 14 10 | 1 50 |
| S 18 | 19 35 | 1 13 | 4 41 | 23 24 | 0 57 | 7 58 | 0 17 | 23 54 | 0 51 | 15 40 | 1 13 | 4 53 | 2 27 | 14 55 | 0 23 | 9 56 | 0 47 | 23 24 | 1 20 | 22 1 | 22 7 | 25 36 | 14 11 | 1 50 |
| S 19 | 19 48 | 4n23 | 4 1 | 23 10 | 0 42 | 7 56 | 0 27 | 23 58 | 0 52 | 15 38 | 1 13 | 4 53 | 2 26 | 14 56 | 0 23 | 9 56 | 0 47 | 23 24 | 1 20 | 22 1 | 22 6 | 25 36 | 14 12 | 1 50 |
| M20 | 20 1 | 9 42 | 3 10 | 22 55 | 0 27 | 7 56 | 0 36 | 24 1 | 0 52 | 15 36 | 1 13 | 4 53 | 2 26 | 14 57 | 0 23 | 9 56 | 0 47 | 23 24 | 1 20 | 22 1 | 22 6 | 25 36 | 14 14 | 1 50 |
| T 21 | 20 13 | 14 33 | 2 10 | 22 39 | 0 12 | 7 57 | 0 45 | 24 4 | 0 52 | 15 34 | 1 13 | 4 53 | 2 26 | 14 58 | 0 23 | 9 56 | 0 47 | 23 24 | 1 20 | 22 0 | 22 5 | 25 36 | 14 15 | 1 50 |
| W22 | 20 25 | 18 44 | 1 5 | 22 21 | 0s 4 | 7 59 | 0 54 | 24 7 | 0 53 | 15 32 | 1 12 | 4 53 | 2 26 | 14 59 | 0 23 | 9 55 | 0 47 | 23 24 | 1 20 | 22 0 | 22 5 | 25 36 | 14 16 | 1 50 |
| T 23 | 20 37 | 22 4 | 0n 1 | 22 2 | 0 21 | 8 1 | 1 2 | 24 9 | 0 53 | 15 31 | 1 12 | 4 53 | 2 26 | 15 0 | 0 23 | 9 55 | 0 47 | 23 24 | 1 20 | 22 0 | 22 4 | 25 36 | 14 17 | 1 51 |
| F 24 | 20 48 | 24 23 | 1 7 | 21 43 | 0 38 | 8 4 | 1 10 | 24 12 | 0 53 | 15 29 | 1 12 | 4 53 | 2 25 | 15 1 | 0 23 | 9 55 | 0 47 | 23 24 | 1 20 | 22 0 | 22 4 | 25 36 | 14 18 | 1 51 |
| S 25 | 20 59 | 25 35 | 2 10 | 21 23 | 0 56 | 8 8 | 1 18 | 24 14 | 0 54 | 15 27 | 1 12 | 4 52 | 2 25 | 15 2 | 0 23 | 9 55 | 0 48 | 23 23 | 1 20 | 22 0 | 22 3 | 25 36 | 14 19 | 1 51 |
| S 26 | 21 10 | 25 36 | 3 7 | 21 2 | 1 13 | 8 13 | 1 25 | 24 16 | 0 54 | 15 25 | 1 12 | 4 52 | 2 25 | 15 3 | 0 23 | 9 55 | 0 48 | 23 23 | 1 20 | 22 1 | 22 3 | 25 37 | 14 20 | 1 51 |
| M27 | 21 20 | 24 28 | 3 55 | 20 41 | 1 30 | 8 19 | 1 32 | 24 18 | 0 54 | 15 23 | 1 12 | 4 52 | 2 25 | 15 4 | 0 23 | 9 55 | 0 48 | 23 23 | 1 20 | 22 1 | 22 2 | 25 37 | 14 21 | 1 51 |
| T 28 | 21 30 | 22 14 | 4 34 | 20 19 | 1 48 | 8 25 | 1 39 | 24 20 | 0 55 | 15 21 | 1 11 | 4 52 | 2 25 | 15 5 | 0 23 | 9 55 | 0 48 | 23 23 | 1 20 | 22 1 | 22 2 | 25 37 | 14 22 | 1 51 |
| W29 | 21 39 | 19 2 | 5 1 | 19 58 | 2 4 | 8 32 | 1 46 | 24 21 | 0 55 | 15 20 | 1 11 | 4 51 | 2 24 | 15 6 | 0 23 | 9 54 | 0 48 | 23 23 | 1 20 | 22 1 | 22 1 | 25 37 | 14 23 | 1 51 |
| T 30 | 21 48 | 14 59 | 5 16 | 19 37 | 2 21 | 8 39 | 1 52 | 24 22 | 0 55 | 15 18 | 1 11 | 4 51 | 2 24 | 15 7 | 0 23 | 9 54 | 0 48 | 23 23 | 1 20 | 22 1 | 22 1 | 25 37 | 14 24 | 1 51 |
| F 31 | 21n57 | 10n15 | 5n16 | 19n17 | 2s36 | 8n47 | 1s58 | 24n23 | 0n56 | 15s16 | 1n11 | 4n51 | 2n24 | 15n 8 | 0s23 | 9s54 | 0s48 | 23n23 | 1n20 | 22n 1 | 22n 1 | 25n37 | 14n25 | 1s52 |

Julian Day Number = 2336979.5, Delta T = 20.23 sec
Ecliptic obliquity = 23°28'51, Nutation = - 0°00'17, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°21'42, Lahiri = 19°28'43Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1686
# geocentric

## JUNE 1686 GC — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S 1 | 16 39 20 | 10♊42'46 | 29♍ 6 | 8°R33 | 28♈12 | 28♊36 | 15°R 1 | 23♍22 | 12♉11 | 6♓26 | 19♋36 | 10♊10 | 10♊ 6 | 13♋36 | 14♉30 | S 1 |
| S 2 | 16 43 16 | 11°40'09 | 12♎15 | 8♊ 1 | 28°53 | 29°15 | 14♏55 | 23°22 | 12°14 | 6°27 | 19°38 | 10°10 | 10° 2 | 13°42 | 14°34 | S 2 |
| M 3 | 16 47 13 | 12°37'31 | 25°50 | 7°29 | 29°34 | 29°55 | 14°49 | 23°23 | 12°17 | 6°27 | 19°39 | 10°10 | 9°59 | 13°49 | 14°38 | M 3 |
| T 4 | 16 51 9 | 13°34'51 | 9♏52 | 7° 0 | 0♉16 | 0♋34 | 14°43 | 23°24 | 12°21 | 6°27 | 19°40 | 10°10 | 9°56 | 13°56 | 14°42 | T 4 |
| W 5 | 16 55 6 | 14°32'11 | 24°17 | 6°33 | 0°59 | 1°14 | 14°37 | 23°25 | 12°24 | 6°27 | 19°42 | 10°11 | 9°53 | 14° 2 | 14°45 | W 5 |
| T 6 | 16 59 2 | 15°29'30 | 9♐ 3 | 6° 9 | 1°43 | 1°53 | 14°31 | 23°26 | 12°27 | 6°27 | 19°43 | 10°R11 | 9°50 | 14° 9 | 14°49 | T 6 |
| F 7 | 17 2 59 | 16°26'48 | 24° 2 | 5°48 | 2°28 | 2°32 | 14°26 | 23°27 | 12°30 | 6°27 | 19°45 | 10°11 | 9°47 | 14°16 | 14°53 | F 7 |
| S 8 | 17 6 56 | 17°24'06 | 9♑ 6 | 5°31 | 3°14 | 3°12 | 14°20 | 23°29 | 12°33 | 6°R27 | 19°46 | 10°10 | 9°43 | 14°22 | 14°57 | S 8 |
| S 9 | 17 10 52 | 18°21'23 | 24° 7 | 5°17 | 4° 1 | 3°51 | 14°15 | 23°30 | 12°36 | 6°27 | 19°47 | 10° 9 | 9°40 | 14°29 | 15° 0 | S 9 |
| M10 | 17 14 49 | 19°18'39 | 8♒56 | 5° 8 | 4°49 | 4°30 | 14°10 | 23°32 | 12°39 | 6°27 | 19°49 | 10° 8 | 9°37 | 14°36 | 15° 4 | M10 |
| T 11 | 17 18 45 | 20°15'55 | 23°27 | 5° 3 | 5°37 | 5° 9 | 14° 5 | 23°33 | 12°42 | 6°27 | 19°50 | 10° 7 | 9°34 | 14°42 | 15° 8 | T 11 |
| W12 | 17 22 42 | 21°13'11 | 7♓36 | 5°D 3 | 6°26 | 5°49 | 14° 0 | 23°35 | 12°44 | 6°27 | 19°52 | 10° 7 | 9°31 | 14°49 | 15°11 | W12 |
| T 13 | 17 26 38 | 22°10'26 | 21°22 | 5° 7 | 7°16 | 6°28 | 13°55 | 23°37 | 12°47 | 6°27 | 19°53 | 10°D 6 | 9°27 | 14°56 | 15°15 | T 13 |
| F 14 | 17 30 35 | 23° 7'42 | 4♈45 | 5°15 | 8° 6 | 7° 7 | 13°51 | 23°39 | 12°50 | 6°27 | 19°55 | 10° 7 | 9°24 | 15° 2 | 15°18 | F 14 |
| S 15 | 17 34 31 | 24° 4'57 | 17°46 | 5°28 | 8°57 | 7°46 | 13°46 | 23°41 | 12°53 | 6°27 | 19°56 | 10° 7 | 9°21 | 15° 9 | 15°22 | S 15 |
| S 16 | 17 38 28 | 25° 2'11 | 0♉29 | 5°46 | 9°49 | 8°25 | 13°42 | 23°43 | 12°56 | 6°26 | 19°57 | 10° 9 | 9°18 | 15°16 | 15°25 | S 16 |
| M17 | 17 42 25 | 25°59'26 | 12°56 | 6° 9 | 10°41 | 9° 5 | 13°38 | 23°45 | 12°59 | 6°26 | 19°59 | 10°10 | 9°15 | 15°22 | 15°29 | M17 |
| T 18 | 17 46 21 | 26°56'40 | 25°11 | 6°36 | 11°34 | 9°44 | 13°34 | 23°47 | 13° 1 | 6°26 | 20° 0 | 10°11 | 9°12 | 15°29 | 15°32 | T 18 |
| W19 | 17 50 18 | 27°53'55 | 7♊16 | 7° 8 | 12°27 | 10°23 | 13°30 | 23°50 | 13° 4 | 6°25 | 20° 2 | 10°R12 | 9° 8 | 15°36 | 15°36 | W19 |
| T 20 | 17 54 14 | 28°51'09 | 19°13 | 7°44 | 13°21 | 11° 2 | 13°27 | 23°52 | 13° 7 | 6°25 | 20° 4 | 10°11 | 9° 5 | 15°42 | 15°39 | T 20 |
| F 21 | 17 58 11 | 29°48'23 | 1♋ 6 | 8°25 | 14°16 | 11°41 | 13°23 | 23°55 | 13° 9 | 6°25 | 20° 5 | 10°10 | 9° 2 | 15°49 | 15°42 | F 21 |
| S 22 | 18 2 7 | 0♋45'36 | 12°55 | 9°10 | 15°11 | 12°20 | 13°20 | 23°57 | 13°12 | 6°24 | 20° 7 | 10° 8 | 8°59 | 15°56 | 15°45 | S 22 |
| S 23 | 18 6 4 | 1°42'49 | 24°44 | 9°59 | 16° 6 | 12°59 | 13°17 | 24° 0 | 13°14 | 6°24 | 20° 8 | 10° 5 | 8°56 | 16° 2 | 15°49 | S 23 |
| M24 | 18 10 1 | 2°40'02 | 6♌34 | 10°53 | 17° 2 | 13°38 | 13°14 | 24° 3 | 13°17 | 6°23 | 20°10 | 10° 1 | 8°53 | 16° 9 | 15°52 | M24 |
| T 25 | 18 13 57 | 3°37'15 | 18°28 | 11°51 | 17°59 | 14°17 | 13°11 | 24° 6 | 13°19 | 6°23 | 20°11 | 9°58 | 8°49 | 16°16 | 15°55 | T 25 |
| W26 | 18 17 54 | 4°34'27 | 0♍30 | 12°53 | 18°55 | 14°56 | 13° 9 | 24° 9 | 13°22 | 6°22 | 20°13 | 9°54 | 8°46 | 16°22 | 15°58 | W26 |
| T 27 | 18 21 50 | 5°31'39 | 12°41 | 13°59 | 19°53 | 15°35 | 13° 6 | 24°12 | 13°24 | 6°22 | 20°14 | 9°51 | 8°43 | 16°29 | 16° 1 | T 27 |
| F 28 | 18 25 47 | 6°28'51 | 25° 6 | 15° 9 | 20°50 | 16°13 | 13° 4 | 24°15 | 13°27 | 6°21 | 20°16 | 9°50 | 8°40 | 16°36 | 16° 4 | F 28 |
| S 29 | 18 29 43 | 7°26'02 | 7♎48 | 16°23 | 21°48 | 16°52 | 13° 2 | 24°18 | 13°29 | 6°21 | 20°18 | 9°D49 | 8°37 | 16°43 | 16° 7 | S 29 |
| S 30 | 18 33 40 | 8♋23'13 | 20♎52 | 17♊42 | 22♉47 | 17♋31 | 13♏ 0 | 24♍22 | 13♉31 | 6♓20 | 20♋19 | 9♊50 | 8♊33 | 16♋49 | 16♉10 | S 30 |

| 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 |
| S 1 | 22n 5 | 4n57 | 5n 0 | 18n57 | 2s51 | 8n56 | 2s 3 | 24n24 | 0n56 | 15s15 | 1n11 | 4n50 | 2n24 | 15n 9 | 0s23 | 9s54 | 0s48 | 23n22 | 1n21 | 22n 1 | 22n 0 | 25n37 | 14n26 | 1s52 |
| S 2 | 22 13 | 0s43 | 4 29 | 18 38 | 3 5 | 9 5 | 2 9 | 24 25 | 0 56 | 15 13 | 1 10 | 4 50 | 2 23 | 15 10 | 0 23 | 9 54 | 0 48 | 23 22 | 1 21 | 22 1 | 22 0 | 25 37 | 14 27 | 1 52 |
| M 3 | 22 21 | 6 33 | 3 42 | 18 20 | 3 18 | 9 15 | 2 14 | 24 25 | 0 56 | 15 11 | 1 10 | 4 49 | 2 23 | 15 11 | 0 23 | 9 54 | 0 48 | 23 22 | 1 21 | 22 1 | 21 59 | 25 37 | 14 28 | 1 52 |
| T 4 | 22 28 | 12 15 | 2 41 | 18 4 | 3 30 | 9 25 | 2 19 | 24 25 | 0 57 | 15 10 | 1 10 | 4 49 | 2 23 | 15 12 | 0 23 | 9 54 | 0 48 | 23 22 | 1 21 | 22 1 | 21 59 | 25 37 | 14 29 | 1 52 |
| W 5 | 22 35 | 17 28 | 1 27 | 17 49 | 3 40 | 9 36 | 2 23 | 24 26 | 0 57 | 15 8 | 1 10 | 4 48 | 2 23 | 15 13 | 0 23 | 9 54 | 0 48 | 23 22 | 1 21 | 22 1 | 21 58 | 25 37 | 14 30 | 1 52 |
| T 6 | 22 41 | 21 44 | 0 6 | 17 36 | 3 50 | 9 47 | 2 27 | 24 25 | 0 57 | 15 7 | 1 10 | 4 47 | 2 23 | 15 14 | 0 23 | 9 54 | 0 48 | 23 22 | 1 21 | 22 1 | 21 58 | 25 37 | 14 31 | 1 52 |
| F 7 | 22 47 | 24 37 | 1s16 | 17 25 | 3 58 | 9 59 | 2 32 | 24 25 | 0 58 | 15 5 | 1 9 | 4 47 | 2 22 | 15 15 | 0 23 | 9 54 | 0 48 | 23 21 | 1 21 | 22 1 | 21 57 | 25 37 | 14 32 | 1 53 |
| S 8 | 22 53 | 25 43 | 2 34 | 17 15 | 4 4 | 10 11 | 2 35 | 24 24 | 0 58 | 15 4 | 1 9 | 4 46 | 2 22 | 15 16 | 0 23 | 9 54 | 0 48 | 23 21 | 1 21 | 22 1 | 21 57 | 25 37 | 14 33 | 1 53 |
| S 9 | 22 58 | 24 56 | 3 40 | 17 8 | 4 10 | 10 23 | 2 39 | 24 24 | 0 58 | 15 3 | 1 9 | 4 45 | 2 22 | 15 17 | 0 23 | 9 54 | 0 48 | 23 21 | 1 21 | 22 1 | 21 56 | 25 37 | 14 34 | 1 53 |
| M10 | 23 3 | 22 25 | 4 31 | 17 2 | 4 14 | 10 36 | 2 42 | 24 23 | 0 58 | 15 1 | 1 9 | 4 45 | 2 22 | 15 17 | 0 23 | 9 54 | 0 48 | 23 21 | 1 21 | 22 1 | 21 56 | 25 37 | 14 35 | 1 53 |
| T 11 | 23 7 | 18 30 | 5 4 | 16 58 | 4 16 | 10 49 | 2 46 | 24 21 | 0 59 | 15 0 | 1 9 | 4 44 | 2 22 | 15 18 | 0 23 | 9 54 | 0 48 | 23 21 | 1 21 | 22 0 | 21 55 | 25 37 | 14 36 | 1 53 |
| W12 | 23 11 | 13 37 | 5 17 | 16 57 | 4 18 | 11 2 | 2 49 | 24 20 | 0 59 | 14 59 | 1 8 | 4 43 | 2 21 | 15 19 | 0 23 | 9 54 | 0 48 | 23 21 | 1 21 | 22 0 | 21 55 | 25 37 | 14 37 | 1 53 |
| T 13 | 23 15 | 8 11 | 5 11 | 16 57 | 4 18 | 11 15 | 2 51 | 24 18 | 0 59 | 14 58 | 1 8 | 4 42 | 2 21 | 15 20 | 0 23 | 9 54 | 0 48 | 23 20 | 1 21 | 22 0 | 21 54 | 25 37 | 14 38 | 1 53 |
| F 14 | 23 18 | 2 31 | 4 48 | 17 0 | 4 17 | 11 29 | 2 54 | 24 17 | 0 59 | 14 57 | 1 8 | 4 41 | 2 21 | 15 21 | 0 23 | 9 55 | 0 48 | 23 20 | 1 21 | 22 0 | 21 54 | 25 37 | 14 38 | 1 54 |
| S 15 | 23 21 | 3n 7 | 4 11 | 17 4 | 4 15 | 11 43 | 2 56 | 24 15 | 1 0 | 14 55 | 1 8 | 4 40 | 2 21 | 15 22 | 0 23 | 9 55 | 0 48 | 23 20 | 1 21 | 22 0 | 21 53 | 25 37 | 14 39 | 1 54 |
| S 16 | 23 23 | 8 30 | 3 22 | 17 10 | 4 12 | 11 57 | 2 58 | 24 13 | 1 0 | 14 54 | 1 7 | 4 39 | 2 20 | 15 23 | 0 23 | 9 55 | 0 48 | 23 20 | 1 21 | 22 1 | 21 53 | 25 37 | 14 40 | 1 54 |
| M17 | 23 25 | 13 27 | 2 25 | 17 18 | 4 8 | 12 12 | 3 0 | 24 10 | 1 0 | 14 53 | 1 7 | 4 38 | 2 20 | 15 23 | 0 23 | 9 55 | 0 48 | 23 20 | 1 21 | 22 1 | 21 53 | 25 37 | 14 41 | 1 54 |
| T 18 | 23 27 | 17 46 | 1 22 | 17 28 | 4 3 | 12 26 | 3 2 | 24 8 | 1 0 | 14 53 | 1 7 | 4 37 | 2 20 | 15 24 | 0 23 | 9 55 | 0 48 | 23 20 | 1 21 | 22 1 | 21 52 | 25 37 | 14 42 | 1 54 |
| W19 | 23 28 | 21 18 | 0 16 | 17 39 | 3 57 | 12 41 | 3 4 | 24 5 | 1 1 | 14 52 | 1 7 | 4 36 | 2 20 | 15 25 | 0 23 | 9 55 | 0 48 | 23 19 | 1 21 | 22 1 | 21 52 | 25 37 | 14 43 | 1 54 |
| T 20 | 23 29 | 23 52 | 0n50 | 17 51 | 3 50 | 12 56 | 3 5 | 24 2 | 1 1 | 14 51 | 1 6 | 4 35 | 2 20 | 15 26 | 0 23 | 9 55 | 0 48 | 23 19 | 1 21 | 22 1 | 21 51 | 25 36 | 14 43 | 1 55 |
| F 21 | 23 29 | 25 21 | 1 53 | 18 5 | 3 42 | 13 11 | 3 6 | 23 59 | 1 1 | 14 50 | 1 6 | 4 33 | 2 19 | 15 27 | 0 23 | 9 56 | 0 49 | 23 19 | 1 21 | 22 1 | 21 51 | 25 36 | 14 44 | 1 55 |
| S 22 | 23 29 | 25 41 | 2 51 | 18 20 | 3 34 | 13 26 | 3 7 | 23 56 | 1 1 | 14 49 | 1 6 | 4 32 | 2 19 | 15 27 | 0 23 | 9 56 | 0 49 | 23 19 | 1 22 | 22 0 | 21 50 | 25 36 | 14 45 | 1 55 |
| S 23 | 23 28 | 24 51 | 3 41 | 18 36 | 3 25 | 13 41 | 3 8 | 23 52 | 1 2 | 14 49 | 1 6 | 4 31 | 2 19 | 15 28 | 0 23 | 9 56 | 0 49 | 23 19 | 1 22 | 22 0 | 21 50 | 25 36 | 14 46 | 1 55 |
| M24 | 23 27 | 22 54 | 4 22 | 18 53 | 3 15 | 13 56 | 3 9 | 23 48 | 1 2 | 14 48 | 1 5 | 4 30 | 2 19 | 15 29 | 0 23 | 9 56 | 0 49 | 23 19 | 1 22 | 21 59 | 21 49 | 25 36 | 14 47 | 1 55 |
| T 25 | 23 26 | 19 57 | 4 52 | 19 11 | 3 5 | 14 11 | 3 10 | 23 45 | 1 2 | 14 47 | 1 5 | 4 28 | 2 19 | 15 30 | 0 23 | 9 56 | 0 49 | 23 18 | 1 22 | 21 59 | 21 49 | 25 36 | 14 47 | 1 55 |
| W26 | 23 24 | 16 8 | 5 10 | 19 30 | 2 55 | 14 26 | 3 10 | 23 40 | 1 2 | 14 47 | 1 5 | 4 27 | 2 18 | 15 30 | 0 23 | 9 57 | 0 49 | 23 18 | 1 22 | 21 58 | 21 48 | 25 36 | 14 48 | 1 56 |
| T 27 | 23 22 | 11 38 | 5 14 | 19 49 | 2 44 | 14 41 | 3 10 | 23 36 | 1 2 | 14 46 | 1 5 | 4 25 | 2 18 | 15 31 | 0 23 | 9 57 | 0 49 | 23 18 | 1 22 | 21 58 | 21 48 | 25 36 | 14 49 | 1 56 |
| F 28 | 23 19 | 6 35 | 5 3 | 20 8 | 2 32 | 14 56 | 3 10 | 23 32 | 1 3 | 14 46 | 1 4 | 4 24 | 2 18 | 15 32 | 0 23 | 9 57 | 0 49 | 23 18 | 1 22 | 21 58 | 21 47 | 25 35 | 14 49 | 1 56 |
| S 29 | 23 16 | 1 9 | 4 37 | 20 27 | 2 20 | 15 11 | 3 10 | 23 27 | 1 3 | 14 46 | 1 4 | 4 22 | 2 18 | 15 33 | 0 23 | 9 57 | 0 49 | 23 18 | 1 22 | 21 58 | 21 47 | 25 35 | 14 50 | 1 56 |
| S 30 | 23n13 | 4s30 | 3n57 | 20n47 | 2s 8 | 15n26 | 3s10 | 23n22 | 1n 3 | 14s45 | 1n 4 | 4n21 | 2n18 | 15n33 | 0s23 | 9s58 | 0s49 | 23n18 | 1n22 | 21n58 | 21n46 | 25n35 | 14n51 | 1s56 |

Julian Day Number = 2337010.5, Delta T = 20.18 sec
Ecliptic obliquity = 23°28'51, Nutation = - 0°00'17, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°21'47, Lahiri = 19°28'47Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1686
# geocentric

## JULY 1686 GC

**00:00 UT**

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M 1 | 18 37 36 | 9♋20'24 | 4♏19 | 19♊ 4 | 23♉45 | 18♋10 | 12°R59 | 24♍25 | 13♉34 | 6°R19 | 20♋21 | 9♊51 | 8♊30 | 16♋56 | 16♉13 | M 1 |
| T 2 | 18 41 33 | 10°17'34 | 18°14 | 20°29 | 24°45 | 18°49 | 12♏57 | 24°29 | 13°36 | 6♓18 | 20°22 | 9°52 | 8°27 | 17° 3 | 16°16 | T 2 |
| W 3 | 18 45 30 | 11°14'45 | 2♐34 | 21°59 | 25°44 | 19°28 | 12°56 | 24°32 | 13°38 | 6°18 | 20°24 | 9°R53 | 8°24 | 17° 9 | 16°19 | W 3 |
| T 4 | 18 49 26 | 12°11'55 | 17°19 | 23°32 | 26°44 | 20° 6 | 12°55 | 24°36 | 13°40 | 6°17 | 20°25 | 9°53 | 8°21 | 17°16 | 16°22 | T 4 |
| F 5 | 18 53 23 | 13° 9'06 | 2♑22 | 25° 9 | 27°44 | 20°45 | 12°54 | 24°40 | 13°43 | 6°16 | 20°27 | 9°52 | 8°18 | 17°23 | 16°24 | F 5 |
| S 6 | 18 57 19 | 14° 6'16 | 17°36 | 26°50 | 28°45 | 21°24 | 12°53 | 24°44 | 13°45 | 6°15 | 20°29 | 9°49 | 8°14 | 17°29 | 16°27 | S 6 |
| S 7 | 19 1 16 | 15° 3'27 | 2♒51 | 28°34 | 29°46 | 22° 2 | 12°52 | 24°48 | 13°47 | 6°14 | 20°30 | 9°45 | 8°11 | 17°36 | 16°30 | S 7 |
| M 8 | 19 5 12 | 16° 0'38 | 17°55 | 0♋21 | 0♊47 | 22°41 | 12°52 | 24°52 | 13°49 | 6°14 | 20°32 | 9°40 | 8° 8 | 17°43 | 16°32 | M 8 |
| T 9 | 19 9 9 | 16°57'50 | 2♓41 | 2°11 | 1°48 | 23°20 | 12°52 | 24°56 | 13°51 | 6°13 | 20°34 | 9°34 | 8° 5 | 17°49 | 16°35 | T 9 |
| W10 | 19 13 5 | 17°55'02 | 17° 3 | 4° 4 | 2°50 | 23°58 | 12°D52 | 25° 0 | 13°53 | 6°12 | 20°35 | 9°30 | 8° 2 | 17°56 | 16°37 | W10 |
| T 11 | 19 17 2 | 18°52'15 | 0♈56 | 6° 0 | 3°52 | 24°37 | 12°52 | 25° 5 | 13°55 | 6°11 | 20°37 | 9°27 | 7°59 | 18° 3 | 16°40 | T 11 |
| F 12 | 19 20 59 | 19°49'28 | 14°21 | 7°59 | 4°54 | 25°16 | 12°52 | 25° 9 | 13°56 | 6°10 | 20°38 | 9°D26 | 7°55 | 18° 9 | 16°42 | F 12 |
| S 13 | 19 24 55 | 20°46'42 | 27°21 | 9°59 | 5°57 | 25°54 | 12°52 | 25°13 | 13°58 | 6° 9 | 20°40 | 9°26 | 7°52 | 18°16 | 16°45 | S 13 |
| S 14 | 19 28 52 | 21°43'57 | 9♉58 | 12° 2 | 7° 0 | 26°33 | 12°53 | 25°18 | 14° 0 | 6° 8 | 20°42 | 9°27 | 7°49 | 18°23 | 16°47 | S 14 |
| M15 | 19 32 48 | 22°41'12 | 22°17 | 14° 6 | 8° 3 | 27°12 | 12°54 | 25°22 | 14° 2 | 6° 7 | 20°43 | 9°28 | 7°46 | 18°29 | 16°49 | M15 |
| T 16 | 19 36 45 | 23°38'29 | 4♊23 | 16°11 | 9° 6 | 27°50 | 12°55 | 25°27 | 14° 3 | 6° 6 | 20°45 | 9°R29 | 7°43 | 18°36 | 16°52 | T 16 |
| W17 | 19 40 41 | 24°35'46 | 16°19 | 18°18 | 10°10 | 28°29 | 12°56 | 25°32 | 14° 5 | 6° 4 | 20°46 | 9°29 | 7°39 | 18°43 | 16°54 | W17 |
| T 18 | 19 44 38 | 25°33'04 | 28°10 | 20°25 | 11°13 | 29° 7 | 12°58 | 25°37 | 14° 7 | 6° 3 | 20°48 | 9°27 | 7°36 | 18°49 | 16°56 | T 18 |
| F 19 | 19 48 34 | 26°30'22 | 9♋59 | 22°32 | 12°17 | 29°46 | 12°59 | 25°42 | 14° 8 | 6° 2 | 20°50 | 9°23 | 7°33 | 18°56 | 16°58 | F 19 |
| S 20 | 19 52 31 | 27°27'42 | 21°47 | 24°40 | 13°22 | 0♌24 | 13° 1 | 25°46 | 14°10 | 6° 1 | 20°51 | 9°17 | 7°30 | 19° 3 | 17° 0 | S 20 |
| S 21 | 19 56 28 | 28°25'02 | 3♌38 | 26°47 | 14°26 | 1° 3 | 13° 3 | 25°52 | 14°11 | 6° 0 | 20°53 | 9° 9 | 7°27 | 19° 9 | 17° 2 | S 21 |
| M22 | 20 0 24 | 29°22'22 | 15°33 | 28°53 | 15°31 | 1°41 | 13° 5 | 25°57 | 14°13 | 5°59 | 20°55 | 9° 0 | 7°24 | 19°16 | 17° 4 | M22 |
| T 23 | 20 4 21 | 0♌19'44 | 27°34 | 1♌ 0 | 16°36 | 2°20 | 13° 7 | 26° 2 | 14°14 | 5°57 | 20°56 | 8°51 | 7°20 | 19°23 | 17° 6 | T 23 |
| W24 | 20 8 17 | 1°17'06 | 9♍42 | 3° 5 | 17°41 | 2°58 | 13°10 | 26° 7 | 14°15 | 5°56 | 20°58 | 8°41 | 7°17 | 19°29 | 17° 7 | W24 |
| T 25 | 20 12 14 | 2°14'28 | 21°59 | 5° 9 | 18°46 | 3°37 | 13°12 | 26°12 | 14°17 | 5°55 | 20°59 | 8°34 | 7°14 | 19°36 | 17° 9 | T 25 |
| F 26 | 20 16 10 | 3°11'51 | 4♎28 | 7°12 | 19°51 | 4°15 | 13°15 | 26°18 | 14°18 | 5°53 | 21° 1 | 8°28 | 7°11 | 19°43 | 17°11 | F 26 |
| S 27 | 20 20 7 | 4° 9'15 | 17°11 | 9°14 | 20°57 | 4°53 | 13°18 | 26°23 | 14°19 | 5°52 | 21° 3 | 8°24 | 7° 8 | 19°50 | 17°12 | S 27 |
| S 28 | 20 24 3 | 5° 6'39 | 0♏12 | 11°14 | 22° 3 | 5°32 | 13°21 | 26°29 | 14°20 | 5°51 | 21° 4 | 8°D23 | 7° 5 | 19°56 | 17°14 | S 28 |
| M29 | 20 28 0 | 6° 4'04 | 13°33 | 13°13 | 23° 9 | 6°10 | 13°24 | 26°34 | 14°21 | 5°49 | 21° 6 | 8°23 | 7° 1 | 20° 3 | 17°16 | M29 |
| T 30 | 20 31 57 | 7° 1'30 | 27°17 | 15°11 | 24°15 | 6°49 | 13°28 | 26°40 | 14°22 | 5°48 | 21° 7 | 8°24 | 6°58 | 20°10 | 17°17 | T 30 |
| W31 | 20 35 53 | 7♌58'56 | 11♐26 | 17♌ 7 | 25♊21 | 7♌27 | 13♏32 | 26♍45 | 14♉23 | 5♓47 | 21♋ 9 | 8°R24 | 6♊55 | 20♋16 | 17♉18 | W31 |

| 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 |
| M 1 | 23n 9 | 10s 7 | 3n 3 | 21n 6 | 1s56 | 15n41 | 3s10 | 23n17 | 1n 3 | 14s45 | 1n 4 | 4n19 | 2n17 | 15n34 | 0s23 | 9s58 | 0s49 | 23n17 | 1n22 | 21n58 | 21n46 | 25n35 | 14n51 | 1s57 |
| T 2 | 23 5 | 15 26 | 1 56 | 21 25 | 1 43 | 15 55 | 3 10 | 23 12 | 1 3 | 14 45 | 1 3 | 4 18 | 2 17 | 15 35 | 0 23 | 9 58 | 0 49 | 23 17 | 1 22 | 21 58 | 21 45 | 25 35 | 14 52 | 1 57 |
| W 3 | 23 0 | 20 3 | 0 40 | 21 44 | 1 30 | 16 10 | 3 9 | 23 7 | 1 4 | 14 45 | 1 3 | 4 16 | 2 17 | 15 35 | 0 23 | 9 59 | 0 49 | 23 17 | 1 22 | 21 58 | 21 45 | 25 35 | 14 53 | 1 57 |
| T 4 | 22 55 | 23 33 | 0s41 | 22 2 | 1 18 | 16 24 | 3 8 | 23 1 | 1 4 | 14 44 | 1 3 | 4 14 | 2 17 | 15 36 | 0 23 | 9 59 | 0 49 | 23 17 | 1 22 | 21 58 | 21 44 | 25 34 | 14 53 | 1 57 |
| F 5 | 22 50 | 25 27 | 2 0 | 22 19 | 1 5 | 16 39 | 3 7 | 22 56 | 1 4 | 14 44 | 1 3 | 4 13 | 2 17 | 15 37 | 0 23 | 9 59 | 0 49 | 23 17 | 1 22 | 21 58 | 21 44 | 25 34 | 14 54 | 1 57 |
| S 6 | 22 44 | 25 29 | 3 11 | 22 35 | 0 52 | 16 53 | 3 6 | 22 50 | 1 4 | 14 44 | 1 2 | 4 11 | 2 17 | 15 37 | 0 23 | 9 59 | 0 49 | 23 16 | 1 22 | 21 58 | 21 43 | 25 34 | 14 55 | 1 57 |
| S 7 | 22 38 | 23 36 | 4 9 | 22 49 | 0 39 | 17 7 | 3 5 | 22 44 | 1 4 | 14 45 | 1 2 | 4 9 | 2 16 | 15 38 | 0 23 | 10 0 | 0 49 | 23 16 | 1 22 | 21 57 | 21 43 | 25 34 | 14 55 | 1 58 |
| M 8 | 22 31 | 20 4 | 4 49 | 23 2 | 0 27 | 17 21 | 3 4 | 22 38 | 1 5 | 14 45 | 1 2 | 4 8 | 2 16 | 15 38 | 0 23 | 10 0 | 0 49 | 23 16 | 1 22 | 21 56 | 21 42 | 25 34 | 14 56 | 1 58 |
| T 9 | 22 24 | 15 20 | 5 9 | 23 13 | 0 14 | 17 34 | 3 3 | 22 31 | 1 5 | 14 45 | 1 2 | 4 6 | 2 16 | 15 39 | 0 23 | 10 1 | 0 49 | 23 16 | 1 23 | 21 55 | 21 42 | 25 33 | 14 56 | 1 58 |
| W10 | 22 17 | 9 51 | 5 8 | 23 23 | 0 2 | 17 48 | 3 1 | 22 25 | 1 5 | 14 45 | 1 1 | 4 4 | 2 16 | 15 40 | 0 23 | 10 1 | 0 49 | 23 16 | 1 23 | 21 55 | 21 41 | 25 33 | 14 57 | 1 58 |
| T 11 | 22 9 | 4 3 | 4 50 | 23 30 | 0n 9 | 18 1 | 3 0 | 22 18 | 1 5 | 14 45 | 1 1 | 4 2 | 2 16 | 15 40 | 0 23 | 10 1 | 0 49 | 23 15 | 1 23 | 21 54 | 21 41 | 25 33 | 14 57 | 1 58 |
| F 12 | 22 1 | 1n45 | 4 15 | 23 35 | 0 20 | 18 14 | 2 58 | 22 11 | 1 5 | 14 46 | 1 1 | 4 0 | 2 15 | 15 41 | 0 23 | 10 2 | 0 49 | 23 15 | 1 23 | 21 54 | 21 40 | 25 33 | 14 58 | 1 59 |
| S 13 | 21 52 | 7 18 | 3 29 | 23 37 | 0 31 | 18 26 | 2 56 | 22 4 | 1 5 | 14 46 | 1 1 | 3 58 | 2 15 | 15 41 | 0 23 | 10 2 | 0 49 | 23 15 | 1 23 | 21 54 | 21 40 | 25 32 | 14 58 | 1 59 |
| S 14 | 21 43 | 12 24 | 2 33 | 23 37 | 0 41 | 18 39 | 2 55 | 21 57 | 1 6 | 14 47 | 1 0 | 3 56 | 2 15 | 15 42 | 0 23 | 10 3 | 0 49 | 23 15 | 1 23 | 21 54 | 21 39 | 25 32 | 14 59 | 1 59 |
| M15 | 21 34 | 16 53 | 1 32 | 23 34 | 0 51 | 18 51 | 2 53 | 21 50 | 1 6 | 14 47 | 1 0 | 3 54 | 2 15 | 15 42 | 0 23 | 10 3 | 0 49 | 23 15 | 1 23 | 21 55 | 21 39 | 25 32 | 14 59 | 1 59 |
| T 16 | 21 24 | 20 36 | 0 28 | 23 29 | 1 0 | 19 2 | 2 51 | 21 42 | 1 6 | 14 48 | 1 0 | 3 52 | 2 15 | 15 43 | 0 23 | 10 3 | 0 49 | 23 15 | 1 23 | 21 55 | 21 38 | 25 32 | 15 0 | 1 59 |
| W17 | 21 14 | 23 23 | 0n37 | 23 21 | 1 8 | 19 14 | 2 49 | 21 35 | 1 6 | 14 48 | 0 59 | 3 50 | 2 15 | 15 43 | 0 23 | 10 4 | 0 49 | 23 14 | 1 23 | 21 55 | 21 38 | 25 31 | 15 0 | 2 0 |
| T 18 | 21 4 | 25 7 | 1 39 | 23 10 | 1 15 | 19 25 | 2 46 | 21 27 | 1 6 | 14 49 | 0 59 | 3 48 | 2 14 | 15 44 | 0 23 | 10 4 | 0 49 | 23 14 | 1 23 | 21 54 | 21 37 | 25 31 | 15 0 | 2 0 |
| F 19 | 20 53 | 25 43 | 2 37 | 22 56 | 1 22 | 19 36 | 2 44 | 21 19 | 1 6 | 14 50 | 0 59 | 3 46 | 2 14 | 15 44 | 0 24 | 10 5 | 0 49 | 23 14 | 1 23 | 21 54 | 21 36 | 25 31 | 15 1 | 2 0 |
| S 20 | 20 42 | 25 8 | 3 28 | 22 40 | 1 28 | 19 46 | 2 42 | 21 11 | 1 6 | 14 50 | 0 59 | 3 44 | 2 14 | 15 45 | 0 24 | 10 5 | 0 49 | 23 14 | 1 23 | 21 53 | 21 36 | 25 30 | 15 1 | 2 0 |
| S 21 | 20 31 | 23 25 | 4 10 | 22 21 | 1 33 | 19 56 | 2 39 | 21 3 | 1 7 | 14 51 | 0 58 | 3 42 | 2 14 | 15 45 | 0 24 | 10 6 | 0 49 | 23 14 | 1 23 | 21 52 | 21 35 | 25 30 | 15 1 | 2 0 |
| M22 | 20 19 | 20 40 | 4 41 | 22 0 | 1 37 | 20 6 | 2 37 | 20 54 | 1 7 | 14 52 | 0 58 | 3 40 | 2 14 | 15 45 | 0 24 | 10 6 | 0 50 | 23 13 | 1 23 | 21 50 | 21 35 | 25 30 | 15 2 | 2 1 |
| T 23 | 20 7 | 17 2 | 5 0 | 21 36 | 1 40 | 20 15 | 2 34 | 20 46 | 1 7 | 14 53 | 0 58 | 3 37 | 2 14 | 15 46 | 0 24 | 10 7 | 0 50 | 23 13 | 1 23 | 21 49 | 21 34 | 25 30 | 15 2 | 2 1 |
| W24 | 19 54 | 12 40 | 5 6 | 21 11 | 1 43 | 20 24 | 2 31 | 20 37 | 1 7 | 14 54 | 0 58 | 3 35 | 2 14 | 15 46 | 0 24 | 10 7 | 0 50 | 23 13 | 1 23 | 21 47 | 21 34 | 25 29 | 15 2 | 2 1 |
| T 25 | 19 42 | 7 44 | 4 58 | 20 43 | 1 45 | 20 32 | 2 29 | 20 28 | 1 7 | 14 55 | 0 57 | 3 33 | 2 13 | 15 47 | 0 24 | 10 8 | 0 50 | 23 13 | 1 24 | 21 46 | 21 33 | 25 29 | 15 3 | 2 1 |
| F 26 | 19 29 | 2 26 | 4 35 | 20 13 | 1 46 | 20 40 | 2 26 | 20 19 | 1 7 | 14 56 | 0 57 | 3 31 | 2 13 | 15 47 | 0 24 | 10 8 | 0 50 | 23 13 | 1 24 | 21 45 | 21 33 | 25 29 | 15 3 | 2 2 |
| S 27 | 19 15 | 3s 5 | 3 59 | 19 42 | 1 47 | 20 48 | 2 23 | 20 10 | 1 7 | 14 57 | 0 57 | 3 28 | 2 13 | 15 47 | 0 24 | 10 9 | 0 50 | 23 13 | 1 24 | 21 45 | 21 32 | 25 28 | 15 3 | 2 2 |
| S 28 | 19 1 | 8 36 | 3 10 | 19 9 | 1 47 | 20 55 | 2 20 | 20 1 | 1 7 | 14 58 | 0 57 | 3 26 | 2 13 | 15 48 | 0 24 | 10 9 | 0 50 | 23 12 | 1 24 | 21 44 | 21 32 | 25 28 | 15 3 | 2 2 |
| M29 | 18 47 | 13 53 | 2 9 | 18 34 | 1 46 | 21 1 | 2 17 | 19 51 | 1 8 | 15 0 | 0 56 | 3 24 | 2 13 | 15 48 | 0 24 | 10 10 | 0 50 | 23 12 | 1 24 | 21 44 | 21 31 | 25 27 | 15 4 | 2 2 |
| T 30 | 18 33 | 18 38 | 0 59 | 17 59 | 1 45 | 21 7 | 2 14 | 19 42 | 1 8 | 15 1 | 0 56 | 3 21 | 2 13 | 15 48 | 0 24 | 10 10 | 0 50 | 23 12 | 1 24 | 21 45 | 21 31 | 25 27 | 15 4 | 2 2 |
| W31 | 18n18 | 22s28 | 0s16 | 17n22 | 1n43 | 21n13 | 2s11 | 19n32 | 1n 8 | 15s 2 | 0n56 | 3n19 | 2n13 | 15n48 | 0s24 | 10s11 | 0s50 | 23n12 | 1n24 | 21n45 | 21n30 | 25n27 | 15n 4 | 2s 3 |

Julian Day Number = 2337040.5, Delta T = 20.14 sec
Ecliptic obliquity = 23°28'51, Nutation = - 0°00'16, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°21'51, Lahiri = 19°28'51Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1686
# geocentric

## AUGUST 1686 GC

**00:00 UT**

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T 1 | 20 39 50 | 8♌56'23 | 25♐59 | 19♌ 1 | 26♊28 | 8♌ 5 | 13♏35 | 26♍51 | 14♉24 | 5°R45 | 21♋10 | 8°R23 | 6♊52 | 20♋23 | 17♉20 | T 1 |
| F 2 | 20 43 46 | 9°53'51 | 10♑52 | 20°54 | 27°34 | 8°44 | 13°39 | 26°57 | 14°25 | 5♓44 | 21°12 | 8♊19 | 6°49 | 20°30 | 17°21 | F 2 |
| S 3 | 20 47 43 | 10°51'20 | 26° 0 | 22°46 | 28°41 | 9°22 | 13°44 | 27° 3 | 14°26 | 5°42 | 21°13 | 8°14 | 6°45 | 20°36 | 17°22 | S 3 |
| S 4 | 20 51 39 | 11°48'50 | 11♒13 | 24°35 | 29°48 | 10° 0 | 13°48 | 27° 9 | 14°27 | 5°41 | 21°15 | 8° 6 | 6°42 | 20°43 | 17°23 | S 4 |
| M 5 | 20 55 36 | 12°46'21 | 26°20 | 26°24 | 0♋55 | 10°39 | 13°52 | 27°15 | 14°28 | 5°39 | 21°17 | 7°56 | 6°39 | 20°50 | 17°24 | M 5 |
| T 6 | 20 59 32 | 13°43'53 | 11♓13 | 28°11 | 2° 2 | 11°17 | 13°57 | 27°21 | 14°28 | 5°38 | 21°18 | 7°47 | 6°36 | 20°56 | 17°26 | T 6 |
| W 7 | 21 3 29 | 14°41'26 | 25°41 | 29°56 | 3°10 | 11°55 | 14° 2 | 27°27 | 14°29 | 5°36 | 21°20 | 7°38 | 6°33 | 21° 3 | 17°27 | W 7 |
| T 8 | 21 7 26 | 15°39'01 | 9♈42 | 1♍40 | 4°17 | 12°34 | 14° 7 | 27°33 | 14°30 | 5°35 | 21°21 | 7°32 | 6°30 | 21°10 | 17°27 | T 8 |
| F 9 | 21 11 22 | 16°36'37 | 23°12 | 3°22 | 5°25 | 13°12 | 14°12 | 27°39 | 14°30 | 5°33 | 21°23 | 7°27 | 6°26 | 21°16 | 17°28 | F 9 |
| S 10 | 21 15 19 | 17°34'15 | 6♉15 | 5° 3 | 6°33 | 13°50 | 14°17 | 27°45 | 14°31 | 5°32 | 21°24 | 7°25 | 6°23 | 21°23 | 17°29 | S 10 |
| S 11 | 21 19 15 | 18°31'54 | 18°53 | 6°42 | 7°41 | 14°28 | 14°22 | 27°51 | 14°31 | 5°30 | 21°26 | 7°D24 | 6°20 | 21°30 | 17°30 | S 11 |
| M12 | 21 23 12 | 19°29'35 | 1♊10 | 8°20 | 8°49 | 15° 7 | 14°28 | 27°58 | 14°32 | 5°29 | 21°27 | 7°R25 | 6°17 | 21°36 | 17°31 | M12 |
| T 13 | 21 27 8 | 20°27'18 | 13°14 | 9°56 | 9°58 | 15°45 | 14°34 | 28° 4 | 14°32 | 5°27 | 21°28 | 7°25 | 6°14 | 21°43 | 17°31 | T 13 |
| W14 | 21 31 5 | 21°25'02 | 25° 7 | 11°31 | 11° 6 | 16°23 | 14°39 | 28°10 | 14°32 | 5°26 | 21°30 | 7°23 | 6°11 | 21°50 | 17°32 | W14 |
| T 15 | 21 35 1 | 22°22'48 | 6♋56 | 13° 4 | 12°15 | 17° 1 | 14°45 | 28°17 | 14°33 | 5°24 | 21°31 | 7°20 | 6° 7 | 21°56 | 17°32 | T 15 |
| F 16 | 21 38 58 | 23°20'35 | 18°44 | 14°36 | 13°24 | 17°40 | 14°52 | 28°23 | 14°33 | 5°22 | 21°33 | 7°14 | 6° 4 | 22° 3 | 17°33 | F 16 |
| S 17 | 21 42 55 | 24°18'24 | 0♌35 | 16° 7 | 14°32 | 18°18 | 14°58 | 28°30 | 14°33 | 5°21 | 21°34 | 7° 5 | 6° 1 | 22°10 | 17°33 | S 17 |
| S 18 | 21 46 51 | 25°16'14 | 12°31 | 17°36 | 15°41 | 18°56 | 15° 4 | 28°37 | 14°33 | 5°19 | 21°36 | 6°53 | 5°58 | 22°17 | 17°33 | S 18 |
| M19 | 21 50 48 | 26°14'06 | 24°34 | 19° 4 | 16°51 | 19°34 | 15°11 | 28°43 | 14°33 | 5°18 | 21°37 | 6°40 | 5°55 | 22°23 | 17°34 | M19 |
| T 20 | 21 54 44 | 27°12'00 | 6♍45 | 20°30 | 18° 0 | 20°13 | 15°18 | 28°50 | 14°R33 | 5°16 | 21°38 | 6°27 | 5°51 | 22°30 | 17°34 | T 20 |
| W21 | 21 58 41 | 28° 9'55 | 19° 5 | 21°55 | 19° 9 | 20°51 | 15°25 | 28°57 | 14°33 | 5°14 | 21°40 | 6°14 | 5°48 | 22°37 | 17°34 | W21 |
| T 22 | 22 2 37 | 29° 7'51 | 1♎35 | 23°18 | 20°19 | 21°29 | 15°32 | 29° 3 | 14°33 | 5°13 | 21°41 | 6° 2 | 5°45 | 22°43 | 17°R34 | T 22 |
| F 23 | 22 6 34 | 0♍ 5'49 | 14°15 | 24°39 | 21°28 | 22° 7 | 15°39 | 29°10 | 14°33 | 5°11 | 21°42 | 5°53 | 5°42 | 22°50 | 17°34 | F 23 |
| S 24 | 22 10 30 | 1° 3'48 | 27° 7 | 25°59 | 22°38 | 22°45 | 15°46 | 29°17 | 14°33 | 5° 9 | 21°44 | 5°47 | 5°39 | 22°57 | 17°34 | S 24 |
| S 25 | 22 14 27 | 2° 1'48 | 10♏13 | 27°17 | 23°48 | 23°24 | 15°53 | 29°24 | 14°32 | 5° 8 | 21°45 | 5°44 | 5°36 | 23° 3 | 17°34 | S 25 |
| M26 | 22 18 24 | 2°59'50 | 23°34 | 28°34 | 24°58 | 24° 2 | 16° 1 | 29°31 | 14°32 | 5° 6 | 21°46 | 5°43 | 5°32 | 23°10 | 17°34 | M26 |
| T 27 | 22 22 20 | 3°57'53 | 7♐13 | 29°49 | 26° 8 | 24°40 | 16° 9 | 29°37 | 14°32 | 5° 4 | 21°47 | 5°43 | 5°29 | 23°17 | 17°33 | T 27 |
| W28 | 22 26 17 | 4°55'58 | 21°11 | 1♎ 2 | 27°18 | 25°18 | 16°16 | 29°44 | 14°31 | 5° 3 | 21°49 | 5°42 | 5°26 | 23°23 | 17°33 | W28 |
| T 29 | 22 30 13 | 5°54'04 | 5♑29 | 2°13 | 28°28 | 25°56 | 16°24 | 29°51 | 14°31 | 5° 1 | 21°50 | 5°41 | 5°23 | 23°30 | 17°33 | T 29 |
| F 30 | 22 34 10 | 6°52'12 | 20° 4 | 3°22 | 29°38 | 26°34 | 16°32 | 29°58 | 14°30 | 5° 0 | 21°51 | 5°36 | 5°20 | 23°37 | 17°32 | F 30 |
| S 31 | 22 38 6 | 7♍50'21 | 4♒53 | 4♎29 | 0♌49 | 27♌13 | 16♏41 | 0♎ 5 | 14♉30 | 4♓58 | 21♋52 | 5♊30 | 5♊17 | 23♋43 | 17♉32 | 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 | 18n 3 | 24s58 | 1s33 | 16n44 | 1n40 | 21n18 | 2s 8 | 19n22 | 1n 8 | 15s 4 | 0n56 | 3n17 | 2n12 | 15n49 | 0s24 | 10s11 | 0s50 | 23n12 | 1n24 | 21n44 | 21n30 | 25n26 | 15n 4 | 2s 3 |
| F 2 | 17 48 | 25 46 | 2 44 | 16 5 | 1 37 | 21 23 | 2 5 | 19 12 | 1 8 | 15 5 | 0 55 | 3 14 | 2 12 | 15 49 | 0 24 | 10 12 | 0 50 | 23 12 | 1 24 | 21 44 | 21 29 | 25 26 | 15 4 | 2 3 |
| S 3 | 17 32 | 24 40 | 3 45 | 15 26 | 1 34 | 21 27 | 2 1 | 19 2 | 1 8 | 15 7 | 0 55 | 3 12 | 2 12 | 15 49 | 0 24 | 10 12 | 0 50 | 23 11 | 1 24 | 21 43 | 21 29 | 25 26 | 15 4 | 2 3 |
| S 4 | 17 17 | 21 47 | 4 31 | 14 45 | 1 30 | 21 31 | 1 58 | 18 52 | 1 8 | 15 8 | 0 55 | 3 9 | 2 12 | 15 49 | 0 24 | 10 13 | 0 50 | 23 11 | 1 24 | 21 42 | 21 28 | 25 25 | 15 5 | 2 4 |
| M 5 | 17 0 | 17 24 | 4 57 | 14 4 | 1 25 | 21 34 | 1 55 | 18 42 | 1 8 | 15 10 | 0 55 | 3 7 | 2 12 | 15 50 | 0 24 | 10 14 | 0 50 | 23 11 | 1 24 | 21 40 | 21 27 | 25 25 | 15 5 | 2 4 |
| T 6 | 16 44 | 12 2 | 5 3 | 13 23 | 1 20 | 21 37 | 1 51 | 18 31 | 1 8 | 15 11 | 0 54 | 3 4 | 2 12 | 15 50 | 0 24 | 10 14 | 0 50 | 23 11 | 1 24 | 21 39 | 21 27 | 25 24 | 15 5 | 2 4 |
| W 7 | 16 27 | 6 8 | 4 48 | 12 41 | 1 15 | 21 39 | 1 48 | 18 20 | 1 8 | 15 13 | 0 54 | 3 2 | 2 12 | 15 50 | 0 24 | 10 15 | 0 50 | 23 11 | 1 25 | 21 37 | 21 26 | 25 24 | 15 5 | 2 4 |
| T 8 | 16 10 | 0 6 | 4 17 | 11 59 | 1 9 | 21 40 | 1 45 | 18 10 | 1 9 | 15 15 | 0 54 | 2 59 | 2 12 | 15 50 | 0 24 | 10 15 | 0 50 | 23 11 | 1 25 | 21 36 | 21 26 | 25 23 | 15 5 | 2 4 |
| F 9 | 15 53 | 5n45 | 3 32 | 11 17 | 1 3 | 21 41 | 1 41 | 17 59 | 1 9 | 15 16 | 0 54 | 2 57 | 2 11 | 15 50 | 0 24 | 10 16 | 0 50 | 23 10 | 1 25 | 21 36 | 21 25 | 25 23 | 15 5 | 2 5 |
| S 10 | 15 36 | 11 9 | 2 38 | 10 34 | 0 57 | 21 42 | 1 38 | 17 48 | 1 9 | 15 18 | 0 53 | 2 54 | 2 11 | 15 51 | 0 24 | 10 16 | 0 50 | 23 10 | 1 25 | 21 35 | 21 25 | 25 23 | 15 5 | 2 5 |
| S 11 | 15 18 | 15 55 | 1 37 | 9 51 | 0 51 | 21 41 | 1 34 | 17 37 | 1 9 | 15 20 | 0 53 | 2 52 | 2 11 | 15 51 | 0 24 | 10 17 | 0 50 | 23 10 | 1 25 | 21 35 | 21 24 | 25 22 | 15 5 | 2 5 |
| M12 | 15 0 | 19 53 | 0 33 | 9 8 | 0 44 | 21 41 | 1 31 | 17 26 | 1 9 | 15 22 | 0 53 | 2 49 | 2 11 | 15 51 | 0 24 | 10 18 | 0 50 | 23 10 | 1 25 | 21 35 | 21 24 | 25 22 | 15 5 | 2 5 |
| T 13 | 14 42 | 22 56 | 0n31 | 8 25 | 0 37 | 21 40 | 1 27 | 17 14 | 1 9 | 15 24 | 0 53 | 2 46 | 2 11 | 15 51 | 0 24 | 10 18 | 0 50 | 23 10 | 1 25 | 21 35 | 21 23 | 25 21 | 15 5 | 2 6 |
| W14 | 14 23 | 24 56 | 1 33 | 7 42 | 0 29 | 21 38 | 1 23 | 17 3 | 1 9 | 15 26 | 0 53 | 2 44 | 2 11 | 15 51 | 0 24 | 10 19 | 0 50 | 23 10 | 1 25 | 21 35 | 21 23 | 25 21 | 15 5 | 2 6 |
| T 15 | 14 5 | 25 48 | 2 30 | 7 0 | 0 22 | 21 35 | 1 20 | 16 51 | 1 9 | 15 28 | 0 52 | 2 41 | 2 11 | 15 51 | 0 24 | 10 19 | 0 50 | 23 9 | 1 25 | 21 34 | 21 22 | 25 20 | 15 5 | 2 6 |
| F 16 | 13 46 | 25 28 | 3 20 | 6 17 | 0 14 | 21 32 | 1 16 | 16 40 | 1 9 | 15 30 | 0 52 | 2 38 | 2 11 | 15 51 | 0 24 | 10 20 | 0 50 | 23 9 | 1 25 | 21 33 | 21 21 | 25 20 | 15 5 | 2 6 |
| S 17 | 13 27 | 24 0 | 4 2 | 5 34 | 0 6 | 21 29 | 1 13 | 16 28 | 1 9 | 15 32 | 0 52 | 2 36 | 2 11 | 15 51 | 0 24 | 10 21 | 0 50 | 23 9 | 1 25 | 21 32 | 21 21 | 25 19 | 15 4 | 2 6 |
| S 18 | 13 7 | 21 27 | 4 34 | 4 52 | 0s 2 | 21 25 | 1 9 | 16 16 | 1 9 | 15 34 | 0 52 | 2 33 | 2 11 | 15 51 | 0 24 | 10 21 | 0 50 | 23 9 | 1 25 | 21 30 | 21 20 | 25 19 | 15 4 | 2 7 |
| M19 | 12 48 | 17 58 | 4 53 | 4 10 | 0 11 | 21 20 | 1 5 | 16 4 | 1 9 | 15 36 | 0 51 | 2 30 | 2 10 | 15 51 | 0 24 | 10 22 | 0 50 | 23 9 | 1 25 | 21 28 | 21 20 | 25 18 | 15 4 | 2 7 |
| T 20 | 12 28 | 13 41 | 5 0 | 3 29 | 0 19 | 21 15 | 1 2 | 15 52 | 1 9 | 15 38 | 0 51 | 2 28 | 2 10 | 15 51 | 0 24 | 10 22 | 0 50 | 23 9 | 1 26 | 21 25 | 21 19 | 25 18 | 15 4 | 2 7 |
| W21 | 12 8 | 8 49 | 4 53 | 2 47 | 0 28 | 21 9 | 0 58 | 15 40 | 1 9 | 15 40 | 0 51 | 2 25 | 2 10 | 15 51 | 0 24 | 10 23 | 0 50 | 23 9 | 1 26 | 21 23 | 21 19 | 25 17 | 15 4 | 2 7 |
| T 22 | 11 48 | 3 31 | 4 31 | 2 6 | 0 37 | 21 3 | 0 54 | 15 28 | 1 9 | 15 43 | 0 51 | 2 22 | 2 10 | 15 51 | 0 24 | 10 24 | 0 50 | 23 9 | 1 26 | 21 21 | 21 18 | 25 17 | 15 4 | 2 8 |
| F 23 | 11 27 | 2s 0 | 3 56 | 1 26 | 0 45 | 20 56 | 0 51 | 15 15 | 1 10 | 15 45 | 0 51 | 2 19 | 2 10 | 15 51 | 0 24 | 10 24 | 0 50 | 23 8 | 1 26 | 21 20 | 21 18 | 25 16 | 15 3 | 2 8 |
| S 24 | 11 7 | 7 32 | 3 9 | 0 46 | 0 54 | 20 48 | 0 47 | 15 3 | 1 10 | 15 47 | 0 50 | 2 17 | 2 10 | 15 51 | 0 24 | 10 25 | 0 50 | 23 8 | 1 26 | 21 19 | 21 17 | 25 15 | 15 3 | 2 8 |
| S 25 | 10 46 | 12 51 | 2 10 | 0 7 | 1 3 | 20 40 | 0 44 | 14 50 | 1 10 | 15 49 | 0 50 | 2 14 | 2 10 | 15 51 | 0 24 | 10 25 | 0 50 | 23 8 | 1 26 | 21 18 | 21 16 | 25 15 | 15 3 | 2 8 |
| M26 | 10 25 | 17 40 | 1 4 | 0s32 | 1 12 | 20 31 | 0 40 | 14 38 | 1 10 | 15 52 | 0 50 | 2 11 | 2 10 | 15 51 | 0 24 | 10 26 | 0 50 | 23 8 | 1 26 | 21 18 | 21 16 | 25 14 | 15 3 | 2 9 |
| T 27 | 10 4 | 21 41 | 0s 8 | 1 10 | 1 21 | 20 22 | 0 36 | 14 25 | 1 10 | 15 54 | 0 50 | 2 8 | 2 10 | 15 51 | 0 24 | 10 27 | 0 50 | 23 8 | 1 26 | 21 18 | 21 15 | 25 14 | 15 2 | 2 9 |
| W28 | 9 43 | 24 32 | 1 21 | 1 47 | 1 30 | 20 12 | 0 33 | 14 12 | 1 10 | 15 57 | 0 49 | 2 5 | 2 10 | 15 51 | 0 24 | 10 27 | 0 50 | 23 8 | 1 26 | 21 18 | 21 15 | 25 13 | 15 2 | 2 9 |
| T 29 | 9 22 | 25 52 | 2 30 | 2 24 | 1 39 | 20 2 | 0 29 | 13 59 | 1 10 | 15 59 | 0 49 | 2 2 | 2 10 | 15 50 | 0 24 | 10 28 | 0 50 | 23 8 | 1 26 | 21 17 | 21 14 | 25 13 | 15 2 | 2 9 |
| F 30 | 9 0 | 25 28 | 3 31 | 3 0 | 1 48 | 19 51 | 0 26 | 13 46 | 1 10 | 16 2 | 0 49 | 2 0 | 2 10 | 15 50 | 0 24 | 10 29 | 0 50 | 23 8 | 1 26 | 21 17 | 21 14 | 25 12 | 15 1 | 2 9 |
| S 31 | 8n39 | 23s16 | 4s19 | 3s35 | 1s57 | 19n39 | 0s22 | 13n33 | 1n10 | 16s 4 | 0n49 | 1n57 | 2n10 | 15n50 | 0s24 | 10s29 | 0s50 | 23n 7 | 1n27 | 21n15 | 21n13 | 25n11 | 15n 1 | 2s10 |

Julian Day Number = 2337071.5, Delta T = 20.10 sec
Ecliptic obliquity = 23°28'52, Nutation = - 0°00'15, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°21'55, Lahiri = 19°28'56Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1686
# geocentric

## SEPTEMBER 1686 GC — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S 1 | 22 42 3 | 8♍48'31 | 19♒50 | 5♎34 | 1♌59 | 27♌51 | 16♏49 | 0♎12 | 14°R29 | 4°R56 | 21♋54 | 5°R20 | 5♊13 | 23♋50 | 17°R31 | S 1 |
| M 2 | 22 45 59 | 9°46'44 | 4♓44 | 6°37 | 3°10 | 28°29 | 16°57 | 0°20 | 14♉29 | 4♓55 | 21°55 | 5♊ 9 | 5°10 | 23°57 | 17♉30 | M 2 |
| T 3 | 22 49 56 | 10°44'57 | 19°28 | 7°37 | 4°21 | 29° 7 | 17° 6 | 0°27 | 14°28 | 4°53 | 21°56 | 4°58 | 5° 7 | 24° 4 | 17°30 | T 3 |
| W 4 | 22 53 53 | 11°43'13 | 3♈52 | 8°35 | 5°32 | 29°45 | 17°14 | 0°34 | 14°27 | 4°51 | 21°57 | 4°47 | 5° 4 | 24°10 | 17°29 | W 4 |
| T 5 | 22 57 49 | 12°41'31 | 17°52 | 9°30 | 6°43 | 0♍23 | 17°23 | 0°41 | 14°27 | 4°50 | 21°58 | 4°39 | 5° 1 | 24°17 | 17°28 | T 5 |
| F 6 | 23 1 46 | 13°39'50 | 1♉25 | 10°21 | 7°54 | 1° 1 | 17°32 | 0°48 | 14°26 | 4°48 | 21°59 | 4°33 | 4°57 | 24°24 | 17°27 | F 6 |
| S 7 | 23 5 42 | 14°38'12 | 14°30 | 11°10 | 9° 5 | 1°40 | 17°41 | 0°55 | 14°25 | 4°46 | 22° 0 | 4°29 | 4°54 | 24°30 | 17°26 | S 7 |
| S 8 | 23 9 39 | 15°36'36 | 27°10 | 11°56 | 10°16 | 2°18 | 17°50 | 1° 3 | 14°24 | 4°45 | 22° 1 | 4°28 | 4°51 | 24°37 | 17°25 | S 8 |
| M 9 | 23 13 35 | 16°35'02 | 9♊30 | 12°37 | 11°28 | 2°56 | 17°59 | 1°10 | 14°23 | 4°43 | 22° 2 | 4°D28 | 4°48 | 24°44 | 17°24 | M 9 |
| T 10 | 23 17 32 | 17°33'30 | 21°35 | 13°15 | 12°39 | 3°34 | 18° 9 | 1°17 | 14°22 | 4°42 | 22° 3 | 4°R28 | 4°45 | 24°50 | 17°23 | T 10 |
| W11 | 23 21 28 | 18°32'00 | 3♋29 | 13°49 | 13°51 | 4°12 | 18°18 | 1°24 | 14°21 | 4°40 | 22° 5 | 4°27 | 4°42 | 24°57 | 17°22 | W11 |
| T 12 | 23 25 25 | 19°30'33 | 15°19 | 14°18 | 15° 2 | 4°50 | 18°28 | 1°32 | 14°20 | 4°38 | 22° 5 | 4°24 | 4°38 | 25° 4 | 17°21 | T 12 |
| F 13 | 23 29 22 | 20°29'08 | 27° 9 | 14°42 | 16°14 | 5°28 | 18°37 | 1°39 | 14°19 | 4°37 | 22° 6 | 4°19 | 4°35 | 25°10 | 17°19 | F 13 |
| S 14 | 23 33 18 | 21°27'44 | 9♌ 3 | 15° 1 | 17°26 | 6° 6 | 18°47 | 1°46 | 14°18 | 4°35 | 22° 7 | 4°11 | 4°32 | 25°17 | 17°18 | S 14 |
| S 15 | 23 37 15 | 22°26'23 | 21° 5 | 15°15 | 18°38 | 6°45 | 18°57 | 1°54 | 14°16 | 4°34 | 22° 8 | 4° 1 | 4°29 | 25°24 | 17°17 | S 15 |
| M16 | 23 41 11 | 23°25'04 | 3♍16 | 15°23 | 19°50 | 7°23 | 19° 7 | 2° 1 | 14°15 | 4°32 | 22° 9 | 3°49 | 4°26 | 25°31 | 17°15 | M16 |
| T 17 | 23 45 8 | 24°23'47 | 15°40 | 15°R24 | 21° 2 | 8° 1 | 19°17 | 2° 8 | 14°14 | 4°31 | 22°10 | 3°36 | 4°22 | 25°37 | 17°14 | T 17 |
| W18 | 23 49 4 | 25°22'32 | 28°15 | 15°19 | 22°14 | 8°39 | 19°27 | 2°16 | 14°12 | 4°29 | 22°11 | 3°24 | 4°19 | 25°44 | 17°12 | W18 |
| T 19 | 23 53 1 | 26°21'19 | 11♎ 3 | 15° 7 | 23°26 | 9°17 | 19°37 | 2°23 | 14°11 | 4°28 | 22°12 | 3°13 | 4°16 | 25°51 | 17°10 | T 19 |
| F 20 | 23 56 57 | 27°20'08 | 24° 2 | 14°47 | 24°39 | 9°55 | 19°48 | 2°30 | 14° 9 | 4°26 | 22°13 | 3° 5 | 4°13 | 25°57 | 17° 9 | F 20 |
| S 21 | 0 0 54 | 28°18'59 | 7♏12 | 14°21 | 25°51 | 10°33 | 19°58 | 2°38 | 14° 8 | 4°25 | 22°13 | 3° 0 | 4°10 | 26° 4 | 17° 7 | S 21 |
| S 22 | 0 4 50 | 29°17'52 | 20°34 | 13°46 | 27° 4 | 11°11 | 20° 9 | 2°45 | 14° 6 | 4°23 | 22°14 | 2°57 | 4° 7 | 26°11 | 17° 5 | S 22 |
| M23 | 0 8 47 | 0♎16'47 | 4♐ 6 | 13° 5 | 28°16 | 11°50 | 20°19 | 2°53 | 14° 5 | 4°22 | 22°15 | 2°D56 | 4° 3 | 26°17 | 17° 3 | M23 |
| T 24 | 0 12 44 | 1°15'43 | 17°50 | 12°17 | 29°29 | 12°28 | 20°30 | 3° 0 | 14° 3 | 4°20 | 22°16 | 2°57 | 4° 0 | 26°24 | 17° 1 | T 24 |
| W25 | 0 16 40 | 2°14'41 | 1♑45 | 11°22 | 0♍42 | 13° 6 | 20°41 | 3° 8 | 14° 2 | 4°19 | 22°16 | 2°R57 | 3°57 | 26°31 | 17° 0 | W25 |
| T 26 | 0 20 37 | 3°13'41 | 15°53 | 10°22 | 1°54 | 13°44 | 20°52 | 3°15 | 14° 0 | 4°17 | 22°17 | 2°57 | 3°54 | 26°37 | 16°58 | T 26 |
| F 27 | 0 24 33 | 4°12'43 | 0♒12 | 9°17 | 3° 7 | 14°22 | 21° 3 | 3°22 | 13°58 | 4°16 | 22°18 | 2°54 | 3°51 | 26°44 | 16°55 | F 27 |
| S 28 | 0 28 30 | 5°11'46 | 14°39 | 8° 9 | 4°20 | 15° 0 | 21°14 | 3°30 | 13°56 | 4°15 | 22°18 | 2°49 | 3°48 | 26°51 | 16°53 | S 28 |
| S 29 | 0 32 26 | 6°10'51 | 29°10 | 7° 0 | 5°33 | 15°38 | 21°25 | 3°37 | 13°55 | 4°13 | 22°19 | 2°42 | 3°44 | 26°58 | 16°51 | S 29 |
| M30 | 0 36 23 | 7♎ 9'58 | 13♓39 | 5♎51 | 6♍46 | 16♍16 | 21♏36 | 3♎45 | 13♉53 | 4♓12 | 22♋20 | 2♊33 | 3♊41 | 27♋ 4 | 16♉49 | M30 |

| Day | ☉ | ☽ | | ☿ | | ♀ | | ♂ | | ♃ | | ♄ | | ♅ | | ♆ | | ♇ | | ☊ | ☊ | ⚸ | ⚷ | | 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 | |
| S 1 | 8n17 | 19s28 | 4s50 | 4s 9 | 2s 6 | 19n27 | 0s19 | 13n20 | 1n10 | 16s 7 | 0n49 | 1n54 | 2n10 | 15n50 | 0s24 | 10s30 | 0s50 | 23n 7 | 1n27 | 21n14 | 21n13 | 25n11 | 15n 1 | 2s10 | S 1 |
| M 2 | 7 55 | 14 27 | 5 0 | 4 42 | 2 15 | 19 14 | 0 15 | 13 7 | 1 10 | 16 9 | 0 48 | 1 51 | 2 10 | 15 50 | 0 24 | 10 30 | 0 50 | 23 7 | 1 27 | 21 12 | 21 12 | 25 10 | 15 0 | 2 10 | M 2 |
| T 3 | 7 33 | 8 38 | 4 51 | 5 14 | 2 24 | 19 1 | 0 12 | 12 53 | 1 10 | 16 12 | 0 48 | 1 48 | 2 10 | 15 49 | 0 24 | 10 31 | 0 50 | 23 7 | 1 27 | 21 10 | 21 11 | 25 10 | 15 0 | 2 10 | T 3 |
| W 4 | 7 11 | 2 29 | 4 23 | 5 44 | 2 32 | 18 47 | 0 8 | 12 40 | 1 10 | 16 15 | 0 48 | 1 45 | 2 10 | 15 49 | 0 24 | 10 32 | 0 50 | 23 7 | 1 27 | 21 8 | 21 11 | 25 9 | 14 59 | 2 11 | W 4 |
| T 5 | 6 48 | 3n38 | 3 40 | 6 14 | 2 41 | 18 33 | 0 5 | 12 27 | 1 10 | 16 17 | 0 48 | 1 42 | 2 9 | 15 49 | 0 24 | 10 32 | 0 50 | 23 7 | 1 27 | 21 6 | 21 10 | 25 8 | 14 59 | 2 11 | T 5 |
| F 6 | 6 26 | 9 24 | 2 45 | 6 42 | 2 49 | 18 18 | 0 1 | 12 13 | 1 10 | 16 20 | 0 48 | 1 40 | 2 9 | 15 49 | 0 24 | 10 33 | 0 50 | 23 7 | 1 27 | 21 5 | 21 10 | 25 8 | 14 58 | 2 11 | F 6 |
| S 7 | 6 4 | 14 34 | 1 44 | 7 8 | 2 57 | 18 3 | 0n 2 | 11 59 | 1 10 | 16 23 | 0 47 | 1 37 | 2 9 | 15 48 | 0 24 | 10 33 | 0 50 | 23 7 | 1 27 | 21 5 | 21 9 | 25 7 | 14 58 | 2 11 | S 7 |
| S 8 | 5 41 | 18 56 | 0 39 | 7 33 | 3 5 | 17 47 | 0 5 | 11 46 | 1 10 | 16 25 | 0 47 | 1 34 | 2 9 | 15 48 | 0 24 | 10 34 | 0 50 | 23 7 | 1 27 | 21 4 | 21 9 | 25 6 | 14 57 | 2 11 | S 8 |
| M 9 | 5 18 | 22 21 | 0n27 | 7 56 | 3 12 | 17 31 | 0 8 | 11 32 | 1 10 | 16 28 | 0 47 | 1 31 | 2 9 | 15 48 | 0 24 | 10 35 | 0 50 | 23 7 | 1 27 | 21 4 | 21 8 | 25 6 | 14 57 | 2 12 | M 9 |
| T 10 | 4 55 | 24 42 | 1 29 | 8 18 | 3 19 | 17 14 | 0 12 | 11 18 | 1 10 | 16 31 | 0 47 | 1 28 | 2 9 | 15 48 | 0 24 | 10 35 | 0 50 | 23 7 | 1 27 | 21 4 | 21 7 | 25 5 | 14 56 | 2 12 | T 10 |
| W11 | 4 33 | 25 53 | 2 27 | 8 37 | 3 26 | 16 56 | 0 15 | 11 4 | 1 10 | 16 34 | 0 47 | 1 25 | 2 9 | 15 47 | 0 24 | 10 36 | 0 50 | 23 7 | 1 28 | 21 4 | 21 7 | 25 4 | 14 56 | 2 12 | W11 |
| T 12 | 4 10 | 25 53 | 3 19 | 8 54 | 3 32 | 16 38 | 0 18 | 10 50 | 1 10 | 16 36 | 0 47 | 1 22 | 2 9 | 15 47 | 0 24 | 10 36 | 0 50 | 23 6 | 1 28 | 21 4 | 21 6 | 25 4 | 14 55 | 2 12 | T 12 |
| F 13 | 3 47 | 24 42 | 4 1 | 9 8 | 3 37 | 16 20 | 0 21 | 10 36 | 1 10 | 16 39 | 0 46 | 1 19 | 2 9 | 15 47 | 0 24 | 10 37 | 0 50 | 23 6 | 1 28 | 21 3 | 21 6 | 25 3 | 14 55 | 2 13 | F 13 |
| S 14 | 3 23 | 22 25 | 4 33 | 9 20 | 3 42 | 16 1 | 0 24 | 10 22 | 1 10 | 16 42 | 0 46 | 1 16 | 2 9 | 15 46 | 0 24 | 10 38 | 0 50 | 23 6 | 1 28 | 21 1 | 21 5 | 25 2 | 14 54 | 2 13 | S 14 |
| S 15 | 3 0 | 19 8 | 4 54 | 9 29 | 3 46 | 15 42 | 0 27 | 10 8 | 1 10 | 16 45 | 0 46 | 1 13 | 2 9 | 15 46 | 0 24 | 10 38 | 0 50 | 23 6 | 1 28 | 20 59 | 21 4 | 25 2 | 14 54 | 2 13 | S 15 |
| M16 | 2 37 | 15 0 | 5 1 | 9 35 | 3 49 | 15 22 | 0 30 | 9 54 | 1 10 | 16 48 | 0 46 | 1 10 | 2 9 | 15 45 | 0 24 | 10 39 | 0 50 | 23 6 | 1 28 | 20 57 | 21 4 | 25 1 | 14 53 | 2 13 | M16 |
| T 17 | 2 14 | 10 11 | 4 55 | 9 38 | 3 52 | 15 2 | 0 33 | 9 39 | 1 10 | 16 51 | 0 46 | 1 7 | 2 9 | 15 45 | 0 24 | 10 39 | 0 50 | 23 6 | 1 28 | 20 55 | 21 3 | 25 0 | 14 52 | 2 13 | T 17 |
| W18 | 1 50 | 4 53 | 4 34 | 9 37 | 3 53 | 14 41 | 0 36 | 9 25 | 1 10 | 16 54 | 0 45 | 1 5 | 2 9 | 15 45 | 0 24 | 10 40 | 0 50 | 23 6 | 1 28 | 20 52 | 21 3 | 24 59 | 14 52 | 2 14 | W18 |
| T 19 | 1 27 | 0s43 | 3 59 | 9 32 | 3 53 | 14 20 | 0 39 | 9 11 | 1 10 | 16 57 | 0 45 | 1 2 | 2 9 | 15 44 | 0 24 | 10 40 | 0 50 | 23 6 | 1 28 | 20 50 | 21 2 | 24 59 | 14 51 | 2 14 | T 19 |
| F 20 | 1 4 | 6 22 | 3 11 | 9 23 | 3 51 | 13 59 | 0 42 | 8 56 | 1 10 | 17 0 | 0 45 | 0 59 | 2 9 | 15 44 | 0 24 | 10 41 | 0 50 | 23 6 | 1 28 | 20 49 | 21 2 | 24 58 | 14 50 | 2 14 | F 20 |
| S 21 | 0 40 | 11 51 | 2 13 | 9 10 | 3 49 | 13 37 | 0 44 | 8 42 | 1 10 | 17 3 | 0 45 | 0 56 | 2 9 | 15 43 | 0 24 | 10 41 | 0 50 | 23 6 | 1 29 | 20 48 | 21 1 | 24 57 | 14 50 | 2 14 | S 21 |
| S 22 | 0 17 | 16 52 | 1 6 | 8 53 | 3 44 | 13 15 | 0 47 | 8 27 | 1 10 | 17 6 | 0 45 | 0 53 | 2 9 | 15 43 | 0 24 | 10 42 | 0 50 | 23 6 | 1 29 | 20 47 | 21 0 | 24 56 | 14 49 | 2 15 | S 22 |
| M23 | 0s 7 | 21 6 | 0s 6 | 8 31 | 3 38 | 12 52 | 0 49 | 8 13 | 1 10 | 17 9 | 0 45 | 0 50 | 2 9 | 15 42 | 0 24 | 10 42 | 0 50 | 23 6 | 1 29 | 20 47 | 21 0 | 24 56 | 14 48 | 2 15 | M23 |
| T 24 | 0 30 | 24 14 | 1 19 | 8 5 | 3 30 | 12 29 | 0 52 | 7 58 | 1 9 | 17 12 | 0 44 | 0 47 | 2 9 | 15 42 | 0 24 | 10 43 | 0 50 | 23 6 | 1 29 | 20 47 | 20 59 | 24 55 | 14 48 | 2 15 | T 24 |
| W25 | 0 54 | 25 56 | 2 28 | 7 34 | 3 20 | 12 6 | 0 54 | 7 43 | 1 9 | 17 15 | 0 44 | 0 44 | 2 9 | 15 41 | 0 24 | 10 44 | 0 50 | 23 6 | 1 29 | 20 47 | 20 59 | 24 54 | 14 47 | 2 15 | W25 |
| T 26 | 1 17 | 25 59 | 3 28 | 6 59 | 3 8 | 11 42 | 0 57 | 7 29 | 1 9 | 17 18 | 0 44 | 0 41 | 2 9 | 15 41 | 0 24 | 10 44 | 0 50 | 23 6 | 1 29 | 20 47 | 20 58 | 24 53 | 14 46 | 2 15 | T 26 |
| F 27 | 1 41 | 24 20 | 4 17 | 6 21 | 2 54 | 11 18 | 0 59 | 7 14 | 1 9 | 17 21 | 0 44 | 0 38 | 2 9 | 15 40 | 0 24 | 10 45 | 0 50 | 23 6 | 1 29 | 20 46 | 20 57 | 24 52 | 14 45 | 2 16 | F 27 |
| S 28 | 2 4 | 21 5 | 4 50 | 5 40 | 2 39 | 10 53 | 1 1 | 6 59 | 1 9 | 17 24 | 0 44 | 0 35 | 2 9 | 15 40 | 0 24 | 10 45 | 0 50 | 23 6 | 1 29 | 20 46 | 20 57 | 24 52 | 14 44 | 2 16 | S 28 |
| S 29 | 2 28 | 16 32 | 5 4 | 4 57 | 2 22 | 10 29 | 1 4 | 6 44 | 1 9 | 17 27 | 0 44 | 0 32 | 2 10 | 15 39 | 0 24 | 10 46 | 0 50 | 23 6 | 1 29 | 20 44 | 20 56 | 24 51 | 14 44 | 2 16 | S 29 |
| M30 | 2s51 | 11s 3 | 4s59 | 4s13 | 2s 3 | 10n 4 | 1n 6 | 6n29 | 1n 9 | 17s30 | 0n43 | 0n29 | 2n10 | 15n39 | 0s24 | 10s46 | 0s50 | 23n 6 | 1n29 | 20n42 | 20n56 | 24n50 | 14n43 | 2s16 | M30 |

Julian Day Number = 2337102.5, Delta T = 20.05 sec
Ecliptic obliquity = 23°28'52, Nutation = - 0°00'14, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°21'59, Lahiri = 19°29'00Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1686
# geocentric

## OCTOBER 1686 GC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T 1 | 0 40 20 | 8♎ 9'07 | 28♓ 0 | 4°R44 | 7♍59 | 16♍54 | 21♏47 | 3♎52 | 13°R51 | 4°R11 | 22♋20 | 2°R24 | 3♊38 | 27♋11 | 16°R47 | T 1 |
| W 2 | 0 44 16 | 9° 8'17 | 12♈ 7 | 3♎41 | 9°12 | 17°33 | 21°59 | 3°59 | 13♉49 | 4♓ 9 | 22°21 | 2♊16 | 3°35 | 27°18 | 16♉44 | W 2 |
| T 3 | 0 48 13 | 10° 7'30 | 25°55 | 2°44 | 10°26 | 18°11 | 22°10 | 4° 7 | 13°47 | 4° 8 | 22°21 | 2° 9 | 3°32 | 27°24 | 16°42 | T 3 |
| F 4 | 0 52 9 | 11° 6'45 | 9♉20 | 1°55 | 11°39 | 18°49 | 22°22 | 4°14 | 13°45 | 4° 7 | 22°22 | 2° 5 | 3°28 | 27°31 | 16°40 | F 4 |
| S 5 | 0 56 6 | 12° 6'03 | 22°23 | 1°14 | 12°52 | 19°27 | 22°33 | 4°21 | 13°43 | 4° 6 | 22°22 | 2° 2 | 3°25 | 27°38 | 16°37 | S 5 |
| S 6 | 1 0 2 | 13° 5'22 | 5♊ 3 | 0°43 | 14° 6 | 20° 5 | 22°45 | 4°29 | 13°41 | 4° 5 | 22°23 | 2°D 2 | 3°22 | 27°44 | 16°35 | S 6 |
| M 7 | 1 3 59 | 14° 4'44 | 17°24 | 0°23 | 15°19 | 20°43 | 22°56 | 4°36 | 13°39 | 4° 3 | 22°23 | 2° 3 | 3°19 | 27°51 | 16°32 | M 7 |
| T 8 | 1 7 55 | 15° 4'08 | 29°31 | 0°D14 | 16°33 | 21°21 | 23° 8 | 4°44 | 13°37 | 4° 2 | 22°23 | 2° 4 | 3°16 | 27°58 | 16°30 | T 8 |
| W 9 | 1 11 52 | 16° 3'35 | 11♋27 | 0°15 | 17°47 | 21°59 | 23°20 | 4°51 | 13°35 | 4° 1 | 22°24 | 2°R 5 | 3°13 | 28° 5 | 16°27 | W 9 |
| T 10 | 1 15 48 | 17° 3'04 | 23°18 | 0°27 | 19° 0 | 22°38 | 23°32 | 4°58 | 13°33 | 4° 0 | 22°24 | 2° 5 | 3° 9 | 28°11 | 16°25 | T 10 |
| F 11 | 1 19 45 | 18° 2'35 | 5♌10 | 0°50 | 20°14 | 23°16 | 23°44 | 5° 5 | 13°31 | 3°59 | 22°24 | 2° 3 | 3° 6 | 28°18 | 16°22 | F 11 |
| S 12 | 1 23 42 | 19° 2'08 | 17° 6 | 1°22 | 21°28 | 23°54 | 23°56 | 5°13 | 13°28 | 3°58 | 22°25 | 1°59 | 3° 3 | 28°25 | 16°19 | S 12 |
| S 13 | 1 27 38 | 20° 1'44 | 29°12 | 2° 4 | 22°42 | 24°32 | 24° 8 | 5°20 | 13°26 | 3°57 | 22°25 | 1°54 | 3° 0 | 28°31 | 16°16 | S 13 |
| M14 | 1 31 35 | 21° 1'22 | 11♍30 | 2°54 | 23°56 | 25°10 | 24°20 | 5°27 | 13°24 | 3°56 | 22°25 | 1°47 | 2°57 | 28°38 | 16°14 | M14 |
| T 15 | 1 35 31 | 22° 1'02 | 24° 3 | 3°51 | 25°10 | 25°48 | 24°32 | 5°34 | 13°22 | 3°55 | 22°26 | 1°40 | 2°54 | 28°45 | 16°11 | T 15 |
| W16 | 1 39 28 | 23° 0'44 | 6♎52 | 4°56 | 26°24 | 26°26 | 24°45 | 5°42 | 13°19 | 3°54 | 22°26 | 1°33 | 2°50 | 28°51 | 16° 8 | W16 |
| T 17 | 1 43 24 | 24° 0'28 | 19°58 | 6° 6 | 27°38 | 27° 5 | 24°57 | 5°49 | 13°17 | 3°53 | 22°26 | 1°27 | 2°47 | 28°58 | 16° 5 | T 17 |
| F 18 | 1 47 21 | 25° 0'14 | 3♏20 | 7°21 | 28°52 | 27°43 | 25° 9 | 5°56 | 13°15 | 3°52 | 22°26 | 1°22 | 2°44 | 29° 5 | 16° 2 | F 18 |
| S 19 | 1 51 17 | 26° 0'03 | 16°54 | 8°40 | 0♎ 6 | 28°21 | 25°22 | 6° 3 | 13°12 | 3°51 | 22°26 | 1°20 | 2°41 | 29°11 | 15°59 | S 19 |
| S 20 | 1 55 14 | 26°59'53 | 0♐40 | 10° 4 | 1°21 | 28°59 | 25°34 | 6°10 | 13°10 | 3°50 | 22°26 | 1°D19 | 2°38 | 29°18 | 15°56 | S 20 |
| M21 | 1 59 11 | 27°59'45 | 14°35 | 11°30 | 2°35 | 29°37 | 25°47 | 6°17 | 13° 8 | 3°50 | 22°26 | 1°19 | 2°34 | 29°25 | 15°53 | M21 |
| T 22 | 2 3 7 | 28°59'39 | 28°37 | 12°59 | 3°49 | 0♎15 | 26° 0 | 6°24 | 13° 5 | 3°49 | 22°26 | 1°21 | 2°31 | 29°32 | 15°50 | T 22 |
| W23 | 2 7 4 | 29°59'34 | 12♑43 | 14°31 | 5° 4 | 0°54 | 26°12 | 6°31 | 13° 3 | 3°48 | 22°R26 | 1°22 | 2°28 | 29°38 | 15°47 | W23 |
| T 24 | 2 11 0 | 0♏59'32 | 26°52 | 16° 4 | 6°18 | 1°32 | 26°25 | 6°38 | 13° 1 | 3°47 | 22°26 | 1°R23 | 2°25 | 29°45 | 15°44 | T 24 |
| F 25 | 2 14 57 | 1°59'30 | 11♒ 3 | 17°38 | 7°32 | 2°10 | 26°38 | 6°45 | 12°58 | 3°47 | 22°26 | 1°23 | 2°22 | 29°52 | 15°41 | F 25 |
| S 26 | 2 18 53 | 2°59'31 | 25°13 | 19°14 | 8°47 | 2°48 | 26°50 | 6°52 | 12°56 | 3°46 | 22°26 | 1°21 | 2°19 | 29°58 | 15°38 | S 26 |
| S 27 | 2 22 50 | 3°59'33 | 9♓20 | 20°50 | 10° 1 | 3°26 | 27° 3 | 6°59 | 12°53 | 3°45 | 22°26 | 1°18 | 2°15 | 0♌ 5 | 15°35 | S 27 |
| M28 | 2 26 46 | 4°59'36 | 23°21 | 22°27 | 11°16 | 4° 4 | 27°16 | 7° 6 | 12°51 | 3°45 | 22°26 | 1°15 | 2°12 | 0°12 | 15°32 | M28 |
| T 29 | 2 30 43 | 5°59'41 | 7♈14 | 24° 5 | 12°31 | 4°43 | 27°29 | 7°13 | 12°48 | 3°44 | 22°26 | 1°11 | 2° 9 | 0°19 | 15°29 | T 29 |
| W30 | 2 34 40 | 6°59'48 | 20°54 | 25°43 | 13°45 | 5°21 | 27°42 | 7°20 | 12°46 | 3°44 | 22°26 | 1° 7 | 2° 6 | 0°25 | 15°26 | W30 |
| T 31 | 2 38 36 | 7♏59'56 | 4♉19 | 27♎21 | 15♎ 0 | 5♎59 | 27♏55 | 7♎26 | 12♉43 | 3♓43 | 22♋26 | 1♊ 4 | 2♊ 3 | 0♌32 | 15♉23 | T 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 | 3s14 | 5s 0 | 4s36 | 3s28 | 1s44 | 9n38 | 1n 8 | 6n14 | 1n 9 | 17s33 | 0n43 | 0n27 | 2n10 | 15n38 | 0s24 | 10s46 | 0s50 | 23n 6 | 1n30 | 20n41 | 20n55 | 24n49 | 14n42 | 2s16 |
| W 2 | 3 38 | 1n11 | 3 55 | 2 45 | 1 24 | 9 13 | 1 10 | 5 59 | 1 9 | 17 36 | 0 43 | 0 24 | 2 10 | 15 38 | 0 24 | 10 47 | 0 50 | 23 6 | 1 30 | 20 39 | 20 54 | 24 48 | 14 41 | 2 17 |
| T 3 | 4 1 | 7 13 | 3 1 | 2 3 | 1 3 | 8 47 | 1 12 | 5 44 | 1 9 | 17 39 | 0 43 | 0 21 | 2 10 | 15 37 | 0 24 | 10 47 | 0 50 | 23 6 | 1 30 | 20 38 | 20 54 | 24 48 | 14 40 | 2 17 |
| F 4 | 4 24 | 12 45 | 1 59 | 1 25 | 0 43 | 8 20 | 1 14 | 5 29 | 1 9 | 17 42 | 0 43 | 0 18 | 2 10 | 15 36 | 0 24 | 10 48 | 0 50 | 23 6 | 1 30 | 20 37 | 20 53 | 24 47 | 14 39 | 2 17 |
| S 5 | 4 47 | 17 34 | 0 52 | 0 50 | 0 23 | 7 54 | 1 16 | 5 14 | 1 9 | 17 45 | 0 43 | 0 15 | 2 10 | 15 36 | 0 24 | 10 48 | 0 50 | 23 6 | 1 30 | 20 36 | 20 53 | 24 46 | 14 39 | 2 17 |
| S 6 | 5 11 | 21 27 | 0n16 | 0 20 | 0 3 | 7 27 | 1 17 | 4 59 | 1 9 | 17 48 | 0 43 | 0 12 | 2 10 | 15 35 | 0 24 | 10 49 | 0 50 | 23 6 | 1 30 | 20 36 | 20 52 | 24 45 | 14 38 | 2 17 |
| M 7 | 5 34 | 24 15 | 1 22 | 0n 5 | 0n15 | 7 0 | 1 19 | 4 44 | 1 9 | 17 51 | 0 42 | 0 9 | 2 10 | 15 35 | 0 24 | 10 49 | 0 50 | 23 6 | 1 30 | 20 36 | 20 51 | 24 44 | 14 37 | 2 17 |
| T 8 | 5 57 | 25 52 | 2 23 | 0 24 | 0 32 | 6 33 | 1 21 | 4 29 | 1 9 | 17 54 | 0 42 | 0 6 | 2 10 | 15 34 | 0 24 | 10 50 | 0 50 | 23 6 | 1 30 | 20 37 | 20 51 | 24 43 | 14 36 | 2 18 |
| W 9 | 6 20 | 26 15 | 3 17 | 0 38 | 0 48 | 6 6 | 1 22 | 4 14 | 1 9 | 17 58 | 0 42 | 0 4 | 2 10 | 15 33 | 0 24 | 10 50 | 0 50 | 23 6 | 1 30 | 20 37 | 20 50 | 24 42 | 14 35 | 2 18 |
| T 10 | 6 43 | 25 26 | 4 2 | 0 46 | 1 2 | 5 38 | 1 23 | 3 59 | 1 8 | 18 1 | 0 42 | 0 1 | 2 10 | 15 33 | 0 24 | 10 50 | 0 50 | 23 6 | 1 30 | 20 37 | 20 49 | 24 42 | 14 34 | 2 18 |
| F 11 | 7 5 | 23 28 | 4 36 | 0 49 | 1 15 | 5 10 | 1 25 | 3 44 | 1 8 | 18 4 | 0 42 | 0s 2 | 2 10 | 15 32 | 0 24 | 10 51 | 0 50 | 23 6 | 1 31 | 20 37 | 20 49 | 24 41 | 14 33 | 2 18 |
| S 12 | 7 28 | 20 29 | 4 59 | 0 46 | 1 26 | 4 42 | 1 26 | 3 28 | 1 8 | 18 7 | 0 42 | 0 5 | 2 10 | 15 31 | 0 24 | 10 51 | 0 50 | 23 6 | 1 31 | 20 36 | 20 48 | 24 40 | 14 32 | 2 18 |
| S 13 | 7 51 | 16 35 | 5 9 | 0 38 | 1 36 | 4 14 | 1 27 | 3 13 | 1 8 | 18 10 | 0 42 | 0 8 | 2 10 | 15 31 | 0 24 | 10 51 | 0 50 | 23 6 | 1 31 | 20 35 | 20 48 | 24 39 | 14 31 | 2 19 |
| M14 | 8 13 | 11 57 | 5 5 | 0 26 | 1 44 | 3 46 | 1 28 | 2 58 | 1 8 | 18 13 | 0 41 | 0 11 | 2 10 | 15 30 | 0 24 | 10 52 | 0 50 | 23 6 | 1 31 | 20 33 | 20 47 | 24 38 | 14 30 | 2 19 |
| T 15 | 8 35 | 6 45 | 4 46 | 0 9 | 1 50 | 3 18 | 1 30 | 2 43 | 1 8 | 18 16 | 0 41 | 0 13 | 2 10 | 15 29 | 0 24 | 10 52 | 0 50 | 23 6 | 1 31 | 20 32 | 20 46 | 24 37 | 14 29 | 2 19 |
| W16 | 8 58 | 1 8 | 4 13 | 0s11 | 1 56 | 2 49 | 1 31 | 2 27 | 1 8 | 18 19 | 0 41 | 0 16 | 2 11 | 15 29 | 0 24 | 10 52 | 0 50 | 23 7 | 1 31 | 20 30 | 20 46 | 24 36 | 14 28 | 2 19 |
| T 17 | 9 20 | 4s39 | 3 26 | 0 36 | 2 0 | 2 20 | 1 31 | 2 12 | 1 8 | 18 22 | 0 41 | 0 19 | 2 11 | 15 28 | 0 24 | 10 53 | 0 50 | 23 7 | 1 31 | 20 29 | 20 45 | 24 35 | 14 27 | 2 19 |
| F 18 | 9 42 | 10 21 | 2 26 | 1 3 | 2 2 | 1 52 | 1 32 | 1 57 | 1 8 | 18 26 | 0 41 | 0 22 | 2 11 | 15 27 | 0 24 | 10 53 | 0 50 | 23 7 | 1 31 | 20 28 | 20 45 | 24 34 | 14 27 | 2 19 |
| S 19 | 10 4 | 15 40 | 1 18 | 1 32 | 2 4 | 1 23 | 1 33 | 1 41 | 1 8 | 18 29 | 0 41 | 0 24 | 2 11 | 15 27 | 0 24 | 10 53 | 0 50 | 23 7 | 1 31 | 20 28 | 20 44 | 24 33 | 14 26 | 2 20 |
| S 20 | 10 25 | 20 16 | 0 4 | 2 5 | 2 5 | 0 54 | 1 34 | 1 26 | 1 7 | 18 32 | 0 41 | 0 27 | 2 11 | 15 26 | 0 24 | 10 54 | 0 50 | 23 7 | 1 32 | 20 28 | 20 43 | 24 32 | 14 25 | 2 20 |
| M21 | 10 47 | 23 47 | 1s12 | 2 39 | 2 5 | 0 25 | 1 34 | 1 11 | 1 7 | 18 35 | 0 41 | 0 30 | 2 11 | 15 25 | 0 24 | 10 54 | 0 50 | 23 7 | 1 32 | 20 28 | 20 43 | 24 31 | 14 24 | 2 20 |
| T 22 | 11 8 | 25 52 | 2 24 | 3 14 | 2 4 | 0s 4 | 1 35 | 0 55 | 1 7 | 18 38 | 0 40 | 0 32 | 2 11 | 15 25 | 0 24 | 10 54 | 0 50 | 23 7 | 1 32 | 20 28 | 20 42 | 24 30 | 14 23 | 2 20 |
| W23 | 11 29 | 26 19 | 3 27 | 3 51 | 2 2 | 0 33 | 1 35 | 0 40 | 1 7 | 18 41 | 0 40 | 0 35 | 2 11 | 15 24 | 0 24 | 10 55 | 0 50 | 23 7 | 1 32 | 20 28 | 20 41 | 24 29 | 14 22 | 2 20 |
| T 24 | 11 50 | 25 2 | 4 18 | 4 29 | 1 59 | 1 2 | 1 36 | 0 25 | 1 7 | 18 44 | 0 40 | 0 38 | 2 11 | 15 23 | 0 24 | 10 55 | 0 50 | 23 7 | 1 32 | 20 28 | 20 41 | 24 28 | 14 21 | 2 20 |
| F 25 | 12 11 | 22 11 | 4 54 | 5 8 | 1 56 | 1 32 | 1 36 | 0 9 | 1 7 | 18 47 | 0 40 | 0 40 | 2 12 | 15 22 | 0 24 | 10 55 | 0 50 | 23 7 | 1 32 | 20 28 | 20 40 | 24 27 | 14 20 | 2 20 |
| S 26 | 12 32 | 18 1 | 5 11 | 5 48 | 1 53 | 2 1 | 1 36 | 0s 6 | 1 7 | 18 50 | 0 40 | 0 43 | 2 12 | 15 22 | 0 24 | 10 55 | 0 50 | 23 7 | 1 32 | 20 28 | 20 40 | 24 26 | 14 18 | 2 21 |
| S 27 | 12 52 | 12 52 | 5 10 | 6 28 | 1 49 | 2 30 | 1 36 | 0 21 | 1 6 | 18 53 | 0 40 | 0 46 | 2 12 | 15 21 | 0 24 | 10 55 | 0 50 | 23 8 | 1 32 | 20 27 | 20 39 | 24 25 | 14 17 | 2 21 |
| M28 | 13 13 | 7 5 | 4 50 | 7 9 | 1 44 | 2 59 | 1 37 | 0 36 | 1 6 | 18 56 | 0 40 | 0 48 | 2 12 | 15 20 | 0 24 | 10 56 | 0 50 | 23 8 | 1 32 | 20 27 | 20 38 | 24 24 | 14 16 | 2 21 |
| T 29 | 13 33 | 1 1 | 4 14 | 7 49 | 1 39 | 3 28 | 1 37 | 0 52 | 1 6 | 18 59 | 0 40 | 0 51 | 2 12 | 15 19 | 0 24 | 10 56 | 0 50 | 23 8 | 1 32 | 20 26 | 20 38 | 24 23 | 14 15 | 2 21 |
| W30 | 13 52 | 5n 2 | 3 23 | 8 30 | 1 34 | 3 57 | 1 36 | 1 7 | 1 6 | 19 2 | 0 40 | 0 53 | 2 12 | 15 19 | 0 24 | 10 56 | 0 50 | 23 8 | 1 33 | 20 25 | 20 37 | 24 22 | 14 14 | 2 21 |
| T 31 | 14s12 | 10n45 | 2s22 | 9s10 | 1n29 | 4s26 | 1n36 | 1s22 | 1n 6 | 19s 5 | 0n39 | 0s56 | 2n12 | 15n18 | 0s24 | 10s56 | 0s50 | 23n 8 | 1n33 | 20n25 | 20n36 | 24n21 | 14n13 | 2s21 |

Julian Day Number = 2337132.5, Delta T = 20.01 sec
Ecliptic obliquity = 23°28'53, Nutation = - 0°00'16, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°22'04, Lahiri = 19°29'04Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1686
# geocentric

## NOVEMBER 1686 GC — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F 1 | 2 42 33 | 9♏ 0'07 | 17♉28 | 28♎59 | 16♎15 | 6♎37 | 28♏ 8 | 7♎33 | 12°R41 | 3°R43 | 22°R25 | 1°R 2 | 1♊59 | 0♌39 | 15°R19 | F 1 |
| S 2 | 2 46 29 | 10° 0'19 | 0♊19 | 0♏38 | 17°29 | 7°15 | 28°21 | 7°40 | 12♉38 | 3♓42 | 22♋25 | 1°D 2 | 1°56 | 0°45 | 15♉16 | S 2 |
| S 3 | 2 50 26 | 11° 0'33 | 12°53 | 2°16 | 18°44 | 7°54 | 28°34 | 7°46 | 12°36 | 3°42 | 22°25 | 1♊ 2 | 1°53 | 0°52 | 15°13 | S 3 |
| M 4 | 2 54 22 | 12° 0'49 | 25°12 | 3°54 | 19°59 | 8°32 | 28°47 | 7°53 | 12°33 | 3°41 | 22°25 | 1° 3 | 1°50 | 0°59 | 15°10 | M 4 |
| T 5 | 2 58 19 | 13° 1'08 | 7♋18 | 5°32 | 21°14 | 9°10 | 29° 0 | 8° 0 | 12°31 | 3°41 | 22°24 | 1° 5 | 1°47 | 1° 5 | 15° 7 | T 5 |
| W 6 | 3 2 15 | 14° 1'28 | 19°15 | 7° 9 | 22°29 | 9°48 | 29°13 | 8° 6 | 12°28 | 3°41 | 22°24 | 1° 7 | 1°44 | 1°12 | 15° 3 | W 6 |
| T 7 | 3 6 12 | 15° 1'50 | 1♌ 7 | 8°47 | 23°43 | 10°26 | 29°26 | 8°12 | 12°26 | 3°41 | 22°24 | 1° 8 | 1°40 | 1°19 | 15° 0 | T 7 |
| F 8 | 3 10 9 | 16° 2'13 | 12°59 | 10°24 | 24°58 | 11° 4 | 29°40 | 8°19 | 12°23 | 3°40 | 22°23 | 1°R 8 | 1°37 | 1°26 | 14°57 | F 8 |
| S 9 | 3 14 5 | 17° 2'39 | 24°55 | 12° 1 | 26°13 | 11°43 | 29°53 | 8°25 | 12°21 | 3°40 | 22°23 | 1° 8 | 1°34 | 1°32 | 14°54 | S 9 |
| S 10 | 3 18 2 | 18° 3'07 | 7♍ 0 | 13°38 | 27°28 | 12°21 | 0♐ 6 | 8°32 | 12°18 | 3°40 | 22°22 | 1° 7 | 1°31 | 1°39 | 14°51 | S 10 |
| M11 | 3 21 58 | 19° 3'36 | 19°19 | 15°14 | 28°43 | 12°59 | 0°19 | 8°38 | 12°16 | 3°40 | 22°22 | 1° 6 | 1°28 | 1°46 | 14°47 | M11 |
| T 12 | 3 25 55 | 20° 4'08 | 1♎56 | 16°50 | 29°58 | 13°37 | 0°33 | 8°44 | 12°14 | 3°40 | 22°21 | 1° 5 | 1°25 | 1°52 | 14°44 | T 12 |
| W13 | 3 29 51 | 21° 4'41 | 14°52 | 18°26 | 1♏13 | 14°16 | 0°46 | 8°50 | 12°11 | 3°40 | 22°21 | 1° 3 | 1°21 | 1°59 | 14°41 | W13 |
| T 14 | 3 33 48 | 22° 5'15 | 28° 9 | 20° 2 | 2°29 | 14°54 | 0°59 | 8°56 | 12° 9 | 3°40 | 22°20 | 1° 2 | 1°18 | 2° 6 | 14°38 | T 14 |
| F 15 | 3 37 44 | 23° 5'52 | 11♏48 | 21°37 | 3°44 | 15°32 | 1°13 | 9° 2 | 12° 6 | 3°D40 | 22°20 | 1° 1 | 1°15 | 2°12 | 14°35 | F 15 |
| S 16 | 3 41 41 | 24° 6'30 | 25°46 | 23°12 | 4°59 | 16°10 | 1°26 | 9° 8 | 12° 4 | 3°40 | 22°19 | 1°D 1 | 1°12 | 2°19 | 14°32 | S 16 |
| S 17 | 3 45 38 | 25° 7'10 | 9♐59 | 24°47 | 6°14 | 16°48 | 1°40 | 9°14 | 12° 1 | 3°40 | 22°19 | 1° 1 | 1° 9 | 2°26 | 14°28 | S 17 |
| M18 | 3 49 34 | 26° 7'51 | 24°23 | 26°22 | 7°29 | 17°27 | 1°53 | 9°20 | 11°59 | 3°40 | 22°18 | 1° 1 | 1° 5 | 2°33 | 14°25 | M18 |
| T 19 | 3 53 31 | 27° 8'33 | 8♑52 | 27°57 | 8°44 | 18° 5 | 2° 6 | 9°26 | 11°57 | 3°40 | 22°17 | 1° 1 | 1° 2 | 2°39 | 14°22 | T 19 |
| W20 | 3 57 27 | 28° 9'17 | 23°22 | 29°31 | 10° 0 | 18°43 | 2°20 | 9°32 | 11°54 | 3°40 | 22°17 | 1° 2 | 0°59 | 2°46 | 14°19 | W20 |
| T 21 | 4 1 24 | 29°10'01 | 7♒47 | 1♐ 6 | 11°15 | 19°21 | 2°33 | 9°37 | 11°52 | 3°40 | 22°16 | 1° 2 | 0°56 | 2°53 | 14°16 | T 21 |
| F 22 | 4 5 20 | 0♐10'47 | 22° 3 | 2°40 | 12°30 | 20° 0 | 2°47 | 9°43 | 11°49 | 3°41 | 22°15 | 1° 2 | 0°53 | 2°59 | 14°13 | F 22 |
| S 23 | 4 9 17 | 1°11'33 | 6♓ 9 | 4°14 | 13°45 | 20°38 | 3° 0 | 9°48 | 11°47 | 3°41 | 22°15 | 1° 2 | 0°50 | 3° 6 | 14°10 | S 23 |
| S 24 | 4 13 13 | 2°12'20 | 20° 2 | 5°48 | 15° 1 | 21°16 | 3°14 | 9°54 | 11°45 | 3°41 | 22°14 | 1° 2 | 0°46 | 3°13 | 14° 7 | S 24 |
| M25 | 4 17 10 | 3°13'09 | 3♈42 | 7°22 | 16°16 | 21°54 | 3°27 | 9°59 | 11°43 | 3°41 | 22°13 | 1° 2 | 0°43 | 3°20 | 14° 4 | M25 |
| T 26 | 4 21 7 | 4°13'58 | 17° 8 | 8°56 | 17°31 | 22°33 | 3°41 | 10° 5 | 11°40 | 3°42 | 22°12 | 1° 2 | 0°40 | 3°26 | 14° 1 | T 26 |
| W27 | 4 25 3 | 5°14'48 | 0♉22 | 10°29 | 18°46 | 23°11 | 3°54 | 10°10 | 11°38 | 3°42 | 22°11 | 1° 3 | 0°37 | 3°33 | 13°58 | W27 |
| T 28 | 4 29 0 | 6°15'39 | 13°21 | 12° 3 | 20° 2 | 23°49 | 4° 7 | 10°15 | 11°36 | 3°43 | 22°11 | 1° 3 | 0°34 | 3°40 | 13°55 | T 28 |
| F 29 | 4 32 56 | 7°16'31 | 26° 8 | 13°37 | 21°17 | 24°27 | 4°21 | 10°20 | 11°34 | 3°43 | 22°10 | 1°R 4 | 0°31 | 3°46 | 13°52 | F 29 |
| S 30 | 4 36 53 | 8♐17'25 | 8♊42 | 15♐10 | 22♏32 | 25♎ 5 | 4♐34 | 10♎25 | 11♉32 | 3♓44 | 22♋ 9 | 1♊ 4 | 0♊27 | 3♌53 | 13♉49 | S 30 |

| 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 |
| F 1 | 14s31 | 15n53 | 1s14 | 9s50 | 1n23 | 4s55 | 1n36 | 1s38 | 1n 6 | 19s 8 | 0n39 | 0s58 | 2n12 | 15n17 | 0s24 | 10s56 | 0s50 | 23n 8 | 1n33 | 20n24 | 20n36 | 24n20 | 14n12 | 2s21 |
| S 2 | 14 50 | 20 11 | 0 4 | 10 31 | 1 17 | 5 24 | 1 36 | 1 53 | 1 6 | 19 11 | 0 39 | 1 1 | 2 13 | 15 16 | 0 24 | 10 56 | 0 50 | 23 8 | 1 33 | 20 24 | 20 35 | 24 19 | 14 11 | 2 21 |
| S 3 | 15 9 | 23 27 | 1n 5 | 11 10 | 1 11 | 5 53 | 1 36 | 2 8 | 1 5 | 19 14 | 0 39 | 1 3 | 2 13 | 15 16 | 0 24 | 10 57 | 0 50 | 23 9 | 1 33 | 20 24 | 20 35 | 24 18 | 14 10 | 2 22 |
| M 4 | 15 28 | 25 33 | 2 9 | 11 50 | 1 5 | 6 21 | 1 35 | 2 23 | 1 5 | 19 17 | 0 39 | 1 6 | 2 13 | 15 15 | 0 24 | 10 57 | 0 50 | 23 9 | 1 33 | 20 24 | 20 34 | 24 17 | 14 9 | 2 22 |
| T 5 | 15 46 | 26 24 | 3 7 | 12 28 | 0 58 | 6 50 | 1 35 | 2 39 | 1 5 | 19 20 | 0 39 | 1 8 | 2 13 | 15 14 | 0 24 | 10 57 | 0 50 | 23 9 | 1 33 | 20 25 | 20 33 | 24 16 | 14 8 | 2 22 |
| W 6 | 16 5 | 25 59 | 3 56 | 13 7 | 0 52 | 7 18 | 1 34 | 2 54 | 1 5 | 19 23 | 0 39 | 1 11 | 2 13 | 15 13 | 0 24 | 10 57 | 0 50 | 23 9 | 1 33 | 20 25 | 20 33 | 24 15 | 14 7 | 2 22 |
| T 7 | 16 22 | 24 24 | 4 34 | 13 44 | 0 45 | 7 47 | 1 33 | 3 9 | 1 5 | 19 26 | 0 39 | 1 13 | 2 13 | 15 13 | 0 24 | 10 57 | 0 50 | 23 9 | 1 33 | 20 25 | 20 32 | 24 14 | 14 6 | 2 22 |
| F 8 | 16 40 | 21 45 | 5 1 | 14 21 | 0 38 | 8 15 | 1 33 | 3 24 | 1 5 | 19 29 | 0 39 | 1 16 | 2 13 | 15 12 | 0 24 | 10 57 | 0 50 | 23 9 | 1 34 | 20 25 | 20 31 | 24 13 | 14 5 | 2 22 |
| S 9 | 16 57 | 18 10 | 5 14 | 14 58 | 0 32 | 8 43 | 1 32 | 3 39 | 1 4 | 19 32 | 0 39 | 1 18 | 2 14 | 15 11 | 0 24 | 10 57 | 0 50 | 23 9 | 1 34 | 20 25 | 20 31 | 24 12 | 14 4 | 2 22 |
| S 10 | 17 14 | 13 49 | 5 15 | 15 34 | 0 25 | 9 11 | 1 31 | 3 54 | 1 4 | 19 35 | 0 38 | 1 20 | 2 14 | 15 10 | 0 24 | 10 57 | 0 50 | 23 10 | 1 34 | 20 25 | 20 30 | 24 11 | 14 3 | 2 22 |
| M11 | 17 31 | 8 50 | 5 1 | 16 9 | 0 18 | 9 38 | 1 30 | 4 9 | 1 4 | 19 38 | 0 38 | 1 23 | 2 14 | 15 10 | 0 24 | 10 57 | 0 50 | 23 10 | 1 34 | 20 25 | 20 29 | 24 10 | 14 2 | 2 22 |
| T 12 | 17 47 | 3 23 | 4 32 | 16 43 | 0 11 | 10 5 | 1 29 | 4 24 | 1 4 | 19 41 | 0 38 | 1 25 | 2 14 | 15 9 | 0 24 | 10 57 | 0 50 | 23 10 | 1 34 | 20 25 | 20 29 | 24 8 | 14 1 | 2 22 |
| W13 | 18 4 | 2s21 | 3 49 | 17 16 | 0 5 | 10 33 | 1 28 | 4 39 | 1 4 | 19 44 | 0 38 | 1 27 | 2 14 | 15 8 | 0 24 | 10 57 | 0 50 | 23 10 | 1 34 | 20 24 | 20 28 | 24 7 | 14 0 | 2 22 |
| T 14 | 18 19 | 8 9 | 2 52 | 17 49 | 0s 2 | 10 59 | 1 27 | 4 54 | 1 3 | 19 46 | 0 38 | 1 29 | 2 14 | 15 7 | 0 24 | 10 57 | 0 50 | 23 10 | 1 34 | 20 24 | 20 27 | 24 6 | 13 59 | 2 23 |
| F 15 | 18 35 | 13 45 | 1 45 | 18 21 | 0 9 | 11 26 | 1 26 | 5 9 | 1 3 | 19 49 | 0 38 | 1 32 | 2 15 | 15 7 | 0 24 | 10 57 | 0 50 | 23 11 | 1 34 | 20 24 | 20 27 | 24 5 | 13 58 | 2 23 |
| S 16 | 18 50 | 18 46 | 0 29 | 18 51 | 0 16 | 11 52 | 1 25 | 5 24 | 1 3 | 19 52 | 0 38 | 1 34 | 2 15 | 15 6 | 0 24 | 10 57 | 0 50 | 23 11 | 1 34 | 20 24 | 20 26 | 24 4 | 13 57 | 2 23 |
| S 17 | 19 5 | 22 48 | 0s50 | 19 21 | 0 22 | 12 19 | 1 23 | 5 39 | 1 3 | 19 55 | 0 38 | 1 36 | 2 15 | 15 5 | 0 24 | 10 57 | 0 50 | 23 11 | 1 34 | 20 24 | 20 25 | 24 3 | 13 56 | 2 23 |
| M18 | 19 19 | 25 28 | 2 6 | 19 50 | 0 29 | 12 44 | 1 22 | 5 54 | 1 3 | 19 58 | 0 38 | 1 38 | 2 15 | 15 5 | 0 24 | 10 57 | 0 50 | 23 11 | 1 35 | 20 24 | 20 25 | 24 2 | 13 55 | 2 23 |
| T 19 | 19 33 | 26 26 | 3 15 | 20 18 | 0 35 | 13 10 | 1 21 | 6 9 | 1 2 | 20 0 | 0 38 | 1 40 | 2 15 | 15 4 | 0 24 | 10 57 | 0 50 | 23 11 | 1 35 | 20 24 | 20 24 | 24 0 | 13 54 | 2 23 |
| W20 | 19 47 | 25 35 | 4 11 | 20 45 | 0 41 | 13 35 | 1 19 | 6 23 | 1 2 | 20 3 | 0 38 | 1 42 | 2 16 | 15 3 | 0 24 | 10 57 | 0 50 | 23 12 | 1 35 | 20 24 | 20 24 | 23 59 | 13 53 | 2 23 |
| T 21 | 20 0 | 23 3 | 4 52 | 21 11 | 0 48 | 14 0 | 1 18 | 6 38 | 1 2 | 20 6 | 0 37 | 1 44 | 2 16 | 15 2 | 0 24 | 10 57 | 0 50 | 23 12 | 1 35 | 20 24 | 20 23 | 23 58 | 13 52 | 2 23 |
| F 22 | 20 13 | 19 7 | 5 13 | 21 36 | 0 54 | 14 24 | 1 16 | 6 53 | 1 2 | 20 8 | 0 37 | 1 46 | 2 16 | 15 2 | 0 24 | 10 57 | 0 50 | 23 12 | 1 35 | 20 24 | 20 22 | 23 57 | 13 51 | 2 23 |
| S 23 | 20 26 | 14 10 | 5 16 | 22 0 | 1 0 | 14 48 | 1 15 | 7 7 | 1 1 | 20 11 | 0 37 | 1 48 | 2 16 | 15 1 | 0 24 | 10 57 | 0 50 | 23 12 | 1 35 | 20 24 | 20 22 | 23 56 | 13 50 | 2 23 |
| S 24 | 20 38 | 8 33 | 5 0 | 22 23 | 1 6 | 15 12 | 1 13 | 7 22 | 1 1 | 20 14 | 0 37 | 1 50 | 2 16 | 15 0 | 0 24 | 10 57 | 0 49 | 23 12 | 1 35 | 20 24 | 20 21 | 23 55 | 13 49 | 2 23 |
| M25 | 20 50 | 2 37 | 4 27 | 22 45 | 1 11 | 15 36 | 1 11 | 7 36 | 1 1 | 20 16 | 0 37 | 1 52 | 2 17 | 15 0 | 0 24 | 10 56 | 0 49 | 23 13 | 1 35 | 20 24 | 20 20 | 23 53 | 13 48 | 2 23 |
| T 26 | 21 2 | 3n21 | 3 40 | 23 5 | 1 17 | 15 59 | 1 9 | 7 51 | 1 1 | 20 19 | 0 37 | 1 54 | 2 17 | 14 59 | 0 24 | 10 56 | 0 49 | 23 13 | 1 35 | 20 24 | 20 20 | 23 52 | 13 48 | 2 23 |
| W27 | 21 13 | 9 5 | 2 42 | 23 25 | 1 22 | 16 21 | 1 8 | 8 5 | 1 0 | 20 22 | 0 37 | 1 56 | 2 17 | 14 58 | 0 24 | 10 56 | 0 49 | 23 13 | 1 35 | 20 24 | 20 19 | 23 51 | 13 47 | 2 23 |
| T 28 | 21 23 | 14 20 | 1 37 | 23 43 | 1 27 | 16 43 | 1 6 | 8 20 | 1 0 | 20 24 | 0 37 | 1 58 | 2 17 | 14 58 | 0 24 | 10 56 | 0 49 | 23 13 | 1 36 | 20 24 | 20 18 | 23 50 | 13 46 | 2 23 |
| F 29 | 21 34 | 18 53 | 0 27 | 24 0 | 1 32 | 17 5 | 1 4 | 8 34 | 1 0 | 20 27 | 0 37 | 2 0 | 2 17 | 14 57 | 0 24 | 10 56 | 0 49 | 23 14 | 1 36 | 20 24 | 20 18 | 23 48 | 13 45 | 2 23 |
| S 30 | 21s44 | 22n29 | 0n42 | 24s16 | 1s37 | 17s26 | 1n 2 | 8s48 | 1n 0 | 20s29 | 0n37 | 2s 1 | 2n18 | 14n56 | 0s24 | 10s55 | 0s49 | 23n14 | 1n36 | 20n24 | 20n17 | 23n47 | 13n44 | 2s23 |

Julian Day Number = 2337163.5, Delta T = 19.97 sec
Ecliptic obliquity = 23°28'53, Nutation = - 0°00'17, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°22'08, Lahiri = 19°29'08Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1686
# geocentric

## DECEMBER 1686 GC

**00:00 UT**

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S 1 | 4 40 49 | 9♐18'19 | 21♊ 5 | 16♐44 | 23♏48 | 25♎44 | 4♐48 | 10♎30 | 11°R29 | 3♓44 | 22°R 8 | 1°R 3 | 0♊24 | 4♌ 0 | 13°R47 | S 1 |
| M 2 | 4 44 46 | 10°19'14 | 3♋16 | 18°18 | 25° 3 | 26°22 | 5° 1 | 10°35 | 11♉27 | 3°45 | 22♋ 7 | 1♊ 2 | 0°21 | 4° 6 | 13♉44 | M 2 |
| T 3 | 4 48 42 | 11°20'11 | 15°19 | 19°51 | 26°18 | 27° 0 | 5°15 | 10°40 | 11°25 | 3°45 | 22° 6 | 1° 1 | 0°18 | 4°13 | 13°41 | T 3 |
| W 4 | 4 52 39 | 12°21'09 | 27°15 | 21°25 | 27°34 | 27°38 | 5°28 | 10°45 | 11°23 | 3°46 | 22° 5 | 0°59 | 0°15 | 4°20 | 13°38 | W 4 |
| T 5 | 4 56 36 | 13°22'07 | 9♌ 6 | 22°58 | 28°49 | 28°17 | 5°42 | 10°49 | 11°21 | 3°47 | 22° 4 | 0°57 | 0°11 | 4°27 | 13°36 | T 5 |
| F 6 | 5 0 32 | 14°23'07 | 20°57 | 24°32 | 0♐ 5 | 28°55 | 5°55 | 10°54 | 11°19 | 3°47 | 22° 3 | 0°56 | 0° 8 | 4°33 | 13°33 | F 6 |
| S 7 | 5 4 29 | 15°24'08 | 2♍52 | 26° 5 | 1°20 | 29°33 | 6° 8 | 10°58 | 11°17 | 3°48 | 22° 2 | 0°54 | 0° 5 | 4°40 | 13°30 | S 7 |
| S 8 | 5 8 25 | 16°25'10 | 14°55 | 27°39 | 2°35 | 0♏11 | 6°22 | 11° 3 | 11°15 | 3°49 | 22° 1 | 0°D54 | 0° 2 | 4°47 | 13°28 | S 8 |
| M 9 | 5 12 22 | 17°26'13 | 27°10 | 29°12 | 3°51 | 0°50 | 6°35 | 11° 7 | 11°13 | 3°50 | 22° 0 | 0°54 | 29♉59 | 4°53 | 13°25 | M 9 |
| T 10 | 5 16 18 | 18°27'16 | 9♎42 | 0♑46 | 5° 6 | 1°28 | 6°48 | 11°12 | 11°12 | 3°51 | 21°59 | 0°55 | 29°56 | 5° 0 | 13°23 | T 10 |
| W11 | 5 20 15 | 19°28'21 | 22°36 | 2°19 | 6°22 | 2° 6 | 7° 2 | 11°16 | 11°10 | 3°52 | 21°58 | 0°57 | 29°52 | 5° 7 | 13°20 | W11 |
| T 12 | 5 24 11 | 20°29'27 | 5♏54 | 3°52 | 7°37 | 2°44 | 7°15 | 11°20 | 11° 8 | 3°52 | 21°57 | 0°58 | 29°49 | 5°14 | 13°18 | T 12 |
| F 13 | 5 28 8 | 21°30'34 | 19°38 | 5°24 | 8°53 | 3°22 | 7°28 | 11°24 | 11° 6 | 3°53 | 21°56 | 0°59 | 29°46 | 5°20 | 13°16 | F 13 |
| S 14 | 5 32 5 | 22°31'41 | 3♐47 | 6°57 | 10° 8 | 4° 1 | 7°42 | 11°28 | 11° 5 | 3°54 | 21°55 | 1°R 0 | 29°43 | 5°27 | 13°13 | S 14 |
| S 15 | 5 36 1 | 23°32'50 | 18°19 | 8°29 | 11°23 | 4°39 | 7°55 | 11°32 | 11° 3 | 3°55 | 21°54 | 0°59 | 29°40 | 5°34 | 13°11 | S 15 |
| M16 | 5 39 58 | 24°33'58 | 3♑ 8 | 10° 0 | 12°39 | 5°17 | 8° 8 | 11°35 | 11° 1 | 3°56 | 21°53 | 0°57 | 29°37 | 5°40 | 13° 9 | M16 |
| T 17 | 5 43 54 | 25°35'08 | 18° 5 | 11°31 | 13°54 | 5°55 | 8°21 | 11°39 | 11° 0 | 3°58 | 21°52 | 0°54 | 29°33 | 5°47 | 13° 7 | T 17 |
| W18 | 5 47 51 | 26°36'17 | 3♒ 3 | 13° 1 | 15°10 | 6°34 | 8°35 | 11°43 | 10°58 | 3°59 | 21°50 | 0°50 | 29°30 | 5°54 | 13° 5 | W18 |
| T 19 | 5 51 47 | 27°37'27 | 17°53 | 14°29 | 16°25 | 7°12 | 8°48 | 11°46 | 10°57 | 4° 0 | 21°49 | 0°46 | 29°27 | 6° 1 | 13° 3 | T 19 |
| F 20 | 5 55 44 | 28°38'37 | 2♓27 | 15°57 | 17°41 | 7°50 | 9° 1 | 11°49 | 10°55 | 4° 1 | 21°48 | 0°43 | 29°24 | 6° 7 | 13° 1 | F 20 |
| S 21 | 5 59 41 | 29°39'46 | 16°42 | 17°23 | 18°56 | 8°28 | 9°14 | 11°53 | 10°54 | 4° 2 | 21°47 | 0°41 | 29°21 | 6°14 | 12°59 | S 21 |
| S 22 | 6 3 37 | 0♑40'56 | 0♈35 | 18°48 | 20°12 | 9° 6 | 9°27 | 11°56 | 10°52 | 4° 3 | 21°46 | 0°D40 | 29°17 | 6°21 | 12°57 | S 22 |
| M23 | 6 7 34 | 1°42'06 | 14° 7 | 20°10 | 21°27 | 9°45 | 9°40 | 11°59 | 10°51 | 4° 5 | 21°44 | 0°41 | 29°14 | 6°27 | 12°55 | M23 |
| T 24 | 6 11 30 | 2°43'15 | 27°19 | 21°30 | 22°43 | 10°23 | 9°53 | 12° 2 | 10°50 | 4° 6 | 21°43 | 0°42 | 29°11 | 6°34 | 12°53 | T 24 |
| W25 | 6 15 27 | 3°44'25 | 10♉13 | 22°47 | 23°58 | 11° 1 | 10° 6 | 12° 5 | 10°49 | 4° 7 | 21°42 | 0°44 | 29° 8 | 6°41 | 12°51 | W25 |
| T 26 | 6 19 23 | 4°45'34 | 22°53 | 24° 0 | 25°14 | 11°39 | 10°19 | 12° 8 | 10°47 | 4° 9 | 21°41 | 0°45 | 29° 5 | 6°48 | 12°50 | T 26 |
| F 27 | 6 23 20 | 5°46'44 | 5♊20 | 25°10 | 26°29 | 12°17 | 10°32 | 12°10 | 10°46 | 4°10 | 21°39 | 0°R46 | 29° 2 | 6°54 | 12°48 | F 27 |
| S 28 | 6 27 16 | 6°47'53 | 17°37 | 26°14 | 27°45 | 12°56 | 10°44 | 12°13 | 10°45 | 4°11 | 21°38 | 0°44 | 28°58 | 7° 1 | 12°46 | S 28 |
| S 29 | 6 31 13 | 7°49'02 | 29°46 | 27°13 | 29° 0 | 13°34 | 10°57 | 12°16 | 10°44 | 4°13 | 21°37 | 0°41 | 28°55 | 7° 8 | 12°45 | S 29 |
| M30 | 6 35 10 | 8°50'12 | 11♋48 | 28° 6 | 0♑15 | 14°12 | 11°10 | 12°18 | 10°43 | 4°14 | 21°36 | 0°35 | 28°52 | 7°14 | 12°44 | M30 |
| T 31 | 6 39 6 | 9♑51'21 | 23♋45 | 28♑52 | 1♑31 | 14♏50 | 11♐23 | 12♎20 | 10♉42 | 4♓16 | 21♋34 | 0♊28 | 28♉49 | 7♌21 | 12♉42 | T 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 |
| S 1 | 21s53 | 24n59 | 1n49 | 24s30 | 1s42 | 17s47 | 1n 0 | 9s 2 | 0n59 | 20s32 | 0n37 | 2s 3 | 2n18 | 14n56 | 0s24 | 10s55 | 0s49 | 23n14 | 1n36 | 20n24 | 20n16 | 23n46 | 13n43 | 2s23 |
| M 2 | 22 2 | 26 16 | 2 49 | 24 44 | 1 46 | 18 7 | 0 58 | 9 17 | 0 59 | 20 34 | 0 37 | 2 5 | 2 18 | 14 55 | 0 24 | 10 55 | 0 49 | 23 14 | 1 36 | 20 24 | 20 16 | 23 45 | 13 42 | 2 23 |
| T 3 | 22 11 | 26 16 | 3 41 | 24 55 | 1 50 | 18 27 | 0 56 | 9 31 | 0 59 | 20 37 | 0 37 | 2 7 | 2 18 | 14 54 | 0 24 | 10 55 | 0 49 | 23 15 | 1 36 | 20 24 | 20 15 | 23 43 | 13 41 | 2 23 |
| W 4 | 22 19 | 25 3 | 4 23 | 25 6 | 1 54 | 18 46 | 0 54 | 9 45 | 0 58 | 20 39 | 0 37 | 2 8 | 2 18 | 14 54 | 0 24 | 10 55 | 0 49 | 23 15 | 1 36 | 20 23 | 20 14 | 23 42 | 13 41 | 2 24 |
| T 5 | 22 27 | 22 43 | 4 53 | 25 15 | 1 58 | 19 5 | 0 52 | 9 58 | 0 58 | 20 42 | 0 36 | 2 10 | 2 19 | 14 53 | 0 24 | 10 54 | 0 49 | 23 15 | 1 36 | 20 23 | 20 14 | 23 41 | 13 40 | 2 24 |
| F 6 | 22 34 | 19 27 | 5 11 | 25 23 | 2 1 | 19 24 | 0 50 | 10 12 | 0 58 | 20 44 | 0 36 | 2 11 | 2 19 | 14 53 | 0 24 | 10 54 | 0 49 | 23 15 | 1 36 | 20 23 | 20 13 | 23 40 | 13 39 | 2 24 |
| S 7 | 22 41 | 15 22 | 5 16 | 25 29 | 2 4 | 19 41 | 0 47 | 10 26 | 0 58 | 20 46 | 0 36 | 2 13 | 2 19 | 14 52 | 0 24 | 10 54 | 0 49 | 23 16 | 1 36 | 20 23 | 20 12 | 23 38 | 13 38 | 2 24 |
| S 8 | 22 47 | 10 40 | 5 7 | 25 34 | 2 7 | 19 58 | 0 45 | 10 40 | 0 57 | 20 49 | 0 36 | 2 14 | 2 19 | 14 51 | 0 24 | 10 53 | 0 49 | 23 16 | 1 36 | 20 22 | 20 12 | 23 37 | 13 37 | 2 24 |
| M 9 | 22 53 | 5 28 | 4 44 | 25 38 | 2 9 | 20 15 | 0 43 | 10 54 | 0 57 | 20 51 | 0 36 | 2 16 | 2 20 | 14 51 | 0 24 | 10 53 | 0 49 | 23 16 | 1 37 | 20 23 | 20 11 | 23 36 | 13 37 | 2 24 |
| T 10 | 22 59 | 0s 4 | 4 7 | 25 40 | 2 11 | 20 31 | 0 41 | 11 7 | 0 57 | 20 53 | 0 36 | 2 17 | 2 20 | 14 50 | 0 24 | 10 53 | 0 49 | 23 16 | 1 37 | 20 23 | 20 10 | 23 34 | 13 36 | 2 24 |
| W11 | 23 4 | 5 46 | 3 16 | 25 40 | 2 12 | 20 47 | 0 38 | 11 21 | 0 56 | 20 56 | 0 36 | 2 19 | 2 20 | 14 50 | 0 24 | 10 52 | 0 49 | 23 17 | 1 37 | 20 23 | 20 10 | 23 33 | 13 35 | 2 24 |
| T 12 | 23 8 | 11 24 | 2 14 | 25 39 | 2 14 | 21 1 | 0 36 | 11 34 | 0 56 | 20 58 | 0 36 | 2 20 | 2 20 | 14 49 | 0 24 | 10 52 | 0 49 | 23 17 | 1 37 | 20 23 | 20 9 | 23 32 | 13 35 | 2 24 |
| F 13 | 23 13 | 16 40 | 1 2 | 25 36 | 2 14 | 21 16 | 0 34 | 11 47 | 0 56 | 21 0 | 0 36 | 2 22 | 2 21 | 14 49 | 0 24 | 10 52 | 0 49 | 23 17 | 1 37 | 20 24 | 20 8 | 23 31 | 13 34 | 2 24 |
| S 14 | 23 16 | 21 12 | 0s15 | 25 32 | 2 15 | 21 29 | 0 31 | 12 1 | 0 55 | 21 2 | 0 36 | 2 23 | 2 21 | 14 48 | 0 24 | 10 51 | 0 49 | 23 17 | 1 37 | 20 24 | 20 7 | 23 29 | 13 33 | 2 24 |
| S 15 | 23 19 | 24 32 | 1 34 | 25 27 | 2 14 | 21 42 | 0 29 | 12 14 | 0 55 | 21 5 | 0 36 | 2 24 | 2 21 | 14 48 | 0 24 | 10 51 | 0 49 | 23 18 | 1 37 | 20 23 | 20 7 | 23 28 | 13 32 | 2 24 |
| M16 | 23 22 | 26 14 | 2 48 | 25 20 | 2 14 | 21 55 | 0 27 | 12 27 | 0 55 | 21 7 | 0 36 | 2 25 | 2 21 | 14 47 | 0 24 | 10 51 | 0 49 | 23 18 | 1 37 | 20 23 | 20 6 | 23 27 | 13 32 | 2 24 |
| T 17 | 23 24 | 26 4 | 3 50 | 25 11 | 2 12 | 22 6 | 0 24 | 12 40 | 0 54 | 21 9 | 0 36 | 2 27 | 2 22 | 14 47 | 0 24 | 10 50 | 0 49 | 23 18 | 1 37 | 20 22 | 20 5 | 23 25 | 13 31 | 2 24 |
| W18 | 23 26 | 24 0 | 4 38 | 25 0 | 2 10 | 22 17 | 0 22 | 12 53 | 0 54 | 21 11 | 0 36 | 2 28 | 2 22 | 14 46 | 0 24 | 10 50 | 0 49 | 23 18 | 1 37 | 20 22 | 20 5 | 23 24 | 13 31 | 2 24 |
| T 19 | 23 28 | 20 20 | 5 6 | 24 49 | 2 8 | 22 28 | 0 20 | 13 6 | 0 54 | 21 13 | 0 36 | 2 29 | 2 22 | 14 46 | 0 23 | 10 49 | 0 49 | 23 19 | 1 37 | 20 21 | 20 4 | 23 22 | 13 30 | 2 24 |
| F 20 | 23 28 | 15 29 | 5 13 | 24 35 | 2 5 | 22 38 | 0 17 | 13 19 | 0 53 | 21 15 | 0 36 | 2 30 | 2 22 | 14 45 | 0 23 | 10 49 | 0 49 | 23 19 | 1 38 | 20 20 | 20 3 | 23 21 | 13 29 | 2 24 |
| S 21 | 23 29 | 9 53 | 5 1 | 24 21 | 2 1 | 22 47 | 0 15 | 13 31 | 0 53 | 21 17 | 0 36 | 2 31 | 2 23 | 14 45 | 0 23 | 10 48 | 0 49 | 23 19 | 1 38 | 20 20 | 20 3 | 23 20 | 13 29 | 2 23 |
| S 22 | 23 29 | 3 55 | 4 32 | 24 5 | 1 56 | 22 55 | 0 12 | 13 44 | 0 52 | 21 19 | 0 35 | 2 32 | 2 23 | 14 45 | 0 23 | 10 48 | 0 49 | 23 20 | 1 38 | 20 20 | 20 2 | 23 18 | 13 28 | 2 23 |
| M23 | 23 28 | 2n 5 | 3 48 | 23 47 | 1 51 | 23 3 | 0 10 | 13 56 | 0 52 | 21 21 | 0 35 | 2 33 | 2 23 | 14 44 | 0 23 | 10 47 | 0 49 | 23 20 | 1 38 | 20 20 | 20 1 | 23 17 | 13 28 | 2 23 |
| T 24 | 23 27 | 7 51 | 2 53 | 23 29 | 1 44 | 23 9 | 0 7 | 14 9 | 0 52 | 21 23 | 0 35 | 2 34 | 2 23 | 14 44 | 0 23 | 10 47 | 0 49 | 23 20 | 1 38 | 20 20 | 20 1 | 23 16 | 13 27 | 2 23 |
| W25 | 23 26 | 13 10 | 1 50 | 23 9 | 1 37 | 23 16 | 0 5 | 14 21 | 0 51 | 21 25 | 0 35 | 2 35 | 2 24 | 14 43 | 0 23 | 10 47 | 0 49 | 23 20 | 1 38 | 20 20 | 20 0 | 23 14 | 13 27 | 2 23 |
| T 26 | 23 24 | 17 50 | 0 43 | 22 48 | 1 29 | 23 21 | 0 2 | 14 33 | 0 51 | 21 27 | 0 35 | 2 36 | 2 24 | 14 43 | 0 23 | 10 46 | 0 49 | 23 21 | 1 38 | 20 21 | 19 59 | 23 13 | 13 26 | 2 23 |
| F 27 | 23 21 | 21 38 | 0n25 | 22 27 | 1 20 | 23 26 | 0s 0 | 14 45 | 0 50 | 21 29 | 0 35 | 2 36 | 2 24 | 14 43 | 0 23 | 10 45 | 0 49 | 23 21 | 1 38 | 20 21 | 19 59 | 23 11 | 13 26 | 2 23 |
| S 28 | 23 18 | 24 24 | 1 31 | 22 5 | 1 10 | 23 30 | 0 2 | 14 57 | 0 50 | 21 31 | 0 35 | 2 37 | 2 25 | 14 42 | 0 23 | 10 45 | 0 49 | 23 21 | 1 38 | 20 20 | 19 58 | 23 10 | 13 25 | 2 23 |
| S 29 | 23 15 | 26 0 | 2 31 | 21 42 | 0 58 | 23 34 | 0 5 | 15 9 | 0 50 | 21 33 | 0 35 | 2 38 | 2 25 | 14 42 | 0 23 | 10 44 | 0 49 | 23 22 | 1 38 | 20 20 | 19 57 | 23 8 | 13 25 | 2 23 |
| M30 | 23 11 | 26 21 | 3 24 | 21 20 | 0 46 | 23 36 | 0 7 | 15 21 | 0 49 | 21 34 | 0 35 | 2 39 | 2 25 | 14 42 | 0 23 | 10 44 | 0 49 | 23 22 | 1 38 | 20 19 | 19 56 | 23 7 | 13 25 | 2 23 |
| T 31 | 23s 7 | 25n28 | 4n 8 | 20s57 | 0s33 | 23s38 | 0s10 | 15s32 | 0n49 | 21s36 | 0n35 | 2s39 | 2n25 | 14n42 | 0s23 | 10s43 | 0s49 | 23n22 | 1n38 | 20n17 | 19n56 | 23n 6 | 13n24 | 2s23 |

Julian Day Number = 2337193.5, Delta T = 19.93 sec
Ecliptic obliquity = 23°28'52, Nutation = - 0°00'16, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°22'12, Lahiri = 19°29'12Greg. Calendar