



Astrodienst Ephemeris Tables for the year 2029

tropical geocentric zodiac

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

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

ASTRODIENST EPHEMERIS for the year 2029

geocentric

JANUARY 2029

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|----------|---------|--------|--------|--------|--------|-------|---------|-------|-------|--------|--------|-------|-------|------|
| M 1 | 6 43 44 | 10°51'08 | 14°39 | 0°22 | 21°5 | 4°18 | 24°58 | 4°R26 | 11°R 5 | 6°Y 9 | 7°35 | 13°D59 | 14°38 | 3°Y21 | 3°R58 | M 1 |
| T 2 | 6 47 41 | 11°52'16 | 28°30 | 1°15 | 22°20 | 4°41 | 25°4 | 4°B26 | 11°II 3 | 6°10 | 7°37 | 13°D59 | 14°5 | 3°28 | 3°B57 | T 2 |
| W 3 | 6 51 37 | 12°53'24 | 12°33 | 2°1 | 23°35 | 5°3 | 25°11 | 4°25 | 11°1 | 6°11 | 7°39 | 13°59 | 14°2 | 3°35 | 3°56 | W 3 |
| T 4 | 6 55 34 | 13°54'32 | 26°46 | 2°39 | 24°50 | 5°25 | 25°18 | 4°25 | 10°59 | 6°11 | 7°41 | 13°R59 | 13°59 | 3°42 | 3°56 | T 4 |
| F 5 | 6 59 31 | 14°55'40 | 11°2 | 3°8 | 26°6 | 5°47 | 25°24 | 4°25 | 10°57 | 6°12 | 7°42 | 13°59 | 13°55 | 3°48 | 3°55 | F 5 |
| S 6 | 7 3 27 | 15°56'49 | 25°20 | 3°28 | 27°21 | 6°8 | 25°31 | 4°D25 | 10°55 | 6°13 | 7°44 | 13°59 | 13°52 | 3°55 | 3°55 | S 6 |
| S 7 | 7 7 24 | 16°57'57 | 9°35 | 3°R37 | 28°36 | 6°29 | 25°37 | 4°25 | 10°53 | 6°13 | 7°46 | 13°58 | 13°49 | 4°2 | 3°54 | S 7 |
| M 8 | 7 11 20 | 17°59'06 | 23°45 | 3°35 | 29°51 | 6°49 | 25°43 | 4°25 | 10°51 | 6°14 | 7°48 | 13°D58 | 13°46 | 4°8 | 3°54 | M 8 |
| T 9 | 7 15 17 | 19°0'15 | 7°48 | 3°22 | 1°3 | 7°10 | 25°49 | 4°26 | 10°50 | 6°15 | 7°49 | 13°59 | 13°43 | 4°15 | 3°54 | T 9 |
| W10 | 7 19 13 | 20°1'24 | 21°43 | 2°56 | 2°22 | 7°29 | 25°54 | 4°26 | 10°48 | 6°16 | 7°51 | 13°59 | 13°40 | 4°22 | 3°53 | W10 |
| T 11 | 7 23 10 | 21°2'34 | 5°27 | 2°19 | 3°37 | 7°49 | 26°0 | 4°27 | 10°46 | 6°16 | 7°53 | 14°0 | 13°36 | 4°29 | 3°53 | T 11 |
| F 12 | 7 27 6 | 22°3'43 | 19°0 | 1°31 | 4°52 | 8°8 | 26°5 | 4°27 | 10°44 | 6°17 | 7°55 | 14°1 | 13°33 | 4°35 | 3°53 | F 12 |
| S 13 | 7 31 3 | 23°4'52 | 2°30 | 0°33 | 6°7 | 8°27 | 26°10 | 4°28 | 10°43 | 6°18 | 7°57 | 14°1 | 13°30 | 4°42 | 3°D53 | S 13 |
| S 14 | 7 35 0 | 24°6'00 | 15°28 | 29°36 | 7°23 | 8°45 | 26°15 | 4°29 | 10°41 | 6°19 | 7°58 | 14°R 1 | 13°27 | 4°49 | 3°53 | S 14 |
| M15 | 7 38 56 | 25°7'09 | 28°21 | 28°13 | 8°38 | 9°3 | 26°20 | 4°30 | 10°39 | 6°20 | 8°0 | 14°1 | 13°24 | 4°56 | 3°53 | M15 |
| T 16 | 7 42 53 | 26°8'17 | 11°1 | 26°56 | 9°53 | 9°20 | 26°25 | 4°31 | 10°38 | 6°21 | 8°2 | 14°0 | 13°21 | 5°2 | 3°53 | T 16 |
| W17 | 7 46 49 | 27°9'24 | 23°27 | 25°38 | 11°8 | 9°37 | 26°30 | 4°32 | 10°36 | 6°22 | 8°4 | 13°58 | 13°17 | 5°9 | 3°54 | W17 |
| T 18 | 7 50 46 | 28°10'30 | 5°41 | 24°20 | 12°24 | 9°54 | 26°34 | 4°34 | 10°35 | 6°23 | 8°6 | 13°56 | 13°14 | 5°16 | 3°54 | T 18 |
| F 19 | 7 54 42 | 29°11'36 | 17°45 | 23°5 | 13°39 | 10°10 | 26°38 | 4°35 | 10°33 | 6°24 | 8°8 | 13°54 | 13°11 | 5°22 | 3°54 | F 19 |
| S 20 | 7 58 39 | 0°12'41 | 29°41 | 21°55 | 14°54 | 10°25 | 26°42 | 4°37 | 10°32 | 6°26 | 8°10 | 13°51 | 13°8 | 5°29 | 3°54 | S 20 |
| S 21 | 8 2 35 | 1°13'45 | 11°Y33 | 20°52 | 16°9 | 10°40 | 26°46 | 4°38 | 10°30 | 6°27 | 8°11 | 13°50 | 13°5 | 5°36 | 3°55 | S 21 |
| M22 | 8 6 32 | 2°14'49 | 23°25 | 19°57 | 17°25 | 10°55 | 26°50 | 4°40 | 10°29 | 6°28 | 8°13 | 13°48 | 13°1 | 5°43 | 3°55 | M22 |
| T 23 | 8 10 29 | 3°15'51 | 5°B23 | 19°10 | 18°40 | 11°9 | 26°53 | 4°42 | 10°28 | 6°29 | 8°15 | 13°D48 | 12°58 | 5°49 | 3°56 | T 23 |
| W24 | 8 14 25 | 4°16'52 | 17°29 | 18°33 | 19°55 | 11°23 | 26°57 | 4°44 | 10°27 | 6°30 | 8°17 | 13°49 | 12°55 | 5°56 | 3°57 | W24 |
| T 25 | 8 18 22 | 5°17'53 | 29°50 | 18°5 | 21°10 | 11°36 | 27°0 | 4°46 | 10°25 | 6°32 | 8°19 | 13°50 | 12°52 | 6°3 | 3°57 | T 25 |
| F 26 | 8 22 18 | 6°18'52 | 12°II30 | 17°45 | 22°25 | 11°49 | 27°3 | 4°48 | 10°24 | 6°33 | 8°21 | 13°52 | 12°49 | 6°9 | 3°58 | F 26 |
| S 27 | 8 26 15 | 7°19'51 | 25°31 | 17°35 | 23°41 | 12°1 | 27°5 | 4°51 | 10°23 | 6°34 | 8°23 | 13°53 | 12°46 | 6°16 | 3°59 | S 27 |
| S 28 | 8 30 11 | 8°20'48 | 8°B57 | 17°D33 | 24°56 | 12°12 | 27°8 | 4°53 | 10°22 | 6°36 | 8°25 | 13°R54 | 12°42 | 6°23 | 4°0 | S 28 |
| M29 | 8 34 8 | 9°21'44 | 22°47 | 17°38 | 26°11 | 12°23 | 27°11 | 4°56 | 10°21 | 6°37 | 8°26 | 13°54 | 12°39 | 6°30 | 4°0 | M29 |
| T 30 | 8 38 5 | 10°22'39 | 7°R 0 | 17°51 | 27°26 | 12°34 | 27°13 | 4°58 | 10°20 | 6°38 | 8°28 | 13°52 | 12°36 | 6°36 | 4°1 | T 30 |
| W31 | 8 42 1 | 11°23'33 | 21°R30 | 18°B10 | 28°B42 | 12°B44 | 27°B15 | 5°B 1 | 10°II19 | 6°Y40 | 8°B30 | 13°B50 | 12°B33 | 6°Y43 | 4°B 2 | W31 |

| Day | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|-------|-------|------|-------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | lat |
| M 1 | 23s 0 | 22n34 | 0s 4 | 21s 5 | 1s 2 | 22s31 | 0n37 | 0n33 | 2n28 | 8s29 | 1n16 | 10n38 | 2s30 | 22n 5 | 0s 1 | 1n 6 |
| T 2 | 22 54 | 19 9 | 1 20 | 20 41 | 0 50 | 22 38 | 0 35 | 0 25 | 2 29 | 8 31 | 1 16 | 10 38 | 2 30 | 22 4 | 0 1 | 1 6 |
| W 3 | 22 49 | 14 36 | 2 32 | 20 18 | 0 36 | 22 45 | 0 32 | 0 17 | 2 30 | 8 34 | 1 16 | 10 38 | 2 30 | 22 4 | 0 1 | 1 7 |
| T 4 | 22 43 | 9 13 | 3 36 | 19 55 | 0 22 | 22 51 | 0 30 | 0 10 | 2 31 | 8 36 | 1 16 | 10 39 | 2 30 | 22 4 | 0 1 | 1 7 |
| F 5 | 22 36 | 3 19 | 4 26 | 19 34 | 0 7 | 22 56 | 0 27 | 0 2 | 2 32 | 8 38 | 1 17 | 10 39 | 2 29 | 22 4 | 0 1 | 1 7 |
| S 6 | 22 29 | 2s45 | 5 1 | 19 13 | 0n10 | 23 0 | 0 24 | 0s 6 | 2 33 | 8 40 | 1 17 | 10 39 | 2 29 | 22 3 | 0 1 | 1 8 |
| S 7 | 22 22 | 8 38 | 5 16 | 18 54 | 0 27 | 23 4 | 0 22 | 0 13 | 2 34 | 8 42 | 1 17 | 10 39 | 2 29 | 22 3 | 0 1 | 1 8 |
| M 8 | 22 14 | 14 3 | 5 13 | 18 37 | 0 45 | 23 7 | 0 19 | 0 20 | 2 35 | 8 44 | 1 17 | 10 40 | 2 28 | 22 3 | 0 1 | 1 8 |
| T 9 | 22 5 | 18 41 | 4 50 | 18 22 | 1 4 | 23 9 | 0 17 | 0 27 | 2 36 | 8 46 | 1 17 | 10 40 | 2 28 | 22 3 | 0 1 | 1 9 |
| W10 | 21 57 | 22 14 | 4 11 | 18 9 | 1 23 | 23 11 | 0 14 | 0 34 | 2 37 | 8 48 | 1 18 | 10 41 | 2 28 | 22 2 | 0 1 | 1 9 |
| T 11 | 21 47 | 24 27 | 3 18 | 17 59 | 1 42 | 23 11 | 0 12 | 0 40 | 2 38 | 8 50 | 1 18 | 10 41 | 2 28 | 22 2 | 0 1 | 1 9 |
| F 12 | 21 38 | 25 13 | 2 14 | 17 51 | 2 1 | 23 12 | 0 9 | 0 47 | 2 39 | 8 51 | 1 18 | 10 42 | 2 27 | 22 2 | 0 1 | 1 10 |
| S 13 | 21 28 | 24 29 | 1 4 | 17 47 | 2 18 | 23 11 | 0 7 | 0 53 | 2 40 | 8 53 | 1 18 | 10 42 | 2 27 | 22 2 | 0 1 | 1 10 |
| S 14 | 21 17 | 22 24 | 0n 8 | 17 44 | 2 35 | 23 10 | 0 4 | 1 0 | 2 42 | 8 55 | 1 19 | 10 43 | 2 27 | 22 1 | 0 1 | 1 11 |
| M15 | 21 6 | 19 12 | 1 19 | 17 45 | 2 50 | 23 8 | 0 1 | 1 6 | 2 43 | 8 56 | 1 19 | 10 43 | 2 26 | 22 1 | 0 1 | 1 11 |
| T 16 | 20 55 | 15 9 | 2 24 | 17 47 | 3 2 | 23 5 | 0s 1 | 1 11 | 2 44 | 8 58 | 1 19 | 10 44 | 2 26 | 22 1 | 0 1 | 1 11 |
| W17 | 20 43 | 10 32 | 3 21 | 17 51 | 3 13 | 23 2 | 0 4 | 1 17 | 2 45 | 8 59 | 1 19 | 10 45 | 2 26 | 22 1 | 0 1 | 1 12 |
| T 18 | 20 31 | 5 35 | 4 8 | 17 57 | 3 21 | 22 58 | 0 6 | 1 22 | 2 46 | 9 1 | 1 20 | 10 45 | 2 25 | 22 1 | 0 1 | 1 12 |
| F 19 | 20 19 | 0 30 | 4 43 | 18 5 | 3 26 | 22 53 | 0 9 | 1 28 | 2 47 | 9 2 | 1 20 | 10 46 | 2 25 | 22 0 | 0 1 | 1 13 |
| S 20 | 20 6 | 4n33 | 5 6 | 18 13 | 3 29 | 22 47 | 0 11 | 1 33 | 2 48 | 9 3 | 1 20 | 10 47 | 2 25 | 22 0 | 0 1 | 1 13 |
| S 21 | 19 53 | 9 24 | 5 15 | 18 22 | 3 29 | 22 41 | 0 14 | 1 38 | 2 49 | 9 4 | 1 20 | 10 48 | 2 25 | 22 0 | 0 1 | 1 14 |
| M22 | 19 39 | 13 54 | 5 11 | 18 32 | 3 28 | 22 34 | 0 16 | 1 42 | 2 50 | 9 5 | 1 20 | 10 49 | 2 24 | 22 0 | 0 1 | 1 14 |
| T 23 | 19 25 | 17 55 | 4 53 | 18 42 | 3 24 | 22 26 | 0 18 | 1 47 | 2 52 | 9 6 | 1 21 | 10 50 | 2 24 | 22 0 | 0 1 | 1 15 |
| W24 | 19 11 | 21 15 | 4 23 | 18 52 | 3 19 | 22 18 | 0 21 | 1 51 | 2 53 | 9 7 | 1 21 | 10 50 | 2 24 | 22 0 | 0 1 | 1 15 |
| T 25 | 18 56 | 23 41 | 3 39 | 19 3 | 3 12 | 22 9 | 0 23 | 1 55 | 2 54 | 9 8 | 1 21 | 10 51 | 2 23 | 21 59 | 0 1 | 1 16 |
| F 26 | 18 42 | 25 0 | 2 44 | 19 13 | 3 4 | 22 0 | 0 26 | 1 59 | 2 55 | 9 9 | 1 21 | 10 52 | 2 23 | 21 59 | 0 1 | 1 16 |
| S 27 | 18 26 | 25 1 | 1 39 | 19 23 | 2 55 | 21 49 | 0 28 | 2 3 | 2 56 | 9 10 | 1 22 | 10 54 | 2 23 | 21 59 | 0 1 | 1 17 |
| S 28 | 18 11 | 23 35 | 0 27 | 19 33 | 2 46 | 21 38 | 0 30 | 2 6 | 2 57 | 9 11 | 1 22 | 10 55 | 2 23 | 21 59 | 0 1 | 1 18 |
| M29 | 17 55 | 20 43 | 0s49 | 19 42 | 2 35 | 21 27 | 0 33 | 2 9 | 2 58 | 9 11 | 1 22 | 10 56 | 2 22 | 21 59 | 0 1 | 1 18 |
| T 30 | 17 38 | 16 32 | 2 3 | 19 51 | 2 25 | 21 14 | 0 35 | 2 12 | 2 59 | 9 12 | 1 22 | 10 57 | 2 22 | 21 59 | 0 1 | 1 19 |
| W31 | 17s22 | 11n18 | 3s12 | 19s59 | 2n14 | 21s 1 | 0s37 | 2s15 | 3n 1 | 9s12 | 1n23 | 10n58 | 2s22 | 21n59 | 0s 1 | 1n19 |

Julian Day Number = 2462137.5, Delta T = 69.04 sec

Ecliptic obliquity = 23°26'10, Nutation = 0°00'17, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 25°08'44, Lahiri = 24°15'44

ASTRODIENST EPHEMERIS for the year 2029

geocentric

FEBRUARY 2029

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|-----------|----------|----------|-----------|-----------|----------|----------|------|
| T 1 | 8 45 58 | 12°24'26" | 6°13'13" | 18°36'36" | 29°35'57" | 12°53'53" | 27°17'17" | 5°8'4" | 10°R19 | 6°V41 | 8°32'32" | 13°R46 | 12°30'30" | 6°V50 | 4°8'3" | T 1 |
| F 2 | 8 49 54 | 13°25'19" | 21°0'0" | 19°7'7" | 1°12'12" | 13°2'2" | 27°18'18" | 5°7'7" | 10°II18 | 6°43'43" | 8°34'34" | 13°34'34" | 12°27'27" | 6°57'57" | 4°5'5" | F 2 |
| S 3 | 8 53 51 | 14°26'10" | 5°43'43" | 19°44'44" | 2°27'27" | 13°10'10" | 27°20'20" | 5°10'10" | 10°17'17" | 6°44'44" | 8°36'36" | 13°37'37" | 12°23'23" | 7°3'3" | 4°6'6" | S 3 |
| S 4 | 8 57 47 | 15°27'00" | 20°16'16" | 20°25'25" | 3°42'42" | 13°17'17" | 27°21'21" | 5°13'13" | 10°16'16" | 6°46'46" | 8°38'38" | 13°33'33" | 12°20'20" | 7°10'10" | 4°7'7" | S 4 |
| M 5 | 9 1 44 | 16°27'50" | 4°16'16" | 21°10'10" | 4°57'57" | 13°24'24" | 27°23'23" | 5°16'16" | 10°16'16" | 6°48'48" | 8°40'40" | 13°31'31" | 12°17'17" | 7°17'17" | 4°8'8" | M 5 |
| T 6 | 9 5 40 | 17°28'39" | 18°37'37" | 21°59'59" | 6°13'13" | 13°30'30" | 27°23'23" | 5°20'20" | 10°15'15" | 6°49'49" | 8°41'41" | 13°D31 | 12°14'14" | 7°23'23" | 4°10'10" | T 6 |
| W 7 | 9 9 37 | 18°29'27" | 2°17'17" | 22°52'52" | 7°28'28" | 13°36'36" | 27°24'24" | 5°23'23" | 10°15'15" | 6°51'51" | 8°43'43" | 13°31'31" | 12°11'11" | 7°30'30" | 4°11'11" | W 7 |
| T 8 | 9 13 33 | 19°30'14" | 15°48'48" | 23°48'48" | 8°43'43" | 13°41'41" | 27°25'25" | 5°27'27" | 10°14'14" | 6°52'52" | 8°45'45" | 13°33'33" | 12°7'7" | 7°37'37" | 4°12'12" | T 8 |
| F 9 | 9 17 30 | 20°31'00" | 28°59'59" | 24°47'47" | 9°58'58" | 13°45'45" | 27°25'25" | 5°30'30" | 10°14'14" | 6°54'54" | 8°47'47" | 13°35'35" | 12°4'4" | 7°44'44" | 4°14'14" | F 9 |
| S 10 | 9 21 27 | 21°31'45" | 11°35'56" | 25°48'48" | 11°13'13" | 13°48'48" | 27°25'25" | 5°34'34" | 10°13'13" | 6°56'56" | 8°49'49" | 13°R35 | 12°1'1" | 7°50'50" | 4°16'16" | S 10 |
| S 11 | 9 25 23 | 22°32'29" | 24°40'40" | 26°52'52" | 12°29'29" | 13°51'51" | 27°R25 | 5°38'38" | 10°13'13" | 6°58'58" | 8°51'51" | 13°35'35" | 11°58'58" | 7°57'57" | 4°17'17" | S 11 |
| M12 | 9 29 20 | 23°33'12" | 7°14'14" | 27°59'59" | 13°44'44" | 13°53'53" | 27°25'25" | 5°42'42" | 10°13'13" | 6°59'59" | 8°53'53" | 13°32'32" | 11°55'55" | 8°4'4" | 4°19'19" | M12 |
| T 13 | 9 33 16 | 24°33'53" | 19°37'37" | 29°8'8" | 14°59'59" | 13°55'55" | 27°25'25" | 5°46'46" | 10°13'13" | 7°1'1" | 8°54'54" | 13°27'27" | 11°52'52" | 8°10'10" | 4°21'21" | T 13 |
| W14 | 9 37 13 | 25°34'33" | 1°15'15" | 0°18'18" | 16°14'14" | 13°R55 | 27°24'24" | 5°50'50" | 10°12'12" | 7°3'3" | 8°56'56" | 13°21'21" | 11°48'48" | 8°17'17" | 4°22'22" | W14 |
| T 15 | 9 41 9 | 26°35'12" | 13°58'58" | 1°31'31" | 17°29'29" | 13°55'55" | 27°24'24" | 5°54'54" | 10°12'12" | 7°5'5" | 8°58'58" | 13°13'13" | 11°45'45" | 8°24'24" | 4°24'24" | T 15 |
| F 16 | 9 45 6 | 27°35'49" | 25°58'58" | 2°45'45" | 18°44'44" | 13°54'54" | 27°23'23" | 5°58'58" | 10°D12 | 7°7'7" | 9°0'0" | 13°4'4" | 11°42'42" | 8°31'31" | 4°26'26" | F 16 |
| S 17 | 9 49 2 | 28°36'24" | 7°V52 | 4°1'1" | 19°59'59" | 13°53'53" | 27°21'21" | 6°3'3" | 10°12'12" | 7°8'8" | 9°2'2" | 12°55'55" | 11°39'39" | 8°37'37" | 4°28'28" | S 17 |
| S 18 | 9 52 59 | 29°36'58" | 19°44'44" | 5°18'18" | 21°14'14" | 13°50'50" | 27°20'20" | 6°7'7" | 10°12'12" | 7°10'10" | 9°3'3" | 12°47'47" | 11°36'36" | 8°44'44" | 4°30'30" | S 18 |
| M19 | 9 56 56 | 0°13'30" | 1°B35 | 6°37'37" | 22°30'30" | 13°47'47" | 27°19'19" | 6°12'12" | 10°13'13" | 7°12'12" | 9°5'5" | 12°41'41" | 11°33'33" | 8°51'51" | 4°32'32" | M19 |
| T 20 | 10 0 52 | 1°38'00" | 13°30'30" | 7°57'57" | 23°45'45" | 13°43'43" | 27°17'17" | 6°16'16" | 10°13'13" | 7°14'14" | 9°7'7" | 12°37'37" | 11°29'29" | 8°58'58" | 4°34'34" | T 20 |
| W21 | 10 4 49 | 2°38'28" | 25°33'33" | 9°19'19" | 25°0'0" | 13°39'39" | 27°15'15" | 6°21'21" | 10°13'13" | 7°16'16" | 9°9'9" | 12°35'35" | 11°26'26" | 9°4'4" | 4°36'36" | W21 |
| T 22 | 10 8 45 | 3°38'55" | 7°II49 | 10°42'42" | 26°15'15" | 13°33'33" | 27°13'13" | 6°26'26" | 10°13'13" | 7°18'18" | 9°10'10" | 12°D35 | 11°23'23" | 9°11'11" | 4°38'38" | T 22 |
| F 23 | 10 12 42 | 4°39'20" | 20°24'24" | 12°6'6" | 27°30'30" | 13°27'27" | 27°11'11" | 6°31'31" | 10°13'13" | 7°20'20" | 9°12'12" | 12°35'35" | 11°20'20" | 9°18'18" | 4°41'41" | F 23 |
| S 24 | 10 16 38 | 5°39'43" | 3°D20 | 13°31'31" | 28°45'45" | 13°20'20" | 27°8'8" | 6°36'36" | 10°14'14" | 7°22'22" | 9°14'14" | 12°37'37" | 11°17'17" | 9°24'24" | 4°43'43" | S 24 |
| S 25 | 10 20 35 | 6°40'04" | 16°43'43" | 14°58'58" | 29°59'59" | 13°12'12" | 27°6'6" | 6°41'41" | 10°14'14" | 7°24'24" | 9°16'16" | 12°R37 | 11°13'13" | 9°31'31" | 4°45'45" | S 25 |
| M26 | 10 24 31 | 7°40'23" | 0°13'13" | 16°25'25" | 1°15'15" | 13°4'4" | 27°3'3" | 6°46'46" | 10°15'15" | 7°26'26" | 9°17'17" | 12°35'35" | 11°10'10" | 9°38'38" | 4°47'47" | M26 |
| T 27 | 10 28 28 | 8°40'40" | 14°55'55" | 17°54'54" | 2°30'30" | 12°54'54" | 27°0'0" | 6°51'51" | 10°15'15" | 7°28'28" | 9°19'19" | 12°32'32" | 11°7'7" | 9°45'45" | 4°50'50" | T 27 |
| W28 | 10 32 25 | 9°40'55" | 29°13'39" | 19°24'24" | 3°45'45" | 12°44'44" | 26°57'57" | 6°56'56" | 10°II16 | 7°V30 | 9°21'21" | 12°35'35" | 11°3'3" | 9°V51 | 4°52'52" | W28 |

| Day | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|-------|-------|------|-------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | |
| T 1 | 17s 5 | 5n23 | 4s 8 | 20s 7 | 2n 3 | 20s48 | 0s39 | 2s18 | 3n 2 | 9s13 | 1n23 | 10n59 | 2s21 | 21n58 | 0s 1 | 1n20 |
| F 2 | 16 47 | 0s51 | 4 48 | 20 14 | 1 52 | 20 34 | 0 41 | 2 20 | 3 3 | 9 13 | 1 23 | 11 0 | 2 21 | 21 58 | 0 1 | 1 21 |
| S 3 | 16 30 | 7 0 | 5 9 | 20 20 | 1 41 | 20 19 | 0 44 | 2 22 | 3 4 | 9 14 | 1 23 | 11 2 | 2 21 | 21 58 | 0 1 | 1 21 |
| S 4 | 16 12 | 12 42 | 5 10 | 20 25 | 1 30 | 20 4 | 0 46 | 2 24 | 3 5 | 9 14 | 1 24 | 11 3 | 2 21 | 21 58 | 0 1 | 1 22 |
| M 5 | 15 54 | 17 37 | 4 52 | 20 29 | 1 19 | 19 48 | 0 48 | 2 26 | 3 6 | 9 14 | 1 24 | 11 4 | 2 20 | 21 58 | 0 1 | 1 23 |
| T 6 | 15 36 | 21 27 | 4 16 | 20 32 | 1 8 | 19 31 | 0 50 | 2 27 | 3 7 | 9 14 | 1 24 | 11 6 | 2 20 | 21 58 | 0 1 | 1 23 |
| W 7 | 15 17 | 24 0 | 3 26 | 20 34 | 0 57 | 19 14 | 0 52 | 2 28 | 3 8 | 9 14 | 1 24 | 11 7 | 2 20 | 21 58 | 0 1 | 1 24 |
| T 8 | 14 58 | 25 6 | 2 26 | 20 35 | 0 46 | 18 56 | 0 53 | 2 29 | 3 9 | 9 14 | 1 25 | 11 9 | 2 19 | 21 58 | 0 1 | 1 25 |
| F 9 | 14 39 | 24 45 | 1 19 | 20 35 | 0 36 | 18 38 | 0 55 | 2 30 | 3 11 | 9 14 | 1 25 | 11 10 | 2 19 | 21 58 | 0 1 | 1 25 |
| S 10 | 14 20 | 23 3 | 0 9 | 20 33 | 0 26 | 18 19 | 0 57 | 2 30 | 3 12 | 9 14 | 1 25 | 11 11 | 2 19 | 21 58 | 0 1 | 1 26 |
| S 11 | 14 0 | 20 12 | 1n 0 | 20 31 | 0 16 | 18 0 | 0 59 | 2 30 | 3 13 | 9 14 | 1 25 | 11 13 | 2 19 | 21 58 | 0 1 | 1 27 |
| M12 | 13 40 | 16 27 | 2 5 | 20 27 | 0 6 | 17 40 | 1 1 | 2 30 | 3 14 | 9 13 | 1 25 | 11 15 | 2 18 | 21 58 | 0 1 | 1 27 |
| T 13 | 13 20 | 12 2 | 3 3 | 20 23 | 0s 3 | 17 20 | 1 2 | 2 30 | 3 15 | 9 13 | 1 26 | 11 16 | 2 18 | 21 58 | 0 1 | 1 28 |
| W14 | 13 0 | 7 12 | 3 51 | 20 17 | 0 12 | 16 59 | 1 4 | 2 29 | 3 16 | 9 13 | 1 26 | 11 18 | 2 18 | 21 58 | 0 1 | 1 29 |
| T 15 | 12 39 | 2 10 | 4 29 | 20 9 | 0 21 | 16 38 | 1 6 | 2 28 | 3 17 | 9 12 | 1 26 | 11 19 | 2 18 | 21 58 | 0 1 | 1 30 |
| F 16 | 12 18 | 2n54 | 4 54 | 20 1 | 0 29 | 16 16 | 1 7 | 2 27 | 3 18 | 9 12 | 1 26 | 11 21 | 2 17 | 21 58 | 0 1 | 1 30 |
| S 17 | 11 57 | 7 49 | 5 6 | 19 51 | 0 37 | 15 54 | 1 9 | 2 25 | 3 19 | 9 11 | 1 27 | 11 23 | 2 17 | 21 58 | 0 1 | 1 31 |
| S 18 | 11 36 | 12 25 | 5 5 | 19 40 | 0 45 | 15 31 | 1 10 | 2 24 | 3 20 | 9 10 | 1 27 | 11 24 | 2 17 | 21 58 | 0 1 | 1 32 |
| M19 | 11 15 | 16 34 | 4 51 | 19 28 | 0 53 | 15 8 | 1 11 | 2 22 | 3 20 | 9 10 | 1 27 | 11 26 | 2 17 | 21 58 | 0 1 | 1 33 |
| T 20 | 10 54 | 20 5 | 4 24 | 19 15 | 1 0 | 14 45 | 1 13 | 2 19 | 3 21 | 9 9 | 1 27 | 11 28 | 2 16 | 21 58 | 0 1 | 1 33 |
| W21 | 10 32 | 22 48 | 3 46 | 19 0 | 1 7 | 14 21 | 1 14 | 2 17 | 3 22 | 9 8 | 1 28 | 11 30 | 2 16 | 21 58 | 0 1 | 1 34 |
| T 22 | 10 10 | 24 30 | 2 56 | 18 44 | 1 14 | 13 57 | 1 15 | 2 14 | 3 23 | 9 7 | 1 28 | 11 31 | 2 16 | 21 58 | 0 1 | 1 35 |
| F 23 | 9 48 | 25 2 | 1 57 | 18 27 | 1 20 | 13 32 | 1 16 | 2 11 | 3 24 | 9 6 | 1 28 | 11 33 | 2 16 | 21 58 | 0 1 | 1 36 |
| S 24 | 9 26 | 24 13 | 0 50 | 18 8 | 1 26 | 13 7 | 1 17 | 2 7 | 3 24 | 9 5 | 1 28 | 11 35 | 2 15 | 21 58 | 0 1 | 1 37 |
| S 25 | 9 4 | 22 2 | 0s22 | 17 49 | 1 32 | 12 42 | 1 18 | 2 4 | 3 25 | 9 4 | 1 28 | 11 37 | 2 15 | 21 58 | 0 1 | 1 37 |
| M26 | 8 41 | 18 29 | 1 35 | 17 27 | 1 37 | 12 16 | 1 19 | 2 0 | 3 26 | 9 2 | 1 29 | 11 39 | 2 15 | 21 58 | 0 1 | 1 38 |
| T 27 | 8 19 | 13 45 | 2 44 | 17 5 | 1 42 | 11 50 | 1 20 | 1 56 | 3 26 | 9 1 | 1 29 | 11 41 | 2 15 | 21 58 | 0 1 | 1 39 |
| W28 | 7s56 | 8n 5 | 3s44 | 16s41 | 1s47 | 11s23 | 1s21 | 1s51 | 3n27 | 9s 0 | 1n29 | 11n43 | 2s14 | 21n58 | 0s 1 | 1n40 |

Julian Day Number = 2462168.5, Delta T = 69.06 sec

Ecliptic obliquity = 23°26'10", Nutation = 0°00'18", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 25°08'48", Lahiri = 24°15'48"

ASTRODIENST EPHEMERIS for the year 2029

geocentric

MARCH 2029

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|-----------|----------|----------|----------|----------|----------|---------|----------|---------|---------|----------|----------|----------|---------|------|
| T 1 | 10 36 21 | 10°41'08 | 14°42'42 | 20°55'55 | 5°41'00 | 12°R33 | 26°R53 | 7°8'1 | 10°II17 | 7°V32 | 9°22'22 | 12°R17 | 11°3'1 | 9°V58 | 4°8'55 | T 1 |
| F 2 | 10 40 18 | 11°41'19 | 29°53'53 | 22°27'27 | 6°15'15 | 12°22'22 | 26°22'22 | 7°7'7 | 10°17'17 | 7°34'34 | 9°24'24 | 12°3'8 | 10°58'58 | 10°5'5 | 4°57'57 | F 2 |
| S 3 | 10 44 14 | 12°41'29 | 15°2'2 | 24°0'0 | 7°30'30 | 12°9'9 | 26°46'46 | 7°12'12 | 10°18'18 | 7°36'36 | 9°26'26 | 11°59'59 | 10°54'54 | 10°12'12 | 5°0'0 | S 3 |
| S 4 | 10 48 11 | 13°41'38 | 29°59'59 | 25°34'34 | 8°45'45 | 11°56'56 | 26°42'42 | 7°18'18 | 10°19'19 | 7°38'38 | 9°27'27 | 11°51'51 | 10°51'51 | 10°18'18 | 5°2'2 | S 4 |
| M 5 | 10 52 7 | 14°41'44 | 14°42'42 | 27°10'10 | 10°0'0 | 11°43'43 | 26°38'38 | 7°23'23 | 10°20'20 | 7°41'41 | 9°29'29 | 11°45'45 | 10°48'48 | 10°25'25 | 5°5'5 | M 5 |
| T 6 | 10 56 4 | 15°41'49 | 28°49'49 | 28°46'46 | 11°14'14 | 11°28'28 | 26°34'34 | 7°29'29 | 10°21'21 | 7°43'43 | 9°30'30 | 11°41'41 | 10°45'45 | 10°32'32 | 5°8'8 | T 6 |
| W 7 | 11 0 0 | 16°41'53 | 12°36'36 | 0°23'23 | 12°29'29 | 11°13'13 | 26°30'30 | 7°35'35 | 10°22'22 | 7°45'45 | 9°32'32 | 11°D40 | 10°42'42 | 10°38'38 | 5°11'11 | W 7 |
| T 8 | 11 3 57 | 17°41'55 | 25°59'59 | 2°2'2 | 13°44'44 | 10°57'57 | 26°25'25 | 7°41'41 | 10°23'23 | 7°47'47 | 9°34'34 | 11°40'40 | 10°39'39 | 10°45'45 | 5°13'13 | T 8 |
| F 9 | 11 7 54 | 18°41'56 | 9°3'1 | 3°42'42 | 14°59'59 | 10°40'40 | 26°21'21 | 7°47'47 | 10°24'24 | 7°49'49 | 9°35'35 | 11°R41 | 10°35'35 | 10°52'52 | 5°16'16 | F 9 |
| S 10 | 11 11 50 | 19°41'55 | 21°44'44 | 5°23'23 | 16°14'14 | 10°23'23 | 26°16'16 | 7°53'53 | 10°25'25 | 7°51'51 | 9°37'37 | 11°40'40 | 10°32'32 | 10°59'59 | 5°19'19 | S 10 |
| S 11 | 11 15 47 | 20°41'52 | 4°14'14 | 7°5'5 | 17°29'29 | 10°5'5 | 26°11'11 | 7°59'59 | 10°26'26 | 7°53'53 | 9°38'38 | 11°38'38 | 10°29'29 | 11°5'5 | 5°22'22 | S 11 |
| M 12 | 11 19 43 | 21°41'48 | 16°32'32 | 8°48'48 | 18°44'44 | 9°46'46 | 26°6'6 | 8°5'5 | 10°27'27 | 7°56'56 | 9°40'40 | 11°33'33 | 10°26'26 | 11°12'12 | 5°25'25 | M 12 |
| T 13 | 11 23 40 | 22°41'41 | 28°42'42 | 10°32'32 | 19°59'59 | 9°27'27 | 26°0'0 | 8°11'11 | 10°28'28 | 7°58'58 | 9°41'41 | 11°25'25 | 10°23'23 | 11°19'19 | 5°28'28 | T 13 |
| W 14 | 11 27 36 | 23°41'33 | 10°45'45 | 12°17'17 | 21°13'13 | 9°7'7 | 25°55'55 | 8°17'17 | 10°30'30 | 8°0'0 | 9°43'43 | 11°14'14 | 10°19'19 | 11°25'25 | 5°31'31 | W 14 |
| T 15 | 11 31 33 | 24°41'23 | 22°43'43 | 14°4'4 | 22°28'28 | 8°47'47 | 25°49'49 | 8°23'23 | 10°31'31 | 8°2'2 | 9°44'44 | 11°2'2 | 10°16'16 | 11°32'32 | 5°34'34 | T 15 |
| F 16 | 11 35 29 | 25°41'11 | 4°V38 | 15°52'52 | 23°43'43 | 8°26'26 | 25°44'44 | 8°30'30 | 10°32'32 | 8°5'5 | 9°45'45 | 10°48'48 | 10°13'13 | 11°39'39 | 5°37'37 | F 16 |
| S 17 | 11 39 26 | 26°40'57 | 16°30'30 | 17°41'41 | 24°58'58 | 8°5'5 | 25°38'38 | 8°36'36 | 10°34'34 | 8°7'7 | 9°47'47 | 10°33'33 | 10°10'10 | 11°46'46 | 5°40'40 | S 17 |
| S 18 | 11 43 23 | 27°40'41 | 28°22'22 | 19°31'31 | 26°13'13 | 7°44'44 | 25°32'32 | 8°42'42 | 10°35'35 | 8°9'9 | 9°48'48 | 10°21'21 | 10°7'7 | 11°52'52 | 5°43'43 | S 18 |
| M 19 | 11 47 19 | 28°40'23 | 10°14'14 | 21°22'22 | 27°27'27 | 7°22'22 | 25°26'26 | 8°49'49 | 10°37'37 | 8°11'11 | 9°50'50 | 10°10'10 | 10°4'4 | 11°59'59 | 5°46'46 | M 19 |
| T 20 | 11 51 16 | 29°40'02 | 22°10'10 | 23°15'15 | 28°42'42 | 7°0'0 | 25°20'20 | 8°55'55 | 10°38'38 | 8°14'14 | 9°51'51 | 10°2'2 | 10°0'0 | 12°6'6 | 5°49'49 | T 20 |
| W 21 | 11 55 12 | 0°V39'40 | 4°II13 | 25°9'9 | 29°57'57 | 6°37'37 | 25°13'13 | 9°2'2 | 10°40'40 | 8°16'16 | 9°52'52 | 9°57'57 | 9°57'57 | 12°13'13 | 5°53'53 | W 21 |
| T 22 | 11 59 9 | 1°39'15 | 16°28'28 | 27°4'4 | 1°V11 | 6°14'14 | 25°7'7 | 9°9'9 | 10°42'42 | 8°18'18 | 9°54'54 | 9°54'54 | 9°54'54 | 12°19'19 | 5°56'56 | T 22 |
| F 23 | 12 3 5 | 2°38'48 | 28°58'58 | 29°0'0 | 2°26'26 | 5°51'51 | 25°0'0 | 9°15'15 | 10°44'44 | 8°20'20 | 9°55'55 | 9°53'53 | 9°51'51 | 12°26'26 | 5°59'59 | F 23 |
| S 24 | 12 7 2 | 3°38'19 | 11°24'48 | 0°V57 | 3°41'41 | 5°28'28 | 24°54'54 | 9°22'22 | 10°45'45 | 8°23'23 | 9°56'56 | 9°53'53 | 9°48'48 | 12°33'33 | 6°2'2 | S 24 |
| S 25 | 12 10 58 | 4°37'47 | 25°3'3 | 2°56'56 | 4°55'55 | 5°5'5 | 24°47'47 | 9°29'29 | 10°47'47 | 8°25'25 | 9°57'57 | 9°53'53 | 9°44'44 | 12°39'39 | 6°6'6 | S 25 |
| M 26 | 12 14 55 | 5°37'13 | 8°24'47 | 4°55'55 | 6°10'10 | 4°41'41 | 24°40'40 | 9°36'36 | 10°49'49 | 8°27'27 | 9°59'59 | 9°51'51 | 9°41'41 | 12°46'46 | 6°9'9 | M 26 |
| T 27 | 12 18 52 | 6°36'37 | 23°1'1 | 6°56'56 | 7°25'25 | 4°18'18 | 24°33'33 | 9°42'42 | 10°51'51 | 8°29'29 | 10°0'0 | 9°46'46 | 9°38'38 | 12°53'53 | 6°12'12 | T 27 |
| W 28 | 12 22 48 | 7°35'58 | 7°43'43 | 8°57'57 | 8°39'39 | 3°55'55 | 24°26'26 | 9°49'49 | 10°53'53 | 8°32'32 | 10°1'1 | 9°39'39 | 9°35'35 | 13°0'0 | 6°16'16 | W 28 |
| T 29 | 12 26 45 | 8°35'17 | 22°48'48 | 10°59'59 | 9°54'54 | 3°31'31 | 24°19'19 | 9°56'56 | 10°55'55 | 8°34'34 | 10°2'2 | 9°29'29 | 9°32'32 | 13°6'6 | 6°19'19 | T 29 |
| F 30 | 12 30 41 | 9°34'34 | 8°2'2 | 13°2'2 | 11°8'8 | 3°8'8 | 24°12'12 | 10°3'3 | 10°57'57 | 8°36'36 | 10°3'3 | 9°18'18 | 9°29'29 | 13°13'13 | 6°23'23 | F 30 |
| S 31 | 12 34 38 | 10°V33'49 | 23°28'28 | 15°V5 | 12°V23 | 2°24'45 | 24°4'4 | 10°3'3 | 10°II59 | 8°V38 | 10°2'2 | 9°3'7 | 9°3'25 | 13°V20 | 6°26'26 | S 31 |

| Day | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|------|-------|------|-------|------|-------|------|------|------|------|------|-------|------|-------|-----|------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | lat |
| T 1 | 7s34 | 1n52 | 4s30 | 16s17 | 1s51 | 10s57 | 1s22 | 1s47 | 3n27 | 8s58 | 1n29 | 11n44 | 2s14 | 21n58 | 0s1 | 1n41 |
| F 2 | 7 11 | 4s30 | 4 57 | 15 50 | 1 55 | 10 30 | 1 23 | 1 42 | 3 28 | 8 57 | 1 29 | 11 46 | 2 14 | 21 59 | 0 1 | 1 41 |
| S 3 | 6 48 | 10 35 | 5 4 | 15 23 | 1 58 | 10 3 | 1 23 | 1 36 | 3 28 | 8 56 | 1 30 | 11 48 | 2 14 | 21 59 | 0 1 | 1 42 |
| S 4 | 6 25 | 15 58 | 4 49 | 14 54 | 2 2 | 9 35 | 1 24 | 1 31 | 3 29 | 8 54 | 1 30 | 11 50 | 2 14 | 21 59 | 0 1 | 1 43 |
| M 5 | 6 2 | 20 17 | 4 16 | 14 24 | 2 4 | 9 7 | 1 24 | 1 25 | 3 29 | 8 52 | 1 30 | 11 52 | 2 13 | 21 59 | 0 1 | 1 44 |
| T 6 | 5 38 | 23 16 | 3 28 | 13 53 | 2 7 | 8 39 | 1 25 | 1 20 | 3 29 | 8 51 | 1 30 | 11 54 | 2 13 | 21 59 | 0 1 | 1 45 |
| W 7 | 5 15 | 24 45 | 2 28 | 13 20 | 2 9 | 8 11 | 1 25 | 1 13 | 3 29 | 8 49 | 1 30 | 11 57 | 2 13 | 21 59 | 0 1 | 1 46 |
| T 8 | 4 52 | 24 45 | 1 23 | 12 46 | 2 10 | 7 43 | 1 25 | 1 7 | 3 29 | 8 47 | 1 31 | 11 59 | 2 13 | 21 59 | 0 1 | 1 47 |
| F 9 | 4 28 | 23 22 | 0 14 | 12 11 | 2 11 | 7 14 | 1 26 | 1 1 | 3 29 | 8 45 | 1 31 | 12 1 | 2 13 | 22 0 | 0 1 | 1 47 |
| S 10 | 4 5 | 20 48 | 0n53 | 11 35 | 2 12 | 6 45 | 1 26 | 0 54 | 3 29 | 8 43 | 1 31 | 12 3 | 2 12 | 22 0 | 0 1 | 1 48 |
| S 11 | 3 41 | 17 18 | 1 57 | 10 58 | 2 12 | 6 16 | 1 26 | 0 47 | 3 29 | 8 41 | 1 31 | 12 5 | 2 12 | 22 0 | 0 1 | 1 49 |
| M 12 | 3 18 | 13 7 | 2 54 | 10 19 | 2 12 | 5 47 | 1 26 | 0 40 | 3 29 | 8 39 | 1 31 | 12 7 | 2 12 | 22 0 | 0 1 | 1 50 |
| T 13 | 2 54 | 8 27 | 3 42 | 9 39 | 2 12 | 5 17 | 1 26 | 0 33 | 3 29 | 8 37 | 1 31 | 12 9 | 2 12 | 22 0 | 0 1 | 1 51 |
| W 14 | 2 30 | 3 32 | 4 19 | 8 58 | 2 10 | 4 48 | 1 26 | 0 25 | 3 28 | 8 35 | 1 32 | 12 11 | 2 12 | 22 0 | 0 1 | 1 52 |
| T 15 | 2 7 | 1n29 | 4 45 | 8 15 | 2 9 | 4 18 | 1 26 | 0 18 | 3 28 | 8 33 | 1 32 | 12 13 | 2 11 | 22 1 | 0 1 | 1 53 |
| F 16 | 1 43 | 6 24 | 4 58 | 7 31 | 2 7 | 3 49 | 1 26 | 0 10 | 3 27 | 8 31 | 1 32 | 12 16 | 2 11 | 22 1 | 0 1 | 1 54 |
| S 17 | 1 19 | 11 5 | 4 59 | 6 47 | 2 4 | 3 19 | 1 26 | 0 2 | 3 27 | 8 29 | 1 32 | 12 18 | 2 11 | 22 1 | 0 1 | 1 54 |
| S 18 | 0 55 | 15 20 | 4 46 | 6 1 | 2 1 | 2 49 | 1 25 | 0n6 | 3 26 | 8 26 | 1 32 | 12 20 | 2 11 | 22 1 | 0 1 | 1 55 |
| M 19 | 0 32 | 19 0 | 4 20 | 5 14 | 1 58 | 2 19 | 1 25 | 0 13 | 3 25 | 8 24 | 1 32 | 12 22 | 2 11 | 22 2 | 0 1 | 1 56 |
| T 20 | 0 8 | 21 55 | 3 44 | 4 25 | 1 54 | 1 49 | 1 25 | 0 21 | 3 25 | 8 22 | 1 32 | 12 25 | 2 10 | 22 2 | 0 1 | 1 57 |
| W 21 | 0n16 | 23 53 | 2 57 | 3 36 | 1 49 | 1 18 | 1 24 | 0 29 | 3 24 | 8 19 | 1 33 | 12 27 | 2 10 | 22 2 | 0 1 | 1 58 |
| T 22 | 0 39 | 24 45 | 2 0 | 2 46 | 1 44 | 0 48 | 1 23 | 0 37 | 3 23 | 8 17 | 1 33 | 12 29 | 2 10 | 22 2 | 0 1 | 1 59 |
| F 23 | 1 3 | 24 23 | 0 57 | 1 54 | 1 39 | 0 18 | 1 23 | 0 46 | 3 21 | 8 14 | 1 33 | 12 31 | 2 10 | 22 3 | 0 1 | 2 0 |
| S 24 | 1 27 | 22 45 | 0s10 | 1 2 | 1 33 | 0n12 | 1 22 | 0 54 | 3 20 | 8 12 | 1 33 | 12 34 | 2 10 | 22 3 | 0 1 | 2 1 |
| S 25 | 1 50 | 19 49 | 1 19 | 0 9 | 1 26 | 0 43 | 1 21 | 1 2 | 3 19 | 8 9 | 1 33 | 12 36 | 2 10 | 22 3 | 0 1 | 2 2 |
| M 26 | 2 14 | 15 42 | 2 26 | 0n45 | 1 19 | 1 13 | 1 21 | 1 10 | 3 18 | 8 7 | 1 33 | 12 38 | 2 10 | 22 3 | 0 1 | 2 2 |
| T 27 | 2 37 | 10 35 | 3 27 | 1 40 | 1 11 | 1 43 | 1 20 | 1 17 | 3 16 | 8 4 | 1 33 | 12 40 | 2 9 | 22 4 | 0 0 | 2 3 |
| W 28 | 3 1 | 4 43 | 4 15 | 2 35 | 1 3 | 2 13 | 1 19 | 1 25 | 3 15 | 8 1 | 1 33 | 12 43 | 2 9 | 22 4 | 0 0 | 2 4 |
| T 29 | 3 24 | 1s33 | 4 48 | 3 31 | 0 54 | 2 43 | 1 18 | 1 33 | 3 13 | 7 59 | 1 33 | 12 45 | 2 9 | 22 4 | 0 0 | 2 5 |
| F 30 | 3 48 | 7 49 | 5 0 | 4 27 | 0 45 | 3 14 | 1 17 | 1 41 | 3 11 | 7 56 | 1 33 | 12 47 | 2 9 | 22 4 | 0 0 | 2 6 |
| S 31 | 4n11 | 13s37 | 4s51 | 5n24 | 0s35 | 3n44 | 1s16 | 1n48 | 3n10 | 7s53 | 1n34 | 12n50 | 2s9 | 22n5 | 0s0 | 2n7 |

Julian Day Number = 2462196.5, Delta T = 69.08 sec

Ecliptic obliquity = 23°26'10, Nutation = 0°00'18, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 25°08'52, Lahiri = 24°15'52

ASTRODIENST EPHEMERIS for the year 2029

geocentric

APRIL 2029

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------|-------|-------|-------|-------|--------|--------|---------|-------|--------|-------|-------|--------|-------|------|
| S 1 | 12 38 34 | 11°33'02 | 8♈41 | 17°8 | 13°37 | 2°R22 | 23°R57 | 10°817 | 11°II 1 | 8°Y41 | 10°≈ 5 | 8°R57 | 9°322 | 13°Y26 | 6°830 | S 1 |
| M 2 | 12 42 31 | 12°32'14 | 23°34 | 19°11 | 14°52 | 2°0 | 23°050 | 10°25 | 11° 3 | 8°43 | 10° 6 | 8°349 | 9°19 | 13°33 | 6°33 | M 2 |
| T 3 | 12 46 27 | 13°31'23 | 8♈1 | 21°14 | 16° 6 | 1°37 | 23°42 | 10°32 | 11° 6 | 8°45 | 10° 7 | 8°44 | 9°16 | 13°40 | 6°37 | T 3 |
| W 4 | 12 50 24 | 14°30'31 | 21°59 | 23°16 | 17°21 | 1°15 | 23°35 | 10°39 | 11° 8 | 8°48 | 10° 8 | 8°42 | 9°13 | 13°47 | 6°40 | W 4 |
| T 5 | 12 54 21 | 15°29'37 | 5♈28 | 25°18 | 18°35 | 0°53 | 23°27 | 10°46 | 11°10 | 8°50 | 10° 9 | 8°D41 | 9°10 | 13°53 | 6°44 | T 5 |
| F 6 | 12 58 17 | 16°28'41 | 18°32 | 27°18 | 19°49 | 0°32 | 23°20 | 10°53 | 11°12 | 8°52 | 10°10 | 8°R41 | 9° 6 | 14° 0 | 6°47 | F 6 |
| S 7 | 13 2 14 | 17°27'43 | 1♈14 | 29°17 | 21° 4 | 0°11 | 23°12 | 11° 1 | 11°15 | 8°54 | 10°11 | 8°40 | 9° 3 | 14° 7 | 6°51 | S 7 |
| S 8 | 13 6 10 | 18°26'44 | 13°38 | 1♈13 | 22°18 | 29°51 | 23° 5 | 11° 8 | 11°17 | 8°57 | 10°12 | 8°38 | 9° 0 | 14°14 | 6°55 | S 8 |
| M 9 | 13 10 7 | 19°25'43 | 25°49 | 3° 8 | 23°33 | 29°31 | 22°57 | 11°15 | 11°20 | 8°59 | 10°13 | 8°33 | 8°57 | 14°20 | 6°58 | M 9 |
| T 10 | 13 14 3 | 20°24'40 | 7♈51 | 4°59 | 24°47 | 29°11 | 22°49 | 11°23 | 11°22 | 9° 1 | 10°14 | 8°26 | 8°54 | 14°27 | 7° 2 | T 10 |
| W11 | 13 18 0 | 21°23'35 | 19°47 | 6°48 | 26° 1 | 28°53 | 22°41 | 11°30 | 11°25 | 9° 3 | 10°15 | 8°15 | 8°50 | 14°34 | 7° 6 | W11 |
| T 12 | 13 21 56 | 22°22'28 | 1°Y40 | 8°33 | 27°16 | 28°34 | 22°34 | 11°37 | 11°27 | 9° 6 | 10°16 | 8° 3 | 8°47 | 14°40 | 7° 9 | T 12 |
| F 13 | 13 25 53 | 23°21'20 | 13°32 | 10°15 | 28°30 | 28°17 | 22°26 | 11°45 | 11°30 | 9° 8 | 10°16 | 7°49 | 8°44 | 14°47 | 7°13 | F 13 |
| S 14 | 13 29 49 | 24°20'09 | 25°24 | 11°52 | 29°44 | 28° 0 | 22°18 | 11°52 | 11°32 | 9°10 | 10°17 | 7°36 | 8°41 | 14°54 | 7°17 | S 14 |
| S 15 | 13 33 46 | 25°18'56 | 7♈17 | 13°25 | 0♈58 | 27°43 | 22°11 | 12° 0 | 11°35 | 9°12 | 10°18 | 7°23 | 8°38 | 15° 1 | 7°20 | S 15 |
| M16 | 13 37 43 | 26°17'42 | 19°14 | 14°54 | 2°13 | 27°28 | 22° 3 | 12° 7 | 11°38 | 9°14 | 10°18 | 7°12 | 8°35 | 15° 7 | 7°24 | M16 |
| T 17 | 13 41 39 | 27°16'25 | 1♈16 | 16°18 | 3°27 | 27°13 | 21°55 | 12°15 | 11°41 | 9°17 | 10°19 | 7° 4 | 8°31 | 15°14 | 7°28 | T 17 |
| W18 | 13 45 36 | 28°15'07 | 13°25 | 17°38 | 4°41 | 26°59 | 21°48 | 12°22 | 11°43 | 9°19 | 10°20 | 6°59 | 8°28 | 15°21 | 7°32 | W18 |
| T 19 | 13 49 32 | 29°13'46 | 25°44 | 18°52 | 5°55 | 26°45 | 21°40 | 12°30 | 11°46 | 9°21 | 10°20 | 6°57 | 8°25 | 15°28 | 7°35 | T 19 |
| F 20 | 13 53 29 | 0♈12'23 | 8♈17 | 20° 1 | 7° 9 | 26°32 | 21°33 | 12°38 | 11°49 | 9°23 | 10°21 | 6°D56 | 8°22 | 15°34 | 7°39 | F 20 |
| S 21 | 13 57 25 | 1°10'58 | 21° 7 | 21° 5 | 8°24 | 26°20 | 21°25 | 12°45 | 11°52 | 9°25 | 10°22 | 6°57 | 8°19 | 15°41 | 7°43 | S 21 |
| S 22 | 14 1 22 | 2° 9'31 | 4♈18 | 22° 3 | 9°38 | 26° 9 | 21°18 | 12°53 | 11°55 | 9°27 | 10°22 | 6°R57 | 8°16 | 15°48 | 7°47 | S 22 |
| M23 | 14 5 18 | 3° 8'01 | 17°54 | 22°56 | 10°52 | 25°59 | 21°10 | 13° 0 | 11°58 | 9°29 | 10°23 | 6°56 | 8°12 | 15°54 | 7°50 | M23 |
| T 24 | 14 9 15 | 4° 6'29 | 1♈57 | 23°44 | 12° 6 | 25°49 | 21° 3 | 13° 8 | 12° 1 | 9°32 | 10°23 | 6°53 | 8° 9 | 16° 1 | 7°54 | T 24 |
| W25 | 14 13 12 | 5° 4'55 | 16°26 | 24°26 | 13°20 | 25°41 | 20°55 | 13°16 | 12° 3 | 9°34 | 10°24 | 6°48 | 8° 6 | 16° 8 | 7°58 | W25 |
| T 26 | 14 17 8 | 6° 3'19 | 1♈18 | 25° 2 | 14°34 | 25°33 | 20°48 | 13°23 | 12° 6 | 9°36 | 10°24 | 6°40 | 8° 3 | 16°15 | 8° 2 | T 26 |
| F 27 | 14 21 5 | 7° 1'41 | 16°27 | 25°32 | 15°48 | 25°25 | 20°41 | 13°31 | 12° 9 | 9°38 | 10°24 | 6°32 | 8° 0 | 16°21 | 8° 6 | F 27 |
| S 28 | 14 25 1 | 8° 0'01 | 1♈42 | 25°57 | 17° 2 | 25°19 | 20°34 | 13°39 | 12°13 | 9°40 | 10°25 | 6°23 | 7°56 | 16°28 | 8° 9 | S 28 |
| S 29 | 14 28 58 | 8°58'19 | 16°53 | 26°16 | 18°16 | 25°13 | 20°27 | 13°47 | 12°16 | 9°42 | 10°25 | 6°15 | 7°53 | 16°35 | 8°13 | S 29 |
| M30 | 14 32 54 | 9°56'36 | 1♈49 | 26°30 | 19°30 | 25°9 | 20°20 | 13°54 | 12°19 | 9°Y44 | 10°≈25 | 6°3 9 | 7°50 | 16°Y41 | 8°17 | M30 |

| Day | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|-------|-------|------|-------|------|-------|------|------|------|------|------|-------|------|-------|------|------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | |
| S 1 | 4n34 | 18s30 | 4s21 | 6n20 | 0s25 | 4n14 | 1s15 | 1n56 | 3n 8 | 7s51 | 1n34 | 12n52 | 2s 9 | 22n 5 | 0s 0 | S 1 |
| M 2 | 4 57 | 22 7 | 3 34 | 7 17 | 0 15 | 4 44 | 1 13 | 2 3 | 3 6 | 7 48 | 1 34 | 12 54 | 2 9 | 22 5 | 0 0 | M 2 |
| T 3 | 5 20 | 24 11 | 2 34 | 8 13 | 0 4 | 5 13 | 1 12 | 2 10 | 3 4 | 7 45 | 1 34 | 12 57 | 2 8 | 22 6 | 0 0 | T 3 |
| W 4 | 5 43 | 24 38 | 1 27 | 9 9 | 0n 7 | 5 43 | 1 11 | 2 17 | 3 2 | 7 42 | 1 34 | 12 59 | 2 8 | 22 6 | 0 0 | W 4 |
| T 5 | 6 6 | 23 36 | 0 17 | 10 4 | 0 18 | 6 13 | 1 9 | 2 24 | 3 0 | 7 39 | 1 34 | 13 1 | 2 8 | 22 6 | 0 0 | T 5 |
| F 6 | 6 29 | 21 18 | 0n52 | 10 58 | 0 29 | 6 42 | 1 8 | 2 30 | 2 57 | 7 37 | 1 34 | 13 4 | 2 8 | 22 7 | 0 0 | F 6 |
| S 7 | 6 51 | 18 0 | 1 56 | 11 51 | 0 41 | 7 11 | 1 7 | 2 36 | 2 55 | 7 34 | 1 34 | 13 6 | 2 8 | 22 7 | 0 0 | S 7 |
| S 8 | 7 14 | 13 58 | 2 53 | 12 43 | 0 52 | 7 41 | 1 5 | 2 42 | 2 53 | 7 31 | 1 34 | 13 8 | 2 8 | 22 7 | 0 0 | S 8 |
| M 9 | 7 36 | 9 26 | 3 42 | 13 33 | 1 4 | 8 9 | 1 3 | 2 48 | 2 51 | 7 28 | 1 34 | 13 11 | 2 8 | 22 8 | 0 0 | M 9 |
| T 10 | 7 58 | 4 37 | 4 19 | 14 22 | 1 15 | 8 38 | 1 2 | 2 54 | 2 48 | 7 25 | 1 34 | 13 13 | 2 8 | 22 8 | 0 0 | T 10 |
| W11 | 8 21 | 0n20 | 4 45 | 15 8 | 1 26 | 9 7 | 1 0 | 2 59 | 2 46 | 7 22 | 1 34 | 13 16 | 2 7 | 22 8 | 0 0 | W11 |
| T 12 | 8 42 | 5 13 | 4 58 | 15 52 | 1 36 | 9 35 | 0 58 | 3 4 | 2 43 | 7 20 | 1 34 | 13 18 | 2 7 | 22 9 | 0 0 | T 12 |
| F 13 | 9 4 | 9 55 | 4 59 | 16 34 | 1 47 | 10 3 | 0 57 | 3 9 | 2 41 | 7 17 | 1 34 | 13 20 | 2 7 | 22 9 | 0 0 | F 13 |
| S 14 | 9 26 | 14 15 | 4 46 | 17 14 | 1 56 | 10 31 | 0 55 | 3 13 | 2 38 | 7 14 | 1 34 | 13 23 | 2 7 | 22 10 | 0 0 | S 14 |
| S 15 | 9 48 | 18 3 | 4 21 | 17 51 | 2 5 | 10 59 | 0 53 | 3 17 | 2 36 | 7 11 | 1 34 | 13 25 | 2 7 | 22 10 | 0 0 | S 15 |
| M16 | 10 9 | 21 8 | 3 44 | 18 26 | 2 14 | 11 26 | 0 51 | 3 21 | 2 33 | 7 8 | 1 34 | 13 27 | 2 7 | 22 10 | 0 0 | M16 |
| T 17 | 10 30 | 23 18 | 2 57 | 18 58 | 2 21 | 11 53 | 0 49 | 3 25 | 2 31 | 7 6 | 1 34 | 13 30 | 2 7 | 22 11 | 0 0 | T 17 |
| W18 | 10 51 | 24 25 | 2 1 | 19 27 | 2 28 | 12 20 | 0 47 | 3 28 | 2 28 | 7 3 | 1 34 | 13 32 | 2 7 | 22 11 | 0 0 | W18 |
| T 19 | 11 12 | 24 21 | 0 59 | 19 54 | 2 34 | 12 47 | 0 45 | 3 31 | 2 26 | 7 0 | 1 33 | 13 34 | 2 7 | 22 11 | 0 0 | T 19 |
| F 20 | 11 33 | 23 3 | 0s 7 | 20 18 | 2 39 | 13 13 | 0 43 | 3 34 | 2 23 | 6 57 | 1 33 | 13 37 | 2 7 | 22 12 | 0 0 | F 20 |
| S 21 | 11 53 | 20 33 | 1 15 | 20 39 | 2 44 | 13 39 | 0 41 | 3 36 | 2 20 | 6 54 | 1 33 | 13 39 | 2 7 | 22 12 | 0 0 | S 21 |
| S 22 | 12 13 | 16 54 | 2 20 | 20 58 | 2 47 | 14 5 | 0 39 | 3 38 | 2 18 | 6 52 | 1 33 | 13 42 | 2 7 | 22 13 | 0 0 | S 22 |
| M23 | 12 33 | 12 17 | 3 20 | 21 14 | 2 49 | 14 30 | 0 37 | 3 40 | 2 15 | 6 49 | 1 33 | 13 44 | 2 6 | 22 13 | 0 0 | M23 |
| T 24 | 12 53 | 6 53 | 4 10 | 21 27 | 2 50 | 14 55 | 0 35 | 3 41 | 2 12 | 6 46 | 1 33 | 13 46 | 2 6 | 22 13 | 0 0 | T 24 |
| W25 | 13 13 | 0 58 | 4 45 | 21 37 | 2 50 | 15 19 | 0 33 | 3 42 | 2 10 | 6 44 | 1 33 | 13 49 | 2 6 | 22 14 | 0 0 | W25 |
| T 26 | 13 32 | 5s 9 | 5 3 | 21 45 | 2 49 | 15 43 | 0 30 | 3 43 | 2 7 | 6 41 | 1 33 | 13 51 | 2 6 | 22 14 | 0 0 | T 26 |
| F 27 | 13 51 | 11 4 | 5 0 | 21 50 | 2 46 | 16 7 | 0 28 | 3 43 | 2 4 | 6 39 | 1 33 | 13 53 | 2 6 | 22 15 | 0 0 | F 27 |
| S 28 | 14 10 | 16 22 | 4 35 | 21 53 | 2 43 | 16 31 | 0 26 | 3 43 | 2 2 | 6 36 | 1 33 | 13 56 | 2 6 | 22 15 | 0 0 | S 28 |
| S 29 | 14 29 | 20 34 | 3 52 | 21 52 | 2 38 | 16 53 | 0 23 | 3 43 | 1 59 | 6 34 | 1 33 | 13 58 | 2 6 | 22 15 | 0 0 | S 29 |
| M30 | 14n48 | 23s20 | 2s53 | 21n50 | 2n32 | 17n16 | 0s21 | 3n43 | 1n56 | 6s31 | 1n32 | 14n 0 | 2s 6 | 22n16 | 0s 0 | M30 |

Julian Day Number = 2462227.5, Delta T = 69.10 sec

Ecliptic obliquity = 23°26'10, Nutation = 0°00'16, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 25°08'56, Lahiri = 24°15'56

ASTRODIENST EPHEMERIS for the year 2029

geocentric

MAY 2029

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|-----------|---------|--------|---------|---------|--------|--------|---------|--------|--------|-------|-------|--------|--------|------|
| T 1 | 14 36 51 | 10°54'50 | 16°23 | 26°38 | 20°44 | 25°R 4 | 20°R13 | 14°8 2 | 12°II22 | 9°Y46 | 10°26 | 6°R 5 | 7°347 | 16°Y48 | 8°821 | T 1 |
| W 2 | 14 40 47 | 11°53'04 | 0°30 | 26°R40 | 21°58 | 25°11 | 20°21 | 14°10 | 12°25 | 9°48 | 10°26 | 6°D 3 | 7°44 | 16°55 | 8°25 | W 2 |
| T 3 | 14 44 44 | 12°51'16 | 14° 8 | 26°38 | 23°12 | 24°59 | 20° 0 | 14°17 | 12°28 | 9°50 | 10°26 | 6°3 3 | 7°41 | 17° 2 | 8°28 | T 3 |
| F 4 | 14 48 41 | 13°49'26 | 27°18 | 26°30 | 24°25 | 24°57 | 19°53 | 14°25 | 12°31 | 9°52 | 10°26 | 6° 4 | 7°37 | 17° 8 | 8°32 | F 4 |
| S 5 | 14 52 37 | 14°47'35 | 10°4 | 26°17 | 25°39 | 24°56 | 19°47 | 14°33 | 12°35 | 9°54 | 10°27 | 6°R 5 | 7°34 | 17°15 | 8°36 | S 5 |
| S 6 | 14 56 34 | 15°45'42 | 22°31 | 26° 0 | 26°53 | 24°D56 | 19°40 | 14°40 | 12°38 | 9°56 | 10°27 | 6° 5 | 7°31 | 17°22 | 8°40 | S 6 |
| M 7 | 15 0 30 | 16°43'48 | 4°42 | 25°38 | 28° 7 | 24°56 | 19°34 | 14°48 | 12°41 | 9°58 | 10°27 | 6° 3 | 7°28 | 17°29 | 8°43 | M 7 |
| T 8 | 15 4 27 | 17°41'52 | 16°42 | 25°13 | 29°21 | 24°58 | 19°28 | 14°56 | 12°44 | 10° 0 | 10°27 | 6° 0 | 7°25 | 17°35 | 8°47 | T 8 |
| W 9 | 15 8 23 | 18°39'55 | 28°36 | 24°45 | 0°II35 | 25° 0 | 19°22 | 15° 4 | 12°48 | 10° 2 | 10°27 | 5°54 | 7°21 | 17°42 | 8°51 | W 9 |
| T 10 | 15 12 20 | 19°37'57 | 10°Y27 | 24°13 | 1°48 | 25° 2 | 19°16 | 15°11 | 12°51 | 10° 3 | 10°27 | 5°46 | 7°18 | 17°49 | 8°55 | T 10 |
| F 11 | 15 16 16 | 20°35'57 | 22°19 | 23°40 | 3° 2 | 25° 6 | 19°11 | 15°19 | 12°54 | 10° 5 | 10°R27 | 5°38 | 7°15 | 17°55 | 8°58 | F 11 |
| S 12 | 15 20 13 | 21°33'56 | 4°813 | 23° 5 | 4°16 | 25°10 | 19° 5 | 15°27 | 12°58 | 10° 7 | 10°27 | 5°29 | 7°12 | 18° 2 | 9° 2 | S 12 |
| S 13 | 15 24 10 | 22°31'53 | 16°12 | 22°30 | 5°29 | 25°15 | 19° 0 | 15°34 | 13° 1 | 10° 9 | 10°27 | 5°22 | 7° 9 | 18° 9 | 9° 6 | S 13 |
| M14 | 15 28 6 | 23°29'49 | 28°17 | 21°54 | 6°43 | 25°20 | 18°54 | 15°42 | 13° 4 | 10°11 | 10°27 | 5°15 | 7° 6 | 18°16 | 9°10 | M14 |
| T 15 | 15 32 3 | 24°27'43 | 10°II29 | 21°18 | 7°57 | 25°27 | 18°49 | 15°50 | 13° 8 | 10°12 | 10°27 | 5°11 | 7° 2 | 18°22 | 9°13 | T 15 |
| W16 | 15 35 59 | 25°25'36 | 22°51 | 20°44 | 9°11 | 25°34 | 18°44 | 15°57 | 13°11 | 10°14 | 10°27 | 5° 8 | 6°59 | 18°29 | 9°17 | W16 |
| T 17 | 15 39 56 | 26°23'27 | 5°22 | 20°10 | 10°24 | 25°41 | 18°39 | 16° 5 | 13°14 | 10°16 | 10°27 | 5°D 7 | 6°56 | 18°36 | 9°21 | T 17 |
| F 18 | 15 43 52 | 27°21'17 | 18° 7 | 19°39 | 11°38 | 25°49 | 18°34 | 16°13 | 13°18 | 10°18 | 10°27 | 5° 8 | 6°53 | 18°42 | 9°24 | F 18 |
| S 19 | 15 47 49 | 28°19'05 | 1°12 | 19°11 | 12°51 | 25°58 | 18°30 | 16°20 | 13°21 | 10°19 | 10°26 | 5° 9 | 6°50 | 18°49 | 9°28 | S 19 |
| S 20 | 15 51 45 | 29°16'51 | 14°22 | 18°46 | 14° 5 | 26° 8 | 18°25 | 16°28 | 13°25 | 10°21 | 10°26 | 5°11 | 6°47 | 18°56 | 9°32 | S 20 |
| M21 | 15 55 42 | 0°II14'36 | 27°58 | 18°24 | 15°19 | 26°18 | 18°21 | 16°35 | 13°28 | 10°22 | 10°26 | 5°R11 | 6°43 | 19° 3 | 9°35 | M21 |
| T 22 | 15 59 39 | 1°12'19 | 11°II53 | 18° 5 | 16°32 | 26°29 | 18°17 | 16°43 | 13°32 | 10°24 | 10°26 | 5°11 | 6°40 | 19° 9 | 9°39 | T 22 |
| W23 | 16 3 35 | 2°10'00 | 26° 9 | 17°51 | 17°46 | 26°40 | 18°13 | 16°51 | 13°35 | 10°26 | 10°25 | 5° 9 | 6°37 | 19°16 | 9°42 | W23 |
| T 24 | 16 7 32 | 3° 7'40 | 10°II43 | 17°41 | 18°59 | 26°52 | 18° 9 | 16°58 | 13°39 | 10°27 | 10°25 | 5° 6 | 6°34 | 19°23 | 9°46 | T 24 |
| F 25 | 16 11 28 | 4° 5'18 | 25°31 | 17°35 | 20°12 | 27° 5 | 18° 6 | 17° 6 | 13°42 | 10°29 | 10°25 | 5° 2 | 6°31 | 19°29 | 9°50 | F 25 |
| S 26 | 16 15 25 | 5° 2'55 | 10°II25 | 17°D34 | 21°26 | 27°18 | 18° 2 | 17°13 | 13°46 | 10°30 | 10°24 | 4°58 | 6°27 | 19°36 | 9°53 | S 26 |
| S 27 | 16 19 21 | 6° 0'30 | 25°18 | 17°37 | 22°39 | 27°31 | 17°59 | 17°21 | 13°49 | 10°32 | 10°24 | 4°54 | 6°24 | 19°43 | 9°57 | S 27 |
| M28 | 16 23 18 | 6°58'04 | 10°II 2 | 17°44 | 23°53 | 27°45 | 17°56 | 17°28 | 13°53 | 10°33 | 10°23 | 4°51 | 6°21 | 19°50 | 10° 0 | M28 |
| T 29 | 16 27 14 | 7°55'38 | 24°29 | 17°57 | 25° 6 | 28° 0 | 17°53 | 17°35 | 13°56 | 10°35 | 10°23 | 4°49 | 6°18 | 19°56 | 10° 4 | T 29 |
| W30 | 16 31 11 | 8°53'10 | 8°33 | 18°13 | 26°19 | 28°15 | 17°50 | 17°43 | 14° 0 | 10°36 | 10°22 | 4°D49 | 6°15 | 20° 3 | 10° 7 | W30 |
| T 31 | 16 35 8 | 9°II50'41 | 22°313 | 18°34 | 27°II33 | 28°II31 | 17°48 | 17°50 | 14°II 3 | 10°Y37 | 10°22 | 4°350 | 6°12 | 20°Y10 | 10°810 | T 31 |

| Day | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | decl | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat |
| T 1 | 15n 6 | 24s27 | 1s43 | 21n44 | 2n24 | 17n38 | 0s19 | 3n42 | 1n54 | 6s29 | 1n32 | 14n 3 | 2s 6 | 22n16 | 0s 0 | 2n33 |
| W 2 | 15 24 | 23 56 | 0 30 | 21 37 | 2 16 | 17 59 | 0 16 | 3 41 | 1 51 | 6 26 | 1 32 | 14 5 | 2 6 | 22 17 | 0 0 | 2 34 |
| T 3 | 15 42 | 21 58 | 0n43 | 21 27 | 2 6 | 18 21 | 0 14 | 3 39 | 1 49 | 6 24 | 1 32 | 14 7 | 2 6 | 22 17 | 0 0 | 2 34 |
| F 4 | 15 59 | 18 52 | 1 52 | 21 14 | 1 55 | 18 41 | 0 12 | 3 38 | 1 46 | 6 22 | 1 32 | 14 9 | 2 6 | 22 17 | 0 0 | 2 35 |
| S 5 | 16 16 | 14 57 | 2 52 | 20 59 | 1 43 | 19 1 | 0 9 | 3 36 | 1 43 | 6 19 | 1 32 | 14 12 | 2 6 | 22 18 | 0 0 | 2 36 |
| S 6 | 16 33 | 10 29 | 3 43 | 20 42 | 1 30 | 19 21 | 0 7 | 3 34 | 1 41 | 6 17 | 1 31 | 14 14 | 2 6 | 22 18 | 0 0 | 2 37 |
| M 7 | 16 50 | 5 42 | 4 23 | 20 24 | 1 16 | 19 40 | 0 4 | 3 31 | 1 38 | 6 15 | 1 31 | 14 16 | 2 6 | 22 19 | 0 0 | 2 37 |
| T 8 | 17 6 | 0 47 | 4 50 | 20 3 | 1 1 | 19 59 | 0 2 | 3 28 | 1 36 | 6 13 | 1 31 | 14 19 | 2 6 | 22 19 | 0 0 | 2 38 |
| W 9 | 17 23 | 4n 6 | 5 5 | 19 41 | 0 45 | 20 17 | 0n 1 | 3 25 | 1 33 | 6 11 | 1 31 | 14 21 | 2 6 | 22 20 | 0 0 | 2 39 |
| T 10 | 17 38 | 8 50 | 5 6 | 19 17 | 0 28 | 20 34 | 0 3 | 3 22 | 1 31 | 6 9 | 1 31 | 14 23 | 2 6 | 22 20 | 0 0 | 2 39 |
| F 11 | 17 54 | 13 14 | 4 55 | 18 52 | 0 11 | 20 51 | 0 6 | 3 18 | 1 29 | 6 7 | 1 31 | 14 25 | 2 6 | 22 20 | 0 0 | 2 40 |
| S 12 | 18 9 | 17 9 | 4 30 | 18 27 | 0s 6 | 21 8 | 0 8 | 3 14 | 1 26 | 6 5 | 1 30 | 14 28 | 2 6 | 22 21 | 0 0 | 2 41 |
| S 13 | 18 24 | 20 24 | 3 53 | 18 1 | 0 24 | 21 23 | 0 11 | 3 10 | 1 24 | 6 3 | 1 30 | 14 30 | 2 6 | 22 21 | 0 0 | 2 41 |
| M14 | 18 39 | 22 48 | 3 6 | 17 35 | 0 41 | 21 39 | 0 13 | 3 6 | 1 21 | 6 1 | 1 30 | 14 32 | 2 6 | 22 22 | 0 0 | 2 42 |
| T 15 | 18 53 | 24 9 | 2 10 | 17 9 | 0 58 | 21 53 | 0 16 | 3 1 | 1 19 | 5 59 | 1 30 | 14 34 | 2 6 | 22 22 | 0 0 | 2 43 |
| W16 | 19 7 | 21 23 | 1 6 | 16 43 | 1 16 | 22 7 | 0 18 | 2 56 | 1 17 | 5 57 | 1 30 | 14 36 | 2 6 | 22 23 | 0 0 | 2 43 |
| T 17 | 19 21 | 23 18 | 0s 1 | 16 18 | 1 32 | 22 21 | 0 20 | 2 51 | 1 15 | 5 56 | 1 29 | 14 39 | 2 6 | 22 23 | 0 0 | 2 44 |
| F 18 | 19 34 | 21 3 | 1 10 | 15 55 | 1 48 | 22 33 | 0 23 | 2 46 | 1 12 | 5 54 | 1 29 | 14 41 | 2 6 | 22 24 | 0 0 | 2 45 |
| S 19 | 19 47 | 17 41 | 2 17 | 15 32 | 2 3 | 22 45 | 0 25 | 2 40 | 1 10 | 5 53 | 1 29 | 14 43 | 2 6 | 22 24 | 0 0 | 2 45 |
| S 20 | 20 0 | 13 22 | 3 17 | 15 11 | 2 18 | 22 57 | 0 28 | 2 35 | 1 8 | 5 51 | 1 29 | 14 45 | 2 6 | 22 24 | 0n 0 | 2 46 |
| M21 | 20 12 | 8 17 | 4 9 | 14 52 | 2 31 | 23 8 | 0 30 | 2 29 | 1 6 | 5 50 | 1 29 | 14 47 | 2 6 | 22 25 | 0 0 | 2 47 |
| T 22 | 20 24 | 2 41 | 4 47 | 14 35 | 2 44 | 23 18 | 0 33 | 2 22 | 1 4 | 5 48 | 1 28 | 14 49 | 2 6 | 22 25 | 0 0 | 2 47 |
| W23 | 20 35 | 3s11 | 5 8 | 14 20 | 2 55 | 23 27 | 0 35 | 2 16 | 1 1 | 5 47 | 1 28 | 14 51 | 2 6 | 22 26 | 0 0 | 2 48 |
| T 24 | 20 47 | 9 0 | 5 10 | 14 8 | 3 6 | 23 36 | 0 37 | 2 9 | 0 59 | 5 46 | 1 28 | 14 53 | 2 6 | 22 26 | 0 0 | 2 48 |
| F 25 | 20 58 | 14 24 | 4 52 | 13 57 | 3 15 | 23 44 | 0 40 | 2 2 | 0 57 | 5 45 | 1 28 | 14 56 | 2 6 | 22 27 | 0 0 | 2 49 |
| S 26 | 21 8 | 18 58 | 4 15 | 13 49 | 3 23 | 23 51 | 0 42 | 1 55 | 0 55 | 5 44 | 1 27 | 14 58 | 2 6 | 22 27 | 0 0 | 2 49 |
| S 27 | 21 18 | 22 19 | 3 20 | 13 43 | 3 30 | 23 58 | 0 44 | 1 48 | 0 53 | 5 43 | 1 27 | 15 0 | 2 6 | 22 27 | 0 0 | 2 50 |
| M28 | 21 28 | 24 7 | 2 12 | 13 39 | 3 36 | 24 4 | 0 47 | 1 41 | 0 51 | 5 42 | 1 27 | 15 2 | 2 6 | 22 28 | 0 0 | 2 50 |
| T 29 | 21 38 | 24 16 | 0 56 | 13 38 | 3 41 | 24 10 | 0 49 | 1 33 | 0 49 | 5 41 | 1 27 | 15 4 | 2 6 | 22 28 | 0 0 | 2 51 |
| W30 | 21 47 | 22 49 | 0n21 | 13 39 | 3 45 | 24 14 | 0 51 | 1 25 | 0 47 | 5 40 | 1 26 | 15 6 | 2 6 | 22 29 | 0 0 | 2 51 |
| T 31 | 21n55 | 20s 3 | 1n34 | 13n42 | 3s48 | 24n18 | 0n53 | 1n17 | 0n45 | 5s39 | 1n26 | 15n 8 | 2s 6 | 22n29 | 0n 0 | 2n52 |

Julian Day Number = 2462257.5, Delta T = 69.12 sec

Ecliptic obliquity = 23°26'09, Nutation = 0°00'16, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 25°09'00, Lahiri = 24°16'01

ASTRODIENST EPHEMERIS for the year 2029

geocentric

JUNE 2029

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|------------------------|----------------------|-----------------------|---------------------|----------------------|---------------------|----------------------|----------------------|----------------------|----------------------|---------------------|--------------------|----------------------|----------------------|------|
| F 1 | 16 39 4 | 10 ^{II} 48'11 | 5 ^{III} 28 | 19 ^{III} 8 0 | 28 ^{II} 46 | 28 ^{III} 47 | 17°R45 | 17 ^{III} 58 | 14 ^{II} 7 | 10 ^{III} 39 | 10°R21 | 4 ^{III} 51 | 6 ^{III} 8 | 20 ^{III} 17 | 10 ^{III} 14 | F 1 |
| S 2 | 16 43 1 | 11°45'40 | 18°19 | 19°29 | 29°59 | 29° 4 | 17 ^{II} 43 | 18° 5 | 14°10 | 10°40 | 10 ^{III} 21 | 4°53 | 6° 5 | 20°23 | 10°17 | S 2 |
| S 3 | 16 46 57 | 12°43'09 | 0 ^{III} 50 | 20° 3 | 1 ^{III} 13 | 29°21 | 17°41 | 18°12 | 14°14 | 10°41 | 10°20 | 4°54 | 6° 2 | 20°30 | 10°21 | S 3 |
| M 4 | 16 50 54 | 13°40'37 | 13° 4 | 20°41 | 2°26 | 29°38 | 17°39 | 18°19 | 14°17 | 10°43 | 10°20 | 4°R54 | 5°59 | 20°37 | 10°24 | M 4 |
| T 5 | 16 54 50 | 14°38'04 | 25° 6 | 21°23 | 3°39 | 29°56 | 17°38 | 18°27 | 14°21 | 10°44 | 10°19 | 4°54 | 5°56 | 20°43 | 10°27 | T 5 |
| W 6 | 16 58 47 | 15°35'30 | 7 ^{III} 1 | 22° 8 | 4°52 | 0 ^{III} 15 | 17°36 | 18°34 | 14°24 | 10°45 | 10°18 | 4°53 | 5°53 | 20°50 | 10°30 | W 6 |
| T 7 | 17 2 43 | 16°32'56 | 18°53 | 22°58 | 6° 6 | 0°34 | 17°35 | 18°41 | 14°28 | 10°46 | 10°18 | 4°51 | 5°49 | 20°57 | 10°34 | T 7 |
| F 8 | 17 6 40 | 17°30'21 | 0 ^{III} 46 | 23°51 | 7°19 | 0°53 | 17°34 | 18°48 | 14°32 | 10°47 | 10°17 | 4°48 | 5°46 | 21° 4 | 10°37 | F 8 |
| S 9 | 17 10 37 | 18°27'45 | 12°44 | 24°47 | 8°32 | 1°13 | 17°33 | 18°55 | 14°35 | 10°49 | 10°16 | 4°46 | 5°43 | 21°10 | 10°40 | S 9 |
| S 10 | 17 14 33 | 19°25'09 | 24°49 | 25°48 | 9°45 | 1°33 | 17°32 | 19° 2 | 14°39 | 10°50 | 10°16 | 4°43 | 5°40 | 21°17 | 10°43 | S 10 |
| M 11 | 17 18 30 | 20°22'32 | 7 ^{III} 3 | 26°51 | 10°58 | 1°54 | 17°31 | 19° 9 | 14°42 | 10°51 | 10°15 | 4°42 | 5°37 | 21°24 | 10°46 | M 11 |
| T 12 | 17 22 26 | 21°19'55 | 19°29 | 27°58 | 12°11 | 2°15 | 17°31 | 19°16 | 14°46 | 10°52 | 10°14 | 4°40 | 5°33 | 21°30 | 10°49 | T 12 |
| W 13 | 17 26 23 | 22°17'17 | 2 ^{III} 7 | 29° 9 | 13°25 | 2°36 | 17°30 | 19°23 | 14°49 | 10°53 | 10°13 | 4°D40 | 5°30 | 21°37 | 10°53 | W 13 |
| T 14 | 17 30 19 | 23°14'38 | 14°58 | 0 ^{III} 23 | 14°38 | 2°58 | 17°D30 | 19°30 | 14°53 | 10°54 | 10°12 | 4°40 | 5°27 | 21°44 | 10°56 | T 14 |
| F 15 | 17 34 16 | 24°11'58 | 28° 2 | 1°39 | 15°51 | 3°20 | 17°31 | 19°37 | 14°56 | 10°55 | 10°12 | 4°41 | 5°24 | 21°51 | 10°59 | F 15 |
| S 16 | 17 38 13 | 25° 9'17 | 11 ^{III} 20 | 3° 0 | 17° 4 | 3°43 | 17°31 | 19°44 | 15° 0 | 10°56 | 10°11 | 4°42 | 5°21 | 21°57 | 11° 2 | S 16 |
| S 17 | 17 42 9 | 26° 6'36 | 24°52 | 4°23 | 18°17 | 4° 6 | 17°31 | 19°50 | 15° 3 | 10°57 | 10°10 | 4°42 | 5°18 | 22° 4 | 11° 4 | S 17 |
| M 18 | 17 46 6 | 27° 3'54 | 8 ^{III} 37 | 5°49 | 19°30 | 4°29 | 17°32 | 19°57 | 15° 7 | 10°57 | 10° 9 | 4°43 | 5°14 | 22°11 | 11° 7 | M 18 |
| T 19 | 17 50 2 | 28° 1'10 | 22°35 | 7°19 | 20°43 | 4°53 | 17°33 | 20° 4 | 15°10 | 10°58 | 10° 8 | 4°R43 | 5°11 | 22°17 | 11°10 | T 19 |
| W 20 | 17 53 59 | 28°58'26 | 6 ^{III} 45 | 8°51 | 21°56 | 5°17 | 17°34 | 20°10 | 15°14 | 10°59 | 10° 7 | 4°43 | 5° 8 | 22°24 | 11°13 | W 20 |
| T 21 | 17 57 55 | 29°55'42 | 21° 5 | 10°27 | 23° 9 | 5°41 | 17°35 | 20°17 | 15°17 | 11° 0 | 10° 6 | 4°43 | 5° 5 | 22°31 | 11°16 | T 21 |
| F 22 | 18 1 52 | 0 ^{III} 52'56 | 5 ^{III} 31 | 12° 5 | 24°21 | 6° 6 | 17°36 | 20°23 | 15°21 | 11° 0 | 10° 5 | 4°43 | 5° 2 | 22°38 | 11°19 | F 22 |
| S 23 | 18 5 48 | 1°50'10 | 19°59 | 13°47 | 25°34 | 6°31 | 17°38 | 20°30 | 15°24 | 11° 1 | 10° 4 | 4°42 | 4°59 | 22°44 | 11°21 | S 23 |
| S 24 | 18 9 45 | 2°47'23 | 4 ^{III} 26 | 15°31 | 26°47 | 6°56 | 17°40 | 20°36 | 15°27 | 11° 2 | 10° 3 | 4°42 | 4°55 | 22°51 | 11°24 | S 24 |
| M 25 | 18 13 42 | 3°44'36 | 18°45 | 17°19 | 28° 0 | 7°22 | 17°42 | 20°43 | 15°31 | 11° 2 | 10° 2 | 4°42 | 4°52 | 22°58 | 11°27 | M 25 |
| T 26 | 18 17 38 | 4°41'49 | 2 ^{III} 52 | 19° 9 | 29°13 | 7°48 | 17°44 | 20°49 | 15°34 | 11° 3 | 10° 1 | 4°42 | 4°49 | 23° 4 | 11°29 | T 26 |
| W 27 | 18 21 35 | 5°39'01 | 16°43 | 21° 2 | 0 ^{III} 25 | 8°14 | 17°46 | 20°55 | 15°38 | 11° 4 | 10° 0 | 4°42 | 4°46 | 23°11 | 11°32 | W 27 |
| T 28 | 18 25 31 | 6°36'13 | 0 ^{III} 44 | 22°57 | 1°38 | 8°41 | 17°48 | 21° 1 | 15°41 | 11° 4 | 9°59 | 4°42 | 4°43 | 23°18 | 11°34 | T 28 |
| F 29 | 18 29 28 | 7°33'25 | 13°25 | 24°55 | 2°51 | 9° 7 | 17°51 | 21° 8 | 15°44 | 11° 5 | 9°58 | 4°42 | 4°39 | 23°25 | 11°37 | F 29 |
| S 30 | 18 33 24 | 8°30'36 | 26 ^{III} 16 | 26 ^{III} 56 | 4 ^{III} 3 | 9°435 | 17°54 | 21 ^{III} 14 | 15 ^{III} 48 | 11 ^{III} 5 | 9°556 | 4°41 | 4°36 | 23°31 | 11°39 | S 30 |

| Day | ☉ | ☾ | | ♀ | | ♀ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | |
|------|-------|-------|------|-------|------|-------|------|------|------|------|------|-------|------|-------|------|------|------|-------|------|-------|-------|-------|-------|------|-----|------|-----|------|-----|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat |
| F 1 | 22n 4 | 16s18 | 2n40 | 13n47 | 3s50 | 24n21 | 0n56 | 1n 9 | 0n44 | 5s39 | 1n26 | 15n10 | 2s 6 | 22n30 | 0n 0 | 2n52 | 1s27 | 23s 2 | 5s36 | 23s21 | 23s18 | 12n32 | 13n55 | 1s 1 | | | | | |
| S 2 | 22 12 | 11 54 | 3 37 | 13 54 | 3 51 | 24 24 | 0 58 | 1 1 | 0 42 | 5 38 | 1 26 | 15 12 | 2 6 | 22 30 | 0 0 | 2 53 | 1 27 | 23 2 | 5 36 | 23 21 | 23 18 | 12 35 | 13 56 | 1 1 | | | | | |
| S 3 | 22 19 | 7 6 | 4 21 | 14 3 | 3 50 | 24 26 | 1 0 | 0 52 | 0 40 | 5 37 | 1 25 | 15 14 | 2 6 | 22 30 | 0 0 | 2 53 | 1 27 | 23 2 | 5 36 | 23 21 | 23 18 | 12 37 | 13 57 | 1 1 | | | | | |
| M 4 | 22 26 | 2 9 | 4 52 | 14 14 | 3 49 | 24 27 | 1 2 | 0 44 | 0 38 | 5 37 | 1 25 | 15 16 | 2 6 | 22 31 | 0 0 | 2 54 | 1 27 | 23 3 | 5 37 | 23 21 | 23 18 | 12 39 | 13 58 | 1 1 | | | | | |
| T 5 | 22 33 | 2n48 | 5 10 | 14 26 | 3 47 | 24 27 | 1 4 | 0 35 | 0 36 | 5 37 | 1 25 | 15 17 | 2 6 | 22 31 | 0 0 | 2 54 | 1 28 | 23 3 | 5 37 | 23 21 | 23 18 | 12 42 | 13 59 | 1 1 | | | | | |
| W 6 | 22 39 | 7 36 | 5 15 | 14 41 | 3 45 | 24 27 | 1 6 | 0 26 | 0 34 | 5 36 | 1 25 | 15 19 | 2 6 | 22 32 | 0 0 | 2 55 | 1 28 | 23 3 | 5 37 | 23 21 | 23 18 | 12 44 | 14 0 | 1 2 | | | | | |
| T 7 | 22 45 | 12 6 | 5 6 | 14 56 | 3 41 | 24 25 | 1 8 | 0 17 | 0 33 | 5 36 | 1 24 | 15 21 | 2 6 | 22 32 | 0 0 | 2 55 | 1 28 | 23 4 | 5 37 | 23 21 | 23 18 | 12 46 | 14 1 | 1 2 | | | | | |
| F 8 | 22 51 | 16 10 | 4 43 | 15 13 | 3 37 | 24 24 | 1 10 | 0 7 | 0 31 | 5 36 | 1 24 | 15 23 | 2 6 | 22 32 | 0 0 | 2 56 | 1 28 | 23 4 | 5 38 | 23 21 | 23 19 | 12 49 | 14 2 | 1 2 | | | | | |
| S 9 | 22 56 | 19 36 | 4 9 | 15 32 | 3 32 | 24 21 | 1 12 | 0s 2 | 0 29 | 5 36 | 1 24 | 15 25 | 2 6 | 22 33 | 0 0 | 2 56 | 1 28 | 23 5 | 5 38 | 23 21 | 23 19 | 12 51 | 14 2 | 1 2 | | | | | |
| S 10 | 23 1 | 22 15 | 3 23 | 15 52 | 3 26 | 24 18 | 1 13 | 0 12 | 0 28 | 5 36 | 1 24 | 15 27 | 2 7 | 22 33 | 0 0 | 2 56 | 1 28 | 23 5 | 5 38 | 23 21 | 23 19 | 12 53 | 14 3 | 1 2 | | | | | |
| M11 | 23 5 | 23 54 | 2 27 | 16 12 | 3 20 | 24 14 | 1 15 | 0 21 | 0 26 | 5 36 | 1 23 | 15 29 | 2 7 | 22 34 | 0 0 | 2 57 | 1 28 | 23 5 | 5 38 | 23 21 | 23 19 | 12 56 | 14 4 | 1 2 | | | | | |
| T 12 | 23 9 | 24 24 | 1 23 | 16 34 | 3 13 | 24 9 | 1 17 | 0 31 | 0 24 | 5 36 | 1 23 | 15 30 | 2 7 | 22 34 | 0 0 | 2 57 | 1 28 | 23 6 | 5 38 | 23 21 | 23 19 | 12 58 | 14 5 | 1 2 | | | | | |
| W13 | 23 13 | 23 39 | 0 14 | 16 57 | 3 6 | 24 4 | 1 19 | 0 41 | 0 23 | 5 36 | 1 23 | 15 32 | 2 7 | 22 35 | 0 0 | 2 57 | 1 28 | 23 6 | 5 39 | 23 21 | 23 19 | 13 0 | 14 6 | 1 2 | | | | | |
| T 14 | 23 16 | 21 39 | 0s57 | 17 20 | 2 58 | 23 58 | 1 20 | 0 51 | 0 21 | 5 36 | 1 22 | 15 34 | 2 7 | 22 35 | 0 0 | 2 58 | 1 28 | 23 7 | 5 39 | 23 21 | 23 19 | 13 3 | 14 7 | 1 3 | | | | | |
| F 15 | 23 19 | 18 30 | 2 6 | 17 44 | 2 49 | 23 51 | 1 22 | 1 2 | 0 19 | 5 36 | 1 22 | 15 36 | 2 7 | 22 35 | 0 0 | 2 58 | 1 28 | 23 7 | 5 39 | 23 21 | 23 20 | 13 5 | 14 8 | 1 3 | | | | | |
| S 16 | 23 21 | 14 20 | 3 9 | 18 8 | 2 40 | 23 43 | 1 23 | 1 12 | 0 18 | 5 37 | 1 22 | 15 38 | 2 7 | 22 36 | 0 0 | 2 58 | 1 28 | 23 8 | 5 39 | 23 21 | 23 20 | 13 7 | 14 8 | 1 3 | | | | | |
| S 17 | 23 23 | 9 24 | 4 3 | 18 33 | 2 30 | 23 35 | 1 25 | 1 23 | 0 16 | 5 37 | 1 22 | 15 39 | 2 7 | 22 36 | 0 0 | 2 59 | 1 28 | 23 8 | 5 39 | 23 21 | 23 20 | 13 10 | 14 9 | 1 3 | | | | | |
| M18 | 23 24 | 3 56 | 4 45 | 18 58 | 2 20 | 23 26 | 1 26 | 1 33 | 0 15 | 5 38 | 1 21 | 15 41 | 2 7 | 22 37 | 0 0 | 2 59 | 1 28 | 23 8 | 5 39 | 23 21 | 23 20 | 13 12 | 14 10 | 1 3 | | | | | |
| T 19 | 23 25 | 1s48 | 5 10 | 19 23 | 2 10 | 23 17 | 1 27 | 1 44 | 0 13 | 5 38 | 1 21 | 15 43 | 2 7 | 22 37 | 0 0 | 2 59 | 1 28 | 23 9 | 5 40 | 23 21 | 23 20 | 13 14 | 14 11 | 1 3 | | | | | |
| W20 | 23 26 | 7 31 | 5 17 | 19 48 | 1 59 | 23 7 | 1 29 | 1 55 | 0 12 | 5 39 | 1 21 | 15 44 | 2 7 | 22 37 | 0 0 | 2 59 | 1 28 | 23 9 | 5 40 | 23 21 | 23 20 | 13 16 | 14 11 | 1 3 | | | | | |
| T 21 | 23 26 | 12 55 | 5 4 | 20 13 | 1 49 | 22 56 | 1 30 | 2 6 | 0 10 | 5 40 | 1 21 | 15 46 | 2 7 | 22 38 | 0 0 | 3 0 | 1 28 | 23 10 | 5 40 | 23 21 | 23 20 | 13 19 | 14 12 | 1 3 | | | | | |
| F 22 | 23 26 | 17 38 | 4 32 | 20 38 | 1 37 | 22 44 | 1 31 | 2 17 | 0 9 | 5 40 | 1 20 | 15 48 | 2 8 | 22 38 | 0 0 | 3 0 | 1 28 | 23 10 | 5 40 | 23 21 | 23 20 | 13 21 | 14 13 | 1 3 | | | | | |
| S 23 | 23 25 | 21 19 | 3 43 | 21 2 | 1 26 | 22 32 | 1 32 | 2 28 | 0 8 | 5 41 | 1 20 | 15 49 | 2 8 | 22 38 | 0 0 | 3 0 | 1 28 | 23 11 | 5 40 | 23 21 | 23 21 | 13 23 | 14 14 | 1 4 | | | | | |
| S 24 | 23 24 | 23 39 | 2 40 | 21 25 | 1 14 | 22 19 | 1 33 | 2 40 | 0 6 | 5 42 | 1 20 | 15 51 | 2 8 | 22 39 | 0 0 | 3 0 | 1 29 | 23 11 | 5 41 | 23 21 | 23 21 | 13 26 | 14 14 | 1 4 | | | | | |
| M25 | 23 23 | 24 25 | 1 27 | 21 48 | 1 2 | 22 6 | 1 34 | 2 51 | 0 5 | 5 43 | 1 19 | 15 52 | 2 8 | 22 39 | 0 0 | 3 1 | 1 29 | 23 12 | 5 41 | 23 21 | 23 21 | 13 28 | 14 15 | 1 4 | | | | | |
| T 26 | 23 21 | 23 34 | 0 10 | 22 9 | 0 51 | 21 52 | 1 35 | 3 2 | 0 3 | 5 44 | 1 19 | 15 54 | 2 8 | 22 40 | 0 0 | 3 1 | 1 29 | 23 12 | 5 41 | 23 21 | 23 21 | 13 30 | 14 16 | 1 4 | | | | | |
| W27 | 23 19 | 21 18 | 1n 6 | 22 29 | 0 39 | 21 37 | 1 36 | 3 14 | 0 2 | 5 45 | 1 19 | 15 55 | 2 8 | 22 40 | 0 0 | 3 1 | 1 29 | 23 12 | 5 41 | 23 21 | 23 21 | 13 32 | 14 16 | 1 4 | | | | | |
| T 28 | 23 16 | 17 52 | 2 17 | 22 48 | 0 27 | 21 22 | 1 37 | 3 26 | 0 1 | 5 46 | 1 19 | 15 57 | 2 8 | 22 40 | 0 0 | 3 1 | 1 29 | 23 13 | 5 41 | 23 21 | 23 21 | 13 35 | 14 17 | 1 4 | | | | | |
| F 29 | 23 13 | 13 37 | 3 19 | 23 5 | 0 15 | 21 6 | 1 37 | 3 38 | 0s 1 | 5 48 | 1 18 | 15 58 | 2 8 | 22 41 | 0 0 | 3 1 | 1 29 | 23 13 | 5 41 | 23 21 | 23 21 | 13 37 | 14 18 | 1 4 | | | | | |
| S 30 | 23n10 | 8s52 | 4n 8 | 23n20 | 0s 4 | 20n50 | 1n38 | 3s49 | 0s 2 | 5s49 | 1n18 | 16n 0 | 2s 8 | 22n41 | 0n 0 | 3n 1 | 1s29 | 23s14 | 5s42 | 23s21 | 23s21 | 13n39 | 14n18 | 1s 4 | | | | | |

ASTRODIENST EPHEMERIS for the year 2029

geocentric

JULY 2029

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------|-------|-------|-------|-------|-------|--------|-------|--------|-------|-------|------|-------|--------|------|
| S 1 | 18 37 21 | 9°27'48 | 8°48 | 28°58 | 5°16 | 10°2 | 17°56 | 21°820 | 15°51 | 11°6 | 9°R55 | 4°R41 | 4°33 | 23°38 | 11°842 | S 1 |
| M 2 | 18 41 17 | 10°25'00 | 21° 4 | 18° 2 | 6°29 | 10°30 | 18° 0 | 21°26 | 15°54 | 11° 6 | 9°554 | 4°340 | 4°30 | 23°45 | 11°44 | M 2 |
| T 3 | 18 45 14 | 11°22'12 | 3°9 | 3° 8 | 7°41 | 10°57 | 18° 3 | 21°32 | 15°58 | 11° 6 | 9°53 | 4°40 | 4°27 | 23°52 | 11°46 | T 3 |
| W 4 | 18 49 11 | 12°19'24 | 15° 5 | 5°16 | 8°54 | 11°26 | 18° 6 | 21°37 | 16° 1 | 11° 7 | 9°52 | 4°D40 | 4°24 | 23°58 | 11°49 | W 4 |
| T 5 | 18 53 7 | 13°16'36 | 26°58 | 7°24 | 10° 6 | 11°54 | 18°10 | 21°43 | 16° 4 | 11° 7 | 9°51 | 4°40 | 4°20 | 24° 5 | 11°51 | T 5 |
| F 6 | 18 57 4 | 14°13'49 | 8°52 | 9°33 | 11°19 | 12°23 | 18°14 | 21°49 | 16° 7 | 11° 7 | 9°49 | 4°41 | 4°17 | 24°12 | 11°53 | F 6 |
| S 7 | 19 1 0 | 15°11'02 | 20°52 | 11°43 | 12°31 | 12°52 | 18°17 | 21°55 | 16°11 | 11° 8 | 9°48 | 4°42 | 4°14 | 24°18 | 11°55 | S 7 |
| S 8 | 19 4 57 | 16° 8'15 | 3°11 | 13°53 | 13°44 | 13°21 | 18°22 | 22° 0 | 16°14 | 11° 8 | 9°47 | 4°43 | 4°11 | 24°25 | 11°57 | S 8 |
| M 9 | 19 8 53 | 17° 5'29 | 15°23 | 16° 3 | 14°56 | 13°50 | 18°26 | 22° 6 | 16°17 | 11° 8 | 9°46 | 4°44 | 4° 8 | 24°32 | 11°59 | M 9 |
| T 10 | 19 12 50 | 18° 2'43 | 28° 1 | 18°13 | 16° 9 | 14°20 | 18°30 | 22°11 | 16°20 | 11° 8 | 9°44 | 4°44 | 4° 5 | 24°39 | 12° 1 | T 10 |
| W11 | 19 16 46 | 18°59'57 | 10°56 | 20°22 | 17°21 | 14°50 | 18°35 | 22°17 | 16°23 | 11° 8 | 9°43 | 4°R44 | 4° 1 | 24°45 | 12° 3 | W11 |
| T 12 | 19 20 43 | 19°57'11 | 24° 9 | 22°31 | 18°33 | 15°20 | 18°39 | 22°22 | 16°26 | 11° 8 | 9°42 | 4°43 | 3°58 | 24°52 | 12° 5 | T 12 |
| F 13 | 19 24 40 | 20°54'26 | 7°13 | 24°38 | 19°46 | 15°51 | 18°44 | 22°27 | 16°29 | 11° 8 | 9°41 | 4°42 | 3°55 | 24°59 | 12° 7 | F 13 |
| S 14 | 19 28 36 | 21°51'40 | 21°22 | 26°45 | 20°58 | 16°21 | 18°49 | 22°32 | 16°32 | 11°R 8 | 9°39 | 4°40 | 3°52 | 25° 5 | 12° 9 | S 14 |
| S 15 | 19 32 33 | 22°48'55 | 5°18 | 28°50 | 22°10 | 16°52 | 18°54 | 22°37 | 16°35 | 11° 8 | 9°38 | 4°38 | 3°49 | 25°12 | 12°11 | S 15 |
| M16 | 19 36 29 | 23°46'10 | 19°23 | 0°53 | 23°22 | 17°23 | 19° 0 | 22°42 | 16°38 | 11° 8 | 9°37 | 4°35 | 3°45 | 25°19 | 12°12 | M16 |
| T 17 | 19 40 26 | 24°43'25 | 3°48 | 2°55 | 24°35 | 17°55 | 19° 5 | 22°47 | 16°41 | 11° 8 | 9°35 | 4°34 | 3°42 | 25°26 | 12°14 | T 17 |
| W18 | 19 44 22 | 25°40'40 | 17°48 | 4°56 | 25°47 | 18°26 | 19°11 | 22°52 | 16°44 | 11° 8 | 9°34 | 4°33 | 3°39 | 25°32 | 12°16 | W18 |
| T 19 | 19 48 19 | 26°37'55 | 2°13 | 6°55 | 26°59 | 18°58 | 19°17 | 22°57 | 16°47 | 11° 8 | 9°33 | 4°D32 | 3°36 | 25°39 | 12°17 | T 19 |
| F 20 | 19 52 15 | 27°35'10 | 16°13 | 8°52 | 28°11 | 19°30 | 19°22 | 23° 2 | 16°50 | 11° 8 | 9°31 | 4°33 | 3°33 | 25°46 | 12°19 | F 20 |
| S 21 | 19 56 12 | 28°32'26 | 0°20 | 10°47 | 29°23 | 20° 2 | 19°29 | 23° 6 | 16°53 | 11° 8 | 9°30 | 4°35 | 3°30 | 25°52 | 12°20 | S 21 |
| S 22 | 20 0 9 | 29°29'41 | 14°20 | 12°41 | 0°35 | 20°34 | 19°35 | 23°11 | 16°56 | 11° 7 | 9°29 | 4°36 | 3°26 | 25°59 | 12°22 | S 22 |
| M23 | 20 4 5 | 0°26'58 | 28°12 | 14°33 | 1°47 | 21° 7 | 19°41 | 23°16 | 16°59 | 11° 7 | 9°27 | 4°R37 | 3°23 | 26° 6 | 12°23 | M23 |
| T 24 | 20 8 2 | 1°24'14 | 11°53 | 16°23 | 2°59 | 21°39 | 19°48 | 23°20 | 17° 1 | 11° 7 | 9°26 | 4°37 | 3°20 | 26°13 | 12°24 | T 24 |
| W25 | 20 11 58 | 2°21'31 | 25°22 | 18°12 | 4°11 | 22°12 | 19°54 | 23°24 | 17° 4 | 11° 7 | 9°25 | 4°35 | 3°17 | 26°19 | 12°26 | W25 |
| T 26 | 20 15 55 | 3°18'49 | 8°37 | 19°58 | 5°22 | 22°45 | 20° 1 | 23°28 | 17° 7 | 11° 6 | 9°23 | 4°33 | 3°14 | 26°26 | 12°27 | T 26 |
| F 27 | 20 19 51 | 4°16'07 | 21°36 | 21°43 | 6°34 | 23°19 | 20° 8 | 23°33 | 17°10 | 11° 6 | 9°22 | 4°29 | 3°11 | 26°33 | 12°28 | F 27 |
| S 28 | 20 23 48 | 5°13'26 | 4°19 | 23°26 | 7°46 | 23°52 | 20°15 | 23°37 | 17°12 | 11° 5 | 9°20 | 4°24 | 3° 7 | 26°39 | 12°29 | S 28 |
| S 29 | 20 27 44 | 6°10'46 | 16°47 | 25° 8 | 8°58 | 24°26 | 20°22 | 23°41 | 17°15 | 11° 5 | 9°19 | 4°19 | 3° 4 | 26°46 | 12°30 | S 29 |
| M30 | 20 31 41 | 7° 8'07 | 29° 2 | 26°47 | 10° 9 | 25° 0 | 20°29 | 23°45 | 17°17 | 11° 4 | 9°18 | 4°14 | 3° 1 | 26°53 | 12°31 | M30 |
| T 31 | 20 35 38 | 8° 5'29 | 11°5 | 28°25 | 11°21 | 25°34 | 20°37 | 23°48 | 17°20 | 11°4 | 9°16 | 4°10 | 2°58 | 26°59 | 12°32 | T 31 |

| Day | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|-------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|------|------|
| S 1 | 23n 6 | 3s52 | 4n45 | 23n33 | 0n 7 | 20n33 | 1n39 | 4s 1 | 0s 3 | 5s50 | 1n18 | 16n 1 | 2s 9 | 22n41 | 0n 0 | S 1 |
| M 2 | 23 2 | 1n11 | 5 8 | 23 44 | 0 18 | 20 15 | 1 39 | 4 13 | 0 4 | 5 52 | 1 18 | 16 3 | 2 9 | 22 42 | 0 0 | M 2 |
| T 3 | 22 57 | 6 5 | 5 17 | 23 53 | 0 29 | 19 57 | 1 40 | 4 25 | 0 6 | 5 53 | 1 17 | 16 4 | 2 9 | 22 42 | 0 0 | T 3 |
| W 4 | 22 52 | 10 43 | 5 12 | 23 59 | 0 39 | 19 38 | 1 40 | 4 38 | 0 7 | 5 55 | 1 17 | 16 5 | 2 9 | 22 42 | 0 0 | W 4 |
| T 5 | 22 46 | 14 56 | 4 53 | 24 2 | 0 48 | 19 19 | 1 40 | 4 50 | 0 8 | 5 56 | 1 17 | 16 7 | 2 9 | 22 43 | 0 0 | T 5 |
| F 6 | 22 41 | 18 35 | 4 22 | 24 2 | 0 57 | 18 59 | 1 40 | 5 2 | 0 9 | 5 58 | 1 17 | 16 8 | 2 9 | 22 43 | 0 0 | F 6 |
| S 7 | 22 34 | 21 30 | 3 40 | 24 0 | 1 5 | 18 39 | 1 41 | 5 15 | 0 11 | 6 0 | 1 16 | 16 9 | 2 9 | 22 44 | 0 0 | S 7 |
| S 8 | 22 28 | 23 29 | 2 47 | 23 55 | 1 13 | 18 18 | 1 41 | 5 27 | 0 12 | 6 1 | 1 16 | 16 11 | 2 10 | 22 44 | 0 0 | S 8 |
| M 9 | 22 21 | 24 22 | 1 45 | 23 48 | 1 20 | 17 57 | 1 41 | 5 40 | 0 13 | 6 3 | 1 16 | 16 12 | 2 10 | 22 44 | 0 0 | M 9 |
| T 10 | 22 13 | 24 2 | 0 37 | 23 37 | 1 26 | 17 35 | 1 40 | 5 52 | 0 14 | 6 5 | 1 16 | 16 13 | 2 10 | 22 45 | 0 0 | T 10 |
| W11 | 22 5 | 22 25 | 0s34 | 23 24 | 1 32 | 17 13 | 1 40 | 6 5 | 0 15 | 6 7 | 1 15 | 16 14 | 2 10 | 22 45 | 0 0 | W11 |
| T 12 | 21 57 | 19 33 | 1 45 | 23 8 | 1 36 | 16 51 | 1 40 | 6 17 | 0 16 | 6 9 | 1 15 | 16 16 | 2 10 | 22 45 | 0 0 | T 12 |
| F 13 | 21 49 | 15 36 | 2 52 | 22 50 | 1 40 | 16 28 | 1 40 | 6 30 | 0 18 | 6 11 | 1 15 | 16 17 | 2 10 | 22 45 | 0 0 | F 13 |
| S 14 | 21 40 | 10 45 | 3 50 | 22 30 | 1 44 | 16 4 | 1 39 | 6 43 | 0 19 | 6 13 | 1 15 | 16 18 | 2 10 | 22 46 | 0 0 | S 14 |
| S 15 | 21 30 | 5 18 | 4 35 | 22 7 | 1 46 | 15 40 | 1 39 | 6 56 | 0 20 | 6 15 | 1 14 | 16 19 | 2 11 | 22 46 | 0 1 | S 15 |
| M16 | 21 21 | 0s27 | 5 4 | 21 43 | 1 48 | 15 16 | 1 38 | 7 9 | 0 21 | 6 18 | 1 14 | 16 20 | 2 11 | 22 46 | 0 1 | M16 |
| T 17 | 21 11 | 6 54 | 5 15 | 21 16 | 1 49 | 14 51 | 1 37 | 7 22 | 0 22 | 6 20 | 1 14 | 16 21 | 2 11 | 22 47 | 0 1 | T 17 |
| W18 | 21 0 | 11 42 | 5 6 | 20 48 | 1 49 | 14 26 | 1 37 | 7 35 | 0 23 | 6 22 | 1 14 | 16 22 | 2 11 | 22 47 | 0 1 | W18 |
| T 19 | 20 50 | 16 33 | 4 39 | 20 18 | 1 49 | 14 1 | 1 36 | 7 48 | 0 24 | 6 25 | 1 13 | 16 23 | 2 11 | 22 47 | 0 1 | T 19 |
| F 20 | 20 38 | 20 26 | 3 55 | 19 46 | 1 48 | 13 35 | 1 35 | 8 1 | 0 25 | 6 27 | 1 13 | 16 24 | 2 11 | 22 48 | 0 1 | F 20 |
| S 21 | 20 27 | 23 6 | 2 57 | 19 13 | 1 46 | 13 9 | 1 34 | 8 14 | 0 26 | 6 30 | 1 13 | 16 25 | 2 12 | 22 48 | 0 1 | S 21 |
| S 22 | 20 15 | 24 19 | 1 49 | 18 39 | 1 44 | 12 43 | 1 33 | 8 27 | 0 27 | 6 32 | 1 13 | 16 26 | 2 12 | 22 48 | 0 1 | S 22 |
| M23 | 20 3 | 24 1 | 0 35 | 18 4 | 1 41 | 12 16 | 1 32 | 8 40 | 0 28 | 6 35 | 1 12 | 16 27 | 2 12 | 22 48 | 0 1 | M23 |
| T 24 | 19 51 | 22 15 | 0n40 | 17 28 | 1 37 | 11 49 | 1 31 | 8 53 | 0 29 | 6 38 | 1 12 | 16 28 | 2 12 | 22 49 | 0 1 | T 24 |
| W25 | 19 38 | 19 14 | 1 51 | 16 51 | 1 34 | 11 22 | 1 29 | 9 7 | 0 30 | 6 40 | 1 12 | 16 29 | 2 12 | 22 49 | 0 1 | W25 |
| T 26 | 19 25 | 15 17 | 2 55 | 16 14 | 1 29 | 10 54 | 1 28 | 9 20 | 0 31 | 6 43 | 1 12 | 16 30 | 2 12 | 22 49 | 0 1 | T 26 |
| F 27 | 19 11 | 10 41 | 3 49 | 15 36 | 1 24 | 10 26 | 1 26 | 9 33 | 0 32 | 6 46 | 1 11 | 16 31 | 2 13 | 22 50 | 0 1 | F 27 |
| S 28 | 18 58 | 5 44 | 4 30 | 14 57 | 1 19 | 9 58 | 1 25 | 9 46 | 0 33 | 6 49 | 1 11 | 16 32 | 2 13 | 22 50 | 0 1 | S 28 |
| S 29 | 18 44 | 0 39 | 4 57 | 14 18 | 1 13 | 9 30 | 1 23 | 9 59 | 0 34 | 6 52 | 1 11 | 16 33 | 2 13 | 22 50 | 0 1 | S 29 |
| M30 | 18 29 | 4n21 | 5 10 | 13 38 | 1 7 | 9 1 | 1 22 | 10 13 | 0 35 | 6 54 | 1 11 | 16 33 | 2 13 | 22 50 | 0 1 | M30 |
| T 31 | 18n14 | 9n 7 | 5n 9 | 12n58 | 1n 0 | 8n32 | 1n20 | 10s26 | 0s36 | 6s57 | 1n11 | 16n34 | 2s13 | 22n51 | 0n 1 | T 31 |

Julian Day Number = 2462318.5, Delta T = 69.16 sec
 Ecliptic obliquity = 23°26'08, Nutation = 0°00'18, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 25°09'08, Lahiri = 24°16'09

ASTRODIENST EPHEMERIS for the year 2029

geocentric

SEPTEMBER 2029

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------------------|--------------------|--------------------|-------------------|-------------------|--------------------|--------------------|--------------------|---------------------|--------------------|--------------------|--------------------|-------------------|---------------------|------|
| S 1 | 22 41 47 | 8 ^m 51°13 | 6 ^h 45 | 1 ^h 43 | 19 ^h 5 | 15 ^m 4 | 25 ^h 32 | 25 ^h 0 | 18 ^h 20 | 10 ^h R33 | 8 ^h R34 | 2 ^h D12 | 1 ^h 316 | 0 ^h 34 | 12 ^h R33 | S 1 |
| S 2 | 22 45 44 | 9°49'17 | 18°54 | 1°49 | 20°14 | 15°43 | 25°42 | 25° 0 | 18°21 | 10 ^h Y31 | 8 ^h 33 | 2 ^h 312 | 1°13 | 0°41 | 12 ^h 32 | S 2 |
| M 3 | 22 49 40 | 10°47'23 | 1 ^h 518 | 1°R49 | 21°24 | 16°22 | 25°53 | 25° 1 | 18°22 | 10°30 | 8°32 | 2°R13 | 1°10 | 0°48 | 12°31 | M 3 |
| T 4 | 22 53 37 | 11°45'31 | 14° 4 | 1°43 | 22°33 | 17° 1 | 26° 4 | 25° 1 | 18°23 | 10°28 | 8°31 | 2°12 | 1° 7 | 0°54 | 12°30 | T 4 |
| W 5 | 22 57 34 | 12°43'41 | 23° 15 | 1°31 | 23°43 | 17°40 | 26°15 | 25° 1 | 18°24 | 10°27 | 8°30 | 2°10 | 1° 3 | 1° 1 | 12°29 | W 5 |
| T 6 | 23 1 130 | 13°41'53 | 10 ^h 54 | 1°13 | 24°52 | 18°20 | 26°26 | 25°R 1 | 18°25 | 10°26 | 8°29 | 2° 5 | 1° 0 | 1° 8 | 12°28 | T 6 |
| F 7 | 23 5 27 | 14°40'06 | 24°59 | 0°48 | 26° 1 | 18°59 | 26°37 | 25° 1 | 18°26 | 10°24 | 8°28 | 1°57 | 0°57 | 1°14 | 12°26 | F 7 |
| S 8 | 23 9 23 | 15°38'22 | 9 ^m 29 | 0°16 | 27°11 | 19°39 | 26°49 | 25° 1 | 18°27 | 10°23 | 8°27 | 1°48 | 0°54 | 1°21 | 12°25 | S 8 |
| S 9 | 23 13 20 | 16°36'39 | 24°17 | 29 ^m 39 | 28°20 | 20°18 | 27° 0 | 25° 1 | 18°28 | 10°21 | 8°26 | 1°37 | 0°51 | 1°28 | 12°24 | S 9 |
| M10 | 23 17 16 | 17°34'58 | 9 ^h 14 | 28°56 | 29°29 | 20°58 | 27°11 | 25° 0 | 18°28 | 10°20 | 8°25 | 1°26 | 0°48 | 1°34 | 12°22 | M10 |
| T 11 | 23 21 13 | 18°33'18 | 24°10 | 28° 7 | 0 ^m 38 | 21°38 | 27°23 | 25° 0 | 18°29 | 10°18 | 8°24 | 1°17 | 0°44 | 1°41 | 12°21 | T 11 |
| W12 | 23 25 9 | 19°31'41 | 8 ^m 59 | 27°13 | 1°46 | 22°18 | 27°34 | 24°59 | 18°30 | 10°17 | 8°23 | 1°10 | 0°41 | 1°48 | 12°20 | W12 |
| T 13 | 23 29 6 | 20°30'04 | 23°32 | 26°16 | 2°55 | 22°58 | 27°46 | 24°59 | 18°30 | 10°15 | 8°22 | 1° 5 | 0°38 | 1°55 | 12°18 | T 13 |
| F 14 | 23 33 3 | 21°28'30 | 7 ^h 46 | 25°15 | 4° 4 | 23°39 | 27°57 | 24°58 | 18°31 | 10°14 | 8°21 | 1° 3 | 0°35 | 2° 1 | 12°17 | F 14 |
| S 15 | 23 36 59 | 22°26'57 | 21°40 | 24°14 | 5°12 | 24°19 | 28° 9 | 24°57 | 18°31 | 10°12 | 8°20 | 1°D 3 | 0°32 | 2° 8 | 12°15 | S 15 |
| S 16 | 23 40 56 | 23°25'26 | 5 ^h 313 | 23°11 | 6°21 | 24°59 | 28°21 | 24°56 | 18°32 | 10°10 | 8°19 | 1°R 3 | 0°28 | 2°15 | 12°13 | S 16 |
| M17 | 23 44 52 | 24°23'56 | 18°29 | 22°10 | 7°29 | 25°40 | 28°33 | 24°55 | 18°32 | 10° 9 | 8°18 | 1° 2 | 0°25 | 2°21 | 12°12 | M17 |
| T 18 | 23 48 49 | 25°22'28 | 1 ^h 30 | 21°12 | 8°37 | 26°21 | 28°44 | 24°54 | 18°32 | 10° 7 | 8°17 | 0°59 | 0°22 | 2°28 | 12°10 | T 18 |
| W19 | 23 52 45 | 26°21'01 | 14°17 | 20°18 | 9°45 | 27° 2 | 28°56 | 24°53 | 18°33 | 10° 6 | 8°16 | 0°54 | 0°19 | 2°35 | 12° 8 | W19 |
| T 20 | 23 56 42 | 27°19'37 | 26°53 | 19°29 | 10°53 | 27°42 | 29° 8 | 24°51 | 18°33 | 10° 4 | 8°16 | 0°45 | 0°16 | 2°41 | 12° 6 | T 20 |
| F 21 | 0 0 38 | 28°18'13 | 9 ^h 19 | 18°47 | 12° 1 | 28°24 | 29°20 | 24°50 | 18°33 | 10° 2 | 8°15 | 0°34 | 0°13 | 2°48 | 12° 5 | F 21 |
| S 22 | 0 4 35 | 29°16'52 | 21°36 | 18°13 | 13° 9 | 29° 5 | 29°32 | 24°48 | 18°33 | 10° 1 | 8°14 | 0°21 | 0° 9 | 2°55 | 12° 3 | S 22 |
| S 23 | 0 8 31 | 0 ^h 15'33 | 3 ^h Y44 | 17°48 | 14°16 | 29°46 | 29°45 | 24°46 | 18°33 | 9°59 | 8°13 | 0° 7 | 0° 6 | 3° 2 | 12° 1 | S 23 |
| M24 | 0 12 28 | 1°14'16 | 15°46 | 17°33 | 15°24 | 0 ^h 27 | 29°57 | 24°44 | 18°R33 | 9°58 | 8°13 | 29 ^h 53 | 0° 3 | 3° 8 | 11°59 | M24 |
| T 25 | 0 16 25 | 2°13'00 | 27°41 | 17°D27 | 16°31 | 1° 9 | 0 ^m 9 | 24°43 | 18°33 | 9°56 | 8°12 | 29°40 | 29 ^h 57 | 3°15 | 11°57 | T 25 |
| W26 | 0 20 21 | 3°11'47 | 9 ^h 32 | 17°31 | 17°38 | 1°50 | 0°21 | 24°41 | 18°33 | 9°54 | 8°11 | 29°30 | 29°57 | 3°22 | 11°55 | W26 |
| T 27 | 0 24 18 | 4°10'36 | 21°21 | 17°45 | 18°45 | 2°32 | 0°34 | 24°38 | 18°33 | 9°53 | 8°11 | 29°23 | 29°54 | 3°28 | 11°52 | T 27 |
| F 28 | 0 28 14 | 5° 9'27 | 3 ^h 11 | 18° 9 | 19°52 | 3°13 | 0°46 | 24°36 | 18°33 | 9°51 | 8°10 | 29°18 | 29°50 | 3°35 | 11°50 | F 28 |
| S 29 | 0 32 11 | 6° 8'21 | 15° 7 | 18°43 | 20°59 | 3°55 | 0°58 | 24°34 | 18°32 | 9°49 | 8° 9 | 29°16 | 29°47 | 3°42 | 11°48 | S 29 |
| S 30 | 0 36 7 | 7 ^h 17 | 27 ^h 13 | 19 ^m 25 | 22 ^m 5 | 4 ^h 37 | 1 ^m 11 | 24 ^h 32 | 18 ^h 32 | 9 ^h Y48 | 8 ^h 9 | 29°D15 | 29 ^h 44 | 3 ^h 48 | 11 ^h 46 | S 30 |

| Day | ☉ | ☾ | | ♀ | | ♀ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | |
|------|------|-------|------|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|-------|-------|-------|------|-----|------|-----|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat |
| S 1 | 8n15 | 23n35 | 2n11 | 4s16 | 3s54 | 7s41 | 0s14 | 17s18 | 0s59 | 8s52 | 1n 5 | 16n45 | 2s20 | 22n56 | 0n 1 | 2n46 | 1s32 | 23s41 | 5s47 | 23s25 | 23s26 | 15n52 | 14n26 | 1s13 | | | |
| S 2 | 7 53 | 24 8 | 1 10 | 4 24 | 4 0 | 8 11 | 0 18 | 17 30 | 1 0 | 8 56 | 1 4 | 16 45 | 2 20 | 22 56 | 0 1 | 2 45 | 1 32 | 23 41 | 5 47 | 23 25 | 23 26 | 15 54 | 14 26 | 1 14 | | | |
| M 3 | 7 31 | 23 31 | 0 5 | 4 29 | 4 6 | 8 41 | 0 22 | 17 42 | 1 0 | 9 0 | 1 4 | 16 45 | 2 20 | 22 57 | 0 1 | 2 45 | 1 32 | 23 42 | 5 47 | 23 25 | 23 26 | 15 56 | 14 25 | 1 14 | | | |
| T 4 | 7 9 | 21 39 | 1s 3 | 4 31 | 4 11 | 9 10 | 0 26 | 17 53 | 1 1 | 9 4 | 1 4 | 16 45 | 2 20 | 22 57 | 0 1 | 2 44 | 1 32 | 23 42 | 5 47 | 23 25 | 23 26 | 15 58 | 14 25 | 1 14 | | | |
| W 5 | 6 47 | 18 36 | 2 9 | 4 30 | 4 15 | 9 40 | 0 30 | 18 5 | 1 1 | 9 8 | 1 4 | 16 45 | 2 21 | 22 57 | 0 1 | 2 43 | 1 32 | 23 42 | 5 47 | 23 25 | 23 26 | 16 0 | 14 24 | 1 14 | | | |
| T 6 | 6 25 | 14 27 | 3 10 | 4 25 | 4 18 | 10 9 | 0 34 | 18 17 | 1 2 | 9 12 | 1 4 | 16 44 | 2 21 | 22 57 | 0 1 | 2 43 | 1 32 | 23 43 | 5 47 | 23 25 | 23 26 | 16 2 | 14 24 | 1 14 | | | |
| F 7 | 6 2 | 9 24 | 4 1 | 4 16 | 4 19 | 10 38 | 0 38 | 18 28 | 1 3 | 9 17 | 1 4 | 16 44 | 2 21 | 22 57 | 0 1 | 2 42 | 1 32 | 23 43 | 5 46 | 23 25 | 23 26 | 16 4 | 14 23 | 1 14 | | | |
| S 8 | 5 40 | 3 42 | 4 39 | 4 4 | 4 19 | 11 7 | 0 42 | 18 39 | 1 3 | 9 21 | 1 4 | 16 44 | 2 21 | 22 57 | 0 1 | 2 42 | 1 32 | 23 43 | 5 46 | 23 25 | 23 26 | 16 6 | 14 23 | 1 14 | | | |
| S 9 | 5 17 | 2s18 | 4 59 | 3 47 | 4 17 | 11 35 | 0 46 | 18 51 | 1 4 | 9 25 | 1 3 | 16 44 | 2 21 | 22 57 | 0 1 | 2 41 | 1 32 | 23 43 | 5 46 | 23 26 | 23 26 | 16 8 | 14 22 | 1 15 | | | |
| M10 | 4 54 | 8 13 | 4 58 | 3 27 | 4 14 | 12 4 | 0 50 | 19 2 | 1 4 | 9 29 | 1 3 | 16 43 | 2 22 | 22 57 | 0 1 | 2 40 | 1 32 | 23 44 | 5 46 | 23 26 | 23 26 | 16 10 | 14 22 | 1 15 | | | |
| T 11 | 4 32 | 13 40 | 4 38 | 3 3 | 4 8 | 12 32 | 0 54 | 19 13 | 1 5 | 9 33 | 1 3 | 16 43 | 2 22 | 22 57 | 0 1 | 2 40 | 1 32 | 23 44 | 5 46 | 23 26 | 23 26 | 16 12 | 14 21 | 1 15 | | | |
| W12 | 4 9 | 18 15 | 3 59 | 2 35 | 4 1 | 13 0 | 0 58 | 19 24 | 1 5 | 9 38 | 1 3 | 16 43 | 2 22 | 22 57 | 0 1 | 2 39 | 1 32 | 23 44 | 5 46 | 23 26 | 23 26 | 16 14 | 14 21 | 1 15 | | | |
| T 13 | 3 46 | 21 38 | 3 4 | 2 4 | 3 52 | 13 27 | 1 2 | 19 34 | 1 6 | 9 42 | 1 3 | 16 42 | 2 22 | 22 57 | 0 1 | 2 39 | 1 32 | 23 44 | 5 46 | 23 26 | 23 26 | 16 16 | 14 20 | 1 15 | | | |
| F 14 | 3 23 | 23 34 | 2 0 | 1 30 | 3 41 | 13 55 | 1 6 | 19 45 | 1 6 | 9 46 | 1 3 | 16 42 | 2 22 | 22 57 | 0 1 | 2 38 | 1 32 | 23 44 | 5 46 | 23 26 | 23 26 | 16 18 | 14 19 | 1 15 | | | |
| S 15 | 3 0 | 24 0 | 0 49 | 0 54 | 3 28 | 14 22 | 1 11 | 19 55 | 1 7 | 9 50 | 1 3 | 16 42 | 2 23 | 22 57 | 0 1 | 2 37 | 1 32 | 23 45 | 5 46 | 23 26 | 23 26 | 16 19 | 14 19 | 1 15 | | | |
| S 16 | 2 37 | 22 58 | 0n22 | 0 16 | 3 14 | 14 49 | 1 15 | 20 6 | 1 7 | 9 55 | 1 2 | 16 41 | 2 23 | 22 58 | 0 1 | 2 37 | 1 32 | 23 45 | 5 46 | 23 26 | 23 26 | 16 21 | 14 18 | 1 16 | | | |
| M17 | 2 13 | 20 40 | 1 31 | 0n23 | 2 57 | 15 15 | 1 19 | 20 16 | 1 8 | 9 59 | 1 2 | 16 41 | 2 23 | 22 58 | 0 1 | 2 36 | 1 32 | 23 45 | 5 46 | 23 26 | 23 26 | 16 23 | 14 18 | 1 16 | | | |
| T 18 | 1 50 | 17 20 | 2 33 | 1 2 | 2 40 | 15 41 | 1 23 | 20 26 | 1 8 | 10 3 | 1 2 | 16 40 | 2 23 | 22 58 | 0 1 | 2 35 | 1 32 | 23 45 | 5 46 | 23 26 | 23 26 | 16 25 | 14 17 | 1 16 | | | |
| W19 | 1 27 | 13 14 | 3 27 | 1 41 | 2 21 | 16 7 | 1 27 | 20 36 | 1 8 | 10 8 | 1 2 | 16 40 | 2 23 | 22 58 | 0 1 | 2 35 | 1 32 | 23 45 | 5 46 | 23 26 | 23 26 | 16 27 | 14 16 | 1 16 | | | |
| T 20 | 1 4 | 8 38 | 4 10 | 2 18 | 2 2 | 16 32 | 1 32 | 20 46 | 1 9 | 10 12 | 1 2 | 16 39 | 2 24 | 22 58 | 0 1 | 2 34 | 1 33 | 23 46 | 5 46 | 23 26 | 23 26 | 16 29 | 14 16 | 1 16 | | | |
| F 21 | 0 40 | 3 45 | 4 40 | 2 52 | 1 42 | 16 57 | 1 36 | 20 56 | 1 9 | 10 16 | 1 2 | 16 39 | 2 24 | 22 58 | 0 1 | 2 33 | 1 33 | 23 46 | 5 46 | 23 26 | 23 26 | 16 31 | 14 15 | 1 16 | | | |
| S 22 | 0 17 | 1n12 | 4 56 | 3 24 | 1 22 | 17 22 | 1 40 | 21 5 | 1 10 | 10 21 | 1 2 | 16 38 | 2 24 | 22 58 | 0 1 | 2 33 | 1 33 | 23 46 | 5 46 | 23 26 | 23 26 | 16 33 | 14 14 | 1 16 | | | |
| S 23 | 0s 6 | 6 3 | 4 59 | 3 52 | 1 2 | 17 46 | 1 44 | 21 14 | 1 10 | 10 25 | 1 2 | 16 38 | 2 24 | 22 58 | 0 1 | 2 32 | 1 33 | 23 46 | 5 46 | 23 26 | 23 26 | 16 35 | 14 13 | 1 17 | | | |
| M24 | 0 30 | 10 38 | 4 48 | 4 16 | 0 42 | 18 10 | 1 48 | 21 24 | 1 11 | 10 29 | 1 2 | 16 37 | 2 24 | 22 58 | 0 1 | 2 31 | 1 33 | 23 46 | 5 46 | 23 26 | 23 26 | 16 36 | 14 13 | 1 17 | | | |
| T 25 | 0 53 | 14 46 | 4 25 | 4 36 | 0 24 | 18 34 | 1 52 | 21 33 | 1 11 | 10 34 | 1 1 | 16 36 | 2 25 | 22 58 | 0 1 | 2 31 | 1 33 | 23 46 | 5 46 | 23 26 | 23 26 | 16 38 | 14 12 | 1 17 | | | |
| W26 | 1 16 | 18 18 | 3 51 | 4 51 | 0 5 | 18 57 | 1 57 | 21 41 | 1 11 | 10 38 | 1 1 | 16 36 | 2 25 | 22 58 | 0 1 | 2 30 | 1 33 | 23 46 | 5 46 | 23 26 | 23 26 | 16 40 | 14 11 | 1 17 | | | |
| T 27 | 1 40 | 21 5 | 3 6 | 5 1 | 0n12 | 19 20 | 2 1 | 21 50 | 1 12 | 10 43 | 1 1 | 16 35 | 2 25 | 22 58 | 0 1 | 2 30 | 1 33 | 23 47 | 5 46 | 23 26 | 23 26 | 16 42 | 14 10 | 1 17 | | | |
| F 28 | 2 3 | 22 58 | 2 13 | 5 6 | 0 27 | 19 42 | 2 5 | 21 59 | 1 12 | 10 47 | 1 1 | 16 34 | 2 25 | 22 58 | 0 1 | 2 29 | 1 33 | 23 47 | 5 46 | 23 26 | 23 26 | 16 44 | 14 10 | 1 17 | | | |
| S 29 | 2 26 | 23 50 | 1 14 | 5 6 | 0 42 | 20 4 | 2 9 | 22 7 | 1 12 | 10 51 | 1 1 | 16 34 | 2 25 | 22 58 | 0 1 | 2 28 | 1 33 | 23 47 | 5 46 | 23 26 | 23 26 | 16 46 | 14 9 | 1 17 | | | |
| S 30 | 2s50 | 23n35 | 0n11 | 5n 2 | 0n55 | 20s26 | 2s13 | 22s15 | 1s13 | 10s56 | 1n 1 | 16n33 | 2s25 | 22n58 | 0n 1 | 2n28 | 1s33 | 23s47 | 5s45 | 23s26 | 23s26 | 16n48 | 14n 8 | 1s17 | | | |

ASTRODIENST EPHEMERIS for the year 2029

geocentric

OCTOBER 2029

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|----------|-------|-------|-------|-------|------|-------|-------|------|-------|--------|-------|------|-------|------|
| M 1 | 0 40 4 | 8♂ 6'15 | 9♂34 | 20♂16 | 23♂12 | 5♂19 | 1♂23 | 24♂29 | 18♂32 | 9♂46 | 8♂ 8 | 29♂15 | 29♂41 | 3♂55 | 11♂44 | M 1 |
| T 2 | 0 44 0 | 9° 5'15 | 22°16 | 21°15 | 24°18 | 6° 1 | 1°36 | 24♂26 | 18♂31 | 9♂44 | 8♂ 8 | 29♂15 | 29°38 | 4° 2 | 11♂41 | T 2 |
| W 3 | 0 47 57 | 10° 4'18 | 5♂23 | 22°21 | 25°24 | 6°43 | 1°48 | 24°24 | 18°31 | 9°43 | 8° 7 | 29°12 | 29°34 | 4° 9 | 11°39 | W 3 |
| T 4 | 0 51 54 | 11° 3'23 | 19° 0 | 23°33 | 26°30 | 7°26 | 2° 1 | 24°21 | 18°30 | 9°41 | 8° 7 | 29° 8 | 29°31 | 4°15 | 11°36 | T 4 |
| F 5 | 0 55 50 | 12° 2'30 | 3♂ 6 | 24°51 | 27°36 | 8° 8 | 2°14 | 24°18 | 18°30 | 9°39 | 8° 6 | 29° 1 | 29°28 | 4°22 | 11°34 | F 5 |
| S 6 | 0 59 47 | 13° 1'39 | 17°40 | 26°13 | 28°42 | 8°51 | 2°26 | 24°15 | 18°29 | 9°38 | 8° 6 | 28°51 | 29°25 | 4°29 | 11°32 | S 6 |
| S 7 | 1 3 43 | 14° 0'51 | 2♂38 | 27°40 | 29°47 | 9°33 | 2°39 | 24°12 | 18°29 | 9°36 | 8° 5 | 28°41 | 29°22 | 4°35 | 11°29 | S 7 |
| M 8 | 1 7 40 | 15° 0'05 | 17°50 | 29°11 | 0♂52 | 10°16 | 2°52 | 24° 9 | 18°28 | 9°34 | 8° 5 | 28°30 | 29°19 | 4°42 | 11°27 | M 8 |
| T 9 | 1 11 36 | 15°59'20 | 3♂ 5 | 0♂45 | 1°57 | 10°59 | 3° 5 | 24° 6 | 18°27 | 9°33 | 8° 5 | 28°20 | 29°15 | 4°49 | 11°24 | T 9 |
| W10 | 1 15 33 | 16°58'38 | 18°12 | 2°21 | 3° 2 | 11°41 | 3°17 | 24° 2 | 18°26 | 9°31 | 8° 4 | 28°13 | 29°12 | 4°55 | 11°21 | W10 |
| T 11 | 1 19 29 | 17°57'58 | 3♂ 3 | 3°59 | 4° 7 | 12°24 | 3°30 | 23°59 | 18°26 | 9°29 | 8° 4 | 28° 8 | 29° 9 | 5° 2 | 11°19 | T 11 |
| F 12 | 1 23 26 | 18°57'19 | 17°32 | 5°39 | 5°11 | 13° 7 | 3°43 | 23°55 | 18°25 | 9°28 | 8° 4 | 28° 6 | 29° 6 | 5° 9 | 11°16 | F 12 |
| S 13 | 1 27 23 | 19°56'43 | 1♂35 | 7°20 | 6°15 | 13°51 | 3°56 | 23°52 | 18°24 | 9°26 | 8° 4 | 28°D 6 | 29° 3 | 5°16 | 11°14 | S 13 |
| S 14 | 1 31 19 | 20°56'08 | 15°12 | 9° 2 | 7°19 | 14°34 | 4° 9 | 23°48 | 18°23 | 9°24 | 8° 3 | 28°R 6 | 29° 0 | 5°22 | 11°11 | S 14 |
| M15 | 1 35 16 | 21°55'34 | 28°26 | 10°45 | 8°23 | 15°17 | 4°22 | 23°45 | 18°22 | 9°23 | 8° 3 | 28° 6 | 28°56 | 5°29 | 11° 8 | M15 |
| T 16 | 1 39 12 | 22°55'03 | 11♂20 | 12°28 | 9°27 | 16° 0 | 4°35 | 23°41 | 18°21 | 9°21 | 8° 3 | 28° 4 | 28°53 | 5°36 | 11° 5 | T 16 |
| W17 | 1 43 9 | 23°54'33 | 23°58 | 14°12 | 10°30 | 16°44 | 4°48 | 23°37 | 18°19 | 9°19 | 8° 3 | 28° 0 | 28°50 | 5°42 | 11° 3 | W17 |
| T 18 | 1 47 5 | 24°54'05 | 6♂22 | 15°55 | 11°33 | 17°27 | 5° 1 | 23°33 | 18°18 | 9°18 | 8° 3 | 27°54 | 28°47 | 5°49 | 11° 0 | T 18 |
| F 19 | 1 51 2 | 25°53'38 | 18°35 | 17°39 | 12°36 | 18°11 | 5°14 | 23°29 | 18°17 | 9°16 | 8° 3 | 27°45 | 28°44 | 5°56 | 10°57 | F 19 |
| S 20 | 1 54 58 | 26°53'14 | 0♂41 | 19°22 | 13°38 | 18°55 | 5°27 | 23°25 | 18°16 | 9°15 | 8° 3 | 27°34 | 28°40 | 6° 2 | 10°54 | S 20 |
| S 21 | 1 58 55 | 27°52'51 | 12°40 | 21° 5 | 14°40 | 19°38 | 5°40 | 23°21 | 18°14 | 9°13 | 8°D 3 | 27°22 | 28°37 | 6° 9 | 10°51 | S 21 |
| M22 | 2 2 52 | 28°52'31 | 24°35 | 22°48 | 15°42 | 20°22 | 5°53 | 23°17 | 18°13 | 9°12 | 8° 3 | 27°11 | 28°34 | 6°16 | 10°49 | M22 |
| T 23 | 2 6 48 | 29°52'12 | 6♂27 | 24°30 | 16°43 | 21° 6 | 6° 6 | 23°12 | 18°12 | 9°10 | 8° 3 | 27° 0 | 28°31 | 6°22 | 10°46 | T 23 |
| W24 | 2 10 45 | 0♂51'55 | 18°17 | 26°12 | 17°44 | 21°50 | 6°19 | 23° 8 | 18°10 | 9° 9 | 8° 3 | 26°52 | 28°28 | 6°29 | 10°43 | W24 |
| T 25 | 2 14 41 | 1°51'41 | 0♂ 7 | 27°54 | 18°45 | 22°34 | 6°32 | 23° 4 | 18° 9 | 9° 7 | 8° 3 | 26°45 | 28°25 | 6°36 | 10°40 | T 25 |
| F 26 | 2 18 38 | 2°51'28 | 12° 0 | 29°35 | 19°46 | 23°18 | 6°45 | 22°59 | 18° 7 | 9° 6 | 8° 3 | 26°42 | 28°21 | 6°43 | 10°37 | F 26 |
| S 27 | 2 22 34 | 3°51'18 | 23°59 | 1♂15 | 20°46 | 24° 3 | 6°58 | 22°55 | 18° 5 | 9° 4 | 8° 3 | 26°D41 | 28°18 | 6°49 | 10°34 | S 27 |
| S 28 | 2 26 31 | 4°51'10 | 6♂ 6 | 2°55 | 21°46 | 24°47 | 7°11 | 22°51 | 18° 4 | 9° 3 | 8° 3 | 26°41 | 28°15 | 6°56 | 10°31 | S 28 |
| M29 | 2 30 27 | 5°51'04 | 18°28 | 4°35 | 22°45 | 25°31 | 7°25 | 22°46 | 18° 2 | 9° 1 | 8° 4 | 26°42 | 28°12 | 7° 3 | 10°28 | M29 |
| T 30 | 2 34 24 | 6°51'00 | 1♂ 7 | 6°14 | 23°44 | 26°16 | 7°38 | 22°41 | 18° 0 | 9° 0 | 8° 4 | 26°R43 | 28° 9 | 7° 9 | 10°25 | T 30 |
| W31 | 2 38 21 | 7♂50'59 | 14♂ 9 | 7♂52 | 24♂42 | 27♂ 0 | 7♂51 | 22♂37 | 17♂59 | 8♂58 | 8♂ 4 | 26♂43 | 28♂ 5 | 7♂16 | 10♂23 | W31 |

| Day | ☉ | ☾ | | ♀ | | ♀ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|-------|-------|-------|------|-----|------|-----|------|-----|------|-----|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat |
| M 1 | 3s13 | 22n11 | 0s54 | 4n53 | 1n 7 | 20s47 | 2s17 | 22s23 | 1s13 | 11s 0 | 1n 1 | 16n32 | 2s26 | 22n58 | 0n 1 | 2n27 | 1s33 | 23s47 | 5s45 | 23s26 | 23s26 | 16n49 | 14n 7 | 1s18 | | | | | | | |
| T 2 | 3 36 | 19 39 | 1 59 | 4 40 | 1 18 | 21 7 | 2 21 | 22 31 | 1 13 | 11 5 | 1 1 | 16 31 | 2 26 | 22 58 | 0 1 | 2 26 | 1 33 | 23 47 | 5 45 | 23 26 | 23 26 | 16 51 | 14 6 | 1 18 | | | | | | | |
| W 3 | 3 59 | 16 2 | 2 59 | 4 22 | 1 27 | 21 27 | 2 25 | 22 38 | 1 14 | 11 9 | 1 1 | 16 30 | 2 26 | 22 58 | 0 1 | 2 26 | 1 33 | 23 47 | 5 45 | 23 26 | 23 26 | 16 53 | 14 5 | 1 18 | | | | | | | |
| T 4 | 4 22 | 11 28 | 3 51 | 4 1 | 1 35 | 21 47 | 2 29 | 22 46 | 1 14 | 11 14 | 1 1 | 16 30 | 2 26 | 22 58 | 0 1 | 2 25 | 1 33 | 23 47 | 5 45 | 23 26 | 23 26 | 16 55 | 14 5 | 1 18 | | | | | | | |
| F 5 | 4 46 | 6 9 | 4 32 | 3 36 | 1 41 | 22 6 | 2 33 | 22 53 | 1 14 | 11 18 | 1 0 | 16 29 | 2 26 | 22 58 | 0 1 | 2 24 | 1 33 | 23 47 | 5 45 | 23 26 | 23 26 | 16 57 | 14 4 | 1 18 | | | | | | | |
| S 6 | 5 9 | 0 20 | 4 56 | 3 8 | 1 47 | 22 24 | 2 36 | 23 0 | 1 15 | 11 22 | 1 0 | 16 28 | 2 26 | 22 58 | 0 1 | 2 24 | 1 33 | 23 47 | 5 45 | 23 26 | 23 26 | 16 59 | 14 3 | 1 18 | | | | | | | |
| S 7 | 5 32 | 5s39 | 5 1 | 2 37 | 1 51 | 22 43 | 2 40 | 23 7 | 1 15 | 11 27 | 1 0 | 16 27 | 2 26 | 22 58 | 0 1 | 2 23 | 1 33 | 23 47 | 5 45 | 23 26 | 23 26 | 17 0 | 14 2 | 1 18 | | | | | | | |
| M 8 | 5 55 | 11 23 | 4 45 | 2 4 | 1 54 | 23 0 | 2 44 | 23 14 | 1 15 | 11 31 | 1 0 | 16 26 | 2 27 | 22 57 | 0 1 | 2 22 | 1 33 | 23 47 | 5 45 | 23 26 | 23 26 | 17 2 | 14 1 | 1 18 | | | | | | | |
| T 9 | 6 17 | 16 25 | 4 8 | 1 29 | 1 56 | 23 17 | 2 48 | 23 20 | 1 16 | 11 36 | 1 0 | 16 25 | 2 27 | 22 57 | 0 1 | 2 22 | 1 33 | 23 47 | 5 45 | 23 26 | 23 26 | 17 4 | 14 0 | 1 19 | | | | | | | |
| W10 | 6 40 | 20 22 | 3 15 | 0 52 | 1 57 | 23 34 | 2 51 | 23 26 | 1 16 | 11 40 | 1 0 | 16 24 | 2 27 | 22 57 | 0 1 | 2 21 | 1 33 | 23 47 | 5 45 | 23 25 | 23 26 | 17 6 | 13 59 | 1 19 | | | | | | | |
| T 11 | 7 3 | 22 52 | 2 9 | 0 13 | 1 57 | 23 50 | 2 55 | 23 32 | 1 16 | 11 44 | 1 0 | 16 23 | 2 27 | 22 57 | 0 1 | 2 20 | 1 33 | 23 47 | 5 45 | 23 25 | 23 26 | 17 8 | 13 58 | 1 19 | | | | | | | |
| F 12 | 7 25 | 23 47 | 0 56 | 0s27 | 1 57 | 24 5 | 2 58 | 23 38 | 1 16 | 11 49 | 1 0 | 16 22 | 2 27 | 22 57 | 0 1 | 2 20 | 1 33 | 23 47 | 5 45 | 23 25 | 23 26 | 17 9 | 13 57 | 1 19 | | | | | | | |
| S 13 | 7 48 | 23 7 | 0n19 | 1 8 | 1 56 | 24 20 | 3 2 | 23 44 | 1 17 | 11 53 | 1 0 | 16 21 | 2 27 | 22 57 | 0 1 | 2 19 | 1 33 | 23 47 | 5 45 | 23 25 | 23 26 | 17 11 | 13 57 | 1 19 | | | | | | | |
| S 14 | 8 10 | 21 5 | 1 30 | 1 50 | 1 54 | 24 34 | 3 5 | 23 49 | 1 17 | 11 58 | 1 0 | 16 20 | 2 27 | 22 57 | 0 1 | 2 18 | 1 33 | 23 47 | 5 44 | 23 25 | 23 26 | 17 13 | 13 56 | 1 19 | | | | | | | |
| M15 | 8 32 | 17 57 | 2 34 | 2 33 | 1 51 | 24 48 | 3 8 | 23 54 | 1 17 | 12 2 | 1 0 | 16 19 | 2 27 | 22 57 | 0 1 | 2 18 | 1 33 | 23 47 | 5 44 | 23 25 | 23 26 | 17 15 | 13 55 | 1 19 | | | | | | | |
| T 16 | 8 55 | 14 2 | 3 29 | 3 36 | 1 48 | 25 1 | 3 11 | 23 59 | 1 17 | 12 7 | 1 0 | 16 18 | 2 28 | 22 57 | 0 1 | 2 17 | 1 33 | 23 47 | 5 44 | 23 25 | 23 26 | 17 16 | 13 54 | 1 19 | | | | | | | |
| W17 | 9 17 | 9 34 | 4 12 | 4 0 | 1 44 | 25 14 | 3 14 | 24 4 | 1 17 | 12 11 | 1 0 | 16 17 | 2 28 | 22 57 | 0 1 | 2 17 | 1 33 | 23 47 | 5 44 | 23 25 | 23 26 | 17 18 | 13 53 | 1 19 | | | | | | | |
| T 18 | 9 38 | 4 48 | 4 43 | 4 43 | 1 40 | 25 25 | 3 17 | 24 8 | 1 18 | 12 15 | 0 59 | 16 16 | 2 28 | 22 57 | 0 1 | 2 16 | 1 33 | 23 47 | 5 44 | 23 25 | 23 26 | 17 20 | 13 52 | 1 20 | | | | | | | |
| F 19 | 10 0 | 0n 5 | 5 0 | 5 27 | 1 36 | 25 37 | 3 20 | 24 12 | 1 18 | 12 20 | 0 59 | 16 15 | 2 28 | 22 57 | 0 1 | 2 15 | 1 33 | 23 47 | 5 44 | 23 25 | 23 26 | 17 22 | 13 51 | 1 20 | | | | | | | |
| S 20 | 10 22 | 4 54 | 5 3 | 6 10 | 1 31 | 25 48 | 3 23 | 24 16 | 1 18 | 12 24 | 0 59 | 16 14 | 2 28 | 22 57 | 0 1 | 2 15 | 1 33 | 23 47 | 5 44 | 23 25 | 23 26 | 17 23 | 13 50 | 1 20 | | | | | | | |
| S 21 | 10 43 | 9 30 | 4 53 | 6 54 | 1 26 | 25 58 | 3 26 | 24 20 | 1 18 | 12 29 | 0 59 | 16 13 | 2 28 | 22 56 | 0 2 | 2 14 | 1 33 | 23 47 | 5 44 | 23 25 | 23 26 | 17 25 | 13 49 | 1 20 | | | | | | | |
| M22 | 11 4 | 13 42 | 4 30 | 7 37 | 1 21 | 26 7 | 3 29 | 24 23 | 1 18 | 12 33 | 0 59 | 16 12 | 2 28 | 22 56 | 0 2 | 2 13 | 1 33 | 23 47 | 5 44 | 23 24 | 23 26 | 17 27 | 13 48 | 1 20 | | | | | | | |
| T 23 | 11 25 | 17 22 | 3 55 | 8 20 | 1 15 | 26 16 | 3 31 | 24 27 | 1 19 | 12 37 | 0 59 | 16 11 | 2 28 | 22 56 | 0 2 | 2 13 | 1 33 | 23 47 | 5 44 | 23 24 | 23 26 | 17 29 | 13 47 | 1 20 | | | | | | | |
| W24 | 11 46 | 20 19 | 3 11 | 9 2 | 1 9 | 26 25 | 3 34 | 24 30 | 1 19 | 12 42 | 0 59 | 16 10 | 2 28 | 22 56 | 0 2 | 2 12 | 1 33 | 23 47 | 5 44 | 23 24 | 23 26 | 17 30 | 13 46 | 1 20 | | | | | | | |
| T 25 | 12 7 | 22 25 | 2 18 | 9 44 | 1 3 | 26 33 | 3 36 | 24 32 | 1 19 | 12 46 | 0 59 | 16 9 | 2 28 | 22 56 | 0 2 | 2 12 | 1 33 | 23 47 | 5 44 | 23 24 | 23 26 | 17 32 | 13 45 | 1 20 | | | | | | | |
| F 26 | 12 28 | 23 31 | 1 18 | 10 26 | 0 57 | 26 40 | 3 38 | 24 35 | 1 19 | 12 50 | 0 59 | 16 7 | 2 28 | 22 56 | 0 2 | 2 11 | 1 33 | 23 46 | 5 43 | 23 24 | 23 26 | 17 34 | 13 44 | 1 20 | | | | | | | |
| S 27 | 12 48 | 23 32 | 0 15 | 11 7 | 0 51 | 26 46 | 3 40 | 24 37 | 1 19 | 12 55 | 0 59 | 16 6 | 2 28 | 22 56 | 0 2 | 2 11 | 1 33 | 23 46 | 5 43 | 23 24 | 23 25 | 17 36 | 13 43 | 1 20 | | | | | | | |
| S 28 | 13 8 | 22 27 | 0s51 | 11 48 | 0 44 | 26 52 | 3 42 | 24 39 | 1 19 | 12 59 | 0 59 | 16 5 | 2 28 | 22 56 | 0 2 | 2 10 | 1 32 | 23 46 | 5 43 | 23 24 | 23 25 | 17 37 | 13 42 | 1 21 | | | | | | | |
| M29 | 13 28 | 20 16 | 1 55 | 12 27 | 0 38 | 26 58 | 3 44 | 24 41 | 1 19 | 13 3 | 0 59 | 16 4 | 2 28 | 22 55 | 0 2 | 2 9 | 1 32 | 23 46 | 5 43 | 23 24 | 23 25 | 17 39 | 13 41 | 1 21 | | | | | | | |
| T 30 | 13 48 | 17 4 | 2 55 | 13 6 | 0 31 | 27 3 | 3 46 | 24 42 | 1 19 | 13 7 | 0 59 | 16 3 | 2 28 | 22 55 | 0 2 | 2 9 | 1 32 | 23 46 | 5 43 | 23 24 | 23 25 | 17 41 | 13 40 | 1 21 | | | | | | | |
| W31 | 14s 7 | 12n57 | 3s48 | 13s45 | 0n24 | 27s 7 | 3s47 | 24s44 | 1s20 | 13s12 | 0n59 | 16n 2 | 2s29 | 22n55 | 0n 2 | 2n 8 | 1s32 | 23s46 | 5s43 | 23s24 | 23s25 | 17n42 | 13n39 | 1s21 | | | | | | | |

ASTRODIENST EPHEMERIS for the year 2029

geocentric

NOVEMBER 2029

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|----------|-------|-------|-------|-------|-------|--------|--------|-------|------|--------|-------|-------|--------|------|
| T 1 | 2 42 17 | 8♈50'59 | 27♏37 | 9♈30 | 25♏40 | 27♏45 | 8♈4 | 22°R32 | 17°R57 | 8°R57 | 8♈4 | 26°R41 | 28♏2 | 7♏23 | 10°R20 | T 1 |
| F 2 | 2 46 14 | 9°51'02 | 11♏34 | 11°8 | 26°38 | 28°29 | 8°17 | 22♏28 | 17♏55 | 8°Y55 | 8°5 | 26♏38 | 27°59 | 7°29 | 10♏17 | F 2 |
| S 3 | 2 50 10 | 10°51'07 | 25°59 | 12°45 | 27°35 | 29°14 | 8°30 | 22°23 | 17°53 | 8°54 | 8°5 | 26°32 | 27°56 | 7°36 | 10°14 | S 3 |
| S 4 | 2 54 7 | 11°51'14 | 10♏49 | 14°22 | 28°32 | 29°59 | 8°43 | 22°18 | 17°51 | 8°53 | 8°5 | 26°25 | 27°53 | 7°43 | 10°11 | S 4 |
| M 5 | 2 58 3 | 12°51'23 | 25°57 | 15°58 | 29°28 | 0♏44 | 8°57 | 22°13 | 17°49 | 8°51 | 8°6 | 26°19 | 27°50 | 7°49 | 10°8 | M 5 |
| T 6 | 3 2 0 | 13°51'33 | 11♈14 | 17°34 | 0♏24 | 1°29 | 9°10 | 22°8 | 17°47 | 8°50 | 8°6 | 26°12 | 27°46 | 7°56 | 10°5 | T 6 |
| W 7 | 3 5 56 | 14°51'46 | 26°29 | 19°9 | 1°19 | 2°14 | 9°23 | 22°4 | 17°45 | 8°49 | 8°7 | 26°8 | 27°43 | 8°3 | 10°2 | W 7 |
| T 8 | 3 9 53 | 15°52'01 | 11♏32 | 20°44 | 2°14 | 2°59 | 9°36 | 21°59 | 17°43 | 8°48 | 8°7 | 26°5 | 27°40 | 8°10 | 9°59 | T 8 |
| F 9 | 3 13 50 | 16°52'17 | 26°13 | 22°19 | 3°8 | 3°44 | 9°49 | 21°54 | 17°41 | 8°46 | 8°8 | 26°D 4 | 27°37 | 8°16 | 9°56 | F 9 |
| S 10 | 3 17 46 | 17°52'35 | 10♏29 | 23°53 | 4°1 | 4°29 | 10°2 | 21°49 | 17°39 | 8°45 | 8°8 | 26°5 | 27°34 | 8°23 | 9°53 | S 10 |
| S 11 | 3 21 43 | 18°52'54 | 24°18 | 25°27 | 4°54 | 5°14 | 10°15 | 21°44 | 17°37 | 8°44 | 8°9 | 26°6 | 27°31 | 8°30 | 9°50 | S 11 |
| M12 | 3 25 39 | 19°53'14 | 7♈39 | 27°1 | 5°46 | 6°0 | 10°28 | 21°39 | 17°35 | 8°43 | 8°9 | 26°7 | 27°27 | 8°36 | 9°47 | M12 |
| T 13 | 3 29 36 | 20°53'36 | 20°36 | 28°34 | 6°38 | 6°45 | 10°41 | 21°34 | 17°33 | 8°42 | 8°10 | 26°R 8 | 27°24 | 8°43 | 9°45 | T 13 |
| W14 | 3 33 32 | 21°53'59 | 3♈13 | 0♏7 | 7°28 | 7°31 | 10°54 | 21°30 | 17°31 | 8°40 | 8°11 | 26°7 | 27°21 | 8°50 | 9°42 | W14 |
| T 15 | 3 37 29 | 22°54'24 | 15°33 | 1°40 | 8°18 | 8°16 | 11°7 | 21°25 | 17°28 | 8°39 | 8°11 | 26°5 | 27°18 | 8°56 | 9°39 | T 15 |
| F 16 | 3 41 25 | 23°54'50 | 27°41 | 3°12 | 9°7 | 9°2 | 11°20 | 21°20 | 17°26 | 8°38 | 8°12 | 26°1 | 27°15 | 9°3 | 9°36 | F 16 |
| S 17 | 3 45 22 | 24°55'17 | 9♏40 | 4°45 | 9°56 | 9°47 | 11°33 | 21°15 | 17°24 | 8°37 | 8°13 | 25°56 | 27°11 | 9°10 | 9°33 | S 17 |
| S 18 | 3 49 19 | 25°55'46 | 21°33 | 6°17 | 10°43 | 10°33 | 11°46 | 21°10 | 17°22 | 8°36 | 8°14 | 25°51 | 27°8 | 9°16 | 9°30 | S 18 |
| M19 | 3 53 15 | 26°56'16 | 3♏24 | 7°48 | 11°30 | 11°19 | 11°59 | 21°5 | 17°19 | 8°35 | 8°14 | 25°45 | 27°5 | 9°23 | 9°28 | M19 |
| T 20 | 3 57 12 | 27°56'48 | 15°15 | 9°20 | 12°15 | 12°4 | 12°12 | 21°0 | 17°17 | 8°34 | 8°15 | 25°40 | 27°2 | 9°30 | 9°25 | T 20 |
| W21 | 4 1 8 | 28°57'21 | 27°7 | 10°51 | 13°0 | 12°50 | 12°25 | 20°55 | 17°15 | 8°33 | 8°16 | 25°37 | 26°59 | 9°37 | 9°22 | W21 |
| T 22 | 4 5 5 | 29°57'55 | 9♏3 | 12°22 | 13°44 | 13°36 | 12°38 | 20°51 | 17°12 | 8°32 | 8°17 | 25°34 | 26°56 | 9°43 | 9°19 | T 22 |
| F 23 | 4 9 1 | 0♏58'31 | 21°3 | 13°52 | 14°26 | 14°22 | 12°51 | 20°46 | 17°10 | 8°32 | 8°18 | 25°D33 | 26°52 | 9°50 | 9°17 | F 23 |
| S 24 | 4 12 58 | 1°59'09 | 3♏11 | 15°23 | 15°8 | 15°8 | 13°4 | 20°41 | 17°7 | 8°31 | 8°19 | 25°33 | 26°49 | 9°57 | 9°14 | S 24 |
| S 25 | 4 16 54 | 2°59'48 | 15°29 | 16°53 | 15°49 | 15°54 | 13°16 | 20°36 | 17°5 | 8°30 | 8°20 | 25°34 | 26°46 | 10°3 | 9°11 | S 25 |
| M26 | 4 20 51 | 4°0'29 | 27°59 | 18°23 | 16°28 | 16°40 | 13°29 | 20°32 | 17°2 | 8°29 | 8°21 | 25°36 | 26°43 | 10°10 | 9°9 | M26 |
| T 27 | 4 24 48 | 5°1'11 | 10♏43 | 19°52 | 17°6 | 17°26 | 13°42 | 20°27 | 17°0 | 8°28 | 8°22 | 25°37 | 26°40 | 10°17 | 9°6 | T 27 |
| W28 | 4 28 44 | 6°1'55 | 23°46 | 21°21 | 17°43 | 18°12 | 13°55 | 20°22 | 16°57 | 8°28 | 8°23 | 25°38 | 26°37 | 10°23 | 9°4 | W28 |
| T 29 | 4 32 41 | 7°2'40 | 7♏9 | 22°50 | 18°18 | 18°58 | 14°7 | 20°18 | 16°55 | 8°27 | 8°24 | 25°R39 | 26°33 | 10°30 | 9°1 | T 29 |
| F 30 | 4 36 37 | 8♏3'27 | 20♏55 | 24♏18 | 18♏52 | 19♏45 | 14♏20 | 20♏13 | 16♏52 | 8°Y26 | 8♏25 | 25♏38 | 26♏30 | 10♏37 | 8♏59 | F 30 |

| Day | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | |
| T 1 | 14s27 | 8n 4 | 4s30 | 14s23 | 0n18 | 27s10 | 3s48 | 24s45 | 1s20 | 13s16 | 0n59 | 16n 0 | 2s29 | 22n55 | 0n 2 | 2n 8 |
| F 2 | 14 46 | 2 38 | 4 58 | 15 0 | 0 11 | 27 13 | 3 50 | 24 45 | 1 20 | 13 20 | 0 59 | 15 59 | 2 29 | 22 55 | 0 2 | 2 7 |
| S 3 | 15 5 | 3s 7 | 5 9 | 15 36 | 0 4 | 27 16 | 3 51 | 24 46 | 1 20 | 13 25 | 0 59 | 15 58 | 2 29 | 22 55 | 0 2 | 2 7 |
| S 4 | 15 23 | 8 52 | 4 59 | 16 11 | 0s 3 | 27 17 | 3 52 | 24 46 | 1 20 | 13 29 | 0 59 | 15 57 | 2 29 | 22 54 | 0 2 | 2 6 |
| M 5 | 15 42 | 14 11 | 4 29 | 16 46 | 0 9 | 27 19 | 3 53 | 24 46 | 1 20 | 13 33 | 0 59 | 15 56 | 2 29 | 22 54 | 0 2 | 2 6 |
| T 6 | 16 0 | 18 40 | 3 39 | 17 20 | 0 16 | 27 19 | 3 53 | 24 46 | 1 20 | 13 37 | 0 59 | 15 54 | 2 29 | 22 54 | 0 2 | 2 5 |
| W 7 | 16 18 | 21 51 | 2 34 | 17 52 | 0 23 | 27 19 | 3 54 | 24 45 | 1 20 | 13 41 | 0 59 | 15 53 | 2 29 | 22 54 | 0 2 | 2 5 |
| T 8 | 16 35 | 23 27 | 1 18 | 18 24 | 0 29 | 27 19 | 3 54 | 24 44 | 1 20 | 13 46 | 0 59 | 15 52 | 2 29 | 22 54 | 0 2 | 2 4 |
| F 9 | 16 52 | 23 22 | 0n 1 | 18 55 | 0 36 | 27 18 | 3 54 | 24 43 | 1 20 | 13 50 | 0 59 | 15 51 | 2 28 | 22 54 | 0 2 | 2 4 |
| S 10 | 17 9 | 21 44 | 1 18 | 19 26 | 0 42 | 27 16 | 3 54 | 24 42 | 1 20 | 13 54 | 0 59 | 15 50 | 2 28 | 22 53 | 0 2 | 2 3 |
| S 11 | 17 26 | 18 50 | 2 28 | 19 55 | 0 49 | 27 14 | 3 53 | 24 40 | 1 20 | 13 58 | 0 59 | 15 48 | 2 28 | 22 53 | 0 2 | 2 3 |
| M12 | 17 42 | 15 1 | 3 27 | 20 23 | 0 55 | 27 11 | 3 53 | 24 38 | 1 20 | 14 2 | 0 59 | 15 47 | 2 28 | 22 53 | 0 2 | 2 3 |
| T 13 | 17 59 | 10 36 | 4 14 | 20 50 | 1 1 | 27 8 | 3 52 | 24 36 | 1 20 | 14 6 | 0 59 | 15 46 | 2 28 | 22 53 | 0 2 | 2 2 |
| W14 | 18 14 | 5 51 | 4 48 | 21 16 | 1 7 | 27 4 | 3 51 | 24 33 | 1 20 | 14 10 | 0 58 | 15 45 | 2 28 | 22 53 | 0 2 | 2 2 |
| T 15 | 18 30 | 0 59 | 5 7 | 21 41 | 1 13 | 27 0 | 3 50 | 24 30 | 1 20 | 14 14 | 0 58 | 15 44 | 2 28 | 22 52 | 0 2 | 2 1 |
| F 16 | 18 45 | 3n51 | 5 12 | 22 5 | 1 19 | 26 56 | 3 49 | 24 27 | 1 20 | 14 18 | 0 58 | 15 42 | 2 28 | 22 52 | 0 2 | 2 1 |
| S 17 | 19 0 | 8 28 | 5 3 | 22 28 | 1 25 | 26 50 | 3 47 | 24 24 | 1 20 | 14 22 | 0 58 | 15 41 | 2 28 | 22 52 | 0 2 | 2 1 |
| S 18 | 19 14 | 12 45 | 4 42 | 22 50 | 1 30 | 26 45 | 3 45 | 24 21 | 1 20 | 14 26 | 0 58 | 15 40 | 2 28 | 22 52 | 0 2 | 2 0 |
| M19 | 19 28 | 16 32 | 4 8 | 23 10 | 1 35 | 26 39 | 3 43 | 24 17 | 1 20 | 14 30 | 0 58 | 15 39 | 2 28 | 22 52 | 0 2 | 2 0 |
| T 20 | 19 42 | 19 39 | 3 23 | 23 30 | 1 40 | 26 32 | 3 41 | 24 13 | 1 20 | 14 34 | 0 58 | 15 38 | 2 28 | 22 51 | 0 2 | 1 59 |
| W21 | 19 55 | 21 57 | 2 30 | 23 48 | 1 45 | 26 25 | 3 38 | 24 8 | 1 20 | 14 38 | 0 58 | 15 36 | 2 28 | 22 51 | 0 2 | 1 59 |
| T 22 | 20 8 | 23 17 | 1 30 | 24 5 | 1 50 | 26 18 | 3 35 | 24 4 | 1 20 | 14 42 | 0 58 | 15 35 | 2 28 | 22 51 | 0 2 | 1 59 |
| F 23 | 20 21 | 23 33 | 0 25 | 24 21 | 1 54 | 26 10 | 3 32 | 23 59 | 1 19 | 14 46 | 0 58 | 15 34 | 2 28 | 22 51 | 0 2 | 1 59 |
| S 24 | 20 33 | 22 42 | 0s42 | 24 36 | 1 59 | 26 2 | 3 29 | 23 53 | 1 19 | 14 50 | 0 58 | 15 33 | 2 27 | 22 51 | 0 2 | 1 58 |
| S 25 | 20 45 | 20 45 | 1 48 | 24 49 | 2 3 | 25 54 | 3 25 | 23 48 | 1 19 | 14 53 | 0 58 | 15 32 | 2 27 | 22 50 | 0 2 | 1 58 |
| M26 | 20 57 | 17 48 | 2 50 | 25 1 | 2 6 | 25 45 | 3 21 | 23 42 | 1 19 | 14 57 | 0 58 | 15 31 | 2 27 | 22 50 | 0 2 | 1 58 |
| T 27 | 21 8 | 13 57 | 3 44 | 25 12 | 2 10 | 25 36 | 3 17 | 23 36 | 1 19 | 15 1 | 0 58 | 15 30 | 2 27 | 22 50 | 0 2 | 1 57 |
| W28 | 21 19 | 9 22 | 4 29 | 25 21 | 2 13 | 25 26 | 3 12 | 23 30 | 1 19 | 15 5 | 0 59 | 15 29 | 2 27 | 22 50 | 0 2 | 1 57 |
| T 29 | 21 29 | 4 14 | 5 0 | 25 30 | 2 15 | 25 16 | 3 7 | 23 24 | 1 19 | 15 9 | 0 59 | 15 27 | 2 27 | 22 49 | 0 2 | 1 57 |
| F 30 | 21s39 | 1s14 | 5s15 | 25s36 | 2s18 | 25s 6 | 3s 2 | 23s17 | 1s19 | 15s12 | 0n59 | 15n26 | 2s27 | 22n49 | 0n 2 | 1n57 |

Julian Day Number = 2462441.5, Delta T = 69.24 sec
 Ecliptic obliquity = 23°26'07, Nutation = 0°00'16, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 25°09'25, Lahiri = 24°16'26

ASTRODIENST EPHEMERIS for the year 2029

geocentric

DECEMBER 2029

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|----------|-------|--------|--------|-------|-------|--------|--------|-------|------|--------|-------|-------|-------|------|
| S 1 | 4 40 34 | 9♈ 4'15 | 5♏ 4 | 25♈46 | 19♏25 | 20♏31 | 14♏32 | 20°R 9 | 16°R50 | 8°R26 | 8♏26 | 25°R37 | 26♈27 | 10♏43 | 8°R56 | S 1 |
| S 2 | 4 44 30 | 10° 5'05 | 19°35 | 27°13 | 19°56 | 21°17 | 14°45 | 20♏ 4 | 16♏47 | 8♏25 | 8°27 | 25♈35 | 26°24 | 10°50 | 8♏54 | S 2 |
| M 3 | 4 48 27 | 11° 5'56 | 4♏24 | 28°39 | 20°25 | 22° 4 | 14°57 | 20° 0 | 16°45 | 8°25 | 8°28 | 25°33 | 26°21 | 10°57 | 8°51 | M 3 |
| T 4 | 4 52 23 | 12° 6'49 | 19°25 | 0♏ 4 | 20°53 | 22°50 | 15°10 | 19°56 | 16°42 | 8°24 | 8°29 | 25°32 | 26°17 | 11° 3 | 8°49 | T 4 |
| W 5 | 4 56 20 | 13° 7'43 | 4♈28 | 1°29 | 21°20 | 23°36 | 15°22 | 19°51 | 16°40 | 8°23 | 8°30 | 25°30 | 26°14 | 11°10 | 8°47 | W 5 |
| T 6 | 5 0 17 | 14° 8'38 | 19°26 | 2°52 | 21°44 | 24°23 | 15°35 | 19°47 | 16°37 | 8°23 | 8°32 | 25°D30 | 26°11 | 11°17 | 8°44 | T 6 |
| F 7 | 5 4 13 | 15° 9'34 | 4♏ 9 | 4°14 | 22° 7 | 25° 9 | 15°47 | 19°43 | 16°35 | 8°23 | 8°33 | 25°30 | 26° 8 | 11°24 | 8°42 | F 7 |
| S 8 | 5 8 10 | 16°10'31 | 18°31 | 5°34 | 22°28 | 25°56 | 15°59 | 19°39 | 16°32 | 8°22 | 8°34 | 25°30 | 26° 5 | 11°30 | 8°40 | S 8 |
| S 9 | 5 12 6 | 17°11'29 | 2♏29 | 6°53 | 22°47 | 26°43 | 16°11 | 19°35 | 16°30 | 8°22 | 8°35 | 25°31 | 26° 2 | 11°37 | 8°38 | S 9 |
| M10 | 5 16 3 | 18°12'28 | 15°59 | 8°10 | 23° 4 | 27°29 | 16°24 | 19°31 | 16°27 | 8°21 | 8°37 | 25°32 | 25°58 | 11°44 | 8°36 | M10 |
| T 11 | 5 19 59 | 19°13'27 | 29° 4 | 9°24 | 23°19 | 28°16 | 16°36 | 19°27 | 16°25 | 8°21 | 8°38 | 25°33 | 25°55 | 11°50 | 8°34 | T 11 |
| W12 | 5 23 56 | 20°14'26 | 11♈47 | 10°35 | 23°32 | 29° 3 | 16°48 | 19°23 | 16°22 | 8°21 | 8°39 | 25°33 | 25°52 | 11°57 | 8°32 | W12 |
| T 13 | 5 27 52 | 21°15'27 | 24° 9 | 11°43 | 23°43 | 29°49 | 17° 0 | 19°19 | 16°19 | 8°21 | 8°41 | 25°R33 | 25°49 | 12° 4 | 8°30 | T 13 |
| F 14 | 5 31 49 | 22°16'27 | 6♏17 | 12°47 | 23°51 | 0♏36 | 17°12 | 19°16 | 16°17 | 8°20 | 8°42 | 25°33 | 25°46 | 12°10 | 8°28 | F 14 |
| S 15 | 5 35 46 | 23°17'28 | 18°14 | 13°47 | 23°57 | 1°23 | 17°23 | 19°12 | 16°14 | 8°20 | 8°44 | 25°33 | 25°43 | 12°17 | 8°26 | S 15 |
| S 16 | 5 39 42 | 24°18'30 | 0♏ 6 | 14°42 | 24° 1 | 2°10 | 17°35 | 19° 8 | 16°12 | 8°20 | 8°45 | 25°32 | 25°39 | 12°24 | 8°24 | S 16 |
| M17 | 5 43 39 | 25°19'32 | 11°55 | 15°31 | 24°R 2 | 2°57 | 17°47 | 19° 5 | 16° 9 | 8°20 | 8°46 | 25°D32 | 25°36 | 12°30 | 8°22 | M17 |
| T 18 | 5 47 35 | 26°20'35 | 23°46 | 16°14 | 24° 0 | 3°44 | 17°59 | 19° 2 | 16° 7 | 8°20 | 8°48 | 25°32 | 25°33 | 12°37 | 8°20 | T 18 |
| W19 | 5 51 32 | 27°21'38 | 5♏42 | 16°49 | 23°57 | 4°30 | 18°10 | 18°58 | 16° 4 | 8°D20 | 8°49 | 25°33 | 25°30 | 12°44 | 8°19 | W19 |
| T 20 | 5 55 28 | 28°22'42 | 17°46 | 17°16 | 23°50 | 5°17 | 18°22 | 18°55 | 16° 2 | 8°20 | 8°51 | 25°33 | 25°27 | 12°50 | 8°17 | T 20 |
| F 21 | 5 59 25 | 29°23'46 | 29°58 | 17°34 | 23°42 | 6° 4 | 18°33 | 18°52 | 15°59 | 8°20 | 8°52 | 25°R33 | 25°23 | 12°57 | 8°16 | F 21 |
| S 22 | 6 3 21 | 0♏24'51 | 12♏22 | 17°R42 | 23°30 | 6°51 | 18°45 | 18°49 | 15°57 | 8°20 | 8°54 | 25°33 | 25°20 | 13° 4 | 8°14 | S 22 |
| S 23 | 6 7 18 | 1°25'56 | 24°57 | 17°39 | 23°17 | 7°38 | 18°56 | 18°46 | 15°55 | 8°20 | 8°55 | 25°32 | 25°17 | 13°10 | 8°13 | S 23 |
| M24 | 6 11 15 | 2°27'02 | 7♏44 | 17°25 | 23° 0 | 8°25 | 19° 7 | 18°43 | 15°52 | 8°20 | 8°57 | 25°31 | 25°14 | 13°17 | 8°11 | M24 |
| T 25 | 6 15 11 | 3°28'09 | 20°46 | 16°59 | 22°42 | 9°12 | 19°18 | 18°40 | 15°50 | 8°20 | 8°58 | 25°30 | 25°11 | 13°24 | 8°10 | T 25 |
| W26 | 6 19 8 | 4°29'15 | 4♏ 1 | 16°21 | 22°21 | 9°59 | 19°30 | 18°38 | 15°47 | 8°21 | 9° 0 | 25°29 | 25° 8 | 13°30 | 8° 8 | W26 |
| T 27 | 6 23 4 | 5°30'23 | 17°30 | 15°32 | 21°58 | 10°46 | 19°41 | 18°35 | 15°45 | 8°21 | 9° 2 | 25°28 | 25° 4 | 13°37 | 8° 7 | T 27 |
| F 28 | 6 27 1 | 6°31'31 | 1♏15 | 14°33 | 21°32 | 11°34 | 19°52 | 18°33 | 15°43 | 8°21 | 9° 3 | 25°D28 | 25° 1 | 13°44 | 8° 6 | F 28 |
| S 29 | 6 30 57 | 7°32'39 | 15°14 | 13°24 | 21° 5 | 12°21 | 20° 2 | 18°30 | 15°40 | 8°22 | 9° 5 | 25°28 | 24°58 | 13°51 | 8° 5 | S 29 |
| S 30 | 6 34 54 | 8°33'49 | 29°27 | 12° 9 | 20°36 | 13° 8 | 20°13 | 18°28 | 15°38 | 8°22 | 9° 7 | 25°28 | 24°55 | 13°57 | 8° 4 | S 30 |
| M31 | 6 38 51 | 9♏34'58 | 13♏52 | 10♏49 | 20♏ 5 | 13°55 | 20♏24 | 18♏26 | 15♏36 | 8♏22 | 9♏ 8 | 25♈29 | 24♈52 | 14♏ 4 | 8♏ 3 | M31 |

| Day | ☉ | ☾ | | ♂ | | ♀ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|-------|------|-------|-------|-------|-------|------|-----|------|-----|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat |
| S 1 | 21s48 | 6s47 | 5s12 | 25s41 | 2s20 | 24s56 | 2s56 | 23s10 | 1s18 | 15s16 | 0n59 | 15n25 | 2s27 | 22n49 | 0n 2 | 1n56 | 1s31 | 23s38 | 5s41 | 23s22 | 23s23 | 18n32 | 13n10 | 1s23 | | | |
| S 2 | 21 57 | 12 7 | 4 49 | 25 45 | 2 21 | 24 46 | 2 50 | 23 2 | 1 18 | 15 20 | 0 59 | 15 24 | 2 26 | 22 49 | 0 2 | 1 56 | 1 31 | 23 37 | 5 41 | 23 22 | 23 23 | 18 34 | 13 9 | 1 23 | | | |
| M 3 | 22 6 | 16 51 | 4 7 | 25 48 | 2 22 | 24 35 | 2 44 | 22 55 | 1 18 | 15 23 | 0 59 | 15 23 | 2 26 | 22 48 | 0 2 | 1 56 | 1 31 | 23 37 | 5 40 | 23 22 | 23 23 | 18 35 | 13 8 | 1 23 | | | |
| T 4 | 22 14 | 20 35 | 3 7 | 25 49 | 2 23 | 24 24 | 2 37 | 22 47 | 1 18 | 15 27 | 0 59 | 15 22 | 2 26 | 22 48 | 0 2 | 1 56 | 1 31 | 23 36 | 5 40 | 23 22 | 23 23 | 18 37 | 13 8 | 1 23 | | | |
| W 5 | 22 22 | 22 54 | 1 54 | 25 48 | 2 23 | 24 12 | 2 30 | 22 39 | 1 18 | 15 30 | 0 59 | 15 21 | 2 26 | 22 48 | 0 2 | 1 56 | 1 31 | 23 36 | 5 40 | 23 22 | 23 23 | 18 38 | 13 7 | 1 23 | | | |
| T 6 | 22 30 | 23 34 | 0 34 | 25 47 | 2 22 | 24 1 | 2 22 | 22 31 | 1 18 | 15 34 | 0 59 | 15 20 | 2 26 | 22 48 | 0 2 | 1 56 | 1 31 | 23 36 | 5 40 | 23 22 | 23 23 | 18 40 | 13 6 | 1 23 | | | |
| F 7 | 22 37 | 22 34 | 0n48 | 25 43 | 2 21 | 23 50 | 2 14 | 22 22 | 1 17 | 15 37 | 0 59 | 15 19 | 2 26 | 22 48 | 0 2 | 1 55 | 1 31 | 23 35 | 5 40 | 23 22 | 23 23 | 18 42 | 13 5 | 1 23 | | | |
| S 8 | 22 43 | 20 6 | 2 4 | 25 39 | 2 20 | 23 38 | 2 6 | 22 13 | 1 17 | 15 41 | 0 59 | 15 19 | 2 25 | 22 47 | 0 2 | 1 55 | 1 31 | 23 35 | 5 40 | 23 22 | 23 23 | 18 43 | 13 5 | 1 23 | | | |
| S 9 | 22 49 | 16 30 | 3 11 | 25 33 | 2 17 | 23 26 | 1 57 | 22 4 | 1 17 | 15 44 | 0 59 | 15 18 | 2 25 | 22 47 | 0 2 | 1 55 | 1 31 | 23 35 | 5 40 | 23 22 | 23 23 | 18 45 | 13 4 | 1 23 | | | |
| M10 | 22 55 | 12 8 | 4 5 | 25 25 | 2 14 | 23 14 | 1 48 | 21 55 | 1 17 | 15 48 | 0 59 | 15 17 | 2 25 | 22 47 | 0 2 | 1 55 | 1 31 | 23 34 | 5 40 | 23 22 | 23 22 | 18 46 | 13 3 | 1 23 | | | |
| T 11 | 23 0 | 7 21 | 4 44 | 25 17 | 2 11 | 23 2 | 1 38 | 21 45 | 1 16 | 15 51 | 0 59 | 15 16 | 2 25 | 22 47 | 0 2 | 1 55 | 1 31 | 23 34 | 5 40 | 23 22 | 23 22 | 18 47 | 13 2 | 1 23 | | | |
| W12 | 23 5 | 2 23 | 5 9 | 25 6 | 2 6 | 22 50 | 1 28 | 21 35 | 1 16 | 15 55 | 0 59 | 15 15 | 2 25 | 22 46 | 0 2 | 1 55 | 1 31 | 23 33 | 5 40 | 23 22 | 23 22 | 18 49 | 13 2 | 1 23 | | | |
| T 13 | 23 9 | 2n32 | 5 18 | 24 55 | 2 1 | 22 38 | 1 18 | 21 25 | 1 16 | 15 58 | 0 59 | 15 14 | 2 24 | 22 46 | 0 2 | 1 55 | 1 31 | 23 33 | 5 40 | 23 22 | 23 22 | 18 50 | 13 1 | 1 23 | | | |
| F 14 | 23 13 | 7 16 | 5 12 | 24 43 | 1 54 | 22 26 | 1 7 | 21 15 | 1 16 | 16 1 | 0 59 | 15 13 | 2 24 | 22 46 | 0 2 | 1 55 | 1 31 | 23 33 | 5 40 | 23 22 | 23 22 | 18 52 | 13 1 | 1 23 | | | |
| S 15 | 23 16 | 11 40 | 4 53 | 24 29 | 1 47 | 22 13 | 0 55 | 21 4 | 1 15 | 16 5 | 0 59 | 15 13 | 2 24 | 22 46 | 0 2 | 1 55 | 1 31 | 23 32 | 5 40 | 23 22 | 23 22 | 18 53 | 13 0 | 1 23 | | | |
| S 16 | 23 19 | 15 35 | 4 22 | 24 15 | 1 38 | 22 1 | 0 44 | 20 54 | 1 15 | 16 8 | 0 59 | 15 12 | 2 24 | 22 45 | 0 2 | 1 55 | 1 31 | 23 32 | 5 40 | 23 22 | 23 22 | 18 55 | 12 59 | 1 23 | | | |
| M17 | 23 21 | 18 53 | 3 39 | 24 0 | 1 29 | 21 49 | 0 31 | 20 43 | 1 15 | 16 11 | 0 59 | 15 11 | 2 24 | 22 45 | 0 2 | 1 55 | 1 31 | 23 31 | 5 40 | 23 22 | 23 22 | 18 56 | 12 59 | 1 23 | | | |
| T 18 | 23 23 | 21 25 | 2 48 | 23 44 | 1 18 | 21 37 | 0 19 | 20 31 | 1 15 | 16 14 | 0 59 | 15 11 | 2 23 | 22 45 | 0 2 | 1 55 | 1 31 | 23 31 | 5 40 | 23 22 | 23 22 | 18 58 | 12 58 | 1 23 | | | |
| W19 | 23 25 | 23 2 | 1 48 | 23 28 | 1 6 | 21 24 | 0 6 | 20 20 | 1 14 | 16 17 | 0 59 | 15 10 | 2 23 | 22 45 | 0 2 | 1 55 | 1 31 | 23 30 | 5 40 | 23 22 | 23 22 | 18 59 | 12 58 | 1 23 | | | |
| T 20 | 23 26 | 23 35 | 0 43 | 23 11 | 0 52 | 21 12 | 0n 8 | 20 8 | 1 14 | 16 21 | 0 59 | 15 9 | 2 23 | 22 44 | 0 2 | 1 55 | 1 31 | 23 30 | 5 40 | 23 22 | 23 21 | 19 1 | 12 57 | 1 23 | | | |
| F 21 | 23 26 | 23 2 | 0s25 | 22 54 | 0 38 | 21 0 | 0 22 | 19 56 | 1 14 | 16 24 | 0 59 | 15 9 | 2 23 | 22 44 | 0 2 | 1 55 | 1 31 | 23 30 | 5 40 | 23 22 | 23 21 | 19 2 | 12 56 | 1 23 | | | |
| S 22 | 23 26 | 21 20 | 1 32 | 22 38 | 0 22 | 20 48 | 0 36 | 19 44 | 1 13 | 16 27 | 0 59 | 15 8 | 2 22 | 22 44 | 0 2 | 1 55 | 1 30 | 23 29 | 5 40 | 23 22 | 23 21 | 19 4 | 12 56 | 1 23 | | | |
| S 23 | 23 26 | 18 35 | 2 36 | 22 21 | 0 5 | 20 36 | 0 50 | 19 32 | 1 13 | 16 30 | 0 59 | 15 7 | 2 22 | 22 44 | 0 2 | 1 55 | 1 30 | 23 29 | 5 40 | 23 22 | 23 21 | 19 5 | 12 55 | 1 23 | | | |
| M24 | 23 25 | 14 53 | 3 33 | 22 5 | 0n13 | 20 24 | 1 5 | 19 20 | 1 13 | 16 33 | 0 59 | 15 7 | 2 22 | 22 43 | 0 2 | 1 55 | 1 30 | 23 28 | 5 40 | 23 22 | 23 21 | 19 6 | 12 55 | 1 23 | | | |
| T 25 | 23 23 | 10 27 | 4 21 | 21 50 | 0 32 | 20 12 | 1 20 | 19 7 | 1 12 | 16 36 | 1 0 | 15 6 | 2 22 | 22 43 | 0 2 | 1 55 | 1 30 | 23 28 | 5 40 | 23 22 | 23 21 | 19 8 | 12 55 | 1 23 | | | |
| W26 | 23 22 | 5 27 | 4 55 | 21 35 | 0 51 | 20 0 | 1 36 | 18 54 | 1 12 | 16 39 | 1 0 | 15 6 | 2 21 | 22 43 | 0 2 | 1 56 | 1 30 | 23 27 | 5 40 | 23 21 | 23 21 | 19 9 | 12 54 | 1 23 | | | |
| T 27 | 23 19 | 0 7 | 5 14 | 21 21 | 1 11 | 19 49 | 1 51 | 18 41 | 1 12 | 16 42 | 1 0 | 15 5 | 2 21 | 22 43 | 0 2 | 1 56 | 1 30 | 23 27 | 5 40 | 23 21 | 23 21 | 19 11 | 12 54 | 1 23 | | | |
| F 28 | 23 16 | 5s19 | 5 15 | 21 8 | 1 31 | 19 37 | 2 7 | 18 27 | 1 11 | 16 44 | 1 0 | 15 5 | 2 21 | 22 42 | 0 2 | 1 56 | 1 30 | 23 26 | 5 40 | 23 21 | 23 20 | 19 12 | 12 53 | 1 23 | | | |
| S 29 | 23 13 | 10 35 | 4 58 | 20 56 | 1 50 | 19 26 | 2 22 | 18 14 | 1 11 | 16 47 | 1 0 | 15 5 | 2 21 | 22 42 | 0 2 | 1 56 | 1 30 | 23 26 | 5 40 | 23 21 | 23 20 | 19 13 | 12 53 | 1 23 | | | |
| S 30 | 23 10 | 15 22 | 4 23 | 20 46 | 2 8 | 19 15 | 2 38 | 18 0 | 1 11 | 16 50 | 1 0 | 15 4 | 2 20 | 22 42 | 0 2 | 1 56 | 1 30 | 23 26 | 5 39 | 23 21 | 23 20 | 19 15 | 12 53 | 1 23 | | | |
| M31 | 23s 5 | 19s21 | 3s31 | 20s36 | 2n24 | 19s 4 | 2n54 | 17s46 | 1s10 | 16s53 | 1n 0 | 15n 4 | 2s20 | 22n42 | 0n 2 | 1n56 | 1s30 | 23s25 | 5s39 | 23s21 | 23s20 | 19n16 | 12n52 | 1s23 | | | |