



Astrodienst Ephemeris Tables for the year 2009

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 2009

geocentric

JANUARY 2009

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|----------|-------|-------|-------|-------|-------|--------|-------|-------|------|-------|-------|-------|-------|------|
| T 1 | 6 43 7 | 10°34'00 | 29°46 | 29°29 | 27°15 | 3°31 | 28°55 | 21°R46 | 19°14 | 22°26 | 1°15 | 9°27 | 10°58 | 29°43 | 18°21 | T 1 |
| F 2 | 6 47 4 | 11°43'10 | 12°17 | 0°44 | 28°21 | 4°16 | 29° 9 | 21°46 | 19°16 | 22°28 | 1°18 | 9°29 | 10°55 | 29°49 | 18°25 | F 2 |
| S 3 | 6 51 0 | 12°44'20 | 24°45 | 1°56 | 29°26 | 5° 2 | 29°23 | 21°46 | 19°18 | 22°30 | 1°20 | 9°31 | 10°51 | 29°56 | 18°29 | S 3 |
| S 4 | 6 54 57 | 13°45'30 | 7°41 | 3° 3 | 0°31 | 5°47 | 29°37 | 21°45 | 19°20 | 22°31 | 1°22 | 9°R32 | 10°48 | 0° 3 | 18°32 | S 4 |
| M 5 | 6 58 53 | 14°46'40 | 21° 1 | 4° 5 | 1°36 | 6°32 | 29°51 | 21°45 | 19°21 | 22°33 | 1°24 | 9°32 | 10°45 | 0° 9 | 18°36 | M 5 |
| T 6 | 7 2 50 | 15°47'49 | 4°46 | 5° 2 | 2°40 | 7°18 | 0° 5 | 21°44 | 19°23 | 22°35 | 1°26 | 9°31 | 10°42 | 0°16 | 18°40 | T 6 |
| W 7 | 7 6 46 | 16°48'57 | 18°58 | 5°51 | 3°44 | 8° 3 | 0°19 | 21°44 | 19°25 | 22°37 | 1°28 | 9°28 | 10°39 | 0°23 | 18°44 | W 7 |
| T 8 | 7 10 43 | 17°50'06 | 3°34 | 6°33 | 4°48 | 8°48 | 0°33 | 21°43 | 19°27 | 22°39 | 1°30 | 9°26 | 10°36 | 0°29 | 18°48 | T 8 |
| F 9 | 7 14 40 | 18°51'14 | 18°30 | 7° 6 | 5°52 | 9°34 | 0°47 | 21°42 | 19°29 | 22°41 | 1°33 | 9°23 | 10°32 | 0°36 | 18°52 | F 9 |
| S 10 | 7 18 36 | 19°52'22 | 3°39 | 7°29 | 6°55 | 10°19 | 1° 1 | 21°41 | 19°31 | 22°43 | 1°35 | 9°20 | 10°29 | 0°43 | 18°56 | S 10 |
| S 11 | 7 22 33 | 20°53'29 | 18°52 | 7°43 | 7°58 | 11° 5 | 1°15 | 21°40 | 19°33 | 22°45 | 1°37 | 9°18 | 10°26 | 0°49 | 19° 0 | S 11 |
| M12 | 7 26 29 | 21°54'36 | 3°57 | 7°R45 | 9° 0 | 11°50 | 1°29 | 21°39 | 19°36 | 22°47 | 1°39 | 9°D17 | 10°23 | 0°56 | 19° 4 | M12 |
| T 13 | 7 30 26 | 22°55'43 | 18°47 | 7°36 | 10° 2 | 12°36 | 1°43 | 21°38 | 19°38 | 22°49 | 1°41 | 9°17 | 10°20 | 1° 3 | 19° 8 | T 13 |
| W14 | 7 34 22 | 23°56'49 | 3°17 | 7°14 | 11° 4 | 13°22 | 1°57 | 21°36 | 19°40 | 22°51 | 1°43 | 9°18 | 10°16 | 1° 9 | 19°12 | W14 |
| T 15 | 7 38 19 | 24°57'55 | 17°16 | 6°42 | 12° 5 | 14° 7 | 2°11 | 21°35 | 19°42 | 22°53 | 1°45 | 9°19 | 10°13 | 1°16 | 19°16 | T 15 |
| F 16 | 7 42 16 | 25°59'01 | 0°50 | 5°58 | 13° 6 | 14°53 | 2°25 | 21°33 | 19°45 | 22°55 | 1°47 | 9°21 | 10°10 | 1°23 | 19°20 | F 16 |
| S 17 | 7 46 12 | 27° 0'07 | 13°58 | 5° 3 | 14° 7 | 15°39 | 2°40 | 21°32 | 19°47 | 22°57 | 1°49 | 9°22 | 10° 7 | 1°29 | 19°25 | S 17 |
| S 18 | 7 50 9 | 28° 1'12 | 26°42 | 4° 0 | 15° 7 | 16°25 | 2°54 | 21°30 | 19°49 | 22°59 | 1°51 | 9°R22 | 10° 4 | 1°36 | 19°29 | S 18 |
| M19 | 7 54 5 | 29° 2'18 | 9°16 | 2°50 | 16° 6 | 17°11 | 3° 8 | 21°28 | 19°52 | 23° 2 | 1°53 | 9°22 | 10° 1 | 1°43 | 19°33 | M19 |
| T 20 | 7 58 2 | 0° 3'23 | 21°15 | 1°35 | 17° 5 | 17°57 | 3°22 | 21°26 | 19°54 | 23° 4 | 1°55 | 9°21 | 9°57 | 1°50 | 19°37 | T 20 |
| W21 | 8 1 58 | 1° 4'27 | 3°14 | 0°18 | 18° 4 | 18°43 | 3°36 | 21°24 | 19°57 | 23° 6 | 1°57 | 9°20 | 9°54 | 1°56 | 19°41 | W21 |
| T 22 | 8 5 55 | 2° 5'32 | 15° 5 | 29° 1 | 19° 2 | 19°29 | 3°50 | 21°22 | 19°59 | 23° 8 | 1°59 | 9°19 | 9°51 | 2° 3 | 19°46 | T 22 |
| F 23 | 8 9 51 | 3° 6'35 | 26°54 | 27°46 | 20° 0 | 20°15 | 4° 5 | 21°19 | 20° 2 | 23°10 | 2° 1 | 9°18 | 9°48 | 2°10 | 19°50 | F 23 |
| S 24 | 8 13 48 | 4° 7'39 | 8°43 | 26°35 | 20°57 | 21° 1 | 4°19 | 21°17 | 20° 4 | 23°12 | 2° 3 | 9°17 | 9°45 | 2°16 | 19°54 | S 24 |
| S 25 | 8 17 45 | 5° 8'41 | 20°35 | 25°30 | 21°53 | 21°47 | 4°33 | 21°14 | 20° 7 | 23°15 | 2° 5 | 9°17 | 9°42 | 2°23 | 19°58 | S 25 |
| M26 | 8 21 41 | 6° 9'43 | 2°32 | 24°32 | 22°49 | 22°33 | 4°47 | 21°12 | 20°10 | 23°17 | 2° 7 | 9°16 | 9°38 | 2°30 | 20° 3 | M26 |
| T 27 | 8 25 38 | 7°10'44 | 14°36 | 23°42 | 23°44 | 23°19 | 5° 1 | 21° 9 | 20°12 | 23°19 | 2° 9 | 9°D16 | 9°35 | 2°36 | 20° 7 | T 27 |
| W28 | 8 29 34 | 8°11'44 | 26°49 | 23° 1 | 24°39 | 24° 5 | 5°16 | 21° 6 | 20°15 | 23°21 | 2°11 | 9°16 | 9°32 | 2°43 | 20°11 | W28 |
| T 29 | 8 33 31 | 9°12'43 | 9°12 | 22°29 | 25°33 | 24°51 | 5°30 | 21° 4 | 20°18 | 23°23 | 2°12 | 9°R17 | 9°29 | 2°50 | 20°16 | T 29 |
| F 30 | 8 37 27 | 10°13'40 | 21°48 | 22° 6 | 26°26 | 25°38 | 5°44 | 21° 1 | 20°21 | 23°26 | 2°14 | 9°16 | 9°26 | 2°56 | 20°20 | F 30 |
| S 31 | 8 41 24 | 11°14'37 | 4°37 | 21°51 | 27°19 | 26°24 | 5°58 | 20°58 | 20°24 | 23°28 | 2°16 | 9°16 | 9°22 | 3° 3 | 20°24 | S 31 |

| Day | ☉ | ☾ | | ♀ | | ♀ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|------|------|-------|------|-------|------|-------|-------|-------|------|------|-----|------|-----|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat |
| T 1 | 23s 1 | 9s51 | 1n49 | 21s48 | 1s35 | 13s49 | 1s29 | 24s 6 | 0s42 | 20s47 | 0s25 | 5n 9 | 2n 3 | 4s57 | 0s45 | 14s22 | 0s21 | 17s45 | 5n42 | 17s53 | 17s29 | 26s50 | 9s27 | 6n10 | | | |
| F 2 | 22 55 | 4 24 | 2 50 | 21 24 | 1 26 | 13 23 | 1 25 | 24 5 | 0 43 | 20 44 | 0 25 | 5 9 | 2 3 | 4 56 | 0 45 | 14 22 | 0 21 | 17 45 | 5 41 | 17 53 | 17 30 | 26 50 | 9 26 | 6 10 | | | |
| S 3 | 22 50 | 1n20 | 3 44 | 20 59 | 1 17 | 12 56 | 1 21 | 24 4 | 0 43 | 20 41 | 0 25 | 5 9 | 2 3 | 4 56 | 0 45 | 14 21 | 0 21 | 17 45 | 5 41 | 17 52 | 17 31 | 26 49 | 9 25 | 6 9 | | | |
| S 4 | 22 44 | 7 9 | 4 28 | 20 33 | 1 7 | 12 29 | 1 17 | 24 2 | 0 44 | 20 38 | 0 25 | 5 10 | 2 4 | 4 55 | 0 45 | 14 20 | 0 21 | 17 45 | 5 41 | 17 52 | 17 31 | 26 48 | 9 25 | 6 9 | | | |
| M 5 | 22 37 | 12 49 | 4 59 | 20 8 | 0 55 | 12 2 | 1 13 | 24 1 | 0 44 | 20 35 | 0 25 | 5 10 | 2 4 | 4 54 | 0 45 | 14 20 | 0 21 | 17 45 | 5 41 | 17 52 | 17 32 | 26 48 | 9 24 | 6 9 | | | |
| T 6 | 22 30 | 18 2 | 5 14 | 19 42 | 0 43 | 11 35 | 1 8 | 23 59 | 0 45 | 20 32 | 0 25 | 5 11 | 2 4 | 4 53 | 0 45 | 14 19 | 0 21 | 17 45 | 5 41 | 17 52 | 17 33 | 26 47 | 9 23 | 6 9 | | | |
| W 7 | 22 23 | 22 26 | 5 11 | 19 17 | 0 30 | 11 8 | 1 4 | 23 57 | 0 45 | 20 29 | 0 25 | 5 11 | 2 5 | 4 53 | 0 45 | 14 19 | 0 21 | 17 45 | 5 41 | 17 53 | 17 34 | 26 46 | 9 22 | 6 8 | | | |
| T 8 | 22 15 | 25 34 | 4 48 | 18 53 | 0 15 | 10 40 | 0 59 | 23 54 | 0 46 | 20 27 | 0 25 | 5 12 | 2 5 | 4 52 | 0 45 | 14 18 | 0 21 | 17 45 | 5 41 | 17 54 | 17 35 | 26 45 | 9 21 | 6 8 | | | |
| F 9 | 22 7 | 27 0 | 4 5 | 18 29 | 0n 1 | 10 12 | 0 54 | 23 52 | 0 46 | 20 24 | 0 25 | 5 12 | 2 5 | 4 51 | 0 45 | 14 17 | 0 21 | 17 45 | 5 41 | 17 54 | 17 36 | 26 45 | 9 20 | 6 8 | | | |
| S 10 | 21 58 | 26 28 | 3 4 | 18 7 | 0 17 | 9 44 | 0 49 | 23 49 | 0 47 | 20 21 | 0 25 | 5 13 | 2 5 | 4 50 | 0 45 | 14 17 | 0 21 | 17 45 | 5 41 | 17 55 | 17 37 | 26 44 | 9 19 | 6 8 | | | |
| S 11 | 21 49 | 23 56 | 1 51 | 17 47 | 0 34 | 9 16 | 0 44 | 23 45 | 0 47 | 20 18 | 0 25 | 5 14 | 2 6 | 4 49 | 0 45 | 14 16 | 0 21 | 17 45 | 5 41 | 17 56 | 17 37 | 26 43 | 9 18 | 6 8 | | | |
| M12 | 21 39 | 19 45 | 0 29 | 17 29 | 0 53 | 8 48 | 0 39 | 23 42 | 0 48 | 20 15 | 0 25 | 5 14 | 2 6 | 4 48 | 0 45 | 14 15 | 0 21 | 17 45 | 5 41 | 17 56 | 17 38 | 26 43 | 9 17 | 6 7 | | | |
| T 13 | 21 29 | 14 22 | 0s52 | 17 14 | 1 11 | 8 19 | 0 33 | 23 38 | 0 48 | 20 12 | 0 25 | 5 15 | 2 6 | 4 47 | 0 45 | 14 15 | 0 21 | 17 45 | 5 41 | 17 56 | 17 39 | 26 42 | 9 16 | 6 7 | | | |
| W14 | 21 19 | 8 19 | 2 9 | 17 1 | 1 30 | 7 51 | 0 28 | 23 34 | 0 48 | 20 8 | 0 26 | 5 16 | 2 6 | 4 47 | 0 45 | 14 14 | 0 21 | 17 45 | 5 41 | 17 56 | 17 40 | 26 41 | 9 15 | 6 7 | | | |
| T 15 | 21 8 | 2 2 | 3 15 | 16 51 | 1 49 | 7 22 | 0 22 | 23 30 | 0 49 | 20 5 | 0 26 | 5 17 | 2 7 | 4 46 | 0 45 | 14 13 | 0 21 | 17 45 | 5 41 | 17 55 | 17 41 | 26 40 | 9 14 | 6 7 | | | |
| F 16 | 20 57 | 4s 8 | 4 8 | 16 44 | 2 7 | 6 53 | 0 16 | 23 26 | 0 49 | 20 2 | 0 26 | 5 18 | 2 7 | 4 45 | 0 45 | 14 13 | 0 21 | 17 45 | 5 41 | 17 55 | 17 42 | 26 40 | 9 13 | 6 7 | | | |
| S 17 | 20 45 | 9 54 | 4 47 | 16 40 | 2 24 | 6 25 | 0 10 | 23 21 | 0 50 | 19 59 | 0 26 | 5 18 | 2 7 | 4 44 | 0 45 | 14 12 | 0 21 | 17 45 | 5 41 | 17 55 | 17 43 | 26 39 | 9 12 | 6 6 | | | |
| S 18 | 20 33 | 15 6 | 5 9 | 16 39 | 2 40 | 5 56 | 0 4 | 23 16 | 0 50 | 19 56 | 0 26 | 5 19 | 2 7 | 4 43 | 0 45 | 14 11 | 0 21 | 17 45 | 5 41 | 17 55 | 17 43 | 26 38 | 9 10 | 6 6 | | | |
| M19 | 20 21 | 19 32 | 5 17 | 16 41 | 2 55 | 5 27 | 0n 2 | 23 11 | 0 51 | 19 53 | 0 26 | 5 20 | 2 8 | 4 42 | 0 45 | 14 11 | 0 21 | 17 45 | 5 41 | 17 55 | 17 44 | 26 37 | 9 9 | 6 6 | | | |
| T 20 | 20 8 | 23 4 | 5 10 | 16 46 | 3 7 | 4 58 | 0 9 | 23 5 | 0 51 | 19 50 | 0 26 | 5 21 | 2 8 | 4 41 | 0 45 | 14 10 | 0 21 | 17 45 | 5 41 | 17 55 | 17 45 | 26 37 | 9 8 | 6 6 | | | |
| W21 | 19 55 | 25 33 | 4 50 | 16 53 | 3 17 | 4 29 | 0 15 | 22 59 | 0 52 | 19 46 | 0 26 | 5 23 | 2 8 | 4 40 | 0 44 | 14 9 | 0 21 | 17 45 | 5 41 | 17 55 | 17 46 | 26 36 | 9 7 | 6 6 | | | |
| T 22 | 19 42 | 26 52 | 4 18 | 17 1 | 3 25 | 4 0 | 0 22 | 22 53 | 0 52 | 19 43 | 0 26 | 5 24 | 2 8 | 4 39 | 0 44 | 14 9 | 0 21 | 17 45 | 5 41 | 17 55 | 17 47 | 26 35 | 9 6 | 6 6 | | | |
| F 23 | 19 28 | 26 58 | 3 34 | 17 11 | 3 30 | 3 32 | 0 29 | 22 47 | 0 53 | 19 40 | 0 26 | 5 25 | 2 9 | 4 38 | 0 44 | 14 8 | 0 21 | 17 45 | 5 41 | 17 56 | 17 48 | 26 34 | 9 5 | 6 5 | | | |
| S 24 | 19 14 | 25 51 | 2 42 | 17 22 | 3 32 | 3 3 | 0 36 | 22 40 | 0 53 | 19 37 | 0 26 | 5 26 | 2 9 | 4 37 | 0 44 | 14 7 | 0 21 | 17 45 | 5 41 | 17 56 | 17 49 | 26 33 | 9 4 | 6 5 | | | |
| S 25 | 18 59 | 23 33 | 1 42 | 17 34 | 3 32 | 2 34 | 0 43 | 22 34 | 0 54 | 19 33 | 0 27 | 5 27 | 2 9 | 4 36 | 0 44 | 14 6 | 0 21 | 17 45 | 5 41 | 17 56 | 17 49 | 26 33 | 9 2 | 6 5 | | | |
| M26 | 18 44 | 20 12 | 0 37 | 17 46 | 3 30 | 2 5 | 0 50 | 22 26 | 0 54 | 19 30 | 0 27 | 5 28 | 2 9 | 4 35 | 0 44 | 14 6 | 0 21 | 17 45 | 5 41 | 17 56 | 17 50 | 26 32 | 9 1 | 6 5 | | | |
| T 27 | 18 29 | 15 59 | 0n30 | 17 58 | 3 26 | 1 37 | 0 57 | 22 19 | 0 54 | 19 27 | 0 27 | 5 30 | 2 10 | 4 33 | 0 44 | 14 5 | 0 21 | 17 45 | 5 41 | 17 56 | 17 51 | 26 31 | 9 0 | 6 5 | | | |
| W28 | 18 13 | 11 4 | 1 36 | 18 11 | 3 21 | 1 8 | 1 5 | 22 12 | 0 55 | 19 23 | 0 27 | 5 31 | 2 10 | 4 32 | 0 44 | 14 4 | 0 21 | 17 45 | 5 41 | 17 56 | 17 52 | 26 30 | 8 59 | 6 5 | | | |
| T 29 | 17 57 | 5 40 | 2 39 | 18 23 | 3 13 | 0 40 | 1 13 | 22 4 | 0 55 | 19 20 | 0 27 | 5 32 | 2 10 | 4 31 | 0 44 | 14 4 | 0 21 | 17 45 | 5 41 | 17 56 | 17 53 | 26 29 | 8 58 | 6 5 | | | |
| F 30 | 17 41 | 0n 2 | 3 35 | 18 35 | 3 5 | 0 11 | 1 20 | 21 56 | 0 56 | 19 16 | 0 27 | 5 34 | 2 10 | 4 30 | 0 44 | 14 3 | 0 21 | 17 45 | 5 41 | 17 56 | 17 54 | 26 28 | 8 56 | 6 5 | | | |
| S 31 | 17s24 | 5n50 | 4n21 | 18s46 | 2n56 | 0n17 | 1n28 | 21s47 | 0s56 | 19s13 | 0s27 | 5n35 | 2n11 | 4s29 | 0s44 | 14s 2 | 0s21 | 17s44 | 5n41 | 17s56 | 17s54 | 26s27 | 8s55 | 6n | | | |

ASTRODIENST EPHEMERIS for the year 2009

geocentric

FEBRUARY 2009

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|--------------------|--------------------|-------------------|--------------------|-------------------|-------------------|--------------------|------|
| S 1 | 8 45 20 | 12 ¹⁵ 32 | 17 ⁴ 41 | 21 ⁰ D45 | 28 ¹ 11 | 27 ⁰ 10 | 6 ¹ 12 | 20 ⁰ R54 | 20 ¹ 26 | 23 ¹ 30 | 2 ⁰ 18 | 9 ⁰ R16 | 9 ¹ 19 | 3 ⁰ 10 | 20 ¹ 29 | S 1 |
| M 2 | 8 49 17 | 13 ¹⁶ 26 | 1 ⁸ 3 | 21 ⁰ 47 | 29 ⁰ 2 | 27 ⁰ 56 | 6 ² 27 | 20 ⁰ 51 | 20 ⁰ 29 | 23 ⁰ 32 | 2 ⁰ 20 | 9 ¹ 16 | 9 ⁰ 16 | 3 ⁰ 16 | 20 ⁰ 33 | M 2 |
| T 3 | 8 53 14 | 14 ¹⁷ 19 | 14 ⁴ 2 | 21 ⁰ 55 | 29 ⁰ 52 | 28 ⁰ 43 | 6 ⁴ 41 | 20 ⁰ 48 | 20 ⁰ 32 | 23 ⁰ 35 | 2 ⁰ 21 | 9 ⁰ D16 | 9 ⁰ 13 | 3 ⁰ 23 | 20 ⁰ 38 | T 3 |
| W 4 | 8 57 10 | 15 ¹⁸ 11 | 28 ⁰ 41 | 22 ⁰ 11 | 0 ⁰ Y42 | 29 ⁰ 29 | 6 ⁵ 55 | 20 ⁰ 45 | 20 ⁰ 35 | 23 ⁰ 37 | 2 ⁰ 23 | 9 ⁰ 16 | 9 ⁰ 10 | 3 ⁰ 30 | 20 ⁰ 42 | W 4 |
| T 5 | 9 1 7 | 16 ¹⁹ 01 | 12 ¹ 57 | 22 ⁰ 33 | 1 ⁰ 30 | 0 ⁰ 16 | 7 ⁰ 9 | 20 ⁰ 41 | 20 ⁰ 38 | 23 ⁰ 39 | 2 ⁰ 25 | 9 ⁰ 16 | 9 ⁰ 7 | 3 ⁰ 36 | 20 ⁰ 46 | T 5 |
| F 6 | 9 5 3 | 17 ¹⁹ 49 | 27 ⁰ 30 | 23 ⁰ 1 | 2 ⁰ 18 | 1 ⁰ 2 | 7 ⁰ 23 | 20 ⁰ 38 | 20 ⁰ 41 | 23 ⁰ 41 | 2 ⁰ 27 | 9 ⁰ 17 | 9 ⁰ 3 | 3 ⁰ 43 | 20 ⁰ 51 | F 6 |
| S 7 | 9 9 0 | 18 ²⁰ 37 | 12 ² 14 | 23 ⁰ 34 | 3 ⁰ 5 | 1 ⁰ 49 | 7 ⁰ 37 | 20 ⁰ 34 | 20 ⁰ 44 | 23 ⁰ 44 | 2 ⁰ 28 | 9 ⁰ 18 | 9 ⁰ 0 | 3 ⁰ 50 | 20 ⁰ 55 | S 7 |
| S 8 | 9 12 56 | 19 ²¹ 22 | 27 ⁰ 5 | 24 ⁰ 12 | 3 ⁰ 51 | 2 ⁰ 35 | 7 ⁰ 51 | 20 ⁰ 30 | 20 ⁰ 47 | 23 ⁰ 46 | 2 ⁰ 30 | 9 ⁰ 18 | 8 ⁰ 57 | 3 ⁰ 56 | 21 ⁰ 0 | S 8 |
| M 9 | 9 16 53 | 20 ²² 07 | 11 ³ 54 | 24 ⁰ 54 | 4 ⁰ 36 | 3 ⁰ 22 | 8 ⁰ 5 | 20 ⁰ 27 | 20 ⁰ 50 | 23 ⁰ 48 | 2 ⁰ 32 | 9 ⁰ R18 | 8 ⁰ 54 | 4 ⁰ 3 | 21 ⁰ 4 | M 9 |
| T 10 | 9 20 49 | 21 ²² 49 | 26 ⁰ 35 | 25 ⁰ 40 | 5 ⁰ 19 | 4 ⁰ 8 | 8 ⁰ 19 | 20 ⁰ 23 | 20 ⁰ 53 | 23 ⁰ 50 | 2 ⁰ 33 | 9 ⁰ 18 | 8 ⁰ 51 | 4 ⁰ 10 | 21 ⁰ 8 | T 10 |
| W11 | 9 24 46 | 22 ²³ 31 | 11 ⁴ 1 | 26 ⁰ 30 | 6 ⁰ 2 | 4 ⁰ 55 | 8 ⁰ 33 | 20 ⁰ 19 | 20 ⁰ 56 | 23 ⁰ 53 | 2 ⁰ 35 | 9 ⁰ 17 | 8 ⁰ 48 | 4 ⁰ 16 | 21 ⁰ 13 | W11 |
| T 12 | 9 28 43 | 23 ²⁴ 11 | 25 ⁰ 5 | 27 ⁰ 24 | 6 ⁰ 44 | 5 ⁰ 41 | 8 ⁰ 47 | 20 ⁰ 15 | 20 ⁰ 59 | 23 ⁰ 55 | 2 ⁰ 36 | 9 ⁰ 15 | 8 ⁰ 44 | 4 ⁰ 23 | 21 ⁰ 17 | T 12 |
| F 13 | 9 32 39 | 24 ²⁴ 50 | 8 ¹ 45 | 28 ⁰ 20 | 7 ⁰ 24 | 6 ⁰ 28 | 9 ⁰ 1 | 20 ⁰ 11 | 21 ⁰ 3 | 23 ⁰ 57 | 2 ⁰ 38 | 9 ⁰ 13 | 8 ⁰ 41 | 4 ⁰ 30 | 21 ⁰ 22 | F 13 |
| S 14 | 9 36 36 | 25 ²⁵ 28 | 22 ⁰ 1 | 29 ⁰ 20 | 8 ⁰ 3 | 7 ⁰ 14 | 9 ⁰ 15 | 20 ⁰ 7 | 21 ⁰ 6 | 24 ⁰ 0 | 2 ⁰ 39 | 9 ⁰ 11 | 8 ⁰ 38 | 4 ⁰ 36 | 21 ⁰ 26 | S 14 |
| S 15 | 9 40 32 | 26 ²⁶ 05 | 4 ¹ 51 | 0 ⁰ 22 | 8 ⁰ 41 | 8 ⁰ 1 | 9 ⁰ 29 | 20 ⁰ 3 | 21 ⁰ 9 | 24 ⁰ 2 | 2 ⁰ 41 | 9 ⁰ 9 | 8 ⁰ 35 | 4 ⁰ 43 | 21 ⁰ 30 | S 15 |
| M16 | 9 44 29 | 27 ²⁶ 40 | 17 ⁰ 21 | 1 ⁰ 27 | 9 ⁰ 18 | 8 ⁰ 48 | 9 ⁰ 43 | 19 ⁰ 58 | 21 ⁰ 12 | 24 ⁰ 4 | 2 ⁰ 42 | 9 ⁰ 8 | 8 ⁰ 32 | 4 ⁰ 50 | 21 ⁰ 35 | M16 |
| T 17 | 9 48 25 | 28 ²⁷ 14 | 29 ⁰ 33 | 2 ⁰ 33 | 9 ⁰ 53 | 9 ⁰ 34 | 9 ⁰ 57 | 19 ⁰ 54 | 21 ⁰ 15 | 24 ⁰ 6 | 2 ⁰ 44 | 9 ⁰ D 8 | 8 ⁰ 28 | 4 ⁰ 56 | 21 ⁰ 39 | T 17 |
| W18 | 9 52 22 | 29 ²⁷ 48 | 11 ⁵ 32 | 3 ⁰ 42 | 10 ⁰ 27 | 10 ⁰ 21 | 10 ⁰ 11 | 19 ⁰ 50 | 21 ⁰ 19 | 24 ⁰ 9 | 2 ⁰ 45 | 9 ⁰ 8 | 8 ⁰ 25 | 5 ⁰ 3 | 21 ⁰ 43 | W18 |
| T 19 | 9 56 18 | 0 ⁰ 28'19 | 23 ⁰ 24 | 4 ⁰ 53 | 10 ⁰ 59 | 11 ⁰ 8 | 10 ⁰ 25 | 19 ⁰ 46 | 21 ⁰ 22 | 24 ⁰ 11 | 2 ⁰ 46 | 9 ⁰ 9 | 8 ⁰ 22 | 5 ⁰ 10 | 21 ⁰ 48 | T 19 |
| F 20 | 10 0 15 | 1 ⁰ 28'50 | 5 ⁰ 32 | 6 ⁰ 6 | 11 ⁰ 30 | 11 ⁰ 55 | 10 ⁰ 38 | 19 ⁰ 41 | 21 ⁰ 25 | 24 ⁰ 13 | 2 ⁰ 48 | 9 ⁰ 11 | 8 ⁰ 19 | 5 ⁰ 16 | 21 ⁰ 52 | F 20 |
| S 21 | 10 4 12 | 2 ⁰ 29'19 | 17 ⁰ 2 | 7 ⁰ 21 | 11 ⁰ 59 | 12 ⁰ 41 | 10 ⁰ 52 | 19 ⁰ 37 | 21 ⁰ 28 | 24 ⁰ 16 | 2 ⁰ 49 | 9 ⁰ 13 | 8 ⁰ 16 | 5 ⁰ 23 | 21 ⁰ 56 | S 21 |
| S 22 | 10 8 8 | 3 ⁰ 29'47 | 28 ⁰ 57 | 8 ⁰ 37 | 12 ⁰ 27 | 13 ⁰ 28 | 11 ⁰ 6 | 19 ⁰ 32 | 21 ⁰ 32 | 24 ⁰ 18 | 2 ⁰ 50 | 9 ⁰ 14 | 8 ⁰ 13 | 5 ⁰ 30 | 22 ⁰ 1 | S 22 |
| M23 | 10 12 5 | 4 ⁰ 30'13 | 11 ¹ 1 | 9 ⁰ 55 | 12 ⁰ 53 | 14 ⁰ 15 | 11 ⁰ 19 | 19 ⁰ 28 | 21 ⁰ 35 | 24 ⁰ 20 | 2 ⁰ 52 | 9 ⁰ R15 | 8 ⁰ 9 | 5 ⁰ 36 | 22 ⁰ 5 | M23 |
| T 24 | 10 16 1 | 5 ⁰ 30'38 | 23 ⁰ 16 | 11 ⁰ 14 | 13 ⁰ 17 | 15 ⁰ 2 | 11 ⁰ 33 | 19 ⁰ 23 | 21 ⁰ 38 | 24 ⁰ 22 | 2 ⁰ 53 | 9 ⁰ 14 | 8 ⁰ 6 | 5 ⁰ 43 | 22 ⁰ 9 | T 24 |
| W25 | 10 19 58 | 6 ⁰ 31'01 | 5 ⁰ 45 | 12 ⁰ 35 | 13 ⁰ 39 | 15 ⁰ 49 | 11 ⁰ 47 | 19 ⁰ 19 | 21 ⁰ 42 | 24 ⁰ 25 | 2 ⁰ 54 | 9 ⁰ 11 | 8 ⁰ 3 | 5 ⁰ 50 | 22 ⁰ 14 | W25 |
| T 26 | 10 23 54 | 7 ⁰ 31'22 | 18 ⁰ 28 | 13 ⁰ 57 | 13 ⁰ 59 | 16 ⁰ 36 | 12 ⁰ 0 | 19 ⁰ 14 | 21 ⁰ 45 | 24 ⁰ 27 | 2 ⁰ 55 | 9 ⁰ 8 | 8 ⁰ 0 | 5 ⁰ 56 | 22 ⁰ 18 | T 26 |
| F 27 | 10 27 51 | 8 ⁰ 31'42 | 1 ⁰ Y25 | 15 ⁰ 20 | 14 ⁰ 18 | 17 ⁰ 22 | 12 ⁰ 14 | 19 ⁰ 9 | 21 ⁰ 48 | 24 ⁰ 29 | 2 ⁰ 57 | 9 ⁰ 3 | 7 ⁰ 57 | 6 ⁰ 3 | 22 ⁰ 22 | F 27 |
| S 28 | 10 31 47 | 9 ⁰ 31'59 | 14 ⁰ Y36 | 16 ⁰ 45 | 14 ⁰ Y34 | 18 ⁰ 9 | 12 ⁰ 27 | 19 ⁰ 11 | 21 ⁰ 52 | 24 ⁰ 31 | 2 ⁰ 58 | 8 ⁰ 58 | 7 ⁰ 53 | 6 ⁰ 30 | 22 ⁰ 27 | S 28 |

| 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 | 17s 7 | 11n29 | 4n55 | 18s57 | 2n46 | 0n45 | 1n36 | 21s39 | 0s56 | 19s10 | 0s27 | 5n37 | 2n11 | 4s28 | 0s44 | 14s 1 | 0s21 | 17s44 | 5n41 | 17s56 | 17s55 | 26s27 | 8s54 | 6n 4 | | | |
| M 2 | 16 50 | 16 45 | 5 14 | 19 7 | 2 35 | 1 13 | 1 45 | 21 30 | 0 57 | 19 6 | 0 27 | 5 38 | 2 11 | 4 27 | 0 44 | 14 1 | 0 21 | 17 44 | 5 41 | 17 56 | 17 56 | 26 26 | 8 52 | 6 4 | | | |
| T 3 | 16 33 | 21 17 | 5 16 | 19 17 | 2 24 | 1 41 | 1 53 | 21 21 | 0 57 | 19 3 | 0 27 | 5 39 | 2 11 | 4 26 | 0 44 | 14 0 | 0 21 | 17 44 | 5 41 | 17 56 | 17 57 | 26 25 | 8 51 | 6 4 | | | |
| W 4 | 16 15 | 24 44 | 5 0 | 19 25 | 2 13 | 2 8 | 2 1 | 21 12 | 0 58 | 18 59 | 0 27 | 5 41 | 2 11 | 4 24 | 0 44 | 13 59 | 0 21 | 17 44 | 5 41 | 17 56 | 17 58 | 26 24 | 8 50 | 6 4 | | | |
| T 5 | 15 57 | 26 43 | 4 24 | 19 33 | 2 2 | 2 35 | 2 10 | 21 2 | 0 58 | 18 56 | 0 28 | 5 43 | 2 12 | 4 23 | 0 44 | 13 58 | 0 21 | 17 44 | 5 41 | 17 56 | 17 59 | 26 23 | 8 49 | 6 4 | | | |
| F 6 | 15 38 | 26 57 | 3 32 | 19 40 | 1 50 | 3 2 | 2 19 | 20 53 | 0 58 | 18 52 | 0 28 | 5 44 | 2 12 | 4 22 | 0 44 | 13 58 | 0 21 | 17 44 | 5 41 | 17 56 | 18 0 | 26 22 | 8 47 | 6 4 | | | |
| S 7 | 15 20 | 25 17 | 2 25 | 19 46 | 1 39 | 3 29 | 2 28 | 20 43 | 0 59 | 18 49 | 0 28 | 5 46 | 2 12 | 4 21 | 0 44 | 13 57 | 0 21 | 17 44 | 5 41 | 17 56 | 18 0 | 26 21 | 8 46 | 6 4 | | | |
| S 8 | 15 1 | 21 51 | 1 7 | 19 51 | 1 27 | 3 55 | 2 37 | 20 33 | 0 59 | 18 45 | 0 28 | 5 47 | 2 12 | 4 20 | 0 44 | 13 56 | 0 21 | 17 44 | 5 41 | 17 56 | 18 1 | 26 20 | 8 45 | 6 4 | | | |
| M 9 | 14 42 | 16 59 | 0s14 | 19 54 | 1 16 | 4 22 | 2 46 | 20 22 | 1 0 | 18 42 | 0 28 | 5 49 | 2 12 | 4 18 | 0 44 | 13 55 | 0 21 | 17 44 | 5 41 | 17 56 | 18 2 | 26 19 | 8 43 | 6 4 | | | |
| T 10 | 14 23 | 11 10 | 1 34 | 19 57 | 1 5 | 4 47 | 2 55 | 20 12 | 1 0 | 18 38 | 0 28 | 5 51 | 2 13 | 4 17 | 0 44 | 13 55 | 0 21 | 17 44 | 5 41 | 17 56 | 18 3 | 26 18 | 8 42 | 6 4 | | | |
| W11 | 14 3 | 4 52 | 2 47 | 19 58 | 0 54 | 5 13 | 3 4 | 20 1 | 1 0 | 18 35 | 0 28 | 5 52 | 2 13 | 4 16 | 0 44 | 13 54 | 0 21 | 17 44 | 5 41 | 17 56 | 18 4 | 26 17 | 8 41 | 6 4 | | | |
| T 12 | 13 43 | 1s31 | 3 47 | 19 59 | 0 43 | 5 38 | 3 14 | 19 50 | 1 1 | 18 31 | 0 28 | 5 54 | 2 13 | 4 15 | 0 44 | 13 53 | 0 21 | 17 44 | 5 41 | 17 56 | 18 5 | 26 16 | 8 39 | 6 4 | | | |
| F 13 | 13 23 | 7 39 | 4 33 | 19 58 | 0 33 | 6 3 | 3 23 | 19 39 | 1 1 | 18 27 | 0 28 | 5 56 | 2 13 | 4 13 | 0 44 | 13 52 | 0 21 | 17 44 | 5 41 | 17 57 | 18 5 | 26 16 | 8 38 | 6 4 | | | |
| S 14 | 13 3 | 13 14 | 5 2 | 19 56 | 0 22 | 6 27 | 3 33 | 19 27 | 1 1 | 18 24 | 0 29 | 5 58 | 2 13 | 4 12 | 0 44 | 13 52 | 0 21 | 17 44 | 5 41 | 17 58 | 18 6 | 26 15 | 8 37 | 6 4 | | | |
| S 15 | 12 42 | 18 5 | 5 15 | 19 52 | 0 12 | 6 51 | 3 43 | 19 15 | 1 2 | 18 20 | 0 29 | 5 59 | 2 14 | 4 11 | 0 44 | 13 51 | 0 22 | 17 44 | 5 41 | 17 58 | 18 7 | 26 14 | 8 35 | 6 4 | | | |
| M16 | 12 22 | 22 1 | 5 13 | 19 48 | 0 2 | 7 15 | 3 52 | 19 3 | 1 2 | 18 17 | 0 29 | 6 1 | 2 14 | 4 10 | 0 44 | 13 50 | 0 22 | 17 43 | 5 41 | 17 58 | 18 8 | 26 13 | 8 34 | 6 4 | | | |
| T 17 | 12 1 | 24 53 | 4 56 | 19 42 | 0s 7 | 7 38 | 4 2 | 18 51 | 1 2 | 18 13 | 0 29 | 6 3 | 2 14 | 4 8 | 0 44 | 13 49 | 0 22 | 17 43 | 5 41 | 17 58 | 18 9 | 26 12 | 8 33 | 6 4 | | | |
| W18 | 11 40 | 26 35 | 4 27 | 19 35 | 0 16 | 8 0 | 4 12 | 18 39 | 1 3 | 18 9 | 0 29 | 6 5 | 2 14 | 4 7 | 0 44 | 13 49 | 0 22 | 17 43 | 5 41 | 17 58 | 18 10 | 26 11 | 8 31 | 6 4 | | | |
| T 19 | 11 18 | 27 3 | 3 47 | 19 27 | 0 25 | 8 22 | 4 22 | 18 27 | 1 3 | 18 6 | 0 29 | 6 7 | 2 14 | 4 6 | 0 44 | 13 48 | 0 22 | 17 43 | 5 41 | 17 58 | 18 10 | 26 10 | 8 30 | 6 4 | | | |
| F 20 | 10 57 | 26 17 | 2 57 | 19 17 | 0 34 | 8 44 | 4 33 | 18 14 | 1 3 | 18 2 | 0 29 | 6 9 | 2 14 | 4 4 | 0 44 | 13 47 | 0 22 | 17 43 | 5 42 | 17 58 | 18 11 | 26 9 | 8 28 | 6 4 | | | |
| S 21 | 10 35 | 24 20 | 1 59 | 19 7 | 0 42 | 9 4 | 4 43 | 18 1 | 1 4 | 17 59 | 0 29 | 6 10 | 2 14 | 4 3 | 0 44 | 13 47 | 0 22 | 17 43 | 5 42 | 17 57 | 18 12 | 26 8 | 8 27 | 6 4 | | | |
| S 22 | 10 14 | 21 17 | 0 56 | 18 55 | 0 50 | 9 25 | 4 53 | 17 48 | 1 4 | 17 55 | 0 29 | 6 12 | 2 15 | 4 2 | 0 44 | 13 46 | 0 22 | 17 43 | 5 42 | 17 57 | 18 13 | 26 7 | 8 26 | 6 4 | | | |
| M23 | 9 52 | 17 19 | 0n10 | 18 41 | 0 57 | 9 44 | 5 3 | 17 35 | 1 4 | 17 51 | 0 30 | 6 14 | 2 15 | 4 0 | 0 44 | 13 45 | 0 22 | 17 43 | 5 42 | 17 57 | 18 14 | 26 6 | 8 24 | 6 4 | | | |
| T24 | 9 29 | 12 33 | 1 16 | 18 27 | 1 5 | 10 3 | 5 14 | 17 21 | 1 4 | 17 48 | 0 30 | 6 16 | 2 15 | 3 59 | 0 44 | 13 44 | 0 22 | 17 43 | 5 42 | 17 57 | 18 14 | 26 4 | 8 23 | 6 4 | | | |
| W25 | 9 7 | 7 13 | 2 21 | 18 11 | 1 12 | 10 21 | 5 24 | 17 8 | 1 5 | 17 44 | 0 30 | 6 18 | 2 15 | 3 58 | 0 44 | 13 44 | 0 22 | 17 43 | 5 42 | 17 57 | 18 15 | 26 3 | 8 21 | 6 4 | | | |
| T26 | 8 45 | 1 31 | 3 19 | 17 53 | 1 18 | 10 39 | 5 34 | 16 54 | 1 5 | 17 40 | 0 30 | 6 20 | 2 15 | 3 57 | 0 44 | 13 43 | 0 22 | 17 43 | 5 42 | 17 58 | 18 16 | 26 2 | 8 20 | 6 4 | | | |
| F27 | 8 22 | 4n21 | 4 8 | 17 35 | 1 15 | 10 55 | 5 44 | 16 40 | 1 5 | 17 37 | 0 30 | 6 22 | 2 15 | 3 55 | 0 44 | 13 42 | 0 22 | 17 43 | 5 42 | 18 0 | 18 17 | 26 1 | 8 19 | 6 4 | | | |
| S 28 | 8s 0 | 10n 8 | 4n45 | 17s15 | 1s30 | 11n11 | 5n55 | 16s26 | 1s 6 | 17s33 | 0s30 | 6n24 | 2n15 | 3s54 | 0s44 | 13s41 | 0s22 | 17s42 | 5n42 | 18s 1 | 18s18 | 26s 0 | 8s17 | 6n 4 | | | |

ASTRODIENST EPHEMERIS for the year 2009

geocentric

MARCH 2009

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------|-------|-------|--------|-------|-------|-------|-------|-------|------|-------|------|------|-------|------|
| S 1 | 10 35 44 | 10♌32°15 | 28♍0 | 18♎11 | 14♏49 | 18♐56 | 12♑41 | 19♒0 | 21♓55 | 24♈33 | 2♉59 | 8♊R53 | 7♋50 | 6♌16 | 22♍31 | S 1 |
| M 2 | 10 39 40 | 11°32'29 | 11♌36 | 19°38 | 15° 1 | 19°43 | 12°54 | 18♎55 | 21°59 | 24°36 | 3° 0 | 8♊49 | 7°47 | 6°23 | 22°35 | M 2 |
| T 3 | 10 43 37 | 12°32'41 | 25°23 | 21° 6 | 15°11 | 20°30 | 13° 7 | 18°51 | 22° 2 | 24°38 | 3° 1 | 8°46 | 7°44 | 6°30 | 22°39 | T 3 |
| W 4 | 10 47 34 | 13°32'51 | 9♌20 | 22°36 | 15°18 | 21°17 | 13°21 | 18°46 | 22° 5 | 24°40 | 3° 2 | 8°D45 | 7°41 | 6°36 | 22°43 | W 4 |
| T 5 | 10 51 30 | 14°32'58 | 23°25 | 24° 6 | 15°24 | 22° 4 | 13°34 | 18°41 | 22° 9 | 24°42 | 3° 3 | 8°45 | 7°38 | 6°43 | 22°47 | T 5 |
| F 6 | 10 55 27 | 15°33'04 | 7♌39 | 25°38 | 15°27 | 22°51 | 13°47 | 18°36 | 22°12 | 24°44 | 3° 4 | 8°46 | 7°34 | 6°50 | 22°52 | F 6 |
| S 7 | 10 59 23 | 16°33'07 | 21°58 | 27°11 | 15°R27 | 23°38 | 14° 0 | 18°32 | 22°16 | 24°47 | 3° 5 | 8°48 | 7°31 | 6°56 | 22°56 | S 7 |
| S 8 | 11 3 20 | 17°33'09 | 6♌21 | 28°45 | 15°25 | 24°25 | 14°13 | 18°27 | 22°19 | 24°49 | 3° 6 | 8°R49 | 7°28 | 7° 3 | 23° 0 | S 8 |
| M 9 | 11 7 16 | 18°33'08 | 20°43 | 0♌20 | 15°21 | 25°12 | 14°26 | 18°22 | 22°22 | 24°51 | 3° 7 | 8°48 | 7°25 | 7°10 | 23° 4 | M 9 |
| T 10 | 11 11 13 | 19°33'04 | 5♌0 | 1°57 | 15°14 | 25°59 | 14°39 | 18°17 | 22°26 | 24°53 | 3° 7 | 8°46 | 7°22 | 7°16 | 23° 8 | T 10 |
| W 11 | 11 15 10 | 20°32'59 | 19° 8 | 3°34 | 15° 5 | 26°46 | 14°52 | 18°12 | 22°29 | 24°55 | 3° 8 | 8°41 | 7°19 | 7°23 | 23°12 | W 11 |
| T 12 | 11 19 6 | 21°32'52 | 3♌0 | 5°13 | 14°53 | 27°33 | 15° 5 | 18° 8 | 22°33 | 24°57 | 3° 9 | 8°35 | 7°15 | 7°30 | 23°16 | T 12 |
| F 13 | 11 23 3 | 22°32'43 | 16°34 | 6°52 | 14°38 | 28°20 | 15°17 | 18° 3 | 22°36 | 24°59 | 3°10 | 8°27 | 7°12 | 7°36 | 23°20 | F 13 |
| S 14 | 11 26 59 | 23°32'33 | 29°48 | 8°33 | 14°21 | 29° 6 | 15°30 | 17°58 | 22°40 | 25° 1 | 3°10 | 8°20 | 7° 9 | 7°43 | 23°24 | S 14 |
| S 15 | 11 30 56 | 24°32'20 | 12♌40 | 10°15 | 14° 2 | 29°53 | 15°43 | 17°53 | 22°43 | 25° 3 | 3°11 | 8°12 | 7° 6 | 7°50 | 23°28 | S 15 |
| M 16 | 11 34 52 | 25°32'06 | 25°12 | 11°59 | 13°40 | 0♌40 | 15°55 | 17°49 | 22°46 | 25° 5 | 3°12 | 8° 6 | 7° 3 | 7°56 | 23°32 | M 16 |
| T 17 | 11 38 49 | 26°31'50 | 7♌26 | 13°43 | 13°16 | 1°27 | 16° 8 | 17°44 | 22°50 | 25° 7 | 3°12 | 8° 2 | 6°59 | 8° 3 | 23°35 | T 17 |
| W 18 | 11 42 45 | 27°31'32 | 19°27 | 15°29 | 12°50 | 2°14 | 16°20 | 17°39 | 22°53 | 25° 9 | 3°13 | 8° 0 | 6°56 | 8°10 | 23°39 | W 18 |
| T 19 | 11 46 42 | 28°31'13 | 1♌20 | 17°16 | 12°22 | 3° 1 | 16°33 | 17°35 | 22°57 | 25°11 | 3°14 | 8°D 0 | 6°53 | 8°16 | 23°43 | T 19 |
| F 20 | 11 50 38 | 29°30'52 | 13° 8 | 19° 4 | 11°52 | 3°48 | 16°45 | 17°30 | 23° 0 | 25°13 | 3°14 | 8° 0 | 6°50 | 8°23 | 23°47 | F 20 |
| S 21 | 11 54 35 | 0♌30'29 | 24°59 | 20°54 | 11°21 | 4°35 | 16°57 | 17°25 | 23° 4 | 25°15 | 3°15 | 8° 2 | 6°47 | 8°30 | 23°51 | S 21 |
| S 22 | 11 58 32 | 1°30'04 | 6♌56 | 22°44 | 10°47 | 5°22 | 17° 9 | 17°21 | 23° 7 | 25°17 | 3°15 | 8°R 2 | 6°44 | 8°36 | 23°54 | S 22 |
| M 23 | 12 2 28 | 2°29'38 | 19° 5 | 24°36 | 10°13 | 6° 9 | 17°21 | 17°16 | 23°10 | 25°19 | 3°15 | 8° 2 | 6°40 | 8°43 | 23°58 | M 23 |
| T 24 | 12 6 25 | 3°29'09 | 1♌30 | 26°30 | 9°37 | 6°56 | 17°33 | 17°12 | 23°14 | 25°21 | 3°16 | 7°59 | 6°37 | 8°50 | 24° 2 | T 24 |
| W 25 | 12 10 21 | 4°28'39 | 14°12 | 28°24 | 9° 1 | 7°43 | 17°45 | 17° 7 | 23°17 | 25°23 | 3°16 | 7°54 | 6°34 | 8°56 | 24° 5 | W 25 |
| T 26 | 12 14 18 | 5°28'07 | 27°13 | 0♌20 | 8°24 | 8°30 | 17°57 | 17° 3 | 23°21 | 25°25 | 3°17 | 7°46 | 6°31 | 9° 3 | 24° 9 | T 26 |
| F 27 | 12 18 14 | 6°27'33 | 10♌33 | 2°17 | 7°46 | 9°17 | 18° 9 | 16°59 | 23°24 | 25°27 | 3°17 | 7°37 | 6°28 | 9°10 | 24°12 | F 27 |
| S 28 | 12 22 11 | 7°26'56 | 24°10 | 4°15 | 7° 8 | 10° 4 | 18°20 | 16°54 | 23°27 | 25°28 | 3°17 | 7°27 | 6°25 | 9°16 | 24°16 | S 28 |
| S 29 | 12 26 7 | 8°26'18 | 8♌ 1 | 6°14 | 6°31 | 10°51 | 18°32 | 16°50 | 23°31 | 25°30 | 3°17 | 7°17 | 6°21 | 9°23 | 24°19 | S 29 |
| M 30 | 12 30 4 | 9°25'37 | 22° 1 | 8°14 | 5°53 | 11°38 | 18°43 | 16°46 | 23°34 | 25°32 | 3°18 | 7° 8 | 6°18 | 9°30 | 24°23 | M 30 |
| T 31 | 12 34 1 | 10♌24'55 | 6♌ 7 | 10♌16 | 5♌17 | 12♌25 | 18♎55 | 16♏41 | 23♓37 | 25♈34 | 3♉18 | 7♊ 1 | 6♋15 | 9♌36 | 24♍26 | T 31 |

| Day | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|------|------|-------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | lat |
| S 1 | 7s37 | 15n32 | 5n 7 | 16s54 | 1s36 | 11n26 | 6n 5 | 16s11 | 1s 6 | 17s29 | 0s30 | 6n26 | 2n15 | 3s53 | 0s44 | 13s41 |
| M 2 | 7 14 | 20 15 | 5 12 | 16 32 | 1 41 | 11 40 | 6 15 | 15 57 | 1 6 | 17 26 | 0 30 | 6 28 | 2 16 | 3 51 | 0 44 | 13 40 |
| T 3 | 6 51 | 23 57 | 4 59 | 16 8 | 1 46 | 11 53 | 6 25 | 15 42 | 1 6 | 17 22 | 0 31 | 6 30 | 2 16 | 3 50 | 0 44 | 13 39 |
| W 4 | 6 28 | 26 17 | 4 29 | 15 43 | 1 51 | 12 5 | 6 35 | 15 27 | 1 6 | 17 18 | 0 31 | 6 32 | 2 16 | 3 48 | 0 44 | 13 38 |
| T 5 | 6 5 | 26 59 | 3 42 | 15 17 | 1 55 | 12 16 | 6 44 | 15 12 | 1 7 | 17 15 | 0 31 | 6 34 | 2 16 | 3 47 | 0 44 | 13 38 |
| F 6 | 5 42 | 25 55 | 2 42 | 14 50 | 1 58 | 12 26 | 6 54 | 14 57 | 1 7 | 17 11 | 0 31 | 6 35 | 2 16 | 3 46 | 0 44 | 13 37 |
| S 7 | 5 18 | 23 8 | 1 30 | 14 21 | 2 2 | 12 35 | 7 3 | 14 42 | 1 7 | 17 7 | 0 31 | 6 37 | 2 16 | 3 44 | 0 44 | 13 36 |
| S 8 | 4 55 | 18 54 | 0 13 | 13 51 | 2 5 | 12 42 | 7 12 | 14 27 | 1 7 | 17 4 | 0 31 | 6 39 | 2 16 | 3 43 | 0 44 | 13 36 |
| M 9 | 4 32 | 13 34 | 1s 4 | 13 20 | 2 7 | 12 49 | 7 21 | 14 11 | 1 8 | 17 0 | 0 31 | 6 41 | 2 16 | 3 42 | 0 44 | 13 35 |
| T 10 | 4 8 | 7 33 | 2 17 | 12 48 | 2 9 | 12 54 | 7 29 | 13 55 | 1 8 | 16 56 | 0 31 | 6 43 | 2 16 | 3 40 | 0 44 | 13 34 |
| W 11 | 3 45 | 1 13 | 3 21 | 12 14 | 2 11 | 12 57 | 7 37 | 13 40 | 1 8 | 16 53 | 0 32 | 6 45 | 2 16 | 3 39 | 0 44 | 13 34 |
| T 12 | 3 21 | 5s 2 | 4 12 | 11 39 | 2 12 | 12 59 | 7 44 | 13 24 | 1 8 | 16 49 | 0 32 | 6 47 | 2 16 | 3 38 | 0 44 | 13 33 |
| F 13 | 2 58 | 10 55 | 4 47 | 11 3 | 2 13 | 13 0 | 7 51 | 13 7 | 1 8 | 16 46 | 0 32 | 6 49 | 2 16 | 3 36 | 0 44 | 13 32 |
| S 14 | 2 34 | 16 9 | 5 5 | 10 26 | 2 14 | 12 59 | 7 58 | 12 51 | 1 8 | 16 42 | 0 32 | 6 51 | 2 16 | 3 35 | 0 44 | 13 32 |
| S 15 | 2 10 | 20 31 | 5 8 | 9 47 | 2 14 | 12 57 | 8 4 | 12 35 | 1 9 | 16 38 | 0 32 | 6 53 | 2 16 | 3 34 | 0 44 | 13 31 |
| M 16 | 1 46 | 23 50 | 4 55 | 9 7 | 2 13 | 12 54 | 8 9 | 12 18 | 1 9 | 16 35 | 0 32 | 6 55 | 2 16 | 3 32 | 0 44 | 13 30 |
| T 17 | 1 23 | 25 58 | 4 29 | 8 26 | 2 12 | 12 58 | 8 14 | 12 2 | 1 9 | 16 31 | 0 32 | 6 56 | 2 16 | 3 31 | 0 44 | 13 29 |
| W 18 | 0 59 | 26 52 | 3 52 | 7 44 | 2 11 | 12 42 | 8 17 | 11 45 | 1 9 | 16 28 | 0 33 | 6 58 | 2 16 | 3 29 | 0 44 | 13 29 |
| T 19 | 0 35 | 26 31 | 3 5 | 7 1 | 2 9 | 12 33 | 8 21 | 11 28 | 1 9 | 16 24 | 0 33 | 7 0 | 2 16 | 3 28 | 0 44 | 13 28 |
| F 20 | 0 12 | 24 57 | 2 10 | 6 16 | 2 7 | 12 24 | 8 23 | 11 11 | 1 9 | 16 20 | 0 33 | 7 2 | 2 16 | 3 27 | 0 44 | 13 28 |
| S 21 | 0n12 | 22 17 | 1 10 | 5 30 | 2 4 | 12 13 | 8 24 | 10 54 | 1 9 | 16 17 | 0 33 | 7 4 | 2 16 | 3 25 | 0 44 | 13 27 |
| S 22 | 0 36 | 18 38 | 0 6 | 4 44 | 2 1 | 12 0 | 8 25 | 10 37 | 1 10 | 16 13 | 0 33 | 7 6 | 2 16 | 3 24 | 0 44 | 13 26 |
| M 23 | 1 0 | 14 10 | 0n59 | 3 56 | 1 57 | 11 46 | 8 24 | 10 20 | 1 10 | 16 10 | 0 33 | 7 7 | 2 16 | 3 23 | 0 44 | 13 26 |
| T 24 | 1 23 | 9 2 | 2 3 | 3 7 | 1 52 | 11 31 | 8 23 | 10 3 | 1 10 | 16 6 | 0 34 | 7 9 | 2 16 | 3 21 | 0 44 | 13 25 |
| W 25 | 1 47 | 3 26 | 3 1 | 2 17 | 1 48 | 11 14 | 8 21 | 9 45 | 1 10 | 16 3 | 0 34 | 7 11 | 2 16 | 3 20 | 0 44 | 13 24 |
| T 26 | 2 10 | 2n27 | 3 52 | 1 26 | 1 42 | 10 57 | 8 18 | 9 28 | 1 10 | 15 59 | 0 34 | 7 13 | 2 16 | 3 19 | 0 44 | 13 24 |
| F 27 | 2 34 | 8 20 | 4 31 | 0 34 | 1 36 | 10 38 | 8 14 | 9 10 | 1 10 | 15 56 | 0 34 | 7 14 | 2 16 | 3 17 | 0 44 | 13 23 |
| S 28 | 2 57 | 13 57 | 4 56 | 0n19 | 1 30 | 10 19 | 8 9 | 8 52 | 1 10 | 15 52 | 0 34 | 7 16 | 2 16 | 3 16 | 0 44 | 13 23 |
| S 29 | 3 21 | 18 58 | 5 4 | 1 12 | 1 23 | 9 58 | 8 3 | 8 35 | 1 10 | 15 49 | 0 34 | 7 18 | 2 16 | 3 15 | 0 44 | 13 22 |
| M 30 | 3 44 | 23 0 | 4 54 | 2 7 | 1 15 | 9 37 | 7 56 | 8 17 | 1 10 | 15 46 | 0 34 | 7 19 | 2 16 | 3 13 | 0 44 | 13 21 |
| T 31 | 4n 7 | 25n42 | 4n26 | 3n 2 | 1s 7 | 9n16 | 7n49 | 7s59 | 1s10 | 15s42 | 0s35 | 7n21 | 2n16 | 3s12 | 0s44 | 13s21 |

Julian Day Number = 2454891.5, Delta T = 65.83 sec
 Ecliptic obliquity = 23°26'23", Nutation = 0°00'14", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°52'06", Lahiri = 23°59'06"

ASTRODIENST EPHEMERIS for the year 2009

geocentric

APRIL 2009

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|-----------|-----------|------|
| W 1 | 12 37 57 | 11°24'10" | 20°11'16" | 12°18'18" | 4°R41 | 13°12'12" | 19°6'6" | 16°R37 | 23°41'41" | 25°36'36" | 3°18'18" | 6°R57 | 6°12'12" | 9°43'43" | 24°29'29" | W 1 |
| T 2 | 12 41 54 | 12°23'22" | 4°25'25" | 14°21'21" | 4°Y 6 | 13°59'59" | 19°17'17" | 16°17'33" | 23°44'44" | 25°37'37" | 3°18'18" | 6°55'55" | 6°9'9" | 9°50'50" | 24°32'32" | T 2 |
| F 3 | 12 45 50 | 13°22'33" | 18°32'32" | 16°25'25" | 3°32'32" | 14°46'46" | 19°28'28" | 16°29'29" | 23°47'47" | 25°39'39" | 3°18'18" | 6°D55 | 6°5'5' | 9°56'56" | 24°36'36" | F 3 |
| S 4 | 12 49 47 | 14°21'41" | 2°13'13" | 18°29'29" | 3°0'0" | 15°33'33" | 19°39'39" | 16°25'25" | 23°50'50" | 25°41'41" | 3°18'18" | 6°R55 | 6°2'2" | 10°3'3" | 24°39'39" | S 4 |
| S 5 | 12 53 43 | 15°20'46" | 16°38'38" | 20°33'33" | 2°29'29" | 16°20'20" | 19°50'50" | 16°21'21" | 23°54'54" | 25°42'42" | 3°R18 | 6°55'55" | 5°59'59" | 10°10'10" | 24°42'42" | S 5 |
| M 6 | 12 57 40 | 16°19'49" | 0°17'17" | 22°37'37" | 2°1'1' | 17°6'6" | 20°1'1' | 16°18'18" | 23°57'57" | 25°44'44" | 3°18'18" | 6°53'53" | 5°56'56" | 10°16'16" | 24°45'45" | M 6 |
| T 7 | 13 1 36 | 17°18'50" | 14°24'24" | 24°41'41" | 1°34'34" | 17°53'53" | 20°12'12" | 16°14'14" | 24°0'0" | 25°45'45" | 3°18'18" | 6°48'48" | 5°53'53" | 10°23'23" | 24°48'48" | T 7 |
| W 8 | 13 5 33 | 18°17'49" | 28°6'6" | 26°45'45" | 1°9'9" | 18°40'40" | 20°22'22" | 16°10'10" | 24°3'3" | 25°47'47" | 3°18'18" | 6°41'41" | 5°50'50" | 10°30'30" | 24°51'51" | W 8 |
| T 9 | 13 9 30 | 19°16'45" | 11°36'36" | 28°47'47" | 0°47'47" | 19°27'27" | 20°33'33" | 16°7'7" | 24°7'7" | 25°49'49" | 3°18'18" | 6°31'31" | 5°46'46" | 10°36'36" | 24°54'54" | T 9 |
| F 10 | 13 13 26 | 20°15'40" | 24°53'53" | 0°49'49" | 0°26'26" | 20°14'14" | 20°43'43" | 16°3'3" | 24°10'10" | 25°50'50" | 3°18'18" | 6°19'19" | 5°43'43" | 10°43'43" | 24°57'57" | F 10 |
| S 11 | 13 17 23 | 21°14'32" | 7°15'15" | 2°48'48" | 0°9'9" | 21°0'0" | 20°54'54" | 16°0'0" | 24°13'13" | 25°52'52" | 3°17'17" | 6°6'6" | 5°40'40" | 10°49'49" | 25°0'0" | S 11 |
| S 12 | 13 21 19 | 22°13'23" | 20°38'38" | 4°46'46" | 29°53'53" | 21°47'47" | 21°4'4" | 15°56'56" | 24°16'16" | 25°53'53" | 3°17'17" | 5°54'54" | 5°37'37" | 10°56'56" | 25°3'3" | S 12 |
| M13 | 13 25 16 | 23°12'12" | 3°1'1' | 6°42'42" | 29°40'40" | 22°34'34" | 21°14'14" | 15°53'53" | 24°19'19" | 25°55'55" | 3°17'17" | 5°44'44" | 5°34'34" | 11°3'3" | 25°6'6" | M13 |
| T 14 | 13 29 12 | 24°10'59" | 15°17'17" | 8°35'35" | 29°30'30" | 23°20'20" | 21°24'24" | 15°50'50" | 24°22'22" | 25°56'56" | 3°17'17" | 5°36'36" | 5°31'31" | 11°9'9" | 25°8'8" | T 14 |
| W15 | 13 33 9 | 25°9'44" | 27°18'18" | 10°25'25" | 29°21'21" | 24°7'7" | 21°34'34" | 15°46'46" | 24°25'25" | 25°57'57" | 3°16'16" | 5°30'30" | 5°27'27" | 11°16'16" | 25°11'11" | W15 |
| T 16 | 13 37 5 | 26°8'28" | 9°31'31" | 12°11'11" | 29°16'16" | 24°54'54" | 21°44'44" | 15°43'43" | 24°28'28" | 25°59'59" | 3°16'16" | 5°27'27" | 5°24'24" | 11°23'23" | 25°14'14" | T 16 |
| F 17 | 13 41 2 | 27°7'09" | 20°58'58" | 13°55'55" | 29°13'13" | 25°40'40" | 21°53'53" | 15°40'40" | 24°31'31" | 26°0'0" | 3°16'16" | 5°26'26" | 5°21'21" | 11°29'29" | 25°16'16" | F 17 |
| S 18 | 13 44 59 | 28°5'50" | 2°49'49" | 15°34'34" | 29°D12 | 26°27'27" | 22°3'3" | 15°38'38" | 24°34'34" | 26°1'1" | 3°15'15" | 5°26'26" | 5°18'18" | 11°36'36" | 25°19'19" | S 18 |
| S 19 | 13 48 55 | 29°4'28" | 14°47'47" | 17°9'9" | 29°14'14" | 27°14'14" | 22°12'12" | 15°35'35" | 24°37'37" | 26°3'3" | 3°15'15" | 5°26'26" | 5°15'15" | 11°43'43" | 25°21'21" | S 19 |
| M20 | 13 52 52 | 0°3'05" | 26°57'57" | 18°40'40" | 29°18'18" | 28°0'0" | 22°21'21" | 15°32'32" | 24°40'40" | 26°4'4" | 3°14'14" | 5°25'25" | 5°11'11" | 11°49'49" | 25°24'24" | M20 |
| T 21 | 13 56 48 | 1°1'40" | 9°26'26" | 20°7'7" | 29°24'24" | 28°47'47" | 22°31'31" | 15°29'29" | 24°43'43" | 26°5'5" | 3°14'14" | 5°21'21" | 5°8'8" | 11°56'56" | 25°26'26" | T 21 |
| W22 | 14 0 45 | 2°0'13" | 22°15'15" | 21°29'29" | 29°32'32" | 29°33'33" | 22°40'40" | 15°27'27" | 24°46'46" | 26°6'6" | 3°13'13" | 5°15'15" | 5°5'5" | 12°3'3" | 25°28'28" | W22 |
| T 23 | 14 4 41 | 2°58'44" | 5°19'19" | 22°46'46" | 29°43'43" | 0°12'12" | 22°49'49" | 15°24'24" | 24°49'49" | 26°7'7" | 3°13'13" | 5°6'6" | 5°2'2" | 12°9'9" | 25°31'31" | T 23 |
| F 24 | 14 8 38 | 3°57'14" | 19°6'6" | 23°59'59" | 29°56'56" | 1°6'6" | 22°57'57" | 15°22'22" | 24°52'52" | 26°9'9" | 3°12'12" | 4°56'56" | 4°59'59" | 12°16'16" | 25°33'33" | F 24 |
| S 25 | 14 12 34 | 4°55'42" | 3°4'4" | 25°6'6" | 0°10'10" | 1°53'53" | 23°6'6" | 15°20'20" | 24°55'55" | 26°10'10" | 3°12'12" | 4°44'44" | 4°56'56" | 12°23'23" | 25°35'35" | S 25 |
| S 26 | 14 16 31 | 5°54'08" | 17°20'20" | 26°9'9" | 0°27'27" | 2°39'39" | 23°15'15" | 15°17'17" | 24°58'58" | 26°11'11" | 3°11'11" | 4°32'32" | 4°52'52" | 12°29'29" | 25°37'37" | S 26 |
| M27 | 14 20 28 | 6°52'33" | 1°11'11" | 27°6'6" | 0°46'46" | 3°26'26" | 23°23'23" | 15°15'15" | 25°0'0" | 26°12'12" | 3°10'10" | 4°21'21" | 4°49'49" | 12°36'36" | 25°39'39" | M27 |
| T 28 | 14 24 24 | 7°50'55" | 16°19'19" | 27°58'58" | 1°6'6" | 4°12'12" | 23°31'31" | 15°13'13" | 25°3'3" | 26°13'13" | 3°10'10" | 4°13'13" | 4°46'46" | 12°43'43" | 25°41'41" | T 28 |
| W29 | 14 28 21 | 8°49'16" | 0°49'49" | 28°45'45" | 1°29'29" | 4°58'58" | 23°39'39" | 15°11'11" | 25°6'6" | 26°14'14" | 3°9'9" | 4°7'7" | 4°43'43" | 12°49'49" | 25°43'43" | W29 |
| T 30 | 14 32 17 | 9°47'34" | 15°13'13" | 29°8'26" | 1°53'53" | 5°14'14" | 23°47'47" | 15°10'10" | 25°8'8" | 26°15'15" | 3°8'8" | 4°45'45" | 4°40'40" | 12°56'56" | 25°45'45" | T 30 |

| Day | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|-------|-------|------|-------|------|------|------|------|------|-------|------|------|------|------|------|-------|
| decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat |
| W 1 | 4n31 | 26n46 | 3n42 | 3n57 | 0s59 | 8n54 | 7n40 | 7s41 | 1s10 | 15s39 | 0s35 | 7n22 | 2n16 | 3s11 | 0s44 | 13s20 |
| T 2 | 4 54 | 26 6 | 4 44 | 4 53 | 0 50 | 8 31 | 7 31 | 7 23 | 1 10 | 15 36 | 0 35 | 7 24 | 2 16 | 3 10 | 0 44 | 13 20 |
| F 3 | 5 17 | 23 45 | 1 36 | 5 50 | 0 41 | 8 9 | 7 21 | 7 5 | 1 10 | 15 32 | 0 35 | 7 25 | 2 16 | 3 8 | 0 44 | 13 19 |
| S 4 | 5 40 | 19 57 | 0 23 | 6 46 | 0 31 | 7 46 | 7 11 | 6 47 | 1 10 | 15 29 | 0 35 | 7 27 | 2 16 | 3 7 | 0 44 | 13 19 |
| S 5 | 6 3 | 15 2 | 0s51 | 7 42 | 0 21 | 7 24 | 7 0 | 6 29 | 1 10 | 15 26 | 0 36 | 7 28 | 2 16 | 3 6 | 0 44 | 13 18 |
| M 6 | 6 25 | 9 22 | 2 2 | 8 39 | 0 10 | 7 2 | 6 48 | 6 10 | 1 10 | 15 22 | 0 36 | 7 30 | 2 16 | 3 4 | 0 44 | 13 18 |
| T 7 | 6 48 | 3 18 | 3 5 | 9 34 | 0n 1 | 6 40 | 6 36 | 5 52 | 1 10 | 15 19 | 0 36 | 7 31 | 2 16 | 3 3 | 0 44 | 13 17 |
| W 8 | 7 10 | 2s51 | 3 56 | 10 30 | 0 12 | 6 19 | 6 23 | 5 34 | 1 10 | 15 16 | 0 36 | 7 32 | 2 16 | 3 2 | 0 44 | 13 17 |
| T 9 | 7 33 | 8 47 | 4 34 | 11 24 | 0 23 | 5 58 | 6 10 | 5 15 | 1 10 | 15 13 | 0 36 | 7 34 | 2 16 | 3 1 | 0 44 | 13 16 |
| F 10 | 7 55 | 14 13 | 4 55 | 12 17 | 0 34 | 5 38 | 5 57 | 4 57 | 1 10 | 15 10 | 0 36 | 7 35 | 2 16 | 2 59 | 0 44 | 13 16 |
| S 11 | 8 17 | 18 53 | 5 1 | 13 9 | 0 45 | 5 19 | 5 44 | 4 38 | 1 10 | 15 7 | 0 37 | 7 36 | 2 15 | 2 58 | 0 44 | 13 15 |
| S 12 | 8 39 | 22 35 | 4 51 | 14 0 | 0 57 | 5 0 | 5 30 | 4 20 | 1 10 | 15 3 | 0 37 | 7 38 | 2 15 | 2 57 | 0 44 | 13 15 |
| M13 | 9 1 | 25 9 | 4 28 | 14 49 | 1 8 | 4 43 | 5 17 | 4 1 | 1 10 | 15 0 | 0 37 | 7 39 | 2 15 | 2 56 | 0 44 | 13 14 |
| T 14 | 9 23 | 26 29 | 3 53 | 15 36 | 1 19 | 4 26 | 5 3 | 3 43 | 1 10 | 14 57 | 0 37 | 7 40 | 2 15 | 2 54 | 0 44 | 13 14 |
| W15 | 9 44 | 26 32 | 3 8 | 16 21 | 1 29 | 4 10 | 4 49 | 3 24 | 1 10 | 14 54 | 0 37 | 7 41 | 2 15 | 2 53 | 0 44 | 13 13 |
| T 16 | 10 6 | 25 22 | 2 15 | 17 4 | 1 39 | 3 55 | 4 36 | 3 6 | 1 10 | 14 51 | 0 38 | 7 42 | 2 15 | 2 52 | 0 44 | 13 13 |
| F 17 | 10 27 | 23 3 | 1 16 | 17 45 | 1 49 | 3 41 | 4 22 | 2 47 | 1 10 | 14 48 | 0 38 | 7 43 | 2 15 | 2 51 | 0 44 | 13 12 |
| S 18 | 10 48 | 19 45 | 0 14 | 18 23 | 1 58 | 3 29 | 4 8 | 2 29 | 1 10 | 14 46 | 0 38 | 7 44 | 2 15 | 2 50 | 0 44 | 13 12 |
| S 19 | 11 9 | 15 37 | 0n49 | 18 59 | 2 6 | 3 17 | 3 55 | 2 10 | 1 10 | 14 43 | 0 38 | 7 45 | 2 15 | 2 49 | 0 44 | 13 11 |
| M20 | 11 29 | 10 47 | 1 51 | 19 32 | 2 14 | 3 6 | 3 41 | 1 51 | 1 9 | 14 40 | 0 38 | 7 46 | 2 15 | 2 47 | 0 44 | 13 11 |
| T 21 | 11 50 | 5 25 | 2 50 | 20 2 | 2 21 | 2 57 | 3 28 | 1 33 | 1 9 | 14 37 | 0 39 | 7 47 | 2 14 | 2 46 | 0 44 | 13 11 |
| W22 | 12 10 | 0n18 | 3 41 | 20 30 | 2 28 | 2 48 | 3 15 | 1 14 | 1 9 | 14 34 | 0 39 | 7 48 | 2 14 | 2 45 | 0 44 | 13 10 |
| T 23 | 12 30 | 6 11 | 4 22 | 20 56 | 2 33 | 2 40 | 3 2 | 0 55 | 1 9 | 14 32 | 0 39 | 7 49 | 2 14 | 2 44 | 0 44 | 13 10 |
| F 24 | 12 50 | 11 56 | 4 49 | 21 18 | 2 37 | 2 34 | 2 50 | 0 37 | 1 9 | 14 29 | 0 39 | 7 50 | 2 14 | 2 43 | 0 44 | 13 10 |
| S 25 | 13 10 | 17 14 | 5 0 | 21 39 | 2 41 | 2 28 | 2 37 | 0 18 | 1 9 | 14 26 | 0 39 | 7 50 | 2 14 | 2 42 | 0 44 | 13 9 |
| S 26 | 13 29 | 21 41 | 4 53 | 21 56 | 2 43 | 2 24 | 2 25 | 0n 0 | 1 9 | 14 24 | 0 40 | 7 51 | 2 14 | 2 41 | 0 44 | 13 9 |
| M27 | 13 49 | 24 53 | 4 27 | 22 11 | 2 45 | 2 20 | 2 13 | 0 19 | 1 8 | 14 21 | 0 40 | 7 52 | 2 14 | 2 40 | 0 44 | 13 9 |
| T 28 | 14 8 | 26 27 | 3 44 | 22 24 | 2 45 | 2 18 | 2 2 | 0 38 | 1 8 | 14 18 | 0 40 | 7 52 | 2 13 | 2 39 | 0 44 | 13 8 |
| W29 | 14 26 | 26 12 | 2 46 | 22 34 | 2 45 | 2 16 | 1 50 | 0 56 | 1 8 | 14 16 | 0 40 | 7 53 | 2 13 | 2 37 | 0 44 | 13 8 |
| T 30 | 14n45 | 24n12 | 1n38 | 22n41 | 2n43 | 2n16 | 1n39 | 1n15 | 1s 8 | 14s14 | 0s40 | 7n54 | 2n13 | 2s36 | 0s44 | 13s 8 |

Julian Day Number = 2454922.5, Delta T = 65.85 sec

Ecliptic obliquity = 23°26'23", Nutation = 0°00'13", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 24°52'10", Lahiri = 23°59'11"

ASTRODIENST EPHEMERIS for the year 2009

geocentric

MAY 2009

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------|-------|--------|-------|-------|-------|--------|-------|--------|-------|-------|------|-------|--------|------|
| F 1 | 14 36 14 | 10♌45'50 | 29♌27 | 0♏ 2 | 2♏18 | 6♏31 | 23♏55 | 15°R 8 | 25♏11 | 26♏16 | 3°R 7 | 4°R 4 | 4♏36 | 13♏ 3 | 25♏47 | F 1 |
| S 2 | 14 40 10 | 11♌44'05 | 13♏30 | 0°33 | 2°46 | 7°17 | 24° 3 | 15♏ 6 | 25°14 | 26°17 | 3♏ 7 | 4♏ 4 | 4°33 | 13° 9 | 25°49 | S 2 |
| S 3 | 14 44 7 | 12°42'17 | 27°22 | 0°58 | 3°14 | 8° 3 | 24°11 | 15° 5 | 25°16 | 26°17 | 3° 6 | 4° 3 | 4°30 | 13°16 | 25°50 | S 3 |
| M 4 | 14 48 3 | 13°40'27 | 11♏ 2 | 1°18 | 3°45 | 8°49 | 24°18 | 15° 4 | 25°19 | 26°18 | 3° 5 | 4° 1 | 4°27 | 13°23 | 25°52 | M 4 |
| T 5 | 14 52 0 | 14°38'35 | 24°31 | 1°32 | 4°16 | 9°35 | 24°25 | 15° 2 | 25°21 | 26°19 | 3° 4 | 3°56 | 4°24 | 13°29 | 25°54 | T 5 |
| W 6 | 14 55 57 | 15°36'41 | 7♏49 | 1°41 | 4°50 | 10°22 | 24°32 | 15° 1 | 25°24 | 26°20 | 3° 3 | 3°49 | 4°21 | 13°36 | 25°55 | W 6 |
| T 7 | 14 59 53 | 16°34'45 | 20°56 | 1°R44 | 5°24 | 11° 8 | 24°39 | 15° 0 | 25°26 | 26°21 | 3° 2 | 3°39 | 4°17 | 13°43 | 25°57 | T 7 |
| F 8 | 15 3 50 | 17°32'48 | 3♏51 | 1°43 | 6° 0 | 11°54 | 24°46 | 14°59 | 25°29 | 26°21 | 3° 1 | 3°27 | 4°14 | 13°49 | 25°58 | F 8 |
| S 9 | 15 7 46 | 18°30'48 | 16°34 | 1°37 | 6°37 | 12°40 | 24°53 | 14°58 | 25°31 | 26°22 | 3° 0 | 3°14 | 4°11 | 13°56 | 25°59 | S 9 |
| S 10 | 15 11 43 | 19°28'48 | 29° 4 | 1°25 | 7°15 | 13°25 | 24°59 | 14°57 | 25°33 | 26°23 | 2°59 | 3° 2 | 4° 8 | 14° 2 | 26° 1 | S 10 |
| M 11 | 15 15 39 | 20°26'45 | 11♏21 | 1°10 | 7°54 | 14°11 | 25° 6 | 14°57 | 25°36 | 26°23 | 2°58 | 2°51 | 4° 5 | 14° 9 | 26° 2 | M 11 |
| T 12 | 15 19 36 | 21°24'42 | 23°27 | 0°50 | 8°34 | 14°57 | 25°12 | 14°56 | 25°38 | 26°24 | 2°57 | 2°43 | 4° 2 | 14°16 | 26° 3 | T 12 |
| W 13 | 15 23 32 | 22°22'37 | 5♏23 | 0°27 | 9°16 | 15°43 | 25°18 | 14°56 | 25°40 | 26°24 | 2°56 | 2°37 | 3°58 | 14°22 | 26° 4 | W 13 |
| T 14 | 15 27 29 | 23°20'30 | 17°13 | 29♏59 | 9°58 | 16°29 | 25°24 | 14°55 | 25°42 | 26°25 | 2°55 | 2°34 | 3°55 | 14°29 | 26° 5 | T 14 |
| F 15 | 15 31 26 | 24°18'22 | 29° 0 | 29°30 | 10°42 | 17°15 | 25°30 | 14°55 | 25°45 | 26°25 | 2°54 | 2°D33 | 3°52 | 14°36 | 26° 6 | F 15 |
| S 16 | 15 35 22 | 25°16'13 | 10♏50 | 28°59 | 11°26 | 18° 0 | 25°35 | 14°55 | 25°47 | 26°26 | 2°53 | 2°33 | 3°49 | 14°42 | 26° 7 | S 16 |
| S 17 | 15 39 19 | 26°14'03 | 22°47 | 28°25 | 12°11 | 18°46 | 25°41 | 14°D55 | 25°49 | 26°26 | 2°52 | 2°R33 | 3°46 | 14°49 | 26° 8 | S 17 |
| M 18 | 15 43 15 | 27°11'51 | 4♏57 | 27°51 | 12°57 | 19°31 | 25°46 | 14°55 | 25°51 | 26°27 | 2°51 | 2°33 | 3°42 | 14°56 | 26° 9 | M 18 |
| T 19 | 15 47 12 | 28° 9'39 | 17°26 | 27°16 | 13°44 | 20°17 | 25°51 | 14°55 | 25°53 | 26°27 | 2°50 | 2°31 | 3°39 | 15° 2 | 26°10 | T 19 |
| W 20 | 15 51 8 | 29° 7'25 | 0♏16 | 26°41 | 14°32 | 21° 3 | 25°56 | 14°55 | 25°55 | 26°27 | 2°48 | 2°27 | 3°36 | 15° 9 | 26°10 | W 20 |
| T 21 | 15 55 5 | 0♏ 5'10 | 13°33 | 26° 7 | 15°20 | 21°48 | 26° 1 | 14°55 | 25°57 | 26°28 | 2°47 | 2°21 | 3°33 | 15°16 | 26°11 | T 21 |
| F 22 | 15 59 1 | 1° 2'54 | 27°17 | 25°34 | 16° 9 | 22°33 | 26° 5 | 14°56 | 25°59 | 26°28 | 2°46 | 2°13 | 3°30 | 15°22 | 26°12 | F 22 |
| S 23 | 16 2 58 | 2° 0'37 | 11♏27 | 25° 3 | 16°59 | 23°19 | 26°10 | 14°57 | 26° 1 | 26°28 | 2°45 | 2° 4 | 3°27 | 15°29 | 26°12 | S 23 |
| S 24 | 16 6 55 | 2°58'19 | 25°59 | 24°35 | 17°50 | 24° 4 | 26°14 | 14°57 | 26° 2 | 26°28 | 2°43 | 1°55 | 3°23 | 15°36 | 26°12 | S 24 |
| M 25 | 16 10 51 | 3°55'59 | 10♏46 | 24° 9 | 18°41 | 24°49 | 26°18 | 14°58 | 26° 4 | 26°28 | 2°42 | 1°46 | 3°20 | 15°42 | 26°13 | M 25 |
| T 26 | 16 14 48 | 4°53'39 | 25°40 | 23°46 | 19°33 | 25°35 | 26°22 | 14°59 | 26° 6 | 26°28 | 2°41 | 1°40 | 3°17 | 15°49 | 26°13 | T 26 |
| W 27 | 16 18 44 | 5°51'17 | 10♏33 | 23°27 | 20°25 | 26°20 | 26°26 | 15° 0 | 26° 7 | 26°29 | 2°39 | 1°36 | 3°14 | 15°56 | 26°13 | W 27 |
| T 28 | 16 22 41 | 6°48'53 | 25°18 | 23°12 | 21°18 | 27° 5 | 26°29 | 15° 1 | 26° 9 | 26°29 | 2°38 | 1°D34 | 3°11 | 16° 2 | 26°14 | T 28 |
| F 29 | 16 26 37 | 7°46'29 | 9♏48 | 23° 1 | 22°12 | 27°50 | 26°33 | 15° 2 | 26°11 | 26°R29 | 2°37 | 1°34 | 3° 8 | 16° 9 | 26°14 | F 29 |
| S 30 | 16 30 34 | 8°44'02 | 24° 0 | 22°55 | 23° 6 | 28°35 | 26°36 | 15° 3 | 26°12 | 26°29 | 2°35 | 1°35 | 3° 4 | 16°16 | 26°R14 | S 30 |
| S 31 | 16 34 30 | 9♏41'35 | 7♏54 | 22°D52 | 24♏ 1 | 29♏20 | 26♏39 | 15♏ 5 | 26♏14 | 26♏29 | 2♏34 | 1°R36 | 3♏ 1 | 16♏22 | 26♏14 | S 31 |

| Day | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|-------|-------|------|-------|------|------|------|-------|------|-------|------|------|------|------|------|-------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl |
| F 1 | 15n 3 | 20n40 | 0n24 | 22n46 | 2n40 | 2n16 | 1n28 | 1n33 | 1s 8 | 14s11 | 0s41 | 7n54 | 2n13 | 2s35 | 0s44 | 13s 7 |
| S 2 | 15 21 | 15 59 | 0s50 | 22 49 | 2 36 | 2 17 | 1 17 | 1 52 | 1 7 | 14 9 | 0 41 | 7 55 | 2 13 | 2 34 | 0 44 | 13 7 |
| S 3 | 15 39 | 10 31 | 2 0 | 22 49 | 2 31 | 2 19 | 1 7 | 2 10 | 1 7 | 14 7 | 0 41 | 7 55 | 2 13 | 2 33 | 0 44 | 13 7 |
| M 4 | 15 57 | 4 37 | 3 2 | 22 47 | 2 25 | 2 22 | 0 57 | 2 28 | 1 7 | 14 4 | 0 41 | 7 55 | 2 13 | 2 32 | 0 44 | 13 6 |
| T 5 | 16 14 | 1s24 | 3 53 | 22 42 | 2 17 | 2 25 | 0 47 | 2 47 | 1 7 | 14 2 | 0 41 | 7 56 | 2 12 | 2 31 | 0 44 | 13 6 |
| W 6 | 16 31 | 7 15 | 4 31 | 22 36 | 2 8 | 2 29 | 0 37 | 3 5 | 1 6 | 14 0 | 0 42 | 7 56 | 2 12 | 2 30 | 0 44 | 13 6 |
| T 7 | 16 48 | 12 42 | 4 54 | 22 27 | 1 58 | 2 35 | 0 28 | 3 23 | 1 6 | 13 58 | 0 42 | 7 56 | 2 12 | 2 30 | 0 44 | 13 6 |
| F 8 | 17 4 | 17 31 | 5 1 | 22 16 | 1 47 | 2 40 | 0 19 | 3 41 | 1 6 | 13 56 | 0 42 | 7 57 | 2 12 | 2 29 | 0 44 | 13 6 |
| S 9 | 17 20 | 21 28 | 4 53 | 22 2 | 1 35 | 2 47 | 0 10 | 4 0 | 1 6 | 13 54 | 0 42 | 7 57 | 2 12 | 2 28 | 0 44 | 13 5 |
| S 10 | 17 36 | 24 21 | 4 31 | 21 47 | 1 22 | 2 54 | 0 2 | 4 18 | 1 5 | 13 52 | 0 43 | 7 57 | 2 12 | 2 27 | 0 44 | 13 5 |
| M 11 | 17 52 | 26 3 | 3 57 | 21 30 | 1 8 | 3 2 | 0s 7 | 4 36 | 1 5 | 13 50 | 0 43 | 7 57 | 2 11 | 2 26 | 0 44 | 13 5 |
| T 12 | 18 7 | 26 28 | 3 12 | 21 11 | 0 53 | 3 11 | 0 15 | 4 54 | 1 5 | 13 48 | 0 43 | 7 57 | 2 11 | 2 25 | 0 45 | 13 5 |
| W 13 | 18 22 | 25 39 | 2 19 | 20 51 | 0 37 | 3 20 | 0 22 | 5 12 | 1 5 | 13 46 | 0 43 | 7 57 | 2 11 | 2 24 | 0 45 | 13 5 |
| T 14 | 18 37 | 23 40 | 1 21 | 20 29 | 0 21 | 3 29 | 0 30 | 5 29 | 1 4 | 13 44 | 0 44 | 7 57 | 2 11 | 2 23 | 0 45 | 13 4 |
| F 15 | 18 51 | 20 40 | 0 19 | 20 6 | 0 4 | 3 40 | 0 37 | 5 47 | 1 4 | 13 43 | 0 44 | 7 57 | 2 11 | 2 22 | 0 45 | 13 4 |
| S 16 | 19 5 | 16 48 | 0n44 | 19 43 | 0s14 | 3 51 | 0 44 | 6 5 | 1 4 | 13 41 | 0 44 | 7 57 | 2 11 | 2 22 | 0 45 | 13 4 |
| S 17 | 19 19 | 12 15 | 1 46 | 19 18 | 0 31 | 4 2 | 0 51 | 6 23 | 1 3 | 13 39 | 0 44 | 7 57 | 2 10 | 2 21 | 0 45 | 13 4 |
| M 18 | 19 32 | 7 9 | 2 44 | 18 53 | 0 49 | 4 14 | 0 58 | 6 40 | 1 3 | 13 38 | 0 44 | 7 57 | 2 10 | 2 20 | 0 45 | 13 4 |
| T 19 | 19 45 | 1 39 | 3 36 | 18 28 | 1 6 | 4 26 | 1 4 | 6 58 | 1 3 | 13 36 | 0 45 | 7 56 | 2 10 | 2 19 | 0 45 | 13 4 |
| W 20 | 19 58 | 4n 3 | 4 18 | 18 4 | 1 23 | 4 39 | 1 10 | 7 15 | 1 2 | 13 35 | 0 45 | 7 56 | 2 10 | 2 19 | 0 45 | 13 4 |
| T 21 | 20 10 | 9 46 | 4 49 | 17 40 | 1 40 | 4 52 | 1 16 | 7 32 | 1 2 | 13 33 | 0 45 | 7 56 | 2 10 | 2 18 | 0 45 | 13 4 |
| F 22 | 20 22 | 15 13 | 5 3 | 17 16 | 1 56 | 5 6 | 1 22 | 7 50 | 1 1 | 13 32 | 0 45 | 7 56 | 2 10 | 2 17 | 0 45 | 13 4 |
| S 23 | 20 34 | 20 1 | 5 1 | 16 54 | 2 12 | 5 20 | 1 27 | 8 7 | 1 1 | 13 31 | 0 46 | 7 55 | 2 9 | 2 16 | 0 45 | 13 4 |
| S 24 | 20 45 | 23 45 | 4 38 | 16 33 | 2 26 | 5 34 | 1 32 | 8 24 | 1 1 | 13 30 | 0 46 | 7 55 | 2 9 | 2 16 | 0 45 | 13 4 |
| M 25 | 20 56 | 25 59 | 3 58 | 16 13 | 2 40 | 5 49 | 1 37 | 8 41 | 1 0 | 13 28 | 0 46 | 7 54 | 2 9 | 2 15 | 0 45 | 13 4 |
| T 26 | 21 7 | 26 22 | 3 0 | 15 56 | 2 53 | 6 4 | 1 42 | 8 58 | 1 0 | 13 27 | 0 46 | 7 54 | 2 9 | 2 14 | 0 45 | 13 3 |
| W 27 | 21 17 | 24 51 | 1 50 | 15 40 | 3 4 | 6 20 | 1 47 | 9 14 | 1 0 | 13 26 | 0 47 | 7 53 | 2 9 | 2 14 | 0 45 | 13 3 |
| T 28 | 21 27 | 21 38 | 0 34 | 15 26 | 3 15 | 6 35 | 1 51 | 9 31 | 0 59 | 13 25 | 0 47 | 7 53 | 2 8 | 2 13 | 0 45 | 13 3 |
| F 29 | 21 36 | 17 5 | 0s44 | 15 14 | 3 24 | 6 51 | 1 55 | 9 47 | 0 59 | 13 24 | 0 47 | 7 52 | 2 8 | 2 12 | 0 45 | 13 3 |
| S 30 | 21 45 | 11 40 | 1 58 | 15 4 | 3 32 | 7 8 | 1 59 | 10 4 | 0 58 | 13 24 | 0 47 | 7 51 | 2 8 | 2 12 | 0 45 | 13 4 |
| S 31 | 21n54 | 5n47 | 3s 3 | 14n57 | 3s40 | 7n24 | 2s 3 | 10n20 | 0s58 | 13s23 | 0s48 | 7n51 | 2n 8 | 2s11 | 0s45 | 13s 4 |

Julian Day Number = 2454952.5, Delta T = 65.88 sec
 Ecliptic obliquity = 23°26'22, Nutation = 0°00'13, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°52'14, Lahiri = 23°59'15

ASTRODIENST EPHEMERIS for the year 2009

geocentric

JUNE 2009

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|------------------------|----------------------|---------------------|--------------------|--------------------|----------------------|----------------------|---------------------|---------------------|---------------------|----------------------|-------------------|--------------------|---------------------|------|
| M 1 | 16 38 27 | 10 ^{II} 39'05 | 21 ^{III} 30 | 22 ^{IV} 54 | 24 ^V 56 | 0 ^{VI} 5 | 26 ^{VII} 41 | 15 ^{VIII} 6 | 26 ^{IX} 15 | 26 ^X R29 | 2 ^{XI} R33 | 1 ^{XII} R35 | 2 [♈] 58 | 16 [♉] 29 | 26 [♊] R14 | M 1 |
| T 2 | 16 42 24 | 11 [°] 36'35 | 4 [♈] 48 | 23 [°] 1 | 25 [°] 51 | 0 [°] 50 | 26 [°] 44 | 15 [°] 8 | 26 [°] 17 | 26 [°] 28 | 2 [°] 31 | 1 [°] 33 | 2 [°] 55 | 16 [°] 36 | 26 [°] 14 | T 2 |
| W 3 | 16 46 20 | 12 [°] 34'03 | 17 [°] 51 | 23 [°] 11 | 26 [°] 47 | 1 [°] 35 | 26 [°] 47 | 15 [°] 10 | 26 [°] 18 | 26 [°] 28 | 2 [°] 30 | 1 [°] 28 | 2 [°] 52 | 16 [°] 42 | 26 [°] 13 | W 3 |
| T 4 | 16 50 17 | 13 [°] 31'30 | 0 [♈] 41 | 23 [°] 27 | 27 [°] 44 | 2 [°] 19 | 26 [°] 49 | 15 [°] 11 | 26 [°] 19 | 26 [°] 28 | 2 [°] 28 | 1 [°] 22 | 2 [°] 48 | 16 [°] 49 | 26 [°] 13 | T 4 |
| F 5 | 16 54 13 | 14 [°] 28'56 | 13 [°] 17 | 23 [°] 47 | 28 [°] 41 | 3 [°] 4 | 26 [°] 51 | 15 [°] 13 | 26 [°] 21 | 26 [°] 28 | 2 [°] 27 | 1 [°] 14 | 2 [°] 45 | 16 [°] 55 | 26 [°] 13 | F 5 |
| S 6 | 16 58 10 | 15 [°] 26'21 | 25 [°] 42 | 24 [°] 11 | 29 [°] 38 | 3 [°] 49 | 26 [°] 53 | 15 [°] 15 | 26 [°] 22 | 26 [°] 28 | 2 [°] 25 | 1 [°] 6 | 2 [°] 42 | 17 [°] 2 | 26 [°] 12 | S 6 |
| S 7 | 17 2 6 | 16 [°] 23'45 | 7 [♈] 57 | 24 [°] 40 | 0 [♈] 36 | 4 [°] 33 | 26 [°] 54 | 15 [°] 17 | 26 [°] 23 | 26 [°] 27 | 2 [°] 24 | 0 [°] 58 | 2 [°] 39 | 17 [°] 9 | 26 [°] 12 | S 7 |
| M 8 | 17 6 3 | 17 [°] 21'08 | 20 [°] 2 | 25 [°] 12 | 1 [°] 34 | 5 [°] 18 | 26 [°] 56 | 15 [°] 19 | 26 [°] 24 | 26 [°] 27 | 2 [°] 22 | 0 [°] 51 | 2 [°] 36 | 17 [°] 15 | 26 [°] 12 | M 8 |
| T 9 | 17 9 59 | 18 [°] 18'30 | 1 [♈] 59 | 25 [°] 49 | 2 [°] 33 | 6 [°] 2 | 26 [°] 57 | 15 [°] 22 | 26 [°] 25 | 26 [°] 27 | 2 [°] 21 | 0 [°] 46 | 2 [°] 33 | 17 [°] 22 | 26 [°] 11 | T 9 |
| W10 | 17 13 56 | 19 [°] 15'52 | 13 [°] 51 | 26 [°] 30 | 3 [°] 32 | 6 [°] 47 | 26 [°] 58 | 15 [°] 24 | 26 [°] 26 | 26 [°] 26 | 2 [°] 20 | 0 [°] 42 | 2 [°] 29 | 17 [°] 29 | 26 [°] 10 | W10 |
| T 11 | 17 17 53 | 20 [°] 13'13 | 25 [°] 39 | 27 [°] 15 | 4 [°] 31 | 7 [°] 31 | 26 [°] 59 | 15 [°] 27 | 26 [°] 27 | 26 [°] 26 | 2 [°] 18 | 0 [°] D41 | 2 [°] 26 | 17 [°] 35 | 26 [°] 10 | T 11 |
| F 12 | 17 21 49 | 21 [°] 10'33 | 7 [♈] 26 | 28 [°] 4 | 5 [°] 30 | 8 [°] 15 | 27 [°] 0 | 15 [°] 29 | 26 [°] 28 | 26 [°] 26 | 2 [°] 17 | 0 [°] 41 | 2 [°] 23 | 17 [°] 42 | 26 [°] 9 | F 12 |
| S 13 | 17 25 46 | 22 [°] 7'52 | 19 [°] 16 | 28 [°] 57 | 6 [°] 30 | 9 [°] 0 | 27 [°] 1 | 15 [°] 32 | 26 [°] 29 | 26 [°] 25 | 2 [°] 15 | 0 [°] 42 | 2 [°] 20 | 17 [°] 49 | 26 [°] 8 | S 13 |
| S 14 | 17 29 42 | 23 [°] 5'11 | 1 [♈] 14 | 29 [°] 53 | 7 [°] 31 | 9 [°] 44 | 27 [°] 1 | 15 [°] 35 | 26 [°] 30 | 26 [°] 25 | 2 [°] 13 | 0 [°] 44 | 2 [°] 17 | 17 [°] 55 | 26 [°] 7 | S 14 |
| M15 | 17 33 39 | 24 [°] 2'30 | 13 [°] 24 | 0 [♈] 53 | 8 [°] 31 | 10 [°] 28 | 27 [°] R 1 | 15 [°] 37 | 26 [°] 31 | 26 [°] 24 | 2 [°] 12 | 0 [°] 45 | 2 [°] 14 | 18 [°] 2 | 26 [°] 6 | M15 |
| T 16 | 17 37 35 | 24 [°] 59'48 | 25 [°] 51 | 1 [°] 57 | 9 [°] 32 | 11 [°] 12 | 27 [°] 1 | 15 [°] 40 | 26 [°] 32 | 26 [°] 24 | 2 [°] 10 | 0 [°] R46 | 2 [°] 10 | 18 [°] 9 | 26 [°] 5 | T 16 |
| W17 | 17 41 32 | 25 [°] 57'06 | 8 [♈] Y39 | 3 [°] 4 | 10 [°] 34 | 11 [°] 56 | 27 [°] 1 | 15 [°] 43 | 26 [°] 32 | 26 [°] 23 | 2 [°] 9 | 0 [°] 45 | 2 [°] 7 | 18 [°] 15 | 26 [°] 4 | W17 |
| T 18 | 17 45 28 | 26 [°] 54'24 | 21 [°] 53 | 4 [°] 15 | 11 [°] 35 | 12 [°] 40 | 27 [°] 0 | 15 [°] 47 | 26 [°] 33 | 26 [°] 22 | 2 [°] 7 | 0 [°] 43 | 2 [°] 4 | 18 [°] 22 | 26 [°] 3 | T 18 |
| F 19 | 17 49 25 | 27 [°] 51'41 | 5 [♈] 34 | 5 [°] 29 | 12 [°] 37 | 13 [°] 24 | 27 [°] 0 | 15 [°] 50 | 26 [°] 34 | 26 [°] 22 | 2 [°] 6 | 0 [°] 39 | 2 [°] 1 | 18 [°] 29 | 26 [°] 2 | F 19 |
| S 20 | 17 53 22 | 28 [°] 48'58 | 19 [°] 43 | 6 [°] 47 | 13 [°] 39 | 14 [°] 8 | 26 [°] 59 | 15 [°] 53 | 26 [°] 34 | 26 [°] 21 | 2 [°] 4 | 0 [°] 35 | 1 [°] 58 | 18 [°] 35 | 26 [°] 1 | S 20 |
| S 21 | 17 57 18 | 29 [°] 46'15 | 4 [♈] 17 | 8 [°] 7 | 14 [°] 41 | 14 [°] 52 | 26 [°] 58 | 15 [°] 56 | 26 [°] 35 | 26 [°] 20 | 2 [°] 3 | 0 [°] 30 | 1 [°] 54 | 18 [°] 42 | 26 [°] 0 | S 21 |
| M22 | 18 1 15 | 0 [♈] 43'32 | 19 [°] 11 | 9 [°] 32 | 15 [°] 44 | 15 [°] 35 | 26 [°] 57 | 16 [°] 0 | 26 [°] 35 | 26 [°] 20 | 2 [°] 1 | 0 [°] 26 | 1 [°] 51 | 18 [°] 49 | 25 [°] 58 | M22 |
| T 23 | 18 5 11 | 1 [°] 40'49 | 4 [♈] 18 | 10 [°] 59 | 16 [°] 47 | 16 [°] 19 | 26 [°] 55 | 16 [°] 4 | 26 [°] 36 | 26 [°] 19 | 2 [°] 0 | 0 [°] 23 | 1 [°] 48 | 18 [°] 55 | 25 [°] 57 | T 23 |
| W24 | 18 9 8 | 2 [°] 38'05 | 19 [°] 26 | 12 [°] 30 | 17 [°] 50 | 17 [°] 3 | 26 [°] 54 | 16 [°] 7 | 26 [°] 36 | 26 [°] 18 | 1 [°] 58 | 0 [°] 22 | 1 [°] 45 | 19 [°] 2 | 25 [°] 56 | W24 |
| T 25 | 18 13 4 | 3 [°] 35'20 | 4 [♈] 28 | 14 [°] 4 | 18 [°] 53 | 17 [°] 46 | 26 [°] 52 | 16 [°] 11 | 26 [°] 36 | 26 [°] 17 | 1 [°] 57 | 0 [°] D22 | 1 [°] 42 | 19 [°] 8 | 25 [°] 54 | T 25 |
| F 26 | 18 17 1 | 4 [°] 32'35 | 19 [°] 15 | 15 [°] 41 | 19 [°] 57 | 18 [°] 29 | 26 [°] 50 | 16 [°] 15 | 26 [°] 37 | 26 [°] 17 | 1 [°] 55 | 0 [°] 22 | 1 [°] 39 | 19 [°] 15 | 25 [°] 53 | F 26 |
| S 27 | 18 20 58 | 5 [°] 29'49 | 3 [♈] 43 | 17 [°] 21 | 21 [°] 0 | 19 [°] 13 | 26 [°] 48 | 16 [°] 19 | 26 [°] 37 | 26 [°] 16 | 1 [°] 53 | 0 [°] 24 | 1 [°] 35 | 19 [°] 22 | 25 [°] 51 | S 27 |
| S 28 | 18 24 54 | 6 [°] 27'03 | 17 [°] 47 | 19 [°] 4 | 22 [°] 4 | 19 [°] 56 | 26 [°] 46 | 16 [°] 23 | 26 [°] 37 | 26 [°] 15 | 1 [°] 52 | 0 [°] 25 | 1 [°] 32 | 19 [°] 28 | 25 [°] 49 | S 28 |
| M29 | 18 28 51 | 7 [°] 24'16 | 1 [♈] 28 | 20 [°] 51 | 23 [°] 8 | 20 [°] 39 | 26 [°] 43 | 16 [°] 27 | 26 [°] 37 | 26 [°] 14 | 1 [°] 50 | 0 [°] R26 | 1 [°] 29 | 19 [°] 35 | 25 [°] 48 | M29 |
| T 30 | 18 32 47 | 8 [°] 21'29 | 14 [°] 45 | 22 [°] 40 | 24 [°] 13 | 21 [°] 23 | 26 [°] 40 | 16 [°] 31 | 26 [°] 37 | 26 [°] 13 | 1 [°] 49 | 0 [°] 26 | 1 [°] 26 | 19 [°] 42 | 25 [°] 46 | T 30 |

| Day | ☉ | ☾ | ♀ | | ♀ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|------|------|------|------|------|-------|------|-------|------|-------|-------|-------|------|------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | decl | decl | decl | decl | lat | |
| M 1 | 22n 3 | 0s14 | 3s56 | 14n52 | 3s45 | 7n41 | 2s 7 | 10n36 | 0s57 | 13s22 | 0s48 | 7n50 | 2n 8 | 2s11 | 0s45 | 13s 4 | 0s24 | 17s38 | 5n47 | 19s48 | 19s30 | 23s53 | 6s40 | 6n29 |
| T 2 | 22 11 | 6 7 | 4 35 | 14 49 | 3 50 | 7 58 | 2 10 | 10 52 | 0 57 | 13 21 | 0 48 | 7 49 | 2 8 | 2 10 | 0 45 | 13 4 | 0 24 | 17 38 | 5 47 | 19 49 | 19 30 | 23 51 | 6 39 | 6 30 |
| W 3 | 22 18 | 11 37 | 4 59 | 14 48 | 3 54 | 8 15 | 2 14 | 11 8 | 0 56 | 13 21 | 0 48 | 7 48 | 2 7 | 2 10 | 0 45 | 13 4 | 0 24 | 17 38 | 5 47 | 19 50 | 19 31 | 23 49 | 6 39 | 6 30 |
| T 4 | 22 25 | 16 30 | 5 8 | 14 49 | 3 56 | 8 32 | 2 17 | 11 24 | 0 56 | 13 20 | 0 49 | 7 47 | 2 7 | 2 9 | 0 45 | 13 4 | 0 24 | 17 38 | 5 47 | 19 51 | 19 32 | 23 48 | 6 39 | 6 30 |
| F 5 | 22 32 | 20 36 | 5 1 | 14 53 | 3 58 | 8 50 | 2 20 | 11 40 | 0 56 | 13 20 | 0 49 | 7 47 | 2 7 | 2 9 | 0 45 | 13 4 | 0 24 | 17 38 | 5 47 | 19 53 | 19 33 | 23 46 | 6 39 | 6 31 |
| S 6 | 22 39 | 23 43 | 4 40 | 14 58 | 3 58 | 9 7 | 2 23 | 11 56 | 0 55 | 13 20 | 0 49 | 7 46 | 2 7 | 2 8 | 0 45 | 13 4 | 0 24 | 17 38 | 5 47 | 19 55 | 19 33 | 23 44 | 6 38 | 6 31 |
| S 7 | 22 45 | 25 41 | 4 7 | 15 6 | 3 57 | 9 25 | 2 25 | 12 11 | 0 55 | 13 19 | 0 50 | 7 45 | 2 7 | 2 8 | 0 45 | 13 4 | 0 24 | 17 38 | 5 47 | 19 57 | 19 34 | 23 42 | 6 38 | 6 32 |
| M 8 | 22 50 | 26 26 | 3 22 | 15 15 | 3 56 | 9 43 | 2 28 | 12 26 | 0 54 | 13 19 | 0 50 | 7 44 | 2 7 | 2 7 | 0 45 | 13 4 | 0 24 | 17 38 | 5 47 | 19 58 | 19 35 | 23 41 | 6 38 | 6 32 |
| T 9 | 22 55 | 25 55 | 2 29 | 15 26 | 3 54 | 10 1 | 2 30 | 12 42 | 0 54 | 13 19 | 0 50 | 7 43 | 2 6 | 2 7 | 0 45 | 13 4 | 0 24 | 17 38 | 5 47 | 19 59 | 19 36 | 23 39 | 6 38 | 6 32 |
| W10 | 23 0 | 24 13 | 1 30 | 15 38 | 3 50 | 10 19 | 2 32 | 12 57 | 0 53 | 13 19 | 0 50 | 7 42 | 2 6 | 2 7 | 0 45 | 13 5 | 0 24 | 17 38 | 5 47 | 20 0 | 19 36 | 23 37 | 6 38 | 6 33 |
| T 11 | 23 5 | 21 28 | 0 27 | 15 52 | 3 46 | 10 37 | 2 34 | 13 12 | 0 52 | 13 19 | 0 51 | 7 40 | 2 6 | 2 6 | 0 45 | 13 5 | 0 24 | 17 39 | 5 47 | 20 0 | 19 37 | 23 36 | 6 38 | 6 33 |
| F 12 | 23 9 | 17 49 | 0n37 | 16 8 | 3 41 | 10 55 | 2 36 | 13 26 | 0 52 | 13 19 | 0 51 | 7 39 | 2 6 | 2 6 | 0 46 | 13 5 | 0 24 | 17 39 | 5 47 | 20 0 | 19 38 | 23 34 | 6 38 | 6 33 |
| S 13 | 23 12 | 13 28 | 1 40 | 16 25 | 3 36 | 11 13 | 2 37 | 13 41 | 0 51 | 13 19 | 0 51 | 7 38 | 2 6 | 2 6 | 0 46 | 13 5 | 0 24 | 17 39 | 5 47 | 20 0 | 19 38 | 23 32 | 6 37 | 6 34 |
| S 14 | 23 16 | 8 33 | 2 39 | 16 43 | 3 30 | 11 31 | 2 39 | 13 55 | 0 51 | 13 19 | 0 51 | 7 37 | 2 6 | 2 5 | 0 46 | 13 5 | 0 24 | 17 39 | 5 46 | 20 0 | 19 39 | 23 30 | 6 37 | 6 34 |
| M15 | 23 18 | 3 15 | 3 32 | 17 2 | 3 23 | 11 49 | 2 40 | 14 10 | 0 50 | 13 19 | 0 52 | 7 36 | 2 5 | 2 5 | 0 46 | 13 5 | 0 24 | 17 39 | 5 46 | 19 59 | 19 40 | 23 29 | 6 37 | 6 34 |
| T 16 | 23 21 | 2n17 | 4 17 | 17 22 | 3 15 | 12 7 | 2 41 | 14 24 | 0 50 | 13 19 | 0 52 | 7 34 | 2 5 | 2 5 | 0 46 | 13 6 | 0 24 | 17 39 | 5 46 | 19 59 | 19 41 | 23 27 | 6 37 | 6 35 |
| W17 | 23 23 | 7 52 | 4 50 | 17 43 | 3 7 | 12 25 | 2 42 | 14 38 | 0 49 | 13 19 | 0 52 | 7 33 | 2 5 | 2 5 | 0 46 | 13 6 | 0 24 | 17 39 | 5 46 | 19 59 | 19 41 | 23 25 | 6 37 | 6 35 |
| T 18 | 23 24 | 13 18 | 5 9 | 18 4 | 2 58 | 12 43 | 2 43 | 14 52 | 0 49 | 13 20 | 0 52 | 7 32 | 2 5 | 2 4 | 0 46 | 13 6 | 0 24 | 17 39 | 5 46 | 20 0 | 19 42 | 23 23 | 6 37 | 6 35 |
| F 19 | 23 25 | 18 16 | 5 11 | 18 27 | 2 49 | 13 1 | 2 44 | 15 6 | 0 48 | 13 20 | 0 53 | 7 30 | 2 5 | 2 4 | 0 46 | 13 6 | 0 24 | 17 39 | 5 46 | 20 1 | 19 43 | 23 22 | 6 38 | 6 36 |
| S 20 | 23 26 | 22 24 | 4 55 | 18 49 | 2 39 | 13 19 | 2 44 | 15 19 | 0 48 | 13 21 | 0 53 | 7 29 | 2 5 | 2 4 | 0 46 | 13 7 | 0 24 | 17 39 | 5 46 | 20 2 | 19 43 | 23 20 | 6 38 | 6 36 |
| S 21 | 23 26 | 25 16 | 4 20 | 19 12 | 2 29 | 13 37 | 2 45 | 15 33 | 0 47 | 13 21 | 0 53 | 7 27 | 2 4 | 2 4 | 0 46 | 13 7 | 0 24 | 17 40 | 5 46 | 20 3 | 19 44 | 23 18 | 6 38 | 6 36 |
| M22 | 23 26 | 26 26 | 3 27 | 19 35 | 2 19 | 13 55 | 2 45 | 15 46 | 0 46 | 13 22 | 0 54 | 7 26 | 2 4 | 2 4 | 0 46 | 13 7 | 0 24 | 17 40 | 5 46 | 20 3 | 19 45 | 23 16 | 6 38 | 6 37 |
| T 23 | 23 26 | 25 40 | 2 18 | 19 59 | 2 8 | 14 12 | 2 46 | 15 59 | 0 46 | 13 23 | 0 54 | 7 24 | 2 4 | 2 3 | 0 46 | 13 7 | 0 24 | 17 40 | 5 46 | 20 4 | 19 46 | 23 15 | 6 38 | 6 37 |
| W24 | 23 25 | 23 1 | 1 0 | 20 22 | 1 57 | 14 30 | 2 46 | 16 12 | 0 45 | 13 24 | 0 54 | 7 23 | 2 4 | 2 3 | 0 46 | 13 8 | 0 24 | 17 40 | 5 46 | 20 4 | 19 46 | 23 13 | 6 38 | 6 37 |
| T 25 | 23 23 | 18 47 | 0s23 | 20 44 | 1 46 | 14 47 | 2 46 | 16 25 | 0 45 | 13 24 | 0 54 | 7 21 | 2 4 | 2 3 | 0 46 | 13 8 | 0 24 | 17 40 | 5 45 | 20 4 | 19 47 | 23 11 | 6 38 | 6 38 |
| F 26 | 23 22 | 13 26 | 1 42 | 21 7 | 1 34 | 15 4 | 2 45 | 16 38 | 0 44 | 13 25 | 0 55 | 7 19 | 2 4 | 2 3 | 0 46 | 13 8 | 0 24 | 17 40 | 5 45 | 20 4 | 19 48 | 23 9 | 6 39 | 6 38 |
| S 27 | 23 19 | 7 27 | 2 53 | 21 29 | 1 22 | 15 21 | 2 45 | 16 50 | 0 43 | 13 26 | 0 55 | 7 18 | 2 3 | 2 3 | 0 46 | 13 9 | 0 24 | 17 40 | 5 45 | 20 4 | 19 48 | 23 7 | 6 39 | 6 38 |
| S 28 | 23 17 | 1 16 | 3 52 | 21 50 | 1 10 | 15 38 | 2 45 | 17 2 | 0 43 | 13 27 | 0 55 | 7 16 | 2 3 | 2 3 | 0 46 | 13 9 | 0 24 | 17 40 | 5 45 | 20 4 | 19 49 | 23 6 | 6 39 | 6 38 |
| M29 | 23 14 | 4s48 | 4 36 | 22 9 | 0 58 | 15 54 | 2 44 | 17 14 | 0 42 | 13 29 | 0 55 | 7 14 | 2 3 | 2 3 | 0 46 | 13 9 | 0 24 | 17 41 | 5 45 | 20 4 | 19 50 | 23 4 | 6 39 | 6 39 |
| T 30 | 23n11 | 10s29 | 5s 4 | 22n28 | 0s46 | 16n11 | 2s44 | 17n26 | 0s41 | 13s30 | 0s56 | 7n13 | 2n 3 | 2s 3 | 0s46 | 13s10 | 0s24 | 17s41 | 5n45 | 20s 4 | 19s50 | 23s 2 | 6s40 | 6n39 |

ASTRODIENST EPHEMERIS for the year 2009

geocentric

JULY 2009

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|------------------------|----------------------|----------------------|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|--------------------|--------------------|----------------------|---------------------|---------------------|------|
| W 1 | 18 36 44 | 9 ⁵⁸ 18'42" | 27 ²⁴ 42" | 24 ¹¹ 32" | 25 ⁸ 17" | 22 ⁸ 6" | 26 ⁰ R37 | 16 ¹⁰ 35" | 26 ⁰ R37 | 26 ⁰ R12 | 1 ⁰ R47 | 0 ⁰ R25 | 1 ²² 23" | 19 ³ 48" | 25 ⁰ R44 | W 1 |
| T 2 | 18 40 40 | 10 ⁰ 15'54" | 10 ¹⁰ 22" | 26 ⁰ 27" | 26 ⁰ 22" | 22 ⁰ 49" | 26 ⁰ 34" | 16 ⁰ 39" | 26 ⁰ 37" | 26 ⁰ 11" | 1 ⁰ 46" | 0 ⁰ 23" | 1 ⁰ 20" | 19 ⁰ 55" | 25 ⁰ 42" | T 2 |
| F 3 | 18 44 37 | 11 ⁰ 13'05" | 22 ⁰ 46" | 28 ⁰ 24" | 27 ⁰ 27" | 23 ⁰ 32" | 26 ⁰ 31" | 16 ⁰ 44" | 26 ⁰ 37" | 26 ⁰ 10" | 1 ⁰ 44" | 0 ⁰ 20" | 1 ⁰ 16" | 20 ⁰ 2" | 25 ⁰ 40" | F 3 |
| S 4 | 18 48 33 | 12 ⁰ 10'17" | 4 ²⁷ 58" | 0 ⁵⁸ 23" | 28 ⁰ 32" | 24 ⁰ 14" | 26 ⁰ 28" | 16 ⁰ 48" | 26 ⁰ 37" | 26 ⁰ 9" | 1 ⁰ 43" | 0 ⁰ 18" | 1 ⁰ 13" | 20 ⁰ 8" | 25 ⁰ 38" | S 4 |
| S 5 | 18 52 30 | 13 ⁰ 7'28" | 17 ⁰ 1" | 2 ⁰ 25" | 29 ⁰ 37" | 24 ⁰ 57" | 26 ⁰ 24" | 16 ⁰ 53" | 26 ⁰ 37" | 26 ⁰ 8" | 1 ⁰ 41" | 0 ⁰ 15" | 1 ⁰ 10" | 20 ⁰ 15" | 25 ⁰ 36" | S 5 |
| M 6 | 18 56 27 | 14 ⁰ 4'40" | 28 ⁰ 57" | 4 ⁰ 29" | 0 ¹¹ 43" | 25 ⁰ 40" | 26 ⁰ 20" | 16 ⁰ 57" | 26 ⁰ 37" | 26 ⁰ 7" | 1 ⁰ 40" | 0 ⁰ 13" | 1 ⁰ 7" | 20 ⁰ 22" | 25 ⁰ 34" | M 6 |
| T 7 | 19 0 23 | 15 ⁰ 1'51" | 10 ⁰ 348" | 6 ⁰ 34" | 1 ⁰ 48" | 26 ⁰ 23" | 26 ⁰ 16" | 17 ⁰ 2" | 26 ⁰ 37" | 26 ⁰ 6" | 1 ⁰ 38" | 0 ⁰ 11" | 1 ⁰ 4" | 20 ⁰ 28" | 25 ⁰ 32" | T 7 |
| W 8 | 19 4 20 | 15 ⁰ 59'02" | 22 ⁰ 36" | 8 ⁰ 41" | 2 ⁰ 54" | 27 ⁰ 5" | 26 ⁰ 12" | 17 ⁰ 7" | 26 ⁰ 36" | 26 ⁰ 5" | 1 ⁰ 37" | 0 ⁰ 10" | 1 ⁰ 0" | 20 ⁰ 35" | 25 ⁰ 30" | W 8 |
| T 9 | 19 8 16 | 16 ⁰ 56'13" | 4 ²² 24" | 10 ⁰ 49" | 4 ⁰ 0" | 27 ⁰ 48" | 26 ⁰ 8" | 17 ⁰ 12" | 26 ⁰ 36" | 26 ⁰ 3" | 1 ⁰ 35" | 0 ⁰ D10 | 0 ⁰ 57" | 20 ⁰ 42" | 25 ⁰ 28" | T 9 |
| F 10 | 19 12 13 | 17 ⁰ 53'25" | 16 ⁰ 14" | 12 ⁰ 58" | 5 ⁰ 6" | 28 ⁰ 30" | 26 ⁰ 4" | 17 ⁰ 17" | 26 ⁰ 36" | 26 ⁰ 2" | 1 ⁰ 34" | 0 ⁰ 11" | 0 ⁰ 54" | 20 ⁰ 48" | 25 ⁰ 26" | F 10 |
| S 11 | 19 16 9 | 18 ⁰ 50'37" | 28 ⁰ 8" | 15 ⁰ 7" | 6 ⁰ 12" | 29 ⁰ 13" | 25 ⁰ 59" | 17 ⁰ 22" | 26 ⁰ 35" | 26 ⁰ 1" | 1 ⁰ 32" | 0 ⁰ 12" | 0 ⁰ 51" | 20 ⁰ 55" | 25 ⁰ 24" | S 11 |
| S 12 | 19 20 6 | 19 ⁰ 47'49" | 10 ⁰ 311" | 17 ⁰ 17" | 7 ⁰ 19" | 29 ⁰ 55" | 25 ⁰ 54" | 17 ⁰ 27" | 26 ⁰ 35" | 26 ⁰ 0" | 1 ⁰ 31" | 0 ⁰ 13" | 0 ⁰ 48" | 21 ⁰ 1" | 25 ⁰ 21" | S 12 |
| M13 | 19 24 2 | 20 ⁰ 45'01" | 22 ⁰ 25" | 19 ⁰ 26" | 8 ⁰ 25" | 0 ¹¹ 37" | 25 ⁰ 49" | 17 ⁰ 32" | 26 ⁰ 34" | 25 ⁰ 59" | 1 ⁰ 29" | 0 ⁰ 14" | 0 ⁰ 45" | 21 ⁰ 8" | 25 ⁰ 19" | M13 |
| T 14 | 19 27 59 | 21 ⁰ 42'14" | 4 ⁰ 53" | 21 ⁰ 35" | 9 ⁰ 32" | 1 ⁰ 19" | 25 ⁰ 44" | 17 ⁰ 37" | 26 ⁰ 34" | 25 ⁰ 57" | 1 ⁰ 28" | 0 ⁰ 14" | 0 ⁰ 41" | 21 ⁰ 15" | 25 ⁰ 17" | T 14 |
| W15 | 19 31 56 | 22 ⁰ 39'28" | 17 ⁰ 41" | 23 ⁰ 44" | 10 ⁰ 39" | 2 ⁰ 1" | 25 ⁰ 39" | 17 ⁰ 42" | 26 ⁰ 33" | 25 ⁰ 56" | 1 ⁰ 27" | 0 ⁰ R15 | 0 ⁰ 38" | 21 ⁰ 21" | 25 ⁰ 14" | W15 |
| T 16 | 19 35 52 | 23 ⁰ 36'42" | 0 ⁸ 50" | 25 ⁰ 52" | 11 ⁰ 46" | 2 ⁰ 43" | 25 ⁰ 33" | 17 ⁰ 48" | 26 ⁰ 32" | 25 ⁰ 55" | 1 ⁰ 25" | 0 ⁰ 15" | 0 ⁰ 35" | 21 ⁰ 28" | 25 ⁰ 12" | T 16 |
| F 17 | 19 39 49 | 24 ⁰ 33'57" | 14 ⁰ 24" | 27 ⁰ 59" | 12 ⁰ 53" | 3 ⁰ 25" | 25 ⁰ 28" | 17 ⁰ 53" | 26 ⁰ 31" | 25 ⁰ 53" | 1 ⁰ 24" | 0 ⁰ 14" | 0 ⁰ 32" | 21 ⁰ 35" | 25 ⁰ 9" | F 17 |
| S 18 | 19 43 45 | 25 ⁰ 31'13" | 28 ⁰ 24" | 0 ⁰ 5 | 14 ⁰ 1" | 4 ⁰ 7" | 25 ⁰ 22" | 17 ⁰ 59" | 26 ⁰ 31" | 25 ⁰ 52" | 1 ⁰ 22" | 0 ⁰ 14" | 0 ⁰ 29" | 21 ⁰ 41" | 25 ⁰ 7" | S 18 |
| S 19 | 19 47 42 | 26 ⁰ 28'29" | 12 ⁰ 49" | 2 ⁰ 9" | 15 ⁰ 8" | 4 ⁰ 49" | 25 ⁰ 16" | 18 ⁰ 4" | 26 ⁰ 30" | 25 ⁰ 51" | 1 ⁰ 21" | 0 ⁰ 13" | 0 ⁰ 26" | 21 ⁰ 48" | 25 ⁰ 4" | S 19 |
| M20 | 19 51 38 | 27 ⁰ 25'46" | 27 ⁰ 36" | 4 ⁰ 12" | 16 ⁰ 16" | 5 ⁰ 31" | 25 ⁰ 10" | 18 ⁰ 10" | 26 ⁰ 29" | 25 ⁰ 49" | 1 ⁰ 20" | 0 ⁰ 13" | 0 ⁰ 22" | 21 ⁰ 55" | 25 ⁰ 1" | M20 |
| T 21 | 19 55 35 | 28 ⁰ 23'04" | 12 ⁰ 39" | 6 ⁰ 14" | 17 ⁰ 23" | 6 ⁰ 12" | 25 ⁰ 4" | 18 ⁰ 15" | 26 ⁰ 28" | 25 ⁰ 48" | 1 ⁰ 18" | 0 ⁰ 13" | 0 ⁰ 19" | 22 ⁰ 1" | 24 ⁰ 59" | T 21 |
| W22 | 19 59 31 | 29 ⁰ 20'22" | 27 ⁰ 49" | 8 ⁰ 14" | 18 ⁰ 31" | 6 ⁰ 54" | 24 ⁰ 58" | 18 ⁰ 21" | 26 ⁰ 27" | 25 ⁰ 47" | 1 ⁰ 17" | 0 ⁰ D13 | 0 ⁰ 16" | 22 ⁰ 8" | 24 ⁰ 56" | W22 |
| T 23 | 20 3 28 | 0 ⁰ 17'41" | 12 ⁰ 57" | 10 ⁰ 12" | 19 ⁰ 39" | 7 ⁰ 35" | 24 ⁰ 52" | 18 ⁰ 27" | 26 ⁰ 26" | 25 ⁰ 45" | 1 ⁰ 16" | 0 ⁰ R13 | 0 ⁰ 13" | 22 ⁰ 15" | 24 ⁰ 53" | T 23 |
| F 24 | 20 7 25 | 1 ⁰ 15'00" | 27 ⁰ 55" | 12 ⁰ 9" | 20 ⁰ 47" | 8 ⁰ 17" | 24 ⁰ 45" | 18 ⁰ 33" | 26 ⁰ 25" | 25 ⁰ 44" | 1 ⁰ 14" | 0 ⁰ 13" | 0 ⁰ 10" | 22 ⁰ 21" | 24 ⁰ 51" | F 24 |
| S 25 | 20 11 21 | 2 ⁰ 12'20" | 12 ⁰ 34" | 14 ⁰ 4" | 21 ⁰ 55" | 8 ⁰ 58" | 24 ⁰ 39" | 18 ⁰ 39" | 26 ⁰ 24" | 25 ⁰ 42" | 1 ⁰ 13" | 0 ⁰ 13" | 0 ⁰ 6" | 22 ⁰ 28" | 24 ⁰ 48" | S 25 |
| S 26 | 20 15 18 | 3 ⁰ 9'40" | 26 ⁰ 50" | 15 ⁰ 58" | 23 ⁰ 4" | 9 ⁰ 39" | 24 ⁰ 32" | 18 ⁰ 44" | 26 ⁰ 23" | 25 ⁰ 41" | 1 ⁰ 12" | 0 ⁰ 12" | 0 ⁰ 3" | 22 ⁰ 35" | 24 ⁰ 45" | S 26 |
| M27 | 20 19 14 | 4 ⁰ 7'00" | 10 ⁰ 40" | 17 ⁰ 49" | 24 ⁰ 12" | 10 ⁰ 20" | 24 ⁰ 25" | 18 ⁰ 50" | 26 ⁰ 22" | 25 ⁰ 39" | 1 ⁰ 11" | 0 ⁰ 12" | 0 ⁰ 0" | 22 ⁰ 41" | 24 ⁰ 42" | M27 |
| T 28 | 20 23 11 | 5 ⁰ 4'21" | 24 ⁰ 3" | 19 ⁰ 39" | 25 ⁰ 21" | 11 ⁰ 1" | 24 ⁰ 18" | 18 ⁰ 57" | 26 ⁰ 21" | 25 ⁰ 38" | 1 ⁰ 9" | 0 ⁰ 12" | 29 ⁰ 357" | 22 ⁰ 48" | 24 ⁰ 40" | T 28 |
| W29 | 20 27 7 | 6 ⁰ 1'43" | 7 ⁰ 11" | 21 ⁰ 28" | 26 ⁰ 29" | 11 ⁰ 42" | 24 ⁰ 11" | 19 ⁰ 3" | 26 ⁰ 19" | 25 ⁰ 36" | 1 ⁰ 8" | 0 ⁰ D12 | 29 ⁰ 54" | 22 ⁰ 54" | 24 ⁰ 37" | W29 |
| T 30 | 20 31 4 | 6 ⁰ 59'05" | 19 ⁰ 38" | 23 ⁰ 14" | 27 ⁰ 38" | 12 ⁰ 23" | 24 ⁰ 4" | 19 ⁰ 9" | 26 ⁰ 18" | 25 ⁰ 35" | 1 ⁰ 7" | 0 ⁰ 12" | 29 ⁰ 51" | 23 ⁰ 1" | 24 ⁰ 34" | T 30 |
| F 31 | 20 35 0 | 7 ⁰ 56'27" | 1 ⁰ 57" | 24 ⁰ 59" | 28 ⁰ 47" | 13 ⁰ 4" | 23 ⁰ 557" | 19 ⁰ 15" | 26 ⁰ 17" | 25 ⁰ 33" | 1 ⁰ 6" | 0 ⁰ 12" | 29 ⁰ 347" | 23 ⁰ 8" | 24 ⁰ 31" | F 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 |
| W 1 | 23n 7 | 15s33 | 5s15 | 22n46 | 0s34 | 16n27 | 2s43 | 17n38 | 0s41 | 13s31 | 0s56 | 7n11 | 2n 3 | 2s 3 | 0s46 | 13s10 | 0s24 | 17s41 | 5n45 | 20s 4 | 19s51 | 23s 0 | 6s40 | 6n39 | | | | | |
| T 2 | 23 3 | 19 50 | 5 11 | 23 1 | 0 22 | 16 43 | 2 42 | 17 50 | 0 40 | 13 32 | 0 56 | 7 9 | 2 3 | 2 3 | 0 46 | 13 10 | 0 24 | 17 41 | 5 45 | 20 4 | 19 52 | 22 58 | 6 40 | 6 40 | | | | | |
| F 3 | 22 58 | 23 10 | 4 52 | 23 15 | 0 10 | 16 58 | 2 41 | 18 1 | 0 39 | 13 34 | 0 56 | 7 7 | 2 3 | 2 3 | 0 46 | 13 11 | 0 24 | 17 41 | 5 45 | 20 5 | 19 53 | 22 56 | 6 41 | 6 40 | | | | | |
| S 4 | 22 53 | 25 23 | 4 20 | 23 27 | 0n 1 | 17 14 | 2 40 | 18 12 | 0 39 | 13 35 | 0 57 | 7 5 | 2 2 | 2 3 | 0 46 | 13 11 | 0 24 | 17 41 | 5 44 | 20 5 | 19 53 | 22 55 | 6 41 | 6 40 | | | | | |
| S 5 | 22 48 | 26 24 | 3 37 | 23 37 | 0 12 | 17 29 | 2 39 | 18 23 | 0 38 | 13 36 | 0 57 | 7 3 | 2 2 | 2 3 | 0 46 | 13 11 | 0 24 | 17 42 | 5 44 | 20 6 | 19 54 | 22 53 | 6 42 | 6 40 | | | | | |
| M 6 | 22 42 | 26 10 | 2 44 | 23 45 | 0 23 | 17 44 | 2 38 | 18 34 | 0 37 | 13 38 | 0 57 | 7 1 | 2 2 | 2 3 | 0 46 | 13 12 | 0 24 | 17 42 | 5 44 | 20 6 | 19 55 | 22 51 | 6 42 | 6 41 | | | | | |
| T 7 | 22 36 | 24 45 | 1 45 | 23 50 | 0 33 | 17 58 | 2 36 | 18 45 | 0 37 | 13 40 | 0 57 | 7 0 | 2 2 | 2 4 | 0 46 | 13 12 | 0 24 | 17 42 | 5 44 | 20 7 | 19 55 | 22 49 | 6 42 | 6 41 | | | | | |
| W 8 | 22 29 | 22 14 | 0 42 | 23 52 | 0 43 | 18 12 | 2 35 | 18 55 | 0 36 | 13 41 | 0 58 | 6 58 | 2 2 | 2 4 | 0 46 | 13 13 | 0 24 | 17 42 | 5 44 | 20 7 | 19 56 | 22 47 | 6 43 | 6 41 | | | | | |
| T 9 | 22 22 | 18 47 | 0n23 | 23 52 | 0 52 | 18 26 | 2 33 | 19 6 | 0 35 | 13 43 | 0 58 | 6 56 | 2 2 | 2 4 | 0 47 | 13 13 | 0 24 | 17 42 | 5 44 | 20 7 | 19 57 | 22 45 | 6 43 | 6 41 | | | | | |
| F 10 | 22 15 | 14 34 | 1 28 | 23 49 | 1 1 | 18 40 | 2 32 | 19 16 | 0 35 | 13 45 | 0 58 | 6 53 | 2 2 | 2 4 | 0 47 | 13 13 | 0 24 | 17 42 | 5 43 | 20 7 | 19 57 | 22 43 | 6 44 | 6 42 | | | | | |
| S 11 | 22 7 | 9 47 | 2 29 | 23 44 | 1 9 | 18 53 | 2 30 | 19 26 | 0 34 | 13 46 | 0 58 | 6 51 | 2 1 | 2 4 | 0 47 | 13 14 | 0 24 | 17 43 | 5 43 | 20 7 | 19 58 | 22 42 | 6 44 | 6 42 | | | | | |
| S 12 | 21 59 | 4 36 | 3 24 | 23 35 | 1 16 | 19 6 | 2 28 | 19 36 | 0 33 | 13 48 | 0 59 | 6 49 | 2 1 | 2 4 | 0 47 | 13 14 | 0 24 | 17 43 | 5 43 | 20 6 | 19 59 | 22 40 | 6 45 | 6 42 | | | | | |
| M13 | 21 50 | 0n50 | 4 11 | 23 24 | 1 23 | 19 18 | 2 26 | 19 45 | 0 32 | 13 50 | 0 59 | 6 47 | 2 1 | 2 5 | 0 47 | 13 15 | 0 24 | 17 43 | 5 43 | 20 6 | 19 59 | 22 38 | 6 46 | 6 42 | | | | | |
| T 14 | 21 41 | 6 20 | 4 47 | 23 10 | 1 29 | 19 30 | 2 24 | 19 55 | 0 32 | 13 52 | 0 59 | 6 45 | 2 1 | 2 5 | 0 47 | 13 15 | 0 25 | 17 43 | 5 43 | 20 6 | 20 0 | 22 36 | 6 46 | 6 42 | | | | | |
| W15 | 21 32 | 11 43 | 5 10 | 22 54 | 1 34 | 19 42 | 2 22 | 20 4 | 0 31 | 13 54 | 0 59 | 6 43 | 2 1 | 2 5 | 0 47 | 13 16 | 0 25 | 17 43 | 5 43 | 20 6 | 20 1 | 22 34 | 6 47 | 6 43 | | | | | |
| T 16 | 21 23 | 16 43 | 5 18 | 22 35 | 1 38 | 19 53 | 2 20 | 20 13 | 0 30 | 13 56 | 1 0 | 6 41 | 2 1 | 2 6 | 0 47 | 13 16 | 0 25 | 17 43 | 5 42 | 20 6 | 20 2 | 22 32 | 6 47 | 6 43 | | | | | |
| F 17 | 21 13 | 21 3 | 5 8 | 22 14 | 1 42 | 20 4 | 2 18 | 20 21 | 0 29 | 13 58 | 1 0 | 6 38 | 2 1 | 2 6 | 0 47 | 13 16 | 0 25 | 17 44 | 5 42 | 20 6 | 20 2 | 22 30 | 6 48 | 6 43 | | | | | |
| S 18 | 21 2 | 24 21 | 4 40 | 21 50 | 1 44 | 20 14 | 2 16 | 20 30 | 0 29 | 14 0 | 1 0 | 6 36 | 2 1 | 2 6 | 0 47 | 13 17 | 0 25 | 17 44 | 5 42 | 20 6 | 20 3 | 22 28 | 6 49 | 6 43 | | | | | |
| S 19 | 20 52 | 26 12 | 3 54 | 21 24 | 1 46 | 20 24 | 2 13 | 20 38 | 0 28 | 14 3 | 1 0 | 6 34 | 2 1 | 2 7 | 0 47 | 13 17 | 0 25 | 17 44 | 5 42 | 20 6 | 20 4 | 22 26 | 6 49 | 6 43 | | | | | |
| M20 | 20 40 | 26 17 | 2 52 | 20 57 | 1 48 | 20 33 | 2 11 | 20 47 | 0 27 | 14 5 | 1 0 | 6 32 | 2 0 | 2 7 | 0 47 | 13 18 | 0 25 | 17 44 | 5 42 | 20 6 | 20 4 | 22 24 | 6 50 | 6 44 | | | | | |
| T 21 | 20 29 | 24 26 | 1 36 | 20 28 | 1 48 | 20 42 | 2 9 | 20 55 | 0 26 | 14 7 | 1 1 | 6 29 | 2 0 | 2 7 | 0 47 | 13 18 | 0 25 | 17 44 | 5 42 | 20 6 | 20 5 | 22 22 | 6 51 | 6 44 | | | | | |
| W22 | 20 17 | 20 49 | 0 13 | 19 57 | 1 48 | 20 51 | 2 6 | 21 2 | 0 26 | 14 9 | 1 1 | 6 27 | 2 0 | 2 8 | 0 47 | 13 19 | 0 25 | 17 45 | 5 41 | 20 6 | 20 6 | 22 20 | 6 51 | 6 44 | | | | | |
| T 23 | 20 5 | 15 48 | 1s10 | 19 25 | 1 47 | 20 59 | 2 4 | 21 10 | 0 25 | 14 12 | 1 1 | 6 25 | 2 0 | 2 8 | 0 47 | 13 19 | 0 25 | 17 45 | 5 41 | 20 6 | 20 6 | 22 19 | 6 52 | 6 44 | | | | | |
| F 24 | 19 53 | 9 53 | 2 28 | 18 51 | 1 46 | 21 7 | 2 1 | 21 18 | 0 24 | 14 14 | 1 1 | 6 22 | 2 0 | 2 9 | 0 47 | 13 20 | 0 25 | 17 45 | 5 41 | 20 6 | 20 7 | 22 17 | 6 53 | 6 44 | | | | | |
| S 25 | 19 40 | 3 32 | 3 34 | 18 16 | 1 44 | 21 14 | 1 58 | 21 25 | 0 23 | 14 16 | 1 2 | 6 20 | 2 0 | 2 9 | 0 47 | 13 20 | 0 25 | 17 45 | 5 41 | 20 6 | 20 8 | 22 15 | 6 54 | 6 44 | | | | | |
| S 26 | 19 27 | 2s48 | 4 26 | 17 40 | 1 41 | 21 20 | 1 55 | 21 32 | 0 22 | 14 19 | 1 2 | 6 17 | 2 0 | 2 9 | 0 47 | 13 21 | 0 25 | 17 45 | 5 41 | 20 6 | 20 8 | 22 13 | 6 55 | 6 44 | | | | | |
| M27 | 19 14 | 8 49 | 4 59 | 17 3 | 1 38 | 21 26 | 1 53 | 21 39 | 0 22 | 14 21 | 1 2 | 6 15 | 2 0 | 2 10 | 0 47 | 13 21 | 0 25 | 17 46 | 5 40 | 20 6 | 20 9 | 22 11 | 6 55 | 6 45 | | | | | |
| T 28 | 19 0 | 14 13 | 5 16 | 16 25 | 1 35 | 21 32 | 1 50 | 21 45 | 0 21 | 14 24 | 1 2 | 6 13 | 2 0 | 2 10 | 0 47 | 13 22 | 0 25 | 17 46 | 5 40 | 20 7 | 20 10 | 22 9 | 6 56 | 6 45 | | | | | |
| W29 | 18 46 | 18 49 | 5 15 | 15 47 | 1 31 | 21 37 | 1 47 | 21 52 | 0 20 | 14 26 | 1 2 | 6 10 | 2 0 | 2 11 | 0 47 | 13 22 | 0 25 | 17 46 | 5 40 | 20 7 | 20 10 | 22 7 | 6 57 | 6 45 | | | | | |
| T 30 | 18 32 | 22 27 | 5 0 | 15 7 | 1 26 | 21 41 | 1 44 | 21 58 | 0 19 | 14 29 | 1 2 | 6 8 | 1 59 | 2 12 | 0 47 | 13 23 | 0 25 | 17 46 | 5 40 | 20 6 | 20 11 | 22 5 | 6 58 | 6 45 | | | | | |
| F 31 | 18n17 | 24s58 | 4s30 | 14n28 | 1n21 | 21n45 | 1s41 | 22n 4 | 0s18 | 14s31 | 1s 3 | 6n 5 | 1n59 | 2s12 | 0s47 | 13s24 | 0s25 | 17s47 | 5n40 | 20s 6 | 20s12 | 22s 3 | 6s59 | 6n45 | | | | | |

ASTRODIENST EPHEMERIS for the year 2009

geocentric

AUGUST 2009

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------|-------|-------|-------|-------|--------|-------|--------|--------|-------|--------|-------|-------|--------|------|
| S 1 | 20 38 57 | 8♂53'50 | 14♂ 3 | 26♂42 | 29♂56 | 13♂44 | 23°R50 | 19♂21 | 26°R15 | 25°R32 | 1°R 5 | 0♂13 | 29♂44 | 23♂14 | 24°R28 | S 1 |
| S 2 | 20 42 54 | 9°51'14 | 25°59 | 28°24 | 1♂ 5 | 14°25 | 23♂42 | 19°28 | 26♂14 | 25♂30 | 1♂ 4 | 0°14 | 29°41 | 23°21 | 24♂25 | S 2 |
| M 3 | 20 46 50 | 10°48'38 | 7♂49 | 0♂ 4 | 2°14 | 15° 5 | 23°35 | 19°34 | 26°13 | 25°29 | 1° 3 | 0°15 | 29°38 | 23°28 | 24°22 | M 3 |
| T 4 | 20 50 47 | 11°46'03 | 19°37 | 1°42 | 3°23 | 15°46 | 23°27 | 19°40 | 26°11 | 25°27 | 1° 1 | 0°16 | 29°35 | 23°34 | 24°19 | T 4 |
| W 5 | 20 54 43 | 12°43'29 | 1♂25 | 3°18 | 4°33 | 16°26 | 23°20 | 19°47 | 26°10 | 25°25 | 1° 0 | 0°R16 | 29°32 | 23°41 | 24°16 | W 5 |
| T 6 | 20 58 40 | 13°40'56 | 13°16 | 4°53 | 5°42 | 17° 6 | 23°12 | 19°53 | 26° 8 | 25°24 | 0°59 | 0°15 | 29°28 | 23°48 | 24°13 | T 6 |
| F 7 | 21 2 36 | 14°38'24 | 25°12 | 6°26 | 6°52 | 17°46 | 23° 5 | 20° 0 | 26° 7 | 25°22 | 0°58 | 0°14 | 29°25 | 23°54 | 24°10 | F 7 |
| S 8 | 21 6 33 | 15°35'53 | 7♂16 | 7°58 | 8° 1 | 18°26 | 22°57 | 20° 6 | 26° 5 | 25°21 | 0°57 | 0°13 | 29°22 | 24° 1 | 24° 7 | S 8 |
| S 9 | 21 10 29 | 16°33'23 | 19°29 | 9°28 | 9°11 | 19° 6 | 22°49 | 20°13 | 26° 3 | 25°19 | 0°56 | 0°10 | 29°19 | 24° 8 | 24° 4 | S 9 |
| M10 | 21 14 26 | 17°30'54 | 1°V53 | 10°56 | 10°21 | 19°46 | 22°41 | 20°20 | 26° 2 | 25°17 | 0°55 | 0° 8 | 29°16 | 24°14 | 24° 1 | M10 |
| T 11 | 21 18 23 | 18°28'26 | 14°30 | 12°23 | 11°31 | 20°26 | 22°34 | 20°26 | 26° 0 | 25°16 | 0°55 | 0° 5 | 29°12 | 24°21 | 23°58 | T 11 |
| W12 | 21 22 19 | 19°26'00 | 27°23 | 13°48 | 12°41 | 21° 6 | 22°26 | 20°33 | 25°58 | 25°14 | 0°54 | 0° 4 | 29° 9 | 24°28 | 23°55 | W12 |
| T 13 | 21 26 16 | 20°23'36 | 10♂33 | 15°11 | 13°51 | 21°45 | 22°18 | 20°40 | 25°56 | 25°12 | 0°53 | 0° 2 | 29° 6 | 24°34 | 23°52 | T 13 |
| F 14 | 21 30 12 | 21°21'12 | 24° 2 | 16°32 | 15° 2 | 22°25 | 22°10 | 20°47 | 25°54 | 25°11 | 0°52 | 0°D 2 | 29° 3 | 24°41 | 23°49 | F 14 |
| S 15 | 21 34 9 | 22°18'51 | 7♂52 | 17°51 | 16°12 | 23° 4 | 22° 2 | 20°54 | 25°53 | 25° 9 | 0°51 | 0° 3 | 29° 0 | 24°47 | 23°46 | S 15 |
| S 16 | 21 38 5 | 23°16'31 | 22° 3 | 19° 9 | 17°22 | 23°44 | 21°54 | 21° 1 | 25°51 | 25° 8 | 0°50 | 0° 4 | 28°57 | 24°54 | 23°42 | S 16 |
| M17 | 21 42 2 | 24°14'12 | 6♂33 | 20°25 | 18°33 | 24°23 | 21°46 | 21° 7 | 25°49 | 25° 6 | 0°50 | 0° 5 | 28°53 | 25° 1 | 23°39 | M17 |
| T 18 | 21 45 58 | 25°11'56 | 21°20 | 21°39 | 19°44 | 25° 2 | 21°39 | 21°14 | 25°47 | 25° 4 | 0°49 | 0° 6 | 28°50 | 25° 7 | 23°36 | T 18 |
| W19 | 21 49 55 | 26° 9'40 | 6♂17 | 22°50 | 20°54 | 25°41 | 21°31 | 21°21 | 25°45 | 25° 3 | 0°48 | 0°R 6 | 28°47 | 25°14 | 23°33 | W19 |
| T 20 | 21 53 52 | 27° 7'26 | 21°17 | 24° 0 | 22° 5 | 26°20 | 21°23 | 21°28 | 25°43 | 25° 1 | 0°47 | 0° 5 | 28°44 | 25°21 | 23°30 | T 20 |
| F 21 | 21 57 48 | 28° 5'13 | 6♂11 | 25° 8 | 23°16 | 26°58 | 21°15 | 21°36 | 25°41 | 24°59 | 0°47 | 0° 3 | 28°41 | 25°27 | 23°27 | F 21 |
| S 22 | 22 1 45 | 29° 3'02 | 20°52 | 26°13 | 24°27 | 27°37 | 21° 7 | 21°43 | 25°39 | 24°58 | 0°46 | 29♂59 | 28°38 | 25°34 | 23°24 | S 22 |
| S 23 | 22 5 41 | 0♂ 0'52 | 5♂13 | 27°16 | 25°38 | 28°16 | 21° 0 | 21°50 | 25°37 | 24°56 | 0°45 | 29°55 | 28°34 | 25°41 | 23°21 | S 23 |
| M24 | 22 9 38 | 0°58'43 | 19° 9 | 28°16 | 26°49 | 28°54 | 20°52 | 21°57 | 25°35 | 24°54 | 0°45 | 29°50 | 28°31 | 25°47 | 23°18 | M24 |
| T 25 | 22 13 34 | 1°56'35 | 2♂37 | 29°13 | 28° 1 | 29°32 | 20°45 | 22° 4 | 25°32 | 24°53 | 0°44 | 29°46 | 28°28 | 25°54 | 23°15 | T 25 |
| W26 | 22 17 31 | 2°54'29 | 15°40 | 0♂ 8 | 29°12 | 0♂11 | 20°37 | 22°11 | 25°30 | 24°51 | 0°44 | 29°44 | 28°25 | 26° 1 | 23°12 | W26 |
| T 27 | 22 21 27 | 3°52'24 | 28°18 | 1° 0 | 0♂23 | 0°49 | 20°30 | 22°18 | 25°28 | 24°50 | 0°43 | 29°D42 | 28°22 | 26° 7 | 23° 9 | T 27 |
| F 28 | 22 25 24 | 4°50'20 | 10♂37 | 1°49 | 1°35 | 1°27 | 20°22 | 22°26 | 25°26 | 24°48 | 0°43 | 29°42 | 28°18 | 26°14 | 23° 6 | F 28 |
| S 29 | 22 29 21 | 5°48'17 | 22°41 | 2°34 | 2°46 | 2° 5 | 20°15 | 22°33 | 25°24 | 24°46 | 0°42 | 29°43 | 28°15 | 26°20 | 23° 3 | S 29 |
| S 30 | 22 33 17 | 6°46'16 | 4♂34 | 3°16 | 3°58 | 2°43 | 20° 8 | 22°40 | 25°22 | 24°45 | 0°42 | 29°45 | 28°12 | 26°27 | 23° 0 | S 30 |
| M31 | 22 37 14 | 7♂44'16 | 16♂23 | 3♂54 | 5♂10 | 3♂20 | 20° 0 | 22♂48 | 25♂19 | 24°43 | 0♂42 | 29♂47 | 28♂ 9 | 26♂34 | 22°57 | M31 |

| Day | ☉ | ☾ | | ♂ | | ♀ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | | ♂ | |
|------|-------|-------|------|-------|------|-------|------|-------|------|-------|-------|------|------|------|------|-------|------|-------|------|-------|-------|-------|------|------|-----|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat |
| S 1 | 18n 2 | 26s17 | 3s49 | 13n48 | 1n15 | 21n48 | 1s38 | 22n10 | 0s17 | 14s34 | 1 s 3 | 6n 3 | 1n59 | 2s13 | 0s47 | 13s24 | 0s25 | 17s47 | 5n39 | 20s 6 | 20s12 | 22s 1 | 7s 0 | 6n45 | |
| S 2 | 17 47 | 26 22 | 2 59 | 13 7 | 1 9 | 21 51 | 1 35 | 22 15 | 0 17 | 14 37 | 1 3 | 6 0 | 1 59 | 2 13 | 0 47 | 13 25 | 0 25 | 17 47 | 5 39 | 20 6 | 20 13 | 21 59 | 7 0 | 6 45 | |
| M 3 | 17 31 | 25 14 | 2 1 | 12 26 | 1 3 | 21 53 | 1 32 | 22 21 | 0 16 | 14 39 | 1 3 | 5 57 | 1 59 | 2 14 | 0 47 | 13 25 | 0 25 | 17 47 | 5 39 | 20 6 | 20 14 | 21 57 | 7 1 | 6 45 | |
| T 4 | 17 16 | 22 59 | 0 59 | 11 45 | 0 57 | 21 55 | 1 29 | 22 26 | 0 15 | 14 42 | 1 3 | 5 55 | 1 59 | 2 14 | 0 47 | 13 26 | 0 25 | 17 47 | 5 39 | 20 6 | 20 14 | 21 55 | 7 2 | 6 45 | |
| W 5 | 16 59 | 19 44 | 0n 6 | 11 4 | 0 50 | 21 56 | 1 26 | 22 31 | 0 14 | 14 45 | 1 4 | 5 52 | 1 59 | 2 15 | 0 47 | 13 26 | 0 25 | 17 48 | 5 38 | 20 6 | 20 15 | 21 53 | 7 3 | 6 45 | |
| T 6 | 16 43 | 15 42 | 1 11 | 10 22 | 0 42 | 21 56 | 1 23 | 22 36 | 0 13 | 14 47 | 1 4 | 5 50 | 1 59 | 2 16 | 0 47 | 13 27 | 0 25 | 17 48 | 5 38 | 20 6 | 20 16 | 21 51 | 7 4 | 6 45 | |
| F 7 | 16 26 | 11 1 | 2 14 | 9 41 | 0 35 | 21 56 | 1 19 | 22 40 | 0 12 | 14 50 | 1 4 | 5 47 | 1 59 | 2 16 | 0 47 | 13 27 | 0 25 | 17 48 | 5 38 | 20 6 | 20 16 | 21 49 | 7 5 | 6 45 | |
| S 8 | 16 10 | 5 53 | 3 11 | 9 0 | 0 27 | 21 56 | 1 16 | 22 45 | 0 11 | 14 52 | 1 4 | 5 44 | 1 59 | 2 17 | 0 47 | 13 28 | 0 25 | 17 48 | 5 38 | 20 6 | 20 17 | 21 47 | 7 6 | 6 45 | |
| S 9 | 15 52 | 0 29 | 4 0 | 8 19 | 0 19 | 21 54 | 1 13 | 22 49 | 0 10 | 14 55 | 1 4 | 5 42 | 1 59 | 2 18 | 0 47 | 13 28 | 0 25 | 17 49 | 5 38 | 20 7 | 20 18 | 21 45 | 7 7 | 6 45 | |
| M10 | 15 35 | 5n 0 | 4 38 | 7 37 | 0 10 | 21 53 | 1 10 | 22 53 | 0 10 | 14 58 | 1 4 | 5 39 | 1 59 | 2 18 | 0 48 | 13 29 | 0 25 | 17 49 | 5 37 | 20 7 | 20 18 | 21 43 | 7 8 | 6 45 | |
| T 11 | 15 17 | 10 23 | 5 4 | 6 57 | 0 2 | 21 50 | 1 6 | 22 57 | 0 9 | 15 1 | 1 4 | 5 36 | 1 59 | 2 19 | 0 48 | 13 30 | 0 25 | 17 49 | 5 37 | 20 8 | 20 19 | 21 41 | 7 9 | 6 45 | |
| W12 | 15 0 | 15 26 | 5 15 | 6 16 | 0s 7 | 21 47 | 1 3 | 23 1 | 0 8 | 15 3 | 1 4 | 5 34 | 1 59 | 2 20 | 0 48 | 13 30 | 0 25 | 17 49 | 5 37 | 20 8 | 20 20 | 21 39 | 7 10 | 6 45 | |
| T 13 | 14 41 | 19 53 | 5 10 | 5 36 | 0 16 | 21 44 | 1 0 | 23 4 | 0 7 | 15 6 | 1 5 | 5 31 | 1 58 | 2 21 | 0 48 | 13 31 | 0 25 | 17 50 | 5 37 | 20 9 | 20 20 | 21 37 | 7 11 | 6 45 | |
| F 14 | 14 23 | 23 26 | 4 48 | 4 56 | 0 25 | 21 39 | 0 57 | 23 7 | 0 6 | 15 9 | 1 5 | 5 28 | 1 58 | 2 21 | 0 48 | 13 31 | 0 25 | 17 50 | 5 36 | 20 9 | 20 21 | 21 35 | 7 12 | 6 45 | |
| S 15 | 14 4 | 25 43 | 4 9 | 4 16 | 0 35 | 21 35 | 0 53 | 23 10 | 0 5 | 15 11 | 1 5 | 5 25 | 1 58 | 2 22 | 0 48 | 13 32 | 0 25 | 17 50 | 5 36 | 20 8 | 20 22 | 21 32 | 7 13 | 6 45 | |
| S 16 | 13 46 | 26 26 | 3 15 | 3 37 | 0 44 | 21 29 | 0 50 | 23 13 | 0 4 | 15 14 | 1 5 | 5 23 | 1 58 | 2 23 | 0 48 | 13 32 | 0 25 | 17 50 | 5 36 | 20 8 | 20 22 | 21 30 | 7 14 | 6 45 | |
| M17 | 13 27 | 25 23 | 2 6 | 2 59 | 0 54 | 21 23 | 0 47 | 23 16 | 0 3 | 15 16 | 1 5 | 5 20 | 1 58 | 2 24 | 0 48 | 13 33 | 0 25 | 17 51 | 5 36 | 20 8 | 20 23 | 21 28 | 7 15 | 6 45 | |
| T 18 | 13 7 | 22 32 | 0 48 | 2 21 | 1 3 | 21 16 | 0 43 | 23 18 | 0 2 | 15 19 | 1 5 | 5 17 | 1 58 | 2 24 | 0 48 | 13 33 | 0 25 | 17 51 | 5 35 | 20 8 | 20 24 | 21 26 | 7 16 | 6 45 | |
| W19 | 12 48 | 18 9 | 0s34 | 1 43 | 1 13 | 21 9 | 0 40 | 23 21 | 0 1 | 15 22 | 1 5 | 5 14 | 1 58 | 2 25 | 0 48 | 13 34 | 0 25 | 17 51 | 5 35 | 20 8 | 20 24 | 21 24 | 7 17 | 6 45 | |
| T 20 | 12 28 | 12 37 | 1 54 | 1 7 | 1 23 | 21 1 | 0 37 | 23 23 | 0 0 | 15 24 | 1 5 | 5 11 | 1 58 | 2 26 | 0 48 | 13 35 | 0 25 | 17 51 | 5 35 | 20 8 | 20 25 | 21 22 | 7 18 | 6 45 | |
| F 21 | 12 8 | 6 22 | 3 5 | 0 31 | 1 33 | 20 53 | 0 33 | 23 25 | 0n 1 | 15 27 | 1 5 | 5 9 | 1 58 | 2 27 | 0 48 | 13 35 | 0 25 | 17 52 | 5 35 | 20 8 | 20 26 | 21 20 | 7 19 | 6 45 | |
| S 22 | 11 48 | 0s 7 | 4 3 | 0s 4 | 1 43 | 20 44 | 0 30 | 23 27 | 0 2 | 15 29 | 1 6 | 5 6 | 1 58 | 2 28 | 0 48 | 13 36 | 0 25 | 17 52 | 5 34 | 20 9 | 20 26 | 21 18 | 7 20 | 6 45 | |
| S 23 | 11 28 | 6 25 | 4 45 | 0 38 | 1 53 | 20 35 | 0 27 | 23 28 | 0 3 | 15 32 | 1 6 | 5 3 | 1 58 | 2 28 | 0 48 | 13 36 | 0 25 | 17 52 | 5 34 | 20 10 | 20 27 | 21 16 | 7 21 | 6 45 | |
| M24 | 11 8 | 12 14 | 5 8 | 1 11 | 2 3 | 20 24 | 0 24 | 23 30 | 0 3 | 15 35 | 1 6 | 5 0 | 1 58 | 2 29 | 0 48 | 13 37 | 0 25 | 17 52 | 5 34 | 20 11 | 20 27 | 21 14 | 7 22 | 6 45 | |
| T 25 | 10 47 | 17 16 | 5 12 | 1 43 | 2 13 | 20 14 | 0 20 | 23 31 | 0 4 | 15 37 | 1 6 | 4 57 | 1 58 | 2 30 | 0 48 | 13 37 | 0 25 | 17 53 | 5 34 | 20 12 | 20 28 | 21 12 | 7 24 | 6 44 | |
| W26 | 10 26 | 21 19 | 5 1 | 2 14 | 2 23 | 20 2 | 0 17 | 23 32 | 0 5 | 15 39 | 1 6 | 4 54 | 1 58 | 2 31 | 0 48 | 13 38 | 0 25 | 17 53 | 5 33 | 20 12 | 20 29 | 21 10 | 7 25 | 6 44 | |
| T 27 | 10 5 | 24 15 | 4 35 | 2 44 | 2 32 | 19 51 | 0 14 | 23 33 | 0 6 | 15 42 | 1 6 | 4 52 | 1 58 | 2 32 | 0 48 | 13 38 | 0 25 | 17 53 | 5 33 | 20 13 | 20 29 | 21 7 | 7 26 | 6 44 | |
| F 28 | 9 44 | 25 57 | 3 57 | 3 12 | 2 42 | 19 38 | 0 11 | 23 33 | 0 7 | 15 44 | 1 6 | 4 49 | 1 58 | 2 33 | 0 48 | 13 39 | 0 25 | 17 53 | 5 33 | 20 13 | 20 30 | 21 5 | 7 27 | 6 44 | |
| S 29 | 9 23 | 26 27 | 3 9 | 3 39 | 2 52 | 19 25 | 0 7 | 23 34 | 0 8 | 15 47 | 1 6 | 4 46 | 1 58 | 2 34 | 0 48 | 13 40 | 0 25 | 17 54 | 5 33 | 20 13 | 20 31 | 21 3 | 7 28 | 6 44 | |
| S 30 | 9 2 | 25 35 | 2 13 | 4 4 | 3 1 | 19 12 | 0 4 | 23 34 | 0 9 | 15 49 | 1 6 | 4 43 | 1 58 | 2 35 | 0 48 | 13 40 | 0 25 | 17 54 | 5 32 | 20 12 | 20 31 | 21 1 | 7 29 | 6 44 | |
| M31 | 8n40 | 23s38 | 1s13 | 4s27 | 3s10 | 18n58 | 0s 1 | 23n34 | 0n11 | 15s51 | 1s 6 | 4n40 | 1n58 | 2s35 | 0s48 | 13s41 | 0s25 | 17s54 | 5n32 | 20s12 | 20s32 | 20s59 | 7s30 | 6n44 | |

ASTRODIENST EPHEMERIS for the year 2009
geocentric

SEPTEMBER 2009

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------|-------|--------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|------|
| T 1 | 22 41 10 | 8♐42'18 | 28♌10 | 4♊28 | 6♋21 | 3♉58 | 19♍53 | 22♎55 | 25♏17 | 24♏42 | 0♏41 | 29♏47 | 28♌6 | 26♌40 | 22♏54 | T 1 |
| W 2 | 22 45 7 | 9°40'21 | 10♋1 | 4°58 | 7°33 | 4°35 | 19♋46 | 23°2 | 25♏15 | 24♋40 | 0♌41 | 29♌47 | 28°3 | 26°47 | 22♋51 | W 2 |
| T 3 | 22 49 3 | 10°38'25 | 21°58 | 5°23 | 8°45 | 5°13 | 19°40 | 23°10 | 25°12 | 24°39 | 0°41 | 29°45 | 27°59 | 26°54 | 22°48 | T 3 |
| F 4 | 22 53 0 | 11°36'31 | 4♋4 | 5°44 | 9°57 | 5°50 | 19°33 | 23°17 | 25°10 | 24°37 | 0°40 | 29°40 | 27°56 | 27°0 | 22°45 | F 4 |
| S 5 | 22 56 56 | 12°34'39 | 16°21 | 5°59 | 11°9 | 6°27 | 19°26 | 23°24 | 25°8 | 24°35 | 0°40 | 29°34 | 27°53 | 27°7 | 22°43 | S 5 |
| S 6 | 23 0 53 | 13°32'48 | 28°50 | 6°9 | 12°21 | 7°4 | 19°20 | 23°32 | 25°6 | 24°34 | 0°40 | 29°27 | 27°50 | 27°14 | 22°40 | S 6 |
| M 7 | 23 4 50 | 14°31'00 | 11♍31 | 6°R13 | 13°33 | 7°41 | 19°13 | 23°39 | 25°3 | 24°32 | 0°40 | 29°19 | 27°47 | 27°20 | 22°37 | M 7 |
| T 8 | 23 8 46 | 15°29'13 | 24°24 | 6°11 | 14°46 | 8°17 | 19°7 | 23°47 | 25°1 | 24°31 | 0°40 | 29°11 | 27°43 | 27°27 | 22°34 | T 8 |
| W 9 | 23 12 43 | 16°27'28 | 7♌31 | 6°3 | 15°58 | 8°54 | 19°1 | 23°54 | 24°58 | 24°29 | 0°40 | 29°4 | 27°40 | 27°34 | 22°32 | W 9 |
| T 10 | 23 16 39 | 17°25'45 | 20°50 | 5°49 | 17°11 | 9°30 | 18°55 | 24°2 | 24°56 | 24°28 | 0°40 | 28°59 | 27°37 | 27°40 | 22°29 | T 10 |
| F 11 | 23 20 36 | 18°24'04 | 4♐23 | 5°28 | 18°23 | 10°7 | 18°49 | 24°9 | 24°54 | 24°26 | 0°40 | 28°57 | 27°34 | 27°47 | 22°26 | F 11 |
| S 12 | 23 24 32 | 19°22'25 | 18°9 | 5°0 | 19°36 | 10°43 | 18°43 | 24°16 | 24°51 | 24°25 | 0°D40 | 28°D56 | 27°31 | 27°53 | 22°24 | S 12 |
| S 13 | 23 28 29 | 20°20'49 | 2♉10 | 4°25 | 20°48 | 11°19 | 18°37 | 24°24 | 24°49 | 24°24 | 0°40 | 28°56 | 27°28 | 28°0 | 22°21 | S 13 |
| M14 | 23 32 25 | 21°19'14 | 16°23 | 3°45 | 22°1 | 11°55 | 18°32 | 24°31 | 24°47 | 24°22 | 0°40 | 28°57 | 27°24 | 28°7 | 22°18 | M14 |
| T 15 | 23 36 22 | 22°17'42 | 0♋49 | 2°58 | 23°14 | 12°31 | 18°27 | 24°39 | 24°44 | 24°21 | 0°40 | 28°R57 | 27°21 | 28°13 | 22°16 | T 15 |
| W16 | 23 40 19 | 23°16'12 | 15°23 | 2°6 | 24°27 | 13°6 | 18°22 | 24°46 | 24°42 | 24°19 | 0°40 | 28°56 | 27°18 | 28°20 | 22°13 | W16 |
| T 17 | 23 44 15 | 24°14'44 | 0♎2 | 1°9 | 25°40 | 13°42 | 18°17 | 24°54 | 24°39 | 24°18 | 0°40 | 28°53 | 27°15 | 28°27 | 22°11 | T 17 |
| F 18 | 23 48 12 | 25°13'18 | 14°40 | 0°9 | 26°53 | 14°17 | 18°12 | 25°1 | 24°37 | 24°17 | 0°40 | 28°47 | 27°12 | 28°33 | 22°9 | F 18 |
| S 19 | 23 52 8 | 26°11'53 | 29°8 | 29♎6 | 28°6 | 14°53 | 18°7 | 25°9 | 24°35 | 24°15 | 0°40 | 28°39 | 27°9 | 28°40 | 22°6 | S 19 |
| S 20 | 23 56 5 | 27°10'31 | 13♊22 | 28°2 | 29°19 | 15°28 | 18°3 | 25°16 | 24°32 | 24°14 | 0°41 | 28°30 | 27°5 | 28°47 | 22°4 | S 20 |
| M21 | 0 0 1 | 28°9'10 | 27°14 | 26°58 | 0♎32 | 16°3 | 17°58 | 25°24 | 24°30 | 24°13 | 0°41 | 28°20 | 27°2 | 28°53 | 22°2 | M21 |
| T 22 | 0 3 58 | 29°7'52 | 10♌43 | 25°57 | 1°45 | 16°37 | 17°54 | 25°31 | 24°27 | 24°11 | 0°41 | 28°11 | 26°59 | 29°0 | 21°59 | T 22 |
| W23 | 0 7 54 | 0♊6'35 | 23°46 | 24°59 | 2°58 | 17°12 | 17°50 | 25°39 | 24°25 | 24°10 | 0°42 | 28°4 | 26°56 | 29°7 | 21°57 | W23 |
| T 24 | 0 11 51 | 1°5'20 | 6♊26 | 24°5 | 4°12 | 17°46 | 17°46 | 25°46 | 24°23 | 24°9 | 0°42 | 27°58 | 26°53 | 29°13 | 21°55 | T 24 |
| F 25 | 0 15 48 | 2°4'07 | 18°46 | 23°19 | 5°25 | 18°21 | 17°43 | 25°54 | 24°20 | 24°8 | 0°42 | 27°55 | 26°49 | 29°20 | 21°53 | F 25 |
| S 26 | 0 19 44 | 3°2'55 | 0♌51 | 22°40 | 6°39 | 18°55 | 17°39 | 26°1 | 24°18 | 24°6 | 0°43 | 27°D55 | 26°46 | 29°27 | 21°51 | S 26 |
| S 27 | 0 23 41 | 4°1'45 | 12°44 | 22°10 | 7°52 | 19°29 | 17°36 | 26°9 | 24°15 | 24°5 | 0°43 | 27°55 | 26°43 | 29°33 | 21°49 | S 27 |
| M28 | 0 27 37 | 5°0'37 | 24°32 | 21°49 | 9°6 | 20°3 | 17°33 | 26°16 | 24°13 | 24°4 | 0°44 | 27°R55 | 26°40 | 29°40 | 21°47 | M28 |
| T 29 | 0 31 34 | 5°59'31 | 6♋21 | 21°38 | 10°19 | 20°36 | 17°30 | 26°23 | 24°11 | 24°3 | 0°44 | 27°55 | 26°37 | 29°46 | 21°45 | T 29 |
| W30 | 0 35 30 | 6♊58'26 | 18♋14 | 21°D38 | 11♎33 | 21♉10 | 17♋27 | 26♎31 | 24♏8 | 24♋2 | 0♌45 | 27♌53 | 26♌34 | 29♌53 | 21♋43 | W30 |

| Day | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| | decl | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat | decl lat |
| T 1 | 8n18 | 20s40 | 0s9 | 4s49 | 3s19 | 18n43 | 0n2 | 23n34 | 0n12 | 15s54 | 1s6 | 4n37 | 1n58 | 2s36 | 0s48 | 13s41 |
| W 2 | 7 57 | 16 51 | 0n55 | 5 8 | 3 27 | 18 28 | 0 5 | 23 34 | 0 13 | 15 56 | 1 6 | 4 34 | 1 58 | 2 37 | 0 48 | 13 42 |
| T 3 | 7 35 | 12 20 | 1 58 | 5 26 | 3 35 | 18 12 | 0 8 | 23 34 | 0 14 | 15 58 | 1 6 | 4 31 | 1 58 | 2 38 | 0 48 | 13 42 |
| F 4 | 7 13 | 7 18 | 2 55 | 5 41 | 3 42 | 17 56 | 0 11 | 23 33 | 0 15 | 16 0 | 1 6 | 4 28 | 1 58 | 2 39 | 0 48 | 13 43 |
| S 5 | 6 50 | 1 55 | 3 45 | 5 53 | 3 49 | 17 39 | 0 14 | 23 33 | 0 16 | 16 2 | 1 6 | 4 25 | 1 58 | 2 40 | 0 48 | 13 43 |
| S 6 | 6 28 | 3n36 | 4 26 | 6 3 | 3 56 | 17 22 | 0 17 | 23 32 | 0 17 | 16 4 | 1 6 | 4 22 | 1 58 | 2 41 | 0 48 | 13 44 |
| M 7 | 6 6 | 9 3 | 4 53 | 6 9 | 4 1 | 17 4 | 0 20 | 23 31 | 0 18 | 16 6 | 1 6 | 4 20 | 1 58 | 2 42 | 0 48 | 13 44 |
| T 8 | 5 43 | 14 13 | 5 7 | 6 13 | 4 6 | 16 46 | 0 23 | 23 30 | 0 19 | 16 8 | 1 6 | 4 17 | 1 58 | 2 43 | 0 48 | 13 45 |
| W 9 | 5 21 | 18 49 | 5 5 | 6 13 | 4 9 | 16 28 | 0 26 | 23 28 | 0 20 | 16 10 | 1 6 | 4 14 | 1 58 | 2 44 | 0 48 | 13 45 |
| T 10 | 4 58 | 22 33 | 4 46 | 6 9 | 4 12 | 16 8 | 0 29 | 23 27 | 0 21 | 16 12 | 1 6 | 4 11 | 1 58 | 2 45 | 0 48 | 13 46 |
| F 11 | 4 35 | 25 8 | 4 11 | 6 2 | 4 13 | 15 49 | 0 31 | 23 25 | 0 22 | 16 14 | 1 6 | 4 8 | 1 58 | 2 46 | 0 48 | 13 46 |
| S 12 | 4 12 | 26 16 | 3 22 | 5 51 | 4 12 | 15 29 | 0 34 | 23 24 | 0 23 | 16 16 | 1 6 | 4 5 | 1 58 | 2 47 | 0 48 | 13 47 |
| S 13 | 3 49 | 25 44 | 2 19 | 5 35 | 4 11 | 15 8 | 0 37 | 23 22 | 0 24 | 16 17 | 1 6 | 4 2 | 1 58 | 2 48 | 0 48 | 13 47 |
| M14 | 3 26 | 23 33 | 1 7 | 5 16 | 4 7 | 14 47 | 0 39 | 23 20 | 0 26 | 16 19 | 1 6 | 3 59 | 1 58 | 2 49 | 0 48 | 13 48 |
| T 15 | 3 3 | 19 49 | 0s10 | 4 53 | 4 2 | 14 26 | 0 42 | 23 18 | 0 27 | 16 21 | 1 6 | 3 56 | 1 58 | 2 50 | 0 48 | 13 48 |
| W16 | 2 40 | 14 50 | 1 27 | 4 25 | 3 55 | 14 4 | 0 44 | 23 15 | 0 28 | 16 22 | 1 6 | 3 53 | 1 58 | 2 50 | 0 48 | 13 49 |
| T 17 | 2 17 | 8 59 | 2 39 | 3 54 | 3 46 | 13 42 | 0 47 | 23 13 | 0 29 | 16 24 | 1 6 | 3 50 | 1 58 | 2 51 | 0 48 | 13 49 |
| F 18 | 1 54 | 2 40 | 3 40 | 3 30 | 3 35 | 13 19 | 0 49 | 23 10 | 0 30 | 16 25 | 1 6 | 3 47 | 1 58 | 2 52 | 0 48 | 13 50 |
| S 19 | 1 31 | 3s43 | 4 26 | 2 43 | 3 22 | 12 57 | 0 52 | 23 8 | 0 31 | 16 27 | 1 6 | 3 44 | 1 58 | 2 53 | 0 48 | 13 50 |
| S 20 | 1 7 | 9 47 | 4 54 | 2 5 | 3 7 | 12 33 | 0 54 | 23 5 | 0 32 | 16 28 | 1 6 | 3 41 | 1 58 | 2 54 | 0 48 | 13 51 |
| M21 | 0 44 | 15 13 | 5 5 | 1 24 | 2 51 | 12 10 | 0 56 | 23 2 | 0 34 | 16 29 | 1 6 | 3 38 | 1 58 | 2 55 | 0 48 | 13 51 |
| T 22 | 0 21 | 19 44 | 4 58 | 0 44 | 2 33 | 11 45 | 0 58 | 22 59 | 0 35 | 16 30 | 1 6 | 3 36 | 1 58 | 2 56 | 0 48 | 13 51 |
| W23 | 0s3 | 23 9 | 4 35 | 0 3 | 2 14 | 11 21 | 1 0 | 22 56 | 0 36 | 16 32 | 1 6 | 3 33 | 1 59 | 2 57 | 0 48 | 13 52 |
| T 24 | 0 26 | 25 19 | 3 59 | 0n36 | 1 55 | 10 56 | 1 2 | 22 52 | 0 37 | 16 33 | 1 5 | 3 30 | 1 59 | 2 58 | 0 48 | 13 52 |
| F 25 | 0 49 | 26 10 | 3 13 | 1 12 | 1 34 | 10 31 | 1 4 | 22 49 | 0 38 | 16 34 | 1 5 | 3 27 | 1 59 | 2 59 | 0 48 | 13 53 |
| S 26 | 1 13 | 25 46 | 2 19 | 1 46 | 1 14 | 10 6 | 1 6 | 22 45 | 0 40 | 16 35 | 1 5 | 3 24 | 1 59 | 3 0 | 0 48 | 13 53 |
| S 27 | 1 36 | 24 10 | 1 20 | 2 17 | 0 54 | 9 40 | 1 8 | 22 42 | 0 41 | 16 36 | 1 5 | 3 21 | 1 59 | 3 1 | 0 48 | 13 53 |
| M28 | 1 59 | 21 31 | 0 18 | 2 43 | 0 35 | 9 15 | 1 10 | 22 38 | 0 42 | 16 37 | 1 5 | 3 18 | 1 59 | 3 2 | 0 48 | 13 54 |
| T 29 | 2 23 | 17 58 | 0n45 | 3 5 | 0 16 | 8 48 | 1 12 | 22 34 | 0 43 | 16 37 | 1 5 | 3 15 | 1 59 | 3 3 | 0 48 | 13 54 |
| W30 | 2s46 | 13s41 | 1n46 | 3n21 | 0n2 | 8n22 | 1n13 | 22n30 | 0n45 | 16s38 | 1s5 | 3n12 | 1n59 | 3s4 | 0s48 | 13s55 |

Julian Day Number = 2455075.5, Delta T = 65.98 sec
Ecliptic obliquity = 23°26'22, Nutation = 0°00'16, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 24°52'31, Lahiri = 23°59'32

ASTRODIENST EPHEMERIS for the year 2009

geocentric

OCTOBER 2009

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|----------|-------|-------|-------|-------|--------|-------|--------|--------|------|--------|-------|-------|--------|------|
| T 1 | 0 39 27 | 7♂57'23 | 0♂17 | 21♂47 | 12♂47 | 21♂43 | 17°R25 | 26♂38 | 24°R 6 | 24°R 1 | 0♂45 | 27°R49 | 26♂30 | 29♂59 | 21°R41 | T 1 |
| F 2 | 0 43 23 | 8°56'22 | 12°33 | 22° 7 | 14° 0 | 22°16 | 17°22 | 26°46 | 24°R 4 | 24°R 0 | 0°46 | 27°R42 | 26°27 | 0°46 | 21°R39 | F 2 |
| S 3 | 0 47 20 | 9°55'22 | 25° 4 | 22°37 | 15°14 | 22°49 | 17°20 | 26°53 | 24° 1 | 23°59 | 0°47 | 27°32 | 26°24 | 0°13 | 21°38 | S 3 |
| S 4 | 0 51 16 | 10°54'25 | 7°V50 | 23°16 | 16°28 | 23°22 | 17°18 | 27° 0 | 23°59 | 23°58 | 0°47 | 27°20 | 26°21 | 0°20 | 21°36 | S 4 |
| M 5 | 0 55 13 | 11°53'30 | 20°52 | 24° 3 | 17°42 | 23°55 | 17°17 | 27° 8 | 23°57 | 23°57 | 0°48 | 27° 8 | 26°18 | 0°26 | 21°34 | M 5 |
| T 6 | 0 59 10 | 12°52'37 | 4♂ 9 | 24°59 | 18°56 | 24°27 | 17°15 | 27°15 | 23°55 | 23°56 | 0°49 | 26°56 | 26°15 | 0°33 | 21°33 | T 6 |
| W 7 | 1 3 6 | 13°51'46 | 17°37 | 26° 2 | 20°10 | 24°59 | 17°14 | 27°22 | 23°53 | 23°55 | 0°50 | 26°45 | 26°11 | 0°40 | 21°31 | W 7 |
| T 8 | 1 7 3 | 14°50'57 | 1♂16 | 27°11 | 21°24 | 25°31 | 17°13 | 27°29 | 23°50 | 23°54 | 0°50 | 26°37 | 26° 8 | 0°46 | 21°30 | T 8 |
| F 9 | 1 10 59 | 15°50'11 | 15° 3 | 28°27 | 22°38 | 26° 3 | 17°12 | 27°37 | 23°48 | 23°53 | 0°51 | 26°31 | 26° 5 | 0°53 | 21°28 | F 9 |
| S 10 | 1 14 56 | 16°49'27 | 28°57 | 29°47 | 23°52 | 26°35 | 17°11 | 27°44 | 23°46 | 23°52 | 0°52 | 26°28 | 26° 2 | 1° 0 | 21°27 | S 10 |
| S 11 | 1 18 52 | 17°48'45 | 12♂57 | 1♂12 | 25° 7 | 27° 6 | 17°10 | 27°51 | 23°44 | 23°52 | 0°53 | 26°27 | 25°59 | 1° 6 | 21°26 | S 11 |
| M12 | 1 22 49 | 18°48'06 | 27° 2 | 2°40 | 26°21 | 27°38 | 17°10 | 27°58 | 23°42 | 23°51 | 0°54 | 26°27 | 25°55 | 1°13 | 21°25 | M12 |
| T 13 | 1 26 45 | 19°47'28 | 11♂11 | 4°12 | 27°35 | 28° 9 | 17°D10 | 28° 6 | 23°40 | 23°50 | 0°55 | 26°27 | 25°52 | 1°19 | 21°23 | T 13 |
| W14 | 1 30 42 | 20°46'54 | 25°24 | 5°46 | 28°49 | 28°39 | 17°10 | 28°13 | 23°38 | 23°49 | 0°56 | 26°24 | 25°49 | 1°26 | 21°22 | W14 |
| T 15 | 1 34 39 | 21°46'21 | 9♂38 | 7°22 | 0♂ 4 | 29°10 | 17°10 | 28°20 | 23°36 | 23°49 | 0°57 | 26°20 | 25°46 | 1°33 | 21°21 | T 15 |
| F 16 | 1 38 35 | 22°45'51 | 23°50 | 9° 0 | 1°18 | 29°40 | 17°11 | 28°27 | 23°34 | 23°48 | 0°58 | 26°12 | 25°43 | 1°39 | 21°20 | F 16 |
| S 17 | 1 42 32 | 23°45'22 | 7♂55 | 10°40 | 2°33 | 0♂11 | 17°11 | 28°34 | 23°32 | 23°47 | 0°59 | 26° 1 | 25°40 | 1°46 | 21°19 | S 17 |
| S 18 | 1 46 28 | 24°44'56 | 21°48 | 12°20 | 3°47 | 0°41 | 17°12 | 28°41 | 23°30 | 23°47 | 1° 0 | 25°49 | 25°36 | 1°53 | 21°19 | S 18 |
| M19 | 1 50 25 | 25°44'32 | 5♂26 | 14° 2 | 5° 2 | 1°10 | 17°13 | 28°48 | 23°28 | 23°46 | 1° 1 | 25°36 | 25°33 | 1°59 | 21°18 | M19 |
| T 20 | 1 54 21 | 26°44'10 | 18°44 | 15°43 | 6°16 | 1°40 | 17°15 | 28°55 | 23°26 | 23°46 | 1° 2 | 25°24 | 25°30 | 2° 6 | 21°17 | T 20 |
| W21 | 1 58 18 | 27°43'50 | 1♂42 | 17°25 | 7°31 | 2° 9 | 17°16 | 29° 2 | 23°24 | 23°45 | 1° 4 | 25°13 | 25°27 | 2°13 | 21°16 | W21 |
| T 22 | 2 2 14 | 28°43'32 | 14°19 | 19° 7 | 8°46 | 2°38 | 17°18 | 29° 8 | 23°22 | 23°45 | 1° 5 | 25° 5 | 25°24 | 2°19 | 21°16 | T 22 |
| F 23 | 2 6 11 | 29°43'16 | 26°38 | 20°50 | 10° 0 | 3° 7 | 17°20 | 29°15 | 23°20 | 23°44 | 1° 6 | 25° 0 | 25°20 | 2°26 | 21°15 | F 23 |
| S 24 | 2 10 8 | 0♂43'01 | 8♂42 | 22°32 | 11°15 | 3°35 | 17°22 | 29°22 | 23°18 | 23°44 | 1° 7 | 24°58 | 25°17 | 2°33 | 21°15 | S 24 |
| S 25 | 2 14 4 | 1°42'48 | 20°35 | 24°14 | 12°30 | 4° 3 | 17°24 | 29°29 | 23°17 | 23°43 | 1° 9 | 24°57 | 25°14 | 2°39 | 21°14 | S 25 |
| M26 | 2 18 1 | 2°42'37 | 2♂24 | 25°55 | 13°44 | 4°31 | 17°26 | 29°36 | 23°15 | 23°43 | 1°10 | 24°57 | 25°11 | 2°46 | 21°14 | M26 |
| T 27 | 2 21 57 | 3°42'27 | 14°12 | 27°36 | 14°59 | 4°59 | 17°29 | 29°42 | 23°13 | 23°43 | 1°11 | 24°57 | 25° 8 | 2°52 | 21°14 | T 27 |
| W28 | 2 25 54 | 4°42'19 | 26° 7 | 29°17 | 16°14 | 5°26 | 17°32 | 29°49 | 23°12 | 23°42 | 1°13 | 24°55 | 25° 5 | 2°59 | 21°13 | W28 |
| T 29 | 2 29 50 | 5°42'13 | 8♂13 | 0♂58 | 17°29 | 5°53 | 17°35 | 29°55 | 23°10 | 23°42 | 1°14 | 24°51 | 25° 1 | 3° 6 | 21°13 | T 29 |
| F 30 | 2 33 47 | 6°42'08 | 20°34 | 2°38 | 18°44 | 6°20 | 17°38 | 0♂ 2 | 23° 9 | 23°42 | 1°15 | 24°44 | 24°58 | 3°12 | 21°13 | F 30 |
| S 31 | 2 37 43 | 7♂42'05 | 3°V14 | 4♂18 | 19♂59 | 6♂46 | 17°42 | 0♂ 8 | 23°R 7 | 23°42 | 1°17 | 24°35 | 24°55 | 3°19 | 21°D13 | S 31 |

| Day | ☉ | ☽ | ♂ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|-------|-------|------|-------|------|------|------|-------|------|-------|------|------|------|------|------|-------|
| | decl | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | decl | lat | lat |
| T 1 | 3s 9 | 8s49 | 2n43 | 3n33 | 0n19 | 7n55 | 1n15 | 22n26 | 0n46 | 16s39 | 1s 5 | 3n 9 | 1n59 | 3s 4 | 0s48 | 13s55 |
| F 2 | 3 33 | 3 33 | 3 34 | 3 39 | 0 35 | 7 28 | 1 17 | 22 22 | 0 47 | 16 39 | 1 5 | 3 7 | 1 59 | 3 5 | 0 48 | 13 55 |
| S 3 | 3 56 | 1n56 | 4 15 | 3 41 | 0 49 | 7 1 | 1 18 | 22 18 | 0 48 | 16 40 | 1 5 | 3 4 | 1 59 | 3 6 | 0 48 | 13 56 |
| S 4 | 4 19 | 7 27 | 4 44 | 3 37 | 1 2 | 6 34 | 1 20 | 22 14 | 0 50 | 16 40 | 1 5 | 3 1 | 1 59 | 3 7 | 0 48 | 13 56 |
| M 5 | 4 42 | 12 46 | 4 59 | 3 29 | 1 14 | 6 6 | 1 21 | 22 10 | 0 51 | 16 41 | 1 5 | 2 58 | 1 59 | 3 8 | 0 48 | 13 56 |
| T 6 | 5 5 | 17 35 | 4 59 | 3 16 | 1 24 | 5 38 | 1 22 | 22 5 | 0 52 | 16 41 | 1 4 | 2 55 | 1 59 | 3 9 | 0 48 | 13 57 |
| W 7 | 5 28 | 21 35 | 4 42 | 2 59 | 1 32 | 5 10 | 1 23 | 22 1 | 0 54 | 16 42 | 1 4 | 2 52 | 2 0 | 3 10 | 0 48 | 13 57 |
| T 8 | 5 51 | 24 28 | 4 8 | 2 39 | 1 40 | 4 42 | 1 24 | 21 56 | 0 55 | 16 42 | 1 4 | 2 50 | 2 0 | 3 11 | 0 48 | 13 57 |
| F 9 | 6 14 | 25 55 | 3 20 | 2 14 | 1 46 | 4 14 | 1 26 | 21 52 | 0 56 | 16 42 | 1 4 | 2 47 | 2 0 | 3 11 | 0 48 | 13 57 |
| S 10 | 6 37 | 25 46 | 2 20 | 1 47 | 1 51 | 3 45 | 1 27 | 21 47 | 0 58 | 16 42 | 1 4 | 2 44 | 2 0 | 3 12 | 0 48 | 13 58 |
| S 11 | 6 59 | 23 59 | 1 11 | 1 16 | 1 54 | 3 17 | 1 27 | 21 42 | 0 59 | 16 42 | 1 4 | 2 41 | 2 0 | 3 13 | 0 48 | 13 58 |
| M12 | 7 22 | 20 42 | 0s 3 | 0 44 | 1 57 | 2 48 | 1 28 | 21 37 | 1 0 | 16 42 | 1 4 | 2 39 | 2 0 | 3 14 | 0 48 | 13 58 |
| T 13 | 7 44 | 16 11 | 1 17 | 0 9 | 1 58 | 2 19 | 1 29 | 21 32 | 1 2 | 16 42 | 1 4 | 2 36 | 2 0 | 3 15 | 0 48 | 13 58 |
| W14 | 8 7 | 10 45 | 2 27 | 0s28 | 1 59 | 1 50 | 1 30 | 21 28 | 1 3 | 16 42 | 1 4 | 2 33 | 2 0 | 3 16 | 0 48 | 13 59 |
| T 15 | 8 29 | 4 46 | 3 27 | 1 6 | 1 59 | 1 21 | 1 30 | 21 23 | 1 5 | 16 42 | 1 4 | 2 30 | 2 0 | 3 16 | 0 48 | 13 59 |
| F 16 | 8 51 | 1s26 | 4 14 | 1 46 | 1 58 | 0 52 | 1 31 | 21 18 | 1 6 | 16 42 | 1 3 | 2 28 | 2 1 | 3 17 | 0 48 | 13 59 |
| S 17 | 9 13 | 7 31 | 4 46 | 2 46 | 1 56 | 0 23 | 1 31 | 21 13 | 1 7 | 16 41 | 1 3 | 2 25 | 2 1 | 3 18 | 0 48 | 13 59 |
| S 18 | 9 35 | 13 7 | 4 59 | 3 8 | 1 54 | 0s 6 | 1 32 | 21 8 | 1 9 | 16 41 | 1 3 | 2 22 | 2 1 | 3 19 | 0 48 | 14 0 |
| M19 | 9 57 | 17 59 | 4 56 | 3 50 | 1 51 | 0 35 | 1 32 | 21 3 | 1 10 | 16 41 | 1 3 | 2 20 | 2 1 | 3 19 | 0 48 | 14 0 |
| T 20 | 10 19 | 21 49 | 4 36 | 4 32 | 1 47 | 1 5 | 1 32 | 20 57 | 1 12 | 16 40 | 1 3 | 2 17 | 2 1 | 3 20 | 0 47 | 14 0 |
| W21 | 10 40 | 24 27 | 4 2 | 5 15 | 1 44 | 1 34 | 1 33 | 20 52 | 1 13 | 16 39 | 1 3 | 2 14 | 2 1 | 3 21 | 0 47 | 14 0 |
| T 22 | 11 1 | 25 47 | 3 17 | 5 57 | 1 39 | 2 3 | 1 33 | 20 47 | 1 15 | 16 39 | 1 3 | 2 12 | 2 1 | 3 22 | 0 47 | 14 0 |
| F 23 | 11 22 | 25 48 | 2 24 | 6 40 | 1 35 | 2 32 | 1 33 | 20 42 | 1 16 | 16 38 | 1 3 | 2 9 | 2 1 | 3 22 | 0 47 | 14 0 |
| S 24 | 11 43 | 24 34 | 1 25 | 7 23 | 1 29 | 3 2 | 1 33 | 20 37 | 1 18 | 16 37 | 1 3 | 2 7 | 2 2 | 3 23 | 0 47 | 14 0 |
| S 25 | 12 4 | 22 15 | 0 23 | 8 5 | 1 24 | 3 31 | 1 33 | 20 32 | 1 19 | 16 37 | 1 2 | 2 4 | 2 2 | 3 24 | 0 47 | 14 1 |
| M26 | 12 25 | 18 59 | 0n39 | 8 48 | 1 19 | 4 0 | 1 33 | 20 27 | 1 21 | 16 36 | 1 2 | 2 2 | 2 2 | 3 24 | 0 47 | 14 1 |
| T 27 | 12 45 | 14 58 | 1 40 | 9 29 | 1 13 | 4 29 | 1 32 | 20 21 | 1 23 | 16 35 | 1 2 | 1 59 | 2 2 | 3 25 | 0 47 | 14 1 |
| W28 | 13 5 | 10 21 | 2 37 | 10 11 | 1 7 | 4 58 | 1 32 | 20 16 | 1 24 | 16 34 | 1 2 | 1 57 | 2 2 | 3 25 | 0 47 | 14 1 |
| T 29 | 13 25 | 5 16 | 3 28 | 10 52 | 1 1 | 5 27 | 1 32 | 20 11 | 1 26 | 16 33 | 1 2 | 1 54 | 2 2 | 3 26 | 0 47 | 14 1 |
| F 30 | 13 45 | 0n 6 | 4 10 | 11 32 | 0 54 | 5 56 | 1 31 | 20 6 | 1 27 | 16 32 | 1 2 | 1 52 | 2 3 | 3 27 | 0 47 | 14 1 |
| S 31 | 14s 5 | 5n35 | 4n41 | 12s12 | 0n48 | 6s25 | 1n31 | 20n 1 | 1n29 | 16s31 | 1s 2 | 1n49 | 2n 3 | 3s27 | 0s47 | 14s 1 |

Julian Day Number = 2455105.5, Delta T = 66.00 sec
 Ecliptic obliquity = 23°26'22", Nutation = 0°00'15", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°52'35", Lahiri = 23°59'36"

ASTRODIENST EPHEMERIS for the year 2009
geocentric

DECEMBER 2009

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|----------|---------|--------|-------|--------|-------|------|--------|-------|------|--------|--------|------|-------|------|
| T 1 | 4 39 57 | 8°55'16 | 21°30 | 22°58 | 28°51 | 17°24 | 20°55 | 2°59 | 22°42 | 23°53 | 2°12 | 21°R50 | 23°17 | 6°45 | 21°43 | T 1 |
| W 2 | 4 43 53 | 9°56'03 | 5°44 | 24°28 | 0°6 | 17°37 | 21°3 | 3°3 | 22°D42 | 23°54 | 2°14 | 21°R44 | 23°13 | 6°52 | 21°45 | W 2 |
| T 3 | 4 47 50 | 10°56'52 | 20°14 | 25°58 | 1°22 | 17°49 | 21°12 | 3°8 | 22°K42 | 23°55 | 2°16 | 21°39 | 23°10 | 6°58 | 21°47 | T 3 |
| F 4 | 4 51 46 | 11°57'42 | 4°53 | 27°27 | 2°37 | 18°1 | 21°21 | 3°12 | 22°42 | 23°56 | 2°18 | 21°35 | 23°7 | 7°5 | 21°49 | F 4 |
| S 5 | 4 55 43 | 12°58'34 | 19°34 | 28°56 | 3°52 | 18°12 | 21°30 | 3°16 | 22°43 | 23°57 | 2°20 | 21°D34 | 23°4 | 7°12 | 21°51 | S 5 |
| S 6 | 4 59 40 | 13°59'26 | 4°11 | 0°24 | 5°8 | 18°23 | 21°40 | 3°20 | 22°43 | 23°58 | 2°22 | 21°35 | 23°1 | 7°18 | 21°53 | S 6 |
| M 7 | 5 3 36 | 15°0'20 | 18°39 | 1°52 | 6°23 | 18°33 | 21°49 | 3°24 | 22°43 | 23°59 | 2°25 | 21°36 | 22°58 | 7°25 | 21°55 | M 7 |
| T 8 | 5 7 33 | 16°1'15 | 2°15 | 3°19 | 7°39 | 18°43 | 21°59 | 3°28 | 22°43 | 24°0 | 2°27 | 21°38 | 22°54 | 7°32 | 21°58 | T 8 |
| W 9 | 5 11 29 | 17°2'11 | 16°55 | 4°45 | 8°54 | 18°51 | 22°8 | 3°31 | 22°44 | 24°1 | 2°29 | 21°R38 | 22°51 | 7°38 | 22°0 | W 9 |
| T 10 | 5 15 26 | 18°3'08 | 0°42 | 6°10 | 10°10 | 19°0 | 22°18 | 3°35 | 22°44 | 24°2 | 2°31 | 21°38 | 22°48 | 7°45 | 22°2 | T 10 |
| F 11 | 5 19 22 | 19°4'07 | 14°13 | 7°34 | 11°25 | 19°7 | 22°28 | 3°39 | 22°44 | 24°4 | 2°33 | 21°35 | 22°45 | 7°52 | 22°5 | F 11 |
| S 12 | 5 23 19 | 20°5'07 | 27°31 | 8°56 | 12°41 | 19°14 | 22°38 | 3°42 | 22°45 | 24°5 | 2°35 | 21°31 | 22°42 | 7°58 | 22°7 | S 12 |
| S 13 | 5 27 15 | 21°6'08 | 10°35 | 10°17 | 13°56 | 19°20 | 22°48 | 3°45 | 22°45 | 24°6 | 2°37 | 21°27 | 22°38 | 8°5 | 22°10 | S 13 |
| M14 | 5 31 12 | 22°7'09 | 23°26 | 11°35 | 15°12 | 19°25 | 22°58 | 3°49 | 22°46 | 24°7 | 2°39 | 21°21 | 22°35 | 8°12 | 22°12 | M14 |
| T 15 | 5 35 9 | 23°8'12 | 6°4 | 12°52 | 16°27 | 19°30 | 23°9 | 3°52 | 22°47 | 24°9 | 2°42 | 21°16 | 22°32 | 8°18 | 22°15 | T 15 |
| W16 | 5 39 5 | 24°9'16 | 18°30 | 14°6 | 17°43 | 19°34 | 23°19 | 3°55 | 22°47 | 24°10 | 2°44 | 21°12 | 22°29 | 8°25 | 22°18 | W16 |
| T 17 | 5 43 2 | 25°10'21 | 0°345 | 15°16 | 18°58 | 19°37 | 23°30 | 3°58 | 22°48 | 24°11 | 2°46 | 21°9 | 22°26 | 8°32 | 22°21 | T 17 |
| F 18 | 5 46 58 | 26°11'26 | 12°49 | 16°23 | 20°14 | 19°39 | 23°41 | 4°1 | 22°49 | 24°13 | 2°48 | 21°8 | 22°23 | 8°38 | 22°23 | F 18 |
| S 19 | 5 50 55 | 27°12'31 | 24°45 | 17°26 | 21°29 | 19°41 | 23°51 | 4°4 | 22°50 | 24°14 | 2°50 | 21°D 7 | 22°19 | 8°45 | 22°26 | S 19 |
| S 20 | 5 54 51 | 28°13'37 | 6°34 | 18°24 | 22°45 | 19°42 | 24°2 | 4°6 | 22°51 | 24°16 | 2°52 | 21°8 | 22°16 | 8°52 | 22°29 | S 20 |
| M21 | 5 58 48 | 29°14'44 | 18°21 | 19°16 | 24°0 | 19°R42 | 24°13 | 4°9 | 22°52 | 24°17 | 2°55 | 21°10 | 22°13 | 8°58 | 22°32 | M21 |
| T 22 | 6 2 44 | 0°315'50 | 0°K 9 | 20°2 | 25°16 | 19°41 | 24°25 | 4°11 | 22°53 | 24°19 | 2°57 | 21°12 | 22°10 | 9°5 | 22°35 | T 22 |
| W23 | 6 6 41 | 1°16'57 | 12°2 | 20°41 | 26°31 | 19°39 | 24°36 | 4°14 | 22°54 | 24°20 | 2°59 | 21°13 | 22°7 | 9°11 | 22°38 | W23 |
| T 24 | 6 10 38 | 2°18'04 | 24°4 | 21°12 | 27°47 | 19°37 | 24°47 | 4°16 | 22°55 | 24°22 | 3°1 | 21°14 | 22°4 | 9°18 | 22°41 | T 24 |
| F 25 | 6 14 34 | 3°19'11 | 6°Y21 | 21°34 | 29°2 | 19°34 | 24°59 | 4°18 | 22°56 | 24°23 | 3°3 | 21°R14 | 22°0 | 9°25 | 22°44 | F 25 |
| S 26 | 6 18 31 | 4°20'19 | 18°58 | 21°46 | 0°318 | 19°30 | 25°10 | 4°20 | 22°57 | 24°25 | 3°5 | 21°14 | 21°57 | 9°31 | 22°47 | S 26 |
| S 27 | 6 22 27 | 5°21'26 | 1°357 | 21°R47 | 1°33 | 19°25 | 25°22 | 4°22 | 22°58 | 24°26 | 3°8 | 21°12 | 21°54 | 9°38 | 22°50 | S 27 |
| M28 | 6 26 24 | 6°22'34 | 15°23 | 21°37 | 2°49 | 19°20 | 25°34 | 4°24 | 23°0 | 24°28 | 3°10 | 21°10 | 21°51 | 9°45 | 22°54 | M28 |
| T 29 | 6 30 20 | 7°23'41 | 29°17 | 21°15 | 4°4 | 19°13 | 25°46 | 4°26 | 23°1 | 24°30 | 3°12 | 21°8 | 21°48 | 9°51 | 22°57 | T 29 |
| W30 | 6 34 17 | 8°24'49 | 13°II36 | 20°41 | 5°20 | 19°6 | 25°57 | 4°27 | 23°2 | 24°31 | 3°14 | 21°7 | 21°44 | 9°58 | 23°0 | W30 |
| T 31 | 6 38 13 | 9°25'56 | 28°II18 | 19°356 | 6°336 | 18°158 | 26°9 | 4°29 | 23°K 4 | 24°33 | 3°16 | 21°3 | 21°341 | 10°5 | 23°4 | 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 |
| T 1 | 21s47 | 22n28 | 4n29 | 25s24 | 2s 9 | 19s 9 | 0n46 | 17n59 | 2n29 | 15s27 | 0s58 | 0n47 | 2n 9 | 3s36 | 0s46 | 13s57 | 0s25 | 18s16 | 5n10 | 21s40 | 21s26 | 17s25 | 8s26 | 6n 9 | | | | | |
| W 2 | 21 56 | 24 55 | 3 43 | 25 31 | 2 12 | 19 27 | 0 44 | 17 57 | 2 31 | 15 24 | 0 58 | 0 46 | 2 9 | 3 36 | 0 46 | 13 57 | 0 25 | 18 16 | 5 9 | 21 41 | 21 26 | 17 23 | 8 26 | 6 9 | | | | | |
| T 3 | 22 5 | 25 46 | 2 42 | 25 37 | 2 15 | 19 45 | 0 42 | 17 56 | 2 34 | 15 21 | 0 58 | 0 44 | 2 9 | 3 36 | 0 46 | 13 57 | 0 25 | 18 16 | 5 9 | 21 42 | 21 27 | 17 20 | 8 26 | 6 8 | | | | | |
| F 4 | 22 13 | 24 50 | 1 30 | 25 41 | 2 17 | 20 2 | 0 40 | 17 54 | 2 36 | 15 18 | 0 58 | 0 43 | 2 10 | 3 36 | 0 46 | 13 56 | 0 25 | 18 16 | 5 9 | 21 42 | 21 28 | 17 18 | 8 25 | 6 8 | | | | | |
| S 5 | 22 21 | 22 12 | 0 11 | 25 44 | 2 18 | 20 19 | 0 38 | 17 53 | 2 38 | 15 15 | 0 58 | 0 41 | 2 10 | 3 36 | 0 46 | 13 56 | 0 25 | 18 16 | 5 9 | 21 43 | 21 28 | 17 15 | 8 25 | 6 8 | | | | | |
| S 6 | 22 29 | 18 6 | 1 s 8 | 25 46 | 2 20 | 20 35 | 0 35 | 17 52 | 2 41 | 15 12 | 0 58 | 0 40 | 2 10 | 3 36 | 0 46 | 13 56 | 0 25 | 18 16 | 5 9 | 21 43 | 21 29 | 17 13 | 8 25 | 6 7 | | | | | |
| M 7 | 22 36 | 12 59 | 2 22 | 25 46 | 2 20 | 20 50 | 0 33 | 17 51 | 2 43 | 15 9 | 0 58 | 0 39 | 2 10 | 3 36 | 0 46 | 13 55 | 0 25 | 18 16 | 5 9 | 21 42 | 21 29 | 17 10 | 8 24 | 6 7 | | | | | |
| T 8 | 22 42 | 7 14 | 3 26 | 25 44 | 2 21 | 21 5 | 0 31 | 17 50 | 2 45 | 15 6 | 0 58 | 0 37 | 2 11 | 3 35 | 0 46 | 13 55 | 0 25 | 18 16 | 5 9 | 21 42 | 21 30 | 17 8 | 8 24 | 6 6 | | | | | |
| W 9 | 22 48 | 1 13 | 4 17 | 25 42 | 2 20 | 21 19 | 0 28 | 17 50 | 2 48 | 15 2 | 0 58 | 0 36 | 2 11 | 3 35 | 0 46 | 13 55 | 0 25 | 18 17 | 5 8 | 21 42 | 21 30 | 17 5 | 8 24 | 6 6 | | | | | |
| T 10 | 22 54 | 4s44 | 4 52 | 25 37 | 2 20 | 21 33 | 0 26 | 17 49 | 2 50 | 14 59 | 0 58 | 0 35 | 2 11 | 3 35 | 0 46 | 13 54 | 0 25 | 18 17 | 5 8 | 21 42 | 21 31 | 17 3 | 8 23 | 6 6 | | | | | |
| F 11 | 22 59 | 10 22 | 5 10 | 25 31 | 2 18 | 21 45 | 0 24 | 17 49 | 2 53 | 14 56 | 0 57 | 0 34 | 2 11 | 3 35 | 0 46 | 13 54 | 0 25 | 18 17 | 5 8 | 21 42 | 21 31 | 17 0 | 8 23 | 6 5 | | | | | |
| S 12 | 23 4 | 15 25 | 5 11 | 25 24 | 2 16 | 21 58 | 0 21 | 17 49 | 2 55 | 14 52 | 0 57 | 0 33 | 2 12 | 3 35 | 0 46 | 13 53 | 0 25 | 18 17 | 5 8 | 21 43 | 21 32 | 16 58 | 8 22 | 6 5 | | | | | |
| S 13 | 23 8 | 19 40 | 4 55 | 25 16 | 2 14 | 22 9 | 0 19 | 17 50 | 2 57 | 14 49 | 0 57 | 0 32 | 2 12 | 3 34 | 0 46 | 13 53 | 0 25 | 18 17 | 5 8 | 21 44 | 21 32 | 16 55 | 8 22 | 6 5 | | | | | |
| M14 | 23 12 | 22 55 | 4 25 | 25 6 | 2 10 | 22 20 | 0 17 | 17 51 | 3 0 | 14 46 | 0 57 | 0 30 | 2 12 | 3 34 | 0 45 | 13 53 | 0 25 | 18 17 | 5 8 | 21 45 | 21 33 | 16 53 | 8 22 | 6 4 | | | | | |
| T 15 | 23 16 | 24 58 | 3 43 | 24 55 | 2 6 | 22 31 | 0 14 | 17 51 | 3 2 | 14 42 | 0 57 | 0 29 | 2 13 | 3 34 | 0 45 | 13 52 | 0 25 | 18 17 | 5 8 | 21 45 | 21 33 | 16 50 | 8 21 | 6 4 | | | | | |
| W16 | 23 19 | 25 46 | 2 50 | 24 42 | 2 1 | 22 40 | 0 12 | 17 53 | 3 5 | 14 39 | 0 57 | 0 28 | 2 13 | 3 33 | 0 45 | 13 52 | 0 25 | 18 17 | 5 8 | 21 46 | 21 34 | 16 48 | 8 21 | 6 3 | | | | | |
| T 17 | 23 21 | 25 16 | 1 50 | 24 29 | 1 55 | 22 49 | 0 9 | 17 54 | 3 7 | 14 35 | 0 57 | 0 28 | 2 13 | 3 33 | 0 45 | 13 51 | 0 25 | 18 17 | 5 7 | 21 47 | 21 34 | 16 45 | 8 20 | 6 3 | | | | | |
| F 18 | 23 23 | 23 35 | 0 46 | 24 14 | 1 49 | 22 58 | 0 7 | 17 56 | 3 10 | 14 31 | 0 57 | 0 27 | 2 13 | 3 33 | 0 45 | 13 51 | 0 25 | 18 17 | 5 7 | 21 47 | 21 35 | 16 42 | 8 19 | 6 3 | | | | | |
| S 19 | 23 25 | 20 51 | 0n20 | 23 58 | 1 41 | 23 5 | 0 5 | 17 58 | 3 13 | 14 28 | 0 57 | 0 26 | 2 14 | 3 32 | 0 45 | 13 50 | 0 25 | 18 17 | 5 7 | 21 47 | 21 35 | 16 40 | 8 19 | 6 2 | | | | | |
| S 20 | 23 26 | 17 16 | 1 24 | 23 42 | 1 32 | 23 12 | 0 2 | 18 0 | 3 15 | 14 24 | 0 57 | 0 25 | 2 14 | 3 32 | 0 45 | 13 50 | 0 25 | 18 17 | 5 7 | 21 47 | 21 36 | 16 37 | 8 18 | 6 2 | | | | | |
| M21 | 23 26 | 13 2 | 2 25 | 23 24 | 1 22 | 23 18 | 0s 0 | 18 2 | 3 18 | 14 20 | 0 57 | 0 24 | 2 14 | 3 32 | 0 45 | 13 49 | 0 25 | 18 18 | 5 7 | 21 46 | 21 36 | 16 35 | 8 18 | 6 2 | | | | | |
| T 22 | 23 26 | 8 19 | 3 19 | 23 7 | 1 11 | 23 24 | 0 3 | 18 5 | 3 20 | 14 17 | 0 57 | 0 24 | 2 14 | 3 31 | 0 45 | 13 49 | 0 25 | 18 18 | 5 7 | 21 46 | 21 37 | 16 32 | 8 17 | 6 1 | | | | | |
| W23 | 23 26 | 3 16 | 4 6 | 22 49 | 0 59 | 23 29 | 0 5 | 18 8 | 3 23 | 14 13 | 0 57 | 0 23 | 2 15 | 3 31 | 0 45 | 13 48 | 0 25 | 18 18 | 5 7 | 21 46 | 21 37 | 16 30 | 8 16 | 6 1 | | | | | |
| T 24 | 23 25 | 1n57 | 4 42 | 22 31 | 0 45 | 23 33 | 0 7 | 18 11 | 3 25 | 14 9 | 0 57 | 0 22 | 2 15 | 3 30 | 0 45 | 13 48 | 0 25 | 18 18 | 5 7 | 21 46 | 21 38 | 16 27 | 8 16 | 6 1 | | | | | |
| F 25 | 23 24 | 7 12 | 5 6 | 22 13 | 0 30 | 23 36 | 0 10 | 18 14 | 3 28 | 14 5 | 0 56 | 0 22 | 2 15 | 3 30 | 0 45 | 13 47 | 0 25 | 18 18 | 5 7 | 21 46 | 21 38 | 16 25 | 8 15 | 6 0 | | | | | |
| S 26 | 23 22 | 12 18 | 5 16 | 21 55 | 0 14 | 23 38 | 0 12 | 18 18 | 3 30 | 14 1 | 0 56 | 0 21 | 2 16 | 3 29 | 0 45 | 13 47 | 0 25 | 18 18 | 5 6 | 21 46 | 21 39 | 16 22 | 8 14 | 6 0 | | | | | |
| S 27 | 23 20 | 17 1 | 5 11 | 21 38 | 0n 3 | 23 40 | 0 15 | 18 22 | 3 33 | 13 57 | 0 56 | 0 21 | 2 16 | 3 29 | 0 45 | 13 46 | 0 25 | 18 18 | 5 6 | 21 46 | 21 39 | 16 19 | 8 14 | 6 0 | | | | | |
| M28 | 23 17 | 21 3 | 4 49 | 21 22 | 0 21 | 23 41 | 0 17 | 18 26 | 3 35 | 13 53 | 0 56 | 0 20 | 2 16 | 3 28 | 0 45 | 13 46 | 0 25 | 18 18 | 5 6 | 21 46 | 21 40 | 16 17 | 8 13 | 5 59 | | | | | |
| T 29 | 23 14 | 24 3 | 4 9 | 21 6 | 0 40 | 23 42 | 0 19 | 18 30 | 3 38 | 13 49 | 0 56 | 0 20 | 2 16 | 3 28 | 0 45 | 13 45 | 0 25 | 18 18 | 5 6 | 21 47 | 21 40 | 16 14 | 8 12 | 5 59 | | | | | |
| W30 | 23 10 | 25 38 | 3 13 | 20 52 | 0 59 | 23 41 | 0 22 | 18 35 | 3 40 | 13 45 | 0 56 | 0 19 | 2 17 | 3 27 | 0 45 | 13 44 | 0 25 | 18 18 | 5 6 | 21 47 | 21 41 | 16 12 | 8 11 | 5 59 | | | | | |
| T 31 | 23s 6 | 25n29 | 2n 3 | 20s40 | 1n19 | 23s40 | 0s24 | 18n40 | 3n43 | 13s41 | 0s56 | 0n19 | 2n17 | 3s26 | 0s45 | 13s44 | 0s25 | 18s18 | 5n 6 | 21s47 | 21s41 | 16s 9 | 8s11 | 5n59 | | | | | |