# Astrodienst Ephemeris Tables

## for the year 1938

tropical 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 D5EPH

Astrodienst AG, Dammstr. 23, CH-8702 Zollikon / Zürich, Internet: www.astro.com E-Mail: order@astro.com

# ASTRODIENST EPHEMERIS for the year 1938

## JANUARY 1938 — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S 1 | 6 39 57 | 9♑55'19 | 1♑21 | 5°R28 | 1♑45 | 7♓46 | 2♒38 | 29♓ 9 | 9°R51 | 21°R 8 | 29°R24 | 5°R51 | 4♐13 | 20♐30 | 27°R37 | S 1 |
| S 2 | 6 43 54 | 10°56'30 | 13°14 | 4♑13 | 3° 0 | 8°31 | 2°52 | 29°12 | 9♉50 | 21♍ 8 | 29♋23 | 5♐46 | 4°10 | 20°37 | 27♊33 | S 2 |
| M 3 | 6 47 50 | 11°57'41 | 25°13 | 3° 4 | 4°16 | 9°17 | 3° 6 | 29°16 | 9°49 | 21° 7 | 29°22 | 5°40 | 4° 7 | 20°43 | 27°30 | M 3 |
| T 4 | 6 51 47 | 12°58'52 | 7♒20 | 2° 3 | 5°31 | 10° 2 | 3°19 | 29°19 | 9°48 | 21° 7 | 29°21 | 5°33 | 4° 3 | 20°50 | 27°26 | T 4 |
| W 5 | 6 55 43 | 14° 0'03 | 19°35 | 1°11 | 6°47 | 10°48 | 3°33 | 29°23 | 9°47 | 21° 7 | 29°19 | 5°26 | 4° 0 | 20°57 | 27°22 | W 5 |
| T 6 | 6 59 40 | 15° 1'14 | 2♓ 2 | 0°29 | 8° 2 | 11°33 | 3°47 | 29°26 | 9°47 | 21° 6 | 29°18 | 5°19 | 3°57 | 21° 3 | 27°19 | T 6 |
| F 7 | 7 3 36 | 16° 2'24 | 14°41 | 29♐57 | 9°18 | 12°18 | 4° 1 | 29°30 | 9°46 | 21° 6 | 29°17 | 5°13 | 3°54 | 21°10 | 27°15 | F 7 |
| S 8 | 7 7 33 | 17° 3'33 | 27°34 | 29°36 | 10°33 | 13° 4 | 4°15 | 29°34 | 9°46 | 21° 5 | 29°16 | 5° 9 | 3°51 | 21°17 | 27°11 | S 8 |
| S 9 | 7 11 29 | 18° 4'43 | 10♈44 | 29°24 | 11°49 | 13°49 | 4°29 | 29°37 | 9°45 | 21° 5 | 29°14 | 5° 7 | 3°47 | 21°23 | 27° 8 | S 9 |
| M10 | 7 15 26 | 19° 5'52 | 24°13 | 29°D21 | 13° 4 | 14°34 | 4°43 | 29°41 | 9°45 | 21° 4 | 29°13 | 5°D 7 | 3°44 | 21°30 | 27° 4 | M10 |
| T 11 | 7 19 23 | 20° 7'00 | 8♉ 4 | 29°27 | 14°20 | 15°20 | 4°57 | 29°45 | 9°44 | 21° 4 | 29°12 | 5° 8 | 3°41 | 21°37 | 27° 1 | T 11 |
| W12 | 7 23 19 | 21° 8'08 | 22°16 | 29°40 | 15°35 | 16° 5 | 5°11 | 29°50 | 9°44 | 21° 3 | 29°10 | 5° 9 | 3°38 | 21°43 | 26°57 | W12 |
| T 13 | 7 27 16 | 22° 9'15 | 6♊49 | 0♑ 2 | 16°50 | 16°50 | 5°25 | 29°54 | 9°44 | 21° 2 | 29° 9 | 5°R10 | 3°35 | 21°50 | 26°54 | T 13 |
| F 14 | 7 31 12 | 23°10'21 | 21°39 | 0°29 | 18° 6 | 17°35 | 5°39 | 29°58 | 9°43 | 21° 2 | 29° 8 | 5° 9 | 3°32 | 21°57 | 26°51 | F 14 |
| S 15 | 7 35 9 | 24°11'27 | 6♋41 | 1° 3 | 19°21 | 18°21 | 5°53 | 0♈ 2 | 9°43 | 21° 1 | 29° 6 | 5° 5 | 3°28 | 22° 3 | 26°47 | S 15 |
| S 16 | 7 39 5 | 25°12'33 | 21°46 | 1°42 | 20°37 | 19° 6 | 6° 7 | 0° 7 | 9°43 | 21° 0 | 29° 5 | 5° 0 | 3°25 | 22°10 | 26°44 | S 16 |
| M17 | 7 43 2 | 26°13'37 | 6♌45 | 2°26 | 21°52 | 19°51 | 6°21 | 0°11 | 9°43 | 20°59 | 29° 4 | 4°52 | 3°22 | 22°17 | 26°41 | M17 |
| T 18 | 7 46 58 | 27°14'42 | 21°28 | 3°15 | 23° 8 | 20°36 | 6°35 | 0°16 | 9°D43 | 20°59 | 29° 2 | 4°43 | 3°19 | 22°23 | 26°38 | T 18 |
| W19 | 7 50 55 | 28°15'45 | 5♍48 | 4° 7 | 24°23 | 21°21 | 6°49 | 0°21 | 9°43 | 20°58 | 29° 1 | 4°35 | 3°16 | 22°30 | 26°35 | W19 |
| T 20 | 7 54 52 | 29°16'49 | 19°40 | 5° 3 | 25°38 | 22° 6 | 7° 3 | 0°26 | 9°43 | 20°57 | 29° 0 | 4°27 | 3°13 | 22°37 | 26°32 | T 20 |
| F 21 | 7 58 48 | 0♒17'52 | 3♎ 3 | 6° 2 | 26°54 | 22°51 | 7°18 | 0°30 | 9°43 | 20°56 | 28°58 | 4°21 | 3° 9 | 22°43 | 26°29 | F 21 |
| S 22 | 8 2 45 | 1°18'54 | 15°59 | 7° 4 | 28° 9 | 23°37 | 7°32 | 0°35 | 9°43 | 20°55 | 28°57 | 4°18 | 3° 6 | 22°50 | 26°26 | S 22 |
| S 23 | 8 6 41 | 2°19'56 | 28°30 | 8° 9 | 29°25 | 24°22 | 7°46 | 0°40 | 9°43 | 20°54 | 28°56 | 4°D16 | 3° 3 | 22°57 | 26°23 | S 23 |
| M24 | 8 10 38 | 3°20'58 | 10♏42 | 9°16 | 0♒40 | 25° 7 | 8° 0 | 0°45 | 9°44 | 20°53 | 28°54 | 4°17 | 3° 0 | 23° 3 | 26°20 | M24 |
| T 25 | 8 14 34 | 4°21'59 | 22°40 | 10°26 | 1°55 | 25°52 | 8°14 | 0°51 | 9°44 | 20°52 | 28°53 | 4°17 | 2°57 | 23°10 | 26°17 | T 25 |
| W26 | 8 18 31 | 5°23'00 | 4♐30 | 11°37 | 3°11 | 26°37 | 8°29 | 0°56 | 9°44 | 20°51 | 28°52 | 4°R18 | 2°53 | 23°16 | 26°14 | W26 |
| T 27 | 8 22 27 | 6°24'00 | 16°16 | 12°50 | 4°26 | 27°22 | 8°43 | 1° 1 | 9°45 | 20°50 | 28°50 | 4°17 | 2°50 | 23°23 | 26°12 | T 27 |
| F 28 | 8 26 24 | 7°24'59 | 28° 3 | 14° 5 | 5°42 | 28° 6 | 8°57 | 1° 7 | 9°45 | 20°49 | 28°49 | 4°14 | 2°47 | 23°30 | 26° 9 | F 28 |
| S 29 | 8 30 21 | 8°25'58 | 9♑55 | 15°21 | 6°57 | 28°51 | 9°11 | 1°12 | 9°46 | 20°48 | 28°48 | 4° 8 | 2°44 | 23°36 | 26° 7 | S 29 |
| S 30 | 8 34 17 | 9°26'56 | 21°55 | 16°39 | 8°12 | 29°36 | 9°26 | 1°18 | 9°47 | 20°47 | 28°46 | 4° 0 | 2°41 | 23°43 | 26° 4 | S 30 |
| M31 | 8 38 14 | 10♒27'52 | 4♒ 5 | 17♑58 | 9♒28 | 0♈21 | 9♒40 | 1♈23 | 9♉47 | 20♍45 | 28♋45 | 3♐49 | 2♐38 | 23♐50 | 26♊ 2 | M31 |

Delta T = 24.06 sec

## FEBRUARY 1938 — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T 1 | 8 42 10 | 11♒28'48 | 16♒25 | 19♑18 | 10♒43 | 1♈ 6 | 9♒54 | 1♈29 | 9♉48 | 20°R44 | 28°R44 | 3°R36 | 2♐34 | 23♐56 | 25°R59 | T 1 |
| W 2 | 8 46 7 | 12°29'43 | 28°58 | 20°40 | 11°58 | 1°51 | 10° 8 | 1°35 | 9°49 | 20♍43 | 28♋42 | 3♐23 | 2°31 | 24° 3 | 25♊57 | W 2 |
| T 3 | 8 50 3 | 13°30'36 | 11♓42 | 22° 3 | 13°14 | 2°35 | 10°23 | 1°40 | 9°49 | 20°42 | 28°41 | 3°11 | 2°28 | 24°10 | 25°55 | T 3 |
| F 4 | 8 54 0 | 14°31'29 | 24°37 | 23°26 | 14°29 | 3°20 | 10°37 | 1°46 | 9°50 | 20°41 | 28°40 | 3° 0 | 2°25 | 24°16 | 25°53 | F 4 |
| S 5 | 8 57 56 | 15°32'19 | 7♈43 | 24°51 | 15°44 | 4° 5 | 10°51 | 1°52 | 9°51 | 20°39 | 28°39 | 2°52 | 2°22 | 24°23 | 25°51 | S 5 |
| S 6 | 9 1 53 | 16°33'09 | 21° 2 | 26°17 | 17° 0 | 4°49 | 11° 5 | 1°58 | 9°52 | 20°38 | 28°37 | 2°47 | 2°18 | 24°30 | 25°49 | S 6 |
| M 7 | 9 5 50 | 17°33'57 | 4♉33 | 27°43 | 18°15 | 5°34 | 11°20 | 2° 4 | 9°53 | 20°37 | 28°36 | 2°44 | 2°15 | 24°36 | 25°47 | M 7 |
| T 8 | 9 9 46 | 18°34'44 | 18°17 | 29°11 | 19°30 | 6°19 | 11°34 | 2°10 | 9°54 | 20°35 | 28°35 | 2°D44 | 2°12 | 24°43 | 25°45 | T 8 |
| W 9 | 9 13 43 | 19°35'29 | 2♊16 | 0♒40 | 20°45 | 7° 3 | 11°48 | 2°16 | 9°55 | 20°34 | 28°34 | 2°R44 | 2° 9 | 24°50 | 25°43 | W 9 |
| T 10 | 9 17 39 | 20°36'12 | 16°30 | 2° 9 | 22° 1 | 7°48 | 12° 2 | 2°23 | 9°56 | 20°33 | 28°32 | 2°43 | 2° 6 | 24°56 | 25°42 | T 10 |
| F 11 | 9 21 36 | 21°36'54 | 0♋57 | 3°39 | 23°16 | 8°32 | 12°16 | 2°29 | 9°58 | 20°31 | 28°31 | 2°41 | 2° 3 | 25° 3 | 25°40 | F 11 |
| S 12 | 9 25 32 | 22°37'34 | 15°34 | 5°11 | 24°31 | 9°17 | 12°31 | 2°35 | 9°59 | 20°30 | 28°30 | 2°36 | 1°59 | 25°10 | 25°39 | S 12 |
| S 13 | 9 29 29 | 23°38'13 | 0♌16 | 6°43 | 25°46 | 10° 1 | 12°45 | 2°41 | 10° 0 | 20°28 | 28°29 | 2°28 | 1°56 | 25°16 | 25°37 | S 13 |
| M14 | 9 33 25 | 24°38'50 | 14°56 | 8°16 | 27° 1 | 10°46 | 12°59 | 2°48 | 10° 2 | 20°27 | 28°28 | 2°17 | 1°53 | 25°23 | 25°36 | M14 |
| T 15 | 9 37 22 | 25°39'25 | 29°26 | 9°49 | 28°17 | 11°30 | 13°13 | 2°54 | 10° 3 | 20°25 | 28°26 | 2° 5 | 1°50 | 25°30 | 25°34 | T 15 |
| W16 | 9 41 19 | 26°39'59 | 13♍38 | 11°24 | 29°32 | 12°14 | 13°27 | 3° 1 | 10° 4 | 20°24 | 28°25 | 1°53 | 1°47 | 25°36 | 25°33 | W16 |
| T 17 | 9 45 15 | 27°40'31 | 27°28 | 13° 0 | 0♓47 | 12°58 | 13°41 | 3° 7 | 10° 6 | 20°22 | 28°24 | 1°42 | 1°44 | 25°43 | 25°32 | T 17 |
| F 18 | 9 49 12 | 28°41'02 | 10♎53 | 14°36 | 2° 2 | 13°43 | 13°55 | 3°14 | 10° 8 | 20°21 | 28°23 | 1°32 | 1°40 | 25°50 | 25°31 | F 18 |
| S 19 | 9 53 8 | 29°41'32 | 23°52 | 16°14 | 3°17 | 14°27 | 14° 9 | 3°21 | 10° 9 | 20°19 | 28°22 | 1°26 | 1°37 | 25°56 | 25°30 | S 19 |
| S 20 | 9 57 5 | 0♓42'01 | 6♏27 | 17°52 | 4°32 | 15°11 | 14°23 | 3°27 | 10°11 | 20°18 | 28°21 | 1°22 | 1°34 | 26° 3 | 25°29 | S 20 |
| M21 | 10 1 1 | 1°42'28 | 18°42 | 19°31 | 5°47 | 15°55 | 14°37 | 3°34 | 10°12 | 20°16 | 28°20 | 1°21 | 1°31 | 26°10 | 25°28 | M21 |
| T 22 | 10 4 58 | 2°42'54 | 0♐43 | 21°11 | 7° 2 | 16°39 | 14°51 | 3°41 | 10°14 | 20°15 | 28°19 | 1°20 | 1°28 | 26°16 | 25°28 | T 22 |
| W23 | 10 8 54 | 3°43'18 | 12°34 | 22°52 | 8°18 | 17°23 | 15° 5 | 3°48 | 10°16 | 20°13 | 28°17 | 1°20 | 1°24 | 26°23 | 25°27 | W23 |
| T 24 | 10 12 51 | 4°43'42 | 24°22 | 24°35 | 9°33 | 18° 7 | 15°19 | 3°55 | 10°18 | 20°12 | 28°16 | 1°19 | 1°21 | 26°30 | 25°27 | T 24 |
| F 25 | 10 16 48 | 5°44'03 | 6♑11 | 26°18 | 10°48 | 18°51 | 15°33 | 4° 1 | 10°20 | 20°10 | 28°15 | 1°16 | 1°18 | 26°36 | 25°26 | F 25 |
| S 26 | 10 20 44 | 6°44'24 | 18° 6 | 28° 2 | 12° 3 | 19°35 | 15°47 | 4° 8 | 10°22 | 20° 8 | 28°14 | 1°10 | 1°15 | 26°43 | 25°26 | S 26 |
| S 27 | 10 24 41 | 7°44'42 | 0♒12 | 29°47 | 13°18 | 20°19 | 16° 0 | 4°15 | 10°23 | 20° 7 | 28°13 | 1° 2 | 1°12 | 26°50 | 25°25 | S 27 |
| M28 | 10 28 37 | 8♓44'59 | 12♒32 | 1♓33 | 14♓33 | 21♈ 3 | 16♒14 | 4♈22 | 10♉25 | 20♍ 5 | 28♋12 | 0♐50 | 1♐ 9 | 26♐56 | 25♊25 | M28 |

Delta T = 24.06 sec



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# ASTRODIENST EPHEMERIS for the year 1938

## MARCH 1938 — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T 1 | 10 32 34 | 9♓45'15 | 25♒ 6 | 3♓20 | 15♓48 | 21♈47 | 16♒28 | 4♈29 | 10♉28 | 20°R 4 | 28°R11 | 0°R37 | 1♐ 5 | 27♐ 3 | 25°R25 | T 1 |
| W 2 | 10 36 30 | 10°45'28 | 7♓56 | 5° 8 | 17° 3 | 22°30 | 16°41 | 4°36 | 10°30 | 20♍ 2 | 28♋11 | 0♐24 | 1° 2 | 27° 9 | 25°D25 | W 2 |
| T 3 | 10 40 27 | 11°45'40 | 21° 0 | 6°57 | 18°17 | 23°14 | 16°55 | 4°44 | 10°32 | 20° 0 | 28°10 | 0°11 | 0°59 | 27°16 | 25♊25 | T 3 |
| F 4 | 10 44 23 | 12°45'50 | 4♈18 | 8°48 | 19°32 | 23°58 | 17° 9 | 4°51 | 10°34 | 19°59 | 28° 9 | 29♏59 | 0°56 | 27°23 | 25°25 | F 4 |
| S 5 | 10 48 20 | 13°45'58 | 17°47 | 10°39 | 20°47 | 24°42 | 17°22 | 4°58 | 10°36 | 19°57 | 28° 8 | 29°51 | 0°53 | 27°29 | 25°25 | S 5 |
| S 6 | 10 52 17 | 14°46'05 | 1♉26 | 12°31 | 22° 2 | 25°25 | 17°36 | 5° 5 | 10°38 | 19°55 | 28° 7 | 29°45 | 0°50 | 27°36 | 25°26 | S 6 |
| M 7 | 10 56 13 | 15°46'09 | 15°13 | 14°24 | 23°17 | 26° 9 | 17°49 | 5°12 | 10°41 | 19°54 | 28° 6 | 29°42 | 0°46 | 27°43 | 25°26 | M 7 |
| T 8 | 11 0 10 | 16°46'11 | 29° 6 | 16°19 | 24°32 | 26°52 | 18° 3 | 5°20 | 10°43 | 19°52 | 28° 5 | 29°D42 | 0°43 | 27°49 | 25°26 | T 8 |
| W 9 | 11 4 6 | 17°46'10 | 13♊ 6 | 18°14 | 25°47 | 27°36 | 18°16 | 5°27 | 10°45 | 19°50 | 28° 4 | 29°R42 | 0°40 | 27°56 | 25°27 | W 9 |
| T 10 | 11 8 3 | 18°46'08 | 27°11 | 20°10 | 27° 1 | 28°19 | 18°29 | 5°34 | 10°48 | 19°49 | 28° 4 | 29°42 | 0°37 | 28° 3 | 25°28 | T 10 |
| F 11 | 11 11 59 | 19°46'03 | 11♋22 | 22° 7 | 28°16 | 29° 3 | 18°42 | 5°41 | 10°50 | 19°47 | 28° 3 | 29°40 | 0°34 | 28° 9 | 25°28 | F 11 |
| S 12 | 11 15 56 | 20°45'56 | 25°37 | 24° 4 | 29°31 | 29°46 | 18°56 | 5°49 | 10°53 | 19°45 | 28° 2 | 29°36 | 0°30 | 28°16 | 25°29 | S 12 |
| S 13 | 11 19 52 | 21°45'47 | 9♌52 | 26° 2 | 0♈46 | 0♉29 | 19° 9 | 5°56 | 10°55 | 19°44 | 28° 1 | 29°29 | 0°27 | 28°23 | 25°30 | S 13 |
| M14 | 11 23 49 | 22°45'36 | 24° 4 | 28° 1 | 2° 0 | 1°13 | 19°22 | 6° 3 | 10°58 | 19°42 | 28° 1 | 29°20 | 0°24 | 28°29 | 25°31 | M14 |
| T 15 | 11 27 46 | 23°45'22 | 8♍ 8 | 29°59 | 3°15 | 1°56 | 19°35 | 6°11 | 11° 0 | 19°40 | 28° 0 | 29° 9 | 0°21 | 28°36 | 25°32 | T 15 |
| W16 | 11 31 42 | 24°45'07 | 21°59 | 1♈59 | 4°30 | 2°39 | 19°48 | 6°18 | 11° 3 | 19°39 | 27°59 | 28°58 | 0°18 | 28°43 | 25°33 | W16 |
| T 17 | 11 35 39 | 25°44'49 | 5♎32 | 3°58 | 5°44 | 3°22 | 20° 1 | 6°26 | 11° 5 | 19°37 | 27°59 | 28°48 | 0°15 | 28°49 | 25°34 | T 17 |
| F 18 | 11 39 35 | 26°44'29 | 18°46 | 5°56 | 6°59 | 4° 5 | 20°14 | 6°33 | 11° 8 | 19°35 | 27°58 | 28°40 | 0°11 | 28°56 | 25°36 | F 18 |
| S 19 | 11 43 32 | 27°44'08 | 1♏39 | 7°54 | 8°13 | 4°48 | 20°26 | 6°41 | 11°11 | 19°34 | 27°58 | 28°34 | 0° 8 | 29° 3 | 25°37 | S 19 |
| S 20 | 11 47 28 | 28°43'45 | 14°12 | 9°50 | 9°28 | 5°31 | 20°39 | 6°48 | 11°14 | 19°32 | 27°57 | 28°31 | 0° 5 | 29° 9 | 25°38 | S 20 |
| M21 | 11 51 25 | 29°43'20 | 26°28 | 11°45 | 10°42 | 6°14 | 20°52 | 6°55 | 11°16 | 19°30 | 27°57 | 28°D30 | 0° 2 | 29°16 | 25°40 | M21 |
| T 22 | 11 55 21 | 0♈42'53 | 8♐30 | 13°39 | 11°57 | 6°57 | 21° 4 | 7° 3 | 11°19 | 19°29 | 27°56 | 28°30 | 29♏59 | 29°23 | 25°42 | T 22 |
| W23 | 11 59 18 | 1°42'24 | 20°23 | 15°30 | 13°11 | 7°40 | 21°17 | 7°10 | 11°22 | 19°27 | 27°56 | 28°31 | 29°55 | 29°29 | 25°43 | W23 |
| T 24 | 12 3 14 | 2°41'54 | 2♑12 | 17°19 | 14°26 | 8°23 | 21°29 | 7°18 | 11°25 | 19°25 | 27°55 | 28°R32 | 29°52 | 29°36 | 25°45 | T 24 |
| F 25 | 12 7 11 | 3°41'22 | 14° 3 | 19° 4 | 15°40 | 9° 6 | 21°42 | 7°25 | 11°28 | 19°24 | 27°55 | 28°31 | 29°49 | 29°43 | 25°47 | F 25 |
| S 26 | 12 11 8 | 4°40'48 | 26° 0 | 20°46 | 16°55 | 9°48 | 21°54 | 7°33 | 11°31 | 19°22 | 27°54 | 28°28 | 29°46 | 29°49 | 25°49 | S 26 |
| S 27 | 12 15 4 | 5°40'12 | 8♒10 | 22°24 | 18° 9 | 10°31 | 22° 6 | 7°40 | 11°33 | 19°21 | 27°54 | 28°24 | 29°43 | 29°56 | 25°51 | S 27 |
| M28 | 12 19 1 | 6°39'35 | 20°34 | 23°58 | 19°23 | 11°14 | 22°19 | 7°48 | 11°36 | 19°19 | 27°53 | 28°17 | 29°40 | 0♑ 3 | 25°53 | M28 |
| T 29 | 12 22 57 | 7°38'55 | 3♓17 | 25°27 | 20°38 | 11°56 | 22°31 | 7°55 | 11°39 | 19°18 | 27°53 | 28° 9 | 29°36 | 0° 9 | 25°55 | T 29 |
| W30 | 12 26 54 | 8°38'14 | 16°19 | 26°51 | 21°52 | 12°39 | 22°43 | 8° 3 | 11°42 | 19°16 | 27°53 | 28° 0 | 29°33 | 0°16 | 25°57 | W30 |
| T 31 | 12 30 50 | 9♈37'31 | 29♓41 | 28♈ 9 | 23♈ 6 | 13♉21 | 22♒55 | 8♈10 | 11♉45 | 19♍14 | 27♋52 | 27♏51 | 29♏30 | 0♑23 | 26♊ 0 | T 31 |

Delta T = 24.07 sec

## APRIL 1938 — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F 1 | 12 34 47 | 10♈36'45 | 13♈21 | 29♈22 | 24♈21 | 14♉ 4 | 23♒ 6 | 8♈18 | 11♉49 | 19°R13 | 27°R52 | 27°R44 | 29♏27 | 0♑29 | 26♊ 2 | F 1 |
| S 2 | 12 38 43 | 11°35'58 | 27°15 | 0♉29 | 25°35 | 14°46 | 23°18 | 8°25 | 11°52 | 19♍11 | 27♋52 | 27♏38 | 29°24 | 0°36 | 26° 4 | S 2 |
| S 3 | 12 42 40 | 12°35'09 | 11♉20 | 1°29 | 26°49 | 15°29 | 23°30 | 8°33 | 11°55 | 19°10 | 27°52 | 27°35 | 29°21 | 0°43 | 26° 7 | S 3 |
| M 4 | 12 46 37 | 13°34'17 | 25°31 | 2°24 | 28° 3 | 16°11 | 23°42 | 8°41 | 11°58 | 19° 8 | 27°52 | 27°D34 | 29°17 | 0°49 | 26°10 | M 4 |
| T 5 | 12 50 33 | 14°33'23 | 9♊46 | 3°11 | 29°17 | 16°53 | 23°53 | 8°48 | 12° 1 | 19° 7 | 27°51 | 27°34 | 29°14 | 0°56 | 26°12 | T 5 |
| W 6 | 12 54 30 | 15°32'27 | 24° 0 | 3°52 | 0♉32 | 17°36 | 24° 5 | 8°55 | 12° 4 | 19° 5 | 27°51 | 27°36 | 29°11 | 1° 3 | 26°15 | W 6 |
| T 7 | 12 58 26 | 16°31'29 | 8♋12 | 4°26 | 1°46 | 18°18 | 24°16 | 9° 3 | 12° 7 | 19° 4 | 27°51 | 27°37 | 29° 8 | 1° 9 | 26°18 | T 7 |
| F 8 | 13 2 23 | 17°30'28 | 22°20 | 4°54 | 3° 0 | 19° 0 | 24°27 | 9°10 | 12°11 | 19° 3 | 27°51 | 27°R37 | 29° 5 | 1°16 | 26°21 | F 8 |
| S 9 | 13 6 19 | 18°29'25 | 6♌23 | 5°14 | 4°14 | 19°42 | 24°38 | 9°18 | 12°14 | 19° 1 | 27°51 | 27°36 | 29° 1 | 1°23 | 26°24 | S 9 |
| S 10 | 13 10 16 | 19°28'20 | 20°19 | 5°28 | 5°28 | 20°24 | 24°49 | 9°25 | 12°17 | 19° 0 | 27°51 | 27°33 | 28°58 | 1°29 | 26°27 | S 10 |
| M11 | 13 14 12 | 20°27'12 | 4♍ 5 | 5°35 | 6°42 | 21° 6 | 25° 0 | 9°33 | 12°20 | 18°58 | 27°D51 | 27°28 | 28°55 | 1°36 | 26°30 | M11 |
| T 12 | 13 18 9 | 21°26'02 | 17°42 | 5°R36 | 7°56 | 21°48 | 25°11 | 9°40 | 12°24 | 18°57 | 27°51 | 27°22 | 28°52 | 1°43 | 26°33 | T 12 |
| W13 | 13 22 6 | 22°24'49 | 1♎ 5 | 5°30 | 9°10 | 22°30 | 25°22 | 9°48 | 12°27 | 18°56 | 27°51 | 27°16 | 28°49 | 1°49 | 26°36 | W13 |
| T 14 | 13 26 2 | 23°23'35 | 14°15 | 5°18 | 10°23 | 23°12 | 25°33 | 9°55 | 12°30 | 18°54 | 27°51 | 27°11 | 28°46 | 1°56 | 26°39 | T 14 |
| F 15 | 13 29 59 | 24°22'19 | 27° 9 | 5° 1 | 11°37 | 23°54 | 25°43 | 10° 2 | 12°34 | 18°53 | 27°51 | 27° 7 | 28°42 | 2° 3 | 26°43 | F 15 |
| S 16 | 13 33 55 | 25°21'01 | 9♏48 | 4°38 | 12°51 | 24°36 | 25°54 | 10°10 | 12°37 | 18°52 | 27°51 | 27° 4 | 28°39 | 2° 9 | 26°46 | S 16 |
| S 17 | 13 37 52 | 26°19'40 | 22°12 | 4°11 | 14° 5 | 25°18 | 26° 4 | 10°17 | 12°40 | 18°50 | 27°51 | 27°D 3 | 28°36 | 2°16 | 26°50 | S 17 |
| M18 | 13 41 48 | 27°18'18 | 4♐23 | 3°39 | 15°19 | 26° 0 | 26°14 | 10°24 | 12°44 | 18°49 | 27°52 | 27° 3 | 28°33 | 2°23 | 26°53 | M18 |
| T 19 | 13 45 45 | 28°16'55 | 16°23 | 3° 4 | 16°32 | 26°41 | 26°24 | 10°32 | 12°47 | 18°48 | 27°52 | 27° 4 | 28°30 | 2°29 | 26°57 | T 19 |
| W20 | 13 49 41 | 29°15'29 | 28°16 | 2°27 | 17°46 | 27°23 | 26°34 | 10°39 | 12°50 | 18°47 | 27°52 | 27° 6 | 28°27 | 2°36 | 27° 1 | W20 |
| T 21 | 13 53 38 | 0♉14'02 | 10♑ 6 | 1°47 | 19° 0 | 28° 5 | 26°44 | 10°46 | 12°54 | 18°46 | 27°52 | 27° 7 | 28°23 | 2°43 | 27° 4 | T 21 |
| F 22 | 13 57 35 | 1°12'33 | 21°57 | 1° 6 | 20°13 | 28°46 | 26°54 | 10°53 | 12°57 | 18°45 | 27°52 | 27° 9 | 28°20 | 2°49 | 27° 8 | F 22 |
| S 23 | 14 1 31 | 2°11'03 | 3♒55 | 0°24 | 21°27 | 29°28 | 27° 4 | 11° 1 | 13° 1 | 18°43 | 27°53 | 27°R 9 | 28°17 | 2°56 | 27°12 | S 23 |
| S 24 | 14 5 28 | 3° 9'31 | 16° 4 | 29♈43 | 22°40 | 0♊ 9 | 27°13 | 11° 8 | 13° 4 | 18°42 | 27°53 | 27° 8 | 28°14 | 3° 3 | 27°16 | S 24 |
| M25 | 14 9 24 | 4° 7'57 | 28°29 | 29° 2 | 23°54 | 0°51 | 27°23 | 11°15 | 13° 7 | 18°41 | 27°53 | 27° 6 | 28°11 | 3° 9 | 27°20 | M25 |
| T 26 | 14 13 21 | 5° 6'22 | 11♓14 | 28°24 | 25° 8 | 1°32 | 27°32 | 11°22 | 13°11 | 18°40 | 27°54 | 27° 4 | 28° 7 | 3°16 | 27°24 | T 26 |
| W27 | 14 17 17 | 6° 4'45 | 24°21 | 27°47 | 26°21 | 2°14 | 27°41 | 11°29 | 13°14 | 18°39 | 27°54 | 27° 1 | 28° 4 | 3°23 | 27°28 | W27 |
| T 28 | 14 21 14 | 7° 3'06 | 7♈51 | 27°14 | 27°34 | 2°55 | 27°50 | 11°36 | 13°18 | 18°38 | 27°55 | 26°58 | 28° 1 | 3°29 | 27°32 | T 28 |
| F 29 | 14 25 10 | 8° 1'26 | 21°44 | 26°44 | 28°48 | 3°36 | 27°59 | 11°43 | 13°21 | 18°37 | 27°55 | 26°55 | 27°58 | 3°36 | 27°36 | F 29 |
| S 30 | 14 29 7 | 8♉59'44 | 5♉57 | 26♈17 | 0♊ 1 | 4♊17 | 28♒ 8 | 11♈50 | 13♉25 | 18♍36 | 27♋55 | 26♏54 | 27♏55 | 3♑43 | 27♊40 | S 30 |

Delta T = 24.07 sec



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## MAY 1938 — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S 1 | 14 33 3 | 9♉58'00 | 20♉25 | 25°R55 | 1♊15 | 4♊59 | 28♒17 | 11♈57 | 13♉28 | 18°R35 | 27♋56 | 26°D53 | 27♏52 | 3♑49 | 27♊45 | S 1 |
| M 2 | 14 37 0 | 10°56'15 | 5♊ 3 | 25♈37 | 2°28 | 5°40 | 28°26 | 12° 4 | 13°32 | 18♍34 | 27°56 | 26♏53 | 27°48 | 3°56 | 27°49 | M 2 |
| T 3 | 14 40 57 | 11°54'28 | 19°43 | 25°24 | 3°41 | 6°21 | 28°34 | 12°11 | 13°35 | 18°34 | 27°57 | 26°54 | 27°45 | 4° 3 | 27°54 | T 3 |
| W 4 | 14 44 53 | 12°52'38 | 4♋21 | 25°15 | 4°55 | 7° 2 | 28°42 | 12°18 | 13°39 | 18°33 | 27°58 | 26°55 | 27°42 | 4° 9 | 27°58 | W 4 |
| T 5 | 14 48 50 | 13°50'47 | 18°51 | 25°D11 | 6° 8 | 7°43 | 28°51 | 12°25 | 13°42 | 18°32 | 27°58 | 26°56 | 27°39 | 4°16 | 28° 2 | T 5 |
| F 6 | 14 52 46 | 14°48'54 | 3♌ 8 | 25°12 | 7°21 | 8°24 | 28°59 | 12°31 | 13°45 | 18°31 | 27°59 | 26°56 | 27°36 | 4°23 | 28° 7 | F 6 |
| S 7 | 14 56 43 | 15°46'59 | 17°11 | 25°17 | 8°34 | 9° 5 | 29° 6 | 12°38 | 13°49 | 18°30 | 27°59 | 26°R57 | 27°32 | 4°29 | 28°12 | S 7 |
| S 8 | 15 0 39 | 16°45'02 | 0♍59 | 25°28 | 9°47 | 9°46 | 29°14 | 12°45 | 13°52 | 18°30 | 28° 0 | 26°56 | 27°29 | 4°36 | 28°16 | S 8 |
| M 9 | 15 4 36 | 17°43'02 | 14°30 | 25°42 | 11° 0 | 10°27 | 29°22 | 12°51 | 13°56 | 18°29 | 28° 1 | 26°55 | 27°26 | 4°43 | 28°21 | M 9 |
| T 10 | 15 8 32 | 18°41'01 | 27°46 | 26° 2 | 12°13 | 11° 8 | 29°29 | 12°58 | 13°59 | 18°28 | 28° 2 | 26°55 | 27°23 | 4°49 | 28°26 | T 10 |
| W11 | 15 12 29 | 19°38'58 | 10♎47 | 26°25 | 13°26 | 11°49 | 29°37 | 13° 5 | 14° 3 | 18°28 | 28° 2 | 26°54 | 27°20 | 4°56 | 28°30 | W11 |
| T 12 | 15 16 26 | 20°36'54 | 23°33 | 26°53 | 14°39 | 12°30 | 29°44 | 13°11 | 14° 6 | 18°27 | 28° 3 | 26°53 | 27°17 | 5° 3 | 28°35 | T 12 |
| F 13 | 15 20 22 | 21°34'48 | 6♏ 7 | 27°26 | 15°52 | 13°10 | 29°51 | 13°18 | 14°10 | 18°27 | 28° 4 | 26°52 | 27°13 | 5° 9 | 28°40 | F 13 |
| S 14 | 15 24 19 | 22°32'40 | 18°29 | 28° 2 | 17° 5 | 13°51 | 29°58 | 13°24 | 14°13 | 18°26 | 28° 5 | 26°52 | 27°10 | 5°16 | 28°45 | S 14 |
| S 15 | 15 28 15 | 23°30'31 | 0♐40 | 28°42 | 18°18 | 14°32 | 0♓ 5 | 13°30 | 14°17 | 18°26 | 28° 5 | 26°D52 | 27° 7 | 5°23 | 28°50 | S 15 |
| M16 | 15 32 12 | 24°28'20 | 12°43 | 29°25 | 19°31 | 15°12 | 0°11 | 13°37 | 14°20 | 18°25 | 28° 6 | 26°52 | 27° 4 | 5°29 | 28°55 | M16 |
| T 17 | 15 36 8 | 25°26'08 | 24°38 | 0♑13 | 20°44 | 15°53 | 0°18 | 13°43 | 14°23 | 18°25 | 28° 7 | 26°52 | 27° 1 | 5°36 | 29° 0 | T 17 |
| W18 | 15 40 5 | 26°23'55 | 6♑29 | 1° 3 | 21°56 | 16°34 | 0°24 | 13°49 | 14°27 | 18°24 | 28° 8 | 26°52 | 26°58 | 5°43 | 29° 5 | W18 |
| T 19 | 15 44 1 | 27°21'40 | 18°19 | 1°58 | 23° 9 | 17°14 | 0°30 | 13°55 | 14°30 | 18°24 | 28° 9 | 26°R52 | 26°54 | 5°50 | 29°10 | T 19 |
| F 20 | 15 47 58 | 28°19'24 | 0♒11 | 2°55 | 24°22 | 17°55 | 0°36 | 14° 1 | 14°34 | 18°23 | 28°10 | 26°52 | 26°51 | 5°56 | 29°15 | F 20 |
| S 21 | 15 51 55 | 29°17'07 | 12° 9 | 3°56 | 25°34 | 18°35 | 0°42 | 14° 7 | 14°37 | 18°23 | 28°11 | 26°52 | 26°48 | 6° 3 | 29°20 | S 21 |
| S 22 | 15 55 51 | 0♊14'49 | 24°17 | 4°59 | 26°47 | 19°15 | 0°47 | 14°13 | 14°40 | 18°23 | 28°12 | 26°52 | 26°45 | 6°10 | 29°25 | S 22 |
| M23 | 15 59 48 | 1°12'30 | 6♓40 | 6° 6 | 27°59 | 19°56 | 0°53 | 14°19 | 14°44 | 18°23 | 28°13 | 26°D52 | 26°42 | 6°16 | 29°31 | M23 |
| T 24 | 16 3 44 | 2°10'10 | 19°22 | 7°15 | 29°12 | 20°36 | 0°58 | 14°25 | 14°47 | 18°22 | 28°14 | 26°52 | 26°38 | 6°23 | 29°36 | T 24 |
| W25 | 16 7 41 | 3° 7'49 | 2♈26 | 8°28 | 0♋24 | 21°16 | 1° 3 | 14°31 | 14°50 | 18°22 | 28°15 | 26°52 | 26°35 | 6°30 | 29°41 | W25 |
| T 26 | 16 11 37 | 4° 5'27 | 15°55 | 9°43 | 1°37 | 21°57 | 1° 8 | 14°37 | 14°54 | 18°22 | 28°16 | 26°53 | 26°32 | 6°36 | 29°46 | T 26 |
| F 27 | 16 15 34 | 5° 3'03 | 29°50 | 11° 1 | 2°49 | 22°37 | 1°13 | 14°43 | 14°57 | 18°22 | 28°17 | 26°54 | 26°29 | 6°43 | 29°52 | F 27 |
| S 28 | 16 19 30 | 6° 0'39 | 14♉10 | 12°21 | 4° 2 | 23°17 | 1°18 | 14°48 | 15° 0 | 18°22 | 28°18 | 26°54 | 26°26 | 6°50 | 29°57 | S 28 |
| S 29 | 16 23 27 | 6°58'15 | 28°51 | 13°45 | 5°14 | 23°57 | 1°22 | 14°54 | 15° 4 | 18°22 | 28°19 | 26°R54 | 26°23 | 6°56 | 0♋ 3 | S 29 |
| M30 | 16 27 24 | 7°55'49 | 13♊47 | 15°11 | 6°26 | 24°38 | 1°27 | 14°59 | 15° 7 | 18°D22 | 28°20 | 26°54 | 26°19 | 7° 3 | 0° 8 | M30 |
| T 31 | 16 31 20 | 8♊53'21 | 28♊50 | 16♉39 | 7♋38 | 25♊18 | 1♓31 | 15♈ 5 | 15♉10 | 18♍22 | 28♋21 | 26♏53 | 26♏16 | 7♑10 | 0♋13 | T 31 |

Delta T = 24.08 sec

## JUNE 1938 — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W 1 | 16 35 17 | 9♊50'53 | 13♋50 | 18♉10 | 8♋51 | 25♊58 | 1♓35 | 15♈10 | 15♉13 | 18♍22 | 28♋23 | 26°R52 | 26♏13 | 7♑16 | 0♋19 | W 1 |
| T 2 | 16 39 13 | 10°48'24 | 28°41 | 19°43 | 10° 3 | 26°38 | 1°39 | 15°16 | 15°17 | 18°22 | 28°24 | 26♏50 | 26°10 | 7°23 | 0°24 | T 2 |
| F 3 | 16 43 10 | 11°45'53 | 13♌15 | 21°20 | 11°15 | 27°18 | 1°42 | 15°21 | 15°20 | 18°22 | 28°25 | 26°49 | 26° 7 | 7°30 | 0°30 | F 3 |
| S 4 | 16 47 6 | 12°43'21 | 27°28 | 22°58 | 12°27 | 27°58 | 1°46 | 15°26 | 15°23 | 18°22 | 28°26 | 26°48 | 26° 4 | 7°36 | 0°35 | S 4 |
| S 5 | 16 51 3 | 13°40'47 | 11♍17 | 24°39 | 13°39 | 28°38 | 1°49 | 15°31 | 15°26 | 18°22 | 28°27 | 26°D47 | 26° 0 | 7°43 | 0°41 | S 5 |
| M 6 | 16 54 59 | 14°38'12 | 24°44 | 26°23 | 14°51 | 29°18 | 1°52 | 15°36 | 15°29 | 18°22 | 28°29 | 26°47 | 25°57 | 7°50 | 0°47 | M 6 |
| T 7 | 16 58 56 | 15°35'37 | 7♎49 | 28° 9 | 16° 3 | 29°58 | 1°55 | 15°41 | 15°32 | 18°23 | 28°30 | 26°48 | 25°54 | 7°56 | 0°52 | T 7 |
| W 8 | 17 2 53 | 16°33'00 | 20°35 | 29°58 | 17°15 | 0♋37 | 1°57 | 15°46 | 15°36 | 18°23 | 28°31 | 26°50 | 25°51 | 8° 3 | 0°58 | W 8 |
| T 9 | 17 6 49 | 17°30'22 | 3♏ 6 | 1♊49 | 18°27 | 1°17 | 2° 0 | 15°51 | 15°39 | 18°23 | 28°32 | 26°51 | 25°48 | 8°10 | 1° 3 | T 9 |
| F 10 | 17 10 46 | 18°27'43 | 15°23 | 3°42 | 19°38 | 1°57 | 2° 2 | 15°56 | 15°42 | 18°23 | 28°34 | 26°52 | 25°44 | 8°16 | 1° 9 | F 10 |
| S 11 | 17 14 42 | 19°25'03 | 27°31 | 5°38 | 20°50 | 2°37 | 2° 4 | 16° 0 | 15°45 | 18°24 | 28°35 | 26°R53 | 25°41 | 8°23 | 1°15 | S 11 |
| S 12 | 17 18 39 | 20°22'22 | 9♐31 | 7°36 | 22° 2 | 3°16 | 2° 6 | 16° 5 | 15°48 | 18°24 | 28°36 | 26°52 | 25°38 | 8°30 | 1°20 | S 12 |
| M13 | 17 22 35 | 21°19'41 | 21°26 | 9°36 | 23°13 | 3°56 | 2° 8 | 16°10 | 15°51 | 18°25 | 28°38 | 26°50 | 25°35 | 8°36 | 1°26 | M13 |
| T 14 | 17 26 32 | 22°16'59 | 3♑17 | 11°38 | 24°25 | 4°36 | 2°10 | 16°14 | 15°54 | 18°25 | 28°39 | 26°47 | 25°32 | 8°43 | 1°32 | T 14 |
| W15 | 17 30 29 | 23°14'16 | 15° 7 | 13°42 | 25°36 | 5°15 | 2°11 | 16°18 | 15°57 | 18°26 | 28°41 | 26°43 | 25°29 | 8°50 | 1°37 | W15 |
| T 16 | 17 34 25 | 24°11'33 | 26°58 | 15°48 | 26°48 | 5°55 | 2°12 | 16°23 | 15°59 | 18°26 | 28°42 | 26°39 | 25°25 | 8°57 | 1°43 | T 16 |
| F 17 | 17 38 22 | 25° 8'49 | 8♒53 | 17°56 | 27°59 | 6°35 | 2°13 | 16°27 | 16° 2 | 18°27 | 28°43 | 26°34 | 25°22 | 9° 3 | 1°49 | F 17 |
| S 18 | 17 42 18 | 26° 6'05 | 20°53 | 20° 4 | 29°11 | 7°14 | 2°14 | 16°31 | 16° 5 | 18°27 | 28°45 | 26°30 | 25°19 | 9°10 | 1°55 | S 18 |
| S 19 | 17 46 15 | 27° 3'20 | 3♓ 2 | 22°14 | 0♌22 | 7°54 | 2°14 | 16°35 | 16° 8 | 18°28 | 28°46 | 26°26 | 25°16 | 9°17 | 2° 0 | S 19 |
| M20 | 17 50 11 | 28° 0'35 | 15°24 | 24°25 | 1°33 | 8°33 | 2°15 | 16°39 | 16°11 | 18°28 | 28°48 | 26°24 | 25°13 | 9°23 | 2° 6 | M20 |
| T 21 | 17 54 8 | 28°57'50 | 28° 3 | 26°36 | 2°44 | 9°13 | 2°15 | 16°43 | 16°14 | 18°29 | 28°49 | 26°D23 | 25°10 | 9°30 | 2°12 | T 21 |
| W22 | 17 58 4 | 29°55'05 | 11♈ 1 | 28°48 | 3°55 | 9°52 | 2°R15 | 16°47 | 16°16 | 18°30 | 28°51 | 26°24 | 25° 6 | 9°37 | 2°18 | W22 |
| T 23 | 18 2 1 | 0♋52'20 | 24°24 | 0♋59 | 5° 7 | 10°31 | 2°15 | 16°51 | 16°19 | 18°31 | 28°52 | 26°25 | 25° 3 | 9°43 | 2°23 | T 23 |
| F 24 | 18 5 58 | 1°49'35 | 8♉13 | 3°11 | 6°18 | 11°11 | 2°15 | 16°54 | 16°22 | 18°31 | 28°54 | 26°27 | 25° 0 | 9°50 | 2°29 | F 24 |
| S 25 | 18 9 54 | 2°46'50 | 22°28 | 5°22 | 7°28 | 11°50 | 2°14 | 16°58 | 16°24 | 18°32 | 28°55 | 26°R27 | 24°57 | 9°57 | 2°35 | S 25 |
| S 26 | 18 13 51 | 3°44'04 | 7♊ 8 | 7°32 | 8°39 | 12°30 | 2°13 | 17° 1 | 16°27 | 18°33 | 28°57 | 26°27 | 24°54 | 10° 3 | 2°41 | S 26 |
| M27 | 18 17 47 | 4°41'19 | 22° 8 | 9°41 | 9°50 | 13° 9 | 2°12 | 17° 5 | 16°30 | 18°34 | 28°58 | 26°25 | 24°50 | 10°10 | 2°47 | M27 |
| T 28 | 18 21 44 | 5°38'33 | 7♋20 | 11°48 | 11° 1 | 13°48 | 2°11 | 17° 8 | 16°32 | 18°35 | 29° 0 | 26°21 | 24°47 | 10°17 | 2°52 | T 28 |
| W29 | 18 25 40 | 6°35'47 | 22°34 | 13°55 | 12°12 | 14°27 | 2°10 | 17°11 | 16°35 | 18°36 | 29° 1 | 26°16 | 24°44 | 10°23 | 2°58 | W29 |
| T 30 | 18 29 37 | 7♋33'01 | 7♌41 | 16♋ 0 | 13♌22 | 15♋ 7 | 2♓ 8 | 17♈14 | 16♉37 | 18♍37 | 29♋ 3 | 26♏10 | 24♏41 | 10♑30 | 3♋ 4 | T 30 |

Delta T = 24.09 sec



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# ASTRODIENST EPHEMERIS for the year 1938

## JULY 1938 — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F 1 | 18 33 33 | 8♋30'15 | 22♌30 | 18♋ 3 | 14♌33 | 15♋46 | 2°R 7 | 17♈17 | 16♉40 | 18♍38 | 29♋ 5 | 26°R 4 | 24♏38 | 10♑37 | 3♋10 | F 1 |
| S 2 | 18 37 30 | 9°27'28 | 6♍55 | 20° 5 | 15°43 | 16°25 | 2♓ 5 | 17°20 | 16°42 | 18°39 | 29° 6 | 26♏ 0 | 24°35 | 10°43 | 3°15 | S 2 |
| S 3 | 18 41 27 | 10°24'41 | 20°53 | 22° 4 | 16°54 | 17° 4 | 2° 3 | 17°23 | 16°44 | 18°40 | 29° 8 | 25°56 | 24°31 | 10°50 | 3°21 | S 3 |
| M 4 | 18 45 23 | 11°21'53 | 4♎22 | 24° 2 | 18° 4 | 17°43 | 2° 0 | 17°26 | 16°47 | 18°41 | 29° 9 | 25°54 | 24°28 | 10°57 | 3°27 | M 4 |
| T 5 | 18 49 20 | 12°19'05 | 17°25 | 25°58 | 19°14 | 18°22 | 1°58 | 17°28 | 16°49 | 18°42 | 29°11 | 25°D54 | 24°25 | 11° 4 | 3°33 | T 5 |
| W 6 | 18 53 16 | 13°16'17 | 0♏ 6 | 27°52 | 20°25 | 19° 2 | 1°55 | 17°31 | 16°51 | 18°43 | 29°12 | 25°55 | 24°22 | 11°10 | 3°38 | W 6 |
| T 7 | 18 57 13 | 14°13'29 | 12°28 | 29°45 | 21°35 | 19°41 | 1°52 | 17°34 | 16°53 | 18°44 | 29°14 | 25°56 | 24°19 | 11°17 | 3°44 | T 7 |
| F 8 | 19 1 9 | 15°10'40 | 24°37 | 1♌35 | 22°45 | 20°20 | 1°49 | 17°36 | 16°56 | 18°45 | 29°16 | 25°R57 | 24°16 | 11°24 | 3°50 | F 8 |
| S 9 | 19 5 6 | 16° 7'52 | 6♐36 | 3°23 | 23°55 | 20°59 | 1°46 | 17°38 | 16°58 | 18°46 | 29°17 | 25°57 | 24°12 | 11°30 | 3°56 | S 9 |
| S 10 | 19 9 2 | 17° 5'03 | 18°29 | 5° 9 | 25° 5 | 21°38 | 1°43 | 17°40 | 17° 0 | 18°48 | 29°19 | 25°54 | 24° 9 | 11°37 | 4° 1 | S 10 |
| M11 | 19 12 59 | 18° 2'15 | 0♑19 | 6°53 | 26°15 | 22°17 | 1°39 | 17°42 | 17° 2 | 18°49 | 29°21 | 25°49 | 24° 6 | 11°44 | 4° 7 | M11 |
| T 12 | 19 16 56 | 18°59'26 | 12° 9 | 8°35 | 27°24 | 22°56 | 1°36 | 17°44 | 17° 4 | 18°50 | 29°22 | 25°42 | 24° 3 | 11°50 | 4°13 | T 12 |
| W13 | 19 20 52 | 19°56'38 | 24° 0 | 10°15 | 28°34 | 23°34 | 1°32 | 17°46 | 17° 6 | 18°52 | 29°24 | 25°33 | 24° 0 | 11°57 | 4°18 | W13 |
| T 14 | 19 24 49 | 20°53'50 | 5♒55 | 11°54 | 29°43 | 24°13 | 1°28 | 17°48 | 17° 8 | 18°53 | 29°26 | 25°23 | 23°56 | 12° 4 | 4°24 | T 14 |
| F 15 | 19 28 45 | 21°51'03 | 17°56 | 13°30 | 0♍53 | 24°52 | 1°23 | 17°50 | 17°10 | 18°54 | 29°27 | 25°13 | 23°53 | 12°10 | 4°30 | F 15 |
| S 16 | 19 32 42 | 22°48'16 | 0♓ 2 | 15° 4 | 2° 2 | 25°31 | 1°19 | 17°51 | 17°12 | 18°56 | 29°29 | 25° 3 | 23°50 | 12°17 | 4°35 | S 16 |
| S 17 | 19 36 38 | 23°45'29 | 12°18 | 16°36 | 3°11 | 26°10 | 1°14 | 17°53 | 17°14 | 18°57 | 29°30 | 24°55 | 23°47 | 12°24 | 4°41 | S 17 |
| M18 | 19 40 35 | 24°42'43 | 24°44 | 18° 6 | 4°21 | 26°49 | 1°10 | 17°54 | 17°15 | 18°59 | 29°32 | 24°49 | 23°44 | 12°31 | 4°46 | M18 |
| T 19 | 19 44 31 | 25°39'58 | 7♈24 | 19°34 | 5°30 | 27°28 | 1° 5 | 17°55 | 17°17 | 19° 0 | 29°34 | 24°45 | 23°41 | 12°37 | 4°52 | T 19 |
| W20 | 19 48 28 | 26°37'13 | 20°21 | 21° 1 | 6°39 | 28° 6 | 1° 0 | 17°57 | 17°19 | 19° 1 | 29°35 | 24°43 | 23°37 | 12°44 | 4°58 | W20 |
| T 21 | 19 52 25 | 27°34'29 | 3♉37 | 22°25 | 7°48 | 28°45 | 0°54 | 17°58 | 17°20 | 19° 3 | 29°37 | 24°D43 | 23°34 | 12°51 | 5° 3 | T 21 |
| F 22 | 19 56 21 | 28°31'46 | 17°17 | 23°47 | 8°56 | 29°24 | 0°49 | 17°59 | 17°22 | 19° 5 | 29°39 | 24°R44 | 23°31 | 12°57 | 5° 9 | F 22 |
| S 23 | 20 0 18 | 29°29'04 | 1♊22 | 25° 6 | 10° 5 | 0♌ 3 | 0°43 | 18° 0 | 17°24 | 19° 6 | 29°40 | 24°44 | 23°28 | 13° 4 | 5°14 | S 23 |
| S 24 | 20 4 14 | 0♌26'23 | 15°50 | 26°24 | 11°14 | 0°41 | 0°38 | 18° 0 | 17°25 | 19° 8 | 29°42 | 24°42 | 23°25 | 13°11 | 5°20 | S 24 |
| M25 | 20 8 11 | 1°23'43 | 0♋41 | 27°39 | 12°22 | 1°20 | 0°32 | 18° 1 | 17°27 | 19° 9 | 29°44 | 24°38 | 23°22 | 13°17 | 5°25 | M25 |
| T 26 | 20 12 7 | 2°21'04 | 15°47 | 28°52 | 13°30 | 1°59 | 0°26 | 18° 2 | 17°28 | 19°11 | 29°45 | 24°32 | 23°18 | 13°24 | 5°30 | T 26 |
| W27 | 20 16 4 | 3°18'25 | 1♌ 0 | 0♍ 3 | 14°39 | 2°37 | 0°20 | 18° 2 | 17°29 | 19°13 | 29°47 | 24°23 | 23°15 | 13°31 | 5°36 | W27 |
| T 28 | 20 20 0 | 4°15'47 | 16° 9 | 1°11 | 15°47 | 3°16 | 0°14 | 18° 2 | 17°31 | 19°14 | 29°49 | 24°13 | 23°12 | 13°37 | 5°41 | T 28 |
| F 29 | 20 23 57 | 5°13'10 | 1♍ 4 | 2°17 | 16°55 | 3°55 | 0° 7 | 18° 3 | 17°32 | 19°16 | 29°50 | 24° 3 | 23° 9 | 13°44 | 5°46 | F 29 |
| S 30 | 20 27 54 | 6°10'33 | 15°36 | 3°20 | 18° 3 | 4°33 | 0° 1 | 18° 3 | 17°33 | 19°18 | 29°52 | 23°54 | 23° 6 | 13°51 | 5°52 | S 30 |
| S 31 | 20 31 50 | 7♌ 7'57 | 29♍40 | 4♍21 | 19♍11 | 5♌12 | 29♒54 | 18°R 3 | 17♉35 | 19♍19 | 29♋54 | 23♏47 | 23♏ 2 | 13♑57 | 5♋57 | S 31 |

Delta T = 24.10 sec

## AUGUST 1938 — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M 1 | 20 35 47 | 8♌ 5'21 | 13♎15 | 5♍18 | 20♍18 | 5♌50 | 29°R48 | 18°R 3 | 17♉36 | 19♍21 | 29♋55 | 23°R43 | 22♏59 | 14♑ 4 | 6♋ 2 | M 1 |
| T 2 | 20 39 43 | 9° 2'46 | 26°21 | 6°13 | 21°26 | 6°29 | 29♒41 | 18♈ 3 | 17°37 | 19°23 | 29°57 | 23♏41 | 22°56 | 14°11 | 6° 7 | T 2 |
| W 3 | 20 43 40 | 10° 0'12 | 9♏ 3 | 7° 5 | 22°33 | 7° 7 | 29°34 | 18° 2 | 17°38 | 19°25 | 29°59 | 23°D40 | 22°53 | 14°18 | 6°13 | W 3 |
| T 4 | 20 47 36 | 10°57'38 | 21°24 | 7°53 | 23°40 | 7°46 | 29°27 | 18° 2 | 17°39 | 19°27 | 0♌ 0 | 23°R40 | 22°50 | 14°24 | 6°18 | T 4 |
| F 5 | 20 51 33 | 11°55'05 | 3♐30 | 8°38 | 24°48 | 8°24 | 29°20 | 18° 2 | 17°40 | 19°28 | 0° 2 | 23°40 | 22°47 | 14°31 | 6°23 | F 5 |
| S 6 | 20 55 29 | 12°52'33 | 15°25 | 9°19 | 25°55 | 9° 3 | 29°13 | 18° 1 | 17°41 | 19°30 | 0° 4 | 23°38 | 22°43 | 14°38 | 6°28 | S 6 |
| S 7 | 20 59 26 | 13°50'01 | 27°16 | 9°57 | 27° 1 | 9°41 | 29° 5 | 18° 0 | 17°42 | 19°32 | 0° 5 | 23°34 | 22°40 | 14°44 | 6°33 | S 7 |
| M 8 | 21 3 23 | 14°47'31 | 9♑ 5 | 10°30 | 28° 8 | 10°20 | 28°58 | 18° 0 | 17°43 | 19°34 | 0° 7 | 23°28 | 22°37 | 14°51 | 6°38 | M 8 |
| T 9 | 21 7 19 | 15°45'01 | 20°56 | 11° 0 | 29°15 | 10°58 | 28°50 | 17°59 | 17°43 | 19°36 | 0° 9 | 23°18 | 22°34 | 14°58 | 6°43 | T 9 |
| W10 | 21 11 16 | 16°42'33 | 2♒52 | 11°25 | 0♎21 | 11°37 | 28°43 | 17°58 | 17°44 | 19°38 | 0°10 | 23° 6 | 22°31 | 15° 4 | 6°48 | W10 |
| T 11 | 21 15 12 | 17°40'05 | 14°54 | 11°46 | 1°27 | 12°15 | 28°35 | 17°57 | 17°45 | 19°40 | 0°12 | 22°53 | 22°27 | 15°11 | 6°53 | T 11 |
| F 12 | 21 19 9 | 18°37'38 | 27° 4 | 12° 2 | 2°33 | 12°53 | 28°28 | 17°56 | 17°45 | 19°42 | 0°13 | 22°40 | 22°24 | 15°18 | 6°57 | F 12 |
| S 13 | 21 23 5 | 19°35'13 | 9♓22 | 12°12 | 3°39 | 13°32 | 28°20 | 17°54 | 17°46 | 19°44 | 0°15 | 22°27 | 22°21 | 15°25 | 7° 2 | S 13 |
| S 14 | 21 27 2 | 20°32'49 | 21°50 | 12°18 | 4°45 | 14°10 | 28°12 | 17°53 | 17°46 | 19°46 | 0°17 | 22°16 | 22°18 | 15°31 | 7° 7 | S 14 |
| M15 | 21 30 58 | 21°30'26 | 4♈27 | 12°R19 | 5°50 | 14°49 | 28° 5 | 17°51 | 17°47 | 19°48 | 0°18 | 22° 7 | 22°15 | 15°38 | 7°12 | M15 |
| T 16 | 21 34 55 | 22°28'05 | 17°17 | 12°14 | 6°55 | 15°27 | 27°57 | 17°50 | 17°47 | 19°50 | 0°20 | 22° 1 | 22°12 | 15°45 | 7°16 | T 16 |
| W17 | 21 38 52 | 23°25'45 | 0♉19 | 12° 3 | 8° 1 | 16° 5 | 27°49 | 17°48 | 17°48 | 19°52 | 0°21 | 21°58 | 22° 8 | 15°51 | 7°21 | W17 |
| T 18 | 21 42 48 | 24°23'27 | 13°37 | 11°47 | 9° 6 | 16°43 | 27°41 | 17°46 | 17°48 | 19°54 | 0°23 | 21°57 | 22° 5 | 15°58 | 7°25 | T 18 |
| F 19 | 21 46 45 | 25°21'10 | 27°13 | 11°25 | 10°10 | 17°22 | 27°33 | 17°45 | 17°48 | 19°56 | 0°24 | 21°57 | 22° 2 | 16° 5 | 7°30 | F 19 |
| S 20 | 21 50 41 | 26°18'55 | 11♊ 8 | 10°57 | 11°15 | 18° 0 | 27°26 | 17°43 | 17°49 | 19°58 | 0°26 | 21°57 | 21°59 | 16°11 | 7°34 | S 20 |
| S 21 | 21 54 38 | 27°16'42 | 25°23 | 10°24 | 12°19 | 18°38 | 27°18 | 17°41 | 17°49 | 20° 0 | 0°27 | 21°55 | 21°56 | 16°18 | 7°39 | S 21 |
| M22 | 21 58 34 | 28°14'31 | 9♋57 | 9°46 | 13°23 | 19°17 | 27°10 | 17°38 | 17°49 | 20° 2 | 0°29 | 21°51 | 21°53 | 16°25 | 7°43 | M22 |
| T 23 | 22 2 31 | 29°12'21 | 24°45 | 9° 4 | 14°27 | 19°55 | 27° 2 | 17°36 | 17°49 | 20° 4 | 0°30 | 21°44 | 21°49 | 16°31 | 7°47 | T 23 |
| W24 | 22 6 27 | 0♍10'13 | 9♌41 | 8°17 | 15°31 | 20°33 | 26°54 | 17°34 | 17°R49 | 20° 6 | 0°32 | 21°34 | 21°46 | 16°38 | 7°52 | W24 |
| T 25 | 22 10 24 | 1° 8'06 | 24°37 | 7°27 | 16°35 | 21°11 | 26°46 | 17°31 | 17°49 | 20° 8 | 0°33 | 21°23 | 21°43 | 16°45 | 7°56 | T 25 |
| F 26 | 22 14 21 | 2° 6'01 | 9♍23 | 6°34 | 17°38 | 21°50 | 26°38 | 17°29 | 17°49 | 20°11 | 0°35 | 21°12 | 21°40 | 16°52 | 8° 0 | F 26 |
| S 27 | 22 18 17 | 3° 3'58 | 23°50 | 5°39 | 18°41 | 22°28 | 26°31 | 17°26 | 17°49 | 20°13 | 0°36 | 21° 2 | 21°37 | 16°58 | 8° 4 | S 27 |
| S 28 | 22 22 14 | 4° 1'55 | 7♎54 | 4°44 | 19°44 | 23° 6 | 26°23 | 17°24 | 17°49 | 20°15 | 0°38 | 20°54 | 21°33 | 17° 5 | 8° 8 | S 28 |
| M29 | 22 26 10 | 4°59'55 | 21°30 | 3°49 | 20°46 | 23°44 | 26°15 | 17°21 | 17°48 | 20°17 | 0°39 | 20°49 | 21°30 | 17°12 | 8°12 | M29 |
| T 30 | 22 30 7 | 5°57'55 | 4♏39 | 2°56 | 21°49 | 24°23 | 26° 7 | 17°18 | 17°48 | 20°19 | 0°41 | 20°46 | 21°27 | 17°18 | 8°16 | T 30 |
| W31 | 22 34 3 | 6♍55'57 | 17♏23 | 2♍ 6 | 22♎51 | 25♌ 1 | 26♒ 0 | 17♈15 | 17♉48 | 20♍21 | 0♌42 | 20°D45 | 21♏24 | 17♑25 | 8♋20 | W31 |

Delta T = 24.11 sec



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## SEPTEMBER 1938 — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T 1 | 22 38 0 | 7♍54'00 | 29♏46 | 1°R20 | 23♎52 | 25♌39 | 25°R52 | 17°R12 | 17°R47 | 20♍23 | 0♌43 | 20♏45 | 21♏21 | 17♑32 | 8♋24 | T 1 |
| F 2 | 22 41 56 | 8°52'05 | 11♐53 | 0♍39 | 24°54 | 26°17 | 25♒45 | 17♈ 9 | 17♉47 | 20°26 | 0°45 | 20°R45 | 21°18 | 17°38 | 8°27 | F 2 |
| S 3 | 22 45 53 | 9°50'11 | 23°49 | 0° 4 | 25°55 | 26°55 | 25°37 | 17° 6 | 17°47 | 20°28 | 0°46 | 20°44 | 21°14 | 17°45 | 8°31 | S 3 |
| S 4 | 22 49 50 | 10°48'19 | 5♑40 | 29♌36 | 26°56 | 27°33 | 25°30 | 17° 2 | 17°46 | 20°30 | 0°47 | 20°41 | 21°11 | 17°52 | 8°35 | S 4 |
| M 5 | 22 53 46 | 11°46'28 | 17°31 | 29°15 | 27°56 | 28°11 | 25°23 | 16°59 | 17°45 | 20°32 | 0°49 | 20°36 | 21° 8 | 17°59 | 8°38 | M 5 |
| T 6 | 22 57 43 | 12°44'38 | 29°25 | 29° 3 | 28°56 | 28°50 | 25°15 | 16°56 | 17°45 | 20°34 | 0°50 | 20°28 | 21° 5 | 18° 5 | 8°42 | T 6 |
| W 7 | 23 1 39 | 13°42'50 | 11♒26 | 28°D59 | 29°56 | 29°28 | 25° 8 | 16°52 | 17°44 | 20°37 | 0°51 | 20°18 | 21° 2 | 18°12 | 8°45 | W 7 |
| T 8 | 23 5 36 | 14°41'04 | 23°36 | 29° 4 | 0♏55 | 0♍ 6 | 25° 1 | 16°49 | 17°43 | 20°39 | 0°53 | 20° 7 | 20°59 | 18°19 | 8°49 | T 8 |
| F 9 | 23 9 32 | 15°39'19 | 5♓57 | 29°18 | 1°55 | 0°44 | 24°54 | 16°45 | 17°43 | 20°41 | 0°54 | 19°55 | 20°55 | 18°25 | 8°52 | F 9 |
| S 10 | 23 13 29 | 16°37'36 | 18°30 | 29°40 | 2°53 | 1°22 | 24°48 | 16°41 | 17°42 | 20°43 | 0°55 | 19°44 | 20°52 | 18°32 | 8°55 | S 10 |
| S 11 | 23 17 25 | 17°35'55 | 1♈15 | 0♍12 | 3°51 | 2° 0 | 24°41 | 16°38 | 17°41 | 20°46 | 0°56 | 19°34 | 20°49 | 18°39 | 8°58 | S 11 |
| M12 | 23 21 22 | 18°34'16 | 14°11 | 0°52 | 4°49 | 2°38 | 24°34 | 16°34 | 17°40 | 20°48 | 0°58 | 19°27 | 20°46 | 18°45 | 9° 1 | M12 |
| T 13 | 23 25 18 | 19°32'38 | 27°18 | 1°41 | 5°47 | 3°16 | 24°28 | 16°30 | 17°39 | 20°50 | 0°59 | 19°22 | 20°43 | 18°52 | 9° 5 | T 13 |
| W14 | 23 29 15 | 20°31'03 | 10♉36 | 2°37 | 6°44 | 3°54 | 24°22 | 16°26 | 17°38 | 20°52 | 1° 0 | 19°20 | 20°39 | 18°59 | 9° 7 | W14 |
| T 15 | 23 33 12 | 21°29'30 | 24° 6 | 3°40 | 7°40 | 4°32 | 24°15 | 16°22 | 17°37 | 20°54 | 1° 1 | 19°D20 | 20°36 | 19° 6 | 9°10 | T 15 |
| F 16 | 23 37 8 | 22°27'59 | 7♊48 | 4°51 | 8°37 | 5°10 | 24° 9 | 16°18 | 17°36 | 20°57 | 1° 2 | 19°21 | 20°33 | 19°12 | 9°13 | F 16 |
| S 17 | 23 41 5 | 23°26'30 | 21°42 | 6° 7 | 9°32 | 5°48 | 24° 3 | 16°14 | 17°35 | 20°59 | 1° 3 | 19°R21 | 20°30 | 19°19 | 9°16 | S 17 |
| S 18 | 23 45 1 | 24°25'04 | 5♋49 | 7°29 | 10°27 | 6°26 | 23°58 | 16° 9 | 17°34 | 21° 1 | 1° 5 | 19°21 | 20°27 | 19°26 | 9°19 | S 18 |
| M19 | 23 48 58 | 25°23'40 | 20° 7 | 8°57 | 11°22 | 7° 4 | 23°52 | 16° 5 | 17°33 | 21° 3 | 1° 6 | 19°18 | 20°24 | 19°32 | 9°21 | M19 |
| T 20 | 23 52 54 | 26°22'17 | 4♌34 | 10°28 | 12°16 | 7°42 | 23°46 | 16° 1 | 17°31 | 21° 6 | 1° 7 | 19°14 | 20°20 | 19°39 | 9°24 | T 20 |
| W21 | 23 56 51 | 27°20'57 | 19° 6 | 12° 3 | 13°10 | 8°20 | 23°41 | 15°57 | 17°30 | 21° 8 | 1° 8 | 19° 7 | 20°17 | 19°46 | 9°26 | W21 |
| T 22 | 0 0 47 | 28°19'40 | 3♍37 | 13°42 | 14° 3 | 8°58 | 23°36 | 15°52 | 17°29 | 21°10 | 1° 9 | 18°59 | 20°14 | 19°52 | 9°29 | T 22 |
| F 23 | 0 4 44 | 29°18'24 | 18° 0 | 15°23 | 14°55 | 9°36 | 23°31 | 15°48 | 17°27 | 21°12 | 1°10 | 18°51 | 20°11 | 19°59 | 9°31 | F 23 |
| S 24 | 0 8 41 | 0♎17'10 | 2♎ 9 | 17° 7 | 15°47 | 10°14 | 23°26 | 15°43 | 17°26 | 21°14 | 1°11 | 18°44 | 20° 8 | 20° 6 | 9°33 | S 24 |
| S 25 | 0 12 37 | 1°15'58 | 16° 0 | 18°52 | 16°38 | 10°52 | 23°21 | 15°39 | 17°24 | 21°17 | 1°12 | 18°38 | 20° 4 | 20°13 | 9°35 | S 25 |
| M26 | 0 16 34 | 2°14'48 | 29°29 | 20°38 | 17°29 | 11°30 | 23°17 | 15°34 | 17°23 | 21°19 | 1°13 | 18°34 | 20° 1 | 20°19 | 9°37 | M26 |
| T 27 | 0 20 30 | 3°13'40 | 12♏34 | 22°26 | 18°19 | 12° 8 | 23°12 | 15°30 | 17°21 | 21°21 | 1°14 | 18°D32 | 19°58 | 20°26 | 9°39 | T 27 |
| W28 | 0 24 27 | 4°12'34 | 25°18 | 24°14 | 19° 8 | 12°46 | 23° 8 | 15°25 | 17°20 | 21°23 | 1°14 | 18°32 | 19°55 | 20°33 | 9°41 | W28 |
| T 29 | 0 28 23 | 5°11'30 | 7♐42 | 26° 3 | 19°56 | 13°24 | 23° 4 | 15°21 | 17°18 | 21°25 | 1°15 | 18°33 | 19°52 | 20°39 | 9°43 | T 29 |
| F 30 | 0 32 20 | 6♎10'27 | 19♐51 | 27♍52 | 20♏44 | 14♍ 2 | 23♒ 0 | 15♈16 | 17♉16 | 21♍28 | 1♌16 | 18♏35 | 19♏49 | 20♑46 | 9♋45 | F 30 |

Delta T = 24.12 sec

## OCTOBER 1938 — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S 1 | 0 36 16 | 7♎ 9'27 | 1♑49 | 29♍40 | 21♏30 | 14♍40 | 22°R57 | 15°R11 | 17°R15 | 21♍30 | 1♌17 | 18°R36 | 19♏45 | 20♑53 | 9♋47 | S 1 |
| S 2 | 0 40 13 | 8° 8'28 | 13°42 | 1♎29 | 22°16 | 15°18 | 22♒53 | 15♈ 7 | 17♉13 | 21°32 | 1°18 | 18♏36 | 19°42 | 21° 0 | 9°48 | S 2 |
| M 3 | 0 44 10 | 9° 7'30 | 25°33 | 3°17 | 23° 1 | 15°56 | 22°50 | 15° 2 | 17°11 | 21°34 | 1°19 | 18°34 | 19°39 | 21° 6 | 9°50 | M 3 |
| T 4 | 0 48 6 | 10° 6'35 | 7♒29 | 5° 5 | 23°46 | 16°34 | 22°47 | 14°57 | 17° 9 | 21°36 | 1°19 | 18°31 | 19°36 | 21°13 | 9°51 | T 4 |
| W 5 | 0 52 3 | 11° 5'41 | 19°34 | 6°53 | 24°29 | 17°12 | 22°44 | 14°53 | 17° 8 | 21°38 | 1°20 | 18°26 | 19°33 | 21°20 | 9°53 | W 5 |
| T 6 | 0 55 59 | 12° 4'49 | 1♓50 | 8°40 | 25°11 | 17°50 | 22°41 | 14°48 | 17° 6 | 21°40 | 1°21 | 18°21 | 19°30 | 21°26 | 9°54 | T 6 |
| F 7 | 0 59 56 | 13° 3'59 | 14°20 | 10°26 | 25°52 | 18°28 | 22°39 | 14°43 | 17° 4 | 21°43 | 1°22 | 18°14 | 19°26 | 21°33 | 9°55 | F 7 |
| S 8 | 1 3 52 | 14° 3'11 | 27° 6 | 12°11 | 26°32 | 19° 6 | 22°36 | 14°39 | 17° 2 | 21°45 | 1°22 | 18° 8 | 19°23 | 21°40 | 9°56 | S 8 |
| S 9 | 1 7 49 | 15° 2'25 | 10♈ 8 | 13°56 | 27°11 | 19°44 | 22°34 | 14°34 | 17° 0 | 21°47 | 1°23 | 18° 3 | 19°20 | 21°46 | 9°57 | S 9 |
| M10 | 1 11 45 | 16° 1'41 | 23°26 | 15°40 | 27°49 | 20°22 | 22°32 | 14°29 | 16°58 | 21°49 | 1°23 | 18° 0 | 19°17 | 21°53 | 9°58 | M10 |
| T 11 | 1 15 42 | 17° 0'58 | 6♉57 | 17°24 | 28°25 | 21° 0 | 22°30 | 14°24 | 16°56 | 21°51 | 1°24 | 17°58 | 19°14 | 22° 0 | 9°59 | T 11 |
| W12 | 1 19 38 | 18° 0'18 | 20°40 | 19° 7 | 29° 0 | 21°38 | 22°29 | 14°20 | 16°54 | 21°53 | 1°25 | 17°D57 | 19°10 | 22° 7 | 10° 0 | W12 |
| T 13 | 1 23 35 | 18°59'41 | 4♊33 | 20°49 | 29°34 | 22°15 | 22°27 | 14°15 | 16°52 | 21°55 | 1°25 | 17°58 | 19° 7 | 22°13 | 10° 0 | T 13 |
| F 14 | 1 27 32 | 19°59'05 | 18°33 | 22°30 | 0♐ 7 | 22°53 | 22°26 | 14°10 | 16°50 | 21°57 | 1°26 | 17°59 | 19° 4 | 22°20 | 10° 1 | F 14 |
| S 15 | 1 31 28 | 20°58'32 | 2♋38 | 24°10 | 0°38 | 23°31 | 22°25 | 14° 6 | 16°47 | 21°59 | 1°26 | 18° 1 | 19° 1 | 22°27 | 10° 1 | S 15 |
| S 16 | 1 35 25 | 21°58'02 | 16°48 | 25°50 | 1° 8 | 24° 9 | 22°25 | 14° 1 | 16°45 | 22° 1 | 1°27 | 18°R 2 | 18°58 | 22°33 | 10° 2 | S 16 |
| M17 | 1 39 21 | 22°57'33 | 0♌59 | 27°29 | 1°36 | 24°47 | 22°24 | 13°56 | 16°43 | 22° 3 | 1°27 | 18° 2 | 18°55 | 22°40 | 10° 2 | M17 |
| T 18 | 1 43 18 | 23°57'07 | 15°11 | 29° 8 | 2° 3 | 25°25 | 22°24 | 13°52 | 16°41 | 22° 5 | 1°28 | 18° 0 | 18°51 | 22°47 | 10° 3 | T 18 |
| W19 | 1 47 14 | 24°56'43 | 29°20 | 0♏46 | 2°27 | 26° 3 | 22°D24 | 13°47 | 16°39 | 22° 7 | 1°28 | 17°58 | 18°48 | 22°54 | 10° 3 | W19 |
| T 20 | 1 51 11 | 25°56'22 | 13♍23 | 2°23 | 2°51 | 26°41 | 22°24 | 13°42 | 16°36 | 22° 9 | 1°28 | 17°55 | 18°45 | 23° 0 | 10°R 3 | T 20 |
| F 21 | 1 55 7 | 26°56'02 | 27°17 | 4° 0 | 3°12 | 27°19 | 22°24 | 13°38 | 16°34 | 22°11 | 1°29 | 17°52 | 18°42 | 23° 7 | 10° 3 | F 21 |
| S 22 | 1 59 4 | 27°55'45 | 11♎ 0 | 5°36 | 3°32 | 27°56 | 22°24 | 13°33 | 16°32 | 22°13 | 1°29 | 17°49 | 18°39 | 23°14 | 10° 3 | S 22 |
| S 23 | 2 3 1 | 28°55'30 | 24°28 | 7°11 | 3°50 | 28°34 | 22°25 | 13°29 | 16°29 | 22°15 | 1°29 | 17°47 | 18°36 | 23°20 | 10° 3 | S 23 |
| M24 | 2 6 57 | 29°55'17 | 7♏40 | 8°46 | 4° 5 | 29°12 | 22°26 | 13°24 | 16°27 | 22°16 | 1°29 | 17°46 | 18°32 | 23°27 | 10° 2 | M24 |
| T 25 | 2 10 54 | 0♏55'05 | 20°34 | 10°21 | 4°19 | 29°50 | 22°27 | 13°20 | 16°25 | 22°18 | 1°30 | 17°D45 | 18°29 | 23°34 | 10° 2 | T 25 |
| W26 | 2 14 50 | 1°54'56 | 3♐11 | 11°54 | 4°31 | 0♎28 | 22°28 | 13°16 | 16°22 | 22°20 | 1°30 | 17°46 | 18°26 | 23°40 | 10° 1 | W26 |
| T 27 | 2 18 47 | 2°54'49 | 15°32 | 13°28 | 4°41 | 1° 6 | 22°30 | 13°11 | 16°20 | 22°22 | 1°30 | 17°47 | 18°23 | 23°47 | 10° 1 | T 27 |
| F 28 | 2 22 43 | 3°54'43 | 27°40 | 15° 1 | 4°48 | 1°44 | 22°31 | 13° 7 | 16°17 | 22°24 | 1°30 | 17°48 | 18°20 | 23°54 | 10° 0 | F 28 |
| S 29 | 2 26 40 | 4°54'39 | 9♑39 | 16°33 | 4°53 | 2°21 | 22°33 | 13° 3 | 16°15 | 22°25 | 1°30 | 17°50 | 18°16 | 24° 1 | 10° 0 | S 29 |
| S 30 | 2 30 36 | 5°54'37 | 21°32 | 18° 5 | 4°56 | 2°59 | 22°35 | 12°59 | 16°13 | 22°27 | 1°31 | 17°51 | 18°13 | 24° 7 | 9°59 | S 30 |
| M31 | 2 34 33 | 6♏54'36 | 3♒24 | 19♏36 | 4°R56 | 3♎37 | 22♒38 | 12♈55 | 16♉10 | 22♍29 | 1♌31 | 17°R51 | 18♏10 | 24♑14 | 9♋58 | M31 |

Delta T = 24.13 sec


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# ASTRODIENST EPHEMERIS for the year 1938

## NOVEMBER 1938 — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T 1 | 2 38 30 | 7♏54'37 | 15♒19 | 21♏ 7 | 4°R54 | 4♎15 | 22♒40 | 12°R50 | 16°R 8 | 22♍31 | 1♌31 | 17°R51 | 18♏ 7 | 24♑21 | 9°R57 | T 1 |
| W 2 | 2 42 26 | 8°54'39 | 27°23 | 22°37 | 4♐50 | 4°53 | 22°43 | 12♈46 | 16♉ 5 | 22°32 | 1°31 | 17♏50 | 18° 4 | 24°27 | 9♋56 | W 2 |
| T 3 | 2 46 23 | 9°54'43 | 9♓40 | 24° 7 | 4°43 | 5°31 | 22°46 | 12°43 | 16° 3 | 22°34 | 1°R31 | 17°50 | 18° 1 | 24°34 | 9°55 | T 3 |
| F 4 | 2 50 19 | 10°54'49 | 22°13 | 25°36 | 4°34 | 6° 8 | 22°49 | 12°39 | 16° 0 | 22°35 | 1°31 | 17°49 | 17°57 | 24°41 | 9°54 | F 4 |
| S 5 | 2 54 16 | 11°54'56 | 5♈ 6 | 27° 5 | 4°22 | 6°46 | 22°52 | 12°35 | 15°58 | 22°37 | 1°31 | 17°48 | 17°54 | 24°48 | 9°52 | S 5 |
| S 6 | 2 58 12 | 12°55'05 | 18°19 | 28°34 | 4° 8 | 7°24 | 22°55 | 12°31 | 15°55 | 22°39 | 1°31 | 17°47 | 17°51 | 24°54 | 9°51 | S 6 |
| M 7 | 3 2 9 | 13°55'16 | 1♉54 | 0♐ 2 | 3°51 | 8° 2 | 22°59 | 12°27 | 15°53 | 22°40 | 1°30 | 17°47 | 17°48 | 25° 1 | 9°50 | M 7 |
| T 8 | 3 6 5 | 14°55'28 | 15°48 | 1°29 | 3°32 | 8°39 | 23° 3 | 12°24 | 15°50 | 22°42 | 1°30 | 17°D47 | 17°45 | 25° 8 | 9°48 | T 8 |
| W 9 | 3 10 2 | 15°55'42 | 29°58 | 2°56 | 3°11 | 9°17 | 23° 7 | 12°20 | 15°48 | 22°43 | 1°30 | 17°47 | 17°41 | 25°14 | 9°47 | W 9 |
| T 10 | 3 13 59 | 16°55'58 | 14♊20 | 4°22 | 2°48 | 9°55 | 23°11 | 12°17 | 15°45 | 22°45 | 1°30 | 17°47 | 17°38 | 25°21 | 9°45 | T 10 |
| F 11 | 3 17 55 | 17°56'16 | 28°48 | 5°48 | 2°22 | 10°33 | 23°15 | 12°13 | 15°43 | 22°46 | 1°30 | 17°R47 | 17°35 | 25°28 | 9°43 | F 11 |
| S 12 | 3 21 52 | 18°56'36 | 13♋17 | 7°13 | 1°55 | 11°11 | 23°20 | 12°10 | 15°40 | 22°48 | 1°30 | 17°47 | 17°32 | 25°35 | 9°41 | S 12 |
| S 13 | 3 25 48 | 19°56'58 | 27°43 | 8°37 | 1°26 | 11°48 | 23°25 | 12° 7 | 15°38 | 22°49 | 1°29 | 17°47 | 17°29 | 25°41 | 9°39 | S 13 |
| M14 | 3 29 45 | 20°57'22 | 12♌ 0 | 10° 0 | 0°55 | 12°26 | 23°30 | 12° 4 | 15°36 | 22°50 | 1°29 | 17°46 | 17°26 | 25°48 | 9°37 | M14 |
| T 15 | 3 33 41 | 21°57'47 | 26° 8 | 11°23 | 0°22 | 13° 4 | 23°35 | 12° 1 | 15°33 | 22°52 | 1°29 | 17°D46 | 17°22 | 25°55 | 9°35 | T 15 |
| W16 | 3 37 38 | 22°58'15 | 10♍ 3 | 12°44 | 29♏49 | 13°42 | 23°40 | 11°58 | 15°31 | 22°53 | 1°28 | 17°47 | 17°19 | 26° 1 | 9°33 | W16 |
| T 17 | 3 41 34 | 23°58'44 | 23°46 | 14° 4 | 29°14 | 14°19 | 23°45 | 11°55 | 15°28 | 22°54 | 1°28 | 17°47 | 17°16 | 26° 8 | 9°31 | T 17 |
| F 18 | 3 45 31 | 24°59'15 | 7♎15 | 15°24 | 28°39 | 14°57 | 23°51 | 11°52 | 15°26 | 22°56 | 1°28 | 17°48 | 17°13 | 26°15 | 9°29 | F 18 |
| S 19 | 3 49 28 | 25°59'48 | 20°31 | 16°41 | 28° 3 | 15°35 | 23°57 | 11°49 | 15°23 | 22°57 | 1°27 | 17°48 | 17°10 | 26°22 | 9°26 | S 19 |
| S 20 | 3 53 24 | 27° 0'23 | 3♏33 | 17°58 | 27°27 | 16°13 | 24° 3 | 11°47 | 15°21 | 22°58 | 1°27 | 17°49 | 17° 7 | 26°28 | 9°24 | S 20 |
| M21 | 3 57 21 | 28° 0'59 | 16°23 | 19°12 | 26°50 | 16°50 | 24° 9 | 11°44 | 15°18 | 22°59 | 1°26 | 17°R49 | 17° 3 | 26°35 | 9°21 | M21 |
| T 22 | 4 1 17 | 29° 1'37 | 28°59 | 20°24 | 26°14 | 17°28 | 24°15 | 11°42 | 15°16 | 23° 0 | 1°26 | 17°49 | 17° 0 | 26°42 | 9°19 | T 22 |
| W23 | 4 5 14 | 0♐ 2'16 | 11♐24 | 21°35 | 25°38 | 18° 6 | 24°22 | 11°39 | 15°14 | 23° 2 | 1°25 | 17°48 | 16°57 | 26°48 | 9°16 | W23 |
| T 24 | 4 9 10 | 1° 2'57 | 23°38 | 22°42 | 25° 3 | 18°44 | 24°28 | 11°37 | 15°11 | 23° 3 | 1°25 | 17°47 | 16°54 | 26°55 | 9°13 | T 24 |
| F 25 | 4 13 7 | 2° 3'39 | 5♑42 | 23°47 | 24°29 | 19°21 | 24°35 | 11°35 | 15° 9 | 23° 4 | 1°24 | 17°45 | 16°51 | 27° 2 | 9°10 | F 25 |
| S 26 | 4 17 3 | 3° 4'22 | 17°39 | 24°48 | 23°56 | 19°59 | 24°42 | 11°33 | 15° 7 | 23° 5 | 1°24 | 17°42 | 16°47 | 27° 9 | 9° 8 | S 26 |
| S 27 | 4 21 0 | 4° 5'07 | 29°31 | 25°45 | 23°24 | 20°37 | 24°49 | 11°31 | 15° 4 | 23° 6 | 1°23 | 17°40 | 16°44 | 27°15 | 9° 5 | S 27 |
| M28 | 4 24 57 | 5° 5'52 | 11♒22 | 26°38 | 22°53 | 21°14 | 24°57 | 11°29 | 15° 2 | 23° 7 | 1°22 | 17°38 | 16°41 | 27°22 | 9° 2 | M28 |
| T 29 | 4 28 53 | 6° 6'39 | 23°16 | 27°26 | 22°25 | 21°52 | 25° 4 | 11°27 | 15° 0 | 23° 8 | 1°22 | 17°36 | 16°38 | 27°29 | 8°59 | T 29 |
| W30 | 4 32 50 | 7♐ 7'26 | 5♓17 | 28♐ 8 | 21♏58 | 22♎30 | 25♒12 | 11♈26 | 14♉57 | 23♍ 8 | 1♌21 | 17°D36 | 16♏35 | 27♑35 | 8♋56 | W30 |

Delta T = 24.15 sec

## DECEMBER 1938 — 00:00 UT

| Day | Sid.t | ☉ | ☽ | ☿ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ☊ | ☊ | ⚸ | ⚷ | Day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| T 1 | 4 36 46 | 8♐ 8'14 | 17♓29 | 28♐43 | 21°R33 | 23♎ 7 | 25♒19 | 11°R24 | 14°R55 | 23♍ 9 | 1°R20 | 17♏36 | 16♏32 | 27♑42 | 8°R52 | T 1 |
| F 2 | 4 40 43 | 9° 9'03 | 29°59 | 29°12 | 21♏11 | 23°45 | 25°27 | 11♈23 | 14♉53 | 23°10 | 1♌20 | 17°37 | 16°28 | 27°49 | 8♋49 | F 2 |
| S 3 | 4 44 39 | 10° 9'54 | 12♈49 | 29°32 | 20°50 | 24°23 | 25°35 | 11°21 | 14°51 | 23°11 | 1°19 | 17°39 | 16°25 | 27°56 | 8°46 | S 3 |
| S 4 | 4 48 36 | 11°10'45 | 26° 3 | 29°44 | 20°32 | 25° 0 | 25°44 | 11°20 | 14°49 | 23°12 | 1°18 | 17°40 | 16°22 | 28° 2 | 8°43 | S 4 |
| M 5 | 4 52 32 | 12°11'36 | 9♉43 | 29°R46 | 20°16 | 25°38 | 25°52 | 11°19 | 14°46 | 23°12 | 1°17 | 17°41 | 16°19 | 28° 9 | 8°39 | M 5 |
| T 6 | 4 56 29 | 13°12'29 | 23°49 | 29°38 | 20° 3 | 26°15 | 26° 0 | 11°18 | 14°44 | 23°13 | 1°17 | 17°R41 | 16°16 | 28°16 | 8°36 | T 6 |
| W 7 | 5 0 26 | 14°13'23 | 8♊18 | 29°18 | 19°52 | 26°53 | 26° 9 | 11°17 | 14°42 | 23°14 | 1°16 | 17°40 | 16°13 | 28°22 | 8°32 | W 7 |
| T 8 | 5 4 22 | 15°14'18 | 23° 5 | 28°47 | 19°44 | 27°31 | 26°18 | 11°16 | 14°40 | 23°15 | 1°15 | 17°37 | 16° 9 | 28°29 | 8°29 | T 8 |
| F 9 | 5 8 19 | 16°15'14 | 8♋ 2 | 28° 5 | 19°38 | 28° 8 | 26°27 | 11°16 | 14°38 | 23°15 | 1°14 | 17°34 | 16° 6 | 28°36 | 8°25 | F 9 |
| S 10 | 5 12 15 | 17°16'11 | 23° 0 | 27°12 | 19°35 | 28°46 | 26°36 | 11°15 | 14°36 | 23°16 | 1°13 | 17°29 | 16° 3 | 28°43 | 8°22 | S 10 |
| S 11 | 5 16 12 | 18°17'09 | 7♌50 | 26° 9 | 19°D34 | 29°23 | 26°45 | 11°15 | 14°34 | 23°16 | 1°12 | 17°25 | 16° 0 | 28°49 | 8°18 | S 11 |
| M12 | 5 20 8 | 19°18'08 | 22°27 | 24°58 | 19°36 | 0♏ 1 | 26°54 | 11°14 | 14°32 | 23°17 | 1°11 | 17°21 | 15°57 | 28°56 | 8°15 | M12 |
| T 13 | 5 24 5 | 20°19'08 | 6♍44 | 23°40 | 19°40 | 0°38 | 27° 4 | 11°14 | 14°30 | 23°17 | 1°10 | 17°19 | 15°53 | 29° 3 | 8°11 | T 13 |
| W14 | 5 28 1 | 21°20'09 | 20°40 | 22°18 | 19°46 | 1°16 | 27°13 | 11°14 | 14°29 | 23°18 | 1° 9 | 17°D18 | 15°50 | 29° 9 | 8° 7 | W14 |
| T 15 | 5 31 58 | 22°21'11 | 4♎14 | 20°55 | 19°55 | 1°54 | 27°23 | 11°D14 | 14°27 | 23°18 | 1° 8 | 17°19 | 15°47 | 29°16 | 8° 3 | T 15 |
| F 16 | 5 35 55 | 23°22'14 | 17°28 | 19°34 | 20° 6 | 2°31 | 27°33 | 11°14 | 14°25 | 23°18 | 1° 7 | 17°20 | 15°44 | 29°23 | 7°59 | F 16 |
| S 17 | 5 39 51 | 24°23'19 | 0♏25 | 18°17 | 20°19 | 3° 9 | 27°43 | 11°14 | 14°23 | 23°19 | 1° 6 | 17°22 | 15°41 | 29°30 | 7°56 | S 17 |
| S 18 | 5 43 48 | 25°24'24 | 13° 7 | 17° 6 | 20°35 | 3°46 | 27°53 | 11°14 | 14°22 | 23°19 | 1° 5 | 17°R23 | 15°38 | 29°36 | 7°52 | S 18 |
| M19 | 5 47 44 | 26°25'30 | 25°37 | 16° 4 | 20°52 | 4°24 | 28° 3 | 11°15 | 14°20 | 23°19 | 1° 4 | 17°23 | 15°34 | 29°43 | 7°48 | M19 |
| T 20 | 5 51 41 | 27°26'37 | 7♐56 | 15°12 | 21°11 | 5° 1 | 28°13 | 11°15 | 14°18 | 23°20 | 1° 3 | 17°20 | 15°31 | 29°50 | 7°44 | T 20 |
| W21 | 5 55 37 | 28°27'44 | 20° 7 | 14°30 | 21°33 | 5°39 | 28°24 | 11°16 | 14°17 | 23°20 | 1° 2 | 17°16 | 15°28 | 29°57 | 7°40 | W21 |
| T 22 | 5 59 34 | 29°28'52 | 2♑11 | 13°59 | 21°56 | 6°16 | 28°34 | 11°17 | 14°15 | 23°20 | 1° 1 | 17°10 | 15°25 | 0♒ 3 | 7°36 | T 22 |
| F 23 | 6 3 30 | 0♑30'00 | 14° 9 | 13°39 | 22°21 | 6°53 | 28°45 | 11°17 | 14°14 | 23°20 | 1° 0 | 17° 2 | 15°22 | 0°10 | 7°32 | F 23 |
| S 24 | 6 7 27 | 1°31'09 | 26° 3 | 13°D29 | 22°48 | 7°31 | 28°56 | 11°18 | 14°12 | 23°20 | 0°59 | 16°53 | 15°19 | 0°17 | 7°28 | S 24 |
| S 25 | 6 11 24 | 2°32'18 | 7♒55 | 13°30 | 23°16 | 8° 8 | 29° 7 | 11°19 | 14°11 | 23°20 | 0°58 | 16°43 | 15°15 | 0°23 | 7°24 | S 25 |
| M26 | 6 15 20 | 3°33'27 | 19°46 | 13°39 | 23°46 | 8°46 | 29°18 | 11°21 | 14° 9 | 23°R20 | 0°57 | 16°35 | 15°12 | 0°30 | 7°20 | M26 |
| T 27 | 6 19 17 | 4°34'36 | 1♓39 | 13°57 | 24°18 | 9°23 | 29°29 | 11°22 | 14° 8 | 23°20 | 0°55 | 16°28 | 15° 9 | 0°37 | 7°16 | T 27 |
| W28 | 6 23 13 | 5°35'46 | 13°38 | 14°23 | 24°51 | 10° 0 | 29°40 | 11°23 | 14° 7 | 23°20 | 0°54 | 16°23 | 15° 6 | 0°44 | 7°12 | W28 |
| T 29 | 6 27 10 | 6°36'55 | 25°47 | 14°55 | 25°26 | 10°38 | 29°51 | 11°25 | 14° 5 | 23°20 | 0°53 | 16°20 | 15° 3 | 0°50 | 7° 8 | T 29 |
| F 30 | 6 31 6 | 7°38'04 | 8♈10 | 15°34 | 26° 2 | 11°15 | 0♓ 3 | 11°26 | 14° 4 | 23°20 | 0°52 | 16°D20 | 14°59 | 0°57 | 7° 4 | F 30 |
| S 31 | 6 35 3 | 8♑39'13 | 20♈53 | 16♐18 | 26♏39 | 11♏52 | 0♓14 | 11♈28 | 14♉ 3 | 23♍20 | 0♌51 | 16♏20 | 14♏56 | 1♒ 4 | 7♋ 0 | S 31 |

Delta T = 24.16 sec



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