



Astrodienst Ephemeris Tables for the year 2039

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 EPHEMERIS for the year 2039

JANUARY 2039

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♁ | ♂ | ♃ | ♅ | ♁ | ♄ | ♁ | ♁ | ♁ | ♁ | ♁ | ♁ | Day |
|------|---------|----------|-------|-------|-------|-------|-------|--------|--------|--------|-------|-------|-------|-------|-------|------|-----|
| S 1 | 6 42 2 | 10♁24'08 | 25♁33 | 26♁43 | 28♁43 | 21♁53 | 1°R 6 | 29♁14 | 27°R26 | 28°R35 | 22♁38 | 1°R 8 | 0♁44 | 20♁21 | 0°R29 | S 1 | |
| S 2 | 6 45 59 | 11°25'17 | 7♁53 | 28°14 | 29°58 | 22°37 | 1♁ 3 | 29°15 | 27♁23 | 28♁34 | 22°39 | 1°D 8 | 0°41 | 20°28 | 0♁25 | S 2 | |
| M 3 | 6 49 56 | 12°26'26 | 19°59 | 29°45 | 1♁13 | 23°21 | 1° 0 | 29°16 | 27°21 | 28°34 | 22°41 | 1♁ 8 | 0°38 | 20°34 | 0°21 | M 3 | |
| T 4 | 6 53 52 | 13°27'35 | 1♁54 | 1♁16 | 2°28 | 24° 5 | 0°57 | 29°16 | 27°18 | 28°34 | 22°42 | 1° 8 | 0°35 | 20°41 | 0°17 | T 4 | |
| W 5 | 6 57 49 | 14°28'43 | 13°44 | 2°47 | 3°43 | 24°49 | 0°53 | 29°17 | 27°16 | 28°34 | 22°44 | 1° 9 | 0°32 | 20°48 | 0°14 | W 5 | |
| T 6 | 7 1 45 | 15°29'52 | 25°34 | 4°20 | 4°58 | 25°33 | 0°50 | 29°17 | 27°13 | 28°34 | 22°45 | 1°11 | 0°29 | 20°54 | 0°10 | T 6 | |
| F 7 | 7 5 42 | 16°31'00 | 7♁26 | 5°52 | 6°13 | 26°17 | 0°46 | 29°17 | 27°11 | 28°34 | 22°46 | 1°12 | 0°25 | 21° 1 | 0° 6 | F 7 | |
| S 8 | 7 9 38 | 17°32'08 | 19°26 | 7°25 | 7°28 | 27° 1 | 0°42 | 29°R17 | 27° 8 | 28°34 | 22°48 | 1°13 | 0°22 | 21° 8 | 0° 3 | S 8 | |
| S 9 | 7 13 35 | 18°33'16 | 1♁35 | 8°58 | 8°43 | 27°45 | 0°38 | 29°17 | 27° 6 | 28°D34 | 22°49 | 1°R14 | 0°19 | 21°14 | 29♁59 | S 9 | |
| M10 | 7 17 31 | 19°34'23 | 13°56 | 10°32 | 9°58 | 28°29 | 0°33 | 29°17 | 27° 3 | 28°34 | 22°51 | 1°13 | 0°16 | 21°21 | 29°55 | M10 | |
| T 11 | 7 21 28 | 20°35'30 | 26°31 | 12° 6 | 11°13 | 29°14 | 0°29 | 29°17 | 27° 1 | 28°34 | 22°52 | 1°12 | 0°13 | 21°28 | 29°52 | T 11 | |
| W12 | 7 25 25 | 21°36'37 | 9♁19 | 13°40 | 12°28 | 29°58 | 0°24 | 29°17 | 26°58 | 28°34 | 22°54 | 1° 9 | 0° 9 | 21°34 | 29°48 | W12 | |
| T 13 | 7 29 21 | 22°37'44 | 22°21 | 15°15 | 13°43 | 0♁42 | 0°19 | 29°16 | 26°55 | 28°34 | 22°56 | 1° 6 | 0° 6 | 21°41 | 29°45 | T 13 | |
| F 14 | 7 33 18 | 23°38'50 | 5♁36 | 16°50 | 14°58 | 1°26 | 0°14 | 29°16 | 26°53 | 28°34 | 22°57 | 1° 2 | 0° 3 | 21°48 | 29°41 | F 14 | |
| S 15 | 7 37 14 | 24°39'57 | 19° 4 | 18°26 | 16°13 | 2°11 | 0° 9 | 29°15 | 26°50 | 28°34 | 22°59 | 0°59 | 29♁59 | 21°54 | 29°38 | S 15 | |
| S 16 | 7 41 11 | 25°41'03 | 2♁44 | 20° 3 | 17°27 | 2°55 | 0° 3 | 29°14 | 26°48 | 28°35 | 23° 0 | 0°56 | 29°57 | 22° 1 | 29°35 | S 16 | |
| M17 | 7 45 7 | 26°42'09 | 16°35 | 21°39 | 18°42 | 3°40 | 29♁58 | 29°14 | 26°45 | 28°35 | 23° 2 | 0°55 | 29°54 | 22° 8 | 29°31 | M17 | |
| T 18 | 7 49 4 | 27°43'14 | 0♁37 | 23°17 | 19°57 | 4°24 | 29°52 | 29°13 | 26°42 | 28°35 | 23° 3 | 0°D54 | 29°50 | 22°14 | 29°28 | T 18 | |
| W19 | 7 53 0 | 28°44'20 | 14°47 | 24°55 | 21°12 | 5° 9 | 29°46 | 29°11 | 26°40 | 28°35 | 23° 5 | 0°55 | 29°47 | 22°21 | 29°25 | W19 | |
| T 20 | 7 56 57 | 29°45'25 | 29° 4 | 26°33 | 22°27 | 5°53 | 29°40 | 29°10 | 26°37 | 28°36 | 23° 7 | 0°57 | 29°44 | 22°28 | 29°22 | T 20 | |
| F 21 | 8 0 54 | 0♁46'31 | 13♁27 | 28°12 | 23°42 | 6°38 | 29°34 | 29° 9 | 26°34 | 28°36 | 23° 8 | 0°58 | 29°41 | 22°34 | 29°19 | F 21 | |
| S 22 | 8 4 50 | 1°47'35 | 27°51 | 29°52 | 24°56 | 7°23 | 29°28 | 29° 8 | 26°32 | 28°37 | 23°10 | 0°R59 | 29°38 | 22°41 | 29°15 | S 22 | |
| S 23 | 8 8 47 | 2°48'40 | 12♁12 | 1♁32 | 26°11 | 8° 7 | 29°22 | 29° 6 | 26°29 | 28°37 | 23°12 | 0°58 | 29°35 | 22°48 | 29°12 | S 23 | |
| M24 | 8 12 43 | 3°49'43 | 26°26 | 3°13 | 27°26 | 8°52 | 29°15 | 29° 4 | 26°27 | 28°38 | 23°13 | 0°56 | 29°31 | 22°54 | 29° 9 | M24 | |
| T 25 | 8 16 40 | 4°50'46 | 10♁27 | 4°54 | 28°41 | 9°37 | 29° 9 | 29° 3 | 26°24 | 28°38 | 23°15 | 0°52 | 29°28 | 23° 1 | 29° 7 | T 25 | |
| W26 | 8 20 36 | 5°51'49 | 24°11 | 6°36 | 29°55 | 10°22 | 29° 2 | 29° 1 | 26°22 | 28°39 | 23°17 | 0°47 | 29°25 | 23° 8 | 29° 4 | W26 | |
| T 27 | 8 24 33 | 6°52'50 | 7♁36 | 8°18 | 1♁10 | 11° 6 | 28°55 | 28°59 | 26°19 | 28°39 | 23°18 | 0°41 | 29°22 | 23°14 | 29° 1 | T 27 | |
| F 28 | 8 28 30 | 7°53'50 | 20°39 | 10° 1 | 2°24 | 11°51 | 28°48 | 28°57 | 26°16 | 28°40 | 23°20 | 0°34 | 29°19 | 23°21 | 28°58 | F 28 | |
| S 29 | 8 32 26 | 8°54'49 | 3♁21 | 11°45 | 3°39 | 12°36 | 28°41 | 28°55 | 26°14 | 28°41 | 23°22 | 0°29 | 29°15 | 23°28 | 28°56 | S 29 | |
| S 30 | 8 36 23 | 9°55'47 | 15°45 | 13°29 | 4°54 | 13°21 | 28°34 | 28°53 | 26°11 | 28°41 | 23°24 | 0°24 | 29°12 | 23°35 | 28°53 | S 30 | |
| M31 | 8 40 19 | 10♁56'44 | 27♁52 | 15♁14 | 6♁ 8 | 14♁ 6 | 28♁27 | 28♁50 | 26♁ 9 | 28♁42 | 23♁25 | 0♁21 | 29♁ 9 | 23♁41 | 28♁50 | M31 | |

Delta T = 75.16 sec

FEBRUARY 2039

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♁ | ♂ | ♃ | ♅ | ♁ | ♄ | ♁ | ♁ | ♁ | ♁ | ♁ | ♁ | Day |
|------|----------|----------|-------|-------|-------|-------|--------|--------|--------|-------|-------|--------|-------|-------|--------|------|-----|
| T 1 | 8 44 16 | 11♁57'39 | 9♁49 | 17♁ 0 | 7♁23 | 14♁51 | 28°R20 | 28°R48 | 26°R 6 | 28♁43 | 23♁27 | 0°D20 | 29♁ 6 | 23♁48 | 28°R48 | T 1 | |
| W 2 | 8 48 12 | 12°58'33 | 21°39 | 18°46 | 8°37 | 15°36 | 28♁12 | 28♁45 | 26♁ 4 | 28°44 | 23°29 | 0♁20 | 29° 3 | 23°55 | 28♁45 | W 2 | |
| T 3 | 8 52 9 | 13°59'26 | 3♁28 | 20°32 | 9°52 | 16°21 | 28° 5 | 28°43 | 26° 1 | 28°45 | 23°30 | 0°22 | 29° 0 | 24° 1 | 28°43 | T 3 | |
| F 4 | 8 56 5 | 15° 0'18 | 15°22 | 22°19 | 11° 6 | 17° 6 | 27°57 | 28°40 | 25°59 | 28°46 | 23°32 | 0°23 | 28°56 | 24° 8 | 28°41 | F 4 | |
| S 5 | 9 0 2 | 16° 1'09 | 27°24 | 24° 5 | 12°20 | 17°52 | 27°50 | 28°37 | 25°57 | 28°46 | 23°34 | 0°R24 | 28°53 | 24°15 | 28°39 | S 5 | |
| S 6 | 9 3 59 | 17° 1'58 | 9♁40 | 25°53 | 13°35 | 18°37 | 27°42 | 28°34 | 25°54 | 28°47 | 23°36 | 0°24 | 28°50 | 24°21 | 28°37 | S 6 | |
| M 7 | 9 7 55 | 18° 2'45 | 22°10 | 27°40 | 14°49 | 19°22 | 27°34 | 28°32 | 25°52 | 28°48 | 23°37 | 0°21 | 28°47 | 24°28 | 28°34 | M 7 | |
| T 8 | 9 11 52 | 19° 3'32 | 5♁ 2 | 29°27 | 16° 3 | 20° 7 | 27°26 | 28°28 | 25°49 | 28°49 | 23°39 | 0°17 | 28°44 | 24°35 | 28°32 | T 8 | |
| W 9 | 9 15 48 | 20° 4'17 | 18°12 | 1♁14 | 17°17 | 20°53 | 27°19 | 28°25 | 25°47 | 28°50 | 23°41 | 0°10 | 28°41 | 24°41 | 28°31 | W 9 | |
| T 10 | 9 19 45 | 21° 5'01 | 1♁39 | 3° 0 | 18°31 | 21°38 | 27°11 | 28°22 | 25°45 | 28°52 | 23°43 | 0° 2 | 28°37 | 24°48 | 28°29 | T 10 | |
| F 11 | 9 23 41 | 22° 5'43 | 15°22 | 4°45 | 19°46 | 22°23 | 27° 3 | 28°19 | 25°43 | 28°53 | 23°44 | 29♁52 | 28°34 | 24°55 | 28°27 | F 11 | |
| S 12 | 9 27 38 | 23° 6'24 | 29°17 | 6°30 | 21° 0 | 23° 9 | 26°55 | 28°16 | 25°40 | 28°54 | 23°46 | 29°43 | 28°31 | 25° 1 | 28°25 | S 12 | |
| S 13 | 9 31 34 | 24° 7'04 | 13♁20 | 8°13 | 22°14 | 23°54 | 26°47 | 28°12 | 25°38 | 28°55 | 23°48 | 29°36 | 28°28 | 25° 8 | 28°24 | S 13 | |
| M14 | 9 35 31 | 25° 7'43 | 27°27 | 9°54 | 23°28 | 24°39 | 26°39 | 28° 9 | 25°36 | 28°56 | 23°50 | 29°30 | 28°25 | 25°15 | 28°22 | M14 | |
| T 15 | 9 39 28 | 26° 8'21 | 11♁36 | 11°33 | 24°42 | 25°25 | 26°31 | 28° 5 | 25°34 | 28°57 | 23°51 | 29°27 | 28°21 | 25°21 | 28°21 | T 15 | |
| W16 | 9 43 24 | 27° 8'58 | 25°44 | 13° 9 | 25°55 | 26°10 | 26°23 | 28° 1 | 25°32 | 28°59 | 23°53 | 29°D26 | 28°18 | 25°28 | 28°19 | W16 | |
| T 17 | 9 47 21 | 28° 9'34 | 9♁50 | 14°42 | 27° 9 | 26°56 | 26°15 | 27°58 | 25°30 | 29° 0 | 23°55 | 29°27 | 28°15 | 25°35 | 28°18 | T 17 | |
| F 18 | 9 51 17 | 29°10'08 | 23°52 | 16°11 | 28°23 | 27°42 | 26° 8 | 27°54 | 25°28 | 29° 1 | 23°57 | 29°R27 | 28°12 | 25°41 | 28°17 | F 18 | |
| S 19 | 9 55 14 | 0♁10'42 | 7♁51 | 17°36 | 29°37 | 28°27 | 26° 0 | 27°50 | 25°26 | 29° 3 | 23°58 | 29°27 | 28° 9 | 25°48 | 28°16 | S 19 | |
| S 20 | 9 59 10 | 1°11'14 | 21°44 | 18°55 | 0♁51 | 29°13 | 25°52 | 27°46 | 25°24 | 29° 4 | 24° 0 | 29°25 | 28° 6 | 25°55 | 28°15 | S 20 | |
| M21 | 10 3 7 | 2°11'44 | 5♁30 | 20° 9 | 2° 4 | 29°59 | 25°44 | 27°42 | 25°22 | 29° 5 | 24° 2 | 29°20 | 28° 2 | 26° 1 | 28°14 | M21 | |
| T 22 | 10 7 3 | 3°12'14 | 19° 7 | 21°16 | 3°18 | 0♁44 | 25°36 | 27°38 | 25°20 | 29° 7 | 24° 4 | 29°13 | 27°59 | 26° 8 | 28°13 | T 22 | |
| W23 | 10 11 0 | 4°12'41 | 2♁32 | 22°16 | 4°31 | 1°30 | 25°28 | 27°34 | 25°18 | 29° 8 | 24° 5 | 29° 2 | 27°56 | 26°15 | 28°12 | W23 | |
| T 24 | 10 14 57 | 5°13'07 | 15°42 | 23° 8 | 5°45 | 2°16 | 25°20 | 27°30 | 25°16 | 29°10 | 24° 7 | 28°51 | 27°53 | 26°21 | 28°11 | T 24 | |
| F 25 | 10 18 53 | 6°13'31 | 28°36 | 23°52 | 6°58 | 3° 1 | 25°13 | 27°25 | 25°14 | 29°11 | 24° 9 | 28°38 | 27°50 | 26°28 | 28°11 | F 25 | |
| S 26 | 10 22 50 | 7°13'54 | 11♁12 | 24°27 | 8°12 | 3°47 | 25° 5 | 27°21 | 25°12 | 29°13 | 24°11 | 28°27 | 27°47 | 26°35 | 28°10 | S 26 | |
| S 27 | 10 26 46 | 8°14'15 | 23°33 | 24°53 | 9°25 | 4°33 | 24°58 | 27°17 | 25°11 | 29°14 | 24°12 | 28°17 | 27°43 | 26°41 | 28° 9 | S 27 | |
| M28 | 10 30 43 | 9♁14'33 | 5♁40 | 25♁ 9 | 10♁39 | 5♁19 | 24♁50 | 27♁12 | 25♁ 9 | 29♁16 | 24♁14 | 28♁ 9 | 27♁40 | 26♁48 | 28♁ 9 | M28 | |

Delta T = 75.18 sec

ASTRODIENST EPHEMERIS for the year 2039

MARCH 2039

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ♁ | ♂ | ♁ | ♃ | ♄ | Day |
|------|----------|-----------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|------|
| T 1 | 10 34 39 | 10♌14'50 | 17♋36 | 25°R16 | 11°V52 | 6♋5 | 24°R43 | 27°R 8 | 25°R 7 | 29°V17 | 24♋16 | 28°R 4 | 27♋37 | 26♋55 | 28°R 9 | T 1 |
| W 2 | 10 38 36 | 11°15'05 | 29°26 | 25♌13 | 13° 5 | 6♌51 | 24♌35 | 27♌4 | 25♌6 | 29°19 | 24°17 | 28♌2 | 27°34 | 27° 1 | 28♌9 | W 2 |
| T 3 | 10 42 32 | 12°15'18 | 11♌14 | 25° 0 | 14°18 | 7°37 | 24°28 | 26°59 | 25° 4 | 29°21 | 24°19 | 28°D 1 | 27°31 | 27° 8 | 28° 8 | T 3 |
| F 4 | 10 46 29 | 13°15'29 | 23° 7 | 24°38 | 15°31 | 8°23 | 24°21 | 26°55 | 25° 3 | 29°22 | 24°21 | 28°R 1 | 27°27 | 27°15 | 28°D 8 | F 4 |
| S 5 | 10 50 25 | 14°15'37 | 5♌9 | 24° 8 | 16°44 | 9° 8 | 24°14 | 26°50 | 25° 1 | 29°24 | 24°23 | 28° 1 | 27°24 | 27°21 | 28° 8 | S 5 |
| S 6 | 10 54 22 | 15°15'44 | 17°27 | 23°30 | 17°57 | 9°54 | 24° 7 | 26°46 | 25° 0 | 29°26 | 24°24 | 28° 0 | 27°21 | 27°28 | 28° 8 | S 6 |
| M 7 | 10 58 19 | 16°15'49 | 0♌3 | 22°46 | 19°10 | 10°40 | 24° 0 | 26°41 | 24°59 | 29°28 | 24°26 | 27°56 | 27°18 | 27°35 | 28° 9 | M 7 |
| T 8 | 11 2 15 | 17°15'51 | 13° 3 | 21°55 | 20°23 | 11°26 | 23°53 | 26°36 | 24°57 | 29°29 | 24°28 | 27°50 | 27°15 | 27°41 | 28° 9 | T 8 |
| W 9 | 11 6 12 | 18°15'52 | 26°26 | 21° 0 | 21°35 | 12°12 | 23°46 | 26°32 | 24°56 | 29°31 | 24°29 | 27°41 | 27°12 | 27°48 | 28° 9 | W 9 |
| T 10 | 11 10 8 | 19°15'50 | 10♌14 | 20° 3 | 22°48 | 12°59 | 23°40 | 26°27 | 24°55 | 29°33 | 24°31 | 27°30 | 27° 8 | 27°55 | 28°10 | T 10 |
| F 11 | 11 14 5 | 20°15'47 | 24°21 | 19° 3 | 24° 1 | 13°45 | 23°33 | 26°22 | 24°54 | 29°35 | 24°32 | 27°17 | 27° 5 | 28° 1 | 28°10 | F 11 |
| S 12 | 11 18 1 | 21°15'41 | 8♌44 | 18° 4 | 25°13 | 14°31 | 23°27 | 26°18 | 24°52 | 29°37 | 24°34 | 27° 5 | 27° 2 | 28° 8 | 28°11 | S 12 |
| S 13 | 11 21 58 | 22°15'34 | 23°15 | 17° 5 | 26°25 | 15°17 | 23°21 | 26°13 | 24°51 | 29°39 | 24°36 | 26°55 | 26°59 | 28°15 | 28°12 | S 13 |
| M14 | 11 25 54 | 23°15'25 | 7♌48 | 16° 9 | 27°38 | 16° 3 | 23°15 | 26° 8 | 24°50 | 29°40 | 24°37 | 26°47 | 26°56 | 28°21 | 28°12 | M14 |
| T 15 | 11 29 51 | 24°15'14 | 22°16 | 15°16 | 28°50 | 16°49 | 23° 9 | 26° 3 | 24°49 | 29°42 | 24°39 | 26°42 | 26°52 | 28°28 | 28°13 | T 15 |
| W16 | 11 33 48 | 25°15'02 | 6♌36 | 14°27 | 0♌2 | 17°35 | 23° 3 | 25°59 | 24°48 | 29°44 | 24°40 | 26°39 | 26°49 | 28°34 | 28°14 | W16 |
| T 17 | 11 37 44 | 26°14'48 | 20°45 | 13°43 | 1°14 | 18°21 | 22°57 | 25°54 | 24°48 | 29°46 | 24°42 | 26°39 | 26°46 | 28°41 | 28°15 | T 17 |
| F 18 | 11 41 41 | 27°14'32 | 4♌42 | 13° 5 | 2°26 | 19° 8 | 22°52 | 25°49 | 24°47 | 29°48 | 24°43 | 26°39 | 26°43 | 28°48 | 28°16 | F 18 |
| S 19 | 11 45 37 | 28°14'15 | 18°28 | 12°32 | 3°38 | 19°54 | 22°46 | 25°44 | 24°46 | 29°50 | 24°45 | 26°38 | 26°40 | 28°54 | 28°18 | S 19 |
| S 20 | 11 49 34 | 29°13'56 | 2♌2 | 12° 6 | 4°50 | 20°40 | 22°41 | 25°40 | 24°45 | 29°52 | 24°46 | 26°35 | 26°37 | 29° 1 | 28°19 | S 20 |
| M21 | 11 53 30 | 0°V13'35 | 15°25 | 11°46 | 6° 2 | 21°26 | 22°36 | 25°35 | 24°45 | 29°54 | 24°48 | 26°29 | 26°33 | 29° 8 | 28°20 | M21 |
| T 22 | 11 57 27 | 1°13'13 | 28°37 | 11°32 | 7°14 | 22°12 | 22°31 | 25°30 | 24°44 | 29°56 | 24°49 | 26°21 | 26°30 | 29°14 | 28°22 | T 22 |
| W23 | 12 1 23 | 2°12'48 | 11♌38 | 11°24 | 8°25 | 22°59 | 22°27 | 25°26 | 24°43 | 29°58 | 24°51 | 26° 9 | 26°27 | 29°21 | 28°23 | W23 |
| T 24 | 12 5 20 | 3°12'22 | 24°28 | 11°D22 | 9°37 | 23°45 | 22°22 | 25°21 | 24°43 | 0♌0 | 24°52 | 25°56 | 26°24 | 29°28 | 28°25 | T 24 |
| F 25 | 12 9 17 | 4°11'53 | 7°V 5 | 11°26 | 10°48 | 24°31 | 22°18 | 25°16 | 24°42 | 0° 2 | 24°54 | 25°43 | 26°21 | 29°34 | 28°26 | F 25 |
| S 26 | 12 13 13 | 5°11'23 | 19°30 | 11°36 | 12° 0 | 25°18 | 22°13 | 25°12 | 24°42 | 0° 4 | 24°55 | 25°29 | 26°18 | 29°41 | 28°28 | S 26 |
| S 27 | 12 17 10 | 6°10'50 | 1♌43 | 11°51 | 13°11 | 26° 4 | 22° 9 | 25° 7 | 24°42 | 0° 7 | 24°57 | 25°18 | 26°14 | 29°48 | 28°30 | S 27 |
| M28 | 12 21 6 | 7°10'15 | 13°44 | 12°11 | 14°22 | 26°50 | 22° 5 | 25° 2 | 24°41 | 0° 9 | 24°58 | 25° 9 | 26°11 | 29°54 | 28°32 | M28 |
| T 29 | 12 25 3 | 8° 9'38 | 25°38 | 12°36 | 15°33 | 27°36 | 22° 2 | 24°58 | 24°41 | 0°11 | 24°59 | 25° 2 | 26° 8 | 0♌1 | 28°34 | T 29 |
| W30 | 12 28 59 | 9° 8'59 | 7♌26 | 13° 5 | 16°44 | 28°23 | 21°58 | 24°53 | 24°41 | 0°13 | 25° 1 | 24°59 | 26° 5 | 0° 8 | 28°36 | W30 |
| T 31 | 12 32 56 | 10°V 8'18 | 19♌13 | 13♌39 | 17♌55 | 29°≈ 9 | 21♌55 | 24♌49 | 24♌41 | 0♌15 | 25°≈ 2 | 24♌58 | 26♌2 | 0♌14 | 28♌38 | T 31 |

Delta T = 75.20 sec

APRIL 2039

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ♁ | ♂ | ♁ | ♃ | ♄ | Day |
|------|----------|-----------|--------|--------|-------|--------|--------|--------|--------|------|--------|--------|-------|------|-------|------|
| F 1 | 12 36 52 | 11°V 7'34 | 1♌4 | 14♌17 | 19♌6 | 29°≈55 | 21°R52 | 24°R44 | 24°R41 | 0♌17 | 25°≈ 3 | 24°D58 | 25♌58 | 0♌21 | 28♌40 | F 1 |
| S 2 | 12 40 49 | 12° 6'48 | 13° 5 | 14°58 | 20°16 | 0♌42 | 21♌49 | 24♌40 | 24°D41 | 0°19 | 25° 5 | 24°R58 | 25°55 | 0°28 | 28°43 | S 2 |
| S 3 | 12 44 46 | 13° 6'00 | 25°20 | 15°44 | 21°27 | 1°28 | 21°46 | 24°35 | 24♌41 | 0°22 | 25° 6 | 24♌57 | 25°52 | 0°34 | 28°45 | S 3 |
| M 4 | 12 48 42 | 14° 5'10 | 7♌36 | 16°33 | 22°37 | 2°14 | 21°43 | 24°31 | 24°41 | 0°24 | 25° 7 | 24°55 | 25°49 | 0°41 | 28°48 | M 4 |
| T 5 | 12 52 39 | 15° 4'17 | 20°56 | 17°25 | 23°48 | 3° 1 | 21°41 | 24°27 | 24°41 | 0°26 | 25° 8 | 24°50 | 25°46 | 0°48 | 28°50 | T 5 |
| W 6 | 12 56 35 | 16° 3'22 | 4♌24 | 18°20 | 24°58 | 3°47 | 21°39 | 24°23 | 24°41 | 0°28 | 25°10 | 24°43 | 25°43 | 0°54 | 28°53 | W 6 |
| T 7 | 13 0 32 | 17° 2'24 | 2♌19 | 19°18 | 26° 8 | 4°33 | 21°36 | 24°18 | 24°41 | 0°30 | 25°11 | 24°33 | 25°39 | 1° 1 | 28°55 | T 7 |
| F 8 | 13 4 28 | 18° 1'24 | 2♌40 | 20°19 | 27°18 | 5°20 | 21°35 | 24°14 | 24°42 | 0°33 | 25°12 | 24°23 | 25°36 | 1° 8 | 28°58 | F 8 |
| S 9 | 13 8 25 | 19° 0'23 | 17°21 | 21°23 | 28°28 | 6° 6 | 21°33 | 24°10 | 24°42 | 0°35 | 25°13 | 24°13 | 25°33 | 1°14 | 29° 1 | S 9 |
| S 10 | 13 12 21 | 19°59'19 | 2♌14 | 22°29 | 29°38 | 6°52 | 21°31 | 24° 6 | 24°42 | 0°37 | 25°14 | 24° 4 | 25°30 | 1°21 | 29° 4 | S 10 |
| M11 | 13 16 18 | 20°58'13 | 17°12 | 23°37 | 0♌47 | 7°39 | 21°30 | 24° 2 | 24°43 | 0°39 | 25°15 | 23°57 | 25°27 | 1°28 | 29° 7 | M11 |
| T 12 | 13 20 14 | 21°57'06 | 2♌4 | 24°48 | 1°57 | 8°25 | 21°29 | 23°58 | 24°43 | 0°41 | 25°17 | 23°53 | 25°23 | 1°34 | 29°10 | T 12 |
| W13 | 13 24 11 | 22°55'56 | 16°45 | 26° 1 | 3° 6 | 9°11 | 21°28 | 23°54 | 24°44 | 0°44 | 25°18 | 23°51 | 25°20 | 1°41 | 29°13 | W13 |
| T 14 | 13 28 8 | 23°54'45 | 1♌8 | 27°16 | 4°15 | 9°58 | 21°27 | 23°51 | 24°45 | 0°46 | 25°19 | 23°D51 | 25°17 | 1°48 | 29°16 | T 14 |
| F 15 | 13 32 4 | 24°53'33 | 15°13 | 28°34 | 5°24 | 10°44 | 21°27 | 23°47 | 24°45 | 0°48 | 25°20 | 23°52 | 25°14 | 1°54 | 29°19 | F 15 |
| S 16 | 13 36 1 | 25°52'18 | 28°59 | 29°53 | 6°33 | 11°30 | 21°26 | 23°43 | 24°46 | 0°50 | 25°21 | 23°R52 | 25°11 | 2° 1 | 29°23 | S 16 |
| S 17 | 13 39 57 | 26°51'02 | 12°≈26 | 1°V15 | 7°42 | 12°16 | 21°26 | 23°40 | 24°47 | 0°53 | 25°22 | 23°51 | 25° 8 | 2° 8 | 29°26 | S 17 |
| M18 | 13 43 54 | 27°49'45 | 25°36 | 2°38 | 8°51 | 13° 3 | 21°D26 | 23°36 | 24°48 | 0°55 | 25°23 | 23°48 | 25° 4 | 2°14 | 29°29 | M18 |
| T 19 | 13 47 50 | 28°48'25 | 8♌32 | 4° 3 | 9°59 | 13°49 | 21°26 | 23°33 | 24°48 | 0°57 | 25°24 | 23°42 | 25° 1 | 2°21 | 29°33 | T 19 |
| W20 | 13 51 47 | 29°47'04 | 21°15 | 5°30 | 11° 8 | 14°35 | 21°26 | 23°29 | 24°49 | 1° 0 | 25°25 | 23°34 | 24°58 | 2°28 | 29°36 | W20 |
| T 21 | 13 55 43 | 0♌45'41 | 3°V46 | 6°59 | 12°16 | 15°22 | 21°27 | 23°26 | 24°50 | 1° 2 | 25°25 | 23°25 | 24°55 | 2°34 | 29°40 | T 21 |
| F 22 | 13 59 40 | 1°44'16 | 16° 6 | 8°30 | 13°24 | 16° 8 | 21°28 | 23°23 | 24°51 | 1° 4 | 25°26 | 23°15 | 24°52 | 2°41 | 29°44 | F 22 |
| S 23 | 14 3 37 | 2°42'49 | 28°17 | 10° 2 | 14°32 | 16°54 | 21°29 | 23°20 | 24°52 | 1° 6 | 25°27 | 23° 6 | 24°49 | 2°48 | 29°47 | S 23 |
| S 24 | 14 7 33 | 3°41'21 | 10♌19 | 11°36 | 15°40 | 17°40 | 21°30 | 23°17 | 24°54 | 1° 9 | 25°28 | 22°57 | 24°45 | 2°54 | 29°51 | S 24 |
| M25 | 14 11 30 | 4°39'50 | 22°14 | 13°12 | 16°47 | 18°26 | 21°31 | 23°14 | 24°55 | 1°11 | 25°29 | 22°51 | 24°42 | 3° 1 | 29°55 | M25 |
| T 26 | 14 15 26 | 5°38'18 | 4♌3 | 14°50 | 17°55 | 19°13 | 21°32 | 23°11 | 24°56 | 1°13 | 25°30 | 22°47 | 24°39 | 3° 7 | 29°59 | T 26 |
| W27 | 14 19 23 | 6°36'44 | 15°50 | 16°30 | 19° 2 | 19°59 | 21°34 | 23° 8 | 24°57 | 1°15 | 25°30 | 22°45 | 24°36 | 3°14 | 0♌3 | W27 |
| T 28 | 14 23 19 | 7°35'08 | 27°37 | 18°11 | 20° 9 | 20°45 | 21°36 | 23° 5 | 24°59 | 1°18 | 25°31 | 22°D45 | 24°33 | 3°21 | 0° 7 | T 28 |
| F 29 | 14 27 16 | 8°33'29 | 9♌29 | 19°54 | 21°16 | 21°31 | 21°38 | 23° 3 | 25° 0 | 1°20 | 25°32 | 22°46 | 24°29 | 3°27 | 0°11 | F 29 |
| S 30 | 14 31 12 | 9♌31'49 | 21♌29 | 21°V38 | 22♌23 | 22♌17 | 21♌40 | 23♌0 | 25♌2 | 1♌22 | 25°≈33 | 22♌47 | 24♌26 | 3♌34 | 0♌15 | S 30 |

Delta T = 75.22 sec

ASTRODIENST EPHEMERIS for the year 2039

MAY 2039

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♁ | ♂ | ♃ | ♅ | ♁ | ♄ | ♁ | ♁ | ♁ | ♁ | ♁ | ♁ | Day |
|------|----------|----------|-------|-------|-------|-------|-------|--------|-------|------|--------|--------|-------|------|------|------|-----|
| S 1 | 14 35 9 | 10♁30'07 | 3♁44 | 23♃25 | 23♁29 | 23♁3 | 21♁42 | 22°R58 | 25♁3 | 1♁24 | 25♁33 | 22♁48 | 24♁23 | 3♁41 | 0♁19 | S 1 | |
| M 2 | 14 39 6 | 11°28'22 | 16°17 | 25°13 | 24°36 | 23°49 | 21°45 | 22♁55 | 25°5 | 1°27 | 25°34 | 22°R48 | 24°20 | 3°47 | 0°24 | M 2 | |
| T 3 | 14 43 2 | 12°26'36 | 29°13 | 27°3 | 25°42 | 24°35 | 21°48 | 22°53 | 25°6 | 1°29 | 25°35 | 22°47 | 24°17 | 3°54 | 0°28 | T 3 | |
| W 4 | 14 46 59 | 13°24'47 | 12♁37 | 28°55 | 26°48 | 25°21 | 21°51 | 22°51 | 25°8 | 1°31 | 25°35 | 22°44 | 24°14 | 4°1 | 0°32 | W 4 | |
| T 5 | 14 50 55 | 14°22'56 | 26°29 | 0♁48 | 27°53 | 26°7 | 21°54 | 22°49 | 25°9 | 1°33 | 25°36 | 22°40 | 24°10 | 4°7 | 0°37 | T 5 | |
| F 6 | 14 54 52 | 15°21'04 | 10♁49 | 2°44 | 28°59 | 26°53 | 21°57 | 22°47 | 25°11 | 1°36 | 25°36 | 22°34 | 24°7 | 4°14 | 0°41 | F 6 | |
| S 7 | 14 58 48 | 16°19'09 | 25°33 | 4°41 | 0♁4 | 27°39 | 22°0 | 22°45 | 25°13 | 1°38 | 25°37 | 22°29 | 24°4 | 4°21 | 0°46 | S 7 | |
| S 8 | 15 2 45 | 17°17'13 | 10♁35 | 6°40 | 1°9 | 28°25 | 22°4 | 22°43 | 25°15 | 1°40 | 25°37 | 22°24 | 24°1 | 4°27 | 0°50 | S 8 | |
| M 9 | 15 6 41 | 18°15'15 | 25°46 | 8°40 | 2°14 | 29°11 | 22°8 | 22°42 | 25°17 | 1°42 | 25°38 | 22°20 | 23°58 | 4°34 | 0°55 | M 9 | |
| T 10 | 15 10 38 | 19°13'16 | 10♁55 | 10°42 | 3°19 | 29°57 | 22°12 | 22°40 | 25°19 | 1°44 | 25°38 | 22°18 | 23°55 | 4°41 | 0°59 | T 10 | |
| W 11 | 15 14 35 | 20°11'15 | 25°54 | 12°46 | 4°23 | 0♁43 | 22°16 | 22°38 | 25°21 | 1°46 | 25°39 | 22°D18 | 23°51 | 4°47 | 1°4 | W 11 | |
| T 12 | 15 18 31 | 21°9'13 | 10♁36 | 14°51 | 5°27 | 1°29 | 22°20 | 22°37 | 25°23 | 1°49 | 25°39 | 22°19 | 23°48 | 4°54 | 1°9 | T 12 | |
| F 13 | 15 22 28 | 22°7'10 | 24°55 | 16°58 | 6°31 | 2°15 | 22°24 | 22°36 | 25°25 | 1°51 | 25°39 | 22°20 | 23°45 | 5°1 | 1°14 | F 13 | |
| S 14 | 15 26 24 | 23°5'05 | 8♁51 | 19°6 | 7°35 | 3°0 | 22°29 | 22°35 | 25°27 | 1°53 | 25°40 | 22°22 | 23°42 | 5°7 | 1°18 | S 14 | |
| S 15 | 15 30 21 | 24°2'59 | 22°22 | 21°15 | 8°38 | 3°46 | 22°34 | 22°34 | 25°29 | 1°55 | 25°40 | 22°R22 | 23°39 | 5°14 | 1°23 | S 15 | |
| M 16 | 15 34 17 | 25°0'51 | 5♁31 | 23°25 | 9°41 | 4°32 | 22°38 | 22°33 | 25°31 | 1°57 | 25°40 | 22°22 | 23°35 | 5°21 | 1°28 | M 16 | |
| T 17 | 15 38 14 | 25°58'43 | 18°20 | 25°36 | 10°44 | 5°18 | 22°44 | 22°32 | 25°33 | 1°59 | 25°41 | 22°20 | 23°32 | 5°27 | 1°33 | T 17 | |
| W 18 | 15 42 10 | 26°56'33 | 0♁53 | 27°47 | 11°46 | 6°3 | 22°49 | 22°31 | 25°35 | 2°1 | 25°41 | 22°18 | 23°29 | 5°34 | 1°38 | W 18 | |
| T 19 | 15 46 7 | 27°54'22 | 13°11 | 29°58 | 12°48 | 6°49 | 22°54 | 22°30 | 25°38 | 2°4 | 25°41 | 22°14 | 23°26 | 5°41 | 1°43 | T 19 | |
| F 20 | 15 50 4 | 28°52'10 | 25°19 | 2♁9 | 13°50 | 7°35 | 23°0 | 22°30 | 25°40 | 2°6 | 25°41 | 22°10 | 23°23 | 5°47 | 1°48 | F 20 | |
| S 21 | 15 54 0 | 29°49'56 | 7♁19 | 4°20 | 14°52 | 8°20 | 23°5 | 22°29 | 25°43 | 2°8 | 25°41 | 22°6 | 23°20 | 5°54 | 1°53 | S 21 | |
| S 22 | 15 57 57 | 0♁47'42 | 19°12 | 6°31 | 15°53 | 9°6 | 23°11 | 22°29 | 25°45 | 2°10 | 25°41 | 22°3 | 23°16 | 6°0 | 1°58 | S 22 | |
| M 23 | 16 1 53 | 1°45'26 | 1♁1 | 8°40 | 16°54 | 9°51 | 23°17 | 22°28 | 25°47 | 2°12 | 25°42 | 22°1 | 23°13 | 6°7 | 2°4 | M 23 | |
| T 24 | 16 5 50 | 2°43'09 | 12°48 | 10°49 | 17°54 | 10°36 | 23°23 | 22°28 | 25°50 | 2°14 | 25°42 | 22°0 | 23°10 | 6°14 | 2°9 | T 24 | |
| W 25 | 16 9 46 | 3°40'50 | 24°36 | 12°55 | 18°54 | 11°22 | 23°29 | 22°D28 | 25°52 | 2°16 | 25°42 | 21°D59 | 23°7 | 6°20 | 2°14 | W 25 | |
| T 26 | 16 13 43 | 4°38'30 | 6♁26 | 15°1 | 19°54 | 12°7 | 23°36 | 22°28 | 25°55 | 2°18 | 25°42 | 22°0 | 23°4 | 6°27 | 2°19 | T 26 | |
| F 27 | 16 17 39 | 5°36'09 | 18°22 | 17°4 | 20°54 | 12°53 | 23°42 | 22°28 | 25°58 | 2°20 | 25°R42 | 22°1 | 23°1 | 6°34 | 2°24 | F 27 | |
| S 28 | 16 21 36 | 6°33'46 | 0♁27 | 19°6 | 21°53 | 13°38 | 23°49 | 22°29 | 26°0 | 2°22 | 25°42 | 22°2 | 22°57 | 6°40 | 2°30 | S 28 | |
| S 29 | 16 25 33 | 7°31'22 | 12°45 | 21°5 | 22°51 | 14°23 | 23°56 | 22°29 | 26°3 | 2°24 | 25°42 | 22°4 | 22°54 | 6°47 | 2°35 | S 29 | |
| M 30 | 16 29 29 | 8°28'57 | 25°19 | 23°2 | 23°49 | 15°8 | 24°2 | 22°29 | 26°6 | 2°26 | 25°42 | 22°5 | 22°51 | 6°54 | 2°41 | M 30 | |
| T 31 | 16 33 26 | 9♁26'30 | 8♁13 | 24♁56 | 24♁47 | 15♁53 | 24♁9 | 22♁30 | 26♁8 | 2♁27 | 25♁42 | 22°R5 | 22♁48 | 7♁0 | 2♁46 | T 31 | |

Delta T = 75.24 sec

JUNE 2039

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♁ | ♂ | ♃ | ♅ | ♁ | ♄ | ♁ | ♁ | ♁ | ♁ | ♁ | ♁ | Day |
|------|----------|----------|-------|-------|-------|-------|-------|-------|-------|------|--------|--------|-------|-------|------|------|-----|
| W 1 | 16 37 22 | 10♁24'02 | 21♁31 | 26♁48 | 25♁45 | 16♁38 | 24♁17 | 22♁31 | 26♁11 | 2♁29 | 25°R41 | 22°R5 | 22♁45 | 7♁7 | 2♁51 | W 1 | |
| T 2 | 16 41 19 | 11°21'32 | 5♁15 | 28°37 | 26°41 | 17°23 | 24°24 | 22°31 | 26°14 | 2°31 | 25♁41 | 22♁4 | 22°41 | 7°14 | 2°57 | T 2 | |
| F 3 | 16 45 15 | 12°19'01 | 19°25 | 0♁24 | 27°38 | 18°8 | 24°31 | 22°32 | 26°17 | 2°33 | 25°41 | 22°3 | 22°38 | 7°20 | 3°2 | F 3 | |
| S 4 | 16 49 12 | 13°16'29 | 3♁59 | 2°8 | 28°34 | 18°53 | 24°39 | 22°33 | 26°20 | 2°35 | 25°41 | 22°2 | 22°35 | 7°27 | 3°8 | S 4 | |
| S 5 | 16 53 8 | 14°13'55 | 18°54 | 3°49 | 29°29 | 19°38 | 24°47 | 22°34 | 26°23 | 2°37 | 25°41 | 22°1 | 22°32 | 7°34 | 3°13 | S 5 | |
| M 6 | 16 57 5 | 15°11'21 | 4♁2 | 5°28 | 0♁24 | 20°23 | 24°54 | 22°35 | 26°26 | 2°38 | 25°40 | 22°1 | 22°29 | 7°40 | 3°19 | M 6 | |
| T 7 | 17 1 2 | 16°8'46 | 17°9 | 7°3 | 1°18 | 21°8 | 25°2 | 22°37 | 26°29 | 2°40 | 25°40 | 22°D0 | 22°26 | 7°47 | 3°24 | T 7 | |
| W 8 | 17 4 58 | 17°6'09 | 4♁21 | 8°36 | 2°12 | 21°52 | 25°10 | 22°38 | 26°32 | 2°42 | 25°40 | 22°0 | 22°22 | 7°54 | 3°30 | W 8 | |
| T 9 | 17 8 55 | 18°3'32 | 19°14 | 10°6 | 3°5 | 22°37 | 25°19 | 22°40 | 26°35 | 2°44 | 25°40 | 22°1 | 22°19 | 8°0 | 3°36 | T 9 | |
| F 10 | 17 12 51 | 19°0'55 | 3♁46 | 11°33 | 3°57 | 23°22 | 25°27 | 22°41 | 26°38 | 2°45 | 25°39 | 22°1 | 22°16 | 8°7 | 3°41 | F 10 | |
| S 11 | 17 16 48 | 19°58'16 | 17°52 | 12°57 | 4°49 | 24°6 | 25°35 | 22°43 | 26°41 | 2°47 | 25°39 | 22°1 | 22°13 | 8°13 | 3°47 | S 11 | |
| S 12 | 17 20 44 | 20°55'37 | 1♁32 | 14°19 | 5°40 | 24°51 | 25°44 | 22°45 | 26°44 | 2°49 | 25°38 | 22°1 | 22°10 | 8°20 | 3°53 | S 12 | |
| M 13 | 17 24 41 | 21°52'58 | 14°46 | 15°37 | 6°31 | 25°35 | 25°52 | 22°46 | 26°47 | 2°50 | 25°38 | 22°1 | 22°7 | 8°27 | 3°58 | M 13 | |
| T 14 | 17 28 38 | 22°50'18 | 27°37 | 16°52 | 7°21 | 26°20 | 26°1 | 22°48 | 26°50 | 2°52 | 25°38 | 22°1 | 22°3 | 8°33 | 4°4 | T 14 | |
| W 15 | 17 32 34 | 23°47'38 | 10♁7 | 18°4 | 8°10 | 27°4 | 26°10 | 22°50 | 26°53 | 2°54 | 25°37 | 22°1 | 22°0 | 8°40 | 4°10 | W 15 | |
| T 16 | 17 36 31 | 24°44'57 | 22°20 | 19°13 | 8°58 | 27°48 | 26°19 | 22°53 | 26°57 | 2°55 | 25°37 | 22°2 | 21°57 | 8°47 | 4°15 | T 16 | |
| F 17 | 17 40 27 | 25°42'16 | 4♁22 | 20°19 | 9°46 | 28°33 | 26°28 | 22°55 | 27°0 | 2°57 | 25°36 | 22°2 | 21°54 | 8°53 | 4°21 | F 17 | |
| S 18 | 17 44 24 | 26°39'34 | 16°15 | 21°22 | 10°32 | 29°17 | 26°37 | 22°57 | 27°3 | 2°58 | 25°36 | 22°2 | 21°51 | 9°0 | 4°27 | S 18 | |
| S 19 | 17 48 20 | 27°36'53 | 28°4 | 22°21 | 11°18 | 0♁1 | 26°46 | 23°0 | 27°6 | 3°0 | 25°35 | 22°3 | 21°47 | 9°7 | 4°33 | S 19 | |
| M 20 | 17 52 17 | 28°34'10 | 9♁50 | 23°17 | 12°3 | 0°45 | 26°56 | 23°2 | 27°10 | 3°1 | 25°34 | 22°3 | 21°44 | 9°13 | 4°38 | M 20 | |
| T 21 | 17 56 13 | 29°31'28 | 21°39 | 24°9 | 12°47 | 1°29 | 27°5 | 23°5 | 27°13 | 3°3 | 25°34 | 22°R4 | 21°41 | 9°20 | 4°44 | T 21 | |
| W 22 | 18 0 10 | 0♁28'45 | 3♁30 | 24°57 | 13°31 | 2°13 | 27°15 | 23°7 | 27°17 | 3°4 | 25°33 | 22°3 | 21°38 | 9°27 | 4°50 | W 22 | |
| T 23 | 18 4 7 | 1°26'01 | 15°28 | 25°42 | 14°13 | 2°57 | 27°24 | 23°10 | 27°20 | 3°5 | 25°33 | 22°3 | 21°35 | 9°33 | 4°56 | T 23 | |
| F 24 | 18 8 3 | 2°23'17 | 27°34 | 26°23 | 14°54 | 3°40 | 27°34 | 23°13 | 27°23 | 3°7 | 25°32 | 22°2 | 21°32 | 9°40 | 5°1 | F 24 | |
| S 25 | 18 12 0 | 3°20'33 | 9♁49 | 27°1 | 15°34 | 4°24 | 27°44 | 23°16 | 27°27 | 3°8 | 25°31 | 22°0 | 21°28 | 9°47 | 5°7 | S 25 | |
| S 26 | 18 15 56 | 4°17'48 | 22°17 | 27°34 | 16°14 | 5°8 | 27°54 | 23°19 | 27°30 | 3°9 | 25°31 | 21°59 | 21°25 | 9°53 | 5°13 | S 26 | |
| M 27 | 18 19 53 | 5°15'02 | 4♁59 | 28°3 | 16°52 | 5°51 | 28°4 | 23°23 | 27°34 | 3°11 | 25°30 | 21°57 | 21°22 | 10°0 | 5°19 | M 27 | |
| T 28 | 18 23 49 | 6°12'16 | 17°57 | 28°27 | 17°28 | 6°35 | 28°14 | 23°26 | 27°37 | 3°12 | 25°29 | 21°56 | 21°19 | 10°7 | 5°25 | T 28 | |
| W 29 | 18 27 46 | 7°9'30 | 1♁15 | 28°47 | 18°4 | 7°18 | 28°24 | 23°29 | 27°41 | 3°13 | 25°28 | 21°D55 | 21°16 | 10°13 | 5°30 | W 29 | |
| T 30 | 18 31 42 | 8♁64'2 | 14♁52 | 29♁3 | 18♁38 | 8♁1 | 28♁35 | 23♁33 | 27♁44 | 3♁14 | 25♁27 | 21♁55 | 21♁13 | 10♁20 | 5♁36 | T 30 | |

Delta T = 75.26 sec

ASTRODIENST EPHEMERIS for the year 2039

JULY 2039

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ♁ | ♂ | ♁ | ♃ | ♄ | Day |
|------|----------|-----------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|-------|------|
| F 1 | 18 35 39 | 9°35'55" | 28°51' | 29°14' | 19°11' | 8°45' | 28°45' | 23°36' | 27°48' | 3°16' | 25°27' | 21°56' | 21°09' | 10°26' | 5°42' | F 1 |
| S 2 | 18 39 36 | 10°1'07" | 13°10' | 29°21' | 19°43' | 9°28' | 28°55' | 23°40' | 27°51' | 3°17' | 25°26' | 21°57' | 21°06' | 10°33' | 5°48' | S 2 |
| S 3 | 18 43 32 | 10°58'18" | 27°48' | 29°R23 | 20°13' | 10°11' | 29°06' | 23°43' | 27°55' | 3°18' | 25°25' | 21°58' | 21°03' | 10°40' | 5°54' | S 3 |
| M 4 | 18 47 29 | 11°55'30" | 12°39' | 29°20' | 20°42' | 10°54' | 29°17' | 23°47' | 27°58' | 3°19' | 25°24' | 21°59' | 21°00' | 10°46' | 5°59' | M 4 |
| T 5 | 18 51 25 | 12°52'41" | 27°39' | 29°13' | 21°09' | 11°37' | 29°27' | 23°51' | 28°02' | 3°20' | 25°23' | 21°R59 | 20°57' | 10°53' | 6°05' | T 5 |
| W 6 | 18 55 22 | 13°49'52" | 12°38' | 29°01' | 21°34' | 12°20' | 29°38' | 23°55' | 28°05' | 3°21' | 25°22' | 21°58' | 20°53' | 11°00' | 6°11' | W 6 |
| T 7 | 18 59 18 | 14°47'03" | 27°29' | 28°44' | 21°58' | 13°02' | 29°49' | 23°59' | 28°09' | 3°22' | 25°21' | 21°56' | 20°50' | 11°06' | 6°17' | T 7 |
| F 8 | 19 3 15 | 15°44'14" | 12°33' | 28°24' | 22°20' | 13°45' | 29°59' | 24°03' | 28°13' | 3°23' | 25°20' | 21°53' | 20°47' | 11°13' | 6°23' | F 8 |
| S 9 | 19 7 11 | 16°41'25" | 26°15' | 28°00' | 22°40' | 14°28' | 0°11' | 24°07' | 28°16' | 3°24' | 25°20' | 21°50' | 20°44' | 11°20' | 6°28' | S 9 |
| S 10 | 19 11 8 | 17°38'37" | 10°31' | 27°31' | 22°59' | 15°10' | 0°22' | 24°12' | 28°20' | 3°25' | 25°19' | 21°47' | 20°41' | 11°26' | 6°34' | S 10 |
| M11 | 19 15 5 | 18°35'49" | 23°21' | 27°00' | 23°16' | 15°53' | 0°33' | 24°16' | 28°23' | 3°26' | 25°18' | 21°44' | 20°38' | 11°33' | 6°40' | M11 |
| T 12 | 19 19 1 | 19°33'01" | 6°15' | 26°26' | 23°30' | 16°35' | 0°44' | 24°20' | 28°27' | 3°27' | 25°17' | 21°42' | 20°34' | 11°40' | 6°46' | T 12 |
| W13 | 19 22 58 | 20°30'14" | 18°47' | 25°50' | 23°43' | 17°17' | 0°55' | 24°25' | 28°31' | 3°27' | 25°16' | 21°D41 | 20°31' | 11°46' | 6°51' | W13 |
| T 14 | 19 26 54 | 21°27'27" | 1°30' | 25°12' | 23°54' | 17°59' | 1°07' | 24°30' | 28°34' | 3°28' | 25°14' | 21°41' | 20°28' | 11°53' | 6°57' | T 14 |
| F 15 | 19 30 51 | 22°24'41" | 13°00' | 24°33' | 24°02' | 18°42' | 1°18' | 24°34' | 28°38' | 3°29' | 25°13' | 21°43' | 20°25' | 12°00' | 7°03' | F 15 |
| S 16 | 19 34 47 | 23°21'55" | 24°51' | 23°53' | 24°09' | 19°24' | 1°30' | 24°39' | 28°42' | 3°30' | 25°12' | 21°44' | 20°22' | 12°06' | 7°08' | S 16 |
| S 17 | 19 38 44 | 24°19'10" | 6°39' | 23°14' | 24°13' | 20°06' | 1°41' | 24°44' | 28°45' | 3°30' | 25°11' | 21°46' | 20°19' | 12°13' | 7°14' | S 17 |
| M18 | 19 42 40 | 25°16'26" | 18°26' | 22°35' | 24°R15 | 20°47' | 1°53' | 24°49' | 28°49' | 3°31' | 25°10' | 21°R47 | 20°15' | 12°19' | 7°20' | M18 |
| T 19 | 19 46 37 | 26°13'42" | 0°18' | 21°59' | 24°15' | 21°29' | 2°04' | 24°54' | 28°53' | 3°32' | 25°09' | 21°47' | 20°12' | 12°26' | 7°25' | T 19 |
| W20 | 19 50 34 | 27°10'59" | 21°17' | 21°24' | 24°12' | 22°11' | 2°16' | 24°59' | 28°56' | 3°32' | 25°08' | 21°45' | 20°09' | 12°33' | 7°31' | W20 |
| T 21 | 19 54 30 | 28°08'16" | 24°25' | 20°53' | 24°07' | 22°52' | 2°28' | 25°04' | 29°00' | 3°33' | 25°07' | 21°41' | 20°06' | 12°39' | 7°37' | T 21 |
| F 22 | 19 58 27 | 29°05'34" | 6°45' | 20°25' | 24°00' | 23°34' | 2°40' | 25°09' | 29°04' | 3°33' | 25°06' | 21°36' | 20°03' | 12°46' | 7°42' | F 22 |
| S 23 | 20 2 23 | 0°2'52" | 19°16' | 20°01' | 23°50' | 24°15' | 2°51' | 25°14' | 29°07' | 3°34' | 25°04' | 21°30' | 19°59' | 12°53' | 7°48' | S 23 |
| S 24 | 20 6 20 | 1°0'10" | 2°11' | 19°42' | 23°38' | 24°56' | 3°03' | 25°19' | 29°11' | 3°34' | 25°03' | 21°23' | 19°56' | 12°59' | 7°53' | S 24 |
| M25 | 20 10 16 | 1°57'29" | 14°59' | 19°27' | 23°23' | 25°37' | 3°15' | 25°25' | 29°15' | 3°35' | 25°02' | 21°17' | 19°53' | 13°06' | 7°59' | M25 |
| T 26 | 20 14 13 | 2°54'48" | 28°11' | 19°18' | 23°06' | 26°18' | 3°27' | 25°30' | 29°18' | 3°35' | 25°01' | 21°11' | 19°50' | 13°13' | 8°04' | T 26 |
| W27 | 20 18 9 | 3°52'08" | 11°36' | 19°D14 | 22°47' | 26°59' | 3°39' | 25°36' | 29°22' | 3°36' | 25°00' | 21°07' | 19°47' | 13°19' | 8°10' | W27 |
| T 28 | 20 22 6 | 4°49'28" | 25°15' | 19°17' | 22°26' | 27°40' | 3°52' | 25°41' | 29°26' | 3°36' | 24°58' | 21°05' | 19°44' | 13°26' | 8°15' | T 28 |
| F 29 | 20 26 3 | 5°46'49" | 9°18' | 19°25' | 22°02' | 28°21' | 4°04' | 25°47' | 29°29' | 3°36' | 24°57' | 21°D5 | 19°40' | 13°33' | 8°20' | F 29 |
| S 30 | 20 29 59 | 6°44'10" | 23°14' | 19°39' | 21°36' | 29°01' | 4°16' | 25°52' | 29°33' | 3°36' | 24°56' | 21°06' | 19°37' | 13°39' | 8°26' | S 30 |
| S 31 | 20 33 56 | 7°41'32" | 7°34' | 19°59' | 21°09' | 29°42' | 4°28' | 25°58' | 29°37' | 3°37' | 24°55' | 21°07' | 19°34' | 13°46' | 8°31' | S 31 |

Delta T = 75.27 sec

AUGUST 2039

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ♁ | ♂ | ♁ | ♃ | ♄ | Day |
|------|----------|-------------|-----------|----------|--------|-----------|----------|-----------|----------|-------|--------|-----------|-----------|-----------|----------|------|
| M 1 | 20 37 52 | 8°138'54" | 22°34' | 20°26' | 20°R39 | 0°11'22" | 4°11'40" | 26°11'4" | 29°24'0" | 3°37' | 24°R54 | 21°R7 | 19°11'31" | 13°11'53" | 8°23'36" | M 1 |
| T 2 | 20 41 49 | 9°36'16" | 6°34'42" | 20°59' | 20°L8 | 1°02' | 4°53' | 26°10' | 29°44' | 3°37' | 24°52' | 21°11'6" | 19°28' | 13°59' | 8°42' | T 2 |
| W 3 | 20 45 45 | 10°33'40" | 21°21' | 21°38' | 19°35' | 1°42' | 5°05' | 26°16' | 29°48' | 3°37' | 24°51' | 21°03' | 19°25' | 14°06' | 8°47' | W 3 |
| T 4 | 20 49 42 | 11°31'04" | 5°35'55" | 22°23' | 19°01' | 2°22' | 5°18' | 26°22' | 29°51' | 3°37' | 24°50' | 20°58' | 19°21' | 14°12' | 8°52' | T 4 |
| F 5 | 20 53 39 | 12°28'29" | 20°19' | 23°14' | 18°26' | 3°02' | 5°30' | 26°28' | 29°55' | 3°37' | 24°48' | 20°51' | 19°18' | 14°19' | 8°57' | F 5 |
| S 6 | 20 57 35 | 13°25'55" | 4°32'25" | 24°12' | 17°50' | 3°42' | 5°42' | 26°34' | 29°58' | 3°37' | 24°47' | 20°43' | 19°15' | 14°26' | 9°03' | S 6 |
| S 7 | 21 1 32 | 14°23'22" | 18°08' | 25°15' | 17°13' | 4°22' | 5°55' | 26°40' | 0°02' | 3°R37 | 24°46' | 20°34' | 19°12' | 14°32' | 9°08' | S 7 |
| M 8 | 21 5 28 | 15°20'50" | 1°17'28" | 26°24' | 16°36' | 5°01' | 6°07' | 26°46' | 0°06' | 3°37' | 24°45' | 20°27' | 19°09' | 14°39' | 9°13' | M 8 |
| T 9 | 21 9 25 | 16°18'19" | 14°24' | 27°38' | 15°59' | 5°40' | 6°20' | 26°52' | 0°09' | 3°37' | 24°43' | 20°20' | 19°05' | 14°46' | 9°18' | T 9 |
| W10 | 21 13 21 | 17°15'50" | 26°57' | 28°58' | 15°21' | 6°20' | 6°33' | 26°58' | 0°13' | 3°37' | 24°42' | 20°16' | 19°02' | 14°52' | 9°23' | W10 |
| T 11 | 21 17 18 | 18°13'22" | 9°11'11" | 0°12'23" | 14°44' | 6°59' | 6°45' | 27°05' | 0°16' | 3°37' | 24°41' | 20°14' | 18°59' | 14°59' | 9°28' | T 11 |
| F 12 | 21 21 14 | 19°10'55" | 21°12' | 1°53' | 14°08' | 7°38' | 6°58' | 27°11' | 0°20' | 3°37' | 24°39' | 20°D13 | 18°56' | 15°06' | 9°33' | F 12 |
| S 13 | 21 25 11 | 20°08'30" | 3°11'3" | 3°27' | 13°32' | 8°17' | 7°11' | 27°17' | 0°23' | 3°37' | 24°38' | 20°14' | 18°53' | 15°12' | 9°38' | S 13 |
| S 14 | 21 29 7 | 21°06'06" | 14°51' | 5°06' | 12°57' | 8°56' | 7°23' | 27°24' | 0°27' | 3°37' | 24°37' | 20°R15 | 18°50' | 15°19' | 9°43' | S 14 |
| M15 | 21 33 4 | 22°03'44" | 26°40' | 6°48' | 12°23' | 9°34' | 7°36' | 27°30' | 0°30' | 3°36' | 24°35' | 20°15' | 18°46' | 15°26' | 9°47' | M15 |
| T 16 | 21 37 1 | 23°01'23" | 8°36' | 8°34' | 11°51' | 10°13' | 7°49' | 27°37' | 0°34' | 3°36' | 24°34' | 20°13' | 18°43' | 15°32' | 9°52' | T 16 |
| W17 | 21 40 57 | 23°59'04" | 20°42' | 10°23' | 11°20' | 10°51' | 8°02' | 27°44' | 0°37' | 3°36' | 24°33' | 20°09' | 18°40' | 15°39' | 9°57' | W17 |
| T 18 | 21 44 54 | 24°56'46" | 3°12'15" | 12°15' | 10°51' | 11°29' | 8°15' | 27°50' | 0°41' | 3°35' | 24°31' | 20°02' | 18°37' | 15°45' | 10°02' | T 18 |
| F 19 | 21 48 50 | 25°54'29" | 15°36' | 14°10' | 10°24' | 12°07' | 8°27' | 27°57' | 0°44' | 3°35' | 24°30' | 19°53' | 18°34' | 15°52' | 10°06' | F 19 |
| S 20 | 21 52 47 | 26°52'14" | 28°27' | 16°06' | 9°59' | 12°45' | 8°40' | 28°04' | 0°48' | 3°35' | 24°29' | 19°43' | 18°30' | 15°59' | 10°11' | S 20 |
| S 21 | 21 56 43 | 27°50'00" | 11°11'33" | 18°03' | 9°35' | 13°23' | 8°53' | 28°10' | 0°51' | 3°34' | 24°27' | 19°31' | 18°27' | 16°05' | 10°15' | S 21 |
| M22 | 22 0 40 | 28°47'47" | 24°54' | 20°02' | 9°15' | 14°00' | 9°06' | 28°17' | 0°54' | 3°34' | 24°26' | 19°20' | 18°24' | 16°12' | 10°20' | M22 |
| T 23 | 22 4 36 | 29°45'36" | 8°42'26" | 22°02' | 8°56' | 14°38' | 9°19' | 28°24' | 0°58' | 3°33' | 24°25' | 19°11' | 18°21' | 16°19' | 10°24' | T 23 |
| W24 | 22 8 33 | 0°11'43'26" | 22°09' | 24°02' | 8°39' | 15°15' | 9°32' | 28°31' | 1°01' | 3°33' | 24°23' | 19°03' | 18°18' | 16°25' | 10°29' | W24 |
| T 25 | 22 12 30 | 1°41'17" | 6°11'0" | 26°02' | 8°25' | 15°52' | 9°45' | 28°38' | 1°04' | 3°32' | 24°22' | 18°58' | 18°15' | 16°32' | 10°33' | T 25 |
| F 26 | 22 16 26 | 2°39'09" | 19°58' | 28°02' | 8°14' | 16°29' | 9°58' | 28°45' | 1°08' | 3°31' | 24°21' | 18°56' | 18°11' | 16°39' | 10°37' | F 26 |
| S 27 | 22 20 23 | 3°37'03" | 4°31'0" | 0°11'2" | 8°04' | 17°06' | 10°11' | 28°52' | 1°11' | 3°31' | 24°20' | 18°D56 | 18°08' | 16°45' | 10°42' | S 27 |
| S 28 | 22 24 19 | 4°34'57" | 18°09' | 2°01' | 7°57' | 17°43' | 10°24' | 28°59' | 1°14' | 3°30' | 24°18' | 18°R56 | 18°05' | 16°52' | 10°46' | S 28 |
| M29 | 22 28 16 | 5°32'54" | 2°32'21" | 4°00' | 7°53' | 18°19' | 10°37' | 29°06' | 1°17' | 3°29' | 24°17' | 18°55' | 18°02' | 16°59' | 10°50' | M29 |
| T 30 | 22 32 12 | 6°30'51" | 16°36' | 5°58' | 7°D51 | 18°56' | 10°50' | 29°13' | 1°20' | 3°29' | 24°16' | 18°53' | 17°59' | 17°05' | 10°54' | T 30 |
| W31 | 22 36 9 | 7°28'49" | 0°35'50" | 7°11'55" | 7°L51 | 19°11'32" | 11°11'3" | 29°11'20" | 1°24' | 3°R28 | 24°14' | 18°11'48" | 17°11'56" | 17°11'12" | 10°58' | W31 |

Delta T = 75.29 sec

ASTRODIENST EPHEMERIS for the year 2039

SEPTEMBER 2039

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|----------|-------|-------|-------|-------|-------|-------|------|-------|--------|--------|-------|-------|-------|------|
| T 1 | 22 40 5 | 8♍2649 | 15♋0 | 9♍51 | 7♍53 | 20♏8 | 11♍16 | 29♍27 | 1♏27 | 3°R27 | 24°R13 | 18°R41 | 17♏52 | 17♏18 | 11♏2 | T 1 |
| F 2 | 22 44 2 | 9°24'51 | 29° 1 | 11°46 | 7°58 | 20°43 | 11°29 | 29°34 | 1°30 | 3♌26 | 24°12 | 18°19 | 17°49 | 17°25 | 11° 6 | F 2 |
| S 3 | 22 47 59 | 10°22'54 | 12♋50 | 13°39 | 8° 5 | 21°19 | 11°42 | 29°41 | 1°33 | 3°25 | 24°11 | 18°19 | 17°46 | 17°32 | 11°10 | S 3 |
| S 4 | 22 51 55 | 11°20'58 | 26°20 | 15°32 | 8°14 | 21°54 | 11°55 | 29°48 | 1°36 | 3°25 | 24° 9 | 18° 6 | 17°43 | 17°38 | 11°13 | S 4 |
| M 5 | 22 55 52 | 12°19'05 | 9♍32 | 17°24 | 8°26 | 22°30 | 12° 8 | 29°55 | 1°39 | 3°24 | 24° 8 | 17°55 | 17°40 | 17°45 | 11°17 | M 5 |
| T 6 | 22 59 48 | 13°17'13 | 22°22 | 19°14 | 8°39 | 23° 5 | 12°21 | 0♌3 | 1°42 | 3°23 | 24° 7 | 17°45 | 17°36 | 17°52 | 11°21 | T 6 |
| W 7 | 23 3 45 | 14°15'23 | 4♌53 | 21° 3 | 8°54 | 23°40 | 12°34 | 0°10 | 1°45 | 3°22 | 24° 6 | 17°38 | 17°33 | 17°58 | 11°24 | W 7 |
| T 8 | 23 7 41 | 15°13'35 | 17° 6 | 22°51 | 9°12 | 24°14 | 12°47 | 0°17 | 1°48 | 3°21 | 24° 4 | 17°33 | 17°30 | 18° 5 | 11°28 | T 8 |
| F 9 | 23 11 38 | 16°11'49 | 29° 6 | 24°38 | 9°31 | 24°49 | 13° 0 | 0°24 | 1°51 | 3°20 | 24° 3 | 17°31 | 17°27 | 18°12 | 11°31 | F 9 |
| S 10 | 23 15 34 | 17°10'05 | 10♏57 | 26°23 | 9°52 | 25°23 | 13°13 | 0°32 | 1°54 | 3°19 | 24° 2 | 17°30 | 17°24 | 18°18 | 11°35 | S 10 |
| S 11 | 23 19 31 | 18° 8'24 | 22°46 | 28° 8 | 10°15 | 25°57 | 13°26 | 0°39 | 1°56 | 3°18 | 24° 1 | 17°30 | 17°21 | 18°25 | 11°38 | S 11 |
| M12 | 23 23 28 | 19° 6'44 | 4♌36 | 29°51 | 10°40 | 26°31 | 13°39 | 0°46 | 1°59 | 3°17 | 24° 0 | 17°30 | 17°17 | 18°32 | 11°41 | M12 |
| T 13 | 23 27 24 | 20° 5'06 | 16°34 | 1♌33 | 11° 6 | 27° 5 | 13°52 | 0°54 | 2° 2 | 3°16 | 23°58 | 17°28 | 17°14 | 18°38 | 11°45 | T 13 |
| W14 | 23 31 21 | 21° 3'31 | 28°44 | 3°14 | 11°34 | 27°38 | 14° 5 | 1° 1 | 2° 5 | 3°14 | 23°57 | 17°23 | 17°11 | 18°45 | 11°48 | W14 |
| T 15 | 23 35 17 | 22° 1'57 | 11♏11 | 4°54 | 12° 4 | 28°12 | 14°18 | 1° 8 | 2° 7 | 3°13 | 23°56 | 17°16 | 17° 8 | 18°52 | 11°51 | T 15 |
| F 16 | 23 39 14 | 23° 0'26 | 23°58 | 6°33 | 12°35 | 28°45 | 14°31 | 1°16 | 2°10 | 3°12 | 23°55 | 17° 7 | 17° 5 | 18°58 | 11°54 | F 16 |
| S 17 | 23 43 10 | 23°58'56 | 7♍ 5 | 8°11 | 13° 7 | 29°17 | 14°44 | 1°23 | 2°13 | 3°11 | 23°54 | 16°55 | 17° 2 | 19° 5 | 11°57 | S 17 |
| S 18 | 23 47 7 | 24°57'29 | 20°32 | 9°48 | 13°41 | 29°50 | 14°57 | 1°31 | 2°15 | 3°10 | 23°53 | 16°43 | 16°58 | 19°11 | 12° 0 | S 18 |
| M19 | 23 51 3 | 25°56'03 | 4♌16 | 11°23 | 14°16 | 0♌22 | 15°10 | 1°38 | 2°18 | 3° 8 | 23°52 | 16°31 | 16°55 | 19°18 | 12° 2 | M19 |
| T 20 | 23 55 0 | 26°54'39 | 18°15 | 12°58 | 14°53 | 0°54 | 15°23 | 1°45 | 2°20 | 3° 7 | 23°51 | 16°20 | 16°52 | 19°25 | 12° 5 | T 20 |
| W21 | 23 58 57 | 27°53'17 | 2♌22 | 14°32 | 15°31 | 1°26 | 15°36 | 1°53 | 2°23 | 3° 6 | 23°50 | 16°12 | 16°49 | 19°31 | 12° 8 | W21 |
| T 22 | 0 2 53 | 28°51'57 | 16°35 | 16° 5 | 16° 9 | 1°58 | 15°48 | 2° 0 | 2°25 | 3° 5 | 23°49 | 16° 6 | 16°46 | 19°38 | 12°10 | T 22 |
| F 23 | 0 6 50 | 29°50'38 | 0♌48 | 17°36 | 16°50 | 2°29 | 16° 1 | 2° 8 | 2°27 | 3° 3 | 23°48 | 16° 4 | 16°42 | 19°45 | 12°13 | F 23 |
| S 24 | 0 10 46 | 0♌49'22 | 15° 0 | 19° 7 | 17°31 | 3° 0 | 16°14 | 2°15 | 2°30 | 3° 2 | 23°47 | 16°D 3 | 16°39 | 19°51 | 12°15 | S 24 |
| S 25 | 0 14 43 | 1°48'07 | 29° 8 | 20°37 | 18°13 | 3°31 | 16°27 | 2°23 | 2°32 | 3° 1 | 23°46 | 16°R 3 | 16°36 | 19°58 | 12°18 | S 25 |
| M26 | 0 18 39 | 2°46'54 | 13♌12 | 22° 5 | 18°56 | 4° 1 | 16°40 | 2°30 | 2°34 | 2°59 | 23°45 | 16° 3 | 16°33 | 20° 5 | 12°20 | M26 |
| T 27 | 0 22 36 | 3°45'42 | 27°11 | 23°33 | 19°40 | 4°32 | 16°52 | 2°38 | 2°36 | 2°58 | 23°44 | 16° 1 | 16°30 | 20°11 | 12°22 | T 27 |
| W28 | 0 26 32 | 4°44'32 | 11♋3 | 25° 0 | 20°25 | 5° 2 | 17° 5 | 2°45 | 2°39 | 2°56 | 23°43 | 15°57 | 16°27 | 20°18 | 12°24 | W28 |
| T 29 | 0 30 29 | 5°43'24 | 24°48 | 26°25 | 21°12 | 5°31 | 17°18 | 2°52 | 2°41 | 2°55 | 23°42 | 15°49 | 16°23 | 20°25 | 12°26 | T 29 |
| F 30 | 0 34 26 | 6°42'17 | 8♌24 | 27°50 | 21°58 | 6° 1 | 17°30 | 3° 0 | 2°43 | 2°53 | 23°41 | 15°40 | 16°12 | 20°31 | 12°28 | F 30 |

Delta T = 75.31 sec

OCTOBER 2039

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|----------|--------|--------|-------|-------|-------|------|------|-------|--------|--------|-------|-------|--------|------|
| S 1 | 0 38 22 | 7♌41'12 | 21♋48 | 29♏13 | 22♏46 | 6♌30 | 17♍43 | 3♌7 | 2♏45 | 2°R52 | 23°R40 | 15°R29 | 16♏17 | 20♏38 | 12♌30 | S 1 |
| S 2 | 0 42 19 | 8°40'10 | 4♍58 | 0♌36 | 23°35 | 6°59 | 17°56 | 3°15 | 2°47 | 2♌50 | 23°39 | 15♏17 | 16°14 | 20°44 | 12°32 | S 2 |
| M 3 | 0 46 15 | 9°39'09 | 17°53 | 1°57 | 24°25 | 7°27 | 18° 8 | 3°22 | 2°49 | 2°49 | 23°38 | 15° 6 | 16°11 | 20°51 | 12°34 | M 3 |
| T 4 | 0 50 12 | 10°38'10 | 0♌31 | 3°17 | 25°15 | 7°55 | 18°21 | 3°29 | 2°51 | 2°47 | 23°37 | 14°57 | 16° 7 | 20°58 | 12°35 | T 4 |
| W 5 | 0 54 8 | 11°37'14 | 12°54 | 4°36 | 26° 6 | 8°23 | 18°33 | 3°37 | 2°52 | 2°46 | 23°37 | 14°50 | 16° 4 | 21° 4 | 12°37 | W 5 |
| T 6 | 0 58 5 | 12°36'19 | 25° 3 | 5°54 | 26°58 | 8°51 | 18°46 | 3°44 | 2°54 | 2°44 | 23°36 | 14°46 | 16° 1 | 21°11 | 12°38 | T 6 |
| F 7 | 1 2 1 | 13°35'27 | 7♏ 0 | 7°10 | 27°50 | 9°18 | 18°58 | 3°52 | 2°56 | 2°43 | 23°35 | 14°43 | 15°58 | 21°18 | 12°40 | F 7 |
| S 8 | 1 5 58 | 14°34'38 | 18°51 | 8°25 | 28°43 | 9°45 | 19°10 | 3°59 | 2°58 | 2°41 | 23°34 | 14°D43 | 15°55 | 21°24 | 12°41 | S 8 |
| S 9 | 1 9 54 | 15°33'50 | 0♌38 | 9°38 | 29°37 | 10°12 | 19°23 | 4° 6 | 2°59 | 2°40 | 23°34 | 14°44 | 15°52 | 21°31 | 12°42 | S 9 |
| M10 | 1 13 51 | 16°33'05 | 12°28 | 10°50 | 0♌31 | 10°38 | 19°35 | 4°14 | 3° 1 | 2°38 | 23°33 | 14°R45 | 15°48 | 21°38 | 12°43 | M10 |
| T 11 | 1 17 48 | 17°32'22 | 24°25 | 12° 0 | 1°27 | 11° 4 | 19°47 | 4°21 | 3° 3 | 2°36 | 23°32 | 14°45 | 15°45 | 21°44 | 12°45 | T 11 |
| W12 | 1 21 44 | 18°31'41 | 6♌36 | 13° 8 | 2°22 | 11°29 | 19°59 | 4°28 | 3° 4 | 2°35 | 23°32 | 14°43 | 15°42 | 21°51 | 12°45 | W12 |
| T 13 | 1 25 41 | 19°31'03 | 19° 5 | 14°14 | 3°18 | 11°55 | 20°12 | 4°36 | 3° 6 | 2°33 | 23°31 | 14°39 | 15°39 | 21°58 | 12°46 | T 13 |
| F 14 | 1 29 37 | 20°30'27 | 1♍55 | 15°18 | 4°15 | 12°19 | 20°24 | 4°43 | 3° 7 | 2°32 | 23°30 | 14°33 | 15°36 | 22° 4 | 12°47 | F 14 |
| S 15 | 1 33 34 | 21°29'53 | 15°10 | 16°19 | 5°12 | 12°44 | 20°36 | 4°50 | 3° 8 | 2°30 | 23°30 | 14°25 | 15°33 | 22°11 | 12°48 | S 15 |
| S 16 | 1 37 30 | 22°29'22 | 28°49 | 17°18 | 6°10 | 13° 8 | 20°48 | 4°57 | 3°10 | 2°28 | 23°29 | 14°16 | 15°29 | 22°17 | 12°49 | S 16 |
| M17 | 1 41 27 | 23°28'52 | 12♌51 | 18°14 | 7° 9 | 13°31 | 21° 0 | 5° 5 | 3°11 | 2°27 | 23°29 | 14° 7 | 15°26 | 22°24 | 12°49 | M17 |
| T 18 | 1 45 23 | 24°28'25 | 27°12 | 19° 6 | 8° 7 | 13°54 | 21°12 | 5°12 | 3°12 | 2°25 | 23°28 | 14° 0 | 15°23 | 22°31 | 12°50 | T 18 |
| W19 | 1 49 20 | 25°27'59 | 11♌45 | 19°56 | 9° 7 | 14°17 | 21°23 | 5°19 | 3°13 | 2°23 | 23°28 | 13°54 | 15°20 | 22°37 | 12°50 | W19 |
| T 20 | 1 53 17 | 26°27'36 | 26°23 | 20°41 | 10° 6 | 14°39 | 21°35 | 5°26 | 3°14 | 2°22 | 23°27 | 13°50 | 15°17 | 22°44 | 12°50 | T 20 |
| F 21 | 1 57 13 | 27°27'14 | 11♌ 1 | 21°22 | 11° 6 | 15° 1 | 21°47 | 5°33 | 3°15 | 2°20 | 23°27 | 13°D49 | 15°13 | 22°51 | 12°50 | F 21 |
| S 22 | 2 1 10 | 28°26'55 | 25°33 | 21°59 | 12° 7 | 15°23 | 21°59 | 5°40 | 3°16 | 2°18 | 23°26 | 13°50 | 15°10 | 22°57 | 12°51 | S 22 |
| S 23 | 2 5 6 | 29°26'37 | 9♌54 | 22°30 | 13° 8 | 15°44 | 22°10 | 5°47 | 3°17 | 2°17 | 23°26 | 13°51 | 15° 7 | 23° 4 | 12°R51 | S 23 |
| M24 | 2 9 3 | 0♌26'21 | 24° 2 | 22°56 | 14° 9 | 16° 4 | 22°22 | 5°54 | 3°18 | 2°15 | 23°26 | 13°R52 | 15° 4 | 23°11 | 12°51 | M24 |
| T 25 | 2 12 59 | 1°26'06 | 7♋57 | 23°15 | 15°11 | 16°24 | 22°33 | 6° 1 | 3°19 | 2°13 | 23°25 | 13°52 | 15° 1 | 23°17 | 12°50 | T 25 |
| W26 | 2 16 56 | 2°25'53 | 21°38 | 23°28 | 16°13 | 16°43 | 22°45 | 6° 8 | 3°20 | 2°12 | 23°25 | 13°50 | 14°58 | 23°24 | 12°50 | W26 |
| T 27 | 2 20 52 | 3°25'42 | 5♌ 5 | 23°R33 | 17°16 | 17° 2 | 22°56 | 6°15 | 3°21 | 2°10 | 23°25 | 13°46 | 14°54 | 23°31 | 12°50 | T 27 |
| F 28 | 2 24 49 | 4°25'32 | 18°19 | 23°30 | 18°18 | 17°21 | 23° 7 | 6°22 | 3°21 | 2° 8 | 23°24 | 13°41 | 14°51 | 23°37 | 12°49 | F 28 |
| S 29 | 2 28 46 | 5°25'24 | 1°V19 | 23°19 | 19°22 | 17°39 | 23°18 | 6°29 | 3°22 | 2° 6 | 23°24 | 13°35 | 14°48 | 23°44 | 12°49 | S 29 |
| S 30 | 2 32 42 | 6°25'17 | 14° 7 | 22°59 | 20°25 | 17°56 | 23°30 | 6°36 | 3°22 | 2° 5 | 23°24 | 13°28 | 14°45 | 23°51 | 12°48 | S 30 |
| M31 | 2 36 39 | 7♌25'13 | 26°V42 | 22♌29 | 21♍29 | 18♌13 | 23♍41 | 6♌42 | 3♌23 | 2♌ 3 | 23°24 | 13°22 | 14°42 | 23°57 | 12°48 | M31 |

Delta T = 75.33 sec

ASTRODIENST EPHEMERIS for the year 2039

NOVEMBER 2039

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♁ | ♂ | ♃ | ♅ | ♁ | ♄ | ♁ | ♁ | ♁ | ♁ | ♁ | ♁ | Day |
|------|---------|----------|--------|--------|-------|--------|-------|------|-------|-------|--------|--------|---------|---------|--------|------|-----|
| T 1 | 2 40 35 | 8♈25'10 | 9♉5 | 21°R50 | 22♈33 | 18♉30 | 23♈52 | 6♊49 | 3♈23 | 2°R 1 | 23°R24 | 13°R16 | 14♈39 | 24♈4 | 12°R47 | T 1 | |
| W 2 | 2 44 32 | 9°25'10 | 21°16 | 21♈2 | 23°38 | 18°45 | 24°2 | 6°56 | 3°24 | 2♉0 | 23°R23 | 13°R12 | 14°35 | 24°10 | 12♉46 | W 2 | |
| T 3 | 2 48 28 | 10°25'11 | 3♈17 | 20°5 | 24°42 | 19°1 | 24°13 | 7°2 | 3°24 | 1°58 | 23°R23 | 13°10 | 14°32 | 24°17 | 12°45 | T 3 | |
| F 4 | 2 52 25 | 11°25'14 | 15°11 | 19°0 | 25°47 | 19°15 | 24°24 | 7°9 | 3°25 | 1°56 | 23°R23 | 13°D10 | 14°29 | 24°24 | 12°44 | F 4 | |
| S 5 | 2 56 21 | 12°25'20 | 26°59 | 17°49 | 26°53 | 19°29 | 24°35 | 7°16 | 3°25 | 1°55 | 23°R23 | 13°11 | 14°26 | 24°30 | 12°43 | S 5 | |
| S 6 | 3 0 18 | 13°25'27 | 8♉46 | 16°33 | 27°58 | 19°43 | 24°45 | 7°22 | 3°25 | 1°53 | 23°R23 | 13°12 | 14°23 | 24°37 | 12°42 | S 6 | |
| M 7 | 3 4 15 | 14°25'37 | 20°35 | 15°15 | 29°4 | 19°55 | 24°56 | 7°29 | 3°25 | 1°52 | 23°D23 | 13°14 | 14°19 | 24°44 | 12°41 | M 7 | |
| T 8 | 3 8 11 | 15°25'48 | 2♈13 | 13°56 | 0♈10 | 20°8 | 25°6 | 7°35 | 3°25 | 1°50 | 23°R23 | 13°16 | 14°16 | 24°50 | 12°39 | T 8 | |
| W 9 | 3 12 8 | 16°26'01 | 14°40 | 12°39 | 1°17 | 20°19 | 25°16 | 7°41 | 3°R25 | 1°48 | 23°R23 | 13°R16 | 14°13 | 24°57 | 12°38 | W 9 | |
| T 10 | 3 16 4 | 17°26'17 | 27°5 | 11°28 | 2°24 | 20°30 | 25°26 | 7°48 | 3°25 | 1°47 | 23°R23 | 13°16 | 14°10 | 25°4 | 12°36 | T 10 | |
| F 11 | 3 20 1 | 18°26'34 | 9♈52 | 10°23 | 3°30 | 20°40 | 25°37 | 7°54 | 3°25 | 1°45 | 23°R23 | 13°14 | 14°7 | 25°10 | 12°35 | F 11 | |
| S 12 | 3 23 57 | 19°26'54 | 23°4 | 9°28 | 4°38 | 20°50 | 25°47 | 8°0 | 3°25 | 1°43 | 23°R24 | 13°12 | 14°4 | 25°17 | 12°33 | S 12 | |
| S 13 | 3 27 54 | 20°27'15 | 6♊43 | 8°42 | 5°45 | 20°58 | 25°57 | 8°6 | 3°25 | 1°42 | 23°R24 | 13°9 | 14°0 | 25°24 | 12°32 | S 13 | |
| M14 | 3 31 50 | 21°27'38 | 20°49 | 8°8 | 6°53 | 21°7 | 26°6 | 8°12 | 3°24 | 1°40 | 23°R24 | 13°5 | 13°57 | 25°30 | 12°30 | M14 | |
| T 15 | 3 35 47 | 22°28'03 | 5♈19 | 7°46 | 8°0 | 21°14 | 26°16 | 8°18 | 3°24 | 1°39 | 23°R24 | 13°3 | 13°54 | 25°37 | 12°28 | T 15 | |
| W16 | 3 39 44 | 23°28'30 | 20°8 | 7°D35 | 9°8 | 21°20 | 26°26 | 8°24 | 3°24 | 1°37 | 23°R24 | 13°0 | 13°51 | 25°44 | 12°26 | W16 | |
| T 17 | 3 43 40 | 24°28'59 | 5♈7 | 7°36 | 10°17 | 21°26 | 26°35 | 8°30 | 3°23 | 1°36 | 23°R25 | 12°59 | 13°48 | 25°50 | 12°24 | T 17 | |
| F 18 | 3 47 37 | 25°29'29 | 20°9 | 7°47 | 11°25 | 21°31 | 26°45 | 8°36 | 3°23 | 1°34 | 23°R25 | 12°D59 | 13°45 | 25°57 | 12°22 | F 18 | |
| S 19 | 3 51 33 | 26°30'00 | 5♉5 | 8°8 | 12°34 | 21°36 | 26°54 | 8°42 | 3°22 | 1°33 | 23°R25 | 13°0 | 13°41 | 26°3 | 12°19 | S 19 | |
| S 20 | 3 55 30 | 27°30'33 | 19°48 | 8°39 | 13°42 | 21°39 | 27°3 | 8°48 | 3°22 | 1°31 | 23°R26 | 13°1 | 13°38 | 26°10 | 12°17 | S 20 | |
| M21 | 3 59 26 | 28°31'08 | 4♈12 | 9°18 | 14°51 | 21°42 | 27°12 | 8°54 | 3°21 | 1°30 | 23°R26 | 13°2 | 13°35 | 26°17 | 12°15 | M21 | |
| T 22 | 4 3 23 | 29°31'43 | 18°16 | 10°4 | 16°0 | 21°44 | 27°21 | 8°59 | 3°20 | 1°28 | 23°R26 | 13°3 | 13°32 | 26°23 | 12°12 | T 22 | |
| W23 | 4 7 19 | 0♈32'19 | 1♈58 | 10°57 | 17°10 | 21°45 | 27°30 | 9°5 | 3°20 | 1°27 | 23°R27 | 13°R3 | 13°29 | 26°30 | 12°10 | W23 | |
| T 24 | 4 11 16 | 1°32'57 | 15°18 | 11°55 | 18°19 | 21°R45 | 27°39 | 9°10 | 3°19 | 1°25 | 23°R27 | 13°3 | 13°25 | 26°37 | 12°7 | T 24 | |
| F 25 | 4 15 13 | 2°33'35 | 28°20 | 12°58 | 19°29 | 21°45 | 27°47 | 9°16 | 3°18 | 1°24 | 23°R28 | 13°2 | 13°22 | 26°43 | 12°5 | F 25 | |
| S 26 | 4 19 9 | 3°34'15 | 11°Y 4 | 14°6 | 20°38 | 21°43 | 27°56 | 9°21 | 3°17 | 1°23 | 23°R28 | 13°1 | 13°19 | 26°50 | 12°2 | S 26 | |
| S 27 | 4 23 6 | 4°34'56 | 23°34 | 15°17 | 21°48 | 21°41 | 28°4 | 9°26 | 3°16 | 1°21 | 23°R29 | 13°0 | 13°16 | 26°57 | 11°59 | S 27 | |
| M28 | 4 27 2 | 5°35'38 | 5♉52 | 16°32 | 22°58 | 21°38 | 28°13 | 9°31 | 3°15 | 1°20 | 23°R29 | 12°59 | 13°13 | 27°3 | 11°56 | M28 | |
| T 29 | 4 30 59 | 6°36'21 | 17°59 | 17°49 | 24°9 | 21°34 | 28°21 | 9°37 | 3°14 | 1°19 | 23°R30 | 12°58 | 13°10 | 27°10 | 11°53 | T 29 | |
| W30 | 4 34 55 | 7°37'06 | 29♉59 | 19♈9 | 25♈19 | 21♉30 | 28♈29 | 9♊42 | 3♈13 | 1♉17 | 23°R30 | 12°57 | 13°II 6 | 27°II17 | 11°51 | W30 | |

Delta T = 75.35 sec

DECEMBER 2039

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♁ | ♂ | ♃ | ♅ | ♁ | ♄ | ♁ | ♁ | ♁ | ♁ | ♁ | ♁ | Day |
|------|---------|----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|---------|---------|---------|--------|------|-----|
| T 1 | 4 38 52 | 8♈37'51 | 11♈53 | 20♈31 | 26♈29 | 21°R24 | 28♈37 | 9♊47 | 3°R12 | 1°R16 | 23°R31 | 12°D57 | 13°II 3 | 27°II23 | 11°R48 | T 1 | |
| F 2 | 4 42 48 | 9°38'38 | 23°42 | 21°54 | 27°40 | 21°R18 | 28°44 | 9°52 | 3♈11 | 1♉15 | 23°R32 | 12°II57 | 13°0 | 27°30 | 11°R44 | F 2 | |
| S 3 | 4 46 45 | 10°39'27 | 5♉30 | 23°19 | 28°51 | 21°10 | 28°52 | 9°56 | 3°9 | 1°14 | 23°R32 | 12°57 | 12°57 | 27°37 | 11°41 | S 3 | |
| S 4 | 4 50 42 | 11°40'16 | 17°18 | 24°45 | 0♈2 | 21°2 | 28°59 | 10°1 | 3°8 | 1°12 | 23°R33 | 12°58 | 12°54 | 27°43 | 11°38 | S 4 | |
| M 5 | 4 54 38 | 12°41'07 | 29°10 | 26°12 | 1°13 | 20°53 | 29°7 | 10°6 | 3°7 | 1°11 | 23°R34 | 12°R58 | 12°51 | 27°50 | 11°35 | M 5 | |
| T 6 | 4 58 35 | 13°41'59 | 11♈8 | 27°40 | 2°24 | 20°43 | 29°14 | 10°11 | 3°5 | 1°10 | 23°R35 | 12°58 | 12°47 | 27°57 | 11°32 | T 6 | |
| W 7 | 5 2 31 | 14°42'52 | 23°16 | 29°8 | 3°35 | 20°33 | 29°21 | 10°15 | 3°4 | 1°9 | 23°R35 | 12°58 | 12°44 | 28°3 | 11°28 | W 7 | |
| T 8 | 5 6 28 | 15°43'47 | 5♈40 | 0♈38 | 4°46 | 20°21 | 29°28 | 10°20 | 3°3 | 1°8 | 23°R36 | 12°57 | 12°41 | 28°10 | 11°25 | T 8 | |
| F 9 | 5 10 24 | 16°44'43 | 18°21 | 2°8 | 5°58 | 20°9 | 29°35 | 10°24 | 3°1 | 1°7 | 23°R37 | 12°D57 | 12°38 | 28°16 | 11°21 | F 9 | |
| S 10 | 5 14 21 | 17°45'39 | 1♊25 | 3°38 | 7°9 | 19°55 | 29°41 | 10°28 | 2°59 | 1°6 | 23°R38 | 12°58 | 12°35 | 28°23 | 11°18 | S 10 | |
| S 11 | 5 18 17 | 18°46'38 | 14°54 | 5°8 | 8°21 | 19°41 | 29°48 | 10°32 | 2°58 | 1°5 | 23°R39 | 12°58 | 12°31 | 28°30 | 11°14 | S 11 | |
| M12 | 5 22 14 | 19°47'37 | 28°50 | 6°39 | 9°33 | 19°27 | 29°54 | 10°36 | 2°56 | 1°4 | 23°40 | 12°59 | 12°28 | 28°36 | 11°11 | M12 | |
| T 13 | 5 26 11 | 20°48'38 | 13♈13 | 8°11 | 10°45 | 19°11 | 0♈0 | 10°40 | 2°54 | 1°3 | 23°41 | 12°59 | 12°25 | 28°43 | 11°7 | T 13 | |
| W14 | 5 30 7 | 21°49'39 | 28°0 | 9°42 | 11°57 | 18°55 | 0°7 | 10°44 | 2°53 | 1°2 | 23°42 | 13°0 | 12°22 | 28°50 | 11°3 | W14 | |
| T 15 | 5 34 4 | 22°50'42 | 13♈4 | 11°14 | 13°9 | 18°38 | 0°12 | 10°48 | 2°51 | 1°1 | 23°43 | 13°R0 | 12°19 | 28°56 | 11°0 | T 15 | |
| F 16 | 5 38 0 | 23°51'45 | 28°17 | 12°46 | 14°21 | 18°20 | 0°18 | 10°52 | 2°49 | 1°0 | 23°44 | 13°0 | 12°16 | 29°3 | 10°56 | F 16 | |
| S 17 | 5 41 57 | 24°52'50 | 13♉30 | 14°18 | 15°33 | 18°1 | 0°24 | 10°56 | 2°47 | 0°59 | 23°45 | 12°59 | 12°12 | 29°10 | 10°52 | S 17 | |
| S 18 | 5 45 53 | 25°53'54 | 28°33 | 15°51 | 16°45 | 17°42 | 0°29 | 10°59 | 2°45 | 0°58 | 23°46 | 12°57 | 12°9 | 29°16 | 10°48 | S 18 | |
| M19 | 5 49 50 | 26°55'00 | 13♈17 | 17°23 | 17°58 | 17°23 | 0°34 | 11°3 | 2°43 | 0°58 | 23°47 | 12°56 | 12°6 | 29°23 | 10°45 | M19 | |
| T 20 | 5 53 47 | 27°56'05 | 27°37 | 18°56 | 19°10 | 17°2 | 0°39 | 11°6 | 2°41 | 0°57 | 23°48 | 12°54 | 12°3 | 29°30 | 10°41 | T 20 | |
| W21 | 5 57 43 | 28°57'11 | 11♈29 | 20°29 | 20°23 | 16°42 | 0°44 | 11°9 | 2°39 | 0°56 | 23°49 | 12°52 | 12°0 | 29°36 | 10°37 | W21 | |
| T 22 | 6 1 40 | 29°58'17 | 24°55 | 22°2 | 21°35 | 16°20 | 0°49 | 11°13 | 2°37 | 0°55 | 23°50 | 12°D52 | 11°57 | 29°43 | 10°33 | T 22 | |
| F 23 | 6 5 36 | 0♈59'23 | 7♈55 | 23°35 | 22°48 | 15°58 | 0°54 | 11°16 | 2°35 | 0°55 | 23°51 | 12°52 | 11°53 | 29°50 | 10°29 | F 23 | |
| S 24 | 6 9 33 | 2°0'29 | 20°34 | 25°8 | 24°1 | 15°36 | 0°58 | 11°19 | 2°33 | 0°54 | 23°52 | 12°53 | 11°50 | 29°56 | 10°25 | S 24 | |
| S 25 | 6 13 29 | 3°1'36 | 2♉54 | 26°42 | 25°13 | 15°14 | 1°2 | 11°22 | 2°31 | 0°54 | 23°54 | 12°54 | 11°47 | 0♈3 | 10°21 | S 25 | |
| M26 | 6 17 26 | 4°2'42 | 15°2 | 28°16 | 26°26 | 14°51 | 1°7 | 11°24 | 2°29 | 0°53 | 23°55 | 12°56 | 11°44 | 0°10 | 10°17 | M26 | |
| T 27 | 6 21 22 | 5°3'49 | 26°59 | 29°50 | 27°39 | 14°28 | 1°10 | 11°27 | 2°27 | 0°52 | 23°56 | 12°57 | 11°41 | 0°16 | 10°13 | T 27 | |
| W28 | 6 25 19 | 6°4'56 | 8♈50 | 1♉24 | 28°52 | 14°4 | 1°14 | 11°30 | 2°24 | 0°52 | 23°57 | 12°R58 | 11°37 | 0°23 | 10°9 | W28 | |
| T 29 | 6 29 16 | 7°6'04 | 20°39 | 2°59 | 0♈5 | 13°41 | 1°18 | 11°32 | 2°22 | 0°51 | 23°59 | 12°58 | 11°34 | 0°30 | 10°5 | T 29 | |
| F 30 | 6 33 12 | 8°7'11 | 2♉26 | 4°34 | 1°18 | 13°17 | 1°21 | 11°35 | 2°20 | 0°51 | 24°0 | 12°57 | 11°31 | 0°36 | 10°1 | F 30 | |
| S 31 | 6 37 9 | 9♉8'19 | 14♉16 | 6♉9 | 2♈31 | 12°53 | 1♊24 | 11♊37 | 2♈18 | 0♉51 | 24°R 1 | 12°II54 | 11°II28 | 0♈43 | 9♈57 | S 31 | |

Delta T = 75.37 sec