



Astrodienst Ephemeris Tables for the year 1454

tropical geocentric zodiac

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

Programming
Dieter Koch and Alois Treindl
based on Swiss Ephemeris
Code D5EPH

ASTRODIENST EPHEMERIS for the year 1454
geocentric

JANUARY 1454 JC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|------|
| T 1 | 7 16 21 | 19°37'04 | 11°17 | 17°16 | 21°28 | 18°0 | 7°0 | 11°10 | 3°R49 | 6°R47 | 9°R58 | 6°R13 | 4°48 | 7°48 | 8°R22 | T 1 |
| W 2 | 7 20 18 | 20°38'12 | 23°51 | 18°55 | 22°42 | 18°44 | 7°8 | 11°14 | 3°46 | 6°47 | 9°56 | 6°4 | 4°45 | 7°54 | 8°18 | W 2 |
| T 3 | 7 24 14 | 21°39'18 | 6°10 | 20°35 | 23°56 | 19°28 | 7°16 | 11°17 | 3°44 | 6°47 | 9°55 | 5°56 | 4°42 | 8°1 | 8°14 | T 3 |
| F 4 | 7 28 11 | 22°40'24 | 18°17 | 22°15 | 25°9 | 20°11 | 7°24 | 11°21 | 3°41 | 6°47 | 9°54 | 5°49 | 4°39 | 8°8 | 8°10 | F 4 |
| S 5 | 7 32 7 | 23°41'28 | 0°14 | 23°56 | 26°23 | 20°55 | 7°32 | 11°25 | 3°39 | 6°46 | 9°52 | 5°44 | 4°36 | 8°14 | 8°6 | S 5 |
| S 6 | 7 36 4 | 24°42'32 | 12°5 | 25°37 | 27°37 | 21°39 | 7°41 | 11°28 | 3°36 | 6°46 | 9°51 | 5°41 | 4°32 | 8°21 | 8°2 | S 6 |
| M 7 | 7 40 1 | 25°43'34 | 23°55 | 27°19 | 28°50 | 22°23 | 7°50 | 11°32 | 3°33 | 6°46 | 9°50 | 5°D39 | 4°29 | 8°28 | 7°58 | M 7 |
| T 8 | 7 43 57 | 26°44'36 | 5°50 | 29°2 | 0°4 | 23°6 | 7°58 | 11°35 | 3°31 | 6°46 | 9°48 | 5°40 | 4°26 | 8°34 | 7°54 | T 8 |
| W 9 | 7 47 54 | 27°45'36 | 17°53 | 0°45 | 1°17 | 23°50 | 8°7 | 11°39 | 3°28 | 6°45 | 9°47 | 5°41 | 4°23 | 8°41 | 7°50 | W 9 |
| T 10 | 7 51 50 | 28°46'36 | 0°12 | 2°29 | 2°31 | 24°34 | 8°16 | 11°42 | 3°26 | 6°45 | 9°45 | 5°R42 | 4°20 | 8°48 | 7°46 | T 10 |
| F 11 | 7 55 47 | 29°47'34 | 12°49 | 4°13 | 3°44 | 25°18 | 8°25 | 11°45 | 3°23 | 6°45 | 9°44 | 5°42 | 4°17 | 8°55 | 7°42 | F 11 |
| S 12 | 7 59 43 | 0°48'31 | 25°49 | 5°58 | 4°57 | 26°2 | 8°35 | 11°48 | 3°20 | 6°44 | 9°43 | 5°40 | 4°13 | 9°1 | 7°38 | S 12 |
| S 13 | 8 3 40 | 1°49'27 | 9°13 | 7°43 | 6°11 | 26°46 | 8°44 | 11°51 | 3°18 | 6°44 | 9°41 | 5°35 | 4°10 | 9°8 | 7°35 | S 13 |
| M14 | 8 7 37 | 2°50'22 | 23°2 | 9°29 | 7°24 | 27°30 | 8°54 | 11°54 | 3°15 | 6°43 | 9°40 | 5°29 | 4°7 | 9°15 | 7°31 | M14 |
| T 15 | 8 11 33 | 3°51'15 | 7°12 | 11°15 | 8°37 | 28°14 | 9°3 | 11°57 | 3°13 | 6°43 | 9°38 | 5°20 | 4°4 | 9°21 | 7°27 | T 15 |
| W16 | 8 15 30 | 4°52'08 | 21°38 | 13°1 | 9°50 | 28°58 | 9°13 | 11°59 | 3°10 | 6°42 | 9°37 | 5°10 | 4°1 | 9°28 | 7°24 | W16 |
| T 17 | 8 19 26 | 5°52'59 | 6°13 | 14°48 | 11°3 | 29°42 | 9°23 | 12°2 | 3°7 | 6°42 | 9°35 | 5°0 | 3°58 | 9°35 | 7°20 | T 17 |
| F 18 | 8 23 23 | 6°53'50 | 20°51 | 16°34 | 12°16 | 0°27 | 9°33 | 12°4 | 3°5 | 6°41 | 9°34 | 4°52 | 3°54 | 9°41 | 7°17 | F 18 |
| S 19 | 8 27 19 | 7°54'39 | 5°24 | 18°21 | 13°29 | 1°11 | 9°43 | 12°7 | 3°2 | 6°40 | 9°33 | 4°45 | 3°51 | 9°48 | 7°13 | S 19 |
| S 20 | 8 31 16 | 8°55'27 | 19°48 | 20°7 | 14°41 | 1°55 | 9°53 | 12°9 | 2°59 | 6°40 | 9°31 | 4°41 | 3°48 | 9°55 | 7°10 | S 20 |
| M21 | 8 35 12 | 9°56'15 | 3°15 | 21°53 | 15°54 | 2°39 | 10°4 | 12°11 | 2°57 | 6°39 | 9°30 | 4°40 | 3°45 | 10°2 | 7°6 | M21 |
| T 22 | 8 39 9 | 10°57'02 | 17°55 | 23°38 | 17°7 | 3°24 | 10°14 | 12°13 | 2°54 | 6°38 | 9°28 | 4°D40 | 3°42 | 10°8 | 7°3 | T 22 |
| W23 | 8 43 5 | 11°57'48 | 1°37 | 25°22 | 18°19 | 4°8 | 10°25 | 12°15 | 2°52 | 6°37 | 9°27 | 4°R40 | 3°38 | 10°15 | 7°0 | W23 |
| T 24 | 8 47 2 | 12°58'32 | 15°7 | 27°5 | 19°32 | 4°52 | 10°36 | 12°17 | 2°49 | 6°37 | 9°25 | 4°40 | 3°35 | 10°22 | 6°57 | T 24 |
| F 25 | 8 50 59 | 13°59'16 | 28°24 | 28°46 | 20°44 | 5°37 | 10°47 | 12°19 | 2°47 | 6°36 | 9°24 | 4°37 | 3°32 | 10°28 | 6°54 | F 25 |
| S 26 | 8 54 55 | 14°59'58 | 11°31 | 0°24 | 21°57 | 6°21 | 10°57 | 12°21 | 2°44 | 6°35 | 9°23 | 4°32 | 3°29 | 10°35 | 6°51 | S 26 |
| S 27 | 8 58 52 | 16°0'40 | 24°26 | 2°1 | 23°9 | 7°6 | 11°9 | 12°22 | 2°41 | 6°34 | 9°21 | 4°24 | 3°26 | 10°42 | 6°48 | S 27 |
| M28 | 9 2 48 | 17°1'19 | 7°11 | 3°33 | 24°21 | 7°50 | 11°20 | 12°24 | 2°39 | 6°33 | 9°20 | 4°13 | 3°23 | 10°48 | 6°45 | M28 |
| T 29 | 9 6 45 | 18°1'58 | 19°45 | 5°3 | 25°33 | 8°35 | 11°31 | 12°25 | 2°36 | 6°32 | 9°18 | 4°0 | 3°19 | 10°55 | 6°42 | T 29 |
| W30 | 9 10 41 | 19°2'35 | 2°8 | 6°27 | 26°45 | 9°19 | 11°42 | 12°27 | 2°34 | 6°31 | 9°17 | 3°46 | 3°16 | 11°2 | 6°39 | W30 |
| T 31 | 9 14 38 | 20°3'10 | 14°20 | 7°47 | 27°57 | 10°2 | 11°54 | 12°28 | 2°31 | 6°30 | 9°15 | 3°43 | 3°13 | 11°8 | 6°37 | T 31 |

Delta T = 06m22s

Julian Calendar 1 Jan. 1454 == Greg. Calendar 10 Jan. 1454

FEBRUARY 1454 JC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|---------|-------|--------|-------|-------|-------|--------|-------|-------|-------|-------|------|-------|-------|------|
| F 1 | 9 18 34 | 21°3'43 | 26°22 | 9°1 | 29°9 | 10°49 | 12°9 | 12°29 | 2°R29 | 6°R28 | 9°R14 | 3°R20 | 3°10 | 11°15 | 6°R34 | F 1 |
| S 2 | 9 22 31 | 22°4'15 | 8°16 | 10°9 | 0°21 | 11°33 | 12°17 | 12°30 | 2°27 | 6°28 | 9°13 | 3°11 | 3°7 | 11°22 | 6°32 | S 2 |
| S 3 | 9 26 28 | 23°4'45 | 20°6 | 11°9 | 1°32 | 12°18 | 12°29 | 12°31 | 2°24 | 6°27 | 9°11 | 3°4 | 3°4 | 11°29 | 6°29 | S 3 |
| M 4 | 9 30 24 | 24°5'13 | 1°54 | 12°2 | 2°44 | 13°3 | 12°40 | 12°31 | 2°22 | 6°26 | 9°10 | 2°59 | 3°0 | 11°35 | 6°27 | M 4 |
| T 5 | 9 34 21 | 25°5'40 | 13°46 | 12°46 | 3°55 | 13°47 | 12°52 | 12°32 | 2°19 | 6°25 | 9°8 | 2°57 | 2°57 | 11°42 | 6°25 | T 5 |
| W 6 | 9 38 17 | 26°6'04 | 25°47 | 13°22 | 5°7 | 14°32 | 13°4 | 12°33 | 2°17 | 6°24 | 9°7 | 2°57 | 2°54 | 11°49 | 6°23 | W 6 |
| T 7 | 9 42 14 | 27°6'26 | 8°12 | 13°48 | 6°18 | 15°17 | 13°16 | 12°33 | 2°15 | 6°23 | 9°6 | 2°57 | 2°51 | 11°55 | 6°21 | T 7 |
| F 8 | 9 46 10 | 28°6'47 | 20°37 | 14°5 | 7°29 | 16°2 | 13°29 | 12°34 | 2°12 | 6°21 | 9°4 | 2°56 | 2°48 | 12°2 | 6°19 | F 8 |
| S 9 | 9 50 7 | 29°7'06 | 3°36 | 14°R11 | 8°40 | 16°47 | 13°41 | 12°34 | 2°10 | 6°20 | 9°3 | 2°53 | 2°44 | 12°9 | 6°17 | S 9 |
| S 10 | 9 54 3 | 0°7'22 | 17°2 | 14°8 | 9°51 | 17°31 | 13°53 | 12°34 | 2°8 | 6°19 | 9°2 | 2°48 | 2°41 | 12°15 | 6°15 | S 10 |
| M11 | 9 58 0 | 1°7'37 | 0°58 | 13°56 | 11°2 | 18°16 | 14°5 | 12°R34 | 2°6 | 6°18 | 9°0 | 2°40 | 2°38 | 12°22 | 6°13 | M11 |
| T 12 | 10 1 57 | 2°7'49 | 15°21 | 13°34 | 12°13 | 19°1 | 14°18 | 12°34 | 2°4 | 6°16 | 8°59 | 2°30 | 2°35 | 12°29 | 6°12 | T 12 |
| W13 | 10 5 53 | 3°8'00 | 0°15 | 13°3 | 13°23 | 19°46 | 14°30 | 12°34 | 2°1 | 6°15 | 8°58 | 2°18 | 2°32 | 12°35 | 6°10 | W13 |
| T 14 | 10 9 50 | 4°8'08 | 15°5 | 12°24 | 14°33 | 20°31 | 14°43 | 12°34 | 1°59 | 6°14 | 8°57 | 2°6 | 2°29 | 12°42 | 6°9 | T 14 |
| F 15 | 10 13 46 | 5°8'15 | 0°8 | 11°39 | 15°44 | 21°16 | 14°56 | 12°33 | 1°57 | 6°12 | 8°55 | 1°56 | 2°25 | 12°49 | 6°7 | F 15 |
| S 16 | 10 17 43 | 6°8'21 | 15°6 | 10°48 | 16°54 | 22°1 | 15°8 | 12°33 | 1°55 | 6°11 | 8°54 | 1°48 | 2°22 | 12°56 | 6°6 | S 16 |
| S 17 | 10 21 39 | 7°8'24 | 29°51 | 9°52 | 18°4 | 22°46 | 15°21 | 12°32 | 1°53 | 6°10 | 8°53 | 1°42 | 2°19 | 13°2 | 6°5 | S 17 |
| M18 | 10 25 36 | 8°8'26 | 14°17 | 8°53 | 19°14 | 23°31 | 15°34 | 12°32 | 1°51 | 6°8 | 8°52 | 1°40 | 2°16 | 13°9 | 6°4 | M18 |
| T 19 | 10 29 32 | 9°8'26 | 28°21 | 7°53 | 20°23 | 24°16 | 15°47 | 12°31 | 1°49 | 6°7 | 8°50 | 1°D39 | 2°13 | 13°16 | 6°3 | T 19 |
| W20 | 10 33 29 | 10°8'25 | 12°4 | 6°53 | 21°33 | 25°2 | 16°0 | 12°30 | 1°47 | 6°5 | 8°49 | 1°R39 | 2°10 | 13°22 | 6°2 | W20 |
| T 21 | 10 37 26 | 11°8'23 | 25°27 | 5°53 | 22°43 | 25°47 | 16°13 | 12°29 | 1°45 | 6°4 | 8°48 | 1°38 | 2°6 | 13°29 | 6°1 | T 21 |
| F 22 | 10 41 22 | 12°8'18 | 8°32 | 4°56 | 23°52 | 26°32 | 16°26 | 12°28 | 1°44 | 6°2 | 8°47 | 1°36 | 2°3 | 13°36 | 6°0 | F 22 |
| S 23 | 10 45 19 | 13°8'12 | 21°23 | 4°3 | 25°1 | 27°17 | 16°39 | 12°27 | 1°42 | 6°1 | 8°46 | 1°31 | 2°0 | 13°42 | 6°0 | S 23 |
| S 24 | 10 49 15 | 14°8'04 | 4°1 | 3°13 | 26°10 | 28°2 | 16°53 | 12°26 | 1°40 | 6°0 | 8°44 | 1°23 | 1°57 | 13°49 | 5°59 | S 24 |
| M25 | 10 53 12 | 15°7'54 | 16°28 | 2°29 | 27°19 | 28°48 | 17°6 | 12°24 | 1°38 | 5°58 | 8°43 | 1°12 | 1°54 | 13°56 | 5°59 | M25 |
| T 26 | 10 57 8 | 16°7'43 | 28°46 | 1°51 | 28°28 | 29°33 | 17°19 | 12°23 | 1°37 | 5°56 | 8°42 | 1°0 | 1°50 | 14°2 | 5°58 | T 26 |
| W27 | 11 1 5 | 17°7'29 | 10°56 | 1°18 | 29°36 | 0°18 | 17°33 | 12°21 | 1°35 | 5°55 | 8°41 | 0°46 | 1°47 | 14°9 | 5°58 | W27 |
| T 28 | 11 5 1 | 18°7'13 | 22°58 | 0°52 | 0°45 | 1°3 | 17°46 | 12°20 | 1°34 | 5°53 | 8°40 | 0°32 | 1°44 | 14°16 | 5°58 | T 28 |

Delta T = 06m22s

Julian Calendar

ASTRODIENST EPHEMERIS for the year 1454

geocentric

MARCH 1454 JC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|-----------|----------|-----------|----------|------|
| F 1 | 11 8 58 | 19°45'56" | 4°45'54" | 0°R32 | 1°45'53" | 1°45'49" | 18°18'00" | 12°R18 | 1°R32 | 5°R52 | 8°R39 | 0°R20 | 1°41'41" | 14°45'23" | 5°D58 | F 1 |
| S 2 | 11 12 55 | 20° 6'36" | 16°45' | 0°45'18" | 3° 1' | 2°34' | 18°13' | 12°16'16" | 1°16'31" | 5°16'50" | 8°16'38" | 0°16'10" | 1°38' | 14°29' | 5°58' | S 2 |
| S 3 | 11 16 51 | 21° 6'14" | 28°33' | 0°10' | 4° 9' | 3°19' | 18°27' | 12°14' | 1°29' | 5°49' | 8°37' | 0° 3' | 1°35' | 14°36' | 5°58' | S 3 |
| M 4 | 11 20 48 | 22° 5'50" | 10°45'21" | 0°D 9' | 5°16' | 4° 5' | 18°41' | 12°12' | 1°28' | 5°47' | 8°36' | 29°16'58" | 1°31' | 14°43' | 5°59' | M 4 |
| T 5 | 11 24 44 | 23° 5'23" | 22°13' | 0°13' | 6°24' | 4°50' | 18°54' | 12°10' | 1°26' | 5°45' | 8°35' | 29°56' | 1°28' | 14°49' | 5°59' | T 5 |
| W 6 | 11 28 41 | 24° 4'55" | 4°11'13" | 0°23' | 7°31' | 5°35' | 19° 8' | 12° 8' | 1°25' | 5°44' | 8°34' | 29°D56' | 1°25' | 14°56' | 5°59' | W 6 |
| T 7 | 11 32 37 | 25° 4'24" | 16°26' | 0°39' | 8°38' | 6°21' | 19°22' | 12° 6' | 1°24' | 5°42' | 8°33' | 29°57' | 1°22' | 15° 3' | 6° 0' | T 7 |
| F 8 | 11 36 34 | 26° 3'51" | 28°57' | 0°59' | 9°45' | 7° 6' | 19°36' | 12° 3' | 1°23' | 5°41' | 8°32' | 29°R57' | 1°19' | 15° 9' | 6° 0' | F 8 |
| S 9 | 11 40 30 | 27° 3'16" | 11°55'51" | 1°25' | 10°52' | 7°52' | 19°49' | 12° 1' | 1°21' | 5°39' | 8°31' | 29°56' | 1°15' | 15°16' | 6° 1' | S 9 |
| S 10 | 11 44 27 | 28° 2'38" | 25°12' | 1°54' | 11°58' | 8°37' | 20° 3' | 11°58' | 1°20' | 5°37' | 8°31' | 29°53' | 1°12' | 15°23' | 6° 2' | S 10 |
| M 11 | 11 48 24 | 29° 1'57" | 9°45' 3' | 2°29' | 13° 5' | 9°22' | 20°17' | 11°56' | 1°19' | 5°36' | 8°30' | 29°47' | 1° 9' | 15°29' | 6° 3' | M 11 |
| T 12 | 11 52 20 | 0°45'11" | 23°23' | 3° 7' | 14°11' | 10° 8' | 20°31' | 11°53' | 1°18' | 5°34' | 8°29' | 29°40' | 1° 6' | 15°36' | 6° 4' | T 12 |
| W 13 | 11 56 17 | 1° 0'30" | 8°16'10" | 3°49' | 15°16' | 10°53' | 20°45' | 11°50' | 1°17' | 5°32' | 8°28' | 29°31' | 1° 3' | 15°43' | 6° 5' | W 13 |
| T 14 | 12 0 13 | 1°59'43" | 23°17' | 4°35' | 16°22' | 11°39' | 20°59' | 11°47' | 1°16' | 5°31' | 8°27' | 29°22' | 1° 0' | 15°49' | 6° 6' | T 14 |
| F 15 | 12 4 10 | 2°58'54" | 8°45'33" | 5°24' | 17°27' | 12°24' | 21°13' | 11°44' | 1°16' | 5°29' | 8°27' | 29°14' | 0°56' | 15°56' | 6° 8' | F 15 |
| S 16 | 12 8 6 | 3°58'02" | 23°47' | 6°17' | 18°32' | 13°10' | 21°27' | 11°41' | 1°15' | 5°28' | 8°26' | 29° 8' | 0°53' | 16° 3' | 6° 9' | S 16 |
| S 17 | 12 12 3 | 4°57'09" | 8°16'50" | 7°12' | 19°37' | 13°55' | 21°41' | 11°38' | 1°14' | 5°26' | 8°25' | 29° 4' | 0°50' | 16° 9' | 6°10' | S 17 |
| M 18 | 12 15 59 | 5°56'14" | 23°34' | 8°11' | 20°41' | 14°41' | 21°55' | 11°35' | 1°13' | 5°24' | 8°25' | 29°D 2' | 0°47' | 16°16' | 6°12' | M 18 |
| T 19 | 12 19 56 | 6°55'18" | 7°45'53" | 9°12' | 21°46' | 15°26' | 22°10' | 11°32' | 1°13' | 5°23' | 8°24' | 29° 2' | 0°44' | 16°23' | 6°14' | T 19 |
| W 20 | 12 23 52 | 7°54'19" | 21°46' | 10°16' | 22°49' | 16°12' | 22°24' | 11°28' | 1°12' | 5°21' | 8°23' | 29° 3' | 0°41' | 16°30' | 6°15' | W 20 |
| T 21 | 12 27 49 | 8°53'19" | 5°31'14" | 11°22' | 23°53' | 16°57' | 22°38' | 11°25' | 1°11' | 5°19' | 8°23' | 29°R 4' | 0°37' | 16°36' | 6°17' | T 21 |
| F 22 | 12 31 46 | 9°52'17" | 18°20' | 12°31' | 24°57' | 17°43' | 22°52' | 11°22' | 1°11' | 5°18' | 8°22' | 29° 4' | 0°34' | 16°43' | 6°19' | F 22 |
| S 23 | 12 35 42 | 10°51'13" | 1°45' 5' | 13°42' | 26° 0' | 18°29' | 23° 6' | 11°18' | 1°11' | 5°16' | 8°22' | 29° 2' | 0°31' | 16°50' | 6°21' | S 23 |
| S 24 | 12 39 39 | 11°50'07" | 13°35' | 14°55' | 27° 2' | 19°14' | 23°21' | 11°15' | 1°10' | 5°14' | 8°21' | 28°57' | 0°28' | 16°56' | 6°23' | S 24 |
| M 25 | 12 43 35 | 12°49'00" | 25°52' | 16°11' | 28° 5' | 20° 0' | 23°35' | 11°11' | 1°10' | 5°13' | 8°21' | 28°51' | 0°25' | 17° 3' | 6°25' | M 25 |
| T 26 | 12 47 32 | 13°47'50" | 7°45'59" | 17°28' | 29° 7' | 20°45' | 23°49' | 11° 7' | 1°10' | 5°11' | 8°20' | 28°44' | 0°21' | 17°10' | 6°28' | T 26 |
| W 27 | 12 51 28 | 14°46'39" | 19°58' | 18°48' | 0°11' 9' | 21°31' | 24° 4' | 11° 3' | 1° 9' | 5° 9' | 8°20' | 28°35' | 0°18' | 17°16' | 6°30' | W 27 |
| T 28 | 12 55 25 | 15°45'26" | 1°45'52" | 20° 9' | 1°10' | 22°16' | 24°18' | 11° 0' | 1° 9' | 5° 8' | 8°19' | 28°27' | 0°15' | 17°23' | 6°33' | T 28 |
| F 29 | 12 59 21 | 16°44'11" | 13°43' | 21°33' | 2°11' | 23° 2' | 24°32' | 10°56' | 1° 9' | 5° 6' | 8°19' | 28°19' | 0°12' | 17°30' | 6°35' | F 29 |
| S 30 | 13 3 18 | 17°42'54" | 25°32' | 22°58' | 3°12' | 23°47' | 24°47' | 10°52' | 1° 9' | 5° 5' | 8°19' | 28°13' | 0° 9' | 17°36' | 6°38' | S 30 |
| S 31 | 13 7 15 | 18°41'35" | 7°45'21" | 24°45'25" | 4°11'12" | 24°45'33" | 25°45' 1' | 10°48'48" | 1°D 9' | 5°16' 3' | 8°18'18" | 28°16' 9' | 0°47' 6' | 17°43'43" | 6°41'38" | S 31 |

Delta T = 06m22s

Julian Calendar 1 March 1454 == Greg. Calendar 10 March 1454

APRIL 1454 JC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|-----------|-----------|-----------|----------|-----------|-----------|-----------|----------|----------|----------|-----------|-----------|-----------|----------|------|
| M 1 | 13 11 11 | 19°40'14" | 19°45'13" | 25°45'54" | 5°11'12" | 25°45'19" | 25°45'15" | 10°R44 | 1°16' 9' | 5°R 1' | 8°R18 | 28°R 7' | 0°47' 2' | 17°45'50" | 6°46'33" | M 1 |
| T 2 | 13 15 8 | 20°38'51" | 1°11' 9' | 27°24' | 6°12' | 26° 4' | 25°30' | 10°44'40" | 1° 9' | 5°16' 0' | 8°18'18" | 28°D 7' | 29°16'59" | 17°56' | 6°46' | T 2 |
| W 3 | 13 19 4 | 21°37'25" | 13°14' | 28°57' | 7°11' | 26°50' | 25°44' | 10°36' | 1° 9' | 4°58' | 8°17' | 28°16' 8' | 29°56' | 18° 3' | 6°49' | W 3 |
| T 4 | 13 23 1 | 22°35'58" | 25°30' | 0°45'31" | 8°10' | 27°35' | 25°58' | 10°32' | 1° 9' | 4°57' | 8°17' | 28° 9' | 29°53' | 18°10' | 6°52' | T 4 |
| F 5 | 13 26 57 | 23°34'29" | 8°45' 2' | 2° 6' | 9° 8' | 28°21' | 26°13' | 10°27' | 1°10' | 4°55' | 8°17' | 28°11' | 29°50' | 18°16' | 6°55' | F 5 |
| S 6 | 13 30 54 | 24°32'57" | 20°54' | 3°44' | 10° 6' | 29° 6' | 26°27' | 10°23' | 1°10' | 4°54' | 8°17' | 28°R12' | 29°46' | 18°23' | 6°59' | S 6 |
| S 7 | 13 34 50 | 25°31'23" | 4°45'10" | 5°23' | 11° 3' | 29°52' | 26°42' | 10°19' | 1°10' | 4°52' | 8°17' | 28°11' | 29°43' | 18°30' | 7° 2' | S 7 |
| M 8 | 13 38 47 | 26°29'47" | 17°52' | 7° 4' | 12° 0' | 0°45'37" | 26°56' | 10°15' | 1°11' | 4°51' | 8°17' | 28°10' | 29°40' | 18°36' | 7° 5' | M 8 |
| T 9 | 13 42 44 | 27°28'09" | 2°16' 2' | 8°47' | 12°56' | 1°23' | 27°10' | 10°10' | 1°11' | 4°49' | 8°16' | 28° 7' | 29°37' | 18°43' | 7° 9' | T 9 |
| W 10 | 13 46 40 | 28°26'28" | 16°38' | 10°31' | 13°52' | 2° 8' | 27°25' | 10° 6' | 1°12' | 4°48' | 8°16' | 28° 3' | 29°34' | 18°50' | 7°12' | W 10 |
| T 11 | 13 50 37 | 29°24'46" | 1°45'34" | 12°17' | 14°47' | 2°54' | 27°39' | 10° 2' | 1°12' | 4°46' | 8°16' | 27°59' | 29°31' | 18°56' | 7°16' | T 11 |
| F 12 | 13 54 33 | 0°23'01" | 16°44' | 14° 5' | 15°42' | 3°39' | 27°53' | 9°57' | 1°13' | 4°45' | 8°D16' | 27°55' | 29°27' | 19° 3' | 7°20' | F 12 |
| S 13 | 13 58 30 | 1°21'15" | 1°16'59" | 15°55' | 16°36' | 4°24' | 28° 8' | 9°53' | 1°14' | 4°43' | 8°16' | 27°53' | 29°24' | 19°10' | 7°23' | S 13 |
| S 14 | 14 2 26 | 2°19'27" | 17° 7' | 17°46' | 17°30' | 5°10' | 28°22' | 9°48' | 1°14' | 4°42' | 8°16' | 27°51' | 29°21' | 19°17' | 7°27' | S 14 |
| M 15 | 14 6 23 | 3°17'37" | 2°45' 0' | 19°39' | 18°23' | 5°55' | 28°36' | 9°44' | 1°15' | 4°40' | 8°17' | 27°D51' | 29°18' | 19°23' | 7°31' | M 15 |
| T 16 | 14 10 19 | 4°15'46" | 16°30' | 21°34' | 19°15' | 6°41' | 28°51' | 9°39' | 1°16' | 4°39' | 8°17' | 27°51' | 29°15' | 19°30' | 7°35' | T 16 |
| W 17 | 14 14 16 | 5°13'53" | 0°35'35" | 23°31' | 20° 6' | 7°26' | 29° 5' | 9°35' | 1°17' | 4°38' | 8°17' | 27°53' | 29°12' | 19°37' | 7°39' | W 17 |
| T 18 | 14 18 13 | 6°11'59" | 14°13' | 25°29' | 20°57' | 8°11' | 29°19' | 9°30' | 1°18' | 4°36' | 8°17' | 27°54' | 29° 8' | 19°43' | 7°43' | T 18 |
| F 19 | 14 22 9 | 7°10'03" | 27°25' | 27°29' | 21°47' | 8°57' | 29°34' | 9°26' | 1°19' | 4°35' | 8°17' | 27°55' | 29° 5' | 19°50' | 7°48' | F 19 |
| S 20 | 14 26 6 | 8° 8'06" | 10°45'14" | 29°31' | 22°37' | 9°42' | 29°48' | 9°21' | 1°20' | 4°34' | 8°17' | 27°R56' | 29° 2' | 19°57' | 7°52' | S 20 |
| S 21 | 14 30 2 | 9° 6'07" | 22°43' | 1°45'34" | 23°25' | 10°27' | 0°45' 2' | 9°17' | 1°21' | 4°32' | 8°18' | 27°55' | 28°59' | 20° 3' | 7°56' | S 21 |
| M 22 | 14 33 59 | 10° 4'07" | 4°45'57" | 3°39' | 24°13' | 11°13' | 0°17' | 9°12' | 1°22' | 4°31' | 8°18' | 27°53' | 28°56' | 20°10' | 8° 1' | M 22 |
| T 23 | 14 37 55 | 11° 2'06" | 16°59' | 5°45' | 25° 0' | 11°58' | 0°31' | 9° 8' | 1°23' | 4°30' | 8°18' | 27°51' | 28°52' | 20°17' | 8° 5' | T 23 |
| W 24 | 14 41 52 | 12° 0'03" | 28°54' | 7°52' | 25°47' | 12°43' | 0°45' | 9° 3' | 1°25' | 4°28' | 8°19' | 27°49' | 28°49' | 20°23' | 8°10' | W 24 |
| T 25 | 14 45 48 | 12°57'59" | 10°45'44" | 10° 1' | 26°32' | 13°28' | 0°59' | 8°59' | 1°26' | 4°27' | 8°19' | 27°47' | 28°46' | 20°30' | 8°14' | T 25 |
| F 26 | 14 49 45 | 13°55'53" | 22°32' | 12°10' | 27°16' | 14°14' | 1°13' | 8°54' | 1°27' | 4°26' | 8°19' | 27°45' | 28°43' | 20°37' | 8°19' | F 26 |
| S 27 | 14 53 41 | 14°53'46" | 4°45'22" | 14°21' | 28° 0' | 14°59' | 1°28' | 8°50' | 1°29' | 4°25' | 8°20' | 27°43' | 28°40' | 20°43' | 8°24' | S 27 |
| S 28 | 14 57 38 | 15°51'38" | 16°15' | 16°31' | 28°42' | 15°44' | 1°42' | 8°45' | 1°30' | 4°24' | 8°20' | 27°42' | 28°37' | 20°50' | 8°28' | S 28 |
| M 29 | 15 1 35 | 16°49'28" | 28°14' | 18°42' | 29°24' | 16°29' | 1°56' | 8°41' | 1°32' | 4°23' | 8°21' | 27°D42' | 28°33' | 20°57' | 8°33' | M 29 |
| T 30 | 15 5 31 | 17°47'17" | 10°11'20" | 20°45'54" | 0°45' 4' | 17°45'14" | 2°10' | 8°16'37" | 1°16'33" | 4°21' 4' | 8°16'21" | 27°16'42" | 28°16'30" | 21°45' 3' | 8°45'38" | T 30 |

Delta T = 06m22s

Julian Calendar

ASTRODIENST EPHEMERIS for the year 1454

geocentric

MAY 1454 JC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|------------|----------|--------|-------|--------|-------|-------|-------|-------|-------|--------|--------|--------|--------|------|
| W 1 | 15 9 28 | 18°45'04 | 22°11'35 | 23°8'4 | 0°43 | 17°59 | 2°24 | 8°R32 | 1°035 | 4°R20 | 8°022 | 27°M43 | 28°M27 | 21°Y10 | 8°43 | W 1 |
| T 2 | 15 13 24 | 19°42'49 | 5°3 | 25°15 | 1°21 | 18°44 | 2°38 | 8°M28 | 1°36 | 4°19 | 8°22 | 27°44 | 28°24 | 21°17 | 8°48 | T 2 |
| F 3 | 15 17 21 | 20°40'33 | 17°45 | 27°24 | 1°58 | 19°29 | 2°52 | 8°23 | 1°38 | 4°18 | 8°23 | 27°44 | 28°21 | 21°23 | 8°53 | F 3 |
| S 4 | 15 21 17 | 21°38'16 | 0°43 | 29°33 | 2°34 | 20°14 | 3°6 | 8°19 | 1°40 | 4°17 | 8°23 | 27°45 | 28°18 | 21°30 | 8°59 | S 4 |
| S 5 | 15 25 14 | 22°35'56 | 14°0 | 1°40 | 3°8 | 20°59 | 3°20 | 8°15 | 1°42 | 4°16 | 8°24 | 27°45 | 28°14 | 21°37 | 9°4 | S 5 |
| M 6 | 15 29 10 | 23°33'36 | 27°38 | 3°45 | 3°41 | 21°44 | 3°34 | 8°10 | 1°44 | 4°15 | 8°25 | 27°R45 | 28°11 | 21°43 | 9°9 | M 6 |
| T 7 | 15 33 7 | 24°31'13 | 11°37 | 5°49 | 4°13 | 22°29 | 3°48 | 8°6 | 1°45 | 4°14 | 8°25 | 27°45 | 28°8 | 21°50 | 9°14 | T 7 |
| W 8 | 15 37 4 | 25°28'49 | 25°57 | 7°51 | 4°43 | 23°13 | 4°2 | 8°2 | 1°47 | 4°14 | 8°26 | 27°45 | 28°5 | 21°57 | 9°20 | W 8 |
| T 9 | 15 41 0 | 26°26'23 | 10°43 | 9°50 | 5°11 | 23°58 | 4°15 | 7°58 | 1°49 | 4°13 | 8°27 | 27°45 | 28°2 | 22°3 | 9°25 | T 9 |
| F 10 | 15 44 57 | 27°23'56 | 25°27 | 11°47 | 5°38 | 24°43 | 4°29 | 7°54 | 1°51 | 4°12 | 8°27 | 27°D45 | 27°58 | 22°10 | 9°31 | F 10 |
| S 11 | 15 48 53 | 28°21'28 | 10°M25 | 13°42 | 6°4 | 25°28 | 4°43 | 7°50 | 1°53 | 4°11 | 8°28 | 27°45 | 27°55 | 22°17 | 9°36 | S 11 |
| S 12 | 15 52 50 | 29°18'58 | 25°21 | 15°34 | 6°27 | 26°12 | 4°57 | 7°46 | 1°55 | 4°10 | 8°29 | 27°R45 | 27°52 | 22°23 | 9°42 | S 12 |
| M13 | 15 56 46 | 0°11'6'28 | 10°M8 | 17°23 | 6°49 | 26°57 | 5°10 | 7°42 | 1°58 | 4°9 | 8°30 | 27°45 | 27°49 | 22°30 | 9°47 | M13 |
| T 14 | 16 0 43 | 1°13'56 | 24°39 | 19°10 | 7°10 | 27°41 | 5°24 | 7°38 | 2°0 | 4°9 | 8°31 | 27°44 | 27°46 | 22°37 | 9°53 | T 14 |
| W15 | 16 4 39 | 2°11'24 | 8°348 | 20°54 | 7°28 | 28°26 | 5°37 | 7°34 | 2°2 | 4°8 | 8°32 | 27°44 | 27°43 | 22°43 | 9°59 | W15 |
| T 16 | 16 8 36 | 3°8'50 | 22°32 | 22°36 | 7°44 | 29°10 | 5°51 | 7°30 | 2°4 | 4°7 | 8°32 | 27°43 | 27°39 | 22°50 | 10°4 | T 16 |
| F 17 | 16 12 33 | 4°6'16 | 5°50 | 24°14 | 7°59 | 29°55 | 6°4 | 7°26 | 2°7 | 4°7 | 8°33 | 27°43 | 27°36 | 22°57 | 10°10 | F 17 |
| S 18 | 16 16 29 | 5°3'41 | 18°44 | 25°50 | 8°11 | 0°Y39 | 6°18 | 7°22 | 2°9 | 4°6 | 8°34 | 27°42 | 27°33 | 23°3 | 10°16 | S 18 |
| S 19 | 16 20 26 | 6°1'05 | 1°X17 | 27°23 | 8°21 | 1°23 | 6°31 | 7°19 | 2°11 | 4°5 | 8°35 | 27°D42 | 27°30 | 23°10 | 10°22 | S 19 |
| M20 | 16 24 22 | 6°58'29 | 13°32 | 28°52 | 8°29 | 2°8 | 6°44 | 7°15 | 2°14 | 4°5 | 8°36 | 27°42 | 27°27 | 23°17 | 10°28 | M20 |
| T 21 | 16 28 19 | 7°55'52 | 25°34 | 0°19 | 8°35 | 2°52 | 6°58 | 7°12 | 2°16 | 4°4 | 8°37 | 27°42 | 27°24 | 23°23 | 10°34 | T 21 |
| W22 | 16 32 15 | 8°53'14 | 7°Y27 | 1°43 | 8°39 | 3°36 | 7°11 | 7°8 | 2°19 | 4°4 | 8°38 | 27°43 | 27°20 | 23°30 | 10°40 | W22 |
| T 23 | 16 36 12 | 9°50'36 | 19°16 | 3°4 | 8°R40 | 4°20 | 7°24 | 7°5 | 2°21 | 4°3 | 8°39 | 27°44 | 27°17 | 23°37 | 10°46 | T 23 |
| F 24 | 16 40 8 | 10°47'57 | 1°8'5 | 4°22 | 8°40 | 5°4 | 7°37 | 7°1 | 2°24 | 4°3 | 8°41 | 27°46 | 27°14 | 23°43 | 10°52 | F 24 |
| S 25 | 16 44 5 | 11°45'17 | 12°58 | 5°37 | 8°36 | 5°48 | 7°50 | 6°58 | 2°27 | 4°2 | 8°42 | 27°47 | 27°11 | 23°50 | 10°58 | S 25 |
| S 26 | 16 48 2 | 12°42'37 | 24°57 | 6°49 | 8°31 | 6°32 | 8°3 | 6°55 | 2°29 | 4°2 | 8°43 | 27°R47 | 27°8 | 23°57 | 11°4 | S 26 |
| M27 | 16 51 58 | 13°39'57 | 7°II6 | 7°57 | 8°23 | 7°16 | 8°16 | 6°52 | 2°32 | 4°2 | 8°44 | 27°47 | 27°4 | 24°3 | 11°11 | M27 |
| T 28 | 16 55 55 | 14°37'16 | 19°26 | 9°3 | 8°12 | 7°59 | 8°29 | 6°48 | 2°35 | 4°1 | 8°45 | 27°46 | 27°1 | 24°10 | 11°17 | T 28 |
| W29 | 16 59 51 | 15°34'34 | 1°58 | 10°5 | 8°0 | 8°43 | 8°42 | 6°45 | 2°37 | 4°1 | 8°46 | 27°44 | 26°58 | 24°17 | 11°23 | W29 |
| T 30 | 17 3 48 | 16°31'51 | 14°44 | 11°3 | 7°44 | 9°27 | 8°55 | 6°42 | 2°40 | 4°1 | 8°47 | 27°42 | 26°55 | 24°23 | 11°29 | T 30 |
| F 31 | 17 7 44 | 17°II29'08 | 27°544 | 11°58 | 7°527 | 10°Y10 | 9°8'8 | 6°M40 | 2°43 | 4°1 | 8°49 | 27°M39 | 26°M52 | 24°Y30 | 11°536 | F 31 |

Delta T = 06m22s

Julian Calendar 1 May 1454 == Greg. Calendar 10 May 1454

JUNE 1454 JC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|------------|--------|--------|---------|--------|--------|-------|-------|------|-------|--------|--------|--------|--------|------|
| S 1 | 17 11 41 | 18°II26'24 | 10°058 | 12°50 | 7°R7 | 10°Y54 | 9°8'20 | 6°R37 | 2°046 | 4°R0 | 8°050 | 27°R36 | 26°M49 | 24°Y37 | 11°542 | S 1 |
| S 2 | 17 15 38 | 19°23'39 | 24°26 | 13°38 | 6°45 | 11°37 | 9°33 | 6°M34 | 2°49 | 4°0 | 8°51 | 27°M34 | 26°45 | 24°43 | 11°48 | S 2 |
| M 3 | 17 19 34 | 20°20'53 | 8°M8 | 14°22 | 6°21 | 12°21 | 9°45 | 6°31 | 2°52 | 4°0 | 8°53 | 27°32 | 26°42 | 24°50 | 11°55 | M 3 |
| T 4 | 17 23 31 | 21°18'07 | 22°4 | 15°2 | 5°54 | 13°4 | 9°58 | 6°29 | 2°55 | 4°0 | 8°54 | 27°D32 | 26°39 | 24°57 | 12°1 | T 4 |
| W 5 | 17 27 27 | 22°15'20 | 6°13 | 15°38 | 5°26 | 13°47 | 10°10 | 6°26 | 2°58 | 4°0 | 8°55 | 27°32 | 26°36 | 25°3 | 12°8 | W 5 |
| T 6 | 17 31 24 | 23°12'32 | 20°33 | 16°10 | 4°56 | 14°30 | 10°22 | 6°24 | 3°1 | 4°D0 | 8°57 | 27°33 | 26°33 | 25°10 | 12°14 | T 6 |
| F 7 | 17 35 20 | 24°9'44 | 5°M2 | 16°38 | 4°24 | 15°13 | 10°35 | 6°22 | 3°4 | 4°0 | 8°58 | 27°35 | 26°29 | 25°17 | 12°21 | F 7 |
| S 8 | 17 39 17 | 25°6'55 | 19°36 | 17°1 | 3°51 | 15°56 | 10°47 | 6°20 | 3°7 | 4°0 | 8°59 | 27°36 | 26°26 | 25°23 | 12°27 | S 8 |
| S 9 | 17 43 13 | 26°4'05 | 4°X9 | 17°20 | 3°17 | 16°39 | 10°59 | 6°17 | 3°10 | 4°0 | 9°1 | 27°R36 | 26°23 | 25°30 | 12°34 | S 9 |
| M10 | 17 47 10 | 27°1'15 | 18°38 | 17°35 | 2°41 | 17°22 | 11°11 | 6°15 | 3°13 | 4°0 | 9°2 | 27°35 | 26°20 | 25°37 | 12°40 | M10 |
| T 11 | 17 51 7 | 27°58'25 | 2°355 | 17°45 | 2°5 | 18°5 | 11°23 | 6°13 | 3°16 | 4°0 | 9°4 | 27°32 | 26°17 | 25°43 | 12°47 | T 11 |
| W12 | 17 55 3 | 28°55'35 | 16°55 | 17°50 | 1°28 | 18°47 | 11°34 | 6°12 | 3°20 | 4°1 | 9°5 | 27°28 | 26°14 | 25°50 | 12°54 | W12 |
| T 13 | 17 59 0 | 29°52'45 | 0°35 | 17°R51 | 0°50 | 19°30 | 11°46 | 6°10 | 3°23 | 4°1 | 9°7 | 27°23 | 26°10 | 25°57 | 13°0 | T 13 |
| F 14 | 18 2 56 | 0°49'55 | 13°53 | 17°47 | 0°12 | 20°12 | 11°58 | 6°8 | 3°26 | 4°1 | 9°8 | 27°18 | 26°7 | 26°3 | 13°7 | F 14 |
| S 15 | 18 6 53 | 1°47'04 | 26°49 | 17°39 | 29°II35 | 20°55 | 12°10 | 6°6 | 3°29 | 4°1 | 9°10 | 27°13 | 26°4 | 26°10 | 13°14 | S 15 |
| S 16 | 18 10 49 | 2°44'14 | 9°X23 | 17°26 | 28°58 | 21°37 | 12°21 | 6°5 | 3°33 | 4°1 | 9°11 | 27°10 | 26°1 | 26°17 | 13°20 | S 16 |
| M17 | 18 14 46 | 3°41'24 | 21°40 | 17°9 | 28°21 | 22°19 | 12°32 | 6°4 | 3°36 | 4°2 | 9°13 | 27°7 | 25°58 | 26°23 | 13°27 | M17 |
| T 18 | 18 18 42 | 4°38'35 | 3°Y43 | 16°47 | 27°45 | 23°1 | 12°44 | 6°2 | 3°39 | 4°2 | 9°14 | 27°D7 | 25°55 | 26°30 | 13°34 | T 18 |
| W19 | 18 22 39 | 5°35'45 | 15°36 | 16°22 | 27°11 | 23°43 | 12°55 | 6°1 | 3°43 | 4°3 | 9°16 | 27°7 | 25°51 | 26°37 | 13°41 | W19 |
| T 20 | 18 26 36 | 6°32'56 | 27°26 | 15°54 | 26°37 | 24°25 | 13°6 | 6°0 | 3°46 | 4°3 | 9°17 | 27°8 | 25°48 | 26°43 | 13°47 | T 20 |
| F 21 | 18 30 32 | 7°30'07 | 9°8'16 | 15°22 | 26°5 | 25°7 | 13°17 | 5°59 | 3°49 | 4°3 | 9°19 | 27°10 | 25°45 | 26°50 | 13°54 | F 21 |
| S 22 | 18 34 29 | 8°27'19 | 21°12 | 14°48 | 25°35 | 25°49 | 13°28 | 5°58 | 3°53 | 4°4 | 9°21 | 27°R11 | 25°42 | 26°57 | 14°1 | S 22 |
| S 23 | 18 38 25 | 9°24'31 | 3°II18 | 14°12 | 25°6 | 26°30 | 13°39 | 5°57 | 3°56 | 4°4 | 9°22 | 27°11 | 25°39 | 27°3 | 14°8 | S 23 |
| M24 | 18 42 22 | 10°21'44 | 15°37 | 13°34 | 24°39 | 27°12 | 13°50 | 5°56 | 4°0 | 4°5 | 9°24 | 27°9 | 25°35 | 27°10 | 14°14 | M24 |
| T 25 | 18 46 18 | 11°18'57 | 28°11 | 12°55 | 24°14 | 27°53 | 14°0 | 5°56 | 4°3 | 4°6 | 9°25 | 27°6 | 25°32 | 27°17 | 14°21 | T 25 |
| W26 | 18 50 15 | 12°16'10 | 11°52 | 12°17 | 23°51 | 28°35 | 14°11 | 5°55 | 4°7 | 4°6 | 9°27 | 27°0 | 25°29 | 27°23 | 14°28 | W26 |
| T 27 | 18 54 11 | 13°13'23 | 24°10 | 11°38 | 23°31 | 29°16 | 14°21 | 5°55 | 4°10 | 4°7 | 9°29 | 26°53 | 25°26 | 27°30 | 14°35 | T 27 |
| F 28 | 18 58 8 | 14°10'37 | 7°034 | 11°1 | 23°12 | 29°57 | 14°32 | 5°54 | 4°14 | 4°7 | 9°30 | 26°45 | 25°23 | 27°37 | 14°42 | F 28 |
| S 29 | 19 2 5 | 15°7'51 | 21°11 | 10°25 | 22°56 | 0°38 | 14°42 | 5°54 | 4°17 | 4°8 | 9°32 | 26°38 | 25°20 | 27°43 | 14°48 | S 29 |
| S 30 | 19 6 1 | 16°5'05 | 4°M59 | 9°52 | 22°II43 | 1°8'19 | 14°52 | 5°M54 | 4°021 | 4°9 | 9°034 | 26°M31 | 25°M16 | 27°Y50 | 14°555 | S 30 |

Delta T = 06m21s

Julian Calendar

ASTRODIENST EPHEMERIS for the year 1454

geocentric

JULY 1454 JC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|-----|----------|------------|-----------|-------|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|--------|-----|
| M 1 | 19 9 58 | 17°52'19" | 18°56'56" | 9°R22 | 22°R32 | 1°R59 | 15°R 2 | 5°D54 | 4°R24 | 4°R10 | 9°R36 | 26°R26 | 25°R13 | 27°R57 | 15°R 2 | M 1 |
| T 2 | 19 13 54 | 17°59'34" | 2°R59 | 8°R56 | 22°R23 | 2°40 | 15°12 | 5°R54 | 4°R28 | 4°10 | 9°R37 | 26°R23 | 25°10 | 28° 3 | 15° 9 | T 2 |
| W 3 | 19 17 51 | 18°56'48" | 17° 6 | 8°33 | 22°16 | 3°20 | 15°22 | 5°54 | 4°32 | 4°11 | 9°R39 | 26°D22 | 25° 7 | 28°10 | 15°16 | W 3 |
| T 4 | 19 21 47 | 19°54'03" | 1°R16 | 8°16 | 22°12 | 4° 1 | 15°32 | 5°54 | 4°35 | 4°12 | 9°R41 | 26°R23 | 25° 4 | 28°17 | 15°22 | T 4 |
| F 5 | 19 25 44 | 20°51'18" | 15°27 | 8° 3 | 22°D10 | 4°41 | 15°41 | 5°54 | 4°39 | 4°13 | 9°R42 | 26°R23 | 25° 1 | 28°23 | 15°29 | F 5 |
| S 6 | 19 29 40 | 21°48'34" | 29°38 | 7°55 | 22°11 | 5°21 | 15°51 | 5°55 | 4°42 | 4°14 | 9°R44 | 26°R24 | 24°57 | 28°30 | 15°36 | S 6 |
| S 7 | 19 33 37 | 22°45'50" | 13°R46 | 7°D53 | 22°13 | 6° 1 | 16° 0 | 5°55 | 4°46 | 4°15 | 9°R46 | 26°22 | 24°54 | 28°37 | 15°43 | S 7 |
| M 8 | 19 37 34 | 23°43'06" | 27°49 | 7°56 | 22°18 | 6°41 | 16° 9 | 5°56 | 4°50 | 4°16 | 9°R48 | 26°19 | 24°51 | 28°43 | 15°50 | M 8 |
| T 9 | 19 41 30 | 24°40'23" | 11°R43 | 8° 6 | 22°26 | 7°21 | 16°18 | 5°57 | 4°53 | 4°17 | 9°R50 | 26°13 | 24°48 | 28°50 | 15°56 | T 9 |
| W10 | 19 45 27 | 25°37'40" | 25°25 | 8°21 | 22°35 | 8° 0 | 16°27 | 5°57 | 4°57 | 4°18 | 9°R51 | 26° 5 | 24°45 | 28°57 | 16° 3 | W10 |
| T11 | 19 49 23 | 26°34'59" | 8°R52 | 8°43 | 22°46 | 8°39 | 16°36 | 5°58 | 5° 1 | 4°19 | 9°R53 | 25°55 | 24°41 | 29° 3 | 16°10 | T11 |
| F12 | 19 53 20 | 27°32'18" | 22° 0 | 9°10 | 23° 0 | 9°19 | 16°45 | 5°59 | 5° 4 | 4°20 | 9°R55 | 25°45 | 24°38 | 29°10 | 16°17 | F12 |
| S13 | 19 57 16 | 28°29'38" | 4°R50 | 9°44 | 23°16 | 9°58 | 16°54 | 6° 0 | 5° 8 | 4°21 | 9°R57 | 25°35 | 24°35 | 29°17 | 16°23 | S13 |
| S14 | 20 1 13 | 29°26'58" | 17°22 | 10°23 | 23°33 | 10°37 | 17° 2 | 6° 1 | 5°12 | 4°22 | 9°R59 | 25°27 | 24°32 | 29°23 | 16°30 | S14 |
| M15 | 20 5 9 | 0°R24'20" | 29°37 | 11° 9 | 23°52 | 11°16 | 17°10 | 6° 3 | 5°15 | 4°24 | 10° 0 | 25°20 | 24°29 | 29°30 | 16°37 | M15 |
| T16 | 20 9 6 | 1°21'43" | 11°R39 | 12° 1 | 24°13 | 11°54 | 17°19 | 6° 4 | 5°19 | 4°25 | 10° 2 | 25°16 | 24°26 | 29°37 | 16°44 | T16 |
| W17 | 20 13 3 | 2°19'08" | 23°32 | 12°58 | 24°36 | 12°33 | 17°27 | 6° 6 | 5°23 | 4°26 | 10° 4 | 25°14 | 24°22 | 29°43 | 16°50 | W17 |
| T18 | 20 16 59 | 3°16'33" | 5°R21 | 14° 2 | 25° 1 | 13°11 | 17°35 | 6° 7 | 5°27 | 4°27 | 10° 6 | 25°D14 | 24°19 | 29°50 | 16°57 | T18 |
| F19 | 20 20 56 | 4°14'00" | 17°12 | 15°11 | 25°27 | 13°50 | 17°42 | 6° 9 | 5°30 | 4°29 | 10° 8 | 25°14 | 24°16 | 29°57 | 17° 4 | F19 |
| S20 | 20 24 52 | 5°11'28" | 29° 9 | 16°25 | 25°55 | 14°28 | 17°50 | 6°11 | 5°34 | 4°30 | 10°10 | 25°R14 | 24°13 | 0°R 3 | 17°10 | S20 |
| S21 | 20 28 49 | 6° 8'57" | 11°R19 | 17°45 | 26°24 | 15° 6 | 17°57 | 6°12 | 5°38 | 4°31 | 10°11 | 25°13 | 24°10 | 0°10 | 17°17 | S21 |
| M22 | 20 32 45 | 7° 6'28" | 23°44 | 19° 9 | 26°55 | 15°43 | 18° 5 | 6°14 | 5°41 | 4°33 | 10°13 | 25°10 | 24° 7 | 0°17 | 17°23 | M22 |
| T23 | 20 36 42 | 8° 4'00" | 6°R29 | 20°39 | 27°27 | 16°21 | 18°12 | 6°16 | 5°45 | 4°34 | 10°15 | 25° 4 | 24° 3 | 0°23 | 17°30 | T23 |
| W24 | 20 40 38 | 9° 1'33" | 19°36 | 22°13 | 28° 0 | 16°58 | 18°19 | 6°18 | 5°49 | 4°35 | 10°17 | 24°56 | 24° 0 | 0°30 | 17°37 | W24 |
| T25 | 20 44 35 | 9°59'07" | 3°R 4 | 23°51 | 28°35 | 17°35 | 18°26 | 6°21 | 5°53 | 4°37 | 10°19 | 24°46 | 23°57 | 0°37 | 17°43 | T25 |
| F26 | 20 48 32 | 10°56'43" | 16°52 | 25°34 | 29°11 | 18°12 | 18°33 | 6°23 | 5°56 | 4°38 | 10°21 | 24°34 | 23°54 | 0°43 | 17°50 | F26 |
| S27 | 20 52 28 | 11°54'20" | 0°R56 | 27°20 | 29°48 | 18°49 | 18°39 | 6°25 | 6° 0 | 4°40 | 10°22 | 24°23 | 23°51 | 0°50 | 17°56 | S27 |
| S28 | 20 56 25 | 12°51'57" | 15°10 | 29° 9 | 0°R27 | 19°26 | 18°46 | 6°28 | 6° 4 | 4°41 | 10°24 | 24°13 | 23°47 | 0°57 | 18° 3 | S28 |
| M29 | 21 0 21 | 13°49'36" | 29°29 | 1°R 0 | 1° 6 | 20° 2 | 18°52 | 6°30 | 6° 7 | 4°43 | 10°26 | 24° 5 | 23°44 | 1° 3 | 18° 9 | M29 |
| T30 | 21 4 18 | 14°47'16" | 13°R49 | 2°55 | 1°47 | 20°39 | 18°58 | 6°33 | 6°11 | 4°44 | 10°28 | 24° 0 | 23°41 | 1°10 | 18°15 | T30 |
| W31 | 21 8 14 | 15°R44'57" | 28°R 6 | 4°R51 | 2°R29 | 21°R15 | 19°R 4 | 6°R36 | 6°R15 | 4°R46 | 10°R30 | 23°R57 | 23°R38 | 1°R16 | 18°R22 | W31 |

Delta T = 06m21s

Julian Calendar 1 July 1454 == Greg. Calendar 10 July 1454

AUGUST 1454 JC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|-----|----------|------------|--------|-------|--------|--------|--------|-------|-------|-------|--------|--------|--------|-------|--------|-----|
| T 1 | 21 12 11 | 16°R42'39" | 12°R16 | 6°R49 | 3°R11 | 21°R50 | 19°R10 | 6°R39 | 6°R18 | 4°R48 | 10°R32 | 23°R56 | 23°R35 | 1°R23 | 18°R28 | T 1 |
| F 2 | 21 16 7 | 17°40'23" | 26°20 | 8°48 | 3°55 | 22°26 | 19°16 | 6°42 | 6°22 | 4°49 | 10°33 | 23°R56 | 23°32 | 1°30 | 18°34 | F 2 |
| S 3 | 21 20 4 | 18°38'07" | 10°R16 | 10°48 | 4°39 | 23° 2 | 19°21 | 6°45 | 6°26 | 4°51 | 10°35 | 23°56 | 23°28 | 1°36 | 18°41 | S 3 |
| S 4 | 21 24 1 | 19°35'52" | 24° 3 | 12°48 | 5°25 | 23°37 | 19°26 | 6°48 | 6°29 | 4°53 | 10°37 | 23°53 | 23°25 | 1°43 | 18°47 | S 4 |
| M 5 | 21 27 57 | 20°33'39" | 7°R43 | 14°49 | 6°11 | 24°12 | 19°32 | 6°51 | 6°33 | 4°54 | 10°39 | 23°48 | 23°22 | 1°50 | 18°53 | M 5 |
| T 6 | 21 31 54 | 21°31'27" | 21°12 | 16°49 | 6°58 | 24°46 | 19°36 | 6°54 | 6°37 | 4°56 | 10°41 | 23°41 | 23°19 | 1°56 | 18°59 | T 6 |
| W 7 | 21 35 50 | 22°29'16" | 4°R31 | 18°50 | 7°46 | 25°21 | 19°41 | 6°58 | 6°40 | 4°58 | 10°43 | 23°30 | 23°16 | 2° 3 | 19° 5 | W 7 |
| T 8 | 21 39 47 | 23°27'07" | 17°37 | 20°50 | 8°34 | 25°55 | 19°46 | 7° 1 | 6°44 | 4°59 | 10°44 | 23°18 | 23°13 | 2°10 | 19°12 | T 8 |
| F 9 | 21 43 43 | 24°24'59" | 0°R30 | 22°49 | 9°24 | 26°29 | 19°50 | 7° 5 | 6°47 | 5° 1 | 10°46 | 23° 5 | 23° 9 | 2°16 | 19°18 | F 9 |
| S10 | 21 47 40 | 25°22'52" | 13° 7 | 24°48 | 10°14 | 27° 3 | 19°55 | 7° 8 | 6°51 | 5° 3 | 10°48 | 22°52 | 23° 6 | 2°23 | 19°24 | S10 |
| S11 | 21 51 36 | 26°20'48" | 25°30 | 26°45 | 11° 5 | 27°37 | 19°59 | 7°12 | 6°55 | 5° 5 | 10°50 | 22°41 | 23° 3 | 2°30 | 19°30 | S11 |
| M12 | 21 55 33 | 27°18'45" | 7°R40 | 28°42 | 11°56 | 28°10 | 20° 3 | 7°16 | 6°58 | 5° 7 | 10°52 | 22°32 | 23° 0 | 2°36 | 19°36 | M12 |
| T13 | 21 59 30 | 28°16'43" | 19°38 | 0°R38 | 12°49 | 28°44 | 20° 6 | 7°20 | 7° 2 | 5° 9 | 10°53 | 22°26 | 22°57 | 2°43 | 19°42 | T13 |
| W14 | 22 3 26 | 29°14'44" | 1°R29 | 2°32 | 13°42 | 29°16 | 20°10 | 7°23 | 7° 5 | 5°10 | 10°55 | 22°23 | 22°53 | 2°50 | 19°47 | W14 |
| T15 | 22 7 23 | 0°R12'47" | 13°17 | 4°25 | 14°35 | 29°49 | 20°13 | 7°27 | 7° 9 | 5°12 | 10°57 | 22°21 | 22°50 | 2°56 | 19°53 | T15 |
| F16 | 22 11 19 | 1°10'51" | 25° 7 | 6°18 | 15°29 | 0°R21 | 20°16 | 7°32 | 7°12 | 5°14 | 10°59 | 22°21 | 22°47 | 3° 3 | 19°59 | F16 |
| S17 | 22 15 16 | 2° 8'58" | 7°R 3 | 8° 9 | 16°24 | 0°54 | 20°19 | 7°36 | 7°16 | 5°16 | 11° 0 | 22°21 | 22°44 | 3°10 | 20° 5 | S17 |
| S18 | 22 19 12 | 3° 7'06" | 19°13 | 9°58 | 17°19 | 1°25 | 20°22 | 7°40 | 7°19 | 5°18 | 11° 2 | 22°20 | 22°41 | 3°16 | 20°10 | S18 |
| M19 | 22 23 9 | 4° 5'17" | 1°R40 | 11°47 | 18°15 | 1°57 | 20°25 | 7°44 | 7°22 | 5°20 | 11° 4 | 22°17 | 22°38 | 3°23 | 20°16 | M19 |
| T20 | 22 27 5 | 5° 3'29" | 14°29 | 13°34 | 19°11 | 2°28 | 20°27 | 7°49 | 7°26 | 5°22 | 11° 6 | 22°12 | 22°34 | 3°30 | 20°22 | T20 |
| W21 | 22 31 2 | 6° 1'44" | 27°44 | 15°21 | 20° 8 | 2°59 | 20°29 | 7°53 | 7°29 | 5°24 | 11° 7 | 22° 5 | 22°31 | 3°36 | 20°27 | W21 |
| T22 | 22 34 59 | 7° 0'00" | 11°R24 | 17° 6 | 21° 5 | 3°30 | 20°31 | 7°58 | 7°33 | 5°26 | 11° 9 | 21°55 | 22°28 | 3°43 | 20°33 | T22 |
| F23 | 22 38 55 | 7°58'19" | 25°29 | 18°49 | 22° 3 | 4° 0 | 20°33 | 8° 2 | 7°36 | 5°28 | 11°11 | 21°44 | 22°25 | 3°50 | 20°38 | F23 |
| S24 | 22 42 52 | 8°56'39" | 9°R54 | 20°32 | 23° 1 | 4°30 | 20°35 | 8° 7 | 7°39 | 5°30 | 11°12 | 21°33 | 22°22 | 3°56 | 20°43 | S24 |
| S25 | 22 46 48 | 9°55'01" | 24°33 | 22°14 | 23°59 | 5° 0 | 20°36 | 8°12 | 7°42 | 5°32 | 11°14 | 21°23 | 22°19 | 4° 3 | 20°49 | S25 |
| M26 | 22 50 45 | 10°53'25" | 9°R18 | 23°54 | 24°58 | 5°29 | 20°38 | 8°16 | 7°46 | 5°34 | 11°16 | 21°15 | 22°15 | 4° 9 | 20°54 | M26 |
| T27 | 22 54 41 | 11°51'50" | 24° 1 | 25°33 | 25°58 | 5°58 | 20°39 | 8°21 | 7°49 | 5°36 | 11°17 | 21°10 | 22°12 | 4°16 | 20°59 | T27 |
| W28 | 22 58 38 | 12°50'18" | 8°R36 | 27°11 | 26°58 | 6°27 | 20°39 | 8°26 | 7°52 | 5°38 | 11°19 | 21° 7 | 22° 9 | 4°23 | 21° 4 | W28 |
| T29 | 23 2 34 | 13°48'47" | 22°58 | 28°49 | 27°58 | 6°55 | 20°40 | 8°31 | 7°55 | 5°40 | 11°20 | 21°D 7 | 22° 6 | 4°29 | 21° 9 | T29 |
| F30 | 23 6 31 | 14°47'17" | 7°R 6 | 0°R25 | 28°58 | 7°23 | 20°40 | 8°36 | 7°59 | 5°43 | 11°22 | 21° 7 | 22° 3 | 4°36 | 21°15 | F30 |
| S31 | 23 10 27 | 15°R45'50" | 20°R59 | 2°R 0 | 29°R59 | 7°R51 | 20°R41 | 8°R42 | 8°R 2 | 5°R45 | 11°R24 | 21°R 7 | 21°R59 | 4°R43 | 21°R19 | S31 |

Delta T = 06m21s

Julian Calendar

ASTRODIENST EPHEMERIS for the year 1454

geocentric

SEPTEMBER 1454 JC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|----------|------------------------|-------------------|-------------------|-------------------|--------------------|---------------------|--------------------|-------------------|-------------------|--------------------|--------------------|---------------------|-------------------|--------------------|------|
| S 1 | 23 14 24 | 16 ¹¹ 44'24 | 4 ³ 36 | 3 ¹ 34 | 1 ¹ 1 | 8 ¹¹ 18 | 20°R41 | 8 ¹¹ 47 | 8 ¹¹ 5 | 5 ¹ 47 | 11 ¹ 25 | 21°R 6 | 21 ¹¹ 56 | 4 ⁸ 49 | 21 ¹ 24 | S 1 |
| M 2 | 23 18 21 | 17°42'59 | 17°59 | 5° 7 | 2° 2 | 8°45 | 20 ¹ 841 | 8°52 | 8° 8 | 5°49 | 11°27 | 21 ¹¹ 2 | 21°53 | 4°56 | 21°29 | M 2 |
| T 3 | 23 22 17 | 18°41'36 | 1 ¹ 36 | 6°38 | 3° 4 | 9°12 | 20°40 | 8°57 | 8°11 | 5°51 | 11°28 | 20°56 | 21°50 | 5° 3 | 21°34 | T 3 |
| W 4 | 23 26 14 | 19°40'15 | 14° 7 | 8° 9 | 4° 7 | 9°38 | 20°40 | 9° 3 | 8°14 | 5°53 | 11°30 | 20°48 | 21°47 | 5° 9 | 21°39 | W 4 |
| T 5 | 23 30 10 | 20°38'56 | 26°52 | 9°39 | 5° 9 | 10° 3 | 20°39 | 9° 8 | 8°17 | 5°55 | 11°31 | 20°37 | 21°44 | 5°16 | 21°43 | T 5 |
| F 6 | 23 34 7 | 21°37'39 | 9 ¹ 26 | 11° 8 | 6°12 | 10°29 | 20°38 | 9°14 | 8°20 | 5°58 | 11°33 | 20°27 | 21°40 | 5°23 | 21°48 | F 6 |
| S 7 | 23 38 3 | 22°36'23 | 21°48 | 12°36 | 7°16 | 10°54 | 20°37 | 9°19 | 8°23 | 6° 0 | 11°34 | 20°16 | 21°37 | 5°29 | 21°52 | S 7 |
| S 8 | 23 42 0 | 23°35'10 | 4 ¹ 0 | 14° 2 | 8°19 | 11°18 | 20°35 | 9°25 | 8°26 | 6° 2 | 11°36 | 20° 7 | 21°34 | 5°36 | 21°57 | S 8 |
| M 9 | 23 45 56 | 24°33'58 | 16° 2 | 15°28 | 9°23 | 11°42 | 20°34 | 9°31 | 8°29 | 6° 4 | 11°37 | 19°59 | 21°31 | 5°43 | 22° 1 | M 9 |
| T 10 | 23 49 53 | 25°32'49 | 27°55 | 16°53 | 10°28 | 12° 6 | 20°32 | 9°36 | 8°31 | 6° 6 | 11°39 | 19°54 | 21°28 | 5°49 | 22° 6 | T 10 |
| W 11 | 23 53 50 | 26°31'42 | 9 ¹ 44 | 18°16 | 11°32 | 12°29 | 20°30 | 9°42 | 8°34 | 6° 9 | 11°40 | 19°52 | 21°24 | 5°56 | 22°10 | W 11 |
| T 12 | 23 57 46 | 27°30'37 | 21°30 | 19°39 | 12°37 | 12°52 | 20°28 | 9°48 | 8°37 | 6°11 | 11°41 | 19°D51 | 21°21 | 6° 3 | 22°14 | T 12 |
| F 13 | 0 1 43 | 28°29'35 | 3 ¹ 11 | 21° 0 | 13°42 | 13°14 | 20°26 | 9°54 | 8°40 | 6°13 | 11°43 | 19°52 | 21°18 | 6° 9 | 22°18 | F 13 |
| S 14 | 0 5 39 | 29°28'35 | 15°14 | 22°20 | 14°47 | 13°36 | 20°23 | 10° 0 | 8°42 | 6°15 | 11°44 | 19°53 | 21°15 | 6°16 | 22°22 | S 14 |
| S 15 | 0 9 36 | 0 ¹ 27'37 | 27°21 | 23°39 | 15°53 | 13°57 | 20°20 | 10° 6 | 8°45 | 6°17 | 11°45 | 19°R54 | 21°12 | 6°22 | 22°26 | S 15 |
| M 16 | 0 13 32 | 1°26'41 | 9 ¹ 46 | 24°56 | 16°59 | 14°18 | 20°17 | 10°12 | 8°47 | 6°20 | 11°47 | 19°54 | 21° 9 | 6°29 | 22°30 | M 16 |
| T 17 | 0 17 29 | 2°25'48 | 22°33 | 26°12 | 18° 5 | 14°38 | 20°14 | 10°18 | 8°50 | 6°22 | 11°48 | 19°52 | 21° 5 | 6°36 | 22°34 | T 17 |
| W 18 | 0 21 25 | 3°24'57 | 5 ¹ 46 | 27°27 | 19°11 | 14°58 | 20°11 | 10°24 | 8°53 | 6°24 | 11°49 | 19°48 | 21° 2 | 6°42 | 22°37 | W 18 |
| T 19 | 0 25 22 | 4°24'09 | 19°27 | 28°40 | 20°17 | 15°17 | 20° 7 | 10°30 | 8°55 | 6°26 | 11°51 | 19°42 | 20°59 | 6°49 | 22°41 | T 19 |
| F 20 | 0 29 19 | 5°23'23 | 3 ¹ 36 | 29°51 | 21°24 | 15°36 | 20° 4 | 10°36 | 8°58 | 6°29 | 11°52 | 19°35 | 20°56 | 6°56 | 22°45 | F 20 |
| S 21 | 0 33 15 | 6°22'39 | 18°10 | 1 ¹ 1 | 22°31 | 15°54 | 20° 0 | 10°43 | 9° 0 | 6°31 | 11°53 | 19°28 | 20°53 | 7° 2 | 22°48 | S 21 |
| S 22 | 0 37 12 | 7°21'57 | 3 ¹ 3 | 2° 9 | 23°38 | 16°11 | 19°56 | 10°49 | 9° 2 | 6°33 | 11°54 | 19°22 | 20°50 | 7° 9 | 22°52 | S 22 |
| M 23 | 0 41 8 | 8°21'17 | 18° 6 | 3°14 | 24°46 | 16°28 | 19°51 | 10°55 | 9° 5 | 6°35 | 11°55 | 19°17 | 20°46 | 7°16 | 22°55 | M 23 |
| T 24 | 0 45 5 | 9°20'39 | 3 ¹ 11 | 4°18 | 25°53 | 16°45 | 19°47 | 11° 2 | 9° 7 | 6°38 | 11°56 | 19°14 | 20°43 | 7°22 | 22°58 | T 24 |
| W 25 | 0 49 1 | 10°20'03 | 18° 8 | 5°19 | 27° 1 | 17° 0 | 19°42 | 11° 8 | 9° 9 | 6°40 | 11°58 | 19°D13 | 20°40 | 7°29 | 23° 1 | W 25 |
| T 26 | 0 52 58 | 11°19'30 | 2 ¹ 50 | 6°17 | 28° 9 | 17°15 | 19°37 | 11°15 | 9°11 | 6°42 | 11°59 | 19°14 | 20°37 | 7°36 | 23° 4 | T 26 |
| F 27 | 0 56 54 | 12°18'58 | 17°12 | 7°13 | 29°17 | 17°30 | 19°32 | 11°21 | 9°13 | 6°44 | 12° 0 | 19°15 | 20°34 | 7°42 | 23° 7 | F 27 |
| S 28 | 1 0 51 | 13°18'27 | 1 ¹ 13 | 8° 5 | 0 ¹ 26 | 17°44 | 19°27 | 11°28 | 9°16 | 6°46 | 12° 1 | 19°16 | 20°30 | 7°49 | 23°10 | S 28 |
| S 29 | 1 4 48 | 14°17'59 | 14°51 | 8°54 | 1°34 | 17°57 | 19°22 | 11°34 | 9°18 | 6°49 | 12° 2 | 19°R17 | 20°27 | 7°56 | 23°13 | S 29 |
| M 30 | 1 8 44 | 15°17'32 | 28 ¹ 9 | 9 ¹ 39 | 2 ¹ 43 | 18 ¹ 9 | 19°16 | 11°41 | 9°20 | 6°51 | 12° 3 | 19°16 | 20°16 | 8° 2 | 23°16 | M 30 |

Delta T = 06m21s

Julian Calendar 1 Sept. 1454 == Greg. Calendar 10 Sept. 1454

OCTOBER 1454 JC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|------------------------|--------------------|--------------------|-------------------|--------------------|--------|--------------------|-------------------|-------------------|-------|--------|--------------------|------------------|--------|------|
| T 1 | 1 12 41 | 16 ¹¹ 17'07 | 11 ¹ 36 | 10 ¹ 20 | 3 ¹ 52 | 18 ¹ 21 | 19°R11 | 11 ¹ 47 | 9 ¹ 22 | 6 ¹ 53 | 12° 4 | 19°R14 | 20 ¹ 21 | 8 ¹ 9 | 23°18 | T 1 |
| W 2 | 1 16 37 | 17°16'44 | 23°52 | 10°56 | 5° 1 | 18°32 | 19° 5 | 11°54 | 9°23 | 6°55 | 12° 5 | 19°10 | 20°18 | 8°16 | 23°21 | W 2 |
| T 3 | 1 20 34 | 18°16'22 | 6 ¹ 22 | 11°27 | 6°10 | 18°43 | 18°59 | 12° 1 | 9°25 | 6°58 | 12° 6 | 19° 5 | 20°15 | 8°22 | 23°23 | T 3 |
| F 4 | 1 24 30 | 19°16'03 | 18°40 | 11°53 | 7°19 | 18°52 | 18°53 | 12° 8 | 9°27 | 7° 0 | 12° 7 | 19° 0 | 20°11 | 8°29 | 23°25 | F 4 |
| S 5 | 1 28 27 | 20°15'45 | 0 ¹ 48 | 12°12 | 8°29 | 19° 1 | 18°47 | 12°14 | 9°29 | 7° 2 | 12° 7 | 18°55 | 20° 8 | 8°35 | 23°28 | S 5 |
| S 6 | 1 32 23 | 21°15'29 | 12°48 | 12°25 | 9°38 | 19° 9 | 18°40 | 12°21 | 9°31 | 7° 4 | 12° 8 | 18°50 | 20° 5 | 8°42 | 23°30 | S 6 |
| M 7 | 1 36 20 | 22°15'15 | 24°42 | 12°R30 | 10°48 | 19°17 | 18°34 | 12°28 | 9°32 | 7° 6 | 12° 9 | 18°47 | 20° 2 | 8°49 | 23°32 | M 7 |
| T 8 | 1 40 16 | 23°15'03 | 6 ¹ 31 | 12°27 | 11°58 | 19°24 | 18°27 | 12°35 | 9°34 | 7° 9 | 12°10 | 18°45 | 19°59 | 8°55 | 23°34 | T 8 |
| W 9 | 1 44 13 | 24°14'54 | 18°19 | 12°16 | 13° 8 | 19°29 | 18°20 | 12°42 | 9°35 | 7°11 | 12°11 | 18°D44 | 19°55 | 9° 2 | 23°36 | W 9 |
| T 10 | 1 48 10 | 25°14'46 | 0 ¹ 11 | 11°57 | 14°19 | 19°35 | 18°13 | 12°49 | 9°37 | 7°13 | 12°11 | 18°45 | 19°52 | 9° 9 | 23°38 | T 10 |
| F 11 | 1 52 6 | 26°14'40 | 11°57 | 11°28 | 15°29 | 19°39 | 18° 6 | 12°55 | 9°38 | 7°15 | 12°12 | 18°46 | 19°49 | 9°15 | 23°39 | F 11 |
| S 12 | 1 56 3 | 27°14'37 | 23°54 | 10°49 | 16°40 | 19°43 | 17°59 | 13° 2 | 9°40 | 7°17 | 12°13 | 18°48 | 19°46 | 9°22 | 23°41 | S 12 |
| S 13 | 1 59 59 | 28°14'36 | 6 ¹ 2 | 10° 2 | 17°50 | 19°45 | 17°52 | 13° 9 | 9°41 | 7°19 | 12°13 | 18°49 | 19°43 | 9°29 | 23°42 | S 13 |
| M 14 | 2 3 56 | 29°14'37 | 18°26 | 9° 6 | 19° 1 | 19°47 | 17°45 | 13°16 | 9°43 | 7°21 | 12°14 | 18°50 | 19°40 | 9°35 | 23°44 | M 14 |
| T 15 | 2 7 52 | 0 ¹ 14'40 | 1 ¹ 8 | 8° 2 | 20°12 | 19°48 | 17°37 | 13°23 | 9°44 | 7°23 | 12°15 | 18°R51 | 19°36 | 9°42 | 23°45 | T 15 |
| W 16 | 2 11 49 | 1°14'45 | 14°14 | 6°52 | 21°23 | 19°R48 | 17°30 | 13°30 | 9°45 | 7°26 | 12°15 | 18°50 | 19°33 | 9°49 | 23°46 | W 16 |
| T 17 | 2 15 45 | 2°14'53 | 27°47 | 5°37 | 22°34 | 19°48 | 17°22 | 13°37 | 9°46 | 7°28 | 12°16 | 18°49 | 19°30 | 9°55 | 23°47 | T 17 |
| F 18 | 2 19 42 | 3°15'02 | 11 ¹ 47 | 4°19 | 23°46 | 19°46 | 17°14 | 13°44 | 9°47 | 7°30 | 12°16 | 18°47 | 19°27 | 10° 2 | 23°48 | F 18 |
| S 19 | 2 23 39 | 4°15'14 | 26°15 | 3° 0 | 24°57 | 19°43 | 17° 7 | 13°51 | 9°48 | 7°32 | 12°17 | 18°45 | 19°24 | 10° 9 | 23°49 | S 19 |
| S 20 | 2 27 35 | 5°15'28 | 11 ¹ 5 | 1°44 | 26° 9 | 19°40 | 16°59 | 13°58 | 9°49 | 7°34 | 12°17 | 18°43 | 19°21 | 10°15 | 23°50 | S 20 |
| M 21 | 2 31 32 | 6°15'43 | 26°11 | 0°32 | 27°21 | 19°36 | 16°51 | 14° 6 | 9°50 | 7°36 | 12°18 | 18°42 | 19°17 | 10°22 | 23°51 | M 21 |
| T 22 | 2 35 28 | 7°16'01 | 11 ¹ 25 | 29°27 | 28°32 | 19°31 | 16°43 | 14°13 | 9°51 | 7°38 | 12°18 | 18°D41 | 19°14 | 10°28 | 23°51 | T 22 |
| W 23 | 2 39 25 | 8°16'20 | 26°36 | 28°31 | 29°44 | 19°25 | 16°35 | 14°20 | 9°52 | 7°40 | 12°19 | 18°41 | 19°11 | 10°35 | 23°52 | W 23 |
| T 24 | 2 43 21 | 9°16'41 | 11 ¹ 35 | 27°45 | 0 ¹ 56 | 19°18 | 16°27 | 14°27 | 9°53 | 7°42 | 12°19 | 18°42 | 19° 8 | 10°42 | 23°52 | T 24 |
| F 25 | 2 47 18 | 10°17'04 | 26°15 | 27°10 | 2° 8 | 19°10 | 16°19 | 14°34 | 9°54 | 7°44 | 12°19 | 18°43 | 19° 5 | 10°48 | 23°53 | F 25 |
| S 26 | 2 51 14 | 11°17'28 | 10 ¹ 30 | 26°46 | 3°20 | 19° 1 | 16°11 | 14°41 | 9°54 | 7°46 | 12°20 | 18°43 | 19° 1 | 10°55 | 23°53 | S 26 |
| S 27 | 2 55 11 | 12°17'53 | 24°19 | 26°35 | 4°33 | 18°52 | 16° 2 | 14°48 | 9°55 | 7°48 | 12°20 | 18°44 | 18°58 | 11° 2 | 23°53 | S 27 |
| M 28 | 2 59 8 | 13°18'20 | 7 ¹ 42 | 26°D34 | 5°45 | 18°41 | 15°54 | 14°55 | 9°55 | 7°50 | 12°20 | 18°R44 | 18°55 | 11° 8 | 23°R53 | M 28 |
| T 29 | 3 3 4 | 14°18'48 | 20°42 | 26°45 | 6°58 | 18°30 | 15°46 | 15° 2 | 9°56 | 7°51 | 12°20 | 18°44 | 18°52 | 11°15 | 23°53 | T 29 |
| W 30 | 3 7 1 | 15°19'17 | 3 ¹ 20 | 27° 5 | 8°10 | 18°18 | 15°38 | 15°10 | 9°56 | 7°53 | 12°21 | 18°44 | 18°49 | 11°22 | 23°53 | W 30 |
| T 31 | 3 10 57 | 16°19'48 | 15 ¹ 42 | 27°35 | 9°23 | 18 ¹ 5 | 15°30 | 15°17 | 9°57 | 7°55 | 12°21 | 18°44 | 18°46 | 11°28 | 23°55 | T 31 |

Delta T = 06m21s

Julian Calendar

ASTRODIENST EPHEMERIS for the year 1454
geocentric

NOVEMBER 1454 JC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|-------------------------|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|----------------------|---------------------|---------------------|------|
| F 1 | 3 14 54 | 17 ^h 20'20" | 27 ^h 50' | 28 ^h 14' | 10 ^h 35' | 17 ^h R51 | 15 ^h R22 | 15 ^h M24 | 9 ^h Ω57 | 7 ^h Δ57 | 12 ^h Ω21 | 18 ^h R44 | 18 ^h M42 | 11 ^h Ω35 | 23 ^h R52 | F 1 |
| S 2 | 3 18 50 | 18 ^h 20'54" | 9 ^h Υ48 | 29° 0 | 11 ^h 48 | 17 ^h II37 | 15 ^h Ω13 | 15 ^h Ω31 | 9 ^h 57 | 7 ^h 59 | 12 ^h 21 | 18 ^h D43 | 18 ^h Ω39 | 11 ^h 42 | 23 ^h Ω52 | S 2 |
| S 3 | 3 22 47 | 19 ^h 21'28" | 21 ^h 40' | 29 ^h 52' | 13° 1 | 17 ^h 22 | 15° 5 | 15 ^h 38 | 9 ^h 58 | 8° 1 | 12 ^h 21 | 18 ^h M43 | 18 ^h Ω36 | 11 ^h 48 | 23 ^h 51 | S 3 |
| M 4 | 3 26 43 | 20 ^h 22'04" | 3 ^h Ω29 | 0 ^h M51 | 14 ^h 14 | 17° 6 | 14 ^h 57 | 15 ^h 45 | 9 ^h 58 | 8° 2 | 12 ^h 21 | 18 ^h 44 | 18 ^h Ω33 | 11 ^h 55 | 23 ^h 50 | M 4 |
| T 5 | 3 30 40 | 21 ^h 22'42" | 15 ^h 17 | 1 ^h 54 | 15 ^h 27 | 16 ^h 49 | 14 ^h 49 | 15 ^h 52 | 9 ^h 58 | 8° 4 | 12 ^h R21 | 18 ^h R44 | 18 ^h Ω30 | 12° 1 | 23 ^h 49 | T 5 |
| W 6 | 3 34 37 | 22 ^h 23'21" | 27° 6 | 3° 2 | 16 ^h 40 | 16 ^h 31 | 14 ^h 41 | 15 ^h 59 | 9 ^h 58 | 8° 6 | 12 ^h 21 | 18 ^h 44 | 18 ^h Ω27 | 12° 8 | 23 ^h 49 | W 6 |
| T 7 | 3 38 33 | 23 ^h 24'01" | 8 ^h II58 | 4 ^h 14 | 17 ^h 53 | 16 ^h 13 | 14 ^h 33 | 16° 6 | 9 ^h R58 | 8° 8 | 12 ^h 21 | 18 ^h 43 | 18 ^h Ω23 | 12 ^h 15 | 23 ^h 48 | T 7 |
| F 8 | 3 42 30 | 24 ^h 24'43" | 20 ^h 56 | 5 ^h 29 | 19° 6 | 15 ^h 55 | 14 ^h 25 | 16 ^h 14 | 9 ^h 58 | 8° 9 | 12 ^h 21 | 18 ^h 43 | 18 ^h Ω20 | 12 ^h 21 | 23 ^h 46 | F 8 |
| S 9 | 3 46 26 | 25 ^h 25'27" | 3 ^h Ω2 | 6 ^h 47 | 20 ^h 20 | 15 ^h 35 | 14 ^h 17 | 16 ^h 21 | 9 ^h 58 | 8 ^h 11 | 12 ^h 21 | 18 ^h 42 | 18 ^h Ω17 | 12 ^h 28 | 23 ^h 45 | S 9 |
| S 10 | 3 50 23 | 26 ^h 26'12" | 15 ^h 17 | 8° 7 | 21 ^h 33 | 15 ^h 15 | 14° 9 | 16 ^h 28 | 9 ^h 58 | 8 ^h 13 | 12 ^h 21 | 18 ^h 41 | 18 ^h Ω14 | 12 ^h 35 | 23 ^h 44 | S 10 |
| M 11 | 3 54 19 | 27 ^h 26'58" | 27 ^h 46 | 9 ^h 29 | 22 ^h 46 | 14 ^h 55 | 14° 2 | 16 ^h 35 | 9 ^h 58 | 8 ^h 14 | 12 ^h 20 | 18 ^h 40 | 18 ^h Ω11 | 12 ^h 41 | 23 ^h 43 | M 11 |
| T 12 | 3 58 16 | 28 ^h 27'46" | 10 ^h Ω30 | 10 ^h 53 | 24° 0 | 14 ^h 34 | 13 ^h 54 | 16 ^h 42 | 9 ^h 57 | 8 ^h 16 | 12 ^h 20 | 18 ^h 39 | 18° 7 | 12 ^h 48 | 23 ^h 41 | T 12 |
| W 13 | 4 2 12 | 29 ^h 28'35" | 23 ^h 33 | 12 ^h 18 | 25 ^h 14 | 14 ^h 12 | 13 ^h 46 | 16 ^h 49 | 9 ^h 57 | 8 ^h 17 | 12 ^h 20 | 18 ^h D38 | 18° 4 | 12 ^h 55 | 23 ^h 40 | W 13 |
| T 14 | 4 6 9 | 0 ^h Δ29'26" | 6 ^h η57 | 13 ^h 45 | 26 ^h 27 | 13 ^h 51 | 13 ^h 39 | 16 ^h 56 | 9 ^h 57 | 8 ^h 19 | 12 ^h 20 | 18 ^h 38 | 18° 1 | 13° 1 | 23 ^h 38 | T 14 |
| F 15 | 4 10 6 | 1 ^h 30'19" | 20 ^h 44 | 15 ^h 12 | 27 ^h 41 | 13 ^h 28 | 13 ^h 31 | 17° 3 | 9 ^h 56 | 8 ^h 20 | 12 ^h 20 | 18 ^h 39 | 17 ^h 58 | 13° 8 | 23 ^h 36 | F 15 |
| S 16 | 4 14 2 | 2 ^h 31'12" | 4 ^h Δ54 | 16 ^h 41 | 28 ^h 55 | 13° 6 | 13 ^h 24 | 17 ^h 10 | 9 ^h 56 | 8 ^h 22 | 12 ^h 19 | 18 ^h 40 | 17 ^h 55 | 13 ^h 15 | 23 ^h 34 | S 16 |
| S 17 | 4 17 59 | 3 ^h 32'07" | 19 ^h 27 | 18 ^h 10 | 0 ^h M 8 | 12 ^h 43 | 13 ^h 17 | 17 ^h 17 | 9 ^h 55 | 8 ^h 23 | 12 ^h 19 | 18 ^h 41 | 17 ^h 52 | 13 ^h 21 | 23 ^h 32 | S 17 |
| M 18 | 4 21 55 | 4 ^h 33'04" | 4 ^h M 19 | 19 ^h 40 | 1 ^h 22 | 12 ^h 20 | 13 ^h 10 | 17 ^h 24 | 9 ^h 54 | 8 ^h 25 | 12 ^h 19 | 18 ^h 42 | 17 ^h 48 | 13 ^h 28 | 23 ^h 30 | M 18 |
| T 19 | 4 25 52 | 5 ^h 34'02" | 19 ^h 22 | 21 ^h 10 | 2 ^h 36 | 11 ^h 57 | 13° 3 | 17 ^h 31 | 9 ^h 54 | 8 ^h 26 | 12 ^h 18 | 18 ^h R43 | 17 ^h 45 | 13 ^h 35 | 23 ^h 28 | T 19 |
| W 20 | 4 29 48 | 6 ^h 35'01" | 4 ^h Δ30 | 22 ^h 41 | 3 ^h 50 | 11 ^h 33 | 12 ^h 56 | 17 ^h 37 | 9 ^h 53 | 8 ^h 28 | 12 ^h 18 | 18 ^h 42 | 17 ^h 42 | 13 ^h 41 | 23 ^h 26 | W 20 |
| T 21 | 4 33 45 | 7 ^h 36'01" | 19 ^h 33 | 24 ^h 12 | 5° 4 | 11 ^h 10 | 12 ^h 49 | 17 ^h 44 | 9 ^h 52 | 8 ^h 29 | 12 ^h 17 | 18 ^h 40 | 17 ^h 39 | 13 ^h 48 | 23 ^h 24 | T 21 |
| F 22 | 4 37 41 | 8 ^h 37'01" | 4 ^h Ω21 | 25 ^h 43 | 6 ^h 18 | 10 ^h 46 | 12 ^h 42 | 17 ^h 51 | 9 ^h 52 | 8 ^h 30 | 12 ^h 17 | 18 ^h 38 | 17 ^h 36 | 13 ^h 54 | 23 ^h 21 | F 22 |
| S 23 | 4 41 38 | 9 ^h 38'03" | 18 ^h 48 | 27 ^h 15 | 7 ^h 32 | 10 ^h 23 | 12 ^h 36 | 17 ^h 58 | 9 ^h 51 | 8 ^h 32 | 12 ^h 16 | 18 ^h 35 | 17 ^h 33 | 14° 1 | 23 ^h 19 | S 23 |
| S 24 | 4 45 35 | 10 ^h 39'05" | 2 ^h Δ49 | 28 ^h 47 | 8 ^h 46 | 10° 0 | 12 ^h 29 | 18° 5 | 9 ^h 50 | 8 ^h 33 | 12 ^h 16 | 18 ^h 32 | 17 ^h 29 | 14° 8 | 23 ^h 16 | S 24 |
| M 25 | 4 49 31 | 11 ^h 40'08" | 16 ^h 22 | 0 ^h Δ19 | 10° 0 | 9 ^h 37 | 12 ^h 23 | 18 ^h 11 | 9 ^h 49 | 8 ^h 34 | 12 ^h 15 | 18 ^h 29 | 17 ^h 26 | 14 ^h 14 | 23 ^h 14 | M 25 |
| T 26 | 4 53 28 | 12 ^h 41'11" | 29 ^h 28 | 1 ^h 51 | 11 ^h 15 | 9 ^h 14 | 12 ^h 17 | 18 ^h 18 | 9 ^h 48 | 8 ^h 35 | 12 ^h 15 | 18 ^h 28 | 17 ^h 23 | 14 ^h 21 | 23 ^h 11 | T 26 |
| W 27 | 4 57 24 | 13 ^h 42'15" | 12 ^h Δ10 | 3 ^h 23 | 12 ^h 29 | 8 ^h 51 | 12 ^h 11 | 18 ^h 25 | 9 ^h 47 | 8 ^h 37 | 12 ^h 14 | 18 ^h D27 | 17 ^h 20 | 14 ^h 28 | 23° 8 | W 27 |
| T 28 | 5 1 21 | 14 ^h 43'19" | 24 ^h 31 | 4 ^h 56 | 13 ^h 43 | 8 ^h 28 | 12° 5 | 18 ^h 31 | 9 ^h 46 | 8 ^h 38 | 12 ^h 13 | 18 ^h 27 | 17 ^h 17 | 14 ^h 34 | 23° 5 | T 28 |
| F 29 | 5 5 17 | 15 ^h 44'24" | 6 ^h Υ36 | 6 ^h 29 | 14 ^h 57 | 8° 6 | 12° 0 | 18 ^h 38 | 9 ^h 44 | 8 ^h 39 | 12 ^h 13 | 18 ^h 29 | 17 ^h 13 | 14 ^h 41 | 23° 2 | F 29 |
| S 30 | 5 9 14 | 16 ^h Δ45'29" | 18 ^h Υ30 | 8 ^h Δ 1 | 16 ^h M 12 | 7 ^h II45 | 11 ^h Ω54 | 18 ^h M45 | 9 ^h Ω43 | 8 ^h Δ40 | 12 ^h Ω12 | 18 ^h M30 | 17 ^h M 10 | 14 ^h Ω48 | 22 ^h Ω59 | S 30 |

Delta T = 06m21s

Julian Calendar 1 Nov. 1454 == Greg. Calendar 10 Nov. 1454

DECEMBER 1454 JC

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | Day |
|------|---------|------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------|
| S 1 | 5 13 10 | 17 ^h Δ46'34 | 0 ^h Ω19 | 9 ^h Δ34 | 17 ^h M26 | 7 ^h R23 | 11 ^h R49 | 18 ^h M51 | 9 ^h R42 | 8 ^h Δ41 | 12 ^h R11 | 18 ^h M32 | 17 ^h M 7 | 14 ^h Ω54 | 22 ^h R56 | S 1 |
| M 2 | 5 17 7 | 18 ^h 47'40 | 12° 5 | 11° 8 | 18 ^h 40 | 7 ^h II 2 | 11 ^h Ω44 | 18 ^h 58 | 9 ^h Ω41 | 8 ^h 42 | 12 ^h Ω11 | 18 ^h 33 | 17° 4 | 15° 1 | 22 ^h Ω53 | M 2 |
| T 3 | 5 21 4 | 19 ^h 48'46 | 23 ^h 54 | 12 ^h 41 | 19 ^h 55 | 6 ^h 42 | 11 ^h 39 | 19° 4 | 9 ^h 39 | 8 ^h 43 | 12 ^h 10 | 18 ^h R33 | 17° 1 | 15° 8 | 22 ^h 50 | T 3 |
| W 4 | 5 25 0 | 20 ^h 49'53 | 5 ^h II47 | 14 ^h 14 | 21° 9 | 6 ^h 22 | 11 ^h 34 | 19 ^h 11 | 9 ^h 38 | 8 ^h 44 | 12° 9 | 18 ^h 32 | 16 ^h 58 | 15 ^h 14 | 22 ^h 46 | W 4 |
| T 5 | 5 28 57 | 21 ^h 51'00 | 17 ^h 48 | 15 ^h 48 | 22 ^h 24 | 6° 3 | 11 ^h 30 | 19 ^h 17 | 9 ^h 36 | 8 ^h 45 | 12° 8 | 18 ^h 29 | 16 ^h 54 | 15 ^h 21 | 22 ^h 43 | T 5 |
| F 6 | 5 32 53 | 22 ^h 52'07 | 29 ^h 58 | 17 ^h 22 | 23 ^h 38 | 5 ^h 45 | 11 ^h 25 | 19 ^h 23 | 9 ^h 35 | 8 ^h 46 | 12° 8 | 18 ^h 24 | 16 ^h 51 | 15 ^h 27 | 22 ^h 40 | F 6 |
| S 7 | 5 36 50 | 23 ^h 53'15 | 12 ^h Ω18 | 18 ^h 56 | 24 ^h 53 | 5 ^h 27 | 11 ^h 21 | 19 ^h 30 | 9 ^h 33 | 8 ^h 47 | 12° 7 | 18 ^h 18 | 16 ^h 48 | 15 ^h 34 | 22 ^h 36 | S 7 |
| S 8 | 5 40 46 | 24 ^h 54'24 | 24 ^h 49 | 20 ^h 30 | 26° 7 | 5° 9 | 11 ^h 17 | 19 ^h 36 | 9 ^h 32 | 8 ^h 48 | 12° 6 | 18 ^h 11 | 16 ^h 45 | 15 ^h 41 | 22 ^h 33 | S 8 |
| M 9 | 5 44 43 | 25 ^h 55'33 | 7 ^h Ω32 | 22° 5 | 27 ^h 22 | 4 ^h 53 | 11 ^h 13 | 19 ^h 42 | 9 ^h 30 | 8 ^h 48 | 12° 5 | 18° 4 | 16 ^h 42 | 15 ^h 47 | 22 ^h 29 | M 9 |
| T 10 | 5 48 39 | 26 ^h 56'42 | 20 ^h 28 | 23 ^h 39 | 28 ^h 36 | 4 ^h 37 | 11 ^h 10 | 19 ^h 48 | 9 ^h 28 | 8 ^h 49 | 12° 4 | 17 ^h 58 | 16 ^h 39 | 15 ^h 54 | 22 ^h 25 | T 10 |
| W 11 | 5 52 36 | 27 ^h 57'52 | 3 ^h η38 | 25 ^h 14 | 29 ^h 51 | 4 ^h 21 | 11° 6 | 19 ^h 55 | 9 ^h 27 | 8 ^h 50 | 12° 3 | 17 ^h 54 | 16 ^h 35 | 16° 1 | 22 ^h 21 | W 11 |
| T 12 | 5 56 33 | 28 ^h 59'02 | 17° 2 | 26 ^h 50 | 1 ^h Δ 6 | 4° 7 | 11° 3 | 20° 1 | 9 ^h 25 | 8 ^h 51 | 12° 2 | 17 ^h 51 | 16 ^h 32 | 16° 7 | 22 ^h 18 | T 12 |
| F 13 | 6 0 29 | 0 ^h Ω 0'12 | 0 ^h Δ42 | 28 ^h 25 | 2 ^h 20 | 3 ^h 53 | 11° 0 | 20° 7 | 9 ^h 23 | 8 ^h 51 | 12° 1 | 17 ^h D51 | 16 ^h 29 | 16 ^h 14 | 22 ^h 14 | F 13 |
| S 14 | 6 4 26 | 1° 1'23 | 14 ^h 38 | 0 ^h Ω 1 | 3 ^h 35 | 3 ^h 40 | 10 ^h 57 | 20 ^h 13 | 9 ^h 21 | 8 ^h 52 | 12° 0 | 17 ^h 51 | 16 ^h 26 | 16 ^h 21 | 22 ^h 10 | S 14 |
| S 15 | 6 8 22 | 2° 2'35 | 28 ^h 51 | 1 ^h 37 | 4 ^h 50 | 3 ^h 28 | 10 ^h 55 | 20 ^h 19 | 9 ^h 19 | 8 ^h 53 | 11 ^h 59 | 17 ^h 53 | 16 ^h 23 | 16 ^h 27 | 22° 6 | S 15 |
| M 16 | 6 12 19 | 3° 3'47 | 13 ^h M 19 | 3 ^h 14 | 6° 4 | 3 ^h 16 | 10 ^h 52 | 20 ^h 24 | 9 ^h 17 | 8 ^h 53 | 11 ^h 58 | 17 ^h R54 | 16 ^h 19 | 16 ^h 34 | 22° 2 | M 16 |
| T 17 | 6 16 15 | 4° 4'59 | 27 ^h 59 | 4 ^h 51 | 7 ^h 19 | 3° 6 | 10 ^h 50 | 20 ^h 30 | 9 ^h 15 | 8 ^h 54 | 11 ^h 57 | 17 ^h 53 | 16 ^h 16 | 16 ^h 41 | 21 ^h 58 | T 17 |
| W 18 | 6 20 12 | 5° 6'11 | 12 ^h Δ47 | 6 ^h 28 | 8 ^h 34 | 2 ^h 56 | 10 ^h 48 | 20 ^h 36 | 9 ^h 13 | 8 ^h 54 | 11 ^h 56 | 17 ^h 51 | 16 ^h 13 | 16 ^h 47 | 21 ^h 54 | W 18 |
| T 19 | 6 24 9 | 6° 7'24 | 27 ^h 34 | 8° 5 | 9 ^h 49 | 2 ^h 47 | 10 ^h 46 | 20 ^h 42 | 9 ^h 11 | 8 ^h 55 | 11 ^h 55 | 17 ^h 46 | 16 ^h 10 | 16 ^h 54 | 21 ^h 50 | T 19 |
| F 20 | 6 28 5 | 7° 8'36 | 12 ^h Ω14 | 9 ^h 43 | 11° 4 | 2 ^h 39 | 10 ^h 44 | 20 ^h 47 | 9° 9 | 8 ^h 55 | 11 ^h 54 | 17 ^h 39 | 16° 7 | 17° 1 | 21 ^h 45 | F 20 |
| S 21 | 6 32 2 | 8° 9'49 | 26 ^h 38 | 11 ^h 22 | 12 ^h 18 | 2 ^h 32 | 10 ^h 43 | 20 ^h 53 | 9° 7 | 8 ^h 56 | 11 ^h 53 | 17 ^h 31 | 16° 4 | 17° 7 | 21 ^h 41 | S 21 |
| S 22 | 6 35 58 | 9°11'01 | 10 ^h Δ42 | 13° 0 | 13 ^h 33 | 2 ^h 25 | 10 ^h 42 | 20 ^h 59 | 9° 5 | 8 ^h 56 | 11 ^h 51 | 17 ^h 22 | 16° 0 | 17 ^h 14 | 21 ^h 37 | S 22 |
| M 23 | 6 39 55 | 10°12'12 | 24 ^h 19 | 14 ^h 39 | 14 ^h 48 | 2 ^h 20 | 10 ^h 41 | 21° 4 | 9° 3 | 8 ^h 56 | 11 ^h 50 | 17 ^h 13 | 15 ^h 57 | 17 ^h 20 | 21 ^h 33 | M 23 |
| T 24 | 6 43 51 | 11°13'23 | 7 ^h Δ31 | 16 ^h 19 | 16° 3 | 2 ^h 15 | 10 ^h 40 | 21° 9 | 9° 1 | 8 ^h 57 | 11 ^h 49 | 17° 6 | 15 ^h 54 | 17 ^h 27 | 21 ^h 28 | T 24 |
| W 25 | 6 47 48 | 12°14'34 | 20 ^h 17 | 17 ^h 59 | 17 ^h 18 | 2 ^h 11 | 10 ^h 39 | 21 ^h 15 | 8 ^h 58 | 8 ^h 57 | 11 ^h 48 | 17° 1 | 15 ^h 51 | 17 ^h 34 | 21 ^h 24 | W 25 |
| T 26 | 6 51 44 | 13°15'43 | 2 ^h Υ42 | 19 ^h 39 | 18 ^h 32 | 2° 8 | 10 ^h 39 | 21 ^h 20 | 8 ^h 56 | 8 ^h 57 | 11 ^h 47 | 16 ^h 59 | 15 ^h 48 | 17 ^h 40 | 21 ^h 20 | T 26 |
| F 27 | 6 55 41 | 14°16'53 | 14 ^h 49 | 21 ^h 19 | 19 ^h 47 | 2° 5 | 10 ^h D39 | 21 ^h 25 | 8 ^h 54 | 8 ^h 57 | 11 ^h 45 | 16 ^h D58 | 15 ^h 45 | 17 ^h 47 | 21 ^h 15 | F 27 |
| S 28 | 6 59 38 | 15°18'01 | 26 ^h 43 | 23° 0 | 21° 2 | 2° 4 | 10 ^h 39 | 21 ^h 30 | 8 ^h 52 | 8 ^h 57 | 11 ^h 44 | 16 ^h 59 | 15 ^h 41 | 17 ^h 54 | 21 ^h 11 | S 28 |
| S 29 | 7 3 34 | 16°19'09 | 8 ^h Δ31 | 24 ^h 41 | 22 ^h 17 | 2° 3 | 10 ^h 39 | 21 ^h 35 | 8 ^h 49 | 8 ^h 58 | 11 ^h 43 | 17° 0 | 15 ^h 38 | 18° 0 | 21° 7 | S 29 |
| M 30 | 7 7 31 | 17°20'16 | 20 ^h 18 | 26 ^h 22 | 23 ^h 32 | 2 ^h D 3 | 10 ^h 40 | 21 ^h 40 | 8 ^h 47 | 8 ^h 58 | 11 ^h 42 | 17 ^h R 0 | 15 ^h 35 | 18° 7 | 21° 2 | M 30 |
| T 31 | 7 11 27 | 18 ^h Ω21'23 | 2 ^h II 8 | 28 ^h Ω 4 | 24 ^h Δ47 | 2 ^h II 4 | 10 ^h Δ40 | 21 ^h M45 | 8 ^h Ω44 | 8 ^h Δ58 | 11 ^h Ω40 | 16 ^h M58 | 15 ^h M32 | 18 ^h Ω14 | 20 ^h Ω58 | T 31 |