

SWISS EPHEMERIS for the year 519 BCE

JANUARY 519 BCE (-518) JC

00:00 UT

| Day  | Sid.t   | ☉        | ☽      | ♀     | ♁     | ♂      | ♃     | ♅    | ♁      | ♁      | ♁      | ♁      | ♁     | ♁     | ♁    |
|------|---------|----------|--------|-------|-------|--------|-------|------|--------|--------|--------|--------|-------|-------|------|
| M 1  | 6 16 32 | 5°27'00  | 28°Y 0 | 18°30 | 24M23 | 28°Y17 | 19°22 | 0M59 | 22°347 | 19°R40 | 23°R55 | 18M35  | 17M11 | 10°46 | n.a. |
| T 2  | 6 20 29 | 6°27'52  | 9°46   | 20°12 | 25°34 | 28°33  | 19°35 | 1° 3 | 22°51  | 19°M40 | 23°53  | 18°37  | 17° 7 | 10°53 | n.a. |
| W 3  | 6 24 25 | 7°28'42  | 21°35  | 21°53 | 26°46 | 28°50  | 19°49 | 1° 7 | 22°54  | 19°40  | 23°52  | 18°R37 | 17° 4 | 10°59 | n.a. |
| T 4  | 6 28 22 | 8°29'31  | 3II30  | 23°33 | 27°57 | 29° 7  | 20° 3 | 1°11 | 22°57  | 19°40  | 23°51  | 18°36  | 17° 1 | 11° 6 | n.a. |
| F 5  | 6 32 18 | 9°30'18  | 15°34  | 25°10 | 29° 9 | 29°25  | 20°17 | 1°15 | 23° 1  | 19°39  | 23°49  | 18°32  | 16°58 | 11°13 | n.a. |
| S 6  | 6 36 15 | 10°31'04 | 27°51  | 26°44 | 0A21  | 29°43  | 20°30 | 1°19 | 23° 4  | 19°39  | 23°48  | 18°26  | 16°55 | 11°19 | n.a. |
| S 7  | 6 40 11 | 11°31'49 | 10°22  | 28°16 | 1°32  | 0B 1   | 20°44 | 1°23 | 23° 8  | 19°39  | 23°46  | 18°18  | 16°52 | 11°26 | n.a. |
| M 8  | 6 44 8  | 12°32'31 | 23° 7  | 29°43 | 2°44  | 0°20   | 20°57 | 1°26 | 23°11  | 19°38  | 23°45  | 18° 8  | 16°48 | 11°33 | n.a. |
| T 9  | 6 48 5  | 13°33'13 | 6M 5   | 1A 7  | 3°56  | 0°39   | 21°11 | 1°30 | 23°14  | 19°38  | 23°43  | 17°58  | 16°45 | 11°39 | n.a. |
| W10  | 6 52 1  | 14°33'52 | 19°17  | 2°25  | 5° 8  | 0°59   | 21°25 | 1°33 | 23°18  | 19°37  | 23°42  | 17°48  | 16°42 | 11°46 | n.a. |
| T 11 | 6 55 58 | 15°34'31 | 2M40   | 3°38  | 6°20  | 1°19   | 21°38 | 1°37 | 23°21  | 19°37  | 23°40  | 17°39  | 16°39 | 11°52 | n.a. |
| F 12 | 6 59 54 | 16°35'08 | 16°14  | 4°44  | 7°32  | 1°39   | 21°52 | 1°40 | 23°25  | 19°37  | 23°39  | 17°33  | 16°36 | 11°59 | n.a. |
| S 13 | 7 3 51  | 17°35'43 | 29°57  | 5°43  | 8°44  | 2° 0   | 22° 5 | 1°44 | 23°28  | 19°36  | 23°37  | 17°29  | 16°32 | 12° 6 | n.a. |
| S 14 | 7 7 47  | 18°36'17 | 13°50  | 6°34  | 9°56  | 2°21   | 22°18 | 1°47 | 23°32  | 19°35  | 23°36  | 17°D28 | 16°29 | 12°12 | n.a. |
| M15  | 7 11 44 | 19°36'50 | 27°52  | 7°16  | 11° 8 | 2°43   | 22°32 | 1°50 | 23°35  | 19°35  | 23°34  | 17°28  | 16°26 | 12°19 | n.a. |
| T 16 | 7 15 40 | 20°37'22 | 12M 3  | 7°49  | 12°20 | 3° 4   | 22°45 | 1°53 | 23°39  | 19°34  | 23°33  | 17°R28 | 16°23 | 12°26 | n.a. |
| W17  | 7 19 37 | 21°37'52 | 26°21  | 8°13  | 13°32 | 3°26   | 22°58 | 1°56 | 23°42  | 19°34  | 23°31  | 17°28  | 16°20 | 12°32 | n.a. |
| T 18 | 7 23 34 | 22°38'20 | 10°43  | 8°27  | 14°45 | 3°49   | 23°11 | 1°59 | 23°46  | 19°33  | 23°30  | 17°26  | 16°17 | 12°39 | n.a. |
| F 19 | 7 27 30 | 23°38'48 | 25° 8  | 8°R31 | 15°57 | 4°11   | 23°24 | 2° 1 | 23°49  | 19°32  | 23°28  | 17°21  | 16°13 | 12°46 | n.a. |
| S 20 | 7 31 27 | 24°39'13 | 9°28   | 8°24  | 17° 9 | 4°35   | 23°38 | 2° 4 | 23°52  | 19°31  | 23°27  | 17°14  | 16°10 | 12°52 | n.a. |
| S 21 | 7 35 23 | 25°39'37 | 23°39  | 8° 8  | 18°22 | 4°58   | 23°51 | 2° 7 | 23°56  | 19°31  | 23°25  | 17° 4  | 16° 7 | 12°59 | n.a. |
| M22  | 7 39 20 | 26°39'59 | 7A36   | 7°42  | 19°34 | 5°21   | 24° 4 | 2° 9 | 23°59  | 19°30  | 23°24  | 16°52  | 16° 4 | 13° 6 | n.a. |
| T 23 | 7 43 16 | 27°40'18 | 21°13  | 7° 7  | 20°47 | 5°45   | 24°16 | 2°11 | 24° 3  | 19°29  | 23°22  | 16°40  | 16° 1 | 13°12 | n.a. |
| W24  | 7 47 13 | 28°40'36 | 4X28   | 6°25  | 21°59 | 6°10   | 24°29 | 2°14 | 24° 6  | 19°28  | 23°21  | 16°29  | 15°58 | 13°19 | n.a. |
| T 25 | 7 51 9  | 29°40'52 | 17°20  | 5°35  | 23°11 | 6°34   | 24°42 | 2°16 | 24°10  | 19°27  | 23°19  | 16°20  | 15°54 | 13°25 | n.a. |
| F 26 | 7 55 6  | 0A41'05  | 29°51  | 4°40  | 24°24 | 6°59   | 24°55 | 2°18 | 24°13  | 19°26  | 23°18  | 16°14  | 15°51 | 13°32 | n.a. |
| S 27 | 7 59 3  | 1°41'17  | 12°Y 4 | 3°41  | 25°36 | 7°24   | 25° 8 | 2°20 | 24°17  | 19°25  | 23°16  | 16°10  | 15°48 | 13°39 | n.a. |
| S 28 | 8 2 59  | 2°41'26  | 24° 3  | 2°39  | 26°49 | 7°49   | 25°20 | 2°22 | 24°20  | 19°24  | 23°15  | 16° 8  | 15°45 | 13°45 | n.a. |
| M29  | 8 6 56  | 3°41'33  | 5B54   | 1°36  | 28° 2 | 8°14   | 25°33 | 2°24 | 24°24  | 19°23  | 23°14  | 16°D 8 | 15°42 | 13°52 | n.a. |
| T 30 | 8 10 52 | 4°41'38  | 17°41  | 0°34  | 29°14 | 8°40   | 25°45 | 2°25 | 24°27  | 19°22  | 23°12  | 16°R 8 | 15°38 | 13°59 | n.a. |
| W31  | 8 14 49 | 5A41'40  | 29B31  | 29°33 | 0B27  | 9B 6   | 25A58 | 2M27 | 24°30  | 19M21  | 23°11  | 16M 7  | 15M35 | 14B 5 | n.a. |

Delta T = 04h44m17s Julian Calendar 1 Jan. 519 BCE == Greg. Calendar 26 Dec. 520 BCE  
 The year -518 astronomical counting style corresponds to year 519 B.C.E historical counting style.

FEBRUARY 519 BCE (-518) JC

00:00 UT

| Day  | Sid.t   | ☉        | ☽      | ♀      | ♁     | ♂     | ♃     | ♅     | ♁     | ♁      | ♁      | ♁      | ♁     | ♁     | ♁    |
|------|---------|----------|--------|--------|-------|-------|-------|-------|-------|--------|--------|--------|-------|-------|------|
| T 1  | 8 18 45 | 6A41'40  | 11II29 | 28°R36 | 1°39  | 9B32  | 26°10 | 2M28  | 24°34 | 19°R20 | 23°R 9 | 16°R 5 | 15M32 | 14B12 | n.a. |
| F 2  | 8 22 42 | 7°41'38  | 23°39  | 27°42  | 2°52  | 9°58  | 26°22 | 2°30  | 24°37 | 19M19  | 23°8   | 16M 0  | 15°29 | 14°19 | n.a. |
| S 3  | 8 26 38 | 8°41'34  | 6°5    | 26°53  | 4° 5  | 10°25 | 26°34 | 2°31  | 24°41 | 19°18  | 23° 6  | 15°52  | 15°26 | 14°25 | n.a. |
| S 4  | 8 30 35 | 9°41'28  | 18°48  | 26°10  | 5°17  | 10°52 | 26°47 | 2°32  | 24°44 | 19°17  | 23° 5  | 15°42  | 15°23 | 14°32 | n.a. |
| M 5  | 8 34 32 | 10°41'19 | 1°51   | 25°34  | 6°30  | 11°19 | 26°59 | 2°33  | 24°47 | 19°16  | 23° 3  | 15°30  | 15°19 | 14°39 | n.a. |
| T 6  | 8 38 28 | 11°41'08 | 15°12  | 25° 3  | 7°43  | 11°46 | 27°11 | 2°34  | 24°51 | 19°14  | 23° 2  | 15°17  | 15°16 | 14°45 | n.a. |
| W 7  | 8 42 25 | 12°40'56 | 28°49  | 24°39  | 8°55  | 12°13 | 27°23 | 2°35  | 24°54 | 19°13  | 23° 1  | 15° 4  | 15°13 | 14°52 | n.a. |
| T 8  | 8 46 21 | 13°40'41 | 12M38  | 24°22  | 10° 8 | 12°41 | 27°34 | 2°36  | 24°57 | 19°12  | 22°59  | 14°53  | 15°10 | 14°59 | n.a. |
| F 9  | 8 50 18 | 14°40'24 | 26°36  | 24°11  | 11°21 | 13° 9 | 27°46 | 2°37  | 25° 1 | 19°11  | 22°58  | 14°45  | 15° 7 | 15° 5 | n.a. |
| S 10 | 8 54 14 | 15°40'05 | 10A39  | 24°D 7 | 12°34 | 13°37 | 27°58 | 2°37  | 25° 4 | 19° 9  | 22°56  | 14°39  | 15° 3 | 15°12 | n.a. |
| S 11 | 8 58 11 | 16°39'44 | 24°44  | 24° 8  | 13°46 | 14° 5 | 28° 9 | 2°38  | 25° 7 | 19° 8  | 22°55  | 14°36  | 15° 0 | 15°18 | n.a. |
| M12  | 9 2 7   | 17°39'22 | 8M50   | 24°16  | 14°59 | 14°33 | 28°21 | 2°38  | 25°11 | 19° 7  | 22°54  | 14°36  | 14°57 | 15°25 | n.a. |
| T 13 | 9 6 4   | 18°38'57 | 22°56  | 24°29  | 16°12 | 15° 1 | 28°32 | 2°39  | 25°14 | 19° 5  | 22°52  | 14°35  | 14°54 | 15°32 | n.a. |
| W14  | 9 10 1  | 19°38'31 | 7A 1   | 24°48  | 17°25 | 15°30 | 28°44 | 2°39  | 25°17 | 19° 4  | 22°51  | 14°35  | 14°51 | 15°38 | n.a. |
| T 15 | 9 13 57 | 20°38'03 | 21° 3  | 25°11  | 18°38 | 15°59 | 28°55 | 2°39  | 25°20 | 19° 3  | 22°50  | 14°32  | 14°48 | 15°45 | n.a. |
| F 16 | 9 17 54 | 21°37'34 | 5B 2   | 25°39  | 19°51 | 16°28 | 29° 6 | 2°R39 | 25°23 | 19° 1  | 22°49  | 14°27  | 14°44 | 15°52 | n.a. |
| S 17 | 9 21 50 | 22°37'02 | 18°56  | 26°12  | 21° 4 | 16°57 | 29°17 | 2°39  | 25°27 | 19° 0  | 22°47  | 14°19  | 14°41 | 15°58 | n.a. |
| S 18 | 9 25 47 | 23°36'28 | 2A41   | 26°49  | 22°17 | 17°26 | 29°28 | 2°39  | 25°30 | 18°58  | 22°46  | 14° 8  | 14°38 | 16° 5 | n.a. |
| M19  | 9 29 43 | 24°35'52 | 16°14  | 27°30  | 23°29 | 17°55 | 29°39 | 2°39  | 25°33 | 18°57  | 22°45  | 13°56  | 14°35 | 16°12 | n.a. |
| T 20 | 9 33 40 | 25°35'14 | 29°32  | 28°15  | 24°42 | 18°25 | 29°50 | 2°38  | 25°36 | 18°56  | 22°44  | 13°43  | 14°32 | 16°18 | n.a. |
| W21  | 9 37 36 | 26°34'34 | 12X33  | 29° 3  | 25°55 | 18°55 | 0B 0  | 2°38  | 25°39 | 18°54  | 22°42  | 13°31  | 14°29 | 16°25 | n.a. |
| T 22 | 9 41 33 | 27°33'51 | 25°17  | 29°54  | 27° 8 | 19°25 | 0°11  | 2°37  | 25°42 | 18°53  | 22°41  | 13°21  | 14°25 | 16°32 | n.a. |
| F 23 | 9 45 30 | 28°33'07 | 7Y43   | 0A49   | 28°21 | 19°54 | 0°21  | 2°36  | 25°45 | 18°51  | 22°40  | 13°13  | 14°22 | 16°38 | n.a. |
| S 24 | 9 49 26 | 29°32'19 | 19°53  | 1°46   | 29°34 | 20°25 | 0°32  | 2°36  | 25°48 | 18°50  | 22°39  | 13° 9  | 14°19 | 16°45 | n.a. |
| S 25 | 9 53 23 | 0X31'30  | 1B52   | 2°47   | 0A47  | 20°55 | 0°42  | 2°35  | 25°51 | 18°48  | 22°38  | 13° 6  | 14°16 | 16°51 | n.a. |
| M26  | 9 57 19 | 1°30'38  | 13°42  | 3°50   | 2° 0  | 21°25 | 0°52  | 2°34  | 25°54 | 18°46  | 22°37  | 13°D 6 | 14°13 | 16°58 | n.a. |
| T 27 | 10 1 16 | 2°29'44  | 25°30  | 4°55   | 3°13  | 21°56 | 1° 2  | 2°33  | 25°57 | 18°45  | 22°35  | 13° 6  | 14° 9 | 17° 5 | n.a. |
| W28  | 10 5 12 | 3X28'47  | 7II20  | 6A 3   | 4A26  | 22B26 | 1°12  | 2M32  | 26°0  | 18M43  | 22°34  | 13°R 6 | 14M 6 | 17B11 | n.a. |

Delta T = 04h44m15s Julian Calendar created from Swiss Ephemeris, Copyright Astrodiest AG [10.1.2003]

SWISS EPHEMERIS for the year 519 BCE

MARCH 519 BCE (-518) JC

00:00 UT

| Day  | Sid.t    | ☉                     | ☽                     | ♀                  | ♁                  | ♂                  | ♃                 | ♄                 | ♅                  | ♆                  | ♇                  | ♈                  | ♉                  | ♊                  | ♋    | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ |
|------|----------|-----------------------|-----------------------|--------------------|--------------------|--------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------|---|---|---|---|---|---|---|---|
| T 1  | 10 9 9   | 4 <sup>h</sup> 27'48  | 19 <sup>h</sup> 11'19 | 7 <sup>h</sup> 13  | 5 <sup>h</sup> 39  | 22 <sup>h</sup> 57 | 1 <sup>h</sup> 22 | 2 <sup>h</sup> 30 | 26 <sup>h</sup> 3  | 18 <sup>h</sup> 42 | 22 <sup>h</sup> 33 | 13 <sup>h</sup> 5  | 14 <sup>h</sup> 3  | 17 <sup>h</sup> 18 | n.a. |   |   |   |   |   |   |   |   |
| F 2  | 10 13 5  | 5 <sup>h</sup> 26'47  | 19 <sup>h</sup> 30    | 8 <sup>h</sup> 25  | 6 <sup>h</sup> 52  | 23 <sup>h</sup> 28 | 1 <sup>h</sup> 32 | 2 <sup>h</sup> 29 | 26 <sup>h</sup> 6  | 18 <sup>h</sup> 40 | 22 <sup>h</sup> 32 | 13 <sup>h</sup> 2  | 14 <sup>h</sup> 0  | 17 <sup>h</sup> 25 | n.a. |   |   |   |   |   |   |   |   |
| S 3  | 10 17 2  | 6 <sup>h</sup> 25'43  | 14 <sup>h</sup> 0     | 9 <sup>h</sup> 40  | 8 <sup>h</sup> 5   | 23 <sup>h</sup> 59 | 1 <sup>h</sup> 41 | 2 <sup>h</sup> 28 | 26 <sup>h</sup> 9  | 18 <sup>h</sup> 39 | 22 <sup>h</sup> 31 | 12 <sup>h</sup> 56 | 13 <sup>h</sup> 57 | 17 <sup>h</sup> 31 | n.a. |   |   |   |   |   |   |   |   |
| S 4  | 10 20 59 | 7 <sup>h</sup> 24'36  | 26 <sup>h</sup> 50    | 10 <sup>h</sup> 56 | 9 <sup>h</sup> 18  | 24 <sup>h</sup> 30 | 1 <sup>h</sup> 51 | 2 <sup>h</sup> 26 | 26 <sup>h</sup> 12 | 18 <sup>h</sup> 37 | 22 <sup>h</sup> 30 | 12 <sup>h</sup> 48 | 13 <sup>h</sup> 54 | 17 <sup>h</sup> 38 | n.a. |   |   |   |   |   |   |   |   |
| M 5  | 10 24 55 | 8 <sup>h</sup> 23'28  | 10 <sup>h</sup> 4     | 12 <sup>h</sup> 15 | 10 <sup>h</sup> 31 | 25 <sup>h</sup> 1  | 2 <sup>h</sup> 0  | 2 <sup>h</sup> 24 | 26 <sup>h</sup> 14 | 18 <sup>h</sup> 35 | 22 <sup>h</sup> 29 | 12 <sup>h</sup> 39 | 13 <sup>h</sup> 50 | 17 <sup>h</sup> 45 | n.a. |   |   |   |   |   |   |   |   |
| T 6  | 10 28 52 | 9 <sup>h</sup> 22'17  | 23 <sup>h</sup> 41    | 13 <sup>h</sup> 35 | 11 <sup>h</sup> 44 | 25 <sup>h</sup> 32 | 2 <sup>h</sup> 9  | 2 <sup>h</sup> 23 | 26 <sup>h</sup> 17 | 18 <sup>h</sup> 34 | 22 <sup>h</sup> 28 | 12 <sup>h</sup> 28 | 13 <sup>h</sup> 47 | 17 <sup>h</sup> 51 | n.a. |   |   |   |   |   |   |   |   |
| W 7  | 10 32 48 | 10 <sup>h</sup> 21'04 | 7 <sup>h</sup> 38     | 14 <sup>h</sup> 57 | 12 <sup>h</sup> 57 | 26 <sup>h</sup> 4  | 2 <sup>h</sup> 18 | 2 <sup>h</sup> 21 | 26 <sup>h</sup> 20 | 18 <sup>h</sup> 32 | 22 <sup>h</sup> 27 | 12 <sup>h</sup> 18 | 13 <sup>h</sup> 44 | 17 <sup>h</sup> 58 | n.a. |   |   |   |   |   |   |   |   |
| T 8  | 10 36 45 | 11 <sup>h</sup> 19'49 | 21 <sup>h</sup> 52    | 16 <sup>h</sup> 21 | 14 <sup>h</sup> 10 | 26 <sup>h</sup> 35 | 2 <sup>h</sup> 27 | 2 <sup>h</sup> 19 | 26 <sup>h</sup> 23 | 18 <sup>h</sup> 31 | 22 <sup>h</sup> 27 | 12 <sup>h</sup> 9  | 13 <sup>h</sup> 41 | 18 <sup>h</sup> 5  | n.a. |   |   |   |   |   |   |   |   |
| F 9  | 10 40 41 | 12 <sup>h</sup> 18'31 | 6 <sup>h</sup> 16     | 17 <sup>h</sup> 47 | 15 <sup>h</sup> 23 | 27 <sup>h</sup> 7  | 2 <sup>h</sup> 36 | 2 <sup>h</sup> 17 | 26 <sup>h</sup> 25 | 18 <sup>h</sup> 29 | 22 <sup>h</sup> 26 | 12 <sup>h</sup> 2  | 13 <sup>h</sup> 38 | 18 <sup>h</sup> 11 | n.a. |   |   |   |   |   |   |   |   |
| S 10 | 10 44 38 | 13 <sup>h</sup> 17'12 | 20 <sup>h</sup> 45    | 19 <sup>h</sup> 15 | 16 <sup>h</sup> 36 | 27 <sup>h</sup> 39 | 2 <sup>h</sup> 45 | 2 <sup>h</sup> 15 | 26 <sup>h</sup> 28 | 18 <sup>h</sup> 27 | 22 <sup>h</sup> 25 | 11 <sup>h</sup> 58 | 13 <sup>h</sup> 35 | 18 <sup>h</sup> 18 | n.a. |   |   |   |   |   |   |   |   |
| S 11 | 10 48 34 | 14 <sup>h</sup> 15'51 | 5 <sup>h</sup> 11     | 20 <sup>h</sup> 44 | 17 <sup>h</sup> 49 | 28 <sup>h</sup> 10 | 2 <sup>h</sup> 54 | 2 <sup>h</sup> 13 | 26 <sup>h</sup> 30 | 18 <sup>h</sup> 26 | 22 <sup>h</sup> 24 | 11 <sup>h</sup> 57 | 13 <sup>h</sup> 31 | 18 <sup>h</sup> 25 | n.a. |   |   |   |   |   |   |   |   |
| M12  | 10 52 31 | 15 <sup>h</sup> 14'28 | 19 <sup>h</sup> 36    | 22 <sup>h</sup> 15 | 19 <sup>h</sup> 2  | 28 <sup>h</sup> 42 | 3 <sup>h</sup> 2  | 2 <sup>h</sup> 11 | 26 <sup>h</sup> 33 | 18 <sup>h</sup> 24 | 22 <sup>h</sup> 23 | 11 <sup>h</sup> 57 | 13 <sup>h</sup> 28 | 18 <sup>h</sup> 31 | n.a. |   |   |   |   |   |   |   |   |
| T 13 | 10 56 27 | 16 <sup>h</sup> 13'03 | 3 <sup>h</sup> 51     | 23 <sup>h</sup> 48 | 20 <sup>h</sup> 15 | 29 <sup>h</sup> 14 | 3 <sup>h</sup> 10 | 2 <sup>h</sup> 8  | 26 <sup>h</sup> 36 | 18 <sup>h</sup> 22 | 22 <sup>h</sup> 22 | 11 <sup>h</sup> 57 | 13 <sup>h</sup> 25 | 18 <sup>h</sup> 38 | n.a. |   |   |   |   |   |   |   |   |
| W14  | 11 0 24  | 17 <sup>h</sup> 11'37 | 17 <sup>h</sup> 56    | 25 <sup>h</sup> 22 | 21 <sup>h</sup> 28 | 29 <sup>h</sup> 46 | 3 <sup>h</sup> 19 | 2 <sup>h</sup> 6  | 26 <sup>h</sup> 38 | 18 <sup>h</sup> 21 | 22 <sup>h</sup> 22 | 11 <sup>h</sup> 58 | 13 <sup>h</sup> 22 | 18 <sup>h</sup> 44 | n.a. |   |   |   |   |   |   |   |   |
| T 15 | 11 4 21  | 18 <sup>h</sup> 10'09 | 1 <sup>h</sup> 51     | 26 <sup>h</sup> 58 | 22 <sup>h</sup> 41 | 0 <sup>h</sup> 11  | 3 <sup>h</sup> 27 | 2 <sup>h</sup> 3  | 26 <sup>h</sup> 41 | 18 <sup>h</sup> 19 | 22 <sup>h</sup> 21 | 11 <sup>h</sup> 57 | 13 <sup>h</sup> 19 | 18 <sup>h</sup> 51 | n.a. |   |   |   |   |   |   |   |   |
| F 16 | 11 8 17  | 19 <sup>h</sup> 8'39  | 15 <sup>h</sup> 34    | 28 <sup>h</sup> 35 | 23 <sup>h</sup> 54 | 0 <sup>h</sup> 51  | 3 <sup>h</sup> 35 | 2 <sup>h</sup> 1  | 26 <sup>h</sup> 43 | 18 <sup>h</sup> 17 | 22 <sup>h</sup> 20 | 11 <sup>h</sup> 54 | 13 <sup>h</sup> 15 | 18 <sup>h</sup> 58 | n.a. |   |   |   |   |   |   |   |   |
| S 17 | 11 12 14 | 20 <sup>h</sup> 7'07  | 29 <sup>h</sup> 7     | 0 <sup>h</sup> 15  | 25 <sup>h</sup> 8  | 1 <sup>h</sup> 23  | 3 <sup>h</sup> 43 | 1 <sup>h</sup> 58 | 26 <sup>h</sup> 45 | 18 <sup>h</sup> 16 | 22 <sup>h</sup> 20 | 11 <sup>h</sup> 49 | 13 <sup>h</sup> 12 | 19 <sup>h</sup> 4  | n.a. |   |   |   |   |   |   |   |   |
| S 18 | 11 16 10 | 21 <sup>h</sup> 5'34  | 12 <sup>h</sup> 28    | 1 <sup>h</sup> 56  | 26 <sup>h</sup> 21 | 1 <sup>h</sup> 56  | 3 <sup>h</sup> 50 | 1 <sup>h</sup> 55 | 26 <sup>h</sup> 48 | 18 <sup>h</sup> 14 | 22 <sup>h</sup> 19 | 11 <sup>h</sup> 42 | 13 <sup>h</sup> 9  | 19 <sup>h</sup> 11 | n.a. |   |   |   |   |   |   |   |   |
| M19  | 11 20 7  | 22 <sup>h</sup> 3'59  | 25 <sup>h</sup> 36    | 3 <sup>h</sup> 38  | 27 <sup>h</sup> 34 | 2 <sup>h</sup> 28  | 3 <sup>h</sup> 58 | 1 <sup>h</sup> 53 | 26 <sup>h</sup> 50 | 18 <sup>h</sup> 13 | 22 <sup>h</sup> 18 | 11 <sup>h</sup> 33 | 13 <sup>h</sup> 6  | 19 <sup>h</sup> 18 | n.a. |   |   |   |   |   |   |   |   |
| T 20 | 11 24 3  | 23 <sup>h</sup> 2'22  | 8 <sup>h</sup> 32     | 5 <sup>h</sup> 23  | 28 <sup>h</sup> 47 | 3 <sup>h</sup> 1   | 4 <sup>h</sup> 5  | 1 <sup>h</sup> 50 | 26 <sup>h</sup> 52 | 18 <sup>h</sup> 11 | 22 <sup>h</sup> 18 | 11 <sup>h</sup> 25 | 13 <sup>h</sup> 3  | 19 <sup>h</sup> 24 | n.a. |   |   |   |   |   |   |   |   |
| W21  | 11 28 0  | 24 <sup>h</sup> 0'43  | 2 <sup>h</sup> 13     | 7 <sup>h</sup> 8   | 0 <sup>h</sup> 0   | 3 <sup>h</sup> 33  | 4 <sup>h</sup> 12 | 1 <sup>h</sup> 47 | 26 <sup>h</sup> 55 | 18 <sup>h</sup> 9  | 22 <sup>h</sup> 17 | 11 <sup>h</sup> 16 | 13 <sup>h</sup> 0  | 19 <sup>h</sup> 31 | n.a. |   |   |   |   |   |   |   |   |
| T 22 | 11 31 56 | 24 <sup>h</sup> 59'02 | 3 <sup>h</sup> 51     | 8 <sup>h</sup> 56  | 1 <sup>h</sup> 13  | 4 <sup>h</sup> 6   | 4 <sup>h</sup> 20 | 1 <sup>h</sup> 44 | 26 <sup>h</sup> 57 | 18 <sup>h</sup> 8  | 22 <sup>h</sup> 17 | 11 <sup>h</sup> 10 | 12 <sup>h</sup> 56 | 19 <sup>h</sup> 38 | n.a. |   |   |   |   |   |   |   |   |
| F 23 | 11 35 53 | 25 <sup>h</sup> 57'19 | 15 <sup>h</sup> 57    | 10 <sup>h</sup> 45 | 2 <sup>h</sup> 26  | 4 <sup>h</sup> 39  | 4 <sup>h</sup> 27 | 1 <sup>h</sup> 41 | 26 <sup>h</sup> 59 | 18 <sup>h</sup> 6  | 22 <sup>h</sup> 16 | 11 <sup>h</sup> 5  | 12 <sup>h</sup> 53 | 19 <sup>h</sup> 44 | n.a. |   |   |   |   |   |   |   |   |
| S 24 | 11 39 50 | 26 <sup>h</sup> 55'34 | 28 <sup>h</sup> 0     | 12 <sup>h</sup> 36 | 3 <sup>h</sup> 39  | 5 <sup>h</sup> 12  | 4 <sup>h</sup> 33 | 1 <sup>h</sup> 38 | 27 <sup>h</sup> 1  | 18 <sup>h</sup> 4  | 22 <sup>h</sup> 16 | 11 <sup>h</sup> 2  | 12 <sup>h</sup> 50 | 19 <sup>h</sup> 51 | n.a. |   |   |   |   |   |   |   |   |
| S 25 | 11 43 46 | 27 <sup>h</sup> 53'47 | 9 <sup>h</sup> 55     | 14 <sup>h</sup> 29 | 4 <sup>h</sup> 52  | 5 <sup>h</sup> 45  | 4 <sup>h</sup> 40 | 1 <sup>h</sup> 34 | 27 <sup>h</sup> 3  | 18 <sup>h</sup> 3  | 22 <sup>h</sup> 15 | 11 <sup>h</sup> 0  | 12 <sup>h</sup> 47 | 19 <sup>h</sup> 58 | n.a. |   |   |   |   |   |   |   |   |
| M26  | 11 47 43 | 28 <sup>h</sup> 51'58 | 21 <sup>h</sup> 44    | 16 <sup>h</sup> 23 | 6 <sup>h</sup> 6   | 6 <sup>h</sup> 18  | 4 <sup>h</sup> 47 | 1 <sup>h</sup> 31 | 27 <sup>h</sup> 5  | 18 <sup>h</sup> 1  | 22 <sup>h</sup> 15 | 11 <sup>h</sup> 1  | 12 <sup>h</sup> 44 | 20 <sup>h</sup> 4  | n.a. |   |   |   |   |   |   |   |   |
| T 27 | 11 51 39 | 29 <sup>h</sup> 50'08 | 3 <sup>h</sup> 11     | 18 <sup>h</sup> 19 | 7 <sup>h</sup> 19  | 6 <sup>h</sup> 51  | 4 <sup>h</sup> 53 | 1 <sup>h</sup> 28 | 27 <sup>h</sup> 7  | 18 <sup>h</sup> 0  | 22 <sup>h</sup> 14 | 11 <sup>h</sup> 3  | 12 <sup>h</sup> 40 | 20 <sup>h</sup> 11 | n.a. |   |   |   |   |   |   |   |   |
| W28  | 11 55 36 | 0 <sup>h</sup> 54'15  | 15 <sup>h</sup> 21    | 20 <sup>h</sup> 17 | 8 <sup>h</sup> 32  | 7 <sup>h</sup> 24  | 4 <sup>h</sup> 59 | 1 <sup>h</sup> 24 | 27 <sup>h</sup> 9  | 17 <sup>h</sup> 58 | 22 <sup>h</sup> 14 | 11 <sup>h</sup> 4  | 12 <sup>h</sup> 37 | 20 <sup>h</sup> 17 | n.a. |   |   |   |   |   |   |   |   |
| T 29 | 11 59 32 | 1 <sup>h</sup> 46'20  | 27 <sup>h</sup> 19    | 22 <sup>h</sup> 16 | 9 <sup>h</sup> 45  | 7 <sup>h</sup> 58  | 5 <sup>h</sup> 5  | 1 <sup>h</sup> 21 | 27 <sup>h</sup> 11 | 17 <sup>h</sup> 56 | 22 <sup>h</sup> 14 | 11 <sup>h</sup> 5  | 12 <sup>h</sup> 34 | 20 <sup>h</sup> 24 | n.a. |   |   |   |   |   |   |   |   |
| F 30 | 12 3 29  | 2 <sup>h</sup> 44'23  | 9 <sup>h</sup> 30     | 24 <sup>h</sup> 17 | 10 <sup>h</sup> 58 | 8 <sup>h</sup> 31  | 5 <sup>h</sup> 11 | 1 <sup>h</sup> 17 | 27 <sup>h</sup> 13 | 17 <sup>h</sup> 55 | 22 <sup>h</sup> 13 | 11 <sup>h</sup> 5  | 12 <sup>h</sup> 31 | 20 <sup>h</sup> 31 | n.a. |   |   |   |   |   |   |   |   |
| S 31 | 12 7 25  | 3 <sup>h</sup> 42'24  | 21 <sup>h</sup> 59    | 26 <sup>h</sup> 19 | 12 <sup>h</sup> 11 | 9 <sup>h</sup> 11  | 5 <sup>h</sup> 17 | 1 <sup>h</sup> 14 | 27 <sup>h</sup> 15 | 17 <sup>h</sup> 53 | 22 <sup>h</sup> 13 | 11 <sup>h</sup> 3  | 12 <sup>h</sup> 28 | 20 <sup>h</sup> 37 | n.a. |   |   |   |   |   |   |   |   |

Delta T = 04h44m13s Julian Calendar 1 March 519 BCE == Greg. Calendar 23 Feb. 519 BCE

The year -518 astronomical counting style corresponds to year 519 B.C.E historical counting style.

APRIL 519 BCE (-518) JC

00:00 UT

| Day  | Sid.t    | ☉                     | ☽                  | ♀                  | ♁                  | ♂                  | ♃                 | ♄                 | ♅                  | ♆                  | ♇                  | ♈                  | ♉                  | ♊                  | ♋    | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ |
|------|----------|-----------------------|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------|---|---|---|---|---|---|---|---|
| S 1  | 12 11 22 | 4 <sup>h</sup> 50'22  | 4 <sup>h</sup> 50  | 28 <sup>h</sup> 23 | 13 <sup>h</sup> 24 | 9 <sup>h</sup> 11  | 5 <sup>h</sup> 22 | 1 <sup>h</sup> 10 | 27 <sup>h</sup> 17 | 17 <sup>h</sup> 52 | 22 <sup>h</sup> 13 | 11 <sup>h</sup> 0  | 12 <sup>h</sup> 25 | 20 <sup>h</sup> 44 | n.a. |   |   |   |   |   |   |   |   |
| M 2  | 12 15 19 | 5 <sup>h</sup> 38'19  | 18 <sup>h</sup> 5  | 0 <sup>h</sup> 29  | 14 <sup>h</sup> 37 | 10 <sup>h</sup> 12 | 5 <sup>h</sup> 28 | 1 <sup>h</sup> 6  | 27 <sup>h</sup> 18 | 17 <sup>h</sup> 50 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 56 | 12 <sup>h</sup> 21 | 20 <sup>h</sup> 51 | n.a. |   |   |   |   |   |   |   |   |
| T 3  | 12 19 15 | 6 <sup>h</sup> 36'14  | 1 <sup>h</sup> 47  | 2 <sup>h</sup> 35  | 15 <sup>h</sup> 51 | 10 <sup>h</sup> 45 | 5 <sup>h</sup> 33 | 1 <sup>h</sup> 2  | 27 <sup>h</sup> 20 | 17 <sup>h</sup> 49 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 51 | 12 <sup>h</sup> 18 | 20 <sup>h</sup> 57 | n.a. |   |   |   |   |   |   |   |   |
| W 4  | 12 23 12 | 7 <sup>h</sup> 34'07  | 15 <sup>h</sup> 54 | 4 <sup>h</sup> 43  | 17 <sup>h</sup> 4  | 11 <sup>h</sup> 19 | 5 <sup>h</sup> 38 | 0 <sup>h</sup> 59 | 27 <sup>h</sup> 22 | 17 <sup>h</sup> 47 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 46 | 12 <sup>h</sup> 15 | 21 <sup>h</sup> 4  | n.a. |   |   |   |   |   |   |   |   |
| T 5  | 12 27 8  | 8 <sup>h</sup> 31'58  | 0 <sup>h</sup> 22  | 6 <sup>h</sup> 51  | 18 <sup>h</sup> 17 | 11 <sup>h</sup> 53 | 5 <sup>h</sup> 43 | 0 <sup>h</sup> 55 | 27 <sup>h</sup> 23 | 17 <sup>h</sup> 46 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 41 | 12 <sup>h</sup> 12 | 21 <sup>h</sup> 11 | n.a. |   |   |   |   |   |   |   |   |
| F 6  | 12 31 5  | 9 <sup>h</sup> 29'48  | 15 <sup>h</sup> 6  | 9 <sup>h</sup> 1   | 19 <sup>h</sup> 30 | 12 <sup>h</sup> 26 | 5 <sup>h</sup> 48 | 0 <sup>h</sup> 51 | 27 <sup>h</sup> 25 | 17 <sup>h</sup> 44 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 38 | 12 <sup>h</sup> 9  | 21 <sup>h</sup> 17 | n.a. |   |   |   |   |   |   |   |   |
| S 7  | 12 35 1  | 10 <sup>h</sup> 27'36 | 29 <sup>h</sup> 58 | 11 <sup>h</sup> 11 | 20 <sup>h</sup> 43 | 13 <sup>h</sup> 0  | 5 <sup>h</sup> 52 | 0 <sup>h</sup> 47 | 27 <sup>h</sup> 27 | 17 <sup>h</sup> 43 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 36 | 12 <sup>h</sup> 6  | 21 <sup>h</sup> 24 | n.a. |   |   |   |   |   |   |   |   |
| S 8  | 12 38 58 | 11 <sup>h</sup> 25'23 | 14 <sup>h</sup> 51 | 13 <sup>h</sup> 21 | 21 <sup>h</sup> 56 | 13 <sup>h</sup> 34 | 5 <sup>h</sup> 57 | 0 <sup>h</sup> 43 | 27 <sup>h</sup> 28 | 17 <sup>h</sup> 41 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 36 | 12 <sup>h</sup> 2  | 21 <sup>h</sup> 31 | n.a. |   |   |   |   |   |   |   |   |
| M 9  | 12 42 54 | 12 <sup>h</sup> 23'08 | 29 <sup>h</sup> 36 | 15 <sup>h</sup> 31 | 23 <sup>h</sup> 9  | 14 <sup>h</sup> 8  | 6 <sup>h</sup> 1  | 0 <sup>h</sup> 39 | 27 <sup>h</sup> 30 | 17 <sup>h</sup> 40 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 37 | 11 <sup>h</sup> 59 | 21 <sup>h</sup> 37 | n.a. |   |   |   |   |   |   |   |   |
| T 10 | 12 46 51 | 13 <sup>h</sup> 20'52 | 14 <sup>h</sup> 7  | 17 <sup>h</sup> 42 | 24 <sup>h</sup> 23 | 14 <sup>h</sup> 42 | 6 <sup>h</sup> 5  | 0 <sup>h</sup> 35 | 27 <sup>h</sup> 31 | 17 <sup>h</sup> 38 | 22 <sup>h</sup> 11 | 10 <sup>h</sup> 38 | 11 <sup>h</sup> 56 | 21 <sup>h</sup> 44 | n.a. |   |   |   |   |   |   |   |   |
| W11  | 12 50 48 | 14 <sup>h</sup> 18'35 | 28 <sup>h</sup> 26 | 19 <sup>h</sup> 51 | 25 <sup>h</sup> 36 | 15 <sup>h</sup> 16 | 6 <sup>h</sup> 9  | 0 <sup>h</sup> 31 | 27 <sup>h</sup> 32 | 17 <sup>h</sup> 37 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 39 | 11 <sup>h</sup> 53 | 21 <sup>h</sup> 51 | n.a. |   |   |   |   |   |   |   |   |
| T 12 | 12 54 44 | 15 <sup>h</sup> 16'16 | 12 <sup>h</sup> 25 | 22 <sup>h</sup> 0  | 26 <sup>h</sup> 49 | 15 <sup>h</sup> 51 | 6 <sup>h</sup> 13 | 0 <sup>h</sup> 26 | 27 <sup>h</sup> 34 | 17 <sup>h</sup> 35 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 40 | 11 <sup>h</sup> 50 | 21 <sup>h</sup> 57 | n.a. |   |   |   |   |   |   |   |   |
| F 13 | 12 58 41 | 16 <sup>h</sup> 13'57 | 26 <sup>h</sup> 5  | 24 <sup>h</sup> 8  | 28 <sup>h</sup> 2  | 16 <sup>h</sup> 25 | 6 <sup>h</sup> 16 | 0 <sup>h</sup> 22 | 27 <sup>h</sup> 35 | 17 <sup>h</sup> 34 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 40 | 11 <sup>h</sup> 46 | 22 <sup>h</sup> 4  | n.a. |   |   |   |   |   |   |   |   |
| S 14 | 13 2 37  | 17 <sup>h</sup> 11'36 | 9 <sup>h</sup> 27  | 26 <sup>h</sup> 15 | 29 <sup>h</sup> 15 | 16 <sup>h</sup> 59 | 6 <sup>h</sup> 19 | 0 <sup>h</sup> 18 | 27 <sup>h</sup> 36 | 17 <sup>h</sup> 33 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 38 | 11 <sup>h</sup> 43 | 22 <sup>h</sup> 10 | n.a. |   |   |   |   |   |   |   |   |
| S 15 | 13 6 34  | 18 <sup>h</sup> 9'14  | 22 <sup>h</sup> 32 | 28 <sup>h</sup> 20 | 0 <sup>h</sup> 29  | 17 <sup>h</sup> 33 | 6 <sup>h</sup> 23 | 0 <sup>h</sup> 14 | 27 <sup>h</sup> 37 | 17 <sup>h</sup> 31 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 36 | 11 <sup>h</sup> 40 | 22 <sup>h</sup> 17 | n.a. |   |   |   |   |   |   |   |   |
| M16  | 13 10 30 | 19 <sup>h</sup> 6'51  | 5 <sup>h</sup> 22  | 0 <sup>h</sup> 24  | 1 <sup>h</sup> 42  | 18 <sup>h</sup> 8  | 6 <sup>h</sup> 26 | 0 <sup>h</sup> 10 | 27 <sup>h</sup> 38 | 17 <sup>h</sup> 30 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 33 | 11 <sup>h</sup> 37 | 22 <sup>h</sup> 24 | n.a. |   |   |   |   |   |   |   |   |
| T 17 | 13 14 27 | 20 <sup>h</sup> 4'26  | 17 <sup>h</sup> 58 | 2 <sup>h</sup> 25  | 2 <sup>h</sup> 55  | 18 <sup>h</sup> 42 | 6 <sup>h</sup> 28 | 0 <sup>h</sup> 5  | 27 <sup>h</sup> 40 | 17 <sup>h</sup> 29 | 22 <sup>h</sup> 12 | 10 <sup>h</sup> 30 | 11 <sup>h</sup> 34 | 22 <sup>h</sup> 30 | n.a. |   |   |   |   |   |   |   |   |
| W18  | 13 18 23 | 21 <sup>h</sup> 2'01  | 0 <sup>h</sup> 21  | 4 <sup>h</sup> 24  | 4 <sup>h</sup> 8   | 19 <sup>h</sup> 17 | 6 <sup>h</sup> 31 | 0 <sup>h</sup> 1  | 27 <sup>h</sup> 41 | 17 <sup>h</sup> 27 | 22 <sup>h</sup>    |                    |                    |                    |      |   |   |   |   |   |   |   |   |

SWISS EPHEMERIS for the year 519 BCE

MAY 519 BCE (-518) JC

00:00 UT

| Day  | Sid.t    | ☉        | ☽     | ♀      | ♁     | ♂     | ♃     | ♄      | ♅      | ♆      | ♇     | ♈      | ♉     | ♊     | ♋    | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ |
|------|----------|----------|-------|--------|-------|-------|-------|--------|--------|--------|-------|--------|-------|-------|------|---|---|---|---|---|---|---|---|
| T 1  | 14 9 39  | 3♃28'34  | 10♎1  | 26♄3   | 20♂1  | 26♁50 | 6♃48  | 29°R 4 | 27♃50  | 17°R12 | 22♁18 | 10°R26 | 10♎49 | 24♄3  | n.a. |   |   |   |   |   |   |   |   |
| W 2  | 14 13 35 | 4°25'51  | 24° 5 | 27°22  | 21°14 | 27°25 | 6°R48 | 28♁59  | 27°50  | 17°11  | 22°19 | 10♎25  | 10°46 | 24°10 | n.a. |   |   |   |   |   |   |   |   |
| T 3  | 14 17 32 | 5°23'07  | 8♁35  | 28°38  | 22°27 | 28° 1 | 6°48  | 28°55  | 27°50  | 17°10  | 22°19 | 10°25  | 10°43 | 24°17 | n.a. |   |   |   |   |   |   |   |   |
| F 4  | 14 21 28 | 6°20'21  | 23°25 | 29°50  | 23°40 | 28°36 | 6°48  | 28°51  | 27°51  | 17° 9  | 22°20 | 10°24  | 10°40 | 24°23 | n.a. |   |   |   |   |   |   |   |   |
| S 5  | 14 25 25 | 7°17'35  | 8♎29  | 0♁59   | 24°54 | 29°11 | 6°47  | 28°46  | 27°51  | 17° 8  | 22°21 | 10°D24 | 10°37 | 24°30 | n.a. |   |   |   |   |   |   |   |   |
| S 6  | 14 29 21 | 8°14'48  | 23°38 | 2° 5   | 26° 7 | 29°47 | 6°46  | 28°42  | 27°51  | 17° 7  | 22°21 | 10°24  | 10°33 | 24°37 | n.a. |   |   |   |   |   |   |   |   |
| M 7  | 14 33 18 | 9°12'00  | 8♁43  | 3° 7   | 27°20 | 0♁22  | 6°45  | 28°38  | 27°51  | 17° 7  | 22°22 | 10°24  | 10°30 | 24°43 | n.a. |   |   |   |   |   |   |   |   |
| T 8  | 14 37 14 | 10° 9'12 | 23°35 | 4° 5   | 28°34 | 0°58  | 6°44  | 28°34  | 27°51  | 17° 6  | 22°23 | 10°R24 | 10°27 | 24°50 | n.a. |   |   |   |   |   |   |   |   |
| W 9  | 14 41 11 | 11° 6'24 | 8♃9   | 5° 1   | 29°47 | 1°33  | 6°43  | 28°29  | 27°R51 | 17° 5  | 22°24 | 10°24  | 10°24 | 24°57 | n.a. |   |   |   |   |   |   |   |   |
| T 10 | 14 45 8  | 12° 3'35 | 22°19 | 5°52   | 1♄0   | 2° 9  | 6°42  | 28°25  | 27°51  | 17° 4  | 22°24 | 10°24  | 10°21 | 25° 3 | n.a. |   |   |   |   |   |   |   |   |
| F 11 | 14 49 4  | 13° 0'45 | 6♁4   | 6°40   | 2°14  | 2° 44 | 6°40  | 28°21  | 27°51  | 17° 3  | 22°25 | 10°24  | 10°17 | 25°10 | n.a. |   |   |   |   |   |   |   |   |
| S 12 | 14 53 1  | 13°57'56 | 19°25 | 7°23   | 3°27  | 3°20  | 6°38  | 28°17  | 27°51  | 17° 3  | 22°26 | 10°D24 | 10°14 | 25°17 | n.a. |   |   |   |   |   |   |   |   |
| S 13 | 14 56 57 | 14°55'06 | 2♁24  | 8° 3   | 4°41  | 3°56  | 6°36  | 28°13  | 27°51  | 17° 2  | 22°27 | 10°24  | 10°11 | 25°23 | n.a. |   |   |   |   |   |   |   |   |
| M14  | 15 0 54  | 15°52'15 | 15° 4 | 8°39   | 5°54  | 4°32  | 6°34  | 28° 8  | 27°51  | 17° 1  | 22°28 | 10°25  | 10° 8 | 25°30 | n.a. |   |   |   |   |   |   |   |   |
| T 15 | 15 4 50  | 16°49'25 | 27°27 | 9°10   | 7° 7  | 5° 7  | 6°31  | 28° 4  | 27°50  | 17° 1  | 22°29 | 10°25  | 10° 5 | 25°37 | n.a. |   |   |   |   |   |   |   |   |
| W16  | 15 8 47  | 17°46'34 | 9♂37  | 9°38   | 8°21  | 5°43  | 6°29  | 28° 0  | 27°50  | 17° 0  | 22°30 | 10°26  | 10° 2 | 25°43 | n.a. |   |   |   |   |   |   |   |   |
| T 17 | 15 12 43 | 18°43'43 | 21°38 | 10° 1  | 9°34  | 6°19  | 6°26  | 27°56  | 27°50  | 16°59  | 22°31 | 10°27  | 9°58  | 25°50 | n.a. |   |   |   |   |   |   |   |   |
| F 18 | 15 16 40 | 19°40'51 | 3♄31  | 10°19  | 10°48 | 6°55  | 6°23  | 27°52  | 27°49  | 16°59  | 22°32 | 10°27  | 9°55  | 25°57 | n.a. |   |   |   |   |   |   |   |   |
| S 19 | 15 20 37 | 20°38'00 | 15°20 | 10°33  | 12° 1 | 7°31  | 6°20  | 27°48  | 27°49  | 16°58  | 22°33 | 10°R27 | 9°52  | 26° 3 | n.a. |   |   |   |   |   |   |   |   |
| S 20 | 15 24 33 | 21°35'08 | 27° 8 | 10°43  | 13°15 | 8° 7  | 6°16  | 27°45  | 27°48  | 16°58  | 22°34 | 10°27  | 9°49  | 26°10 | n.a. |   |   |   |   |   |   |   |   |
| M21  | 15 28 30 | 22°32'16 | 8♁56  | 10°48  | 14°28 | 8°43  | 6°13  | 27°41  | 27°48  | 16°57  | 22°35 | 10°26  | 9°46  | 26°17 | n.a. |   |   |   |   |   |   |   |   |
| T 22 | 15 32 26 | 23°29'23 | 20°46 | 10°R48 | 15°42 | 9°19  | 6° 9  | 27°37  | 27°47  | 16°57  | 22°36 | 10°24  | 9°43  | 26°23 | n.a. |   |   |   |   |   |   |   |   |
| W23  | 15 36 23 | 24°26'30 | 2♁41  | 10°44  | 16°55 | 9°55  | 6° 5  | 27°33  | 27°47  | 16°56  | 22°38 | 10°22  | 9°39  | 26°30 | n.a. |   |   |   |   |   |   |   |   |
| T 24 | 15 40 19 | 25°23'37 | 14°45 | 10°35  | 18° 9 | 10°32 | 6° 1  | 27°30  | 27°46  | 16°56  | 22°39 | 10°20  | 9°36  | 26°36 | n.a. |   |   |   |   |   |   |   |   |
| F 25 | 15 44 16 | 26°20'44 | 26°59 | 10°23  | 19°22 | 11° 8 | 5°57  | 27°26  | 27°45  | 16°56  | 22°40 | 10°18  | 9°33  | 26°43 | n.a. |   |   |   |   |   |   |   |   |
| S 26 | 15 48 12 | 27°17'50 | 9♁27  | 10° 5  | 20°36 | 11°44 | 5°52  | 27°23  | 27°45  | 16°55  | 22°41 | 10°16  | 9°30  | 26°50 | n.a. |   |   |   |   |   |   |   |   |
| S 27 | 15 52 9  | 28°14'55 | 22°13 | 9°44   | 21°49 | 12°20 | 5°48  | 27°19  | 27°44  | 16°55  | 22°43 | 10°D16 | 9°27  | 26°56 | n.a. |   |   |   |   |   |   |   |   |
| M28  | 15 56 6  | 29°12'01 | 5♎19  | 9°20   | 23° 3 | 12°57 | 5°43  | 27°16  | 27°43  | 16°55  | 22°44 | 10°16  | 9°23  | 27° 3 | n.a. |   |   |   |   |   |   |   |   |
| T 29 | 16 0 2   | 0♁9'06   | 18°49 | 8°52   | 24°17 | 13°33 | 5°38  | 27°12  | 27°42  | 16°55  | 22°45 | 10°16  | 9°20  | 27°10 | n.a. |   |   |   |   |   |   |   |   |
| W30  | 16 3 59  | 1° 6'10  | 2♁44  | 8°21   | 25°30 | 14°10 | 5°33  | 27° 9  | 27°41  | 16°54  | 22°46 | 10°18  | 9°17  | 27°16 | n.a. |   |   |   |   |   |   |   |   |
| T 31 | 16 7 55  | 2♁3'15   | 17♁4  | 7♁48   | 26♄44 | 14♁46 | 5♃28  | 27♁6   | 27♃40  | 16♎54  | 22♁48 | 10♎19  | 9♎14  | 27♄23 | n.a. |   |   |   |   |   |   |   |   |

Delta T = 04h44m09s Julian Calendar 1 May 519 BCE == Greg. Calendar 25 Apr. 519 BCE

The year -518 astronomical counting style corresponds to year 519 B.C.E historical counting style.

JUNE 519 BCE (-518) JC

00:00 UT

| Day  | Sid.t    | ☉        | ☽     | ♀     | ♁     | ♂     | ♃     | ♄      | ♅      | ♆      | ♇     | ♈      | ♉    | ♊     | ♋    | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ |
|------|----------|----------|-------|-------|-------|-------|-------|--------|--------|--------|-------|--------|------|-------|------|---|---|---|---|---|---|---|---|
| F 1  | 16 11 52 | 3♁0'19   | 1♎48  | 7°R12 | 27♄57 | 15♁23 | 5°R23 | 27°R 3 | 27°R39 | 16°R54 | 22♁49 | 10♎20  | 9♎11 | 27♄30 | n.a. |   |   |   |   |   |   |   |   |
| S 2  | 16 15 48 | 3°57'23  | 16°48 | 6♁36  | 29°11 | 15°59 | 5♃17  | 27♁0   | 27♃38  | 16♎54  | 22°51 | 10°R20 | 9° 8 | 27°36 | n.a. |   |   |   |   |   |   |   |   |
| S 3  | 16 19 45 | 4°54'28  | 2♁0   | 5°59  | 0♁25  | 16°36 | 5°12  | 26°57  | 27°37  | 16°54  | 22°52 | 10°19  | 9° 4 | 27°43 | n.a. |   |   |   |   |   |   |   |   |
| M 4  | 16 23 41 | 5°51'32  | 17°12 | 5°22  | 1°38  | 17°12 | 5° 6  | 26°54  | 27°36  | 16°D54 | 22°53 | 10°17  | 9° 1 | 27°50 | n.a. |   |   |   |   |   |   |   |   |
| T 5  | 16 27 38 | 6°48'37  | 2♃15  | 4°45  | 2°52  | 17°49 | 5° 0  | 26°51  | 27°34  | 16°54  | 22°55 | 10°13  | 8°58 | 27°56 | n.a. |   |   |   |   |   |   |   |   |
| W 6  | 16 31 35 | 7°45'42  | 17° 1 | 4° 9  | 4° 6  | 18°26 | 4°54  | 26°48  | 27°33  | 16°54  | 22°56 | 10°10  | 8°55 | 28° 3 | n.a. |   |   |   |   |   |   |   |   |
| T 7  | 16 35 31 | 8°42'48  | 18°23 | 3°36  | 5°19  | 19° 2 | 4°48  | 26°45  | 27°32  | 16°54  | 22°58 | 10° 6  | 8°52 | 28°10 | n.a. |   |   |   |   |   |   |   |   |
| F 8  | 16 39 28 | 9°39'54  | 15°17 | 3° 5  | 6°33  | 19°39 | 4°42  | 26°43  | 27°30  | 16°54  | 22°59 | 10° 3  | 8°49 | 28°16 | n.a. |   |   |   |   |   |   |   |   |
| S 9  | 16 43 24 | 10°37'01 | 28°43 | 2°36  | 7°47  | 20°16 | 4°35  | 26°40  | 27°29  | 16°54  | 23° 1 | 10° 1  | 8°45 | 28°23 | n.a. |   |   |   |   |   |   |   |   |
| S 10 | 16 47 21 | 11°34'09 | 11♁43 | 2°12  | 9° 1  | 20°53 | 4°29  | 26°38  | 27°28  | 16°54  | 23° 2 | 10°D 1 | 8°42 | 28°30 | n.a. |   |   |   |   |   |   |   |   |
| M11  | 16 51 17 | 12°31'17 | 24°19 | 1°51  | 10°14 | 21°30 | 4°22  | 26°35  | 27°26  | 16°55  | 23° 4 | 10° 1  | 8°39 | 28°36 | n.a. |   |   |   |   |   |   |   |   |
| T 12 | 16 55 14 | 13°28'26 | 6♂37  | 1°35  | 11°28 | 22° 7 | 4°16  | 26°33  | 27°25  | 16°55  | 23° 5 | 10° 3  | 8°36 | 28°43 | n.a. |   |   |   |   |   |   |   |   |
| W13  | 16 59 10 | 14°25'35 | 18°41 | 1°23  | 12°42 | 22°44 | 4° 9  | 26°31  | 27°23  | 16°55  | 23° 7 | 10° 4  | 8°33 | 28°50 | n.a. |   |   |   |   |   |   |   |   |
| T 14 | 17 3 7   | 15°22'45 | 0♄35  | 1°17  | 13°56 | 23°21 | 4° 2  | 26°28  | 27°22  | 16°55  | 23° 9 | 10° 6  | 8°29 | 28°56 | n.a. |   |   |   |   |   |   |   |   |
| F 15 | 17 7 4   | 16°19'56 | 12°24 | 1°D15 | 15°10 | 23°58 | 3°55  | 26°26  | 27°20  | 16°56  | 23°10 | 10°R 6 | 8°26 | 29° 3 | n.a. |   |   |   |   |   |   |   |   |
| S 16 | 17 11 0  | 17°17'08 | 24°11 | 1°20  | 16°23 | 24°35 | 3°48  | 26°24  | 27°18  | 16°56  | 23°12 | 10° 5  | 8°23 | 29° 9 | n.a. |   |   |   |   |   |   |   |   |
| S 17 | 17 14 57 | 18°14'21 | 5♁58  | 1°29  | 17°37 | 25°12 | 3°41  | 26°22  | 27°17  | 16°57  | 23°14 | 10° 2  | 8°20 | 29°16 | n.a. |   |   |   |   |   |   |   |   |
| M18  | 17 18 53 | 19°11'34 | 17°50 | 1°44  | 18°51 | 25°50 | 3°33  | 26°21  | 27°15  | 16°57  | 23°15 | 9°57   | 8°17 | 29°23 | n.a. |   |   |   |   |   |   |   |   |
| T 19 | 17 22 50 | 20° 8'48 | 29°47 | 2° 6  | 20° 5 | 26°27 | 3°26  | 26°19  | 27°13  | 16°57  | 23°17 | 9°51   | 8°14 | 29°29 | n.a. |   |   |   |   |   |   |   |   |
| W20  | 17 26 46 | 21° 6'03 | 11♁51 | 2°32  | 21°19 | 27° 4 | 3°19  | 26°17  | 27°12  | 16°58  | 23°19 | 9°44   | 8°10 | 29°36 | n.a. |   |   |   |   |   |   |   |   |
| T 21 | 17 30 43 | 22° 3'18 | 24° 5 | 3° 5  | 22°33 | 27°42 | 3°11  | 26°16  | 27°10  | 16°58  | 23°20 | 9°37   | 8° 7 | 29°43 | n.a. |   |   |   |   |   |   |   |   |
| F 22 | 17 34 39 | 23° 0'34 | 6♁28  | 3°43  | 23°47 | 28°19 | 3° 4  | 26°14  | 27° 8  | 16°59  | 23°22 | 9°29   | 8° 4 | 29°49 | n.a. |   |   |   |   |   |   |   |   |
| S 23 | 17 38 36 | 23°57'51 | 19° 4 | 4°27  | 25° 1 | 28°56 | 2°56  | 26°13  | 27° 6  | 17° 0  | 23°24 | 9°23   | 8° 1 | 29°56 | n.a. |   |   |   |   |   |   |   |   |
| S 24 | 17 42 33 | 24°55'08 | 1♎54  | 5°17  | 26°15 | 29°34 | 2°48  | 26°11  | 27° 4  | 17° 0  | 23°26 | 9°19   | 7°58 | 0♁3   | n.a. |   |   |   |   |   |   |   |   |
| M25  | 17 46 29 | 25°52'25 | 15° 1 | 6°12  | 27°29 | 0♁11  | 2°41  | 26°10  | 27° 2  | 17° 1  | 23°27 | 9°17   | 7°54 | 0° 9  | n.a. |   |   |   |   |   |   |   |   |
| T 26 | 17 50 26 | 26°49'44 | 28°26 | 7°12  | 28°43 | 0°49  | 2°33  | 26° 9  | 27° 0  | 17° 1  | 23°29 | 9°D16  | 7°51 | 0°16  | n.a. |   |   |   |   |   |   |   |   |
| W27  | 17 54 22 | 27°47'03 | 12♁11 | 8°18  | 29°57 | 1°26  | 2°25  | 26° 8  | 26°58  | 17° 2  | 23°31 | 9°17   | 7°48 | 0°23  | n.a. |   |   |   |   |   |   |   |   |
| T 28 | 17 58 19 | 28°44'22 | 26°18 | 9°30  | 1♁11  | 2° 4  | 2°17  | 26° 7  | 26°56  | 17° 3  | 23°33 | 9°18   | 7°45 | 0°29  | n.a. |   |   |   |   |   |   |   |   |
| F 29 | 18 2 15  | 29°41'42 | 10♎46 | 10°46 | 2°25  | 2°42  | 2°10  | 26° 6  | 26°54  | 17° 4  | 23°34 | 9°R18  | 7°42 | 0°36  | n.a. |   |   |   |   |   |   |   |   |
| S 30 | 18 6 12  | 0♁39'04  | 25♎32 | 12♁7  | 3♁39  | 3♁20  | 2♃2   | 26♁6   | 26♃52  | 17♎4   | 23♁36 | 9♎17   | 7♎39 | 0♁43  | n.a. |   |   |   |   |   |   |   |   |

Delta T = 04h44m07s Julian Calendar

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SWISS EPHEMERIS for the year 519 BCE

JULY 519 BCE (-518) JC

00:00 UT

| Day  | Sid.t    | ☉        | ☽      | ♀      | ♁      | ♂      | ♃      | ♄      | ♅      | ♆      | ♇      | ♈     | ♉     | ♊      | ♋    | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ |
|------|----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|------|---|---|---|---|---|---|---|---|
| S 1  | 18 10 8  | 19°36'26 | 10°31  | 13°34  | 4°53   | 3°57   | 1°R54  | 26°R 5 | 26°R50 | 17°M 5 | 23°38  | 9°R14 | 7°M35 | 0°II49 | n.a. |   |   |   |   |   |   |   |   |
| M 2  | 18 14 5  | 2°33'49  | 25°35  | 15° 4  | 6° 7   | 4°35   | 1°Z46  | 26°4 4 | 26°Z48 | 17° 6  | 23°40  | 9°M 9 | 7°32  | 0°56   | n.a. |   |   |   |   |   |   |   |   |
| T 3  | 18 18 2  | 3°31'13  | 10°35  | 16°40  | 7°21   | 5°13   | 1°39   | 26° 4  | 26°46  | 17° 7  | 23°42  | 9° 2  | 7°29  | 1° 3   | n.a. |   |   |   |   |   |   |   |   |
| W 4  | 18 21 58 | 4°28'38  | 25°22  | 18°19  | 8°35   | 5°51   | 1°31   | 26° 4  | 26°44  | 17° 8  | 23°44  | 8°53  | 7°26  | 1° 9   | n.a. |   |   |   |   |   |   |   |   |
| T 5  | 18 25 55 | 5°26'05  | 9°47   | 20° 2  | 9°49   | 6°29   | 1°23   | 26° 3  | 26°42  | 17° 9  | 23°46  | 8°45  | 7°23  | 1°16   | n.a. |   |   |   |   |   |   |   |   |
| F 6  | 18 29 51 | 6°23'33  | 23°47  | 21°49  | 11° 3  | 7° 7   | 1°15   | 26° 3  | 26°40  | 17°10  | 23°47  | 8°38  | 7°20  | 1°23   | n.a. |   |   |   |   |   |   |   |   |
| S 7  | 18 33 48 | 7°21'02  | 7°X18  | 23°38  | 12°18  | 7°45   | 1° 8   | 26°D 3 | 26°37  | 17°11  | 23°49  | 8°32  | 7°16  | 1°29   | n.a. |   |   |   |   |   |   |   |   |
| S 8  | 18 37 44 | 8°18'33  | 20°21  | 25°31  | 13°32  | 8°23   | 1° 0   | 26° 3  | 26°35  | 17°12  | 23°51  | 8°28  | 7°13  | 1°36   | n.a. |   |   |   |   |   |   |   |   |
| M 9  | 18 41 41 | 9°16'05  | 2°Y59  | 27°26  | 14°46  | 9° 1   | 0°52   | 26° 3  | 26°33  | 17°13  | 23°53  | 8°26  | 7°10  | 1°43   | n.a. |   |   |   |   |   |   |   |   |
| T 10 | 18 45 37 | 10°13'39 | 15°17  | 29°23  | 16° 0  | 9°39   | 0°45   | 26° 4  | 26°31  | 17°14  | 23°55  | 8°D26 | 7° 7  | 1°49   | n.a. |   |   |   |   |   |   |   |   |
| W11  | 18 49 34 | 11°11'14 | 27°20  | 1°E22  | 17°14  | 10°17  | 0°37   | 26° 4  | 26°28  | 17°15  | 23°57  | 8°27  | 7° 4  | 1°56   | n.a. |   |   |   |   |   |   |   |   |
| T 12 | 18 53 31 | 12° 8'52 | 9°B12  | 3°22   | 18°28  | 10°55  | 0°30   | 26° 4  | 26°26  | 17°16  | 23°59  | 8°R27 | 7° 0  | 2° 3   | n.a. |   |   |   |   |   |   |   |   |
| F 13 | 18 57 27 | 13° 6'30 | 21° 0  | 5°23   | 19°43  | 11°34  | 0°22   | 26° 5  | 26°24  | 17°18  | 24° 1  | 8°27  | 6°57  | 2° 9   | n.a. |   |   |   |   |   |   |   |   |
| S 14 | 19 1 24  | 14° 4'11 | 2°II47 | 7°24   | 20°57  | 12°12  | 0°15   | 26° 5  | 26°21  | 17°19  | 24° 3  | 8°24  | 6°54  | 2°16   | n.a. |   |   |   |   |   |   |   |   |
| S 15 | 19 5 20  | 15° 1'53 | 14°38  | 9°26   | 22°11  | 12°50  | 0° 7   | 26° 6  | 26°19  | 17°20  | 24° 5  | 8°18  | 6°51  | 2°23   | n.a. |   |   |   |   |   |   |   |   |
| M16  | 19 9 17  | 15°59'37 | 26°36  | 11°28  | 23°25  | 13°29  | 0° 0   | 26° 7  | 26°17  | 17°21  | 24° 7  | 8°10  | 6°48  | 2°29   | n.a. |   |   |   |   |   |   |   |   |
| T 17 | 19 13 13 | 16°57'22 | 8°E42  | 13°30  | 24°40  | 14° 7  | 29°X53 | 26° 8  | 26°14  | 17°23  | 24° 9  | 8° 0  | 6°45  | 2°36   | n.a. |   |   |   |   |   |   |   |   |
| W18  | 19 17 10 | 17°55'09 | 20°59  | 15°32  | 25°54  | 14°46  | 29°46  | 26° 9  | 26°12  | 17°24  | 24°11  | 7°48  | 6°41  | 2°43   | n.a. |   |   |   |   |   |   |   |   |
| T 19 | 19 21 6  | 18°52'57 | 3°L27  | 17°32  | 27° 8  | 15°24  | 29°39  | 26°10  | 26°10  | 17°25  | 24°13  | 7°36  | 6°38  | 2°49   | n.a. |   |   |   |   |   |   |   |   |
| F 20 | 19 25 3  | 19°50'47 | 16° 7  | 19°32  | 28°23  | 16° 3  | 29°32  | 26°11  | 26° 7  | 17°27  | 24°14  | 7°24  | 6°35  | 2°56   | n.a. |   |   |   |   |   |   |   |   |
| S 21 | 19 29 0  | 20°48'39 | 28°58  | 21°31  | 29°37  | 16°42  | 29°25  | 26°12  | 26° 5  | 17°28  | 24°16  | 7°14  | 6°32  | 3° 3   | n.a. |   |   |   |   |   |   |   |   |
| S 22 | 19 32 56 | 21°46'31 | 12°M 1 | 23°29  | 0°L51  | 17°20  | 29°19  | 26°14  | 26° 3  | 17°29  | 24°18  | 7° 6  | 6°29  | 3° 9   | n.a. |   |   |   |   |   |   |   |   |
| M23  | 19 36 53 | 22°44'26 | 25°16  | 25°26  | 2° 6   | 17°59  | 29°12  | 26°15  | 26° 0  | 17°31  | 24°20  | 7° 1  | 6°26  | 3°16   | n.a. |   |   |   |   |   |   |   |   |
| T 24 | 19 40 49 | 23°42'21 | 8°45   | 27°22  | 3°20   | 18°38  | 29° 6  | 26°17  | 25°58  | 17°32  | 24°22  | 6°58  | 6°22  | 3°23   | n.a. |   |   |   |   |   |   |   |   |
| W25  | 19 44 46 | 24°40'18 | 22°27  | 29°17  | 4°34   | 19°17  | 28°59  | 26°18  | 25°55  | 17°34  | 24°24  | 6°D57 | 6°19  | 3°29   | n.a. |   |   |   |   |   |   |   |   |
| T 26 | 19 48 42 | 25°38'16 | 6°M25  | 1°L11  | 5°49   | 19°55  | 28°53  | 26°20  | 25°53  | 17°35  | 24°26  | 6°R57 | 6°16  | 3°36   | n.a. |   |   |   |   |   |   |   |   |
| F 27 | 19 52 39 | 26°36'16 | 20°38  | 3° 3   | 7° 3   | 20°34  | 28°47  | 26°22  | 25°51  | 17°37  | 24°28  | 6°57  | 6°13  | 3°43   | n.a. |   |   |   |   |   |   |   |   |
| S 28 | 19 56 35 | 27°34'18 | 5°X 4  | 4°54   | 8°17   | 21°13  | 28°41  | 26°24  | 25°48  | 17°38  | 24°30  | 6°55  | 6°10  | 3°49   | n.a. |   |   |   |   |   |   |   |   |
| S 29 | 20 0 32  | 28°32'21 | 19°42  | 6°44   | 9°32   | 21°52  | 28°35  | 26°26  | 25°46  | 17°40  | 24°32  | 6°50  | 6° 6  | 3°56   | n.a. |   |   |   |   |   |   |   |   |
| M30  | 20 4 29  | 29°30'25 | 4°Z26  | 8°32   | 10°46  | 22°31  | 28°30  | 26°28  | 25°43  | 17°42  | 24°34  | 6°43  | 6° 3  | 4° 3   | n.a. |   |   |   |   |   |   |   |   |
| T 31 | 20 8 25  | 0°L28'31 | 19°Z 8 | 10°L19 | 12°L 1 | 23°L10 | 28°X24 | 26°430 | 25°Z41 | 17°M43 | 24°Z36 | 6°M33 | 6°M 0 | 4°II 9 | n.a. |   |   |   |   |   |   |   |   |

Delta T = 04h44m05s Julian Calendar 1 July 519 BCE == Greg. Calendar 25 June 519 BCE  
 The year -518 astronomical counting style corresponds to year 519 B.C.E historical counting style.

AUGUST 519 BCE (-518) JC

00:00 UT

| Day  | Sid.t    | ☉        | ☽       | ♀      | ♁      | ♂      | ♃      | ♄      | ♅      | ♆      | ♇      | ♈     | ♉     | ♊      | ♋    | ♌ | ♍ | ♎ | ♏ | ♐ | ♑ | ♒ | ♓ |
|------|----------|----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|--------|------|---|---|---|---|---|---|---|---|
| W 1  | 20 12 22 | 1°L26'39 | 3°41    | 12°L 5 | 13°L15 | 23°L49 | 28°R19 | 26°433 | 25°R39 | 17°M45 | 24°38  | 6°R22 | 5°M57 | 4°II16 | n.a. |   |   |   |   |   |   |   |   |
| T 2  | 20 16 18 | 2°24'49  | 17°58   | 13°50  | 14°29  | 24°29  | 28°X13 | 26°35  | 25°Z36 | 17°47  | 24°40  | 6°M10 | 5°54  | 4°23   | n.a. |   |   |   |   |   |   |   |   |
| F 3  | 20 20 15 | 3°23'00  | 1°X53   | 15°34  | 15°44  | 25° 8  | 28° 8  | 26°37  | 25°34  | 17°48  | 24°42  | 5°59  | 5°51  | 4°29   | n.a. |   |   |   |   |   |   |   |   |
| S 4  | 20 24 11 | 4°21'14  | 15°23   | 17°16  | 16°58  | 25°47  | 28° 3  | 26°40  | 25°32  | 17°50  | 24°44  | 5°51  | 5°47  | 4°36   | n.a. |   |   |   |   |   |   |   |   |
| S 5  | 20 28 8  | 5°19'30  | 28°27   | 18°57  | 18°13  | 26°26  | 27°59  | 26°43  | 25°29  | 17°52  | 24°46  | 5°45  | 5°44  | 4°42   | n.a. |   |   |   |   |   |   |   |   |
| M 6  | 20 32 4  | 6°17'48  | 11°Y 7  | 20°37  | 19°27  | 27° 6  | 27°54  | 26°45  | 25°27  | 17°54  | 24°48  | 5°41  | 5°41  | 4°49   | n.a. |   |   |   |   |   |   |   |   |
| T 7  | 20 36 1  | 7°16'08  | 23°26   | 22°16  | 20°41  | 27°45  | 27°50  | 26°48  | 25°25  | 17°55  | 24°50  | 5°39  | 5°38  | 4°56   | n.a. |   |   |   |   |   |   |   |   |
| W 8  | 20 39 58 | 8°14'30  | 5°B30   | 23°54  | 21°56  | 28°25  | 27°45  | 26°51  | 25°22  | 17°57  | 24°52  | 5°39  | 5°35  | 5° 2   | n.a. |   |   |   |   |   |   |   |   |
| T 9  | 20 43 54 | 9°12'55  | 17°23   | 25°30  | 23°10  | 29° 4  | 27°41  | 26°54  | 25°20  | 17°59  | 24°54  | 5°39  | 5°32  | 5° 9   | n.a. |   |   |   |   |   |   |   |   |
| F 10 | 20 47 51 | 10°11'21 | 29°12   | 27° 5  | 24°25  | 29°44  | 27°37  | 26°57  | 25°18  | 18° 1  | 24°55  | 5°38  | 5°28  | 5°16   | n.a. |   |   |   |   |   |   |   |   |
| S 11 | 20 51 47 | 11° 9'50 | 11°II 1 | 28°40  | 25°39  | 0°M23  | 27°34  | 27° 0  | 25°15  | 18° 3  | 24°57  | 5°35  | 5°25  | 5°22   | n.a. |   |   |   |   |   |   |   |   |
| S 12 | 20 55 44 | 12° 8'22 | 22°55   | 0°M13  | 26°54  | 1° 3   | 27°30  | 27° 4  | 25°13  | 18° 5  | 24°59  | 5°30  | 5°22  | 5°29   | n.a. |   |   |   |   |   |   |   |   |
| M13  | 20 59 40 | 13° 6'55 | 4°E59   | 1°45   | 28° 8  | 1°42   | 27°27  | 27° 7  | 25°11  | 18° 6  | 25° 1  | 5°21  | 5°19  | 5°36   | n.a. |   |   |   |   |   |   |   |   |
| T 14 | 21 3 37  | 14° 5'31 | 17°15   | 3°16   | 29°23  | 2°22   | 27°23  | 27°10  | 25° 9  | 18° 8  | 25° 3  | 5°11  | 5°16  | 5°42   | n.a. |   |   |   |   |   |   |   |   |
| W15  | 21 7 33  | 15° 4'09 | 29°45   | 4°46   | 0°M37  | 3° 2   | 27°20  | 27°14  | 25° 6  | 18°10  | 25° 5  | 4°58  | 5°12  | 5°49   | n.a. |   |   |   |   |   |   |   |   |
| T 16 | 21 11 30 | 16° 2'49 | 12°L30  | 6°15   | 1°51   | 3°42   | 27°18  | 27°17  | 25° 4  | 18°12  | 25° 7  | 4°45  | 5° 9  | 5°56   | n.a. |   |   |   |   |   |   |   |   |
| F 17 | 21 15 27 | 17° 1'31 | 25°29   | 7°43   | 3° 6   | 4°22   | 27°15  | 27°21  | 25° 2  | 18°14  | 25° 9  | 4°32  | 5° 6  | 6° 2   | n.a. |   |   |   |   |   |   |   |   |
| S 18 | 21 19 23 | 18° 0'15 | 8°M42   | 9° 9   | 4°20   | 5° 2   | 27°12  | 27°25  | 25° 0  | 18°16  | 25°11  | 4°21  | 5° 3  | 6° 9   | n.a. |   |   |   |   |   |   |   |   |
| S 19 | 21 23 20 | 18°59'01 | 22° 6   | 10°35  | 5°35   | 5°42   | 27°10  | 27°29  | 24°58  | 18°18  | 25°12  | 4°13  | 5° 0  | 6°16   | n.a. |   |   |   |   |   |   |   |   |
| M20  | 21 27 16 | 19°57'49 | 5°45    | 11°59  | 6°49   | 6°22   | 27° 8  | 27°33  | 24°56  | 18°20  | 25°14  | 4° 7  | 4°57  | 6°22   | n.a. |   |   |   |   |   |   |   |   |
| T 21 | 21 31 13 | 20°56'39 | 19°23   | 13°22  | 8° 4   | 7° 2   | 27° 6  | 27°37  | 24°54  | 18°22  | 25°16  | 4° 5  | 4°53  | 6°29   | n.a. |   |   |   |   |   |   |   |   |
| W22  | 21 35 9  | 21°55'31 | 3°M14   | 14°44  | 9°18   | 7°42   | 27° 4  | 27°41  | 24°51  | 18°24  | 25°18  | 4°D 4 | 4°50  | 6°36   | n.a. |   |   |   |   |   |   |   |   |
| T 23 | 21 39 6  | 22°54'25 | 17°12   | 16° 5  | 10°33  | 8°22   | 27° 3  | 27°45  | 24°49  | 18°26  | 25°20  | 4°R 4 | 4°47  | 6°42   | n.a. |   |   |   |   |   |   |   |   |
| F 24 | 21 43 2  | 23°53'20 | 1°X18   | 17°24  | 11°47  | 9° 2   | 27° 2  | 27°49  | 24°47  | 18°28  | 25°21  | 4° 4  | 4°44  | 6°49   | n.a. |   |   |   |   |   |   |   |   |
| S 25 | 21 46 59 | 24°52'17 | 15°30   | 18°42  | 13° 2  | 9°43   | 27° 1  | 27°53  | 24°45  | 18°31  | 25°23  | 4° 2  | 4°41  | 6°56   | n.a. |   |   |   |   |   |   |   |   |
| S 26 | 21 50 56 | 25°51'17 | 29°47   | 19°58  | 14°16  | 10°23  | 27° 0  | 27°58  | 24°44  | 18°33  | 25°25  | 3°59  | 4°37  | 7° 2   | n.a. |   |   |   |   |   |   |   |   |
| M27  | 21 54 52 | 26°50'18 | 14°Z 5  | 21°14  | 15°31  | 11° 3  | 26°59  | 28° 2  | 24°42  | 18°35  | 25°27  | 3°52  | 4°34  | 7° 9   | n.a. |   |   |   |   |   |   |   |   |
| T 28 | 21 58 49 | 27°49'21 | 28°22   | 22°27  | 16°45  | 11°44  | 26°58  | 28° 7  | 24°40  | 18°37  | 25°28  | 3°43  | 4°31  | 7°16   | n.a. |   |   |   |   |   |   |   |   |
| W29  | 22 2 45  | 28°48'26 | 12°30   | 23°39  | 17°59  | 12°24  | 26°58  | 28°11  | 24°38  | 18°39  | 25°30  | 3°33  | 4°28  | 7°22   | n.a. |   |   |   |   |   |   |   |   |
| T 30 | 22 6 42  | 29°47'33 | 26°26   | 24°49  | 19°14  | 13° 5  | 26°D58 | 28°16  | 24°36  | 18°41  | 25°32  | 3°22  | 4°25  | 7°29   | n.a. |   |   |   |   |   |   |   |   |
| F 31 | 22 10 38 | 0°M46'42 | 10°X 5  | 25°M57 | 20°M28 | 13°M45 | 26°X58 | 28°420 | 24°Z34 | 18°M43 | 25°Z33 | 3°M13 | 4°M22 | 7°II36 | n.a. |   |   |   |   |   |   |   |   |

Delta T = 04h44m04s Julian Calendar created from Swiss Ephemeris, Copyright Astrodienst AG [10.1.2003]

SWISS EPHEMERIS for the year 519 BCE

SEPTEMBER 519 BCE (-518) JC

00:00 UT

| Day  | Sid.t    | ☉        | ☽     | ♀     | ♁     | ♂     | ♃     | ♅     | ♁      | ♁     | ♁      | ♁     | ♁    | ♁     | ♁    |
|------|----------|----------|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|------|-------|------|
| S 1  | 22 14 35 | 1♎45'53  | 23♋24 | 27♎3  | 21♎43 | 14♎26 | 26♎58 | 28♎25 | 24°R32 | 18♎45 | 25♎35  | 3°R 5 | 4♎18 | 7♎42  | n.a. |
| S 2  | 22 18 31 | 2°45'07  | 6♎21  | 28° 7 | 22°57 | 15° 6 | 26°59 | 28°30 | 24°R31 | 18°48 | 25°37  | 2♎59  | 4°15 | 7°49  | n.a. |
| M 3  | 22 22 28 | 3°44'22  | 18°58 | 29° 9 | 24°11 | 15°47 | 27° 0 | 28°35 | 24°R29 | 18°50 | 25°38  | 2°56  | 4°12 | 7°56  | n.a. |
| T 4  | 22 26 25 | 4°43'41  | 1♎17  | 0♎ 8  | 25°26 | 16°28 | 27° 0 | 28°40 | 24°R27 | 18°52 | 25°40  | 2°D55 | 4° 9 | 8° 2  | n.a. |
| W 5  | 22 30 21 | 5°43'01  | 13°21 | 1° 5  | 26°40 | 17° 9 | 27° 1 | 28°45 | 24°R26 | 18°54 | 25°42  | 2°55  | 4° 6 | 8° 9  | n.a. |
| T 6  | 22 34 18 | 6°42'24  | 25°15 | 1°58  | 27°55 | 17°49 | 27° 3 | 28°50 | 24°R24 | 18°56 | 25°43  | 2°56  | 4° 3 | 8°16  | n.a. |
| F 7  | 22 38 14 | 7°41'50  | 7♎ 5  | 2°48  | 29° 9 | 18°30 | 27° 4 | 28°55 | 24°R23 | 18°59 | 25°45  | 2°R57 | 3°59 | 8°22  | n.a. |
| S 8  | 22 42 11 | 8°41'18  | 18°55 | 3°34  | 0♎23  | 19°11 | 27° 6 | 29° 1 | 24°R21 | 19° 1 | 25°46  | 2°56  | 3°56 | 8°29  | n.a. |
| S 9  | 22 46 7  | 9°40'48  | 0♎51  | 4°17  | 1°38  | 19°52 | 27° 8 | 29° 6 | 24°R20 | 19° 3 | 25°48  | 2°53  | 3°53 | 8°36  | n.a. |
| M10  | 22 50 4  | 10°40'21 | 12°58 | 4°55  | 2°52  | 20°33 | 27°10 | 29°11 | 24°R18 | 19° 5 | 25°49  | 2°49  | 3°50 | 8°43  | n.a. |
| T 11 | 22 54 0  | 11°39'56 | 25°19 | 5°29  | 4° 7  | 21°14 | 27°12 | 29°17 | 24°R17 | 19° 7 | 25°51  | 2°42  | 3°47 | 8°49  | n.a. |
| W12  | 22 57 57 | 12°39'34 | 7♎58  | 5°57  | 5°21  | 21°56 | 27°14 | 29°22 | 24°R15 | 19°10 | 25°52  | 2°34  | 3°43 | 8°56  | n.a. |
| T 13 | 23 1 54  | 13°39'14 | 20°56 | 6°19  | 6°35  | 22°37 | 27°17 | 29°28 | 24°R14 | 19°12 | 25°54  | 2°25  | 3°40 | 9° 3  | n.a. |
| F 14 | 23 5 50  | 14°38'56 | 4♎12  | 6°36  | 7°50  | 23°18 | 27°20 | 29°33 | 24°R13 | 19°14 | 25°55  | 2°16  | 3°37 | 9° 9  | n.a. |
| S 15 | 23 9 47  | 15°38'40 | 17°47 | 6°45  | 9° 4  | 23°59 | 27°23 | 29°39 | 24°R12 | 19°16 | 25°57  | 2° 9  | 3°34 | 9°16  | n.a. |
| S 16 | 23 13 43 | 16°38'26 | 1♎36  | 6°R48 | 10°18 | 24°41 | 27°26 | 29°44 | 24°R10 | 19°19 | 25°58  | 2° 3  | 3°31 | 9°23  | n.a. |
| M17  | 23 17 40 | 17°38'14 | 15°36 | 6°42  | 11°33 | 25°22 | 27°29 | 29°50 | 24°R 9 | 19°21 | 25°59  | 2° 0  | 3°28 | 9°29  | n.a. |
| T 18 | 23 21 36 | 18°38'04 | 29°44 | 6°29  | 12°47 | 26° 4 | 27°33 | 29°56 | 24°R 8 | 19°23 | 26° 1  | 1°D59 | 3°24 | 9°36  | n.a. |
| W19  | 23 25 33 | 19°37'57 | 13♎55 | 6° 6  | 14° 1 | 26°45 | 27°37 | 0♎ 2  | 24°R 7 | 19°25 | 26° 2  | 1°59  | 3°21 | 9°43  | n.a. |
| T 20 | 23 29 29 | 20°37'51 | 28° 8 | 5°35  | 15°16 | 27°27 | 27°41 | 0° 8  | 24°R 6 | 19°28 | 26° 3  | 2° 1  | 3°18 | 9°49  | n.a. |
| F 21 | 23 33 26 | 21°37'46 | 12♎19 | 4°55  | 16°30 | 28° 8 | 27°45 | 0°14  | 24°R 5 | 19°30 | 26° 4  | 2° 2  | 3°15 | 9°56  | n.a. |
| S 22 | 23 37 22 | 22°37'44 | 26°28 | 4° 6  | 17°44 | 28°50 | 27°49 | 0°20  | 24°R 4 | 19°32 | 26° 6  | 2°R 2 | 3°12 | 10° 3 | n.a. |
| S 23 | 23 41 19 | 23°37'43 | 10♎32 | 3° 9  | 18°58 | 29°32 | 27°54 | 0°26  | 24°R 3 | 19°34 | 26° 7  | 2° 1  | 3° 9 | 10° 9 | n.a. |
| M24  | 23 45 16 | 24°37'44 | 24°30 | 2° 5  | 20°13 | 0♎14  | 27°58 | 0°32  | 24°R 3 | 19°37 | 26° 8  | 1°58  | 3° 5 | 10°16 | n.a. |
| T 25 | 23 49 12 | 25°37'47 | 8♎21  | 0°54  | 21°27 | 0°55  | 28° 3 | 0°38  | 24°R 2 | 19°39 | 26° 9  | 1°53  | 3° 2 | 10°23 | n.a. |
| W26  | 23 53 9  | 26°37'51 | 22° 2 | 29♎39 | 22°41 | 1°37  | 28° 8 | 0°44  | 24°R 1 | 19°41 | 26°10  | 1°48  | 2°59 | 10°29 | n.a. |
| T 27 | 23 57 5  | 27°37'57 | 5♎30  | 28°22 | 23°55 | 2°19  | 28°13 | 0°50  | 24°R 0 | 19°43 | 26°12  | 1°42  | 2°56 | 10°36 | n.a. |
| F 28 | 0 1 2    | 28°38'05 | 18°45 | 27° 5 | 25° 9 | 3° 1  | 28°19 | 0°57  | 24°R 0 | 19°45 | 26°13  | 1°36  | 2°53 | 10°43 | n.a. |
| S 29 | 0 4 58   | 29°38'15 | 1♎45  | 25°51 | 26°24 | 3°43  | 28°24 | 1° 3  | 23°R59 | 19°48 | 26°14  | 1°32  | 2°49 | 10°49 | n.a. |
| S 30 | 0 8 55   | 0♎38'27  | 14♎28 | 24♎41 | 27♎38 | 4♎25  | 28♎30 | 1♎ 9  | 23°R59 | 19♎50 | 26°R15 | 1♎29  | 2♎46 | 10♎56 | n.a. |

Delta T = 04h44m02s Julian Calendar 1 Sept. 519 BCE == Greg. Calendar 26 Aug. 519 BCE  
 The year -518 astronomical counting style corresponds to year 519 B.C.E historical counting style.

OCTOBER 519 BCE (-518) JC

00:00 UT

| Day  | Sid.t   | ☉        | ☽     | ♀      | ♁     | ♂     | ♃     | ♅    | ♁      | ♁     | ♁      | ♁     | ♁    | ♁     | ♁    |
|------|---------|----------|-------|--------|-------|-------|-------|------|--------|-------|--------|-------|------|-------|------|
| M 1  | 0 12 51 | 1♎38'41  | 26♎56 | 23°R38 | 28♎52 | 5♎ 7  | 28♎36 | 1♎16 | 23°R58 | 19♎52 | 26°R16 | 1♎28  | 2♎43 | 11♎ 3 | n.a. |
| T 2  | 0 16 48 | 2°38'57  | 9♎10  | 22♎44  | 0♎ 6  | 5°49  | 28°42 | 1°22 | 23°R58 | 19°54 | 26°17  | 1°28  | 2°40 | 11° 9 | n.a. |
| W 3  | 0 20 45 | 3°39'15  | 21°12 | 22° 0  | 1°20  | 6°32  | 28°48 | 1°28 | 23°57  | 19°57 | 26°18  | 1°29  | 2°37 | 11°16 | n.a. |
| T 4  | 0 24 41 | 4°39'35  | 3♎ 6  | 21°27  | 2°34  | 7°14  | 28°54 | 1°35 | 23°57  | 19°59 | 26°19  | 1°31  | 2°34 | 11°23 | n.a. |
| F 5  | 0 28 38 | 5°39'57  | 14°55 | 21° 6  | 3°48  | 7°56  | 29° 1 | 1°41 | 23°57  | 20° 1 | 26°20  | 1°33  | 2°30 | 11°29 | n.a. |
| S 6  | 0 32 34 | 6°40'21  | 26°45 | 20°D56 | 5° 2  | 8°39  | 29° 8 | 1°48 | 23°57  | 20° 3 | 26°20  | 1°34  | 2°27 | 11°36 | n.a. |
| S 7  | 0 36 31 | 7°40'47  | 8♎41  | 20°58  | 6°16  | 9°21  | 29°14 | 1°55 | 23°56  | 20° 5 | 26°21  | 1°R35 | 2°24 | 11°43 | n.a. |
| M 8  | 0 40 27 | 8°41'15  | 20°47 | 21°10  | 7°30  | 10° 4 | 29°21 | 2° 1 | 23°56  | 20° 7 | 26°22  | 1°34  | 2°21 | 11°49 | n.a. |
| T 9  | 0 44 24 | 9°41'46  | 3♎ 7  | 21°33  | 8°45  | 10°46 | 29°29 | 2° 8 | 23°56  | 20°10 | 26°23  | 1°32  | 2°18 | 11°56 | n.a. |
| W10  | 0 48 20 | 10°42'18 | 15°47 | 22° 6  | 9°59  | 11°29 | 29°36 | 2°14 | 23°D56 | 20°12 | 26°24  | 1°30  | 2°14 | 12° 3 | n.a. |
| T 11 | 0 52 17 | 11°42'52 | 28°49 | 22°46  | 11°13 | 12°11 | 29°43 | 2°21 | 23°56  | 20°14 | 26°24  | 1°27  | 2°11 | 12° 9 | n.a. |
| F 12 | 0 56 14 | 12°43'28 | 12♎14 | 23°34  | 12°27 | 12°54 | 29°51 | 2°28 | 23°56  | 20°16 | 26°25  | 1°24  | 2° 8 | 12°16 | n.a. |
| S 13 | 1 0 10  | 13°44'06 | 26° 2 | 24°29  | 13°41 | 13°37 | 29°59 | 2°35 | 23°56  | 20°18 | 26°26  | 1°21  | 2° 5 | 12°23 | n.a. |
| S 14 | 1 4 7   | 14°44'45 | 10♎11 | 25°30  | 14°55 | 14°19 | 0♎ 7  | 2°41 | 23°57  | 20°20 | 26°27  | 1°20  | 2° 2 | 12°29 | n.a. |
| M15  | 1 8 3   | 15°45'26 | 24°36 | 26°36  | 16° 8 | 15° 2 | 0°15  | 2°48 | 23°57  | 20°22 | 26°27  | 1°D19 | 1°59 | 12°36 | n.a. |
| T 16 | 1 12 0  | 16°46'09 | 9♎11  | 27°46  | 17°22 | 15°45 | 0°23  | 2°55 | 23°57  | 20°24 | 26°28  | 1°19  | 1°55 | 12°43 | n.a. |
| W17  | 1 15 56 | 17°46'53 | 23°51 | 29° 0  | 18°36 | 16°28 | 0°31  | 3° 2 | 23°57  | 20°26 | 26°28  | 1°19  | 1°52 | 12°49 | n.a. |
| T 18 | 1 19 53 | 18°47'38 | 8♎29  | 0♎17   | 19°50 | 17°11 | 0°40  | 3° 9 | 23°58  | 20°28 | 26°29  | 1°21  | 1°49 | 12°56 | n.a. |
| F 19 | 1 23 49 | 19°48'25 | 22°59 | 1°37   | 21° 4 | 17°54 | 0°49  | 3°16 | 23°58  | 20°30 | 26°29  | 1°22  | 1°46 | 13° 3 | n.a. |
| S 20 | 1 27 46 | 20°49'13 | 7♎38  | 2°59   | 22°18 | 18°37 | 0°57  | 3°23 | 23°59  | 20°32 | 26°30  | 1°22  | 1°43 | 13° 9 | n.a. |
| S 21 | 1 31 42 | 21°50'02 | 21°23 | 4°24   | 23°32 | 19°20 | 1° 6  | 3°29 | 23°59  | 20°34 | 26°30  | 1°R22 | 1°40 | 13°16 | n.a. |
| M22  | 1 35 39 | 22°50'52 | 5♎12  | 5°50   | 24°46 | 20° 4 | 1°15  | 3°36 | 24° 0  | 20°36 | 26°31  | 1°22  | 1°36 | 13°23 | n.a. |
| T 23 | 1 39 36 | 23°51'43 | 18°47 | 7°17   | 25°59 | 20°47 | 1°25  | 3°43 | 24° 0  | 20°38 | 26°31  | 1°22  | 1°33 | 13°30 | n.a. |
| W24  | 1 43 32 | 24°52'35 | 2♎ 6  | 8°45   | 27°13 | 21°30 | 1°34  | 3°50 | 24° 1  | 20°40 | 26°31  | 1°21  | 1°30 | 13°36 | n.a. |
| T 25 | 1 47 29 | 25°53'28 | 15°10 | 10°15  | 28°27 | 22°13 | 1°43  | 3°57 | 24° 2  | 20°42 | 26°32  | 1°20  | 1°27 | 13°43 | n.a. |
| F 26 | 1 51 25 | 26°54'23 | 28° 0 | 11°45  | 29°41 | 22°57 | 1°53  | 4° 4 | 24° 3  | 20°44 | 26°32  | 1°20  | 1°24 | 13°50 | n.a. |
| S 27 | 1 55 22 | 27°55'18 | 10♎38 | 13°15  | 0♎54  | 23°40 | 2° 3  | 4°11 | 24° 4  | 20°46 | 26°32  | 1°19  | 1°20 | 13°56 | n.a. |
| S 28 | 1 59 18 | 28°56'14 | 23° 4 | 14°47  | 2° 8  | 24°24 | 2°12  | 4°18 | 24° 4  | 20°48 | 26°33  | 1°19  | 1°17 | 14° 3 | n.a. |
| M29  | 2 3 15  | 29°57'12 | 5♎18  | 16°18  | 3°21  | 25° 7 | 2°22  | 4°25 | 24° 5  | 20°50 | 26°33  | 1°D19 | 1°14 | 14°10 | n.a. |
| T 30 | 2 7 11  | 0♎58'11  | 17°24 | 17°51  | 4°35  | 25°51 | 2°32  | 4°32 | 24° 6  | 20°51 | 26°33  | 1°R19 | 1°11 | 14°16 | n.a. |
| W31  | 2 11 8  | 1♎59'11  | 29♎21 | 19♎23  | 5♎49  | 26♎34 | 2°R42 | 4♎39 | 24°R 7 | 20♎53 | 26°R33 | 1♎19  | 1♎ 8 | 14♎23 | n.a. |

Delta T = 04h44m00s Julian Calendar created from Swiss Ephemeris, Copyright Astrodienst AG [10.1.2003]

SWISS EPHEMERIS for the year 519 BCE

NOVEMBER 519 BCE (-518) JC

00:00 UT

| Day  | Sid.t   | ☉        | ☽     | ♀     | ♂     | ♃     | ♄    | ♅    | ♆     | ♇     | ♁      | ♂     | ♁      | ♃     | ♄    |
|------|---------|----------|-------|-------|-------|-------|------|------|-------|-------|--------|-------|--------|-------|------|
| T 1  | 2 15 5  | 3♈ 0'12  | 11♐13 | 20♌55 | 7♌ 2  | 27♌18 | 2♃53 | 4♈46 | 24♃ 9 | 20♈55 | 26♁33  | 1°R19 | 1♈ 5   | 14♐30 | n.a. |
| F 2  | 2 19 1  | 4° 1'14  | 23° 3 | 22°28 | 8°16  | 28° 2 | 3° 3 | 4°53 | 24°10 | 20°57 | 26°33  | 1♈18  | 1° 1   | 14°36 | n.a. |
| S 3  | 2 22 58 | 5° 2'18  | 4♁53  | 24° 1 | 9°29  | 28°46 | 3°14 | 5° 0 | 24°11 | 20°59 | 26°33  | 1°18  | 0°58   | 14°43 | n.a. |
| S 4  | 2 26 54 | 6° 3'23  | 16°47 | 25°34 | 10°42 | 29°29 | 3°24 | 5° 7 | 24°12 | 21° 0 | 26°R33 | 1°18  | 0°55   | 14°50 | n.a. |
| M 5  | 2 30 51 | 7° 4'29  | 28°51 | 27° 7 | 11°56 | 0♈13  | 3°35 | 5°14 | 24°13 | 21° 2 | 26°33  | 1°17  | 0°52   | 14°56 | n.a. |
| T 6  | 2 34 47 | 8° 5'36  | 11♈ 8 | 28°41 | 13° 9 | 0°57  | 3°46 | 5°21 | 24°15 | 21° 4 | 26°33  | 1°D17 | 0°49   | 15° 3 | n.a. |
| W 7  | 2 38 44 | 9° 6'44  | 23°42 | 0♈14  | 14°22 | 1°41  | 3°57 | 5°28 | 24°16 | 21° 5 | 26°33  | 1°17  | 0°45   | 15°10 | n.a. |
| T 8  | 2 42 40 | 10° 7'53 | 6♈38  | 1°47  | 15°36 | 2°25  | 4° 8 | 5°35 | 24°18 | 21° 7 | 26°33  | 1°18  | 0°42   | 15°16 | n.a. |
| F 9  | 2 46 37 | 11° 9'04 | 20° 0 | 3°21  | 16°49 | 3° 9  | 4°19 | 5°42 | 24°19 | 21° 9 | 26°33  | 1°19  | 0°39   | 15°23 | n.a. |
| S 10 | 2 50 34 | 12°10'15 | 3♁48  | 4°54  | 18° 2 | 3°53  | 4°30 | 5°49 | 24°21 | 21°10 | 26°33  | 1°20  | 0°36   | 15°30 | n.a. |
| S 11 | 2 54 30 | 13°11'27 | 18° 2 | 6°28  | 19°15 | 4°37  | 4°42 | 5°56 | 24°22 | 21°12 | 26°33  | 1°21  | 0°33   | 15°37 | n.a. |
| M12  | 2 58 27 | 14°12'40 | 2♈40  | 8° 2  | 20°29 | 5°22  | 4°53 | 6° 3 | 24°24 | 21°13 | 26°32  | 1°R21 | 0°30   | 15°43 | n.a. |
| T 13 | 3 2 23  | 15°13'54 | 17°35 | 9°35  | 21°42 | 6° 6  | 5° 4 | 6°10 | 24°25 | 21°15 | 26°32  | 1°21  | 0°26   | 15°50 | n.a. |
| W14  | 3 6 20  | 16°15'08 | 2♌39  | 11° 9 | 22°55 | 6°50  | 5°16 | 6°17 | 24°27 | 21°16 | 26°32  | 1°19  | 0°23   | 15°57 | n.a. |
| T 15 | 3 10 16 | 17°16'23 | 17°44 | 12°43 | 24° 8 | 7°35  | 5°28 | 6°24 | 24°29 | 21°18 | 26°32  | 1°17  | 0°20   | 16° 3 | n.a. |
| F 16 | 3 14 13 | 18°17'38 | 2♃39  | 14°18 | 25°21 | 8°19  | 5°40 | 6°31 | 24°31 | 21°19 | 26°31  | 1°15  | 0°17   | 16°10 | n.a. |
| S 17 | 3 18 9  | 19°18'54 | 17°19 | 15°52 | 26°34 | 9° 3  | 5°52 | 6°38 | 24°33 | 21°21 | 26°31  | 1°13  | 0°14   | 16°17 | n.a. |
| S 18 | 3 22 6  | 20°20'09 | 1♁37  | 17°26 | 27°47 | 9°48  | 6° 4 | 6°45 | 24°34 | 21°22 | 26°30  | 1°11  | 0°11   | 16°23 | n.a. |
| M19  | 3 26 3  | 21°21'25 | 15°32 | 19° 1 | 28°59 | 10°32 | 6°16 | 6°52 | 24°36 | 21°23 | 26°30  | 1°D10 | 0° 7   | 16°30 | n.a. |
| T 20 | 3 29 59 | 22°22'41 | 29° 2 | 20°36 | 0♃12  | 11°17 | 6°28 | 6°59 | 24°38 | 21°25 | 26°30  | 1°10  | 0° 4   | 16°37 | n.a. |
| W21  | 3 33 56 | 23°23'56 | 12♈11 | 22°11 | 1°25  | 12° 1 | 6°40 | 7° 5 | 24°40 | 21°26 | 26°29  | 1°11  | 0° 1   | 16°43 | n.a. |
| T 22 | 3 37 52 | 24°25'12 | 25° 1 | 23°46 | 2°37  | 12°46 | 6°52 | 7°12 | 24°43 | 21°27 | 26°29  | 1°13  | 29°♁58 | 16°50 | n.a. |
| F 23 | 3 41 49 | 25°26'27 | 7♈34  | 25°22 | 3°50  | 13°31 | 7° 5 | 7°19 | 24°45 | 21°28 | 26°28  | 1°15  | 29°55  | 16°57 | n.a. |
| S 24 | 3 45 45 | 26°27'43 | 19°54 | 26°57 | 5° 2  | 14°15 | 7°17 | 7°26 | 24°47 | 21°30 | 26°27  | 1°16  | 29°51  | 17° 3 | n.a. |
| S 25 | 3 49 42 | 27°28'58 | 2♃ 4  | 28°33 | 6°15  | 15° 0 | 7°30 | 7°32 | 24°49 | 21°31 | 26°27  | 1°R17 | 29°48  | 17°10 | n.a. |
| M26  | 3 53 38 | 28°30'14 | 14° 6 | 0♌ 9  | 7°27  | 15°45 | 7°42 | 7°39 | 24°51 | 21°32 | 26°26  | 1°16  | 29°45  | 17°17 | n.a. |
| T 27 | 3 57 35 | 29°31'29 | 26° 2 | 1°46  | 8°40  | 16°30 | 7°55 | 7°46 | 24°53 | 21°33 | 26°25  | 1°13  | 29°42  | 17°23 | n.a. |
| W28  | 4 1 32  | 0♌32'45  | 7♐55  | 3°23  | 9°52  | 17°15 | 8° 8 | 7°53 | 24°56 | 21°34 | 26°25  | 1°10  | 29°39  | 17°30 | n.a. |
| T 29 | 4 5 28  | 1°34'00  | 19°46 | 5° 0  | 11° 4 | 18° 0 | 8°20 | 7°59 | 24°58 | 21°35 | 26°24  | 1° 5  | 29°36  | 17°37 | n.a. |
| F 30 | 4 9 25  | 2♌35'16  | 1♁36  | 6♌37  | 12♃16 | 18♈45 | 8♃33 | 8♈ 6 | 25♃ 0 | 21♈36 | 26♁23  | 0♈59  | 29°♁32 | 17♐44 | n.a. |

Delta T = 04h43m58s Julian Calendar 1 Nov. 519 BCE == Greg. Calendar 26 Oct. 519 BCE

The year -518 astronomical counting style corresponds to year 519 B.C.E historical counting style.

DECEMBER 519 BCE (-518) JC

00:00 UT

| Day  | Sid.t   | ☉        | ☽     | ♀     | ♂     | ♃     | ♄     | ♅     | ♆     | ♇      | ♁      | ♂      | ♁      | ♃     | ♄    |
|------|---------|----------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|------|
| S 1  | 4 13 21 | 3♌36'32  | 13♁29 | 8♌15  | 13♃28 | 19♈30 | 8♃46  | 8♈12  | 25♃ 3 | 21♈37  | 26°R23 | 0°R52  | 29°♁29 | 17♐50 | n.a. |
| S 2  | 4 17 18 | 4°37'47  | 25°25 | 9°53  | 14°40 | 20°15 | 8°59  | 8°19  | 25° 5 | 21°38  | 26°♁22 | 0♈47   | 29°26  | 17°57 | n.a. |
| M 3  | 4 21 14 | 5°39'03  | 7♈29  | 11°32 | 15°52 | 21° 0 | 9°12  | 8°25  | 25° 8 | 21°39  | 26°21  | 0°42   | 29°23  | 18° 4 | n.a. |
| T 4  | 4 25 11 | 6°40'19  | 19°44 | 13°11 | 17° 4 | 21°45 | 9°26  | 8°32  | 25°10 | 21°40  | 26°20  | 0°39   | 29°20  | 18°10 | n.a. |
| W 5  | 4 29 7  | 7°41'34  | 2♈14  | 14°50 | 18°15 | 22°30 | 9°39  | 8°38  | 25°13 | 21°41  | 26°19  | 0°D37  | 29°17  | 18°17 | n.a. |
| T 6  | 4 33 4  | 8°42'50  | 15° 3 | 16°29 | 19°27 | 23°15 | 9°52  | 8°45  | 25°16 | 21°42  | 26°18  | 0°37   | 29°13  | 18°24 | n.a. |
| F 7  | 4 37 1  | 9°44'05  | 28°14 | 18° 8 | 20°38 | 24° 1 | 10° 5 | 8°51  | 25°18 | 21°42  | 26°17  | 0°38   | 29°10  | 18°30 | n.a. |
| S 8  | 4 40 57 | 10°45'21 | 11♁52 | 19°48 | 21°50 | 24°46 | 10°19 | 8°58  | 25°21 | 21°43  | 26°16  | 0°40   | 29° 7  | 18°37 | n.a. |
| S 9  | 4 44 54 | 11°46'36 | 25°57 | 21°28 | 23° 1 | 25°31 | 10°32 | 9° 4  | 25°24 | 21°44  | 26°16  | 0°R41  | 29° 4  | 18°44 | n.a. |
| M10  | 4 48 50 | 12°47'51 | 10♈29 | 23° 8 | 24°12 | 26°17 | 10°46 | 9°10  | 25°26 | 21°44  | 26°15  | 0°40   | 29° 1  | 18°50 | n.a. |
| T 11 | 4 52 47 | 13°49'06 | 25°25 | 24°48 | 25°23 | 27° 2 | 10°59 | 9°16  | 25°29 | 21°45  | 26°14  | 0°38   | 28°57  | 18°57 | n.a. |
| W12  | 4 56 43 | 14°50'21 | 10♌38 | 26°28 | 26°34 | 27°48 | 11°13 | 9°22  | 25°32 | 21°46  | 26°12  | 0°34   | 28°54  | 19° 4 | n.a. |
| T 13 | 5 0 40  | 15°51'35 | 25°57 | 28° 8 | 27°45 | 28°33 | 11°26 | 9°29  | 25°35 | 21°46  | 26°11  | 0°28   | 28°51  | 19°11 | n.a. |
| F 14 | 5 4 36  | 16°52'48 | 11♃11 | 29°47 | 28°56 | 29°19 | 11°40 | 9°35  | 25°38 | 21°47  | 26°10  | 0°20   | 28°48  | 19°17 | n.a. |
| S 15 | 5 8 33  | 17°54'00 | 26°10 | 1♃26  | 0♌ 7  | 0♌ 4  | 11°54 | 9°41  | 25°40 | 21°47  | 26° 9  | 0°13   | 28°45  | 19°24 | n.a. |
| S 16 | 5 12 30 | 18°55'12 | 10♌47 | 3° 4  | 1°17  | 0°50  | 12° 7 | 9°47  | 25°43 | 21°48  | 26° 8  | 0° 6   | 28°42  | 19°31 | n.a. |
| M17  | 5 16 26 | 19°56'22 | 24°55 | 4°41  | 2°28  | 1°35  | 12°21 | 9°53  | 25°46 | 21°48  | 26° 7  | 0° 1   | 28°38  | 19°37 | n.a. |
| T 18 | 5 20 23 | 20°57'32 | 8♈33  | 6°17  | 3°38  | 2°21  | 12°35 | 9°58  | 25°49 | 21°49  | 26° 6  | 29°♁58 | 28°35  | 19°44 | n.a. |
| W19  | 5 24 19 | 21°58'40 | 21°44 | 7°52  | 4°48  | 3° 7  | 12°49 | 10° 4 | 25°52 | 21°49  | 26° 5  | 29°D57 | 28°32  | 19°51 | n.a. |
| T 20 | 5 28 16 | 22°59'47 | 4♈30  | 9°24  | 5°58  | 3°53  | 13° 3 | 10°10 | 25°55 | 21°50  | 26° 3  | 29°58  | 28°29  | 19°57 | n.a. |
| F 21 | 5 32 12 | 24° 0'53 | 16°57 | 10°54 | 7° 8  | 4°38  | 13°17 | 10°16 | 25°58 | 21°50  | 26° 2  | 29°59  | 28°26  | 20° 4 | n.a. |
| S 22 | 5 36 9  | 25° 1'58 | 29° 8 | 12°22 | 8°18  | 5°24  | 13°31 | 10°21 | 26° 1 | 21°50  | 26° 1  | 0°R 0  | 28°23  | 20°11 | n.a. |
| S 23 | 5 40 5  | 26° 3'01 | 11♃ 8 | 13°45 | 9°28  | 6°10  | 13°45 | 10°27 | 26° 4 | 21°50  | 26° 0  | 29°59  | 28°19  | 20°17 | n.a. |
| M24  | 5 44 2  | 27° 4'04 | 23° 2 | 15° 5 | 10°37 | 6°56  | 13°59 | 10°33 | 26° 8 | 21°51  | 25°59  | 29°56  | 28°16  | 20°24 | n.a. |
| T 25 | 5 47 59 | 28° 5'05 | 4♐53  | 16°20 | 11°47 | 7°42  | 14°13 | 10°38 | 26°11 | 21°51  | 25°57  | 29°51  | 28°13  | 20°31 | n.a. |
| W26  | 5 51 55 | 29° 6'05 | 16°42 | 17°30 | 12°56 | 8°28  | 14°27 | 10°43 | 26°14 | 21°51  | 25°56  | 29°42  | 28°10  | 20°38 | n.a. |
| T 27 | 5 55 52 | 0♃ 7'04  | 28°33 | 18°34 | 14° 5 | 9°13  | 14°41 | 10°49 | 26°17 | 21°51  | 25°55  | 29°32  | 28° 7  | 20°44 | n.a. |
| F 28 | 5 59 48 | 1° 8'02  | 10♁28 | 19°30 | 15°13 | 9°59  | 14°55 | 10°54 | 26°20 | 21°51  | 25°53  | 29°20  | 28° 3  | 20°51 | n.a. |
| S 29 | 6 3 45  | 2° 8'59  | 22°26 | 20°19 | 16°22 | 10°45 | 15° 9 | 10°59 | 26°23 | 21°51  | 25°52  | 29° 7  | 28° 0  | 20°58 | n.a. |
| S 30 | 6 7 41  | 3° 9'54  | 4♈30  | 20°59 | 17°30 | 11°32 | 15°23 | 11° 5 | 26°27 | 21°R51 | 25°51  | 28°55  | 27°57  | 21° 4 | n.a. |
| M31  | 6 11 38 | 4♃10'49  | 16♈41 | 21♃29 | 18♌39 | 12♌18 | 15♃38 | 11♈10 | 26♃30 | 21♈51  | 25♁49  | 28°♁44 | 27°♁54 | 21♐11 | n.a. |

Delta T = 04h43m56s

Julian Calendar

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