



SWISS EPHEMERIS for the year 2010  
heliocentric

MARCH 2010

00:00 UT

| Day  | Sid.t    | Terra    | ☾     | ♃     | ♄     | ♅     | ♆     | ♁    | ♂     | ♆     | ♁    | ♄     |
|------|----------|----------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|
| M 1  | 10 34 47 | 10♐17'22 | 10♐18 | 2♉25  | 7♊49  | 23♌8  | 9♋47  | 0♉34 | 26♋24 | 26♌15 | 3♊26 | 26♌16 |
| T 2  | 10 38 43 | 11°17'34 | 11°20 | 5°39  | 9°24  | 23°35 | 9°53  | 0°36 | 26°25 | 26°15 | 3°26 | 26°17 |
| W 3  | 10 42 40 | 12°17'44 | 12°22 | 8°57  | 11° 0 | 24° 1 | 9°58  | 0°38 | 26°25 | 26°16 | 3°27 | 26°18 |
| T 4  | 10 46 36 | 13°17'53 | 13°24 | 12°20 | 12°35 | 24°27 | 10° 4 | 0°40 | 26°26 | 26°16 | 3°27 | 26°19 |
| F 5  | 10 50 33 | 14°18'00 | 14°25 | 15°48 | 14°11 | 24°54 | 10° 9 | 0°42 | 26°27 | 26°16 | 3°27 | 26°19 |
| S 6  | 10 54 30 | 15°18'06 | 15°26 | 19°20 | 15°47 | 25°20 | 10°15 | 0°44 | 26°27 | 26°17 | 3°28 | 26°20 |
| S 7  | 10 58 26 | 16°18'10 | 16°27 | 22°58 | 17°22 | 25°46 | 10°20 | 0°47 | 26°28 | 26°17 | 3°28 | 26°21 |
| M 8  | 11 2 23  | 17°18'12 | 17°27 | 26°41 | 18°58 | 26°13 | 10°25 | 0°49 | 26°29 | 26°18 | 3°28 | 26°22 |
| T 9  | 11 6 19  | 18°18'13 | 18°27 | 0♋31  | 20°34 | 26°39 | 10°31 | 0°51 | 26°29 | 26°18 | 3°29 | 26°22 |
| W10  | 11 10 16 | 19°18'13 | 19°27 | 4°27  | 22°10 | 27° 5 | 10°36 | 0°53 | 26°30 | 26°18 | 3°29 | 26°23 |
| T 11 | 11 14 12 | 20°18'10 | 20°26 | 8°29  | 23°45 | 27°31 | 10°42 | 0°55 | 26°31 | 26°19 | 3°29 | 26°24 |
| F 12 | 11 18 9  | 21°18'06 | 21°24 | 12°40 | 25°21 | 27°58 | 10°47 | 0°57 | 26°31 | 26°19 | 3°30 | 26°25 |
| S 13 | 11 22 6  | 22°18'00 | 22°23 | 16°57 | 26°57 | 28°24 | 10°52 | 0°59 | 26°32 | 26°19 | 3°30 | 26°25 |
| S 14 | 11 26 2  | 23°17'53 | 23°21 | 21°23 | 28°33 | 28°50 | 10°58 | 1° 1 | 26°33 | 26°20 | 3°31 | 26°26 |
| M15  | 11 29 59 | 24°17'43 | 24°19 | 25°56 | 0♌9   | 29°16 | 11° 3 | 1° 3 | 26°33 | 26°20 | 3°31 | 26°27 |
| T 16 | 11 33 55 | 25°17'32 | 25°17 | 0♍39  | 1°45  | 29°43 | 11° 9 | 1° 5 | 26°34 | 26°20 | 3°31 | 26°28 |
| W17  | 11 37 52 | 26°17'18 | 26°15 | 5°30  | 3°20  | 0♎9   | 11°14 | 1° 7 | 26°34 | 26°21 | 3°32 | 26°29 |
| T 18 | 11 41 48 | 27°17'03 | 27°13 | 10°30 | 4°56  | 0°35  | 11°20 | 1° 9 | 26°35 | 26°21 | 3°32 | 26°29 |
| F 19 | 11 45 45 | 28°16'45 | 28°11 | 15°39 | 6°32  | 1° 1  | 11°25 | 1°11 | 26°36 | 26°22 | 3°32 | 26°30 |
| S 20 | 11 49 41 | 29°16'25 | 29°10 | 20°57 | 8° 8  | 1°28  | 11°30 | 1°13 | 26°36 | 26°22 | 3°33 | 26°31 |
| S 21 | 11 53 38 | 0♏16'03  | 0♏8   | 26°25 | 9°44  | 1°54  | 11°36 | 1°15 | 26°37 | 26°22 | 3°33 | 26°32 |
| M22  | 11 57 34 | 1°15'39  | 1° 7  | 2♌1   | 11°20 | 2°20  | 11°41 | 1°17 | 26°38 | 26°23 | 3°33 | 26°32 |
| T 23 | 12 1 31  | 2°15'13  | 2° 7  | 7°45  | 12°57 | 2°46  | 11°47 | 1°19 | 26°38 | 26°23 | 3°34 | 26°33 |
| W24  | 12 5 28  | 3°14'44  | 3° 6  | 13°38 | 14°33 | 3°12  | 11°52 | 1°21 | 26°39 | 26°23 | 3°34 | 26°34 |
| T 25 | 12 9 24  | 4°14'13  | 4° 6  | 19°38 | 16° 9 | 3°39  | 11°58 | 1°23 | 26°40 | 26°24 | 3°34 | 26°35 |
| F 26 | 12 13 21 | 5°13'40  | 5° 7  | 25°44 | 17°45 | 4° 5  | 12° 3 | 1°25 | 26°40 | 26°24 | 3°35 | 26°36 |
| S 27 | 12 17 17 | 6°13'04  | 6° 7  | 1♉55  | 19°21 | 4°31  | 12° 8 | 1°27 | 26°41 | 26°24 | 3°35 | 26°36 |
| S 28 | 12 21 14 | 7°12'26  | 7° 8  | 8°10  | 20°57 | 4°57  | 12°14 | 1°29 | 26°42 | 26°25 | 3°35 | 26°37 |
| M29  | 12 25 10 | 8°11'46  | 8°10  | 14°28 | 22°34 | 5°23  | 12°19 | 1°31 | 26°42 | 26°25 | 3°36 | 26°38 |
| T 30 | 12 29 7  | 9°11'03  | 9°11  | 20°47 | 24°10 | 5°50  | 12°25 | 1°33 | 26°43 | 26°26 | 3°36 | 26°39 |
| W31  | 12 33 3  | 10♐10'19 | 10♐12 | 27♉6  | 25♋46 | 6♎16  | 12♋30 | 1♉35 | 26♋43 | 26♌26 | 3♊36 | 26♌39 |

Delta T = 66.11 sec.

APRIL 2010

00:00 UT

| Day  | Sid.t    | Terra    | ☾     | ♃     | ♄     | ♅     | ♆     | ♁    | ♂     | ♆     | ♁    | ♄     |
|------|----------|----------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|
| T 1  | 12 37 0  | 11♐9'32  | 11♐13 | 3♌24  | 27♋23 | 6♎42  | 12♋36 | 1♉37 | 26♋44 | 26♌26 | 3♊37 | 26♌40 |
| F 2  | 12 40 47 | 12° 8'44 | 12°14 | 9°38  | 28°59 | 7° 8  | 12°41 | 1°39 | 26°45 | 26°27 | 3°37 | 26°41 |
| S 3  | 12 44 53 | 13° 7'54 | 13°15 | 15°47 | 0♐35  | 7°34  | 12°46 | 1°41 | 26°45 | 26°27 | 3°37 | 26°42 |
| S 4  | 12 48 50 | 14° 7'02 | 14°15 | 21°50 | 2°12  | 8° 1  | 12°52 | 1°43 | 26°46 | 26°27 | 3°38 | 26°42 |
| M 5  | 12 52 46 | 15° 6'08 | 15°15 | 27°47 | 3°48  | 8°27  | 12°57 | 1°45 | 26°47 | 26°28 | 3°38 | 26°43 |
| T 6  | 12 56 43 | 16° 5'13 | 16°14 | 3♌35  | 5°25  | 8°53  | 13° 3 | 1°47 | 26°47 | 26°28 | 3°38 | 26°44 |
| W 7  | 13 0 39  | 17° 4'16 | 17°13 | 9°15  | 7° 1  | 9°19  | 13° 8 | 1°49 | 26°48 | 26°28 | 3°39 | 26°45 |
| T 8  | 13 4 36  | 18° 3'17 | 18°12 | 14°46 | 8°38  | 9°46  | 13°14 | 1°51 | 26°49 | 26°29 | 3°39 | 26°46 |
| F 9  | 13 8 32  | 19° 2'16 | 19°10 | 20° 7 | 10°14 | 10°12 | 13°19 | 1°53 | 26°49 | 26°29 | 3°39 | 26°46 |
| S 10 | 13 12 29 | 20° 1'13 | 20° 8 | 25°19 | 11°51 | 10°38 | 13°24 | 1°55 | 26°50 | 26°29 | 3°40 | 26°47 |
| S 11 | 13 16 26 | 21° 0'09 | 21° 6 | 0♐21  | 13°28 | 11° 4 | 13°30 | 1°57 | 26°51 | 26°30 | 3°40 | 26°48 |
| M12  | 13 20 22 | 21°59'02 | 22° 3 | 5°13  | 15° 4 | 11°30 | 13°35 | 1°59 | 26°51 | 26°30 | 3°41 | 26°49 |
| T 13 | 13 24 19 | 22°57'54 | 23° 1 | 9°56  | 16°41 | 11°57 | 13°41 | 2° 1 | 26°52 | 26°31 | 3°41 | 26°49 |
| W14  | 13 28 15 | 23°56'44 | 23°58 | 14°30 | 18°18 | 12°23 | 13°46 | 2° 3 | 26°52 | 26°31 | 3°41 | 26°50 |
| T 15 | 13 32 12 | 24°55'32 | 24°55 | 18°55 | 19°55 | 12°49 | 13°52 | 2° 5 | 26°53 | 26°31 | 3°42 | 26°51 |
| F 16 | 13 36 8  | 25°54'18 | 25°52 | 23°12 | 21°31 | 13°15 | 13°57 | 2° 7 | 26°54 | 26°32 | 3°42 | 26°52 |
| S 17 | 13 40 5  | 26°53'02 | 26°49 | 27°20 | 23° 8 | 13°42 | 14° 2 | 2° 9 | 26°54 | 26°32 | 3°42 | 26°53 |
| S 18 | 13 44 1  | 27°51'44 | 27°46 | 1♐21  | 24°45 | 14° 8 | 14° 8 | 2°11 | 26°55 | 26°32 | 3°43 | 26°53 |
| M19  | 13 47 58 | 28°50'24 | 28°43 | 5°16  | 26°22 | 14°34 | 14°13 | 2°13 | 26°56 | 26°33 | 3°43 | 26°54 |
| T 20 | 13 51 55 | 29°49'01 | 29°41 | 9° 3  | 27°59 | 15° 0 | 14°19 | 2°15 | 26°56 | 26°33 | 3°43 | 26°55 |
| W21  | 13 55 51 | 0♑47'37  | 0♑39  | 12°44 | 29°36 | 15°27 | 14°24 | 2°17 | 26°57 | 26°33 | 3°44 | 26°56 |
| T 22 | 13 59 48 | 1°46'10  | 1°38  | 16°19 | 1♌13  | 15°53 | 14°30 | 2°20 | 26°58 | 26°34 | 3°44 | 26°56 |
| F 23 | 14 3 44  | 2°44'41  | 2°37  | 19°49 | 2°50  | 16°19 | 14°35 | 2°22 | 26°58 | 26°34 | 3°44 | 26°57 |
| S 24 | 14 7 41  | 3°43'09  | 3°36  | 23°13 | 4°27  | 16°45 | 14°41 | 2°24 | 26°59 | 26°35 | 3°45 | 26°58 |
| S 25 | 14 11 37 | 4°41'36  | 4°35  | 26°33 | 6° 4  | 17°12 | 14°46 | 2°26 | 27° 0 | 26°35 | 3°45 | 26°59 |
| M26  | 14 15 34 | 5°40'00  | 5°35  | 29°49 | 7°41  | 17°38 | 14°51 | 2°28 | 27° 0 | 26°35 | 3°45 | 26°59 |
| T 27 | 14 19 30 | 6°38'22  | 6°35  | 3♌1   | 9°18  | 18° 4 | 14°57 | 2°30 | 27° 1 | 26°36 | 3°46 | 27° 0 |
| W28  | 14 23 27 | 7°36'43  | 7°36  | 6° 9  | 10°55 | 18°31 | 15° 2 | 2°32 | 27° 2 | 26°36 | 3°46 | 27° 1 |
| T 29 | 14 27 23 | 8°35'01  | 8°36  | 9°13  | 12°32 | 18°57 | 15° 8 | 2°34 | 27° 2 | 26°36 | 3°46 | 27° 2 |
| F 30 | 14 31 20 | 9♌33'18  | 9♌36  | 12♌15 | 14♌10 | 19♎23 | 15♋13 | 2♉36 | 27♋3  | 26♌37 | 3♊47 | 27♌3  |

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SWISS EPHEMERIS for the year 2010  
heliocentric

MAY 2010

00:00 UT

| Day  | Sid.t    | Terra    | ☾     | ♃     | ♄     | ♅     | ♆     | ♁    | ♂     | ♆     | ♁    | ♂     |
|------|----------|----------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|
| S 1  | 14 35 17 | 10♁31'34 | 10♁36 | 15♁14 | 15♁47 | 19♁50 | 15♁19 | 2♁38 | 27♁3  | 26♁37 | 3♁47 | 27♁3  |
| S 2  | 14 39 13 | 11°29'47 | 11°36 | 18°10 | 17°24 | 20°16 | 15°24 | 2°40 | 27° 4 | 26°37 | 3°47 | 27° 4 |
| M 3  | 14 43 10 | 12°27'59 | 12°35 | 21° 5 | 19° 1 | 20°42 | 15°30 | 2°42 | 27° 5 | 26°38 | 3°48 | 27° 5 |
| T 4  | 14 47 6  | 13°26'10 | 13°34 | 23°57 | 20°39 | 21° 9 | 15°35 | 2°44 | 27° 5 | 26°38 | 3°48 | 27° 6 |
| W 5  | 14 51 3  | 14°24'19 | 14°33 | 26°47 | 22°16 | 21°35 | 15°40 | 2°46 | 27° 6 | 26°39 | 3°48 | 27° 6 |
| T 6  | 14 54 59 | 15°22'26 | 15°32 | 29°36 | 23°53 | 22° 1 | 15°46 | 2°48 | 27° 7 | 26°39 | 3°49 | 27° 7 |
| F 7  | 14 58 56 | 16°20'32 | 16°30 | 2♁24  | 25°31 | 22°28 | 15°51 | 2°50 | 27° 7 | 26°39 | 3°49 | 27° 8 |
| S 8  | 15 2 53  | 17°18'37 | 17°27 | 5°11  | 27° 8 | 22°54 | 15°57 | 2°52 | 27° 8 | 26°40 | 3°49 | 27° 9 |
| S 9  | 15 6 49  | 18°16'40 | 18°25 | 7°57  | 28°45 | 23°21 | 16° 2 | 2°54 | 27° 9 | 26°40 | 3°50 | 27° 9 |
| M10  | 15 10 46 | 19°14'42 | 19°21 | 10°42 | 0♁23  | 23°47 | 16° 8 | 2°56 | 27° 9 | 26°40 | 3°50 | 27°10 |
| T 11 | 15 14 42 | 20°12'43 | 20°18 | 13°27 | 2° 0  | 24°14 | 16°13 | 2°58 | 27°10 | 26°41 | 3°51 | 27°11 |
| W12  | 15 18 39 | 21°10'42 | 21°14 | 16°11 | 3°38  | 24°40 | 16°18 | 3° 0 | 27°11 | 26°41 | 3°51 | 27°12 |
| T 13 | 15 22 35 | 22° 8'39 | 22°11 | 18°56 | 5°15  | 25° 7 | 16°24 | 3° 2 | 27°11 | 26°41 | 3°51 | 27°13 |
| F 14 | 15 26 32 | 23° 6'36 | 23° 7 | 21°41 | 6°52  | 25°33 | 16°29 | 3° 4 | 27°12 | 26°42 | 3°52 | 27°13 |
| S 15 | 15 30 28 | 24° 4'31 | 24° 3 | 24°26 | 8°30  | 26° 0 | 16°35 | 3° 6 | 27°12 | 26°42 | 3°52 | 27°14 |
| S 16 | 15 34 25 | 25° 2'24 | 24°59 | 27°12 | 10° 7 | 26°26 | 16°40 | 3° 8 | 27°13 | 26°43 | 3°52 | 27°15 |
| M17  | 15 38 22 | 26° 0'16 | 25°55 | 29°59 | 11°45 | 26°53 | 16°46 | 3°10 | 27°14 | 26°43 | 3°53 | 27°16 |
| T 18 | 15 42 18 | 26°58'06 | 26°52 | 2♁47  | 13°22 | 27°19 | 16°51 | 3°12 | 27°14 | 26°43 | 3°53 | 27°16 |
| W19  | 15 46 15 | 27°55'54 | 27°48 | 5°36  | 15° 0 | 27°46 | 16°57 | 3°14 | 27°15 | 26°44 | 3°53 | 27°17 |
| T 20 | 15 50 11 | 28°53'41 | 28°46 | 8°26  | 16°38 | 28°12 | 17° 2 | 3°16 | 27°16 | 26°44 | 3°54 | 27°18 |
| F 21 | 15 54 8  | 29°51'25 | 29°43 | 11°18 | 18°15 | 28°39 | 17° 8 | 3°18 | 27°16 | 26°44 | 3°54 | 27°19 |
| S 22 | 15 58 4  | 0♁49'09  | 0♁41  | 14°12 | 19°53 | 29° 6 | 17°13 | 3°20 | 27°17 | 26°45 | 3°54 | 27°19 |
| S 23 | 16 2 1   | 1°46'50  | 1°39  | 17° 9 | 21°30 | 29°32 | 17°18 | 3°22 | 27°18 | 26°45 | 3°55 | 27°20 |
| M24  | 16 5 57  | 2°44'30  | 2°38  | 20° 7 | 23° 8 | 29°59 | 17°24 | 3°24 | 27°18 | 26°45 | 3°55 | 27°21 |
| T 25 | 16 9 54  | 3°42'09  | 3°37  | 23° 9 | 24°45 | 0♁25  | 17°29 | 3°26 | 27°19 | 26°46 | 3°55 | 27°22 |
| W26  | 16 13 51 | 4°39'46  | 4°36  | 26°13 | 26°23 | 0°52  | 17°35 | 3°28 | 27°20 | 26°46 | 3°56 | 27°23 |
| T 27 | 16 17 47 | 5°37'22  | 5°36  | 29°20 | 28° 0 | 1°19  | 17°40 | 3°30 | 27°20 | 26°47 | 3°56 | 27°23 |
| F 28 | 16 21 44 | 6°34'56  | 6°35  | 2♁31  | 29°38 | 1°46  | 17°46 | 3°32 | 27°21 | 26°47 | 3°56 | 27°24 |
| S 29 | 16 25 40 | 7°32'30  | 7°34  | 5°45  | 1♁15  | 2°12  | 17°51 | 3°34 | 27°22 | 26°47 | 3°57 | 27°25 |
| S 30 | 16 29 37 | 8°30'02  | 8°34  | 9° 4  | 2°53  | 2°39  | 17°57 | 3°36 | 27°22 | 26°48 | 3°57 | 27°26 |
| MB1  | 16 33 33 | 9♁27'33  | 9♁33  | 12♁27 | 4♁30  | 3♁ 6  | 18♁ 2 | 3♁38 | 27♁23 | 26♁48 | 3♁57 | 27♁26 |

Delta T = 66.15 sec.

JUNE 2010

00:00 UT

| Day  | Sid.t    | Terra    | ☾     | ♃     | ♄     | ♅     | ♆     | ♁    | ♂     | ♆     | ♁    | ♂     |
|------|----------|----------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|
| T 1  | 16 37 30 | 10♁25'04 | 10♁32 | 15♁54 | 6♁ 8  | 3♁33  | 18♁ 8 | 3♁40 | 27♁23 | 26♁48 | 3♁58 | 27♁27 |
| W 2  | 16 41 26 | 11°22'33 | 11°30 | 19°27 | 7°45  | 3°59  | 18°13 | 3°42 | 27°24 | 26°49 | 3°58 | 27°28 |
| T 3  | 16 45 23 | 12°20'02 | 12°29 | 23° 5 | 9°23  | 4°26  | 18°18 | 3°44 | 27°25 | 26°49 | 3°58 | 27°29 |
| F 4  | 16 49 20 | 13°17'30 | 13°26 | 26°48 | 11° 0 | 4°53  | 18°24 | 3°46 | 27°25 | 26°49 | 3°59 | 27°29 |
| S 5  | 16 53 16 | 14°14'57 | 14°24 | 0♁38  | 12°38 | 5°20  | 18°29 | 3°48 | 27°26 | 26°50 | 3°59 | 27°30 |
| S 6  | 16 57 13 | 15°12'23 | 15°21 | 4°34  | 14°15 | 5°47  | 18°35 | 3°50 | 27°27 | 26°50 | 3°59 | 27°31 |
| M 7  | 17 1 9   | 16° 9'49 | 16°18 | 8°37  | 15°53 | 6°14  | 18°40 | 3°52 | 27°27 | 26°51 | 4° 0 | 27°32 |
| T 8  | 17 5 6   | 17° 7'14 | 17°15 | 12°48 | 17°30 | 6°41  | 18°46 | 3°54 | 27°28 | 26°51 | 4° 0 | 27°32 |
| W 9  | 17 9 2   | 18° 4'39 | 18°11 | 17° 5 | 19° 7 | 7° 8  | 18°51 | 3°56 | 27°29 | 26°51 | 4° 1 | 27°33 |
| T 10 | 17 12 59 | 19° 2'03 | 19° 7 | 21°31 | 20°45 | 7°34  | 18°57 | 3°58 | 27°29 | 26°52 | 4° 1 | 27°34 |
| F 11 | 17 16 55 | 19°59'26 | 20° 2 | 26° 5 | 22°22 | 8° 1  | 19° 2 | 4° 0 | 27°30 | 26°52 | 4° 1 | 27°35 |
| S 12 | 17 20 52 | 20°56'49 | 20°58 | 0♁48  | 23°59 | 8°28  | 19° 8 | 4° 2 | 27°31 | 26°52 | 4° 2 | 27°36 |
| S 13 | 17 24 49 | 21°54'11 | 21°53 | 5°39  | 25°37 | 8°56  | 19°13 | 4° 4 | 27°31 | 26°53 | 4° 2 | 27°36 |
| M14  | 17 28 45 | 22°51'33 | 22°49 | 10°39 | 27°14 | 9°23  | 19°18 | 4° 6 | 27°32 | 26°53 | 4° 2 | 27°37 |
| T 15 | 17 32 42 | 23°48'53 | 23°44 | 15°49 | 28°51 | 9°50  | 19°24 | 4° 8 | 27°32 | 26°53 | 4° 3 | 27°38 |
| W16  | 17 36 38 | 24°46'13 | 24°40 | 21° 7 | 0♁28  | 10°17 | 19°29 | 4°10 | 27°33 | 26°54 | 4° 3 | 27°39 |
| T 17 | 17 40 35 | 25°43'32 | 25°36 | 26°35 | 2° 5  | 10°44 | 19°35 | 4°12 | 27°34 | 26°54 | 4° 3 | 27°39 |
| F 18 | 17 44 31 | 26°40'49 | 26°33 | 2♁11  | 3°42  | 11°11 | 19°40 | 4°14 | 27°34 | 26°55 | 4° 4 | 27°40 |
| S 19 | 17 48 28 | 27°38'06 | 27°30 | 7°56  | 5°19  | 11°38 | 19°46 | 4°16 | 27°35 | 26°55 | 4° 4 | 27°41 |
| S 20 | 17 52 24 | 28°35'23 | 28°27 | 13°49 | 6°56  | 12° 5 | 19°51 | 4°18 | 27°36 | 26°55 | 4° 4 | 27°42 |
| M21  | 17 56 21 | 29°32'38 | 29°25 | 19°49 | 8°33  | 12°33 | 19°57 | 4°20 | 27°36 | 26°56 | 4° 5 | 27°42 |
| T 22 | 18 0 18  | 0♁29'53  | 0♁23  | 25°55 | 10°10 | 13° 0 | 20° 2 | 4°22 | 27°37 | 26°56 | 4° 5 | 27°43 |
| W23  | 18 4 14  | 1°27'07  | 1°21  | 2♁ 7  | 11°47 | 13°27 | 20° 8 | 4°24 | 27°38 | 26°56 | 4° 5 | 27°44 |
| T 24 | 18 8 11  | 2°24'20  | 2°20  | 8°22  | 13°24 | 13°55 | 20°13 | 4°26 | 27°38 | 26°57 | 4° 6 | 27°45 |
| F 25 | 18 12 7  | 3°21'33  | 3°19  | 14°40 | 15° 1 | 14°22 | 20°19 | 4°28 | 27°39 | 26°57 | 4° 6 | 27°45 |
| S 26 | 18 16 4  | 4°18'46  | 4°18  | 20°59 | 16°38 | 14°49 | 20°24 | 4°30 | 27°40 | 26°57 | 4° 6 | 27°46 |
| S 27 | 18 20 0  | 5°15'58  | 5°17  | 27°18 | 18°15 | 15°17 | 20°29 | 4°33 | 27°40 | 26°58 | 4° 7 | 27°47 |
| M28  | 18 23 57 | 6°13'10  | 6°16  | 3♁35  | 19°51 | 15°44 | 20°35 | 4°35 | 27°41 | 26°58 | 4° 7 | 27°48 |
| T 29 | 18 27 53 | 7°10'22  | 7°15  | 9°49  | 21°28 | 16°11 | 20°40 | 4°37 | 27°42 | 26°59 | 4° 7 | 27°49 |
| W30  | 18 31 50 | 8♁ 7'34  | 8♁13  | 15♁58 | 23♁ 5 | 16♁39 | 20♁46 | 4♁39 | 27♁42 | 26♁59 | 4♁ 8 | 27♁49 |

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SWISS EPHEMERIS for the year 2010  
heliocentric

JULY 2010

00:00 UT

| Day  | Sid.t    | Terra    | ☾     | ♃     | ♄     | ♅     | ♆     | ♁    | ♂     | ♆     | ♁    | ♃     |
|------|----------|----------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|
| T 1  | 18 35 47 | 9♁ 4'46  | 9♁12  | 22♁1  | 24♁41 | 17♁ 6 | 20♁51 | 4♁41 | 27♁43 | 26♁59 | 4♁ 8 | 27♁50 |
| F 2  | 18 39 43 | 10° 1'57 | 10°10 | 27°58 | 26°18 | 17°34 | 20°57 | 4°43 | 27°43 | 27° 0 | 4° 8 | 27°51 |
| S 3  | 18 43 40 | 10°59'09 | 11° 8 | 3♁46  | 27°54 | 18° 2 | 21° 2 | 4°45 | 27°44 | 27° 0 | 4° 9 | 27°52 |
| S 4  | 18 47 36 | 11°56'21 | 12° 5 | 9°25  | 29°31 | 18°29 | 21° 8 | 4°47 | 27°45 | 27° 0 | 4° 9 | 27°52 |
| M 5  | 18 51 33 | 12°53'34 | 13° 2 | 14°56 | 1♁ 7  | 18°57 | 21°13 | 4°49 | 27°45 | 27° 1 | 4° 9 | 27°53 |
| T 6  | 18 55 29 | 13°50'46 | 13°59 | 20°17 | 2°44  | 19°24 | 21°19 | 4°51 | 27°46 | 27° 1 | 4°10 | 27°54 |
| W 7  | 18 59 26 | 14°47'59 | 14°56 | 25°28 | 4°20  | 19°52 | 21°24 | 4°53 | 27°47 | 27° 1 | 4°10 | 27°55 |
| T 8  | 19 3 22  | 15°45'12 | 15°52 | 0♁30  | 5°56  | 20°20 | 21°30 | 4°55 | 27°47 | 27° 2 | 4°11 | 27°55 |
| F 9  | 19 7 19  | 16°42'26 | 16°48 | 5°22  | 7°32  | 20°47 | 21°35 | 4°57 | 27°48 | 27° 2 | 4°11 | 27°56 |
| S 10 | 19 11 16 | 17°39'40 | 17°43 | 10° 5 | 9° 8  | 21°15 | 21°41 | 4°59 | 27°49 | 27° 3 | 4°11 | 27°57 |
| S 11 | 19 15 12 | 18°36'54 | 18°39 | 14°38 | 10°45 | 21°43 | 21°46 | 5° 1 | 27°49 | 27° 3 | 4°12 | 27°58 |
| M 12 | 19 19 9  | 19°34'09 | 19°34 | 19° 3 | 12°21 | 22°11 | 21°51 | 5° 3 | 27°50 | 27° 3 | 4°12 | 27°58 |
| T 13 | 19 23 5  | 20°31'23 | 20°29 | 23°20 | 13°57 | 22°39 | 21°57 | 5° 5 | 27°51 | 27° 4 | 4°12 | 27°59 |
| W 14 | 19 27 2  | 21°28'38 | 21°25 | 27°28 | 15°33 | 23° 7 | 22° 2 | 5° 7 | 27°51 | 27° 4 | 4°13 | 28° 0 |
| T 15 | 19 30 58 | 22°25'53 | 22°20 | 1♁29  | 17° 9 | 23°35 | 22° 8 | 5° 9 | 27°52 | 27° 4 | 4°13 | 28° 1 |
| F 16 | 19 34 55 | 23°23'08 | 23°16 | 5°23  | 18°45 | 24° 3 | 22°13 | 5°11 | 27°52 | 27° 5 | 4°13 | 28° 1 |
| S 17 | 19 38 52 | 24°20'23 | 24°12 | 9°10  | 20°20 | 24°31 | 22°19 | 5°13 | 27°53 | 27° 5 | 4°14 | 28° 2 |
| S 18 | 19 42 48 | 25°17'38 | 25° 9 | 12°51 | 21°56 | 24°59 | 22°24 | 5°15 | 27°54 | 27° 5 | 4°14 | 28° 3 |
| M 19 | 19 46 45 | 26°14'53 | 26° 6 | 16°26 | 23°32 | 25°27 | 22°30 | 5°17 | 27°54 | 27° 6 | 4°14 | 28° 4 |
| T 20 | 19 50 41 | 27°12'08 | 27° 4 | 19°55 | 25° 8 | 25°55 | 22°35 | 5°19 | 27°55 | 27° 6 | 4°15 | 28° 5 |
| W 21 | 19 54 38 | 28° 9'24 | 28° 2 | 23°20 | 26°43 | 26°23 | 22°41 | 5°21 | 27°56 | 27° 7 | 4°15 | 28° 5 |
| T 22 | 19 58 34 | 29° 6'40 | 29° 0 | 26°40 | 28°19 | 26°51 | 22°46 | 5°23 | 27°56 | 27° 7 | 4°15 | 28° 6 |
| F 23 | 20 2 31  | 0♁ 3'56  | 29°59 | 29°55 | 29°55 | 27°19 | 22°52 | 5°25 | 27°57 | 27° 7 | 4°16 | 28° 7 |
| S 24 | 20 6 27  | 1° 1'12  | 0♁58  | 3♁ 7  | 1♁30  | 27°47 | 22°57 | 5°27 | 27°58 | 27° 8 | 4°16 | 28° 8 |
| S 25 | 20 10 24 | 1°58'29  | 1°57  | 6°15  | 3° 6  | 28°16 | 23° 3 | 5°29 | 27°58 | 27° 8 | 4°16 | 28° 8 |
| M 26 | 20 14 21 | 2°55'47  | 2°56  | 9°19  | 4°41  | 28°44 | 23° 8 | 5°31 | 27°59 | 27° 8 | 4°17 | 28° 9 |
| T 27 | 20 18 17 | 3°53'05  | 3°55  | 12°21 | 6°17  | 29°12 | 23°14 | 5°33 | 28° 0 | 27° 9 | 4°17 | 28°10 |
| W 28 | 20 22 14 | 4°50'24  | 4°54  | 15°20 | 7°52  | 29°41 | 23°19 | 5°35 | 28° 0 | 27° 9 | 4°17 | 28°11 |
| T 29 | 20 26 10 | 5°47'44  | 5°53  | 18°16 | 9°28  | 0♁ 9  | 23°24 | 5°37 | 28° 1 | 27° 9 | 4°18 | 28°11 |
| F 30 | 20 30 7  | 6°45'05  | 6°51  | 21°10 | 11° 3 | 0°38  | 23°30 | 5°39 | 28° 2 | 27°10 | 4°18 | 28°12 |
| S 31 | 20 34 3  | 7♁42'26  | 7♁50  | 24♁ 2 | 12♁38 | 1♁ 6  | 23♁35 | 5♁41 | 28♁ 2 | 27♁10 | 4♁18 | 28♁13 |

Delta T = 66.19 sec.

AUGUST 2010

00:00 UT

| Day  | Sid.t    | Terra    | ☾     | ♃     | ♄     | ♅     | ♆     | ♁    | ♂     | ♆     | ♁    | ♃     |
|------|----------|----------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|
| S 1  | 20 38 0  | 8♁39'49  | 8♁48  | 26♁53 | 14♁14 | 1♁35  | 23♁41 | 5♁43 | 28♁ 3 | 27♁11 | 4♁19 | 28♁14 |
| M 2  | 20 41 56 | 9°37'12  | 9°46  | 29°42 | 15°49 | 2° 3  | 23°46 | 5°45 | 28° 3 | 27°11 | 4°19 | 28°14 |
| T 3  | 20 45 53 | 10°34'37 | 10°43 | 2♁29  | 17°24 | 2°32  | 23°52 | 5°47 | 28° 4 | 27°11 | 4°19 | 28°15 |
| W 4  | 20 49 50 | 11°32'03 | 11°41 | 5°16  | 18°59 | 3° 0  | 23°57 | 5°49 | 28° 5 | 27°12 | 4°20 | 28°16 |
| T 5  | 20 53 46 | 12°29'31 | 12°38 | 8° 2  | 20°34 | 3°29  | 24° 3 | 5°51 | 28° 5 | 27°12 | 4°20 | 28°17 |
| F 6  | 20 57 43 | 13°26'59 | 13°34 | 10°47 | 22°10 | 3°58  | 24° 8 | 5°53 | 28° 6 | 27°12 | 4°21 | 28°17 |
| S 7  | 21 1 39  | 14°24'29 | 14°30 | 13°32 | 23°45 | 4°27  | 24°14 | 5°55 | 28° 7 | 27°13 | 4°21 | 28°18 |
| S 8  | 21 5 36  | 15°22'00 | 15°26 | 16°17 | 25°20 | 4°55  | 24°19 | 5°57 | 28° 7 | 27°13 | 4°21 | 28°19 |
| M 9  | 21 9 32  | 16°19'33 | 16°22 | 19° 1 | 26°55 | 5°24  | 24°25 | 5°59 | 28° 8 | 27°13 | 4°22 | 28°20 |
| T 10 | 21 13 29 | 17°17'06 | 17°17 | 21°46 | 28°30 | 5°53  | 24°30 | 6° 1 | 28° 9 | 27°14 | 4°22 | 28°20 |
| W 11 | 21 17 25 | 18°14'40 | 18°13 | 24°32 | 0♁ 5  | 6°22  | 24°36 | 6° 3 | 28° 9 | 27°14 | 4°22 | 28°21 |
| T 12 | 21 21 22 | 19°12'16 | 19° 9 | 27°18 | 1°40  | 6°51  | 24°41 | 6° 5 | 28°10 | 27°15 | 4°23 | 28°22 |
| F 13 | 21 25 19 | 20° 9'52 | 20° 5 | 0♁ 4  | 3°15  | 7°20  | 24°47 | 6° 7 | 28°11 | 27°15 | 4°23 | 28°23 |
| S 14 | 21 29 15 | 21° 7'30 | 21° 1 | 2°52  | 4°50  | 7°49  | 24°52 | 6° 9 | 28°11 | 27°15 | 4°23 | 28°23 |
| S 15 | 21 33 12 | 22° 5'08 | 21°57 | 5°41  | 6°25  | 8°18  | 24°58 | 6°11 | 28°12 | 27°16 | 4°24 | 28°24 |
| M 16 | 21 37 8  | 23° 2'47 | 22°54 | 8°32  | 8° 0  | 8°47  | 25° 3 | 6°13 | 28°12 | 27°16 | 4°24 | 28°25 |
| T 17 | 21 41 5  | 24° 0'28 | 23°52 | 11°24 | 9°35  | 9°17  | 25° 9 | 6°15 | 28°13 | 27°16 | 4°24 | 28°26 |
| W 18 | 21 45 1  | 24°58'09 | 24°50 | 14°18 | 11°10 | 9°46  | 25°14 | 6°17 | 28°14 | 27°17 | 4°25 | 28°26 |
| T 19 | 21 48 58 | 25°55'52 | 25°48 | 17°14 | 12°44 | 10°15 | 25°19 | 6°19 | 28°14 | 27°17 | 4°25 | 28°27 |
| F 20 | 21 52 54 | 26°53'35 | 26°46 | 20°13 | 14°19 | 10°44 | 25°25 | 6°21 | 28°15 | 27°17 | 4°25 | 28°28 |
| S 21 | 21 56 51 | 27°51'20 | 27°45 | 23°14 | 15°54 | 11°14 | 25°30 | 6°23 | 28°16 | 27°18 | 4°26 | 28°29 |
| S 22 | 22 0 48  | 28°49'06 | 28°45 | 26°19 | 17°29 | 11°43 | 25°36 | 6°25 | 28°16 | 27°18 | 4°26 | 28°30 |
| M 23 | 22 4 44  | 29°46'53 | 29°44 | 29°26 | 19° 4 | 12°13 | 25°41 | 6°27 | 28°17 | 27°19 | 4°26 | 28°30 |
| T 24 | 22 8 41  | 0♁44'41  | 0♁43  | 2♁37  | 20°39 | 12°42 | 25°47 | 6°29 | 28°18 | 27°19 | 4°27 | 28°31 |
| W 25 | 22 12 37 | 1°42'31  | 1°43  | 5°52  | 22°14 | 13°12 | 25°52 | 6°31 | 28°18 | 27°19 | 4°27 | 28°32 |
| T 26 | 22 16 34 | 2°40'22  | 2°43  | 9°10  | 23°48 | 13°41 | 25°58 | 6°33 | 28°19 | 27°20 | 4°27 | 28°33 |
| F 27 | 22 20 30 | 3°38'15  | 3°42  | 12°33 | 25°23 | 14°11 | 26° 3 | 6°35 | 28°20 | 27°20 | 4°28 | 28°33 |
| S 28 | 22 24 27 | 4°36'09  | 4°42  | 16° 1 | 26°58 | 14°40 | 26° 9 | 6°37 | 28°20 | 27°20 | 4°28 | 28°34 |
| S 29 | 22 28 23 | 5°34'05  | 5°41  | 19°34 | 28°33 | 15°10 | 26°14 | 6°39 | 28°21 | 27°21 | 4°28 | 28°35 |
| M 30 | 22 32 20 | 6°32'03  | 6°40  | 23°12 | 0♁ 8  | 15°40 | 26°20 | 6°41 | 28°21 | 27°21 | 4°29 | 28°36 |
| T 31 | 22 36 16 | 7♁30'03  | 7♁38  | 26♁56 | 1♁43  | 16♁10 | 26♁25 | 6♁43 | 28♁22 | 27♁21 | 4♁29 | 28♁36 |

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**SWISS EPHEMERIS for the year 2010**  
**heliocentric**

**SEPTEMBER 2010**

**00:00 UT**

| Day  | Sid.t    | Terra    | ☾     | ♃     | ♄     | ♅     | ♆     | ♁    | ♂     | ♆     | ♁    | ♄     | ♃ | ♅ |
|------|----------|----------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|---|---|
| W 1  | 22 40 13 | 8°28'05  | 8°37  | 0°45  | 3°18  | 16°40 | 26°31 | 6°45 | 28°23 | 27°22 | 4°29 | 28°37 |   |   |
| T 2  | 22 44 10 | 9°26'08  | 9°35  | 4°42  | 4°52  | 17°10 | 26°36 | 6°47 | 28°23 | 27°22 | 4°30 | 28°38 |   |   |
| F 3  | 22 48 6  | 10°24'14 | 10°33 | 8°45  | 6°27  | 17°39 | 26°42 | 6°49 | 28°24 | 27°23 | 4°30 | 28°39 |   |   |
| S 4  | 22 52 3  | 11°22'22 | 11°30 | 12°56 | 8° 2  | 18° 9 | 26°47 | 6°51 | 28°25 | 27°23 | 4°30 | 28°39 |   |   |
| S 5  | 22 55 59 | 12°20'31 | 12°27 | 17°14 | 9°37  | 18°40 | 26°53 | 6°53 | 28°25 | 27°23 | 4°31 | 28°40 |   |   |
| M 6  | 22 59 56 | 13°18'43 | 13°23 | 21°40 | 11°12 | 19°10 | 26°58 | 6°55 | 28°26 | 27°24 | 4°31 | 28°41 |   |   |
| T 7  | 23 3 52  | 14°16'56 | 14°20 | 26°14 | 12°47 | 19°40 | 27° 4 | 6°57 | 28°27 | 27°24 | 4°31 | 28°42 |   |   |
| W 8  | 23 7 49  | 15°15'11 | 15°16 | 0°57  | 14°22 | 20°10 | 27° 9 | 6°59 | 28°27 | 27°24 | 4°32 | 28°42 |   |   |
| T 9  | 23 11 45 | 16°13'28 | 16°12 | 5°48  | 15°57 | 20°40 | 27°15 | 7° 1 | 28°28 | 27°25 | 4°32 | 28°43 |   |   |
| F 10 | 23 15 42 | 17°11'47 | 17° 9 | 10°49 | 17°32 | 21°10 | 27°20 | 7° 3 | 28°29 | 27°25 | 4°33 | 28°44 |   |   |
| S 11 | 23 19 39 | 18°10'07 | 18° 5 | 15°59 | 19° 6 | 21°41 | 27°26 | 7° 5 | 28°29 | 27°25 | 4°33 | 28°45 |   |   |
| S 12 | 23 23 35 | 19° 8'29 | 19° 2 | 21°17 | 20°41 | 22°11 | 27°31 | 7° 7 | 28°30 | 27°26 | 4°33 | 28°45 |   |   |
| M 13 | 23 27 32 | 20° 6'52 | 19°59 | 26°45 | 22°16 | 22°42 | 27°37 | 7° 9 | 28°31 | 27°26 | 4°34 | 28°46 |   |   |
| T 14 | 23 31 28 | 21° 5'18 | 20°57 | 2°22  | 23°51 | 23°12 | 27°42 | 7°11 | 28°31 | 27°26 | 4°34 | 28°47 |   |   |
| W 15 | 23 35 25 | 22° 3'44 | 21°55 | 8° 7  | 25°26 | 23°43 | 27°48 | 7°13 | 28°32 | 27°27 | 4°34 | 28°48 |   |   |
| T 16 | 23 39 21 | 23° 2'13 | 22°53 | 14° 0 | 27° 1 | 24°13 | 27°53 | 7°15 | 28°32 | 27°27 | 4°35 | 28°48 |   |   |
| F 17 | 23 43 18 | 24° 0'43 | 23°52 | 20° 0 | 28°36 | 24°44 | 27°58 | 7°17 | 28°33 | 27°28 | 4°35 | 28°49 |   |   |
| S 18 | 23 47 14 | 24°59'14 | 24°51 | 26° 7 | 0°11  | 25°15 | 28° 4 | 7°19 | 28°34 | 27°28 | 4°35 | 28°50 |   |   |
| S 19 | 23 51 11 | 25°57'48 | 25°51 | 2°11  | 1°46  | 25°45 | 28° 9 | 7°21 | 28°34 | 27°28 | 4°36 | 28°51 |   |   |
| M 20 | 23 55 8  | 26°56'22 | 26°51 | 8°34  | 3°22  | 26°16 | 28°15 | 7°23 | 28°35 | 27°29 | 4°36 | 28°51 |   |   |
| T 21 | 23 59 4  | 27°54'59 | 27°51 | 14°52 | 4°57  | 26°47 | 28°20 | 7°25 | 28°36 | 27°29 | 4°36 | 28°52 |   |   |
| W 22 | 0 3 1    | 28°53'37 | 28°51 | 21°11 | 6°32  | 27°18 | 28°26 | 7°27 | 28°36 | 27°29 | 4°37 | 28°53 |   |   |
| T 23 | 0 6 57   | 29°52'18 | 29°52 | 27°30 | 8° 7  | 27°49 | 28°31 | 7°29 | 28°37 | 27°30 | 4°37 | 28°54 |   |   |
| F 24 | 0 10 54  | 0°51'00  | 0°52  | 35°47 | 9°42  | 28°20 | 28°37 | 7°31 | 28°38 | 27°30 | 4°37 | 28°54 |   |   |
| S 25 | 0 14 50  | 1°49'44  | 1°53  | 10° 1 | 11°17 | 28°51 | 28°42 | 7°33 | 28°38 | 27°30 | 4°38 | 28°55 |   |   |
| S 26 | 0 18 47  | 2°48'31  | 2°53  | 16° 9 | 12°52 | 29°22 | 28°48 | 7°35 | 28°39 | 27°31 | 4°38 | 28°56 |   |   |
| M 27 | 0 22 43  | 3°47'19  | 3°53  | 22°12 | 14°27 | 29°53 | 28°53 | 7°37 | 28°40 | 27°31 | 4°38 | 28°57 |   |   |
| T 28 | 0 26 40  | 4°46'10  | 4°53  | 28° 8 | 16° 3 | 0°24  | 28°59 | 7°39 | 28°40 | 27°32 | 4°39 | 28°57 |   |   |
| W 29 | 0 30 37  | 5°45'03  | 5°53  | 3°56  | 17°38 | 0°56  | 29° 4 | 7°41 | 28°41 | 27°32 | 4°39 | 28°58 |   |   |
| T 30 | 0 34 33  | 6°43'58  | 6°52  | 9°36  | 19°13 | 1°27  | 29°10 | 7°43 | 28°41 | 27°33 | 4°39 | 28°59 |   |   |

Delta T = 66.24 sec.

**OCTOBER 2010**

**00:00 UT**

| Day  | Sid.t   | Terra    | ☾     | ♃     | ♄     | ♅     | ♆     | ♁    | ♂     | ♆     | ♁    | ♄     | ♃ | ♅ |
|------|---------|----------|-------|-------|-------|-------|-------|------|-------|-------|------|-------|---|---|
| F 1  | 0 38 30 | 7°42'55  | 7°52  | 15° 6 | 20°48 | 1°58  | 29°15 | 7°45 | 28°42 | 27°33 | 4°40 | 29° 0 |   |   |
| S 2  | 0 42 26 | 8°41'55  | 8°50  | 20°27 | 22°24 | 2°30  | 29°21 | 7°47 | 28°43 | 27°33 | 4°40 | 29° 0 |   |   |
| S 3  | 0 46 23 | 9°40'58  | 9°49  | 25°38 | 23°59 | 3° 1  | 29°26 | 7°49 | 28°43 | 27°33 | 4°40 | 29° 1 |   |   |
| M 4  | 0 50 19 | 10°40'02 | 10°47 | 0°39  | 25°34 | 3°33  | 29°32 | 7°51 | 28°44 | 27°34 | 4°41 | 29° 2 |   |   |
| T 5  | 0 54 16 | 11°39'09 | 11°44 | 5°31  | 27°10 | 4° 4  | 29°37 | 7°53 | 28°45 | 27°34 | 4°41 | 29° 3 |   |   |
| W 6  | 0 58 12 | 12°38'18 | 12°42 | 10°13 | 28°45 | 4°36  | 29°43 | 7°55 | 28°45 | 27°34 | 4°41 | 29° 3 |   |   |
| T 7  | 1 2 9   | 13°37'29 | 13°39 | 14°47 | 0°21  | 5° 8  | 29°48 | 7°57 | 28°46 | 27°35 | 4°42 | 29° 4 |   |   |
| F 8  | 1 6 6   | 14°36'42 | 14°36 | 19°11 | 1°56  | 5°39  | 29°54 | 7°59 | 28°47 | 27°35 | 4°42 | 29° 5 |   |   |
| S 9  | 1 10 2  | 15°35'57 | 15°34 | 23°27 | 3°32  | 6°11  | 29°59 | 8° 1 | 28°47 | 27°36 | 4°42 | 29° 6 |   |   |
| S 10 | 1 13 59 | 16°35'14 | 16°31 | 27°36 | 5° 7  | 6°43  | 0° 5  | 8° 3 | 28°48 | 27°36 | 4°43 | 29° 6 |   |   |
| M 11 | 1 17 55 | 17°34'33 | 17°29 | 1°36  | 6°43  | 7°15  | 0°10  | 8° 5 | 28°49 | 27°36 | 4°43 | 29° 7 |   |   |
| T 12 | 1 21 52 | 18°33'54 | 18°27 | 5°30  | 8°18  | 7°47  | 0°16  | 8° 7 | 28°49 | 27°37 | 4°43 | 29° 8 |   |   |
| W 13 | 1 25 48 | 19°33'17 | 19°25 | 9°17  | 9°54  | 8°19  | 0°21  | 8° 9 | 28°50 | 27°37 | 4°44 | 29° 9 |   |   |
| T 14 | 1 29 45 | 20°32'42 | 20°24 | 12°58 | 11°29 | 8°51  | 0°27  | 8°11 | 28°50 | 27°37 | 4°44 | 29° 9 |   |   |
| F 15 | 1 33 41 | 21°32'08 | 21°23 | 16°32 | 13° 5 | 9°23  | 0°32  | 8°13 | 28°51 | 27°38 | 4°45 | 29°10 |   |   |
| S 16 | 1 37 38 | 22°31'36 | 22°23 | 20° 2 | 14°40 | 9°55  | 0°38  | 8°15 | 28°52 | 27°38 | 4°45 | 29°11 |   |   |
| S 17 | 1 41 35 | 23°31'06 | 23°23 | 23°26 | 16°16 | 10°28 | 0°43  | 8°17 | 28°52 | 27°38 | 4°45 | 29°12 |   |   |
| M 18 | 1 45 31 | 24°30'37 | 24°23 | 26°46 | 17°52 | 11° 0 | 0°49  | 8°19 | 28°53 | 27°39 | 4°46 | 29°12 |   |   |
| T 19 | 1 49 28 | 25°30'10 | 25°24 | 0°11  | 19°27 | 11°32 | 0°54  | 8°21 | 28°54 | 27°39 | 4°46 | 29°13 |   |   |
| W 20 | 1 53 24 | 26°29'45 | 26°25 | 3°13  | 21° 3 | 12° 5 | 1° 0  | 8°23 | 28°54 | 27°40 | 4°46 | 29°14 |   |   |
| T 21 | 1 57 21 | 27°29'22 | 27°26 | 6°21  | 22°39 | 12°37 | 1° 5  | 8°25 | 28°55 | 27°40 | 4°47 | 29°15 |   |   |
| F 22 | 2 1 17  | 28°29'01 | 28°27 | 9°25  | 24°15 | 13°10 | 1°11  | 8°27 | 28°56 | 27°40 | 4°47 | 29°15 |   |   |
| S 23 | 2 5 14  | 29°28'42 | 29°29 | 12°27 | 25°50 | 13°42 | 1°16  | 8°29 | 28°56 | 27°41 | 4°47 | 29°16 |   |   |
| S 24 | 2 9 10  | 0°28'24  | 0°30  | 15°25 | 27°26 | 14°15 | 1°22  | 8°31 | 28°57 | 27°41 | 4°48 | 29°17 |   |   |
| M 25 | 2 13 7  | 1°28'09  | 1°32  | 18°21 | 29° 2 | 14°48 | 1°27  | 8°33 | 28°58 | 27°41 | 4°48 | 29°18 |   |   |
| T 26 | 2 17 3  | 2°27'56  | 2°33  | 21°16 | 0°38  | 15°20 | 1°33  | 8°35 | 28°58 | 27°42 | 4°48 | 29°18 |   |   |
| W 27 | 2 21 0  | 3°27'45  | 3°34  | 24° 8 | 2°14  | 15°53 | 1°38  | 8°37 | 28°59 | 27°42 | 4°49 | 29°19 |   |   |
| T 28 | 2 24 57 | 4°27'37  | 4°35  | 26°58 | 3°50  | 16°26 | 1°44  | 8°39 | 29° 0 | 27°42 | 4°49 | 29°20 |   |   |
| F 29 | 2 28 53 | 5°27'30  | 5°36  | 29°47 | 5°26  | 16°59 | 1°49  | 8°41 | 29° 0 | 27°43 | 4°49 | 29°21 |   |   |
| S 30 | 2 32 50 | 6°27'26  | 6°36  | 2°35  | 7° 2  | 17°32 | 1°55  | 8°43 | 29° 1 | 27°43 | 4°50 | 29°21 |   |   |
| S 31 | 2 36 46 | 7°27'23  | 7°36  | 5°21  | 8°38  | 18° 5 | 2° 0  | 8°45 | 29° 1 | 27°44 | 4°50 | 29°22 |   |   |

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SWISS EPHEMERIS for the year 2010  
heliocentric

NOVEMBER 2010

00:00 UT

| Day  | Sid.t   | Terra    | ☾     | ♄     | ♅     | ♆     | ♁    | ♂    | ♃     | ♅     | ♁    | ♄     |
|------|---------|----------|-------|-------|-------|-------|------|------|-------|-------|------|-------|
| M 1  | 2 40 43 | 8♂27'23  | 8♂35  | 8♂7 7 | 10♂14 | 18♂38 | 2♂6  | 8♂47 | 29♂2  | 27♂44 | 4♂50 | 29♂23 |
| T 2  | 2 44 39 | 9°27'25  | 9°35  | 10°52 | 11°50 | 19°11 | 2°11 | 8°49 | 29°3  | 27°44 | 4°51 | 29°24 |
| W 3  | 2 48 36 | 10°27'30 | 10°33 | 13°37 | 13°26 | 19°45 | 2°17 | 8°51 | 29°3  | 27°45 | 4°51 | 29°24 |
| T 4  | 2 52 32 | 11°27'36 | 11°32 | 16°22 | 15°2  | 20°18 | 2°22 | 8°53 | 29°4  | 27°45 | 4°51 | 29°25 |
| F 5  | 2 56 29 | 12°27'44 | 12°30 | 19°7  | 16°38 | 20°51 | 2°28 | 8°55 | 29°5  | 27°45 | 4°52 | 29°26 |
| S 6  | 3 0 26  | 13°27'54 | 13°28 | 21°51 | 18°14 | 21°25 | 2°33 | 8°57 | 29°5  | 27°46 | 4°52 | 29°27 |
| S 7  | 3 4 22  | 14°28'07 | 14°27 | 24°37 | 19°51 | 21°58 | 2°39 | 8°59 | 29°6  | 27°46 | 4°52 | 29°27 |
| M 8  | 3 8 19  | 15°28'21 | 15°25 | 27°23 | 21°27 | 22°32 | 2°44 | 9°1  | 29°7  | 27°46 | 4°53 | 29°28 |
| T 9  | 3 12 15 | 16°28'36 | 16°23 | 0♂10  | 23°3  | 23°5  | 2°50 | 9°3  | 29°7  | 27°47 | 4°53 | 29°29 |
| W10  | 3 16 12 | 17°28'53 | 17°22 | 2°57  | 24°39 | 23°39 | 2°55 | 9°5  | 29°8  | 27°47 | 4°53 | 29°30 |
| T 11 | 3 20 8  | 18°29'12 | 18°21 | 5°47  | 26°16 | 24°12 | 3°1  | 9°7  | 29°9  | 27°48 | 4°54 | 29°30 |
| F 12 | 3 24 5  | 19°29'32 | 19°21 | 8°37  | 27°52 | 24°46 | 3°6  | 9°9  | 29°9  | 27°48 | 4°54 | 29°31 |
| S 13 | 3 28 2  | 20°29'54 | 20°21 | 11°29 | 29°29 | 25°20 | 3°12 | 9°11 | 29°10 | 27°48 | 4°54 | 29°32 |
| S 14 | 3 31 58 | 21°30'16 | 21°21 | 14°24 | 1♂5   | 25°54 | 3°17 | 9°13 | 29°10 | 27°49 | 4°55 | 29°33 |
| M15  | 3 35 55 | 22°30'41 | 22°22 | 17°20 | 2°41  | 26°28 | 3°23 | 9°15 | 29°11 | 27°49 | 4°55 | 29°33 |
| T 16 | 3 39 51 | 23°31'06 | 23°23 | 20°19 | 4°18  | 27°2  | 3°28 | 9°17 | 29°12 | 27°49 | 4°55 | 29°34 |
| W17  | 3 43 48 | 24°31'33 | 24°24 | 23°20 | 5°54  | 27°36 | 3°34 | 9°19 | 29°12 | 27°50 | 4°56 | 29°35 |
| T 18 | 3 47 44 | 25°32'01 | 25°26 | 26°25 | 7°31  | 28°10 | 3°39 | 9°21 | 29°13 | 27°50 | 4°56 | 29°36 |
| F 19 | 3 51 41 | 26°32'31 | 26°28 | 29°32 | 9°7   | 28°44 | 3°45 | 9°23 | 29°14 | 27°50 | 4°56 | 29°36 |
| S 20 | 3 55 37 | 27°33'02 | 27°30 | 2♂43  | 10°44 | 29°18 | 3°50 | 9°25 | 29°14 | 27°51 | 4°57 | 29°37 |
| S 21 | 3 59 34 | 28°33'35 | 28°32 | 5°58  | 12°21 | 29°52 | 3°56 | 9°27 | 29°15 | 27°51 | 4°57 | 29°38 |
| M22  | 4 3 30  | 29°34'09 | 29°35 | 9°16  | 13°57 | 0♂27  | 4°1  | 9°29 | 29°16 | 27°52 | 4°58 | 29°39 |
| T 23 | 4 7 27  | 0♂34'44  | 0♂37  | 12°40 | 15°34 | 1°1   | 4°7  | 9°31 | 29°16 | 27°52 | 4°58 | 29°39 |
| W24  | 4 11 24 | 1°35'21  | 1°39  | 16°7  | 17°11 | 1°36  | 4°12 | 9°33 | 29°17 | 27°52 | 4°58 | 29°40 |
| T 25 | 4 15 20 | 2°36'00  | 2°42  | 19°40 | 18°47 | 2°10  | 4°18 | 9°35 | 29°18 | 27°53 | 4°59 | 29°41 |
| F 26 | 4 19 17 | 3°36'40  | 3°44  | 23°19 | 20°24 | 2°45  | 4°23 | 9°37 | 29°18 | 27°53 | 4°59 | 29°42 |
| S 27 | 4 23 13 | 4°37'22  | 4°45  | 27°3  | 22°1  | 3°19  | 4°29 | 9°39 | 29°19 | 27°53 | 4°59 | 29°42 |
| S 28 | 4 27 10 | 5°38'05  | 5°47  | 0♂53  | 23°38 | 3°54  | 4°34 | 9°41 | 29°20 | 27°54 | 5°0  | 29°43 |
| M29  | 4 31 6  | 6°38'50  | 6°47  | 4°49  | 25°15 | 4°28  | 4°40 | 9°43 | 29°20 | 27°54 | 5°0  | 29°44 |
| T 30 | 4 35 3  | 7°39'36  | 7°48  | 8♂53  | 26♂51 | 5♂3   | 4♂45 | 9♂45 | 29♂21 | 27♂54 | 5♂0  | 29♂44 |

Delta T = 66.28 sec.

DECEMBER 2010

00:00 UT

| Day  | Sid.t   | Terra    | ☾     | ♄     | ♅     | ♆     | ♁    | ♂     | ♃     | ♅     | ♁    | ♄     |
|------|---------|----------|-------|-------|-------|-------|------|-------|-------|-------|------|-------|
| W 1  | 4 39 0  | 8♂40'24  | 8♂48  | 13♂3  | 28♂28 | 5♂38  | 4♂51 | 9♂47  | 29♂21 | 27♂55 | 5♂1  | 29♂45 |
| T 2  | 4 42 56 | 9°41'14  | 9°48  | 17°22 | 0♂5   | 6°13  | 4°56 | 9°49  | 29°22 | 27°55 | 5°1  | 29°46 |
| F 3  | 4 46 53 | 10°42'04 | 10°47 | 21°48 | 1°42  | 6°48  | 5°2  | 9°51  | 29°23 | 27°56 | 5°1  | 29°47 |
| S 4  | 4 50 49 | 11°42'57 | 11°46 | 26°22 | 3°19  | 7°23  | 5°7  | 9°53  | 29°23 | 27°56 | 5°2  | 29°47 |
| S 5  | 4 54 46 | 12°43'50 | 12°45 | 1♂6   | 4°56  | 7°58  | 5°13 | 9°55  | 29°24 | 27°56 | 5°2  | 29°48 |
| M 6  | 4 58 42 | 13°44'45 | 13°44 | 5°57  | 6°33  | 8°33  | 5°18 | 9°57  | 29°25 | 27°57 | 5°2  | 29°49 |
| T 7  | 5 2 39  | 14°45'41 | 14°43 | 10°58 | 8°10  | 9°8   | 5°24 | 9°59  | 29°25 | 27°57 | 5°3  | 29°50 |
| W 8  | 5 6 35  | 15°46'37 | 15°42 | 16°8  | 9°48  | 9°43  | 5°29 | 10°1  | 29°26 | 27°57 | 5°3  | 29°50 |
| T 9  | 5 10 32 | 16°47'35 | 16°42 | 21°27 | 11°25 | 10°19 | 5°35 | 10°3  | 29°27 | 27°58 | 5°3  | 29°51 |
| F 10 | 5 14 29 | 17°48'33 | 17°41 | 26°56 | 13°2  | 10°54 | 5°40 | 10°5  | 29°27 | 27°58 | 5°4  | 29°52 |
| S 11 | 5 18 25 | 18°49'32 | 18°41 | 2♂33  | 14°39 | 11°29 | 5°46 | 10°7  | 29°28 | 27°58 | 5°4  | 29°53 |
| S 12 | 5 22 22 | 19°50'32 | 19°42 | 8°18  | 16°16 | 12°5  | 5°51 | 10°9  | 29°29 | 27°59 | 5°4  | 29°53 |
| M13  | 5 26 18 | 20°51'32 | 20°42 | 14°11 | 17°54 | 12°40 | 5°57 | 10°10 | 29°29 | 27°59 | 5°5  | 29°54 |
| T 14 | 5 30 15 | 21°52'32 | 21°43 | 20°11 | 19°31 | 13°16 | 6°2  | 10°12 | 29°30 | 28°0  | 5°5  | 29°55 |
| W15  | 5 34 11 | 22°53'33 | 22°45 | 26°18 | 21°8  | 13°51 | 6°8  | 10°14 | 29°30 | 28°0  | 5°5  | 29°56 |
| T 16 | 5 38 8  | 23°54'35 | 23°46 | 2♂30  | 22°45 | 14°27 | 6°13 | 10°16 | 29°31 | 28°0  | 5°6  | 29°56 |
| F 17 | 5 42 4  | 24°55'37 | 24°48 | 8°45  | 24°23 | 15°2  | 6°19 | 10°18 | 29°32 | 28°1  | 5°6  | 29°57 |
| S 18 | 5 46 1  | 25°56'39 | 25°51 | 15°3  | 26°0  | 15°38 | 6°24 | 10°20 | 29°32 | 28°1  | 5°6  | 29°58 |
| S 19 | 5 49 58 | 26°57'43 | 26°53 | 21°23 | 27°37 | 16°14 | 6°30 | 10°22 | 29°33 | 28°1  | 5°7  | 29°59 |
| M20  | 5 53 54 | 27°58'46 | 27°56 | 27°42 | 29°15 | 16°50 | 6°35 | 10°24 | 29°34 | 28°2  | 5°7  | 29°59 |
| T 21 | 5 57 51 | 28°59'50 | 28°59 | 3♂59  | 0♂52  | 17°26 | 6°41 | 10°26 | 29°34 | 28°2  | 5°7  | 0♂0   |
| W22  | 6 1 47  | 0♂5'55   | 0♂2   | 10°12 | 2°30  | 18°2  | 6°46 | 10°28 | 29°35 | 28°2  | 5°8  | 0°1   |
| T 23 | 6 5 44  | 1°2'00   | 1°5   | 16°21 | 4°7   | 18°38 | 6°52 | 10°30 | 29°36 | 28°3  | 5°8  | 0°2   |
| F 24 | 6 9 40  | 2°3'06   | 2°8   | 22°24 | 5°45  | 19°14 | 6°57 | 10°32 | 29°36 | 28°3  | 5°8  | 0°2   |
| S 25 | 6 13 37 | 3°4'12   | 3°11  | 28°19 | 7°22  | 19°50 | 7°3  | 10°34 | 29°37 | 28°4  | 5°9  | 0°3   |
| S 26 | 6 17 33 | 4°5'18   | 4°13  | 4♂7   | 8°59  | 20°26 | 7°8  | 10°36 | 29°38 | 28°4  | 5°9  | 0°4   |
| M27  | 6 21 30 | 5°6'26   | 5°15  | 9°46  | 10°37 | 21°2  | 7°14 | 10°38 | 29°38 | 28°4  | 5°9  | 0°5   |
| T 28 | 6 25 27 | 6°7'34   | 6°16  | 15°16 | 12°14 | 21°38 | 7°19 | 10°40 | 29°39 | 28°5  | 5°10 | 0°5   |
| W29  | 6 29 23 | 7°8'42   | 7°17  | 20°36 | 13°52 | 22°14 | 7°25 | 10°42 | 29°40 | 28°5  | 5°10 | 0°6   |
| T 30 | 6 33 20 | 8°9'51   | 8°18  | 25°47 | 15°29 | 22°51 | 7°30 | 10°44 | 29°40 | 28°5  | 5°11 | 0°7   |
| F 31 | 6 37 16 | 9♂11'01  | 9♂18  | 0♂48  | 17♂7  | 23♂27 | 7♂36 | 10♂46 | 29♂41 | 28♂6  | 5♂11 | 0♂8   |

Delta T = 66.30 sec.

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