

# SWISS EPHEMERIS for the year 2082

## JANUARY 2082

00:00 UT

| Day  | Sid.t   | ☉         | ☽      | ♀      | ♂      | ♂      | ♂      | ♂      | ♂     | ♂     | ♂      | ♂     | ♂     | ♂      | ♂      |
|------|---------|-----------|--------|--------|--------|--------|--------|--------|-------|-------|--------|-------|-------|--------|--------|
| T 1  | 6 44 23 | 10°38'50  | 2°37   | 27°R58 | 13°358 | 21°M15 | 22°H 1 | 24°A25 | 8°A15 | 6°R57 | 14°Y16 | 7°R30 | 9°H 3 | 29°H52 | 15°R27 |
| F 2  | 6 48 20 | 12° 0'00  | 15° 9  | 27°357 | 15°13  | 21°53  | 22°10  | 24°31  | 8°19  | 6°L56 | 14°16  | 7°H25 | 9° 0  | 29°58  | 15°R26 |
| S 3  | 6 52 16 | 13° 1'10  | 27°25  | 27°44  | 16°29  | 22°32  | 22°19  | 24°37  | 8°22  | 6°54  | 14°17  | 7°23  | 8°57  | 0°Y 5  | 15°25  |
| S 4  | 6 56 13 | 14° 2'19  | 9°H27  | 27°19  | 17°44  | 23°11  | 22°28  | 24°43  | 8°25  | 6°52  | 14°17  | 7°D22 | 8°54  | 0°12   | 15°23  |
| M 5  | 7 0 9   | 15° 3'29  | 21°20  | 26°43  | 19° 0  | 23°50  | 22°38  | 24°49  | 8°28  | 6°51  | 14°17  | 7°23  | 8°51  | 0°18   | 15°22  |
| T 6  | 7 4 6   | 16° 4'38  | 3°Y 8  | 25°55  | 20°15  | 24°29  | 22°47  | 24°55  | 8°32  | 6°49  | 14°17  | 7°24  | 8°47  | 0°25   | 15°21  |
| W 7  | 7 8 2   | 17° 5'47  | 14°57  | 24°57  | 21°31  | 25° 7  | 22°57  | 25° 1  | 8°35  | 6°48  | 14°17  | 7°R25 | 8°44  | 0°32   | 15°20  |
| T 8  | 7 11 59 | 18° 6'56  | 26°52  | 23°50  | 22°46  | 25°46  | 23° 7  | 25° 8  | 8°38  | 6°46  | 14°17  | 7°24  | 8°41  | 0°38   | 15°19  |
| F 9  | 7 15 56 | 19° 8'04  | 8°B58  | 22°36  | 24° 2  | 26°25  | 23°17  | 25°14  | 8°42  | 6°45  | 14°18  | 7°22  | 8°38  | 0°45   | 15°18  |
| S 10 | 7 19 52 | 20° 9'12  | 21°20  | 21°18  | 25°17  | 27° 4  | 23°27  | 25°20  | 8°45  | 6°43  | 14°18  | 7°18  | 8°35  | 0°52   | 15°17  |
| S 11 | 7 23 49 | 21°10'20  | 4°II 1 | 19°58  | 26°32  | 27°43  | 23°37  | 25°27  | 8°48  | 6°41  | 14°18  | 7°11  | 8°32  | 0°58   | 15°16  |
| M 12 | 7 27 45 | 22°11'27  | 17° 5  | 18°38  | 27°48  | 28°21  | 23°47  | 25°33  | 8°52  | 6°40  | 14°19  | 7° 4  | 8°28  | 1° 5   | 15°16  |
| T 13 | 7 31 42 | 23°12'33  | 0°B32  | 17°22  | 29° 3  | 29° 0  | 23°58  | 25°40  | 8°55  | 6°38  | 14°19  | 6°56  | 8°25  | 1°12   | 15°15  |
| W 14 | 7 35 38 | 24°13'39  | 14°20  | 16°10  | 0°A19  | 29°39  | 24° 8  | 25°46  | 8°59  | 6°37  | 14°19  | 6°49  | 8°22  | 1°18   | 15°14  |
| T 15 | 7 39 35 | 25°14'45  | 28°27  | 15° 6  | 1°34   | 0°A18  | 24°19  | 25°53  | 9° 2  | 6°35  | 14°20  | 6°42  | 8°19  | 1°25   | 15°14  |
| F 16 | 7 43 32 | 26°15'51  | 12°L47 | 14°10  | 2°50   | 0°57   | 24°29  | 25°59  | 9° 5  | 6°33  | 14°20  | 6°38  | 8°16  | 1°32   | 15°13  |
| S 17 | 7 47 28 | 27°16'55  | 27°14  | 13°23  | 4° 5   | 1°36   | 24°40  | 26° 6  | 9° 9  | 6°32  | 14°21  | 6°36  | 8°13  | 1°38   | 15°13  |
| S 18 | 7 51 25 | 28°18'00  | 11°M44 | 12°45  | 5°20   | 2°14   | 24°51  | 26°13  | 9°12  | 6°30  | 14°21  | 6°D36 | 8° 9  | 1°45   | 15°12  |
| M 19 | 7 55 21 | 29°19'04  | 26°11  | 12°17  | 6°36   | 2°53   | 25° 2  | 26°19  | 9°16  | 6°28  | 14°22  | 6°37  | 8° 6  | 1°52   | 15°12  |
| T 20 | 7 59 18 | 0°A20'08  | 10°A31 | 11°58  | 7°51   | 3°32   | 25°13  | 26°26  | 9°19  | 6°27  | 14°22  | 6°38  | 8° 3  | 1°58   | 15°12  |
| W 21 | 8 3 14  | 1°21'12   | 24°42  | 11°49  | 9° 6   | 4°11   | 25°25  | 26°33  | 9°23  | 6°25  | 14°23  | 6°39  | 8° 0  | 2° 5   | 15°12  |
| T 22 | 8 7 11  | 2°22'15   | 8°M43  | 11°D48 | 10°22  | 4°50   | 25°36  | 26°40  | 9°26  | 6°23  | 14°23  | 6°R39 | 7°57  | 2°12   | 15°11  |
| F 23 | 8 11 7  | 3°23'18   | 22°32  | 11°55  | 11°37  | 5°29   | 25°48  | 26°47  | 9°30  | 6°22  | 14°24  | 6°38  | 7°53  | 2°18   | 15°11  |
| S 24 | 8 15 4  | 4°24'21   | 6°A 8  | 12° 9  | 12°52  | 6° 7   | 25°59  | 26°53  | 9°33  | 6°20  | 14°24  | 6°35  | 7°50  | 2°25   | 15°D11 |
| S 25 | 8 19 1  | 5°25'24   | 19°33  | 12°30  | 14° 8  | 6°46   | 26°11  | 27° 0  | 9°37  | 6°18  | 14°25  | 6°30  | 7°47  | 2°32   | 15°11  |
| M 26 | 8 22 57 | 6°26'25   | 2°B45  | 12°58  | 15°23  | 7°25   | 26°22  | 27° 7  | 9°40  | 6°16  | 14°26  | 6°25  | 7°44  | 2°38   | 15°11  |
| T 27 | 8 26 54 | 7°27'27   | 15°44  | 13°31  | 16°38  | 8° 4   | 26°34  | 27°14  | 9°44  | 6°15  | 14°26  | 6°20  | 7°41  | 2°45   | 15°12  |
| W 28 | 8 30 50 | 8°28'27   | 28°30  | 14° 9  | 17°54  | 8°43   | 26°46  | 27°21  | 9°47  | 6°13  | 14°27  | 6°16  | 7°38  | 2°52   | 15°12  |
| T 29 | 8 34 47 | 9°29'27   | 11°A 2 | 14°52  | 19° 9  | 9°22   | 26°58  | 27°28  | 9°51  | 6°11  | 14°28  | 6°12  | 7°34  | 2°58   | 15°12  |
| F 30 | 8 38 43 | 10°30'25  | 23°21  | 15°39  | 20°24  | 10° 0  | 27°10  | 27°35  | 9°54  | 6°10  | 14°28  | 6°10  | 7°31  | 3° 5   | 15°13  |
| S 31 | 8 42 40 | 11°A31'23 | 5°H29  | 16°B30 | 21°A39 | 10°A39 | 27°H23 | 27°A42 | 9°A58 | 6°L 8 | 14°Y29 | 6°D 9 | 7°H28 | 3°Y11  | 15°B13 |

Delta T = 180.68 sec.

## FEBRUARY 2082

00:00 UT

| Day  | Sid.t    | ☉         | ☽       | ♀      | ♂      | ♂      | ♂      | ♂      | ♂      | ♂     | ♂      | ♂     | ♂     | ♂     | ♂      |
|------|----------|-----------|---------|--------|--------|--------|--------|--------|--------|-------|--------|-------|-------|-------|--------|
| S 1  | 8 46 36  | 12°A32'19 | 17°H27  | 17°B25 | 22°A55 | 11°A18 | 27°H35 | 27°A50 | 10°A 1 | 6°R 6 | 14°Y30 | 6°H10 | 7°H25 | 3°Y18 | 15°B13 |
| M 2  | 8 50 33  | 13°33'14  | 29°19   | 18°23  | 24°10  | 11°57  | 27°47  | 27°57  | 10° 5  | 6°L 5 | 14°31  | 6°11  | 7°22  | 3°25  | 15°14  |
| T 3  | 8 54 30  | 14°34'08  | 11°Y 7  | 19°23  | 25°25  | 12°36  | 28° 0  | 28° 4  | 10° 8  | 6° 3  | 14°32  | 6°13  | 7°19  | 3°31  | 15°15  |
| W 4  | 8 58 26  | 15°35'01  | 22°55   | 20°26  | 26°40  | 13°15  | 28°12  | 28°11  | 10°12  | 6° 1  | 14°32  | 6°15  | 7°15  | 3°38  | 15°15  |
| T 5  | 9 2 23   | 16°35'53  | 4°B49   | 21°32  | 27°56  | 13°53  | 28°25  | 28°18  | 10°15  | 6° 0  | 14°33  | 6°16  | 7°12  | 3°45  | 15°16  |
| F 6  | 9 6 19   | 17°36'43  | 16°53   | 22°40  | 29°11  | 14°32  | 28°37  | 28°25  | 10°19  | 5°58  | 14°34  | 6°R16 | 7° 9  | 3°51  | 15°17  |
| S 7  | 9 10 16  | 18°37'32  | 29°12   | 23°50  | 0°H26  | 15°11  | 28°50  | 28°32  | 10°22  | 5°56  | 14°35  | 6°16  | 7° 6  | 3°58  | 15°18  |
| S 8  | 9 14 12  | 19°38'19  | 11°II50 | 25° 1  | 1°41   | 15°50  | 29° 3  | 28°40  | 10°26  | 5°55  | 14°36  | 6°15  | 7° 3  | 4° 5  | 15°19  |
| M 9  | 9 18 9   | 20°39'05  | 24°52   | 26°15  | 2°56   | 16°28  | 29°16  | 28°47  | 10°29  | 5°53  | 14°37  | 6°13  | 6°59  | 4°11  | 15°20  |
| T 10 | 9 22 5   | 21°39'49  | 8°B19   | 27°30  | 4°11   | 17° 7  | 29°29  | 28°54  | 10°33  | 5°51  | 14°38  | 6°11  | 6°56  | 4°18  | 15°21  |
| W 11 | 9 26 2   | 22°40'32  | 22°12   | 28°47  | 5°26   | 17°46  | 29°42  | 29° 1  | 10°36  | 5°50  | 14°39  | 6° 9  | 6°53  | 4°25  | 15°22  |
| T 12 | 9 29 59  | 23°41'13  | 6°L29   | 0°A 5  | 6°41   | 18°25  | 29°55  | 29° 9  | 10°40  | 5°48  | 14°40  | 6° 8  | 6°50  | 4°31  | 15°23  |
| F 13 | 9 33 55  | 24°41'53  | 21° 6   | 1°25   | 7°56   | 19° 3  | 0°Y 8  | 29°16  | 10°43  | 5°47  | 14°41  | 6° 7  | 6°47  | 4°38  | 15°24  |
| S 14 | 9 37 52  | 25°42'32  | 5°M57   | 2°46   | 9°11   | 19°42  | 0°21   | 29°23  | 10°47  | 5°45  | 14°42  | 6°D 6 | 6°44  | 4°45  | 15°25  |
| S 15 | 9 41 48  | 26°43'09  | 20°53   | 4° 8   | 10°26  | 20°21  | 0°35   | 29°30  | 10°50  | 5°43  | 14°43  | 6° 6  | 6°40  | 4°51  | 15°27  |
| M 16 | 9 45 45  | 27°43'45  | 5°L47   | 5°31   | 11°41  | 21° 0  | 0°48   | 29°38  | 10°53  | 5°42  | 14°44  | 6° 7  | 6°37  | 4°58  | 15°28  |
| T 17 | 9 49 41  | 28°44'19  | 20°32   | 6°55   | 12°56  | 21°38  | 1° 1   | 29°45  | 10°57  | 5°40  | 14°45  | 6° 8  | 6°34  | 5° 5  | 15°30  |
| W 18 | 9 53 38  | 29°44'53  | 5°M 2   | 8°21   | 14°11  | 22°17  | 1°15   | 29°52  | 11° 0  | 5°39  | 14°46  | 6° 8  | 6°31  | 5°11  | 15°31  |
| T 19 | 9 57 34  | 0°H45'25  | 19°12   | 9°48   | 15°26  | 22°56  | 1°28   | 29°59  | 11° 4  | 5°37  | 14°47  | 6° 9  | 6°28  | 5°18  | 15°33  |
| F 20 | 10 1 31  | 1°45'56   | 3°A 3   | 11°15  | 16°41  | 23°34  | 1°42   | 0°H 7  | 11° 7  | 5°36  | 14°48  | 6°R 9 | 6°25  | 5°25  | 15°34  |
| S 21 | 10 5 28  | 2°46'26   | 16°33   | 12°44  | 17°56  | 24°13  | 1°55   | 0°14   | 11°10  | 5°34  | 14°49  | 6° 9  | 6°21  | 5°31  | 15°36  |
| S 22 | 10 9 24  | 3°46'54   | 29°44   | 14°14  | 19°11  | 24°52  | 2° 9   | 0°21   | 11°14  | 5°33  | 14°50  | 6° 9  | 6°18  | 5°38  | 15°38  |
| M 23 | 10 13 21 | 4°47'22   | 12°B38  | 15°45  | 20°25  | 25°31  | 2°23   | 0°28   | 11°17  | 5°31  | 14°51  | 6° 8  | 6°15  | 5°45  | 15°39  |
| T 24 | 10 17 17 | 5°47'47   | 25°17   | 17°17  | 21°40  | 26° 9  | 2°37   | 0°36   | 11°20  | 5°30  | 14°52  | 6°D 8 | 6°12  | 5°51  | 15°41  |
| W 25 | 10 21 14 | 6°48'12   | 7°A42   | 18°50  | 22°55  | 26°48  | 2°50   | 0°43   | 11°23  | 5°29  | 14°54  | 6° 8  | 6° 9  | 5°58  | 15°43  |
| T 26 | 10 25 10 | 7°48'35   | 19°57   | 20°24  | 24°10  | 27°27  | 3° 4   | 0°50   | 11°27  | 5°27  | 14°55  | 6° 8  | 6° 5  | 6° 5  | 15°45  |
| F 27 | 10 29 7  | 8°48'56   | 2°H 3   | 21°58  | 25°24  | 28° 5  | 3°18   | 0°57   | 11°30  | 5°26  | 14°56  | 6°R 8 | 6° 2  | 6°11  | 15°47  |
| S 28 | 10 33 3  | 9°H49'15  | 14°H 1  | 23°A34 | 26°H39 | 28°A44 | 3°Y32  | 1°H 5  | 11°A33 | 5°L25 | 14°Y57 | 6°H 8 | 5°H59 | 6°Y18 | 15°B49 |

Delta T = 180.84 sec.

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# SWISS EPHEMERIS for the year 2082

## MARCH 2082

00:00 UT

| Day  | Sid.t    | ☉                      | ☽                   | ♀                   | ♂                   | ♂                   | ♂                   | ♂                  | ♂                   | ♂                  | ♂                   | ♂                  | ♂                  | ♂                  | ♂                   |
|------|----------|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|--------------------|--------------------|---------------------|
| S 1  | 10 37 0  | 10 <sup>h</sup> 49'33" | 25 <sup>h</sup> 53' | 25 <sup>h</sup> 11' | 27 <sup>h</sup> 54' | 29 <sup>h</sup> 22' | 3 <sup>h</sup> 46'  | 1 <sup>h</sup> 12' | 11 <sup>h</sup> 36' | 5 <sup>h</sup> 23' | 14 <sup>h</sup> 58' | 6 <sup>h</sup> 8'  | 5 <sup>h</sup> 56' | 6 <sup>h</sup> 25' | 15 <sup>h</sup> 51' |
| M 2  | 10 40 57 | 11 <sup>h</sup> 49'49" | 7 <sup>h</sup> 43'  | 26 <sup>h</sup> 49' | 29 <sup>h</sup> 8'  | 0 <sup>h</sup> 31'  | 4 <sup>h</sup> 0'   | 1 <sup>h</sup> 19' | 11 <sup>h</sup> 39' | 5 <sup>h</sup> 22' | 15 <sup>h</sup> 0'  | 6 <sup>h</sup> 8'  | 5 <sup>h</sup> 53' | 6 <sup>h</sup> 31' | 15 <sup>h</sup> 54' |
| T 3  | 10 44 53 | 12 <sup>h</sup> 50'03" | 19 <sup>h</sup> 31' | 28 <sup>h</sup> 28' | 0 <sup>h</sup> 23'  | 0 <sup>h</sup> 39'  | 4 <sup>h</sup> 14'  | 1 <sup>h</sup> 26' | 11 <sup>h</sup> 43' | 5 <sup>h</sup> 21' | 15 <sup>h</sup> 1'  | 6 <sup>h</sup> 7'  | 5 <sup>h</sup> 50' | 6 <sup>h</sup> 38' | 15 <sup>h</sup> 56' |
| W 4  | 10 48 50 | 13 <sup>h</sup> 50'15" | 1 <sup>h</sup> 21'  | 0 <sup>h</sup> 8'   | 1 <sup>h</sup> 38'  | 1 <sup>h</sup> 18'  | 4 <sup>h</sup> 28'  | 1 <sup>h</sup> 33' | 11 <sup>h</sup> 46' | 5 <sup>h</sup> 19' | 15 <sup>h</sup> 2'  | 6 <sup>h</sup> 6'  | 5 <sup>h</sup> 46' | 6 <sup>h</sup> 45' | 15 <sup>h</sup> 58' |
| T 5  | 10 52 46 | 14 <sup>h</sup> 50'25" | 13 <sup>h</sup> 16' | 1 <sup>h</sup> 49'  | 2 <sup>h</sup> 52'  | 1 <sup>h</sup> 57'  | 4 <sup>h</sup> 42'  | 1 <sup>h</sup> 40' | 11 <sup>h</sup> 49' | 5 <sup>h</sup> 18' | 15 <sup>h</sup> 3'  | 6 <sup>h</sup> 5'  | 5 <sup>h</sup> 43' | 6 <sup>h</sup> 51' | 16 <sup>h</sup> 0'  |
| F 6  | 10 56 43 | 15 <sup>h</sup> 50'33" | 25 <sup>h</sup> 20' | 3 <sup>h</sup> 31'  | 4 <sup>h</sup> 7'   | 2 <sup>h</sup> 35'  | 4 <sup>h</sup> 56'  | 1 <sup>h</sup> 48' | 11 <sup>h</sup> 52' | 5 <sup>h</sup> 17' | 15 <sup>h</sup> 5'  | 6 <sup>h</sup> 4'  | 5 <sup>h</sup> 40' | 6 <sup>h</sup> 58' | 16 <sup>h</sup> 3'  |
| S 7  | 11 0 39  | 16 <sup>h</sup> 50'39" | 7 <sup>h</sup> 11'  | 5 <sup>h</sup> 14'  | 5 <sup>h</sup> 21'  | 3 <sup>h</sup> 13'  | 5 <sup>h</sup> 11'  | 1 <sup>h</sup> 55' | 11 <sup>h</sup> 55' | 5 <sup>h</sup> 16' | 15 <sup>h</sup> 6'  | 6 <sup>h</sup> 3'  | 5 <sup>h</sup> 37' | 7 <sup>h</sup> 5'  | 16 <sup>h</sup> 5'  |
| S 8  | 11 4 36  | 17 <sup>h</sup> 50'43" | 20 <sup>h</sup> 10' | 6 <sup>h</sup> 58'  | 6 <sup>h</sup> 36'  | 3 <sup>h</sup> 52'  | 5 <sup>h</sup> 25'  | 2 <sup>h</sup> 2'  | 11 <sup>h</sup> 58' | 5 <sup>h</sup> 15' | 15 <sup>h</sup> 7'  | 6 <sup>h</sup> 3'  | 5 <sup>h</sup> 34' | 7 <sup>h</sup> 11' | 16 <sup>h</sup> 8'  |
| M 9  | 11 8 32  | 18 <sup>h</sup> 50'45" | 3 <sup>h</sup> 4'   | 8 <sup>h</sup> 44'  | 7 <sup>h</sup> 50'  | 4 <sup>h</sup> 30'  | 5 <sup>h</sup> 39'  | 2 <sup>h</sup> 9'  | 12 <sup>h</sup> 1'  | 5 <sup>h</sup> 13' | 15 <sup>h</sup> 9'  | 6 <sup>h</sup> 3'  | 5 <sup>h</sup> 30' | 7 <sup>h</sup> 18' | 16 <sup>h</sup> 10' |
| T 10 | 11 12 29 | 19 <sup>h</sup> 50'45" | 16 <sup>h</sup> 23' | 10 <sup>h</sup> 30' | 9 <sup>h</sup> 4'   | 5 <sup>h</sup> 9'   | 5 <sup>h</sup> 53'  | 2 <sup>h</sup> 16' | 12 <sup>h</sup> 4'  | 5 <sup>h</sup> 12' | 15 <sup>h</sup> 10' | 6 <sup>h</sup> 4'  | 5 <sup>h</sup> 27' | 7 <sup>h</sup> 25' | 16 <sup>h</sup> 13' |
| W 11 | 11 16 26 | 20 <sup>h</sup> 50'42" | 0 <sup>h</sup> 9'   | 12 <sup>h</sup> 18' | 10 <sup>h</sup> 19' | 5 <sup>h</sup> 47'  | 6 <sup>h</sup> 8'   | 2 <sup>h</sup> 23' | 12 <sup>h</sup> 7'  | 5 <sup>h</sup> 11' | 15 <sup>h</sup> 11' | 6 <sup>h</sup> 5'  | 5 <sup>h</sup> 24' | 7 <sup>h</sup> 31' | 16 <sup>h</sup> 15' |
| T 12 | 11 20 22 | 21 <sup>h</sup> 50'38" | 14 <sup>h</sup> 22' | 14 <sup>h</sup> 6'  | 11 <sup>h</sup> 33' | 6 <sup>h</sup> 26'  | 6 <sup>h</sup> 22'  | 2 <sup>h</sup> 30' | 12 <sup>h</sup> 10' | 5 <sup>h</sup> 10' | 15 <sup>h</sup> 13' | 6 <sup>h</sup> 6'  | 5 <sup>h</sup> 21' | 7 <sup>h</sup> 38' | 16 <sup>h</sup> 18' |
| F 13 | 11 24 19 | 22 <sup>h</sup> 50'31" | 29 <sup>h</sup> 0'  | 15 <sup>h</sup> 56' | 12 <sup>h</sup> 47' | 7 <sup>h</sup> 4'   | 6 <sup>h</sup> 36'  | 2 <sup>h</sup> 37' | 12 <sup>h</sup> 12' | 5 <sup>h</sup> 9'  | 15 <sup>h</sup> 14' | 6 <sup>h</sup> 7'  | 5 <sup>h</sup> 18' | 7 <sup>h</sup> 45' | 16 <sup>h</sup> 21' |
| S 14 | 11 28 15 | 23 <sup>h</sup> 50'22" | 13 <sup>h</sup> 58' | 17 <sup>h</sup> 47' | 14 <sup>h</sup> 2'  | 7 <sup>h</sup> 42'  | 6 <sup>h</sup> 50'  | 2 <sup>h</sup> 44' | 12 <sup>h</sup> 15' | 5 <sup>h</sup> 8'  | 15 <sup>h</sup> 15' | 6 <sup>h</sup> 7'  | 5 <sup>h</sup> 15' | 7 <sup>h</sup> 51' | 16 <sup>h</sup> 23' |
| S 15 | 11 32 12 | 24 <sup>h</sup> 50'11" | 29 <sup>h</sup> 8'  | 19 <sup>h</sup> 39' | 15 <sup>h</sup> 16' | 8 <sup>h</sup> 21'  | 7 <sup>h</sup> 5'   | 2 <sup>h</sup> 51' | 12 <sup>h</sup> 18' | 5 <sup>h</sup> 7'  | 15 <sup>h</sup> 17' | 6 <sup>h</sup> 6'  | 5 <sup>h</sup> 11' | 7 <sup>h</sup> 58' | 16 <sup>h</sup> 26' |
| M 16 | 11 36 8  | 25 <sup>h</sup> 49'58" | 14 <sup>h</sup> 22' | 21 <sup>h</sup> 33' | 16 <sup>h</sup> 30' | 8 <sup>h</sup> 59'  | 7 <sup>h</sup> 19'  | 2 <sup>h</sup> 58' | 12 <sup>h</sup> 21' | 5 <sup>h</sup> 6'  | 15 <sup>h</sup> 18' | 6 <sup>h</sup> 4'  | 5 <sup>h</sup> 8'  | 8 <sup>h</sup> 5'  | 16 <sup>h</sup> 29' |
| T 17 | 11 40 5  | 26 <sup>h</sup> 49'43" | 29 <sup>h</sup> 28' | 23 <sup>h</sup> 27' | 17 <sup>h</sup> 44' | 9 <sup>h</sup> 37'  | 7 <sup>h</sup> 34'  | 3 <sup>h</sup> 5'  | 12 <sup>h</sup> 24' | 5 <sup>h</sup> 5'  | 15 <sup>h</sup> 19' | 6 <sup>h</sup> 1'  | 5 <sup>h</sup> 5'  | 8 <sup>h</sup> 11' | 16 <sup>h</sup> 32' |
| W 18 | 11 44 1  | 27 <sup>h</sup> 49'27" | 14 <sup>h</sup> 19' | 25 <sup>h</sup> 23' | 18 <sup>h</sup> 58' | 10 <sup>h</sup> 15' | 7 <sup>h</sup> 48'  | 3 <sup>h</sup> 11' | 12 <sup>h</sup> 26' | 5 <sup>h</sup> 4'  | 15 <sup>h</sup> 21' | 5 <sup>h</sup> 59' | 5 <sup>h</sup> 2'  | 8 <sup>h</sup> 18' | 16 <sup>h</sup> 35' |
| T 19 | 11 47 58 | 28 <sup>h</sup> 49'09" | 28 <sup>h</sup> 47' | 27 <sup>h</sup> 19' | 20 <sup>h</sup> 12' | 10 <sup>h</sup> 54' | 8 <sup>h</sup> 3'   | 3 <sup>h</sup> 18' | 12 <sup>h</sup> 29' | 5 <sup>h</sup> 4'  | 15 <sup>h</sup> 22' | 5 <sup>h</sup> 56' | 4 <sup>h</sup> 59' | 8 <sup>h</sup> 25' | 16 <sup>h</sup> 38' |
| F 20 | 11 51 54 | 29 <sup>h</sup> 48'49" | 12 <sup>h</sup> 49' | 29 <sup>h</sup> 17' | 21 <sup>h</sup> 26' | 11 <sup>h</sup> 32' | 8 <sup>h</sup> 17'  | 3 <sup>h</sup> 25' | 12 <sup>h</sup> 32' | 5 <sup>h</sup> 3'  | 15 <sup>h</sup> 24' | 5 <sup>h</sup> 54' | 4 <sup>h</sup> 56' | 8 <sup>h</sup> 31' | 16 <sup>h</sup> 41' |
| S 21 | 11 55 51 | 0 <sup>h</sup> 48'27"  | 26 <sup>h</sup> 24' | 1 <sup>h</sup> 15'  | 22 <sup>h</sup> 40' | 12 <sup>h</sup> 10' | 8 <sup>h</sup> 31'  | 3 <sup>h</sup> 32' | 12 <sup>h</sup> 34' | 5 <sup>h</sup> 2'  | 15 <sup>h</sup> 25' | 5 <sup>h</sup> 53' | 4 <sup>h</sup> 52' | 8 <sup>h</sup> 38' | 16 <sup>h</sup> 44' |
| S 22 | 11 59 48 | 1 <sup>h</sup> 48'04"  | 9 <sup>h</sup> 33'  | 3 <sup>h</sup> 15'  | 23 <sup>h</sup> 54' | 12 <sup>h</sup> 48' | 8 <sup>h</sup> 46'  | 3 <sup>h</sup> 39' | 12 <sup>h</sup> 37' | 5 <sup>h</sup> 1'  | 15 <sup>h</sup> 26' | 5 <sup>h</sup> 53' | 4 <sup>h</sup> 49' | 8 <sup>h</sup> 45' | 16 <sup>h</sup> 47' |
| M 23 | 12 3 44  | 2 <sup>h</sup> 47'39"  | 22 <sup>h</sup> 21' | 5 <sup>h</sup> 15'  | 25 <sup>h</sup> 8'  | 13 <sup>h</sup> 26' | 9 <sup>h</sup> 0'   | 3 <sup>h</sup> 45' | 12 <sup>h</sup> 40' | 5 <sup>h</sup> 0'  | 15 <sup>h</sup> 28' | 5 <sup>h</sup> 54' | 4 <sup>h</sup> 46' | 8 <sup>h</sup> 51' | 16 <sup>h</sup> 50' |
| T 24 | 12 7 41  | 3 <sup>h</sup> 47'13"  | 4 <sup>h</sup> 49'  | 7 <sup>h</sup> 16'  | 26 <sup>h</sup> 22' | 14 <sup>h</sup> 5'  | 9 <sup>h</sup> 15'  | 3 <sup>h</sup> 52' | 12 <sup>h</sup> 42' | 5 <sup>h</sup> 0'  | 15 <sup>h</sup> 29' | 5 <sup>h</sup> 56' | 4 <sup>h</sup> 43' | 8 <sup>h</sup> 58' | 16 <sup>h</sup> 53' |
| W 25 | 12 11 37 | 4 <sup>h</sup> 46'44"  | 17 <sup>h</sup> 2'  | 9 <sup>h</sup> 17'  | 27 <sup>h</sup> 36' | 14 <sup>h</sup> 43' | 9 <sup>h</sup> 29'  | 3 <sup>h</sup> 58' | 12 <sup>h</sup> 45' | 4 <sup>h</sup> 59' | 15 <sup>h</sup> 31' | 5 <sup>h</sup> 58' | 4 <sup>h</sup> 40' | 9 <sup>h</sup> 5'  | 16 <sup>h</sup> 56' |
| T 26 | 12 15 34 | 5 <sup>h</sup> 46'14"  | 29 <sup>h</sup> 5'  | 11 <sup>h</sup> 19' | 28 <sup>h</sup> 50' | 15 <sup>h</sup> 21' | 9 <sup>h</sup> 44'  | 4 <sup>h</sup> 5'  | 12 <sup>h</sup> 47' | 4 <sup>h</sup> 58' | 15 <sup>h</sup> 32' | 5 <sup>h</sup> 59' | 4 <sup>h</sup> 36' | 9 <sup>h</sup> 11' | 16 <sup>h</sup> 59' |
| F 27 | 12 19 30 | 6 <sup>h</sup> 45'42"  | 11 <sup>h</sup> 0'  | 13 <sup>h</sup> 20' | 0 <sup>h</sup> 8'   | 15 <sup>h</sup> 59' | 9 <sup>h</sup> 59'  | 4 <sup>h</sup> 12' | 12 <sup>h</sup> 49' | 4 <sup>h</sup> 58' | 15 <sup>h</sup> 34' | 5 <sup>h</sup> 59' | 4 <sup>h</sup> 33' | 9 <sup>h</sup> 18' | 17 <sup>h</sup> 3'  |
| S 28 | 12 23 27 | 7 <sup>h</sup> 45'07"  | 22 <sup>h</sup> 51' | 15 <sup>h</sup> 22' | 1 <sup>h</sup> 17'  | 16 <sup>h</sup> 37' | 10 <sup>h</sup> 13' | 4 <sup>h</sup> 18' | 12 <sup>h</sup> 52' | 4 <sup>h</sup> 57' | 15 <sup>h</sup> 35' | 5 <sup>h</sup> 57' | 4 <sup>h</sup> 30' | 9 <sup>h</sup> 25' | 17 <sup>h</sup> 6'  |
| S 29 | 12 27 23 | 8 <sup>h</sup> 44'31"  | 4 <sup>h</sup> 39'  | 17 <sup>h</sup> 23' | 2 <sup>h</sup> 31'  | 17 <sup>h</sup> 15' | 10 <sup>h</sup> 28' | 4 <sup>h</sup> 24' | 12 <sup>h</sup> 54' | 4 <sup>h</sup> 56' | 15 <sup>h</sup> 36' | 5 <sup>h</sup> 54' | 4 <sup>h</sup> 27' | 9 <sup>h</sup> 31' | 17 <sup>h</sup> 9'  |
| M 30 | 12 31 20 | 9 <sup>h</sup> 43'53"  | 16 <sup>h</sup> 28' | 19 <sup>h</sup> 23' | 3 <sup>h</sup> 45'  | 17 <sup>h</sup> 52' | 10 <sup>h</sup> 42' | 4 <sup>h</sup> 31' | 12 <sup>h</sup> 56' | 4 <sup>h</sup> 56' | 15 <sup>h</sup> 38' | 5 <sup>h</sup> 50' | 4 <sup>h</sup> 24' | 9 <sup>h</sup> 38' | 17 <sup>h</sup> 13' |
| T 31 | 12 35 17 | 10 <sup>h</sup> 43'13" | 28 <sup>h</sup> 19' | 21 <sup>h</sup> 23' | 4 <sup>h</sup> 58'  | 18 <sup>h</sup> 30' | 10 <sup>h</sup> 57' | 4 <sup>h</sup> 37' | 12 <sup>h</sup> 59' | 4 <sup>h</sup> 55' | 15 <sup>h</sup> 39' | 5 <sup>h</sup> 44' | 4 <sup>h</sup> 21' | 9 <sup>h</sup> 45' | 17 <sup>h</sup> 16' |

Delta T = 180.99 sec.

## APRIL 2082

00:00 UT

| Day  | Sid.t    | ☉        | ☽       | ♂      | ♀        | ♂      | ♂ | ♂      | ♂     | ♂      | ♂     | ♂      | ♂     | ♂     | ♂      |
|------|----------|----------|---------|--------|----------|--------|---|--------|-------|--------|-------|--------|-------|-------|--------|
| W 1  | 12 39 13 | 11°42'30 | 10°13'  | 23°21' | 6°12'    | 19°38' | 8 | 11°11' | 4°44' | 13°1'  | 4°R55 | 15°41' | 5°R37 | 4°17' | 9°45'  |
| T 2  | 12 43 10 | 12°41'46 | 22°14'  | 25°17' | 7°25'    | 19°46' |   | 11°26' | 4°50' | 13°3'  | 4°Q54 | 15°42' | 5°H30 | 4°14' | 9°58'  |
| F 3  | 12 47 6  | 13°40'59 | 4°11'22 | 27°11' | 8°39'    | 20°24' |   | 11°40' | 4°56' | 13°5'  | 4°S4  | 15°44' | 5°24' | 4°11' | 10°5'  |
| S 4  | 12 51 3  | 14°40'11 | 16°42'  | 29°2'  | 9°52'    | 21°1'  |   | 11°55' | 5°2'  | 13°7'  | 4°S4  | 15°45' | 5°19' | 4°8'  | 10°11' |
| S 5  | 12 54 59 | 15°39'19 | 29°15'  | 0°50'  | 11°6'    | 21°39' |   | 12°9'  | 5°8'  | 13°9'  | 4°S3  | 15°46' | 5°16' | 4°5'  | 10°18' |
| M 6  | 12 58 56 | 16°38'26 | 12°5'   | 2°35'  | 12°19'   | 22°17' |   | 12°24' | 5°14' | 13°11' | 4°S3  | 15°48' | 5°D14 | 4°2'  | 10°25' |
| T 7  | 13 2 52  | 17°37'30 | 25°17'  | 4°16'  | 13°32'   | 22°54' |   | 12°38' | 5°20' | 13°13' | 4°S3  | 15°49' | 5°15' | 3°58' | 10°31' |
| W 8  | 13 6 49  | 18°36'32 | 8°15'51 | 5°53'  | 14°46'   | 23°32' |   | 12°53' | 5°26' | 13°15' | 4°S3  | 15°51' | 5°16' | 3°55' | 10°38' |
| T 9  | 13 10 46 | 19°35'32 | 22°52'  | 7°26'  | 15°59'   | 24°9'  |   | 13°7'  | 5°32' | 13°17' | 4°S2  | 15°52' | 5°17' | 3°52' | 10°45' |
| F 10 | 13 14 42 | 20°34'29 | 7°18'18 | 8°54'  | 17°12'   | 24°46' |   | 13°22' | 5°38' | 13°19' | 4°S2  | 15°54' | 5°R17 | 3°49' | 10°51' |
| S 11 | 13 18 39 | 21°33'24 | 22°7'   | 10°18' | 18°25'   | 25°24' |   | 13°36' | 5°44' | 13°21' | 4°S2  | 15°55' | 5°16' | 3°46' | 10°58' |
| S 12 | 13 22 35 | 22°32'17 | 7°13'   | 11°36' | 19°38'   | 26°1'  |   | 13°51' | 5°50' | 13°23' | 4°S2  | 15°57' | 5°13' | 3°42' | 11°5'  |
| M 13 | 13 26 32 | 23°31'08 | 22°29'  | 12°48' | 20°51'   | 26°38' |   | 14°5'  | 5°55' | 13°24' | 4°S2  | 15°58' | 5°8'  | 3°39' | 11°11' |
| T 14 | 13 30 28 | 24°29'56 | 7°14'43 | 13°56' | 22°4'    | 27°16' |   | 14°19' | 6°1'  | 13°26' | 4°S2  | 15°59' | 5°1'  | 3°36' | 11°18' |
| W 15 | 13 34 25 | 25°28'43 | 22°45'  | 14°57' | 23°17'   | 27°53' |   | 14°34' | 6°7'  | 13°28' | 4°D52 | 16°1'  | 4°53' | 3°33' | 11°25' |
| T 16 | 13 38 21 | 26°27'28 | 7°26'26 | 15°53' | 24°30'   | 28°30' |   | 14°48' | 6°12' | 13°29' | 4°S2  | 16°2'  | 4°46' | 3°30' | 11°31' |
| F 17 | 13 42 18 | 27°26'12 | 21°39'  | 16°43' | 25°42'   | 29°7'  |   | 15°3'  | 6°18' | 13°31' | 4°S2  | 16°4'  | 4°39' | 3°27' | 11°38' |
| S 18 | 13 46 15 | 28°24'54 | 5°24'28 | 17°27' | 26°55'   | 29°44' |   | 15°17' | 6°23' | 13°32' | 4°S2  | 16°5'  | 4°35' | 3°23' | 11°45' |
| S 19 | 13 50 11 | 29°23'34 | 18°39'  | 18°5'  | 28°8'    | 0°21'  |   | 15°31' | 6°28' | 13°34' | 4°S2  | 16°7'  | 4°32' | 3°20' | 11°51' |
| M 20 | 13 54 8  | 0°22'12  | 18°28'  | 18°36' | 29°21'   | 0°58'  |   | 15°45' | 6°34' | 13°35' | 4°S2  | 16°8'  | 4°D32 | 3°17' | 11°58' |
| T 21 | 13 58 4  | 1°20'49  | 13°54'  | 19°2'  | 0°11'33  | 1°34'  |   | 16°0'  | 6°39' | 13°36' | 4°S2  | 16°9'  | 4°32' | 3°14' | 12°5'  |
| W 22 | 14 2 1   | 2°19'24  | 26°4'   | 19°22' | 1°46'    | 2°11'  |   | 16°14' | 6°44' | 13°38' | 4°S3  | 16°11' | 4°33' | 3°11' | 12°12' |
| T 23 | 14 5 57  | 3°17'57  | 8°1'2   | 19°35' | 2°58'    | 2°48'  |   | 16°28' | 6°49' | 13°39' | 4°S3  | 16°12' | 4°R33 | 3°8'  | 12°18' |
| F 24 | 14 9 54  | 4°16'28  | 19°52'  | 19°43' | 4°11'    | 3°24'  |   | 16°42' | 6°54' | 13°40' | 4°S3  | 16°14' | 4°32' | 3°4'  | 12°25' |
| S 25 | 14 13 50 | 5°14'58  | 1°40'   | 19°R45 | 5°23'    | 4°1'   |   | 16°57' | 6°59' | 13°41' | 4°S3  | 16°15' | 4°29' | 3°1'  | 12°32' |
| S 26 | 14 17 47 | 6°13'26  | 13°28'  | 19°41' | 6°35'    | 4°37'  |   | 17°11' | 7°4'  | 13°42' | 4°S4  | 16°16' | 4°22' | 2°58' | 12°38' |
| M 27 | 14 21 43 | 7°11'53  | 25°18'  | 19°32' | 7°48'    | 5°13'  |   | 17°25' | 7°9'  | 13°43' | 4°S4  | 16°18' | 4°14' | 2°55' | 12°45' |
| T 28 | 14 25 40 | 8°10'17  | 7°14'   | 19°17' | 9°0'     | 5°50'  |   | 17°39' | 7°13' | 13°44' | 4°S5  | 16°19' | 4°3'  | 2°52' | 12°52' |
| W 29 | 14 29 37 | 9°8'40   | 19°17'  | 18°58' | 10°12'   | 6°26'  |   | 17°53' | 7°18' | 13°45' | 4°S5  | 16°20' | 3°51' | 2°48' | 12°58' |
| T 30 | 14 33 33 | 10°8'01  | 1°11'28 | 18°H35 | 11°11'24 | 7°22'  |   | 18°47' | 7°23' | 13°46' | 4°Q56 | 16°42' | 3°H39 | 2°H45 | 13°45' |

# SWISS EPHEMERIS for the year 2082

MAY 2082

00:00 UT

| Day  | Sid.t    | ☉        | ☽      | ♀      | ♂     | ♂     | ♂      | ♂    | ♂      | ♂    | ♂      | ♂     | ♂    | ♂      | ♂     |
|------|----------|----------|--------|--------|-------|-------|--------|------|--------|------|--------|-------|------|--------|-------|
| F 1  | 14 37 30 | 11♈ 5'20 | 13♈47  | 18°R 8 | 12♈36 | 7♈38  | 18°V21 | 7♈27 | 13♈47  | 4♈56 | 16°V23 | 3°R27 | 2♈42 | 13°V12 | 19♈13 |
| S 2  | 14 41 26 | 12° 3'37 | 26°17  | 17♈37  | 13°48 | 8°14  | 18°35  | 7°32 | 13°48  | 4°57 | 16°24  | 3♈18  | 2°39 | 13°18  | 19°17 |
| S 3  | 14 45 23 | 13° 1'53 | 8♈58   | 17° 4  | 15° 0 | 8°49  | 18°49  | 7°36 | 13°49  | 4°57 | 16°26  | 3°11  | 2°36 | 13°25  | 19°21 |
| M 4  | 14 49 19 | 14° 0'06 | 21°53  | 16°28  | 16°12 | 9°25  | 19° 2  | 7°40 | 13°50  | 4°58 | 16°27  | 3° 6  | 2°33 | 13°32  | 19°25 |
| T 5  | 14 53 16 | 14°58'17 | 5♈ 3   | 15°51  | 17°24 | 10° 1 | 19°16  | 7°44 | 13°50  | 4°58 | 16°28  | 3° 4  | 2°29 | 13°38  | 19°29 |
| W 6  | 14 57 13 | 15°56'27 | 18°33  | 15°14  | 18°35 | 10°36 | 19°30  | 7°49 | 13°51  | 4°59 | 16°30  | 3°D 4 | 2°26 | 13°45  | 19°33 |
| T 7  | 15 1 9   | 16°54'34 | 2♈22   | 14°36  | 19°47 | 11°11 | 19°44  | 7°53 | 13°51  | 5° 0 | 16°31  | 3°R 4 | 2°23 | 13°52  | 19°37 |
| F 8  | 15 5 6   | 17°52'39 | 16°34  | 13°58  | 20°59 | 11°47 | 19°57  | 7°57 | 13°52  | 5° 1 | 16°32  | 3° 4  | 2°20 | 13°58  | 19°41 |
| S 9  | 15 9 2   | 18°50'42 | 1♈ 6   | 13°22  | 22°10 | 12°22 | 20°11  | 8° 0 | 13°52  | 5° 1 | 16°33  | 3° 1  | 2°17 | 14° 5  | 19°45 |
| S 10 | 15 12 59 | 19°48'44 | 15°56  | 12°48  | 23°22 | 12°57 | 20°24  | 8° 4 | 13°53  | 5° 2 | 16°35  | 2°56  | 2°13 | 14°12  | 19°49 |
| M11  | 15 16 55 | 20°46'43 | 0♈57   | 12°16  | 24°33 | 13°32 | 20°38  | 8° 8 | 13°53  | 5° 3 | 16°36  | 2°49  | 2°10 | 14°18  | 19°53 |
| T 12 | 15 20 52 | 21°44'41 | 16° 0  | 11°47  | 25°44 | 14° 7 | 20°51  | 8°12 | 13°54  | 5° 4 | 16°37  | 2°39  | 2° 7 | 14°25  | 19°57 |
| W13  | 15 24 48 | 22°42'37 | 0♈57   | 11°21  | 26°55 | 14°41 | 21° 5  | 8°15 | 13°54  | 5° 5 | 16°38  | 2°28  | 2° 4 | 14°32  | 20° 2 |
| T 14 | 15 28 45 | 23°40'32 | 15°37  | 10°59  | 28° 7 | 15°16 | 21°18  | 8°19 | 13°54  | 5° 6 | 16°40  | 2°17  | 2° 1 | 14°38  | 20° 6 |
| F 15 | 15 32 42 | 24°38'26 | 29°53  | 10°41  | 29°18 | 15°50 | 21°31  | 8°22 | 13°54  | 5° 7 | 16°41  | 2° 8  | 1°58 | 14°45  | 20°10 |
| S 16 | 15 36 38 | 25°36'18 | 13♈42  | 10°27  | 0♈29  | 16°24 | 21°45  | 8°25 | 13°54  | 5° 8 | 16°42  | 2° 0  | 1°54 | 14°52  | 20°14 |
| S 17 | 15 40 35 | 26°34'09 | 27° 2  | 10°18  | 1°40  | 16°59 | 21°58  | 8°29 | 13°54  | 5° 9 | 16°43  | 1°55  | 1°51 | 14°59  | 20°18 |
| M18  | 15 44 31 | 27°31'59 | 9♈55   | 10°12  | 2°50  | 17°33 | 22°11  | 8°32 | 13°R55 | 5°10 | 16°44  | 1°53  | 1°48 | 15° 5  | 20°22 |
| T 19 | 15 48 28 | 28°29'47 | 22°24  | 10°D12 | 4° 1  | 18° 6 | 22°24  | 8°35 | 13°54  | 5°11 | 16°45  | 1°52  | 1°45 | 15°12  | 20°26 |
| W20  | 15 52 24 | 29°27'35 | 4♈35   | 10°16  | 5°12  | 18°40 | 22°37  | 8°38 | 13°54  | 5°12 | 16°47  | 1°52  | 1°42 | 15°19  | 20°30 |
| T 21 | 15 56 21 | 0♈25'21  | 16°34  | 10°25  | 6°23  | 19°14 | 22°50  | 8°41 | 13°54  | 5°13 | 16°48  | 1°52  | 1°39 | 15°25  | 20°34 |
| F 22 | 16 0 17  | 1°23'06  | 28°24  | 10°38  | 7°33  | 19°47 | 23° 3  | 8°43 | 13°54  | 5°14 | 16°49  | 1°50  | 1°35 | 15°32  | 20°38 |
| S 23 | 16 4 14  | 2°20'50  | 10°V12 | 10°55  | 8°44  | 20°20 | 23°16  | 8°46 | 13°54  | 5°15 | 16°50  | 1°46  | 1°32 | 15°39  | 20°42 |
| S 24 | 16 8 11  | 3°18'32  | 22° 2  | 11°17  | 9°54  | 20°53 | 23°28  | 8°49 | 13°54  | 5°17 | 16°51  | 1°39  | 1°29 | 15°45  | 20°46 |
| M25  | 16 12 7  | 4°16'14  | 3♈57   | 11°43  | 11° 4 | 21°26 | 23°41  | 8°51 | 13°53  | 5°18 | 16°52  | 1°29  | 1°26 | 15°52  | 20°50 |
| T 26 | 16 16 4  | 5°13'55  | 16° 0  | 12°14  | 12°14 | 21°59 | 23°54  | 8°53 | 13°53  | 5°19 | 16°53  | 1°17  | 1°23 | 15°59  | 20°54 |
| W27  | 16 20 0  | 6°11'34  | 28°13  | 12°48  | 13°25 | 22°31 | 24° 6  | 8°56 | 13°53  | 5°20 | 16°54  | 1° 4  | 1°19 | 16° 5  | 20°58 |
| T 28 | 16 23 57 | 7° 9'13  | 10♈37  | 13°27  | 14°35 | 23° 4 | 24°19  | 8°58 | 13°52  | 5°22 | 16°55  | 0°51  | 1°16 | 16°12  | 21° 2 |
| F 29 | 16 27 53 | 8° 6'50  | 23°12  | 14° 9  | 15°45 | 23°36 | 24°31  | 9° 0 | 13°52  | 5°23 | 16°56  | 0°38  | 1°13 | 16°19  | 21° 6 |
| S 30 | 16 31 50 | 9° 4'26  | 5♈58   | 14°55  | 16°54 | 24° 8 | 24°43  | 9° 2 | 13°51  | 5°24 | 16°57  | 0°28  | 1°10 | 16°25  | 21° 9 |
| S 31 | 16 35 47 | 10♈ 2'00 | 18♈55  | 15♈45  | 18♈ 4 | 24♈39 | 24°V56 | 9♈ 4 | 13♈50  | 5♈26 | 16°V58 | 0♈20  | 1♈ 7 | 16°V32 | 21♈13 |

Delta T = 181.32 sec.

JUNE 2082

00:00 UT

| Day  | Sid.t    | ☉        | ☽     | ♀     | ♂     | ♂     | ♂      | ♂     | ♂      | ♂    | ♂      | ♂      | ♂     | ♂      | ♂     |
|------|----------|----------|-------|-------|-------|-------|--------|-------|--------|------|--------|--------|-------|--------|-------|
| M 1  | 16 39 43 | 10♈59'34 | 2♈ 4  | 16♈38 | 19♈14 | 25♈11 | 25°V 8 | 9♈ 6  | 13°R50 | 5♈27 | 16°V59 | 0°R14  | 1♈ 4  | 16°V39 | 21♈17 |
| T 2  | 16 43 40 | 11°57'06 | 15°25 | 17°35 | 20°24 | 25°42 | 25°20  | 9° 8  | 13°49  | 5°29 | 17° 0  | 0♈12   | 1° 0  | 16°45  | 21°21 |
| W 3  | 16 47 36 | 12°54'37 | 28°59 | 18°35 | 21°33 | 26°13 | 25°32  | 9° 9  | 13°48  | 5°30 | 17° 1  | 0°D11  | 0°57  | 16°52  | 21°25 |
| T 4  | 16 51 33 | 13°52'06 | 12♈47 | 19°39 | 22°42 | 26°44 | 25°44  | 9°11  | 13°48  | 5°32 | 17° 2  | 0°R11  | 0°54  | 16°59  | 21°29 |
| F 5  | 16 55 29 | 14°49'34 | 26°50 | 20°45 | 23°52 | 27°14 | 25°56  | 9°12  | 13°47  | 5°33 | 17° 2  | 0°11   | 0°51  | 17° 6  | 21°33 |
| S 6  | 16 59 26 | 15°47'01 | 11♈ 7 | 21°55 | 25° 1 | 27°45 | 26° 8  | 9°14  | 13°46  | 5°35 | 17° 3  | 0° 9   | 0°48  | 17°12  | 21°36 |
| S 7  | 17 3 22  | 16°44'26 | 25°37 | 23° 8 | 26°10 | 28°15 | 26°19  | 9°15  | 13°45  | 5°36 | 17° 4  | 0° 5   | 0°45  | 17°19  | 21°40 |
| M 8  | 17 7 19  | 17°41'51 | 10♈16 | 24°23 | 27°19 | 28°44 | 26°31  | 9°16  | 13°44  | 5°38 | 17° 5  | 29♈58  | 0°41  | 17°26  | 21°44 |
| T 9  | 17 11 16 | 18°39'14 | 24°57 | 25°42 | 28°28 | 29°14 | 26°42  | 9°17  | 13°43  | 5°40 | 17° 6  | 29°49  | 0°38  | 17°32  | 21°48 |
| W10  | 17 15 12 | 19°36'36 | 9♈33  | 27° 4 | 29°36 | 29°43 | 26°54  | 9°18  | 13°42  | 5°41 | 17° 6  | 29°38  | 0°35  | 17°39  | 21°51 |
| T 11 | 17 19 9  | 20°33'58 | 23°57 | 28°29 | 0♈45  | 0♈12  | 27° 5  | 9°19  | 13°41  | 5°43 | 17° 7  | 29°28  | 0°32  | 17°46  | 21°55 |
| F 12 | 17 23 5  | 21°31'19 | 8♈ 2  | 29°56 | 1°53  | 0°41  | 27°16  | 9°20  | 13°40  | 5°45 | 17° 8  | 29°19  | 0°29  | 17°52  | 21°59 |
| S 13 | 17 27 2  | 22°28'39 | 21°45 | 1♈27  | 3° 1  | 1°10  | 27°27  | 9°20  | 13°39  | 5°46 | 17° 9  | 29°12  | 0°25  | 17°59  | 22° 2 |
| S 14 | 17 30 58 | 23°25'59 | 5♈ 2  | 3° 0  | 4°10  | 1°38  | 27°38  | 9°21  | 13°37  | 5°48 | 17° 9  | 29° 7  | 0°22  | 18° 6  | 22° 6 |
| M15  | 17 34 55 | 24°23'18 | 17°55 | 4°36  | 5°18  | 2° 6  | 27°49  | 9°21  | 13°36  | 5°50 | 17°10  | 29° 5  | 0°19  | 18°12  | 22°10 |
| T 16 | 17 38 52 | 25°20'36 | 0♈27  | 6°15  | 6°26  | 2°33  | 28° 0  | 9°22  | 13°35  | 5°52 | 17°11  | 29°D 4 | 0°16  | 18°19  | 22°13 |
| W17  | 17 42 48 | 26°17'54 | 12°40 | 7°57  | 7°33  | 3° 0  | 28°11  | 9°22  | 13°33  | 5°53 | 17°11  | 29° 5  | 0°13  | 18°26  | 22°17 |
| T 18 | 17 46 45 | 27°15'12 | 24°40 | 9°41  | 8°41  | 3°27  | 28°22  | 9°22  | 13°32  | 5°55 | 17°12  | 29°R 5 | 0°10  | 18°32  | 22°20 |
| F 19 | 17 50 41 | 28°12'29 | 6°V33 | 11°29 | 9°49  | 3°54  | 28°32  | 9°R22 | 13°31  | 5°57 | 17°13  | 29° 5  | 0° 6  | 18°39  | 22°24 |
| S 20 | 17 54 38 | 29° 9'46 | 18°23 | 13°19 | 10°56 | 4°20  | 28°43  | 9°22  | 13°29  | 5°59 | 17°13  | 29° 3  | 0° 3  | 18°46  | 22°27 |
| S 21 | 17 58 34 | 0♈ 7'03  | 0♈16  | 15°11 | 12° 3 | 4°46  | 28°53  | 9°22  | 13°28  | 6° 1 | 17°14  | 28°59  | 0° 0  | 18°53  | 22°31 |
| M22  | 18 2 31  | 1° 4'20  | 12°15 | 17° 6 | 13°10 | 5°11  | 29° 3  | 9°22  | 13°26  | 6° 3 | 17°14  | 28°52  | 29♈57 | 18°59  | 22°34 |
| T 23 | 18 6 27  | 2° 1'36  | 24°25 | 19° 4 | 14°17 | 5°36  | 29°13  | 9°22  | 13°25  | 6° 5 | 17°15  | 28°44  | 29°54 | 19° 6  | 22°37 |
| W24  | 18 10 24 | 2°58'53  | 6♈47  | 21° 4 | 15°24 | 6° 1  | 29°23  | 9°21  | 13°23  | 6° 6 | 17°15  | 28°35  | 29°51 | 19°13  | 22°41 |
| T 25 | 18 14 21 | 3°56'09  | 19°24 | 23° 6 | 16°31 | 6°25  | 29°33  | 9°21  | 13°21  | 6° 8 | 17°16  | 28°25  | 29°47 | 19°19  | 22°44 |
| F 26 | 18 18 17 | 4°53'24  | 2♈15  | 25°10 | 17°37 | 6°49  | 29°43  | 9°20  | 13°20  | 6°10 | 17°16  | 28°15  | 29°44 | 19°26  | 22°47 |
| S 27 | 18 22 14 | 5°50'40  | 15°21 | 27°15 | 18°43 | 7°13  | 29°53  | 9°19  | 13°18  | 6°12 | 17°17  | 28° 8  | 29°41 | 19°33  | 22°51 |
| S 28 | 18 26 10 | 6°47'55  | 28°39 | 29°22 | 19°50 | 7°35  | 0♈ 2   | 9°19  | 13°16  | 6°14 | 17°17  | 28° 2  | 29°38 | 19°39  | 22°54 |
| M29  | 18 30 7  | 7°45'09  | 12♈10 | 19°31 | 20°56 | 7°58  | 0°11   | 9°18  | 13°14  | 6°16 | 17°18  | 27°59  | 29°35 | 19°46  | 22°57 |
| T 30 | 18 34 3  | 8♈42'24  | 25♈51 | 3♈40  | 22♈ 1 | 8♈20  | 0♈21   | 9♈17  | 13♈13  | 6♈18 | 17°V18 | 27°D58 | 29♈31 | 19°V53 | 23♈ 0 |

Delta T = 181.48 sec.

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# SWISS EPHEMERIS for the year 2082

JULY 2082

00:00 UT

| Day  | Sid.t    | ☉                     | ☽                   | ♀                   | ♀                   | ♂                   | ♂                  | ♂                  | ♂                   | ♂                  | ♂                   | ♂                   | ♂                   | ♂                   | ♂                   |
|------|----------|-----------------------|---------------------|---------------------|---------------------|---------------------|--------------------|--------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| W 1  | 18 38 0  | 9 <sup>53</sup> 39'37 | 9 <sup>11</sup> 40  | 5 <sup>55</sup> 51  | 23 <sup>52</sup> 7  | 8 <sup>44</sup> 42  | 0 <sup>53</sup> 30 | 9 <sup>16</sup> 16 | 13 <sup>11</sup> 11 | 6 <sup>20</sup> 20 | 17 <sup>18</sup> 18 | 27 <sup>58</sup> 58 | 29 <sup>28</sup> 28 | 19 <sup>59</sup> 59 | 23 <sup>38</sup> 3  |
| T 2  | 18 41 56 | 10 <sup>36</sup> 51   | 23 <sup>38</sup> 48 | 8 <sup>1</sup> 1    | 24 <sup>12</sup> 12 | 9 <sup>3</sup> 23   | 0 <sup>39</sup> 39 | 9 <sup>14</sup> 14 | 13 <sup>9</sup> 9   | 6 <sup>22</sup> 22 | 17 <sup>19</sup> 19 | 27 <sup>59</sup> 59 | 29 <sup>25</sup> 25 | 20 <sup>6</sup> 6   | 23 <sup>6</sup> 6   |
| F 3  | 18 45 53 | 11 <sup>34</sup> 03   | 7 <sup>44</sup> 44  | 10 <sup>12</sup> 12 | 25 <sup>18</sup> 18 | 9 <sup>23</sup> 23  | 0 <sup>48</sup> 48 | 9 <sup>13</sup> 13 | 13 <sup>7</sup> 7   | 6 <sup>24</sup> 24 | 17 <sup>19</sup> 19 | 28 <sup>0</sup> 0   | 29 <sup>22</sup> 22 | 20 <sup>13</sup> 13 | 23 <sup>9</sup> 9   |
| S 4  | 18 49 50 | 12 <sup>31</sup> 16   | 21 <sup>55</sup> 55 | 12 <sup>23</sup> 23 | 26 <sup>23</sup> 23 | 9 <sup>43</sup> 43  | 0 <sup>57</sup> 57 | 9 <sup>12</sup> 12 | 13 <sup>5</sup> 5   | 6 <sup>26</sup> 26 | 17 <sup>19</sup> 19 | 28 <sup>0</sup> 0   | 29 <sup>19</sup> 19 | 20 <sup>20</sup> 20 | 23 <sup>12</sup> 12 |
| S 5  | 18 53 46 | 13 <sup>28</sup> 28   | 6 <sup>11</sup> 11  | 14 <sup>33</sup> 33 | 27 <sup>27</sup> 27 | 10 <sup>3</sup> 3   | 1 <sup>5</sup> 5   | 9 <sup>10</sup> 10 | 13 <sup>3</sup> 3   | 6 <sup>29</sup> 29 | 17 <sup>20</sup> 20 | 27 <sup>58</sup> 58 | 29 <sup>16</sup> 16 | 20 <sup>26</sup> 26 | 23 <sup>15</sup> 15 |
| M 6  | 18 57 43 | 14 <sup>25</sup> 40   | 20 <sup>28</sup> 28 | 16 <sup>43</sup> 43 | 28 <sup>32</sup> 32 | 10 <sup>22</sup> 22 | 1 <sup>14</sup> 14 | 9 <sup>9</sup> 9   | 13 <sup>1</sup> 1   | 6 <sup>31</sup> 31 | 17 <sup>20</sup> 20 | 27 <sup>54</sup> 54 | 29 <sup>12</sup> 12 | 20 <sup>33</sup> 33 | 23 <sup>18</sup> 18 |
| T 7  | 19 1 39  | 15 <sup>22</sup> 52   | 4 <sup>44</sup> 44  | 18 <sup>52</sup> 52 | 29 <sup>36</sup> 36 | 10 <sup>41</sup> 41 | 1 <sup>22</sup> 22 | 9 <sup>7</sup> 7   | 12 <sup>59</sup> 59 | 6 <sup>33</sup> 33 | 17 <sup>20</sup> 20 | 27 <sup>49</sup> 49 | 29 <sup>9</sup> 9   | 20 <sup>40</sup> 40 | 23 <sup>21</sup> 21 |
| W 8  | 19 5 36  | 16 <sup>20</sup> 03   | 18 <sup>53</sup> 53 | 20 <sup>59</sup> 59 | 0 <sup>40</sup> 40  | 10 <sup>59</sup> 59 | 1 <sup>30</sup> 30 | 9 <sup>5</sup> 5   | 12 <sup>57</sup> 57 | 6 <sup>35</sup> 35 | 17 <sup>20</sup> 20 | 27 <sup>42</sup> 42 | 29 <sup>6</sup> 6   | 20 <sup>46</sup> 46 | 23 <sup>24</sup> 24 |
| T 9  | 19 9 32  | 17 <sup>17</sup> 14   | 2 <sup>51</sup> 51  | 23 <sup>6</sup> 6   | 1 <sup>44</sup> 44  | 11 <sup>16</sup> 16 | 1 <sup>39</sup> 39 | 9 <sup>3</sup> 3   | 12 <sup>55</sup> 55 | 6 <sup>37</sup> 37 | 17 <sup>20</sup> 20 | 27 <sup>36</sup> 36 | 29 <sup>3</sup> 3   | 20 <sup>53</sup> 53 | 23 <sup>27</sup> 27 |
| F 10 | 19 13 29 | 18 <sup>14</sup> 26   | 16 <sup>35</sup> 35 | 25 <sup>11</sup> 11 | 2 <sup>48</sup> 48  | 11 <sup>33</sup> 33 | 1 <sup>47</sup> 47 | 9 <sup>1</sup> 1   | 12 <sup>53</sup> 53 | 6 <sup>39</sup> 39 | 17 <sup>21</sup> 21 | 27 <sup>30</sup> 30 | 29 <sup>0</sup> 0   | 21 <sup>0</sup> 0   | 23 <sup>29</sup> 29 |
| S 11 | 19 17 26 | 19 <sup>11</sup> 37   | 0 <sup>55</sup> 55  | 27 <sup>15</sup> 15 | 3 <sup>51</sup> 51  | 11 <sup>50</sup> 50 | 1 <sup>54</sup> 54 | 8 <sup>59</sup> 59 | 12 <sup>51</sup> 51 | 6 <sup>41</sup> 41 | 17 <sup>21</sup> 21 | 27 <sup>26</sup> 26 | 28 <sup>57</sup> 57 | 21 <sup>6</sup> 6   | 23 <sup>32</sup> 32 |
| S 12 | 19 21 22 | 20 <sup>8</sup> 49    | 13 <sup>6</sup> 6   | 29 <sup>17</sup> 17 | 4 <sup>55</sup> 55  | 12 <sup>5</sup> 5   | 2 <sup>2</sup> 2   | 8 <sup>57</sup> 57 | 12 <sup>49</sup> 49 | 6 <sup>43</sup> 43 | 17 <sup>21</sup> 21 | 27 <sup>23</sup> 23 | 28 <sup>53</sup> 53 | 21 <sup>13</sup> 13 | 23 <sup>35</sup> 35 |
| M13  | 19 25 19 | 21 <sup>6</sup> 01    | 25 <sup>52</sup> 52 | 1 <sup>17</sup> 17  | 5 <sup>57</sup> 57  | 12 <sup>21</sup> 21 | 2 <sup>10</sup> 10 | 8 <sup>55</sup> 55 | 12 <sup>46</sup> 46 | 6 <sup>45</sup> 45 | 17 <sup>21</sup> 21 | 27 <sup>20</sup> 20 | 28 <sup>50</sup> 50 | 21 <sup>20</sup> 20 | 23 <sup>37</sup> 37 |
| T 14 | 19 29 15 | 22 <sup>3</sup> 13    | 8 <sup>21</sup> 21  | 3 <sup>16</sup> 16  | 7 <sup>0</sup> 0    | 12 <sup>35</sup> 35 | 2 <sup>17</sup> 17 | 8 <sup>53</sup> 53 | 12 <sup>44</sup> 44 | 6 <sup>48</sup> 48 | 17 <sup>21</sup> 21 | 27 <sup>23</sup> 23 | 28 <sup>47</sup> 47 | 21 <sup>26</sup> 26 | 23 <sup>40</sup> 40 |
| W15  | 19 33 12 | 23 <sup>0</sup> 26    | 20 <sup>33</sup> 33 | 5 <sup>13</sup> 13  | 8 <sup>2</sup> 2    | 12 <sup>49</sup> 49 | 2 <sup>24</sup> 24 | 8 <sup>50</sup> 50 | 12 <sup>42</sup> 42 | 6 <sup>50</sup> 50 | 17 <sup>21</sup> 21 | 27 <sup>24</sup> 24 | 28 <sup>44</sup> 44 | 21 <sup>33</sup> 33 | 23 <sup>42</sup> 42 |
| T 16 | 19 37 8  | 23 <sup>57</sup> 39   | 2 <sup>35</sup> 35  | 7 <sup>8</sup> 8    | 9 <sup>4</sup> 4    | 13 <sup>2</sup> 2   | 2 <sup>31</sup> 31 | 8 <sup>48</sup> 48 | 12 <sup>40</sup> 40 | 6 <sup>52</sup> 52 | 17 <sup>21</sup> 21 | 27 <sup>26</sup> 26 | 28 <sup>41</sup> 41 | 21 <sup>40</sup> 40 | 23 <sup>45</sup> 45 |
| F 17 | 19 41 5  | 24 <sup>54</sup> 53   | 14 <sup>29</sup> 29 | 9 <sup>1</sup> 1    | 10 <sup>6</sup> 6   | 13 <sup>15</sup> 15 | 2 <sup>38</sup> 38 | 8 <sup>45</sup> 45 | 12 <sup>38</sup> 38 | 6 <sup>54</sup> 54 | 17 <sup>21</sup> 21 | 27 <sup>27</sup> 27 | 28 <sup>37</sup> 37 | 21 <sup>47</sup> 47 | 23 <sup>47</sup> 47 |
| S 18 | 19 45 1  | 25 <sup>52</sup> 07   | 26 <sup>20</sup> 20 | 10 <sup>53</sup> 53 | 11 <sup>8</sup> 8   | 13 <sup>27</sup> 27 | 2 <sup>45</sup> 45 | 8 <sup>43</sup> 43 | 12 <sup>35</sup> 35 | 6 <sup>56</sup> 56 | 17 <sup>21</sup> 21 | 27 <sup>28</sup> 28 | 28 <sup>34</sup> 34 | 21 <sup>53</sup> 53 | 23 <sup>50</sup> 50 |
| S 19 | 19 48 58 | 26 <sup>49</sup> 23   | 8 <sup>14</sup> 14  | 12 <sup>42</sup> 42 | 12 <sup>9</sup> 9   | 13 <sup>38</sup> 38 | 2 <sup>52</sup> 52 | 8 <sup>40</sup> 40 | 12 <sup>33</sup> 33 | 6 <sup>59</sup> 59 | 17 <sup>21</sup> 21 | 27 <sup>27</sup> 27 | 28 <sup>31</sup> 31 | 22 <sup>0</sup> 0   | 23 <sup>52</sup> 52 |
| M20  | 19 52 55 | 27 <sup>46</sup> 38   | 20 <sup>16</sup> 16 | 14 <sup>30</sup> 30 | 13 <sup>10</sup> 10 | 13 <sup>48</sup> 48 | 2 <sup>58</sup> 58 | 8 <sup>37</sup> 37 | 12 <sup>31</sup> 31 | 7 <sup>1</sup> 1   | 17 <sup>21</sup> 21 | 27 <sup>25</sup> 25 | 28 <sup>28</sup> 28 | 22 <sup>7</sup> 7   | 23 <sup>54</sup> 54 |
| T 21 | 19 56 51 | 28 <sup>43</sup> 55   | 2 <sup>11</sup> 29  | 16 <sup>16</sup> 16 | 14 <sup>11</sup> 11 | 13 <sup>58</sup> 58 | 3 <sup>5</sup> 5   | 8 <sup>34</sup> 34 | 12 <sup>29</sup> 29 | 7 <sup>3</sup> 3   | 17 <sup>21</sup> 21 | 27 <sup>22</sup> 22 | 28 <sup>25</sup> 25 | 22 <sup>13</sup> 13 | 23 <sup>56</sup> 56 |
| W22  | 20 0 48  | 29 <sup>41</sup> 12   | 14 <sup>57</sup> 57 | 18 <sup>0</sup> 0   | 15 <sup>11</sup> 11 | 14 <sup>7</sup> 7   | 3 <sup>11</sup> 11 | 8 <sup>31</sup> 31 | 12 <sup>26</sup> 26 | 7 <sup>5</sup> 5   | 17 <sup>21</sup> 21 | 27 <sup>18</sup> 18 | 28 <sup>22</sup> 22 | 22 <sup>20</sup> 20 | 23 <sup>59</sup> 59 |
| T 23 | 20 4 44  | 0 <sup>13</sup> 38'30 | 27 <sup>42</sup> 42 | 19 <sup>42</sup> 42 | 16 <sup>11</sup> 11 | 14 <sup>16</sup> 16 | 3 <sup>17</sup> 17 | 8 <sup>28</sup> 28 | 12 <sup>24</sup> 24 | 7 <sup>7</sup> 7   | 17 <sup>21</sup> 21 | 27 <sup>14</sup> 14 | 28 <sup>18</sup> 18 | 22 <sup>27</sup> 27 | 24 <sup>1</sup> 1   |
| F 24 | 20 8 41  | 1 <sup>35</sup> 49    | 10 <sup>54</sup> 54 | 21 <sup>23</sup> 23 | 17 <sup>10</sup> 10 | 14 <sup>23</sup> 23 | 3 <sup>23</sup> 23 | 8 <sup>25</sup> 25 | 12 <sup>22</sup> 22 | 7 <sup>10</sup> 10 | 17 <sup>21</sup> 21 | 27 <sup>10</sup> 10 | 28 <sup>15</sup> 15 | 22 <sup>33</sup> 33 | 24 <sup>3</sup> 3   |
| S 25 | 20 12 37 | 2 <sup>33</sup> 08    | 24 <sup>9</sup> 9   | 23 <sup>1</sup> 1   | 18 <sup>10</sup> 10 | 14 <sup>30</sup> 30 | 3 <sup>28</sup> 28 | 8 <sup>22</sup> 22 | 12 <sup>19</sup> 19 | 7 <sup>12</sup> 12 | 17 <sup>21</sup> 21 | 27 <sup>7</sup> 7   | 28 <sup>12</sup> 12 | 22 <sup>40</sup> 40 | 24 <sup>5</sup> 5   |
| S 26 | 20 16 34 | 3 <sup>30</sup> 28    | 7 <sup>12</sup> 50  | 24 <sup>38</sup> 38 | 19 <sup>8</sup> 8   | 14 <sup>36</sup> 36 | 3 <sup>34</sup> 34 | 8 <sup>19</sup> 19 | 12 <sup>17</sup> 17 | 7 <sup>14</sup> 14 | 17 <sup>20</sup> 20 | 27 <sup>5</sup> 5   | 28 <sup>9</sup> 9   | 22 <sup>47</sup> 47 | 24 <sup>7</sup> 7   |
| M27  | 20 20 30 | 4 <sup>27</sup> 49    | 21 <sup>45</sup> 45 | 26 <sup>13</sup> 13 | 20 <sup>7</sup> 7   | 14 <sup>41</sup> 41 | 3 <sup>39</sup> 39 | 8 <sup>16</sup> 16 | 12 <sup>15</sup> 15 | 7 <sup>16</sup> 16 | 17 <sup>20</sup> 20 | 27 <sup>4</sup> 4   | 28 <sup>6</sup> 6   | 22 <sup>54</sup> 54 | 24 <sup>9</sup> 9   |
| T 28 | 20 24 27 | 5 <sup>25</sup> 10    | 5 <sup>11</sup> 22  | 27 <sup>46</sup> 46 | 21 <sup>5</sup> 5   | 14 <sup>46</sup> 46 | 3 <sup>45</sup> 45 | 8 <sup>12</sup> 12 | 12 <sup>12</sup> 12 | 7 <sup>18</sup> 18 | 17 <sup>20</sup> 20 | 27 <sup>4</sup> 4   | 28 <sup>3</sup> 3   | 23 <sup>0</sup> 0   | 24 <sup>11</sup> 11 |
| W29  | 20 28 24 | 6 <sup>22</sup> 31    | 20 <sup>6</sup> 6   | 29 <sup>18</sup> 18 | 22 <sup>3</sup> 3   | 14 <sup>49</sup> 49 | 3 <sup>50</sup> 50 | 8 <sup>9</sup> 9   | 12 <sup>10</sup> 10 | 7 <sup>21</sup> 21 | 17 <sup>20</sup> 20 | 27 <sup>5</sup> 5   | 27 <sup>59</sup> 59 | 23 <sup>7</sup> 7   | 24 <sup>13</sup> 13 |
| T 30 | 20 32 20 | 7 <sup>19</sup> 53    | 4 <sup>24</sup> 24  | 0 <sup>47</sup> 47  | 23 <sup>0</sup> 0   | 14 <sup>52</sup> 52 | 3 <sup>54</sup> 54 | 8 <sup>5</sup> 5   | 12 <sup>7</sup> 7   | 7 <sup>23</sup> 23 | 17 <sup>19</sup> 19 | 27 <sup>6</sup> 6   | 27 <sup>56</sup> 56 | 23 <sup>14</sup> 14 | 24 <sup>14</sup> 14 |
| F 31 | 20 36 17 | 8 <sup>17</sup> 16    | 18 <sup>42</sup> 42 | 2 <sup>15</sup> 15  | 23 <sup>57</sup> 57 | 14 <sup>54</sup> 54 | 3 <sup>59</sup> 59 | 8 <sup>2</sup> 2   | 12 <sup>5</sup> 5   | 7 <sup>25</sup> 25 | 17 <sup>19</sup> 19 | 27 <sup>7</sup> 7   | 27 <sup>53</sup> 53 | 23 <sup>17</sup> 17 | 24 <sup>16</sup> 16 |

Delta T = 181.65 sec.

AUGUST 2082

00:00 UT

| Day  | Sid.t    | ☉        | ☽      | ♂      | ♀     | ♂      | ♂     | ♂     | ♂      | ♂    | ♂      | ♂      | ♂     | ♂      | ♂      |
|------|----------|----------|--------|--------|-------|--------|-------|-------|--------|------|--------|--------|-------|--------|--------|
| S 1  | 20 40 13 | 9♏14'39  | 2♌58   | 3♎40   | 24♎53 | 14♋56  | 4♊ 4  | 7°R58 | 12°R 3 | 7♏27 | 17°R19 | 27°R 8 | 27≈50 | 23°P27 | 24♊18  |
| S 2  | 20 44 10 | 10°12'03 | 17° 9  | 5° 4   | 25°49 | 14°R56 | 4° 8  | 7♋54  | 12≈ 0  | 7°30 | 17°P18 | 27≈ 8  | 27°47 | 23°34  | 24°19  |
| M 3  | 20 48 6  | 11° 9'27 | 1♌13   | 6°26   | 26°44 | 14°56  | 4°12  | 7°51  | 11°58  | 7°32 | 17°18  | 27° 7  | 27°43 | 23°40  | 24°21  |
| T 4  | 20 52 3  | 12° 6'52 | 15° 8  | 7°46   | 27°39 | 14°55  | 4°16  | 7°47  | 11°55  | 7°34 | 17°18  | 27° 6  | 27°40 | 23°47  | 24°22  |
| W 5  | 20 55 59 | 13° 4'17 | 28°52  | 9° 4   | 28°34 | 14°53  | 4°20  | 7°43  | 11°53  | 7°36 | 17°17  | 27° 4  | 27°37 | 23°54  | 24°24  |
| T 6  | 20 59 56 | 14° 1'43 | 12♊23  | 10°20  | 29°27 | 14°51  | 4°23  | 7°39  | 11°51  | 7°38 | 17°17  | 27° 2  | 27°34 | 24° 1  | 24°25  |
| F 7  | 21 3 53  | 14°59'10 | 25°41  | 11°33  | 0♌21  | 14°47  | 4°27  | 7°35  | 11°48  | 7°41 | 17°17  | 27° 1  | 27°31 | 24° 7  | 24°27  |
| S 8  | 21 7 49  | 15°56'38 | 8≈44   | 12°45  | 1°13  | 14°43  | 4°30  | 7°31  | 11°46  | 7°43 | 17°16  | 27° 0  | 27°28 | 24°14  | 24°28  |
| S 9  | 21 11 46 | 16°54'07 | 21°33  | 13°54  | 2° 5  | 14°38  | 4°33  | 7°27  | 11°43  | 7°45 | 17°16  | 26°D59 | 27°24 | 24°21  | 24°29  |
| M10  | 21 15 42 | 17°51'37 | 4♋ 6   | 15° 1  | 2°57  | 14°32  | 4°36  | 7°23  | 11°41  | 7°47 | 17°15  | 26°59  | 27°21 | 24°27  | 24°30  |
| T 11 | 21 19 39 | 18°49'08 | 16°26  | 16° 5  | 3°48  | 14°26  | 4°39  | 7°19  | 11°39  | 7°49 | 17°15  | 27° 0  | 27°18 | 24°34  | 24°32  |
| W12  | 21 23 35 | 19°46'40 | 28°34  | 17° 7  | 4°38  | 14°19  | 4°41  | 7°14  | 11°36  | 7°52 | 17°14  | 27° 0  | 27°15 | 24°41  | 24°33  |
| T 13 | 21 27 32 | 20°44'13 | 10°P34 | 18° 7  | 5°27  | 14°11  | 4°43  | 7°10  | 11°34  | 7°54 | 17°14  | 27° 1  | 27°12 | 24°47  | 24°34  |
| F 14 | 21 31 28 | 21°41'48 | 22°27  | 19° 3  | 6°16  | 14° 2  | 4°45  | 7° 6  | 11°32  | 7°56 | 17°13  | 27° 2  | 27° 9 | 24°54  | 24°35  |
| S 15 | 21 35 25 | 22°39'24 | 4♊19   | 19°57  | 7° 4  | 13°53  | 4°47  | 7° 2  | 11°29  | 7°58 | 17°12  | 27° 2  | 27° 5 | 25° 1  | 24°35  |
| S 16 | 21 39 22 | 23°37'02 | 16°13  | 20°47  | 7°51  | 13°43  | 4°49  | 6°57  | 11°27  | 8° 0 | 17°12  | 27° 2  | 27° 2 | 25° 8  | 24°36  |
| M17  | 21 43 18 | 24°34'41 | 28°14  | 21°34  | 8°37  | 13°32  | 4°51  | 6°53  | 11°25  | 8° 3 | 17°11  | 27°R 2 | 26°59 | 25°14  | 24°37  |
| T 18 | 21 47 15 | 25°32'22 | 10♌26  | 22°18  | 9°23  | 13°21  | 4°52  | 6°49  | 11°22  | 8° 5 | 17°11  | 27° 2  | 26°56 | 25°21  | 24°38  |
| W19  | 21 51 11 | 26°30'05 | 22°54  | 22°58  | 10° 8 | 13° 9  | 4°53  | 6°44  | 11°20  | 8° 7 | 17°10  | 27° 2  | 26°53 | 25°28  | 24°38  |
| T 20 | 21 55 8  | 27°27'49 | 5♌41   | 23°35  | 10°51 | 12°56  | 4°54  | 6°40  | 11°18  | 8° 9 | 17° 9  | 27°D 2 | 26°49 | 25°34  | 24°39  |
| F 21 | 21 59 4  | 28°25'34 | 18°51  | 24° 7  | 11°34 | 12°43  | 4°55  | 6°35  | 11°16  | 8°11 | 17° 9  | 27° 2  | 26°46 | 25°41  | 24°40  |
| S 22 | 22 3 1   | 29°23'21 | 2♏24   | 24°35  | 12°16 | 12°30  | 4°55  | 6°31  | 11°13  | 8°13 | 17° 8  | 27° 2  | 26°43 | 25°48  | 24°40  |
| S 23 | 22 6 58  | 0♎21'10  | 16°20  | 24°59  | 12°57 | 12°16  | 4°55  | 6°26  | 11°11  | 8°15 | 17° 7  | 27° 2  | 26°40 | 25°54  | 24°40  |
| M24  | 22 10 54 | 1°19'00  | 0♎36   | 25°18  | 13°37 | 12° 2  | 4°R56 | 6°22  | 11° 9  | 8°17 | 17° 6  | 27°R 3 | 26°37 | 26° 1  | 24°41  |
| T 25 | 22 14 51 | 2°16'51  | 15° 7  | 25°31  | 14°16 | 11°47  | 4°56  | 6°17  | 11° 7  | 8°19 | 17° 6  | 27° 2  | 26°34 | 26° 8  | 24°41  |
| W26  | 22 18 47 | 3°14'44  | 29°48  | 25°40  | 14°53 | 11°32  | 4°55  | 6°13  | 11° 4  | 8°22 | 17° 5  | 27° 2  | 26°30 | 26°15  | 24°41  |
| T 27 | 22 22 44 | 4°12'38  | 14♌32  | 25°R43 | 15°30 | 11°16  | 4°55  | 6° 8  | 11° 2  | 8°24 | 17° 4  | 27° 1  | 26°27 | 26°21  | 24°41  |
| F 28 | 22 26 40 | 5°10'34  | 29°13  | 25°41  | 16° 5 | 11° 1  | 4°54  | 6° 4  | 11° 0  | 8°26 | 17° 3  | 27° 0  | 26°24 | 26°28  | 24°42  |
| S 29 | 22 30 37 | 6° 8'30  | 13♌43  | 25°32  | 16°39 | 10°45  | 4°53  | 5°59  | 10°58  | 8°28 | 17° 2  | 27° 0  | 26°21 | 26°35  | 24°R42 |
| S 30 | 22 34 33 | 7° 6'28  | 28° 0  | 25°18  | 17°12 | 10°29  | 4°52  | 5°54  | 10°56  | 8°30 | 17° 2  | 26°59  | 26°18 | 26°41  | 24°42  |
| M31  | 22 38 30 | 8♎ 4'28  | 12♊ 1  | 24♎57  | 17♌43 | 10♋13  | 4♊51  | 5♋50  | 10≈54  | 8♏32 | 17°P 1 | 26°D59 | 26≈15 | 26°P48 | 24♊42  |

# SWISS EPHEMERIS for the year 2082

## SEPTEMBER 2082

00:00 UT

| Day  | Sid.t    | ☉                    | ☽                  | ♀                  | ♂                  | ♂                 | ♂                 | ♂                 | ♂                  | ♂                 | ♂                  | ♂                  | ♂                  | ♂                  | ♂                  |
|------|----------|----------------------|--------------------|--------------------|--------------------|-------------------|-------------------|-------------------|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| T 1  | 22 42 26 | 9 <sup>h</sup> 2'29  | 25 <sup>h</sup> 44 | 24°R31             | 18 <sup>h</sup> 13 | 9°R57             | 4°R49             | 5°R45             | 10°R52             | 8 <sup>h</sup> 34 | 17°R 0             | 26 <sup>h</sup> 59 | 26 <sup>h</sup> 11 | 26 <sup>h</sup> 55 | 24°R41             |
| W 2  | 22 46 23 | 10° 0'31             | 9 <sup>h</sup> 310 | 23 <sup>h</sup> 58 | 18°41              | 9 <sup>h</sup> 41 | 4 <sup>h</sup> 48 | 5 <sup>h</sup> 41 | 10 <sup>h</sup> 50 | 8°36              | 16°Y59             | 27° 0              | 26° 8              | 27° 1              | 24 <sup>h</sup> 81 |
| T 3  | 22 50 20 | 10°58'34             | 22°20              | 23°20              | 19° 8              | 9°25              | 4°46              | 5°36              | 10°48              | 8°38              | 16°58              | 27° 1              | 26° 5              | 27° 8              | 24°41              |
| F 4  | 22 54 16 | 11°56'39             | 5 <sup>h</sup> 15  | 22°36              | 19°33              | 9° 9              | 4°44              | 5°32              | 10°46              | 8°39              | 16°57              | 27° 2              | 26° 2              | 27°15              | 24°41              |
| S 5  | 22 58 13 | 12°54'45             | 17°57              | 21°47              | 19°57              | 8°53              | 4°41              | 5°27              | 10°44              | 8°41              | 16°56              | 27° 3              | 25°59              | 27°22              | 24°40              |
| S 6  | 23 2 9   | 13°52'53             | 0 <sup>h</sup> 26  | 20°54              | 20°19              | 8°38              | 4°39              | 5°23              | 10°42              | 8°43              | 16°55              | 27°R 3             | 25°55              | 27°28              | 24°40              |
| M 7  | 23 6 6   | 14°51'02             | 12°45              | 19°58              | 20°39              | 8°22              | 4°36              | 5°18              | 10°40              | 8°45              | 16°54              | 27° 3              | 25°52              | 27°35              | 24°39              |
| T 8  | 23 10 2  | 15°49'13             | 24°54              | 19° 0              | 20°57              | 8° 7              | 4°33              | 5°14              | 10°39              | 8°47              | 16°53              | 27° 1              | 25°49              | 27°42              | 24°39              |
| W 9  | 23 13 59 | 16°47'26             | 6 <sup>h</sup> 56  | 18° 0              | 21°13              | 7°52              | 4°30              | 5°10              | 10°37              | 8°49              | 16°52              | 26°59              | 25°46              | 27°48              | 24°38              |
| T 10 | 23 17 55 | 17°45'41             | 18°52              | 17° 1              | 21°27              | 7°38              | 4°27              | 5° 5              | 10°35              | 8°51              | 16°51              | 26°55              | 25°43              | 27°55              | 24°37              |
| F 11 | 23 21 52 | 18°43'57             | 0 <sup>h</sup> 44  | 16° 3              | 21°40              | 7°24              | 4°24              | 5° 1              | 10°33              | 8°53              | 16°50              | 26°52              | 25°40              | 28° 2              | 24°37              |
| S 12 | 23 25 49 | 19°42'16             | 12°35              | 15° 8              | 21°50              | 7°10              | 4°20              | 4°56              | 10°32              | 8°54              | 16°49              | 26°48              | 25°36              | 28° 9              | 24°36              |
| S 13 | 23 29 45 | 20°40'36             | 24°28              | 14°17              | 21°58              | 6°57              | 4°16              | 4°52              | 10°30              | 8°56              | 16°48              | 26°45              | 25°33              | 28°15              | 24°35              |
| M14  | 23 33 42 | 21°38'59             | 6 <sup>h</sup> 12  | 13°32              | 22° 4              | 6°44              | 4°12              | 4°48              | 10°28              | 8°58              | 16°47              | 26°43              | 25°30              | 28°22              | 24°34              |
| T 15 | 23 37 38 | 22°37'24             | 18°37              | 12°54              | 22° 8              | 6°32              | 4° 8              | 4°44              | 10°27              | 9° 0              | 16°46              | 26°D42             | 25°27              | 28°29              | 24°33              |
| W16  | 23 41 35 | 23°35'51             | 1 <sup>h</sup> 2   | 12°23              | 22°R 9             | 6°21              | 4° 4              | 4°39              | 10°25              | 9° 1              | 16°45              | 26°42              | 25°24              | 28°35              | 24°32              |
| T 17 | 23 45 31 | 24°34'21             | 13°45              | 12° 0              | 22° 8              | 6°10              | 3°59              | 4°35              | 10°24              | 9° 3              | 16°44              | 26°44              | 25°21              | 28°42              | 24°31              |
| F 18 | 23 49 28 | 25°32'52             | 26°51              | 11°46              | 22° 5              | 5°59              | 3°55              | 4°31              | 10°22              | 9° 5              | 16°43              | 26°45              | 25°17              | 28°49              | 24°30              |
| S 19 | 23 53 24 | 26°31'25             | 10 <sup>h</sup> 24 | 11°D42             | 21°59              | 5°50              | 3°50              | 4°27              | 10°21              | 9° 6              | 16°42              | 26°47              | 25°14              | 28°55              | 24°29              |
| S 20 | 23 57 21 | 27°30'01             | 24°23              | 11°48              | 21°52              | 5°41              | 3°45              | 4°23              | 10°19              | 9° 8              | 16°41              | 26°R47             | 25°11              | 29° 2              | 24°27              |
| M21  | 0 1 18   | 28°28'38             | 8 <sup>h</sup> 48  | 12° 3              | 21°41              | 5°32              | 3°40              | 4°19              | 10°18              | 9° 9              | 16°40              | 26°47              | 25° 8              | 29° 9              | 24°26              |
| T 22 | 0 5 14   | 29°27'18             | 23°35              | 12°27              | 21°28              | 5°25              | 3°34              | 4°15              | 10°17              | 9°11              | 16°39              | 26°45              | 25° 5              | 29°16              | 24°25              |
| W23  | 0 9 11   | 0 <sup>h</sup> 26'00 | 8 <sup>h</sup> 37  | 13° 1              | 21°13              | 5°18              | 3°29              | 4°11              | 10°15              | 9°13              | 16°38              | 26°41              | 25° 1              | 29°22              | 24°23              |
| T 24 | 0 13 7   | 1°24'43              | 23°45              | 13°44              | 20°56              | 5°11              | 3°23              | 4° 8              | 10°14              | 9°14              | 16°37              | 26°37              | 24°58              | 29°29              | 24°22              |
| F 25 | 0 17 4   | 2°23'29              | 8 <sup>h</sup> 49  | 14°34              | 20°36              | 5° 6              | 3°17              | 4° 4              | 10°13              | 9°16              | 16°36              | 26°31              | 24°55              | 29°36              | 24°20              |
| S 26 | 0 21 0   | 3°22'16              | 23°40              | 15°33              | 20°15              | 5° 2              | 3°11              | 4° 0              | 10°12              | 9°17              | 16°34              | 26°26              | 24°52              | 29°42              | 24°19              |
| S 27 | 0 24 57  | 4°21'05              | 8 <sup>h</sup> 11  | 16°39              | 19°50              | 4°58              | 3° 5              | 3°57              | 10°11              | 9°19              | 16°33              | 26°22              | 24°49              | 29°49              | 24°17              |
| M28  | 0 28 53  | 5°19'56              | 22°18              | 17°51              | 19°24              | 4°55              | 2°59              | 3°53              | 10°10              | 9°20              | 16°32              | 26°20              | 24°46              | 29°56              | 24°15              |
| T 29 | 0 32 50  | 6°18'48              | 6 <sup>h</sup> 21  | 19° 9              | 18°56              | 4°53              | 2°52              | 3°50              | 10° 9              | 9°21              | 16°31              | 26°D19             | 24°42              | 0 <sup>h</sup> 3   | 24°14              |
| W30  | 0 36 47  | 7 <sup>h</sup> 17'42 | 19 <sup>h</sup> 20 | 20 <sup>h</sup> 33 | 18 <sup>h</sup> 27 | 4 <sup>h</sup> 51 | 2 <sup>h</sup> 46 | 3 <sup>h</sup> 46 | 10 <sup>h</sup> 8  | 9 <sup>h</sup> 23 | 16 <sup>h</sup> 30 | 26 <sup>h</sup> 20 | 24 <sup>h</sup> 39 | 0 <sup>h</sup> 9   | 24 <sup>h</sup> 12 |

Delta T = 181.98 sec.

## OCTOBER 2082

00:00 UT

| Day  | Sid.t   | ☉                    | ☽                  | ♀                  | ♂                  | ♂                  | ♂                 | ♂                 | ♂                 | ♂                 | ♂      | ♂                  | ♂                  | ♂                 | ♂                  |
|------|---------|----------------------|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|-------------------|-------------------|--------|--------------------|--------------------|-------------------|--------------------|
| T 1  | 0 40 43 | 8 <sup>h</sup> 16'38 | 2 <sup>h</sup> 18  | 22 <sup>h</sup> 1  | 17°R55             | 4°D51              | 2°R39             | 3°R43             | 10°R 7            | 9 <sup>h</sup> 24 | 16°R29 | 26 <sup>h</sup> 21 | 24 <sup>h</sup> 36 | 0 <sup>h</sup> 16 | 24°R10             |
| F 2  | 0 44 40 | 9°15'36              | 14°58              | 23°32              | 17 <sup>h</sup> 22 | 4 <sup>h</sup> 51  | 2 <sup>h</sup> 32 | 3 <sup>h</sup> 40 | 10 <sup>h</sup> 6 | 9°25              | 16°Y28 | 26°23              | 24°33              | 0°23              | 24 <sup>h</sup> 8  |
| S 3  | 0 48 36 | 10°14'35             | 27°23              | 25° 7              | 16°48              | 4°52               | 2°25              | 3°36              | 10° 5             | 9°27              | 16°26  | 26°R23             | 24°30              | 0°29              | 24° 6              |
| S 4  | 0 52 33 | 11°13'36             | 9 <sup>h</sup> 38  | 26°45              | 16°13              | 4°54               | 2°18              | 3°33              | 10° 4             | 9°28              | 16°25  | 26°22              | 24°26              | 0°36              | 24° 4              |
| M 5  | 0 56 29 | 12°12'39             | 21°43              | 28°24              | 15°37              | 4°57               | 2°11              | 3°30              | 10° 4             | 9°29              | 16°24  | 26°19              | 24°23              | 0°43              | 24° 2              |
| T 6  | 1 0 26  | 13°11'44             | 3 <sup>h</sup> 43  | 0 <sup>h</sup> 6   | 15° 1              | 5° 0               | 2° 4              | 3°27              | 10° 3             | 9°30              | 16°23  | 26°14              | 24°20              | 0°50              | 24° 0              |
| W 7  | 1 4 22  | 14°10'50             | 15°39              | 1°49               | 14°24              | 5° 4               | 1°57              | 3°24              | 10° 2             | 9°32              | 16°22  | 26° 6              | 24°17              | 0°56              | 23°58              |
| T 8  | 1 8 19  | 15° 9'59             | 27°31              | 3°33               | 13°47              | 5° 9               | 1°49              | 3°22              | 10° 2             | 9°33              | 16°21  | 25°57              | 24°14              | 1° 3              | 23°56              |
| F 9  | 1 12 15 | 16° 9'10             | 9 <sup>h</sup> 23  | 5°18               | 13°10              | 5°15               | 1°42              | 3°19              | 10° 1             | 9°34              | 16°20  | 25°48              | 24°11              | 1°10              | 23°54              |
| S 10 | 1 16 12 | 17° 8'24             | 21°15              | 7° 3               | 12°34              | 5°21               | 1°34              | 3°16              | 10° 1             | 9°35              | 16°18  | 25°38              | 24° 7              | 1°16              | 23°51              |
| S 11 | 1 20 9  | 18° 7'39             | 3 <sup>h</sup> 10  | 8°48               | 11°58              | 5°29               | 1°27              | 3°14              | 10° 0             | 9°36              | 16°17  | 25°29              | 24° 4              | 1°23              | 23°49              |
| M12  | 1 24 5  | 19° 6'57             | 15°11              | 10°34              | 11°23              | 5°37               | 1°19              | 3°11              | 10° 0             | 9°37              | 16°16  | 25°22              | 24° 1              | 1°30              | 23°47              |
| T 13 | 1 28 2  | 20° 6'17             | 27°20              | 12°19              | 10°50              | 5°45               | 1°11              | 3° 9              | 10° 0             | 9°38              | 16°15  | 25°17              | 23°58              | 1°37              | 23°44              |
| W14  | 1 31 58 | 21° 5'39             | 9 <sup>h</sup> 41  | 14° 5              | 10°17              | 5°55               | 1° 3              | 3° 7              | 9°59              | 9°39              | 16°14  | 25°14              | 23°55              | 1°43              | 23°42              |
| T 15 | 1 35 55 | 22° 5'04             | 22°19              | 15°50              | 9°46               | 6° 5               | 0°55              | 3° 4              | 9°59              | 9°40              | 16°13  | 25°D13             | 23°52              | 1°50              | 23°39              |
| F 16 | 1 39 51 | 23° 4'31             | 5 <sup>h</sup> 18  | 17°34              | 9°17               | 6°16               | 0°47              | 3° 2              | 9°59              | 9°41              | 16°11  | 25°14              | 23°48              | 1°57              | 23°37              |
| S 17 | 1 43 48 | 24° 4'00             | 18°43              | 19°19              | 8°50               | 6°27               | 0°39              | 3° 0              | 9°59              | 9°42              | 16°10  | 25°R14             | 23°45              | 2° 3              | 23°34              |
| S 18 | 1 47 44 | 25° 3'31             | 2 <sup>h</sup> 35  | 21° 2              | 8°25               | 6°39               | 0°31              | 2°58              | 9°59              | 9°43              | 16° 9  | 25°14              | 23°42              | 2°10              | 23°32              |
| M19  | 1 51 41 | 26° 3'05             | 16°55              | 22°45              | 8° 1               | 6°52               | 0°23              | 2°56              | 9°D58             | 9°43              | 16° 8  | 25°13              | 23°39              | 2°17              | 23°29              |
| T 20 | 1 55 38 | 27° 2'41             | 1 <sup>h</sup> 42  | 24°28              | 7°40               | 7° 6               | 0°15              | 2°55              | 9°58              | 9°44              | 16° 7  | 25° 8              | 23°36              | 2°24              | 23°26              |
| W21  | 1 59 34 | 28° 2'19             | 16°49              | 26°10              | 7°22               | 7°20               | 0° 7              | 2°53              | 9°59              | 9°45              | 16° 6  | 25° 1              | 23°32              | 2°30              | 23°24              |
| T 22 | 2 3 31  | 29° 1'59             | 2 <sup>h</sup> 11  | 27°52              | 7° 5               | 7°35               | 29°Y59            | 2°52              | 9°59              | 9°46              | 16° 5  | 24°52              | 23°29              | 2°37              | 23°21              |
| F 23 | 2 7 27  | 0 <sup>h</sup> 11    | 17°26              | 29°32              | 6°52               | 7°50               | 29°51             | 2°50              | 9°59              | 9°46              | 16° 3  | 24°42              | 23°26              | 2°44              | 23°18              |
| S 24 | 2 11 24 | 1° 1'25              | 2 <sup>h</sup> 34  | 1 <sup>h</sup> 13  | 6°40               | 8° 6               | 29°42             | 2°49              | 9°59              | 9°47              | 16° 2  | 24°33              | 23°23              | 2°50              | 23°15              |
| S 25 | 2 15 20 | 2° 1'11              | 17°21              | 2°52               | 6°31               | 8°23               | 29°34             | 2°47              | 9°59              | 9°48              | 16° 1  | 24°24              | 23°20              | 2°57              | 23°13              |
| M26  | 2 19 17 | 3° 0'59              | 1 <sup>h</sup> 41  | 4°32               | 6°24               | 8°40               | 29°26             | 2°46              | 10° 0             | 9°48              | 16° 0  | 24°18              | 23°17              | 3° 4              | 23°10              |
| T 27 | 2 23 13 | 4° 0'48              | 15°31              | 6°10               | 6°20               | 8°58               | 29°18             | 2°45              | 10° 0             | 9°49              | 15°59  | 24°15              | 23°13              | 3°11              | 23° 7              |
| W28  | 2 27 10 | 5° 0'39              | 28°53              | 7°48               | 6°D18              | 9°16               | 29°10             | 2°44              | 10° 0             | 9°49              | 15°58  | 24°13              | 23°10              | 3°17              | 23° 4              |
| T 29 | 2 31 7  | 6° 0'32              | 11 <sup>h</sup> 49 | 9°26               | 6°19               | 9°35               | 29° 2             | 2°44              | 10° 1             | 9°50              | 15°57  | 24°D13             | 23° 7              | 3°24              | 23° 1              |
| F 30 | 2 35 3  | 7° 0'26              | 24°24              | 11° 3              | 6°22               | 9°55               | 28°54             | 2°43              | 10° 1             | 9°50              | 15°56  | 24°R13             | 23° 4              | 3°31              | 22°58              |
| S 31 | 2 39 0  | 8 <sup>h</sup> 0'22  | 6 <sup>h</sup> 42  | 12 <sup>h</sup> 39 | 6 <sup>h</sup> 27  | 10 <sup>h</sup> 15 | 28°Y46            | 2 <sup>h</sup> 42 | 10 <sup>h</sup> 2 | 9 <sup>h</sup> 51 | 15°Y55 | 24 <sup>h</sup> 13 | 23 <sup>h</sup> 1  | 3 <sup>h</sup> 37 | 22 <sup>h</sup> 55 |

Delta T = 182.14 sec.

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# SWISS EPHEMERIS for the year 2082

NOVEMBER 2082

00:00 UT

| Day  | Sid.t   | ☉        | ☽      | ♀      | ♂      | ♂      | ♂      | ♂     | ♂     | ♂     | ♂      | ♂      | ♂      | ♂     | ♂      |
|------|---------|----------|--------|--------|--------|--------|--------|-------|-------|-------|--------|--------|--------|-------|--------|
| S 1  | 2 42 56 | 9♉ 0'20  | 18♈ 48 | 14♉ 15 | 6♉ 35  | 10♈ 35 | 28°R38 | 2°R42 | 10♈ 3 | 9♉ 51 | 15°R54 | 24°R10 | 22°R58 | 3♉ 44 | 22°R52 |
| M 2  | 2 46 53 | 10° 0'19 | 0♈ 46  | 15°50  | 6°45   | 10°56  | 28°Y30 | 2♈ 41 | 10° 3 | 9°51  | 15°Y53 | 24° 5  | 22°54  | 3°51  | 22°R49 |
| T 3  | 2 50 49 | 11° 0'20 | 12°39  | 17°25  | 6°57   | 11°17  | 28°23  | 2°41  | 10° 4 | 9°52  | 15°52  | 23°57  | 22°51  | 3°58  | 22°46  |
| W 4  | 2 54 46 | 12° 0'22 | 24°30  | 19° 0  | 7°11   | 11°39  | 28°15  | 2°41  | 10° 5 | 9°52  | 15°51  | 23°46  | 22°48  | 4° 4  | 22°43  |
| T 5  | 2 58 42 | 13° 0'27 | 6♉ 22  | 20°34  | 7°27   | 12° 2  | 28° 7  | 2°40  | 10° 6 | 9°52  | 15°49  | 23°33  | 22°45  | 4°11  | 22°40  |
| F 6  | 3 2 39  | 14° 0'33 | 18°16  | 22° 8  | 7°46   | 12°25  | 28° 0  | 2°D40 | 10° 6 | 9°52  | 15°48  | 23°18  | 22°42  | 4°18  | 22°37  |
| S 7  | 3 6 35  | 15° 0'41 | 0♈ 13  | 23°41  | 8° 6   | 12°48  | 27°52  | 2°40  | 10° 7 | 9°53  | 15°47  | 23° 4  | 22°38  | 4°24  | 22°34  |
| S 8  | 3 10 32 | 16° 0'51 | 12°14  | 25°14  | 8°28   | 13°11  | 27°45  | 2°41  | 10° 8 | 9°53  | 15°47  | 22°50  | 22°35  | 4°31  | 22°31  |
| M 9  | 3 14 29 | 17° 1'03 | 24°20  | 26°47  | 8°52   | 13°35  | 27°38  | 2°41  | 10° 9 | 9°53  | 15°46  | 22°39  | 22°32  | 4°38  | 22°28  |
| T 10 | 3 18 25 | 18° 1'17 | 6♉ 35  | 28°19  | 9°18   | 14° 0  | 27°31  | 2°41  | 10°10 | 9°53  | 15°45  | 22°31  | 22°29  | 4°45  | 22°25  |
| W 11 | 3 22 22 | 19° 1'33 | 19° 0  | 29°51  | 9°45   | 14°25  | 27°24  | 2°42  | 10°12 | 9°53  | 15°44  | 22°25  | 22°26  | 4°51  | 22°22  |
| T 12 | 3 26 18 | 20° 1'51 | 18♉ 38 | 1♉ 22  | 10°15  | 14°50  | 27°17  | 2°42  | 10°13 | 9°R53 | 15°43  | 22°22  | 22°23  | 4°58  | 22°19  |
| F 13 | 3 30 15 | 21° 2'10 | 14°34  | 2°54   | 10°45  | 15°16  | 27°10  | 2°43  | 10°14 | 9°53  | 15°42  | 22°22  | 22°19  | 5° 5  | 22°16  |
| S 14 | 3 34 11 | 22° 2'32 | 27°50  | 4°25   | 11°18  | 15°42  | 27° 3  | 2°44  | 10°15 | 9°53  | 15°41  | 22°22  | 22°16  | 5°11  | 22°13  |
| S 15 | 3 38 8  | 23° 2'56 | 11♈ 31 | 5°55   | 11°52  | 16° 8  | 26°57  | 2°45  | 10°17 | 9°53  | 15°40  | 22°21  | 22°13  | 5°18  | 22° 9  |
| M 16 | 3 42 5  | 24° 3'21 | 25°38  | 7°25   | 12°27  | 16°35  | 26°50  | 2°46  | 10°18 | 9°53  | 15°39  | 22°19  | 22°10  | 5°25  | 22° 6  |
| T 17 | 3 46 1  | 25° 3'48 | 10♉ 10 | 8°55   | 13° 3  | 17° 2  | 26°44  | 2°47  | 10°19 | 9°52  | 15°38  | 22°14  | 22° 7  | 5°32  | 22° 3  |
| W 18 | 3 49 58 | 26° 4'18 | 25° 6  | 10°25  | 13°41  | 17°29  | 26°38  | 2°48  | 10°21 | 9°52  | 15°37  | 22° 6  | 22° 4  | 5°38  | 22° 0  |
| T 19 | 3 53 54 | 27° 4'49 | 10♈ 16 | 11°54  | 14°21  | 17°57  | 26°32  | 2°50  | 10°22 | 9°52  | 15°37  | 21°55  | 22° 0  | 5°45  | 21°57  |
| F 20 | 3 57 51 | 28° 5'22 | 25°32  | 13°22  | 15° 1  | 18°25  | 26°26  | 2°51  | 10°24 | 9°52  | 15°36  | 21°44  | 21°57  | 5°52  | 21°54  |
| S 21 | 4 1 47  | 29° 5'56 | 10♈ 42 | 14°51  | 15°42  | 18°53  | 26°20  | 2°53  | 10°25 | 9°51  | 15°35  | 21°32  | 21°54  | 5°58  | 21°51  |
| S 22 | 4 5 44  | 0♉ 6'32  | 25°35  | 16°19  | 16°25  | 19°22  | 26°15  | 2°54  | 10°27 | 9°51  | 15°34  | 21°22  | 21°51  | 6° 5  | 21°48  |
| M 23 | 4 9 40  | 1° 7'09  | 10♈ 4  | 17°46  | 17° 9  | 19°51  | 26°10  | 2°56  | 10°29 | 9°51  | 15°33  | 21°14  | 21°48  | 6°12  | 21°45  |
| T 24 | 4 13 37 | 2° 7'47  | 24° 3  | 19°13  | 17°54  | 20°20  | 26° 4  | 2°58  | 10°31 | 9°50  | 15°33  | 21° 9  | 21°44  | 6°19  | 21°42  |
| W 25 | 4 17 34 | 3° 8'27  | 7♈ 33  | 20°39  | 18°40  | 20°49  | 25°59  | 3° 0  | 10°32 | 9°50  | 15°32  | 21° 7  | 21°41  | 6°25  | 21°39  |
| T 26 | 4 21 30 | 4° 9'08  | 20°35  | 22° 4  | 19°26  | 21°19  | 25°55  | 3° 2  | 10°34 | 9°49  | 15°31  | 21°D 6 | 21°38  | 6°32  | 21°36  |
| F 27 | 4 25 27 | 5° 9'49  | 3♈ 12  | 23°29  | 20°14  | 21°49  | 25°50  | 3° 4  | 10°36 | 9°49  | 15°30  | 21°R 6 | 21°35  | 6°39  | 21°33  |
| S 28 | 4 29 23 | 6°10'32  | 15°31  | 24°52  | 21° 3  | 22°19  | 25°46  | 3° 6  | 10°38 | 9°48  | 15°30  | 21° 6  | 21°32  | 6°45  | 21°30  |
| S 29 | 4 33 20 | 7°11'15  | 27°35  | 26°15  | 21°52  | 22°50  | 25°41  | 3° 9  | 10°40 | 9°48  | 15°29  | 21° 4  | 21°29  | 6°52  | 21°27  |
| M 30 | 4 37 16 | 8♈ 12'00 | 9♈ 31  | 27♈ 36 | 22♈ 42 | 23♈ 21 | 25°Y37 | 3♈ 11 | 10°42 | 9♈ 47 | 15°Y29 | 21° 0  | 21°25  | 6♈ 59 | 21♈ 24 |

Delta T = 182.30 sec.

DECEMBER 2082

00:00 UT

| Day  | Sid.t   | ☉        | ☽      | ♀      | ♂      | ♂      | ♂      | ♂     | ♂     | ♂     | ♂      | ♂      | ♂      | ♂      | ♂      |
|------|---------|----------|--------|--------|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|--------|
| T 1  | 4 41 13 | 9♈ 12'46 | 21°Y22 | 28♈ 57 | 23♈ 33 | 23♈ 52 | 25°R33 | 3♈ 14 | 10°44 | 9°R47 | 15°R28 | 20°R53 | 21°R22 | 7♈ 6   | 21°R21 |
| W 2  | 4 45 9  | 10°13'33 | 3♈ 13  | 0♈ 15  | 24°25  | 24°23  | 25°Y30 | 3°16  | 10°46 | 9♈ 46 | 15°Y27 | 20°R43 | 21°19  | 7°12   | 21°R18 |
| T 3  | 4 49 6  | 11°14'21 | 15° 6  | 1°32   | 25°18  | 24°54  | 25°26  | 3°19  | 10°48 | 9°45  | 15°27  | 20°31  | 21°16  | 7°19   | 21°15  |
| F 4  | 4 53 3  | 12°15'10 | 27° 3  | 2°46   | 26°11  | 25°26  | 25°23  | 3°22  | 10°50 | 9°45  | 15°26  | 20°18  | 21°13  | 7°26   | 21°12  |
| S 5  | 4 56 59 | 13°16'00 | 9♈ 7   | 3°58   | 27° 5  | 25°58  | 25°20  | 3°25  | 10°53 | 9°44  | 15°26  | 20° 4  | 21°10  | 7°33   | 21° 9  |
| S 6  | 5 0 56  | 14°16'51 | 21°18  | 5° 8   | 27°59  | 26°30  | 25°17  | 3°28  | 10°55 | 9°43  | 15°25  | 19°52  | 21° 6  | 7°39   | 21° 7  |
| M 7  | 5 4 52  | 15°17'43 | 3♈ 37  | 6°14   | 28°55  | 27° 2  | 25°14  | 3°31  | 10°57 | 9°42  | 15°25  | 19°42  | 21° 3  | 7°46   | 21° 4  |
| T 8  | 5 8 49  | 16°18'36 | 16° 5  | 7°17   | 29°51  | 27°34  | 25°11  | 3°34  | 10°59 | 9°41  | 15°24  | 19°34  | 21° 0  | 7°53   | 21° 1  |
| W 9  | 5 12 45 | 17°19'31 | 28°43  | 8°15   | 0♈ 47  | 28° 7  | 25° 9  | 3°37  | 11° 2 | 9°41  | 15°24  | 19°29  | 20°57  | 7°59   | 20°58  |
| T 10 | 5 16 42 | 18°20'26 | 11♈ 32 | 9° 8   | 1°44   | 28°40  | 25° 7  | 3°41  | 11° 4 | 9°40  | 15°23  | 19°27  | 20°54  | 8° 6   | 20°56  |
| F 11 | 5 20 39 | 19°21'23 | 24°34  | 9°56   | 2°42   | 29°13  | 25° 5  | 3°44  | 11° 7 | 9°39  | 15°23  | 19°D27 | 20°50  | 8°13   | 20°53  |
| S 12 | 5 24 35 | 20°22'21 | 7♈ 52  | 10°38  | 3°40   | 29°46  | 25° 3  | 3°48  | 11° 9 | 9°38  | 15°22  | 19°28  | 20°47  | 8°20   | 20°50  |
| S 13 | 5 28 32 | 21°23'20 | 21°28  | 11°13  | 4°39   | 0°Y19  | 25° 2  | 3°51  | 11°12 | 9°37  | 15°22  | 19°R28 | 20°44  | 8°26   | 20°48  |
| M 14 | 5 32 28 | 22°24'20 | 5♈ 24  | 11°39  | 5°38   | 0°53   | 25° 0  | 3°55  | 11°14 | 9°36  | 15°22  | 19°27  | 20°41  | 8°33   | 20°45  |
| T 15 | 5 36 25 | 23°25'21 | 19°40  | 11°57  | 6°38   | 1°26   | 24°59  | 3°59  | 11°17 | 9°35  | 15°21  | 19°25  | 20°38  | 8°40   | 20°43  |
| W 16 | 5 40 21 | 24°26'24 | 4♈ 14  | 12°R 5 | 7°38   | 2° 0   | 24°58  | 4° 3  | 11°19 | 9°34  | 15°21  | 19°19  | 20°35  | 8°46   | 20°40  |
| T 17 | 5 44 18 | 25°27'27 | 19° 1  | 12° 3  | 8°38   | 2°34   | 24°58  | 4° 7  | 11°22 | 9°33  | 15°21  | 19°12  | 20°31  | 8°53   | 20°38  |
| F 18 | 5 48 14 | 26°28'32 | 3♈ 56  | 11°50  | 9°39   | 3° 8   | 24°57  | 4°11  | 11°25 | 9°31  | 15°20  | 19° 4  | 20°28  | 9° 0   | 20°36  |
| S 19 | 5 52 11 | 27°29'37 | 18°49  | 11°25  | 10°41  | 3°42   | 24°57  | 4°15  | 11°28 | 9°30  | 15°20  | 18°55  | 20°25  | 9° 7   | 20°33  |
| S 20 | 5 56 8  | 28°30'43 | 3♈ 31  | 10°48  | 11°43  | 4°17   | 24°D57 | 4°20  | 11°30 | 9°29  | 15°20  | 18°47  | 20°22  | 9°13   | 20°31  |
| M 21 | 6 0 4   | 29°31'49 | 17°55  | 10° 0  | 12°45  | 4°51   | 24°57  | 4°24  | 11°33 | 9°28  | 15°20  | 18°41  | 20°19  | 9°20   | 20°29  |
| T 22 | 6 4 1   | 0♈ 32'56 | 1♈ 55  | 9° 2   | 13°47  | 5°26   | 24°58  | 4°28  | 11°36 | 9°27  | 15°20  | 18°38  | 20°16  | 9°27   | 20°26  |
| W 23 | 6 7 57  | 1°34'03  | 15°28  | 7°54   | 14°50  | 6° 1   | 24°58  | 4°33  | 11°39 | 9°26  | 15°19  | 18°D36 | 20°12  | 9°34   | 20°24  |
| T 24 | 6 11 54 | 2°35'10  | 28°35  | 6°39   | 15°53  | 6°36   | 24°59  | 4°37  | 11°42 | 9°24  | 15°19  | 18°37  | 20° 9  | 9°40   | 20°22  |
| F 25 | 6 15 50 | 3°36'18  | 11♈ 19 | 5°19   | 16°57  | 7°11   | 25° 0  | 4°42  | 11°45 | 9°23  | 15°19  | 18°38  | 20° 6  | 9°47   | 20°20  |
| S 26 | 6 19 47 | 4°37'25  | 23°42  | 3°56   | 18° 1  | 7°46   | 25° 1  | 4°47  | 11°48 | 9°22  | 15°19  | 18°40  | 20° 3  | 9°54   | 20°18  |
| S 27 | 6 23 44 | 5°38'33  | 5°Y49  | 2°35   | 19° 5  | 8°21   | 25° 3  | 4°52  | 11°50 | 9°20  | 15°19  | 18°R40 | 20° 0  | 10° 0  | 20°16  |
| M 28 | 6 27 40 | 6°39'41  | 17°47  | 1°16   | 20° 9  | 8°57   | 25° 4  | 4°57  | 11°53 | 9°19  | 15°19  | 18°39  | 19°56  | 10° 7  | 20°14  |
| T 29 | 6 31 37 | 7°40'49  | 29°39  | 0° 2   | 21°14  | 9°32   | 25° 6  | 5° 1  | 11°56 | 9°18  | 15°D19 | 18°37  | 19°53  | 10°14  | 20°12  |
| W 30 | 6 35 33 | 8°41'56  | 11♈ 30 | 28♈ 57 | 22°19  | 10° 8  | 25° 8  | 5° 7  | 12° 0 | 9°16  | 15°19  | 18°32  | 19°50  | 10°21  | 20°11  |
| T 31 | 6 39 30 | 9♈ 43'04 | 23♈ 25 | 28♈ 0  | 23♈ 25 | 10°Y43 | 25°Y10 | 5♈ 12 | 12° 3 | 9♈ 15 | 15°Y19 | 18°R26 | 19°R47 | 10♈ 27 | 20♈ 9  |

Delta T = 182.46 sec.

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