

SWISS EPHEMERIS for the year 1889

JANUARY 1889

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♁ | ♂ | ♃ | ♅ | ♁ | ♁ | ♁ | ♁ | ♁ | ♁ | ♁ | ♁ |
|------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------|----------|----------|---------|---------|---|
| T 1 | 6 43 20 | 10°34'41 | 28°13'32 | 12°34'43 | 22°22'27 | 23°18'18 | 22°17'32 | 19°R28 | 21°15'42 | 29°R55 | 4°R22 | 21°R13 | 21°15'52 | 6°11'59 | 8°R28 | |
| W 2 | 6 47 17 | 11°50'52 | 13°33'30 | 14°20'20 | 23°38'23 | 24°4'24 | 22°46'19 | 19°19'25 | 21°43'29 | 29°15'54 | 4°11'21 | 21°15'12 | 21°49'7 | 7°6'8 | 8°24'24 | |
| T 3 | 6 51 13 | 12°52'04 | 28°16'16 | 15°58'24 | 24°49'24 | 24°51'22 | 22°59'19 | 19°22'21 | 21°45'29 | 29°52'4 | 4°20'21 | 21°D12 | 21°46'7 | 7°13'8 | 8°20'20 | |
| F 4 | 6 55 10 | 13°53'16 | 12°42'42 | 17°36'26 | 26°0'25 | 25°38'23 | 23°12'19 | 19°18'21 | 21°46'29 | 29°51'4 | 4°19'21 | 21°13'21 | 21°43'7 | 7°19'8 | 8°16'16 | |
| S 5 | 6 59 7 | 14°54'27 | 26°43'19 | 19°15'27 | 27°11'26 | 26°25'23 | 23°25'19 | 19°15'21 | 21°47'29 | 29°50'4 | 4°18'21 | 21°13'21 | 21°39'7 | 7°26'8 | 8°12'12 | |
| S 6 | 7 3 3 | 15°55'37 | 10°13'10 | 20°54'28 | 28°22'27 | 27°12'23 | 23°38'19 | 19°11'21 | 21°48'29 | 29°49'4 | 4°17'21 | 21°14'21 | 21°36'7 | 7°33'8 | 8°7'7 | |
| M 7 | 7 7 0 | 16°56'48 | 23°29'23 | 22°33'29 | 29°33'27 | 27°59'23 | 23°51'19 | 8'21 | 21°49'29 | 29°48'4 | 4°17'21 | 21°14'21 | 21°33'7 | 7°39'8 | 8°3'3 | |
| T 8 | 7 10 56 | 17°57'57 | 6°14'24 | 24°13'0 | 30°43'28 | 28°46'24 | 24°4'19 | 4'21 | 21°50'29 | 29°47'4 | 4°16'21 | 21°15'21 | 21°30'7 | 7°46'7 | 7°59'59 | |
| W 9 | 7 14 53 | 18°59'06 | 18°40'25 | 25°53'1 | 53'29 | 29°32'24 | 24°17'19 | 0'21 | 21°51'29 | 29°46'4 | 4°15'21 | 21°R15 | 21°27'7 | 7°53'7 | 7°55'55 | |
| T 10 | 7 18 49 | 20°0'15 | 0°50'27 | 27°33'3 | 4'0 | 0°19'24 | 24°30'18 | 56'21 | 21°52'29 | 29°45'4 | 4°14'21 | 21°15'21 | 21°23'7 | 7°59'7 | 7°51'51 | |
| F 11 | 7 22 46 | 21°1'23 | 12°48'29 | 14'4 | 14'1 | 6'0 | 24°43'18 | 52'21 | 21°53'29 | 29°44'4 | 4°14'21 | 21°D15 | 21°20'8 | 8'6'7 | 7°47'7 | |
| S 12 | 7 26 42 | 22°2'31 | 24°40'0 | 54'5 | 24'1 | 53'24 | 24°56'18 | 48'21 | 21°54'29 | 29°43'4 | 4°13'21 | 21°15'21 | 21°17'8 | 8°13'7 | 7°43'43 | |
| S 13 | 7 30 39 | 23°3'37 | 6°11'29 | 2°35'6 | 34'6 | 40'25 | 25°9'18 | 44'21 | 21°55'29 | 29°42'4 | 4°12'21 | 21°15'21 | 21°14'8 | 8°19'7 | 7°39'39 | |
| M 14 | 7 34 36 | 24°4'44 | 18°20'4 | 16'7 | 43'7 | 43'3 | 25°22'18 | 40'21 | 21°55'29 | 29°41'4 | 4°11'21 | 21°15'21 | 21°11'8 | 8°26'7 | 7°35'35 | |
| T 15 | 7 38 32 | 25°5'49 | 0°15'5 | 5'5 | 53'8 | 53'4 | 25°35'18 | 35'21 | 21°56'29 | 29°41'4 | 4°11'21 | 21°16'21 | 21°8'8 | 8°33'7 | 7°31'31 | |
| W 16 | 7 42 29 | 26°6'54 | 12°18'7 | 38'10 | 2'10 | 0'25 | 25°47'18 | 31'21 | 21°57'29 | 29°40'4 | 4°10'21 | 21°16'21 | 21°4'8 | 8°39'7 | 7°28'28 | |
| T 17 | 7 46 25 | 27°7'59 | 24°30'9 | 19'11 | 12'11 | 5'47 | 26°0'18 | 27'21 | 21°57'29 | 29°39'4 | 4°9'21 | 21°R16 | 21°1'8 | 8°46'7 | 7°24'24 | |
| F 18 | 7 50 22 | 28°9'02 | 6°52'10 | 59'12 | 21'6 | 33'26 | 26°13'18 | 22'21 | 21°58'29 | 29°38'4 | 4°9'21 | 21°16'20 | 20°58'8 | 8°53'7 | 7°20'20 | |
| S 19 | 7 54 18 | 29°10'05 | 19°27'12 | 39'13 | 30'7 | 20'26 | 26°25'18 | 18'21 | 21°58'29 | 29°38'4 | 4°8'21 | 21°15'20 | 20°55'8 | 8°59'7 | 7°16'16 | |
| S 20 | 7 58 15 | 0°11'08 | 2°14'14 | 17'14 | 38'8 | 7'26 | 26°38'18 | 14'21 | 21°58'29 | 29°37'4 | 4°8'21 | 21°14'20 | 20°52'9 | 9°6'7 | 7°13'13 | |
| M 21 | 8 2 11 | 1°12'10 | 15°15'15 | 55'15 | 47'8 | 53'26 | 26°50'18 | 9'21 | 21°59'29 | 29°36'4 | 4°7'21 | 21°13'20 | 20°49'9 | 9°13'7 | 7°9'9 | |
| T 22 | 8 6 8 | 2°13'11 | 28°29'17 | 32'16 | 55'9 | 40'27 | 27°3'18 | 4'21 | 21°59'29 | 29°36'4 | 4°7'21 | 21°11'20 | 20°45'9 | 9°19'7 | 7°5'5 | |
| W 23 | 8 10 5 | 3°14'12 | 11°58'19 | 6'18 | 3'10 | 27'27 | 27°15'18 | 0'21 | 21°59'29 | 29°35'4 | 4°6'21 | 21°10'20 | 20°42'9 | 9°26'7 | 7°2'2 | |
| T 24 | 8 14 1 | 4°15'12 | 25°41'20 | 39'19 | 11'11 | 13'27 | 27°27'17 | 55'21 | 21°59'29 | 29°35'4 | 4°6'21 | 21°9'20 | 20°39'9 | 9°33'6 | 6°58'58 | |
| F 25 | 8 17 58 | 5°16'11 | 9°13'8 | 22°9'20 | 19'12 | 0'27 | 27°39'17 | 50'21 | 21°59'29 | 29°34'4 | 4°5'21 | 21°D9 | 20°36'9 | 9°40'6 | 6°55'55 | |
| S 26 | 8 21 54 | 6°17'11 | 23°48'23 | 36'21 | 27'12 | 47'27 | 27°51'17 | 46'21 | 21°R59 | 29°34'4 | 4°5'21 | 21°10'20 | 20°33'9 | 9°46'6 | 6°51'51 | |
| S 27 | 8 25 51 | 7°18'09 | 8°17'24 | 59'22 | 34'13 | 33'28 | 28°3'17 | 41'21 | 21°59'29 | 29°33'4 | 4°4'21 | 21°11'20 | 20°29'9 | 9°53'6 | 6°48'48 | |
| M 28 | 8 29 47 | 8°19'07 | 2°10'26 | 18'23 | 41'14 | 20'28 | 28°15'17 | 36'21 | 21°59'29 | 29°33'4 | 4°4'21 | 21°12'20 | 20°26'10 | 10°0'6 | 6°45'45 | |
| T 29 | 8 33 44 | 9°20'04 | 7°15'27 | 32'24 | 48'15 | 6'28 | 28°27'17 | 31'21 | 21°59'29 | 29°32'4 | 4°3'21 | 21°13'20 | 20°23'10 | 10°6'6 | 6°41'41 | |
| W 30 | 8 37 40 | 10°21'01 | 21°50'28 | 40'25 | 55'15 | 53'28 | 28°39'17 | 27'21 | 21°59'29 | 29°32'4 | 4°3'21 | 21°R14 | 20°20'10 | 10°13'6 | 6°38'38 | |
| T 31 | 8 41 37 | 11°22'56 | 6°17'29 | 41'27 | 51'16 | 39'28 | 28°51'17 | 22'21 | 21°15'59 | 29°32'4 | 4°11'21 | 21°13'20 | 20°17'10 | 10°20'6 | 6°35'35 | |

Delta T = -5.76 sec.

FEBRUARY 1889

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| Day | Sid.t | ☉ | ☽ | ♀ | ♁ | ♂ | ♃ | ♅ | ♁ | ♁ | ♁ | ♁ | ♁ | ♁ | ♁ | ♁ |
|------|----------|----------|----------|-------|-------|-------|----------|-------|----------|----------|---------|----------|----------|----------|---------|---|
| F 1 | 8 45 34 | 12°22'51 | 20°32'0 | 36'0 | 38'8 | 17'17 | 29°17'17 | R17 | 21°R58 | 29°R32 | 4°R2 | 21°R11 | 20°14'20 | 10°11'26 | 6°R32 | |
| S 2 | 8 49 30 | 13°23'44 | 4°29'1 | 21'29 | 14'18 | 12'29 | 29°14'17 | 12'17 | 21°15'58 | 29°15'31 | 4°11'21 | 21°8'20 | 20°10'10 | 10°33'6 | 6°29'29 | |
| S 3 | 8 53 27 | 14°24'35 | 18°5'1 | 58'0 | 20'18 | 58'29 | 29°26'17 | 7'21 | 21°57'29 | 29°31'4 | 4°2'21 | 21°5'20 | 20°7'10 | 10°40'6 | 6°26'26 | |
| M 4 | 8 57 23 | 15°25'26 | 1°18'1 | 26'1 | 25'19 | 45'29 | 29°37'17 | 2'21 | 21°57'29 | 29°31'4 | 4°1'21 | 21°1'20 | 20°4'10 | 10°46'6 | 6°23'23 | |
| T 5 | 9 1 20 | 16°26'15 | 14°8'2 | 43'2 | 31'20 | 31'20 | 29°49'16 | 57'21 | 21°56'29 | 29°31'4 | 4°1'20 | 20°58'20 | 20°1'10 | 10°53'6 | 6°20'20 | |
| W 6 | 9 5 16 | 17°27'02 | 26°38'2 | 49'2 | 36'21 | 18'21 | 0°30'16 | 52'21 | 21°56'29 | 29°31'4 | 4°1'20 | 20°55'19 | 19°58'11 | 10°0'6 | 6°17'17 | |
| T 7 | 9 9 13 | 18°27'48 | 8°51'2 | 45'2 | 4'22 | 4'0 | 0°11'16 | 47'21 | 21°55'29 | 29°31'4 | 4°1'20 | 20°53'19 | 19°55'11 | 10°6'6 | 6°15'15 | |
| F 8 | 9 13 9 | 19°28'33 | 20°51'2 | 30'5 | 45'22 | 50'22 | 0°22'16 | 43'21 | 21°55'29 | 29°D31 | 4°0'20 | 20°D52 | 19°51'11 | 11°13'6 | 6°12'12 | |
| S 9 | 9 17 6 | 20°29'16 | 2°11'2 | 4'6 | 49'23 | 36'0 | 0°33'16 | 38'21 | 21°54'29 | 29°31'4 | 4°0'20 | 20°53'19 | 19°48'11 | 11°20'6 | 6°10'10 | |
| S 10 | 9 21 3 | 21°29'57 | 14°33'1 | 28'7 | 52'24 | 22'0 | 0°44'16 | 33'21 | 21°53'29 | 29°31'4 | 4°0'20 | 20°55'19 | 19°45'11 | 11°26'6 | 6°7'7 | |
| M 11 | 9 24 59 | 22°30'37 | 26°24'0 | 43'8 | 56'25 | 9'0 | 0°55'16 | 28'21 | 21°52'29 | 29°31'4 | 4°0'20 | 20°57'19 | 19°42'11 | 11°33'6 | 6°5'5 | |
| T 12 | 9 28 56 | 23°31'15 | 8°22'29 | 50'9 | 59'25 | 55'1 | 1°6'16 | 23'21 | 21°51'29 | 29°31'4 | 4°0'20 | 20°58'19 | 19°39'11 | 11°40'6 | 6°3'3 | |
| W 13 | 9 32 52 | 24°31'51 | 20°30'28 | 51'11 | 2'26 | 41'1 | 1°17'16 | 18'21 | 21°50'29 | 29°31'4 | 4°0'20 | 20°R59 | 19°35'11 | 11°46'6 | 6°0'0 | |
| T 14 | 9 36 49 | 25°32'26 | 2°52'27 | 47'12 | 4'27 | 27'1 | 1°27'16 | 13'21 | 21°49'29 | 29°31'4 | 4°0'20 | 20°58'19 | 19°32'11 | 11°53'6 | 5°58'58 | |
| F 15 | 9 40 45 | 26°32'59 | 15°30'26 | 40'13 | 6'28 | 13'1 | 1°38'16 | 9'21 | 21°48'29 | 29°31'4 | 4°0'20 | 20°56'19 | 19°29'12 | 12°0'6 | 5°56'56 | |
| S 16 | 9 44 42 | 27°33'31 | 28°25'25 | 31'14 | 8'28 | 59'1 | 1°48'16 | 4'21 | 21°47'29 | 29°32'4 | 4°D0 | 20°52'19 | 19°26'12 | 12°6'6 | 5°54'54 | |
| S 17 | 9 48 38 | 28°34'00 | 11°36'24 | 23'15 | 9'29 | 45'2 | 1°59'15 | 59'21 | 21°46'29 | 29°32'4 | 4°0'20 | 20°46'19 | 19°23'12 | 12°13'6 | 5°52'52 | |
| M 18 | 9 52 35 | 29°34'29 | 25°3'23 | 18'16 | 10'0 | 31'0 | 2°9'15 | 54'21 | 21°45'29 | 29°32'4 | 4°0'20 | 20°39'19 | 19°20'12 | 12°20'6 | 5°51'51 | |
| T 19 | 9 56 32 | 0°34'56 | 8°42'22 | 16'17 | 10'1 | 17'2 | 2°19'15 | 50'21 | 21°43'29 | 29°33'4 | 4°0'20 | 20°33'19 | 19°16'12 | 12°26'6 | 5°49'49 | |
| W 20 | 10 0 28 | 1°35'21 | 22°32'21 | 18'18 | 10'2 | 3'2 | 2°29'15 | 45'21 | 21°42'29 | 29°33'4 | 4°0'20 | 20°27'19 | 19°13'12 | 12°33'6 | 5°47'47 | |
| T 21 | 10 4 25 | 2°35'45 | 6°13'20 | 27'19 | 9'2 | 48'2 | 2°39'15 | 41'21 | 21°41'29 | 29°33'4 | 4°0'20 | 20°22'19 | 19°10'12 | 12°40'6 | 5°46'46 | |
| F 22 | 10 8 21 | 3°36'08 | 20°33'19 | 42'20 | 8'3 | 34'2 | 2°48'15 | 36'21 | 21°39'29 | 29°34'4 | 4°0'20 | 20°19'19 | 19°7'12 | 12°46'6 | 5°44'44 | |
| S 23 | 10 12 18 | 4°36'30 | 4°39'19 | 4'21 | 7'4 | 20'2 | 2°58'15 | 32'21 | 21°38'29 | 29°34'4 | 4°0'20 | 20°D18 | 19°4'12 | 12°53'6 | 5°43'43 | |
| S 24 | 10 16 14 | 5°36'50 | 18°48'18 | 34'22 | 5'6 | 6'3 | 3°8'15 | 27'21 | 21°36'29 | 29°35'4 | 4°0'20 | 20°19'19 | 19°1'13 | 13°0'6 | 5°41'41 | |
| M 25 | 10 20 11 | 6°37'09 | 2°57'18 | 10'23 | 2'5 | 51'3 | 3°17'15 | 23'21 | 21°35'29 | 29°35'4 | 4°0'20 | 20°20'18 | 18°57'13 | 13°6'6 | 5°40'40 | |
| T 26 | 10 24 7 | 7°37'26 | 17°6'17 | 54'23 | 59'6 | 37'3 | 3°26'15 | 18'21 | 21°33'29 | 29°36'4 | 4°1'20 | 20°R21 | 18°54'13 | 13°13'6 | 5°39'39 | |
| W 27 | 10 28 4 | 8°37'42 | 1°11'17 | 45'24 | 55'7 | 22'3 | 3°36'15 | 14'21 | 21°32'29 | 29°37'4 | 4°1'20 | 20°21'18 | 18°51'13 | 13°20'6 | 5°38'38 | |
| T 28 | 10 32 1 | 9°37'56 | 15°11'17 | D43 | 51'8 | 8'8 | 3°45'15 | 10'21 | 21°15'30 | 29°15'32 | 4°11'21 | 20°18'18 | 18°48'13 | 13°26'6 | 5°37'37 | |

Delta T = -5.77 sec.

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SWISS EPHEMERIS for the year 1889

MARCH 1889

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ♁ | ♂ | ♃ | ♄ |
|------|----------|----------|--------|-------|-------|-------|------|--------|--------|-------|-------|--------|-------|--------|-------|
| F 1 | 10 35 57 | 10X38'08 | 29≈ 2 | 17≈47 | 26Y47 | 8Y54 | 3Z54 | 15°R 6 | 21°R28 | 29D38 | 4II 1 | 20°R13 | 18D45 | 13II33 | 5°R36 |
| S 2 | 10 39 54 | 11°38'19 | 12X41 | 17°58 | 27°41 | 9°39 | 4° 3 | 15L 1 | 21D27 | 29°39 | 4° 2 | 20D 6 | 18°41 | 13°40 | 5D35 |
| S 3 | 10 43 50 | 12°38'27 | 26° 4 | 18°14 | 28°35 | 10°24 | 4°11 | 14°57 | 21°25 | 29°40 | 4° 2 | 19°57 | 18°38 | 13°46 | 5°35 |
| M 4 | 10 47 47 | 13°38'34 | 9Y 9 | 18°35 | 29°29 | 11°10 | 4°20 | 14°53 | 21°23 | 29°40 | 4° 2 | 19°47 | 18°35 | 13°53 | 5°34 |
| T 5 | 10 51 43 | 14°38'39 | 21°57 | 19° 2 | 0B21 | 11°55 | 4°28 | 14°50 | 21°21 | 29°41 | 4° 3 | 19°37 | 18°32 | 14° 0 | 5°34 |
| W 6 | 10 55 40 | 15°38'42 | 4B26 | 19°34 | 1°13 | 12°40 | 4°37 | 14°46 | 21°19 | 29°42 | 4° 3 | 19°29 | 18°29 | 14° 6 | 5°33 |
| T 7 | 10 59 36 | 16°38'42 | 16°39 | 20°10 | 2° 5 | 13°26 | 4°45 | 14°42 | 21°17 | 29°43 | 4° 3 | 19°22 | 18°26 | 14°13 | 5°33 |
| F 8 | 11 3 33 | 17°38'41 | 28°40 | 20°50 | 2°55 | 14°11 | 4°53 | 14°38 | 21°15 | 29°44 | 4° 4 | 19°18 | 18°22 | 14°20 | 5°33 |
| S 9 | 11 7 29 | 18°38'37 | 10II32 | 21°34 | 3°45 | 14°56 | 5° 1 | 14°35 | 21°13 | 29°45 | 4° 4 | 19°16 | 18°19 | 14°26 | 5°33 |
| S 10 | 11 11 26 | 19°38'32 | 22°21 | 22°21 | 4°34 | 15°41 | 5° 9 | 14°31 | 21°11 | 29°46 | 4° 5 | 19°D15 | 18°16 | 14°33 | 5°D33 |
| M11 | 11 15 23 | 20°38'24 | 4B12 | 23°12 | 5°22 | 16°26 | 5°16 | 14°27 | 21° 9 | 29°47 | 4° 5 | 19°16 | 18°13 | 14°40 | 5°33 |
| T 12 | 11 19 19 | 21°38'14 | 16°11 | 24° 6 | 6° 9 | 17°11 | 5°24 | 14°24 | 21° 7 | 29°48 | 4° 6 | 19°R17 | 18°10 | 14°46 | 5°33 |
| W13 | 11 23 16 | 22°38'01 | 28°21 | 25° 3 | 6°55 | 17°56 | 5°31 | 14°21 | 21° 5 | 29°49 | 4° 6 | 19°16 | 18° 6 | 14°53 | 5°33 |
| T 14 | 11 27 12 | 23°37'47 | 10D49 | 26° 3 | 7°40 | 18°41 | 5°39 | 14°18 | 21° 3 | 29°50 | 4° 7 | 19°14 | 18° 3 | 15° 0 | 5°33 |
| F 15 | 11 31 9 | 24°37'30 | 23°38 | 27° 5 | 8°24 | 19°26 | 5°46 | 14°14 | 21° 1 | 29°51 | 4° 7 | 19° 9 | 18° 0 | 15° 7 | 5°34 |
| S 16 | 11 35 5 | 25°37'11 | 6D48 | 28°10 | 9° 7 | 20°11 | 5°53 | 14°11 | 20°58 | 29°52 | 4° 8 | 19° 2 | 17°57 | 15°13 | 5°34 |
| S 17 | 11 39 2 | 26°36'50 | 20°20 | 29°18 | 9°49 | 20°56 | 6° 0 | 14° 8 | 20°56 | 29°54 | 4° 9 | 18°52 | 17°54 | 15°20 | 5°35 |
| M18 | 11 42 58 | 27°36'26 | 4B12 | 0X27 | 10°30 | 21°41 | 6° 6 | 14° 6 | 20°54 | 29°55 | 4° 9 | 18°41 | 17°51 | 15°27 | 5°36 |
| T 19 | 11 46 55 | 28°36'01 | 18°19 | 1°39 | 11°10 | 22°25 | 6°13 | 14° 3 | 20°52 | 29°56 | 4°10 | 18°30 | 17°47 | 15°33 | 5°36 |
| W20 | 11 50 52 | 29°35'34 | 2D37 | 2°52 | 11°49 | 23°10 | 6°19 | 14° 0 | 20°49 | 29°57 | 4°10 | 18°20 | 17°44 | 15°40 | 5°37 |
| T 21 | 11 54 48 | 0Y35'05 | 16°59 | 4° 8 | 12°26 | 23°55 | 6°25 | 13°57 | 20°47 | 29°59 | 4°11 | 18°12 | 17°41 | 15°46 | 5°38 |
| F 22 | 11 58 45 | 1°34'35 | 1X21 | 5°25 | 13° 2 | 24°39 | 6°31 | 13°55 | 20°45 | 0II 0 | 4°12 | 18° 6 | 17°38 | 15°53 | 5°39 |
| S 23 | 12 2 41 | 2°34'02 | 15°38 | 6°44 | 13°37 | 25°24 | 6°37 | 13°52 | 20°42 | 0° 1 | 4°13 | 18° 3 | 17°35 | 16° 0 | 5°40 |
| S 24 | 12 6 38 | 3°33'28 | 29°47 | 8° 5 | 14°10 | 26° 8 | 6°43 | 13°50 | 20°40 | 0° 3 | 4°13 | 18°D 2 | 17°32 | 16° 6 | 5°42 |
| M25 | 12 10 34 | 4°32'52 | 13B49 | 9°28 | 14°42 | 26°53 | 6°49 | 13°48 | 20°37 | 0° 4 | 4°14 | 18°R 2 | 17°28 | 16°13 | 5°43 |
| T 26 | 12 14 31 | 5°32'15 | 27°42 | 10°52 | 15°13 | 27°37 | 6°54 | 13°46 | 20°35 | 0° 6 | 4°15 | 18° 2 | 17°25 | 16°20 | 5°44 |
| W27 | 12 18 27 | 6°31'35 | 11≈25 | 12°18 | 15°41 | 28°21 | 6°59 | 13°44 | 20°32 | 0° 7 | 4°16 | 18° 0 | 17°22 | 16°26 | 5°46 |
| T 28 | 12 22 24 | 7°30'54 | 25° 0 | 13°45 | 16° 9 | 29° 6 | 7° 5 | 13°42 | 20°30 | 0° 9 | 4°16 | 17°56 | 17°19 | 16°33 | 5°48 |
| F 29 | 12 26 21 | 8°30'11 | 8X26 | 15°14 | 16°34 | 29°50 | 7°10 | 13°40 | 20°27 | 0°10 | 4°17 | 17°49 | 17°16 | 16°40 | 5°49 |
| S 30 | 12 30 17 | 9°29'26 | 21°40 | 16°45 | 16°58 | 0B34 | 7°14 | 13°38 | 20°25 | 0°12 | 4°18 | 17°38 | 17°12 | 16°46 | 5°51 |
| S 31 | 12 34 14 | 10Y28'39 | 4Y43 | 18X17 | 17D20 | 1B18 | 7B19 | 13D37 | 20D22 | 0II13 | 4II19 | 17D26 | 17D 9 | 16II53 | 5D53 |

Delta T = -5.78 sec.

APRIL 1889

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ♁ | ♂ | ♃ | ♄ |
|------|----------|----------|--------|-------|--------|-------|-------|--------|--------|-------|-------|--------|-------|--------|------|
| M 1 | 12 38 10 | 11Y27'50 | 17Y32 | 19X50 | 17D40 | 2B 2 | 7B23 | 13°R35 | 20°R20 | 0II15 | 4II20 | 17°R13 | 17D 6 | 17II 0 | 5D55 |
| T 2 | 12 42 7 | 12°26'59 | 0B 8 | 21°25 | 17°58 | 2°47 | 7°28 | 13D34 | 20D17 | 0°16 | 4°21 | 16D59 | 17° 3 | 17° 6 | 5°57 |
| W 3 | 12 46 3 | 13°26'05 | 12°29 | 23° 1 | 18°15 | 3°31 | 7°32 | 13°33 | 20°15 | 0°18 | 4°22 | 16°47 | 17° 0 | 17°13 | 5°59 |
| T 4 | 12 50 0 | 14°25'10 | 24°38 | 24°39 | 18°29 | 4°14 | 7°36 | 13°31 | 20°12 | 0°20 | 4°22 | 16°37 | 16°57 | 17°20 | 6° 1 |
| F 5 | 12 53 56 | 15°24'12 | 6II36 | 26°19 | 18°41 | 4°58 | 7°39 | 13°30 | 20°10 | 0°21 | 4°23 | 16°30 | 16°53 | 17°26 | 6° 3 |
| S 6 | 12 57 53 | 16°23'13 | 18°27 | 28° 0 | 18°51 | 5°42 | 7°43 | 13°29 | 20° 7 | 0°23 | 4°24 | 16°25 | 16°50 | 17°33 | 6° 6 |
| S 7 | 13 1 49 | 17°22'11 | 0B14 | 29°42 | 18°59 | 6°26 | 7°46 | 13°28 | 20° 5 | 0°25 | 4°25 | 16°23 | 16°47 | 17°40 | 6° 8 |
| M 8 | 13 5 46 | 18°21'06 | 12° 4 | 1Y26 | 19° 4 | 7°10 | 7°50 | 13°28 | 20° 2 | 0°27 | 4°26 | 16°22 | 16°44 | 17°46 | 6°11 |
| T 9 | 13 9 43 | 19°20'00 | 24° 2 | 3°11 | 19° 7 | 7°54 | 7°53 | 13°27 | 19°59 | 0°28 | 4°27 | 16°22 | 16°41 | 17°53 | 6°13 |
| W10 | 13 13 39 | 20°18'51 | 6D12 | 4°58 | 19°R 8 | 8°37 | 7°55 | 13°27 | 19°57 | 0°30 | 4°28 | 16°22 | 16°38 | 18° 0 | 6°16 |
| T 11 | 13 17 36 | 21°17'40 | 18°40 | 6°46 | 19° 6 | 9°21 | 7°58 | 13°26 | 19°54 | 0°32 | 4°29 | 16°19 | 16°34 | 18° 6 | 6°19 |
| F 12 | 13 21 32 | 22°16'26 | 1D31 | 8°36 | 19° 2 | 10° 4 | 8° 1 | 13°26 | 19°52 | 0°34 | 4°30 | 16°15 | 16°31 | 18°13 | 6°22 |
| S 13 | 13 25 29 | 23°15'11 | 14°48 | 10°27 | 18°55 | 10°48 | 8° 3 | 13°26 | 19°49 | 0°36 | 4°31 | 16° 8 | 16°28 | 18°20 | 6°25 |
| S 14 | 13 29 25 | 24°13'53 | 28°31 | 12°20 | 18°46 | 11°31 | 8° 5 | 13°25 | 19°46 | 0°38 | 4°32 | 15°58 | 16°25 | 18°26 | 6°28 |
| M15 | 13 33 22 | 25°12'33 | 12D40 | 14°15 | 18°34 | 12°15 | 8° 7 | 13°D25 | 19°44 | 0°39 | 4°34 | 15°47 | 16°22 | 18°33 | 6°31 |
| T 16 | 13 37 18 | 26°11'10 | 27° 9 | 16°11 | 18°20 | 12°58 | 8° 9 | 13°26 | 19°41 | 0°41 | 4°35 | 15°35 | 16°18 | 18°40 | 6°34 |
| W17 | 13 41 15 | 27° 9'47 | 11II51 | 18° 8 | 18° 4 | 13°41 | 8°10 | 13°26 | 19°39 | 0°43 | 4°36 | 15°25 | 16°15 | 18°46 | 6°37 |
| T 18 | 13 45 12 | 28° 8'21 | 26°40 | 20° 7 | 17°45 | 14°25 | 8°12 | 13°26 | 19°36 | 0°45 | 4°37 | 15°16 | 16°12 | 18°53 | 6°41 |
| F 19 | 13 49 8 | 29° 6'53 | 11X26 | 22° 8 | 17°24 | 15° 8 | 8°13 | 13°27 | 19°34 | 0°47 | 4°38 | 15°10 | 16° 9 | 19° 0 | 6°44 |
| S 20 | 13 53 5 | 0B 5'24 | 26° 2 | 24°10 | 17° 0 | 15°51 | 8°14 | 13°27 | 19°31 | 0°49 | 4°39 | 15° 7 | 16° 6 | 19° 6 | 6°47 |
| S 21 | 13 57 1 | 1° 3'53 | 10B25 | 26°13 | 16°35 | 16°34 | 8°15 | 13°28 | 19°29 | 0°51 | 4°40 | 15°D 5 | 16° 3 | 19°13 | 6°51 |
| M22 | 14 0 58 | 2° 2'21 | 24°32 | 28°17 | 16° 7 | 17°17 | 8°16 | 13°28 | 19°26 | 0°53 | 4°41 | 15° 6 | 15°59 | 19°20 | 6°55 |
| T 23 | 14 4 54 | 3° 0'47 | 8≈23 | 0B23 | 15°38 | 18° 0 | 8°16 | 13°29 | 19°24 | 0°55 | 4°43 | 15°R 6 | 15°56 | 19°26 | 6°58 |
| W24 | 14 8 51 | 3°59'12 | 21°57 | 2°30 | 15° 6 | 18°43 | 8°16 | 13°30 | 19°21 | 0°57 | 4°44 | 15° 4 | 15°53 | 19°33 | 7° 2 |
| T 25 | 14 12 47 | 4°57'34 | 5X17 | 4°38 | 14°34 | 19°26 | 8°R16 | 13°31 | 19°19 | 0°59 | 4°45 | 15° 1 | 15°50 | 19°40 | 7° 6 |
| F 26 | 14 16 44 | 5°55'56 | 18°23 | 6°46 | 13°59 | 20° 9 | 8°16 | 13°33 | 19°16 | 1° 1 | 4°46 | 14°55 | 15°47 | 19°46 | 7°10 |
| S 27 | 14 20 41 | 6°54'15 | 1Y17 | 8°55 | 13°24 | 20°52 | 8°16 | 13°34 | 19°14 | 1° 3 | 4°47 | 14°46 | 15°43 | 19°53 | 7°14 |
| S 28 | 14 24 37 | 7°52'33 | 13°59 | 11° 4 | 12°48 | 21°35 | 8°15 | 13°35 | 19°11 | 1° 5 | 4°49 | 14°35 | 15°40 | 20° 0 | 7°18 |
| M29 | 14 28 34 | 8°50'49 | 26°30 | 13°13 | 12°11 | 22°17 | 8°15 | 13°37 | 19° 9 | 1° 8 | 4°50 | 14°24 | 15°37 | 20° 6 | 7°22 |
| T 30 | 14 32 30 | 9B49'04 | 8B50 | 15D22 | 11B33 | 23B 0 | 8B14 | 13D38 | 19D 7 | 1II10 | 4II51 | 14D12 | 15D34 | 20II13 | 7D26 |

Delta T = -5.79 sec.

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SWISS EPHEMERIS for the year 1889

MAY 1889

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| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|----------|-----------|---------|--------|--------|---------|-------|--------|--------|--------|--------|--------|--------|---------|--------|---|
| W 1 | 14 36 27 | 10♄47'17 | 21♄ 0 | 17♄31 | 10♄R56 | 23♄43 | 8♄R13 | 13♄Ω40 | 19♄R 4 | 1♄II12 | 4♄II52 | 14♄R 1 | 15♄Ω31 | 20♄II20 | 7♄Ω30 | |
| T 2 | 14 40 23 | 11°45'28 | 3♄II 1 | 19°38 | 10♄R18 | 24°25 | 8♄Ω12 | 13°42 | 19♄Ω 2 | 1°14 | 4°54 | 13♄Ω52 | 15°28 | 20°26 | 7°35 | |
| F 3 | 14 44 20 | 12°43'38 | 14°54 | 21°45 | 9°40 | 25° 8 | 8°10 | 13°44 | 19° 0 | 1°16 | 4°55 | 13°46 | 15°24 | 20°33 | 7°39 | |
| S 4 | 14 48 16 | 13°41'45 | 26°42 | 23°50 | 9° 3 | 25°50 | 8° 9 | 13°46 | 18°58 | 1°18 | 4°56 | 13°42 | 15°21 | 20°40 | 7°43 | |
| S 5 | 14 52 13 | 14°39'51 | 8♄Ω29 | 25°53 | 8°27 | 26°33 | 8° 7 | 13°48 | 18°55 | 1°20 | 4°58 | 13°D40 | 15°18 | 20°46 | 7°48 | |
| M 6 | 14 56 10 | 15°37'55 | 20°18 | 27°54 | 7°52 | 27°15 | 8° 5 | 13°50 | 18°53 | 1°23 | 4°59 | 13°40 | 15°15 | 20°53 | 7°52 | |
| T 7 | 15 0 6 | 16°35'57 | 2♄Ω15 | 29°53 | 7°18 | 27°58 | 8° 3 | 13°52 | 18°51 | 1°25 | 5° 0 | 13°41 | 15°12 | 21° 0 | 7°57 | |
| W 8 | 15 4 3 | 17°33'57 | 14°24 | 1♄II50 | 6°45 | 28°40 | 8° 0 | 13°55 | 18°49 | 1°27 | 5° 1 | 13°R42 | 15° 9 | 21° 6 | 8° 2 | |
| T 9 | 15 7 59 | 18°31'55 | 26°50 | 3°44 | 6°13 | 29°22 | 7°58 | 13°57 | 18°47 | 1°29 | 5° 3 | 13°41 | 15° 5 | 21°13 | 8° 6 | |
| F 10 | 15 11 56 | 19°29'51 | 9♄III39 | 5°35 | 5°44 | 0♄II 4 | 7°55 | 14° 0 | 18°44 | 1°31 | 5° 4 | 13°39 | 15° 2 | 21°20 | 8°11 | |
| S 11 | 15 15 52 | 20°27'46 | 22°54 | 7°23 | 5°16 | 0°47 | 7°52 | 14° 3 | 18°42 | 1°34 | 5° 5 | 13°35 | 14°59 | 21°26 | 8°16 | |
| S 12 | 15 19 49 | 21°25'38 | 6♄Ω38 | 9° 8 | 4°50 | 1°29 | 7°49 | 14° 6 | 18°40 | 1°36 | 5° 7 | 13°29 | 14°56 | 21°33 | 8°21 | |
| M13 | 15 23 45 | 22°23'29 | 20°50 | 10°50 | 4°27 | 2°11 | 7°46 | 14° 8 | 18°38 | 1°38 | 5° 8 | 13°22 | 14°53 | 21°40 | 8°26 | |
| T 14 | 15 27 42 | 23°21'18 | 5♄II27 | 12°29 | 4° 6 | 2°53 | 7°42 | 14°12 | 18°36 | 1°40 | 5° 9 | 13°14 | 14°49 | 21°46 | 8°31 | |
| W15 | 15 31 39 | 24°19'06 | 20°23 | 14° 4 | 3°46 | 3°35 | 7°39 | 14°15 | 18°34 | 1°42 | 5°11 | 13° 7 | 14°46 | 21°53 | 8°36 | |
| T 16 | 15 35 35 | 25°16'53 | 5♄R29 | 15°36 | 3°30 | 4°17 | 7°35 | 14°18 | 18°33 | 1°45 | 5°12 | 13° 1 | 14°43 | 22° 0 | 8°41 | |
| F 17 | 15 39 32 | 26°14'38 | 20°34 | 17° 4 | 3°15 | 4°58 | 7°31 | 14°21 | 18°31 | 1°47 | 5°13 | 12°57 | 14°40 | 22° 6 | 8°46 | |
| S 18 | 15 43 28 | 27°12'22 | 5♄Ω32 | 18°29 | 3° 3 | 5°40 | 7°27 | 14°24 | 18°29 | 1°49 | 5°15 | 12°55 | 14°37 | 22°13 | 8°51 | |
| S 19 | 15 47 25 | 28°10'04 | 20°13 | 19°50 | 2°54 | 6°22 | 7°23 | 14°28 | 18°27 | 1°51 | 5°16 | 12°D55 | 14°34 | 22°19 | 8°56 | |
| M20 | 15 51 21 | 29° 7'46 | 4♄Ω34 | 21° 8 | 2°47 | 7° 4 | 7°18 | 14°32 | 18°25 | 1°54 | 5°17 | 12°56 | 14°30 | 22°26 | 9° 2 | |
| T 21 | 15 55 18 | 0♄II 5'26 | 18°33 | 22°22 | 2°42 | 7°45 | 7°14 | 14°35 | 18°24 | 1°56 | 5°19 | 12°58 | 14°27 | 22°33 | 9° 7 | |
| W22 | 15 59 14 | 1° 3'06 | 2♄R 9 | 23°32 | 2°D40 | 8°27 | 7° 9 | 14°39 | 18°22 | 1°58 | 5°20 | 12°R58 | 14°24 | 22°39 | 9°12 | |
| T 23 | 16 3 11 | 2° 0'44 | 15°25 | 24°39 | 2°40 | 9° 9 | 7° 4 | 14°43 | 18°20 | 2° 0 | 5°22 | 12°57 | 14°21 | 22°46 | 9°18 | |
| F 24 | 16 7 8 | 2°58'22 | 28°22 | 25°41 | 2°43 | 9°50 | 6°59 | 14°47 | 18°19 | 2° 3 | 5°23 | 12°55 | 14°18 | 22°53 | 9°23 | |
| S 25 | 16 11 4 | 3°55'59 | 11♄Y 3 | 26°40 | 2°48 | 10°32 | 6°54 | 14°51 | 18°17 | 2° 5 | 5°24 | 12°50 | 14°15 | 22°59 | 9°29 | |
| S 26 | 16 15 1 | 4°53'34 | 23°31 | 27°35 | 2°55 | 11°13 | 6°49 | 14°55 | 18°16 | 2° 7 | 5°26 | 12°45 | 14°11 | 23° 6 | 9°34 | |
| M27 | 16 18 57 | 5°51'09 | 5♄R47 | 28°25 | 3° 4 | 11°55 | 6°43 | 14°59 | 18°14 | 2° 9 | 5°27 | 12°38 | 14° 8 | 23°13 | 9°40 | |
| T 28 | 16 22 54 | 6°48'42 | 17°54 | 29°12 | 3°15 | 12°36 | 6°38 | 15° 3 | 18°13 | 2°12 | 5°28 | 12°32 | 14° 5 | 23°19 | 9°46 | |
| W29 | 16 26 50 | 7°46'15 | 29°53 | 29°54 | 3°29 | 13°17 | 6°32 | 15° 7 | 18°11 | 2°14 | 5°30 | 12°26 | 14° 2 | 23°26 | 9°51 | |
| T 30 | 16 30 47 | 8°43'47 | 11♄II46 | 0♄Ω33 | 3°44 | 13°59 | 6°26 | 15°12 | 18°10 | 2°16 | 5°31 | 12°21 | 13°59 | 23°33 | 9°57 | |
| F 31 | 16 34 43 | 9♄II41'17 | 23♄II34 | 1♄Ω 6 | 4♄R 1 | 14♄II40 | 6♄Ω20 | 15♄Ω16 | 18♄Ω 9 | 2♄II18 | 5♄II32 | 12♄Ω18 | 13♄Ω55 | 23♄II39 | 10♄Ω 3 | |

Delta T = -5.81 sec.

JUNE 1889

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| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|----------|------------|---------|---------|--------|---------|-------|--------|--------|--------|--------|--------|--------|---------|--------|---|
| S 1 | 16 38 40 | 10♄II38'47 | 5♄Ω21 | 1♄Ω36 | 4♄R20 | 15♄II21 | 6♄R14 | 15♄Ω21 | 18°R 7 | 2♄II21 | 5♄II34 | 12°R16 | 13♄Ω52 | 23♄II46 | 10♄Ω 8 | |
| S 2 | 16 42 37 | 11°36'16 | 17° 9 | 2° 1 | 4°41 | 16° 2 | 6♄Ω 8 | 15°26 | 18°Ω 6 | 2°23 | 5°35 | 12°D16 | 13°49 | 23°53 | 10°14 | |
| M 3 | 16 46 33 | 12°33'43 | 29° 0 | 2°21 | 5° 4 | 16°43 | 6° 1 | 15°30 | 18° 5 | 2°25 | 5°37 | 12°Ω17 | 13°46 | 23°59 | 10°20 | |
| T 4 | 16 50 30 | 13°31'09 | 10♄Ω59 | 2°37 | 5°28 | 17°24 | 5°55 | 15°35 | 18° 4 | 2°27 | 5°38 | 12°19 | 13°43 | 24° 6 | 10°26 | |
| W 5 | 16 54 26 | 14°28'34 | 23°10 | 2°48 | 5°54 | 18° 6 | 5°48 | 15°40 | 18° 3 | 2°30 | 5°39 | 12°20 | 13°40 | 24°13 | 10°32 | |
| T 6 | 16 58 23 | 15°25'58 | 5♄III36 | 2°54 | 6°22 | 18°46 | 5°42 | 15°45 | 18° 2 | 2°32 | 5°41 | 12°22 | 13°36 | 24°19 | 10°38 | |
| F 7 | 17 2 19 | 16°23'21 | 18°22 | 2°R56 | 6°51 | 19°27 | 5°35 | 15°50 | 18° 1 | 2°34 | 5°42 | 12°R22 | 13°33 | 24°26 | 10°44 | |
| S 8 | 17 6 16 | 17°20'43 | 1♄Ω33 | 2°54 | 7°21 | 20° 8 | 5°28 | 15°55 | 18° 0 | 2°36 | 5°43 | 12°21 | 13°30 | 24°33 | 10°50 | |
| S 9 | 17 10 12 | 18°18'03 | 15°11 | 2°47 | 7°53 | 20°49 | 5°21 | 16° 0 | 17°59 | 2°38 | 5°45 | 12°20 | 13°27 | 24°39 | 10°56 | |
| M10 | 17 14 9 | 19°15'23 | 29°16 | 2°36 | 8°26 | 21°30 | 5°14 | 16° 6 | 17°58 | 2°40 | 5°46 | 12°17 | 13°24 | 24°46 | 11° 2 | |
| T 11 | 17 18 6 | 20°12'42 | 13♄II48 | 2°20 | 9° 1 | 22°11 | 5° 7 | 16°11 | 17°57 | 2°43 | 5°47 | 12°14 | 13°21 | 24°53 | 11° 8 | |
| W12 | 17 22 2 | 21° 9'59 | 28°41 | 2° 1 | 9°37 | 22°51 | 5° 0 | 16°16 | 17°57 | 2°45 | 5°49 | 12°11 | 13°17 | 24°59 | 11°14 | |
| T 13 | 17 25 59 | 22° 7'17 | 13♄R49 | 1°39 | 10°14 | 23°32 | 4°52 | 16°22 | 17°56 | 2°47 | 5°50 | 12° 9 | 13°14 | 25° 6 | 11°20 | |
| F 14 | 17 29 55 | 23° 4'33 | 29° 2 | 1°13 | 10°52 | 24°13 | 4°45 | 16°27 | 17°55 | 2°49 | 5°51 | 12° 8 | 13°11 | 25°12 | 11°26 | |
| S 15 | 17 33 52 | 24° 1'49 | 14♄Ω11 | 0°45 | 11°31 | 24°53 | 4°38 | 16°33 | 17°55 | 2°51 | 5°53 | 12°D 8 | 13° 8 | 25°19 | 11°33 | |
| S 16 | 17 37 48 | 24°59'04 | 29° 7 | 0°14 | 12°11 | 25°34 | 4°30 | 16°39 | 17°54 | 2°53 | 5°54 | 12° 8 | 13° 5 | 25°26 | 11°39 | |
| M17 | 17 41 45 | 25°56'20 | 13♄Ω42 | 29♄II41 | 12°53 | 26°15 | 4°23 | 16°44 | 17°54 | 2°55 | 5°55 | 12° 9 | 13° 1 | 25°32 | 11°45 | |
| T 18 | 17 45 41 | 26°53'34 | 27°53 | 29° 7 | 13°35 | 26°55 | 4°15 | 16°50 | 17°53 | 2°58 | 5°56 | 12°10 | 12°58 | 25°39 | 11°51 | |
| W19 | 17 49 38 | 27°50'49 | 11♄X38 | 28°33 | 14°18 | 27°35 | 4° 8 | 16°56 | 17°53 | 3° 0 | 5°58 | 12°11 | 12°55 | 25°46 | 11°58 | |
| T 20 | 17 53 35 | 28°48'03 | 24°58 | 27°58 | 15° 3 | 28°16 | 4° 0 | 17° 2 | 17°53 | 3° 2 | 5°59 | 12°R12 | 12°52 | 25°52 | 12° 4 | |
| F 21 | 17 57 31 | 29°45'17 | 7♄Y55 | 27°24 | 15°48 | 28°56 | 3°53 | 17° 8 | 17°53 | 3° 4 | 6° 0 | 12°12 | 12°49 | 25°59 | 12°10 | |
| S 22 | 18 1 28 | 0♄Ω42'31 | 20°32 | 26°52 | 16°34 | 29°37 | 3°45 | 17°14 | 17°52 | 3° 6 | 6° 2 | 12°11 | 12°46 | 26° 6 | 12°16 | |
| S 23 | 18 5 24 | 1°39'45 | 2♄Ω52 | 26°20 | 17°20 | 0♄Ω17 | 3°37 | 17°20 | 17°52 | 3° 8 | 6° 3 | 12°10 | 12°42 | 26°12 | 12°23 | |
| M24 | 18 9 21 | 2°36'59 | 15° 0 | 25°51 | 18° 8 | 0°57 | 3°30 | 17°26 | 17°52 | 3°10 | 6° 4 | 12° 9 | 12°39 | 26°19 | 12°29 | |
| T 25 | 18 13 17 | 3°34'13 | 26°58 | 25°25 | 18°56 | 1°37 | 3°22 | 17°32 | 17°D52 | 3°12 | 6° 5 | 12° 7 | 12°36 | 26°26 | 12°35 | |
| W26 | 18 17 14 | 4°31'27 | 8♄II49 | 25° 2 | 19°45 | 2°18 | 3°14 | 17°39 | 17°52 | 3°14 | 6° 7 | 12° 6 | 12°33 | 26°32 | 12°42 | |
| T 27 | 18 21 10 | 5°28'41 | 20°38 | 24°42 | 20°35 | 2°58 | 3° 6 | 17°45 | 17°52 | 3°16 | 6° 8 | 12° 5 | 12°30 | 26°39 | 12°48 | |
| F 28 | 18 25 7 | 6°25'54 | 2♄Ω25 | 24°27 | 21°26 | 3°38 | 2°59 | 17°51 | 17°52 | 3°18 | 6° 9 | 12° 5 | 12°27 | 26°46 | 12°55 | |
| S 29 | 18 29 4 | 7°23'08 | 14°13 | 24°15 | 22°17 | 4°18 | 2°51 | 17°58 | 17°52 | 3°20 | 6°10 | 12°D 5 | 12°23 | 26°52 | 13° 1 | |
| S 30 | 18 33 0 | 8♄Ω20'21 | 26♄Ω 6 | 24♄II 8 | 23♄R 8 | 4♄Ω58 | 2♄Ω44 | 18♄Ω 4 | 17♄Ω53 | 3♄II22 | 6♄II11 | 12♄Ω 5 | 12♄Ω20 | 26♄II59 | 13♄Ω 7 | |

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SWISS EPHEMERIS for the year 1889

JULY 1889

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| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|----------|----------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|
| M 1 | 18 36 57 | 9♄17'34 | 8♃4 | 24♂6 | 24♂1 | 5♄38 | 2°R36 | 18♂11 | 17♄53 | 3♂24 | 6♂13 | 12♄5 | 12♄17 | 27♂6 | 13♄14 |
| T 2 | 18 40 53 | 10°14'47 | 20°10 | 24°8 | 24°53 | 6°18 | 2♄28 | 18°17 | 17°53 | 3°25 | 6°14 | 12°6 | 12°14 | 27°12 | 13°20 |
| W 3 | 18 44 50 | 11°12'00 | 2♂28 | 24°16 | 25°47 | 6°58 | 2°21 | 18°24 | 17°54 | 3°27 | 6°15 | 12°6 | 12°11 | 27°19 | 13°27 |
| T 4 | 18 48 46 | 12°9'13 | 15°0 | 24°28 | 26°41 | 7°38 | 2°13 | 18°30 | 17°54 | 3°29 | 6°16 | 12°R6 | 12°7 | 27°26 | 13°33 |
| F 5 | 18 52 43 | 13°6'25 | 27°49 | 24°46 | 27°35 | 8°18 | 2°6 | 18°37 | 17°54 | 3°31 | 6°17 | 12°6 | 12°4 | 27°32 | 13°40 |
| S 6 | 18 56 40 | 14°3'37 | 10♄58 | 25°8 | 28°30 | 8°57 | 1°58 | 18°44 | 17°55 | 3°33 | 6°18 | 12°D6 | 12°1 | 27°39 | 13°46 |
| S 7 | 19 0 36 | 15°0'49 | 24°29 | 25°36 | 29°26 | 9°37 | 1°51 | 18°51 | 17°56 | 3°35 | 6°19 | 12°6 | 11°58 | 27°45 | 13°52 |
| M 8 | 19 4 33 | 15°58'00 | 8♃24 | 26°9 | 0♂22 | 10°17 | 1°44 | 18°57 | 17°56 | 3°36 | 6°20 | 12°6 | 11°55 | 27°52 | 13°59 |
| T 9 | 19 8 29 | 16°55'12 | 22°43 | 26°47 | 1°18 | 10°57 | 1°37 | 19°4 | 17°57 | 3°38 | 6°22 | 12°6 | 11°52 | 27°59 | 14°5 |
| W10 | 19 12 26 | 17°52'24 | 7♄22 | 27°29 | 2°15 | 11°36 | 1°30 | 19°11 | 17°58 | 3°40 | 6°23 | 12°7 | 11°48 | 28°5 | 14°12 |
| T 11 | 19 16 22 | 18°49'36 | 22°18 | 28°17 | 3°12 | 12°16 | 1°22 | 19°18 | 17°58 | 3°42 | 6°24 | 12°7 | 11°45 | 28°12 | 14°18 |
| F 12 | 19 20 19 | 19°46'47 | 7♄23 | 29°10 | 4°10 | 12°55 | 1°16 | 19°25 | 17°59 | 3°43 | 6°25 | 12°R8 | 11°42 | 28°19 | 14°25 |
| S 13 | 19 24 15 | 20°44'00 | 22°29 | 0♄8 | 5°8 | 13°35 | 1°9 | 19°32 | 18°0 | 3°45 | 6°26 | 12°7 | 11°39 | 28°25 | 14°31 |
| S 14 | 19 28 12 | 21°41'12 | 7♄27 | 1°10 | 6°6 | 14°15 | 1°2 | 19°39 | 18°1 | 3°47 | 6°27 | 12°7 | 11°36 | 28°32 | 14°38 |
| M15 | 19 32 9 | 22°38'25 | 22°9 | 2°17 | 7°5 | 14°54 | 0°55 | 19°46 | 18°2 | 3°48 | 6°28 | 12°6 | 11°33 | 28°39 | 14°44 |
| T 16 | 19 36 5 | 23°35'38 | 6♄28 | 3°29 | 8°4 | 15°34 | 0°49 | 19°53 | 18°3 | 3°50 | 6°29 | 12°5 | 11°29 | 28°45 | 14°50 |
| W17 | 19 40 2 | 24°32'52 | 20°22 | 4°45 | 9°4 | 16°13 | 0°42 | 20°1 | 18°4 | 3°51 | 6°30 | 12°3 | 11°26 | 28°52 | 14°57 |
| T 18 | 19 43 58 | 25°30'07 | 3♂48 | 6°6 | 10°4 | 16°52 | 0°36 | 20°8 | 18°5 | 3°53 | 6°31 | 12°2 | 11°23 | 28°59 | 15°3 |
| F 19 | 19 47 55 | 26°27'22 | 16°49 | 7°31 | 11°4 | 17°32 | 0°29 | 20°15 | 18°7 | 3°55 | 6°32 | 12°1 | 11°20 | 29°5 | 15°10 |
| S 20 | 19 51 51 | 27°24'38 | 29°27 | 9°1 | 12°5 | 18°11 | 0°23 | 20°22 | 18°8 | 3°56 | 6°33 | 12°D1 | 11°17 | 29°12 | 15°16 |
| S 21 | 19 55 48 | 28°21'55 | 11♄46 | 10°35 | 13°6 | 18°50 | 0°17 | 20°29 | 18°9 | 3°58 | 6°34 | 12°1 | 11°13 | 29°19 | 15°22 |
| M22 | 19 59 44 | 29°19'13 | 23°51 | 12°12 | 14°7 | 19°30 | 0°11 | 20°37 | 18°10 | 3°59 | 6°34 | 12°2 | 11°10 | 29°25 | 15°29 |
| T 23 | 20 3 41 | 0♂16'32 | 5♂45 | 13°54 | 15°9 | 20°9 | 0°6 | 20°44 | 18°12 | 4°0 | 6°35 | 12°4 | 11°7 | 29°32 | 15°35 |
| W24 | 20 7 38 | 1°13'51 | 17°34 | 15°39 | 16°10 | 20°48 | 0°0 | 20°51 | 18°13 | 4°2 | 6°36 | 12°5 | 11°4 | 29°39 | 15°41 |
| T 25 | 20 11 34 | 2°11'12 | 29°20 | 17°27 | 17°12 | 21°27 | 29♄55 | 20°59 | 18°15 | 4°3 | 6°37 | 12°7 | 11°1 | 29°45 | 15°48 |
| F 26 | 20 15 31 | 3°8'33 | 11♄9 | 19°19 | 18°15 | 22°7 | 29°49 | 21°6 | 18°16 | 4°5 | 6°38 | 12°R7 | 10°58 | 29°52 | 15°54 |
| S 27 | 20 19 27 | 4°5'55 | 23°3 | 21°13 | 19°18 | 22°46 | 29°44 | 21°14 | 18°18 | 4°6 | 6°39 | 12°7 | 10°54 | 29°58 | 16°0 |
| S 28 | 20 23 24 | 5°3'18 | 5♂3 | 23°10 | 20°20 | 23°25 | 29°39 | 21°21 | 18°20 | 4°7 | 6°39 | 12°5 | 10°51 | 0♄5 | 16°6 |
| M29 | 20 27 20 | 6°0'42 | 17°13 | 25°9 | 21°24 | 24°4 | 29°34 | 21°29 | 18°21 | 4°8 | 6°40 | 12°2 | 10°48 | 0°12 | 16°13 |
| T 30 | 20 31 17 | 6°58'06 | 29°33 | 27°10 | 22°27 | 24°43 | 29°29 | 21°36 | 18°23 | 4°10 | 6°41 | 11°59 | 10°45 | 0°18 | 16°19 |
| W31 | 20 35 13 | 7♄55'32 | 12♂5 | 29♄12 | 23♂31 | 25♄22 | 29♄25 | 21♂44 | 18♄25 | 4♂11 | 6♂42 | 11♄55 | 10♄42 | 0♄25 | 16♄25 |

Delta T = -5.84 sec.

AUGUST 1889

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| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|----------|----------|-------|-------|-------|-------|--------|-------|-------|------|------|--------|-------|------|-------|
| T 1 | 20 39 10 | 8♂52'58 | 24♂50 | 1♂16 | 24♂35 | 26♄1 | 29°R20 | 21♂51 | 18♄27 | 4♂12 | 6♂43 | 11°R51 | 10♄38 | 0♄32 | 16♄31 |
| F 2 | 20 43 7 | 9°50'24 | 7♄50 | 3°20 | 25°39 | 26°40 | 29♄16 | 21°59 | 18°29 | 4°13 | 6°43 | 11♄47 | 10°35 | 0°38 | 16°37 |
| S 3 | 20 47 3 | 10°47'51 | 21°4 | 5°25 | 26°43 | 27°19 | 29°12 | 22°6 | 18°30 | 4°14 | 6°44 | 11°44 | 10°32 | 0°45 | 16°44 |
| S 4 | 20 51 0 | 11°45'19 | 4♂36 | 7°30 | 27°48 | 27°58 | 29°8 | 22°14 | 18°32 | 4°16 | 6°45 | 11°43 | 10°29 | 0°52 | 16°50 |
| M 5 | 20 54 56 | 12°42'48 | 18°24 | 9°34 | 28°52 | 28°36 | 29°4 | 22°21 | 18°34 | 4°17 | 6°45 | 11°D43 | 10°26 | 0°58 | 16°56 |
| T 6 | 20 58 53 | 13°40'18 | 2♄29 | 11°39 | 29°57 | 29°15 | 29°0 | 22°29 | 18°37 | 4°18 | 6°46 | 11°44 | 10°23 | 1°5 | 17°2 |
| W 7 | 21 2 49 | 14°37'48 | 16°51 | 13°43 | 1♄2 | 29°54 | 28°57 | 22°37 | 18°39 | 4°19 | 6°47 | 11°45 | 10°19 | 1°12 | 17°8 |
| T 8 | 21 6 46 | 15°35'19 | 1♄27 | 15°46 | 2°8 | 0♂33 | 28°54 | 22°44 | 18°41 | 4°20 | 6°47 | 11°47 | 10°16 | 1°18 | 17°14 |
| F 9 | 21 10 42 | 16°32'51 | 16°12 | 17°48 | 3°13 | 1°12 | 28°51 | 22°52 | 18°43 | 4°21 | 6°48 | 11°R47 | 10°13 | 1°25 | 17°20 |
| S 10 | 21 14 39 | 17°30'24 | 1♄1 | 19°49 | 4°19 | 1°50 | 28°48 | 22°59 | 18°45 | 4°22 | 6°48 | 11°46 | 10°10 | 1°32 | 17°26 |
| S 11 | 21 18 36 | 18°27'59 | 15°46 | 21°49 | 5°25 | 2°29 | 28°45 | 23°7 | 18°47 | 4°22 | 6°49 | 11°43 | 10°7 | 1°38 | 17°32 |
| M12 | 21 22 32 | 19°25'34 | 0♄21 | 23°48 | 6°31 | 3°8 | 28°42 | 23°15 | 18°50 | 4°23 | 6°49 | 11°38 | 10°4 | 1°45 | 17°38 |
| T 13 | 21 26 29 | 20°23'10 | 14°39 | 25°46 | 7°38 | 3°46 | 28°40 | 23°22 | 18°52 | 4°24 | 6°50 | 11°32 | 10°0 | 1°51 | 17°43 |
| W14 | 21 30 25 | 21°20'48 | 28°34 | 27°42 | 8°44 | 4°25 | 28°38 | 23°30 | 18°55 | 4°25 | 6°50 | 11°26 | 9°57 | 1°58 | 17°49 |
| T 15 | 21 34 22 | 22°18'27 | 12♂3 | 29°37 | 9°51 | 5°3 | 28°36 | 23°38 | 18°57 | 4°26 | 6°51 | 11°20 | 9°54 | 2°5 | 17°55 |
| F 16 | 21 38 18 | 23°16'08 | 25°7 | 1♂30 | 10°58 | 5°42 | 28°34 | 23°45 | 18°59 | 4°26 | 6°51 | 11°16 | 9°51 | 2°11 | 18°1 |
| S 17 | 21 42 15 | 24°13'50 | 7♄48 | 3°23 | 12°5 | 6°21 | 28°32 | 23°53 | 19°2 | 4°27 | 6°52 | 11°12 | 9°48 | 2°18 | 18°6 |
| S 18 | 21 46 11 | 25°11'34 | 20°8 | 5°13 | 13°12 | 6°59 | 28°31 | 24°1 | 19°5 | 4°28 | 6°52 | 11°D11 | 9°44 | 2°25 | 18°12 |
| M19 | 21 50 8 | 26°9'20 | 2♂13 | 7°3 | 14°19 | 7°38 | 28°30 | 24°8 | 19°7 | 4°28 | 6°52 | 11°11 | 9°41 | 2°31 | 18°18 |
| T 20 | 21 54 5 | 27°7'07 | 14°6 | 8°50 | 15°27 | 8°16 | 28°29 | 24°16 | 19°10 | 4°29 | 6°53 | 11°12 | 9°38 | 2°38 | 18°23 |
| W21 | 21 58 1 | 28°4'56 | 25°55 | 10°37 | 16°35 | 8°54 | 28°28 | 24°24 | 19°12 | 4°30 | 6°53 | 11°13 | 9°35 | 2°45 | 18°29 |
| T 22 | 22 1 58 | 29°2'47 | 7♄43 | 12°22 | 17°42 | 9°33 | 28°27 | 24°31 | 19°15 | 4°30 | 6°54 | 11°R14 | 9°32 | 2°51 | 18°34 |
| F 23 | 22 5 54 | 0♂0'39 | 19°34 | 14°6 | 18°50 | 10°11 | 28°27 | 24°39 | 19°18 | 4°31 | 6°54 | 11°14 | 9°29 | 2°58 | 18°40 |
| S 24 | 22 9 51 | 0°58'34 | 1♂34 | 15°48 | 19°59 | 10°50 | 28°26 | 24°46 | 19°21 | 4°31 | 6°54 | 11°12 | 9°25 | 3°5 | 18°45 |
| S 25 | 22 13 47 | 1°56'29 | 13°44 | 17°30 | 21°7 | 11°28 | 28°D26 | 24°54 | 19°24 | 4°32 | 6°54 | 11°8 | 9°22 | 3°11 | 18°50 |
| M26 | 22 17 44 | 2°54'27 | 26°8 | 19°9 | 22°15 | 12°6 | 28°26 | 25°2 | 19°26 | 4°32 | 6°55 | 11°1 | 9°19 | 3°18 | 18°56 |
| T 27 | 22 21 40 | 3°52'25 | 8♂46 | 20°48 | 23°24 | 12°44 | 28°26 | 25°9 | 19°29 | 4°32 | 6°55 | 10°53 | 9°16 | 3°24 | 19°1 |
| W28 | 22 25 37 | 4°50'26 | 21°38 | 22°25 | 24°33 | 13°23 | 28°27 | 25°17 | 19°32 | 4°33 | 6°55 | 10°43 | 9°13 | 3°31 | 19°6 |
| T 29 | 22 29 34 | 5°48'28 | 4♄44 | 24°1 | 25°41 | 14°1 | 28°27 | 25°25 | 19°35 | 4°33 | 6°55 | 10°34 | 9°10 | 3°38 | 19°11 |
| F 30 | 22 33 30 | 6°46'31 | 18°2 | 25°35 | 26°50 | 14°39 | 28°28 | 25°32 | 19°38 | 4°33 | 6°55 | 10°25 | 9°6 | 3°44 | 19°16 |
| S 31 | 22 37 27 | 7♂44'36 | 1♂32 | 27♂9 | 28♄0 | 15♂17 | 28♄29 | 25♂40 | 19♄41 | 4♂34 | 6♂56 | 10♄18 | 9♄3 | 3♄51 | 19♄21 |

Delta T = -5.86 sec.

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SWISS EPHEMERIS for the year 1889

SEPTEMBER 1889

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| Day | Sid.t | ☉ | ☽ | ♀ | ♁ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ♈ | ♉ | ♊ | ♋ | ♌ | ♍ |
|------|----------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|------|------|-------|---|---|
| S 1 | 22 41 23 | 8♎42'42 | 15♌13 | 28♎41 | 29♄9 | 15♏55 | 28♁30 | 25♎47 | 19♑44 | 4♒34 | 6♐56 | 10°R13 | 9♄0 | 3♄58 | 19♄26 | | |
| M 2 | 22 45 20 | 9°40'50 | 29°4 | 0♌12 | 0♏18 | 16°34 | 28°32 | 25°55 | 19°47 | 4°34 | 6°56 | 10♄11 | 8°57 | 4°4 | 19°31 | | |
| T 3 | 22 49 16 | 10°38'59 | 13♁4 | 1°41 | 1°28 | 17°12 | 28°33 | 26°2 | 19°50 | 4°34 | 6°56 | 10°D11 | 8°54 | 4°11 | 19°36 | | |
| W 4 | 22 53 13 | 11°37'10 | 27°12 | 3°10 | 2°37 | 17°50 | 28°35 | 26°10 | 19°54 | 4°34 | 6°56 | 10°11 | 8°50 | 4°18 | 19°41 | | |
| T 5 | 22 57 9 | 12°35'22 | 11♄29 | 4°37 | 3°47 | 18°28 | 28°37 | 26°17 | 19°57 | 4°34 | 6°56 | 10°R12 | 8°47 | 4°24 | 19°46 | | |
| F 6 | 23 1 6 | 13°33'35 | 25°51 | 6°2 | 4°57 | 19°6 | 28°39 | 26°25 | 20°0 | 4°34 | 6°R56 | 10°11 | 8°44 | 4°31 | 19°51 | | |
| S 7 | 23 5 3 | 14°31'50 | 10♌15 | 7°27 | 6°7 | 19°44 | 28°42 | 26°32 | 20°3 | 4°R34 | 6°56 | 10°8 | 8°41 | 4°38 | 19°55 | | |
| S 8 | 23 8 59 | 15°30'07 | 24°38 | 8°49 | 7°17 | 20°22 | 28°44 | 26°39 | 20°6 | 4°34 | 6°56 | 10°2 | 8°38 | 4°44 | 20°0 | | |
| M 9 | 23 12 56 | 16°28'25 | 8♁53 | 10°11 | 8°27 | 21°0 | 28°47 | 26°47 | 20°10 | 4°34 | 6°56 | 9°53 | 8°35 | 4°51 | 20°4 | | |
| T 10 | 23 16 52 | 17°26'45 | 22°56 | 11°31 | 9°37 | 21°38 | 28°50 | 26°54 | 20°13 | 4°34 | 6°56 | 9°43 | 8°31 | 4°58 | 20°9 | | |
| W11 | 23 20 49 | 18°25'07 | 6♁41 | 12°50 | 10°48 | 22°16 | 28°53 | 27°1 | 20°16 | 4°34 | 6°56 | 9°32 | 8°28 | 5°4 | 20°13 | | |
| T 12 | 23 24 45 | 19°23'31 | 20°5 | 14°7 | 11°58 | 22°53 | 28°56 | 27°9 | 20°20 | 4°34 | 6°56 | 9°21 | 8°25 | 5°11 | 20°18 | | |
| F 13 | 23 28 42 | 20°21'57 | 3♄6 | 15°23 | 13°9 | 23°31 | 28°59 | 27°16 | 20°23 | 4°34 | 6°55 | 9°12 | 8°22 | 5°17 | 20°22 | | |
| S 14 | 23 32 38 | 21°20'24 | 15°46 | 16°37 | 14°20 | 24°9 | 29°3 | 27°23 | 20°26 | 4°34 | 6°55 | 9°5 | 8°19 | 5°24 | 20°26 | | |
| S 15 | 23 36 35 | 22°18'55 | 28°7 | 17°49 | 15°31 | 24°47 | 29°7 | 27°30 | 20°30 | 4°33 | 6°55 | 9°0 | 8°16 | 5°31 | 20°30 | | |
| M16 | 23 40 31 | 23°17'27 | 10♐11 | 19°0 | 16°42 | 25°25 | 29°10 | 27°38 | 20°33 | 4°33 | 6°55 | 8°57 | 8°12 | 5°37 | 20°34 | | |
| T 17 | 23 44 28 | 24°16'01 | 22°5 | 20°9 | 17°53 | 26°3 | 29°15 | 27°45 | 20°37 | 4°33 | 6°55 | 8°D56 | 8°9 | 5°44 | 20°38 | | |
| W18 | 23 48 25 | 25°14'38 | 3♄54 | 21°15 | 19°4 | 26°40 | 29°19 | 27°52 | 20°40 | 4°32 | 6°54 | 8°R57 | 8°6 | 5°51 | 20°42 | | |
| T 19 | 23 52 21 | 26°13'17 | 15°43 | 22°20 | 20°15 | 27°18 | 29°23 | 27°59 | 20°44 | 4°32 | 6°54 | 8°56 | 8°3 | 5°57 | 20°46 | | |
| F 20 | 23 56 18 | 27°11'58 | 27°37 | 23°22 | 21°27 | 27°56 | 29°28 | 28°6 | 20°47 | 4°32 | 6°54 | 8°55 | 8°0 | 6°4 | 20°50 | | |
| S 21 | 0 0 14 | 28°10'41 | 9♏41 | 24°22 | 22°38 | 28°33 | 29°33 | 28°13 | 20°51 | 4°31 | 6°54 | 8°52 | 7°56 | 6°11 | 20°54 | | |
| S 22 | 0 4 11 | 29°9'27 | 22°0 | 25°19 | 23°50 | 29°11 | 29°38 | 28°20 | 20°54 | 4°31 | 6°53 | 8°46 | 7°53 | 6°17 | 20°57 | | |
| M23 | 0 8 7 | 0♌8'14 | 4♎35 | 26°14 | 25°1 | 29°49 | 29°43 | 28°27 | 20°58 | 4°30 | 6°53 | 8°37 | 7°50 | 6°24 | 21°1 | | |
| T 24 | 0 12 4 | 1°7'04 | 17°30 | 27°5 | 26°13 | 0♎26 | 29°48 | 28°34 | 21°2 | 4°30 | 6°52 | 8°26 | 7°47 | 6°31 | 21°5 | | |
| W25 | 0 16 0 | 2°5'55 | 0♌42 | 27°54 | 27°25 | 1°4 | 29°54 | 28°41 | 21°5 | 4°29 | 6°52 | 8°13 | 7°44 | 6°37 | 21°8 | | |
| T 26 | 0 19 57 | 3°4'49 | 14°12 | 28°38 | 28°37 | 1°41 | 29°59 | 28°47 | 21°9 | 4°29 | 6°52 | 8°0 | 7°41 | 6°44 | 21°11 | | |
| F 27 | 0 23 54 | 4°3'45 | 27°56 | 29°19 | 29°49 | 2°19 | 0♄5 | 28°54 | 21°13 | 4°28 | 6°51 | 7°48 | 7°37 | 6°50 | 21°15 | | |
| S 28 | 0 27 50 | 5°2'42 | 11♌50 | 29°56 | 1♎1 | 2°57 | 0°11 | 29°1 | 21°16 | 4°27 | 6°51 | 7°39 | 7°34 | 6°57 | 21°18 | | |
| S 29 | 0 31 47 | 6°1'42 | 25°51 | 0♌28 | 2°13 | 3°34 | 0°17 | 29°8 | 21°20 | 4°27 | 6°50 | 7°32 | 7°31 | 7°4 | 21°21 | | |
| M30 | 0 35 43 | 7°0'43 | 9♁55 | 0♌55 | 3♎26 | 4♎11 | 0♄23 | 29°14 | 21°24 | 4♒26 | 6♐50 | 7♄28 | 7♄28 | 7♄10 | 21°24 | | |

Delta T = -5.88 sec.

OCTOBER 1889

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| Day | Sid.t | ☉ | ☽ | ♀ | ♁ | ♂ | ♃ | ♄ | ♅ | ♆ | ♇ | ♈ | ♉ | ♊ | ♋ | ♌ | ♍ |
|------|---------|----------|-------|--------|-------|-------|------|--------|-------|-------|-------|-------|------|-------|-------|---|---|
| T 1 | 0 39 40 | 7♄59'46 | 24♁2 | 1♌16 | 4♎38 | 4♎49 | 0♄30 | 29°121 | 21°27 | 4°R25 | 6°R49 | 7°R27 | 7♄25 | 7♄17 | 21°27 | | |
| W 2 | 0 43 36 | 8°58'51 | 8♄8 | 1°32 | 5°50 | 5°26 | 0°36 | 29°27 | 21°31 | 4♒24 | 6♐49 | 7♄26 | 7°21 | 7°24 | 21°30 | | |
| T 3 | 0 47 33 | 9°57'58 | 22°14 | 1°42 | 7°3 | 6°4 | 0°43 | 29°34 | 21°35 | 4°24 | 6°48 | 7°26 | 7°18 | 7°30 | 21°33 | | |
| F 4 | 0 51 29 | 10°57'06 | 6♌18 | 1°R45 | 8°16 | 6°41 | 0°50 | 29°40 | 21°38 | 4°23 | 6°48 | 7°25 | 7°15 | 7°37 | 21°35 | | |
| S 5 | 0 55 26 | 11°56'16 | 20°19 | 1°41 | 9°28 | 7°18 | 0°57 | 29°47 | 21°42 | 4°22 | 6°47 | 7°21 | 7°12 | 7°44 | 21°38 | | |
| S 6 | 0 59 23 | 12°55'28 | 4♁16 | 1°30 | 10°41 | 7°56 | 1°4 | 29°53 | 21°46 | 4°21 | 6°47 | 7°14 | 7°9 | 7°50 | 21°41 | | |
| M 7 | 1 3 19 | 13°54'41 | 18°5 | 1°10 | 11°54 | 8°33 | 1°11 | 29°59 | 21°50 | 4°20 | 6°46 | 7°4 | 7°6 | 7°57 | 21°43 | | |
| T 8 | 1 7 16 | 14°53'57 | 1♁44 | 0°43 | 13°7 | 9°10 | 1°19 | 0♎5 | 21°53 | 4°19 | 6°45 | 6°53 | 7°2 | 8°4 | 21°46 | | |
| W 9 | 1 11 12 | 15°53'14 | 15°9 | 0°7 | 14°20 | 9°48 | 1°26 | 0°11 | 21°57 | 4°18 | 6°45 | 6°40 | 6°59 | 8°10 | 21°48 | | |
| T 10 | 1 15 9 | 16°52'33 | 28°18 | 29♄23 | 15°33 | 10°25 | 1°34 | 0°17 | 22°1 | 4°17 | 6°44 | 6°28 | 6°56 | 8°17 | 21°50 | | |
| F 11 | 1 19 5 | 17°51'55 | 11♄9 | 28°31 | 16°46 | 11°2 | 1°42 | 0°23 | 22°5 | 4°16 | 6°43 | 6°16 | 6°53 | 8°23 | 21°52 | | |
| S 12 | 1 23 2 | 18°51'19 | 23°43 | 27°33 | 17°59 | 11°39 | 1°50 | 0°29 | 22°8 | 4°15 | 6°43 | 6°7 | 6°50 | 8°30 | 21°54 | | |
| S 13 | 1 26 58 | 19°50'45 | 5♐59 | 26°28 | 19°12 | 12°16 | 1°58 | 0°35 | 22°12 | 4°14 | 6°42 | 6°1 | 6°47 | 8°37 | 21°56 | | |
| M14 | 1 30 55 | 20°50'13 | 18°2 | 25°19 | 20°26 | 12°53 | 2°6 | 0°41 | 22°16 | 4°13 | 6°41 | 5°58 | 6°43 | 8°43 | 21°58 | | |
| T 15 | 1 34 51 | 21°49'44 | 29°56 | 24°6 | 21°39 | 13°31 | 2°15 | 0°47 | 22°20 | 4°12 | 6°40 | 5°56 | 6°40 | 8°50 | 22°0 | | |
| W16 | 1 38 48 | 22°49'17 | 11♄44 | 22°52 | 22°52 | 14°8 | 2°23 | 0°53 | 22°24 | 4°10 | 6°40 | 5°D56 | 6°37 | 8°57 | 22°2 | | |
| T 17 | 1 42 45 | 23°48'52 | 23°32 | 21°40 | 24°6 | 14°45 | 2°32 | 0°58 | 22°27 | 4°9 | 6°39 | 5°R56 | 6°34 | 9°3 | 22°3 | | |
| F 18 | 1 46 41 | 24°48'29 | 5♏26 | 20°30 | 25°20 | 15°22 | 2°41 | 1°4 | 22°31 | 4°8 | 6°38 | 5°56 | 6°31 | 9°10 | 22°5 | | |
| S 19 | 1 50 38 | 25°48'09 | 17°31 | 19°25 | 26°33 | 15°59 | 2°50 | 1°9 | 22°35 | 4°7 | 6°37 | 5°54 | 6°27 | 9°17 | 22°6 | | |
| S 20 | 1 54 34 | 26°47'51 | 29°53 | 18°28 | 27°47 | 16°36 | 2°59 | 1°15 | 22°39 | 4°6 | 6°36 | 5°49 | 6°24 | 9°23 | 22°7 | | |
| M21 | 1 58 31 | 27°47'35 | 12♎34 | 17°39 | 29°1 | 17°13 | 3°8 | 1°20 | 22°42 | 4°4 | 6°36 | 5°42 | 6°21 | 9°30 | 22°9 | | |
| T 22 | 2 2 27 | 28°47'21 | 25°38 | 17°0 | 0♌15 | 17°50 | 3°17 | 1°25 | 22°46 | 4°3 | 6°35 | 5°33 | 6°18 | 9°37 | 22°10 | | |
| W23 | 2 6 24 | 29°47'10 | 9♌6 | 16°32 | 1°28 | 18°27 | 3°27 | 1°31 | 22°50 | 4°2 | 6°34 | 5°22 | 6°15 | 9°43 | 22°11 | | |
| T 24 | 2 10 20 | 0♌47'00 | 22°55 | 16°15 | 2°42 | 19°3 | 3°36 | 1°36 | 22°54 | 4°0 | 6°33 | 5°11 | 6°12 | 9°50 | 22°12 | | |
| F 25 | 2 14 17 | 1°46'53 | 7♌3 | 16°D10 | 3°56 | 19°40 | 3°46 | 1°41 | 22°58 | 3°59 | 6°32 | 5°0 | 6°8 | 9°56 | 22°13 | | |
| S 26 | 2 18 14 | 2°46'47 | 21°23 | 16°16 | 5°10 | 20°17 | 3°55 | 1°46 | 23°1 | 3°58 | 6°31 | 4°52 | 6°5 | 10°3 | 22°13 | | |
| S 27 | 2 22 10 | 3°46'44 | 5♁51 | 16°32 | 6°25 | 20°54 | 4°5 | 1°51 | 23°5 | 3°56 | 6°30 | 4°46 | 6°2 | 10°10 | 22°14 | | |
| M28 | 2 26 7 | 4°46'42 | 20°19 | 16°59 | 7°39 | 21°31 | 4°15 | 1°55 | 23°9 | 3°55 | 6°29 | 4°43 | 5°59 | 10°16 | 22°15 | | |
| T 29 | 2 30 3 | 5°46'42 | 4♄44 | 17°35 | 8°53 | 22°7 | 4°25 | 2°0 | 23°12 | 3°53 | 6°28 | 4°D42 | 5°56 | 10°23 | 22°15 | | |
| W30 | 2 34 0 | 6°46'44 | 19°2 | 18°20 | 10°7 | 22°44 | 4°36 | 2°5 | 23°16 | 3°52 | 6°27 | 4°43 | 5°53 | 10°30 | 22°16 | | |
| T 31 | 2 37 56 | 7♌46'47 | 3♌10 | 19♌12 | 11♌21 | 23♎21 | 4♄46 | 2♎9 | 23°20 | 3♐50 | 6♐26 | 4°R44 | 5♄49 | 10♄36 | 22°16 | | |

Delta T = -5.90 sec.

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SWISS EPHEMERIS for the year 1889

NOVEMBER 1889

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|---------|----------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|--------|
| F 1 | 2 41 53 | 8♍46'51 | 17♋8 | 20♌11 | 12♌36 | 23♍57 | 4♄56 | 2♃14 | 23♌24 | 3°R49 | 6°R25 | 4°R43 | 5♄46 | 10♄43 | 22♌16 |
| S 2 | 2 45 49 | 9°46'57 | 0♋55 | 21°16 | 13°50 | 24°34 | 5° 7 | 2°18 | 23°27 | 3♂47 | 6♂24 | 4♄41 | 5°43 | 10°50 | 22°R16 |
| S 3 | 2 49 46 | 10°47'05 | 14°32 | 22°26 | 15° 4 | 25°11 | 5°18 | 2°23 | 23°31 | 3°46 | 6°23 | 4°37 | 5°40 | 10°56 | 22°16 |
| M 4 | 2 53 43 | 11°47'14 | 27°57 | 23°40 | 16°19 | 25°47 | 5°28 | 2°27 | 23°35 | 3°44 | 6°22 | 4°30 | 5°37 | 11° 3 | 22°16 |
| T 5 | 2 57 39 | 12°47'25 | 11♍11 | 24°58 | 17°33 | 26°24 | 5°39 | 2°31 | 23°38 | 3°43 | 6°21 | 4°22 | 5°33 | 11°10 | 22°16 |
| W 6 | 3 1 36 | 13°47'37 | 24°13 | 26°20 | 18°48 | 27° 0 | 5°50 | 2°35 | 23°42 | 3°41 | 6°20 | 4°12 | 5°30 | 11°16 | 22°16 |
| T 7 | 3 5 32 | 14°47'51 | 7♄ 1 | 27°44 | 20° 2 | 27°37 | 6° 1 | 2°39 | 23°45 | 3°40 | 6°19 | 4° 3 | 5°27 | 11°23 | 22°15 |
| F 8 | 3 9 29 | 15°48'07 | 19°36 | 29°10 | 21°17 | 28°13 | 6°12 | 2°43 | 23°49 | 3°38 | 6°18 | 3°55 | 5°24 | 11°30 | 22°15 |
| S 9 | 3 13 25 | 16°48'25 | 1♂57 | 0♍39 | 22°32 | 28°49 | 6°23 | 2°47 | 23°53 | 3°36 | 6°17 | 3°48 | 5°21 | 11°36 | 22°14 |
| S 10 | 3 17 22 | 17°48'44 | 14° 6 | 2° 8 | 23°46 | 29°26 | 6°35 | 2°50 | 23°56 | 3°35 | 6°16 | 3°44 | 5°18 | 11°43 | 22°13 |
| M11 | 3 21 18 | 18°49'06 | 26° 4 | 3°40 | 25° 1 | 0♌ 2 | 6°46 | 2°54 | 24° 0 | 3°33 | 6°15 | 3°42 | 5°14 | 11°49 | 22°13 |
| T 12 | 3 25 15 | 19°49'29 | 7♄55 | 5°12 | 26°16 | 0°39 | 6°57 | 2°57 | 24° 3 | 3°31 | 6°14 | 3°D42 | 5°11 | 11°56 | 22°12 |
| W13 | 3 29 12 | 20°49'54 | 19°42 | 6°45 | 27°30 | 1°15 | 7° 0 | 3° 1 | 24° 7 | 3°30 | 6°13 | 3°43 | 5° 8 | 12° 3 | 22°11 |
| T 14 | 3 33 8 | 21°50'21 | 1♂30 | 8°18 | 28°45 | 1°51 | 7°21 | 3° 4 | 24°10 | 3°28 | 6°12 | 3°44 | 5° 5 | 12° 9 | 22°10 |
| F 15 | 3 37 5 | 22°50'49 | 13°23 | 9°52 | 0♍ 0 | 2°27 | 7°32 | 3° 7 | 24°14 | 3°27 | 6°11 | 3°46 | 5° 2 | 12°16 | 22° 9 |
| S 16 | 3 41 1 | 23°51'20 | 25°26 | 11°27 | 1°15 | 3° 3 | 7°44 | 3°10 | 24°17 | 3°25 | 6°10 | 3°R46 | 4°58 | 12°23 | 22° 8 |
| S 17 | 3 44 58 | 24°51'52 | 7♍45 | 13° 1 | 2°30 | 3°40 | 7°56 | 3°13 | 24°20 | 3°23 | 6° 9 | 3°45 | 4°55 | 12°29 | 22° 6 |
| M18 | 3 48 54 | 25°52'26 | 20°25 | 14°36 | 3°45 | 4°16 | 8° 8 | 3°16 | 24°24 | 3°22 | 6° 7 | 3°43 | 4°52 | 12°36 | 22° 5 |
| T 19 | 3 52 51 | 26°53'02 | 3♌29 | 16°11 | 5° 0 | 4°52 | 8°20 | 3°19 | 24°27 | 3°20 | 6° 6 | 3°38 | 4°49 | 12°43 | 22° 3 |
| W20 | 3 56 47 | 27°53'39 | 16°59 | 17°46 | 6°15 | 5°28 | 8°32 | 3°22 | 24°30 | 3°18 | 6° 5 | 3°33 | 4°46 | 12°49 | 22° 2 |
| T 21 | 4 0 44 | 28°54'18 | 0♍56 | 19°21 | 7°30 | 6° 4 | 8°44 | 3°25 | 24°34 | 3°16 | 6° 4 | 3°27 | 4°43 | 12°56 | 22° 0 |
| F 22 | 4 4 41 | 29°54'59 | 15°17 | 20°56 | 8°45 | 6°40 | 8°57 | 3°27 | 24°37 | 3°15 | 6° 3 | 3°22 | 4°39 | 13° 3 | 21°58 |
| S 23 | 4 8 37 | 0♌55'42 | 29°56 | 22°31 | 10° 0 | 7°16 | 9° 9 | 3°29 | 24°40 | 3°13 | 6° 2 | 3°18 | 4°36 | 13° 9 | 21°56 |
| S 24 | 4 12 34 | 1°56'25 | 14♌47 | 24° 6 | 11°15 | 7°52 | 9°21 | 3°32 | 24°44 | 3°11 | 6° 1 | 3°15 | 4°33 | 13°16 | 21°54 |
| M25 | 4 16 30 | 2°57'10 | 29°42 | 25°41 | 12°30 | 8°28 | 9°34 | 3°34 | 24°47 | 3°10 | 6° 0 | 3°D14 | 4°30 | 13°22 | 21°52 |
| T 26 | 4 20 27 | 3°57'57 | 14♄32 | 27°16 | 13°45 | 9° 3 | 9°46 | 3°36 | 24°50 | 3° 8 | 5°58 | 3°14 | 4°27 | 13°29 | 21°50 |
| W27 | 4 24 23 | 4°58'44 | 29°11 | 28°51 | 15° 0 | 9°39 | 9°59 | 3°38 | 24°53 | 3° 6 | 5°57 | 3°15 | 4°24 | 13°36 | 21°48 |
| T 28 | 4 28 20 | 5°59'32 | 13♋35 | 0♌25 | 16°15 | 10°15 | 10°12 | 3°40 | 24°56 | 3° 5 | 5°56 | 3°17 | 4°20 | 13°42 | 21°46 |
| F 29 | 4 32 17 | 7° 0'21 | 27°41 | 2° 0 | 17°30 | 10°50 | 10°24 | 3°42 | 24°59 | 3° 3 | 5°55 | 3°18 | 4°17 | 13°49 | 21°43 |
| S 30 | 4 36 13 | 8♌ 1'11 | 11♋27 | 3♌34 | 18♍46 | 11♌26 | 10♄37 | 3♍43 | 25° 2 | 3♂ 1 | 5♂54 | 3°R18 | 4♄14 | 13♄56 | 21♄41 |

Delta T = -5.93 sec.

DECEMBER 1889

00:00 UT

| Day | Sid.t | ☉ | ☽ | ♀ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ | ♂ |
|------|---------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|--------|
| S 1 | 4 40 10 | 9♌ 2'02 | 24♋56 | 5♌ 9 | 20♍ 1 | 12♌ 2 | 10♄50 | 3♍45 | 25° 5 | 2°R59 | 5°R53 | 3°R17 | 4♄11 | 14♄ 2 | 21°R38 |
| M 2 | 4 44 6 | 10° 2'54 | 8♍ 7 | 6°43 | 21°16 | 12°37 | 11° 3 | 3°46 | 25° 8 | 2♂58 | 5♂52 | 3♄15 | 4° 8 | 14° 9 | 21♄36 |
| T 3 | 4 48 3 | 11° 3'46 | 21° 2 | 8°17 | 22°31 | 13°13 | 11°16 | 3°48 | 25°11 | 2°56 | 5°50 | 3°12 | 4° 4 | 14°16 | 21°33 |
| W 4 | 4 51 59 | 12° 4'39 | 3♄43 | 9°51 | 23°46 | 13°48 | 11°29 | 3°49 | 25°14 | 2°54 | 5°49 | 3° 9 | 4° 1 | 14°22 | 21°30 |
| T 5 | 4 55 56 | 13° 5'34 | 16°11 | 11°26 | 25° 2 | 14°24 | 11°42 | 3°50 | 25°17 | 2°53 | 5°48 | 3° 5 | 3°58 | 14°29 | 21°28 |
| F 6 | 4 59 52 | 14° 6'29 | 28°28 | 13° 0 | 26°17 | 14°59 | 11°55 | 3°51 | 25°20 | 2°51 | 5°47 | 3° 2 | 3°55 | 14°36 | 21°25 |
| S 7 | 5 3 49 | 15° 7'25 | 10♂36 | 14°34 | 27°32 | 15°34 | 12° 8 | 3°52 | 25°22 | 2°49 | 5°46 | 3° 0 | 3°52 | 14°42 | 21°22 |
| S 8 | 5 7 45 | 16° 8'22 | 22°35 | 16° 8 | 28°47 | 16°10 | 12°22 | 3°53 | 25°25 | 2°48 | 5°45 | 2°59 | 3°49 | 14°49 | 21°19 |
| M 9 | 5 11 42 | 17° 9'20 | 4♄28 | 17°43 | 0♌ 3 | 16°45 | 12°35 | 3°53 | 25°28 | 2°46 | 5°44 | 2°D58 | 3°45 | 14°56 | 21°16 |
| T 10 | 5 15 39 | 18°10'19 | 16°17 | 19°17 | 1°18 | 17°20 | 12°48 | 3°54 | 25°31 | 2°45 | 5°43 | 2°59 | 3°42 | 15° 2 | 21°12 |
| W11 | 5 19 35 | 19°11'19 | 28° 4 | 20°51 | 2°33 | 17°55 | 13° 1 | 3°54 | 25°33 | 2°43 | 5°41 | 3° 0 | 3°39 | 15° 9 | 21° 9 |
| T 12 | 5 23 32 | 20°12'19 | 9♌52 | 22°26 | 3°49 | 18°30 | 13°15 | 3°55 | 25°36 | 2°41 | 5°40 | 3° 1 | 3°36 | 15°16 | 21° 6 |
| F 13 | 5 27 28 | 21°13'21 | 21°46 | 24° 0 | 5° 4 | 19° 5 | 13°28 | 3°55 | 25°38 | 2°40 | 5°39 | 3° 3 | 3°33 | 15°22 | 21° 2 |
| S 14 | 5 31 25 | 22°14'24 | 3♍49 | 25°35 | 6°19 | 19°40 | 13°42 | 3°R55 | 25°41 | 2°38 | 5°38 | 3° 4 | 3°30 | 15°29 | 20°59 |
| S 15 | 5 35 21 | 23°15'27 | 16° 5 | 27°10 | 7°35 | 20°15 | 13°55 | 3°55 | 25°43 | 2°37 | 5°37 | 3° 4 | 3°26 | 15°35 | 20°55 |
| M16 | 5 39 18 | 24°16'32 | 28°40 | 8°50 | 20°50 | 20°50 | 14° 9 | 3°55 | 25°46 | 2°35 | 5°36 | 3°R 4 | 3°23 | 15°42 | 20°52 |
| T 17 | 5 43 15 | 25°17'37 | 11♌37 | 0♄20 | 10° 5 | 21°25 | 14°22 | 3°54 | 25°48 | 2°33 | 5°35 | 3° 4 | 3°20 | 15°49 | 20°48 |
| W18 | 5 47 11 | 26°18'43 | 25° 0 | 1°56 | 11°21 | 21°59 | 14°36 | 3°54 | 25°50 | 2°32 | 5°34 | 3° 3 | 3°17 | 15°55 | 20°45 |
| T 19 | 5 51 8 | 27°19'50 | 8♍50 | 3°31 | 12°36 | 22°34 | 14°50 | 3°54 | 25°53 | 2°30 | 5°33 | 3° 2 | 3°14 | 16° 2 | 20°41 |
| F 20 | 5 55 4 | 28°20'58 | 23° 7 | 5° 7 | 13°52 | 23° 9 | 15° 3 | 3°53 | 25°55 | 2°29 | 5°32 | 3° 2 | 3°10 | 16° 9 | 20°37 |
| S 21 | 5 59 1 | 29°22'07 | 7♌49 | 6°42 | 15° 7 | 23°43 | 15°17 | 3°52 | 25°57 | 2°27 | 5°31 | 3° 1 | 3° 7 | 16°15 | 20°33 |
| S 22 | 6 2 57 | 0♄23'16 | 22°49 | 8°18 | 16°22 | 24°18 | 15°31 | 3°52 | 25°59 | 2°26 | 5°30 | 3° 1 | 3° 4 | 16°22 | 20°29 |
| M23 | 6 6 54 | 1°24'26 | 7♄59 | 9°54 | 17°38 | 24°52 | 15°45 | 3°51 | 26° 1 | 2°25 | 5°29 | 3°D 1 | 3° 1 | 16°29 | 20°25 |
| T 24 | 6 10 50 | 2°25'36 | 23° 9 | 11°31 | 18°53 | 25°27 | 15°59 | 3°50 | 26° 3 | 2°23 | 5°28 | 3° 1 | 2°58 | 16°35 | 20°22 |
| W25 | 6 14 47 | 3°26'46 | 8♍11 | 13° 7 | 20° 9 | 26° 1 | 16°12 | 3°49 | 26° 5 | 2°22 | 5°27 | 3°R 1 | 2°55 | 16°42 | 20°18 |
| T 26 | 6 18 44 | 4°27'56 | 22°57 | 14°43 | 21°24 | 26°35 | 16°26 | 3°47 | 26° 7 | 2°20 | 5°26 | 3° 1 | 2°51 | 16°49 | 20°14 |
| F 27 | 6 22 40 | 5°29'07 | 7♋19 | 16°20 | 22°40 | 27°10 | 16°40 | 3°46 | 26° 9 | 2°19 | 5°25 | 3° 1 | 2°48 | 16°55 | 20° 9 |
| S 28 | 6 26 37 | 6°30'17 | 21°17 | 17°56 | 23°55 | 27°44 | 16°54 | 3°45 | 26°11 | 2°18 | 5°24 | 3° 1 | 2°45 | 17° 2 | 20° 5 |
| S 29 | 6 30 33 | 7°31'26 | 4♍50 | 19°32 | 25°10 | 28°18 | 17° 8 | 3°43 | 26°13 | 2°16 | 5°23 | 3°D 1 | 2°42 | 17° 9 | 20° 1 |
| M30 | 6 34 30 | 8°32'36 | 17°58 | 21° 9 | 26°26 | 28°52 | 17°22 | 3°41 | 26°15 | 2°15 | 5°22 | 3° 1 | 2°39 | 17°15 | 19°57 |
| T 31 | 6 38 26 | 9♄33'46 | 0♌45 | 22♄44 | 27♌41 | 29♌26 | 17♄36 | 3♍40 | 26°16 | 2°14 | 5♂21 | 3♄ 1 | 2♄36 | 17♄22 | 19♄53 |

Delta T = -5.95 sec.

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