

SWISS EPHEMERIS for the year 1229

JANUARY 1229 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♅	♁	♁	♁	♁	♁	♁	♁	♁
M 1	7 10 27	18°13'42	3°16	0°14	9°R21	22°10	16°13	27°39	6°32	18°R10	22°R19	7°R 5	6°40	2°13	14° 1	
T 2	7 14 23	19°14'48	17° 5	1°42	9° 3	22°53	16°19	27°45	6°35	18°R 9	22°19	7°R 4	6°36	2°20	14° 5	
W 3	7 18 20	20°15'53	1°13	3°10	8°42	23°36	16°25	27°52	6°38	18° 8	22°18	7° 3	6°33	2°27	14° 9	
T 4	7 22 16	21°16'56	15° 8	4°39	8°19	24°19	16°32	27°58	6°41	18° 8	22°18	7°D 2	6°30	2°34	14°13	
F 5	7 26 13	22°17'59	29°18	6° 9	7°54	25° 2	16°38	28° 5	6°44	18° 7	22°17	7° 2	6°27	2°40	14°17	
S 6	7 30 9	23°19'00	13°31	7°39	7°27	25°44	16°44	28°11	6°46	18° 7	22°17	7° 3	6°24	2°47	14°21	
S 7	7 34 6	24°20'01	27°45	9°10	6°58	26°27	16°51	28°18	6°49	18° 6	22°16	7° 4	6°21	2°54	14°26	
M 8	7 38 3	25°21'00	11°57	10°42	6°27	27°10	16°58	28°24	6°52	18° 6	22°15	7° 5	6°17	3° 0	14°30	
T 9	7 41 59	26°21'58	26° 4	12°14	5°55	27°53	17° 5	28°31	6°55	18° 5	22°15	7° 6	6°14	3° 7	14°34	
W10	7 45 56	27°22'55	10°53	13°47	5°21	28°35	17°12	28°37	6°57	18° 5	22°14	7°R 6	6°11	3°14	14°38	
T11	7 49 52	28°23'51	23°50	15°21	4°46	29°18	17°20	28°44	7° 0	18° 5	22°13	7° 6	6° 8	3°20	14°42	
F12	7 53 49	29°24'45	7°23	16°55	4°10	0°11	17°27	28°51	7° 2	18° 4	22°12	7° 4	6° 5	3°27	14°46	
S13	7 57 45	0°25'39	20°39	18°31	3°33	0°43	17°35	28°58	7° 5	18° 4	22°11	7° 1	6° 2	3°34	14°51	
S14	8 1 42	1°26'32	3°36	20° 6	2°56	1°26	17°43	29° 4	7° 8	18° 4	22°11	6°57	5°58	3°41	14°55	
M15	8 5 38	2°27'23	16°16	21°43	2°18	2° 8	17°51	29°11	7°10	18° 4	22°10	6°52	5°55	3°47	14°59	
T16	8 9 35	3°28'14	28°39	23°20	1°41	2°51	17°59	29°18	7°12	18° 3	22° 9	6°48	5°52	3°54	15° 3	
W17	8 13 32	4°29'03	10°47	24°58	1° 4	3°33	18° 7	29°25	7°15	18° 3	22° 8	6°45	5°49	4° 1	15° 7	
T18	8 17 28	5°29'52	22°46	26°37	0°28	4°16	18°15	29°32	7°17	18° 3	22° 7	6°43	5°46	4° 7	15°12	
F19	8 21 25	6°30'39	4°39	28°16	29°53	4°58	18°24	29°39	7°20	18° 3	22° 6	6°D42	5°42	4°14	15°16	
S20	8 25 21	7°31'26	16°30	29°56	29°18	5°41	18°32	29°46	7°22	18° 3	22° 5	6°42	5°39	4°21	15°20	
S21	8 29 18	8°32'11	28°25	1°37	28°45	6°23	18°41	29°53	7°24	18°D 3	22° 4	6°44	5°36	4°28	15°25	
M22	8 33 14	9°32'56	10°29	3°19	28°14	7° 6	18°50	0° 0	7°26	18° 3	22° 3	6°46	5°33	4°34	15°29	
T23	8 37 11	10°33'39	22°46	5° 2	27°44	7°48	18°59	0° 7	7°28	18° 3	22° 2	6°47	5°30	4°41	15°33	
W24	8 41 7	11°34'22	5°20	6°45	27°16	8°30	19° 8	0°14	7°30	18° 3	22° 0	6°R48	5°27	4°48	15°37	
T25	8 45 4	12°35'03	18°14	8°30	26°50	9°13	19°18	0°21	7°33	18° 3	21°59	6°47	5°23	4°54	15°42	
F26	8 49 1	13°35'42	1°29	10°15	26°26	9°55	19°27	0°29	7°35	18° 4	21°58	6°45	5°20	5° 1	15°46	
S27	8 52 57	14°36'20	15° 5	12° 1	26° 4	10°37	19°37	0°36	7°37	18° 4	21°57	6°41	5°17	5° 8	15°50	
S28	8 56 54	15°36'57	28°59	13°48	25°45	11°20	19°47	0°43	7°38	18° 4	21°56	6°35	5°14	5°14	15°55	
M29	9 0 50	16°37'32	13° 7	15°36	25°28	12° 2	19°56	0°50	7°40	18° 4	21°54	6°28	5°11	5°21	15°59	
T30	9 4 47	17°38'05	27°24	17°24	25°14	12°44	20° 6	0°57	7°42	18° 5	21°53	6°22	5° 8	5°28	16° 3	
W31	9 8 43	18°38'36	11°45	19°14	25° 2	13°26	20°16	1° 5	7°44	18° 5	21°52	6°16	5° 4	5°35	16° 7	

Delta T = 10m50s Julian Calendar 1 Jan. 1229 == Greg. Calendar 8 Jan. 1229

FEBRUARY 1229 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♅	♁	♁	♁	♁	♁	♁	♁	♁
T 1	9 12 40	19°39'06	26°15	21° 4	24°R52	14°17	20°17	1°12	7°46	18°R 5	21°R50	6°R12	5°R 1	5°41	16°12	
F 2	9 16 36	20°39'33	10°21	22°55	24°R45	14°50	20°37	1°19	7°47	18° 6	21°19	6°R 9	4°58	5°48	16°16	
S 3	9 20 33	21°39'59	24°29	24°47	24°40	15°32	20°47	1°27	7°49	18° 6	21°48	6°D 9	4°55	5°55	16°20	
S 4	9 24 30	22°40'23	8°29	26°39	24°D38	16°15	20°58	1°34	7°50	18° 7	21°46	6°10	4°52	6° 1	16°25	
M 5	9 28 26	23°40'44	22°20	28°32	24°38	16°57	21° 8	1°41	7°52	18° 7	21°45	6°11	4°48	6° 8	16°29	
T 6	9 32 23	24°41'04	6° 1	0°12	24°41	17°39	21°19	1°49	7°53	18° 8	21°44	6°R12	4°45	6°15	16°33	
W 7	9 36 19	25°41'22	19°32	2°19	24°46	18°20	21°30	1°56	7°55	18° 8	21°42	6°11	4°42	6°22	16°37	
T 8	9 40 16	26°41'38	2°53	4°13	24°53	19° 2	21°41	2° 3	7°56	18° 9	21°41	6° 8	4°39	6°28	16°42	
F 9	9 44 12	27°41'52	16° 3	6° 8	25° 2	19°44	21°52	2°11	7°58	18°10	21°39	6° 2	4°36	6°35	16°46	
S10	9 48 9	28°42'03	29° 0	8° 1	25°14	20°26	22° 3	2°18	7°59	18°10	21°38	5°54	4°33	6°42	16°50	
S11	9 52 5	29°42'13	11°45	9°55	25°28	21° 8	22°14	2°25	8° 0	18°11	21°36	5°45	4°29	6°48	16°54	
M12	9 56 2	0°42'22	24°16	11°48	25°44	21°50	22°26	2°33	8° 1	18°12	21°35	5°34	4°26	6°55	16°59	
T13	9 59 59	1°42'28	6°34	13°40	26° 1	22°32	22°37	2°40	8° 2	18°12	21°33	5°24	4°23	7° 2	17° 3	
W14	10 3 55	2°42'33	18°41	15°30	26°21	23°13	22°49	2°48	8° 4	18°13	21°32	5°15	4°20	7° 8	17° 7	
T15	10 7 52	3°42'36	0°39	17°19	26°43	23°55	23° 0	2°55	8° 5	18°14	21°30	5° 7	4°17	7°15	17°11	
F16	10 11 48	4°42'38	12°30	19° 5	27° 7	24°37	23°12	3° 2	8° 6	18°15	21°29	5° 2	4°13	7°22	17°15	
S17	10 15 45	5°42'37	24°21	20°49	27°32	25°18	23°24	3°10	8° 6	18°16	21°27	4°59	4°10	7°29	17°19	
S18	10 19 41	6°42'36	6°14	22°29	27°59	26° 0	23°36	3°17	8° 7	18°17	21°26	4°D58	4° 7	7°35	17°23	
M19	10 23 38	7°42'32	18°16	24° 6	28°27	26°41	23°48	3°24	8° 8	18°18	21°24	4°59	4° 4	7°42	17°28	
T20	10 27 34	8°42'27	0°32	25°39	28°57	27°23	24° 0	3°32	8° 9	18°19	21°22	4°R59	4° 1	7°49	17°32	
W21	10 31 31	9°42'20	13° 7	27° 7	29°29	28° 4	24°12	3°39	8°10	18°20	21°21	4°59	3°58	7°55	17°36	
T22	10 35 28	10°42'12	26° 5	28°29	0° 2	28°46	24°24	3°47	8°10	18°21	21°19	4°57	3°54	8° 2	17°40	
F23	10 39 24	11°42'01	9°28	29°46	0°37	29°27	24°36	3°54	8°11	18°22	21°18	4°53	3°51	8° 9	17°44	
S24	10 43 21	12°41'49	23°18	0°15	1°12	0° 9	24°48	4° 1	8°11	18°23	21°16	4°46	3°48	8°15	17°48	
S25	10 47 17	13°41'35	7°32	2° 1	1°49	0°50	25° 1	4° 9	8°12	18°24	21°14	4°36	3°45	8°22	17°52	
M26	10 51 14	14°41'18	22° 6	2°57	2°28	1°31	25°13	4°16	8°12	18°25	21°13	4°26	3°42	8°29	17°56	
T27	10 55 10	15°41'00	6°15	3°47	3° 7	2°13	25°26	4°23	8°13	18°27	21°11	4°15	3°39	8°36	18° 0	
W28	10 59 7	16°40'39	21°39	4°29	3°48	2°54	25°38	4°30	8°13	18°28	21°10	4°R 5	3°35	8°42	18° 3	

Delta T = 10m50s Julian Calendar created from Swiss Ephemeris, Copyright Astrodiens AG [10.1.2003]

SWISS EPHEMERIS for the year 1229

MARCH 1229 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍
T 1	11 3 3	17 ^h 40'17"	6 ^h 24'	5 ^h 3'	4 ^h 29'	3 ^h 35'	25 ^h 51'	4 ^h 38'	8 ^h 13'	18 ^h 29'	21 ^h 8'	3 ^h 57'	3 ^h 32'	8 ^h 49'	18 ^h 7'		
F 2	11 7 0	18 ^h 39'52"	20 ^h 56'	5 ^h 29'	5 ^h 12'	4 ^h 17'	26 ^h 4'	4 ^h 45'	8 ^h 14'	18 ^h 30'	21 ^h 6'	3 ^h 52'	3 ^h 29'	8 ^h 56'	18 ^h 11'		
S 3	11 10 56	19 ^h 39'25"	5 ^h 14'	5 ^h 47'	5 ^h 56'	4 ^h 58'	26 ^h 17'	4 ^h 52'	8 ^h 14'	18 ^h 32'	21 ^h 4'	3 ^h 49'	3 ^h 26'	9 ^h 2'	18 ^h 15'		
S 4	11 14 53	20 ^h 38'55"	19 ^h 14'	5 ^h 57'	6 ^h 40'	5 ^h 39'	26 ^h 30'	4 ^h 59'	8 ^h 14'	18 ^h 33'	21 ^h 3'	3 ^h D49	3 ^h 23'	9 ^h 9'	18 ^h 19'		
M 5	11 18 50	21 ^h 38'23"	2 ^h 57'	5 ^h R59	7 ^h 26'	6 ^h 20'	26 ^h 43'	5 ^h 7'	8 ^h 14'	18 ^h 35'	21 ^h 1'	3 ^h R49	3 ^h 19'	9 ^h 16'	18 ^h 22'		
T 6	11 22 46	22 ^h 37'49"	16 ^h 24'	5 ^h 53'	8 ^h 12'	7 ^h 1'	26 ^h 56'	5 ^h 14'	8 ^h R14	18 ^h 36'	20 ^h 59'	3 ^h 48'	3 ^h 16'	9 ^h 22'	18 ^h 26'		
W 7	11 26 43	23 ^h 37'12"	29 ^h 36'	5 ^h 40'	8 ^h 59'	7 ^h 42'	27 ^h 9'	5 ^h 21'	8 ^h 14'	18 ^h 37'	20 ^h 58'	3 ^h 46'	3 ^h 13'	9 ^h 29'	18 ^h 30'		
T 8	11 30 39	24 ^h 36'33"	12 ^h 36'	5 ^h 19'	9 ^h 47'	8 ^h 23'	27 ^h 22'	5 ^h 28'	8 ^h 14'	18 ^h 39'	20 ^h 56'	3 ^h 41'	3 ^h 10'	9 ^h 36'	18 ^h 34'		
F 9	11 34 36	25 ^h 35'52"	25 ^h 25'	4 ^h 53'	10 ^h 36'	9 ^h 4'	27 ^h 35'	5 ^h 35'	8 ^h 14'	18 ^h 40'	20 ^h 55'	3 ^h 34'	3 ^h 7'	9 ^h 42'	18 ^h 37'		
S 10	11 38 32	26 ^h 35'08"	8 ^h 12'	4 ^h 20'	11 ^h 26'	9 ^h 45'	27 ^h 48'	5 ^h 42'	8 ^h 14'	18 ^h 42'	20 ^h 53'	3 ^h 23'	3 ^h 4'	9 ^h 49'	18 ^h 41'		
S 11	11 42 29	27 ^h 34'22"	20 ^h 30'	3 ^h 43'	12 ^h 16'	10 ^h 26'	28 ^h 1'	5 ^h 49'	8 ^h 13'	18 ^h 43'	20 ^h 51'	3 ^h 10'	3 ^h 0'	9 ^h 56'	18 ^h 44'		
M12	11 46 25	28 ^h 33'34"	2 ^h 49'	3 ^h 1'	13 ^h 7'	11 ^h 7'	28 ^h 15'	5 ^h 56'	8 ^h 13'	18 ^h 45'	20 ^h 50'	2 ^h 56'	2 ^h 57'	10 ^h 3'	18 ^h 48'		
T 13	11 50 22	29 ^h 32'44"	14 ^h 58'	2 ^h 16'	13 ^h 59'	11 ^h 48'	28 ^h 28'	6 ^h 3'	8 ^h 13'	18 ^h 47'	20 ^h 48'	2 ^h 42'	2 ^h 54'	10 ^h 9'	18 ^h 51'		
W14	11 54 19	0 ^h 31'52"	26 ^h 59'	1 ^h 28'	14 ^h 51'	12 ^h 29'	28 ^h 41'	6 ^h 10'	8 ^h 12'	18 ^h 48'	20 ^h 46'	2 ^h 30'	2 ^h 51'	10 ^h 16'	18 ^h 55'		
T 15	11 58 15	1 ^h 30'58"	8 ^h 153'	0 ^h 39'	15 ^h 44'	13 ^h 9'	28 ^h 55'	6 ^h 17'	8 ^h 12'	18 ^h 50'	20 ^h 45'	2 ^h 19'	2 ^h 48'	10 ^h 23'	18 ^h 58'		
F 16	12 2 12	2 ^h 30'03"	20 ^h 43'	29 ^h 50'	16 ^h 37'	13 ^h 50'	29 ^h 8'	6 ^h 24'	8 ^h 11'	18 ^h 51'	20 ^h 43'	2 ^h 11'	2 ^h 45'	10 ^h 29'	19 ^h 2'		
S 17	12 6 8	3 ^h 29'05"	2 ^h 32'	29 ^h 2'	17 ^h 32'	14 ^h 31'	29 ^h 22'	6 ^h 31'	8 ^h 11'	18 ^h 53'	20 ^h 42'	2 ^h 6'	2 ^h 41'	10 ^h 36'	19 ^h 5'		
S 18	12 10 5	4 ^h 28'06"	14 ^h 25'	28 ^h 15'	18 ^h 26'	15 ^h 11'	29 ^h 35'	6 ^h 38'	8 ^h 10'	18 ^h 55'	20 ^h 40'	2 ^h 3'	2 ^h 38'	10 ^h 43'	19 ^h 8'		
M19	12 14 1	5 ^h 27'05"	26 ^h 25'	27 ^h 30'	19 ^h 22'	15 ^h 52'	29 ^h 49'	6 ^h 45'	8 ^h 9'	18 ^h 57'	20 ^h 38'	2 ^h 2'	2 ^h 35'	10 ^h 49'	19 ^h 12'		
T 20	12 17 58	6 ^h 26'02"	8 ^h 38'	26 ^h 48'	20 ^h 17'	16 ^h 33'	0 ^h 3'	6 ^h 52'	8 ^h 9'	18 ^h 58'	20 ^h 37'	2 ^h 2'	2 ^h 32'	10 ^h 56'	19 ^h 15'		
W21	12 21 54	7 ^h 24'57"	21 ^h 10'	26 ^h 10'	21 ^h 14'	17 ^h 13'	0 ^h 16'	6 ^h 58'	8 ^h 8'	19 ^h 0'	20 ^h 35'	2 ^h 2'	2 ^h 29'	11 ^h 3'	19 ^h 18'		
T 22	12 25 51	8 ^h 23'50"	4 ^h 5'	25 ^h 36'	22 ^h 10'	17 ^h 54'	0 ^h 30'	7 ^h 5'	8 ^h 7'	19 ^h 2'	20 ^h 34'	2 ^h 0'	2 ^h 25'	11 ^h 9'	19 ^h 21'		
F 23	12 29 48	9 ^h 22'42"	17 ^h 28'	25 ^h 7'	23 ^h 7'	18 ^h 34'	0 ^h 44'	7 ^h 12'	8 ^h 6'	19 ^h 4'	20 ^h 32'	1 ^h 56'	2 ^h 22'	11 ^h 16'	19 ^h 24'		
S 24	12 33 44	10 ^h 21'32"	1 ^h 20'	24 ^h 42'	24 ^h 5'	19 ^h 15'	0 ^h 58'	7 ^h 18'	8 ^h 6'	19 ^h 5'	20 ^h 31'	1 ^h 49'	2 ^h 19'	11 ^h 23'	19 ^h 27'		
S 25	12 37 41	11 ^h 20'20"	15 ^h 41'	24 ^h 23'	25 ^h 3'	19 ^h 55'	1 ^h 12'	7 ^h 25'	8 ^h 5'	19 ^h 7'	20 ^h 29'	1 ^h 40'	2 ^h 16'	11 ^h 30'	19 ^h 30'		
M26	12 41 37	12 ^h 19'06"	0 ^h 26'	24 ^h 9'	26 ^h 2'	20 ^h 36'	1 ^h 25'	7 ^h 31'	8 ^h 4'	19 ^h 9'	20 ^h 28'	1 ^h 29'	2 ^h 13'	11 ^h 36'	19 ^h 33'		
T 27	12 45 34	13 ^h 17'50"	15 ^h 28'	24 ^h 0'	27 ^h 0'	21 ^h 16'	1 ^h 39'	7 ^h 38'	8 ^h 3'	19 ^h 11'	20 ^h 26'	1 ^h 18'	2 ^h 10'	11 ^h 43'	19 ^h 36'		
W28	12 49 30	14 ^h 16'32"	0 ^h 37'	23 ^h D57	28 ^h 0'	21 ^h 57'	1 ^h 53'	7 ^h 44'	8 ^h 1'	19 ^h 13'	20 ^h 25'	1 ^h 7'	2 ^h 6'	11 ^h 50'	19 ^h 39'		
T 29	12 53 27	15 ^h 15'12"	15 ^h 43'	23 ^h 58'	28 ^h 59'	22 ^h 37'	2 ^h 7'	7 ^h 51'	8 ^h 0'	19 ^h 15'	20 ^h 23'	0 ^h 59'	2 ^h 3'	11 ^h 56'	19 ^h 42'		
F 30	12 57 23	16 ^h 13'50"	0 ^h 36'	24 ^h 5'	29 ^h 59'	23 ^h 17'	2 ^h 21'	7 ^h 57'	7 ^h 59'	19 ^h 17'	20 ^h 22'	0 ^h 54'	2 ^h 0'	12 ^h 3'	19 ^h 45'		
S 31	13 1 20	17 ^h 12'26"	15 ^h 10'	24 ^h 17'	1 ^h 0'	23 ^h 58'	2 ^h 35'	8 ^h 3'	7 ^h 58'	19 ^h 19'	20 ^h 20'	0 ^h 51'	1 ^h 57'	12 ^h 10'	19 ^h 48'		

Delta T = 10m49s Julian Calendar 1 March 1229 == Greg. Calendar 8 March 1229

APRIL 1229 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍
S 1	13 5 17	18 ^h 11'00"	29 ^h 11'	24 ^h 34'	2 ^h 0'	24 ^h 38'	2 ^h 49'	8 ^h 10'	7 ^h R57	19 ^h 21'	20 ^h R19	0 ^h 50'	1 ^h 54'	12 ^h 16'	19 ^h 50'		
M 2	13 9 13	19 ^h 9'32"	13 ^h 9'	24 ^h 55'	3 ^h 1'	25 ^h 18'	3 ^h 3'	8 ^h 16'	7 ^h 55'	19 ^h 23'	20 ^h 17'	0 ^h R50	1 ^h 50'	12 ^h 23'	19 ^h 53'		
T 3	13 13 10	20 ^h 8'01"	26 ^h 34'	25 ^h 20'	4 ^h 2'	25 ^h 58'	3 ^h 17'	8 ^h 22'	7 ^h 54'	19 ^h 25'	20 ^h 16'	0 ^h 50'	1 ^h 47'	12 ^h 30'	19 ^h 55'		
W 4	13 17 6	21 ^h 6'28"	9 ^h 40'	25 ^h 50'	5 ^h 4'	26 ^h 38'	3 ^h 31'	8 ^h 28'	7 ^h 53'	19 ^h 27'	20 ^h 15'	0 ^h 49'	1 ^h 44'	12 ^h 36'	19 ^h 58'		
T 5	13 21 3	22 ^h 4'52"	22 ^h 28'	26 ^h 25'	6 ^h 6'	27 ^h 18'	3 ^h 45'	8 ^h 34'	7 ^h 51'	19 ^h 29'	20 ^h 13'	0 ^h 45'	1 ^h 41'	12 ^h 43'	20 ^h 1'		
F 6	13 24 59	23 ^h 3'15"	5 ^h 12'	27 ^h 3'	7 ^h 8'	27 ^h 59'	4 ^h 0'	8 ^h 40'	7 ^h 50'	19 ^h 31'	20 ^h 12'	0 ^h 39'	1 ^h 38'	12 ^h 50'	20 ^h 3'		
S 7	13 28 56	24 ^h 1'35"	17 ^h 26'	27 ^h 45'	8 ^h 10'	28 ^h 39'	4 ^h 14'	8 ^h 46'	7 ^h 48'	19 ^h 33'	20 ^h 11'	0 ^h 30'	1 ^h 35'	12 ^h 57'	20 ^h 5'		
S 8	13 32 52	24 ^h 59'54"	29 ^h 40'	28 ^h 30'	9 ^h 13'	29 ^h 19'	4 ^h 28'	8 ^h 52'	7 ^h 47'	19 ^h 35'	20 ^h 9'	0 ^h 19'	1 ^h 31'	13 ^h 3'	20 ^h 8'		
M 9	13 36 49	25 ^h 58'10"	11 ^h 47'	29 ^h 19'	10 ^h 15'	29 ^h 59'	4 ^h 42'	8 ^h 58'	7 ^h 45'	19 ^h 37'	20 ^h 8'	0 ^h 7'	1 ^h 28'	13 ^h 10'	20 ^h 10'		
T 10	13 40 45	26 ^h 56'25"	23 ^h 46'	0 ^h 11'	11 ^h 19'	0 ^h 11'	4 ^h 56'	9 ^h 4'	7 ^h 43'	19 ^h 39'	20 ^h 7'	29 ^h 55'	1 ^h 25'	13 ^h 17'	20 ^h 12'		
W11	13 44 42	27 ^h 54'38"	5 ^h 14'	1 ^h 7'	12 ^h 22'	1 ^h 18'	5 ^h 10'	9 ^h 9'	7 ^h 42'	19 ^h 41'	20 ^h 6'	29 ^h 44'	1 ^h 22'	13 ^h 23'	20 ^h 15'		
T 12	13 48 39	28 ^h 52'49"	17 ^h 32'	2 ^h 5'	13 ^h 26'	1 ^h 58'	5 ^h 25'	9 ^h 15'	7 ^h 40'	19 ^h 43'	20 ^h 4'	29 ^h 35'	1 ^h 19'	13 ^h 30'	20 ^h 17'		
F 13	13 52 35	29 ^h 50'58"	29 ^h 21'	3 ^h 6'	14 ^h 29'	2 ^h 38'	5 ^h 39'	9 ^h 21'	7 ^h 38'	19 ^h 46'	20 ^h 3'	29 ^h 29'	1 ^h 16'	13 ^h 37'	20 ^h 19'		
S 14	13 56 32	0 ^h 49'06"	11 ^h 11'	4 ^h 11'	15 ^h 33'	3 ^h 18'	5 ^h 53'	9 ^h 26'	7 ^h 37'	19 ^h 48'	20 ^h 2'	29 ^h 25'	1 ^h 12'	13 ^h 43'	20 ^h 21'		
S 15	14 0 28	1 ^h 47'13"	23 ^h 5'	5 ^h 18'	16 ^h 38'	3 ^h 58'	6 ^h 7'	9 ^h 32'	7 ^h 35'	19 ^h 50'	20 ^h 1'	29 ^h 23'	1 ^h 9'	13 ^h 50'	20 ^h 23'		
M16	14 4 25	2 ^h 45'18"	5 ^h 3'	6 ^h 27'	17 ^h 42'	4 ^h 38'	6 ^h 21'	9 ^h 37'	7 ^h 33'	19 ^h 52'	20 ^h 0'	29 ^h D23	1 ^h 6'	13 ^h 57'	20 ^h 25'		
T 17	14 8 21	3 ^h 43'21"	17 ^h 20'	7 ^h 39'	18 ^h 47'	5 ^h 17'	6 ^h 36'	9 ^h 42'	7 ^h 31'	19 ^h 54'	19 ^h 59'	29 ^h 24'	1 ^h 3'	14 ^h 3'	20 ^h 27'		
W18	14 12 1																

SWISS EPHEMERIS for the year 1229

MAY 1229 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
T 1	15 3 33	17♌13'40	6♋5	28♍30	4♍10	14♎31	9♏54	10♐50	7♑2	20♒25	19♓46	28♔44	0♕18	15♖37	20♗47	
W 2	15 7 30	18°11'21	19°13	0♌15	5°17	15°11	10° 9	10°54	6♎59	20°27	19♏45	28°R45	0°15	15°44	20°48	
T 3	15 11 26	19° 9'01	2♎0	2° 3	6°24	15°50	10°23	10°59	6°57	20°30	19°45	28°44	0°12	15°50	20°49	
F 4	15 15 23	20° 6'39	14°30	3°53	7°31	16°29	10°37	11° 3	6°55	20°32	19°44	28°41	0° 9	15°57	20°50	
S 5	15 19 19	21° 4'15	26°46	5°45	8°39	17° 9	10°51	11° 7	6°52	20°34	19°44	28°37	0° 6	16° 4	20°51	
S 6	15 23 16	22° 1'50	8♌51	7°39	9°46	17°48	11° 5	11°11	6°50	20°36	19°43	28°32	0° 2	16°10	20°51	
M 7	15 27 12	22°59'23	20°49	9°35	10°54	18°27	11°19	11°15	6°48	20°39	19°42	28°25	29♎59	16°17	20°52	
T 8	15 31 9	23°56'56	2♎43	11°33	12° 2	19° 6	11°33	11°18	6°45	20°41	19°42	28°19	29°56	16°24	20°53	
W 9	15 35 6	24°54'27	14°33	13°33	13° 9	19°46	11°47	11°22	6°43	20°43	19°41	28°13	29°53	16°30	20°53	
T 10	15 39 2	25°51'56	26°23	15°35	14°17	20°25	12° 1	11°26	6°41	20°45	19°41	28° 9	29°50	16°37	20°54	
F 11	15 42 59	26°49'25	8♎14	17°38	15°25	21° 4	12°15	11°29	6°38	20°48	19°41	28° 5	29°47	16°44	20°54	
S 12	15 46 55	27°46'53	20° 9	19°44	16°34	21°43	12°29	11°33	6°36	20°50	19°40	28° 4	29°43	16°51	20°55	
S 13	15 50 52	28°44'20	2♎9	21°51	17°42	22°22	12°43	11°36	6°33	20°52	19°40	28°D 4	29°40	16°57	20°55	
M14	15 54 48	29°41'46	14°18	23°59	18°50	23° 1	12°57	11°39	6°31	20°54	19°39	28° 5	29°37	17° 4	20°55	
T 15	15 58 45	0♎39'11	26°38	26° 9	19°59	23°40	13°11	11°43	6°28	20°57	19°39	28° 6	29°34	17°11	20°56	
W16	16 2 41	1°36'35	9♌13	28°19	21° 7	24°19	13°24	11°46	6°26	20°59	19°39	28° 8	29°31	17°17	20°56	
T 17	16 6 38	2°33'59	22° 7	0♎31	22°16	24°58	13°38	11°49	6°23	21° 1	19°39	28° 9	29°28	17°24	20°56	
F 18	16 10 35	3°31'22	5♎22	2°43	23°24	25°37	13°52	11°52	6°21	21° 3	19°39	28°R 9	29°24	17°31	20°R56	
S 19	16 14 31	4°28'44	19° 2	4°55	24°33	26°16	14° 6	11°54	6°19	21° 5	19°38	28° 9	29°21	17°37	20°56	
S 20	16 18 28	5°26'06	3♍7	7° 7	25°42	26°55	14°19	11°57	6°16	21° 8	19°38	28° 7	29°18	17°44	20°56	
M21	16 22 24	6°23'27	17°36	9°18	26°51	27°34	14°33	12° 0	6°14	21°10	19°38	28° 4	29°15	17°51	20°56	
T 22	16 26 21	7°20'48	2♎25	11°29	28° 0	28°13	14°47	12° 2	6°11	21°12	19°38	28° 2	29°12	17°57	20°55	
W23	16 30 17	8°18'08	17°28	13°39	29° 9	28°52	15° 0	12° 5	6° 9	21°14	19°D38	27°59	29° 8	18° 4	20°55	
T 24	16 34 14	9°15'27	2♎36	15°49	0♌18	29°31	15°14	12° 7	6° 6	21°16	19°38	27°57	29° 5	18°11	20°55	
F 25	16 38 10	10°12'47	17°40	17°56	1°28	0♌10	15°27	12°10	6° 4	21°19	19°38	27°56	29° 2	18°17	20°54	
S 26	16 42 7	11°10'05	2♎31	20° 3	2°37	0°48	15°41	12°12	6° 1	21°21	19°38	27°D56	28°59	18°24	20°54	
S 27	16 46 4	12° 7'23	17° 3	22° 7	3°47	1°27	15°54	12°14	5°59	21°23	19°38	27°57	28°56	18°31	20°53	
M28	16 50 0	13° 4'39	1♎9	24°10	4°56	2° 6	16° 8	12°16	5°56	21°25	19°38	27°58	28°53	18°37	20°53	
T 29	16 53 57	14° 1'55	14°50	26°11	6° 6	2°45	16°21	12°18	5°54	21°27	19°39	27°59	28°49	18°44	20°52	
W30	16 57 53	14°59'10	28° 4	28°10	7°15	3°24	16°34	12°20	5°52	21°29	19°39	28° 0	28°46	18°51	20°52	
T 31	17 1 50	15°56'24	10♎55	0♌7	8♌25	4♌2	16♎48	12♎21	5♎49	21♎31	19♎39	28°R 0	28♎43	18♎57	20♎51	

Delta T = 10m49s Julian Calendar 1 May 1229 == Greg. Calendar 8 May 1229

JUNE 1229 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
F 1	17 5 46	16♎53'38	23♎26	2♌2	9♌35	4♌41	17♌1	12♎23	5°R47	21♎33	19♎39	28°R 0	28♎40	19♎4	20°R50	
S 2	17 9 43	17°50'51	5♌40	3°54	10°45	5°20	17°14	12°24	5♎44	21°35	19°40	28♎0	28°37	19°11	20♎49	
S 3	17 13 40	18°48'03	17°43	5°44	11°54	5°59	17°27	12°26	5°42	21°37	19°40	27°59	28°33	19°17	20°48	
M 4	17 17 36	19°45'14	29°37	7°32	13° 4	6°37	17°40	12°27	5°40	21°40	19°40	27°58	28°30	19°24	20°47	
T 5	17 21 33	20°42'25	11♎28	9°18	14°14	7°16	17°53	12°28	5°37	21°42	19°41	27°57	28°27	19°31	20°46	
W 6	17 25 29	21°39'36	23°18	11° 2	15°24	7°54	18° 6	12°29	5°35	21°44	19°41	27°56	28°24	19°38	20°45	
T 7	17 29 26	22°36'46	5♎9	12°43	16°35	8°33	18°19	12°30	5°32	21°46	19°41	27°55	28°21	19°44	20°44	
F 8	17 33 22	23°33'56	17° 6	14°22	17°45	9°12	18°32	12°31	5°30	21°48	19°42	27°55	28°18	19°51	20°43	
S 9	17 37 19	24°31'05	29° 9	15°59	18°55	9°50	18°44	12°32	5°28	21°50	19°42	27°D55	28°14	19°58	20°42	
S 10	17 41 15	25°28'15	11♎20	17°33	20° 5	10°29	18°57	12°33	5°26	21°51	19°43	27°55	28°11	20° 4	20°40	
M11	17 45 12	26°25'24	23°42	19° 5	21°16	11° 7	19°10	12°33	5°23	21°53	19°44	27°55	28° 8	20°11	20°39	
T 12	17 49 9	27°22'34	6♎17	20°35	22°26	11°46	19°22	12°34	5°21	21°55	19°44	27°55	28° 5	20°18	20°37	
W13	17 53 5	28°19'43	19° 5	22° 2	23°37	12°25	19°35	12°34	5°19	21°57	19°45	27°R55	28° 2	20°24	20°36	
T 14	17 57 2	29°16'53	2♎8	23°27	24°47	13° 3	19°47	12°35	5°17	21°59	19°46	27°55	27°59	20°31	20°34	
F 15	18 0 58	0♌14'02	15°29	24°50	25°58	13°42	20° 0	12°35	5°15	22° 1	19°46	27°55	27°55	20°38	20°33	
S 16	18 4 55	1°11'12	29° 7	26°10	27° 9	14°20	20°12	12°35	5°12	22° 3	19°47	27°D55	27°52	20°44	20°31	
S 17	18 8 51	2° 8'23	13♍4	27°28	28°20	14°59	20°24	12°R35	5°10	22° 5	19°48	27°55	27°49	20°51	20°29	
M18	18 12 48	3° 5'34	27°19	28°43	29°30	15°37	20°36	12°35	5° 8	22° 6	19°49	27°55	27°46	20°58	20°28	
T 19	18 16 44	4° 2'45	11♎50	29°56	0♎41	16°15	20°49	12°35	5° 6	22° 8	19°49	27°56	27°43	21° 4	20°26	
W20	18 20 41	4°59'56	26°32	1♎6	1°52	16°54	21° 1	12°34	5° 4	22°10	19°50	27°56	27°39	21°11	20°24	
T 21	18 24 38	5°57'09	11♎21	2°13	3° 3	17°32	21°13	12°34	5° 2	22°12	19°51	27°57	27°36	21°18	20°22	
F 22	18 28 34	6°54'21	26° 8	3°17	4°14	18°11	21°24	12°33	5° 0	22°13	19°52	27°R57	27°33	21°24	20°20	
S 23	18 32 31	7°51'34	10♌48	4°19	5°25	18°49	21°36	12°33	4°58	22°15	19°53	27°57	27°30	21°31	20°18	
S 24	18 36 27	8°48'47	25°14	5°17	6°37	19°28	21°48	12°32	4°56	22°17	19°54	27°56	27°27	21°38	20°16	
M25	18 40 24	9°46'00	9♎20	6°13	7°48	20° 6	22° 0	12°31	4°54	22°19	19°55	27°55	27°24	21°44	20°14	
T 26	18 44 20	10°43'13	23° 2	7° 5	8°59	20°44	22°11	12°31	4°53	22°20	19°56	27°53	27°20	21°51	20°12	
W27	18 48 17	11°40'27	6♎21	7°54	10°10	21°23	22°23	12°30	4°51	22°22	19°57	27°52	27°17	21°58	20°10	
T 28	18 52 13	12°37'40	19°15	8°39	11°22	22° 1	22°34	12°28	4°49	22°23	19°58	27°50	27°14	22° 4	20° 8	
F 29	18 56 10	13°34'54	1♎49	9°21	12°33	22°40	22°45	12°27	4°47	22°25	19°59	27°49	27°11	22°11	20° 6	
S 30	19 0 7	14°32'08	14♌5	9♎59	13♎45	23♎18	22♎57	12♎26	4♎45	22♎27	20♎1	27°D49	27♎8	22♎18	20♎3	

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SWISS EPHEMERIS for the year 1229

JULY 1229 JC

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Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
S 1	19 4 3	15 ⁵² 29'22	26 ²⁶ 7	10 ⁰ 133	14 ^{II} 56	23 ⁵⁶ 56	23 ⁸ 8	12 ^R 25	4 ^R 44	22 ²⁸ 28	20 ^{np} 2	27 ⁷ 49	27 ⁷ 5	22 ^{ml} 24	20 ^R 1								
M 2	19 8 0	16 ²⁶ 37	8 ^{ml} 1	11° 3	16° 8	24°35	23°19	12 ^X 23	4 ^X 42	22°30	20° 3	27°50	27° 1	22°31	19 ^{as} 59								
T 3	19 11 56	17°23'52	19°51	11°29	17°19	25°13	23°30	12°22	4°41	22°31	20° 4	27°52	26°58	22°38	19°56								
W 4	19 15 53	18°21'07	1 ^X 42	11°50	18°31	25°51	23°41	12°20	4°39	22°32	20° 6	27°53	26°55	22°44	19°54								
T 5	19 19 49	19°18'23	13°37	12° 7	19°43	26°29	23°51	12°18	4°38	22°34	20° 7	27°54	26°52	22°51	19°51								
F 6	19 23 46	20°15'39	25°40	12°19	20°55	27° 8	24° 2	12°16	4°36	22°35	20° 8	27 ^R 55	26°49	22°58	19°49								
S 7	19 27 42	21°12'56	7 ⁵³ 53	12°26	22° 6	27°46	24°12	12°14	4°35	22°37	20°10	27°55	26°45	23° 4	19°46								
S 8	19 31 39	22°10'13	20°20	12 ^R 28	23°18	28°24	24°23	12°12	4°33	22°38	20°11	27°53	26°42	23°11	19°44								
M 9	19 35 36	23° 7'32	3 ^{as} 0	12°25	24°30	29° 3	24°33	12°10	4°32	22°39	20°12	27°51	26°39	23°18	19°41								
T 10	19 39 32	24° 4'51	15°54	12°17	25°42	29°41	24°43	12° 8	4°31	22°41	20°14	27°47	26°36	23°24	19°38								
W11	19 43 29	25° 2'10	29° 3	12° 4	26°54	0 ⁰ 19	24°54	12° 6	4°29	22°42	20°15	27°43	26°33	23°31	19°36								
T 12	19 47 25	25°59'31	12 ^X 25	11°46	28° 6	0°57	25° 4	12° 3	4°28	22°43	20°17	27°39	26°30	23°38	19°33								
F 13	19 51 22	26°56'53	26° 0	11°23	29°19	1°36	25°14	12° 1	4°27	22°44	20°18	27°35	26°26	23°44	19°30								
S 14	19 55 18	27°54'16	9 ^Y 47	10°56	0 ⁵³ 31	2°14	25°23	11°58	4°26	22°45	20°20	27°33	26°23	23°51	19°27								
S 15	19 59 15	28°51'41	23°45	10°24	1°43	2°52	25°33	11°55	4°25	22°47	20°21	27 ^D 32	26°20	23°58	19°25								
M16	20 3 11	29°49'06	7 ⁵² 52	9°47	2°55	3°30	25°43	11°53	4°23	22°48	20°23	27°32	26°17	24° 4	19°22								
T 17	20 7 8	0 ⁰ 46'33	22° 7	9° 7	4° 8	4° 8	25°52	11°50	4°22	22°49	20°25	27°33	26°14	24°11	19°19								
W18	20 11 5	1°44'01	6 ^{II} 28	8°25	5°20	4°47	26° 2	11°47	4°22	22°50	20°26	27°34	26°11	24°18	19°16								
T 19	20 15 1	2°41'31	20°52	7°39	6°33	5°25	26°11	11°44	4°21	22°51	20°28	27 ^R 35	26° 7	24°24	19°13								
F 20	20 18 58	3°39'02	5 ⁵² 15	6°52	7°45	6° 3	26°20	11°41	4°20	22°52	20°30	27°35	26° 4	24°31	19°10								
S 21	20 22 54	4°36'34	19°32	6° 4	8°58	6°41	26°29	11°38	4°19	22°53	20°31	27°33	26° 1	24°38	19° 8								
S 22	20 26 51	5°34'08	3 ⁰ 40	5°16	10°10	7°20	26°38	11°35	4°18	22°54	20°33	27°30	25°58	24°44	19° 5								
M23	20 30 47	6°31'42	17°34	4°30	11°23	7°58	26°47	11°31	4°17	22°55	20°35	27°25	25°55	24°51	19° 2								
T 24	20 34 44	7°29'18	1 ^{np} 9	3°45	12°36	8°36	26°55	11°28	4°17	22°56	20°36	27°19	25°51	24°58	18°59								
W25	20 38 41	8°26'55	14°23	3° 2	13°48	9°14	27° 4	11°25	4°16	22°56	20°38	27°12	25°48	25° 4	18°56								
T 26	20 42 37	9°24'32	27°17	2°23	15° 1	9°52	27°12	11°21	4°15	22°57	20°40	27° 5	25°45	25°11	18°53								
F 27	20 46 34	10°22'11	9 ² 50	1°49	16°14	10°31	27°20	11°18	4°15	22°58	20°42	27° 0	25°42	25°18	18°50								
S 28	20 50 30	11°19'51	22° 7	1°20	17°27	11° 9	27°28	11°14	4°14	22°59	20°44	26°56	25°39	25°24	18°47								
S 29	20 54 27	12°17'32	4 ^{ml} 9	0°57	18°40	11°47	27°36	11°10	4°14	23° 0	20°46	26°54	25°36	25°31	18°44								
M30	20 58 23	13°15'14	16° 3	0°40	19°53	12°25	27°44	11° 6	4°14	23° 0	20°48	26 ^D 54	25°32	25°38	18°41								
T 31	21 2 20	14 ⁰ 12'57	27 ^{ml} 53	0 ⁰ 30	21 ⁵ 6	13 ⁰ 3	27 ⁵² 52	11 ^X 3	4 ^X 13	23 ⁸ 1	20 ^{np} 49	26 ^X 55	25 ^X 29	25 ^{ml} 44	18 ^{as} 38								

Delta T = 10m48s Julian Calendar 1 July 1229 == Greg. Calendar 8 July 1229

AUGUST 1229 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
W 1	21 6 16	15 ⁰ 10'42	9 ⁷ 44	0 ⁰ 27	22 ⁵⁶ 19	13 ⁰ 42	27 ⁸ 59	10 ^R 59	4 ^R 13	23 ⁸ 2	20 ^{np} 51	26 ^X 56	25 ^X 26	25 ^{ml} 51	18 ^R 35								
T 2	21 10 13	16° 8'27	21°42	0°31	23°32	14°20	28° 7	10 ^X 55	4 ^X 13	23° 2	20°53	26 ^R 57	25°23	25°58	18 ^{as} 32								
F 3	21 14 9	17° 6'14	3 ⁵⁰ 50	0°43	24°45	14°58	28°14	10°51	4°13	23° 3	20°55	26°57	25°20	26° 4	18°28								
S 4	21 18 6	18° 4'02	16°12	1° 3	25°59	15°36	28°21	10°47	4°12	23° 3	20°57	26°55	25°17	26°11	18°25								
S 5	21 22 3	19° 1'52	28°52	1°31	27°12	16°14	28°28	10°43	4°12	23° 4	20°59	26°51	25°13	26°18	18°22								
M 6	21 25 59	19°59'42	11 ^{as} 51	2° 7	28°25	16°53	28°35	10°39	4 ^D 12	23° 4	21° 1	26°45	25°10	26°24	18°19								
T 7	21 29 56	20°57'35	25° 8	2°49	29°39	17°31	28°41	10°34	4°12	23° 5	21° 3	26°37	25° 7	26°31	18°16								
W 8	21 33 52	21°55'28	8 ^X 41	3°40	0 ⁰ 52	18° 9	28°48	10°30	4°12	23° 5	21° 5	26°28	25° 4	26°38	18°13								
T 9	21 37 49	22°53'24	22°29	4°37	2° 5	18°47	28°54	10°26	4°13	23° 5	21° 7	26°19	25° 1	26°44	18°10								
F 10	21 41 45	23°51'21	6 ^Y 28	5°42	3°19	19°25	29° 0	10°22	4°13	23° 6	21° 9	26°10	24°57	26°51	18° 7								
S 11	21 45 42	24°49'20	20°33	6°53	4°32	20° 3	29° 6	10°17	4°13	23° 6	21°11	26° 4	24°54	26°58	18° 4								
S 12	21 49 38	25°47'21	4 ⁸ 42	8°10	5°46	20°42	29°12	10°13	4°13	23° 6	21°14	26° 0	24°51	27° 4	18° 1								
M13	21 53 35	26°45'24	18°51	9°32	7° 0	21°20	29°18	10° 8	4°14	23° 7	21°16	25°58	24°48	27°11	17°58								
T 14	21 57 32	27°43'29	3 ^{II} 0	11° 0	8°13	21°58	29°23	10° 4	4°14	23° 7	21°18	25 ^D 58	24°45	27°18	17°55								
W15	22 1 28	28°41'37	17° 6	12°33	9°27	22°36	29°29	10° 0	4°14	23° 7	21°20	25°59	24°42	27°24	17°52								
T 16	22 5 25	29°39'46	1 ⁵ 9	14° 9	10°41	23°14	29°34	9°55	4°15	23° 7	21°22	25 ^R 59	24°38	27°31	17°49								
F 17	22 9 21	0 ^{np} 37'57	15° 7	15°50	11°55	23°53	29°39	9°51	4°15	23° 7	21°24	25°57	24°35	27°38	17°46								
S 18	22 13 18	1°36'10	29° 0	17°34	13° 9	24°31	29°44	9°46	4°16	23° 7	21°26	25°53	24°32	27°44	17°43								
S 19	22 17 14	2°34'25	12 ⁰ 43	19°20	14°22	25° 9	29°49	9°41	4°17	23° 7	21°29	25°47	24°29	27°51	17°40								
M20	22 21 11	3°32'42	26°15	21° 9	15°36	25°47	29°53	9°37	4°17	23 ^R 7	21°31	25°38	24°26	27°58	17°38								
T 21	22 25 7	4°31'01	9 ^{np} 34	22°59	16°50	26°26	29°57	9°32	4°18	23° 7	21°33	25°26	24°23	28° 4	17°35								
W22	22 29 4	5°29'22	22°36	24°51	18° 4	27° 4	0 ^{II} 2	9°28	4°19	23° 7	21°35	25°15	24°19	28°11	17°32								
T 23	22 33 1	6°27'44	5 ² 21	26°44	19°19	27°42	0° 5	9°23	4°20	23° 7	21°37	25° 3	24°16	28°18	17°29								
F 24	22 36 57	7°26'08	17°50	28°38	20°33	28°20	0° 9	9°18	4°21	23° 7	21°40	24°53	24°13	28°24	17°26								
S 25	22 40 54	8°24'34	0 ^{ml} 3	0 ^{np} 32	21°47	28°59	0°13	9°14	4°21	23° 7	21°42	24°44	24°10	28°31	17°23								
S 26	22 44 50	9°23'01	12° 4	2°26	23° 1	29°37	0°16	9° 9	4°22	23° 7	21°44	24°39	24° 7	28°38	17°21								
M27	22 48 47	10°21'30	23°56	4°20	24°15	0 ^{np} 15	0°20	9° 4	4°24	23° 6	21°46	24°36	24° 3	28°44	17°18								
T 28	22 52 43	11°20'01	5 ^X 45	6°13	25°29	0°53	0°23	9° 0	4°25	23° 6	21°49	24°35	24° 0	28°51	17°15								
W29	22 56 40	12°18'34	17°35	8° 7	26°44	1°32	0°25	8°55	4°26	23° 6	21°51	24 ^D 34	23°57	28°58	17°13								
T 30	23 0 36	13°17'08	29°32	9°59	27°58	2°10	0°28	8°51	4°27	23° 6	21°53	24 ^R 34	23°54	29° 4	17°10								
F 31	23 4 33	14 ^{np} 15'44	11 ³ 42	11 ^{np} 51	29 ⁰ 12	2 ^{np} 48	0 ^{II} 31	8 ^X 46	4 ^X 28	23 ⁸ 5	21 ^{np} 55	24 ^X 33	23 ^X 51	29 ^{ml} 11	17 ^{as} 7								

Delta T = 10m48s Julian Calendar created from Swiss Ephemeris, Copyright Astrodienst AG [10.1.2003]

SWISS EPHEMERIS for the year 1229

SEPTEMBER 1229 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
S 1	23 8 30	15 ^h 14'22"	24 ^h 30'9"	13 ^h 43'	0 ^h 27'	3 ^h 26'	0 ^h 33'	8°R41	4°A29	23°R 5	21 ^h 58'	24°R30	23°A48	29 ^h 18'	17°R 5								
S 2	23 12 26	16°13'02"	6 ^h 57'	15°33'	1°41'	4° 5'	0°35'	8°A37	4°31'	23°R 4	22° 0'	24°A25	23°44'	29°24'	17°A 2								
M 3	23 16 23	17°11'43"	20° 8'	17°23'	2°56'	4°43'	0°37'	8°32'	4°32'	23° 4'	22° 2'	24°17'	23°41'	29°31'	17° 0'								
T 4	23 20 19	18°10'26"	3 ^h 43'	19°12'	4°10'	5°21'	0°39'	8°28'	4°34'	23° 3'	22° 4'	24° 6'	23°38'	29°38'	16°57'								
W 5	23 24 16	19° 9'11"	17°39'	20°59'	5°25'	6° 0'	0°40'	8°23'	4°35'	23° 3'	22° 7'	23°55'	23°35'	29°44'	16°55'								
T 6	23 28 12	20° 7'58"	1 ^h 53'	22°46'	6°39'	6°38'	0°41'	8°19'	4°37'	23° 2'	22° 9'	23°43'	23°32'	29°51'	16°52'								
F 7	23 32 9	21° 6'47"	16°19'	24°32'	7°54'	7°16'	0°42'	8°14'	4°38'	23° 2'	22°11'	23°32'	23°28'	29°57'	16°50'								
S 8	23 36 5	22° 5'38"	0 ^h 50'	26°17'	9° 8'	7°55'	0°43'	8°10'	4°40'	23° 1'	22°14'	23°23'	23°25'	0°A 4	16°48'								
S 9	23 40 2	23° 4'32"	15°19'	28° 2'	10°23'	8°33'	0°44'	8° 5'	4°42'	23° 1'	22°16'	23°17'	23°22'	0°11'	16°45'								
M10	23 43 59	24° 3'28"	29°43'	29°45'	11°38'	9°11'	0°45'	8° 1'	4°43'	23° 0'	22°18'	23°14'	23°19'	0°17'	16°43'								
T 11	23 47 55	25° 2'26"	13 ^h 57'	1 ^h 27'	12°52'	9°50'	0°45'	7°57'	4°45'	22°59'	22°20'	23°13'	23°16'	0°24'	16°41'								
W12	23 51 52	26° 1'27"	28° 0'	3° 9'	14° 7'	10°28'	0°45'	7°52'	4°47'	22°58'	22°23'	23°13'	23°13'	0°31'	16°39'								
T 13	23 55 48	27° 0'30"	11 ^h 53'	4°49'	15°22'	11° 6'	0°45'	7°48'	4°49'	22°58'	22°25'	23°12'	23° 9'	0°37'	16°37'								
F 14	23 59 45	27°59'35"	25°34'	6°29'	16°37'	11°45'	0°45'	7°44'	4°51'	22°57'	22°27'	23°10'	23° 6'	0°44'	16°35'								
S 15	0 3 41	28°58'43"	9 ^h 4'	8° 8'	17°51'	12°23'	0°44'	7°40'	4°53'	22°56'	22°30'	23° 6'	23° 3'	0°51'	16°33'								
S 16	0 7 38	29°57'53"	22°24'	9°46'	19° 6'	13° 1'	0°43'	7°36'	4°55'	22°55'	22°32'	22°58'	23° 0'	0°57'	16°31'								
M17	0 11 34	0 ^h 57'05"	5 ^h 33'	11°23'	20°21'	13°40'	0°43'	7°32'	4°57'	22°54'	22°34'	22°48'	22°57'	1° 4'	16°29'								
T 18	0 15 31	1°56'20"	18°30'	12°59'	21°36'	14°18'	0°41'	7°28'	4°59'	22°53'	22°36'	22°35'	22°54'	1°11'	16°27'								
W19	0 19 27	2°55'36"	1 ^h 15'	14°35'	22°51'	14°57'	0°40'	7°24'	5° 1'	22°52'	22°39'	22°22'	22°50'	1°17'	16°25'								
T 20	0 23 24	3°54'55"	13°47'	16°10'	24° 6'	15°35'	0°39'	7°20'	5° 3'	22°51'	22°41'	22° 9'	22°47'	1°24'	16°24'								
F 21	0 27 21	4°54'16"	26° 5'	17°44'	25°21'	16°14'	0°37'	7°16'	5° 5'	22°50'	22°43'	21°57'	22°44'	1°31'	16°22'								
S 22	0 31 17	5°53'38"	8 ^h 12'	19°18'	26°36'	16°52'	0°35'	7°12'	5° 7'	22°49'	22°45'	21°47'	22°41'	1°37'	16°20'								
S 23	0 35 14	6°53'03"	20° 8'	20°50'	27°51'	17°30'	0°33'	7° 8'	5°10'	22°48'	22°48'	21°40'	22°38'	1°44'	16°19'								
M24	0 39 10	7°52'30"	1 ^h 58'	22°22'	29° 6'	18° 9'	0°31'	7° 5'	5°12'	22°47'	22°50'	21°36'	22°34'	1°51'	16°17'								
T 25	0 43 7	8°51'58"	13°45'	23°54'	0 ^h 21'	18°47'	0°28'	7° 1'	5°15'	22°46'	22°52'	21°34'	22°31'	1°57'	16°16'								
W26	0 47 3	9°51'29"	25°33'	25°24'	1°36'	19°26'	0°25'	6°58'	5°17'	22°45'	22°54'	21°D34	22°28'	2° 4'	16°14'								
T 27	0 51 0	10°51'01"	7 ^h 38'	26°54'	2°51'	20° 4'	0°23'	6°54'	5°19'	22°44'	22°57'	21°R35	22°25'	2°11'	16°13'								
F 28	0 54 56	11°50'35"	19°35'	28°23'	4° 6'	20°43'	0°19'	6°51'	5°22'	22°43'	22°59'	21°34'	22°22'	2°17'	16°11'								
S 29	0 58 53	12°50'10"	2 ^h 1'	29°52'	5°21'	21°21'	0°16'	6°48'	5°24'	22°42'	23° 1'	21°33'	22°19'	2°24'	16°10'								
S 30	1 2 50	13 ^h 49'48"	14 ^h 49'	1 ^h 19'	6 ^h 36'	22 ^h 0'	0 ^h 13'	6 ^h 44'	5 ^h 27'	22 ^h 40'	23 ^h 3'	21 ^h 29'	22 ^h 15'	2 ^h 31'	16 ^h 9'								

Delta T = 10m48s Julian Calendar 1 Sept. 1229 == Greg. Calendar 8 Sept. 1229

OCTOBER 1229 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
M 1	1 6 46	14 ^h 49'27"	28 ^h 3'	2 ^h 46'	7 ^h 52'	22 ^h 38'	0°R 9	6°R41	5°A30	22°R39	23 ^h 5'	21°R22	22°A12	2°A37	16°R 8								
T 2	1 10 43	15°49'08"	11 ^h 45'	4°13'	9° 7'	23°17'	0 ^h II 5	6 ^h A38	5°32'	22 ^h 38'	23° 7'	21°A14	22° 9'	2°44'	16 ^h 7'								
W 3	1 14 39	16°48'51"	25°53'	5°38'	10°22'	23°55'	0° 1'	6°35'	5°35'	22°37'	23°10'	21° 4'	22° 6'	2°51'	16° 6'								
T 4	1 18 36	17°48'36"	10 ^h 25'	7° 3'	11°37'	24°34'	29 ^h 57'	6°32'	5°38'	22°35'	23°12'	20°53'	22° 3'	2°57'	16° 5'								
F 5	1 22 32	18°48'22"	25°13'	8°27'	12°52'	25°12'	29°53'	6°29'	5°40'	22°34'	23°14'	20°44'	21°59'	3° 4'	16° 4'								
S 6	1 26 29	19°48'11"	10 ^h 8'	9°50'	14° 8'	25°51'	29°48'	6°27'	5°43'	22°33'	23°16'	20°36'	21°56'	3°10'	16° 3'								
S 7	1 30 25	20°48'02"	25° 3'	11°12'	15°23'	26°30'	29°43'	6°24'	5°46'	22°31'	23°18'	20°31'	21°53'	3°17'	16° 2'								
M 8	1 34 22	21°47'55"	9 ^h II48	12°33'	16°38'	27° 8'	29°38'	6°22'	5°49'	22°30'	23°20'	20°29'	21°50'	3°24'	16° 1'								
T 9	1 38 19	22°47'51"	24°19'	13°53'	17°53'	27°47'	29°33'	6°19'	5°52'	22°28'	23°22'	20°D29	21°47'	3°30'	16° 1'								
W10	1 42 15	23°47'49"	8 ^h 33'	15°12'	19° 9'	28°25'	29°28'	6°17'	5°55'	22°27'	23°24'	20°29'	21°44'	3°37'	16° 0'								
T 11	1 46 12	24°47'48"	22°27'	16°30'	20°24'	29° 4'	29°23'	6°14'	5°58'	22°25'	23°26'	20°R30	21°40'	3°44'	16° 0'								
F 12	1 50 8	25°47'51"	6 ^h 3'	17°47'	21°39'	29°43'	29°17'	6°12'	6° 1'	22°24'	23°28'	20°29'	21°37'	3°50'	15°59'								
S 13	1 54 5	26°47'55"	19°22'	19° 2'	22°54'	0 ^h 21'	29°11'	6°10'	6° 4'	22°23'	23°30'	20°27'	21°34'	3°57'	15°59'								
S 14	1 58 1	27°48'01"	2 ^h 26'	20°15'	24°10'	1° 0'	29° 5'	6° 8'	6° 7'	22°21'	23°32'	20°22'	21°31'	4° 4'	15°58'								
M15	2 1 58	28°48'10"	15°16'	21°27'	25°25'	1°39'	28°59'	6° 6'	6°10'	22°20'	23°34'	20°15'	21°28'	4°10'	15°58'								
T 16	2 5 54	29°48'20"	27°54'	22°37'	26°40'	2°17'	28°53'	6° 4'	6°13'	22°18'	23°36'	20° 6'	21°25'	4°17'	15°58'								
W17	2 9 51	0 ^h 48'33"	10 ^h 20'	23°45'	27°56'	2°56'	28°47'	6° 3'	6°16'	22°16'	23°38'	19°57'	21°21'	4°24'	15°58'								
T 18	2 13 48	1°48'47"	22°36'	24°50'	29°11'	3°35'	28°40'	6° 1'	6°19'	22°15'	23°40'	19°47'	21°18'	4°30'	15°57'								
F 19	2 17 44	2°49'03"	4 ^h 43'	25°53'	0 ^h 27'	4°14'	28°34'	6° 0'	6°22'	22°13'	23°42'	19°39'	21°15'	4°37'	15°D57								
S 20	2 21 41	3°49'22"	16°41'	26°53'	1°42'	4°52'	28°27'	5°58'	6°25'	22°12'	23°44'	19°32'	21°12'	4°44'	15°57'								
S 21	2 25 37	4°49'41"	28°33'	27°49'	2°57'	5°31'	28°20'	5°57'	6°29'	22°10'	23°46'	19°27'	21° 9'	4°50'	15°58'								
M22	2 29 34	5°50'03"	10 ^h A20	28°42'	4°13'	6°10'	28°13'	5°56'	6°32'	22° 9'	23°47'	19°25'	21° 5'	4°57'	15°58'								
T 23	2 33 30	6°50'26"	22° 6'	29°31'	5°28'	6°49'	28° 6'	5°55'	6°35'	22° 7'	23°49'	19°D25	21° 2'	5° 4'	15°58'								
W24	2 37 27	7°50'51"	3 ^h 54'	0 ^h A14	6°44'	7°27'	27°59'	5°54'	6°39'	22° 5'	23°51'	19°26'	20°59'	5°10'	15°58'								
T 25	2 41 23	8°51'17"	15°48'	0°53'	7°59'	8° 6'	27°51'	5°53'	6°42'	22° 4'	23°53'	19°27'	20°56'	5°17'	15°59'								
F 26	2 45 20	9°51'45"	27°54'	1°25'	9°14'	8°45'	27°44'	5°52'	6°45'	22° 2'	23°55'	19°29'	20°53'	5°23'	15°59'								
S 27	2 49 17	10°52'14"	10 ^h 16'	1°51'	10°30'	9°24'	27°37'	5°51'	6°49'	22° 0'	23°56'	19°R29	20°50'	5°30'	15°59'								
S 28	2 53 13	11°52'44"	22°59'	2°10'	11°45'	10° 3'	27°29'	5°51'	6°52'	21°59'	23°58'	19°29'	20°46'	5°37'	16° 0'								
M29	2 57 10	12°53'15"	6 ^h A 7	2°21'	13° 1'	10°41'	27°21'	5°50'	6°55'	21°57'	24° 0'	19°26'	20°43'	5°43'	16° 0'								
T 30	3 1 6	13°53'48"	19°44'	2°R22	14°16'	11°20'	27°14'	5°50'	6°59'	21°55'	24° 1'	19°23'	20°40'	5°50'	16° 1'								
W31	3 5 3	14 ^h 54'22"	3 ^h 49'	2°A15	15 ^h 32'	11 ^h 59'	27 ^h 6'	5 ^h A50	7°A 2	21 ^h 54'	24 ^h 3'	19°A18	20°A37	5°A57	16 ^h 2'								

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SWISS EPHEMERIS for the year 1229

NOVEMBER 1229 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♅	♁	♁	♁	♁	♁	♁	♁
T 1	3 8 59	15♌54'58	18♍22	1°R57	16♌47	12♌38	26°R58	5°R49	7♌6	21°R52	24♍4	19°R12	20♌34	6♌3	16♌3
F 2	3 12 56	16°55'34	3♌17	1♌29	18° 2	13°17	26♌50	5°D49	7° 9	21♌50	24° 6	19♌8	20°31	6°10	16° 3
S 3	3 16 52	17°56'13	18°25	0°50	19°18	13°56	26°42	5♌49	7°13	21°49	24° 8	19° 4	20°27	6°17	16° 4
S 4	3 20 49	18°56'52	3♌38	0° 0	20°33	14°35	26°34	5°50	7°16	21°47	24° 9	19° 1	20°24	6°23	16° 5
M 5	3 24 46	19°57'34	18°44	29♌1	21°49	15°13	26°26	5°50	7°20	21°45	24°11	19°D 1	20°21	6°30	16° 6
T 6	3 28 42	20°58'16	3♌36	27°53	23° 4	15°52	26°18	5°50	7°23	21°43	24°12	19° 1	20°18	6°37	16° 7
W 7	3 32 39	21°59'01	18° 8	26°39	24°20	16°31	26°10	5°51	7°27	21°42	24°14	19° 3	20°15	6°43	16° 9
T 8	3 36 35	22°59'47	2♌16	25°19	25°35	17°10	26° 1	5°51	7°30	21°40	24°15	19° 4	20°11	6°50	16°10
F 9	3 40 32	24° 0'34	16° 0	23°57	26°51	17°49	25°53	5°52	7°34	21°38	24°16	19° 5	20° 8	6°57	16°11
S 10	3 44 28	25° 1'23	29°20	22°35	28° 6	18°28	25°45	5°53	7°38	21°37	24°18	19°R 5	20° 5	7° 3	16°12
S 11	3 48 25	26° 2'14	12♍18	21°16	29°21	19° 7	25°37	5°54	7°41	21°35	24°19	19° 4	20° 2	7°10	16°14
M12	3 52 21	27° 3'06	24°58	20° 3	0♌37	19°46	25°29	5°55	7°45	21°33	24°20	19° 2	19°59	7°17	16°15
T 13	3 56 18	28° 3'59	7♌24	18°58	1°52	20°25	25°21	5°56	7°48	21°32	24°22	18°59	19°56	7°23	16°17
W14	4 0 15	29° 4'54	19°36	18° 2	3° 8	21° 4	25°12	5°57	7°52	21°30	24°23	18°56	19°52	7°30	16°18
T 15	4 4 11	0♌5'50	1♌40	17°17	4°23	21°43	25° 4	5°59	7°56	21°28	24°24	18°53	19°49	7°36	16°20
F 16	4 8 8	1° 6'47	13°36	16°44	5°39	22°22	24°56	6° 0	7°59	21°27	24°25	18°50	19°46	7°43	16°22
S 17	4 12 4	2° 7'46	25°27	16°22	6°54	23° 1	24°48	6° 2	8° 3	21°25	24°26	18°48	19°43	7°50	16°23
S 18	4 16 1	3° 8'45	7♌15	16°11	8°10	23°40	24°40	6° 3	8° 7	21°23	24°27	18°46	19°40	7°56	16°25
M19	4 19 57	4° 9'46	19° 2	16°D11	9°25	24°19	24°32	6° 5	8°10	21°22	24°29	18°D46	19°37	8° 3	16°27
T 20	4 23 54	5°10'47	0♌50	16°21	10°41	24°59	24°24	6° 7	8°14	21°20	24°30	18°46	19°33	8°10	16°29
W21	4 27 50	6°11'49	12°42	16°40	11°56	25°38	24°16	6° 9	8°18	21°18	24°31	18°47	19°30	8°16	16°31
T 22	4 31 47	7°12'52	24°41	17° 7	13°12	26°17	24° 8	6°11	8°21	21°17	24°32	18°48	19°27	8°23	16°33
F 23	4 35 44	8°13'56	6♌50	17°43	14°27	26°56	24° 1	6°13	8°25	21°15	24°33	18°50	19°24	8°30	16°35
S 24	4 39 40	9°15'00	19°12	18°24	15°42	27°35	23°53	6°16	8°29	21°14	24°33	18°51	19°21	8°36	16°37
S 25	4 43 37	10°16'04	1♌52	19°12	16°58	28°14	23°46	6°18	8°32	21°12	24°34	18°51	19°17	8°43	16°39
M26	4 47 33	11°17'09	14°54	20° 5	18°13	28°53	23°38	6°20	8°36	21°10	24°35	18°R51	19°14	8°50	16°42
T 27	4 51 30	12°18'14	28°20	21° 3	19°29	29°32	23°31	6°23	8°39	21° 9	24°36	18°51	19°11	8°56	16°44
W28	4 55 26	13°19'20	12♍13	22° 4	20°44	0♌12	23°23	6°26	8°43	21° 7	24°37	18°50	19° 8	9° 3	16°46
T 29	4 59 23	14°20'26	26°32	23°10	22° 0	0°51	23°16	6°28	8°47	21° 6	24°38	18°50	19° 5	9°10	16°49
F 30	5 3 19	15♌21'32	11♌15	24♌18	23♌15	1♌30	23♌9	6♌31	8♌50	21♌4	24♍38	18♌49	19♌2	9♌16	16♌51

Delta T = 10m47s Julian Calendar 1 Nov. 1229 == Greg. Calendar 8 Nov. 1229

DECEMBER 1229 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♅	♁	♁	♁	♁	♁	♁	♁
S 1	5 7 16	16♌22'39	26♌17	25♌29	24♌30	2♌9	23°R 2	6♌34	8♌54	21°R 3	24♍39	18°R49	18♌58	9♌23	16♌54
S 2	5 11 13	17°23'46	11♌29	26°42	25°46	2°48	22♌55	6°37	8°58	21♌1	24°40	18°D49	18°55	9°29	16°56
M 3	5 15 9	18°24'54	26°43	27°58	27° 1	3°27	22°49	6°41	9° 1	21° 0	24°40	18°R49	18°52	9°36	16°59
T 4	5 19 6	19°26'02	11♌48	29°15	28°17	4° 7	22°42	6°44	9° 5	20°58	24°41	18♌49	18°49	9°43	17° 2
W 5	5 23 2	20°27'11	26°36	0♌34	29°32	4°46	22°36	6°47	9° 9	20°57	24°41	18°49	18°46	9°49	17° 4
T 6	5 26 59	21°28'20	11♌0	1°54	0♌47	5°25	22°30	6°51	9°12	20°55	24°42	18°49	18°43	9°56	17° 7
F 7	5 30 55	22°29'30	24°58	3°16	2° 3	6° 4	22°29	6°54	9°16	20°54	24°42	18°48	18°39	10° 3	17°10
S 8	5 34 52	23°30'40	8♍27	4°39	3°18	6°44	22°17	6°58	9°19	20°53	24°43	18°48	18°36	10° 9	17°13
S 9	5 38 48	24°31'51	21°31	6° 2	4°33	7°23	22°12	7° 2	9°23	20°51	24°43	18°D48	18°33	10°16	17°15
M10	5 42 45	25°33'02	4♌11	7°27	5°49	8° 2	22° 6	7° 6	9°26	20°50	24°44	18°48	18°30	10°23	17°18
T 11	5 46 42	26°34'13	16°33	8°52	7° 4	8°41	22° 0	7° 9	9°30	20°49	24°44	18°48	18°27	10°29	17°21
W12	5 50 38	27°35'25	28°39	10°19	8°20	9°21	21°55	7°13	9°34	20°47	24°44	18°49	18°23	10°36	17°24
T 13	5 54 35	28°36'38	10♌36	11°45	9°35	10° 0	21°50	7°18	9°37	20°46	24°45	18°50	18°20	10°43	17°27
F 14	5 58 31	29°37'50	22°26	13°13	10°50	10°39	21°45	7°22	9°41	20°45	24°45	18°51	18°17	10°49	17°31
S 15	6 2 28	0♌39'03	4♌12	14°41	12° 6	11°19	21°40	7°26	9°44	20°44	24°45	18°52	18°14	10°56	17°34
S 16	6 6 24	1°40'16	15°59	16°10	13°21	11°58	21°35	7°30	9°48	20°42	24°45	18°R53	18°11	11° 3	17°37
M17	6 10 21	2°41'29	27°49	17°39	14°36	12°37	21°31	7°35	9°51	20°41	24°45	18°52	18° 8	11° 9	17°40
T 18	6 14 17	3°42'42	9♌44	19° 8	15°52	13°17	21°27	7°39	9°54	20°40	24°46	18°51	18° 4	11°16	17°43
W19	6 18 14	4°43'54	21°45	20°38	17° 7	13°56	21°22	7°44	9°58	20°39	24°46	18°50	18° 1	11°22	17°47
T 20	6 22 11	5°45'07	3♌54	22° 9	18°22	14°36	21°19	7°49	10° 1	20°38	24°R46	18°47	17°58	11°29	17°50
F 21	6 26 7	6°46'19	16°14	23°40	19°37	15°15	21°15	7°53	10° 5	20°37	24°46	18°44	17°55	11°36	17°53
S 22	6 30 4	7°47'30	28°46	25°11	20°53	15°54	21°11	7°58	10° 8	20°36	24°46	18°41	17°52	11°42	17°57
S 23	6 34 0	8°48'41	11♌33	26°43	22° 8	16°34	21° 8	8° 3	10°11	20°35	24°46	18°39	17°49	11°49	18° 0
M24	6 37 57	9°49'51	24°35	28°16	23°23	17°13	21° 5	8° 8	10°15	20°34	24°45	18°37	17°45	11°56	18° 4
T 25	6 41 53	10°51'01	7♍56	29°49	24°38	17°52	21° 2	8°13	10°18	20°33	24°45	18°D36	17°42	12° 2	18° 7
W26	6 45 50	11°52'10	21°37	1♌22	25°54	18°32	20°59	8°18	10°21	20°32	24°45	18°36	17°39	12° 9	18°11
T 27	6 49 46	12°53'18	5♌39	2°56	27° 9	19°11	20°57	8°24	10°24	20°31	24°45	18°37	17°36	12°16	18°14
F 28	6 53 43	13°54'26	20° 1	4°30	28°24	19°51	20°54	8°29	10°28	20°30	24°45	18°39	17°33	12°22	18°18
S 29	6 57 40	14°55'32	4♌42	6° 5	29°39	20°30	20°52	8°34	10°31	20°29	24°44	18°40	17°29	12°29	18°22
S 30	7 1 36	15°56'38	19°36	7°40	0♌54	21° 9	20°50	8°40	10°34	20°28	24°44	18°R41	17°26	12°36	18°25
M31	7 5 33	16♌57'44	4♌37	9♌16	2♌10	21♌49	20♌48	8♌45	10♌37	20♌28	24♍44	18♌40	17♌23	12♌42	18♌29

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