

SWISS EPHEMERIS for the year 1170

JANUARY 1170 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	
T 1	7 7 39	17°32'31	29°15	1°19	4°43	15°51	25°51	25°43	12°50	9°16	18°27	6°24	7°50	1°19	6°11									
F 2	7 11 35	18°33'35	13°11	2°49	5°25	16°35	25°55	25°50	12°52	9°18	18°26	6°17	7°47	1°26	6°17									
S 3	7 15 32	19°34'38	27°11	4°20	6°7	17°18	25°59	25°56	12°55	9°20	18°25	6°9	7°43	1°32	6°23									
S 4	7 19 28	20°35'40	11°54	5°51	6°51	18°2	26°3	26°2	12°57	9°23	18°24	6°1	7°40	1°39	6°29									
M 5	7 23 25	21°36'42	26°35	7°22	7°36	18°46	26°7	26°9	12°59	9°25	18°23	5°55	7°37	1°45	6°35									
T 6	7 27 21	22°37'42	11°32	8°55	8°22	19°30	26°12	26°15	13°2	9°27	18°22	5°50	7°34	1°52	6°41									
W 7	7 31 18	23°38'41	26°28	10°28	9°8	20°14	26°16	26°22	13°4	9°29	18°21	5°48	7°31	1°59	6°47									
T 8	7 35 15	24°39'40	11°15	12°1	9°56	20°58	26°21	26°29	13°7	9°31	18°20	5°D48	7°28	2°5	6°53									
F 9	7 39 11	25°40'38	25°47	13°35	10°45	21°42	26°26	26°35	13°9	9°34	18°20	5°49	7°24	2°12	6°58									
S 10	7 43 8	26°41'35	10°2	15°10	11°34	22°27	26°32	26°42	13°12	9°36	18°19	5°50	7°21	2°19	7°4									
S 11	7 47 4	27°42'32	23°57	16°46	12°24	23°11	26°37	26°49	13°15	9°38	18°18	5°R51	7°18	2°25	7°9									
M12	7 51 1	28°43'28	7°13	18°22	13°15	23°55	26°43	26°56	13°17	9°40	18°17	5°51	7°15	2°32	7°15									
T 13	7 54 57	29°44'23	20°50	19°59	14°7	24°39	26°48	27°2	13°20	9°42	18°16	5°49	7°12	2°39	7°20									
W14	7 58 54	0°45'17	3°45	21°37	14°59	25°24	26°54	27°9	13°23	9°45	18°15	5°45	7°9	2°45	7°26									
T 15	8 2 50	1°46'11	16°38	23°15	15°52	26°8	27°1	27°16	13°25	9°47	18°14	5°40	7°5	2°52	7°31									
F 16	8 6 47	2°47'03	23°12	24°54	16°46	26°52	27°7	27°23	13°28	9°49	18°13	5°35	7°2	2°59	7°36									
S 17	8 10 44	3°47'55	11°35	26°34	17°40	27°37	27°13	27°30	13°31	9°51	18°13	5°28	6°59	3°5	7°41									
S 18	8 14 40	4°48'45	23°47	28°15	18°35	28°21	27°20	27°37	13°34	9°53	18°12	5°23	6°56	3°12	7°46									
M19	8 18 37	5°49'34	5°50	29°56	19°31	29°5	27°27	27°44	13°37	9°55	18°11	5°19	6°53	3°19	7°51									
T 20	8 22 33	6°50'21	17°46	18°38	20°27	29°50	27°34	27°51	13°40	9°57	18°10	5°16	6°49	3°25	7°56									
W21	8 26 30	7°51'08	29°36	3°21	21°23	0°34	27°41	27°58	13°43	9°59	18°10	5°D14	6°46	3°32	8°1									
T 22	8 30 26	8°51'52	11°23	5°5	22°20	1°19	27°48	28°5	13°45	10°1	18°9	5°14	6°43	3°38	8°6									
F 23	8 34 23	9°52'36	23°9	6°50	23°18	2°4	27°55	28°12	13°48	10°3	18°8	5°15	6°40	3°45	8°11									
S 24	8 38 19	10°53'17	4°58	8°35	24°16	2°48	28°3	28°19	13°51	10°6	18°8	5°17	6°37	3°52	8°15									
S 25	8 42 16	11°53'57	16°55	10°21	25°15	3°33	28°11	28°27	13°54	10°8	18°7	5°19	6°34	3°58	8°20									
M26	8 46 13	12°54'35	29°3	12°8	26°14	4°17	28°19	28°34	13°57	10°10	18°6	5°20	6°30	4°5	8°24									
T 27	8 50 9	13°55'12	11°27	13°56	27°13	5°2	28°27	28°41	14°1	10°12	18°6	5°R21	6°27	4°12	8°28									
W28	8 54 6	14°55'46	24°13	15°45	28°13	5°47	28°35	28°48	14°4	10°13	18°5	5°21	6°24	4°18	8°33									
T 29	8 58 2	15°56'19	7°12	17°34	29°13	6°32	28°43	28°56	14°7	10°15	18°5	5°19	6°21	4°25	8°37									
F 30	9 1 59	16°56'50	21°0	19°24	0°13	7°16	28°51	29°3	14°10	10°17	18°4	5°18	6°18	4°32	8°41									
S 31	9 5 55	17°57'20	5°2	21°15	1°14	8°1	29°0	29°10	14°13	10°19	18°3	5°15	6°15	4°38	8°45									

Delta T = 13m45s

Julian Calendar 1 Jan. 1170 == Greg. Calendar 8 Jan. 1170

FEBRUARY 1170 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	
S 1	9 9 52	18°57'47	19°37	23°7	2°16	8°46	29°9	29°17	14°16	10°21	18°R 3	5°R13	6°11	4°45	8°49									
M 2	9 13 49	19°58'13	4°11	24°59	3°17	9°31	29°18	29°25	14°19	10°23	18°II 2	5°H11	6°8	4°52	8°53									
T 3	9 17 45	20°58'36	19°38	26°52	4°19	10°16	29°27	29°32	14°23	10°25	18°2	5°10	6°5	4°58	8°57									
W 4	9 21 42	21°58'58	4°11	28°45	5°22	11°1	29°36	29°39	14°26	10°27	18°1	5°D 9	6°2	5°5	9°1									
T 5	9 25 38	22°59'19	19°58	0°38	6°24	11°45	29°45	29°47	14°29	10°28	18°1	5°10	5°59	5°11	9°4									
F 6	9 29 35	23°59'37	4°52	2°31	7°27	12°30	29°54	29°54	14°32	10°30	18°1	5°11	5°55	5°18	9°8									
S 7	9 33 31	24°59'54	19°26	4°24	8°30	13°15	0°4	0°1	14°36	10°32	18°0	5°11	5°52	5°25	9°11									
S 8	9 37 28	26°0'10	3°13	6°17	9°34	14°0	0°13	0°9	14°39	10°34	18°0	5°12	5°49	5°31	9°15									
M 9	9 41 24	27°0'24	17°21	8°9	10°38	14°45	0°23	0°16	14°42	10°35	18°0	5°13	5°46	5°38	9°18									
T 10	9 45 21	28°0'37	0°41	10°0	11°42	15°31	0°33	0°23	14°45	10°37	17°59	5°R13	5°43	5°45	9°21									
W11	9 49 18	29°0'48	13°39	11°50	12°46	16°16	0°43	0°31	14°49	10°39	17°59	5°13	5°40	5°51	9°24									
T 12	9 53 14	0°58	26°17	13°38	13°51	17°1	0°53	0°38	14°52	10°41	17°59	5°12	5°36	5°58	9°27									
F 13	9 57 11	1°1'06	8°40	15°24	14°55	17°46	1°3	0°46	14°56	10°42	17°58	5°12	5°33	6°5	9°30									
S 14	10 1 7	2°1'12	20°49	17°7	16°0	18°31	1°13	0°53	14°59	10°44	17°58	5°11	5°30	6°11	9°33									
S 15	10 5 4	3°1'17	2°49	18°47	17°6	19°16	1°24	1°0	15°2	10°45	17°58	5°11	5°27	6°18	9°36									
M16	10 9 0	4°1'20	14°43	20°24	18°11	20°2	1°34	1°8	15°6	10°47	17°58	5°11	5°24	6°25	9°38									
T 17	10 12 57	5°1'21	26°32	21°56	19°17	20°47	1°45	1°15	15°9	10°48	17°58	5°D11	5°21	6°31	9°41									
W18	10 16 53	6°1'20	8°19	23°24	20°22	21°32	1°56	1°22	15°12	10°50	17°57	5°R11	5°17	6°38	9°43									
T 19	10 20 50	7°1'17	20°6	24°46	21°28	22°17	2°6	1°30	15°16	10°51	17°57	5°10	5°14	6°44	9°46									
F 20	10 24 46	8°1'12	1°56	26°3	22°35	23°3	2°17	1°37	15°19	10°53	17°57	5°10	5°11	6°51	9°48									
S 21	10 28 43	9°1'05	13°51	27°13	23°41	23°48	2°28	1°45	15°23	10°54	17°57	5°10	5°8	6°58	9°50									
S 22	10 32 40	10°0'55	25°53	28°16	24°48	24°33	2°39	1°52	15°26	10°56	17°57	5°9	5°5	7°4	9°52									
M23	10 36 36	11°0'44	8°6	29°13	25°54	25°19	2°51	1°59	15°30	10°57	17°57	5°9	5°1	7°11	9°54									
T 24	10 40 33	12°0'30	20°32	0°1	27°1	26°4	3°2	2°7	15°33	10°58	17°D57	5°8	4°58	7°18	9°56									
W25	10 44 29	13°0'14	3°11	0°42	28°8	26°49	3°13	2°14	15°36	11°0	17°57	5°7	4°55	7°24	9°58									
T 26	10 48 26	13°59'56	16°20	1°15	29°15	27°35	3°25	2°21	15°40	11°1	17°57	5°D 7	4°52	7°31	9°59									
F 27	10 52 22	14°59'36	29°47	1°40	0°23	28°20	3°36	2°28	15°43	11°2	17°57	5°8	4°49	7°38	10°1									
S 28	10 56 19	15°59'13	13°40	1°56	1°30	29°3	3°48	2°36	15°47	11°3	17°II 57	5°H 8	4°46	7°44	10°2									

Delta T = 13m44s

SWISS EPHEMERIS for the year 1170

MARCH 1170 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
S 1	11 0 15	16°58'48	27°58'58	2°R 4	2°38	29°51	4°0	2°43	15°50	11°5	17°57	5°9	4°42	7°51	10°7 4
M 2	11 4 12	17°58'21	12°58'39	2°Y 4	3°45	0°37	4°12	2°50	15°54	11°6	17°58	5°10	4°39	7°58	10°5
T 3	11 8 9	18°57'51	27°38	1°57	4°53	1°22	4°24	2°57	15°57	11°7	17°58	5°R11	4°36	8°4	10°6
W 4	11 12 5	19°57'19	12°49	1°41	6°1	2°8	4°36	3°5	16°0	11°8	17°58	5°11	4°33	8°11	10°7
T 5	11 16 2	20°56'45	28°1	1°18	7°9	2°53	4°48	3°12	16°4	11°9	17°58	5°10	4°30	8°18	10°8
F 6	11 19 58	21°56'08	13°5	0°49	8°17	3°39	5°0	3°19	16°7	11°10	17°58	5°8	4°26	8°24	10°9
S 7	11 23 55	22°55'30	27°53	0°14	9°26	4°24	5°12	3°26	16°11	11°11	17°59	5°6	4°23	8°31	10°10
S 8	11 27 51	23°54'50	12°18	29°35	10°34	5°10	5°24	3°33	16°14	11°12	17°59	5°4	4°20	8°37	10°11
M 9	11 31 48	24°54'09	26°15	28°51	11°43	5°55	5°36	3°40	16°17	11°13	17°59	5°1	4°17	8°44	10°11
T 10	11 35 44	25°53'25	9°44	28°3	12°51	6°41	5°49	3°47	16°21	11°14	18°0	5°0	4°14	8°51	10°12
W11	11 39 41	26°52'40	22°46	27°14	14°0	7°26	6°1	3°54	16°24	11°15	18°0	4°D59	4°11	8°57	10°12
T 12	11 43 38	27°51'53	5°25	26°24	15°9	8°12	6°14	4°1	16°28	11°16	18°0	4°59	4°7	9°4	10°12
F 13	11 47 34	28°51'04	17°44	25°34	16°18	8°58	6°27	4°8	16°31	11°17	18°1	5°0	4°4	9°11	10°13
S 14	11 51 31	29°50'13	29°49	24°44	17°27	9°43	6°39	4°15	16°34	11°17	18°1	5°2	4°1	9°17	10°R13
S 15	11 55 27	0°Y49'20	11°43	23°56	18°36	10°29	6°52	4°22	16°38	11°18	18°1	5°3	3°58	9°24	10°13
M16	11 59 24	1°48'26	23°31	23°12	19°45	11°14	7°5	4°29	16°41	11°19	18°2	5°5	3°55	9°31	10°13
T 17	12 3 20	2°47'29	5°17	22°30	20°55	12°0	7°18	4°36	16°44	11°20	18°2	5°R 5	3°52	9°37	10°12
W18	12 7 17	3°46'31	17°5	21°52	22°4	12°46	7°31	4°42	16°48	11°20	18°3	5°5	3°48	9°44	10°12
T 19	12 11 13	4°45'30	28°55	21°19	23°14	13°31	7°44	4°49	16°51	11°21	18°3	5°2	3°45	9°51	10°12
F 20	12 15 10	5°44'28	10°Y52	20°51	24°23	14°17	7°57	4°56	16°54	11°21	18°4	4°59	3°42	9°57	10°11
S 21	12 19 7	6°43'23	22°57	20°28	25°33	15°3	8°10	5°3	16°58	11°22	18°4	4°54	3°39	10°4	10°11
S 22	12 23 3	7°42'17	5°10	20°10	26°43	15°48	8°23	5°9	17°1	11°23	18°5	4°48	3°36	10°10	10°10
M23	12 27 0	8°41'08	17°35	19°57	27°52	16°34	8°36	5°16	17°4	11°23	18°6	4°42	3°32	10°17	10°9
T 24	12 30 56	9°39'57	0°II12	19°50	29°2	17°20	8°49	5°22	17°7	11°24	18°6	4°37	3°29	10°24	10°8
W25	12 34 53	10°38'44	13°2	19°D48	0°X12	18°5	9°2	5°29	17°11	11°24	18°7	4°32	3°26	10°30	10°7
T 26	12 38 49	11°37'29	26°9	19°51	1°22	18°51	9°16	5°35	17°14	11°24	18°8	4°30	3°23	10°37	10°6
F 27	12 42 46	12°36'11	9°33	20°0	2°32	19°36	9°29	5°42	17°17	11°25	18°8	4°D29	3°20	10°44	10°5
S 28	12 46 42	13°34'51	23°16	20°13	3°42	20°22	9°43	5°48	17°20	11°25	18°9	4°29	3°17	10°50	10°4
S 29	12 50 39	14°33'29	7°19	20°31	4°53	21°8	9°56	5°55	17°23	11°25	18°10	4°30	3°13	10°57	10°2
M30	12 54 36	15°32'04	21°42	20°54	6°3	21°53	10°9	6°1	17°27	11°26	18°10	4°31	3°10	11°4	10°1
T 31	12 58 32	16°Y30'37	6°12	21°X22	7°13	22°39	10°23	6°X 7	17°X30	11°26	18°11	4°R32	3°X 7	11°X10	9°X59

Delta T = 13m44s Julian Calendar 1 March 1170 == Greg. Calendar 8 March 1170

APRIL 1170 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
W 1	13 2 29	17°Y29'08	21°15	21°X53	8°X23	23°24	10°37	6°X13	17°X33	11°26	18°12	4°R31	3°X 4	11°X17	9°R58
T 2	13 6 25	18°27'37	6°15	22°29	9°34	24°10	10°50	6°19	17°36	11°26	18°13	4°X28	3°1	11°24	9°X56
F 3	13 10 22	19°26'04	21°12	23°8	10°44	24°56	11°4	6°25	17°39	11°26	18°14	4°23	2°58	11°30	9°54
S 4	13 14 18	20°24'29	5°18	23°52	11°55	25°41	11°17	6°31	17°42	11°27	18°14	4°16	2°54	11°37	9°52
S 5	13 18 15	21°22'52	20°25	24°39	13°5	26°27	11°31	6°37	17°45	11°27	18°15	4°9	2°51	11°44	9°51
M 6	13 22 11	22°21'14	4°28	25°29	14°16	27°12	11°45	6°43	17°48	11°27	18°16	4°1	2°48	11°50	9°48
T 7	13 26 8	23°19'34	18°3	26°22	15°27	27°58	11°59	6°49	17°51	11°R27	18°17	3°55	2°45	11°57	9°46
W 8	13 30 5	24°17'52	1°11	27°19	16°37	28°43	12°12	6°55	17°54	11°27	18°18	3°51	2°42	12°3	9°44
T 9	13 34 1	25°16'09	13°54	28°19	17°48	29°29	12°26	7°1	17°57	11°27	18°19	3°48	2°38	12°10	9°42
F 10	13 37 58	26°14'24	26°15	29°21	18°59	0°X15	12°40	7°7	18°0	11°27	18°20	3°D47	2°35	12°17	9°39
S 11	13 41 54	27°12'37	8°20	0°Y26	20°10	1°0	12°54	7°12	18°2	11°26	18°21	3°48	2°32	12°23	9°37
S 12	13 45 51	28°10'50	20°14	1°34	21°21	1°46	13°8	7°18	18°5	11°26	18°22	3°49	2°29	12°30	9°35
M13	13 49 47	29°9'00	2°X 1	2°44	22°32	2°31	13°22	7°23	18°8	11°26	18°23	3°R50	2°26	12°37	9°32
T 14	13 53 44	0°X 7'09	13°48	3°57	23°42	3°17	13°36	7°29	18°11	11°26	18°24	3°49	2°23	12°43	9°29
W15	13 57 40	1°5'16	25°37	5°13	24°54	4°2	13°50	7°34	18°14	11°26	18°25	3°47	2°19	12°50	9°26
T 16	14 1 37	2°3'22	7°Y34	6°30	26°5	4°47	14°3	7°39	18°16	11°25	18°26	3°42	2°16	12°57	9°24
F 17	14 5 34	3°1'26	19°39	7°50	27°16	5°33	14°17	7°45	18°19	11°25	18°27	3°34	2°13	13°3	9°21
S 18	14 9 30	3°59'29	1°X56	9°13	28°27	6°18	14°31	7°50	18°22	11°25	18°28	3°25	2°10	13°10	9°18
S 19	14 13 27	4°57'30	14°26	10°37	29°38	7°3	14°45	7°55	18°24	11°24	18°29	3°14	2°7	13°17	9°15
M20	14 17 23	5°55'29	27°8	12°4	0°Y49	7°49	15°0	8°0	18°27	11°24	18°30	3°3	2°3	13°23	9°12
T 21	14 21 20	6°53'27	10°II 2	13°32	2°0	8°34	15°14	8°5	18°29	11°23	18°31	2°53	2°0	13°30	9°8
W22	14 25 16	7°51'23	23°9	15°3	3°12	9°19	15°28	8°10	18°32	11°23	18°32	2°44	1°57	13°37	9°5
T 23	14 29 13	8°49'18	6°28	16°36	4°23	10°5	15°42	8°15	18°34	11°22	18°34	2°37	1°54	13°43	9°2
F 24	14 33 9	9°47'10	19°59	18°11	5°34	10°50	15°56	8°20	18°37	11°22	18°35	2°33	1°51	13°50	8°59
S 25	14 37 6	10°45'01	3°14	19°48	6°46	11°35	16°10	8°24	18°39	11°21	18°36	2°32	1°48	13°56	8°55
S 26	14 41 3	11°42'50	17°39	21°28	7°57	12°20	16°24	8°29	18°42	11°21	18°37	2°D32	1°44	14°3	8°52
M27	14 44 59	12°40'37	1°14	23°9	9°9	13°5	16°38	8°33	18°44	11°20	18°38	2°R32	1°41	14°10	8°48
T 28	14 48 56	13°38'22	16°9	24°52	10°20	13°50	16°52	8°38	18°46	11°19	18°39	2°31	1°38	14°16	8°45
W29	14 52 52	14°36'05	0°14	26°38	11°31	14°35	17°6	8°42	18°48	11°19	18°41	2°29	1°35	14°23	8°41
T 30	14 56 49	15°33'47	15°16	28°Y25	12°Y43	15°X20	17°X20	8°X47	18°X51	11°18	18°42	2°X24	1°X32	14°X30	8°X37

Delta T = 13m44s Julian Calendar created from Swiss Ephemeris, Copyright Astrodiest AG [10.1.2003]

SWISS EPHEMERIS for the year 1170

MAY 1170 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	
F 1	15 0 45	16♁31'27	29♄53	0♁15	13♃54	16♁5	17♁34	8♁51	18♁53	11°R17	18♁43	2°R16	1♁29	14♁36	8°R34									
S 2	15 4 42	17°29'06	14♁22	2°7	15°6	16°50	17°48	8°55	18°55	11♁17	18°44	2♁6	1°25	14°43	8°30									
S 3	15 8 38	18°26'44	28°37	4°0	16°18	17°35	18°3	8°59	18°57	11°16	18°46	1°55	1°22	14°50	8°26									
M 4	15 12 35	19°24'21	12♁32	5°56	17°29	18°20	18°17	9°3	18°59	11°15	18°47	1°44	1°19	14°56	8°22									
T 5	15 16 32	20°21'56	26°5	7°54	18°41	19°5	18°31	9°7	19°1	11°14	18°48	1°34	1°16	15°3	8°19									
W 6	15 20 28	21°19'30	9♁12	9°53	19°53	19°50	18°45	9°11	19°3	11°13	18°50	1°26	1°13	15°10	8°15									
T 7	15 24 25	22°17'04	21°56	11°55	21°4	20°35	18°59	9°15	19°5	11°12	18°51	1°20	1°9	15°16	8°11									
F 8	15 28 21	23°14'36	4♁19	13°58	22°16	21°19	19°13	9°18	19°7	11°11	18°52	1°17	1°6	15°23	8°7									
S 9	15 32 18	24°12'07	16°25	16°3	23°28	22°4	19°27	9°22	19°9	11°10	18°54	1°16	1°3	15°30	8°3									
S 10	15 36 14	25°9'38	28°20	18°10	24°40	22°49	19°41	9°25	19°11	11°10	18°55	1°16	1°0	15°36	7°59									
M11	15 40 11	26°7'07	10♁9	20°18	25°51	23°33	19°55	9°29	19°13	11°9	18°56	1°16	0°57	15°43	7°55									
T 12	15 44 7	27°4'36	21°57	22°28	27°3	24°18	20°9	9°32	19°15	11°7	18°58	1°15	0°54	15°50	7°51									
W13	15 48 4	28°2'04	3♃50	24°38	28°15	25°2	20°23	9°35	19°16	11°6	18°59	1°11	0°50	15°56	7°46									
T 14	15 52 1	28°59'31	15°52	26°49	29°27	25°47	20°37	9°38	19°18	11°5	19°0	1°6	0°47	16°3	7°42									
F 15	15 55 57	29°56'57	28°6	29°1	0♁39	26°31	20°51	9°42	19°20	11°4	19°2	0°57	0°44	16°9	7°38									
S 16	15 59 54	0♁54'23	10♁35	1♁13	1°51	27°16	21°5	9°44	19°21	11°3	19°3	0°46	0°41	16°16	7°34									
S 17	16 3 50	1°51'47	23°21	3°25	3°3	28°0	21°19	9°47	19°23	11°2	19°4	0°34	0°38	16°23	7°30									
M18	16 7 47	2°49'11	6♁22	5°36	4°15	28°44	21°33	9°50	19°24	11°1	19°6	0°21	0°35	16°29	7°26									
T 19	16 11 43	3°46'35	19°39	7°48	5°27	29°28	21°47	9°53	19°26	11°0	19°7	0°9	0°31	16°36	7°22									
W20	16 15 40	4°43'57	3♁8	9°58	6°39	0♃12	22°1	9°55	19°27	10°58	19°9	29°59	0°28	16°43	7°17									
T 21	16 19 36	5°41'18	16°48	12°7	7°51	0°57	22°15	9°58	19°28	10°57	19°10	29°51	0°25	16°49	7°13									
F 22	16 23 33	6°38'38	0♁36	14°16	9°3	1°41	22°29	10°0	19°30	10°56	19°11	29°46	0°22	16°56	7°9									
S 23	16 27 30	7°35'57	14°31	16°22	10°16	2°24	22°42	10°3	19°31	10°55	19°13	29°44	0°19	17°3	7°5									
S 24	16 31 26	8°33'16	28°32	18°27	11°28	3°8	22°56	10°5	19°32	10°53	19°14	29°D44	0°15	17°9	7°1									
M25	16 35 23	9°30'33	12♁38	20°30	12°40	3°52	23°10	10°7	19°33	10°52	19°16	29°R44	0°12	17°16	6°56									
T 26	16 39 19	10°27'49	26°48	22°32	13°52	4°36	23°24	10°9	19°35	10°51	19°17	29°43	0°9	17°23	6°52									
W27	16 43 16	11°25'04	11♁0	24°31	15°4	5°20	23°37	10°11	19°36	10°49	19°19	29°40	0°6	17°29	6°48									
T 28	16 47 12	12°22'18	25°14	26°28	16°17	6°3	23°51	10°13	19°37	10°48	19°20	29°35	0°3	17°36	6°44									
F 29	16 51 9	13°19'32	9♁25	28°23	17°29	6°47	24°5	10°15	19°38	10°47	19°21	29°28	0°0	17°43	6°40									
S 30	16 55 5	14°16'45	23°28	0♁16	18°41	7°30	24°18	10°16	19°39	10°45	19°23	29°18	29°56	17°49	6°36									
S 31	16 59 2	15♁13'57	7♁21	2♁7	19♁53	8♃14	24♁32	10♁18	19♁40	10♁44	19♁24	29°7	29°53	17♁56	6♁31									

Delta T = 13m44s Julian Calendar 1 May 1170 == Greg. Calendar 8 May 1170

JUNE 1170 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	
M 1	17 2 59	16♁11'09	20♁58	3♁55	21♁6	8♃57	24♁46	10♁19	19♁40	10°R42	19♁26	28°R56	29°50	18♁3	6°R27									
T 2	17 6 55	17°8'20	4♁16	5°41	22°18	9°40	24°59	10°21	19°41	10♁41	19°27	28°45	29°47	18°9	6°23									
W 3	17 10 52	18°5'31	17°14	7°25	23°30	10°23	25°13	10°22	19°42	10°40	19°29	28°37	29°44	18°16	6°19									
T 4	17 14 48	19°2'42	29°53	9°6	24°43	11°6	25°26	10°23	19°43	10°38	19°30	28°31	29°41	18°23	6°15									
F 5	17 18 45	19°59'53	12°13	10°45	25°55	11°50	25°39	10°24	19°43	10°37	19°32	28°28	29°37	18°29	6°11									
S 6	17 22 41	20°57'04	24°19	12°22	27°8	12°32	25°53	10°25	19°44	10°35	19°33	28°D27	29°34	18°36	6°7									
S 7	17 26 38	21°54'14	6♁14	13°56	28°20	13°15	26°6	10°26	19°45	10°34	19°35	28°27	29°31	18°42	6°3									
M 8	17 30 34	22°51'24	18°4	15°28	29°33	13°58	26°19	10°27	19°45	10°32	19°36	28°R28	29°28	18°49	5°59									
T 9	17 34 31	23°48'35	29°53	16°57	0♁45	14°41	26°33	10°28	19°46	10°31	19°37	28°27	29°25	18°56	5°56									
W10	17 38 28	24°45'46	11♃48	18°24	1°58	15°24	26°46	10°28	19°46	10°29	19°39	28°26	29°21	19°2	5°52									
T 11	17 42 24	25°42'56	23°53	19°49	3°11	16°6	26°59	10°29	19°46	10°27	19°40	28°22	29°18	19°9	5°48									
F 12	17 46 21	26°40'07	6♁13	21°11	4°23	16°49	27°12	10°29	19°47	10°26	19°42	28°16	29°15	19°16	5°44									
S 13	17 50 17	27°37'18	18°50	22°31	5°36	17°31	27°25	10°29	19°47	10°24	19°43	28°9	29°12	19°22	5°40									
S 14	17 54 14	28°34'29	1♁48	23°48	6°49	18°13	27°38	10°29	19°47	10°23	19°45	27°59	29°9	19°29	5°37									
M15	17 58 10	29°31'41	15°5	25°3	8°1	18°55	27°51	10°R29	19°48	10°21	19°46	27°49	29°6	19°36	5°33									
T 16	18 2 7	0♁28'52	28°42	26°15	9°14	19°38	28°4	10°29	19°48	10°20	19°48	27°40	29°2	19°42	5°30									
W17	18 6 4	1°26'04	12♁34	27°24	10°27	20°20	28°17	10°29	19°48	10°18	19°49	27°32	28°59	19°49	5°26									
T 18	18 10 0	2°23'16	26°39	28°31	11°40	21°1	28°30	10°29	19°R48	10°16	19°50	27°27	28°56	19°56	5°23									
F 19	18 13 57	3°20'27	10♁51	29°34	12°53	21°43	28°42	10°29	19°48	10°15	19°52	27°23	28°53	20°2	5°19									
S 20	18 17 53	4°17'39	25°7	0♁35	14°6	22°25	28°55	10°28	19°48	10°13	19°53	27°D22	28°50	20°9	5°16									
S 21	18 21 50	5°14'50																						

SWISS EPHEMERIS for the year 1170

JULY 1170 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
W 1	19 1 15	14 ⁵ 46'47	25 ³ 37	7 ⁰ 51	27 ^{II} 29	29 ^V 56	1 ^{II} 10	10 ^R 17	19 ^R 44	9 ^R 55	20 ^{II} 8	26 ^R 43	28 ^{III} 15	21 ^X 22	4 ^R 43								
T 2	19 5 12	15 ⁴ 44'01	8 ^{III} 4	8 [°] 6	28 [°] 42	0 ^{III} 36	1 [°] 22	10 ^X 15	19 ^X 43	9 ^{III} 54	20 [°] 10	26 ^{III} 39	28 [°] 12	21 [°] 29	4 ^X 41								
F 3	19 9 8	16 ⁴ 41'15	20 [°] 17	8 [°] 17	29 [°] 55	1 [°] 17	1 [°] 34	10 [°] 13	19 [°] 43	9 [°] 52	20 [°] 11	26 [°] 37	28 [°] 8	21 [°] 36	4 [°] 38								
S 4	19 13 5	17 ⁴ 38'30	2 ^X 19	8 [°] 22	1 ^{III} 8	1 [°] 57	1 [°] 46	10 [°] 12	19 [°] 42	9 [°] 51	20 [°] 12	26 [°] D37	28 [°] 5	21 [°] 42	4 [°] 36								
S 5	19 17 2	18 ⁴ 35'46	14 [°] 12	8 ^R 23	2 [°] 22	2 [°] 37	1 [°] 57	10 [°] 10	19 [°] 41	9 [°] 49	20 [°] 14	26 [°] 38	28 [°] 2	21 [°] 49	4 [°] 34								
M 6	19 20 58	19 ⁴ 33'02	26 [°] 2	8 [°] 18	3 [°] 35	3 [°] 17	2 [°] 9	10 [°] 8	19 [°] 40	9 [°] 47	20 [°] 15	26 [°] 40	27 [°] 59	21 [°] 56	4 [°] 31								
T 7	19 24 55	20 ⁴ 30'20	7 ^V 51	8 [°] 9	4 [°] 48	3 [°] 56	2 [°] 20	10 [°] 6	19 [°] 40	9 [°] 46	20 [°] 16	26 [°] 42	27 [°] 56	22 [°] 2	4 [°] 29								
W 8	19 28 51	21 ⁴ 27'38	19 [°] 46	7 [°] 54	6 [°] 2	4 [°] 36	2 [°] 32	10 [°] 4	19 [°] 39	9 [°] 44	20 [°] 18	26 [°] R42	27 [°] 53	22 [°] 9	4 [°] 27								
T 9	19 32 48	22 ⁴ 24'58	1 ^X 52	7 [°] 35	7 [°] 15	5 [°] 15	2 [°] 43	10 [°] 1	19 [°] 38	9 [°] 43	20 [°] 19	26 [°] 42	27 [°] 49	22 [°] 15	4 [°] 25								
F 10	19 36 44	23 ⁴ 22'19	14 [°] 12	7 [°] 11	8 [°] 29	5 [°] 54	2 [°] 54	9 [°] 59	19 [°] 37	9 [°] 41	20 [°] 20	26 [°] 40	27 [°] 46	22 [°] 22	4 [°] 23								
S 11	19 40 41	24 ⁴ 19'41	26 [°] 52	6 [°] 42	9 [°] 42	6 [°] 34	3 [°] 5	9 [°] 57	19 [°] 36	9 [°] 39	20 [°] 21	26 [°] 37	27 [°] 43	22 [°] 29	4 [°] 21								
S 12	19 44 37	25 ⁴ 17'03	9 ^{II} 54	6 [°] 10	10 [°] 56	7 [°] 13	3 [°] 16	9 [°] 54	19 [°] 35	9 [°] 38	20 [°] 23	26 [°] 33	27 [°] 40	22 [°] 35	4 [°] 20								
M 13	19 48 34	26 ⁴ 14'28	23 [°] 19	5 [°] 33	12 [°] 9	7 [°] 51	3 [°] 27	9 [°] 51	19 [°] 33	9 [°] 36	20 [°] 24	26 [°] 28	27 [°] 37	22 [°] 42	4 [°] 18								
T 14	19 52 31	27 ⁴ 11'53	7 ^{III} 8	4 [°] 53	13 [°] 23	8 [°] 30	3 [°] 38	9 [°] 49	19 [°] 32	9 [°] 35	20 [°] 25	26 [°] 24	27 [°] 33	22 [°] 49	4 [°] 16								
W 15	19 56 27	28 [°] 9'19	21 [°] 18	4 [°] 10	14 [°] 36	9 [°] 9	3 [°] 49	9 [°] 46	19 [°] 31	9 [°] 33	20 [°] 26	26 [°] 20	27 [°] 30	22 [°] 55	4 [°] 15								
T 16	20 0 24	29 [°] 6'46	5 ^{II} 45	3 [°] 25	15 [°] 50	9 [°] 47	4 [°] 0	9 [°] 43	19 [°] 30	9 [°] 32	20 [°] 27	26 [°] 17	27 [°] 27	23 [°] 2	4 [°] 13								
F 17	20 4 20	0 ^{II} 4'14	20 [°] 22	2 [°] 39	17 [°] 4	10 [°] 25	4 [°] 10	9 [°] 40	19 [°] 29	9 [°] 30	20 [°] 29	26 [°] D16	27 [°] 24	23 [°] 9	4 [°] 12								
S 18	20 8 17	1 [°] 1'43	5 ^{III} 3	1 [°] 52	18 [°] 17	11 [°] 3	4 [°] 21	9 [°] 37	19 [°] 27	9 [°] 29	20 [°] 30	26 [°] 16	27 [°] 21	23 [°] 15	4 [°] 11								
S 19	20 12 13	1 [°] 59'13	19 [°] 42	1 [°] 6	19 [°] 31	11 [°] 41	4 [°] 31	9 [°] 34	19 [°] 26	9 [°] 27	20 [°] 31	26 [°] 17	27 [°] 18	23 [°] 22	4 [°] 10								
M 20	20 16 10	2 [°] 56'44	4 ^{II} 14	0 [°] 20	20 [°] 45	12 [°] 19	4 [°] 41	9 [°] 31	19 [°] 25	9 [°] 26	20 [°] 32	26 [°] 19	27 [°] 14	23 [°] 29	4 [°] 9								
T 21	20 20 6	3 [°] 54'15	18 [°] 34	29 ^{III} 37	21 [°] 58	12 [°] 57	4 [°] 51	9 [°] 28	19 [°] 23	9 [°] 24	20 [°] 33	26 [°] 20	27 [°] 11	23 [°] 35	4 [°] 8								
W 22	20 24 3	4 [°] 51'47	2 ^{III} 40	28 [°] 57	23 [°] 12	13 [°] 34	5 [°] 2	9 [°] 24	19 [°] 22	9 [°] 23	20 [°] 34	26 [°] R20	27 [°] 8	23 [°] 42	4 [°] 7								
T 23	20 28 0	5 [°] 49'21	16 [°] 31	28 [°] 20	24 [°] 26	14 [°] 11	5 [°] 11	9 [°] 21	19 [°] 20	9 [°] 22	20 [°] 35	26 [°] 20	27 [°] 5	23 [°] 49	4 [°] 6								
F 24	20 31 56	6 [°] 46'55	0 ^X 7	27 [°] 48	25 [°] 40	14 [°] 48	5 [°] 21	9 [°] 17	19 [°] 19	9 [°] 20	20 [°] 36	26 [°] 19	27 [°] 2	23 [°] 55	4 [°] 5								
S 25	20 35 53	7 [°] 44'30	13 [°] 27	27 [°] 21	26 [°] 54	15 [°] 25	5 [°] 31	9 [°] 14	19 [°] 17	9 [°] 19	20 [°] 37	26 [°] 17	26 [°] 59	24 [°] 2	4 [°] 5								
S 26	20 39 49	8 [°] 42'06	26 [°] 32	27 [°] 0	28 [°] 8	16 [°] 2	5 [°] 41	9 [°] 10	19 [°] 15	9 [°] 17	20 [°] 38	26 [°] 14	26 [°] 55	24 [°] 9	4 [°] 4								
M 27	20 43 46	9 [°] 39'44	9 ^{III} 22	26 [°] 45	29 [°] 22	16 [°] 38	5 [°] 50	9 [°] 7	19 [°] 14	9 [°] 16	20 [°] 39	26 [°] 12	26 [°] 52	24 [°] 15	4 [°] 4								
T 28	20 47 42	10 [°] 37'22	2 [°] 0	26 [°] 37	0 ^{II} 36	17 [°] 14	6 [°] 0	9 [°] 3	19 [°] 12	9 [°] 15	20 [°] 40	26 [°] 10	26 [°] 49	24 [°] 22	4 [°] 3								
W 29	20 51 39	11 [°] 35'02	4 ^{III} 24	26 [°] D36	1 [°] 50	17 [°] 50	6 [°] 9	8 [°] 59	19 [°] 10	9 [°] 13	20 [°] 41	26 [°] 8	26 [°] 46	24 [°] 29	4 [°] 3								
T 30	20 55 36	12 [°] 32'43	16 [°] 38	26 [°] 43	3 [°] 4	18 [°] 26	6 [°] 18	8 [°] 55	19 [°] 8	9 [°] 12	20 [°] 42	26 [°] 7	26 [°] 43	24 [°] 35	4 [°] 3								
F 31	20 59 32	13 ^{II} 30'25	28 ^{III} 42	26 [°] 56	4 ^{II} 18	19 [°] 2	6 ^{II} 27	8 ^X 51	19 ^X 7	9 ^{III} 11	20 ^{II} 43	26 [°] D 7	26 ^{III} 39	24 ^X 42	4 ^D 3								

Delta T = 13m43s

Julian Calendar 1 July 1170 == Greg. Calendar 8 July 1170

AUGUST 1170 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
S 1	21 3 29	14 ^{II} 28'09	10 ^X 38	27 ^{III} 18	5 ^{II} 32	19 ^X 38	6 ^{II} 36	8 ^R 48	19 ^R 5	9 ^R 10	20 ^{II} 44	26 ^{III} 8	26 ^{III} 36	24 ^X 49	4 ^X 3								
S 2	21 7 25	15 [°] 25'54	22 [°] 28	27 [°] 47	6 [°] 46	20 [°] 13	6 [°] 45	8 ^X 44	19 ^X 3	9 ^{III} 8	20 [°] 45	26 [°] 8	26 [°] 33	24 [°] 55	4 [°] 3								
M 3	21 11 22	16 [°] 23'41	4 ^V 17	28 [°] 23	8 [°] 0	20 [°] 48	6 [°] 53	8 [°] 39	19 [°] 1	9 [°] 7	20 [°] 46	26 [°] 9	26 [°] 30	25 [°] 2	4 [°] 3								
T 4	21 15 18	17 [°] 21'30	16 [°] 7	29 [°] 7	9 [°] 14	21 [°] 23	7 [°] 2	8 [°] 35	18 [°] 59	9 [°] 6	20 [°] 47	26 [°] 10	26 [°] 27	25 [°] 9	4 [°] 4								
W 5	21 19 15	18 [°] 19'20	28 [°] 1	29 [°] 58	10 [°] 28	21 [°] 57	7 [°] 10	8 [°] 31	18 [°] 57	9 [°] 5	20 [°] 48	26 [°] 11	26 [°] 24	25 [°] 15	4 [°] 4								
T 6	21 23 11	19 [°] 17'12	10 ^X 6	0 ^{II} 56	11 [°] 42	22 [°] 32	7 [°] 19	8 [°] 27	18 [°] 55	9 [°] 4	20 [°] 49	26 [°] 11	26 [°] 20	25 [°] 22	4 [°] 5								
F 7	21 27 8	20 [°] 15'06	22 [°] 24	2 [°] 1	12 [°] 57	23 [°] 6	7 [°] 27	8 [°] 23	18 [°] 53	9 [°] 2	20 [°] 50	26 [°] R12	26 [°] 17	25 [°] 29	4 [°] 5								
S 8	21 31 4	21 [°] 13'02	5 ^{II} 1	3 [°] 12	14 [°] 11	23 [°] 40	7 [°] 35	8 [°] 19	18 [°] 51	9 [°] 1	20 [°] 50	26 [°] 11	26 [°] 14	25 [°] 35	4 [°] 6								
S 9	21 35 1	22 [°] 11'00	18 [°] 0	4 [°] 29	15 [°] 25	24 [°] 14	7 [°] 43	8 [°] 14	18 [°] 49	9 [°] 0	20 [°] 51	26 [°] 11	26 [°] 11	25 [°] 42	4 [°] 7								
M 10	21 38 58	23 [°] 8'59	1 ^{III} 24	5 [°] 52	16 [°] 40	24 [°] 47	7 [°] 51	8 [°] 10	18 [°] 47	8 [°] 59	20 [°] 52	26 [°] 11	26 [°] 8	25 [°] 49	4 [°] 8								
T 11	21 42 54	24 [°] 7'01	15 [°] 15	7 [°] 20	17 [°] 54	25 [°] 21	7 [°] 58	8 [°] 5	18 [°] 45	8 [°] 58	20 [°] 53	26 [°] 10	26 [°] 5	25 [°] 55	4 [°] 9								
W 12	21 46 51	25 [°] 5'04	29 [°] 30	8 [°] 53	19 [°] 8	25 [°] 54	8 [°] 6	8 [°] 1	18 [°] 43	8 [°] 57	20 [°] 53	26 [°] 10	26 [°] 1	26 [°] 2	4 [°] 10								
T 13	21 50 47	26 [°] 3'10	14 ^{II} 8	10 [°] 30	20 [°] 23	26 [°] 26	8 [°] 13	7 [°] 57	18 [°] 41	8 [°] 56	20 [°] 54	26 [°] D10	25 [°] 58	26 [°] 9	4 [°] 11								
F 14	21 54 44	27 [°] 1'17	29 [°] 2	12 [°] 11	21 [°] 37	26 [°] 59	8 [°] 20	7 [°] 52	18 [°] 38	8 [°] 55	20 [°] 55	26 [°] R10	25 [°] 55	26 [°] 15	4 [°] 12								
S 15	21 58 40	27 [°] 59'25	14 ^{III} 4	13 [°] 55	22 [°] 52	27 [°] 31	8 [°] 27	7 [°] 48	18 [°] 36	8 [°] 54	20 [°] 56	26 [°] 10	25 [°] 52	26 [°] 22	4 [°] 14								
S 16	22 2 37	28 [°] 57'35	29 [°] 6	15 [°] 42	24 [°] 6	28 [°] 3	8 [°] 34	7 [°] 43	18 [°] 34	8 [°] 53	20 [°] 56	26 [°] 10	25 [°] 49	26 [°] 29	4 [°] 15								

SWISS EPHEMERIS for the year 1170

SEPTEMBER 1170 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍
T 1	23 5 42	14♐32'01	24♑47	15♒45	14♓0	5♈52	10♉2	6°R29	17°R57	8°R43	21♈4	26°R 4	24♌58	28♍15	4♎51		
W 2	23 9 38	15°30'41	6♌44	17°34	15°15	6°19	10° 6	6♋25	17♋54	8♌42	21° 4	26♌1	24°55	28°22	4°53		
T 3	23 13 35	16°29'23	18°50	19°21	16°30	6°45	10°10	6°20	17°52	8°42	21° 5	25°59	24°51	28°29	4°57		
F 4	23 17 31	17°28'08	1♈8	21° 8	17°44	7°10	10°14	6°16	17°49	8°42	21° 5	25°57	24°48	28°35	5° 0		
S 5	23 21 28	18°26'55	13°41	22°54	18°59	7°35	10°17	6°11	17°47	8°41	21° 5	25°D56	24°45	28°42	5° 3		
S 6	23 25 25	19°25'44	26°34	24°39	20°14	8° 0	10°21	6° 7	17°45	8°41	21° 5	25°56	24°42	28°49	5° 6		
M 7	23 29 21	20°24'36	9♌51	26°22	21°29	8°25	10°24	6° 2	17°42	8°41	21° 5	25°57	24°39	28°55	5°10		
T 8	23 33 18	21°23'30	23°33	28° 5	22°44	8°49	10°27	5°58	17°40	8°41	21° 6	25°58	24°36	29° 2	5°13		
W 9	23 37 14	22°22'26	7♎41	29°47	23°59	9°12	10°30	5°54	17°37	8°40	21° 6	26° 0	24°32	29° 9	5°17		
T 10	23 41 11	23°21'24	22°16	1♉28	25°14	9°35	10°32	5°49	17°35	8°40	21° 6	26°R 0	24°29	29°15	5°20		
F 11	23 45 7	24°20'25	7♐11	3° 8	26°28	9°58	10°35	5°45	17°33	8°40	21° 6	26° 0	24°26	29°22	5°24		
S 12	23 49 4	25°19'28	22°21	4°48	27°43	10°20	10°37	5°41	17°30	8°40	21° 6	25°58	24°23	29°29	5°28		
S 13	23 53 0	26°18'33	7♊36	6°26	28°58	10°42	10°39	5°37	17°28	8°40	21° 6	25°55	24°20	29°35	5°31		
M 14	23 56 57	27°17'39	22°46	8° 4	0♈13	11° 3	10°41	5°33	17°25	8°D40	21° 6	25°51	24°16	29°42	5°35		
T 15	0 0 54	28°16'48	7♌41	9°40	1°28	11°23	10°42	5°28	17°23	8°40	21°R 6	25°46	24°13	29°49	5°39		
W 16	0 4 50	29°15'59	22°14	11°16	2°43	11°44	10°44	5°24	17°21	8°40	21° 6	25°42	24°10	29°55	5°43		
T 17	0 8 47	0♉15'12	6♌20	12°51	3°58	12° 3	10°45	5°20	17°18	8°40	21° 6	25°38	24° 7	0♑2	5°48		
F 18	0 12 43	1°14'26	19°57	14°26	5°13	12°22	10°46	5°17	17°16	8°40	21° 6	25°36	24° 4	0° 9	5°52		
S 19	0 16 40	2°13'42	3♌8	15°59	6°28	12°41	10°47	5°13	17°14	8°40	21° 6	25°D35	24° 1	0°15	5°56		
S 20	0 20 36	3°13'01	15°55	17°32	7°43	12°59	10°47	5° 9	17°11	8°41	21° 6	25°36	23°57	0°22	6° 1		
M 21	0 24 33	4°12'20	28°21	19° 4	8°58	13°16	10°48	5° 5	17° 9	8°41	21° 6	25°38	23°54	0°29	6° 5		
T 22	0 28 29	5°11'42	10♌33	20°35	10°13	13°33	10°48	5° 1	17° 7	8°41	21° 6	25°39	23°51	0°35	6° 9		
W 23	0 32 26	6°11'05	22°33	22° 6	11°28	13°49	10°R48	4°58	17° 5	8°41	21° 5	25°R40	23°48	0°42	6°14		
T 24	0 36 23	7°10'31	4♋26	23°36	12°43	14° 5	10°48	4°54	17° 2	8°42	21° 5	25°40	23°45	0°49	6°19		
F 25	0 40 19	8° 9'58	16°16	25° 5	13°58	14°20	10°48	4°51	17° 0	8°42	21° 5	25°38	23°42	0°55	6°23		
S 26	0 44 16	9° 9'27	28° 5	26°33	15°13	14°34	10°47	4°47	16°58	8°42	21° 5	25°33	23°38	1° 2	6°28		
S 27	0 48 12	10° 8'58	9♑55	28° 1	16°28	14°48	10°46	4°44	16°56	8°43	21° 4	25°27	23°35	1° 9	6°33		
M 28	0 52 9	11° 8'32	21°48	29°28	17°43	15° 1	10°45	4°41	16°54	8°43	21° 4	25°19	23°32	1°15	6°38		
T 29	0 56 5	12° 8'07	3♌47	0♎54	18°58	15°14	10°44	4°38	16°52	8°44	21° 4	25°10	23°29	1°22	6°43		
W 30	1 0 2	13♌7'45	15♌51	2♎19	20♈13	15♈26	10♈43	4♋34	16♋49	8♌44	21♈4	25♌1	23♌26	1♑29	6♑48		

Delta T = 13m43s Julian Calendar 1 Sept. 1170 == Greg. Calendar 8 Sept. 1170

OCTOBER 1170 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♄	♅	♆	♇	♈	♉	♊	♋	♌	♍
T 1	1 3 58	14♌7'24	28♌4	3♎43	21♏28	15♈37	10°R41	4°R31	16°R47	8♌45	21°R 3	24°R52	23♌22	1♑35	6♑53		
F 2	1 7 55	15° 7'07	10♈27	5° 7	22°43	15°47	10♈39	4♋28	16♋45	8°45	21♈3	24♌45	23°19	1°42	6°58		
S 3	1 11 52	16° 6'51	23° 2	6°30	23°59	15°57	10°37	4°26	16°43	8°46	21° 2	24°40	23°16	1°49	7° 3		
S 4	1 15 48	17° 6'38	5♌53	7°51	25°14	16° 6	10°35	4°23	16°41	8°47	21° 2	24°38	23°13	1°55	7° 9		
M 5	1 19 45	18° 6'27	19° 3	9°12	26°29	16°14	10°33	4°20	16°39	8°47	21° 2	24°D37	23°10	2° 2	7°14		
T 6	1 23 41	19° 6'18	2♎35	10°32	27°44	16°21	10°30	4°18	16°37	8°48	21° 1	24°37	23° 7	2° 9	7°19		
W 7	1 27 38	20° 6'11	16°30	11°50	28°59	16°28	10°27	4°15	16°36	8°49	21° 1	24°38	23° 3	2°16	7°25		
T 8	1 31 34	21° 6'07	0♎50	13° 7	0♎14	16°34	10°24	4°13	16°34	8°50	21° 0	24°R38	23° 0	2°22	7°30		
F 9	1 35 31	22° 6'05	15°32	14°23	1°29	16°39	10°21	4°10	16°32	8°50	21° 0	24°37	22°57	2°29	7°36		
S 10	1 39 27	23° 6'05	0♉33	15°38	2°44	16°43	10°18	4° 8	16°30	8°51	20°59	24°32	22°54	2°36	7°41		
S 11	1 43 24	24° 6'07	15°44	16°51	3°59	16°47	10°14	4° 6	16°28	8°52	20°58	24°26	22°51	2°42	7°47		
M 12	1 47 20	25° 6'11	0♎55	18° 2	5°14	16°49	10°11	4° 4	16°27	8°53	20°58	24°17	22°48	2°49	7°53		
T 13	1 51 17	26° 6'17	15°57	19°11	6°29	16°51	10° 7	4° 2	16°25	8°54	20°57	24° 7	22°44	2°56	7°59		
W 14	1 55 14	27° 6'25	0♌38	20°18	7°45	16°52	10° 3	4° 0	16°23	8°55	20°57	23°57	22°41	3° 2	8° 4		
T 15	1 59 10	28° 6'35	14°54	21°23	9° 0	16°R52	9°58	3°58	16°22	8°56	20°56	23°49	22°38	3° 9	8°10		
F 16	2 3 7	29° 6'46	28°39	22°25	10°15	16°52	9°54	3°57	16°20	8°57	20°55	23°43	22°35	3°16	8°16		
S 17	2 7 3	0♎6'59	11♌56	23°24	11°30	16°50	9°49	3°55	16°18	8°58	20°55	23°39	22°32	3°22	8°22		
S 18	2 11 0	1° 7'13	24°45	24°19	12°45	16°48	9°44	3°54	16°17	8°59	20°54	23°37	22°28	3°29	8°28		
M 19	2 14 56	2° 7'29	7♌12	25°11	14° 0	16°44	9°39	3°52	16°15	9° 0	20°53	23°D37	22°25	3°36	8°34		
T 20	2 18 53	3° 7'47	19°21	25°59	15°15	16°40	9°34	3°51	16°14	9° 1	20°53	23°R38	22°22	3°42	8°40		
W 21	2 22 50	4° 8'06	1♋18	26°42	16°30	16°35	9°29	3°50	16°13	9° 3	20°52	23°38	22°19	3°49	8°46		
T 22	2 26 46	5° 8'26	13° 9	27°19	17°45	16°29	9°23	3°49	16°11	9° 4	20°51	23°36	22°16	3°56	8°52		
F 23	2 30 43	6° 8'48	24°56	27°51	19° 0	16°22	9°18	3°48	16°10	9° 5	20°50	23°31	22°13	4° 2	8°59		
S 24	2 34 39	7° 9'11	6♑46	28°16	20°16	16°14	9°12	3°47	16° 9	9° 6	20°49	23°24	22° 9	4° 9	9° 5		
S 25	2 38 36	8° 9'36	18°39	28°34	21°31	16° 6	9° 6	3°46	16° 8	9° 8	20°49	23°14	22° 6	4°16	9°11		
M 26	2 42 32	9°10'02	0♌39	28°44	22°46	15°56	9° 0	3°46	16° 6	9° 9	20°48	23° 2	22° 3	4°22	9°17		
T 27	2 46 29	10°10'31	12°48	28°R46	24° 1	15°46	8°54	3°45	16° 5	9°10	20°47	22°48	22° 0	4°29	9°24		
W 28	2 50 25	11°11'00	25° 4	28°38	25°16	15°35	8°47	3°45	16° 4	9°12	20°46	22°34	21°57	4°36	9°30		
T 29	2 54 22	12°11'32	7♈31	28°20	26°31	15°23	8°41	3°44	16° 3	9°13	20°45	22°21	21°53	4°42	9°36		
F 30	2 58 18	13°12'05	20° 7	27°52	27°46	15°10	8°34	3°44	16° 2	9°15	20°44	22°10	21°50	4°49	9°43		
S 31	3 2 15	14♎12'40	2♌54	27♎13	29♎1	14♈56	8♈27	3°D44	16♋1	9♌16	20♈43	22♌1	21♌47	4♑56	9♑49		

Delta T = 13m42s Julian Calendar created from Swiss Ephemeris, Copyright Astrodienst AG [10.1.2003]

SWISS EPHEMERIS for the year 1170

NOVEMBER 1170 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♅	♁	♁	♁	♁	♁	♁	♁	♁
S 1	3 6 12	15♏13'17	15♏53	26°R24	0♁16	14°R42	8°R20	3♁44	16°R 0	9♁18	20°R42	21°R56	21♏44	21°41	5♁ 2	9♁56
M 2	3 10 8	16°13'55	29° 5	25♏25	1°31	14♏27	8♏13	3°44	15♁59	9°19	20♏41	21♏53	21°41	5° 9	10° 2	
T 3	3 14 5	17°14'35	12♏33	24°18	2°46	14°11	8° 6	3°44	15°59	9°21	20°40	21°52	21°38	5°16	10° 9	
W 4	3 18 1	18°15'17	26°18	23° 4	4° 1	13°54	7°59	3°45	15°58	9°22	20°39	21°52	21°34	5°23	10°16	
T 5	3 21 58	19°16'01	10♏23	21°44	5°16	13°37	7°52	3°45	15°57	9°24	20°38	21°51	21°31	5°29	10°22	
F 6	3 25 54	20°16'46	24°46	20°22	6°32	13°18	7°44	3°46	15°56	9°25	20°37	21°49	21°28	5°36	10°29	
S 7	3 29 51	21°17'33	9♏25	19° 1	7°47	13° 0	7°37	3°46	15°56	9°27	20°36	21°44	21°25	5°43	10°35	
S 8	3 33 47	22°18'21	24°16	17°42	9° 2	12°40	7°29	3°47	15°55	9°29	20°35	21°35	21°22	5°49	10°42	
M 9	3 37 44	23°19'11	9♏11	16°29	10°17	12°20	7°21	3°48	15°55	9°30	20°34	21°25	21°19	5°56	10°49	
T 10	3 41 41	24°20'02	24° 0	15°24	11°32	12° 0	7°14	3°49	15°54	9°32	20°33	21°12	21°15	6° 3	10°56	
W11	3 45 37	25°20'55	8♁36	14°28	12°47	11°39	7° 6	3°50	15°54	9°34	20°32	21° 0	21°12	6° 9	11° 2	
T 12	3 49 34	26°21'49	22°50	13°43	14° 2	11°17	6°58	3°51	15°53	9°36	20°31	20°49	21° 9	6°16	11° 9	
F 13	3 53 30	27°22'43	6♁38	13° 9	15°17	10°55	6°50	3°52	15°53	9°37	20°30	20°41	21° 6	6°23	11°16	
S 14	3 57 27	28°23'39	19°59	12°47	16°32	10°33	6°42	3°54	15°53	9°39	20°29	20°35	21° 3	6°29	11°23	
S 15	4 1 23	29°24'36	2♏53	12°36	17°47	10°10	6°34	3°55	15°53	9°41	20°28	20°32	20°59	6°36	11°29	
M16	4 5 20	0♁25'33	15°23	12°D36	19° 2	9°47	6°26	3°57	15°53	9°43	20°27	20°31	20°56	6°43	11°36	
T 17	4 9 17	1°26'31	27°35	12°46	20°17	9°24	6°18	3°59	15°52	9°45	20°26	20°31	20°53	6°49	11°43	
W18	4 13 13	2°27'29	9♁34	13° 5	21°32	9° 1	6° 9	4° 0	15°52	9°47	20°25	20°31	20°50	6°56	11°50	
T 19	4 17 10	3°28'29	21°25	13°33	22°47	8°38	6° 1	4° 2	15°D52	9°49	20°23	20°29	20°47	7° 3	11°57	
F 20	4 21 6	4°29'29	3♁13	14° 9	24° 2	8°14	5°53	4° 4	15°52	9°50	20°22	20°26	20°44	7° 9	12° 4	
S 21	4 25 3	5°30'29	15° 4	14°51	25°17	7°51	5°45	4° 6	15°53	9°52	20°21	20°19	20°40	7°16	12°10	
S 22	4 28 59	6°31'31	27° 2	15°39	26°32	7°27	5°37	4° 9	15°53	9°54	20°20	20°10	20°37	7°23	12°17	
M23	4 32 56	7°32'33	9♁ 8	16°33	27°47	7° 4	5°29	4°11	15°53	9°56	20°19	19°59	20°34	7°30	12°24	
T 24	4 36 52	8°33'36	21°27	17°31	29° 2	6°41	5°20	4°13	15°53	9°58	20°18	19°46	20°31	7°36	12°31	
W25	4 40 49	9°34'39	3♏58	18°34	0♁17	6°18	5°12	4°16	15°53	10° 0	20°16	19°33	20°28	7°43	12°38	
T 26	4 44 46	10°35'43	16°42	19°40	1°32	5°55	5° 4	4°19	15°54	10° 2	20°15	19°20	20°25	7°50	12°45	
F 27	4 48 42	11°36'48	29°38	20°49	2°47	5°33	4°56	4°21	15°54	10° 4	20°14	19°10	20°21	7°56	12°52	
S 28	4 52 39	12°37'54	12♏45	22° 1	4° 2	5°10	4°48	4°24	15°55	10° 7	20°13	19° 2	20°18	8° 3	12°59	
S 29	4 56 35	13°39'00	26° 3	23°15	5°17	4°48	4°40	4°27	15°55	10° 9	20°12	18°57	20°15	8°10	13° 5	
M30	5 0 32	14°40'08	9♏31	24♏31	6♁31	4♏27	4♏32	4♁30	15♁56	10♁11	20♏10	18♏54	20♏12	8♁16	13♁12	

Delta T = 13m42s Julian Calendar 1 Nov. 1170 == Greg. Calendar 8 Nov. 1170

DECEMBER 1170 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♁	♂	♃	♅	♁	♁	♁	♁	♁	♁	♁	♁
T 1	5 4 28	15♁41'15	23♏ 9	25♏49	7♁46	4°R 6	4°R24	4♁33	15♁56	10♁13	20°R 9	18♏54	20♏ 9	8♁23	13♁19	
W 2	5 8 25	16°42'24	6♏57	27° 9	9° 1	3♏45	4♏16	4°36	15°57	10°15	20♏ 8	18°55	20° 5	8°30	13°26	
T 3	5 12 21	17°43'33	20°56	28°30	10°16	3°25	4° 9	4°40	15°58	10°17	20° 7	18°R55	20° 2	8°36	13°33	
F 4	5 16 18	18°44'44	5♏ 5	29°52	11°31	3° 6	4° 1	4°43	15°58	10°19	20° 6	18°54	19°59	8°43	13°40	
S 5	5 20 15	19°45'54	19°24	1♁15	12°46	2°47	3°53	4°47	15°59	10°21	20° 4	18°50	19°56	8°50	13°47	
S 6	5 24 11	20°47'06	3♏49	2°40	14° 1	2°29	3°46	4°50	16° 0	10°23	20° 3	18°44	19°53	8°57	13°53	
M 7	5 28 8	21°48'18	18°16	4° 5	15°15	2°11	3°38	4°54	16° 1	10°26	20° 2	18°36	19°50	9° 3	14° 0	
T 8	5 32 4	22°49'30	2♁39	5°31	16°30	1°54	3°31	4°58	16° 2	10°28	20° 1	18°27	19°46	9°10	14° 7	
W 9	5 36 1	23°50'43	16°52	6°58	17°45	1°38	3°24	5° 1	16° 3	10°30	20° 0	18°17	19°43	9°17	14°14	
T 10	5 39 57	24°51'57	0♁50	8°25	19° 0	1°22	3°17	5° 5	16° 4	10°32	19°58	18° 8	19°40	9°23	14°21	
F 11	5 43 54	25°53'10	14°28	9°53	20°14	1° 8	3°10	5° 9	16° 5	10°34	19°57	18° 2	19°37	9°30	14°28	
S 12	5 47 50	26°54'23	27°43	11°21	21°29	0°54	3° 3	5°14	16° 6	10°37	19°56	17°57	19°34	9°37	14°34	
S 13	5 51 47	27°55'36	10♏36	12°50	22°44	0°40	2°56	5°18	16° 8	10°39	19°55	17°55	19°31	9°43	14°41	
M14	5 55 44	28°56'49	23° 8	14°19	23°59	0°28	2°49	5°22	16° 9	10°41	19°54	17°D55	19°27	9°50	14°48	
T 15	5 59 40	29°58'02	5♁22	15°49	25°13	0°16	2°43	5°26	16°10	10°43	19°53	17°56	19°24	9°57	14°54	
W16	6 3 37	0♁59'14	17°24	17°20	26°28	0° 6	2°37	5°31	16°12	10°46	19°51	17°57	19°21	10° 3	15° 1	
T 17	6 7 33	2° 0'26	29°17	18°50	27°43	29♁56	2°30	5°35	16°13	10°48	19°50	17°R58	19°18	10°10	15° 8	
F 18	6 11 30	3° 1'38	11♁ 7	20°21	28°57	29°47	2°24	5°40	16°14	10°50	19°49	17°58	19°15	10°17	15°14	
S 19	6 15 26	4° 2'49	22°59	21°53	0♏12	29°38	2°18	5°45	16°16	10°52	19°48	17°56	19°11	10°24	15°21	
S 20	6 19 23	5° 3'59	4♁58	23°25	1°26	29°31	2°13	5°50	16°18	10°55	19°47	17°52	19° 8	10°30	15°28	
M21	6 23 19	6° 5'10	17° 9	24°57	2°41	29°24	2° 7	5°54	16°19	10°57	19°45	17°46	19° 5	10°37	15°34	
T 22	6 27 16	7° 6'20	29°34	26°30	3°55	29°18	2° 2	5°59	16°21	10°59	19°44	17°39	19° 2	10°44	15°41	
W23	6 31 13	8° 7'29	12♏15	28° 4	5°10	29°13	1°56	6° 4	16°22	11° 1	19°43	17°31	18°59	10°50	15°47	
T 24	6 35 9	9° 8'38	25°14	29°37	6°24	29° 9	1°51	6°10	16°24	11° 4	19°42	17°24	18°56	10°57	15°54	
F 25	6 39 6	10° 9'46	8♁30	1♁11	7°39	29° 5	1°46	6°15	16°26	11° 6	19°41	17°18	18°52	11° 4	16° 0	
S 26	6 43 2	11°10'54	22° 1	2°46	8°53	29° 3	1°41	6°20	16°28	11° 8	19°40	17°14	18°49	11°10	16° 7	
S 27	6 46 59	12°12'02	5♏45	4°21	10° 7	29° 1	1°37	6°25	16°30	11°11	19°39	17°12	18°46	11°17	16°13	
M28	6 50 55	13°13'09	19°39	5°57	11°22	29° 0	1°32	6°31	16°32	11°13	19°38	17°D11	18°43	11°24	16°19	
T 29	6 54 52	14°14'16	3♏40	7°33	12°36	29°D 0	1°28	6°36	16°34	11°15	19°37	17°12	18°40	11°30	16°26	
W30	6 58 49	15°15'22	17°47	9° 9	13°50	29° 0	1°24	6°42	16°36	11°17	19°35	17°13	18°37	11°37	16°32	
T 31	7 2 45	16°16'28	1♁55	10♁47	15♏ 5	29♁ 1	1♏20	6♁47	16♁38	11♁20	19♏34	17♏15	18♏33	11♁44	16♁38	

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