



# Astrodienst Ephemeris Tables for the year 1459

tropical geocentric zodiac

contains Sun, Moon, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, True Node, Moon's Node, Lilith, Chiron

Programming  
Dieter Koch and Alois Treindl  
based on Swiss Ephemeris  
Code D5EPH

# ASTRODIENST EPHEMERIS for the year 1459

## geocentric

JANUARY 1459 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	7 15 30	19°23'44	4°5' 5	29°31	5°9 9	3°R 9	0°5 7	2°328	28°R19	17°40	18°R41	26°R47	28°Ω 6	1°M 1	26°M35	M 1
T 2	7 19 26	20°24'51	16°25	0°355	6°16	3°M 4	0° 8	2°34	28°Ω17	17°40	18°Ω39	26°Ω40	28° 3	1° 8	26°R35	T 2
W 3	7 23 23	21°25'58	28°59	2°20	7°22	2°58	0° 9	2°41	28°15	17°40	18°38	26°33	28° 0	1°14	26°35	W 3
T 4	7 27 19	22°27'05	11°350	3°46	8°29	2°51	0° 9	2°48	28°13	17°40	18°37	26°27	27°57	1°21	26°35	T 4
F 5	7 31 16	23°28'10	24°55	5°13	9°35	2°43	0°10	2°55	28°11	17°41	18°36	26°23	27°54	1°28	26°34	F 5
S 6	7 35 13	24°29'15	8°16	6°40	10°41	2°35	0°R10	3° 2	28° 9	17°41	18°34	26°20	27°50	1°34	26°34	S 6
S 7	7 39 9	25°30'19	21°48	8° 9	11°46	2°26	0°10	3° 8	28° 7	17°41	18°33	26°D18	27°47	1°41	26°33	S 7
M 8	7 43 6	26°31'22	5°32	9°38	12°52	2°16	0° 9	3°15	28° 5	17°41	18°32	26°18	27°44	1°48	26°33	M 8
T 9	7 47 2	27°32'24	19°24	11° 7	13°57	2° 5	0° 9	3°22	28° 3	17°41	18°30	26°20	27°41	1°55	26°32	T 9
W10	7 50 59	28°33'25	3°Y24	12°38	15° 2	1°53	0° 8	3°28	28° 1	17°R41	18°29	26°21	27°38	2° 1	26°31	W10
T11	7 54 55	29°34'24	17°29	14° 9	16° 6	1°41	0° 7	3°35	27°59	17°41	18°27	26°23	27°35	2° 8	26°30	T11
F12	7 58 52	0°35'23	1°38	15°40	17°10	1°28	0° 6	3°41	27°56	17°41	18°26	26°R23	27°31	2°15	26°29	F12
S13	8 2 48	1°36'20	15°49	17°13	18°14	1°14	0° 5	3°48	27°54	17°41	18°25	26°22	27°28	2°21	26°27	S13
S14	8 6 45	2°37'15	0°II 0	18°46	19°18	1° 0	0° 3	3°54	27°52	17°41	18°23	26°21	27°25	2°28	26°26	S14
M15	8 10 42	3°38'10	14° 9	20°19	20°21	0°44	0° 2	4° 1	27°50	17°41	18°22	26°18	27°22	2°35	26°24	M15
T16	8 14 38	4°39'03	28°12	21°54	21°24	0°28	29°M59	4° 7	27°47	17°40	18°20	26°15	27°19	2°42	26°23	T16
W17	8 18 35	5°39'55	12°5	23°29	22°26	0°12	29°58	4°14	27°45	17°40	18°19	26°11	27°15	2°48	26°21	W17
T18	8 22 31	6°40'46	25°46	25° 5	23°28	29°Ω54	29°56	4°20	27°43	17°40	18°18	26° 9	27°12	2°55	26°19	T18
F19	8 26 28	7°41'35	9°Ω12	26°41	24°30	29°36	29°53	4°26	27°40	17°40	18°16	26° 7	27° 9	3° 2	26°17	F19
S20	8 30 24	8°42'23	22°20	28°19	25°31	29°17	29°51	4°33	27°38	17°39	18°15	26°D 6	27° 6	3° 8	26°15	S20
S21	8 34 21	9°43'10	5°M10	29°57	26°32	28°58	29°48	4°39	27°35	17°39	18°13	26° 6	27° 3	3°15	26°13	S21
M22	8 38 17	10°43'56	17°43	1°36	27°32	28°38	29°45	4°45	27°33	17°39	18°12	26° 7	27° 0	3°22	26°11	M22
T23	8 42 14	11°44'40	0°1	3°15	28°32	28°18	29°42	4°51	27°30	17°38	18°10	26° 9	26°56	3°29	26° 8	T23
W24	8 46 11	12°45'24	12° 6	4°56	29°32	27°57	29°39	4°57	27°28	17°38	18° 9	26°10	26°53	3°35	26° 6	W24
T25	8 50 7	13°46'06	24° 3	6°37	0°Y31	27°36	29°35	5° 3	27°25	17°37	18° 7	26°11	26°50	3°42	26° 3	T25
F26	8 54 4	14°46'47	5°M55	8°19	1°29	27°14	29°32	5° 9	27°23	17°37	18° 6	26°12	26°47	3°49	26° 1	F26
S27	8 58 0	15°47'27	17°48	10° 2	2°28	26°52	29°28	5°15	27°20	17°36	18° 4	26°R12	26°44	3°55	25°58	S27
S28	9 1 57	16°48'06	29°45	11°46	3°25	26°29	29°24	5°21	27°18	17°36	18° 3	26°12	26°40	4° 2	25°55	S28
M29	9 5 53	17°48'44	11°35	13°31	4°22	26° 6	29°20	5°27	27°15	17°35	18° 1	26°11	26°37	4° 9	25°52	M29
T30	9 9 50	18°49'20	24°15	15°16	5°19	25°43	29°15	5°33	27°13	17°34	18° 0	26°10	26°34	4°15	25°49	T30
W31	9 13 46	19°49'56	6°354	17°3	6°Y14	25°Ω20	29°M11	5°38	27°Ω10	17°34	17°Ω58	26°Ω 9	26°Ω31	4°M22	25°M46	W31

Delta T = 06m13s

Julian Calendar 1 Jan. 1459 == Greg. Calendar 10 Jan. 1459

FEBRUARY 1459 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	9 17 43	20°50'30	19°352	18°50	7°Y10	24°R56	29°R 6	5°344	27°R 7	17°R33	17°R57	26°R 8	26°Ω28	4°M29	25°R43	T 1
F 2	9 21 40	21°51'02	3°12	20°38	8° 4	24°Ω32	29°M 1	5°50	27°Ω 5	17°Ω32	17°Ω56	26°Ω 8	26°25	4°36	25°M39	F 2
S 3	9 25 36	22°51'33	16°51	22°27	8°58	24° 9	28°56	5°55	27° 2	17°31	17°54	26° 8	26°21	4°42	25°36	S 3
S 4	9 29 33	23°52'02	0°H49	24°17	9°52	23°45	28°51	6° 1	27° 0	17°31	17°53	26°D 8	26°18	4°49	25°32	S 4
M 5	9 33 29	24°52'30	15° 1	26° 8	10°44	23°21	28°46	6° 6	26°57	17°30	17°51	26° 8	26°15	4°56	25°29	M 5
T 6	9 37 26	25°52'56	29°22	27°59	11°36	22°57	28°41	6°12	26°54	17°29	17°50	26°R 8	26°12	5° 2	25°25	T 6
W 7	9 41 22	26°53'20	13°Y49	29°51	12°27	22°33	28°35	6°17	26°52	17°28	17°48	26° 8	26° 9	5° 9	25°21	W 7
T 8	9 45 19	27°53'41	28°15	1°H44	13°18	22° 9	28°29	6°22	26°49	17°27	17°47	26° 8	26° 6	5°16	25°18	T 8
F 9	9 49 15	28°54'01	12°36	3°38	14° 7	21°46	28°23	6°27	26°46	17°26	17°45	26° 7	26° 2	5°23	25°14	F 9
S10	9 53 12	29°54'19	26°50	5°32	14°56	21°23	28°17	6°32	26°44	17°25	17°44	26°D 7	25°59	5°29	25°10	S10
S11	9 57 9	0°H54'35	10°II54	7°26	15°44	21° 0	28°11	6°38	26°41	17°24	17°42	26° 7	25°56	5°36	25° 6	S11
M12	10 1 5	1°54'49	24°45	9°21	16°31	20°37	28° 5	6°43	26°39	17°23	17°41	26° 8	25°53	5°43	25° 2	M12
T13	10 5 2	2°55'01	8°524	11°15	17°17	20°15	27°59	6°47	26°36	17°22	17°39	26° 8	25°50	5°49	24°57	T13
W14	10 8 58	3°55'11	21°51	13°10	18° 2	19°53	27°52	6°52	26°33	17°21	17°38	26° 9	25°46	5°56	24°53	W14
T15	10 12 55	4°55'18	5°Ω 4	15° 4	18°46	19°31	27°46	6°57	26°31	17°20	17°37	26°10	25°43	6° 3	24°49	T15
F16	10 16 51	5°55'24	18° 4	16°57	19°29	19°10	27°39	7° 2	26°28	17°19	17°35	26°10	25°40	6°10	24°45	F16
S17	10 20 48	6°55'28	0°M51	18°49	20°11	18°50	27°32	7° 7	26°26	17°18	17°34	26°R10	25°37	6°16	24°40	S17
S18	10 24 44	7°55'29	13°26	20°40	20°52	18°30	27°25	7°11	26°23	17°17	17°32	26°10	25°34	6°23	24°36	S18
M19	10 28 41	8°55'29	25°49	22°29	21°31	18°10	27°19	7°16	26°21	17°16	17°31	26° 9	25°31	6°30	24°32	M19
T20	10 32 37	9°55'27	8°1	24°16	22° 9	17°51	27°11	7°20	26°18	17°14	17°30	26° 7	25°27	6°36	24°27	T20
W21	10 36 34	10°55'23	20° 3	26° 0	22°46	17°33	27° 4	7°24	26°16	17°13	17°28	26° 5	25°24	6°43	24°23	W21
T22	10 40 31	11°55'17	2°M 0	27°41	23°22	17°15	26°57	7°29	26°13	17°12	17°27	26° 2	25°21	6°50	24°18	T22
F23	10 44 27	12°55'10	13°52	29°18	23°56	16°58	26°50	7°33	26°11	17°11	17°26	26° 0	25°18	6°57	24°13	F23
S24	10 48 24	13°55'01	25°45	0°Y51	24°29	16°42	26°42	7°37	26° 8	17° 9	17°24	25°58	25°15	7° 3	24° 9	S24
S25	10 52 20	14°54'50	7°Y41	2°19	25° 0	16°26	26°35	7°41	26° 6	17° 8	17°23	25°57	25°12	7°10	24° 4	S25
M26	10 56 17	15°54'37	19°47	3°42	25°30	16°11	26°28	7°45	26° 3	17° 7	17°22	25°D57	25° 8	7°17	23°59	M26
T27	11 0 13	16°54'23	2°3	5° 0	25°58	15°57	26°20	7°49	26° 1	17° 5	17°21	25°58	25° 5	7°23	23°55	T27
W28	11 4 10	17°54'07	14°342	6°Y11	26°Y25	15°Ω44	26°M12	7°53	25°Ω58	17°1	17°Ω19	25°Ω59	25°Ω 2	7°M30	23°M50	W28

Delta T = 06m13s

Julian Calendar

ASTRODIENST EPHEMERIS for the year 1459  
geocentric

MARCH 1459 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	11 8 6	18°53'49	27°34'0	7°15	26°50	15°R31	26°R 5	7°357	25°R56	17°R 3	17°R18	26°R 1	24°R59	7°M37	23°R45	T 1
F 2	11 12 3	19°53'30	11°33'3	8°13	27°13	15°R19	25°R57	8°0	25°R54	17°R 1	17°R17	26°R 2	24°R56	7°44	23°R40	F 2
S 3	11 16 0	20°53'08	24°51	9°3	27°34	15°R 8	25°49	8°4	25°51	17°R 0	17°R16	26°R 3	24°R52	7°50	23°36	S 3
S 4	11 19 56	21°52'45	9°4	9°46	27°53	14°57	25°42	8°7	25°49	16°58	17°15	26°R 2	24°R49	7°57	23°31	S 4
M 5	11 23 53	22°52'19	23°37	10°21	28°11	14°48	25°34	8°11	25°47	16°57	17°13	26°R 0	24°R46	8°4	23°26	M 5
T 6	11 27 49	23°51'52	8°Y25	10°48	28°26	14°39	25°26	8°14	25°45	16°55	17°12	25°57	24°R43	8°11	23°21	T 6
W 7	11 31 46	24°51'22	23°20	11°7	28°39	14°31	25°18	8°17	25°42	16°54	17°11	25°53	24°R40	8°17	23°17	W 7
T 8	11 35 42	25°50'50	8°Y13	11°19	28°51	14°24	25°11	8°20	25°40	16°52	17°10	25°49	24°R37	8°24	23°12	T 8
F 9	11 39 39	26°50'16	22°56	11°R22	29°0	14°17	25°3	8°23	25°38	16°51	17°9	25°45	24°R33	8°31	23°7	F 9
S 10	11 43 35	27°49'40	7°II24	11°18	29°6	14°12	24°55	8°26	25°36	16°49	17°8	25°42	24°R30	8°37	23°2	S 10
S 11	11 47 32	28°49'01	21°33	11°6	29°10	14°7	24°47	8°29	25°34	16°48	17°7	25°40	24°R27	8°44	22°57	S 11
M12	11 51 29	29°48'20	5°E21	10°48	29°R12	14°3	24°40	8°32	25°32	16°46	17°6	25°D40	24°R24	8°51	22°53	M12
T 13	11 55 25	0°Y47'37	18°49	10°23	29°12	13°59	24°32	8°35	25°30	16°45	17°5	25°41	24°R21	8°58	22°48	T 13
W14	11 59 22	1°46'51	1°R58	9°52	29°9	13°57	24°24	8°37	25°28	16°43	17°4	25°43	24°R17	9°4	22°43	W14
T 15	12 3 18	2°46'03	14°51	9°16	29°4	13°55	24°17	8°40	25°26	16°42	17°3	25°44	24°R14	9°11	22°39	T 15
F 16	12 7 15	3°45'12	27°31	8°36	28°56	13°54	24°9	8°42	25°24	16°40	17°2	25°R45	24°R11	9°18	22°34	F 16
S 17	12 11 11	4°44'20	9°R59	7°53	28°45	13°D54	24°2	8°45	25°22	16°38	17°1	25°44	24°R 8	9°24	22°29	S 17
S 18	12 15 8	5°43'25	22°17	7°6	28°32	13°54	23°54	8°47	25°20	16°37	17°0	25°41	24°R 5	9°31	22°25	S 18
M19	12 19 4	6°42'28	4°E27	6°19	28°17	13°55	23°47	8°49	25°19	16°35	16°59	25°36	24°R 2	9°38	22°20	M19
T 20	12 23 1	7°41'28	16°30	5°30	27°59	13°57	23°39	8°51	25°17	16°34	16°58	25°29	23°58	9°45	22°16	T 20
W21	12 26 57	8°40'27	28°28	4°42	27°39	14°0	23°32	8°53	25°15	16°32	16°58	25°21	23°55	9°51	22°11	W21
T 22	12 30 54	9°39'24	10°R22	3°55	27°16	14°3	23°25	8°55	25°14	16°30	16°57	25°13	23°52	9°58	22°7	T 22
F 23	12 34 51	10°38'19	22°14	3°11	26°52	14°7	23°18	8°57	25°12	16°29	16°56	25°4	23°49	10°5	22°2	F 23
S 24	12 38 47	11°37'12	4°E7	2°29	26°25	14°12	23°11	8°58	25°10	16°27	16°55	24°57	23°46	10°11	21°58	S 24
S 25	12 42 44	12°36'04	16°4	1°50	25°56	14°17	23°4	9°0	25°9	16°25	16°54	24°52	23°43	10°18	21°54	S 25
M26	12 46 40	13°34'53	28°7	1°16	25°26	14°23	22°57	9°1	25°7	16°24	16°54	24°48	23°39	10°25	21°50	M26
T 27	12 50 37	14°33'41	10°E23	0°46	24°53	14°30	22°50	9°3	25°6	16°22	16°53	24°D47	23°36	10°32	21°45	T 27
W28	12 54 33	15°32'27	22°55	0°20	24°20	14°37	22°43	9°4	25°5	16°20	16°52	24°47	23°33	10°38	21°41	W28
T 29	12 58 30	16°31'11	5°E48	29°H59	23°45	14°45	22°37	9°5	25°3	16°19	16°52	24°48	23°30	10°45	21°37	T 29
F 30	13 2 26	17°29'54	19°6	29°45	23°9	14°53	22°30	9°6	25°2	16°17	16°51	24°R49	23°27	10°52	21°33	F 30
S 31	13 6 23	18°Y28'35	2°H52	29°H35	22°Y32	15°R 2	22°R24	9°E7	25°R 1	16°E16	16°R51	24°R49	23°R23	10°M58	21°R29	S 31

Delta T = 06m13s

Julian Calendar 1 March 1459 == Greg. Calendar 10 March 1459

APRIL 1459 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	13 10 20	19°Y27'14	17°H 6	29°D30	21°R54	15°R12	22°R17	9°E 8	24°R59	16°R14	16°R50	24°R47	23°R20	11°M 5	21°R25	S 1
M 2	13 14 16	20°25'51	1°Y46	29°H31	21°Y17	15°22	22°R11	9°9	24°R58	16°E12	16°R50	24°R42	23°R17	11°12	21°R22	M 2
T 3	13 18 13	21°24'27	16°47	29°36	20°39	15°33	22°5	9°10	24°57	16°11	16°49	24°36	23°14	11°19	21°18	T 3
W 4	13 22 9	22°23'00	2°E 0	29°47	20°1	15°44	21°59	9°10	24°56	16°9	16°49	24°28	23°11	11°25	21°14	W 4
T 5	13 26 6	23°21'32	17°14	0°Y 2	19°24	15°56	21°53	9°11	24°55	16°7	16°48	24°19	23°8	11°32	21°11	T 5
F 6	13 30 2	24°20'01	2°II18	0°22	18°47	16°9	21°48	9°11	24°54	16°6	16°48	24°10	23°4	11°39	21°7	F 6
S 7	13 33 59	25°18'29	17°4	0°46	18°11	16°22	21°42	9°12	24°53	16°4	16°47	24°3	23°1	11°46	21°4	S 7
S 8	13 37 55	26°16'54	1°E25	1°15	17°37	16°35	21°37	9°12	24°52	16°2	16°47	23°59	22°58	11°52	21°0	S 8
M 9	13 41 52	27°15'17	15°20	1°48	17°3	16°49	21°32	9°12	24°52	16°1	16°47	23°56	22°55	11°59	20°57	M 9
T 10	13 45 49	28°13'38	28°48	2°25	16°31	17°4	21°27	9°R12	24°51	15°59	16°46	23°D56	22°52	12°6	20°54	T 10
W11	13 49 45	29°11'57	11°R53	3°6	16°1	17°19	21°22	9°12	24°50	15°58	16°46	23°56	22°49	12°12	20°51	W11
T 12	13 53 42	0°E10'14	24°37	3°50	15°33	17°34	21°17	9°12	24°49	15°56	16°46	23°R56	22°45	12°19	20°48	T 12
F 13	13 57 38	1°8'29	7°R 5	4°38	15°6	17°50	21°12	9°12	24°49	15°55	16°46	23°56	22°42	12°26	20°45	F 13
S 14	14 1 35	2°6'41	19°20	5°30	14°42	18°7	21°8	9°11	24°48	15°53	16°45	23°53	22°39	12°33	20°42	S 14
S 15	14 5 31	3°4'52	1°E26	6°24	14°19	18°24	21°4	9°11	24°48	15°51	16°45	23°47	22°36	12°39	20°40	S 15
M16	14 9 28	4°3'01	13°26	7°22	13°59	18°41	21°0	9°10	24°47	15°50	16°45	23°39	22°33	12°46	20°37	M16
T 17	14 13 24	5°1'08	25°22	8°23	13°42	18°58	20°56	9°10	24°47	15°48	16°45	23°28	22°29	12°53	20°35	T 17
W18	14 17 21	5°59'13	7°R16	9°26	13°26	19°17	20°52	9°9	24°47	15°47	16°45	23°16	22°26	12°59	20°32	W18
T 19	14 21 18	6°57'16	19°9	10°32	13°14	19°35	20°48	9°8	24°46	15°45	16°45	23°2	22°23	13°6	20°30	T 19
F 20	14 25 14	7°55'18	1°E 2	11°41	13°3	19°54	20°45	9°7	24°46	15°44	16°D45	22°49	22°20	13°13	20°28	F 20
S 21	14 29 11	8°53'19	12°57	12°53	12°55	20°13	20°41	9°6	24°46	15°42	16°45	22°38	22°17	13°20	20°26	S 21
S 22	14 33 7	9°51'18	24°56	14°7	12°50	20°33	20°38	9°5	24°46	15°41	16°45	22°28	22°14	13°26	20°24	S 22
M23	14 37 4	10°49'15	7°E 3	15°23	12°47	20°53	20°35	9°4	24°46	15°39	16°45	22°22	22°10	13°33	20°22	M23
T 24	14 41 0	11°47'11	19°19	16°42	12°D46	21°13	20°33	9°2	24°D46	15°38	16°45	22°17	22°7	13°40	20°20	T 24
W25	14 44 57	12°45'06	1°E50	18°3	12°48	21°34	20°30	9°1	24°46	15°37	16°45	22°16	22°4	13°46	20°18	W25
T 26	14 48 53	13°42'59	14°39	19°27	12°52	21°55	20°28	8°59	24°46	15°35	16°45	22°15	22°1	13°53	20°17	T 26
F 27	14 52 50	14°40'52	27°51	20°53	12°58	22°17	20°25	8°58	24°46	15°34	16°46	22°15	21°58	14°0	20°15	F 27
S 28	14 56 47	15°38'43	11°H29	22°21	13°7	22°38	20°23	8°56	24°46	15°32	16°46	22°14	21°54	14°7	20°14	S 28
S 29	15 0 43	16°36'32	25°35	23°51	13°17	23°1	20°21	8°54	24°46	15°31	16°46	22°12	21°51	14°13	20°12	S 29
M30	15 4 40	17°B34'21	10°Y 9	25°Y23	13°Y30	23°R23	20°R20	8°E53	24°R47	15°E30	16°R46	22°R 6	21°R48	14°M20	20°R11	M30

Delta T = 06m13s

Julian Calendar

## ASTRODIENST EPHEMERIS for the year 1459

geocentric

MAY 1459 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	15 8 36	18°32'08"	25°07' 7	26°05'58"	13°04'45"	23°04'46"	20°08'18"	8°05'51"	24°04'47"	15°08'28"	16°04'47"	21°08'58"	21°04'45"	14°04'27"	20°08'10"	T 1
W 2	15 12 33	19°29'54"	10°08'21"	28°35' 14° 1	24° 9	20°17' 17	8°03'49"	24°47' 15°02'27"	16°47' 21°04'48"	21°42' 14°34' 20°08'19"	W 2					
T 3	15 16 29	20°27'39"	25°41' 08°14'	14°20' 24°32'	20°16' 8°46'	24°48' 15°26'	16°47' 21°37'	21°39' 14°40' 20° 8	T 3							
F 4	15 20 26	21°25'23"	10°11'54"	1°55' 14°40'	24°56' 20°15'	8°44' 24°48'	15°24' 16°48'	21°27' 21°35'	14°47' 20° 8	F 4						
S 5	15 24 22	22°23'05"	25°51' 3°39'	15° 3	25°20' 20°14'	8°42' 24°49'	15°23' 16°48'	21°18' 21°32'	14°54' 20° 7	S 5						
S 6	15 28 19	23°20'45"	10°08'24"	5°24' 15°26'	25°44' 20°13'	8°40' 24°50'	15°22' 16°49'	21°11' 21°29'	15° 0	20° 7	S 6					
M 7	15 32 16	24°18'24"	24°28' 7°12'	15°52' 26° 9	20°13' 8°37'	24°50' 15°21'	16°49' 21° 7	21°26' 15° 7	20° 6	M 7						
T 8	15 36 12	25°16'02"	8°02' 3	9° 2	16°19' 26°34'	20°13' 8°35'	24°51' 15°20'	16°50' 21° 5	21°23' 15°14'	20° 6	T 8					
W 9	15 40 9	26°13'38"	21°10' 10°53'	16°48' 26°59'	20°13' 8°32'	24°52' 15°18'	16°50' 21° 5	21°20' 15°21'	20° 6	W 9						
T 10	15 44 5	27°11'12"	3°05'54"	12°48' 17°18'	27°24' 20°13'	8°29' 24°53'	15°17' 16°51'	21° 5	21°16' 15°27'	20°10' 6	T 10					
F 11	15 48 2	28° 8'45"	16°19' 14°44'	17°49' 27°50'	20°13' 8°27'	24°54' 15°16'	16°51' 21° 4	21°13' 15°34'	20° 6	F 11						
S 12	15 51 58	29° 6'16"	28°30' 16°42'	18°22' 28°16'	20°13' 8°24'	24°54' 15°15'	16°52' 21° 1	21°10' 15°41'	20° 6	S 12						
S 13	15 55 55	0°11'34"	10°08'31"	18°42' 18°56'	28°42' 20°14'	8°21' 24°55'	15°14' 16°52'	20°56' 21° 7	15°48' 20° 7	S 13						
M14	15 59 51	1° 1'15"	22°26' 20°44'	19°32' 29° 8	20°15' 8°18'	24°57' 15°13'	16°53' 20°48'	21° 4	15°54' 20° 7	M14						
T 15	16 3 48	1°58'43"	4°04'18"	22°48' 20° 9	29°35' 20°16'	8°15' 24°58'	15°12' 16°54'	20°37' 21° 0	16° 1	20° 7	T 15					
W16	16 7 44	2°56'09"	16°10' 24°54'	20°46' 0°02'2	20°17' 8°12'	24°59' 15°11'	16°55' 20°24'	20°57' 16° 8	20° 8	W16						
T 17	16 11 41	3°53'35"	28° 4	27° 1	21°25' 0°29'	20°19' 8° 8	25° 0	15°10' 16°55'	20°11' 20°54'	16°14' 20° 9	T 17					
F 18	16 15 38	4°50'59"	10°08' 2	29° 9	22° 5	0°56' 20°20'	8° 5	25° 1	15° 9	16°56' 19°58'	20°51' 16°21'	20°10' 6	F 18			
S 19	16 19 34	5°48'23"	22° 2	1°11'19"	22°47' 1°24'	20°22' 8° 2	25° 3	15° 8	16°57' 19°46'	20°48' 16°28'	20°11' 6	S 19				
S 20	16 23 31	6°45'45"	4°08' 8	3°30' 23°29'	1°52' 20°24'	7°59' 25° 4	15° 7	16°58' 19°37'	20°45' 16°35'	20°12' 6	S 20					
M21	16 27 27	7°43'07"	16°23' 5°41'	24°12' 2°20'	20°26' 7°55'	25° 5	15° 6	16°59' 19°30'	20°41' 16°41'	20°13' 6	M21					
T 22	16 31 24	8°40'29"	28°47' 7°53'	24°56' 2°48'	20°28' 7°52'	25° 7	15° 6	16°59' 19°26'	20°38' 16°48'	20°14' 6	T 22					
W23	16 35 20	9°37'49"	11°08'23"	10° 5	25°41' 3°16'	20°30' 7°48'	25° 8	15° 5	17° 0	19°24' 20°35'	16°55' 20°16'	W23				
T 24	16 39 17	10°35'09"	24°15' 12°17'	26°27' 3°45'	20°33' 7°44'	25°10' 15° 4	17° 1	19°D24' 20°32'	17° 1	20°17' 6	T 24					
F 25	16 43 14	11°32'29"	7°08'26"	14°29' 27°13'	4°14' 20°36'	7°41' 25°11'	15° 3	17° 2	19°R24' 20°29'	17° 8	20°19' 6	F 25				
S 26	16 47 10	12°29'48"	20°59' 16°40'	28° 1	4°43' 20°39'	7°37' 25°13'	15° 3	17° 3	19°24' 20°26'	17°15' 20°21' 6	S 26					
S 27	16 51 7	13°27'06"	4°05'56"	18°50' 28°49'	5°12' 20°42'	7°33' 25°15'	15° 2	17° 4	19°22' 20°22'	17°22' 20°23' 6	S 27					
M28	16 55 3	14°24'25"	19°18' 20°59'	29°38' 5°41'	20°45' 7°29'	25°16' 15° 1	17° 5	19°18' 20°19'	17°28' 20°25' 6	M28						
T 29	16 59 0	15°21'42"	4°08' 2	23° 6	0°08'27'	6°11' 20°48'	7°25' 25°18'	15° 1	17° 6	19°12' 20°16'	17°35' 20°27' 6	T 29				
W30	17 2 56	16°19'00"	19° 2	25°12' 1°18'	6°41' 20°52'	7°22' 25°20'	15° 0	17° 7	19° 4	20°13' 17°42'	20°29' 6	W30				
T 31	17 6 53	17°16'17"	4°11'11"	27°11'17"	2°08' 9	7°04'11"	20°05'56"	7°03'18"	25°02'22"	14°05'59"	17°04' 8	18°05'55"	20°04'10"	17°04'49"	20°08'31"	T 31

Delta T = 06m12s

Julian Calendar 1 May 1459 == Greg. Calendar 10 May 1459

JUNE 1459 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	17 10 49	18°11'33"	19°11'17"	29°11'20"	3°08' 0	7°04'41"	21°08' 0	7°08'14"	25°02'24"	14°08'59"	17°04'10"	18°08'46"	20°04' 6	17°04'55"	20°08'34"	F 1
S 2	17 14 46	19°10'50"	4°08'11"	19°02'20"	3°52' 8°11'	21° 4	7°03'10"	25°26' 14°05'58"	17°11' 18°04'38"	20° 3	18° 2	20°36' 6	S 2			
S 3	17 18 43	20° 8'06"	18°45' 3°19'	4°45' 8°42'	21° 8	7° 5	25°28' 14°58'	17°12' 18°33'	20° 0	18° 9	20°39' 6	S 3				
M 4	17 22 39	21° 5'21"	2°02'53"	5°16' 5°38'	9°13' 21°12'	7° 1	25°30' 14°57'	17°13' 18°30'	19°57' 18°15'	20°42' 6	M 4					
T 5	17 26 36	22° 2'35"	16°33' 7°11'	6°32' 9°43'	21°17' 6°57'	25°32' 14°57'	17°14' 18°D29'	19°54' 18°22'	20°45' 6	T 5						
W 6	17 30 32	22°59'49"	29°45' 9° 3	7°27' 10°14'	21°22' 6°53'	25°34' 14°57'	17°15' 18°29'	19°51' 18°29'	20°48' 6	W 6						
T 7	17 34 29	23°57'02"	12°08'33"	10°53' 8°21'	10°46' 21°27'	6°49' 25°36'	14°56' 17°17'	18°30' 19°47'	18°36' 20°51'	T 7						
F 8	17 38 25	24°54'14"	25° 1	12°41' 9°17'	11°17' 21°32'	6°44' 25°39'	14°56' 17°18'	18°R31' 19°44'	18°42' 20°54'	F 8						
S 9	17 42 22	25°51'26"	7°04'12"	14°27' 10°13'	11°49' 21°37'	6°40' 25°41'	14°56' 17°19'	18°30' 19°41'	18°49' 20°57'	S 9						
S 10	17 46 18	26°48'37"	19°13' 16°11'	11° 9	12°20' 21°42'	6°36' 25°43'	14°55' 17°21'	18°27' 19°38'	18°56' 21° 1	S 10						
M11	17 50 15	27°45'48"	1°04' 7	17°52' 12° 6	12°52' 21°48'	6°32' 25°45'	14°55' 17°22'	18°22' 19°35'	19° 3	21° 4	M11					
T 12	17 54 12	28°42'58"	12°59' 19°31'	13° 3	13°24' 21°53'	6°27' 25°48'	14°55' 17°23'	18°16' 19°32'	19° 9	21° 8	T 12					
W13	17 58 8	29°40'08"	24°52' 21° 8	14° 0	13°56' 21°59'	6°23' 25°50'	14°55' 17°25'	18° 8	19°28' 19°16'	W13						
T 14	18 2 5	0°03'37'18"	6°04'49"	22°43' 14°58'	14°29' 22° 5	6°19' 25°53'	14°55' 17°26'	17°59' 19°25'	19°23' 21°15'	T 14						
F 15	18 6 1	1°34'28"	18°52' 24°15'	15°57' 15° 1	22°11' 6°14'	25°55' 14°54'	17°28' 17°51'	19°22' 19°29'	21°19' 6	F 15						
S 16	18 9 58	2°31'37"	1°03' 2	25°45' 16°55'	15°34' 22°17'	6°10' 25°58'	14°54' 17°29'	17°43' 19°19'	19°36' 21°23'	S 16						
S 17	18 13 54	3°28'47"	13°20' 27°12'	17°55' 16° 6	22°23' 6° 5	26° 0	14°54' 17°30'	17°37' 19°16'	19°43' 21°27'	S 17						
M18	18 17 51	4°25'56"	25°48' 28°38'	18°54' 16°39'	22°30' 6° 1	26° 3	14°D54' 17°32'	17°33' 19°12'	19°50' 21°32'	M18						
T 19	18 21 47	5°23'06"	8°04'27"	0°04' 1	19°54' 17°12'	22°36' 5°57'	26° 6	14°54' 17°33'	17°31' 19° 9	19°56' 21°36'	T 19					
W20	18 25 44	6°20'16"	21°18' 1°21'	20°54' 17°45'	22°43' 5°52'	26° 8	14°54' 17°35'	17°D30' 19° 6	20° 3	21°40' 6	W20					
T 21	18 29 41	7°17'26"	4°08'22"	2°39' 21°54'	18°19' 22°50'	5°48' 26°11'	14°55' 17°36'	17°31' 19° 3	20°10' 21°45'	T 21						
F 22	18 33 37	8°14'36"	17°41' 3°55'	22°55' 18°52'	22°57' 5°43'	26°14' 14°55'	17°38' 17°33'	19° 0	20°16' 21°49'	F 22						
S 23	18 37 34	9°11'47"	1°04'17"	5° 8	23°56' 19°26'	23° 4	5°39' 26°17'	14°55' 17°40'	17°34' 18°57'	20°23' 21°54'	S 23					
S 24	18 41 30	10° 8'59"	15°11' 6°18'	24°58' 19°59'	23°11' 5°35'	26°20' 14°55'	17°41' 17°R34'	18°53' 20°30'	21°59' 6	S 24						
M25	18 45 27	11° 6'11"	29°22' 7°26'	25°59' 20°33'	23°19' 5°30'	26°22' 14°55'	17°43' 17°33'	18°50' 20°37'	22° 3	M25						
T 26	18 49 23	12° 3'23"	13°08'50"	8°31' 27° 1	21° 7	23°26' 5°26'	26°25' 14°55'	17°44' 17°30'	18°47' 20°43'	22° 8	T 26					
W27	18 53 20	13° 0'36"	28°30' 9°33'	28° 4	21°41' 23°34'	5°21' 26°28'	14°56' 17°46'	17°26' 18°44'	20°50' 22°13'	W27						
T 28	18 57 16	13°57'50"	13°11'16"	10°33' 29° 6	22°15' 23°42'	5°17' 26°31'	14°56' 17°48'	17°21' 18°41'	20°57' 22°19'	T 28						
F 29	19 1 13	14°55'04"	28° 1	11°29' 0°11' 9	22°50' 23°49'	5°13' 26°34'	14°56' 17°49'	17°16' 18°38'	21° 4	22°24' 6	F 29					
S 30	19 5 10	15°02'19"	12°08'38"	12°02'22"	1°11'12"	23°04'24"	23°05'57"	5°03' 26°03'37"	14°05'57"	17°04'51"	17°04'12"	18°04'34"	21°04'10"	22°08'29"	S 30	

Delta T = 06m12s

Julian Calendar

ASTRODIENST EPHEMERIS for the year 1459  
geocentric

JULY 1459 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	19 9 6	16 <sup>5</sup> 49'34	26 <sup>5</sup> 59	13 <sup>5</sup> 11	2 <sup>11</sup> 15	23 <sup>11</sup> 59	24 <sup>11</sup> 6	5 <sup>5</sup> R 4	26 <sup>10</sup> 40	14 <sup>15</sup> 57	17 <sup>10</sup> 53	17 <sup>10</sup> R10	18 <sup>10</sup> 31	21 <sup>11</sup> 17	22 <sup>11</sup> 34	S 1
M 2	19 13 3	17 <sup>10</sup> 46'50	11 <sup>10</sup> 1	13 <sup>5</sup> 58	3 <sup>19</sup>	24 <sup>10</sup> 34	24 <sup>10</sup> 14	5 <sup>5</sup> 3 0	26 <sup>10</sup> 43	14 <sup>15</sup> 58	17 <sup>10</sup> 54	17 <sup>10</sup> D 8	18 <sup>10</sup> 28	21 <sup>11</sup> 24	22 <sup>11</sup> 40	M 2
T 3	19 16 59	18 <sup>10</sup> 44'06	24 <sup>10</sup> 38	14 <sup>10</sup> 40	4 <sup>22</sup>	25 <sup>10</sup> 8	24 <sup>10</sup> 22	4 <sup>10</sup> 56	26 <sup>10</sup> 47	14 <sup>15</sup> 58	17 <sup>10</sup> 56	17 <sup>10</sup> 50 9	18 <sup>10</sup> 25	21 <sup>11</sup> 30	22 <sup>11</sup> 45	T 3
W 4	19 20 56	19 <sup>10</sup> 41'22	7 <sup>11</sup> 51	15 <sup>10</sup> 19	5 <sup>26</sup>	25 <sup>10</sup> 43	24 <sup>10</sup> 31	4 <sup>10</sup> 51	26 <sup>10</sup> 50	14 <sup>15</sup> 59	17 <sup>10</sup> 58	17 <sup>10</sup> 10	18 <sup>10</sup> 22	21 <sup>11</sup> 37	22 <sup>11</sup> 51	W 4
T 5	19 24 52	20 <sup>10</sup> 38'38	20 <sup>10</sup> 42	15 <sup>10</sup> 55	6 <sup>31</sup>	26 <sup>10</sup> 18	24 <sup>10</sup> 39	4 <sup>10</sup> 47	26 <sup>10</sup> 53	14 <sup>15</sup> 59	18 <sup>10</sup> 0	17 <sup>10</sup> 11	18 <sup>10</sup> 18	21 <sup>11</sup> 44	22 <sup>11</sup> 57	T 5
F 6	19 28 49	21 <sup>10</sup> 35'55	3 <sup>11</sup> 12	16 <sup>10</sup> 26	7 <sup>35</sup>	26 <sup>10</sup> 54	24 <sup>10</sup> 48	4 <sup>10</sup> 43	26 <sup>10</sup> 56	15 <sup>10</sup> 0	18 <sup>10</sup> 1	17 <sup>10</sup> 13	18 <sup>10</sup> 15	21 <sup>11</sup> 51	23 <sup>12</sup> 2	F 6
S 7	19 32 45	22 <sup>10</sup> 33'12	15 <sup>10</sup> 26	16 <sup>10</sup> 52	8 <sup>39</sup>	27 <sup>10</sup> 29	24 <sup>10</sup> 57	4 <sup>10</sup> 39	26 <sup>10</sup> 59	15 <sup>10</sup> 0	18 <sup>10</sup> 3	17 <sup>10</sup> 14	18 <sup>10</sup> 12	21 <sup>11</sup> 57	23 <sup>12</sup> 8	S 7
S 8	19 36 42	23 <sup>10</sup> 30'30	27 <sup>10</sup> 29	17 <sup>10</sup> 15	9 <sup>44</sup>	28 <sup>10</sup> 4	25 <sup>10</sup> 5	4 <sup>10</sup> 35	27 <sup>10</sup> 3	15 <sup>10</sup> 1	18 <sup>10</sup> 5	17 <sup>10</sup> R14	18 <sup>10</sup> 9	22 <sup>12</sup> 4	23 <sup>12</sup> 14	S 8
M 9	19 40 39	24 <sup>10</sup> 27'48	9 <sup>11</sup> 24	17 <sup>10</sup> 33	10 <sup>49</sup>	28 <sup>10</sup> 40	25 <sup>10</sup> 14	4 <sup>10</sup> 31	27 <sup>10</sup> 6	15 <sup>10</sup> 2	18 <sup>10</sup> 7	17 <sup>10</sup> 13	18 <sup>10</sup> 6	22 <sup>12</sup> 11	23 <sup>12</sup> 20	M 9
T 10	19 44 35	25 <sup>10</sup> 25'06	21 <sup>11</sup> 17	17 <sup>10</sup> 46	11 <sup>54</sup>	29 <sup>10</sup> 16	25 <sup>10</sup> 24	4 <sup>10</sup> 27	27 <sup>10</sup> 9	15 <sup>10</sup> 2	18 <sup>10</sup> 8	17 <sup>10</sup> 11	18 <sup>10</sup> 3	22 <sup>12</sup> 18	23 <sup>12</sup> 26	T 10
W11	19 48 32	26 <sup>10</sup> 22'25	3 <sup>11</sup> 12	17 <sup>10</sup> 55	13 <sup>0</sup>	29 <sup>10</sup> 51	25 <sup>10</sup> 33	4 <sup>10</sup> 23	27 <sup>10</sup> 13	15 <sup>10</sup> 3	18 <sup>10</sup> 10	17 <sup>10</sup> 8	17 <sup>10</sup> 59	22 <sup>12</sup> 24	23 <sup>12</sup> 32	W11
T 12	19 52 28	27 <sup>10</sup> 19'45	15 <sup>11</sup> 12	17 <sup>10</sup> R58	14 <sup>5</sup>	0 <sup>11</sup> 27	25 <sup>10</sup> 42	4 <sup>10</sup> 19	27 <sup>10</sup> 16	15 <sup>10</sup> 4	18 <sup>10</sup> 12	17 <sup>10</sup> 5	17 <sup>10</sup> 56	22 <sup>12</sup> 31	23 <sup>12</sup> 39	T 12
F 13	19 56 25	28 <sup>10</sup> 17'05	27 <sup>11</sup> 21	17 <sup>10</sup> 57	15 <sup>11</sup> 1	1 <sup>11</sup> 3	25 <sup>10</sup> 51	4 <sup>10</sup> 15	27 <sup>10</sup> 19	15 <sup>10</sup> 4	18 <sup>10</sup> 14	17 <sup>10</sup> 2	17 <sup>10</sup> 53	22 <sup>12</sup> 38	23 <sup>12</sup> 45	F 13
S 14	20 0 21	29 <sup>10</sup> 14'26	9 <sup>11</sup> 40	17 <sup>10</sup> 50	16 <sup>11</sup> 17	1 <sup>11</sup> 39	26 <sup>10</sup> 1	4 <sup>10</sup> 12	27 <sup>10</sup> 23	15 <sup>10</sup> 5	18 <sup>10</sup> 16	17 <sup>10</sup> 0	17 <sup>10</sup> 50	22 <sup>12</sup> 44	23 <sup>12</sup> 51	S 14
S 15	20 4 18	0 <sup>11</sup> 11'47	22 <sup>11</sup> 12	17 <sup>10</sup> 38	17 <sup>10</sup> 23	2 <sup>11</sup> 16	26 <sup>10</sup> 10	4 <sup>10</sup> 8	27 <sup>10</sup> 26	15 <sup>10</sup> 6	18 <sup>10</sup> 18	16 <sup>10</sup> 58	17 <sup>10</sup> 47	22 <sup>12</sup> 51	23 <sup>12</sup> 58	S 15
M16	20 8 14	1 <sup>11</sup> 9'10	4 <sup>11</sup> 57	17 <sup>10</sup> 21	18 <sup>10</sup> 29	2 <sup>11</sup> 52	26 <sup>10</sup> 20	4 <sup>10</sup> 4	27 <sup>10</sup> 30	15 <sup>10</sup> 7	18 <sup>10</sup> 19	16 <sup>10</sup> 57	17 <sup>10</sup> 43	22 <sup>12</sup> 58	24 <sup>13</sup> 4	M16
T 17	20 12 11	2 <sup>11</sup> 6'33	17 <sup>10</sup> 56	16 <sup>10</sup> 59	19 <sup>10</sup> 36	3 <sup>11</sup> 28	26 <sup>10</sup> 30	4 <sup>10</sup> 0	27 <sup>10</sup> 33	15 <sup>10</sup> 8	18 <sup>10</sup> 21	16 <sup>10</sup> D56	17 <sup>10</sup> 40	23 <sup>12</sup> 5	24 <sup>13</sup> 11	T 17
W18	20 16 8	3 <sup>11</sup> 3'58	1 <sup>11</sup> 8	16 <sup>10</sup> 32	20 <sup>10</sup> 42	4 <sup>11</sup> 5	26 <sup>10</sup> 40	3 <sup>11</sup> 57	27 <sup>10</sup> 37	15 <sup>10</sup> 9	18 <sup>10</sup> 23	16 <sup>10</sup> 57	17 <sup>10</sup> 37	23 <sup>12</sup> 11	24 <sup>13</sup> 18	W18
T 19	20 20 4	4 <sup>11</sup> 1'23	14 <sup>11</sup> 33	16 <sup>10</sup> 1	21 <sup>10</sup> 49	4 <sup>11</sup> 41	26 <sup>10</sup> 50	3 <sup>11</sup> 53	27 <sup>10</sup> 40	15 <sup>10</sup> 10	18 <sup>10</sup> 25	16 <sup>10</sup> 58	17 <sup>10</sup> 34	23 <sup>12</sup> 18	24 <sup>13</sup> 24	T 19
F 20	20 24 1	4 <sup>11</sup> 58'50	28 <sup>11</sup> 11	15 <sup>10</sup> 25	22 <sup>10</sup> 56	5 <sup>11</sup> 18	27 <sup>10</sup> 0	3 <sup>11</sup> 50	27 <sup>10</sup> 44	15 <sup>10</sup> 11	18 <sup>10</sup> 27	16 <sup>10</sup> 59	17 <sup>10</sup> 31	23 <sup>12</sup> 25	24 <sup>13</sup> 31	F 20
S 21	20 27 57	5 <sup>11</sup> 56'18	12 <sup>11</sup> 1	14 <sup>10</sup> 45	24 <sup>10</sup> 3	5 <sup>11</sup> 55	27 <sup>10</sup> 10	3 <sup>11</sup> 47	27 <sup>10</sup> 47	15 <sup>10</sup> 12	18 <sup>10</sup> 29	17 <sup>10</sup> 0	17 <sup>10</sup> 28	23 <sup>12</sup> 31	24 <sup>13</sup> 38	S 21
S 22	20 31 54	6 <sup>11</sup> 53'47	26 <sup>11</sup> 1	14 <sup>10</sup> 2	25 <sup>10</sup> 10	6 <sup>11</sup> 32	27 <sup>10</sup> 20	3 <sup>11</sup> 43	27 <sup>10</sup> 51	15 <sup>10</sup> 13	18 <sup>10</sup> 31	17 <sup>10</sup> 0	17 <sup>10</sup> 24	23 <sup>12</sup> 38	24 <sup>13</sup> 45	S 22
M23	20 35 50	7 <sup>11</sup> 51'17	10 <sup>11</sup> 10	13 <sup>10</sup> 17	26 <sup>10</sup> 18	7 <sup>11</sup> 9	27 <sup>10</sup> 30	3 <sup>11</sup> 40	27 <sup>10</sup> 54	15 <sup>10</sup> 14	18 <sup>10</sup> 33	17 <sup>10</sup> R 0	17 <sup>10</sup> 21	23 <sup>12</sup> 45	24 <sup>13</sup> 52	M23
T 24	20 39 47	8 <sup>11</sup> 48'50	24 <sup>11</sup> 27	12 <sup>10</sup> 30	27 <sup>10</sup> 25	7 <sup>11</sup> 46	27 <sup>10</sup> 41	3 <sup>11</sup> 37	27 <sup>10</sup> 58	15 <sup>10</sup> 15	18 <sup>10</sup> 35	17 <sup>10</sup> 0	17 <sup>10</sup> 18	23 <sup>12</sup> 52	24 <sup>13</sup> 59	T 24
W25	20 43 43	9 <sup>11</sup> 46'23	8 <sup>11</sup> 47	11 <sup>10</sup> 41	28 <sup>10</sup> 33	8 <sup>11</sup> 23	27 <sup>10</sup> 51	3 <sup>11</sup> 34	28 <sup>10</sup> 1	15 <sup>10</sup> 16	18 <sup>10</sup> 36	16 <sup>10</sup> 59	17 <sup>10</sup> 15	23 <sup>12</sup> 58	25 <sup>13</sup> 6	W25
T 26	20 47 40	10 <sup>11</sup> 43'58	23 <sup>11</sup> 8	10 <sup>10</sup> 52	29 <sup>10</sup> 41	9 <sup>11</sup> 1	28 <sup>10</sup> 2	3 <sup>11</sup> 30	28 <sup>10</sup> 5	15 <sup>10</sup> 17	18 <sup>10</sup> 38	16 <sup>10</sup> 59	17 <sup>10</sup> 12	24 <sup>13</sup> 5	25 <sup>13</sup> 13	T 26
F 27	20 51 37	11 <sup>11</sup> 41'35	7 <sup>11</sup> 27	10 <sup>10</sup> 5	0 <sup>11</sup> 49	9 <sup>11</sup> 38	28 <sup>10</sup> 13	3 <sup>11</sup> 28	28 <sup>10</sup> 9	15 <sup>10</sup> 19	18 <sup>10</sup> 40	16 <sup>10</sup> 58	17 <sup>10</sup> 9	24 <sup>13</sup> 12	25 <sup>13</sup> 20	F 27
S 28	20 55 33	12 <sup>11</sup> 39'13	21 <sup>11</sup> 37	9 <sup>10</sup> 18	1 <sup>11</sup> 57	10 <sup>10</sup> 16	28 <sup>10</sup> 23	3 <sup>11</sup> 25	28 <sup>10</sup> 12	15 <sup>10</sup> 20	18 <sup>10</sup> 42	16 <sup>10</sup> 58	17 <sup>10</sup> 5	24 <sup>13</sup> 19	25 <sup>13</sup> 28	S 28
S 29	20 59 30	13 <sup>11</sup> 36'52	5 <sup>11</sup> 16	8 <sup>10</sup> 35	3 <sup>11</sup> 5	10 <sup>10</sup> 53	28 <sup>10</sup> 34	3 <sup>11</sup> 22	28 <sup>10</sup> 16	15 <sup>10</sup> 21	18 <sup>10</sup> 44	16 <sup>10</sup> 57	17 <sup>10</sup> 2	24 <sup>13</sup> 25	25 <sup>13</sup> 35	S 29
M30	21 3 26	14 <sup>11</sup> 34'33	19 <sup>11</sup> 9	7 <sup>10</sup> 54	4 <sup>11</sup> 13	11 <sup>10</sup> 31	28 <sup>10</sup> 45	3 <sup>11</sup> 19	28 <sup>10</sup> 20	15 <sup>10</sup> 22	18 <sup>10</sup> 46	16 <sup>10</sup> D57	16 <sup>10</sup> 59	24 <sup>13</sup> 32	25 <sup>13</sup> 42	M30
T 31	21 7 23	15 <sup>11</sup> 32'15	2 <sup>11</sup> 45	7 <sup>10</sup> 19	5 <sup>11</sup> 22	12 <sup>11</sup> 9	28 <sup>10</sup> 56	3 <sup>11</sup> 16	28 <sup>10</sup> 23	15 <sup>10</sup> 24	18 <sup>10</sup> 48	16 <sup>10</sup> 57	16 <sup>10</sup> 56	24 <sup>13</sup> 39	25 <sup>13</sup> 50	T 31

Delta T = 06m12s

Julian Calendar 1 July 1459 == Greg. Calendar 10 July 1459

AUGUST 1459 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	21 11 19	16 <sup>11</sup> 29'58	15 <sup>11</sup> 51	6 <sup>10</sup> R48	6 <sup>11</sup> 31	12 <sup>11</sup> 47	29 <sup>11</sup> 7	3 <sup>11</sup> R14	28 <sup>10</sup> 27	15 <sup>10</sup> 25	18 <sup>10</sup> 50	16 <sup>10</sup> R57	16 <sup>10</sup> 53	24 <sup>11</sup> 45	25 <sup>11</sup> 57	W 1
T 2	21 15 16	17 <sup>10</sup> 27'42	28 <sup>10</sup> 38	6 <sup>10</sup> 23	7 <sup>39</sup>	13 <sup>10</sup> 25	29 <sup>10</sup> 18	3 <sup>11</sup> 11	28 <sup>10</sup> 31	15 <sup>10</sup> 26	18 <sup>10</sup> 52	16 <sup>10</sup> 57	16 <sup>10</sup> 49	24 <sup>11</sup> 52	26 <sup>11</sup> 5	T 2
F 3	21 19 12	18 <sup>10</sup> 25'27	11 <sup>11</sup> 8	6 <sup>10</sup> 4	8 <sup>48</sup>	14 <sup>10</sup> 3	29 <sup>10</sup> 29	3 <sup>11</sup> 9	28 <sup>10</sup> 34	15 <sup>10</sup> 28	18 <sup>10</sup> 54	16 <sup>10</sup> 57	16 <sup>10</sup> 46	24 <sup>11</sup> 59	26 <sup>11</sup> 12	F 3
S 4	21 23 9	19 <sup>10</sup> 23'14	23 <sup>10</sup> 23	5 <sup>10</sup> 53	9 <sup>57</sup>	14 <sup>10</sup> 41	29 <sup>10</sup> 40	3 <sup>11</sup> 6	28 <sup>10</sup> 38	15 <sup>10</sup> 29	18 <sup>10</sup> 56	16 <sup>10</sup> 57	16 <sup>10</sup> 43	25 <sup>11</sup> 6	26 <sup>11</sup> 20	S 4
S 5	21 27 6	20 <sup>10</sup> 21'02	5 <sup>11</sup> 27	5 <sup>10</sup> D48	11 <sup>6</sup>	15 <sup>10</sup> 20	29 <sup>10</sup> 52	3 <sup>11</sup> 4	28 <sup>10</sup> 42	15 <sup>10</sup> 31	18 <sup>10</sup> 58	16 <sup>10</sup> 57	16 <sup>10</sup> 40	25 <sup>11</sup> 12	26 <sup>11</sup> 28	S 5
M 6	21 31 2	21 <sup>10</sup> 18'51	17 <sup>10</sup> 23	5 <sup>10</sup> 51	12 <sup>10</sup> 16	15 <sup>10</sup> 58	0 <sup>11</sup> 3	3 <sup>11</sup> 2	28 <sup>10</sup> 46	15 <sup>10</sup> 32	19 <sup>10</sup> 0	16 <sup>10</sup> D57	16 <sup>10</sup> 37	25 <sup>11</sup> 19	26 <sup>11</sup> 35	M 6
T 7	21 34 59	22 <sup>10</sup> 16'41	29 <sup>10</sup> 16	6 <sup>10</sup> 2	13 <sup>10</sup> 25	16 <sup>10</sup> 37	0 <sup>11</sup> 14	3 <sup>11</sup> 0	28 <sup>10</sup> 49	15 <sup>10</sup> 33	19 <sup>10</sup> 2	16 <sup>10</sup> 57	16 <sup>10</sup> 34	25 <sup>11</sup> 26	26 <sup>11</sup> 43	T 7
W 8	21 38 55	23 <sup>10</sup> 14'33	11 <sup>11</sup> 11	6 <sup>10</sup> 21	14 <sup>10</sup> 34	17 <sup>10</sup> 15	0 <sup>11</sup> 26	2 <sup>11</sup> 58	28 <sup>10</sup> 53	15 <sup>10</sup> 35	19 <sup>10</sup> 3	16 <sup>10</sup> 57	16 <sup>10</sup> 30	25 <sup>11</sup> 32	26 <sup>11</sup> 51	W 8
T 9	21 42 52	24 <sup>10</sup> 12'26	23 <sup>10</sup> 13	6 <sup>10</sup> 48	15 <sup>10</sup> 44	17 <sup>10</sup> 54	0 <sup>11</sup> 37	2 <sup>11</sup> 56	28 <sup>10</sup> 57	15 <sup>10</sup> 37	19 <sup>10</sup> 5	16 <sup>10</sup> 58	16 <sup>10</sup> 27	25 <sup>11</sup> 39	26 <sup>11</sup> 59	T 9
F 10	21 46 48	25 <sup>10</sup> 10'20	5 <sup>11</sup> 24	7 <sup>10</sup> 22	16 <sup>10</sup> 54	18 <sup>10</sup> 33	0 <sup>11</sup> 49	2 <sup>11</sup> 54	29 <sup>10</sup> 1	15 <sup>10</sup> 38	19 <sup>10</sup> 7	16 <sup>10</sup> 58	16 <sup>10</sup> 24	25 <sup>11</sup> 46	27 <sup>11</sup> 7	F 10
S 11	21 50 45	26 <sup>10</sup> 8'15	17 <sup>10</sup> 50	8 <sup>10</sup> 4	18 <sup>10</sup> 4	19 <sup>10</sup> 12	1 <sup>11</sup> 1	2 <sup>11</sup> 52	29 <sup>10</sup> 4	15 <sup>10</sup> 40	19 <sup>10</sup> 9	16 <sup>10</sup> 59	16 <sup>10</sup> 21	25 <sup>11</sup> 53	27 <sup>11</sup> 15	S 11
S 12	21 54 41	27 <sup>10</sup> 6'12	0 <sup>11</sup> 32	8 <sup>10</sup> 54	19 <sup>10</sup> 13	19 <sup>10</sup> 51	1 <sup>11</sup> 12	2 <sup>11</sup> 50	29 <sup>10</sup> 8	15 <sup>10</sup> 41	19 <sup>10</sup> 11	17 <sup>10</sup> 0	16 <sup>10</sup> 18	25 <sup>11</sup> 59	27 <sup>11</sup> 23	S 12
M13	21 58 38	28 <sup>10</sup> 4'11	13 <sup>10</sup> 33	9 <sup>10</sup> 51	20 <sup>10</sup> 24	20 <sup>10</sup> 30	1 <sup>11</sup> 24	2 <sup>11</sup> 49	29 <sup>10</sup> 12	15 <sup>10</sup> 43	19 <sup>10</sup> 13	17 <sup>10</sup> R 0	16 <sup>10</sup> 15	26 <sup>11</sup> 6	27 <sup>11</sup> 31	M13
T 14	22 2 35	29 <sup>10</sup> 2'11	26 <sup>10</sup> 52	10 <sup>10</sup> 55	21 <sup>10</sup> 34	21 <sup>10</sup> 9	1 <sup>11</sup> 36	2 <sup>11</sup> 47	29 <sup>10</sup> 16	15 <sup>10</sup> 45	19 <sup>10</sup> 15	17 <sup>10</sup> 0	16 <sup>10</sup> 11	26 <sup>11</sup> 13	27 <sup>11</sup> 39	T 14
W15	22 6 31	0 <sup>11</sup> 9'12	10 <sup>11</sup> 29	12 <sup>10</sup> 5	22 <sup>10</sup> 44	21 <sup>10</sup> 48	1 <sup>11</sup> 48	2 <sup>11</sup> 46	29 <sup>10</sup> 19	15 <sup>10</sup> 46	19 <sup>10</sup> 17	17 <sup>10</sup> 0	16 <sup>10</sup> 8	26 <sup>11</sup> 20	27 <sup>11</sup> 47	W15
T 16	22 10 28	0 <sup>11</sup> 58'16	24 <sup>10</sup> 22	13 <sup>10</sup> 22	23 <sup>10</sup> 54	22 <sup>10</sup> 27	2 <sup>11</sup> 0	2 <sup>11</sup> 44	29 <sup>10</sup> 23	15 <sup>10</sup> 48	19 <sup>10</sup> 19	16 <sup>10</sup> 58	16 <sup>10</sup> 5	26 <sup>11</sup> 26	27 <sup>11</sup> 55	T 16
F 17	22 14 24	1 <sup>11</sup> 56'21	8 <sup>11</sup> 26	14 <sup>10</sup> 44	25 <sup>10</sup> 5	23 <sup>10</sup> 7	2 <sup>11</sup> 12	2 <sup>11</sup> 43	29 <sup>10</sup> 27	15 <sup>10</sup> 50	19 <sup>10</sup> 21	16 <sup>10</sup> 56	16 <sup>10</sup> 2	26 <sup>11</sup> 33	28 <sup>11</sup> 3	F 17
S 18	22 18 21	2 <sup>11</sup> 54'28	22 <sup>10</sup> 39	16 <sup>10</sup> 12	26 <sup>10</sup> 15	23 <sup>10</sup> 46	2 <sup>11</sup> 24	2 <sup>11</sup> 42	29 <sup>10</sup> 31	15 <sup>10</sup> 51	19 <sup>10</sup> 23	16 <sup>10</sup> 54	15 <sup>10</sup> 59	26 <sup>11</sup> 40	28 <sup>11</sup> 12	S 18
S 19	22 22 17	3 <sup>11</sup> 52'36	6 <sup>11</sup> 57	17 <sup>10</sup> 44	27 <sup>10</sup> 26	24 <sup>10</sup> 26	2 <sup>11</sup> 36	2 <sup>11</sup> 41	29 <sup>10</sup> 34	15 <sup>10</sup> 53	19 <sup>10</sup> 24	16 <sup>10</sup> 53	15 <sup>10</sup> 55	26 <sup>11</sup> 46	28 <sup>11</sup> 20	S 19
M20	22 26 14	4 <sup>11</sup> 50'48	21 <sup>10</sup> 54	19 <sup>10</sup> 20	28 <sup>10</sup> 37	25 <sup>10</sup> 6	2 <sup>11</sup> 48	2 <sup>11</sup> 40	29 <sup>10</sup> 38	15 <sup>10</sup> 55	19 <sup>10</sup> 26	16 <sup>10</sup> 51	15 <sup>10</sup> 52	26 <sup>11</sup> 53	28 <sup>11</sup> 28	M20
T 21	22 30 10	5 <sup>11</sup> 49'01	5 <sup>11</sup> 29	21 <sup>10</sup> 1	29 <sup>10</sup> 48	25 <sup>10</sup> 45	3 <sup>11</sup> 0	2 <sup>11</sup> 39	29 <sup>10</sup> 42	15 <sup>10</sup> 57	19 <sup>10</sup> 28	16 <sup>10</sup> D51	15 <sup>10</sup> 49	27 <sup>11</sup> 0	28 <sup>11</sup> 36	T 21
W22	22 34 7	6 <sup>11</sup> 47'16	19 <sup>10</sup> 39	22 <sup>10</sup> 44	0 <sup>11</sup> 59	26 <sup>10</sup> 25	3 <sup>11</sup> 12	2 <sup>11</sup> 38	29 <sup>10</sup> 46	15 <sup>10</sup> 58	19 <sup>10</sup> 30	16 <sup>10</sup> 51	15 <sup>10</sup> 46	27 <sup>11</sup> 7	28 <sup>11</sup> 45	W22
T 23	22 38 4	7 <sup>11</sup> 45'33	3 <sup>11</sup> 41	24 <sup>10</sup> 30	2 <sup>11</sup> 10	27 <sup>10</sup> 5	3 <sup>11</sup> 25	2 <sup>11</sup> 38	29 <sup>10</sup> 49	16 <sup>10</sup> 0	19 <sup>10</sup> 32	16 <sup>10</sup> 52	15 <sup>10</sup> 43	27 <sup>11</sup> 13	28 <sup>11</sup> 53	T 23
F 24	22 42 0	8 <sup>11</sup> 43'53	17 <sup>10</sup> 34	26 <sup>10</sup> 18	3 <sup>11</sup> 21	27 <sup>10</sup> 45	3 <sup>11</sup> 37	2 <sup>11</sup> 37	29 <sup>10</sup> 53	16 <sup>10</sup> 2	19 <sup>10</sup> 34	16 <sup>10</sup> 54	15 <sup>10</sup> 40	27 <sup>11</sup> 20	29 <sup>11</sup> 2	F 24
S 25	22 45 57	9 <sup>11</sup> 42'15	1 <sup>11</sup> 17	28 <sup>10</sup> 8	4 <sup>11</sup> 32	28 <sup>10</sup> 25	3 <sup>11</sup> 49	2 <sup>11</sup> 37	29 <sup>10</sup> 57	16 <sup>10</sup> 4	19 <sup>10</sup> 36	16 <sup>10</sup> 55	15 <sup>10</sup> 36	27 <sup>11</sup> 27	29 <sup>11</sup> 10	S 25
S 26	22 49 53	10 <sup>11</sup> 40'38	14 <sup>10</sup> 49	29 <sup>10</sup> 59	5 <sup>11</sup> 44	29 <sup>10</sup> 6	4 <sup>11</sup> 2	2 <sup>11</sup> 36	0 <sup>11</sup> 1	16 <sup>10</sup> 6	19 <sup>10</sup> 37	16 <sup>10</sup> R56	15 <sup>10</sup> 33	27 <sup>11</sup> 33	29 <sup>11</sup> 19	S 26
M27	22 53 50	11 <sup>11</sup> 39'04	28 <sup>10</sup> 9	1 <sup>11</sup> 52	6 <sup>11</sup> 55	29 <sup>10</sup> 46	4 <sup>11</sup> 14	2 <sup>11</sup> 36	0 <sup>11</sup> 4	16 <sup>10</sup> 8	19 <sup>10</sup> 39	16 <sup>10</sup> 55	15 <sup>10</sup> 30	27 <sup>11</sup> 40	29 <sup>11</sup> 27	M27
T 28	22 57 46	12 <sup>11</sup> 37'31	11 <sup>11</sup> 15	3 <sup>11</sup> 45	8 <sup>11</sup> 7	0 <sup>11</sup> 26	4 <sup>11</sup> 27	2 <sup>11</sup> 36	0 <sup>11</sup> 8	16 <sup>10</sup> 10	19 <sup>10</sup> 41	16 <sup>10</sup> 54	15 <sup>10</sup> 27	27 <sup>11</sup> 47	29 <sup>11</sup> 36	T 28
W29	23 1 43	13 <sup>11</sup> 36'00	24 <sup>10</sup> 7	5 <sup>11</sup> 39	9 <sup>11</sup> 18	1 <sup>11</sup> 7	4 <sup>11</sup> 39	2 <sup>11</sup> D36	0 <sup>11</sup> 12	16 <sup>10</sup> 12	19 <sup>10</sup> 43	16 <sup>10</sup> 51	15 <sup>10</sup> 24	27 <sup>11</sup> 54	29 <sup>11</sup> 44	W29
T 30	23 1 59	14 <sup>11</sup> 34'32	6 <sup>11</sup> 45	7 <sup>11</sup> 32	10 <sup>11</sup> 30	1 <sup>11</sup> 47	4 <sup>11</sup> 52	2 <sup>11</sup> 36	0 <sup>11</sup> 15	16 <sup>10</sup> 14	19 <sup>10</sup> 45	16 <sup>10</sup> 46	15 <sup>10</sup> 21	28 <sup>11</sup> 0	29 <sup>11</sup> 53	T 30
F 31	23 9 36	15 <sup>11</sup> 33'05	19 <sup>11</sup> 10	9 <sup>11</sup> 26	11 <sup>11</sup> 42	2 <sup>11</sup> 28	5 <sup>11</sup> 4	2 <sup>11</sup> 36	0 <sup>11</sup> 19	16 <sup>11</sup> 16	19 <sup>11</sup> 46	16 <sup>11</sup> 42	15 <sup>11</sup> 217	28 <sup>11</sup> 7	0 <sup>11</sup> 1	F 31

# ASTRODIENST EPHEMERIS for the year 1459

## geocentric

SEPTEMBER 1459 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	23 13 32	16 <sup>h</sup> 31'39"	1 <sup>m</sup> 22'	11 <sup>m</sup> 19'	12 <sup>h</sup> 54'	3 <sup>m</sup> 9'	5 <sup>h</sup> 17'	2 <sup>h</sup> 36'	0 <sup>m</sup> 23'	16 <sup>h</sup> 18'	19 <sup>h</sup> 48'	16 <sup>h</sup> R37	15 <sup>h</sup> 14'	28 <sup>m</sup> 14'	0 <sup>h</sup> 10'	S 1
S 2	23 17 29	17 <sup>h</sup> 30'16"	13 <sup>h</sup> 24'	13 <sup>h</sup> 12'	14 <sup>h</sup> 6'	3 <sup>h</sup> 50'	5 <sup>h</sup> 30'	2 <sup>h</sup> 37'	0 <sup>h</sup> 26'	16 <sup>h</sup> 20'	19 <sup>h</sup> 50'	16 <sup>h</sup> 32'	15 <sup>h</sup> 11'	28 <sup>h</sup> 21'	0 <sup>h</sup> 18'	S 2
M 3	23 21 26	18 <sup>h</sup> 28'54"	25 <sup>h</sup> 19'	15 <sup>h</sup> 4'	15 <sup>h</sup> 18'	4 <sup>h</sup> 31'	5 <sup>h</sup> 42'	2 <sup>h</sup> 37'	0 <sup>h</sup> 30'	16 <sup>h</sup> 22'	19 <sup>h</sup> 52'	16 <sup>h</sup> 28'	15 <sup>h</sup> 8'	28 <sup>h</sup> 27'	0 <sup>h</sup> 27'	M 3
T 4	23 25 22	19 <sup>h</sup> 27'34"	7 <sup>m</sup> 11'	16 <sup>h</sup> 55'	16 <sup>h</sup> 30'	5 <sup>h</sup> 11'	5 <sup>h</sup> 55'	2 <sup>h</sup> 37'	0 <sup>h</sup> 34'	16 <sup>h</sup> 24'	19 <sup>h</sup> 54'	16 <sup>h</sup> 26'	15 <sup>h</sup> 5'	28 <sup>h</sup> 34'	0 <sup>h</sup> 36'	T 4
W 5	23 29 19	20 <sup>h</sup> 26'16"	19 <sup>h</sup> 4'	18 <sup>h</sup> 46'	17 <sup>h</sup> 42'	5 <sup>h</sup> 53'	6 <sup>h</sup> 8'	2 <sup>h</sup> 38'	0 <sup>h</sup> 37'	16 <sup>h</sup> 26'	19 <sup>h</sup> 55'	16 <sup>h</sup> D25	15 <sup>h</sup> 1'	28 <sup>h</sup> 41'	0 <sup>h</sup> 44'	W 5
T 6	23 33 15	21 <sup>h</sup> 25'00"	1 <sup>h</sup> 34'	20 <sup>h</sup> 36'	18 <sup>h</sup> 55'	6 <sup>h</sup> 34'	6 <sup>h</sup> 20'	2 <sup>h</sup> 39'	0 <sup>h</sup> 41'	16 <sup>h</sup> 28'	19 <sup>h</sup> 57'	16 <sup>h</sup> 26'	14 <sup>h</sup> 58'	28 <sup>h</sup> 47'	0 <sup>h</sup> 53'	T 6
F 7	23 37 12	22 <sup>h</sup> 23'45"	13 <sup>h</sup> 14'	22 <sup>h</sup> 25'	20 <sup>h</sup> 7'	7 <sup>h</sup> 15'	6 <sup>h</sup> 33'	2 <sup>h</sup> 40'	0 <sup>h</sup> 44'	16 <sup>h</sup> 30'	19 <sup>h</sup> 59'	16 <sup>h</sup> 27'	14 <sup>h</sup> 55'	28 <sup>h</sup> 54'	1 <sup>h</sup> 2'	F 7
S 8	23 41 8	23 <sup>h</sup> 22'32"	25 <sup>h</sup> 41'	24 <sup>h</sup> 14'	21 <sup>h</sup> 19'	7 <sup>h</sup> 56'	6 <sup>h</sup> 46'	2 <sup>h</sup> 40'	0 <sup>h</sup> 48'	16 <sup>h</sup> 32'	20 <sup>h</sup> 0'	16 <sup>h</sup> 29'	14 <sup>h</sup> 52'	29 <sup>h</sup> 1'	1 <sup>h</sup> 10'	S 8
S 9	23 45 5	24 <sup>h</sup> 21'21"	8 <sup>m</sup> 27'	26 <sup>h</sup> 1'	22 <sup>h</sup> 32'	8 <sup>h</sup> 38'	6 <sup>h</sup> 59'	2 <sup>h</sup> 41'	0 <sup>h</sup> 51'	16 <sup>h</sup> 34'	20 <sup>h</sup> 2'	16 <sup>h</sup> 30'	14 <sup>h</sup> 49'	29 <sup>h</sup> 8'	1 <sup>h</sup> 19'	S 9
M10	23 49 1	25 <sup>h</sup> 20'12"	21 <sup>h</sup> 36'	27 <sup>h</sup> 48'	23 <sup>h</sup> 45'	9 <sup>h</sup> 19'	7 <sup>h</sup> 12'	2 <sup>h</sup> 43'	0 <sup>h</sup> 55'	16 <sup>h</sup> 36'	20 <sup>h</sup> 4'	16 <sup>h</sup> R30	14 <sup>h</sup> 46'	29 <sup>h</sup> 14'	1 <sup>h</sup> 28'	M10
T 11	23 52 58	26 <sup>h</sup> 19'04"	5 <sup>m</sup> 9'	29 <sup>h</sup> 33'	24 <sup>h</sup> 57'	10 <sup>h</sup> 1'	7 <sup>h</sup> 25'	2 <sup>h</sup> 44'	0 <sup>h</sup> 58'	16 <sup>h</sup> 38'	20 <sup>h</sup> 5'	16 <sup>h</sup> 29'	14 <sup>h</sup> 42'	29 <sup>h</sup> 21'	1 <sup>h</sup> 37'	T 11
W12	23 56 55	27 <sup>h</sup> 17'59"	19 <sup>h</sup> 7'	1 <sup>h</sup> 18'	26 <sup>h</sup> 10'	10 <sup>h</sup> 42'	7 <sup>h</sup> 37'	2 <sup>h</sup> 45'	1 <sup>h</sup> 2'	16 <sup>h</sup> 40'	20 <sup>h</sup> 7'	16 <sup>h</sup> 25'	14 <sup>h</sup> 39'	29 <sup>h</sup> 28'	1 <sup>h</sup> 45'	W12
T 13	0 0 51	28 <sup>h</sup> 16'55"	3 <sup>m</sup> 24'	3 <sup>h</sup> 2'	27 <sup>h</sup> 23'	11 <sup>h</sup> 24'	7 <sup>h</sup> 50'	2 <sup>h</sup> 46'	1 <sup>h</sup> 5'	16 <sup>h</sup> 43'	20 <sup>h</sup> 8'	16 <sup>h</sup> 20'	14 <sup>h</sup> 36'	29 <sup>h</sup> 34'	1 <sup>h</sup> 54'	T 13
F 14	0 4 48	29 <sup>h</sup> 15'53"	17 <sup>h</sup> 58'	4 <sup>h</sup> 45'	28 <sup>h</sup> 36'	12 <sup>h</sup> 6'	8 <sup>h</sup> 3'	2 <sup>h</sup> 48'	1 <sup>h</sup> 9'	16 <sup>h</sup> 45'	20 <sup>h</sup> 10'	16 <sup>h</sup> 14'	14 <sup>h</sup> 33'	29 <sup>h</sup> 41'	2 <sup>h</sup> 3'	F 14
S 15	0 8 44	0 <sup>h</sup> 14'54"	2 <sup>h</sup> 39'	6 <sup>h</sup> 27'	29 <sup>h</sup> 49'	12 <sup>h</sup> 48'	8 <sup>h</sup> 16'	2 <sup>h</sup> 49'	1 <sup>h</sup> 12'	16 <sup>h</sup> 47'	20 <sup>h</sup> 12'	16 <sup>h</sup> 7'	14 <sup>h</sup> 30'	29 <sup>h</sup> 48'	2 <sup>h</sup> 12'	S 15
S 16	0 12 41	1 <sup>h</sup> 13'57"	17 <sup>h</sup> 21'	8 <sup>h</sup> 8'	1 <sup>h</sup> 22'	13 <sup>h</sup> 29'	8 <sup>h</sup> 29'	2 <sup>h</sup> 51'	1 <sup>h</sup> 16'	16 <sup>h</sup> 49'	20 <sup>h</sup> 13'	16 <sup>h</sup> 1'	14 <sup>h</sup> 26'	29 <sup>h</sup> 55'	2 <sup>h</sup> 20'	S 16
M17	0 16 37	2 <sup>h</sup> 13'02"	1 <sup>h</sup> 58'	9 <sup>h</sup> 48'	2 <sup>h</sup> 15'	14 <sup>h</sup> 11'	8 <sup>h</sup> 42'	2 <sup>h</sup> 53'	1 <sup>h</sup> 19'	16 <sup>h</sup> 51'	20 <sup>h</sup> 15'	15 <sup>h</sup> 56'	14 <sup>h</sup> 23'	0 <sup>h</sup> 1'	2 <sup>h</sup> 29'	M17
T 18	0 20 34	3 <sup>h</sup> 12'10"	16 <sup>h</sup> 23'	11 <sup>h</sup> 28'	3 <sup>h</sup> 28'	14 <sup>h</sup> 54'	8 <sup>h</sup> 55'	2 <sup>h</sup> 55'	1 <sup>h</sup> 22'	16 <sup>h</sup> 53'	20 <sup>h</sup> 16'	15 <sup>h</sup> 52'	14 <sup>h</sup> 20'	0 <sup>h</sup> 8'	2 <sup>h</sup> 38'	T 18
W19	0 24 30	4 <sup>h</sup> 11'20"	0 <sup>h</sup> 33'	13 <sup>h</sup> 6'	4 <sup>h</sup> 41'	15 <sup>h</sup> 36'	9 <sup>h</sup> 8'	2 <sup>h</sup> 57'	1 <sup>h</sup> 26'	16 <sup>h</sup> 56'	20 <sup>h</sup> 18'	15 <sup>h</sup> D51	14 <sup>h</sup> 17'	0 <sup>h</sup> 15'	2 <sup>h</sup> 47'	W19
T 20	0 28 27	5 <sup>h</sup> 10'32"	14 <sup>h</sup> 27'	14 <sup>h</sup> 44'	5 <sup>h</sup> 55'	16 <sup>h</sup> 18'	9 <sup>h</sup> 21'	2 <sup>h</sup> 59'	1 <sup>h</sup> 29'	16 <sup>h</sup> 58'	20 <sup>h</sup> 19'	15 <sup>h</sup> 51'	14 <sup>h</sup> 14'	0 <sup>h</sup> 21'	2 <sup>h</sup> 55'	T 20
F 21	0 32 24	6 <sup>h</sup> 9'47"	28 <sup>h</sup> 4'	16 <sup>h</sup> 21'	7 <sup>h</sup> 8'	17 <sup>h</sup> 0'	9 <sup>h</sup> 34'	3 <sup>h</sup> 1'	1 <sup>h</sup> 32'	17 <sup>h</sup> 0'	20 <sup>h</sup> 21'	15 <sup>h</sup> 52'	14 <sup>h</sup> 11'	0 <sup>h</sup> 28'	3 <sup>h</sup> 4'	F 21
S 22	0 36 20	7 <sup>h</sup> 9'04"	11 <sup>h</sup> 27'	17 <sup>h</sup> 58'	8 <sup>h</sup> 22'	17 <sup>h</sup> 43'	9 <sup>h</sup> 47'	3 <sup>h</sup> 3'	1 <sup>h</sup> 35'	17 <sup>h</sup> 2'	20 <sup>h</sup> 22'	15 <sup>h</sup> R53	14 <sup>h</sup> 7'	0 <sup>h</sup> 35'	3 <sup>h</sup> 13'	S 22
S 23	0 40 17	8 <sup>h</sup> 8'23"	24 <sup>h</sup> 36'	19 <sup>h</sup> 33'	9 <sup>h</sup> 35'	18 <sup>h</sup> 25'	10 <sup>h</sup> 0'	3 <sup>h</sup> 6'	1 <sup>h</sup> 39'	17 <sup>h</sup> 4'	20 <sup>h</sup> 24'	15 <sup>h</sup> 53'	14 <sup>h</sup> 4'	0 <sup>h</sup> 42'	3 <sup>h</sup> 22'	S 23
M24	0 44 13	9 <sup>h</sup> 7'44"	7 <sup>h</sup> 33'	21 <sup>h</sup> 8'	10 <sup>h</sup> 49'	19 <sup>h</sup> 8'	10 <sup>h</sup> 13'	3 <sup>h</sup> 8'	1 <sup>h</sup> 42'	17 <sup>h</sup> 7'	20 <sup>h</sup> 25'	15 <sup>h</sup> 51'	14 <sup>h</sup> 1'	0 <sup>h</sup> 48'	3 <sup>h</sup> 30'	M24
T 25	0 48 10	10 <sup>h</sup> 7'08"	20 <sup>h</sup> 19'	22 <sup>h</sup> 42'	12 <sup>h</sup> 2'	19 <sup>h</sup> 50'	10 <sup>h</sup> 26'	3 <sup>h</sup> 10'	1 <sup>h</sup> 45'	17 <sup>h</sup> 9'	20 <sup>h</sup> 26'	15 <sup>h</sup> 46'	13 <sup>h</sup> 58'	0 <sup>h</sup> 55'	3 <sup>h</sup> 39'	T 25
W26	0 52 6	11 <sup>h</sup> 6'34"	2 <sup>h</sup> 53'	24 <sup>h</sup> 15'	13 <sup>h</sup> 16'	20 <sup>h</sup> 33'	10 <sup>h</sup> 39'	3 <sup>h</sup> 13'	1 <sup>h</sup> 48'	17 <sup>h</sup> 11'	20 <sup>h</sup> 28'	15 <sup>h</sup> 39'	13 <sup>h</sup> 55'	1 <sup>h</sup> 2'	3 <sup>h</sup> 48'	W26
T 27	0 56 3	12 <sup>h</sup> 6'02"	15 <sup>h</sup> 18'	25 <sup>h</sup> 48'	14 <sup>h</sup> 30'	21 <sup>h</sup> 16'	10 <sup>h</sup> 52'	3 <sup>h</sup> 16'	1 <sup>h</sup> 51'	17 <sup>h</sup> 13'	20 <sup>h</sup> 29'	15 <sup>h</sup> 29'	13 <sup>h</sup> 52'	1 <sup>h</sup> 8'	3 <sup>h</sup> 57'	T 27
F 28	0 59 59	13 <sup>h</sup> 5'32"	27 <sup>h</sup> 33'	27 <sup>h</sup> 20'	15 <sup>h</sup> 44'	21 <sup>h</sup> 59'	11 <sup>h</sup> 5'	3 <sup>h</sup> 19'	1 <sup>h</sup> 54'	17 <sup>h</sup> 16'	20 <sup>h</sup> 30'	15 <sup>h</sup> 18'	13 <sup>h</sup> 48'	1 <sup>h</sup> 15'	4 <sup>h</sup> 5'	F 28
S 29	1 3 56	14 <sup>h</sup> 5'04"	9 <sup>h</sup> 39'	28 <sup>h</sup> 51'	16 <sup>h</sup> 58'	22 <sup>h</sup> 42'	11 <sup>h</sup> 18'	3 <sup>h</sup> 21'	1 <sup>h</sup> 57'	17 <sup>h</sup> 18'	20 <sup>h</sup> 32'	15 <sup>h</sup> 7'	13 <sup>h</sup> 45'	1 <sup>h</sup> 22'	4 <sup>h</sup> 14'	S 29
S 30	1 7 52	15 <sup>h</sup> 4'38"	21 <sup>h</sup> 37'	0 <sup>h</sup> 22'	18 <sup>h</sup> 11'	23 <sup>h</sup> 25'	11 <sup>h</sup> 31'	3 <sup>h</sup> 24'	2 <sup>h</sup> 0'	17 <sup>h</sup> 20'	20 <sup>h</sup> 33'	14 <sup>h</sup> 56'	13 <sup>h</sup> 42'	1 <sup>h</sup> 29'	4 <sup>h</sup> 23'	S 30

Delta T = 06m12s

Julian Calendar 1 Sept. 1459 == Greg. Calendar 10 Sept. 1459

OCTOBER 1459 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	1 11 49	16 <sup>h</sup> 4'14	3 <sup>m</sup> 29	1 <sup>m</sup> 52	19 <sup>h</sup> 25	24 <sup>h</sup> 8	11 <sup>h</sup> 44	3 <sup>h</sup> 27	2 <sup>h</sup> 3	17 <sup>h</sup> 22	20 <sup>h</sup> 34	14 <sup>h</sup> R46	13 <sup>h</sup> 39	1 <sup>h</sup> 35	4 <sup>h</sup> 31	M 1
T 2	1 15 46	17° 3'52	15°19	3°21	20°39	24°51	11°57	3°31	2° 6	17°25	20°35	14 <sup>h</sup> 39	13°36	1°42	4°40	T 2
W 3	1 19 42	18° 3'31	27°10	4°50	21°54	25°34	12°10	3°34	2° 9	17°27	20°37	14°34	13°32	1°49	4°49	W 3
T 4	1 23 39	19° 3'13	9 <sup>h</sup> 7	6°17	23° 8	26°17	12°23	3°37	2°12	17°29	20°38	14°32	13°29	1°55	4°57	T 4
F 5	1 27 35	20° 2'56	21°13	7°45	24°22	27° 1	12°36	3°41	2°15	17°31	20°39	14°D31	13°26	2° 2	5° 6	F 5
S 6	1 31 32	21° 2'41	3 <sup>m</sup> 35	9°11	25°36	27°44	12°49	3°44	2°18	17°34	20°40	14°32	13°23	2° 9	5°14	S 6
S 7	1 35 28	22° 2'27	16°18	10°37	26°50	28°28	13° 2	3°48	2°20	17°36	20°41	14°R32	13°20	2°16	5°23	S 7
M 8	1 39 25	23° 2'16	29°26	12° 2	28° 5	29°11	13°15	3°51	2°23	17°38	20°42	14°31	13°17	2°22	5°32	M 8
T 9	1 43 21	24° 2'06	13 <sup>h</sup> 3	13°26	29°19	29°55	13°28	3°55	2°26	17°40	20°43	14°28	13°13	2°29	5°40	T 9
W10	1 47 18	25° 1'57	27° 8	14°49	0 <sup>h</sup> 33	0 <sup>h</sup> 39	13°41	3°59	2°29	17°42	20°44	14°22	13°10	2°36	5°49	W10
T 11	1 51 15	26° 1'51	11 <sup>h</sup> 40	16°12	1°48	1°22	13°54	4° 3	2°31	17°45	20°45	14°14	13° 7	2°42	5°57	T 11
F 12	1 55 11	27° 1'46	26°33	17°33	3° 2	2° 6	14° 7	4° 7	2°34	17°47	20°46	14° 4	13° 4	2°49	6° 5	F 12
S 13	1 59 8	28° 1'44	11 <sup>h</sup> 39	18°54	4°17	2°50	14°20	4°11	2°36	17°49	20°47	13°53	13° 1	2°56	6°14	S 13
S 14	2 3 4	29° 1'43	26°46	20°13	5°31	3°34	14°33	4°15	2°39	17°51	20°48	13°43	12°57	3° 3	6°22	S 14
M15	2 7 1	0 <sup>h</sup> 1'44	11 <sup>h</sup> 46	21°31	6°46	4°18	14°45	4°19	2°41	17°54	20°49	13°34	12°54	3° 9	6°31	M15
T 16	2 10 57	1° 1'48	26°30	22°48	8° 1	5° 2	14°58	4°24	2°44	17°56	20°50	13°27	12°51	3°16	6°39	T 16
W17	2 14 54	2° 1'54	10 <sup>h</sup> 52	24° 4	9°15	5°46	15°11	4°28	2°46	17°58	20°51	13°24	12°48	3°23	6°47	W17
T 18	2 18 50	3° 2'02	24°50	25°18	10°30	6°31	15°24	4°32	2°48	18° 0	20°52	13°22	12°45	3°29	6°55	T 18
F 19	2 22 47	4° 2'12	8 <sup>h</sup> 25	26°30	11°45	7°15	15°36	4°37	2°50	18° 2	20°52	13°22	12°42	3°36	7° 4	F 19
S 20	2 26 44	5° 2'24	21°29	27°41	12°59	7°59	15°49	4°41	2°53	18° 4	20°53	13°22	12°38	3°43	7°12	S 20
S 21	2 30 40	6° 2'38	4 <sup>h</sup> 35	28°49	14°14	8°44	16° 2	4°46	2°55	18° 7	20°54	13°21	12°35	3°50	7°20	S 21
M22	2 34 37	7° 2'55	17°16	29°55	15°29	9°28	16°14	4°51	2°57	18° 9	20°54	13°17	12°32	3°56	7°28	M22
T 23	2 38 33	8° 3'13	29°45	0 <sup>h</sup> 59	16°44	10°13	16°27	4°56	2°59	18°11	20°55	13°10	12°29	4° 3	7°36	T 23
W24	2 42 30	9° 3'33	12 <sup>h</sup> 4	1°59	17°59	10°58	16°40	5° 1	3° 1	18°13	20°56	13° 0	12°26	4°10	7°44	W24
T 25	2 46 26	10° 3'55	24°15	2°56	19°14	11°42	16°52	5° 5	3° 3	18°15	20°56	12°48	12°23	4°16	7°52	T 25
F 26	2 50 23	11° 4'19	6 <sup>h</sup> 20	3°50	20°29	12°27	17° 5	5°10	3° 5	18°17	20°57	12°34	12°19	4°23	8° 0	F 26
S 27	2 54 19	12° 4'44	18°18	4°39	21°44	13°12	17°17	5°16	3° 7	18°19	20°58	12°18	12°16	4°30	8° 8	S 27
S 28	2 58 16	13° 5'11	0 <sup>h</sup> 13	5°23	22°59	13°57	17°29	5°21	3° 9	18°21	20°58	12° 4	12°13	4°37	8°16	S 28
M29	3 2 13	14° 5'40	12° 3	6° 2	24°14	14°42	17°42	5°26	3°11	18°24	20°59	11°51	12°10	4°43	8°23	M29
T 30	3 6 9	15° 6'10	23°53	6°36	25°29	15°27	17°54	5°31	3°12	18°26	20°59	11°41	12° 7	4°50	8°31	T 30
W31	3 10 6	16 <sup>h</sup> 6'42	5 <sup>h</sup> 43	7 <sup>h</sup> 2	26 <sup>h</sup> 44	16 <sup>h</sup> 12	18 <sup>h</sup> 6	5 <sup>h</sup> 37	3 <sup>h</sup> 14	18 <sup>h</sup> 28	21 <sup>h</sup> 0	11 <sup>h</sup> 33	12 <sup>h</sup> 3	4 <sup>h</sup> 57	8 <sup>h</sup> 39	W31

# ASTRODIENST EPHEMERIS for the year 1459

## geocentric

NOVEMBER 1459 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	3 14 2	17°17'15"	17°39'39"	7°22'22"	27°59'59"	16°57'57"	18°19'19"	5°42'42"	3°16'16"	18°30'30"	21°0'0"	11°R29	12°0'0"	5°3'3"	8°46'46"	T 1
F 2	3 17 59	18°7'50"	29°43'43"	7°33'33"	29°14'14"	17°42'42"	18°31'31"	5°47'47"	3°17'17"	18°32'32"	21°0'0"	11°R27	11°57'57"	5°10'10"	8°54'54"	F 2
S 3	3 21 55	19°8'25"	12°1'1"	7°R35	0°M29	18°27'27"	18°43'43"	5°53'53"	3°19'19"	18°34'34"	21°1'1"	11°27'27"	11°54'54"	5°17'17"	9°2'2"	S 3
S 4	3 25 52	20°9'02"	24°38'38"	7°28'28"	1°45'45"	19°13'13"	18°55'55"	5°59'59"	3°20'20"	18°36'36"	21°1'1"	11°27'27"	11°51'51"	5°24'24"	9°9'9"	S 4
M 5	3 29 48	21°9'40"	7°H39	7°11'11"	3°0'0"	19°58'58"	19°7'7"	6°4'4"	3°22'22"	18°38'38"	21°1'1"	11°26'26"	11°48'48"	5°30'30"	9°16'16"	M 5
T 6	3 33 45	22°10'19"	21°9'9"	6°43'43"	4°15'15"	20°43'43"	19°19'19"	6°10'10"	3°23'23"	18°40'40"	21°2'2"	11°23'23"	11°44'44"	5°37'37"	9°24'24"	T 6
W 7	3 37 42	23°11'00"	5°Y 8	6°5'5"	5°30'30"	21°29'29"	19°31'31"	6°16'16"	3°25'25"	18°42'42"	21°2'2"	11°18'18"	11°41'41"	5°44'44"	9°31'31"	W 7
T 8	3 41 38	24°11'41"	19°38'38"	5°16'16"	6°45'45"	22°14'14"	19°43'43"	6°21'21"	3°26'26"	18°43'43"	21°2'2"	11°10'10"	11°38'38"	5°50'50"	9°38'38"	T 8
F 9	3 45 35	25°12'24"	4°B33	4°17'17"	8°1'1"	23°0'0"	19°54'54"	6°27'27"	3°27'27"	18°45'45"	21°2'2"	11°0'0"	11°35'35"	5°57'57"	9°45'45"	F 9
S 10	3 49 31	26°13'08"	19°47'47"	3°9'9"	9°16'16"	23°45'45"	20°6'6"	6°33'33"	3°28'28"	18°47'47"	21°2'2"	10°49'49"	11°32'32"	6°4'4"	9°53'53"	S 10
S 11	3 53 28	27°13'53"	5°II 8	1°54'54"	10°31'31"	24°31'31"	20°18'18"	6°39'39"	3°29'29"	18°49'49"	21°2'2"	10°38'38"	11°29'29"	6°11'11"	10°0'0"	S 11
M12	3 57 24	28°14'39"	20°25'25"	0°34'34"	11°47'47"	25°17'17"	20°29'29"	6°45'45"	3°30'30"	18°51'51"	21°3'3"	10°29'29"	11°25'25"	6°17'17"	10°7'7"	M12
T 13	4 1 21	29°15'27"	5°E27	29°M12	13°2'2"	26°2'2"	20°41'41"	6°51'51"	3°31'31"	18°53'53"	21°3'3"	10°22'22"	11°22'22"	6°24'24"	10°13'13"	T 13
W14	4 5 17	0°16'17"	20°6'6"	27°50'50"	14°17'17"	26°48'48"	20°52'52"	6°57'57"	3°32'32"	18°55'55"	21°R 3	10°18'18"	11°19'19"	6°31'31"	10°20'20"	W14
T 15	4 9 14	1°17'07"	4°L18	26°31'31"	15°33'33"	27°34'34"	21°4'4"	7°3'3"	3°33'33"	18°56'56"	21°3'3"	10°D16	11°16'16"	6°37'37"	10°27'27"	T 15
F 16	4 13 11	2°18'00"	18°2'2"	25°17'17"	16°48'48"	28°20'20"	21°15'15"	7°10'10"	3°34'34"	18°58'58"	21°3'3"	10°16'16"	11°13'13"	6°44'44"	10°34'34"	F 16
S 17	4 17 7	3°18'53"	1°H19	24°12'12"	18°3'3"	29°6'6"	21°26'26"	7°16'16"	3°35'35"	19°0'0"	21°2'2"	10°R17	11°9'9"	6°51'51"	10°40'40"	S 17
S 18	4 21 4	4°19'48"	14°14'14"	23°16'16"	19°19'19"	29°52'52"	21°38'38"	7°22'22"	3°36'36"	19°2'2"	21°2'2"	10°16'16"	11°6'6"	6°58'58"	10°47'47"	S 18
M19	4 25 0	5°20'44"	26°49'49"	22°31'31"	20°34'34"	0°B38	21°49'49"	7°28'28"	3°36'36"	19°3'3"	21°2'2"	10°14'14"	11°3'3"	7°4'4"	10°54'54"	M19
T 20	4 28 57	6°21'42"	9°A10	21°57'57"	21°49'49"	1°24'24"	22°0'0"	7°35'35"	3°37'37"	19°5'5"	21°2'2"	10°9'9"	11°0'0"	7°11'11"	11°0'0"	T 20
W21	4 32 53	7°22'40"	21°20'20"	21°34'34"	23°5'5"	2°10'10"	22°11'11"	7°41'41"	3°38'38"	19°7'7"	21°2'2"	10°1'1"	10°57'57"	7°18'18"	11°6'6"	W21
T 22	4 36 50	8°23'40"	3°M21	21°23'23"	24°20'20"	2°56'56"	22°22'22"	7°48'48"	3°38'38"	19°8'8"	21°2'2"	9°52'52"	10°54'54"	7°24'24"	11°13'13"	T 22
F 23	4 40 46	9°24'41"	15°18'18"	21°D23	25°36'36"	3°43'43"	22°32'32"	7°54'54"	3°39'39"	19°10'10"	21°1'1"	9°40'40"	10°50'50"	7°31'31"	11°19'19"	F 23
S 24	4 44 43	10°25'43"	27°11'11"	21°32'32"	26°51'51"	4°29'29"	22°43'43"	8°1'1"	3°39'39"	19°11'11"	21°1'1"	9°28'28"	10°47'47"	7°38'38"	11°25'25"	S 24
S 25	4 48 40	11°26'46"	9°J 2	21°51'51"	28°7'7"	5°15'15"	22°54'54"	8°7'7"	3°39'39"	19°13'13"	21°1'1"	9°16'16"	10°44'44"	7°44'44"	11°31'31"	S 25
M26	4 52 36	12°27'50"	20°53'53"	22°18'18"	29°22'22"	6°2'2"	23°4'4"	8°14'14"	3°40'40"	19°14'14"	21°1'1"	9°5'5"	10°41'41"	7°51'51"	11°37'37"	M26
T 27	4 56 33	13°28'54"	2°B45	22°52'52"	0°J37	6°48'48"	23°15'15"	8°20'20"	3°40'40"	19°16'16"	21°0'0"	8°57'57"	10°38'38"	7°58'58"	11°43'43"	T 27
W28	5 0 29	14°29'59"	14°41'41"	23°33'33"	1°53'53"	7°35'35"	23°25'25"	8°27'27"	3°40'40"	19°17'17"	21°0'0"	8°51'51"	10°35'35"	8°5'5"	11°48'48"	W28
T 29	5 4 26	15°31'05"	26°41'41"	24°20'20"	3°8'8"	8°21'21"	23°35'35"	8°34'34"	3°40'40"	19°19'19"	20°59'59"	8°48'48"	10°31'31"	8°11'11"	11°54'54"	T 29
F 30	5 8 22	16°32'11"	8°A50	25°M13	4°J24	9°B 8	23°46'46"	8°B40	3°H40	19°20'20"	20°L59	8°D47	10°L28	8°J18	12°L 0	F 30

Delta T = 06m11s

Julian Calendar 1 Nov. 1459 == Greg. Calendar 10 Nov. 1459

DECEMBER 1459 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	5 12 19	17°33'18	21°10'10	26°10'10	5°39'39	9°54'54	23°56'56	8°47'47	3°R40	19°22'22	20°R58	8°L47	10°L25	8°J25	12°L 5	S 1
S 2	5 16 15	18°34'25	3°H47	27°11'11	6°55'55	10°41'41	24°6'6	8°54'54	3°H40	19°23'23	20°L58	8°49'49	10°22'22	8°31'31	12°11'11	S 2
M 3	5 20 12	19°35'32	16°43'43	28°15'15	8°10'10	11°27'27	24°16'16	9°1'1	3°40'40	19°24'24	20°57'57	8°R49	10°19'19	8°38'38	12°16'16	M 3
T 4	5 24 9	20°36'39	0°Y 4	29°23'23	9°26'26	12°14'14	24°25'25	9°7'7	3°40'40	19°26'26	20°57'57	8°49'49	10°15'15	8°45'45	12°21'21	T 4
W 5	5 28 5	21°37'47	13°51'51	0°J33	10°41'41	13°1'1	24°35'35	9°14'14	3°40'40	19°27'27	20°56'56	8°47'47	10°12'12	8°52'52	12°26'26	W 5
T 6	5 32 2	22°38'54	28°7'7	1°46'46	11°57'57	13°48'48	24°45'45	9°21'21	3°39'39	19°28'28	20°56'56	8°42'42	10°9'9	8°58'58	12°31'31	T 6
F 7	5 35 58	23°40'02	12°B48	3°1'1	13°12'12	14°34'34	24°54'54	9°28'28	3°39'39	19°29'29	20°55'55	8°37'37	10°6'6	9°5'5	12°36'36	F 7
S 8	5 39 55	24°41'10	27°50'50	4°18'18	14°28'28	15°21'21	25°4'4	9°35'35	3°39'39	19°31'31	20°54'54	8°30'30	10°3'3	9°12'12	12°41'41	S 8
S 9	5 43 51	25°42'18	13°II 5	5°36'36	15°43'43	16°8'8	25°13'13	9°42'42	3°38'38	19°32'32	20°54'54	8°23'23	10°0'0	9°18'18	12°46'46	S 9
M10	5 47 48	26°43'27	28°21'21	6°56'56	16°59'59	16°55'55	25°22'22	9°49'49	3°38'38	19°33'33	20°53'53	8°17'17	9°56'56	9°25'25	12°50'50	M10
T 11	5 51 44	27°44'36	13°E28	8°17'17	18°14'14	17°42'42	25°31'31	9°56'56	3°37'37	19°34'34	20°52'52	8°13'13	9°53'53	9°32'32	12°55'55	T 11
W12	5 55 41	28°45'45	28°17'17	9°40'40	19°30'30	18°29'29	25°40'40	10°3'3	3°37'37	19°35'35	20°51'51	8°11'11	9°50'50	9°39'39	12°59'59	W12
T 13	5 59 38	29°46'54	12°L41	11°3'3	20°45'45	19°16'16	25°49'49	10°10'10	3°36'36	19°36'36	20°50'50	8°D10	9°47'47	9°45'45	13°4'4	T 13
F 14	6 3 34	0°348'04	26°37'37	12°27'27	22°1'1	20°3'3	25°57'57	10°17'17	3°35'35	19°37'37	20°50'50	8°11'11	9°44'44	9°52'52	13°8'8	F 14
S 15	6 7 31	1°49'14	10°H 5	13°52'52	23°16'16	20°50'50	26°6'6	10°24'24	3°34'34	19°38'38	20°49'49	8°13'13	9°41'41	9°59'59	13°12'12	S 15
S 16	6 11 27	2°50'25	23°7'7	15°18'18	24°31'31	21°37'37	26°14'14	10°31'31	3°34'34	19°39'39	20°48'48	8°14'14	9°37'37	10°5'5	13°16'16	S 16
M17	6 15 24	3°51'35	5°A47	16°45'45	25°47'47	22°24'24	26°23'23	10°38'38	3°33'33	19°40'40	20°47'47	8°R15	9°34'34	10°12'12	13°20'20	M17
T 18	6 19 20	4°52'46	18°8'8	18°12'12	27°2'2	23°11'11	26°31'31	10°45'45	3°32'32	19°41'41	20°46'46	8°14'14	9°31'31	10°19'19	13°24'24	T 18
W19	6 23 17	5°53'57	0°M15	19°40'40	28°18'18	23°58'58	26°39'39	10°52'52	3°31'31	19°42'42	20°45'45	8°11'11	9°28'28	10°25'25	13°28'28	W19
T 20	6 27 14	6°55'09	12°13'13	21°8'8	29°33'33	24°45'45	26°47'47	10°59'59	3°30'30	19°42'42	20°44'44	8°7'7	9°25'25	10°32'32	13°31'31	T 20
F 21	6 31 10	7°56'20	24°6'6	22°37'37	0°B49	25°32'32	26°55'55	11°6'6	3°29'29	19°43'43	20°43'43	8°2'2	9°21'21	10°39'39	13°35'35	F 21
S 22	6 35 7	8°57'32	5°J56	24°6'6	2°4'4	26°20'20	27°3'3	11°13'13	3°28'28	19°44'44	20°42'42	7°57'57	9°18'18	10°46'46	13°38'38	S 22
S 23	6 39 3	9°58'43	17°47'47	25°36'36	3°20'20	27°7'7	27°10'10	11°20'20	3°26'26	19°45'45	20°41'41	7°51'51	9°15'15	10°52'52	13°42'42	S 23
M24	6 43 0	10°59'54	29°40'40	27°7'7	4°35'35	27°54'54	27°18'18	11°27'27	3°25'25	19°45'45	20°40'40	7°46'46	9°12'12	10°59'59	13°45'45	M24
T 25	6 46 56	12°1'06	11°B39	28°38'38	5°51'51	28°41'41	27°25'25	11°34'34	3°24'24	19°46'46	20°39'39	7°43'43	9°9'9	11°6'6	13°48'48	T 25
W26	6 50 53	13°2'16	23°43'43	0°B 9	7°6'6	29°29'29	27°32'32	11°41'41	3°23'23	19°47'47	20°38'38	7°41'41	9°6'6	11°12'12	13°51'51	W26
T 27	6 54 49	14°3'27	5°A55	1°41'41	8°22'22	0°A16	27°39'39	11°48'48	3°21'21	19°47'47	20°37'37	7°D40	9°2'2	11°19'19	13°54'54	T 27
F 28	6 58 46	15°4'37	18°16'16	3°13'13	9°37'37	1°3'3	27°46'46	11°56'56	3°20'20	19°48'48	20°36'36	7°40'40	8°59'59	11°26'26	13°56'56	F 28
S 29	7 2 43	16°5'46	0°H49	4°46'46	10°53'53	1°50'50	27°53'53	12°3'3	3°18'18	19°48'48	20°34'34	7°41'41	8°56'56	11°32'32	13°59'59	S 29
S 30	7 6 39	17°6'54	13°36'36	6°19'19	12°8'8	2°38'38	27°59'59	12°10'10	3°17'17	19°49'49	20°33'33	7°43'43	8°53'53	11°39'39	14°1'1	S 30
M31	7 10 36	18°8'02	26°H38	7°B53	13°B23	3°A25	28°L 6	12°B17	3°H15	19°L49	20°L32	7°L44	8°L50	11°J46	14°L 4	M31