



# Astrodienst Ephemeris Tables for the year 1429

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 1429

geocentric

JANUARY 1429 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	7 16 33	19°34'01	19°11'06	4°48'44	5°27'23	26°17'37	28°48'18	26°27'40	13°17'05	11°18'05	4°48'52	7°08'52	8°17'20	10°11'20	1°18'59	S 1
S 2	7 20 30	20°42'08	3°27'42	5°41'00	6°10'10	26°50'10	28°31'00	26°46'10	13°06'10	11°18'04	4°48'50	7°08'47	8°16'16	10°27'10	2°02'00	S 2
M 3	7 24 27	21°43'15	18°34'00	7°16'00	6°58'10	27°02'10	28°44'00	26°53'10	13°07'10	11°18'02	4°48'49	7°08'39	8°13'10	10°33'10	2°05'00	M 3
T 4	7 28 23	22°44'21	3°33'34	8°50'00	7°46'10	27°14'10	28°57'00	27°00'00	13°08'10	11°18'01	4°48'48	7°08'28	8°10'10	10°40'10	2°08'00	T 4
W 5	7 32 20	23°45'26	18°33'00	10°21'00	8°36'10	27°25'10	29°10'00	27°06'10	13°10'10	10°59'00	4°48'47	7°08'17	8°07'10	10°47'10	2°11'00	W 5
T 6	7 36 16	24°46'31	3°23'23	11°50'00	9°26'10	27°36'10	29°23'00	27°13'10	13°11'10	10°57'00	4°48'46	7°08'06	8°04'10	10°53'10	2°15'00	T 6
F 7	7 40 13	25°47'35	17°53'00	13°16'00	10°17'10	27°46'10	29°36'00	27°19'10	13°12'10	10°56'00	4°48'44	7°08'05	8°01'10	11°00'00	2°18'00	F 7
S 8	7 44 09	26°48'38	1°18'57	14°38'00	11°09'10	27°56'10	29°49'00	27°26'10	13°13'10	10°54'00	4°48'43	7°08'04	7°57'10	11°07'00	2°21'00	S 8
S 9	7 48 06	27°49'39	15°34'00	15°56'00	12°01'10	28°04'10	0°18'30	27°32'10	13°15'10	10°52'00	4°48'42	7°08'04	7°54'10	11°14'00	2°25'00	S 9
M10	7 52 02	28°50'40	28°43'00	17°09'10	12°54'10	28°13'10	0°16'00	27°39'10	13°16'10	10°51'00	4°48'41	7°08'04	7°51'10	11°20'00	2°28'00	M10
T 11	7 55 59	29°51'39	11°17'27	18°16'10	13°48'10	28°20'10	0°30'00	27°45'10	13°17'10	10°49'00	4°48'40	7°08'04	6°04'20	7°48'10	11°27'00	T 11
W12	7 59 56	0°52'37	23°49'00	19°17'10	14°42'10	28°27'00	0°43'00	27°51'10	13°19'10	10°48'00	4°48'39	7°08'04	6°04'10	7°45'10	11°34'00	W12
T 13	8 03 52	1°53'34	5°18'56	20°10'10	15°37'10	28°34'00	0°57'00	27°58'10	13°21'10	10°46'00	4°48'38	7°08'04	6°04'10	7°42'10	11°40'00	T 13
F 14	8 07 49	2°54'30	17°52'00	20°55'10	16°33'10	28°39'00	1°10'00	28°04'10	13°22'10	10°44'00	4°48'37	7°08'04	6°04'10	7°38'10	11°47'00	F 14
S 15	8 11 45	3°55'24	29°42'00	21°31'10	17°29'10	28°45'00	1°24'00	28°10'10	13°24'10	10°43'00	4°48'36	7°08'04	6°03'10	7°35'10	11°54'00	S 15
S 16	8 15 42	4°56'17	11°11'32	21°57'10	18°26'10	28°49'00	1°38'00	28°16'10	13°25'10	10°41'00	4°48'34	7°08'04	6°03'10	7°32'10	12°01'00	S 16
M17	8 19 38	5°57'09	23°26'00	22°13'10	19°23'10	28°53'00	1°51'00	28°22'10	13°27'10	10°39'00	4°48'33	7°08'04	6°03'10	7°29'10	12°07'00	M17
T 18	8 23 35	6°57'59	5°26'26	22°19'10	20°21'10	28°56'00	2°05'00	28°28'10	13°29'10	10°38'00	4°48'32	7°08'04	6°03'10	7°26'10	12°14'00	T 18
W19	8 27 31	7°58'48	17°35'00	22°13'10	21°19'10	28°58'00	2°19'00	28°34'10	13°31'10	10°36'00	4°48'31	7°08'04	6°02'10	7°22'10	12°21'00	W19
T 20	8 31 28	8°59'36	29°55'00	21°56'10	22°17'10	29°00'00	2°33'00	28°40'10	13°33'10	10°34'00	4°48'30	7°08'04	5°50'10	7°19'10	12°27'00	T 20
F 21	8 35 25	10°02'22	12°02'26	21°28'10	23°17'10	29°00'00	2°47'00	28°46'10	13°34'10	10°32'00	4°48'29	7°08'04	5°40'10	7°16'10	12°34'00	F 21
S 22	8 39 21	11°07'00	25°08'00	20°51'10	24°16'10	29°00'00	3°01'00	28°52'10	13°36'10	10°31'00	4°48'28	7°08'04	5°32'10	7°13'10	12°41'00	S 22
S 23	8 43 18	12°15'00	8°17'02	20°04'10	25°16'10	29°00'00	3°15'00	28°58'10	13°38'10	10°29'00	4°48'27	7°08'04	5°26'10	7°10'10	12°48'00	S 23
M24	8 47 14	13°23'30	21°06'00	19°09'10	26°16'10	28°59'00	3°29'00	29°03'10	13°40'10	10°27'00	4°48'26	7°08'04	5°22'10	7°07'10	12°54'00	M24
T 25	8 51 11	14°31'14	4°12'22	18°08'10	27°17'10	28°57'00	3°43'00	29°09'10	13°43'10	10°26'00	4°48'26	7°08'04	5°02'21	7°03'10	13°01'00	T 25
W26	8 55 07	15°35'54	17°49'00	17°02'10	28°18'10	28°54'00	3°57'00	29°15'10	13°45'10	10°24'00	4°48'25	7°08'04	5°22'10	7°00'10	13°08'00	W26
T 27	8 59 04	16°43'33	1°11'29	15°53'10	29°20'10	28°50'00	4°11'00	29°20'10	13°47'10	10°22'00	4°48'24	7°08'04	5°23'10	6°57'10	13°14'00	T 27
F 28	9 03 00	17°51'11	15°22'00	14°43'00	0°23'22	28°46'00	4°25'00	29°26'10	13°49'10	10°21'00	4°48'23	7°08'04	5°24'10	6°54'10	13°21'00	F 28
S 29	9 06 57	18°54'48	29°28'00	13°34'00	1°24'00	28°40'00	4°39'00	29°31'10	13°51'10	10°19'00	4°48'22	7°08'04	5°23'10	6°51'10	13°28'00	S 29
S 30	9 10 54	19°6'23	13°17'46	12°28'00	2°26'00	28°35'00	4°54'00	29°37'10	13°53'10	10°17'00	4°48'21	7°08'04	5°21'10	6°48'10	13°35'00	S 30
M31	9 14 50	20°6'58	28°17'14	11°26'00	3°29'00	28°17'28	5°18'00	29°17'42	13°56'10	10°16'00	4°48'20	7°08'04	5°19'10	6°47'10	13°41'00	M31

Delta T = 07m06s

Julian Calendar 1 Jan. 1429 == Greg. Calendar 10 Jan. 1429

FEBRUARY 1429 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	9 18 47	21° 7'31	12° 47	10° R29	4° 32	28° R20	5° 22	29° 47	13° 58	10° R14	4° R20	5° R10	6° 41	13° 48	3° 48	T 1
W 2	9 22 43	22° 8'02	27° 19	9° 38	5° 36	28° 12	5° 36	29° 53	14° 1	10° 12	4° 19	5° 3	6° 38	13° 55	3° 52	W 2
T 3	9 26 40	23° 8'33	11° 44	8° 54	6° 40	28° 3	5° 51	29° 58	14° 3	10° 11	4° 18	4° 56	6° 35	14° 1	3° 56	T 3
F 4	9 30 36	24° 9'01	25° 56	8° 17	7° 43	27° 53	6° 5	0° 3	14° 5	10° 9	4° 17	4° 50	6° 32	14° 8	4° 0	F 4
S 5	9 34 33	25° 9'28	9° 48	7° 48	8° 48	27° 42	6° 20	0° 8	14° 8	10° 7	4° 16	4° 45	6° 28	14° 15	4° 4	S 5
S 6	9 38 29	26° 9'53	23° 19	7° 26	9° 52	27° 31	6° 34	0° 13	14° 10	10° 6	4° 16	4° 43	6° 25	14° 22	4° 7	S 6
M 7	9 42 26	27° 10'16	6° 27	7° 12	10° 57	27° 18	6° 48	0° 18	14° 13	10° 4	4° 15	4° D42	6° 22	14° 28	4° 11	M 7
T 8	9 46 23	28° 10'37	19° 12	7° 4	12° 2	27° 5	7° 3	0° 22	14° 16	10° 3	4° 14	4° 43	6° 19	14° 35	4° 15	T 8
W 9	9 50 19	29° 10'56	1° 38	7° D 4	13° 7	26° 52	7° 17	0° 27	14° 18	10° 1	4° 14	4° 45	6° 16	14° 42	4° 19	W 9
T 10	9 54 16	0° 11'13	13° 49	7° 10	14° 12	26° 37	7° 32	0° 32	14° 21	9° 59	4° 13	4° 47	6° 13	14° 48	4° 23	T 10
F 11	9 58 12	1° 11'29	25° 48	7° 22	15° 18	26° 22	7° 46	0° 36	14° 24	9° 58	4° 12	4° R48	6° 9	14° 55	4° 27	F 11
S 12	10 2 9	2° 11'42	7° 41	7° 40	16° 24	26° 6	8° 0	0° 41	14° 26	9° 56	4° 12	4° 48	6° 6	15° 2	4° 31	S 12
S 13	10 6 5	3° 11'53	19° 32	8° 3	17° 30	25° 49	8° 15	0° 45	14° 29	9° 55	4° 11	4° 46	6° 3	15° 8	4° 35	S 13
M14	10 10 2	4° 12'02	1° 28	8° 32	18° 36	25° 32	8° 29	0° 50	14° 32	9° 53	4° 11	4° 43	6° 0	15° 15	4° 39	M14
T 15	10 13 58	5° 12'09	13° 31	9° 5	19° 42	25° 14	8° 44	0° 54	14° 35	9° 52	4° 10	4° 39	5° 57	15° 22	4° 42	T 15
W16	10 17 55	6° 12'14	25° 45	9° 42	20° 49	24° 56	8° 58	0° 58	14° 38	9° 50	4° 10	4° 35	5° 54	15° 29	4° 46	W16
T 17	10 21 52	7° 12'17	8° 13	10° 24	21° 55	24° 37	9° 13	1° 2	14° 40	9° 49	4° 9	4° 30	5° 50	15° 35	4° 50	T 17
F 18	10 25 48	8° 12'18	20° 56	11° 9	23° 2	24° 18	9° 27	1° 7	14° 43	9° 47	4° 9	4° 25	5° 47	15° 42	4° 54	F 18
S 19	10 29 45	9° 12'16	3° 56	11° 58	24° 9	23° 57	9° 42	1° 10	14° 46	9° 46	4° 8	4° 22	5° 44	15° 49	4° 58	S 19
S 20	10 33 41	10° 12'13	17° 10	12° 50	25° 16	23° 37	9° 56	1° 14	14° 49	9° 45	4° 8	4° 20	5° 41	15° 56	5° 2	S 20
M21	10 37 38	11° 12'08	0° 39	13° 46	26° 24	23° 16	10° 11	1° 18	14° 52	9° 43	4° 8	4° D19	5° 38	16° 2	5° 6	M21
T 22	10 41 34	12° 12'01	14° 21	14° 44	27° 31	22° 54	10° 25	1° 22	14° 55	9° 42	4° 7	4° 19	5° 34	16° 9	5° 10	T 22
W23	10 45 31	13° 11'52	28° 12	15° 45	28° 39	22° 33	10° 40	1° 26	14° 58	9° 40	4° 7	4° 20	5° 31	16° 16	5° 13	W23
T 24	10 49 27	14° 11'41	12° 11	16° 48	29° 47	22° 10	10° 54	1° 29	15° 1	9° 39	4° 6	4° 21	5° 28	16° 22	5° 17	T 24
F 25	10 53 24	15° 11'29	26° 18	17° 54	0° 55	21° 48	11° 9	1° 33	15° 4	9° 38	4° 6	4° 23	5° 25	16° 29	5° 21	F 25
S 26	10 57 21	16° 11'15	10° 28	19° 2	2° 3	21° 25	11° 23	1° 36	15° 7	9° 37	4° 6	4° R23	5° 22	16° 36	5° 25	S 26
S 27	11 1 17	17° 11'00	24° 40	20° 12	3° 11	21° 2	11° 38	1° 39	15° 11	9° 35	4° 6	4° 23	5° 19	16° 43	5° 29	S 27
M28	11 5 14	18° 10'42	8° 52	21° 25	4° 19	20° 39	11° 52	1° 34	15° 14	9° 34	4° 5	4° 22	5° 15	16° 49	5° 33	M28

## ASTRODIENST EPHEMERIS for the year 1429

geocentric

MARCH 1429 JC

00:00 UT

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

Delta T = 07m06s

Julian Calendar 1 March 1429 == Greg. Calendar 10 March 1429

APRIL 1429 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	13 11 23	19°43'12	14°19	13°53	11°32	10°44	19°22	2°38	17°1	9°8	4°10	4°18	3°34	20°24	7°25	F 1
S 2	13 15 20	20°41'48	27°23	15°56	12°43	10°35	19°36	2°38	17°4	9°8	4°11	4°18	3°31	20°31	7°28	S 2
S 3	13 19 16	21°40'22	10°14	18°0	13°53	10°28	19°49	2°38	17°8	9°7	4°12	4°18	3°27	20°38	7°31	S 3
M 4	13 23 13	22°38'54	22°52	20°5	15°4	10°21	20°3	2°38	17°11	9°7	4°12	4°17	3°24	20°44	7°34	M 4
T 5	13 27 10	23°37'24	5°19	22°11	16°15	10°15	20°16	2°38	17°15	9°7	4°13	4°16	3°21	20°51	7°37	T 5
W 6	13 31 6	24°35'52	17°34	24°18	17°26	10°10	20°29	2°37	17°18	9°7	4°13	4°13	3°18	20°58	7°40	W 6
T 7	13 35 3	25°34'19	29°40	26°26	18°37	10°5	20°42	2°37	17°22	9°7	4°14	4°9	3°15	21°5	7°43	T 7
F 8	13 38 59	26°32'43	11°38	28°34	19°49	10°2	20°55	2°36	17°25	9°7	4°15	4°6	3°11	21°11	7°46	F 8
S 9	13 42 56	27°31'06	23°32	0°43	21°0	9°59	21°8	2°36	17°28	9°6	4°15	4°2	3°8	21°18	7°49	S 9
S 10	13 46 52	28°29'26	5°24	2°51	22°11	9°57	21°21	2°35	17°32	9°6	4°16	4°0	3°5	21°25	7°51	S 10
M11	13 50 49	29°27'44	17°18	5°0	23°22	9°56	21°34	2°34	17°35	9°D	4°17	3°58	3°2	21°31	7°54	M11
T 12	13 54 45	0°26'00	29°19	7°8	24°33	9°D55	21°47	2°34	17°39	9°6	4°18	3°D57	2°59	21°38	7°57	T 12
W13	13 58 42	1°24'14	11°32	9°15	25°45	9°55	22°0	2°33	17°42	9°6	4°18	3°58	2°56	21°45	8°0	W13
T 14	14 2 39	2°22'26	24°1	11°21	26°56	9°56	22°13	2°32	17°45	9°7	4°19	3°59	2°52	21°52	8°2	T 14
F 15	14 6 35	3°20'36	6°50	13°26	28°7	9°58	22°25	2°30	17°49	9°7	4°20	4°0	2°49	21°58	8°5	F 15
S 16	14 10 32	4°18'44	20°2	15°29	29°19	10°1	22°38	2°29	17°52	9°7	4°21	4°2	2°46	22°5	8°7	S 16
S 17	14 14 28	5°16'50	3°44	17°30	0°30	10°4	22°50	2°28	17°55	9°7	4°22	4°R	2°43	22°12	8°10	S 17
M18	14 18 25	6°14'54	17°44	19°29	1°41	10°8	23°3	2°27	17°59	9°7	4°23	4°2	2°40	22°18	8°12	M18
T 19	14 22 21	7°12'56	2°11	21°25	2°53	10°12	23°15	2°25	18°2	9°7	4°24	4°0	2°37	22°25	8°15	T 19
W20	14 26 18	8°10'57	16°55	23°19	4°4	10°17	23°28	2°23	18°5	9°8	4°24	3°56	2°33	22°32	8°17	W20
T 21	14 30 14	9°8'56	1°49	25°10	5°16	10°23	23°40	2°22	18°8	9°8	4°25	3°51	2°30	22°39	8°19	T 21
F 22	14 34 11	10°6'54	16°46	26°58	6°27	10°30	23°52	2°20	18°12	9°8	4°26	3°46	2°27	22°45	8°22	F 22
S 23	14 38 8	11°4'50	1°35	28°42	7°39	10°37	24°4	2°18	18°15	9°9	4°27	3°41	2°24	22°52	8°24	S 23
S 24	14 42 4	12°2'45	16°11	0°24	8°51	10°45	24°16	2°16	18°18	9°9	4°28	3°37	2°21	22°59	8°26	S 24
M25	14 46 1	13°0'38	0°28	2°2	10°2	10°54	24°28	2°14	18°21	9°10	4°29	3°35	2°17	23°6	8°28	M25
T 26	14 49 57	13°58'31	14°25	3°36	11°14	11°3	24°40	2°12	18°25	9°10	4°30	3°D34	2°14	23°12	8°30	T 26
W27	14 53 54	14°56'22	28°1	5°7	12°26	11°13	24°51	2°10	18°28	9°11	4°31	3°35	2°11	23°19	8°32	W27
T 28	14 57 50	15°54'12	11°17	6°35	13°37	11°23	25°3	2°8	18°31	9°11	4°32	3°36	2°8	23°26	8°34	T 28
F 29	15 1 47	16°52'00	24°16	7°58	14°49	11°34	25°15	2°5	18°34	9°12	4°34	3°37	2°5	23°32	8°36	F 29
S 30	15 5 43	17°49'47	7°1	9°18	16°1	11°45	25°26	2°3	18°37	9°12	4°35	3°R38	2°1	23°39	8°38	S 30

Delta T = 07m05s

Julian Calendar

# ASTRODIENST EPHEMERIS for the year 1429

## geocentric

MAY 1429 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	15 9 40	18°47'33	19°33	10°35	17°13	11°58	25°37	2°R 0	18°40	9°13	4°36	3°R36	1°58	23°46	8°40	S 1
M 2	15 13 37	19°45'18	18°54	11°47	18°25	12°10	25°49	1°38	18°43	9°14	4°37	3°Y33	1°55	23°53	8°42	M 2
T 3	15 17 33	20°43'02	14° 7	12°56	19°36	12°23	26° 0	1°55	18°46	9°14	4°38	3°27	1°52	23°59	8°43	T 3
W 4	15 21 30	21°40'44	26°12	14° 0	20°48	12°37	26°11	1°52	18°49	9°15	4°39	3°20	1°49	24° 6	8°45	W 4
T 5	15 25 26	22°38'25	8°11	15° 1	22° 0	12°52	26°22	1°49	18°52	9°16	4°40	3°11	1°46	24°13	8°47	T 5
F 6	15 29 23	23°36'05	20° 6	15°58	23°12	13° 6	26°33	1°46	18°55	9°17	4°42	3° 1	1°43	24°19	8°48	F 6
S 7	15 33 19	24°33'43	1°58	16°50	24°24	13°22	26°44	1°43	18°58	9°17	4°43	2°52	1°39	24°26	8°50	S 7
S 8	15 37 16	25°31'20	13°50	17°38	25°36	13°38	26°54	1°40	19° 1	9°18	4°44	2°44	1°36	24°33	8°51	S 8
M 9	15 41 13	26°28'55	25°44	18°22	26°48	13°54	27° 5	1°37	19° 4	9°19	4°45	2°37	1°33	24°40	8°53	M 9
T 10	15 45 9	27°26'29	7°44	19° 2	28° 0	14°11	27°16	1°34	19° 7	9°20	4°46	2°33	1°30	24°46	8°54	T 10
W11	15 49 6	28°24'02	19°54	19°37	29°12	14°28	27°26	1°31	19°10	9°21	4°48	2°31	1°27	24°53	8°55	W11
T 12	15 53 2	29°21'33	2°19	20° 8	0°24	14°46	27°36	1°27	19°13	9°22	4°49	2°D31	1°23	25° 0	8°57	T 12
F 13	15 56 59	0°19'03	15° 4	20°34	1°36	15° 4	27°46	1°24	19°16	9°23	4°50	2°31	1°20	25° 7	8°58	F 13
S 14	16 0 55	1°16'31	28°12	20°56	2°48	15°23	27°56	1°21	19°18	9°24	4°52	2°R32	1°17	25°13	8°59	S 14
S 15	16 4 52	2°13'58	11°48	21°13	4° 0	15°42	28° 6	1°17	19°21	9°25	4°53	2°32	1°14	25°20	9° 0	S 15
M16	16 8 48	3°11'24	25°52	21°25	5°13	16° 1	28°16	1°13	19°24	9°26	4°54	2°30	1°11	25°27	9° 1	M16
T 17	16 12 45	4° 8'48	10°25	21°33	6°25	16°21	28°26	1°10	19°26	9°27	4°55	2°25	1° 8	25°33	9° 2	T 17
W18	16 16 41	5° 6'12	25°20	21°R36	7°37	16°42	28°35	1° 6	19°29	9°28	4°57	2°19	1° 4	25°40	9° 3	W18
T 19	16 20 38	6° 3'35	10°30	21°34	8°49	17° 2	28°45	1° 2	19°32	9°30	4°58	2°10	1° 1	25°47	9° 4	T 19
F 20	16 24 35	7° 0'57	25°46	21°28	10° 1	17°23	28°54	0°59	19°34	9°31	5° 0	2° 1	0°58	25°54	9° 5	F 20
S 21	16 28 31	7°58'18	10°55	21°18	11°14	17°45	29° 4	0°55	19°37	9°32	5° 1	1°52	0°55	26° 0	9° 6	S 21
S 22	16 32 28	8°55'38	25°49	21° 4	12°26	18° 7	29°13	0°51	19°39	9°33	5° 2	1°44	0°52	26° 7	9° 6	S 22
M23	16 36 24	9°52'58	10°20	20°46	13°38	18°29	29°22	0°47	19°42	9°35	5° 4	1°39	0°49	26°14	9° 7	M23
T 24	16 40 21	10°50'17	24°24	20°24	14°50	18°52	29°30	0°43	19°44	9°36	5° 5	1°36	0°45	26°20	9° 8	T 24
W25	16 44 17	11°47'36	8° 2	19°59	16° 3	19°15	29°39	0°39	19°47	9°37	5° 7	1°D35	0°42	26°27	9° 8	W25
T 26	16 48 14	12°44'54	21°15	19°31	17°15	19°38	29°48	0°35	19°49	9°39	5° 8	1°35	0°39	26°34	9° 9	T 26
F 27	16 52 11	13°42'11	4° 6	19° 1	18°28	20° 1	29°56	0°31	19°51	9°40	5° 9	1°R35	0°36	26°41	9° 9	F 27
S 28	16 56 7	14°39'29	16°40	18°30	19°40	20°25	0° 5	0°27	19°54	9°41	5°11	1°34	0°33	26°47	9°10	S 28
S 29	17 0 4	15°36'46	29° 0	17°56	20°52	20°50	0°13	0°23	19°56	9°43	5°12	1°31	0°29	26°54	9°10	S 29
M30	17 4 0	16°34'02	11°10	17°23	22° 5	21°14	0°21	0°18	19°58	9°44	5°14	1°26	0°26	27° 1	9°10	M30
T 31	17 7 57	17°31'19	23°12	16°48	23°17	21°39	0° 5	0°14	20° 1	9°46	5°15	1°Y17	0°Y23	27°11	9°10	T 31

Delta T = 07m05s

Julian Calendar 1 May 1429 == Greg. Calendar 10 May 1429

JUNE 1429 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	17 11 53	18°28'35	5°11	16°R15	24°30	22°15	0°Y37	0°R10	20°Y 3	9°47	5°17	1°R 7	0°Y20	27°11	9°11	W 1
T 2	17 15 50	19°25'50	17° 3	15°H42	25°42	22°30	0°44	0°3 6	20° 5	9°49	5°18	0°Y54	0°17	27°21	9°11	T 2
F 3	17 19 46	20°23'05	28°55	15°11	26°55	22°56	0°52	0° 1	20° 7	9°50	5°20	0°40	0°14	27°28	9°11	F 3
S 4	17 23 43	21°20'20	10°47	14°42	28° 8	23°22	0°59	29°57	20° 9	9°52	5°21	0°27	0°10	27°34	9°11	S 4
S 5	17 27 40	22°17'34	22°40	14°16	29°20	23°49	1° 6	29°53	20°11	9°54	5°23	0°15	0° 7	27°41	9°11	S 5
M 6	17 31 36	23°14'47	4°37	13°52	0°H33	24°15	1°13	29°48	20°13	9°55	5°24	0° 5	0° 4	27°48	9°11	M 6
T 7	17 35 33	24°12'00	16°39	13°32	1°45	24°42	1°20	29°44	20°15	9°57	5°26	29°H58	0° 1	27°55	9°10	T 7
W 8	17 39 29	25° 9'12	28°50	13°16	2°58	25°10	1°27	29°40	20°17	9°59	5°27	29°53	29°H58	28° 1	9°10	W 8
T 9	17 43 26	26° 6'24	11°15	13° 4	4°11	25°37	1°34	29°35	20°19	10° 0	5°29	29°51	29°55	28° 8	9°10	T 9
F 10	17 47 22	27° 3'36	23°57	12°56	5°23	26° 5	1°40	29°31	20°20	10° 2	5°30	29°51	29°51	28°15	9°10	F 10
S 11	17 51 19	28° 0'46	7° 0	12°D53	6°36	26°33	1°46	29°26	20°22	10° 4	5°32	29°51	29°48	28°22	9° 9	S 11
S 12	17 55 15	28°57'57	20°29	12°54	7°49	27° 2	1°52	29°22	20°24	10° 6	5°33	29°50	29°45	28°28	9° 9	S 12
M13	17 59 12	29°55'07	4°11	13° 1	9° 2	27°30	1°58	29°17	20°26	10° 7	5°35	29°47	29°42	28°35	9° 8	M13
T 14	18 3 9	0°52'16	18°53	13°12	10°14	27°59	2° 4	29°13	20°27	10° 9	5°36	29°42	29°39	28°42	9° 8	T 14
W15	18 7 5	1°49'26	3°45	13°28	11°27	28°28	2°10	29° 9	20°29	10°11	5°38	29°35	29°35	28°48	9° 7	W15
T 16	18 11 2	2°46'35	18°55	13°49	12°40	28°58	2°15	29° 4	20°30	10°13	5°39	29°25	29°32	28°55	9° 6	T 16
F 17	18 14 58	3°43'44	4°35	14°15	13°53	29°27	2°21	29° 0	20°32	10°15	5°41	29°14	29°29	29° 2	9° 6	F 17
S 18	18 18 55	4°40'53	19°33	14°46	15° 6	29°57	2°26	28°56	20°33	10°16	5°42	29° 4	29°26	29° 9	9° 5	S 18
S 19	18 22 51	5°38'02	4°37	15°21	16°19	0°H27	2°31	28°51	20°35	10°18	5°44	28°55	29°23	29°15	9° 4	S 19
M20	18 26 48	6°35'12	19°18	16° 2	17°32	0°57	2°35	28°47	20°36	10°20	5°45	28°49	29°20	29°22	9° 3	M20
T 21	18 30 45	7°32'22	3°33	16°47	18°45	1°28	2°40	28°42	20°38	10°22	5°47	28°45	29°16	29°29	9° 2	T 21
W22	18 34 41	8°29'32	17°17	17°38	19°58	1°58	2°45	28°38	20°39	10°24	5°48	28°43	29°13	29°36	9° 1	W22
T 23	18 38 38	9°26'42	0°Y34	18°33	21°11	2°29	2°49	28°34	20°40	10°26	5°50	28°D42	29°10	29°42	9° 0	T 23
F 24	18 42 34	10°23'53	13°26	19°32	22°24	3° 0	2°53	28°30	20°41	10°28	5°51	28°R43	29° 7	29°49	8°59	F 24
S 25	18 46 31	11°21'05	25°58	20°37	23°37	3°32	2°57	28°25	20°42	10°30	5°53	28°42	29° 4	29°56	8°58	S 25
S 26	18 50 27	12°18'17	8°13	21°45	24°50	4° 3	3° 1	28°21	20°43	10°32	5°54	28°39	29° 1	0°2 2	8°57	S 26
M27	18 54 24	13°15'30	20°18	22°59	26° 3	4°35	3° 4	28°17	20°45	10°34	5°56	28°34	28°57	0° 9	8°55	M27
T 28	18 58 20	14°12'43	2°H15	24°16	27°16	5° 7	3° 7	28°13	20°46	10°36	5°58	28°27	28°54	0°16	8°54	T 28
W29	19 2 17	15° 9'57	14° 8	25°38	28°29	5°39	3°11	28° 9	20°47	10°38	5°59	28°16	28°51	0°23	8°53	W29
T 30	19 6 14	16° 7'11	25°H59	27°H 4	29°H43	6°H11	3°Y14	28°H 4	20°Y47	10°H40	6°H 1	28°H 4	28°H48	0°H29	8°H51	T 30

Delta T = 07m05s

Julian Calendar

# ASTRODIENST EPHEMERIS for the year 1429

## geocentric

JULY 1429 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	19 10 10	17°42'26"	7°51'51"	28°11'35"	0°55'56"	6°44'44"	3°17'16"	28°R 0	20°Y48	10°L42	6°52'2	27°R52	28°K45	0°53'36"	8°R50	F 1
S 2	19 14 7	18° 1'42"	19°46'	0°59'9"	2° 9'	7°16'	3°19'	27°A56	20°49'	10°44'	6° 4'	27°K39	28°41'	0°43'	8°K48	S 2
S 3	19 18 3	18°58'58"	1°44'	1°47'	3°23'	7°49'	3°22'	27°52'	20°50'	10°46'	6° 5'	27°28'	28°38'	0°49'	8°47'	S 3
M 4	19 22 0	19°56'14"	13°47'	3°29'	4°36'	8°22'	3°24'	27°49'	20°51'	10°48'	6° 7'	27°18'	28°35'	0°56'	8°45'	M 4
T 5	19 25 56	20°53'31"	25°57'	5°15'	5°49'	8°56'	3°26'	27°45'	20°51'	10°51'	6° 8'	27°12'	28°32'	1° 3'	8°44'	T 5
W 6	19 29 53	21°50'48"	8°15'	7° 3'	7° 3'	9°29'	3°28'	27°41'	20°52'	10°53'	6°10'	27° 8'	28°29'	1°10'	8°42'	W 6
T 7	19 33 49	22°48'06"	20°46'	8°55'	8°16'	10° 3'	3°29'	27°37'	20°52'	10°55'	6°11'	27° 6'	28°26'	1°16'	8°40'	T 7
F 8	19 37 46	23°45'24"	3°43'	10°50'	9°29'	10°37'	3°31'	27°33'	20°53'	10°57'	6°12'	27°D 6	28°22'	1°23'	8°38'	F 8
S 9	19 41 43	24°42'42"	16°35'	12°47'	10°43'	11°10'	3°32'	27°30'	20°53'	10°59'	6°14'	27° 6'	28°19'	1°30'	8°37'	S 9
S 10	19 45 39	25°40'01"	0°11'0"	14°46'	11°56'	11°45'	3°33'	27°26'	20°54'	11° 1'	6°15'	27°R 7	28°16'	1°37'	8°35'	S 10
M 11	19 49 36	26°37'21"	13°50'	16°47'	13°10'	12°19'	3°34'	27°22'	20°54'	11° 3'	6°17'	27° 5'	28°13'	1°43'	8°33'	M 11
T 12	19 53 32	27°34'41"	28° 5'	18°50'	14°23'	12°53'	3°35'	27°19'	20°55'	11° 6'	6°18'	27° 2'	28°10'	1°50'	8°31'	T 12
W 13	19 57 29	28°32'01"	12°A43	20°54'	15°37'	13°28'	3°35'	27°15'	20°55'	11° 8'	6°20'	26°56'	28° 7'	1°57'	8°29'	W 13
T 14	20 1 25	29°29'23"	27°39'	22°59'	16°51'	14° 3'	3°36'	27°12'	20°55'	11°10'	6°21'	26°49'	28° 3'	2° 3'	8°27'	T 14
F 15	20 5 22	0°12'6"	12°B47	25° 4'	18° 4'	14°38'	3°R36	27° 9'	20°55'	11°12'	6°23'	26°41'	28° 0'	2°10'	8°25'	F 15
S 16	20 9 18	1°24'07"	27°57'	27° 9'	19°18'	15°13'	3°36'	27° 5'	20°55'	11°14'	6°24'	26°33'	27°57'	2°17'	8°23'	S 16
S 17	20 13 15	2°21'31"	12°C57	29°15'	20°31'	15°48'	3°35'	27° 2'	20°56'	11°17'	6°25'	26°26'	27°54'	2°24'	8°21'	S 17
M 18	20 17 12	3°18'56"	27°39'	1°12'0"	21°45'	16°23'	3°35'	26°59'	20°R56	11°19'	6°27'	26°21'	27°51'	2°30'	8°18'	M 18
T 19	20 21 8	4°16'21"	11°K57	3°25'	22°59'	16°59'	3°34'	26°56'	20°56'	11°21'	6°28'	26°18'	27°47'	2°37'	8°16'	T 19
W 20	20 25 5	5°13'48"	25°47'	5°29'	24°13'	17°35'	3°33'	26°53'	20°55'	11°23'	6°30'	26°D17	27°44'	2°44'	8°14'	W 20
T 21	20 29 1	6°11'16"	9°Y 9	7°32'	25°26'	18°10'	3°32'	26°50'	20°55'	11°25'	6°31'	26°18'	27°41'	2°51'	8°12'	T 21
F 22	20 32 58	7° 8'45"	22° 6'	9°34'	26°40'	18°46'	3°31'	26°47'	20°55'	11°28'	6°32'	26°19'	27°38'	2°57'	8° 9'	F 22
S 23	20 36 54	8° 6'16"	4°B40	11°35'	27°54'	19°23'	3°30'	26°45'	20°55'	11°30'	6°34'	26°R20	27°35'	3° 4'	8° 7'	S 23
S 24	20 40 51	9° 3'49"	16°57'	13°34'	29° 8'	19°59'	3°28'	26°42'	20°55'	11°32'	6°35'	26°19'	27°32'	3°11'	8° 5'	S 24
M 25	20 44 47	10° 1'22"	29° 2'	15°33'	0°12'2"	20°35'	3°26'	26°39'	20°54'	11°34'	6°36'	26°17'	27°28'	3°17'	8° 2'	M 25
T 26	20 48 44	10°58'58"	10°I58	17°30'	1°36'	21°12'	3°24'	26°37'	20°54'	11°37'	6°38'	26°13'	27°25'	3°24'	8° 0'	T 26
W 27	20 52 41	11°56'34"	22°50'	19°26'	2°50'	21°48'	3°22'	26°34'	20°54'	11°39'	6°39'	26° 8'	27°22'	3°31'	7°57'	W 27
T 28	20 56 37	12°54'13"	4°B42	21°20'	4° 4'	22°25'	3°19'	26°32'	20°53'	11°41'	6°40'	26° 1'	27°19'	3°38'	7°55'	T 28
F 29	21 0 34	13°51'52"	16°36'	23°13'	5°18'	23° 2'	3°17'	26°30'	20°53'	11°43'	6°41'	25°53'	27°16'	3°44'	7°52'	F 29
S 30	21 4 30	14°49'33"	28°35'	25° 4'	6°32'	23°39'	3°14'	26°27'	20°52'	11°45'	6°43'	25°45'	27°13'	3°51'	7°50'	S 30
S 31	21 8 27	15°47'16"	10°L41	26°L54	7°L46	24°L17	3°Y11	26°A25	20°Y52	11°L48	6°B44	25°K38	27°K 9	3°B58	7°K47	S 31

Delta T = 07m05s

Julian Calendar 1 July 1429 == Greg. Calendar 10 July 1429

AUGUST 1429 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	21 12 23	16°L44'59"	22°L55	28°L43	9°L 0	24°L54	3°R 8	26°R23	20°R51	11°L50	6°B45	25°R33	27°K 6	4°B 5	7°R44	M 1
T 2	21 16 20	17°42'44"	5°11'16"	0°11'30"	10°14'	25°32'	3°Y 4	26°A21	20°Y50	11°52'	6°46'	25°K29	27° 3'	4°11'	7°K42	T 2
W 3	21 20 16	18°40'30"	17°51'	2°16'	11°28'	26° 9'	3° 1'	26°19'	20°50'	11°54'	6°48'	25°27'	27° 0'	4°18'	7°39'	W 3
T 4	21 24 13	19°38'18"	0°A36	4° 0'	12°42'	26°47'	2°57'	26°18'	20°49'	11°57'	6°49'	25°D27	26°57'	4°25'	7°36'	T 4
F 5	21 28 10	20°36'07"	13°34'	5°43'	13°57'	27°25'	2°53'	26°16'	20°48'	11°59'	6°50'	25°28'	26°53'	4°31'	7°34'	F 5
S 6	21 32 6	21°33'57"	26°47'	7°24'	15°11'	28° 3'	2°49'	26°14'	20°47'	12° 1'	6°51'	25°30'	26°50'	4°38'	7°31'	S 6
S 7	21 36 3	22°31'48"	10°M17	9° 5'	16°25'	28°41'	2°44'	26°13'	20°46'	12° 3'	6°52'	25°31'	26°47'	4°45'	7°28'	S 7
M 8	21 39 59	23°29'41"	24° 4'	10°43'	17°39'	29°19'	2°40'	26°12'	20°45'	12° 5'	6°53'	25°R31	26°44'	4°52'	7°25'	M 8
T 9	21 43 56	24°27'35"	8°A10	12°21'	18°54'	29°58'	2°35'	26°10'	20°44'	12° 8'	6°54'	25°31'	26°41'	4°58'	7°23'	T 9
W 10	21 47 52	25°25'30"	22°32'	13°57'	20° 8'	0°M36	2°31'	26° 9'	20°43'	12°10'	6°56'	25°29'	26°38'	5° 5'	7°20'	W 10
T 11	21 51 49	26°23'27"	7°B 9	15°32'	21°22'	1°15'	2°26'	26° 8'	20°42'	12°12'	6°57'	25°26'	26°34'	5°12'	7°17'	T 11
F 12	21 55 45	27°21'25"	17° 5'	22°36'	1°54'	2°20'	2°20'	26° 7'	20°41'	12°14'	6°58'	25°22'	26°31'	5°18'	7°14'	F 12
S 13	21 59 42	28°19'24"	6°A41	18°37'	23°51'	2°33'	2°15'	26° 6'	20°40'	12°16'	6°59'	25°18'	26°28'	5°25'	7°11'	S 13
S 14	22 3 39	29°17'25"	21°23'	20° 8'	25° 5'	3°12'	2°10'	26° 5'	20°38'	12°18'	7° 0'	25°15'	26°25'	5°32'	7° 9'	S 14
M 15	22 7 35	0°11'52"	5°K52	21°38'	26°20'	3°51'	2° 4'	26° 4'	20°37'	12°21'	7° 1'	25°12'	26°22'	5°39'	7° 6'	M 15
T 16	22 11 32	1°13'31"	20° 2'	23° 6'	27°34'	4°30'	1°58'	26° 4'	20°36'	12°23'	7° 2'	25°D11	26°18'	5°45'	7° 3'	T 16
W 17	22 15 28	2°11'37"	3°Y49	24°33'	28°48'	5° 9'	1°52'	26° 3'	20°34'	12°25'	7° 3'	25°11'	26°15'	5°52'	7° 0'	W 17
T 18	22 19 25	3° 9'45"	17°12'	25°58'	0°11'3	5°49'	1°46'	26° 3'	20°33'	12°27'	7° 4'	25°12'	26°12'	5°59'	6°57'	T 18
F 19	22 23 21	4° 7'54"	0°B12	27°22'	1°17'	6°28'	1°40'	26° 2'	20°32'	12°29'	7° 5'	25°14'	26° 9'	6° 6'	6°54'	F 19
S 20	22 27 18	5° 6'06"	12°50'	28°45'	2°32'	7° 8'	1°34'	26° 2'	20°30'	12°31'	7° 6'	25°15'	26° 6'	6°12'	6°51'	S 20
S 21	22 31 14	6° 4'20"	25°10'	0°A 7	3°46'	7°48'	1°27'	26° 2'	20°29'	12°33'	7° 6'	25°16'	26° 3'	6°19'	6°49'	S 21
M 22	22 35 11	7° 2'36"	7°I16	1°26'	5° 1'	8°28'	1°21'	26°D 2	20°27'	12°35'	7° 7'	25°R17	25°59'	6°26'	6°46'	M 22
T 23	22 39 8	8° 0'54"	19°14'	2°45'	6°16'	9° 8'	1°14'	26° 2'	20°26'	12°37'	7° 8'	25°16'	25°56'	6°32'	6°43'	T 23
W 24	22 43 4	8°59'14"	1°B 7	4° 1'	7°30'	9°48'	1° 7'	26° 2'	20°24'	12°39'	7° 9'	25°15'	25°53'	6°39'	6°40'	W 24
T 25	22 47 1	9°57'36"	13° 0'	5°17'	8°45'	10°28'	1° 0'	26° 2'	20°22'	12°41'	7°10'	25°14'	25°50'	6°46'	6°37'	T 25
F 26	22 50 57	10°56'00"	24°56'	6°30'	9°59'	11° 8'	0°53'	26° 2'	20°21'	12°43'	7°11'	25°11'	25°47'	6°53'	6°34'	F 26
S 27	22 54 54	11°54'27"	7°L 0	7°42'	11°14'	11°49'	0°46'	26° 3'	20°19'	12°45'	7°11'	25° 9'	25°44'	6°59'	6°31'	S 27
S 28	22 58 50	12°52'55"	19°14'	8°52'	12°29'	12°29'	0°39'	26° 3'	20°17'	12°47'	7°12'	25° 8'	25°40'	7° 6'	6°29'	S 28
M 29	23 2 47	13°51'25"	11°40'	10° 0'	13°43'	13°10'	0°31'	26° 4'	20°15'	12°49'	7°13'	25° 6'	25°37'	7°13'	6°26'	M 29
T 30	23 6 43	14°49'58"	14°19'	11° 5'	14°58'	13°51'	0°24'	26° 5'	20°13'	12°51'	7°14'	25° 5'	25°34'	7°19'	6°23'	T 30
W 31	23 10 40	15°48'32"	27°12'	12°A 9	16°13'	14°M32	0°Y17	26°A 5	20°Y11	12°L53	7°B14	25°D 5	25°K31	7°B26	6°K20	W 31

Delta T = 07m05s

Julian Calendar

# ASTRODIENST EPHEMERIS for the year 1429

## geocentric

SEPTEMBER 1429 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	23 14 37	16 <sup>17</sup> 47'08	10 <sup>19</sup> 19	13 <sup>10</sup> 10	17 <sup>17</sup> 28	15 <sup>11</sup> 13	0°R 9	26 <sup>27</sup> 6	20°R10	12 <sup>12</sup> 55	7 <sup>15</sup> 15	25 <sup>15</sup> 6	25 <sup>15</sup> 28	7 <sup>15</sup> 33	6°R17	T 1
F 2	23 18 33	17°45'46	23°39	14° 9	18°42	15°54	0°Y 1	26° 7	20°Y 8	12°57	7°16	25° 6	25°24	7°40	6°14	F 2
S 3	23 22 30	18°44'26	7 <sup>11</sup> 12	15° 5	19°57	16°35	29 <sup>19</sup> 54	26° 8	20° 6	12°59	7°16	25° 7	25°21	7°46	6°12	S 3
S 4	23 26 26	19°43'07	20°57	15°59	21°12	17°16	29°46	26° 9	20° 4	13° 1	7°17	25° 7	25°18	7°53	6° 9	S 4
M 5	23 30 23	20°41'51	4 <sup>17</sup> 53	16°49	22°27	17°58	29°38	26°11	20° 2	13° 3	7°17	25° 8	25°15	8° 0	6° 6	M 5
T 6	23 34 19	21°40'36	18°58	17°36	23°41	18°39	29°30	26°12	20° 0	13° 5	7°18	25°R 8	25°12	8° 6	6° 3	T 6
W 7	23 38 16	22°39'23	3 <sup>13</sup> 11	18°19	24°56	19°21	29°22	26°14	19°58	13° 6	7°18	25° 8	25° 9	8°13	6° 1	W 7
T 8	23 42 12	23°38'11	17°30	18°58	26°11	20° 2	29°14	26°15	19°55	13° 8	7°19	25° 8	25° 5	8°20	5°58	T 8
F 9	23 46 9	24°37'01	1 <sup>18</sup> 50	19°33	27°26	20°44	29° 6	26°17	19°53	13°10	7°19	25° 8	25° 2	8°27	5°55	F 9
S 10	23 50 6	25°35'53	16°10	20° 3	28°41	21°26	28°58	26°19	19°51	13°12	7°20	25°D 8	24°59	8°33	5°53	S 10
S 11	23 54 2	26°34'47	0 <sup>18</sup> 24	20°29	29°56	22° 8	28°50	26°21	19°49	13°13	7°20	25° 8	24°56	8°40	5°50	S 11
M12	23 57 59	27°33'43	14°28	20°49	1 <sup>18</sup> 10	22°50	28°42	26°22	19°47	13°15	7°21	25° 8	24°53	8°47	5°47	M12
T 13	0 1 55	28°32'40	28°18	21° 3	2°25	23°32	28°34	26°25	19°45	13°17	7°21	25°R 8	24°50	8°54	5°45	T 13
W14	0 5 52	29°31'40	11°Y52	21°11	3°40	24°14	28°26	26°27	19°42	13°19	7°22	25° 8	24°46	9° 0	5°42	W14
T 15	0 9 48	0 <sup>18</sup> 30'41	25° 8	21°R12	4°55	24°57	28°18	26°29	19°40	13°20	7°22	25° 7	24°43	9° 7	5°40	T 15
F 16	0 13 45	1°29'45	8 <sup>18</sup> 4	21° 6	6°10	25°39	28°10	26°31	19°38	13°22	7°22	25° 7	24°40	9°14	5°37	F 16
S 17	0 17 41	2°28'51	20°42	20°53	7°25	26°21	28° 2	26°34	19°35	13°23	7°23	25° 6	24°37	9°20	5°35	S 17
S 18	0 21 38	3°28'00	3 <sup>11</sup> 3	20°32	8°40	27° 4	27°54	26°36	19°33	13°25	7°23	25° 5	24°34	9°27	5°32	S 18
M19	0 25 35	4°27'11	15°11	20° 3	9°55	27°47	27°46	26°39	19°31	13°27	7°23	25° 4	24°30	9°34	5°30	M19
T 20	0 29 31	5°26'24	27° 9	19°26	11°10	28°29	27°38	26°41	19°28	13°28	7°23	25° 3	24°27	9°41	5°27	T 20
W21	0 33 28	6°25'40	9 <sup>18</sup> 3	18°42	12°24	29°12	27°30	26°44	19°26	13°30	7°24	25°D 3	24°24	9°47	5°25	W21
T 22	0 37 24	7°24'58	20°56	17°50	13°39	29°55	27°22	26°47	19°24	13°31	7°24	25° 3	24°21	9°54	5°23	T 22
F 23	0 41 21	8°24'18	2 <sup>12</sup> 53	16°51	14°54	0 <sup>18</sup> 38	27°15	26°50	19°21	13°33	7°24	25° 4	24°18	10° 1	5°20	F 23
S 24	0 45 17	9°23'40	14°59	15°46	16° 9	1°21	27° 7	26°53	19°19	13°34	7°24	25° 6	24°15	10° 7	5°18	S 24
S 25	0 49 14	10°23'05	27°18	14°38	17°24	2° 4	26°59	26°56	19°17	13°35	7°24	25° 7	24°11	10°14	5°16	S 25
M26	0 53 10	11°22'32	9 <sup>17</sup> 52	13°26	18°39	2°48	26°52	26°59	19°14	13°37	7°24	25° 8	24° 8	10°21	5°14	M26
T 27	0 57 7	12°22'01	22°45	12°13	19°54	3°31	26°44	27° 3	19°12	13°38	7°24	25°R 9	24° 5	10°28	5°12	T 27
W28	1 1 4	13°21'32	5 <sup>18</sup> 57	11° 2	21° 9	4°14	26°37	27° 6	19° 9	13°39	7°24	25° 8	24° 2	10°34	5°10	W28
T 29	1 5 0	14°21'06	19°28	9°53	22°24	4°58	26°29	27°10	19° 7	13°41	7°R24	25° 7	23°59	10°41	5° 8	T 29
F 30	1 8 57	15 <sup>18</sup> 20'41	3 <sup>11</sup> 15	8 <sup>18</sup> 50	23 <sup>18</sup> 39	5 <sup>17</sup> 42	26 <sup>18</sup> 22	27 <sup>17</sup> 13	19 <sup>17</sup> 4	13 <sup>18</sup> 42	7 <sup>15</sup> 24	25 <sup>15</sup> 5	23 <sup>18</sup> 55	10 <sup>18</sup> 48	5 <sup>18</sup> 6	F 30

Delta T = 07m05s

Julian Calendar 1 Sept. 1429 == Greg. Calendar 10 Sept. 1429

OCTOBER 1429 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	1 12 53	16 <sup>18</sup> 20'18	17 <sup>11</sup> 16	7°R54	24 <sup>18</sup> 54	6 <sup>17</sup> 25	26°R15	27 <sup>17</sup> 17	19°R 2	13 <sup>12</sup> 43	7°R24	25°R 2	23 <sup>18</sup> 52	10 <sup>18</sup> 54	5°R 4	S 1
S 2	1 16 50	17°19'58	1 <sup>17</sup> 27	7 <sup>18</sup> 7	26° 9	7° 9	26 <sup>18</sup> 8	27°21	18°Y59	13°44	7 <sup>15</sup> 24	24 <sup>18</sup> 59	23°49	11° 1	5 <sup>18</sup> 2	S 2
M 3	1 20 46	18°19'39	15°43	6°29	27°24	7°53	26° 1	27°24	18°57	13°46	7°24	24°56	23°46	11° 8	5° 0	M 3
T 4	1 24 43	19°19'22	29°59	6° 2	28°39	8°37	25°54	27°28	18°55	13°47	7°24	24°54	23°43	11°15	4°58	T 4
W 5	1 28 39	20°19'07	14 <sup>13</sup> 15	5°47	29°54	9°21	25°48	27°32	18°52	13°48	7°24	24°D52	23°40	11°21	4°56	W 5
T 6	1 32 36	21°18'53	28°25	5°D42	1 <sup>11</sup> 9	10° 5	25°41	27°36	18°50	13°49	7°24	24°53	23°36	11°28	4°54	T 6
F 7	1 36 33	22°18'41	12 <sup>18</sup> 28	5°49	2°24	10°49	25°35	27°40	18°47	13°50	7°24	24°54	23°33	11°35	4°53	F 7
S 8	1 40 29	23°18'31	26°24	6° 7	3°39	11°33	25°29	27°45	18°45	13°51	7°24	24°55	23°30	11°41	4°51	S 8
S 9	1 44 26	24°18'22	10 <sup>18</sup> 10	6°34	4°54	12°17	25°22	27°49	18°42	13°52	7°23	24°56	23°27	11°48	4°49	S 9
M10	1 48 22	25°18'16	23°46	7°11	6° 9	13° 2	25°16	27°53	18°40	13°53	7°23	24°R57	23°24	11°55	4°48	M10
T 11	1 52 19	26°18'10	7°Y11	7°57	7°24	13°46	25°11	27°58	18°37	13°54	7°23	24°57	23°21	12° 2	4°46	T 11
W12	1 56 15	27°18'07	20°24	8°50	8°39	14°31	25° 5	28° 2	18°35	13°55	7°23	24°54	23°17	12° 8	4°45	W12
T 13	2 0 12	28°18'06	3 <sup>18</sup> 23	9°50	9°54	15°15	24°59	28° 7	18°33	13°56	7°22	24°50	23°14	12°15	4°44	T 13
F 14	2 4 8	29°18'06	16° 9	10°56	11° 9	16° 0	24°54	28°11	18°30	13°57	7°22	24°45	23°11	12°22	4°42	F 14
S 15	2 8 5	0 <sup>18</sup> 18'09	28°40	12° 7	12°24	16°44	24°49	28°16	18°28	13°57	7°21	24°39	23° 8	12°28	4°41	S 15
S 16	2 12 1	1°18'14	10 <sup>11</sup> 58	13°23	13°39	17°29	24°44	28°21	18°25	13°58	7°21	24°32	23° 5	12°35	4°40	S 16
M17	2 15 58	2°18'20	23° 4	14°42	14°54	18°14	24°39	28°26	18°23	13°59	7°21	24°26	23° 1	12°42	4°38	M17
T 18	2 19 55	3°18'29	5 <sup>18</sup> 2	16° 5	16° 9	18°59	24°34	28°31	18°21	14° 0	7°20	24°21	22°58	12°49	4°37	T 18
W19	2 23 51	4°18'40	16°54	17°30	17°24	19°44	24°30	28°36	18°18	14° 0	7°20	24°17	22°55	12°55	4°36	W19
T 20	2 27 48	5°18'53	28°46	18°58	18°39	20°29	24°26	28°41	18°16	14° 1	7°19	24°15	22°52	13° 2	4°35	T 20
F 21	2 31 44	6°19'08	10 <sup>12</sup> 41	20°27	19°54	21°14	24°21	28°46	18°14	14° 2	7°19	24°D15	22°49	13° 9	4°34	F 21
S 22	2 35 41	7°19'25	22°45	21°58	21° 9	21°59	24°17	28°51	18°12	14° 2	7°18	24°16	22°46	13°15	4°33	S 22
S 23	2 39 37	8°19'44	5 <sup>17</sup> 3	23°30	22°25	22°44	24°14	28°56	18° 9	14° 3	7°18	24°18	22°42	13°22	4°32	S 23
M24	2 43 34	9°20'05	17°39	25° 4	23°40	23°30	24°10	29° 2	18° 7	14° 3	7°17	24°R19	22°39	13°29	4°32	M24
T 25	2 47 30	10°20'28	0 <sup>18</sup> 38	26°38	24°55	24°15	24° 7	29° 7	18° 5	14° 4	7°17	24°19	22°36	13°36	4°31	T 25
W26	2 51 27	11°20'53	14° 1	28°12	26°10	25° 0	24° 4	29°13	18° 3	14° 4	7°16	24°17	22°33	13°42	4°30	W26
T 27	2 55 24	12°21'19	27°50	29°47	27°25	25°46	24° 1	29°18	18° 0	14° 5	7°15	24°13	22°30	13°49	4°30	T 27
F 28	2 59 20	13°21'48	12 <sup>11</sup> 23	28°40	26°31	23°58	29°24	29°24	17°58	14° 5	7°15	24° 7	22°27	13°56	4°29	F 28
S 29	3 3 17	14°22'18	26° 30	2°58	29°55	27°17	23°55	29°29	17°56	14° 5	7°14	23°59	22°23	14° 2	4°29	S 29
S 30	3 7 13	15°22'49	11 <sup>17</sup> 10	4°34	1 <sup>17</sup> 10	28° 2	23°53	29°35	17°54	14° 6	7°13	23°50	22°20	14° 9	4°28	S 30
M31	3 11 10	16 <sup>18</sup> 23'23	25 <sup>17</sup> 54	6 <sup>11</sup> 10	2 <sup>17</sup> 25	28 <sup>17</sup> 48	23 <sup>18</sup> 51	29 <sup>17</sup> 41	17 <sup>17</sup> 52	14 <sup>12</sup> 6	7 <sup>15</sup> 13	23 <sup>18</sup> 42	22 <sup>18</sup> 17	14 <sup>18</sup> 16	4 <sup>18</sup> 28	M31

Delta T = 07m05s

Julian Calendar

ASTRODIENST EPHEMERIS for the year 1429  
geocentric

NOVEMBER 1429 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	3 15 6	17 <sup>11</sup> 23'57	10 <sup>3</sup> 33	7 <sup>11</sup> 46	3 <sup>1</sup> 40	29 <sup>1</sup> 34	23 <sup>1</sup> 49	29 <sup>1</sup> 46	17 <sup>1</sup> 50	14 <sup>1</sup> 6	7 <sup>1</sup> 12	23 <sup>1</sup> 36	22 <sup>1</sup> 14	14 <sup>1</sup> 23	4 <sup>1</sup> 27	T 1
W 2	3 19 3	18 <sup>1</sup> 24'33	25 <sup>1</sup> 3	9 <sup>1</sup> 22	4 <sup>1</sup> 55	0 <sup>1</sup> 20	23 <sup>1</sup> 47	29 <sup>1</sup> 52	17 <sup>1</sup> 48	14 <sup>1</sup> 6	7 <sup>1</sup> 11	23 <sup>1</sup> 31	22 <sup>1</sup> 11	14 <sup>1</sup> 29	4 <sup>1</sup> 27	W 2
T 3	3 23 0	19 <sup>1</sup> 25'10	9 <sup>1</sup> 18	10 <sup>1</sup> 57	6 <sup>1</sup> 10	1 <sup>1</sup> 5	23 <sup>1</sup> 45	29 <sup>1</sup> 58	17 <sup>1</sup> 46	14 <sup>1</sup> 7	7 <sup>1</sup> 10	23 <sup>1</sup> 29	22 <sup>1</sup> 7	14 <sup>1</sup> 36	4 <sup>1</sup> 27	T 3
F 4	3 26 56	20 <sup>1</sup> 25'48	23 <sup>1</sup> 18	12 <sup>1</sup> 33	7 <sup>1</sup> 25	1 <sup>1</sup> 51	23 <sup>1</sup> 44	0 <sup>1</sup> 3	17 <sup>1</sup> 44	14 <sup>1</sup> 7	7 <sup>1</sup> 10	23 <sup>1</sup> D28	22 <sup>1</sup> 4	14 <sup>1</sup> 43	4 <sup>1</sup> 27	F 4
S 5	3 30 53	21 <sup>1</sup> 26'27	7 <sup>1</sup> 1	14 <sup>1</sup> 9	8 <sup>1</sup> 40	2 <sup>1</sup> 37	23 <sup>1</sup> 43	0 <sup>1</sup> 10	17 <sup>1</sup> 42	14 <sup>1</sup> 7	7 <sup>1</sup> 9	23 <sup>1</sup> 29	22 <sup>1</sup> 1	14 <sup>1</sup> 49	4 <sup>1</sup> 27	S 5
S 6	3 34 49	22 <sup>1</sup> 27'08	20 <sup>1</sup> 28	15 <sup>1</sup> 44	9 <sup>1</sup> 55	3 <sup>1</sup> 23	23 <sup>1</sup> 42	0 <sup>1</sup> 16	17 <sup>1</sup> 40	14 <sup>1</sup> 7	7 <sup>1</sup> 8	23 <sup>1</sup> R29	21 <sup>1</sup> 58	14 <sup>1</sup> 56	4 <sup>1</sup> D27	S 6
M 7	3 38 46	23 <sup>1</sup> 27'49	3 <sup>1</sup> 42	17 <sup>1</sup> 19	11 <sup>1</sup> 10	4 <sup>1</sup> 9	23 <sup>1</sup> 41	0 <sup>1</sup> 22	17 <sup>1</sup> 38	14 <sup>1</sup> 7	7 <sup>1</sup> 7	23 <sup>1</sup> 29	21 <sup>1</sup> 55	15 <sup>1</sup> 3	4 <sup>1</sup> 27	M 7
T 8	3 42 42	24 <sup>1</sup> 28'31	16 <sup>1</sup> 44	18 <sup>1</sup> 54	12 <sup>1</sup> 25	4 <sup>1</sup> 55	23 <sup>1</sup> 40	0 <sup>1</sup> 28	17 <sup>1</sup> 36	14 <sup>1</sup> R 7	7 <sup>1</sup> 6	23 <sup>1</sup> 26	21 <sup>1</sup> 52	15 <sup>1</sup> 10	4 <sup>1</sup> 27	T 8
W 9	3 46 39	25 <sup>1</sup> 29'15	29 <sup>1</sup> 34	20 <sup>1</sup> 29	13 <sup>1</sup> 40	5 <sup>1</sup> 42	23 <sup>1</sup> 40	0 <sup>1</sup> 34	17 <sup>1</sup> 35	14 <sup>1</sup> 7	7 <sup>1</sup> 5	23 <sup>1</sup> 21	21 <sup>1</sup> 48	15 <sup>1</sup> 16	4 <sup>1</sup> 27	W 9
T 10	3 50 35	26 <sup>1</sup> 30'00	12 <sup>1</sup> 14	22 <sup>1</sup> 4	14 <sup>1</sup> 55	6 <sup>1</sup> 28	23 <sup>1</sup> D40	0 <sup>1</sup> 41	17 <sup>1</sup> 33	14 <sup>1</sup> 7	7 <sup>1</sup> 5	23 <sup>1</sup> 13	21 <sup>1</sup> 45	15 <sup>1</sup> 23	4 <sup>1</sup> 27	T 10
F 11	3 54 32	27 <sup>1</sup> 30'46	24 <sup>1</sup> 43	23 <sup>1</sup> 39	16 <sup>1</sup> 10	7 <sup>1</sup> 14	23 <sup>1</sup> 40	0 <sup>1</sup> 47	17 <sup>1</sup> 31	14 <sup>1</sup> 7	7 <sup>1</sup> 4	23 <sup>1</sup> 3	21 <sup>1</sup> 42	15 <sup>1</sup> 30	4 <sup>1</sup> 27	F 11
S 12	3 58 29	28 <sup>1</sup> 31'34	7 <sup>1</sup> 11	25 <sup>1</sup> 14	17 <sup>1</sup> 25	8 <sup>1</sup> 0	23 <sup>1</sup> 40	0 <sup>1</sup> 53	17 <sup>1</sup> 29	14 <sup>1</sup> 7	7 <sup>1</sup> 3	22 <sup>1</sup> 50	21 <sup>1</sup> 39	15 <sup>1</sup> 36	4 <sup>1</sup> 27	S 12
S 13	4 2 25	29 <sup>1</sup> 32'23	19 <sup>1</sup> 14	26 <sup>1</sup> 48	18 <sup>1</sup> 39	8 <sup>1</sup> 46	23 <sup>1</sup> 41	1 <sup>1</sup> 0	17 <sup>1</sup> 28	14 <sup>1</sup> 7	7 <sup>1</sup> 2	22 <sup>1</sup> 37	21 <sup>1</sup> 36	15 <sup>1</sup> 43	4 <sup>1</sup> 28	S 13
M14	4 6 22	0 <sup>1</sup> 33'13	1 <sup>1</sup> 16	28 <sup>1</sup> 23	19 <sup>1</sup> 54	9 <sup>1</sup> 33	23 <sup>1</sup> 42	1 <sup>1</sup> 6	17 <sup>1</sup> 26	14 <sup>1</sup> 6	7 <sup>1</sup> 1	22 <sup>1</sup> 25	21 <sup>1</sup> 33	15 <sup>1</sup> 50	4 <sup>1</sup> 28	M14
T 15	4 10 18	1 <sup>1</sup> 34'04	13 <sup>1</sup> 11	29 <sup>1</sup> 57	21 <sup>1</sup> 9	10 <sup>1</sup> 19	23 <sup>1</sup> 42	1 <sup>1</sup> 12	17 <sup>1</sup> 25	14 <sup>1</sup> 6	7 <sup>1</sup> 0	22 <sup>1</sup> 14	21 <sup>1</sup> 29	15 <sup>1</sup> 57	4 <sup>1</sup> 29	T 15
W16	4 14 15	2 <sup>1</sup> 34'57	25 <sup>1</sup> 1	1 <sup>1</sup> 31	22 <sup>1</sup> 24	11 <sup>1</sup> 6	23 <sup>1</sup> 44	1 <sup>1</sup> 19	17 <sup>1</sup> 23	14 <sup>1</sup> 6	6 <sup>1</sup> 59	22 <sup>1</sup> 5	21 <sup>1</sup> 26	16 <sup>1</sup> 3	4 <sup>1</sup> 29	W16
T 17	4 18 11	3 <sup>1</sup> 35'51	6 <sup>1</sup> 11	3 <sup>1</sup> 6	23 <sup>1</sup> 39	11 <sup>1</sup> 52	23 <sup>1</sup> 45	1 <sup>1</sup> 25	17 <sup>1</sup> 22	14 <sup>1</sup> 6	6 <sup>1</sup> 58	21 <sup>1</sup> 59	21 <sup>1</sup> 23	16 <sup>1</sup> 10	4 <sup>1</sup> 30	T 17
F 18	4 22 8	4 <sup>1</sup> 36'46	18 <sup>1</sup> 43	4 <sup>1</sup> 40	24 <sup>1</sup> 54	12 <sup>1</sup> 39	23 <sup>1</sup> 46	1 <sup>1</sup> 32	17 <sup>1</sup> 20	14 <sup>1</sup> 5	6 <sup>1</sup> 57	21 <sup>1</sup> 55	21 <sup>1</sup> 20	16 <sup>1</sup> 17	4 <sup>1</sup> 31	F 18
S 19	4 26 4	5 <sup>1</sup> 37'43	0 <sup>1</sup> 14	6 <sup>1</sup> 14	26 <sup>1</sup> 9	13 <sup>1</sup> 25	23 <sup>1</sup> 48	1 <sup>1</sup> 38	17 <sup>1</sup> 19	14 <sup>1</sup> 5	6 <sup>1</sup> 56	21 <sup>1</sup> 54	21 <sup>1</sup> 17	16 <sup>1</sup> 23	4 <sup>1</sup> 31	S 19
S 20	4 30 1	6 <sup>1</sup> 38'41	12 <sup>1</sup> 57	7 <sup>1</sup> 48	27 <sup>1</sup> 24	14 <sup>1</sup> 12	23 <sup>1</sup> 50	1 <sup>1</sup> 45	17 <sup>1</sup> 17	14 <sup>1</sup> 4	6 <sup>1</sup> 55	21 <sup>1</sup> D54	21 <sup>1</sup> 13	16 <sup>1</sup> 30	4 <sup>1</sup> 32	S 20
M21	4 33 58	7 <sup>1</sup> 39'40	25 <sup>1</sup> 29	9 <sup>1</sup> 23	28 <sup>1</sup> 39	14 <sup>1</sup> 58	23 <sup>1</sup> 52	1 <sup>1</sup> 52	17 <sup>1</sup> 16	14 <sup>1</sup> 4	6 <sup>1</sup> 54	21 <sup>1</sup> R54	21 <sup>1</sup> 10	16 <sup>1</sup> 37	4 <sup>1</sup> 33	M21
T 22	4 37 54	8 <sup>1</sup> 40'40	8 <sup>1</sup> 25	10 <sup>1</sup> 57	29 <sup>1</sup> 54	15 <sup>1</sup> 45	23 <sup>1</sup> 55	1 <sup>1</sup> 58	17 <sup>1</sup> 15	14 <sup>1</sup> 3	6 <sup>1</sup> 53	21 <sup>1</sup> 53	21 <sup>1</sup> 7	16 <sup>1</sup> 44	4 <sup>1</sup> 34	T 22
W23	4 41 51	9 <sup>1</sup> 41'41	21 <sup>1</sup> 48	12 <sup>1</sup> 31	1 <sup>1</sup> 9	16 <sup>1</sup> 32	23 <sup>1</sup> 57	2 <sup>1</sup> 5	17 <sup>1</sup> 14	14 <sup>1</sup> 3	6 <sup>1</sup> 52	21 <sup>1</sup> 50	21 <sup>1</sup> 4	16 <sup>1</sup> 50	4 <sup>1</sup> 35	W23
T 24	4 45 47	10 <sup>1</sup> 42'44	5 <sup>1</sup> 11	14 <sup>1</sup> 6	2 <sup>1</sup> 23	17 <sup>1</sup> 18	24 <sup>1</sup> 0	2 <sup>1</sup> 12	17 <sup>1</sup> 12	14 <sup>1</sup> 2	6 <sup>1</sup> 50	21 <sup>1</sup> 44	21 <sup>1</sup> 1	16 <sup>1</sup> 57	4 <sup>1</sup> 36	T 24
F 25	4 49 44	11 <sup>1</sup> 43'47	20 <sup>1</sup> 2	15 <sup>1</sup> 40	3 <sup>1</sup> 38	18 <sup>1</sup> 5	24 <sup>1</sup> 3	2 <sup>1</sup> 19	17 <sup>1</sup> 11	14 <sup>1</sup> 2	6 <sup>1</sup> 49	21 <sup>1</sup> 36	20 <sup>1</sup> 58	17 <sup>1</sup> 4	4 <sup>1</sup> 37	F 25
S 26	4 53 40	12 <sup>1</sup> 44'52	4 <sup>1</sup> 47	17 <sup>1</sup> 15	4 <sup>1</sup> 53	18 <sup>1</sup> 52	24 <sup>1</sup> 6	2 <sup>1</sup> 25	17 <sup>1</sup> 10	14 <sup>1</sup> 1	6 <sup>1</sup> 48	21 <sup>1</sup> 25	20 <sup>1</sup> 54	17 <sup>1</sup> 10	4 <sup>1</sup> 38	S 26
S 27	4 57 37	13 <sup>1</sup> 45'57	19 <sup>1</sup> 50	18 <sup>1</sup> 49	6 <sup>1</sup> 8	19 <sup>1</sup> 39	24 <sup>1</sup> 9	2 <sup>1</sup> 32	17 <sup>1</sup> 9	14 <sup>1</sup> 1	6 <sup>1</sup> 47	21 <sup>1</sup> 13	20 <sup>1</sup> 51	17 <sup>1</sup> 17	4 <sup>1</sup> 39	S 27
M28	5 1 33	14 <sup>1</sup> 47'03	4 <sup>1</sup> 58	20 <sup>1</sup> 24	7 <sup>1</sup> 23	20 <sup>1</sup> 26	24 <sup>1</sup> 13	2 <sup>1</sup> 39	17 <sup>1</sup> 8	14 <sup>1</sup> 0	6 <sup>1</sup> 46	21 <sup>1</sup> 1	20 <sup>1</sup> 48	17 <sup>1</sup> 24	4 <sup>1</sup> 40	M28
T 29	5 5 30	15 <sup>1</sup> 48'10	20 <sup>1</sup> 3	21 <sup>1</sup> 59	8 <sup>1</sup> 38	21 <sup>1</sup> 12	24 <sup>1</sup> 17	2 <sup>1</sup> 46	17 <sup>1</sup> 7	13 <sup>1</sup> 59	6 <sup>1</sup> 45	20 <sup>1</sup> 51	20 <sup>1</sup> 45	17 <sup>1</sup> 31	4 <sup>1</sup> 42	T 29
W30	5 9 27	16 <sup>1</sup> 49'17	4 <sup>1</sup> 55	23 <sup>1</sup> 34	9 <sup>1</sup> 53	21 <sup>1</sup> 59	24 <sup>1</sup> 21	2 <sup>1</sup> 53	17 <sup>1</sup> 6	13 <sup>1</sup> 59	6 <sup>1</sup> 44	20 <sup>1</sup> 44	20 <sup>1</sup> 42	17 <sup>1</sup> 37	4 <sup>1</sup> 43	W30

Delta T = 07m04s

Julian Calendar 1 Nov. 1429 == Greg. Calendar 10 Nov. 1429

DECEMBER 1429 JC

00:00 UT

Day	Sid.t	☉	☾	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	5 13 23	17 <sup>1</sup> 50'25	19 <sup>1</sup> 27	25 <sup>1</sup> 9	11 <sup>1</sup> 7	22 <sup>1</sup> 346	24 <sup>1</sup> 25	3 <sup>1</sup> 0	17 <sup>1</sup> R 5	13 <sup>1</sup> R58	6 <sup>1</sup> R42	20 <sup>1</sup> R39	20 <sup>1</sup> 39	17 <sup>1</sup> 54	4 <sup>1</sup> 44	T 1
F 2	5 17 20	18 <sup>1</sup> 51'32	3 <sup>1</sup> 36	26 <sup>1</sup> 44	12 <sup>1</sup> 22	23 <sup>1</sup> 33	24 <sup>1</sup> 29	3 <sup>1</sup> 7	17 <sup>1</sup> 5	13 <sup>1</sup> 57	6 <sup>1</sup> 41	20 <sup>1</sup> 37	20 <sup>1</sup> 35	17 <sup>1</sup> 51	4 <sup>1</sup> 46	F 2
S 3	5 21 16	19 <sup>1</sup> 52'40	17 <sup>1</sup> 20	28 <sup>1</sup> 20	13 <sup>1</sup> 37	24 <sup>1</sup> 20	24 <sup>1</sup> 33	3 <sup>1</sup> 13	17 <sup>1</sup> 4	13 <sup>1</sup> 56	6 <sup>1</sup> 40	20 <sup>1</sup> 37	20 <sup>1</sup> 32	17 <sup>1</sup> 57	4 <sup>1</sup> 47	S 3
S 4	5 25 13	20 <sup>1</sup> 53'48	0 <sup>1</sup> 43	29 <sup>1</sup> 55	14 <sup>1</sup> 52	25 <sup>1</sup> 7	24 <sup>1</sup> 38	3 <sup>1</sup> 20	17 <sup>1</sup> 3	13 <sup>1</sup> 55	6 <sup>1</sup> 39	20 <sup>1</sup> 37	20 <sup>1</sup> 29	18 <sup>1</sup> 4	4 <sup>1</sup> 49	S 4
M 5	5 29 9	21 <sup>1</sup> 54'56	13 <sup>1</sup> 46	1 <sup>1</sup> 31	16 <sup>1</sup> 7	25 <sup>1</sup> 54	24 <sup>1</sup> 43	3 <sup>1</sup> 27	17 <sup>1</sup> 2	13 <sup>1</sup> 54	6 <sup>1</sup> 38	20 <sup>1</sup> 36	20 <sup>1</sup> 26	18 <sup>1</sup> 11	4 <sup>1</sup> 51	M 5
T 6	5 33 6	22 <sup>1</sup> 56'05	26 <sup>1</sup> 34	3 <sup>1</sup> 6	17 <sup>1</sup> 21	26 <sup>1</sup> 41	24 <sup>1</sup> 48	3 <sup>1</sup> 34	17 <sup>1</sup> 2	13 <sup>1</sup> 54	6 <sup>1</sup> 37	20 <sup>1</sup> 32	20 <sup>1</sup> 23	18 <sup>1</sup> 17	4 <sup>1</sup> 52	T 6
W 7	5 37 2	23 <sup>1</sup> 57'13	9 <sup>1</sup> 8	4 <sup>1</sup> 42	18 <sup>1</sup> 36	27 <sup>1</sup> 28	24 <sup>1</sup> 53	3 <sup>1</sup> 41	17 <sup>1</sup> 1	13 <sup>1</sup> 53	6 <sup>1</sup> 35	20 <sup>1</sup> 26	20 <sup>1</sup> 19	18 <sup>1</sup> 24	4 <sup>1</sup> 54	W 7
T 8	5 40 59	24 <sup>1</sup> 58'22	21 <sup>1</sup> 31	6 <sup>1</sup> 17	19 <sup>1</sup> 51	28 <sup>1</sup> 15	24 <sup>1</sup> 59	3 <sup>1</sup> 48	17 <sup>1</sup> 1	13 <sup>1</sup> 52	6 <sup>1</sup> 34	20 <sup>1</sup> 17	20 <sup>1</sup> 16	18 <sup>1</sup> 31	4 <sup>1</sup> 56	T 8
F 9	5 44 56	25 <sup>1</sup> 59'31	3 <sup>1</sup> 11	7 <sup>1</sup> 53	21 <sup>1</sup> 5	29 <sup>1</sup> 3	25 <sup>1</sup> 4	3 <sup>1</sup> 55	17 <sup>1</sup> 0	13 <sup>1</sup> 51	6 <sup>1</sup> 33	20 <sup>1</sup> 5	20 <sup>1</sup> 13	18 <sup>1</sup> 38	4 <sup>1</sup> 58	F 9
S 10	5 48 52	27 <sup>1</sup> 0'40	15 <sup>1</sup> 53	9 <sup>1</sup> 28	22 <sup>1</sup> 20	29 <sup>1</sup> 50	25 <sup>1</sup> 10	4 <sup>1</sup> 2	17 <sup>1</sup> 0	13 <sup>1</sup> 50	6 <sup>1</sup> 32	19 <sup>1</sup> 50	20 <sup>1</sup> 10	18 <sup>1</sup> 44	5 <sup>1</sup> 0	S 10
S 11	5 52 49	28 <sup>1</sup> 1'49	27 <sup>1</sup> 55	11 <sup>1</sup> 3	23 <sup>1</sup> 35	0 <sup>1</sup> 37	25 <sup>1</sup> 16	4 <sup>1</sup> 9	17 <sup>1</sup> 0	13 <sup>1</sup> 49	6 <sup>1</sup> 30	19 <sup>1</sup> 35	20 <sup>1</sup> 7	18 <sup>1</sup> 51	5 <sup>1</sup> 1	S 11
M12	5 56 45	29 <sup>1</sup> 2'59	9 <sup>1</sup> 51	12 <sup>1</sup> 38	24 <sup>1</sup> 49	1 <sup>1</sup> 24	25 <sup>1</sup> 22	4 <sup>1</sup> 16	16 <sup>1</sup> 59	13 <sup>1</sup> 48	6 <sup>1</sup> 29	19 <sup>1</sup> 21	20 <sup>1</sup> 4	18 <sup>1</sup> 58	5 <sup>1</sup> 3	M12
T 13	6 0 42	0 <sup>1</sup> 3	21 <sup>1</sup> 43	14 <sup>1</sup> 13	26 <sup>1</sup> 4	2 <sup>1</sup> 11	25 <sup>1</sup> 29	4 <sup>1</sup> 24	16 <sup>1</sup> 59	13 <sup>1</sup> 46	6 <sup>1</sup> 28	19 <sup>1</sup> 8	20 <sup>1</sup> 0	19 <sup>1</sup> 4	5 <sup>1</sup> 6	T 13
W14	6 4 38	1 <sup>1</sup> 5'18	3 <sup>1</sup> 13	15 <sup>1</sup> 47	27 <sup>1</sup> 19	2 <sup>1</sup> 58	25 <sup>1</sup> 35	4 <sup>1</sup> 31	16 <sup>1</sup> 59	13 <sup>1</sup> 45	6 <sup>1</sup> 27	18 <sup>1</sup> 57	19 <sup>1</sup> 57	19 <sup>1</sup> 11	5 <sup>1</sup> 8	W14
T 15	6 8 35	2 <sup>1</sup> 6'28	15 <sup>1</sup> 23	17 <sup>1</sup> 20	28 <sup>1</sup> 33	3 <sup>1</sup> 45	25 <sup>1</sup> 42	4 <sup>1</sup> 38	16 <sup>1</sup> 59	13 <sup>1</sup> 44	6 <sup>1</sup> 25	18 <sup>1</sup> 50	19 <sup>1</sup> 54	19 <sup>1</sup> 18	5 <sup>1</sup> 10	T 15
F 16	6 12 32	3 <sup>1</sup> 7'39	27 <sup>1</sup> 16	18 <sup>1</sup> 52	29 <sup>1</sup> 48	4 <sup>1</sup> 33	25 <sup>1</sup> 48	4 <sup>1</sup> 45	16 <sup>1</sup> 59	13 <sup>1</sup> 43	6 <sup>1</sup> 24	18 <sup>1</sup> 45	19 <sup>1</sup> 51	19 <sup>1</sup> 25	5 <sup>1</sup> 12	F 16
S 17	6 16 28	4 <sup>1</sup> 8'49	9 <sup>1</sup> 16	20 <sup>1</sup> 24	1 <sup>1</sup> 2	5 <sup>1</sup> 20	25 <sup>1</sup> 55	4 <sup>1</sup> 52	16 <sup>1</sup> D59	13 <sup>1</sup> 42	6 <sup>1</sup> 23	18 <sup>1</sup> 43	19 <sup>1</sup> 48	19 <sup>1</sup> 31	5 <sup>1</sup> 14	S 17
S 18	6 20 25	5 <sup>1</sup> 10'00	21 <sup>1</sup> 27	21 <sup>1</sup> 54	2 <sup>1</sup> 17	6 <sup>1</sup> 7	26 <sup>1</sup> 2	4 <sup>1</sup> 59	16 <sup>1</sup> 59	13 <sup>1</sup> 41	6 <sup>1</sup> 22	18 <sup>1</sup> D43	19 <sup>1</sup> 45	19 <sup>1</sup> 38	5 <sup>1</sup> 16	S 18
M19	6 24 21	6 <sup>1</sup> 11'11	3 <sup>1</sup> 55	23 <sup>1</sup> 22	3 <sup>1</sup> 31	6 <sup>1</sup> 54	26 <sup>1</sup> 10	5 <sup>1</sup> 6	16 <sup>1</sup> 59	13 <sup>1</sup> 39	6 <sup>1</sup> 20	18 <sup>1</sup> R43	19 <sup>1</sup> 41	19 <sup>1</sup> 45	5 <sup>1</sup> 19	M19
T 20	6 28 18	7 <sup>1</sup> 12'22	16 <sup>1</sup> 44	24 <sup>1</sup> 49	4 <sup>1</sup> 46	7 <sup>1</sup> 42	26 <sup>1</sup> 17	5 <sup>1</sup> 13	16 <sup>1</sup> 59	13 <sup>1</sup> 38	6 <sup>1</sup> 19	18 <sup>1</sup> 43	19 <sup>1</sup> 38	19 <sup>1</sup> 51	5 <sup>1</sup> 21	T 20
W21	6 32 14	8 <sup>1</sup> 13'33	29 <sup>1</sup> 59	26 <sup>1</sup> 13	6 <sup>1</sup> 0	8 <sup>1</sup> 29	26 <sup>1</sup> 25	5 <sup>1</sup> 20	16 <sup>1</sup> 59	13 <sup>1</sup> 37	6 <sup>1</sup> 18	18 <sup>1</sup> 41	19 <sup>1</sup> 35	19 <sup>1</sup> 58	5 <sup>1</sup> 24	W21
T 22	6 36 11	9 <sup>1</sup> 14'44	13 <sup>1</sup> 11	27 <sup>1</sup> 34	7 <sup>1</sup> 14	9 <sup>1</sup> 16	26 <sup>1</sup> 33	5 <sup>1</sup> 27	16 <sup>1</sup> 59	13 <sup>1</sup> 36	6 <sup>1</sup> 17	18 <sup>1</sup> 36	19 <sup>1</sup> 32	20 <sup>1</sup> 5	5 <sup>1</sup> 26	T 22
F 23	6 40 7	10 <sup>1</sup> 15'56	28 <sup>1</sup> 0	28 <sup>1</sup> 52	8 <sup>1</sup> 29	10 <sup>1</sup> 3	26 <sup>1</sup> 40	5 <sup>1</sup> 34	16 <sup>1</sup> 59	13 <sup>1</sup> 34	6 <sup>1</sup> 15	18 <sup>1</sup> 29	19 <sup>1</sup> 29	20 <sup>1</sup> 11	5 <sup>1</sup> 29	F 23
S 24	6 44 4	11 <sup>1</sup> 17'07	12 <sup>1</sup> 7	0 <sup>1</sup> 5	9 <sup>1</sup> 43	10 <sup>1</sup> 51	26 <sup>1</sup> 49	5 <sup>1</sup> 41	17 <sup>1</sup> 0	13 <sup>1</sup> 33	6 <sup>1</sup> 14	18 <sup>1</sup> 20	19 <sup>1</sup> 25	20 <sup>1</sup> 18	5 <sup>1</sup> 31	S 24
S 25	6 48 1	12 <sup>1</sup> 18'19	27 <sup>1</sup> 49	1 <sup>1</sup> 15	10 <sup>1</sup> 58	11 <sup>1</sup> 38	26 <sup>1</sup> 57	5 <sup>1</sup> 48	17 <sup>1</sup> 0	13 <sup>1</sup> 31	6 <sup>1</sup> 13	18 <sup>1</sup> 10	19 <sup>1</sup> 22	20 <sup>1</sup> 25	5 <sup>1</sup> 34	S 25
M26	6 51 57	13 <sup>1</sup> 19'30	13 <sup>1</sup> 7	2 <sup>1</sup> 19	12 <sup>1</sup> 12	12 <sup>1</sup> 25	27 <sup>1</sup> 5	5 <sup>1</sup> 55	17 <sup>1</sup> 0	13 <sup>1</sup> 30	6 <sup>1</sup> 12	18 <sup>1</sup> 0	19 <sup>1</sup> 19	20 <sup>1</sup> 32	5 <sup>1</sup> 36	M26
T 27	6 55 54	14 <sup>1</sup> 20'40	28 <sup>1</sup> 26	3 <sup>1</sup> 16	13 <sup>1</sup> 26	13 <sup>1</sup> 12	27 <sup>1</sup> 14	6 <sup>1</sup> 2	17 <sup>1</sup> 1	13 <sup>1</sup> 29	6 <sup>1</sup> 10	17 <sup>1</sup> 51	19 <sup>1</sup> 16	20 <sup>1</sup> 38	5 <sup>1</sup> 39	T 27
W28	6 59 50	15 <sup>1</sup> 21'51	13 <sup>1</sup> 36	4 <sup>1</sup> 7	14 <sup>1</sup> 40	14 <sup>1</sup> 0	27 <sup>1</sup> 22	6 <sup>1</sup> 9	17 <sup>1</sup> 1	13 <sup>1</sup> 27	6 <sup>1</sup> 9	17 <sup>1</sup> 44	19 <sup>1</sup> 13	20 <sup>1</sup> 45	5 <sup>1</sup> 42	W28
T 29	7 3 47	16 <sup>1</sup> 23'00	28 <sup>1</sup> 26	4 <sup>1</sup> 50	15 <sup>1</sup> 55	14 <sup>1</sup> 47	27 <sup>1</sup> 31	6 <sup>1</sup> 16	17 <sup>1</sup> 2	13 <sup>1</sup> 26	6 <sup>1</sup> 8	17 <sup>1</sup> 40	19 <sup>1</sup> 10	20 <sup>1</sup> 52	5 <sup>1</sup> 45	T 29
F 30	7 7 43	17 <sup>1</sup> 24'09	12 <sup>1</sup> 50	5 <sup>1</sup> 24	17 <sup>1</sup> 9	15 <sup>1</sup> 34	27 <sup>1</sup> 40	6 <sup>1</sup> 23	17 <sup>1</sup> 3	13 <sup>1</sup> 24	6 <sup>1</sup> 7	17 <sup>1</sup> D38	19 <sup>1</sup> 6	20 <sup>1</sup> 58	5 <sup>1</sup> 47	F 30
S 31	7 11 40	18 <sup>1</sup> 25'17	26 <sup>1</sup> 48	5 <sup>1</sup> 48	18 <sup>1</sup> 23	16 <sup>1</sup> 22	27 <sup>1</sup> 49	6 <sup>1</sup> 30	17 <sup>1</sup> 3	13 <sup>1</sup> 23	6 <sup>1</sup> 5	17 <sup>1</sup> 38	19 <sup>1</sup> 3	21 <sup>1</sup> 5	5 <sup>1</sup> 50	S 31