



Astrodienst Ephemeris Tables for the year 1416

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 D5EPX

ASTRODIENST EPHEMERIS for the year 1416

geocentric

JANUARY 1416 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	7 13 13	18°50'01	25°32'23	4°25'25	26°58'56	26°58'4	26°34'5	18°R46	23°33'3	11°R28	20°R10	21°R 7	19°R49	21°R21	14°R38	W 1
T 2	7 17 10	19°51'09	7°31'31	5°58'27	27°20'20	26°35'5	26°59'5	18°R41	23°6'6	11°R26	20°R 9	21°R 3	19°46'4	21°28'4	14°44'4	T 2
F 3	7 21 6	20°52'16	19°47'15	7°30'15	27°41'1	27°5'27	27°13'5	18°R36	23°9'9	11°R25	20°8'8	20°58'8	19°42'8	21°35'8	14°50'8	F 3
S 4	7 25 3	21°53'22	2°15'15	8°58'28	28°1'1	27°35'5	27°28'5	18°R31	23°12'12	11°R23	20°7'7	20°52'7	19°39'7	21°41'7	14°56'7	S 4
S 5	7 29 0	22°54'27	14°55'55	10°24'28	28°18'18	28°5'27	27°42'2	18°R26	23°16'16	11°R21	20°6'6	20°47'6	19°36'6	21°48'6	15°2'6	S 5
M 6	7 32 56	23°55'31	27°49'49	11°47'28	28°34'34	28°35'27	27°56'6	18°R21	23°19'19	11°R20	20°5'5	20°43'5	19°33'5	21°55'5	15°8'5	M 6
T 7	7 36 53	24°56'34	10°V59	13°5'5	28°47'47	29°5'28	28°10'10	18°R17	23°22'22	11°R18	20°4'4	20°40'4	19°30'4	22°1'4	15°14'4	T 7
W 8	7 40 49	25°57'36	24°26'26	14°19'19	28°58'58	29°35'35	28°25'25	18°R12	23°25'25	11°R16	20°3'3	20°D39	19°27'3	22°8'3	15°20'3	W 8
T 9	7 44 46	26°58'37	8°B13	15°27'27	29°7'7	0°M4	28°39'39	18°7'7	23°28'28	11°R15	20°2'2	20°40'2	19°23'2	22°15'2	15°25'2	T 9
F 10	7 48 42	27°59'37	22°19'19	16°29'29	29°13'13	0°33'33	28°53'53	18°2'2	23°31'31	11°R13	20°1'1	20°41'1	19°20'1	22°21'1	15°31'1	F 10
S 11	7 52 39	29°0'36	6°II44	17°23'23	29°17'17	1°2'2	29°7'7	17°57'57	23°34'34	11°R12	20°0'0	20°43'0	19°17'0	22°28'0	15°37'0	S 11
S 12	7 56 35	0°33'33	21°26'26	18°10'10	29°R19	1°31'31	29°21'21	17°52'52	23°38'38	11°R10	19°59'59	20°R43	19°14'14	22°34'14	15°42'14	S 12
M13	8 0 32	1°2'30	6°B19	18°48'48	29°18'18	2°0'0	29°36'36	17°47'47	23°41'41	11°R8	19°59'59	20°42'42	19°11'11	22°41'11	15°48'11	M13
T 14	8 4 29	2°3'25	21°17'17	19°16'16	29°14'14	2°29'29	29°50'50	17°43'43	23°44'44	11°R7	19°58'58	20°39'39	19°8'8	22°48'8	15°53'8	T 14
W15	8 8 25	3°4'19	6°Q12	19°34'34	29°8'8	2°57'57	0°33'33	17°38'38	23°48'48	11°R5	19°57'57	20°34'34	19°4'4	22°54'4	15°59'4	W15
T 16	8 12 22	4°5'12	20°54'54	19°R41	29°0'0	3°25'25	0°18'18	17°33'33	23°51'51	11°R4	19°56'56	20°28'28	19°1'1	23°1'1	16°4'4	T 16
F 17	8 16 18	5°6'04	5°M17	19°37'37	28°49'49	3°54'54	0°33'33	17°29'29	23°54'54	11°R2	19°55'55	20°20'20	18°58'58	23°8'8	16°9'9	F 17
S 18	8 20 15	6°6'54	19°14'14	19°22'22	28°35'35	4°21'21	0°47'47	17°24'24	23°57'57	11°R1	19°54'54	20°13'13	18°55'55	23°14'14	16°14'14	S 18
S 19	8 24 11	7°7'44	2°A44	18°56'56	28°19'19	4°49'49	1°1'1	17°20'20	24°1'1	10°59'59	19°54'54	20°7'7	18°52'52	23°21'21	16°20'20	S 19
M20	8 28 8	8°8'33	15°47'47	18°20'20	28°1'1	5°17'17	1°15'15	17°15'15	24°4'4	10°58'58	19°53'53	20°2'2	18°48'48	23°28'28	16°25'25	M20
T 21	8 32 4	9°9'21	28°25'25	17°34'34	27°40'40	5°44'44	1°30'30	17°11'11	24°8'8	10°56'56	19°52'52	19°59'59	18°45'45	23°34'34	16°30'30	T 21
W22	8 36 1	10°10'08	10°M42	16°39'39	27°17'17	6°11'11	1°44'44	17°6'6	24°11'11	10°55'55	19°51'51	19°D59	18°42'42	23°41'41	16°35'35	W22
T 23	8 39 58	11°10'53	22°44'44	15°38'38	26°51'51	6°38'38	1°58'58	17°2'2	24°14'14	10°53'53	19°51'51	19°59'59	18°39'39	23°48'48	16°40'40	T 23
F 24	8 43 54	12°11'38	4°X35	14°32'32	26°24'24	7°4'4	2°12'12	16°58'58	24°18'18	10°52'52	19°50'50	20°0'0	18°36'36	23°54'54	16°45'45	F 24
S 25	8 47 51	13°12'22	16°21'21	13°23'23	25°55'55	7°31'31	2°26'26	16°54'54	24°21'21	10°51'51	19°49'49	20°R 1	18°33'33	24°1'1	16°49'49	S 25
S 26	8 51 47	14°13'04	28°8'8	12°12'12	25°24'24	7°57'57	2°40'40	16°50'50	24°25'25	10°49'49	19°49'49	20°1'1	18°29'29	24°8'8	16°54'54	S 26
M27	8 55 44	15°13'46	9°B59	11°2'2	24°51'51	8°23'23	2°54'54	16°45'45	24°28'28	10°48'48	19°48'48	19°59'59	18°26'26	24°14'14	16°59'59	M27
T 28	8 59 40	16°14'26	21°57'57	9°55'55	24°17'17	8°49'49	3°9'9	16°42'42	24°31'31	10°47'47	19°48'48	19°54'54	18°23'23	24°21'21	17°3'3	T 28
W29	9 3 37	17°15'04	4°4'6	8°51'51	23°42'42	9°14'14	3°23'23	16°38'38	24°35'35	10°45'45	19°47'47	19°47'47	18°20'20	24°27'27	17°8'8	W29
T 30	9 7 33	18°15'41	16°28'28	7°53'53	23°6'6	9°39'39	3°37'37	16°34'34	24°38'38	10°44'44	19°46'46	19°37'37	18°17'17	24°34'34	17°12'12	T 30
F 31	9 11 30	19°16'17	29°22'22	7°33'33	22°29'29	10°M4	3°55'55	16°30'30	24°42'42	10°43'43	19°46'46	19°R26	18°R14	24°R41	17°R17	F 31

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
W 1	22s11	18s14	2n57	20s44	1s34	10s46	1n56	8s29	1n44	21s19	0s27	22n12	0n 1	14s33	0s43	22n16	0s45	16n32	6s38	23s13	23s 7	23s 6	18s 0	4n40					
T 2	22 2	14 47	3 47	20 14	1 26	10 26	2 8	8 40	1 44	21 16	0 27	22 13	0 1	14 32	0 43	22 16	0 45	16 32	6 38	23 13	23 7	23 5	18 0	4 40					
F 3	21 53	10 41	4 28	19 43	1 18	10 7	2 20	8 51	1 44	21 14	0 27	22 14	0 1	14 31	0 43	22 16	0 45	16 32	6 38	23 12	23 7	23 5	18 0	4 40					
S 4	21 44	6 6	4 56	19 11	1 9	9 49	2 33	9 2	1 44	21 11	0 27	22 15	0 1	14 30	0 43	22 16	0 45	16 32	6 38	23 12	23 7	23 4	18 1	4 41					
S 5	21 34	1 11	5 11	18 38	0 59	9 31	2 46	9 12	1 44	21 8	0 27	22 16	0 1	14 29	0 43	22 16	0 45	16 32	6 38	23 12	23 6	23 4	18 1	4 41					
M 6	21 23	3n52	5 10	18 5	0 49	9 13	2 59	9 23	1 44	21 5	0 28	22 16	0 1	14 28	0 43	22 17	0 45	16 32	6 38	23 11	23 6	23 3	18 1	4 42					
T 7	21 13	8 51	4 53	17 32	0 37	8 56	3 12	9 33	1 44	21 3	0 28	22 17	0 1	14 27	0 43	22 17	0 45	16 32	6 38	23 11	23 6	23 3	18 1	4 42					
W 8	21 1	13 32	4 20	16 59	0 25	8 40	3 25	9 44	1 45	21 0	0 28	22 18	0 2	14 26	0 42	22 17	0 45	16 32	6 37	23 11	23 6	23 2	18 1	4 42					
T 9	20 50	17 37	3 31	16 26	0 11	8 24	3 39	9 54	1 45	20 57	0 28	22 19	0 2	14 24	0 42	22 17	0 45	16 32	6 37	23 11	23 5	23 2	18 2	4 43					
F 10	20 38	20 48	2 29	15 54	0n 3	8 9	3 53	10 4	1 45	20 54	0 28	22 19	0 2	14 23	0 42	22 17	0 45	16 32	6 37	23 11	23 5	23 1	18 2	4 43					
S 11	20 25	22 45	1 16	15 23	0 18	7 54	4 7	10 14	1 45	20 51	0 28	22 20	0 2	14 22	0 42	22 17	0 45	16 32	6 37	23 11	23 5	23 1	18 2	4 44					
S 12	20 13	23 10	0s 4	14 53	0 34	7 40	4 21	10 24	1 45	20 48	0 28	22 21	0 2	14 21	0 42	22 18	0 45	16 32	6 37	23 11	23 5	23 0	18 2	4 44					
M13	19 59	21 58	1 24	14 26	0 51	7 27	4 35	10 34	1 45	20 45	0 28	22 22	0 2	14 20	0 42	22 18	0 45	16 33	6 37	23 11	23 4	23 0	18 2	4 45					
T 14	19 46	19 13	2 38	14 1	1 8	7 15	4 49	10 44	1 45	20 43	0 28	22 22	0 2	14 19	0 42	22 18	0 45	16 33	6 36	23 11	23 4	22 59	18 2	4 45					
W15	19 32	15 12	3 42	13 39	1 25	7 4	5 4	10 53	1 45	20 40	0 28	22 23	0 2	14 18	0 42	22 18	0 45	16 33	6 36	23 11	23 4	22 59	18 2	4 45					
T 16	19 18	10 19	4 29	13 20	1 43	6 54	5 18	11 3	1 45	20 37	0 28	22 24	0 2	14 17	0 42	22 18	0 45	16 33	6 36	23 10	23 4	22 58	18 3	4 46					
F 17	19 3	4 58	4 58	13 5	2 0	6 44	5 32	11 12	1 45	20 34	0 29	22 25	0 2	14 16	0 42	22 18	0 45	16 33	6 36	23 10	23 3	22 58	18 3	4 46					
S 18	18 48	0s28	5 9	12 53	2 17	6 36	5 46	11 22	1 45	20 31	0 29	22 25	0 3	14 15	0 42	22 18	0 45	16 33	6 36	23 9	23 3	22 57	18 3	4 47					
S 19	18 33	5 42	5 2	12 46	2 34	6 28	6 0	11 31	1 45	20 28	0 29	22 26	0 3	14 13	0 42	22 19	0 45	16 33	6 36	23 9	23 3	22 57	18 3	4 47					
M20	18 17	10 30	4 39	12 42	2 49	6 21	6 13	11 40	1 45	20 25	0 29	22 27	0 3	14 12	0 42	22 19	0 45	16 33	6 36	23 8	23 2	22 56	18 3	4 48					
T 21	18 1	14 43	4 3	12 43	3 3	6 16	6 27	11 49	1 45	20 22	0 29	22 27	0 3	14 11	0 42	22 19	0 45	16 33	6 35	23 8	23 2	22 56	18 3	4 48					
W22	17 45	18 11	3 16	12 48	3 15	6 12	6 40	11 58	1 45	20 19	0 29	22 28	0 3	14 10	0 42	22 19	0 45	16 33	6 35	23 8	23 2	22 55	18 3	4 49					
T 23	17 28	20 48	2 22	12 56	3 25	6 8	6 52	12 7	1 45	20 15	0 29	22 29	0 3	14 9	0 42	22 19	0 45	16 34	6 35	23 8	23 2	22 54	18 3	4 49					
F 24	17 12	22 28	1 22	13 7	3 34	6 6	7 4	12 15	1 45	20 12	0 29	22 29	0 3	14 8	0 42	22 19	0 45	16 34	6 35	23 8	23 1	22 54	18 3	4 50					
S 25	16 54	23 8	0 20	13 21	3 39	6 5	7 16	12 24	1 45	20 9	0 29	22 30	0 3	14 7	0 42	22 19	0 45	16 34	6 35	23 8	23 1	22 53	18 3	4 50					
S 26	16 37	22 47	0n44	13 38	3 43	6 5	7 27	12 33	1 45	20 6	0 29	22 31	0 3	14 6	0 42	22 20	0 45	16 34	6 35	23 8	23 1	22 53	18 3	4 51					
M27	16 19	21 23	1 45	13 56	3 44	6 5	7 37	12 41	1 45	20 3	0 30	22 31	0 4	14 4	0 42	22 20	0 45	16 34	6 34	23 8	23 1	22 52	18 2	4 51					
T 28	16 1	19 2	2 43	14 15	3 43	6 7	7 47	12 49	1 45	20 0	0 30	22 32	0 4	14 3	0 42	22 20	0 45	16 34	6 34	23 8	23 0	22 51	18 2	4 52					
W29	15 43	15 50	3 34	14 35	3 39	6 10	7 55	12 57	1 45	19 57	0 30	22 32	0 4	14 2	0 42	22 20	0 45	16 34	6 34	23 7	23 0	22 51	18 2	4 52					
T 30	15 24	11 54	4 15	14 55	3 34	6 14	8 3	13 5	1 45	19 53	0 30	22 33	0 4	14 1	0 42	22 20	0 45	16 34	6 34	23 6	23 0	22 50	18 2	4 53					
F 31	15s 5	7s24	4n45	15s15	3n27	6s19	8n10	13s13	1n45	19s50	0s30	22n33	0n 4	14s 0	0s42	22n20	0s45	16n35	6s34	23s 6	22s59	22s50	18s 2	4n53					

ASTRODIENST EPHEMERIS for the year 1416

geocentric

FEBRUARY 1416 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	9 15 27	20 ¹⁶ 51	11 ⁴ 49	6 ¹⁵ 15	21 ¹⁵ 52	10 ¹⁶ 29	4 ⁴ 5	16 ¹⁶ R26	24 ⁴ 45	10 ¹⁰ R41	19 ¹⁰ R45	19 ¹⁰ R14	18 ¹⁰ 10	24 ¹⁰ 47	17 ¹⁰ 21	S 1
S 2	9 19 23	21 ¹⁷ 23	24 ⁴ 48	5 ⁴ 37	21 ¹⁵ 15	10 ¹⁰ 54	4 ¹⁹	16 ¹⁶ 23	24 ⁴ 49	10 ¹⁰ 40	19 ¹⁰ 45	19 ¹⁰ 4	18 ¹⁰ 7	24 ¹⁰ 54	17 ¹⁰ 25	S 2
M 3	9 23 20	22 ¹⁷ 54	7 ¹⁵ 59	5 ¹⁰ 7	20 ¹⁰ 37	11 ¹¹ 18	4 ³³	16 ¹⁶ 19	24 ¹⁰ 52	10 ¹⁰ 39	19 ¹⁰ 44	18 ¹⁰ 54	18 ¹⁰ 4	25 ¹⁰ 1	17 ¹⁰ 29	M 3
T 4	9 27 16	23 ¹⁸ 22	21 ¹² 22	4 ⁴ 44	20 ¹⁰ 0	11 ¹¹ 42	4 ⁴ 47	16 ¹⁶ 16	24 ¹⁰ 56	10 ¹⁰ 38	19 ¹⁰ 44	18 ¹⁰ 48	18 ¹⁰ 1	25 ¹⁰ 7	17 ¹⁰ 33	T 4
W 5	9 31 13	24 ¹⁸ 49	4 ¹⁰ 56	4 ²⁹	19 ¹⁰ 24	12 ¹⁰ 5	5 ¹⁰ 0	16 ¹⁶ 12	24 ¹⁰ 59	10 ¹⁰ 37	19 ¹⁰ 43	18 ¹⁰ 44	17 ¹⁰ 58	25 ¹⁰ 14	17 ¹⁰ 37	W 5
T 6	9 35 9	25 ¹⁹ 14	18 ¹⁰ 41	4 ²¹	18 ¹⁰ 48	12 ¹⁰ 28	5 ¹⁴	16 ¹⁶ 9	25 ¹⁰ 2	10 ¹⁰ 36	19 ¹⁰ 43	18 ¹⁰ 42	17 ¹⁰ 54	25 ¹⁰ 21	17 ¹⁰ 41	T 6
F 7	9 39 6	26 ¹⁹ 37	2 ¹⁰ 38	4 ¹⁰ D20	18 ¹⁰ 13	12 ¹⁰ 51	5 ¹⁰ 28	16 ¹⁶ 6	25 ¹⁰ 6	10 ¹⁰ 35	19 ¹⁰ 43	18 ¹⁰ D42	17 ¹⁰ 51	25 ¹⁰ 27	17 ¹⁰ 45	F 7
S 8	9 43 2	27 ¹⁹ 58	16 ¹⁰ 46	4 ²⁵	17 ¹⁰ 40	13 ¹⁰ 14	5 ¹⁰ 42	16 ¹⁶ 3	25 ¹⁰ 9	10 ¹⁰ 33	19 ¹⁰ 42	18 ¹⁰ R42	17 ¹⁰ 48	25 ¹⁰ 34	17 ¹⁰ 49	S 8
S 9	9 46 59	28 ²⁰ 17	1 ¹⁰ 6	4 ³⁷	17 ¹⁰ 8	13 ¹⁰ 37	5 ¹⁰ 56	16 ¹⁶ 0	25 ¹⁰ 13	10 ¹⁰ 32	19 ¹⁰ 42	18 ¹⁰ 42	17 ¹⁰ 45	25 ¹⁰ 41	17 ¹⁰ 52	S 9
M10	9 50 56	29 ²⁰ 33	15 ¹⁰ 34	4 ⁵⁵	16 ¹⁰ 38	13 ¹⁰ 59	6 ¹⁰ 9	15 ¹⁰ 57	25 ¹⁰ 16	10 ¹⁰ 31	19 ¹⁰ 42	18 ¹⁰ 39	17 ¹⁰ 42	25 ¹⁰ 47	17 ¹⁰ 56	M10
T 11	9 54 52	0 ¹⁰ 20'48	0 ¹⁰ 6	5 ¹⁸	16 ¹⁰ 9	14 ¹⁰ 20	6 ¹⁰ 23	15 ¹⁰ 54	25 ¹⁰ 20	10 ¹⁰ 30	19 ¹⁰ 41	18 ¹⁰ 34	17 ¹⁰ 39	25 ¹⁰ 54	17 ¹⁰ 59	T 11
W12	9 58 49	1 ²¹ 01	14 ¹⁰ 38	5 ⁴⁷	15 ¹⁰ 43	14 ¹⁰ 42	6 ¹⁰ 37	15 ¹⁰ 51	25 ¹⁰ 23	10 ¹⁰ 29	19 ¹⁰ 41	18 ¹⁰ 26	17 ¹⁰ 35	26 ¹⁰ 1	18 ¹⁰ 3	W12
T 13	10 2 45	2 ²¹ 12	29 ¹⁰ 3	6 ¹⁰ 20	15 ¹⁰ 18	15 ¹⁰ 3	6 ¹⁰ 50	15 ¹⁰ 49	25 ¹⁰ 27	10 ¹⁰ 29	19 ¹⁰ 41	18 ¹⁰ 15	17 ¹⁰ 32	26 ¹⁰ 7	18 ¹⁰ 6	T 13
F 14	10 6 42	3 ²¹ 21	13 ¹⁰ 14	6 ¹⁰ 57	14 ¹⁰ 56	15 ¹⁰ 24	7 ¹⁰ 4	15 ¹⁰ 46	25 ¹⁰ 30	10 ¹⁰ 28	19 ¹⁰ 41	18 ¹⁰ 4	17 ¹⁰ 29	26 ¹⁰ 14	18 ¹⁰ 9	F 14
S 15	10 10 38	4 ²¹ 28	27 ¹⁰ 5	7 ¹⁰ 39	14 ¹⁰ 36	15 ¹⁰ 44	7 ¹⁰ 17	15 ¹⁰ 44	25 ¹⁰ 33	10 ¹⁰ 27	19 ¹⁰ 40	17 ¹⁰ 52	17 ¹⁰ 26	26 ¹⁰ 20	18 ¹⁰ 13	S 15
S 16	10 14 35	5 ²¹ 33	10 ¹⁰ 33	8 ¹⁰ 24	14 ¹⁰ 18	16 ¹⁰ 4	7 ¹⁰ 31	15 ¹⁰ 41	25 ¹⁰ 37	10 ¹⁰ 26	19 ¹⁰ 40	17 ¹⁰ 41	17 ¹⁰ 23	26 ¹⁰ 27	18 ¹⁰ 16	S 16
M17	10 18 31	6 ²¹ 37	23 ¹⁰ 36	9 ¹⁰ 13	14 ¹⁰ 3	16 ¹⁰ 24	7 ¹⁰ 44	15 ¹⁰ 39	25 ¹⁰ 40	10 ¹⁰ 25	19 ¹⁰ 40	17 ¹⁰ 32	17 ¹⁰ 19	26 ¹⁰ 34	18 ¹⁰ 19	M17
T 18	10 22 28	7 ²¹ 39	6 ¹⁰ 17	10 ¹⁰ 6	13 ¹⁰ 51	16 ¹⁰ 43	7 ¹⁰ 57	15 ¹⁰ 37	25 ¹⁰ 44	10 ¹⁰ 24	19 ¹⁰ 40	17 ¹⁰ 26	17 ¹⁰ 16	26 ¹⁰ 40	18 ¹⁰ 21	T 18
W19	10 26 25	8 ²¹ 39	18 ¹⁰ 37	11 ¹⁰ 1	13 ¹⁰ 41	17 ¹⁰ 2	8 ¹⁰ 11	15 ¹⁰ 35	25 ¹⁰ 47	10 ¹⁰ 24	19 ¹⁰ 40	17 ¹⁰ 22	17 ¹⁰ 13	26 ¹⁰ 47	18 ¹⁰ 24	W19
T 20	10 30 21	9 ²¹ 38	0 ¹⁰ 14	11 ¹⁰ 59	13 ¹⁰ 33	17 ¹⁰ 20	8 ¹⁰ 24	15 ¹⁰ 33	25 ¹⁰ 51	10 ¹⁰ 23	19 ¹⁰ 40	17 ¹⁰ 21	17 ¹⁰ 10	26 ¹⁰ 54	18 ¹⁰ 27	T 20
F 21	10 34 18	10 ²¹ 35	12 ¹⁰ 34	13 ¹⁰ 0	13 ¹⁰ 28	17 ¹⁰ 38	8 ¹⁰ 37	15 ¹⁰ 31	25 ¹⁰ 54	10 ¹⁰ 22	19 ¹⁰ 39	17 ¹⁰ 21	17 ¹⁰ 7	27 ¹⁰ 0	18 ¹⁰ 30	F 21
S 22	10 38 14	11 ²¹ 31	24 ¹⁰ 22	14 ¹⁰ 4	13 ¹⁰ 25	17 ¹⁰ 56	8 ¹⁰ 50	15 ¹⁰ 29	25 ¹⁰ 57	10 ¹⁰ 22	19 ¹⁰ 39	17 ¹⁰ 21	17 ¹⁰ 4	27 ¹⁰ 7	18 ¹⁰ 32	S 22
S 23	10 42 11	12 ²¹ 25	6 ¹⁰ 10	15 ¹⁰ 10	13 ¹⁰ D25	18 ¹⁰ 13	9 ¹⁰ 3	15 ¹⁰ 28	26 ¹⁰ 1	10 ¹⁰ 21	19 ¹⁰ 39	17 ¹⁰ 20	17 ¹⁰ 0	27 ¹⁰ 14	18 ¹⁰ 35	S 23
M24	10 46 7	13 ²¹ 17	18 ¹⁰ 4	16 ¹⁰ 18	13 ¹⁰ 27	18 ¹⁰ 30	9 ¹⁰ 16	15 ¹⁰ 26	26 ¹⁰ 4	10 ¹⁰ 20	19 ¹⁰ D39	17 ¹⁰ 17	16 ¹⁰ 57	27 ¹⁰ 20	18 ¹⁰ 37	M24
T 25	10 50 4	14 ²¹ 07	0 ¹⁰ 7	17 ¹⁰ 28	13 ¹⁰ 32	18 ¹⁰ 47	9 ¹⁰ 29	15 ¹⁰ 25	26 ¹⁰ 7	10 ¹⁰ 20	19 ¹⁰ 39	17 ¹⁰ 11	16 ¹⁰ 54	27 ¹⁰ 27	18 ¹⁰ 39	T 25
W26	10 54 0	15 ²⁰ 55	12 ¹⁰ 25	18 ¹⁰ 41	13 ¹⁰ 39	19 ¹⁰ 2	9 ¹⁰ 42	15 ¹⁰ 24	26 ¹⁰ 11	10 ¹⁰ 19	19 ¹⁰ 39	17 ¹⁰ 2	16 ¹⁰ 51	27 ¹⁰ 34	18 ¹⁰ 42	W26
T 27	10 57 57	16 ²⁰ 42	24 ¹⁰ 58	19 ¹⁰ 55	13 ¹⁰ 48	19 ¹⁰ 18	9 ¹⁰ 55	15 ¹⁰ 22	26 ¹⁰ 14	10 ¹⁰ 19	19 ¹⁰ 39	16 ¹⁰ 51	16 ¹⁰ 48	27 ¹⁰ 40	18 ¹⁰ 44	T 27
F 28	11 1 54	17 ²⁰ 26	7 ¹⁰ 49	21 ¹⁰ 11	13 ¹⁰ 59	19 ¹⁰ 33	10 ¹⁰ 8	15 ¹⁰ 21	26 ¹⁰ 17	10 ¹⁰ 18	19 ¹⁰ 40	16 ¹⁰ 38	16 ¹⁰ 45	27 ¹⁰ 47	18 ¹⁰ 46	F 28
S 29	11 5 50	18 ¹⁰ 20'09	20 ¹⁰ 56	22 ¹⁰ 29	14 ¹⁰ 12	19 ¹⁰ 147	10 ¹⁰ 21	15 ¹⁰ 20	26 ¹⁰ 21	10 ¹⁰ 18	19 ¹⁰ 40	16 ¹⁰ 38	16 ¹⁰ 41	27 ¹⁰ 53	18 ¹⁰ 48	S 29

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	
S 1	14s46	2s31	5n 1	15s34	3n18	6s25	8n17	13s21	1n45	19s47	0s30	22n34	0n 4	13s59	0s42	22n20	0s45	16n35	6s33	23s 5	22s59	22s49	18s 2	4n54				
S 2	14 27	2n33	5 2	15 53	3 8	6 32	8 22	13 29	1 45	19 44	0 30	22 35	0 4	13 57	0 42	22 20	0 45	16 35	6 33	23 4	22 59	22 48	18 2	4 55				
M 3	14 7	7 34	4 47	16 11	2 57	6 39	8 26	13 36	1 45	19 41	0 30	22 35	0 4	13 56	0 42	22 21	0 45	16 35	6 33	23 3	22 59	22 48	18 2	4 55				
T 4	13 48	12 19	4 17	16 28	2 46	6 47	8 30	13 44	1 45	19 37	0 30	22 36	0 4	13 55	0 42	22 21	0 45	16 35	6 33	23 2	22 58	22 47	18 1	4 56				
W 5	13 28	16 31	3 31	16 43	2 34	6 56	8 32	13 51	1 45	19 34	0 31	22 36	0 4	13 54	0 42	22 21	0 45	16 35	6 33	23 2	22 58	22 47	18 1	4 56				
T 6	13 7	19 53	2 33	16 57	2 21	7 5	8 33	13 58	1 45	19 31	0 31	22 37	0 5	13 53	0 42	22 21	0 45	16 35	6 33	23 2	22 58	22 46	18 1	4 57				
F 7	12 47	22 8	1 25	17 10	2 8	7 15	8 34	14 5	1 44	19 28	0 31	22 37	0 5	13 52	0 42	22 21	0 45	16 36	6 32	23 2	22 57	22 45	18 1	4 57				
S 8	12 26	23 2	0 10	17 21	1 55	7 26	8 33	14 12	1 44	19 24	0 31	22 38	0 5	13 50	0 42	22 21	0 45	16 36	6 32	23 2	22 57	22 45	18 1	4 58				
S 9	12 5	22 25	1s 5	17 31	1 42	7 36	8 32	14 19	1 44	19 21	0 31	22 38	0 5	13 49	0 42	22 21	0 45	16 36	6 32	23 2	22 57	22 44	18 0	4 58				
M10	11 44	20 20	2 18	17 39	1 29	7 47	8 30	14 26	1 44	19 18	0 31	22 38	0 5	13 48	0 42	22 21	0 45	16 36	6 32	23 2	22 57	22 43	18 0	4 59				
T 11	11 23	16 55	3 21	17 46	1 16	7 59	8 27	14 32	1 44	19 14	0 31	22 39	0 5	13 47	0 42	22 22	0 44	16 36	6 32	23 1	22 56	22 43	18 0	5 0				
W12	11 2	12 29	4 11	17 51	1 4	8 10	8 23	14 39	1 44	19 11	0 31	22 39	0 5	13 46	0 42	22 22	0 44	16 36	6 31	23 1	22 56	22 42	17 59	5 0				
T 13	10 40	7 23	4 45	17 55	0 51	8 21	8 18	14 45	1 43	19 8	0 32	22 40	0 5	13 45	0 42	22 22	0 44	16 37	6 31	23 0	22 56	22 41	17 59	5 1				
F 14	10 18	1 59	5 0	17 57	0 39	8 33	8 13	14 51	1 43	19 5	0 32	22 40	0 5	13 43	0 42	22 22	0 44	16 37	6 31	22 59	22 55	22 41	17 59	5 1				
S 15	9 57	3s23	4 58	17 58	0 28	8 44	8 7	14 58	1 43	19 1	0 32	22 41	0 5	13 42	0 42	22 22	0 44	16 37	6 31	22 58	22 55	22 40	17 59	5 2				
S 16	9 35	8 27	4 38	17 58	0 16	8 55	8 0	15 4	1 43	18 58	0 32	22 41	0 6	13 41	0 42	22 22	0 44	16 37	6 31	22 57	22 55	22 39	17 58	5 3				
M17	9 12	12 59	4 4	17 55	0 5	9 6	7 53	15 9	1 42	18 55	0 32	22 41	0 6	13 40	0 42	22 22	0 44	16 37	6 30	22 56	22 55	22 39	17 58	5 3				
T 18	8 50	16 47	3 19	17 52	0s 6	9 17	7 45	15 15	1 42	18 51	0 32	22 42	0 6	13 39	0 42	22 22	0 44	16 38	6 30	22 55	22 54	22 38	17 57	5 4				
W19	8 28	19 45	2 26	17 47	0 16	9 28	7 37	15 21	1 42	18 48	0 32	22 42	0 6	13 38	0 42	22 22	0 44	16 38	6 30	22 55	22 54	22 37	17 57	5 4				
T 20	8 5	21 47	1 27	17 40	0 26	9 38	7 29	15 26	1 41	18 45	0 32	22 42	0 6	13 37	0 42	22 22	0 44	16 38	6 30	22 55	22 54	22 36	17 57	5 5				
F 21	7 42	22 48	0 25	17 32	0 36	9 48	7 20	15 32	1 41	18 41	0 33	22 43	0 6	13 35	0 42	22 22	0 44	16 38	6 30	22 55	22 53	22 36	17 56	5 6				
S 22	7 20	22 47	0n37	17 23	0 45	9 57	7 11	15 37	1 41	18 38	0 33	22 43	0 6	13 34	0 42	22 23	0 44	16 38	6 29	22 55	22 53	22 35	17 56	5 6				
S 23	6 57	21 44	1 38	17 12	0 54	10 6	7 2	15 42	1 40	18 35	0 33	22 43	0 6	13 33	0 42	22 23	0 44	16 38	6 29	22 55	22 53	22 34	17 55	5 7				
M24	6 34	19 44	2 35	16 59	1 2	10 15	6 52	15 47	1 40	18 31	0 33	22 43	0 6	13 32	0 42	22 23	0 44	16 39	6 29	22 54	22 52	22 33	17 55	5 8				
T 25	6 11	16 50	3 26	16 46	1 10	10 23	6 42	15 52	1 39	18 28	0 33	22 44	0 6	13 31	0 42	22 23	0 44	16 39	6 29	22 54	22 52	22 33	17 55	5 8				
W26	5 48	13 10	4 8	16 30	1 18	10 31	6 32	15 57	1 39	18 25	0 33	22 44	0 7	13 30	0 42	22 23	0 44	16 39	6 29	22 53	22 52	22 32	17 54	5 9				
T 27	5 24	8 51	4 39	16 14	1 25	10 38	6 22	16 2	1 39	18 21	0 33	22 44	0 7	13 29	0 42	22 23	0 44	16 39	6 28	22 52	22 51	22 31	17 54	5 9				
F 28	5 1	4 5	4 57	15 56	1 32	10 45	6 12	16 6	1 38	18 18	0 34	22 44	0 7	13 28	0 42	22 23	0 44	16 39	6 28	22 50	22 51	22 31	17 53	5 10				
S 29	4s38	0n59	4n59	15s36	1s38	10s51	6n 1	16s10	1n37	18s15	0s34	22n45	0n 7	13s26	0s43	22n23	0s44	16n40	6s28	22s49	22s51	22s30	17s53	5n11				

ASTRODIENST EPHEMERIS for the year 1416

geocentric

MARCH 1416 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	11 9 47	19°19'49	4°19'19	23°48'48	14°28'28	20°11'1	10°33'33	15°R19	26°24'24	10°R17	19°11'40	16°R12	16°38'38	28°0'0	18°49'49	S 1
M 2	11 13 43	20°19'27	17°54'54	25°10'10	14°45'45	20°15'15	10°46'46	15°19'19	26°27'27	10°17'17	19°40'40	16°1'1	16°35'35	28°7'7	18°51'51	M 2
T 3	11 17 40	21°19'04	18°40'40	26°32'32	15°5'5	20°27'27	10°59'59	15°18'18	26°30'30	10°17'17	19°40'40	15°53'53	16°32'32	28°13'13	18°53'53	T 3
W 4	11 21 36	22°18'38	15°32'32	27°57'57	15°26'26	20°40'40	11°11'11	15°18'18	26°33'33	10°16'16	19°40'40	15°47'47	16°29'29	28°20'20	18°54'54	W 4
T 5	11 25 33	23°18'09	29°30'30	29°23'23	15°49'49	20°52'52	11°23'23	15°17'17	26°37'37	10°16'16	19°41'41	15°45'45	16°25'25	28°27'27	18°56'56	T 5
F 6	11 29 29	24°17'39	13°11'32	0°15'50	16°13'13	21°3'3	11°36'36	15°17'17	26°40'40	10°16'16	19°41'41	15°D44	16°22'22	28°33'33	18°57'57	F 6
S 7	11 33 26	25°17'06	27°37'37	2°19'19	16°40'40	21°14'14	11°48'48	15°17'17	26°43'43	10°16'16	19°41'41	15°R44	16°19'19	28°40'40	18°59'59	S 7
S 8	11 37 23	26°16'31	11°15'44	3°49'49	17°8'8	21°24'24	12°0'0	15°D17	26°46'46	10°15'15	19°41'41	15°44'44	16°16'16	28°47'47	19°0'0	S 8
M 9	11 41 19	27°15'53	25°53'53	5°21'21	17°37'37	21°33'33	12°12'12	15°17'17	26°49'49	10°15'15	19°42'42	15°41'41	16°13'13	28°53'53	19°1'1	M 9
T 10	11 45 16	28°15'13	10°15'13	6°54'54	18°8'8	21°42'42	12°24'24	15°17'17	26°52'52	10°15'15	19°42'42	15°36'36	16°10'10	29°0'0	19°2'2	T 10
W 11	11 49 12	29°14'31	24°6'6	8°28'28	18°41'41	21°51'51	12°36'36	15°17'17	26°55'55	10°15'15	19°42'42	15°28'28	16°6'6	29°7'7	19°3'3	W 11
T 12	11 53 9	0°13'46	8°13'46	10°4'4	19°15'15	21°59'59	12°48'48	15°17'17	26°58'58	10°15'15	19°43'43	15°18'18	16°3'3	29°13'13	19°3'3	T 12
F 13	11 57 5	1°12'59	21°50'50	11°42'42	19°50'50	22°6'6	13°0'0	15°18'18	27°1'1	10°D15	19°43'43	15°6'6	16°0'0	29°20'20	19°4'4	F 13
S 14	12 1 2	2°12'10	5°12'22	13°20'20	20°26'26	22°12'12	13°12'12	15°18'18	27°4'4	10°15'15	19°43'43	14°54'54	15°57'57	29°27'27	19°5'5	S 14
S 15	12 4 58	3°11'19	18°36'36	15°1'1	21°4'4	22°18'18	13°23'23	15°19'19	27°7'7	10°15'15	19°44'44	14°43'43	15°54'54	29°33'33	19°5'5	S 15
M 16	12 8 55	4°10'25	1°11'31	16°42'42	21°43'43	22°23'23	13°35'35	15°20'20	27°10'10	10°15'15	19°44'44	14°34'34	15°51'51	29°40'40	19°6'6	M 16
T 17	12 12 51	5°9'30	14°6'6	18°25'25	22°23'23	22°28'28	13°46'46	15°21'21	27°13'13	10°15'15	19°45'45	14°28'28	15°47'47	29°46'46	19°6'6	T 17
W 18	12 16 48	6°8'34	26°24'24	20°9'9	23°4'4	22°32'32	13°57'57	15°22'22	27°16'16	10°16'16	19°45'45	14°24'24	15°44'44	29°53'53	19°6'6	W 18
T 19	12 20 45	7°7'35	8°28'28	21°55'55	23°46'46	22°35'35	14°9'9	15°23'23	27°19'19	10°16'16	19°46'46	14°22'22	15°41'41	29°59'59	19°6'6	T 19
F 20	12 24 41	8°6'34	20°22'22	23°43'43	24°29'29	22°37'37	14°20'20	15°24'24	27°22'22	10°16'16	19°46'46	14°D22	15°38'38	0°13'13	19°R 6	F 20
S 21	12 28 38	9°5'32	2°11'31	25°31'31	25°14'14	22°39'39	14°31'31	15°26'26	27°25'25	10°16'16	19°47'47	14°23'23	15°35'35	0°13'13	19°6'6	S 21
S 22	12 32 34	10°4'28	14°1'1	27°22'22	25°59'59	22°40'40	14°42'42	15°27'27	27°27'27	10°17'17	19°48'48	14°R23	15°31'31	0°20'20	19°6'6	S 22
M 23	12 36 31	11°3'22	25°56'56	29°13'13	26°45'45	22°R41	14°53'53	15°29'29	27°30'30	10°17'17	19°48'48	14°22'22	15°28'28	0°26'26	19°6'6	M 23
T 24	12 40 27	12°2'15	8°2'2	1°1'6	27°31'31	22°40'40	15°4'4	15°30'30	27°33'33	10°17'17	19°49'49	14°18'18	15°25'25	0°33'33	19°6'6	T 24
W 25	12 44 24	13°1'05	20°23'23	3°1'1	28°19'19	22°39'39	15°14'14	15°32'32	27°35'35	10°18'18	19°49'49	14°13'13	15°22'22	0°40'40	19°5'5	W 25
T 26	12 48 20	13°59'54	3°1'3	4°57'57	29°8'8	22°37'37	15°25'25	15°34'34	27°38'38	10°18'18	19°50'50	14°5'5	15°19'19	0°46'46	19°5'5	T 26
F 27	12 52 17	14°58'40	16°5'5	6°55'55	29°57'57	22°34'34	15°35'35	15°36'36	27°41'41	10°19'19	19°51'51	13°56'56	15°16'16	0°53'53	19°4'4	F 27
S 28	12 56 14	15°57'25	29°28'28	8°54'54	0°1'47	22°31'31	15°46'46	15°38'38	27°43'43	10°19'19	19°52'52	13°46'46	15°12'12	1°0'0	19°4'4	S 28
S 29	13 0 10	16°56'08	13°1'10	10°54'54	1°37'37	22°26'26	15°56'56	15°40'40	27°46'46	10°20'20	19°52'52	13°36'36	15°9'9	1°6'6	19°3'3	S 29
M 30	13 4 7	17°54'50	27°10'10	12°56'56	2°29'29	22°21'21	16°6'6	15°43'43	27°48'48	10°20'20	19°53'53	13°28'28	15°6'6	1°13'13	19°2'2	M 30
T 31	13 8 3	18°53'29	11°1'21	14°1'59	3°1'21	22°16'16	16°16'16	15°45'45	27°51'51	10°21'21	19°54'54	13°22'22	15°3'3	1°13'13	19°1'1	T 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
S 1	4s14	6n 5	4n46	15s16	1s44	10s56	5n51	16s15	1n37	18s11	0s34	22n45	0n 7	13s25	0s43	22n23
M 2	3 51	10 59	4 16	14 54	1 49	11 1	5 41	16 19	1 36	18 8	0 34	22 45	0 7	13 24	0 43	22 23
T 3	3 27	15 23	3 30	14 30	1 55	11 6	5 30	16 23	1 36	18 5	0 34	22 45	0 7	13 23	0 43	22 23
W 4	3 4	18 58	2 32	14 5	1 59	11 10	5 20	16 27	1 35	18 1	0 34	22 45	0 7	13 22	0 43	22 23
T 5	2 40	21 29	1 25	13 39	2 3	11 13	5 9	16 31	1 34	17 58	0 34	22 45	0 7	13 21	0 43	22 23
F 6	2 16	22 41	0 12	13 12	2 7	11 16	4 59	16 34	1 34	17 55	0 35	22 45	0 7	13 20	0 43	22 23
S 7	1 53	22 27	1s 3	12 43	2 10	11 18	4 49	16 38	1 33	17 52	0 35	22 46	0 7	13 19	0 43	22 23
S 8	1 29	20 47	2 13	12 12	2 13	11 20	4 38	16 41	1 32	17 48	0 35	22 46	0 8	13 18	0 43	22 24
M 9	1 5	17 50	3 15	11 41	2 16	11 21	4 28	16 44	1 31	17 45	0 35	22 46	0 8	13 17	0 43	22 24
T 10	0 42	13 51	4 6	11 8	2 18	11 21	4 18	16 47	1 31	17 42	0 35	22 46	0 8	13 16	0 43	22 24
W 11	0 18	9 7	4 41	10 34	2 19	11 21	4 8	16 50	1 30	17 39	0 35	22 46	0 8	13 15	0 43	22 24
T 12	0n 5	3 57	4 59	9 59	2 20	11 20	3 58	16 53	1 29	17 35	0 36	22 46	0 8	13 14	0 43	22 24
F 13	0 29	1s20	4 59	9 22	2 21	11 18	3 48	16 56	1 28	17 32	0 36	22 46	0 8	13 13	0 43	22 24
S 14	0 53	6 28	4 43	8 44	2 21	11 16	3 38	16 59	1 27	17 29	0 36	22 46	0 8	13 12	0 43	22 24
S 15	1 16	11 11	4 11	8 5	2 21	11 14	3 29	17 1	1 26	17 26	0 36	22 46	0 8	13 11	0 43	22 24
M 16	1 40	15 16	3 27	7 24	2 20	11 10	3 19	17 3	1 25	17 23	0 36	22 46	0 8	13 10	0 43	22 24
T 17	2 3	18 34	2 34	6 43	2 18	11 6	3 10	17 6	1 24	17 20	0 36	22 46	0 8	13 9	0 43	22 24
W 18	2 27	20 56	1 34	6 0	2 16	11 2	3 0	17 8	1 23	17 16	0 37	22 46	0 8	13 8	0 43	22 24
T 19	2 50	22 18	0 31	5 16	2 14	10 57	2 51	17 9	1 22	17 13	0 37	22 46	0 8	13 7	0 43	22 24
F 20	3 14	22 38	0n32	4 31	2 11	10 51	2 42	17 11	1 20	17 10	0 37	22 46	0 9	13 6	0 43	22 24
S 21	3 37	21 56	1 34	3 44	2 8	10 45	2 33	17 13	1 19	17 7	0 37	22 46	0 9	13 5	0 43	22 24
S 22	4 0	20 16	2 31	2 57	2 4	10 38	2 24	17 14	1 18	17 4	0 37	22 46	0 9	13 4	0 43	22 24
M 23	4 23	17 42	3 23	2 8	2 0	10 31	2 16	17 16	1 17	17 1	0 38	22 46	0 9	13 3	0 43	22 24
T 24	4 46	14 21	4 6	1 19	1 55	10 23	2 7	17 17	1 15	16 58	0 38	22 45	0 9	13 2	0 43	22 24
W 25	5 9	10 19	4 39	0 28	1 49	10 14	1 59	17 18	1 14	16 55	0 38	22 45	0 9	13 1	0 43	22 24
T 26	5 32	5 46	4 59	0n24	1 43	10 5	1 50	17 19	1 12	16 52	0 38	22 45	0 9	13 0	0 43	22 24
F 27	5 55	0 50	5 5	1 16	1 37	9 56	1 42	17 20	1 11	16 49	0 38	22 45	0 9	12 59	0 43	22 24
S 28	6 18	4n16	4 54	2 10	1 30	9 46	1 34	17 20	1 9	16 46	0 38	22 45	0 9	12 59	0 43	22 24
S 29	6 40	9 17	4 26	3 4	1 22	9 35	1 26	17 21	1 8	16 44	0 39	22 45	0 9	12 58	0 43	22 24
M 30	7 3	13 56	3 41	3 59	1 15	9 24	1 19	17 21	1 6	16 41	0 39	22 45	0 9	12 57	0 43	22 24
T 31	7n25	17n52	2n43	4n54	1s 6	9s13	1n11	17s21	1n 4	16s38	0s39	22n44	0n 9	12s56	0s43	22n24

Julian Day Number = 2238311.5, Delta T = 07m27s

Ecliptic obliquity = 23°30'53", Nutation = 0°00'17", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 16°35'45", Lahiri = 15°42'45" Julian Calendar 1 March 1416 == Greg. Calendar 10 March 1416

ASTRODIENST EPHEMERIS for the year 1416

geocentric

APRIL 1416 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	13 12 0	19°52'06	25°39	17°3	4°13	22°R 9	16°26	15°48	27°53	10°21	19°55	13°R18	15°0	1°26	19°R 0	W 1
T 2	13 15 56	20°50'41	10°II 0	19° 9	5° 6	22°M 2	16°36	15°50	27°56	10°22	19°55	13°D17	14°56	1°33	18°59	T 2
F 3	13 19 53	21°49'14	24°19	21°15	6° 0	21°54	16°46	15°53	27°58	10°23	19°56	13°17	14°53	1°40	18°57	F 3
S 4	13 23 49	22°47'44	8°34	23°22	6°54	21°45	16°55	15°56	28° 0	10°24	19°57	13°18	14°50	1°46	18°56	S 4
S 5	13 27 46	23°46'13	22°43	25°30	7°49	21°35	17° 5	15°59	28° 3	10°24	19°58	13°R19	14°47	1°53	18°55	S 5
M 6	13 31 43	24°44'39	6°44	27°38	8°44	21°25	17°14	16° 2	28° 5	10°25	19°59	13°18	14°44	1°59	18°53	M 6
T 7	13 35 39	25°43'03	20°37	29°46	9°40	21°14	17°23	16° 5	28° 7	10°26	20° 0	13°15	14°41	2° 6	18°52	T 7
W 8	13 39 36	26°41'24	4°20	1°55	10°36	21° 2	17°32	16° 8	28° 9	10°27	20° 1	13°11	14°37	2°13	18°50	W 8
T 9	13 43 32	27°39'44	17°53	4° 2	11°33	20°50	17°41	16°11	28°12	10°28	20° 2	13° 5	14°34	2°19	18°48	T 9
F 10	13 47 29	28°38'01	1°13	6°10	12°30	20°36	17°50	16°15	28°14	10°29	20° 2	12°57	14°31	2°26	18°46	F 10
S 11	13 51 25	29°36'17	14°21	8°16	13°28	20°23	17°59	16°18	28°16	10°30	20° 3	12°50	14°28	2°33	18°45	S 11
S 12	13 55 22	0°34'31	27°14	10°21	14°26	20° 8	18° 7	16°22	28°18	10°30	20° 4	12°43	14°25	2°39	18°43	S 12
M13	13 59 18	1°32'43	9°M52	12°24	15°24	19°53	18°16	16°25	28°20	10°31	20° 5	12°37	14°22	2°46	18°40	M13
T 14	14 3 15	2°30'53	22°16	14°26	16°23	19°37	18°24	16°29	28°22	10°33	20° 6	12°33	14°18	2°53	18°38	T 14
W15	14 7 11	3°29'02	4°27	16°25	17°22	19°21	18°32	16°33	28°24	10°34	20° 7	12°31	14°15	2°59	18°36	W15
T 16	14 11 8	4°27'09	16°27	18°22	18°22	19° 4	18°40	16°37	28°25	10°35	20° 9	12°D31	14°12	3° 6	18°34	T 16
F 17	14 15 5	5°25'14	28°20	20°16	19°22	18°46	18°48	16°41	28°27	10°36	20°10	12°32	14° 9	3°13	18°31	F 17
S 18	14 19 1	6°23'18	10°3	22° 8	20°22	18°28	18°56	16°45	28°29	10°37	20°11	12°34	14° 6	3°19	18°29	S 18
S 19	14 22 58	7°21'21	21°58	23°56	21°23	18° 9	19° 4	16°49	28°31	10°38	20°12	12°35	14° 2	3°26	18°26	S 19
M20	14 26 54	8°19'22	3°54	25°41	22°23	17°50	19°11	16°54	28°32	10°39	20°13	12°R36	13°59	3°33	18°24	M20
T 21	14 30 51	9°17'22	16° 0	27°23	23°25	17°31	19°18	16°58	28°34	10°41	20°14	12°36	13°56	3°39	18°21	T 21
W22	14 34 47	10°15'20	28°21	29° 2	24°26	17°11	19°26	17° 3	28°36	10°42	20°15	12°35	13°53	3°46	18°19	W22
T 23	14 38 44	11°13'17	11°2	0°II37	25°28	16°51	19°33	17° 7	28°37	10°43	20°16	12°32	13°50	3°53	18°16	T 23
F 24	14 42 40	12°11'12	24° 6	2° 8	26°30	16°30	19°40	17°12	28°39	10°44	20°17	12°28	13°47	3°59	18°13	F 24
S 25	14 46 37	13° 9'07	7°Y35	3°36	27°32	16°10	19°46	17°16	28°40	10°46	20°19	12°24	13°43	4° 6	18°10	S 25
S 26	14 50 34	14° 7'00	21°28	5° 0	28°35	15°49	19°53	17°21	28°42	10°47	20°20	12°19	13°40	4°13	18° 7	S 26
M27	14 54 30	15° 4'51	5°B43	6°20	29°38	15°27	19°59	17°26	28°43	10°49	20°21	12°16	13°37	4°19	18° 4	M27
T 28	14 58 27	16° 2'42	20°14	7°36	0°Y41	15° 6	20° 6	17°31	28°44	10°50	20°22	12°13	13°34	4°26	18° 1	T 28
W29	15 2 23	17° 0'30	4°II57	8°49	1°44	14°44	20°12	17°36	28°46	10°51	20°23	12°D12	13°31	4°33	17°58	W29
T 30	15 6 20	17°58'18	19°II43	9°II57	2°Y48	14°M23	20°18	17°34	28°47	10°53	20°25	12°12	13°28	4°39	17°54	T 30

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	
W 1	7n48	20n45	1n33	5n50	0s57	9s 0	1n 4	17s21	1n 3	16s35	0s39	22n44	0n10	12s55	0s43	22n24
T 2	8 10	22 19	0 18	6 47	0 48	8 48	0 56	17 21	1 1	16 32	0 39	22 44	0 10	12 54	0 43	22 24
F 3	8 32	22 24	0s59	7 43	0 39	8 35	0 49	17 21	0 59	16 30	0 40	22 44	0 10	12 54	0 43	22 24
S 4	8 54	21 2	2 12	8 40	0 29	8 21	0 42	17 21	0 57	16 27	0 40	22 43	0 10	12 53	0 43	22 24
S 5	9 15	18 22	3 16	9 36	0 18	8 7	0 35	17 20	0 55	16 24	0 40	22 43	0 10	12 52	0 43	22 24
M 6	9 37	14 39	4 8	10 32	0 8	7 53	0 28	17 19	0 53	16 21	0 40	22 43	0 10	12 51	0 43	22 24
T 7	9 58	10 10	4 45	11 28	0n 3	7 38	0 22	17 18	0 51	16 19	0 40	22 43	0 10	12 51	0 43	22 24
W 8	10 19	5 13	5 5	12 23	0 13	7 23	0 15	17 17	0 49	16 16	0 41	22 42	0 10	12 50	0 43	22 24
T 9	10 40	0 6	5 7	13 17	0 24	7 7	0 9	17 16	0 46	16 14	0 41	22 42	0 10	12 49	0 43	22 24
F 10	11 1	4s58	4 53	14 10	0 35	6 51	0 3	17 15	0 44	16 11	0 41	22 42	0 10	12 48	0 44	22 24
S 11	11 22	9 43	4 23	15 2	0 46	6 34	0s 3	17 14	0 42	16 9	0 41	22 41	0 10	12 48	0 44	22 24
S 12	11 43	13 57	3 41	15 51	0 56	6 17	0 9	17 12	0 39	16 6	0 41	22 41	0 10	12 47	0 44	22 24
M13	12 3	17 28	2 48	16 40	1 6	6 0	0 15	17 10	0 37	16 4	0 42	22 40	0 10	12 46	0 44	22 24
T 14	12 23	20 8	1 48	17 26	1 16	5 42	0 20	17 8	0 35	16 1	0 42	22 40	0 11	12 46	0 44	22 23
W15	12 43	21 49	0 44	18 10	1 26	5 24	0 26	17 6	0 32	15 59	0 42	22 40	0 11	12 45	0 44	22 23
T 16	13 3	22 28	0n21	18 52	1 35	5 6	0 31	17 4	0 30	15 57	0 42	22 39	0 11	12 45	0 44	22 23
F 17	13 22	22 5	1 25	19 32	1 43	4 47	0 36	17 2	0 27	15 55	0 43	22 39	0 11	12 44	0 44	22 23
S 18	13 42	20 43	2 25	20 9	1 51	4 28	0 41	16 59	0 24	15 52	0 43	22 38	0 11	12 43	0 44	22 23
S 19	14 1	18 27	3 19	20 44	1 58	4 8	0 46	16 57	0 22	15 50	0 43	22 38	0 11	12 43	0 44	22 23
M20	14 19	15 23	4 5	21 16	2 5	3 49	0 51	16 54	0 19	15 48	0 43	22 37	0 11	12 42	0 44	22 23
T 21	14 38	11 38	4 40	21 46	2 11	3 29	0 56	16 51	0 16	15 46	0 43	22 37	0 11	12 42	0 44	22 23
W22	14 56	7 20	5 3	22 13	2 16	3 8	1 0	16 48	0 13	15 44	0 44	22 37	0 11	12 41	0 44	22 23
T 23	15 15	2 37	5 13	22 37	2 20	2 48	1 4	16 45	0 11	15 42	0 44	22 36	0 11	12 41	0 44	22 23
F 24	15 32	2n21	5 7	23 0	2 23	2 27	1 9	16 42	0 8	15 40	0 44	22 36	0 11	12 40	0 44	22 23
S 25	15 50	7 21	4 44	23 20	2 26	2 6	1 13	16 39	0 5	15 38	0 44	22 35	0 11	12 40	0 44	22 23
S 26	16 8	12 9	4 3	23 37	2 28	1 44	1 17	16 35	0 2	15 36	0 45	22 34	0 11	12 39	0 44	22 23
M27	16 25	16 24	3 7	23 52	2 29	1 23	1 21	16 32	0s 1	15 34	0 45	22 34	0 12	12 39	0 44	22 23
T 28	16 41	19 45	1 58	24 5	2 28	1 1	1 24	16 29	0 4	15 33	0 45	22 33	0 12	12 38	0 44	22 22
W29	16 58	21 50	0 40	24 16	2 27	0 39	1 28	16 25	0 7	15 31	0 45	22 33	0 12	12 38	0 44	22 22
T 30	17n14	22n26	0s41	24n25	2n26	0s17	1s31	16s22	0s10	15s29	0s46	22n32	0n12	12s37	0s44	22n22

Julian Day Number = 2238342.5, Delta T = 07m27s

Ecliptic obliquity = 23°30'52, Nutation = 0°00'16, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 16°35'49, Lahiri = 15°42'49 Julian Calendar 1 Apr. 1416 == Greg. Calendar 10 Apr. 1416

ASTRODIENST EPHEMERIS for the year 1416

geocentric

MAY 1416 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	15 10 16	18°56'04	4°26	11°11' 2	3°51' 51	14°R 2	20°24	17°46	28°48	10°54	20°26	12°13	13°24	4°46	17°R51	F 1
S 2	15 14 13	19°53'48	19° 0	12° 2	4°55	13°M40	20°29	17°52	28°49	10°56	20°27	12°14	13°21	4°52	17°M48	S 2
S 3	15 18 10	20°51'30	3°21	12°58	5°59	13°19	20°35	17°57	28°50	10°58	20°28	12°15	13°18	4°59	17°44	S 3
M 4	15 22 6	21°49'11	17°27	13°50	7° 4	12°58	20°40	18° 2	28°52	10°59	20°30	12°R16	13°15	5° 6	17°41	M 4
T 5	15 26 3	22°46'50	1°17	14°37	8° 8	12°37	20°45	18° 8	28°53	11° 1	20°31	12°16	13°12	5°12	17°37	T 5
W 6	15 29 59	23°44'27	14°48	15°21	9°13	12°16	20°50	18°13	28°53	11° 2	20°32	12°15	13° 8	5°19	17°34	W 6
T 7	15 33 56	24°42'03	28° 3	15°59	10°18	11°56	20°55	18°19	28°54	11° 4	20°34	12°13	13° 5	5°26	17°30	T 7
F 8	15 37 52	25°39'38	11°11' 4	16°34	11°23	11°35	21° 0	18°25	28°55	11° 6	20°35	12°11	13° 2	5°32	17°27	F 8
S 9	15 41 49	26°37'11	23°49	17° 3	12°28	11°16	21° 4	18°30	28°56	11° 7	20°36	12° 9	12°59	5°39	17°23	S 9
S 10	15 45 45	27°34'43	6°11' 22	17°29	13°34	10°56	21° 9	18°36	28°57	11° 9	20°38	12° 7	12°56	5°46	17°19	S 10
M 11	15 49 42	28°32'13	18°43	17°49	14°39	10°38	21°13	18°42	28°58	11°11	20°39	12° 5	12°53	5°52	17°16	M 11
T 12	15 53 38	29°29'43	0°17' 53	18° 5	15°45	10°19	21°17	18°48	28°58	11°12	20°40	12° 4	12°49	5°59	17°12	T 12
W 13	15 57 35	0°11' 27	12°55	18°16	16°51	10° 1	21°20	18°54	28°59	11°14	20°42	12°D 4	12°46	6° 6	17° 8	W 13
T 14	16 1 32	1°24'38	24°49	18°22	17°57	9°44	21°24	19° 0	28°59	11°16	20°43	12° 4	12°43	6°12	17° 4	T 14
F 15	16 5 28	2°22'05	6°33' 39	18°R24	19° 3	9°27	21°27	19° 6	29° 0	11°18	20°44	12° 5	12°40	6°19	17° 0	F 15
S 16	16 9 25	3°19'30	18°28	18°21	20°10	9°11	21°31	19°12	29° 1	11°20	20°46	12° 6	12°37	6°26	16°56	S 16
S 17	16 13 21	4°16'55	0°18' 18	18°14	21°16	8°55	21°34	19°18	29° 1	11°21	20°47	12° 7	12°33	6°32	16°53	S 17
M 18	16 17 18	5°14'19	12°14	18° 3	22°23	8°40	21°37	19°25	29° 1	11°23	20°48	12° 7	12°30	6°39	16°49	M 18
T 19	16 21 14	6°11'43	24°20	17°47	23°30	8°26	21°39	19°31	29° 2	11°25	20°50	12° 8	12°27	6°46	16°45	T 19
W 20	16 25 11	7° 9'05	6°14' 40	17°28	24°37	8°13	21°42	19°37	29° 2	11°27	20°51	12°R 8	12°24	6°52	16°41	W 20
T 21	16 29 7	8° 6'27	19°19	17° 6	25°44	8° 0	21°44	19°44	29° 2	11°29	20°53	12° 8	12°21	6°59	16°37	T 21
F 22	16 33 4	9° 3'49	2°19' 19	16°40	26°51	7°48	21°46	19°50	29° 2	11°31	20°54	12° 8	12°18	7° 6	16°33	F 22
S 23	16 37 1	10° 1'10	15°45	16°12	27°58	7°36	21°48	19°57	29° 3	11°33	20°55	12° 7	12°14	7°12	16°29	S 23
S 24	16 40 57	10°58'30	29°38	15°41	29° 6	7°26	21°50	20° 3	29° 3	11°35	20°57	12° 7	12°11	7°19	16°24	S 24
M 25	16 44 54	11°55'50	13°55	15° 9	0°13' 13	7°16	21°52	20°10	29°R 3	11°37	20°58	12°D 7	12° 8	7°26	16°20	M 25
T 26	16 48 50	12°53'10	28°35	14°36	1°21	7° 7	21°53	20°17	29° 3	11°39	21° 0	12° 7	12° 5	7°32	16°16	T 26
W 27	16 52 47	13°50'29	13°11' 31	14° 2	2°29	6°59	21°54	20°24	29° 3	11°41	21° 1	12°R 7	12° 2	7°39	16°12	W 27
T 28	16 56 43	14°47'47	28°35	13°29	3°36	6°52	21°55	20°30	29° 3	11°43	21° 3	12° 7	11°59	7°46	16° 8	T 28
F 29	17 0 40	15°45'05	13°39	12°55	4°44	6°45	21°56	20°37	29° 2	11°45	21° 4	12° 7	11°55	7°52	16° 4	F 29
S 30	17 4 37	16°42'22	28°34	12°24	5°53	6°40	21°57	20°44	29° 2	11°47	21° 6	12° 6	11°52	7°59	16° 0	S 30
S 31	17 8 33	17°11' 39	13°11' 13	11°11' 53	7° 8	6°13	21°58	20°51	29° 2	11°49	21° 7	12° 6	11° 49	8° 6	15° 56	S 31

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
F 1	17n30	21n27	1s59	24n31	2n23	0n 6	1s34	16s18	0s13	15s28	0s46	22n32	0n12	12s37	0s44	22n22	0s42	16n53	6s18	22s20	22s29	21s33	17s12	5n47	
S 2	17 46	19 2	3 9	24 36	2 19	0 28	1 38	16 14	0 16	15 26	0 46	22 31	0 12	12 37	0 44	22 22	0 42	16 54	6 17	22 20	22 28	21 32	17 11	5 48	
S 3	18 2	15 29	4 6	24 39	2 14	0 51	1 41	16 11	0 19	15 24	0 46	22 30	0 12	12 36	0 44	22 22	0 42	16 54	6 17	22 20	22 28	21 31	17 10	5 48	
M 4	18 17	11 6	4 47	24 40	2 9	1 14	1 44	16 7	0 22	15 23	0 47	22 30	0 12	12 36	0 44	22 22	0 42	16 54	6 17	22 20	22 28	21 30	17 9	5 48	
T 5	18 31	6 14	5 10	24 39	2 2	1 37	1 46	16 4	0 25	15 22	0 47	22 29	0 12	12 36	0 44	22 22	0 42	16 54	6 17	22 20	22 27	21 29	17 9	5 49	
W 6	18 46	1 9	5 15	24 36	1 54	2 0	1 49	16 0	0 27	15 20	0 47	22 28	0 12	12 35	0 44	22 22	0 42	16 54	6 17	22 20	22 27	21 28	17 8	5 49	
T 7	19 0	3s52	5 4	24 32	1 46	2 23	1 51	15 57	0 30	15 19	0 47	22 28	0 12	12 35	0 45	22 22	0 42	16 55	6 17	22 20	22 26	21 27	17 7	5 50	
F 8	19 14	8 38	4 37	24 26	1 37	2 46	1 54	15 53	0 33	15 18	0 48	22 27	0 12	12 35	0 45	22 21	0 42	16 55	6 17	22 19	22 26	21 26	17 7	5 50	
S 9	19 28	12 56	3 56	24 19	1 26	3 10	1 56	15 50	0 36	15 16	0 48	22 26	0 12	12 35	0 45	22 21	0 42	16 55	6 17	22 19	22 26	21 24	17 6	5 50	
S 10	19 41	16 36	3 5	24 10	1 15	3 33	1 58	15 46	0 39	15 15	0 48	22 25	0 13	12 34	0 45	22 21	0 42	16 55	6 17	22 19	22 25	21 23	17 5	5 51	
M11	19 54	19 28	2 6	24 0	1 3	3 57	2 0	15 43	0 42	15 14	0 48	22 25	0 13	12 34	0 45	22 21	0 42	16 55	6 16	22 19	22 25	21 22	17 5	5 51	
T 12	20 6	21 24	1 2	23 49	0 50	4 20	2 2	15 40	0 45	15 13	0 49	22 24	0 13	12 34	0 45	22 21	0 42	16 56	6 16	22 19	22 24	21 21	17 4	5 51	
W13	20 19	22 20	0n 5	23 36	0 36	4 44	2 4	15 37	0 48	15 12	0 49	22 23	0 13	12 34	0 45	22 21	0 41	16 56	6 16	22 18	22 24	21 20	17 3	5 52	
T 14	20 30	22 25	1 10	23 22	0 22	5 8	2 5	15 34	0 50	15 11	0 49	22 22	0 13	12 34	0 45	22 21	0 41	16 56	6 16	22 19	22 24	21 19	17 3	5 52	
F 15	20 42	21 9	2 12	23 7	0 7	5 32	2 7	15 31	0 53	15 10	0 49	22 22	0 13	12 33	0 45	22 21	0 41	16 56	6 16	22 19	22 23	21 18	17 2	5 52	
S 16	20 53	19 7	3 9	22 51	0s 9	5 55	2 8	15 29	0 56	15 10	0 50	22 21	0 13	12 33	0 45	22 21	0 41	16 56	6 16	22 19	22 23	21 17	17 1	5 53	
S 17	21 4	16 17	3 57	22 34	0 25	6 19	2 10	15 26	0 58	15 9	0 50	22 20	0 13	12 33	0 45	22 20	0 41	16 57	6 16	22 19	22 22	21 16	17 1	5 53	
M18	21 14	12 46	4 36	22 17	0 42	6 43	2 11	15 24	1 1	15 8	0 50	22 19	0 13	12 33	0 45	22 20	0 41	16 57	6 16	22 19	22 22	21 14	17 0	5 53	
T 19	21 25	8 42	5 3	21 58	0 59	7 7	2 12	15 22	1 4	15 8	0 50	22 18	0 13	12 33	0 45	22 20	0 41	16 57	6 16	22 19	22 22	21 13	16 59	5 53	
W20	21 34	4 12	5 16	21 39	1 16	7 30	2 13	15 20	1 6	15 7	0 51	22 18	0 13	12 33	0 45	22 20	0 41	16 57	6 16	22 19	22 21	21 12	16 59	5 54	
T 21	21 44	0n35	5 15	21 20	1 33	7 54	2 14	15 18	1 9	15 7	0 51	22 17	0 13	12 33	0 45	22 20	0 41	16 57	6 16	22 19	22 21	21 11	16 58	5 54	
F 22	21 53	5 29	4 58	21 1	1 51	8 18	2 14	15 16	1 11	15 6	0 51	22 16	0 13	12 33	0 45	22 20	0 41	16 57	6 15	22 19	22 20	21 10	16 58	5 54	
S 23	22 1	10 17	4 25	20 41	2 7	8 41	2 15	15 15	1 13	15 6	0 52	22 15	0 13	12 33	0 45	22 20	0 41	16 58	6 15	22 19	22 20	21 9	16 57	5 54	
S 24	22 10	14 43	3 35	20 21	2 24	9 5	2 15	15 14	1 16	15 5	0 52	22 14	0 14	12 33	0 45	22 19	0 41	16 58	6 15	22 19	22 19	21 7	16 56	5 55	
M25	22 17	18 28	2 30	20 2	2 40	9 28	2 16	15 13	1 18	15 5	0 52	22 13	0 14	12 33	0 45	22 19	0 41	16 58	6 15	22 19	22 19	21 6	16 56	5 55	
T 26	22 25	21 7	1 15	19 43	2 55	9 51	2 16	15 12	1 20	15 5	0 52	22 12	0 14	12 33	0 45	22 19	0 41	16 58	6 15	22 19	22 19	21 5	16 55	5 55	
W27	22 32	22 22	0s 8	19 25	3 10	10 14	2 16	15 11	1 23	15 5	0 53	22 11	0 14	12 33	0 45	22 19	0 41	16 58	6 15	22 19	22 18	21 4	16 55	5 55	
T 28	22 39	22 0	1 30	19 8	3 23	10 37	2 16	15 11	1 25	15 5	0 53	22 10	0 14	12 33	0 45	22 19	0 41	16 58	6 15	22 19	22 18	21 3	16 54	5 55	
F 29	22 45	20 3	2 46	18 52	3 35	11 0	2 16	15 11	1 27	15 5	0 53	22 9	0 14	12 33	0 45	22 19	0 41	16 59	6 15	22 19	22 17	21 2	16 53	5 55	
S 30	22 51	16 45	3 51	18 37	3 46	11 23	2 16	15 11	1 29	15 5	0 53	22 8	0 14	12 33	0 45	22 18	0 41	16 59	6 15	22 19	22 17	21 0	16 53	5 56	
S 31	22n56	12n27	4s38	18n23	3s56	11n45	2s16	15s11	1s31	15s 5	0s54	22n 7	0n14	12s33	0s45	22n18	0s41	16n59	6s15	22s19	22s17	20s59	16s52	5n56	

ASTRODIENST EPHEMERIS for the year 1416

geocentric

JUNE 1416 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	17 12 30	18°36'53	27°23'1	11°R25	8°R 9	6°R31	21°R57	20°R58	29°R 2	11°R51	21°R 8	12°R 5	11°R46	8°R12	15°R52	M 1
T 2	17 16 26	19°34'07	11°R25	11°R 0	9°17	6°R28	21°R57	21° 5	29°R 1	11°53	21°10	12°R 5	11°43	8°19	15°R48	T 2
W 3	17 20 23	20°31'21	24°56	10°38	10°26	6°26	21°57	21°12	29° 1	11°55	21°11	12°D 5	11°39	8°26	15°44	W 3
T 4	17 24 19	21°28'34	8°R 5	10°19	11°34	6°24	21°57	21°19	29° 1	11°57	21°13	12° 5	11°36	8°32	15°40	T 4
F 5	17 28 16	22°25'46	20°53	10° 4	12°43	6°D24	21°56	21°26	29° 0	12° 0	21°14	12° 6	11°33	8°39	15°36	F 5
S 6	17 32 12	23°22'58	3°R25	9°54	13°52	6°24	21°55	21°33	28°59	12° 2	21°16	12° 7	11°30	8°46	15°32	S 6
S 7	17 36 9	24°20'09	15°43	9°47	15° 0	6°25	21°55	21°40	28°59	12° 4	21°17	12° 8	11°27	8°52	15°28	S 7
M 8	17 40 6	25°17'20	27°50	9°D45	16° 9	6°27	21°53	21°48	28°58	12° 6	21°18	12° 9	11°24	8°59	15°24	M 8
T 9	17 44 2	26°14'30	9°R48	9°48	17°18	6°30	21°52	21°55	28°58	12° 8	21°20	12°R 9	11°20	9° 6	15°20	T 9
W10	17 47 59	27°11'40	21°42	9°56	18°27	6°33	21°51	22° 2	28°57	12°10	21°21	12° 9	11°17	9°12	15°16	W10
T 11	17 51 55	28° 8'50	3°R32	10° 8	19°37	6°37	21°49	22°10	28°56	12°12	21°23	12° 8	11°14	9°19	15°12	T 11
F 12	17 55 52	29° 6'00	15°21	10°26	20°46	6°42	21°47	22°17	28°55	12°15	21°24	12° 6	11°11	9°26	15° 8	F 12
S 13	17 59 48	0°R 3'10	27°10	10°48	21°55	6°48	21°45	22°24	28°55	12°17	21°26	12° 4	11° 8	9°32	15° 4	S 13
S 14	18 3 45	1° 0'19	9°R 4	11°15	23° 5	6°55	21°43	22°32	28°54	12°19	21°27	12° 1	11° 5	9°39	15° 0	S 14
M15	18 7 41	1°57'29	21° 3	11°47	24°14	7° 2	21°40	22°39	28°53	12°21	21°28	11°58	11° 1	9°45	14°57	M15
T 16	18 11 38	2°54'39	3°R12	12°23	25°24	7°10	21°38	22°47	28°52	12°23	21°30	11°55	10°58	9°52	14°53	T 16
W17	18 15 35	3°51'49	15°33	13° 5	26°33	7°19	21°35	22°54	28°51	12°26	21°31	11°53	10°55	9°59	14°49	W17
T 18	18 19 31	4°48'59	28°10	13°51	27°43	7°28	21°32	23° 2	28°50	12°28	21°33	11°52	10°52	10° 5	14°46	T 18
F 19	18 23 28	5°46'10	11°Y 7	14°41	28°53	7°38	21°29	23° 9	28°49	12°30	21°34	11°D52	10°49	10°12	14°42	F 19
S 20	18 27 24	6°43'21	24°26	15°37	0°R 3	7°49	21°25	23°17	28°47	12°32	21°36	11°53	10°45	10°19	14°38	S 20
S 21	18 31 21	7°40'33	8°R10	16°37	1°13	8° 1	21°22	23°24	28°46	12°34	21°37	11°55	10°42	10°25	14°35	S 21
M22	18 35 17	8°37'45	22°20	17°41	2°23	8°13	21°18	23°32	28°45	12°37	21°38	11°56	10°39	10°32	14°31	M22
T 23	18 39 14	9°34'57	6°R51	18°50	3°33	8°26	21°14	23°39	28°44	12°39	21°40	11°R57	10°36	10°39	14°28	T 23
W24	18 43 10	10°32'10	21°51	20° 3	4°43	8°40	21°10	23°47	28°42	12°41	21°41	11°57	10°33	10°45	14°24	W24
T 25	18 47 7	11°29'24	7°R 0	21°20	5°53	8°54	21° 6	23°55	28°41	12°43	21°42	11°55	10°30	10°52	14°21	T 25
F 26	18 51 4	12°26'37	22°13	22°42	7° 4	9° 9	21° 1	24° 2	28°40	12°46	21°44	11°52	10°26	10°59	14°18	F 26
S 27	18 55 0	13°23'51	7°R21	24° 7	8°14	9°24	20°57	24°10	28°38	12°48	21°45	11°48	10°23	11° 5	14°14	S 27
S 28	18 58 57	14°21'05	22°14	25°37	9°25	9°40	20°52	24°18	28°37	12°50	21°47	11°43	10°20	11°12	14°11	S 28
M29	19 2 53	15°18'19	6°R45	27°11	10°35	9°57	20°47	24°25	28°35	12°52	21°48	11°39	10°17	11°19	14° 8	M29
T 30	19 6 50	16°25'34	20°R49	28°R48	11°R46	10°R14	20°R42	24°R33	28°R34	12°R54	21°R49	11°R36	10°R14	11°R25	14°R 5	T 30

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
M 1	23n 1	7n34	5s 7	18n11	4s 5	12n 8	2s16	15s12	1s33	15s 5	0s54	22n 6	0n14	12s34	0s45	22n18
T 2	23 6	2 24	5 17	18 0	4 12	12 30	2 15	15 12	1 35	15 5	0 54	22 5	0 14	12 34	0 46	22 18
W 3	23 10	2s43	5 10	17 52	4 18	12 52	2 15	15 14	1 37	15 6	0 55	22 4	0 14	12 34	0 46	22 18
T 4	23 14	7 35	4 46	17 45	4 22	13 14	2 14	15 15	1 39	15 6	0 55	22 3	0 14	12 34	0 46	22 18
F 5	23 18	12 0	4 8	17 40	4 25	13 35	2 13	15 16	1 40	15 7	0 55	22 2	0 14	12 34	0 46	22 17
S 6	23 21	15 48	3 19	17 37	4 26	13 56	2 13	15 18	1 42	15 7	0 55	22 1	0 15	12 34	0 46	22 17
S 7	23 24	18 51	2 21	17 36	4 26	14 17	2 12	15 20	1 44	15 8	0 56	22 0	0 15	12 35	0 46	22 17
M 8	23 26	21 1	1 19	17 36	4 25	14 38	2 11	15 22	1 45	15 8	0 56	21 59	0 15	12 35	0 46	22 17
T 9	23 28	22 12	0 13	17 39	4 23	14 59	2 10	15 24	1 47	15 9	0 56	21 58	0 15	12 35	0 46	22 17
W10	23 29	22 23	0n53	17 44	4 20	15 19	2 9	15 27	1 48	15 10	0 56	21 57	0 15	12 35	0 46	22 17
T 11	23 30	21 32	1 56	17 50	4 15	15 39	2 7	15 30	1 50	15 10	0 57	21 56	0 15	12 36	0 46	22 16
F 12	23 31	19 45	2 53	17 58	4 9	15 58	2 6	15 33	1 51	15 11	0 57	21 55	0 15	12 36	0 46	22 16
S 13	23 31	17 8	3 44	18 8	4 3	16 18	2 5	15 36	1 53	15 12	0 57	21 54	0 15	12 36	0 46	22 16
S 14	23 31	13 47	4 25	18 19	3 55	16 37	2 3	15 40	1 54	15 13	0 58	21 52	0 15	12 37	0 46	22 16
M15	23 30	9 52	4 54	18 31	3 47	16 55	2 2	15 43	1 55	15 14	0 58	21 51	0 15	12 37	0 46	22 16
T 16	23 29	5 31	5 11	18 45	3 38	17 14	2 0	15 47	1 57	15 15	0 58	21 50	0 15	12 38	0 46	22 15
W17	23 27	0 53	5 14	19 0	3 28	17 31	1 59	15 51	1 58	15 17	0 58	21 49	0 15	12 38	0 46	22 15
T 18	23 26	3n53	5 2	19 15	3 18	17 49	1 57	15 55	1 59	15 18	0 59	21 48	0 15	12 38	0 46	22 15
F 19	23 23	8 37	4 35	19 32	3 7	18 6	1 55	16 0	2 0	15 19	0 59	21 47	0 16	12 39	0 46	22 15
S 20	23 21	13 6	3 52	19 49	2 56	18 23	1 53	16 5	2 2	15 20	0 59	21 45	0 16	12 39	0 46	22 15
S 21	23 17	17 2	2 55	20 7	2 44	18 39	1 51	16 9	2 3	15 22	0 59	21 44	0 16	12 40	0 46	22 14
M22	23 14	20 7	1 46	20 25	2 32	18 55	1 49	16 14	2 4	15 23	1 0	21 43	0 16	12 40	0 46	22 14
T 23	23 10	21 59	0 28	20 44	2 19	19 10	1 47	16 20	2 5	15 25	1 0	21 42	0 16	12 41	0 46	22 14
W24	23 6	22 22	0s54	21 2	2 6	19 25	1 45	16 25	2 6	15 26	1 0	21 41	0 16	12 41	0 46	22 14
T 25	23 1	21 7	2 13	21 21	1 53	19 40	1 43	16 30	2 7	15 28	1 0	21 39	0 16	12 42	0 46	22 14
F 26	22 56	18 20	3 23	21 39	1 40	19 54	1 41	16 36	2 8	15 30	1 1	21 38	0 16	12 42	0 46	22 13
S 27	22 50	14 20	4 18	21 56	1 27	20 8	1 38	16 42	2 9	15 31	1 1	21 37	0 16	12 43	0 46	22 13
S 28	22 44	9 30	4 55	22 13	1 13	20 21	1 36	16 48	2 9	15 33	1 1	21 35	0 16	12 43	0 46	22 13
M29	22 38	4 15	5 11	22 29	1 0	20 33	1 34	16 54	2 10	15 35	1 2	21 34	0 16	12 44	0 46	22 13
T 30	22n31	1s 4	5s 8	22n44	0s47	20n45	1s31	17s 0	2s11	15s37	1s 2	21n33	0n16	12s44	0s47	22n13

Julian Day Number = 2238403.5, Delta T = 07m27s

Ecliptic obliquity = 23°30'51, Nutation = 0°00'16, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 16°35'57, Lahiri = 15°42'58 Julian Calendar 1 June 1416 == Greg. Calendar 10 June 1416

ASTRODIENST EPHEMERIS for the year 1416

geocentric

JULY 1416 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	19 10 46	17°12'48"	4°25'	0°30'	12°11'56"	10°11'32"	20°18'37"	24°41'	28°13'32"	12°57'	21°11'51"	11°18'33"	10°11'11"	11°33'	14°18' 2	W 1
T 2	19 14 43	18°10'03"	17°34'	2°14'	14° 7'	10°51'	20°31'	24°49'	28°30'	12°59'	21°52'	11°18'33"	10° 7'	11°39'	13°59'	T 2
F 3	19 18 39	19° 7'18"	0°11'19"	4° 3'	15°18'	11°10'	20°26'	24°56'	28°29'	13° 1'	21°53'	11°18'33"	10° 4'	11°45'	13°56'	F 3
S 4	19 22 36	20° 4'33"	12°44'	5°54'	16°29'	11°29'	20°20'	25° 4'	28°27'	13° 3'	21°54'	11°35'	10° 1'	11°52'	13°53'	S 4
S 5	19 26 33	21° 1'49"	24°54'	7°48'	17°40'	11°49'	20°14'	25°12'	28°25'	13° 6'	21°56'	11°36'	9°58'	11°59'	13°50'	S 5
M 6	19 30 29	21°59'05"	6°53'	9°44'	18°51'	12°10'	20° 9'	25°20'	28°24'	13° 8'	21°57'	11°18'37"	9°55'	12° 5'	13°48'	M 6
T 7	19 34 26	22°56'21"	18°45'	11°43'	20° 2'	12°31'	20° 2'	25°27'	28°22'	13°10'	21°58'	11°37'	9°51'	12°12'	13°45'	T 7
W 8	19 38 22	23°53'38"	0°33'44"	13°44'	21°13'	12°53'	19°56'	25°35'	28°20'	13°12'	22° 0'	11°35'	9°48'	12°19'	13°42'	W 8
T 9	19 42 19	24°50'56"	12°22'	15°47'	22°24'	13°15'	19°50'	25°43'	28°18'	13°14'	22° 1'	11°31'	9°45'	12°25'	13°40'	T 9
F 10	19 46 15	25°48'14"	24°13'	17°51'	23°35'	13°37'	19°44'	25°51'	28°16'	13°17'	22° 2'	11°26'	9°42'	12°32'	13°38'	F 10
S 11	19 50 12	26°45'34"	6° 7'	19°56'	24°46'	14° 0'	19°37'	25°58'	28°14'	13°19'	22° 3'	11°18'	9°39'	12°39'	13°35'	S 11
S 12	19 54 8	27°42'53"	18° 8'	22° 1'	25°58'	14°24'	19°30'	26° 6'	28°12'	13°21'	22° 4'	11°10'	9°36'	12°45'	13°33'	S 12
M13	19 58 5	28°40'14"	0°15'	24° 7'	27° 9'	14°48'	19°24'	26°14'	28°11'	13°23'	22° 6'	11° 1'	9°32'	12°52'	13°31'	M13
T14	20 2 2	29°37'36"	12°32'	26°13'	28°21'	15°12'	19°17'	26°22'	28° 9'	13°25'	22° 7'	10°53'	9°29'	12°59'	13°29'	T14
W15	20 5 58	0°13'45'59"	25° 0'	28°19'	29°32'	15°37'	19°10'	26°29'	28° 6'	13°27'	22° 8'	10°47'	9°26'	13° 5'	13°26'	W15
T16	20 9 55	1°32'23"	7°40'	0°12'24"	0°54'44"	16° 2'	19° 3'	26°37'	28° 4'	13°30'	22° 9'	10°42'	9°23'	13°12'	13°24'	T16
F17	20 13 51	2°29'48"	20°37'	2°29'	1°55'	16°28'	18°55'	26°45'	28° 2'	13°32'	22°10'	10°39'	9°20'	13°19'	13°23'	F17
S18	20 17 48	3°27'14"	3°52'	4°33'	3° 7'	16°54'	18°48'	26°53'	28° 0'	13°34'	22°12'	10°18'39"	9°17'	13°25'	13°21'	S18
S19	20 21 44	4°24'42"	17°28'	6°36'	4°19'	17°21'	18°41'	27° 0'	27°58'	13°36'	22°13'	10°39'	9°13'	13°32'	13°19'	S19
M20	20 25 41	5°22'11"	1°12'27"	8°38'	5°31'	17°47'	18°33'	27° 8'	27°56'	13°38'	22°14'	10°40'	9°10'	13°39'	13°17'	M20
T21	20 29 37	6°19'42"	15°48'	10°39'	6°43'	18°15'	18°26'	27°16'	27°54'	13°40'	22°15'	10°18'40"	9° 7'	13°46'	13°16'	T21
W22	20 33 34	7°17'14"	0°31'	12°38'	7°55'	18°42'	18°18'	27°24'	27°52'	13°42'	22°16'	10°39'	9° 4'	13°52'	13°14'	W22
T23	20 37 31	8°14'47"	15°30'	14°36'	9° 7'	19°11'	18°11'	27°31'	27°50'	13°44'	22°17'	10°35'	9° 1'	13°59'	13°13'	T23
F24	20 41 27	9°12'21"	0°12'37"	16°33'	10°19'	19°39'	18° 3'	27°39'	27°47'	13°46'	22°18'	10°29'	8°57'	14° 6'	13°11'	F24
S25	20 45 24	10° 9'57"	15°44'	18°28'	11°31'	20° 8'	17°55'	27°47'	27°45'	13°48'	22°19'	10°21'	8°54'	14°12'	13°10'	S25
S26	20 49 20	11° 7'34"	0°14'40"	20°22'	12°43'	20°37'	17°48'	27°54'	27°43'	13°50'	22°20'	10°11'	8°51'	14°19'	13° 9'	S26
M27	20 53 17	12° 5'11"	15°16'	22°14'	13°56'	21° 6'	17°40'	28° 2'	27°41'	13°53'	22°21'	10° 2'	8°48'	14°26'	13° 8'	M27
T28	20 57 13	13° 2'50"	29°26'	24° 5'	15° 8'	21°36'	17°32'	28° 9'	27°38'	13°55'	22°22'	9°55'	8°45'	14°32'	13° 7'	T28
W29	21 1 10	14° 0'30"	13°13'48"	25°54'	16°20'	22° 6'	17°24'	28°17'	27°36'	13°57'	22°23'	9°49'	8°42'	14°39'	13° 6'	W29
T30	21 5 6	14°58'11"	26°20'	27°42'	17°33'	22°37'	17°16'	28°25'	27°34'	13°58'	22°24'	9°45'	8°38'	14°46'	13° 5'	T30
F31	21 9 3	15°55'53"	9°11' 7"	29°12'29"	18°54'45"	23°11' 8"	17° 8'	28°32'	27°33'11"	14°58' 0"	22°11'25"	9°43'13"	8°35'13"	14°52'13"	13° 4'	F31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	
W 1	22n24	6s10	4s48	22n57	0s34	20n57	1s29	17s 7	2s12	15s39	1s 2	21n32	0n17	12s45	0s47	W 1
T 2	22 17	10 48	4 13	23 9	0 21	21 8	1 26	17 13	2 13	15 41	1 2	21 30	0 17	12 45	0 47	T 2
F 3	22 9	14 50	3 26	23 18	0 9	21 19	1 24	17 20	2 13	15 43	1 2	21 29	0 17	12 46	0 47	F 3
S 4	22 0	18 6	2 31	23 26	0n 3	21 29	1 21	17 27	2 14	15 45	1 3	21 28	0 17	12 47	0 47	S 4
S 5	21 52	20 30	1 30	23 32	0 15	21 38	1 19	17 34	2 15	15 47	1 3	21 26	0 17	12 47	0 47	S 5
M 6	21 43	21 57	0 26	23 35	0 26	21 47	1 16	17 41	2 15	15 49	1 3	21 25	0 17	12 48	0 47	M 6
T 7	21 33	22 24	0n39	23 36	0 37	21 55	1 13	17 48	2 16	15 51	1 3	21 24	0 17	12 49	0 47	T 7
W 8	21 24	21 50	1 41	23 34	0 46	22 3	1 11	17 55	2 16	15 53	1 4	21 22	0 17	12 49	0 47	W 8
T 9	21 14	20 18	2 39	23 30	0 56	22 10	1 8	18 2	2 17	15 55	1 4	21 21	0 17	12 50	0 47	T 9
F 10	21 3	17 54	3 30	23 23	1 4	22 16	1 5	18 10	2 18	15 58	1 4	21 20	0 17	12 51	0 47	F 10
S 11	20 52	14 44	4 12	23 13	1 12	22 22	1 2	18 17	2 18	16 0	1 4	21 18	0 17	12 51	0 47	S 11
S 12	20 41	10 57	4 43	23 0	1 19	22 28	1 0	18 25	2 19	16 2	1 4	21 17	0 17	12 52	0 47	S 12
M13	20 29	6 42	5 2	22 45	1 25	22 32	0 57	18 32	2 19	16 4	1 5	21 15	0 18	12 53	0 47	M13
T14	20 18	2 9	5 7	22 27	1 30	22 36	0 54	18 40	2 19	16 7	1 5	21 14	0 18	12 53	0 47	T14
W15	20 5	2n34	4 58	22 7	1 35	22 40	0 51	18 48	2 20	16 9	1 5	21 13	0 18	12 54	0 47	W15
T16	19 53	7 15	4 34	21 44	1 39	22 43	0 48	18 56	2 20	16 12	1 5	21 11	0 18	12 55	0 47	T16
F17	19 40	11 43	3 56	21 19	1 42	22 45	0 45	19 3	2 21	16 14	1 5	21 10	0 18	12 56	0 47	F17
S18	19 27	15 44	3 5	20 52	1 44	22 46	0 42	19 11	2 21	16 16	1 6	21 9	0 18	12 56	0 47	S18
S19	19 13	19 2	2 1	20 23	1 46	22 47	0 39	19 19	2 21	16 19	1 6	21 7	0 18	12 57	0 47	S19
M20	18 59	21 19	0 49	19 52	1 46	22 47	0 37	19 27	2 22	16 21	1 6	21 6	0 18	12 58	0 47	M20
T21	18 45	22 18	0s28	19 20	1 47	22 47	0 34	19 35	2 22	16 24	1 6	21 4	0 18	12 59	0 47	T21
W22	18 30	21 46	1 44	18 46	1 46	22 46	0 31	19 43	2 22	16 26	1 6	21 3	0 18	12 59	0 47	W22
T23	18 16	19 43	2 55	18 11	1 45	22 44	0 28	19 51	2 22	16 29	1 6	21 1	0 18	13 0	0 47	T23
F24	18 1	16 16	3 54	17 34	1 43	22 42	0 25	19 59	2 23	16 31	1 7	21 0	0 19	13 1	0 47	F24
S25	17 45	11 45	4 37	16 56	1 41	22 39	0 22	20 7	2 23	16 34	1 7	20 59	0 19	13 2	0 47	S25
S26	17 29	6 35	5 0	16 18	1 38	22 35	0 19	20 16	2 23	16 36	1 7	20 57	0 19	13 2	0 47	S26
M27	17 13	1 10	5 3	15 38	1 35	22 31	0 16	20 24	2 23	16 39	1 7	20 56	0 19	13 3	0 47	M27
T28	16 57	4s10	4 47	14 58	1 31	22 26	0 13	20 32	2 23	16 42	1 7	20 54	0 19	13 4	0 47	T28
W29	16 41	9 6	4 15	14 17	1 27	22 20	0 10	20 40	2 24	16 44	1 7	20 53	0 19	13 5	0 47	W29
T30	16 24	13 27	3 30	13 36	1 22	22 14	0 7	20 48	2 24	16 47	1 7	20 51	0 19	13 6	0 47	T30
F31	16n 7	17s 2	2s36	12n54	1n17	22n 7	0s 5	20s56	2s24	16s49	1s 8	20n50	0n19	13s 7	0s47	F31

Julian Day Number = 2238433.5, Delta T = 07m27s

Ecliptic obliquity = 23°30'51", Nutation = 0°00'17", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 16°36'01", Lahiri = 15°43'02" Julian Calendar 1 July 1416 == Greg. Calendar 10 July 1416

ASTRODIENST EPHEMERIS for the year 1416

geocentric

AUGUST 1416 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	21 13 0	16♌53'37	21♍11'32	1♈14	19♏58	23♎139	17°R 1	28♑40	27°R29	14♒2	22♒26	9°D43	8♓32	14♑59	13°R 4	S 1
S 2	21 16 56	17°51'21	3♈40	2°57	21°10	24°10	16♐53	28°47	27♐27	14°4	22°27	9°R44	8°29	15°6	13♈3	S 2
M 3	21 20 53	18°49'06	15°37	4°40	22°23	24°42	16°45	28°55	27°24	14°6	22°28	9♈44	8°26	15°12	13°3	M 3
T 4	21 24 49	19°46'53	27°27	6°20	23°36	25°14	16°37	29°2	27°22	14°8	22°29	9°42	8°23	15°19	13°2	T 4
W 5	21 28 46	20°44'41	9♑15	8°0	24°48	25°47	16°29	29°10	27°20	14°10	22°29	9°38	8°19	15°26	13°2	W 5
T 6	21 32 42	21°42'31	21°42'31	4°9	9°38	26°1	16°219	29°17	27°17	14°12	22°30	9°32	8°16	15°32	13°2	T 6
F 7	21 36 39	22°40'21	2♐59	11°14	27°14	26°52	16°14	29°24	27°15	14°14	22°31	9°23	8°13	15°39	13°2	F 7
S 8	21 40 35	23°38'13	15°1	12°50	28°27	27°25	16°6	29°32	27°12	14°16	22°32	9°12	8°10	15°46	13°D 2	S 8
S 9	21 44 32	24°36'07	27°12	14°24	29°40	27°59	15°58	29°39	27°10	14°17	22°33	8°59	8°7	15°52	13°2	S 9
M10	21 48 29	25°34'02	9♐33	15°56	0♌53	28°33	15°50	29°46	27°8	14°19	22°33	8°46	8°3	15°59	13°2	M10
T 11	21 52 25	26°31'58	22°3	17°27	2°6	29°7	15°43	29°54	27°5	14°21	22°34	8°34	8°0	16°6	13°2	T 11
W12	21 56 22	27°29'57	4♋45	18°57	3°19	29°41	15°35	0♌1	27°3	14°23	22°35	8°23	7°57	16°12	13°2	W12
T 13	22 0 18	28°27'57	17°37	20°26	4°32	0♈15	15°28	0°8	27°0	14°24	22°36	8°15	7°54	16°19	13°3	T 13
F 14	22 4 15	29°25'59	0♑42	21°53	5°45	0°50	15°20	0°15	26°58	14°26	22°36	8°10	7°51	16°26	13°3	F 14
S 15	22 8 11	0♐24	14°1	23°19	6°59	1°25	15°13	0°22	26°56	14°28	22°37	8°8	7°48	16°32	13°4	S 15
S 16	22 12 8	1°22'09	27°35	24°43	8°12	2°0	15°6	0°29	26°53	14°29	22°38	8°7	7°44	16°39	13°5	S 16
M17	22 16 4	2°20'17	11♒25	26°6	9°25	2°36	14°59	0°36	26°51	14°31	22°38	8°7	7°41	16°46	13°5	M17
T 18	22 20 1	3°18'28	25°34	27°27	10°39	3°11	14°51	0°43	26°49	14°33	22°39	8°6	7°38	16°52	13°6	T 18
W19	22 23 58	4°16'40	9♑59	28°47	11°52	3°47	14°44	0°50	26°46	14°34	22°39	8°4	7°35	16°59	13°7	W19
T 20	22 27 54	5°14'54	24°38	0♑6	13°6	4°23	14°38	0°57	26°44	14°36	22°40	7°59	7°32	17°6	13°8	T 20
F 21	22 31 51	6°13'11	9♌27	1°23	14°20	5°0	14°31	1°4	26°41	14°37	22°40	7°51	7°29	17°12	13°9	F 21
S 22	22 35 47	7°11'29	24°17	2°38	15°33	5°36	14°24	1°11	26°39	14°39	22°41	7°41	7°25	17°19	13°11	S 22
S 23	22 39 44	8°9'49	9♐1	3°52	16°47	6°13	14°17	1°18	26°37	14°40	22°41	7°30	7°22	17°26	13°12	S 23
M24	22 43 40	9°8'11	7♑29	5°3	18°1	6°50	14°11	1°24	26°34	14°42	22°42	7°18	7°19	17°32	13°13	M24
T 25	22 47 37	10°6'34	7♒36	6°13	19°14	7°27	14°5	1°31	26°32	14°43	22°42	7°8	7°16	17°39	13°15	T 25
W26	22 51 33	11°4'59	21°17	7°21	20°28	8°4	13°58	1°38	26°30	14°45	22°43	6°59	7°13	17°46	13°16	W26
T 27	22 55 30	12°3'26	4♍31	8°27	21°42	8°42	13°52	1°44	26°28	14°46	22°43	6°54	7°9	17°52	13°18	T 27
F 28	22 59 27	13°1'55	17°20	9°30	22°56	9°20	13°46	1°51	26°25	14°47	22°44	6°51	7°6	17°59	13°20	F 28
S 29	23 3 23	14°0'26	29°47	10°32	24°10	9°58	13°41	1°57	26°23	14°49	22°44	6°50	7°3	18°6	13°22	S 29
S 30	23 7 20	14°58'58	11♈56	11°30	25°24	10°36	13°35	2°3	26°21	14°50	22°44	6°50	7°0	18°12	13°24	S 30
M31	23 11 16	15♈57'32	23♈53	12♑26	26♌38	11♈14	13♐29	2♌10	26♐19	14♑51	22♒45	6♓49	6♓57	18♑19	13♈26	M31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	15n49	19s44	1s35	12n11	1n12	22n 0	0s 2	21s 4	2s24	16s52	1 s 8	20n48	0n19	13s 7	0s47	22n 6	0s41	17n 3	6s15	21s59	21s48	19s38	16s43	5n45	
S 2	15 32	21 29	0 32	11 29	1 6	21 52	0n 1	21 12	2 24	16 54	1 8	20 47	0 19	13 8	0 47	22 6	0 41	17 3	6 15	21 59	21 47	19 36	16 44	5 45	
M 3	15 14	22 13	0n31	10 46	1 0	21 43	0 4	21 20	2 24	16 57	1 8	20 46	0 20	13 9	0 47	22 6	0 41	17 3	6 16	21 59	21 47	19 35	16 44	5 45	
T 4	14 56	21 57	1 33	10 3	0 54	21 33	0 7	21 28	2 24	16 59	1 8	20 44	0 20	13 10	0 47	22 5	0 41	17 3	6 16	21 58	21 46	19 33	16 44	5 44	
W 5	14 37	20 42	2 30	9 20	0 47	21 23	0 9	21 36	2 24	17 2	1 8	20 43	0 20	13 11	0 47	22 5	0 41	17 3	6 16	21 58	21 46	19 32	16 45	5 44	
T 6	14 19	18 33	3 21	8 37	0 41	21 13	0 12	21 44	2 24	17 4	1 8	20 41	0 20	13 11	0 47	22 5	0 41	17 3	6 16	21 57	21 45	19 30	16 45	5 44	
F 7	14 0	15 36	4 3	7 53	0 33	21 1	0 15	21 51	2 24	17 6	1 8	20 40	0 20	13 12	0 47	22 5	0 41	17 3	6 16	21 56	21 45	19 29	16 45	5 43	
S 8	13 41	12 0	4 35	7 10	0 26	20 49	0 18	21 59	2 24	17 9	1 8	20 38	0 20	13 13	0 47	22 5	0 41	17 3	6 16	21 54	21 44	19 27	16 46	5 43	
S 9	13 22	7 52	4 55	6 27	0 19	20 37	0 20	22 7	2 24	17 11	1 8	20 37	0 20	13 14	0 47	22 4	0 41	17 3	6 16	21 52	21 44	19 26	16 46	5 42	
M10	13 2	3 22	5 1	5 44	0 11	20 24	0 23	22 14	2 24	17 14	1 8	20 36	0 20	13 15	0 47	22 4	0 41	17 3	6 16	21 50	21 43	19 24	16 47	5 42	
T 11	12 43	1n19	4 53	5 1	0 3	20 10	0 25	22 22	2 24	17 16	1 9	20 34	0 20	13 16	0 47	22 4	0 41	17 3	6 16	21 48	21 43	19 23	16 47	5 42	
W12	12 23	6 1	4 30	4 19	0s 5	19 56	0 28	22 29	2 24	17 18	1 9	20 33	0 20	13 16	0 47	22 4	0 41	17 3	6 16	21 46	21 42	19 22	16 47	5 41	
T 13	12 3	10 32	3 53	3 36	0 13	19 41	0 31	22 37	2 24	17 21	1 9	20 31	0 21	13 17	0 47	22 4	0 41	17 3	6 16	21 45	21 42	19 20	16 48	5 41	
F 14	11 42	14 38	3 4	2 54	0 21	19 25	0 33	22 44	2 24	17 23	1 9	20 30	0 21	13 18	0 47	22 3	0 41	17 3	6 16	21 44	21 41	19 19	16 48	5 40	
S 15	11 22	18 4	2 4	2 13	0 29	19 9	0 35	22 51	2 24	17 25	1 9	20 28	0 21	13 19	0 47	22 3	0 41	17 3	6 16	21 44	21 41	19 17	16 49	5 40	
S 16	11 1	20 35	0 56	1 32	0 38	18 53	0 38	22 58	2 24	17 27	1 9	20 27	0 21	13 20	0 47	22 3	0 41	17 3	6 17	21 44	21 40	19 16	16 49	5 40	
M17	10 40	21 56	0s17	0 51	0 46	18 36	0 40	23 5	2 23	17 29	1 9	20 26	0 21	13 20	0 47	22 3	0 41	17 2	6 17	21 44	21 40	19 14	16 50	5 39	
T 18	10 19	21 56	1 31	0 10	0 55	18 18	0 42	23 12	2 23	17 32	1 9	20 24	0 21	13 21	0 47	22 3	0 41	17 2	6 17	21 44	21 39	19 13	16 50	5 39	
W19	9 58	20 29	2 40	0s29	1 4	18 0	0 45	23 19	2 23	17 34	1 9	20 23	0 21	13 22	0 47	22 3	0 41	17 2	6 17	21 43	21 39	19 11	16 51	5 39	
T 20	9 37	17 40	3 39	1 9	1 12	17 41	0 47	23 26	2 23	17 36	1 9	20 21	0 21	13 23	0 47	22 2	0 41	17 2	6 17	21 43	21 38	19 10	16 51	5 38	
F 21	9 15	13 41	4 25	1 47	1 21	17 22	0 49	23 32	2 23	17 38	1 9	20 20	0 21	13 24	0 47	22 2	0 41	17 2	6 17	21 41	21 38	19 8	16 52	5 38	
S 22	8 54	8 52	4 52	2 25	1 29	17 2	0 51	23 39	2 22	17 40	1 9	20 19	0 22	13 25	0 47	22 2	0 41	17 2	6 17	21 40	21 37	19 7	16 52	5 37	
S 23	8 32	3 35	5 0	3 2	1 38	16 42	0 53	23 45	2 22	17 42	1 9	20 17	0 22	13 25	0 47	22 2	0 41	17 2	6 17	21 38	21 36	19 5	16 53	5 37	
M24	8 10	1s49	4 49	3 39	1 47	16 22	0 55	23 51	2 22	17 43	1 9	20 16	0 22	13 26	0 47	22 2	0 41	17 2	6 17	21 36	21 35	19 4	16 53	5 37	
T 25	7 48	7 0	4 20	4 14	1 55	16 0	0 57	23 57	2 22	17 45	1 9	20 14	0 22	13 27	0 47	22 1	0 41	17 2	6 17	21 34	21 35	19 2	16 54	5 36	
W26	7 26	11 40	3 36	4 49	2 4	15 39	0 59	24 3	2 21	17 47	1 9	20 13	0 22	13 28	0 47	22 1	0 41	17 2	6 17	21 33	21 35	19 1	16 55	5 36	
T 27	7 4	15 36	2 42	5 23	2 12	15 17	1 1	24 9	2 21	17 49	1 9	20 12	0 22	13 28	0 47	22 1	0 41	17 2	6 17	21 32	21 34	18 59	16 55	5 35	
F 28	6 41	18 41	1 41	5 55	2 20	14 54	1 3	24 14	2 21	17 51	1 9	20 10	0 22	13 29	0 47	22 1	0 41	17 2	6 18	21 31	21 34	18 57	16 56	5 35	
S 29	6 19	20 46	0 37	6 27	2 28	14 31	1 5	24 20	2 21	17 52	1 9	20 9	0 22	13 30	0 47	22 1	0 41	17 2	6 18	21 31	21 33	18 56	16 56	5 35	
S 30	5 56	21 51	0n27	6 57	2 36	14 8	1 6	24 25	2 20	17 54	1 9	20 8	0 22	13 31	0 47	22 1	0 41	17 2	6 18	21 31	21 33	18 54	16 57	5 34	
M31	5n33	21s53	1n29	7s27	2s44	13n45	1n 8	24s30	2s20	17s55	1 s 9	20n 6	0n23	13s31	0s47	22n 1	0s41	17n 2	6s18	21s31	21s32	18s53	16s58	5n34	

ASTRODIENST EPHEMERIS for the year 1416
geocentric

SEPTEMBER 1416 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	23 15 13	16 ¹⁷ 56'07	5 ³ 44	13 ²⁰ 20	27 ¹² 52	11 ¹⁷ 53	13 ¹⁰ R24	2 ¹² 16	26 ¹⁰ R16	14 ¹⁵ 53	22 ¹¹ 45	6 ¹⁰ R48	6 ¹⁷ 54	18 ¹⁸ 26	13 ¹⁷ 28	T 1
W 2	23 19 9	17 ¹⁷ 54'44	17 ¹⁷ 33	14 ¹⁰ 10	29 ⁶ 6	12 ³² 13	13 ¹⁰ R19	2 ²² 22	26 ¹⁰ R14	14 ¹⁵ 54	22 ¹¹ 45	6 ¹⁰ R45	6 ¹⁰ 50	18 ¹⁸ 33	13 ¹⁷ 30	W 2
T 3	23 23 6	18 ¹⁸ 53'23	29 ²⁵ 25	14 ¹⁰ 56	0 ¹⁰ 20	13 ¹⁰ 10	13 ¹⁰ 14	2 ²⁹ 29	26 ¹⁰ 12	14 ¹⁵ 55	22 ¹¹ 45	6 ¹⁰ 39	6 ¹⁰ 47	18 ¹⁸ 39	13 ¹⁷ 32	T 3
F 4	23 27 2	19 ¹⁹ 52'04	11 ¹¹ 25	15 ¹⁰ 39	1 ³⁴ 34	13 ¹⁰ 50	13 ¹⁰ 9	2 ³⁵ 35	26 ¹⁰ 10	14 ¹⁵ 56	22 ¹¹ 46	6 ¹⁰ 30	6 ¹⁰ 44	18 ¹⁸ 46	13 ¹⁷ 35	F 4
S 5	23 30 59	20 ²⁰ 50'46	23 ³⁵ 35	16 ¹⁰ 19	2 ⁴⁹ 49	14 ¹⁰ 29	13 ¹⁰ 4	2 ⁴¹ 41	26 ¹⁰ 8	14 ¹⁵ 57	22 ¹¹ 46	6 ¹⁰ 19	6 ¹⁰ 41	18 ¹⁸ 53	13 ¹⁷ 37	S 5
S 6	23 34 56	21 ²¹ 49'30	5 ³ 57	16 ¹⁰ 54	4 ³ 3	15 ¹⁰ 8	13 ¹⁰ 0	2 ⁴⁷ 47	26 ¹⁰ 6	14 ¹⁵ 58	22 ¹¹ 46	6 ¹⁰ 7	6 ¹⁰ 38	18 ¹⁸ 59	13 ¹⁷ 39	S 6
M 7	23 38 52	22 ²² 48'16	18 ¹⁸ 33	17 ¹⁰ 24	5 ¹⁷ 17	15 ¹⁰ 48	12 ¹⁰ 55	2 ⁵³ 53	26 ¹⁰ 4	15 ¹⁰ 0	22 ¹¹ 46	5 ¹⁰ 54	6 ¹⁰ 34	19 ¹⁹ 6	13 ¹⁷ 42	M 7
T 8	23 42 49	23 ²³ 47'05	1 ¹ 21	17 ¹⁰ 50	6 ³² 32	16 ¹⁰ 27	12 ¹⁰ 51	2 ⁵⁸ 58	26 ¹⁰ 2	15 ¹⁰ 1	22 ¹¹ 46	5 ¹⁰ 42	6 ¹⁰ 31	19 ¹⁹ 13	13 ¹⁷ 45	T 8
W 9	23 46 45	24 ²⁴ 45'55	14 ¹⁴ 22	18 ¹⁰ 10	7 ⁴⁶ 46	17 ¹⁰ 7	12 ¹⁰ 47	3 ⁴ 4	26 ¹⁰ 0	15 ¹⁰ 2	22 ¹¹ 47	5 ¹⁰ 32	6 ¹⁰ 28	19 ¹⁹ 19	13 ¹⁷ 48	W 9
T 10	23 50 42	25 ²⁵ 44'47	27 ²⁷ 35	18 ¹⁰ 24	9 ⁰ 0	17 ¹⁰ 47	12 ¹⁰ 43	3 ¹⁰ 10	25 ²⁵ 58	15 ¹⁰ 3	22 ¹¹ 47	5 ¹⁰ 24	6 ¹⁰ 25	19 ¹⁹ 26	13 ¹⁷ 50	T 10
F 11	23 54 38	26 ²⁶ 43'42	10 ¹⁰ 58	18 ¹⁰ 33	10 ¹⁰ 15	18 ¹⁰ 27	12 ¹⁰ 39	3 ¹⁶ 16	25 ²⁵ 56	15 ¹⁰ 4	22 ¹¹ 47	5 ¹⁰ 19	6 ¹⁰ 22	19 ¹⁹ 33	13 ¹⁷ 53	F 11
S 12	23 58 35	27 ²⁷ 42'39	24 ²⁴ 31	18 ¹⁰ R35	11 ¹¹ 29	19 ¹⁹ 7	12 ¹⁰ 36	3 ²¹ 21	25 ²⁵ 54	15 ¹⁰ 5	22 ¹¹ 47	5 ¹⁰ 17	6 ¹⁰ 19	19 ¹⁹ 39	13 ¹⁷ 56	S 12
S 13	0 2 31	28 ²⁸ 41'38	8 ⁸ 11	18 ¹⁰ 30	12 ¹² 44	19 ¹⁹ 48	12 ¹⁰ 33	3 ²⁷ 27	25 ²⁵ 52	15 ¹⁰ 5	22 ¹¹ 47	5 ¹⁰ D16	6 ¹⁰ 15	19 ¹⁹ 46	13 ¹⁷ 59	S 13
M14	0 6 28	29 ²⁹ 40'39	22 ²² 7	18 ¹⁰ 17	13 ¹³ 58	20 ²⁰ 28	12 ¹⁰ 29	3 ³² 32	25 ²⁵ 50	15 ¹⁰ 6	22 ¹¹ R47	5 ¹⁰ 17	6 ¹⁰ 12	19 ¹⁹ 53	14 ¹⁴ 2	M14
T 15	0 10 24	0 ⁰ 39'43	6 ⁶ 10	17 ¹⁷ 58	15 ¹⁵ 13	21 ²¹ 9	12 ¹⁰ 27	3 ³⁸ 38	25 ²⁵ 48	15 ¹⁰ 7	22 ¹¹ 47	5 ¹⁰ R17	6 ¹⁰ 9	19 ¹⁹ 59	14 ¹⁴ 6	T 15
W16	0 14 21	1 ¹ 38'50	20 ²⁰ 22	17 ¹⁷ 30	16 ¹⁶ 28	21 ²¹ 50	12 ¹⁰ 24	3 ⁴³ 43	25 ²⁵ 46	15 ¹⁰ 8	22 ¹¹ 47	5 ¹⁰ 15	6 ¹⁰ 6	20 ²⁰ 6	14 ¹⁴ 9	W16
T 17	0 18 18	2 ² 37'59	4 ⁴ 11	16 ¹⁶ 55	17 ¹⁷ 42	22 ²² 31	12 ¹⁰ 21	3 ⁴⁸ 48	25 ²⁵ 44	15 ¹⁰ 9	22 ¹¹ 47	5 ¹⁰ 11	6 ¹⁰ 3	20 ²⁰ 13	14 ¹⁴ 12	T 17
F 18	0 22 14	3 ³ 37'09	19 ¹⁹ 6	16 ¹⁶ 11	18 ¹⁸ 57	23 ²³ 12	12 ¹⁰ 19	3 ⁵³ 53	25 ²⁵ 43	15 ¹⁰ 9	22 ¹¹ 47	5 ¹⁰ 5	6 ¹⁰ 0	20 ²⁰ 19	14 ¹⁴ 16	F 18
S 19	0 26 11	4 ⁴ 36'23	3 ³ 10	15 ¹⁵ 21	20 ²⁰ 12	23 ²³ 53	12 ¹⁰ 17	3 ⁵⁸ 58	25 ²⁵ 41	15 ¹⁰ 10	22 ¹¹ 47	4 ¹⁰ 57	5 ¹⁰ 56	20 ²⁰ 26	14 ¹⁴ 19	S 19
S 20	0 30 7	5 ⁵ 35'38	17 ¹⁷ 49	14 ¹⁴ 24	21 ²¹ 27	24 ²⁴ 35	12 ¹⁰ 15	4 ⁴ 4	25 ²⁵ 39	15 ¹⁰ 11	22 ¹¹ 46	4 ¹⁰ 47	5 ¹⁰ 53	20 ²⁰ 33	14 ¹⁴ 23	S 20
M21	0 34 4	6 ⁶ 34'56	1 ¹ 57	13 ¹³ 21	22 ²² 41	25 ²⁵ 16	12 ¹⁰ 13	4 ⁸ 8	25 ²⁵ 38	15 ¹⁰ 11	22 ¹¹ 46	4 ¹⁰ 38	5 ¹⁰ 50	20 ²⁰ 39	14 ¹⁴ 27	M21
T 22	0 38 0	7 ⁷ 34'15	15 ¹⁵ 47	12 ¹² 13	23 ²³ 56	25 ²⁵ 58	12 ¹⁰ 11	4 ¹³ 13	25 ²⁵ 36	15 ¹⁰ 12	22 ¹¹ 46	4 ¹⁰ 29	5 ¹⁰ 47	20 ²⁰ 46	14 ¹⁴ 30	T 22
W23	0 41 57	8 ⁸ 33'37	29 ²⁹ 18	11 ¹¹ 3	25 ²⁵ 11	26 ²⁶ 39	12 ¹⁰ 10	4 ¹⁸ 18	25 ²⁵ 35	15 ¹⁰ 13	22 ¹¹ 46	4 ¹⁰ 22	5 ¹⁰ 44	20 ²⁰ 53	14 ¹⁴ 34	W23
T 24	0 45 53	9 ⁹ 33'01	12 ¹² 16	9 ⁹ 51	26 ²⁶ 26	27 ²⁷ 21	12 ¹⁰ 9	4 ²³ 23	25 ²⁵ 33	15 ¹⁰ 13	22 ¹¹ 46	4 ¹⁰ 17	5 ¹⁰ 40	21 ²¹ 0	14 ¹⁴ 38	T 24
F 25	0 49 50	10 ¹⁰ 32'26	25 ²⁵ 12	8 ⁸ 40	27 ²⁷ 41	28 ²⁸ 3	12 ¹⁰ 8	4 ²⁷ 27	25 ²⁵ 32	15 ¹⁰ 14	22 ¹¹ 45	4 ¹⁰ 15	5 ¹⁰ 37	21 ²¹ 6	14 ¹⁴ 42	F 25
S 26	0 53 47	11 ¹¹ 31'54	7 ⁷ 39	7 ⁷ 31	28 ²⁸ 56	28 ²⁸ 45	12 ¹⁰ 7	4 ³² 32	25 ²⁵ 30	15 ¹⁰ 14	22 ¹¹ 45	4 ¹⁰ D14	5 ¹⁰ 34	21 ²¹ 13	14 ¹⁴ 46	S 26
S 27	0 57 43	12 ¹² 31'23	19 ¹⁹ 49	6 ⁶ 28	0 ⁰ 11	29 ²⁹ 28	12 ¹⁰ 6	4 ³⁶ 36	25 ²⁵ 29	15 ¹⁰ 15	22 ¹¹ 45	4 ¹⁰ 15	5 ¹⁰ 31	21 ²¹ 20	14 ¹⁴ 50	S 27
M28	1 1 40	13 ¹³ 30'54	1 ¹ 47	5 ⁵ 31	1 ¹ 26	0 ⁰ 10	12 ¹⁰ 6	4 ⁴¹ 41	25 ²⁵ 27	15 ¹⁰ 15	22 ¹¹ 45	4 ¹⁰ 17	5 ¹⁰ 28	21 ²¹ 26	14 ¹⁴ 55	M28
T 29	1 5 36	14 ¹⁴ 30'27	13 ¹³ 39	4 ⁴ 42	2 ² 41	0 ⁰ 52	12 ¹⁰ D 6	4 ⁴⁵ 45	25 ²⁵ 26	15 ¹⁰ 15	22 ¹¹ 44	4 ¹⁰ R17	5 ¹⁰ 25	21 ²¹ 33	14 ¹⁴ 59	T 29
W30	1 9 33	15 ¹⁵ 30'02	25 ²⁵ 30	4 ⁴ 2	3 ³ 56	1 ¹ 35	12 ¹⁰ 22	4 ⁴ 49	25 ²⁵ 25	15 ¹⁰ 16	22 ¹¹ R44	4 ¹⁰ 17	5 ¹⁰ 21	21 ²¹ 30	15 ¹⁵ 3	W30

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	5n10	20s57	2n27	7s54	2s51	13n20	1n10	24s35	2s20	17s57	1s9	20n5	0n23	13s32	0s47	22n0	0s41	17n2	6s18	21s31	21s32	18s51	16s58	5n33			
W 2	4 48	19 5	3 18	8 20	2 59	12 56	1 11	24 40	2 19	17 58	1 9	20 4	0 23	13 33	0 47	22 0	0 41	17 1	6 18	21 30	21 31	18 50	16 59	5 33			
T 3	4 25	16 25	4 1	8 45	3 5	12 31	1 13	24 45	2 19	18 0	1 9	20 2	0 23	13 34	0 47	22 0	0 41	17 1	6 18	21 29	21 31	18 48	16 59	5 33			
F 4	4 2	13 2	4 33	9 8	3 12	12 6	1 14	24 49	2 19	18 1	1 9	20 1	0 23	13 34	0 47	22 0	0 41	17 1	6 18	21 28	21 30	18 47	17 0	5 32			
S 5	3 38	9 4	4 54	9 29	3 18	11 40	1 15	24 54	2 18	18 2	1 9	20 0	0 23	13 35	0 47	22 0	0 41	17 1	6 18	21 26	21 30	18 45	17 1	5 32			
S 6	3 15	4 41	5 1	9 47	3 24	11 15	1 17	24 58	2 18	18 4	1 8	19 59	0 23	13 36	0 47	22 0	0 41	17 1	6 18	21 24	21 29	18 44	17 1	5 32			
M 7	2 52	0 2	4 54	10 4	3 29	10 48	1 18	25 2	2 17	18 5	1 8	19 57	0 23	13 36	0 47	22 0	0 41	17 1	6 18	21 21	21 28	18 42	17 2	5 31			
T 8	2 29	4n42	4 32	10 18	3 33	10 22	1 19	25 6	2 17	18 6	1 8	19 56	0 23	13 37	0 47	21 59	0 41	17 1	6 19	21 19	21 28	18 40	17 3	5 31			
W 9	2 5	9 18	3 56	10 29	3 37	9 55	1 20	25 9	2 16	18 7	1 8	19 55	0 24	13 38	0 47	21 59	0 41	17 1	6 19	21 18	21 27	18 39	17 4	5 30			
T 10	1 42	13 32	3 6	10 37	3 40	9 28	1 21	25 13	2 16	18 8	1 8	19 54	0 24	13 38	0 47	21 59	0 41	17 1	6 19	21 16	21 27	18 37	17 4	5 30			
F 11	1 18	17 9	2 5	10 42	3 42	9 1	1 22	25 16	2 16	18 9	1 8	19 52	0 24	13 39	0 47	21 59	0 41	17 1	6 19	21 15	21 26	18 36	17 5	5 30			
S 12	0 55	19 53	0 57	10 44	3 43	8 33	1 23	25 19	2 15	18 10	1 8	19 51	0 24	13 40	0 47	21 59	0 41	17 1	6 19	21 15	21 26	18 34	17 6	5 29			
S 13	0 31	21 29	0s16	10 42	3 43	8 5	1 24	25 22	2 15	18 11	1 8	19 50	0 24	13 40	0 47	21 59	0 41	17 0	6 19	21 15	21 25	18 33	17 6	5 29			
M14	0 8	21 48	1 29	10 36	3 41	7 37	1 24	25 24	2 14	18 12	1 8	19 49	0 24	13 41	0 47	21 59	0 41	17 0	6 19	21 15	21 25	18 31	17 7	5 29			
T 15	0s16	20 46	2 37	10 26	3 38	7 9	1 25	25 26	2 14	18 12	1 8	19 48	0 24	13 42	0 47	21 59	0 41	17 0	6 19	21 15	21 24	18 29	17 8	5 28			
W16	0 39	18 24	3 36	10 11	3 34	6 41	1 26	25 29	2 13	18 13	1 8	19 47	0 24	13 42	0 47	21 59	0 41	17 0	6 19	21 15	21 24	18 28	17 8	5 28			
T 17	1 3	14 54	4 23	9 52	3 28	6 12	1 26	25 31	2 13	18 14	1 8	19 46	0 25	13 43	0 47	21 58	0 41	17 0	6 19	21 14	21 23	18 26	17 9	5 28			
F 18	1 27	10 30	4 53	9 28	3 20	5 43	1 27	25 32	2 12	18 14	1 8	19 44	0 25	13 43	0 47	21 58	0 41	17 0	6 20	21 13	21 22	18 25	17 10	5 27			
S 19	1 50	5 32	5 4	8 59	3 10	5 14	1 27	25 34	2 12	18 15	1 7	19 43	0 25	13 44	0 47	21 58	0 41	17 0	6 20	21 11	21 22	18 23	17 11	5 27			
S 20	2 14	0 17	4 56	8 26	2 59	4 45	1 28	25 35	2 11	18 15	1 7	19 42	0 25	13 44	0 47	21 58	0 41	17 0	6 20	21 10	21 21	18 21	17 11	5 27			
M21	2 37	4s55	4 31	7 49	2 45	4 15	1 28	25 36	2 11	18 16	1 7	19 41	0 25	13 45	0 47	21 58	0 41	17 0	6 20	21 8	21 21	18 20	17 12	5 26			
T 22	3 1	9 45	3 49	7 8	2 30	3 46	1 28	25 37	2 10	18 16	1 7	19 40	0 25	13 45	0 47	21 58	0 41	17 0	6 20	21 6	21 20	18 17	17 13	5 26			
W23	3 24	14 0	2 56	6 25	2 13	3 16	1 28	25 38	2 9	18 16	1 7	19 39	0 25	13 46	0 47	21 58	0 41	17 0	6 20	21 5	21 20	18 17	17 14	5 26			
T 24	3 48	17 26	1 54	5 40	1 54	2 46	1 28	25 38	2 9	18 17	1 7	19 38	0 25	13 46	0 47	21 58	0 41	16 59	6 20	21 4	21 19	18 15	17 14	5 25			
F 25	4 11	19 55	0 48	4 54	1 35	2 16	1 28	25 38	2 8	18 17	1 7	19 37	0 26	13 47	0 47	21 58	0 41	16 59	6 20	21 4	21 19	18 13	17 15	5 25			
S 26	4 34	21 21	0n18	4 8	1 15	1 46	1 28	25 38	2 8	18 17	1 7	19 36	0 26	13 47	0 47	21 58	0 41	16 59	6 20	21 4	21 18	18 12	17 16	5 25			
S 27	4 58	21 45	1 23	3 24	0 54	1 16	1 28	25 38	2 7	18 17	1 7	19 35	0 26	13 48	0 47	21 58	0 41	16 59	6 20	21 4	21 17	18 10	17 17	5 24			
M28	5 21	21 7	2 23	2 42	0 34	0 46	1 28	25 37	2 6	18 17	1 7	19 34	0 26	13 48	0 47	21 58	0 41	16 59	6 20	21 4	21 17	18 8	17 17	5 24			
T 29	5 44	19 33	3 16	2 5	0 13	0 16	1 28	25 36	2 6	18 17	1 6	19 34	0 26	13 49	0 46	21 58	0 41	16 59	6 20	21 4	21 16	18 7	17 18	5 24			
W30	6s7	17s10	4n1	1s31	0n6	0s14	1n27	25s35	2s5	18s17	1s6	19n33	0n26	13s49	0s46	21n57	0s41	16n59	6s21	21s4	21s16	18s5	17s19	5n23			

ASTRODIENST EPHEMERIS for the year 1416
geocentric

OCTOBER 1416 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	1 13 29	16♂29'39	7♂24	3°R34	5♂11	2♂17	12♂6	4♂53	25°R23	15♂16	22°R44	4°R14	5♂18	21♂46	15♂7	T 1
F 2	1 17 26	17°29'17	19°26	3♂16	6°26	3° 0	12° 7	4°57	25♂22	15°16	22♂43	4♂10	5°15	21°53	15°12	F 2
S 3	1 21 22	18°28'57	1♂41	3°D 9	7°41	3°43	12° 7	5° 1	25°21	15°17	22°43	4° 3	5°12	22° 0	15°16	S 3
S 4	1 25 19	19°28'39	14°11	3°14	8°56	4°26	12° 8	5° 5	25°20	15°17	22°42	3°56	5° 9	22° 6	15°21	S 4
M 5	1 29 16	20°28'22	26°58	3°29	10°11	5° 9	12° 9	5° 9	25°19	15°17	22°42	3°48	5° 5	22°13	15°26	M 5
T 6	1 33 12	21°28'08	10°Y 3	3°55	11°26	5°52	12°10	5°12	25°18	15°17	22°41	3°40	5° 2	22°20	15°30	T 6
W 7	1 37 9	22°27'55	23°25	4°30	12°41	6°35	12°12	5°16	25°17	15°17	22°41	3°34	4°59	22°26	15°35	W 7
T 8	1 41 5	23°27'45	7♂ 1	5°14	13°56	7°18	12°13	5°19	25°16	15°17	22°40	3°29	4°56	22°33	15°40	T 8
F 9	1 45 2	24°27'37	20°50	6° 5	15°12	8° 2	12°15	5°22	25°15	15°17	22°40	3°27	4°53	22°40	15°45	F 9
S 10	1 48 58	25°27'30	4♂48	7° 4	16°27	8°45	12°17	5°26	25°14	15°R17	22°39	3°D26	4°50	22°46	15°50	S 10
S 11	1 52 55	26°27'26	18°52	8° 9	17°42	9°29	12°20	5°29	25°14	15°17	22°39	3°27	4°46	22°53	15°55	S 11
M12	1 56 51	27°27'24	3♂ 0	9°20	18°57	10°12	12°22	5°32	25°13	15°17	22°38	3°28	4°43	23° 0	16° 0	M12
T 13	2 0 48	28°27'25	17°10	10°35	20°12	10°56	12°25	5°35	25°12	15°17	22°38	3°30	4°40	23° 7	16° 5	T 13
W14	2 4 45	29°27'27	1♂20	11°54	21°28	11°40	12°27	5°38	25°11	15°17	22°37	3°R30	4°37	23°13	16°10	W14
T 15	2 8 41	0♂27'32	15°28	13°17	22°43	12°23	12°30	5°40	25°11	15°17	22°36	3°29	4°34	23°20	16°15	T 15
F 16	2 12 38	1°27'39	29°33	14°42	23°58	13° 7	12°34	5°43	25°10	15°17	22°36	3°27	4°31	23°27	16°20	F 16
S 17	2 16 34	2°27'48	13♂32	16°10	25°14	13°51	12°37	5°46	25°10	15°16	22°35	3°23	4°27	23°33	16°26	S 17
S 18	2 20 31	3°27'59	27°22	17°40	26°29	14°35	12°41	5°48	25° 9	15°16	22°34	3°18	4°24	23°40	16°31	S 18
M19	2 24 27	4°28'12	11♂ 2	19°12	27°44	15°19	12°44	5°50	25° 9	15°16	22°33	3°13	4°21	23°47	16°36	M19
T 20	2 28 24	5°28'26	24°28	20°44	29° 0	16° 4	12°48	5°52	25° 9	15°16	22°33	3° 9	4°18	23°53	16°42	T 20
W21	2 32 20	6°28'43	7♂38	22°18	0♂15	16°48	12°53	5°55	25° 8	15°15	22°32	3° 6	4°15	24° 0	16°47	W21
T 22	2 36 17	7°29'02	20°32	23°53	1°30	17°32	12°57	5°57	25° 8	15°15	22°31	3° 4	4°11	24° 7	16°53	T 22
F 23	2 40 13	8°29'22	3♂ 9	25°28	2°46	18°16	13° 1	5°58	25° 8	15°14	22°30	3°D 3	4° 8	24°13	16°58	F 23
S 24	2 44 10	9°29'44	15°30	27° 4	4° 1	19° 1	13° 6	6° 0	25° 8	15°14	22°30	3° 4	4° 5	24°20	17° 4	S 24
S 25	2 48 7	10°30'08	27°38	28°40	5°17	19°45	13°11	6° 2	25° 8	15°13	22°29	3° 5	4° 2	24°27	17°10	S 25
M26	2 52 3	11°30'33	9♂37	0♂16	6°32	20°30	13°16	6° 3	25°D 8	15°13	22°28	3° 7	3°59	24°34	17°15	M26
T 27	2 56 0	12°30'59	21°29	1°52	7°47	21°15	13°21	6° 5	25° 8	15°12	22°27	3° 9	3°56	24°40	17°21	T 27
W28	2 59 56	13°31'27	3♂19	3°29	9° 3	21°59	13°27	6° 6	25° 8	15°12	22°26	3°10	3°52	24°47	17°27	W28
T 29	3 3 53	14°31'56	15°12	5° 5	10°18	22°44	13°32	6° 7	25° 8	15°11	22°25	3°R10	3°49	24°54	17°33	T 29
F 30	3 7 49	15°32'27	27°14	6°41	11°34	23°29	13°38	6° 9	25° 8	15°10	22°24	3°10	3°46	25° 0	17°39	F 30
S 31	3 11 46	16♂32'59	9♂28	8♂18	12♂49	24♂13	13♂44	6♂10	25♂8	15♂10	22♂23	3♂ 8	3♂43	25♂7	17♂44	S 31

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	6s30	14s 2	4n36	1s 3	0n24	0s44	1n27	25s34	2s 5	18s17	1s 6	19n32	0n26	13s50	0s46	21n57	0s41	16n59	6s21	21s 3	21s15	18s 4	17s20	5n23			
F 2	6 53	10 19	4 58	0 40	0 41	1 14	1 26	25 33	2 4	18 16	1 6	19 31	0 27	13 50	0 46	21 57	0 41	16 59	6 21	21 3	21 15	18 2	17 20	5 23			
S 3	7 16	6 7	5 8	0 23	0 57	1 45	1 26	25 31	2 3	18 16	1 6	19 30	0 27	13 50	0 46	21 57	0 41	16 58	6 21	21 1	21 14	18 0	17 21	5 23			
S 4	7 39	1 35	5 4	0 12	1 11	2 15	1 25	25 29	2 3	18 16	1 6	19 29	0 27	13 51	0 46	21 57	0 41	16 58	6 21	21 0	21 13	17 59	17 22	5 22			
M 5	8 1	3n 8	4 44	0 7	1 23	2 45	1 25	25 27	2 2	18 15	1 6	19 29	0 27	13 51	0 46	21 57	0 41	16 58	6 21	20 59	21 13	17 57	17 23	5 22			
T 6	8 24	7 48	4 9	0 7	1 34	3 15	1 24	25 24	2 1	18 15	1 6	19 28	0 27	13 51	0 46	21 57	0 41	16 58	6 21	20 57	21 12	17 55	17 23	5 22			
W 7	8 46	12 13	3 20	0 13	1 43	3 45	1 23	25 21	2 1	18 14	1 5	19 27	0 27	13 52	0 46	21 57	0 41	16 58	6 21	20 56	21 12	17 54	17 24	5 22			
T 8	9 8	16 5	2 19	0 23	1 51	4 15	1 22	25 18	2 0	18 14	1 5	19 26	0 27	13 52	0 46	21 57	0 41	16 58	6 21	20 55	21 11	17 52	17 25	5 21			
F 9	9 31	19 7	1 8	0 38	1 57	4 45	1 21	25 15	1 59	18 13	1 5	19 26	0 28	13 52	0 46	21 57	0 41	16 58	6 21	20 55	21 11	17 50	17 26	5 21			
S 10	9 53	21 2	0s 7	0 57	2 1	5 15	1 20	25 12	1 58	18 12	1 5	19 25	0 28	13 52	0 46	21 57	0 41	16 58	6 21	20 54	21 10	17 49	17 26	5 21			
S 11	10 14	21 40	1 23	1 20	2 5	5 45	1 19	25 8	1 58	18 12	1 5	19 25	0 28	13 53	0 46	21 57	0 41	16 58	6 21	20 55	21 9	17 47	17 27	5 21			
M12	10 36	20 55	2 34	1 46	2 7	6 14	1 18	25 4	1 57	18 11	1 5	19 24	0 28	13 53	0 46	21 57	0 41	16 58	6 22	20 55	21 9	17 45	17 28	5 20			
T 13	10 58	18 50	3 36	2 14	2 8	6 44	1 17	25 0	1 56	18 10	1 5	19 23	0 28	13 53	0 46	21 57	0 41	16 57	6 22	20 55	21 8	17 44	17 29	5 20			
W14	11 19	15 37	4 25	2 45	2 8	7 13	1 16	24 55	1 55	18 9	1 5	19 23	0 28	13 53	0 46	21 57	0 41	16 57	6 22	20 55	21 8	17 42	17 29	5 20			
T 15	11 40	11 31	4 57	3 18	2 8	7 43	1 15	24 50	1 55	18 8	1 4	19 22	0 28	13 53	0 46	21 57	0 41	16 57	6 22	20 55	21 7	17 40	17 30	5 20			
F 16	12 1	6 48	5 12	3 53	2 6	8 12	1 13	24 45	1 54	18 7	1 4	19 22	0 29	13 54	0 46	21 57	0 41	16 57	6 22	20 55	21 7	17 39	17 31	5 19			
S 17	12 22	1 46	5 8	4 28	2 4	8 40	1 12	24 40	1 53	18 6	1 4	19 21	0 29	13 54	0 46	21 57	0 41	16 57	6 22	20 54	21 6	17 37	17 32	5 19			
S 18	12 43	3s19	4 45	5 6	2 1	9 9	1 11	24 35	1 52	18 5	1 4	19 21	0 29	13 54	0 46	21 57	0 41	16 57	6 22	20 53	21 5	17 35	17 32	5 19			
M19	13 3	8 10	4 7	5 43	1 58	9 38	1 9	24 29	1 52	18 4	1 4	19 20	0 29	13 54	0 46	21 57	0 41	16 57	6 22	20 52	21 5	17 34	17 33	5 19			
T 20	13 23	12 33	3 16	6 22	1 54	10 6	1 8	24 23	1 51	18 2	1 4	19 20	0 29	13 54	0 46	21 57	0 41	16 57	6 22	20 51	21 4	17 32	17 34	5 19			
W21	13 43	16 14	2 15	7 1	1 49	10 34	1 6	24 17	1 50	18 1	1 4	19 20	0 29	13 54	0 46	21 57	0 41	16 57	6 22	20 51	21 4	17 30	17 34	5 18			
T 22	14 3	19 2	1 8	7 41	1 44	11 2	1 4	24 10	1 49	18 0	1 4	19 19	0 29	13 54	0 46	21 57	0 41	16 57	6 22	20 50	21 3	17 28	17 35	5 18			
F 23	14 23	20 51	0n 1	8 20	1 39	11 29	1 3	24 3	1 49	17 58	1 3	19 19	0 30	13 54	0 46	21 57	0 41	16 56	6 22	20 50	21 2	17 27	17 36	5 18			
S 24	14 42	21 36	1 8	9 0	1 34	11 56	1 1	23 56	1 48	17 57	1 3	19 19	0 30	13 54	0 46	21 57	0 41	16 56	6 22	20 50	21 2	17 25	17 36	5 18			
S 25	15 1	21 18	2 11	9 40	1 28	12 23	0 59	23 49	1 47	17 55	1 3	19 18	0 30	13 54	0 46	21 57	0 41	16 56	6 22	20 50	21 1	17 23	17 37	5 18			
M26	15 20	20 2	3 8	10 19	1 22	12 50	0 57	23 42	1 46	17 54	1 3	19 18	0 30	13 54	0 46	21 57	0 41	16 56	6 22	20 51	21 1	17 22	17 38	5 18			
T 27	15 39	17 54	3 56	10 58	1 16	13 16	0 56	23 34	1 45	17 52	1 3	19 18	0 30	13 54	0 46	21 58	0 41	16 56	6 22	20 51	21 0	17 20	17 38	5 18			
W28	15 57	15 2	4 34	11 37	1 10	13 42	0 54	23 26	1 44	17 50	1 3	19 18	0 30	13 54	0 45	21 58	0 41	16 56	6 22	20 51	20 59	17 18	17 39	5 17			
T 29	16 15	11 32	5 1	12 16	1 3	14 8	0 52	23 18	1 44	17 49	1 3	19 18	0 31	13 54	0 45	21 58	0 41	16 56	6 23	20 51	20 59	17 16	17 40	5 17			
F 30	16 33	7 33	5 14	12 54	0 57	14 33	0 50	23 9	1 43	17 47	1 3	19 17	0 31	13 54	0 45	21 58	0 41	16 56	6 23	20 51	20 58	17 15	17 40	5 17			
S 31	16s50	3s12	5n14	13s32	0n50	14s58	0n48	23s 0	1s42	17s45	1s 2	19n17	0n31	13s54	0s45	21n58	0s41	16n56	6s23	20s51	20s58	17s13	17s41	5n17			

ASTRODIENST EPHEMERIS for the year 1416

geocentric

NOVEMBER 1416 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	3 15 42	17 ^h 33'32"	21 ^h 59'	9 ^h 54'	14 ^h 5	24 ^h 58'	13 ^h 50'	6 ^h 10'	25 ^h 8'	15 ^h 9'	22 ^h 22'	3 ^h 6'	3 ^h 40'	25 ^h 14'	17 ^h 50'	S 1
M 2	3 19 39	18 ^h 34'06"	4 ^h 50'	11 ^h 30'	15 ^h 20'	25 ^h 43'	13 ^h 57'	6 ^h 11'	25 ^h 9'	15 ^h 8'	22 ^h 21'	3 ^h 4'	3 ^h 37'	25 ^h 20'	17 ^h 56'	M 2
T 3	3 23 36	19 ^h 34'42"	18 ^h 3'	13 ^h 5'	16 ^h 35'	26 ^h 28'	14 ^h 3'	6 ^h 12'	25 ^h 9'	15 ^h 7'	22 ^h 20'	3 ^h 2'	3 ^h 33'	25 ^h 27'	18 ^h 2'	T 3
W 4	3 27 32	20 ^h 35'19"	18 ^h 39'	14 ^h 41'	17 ^h 51'	27 ^h 13'	14 ^h 10'	6 ^h 12'	25 ^h 9'	15 ^h 7'	22 ^h 20'	3 ^h 1'	3 ^h 30'	25 ^h 34'	18 ^h 8'	W 4
T 5	3 31 29	21 ^h 35'57"	15 ^h 35'	16 ^h 17'	19 ^h 6'	27 ^h 58'	14 ^h 16'	6 ^h 13'	25 ^h 10'	15 ^h 6'	22 ^h 19'	3 ^h 0'	3 ^h 27'	25 ^h 40'	18 ^h 14'	T 5
F 6	3 35 25	22 ^h 36'37"	29 ^h 48'	17 ^h 52'	20 ^h 22'	28 ^h 43'	14 ^h 23'	6 ^h 13'	25 ^h 10'	15 ^h 5'	22 ^h 18'	2 ^h D59	3 ^h 24'	25 ^h 47'	18 ^h 21'	F 6
S 7	3 39 22	23 ^h 37'18"	14 ^h 15'	19 ^h 27'	21 ^h 37'	29 ^h 28'	14 ^h 30'	6 ^h 13'	25 ^h 11'	15 ^h 4'	22 ^h 16'	2 ^h 59'	3 ^h 21'	25 ^h 54'	18 ^h 27'	S 7
S 8	3 43 18	24 ^h 38'01"	28 ^h 48'	21 ^h 2'	22 ^h 53'	0 ^h 13'	14 ^h 38'	6 ^h R14	25 ^h 12'	15 ^h 3'	22 ^h 15'	3 ^h 0'	3 ^h 17'	26 ^h 1'	18 ^h 33'	S 8
M 9	3 47 15	25 ^h 38'46"	13 ^h 22'	22 ^h 37'	24 ^h 8'	0 ^h 58'	14 ^h 45'	6 ^h 14'	25 ^h 12'	15 ^h 2'	22 ^h 14'	3 ^h 1'	3 ^h 14'	26 ^h 7'	18 ^h 39'	M 9
T 10	3 51 11	26 ^h 39'32"	27 ^h 53'	24 ^h 12'	25 ^h 24'	1 ^h 44'	14 ^h 53'	6 ^h 13'	25 ^h 13'	15 ^h 1'	22 ^h 13'	3 ^h 1'	3 ^h 11'	26 ^h 14'	18 ^h 45'	T 10
W11	3 55 8	27 ^h 40'19"	12 ^h 14'	25 ^h 46'	26 ^h 39'	2 ^h 29'	15 ^h 0'	6 ^h 13'	25 ^h 14'	15 ^h 0'	22 ^h 12'	3 ^h 2'	3 ^h 8'	26 ^h 21'	18 ^h 51'	W11
T 12	3 59 5	28 ^h 41'08"	26 ^h 25'	27 ^h 21'	27 ^h 55'	3 ^h 14'	15 ^h 8'	6 ^h 13'	25 ^h 15'	14 ^h 59'	22 ^h 11'	3 ^h R 2	3 ^h 5'	26 ^h 27'	18 ^h 58'	T 12
F 13	4 3 1	29 ^h 41'58"	10 ^h 21'	28 ^h 55'	29 ^h 10'	3 ^h 59'	15 ^h 16'	6 ^h 12'	25 ^h 15'	14 ^h 58'	22 ^h 10'	3 ^h 2'	3 ^h 2'	26 ^h 34'	19 ^h 4'	F 13
S 14	4 6 58	0 ^h 42'50"	24 ^h 4'	0 ^h 30'	0 ^h 26'	4 ^h 45'	15 ^h 24'	6 ^h 12'	25 ^h 16'	14 ^h 57'	22 ^h 9'	3 ^h 2'	2 ^h 58'	26 ^h 41'	19 ^h 10'	S 14
S 15	4 10 54	1 ^h 43'43"	7 ^h 32'	2 ^h 4'	1 ^h 41'	5 ^h 30'	15 ^h 33'	6 ^h 11'	25 ^h 17'	14 ^h 56'	22 ^h 8'	3 ^h 1'	2 ^h 55'	26 ^h 47'	19 ^h 17'	S 15
M16	4 14 51	2 ^h 44'38"	20 ^h 46'	3 ^h 38'	2 ^h 57'	6 ^h 15'	15 ^h 41'	6 ^h 10'	25 ^h 18'	14 ^h 55'	22 ^h 7'	3 ^h D 1	2 ^h 52'	26 ^h 54'	19 ^h 23'	M16
T 17	4 18 47	3 ^h 45'34"	3 ^h 46'	5 ^h 12'	4 ^h 12'	7 ^h 1'	15 ^h 50'	6 ^h 9'	25 ^h 19'	14 ^h 53'	22 ^h 6'	3 ^h 1'	2 ^h 49'	27 ^h 1'	19 ^h 29'	T 17
W18	4 22 44	4 ^h 46'31"	16 ^h 33'	6 ^h 47'	5 ^h 28'	7 ^h 46'	15 ^h 59'	6 ^h 8'	25 ^h 21'	14 ^h 52'	22 ^h 5'	3 ^h 1'	2 ^h 46'	27 ^h 8'	19 ^h 36'	W18
T 19	4 26 40	5 ^h 47'30"	29 ^h 7'	8 ^h 21'	6 ^h 43'	8 ^h 32'	16 ^h 7'	6 ^h 7'	25 ^h 22'	14 ^h 51'	22 ^h 3'	3 ^h R 1	2 ^h 43'	27 ^h 14'	19 ^h 42'	T 19
F 20	4 30 37	6 ^h 48'29"	11 ^h 30'	9 ^h 55'	7 ^h 59'	9 ^h 17'	16 ^h 16'	6 ^h 6'	25 ^h 23'	14 ^h 50'	22 ^h 2'	3 ^h 1'	2 ^h 39'	27 ^h 21'	19 ^h 48'	F 20
S 21	4 34 34	7 ^h 49'29"	23 ^h 42'	11 ^h 29'	9 ^h 14'	10 ^h 2'	16 ^h 26'	6 ^h 5'	25 ^h 24'	14 ^h 49'	22 ^h 1'	3 ^h 1'	2 ^h 36'	27 ^h 28'	19 ^h 55'	S 21
S 22	4 38 30	8 ^h 50'31"	5 ^h 345'	13 ^h 4'	10 ^h 30'	10 ^h 48'	16 ^h 35'	6 ^h 3'	25 ^h 26'	14 ^h 47'	22 ^h 0'	3 ^h 1'	2 ^h 33'	27 ^h 34'	20 ^h 1'	S 22
M23	4 42 27	9 ^h 51'33"	17 ^h 40'	14 ^h 38'	11 ^h 45'	11 ^h 34'	16 ^h 44'	6 ^h 2'	25 ^h 27'	14 ^h 46'	21 ^h 59'	3 ^h 0'	2 ^h 30'	27 ^h 41'	20 ^h 8'	M23
T 24	4 46 23	10 ^h 52'35"	29 ^h 32'	16 ^h 12'	13 ^h 1'	12 ^h 19'	16 ^h 54'	6 ^h 0'	25 ^h 28'	14 ^h 45'	21 ^h 58'	2 ^h 59'	2 ^h 27'	27 ^h 48'	20 ^h 14'	T 24
W25	4 50 20	11 ^h 53'39"	11 ^h 21'	17 ^h 47'	14 ^h 16'	13 ^h 5'	17 ^h 4'	5 ^h 58'	25 ^h 30'	14 ^h 43'	21 ^h 56'	2 ^h 57'	2 ^h 23'	27 ^h 54'	20 ^h 21'	W25
T 26	4 54 16	12 ^h 54'42"	23 ^h 14'	19 ^h 21'	15 ^h 32'	13 ^h 50'	17 ^h 13'	5 ^h 56'	25 ^h 31'	14 ^h 42'	21 ^h 55'	2 ^h 56'	2 ^h 20'	28 ^h 1'	20 ^h 27'	T 26
F 27	4 58 13	13 ^h 55'47"	5 ^h 13'	20 ^h 56'	16 ^h 47'	14 ^h 36'	17 ^h 23'	5 ^h 54'	25 ^h 33'	14 ^h 41'	21 ^h 54'	2 ^h 56'	2 ^h 17'	28 ^h 8'	20 ^h 34'	F 27
S 28	5 2 10	14 ^h 56'51"	17 ^h 23'	22 ^h 31'	18 ^h 3'	15 ^h 21'	17 ^h 33'	5 ^h 52'	25 ^h 34'	14 ^h 39'	21 ^h 53'	2 ^h D56	2 ^h 14'	28 ^h 15'	20 ^h 40'	S 28
S 29	5 6 6	15 ^h 57'56"	29 ^h 49'	24 ^h 5'	19 ^h 18'	16 ^h 7'	17 ^h 43'	5 ^h 50'	25 ^h 36'	14 ^h 38'	21 ^h 52'	2 ^h 56'	2 ^h 11'	28 ^h 21'	20 ^h 46'	S 29
M30	5 10 3	16 ^h 59'02"	12 ^h 36'	25 ^h 40'	20 ^h 34'	16 ^h 552'	17 ^h 554'	5 ^h 48'	25 ^h 38'	14 ^h 36'	21 ^h 51'	2 ^h 57'	2 ^h 8'	28 ^h 28'	20 ^h 53'	M30

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	17s 7	1n23	4n59	14s 9	0n43	15s23	0n46	22s52	1s41	17s43	1s 2	19n17	0n31	13s54	0s45	21n58	0s41	16n56	6s23	20s51	20s57	17s11	17s42	5n17			
M 2	17 24	6 2	4 29	14 45	0 37	15 47	0 44	22 42	1 40	17 41	1 2	19 17	0 31	13 53	0 45	21 58	0 41	16 56	6 23	20 50	20 56	17 10	17 42	5 17			
T 3	17 41	10 33	3 44	15 21	0 30	16 11	0 42	22 33	1 39	17 39	1 2	19 17	0 31	13 53	0 45	21 58	0 41	16 55	6 23	20 50	20 56	17 8	17 43	5 17			
W 4	17 57	14 40	2 45	15 56	0 23	16 34	0 40	22 23	1 39	17 37	1 2	19 17	0 31	13 53	0 45	21 58	0 41	16 55	6 23	20 50	20 55	17 6	17 44	5 17			
T 5	18 13	18 4	1 35	16 30	0 16	16 57	0 37	22 14	1 38	17 35	1 2	19 17	0 32	13 53	0 45	21 58	0 41	16 55	6 23	20 49	20 55	17 4	17 44	5 16			
F 6	18 29	20 28	0 18	17 4	0 9	17 20	0 35	22 4	1 37	17 33	1 2	19 17	0 32	13 53	0 45	21 58	0 41	16 55	6 23	20 49	20 54	17 3	17 45	5 16			
S 7	18 44	21 33	1s 2	17 36	0 3	17 42	0 33	21 53	1 36	17 31	1 2	19 17	0 32	13 53	0 45	21 58	0 41	16 55	6 23	20 49	20 53	17 1	17 45	5 16			
S 8	18 59	21 12	2 18	18 8	0s 4	18 3	0 31	21 43	1 35	17 29	1 2	19 18	0 32	13 52	0 45	21 58	0 41	16 55	6 23	20 49	20 53	16 59	17 46	5 16			
M 9	19 14	19 25	3 26	18 40	0 11	18 24	0 29	21 32	1 34	17 26	1 1	19 18	0 32	13 52	0 45	21 59	0 42	16 55	6 23	20 49	20 52	16 57	17 47	5 16			
T 10	19 28	16 24	4 20	19 10	0 18	18 45	0 26	21 21	1 33	17 24	1 1	19 18	0 32	13 52	0 45	21 59	0 42	16 55	6 23	20 50	20 52	16 56	17 47	5 16			
W11	19 42	12 26	4 57	19 39	0 24	19 5	0 24	21 10	1 32	17 22	1 1	19 18	0 33	13 51	0 45	21 59	0 42	16 55	6 23	20 50	20 51	16 54	17 48	5 16			
T 12	19 56	7 48	5 15	20 7	0 31	19 24	0 22	20 59	1 32	17 19	1 1	19 18	0 33	13 51	0 45	21 59	0 42	16 55	6 23	20 50	20 50	16 52	17 48	5 16			
F 13	20 9	2 51	5 15	20 35	0 37	19 43	0 19	20 47	1 31	17 17	1 1	19 19	0 33	13 51	0 45	21 59	0 42	16 55	6 23	20 50	20 50	16 50	17 49	5 16			
S 14	20 22	2s10	4 56	21 1	0 43	20 2	0 17	20 35	1 30	17 14	1 1	19 19	0 33	13 50	0 45	21 59	0 42	16 55	6 23	20 50	20 49	16 49	17 49	5 16			
S 15	20 34	7 0	4 22	21 27	0 49	20 19	0 15	20 23	1 29	17 12	1 1	19 19	0 33	13 50	0 45	21 59	0 42	16 55	6 23	20 50	20 48	16 47	17 50	5 16			
M16	20 46	11 26	3 34	21 51	0 55	20 37	0 12	20 11	1 28	17 9	1 1	19 20	0 33	13 50	0 45	21 59	0 42	16 54	6 23	20 50	20 48	16 45	17 50	5 16			
T 17	20 58	15 15	2 35	22 14	1 1	20 53	0 10	19 59	1 27	17 6	1 1	19 20	0 34	13 49	0 45	21 59	0 42	16 54	6 23	20 50	20 47	16 43	17 51	5 16			
W18	21 9	18 17	1 30	22 37	1 7	21 9	0 8	19 46	1 26	17 4	1 1	19 20	0 34	13 49	0 45	22 0	0 42	16 54	6 23	20 50	20 47	16 41	17 51	5 16			
T 19	21 20	20 23	0 22	22 58	1 13	21 25	0 5	19 33	1 25	17 1	1 0	19 21	0 34	13 48	0 45	22 0	0 42	16 54	6 23	20 50	20 46	16 40	17 52	5 16			
F 20	21 31	21 27	0n47	23 17	1 18	21 40	0 3	19 20	1 24	16 58	1 0	19 21	0 34	13 48	0 45	22 0	0 42	16 54	6 23	20 50	20 45	16 38	17 52	5 16			
S 21	21 41	21 30	1 52	23 36	1 23	21 54	0 0	19 7	1 23	16 55	1 0	19 22	0 34	13 48	0 45	22 0	0 42	16 54	6 23	20 50	20 45	16 36	17 53	5 16			
S 22	21 51	20 32	2 52	23 54	1 28	22 7	0s 2	18 54	1 22	16 52	1 0	19 22	0 34	13 47	0 45	22 0	0 42	16 54	6 23	20 49	20 44	16 34	17 53	5 16			
M23	22 0	18 39	3 43	24 10	1 33	22 20	0 4	18 40	1 22	16 49	1 0	19 23	0 34	13 47	0 45	22 0	0 42	16 54	6 23	20 49	20 43	16 33	17 54	5 16			
T 24	22 9	16 0	4 25	24 25	1 38	22 33	0 7	18 27	1 21	16 46	1 0	19 23	0 35	13 46	0 45	22 0	0 42	16 54	6 23	20 49	20 43	16 31	17 54	5 16			
W25	22 17	12 42	4 55	24 39	1 42	22 44	0 9	18 13	1 20	16 43	1 0	19 24	0 35	13 46	0 44	22 1	0 42	16 54	6 23	20 49	20 42	16 29	17 55	5 16			
T 26	22 25	8 54	5 12	24 51	1 46	22 55	0 12	17 59	1 19	16 40	1 0	19 25	0 35	13 45	0 44	22 1	0 42	16 54	6 23	20 49	20 42	16 27	17 55	5 16			
F 27	22 33	4 43	5 17	25 2	1 50	23 5	0 14	17 45	1 18	16 37	1 0	19 25	0 35	13 44	0 44	22 1	0 42	16 54	6 23	20 49	20 41	16 25	17 55	5 16			
S 28	22 40	0 17	5 7	25 12	1 54	23 15	0 16	17 30	1 17	16 34	1 0	19 26	0 35	13 44	0 44	22 1	0 42	16 54	6 23	20 49	20 40	16 24	17 56	5 16			
S 29	22 46	4n15	4 43	25 20	1 57	23 23	0 19	17 16	1 16	16 31	0 59	19 27	0 35	13 43	0 44	22 1	0 42	16 54	6 23	20 49	20 40	16 22	17 56	5 16			
M30	22s52	8n44	4n 4	25s27	2s 0	23s31	0s21	17s 1	1s15	16s27	0s59	19n27	0n36	13s43	0s44	22n 1	0s42	16n54	6s23	20s49	20s39	16s20	17s56	5n16			

ASTRODIENST EPHEMERIS for the year 1416
geocentric

DECEMBER 1416 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	5 13 59	18°00'08	25°46'27	21°15'15	17°49'49	17°38'17	18°44'18	5°R45	25°40'25	14°R35	21°R49	2°58'2	2°4'28	28°35'20	20°59'20	T 1
W 2	5 17 56	19°1'14	9°22'28	28°50'23	18°24'18	18°15'5	5°43'25	14°33'14	21°48'21	2°59'2	2°1'28	28°41'21	21°6'21	W 2		
T 3	5 21 52	20°2'20	23°25'0	24°20'19	18°25'18	5°40'25	14°32'14	21°47'21	3°0'0	1°58'28	28°48'21	21°12'21	T 3			
F 4	5 25 49	21°3'27	7°52'2	2°0'25	25°36'19	18°36'5	5°37'25	14°30'21	21°46'3	3°R 0	1°55'28	28°55'21	F 4			
S 5	5 29 45	22°4'35	22°39'3	3°35'26	20°51'20	20°40'18	18°47'5	5°35'25	14°29'21	21°45'3	1°52'29	29°1'21	S 5			
S 6	5 33 42	23°5'42	7°38'5	5°10'28	21°26'18	18°58'5	5°32'25	14°27'21	21°43'2	2°58'1	1°49'29	21°32'21	S 6			
M 7	5 37 39	24°6'51	22°40'6	6°44'29	22°12'19	19°9'5	5°29'25	14°26'21	21°42'2	2°55'1	1°45'29	21°38'21	M 7			
T 8	5 41 35	25°7'59	7°28'8	8°19'0	22°57'19	19°20'5	5°26'25	14°24'21	21°41'2	2°52'1	1°42'29	21°45'21	T 8			
W 9	5 45 32	26°9'08	22°22'9	9°53'1	23°43'19	19°31'5	5°23'25	14°22'21	21°40'2	2°49'1	1°39'29	21°51'21	W 9			
T 10	5 49 28	27°10'18	6°47'11	11°27'3	24°28'19	19°43'5	5°19'25	14°21'21	21°39'2	2°47'1	1°36'29	21°58'21	T 10			
F 11	5 53 25	28°11'28	20°49'13	1°4'2	25°14'19	19°54'5	5°16'25	14°19'21	21°37'2	2°45'1	1°33'29	22°4'21	F 11			
S 12	5 57 21	29°12'39	4°29'14	3°3'5	26°0'20	20°6'5	5°12'26	14°18'21	21°36'2	2°D45	1°29'29	22°11'21	S 12			
S 13	6 1 18	0°13'50	17°47'16	6°55'26	20°17'2	5°9'26	4°14'14	21°35'2	2°46'1	1°26'29	29°55'22	22°17'21	S 13			
M14	6 5 14	1°15'01	0°45'17	8°10'27	20°29'2	5°5'26	4°14'14	21°34'2	2°48'1	1°23'29	0°2'22	22°24'21	M14			
T 15	6 9 11	2°16'13	13°27'19	9°25'28	20°41'2	5°2'26	4°13'14	21°33'2	2°50'1	1°20'0	0°8'22	22°30'21	T 15			
W16	6 13 8	3°17'25	25°55'20	10°41'29	20°53'2	4°58'26	14°11'14	21°32'2	2°51'1	1°17'0	0°15'22	22°36'21	W16			
T 17	6 17 4	4°18'37	8°12'22	11°56'29	21°5'2	4°54'26	14°9'14	21°30'2	2°R51	1°14'0	0°22'22	22°43'21	T 17			
F 18	6 21 1	5°19'50	20°20'23	13°12'0	21°17'2	4°50'26	14°8'14	21°29'2	2°49'1	1°10'0	0°29'22	22°49'21	F 18			
S 19	6 24 57	6°21'02	2°21'24	14°27'1	21°29'2	4°46'26	14°6'14	21°28'2	2°46'1	1°7'0	0°35'22	22°56'21	S 19			
S 20	6 28 54	7°22'15	14°17'26	15°43'2	2°4'21	21°42'2	4°42'26	14°4'14	21°27'2	2°41'1	1°4'0	0°42'23	23°2'21	S 20		
M21	6 32 50	8°23'27	26°10'27	16°58'2	21°54'2	4°38'26	14°3'14	21°26'2	2°35'1	1°1'0	0°49'23	23°8'21	M21			
T 22	6 36 47	9°24'38	8°0'28	18°13'3	22°6'2	4°34'26	14°1'14	21°25'2	2°27'1	0°58'0	0°55'23	23°15'21	T 22			
W23	6 40 43	10°25'50	19°51'29	19°29'4	22°19'2	4°30'26	13°59'14	21°23'2	2°20'1	0°54'1	1°2'23	23°21'21	W23			
T 24	6 44 40	11°27'01	1°45'0	20°44'5	22°31'2	4°25'26	13°58'14	21°22'2	2°13'1	0°51'1	1°9'23	23°27'21	T 24			
F 25	6 48 37	12°28'11	13°44'1	21°59'5	22°44'2	4°21'26	13°56'14	21°21'2	2°8'0	0°48'1	1°15'23	23°33'21	F 25			
S 26	6 52 33	13°29'21	25°52'2	2°6'23	23°15'6	22°57'2	4°17'26	13°54'14	21°20'2	2°4'0	0°45'1	1°22'23	S 26			
S 27	6 56 30	14°30'30	8°13'2	24°30'7	23°10'2	4°12'26	13°52'14	21°19'2	2°2'0	0°42'1	1°29'23	23°46'21	S 27			
M28	7 0 26	15°31'38	20°52'3	25°46'8	23°23'2	4°8'26	13°51'14	21°18'2	2°D 2	0°39'1	1°36'23	23°52'21	M28			
T 29	7 4 23	16°32'46	3°53'3	27°1'8	23°35'2	4°3'26	13°49'14	21°17'2	2°3'0	0°35'1	1°42'23	23°58'21	T 29			
W30	7 8 19	17°33'53	17°20'3	28°16'9	23°48'2	3°59'26	13°47'14	21°16'2	2°4'0	0°32'1	1°49'24	24°4'21	W30			
T 31	7 12 16	18°34'59	1°15'3	29°31'10	24°24'2	3°54'26	13°46'14	21°15'2	2°R 5	0°29'1	1°56'24	24°10'21	T 31			

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	22s58	12n58	3n12	25s32	2s 3	23s39	0s23	16s46	1s14	16s24	0s59	19n28	0n36	13s42	0s44	22n 1	0s42	16n54	6s23	20s49	20s38	16s18	17s57	5n16					
W 2	23 3	16 40	2 7	25 36	2 5	23 45	0 26	16 31	1 13	16 21	0 59	19 29	0 36	13 41	0 44	22 2	0 42	16 54	6 23	20 49	20 38	16 16	17 57	5 16					
T 3	23 8	19 32	0 53	25 38	2 8	23 51	0 28	16 16	1 12	16 17	0 59	19 30	0 36	13 41	0 44	22 2	0 42	16 54	6 22	20 49	20 37	16 15	17 57	5 17					
F 4	23 13	21 15	0s27	25 39	2 9	23 57	0 30	16 1	1 11	16 14	0 59	19 30	0 36	13 40	0 44	22 2	0 42	16 54	6 22	20 49	20 37	16 13	17 58	5 17					
S 5	23 17	21 32	1 46	25 38	2 11	24 1	0 32	15 45	1 10	16 11	0 59	19 31	0 36	13 39	0 44	22 2	0 42	16 54	6 22	20 49	20 36	16 11	17 58	5 17					
S 6	23 20	20 18	3 0	25 36	2 11	24 5	0 35	15 30	1 9	16 7	0 59	19 32	0 36	13 39	0 44	22 2	0 42	16 54	6 22	20 49	20 35	16 9	17 58	5 17					
M 7	23 23	17 39	4 1	25 32	2 12	24 8	0 37	15 14	1 9	16 4	0 59	19 33	0 37	13 38	0 44	22 2	0 42	16 54	6 22	20 48	20 35	16 7	17 59	5 17					
T 8	23 25	13 50	4 45	25 27	2 12	24 10	0 39	14 58	1 8	16 0	0 59	19 34	0 37	13 37	0 44	22 3	0 42	16 54	6 22	20 48	20 34	16 5	17 59	5 17					
W 9	23 27	9 13	5 9	25 20	2 11	24 11	0 41	14 42	1 7	15 56	0 59	19 35	0 37	13 37	0 44	22 3	0 42	16 54	6 22	20 47	20 33	16 4	17 59	5 17					
T 10	23 29	4 11	5 14	25 11	2 10	24 12	0 43	14 26	1 6	15 53	0 59	19 36	0 37	13 36	0 44	22 3	0 42	16 54	6 22	20 47	20 33	16 2	17 59	5 17					
F 11	23 30	0s56	4 59	25 1	2 9	24 12	0 45	14 10	1 5	15 49	0 59	19 37	0 37	13 35	0 44	22 3	0 42	16 54	6 22	20 47	20 32	16 0	18 0	5 18					
S 12	23 31	5 53	4 28	24 49	2 6	24 11	0 47	13 54	1 4	15 45	0 59	19 38	0 37	13 34	0 44	22 3	0 42	16 54	6 22	20 47	20 31	15 58	18 0	5 18					
S 13	23 31	10 26	3 43	24 35	2 4	24 9	0 50	13 37	1 3	15 41	0 58	19 39	0 38	13 33	0 44	22 3	0 42	16 54	6 22	20 47	20 31	15 56	18 0	5 18					
M14	23 30	14 23	2 47	24 20	2 0	24 7	0 52	13 21	1 2	15 38	0 58	19 40	0 38	13 33	0 44	22 4	0 42	16 54	6 22	20 47	20 30	15 54	18 0	5 18					
T 15	23 30	17 35	1 44	24 4	1 56	24 4	0 53	13 4	1 1	15 34	0 58	19 41	0 38	13 32	0 44	22 4	0 42	16 54	6 22	20 47	20 29	15 53	18 0	5 18					
W16	23 28	19 55	0 38	23 46	1 51	24 0	0 55	12 47	1 0	15 30	0 58	19 42	0 38	13 31	0 44	22 4	0 42	16 54	6 22	20 48	20 29	15 51	18 1	5 18					
T 17	23 27	21 16	0n29	23 26	1 45	23 56	0 57	12 30	0 59	15 26	0 58	19 43	0 38	13 30	0 44	22 4	0 42	16 54	6 22	20 48	20 28	15 49	18 1	5 19					
F 18	23 24	21 36	1 34	23 6	1 38	23 50	0 59	12 13	0 58	15 22	0 58	19 44	0 38	13 29	0 44	22 4	0 42	16 54	6 22	20 47	20 28	15 47	18 1	5 19					
S 19	23 22	20 55	2 34	22 44	1 31	23 44	1 1	11 56	0 57	15 18	0 58	19 45	0 38	13 28	0 44	22 5	0 42	16 54	6 21	20 47	20 27	15 45	18 1	5 19					
S 20	23 18	19 19	3 27	22 21	1 22	23 37	1 3	11 39	0 56	15 14	0 58	19 46	0 39	13 28	0 44	22 5	0 42	16 54	6 21	20 46	20 26	15 43	18 1	5 19					
M21	23 15	16 53	4 10	21 58	1 13	23 30	1 4	11 22	0 55	15 10	0 58	19 47	0 39	13 27	0 44	22 5	0 42	16 54	6 21	20 44	20 26	15 42	18 1	5 19					
T 22	23 11	13 46	4 42	21 33	1 3	23 22	1 6	11 4	0 54	15 6	0 58	19 48	0 39	13 26	0 44	22 5	0 42	16 54	6 21	20 43	20 25	15 40	18 1	5 20					
W23	23 6	10 7	5 3	21 9	0 51	23 13	1 8	10 47	0 54	15 2	0 58	19 50	0 39	13 25	0 44	22 5	0 41	16 54	6 21	20 42	20 24	15 38	18 1	5 20					
T 24	23 1	6 4	5 10	20 44	0 38	23 3	1 9	10 29	0 53	14 58	0 58	19 51	0 39	13 24	0 44	22 6	0 41	16 54	6 21	20 40	20 24	15 36	18 1	5 20					
F 25	22 56	1 45	5 4	20 19	0 25	22 53	1 11	10 12	0 52	14 53	0 58	19 52	0 39	13 23	0 44	22 6	0 41	16 54	6 21	20 39	20 23	15 34	18 1	5 20					
S 26	22 50	2n41	4 44	19 55	0 10	22 42	1 12	9 54	0 51	14 49	0 58	19 53	0 39	13 22	0 44	22 6	0 41	16 54	6 21	20 38	20 22	15 32	18 1	5 21					
S 27	22 43	7 6	4 10	19 32	0n 5	22 30	1 14	9 36	0 50	14 45	0 58	19 54	0 39	13 21	0 44	22 6	0 41	16 54	6 21	20 38	20 22	15 30	18 2	5 21					
M28	22 36	11 19	3 24	19 10	0 22	22 17	1 15	9 18	0 49	14 41	0 58	19 56	0 40	13 20	0 44	22 6	0 41	16 54	6 21	20 38	20 21	15 29	18 2	5 21					
T 29	22 29	15 9	2 27	18 49	0 39	22 4	1 17	9 0	0 48	14 36	0 58	19 57	0 40	13 19	0 44	22 6	0 41	16 54	6 20	20 38	20 20	15 27	18 2	5 21					
W30	22 21	18 19	1 19	18 30	0 58	21 50	1 18	8 42	0 47	14 32	0 58	19 58	0 40	13 18	0 43	22 7	0 41	16 54	6 20	20 38	20 20	15 25	18 2	5 22					
T 31	22s13	20n33	0n 5	18s14	1n16	21s36	1s19	8s24	0s46	14s28	0s58	19n59	0n40	13s17	0s43	22n 7	0s41	16n54	6s20	20s39	20s19	15s23	18s 1	5n22					