



Astrodienst Ephemeris Tables for the year 1616

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 1616
geocentric

JANUARY 1616 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	6 39 54	10°36'12"	7°11'22"	22°R10	12°R21	13°38'23"	14°47'55"	19°V50	7°R41	3°41'4"	6°R48	21°R16	22°H 2	28°33'5"	9°41'14"	F 1
S 2	6 43 50	11° 7'22"	19°32'	22°D 2	12°D21	14° 9'	15° 8'	19°52'	7°38'	3° 4'	6°47'	21°H 3	21°58'	28°41'	9°19'	S 2
S 3	6 47 47	12° 8'31"	1°35'35"	22°47'4"	12°47'23"	14°56'	15°21'	19°53'	7°36'	3° 4'	6°47'	20°50'	21°55'	28°48'	9°23'	S 3
M 4	6 51 44	13° 9'40"	13°33'	22°14'	12°28'	15°42'	15°33'	19°54'	7°33'	3° 4'	6°46'	20°36'	21°52'	28°55'	9°27'	M 4
T 5	6 55 40	14°10'48"	25°26'	22°32'	12°35'	16°29'	15°46'	19°55'	7°31'	3°R 4	6°46'	20°24'	21°49'	29° 2'	9°31'	T 5
W 6	6 59 37	15°11'56"	7°11'17"	22°57'	12°44'	17°15'	15°59'	19°57'	7°28'	3° 4'	6°46'	20°14'	21°46'	29° 8'	9°36'	W 6
T 7	7 3 33	16°13'04"	19° 6'	23°28'	12°55'	18° 2'	16°12'	19°59'	7°26'	3° 4'	6°45'	20° 6'	21°43'	29°15'	9°40'	T 7
F 8	7 7 30	17°14'12"	0°11'57"	24° 5'	13° 9'	18°49'	16°24'	20° 0'	7°23'	3° 4'	6°45'	20° 2'	21°39'	29°22'	9°44'	F 8
S 9	7 11 26	18°15'19"	12°52'	24°47'	13°24'	19°35'	16°37'	20° 2'	7°20'	3° 4'	6°45'	20° 0'	21°36'	29°28'	9°49'	S 9
S 10	7 15 23	19°16'26"	24°56'	25°34'	13°42'	20°22'	16°49'	20° 4'	7°18'	3° 3'	6°45'	19°D59	21°33'	29°35'	9°53'	S 10
M 11	7 19 19	20°17'33"	7°13'	26°25'	14° 2'	21° 9'	17° 2'	20° 6'	7°15'	3° 3'	6°44'	20° 0'	21°30'	29°42'	9°58'	M 11
T 12	7 23 16	21°18'40"	19°48'	27°19'	14°24'	21°56'	17°14'	20° 8'	7°13'	3° 3'	6°44'	20°R 1	21°27'	29°48'	10° 2'	T 12
W 13	7 27 13	22°19'46"	2°11'46"	28°18'	14°47'	22°42'	17°26'	20°11'	7°10'	3° 3'	6°44'	20° 0'	21°23'	29°55'	10° 6'	W 13
T 14	7 31 9	23°20'53"	16°12'	29°19'	15°13'	23°29'	17°39'	20°13'	7° 8'	3° 2'	6°44'	19°58'	21°20'	0°11'2"	10°11'	T 14
F 15	7 35 6	24°21'59"	0°47'7"	0°32'23"	15°40'	24°16'	17°51'	20°16'	7° 5'	3° 2'	6°44'	19°53'	21°17'	0° 9'	10°15'	F 15
S 16	7 39 2	25°23'04"	14°31'	1°29'	16° 9'	25° 3'	18° 3'	20°18'	7° 3'	3° 2'	6°43'	19°46'	21°14'	0°15'	10°20'	S 16
S 17	7 42 59	26°24'09"	29°22'	2°38'	16°39'	25°50'	18°15'	20°21'	7° 1'	3° 1'	6°43'	19°38'	21°11'	0°22'	10°24'	S 17
M 18	7 46 55	27°25'14"	14°33'2"	3°49'	17°11'	26°37'	18°27'	20°24'	6°58'	3° 1'	6°43'	19°29'	21° 8'	0°29'	10°29'	M 18
T 19	7 50 52	28°26'18"	29°51'	5° 1'	17°44'	27°24'	18°39'	20°27'	6°56'	3° 0'	6°43'	19°21'	21° 4'	0°35'	10°33'	T 19
W 20	7 54 49	29°27'20"	15°44'8"	6°16'	18°19'	28°11'	18°51'	20°30'	6°53'	3° 0'	6°43'	19°15'	21° 1'	0°42'	10°38'	W 20
T 21	7 58 45	0°28'22"	0°11'12"	7°32'	18°55'	28°58'	19° 3'	20°33'	6°51'	2°59'	6°D43	19°12'	20°58'	0°49'	10°43'	T 21
F 22	8 2 42	1°29'23"	14°54'	8°49'	19°33'	29°45'	19°15'	20°36'	6°49'	2°59'	6°43'	19°D10	20°55'	0°55'	10°47'	F 22
S 23	8 6 38	2°30'23"	29°11'	10° 8'	20°11'	0°33'2"	19°26'	20°39'	6°47'	2°58'	6°43'	19°10'	20°52'	1° 2'	10°52'	S 23
S 24	8 10 35	3°31'21"	13°V 1	11°28'	20°51'	1°19'	19°38'	20°43'	6°44'	2°58'	6°43'	19°12'	20°49'	1° 9'	10°56'	S 24
M 25	8 14 31	4°32'18"	26°24'	12°49'	21°32'	2° 6'	19°50'	20°46'	6°42'	2°57'	6°43'	19°13'	20°45'	1°15'	11° 1'	M 25
T 26	8 18 28	5°33'14"	9°B 23	14°11'	22°14'	2°53'	20° 1'	20°50'	6°40'	2°56'	6°44'	19°R13	20°42'	1°22'	11° 6'	T 26
W 27	8 22 24	6°34'08"	22° 2'	15°35'	22°58'	3°41'	20°12'	20°53'	6°38'	2°55'	6°44'	19°12'	20°39'	1°29'	11°10'	W 27
T 28	8 26 21	7°35'02"	4°11'24"	16°59'	23°42'	4°28'	20°24'	20°57'	6°36'	2°55'	6°44'	19° 8'	20°36'	1°36'	11°15'	T 28
F 29	8 30 18	8°35'54"	16°35'	18°24'	24°27'	5°15'	20°35'	21° 1'	6°33'	2°54'	6°44'	19° 3'	20°33'	1°42'	11°19'	F 29
S 30	8 34 14	9°36'44"	28°36'	19°51'	25°13'	6° 2'	20°46'	21° 5'	6°31'	2°53'	6°44'	18°56'	20°29'	1°49'	11°24'	S 30
S 31	8 38 11	10°37'33"	10°32'	21°318	26°47'0"	6°44'9"	20°47'57"	21°V 9	6°29'	2°52'	6°44'	18°H49	20°H26	1°45'6"	11°29'	S 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl
F 1	23s 6	26n23	4n52	20s 9	3n 7	17s34	4n48	23s45	0s56	22s 8	0n30	5n25	2s33	23n37	0n21	0n 7
S 2	23 1	28 5	5 1	20 13	3 2	17 28	4 54	23 41	0 57	22 10	0 30	5 25	2 33	23 37	0 21	0 7
S 3	22 56	28 25	4 56	20 19	2 56	17 24	4 58	23 36	0 57	22 11	0 30	5 26	2 33	23 38	0 21	0 7
M 4	22 50	27 24	4 38	20 27	2 50	17 20	5 3	23 31	0 57	22 13	0 30	5 27	2 32	23 38	0 21	0 7
T 5	22 44	25 9	4 8	20 35	2 42	17 17	5 6	23 25	0 58	22 14	0 30	5 28	2 32	23 38	0 21	0 7
W 6	22 37	21 49	3 27	20 45	2 34	17 15	5 10	23 20	0 58	22 15	0 30	5 28	2 32	23 38	0 21	0 7
T 7	22 30	17 37	2 37	20 55	2 25	17 14	5 13	23 14	0 58	22 17	0 30	5 29	2 32	23 38	0 21	0 7
F 8	22 23	12 43	1 40	21 5	2 16	17 13	5 15	23 8	0 58	22 18	0 30	5 30	2 31	23 38	0 21	0 8
S 9	22 15	7 20	0 38	21 16	2 7	17 13	5 17	23 2	0 59	22 20	0 30	5 31	2 31	23 39	0 21	0 8
S 10	22 6	1 37	0s26	21 27	1 58	17 13	5 19	22 55	0 59	22 21	0 30	5 32	2 31	23 39	0 21	0 8
M 11	21 57	4s16	1 31	21 38	1 48	17 14	5 20	22 48	0 59	22 22	0 30	5 33	2 30	23 39	0 21	0 8
T 12	21 48	10 7	2 33	21 49	1 39	17 16	5 21	22 41	1 0	22 23	0 30	5 34	2 30	23 39	0 21	0 8
W 13	21 38	15 43	3 28	22 0	1 29	17 18	5 21	22 34	1 0	22 24	0 29	5 35	2 30	23 39	0 21	0 8
T 14	21 28	20 47	4 15	22 10	1 19	17 21	5 21	22 26	1 0	22 26	0 29	5 37	2 30	23 39	0 21	0 8
F 15	21 17	24 54	4 48	22 20	1 10	17 24	5 21	22 18	1 0	22 27	0 29	5 38	2 29	23 39	0 21	0 9
S 16	21 6	27 38	5 5	22 29	1 0	17 27	5 20	22 10	1 1	22 28	0 29	5 39	2 29	23 40	0 21	0 9
S 17	20 55	28 31	5 2	22 37	0 51	17 31	5 20	22 1	1 1	22 29	0 29	5 40	2 29	23 40	0 21	0 9
M 18	20 43	27 18	4 38	22 44	0 42	17 35	5 19	21 53	1 1	22 30	0 29	5 42	2 28	23 40	0 21	0 9
T 19	20 31	24 2	3 53	22 51	0 33	17 40	5 17	21 44	1 1	22 31	0 29	5 43	2 28	23 40	0 21	0 9
W 20	20 19	19 5	2 53	22 57	0 24	17 44	5 16	21 35	1 2	22 32	0 29	5 44	2 28	23 40	0 21	0 10
T 21	20 6	13 0	1 40	23 2	0 15	17 49	5 14	21 25	1 2	22 33	0 29	5 46	2 28	23 40	0 21	0 10
F 22	19 52	6 19	0 23	23 5	0 7	17 54	5 12	21 15	1 2	22 34	0 29	5 47	2 27	23 40	0 21	0 10
S 23	19 39	0n30	0n54	23 8	0s 2	17 59	5 9	21 6	1 2	22 35	0 29	5 49	2 27	23 40	0 21	0 11
S 24	19 25	7 4	2 5	23 10	0 10	18 4	5 7	20 55	1 2	22 36	0 29	5 50	2 27	23 41	0 21	0 11
M 25	19 10	13 7	3 7	23 10	0 18	18 10	5 4	20 45	1 3	22 37	0 29	5 52	2 27	23 41	0 21	0 11
T 26	18 55	18 24	3 58	23 10	0 26	18 15	5 1	20 34	1 3	22 38	0 29	5 53	2 26	23 41	0 21	0 11
W 27	18 40	22 45	4 36	23 8	0 33	18 20	4 58	20 24	1 3	22 39	0 29	5 55	2 26	23 41	0 21	0 12
T 28	18 25	25 58	4 59	23 5	0 41	18 26	4 55	20 13	1 3	22 40	0 29	5 57	2 26	23 41	0 21	0 12
F 29	18 9	27 56	5 9	23 1	0 48	18 31	4 52	20 1	1 3	22 41	0 29	5 58	2 25	23 41	0 21	0 12
S 30	17 53	28 34	5 5	22 55	0 54	18 36	4 48	19 50	1 3	22 41	0 29	6 0	2 25	23 41	0 21	0 13
S 31	17s37	27n51	4n48	22s48	1s 1	18s42	4n44	19s38	1s 4	22s42	0n29	6n 2	2s25	23n41	0n21	0n13

Julian Day Number = 2311291.5, Delta T = 70.39 sec
Ecliptic obliquity = 23°29'30", Nutation = 0°00'03", out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°22'51", Lahiri = 18°29'52"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1616

geocentric

FEBRUARY 1616 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	8 42 7	11°38'21"	22°24'	22°36'	26°48'	7°36'	21°8'	21°13'	6°R27	2°R51	6°45'	18°R41	20°23'	2°2'	11°33'	M 1
T 2	8 46 4	12°39'08"	4°14'	24°15'	27°37'	8°24'	21°19'	21°17'	6°25'	2°50'	6°45'	18°35'	20°20'	2°9'	11°38'	T 2
W 3	8 50 0	13°39'53"	16°5'	25°45'	28°27'	9°11'	21°30'	21°22'	6°24'	2°50'	6°45'	18°29'	20°17'	2°16'	11°42'	W 3
T 4	8 53 57	14°40'36"	27°58'	27°15'	29°17'	9°58'	21°40'	21°26'	6°22'	2°49'	6°45'	18°25'	20°14'	2°22'	11°47'	T 4
F 5	8 57 53	15°41'19"	9°54'	28°47'	0°9'	10°45'	21°51'	21°31'	6°20'	2°48'	6°46'	18°23'	20°10'	2°29'	11°52'	F 5
S 6	9 1 50	16°42'00"	21°57'	0°19'	1°0'	11°33'	22°1'	21°35'	6°18'	2°47'	6°46'	18°D23'	20°7'	2°36'	11°56'	S 6
S 7	9 5 47	17°42'40"	4°8'	1°53'	1°53'	12°20'	22°12'	21°40'	6°16'	2°46'	6°46'	18°24'	20°4'	2°42'	12°1'	S 7
M 8	9 9 43	18°43'19"	16°31'	3°27'	2°46'	13°7'	22°22'	21°45'	6°14'	2°45'	6°47'	18°26'	20°1'	2°49'	12°5'	M 8
T 9	9 13 40	19°43'56"	29°10'	5°2'	3°40'	13°54'	22°32'	21°49'	6°13'	2°43'	6°47'	18°27'	19°58'	2°56'	12°10'	T 9
W10	9 17 36	20°44'33"	12°7'	6°38'	4°35'	14°42'	22°42'	21°54'	6°11'	2°42'	6°48'	18°29'	19°55'	3°2'	12°14'	W10
T 11	9 21 33	21°45'08"	25°27'	8°14'	5°30'	15°29'	22°52'	21°59'	6°10'	2°41'	6°48'	18°R29'	19°51'	3°9'	12°19'	T 11
F 12	9 25 29	22°45'42"	9°11'	9°52'	6°25'	16°16'	23°2'	22°4'	6°8'	2°40'	6°49'	18°28'	19°48'	3°16'	12°24'	F 12
S 13	9 29 26	23°46'15"	23°21'	11°30'	7°22'	17°4'	23°12'	22°10'	6°6'	2°39'	6°49'	18°26'	19°45'	3°23'	12°28'	S 13
S 14	9 33 22	24°46'47"	7°54'	13°10'	8°18'	17°51'	23°21'	22°15'	6°5'	2°38'	6°50'	18°23'	19°42'	3°29'	12°33'	S 14
M15	9 37 19	25°47'17"	14°50'	9°16'	18°38'	23°31'	22°20'	22°20'	6°4'	2°36'	6°50'	18°20'	19°39'	3°36'	12°37'	M15
T 16	9 41 16	26°47'46"	7°54'	16°31'	10°13'	19°26'	23°40'	22°25'	6°2'	2°35'	6°51'	18°17'	19°35'	3°43'	12°42'	T 16
W17	9 45 12	27°48'13"	23°3'	18°13'	11°12'	20°13'	23°50'	22°31'	6°1'	2°34'	6°51'	18°14'	19°32'	3°49'	12°46'	W17
T 18	9 49 9	28°48'38"	8°3'	19°56'	12°10'	21°0'	23°59'	22°36'	5°59'	2°33'	6°52'	18°13'	19°29'	3°56'	12°51'	T 18
F 19	9 53 5	29°49'02"	22°55'	21°40'	13°9'	21°48'	24°8'	22°42'	5°58'	2°31'	6°52'	18°D13'	19°26'	4°3'	12°55'	F 19
S 20	9 57 2	0°49'24"	7°22'	23°26'	14°9'	22°35'	24°17'	22°48'	5°57'	2°30'	6°53'	18°14'	19°23'	4°9'	13°0'	S 20
S 21	10 0 58	1°49'44"	21°22'	25°12'	15°9'	23°22'	24°26'	22°53'	5°56'	2°29'	6°54'	18°15'	19°20'	4°16'	13°4'	S 21
M22	10 4 55	2°50'02"	4°56'	26°59'	16°9'	24°10'	24°34'	22°59'	5°55'	2°27'	6°54'	18°16'	19°16'	4°23'	13°8'	M22
T 23	10 8 51	3°50'18"	18°4'	28°47'	17°9'	24°57'	24°43'	23°5'	5°54'	2°26'	6°55'	18°17'	19°13'	4°29'	13°13'	T 23
W24	10 12 48	4°50'32"	0°36'	0°36'	18°10'	25°44'	24°51'	23°11'	5°53'	2°24'	6°56'	18°R18'	19°10'	4°36'	13°17'	W24
T 25	10 16 45	5°50'43"	13°13'	2°26'	19°12'	26°32'	25°0'	23°17'	5°52'	2°23'	6°57'	18°18'	19°7'	4°43'	13°21'	T 25
F 26	10 20 41	6°50'53"	25°23'	4°17'	20°13'	27°19'	25°8'	23°23'	5°51'	2°22'	6°57'	18°17'	19°4'	4°49'	13°26'	F 26
S 27	10 24 38	7°51'01"	7°21'	6°9'	21°15'	28°6'	25°16'	23°29'	5°50'	2°20'	6°58'	18°16'	19°1'	4°56'	13°30'	S 27
S 28	10 28 34	8°51'07"	19°14'	8°2'	22°18'	28°54'	25°24'	23°35'	5°49'	2°19'	6°59'	18°15'	18°57'	5°3'	13°34'	S 28
M29	10 32 31	9°51'10"	1°10'	9°56'	23°20'	29°41'	25°32'	23°41'	5°49'	2°17'	7°0'	18°13'	18°54'	5°9'	13°39'	M29

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
M 1	17s20	25n52	4n18	22s40	1s7	18s47	4n41	19s26	1s4	22s43	0n29	6n4	2s25	23n41	0n21	0n14	1n29	1s14	15s52	4s29	3s49	23n30	11s17	6n18	
T 2	17 3	22 45	3 37	22 31	1 13	18 52	4 37	19 14	1 4	22 44	0 29	6 5	2 24	23 41	0 21	0 14	1 29	1 13	15 52	4 32	3 50	23 28	11 16	6 18	
W 3	16 46	18 42	2 47	22 20	1 19	18 56	4 33	19 2	1 4	22 44	0 29	6 7	2 24	23 42	0 21	0 14	1 29	1 13	15 51	4 34	3 52	23 26	11 15	6 18	
T 4	16 28	13 55	1 49	22 8	1 24	19 1	4 28	18 49	1 4	22 45	0 29	6 9	2 24	23 42	0 21	0 15	1 29	1 12	15 51	4 35	3 53	23 23	11 14	6 18	
F 5	16 10	8 35	0 46	21 55	1 30	19 5	4 24	18 36	1 4	22 46	0 29	6 11	2 24	23 42	0 21	0 15	1 29	1 12	15 51	4 36	3 54	23 21	11 12	6 18	
S 6	15 52	2 54	0s20	21 40	1 34	19 9	4 20	18 23	1 4	22 46	0 29	6 13	2 23	23 42	0 21	0 16	1 30	1 12	15 50	4 36	3 55	23 19	11 11	6 18	
S 7	15 33	2s57	1 25	21 24	1 39	19 13	4 15	18 10	1 5	22 47	0 29	6 15	2 23	23 42	0 21	0 16	1 30	1 11	15 50	4 36	3 57	23 17	11 10	6 18	
M 8	15 15	8 47	2 28	21 6	1 43	19 17	4 11	17 57	1 5	22 48	0 29	6 17	2 23	23 42	0 21	0 17	1 30	1 11	15 50	4 35	3 58	23 15	11 9	6 18	
T 9	14 56	14 24	3 25	20 47	1 47	19 20	4 6	17 43	1 5	22 48	0 29	6 19	2 23	23 42	0 21	0 17	1 30	1 10	15 49	4 34	3 59	23 13	11 7	6 18	
W10	14 37	19 31	4 13	20 27	1 51	19 24	4 1	17 30	1 5	22 49	0 28	6 21	2 23	23 42	0 21	0 18	1 30	1 10	15 49	4 34	4 0	23 11	11 6	6 18	
T 11	14 17	23 51	4 49	20 5	1 54	19 26	3 57	17 16	1 5	22 50	0 28	6 23	2 22	23 42	0 21	0 18	1 30	1 9	15 49	4 34	4 2	23 8	11 5	6 19	
F 12	13 58	26 59	5 10	19 42	1 57	19 29	3 52	17 2	1 5	22 50	0 28	6 25	2 22	23 42	0 21	0 19	1 30	1 9	15 48	4 34	4 3	23 6	11 4	6 19	
S 13	13 38	28 32	5 13	19 17	2 0	19 31	3 47	16 47	1 5	22 51	0 28	6 27	2 22	23 42	0 21	0 19	1 30	1 8	15 48	4 35	4 4	23 4	11 2	6 19	
S 14	13 17	28 11	4 56	18 51	2 2	19 32	3 42	16 33	1 5	22 51	0 28	6 29	2 22	23 42	0 21	0 20	1 30	1 8	15 48	4 36	4 5	23 2	11 1	6 19	
M15	12 57	25 49	4 20	18 23	2 4	19 34	3 37	16 18	1 5	22 52	0 28	6 31	2 21	23 42	0 21	0 20	1 30	1 7	15 47	4 38	4 7	23 0	11 0	6 19	
T 16	12 37	21 37	3 24	17 54	2 5	19 35	3 32	16 3	1 5	22 52	0 28	6 34	2 21	23 42	0 21	0 21	1 30	1 7	15 47	4 39	4 8	22 58	10 58	6 19	
W17	12 16	15 59	2 14	17 24	2 6	19 35	3 27	15 48	1 5	22 53	0 28	6 36	2 21	23 43	0 21	0 21	1 30	1 6	15 47	4 40	4 9	22 55	10 57	6 19	
T 18	11 55	9 24	0 56	16 52	2 7	19 35	3 21	15 33	1 5	22 53	0 28	6 38	2 21	23 43	0 21	0 22	1 30	1 6	15 46	4 40	4 10	22 53	10 56	6 19	
F 19	11 34	2 25	0n26	16 19	2 7	19 35	3 16	15 18	1 5	22 53	0 28	6 40	2 21	23 43	0 21	0 22	1 30	1 5	15 46	4 40	4 12	22 51	10 55	6 19	
S 20	11 12	4n31	1 44	15 44	2 7	19 34	3 11	15 3	1 5	22 54	0 28	6 43	2 20	23 43	0 21	0 23	1 30	1 5	15 46	4 40	4 13	22 49	10 53	6 19	
S 21	10 51	11 2	2 53	15 8	2 6	19 33	3 6	14 47	1 5	22 54	0 28	6 45	2 20	23 43	0 21	0 23	1 30	1 4	15 45	4 39	4 14	22 46	10 52	6 19	
M22	10 29	16 49	3 50	14 30	2 5	19 32	3 0	14 31	1 5	22 55	0 28	6 47	2 20	23 43	0 21	0 24	1 30	1 4	15 45	4 39	4 15	22 44	10 51	6 19	
T 23	10 7	21 37	4 34	13 51	2 3	19 30	2 55	14 15	1 5	22 55	0 28	6 50	2 20	23 43	0 21	0 25	1 30	1 3	15 45	4 38	4 17	22 42	10 49	6 19	
W24	9 45	25 17	5 2	13 10	2 1	19 27	2 50	13 59	1 5	22 55	0 28	6 52	2 20	23 43	0 21	0 25	1 30	1 3	15 45	4 38	4 18	22 40	10 48	6 20	
T 25	9 23	27 39	5 15	12 28	1 58	19 24	2 44	13 43	1 5	22 56	0 28	6 54	2 19	23 43	0 21	0 26	1 30	1 2	15 44	4 38	4 19	22 37	10 47	6 20	
F 26	9 1	28 39	5 14	11 45	1 55	19 21	2 39	13 27	1 5	22 56	0 28	6 57	2 19	23 43	0 21	0 26	1 30	1 2	15 44	4 39	4 20	22 35	10 45	6 20	
S 27	8 39	28 16	4 59	11 0	1 52	19 17	2 34	13 11	1 5	22 56	0 28	6 59	2 19	23 43	0 21	0 27	1 30	1 1	15 44	4 39	4 22	22 33	10 44	6 20	
S 28	8 16	26 35	4 32	10 14	1 47	19 12	2 28	12 54	1 5	22 57	0 28	7 2	2 19	23 43	0 21	0 28	1 30	1 1	15 43	4 40	4 23	22 31	10 43	6 20	
M29	7s53	23n45	3n53	9s27	1s43	19s7	2n23	12s37	1s5	22s57	0n28	7n4	2s19	23n43	0n21	0n28	1n30	1s0	15s43	4s40	4s24	22n28	10s41	6n20	

Julian Day Number = 2311322.5, Delta T = 70.30 sec
 Ecliptic obliquity = 23°29'30", Nutation = 0°00'04", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 19°22'55", Lahiri = 18°29'56"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1616
geocentric

MARCH 1616 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	10 36 27	10 ^h 51'12	12 ^h 53	11 ^h 51	24 ^h 23	0 ^h 28	25 ^h 39	23 ^h 48	5 ^h R48	2 ^h R16	7 ^h 0	18 ^h R12	18 ^h 51	5 ^h 16	13 ^h 43	T 1
W 2	10 40 24	11 ^h 51'11	24 ^h 46	13 ^h 47	25 ^h 26	1 ^h 15	25 ^h 47	23 ^h 54	5 ^h 47	2 ^h 14	7 ^h 1	18 ^h 11	18 ^h 48	5 ^h 23	13 ^h 47	W 2
T 3	10 44 20	12 ^h 51'08	6 ^h 45	15 ^h 43	26 ^h 30	2 ^h 3	25 ^h 54	24 ^h 0	5 ^h 47	2 ^h 13	7 ^h 2	18 ^h 11	18 ^h 45	5 ^h 30	13 ^h 51	T 3
F 4	10 48 17	13 ^h 51'04	18 ^h 52	17 ^h 40	27 ^h 33	2 ^h 50	26 ^h 2	24 ^h 7	5 ^h 46	2 ^h 11	7 ^h 3	18 ^h D11	18 ^h 41	5 ^h 36	13 ^h 55	F 4
S 5	10 52 14	14 ^h 50'57	1 ^h 47	19 ^h 38	28 ^h 37	3 ^h 37	26 ^h 9	24 ^h 13	5 ^h 46	2 ^h 9	7 ^h 4	18 ^h 11	18 ^h 38	5 ^h 43	13 ^h 59	S 5
S 6	10 56 10	15 ^h 50'49	13 ^h 34	21 ^h 36	29 ^h 41	4 ^h 24	26 ^h 16	24 ^h 20	5 ^h 45	2 ^h 8	7 ^h 5	18 ^h 11	18 ^h 35	5 ^h 50	14 ^h 3	S 6
M 7	11 0 7	16 ^h 50'38	26 ^h 12	23 ^h 34	0 ^h 46	5 ^h 12	26 ^h 22	24 ^h 27	5 ^h 45	2 ^h 6	7 ^h 6	18 ^h 11	18 ^h 32	5 ^h 56	14 ^h 7	M 7
T 8	11 4 3	17 ^h 50'26	9 ^h 11	25 ^h 33	1 ^h 51	5 ^h 59	26 ^h 29	24 ^h 33	5 ^h 44	2 ^h 5	7 ^h 7	18 ^h R11	18 ^h 29	6 ^h 3	14 ^h 12	T 8
W 9	11 8 0	18 ^h 50'13	22 ^h 12	27 ^h 31	2 ^h 55	6 ^h 46	26 ^h 36	24 ^h 40	5 ^h 44	2 ^h 3	7 ^h 8	18 ^h 11	18 ^h 26	6 ^h 10	14 ^h 15	W 9
T 10	11 11 56	19 ^h 49'57	5 ^h 36	29 ^h 28	4 ^h 1	7 ^h 33	26 ^h 42	24 ^h 47	5 ^h 44	2 ^h 2	7 ^h 9	18 ^h 11	18 ^h 22	6 ^h 16	14 ^h 19	T 10
F 11	11 15 53	20 ^h 49'40	19 ^h 18	1 ^h 25	5 ^h 6	8 ^h 20	26 ^h 48	24 ^h 53	5 ^h 44	2 ^h 0	7 ^h 10	18 ^h D11	18 ^h 19	6 ^h 23	14 ^h 23	F 11
S 12	11 19 49	21 ^h 49'21	3 ^h 17	3 ^h 21	6 ^h 11	9 ^h 8	26 ^h 54	25 ^h 0	5 ^h 44	1 ^h 58	7 ^h 11	18 ^h 11	18 ^h 16	6 ^h 30	14 ^h 27	S 12
S 13	11 23 46	22 ^h 49'01	17 ^h 33	5 ^h 15	7 ^h 17	9 ^h 55	27 ^h 0	25 ^h 7	5 ^h 44	1 ^h 57	7 ^h 12	18 ^h 11	18 ^h 13	6 ^h 36	14 ^h 31	S 13
M14	11 27 43	23 ^h 48'39	2 ^h 44	7 ^h 7	8 ^h 23	10 ^h 42	27 ^h 6	25 ^h 14	5 ^h D44	1 ^h 55	7 ^h 13	18 ^h 12	18 ^h 10	6 ^h 43	14 ^h 35	M14
T 15	11 31 39	24 ^h 48'15	16 ^h 45	8 ^h 56	9 ^h 29	11 ^h 29	27 ^h 11	25 ^h 21	5 ^h 44	1 ^h 53	7 ^h 14	18 ^h 12	18 ^h 7	6 ^h 50	14 ^h 39	T 15
W16	11 35 36	25 ^h 47'49	1 ^h 32	10 ^h 43	10 ^h 36	12 ^h 16	27 ^h 17	25 ^h 28	5 ^h 44	1 ^h 52	7 ^h 15	18 ^h 13	18 ^h 3	6 ^h 56	14 ^h 42	W16
T 17	11 39 32	26 ^h 47'21	16 ^h 17	12 ^h 27	11 ^h 42	13 ^h 3	27 ^h 22	25 ^h 35	5 ^h 44	1 ^h 50	7 ^h 16	18 ^h R13	18 ^h 0	7 ^h 3	14 ^h 46	T 17
F 18	11 43 29	27 ^h 46'51	0 ^h 53	14 ^h 7	12 ^h 49	13 ^h 50	27 ^h 27	25 ^h 42	5 ^h 44	1 ^h 49	7 ^h 17	18 ^h 13	17 ^h 57	7 ^h 10	14 ^h 50	F 18
S 19	11 47 25	28 ^h 46'19	15 ^h 14	15 ^h 43	13 ^h 55	14 ^h 37	27 ^h 32	25 ^h 49	5 ^h 44	1 ^h 47	7 ^h 18	18 ^h 12	17 ^h 54	7 ^h 16	14 ^h 53	S 19
S 20	11 51 22	29 ^h 45'44	19 ^h 15	17 ^h 15	15 ^h 2	15 ^h 24	27 ^h 37	25 ^h 57	5 ^h 45	1 ^h 45	7 ^h 19	18 ^h 11	17 ^h 51	7 ^h 23	14 ^h 57	S 20
M21	11 55 18	0 ^h 45'08	12 ^h 53	18 ^h 41	16 ^h 9	16 ^h 11	27 ^h 42	26 ^h 4	5 ^h 45	1 ^h 44	7 ^h 20	18 ^h 9	17 ^h 47	7 ^h 30	15 ^h 1	M21
T 22	11 59 15	1 ^h 44'30	26 ^h 6	20 ^h 2	17 ^h 17	16 ^h 58	27 ^h 46	26 ^h 11	5 ^h 45	1 ^h 42	7 ^h 21	18 ^h 8	17 ^h 44	7 ^h 36	15 ^h 4	T 22
W23	12 3 11	2 ^h 43'49	8 ^h 11	21 ^h 18	18 ^h 24	17 ^h 45	27 ^h 50	26 ^h 18	5 ^h 46	1 ^h 40	7 ^h 22	18 ^h 6	17 ^h 41	7 ^h 43	15 ^h 7	W23
T 24	12 7 8	3 ^h 43'06	21 ^h 26	22 ^h 27	19 ^h 31	18 ^h 32	27 ^h 54	26 ^h 26	5 ^h 47	1 ^h 39	7 ^h 24	18 ^h 5	17 ^h 38	7 ^h 50	15 ^h 11	T 24
F 25	12 11 5	4 ^h 42'20	3 ^h 38	23 ^h 30	20 ^h 39	19 ^h 19	27 ^h 58	26 ^h 33	5 ^h 47	1 ^h 37	7 ^h 25	18 ^h D 5	17 ^h 35	7 ^h 56	15 ^h 14	F 25
S 26	12 15 1	5 ^h 41'33	15 ^h 38	24 ^h 27	21 ^h 47	20 ^h 5	28 ^h 2	26 ^h 40	5 ^h 48	1 ^h 35	7 ^h 26	18 ^h 5	17 ^h 32	8 ^h 3	15 ^h 18	S 26
S 27	12 18 58	6 ^h 40'42	27 ^h 30	25 ^h 17	22 ^h 55	20 ^h 52	28 ^h 5	26 ^h 48	5 ^h 48	1 ^h 34	7 ^h 27	18 ^h 6	17 ^h 28	8 ^h 10	15 ^h 21	S 27
M28	12 22 54	7 ^h 39'50	9 ^h 11	26 ^h 1	24 ^h 3	21 ^h 39	28 ^h 9	26 ^h 55	5 ^h 49	1 ^h 32	7 ^h 28	18 ^h 7	17 ^h 25	8 ^h 16	15 ^h 24	M28
T 29	12 26 51	8 ^h 38'55	21 ^h 11	26 ^h 37	25 ^h 11	22 ^h 26	28 ^h 12	27 ^h 2	5 ^h 50	1 ^h 30	7 ^h 29	18 ^h 9	17 ^h 22	8 ^h 23	15 ^h 27	T 29
W30	12 30 47	9 ^h 37'58	3 ^h 11	27 ^h 7	26 ^h 19	23 ^h 13	28 ^h 15	27 ^h 10	5 ^h 51	1 ^h 29	7 ^h 31	18 ^h 10	17 ^h 19	8 ^h 30	15 ^h 30	W30
T 31	12 34 44	10 ^h 36'59	15 ^h 13	27 ^h 30	27 ^h 27	23 ^h 59	28 ^h 18	27 ^h 17	5 ^h 52	1 ^h 27	7 ^h 32	18 ^h R11	17 ^h 16	8 ^h 37	15 ^h 34	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
T 1	7s31	19n55	3n 4	8s38	1s37	19s 2	2n17	12s21	1s 5	22s57	0n28	7n 7	2s19	23n43	0n21	0n29	1n30	1s 0	15s43	4s41	4s25	22n26	10s40	6n20	
W 2	7 8	15 16	2 6	7 48	1 32	18 56	2 12	12 4	1 5	22 57	0 28	7 9	2 18	23 43	0 21	0 29	1 30	0 59	15 42	4 41	4 27	22 24	10 39	6 20	
T 3	6 45	10 2	1 3	6 57	1 25	18 50	2 7	11 47	1 5	22 58	0 28	7 12	2 18	23 43	0 21	0 30	1 30	0 59	15 42	4 41	4 28	22 22	10 37	6 21	
F 4	6 22	4 21	0s 4	6 5	1 18	18 43	2 1	11 30	1 5	22 58	0 28	7 14	2 18	23 43	0 21	0 31	1 30	0 58	15 42	4 41	4 29	22 19	10 36	6 21	
S 5	5 59	1s32	1 11	5 12	1 11	18 35	1 56	11 12	1 5	22 58	0 28	7 17	2 18	23 43	0 21	0 31	1 30	0 57	15 42	4 41	4 30	22 17	10 35	6 21	
S 6	5 36	7 27	2 16	4 18	1 2	18 27	1 51	10 55	1 5	22 58	0 28	7 19	2 18	23 43	0 21	0 32	1 31	0 57	15 41	4 41	4 31	22 15	10 33	6 21	
M 7	5 12	13 11	3 16	3 23	0 54	18 19	1 45	10 38	1 5	22 59	0 28	7 22	2 18	23 43	0 21	0 33	1 31	0 57	15 41	4 41	4 33	22 12	10 32	6 21	
T 8	4 49	18 27	4 7	2 27	0 44	18 10	1 40	10 20	1 4	22 59	0 28	7 24	2 17	23 43	0 21	0 33	1 31	0 56	15 41	4 41	4 34	22 10	10 31	6 22	
W 9	4 26	22 57	4 45	1 31	0 35	18 1	1 35	10 3	1 4	22 59	0 28	7 27	2 17	23 43	0 21	0 34	1 31	0 56	15 41	4 41	4 35	22 8	10 30	6 22	
T 10	4 2	26 22	5 10	0 35	0 24	17 51	1 30	9 45	1 4	22 59	0 28	7 29	2 17	23 43	0 21	0 35	1 31	0 55	15 40	4 41	4 36	22 5	10 28	6 22	
F 11	3 39	28 20	5 17	0n21	0 13	17 40	1 24	9 27	1 4	22 59	0 28	7 32	2 17	23 43	0 21	0 35	1 31	0 54	15 40	4 41	4 38	22 3	10 27	6 22	
S 12	3 15	28 33	5 7	1 18	0 2	17 29	1 19	9 9	1 4	23 0	0 28	7 35	2 17	23 43	0 21	0 36	1 31	0 54	15 40	4 41	4 39	22 1	10 26	6 22	
S 13	2 51	26 55	4 37	2 14	0n 9	17 18	1 14	8 51	1 4	23 0	0 28	7 37	2 17	23 43	0 21	0 37	1 31	0 53	15 40	4 41	4 40	21 58	10 24	6 23	
M14	2 28	23 28	3 49	3 9	0 21	17 6	1 9	8 33	1 4	23 0	0 28	7 40	2 17	23 43	0 21	0 37	1 31	0 53	15 39	4 41	4 41	21 56	10 23	6 23	
T 15	2 4	18 29	2 46	4 4	0 34	16 53	1 4	8 15	1 4	23 0	0 28	7 43	2 16	23 43	0 21	0 38	1 31	0 52	15 39	4 40	4 43	21 54	10 22	6 23	
W16	1 40	12 22	1 31	4 57	0 46	16 40	0 59	7 57	1 3	23 0	0 28	7 45	2 16	23 43	0 21	0 39	1 31	0 52	15 39	4 40	4 44	21 51	10 20	6 23	
T 17	1 17	5 35	0 11	5 50	0 58	16 27	0 54	7 39	1 3	23 0	0 28	7 48	2 16	23 43	0 21	0 39	1 31	0 51	15 39	4 40	4 45	21 49	10 19	6 24	
F 18	0 53	1n25	1n10	6 40	1 11	16 13	0 49	7 20	1 3	23 0	0 28	7 51	2 16	23 43	0 21	0 40	1 31	0 51	15 38	4 40	4 46	21 47	10 18	6 24	
S 19	0 29	8 14	2 24	7 29	1 23	15 59	0 44	7 2	1 3	23 1	0 28	7 53	2 16	23 43	0 21	0 41	1 31	0 50	15 38	4 40	4 48	21 44	10 17	6 24	
S 20	0 6	14 29	3 28	8 15	1 35	15 44	0 39	6 44	1 3	23 1	0 28	7 56	2 16	23 43	0 21	0 41	1 31	0 50	15 38	4 41	4 49	21 42	10 15	6 24	
M21	0n18	19 50	4 19	8 59	1 47	15 29	0 35	6 25	1 2	23 1	0 28	7 59	2 16	23 43	0 21	0 42	1 31	0 49	15 38	4 42	4 50	21 39	10 14	6 25	
T 22	0 42	24 4	4 53	9 41	1 59	15 13	0 30	6 7	1 2	23 1	0 28	8 1	2 16	23 43	0 21	0 43	1 31	0 48	15 38	4 42	4 51	21 37	10 13	6 25	
W23	1 5	26 59	5 12	10 20	2 10	14 57	0 25	5 48	1 2	23 1	0 28	8 4	2 15	23 43	0 21	0 43	1 31	0 48	15 37	4 43	4 53	21 35	10 12	6 25	
T 24	1 29	28 28	5 16	10 56	2 20	14 40	0 21	5 30	1 2	23 1	0 27	8 7	2 15	23 43	0 21	0 44	1 31	0 47	15 37	4 43	4 54	21 32	10 10	6 25	
F 25	1 52	28 31	5 5	11 28	2 30	14 23	0 16	5 11	1 2	23 1	0 27	8 10	2 15	23 43	0 21	0 45	1 31	0 47	15 37	4 43	4 55	21 30	10 9	6 26	
S 26	2 16	27 13	4 41	11 58	2 39	14 6	0 11	4 52	1 1	23 1	0 27	8 12	2 15	23 43	0 21	0 45	1 31	0 46	15 37	4 43	4 56	21 27	10 8	6 26	
S 27	2 39	24 42	4 5	12 24	2 47	13 48	0 7	4 34	1 1	23 1	0 27	8 15	2 15	23 43	0 21	0 46	1 31	0 46	15 37	4 43	4 58	21 25	10 7	6 26	
M28	3 3	21 9	3 18	12 47	2 55	13 30	0 3	4 15	1 1	23 1	0 27	8 18	2 15	23 43	0 21	0 47	1 31	0 45	15 36	4 42	4 59	21 23	10 5	6 26	
T 29	3 26	16 44	2 24	13 6	3 1	13 11	0s 2	3 56	1 1	23 1	0 27	8 21	2 15	23 43	0 21	0 47	1 31	0 45	15 36	4 42	5 0	21 20	10 4	6 27	
W30	3 49	11 39	1 22	13 21	3 6	12 52	0 6	3 37	1 0	23 1	0 27	8 23	2 15	23 43	0 21	0 48	1 31	0 44	15 36	4 41	5 1	21 18	10 3	6 27	
T 31	4n13	6n 5	0n16	13n33	3n10	12s32	0s10	3s19	1s 0	23s 2	0n27	8n26	2s15	23n43	0n21	0n49	1n31	0s44	15s36	4s41	5s 3	21n15	10s 2	6n27	

ASTRODIENST EPHEMERIS for the year 1616

geocentric

APRIL 1616 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	12 38 40	11°35'57	27°30	27°45	28°36	24°46	28°21	27°25	5°53	1°25	7°33	18°11	17°12	8°43	15°37	F 1
S 2	12 42 37	12°34'54	10°2	27°54	29°44	25°33	28°23	27°32	5°54	1°24	7°34	18°9	17°9	8°50	15°40	S 2
S 3	12 46 34	13°33'48	22°47	27°R56	0°53	26°19	28°25	27°40	5°55	1°22	7°36	18°7	17°6	8°57	15°42	S 3
M 4	12 50 30	14°32'41	5°48	27°51	2°1	27°6	28°27	27°47	5°56	1°21	7°37	18°3	17°3	9°3	15°45	M 4
T 5	12 54 27	15°31'31	19°3	27°41	3°10	27°52	28°29	27°55	5°57	1°19	7°38	17°59	17°0	9°10	15°48	T 5
W 6	12 58 23	16°30'20	2°31	27°24	4°19	28°39	28°31	28°3	5°58	1°17	7°39	17°54	16°57	9°17	15°51	W 6
T 7	13 2 20	17°29'07	16°11	27°2	5°28	29°25	28°33	28°10	6°0	1°16	7°41	17°51	16°53	9°23	15°54	T 7
F 8	13 6 16	18°27'52	0°3	26°35	6°37	0°12	28°34	28°18	6°1	1°14	7°42	17°48	16°50	9°30	15°56	F 8
S 9	13 10 13	19°26'36	14°2	26°3	7°47	0°58	28°35	28°25	6°2	1°13	7°43	17°D47	16°47	9°37	15°59	S 9
S 10	13 14 9	20°25'18	28°9	25°28	8°56	1°44	28°36	28°33	6°4	1°11	7°45	17°47	16°44	9°43	16°2	S 10
M 11	13 18 6	21°23'58	12°24	24°50	10°5	2°31	28°37	28°41	6°5	1°10	7°46	17°48	16°41	9°50	16°4	M 11
T 12	13 22 3	22°22'37	26°42	24°9	11°15	3°17	28°38	28°48	6°7	1°8	7°47	17°49	16°38	9°57	16°7	T 12
W 13	13 25 59	23°21'13	11°2	23°27	12°24	4°3	28°38	28°56	6°8	1°7	7°49	17°R51	16°34	10°3	16°9	W 13
T 14	13 29 56	24°19'48	25°20	22°45	13°34	4°50	28°39	29°4	6°10	1°5	7°50	17°50	16°31	10°10	16°11	T 14
F 15	13 33 52	25°18'21	9°32	22°3	14°44	5°36	28°R39	29°11	6°11	1°4	7°51	17°49	16°28	10°17	16°14	F 15
S 16	13 37 49	26°16'53	23°34	21°21	15°53	6°22	28°38	29°19	6°13	1°2	7°53	17°45	16°25	10°23	16°16	S 16
S 17	13 41 45	27°15'22	7°21	20°41	17°3	7°8	28°38	29°27	6°15	1°1	7°54	17°40	16°22	10°30	16°18	S 17
M 18	13 45 42	28°13'50	20°51	20°3	18°13	7°54	28°38	29°34	6°17	0°59	7°55	17°33	16°18	10°37	16°20	M 18
T 19	13 49 38	29°12'16	4°0	19°29	19°23	8°40	28°37	29°42	6°18	0°58	7°57	17°26	16°15	10°43	16°22	T 19
W 20	13 53 35	0°10'39	16°50	18°57	20°33	9°26	28°36	29°50	6°20	0°56	7°58	17°19	16°12	10°50	16°24	W 20
T 21	13 57 32	1°9'01	29°20	18°30	21°43	10°12	28°35	29°57	6°22	0°55	7°59	17°14	16°9	10°57	16°26	T 21
F 22	14 1 28	2°7'21	11°33	18°6	22°53	10°58	28°34	0°5	6°24	0°54	8°1	17°10	16°6	11°3	16°28	F 22
S 23	14 5 25	3°5'38	23°34	17°47	24°3	11°44	28°32	0°13	6°26	0°52	8°2	17°7	16°3	11°10	16°30	S 23
S 24	14 9 21	4°3'54	5°17	17°32	25°13	12°30	28°31	0°21	6°28	0°51	8°3	17°D7	15°59	11°17	16°32	S 24
M 25	14 13 18	5°2'07	17°17	17°23	26°24	13°15	28°29	0°28	6°30	0°50	8°5	17°8	15°56	11°23	16°34	M 25
T 26	14 17 14	6°0'18	29°9	17°18	27°34	14°1	28°27	0°36	6°33	0°48	8°6	17°9	15°53	11°30	16°35	T 26
W 27	14 21 11	6°58'28	11°8	17°D18	28°44	14°47	28°25	0°44	6°35	0°47	8°7	17°R10	15°50	11°37	16°37	W 27
T 28	14 25 7	7°56'35	23°18	17°22	29°55	15°32	28°22	0°51	6°37	0°46	8°9	17°10	15°47	11°43	16°38	T 28
F 29	14 29 4	8°54'40	5°44	17°32	1°5	16°18	28°20	0°59	6°39	0°45	8°10	17°8	15°44	11°50	16°40	F 29
S 30	14 33 1	9°52'44	18°29	17°46	2°16	17°4	28°17	1°8	6°42	0°43	8°12	17°4	15°40	11°57	16°41	S 30

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	4n36	0n13	0s51	13n41	3n12	12s13	0s14	3s 0	1s 0	23s 2	0n27	8n29	2s15	23n43	0n21	0n49	1n31	0s43	15s36	4s41	5s 4	21n13	10s 1	6n28	
S 2	4 59	5s47	1 57	13 45	3 13	11 52	0 18	2 41	1 0	23 2	0 27	8 32	2 15	23 42	0 21	0 50	1 31	0 43	15 36	4 42	5 5	21 10	10 0	6 28	
S 3	5 22	11 39	2 59	13 46	3 13	11 32	0 22	2 22	0 59	23 2	0 27	8 34	2 14	23 42	0 21	0 51	1 31	0 42	15 35	4 43	5 6	21 8	9 58	6 28	
M 4	5 45	17 8	3 52	13 43	3 11	11 11	0 26	2 4	0 59	23 2	0 27	8 37	2 14	23 42	0 21	0 51	1 31	0 42	15 35	4 44	5 8	21 5	9 57	6 29	
T 5	6 7	21 55	4 34	13 36	3 8	10 50	0 30	1 45	0 59	23 2	0 27	8 40	2 14	23 42	0 21	0 52	1 31	0 41	15 35	4 46	5 9	21 3	9 56	6 29	
W 6	6 30	25 38	5 2	13 25	3 3	10 28	0 33	1 26	0 58	23 2	0 27	8 43	2 14	23 42	0 21	0 52	1 31	0 40	15 35	4 47	5 10	21 0	9 55	6 29	
T 7	6 53	27 57	5 13	13 11	2 57	10 6	0 37	1 7	0 58	23 2	0 27	8 45	2 14	23 42	0 21	0 53	1 31	0 40	15 35	4 49	5 11	20 58	9 54	6 30	
F 8	7 15	28 35	5 6	12 54	2 49	9 44	0 41	0 48	0 58	23 2	0 27	8 48	2 14	23 42	0 21	0 54	1 31	0 39	15 35	4 50	5 12	20 55	9 53	6 30	
S 9	7 37	27 24	4 41	12 34	2 40	9 21	0 44	0 29	0 57	23 2	0 27	8 51	2 14	23 42	0 21	0 54	1 31	0 39	15 35	4 50	5 14	20 53	9 52	6 30	
S 10	8 0	24 28	3 59	12 11	2 30	8 58	0 47	0 11	0 57	23 2	0 27	8 54	2 14	23 42	0 21	0 55	1 31	0 38	15 34	4 50	5 15	20 51	9 51	6 31	
M 11	8 22	20 1	3 2	11 46	2 18	8 35	0 51	0n8	0 57	23 2	0 27	8 56	2 14	23 42	0 21	0 55	1 31	0 38	15 34	4 50	5 16	20 48	9 50	6 31	
T 12	8 44	14 25	1 53	11 19	2 5	8 12	0 54	0 27	0 56	23 2	0 27	8 59	2 14	23 42	0 21	0 56	1 31	0 37	15 34	4 49	5 17	20 46	9 49	6 31	
W 13	9 6	8 1	0 37	10 50	1 50	7 48	0 57	0 46	0 56	23 2	0 27	9 2	2 14	23 42	0 21	0 57	1 31	0 37	15 34	4 49	5 19	20 43	9 47	6 32	
T 14	9 27	1 14	0n41	10 20	1 35	7 24	1 0	1 4	0 56	23 2	0 27	9 5	2 14	23 42	0 21	0 57	1 31	0 36	15 34	4 49	5 20	20 40	9 46	6 32	
F 15	9 49	5n33	1 55	9 50	1 20	7 0	1 3	1 23	0 55	23 2	0 27	9 7	2 14	23 42	0 21	0 58	1 31	0 36	15 34	4 50	5 21	20 38	9 45	6 33	
S 16	10 10	11 59	3 2	9 19	1 3	6 36	1 6	1 42	0 55	23 2	0 27	9 10	2 14	23 41	0 21	0 58	1 31	0 35	15 34	4 51	5 22	20 35	9 44	6 33	
S 17	10 31	17 43	3 57	8 49	0 46	6 11	1 9	2 0	0 54	23 2	0 27	9 13	2 14	23 41	0 21	0 59	1 31	0 35	15 34	4 53	5 24	20 33	9 43	6 33	
M 18	10 52	22 27	4 37	8 19	0 29	5 46	1 12	2 19	0 54	23 2	0 27	9 16	2 14	23 41	0 21	1 0	1 31	0 34	15 34	4 56	5 25	20 30	9 42	6 34	
T 19	11 13	25 55	5 1	7 50	0 13	5 21	1 14	2 37	0 54	23 2	0 27	9 18	2 14	23 41	0 21	1 0	1 31	0 34	15 34	4 58	5 26	20 28	9 41	6 34	
W 20	11 34	27 58	5 9	7 22	0s4	4 56	1 17	2 56	0 53	23 2	0 27	9 21	2 14	23 41	0 21	1 1	1 31	0 34	15 33	5 1	5 27	20 25	9 41	6 34	
T 21	11 54	28 32	5 2	6 57	0 21	4 30	1 19	3 14	0 53	23 2	0 27	9 24	2 14	23 41	0 21	1 1	1 31	0 33	15 33	5 3	5 29	20 23	9 40	6 35	
F 22	12 14	27 40	4 42	6 33	0 37	4 5	1 22	3 33	0 53	23 2	0 27	9 26	2 14	23 41	0 21	1 2	1 31	0 33	15 33	5 5	5 30	20 20	9 39	6 35	
S 23	12 34	25 31	4 9	6 11	0 53	3 39	1 24	3 51	0 52	23 3	0 26	9 29	2 14	23 41	0 21	1 2	1 31	0 32	15 33	5 6	5 31	20 18	9 38	6 36	
S 24	12 54	22 17	3 26	5 52	1 8	3 13	1 26	4 9	0 52	23 3	0 26	9 32	2 14	23 41	0 21	1 3	1 31	0 32	15 33	5 6	5 32	20 15	9 37	6 36	
M 25	13 14	18 8	2 34	5 35	1 22	2 47	1 28	4 27	0 51	23 3	0 26	9 34	2 14	23 41	0 21	1 3	1 31	0 31	15 33	5 6	5 33	20 13	9 36	6 36	
T 26	13 33	13 18	1 36	5 20	1 36	2 21	1 30	4 46	0 51	23 3	0 26	9 37	2 14	23 40	0 21	1 4	1 30	0 31	15 33	5 5	5 35	20 10	9 35	6 37	
W 27	13 52	7 55	0 33	5 8	1 48	1 55	1 32	5 4	0 50	23 3	0 26	9 40	2 14	23 40	0 21	1 4	1 30	0 30	15 33	5 5	5 36	20 7	9 34	6 37	
T 28	14 11	2 10	0s33	4 59	2 0	1 28	1 34	5 22	0 50	23 3	0 26	9 42	2 14	23 40	0 21	1 5	1 30	0 30	15 33	5 5	5 37	20 5	9 33	6 38	
F 29	14 30	3s47	1 38	4 52	2 11	1 2	1 36	5 40	0 49	23 3	0 26	9 45	2 14	23 40	0 21	1 5	1 30	0 29	15 33	5 6	5 38	20 2	9 33	6 38	
S 30	14n48	9s43	2s40	4n48	2s21	0s35	1s37	5n58	0s49	23s3	0n26	9n48	2s14	23n40	0n21	1n6	1n30	0s29	15s33	5s7	5s40	20n0	9s32	6n38	

ASTRODIENST EPHEMERIS for the year 1616

geocentric

MAY 1616 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	14 36 57	10♂50'46	1♂133	18♂4	3♂26	17♂49	28♂14	1♂14	6♂44	0♂42	8♂13	16♂58	15♂37	12♂3	16♂43	S 1
M 2	14 40 54	11♂48'46	14♂56	18♂27	4♂37	18♂34	28♂11	1♂22	6♂46	0♂41	8♂14	16♂50	15♂34	12♂10	16♂44	M 2
T 3	14 44 50	12♂46'44	28♂36	18♂55	5♂48	19♂20	28♂8	1♂29	6♂49	0♂40	8♂16	16♂41	15♂31	12♂17	16♂45	T 3
W 4	14 48 47	13♂44'42	12♂31	19♂26	6♂58	20♂5	28♂4	1♂37	6♂51	0♂39	8♂17	16♂32	15♂28	12♂23	16♂46	W 4
T 5	14 52 43	14♂42'37	26♂36	20♂2	8♂9	20♂50	28♂1	1♂45	6♂54	0♂38	8♂18	16♂23	15♂24	12♂30	16♂47	T 5
F 6	14 56 40	15♂40'32	10♂346	20♂41	9♂20	21♂36	27♂57	1♂52	6♂56	0♂37	8♂20	16♂17	15♂21	12♂37	16♂48	F 6
S 7	15 0 36	16♂38'25	24♂59	21♂24	10♂31	22♂21	27♂53	2♂0	6♂59	0♂36	8♂21	16♂13	15♂18	12♂43	16♂49	S 7
S 8	15 4 33	17♂36'17	9♂11	22♂11	11♂42	23♂6	27♂49	2♂7	7♂1	0♂35	8♂22	16♂11	15♂15	12♂50	16♂50	S 8
M 9	15 8 30	18♂34'07	23♂20	23♂1	12♂53	23♂51	27♂45	2♂15	7♂4	0♂34	8♂24	16♂D11	15♂12	12♂57	16♂51	M 9
T 10	15 12 26	19♂31'56	7♂24	23♂55	14♂4	24♂36	27♂40	2♂22	7♂7	0♂33	8♂25	16♂11	15♂9	13♂3	16♂52	T 10
W11	15 16 23	20♂29'45	21♂24	24♂52	15♂15	25♂21	27♂36	2♂30	7♂10	0♂32	8♂26	16♂R11	15♂5	13♂10	16♂52	W11
T 12	15 20 19	21♂27'32	5♂17	25♂52	16♂26	26♂6	27♂31	2♂37	7♂12	0♂31	8♂28	16♂10	15♂2	13♂17	16♂53	T 12
F 13	15 24 16	22♂25'17	19♂3	26♂55	17♂37	26♂51	27♂26	2♂45	7♂15	0♂30	8♂29	16♂6	14♂59	13♂23	16♂54	F 13
S 14	15 28 12	23♂23'02	2♂40	28♂1	18♂48	27♂36	27♂21	2♂52	7♂18	0♂29	8♂30	16♂0	14♂56	13♂30	16♂54	S 14
S 15	15 32 9	24♂20'45	16♂6	29♂10	19♂59	28♂21	27♂16	2♂59	7♂21	0♂28	8♂32	15♂51	14♂53	13♂37	16♂55	S 15
M16	15 36 5	25♂18'28	29♂18	0♂22	21♂11	29♂6	27♂11	3♂7	7♂24	0♂27	8♂33	15♂40	14♂50	13♂43	16♂55	M16
T 17	15 40 2	26♂16'09	12♂114	1♂36	22♂22	29♂50	27♂5	3♂14	7♂27	0♂27	8♂34	15♂28	14♂46	13♂50	16♂55	T 17
W18	15 43 59	27♂13'48	24♂55	2♂53	23♂33	0♂35	27♂0	3♂21	7♂30	0♂26	8♂36	15♂16	14♂43	13♂57	16♂56	W18
T 19	15 47 55	28♂11'26	7♂19	4♂13	24♂44	1♂20	26♂54	3♂28	7♂32	0♂25	8♂37	15♂6	14♂40	14♂3	16♂56	T 19
F 20	15 51 52	29♂9'03	19♂30	5♂35	25♂56	2♂4	26♂48	3♂36	7♂35	0♂24	8♂38	14♂57	14♂37	14♂10	16♂56	F 20
S 21	15 55 48	0♂11'6'39	1♂29	7♂0	27♂7	2♂49	26♂42	3♂43	7♂39	0♂24	8♂40	14♂52	14♂34	14♂17	16♂56	S 21
S 22	15 59 45	1♂4'12	13♂21	8♂28	28♂19	3♂33	26♂36	3♂50	7♂42	0♂23	8♂41	14♂48	14♂30	14♂23	16♂56	S 22
M23	16 3 41	2♂1'45	25♂10	9♂58	29♂30	4♂17	26♂30	3♂57	7♂45	0♂23	8♂42	14♂47	14♂27	14♂30	16♂56	M23
T 24	16 7 38	2♂59'16	7♂1	11♂30	0♂42	5♂2	26♂23	4♂4	7♂48	0♂22	8♂43	14♂D47	14♂24	14♂37	16♂56	T 24
W25	16 11 34	3♂56'46	19♂0	13♂5	1♂53	5♂46	26♂17	4♂11	7♂51	0♂21	8♂45	14♂R47	14♂21	14♂43	16♂55	W25
T 26	16 15 31	4♂54'14	1♂12	14♂42	3♂5	6♂30	26♂10	4♂18	7♂54	0♂21	8♂46	14♂46	14♂18	14♂50	16♂55	T 26
F 27	16 19 28	5♂51'41	13♂42	16♂22	4♂16	7♂14	26♂3	4♂25	7♂57	0♂20	8♂47	14♂43	14♂15	14♂57	16♂55	F 27
S 28	16 23 24	6♂49'07	26♂34	18♂5	5♂28	7♂58	25♂57	4♂32	8♂0	0♂20	8♂48	14♂38	14♂11	15♂3	16♂54	S 28
S 29	16 27 21	7♂46'32	9♂150	19♂49	6♂39	8♂42	25♂50	4♂39	8♂4	0♂20	8♂50	14♂30	14♂8	15♂10	16♂54	S 29
M30	16 31 17	8♂43'56	23♂30	21♂36	7♂51	9♂26	25♂43	4♂46	8♂7	0♂19	8♂51	14♂20	14♂5	15♂17	16♂53	M30
T 31	16 35 14	9♂11'19	7♂33	23♂26	9♂3	10♂10	25♂36	4♂53	8♂10	0♂19	8♂52	14♂9	14♂2	15♂23	16♂53	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	decl lat
S 1	15n 7	15s24	3s35	4n47	2s31	0s 8	1s39	6n15	0s49	23s 3	0n26	9n50	2s14	23n40	0n21	1n 6
M 2	15 25	20 29	4 19	4 48	2 39	0n18	1 40	6 33	0 48	23 3	0 26	9 53	2 14	23 40	0 21	1 6
T 3	15 42	24 36	4 50	4 51	2 47	0 45	1 42	6 51	0 48	23 3	0 26	9 56	2 14	23 40	0 21	1 7
W 4	16 0	27 22	5 4	4 57	2 53	1 12	1 43	7 8	0 47	23 3	0 26	9 58	2 14	23 39	0 21	1 7
T 5	16 17	28 27	5 0	5 5	2 59	1 39	1 44	7 26	0 47	23 3	0 26	10 1	2 14	23 39	0 21	1 8
F 6	16 34	27 40	4 38	5 15	3 4	2 6	1 45	7 43	0 46	23 3	0 26	10 3	2 14	23 39	0 21	1 8
S 7	16 51	25 5	3 58	5 27	3 8	2 33	1 46	8 1	0 46	23 3	0 26	10 6	2 14	23 39	0 21	1 9
S 8	17 7	20 57	3 4	5 41	3 12	2 59	1 47	8 18	0 45	23 3	0 26	10 8	2 14	23 39	0 21	1 9
M 9	17 23	15 39	1 59	5 58	3 14	3 26	1 48	8 35	0 45	23 3	0 26	10 11	2 14	23 39	0 21	1 9
T 10	17 39	9 32	0 47	6 16	3 16	3 53	1 49	8 52	0 44	23 3	0 25	10 13	2 14	23 39	0 21	1 10
W11	17 55	3 0	0n28	6 35	3 17	4 20	1 49	9 9	0 44	23 3	0 25	10 16	2 14	23 38	0 21	1 10
T 12	18 10	3n38	1 40	6 57	3 17	4 47	1 50	9 26	0 43	23 3	0 25	10 18	2 14	23 38	0 21	1 10
F 13	18 25	10 2	2 45	7 20	3 17	5 14	1 50	9 43	0 43	23 3	0 25	10 21	2 14	23 38	0 21	1 11
S 14	18 40	15 53	3 41	7 45	3 16	5 40	1 51	9 59	0 42	23 3	0 25	10 23	2 14	23 38	0 21	1 11
S 15	18 54	20 53	4 23	8 11	3 14	6 7	1 51	10 16	0 42	23 3	0 25	10 26	2 14	23 38	0 21	1 11
M16	19 8	24 45	4 50	8 38	3 12	6 33	1 51	10 32	0 41	23 3	0 25	10 28	2 14	23 38	0 21	1 12
T 17	19 22	27 17	5 1	9 6	3 9	7 3	1 52	10 48	0 40	23 3	0 25	10 31	2 14	23 37	0 21	1 12
W18	19 35	28 21	4 58	9 36	3 5	7 26	1 52	11 5	0 40	23 3	0 25	10 33	2 14	23 37	0 21	1 12
T 19	19 48	27 57	4 40	10 7	3 1	7 52	1 52	11 21	0 39	23 3	0 25	10 36	2 15	23 37	0 21	1 12
F 20	20 1	26 11	4 9	10 39	2 56	8 18	1 51	11 37	0 39	23 2	0 25	10 38	2 15	23 37	0 21	1 13
S 21	20 13	23 15	3 28	11 12	2 50	8 44	1 51	11 52	0 38	23 2	0 25	10 40	2 15	23 37	0 21	1 13
S 22	20 25	19 23	2 39	11 46	2 44	9 10	1 51	12 8	0 38	23 2	0 25	10 43	2 15	23 37	0 21	1 13
M23	20 37	14 46	1 42	12 20	2 38	9 36	1 51	12 24	0 37	23 2	0 24	10 45	2 15	23 36	0 21	1 13
T 24	20 48	9 35	0 41	12 56	2 30	10 1	1 50	12 39	0 37	23 2	0 24	10 47	2 15	23 36	0 21	1 13
W25	20 59	4 1	0s22	13 32	2 23	10 26	1 50	12 54	0 36	23 2	0 24	10 49	2 15	23 36	0 21	1 14
T 26	21 10	1s48	1 26	14 8	2 15	10 51	1 49	13 10	0 35	23 2	0 24	10 52	2 15	23 36	0 21	1 14
F 27	21 20	7 40	2 27	14 45	2 6	11 16	1 49	13 25	0 35	23 2	0 24	10 54	2 15	23 36	0 21	1 14
S 28	21 30	13 24	3 22	15 22	1 57	11 41	1 48	13 39	0 34	23 2	0 24	10 56	2 15	23 35	0 21	1 14
S 29	21 39	18 43	4 8	16 0	1 48	12 5	1 47	13 54	0 34	23 2	0 24	10 58	2 15	23 35	0 21	1 14
M30	21 48	23 13	4 41	16 37	1 38	12 29	1 46	14 9	0 33	23 2	0 24	11 1	2 16	23 35	0 21	1 14
T 31	21n57	26s31	4s58	17n15	1s28	12n53	1s45	14n23	0s32	23s 2	0n24	11n 3	2s16	23n35	0n21	1n14

Julian Day Number = 2311412.5, Delta T = 70.06 sec
 Ecliptic obliquity = 23°29'30", Nutation = 0°00'03", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 19°23'08", Lahiri = 18°30'08"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1616
geocentric

JUNE 1616 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	16 39 10	10 ^{II} 38'41	21 [♂] 53	25 [♂] 18	10 [♂] 14	10 [♂] 54	25 [♂] R29	5 [♂] 0	8 [♂] 14	0 [♂] R18	8 [♂] 53	13 [♂] R58	13 [♂] 59	15 [♂] 230	16 [♂] R52	W 1
T 2	16 43 7	11 [♂] 36'02	6 [♂] 24	27 [♂] 12	11 [♂] 26	11 [♂] 38	25 [♂] ♂22	5 [♂] 6	8 [♂] 17	0 [♂] ♂18	8 [♂] 54	13 [♂] ♂47	13 [♂] 56	15 [♂] 37	16 [♂] ♂51	T 2
F 3	16 47 4	12 [♂] 33'22	20 [♂] 59	29 [♂] 9	12 [♂] 38	12 [♂] 22	25 [♂] 14	5 [♂] 13	8 [♂] 20	0 [♂] 18	8 [♂] 56	13 [♂] 39	13 [♂] 52	15 [♂] 43	16 [♂] 51	F 3
S 4	16 51 0	13 [♂] 30'42	5 [♂] ♂33	1 [♂] II 8	13 [♂] 50	13 [♂] 5	25 [♂] 7	5 [♂] 20	8 [♂] 24	0 [♂] 18	8 [♂] 57	13 [♂] 33	13 [♂] 49	15 [♂] 50	16 [♂] 50	S 4
S 5	16 54 57	14 [♂] 28'01	19 [♂] 59	3 [♂] 9	15 [♂] 1	13 [♂] 49	25 [♂] 0	5 [♂] 26	8 [♂] 27	0 [♂] 17	8 [♂] 58	13 [♂] 30	13 [♂] 46	15 [♂] 57	16 [♂] 49	S 5
M 6	16 58 53	15 [♂] 25'20	4 [♂] ♂14	5 [♂] 11	16 [♂] 13	14 [♂] 33	24 [♂] 52	5 [♂] 33	8 [♂] 30	0 [♂] 17	8 [♂] 59	13 [♂] 29	13 [♂] 43	16 [♂] 3	16 [♂] 48	M 6
T 7	17 2 50	16 [♂] 22'39	18 [♂] 17	7 [♂] 16	17 [♂] 25	15 [♂] 16	24 [♂] 45	5 [♂] 39	8 [♂] 34	0 [♂] 17	9 [♂] 0	13 [♂] 29	13 [♂] 40	16 [♂] 10	16 [♂] 47	T 7
W 8	17 6 46	17 [♂] 19'57	2 [♂] ♂7	9 [♂] 23	18 [♂] 37	16 [♂] 0	24 [♂] 37	5 [♂] 46	8 [♂] 37	0 [♂] 17	9 [♂] 1	13 [♂] 29	13 [♂] 36	16 [♂] 17	16 [♂] 46	W 8
T 9	17 10 43	18 [♂] 17'14	15 [♂] 45	11 [♂] 30	19 [♂] 49	16 [♂] 43	24 [♂] 30	5 [♂] 52	8 [♂] 41	0 [♂] 17	9 [♂] 2	13 [♂] 27	13 [♂] 33	16 [♂] 23	16 [♂] 45	T 9
F 10	17 14 39	19 [♂] 14'31	29 [♂] 11	13 [♂] 40	21 [♂] 1	17 [♂] 26	24 [♂] 22	5 [♂] 58	8 [♂] 44	0 [♂] 17	9 [♂] 3	13 [♂] 22	13 [♂] 30	16 [♂] 30	16 [♂] 43	F 10
S 11	17 18 36	20 [♂] 11'48	12 [♂] ♂26	15 [♂] 50	22 [♂] 13	18 [♂] 10	24 [♂] 14	6 [♂] 5	8 [♂] 48	0 [♂] D17	9 [♂] 4	13 [♂] 15	13 [♂] 27	16 [♂] 37	16 [♂] 42	S 11
S 12	17 22 33	21 [♂] 9'05	25 [♂] 29	18 [♂] 1	23 [♂] 25	18 [♂] 53	24 [♂] 7	6 [♂] 11	8 [♂] 51	0 [♂] 17	9 [♂] 6	13 [♂] 5	13 [♂] 24	16 [♂] 43	16 [♂] 41	S 12
M13	17 26 29	22 [♂] 6'21	8 [♂] II20	20 [♂] 12	24 [♂] 37	19 [♂] 36	23 [♂] 59	6 [♂] 17	8 [♂] 55	0 [♂] 17	9 [♂] 7	12 [♂] 53	13 [♂] 21	16 [♂] 50	16 [♂] 39	M13
T 14	17 30 26	23 [♂] 3'37	20 [♂] 59	22 [♂] 24	25 [♂] 49	20 [♂] 19	23 [♂] 51	6 [♂] 23	8 [♂] 58	0 [♂] 17	9 [♂] 8	12 [♂] 41	13 [♂] 17	16 [♂] 57	16 [♂] 38	T 14
W15	17 34 22	24 [♂] 0'53	3 [♂] ♂26	24 [♂] 36	27 [♂] 2	21 [♂] 2	23 [♂] 44	6 [♂] 29	9 [♂] 2	0 [♂] 17	9 [♂] 9	12 [♂] 28	13 [♂] 14	17 [♂] 3	16 [♂] 37	W15
T 16	17 38 19	24 [♂] 58'08	15 [♂] 41	26 [♂] 47	28 [♂] 14	21 [♂] 45	23 [♂] 36	6 [♂] 35	9 [♂] 5	0 [♂] 17	9 [♂] 10	12 [♂] 16	13 [♂] 11	17 [♂] 10	16 [♂] 35	T 16
F 17	17 42 15	25 [♂] 55'22	27 [♂] 44	28 [♂] 58	29 [♂] 26	22 [♂] 28	23 [♂] 28	6 [♂] 41	9 [♂] 9	0 [♂] 18	9 [♂] 11	12 [♂] 7	13 [♂] 8	17 [♂] 17	16 [♂] 33	F 17
S 18	17 46 12	26 [♂] 52'36	9 [♂] ♂39	1 [♂] ♂8	0 [♂] II38	23 [♂] 11	23 [♂] 21	6 [♂] 47	9 [♂] 12	0 [♂] 18	9 [♂] 12	12 [♂] 0	13 [♂] 5	17 [♂] 23	16 [♂] 32	S 18
S 19	17 50 8	27 [♂] 49'50	21 [♂] 28	3 [♂] 16	1 [♂] 50	23 [♂] 54	23 [♂] 13	6 [♂] 53	9 [♂] 16	0 [♂] 18	9 [♂] 13	11 [♂] 56	13 [♂] 2	17 [♂] 30	16 [♂] 30	S 19
M20	17 54 5	28 [♂] 47'03	3 [♂] ♂16	5 [♂] 24	3 [♂] 3	24 [♂] 36	23 [♂] 6	6 [♂] 59	9 [♂] 20	0 [♂] 18	9 [♂] 14	11 [♂] 55	12 [♂] 58	17 [♂] 37	16 [♂] 28	M20
T 21	17 58 2	29 [♂] 44'15	1 [♂] 56	7 [♂] 30	4 [♂] 15	25 [♂] 19	22 [♂] 58	7 [♂] 4	9 [♂] 23	0 [♂] 19	9 [♂] 15	11 [♂] D54	12 [♂] 55	17 [♂] 43	16 [♂] 26	T 21
W22	18 1 58	0 [♂] ♂41'27	27 [♂] 3	9 [♂] 35	5 [♂] 27	26 [♂] 2	22 [♂] 50	7 [♂] 10	9 [♂] 27	0 [♂] 19	9 [♂] 15	11 [♂] R55	12 [♂] 52	17 [♂] 50	16 [♂] 24	W22
T 23	18 5 55	1 [♂] 38'38	9 [♂] ♂15	11 [♂] 38	6 [♂] 40	26 [♂] 44	22 [♂] 43	7 [♂] 15	9 [♂] 30	0 [♂] 19	9 [♂] 16	11 [♂] 54	12 [♂] 49	17 [♂] 57	16 [♂] 22	T 23
F 24	18 9 51	2 [♂] 35'49	21 [♂] 44	13 [♂] 39	7 [♂] 52	27 [♂] 27	22 [♂] 35	7 [♂] 21	9 [♂] 34	0 [♂] 20	9 [♂] 17	11 [♂] 53	12 [♂] 46	18 [♂] 3	16 [♂] 20	F 24
S 25	18 13 48	3 [♂] 33'00	4 [♂] ♂37	15 [♂] 38	9 [♂] 4	28 [♂] 9	22 [♂] 28	7 [♂] 26	9 [♂] 38	0 [♂] 20	9 [♂] 18	11 [♂] 49	12 [♂] 42	18 [♂] 10	16 [♂] 18	S 25
S 26	18 17 44	4 [♂] 30'10	17 [♂] 57	17 [♂] 36	10 [♂] 17	28 [♂] 51	22 [♂] 21	7 [♂] 32	9 [♂] 41	0 [♂] 21	9 [♂] 19	11 [♂] 43	12 [♂] 39	18 [♂] 17	16 [♂] 16	S 26
M27	18 21 41	5 [♂] 27'20	1 [♂] ♂44	19 [♂] 31	11 [♂] 29	29 [♂] 34	22 [♂] 13	7 [♂] 37	9 [♂] 45	0 [♂] 21	9 [♂] 20	11 [♂] 35	12 [♂] 36	18 [♂] 23	16 [♂] 14	M27
T 28	18 25 37	6 [♂] 24'30	15 [♂] 58	21 [♂] 25	12 [♂] 42	0 [♂] II16	22 [♂] 6	7 [♂] 42	9 [♂] 48	0 [♂] 22	9 [♂] 21	11 [♂] 26	12 [♂] 33	18 [♂] 30	16 [♂] 12	T 28
W29	18 29 34	7 [♂] 21'40	0 [♂] ♂34	23 [♂] 16	13 [♂] 54	0 [♂] 58	21 [♂] 59	7 [♂] 47	9 [♂] 52	0 [♂] 22	9 [♂] 21	11 [♂] 16	12 [♂] 30	18 [♂] 37	16 [♂] 10	W29
T 30	18 33 31	8 [♂] ♂18'50	15 [♂] ♂25	25 [♂] ♂6	15 [♂] II 7	1 [♂] II40	21 [♂] ♂52	7 [♂] ♂52	9 [♂] ♂56	0 [♂] ♂23	9 [♂] ♂22	11 [♂] ♂7	12 [♂] ♂27	18 [♂] ♂43	16 [♂] ♂8	T 30

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
W 1	22n 5	28s12	4s58	17n52	1s18	13n16	1s44	14n38	0s32	23s 1	0n23	11n 5	2s16	23n35	0n21	1n15	1n29	0s19	15s35	6s19	6s19	18n34	9s16	6n51	
T 2	22 13	27 58	4 38	18 29	1 8	13 40	1 43	14 52	0 31	23 1	0 23	11 7	2 16	23 34	0 21	1 15	1 29	0 18	15 35	6 23	6 20	18 31	9 16	6 52	
F 3	22 21	25 48	4 0	19 5	0 57	14 3	1 42	15 6	0 31	23 1	0 23	11 9	2 16	23 34	0 21	1 15	1 29	0 18	15 36	6 27	6 21	18 29	9 16	6 52	
S 4	22 28	21 56	3 6	19 41	0 46	14 25	1 41	15 20	0 30	23 1	0 23	11 11	2 16	23 34	0 21	1 15	1 29	0 18	15 36	6 29	6 23	18 26	9 16	6 53	
S 5	22 35	16 46	2 1	20 16	0 35	14 48	1 39	15 33	0 29	23 1	0 23	11 13	2 16	23 34	0 21	1 15	1 29	0 18	15 36	6 30	6 24	18 23	9 16	6 53	
M 6	22 42	10 44	0 49	20 49	0 24	15 10	1 38	15 47	0 29	23 1	0 23	11 15	2 16	23 34	0 21	1 15	1 29	0 18	15 36	6 30	6 25	18 20	9 16	6 53	
T 7	22 48	4 15	0n25	21 22	0 13	15 31	1 37	16 0	0 28	23 0	0 23	11 17	2 16	23 33	0 21	1 15	1 29	0 17	15 36	6 30	6 26	18 18	9 15	6 54	
W 8	22 53	2n20	1 37	21 53	0 2	15 53	1 35	16 13	0 27	23 0	0 23	11 19	2 17	23 33	0 21	1 15	1 29	0 17	15 36	6 31	6 28	18 15	9 15	6 54	
T 9	22 58	8 42	2 42	22 22	0n 9	16 14	1 34	16 26	0 27	23 0	0 23	11 21	2 17	23 33	0 21	1 15	1 29	0 17	15 37	6 31	6 29	18 12	9 15	6 54	
F 10	23 3	14 35	3 36	22 49	0 20	16 34	1 32	16 39	0 26	23 0	0 22	11 23	2 17	23 33	0 21	1 15	1 29	0 17	15 37	6 33	6 30	18 9	9 15	6 55	
S 11	23 8	19 42	4 19	23 14	0 30	16 54	1 30	16 52	0 25	23 0	0 22	11 25	2 17	23 32	0 21	1 15	1 29	0 17	15 37	6 36	6 31	18 7	9 15	6 55	
S 12	23 12	23 49	4 47	23 37	0 40	17 14	1 29	17 5	0 25	22 59	0 22	11 27	2 17	23 32	0 21	1 15	1 29	0 17	15 37	6 40	6 32	18 4	9 15	6 56	
M13	23 15	26 40	4 59	23 57	0 49	17 34	1 27	17 17	0 24	22 59	0 22	11 29	2 17	23 32	0 21	1 15	1 29	0 17	15 37	6 44	6 34	18 1	9 16	6 56	
T 14	23 19	28 8	4 57	24 14	0 58	17 53	1 25	17 29	0 23	22 59	0 22	11 31	2 17	23 32	0 21	1 15	1 29	0 16	15 37	6 49	6 35	17 58	9 16	6 56	
W15	23 21	28 8	4 41	24 29	1 7	18 11	1 23	17 41	0 23	22 59	0 22	11 33	2 18	23 31	0 21	1 15	1 29	0 16	15 38	6 54	6 36	17 55	9 16	6 57	
T 16	23 24	26 44	4 12	24 42	1 14	18 29	1 21	17 53	0 22	22 59	0 22	11 35	2 18	23 31	0 21	1 14	1 29	0 16	15 38	6 58	6 37	17 53	9 16	6 57	
F 17	23 26	24 7	3 31	24 51	1 22	18 47	1 19	18 5	0 21	22 58	0 21	11 36	2 18	23 31	0 21	1 14	1 29	0 16	15 38	7 2	6 39	17 50	9 16	6 57	
S 18	23 27	20 29	2 42	24 57	1 28	19 4	1 17	18 16	0 21	22 58	0 21	11 38	2 18	23 31	0 21	1 14	1 29	0 16	15 38	7 4	6 40	17 47	9 16	6 58	
S 19	23 28	16 3	1 46	25 1	1 34	19 21	1 15	18 28	0 20	22 58	0 21	11 40	2 18	23 31	0 21	1 14	1 29	0 16	15 39	7 6	6 41	17 44	9 16	6 58	
M20	23 29	11 3	0 46	25 2	1 39	19 37	1 13	18 39	0 19	22 58	0 21	11 42	2 18	23 30	0 21	1 14	1 28	0 16	15 39	7 7	6 42	17 41	9 17	6 58	
T 21	23 29	5 38	0s17	25 0	1 43	19 52	1 11	18 50	0 19	22 57	0 21	11 43	2 18	23 30	0 21	1 14	1 28	0 16	15 39	7 7	6 43	17 39	9 17	6 59	
W22	23 29	0s 3	1 20	24 55	1 47	20 8	1 9	19 1	0 18	22 57	0 21	11 45	2 19	23 30	0 21	1 14	1 28	0 16	15 39	7 7	6 45	17 36	9 17	6 59	
T 23	23 29	5 49	2 20	24 48	1 50	20 22	1 7	19 11	0 17	22 57	0 21	11 47	2 19	23 30	0 21	1 13	1 28	0 16	15 39	7 7	6 46	17 33	9 17	6 59	
F 24	23 28	11 30	3 15	24 39	1 52	20 36	1 5	19 22	0 17	22 57	0 20	11 48	2 19	23 29	0 21	1 13	1 28	0 16	15 40	7 7	6 47	17 30	9 18	7 0	
S 25	23 27	16 53	4 2	24 27	1 54	20 50	1 2	19 32	0 16	22 56	0 20	11 50	2 19	23 29	0 21	1 13	1 28	0 16	15 40	7 9	6 48	17 27	9 18	7 0	
S 26	23 25	21 40	4 38	24 13	1 54	21 3	1 0	19 42	0 15	22 56	0 20	11 51	2 19	23 29	0 21	1 13	1 28	0 16	15 40	7 11	6 50	17 24	9 18	7 0	
M27	23 23	25 26	4 59	23 57	1 54	21 15	0 58	19 52	0 15	22 56	0 20	11 53	2 20	23 28	0 21	1 12	1 28	0 16	15 40	7 14	6 51	17 22	9 19	7 0	
T 28	23 20	27 46	5 3	23 39	1 54	21 27	0 55	20 1	0 14	22 56	0 20	11 54	2 20	23 28	0 21	1 12	1 28	0 15	15 41	7 18	6 52	17 19	9 19	7 1	
W29	23 17	28 16	4 47	23 19	1 52	21 39	0 53	20 11	0 13	22 55	0 20	11 56	2 20	23 28	0 21	1 12	1 28	0 15	15 41	7 21	6 53	17 16	9 19	7 1	
T 30	23n14	26s46	4s11	22n58	1n50	21n49	0s50	20n20	0s12	22s55	0n20	11n57	2s20	23n28	0n21	1n12	1n28	0s15	15s41	7s25	6s54	17n13	9s20	7n 1	

ASTRODIENST EPHEMERIS for the year 1616

geocentric

JULY 1616 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	18 37 27	9 ⁵⁶ 16'00	0 ²³ 23	26 ⁵³ 53	16 ¹¹ 19	2 ¹¹ 22	21°R45	7 ⁵⁷ 57	9 ⁵⁹ 59	0 ²³ 23	9 ²³ 23	11°R 0	12 ²³ 23	18 ⁵⁰ 50	16°R 5	F 1
S 2	18 41 24	10°13'10	15°18	28°39	17°32	3° 4	21 ³⁸ 38	8° 2	10° 3	0°24	9°24	10 ⁵⁵ 55	12°20	18°56	16 ³⁶ 36	S 2
S 3	18 45 20	11°10'20	0 ⁴ 4	0 ²² 22	18°45	3°46	21°31	8° 7	10° 7	0°25	9°25	10°53	12°17	19° 3	16° 0	S 3
M 4	18 49 17	12° 7'31	14°34	2° 3	19°57	4°28	21°24	8°12	10°10	0°26	9°25	10°D53	12°14	19°10	15°58	M 4
T 5	18 53 13	13° 4'42	28°46	3°43	21°10	5°10	21°17	8°17	10°14	0°26	9°26	10°53	12°11	19°16	15°56	T 5
W 6	18 57 10	14° 1'54	12 ³⁸ 38	5°20	22°23	5°51	21°11	8°21	10°17	0°27	9°27	10°R54	12° 8	19°23	15°53	W 6
T 7	19 1 6	14°59'06	26°11	6°55	23°36	6°33	21° 4	8°26	10°21	0°28	9°27	10°53	12° 4	19°30	15°50	T 7
F 8	19 5 3	15°56'19	9 ²⁷ 27	8°29	24°48	7°15	20°58	8°30	10°25	0°29	9°28	10°51	12° 1	19°36	15°48	F 8
S 9	19 9 0	16°53'32	22°27	10° 0	26° 1	7°56	20°52	8°35	10°28	0°30	9°29	10°46	11°58	19°43	15°45	S 9
S 10	19 12 56	17°50'46	5 ¹¹ 13	11°29	27°14	8°38	20°46	8°39	10°32	0°31	9°29	10°39	11°55	19°50	15°42	S 10
M 11	19 16 53	18°48'01	17°46	12°56	28°27	9°19	20°40	8°43	10°36	0°31	9°30	10°31	11°52	19°56	15°40	M 11
T 12	19 20 49	19°45'17	0 ⁹ 9	14°21	29°40	10° 0	20°34	8°47	10°39	0°32	9°30	10°22	11°48	20° 3	15°37	T 12
W 13	19 24 46	20°42'32	12°21	15°44	0 ⁵³ 53	10°42	20°28	8°51	10°43	0°33	9°31	10°13	11°45	20°10	15°34	W 13
T 14	19 28 42	21°39'49	24°24	17° 5	2° 6	11°23	20°22	8°55	10°46	0°34	9°31	10° 5	11°42	20°16	15°31	T 14
F 15	19 32 39	22°37'05	6 ²⁰ 20	18°24	3°19	12° 4	20°17	8°59	10°50	0°36	9°32	9°58	11°39	20°23	15°29	F 15
S 16	19 36 36	23°34'23	18°10	19°40	4°32	12°45	20°12	9° 3	10°54	0°37	9°32	9°53	11°36	20°30	15°26	S 16
S 17	19 40 32	24°31'40	29°57	20°54	5°45	13°26	20° 6	9° 7	10°57	0°38	9°33	9°51	11°33	20°36	15°23	S 17
M 18	19 44 29	25°28'58	11 ⁴⁴ 44	22° 5	6°58	14° 7	20° 1	9°10	11° 1	0°39	9°33	9°D51	11°29	20°43	15°20	M 18
T 19	19 48 25	26°26'17	23°34	23°15	8°12	14°48	19°56	9°14	11° 4	0°40	9°34	9°51	11°26	20°50	15°17	T 19
W 20	19 52 22	27°23'36	5 ³² 32	24°21	9°25	15°28	19°52	9°17	11° 8	0°41	9°34	9°53	11°23	20°56	15°14	W 20
T 21	19 56 18	28°20'55	17°43	25°25	10°38	16° 9	19°47	9°21	11°11	0°42	9°35	9°54	11°20	21° 3	15°11	T 21
F 22	20 0 15	29°18'15	0 ¹¹ 11	26°26	11°51	16°50	19°43	9°24	11°15	0°44	9°35	9°R55	11°17	21°10	15° 8	F 22
S 23	20 4 11	0 ¹⁵ 15	13° 1	27°25	13° 4	17°30	19°38	9°27	11°18	0°45	9°35	9°54	11°14	21°16	15° 5	S 23
S 24	20 8 8	1°12'57	26°17	28°20	14°18	18°11	19°34	9°30	11°22	0°46	9°36	9°51	11°10	21°23	15° 2	S 24
M 25	20 12 5	2°10'18	10 ¹ 1	29°13	15°31	18°51	19°30	9°33	11°25	0°48	9°36	9°47	11° 7	21°30	14°59	M 25
T 26	20 16 1	3° 7'41	24°14	0 ² 2	16°44	19°32	19°27	9°36	11°29	0°49	9°36	9°43	11° 4	21°36	14°56	T 26
W 27	20 19 58	4° 5'04	8 ⁵² 52	0°48	17°58	20°12	19°23	9°39	11°32	0°50	9°37	9°37	11° 1	21°43	14°53	W 27
T 28	20 23 54	5° 2'27	23°50	1°30	19°11	20°52	19°19	9°41	11°36	0°52	9°37	9°33	10°58	21°50	14°49	T 28
F 29	20 27 51	5°59'52	9 ⁰ 0	2° 9	20°25	21°32	19°16	9°44	11°39	0°53	9°37	9°29	10°54	21°56	14°46	F 29
S 30	20 31 47	6°57'17	24°11	2°43	21°38	22°12	19°13	9°46	11°42	0°55	9°37	9°26	10°51	22° 3	14°43	S 30
S 31	20 35 44	7 ⁴⁴ 44	9 ¹⁴ 14	3 ¹⁴ 14	22 ⁵² 52	22 ¹¹ 11	19 ¹⁰ 10	9 ⁴⁹ 49	11 ⁴⁶ 46	0 ⁵⁶ 56	9 ³⁸ 38	9°D26	10 ⁴⁸ 48	22 ¹⁰ 10	14 ⁴⁰ 40	S 31

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	decl	decl	decl	lat	
F 1	23n10	23s21	3s19	22n35	1n48	21n59	0s48	20n29	0s12	22s55	0n19	11n59	2s20	23n27	0n21	1n11	1n28	0s15	15s41	7s27	6s56	17n10	9s20	7n 1	
S 2	23 6	18 23	2 12	22 11	1 44	22 9	0 46	20 38	0 11	22 54	0 19	12 0	2 20	23 27	0 21	1 11	1 28	0 16	15 42	7 29	6 57	17 7	9 21	7 2	
S 3	23 1	12 22	0 58	21 45	1 41	22 18	0 43	20 47	0 10	22 54	0 19	12 2	2 21	23 27	0 21	1 11	1 28	0 16	15 42	7 30	6 58	17 5	9 21	7 2	
M 4	22 56	5 47	0n20	21 19	1 36	22 26	0 41	20 55	0 10	22 54	0 19	12 3	2 21	23 27	0 21	1 10	1 28	0 16	15 42	7 30	6 59	17 2	9 22	7 2	
T 5	22 51	0n57	1 34	20 51	1 31	22 34	0 38	21 4	0 9	22 54	0 19	12 4	2 21	23 26	0 21	1 10	1 28	0 16	15 42	7 30	7 0	16 59	9 22	7 2	
W 6	22 45	7 29	2 42	20 22	1 26	22 41	0 36	21 12	0 8	22 53	0 19	12 6	2 21	23 26	0 21	1 10	1 28	0 16	15 43	7 30	7 2	16 56	9 23	7 3	
T 7	22 39	13 31	3 38	19 52	1 20	22 47	0 33	21 20	0 7	22 53	0 18	12 7	2 21	23 26	0 21	1 9	1 28	0 16	15 43	7 30	7 3	16 53	9 23	7 3	
F 8	22 32	18 48	4 22	19 22	1 14	22 53	0 30	21 27	0 7	22 53	0 18	12 8	2 22	23 26	0 21	1 9	1 28	0 16	15 43	7 31	7 4	16 50	9 24	7 3	
S 9	22 25	23 6	4 51	18 51	1 7	22 58	0 28	21 35	0 6	22 53	0 18	12 9	2 22	23 25	0 21	1 9	1 28	0 16	15 43	7 33	7 5	16 47	9 24	7 3	
S 10	22 18	26 13	5 5	18 20	0 59	23 3	0 25	21 42	0 5	22 52	0 18	12 10	2 22	23 25	0 21	1 8	1 28	0 16	15 44	7 35	7 7	16 44	9 25	7 4	
M 11	22 10	27 58	5 4	17 48	0 52	23 6	0 23	21 49	0 4	22 52	0 18	12 12	2 22	23 25	0 21	1 8	1 28	0 16	15 44	7 38	7 8	16 41	9 25	7 4	
T 12	22 2	28 18	4 48	17 15	0 44	23 9	0 20	21 56	0 4	22 52	0 18	12 13	2 22	23 24	0 21	1 7	1 28	0 16	15 44	7 42	7 9	16 39	9 26	7 4	
W 13	21 54	27 14	4 20	16 43	0 35	23 12	0 17	22 3	0 3	22 51	0 17	12 14	2 23	23 24	0 21	1 7	1 28	0 16	15 45	7 45	7 10	16 36	9 27	7 4	
T 14	21 45	24 54	3 40	16 10	0 26	23 14	0 15	22 9	0 2	22 51	0 17	12 15	2 23	23 24	0 21	1 7	1 28	0 16	15 45	7 48	7 11	16 33	9 27	7 4	
F 15	21 35	21 29	2 51	15 37	0 17	23 15	0 12	22 16	0 1	22 51	0 17	12 16	2 23	23 24	0 21	1 6	1 27	0 16	15 45	7 51	7 13	16 30	9 28	7 4	
S 16	21 26	17 14	1 55	15 4	0 7	23 15	0 10	22 22	0 1	22 51	0 17	12 17	2 23	23 23	0 21	1 6	1 27	0 17	15 45	7 53	7 14	16 27	9 29	7 5	
S 17	21 16	12 21	0 53	14 31	0s 3	23 15	0 7	22 28	0n 0	22 51	0 17	12 18	2 24	23 23	0 21	1 5	1 27	0 17	15 46	7 54	7 15	16 24	9 29	7 5	
M 18	21 5	7 1	0s10	13 58	0 13	23 14	0 5	22 33	0 1	22 50	0 17	12 19	2 24	23 23	0 21	1 5	1 27	0 17	15 46	7 54	7 16	16 21	9 30	7 5	
T 19	20 55	1 26	1 14	13 26	0 24	23 12	0 2	22 39	0 2	22 50	0 16	12 20	2 24	23 22	0 21	1 4	1 27	0 17	15 46	7 53	7 17	16 18	9 31	7 5	
W 20	20 44	4s16	2 15	12 53	0 35	23 10	0n 1	22 44	0 2	22 50	0 16	12 20	2 24	23 22	0 21	1 4	1 27	0 17	15 47	7 53	7 19	16 15	9 31	7 5	
T 21	20 32	9 55	3 11	12 22	0 46	23 7	0 3	22 49	0 3	22 50	0 16	12 21	2 24	23 22	0 21	1 3	1 27	0 17	15 47	7 52	7 20	16 12	9 32	7 5	
F 22	20 20	15 18	4 0	11 50	0 57	23 3	0 6	22 54	0 4	22 50	0 16	12 22	2 25	23 22	0 21	1 3	1 27	0 17	15 47	7 52	7 21	16 9	9 33	7 5	
S 23	20 8	20 11	4 38	11 19	1 9	22 59	0 8	22 59	0 5	22 49	0 16	12 23	2 25	23 21	0 21	1 2	1 27	0 18	15 48	7 53	7 22	16 6	9 34	7 5	
S 24	19 56	24 16	5 3	10 49	1 20	22 54	0 11	23 3	0 5	22 49	0 16	12 24	2 25	23 21	0 21	1 1	1 27	0 18	15 48	7 53	7 23	16 4	9 35	7 5	
M 25	19 43	27 8	5 11	10 20	1 32	22 48	0 13	23 8	0 6	22 49	0 15	12 24	2 25	23 21	0 21	1 1	1 27	0 18	15 48	7 55	7 25	16 1	9 35	7 5	
T 26	19 30	28 23	5 1	9 52	1 44	22 42	0 16	23 12	0 7	22 49	0 15	12 25	2 26	23 20	0 21	1 0	1 27	0 18	15 48	7 57	7 26	15 58	9 36	7 6	
W 27	19 17	27 43	4 32	9 24	1 56	22 35	0 18	23 15	0 8	22 49	0 15	12 26	2 26	23 20	0 21	1 0	1 27	0 18	15 49	7 59	7 27	15 55	9 37	7 6	
T 28	19 3	25 3	3 43	8 58	2 8	22 27	0 21	23 19	0 9	22 49	0 15	12 26	2 26	23 20	0 21	0 59	1 27	0 19	15 49	8 1	7 28	15 52	9 38	7 6	
F 29	18 49	20 36	2 39	8 33	2 21	22 19	0 23	23 23	0 9	22 49	0 15	12 27	2 26	23 20	0 21	0 59	1 27	0 19	15 49	8 2	7 30	15 49	9 39	7 6	
S 30	18 34	14 47	1 23	8 9	2 33	22 10	0 25	23 26	0 10	22 49	0 15	12 27	2 27	23 19	0 21	0 58	1 27	0 19	15 50	8 3	7 31	15 46	9 40	7 6	
S 31	18n20	8s 9	0s 1	7n47	2s45	22n 0	0n28	23n29	0n11	22s49	0n14	12n28	2s27	23n19	0n21	0n57	1n27	0s19	15s50	8s 3	7s32	15n43	9s40	7n 6	

ASTRODIENST EPHEMERIS for the year 1616

geocentric

AUGUST 1616 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	20 39 40	8♂52'11	24♂1	3♂40	24♂5	23♂32	19°R 7	9♂51	11♂49	0♂58	9♂38	9♂26	10♂45	22♂16	14°R37	M 1
T 2	20 43 37	9°49'40	8♂27	4° 2	25°19	24°12	19♂5	9°53	11°52	0°59	9°38	9°28	10°42	22°23	14°34	T 2
W 3	20 47 34	10°47'11	22°29	4°20	26°33	24°52	19° 3	9°55	11°56	1° 1	9°38	9°29	10°39	22°29	14°30	W 3
T 4	20 51 30	11°44'42	6♂7	4°32	27°46	25°32	19° 0	9°57	11°59	1° 2	9°38	9°R30	10°35	22°36	14°27	T 4
F 5	20 55 27	12°42'16	19°21	4°39	29° 0	26°11	18°58	9°59	12° 2	1° 4	9°38	9°30	10°32	22°43	14°24	F 5
S 6	20 59 23	13°39'50	2♂16	4°R41	0♂14	26°51	18°56	10° 1	12° 5	1° 6	9°38	9°29	10°29	22°49	14°21	S 6
S 7	21 3 20	14°37'27	14°52	4°38	1°27	27°30	18°55	10° 3	12° 9	1° 7	9°38	9°26	10°26	22°56	14°18	S 7
M 8	21 7 16	15°35'04	27°14	4°29	2°41	28°10	18°53	10° 4	12°12	1° 9	9°38	9°23	10°23	23° 3	14°15	M 8
T 9	21 11 13	16°32'43	9♂25	4°15	3°55	28°49	18°52	10° 6	12°15	1°11	9°R38	9°19	10°20	23° 9	14°11	T 9
W10	21 15 9	17°30'24	21°26	3°55	5° 9	29°28	18°51	10° 7	12°18	1°12	9°38	9°16	10°16	23°16	14° 8	W10
T 11	21 19 6	18°28'06	3♂20	3°30	6°23	0♂8	18°50	10° 8	12°21	1°14	9°38	9°13	10°13	23°23	14° 5	T 11
F 12	21 23 3	19°25'49	15°10	2°59	7°37	0°47	18°49	10° 9	12°24	1°16	9°38	9°10	10°10	23°29	14° 2	F 12
S 13	21 26 59	20°23'34	26°57	2°23	8°51	1°26	18°49	10°10	12°27	1°17	9°38	9° 9	10° 7	23°36	13°59	S 13
S 14	21 30 56	21°21'20	8♂45	1°43	10° 5	2° 5	18°48	10°11	12°30	1°19	9°38	9°D 8	10° 4	23°43	13°56	S 14
M15	21 34 52	22°19'07	20°34	0°58	11°19	2°44	18°D48	10°12	12°33	1°21	9°38	9° 9	10° 0	23°49	13°52	M15
T 16	21 38 49	23°16'55	2♂29	0°10	12°33	3°23	18°48	10°13	12°36	1°23	9°38	9°10	9°57	23°56	13°49	T 16
W17	21 42 45	24°14'45	14°31	29♂18	13°47	4° 1	18°49	10°13	12°39	1°25	9°38	9°11	9°54	24° 3	13°46	W17
T 18	21 46 42	25°12'36	26°45	28°25	15° 1	4°40	18°49	10°14	12°42	1°27	9°38	9°12	9°51	24° 9	13°43	T 18
F 19	21 50 38	26°10'29	9♂14	27°31	16°15	5°18	18°50	10°14	12°45	1°29	9°37	9°13	9°48	24°16	13°40	F 19
S 20	21 54 35	27° 8'22	22° 3	26°37	17°29	5°57	18°50	10°15	12°48	1°30	9°37	9°R14	9°45	24°23	13°37	S 20
S 21	21 58 32	28° 6'17	5♂14	25°45	18°43	6°35	18°51	10°15	12°51	1°32	9°37	9°14	9°41	24°29	13°34	S 21
M22	22 2 28	29° 4'14	18°50	24°54	19°57	7°14	18°53	10°R15	12°54	1°34	9°37	9°13	9°38	24°36	13°31	M22
T 23	22 6 25	0♂2'12	2♂53	24° 7	21°12	7°52	18°54	10°15	12°56	1°36	9°36	9°12	9°35	24°42	13°28	T 23
W24	22 10 21	1° 0'11	23°25	22°26	8°30	18°55	10°15	12°59	1°38	9°36	9°11	9°32	24°49	13°25	W24	
T 25	22 14 18	1°58'11	22°48	23°40	9° 8	18°57	10°15	13° 2	1°40	9°36	9°10	9°29	24°56	13°22	T 25	
F 26	22 18 14	2°56'13	17°16	22°18	24°54	9°46	18°59	10°14	13° 4	1°42	9°35	9°10	9°25	25° 2	13°19	F 26
S 27	22 22 11	3°54'16	2♂28	21°54	26° 9	10°24	19° 1	10°14	13° 7	1°44	9°35	9°D10	9°22	25° 9	13°16	S 27
S 28	22 26 7	4°52'21	17°37	21°39	27°23	11° 2	19° 3	10°13	13°10	1°46	9°35	9°10	9°19	25°16	13°13	S 28
M29	22 30 4	5°50'28	2♂35	21°D31	28°37	11°40	19° 6	10°13	13°12	1°48	9°34	9°10	9°16	25°22	13°10	M29
T 30	22 34 1	6°48'36	17°13	21°33	29°52	12°17	19° 9	10°12	13°15	1°50	9°34	9°10	9°13	25°29	13° 7	T 30
W31	22 37 57	7♂46'47	1♂27	21♂43	1♂6	12♂55	19♂11	10♂11	13♂17	1♂52	9♂33	9♂10	9♂10	25♂36	13≈ 5	W31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
M 1	18n 5	1s10	1n19	7n26	2s57	21n50	0n30	23n32	0n12	22s49	0n14	12n28	2s27	23n19	0n21	0n57
T 2	17 50	5n41	2 32	7 7	3 9	21 39	0 32	23 34	0 13	22 48	0 14	12 29	2 27	23 19	0 21	0 56
W 3	17 34	12 5	3 35	6 50	3 20	21 27	0 35	23 37	0 13	22 48	0 14	12 29	2 28	23 18	0 21	0 55
T 4	17 18	17 43	4 23	6 35	3 31	21 15	0 37	23 39	0 14	22 48	0 14	12 30	2 28	23 18	0 21	0 55
F 5	17 2	22 20	4 55	6 23	3 42	21 2	0 39	23 41	0 15	22 48	0 14	12 30	2 28	23 18	0 21	0 54
S 6	16 46	25 45	5 12	6 12	3 53	20 49	0 41	23 43	0 16	22 48	0 13	12 30	2 28	23 17	0 21	0 53
S 7	16 29	27 49	5 13	6 4	4 2	20 35	0 43	23 45	0 17	22 48	0 13	12 31	2 28	23 17	0 21	0 53
M 8	16 12	28 27	4 59	5 59	4 11	20 20	0 45	23 46	0 17	22 48	0 13	12 31	2 29	23 17	0 21	0 52
T 9	15 55	27 41	4 32	5 57	4 19	20 5	0 47	23 47	0 18	22 49	0 13	12 31	2 29	23 17	0 21	0 51
W10	15 37	25 37	3 54	5 57	4 26	19 49	0 49	23 48	0 19	22 49	0 13	12 31	2 29	23 16	0 21	0 51
T 11	15 20	22 27	3 5	6 1	4 32	19 33	0 51	23 49	0 20	22 49	0 13	12 31	2 29	23 16	0 21	0 50
F 12	15 2	18 22	2 9	6 8	4 37	19 16	0 53	23 50	0 21	22 49	0 12	12 32	2 30	23 16	0 21	0 49
S 13	14 43	13 36	1 7	6 17	4 40	18 58	0 55	23 51	0 22	22 49	0 12	12 32	2 30	23 16	0 21	0 48
S 14	14 25	8 21	0 2	6 30	4 42	18 40	0 57	23 51	0 22	22 49	0 12	12 32	2 30	23 15	0 21	0 48
M15	14 6	2 47	1s 3	6 46	4 42	18 22	0 59	23 51	0 23	22 49	0 12	12 32	2 30	23 15	0 21	0 47
T 16	13 47	2s55	2 6	7 4	4 40	18 3	1 0	23 51	0 24	22 49	0 12	12 32	2 31	23 15	0 21	0 46
W17	13 28	8 33	3 4	7 26	4 36	17 43	1 2	23 51	0 25	22 50	0 12	12 32	2 31	23 14	0 21	0 45
T 18	13 9	13 58	3 54	7 49	4 30	17 23	1 4	23 50	0 26	22 50	0 11	12 32	2 31	23 14	0 21	0 45
F 19	12 49	18 57	4 35	8 15	4 23	17 2	1 5	23 50	0 27	22 50	0 11	12 31	2 31	23 14	0 21	0 44
S 20	12 29	23 12	5 3	8 42	4 13	16 41	1 7	23 49	0 27	22 50	0 11	12 31	2 32	23 14	0 21	0 43
S 21	12 9	26 24	5 16	9 10	4 2	16 20	1 8	23 48	0 28	22 50	0 11	12 31	2 32	23 13	0 21	0 42
M22	11 49	28 13	5 13	9 39	3 49	15 58	1 10	23 47	0 29	22 51	0 11	12 31	2 32	23 13	0 21	0 42
T 23	11 29	28 18	4 51	10 8	3 35	15 35	1 11	23 45	0 30	22 51	0 11	12 31	2 32	23 13	0 21	0 41
W24	11 8	26 29	4 10	10 37	3 19	15 12	1 12	23 44	0 31	22 51	0 11	12 30	2 33	23 13	0 21	0 40
T 25	10 48	22 49	3 11	11 5	3 2	14 49	1 13	23 42	0 32	22 52	0 10	12 30	2 33	23 12	0 21	0 39
F 26	10 27	17 35	1 59	11 31	2 44	14 25	1 15	23 40	0 33	22 52	0 10	12 30	2 33	23 12	0 22	0 38
S 27	10 6	11 12	0 37	11 56	2 26	14 1	1 16	23 38	0 33	22 52	0 10	12 29	2 33	23 12	0 22	0 38
S 28	9 45	4 11	0n47	12 19	2 7	13 36	1 17	23 36	0 34	22 53	0 10	12 29	2 34	23 12	0 22	0 37
M29	9 23	2n58	2 7	12 39	1 48	13 12	1 18	23 34	0 35	22 53	0 10	12 29	2 34	23 12	0 22	0 36
T 30	9 2	9 48	3 16	12 56	1 29	12 46	1 19	23 31	0 36	22 53	0 10	12 28	2 34	23 11	0 22	0 35
W31	8n40	15n56	4n12	13n11	1s11	12n21	1n20	23n29	0n37	22s54	0n 9	12n28	2s34	23n11	0n22	0n34

Julian Day Number = 2311504.5, Delta T = 69.81 sec

Ecliptic obliquity = 23°29'29", Nutation = 0°00'07", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 19°23'20", Lahiri = 18°30'21"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1616
geocentric

SEPTEMBER 1616 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	22 41 54	8 ^h 44 ^m 59 ^s	15 ^h 14 ^m	22 ^h 02 ^m	2 ^h 21 ^m	13 ^h 33 ^m	19 ^h 14 ^m	10 ^h 10 ^m	13 ^h 20 ^m	1 ^h 54 ^m	9 ^h 33 ^m	9 ^h 10 ^m	9 ^h 06 ^m	25 ^h 04 ^m	13 ^h 02 ^m	T 1
F 2	22 45 50	9 ^h 43 ^m 14 ^s	28 ^h 35 ^m	22 ^h 29 ^m	3 ^h 35 ^m	14 ^h 10 ^m	19 ^h 18 ^m	10 ^h 08 ^m	13 ^h 22 ^m	1 ^h 57 ^m	9 ^h 33 ^m	9 ^h 10 ^m	9 ^h 03 ^m	25 ^h 49 ^m	12 ^h 59 ^m	F 2
S 3	22 49 47	10 ^h 41 ^m 31 ^s	11 ^h 11 ^m 31 ^s	23 ^h 05 ^m	4 ^h 50 ^m	14 ^h 47 ^m	19 ^h 21 ^m	10 ^h 08 ^m	13 ^h 24 ^m	1 ^h 59 ^m	9 ^h 32 ^m	9 ^h 10 ^m	9 ^h 00 ^m	25 ^h 56 ^m	12 ^h 56 ^m	S 3
S 4	22 53 43	11 ^h 39 ^m 50 ^s	24 ^h 06 ^m	23 ^h 50 ^m	6 ^h 04 ^m	15 ^h 25 ^m	19 ^h 24 ^m	10 ^h 06 ^m	13 ^h 27 ^m	2 ^h 01 ^m	9 ^h 32 ^m	9 ^h 10 ^m	8 ^h 57 ^m	26 ^h 02 ^m	12 ^h 54 ^m	S 4
M 5	22 57 40	12 ^h 38 ^m 11 ^s	6 ^h 23 ^m	24 ^h 42 ^m	7 ^h 19 ^m	16 ^h 02 ^m	19 ^h 28 ^m	10 ^h 05 ^m	13 ^h 29 ^m	2 ^h 03 ^m	9 ^h 31 ^m	9 ^h 10 ^m	8 ^h 54 ^m	26 ^h 09 ^m	12 ^h 51 ^m	M 5
T 6	23 01 36	13 ^h 36 ^m 34 ^s	18 ^h 27 ^m	25 ^h 42 ^m	8 ^h 33 ^m	16 ^h 39 ^m	19 ^h 32 ^m	10 ^h 03 ^m	13 ^h 31 ^m	2 ^h 05 ^m	9 ^h 30 ^m	9 ^h 11 ^m	8 ^h 51 ^m	26 ^h 16 ^m	12 ^h 49 ^m	T 6
W 7	23 05 33	14 ^h 34 ^m 59 ^s	0 ^h 02 ^m 22 ^s	26 ^h 49 ^m	9 ^h 48 ^m	17 ^h 16 ^m	19 ^h 36 ^m	10 ^h 02 ^m	13 ^h 33 ^m	2 ^h 07 ^m	9 ^h 30 ^m	9 ^h 11 ^m	8 ^h 47 ^m	26 ^h 22 ^m	12 ^h 46 ^m	W 7
T 8	23 09 30	15 ^h 33 ^m 27 ^s	12 ^h 01 ^m	28 ^h 02 ^m	11 ^h 02 ^m	17 ^h 53 ^m	19 ^h 40 ^m	10 ^h 00 ^m	13 ^h 35 ^m	2 ^h 09 ^m	9 ^h 29 ^m	9 ^h 12 ^m	8 ^h 44 ^m	26 ^h 29 ^m	12 ^h 44 ^m	T 8
F 9	23 13 26	16 ^h 31 ^m 56 ^s	23 ^h 58 ^m	29 ^h 22 ^m	12 ^h 17 ^m	18 ^h 29 ^m	19 ^h 45 ^m	9 ^h 58 ^m	13 ^h 37 ^m	2 ^h 12 ^m	9 ^h 29 ^m	9 ^h 13 ^m	8 ^h 41 ^m	26 ^h 36 ^m	12 ^h 41 ^m	F 9
S 10	23 17 23	17 ^h 30 ^m 27 ^s	5 ^h 46 ^m	0 ^h 46 ^m	13 ^h 32 ^m	19 ^h 06 ^m	19 ^h 49 ^m	9 ^h 56 ^m	13 ^h 40 ^m	2 ^h 14 ^m	9 ^h 28 ^m	9 ^h 13 ^m	8 ^h 38 ^m	26 ^h 42 ^m	12 ^h 39 ^m	S 10
S 11	23 21 19	18 ^h 29 ^m 00 ^s	17 ^h 37 ^m	2 ^h 16 ^m	14 ^h 46 ^m	19 ^h 43 ^m	19 ^h 54 ^m	9 ^h 54 ^m	13 ^h 42 ^m	2 ^h 16 ^m	9 ^h 27 ^m	9 ^h 13 ^m	8 ^h 35 ^m	26 ^h 49 ^m	12 ^h 36 ^m	S 11
M12	23 25 16	19 ^h 27 ^m 35 ^s	29 ^h 34 ^m	3 ^h 50 ^m	16 ^h 01 ^m	20 ^h 19 ^m	19 ^h 59 ^m	9 ^h 52 ^m	13 ^h 44 ^m	2 ^h 18 ^m	9 ^h 27 ^m	9 ^h 12 ^m	8 ^h 31 ^m	26 ^h 55 ^m	12 ^h 34 ^m	M12
T 13	23 29 12	20 ^h 26 ^m 12 ^s	11 ^h 11 ^m 38 ^s	5 ^h 27 ^m	17 ^h 16 ^m	20 ^h 56 ^m	20 ^h 04 ^m	9 ^h 50 ^m	13 ^h 45 ^m	2 ^h 20 ^m	9 ^h 26 ^m	9 ^h 11 ^m	8 ^h 28 ^m	27 ^h 02 ^m	12 ^h 32 ^m	T 13
W14	23 33 09	21 ^h 24 ^m 51 ^s	23 ^h 51 ^m	7 ^h 07 ^m	18 ^h 31 ^m	21 ^h 32 ^m	20 ^h 09 ^m	9 ^h 48 ^m	13 ^h 47 ^m	2 ^h 22 ^m	9 ^h 25 ^m	9 ^h 09 ^m	8 ^h 25 ^m	27 ^h 09 ^m	12 ^h 29 ^m	W14
T 15	23 37 05	22 ^h 23 ^m 32 ^s	6 ^h 11 ^m 15 ^s	8 ^h 50 ^m	19 ^h 45 ^m	22 ^h 08 ^m	20 ^h 15 ^m	9 ^h 45 ^m	13 ^h 49 ^m	2 ^h 25 ^m	9 ^h 25 ^m	9 ^h 08 ^m	8 ^h 22 ^m	27 ^h 15 ^m	12 ^h 27 ^m	T 15
F 16	23 41 02	23 ^h 22 ^m 14 ^s	18 ^h 53 ^m	10 ^h 35 ^m	21 ^h 00 ^m	22 ^h 44 ^m	20 ^h 20 ^m	9 ^h 43 ^m	13 ^h 51 ^m	2 ^h 27 ^m	9 ^h 24 ^m	9 ^h 06 ^m	8 ^h 19 ^m	27 ^h 22 ^m	12 ^h 25 ^m	F 16
S 17	23 44 58	24 ^h 20 ^m 59 ^s	1 ^h 17 ^m 47 ^s	12 ^h 21 ^m	22 ^h 15 ^m	23 ^h 20 ^m	20 ^h 26 ^m	9 ^h 40 ^m	13 ^h 53 ^m	2 ^h 29 ^m	9 ^h 23 ^m	9 ^h 04 ^m	8 ^h 16 ^m	27 ^h 29 ^m	12 ^h 23 ^m	S 17
S 18	23 48 55	25 ^h 19 ^m 45 ^s	14 ^h 58 ^m	14 ^h 09 ^m	23 ^h 30 ^m	23 ^h 56 ^m	20 ^h 32 ^m	9 ^h 38 ^m	13 ^h 54 ^m	2 ^h 31 ^m	9 ^h 22 ^m	9 ^h 03 ^m	8 ^h 12 ^m	27 ^h 35 ^m	12 ^h 21 ^m	S 18
M19	23 52 52	26 ^h 18 ^m 32 ^s	28 ^h 28 ^m	15 ^h 58 ^m	24 ^h 45 ^m	24 ^h 32 ^m	20 ^h 38 ^m	9 ^h 35 ^m	13 ^h 56 ^m	2 ^h 33 ^m	9 ^h 22 ^m	9 ^h 03 ^m	8 ^h 09 ^m	27 ^h 42 ^m	12 ^h 19 ^m	M19
T 20	23 56 48	27 ^h 17 ^m 22 ^s	12 ^h 30 ^m 20 ^s	17 ^h 47 ^m	25 ^h 59 ^m	25 ^h 08 ^m	20 ^h 44 ^m	9 ^h 32 ^m	13 ^h 58 ^m	2 ^h 36 ^m	9 ^h 21 ^m	9 ^h 03 ^m	8 ^h 06 ^m	27 ^h 49 ^m	12 ^h 17 ^m	T 20
W21	0 0 45	28 ^h 16 ^m 13 ^s	26 ^h 32 ^m	19 ^h 36 ^m	27 ^h 14 ^m	25 ^h 43 ^m	20 ^h 50 ^m	9 ^h 29 ^m	13 ^h 59 ^m	2 ^h 38 ^m	9 ^h 20 ^m	9 ^h 04 ^m	8 ^h 03 ^m	27 ^h 55 ^m	12 ^h 15 ^m	W21
T 22	0 4 41	29 ^h 15 ^m 06 ^s	11 ^h 11 ^m 33 ^s	21 ^h 26 ^m	28 ^h 29 ^m	26 ^h 19 ^m	20 ^h 57 ^m	9 ^h 26 ^m	14 ^h 01 ^m	2 ^h 40 ^m	9 ^h 19 ^m	9 ^h 06 ^m	8 ^h 00 ^m	28 ^h 02 ^m	12 ^h 13 ^m	T 22
F 23	0 8 38	0 ^h 14 ^m 01 ^s	25 ^h 50 ^m	23 ^h 15 ^m	29 ^h 44 ^m	26 ^h 54 ^m	21 ^h 03 ^m	9 ^h 23 ^m	14 ^h 02 ^m	2 ^h 42 ^m	9 ^h 18 ^m	9 ^h 07 ^m	7 ^h 57 ^m	28 ^h 09 ^m	12 ^h 12 ^m	F 23
S 24	0 12 34	1 ^h 12 ^m 57 ^s	10 ^h 11 ^m 47 ^s	25 ^h 05 ^m	0 ^h 59 ^m	27 ^h 29 ^m	21 ^h 10 ^m	9 ^h 20 ^m	14 ^h 03 ^m	2 ^h 45 ^m	9 ^h 18 ^m	9 ^h 07 ^m	7 ^h 53 ^m	28 ^h 15 ^m	12 ^h 10 ^m	S 24
S 25	0 16 31	2 ^h 11 ^m 56 ^s	25 ^h 47 ^m	26 ^h 53 ^m	2 ^h 14 ^m	28 ^h 04 ^m	21 ^h 17 ^m	9 ^h 16 ^m	14 ^h 05 ^m	2 ^h 47 ^m	9 ^h 17 ^m	9 ^h 07 ^m	7 ^h 50 ^m	28 ^h 22 ^m	12 ^h 08 ^m	S 25
M26	0 20 27	3 ^h 10 ^m 56 ^s	10 ^h 11 ^m 41 ^s	28 ^h 42 ^m	3 ^h 29 ^m	28 ^h 39 ^m	21 ^h 24 ^m	9 ^h 13 ^m	14 ^h 06 ^m	2 ^h 49 ^m	9 ^h 16 ^m	9 ^h 05 ^m	7 ^h 47 ^m	28 ^h 29 ^m	12 ^h 07 ^m	M26
T 27	0 24 24	4 ^h 09 ^m 59 ^s	25 ^h 21 ^m	0 ^h 13 ^m 30 ^s	4 ^h 43 ^m	29 ^h 14 ^m	21 ^h 32 ^m	9 ^h 10 ^m	14 ^h 07 ^m	2 ^h 51 ^m	9 ^h 15 ^m	9 ^h 02 ^m	7 ^h 44 ^m	28 ^h 35 ^m	12 ^h 05 ^m	T 27
W28	0 28 21	5 ^h 09 ^m 03 ^s	9 ^h 11 ^m 41 ^s	2 ^h 17 ^m	5 ^h 58 ^m	29 ^h 49 ^m	21 ^h 39 ^m	9 ^h 06 ^m	14 ^h 09 ^m	2 ^h 54 ^m	9 ^h 14 ^m	8 ^h 58 ^m	7 ^h 41 ^m	28 ^h 42 ^m	12 ^h 04 ^m	W28
T 29	0 32 17	6 ^h 08 ^m 10 ^s	23 ^h 35 ^m	4 ^h 04 ^m	7 ^h 13 ^m	0 ^h 02 ^m 24 ^s	21 ^h 46 ^m	9 ^h 02 ^m	14 ^h 10 ^m	2 ^h 56 ^m	9 ^h 13 ^m	8 ^h 54 ^m	7 ^h 37 ^m	28 ^h 48 ^m	12 ^h 02 ^m	T 29
F 30	0 36 14	7 ^h 11 ^m 20 ^s	7 ^h 11 ^m 20 ^s	5 ^h 11 ^m 50 ^s	8 ^h 11 ^m 28 ^s	0 ^h 02 ^m 54 ^s	21 ^h 54 ^m	8 ^h 05 ^m 59 ^s	14 ^h 11 ^m	2 ^h 58 ^m	9 ^h 12 ^m	8 ^h 51 ^m	7 ^h 34 ^m	28 ^h 55 ^m	12 ^h 01 ^m	F 30

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	8n18	21n 4	4n51	13n22	0s53	11n55	1n20	23n26	0n38	22s54	0n 9	12n27	2s35	23n11	0n22	0n33	1n26	0s30	15s59	8s 9	8s10	14n 6	10s11	7n 2				
F 2	7 56	24 58	5 12	13 30	0 35	11 28	1 21	23 23	0 39	22 54	0 9	12 27	2 35	23 11	0 22	0 33	1 26	0 30	16 0	8 9	8 12	14 3	10 12	7 2				
S 3	7 34	27 27	5 18	13 34	0 18	11 2	1 22	23 20	0 40	22 55	0 9	12 26	2 35	23 10	0 22	0 32	1 26	0 30	16 0	8 9	8 13	14 0	10 13	7 1				
S 4	7 12	28 28	5 7	13 35	0 2	10 35	1 22	23 16	0 40	22 55	0 9	12 25	2 35	23 10	0 22	0 31	1 26	0 31	16 0	8 9	8 14	13 57	10 14	7 1				
M 5	6 50	28 3	4 43	13 31	0n13	10 8	1 23	23 13	0 41	22 56	0 9	12 25	2 35	23 10	0 22	0 30	1 26	0 31	16 0	8 9	8 15	13 54	10 15	7 1				
T 6	6 28	26 17	4 6	13 25	0 27	9 40	1 23	23 9	0 42	22 56	0 9	12 24	2 36	23 10	0 22	0 29	1 26	0 32	16 1	8 9	8 16	13 51	10 16	7 0				
W 7	6 5	23 22	3 20	13 14	0 40	9 12	1 24	23 5	0 43	22 57	0 8	12 23	2 36	23 10	0 22	0 28	1 26	0 32	16 1	8 8	8 18	13 48	10 17	7 0				
T 8	5 42	19 30	2 25	13 0	0 52	8 44	1 24	23 1	0 44	22 57	0 8	12 23	2 36	23 9	0 22	0 27	1 26	0 32	16 1	8 8	8 19	13 45	10 18	7 0				
F 9	5 20	14 53	1 24	12 42	1 3	8 16	1 25	22 57	0 45	22 58	0 8	12 22	2 36	23 9	0 22	0 27	1 26	0 33	16 1	8 8	8 20	13 42	10 19	7 0				
S 10	4 57	9 43	0 19	12 21	1 13	7 48	1 25	22 53	0 46	22 58	0 8	12 21	2 37	23 9	0 22	0 26	1 26	0 33	16 2	8 8	8 21	13 39	10 20	6 59				
S 11	4 34	4 11	0s46	11 57	1 21	7 19	1 25	22 49	0 47	22 59	0 8	12 20	2 37	23 9	0 22	0 25	1 26	0 34	16 2	8 8	8 22	13 35	10 21	6 59				
M12	4 11	1s31	1 51	11 30	1 28	6 50	1 25	22 44	0 48	22 59	0 8	12 19	2 37	23 9	0 22	0 24	1 26	0 34	16 2	8 8	8 23	13 32	10 22	6 59				
T 13	3 48	7 13	2 50	11 0	1 35	6 21	1 25	22 40	0 49	23 0	0 8	12 18	2 37	23 9	0 22	0 23	1 26	0 35	16 2	8 9	8 25	13 29	10 23	6 58				
W14	3 25	12 43	3 43	10 28	1 40	5 51	1 25	22 35	0 50	23 0	0 7	12 18	2 37	23 8	0 22	0 22	1 26	0 35	16 3	8 9	8 26	13 26	10 24	6 58				
T 15	3 1	17 49	4 26	9 53	1 44	5 22	1 25	22 30	0 51	23 1	0 7	12 17	2 38	23 8	0 22	0 21	1 26	0 35	16 3	8 10	8 27	13 23	10 25	6 58				
F 16	2 38	22 14	4 57	9 16	1 47	4 52	1 25	22 25	0 52	23 1	0 7	12 16	2 38	23 8	0 22	0 20	1 26	0 36	16 3	8 11	8 28	13 20	10 26	6 57				
S 17	2 15	25 41	5 14	8 38	1 50	4 23	1 25	22 20	0 52	23 2	0 7	12 15	2 38	23 8	0 22	0 20	1 26	0 36	16 3	8 11	8 29	13 17	10 27	6 57				
S 18	1 52	27 51	5 15	7 57	1 51	3 53	1 24	22 15	0 53	23 2	0 7	12 14	2 38	23 8	0 22	0 19	1 26	0 37	16 3	8 12	8 31	13 14	10 28	6 56				
M19	1 28	28 27	4 58	7 16	1 51	3 23	1 24	22 9	0 54	23 3	0 7	12 13	2 38	23 8	0 22	0 18	1 26	0 37	16 4	8 12	8 32	13 11	10 29	6 56				
T 20	1 5	27 19	4 25	6 33	1 51	2 52	1 24	22 4	0 55	23 3	0 7	12 12	2 38	23 8	0 22	0 17	1 26	0 38	16 4	8 11	8 33	13 7	10 30	6 56				
W21	0 41	24 24	3 34	5 49	1 50	2 22	1 23	21 58	0 56	23 4	0 6	12 10	2 39	23 7	0 22	0 16	1 26	0 38	16 4	8 11	8 34	13 4	10 30	6 55				
T 22	0 18	19 53	2 29	5 4	1 49	1 52	1 23	21 52	0 57	23 5	0 6	12 9	2 39	23 7	0 22	0 15	1 26	0 38	16 4	8 11	8 35	13 1	10 31	6 55				
F 23	0s 6	14 4	1 13	4 19	1 47	1 22	1 22	21 47	0 58	23 5	0 6	12 8	2 39	23 7	0 22	0 14	1 26	0 39	16 4	8 10	8 37	12 58	10 32	6 55				
S 24	0 29	7 24	0n 9	3 33	1 44	0 51	1 21	21 41	0 59	23 6	0 6	12 7	2 39	23 7	0 22	0 13	1 26	0 39	16 5	8 10	8 38	12 55	10 33	6 54				
S 25	0 53	0 18	1 31	2 47	1 41	0 21	1 21	21 34	1 0	23 6	0 6	12 6	2 39	23 7	0 22	0 13	1 26	0 40	16 5	8 10	8 39	12 52	10 34	6 54				
M26	1 16	6n46	2 45	2 1	1 37	0s10	1 20	21 28	1 1	23 7	0 6	12 5	2 39	23 7	0 22	0 12	1 26	0 40	16 5	8 11	8 40	12 49	10 35	6 53				
T 27	1 40	13 21	3 48	1 14	1 33	0 41	1 19	21 22	1 2	23 8	0 6	12 3	2 40	23 7	0 22	0 11	1 26	0 41	16 5	8 12	8 41	12 46	10 36	6 53				
W28	2 3	19 4	4 34	0 27	1 29	1 11	1 18	21 16	1 3	23 8	0 6	12 2	2 40	23 7	0 22	0 10	1 26	0 41	16 5	8 14	8 43	12 42	10 37	6 53				
T 29	2 27	23 35	5 3	0s20	1 24	1 42	1 17	21 9	1 4	23 9	0 5	12 1	2 40	23 6	0 22	0 9	1 26	0 41	16 6	8 15	8 44	12 39	10 36	6 52				
F 30	2s50	26n41	5n14	1s 6	1n19	2s12	1n16	21n 3	1n 5	23s 9	0n 5	12n 0	2s40	23n 6	0n22	0n 8	1n26	0s42	16s 6	8s16	8s45	12n36	10s38	6n52				

ASTRODIENST EPHEMERIS for the year 1616
geocentric

OCTOBER 1616 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
S 1	0 40 10	8♌ 6'31	20♊ 3	7♊35	9♎43	1♏33	22♌2	8°R55	14♏12	3♎0	9°R11	8°R48	7♊31	29♏2	11°R59	S 1
S 2	0 44 7	9° 5'45	2♏41	9°19	10°58	2° 7	22°10	8♌51	14°13	3° 2	9♌10	8♊46	7°28	29° 8	11°≈58	S 2
M 3	0 48 3	10° 5'02	14°59	11° 3	12°13	2°42	22°18	8°47	14°14	3° 5	9° 9	8°D46	7°25	29°15	11°57	M 3
T 4	0 52 0	11° 4'20	27° 1	12°46	13°28	3°16	22°26	8°43	14°15	3° 7	9° 9	8°47	7°22	29°22	11°56	T 4
W 5	0 55 56	12° 3'41	8♏54	14°28	14°43	3°50	22°34	8°39	14°16	3° 9	9° 8	8°49	7°18	29°28	11°55	W 5
T 6	0 59 53	13° 3'05	20°42	16°10	15°58	4°24	22°43	8°35	14°16	3°11	9° 7	8°51	7°15	29°35	11°54	T 6
F 7	1 3 50	14° 2'30	2♊29	17°50	17°13	4°57	22°52	8°31	14°17	3°14	9° 6	8°52	7°12	29°42	11°53	F 7
S 8	1 7 46	15° 1'58	14°19	19°30	18°28	5°31	23° 0	8°27	14°18	3°16	9° 5	8°R52	7° 9	29°48	11°52	S 8
S 9	1 11 43	16° 1'28	26°17	21°10	19°43	6° 4	23° 9	8°23	14°18	3°18	9° 4	8°51	7° 6	29°55	11°51	S 9
M10	1 15 39	17° 1'00	8♌23	22°48	20°58	6°38	23°18	8°18	14°19	3°20	9° 2	8°47	7° 2	0♊2	11°50	M10
T 11	1 19 36	18° 0'34	20°41	24°26	22°13	7°11	23°27	8°14	14°19	3°22	9° 1	8°42	6°59	0° 8	11°50	T 11
W12	1 23 32	19° 0'10	3♊11	26° 4	23°29	7°44	23°36	8°10	14°20	3°25	9° 0	8°35	6°56	0°15	11°49	W12
T 13	1 27 29	19°59'48	15°54	27°40	24°44	8°17	23°46	8° 5	14°20	3°27	8°59	8°28	6°53	0°21	11°48	T 13
F 14	1 31 25	20°59'28	28°49	29°16	25°59	8°50	23°55	8° 1	14°21	3°29	8°58	8°20	6°50	0°28	11°48	F 14
S 15	1 35 22	21°59'10	11♌57	0♊52	27°14	9°22	24° 5	7°56	14°21	3°31	8°57	8°13	6°47	0°35	11°47	S 15
S 16	1 39 19	22°58'54	25°18	2°26	28°29	9°55	24°15	7°51	14°21	3°33	8°56	8° 8	6°43	0°41	11°47	S 16
M17	1 43 15	23°58'39	8♌52	4° 1	29°44	10°27	24°24	7°47	14°21	3°35	8°55	8° 5	6°40	0°48	11°47	M17
T 18	1 47 12	24°58'27	22°39	5°34	0♊59	10°59	24°34	7°42	14°22	3°37	8°54	8°D 4	6°37	0°55	11°47	T 18
W19	1 51 8	25°58'16	6♌39	7° 7	2°14	11°31	24°44	7°37	14°22	3°39	8°53	8° 5	6°34	1° 1	11°46	W19
T 20	1 55 5	26°58'06	20°52	8°40	3°29	12° 3	24°54	7°33	14°R22	3°42	8°52	8° 6	6°31	1° 8	11°46	T 20
F 21	1 59 1	27°57'58	5♊16	10°12	4°44	12°34	25° 5	7°28	14°22	3°44	8°51	8°R 6	6°28	1°15	11°D46	F 21
S 22	2 2 58	28°57'52	19°49	11°44	6° 0	13° 6	25°15	7°23	14°22	3°46	8°50	8° 6	6°24	1°21	11°46	S 22
S 23	2 6 54	29°57'48	4♊26	13°15	7°15	13°37	25°25	7°18	14°21	3°48	8°48	8° 3	6°21	1°28	11°46	S 23
M24	2 10 51	0♊57'45	19° 1	14°45	8°30	14° 8	25°36	7°14	14°21	3°50	8°47	7°58	6°18	1°35	11°47	M24
T 25	2 14 48	1°57'44	3♌28	16°15	9°45	14°39	25°47	7° 9	14°21	3°52	8°46	7°51	6°15	1°41	11°47	T 25
W26	2 18 44	2°57'45	17°40	17°45	11° 0	15°10	25°57	7° 4	14°21	3°54	8°45	7°42	6°12	1°48	11°47	W26
T 27	2 22 41	3°57'49	1♊31	19°14	12°15	15°41	26° 8	6°59	14°20	3°56	8°44	7°32	6° 8	1°55	11°47	T 27
F 28	2 26 37	4°57'54	14°59	20°42	13°30	16°11	26°19	6°54	14°20	3°58	8°43	7°23	6° 5	2° 1	11°48	F 28
S 29	2 30 34	5°58'01	28° 2	22°10	14°45	16°42	26°30	6°49	14°19	4° 0	8°42	7°15	6° 2	2° 8	11°48	S 29
S 30	2 34 30	6°58'11	10♌42	23°37	16° 1	17°12	26°41	6°44	14°19	4° 2	8°41	7° 9	5°59	2°14	11°49	S 30
M31	2 38 27	7♊58'22	23♏2	25♊4	17♊16	17♏42	26♌53	6♌40	14♏18	4♎4	8♌40	7♊6	5♊56	2♊21	11°≈50	M31

Day	☉	☽		♊		♋		♌		♍		♎		♏		♐		♑		♒	♓	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	decl	decl	decl	decl	decl	decl	decl	decl	decl	decl	decl	decl	decl	decl
S 1	3s13	28n14	5n 8	1s53	1n14	2s43	1n15	20n56	1n 6	23s10	0n 5	11n58	2s40	23n 6	0n22	0n 7	1n26	0s42	16s 6	8s17	8s46	12n33	10s39	6n51										
S 2	3 37	28 15	4 47	2 39	1 8	3 13	1 14	20 49	1 7	23 10	0 5	11 57	2 40	23 6	0 22	0 6	1 26	0 43	16 6	8 18	8 47	12 30	10 39	6 51										
M 3	4 0	26 51	4 13	3 25	1 3	3 44	1 13	20 42	1 8	23 11	0 5	11 56	2 40	23 6	0 23	0 5	1 26	0 43	16 6	8 18	8 48	12 27	10 40	6 50										
T 4	4 23	24 13	3 29	4 11	0 57	4 14	1 11	20 36	1 9	23 12	0 5	11 54	2 41	23 6	0 23	0 5	1 26	0 44	16 6	8 18	8 50	12 24	10 41	6 50										
W 5	4 47	20 35	2 37	4 56	0 51	4 44	1 10	20 29	1 10	23 12	0 5	11 53	2 41	23 6	0 23	0 4	1 26	0 44	16 6	8 17	8 51	12 20	10 42	6 49										
T 6	5 10	16 10	1 38	5 41	0 44	5 15	1 9	20 22	1 11	23 13	0 5	11 51	2 41	23 6	0 23	0 3	1 26	0 44	16 7	8 16	8 52	12 17	10 42	6 49										
F 7	5 33	11 9	0 35	6 26	0 38	5 45	1 7	20 14	1 12	23 13	0 4	11 50	2 41	23 6	0 23	0 2	1 26	0 45	16 7	8 16	8 53	12 14	10 43	6 49										
S 8	5 56	5 44	0s30	7 10	0 31	6 15	1 6	20 7	1 13	23 14	0 4	11 49	2 41	23 6	0 23	0 1	1 26	0 45	16 7	8 16	8 54	12 11	10 44	6 48										
S 9	6 19	0 3	1 34	7 53	0 25	6 44	1 4	20 0	1 15	23 15	0 4	11 47	2 41	23 6	0 23	0 0	1 26	0 46	16 7	8 16	8 56	12 8	10 44	6 48										
M10	6 42	5s41	2 34	8 36	0 18	7 14	1 3	19 53	1 16	23 15	0 4	11 46	2 41	23 6	0 23	0s 1	1 26	0 46	16 7	8 18	8 57	12 5	10 45	6 47										
T 11	7 5	11 18	3 28	9 19	0 11	7 44	1 1	19 45	1 17	23 16	0 4	11 44	2 41	23 6	0 23	0 1	1 26	0 46	16 7	8 20	8 58	12 1	10 46	6 47										
W12	7 27	16 33	4 12	10 1	0 5	8 13	0 59	19 38	1 18	23 16	0 4	11 43	2 41	23 6	0 23	0 2	1 26	0 47	16 7	8 22	8 59	11 58	10 46	6 46										
T 13	7 50	21 11	4 46	10 42	0s 2	8 42	0 58	19 30	1 19	23 17	0 4	11 41	2 41	23 6	0 23	0 3	1 26	0 47	16 7	8 25	9 0	11 55	10 47	6 46										
F 14	8 13	24 53	5 5	11 23	0 9	9 11	0 56	19 23	1 20	23 17	0 4	11 40	2 41	23 6	0 23	0 4	1 26	0 48	16 7	8 28	9 1	11 52	10 47	6 45										
S 15	8 35	27 22	5 8	12 3	0 16	9 40	0 54	19 15	1 21	23 18	0 4	11 38	2 42	23 6	0 23	0 5	1 26	0 48	16 7	8 30	9 3	11 49	10 48	6 45										
S 16	8 57	28 19	4 55	12 42	0 23	10 9	0 52	19 7	1 22	23 19	0 3	11 37	2 42	23 6	0 23	0 6	1 26	0 48	16 8	8 32	9 4	11 46	10 49	6 44										
M17	9 19	27 37	4 26	13 21	0 29	10 37	0 50	19 0	1 23	23 19	0 3	11 35	2 42	23 6	0 23	0 6	1 26	0 49	16 8	8 33	9 5	11 42	10 49	6 44										
T 18	9 41	25 12	3 40	13 59	0 36	11 5	0 48	18 52	1 24	23 20	0 3	11 34	2 42	23 6	0 23	0 7	1 26	0 49	16 8	8 34	9 6	11 39	10 50	6 43										
W19	10 3	21 15	2 41	14 36	0 43	11 33	0 46	18 44	1 25	23 20	0 3	11 32	2 42	23 6	0 23	0 8	1 27	0 50	16 8	8 34	9 7	11 36	10 50	6 43										
T 20	10 25	16 1	1 32	15 12	0 49	12 1	0 44	18 36	1 27	23 21	0 3	11 30	2 42	23 6	0 23	0 9	1 27	0 50	16 8	8 33	9 8	11 33	10 51	6 43										
F 21	10 46	9 50	0 15	15 48	0 56	12 28	0 42	18 28	1 28	23 21	0 3	11 29	2 42	23 6	0 23	0 10	1 27	0 50	16 8	8 33	9 10	11 30	10 51	6 42										
S 22	11 8	3 5	1n 3	16 23	1 3	12 55	0 40	18 20	1 29	23 22	0 3	11 27	2 42	23 6	0 23	0 10	1 27	0 51	16 8	8 33	9 11	11 26	10 51	6 42										
S 23	11 29	3n51	2 17	16 57	1 9	13 22	0 38	18 13	1 30	23 22	0 3	11 26	2 42	23 6	0 23	0 11	1 27	0 51	16 8	8 34	9 12	11 23	10 52	6 41										
M24	11 50	10 34	3 22	17 30	1 15	13 48	0 36	18 5	1 31	23 23	0 3	11 24	2 42	23 6	0 23	0 12	1 27	0 51	16 8	8 36	9 13	11 20	10 52	6 41										
T 25	12 11	16 39	4 13	18 2	1 21	14 14	0 34	17 57	1 32	23 23	0 2	11 23	2 42	23 6	0 23	0 13	1 27	0 52	16 8	8 39	9 14	11 17	10 53	6 40										
W26	12 32	21 43	4 47	18 33	1 27	14 40	0 31	17 49	1 34	23 23	0 2	11 21	2 42	23 6	0 23	0 14	1 27	0 52	16 8	8 42	9 16	11 14	10 53	6 40										
T 27	12 52	25 28	5 4	19 4	1 33	15 5	0 29	17 41	1 35	23 24	0 2	11 20	2 42	23 6	0 23	0 14	1 27	0 52	16 8	8 46	9 17	11 10	10 53	6 39										
F 28	13 12	27 39	5 3	19 34	1 39	15 30	0 27	17 33	1 36	23 24	0 2	11 18	2 42	23 6	0 23	0 15	1 27	0 53	16 8	8 49	9 18	11 7	10 54	6 39										
S 29	13 32	28 14	4 46	20 2	1 45	15 54	0 25	17 25	1 37	23 25	0 2	11 16	2 42	23 6	0 23	0 16	1 27	0 53	16 8	8 52	9 19	11 4	10 54	6 38										
S 30	13 52	27 18	4 15	20 30	1 45	16 18	0 22	17 17	1 38	23 25	0 2	11 15	2 42	23 6	0 23	0 17	1 27	0 53	16 8	8 54	9 20	11 1	10 54	6 38										
M31	14s12	25n 1	3n33	20s56	1s55	16s42	0n20	17n 9	1n40	23s26	0n 2	11n13	2s42	23n 6	0n23	0s17	1n27	0s54	16s 8	8s55	9s21	10n58	10s55	6n37										

ASTRODIENST EPHEMERIS for the year 1616
geocentric

NOVEMBER 1616 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	2 42 23	8♉58'36	5♊ 6	26♊31	18♊31	18♊11	27♊ 4	6°R35	14°R18	4♊ 6	8°R38	7°D 5	5♊53	2♊28	11♊50	T 1
W 2	2 46 20	9°58'51	16°59	27°56	19°46	18°41	27°15	6♊30	14°R17	4° 8	8♊37	7♊ 5	5°49	2°34	11°51	W 2
T 3	2 50 17	10°59'09	28°47	29°21	21° 1	19°10	27°27	6°25	14°16	4° 9	8°36	7° 5	5°46	2°41	11°52	T 3
F 4	2 54 13	11°59'28	10♊35	0♊45	22°16	19°39	27°38	6°20	14°16	4°11	8°35	7°R 6	5°43	2°48	11°53	F 4
S 5	2 58 10	12°59'50	22°28	2° 9	23°31	20° 8	27°50	6°15	14°15	4°13	8°34	7° 4	5°40	2°54	11°54	S 5
S 6	3 2 6	14° 0'13	4♊31	3°31	24°47	20°37	28° 2	6°11	14°14	4°15	8°33	7° 1	5°37	3° 1	11°55	S 6
M 7	3 6 3	15° 0'38	16°47	4°53	26° 2	21° 6	28°13	6° 6	14°13	4°17	8°32	6°55	5°34	3° 8	11°56	M 7
T 8	3 9 59	16° 1'05	29°18	6°13	27°17	21°34	28°25	6° 1	14°12	4°19	8°31	6°46	5°30	3°14	11°57	T 8
W 9	3 13 56	17° 1'34	12♊ 6	7°32	28°32	22° 2	28°37	5°56	14°11	4°20	8°29	6°34	5°27	3°21	11°58	W 9
T 10	3 17 52	18° 2'04	25°11	8°50	29°47	22°30	28°49	5°52	14°10	4°22	8°28	6°22	5°24	3°28	11°59	T 10
F 11	3 21 49	19° 2'37	8♊30	10° 7	1♊ 2	22°57	29° 1	5°47	14° 9	4°24	8°27	6° 9	5°21	3°34	12° 1	F 11
S 12	3 25 46	20° 3'10	22° 2	11°21	2°18	23°24	29°14	5°42	14° 8	4°26	8°26	5°58	5°18	3°41	12° 2	S 12
S 13	3 29 42	21° 3'45	5♊44	12°34	3°33	23°52	29°26	5°38	14° 6	4°27	8°25	5°49	5°14	3°47	12° 4	S 13
M14	3 33 39	22° 4'22	19°34	13°45	4°48	24°18	29°38	5°33	14° 5	4°29	8°24	5°42	5°11	3°54	12° 5	M14
T 15	3 37 35	23° 4'59	3♊29	14°53	6° 3	24°45	29°51	5°29	14° 4	4°30	8°23	5°39	5° 8	4° 1	12° 7	T 15
W16	3 41 32	24° 5'38	17°30	15°59	7°18	25°11	0♊ 3	5°24	14° 2	4°32	8°22	5°38	5° 5	4° 7	12° 9	W16
T 17	3 45 28	25° 6'18	1♊34	17° 1	8°33	25°37	0°16	5°20	14° 1	4°34	8°21	5°37	5° 2	4°14	12°10	T 17
F 18	3 49 25	26° 6'58	15°41	18° 0	9°49	26° 3	0°28	5°15	14° 0	4°35	8°20	5°37	4°59	4°21	12°12	F 18
S 19	3 53 21	27° 7'40	29°51	18°54	11° 4	26°28	0°41	5°11	13°58	4°37	8°19	5°36	4°55	4°27	12°14	S 19
S 20	3 57 18	28° 8'23	14♊ 1	19°44	12°19	26°54	0°54	5° 7	13°57	4°38	8°17	5°31	4°52	4°34	12°16	S 20
M21	4 1 15	29° 9'07	28° 9	20°29	13°34	27°18	1° 6	5° 2	13°55	4°40	8°16	5°24	4°49	4°41	12°18	M21
T 22	4 5 11	0♊ 9'53	12♊11	21° 8	14°49	27°43	1°19	4°58	13°53	4°41	8°15	5°14	4°46	4°47	12°20	T 22
W23	4 9 8	1°10'39	26° 1	21°40	16° 4	28° 7	1°32	4°54	13°52	4°43	8°14	5° 2	4°43	4°54	12°22	W23
T 24	4 13 4	2°11'27	9♊37	22° 4	17°19	28°31	1°45	4°50	13°50	4°44	8°13	4°49	4°40	5° 1	12°24	T 24
F 25	4 17 1	3°12'16	22°55	22°21	18°35	28°55	1°58	4°46	13°48	4°45	8°12	4°36	4°36	5° 7	12°26	F 25
S 26	4 20 57	4°13'06	5♊52	22°R28	19°50	29°19	2°11	4°42	13°46	4°47	8°11	4°24	4°33	5°14	12°28	S 26
S 27	4 24 54	5°13'58	18°30	22°25	21° 5	29°42	2°24	4°38	13°45	4°48	8°10	4°15	4°30	5°21	12°31	S 27
M28	4 28 51	6°14'51	0♊49	22°12	22°20	0♊ 4	2°37	4°35	13°43	4°49	8° 9	4° 9	4°27	5°27	12°33	M28
T 29	4 32 47	7°15'45	12°53	21°47	23°35	0°27	2°50	4°31	13°41	4°51	8° 8	4° 6	4°24	5°34	12°36	T 29
W30	4 36 44	8♊16'40	24♊46	21♊12	24♊50	0♊49	3♊ 4	4♊27	13°R39	4♊52	8♊ 7	4♊ 4	4♊20	5♊40	12°R38	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
T 1	14s31	21n40	2n42	21s22	2s 0	17s 5	0n18	17n 1	1n41	23s26	0n 2	11n12	2s42	23n 7	0n23	0s18	1n27	0s54	16s 8	8s56	9s23	10n54	10s55	6n37	
W 2	14 50	17 27	1 45	21 46	2 5	17 28	0 15	16 53	1 42	23 26	0 2	11 10	2 42	23 7	0 23	0 19	1 27	0 54	16 8	8 56	9 24	10 51	10 55	6 36	
T 3	15 9	12 37	0 44	22 10	2 9	17 51	0 13	16 45	1 43	23 27	0 1	11 9	2 42	23 7	0 23	0 20	1 27	0 55	16 8	8 56	9 25	10 48	10 55	6 36	
F 4	15 28	7 20	0s19	22 32	2 14	18 12	0 11	16 37	1 45	23 27	0 1	11 7	2 41	23 7	0 23	0 20	1 27	0 55	16 8	8 56	9 26	10 45	10 56	6 35	
S 5	15 46	1 45	1 21	22 53	2 17	18 34	0 8	16 29	1 46	23 27	0 1	11 6	2 41	23 7	0 23	0 21	1 27	0 55	16 8	8 56	9 27	10 42	10 56	6 35	
S 6	16 5	3s57	2 21	23 13	2 21	18 55	0 6	16 21	1 47	23 27	0 1	11 4	2 41	23 7	0 23	0 22	1 27	0 56	16 8	8 57	9 28	10 38	10 56	6 34	
M 7	16 22	9 36	3 15	23 31	2 24	19 15	0 3	16 13	1 49	23 28	0 1	11 3	2 41	23 7	0 24	0 22	1 27	0 56	16 8	9 0	9 30	10 35	10 56	6 34	
T 8	16 40	14 59	4 0	23 49	2 27	19 35	0 1	16 5	1 50	23 28	0 1	11 1	2 41	23 7	0 24	0 23	1 27	0 56	16 8	9 3	9 31	10 32	10 56	6 34	
W 9	16 57	19 51	4 35	24 5	2 30	19 54	0s 2	15 57	1 51	23 28	0 1	11 0	2 41	23 8	0 24	0 24	1 27	0 56	16 8	9 7	9 32	10 29	10 56	6 33	
T 10	17 14	23 53	4 56	24 19	2 32	20 13	0 4	15 49	1 53	23 28	0 1	10 58	2 41	23 8	0 24	0 24	1 27	0 57	16 8	9 12	9 33	10 25	10 57	6 33	
F 11	17 31	26 43	5 1	24 32	2 33	20 31	0 7	15 41	1 54	23 29	0 1	10 57	2 41	23 8	0 24	0 25	1 27	0 57	16 7	9 16	9 34	10 22	10 57	6 32	
S 12	17 48	28 4	4 50	24 44	2 34	20 49	0 9	15 34	1 55	23 29	0 0	10 55	2 41	23 8	0 24	0 26	1 27	0 57	16 7	9 21	9 35	10 19	10 57	6 32	
S 13	18 4	27 43	4 22	24 55	2 35	21 6	0 12	15 26	1 57	23 29	0 0	10 54	2 41	23 8	0 24	0 26	1 27	0 57	16 7	9 24	9 37	10 16	10 57	6 31	
M14	18 20	25 40	3 38	25 4	2 35	21 22	0 14	15 18	1 58	23 29	0 0	10 53	2 40	23 8	0 24	0 27	1 27	0 58	16 7	9 26	9 38	10 12	10 57	6 31	
T 15	18 35	22 2	2 41	25 11	2 34	21 38	0 16	15 11	1 59	23 29	0 0	10 51	2 40	23 8	0 24	0 27	1 27	0 58	16 7	9 28	9 39	10 9	10 57	6 30	
W16	18 50	17 7	1 34	25 17	2 33	21 53	0 19	15 3	2 1	23 29	0 0	10 50	2 40	23 9	0 24	0 28	1 27	0 58	16 7	9 28	9 40	10 6	10 57	6 30	
T 17	19 5	11 17	0 22	25 21	2 31	22 8	0 21	14 55	2 2	23 29	0s 0	10 49	2 40	23 9	0 24	0 29	1 28	0 58	16 7	9 28	9 41	10 3	10 57	6 29	
F 18	19 19	4 51	0n53	25 24	2 27	22 2	0 24	14 48	2 4	23 30	0 0	10 47	2 40	23 9	0 24	0 29	1 28	0 59	16 7	9 28	9 42	9 59	10 57	6 29	
S 19	19 34	1n50	2 4	25 25	2 24	22 35	0 26	14 41	2 5	23 30	0 0	10 46	2 40	23 9	0 24	0 30	1 28	0 59	16 7	9 29	9 44	9 56	10 57	6 28	
S 20	19 47	8 26	3 8	25 24	2 19	22 48	0 29	14 33	2 7	23 30	0 0	10 45	2 40	23 9	0 24	0 30	1 28	0 59	16 6	9 30	9 45	9 53	10 57	6 28	
M21	20 1	14 34	4 0	25 21	2 13	22 59	0 31	14 26	2 8	23 30	0 0	10 43	2 39	23 10	0 24	0 31	1 28	0 59	16 6	9 33	9 46	9 50	10 56	6 28	
T 22	20 14	19 54	4 37	25 17	2 6	23 11	0 33	14 19	2 10	23 30	0 1	10 42	2 39	23 10	0 24	0 31	1 28	0 59	16 6	9 37	9 47	9 46	10 56	6 27	
W23	20 26	24 6	4 56	25 11	1 57	23 21	0 36	14 12	2 11	23 30	0 1	10 41	2 39	23 10	0 24	0 32	1 28	0 59	16 6	9 41	9 48	9 43	10 56	6 27	
T 24	20 39	26 52	4 59	25 3	1 48	23 31	0 38	14 5	2 13	23 29	0 1	10 40	2 39	23 10	0 24	0 33	1 28	1 0	16 6	9 46	9 49	9 40	10 56	6 26	
F 25	20 51	28 3	4 45	24 53	1 37	23 40	0 40	13 58	2 14	23 29	0 1	10 39	2 39	23 10	0 24	0 33	1 28	1 0	16 6	9 51	9 51	9 37	10 56	6 26	
S 26	21 2	27 38	4 17	24 41	1 25	23 49	0 43	13 51	2 16	23 29	0 1	10 38	2 39	23 11	0 24	0 33	1 28	1 0	16 6	9 55	9 52	9 33	10 56	6 25	
S 27	21 13	25 47	3 36	24 27	1 11	23 56	0 45	13 45	2 17	23 29	0 1	10 37	2 38	23 11	0 24	0 34	1 28	1 0	16 5	9 58	9 53	9 30	10 55	6 25	
M28	21 24	22 43	2 46	24 11	0 56	24 3	0 47	13 38	2 19	23 29	0 1	10 35	2 38	23 11	0 24	0 34	1 28	1 0	16 5	10 1	9 54	9 27	10 55	6 25	
T 29	21 34	18 44	1 50	23 53	0 39	24 10	0 49	13 31	2 20	23 29	0 1	10 34	2 38	23 11	0 24	0 35	1 28	1 0	16 5	10 2	9 55	9 24	10 55	6 24	
W30	21s44	14n 4	0n49	23s33	0s21	24s15	0s52	13n25	2n22	23s29	0s 1	10n33	2s38	23n11	0n24	0s35	1n28	1s 0	16s 5	10s 2	9s56	9n20	10s55	6n24	

ASTRODIENST EPHEMERIS for the year 1616
geocentric

DECEMBER 1616 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	4 40 40	9♈17'37	6♐34	20°R25	26♌5	1♐11	3♊17	4°R24	13°R37	4♑53	8°R 6	4°R 4	4♈17	5♐47	12♌41	T 1
F 2	4 44 37	10°18'35	18°22	19♌28	27°20	1°32	3°30	4♊20	13°35	4°54	8♊6	4♈4	4°14	5°54	12°43	F 2
S 3	4 48 33	11°19'34	0♑16	18°21	28°35	1°53	3°44	4°17	13°33	4°55	8°5	4°3	4°11	6°0	12°46	S 3
S 4	4 52 30	12°20'34	12°21	17°7	29°50	2°13	3°57	4°14	13°31	4°57	8°4	3°59	4°8	6°7	12°49	S 4
M 5	4 56 26	13°21'36	24°42	15°47	1♊6	2°34	4°11	4°10	13°29	4°58	8°3	3°53	4°5	6°14	12°51	M 5
T 6	5 0 23	14°22'38	7♐21	14°24	2°21	2°53	4°24	4°7	13°26	4°59	8°2	3°44	4°1	6°20	12°54	T 6
W 7	5 4 20	15°23'42	20°23	13°2	3°36	3°13	4°38	4°4	13°24	5°0	8°1	3°33	3°58	6°27	12°57	W 7
T 8	5 8 16	16°24'46	3♌45	11°42	4°51	3°32	4°51	4°1	13°22	5°1	8°0	3°21	3°55	6°34	13°0	T 8
F 9	5 12 13	17°25'52	17°27	10°27	6°6	3°50	5°5	3°58	13°20	5°2	7°59	3°8	3°52	6°40	13°3	F 9
S 10	5 16 9	18°26'58	1♊26	9°20	7°21	4°8	5°18	3°56	13°17	5°3	7°59	2°56	3°49	6°47	13°6	S 10
S 11	5 20 6	19°28'05	15°35	8°22	8°36	4°26	5°32	3°53	13°15	5°3	7°58	2°47	3°46	6°54	13°9	S 11
M 12	5 24 2	20°29'12	29°51	7°34	9°51	4°43	5°46	3°50	13°13	5°4	7°57	2°40	3°42	7°0	13°12	M 12
T 13	5 27 59	21°30'19	14♌8	6°57	11°6	5°0	5°59	3°48	13°10	5°5	7°56	2°36	3°39	7°7	13°15	T 13
W 14	5 31 55	22°31'27	28°23	6°31	12°21	5°16	6°13	3°46	13°8	5°6	7°55	2°D35	3°36	7°13	13°18	W 14
T 15	5 35 52	23°32'35	12♈33	6°15	13°36	5°32	6°27	3°43	13°6	5°7	7°55	2°35	3°33	7°20	13°22	T 15
F 16	5 39 49	24°33'43	26°37	6°D11	14°51	5°48	6°41	3°41	13°3	5°7	7°54	2°R35	3°30	7°27	13°25	F 16
S 17	5 43 45	25°34'51	10♐35	6°15	16°6	6°2	6°54	3°39	13°1	5°8	7°53	2°34	3°26	7°33	13°28	S 17
S 18	5 47 42	26°36'00	24°26	6°29	17°21	6°17	7°8	3°37	12°58	5°9	7°52	2°31	3°23	7°40	13°32	S 18
M 19	5 51 38	27°37'08	8♊10	6°51	18°36	6°30	7°22	3°35	12°56	5°9	7°52	2°25	3°20	7°47	13°35	M 19
T 20	5 55 35	28°38'17	21°45	7°20	19°51	6°44	7°36	3°33	12°53	5°10	7°51	2°17	3°17	7°53	13°38	T 20
W 21	5 59 31	29°39'26	5♐9	7°56	21°6	6°56	7°50	3°32	12°51	5°11	7°50	2°6	3°14	8°0	13°42	W 21
T 22	6 3 28	0♊40'35	18°21	8°38	22°21	7°9	8°4	3°30	12°48	5°11	7°50	1°55	3°11	8°7	13°45	T 22
F 23	6 7 24	1°41'44	1♐19	9°26	23°36	7°20	8°18	3°29	12°46	5°12	7°49	1°44	3°7	8°13	13°49	F 23
S 24	6 11 21	2°42'53	14°2	10°18	24°51	7°31	8°32	3°28	12°43	5°12	7°49	1°34	3°4	8°20	13°53	S 24
S 25	6 15 18	3°44'02	26°29	11°14	26°6	7°42	8°46	3°26	12°41	5°13	7°48	1°26	3°1	8°27	13°56	S 25
M 26	6 19 14	4°45'12	8♊13	12°13	27°20	7°52	8°59	3°25	12°38	5°13	7°47	1°21	2°58	8°33	14°0	M 26
T 27	6 23 11	5°46'22	20°44	13°16	28°35	8°1	9°13	3°24	12°36	5°13	7°47	1°18	2°55	8°40	14°4	T 27
W 28	6 27 7	6°47'32	2♐36	14°22	29°50	8°10	9°27	3°23	12°33	5°14	7°46	1°D17	2°52	8°47	14°7	W 28
T 29	6 31 4	7°48'42	14°24	15°31	1♌5	8°18	9°41	3°23	12°30	5°14	7°46	1°18	2°48	8°53	14°11	T 29
F 30	6 35 0	8°49'52	26°11	16°42	2°20	8°25	9°55	3°22	12°28	5°14	7°45	1°19	2°45	9°0	14°15	F 30
S 31	6 38 57	9♊51'03	8♊4	17♌55	3♌35	8♐32	10♊9	3♊21	12°25	5♑14	7♊45	1°R20	2♈42	9♐6	14♌19	S 31

Day	☉	☾		♊		♋		♌		♍		♎		♏		♐		♑		♒	♓	♈	♉	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	decl	decl	decl	lat
T 1	21s54	8n55	0s13	23s11	0s 2	24s20	0s54	13n19	2n23	23s28	0s 1	10n32	2s38	23n12	0n24	0s36	1n28	1s 0	16s 5	10s 2	9s58	9n17	10s54	6n23
F 2	22 3	3 27	1 15	22 47	0n18	24 24	0 56	13 13	2 25	23 28	0 1	10 31	2 37	23 12	0 24	0 36	1 28	1 1	16 4	10 2	9 59	9 14	10 54	6 23
S 3	22 11	2s 9	2 14	22 21	0 38	24 27	0 58	13 7	2 27	23 28	0 2	10 31	2 37	23 12	0 24	0 37	1 28	1 1	16 4	10 3	10 0	9 11	10 54	6 23
S 4	22 19	7 46	3 8	21 54	0 58	24 30	1 0	13 1	2 28	23 28	0 2	10 30	2 37	23 12	0 24	0 37	1 28	1 1	16 4	10 4	10 1	9 7	10 53	6 22
M 5	22 27	13 13	3 54	21 26	1 18	24 31	1 2	12 55	2 30	23 27	0 2	10 29	2 37	23 13	0 24	0 37	1 28	1 1	16 4	10 6	10 2	9 4	10 53	6 22
T 6	22 34	18 15	4 30	20 58	1 37	24 32	1 4	12 49	2 32	23 27	0 2	10 28	2 36	23 13	0 24	0 38	1 28	1 1	16 4	10 9	10 3	9 1	10 52	6 21
W 7	22 41	22 35	4 53	20 31	1 55	24 33	1 6	12 44	2 33	23 27	0 2	10 27	2 36	23 13	0 24	0 38	1 29	1 1	16 3	10 14	10 4	8 57	10 52	6 21
T 8	22 48	25 52	5 1	20 5	2 10	24 32	1 8	12 39	2 35	23 26	0 2	10 26	2 36	23 13	0 24	0 38	1 29	1 1	16 3	10 18	10 6	8 54	10 52	6 21
F 9	22 54	27 44	4 52	19 42	2 24	24 31	1 10	12 33	2 37	23 26	0 2	10 26	2 36	23 13	0 24	0 39	1 29	1 1	16 3	10 23	10 7	8 51	10 51	6 20
S 10	22 59	27 54	4 25	19 21	2 35	24 29	1 12	12 28	2 39	23 25	0 2	10 25	2 35	23 14	0 24	0 39	1 29	1 1	16 3	10 27	10 8	8 48	10 51	6 20
S 11	23 4	26 15	3 42	19 3	2 44	24 26	1 14	12 24	2 40	23 25	0 2	10 24	2 35	23 14	0 24	0 39	1 29	1 1	16 2	10 30	10 9	8 44	10 50	6 20
M12	23 9	22 54	2 44	18 49	2 50	24 22	1 15	12 19	2 42	23 24	0 2	10 24	2 35	23 14	0 24	0 40	1 29	1 1	16 2	10 33	10 10	8 41	10 50	6 19
T 13	23 13	18 10	1 36	18 39	2 54	24 18	1 17	12 14	2 44	23 24	0 3	10 23	2 35	23 14	0 24	0 40	1 29	1 1	16 2	10 34	10 11	8 38	10 49	6 19
W14	23 17	12 25	0 22	18 33	2 57	24 13	1 19	12 10	2 46	23 23	0 3	10 23	2 34	23 15	0 24	0 40	1 29	1 1	16 2	10 35	10 13	8 34	10 49	6 19
T 15	23 20	6 3	0n53	18 30	2 57	24 7	1 20	12 6	2 48	23 23	0 3	10 22	2 34	23 15	0 24	0 40	1 29	1 1	16 1	10 35	10 14	8 31	10 48	6 18
F 16	23 23	0n33	2 4	18 30	2 56	24 1	1 22	12 2	2 50	23 22	0 3	10 22	2 34	23 15	0 24	0 41	1 29	1 1	16 1	10 34	10 15	8 28	10 47	6 18
S 17	23 25	7 5	3 8	18 33	2 53	23 54	1 23	11 58	2 51	23 22	0 3	10 21	2 34	23 15	0 24	0 41	1 29	1 1	16 1	10 35	10 16	8 25	10 47	6 18
S 18	23 27	13 12	3 59	18 39	2 50	23 46	1 25	11 55	2 53	23 21	0 3	10 21	2 33	23 16	0 24	0 41	1 29	1 1	16 1	10 36	10 17	8 21	10 46	6 17
M19	23 28	18 37	4 37	18 48	2 45	23 37	1 26	11 51	2 55	23 20	0 3	10 20	2 33	23 16	0 24	0 41	1 29	1 1	16 0	10 38	10 18	8 18	10 46	6 17
T 20	23 29	23 2	4 58	18 58	2 39	23 27	1 27	11 48	2 57	23 20	0 3	10 20	2 33	23 16	0 24	0 42	1 29	1 1	16 0	10 41	10 19	8 15	10 45	6 17
W21	23 29	26 10	5 3	19 10	2 33	23 17	1 28	11 45	2 59	23 19	0 3	10 20	2 32	23 17	0 24	0 42	1 29	1 1	16 0	10 45	10 21	8 11	10 44	6 16
T 22	23 29	27 49	4 51	19 23	2 26	23 6	1 30	11 42	3 1	23 18	0 3	10 19	2 32	23 17	0 25	0 42	1 29	1 1	15 59	10 49	10 22	8 8	10 43	6 16
F 23	23 29	27 54	4 24	19 38	2 19	22 55	1 31	11 40	3 3	23 17	0 4	10 19	2 32	23 17	0 25	0 42	1 29	1 1	15 59	10 53	10 23	8 5	10 43	6 16
S 24	23 28	26 29	3 45	19 53	2 11	22 43	1 32	11 37	3 5	23 17	0 4	10 19	2 32	23 17	0 25	0 42	1 29	1 0	15 59	10 56	10 24	8 1	10 42	6 15
S 25	23 26	23 46	2 55	20 9	2 3	22 30	1 33	11 35	3 7	23 16	0 4	10 19	2 31	23 18	0 25	0 42	1 30	1 0	15 59	10 59	10 25	7 58	10 41	6 15
M26	23 24	20 1	1 58	20 25	1 55	22 16	1 34	11 33	3 9	23 15	0 4	10 19	2 31	23 18	0 25	0 42	1 30	1 0	15 58	11 1	10 26	7 55	10 41	6 15
T 27	23 22	15 30	0 56	20 41	1 46	22 2	1 35	11 32	3 11	23 14	0 4	10 19	2 31	23 18	0 25	0 42	1 30	1 0	15 58	11 2	10 27	7 52	10 40	6 14
W28	23 19	10 28	0s 7	20 57	1 38	21 47	1 35	11 30	3 13	23 13	0 4	10 19	2 30	23 18	0 25	0 43	1 30	1 0	15 58	11 2	10 29	7 48	10 39	6 14
T 29	23 16	5 5	1 10	21 14	1 29	21 31	1 36	11 29	3 15	23 12	0 4	10 19	2 30	23 19	0 25	0 43	1 30	1 0	15 57	11 2	10 30	7 45	10 38	6 14
F 30	23 12	0s 28	2 10	21 29	1 20	21 15	1 37	11 28	3 17	23 11	0 4	10 19	2 30	23 19	0 25	0 43	1 30	1 0	15 57	11 2	10 31	7 42	10 37	6 14
S 31	23s 7	6s 2	3s 5	21s45	1n12	20s58	1s37	11n28	3n19	23s10	0s 4	10n19	2s30	23n19	0n25	0s43	1n30	1s 0	15s57	11s 1	10s32	7n38	10s37	6n13