



Astrodienst Ephemeris Tables for the year 1489

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 1489

geocentric

JANUARY 1489 JC

00:00 UT

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

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

Julian Day Number = 2264915.5, Delta T = 05m14s

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

Ayanamsha: Fagan/Bradley = 17°36'39", Lahiri = 16°43'39" Julian Calendar 1 Jan. 1489 == Greg. Calendar 10 Jan. 1489

ASTRODIENST EPHEMERIS for the year 1489

geocentric

FEBRUARY 1489 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	9 20 38	21°34'11	24°53	26°2	15°26	19°R54	25°40	11°33	13°35	22°34	26°R51	17°R41	16°12	25°17	16°48	S 1
M 2	9 24 34	22°34'43	6°53	26°40	16°40	19°542	25°53	11°39	13°38	22°35	26°50	17°35	16°9	25°24	16°50	M 2
T 3	9 28 31	23°35'14	18°48	27°23	17°55	19°30	26°6	11°45	13°41	22°37	26°50	17°28	16°5	25°30	16°53	T 3
W 4	9 32 28	24°35'42	0°Y40	28°10	19°9	19°19	26°20	11°51	13°44	22°38	26°49	17°21	16°2	25°37	16°56	W 4
T 5	9 36 24	25°36'09	12°31	29°0	20°23	19°10	26°33	11°56	13°47	22°39	26°49	17°14	15°59	25°44	16°58	T 5
F 6	9 40 21	26°36'34	24°24	29°54	21°37	19°1	26°47	12°2	13°50	22°41	26°48	17°8	15°56	25°51	17°1	F 6
S 7	9 44 17	27°36'58	6°22	0°50	22°51	18°52	27°0	12°8	13°53	22°42	26°47	17°4	15°53	25°57	17°4	S 7
S 8	9 48 14	28°37'19	18°30	1°50	24°5	18°45	27°14	12°13	13°56	22°43	26°47	17°2	15°50	26°4	17°6	S 8
M 9	9 52 10	29°37'38	0°12	2°52	25°20	18°38	27°27	12°19	13°58	22°44	26°46	17°D 1	15°46	26°11	17°9	M 9
T 10	9 56 7	0°37'56	13°32	3°56	26°34	18°33	27°41	12°24	14°1	22°45	26°45	17°2	15°43	26°17	17°12	T 10
W11	10 0 3	1°38'11	26°36	5°3	27°48	18°28	27°55	12°30	14°4	22°46	26°45	17°3	15°40	26°24	17°15	W11
T 12	10 4 0	2°38'24	10°6	6°12	29°1	18°23	28°9	12°35	14°6	22°48	26°44	17°R 4	15°37	26°31	17°18	T 12
F 13	10 7 57	3°38'36	24°4	7°23	0°Y15	18°20	28°22	12°40	14°9	22°49	26°43	17°4	15°34	26°38	17°21	F 13
S 14	10 11 53	4°38'45	8°230	8°36	1°29	18°17	28°36	12°46	14°12	22°50	26°42	17°3	15°30	26°44	17°24	S 14
S 15	10 15 50	5°38'52	23°21	9°50	2°43	18°15	28°50	12°51	14°14	22°51	26°41	16°59	15°27	26°51	17°27	S 15
M16	10 19 46	6°38'57	8°29	11°7	3°57	18°14	29°4	12°56	14°17	22°51	26°40	16°52	15°24	26°58	17°30	M16
T 17	10 23 43	7°39'00	23°45	12°25	5°10	18°D14	29°18	13°1	14°19	22°52	26°39	16°45	15°21	27°4	17°33	T 17
W18	10 27 39	8°39'02	8°57	13°44	6°24	18°14	29°32	13°6	14°22	22°53	26°38	16°37	15°18	27°11	17°36	W18
T 19	10 31 36	9°39'01	23°55	15°5	7°37	18°15	29°46	13°11	14°24	22°54	26°38	16°29	15°15	27°18	17°39	T 19
F 20	10 35 32	10°39'00	8°32	16°28	8°51	18°17	0°Y0	13°16	14°26	22°55	26°36	16°23	15°11	27°25	17°42	F 20
S 21	10 39 29	11°38'56	22°43	17°52	10°4	18°19	0°14	13°21	14°29	22°56	26°35	16°19	15°8	27°31	17°45	S 21
S 22	10 43 26	12°38'51	6°27	19°17	11°18	18°22	0°29	13°25	14°31	22°56	26°34	16°18	15°5	27°38	17°48	S 22
M23	10 47 22	13°38'44	19°45	20°44	12°31	18°26	0°43	13°30	14°33	22°57	26°33	16°D18	15°2	27°45	17°52	M23
T 24	10 51 19	14°38'36	2°40	22°12	13°45	18°31	0°57	13°34	14°35	22°58	26°32	16°18	14°59	27°52	17°55	T 24
W25	10 55 15	15°38'26	15°16	23°42	14°58	18°36	1°11	13°39	14°38	22°59	26°31	16°R19	14°56	27°58	17°58	W25
T 26	10 59 12	16°38'14	27°37	25°12	16°11	18°42	1°25	13°43	14°40	22°59	26°30	16°18	14°52	28°5	18°2	T 26
F 27	11 3 8	17°38'00	9°48	26°44	17°24	18°48	1°40	13°48	14°42	23°0	26°29	16°16	14°49	28°12	18°5	F 27
S 28	11 7 5	18°37'45	21°50	28°18	18°Y37	18°55	1°Y54	13°52	14°44	23°0	26°27	16°10	14°46	28°18	18°Y 8	S 28

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	
S 1	14s21	10s18	3n 8	19s43	1n18	6s58	1s18	26n 8	4n 9	2s47	1s 9	22s33	0n27	23s11	0s22	S 1
M 2	14 2	5 22	3 56	19 48	1 6	6 27	1 17	26 9	4 8	2 42	1 9	22 32	0 27	23 11	0 23	M 2
T 3	13 42	0 16	4 32	19 51	0 55	5 57	1 15	26 9	4 6	2 36	1 9	22 32	0 27	23 10	0 23	T 3
W 4	13 22	4n48	4 57	19 53	0 43	5 26	1 14	26 9	4 5	2 31	1 8	22 32	0 27	23 10	0 23	W 4
T 5	13 1	9 41	5 9	19 53	0 32	4 55	1 12	26 8	4 3	2 25	1 8	22 31	0 27	23 10	0 23	T 5
F 6	12 41	14 14	5 7	19 53	0 22	4 24	1 10	26 8	4 1	2 20	1 8	22 31	0 27	23 10	0 23	F 6
S 7	12 20	18 17	4 53	19 51	0 11	3 53	1 8	26 8	4 0	2 14	1 8	22 30	0 27	23 9	0 23	S 7
S 8	11 59	21 37	4 25	19 48	0 1	3 22	1 7	26 7	3 58	2 9	1 8	22 30	0 27	23 9	0 23	S 8
M 9	11 38	24 2	3 44	19 43	0s 9	2 51	1 5	26 6	3 56	2 3	1 8	22 29	0 27	23 9	0 23	M 9
T 10	11 17	25 19	2 51	19 37	0 19	2 20	1 3	26 5	3 54	1 58	1 8	22 29	0 27	23 9	0 23	T 10
W11	10 55	25 16	1 49	19 30	0 28	1 48	1 1	26 4	3 52	1 52	1 8	22 28	0 27	23 8	0 23	W11
T 12	10 34	23 45	0 38	19 22	0 37	1 17	0 59	26 3	3 50	1 47	1 8	22 28	0 27	23 8	0 23	T 12
F 13	10 12	20 44	0s38	19 12	0 45	0 46	0 56	26 1	3 49	1 41	1 8	22 27	0 27	23 8	0 23	F 13
S 14	9 50	16 22	1 53	19 1	0 53	0 14	0 54	26 0	3 47	1 35	1 8	22 27	0 27	23 7	0 23	S 14
S 15	9 28	10 54	3 3	18 49	1 1	0n17	0 52	25 58	3 45	1 30	1 8	22 26	0 27	23 7	0 23	S 15
M16	9 6	4 41	4 1	18 35	1 9	0 49	0 50	25 56	3 43	1 24	1 8	22 26	0 27	23 7	0 23	M16
T 17	8 43	1s50	4 42	18 20	1 16	1 20	0 47	25 55	3 41	1 19	1 7	22 26	0 27	23 7	0 23	T 17
W18	8 21	8 12	5 4	18 4	1 22	1 52	0 45	25 53	3 39	1 13	1 7	22 25	0 27	23 7	0 23	W18
T 19	7 58	14 0	5 4	17 46	1 29	2 23	0 42	25 51	3 37	1 7	1 7	22 25	0 27	23 6	0 23	T 19
F 20	7 36	18 52	4 44	17 27	1 35	2 54	0 40	25 48	3 35	1 2	1 7	22 24	0 27	23 6	0 23	F 20
S 21	7 13	22 29	4 7	17 7	1 40	3 26	0 37	25 46	3 33	0 56	1 7	22 24	0 26	23 6	0 23	S 21
S 22	6 50	24 41	3 17	16 45	1 46	3 57	0 35	25 44	3 31	0 50	1 7	22 23	0 26	23 6	0 23	S 22
M23	6 27	25 23	2 17	16 22	1 50	4 28	0 32	25 41	3 29	0 44	1 7	22 23	0 26	23 5	0 23	M23
T 24	6 4	24 41	1 12	15 57	1 55	4 59	0 29	25 39	3 27	0 39	1 7	22 22	0 26	23 5	0 23	T 24
W25	5 41	22 43	0 6	15 32	1 59	5 30	0 27	25 36	3 26	0 33	1 7	22 22	0 26	23 5	0 23	W25
T 26	5 17	19 43	1n 0	15 5	2 2	6 1	0 24	25 34	3 24	0 27	1 7	22 22	0 26	23 5	0 23	T 26
F 27	4 54	15 53	2 2	14 36	2 6	6 32	0 21	25 31	3 22	0 22	1 7	22 21	0 26	23 5	0 23	F 27
S 28	4s31	11s28	2n57	14s 6	2s 8	7n 2	0s18	25n28	3n20	0s16	1s 7	22s21	0n26	23s 4	0s23	S 28

Julian Day Number = 2264946.5, Delta T = 05m14s

Ecliptic obliquity = 23°30'23, Nutation = 0°00'18, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 17°36'43, Lahiri = 16°43'43 Julian Calendar 1 Feb. 1489 == Greg. Calendar 10 Feb. 1489

ASTRODIENST EPHEMERIS for the year 1489

geocentric

MARCH 1489 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	11 11 1	19°37'27	3°47	29°52	19°50	19°3	2°8	13°56	14°46	23°1	26°R26	16°R 2	14°43	28°25	18°12	S 1
M 2	11 14 58	20°37'08	15°41	1°28	21° 3	19°11	2°23	14° 0	14°48	23° 1	26°25	15°31	14°40	28°32	18°15	M 2
T 3	11 18 54	21°36'46	27°33	3° 5	22°16	19°20	2°37	14° 4	14°50	23° 2	26°24	15°39	14°36	28°39	18°19	T 3
W 4	11 22 51	22°36'22	9°24	4°43	23°29	19°30	2°51	14° 8	14°52	23° 2	26°22	15°26	14°33	28°45	18°22	W 4
T 5	11 26 48	23°35'57	21°17	6°23	24°42	19°40	3° 6	14°12	14°53	23° 3	26°21	15°13	14°30	28°52	18°26	T 5
F 6	11 30 44	24°35'29	3°13	8° 4	25°55	19°51	3°20	14°16	14°55	23° 3	26°20	15° 2	14°27	28°59	18°29	F 6
S 7	11 34 41	25°34'59	15°14	9°46	27° 8	20° 2	3°35	14°20	14°57	23° 3	26°18	14°53	14°24	29° 5	18°33	S 7
S 8	11 38 37	26°34'27	27°23	11°29	28°20	20°14	3°49	14°23	14°59	23° 4	26°17	14°46	14°21	29°12	18°36	S 8
M 9	11 42 34	27°33'52	9°44	13°14	29°33	20°26	4° 4	14°27	15° 0	23° 4	26°15	14°43	14°17	29°19	18°40	M 9
T 10	11 46 30	28°33'15	22°21	15° 0	0°45	20°39	4°18	14°30	15° 2	23° 4	26°14	14°41	14°14	29°26	18°43	T 10
W 11	11 50 27	29°32'36	5°18	16°48	1°58	20°52	4°33	14°34	15° 3	23° 4	26°13	14°D41	14°11	29°32	18°47	W 11
T 12	11 54 23	0°31'55	18°39	18°36	3°10	21° 6	4°47	14°37	15° 5	23° 4	26°11	14°R41	14° 8	29°39	18°51	T 12
F 13	11 58 20	1°31'11	2°18	20°27	4°22	21°20	5° 1	14°40	15° 6	23° 5	26°10	14°40	14° 5	29°46	18°54	F 13
S 14	12 2 17	2°30'25	16°45	22°18	5°35	21°35	5°16	14°43	15° 8	23° 5	26° 8	14°37	14° 2	29°52	18°58	S 14
S 15	12 6 13	3°29'36	1°29	24°11	6°47	21°50	5°30	14°47	15° 9	23° 5	26° 7	14°31	13°58	29°59	19° 2	S 15
M 16	12 10 10	4°28'45	16°35	26° 5	7°59	22° 6	5°45	14°49	15°10	23°R 5	26° 5	14°23	13°55	0°13	19° 5	M 16
T 17	12 14 6	5°27'52	1°25	28° 0	9°11	22°22	5°59	14°52	15°12	23° 5	26° 4	14°13	13°52	0°13	19° 9	T 17
W 18	12 18 3	6°26'57	17°15	29°57	10°23	22°39	6°14	14°55	15°13	23° 5	26° 2	14° 2	13°49	0°19	19°13	W 18
T 19	12 21 59	7°26'00	2°26	1°55	11°35	22°56	6°28	14°58	15°14	23° 5	26° 0	13°51	13°46	0°26	19°16	T 19
F 20	12 25 56	8°25'01	17°17	3°55	12°46	23°13	6°43	15° 0	15°15	23° 4	25°59	13°42	13°42	0°33	19°20	F 20
S 21	12 29 52	9°24'00	1°40	5°56	13°58	23°31	6°57	15° 3	15°16	23° 4	25°57	13°36	13°39	0°39	19°24	S 21
S 22	12 33 49	10°22'57	15°34	7°58	15°10	23°49	7°12	15° 5	15°17	23° 4	25°56	13°32	13°36	0°46	19°28	S 22
M 23	12 37 46	11°21'53	28°59	10° 1	16°21	24° 8	7°26	15° 8	15°18	23° 4	25°54	13°31	13°33	0°53	19°31	M 23
T 24	12 41 42	12°20'47	11°35	12° 4	17°32	24°27	7°41	15°10	15°19	23° 4	25°52	13°30	13°30	1° 0	19°35	T 24
W 25	12 45 39	13°19'39	24°32	14° 9	18°44	24°46	7°55	15°12	15°20	23° 3	25°51	13°30	13°27	1° 6	19°39	W 25
T 26	12 49 35	14°18'30	6°50	16°15	19°55	25° 6	8°10	15°14	15°21	23° 3	25°49	13°29	13°23	1°13	19°43	T 26
F 27	12 53 32	15°17'18	18°55	18°21	21° 6	25°26	8°24	15°16	15°21	23° 3	25°47	13°26	13°20	1°20	19°47	F 27
S 28	12 57 28	16°16'05	0°52	20°27	22°17	25°46	8°38	15°18	15°22	23° 2	25°46	13°20	13°17	1°27	19°50	S 28
S 29	13 1 25	17°14'50	12°44	22°34	23°28	26° 7	8°53	15°20	15°23	23° 2	25°44	13°11	13°14	1°33	19°54	S 29
M 30	13 5 21	18°13'33	24°34	24°40	24°39	26°28	9° 7	15°21	15°23	23° 2	25°42	12°59	13°11	1°40	19°58	M 30
T 31	13 9 18	19°12'14	6°26	26°45	25°50	26°50	9°22	15°23	15°24	23°1	25°41	12°46	13° 7	1°47	20°12	T 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	
S 1	4s 7	6s40	3n45	13s35	2s11	7n33	0s15	25n25	3n18	0s10	1s 7	22s20	0n26	23s 4	0s23	S 1
M 2	3 44	1 39	4 22	13 3	2 13	8 3	0 12	25 22	3 16	0 4	1 7	22 20	0 26	23 4	0 23	M 2
T 3	3 20	3n24	4 47	12 29	2 14	8 33	0 9	25 19	3 14	0n 1	1 7	22 20	0 26	23 4	0 23	T 3
W 4	2 57	8 20	5 0	11 54	2 15	9 3	0 6	25 15	3 12	0 7	1 7	22 19	0 26	23 4	0 23	W 4
T 5	2 33	12 57	5 0	11 18	2 16	9 33	0 3	25 12	3 10	0 13	1 7	22 19	0 26	23 3	0 23	T 5
F 6	2 9	17 6	4 47	10 40	2 16	10 2	0 0	25 9	3 9	0 19	1 7	22 19	0 26	23 3	0 23	F 6
S 7	1 46	20 36	4 21	10 1	2 16	10 31	0n 3	25 5	3 7	0 25	1 7	22 18	0 26	23 3	0 23	S 7
S 8	1 22	23 15	3 43	9 21	2 15	11 0	0 6	25 1	3 5	0 30	1 7	22 18	0 26	23 3	0 23	S 8
M 9	0 58	24 50	2 54	8 40	2 14	11 29	0 9	24 58	3 3	0 36	1 7	22 17	0 26	23 3	0 23	M 9
T 10	0 35	25 12	1 55	7 57	2 12	11 57	0 12	24 54	3 1	0 42	1 7	22 17	0 26	23 3	0 23	T 10
W 11	0 11	24 14	0 50	7 13	2 10	12 26	0 15	24 50	2 59	0 48	1 6	22 17	0 26	23 2	0 23	W 11
T 12	0n13	21 51	0s21	6 28	2 7	12 54	0 18	24 46	2 58	0 53	1 6	22 16	0 26	23 2	0 23	T 12
F 13	0 36	18 10	1 33	5 42	2 4	13 21	0 22	24 42	2 56	0 59	1 6	22 16	0 26	23 2	0 23	F 13
S 14	1 0	13 18	2 41	4 54	2 0	13 48	0 25	24 38	2 54	1 5	1 6	22 16	0 26	23 2	0 23	S 14
S 15	1 24	7 32	3 40	4 5	1 56	14 15	0 28	24 34	2 52	1 11	1 6	22 16	0 26	23 2	0 23	S 15
M 16	1 47	1 13	4 26	3 16	1 51	14 42	0 31	24 30	2 51	1 16	1 6	22 15	0 26	23 2	0 24	M 16
T 17	2 11	5s15	4 54	2 25	1 46	15 8	0 34	24 25	2 49	1 22	1 6	22 15	0 26	23 2	0 24	T 17
W 18	2 34	11 24	5 0	1 33	1 40	15 34	0 38	24 21	2 47	1 28	1 6	22 15	0 26	23 2	0 24	W 18
T 19	2 57	16 48	4 45	0 40	1 34	16 0	0 41	24 16	2 46	1 34	1 6	22 14	0 26	23 1	0 24	T 19
F 20	3 21	21 3	4 11	0n14	1 27	16 25	0 44	24 12	2 44	1 39	1 6	22 14	0 26	23 1	0 24	F 20
S 21	3 44	23 51	3 22	1 9	1 19	16 50	0 47	24 7	2 42	1 45	1 6	22 14	0 25	23 1	0 24	S 21
S 22	4 7	25 4	2 22	2 4	1 11	17 14	0 50	24 2	2 41	1 51	1 6	22 14	0 25	23 1	0 24	S 22
M 23	4 30	24 46	1 16	3 0	1 3	17 38	0 54	23 57	2 39	1 57	1 6	22 13	0 25	23 1	0 24	M 23
T 24	4 54	23 6	0 8	3 57	0 54	18 1	0 57	23 52	2 37	2 2	1 6	22 13	0 25	23 1	0 24	T 24
W 25	5 17	20 19	0n58	4 54	0 45	18 24	1 0	23 47	2 36	2 8	1 6	22 13	0 25	23 1	0 24	W 25
T 26	5 39	16 41	2 0	5 52	0 35	18 47	1 3	23 42	2 34	2 14	1 6	22 13	0 25	23 1	0 24	T 26
F 27	6 2	12 25	2 55	6 49	0 25	19 9	1 6	23 37	2 33	2 19	1 6	22 13	0 25	23 1	0 24	F 27
S 28	6 25	7 44	3 42	7 47	0 15	19 31	1 9	23 31	2 31	2 25	1 6	22 13	0 25	23 1	0 24	S 28
S 29	6 47	2 49	4 19	8 44	0 5	19 52	1 13	23 26	2 30	2 31	1 6	22 12	0 25	23 1	0 24	S 29
M 30	7 10	2n11	4 44	9 41	0n 6	20 13	1 16	23 20	2 28	2 36	1 7	22 12	0 25	23 1	0 24	M 30
T 31	7n32	7n 7	4n58	10n37	0n17	20n33	1n19	23n15	2n27	2n42	1s 7	22s12	0n25	23s 1	0s24	T 31

Julian Day Number = 2264974.5, Delta T = 05m14s

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

Ayanamsha: Fagan/Bradley = 17°36'47", Lahiri = 16°43'47" Julian Calendar 1 March 1489 == Greg. Calendar 10 March 1489

ASTRODIENST EPHEMERIS for the year 1489

geocentric

APRIL 1489 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	13 13 15	20°10'53	18°12'20	28°10'50	27°18'1	27°12'12	9°13'36	15°13'24	15°13'24	23°18'1	25°18'39	12°18'31	13°18'4	1°18'53	20°18'6	W 1
T 2	13 17 11	21° 9'31	08°17'17	08°15'54	28°12'12	27°34'12	9°50'12	15°26'12	15°25'12	23°18'0	25°18'37	12°18'17	13° 1'1	2° 0'0	20° 9'12	T 2
F 3	13 21 8	22° 8'06	12°20'12	2°57'12	29°22'12	27°56'12	10° 5'12	15°27'12	15°25'12	23° 0'0	25°36'12	12° 5'12	12°58'12	2° 7'12	20°13'12	F 3
S 4	13 25 4	23° 6'39	24°29'24	4°57'12	0°11'33	28°19'12	10°19'12	15°28'12	15°26'12	22°59'12	25°34'12	11°55'12	12°55'12	2°14'12	20°17'12	S 4
S 5	13 29 1	24° 5'11	6°11'46	6°56'12	1°43'12	28°42'12	10°33'12	15°29'12	15°26'12	22°58'12	25°32'12	11°47'12	12°52'12	2°20'12	20°21'12	S 5
M 6	13 32 57	25° 3'40	19°14'19	8°52'12	2°53'12	29° 5'12	10°47'12	15°30'12	15°26'12	22°58'12	25°31'12	11°43'12	12°48'12	2°27'12	20°24'12	M 6
T 7	13 36 54	26° 2'07	1°55'55	10°45'12	4° 3'12	29°28'12	11° 2'12	15°31'12	15°26'12	22°57'12	25°29'12	11°41'12	12°45'12	2°34'12	20°28'12	T 7
W 8	13 40 50	27° 0'32	14°52'14	12°35'12	5°14'12	29°52'12	11°16'12	15°32'12	15°27'12	22°56'12	25°27'12	11°D41'12	12°42'12	2°40'12	20°32'12	W 8
T 9	13 44 47	27°58'55	28°10'14	14°23'12	6°23'12	0°16'12	11°30'12	15°33'12	15°27'12	22°56'12	25°25'12	11°R41'12	12°39'12	2°47'12	20°36'12	T 9
F 10	13 48 44	28°57'16	11°12'50	16° 6'12	7°33'12	0°41'12	11°44'12	15°33'12	15°R27'12	22°55'12	25°24'12	11°41'12	12°36'12	2°54'12	20°40'12	F 10
S 11	13 52 40	29°55'34	25°56'12	17°47'12	8°43'12	1° 5'12	11°58'12	15°34'12	15°27'12	22°54'12	25°22'12	11°38'12	12°33'12	3° 1'12	20°43'12	S 11
S 12	13 56 37	08°53'51	10°11'25	19°23'12	9°53'12	1°30'12	12°12'12	15°34'12	15°27'12	22°53'12	25°20'12	11°33'12	12°29'12	3° 7'12	20°47'12	S 12
M13	14 0 33	1°52'05	25°16'12	20°55'12	11° 2'12	1°55'12	12°26'12	15°34'12	15°27'12	22°52'12	25°19'12	11°26'12	12°26'12	3°14'12	20°51'12	M13
T 14	14 4 30	2°50'17	10°11'21	22°24'12	12°11'12	2°21'12	12°40'12	15°35'12	15°26'12	22°52'12	25°17'12	11°17'12	12°23'12	3°21'12	20°55'12	T 14
W15	14 8 26	3°48'28	25°32'12	23°48'12	13°21'12	2°46'12	12°54'12	15°35'12	15°26'12	22°51'12	25°15'12	11° 7'12	12°20'12	3°27'12	20°58'12	W15
T 16	14 12 23	4°46'36	10°11'38	25° 8'12	14°30'12	3°12'12	13° 8'12	15°R35'12	15°26'12	22°50'12	25°14'12	10°58'12	12°17'12	3°34'12	21° 2'12	T 16
F 17	14 16 19	5°44'43	25°28'12	26°24'12	15°39'12	3°38'12	13°22'12	15°35'12	15°26'12	22°49'12	25°12'12	10°50'12	12°13'12	3°41'12	21° 6'12	F 17
S 18	14 20 16	6°42'49	9°17'55	27°35'12	16°48'12	4° 4'12	13°36'12	15°34'12	15°25'12	22°48'12	25°10'12	10°44'12	12°10'12	3°48'12	21° 9'12	S 18
S 19	14 24 13	7°40'53	23°55'12	28°41'12	17°56'12	4°31'12	13°50'12	15°34'12	15°25'12	22°47'12	25° 9'12	10°41'12	12° 7'12	3°54'12	21°13'12	S 19
M20	14 28 9	8°38'55	7°32'36	29°44'12	19° 5'12	4°57'12	14° 4'12	15°34'12	15°24'12	22°46'12	25° 7'12	10°D39'12	12° 4'12	4° 1'12	21°17'12	M20
T 21	14 32 6	9°36'56	20°20'30	0°11'41	20°13'12	5°24'12	14°18'12	15°33'12	15°24'12	22°45'12	25° 5'12	10°40'12	12° 1'12	4° 8'12	21°20'12	T 21
W22	14 36 2	10°34'56	3°11'9	1°34'12	21°22'12	5°51'12	14°31'12	15°33'12	15°23'12	22°44'12	25° 4'12	10°40'12	11°58'12	4°15'12	21°24'12	W22
T 23	14 39 59	11°32'54	15°30'12	2°22'12	22°30'12	6°19'12	14°45'12	15°32'12	15°23'12	22°43'12	25° 2'12	10°R41'12	11°54'12	4°21'12	21°28'12	T 23
F 24	14 43 55	12°30'51	27°36'12	3° 5'12	23°38'12	6°46'12	14°59'12	15°31'12	15°22'12	22°42'12	25° 1'12	10°39'12	11°51'12	4°28'12	21°31'12	F 24
S 25	14 47 52	13°28'47	9°13'33	3°44'12	24°46'12	7°14'12	15°12'12	15°31'12	15°22'12	22°40'12	24°59'12	10°36'12	11°48'12	4°35'12	21°35'12	S 25
S 26	14 51 48	14°26'41	21°24'12	4°17'12	25°54'12	7°42'12	15°26'12	15°30'12	15°21'12	22°39'12	24°57'12	10°30'12	11°45'12	4°41'12	21°39'12	S 26
M27	14 55 45	15°24'34	3°11'15	4°46'12	27° 1'12	8°10'12	15°39'12	15°29'12	15°20'12	22°38'12	24°56'12	10°23'12	11°42'12	4°48'12	21°42'12	M27
T 28	14 59 41	16°22'25	15° 8'12	5°10'12	28° 9'12	8°38'12	15°53'12	15°27'12	15°19'12	22°37'12	24°54'12	10°13'12	11°39'12	4°55'12	21°46'12	T 28
W29	15 3 38	17°20'16	27° 6'12	5°28'12	29°16'12	9° 6'12	16° 6'12	15°26'12	15°18'12	22°36'12	24°53'12	10° 3'12	11°35'12	5° 2'12	21°49'12	W29
T 30	15 7 35	18°18'05	9°11'11	5°11'42	0°22'3	9°13'35	16°11'19	15°13'25	15°13'17	22°18'34	24°15'11	9°13'53	11°13'32	5°18'8	21°18'53	T 30

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
W 1	7n55	11n47	4n58	11n32	0n28	20n52	1n22	23n 9	2n25	2n48	1s 7	22s12	0n25	23s 1	0s24	22s 1
T 2	8 17	16 3	4 45	12 26	0 39	21 11	1 25	23 3	2 24	2 53	1 7	22 12	0 25	23 1	0 24	22 1
F 3	8 39	19 42	4 19	13 19	0 50	21 30	1 28	22 57	2 22	2 59	1 7	22 12	0 25	23 1	0 24	22 1
S 4	9 0	22 32	3 42	14 10	1 1	21 48	1 31	22 51	2 21	3 4	1 7	22 12	0 25	23 1	0 24	22 1
S 5	9 22	24 21	2 53	15 0	1 12	22 5	1 34	22 45	2 19	3 10	1 7	22 12	0 25	23 1	0 24	22 1
M 6	9 44	25 0	1 56	15 47	1 22	22 22	1 36	22 39	2 18	3 16	1 7	22 11	0 25	23 1	0 24	22 1
T 7	10 5	24 21	0 52	16 33	1 32	22 39	1 39	22 32	2 16	3 21	1 7	22 11	0 25	23 1	0 24	22 1
W 8	10 26	22 24	0s17	17 16	1 41	22 54	1 42	22 26	2 15	3 27	1 7	22 11	0 25	23 1	0 24	22 1
T 9	10 47	19 11	1 26	17 57	1 50	23 9	1 45	22 19	2 14	3 32	1 7	22 11	0 25	23 1	0 24	22 1
F 10	11 8	14 50	2 33	18 36	1 58	23 24	1 48	22 13	2 12	3 38	1 7	22 11	0 25	23 1	0 24	22 1
S 11	11 29	9 35	3 32	19 12	2 6	23 38	1 50	22 6	2 11	3 43	1 7	22 11	0 25	23 1	0 24	22 1
S 12	11 49	3 41	4 19	19 45	2 13	23 51	1 53	21 59	2 10	3 49	1 7	22 11	0 25	23 1	0 24	22 1
M13	12 9	2s33	4 50	20 16	2 19	24 4	1 55	21 52	2 8	3 54	1 7	22 11	0 25	23 1	0 24	22 0
T 14	12 29	8 44	5 2	20 45	2 24	24 16	1 58	21 45	2 7	3 59	1 7	22 11	0 25	23 1	0 24	22 0
W15	12 49	14 26	4 53	21 11	2 29	24 27	2 0	21 38	2 6	4 5	1 7	22 11	0 25	23 1	0 24	22 0
T 16	13 9	19 13	4 23	21 34	2 33	24 38	2 3	21 31	2 4	4 10	1 7	22 11	0 24	23 1	0 24	22 0
F 17	13 28	22 40	3 36	21 55	2 35	24 48	2 5	21 23	2 3	4 16	1 7	22 11	0 24	23 1	0 24	22 0
S 18	13 48	24 34	2 36	22 14	2 37	24 57	2 7	21 16	2 2	4 21	1 7	22 11	0 24	23 1	0 24	22 0
S 19	14 7	24 50	1 28	22 30	2 38	25 6	2 9	21 8	2 0	4 26	1 7	22 11	0 24	23 1	0 24	22 0
M20	14 25	23 35	0 17	22 43	2 38	25 14	2 11	21 0	1 59	4 32	1 7	22 12	0 24	23 1	0 25	22 0
T 21	14 44	21 5	0n52	22 55	2 37	25 22	2 13	20 53	1 58	4 37	1 7	22 12	0 24	23 1	0 25	22 0
W22	15 2	17 36	1 57	23 4	2 35	25 29	2 15	20 45	1 57	4 42	1 8	22 12	0 24	23 1	0 25	22 0
T 23	15 20	13 27	2 55	23 10	2 32	25 35	2 17	20 37	1 55	4 47	1 8	22 12	0 24	23 1	0 25	22 0
F 24	15 38	8 50	3 44	23 15	2 28	25 40	2 19	20 28	1 54	4 53	1 8	22 12	0 24	23 2	0 25	22 0
S 25	15 56	3 58	4 22	23 17	2 22	25 45	2 21	20 20	1 53	4 58	1 8	22 12	0 24	23 2	0 25	22 0
S 26	16 13	1n 0	4 48	23 17	2 16	25 49	2 22	20 12	1 52	5 3	1 8	22 12	0 24	23 2	0 25	21 59
M27	16 30	5 55	5 3	23 15	2 9	25 52	2 24	20 3	1 51	5 8	1 8	22 12	0 24	23 2	0 25	21 59
T 28	16 47	10 39	5 4	23 11	2 0	25 55	2 25	19 55	1 49	5 13	1 8	22 13	0 24	23 2	0 25	21 59
W29	17 3	15 0	4 52	23 5	1 51	25 57	2 27	19 46	1 48	5 18	1 8	22 13	0 24	23 2	0 25	21 59
T 30	17n20	18n48	4n27	22n57	1n40	25n58	2n28	19n37	1n47	5n23	1s 8	22s13	0n24	23s 2	0s25	21s59

Julian Day Number = 2265005.5, Delta T = 05m14s

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

Ayanamsha: Fagan/Bradley = 17°36'51, Lahiri = 16°43'51 Julian Calendar 1 Apr. 1489 == Greg. Calendar 10 Apr. 1489

ASTRODIENST EPHEMERIS for the year 1489

geocentric

MAY 1489 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	15 11 31	19°15'52	21°18'24	5°11'51	1°30'30	10°10'4	16°17'33	15°15'23	15°15'16	22°15'33	24°15'50	9°15'45	11°15'29	5°15'15	21°15'56	F 1
S 2	15 15 28	20°13'38	3°11'45	5°15'55	2°3'7	10°10'33	16°16'46	15°15'22	15°15'15	22°15'32	24°15'48	9°15'38	11°15'26	5°15'22	22°15'0	S 2
S 3	15 19 24	21°11'23	16°1'17	5°15'54	3°4'44	11°1'2	16°15'59	15°15'20	15°15'14	22°15'30	24°15'47	9°15'33	11°15'23	5°15'28	22°15'3	S 3
M 4	15 23 21	22°9'06	28°59'59	5°15'48	4°5'0	11°1'31	17°12'12	15°15'19	15°15'13	22°15'29	24°15'45	9°15'30	11°15'19	5°15'35	22°15'6	M 4
T 5	15 27 17	23°6'48	11°54'54	5°15'38	5°5'56	12°1'1	17°12'25	15°15'17	15°15'12	22°15'28	24°15'44	9°15'30	11°15'16	5°15'42	22°15'10	T 5
W 6	15 31 14	24°4'28	25°3'3	5°15'24	7°3'3	12°1'30	17°13'18	15°15'15	15°15'11	22°15'26	24°15'42	9°15'31	11°15'13	5°15'49	22°15'13	W 6
T 7	15 35 11	25°2'07	8°12'27	5°15'6	8°8'8	13°1'0	17°15'1	15°15'13	15°15'10	22°15'25	24°15'41	9°15'32	11°15'10	5°15'55	22°15'17	T 7
F 8	15 39 7	25°59'44	22°8'4	4°15'44	9°14'13	13°1'30	18°4'18	15°15'11	15°15'8	22°15'24	24°15'40	9°15'33	11°15'7	6°15'2	22°15'20	F 8
S 9	15 43 4	26°57'20	6°17'7	4°15'19	10°2'0	14°1'0	18°17'18	15°15'9	15°15'7	22°15'22	24°15'38	9°15'33	11°15'4	6°15'9	22°15'23	S 9
S 10	15 47 0	27°54'54	20°24'4	3°15'51	11°25'11	14°30'18	18°30'15	15°15'7	15°15'6	22°15'21	24°15'37	9°15'31	11°15'0	6°15'16	22°15'26	S 10
M 11	15 50 57	28°52'26	4°15'56	3°15'21	12°30'15	1°15'1	18°42'15	15°15'4	15°15'4	22°15'19	24°15'36	9°15'27	10°15'57	6°15'22	22°15'30	M 11
T 12	15 54 53	29°49'57	19°39'2	2°15'50	13°35'15	1°31'18	18°55'15	15°15'2	15°15'3	22°15'18	24°15'34	9°15'22	10°15'54	6°15'29	22°15'33	T 12
W 13	15 58 50	0°11'47	27°2'2	2°17'14	14°39'16	2°19'7	19°7'15	15°15'0	15°15'1	22°15'16	24°15'33	9°15'16	10°15'51	6°15'36	22°15'36	W 13
T 14	16 2 46	1°44'56	19°11'4	1°43'15	15°44'16	16°33'19	19°20'14	15°15'0	15°15'0	22°15'15	24°15'32	9°15'11	10°15'48	6°15'42	22°15'39	T 14
F 15	16 6 43	2°42'23	3°17'45	1°9'16	16°48'17	17°3'18	19°32'14	15°15'58	15°15'58	22°15'13	24°15'30	9°15'6	10°15'44	6°15'49	22°15'42	F 15
S 16	16 10 40	3°39'50	18°2'0	0°36'17	17°52'17	17°35'19	19°44'14	15°15'52	15°15'57	22°15'12	24°15'29	9°15'3	10°15'41	6°15'56	22°15'45	S 16
S 17	16 14 36	4°37'15	1°15'56	0°4'18	18°56'18	18°6'19	19°57'14	15°15'49	15°15'55	22°15'10	24°15'28	9°15'2	10°15'38	7°15'3	22°15'48	S 17
M 18	16 18 33	5°34'40	15°27'29	1°33'19	19°59'18	18°37'20	20°9'14	15°15'46	15°15'54	22°15'9	24°15'27	9°15'2	10°15'35	7°15'9	22°15'51	M 18
T 19	16 22 29	6°32'04	28°32'29	2°5'21	21°2'19	19°8'20	20°21'14	15°15'43	15°15'52	22°15'7	24°15'26	9°15'3	10°15'32	7°15'16	22°15'54	T 19
W 20	16 26 26	7°29'27	11°15'11	2°8'28	23°5'19	20°33'20	20°33'14	15°15'40	15°15'50	22°15'6	24°15'25	9°15'4	10°15'29	7°15'23	22°15'57	W 20
T 21	16 30 22	8°26'50	23°40'28	2°17'23	25°8'20	20°12'20	20°45'14	15°15'37	15°15'48	22°15'4	24°15'24	9°15'6	10°15'25	7°15'30	23°15'0	T 21
F 22	16 34 19	9°24'12	5°17'49	2°7'27	27°58'24	20°44'20	20°57'14	15°15'34	15°15'47	22°15'3	24°15'22	9°15'7	10°15'22	7°15'36	23°15'3	F 22
S 23	16 38 15	10°21'33	17°48'27	2°42'25	29°12'21	21°15'21	21°9'14	15°15'31	15°15'45	22°15'1	24°15'21	9°15'6	10°15'19	7°15'43	23°15'6	S 23
S 24	16 42 12	11°18'54	29°41'27	2°31'26	31°14'21	21°48'21	21°20'14	15°15'27	15°15'43	22°15'0	24°15'20	9°15'5	10°15'16	7°15'50	23°15'9	S 24
M 25	16 46 9	12°16'14	11°17'34	2°23'27	32°15'27	21°50'22	21°32'14	15°15'24	15°15'41	22°15'58	24°15'19	9°15'2	10°15'13	7°15'56	23°15'12	M 25
T 26	16 50 5	13°13'34	23°30'27	2°20'28	33°16'22	22°52'21	21°43'14	15°15'21	15°15'39	22°15'56	24°15'18	8°15'59	10°15'10	8°15'3	23°15'14	T 26
W 27	16 54 2	14°10'53	5°17'32	2°22'29	34°17'23	23°24'21	21°55'14	15°15'17	15°15'37	22°15'55	24°15'17	8°15'55	10°15'6	8°15'10	23°15'17	W 27
T 28	16 57 58	15°8'12	17°44'27	2°28'0	35°17'23	23°57'22	22°6'14	15°15'14	15°15'35	22°15'53	24°15'17	8°15'51	10°15'3	8°15'17	23°15'20	T 28
F 29	17 1 55	16°5'30	0°17'27	2°38'1	36°17'23	24°30'22	22°17'14	15°15'10	15°15'33	22°15'52	24°15'16	8°15'47	10°15'0	8°15'23	23°15'22	F 29
S 30	17 5 51	17°2'48	12°43'27	2°53'2	37°17'23	25°2'22	22°28'14	15°15'7	15°15'31	22°15'50	24°15'15	8°15'45	9°15'57	8°15'30	23°15'25	S 30
S 31	17 9 48	18°11'05	25°11'32	2°58'13	38°17'3	25°13'25	22°39'14	15°15'3	15°15'29	22°15'48	24°15'14	8°15'43	9°15'54	8°15'37	23°15'27	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	17n35	21n50	3n49	22n48	1n28	25n59	2n29	19n28	1n46	5n28	1 s 8	22s13	0n24	23 s 2	0s25	21s59	1n19	6n30	17n20	23 s 9	23 s 0	6n47	9n 9	0n38
S 2	17 51	23 54	3 0	22 36	1 16	25 59	2 30	19 19	1 45	5 33	1 8	22 13	0 24	23 3	0 25	21 59	1 19	6 31	17 20	23 9	23 1	6 50	9 11	0 38
S 3	18 6	24 49	2 2	22 23	1 2	25 58	2 31	19 10	1 44	5 38	1 8	22 14	0 24	23 3	0 25	21 59	1 19	6 31	17 19	23 10	23 1	6 53	9 12	0 38
M 4	18 21	24 27	0 56	22 7	0 48	25 57	2 32	19 1	1 42	5 43	1 8	22 14	0 24	23 3	0 25	21 59	1 19	6 31	17 19	23 10	23 1	6 55	9 13	0 38
T 5	18 36	22 45	0s13	21 51	0 33	25 55	2 33	18 52	1 41	5 48	1 9	22 14	0 24	23 3	0 25	21 59	1 19	6 31	17 19	23 10	23 2	6 58	9 14	0 38
W 6	18 51	19 49	1 23	21 33	0 17	25 52	2 34	18 42	1 40	5 53	1 9	22 14	0 24	23 3	0 25	21 59	1 19	6 32	17 19	23 10	23 2	7 1	9 15	0 38
T 7	19 5	15 47	2 30	21 13	0 1	25 49	2 34	18 32	1 39	5 58	1 9	22 15	0 24	23 3	0 25	21 58	1 19	6 32	17 18	23 10	23 2	7 4	9 17	0 38
F 8	19 18	10 52	3 30	20 53	0s16	25 45	2 35	18 23	1 38	6 3	1 9	22 15	0 23	23 3	0 25	21 58	1 19	6 32	17 18	23 10	23 2	7 6	9 18	0 38
S 9	19 32	5 17	4 19	20 31	0 33	25 41	2 35	18 13	1 37	6 7	1 9	22 15	0 23	23 4	0 25	21 58	1 19	6 32	17 18	23 10	23 3	7 9	9 19	0 37
S 10	19 45	0s40	4 53	20 9	0 51	25 35	2 35	18 3	1 36	6 12	1 9	22 16	0 23	23 4	0 25	21 58	1 19	6 32	17 17	23 10	23 3	7 12	9 20	0 37
M11	19 58	6 41	5 9	19 46	1 8	25 30	2 35	17 53	1 35	6 17	1 9	22 16	0 23	23 4	0 25	21 58	1 19	6 32	17 17	23 10	23 3	7 15	9 21	0 37
T 12	20 10	12 24	5 5	19 23	1 26	25 23	2 35	17 43	1 34	6 22	1 9	22 16	0 23	23 4	0 25	21 58	1 19	6 33	17 17	23 10	23 3	7 17	9 22	0 37
W13	20 22	17 26	4 40	19 0	1 43	25 16	2 35	17 33	1 33	6 26	1 9	22 17	0 23	23 4	0 25	21 58	1 19	6 33	17 16	23 11	23 4	7 20	9 24	0 37
T 14	20 34	21 23	3 58	18 37	1 59	25 8	2 35	17 23	1 31	6 31	1 10	22 17	0 23	23 5	0 25	21 58	1 19	6 33	17 16	23 11	23 4	7 23	9 25	0 37
F 15	20 46	23 54	3 0	18 14	2 15	25 0	2 35	17 12	1 30	6 35	1 10	22 17	0 23	23 5	0 25	21 58	1 19	6 33	17 15	23 12	23 4	7 25	9 26	0 37
S 16	20 57	24 49	1 52	17 52	2 31	24 51	2 34	17 2	1 29	6 40	1 10	22 18	0 23	23 5	0 25	21 58	1 19	6 33	17 15	23 12	23 4	7 28	9 27	0 37
S 17	21 7	24 8	0 39	17 31	2 45	24 42	2 33	16 51	1 28	6 44	1 10	22 18	0 23	23 5	0 25	21 58	1 19	6 33	17 15	23 12	23 5	7 31	9 28	0 37
M18	21 18	22 2	0n35	17 12	2 59	24 32	2 33	16 40	1 27	6 49	1 10	22 18	0 23	23 5	0 25	21 57	1 19	6 33	17 14	23 12	23 5	7 34	9 29	0 37
T 19	21 28	18 48	1 45	16 53	3 12	24 21	2 32	16 29	1 26	6 53	1 10	22 19	0 23	23 6	0 25	21 57	1 19	6 33	17 14	23 12	23 5	7 36	9 30	0 37
W20	21 37	14 46	2 47	16 37	3 23	24 10	2 31	16 19	1 25	6 58	1 10	22 19	0 23	23 6	0 25	21 57	1 19	6 33	17 13	23 12	23 5	7 39	9 31	0 37
T 21	21 46	10 13	3 40	16 22	3 33	23 58	2 30	16 8	1 24	7 2	1 10	22 19	0 23	23 6	0 25	21 57	1 19	6 33	17 13	23 12	23 6	7 42	9 32	0 37
F 22	21 55	5 21	4 22	16 9	3 42	23 46	2 28	15 56	1 23	7 6	1 11	22 20	0 23	23 6	0 25	21 57	1 19	6 33	17 12	23 12	23 6	7 45	9 33	0 37
S 23	22 4	0 22	4 52	15 58	3 50	23 34	2 27	15 45	1 22	7 11	1 11	22 20	0 23	23 6	0 25	21 57	1 19	6 33	17 12	23 12	23 6	7 47	9 34	0 37
S 24	22 12	4n36	5 9	15 49	3 56	23 20	2 25	15 34	1 21	7 15	1 11	22 21	0 23	23 7	0 25	21 57	1 19	6 33	17 12	23 12	23 6	7 50	9 35	0 37
M25	22 20	9 23	5 13	15 43	4 2	23 7	2 23	15 22	1 20	7 19	1 11	22 21	0 22	23 7	0 25	21 57	1 19	6 33	17 11	23 12	23 7	7 53	9 36	0 37
T 26	22 27	13 50	5 3	15 38	4 5	22 53	2 22	15 11	1 19	7 23	1 11	22 22	0 22	23 7	0 25	21 57	1 19	6 33	17 11	23 12	23 7	7 55	9 37	0 37
W27	22 34	17 48	4 40	15 36	4 8	22 38	2 20	14 59	1 18	7 28	1 11	22 22	0 22	23 7	0 25	21 57	1 19	6 33	17 10	23 12	23 7	7 58	9 38	0 36
T 28	22 40	21 4	4 4	15 36	4 10	22 23	2 17	14 47	1 17	7 32	1 11	22 22	0 22	23 8	0 25	21 56	1 19	6 32	17 10	23 13	23 7	8 1	9 39	0 36
F 29	22 47	23 26	3 16	15 38	4 10	22 7	2 15	14 36	1 16	7 36	1 11	22 23	0 22	23 8	0 25	21 56	1 19	6 32	17 9	23 13	23 8	8 3	9 40	0 36
S 30	22 52	24 40	2 18	15 42	4 9	21 51	2 13	14 24	1 15	7 40	1 12	22 23	0 22	23 8	0 25	21 56	1 19	6 32	17 9	23 13	23 8	8 6	9 41	0 36
S 31	22n58	24n38	1n12	15n48	4s 7	21n35	2n10	14n12	1n14	7n44	1s12	22s24	0n22	23s 8	0s25	21s56	1n19	6n32	17n 8	23s13	23s 8	8n 9	9n42	0n36

ASTRODIENST EPHEMERIS for the year 1489
geocentric

JUNE 1489 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	17 13 44	18II57'22	8☾35	28♂37	4♂16	26♂8	22♀50	13°R59	14°R27	21°R47	24°R13	8°D43	9☾50	8♀44	23♀30	M 1
T 2	17 17 41	19°54'38	21°52	29° 6	5°14	26°41	23° 1	13☾55	14☾25	21☾45	24☾12	8☾43	9°47	8°50	23°32	T 2
W 3	17 21 38	20°51'53	5♂21	29°39	6°12	27°15	23°12	13°51	14°23	21°44	24°12	8°44	9°44	8°57	23°35	W 3
T 4	17 25 34	21°49'08	19° 2	0II16	7°10	27°48	23°23	13°48	14°21	21°42	24°11	8°45	9°41	9° 4	23°37	T 4
F 5	17 29 31	22°46'22	2♂55	0°58	8° 8	28°21	23°33	13°44	14°18	21°40	24°10	8°47	9°38	9°10	23°40	F 5
S 6	17 33 27	23°43'35	16°58	1°44	9° 4	28°55	23°44	13°40	14°16	21°39	24°10	8°47	9°35	9°17	23°42	S 6
S 7	17 37 24	24°40'48	1☾10	2°34	10° 1	29°28	23°54	13°36	14°14	21°37	24° 9	8°R47	9°31	9°24	23°44	S 7
M 8	17 41 20	25°37'59	15°28	3°29	10°57	0♂2	24° 4	13°32	14°12	21°35	24° 8	8°47	9°28	9°31	23°46	M 8
T 9	17 45 17	26°35'11	29°50	4°27	11°52	0°36	24°14	13°27	14°10	21°34	24° 8	8°45	9°25	9°37	23°49	T 9
W10	17 49 13	27°32'22	14♂12	5°29	12°47	1°10	24°24	13°23	14° 7	21°32	24° 7	8°44	9°22	9°44	23°51	W10
T 11	17 53 10	28°29'32	28°29	6°36	13°42	1°44	24°34	13°19	14° 5	21°31	24° 7	8°43	9°19	9°51	23°53	T 11
F 12	17 57 7	29°26'42	12☾37	7°46	14°35	2°18	24°44	13°15	14° 3	21°29	24° 6	8°42	9°16	9°57	23°55	F 12
S 13	18 1 3	0☾23'52	26°32	9° 0	15°29	2°52	24°54	13°11	14° 0	21°27	24° 6	8°41	9°12	10° 4	23°57	S 13
S 14	18 5 0	1°21'02	10☾10	10°18	16°21	3°26	25° 3	13° 6	13°58	21°26	24° 6	8°D41	9° 9	10°11	23°59	S 14
M15	18 8 56	2°18'12	23°29	11°39	17°13	4° 1	25°13	13° 2	13°56	21°24	24° 5	8°41	9° 6	10°18	24° 1	M15
T 16	18 12 53	3°15'21	6☾29	13° 4	18° 5	4°35	25°22	12°58	13°53	21°23	24° 5	8°42	9° 3	10°24	24° 2	T 16
W17	18 16 49	4°12'31	19°10	14°33	18°56	5°10	25°31	12°54	13°51	21°21	24° 5	8°42	9° 0	10°31	24° 4	W17
T 18	18 20 46	5° 9'41	1☾35	16° 6	19°46	5°44	25°40	12°49	13°49	21°19	24° 4	8°43	8°56	10°38	24° 6	T 18
F 19	18 24 42	6° 6'51	13°45	17°42	20°35	6°19	25°49	12°45	13°46	21°18	24° 4	8°43	8°53	10°45	24° 8	F 19
S 20	18 28 39	7° 4'01	25°46	19°21	21°24	6°54	25°58	12°40	13°44	21°16	24° 4	8°43	8°50	10°51	24° 9	S 20
S 21	18 32 36	8° 1'12	7♀41	21° 4	22°12	7°29	26° 7	12°36	13°42	21°15	24° 4	8°R43	8°47	10°58	24°11	S 21
M22	18 36 32	8°58'23	19°34	22°50	22°59	8° 4	26°15	12°32	13°39	21°13	24° 4	8°D43	8°44	11° 5	24°12	M22
T 23	18 40 29	9°55'35	1♂31	24°39	23°45	8°39	26°24	12°27	13°37	21°12	24° 4	8°43	8°41	11°11	24°14	T 23
W24	18 44 25	10°52'47	13°36	26°31	24°31	9°14	26°32	12°23	13°34	21°10	24° 4	8°43	8°37	11°18	24°15	W24
T 25	18 48 22	11°49'59	25°52	28°26	25°15	9°49	26°40	12°18	13°32	21° 9	24°D 3	8°44	8°34	11°25	24°17	T 25
F 26	18 52 18	12°47'12	8II23	0☾24	25°59	10°25	26°48	12°14	13°29	21° 7	24° 3	8°44	8°31	11°32	24°18	F 26
S 27	18 56 15	13°44'26	21°11	2°23	26°42	11° 0	26°56	12°10	13°27	21° 6	24° 4	8°44	8°28	11°38	24°19	S 27
S 28	19 0 12	14°41'40	4☾17	4°25	27°23	11°36	27° 4	12° 5	13°25	21° 4	24° 4	8°R45	8°25	11°45	24°21	S 28
M29	19 4 8	15°38'54	17°41	6°29	28° 4	12°11	27°11	12° 1	13°22	21° 3	24° 4	8°45	8°22	11°52	24°22	M29
T 30	19 8 5	16☾36'09	1♂23	8☾34	28♂44	12♂47	27♀19	11☾56	13☾20	21☾2	24☾4	8☾44	8☾18	11♀59	24♀23	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
M 1	23n 3	23n14	0n 1	15n56	4s 5	21n18	2n 7	14n 0	1n14	7n48	1s12	22s24	0n22	23s 9	0s26	21s56	1n19	6n32	17n 8	23s13	23s 8	8n11	9n43	0n36	
T 2	23 7	20 33	1s12	16 6	4 1	21 1	2 4	13 47	1 13	7 51	1 12	22 25	0 22	23 9	0 26	21 56	1 19	6 32	17 7	23 13	23 9	8 14	9 44	0 36	
W 3	23 11	16 42	2 22	16 17	3 56	20 43	2 1	13 35	1 12	7 55	1 12	22 25	0 22	23 9	0 26	21 56	1 19	6 31	17 7	23 13	23 9	8 17	9 44	0 36	
T 4	23 15	11 55	3 24	16 30	3 51	20 25	1 58	13 23	1 11	7 59	1 12	22 26	0 22	23 9	0 26	21 56	1 19	6 31	17 6	23 13	23 9	8 20	9 45	0 36	
F 5	23 18	6 29	4 16	16 45	3 44	20 7	1 54	13 10	1 10	8 3	1 13	22 26	0 22	23 10	0 26	21 56	1 19	6 31	17 6	23 13	23 9	8 22	9 46	0 36	
S 6	23 21	0 40	4 53	17 1	3 37	19 49	1 50	12 58	1 9	8 7	1 13	22 27	0 22	23 10	0 26	21 56	1 19	6 31	17 5	23 13	23 10	8 25	9 47	0 36	
S 7	23 24	5s15	5 13	17 19	3 29	19 30	1 47	12 45	1 8	8 10	1 13	22 27	0 22	23 10	0 26	21 56	1 19	6 30	17 5	23 13	23 10	8 28	9 48	0 36	
M 8	23 26	10 55	5 14	17 37	3 21	19 11	1 43	12 32	1 7	8 14	1 13	22 28	0 22	23 10	0 26	21 55	1 19	6 30	17 4	23 13	23 10	8 30	9 48	0 36	
T 9	23 28	16 2	4 55	17 57	3 12	18 51	1 38	12 19	1 6	8 17	1 13	22 28	0 21	23 11	0 26	21 55	1 19	6 30	17 4	23 13	23 10	8 33	9 49	0 36	
W10	23 29	20 14	4 18	18 17	3 2	18 31	1 34	12 6	1 5	8 21	1 13	22 29	0 21	23 11	0 26	21 55	1 19	6 30	17 3	23 13	23 10	8 36	9 50	0 36	
T 11	23 30	23 12	3 24	18 39	2 52	18 11	1 29	11 53	1 4	8 24	1 14	22 29	0 21	23 11	0 26	21 55	1 19	6 29	17 3	23 13	23 11	8 38	9 51	0 36	
F 12	23 30	24 41	2 19	19 0	2 42	17 51	1 25	11 40	1 3	8 28	1 14	22 30	0 21	23 11	0 26	21 55	1 19	6 29	17 2	23 13	23 11	8 41	9 51	0 36	
S 13	23 30	24 34	1 7	19 23	2 31	17 31	1 20	11 27	1 3	8 31	1 14	22 30	0 21	23 12	0 26	21 55	1 19	6 28	17 1	23 13	23 11	8 43	9 52	0 36	
S 14	23 30	22 59	0n 8	19 45	2 19	17 10	1 15	11 14	1 2	8 35	1 14	22 31	0 21	23 12	0 26	21 55	1 19	6 28	17 1	23 13	23 11	8 46	9 53	0 36	
M15	23 29	20 7	1 21	20 8	2 8	16 49	1 9	11 0	1 1	8 38	1 14	22 31	0 21	23 12	0 26	21 55	1 19	6 28	17 0	23 13	23 12	8 49	9 53	0 36	
T 16	23 28	16 19	2 28	20 31	1 56	16 28	1 4	10 47	1 0	8 41	1 14	22 32	0 21	23 12	0 26	21 55	1 19	6 27	17 0	23 13	23 12	8 51	9 54	0 36	
W17	23 26	11 51	3 26	20 54	1 43	16 7	0 58	10 34	0 59	8 44	1 15	22 32	0 21	23 13	0 26	21 55	1 19	6 27	16 59	23 13	23 12	8 54	9 55	0 35	
T 18	23 24	7 0	4 13	21 16	1 31	15 45	0 52	10 20	0 58	8 47	1 15	22 33	0 21	23 13	0 26	21 55	1 19	6 26	16 59	23 13	23 12	8 57	9 55	0 35	
F 19	23 22	1 59	4 47	21 38	1 19	15 24	0 46	10 6	0 57	8 50	1 15	22 33	0 21	23 13	0 26	21 55	1 19	6 26	16 58	23 13	23 12	8 59	9 56	0 35	
S 20	23 19	3n 2	5 9	21 59	1 6	15 2	0 40	9 53	0 56	8 53	1 15	22 34	0 21	23 13	0 26	21 54	1 19	6 26	16 58	23 13	23 13	9 2	9 56	0 35	
S 21	23 16	7 54	5 17	22 19	0 53	14 40	0 33	9 39	0 56	8 56	1 15	22 34	0 20	23 14	0 26	21 54	1 19	6 25	16 57	23 13	23 13	9 5	9 57	0 35	
M22	23 12	12 28	5 11	22 38	0 41	14 19	0 26	9 25	0 55	8 59	1 16	22 35	0 20	23 14	0 26	21 54	1 19	6 25	16 56	23 13	23 13	9 7	9 58	0 35	
T 23	23 8	16 36	4 52	22 55	0 29	13 57	0 19	9 11	0 54	9 2	1 16	22 35	0 20	23 14	0 26	21 54	1 19	6 24	16 56	23 13	23 13	9 10	9 58	0 35	
W24	23 4	20 6	4 20	23 11	0 16	13 35	0 12	8 57	0 53	9 5	1 16	22 36	0 20	23 14	0 26	21 54	1 19	6 24	16 55	23 13	23 13	9 12	9 59	0 35	
T 25	22 59	22 46	3 36	23 25	0 5	13 13	0 5	8 43	0 52	9 8	1 16	22 36	0 20	23 15	0 26	21 54	1 19	6 23	16 55	23 13	23 14	9 15	9 59	0 35	
F 26	22 53	24 24	2 40	23 37	0n 7	12 51	0s 3	8 29	0 51	9 10	1 16	22 36	0 20	23 15	0 26	21 54	1 19	6 22	16 54	23 13	23 14	9 18	9 59	0 35	
S 27	22 48	24 48	1 36	23 47	0 18	12 29	0 11	8 14	0 50	9 13	1 17	22 37	0 20	23 15	0 26	21 54	1 19	6 22	16 53	23 13	23 14	9 20	10 0	0 35	
S 28	22 42	23 51	0 25	23 55	0 29	12 7	0 19	8 0	0 50	9 16	1 17	22 37	0 20	23 15	0 26	21 54	1 19	6 21	16 53	23 13	23 14	9 23	10 0	0 35	
M29	22 35	21 31	0s49	24 0	0 39	11 45	0 27	7 46	0 49	9 18	1 17	22 38	0 20	23 16	0 26	21 54	1 19	6 21	16 52	23 13	23 14	9 25	10 1	0 35	
T 30	22n28	17n55	2s 2	24n 2	0n49	11n24	0s35	7n31	0n48	9n21	1s17	22s38	0n20	23s16	0s26	21s54	1n19	6n20	16n52	23s13	23s15	9n28	10n 1	0n35	

ASTRODIENST EPHEMERIS for the year 1489

geocentric

JULY 1489 JC

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Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	19 12 1	17°33'24"	15°18'18"	10°54'40"	29°02'23"	13°17'23"	27°17'26"	11°R52	13°R17	21°R 0	24°R 4	8°R43	8°R15	12°R 5	24°R24	W 1
T 2	19 15 58	18°30'39"	29°25'20"	12°48'00"	0°17'00"	13°59'27"	27°33'11"	11°R48	13°R15	20°R59	24°R 4	8°R42	8°R12	12°R12	24°R25	T 2
F 3	19 19 54	19°27'54"	13°17'40"	14°55'00"	0°36'11"	14°35'27"	27°40'11"	11°R43	13°R13	20°R57	24°R 5	8°R41	8°R 9	12°R19	24°R26	F 3
S 4	19 23 51	20°25'10"	27°57'17"	17° 3'3	1°11'15"	15°11'27"	27°47'11"	11°R39	13°R10	20°R56	24°R 5	8°R40	8°R 6	12°R25	24°R27	S 4
S 5	19 27 47	21°22'26"	12°15'15"	19°11'14"	1°45'15"	15°47'27"	27°54'11"	11°R35	13°R 8	20°R55	24°R 5	8°R39	8°R 2	12°R32	24°R28	S 5
M 6	19 31 44	22°19'42"	26°29'21"	21°19'21"	2°18'16"	16°23'28°	27°54'11°	11°R30	13°R 5	20°R53	24°R 5	8°R39	7°R59	12°R39	24°R29	M 6
T 7	19 35 41	23°16'59"	10°18'38"	23°26'24"	2°49'16"	16°59'28°	27°54'11°	11°R26	13°R 3	20°R52	24°R 6	8°R40	7°R56	12°R46	24°R29	T 7
W 8	19 39 37	24°14'16"	24°39'25"	25°32'31"	3°18'17"	17°35'28°	27°54'11°	11°R22	13°R 1	20°R51	24°R 6	8°R41	7°R53	12°R52	24°R30	W 8
T 9	19 43 34	25°11'34"	8°17'30"	27°38'34"	3°47'18"	18°12'28°	27°54'11°	11°R17	12°R58	20°R49	24°R 7	8°R42	7°R50	12°R59	24°R31	T 9
F 10	19 47 30	26° 8'51"	22°11'29"	29°42'41"	4°13'18"	18°48'28°	27°54'11°	11°R13	12°R56	20°R48	24°R 7	8°R43	7°R47	13°R 6	24°R31	F 10
S 11	19 51 27	27° 6'10"	5°33'39"	18°46'41"	4°38'19"	19°25'28°	27°54'11°	11°R 9	12°R54	20°R47	24°R 8	8°R44	7°R43	13°R12	24°R32	S 11
S 12	19 55 23	28° 3'29"	18°55'34"	3°47'51"	5° 1'20°	20° 2'28°	27°54'11°	11°R 5	12°R51	20°R46	24°R 8	8°R43	7°R40	13°R19	24°R32	S 12
M13	19 59 20	29° 0'49"	1°55'56"	5°48'52"	5°23'20°	20°38'28°	27°54'11°	11°R 1	12°R49	20°R45	24°R 9	8°R42	7°R37	13°R26	24°R33	M13
T 14	20 3 16	29°58'10"	14°43'74"	5°43'21°	5°43'21°	21°15'28°	27°54'11°	10°R57	12°R47	20°R43	24°R10	8°R40	7°R34	13°R33	24°R33	T 14
W15	20 7 13	0°15'53"	27°16'94"	6° 1'21°	5°43'21°	21°15'28°	27°54'11°	10°R53	12°R45	20°R42	24°R10	8°R37	7°R31	13°R39	24°R33	W15
T 16	20 11 10	1°52'54"	9°18'36"	11°41'61"	6°17'22°	22°29'28°	27°54'11°	10°R49	12°R42	20°R41	24°R11	8°R33	7°R28	13°R46	24°R34	T 16
F 17	20 15 6	2°50'17"	21°44'13°	13°35'63°	6°31'23°	23° 6'29°	27°54'11°	10°R45	12°R40	20°R40	24°R12	8°R29	7°R24	13°R53	24°R34	F 17
S 18	20 19 3	3°47'42"	3°17'44"	15°28'64°	6°43'23°	23°43'29°	27°54'11°	10°R41	12°R38	20°R39	24°R12	8°R26	7°R21	14°R 0	24°R34	S 18
S 19	20 22 59	4°45'08"	15°38'17°	17°19'65°	6°53'24°	24°20'29°	27°54'11°	10°R37	12°R36	20°R38	24°R13	8°R24	7°R18	14°R 6	24°R34	S 19
M20	20 26 56	5°42'35"	27°31'19°	9° 1'24°	7° 1'24°	24°58'29°	27°54'11°	10°R33	12°R34	20°R37	24°R14	8°R22	7°R15	14°R13	24°R34	M20
T 21	20 30 52	6°40'04"	9°27'27°	20°57'7°	6° 1'25°	25°35'29°	27°54'11°	10°R30	12°R31	20°R36	24°R15	8°R22	7°R12	14°R20	24°R34	T 21
W22	20 34 49	7°37'34"	21°31'22°	22°43'7°	7°10'26°	26°12'29°	27°54'11°	10°R26	12°R29	20°R35	24°R16	8°R23	7°R 8	14°R26	24°R34	W22
T 23	20 38 45	8°35'05"	3°17'47°	24°28'7°	7°R11'26°	26°50'29°	27°54'11°	10°R22	12°R27	20°R34	24°R17	8°R24	7°R 5	14°R33	24°R34	T 23
F 24	20 42 42	9°32'38"	16°20'26°	12°12'7°	7°10'27°	27°27'29°	27°54'11°	10°R19	12°R25	20°R33	24°R18	8°R26	7°R 2	14°R40	24°R34	F 24
S 25	20 46 39	10°30'12"	29°14'27°	27°54'7°	7° 7'28°	28° 5'29°	27°54'11°	10°R15	12°R23	20°R32	24°R19	8°R27	6°R59	14°R47	24°R33	S 25
S 26	20 50 35	11°27'47"	12°31'29°	29°34'7°	7° 1'28°	28°43'29°	27°54'11°	10°R12	12°R21	20°R31	24°R20	8°R27	6°R56	14°R53	24°R33	S 26
M27	20 54 32	12°25'24"	26°11'11°	11°13'65°	6°53'29°	29°20'29°	27°54'11°	10°R 8	12°R19	20°R30	24°R21	8°R26	6°R53	15°R 0	24°R33	M27
T 28	20 58 28	13°23'02"	10°14'25°	6°42'29°	6°42'29°	29°58'29°	27°54'11°	10°R 5	12°R17	20°R29	24°R22	8°R23	6°R49	15°R 7	24°R32	T 28
W29	21 2 25	14°20'41"	24°36'42°	6°30'03°	6°30'03°	29°44'10°	27°54'11°	10°R 2	12°R15	20°R29	24°R23	8°R19	6°R46	15°R14	24°R32	W29
T 30	21 6 21	15°18'22"	9°10'10°	6° 0'61°	6°14'14°	29°46°	27°54'11°	9°R58	12°R13	20°R28	24°R24	8°R14	6°R43	15°R20	24°R31	T 30
F 31	21 10 18	16°16'03"	23°17'51"	7°17'33"	5°17'57"	1°15'52"	29°17'49"	9°R55	12°R11	20°R27	24°R25	8°R 8	6°R40	15°R27	24°R31	F 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
W 1	22n21	13n17	3s 9	24n 2	0n58	11n 2	0s44	7n17	0n47	9n23	1s17	22s39	0n20	23s16	0s26	21s54
T 2	22 13	7 53	4 5	23 59	1 6	10 40	0 53	7 2	0 46	9 26	1 18	22 39	0 20	23 16	0 26	21 54
F 3	22 5	2 2	4 46	23 53	1 13	10 19	1 2	6 47	0 45	9 28	1 18	22 40	0 19	23 17	0 26	21 53
S 4	21 57	3s56	5 11	23 45	1 20	9 58	1 12	6 33	0 45	9 30	1 18	22 40	0 19	23 17	0 26	21 53
S 5	21 48	9 41	5 15	23 33	1 26	9 37	1 21	6 18	0 44	9 32	1 18	22 41	0 19	23 17	0 26	21 53
M 6	21 39	14 55	5 1	23 19	1 32	9 16	1 31	6 3	0 43	9 34	1 18	22 41	0 19	23 17	0 26	21 53
T 7	21 29	19 18	4 28	23 3	1 36	8 55	1 41	5 48	0 42	9 36	1 19	22 42	0 19	23 18	0 26	21 53
W 8	21 20	22 32	3 40	22 44	1 40	8 35	1 52	5 33	0 41	9 38	1 19	22 42	0 19	23 18	0 26	21 53
T 9	21 9	24 24	2 39	22 22	1 43	8 15	2 2	5 18	0 41	9 40	1 19	22 43	0 19	23 18	0 26	21 53
F 10	20 59	24 46	1 30	21 59	1 45	7 55	2 13	5 3	0 40	9 42	1 19	22 43	0 19	23 18	0 26	21 53
S 11	20 48	23 40	0 17	21 33	1 47	7 36	2 24	4 48	0 39	9 44	1 20	22 44	0 19	23 19	0 26	21 53
S 12	20 36	21 15	0n56	21 6	1 47	7 17	2 36	4 33	0 38	9 46	1 20	22 44	0 19	23 19	0 26	21 53
M13	20 25	17 46	2 4	20 37	1 48	6 58	2 47	4 18	0 37	9 48	1 20	22 44	0 18	23 19	0 26	21 53
T 14	20 13	13 31	3 5	20 6	1 47	6 40	2 59	4 2	0 37	9 49	1 20	22 45	0 18	23 19	0 26	21 53
W15	20 0	8 46	3 56	19 34	1 46	6 23	3 11	3 47	0 36	9 51	1 20	22 45	0 18	23 19	0 26	21 53
T 16	19 38	3 45	4 35	19 0	1 44	6 6	3 23	3 32	0 35	9 52	1 21	22 46	0 18	23 20	0 26	21 53
F 17	19 45	1n19	5 0	18 25	1 42	5 49	3 35	3 16	0 34	9 54	1 21	22 46	0 18	23 20	0 26	21 53
S 18	19 21	6 16	5 12	17 49	1 39	5 33	3 47	3 1	0 33	9 55	1 21	22 47	0 18	23 20	0 26	21 53
S 19	19 8	10 57	5 11	17 12	1 36	5 18	4 0	2 45	0 33	9 57	1 21	22 47	0 18	23 20	0 26	21 53
M20	18 54	15 13	4 56	16 35	1 32	5 3	4 13	2 30	0 32	9 58	1 22	22 47	0 18	23 20	0 26	21 53
T 21	18 39	18 55	4 29	15 56	1 27	4 49	4 25	2 14	0 31	9 59	1 22	22 48	0 18	23 21	0 26	21 53
W22	18 25	21 52	3 49	15 17	1 23	4 36	4 38	1 59	0 30	10 0	1 22	22 48	0 18	23 21	0 26	21 53
T 23	18 10	23 53	2 58	14 37	1 18	4 23	4 51	1 43	0 30	10 1	1 22	22 49	0 17	23 21	0 26	21 53
F 24	17 55	24 45	1 58	13 57	1 12	4 12	5 4	1 27	0 29	10 2	1 23	22 49	0 17	23 21	0 26	21 53
S 25	17 39	24 20	0 50	13 16	1 6	4 1	5 17	1 12	0 28	10 3	1 23	22 49	0 17	23 21	0 26	21 53
S 26	17 23	22 33	0s22	12 35	1 0	3 51	5 30	0 56	0 27	10 4	1 23	22 50	0 17	23 22	0 26	21 53
M27	17 7	19 25	1 35	11 54	0 53	3 42	5 43	0 40	0 27	10 5	1 23	22 50	0 17	23 22	0 26	21 53
T 28	16 51	15 5	2 44	11 13	0 47	3 34	5 56	0 26	0 26	10 6	1 23	22 50	0 17	23 22	0 26	21 52
W29	16 34	9 50	3 45	10 31	0 39	3 27	6 9	0 9	0 25	10 6	1 24	22 51	0 17	23 22	0 26	21 52
T 30	16 17	3 58	4 31	9 50	0 32	3 21	6 21	0s 7	0 24	10 7	1 24	22 51	0 17	23 22	0 26	21 52
F 31	16n 0	2s 9	5s 0	9n 8	0n24	3n15	6s33	0s23	0n24	10n 7	1s24	22s51	0n17	23s22	0s26	21s52

Julian Day Number = 2265096.5, Delta T = 05m13s

Ecliptic obliquity = 23°30'21", Nutation = 0°00'18", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 17°37'03", Lahiri = 16°44'04" Julian Calendar 1 July 1489 == Greg. Calendar 10 July 1489

ASTRODIENST EPHEMERIS for the year 1489

geocentric

AUGUST 1489 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	21 14 14	17°13'46	8°31	9°4	5°R37	2°30	29°V51	9°R52	12°R10	20°R26	24°26	8°R 3	6°37	15°V34	24°R30	S 1
S 2	21 18 11	18°11'30	23° 4	10°34	5°15	3° 9	29°52	9°349	12°8	20°26	24°28	7°59	6°34	15°40	24°V29	S 2
M 3	21 22 8	19° 9'15	7°25	12° 2	4°51	3°47	29°54	9°46	12° 6	20°25	24°29	7°57	6°30	15°47	24°28	M 3
T 4	21 26 4	20° 7'01	21°31	13°29	4°25	4°25	29°55	9°43	12° 4	20°24	24°30	7°D56	6°27	15°54	24°28	T 4
W 5	21 30 1	21° 4'48	5°20	14°54	3°57	5° 4	29°56	9°41	12° 3	20°24	24°31	7°57	6°24	16° 1	24°27	W 5
T 6	21 33 57	22° 2'36	18°54	16°18	3°27	5°42	29°57	9°38	12° 1	20°23	24°33	7°58	6°21	16° 7	24°26	T 6
F 7	21 37 54	23° 0'26	2°13	17°40	2°55	6°21	29°58	9°35	11°59	20°23	24°34	7°R59	6°18	16°14	24°25	F 7
S 8	21 41 50	23°58'17	15°19	19° 0	2°22	6°59	29°59	9°33	11°58	20°22	24°36	7°59	6°14	16°21	24°24	S 8
S 9	21 45 47	24°56'09	28°12	20°19	1°48	7°38	29°59	9°30	11°56	20°22	24°37	7°57	6°11	16°27	24°23	S 9
M10	21 49 43	25°54'03	10°54	21°35	1°13	8°17	29°R59	9°28	11°55	20°21	24°38	7°53	6° 8	16°34	24°22	M10
T 11	21 53 40	26°51'58	23°25	22°50	0°37	8°56	29°59	9°26	11°53	20°21	24°40	7°47	6° 5	16°41	24°20	T 11
W12	21 57 37	27°49'55	5°46	24° 4	29°59	9°35	29°59	9°24	11°52	20°21	24°42	7°39	6° 2	16°48	24°19	W12
T 13	22 1 33	28°47'53	17°58	25°15	29°23	10°14	29°59	9°21	11°50	20°20	24°43	7°29	5°59	16°54	24°18	T 13
F 14	22 5 30	29°45'53	0°V 1	26°24	28°46	10°53	29°58	9°19	11°49	20°20	24°45	7°20	5°55	17° 1	24°17	F 14
S 15	22 9 26	0°43'55	11°57	27°31	28° 8	11°32	29°57	9°17	11°48	20°20	24°46	7°10	5°52	17° 8	24°15	S 15
S 16	22 13 23	1°41'58	23°50	28°36	27°32	12°11	29°56	9°16	11°46	20°19	24°48	7° 3	5°49	17°15	24°14	S 16
M17	22 17 19	2°40'04	5°41	29°39	26°55	12°50	29°55	9°14	11°45	20°19	24°50	6°57	5°46	17°21	24°12	M17
T 18	22 21 16	3°38'12	17°35	0°39	26°20	13°30	29°54	9°12	11°44	20°19	24°51	6°53	5°43	17°28	24°11	T 18
W19	22 25 12	4°36'21	29°36	1°37	25°46	14° 9	29°52	9°11	11°43	20°19	24°53	6°D52	5°40	17°35	24° 9	W19
T 20	22 29 9	5°34'33	11°49	2°32	25°13	14°49	29°50	9° 9	11°42	20°19	24°55	6°52	5°36	17°41	24° 7	T 20
F 21	22 33 6	6°32'46	24°19	3°24	24°41	15°28	29°48	9° 8	11°41	20°18	24°56	6°52	5°33	17°48	24° 6	F 21
S 22	22 37 2	7°31'02	7°12	4°12	24°11	16° 8	29°46	9° 6	11°40	20°18	24°58	6°R53	5°30	17°55	24° 4	S 22
S 23	22 40 59	8°29'20	20°30	4°58	23°43	16°47	29°44	9° 5	11°39	20°18	25° 0	6°52	5°27	18° 2	24° 2	S 23
M24	22 44 55	9°27'40	4°16	5°40	23°17	17°27	29°41	9° 4	11°38	20°D18	25° 2	6°49	5°24	18° 8	24° 0	M24
T 25	22 48 52	10°26'02	18°30	6°18	22°53	18° 7	29°38	9° 3	11°37	20°18	25° 4	6°44	5°20	18°15	23°59	T 25
W26	22 52 48	11°24'26	3°9	6°52	22°31	18°47	29°35	9° 2	11°36	20°18	25° 6	6°36	5°17	18°22	23°57	W26
T 27	22 56 45	12°22'51	18° 5	7°21	22°11	19°27	29°32	9° 1	11°35	20°19	25° 7	6°27	5°14	18°28	23°55	T 27
F 28	23 0 41	13°21'19	3°10	7°46	21°53	20° 7	29°29	9° 1	11°34	20°19	25° 9	6°17	5°11	18°35	23°53	F 28
S 29	23 4 38	14°19'48	18°14	8° 5	21°38	20°47	29°25	9° 0	11°34	20°19	25°11	6° 7	5° 8	18°42	23°51	S 29
S 30	23 8 34	15°18'19	3°7	8°20	21°26	21°27	29°21	8°59	11°33	20°19	25°13	6° 0	5° 5	18°49	23°49	S 30
M31	23 12 31	16°16'52	17°42	8°28	21°15	22° 8	29°V17	8°59	11°32	20°19	25°15	5°54	5° 1	18°V55	23°V46	M31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
S 1	15n43	8s 8	5s10	8n27	0n17	3n12	6s45	0s39	0n23	10n 8	1s24	22s52	0n17	23s23	0s26	21s52
S 2	15 25	13 37	4 59	7 45	0 8	3 9	6 57	0 55	0 22	10 8	1 25	22 52	0 16	23 23	0 26	21 52
M 3	15 7	18 16	4 30	7 4	0 0	3 7	7 8	1 11	0 21	10 9	1 25	22 52	0 16	23 23	0 26	21 52
T 4	14 49	21 48	3 45	6 23	0s 8	3 6	7 18	1 27	0 21	10 9	1 25	22 53	0 16	23 23	0 26	21 52
W 5	14 31	24 0	2 47	5 42	0 17	3 7	7 29	1 43	0 20	10 9	1 25	22 53	0 16	23 23	0 26	21 52
T 6	14 12	24 44	1 41	5 2	0 26	3 9	7 38	1 59	0 19	10 9	1 26	22 53	0 16	23 23	0 26	21 52
F 7	13 53	24 0	0 31	4 22	0 34	3 11	7 47	2 15	0 18	10 9	1 26	22 54	0 16	23 24	0 26	21 52
S 8	13 34	21 58	0n40	3 42	0 43	3 15	7 55	2 31	0 18	10 9	1 26	22 54	0 16	23 24	0 26	21 52
S 9	13 15	18 50	1 47	3 3	0 52	3 20	8 3	2 47	0 17	10 9	1 26	22 54	0 16	23 24	0 26	21 52
M10	12 55	14 51	2 48	2 24	1 2	3 26	8 10	3 3	0 16	10 9	1 27	22 54	0 16	23 24	0 26	21 53
T 11	12 36	10 18	3 39	1 46	1 11	3 33	8 16	3 19	0 15	10 9	1 27	22 55	0 16	23 24	0 26	21 53
W12	12 16	5 23	4 20	1 8	1 20	3 41	8 21	3 35	0 15	10 8	1 27	22 55	0 15	23 24	0 26	21 53
T 13	11 55	0 21	4 48	0 32	1 29	3 50	8 25	3 51	0 14	10 8	1 27	22 55	0 15	23 24	0 26	21 53
F 14	11 35	4n38	5 3	0s 5	1 39	3 59	8 28	4 7	0 13	10 8	1 27	22 55	0 15	23 24	0 26	21 53
S 15	11 15	9 24	5 4	0 40	1 48	4 10	8 31	4 23	0 13	10 7	1 28	22 56	0 15	23 25	0 26	21 53
S 16	10 54	13 48	4 53	1 14	1 57	4 20	8 32	4 39	0 12	10 7	1 28	22 56	0 15	23 25	0 26	21 53
M17	10 33	17 40	4 28	1 48	2 7	4 32	8 32	4 55	0 11	10 6	1 28	22 56	0 15	23 25	0 26	21 53
T 18	10 12	20 50	3 52	2 20	2 16	4 44	8 32	5 11	0 10	10 5	1 28	22 56	0 15	23 25	0 26	21 53
W19	9 51	23 8	3 6	2 51	2 25	4 57	8 31	5 27	0 10	10 4	1 29	22 57	0 15	23 25	0 26	21 53
T 20	9 30	24 25	2 10	3 21	2 34	5 9	8 29	5 43	0 9	10 4	1 29	22 57	0 15	23 25	0 26	21 53
F 21	9 8	24 30	1 7	3 50	2 42	5 22	8 26	5 59	0 8	10 3	1 29	22 57	0 14	23 25	0 26	21 53
S 22	8 46	23 17	0s 2	4 17	2 51	5 36	8 22	6 15	0 8	10 2	1 29	22 57	0 14	23 25	0 26	21 53
S 23	8 25	20 45	1 12	4 43	2 59	5 49	8 17	6 31	0 7	10 1	1 29	22 57	0 14	23 25	0 26	21 53
M24	8 3	16 58	2 21	5 7	3 7	6 2	8 12	6 47	0 6	10 0	1 30	22 58	0 14	23 25	0 26	21 53
T 25	7 41	12 7	3 23	5 30	3 15	6 16	8 6	7 2	0 6	9 58	1 30	22 58	0 14	23 25	0 26	21 53
W26	7 18	6 27	4 13	5 50	3 23	6 29	8 0	7 18	0 5	9 57	1 30	22 58	0 14	23 25	0 26	21 53
T 27	6 56	0 19	4 47	6 8	3 29	6 42	7 52	7 34	0 4	9 56	1 30	22 58	0 14	23 26	0 26	21 53
F 28	6 34	5s53	5 2	6 23	3 36	6 55	7 45	7 50	0 3	9 54	1 30	22 58	0 14	23 26	0 26	21 53
S 29	6 11	11 43	4 56	6 37	3 42	7 7	7 36	8 6	0 3	9 53	1 31	22 58	0 14	23 26	0 26	21 53
S 30	5 48	16 48	4 30	6 47	3 47	7 19	7 28	8 21	0 2	9 52	1 31	22 59	0 14	23 26	0 26	21 53
M31	5n26	20s46	3s46	6s54	3s51	7n31	7s19	8s37	0n 1	9n50	1s31	22s59	0n13	23s26	0s26	21s53

Julian Day Number = 2265127.5, Delta T = 05m13s

Ecliptic obliquity = 23°30'21, Nutation = 0°00'18, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 17°37'08, Lahiri = 16°44'08 Julian Calendar 1 Aug. 1489 == Greg. Calendar 10 Aug. 1489

ASTRODIENST EPHEMERIS for the year 1489
geocentric

SEPTEMBER 1489 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	23 16 28	17 ^h 15'26"	1 ^h 56'	8°R31	21°R 7	22 ^h 48'	29°R13	8°R59	11°R32	20 ^h 20'	25 ^h 17'	5°R52	4 ^h 58'	19 ^h Y 2	23°R44	T 1
W 2	23 20 24	18°14'02"	15°46'	8 ^h 26'	21 ^h Ω 1	23°28'	29 ^h Y 9	8 ^h 58'	11 ^h 31'	20°20'	25°19'	5°D51	4°55'	19° 9	23 ^h Y42	W 2
T 3	23 24 21	19°12'40"	29°13'	8°16'	20°58'	24° 9	29° 5	8°58'	11°31'	20°20'	25°21'	5°R51	4°52'	19°15	23°40	T 3
F 4	23 28 17	20°11'20"	12 ^h 32'	7°58'	20°D57	24°49	29° 0	8°D58	11°30'	20°21'	25°23'	5 ^h 31'	4°49	19°22	23°38	F 4
S 5	23 32 14	21°10'01"	25°12'	7°33'	20°59	25°30	28°55'	8°58'	11°30'	20°21'	25°25'	5°49	4°45	19°29	23°35	S 5
S 6	23 36 10	22° 8'44"	7 ^h 48'	7° 1	21° 3	26°11'	28°50'	8°58'	11°30'	20°21'	25°28'	5°46	4°42	19°36	23°33	S 6
M 7	23 40 7	23° 7'29"	20°14'	6°21'	21° 9	26°51'	28°45'	8°59'	11°30'	20°22'	25°30'	5°39	4°39	19°42	23°31	M 7
T 8	23 44 3	24° 6'15"	2 ^h 31'	5°35'	21°17	27°32'	28°40'	8°59'	11°29'	20°22'	25°32'	5°30	4°36	19°49	23°28	T 8
W 9	23 48 0	25° 5'04"	14°39'	4°43'	21°28	28°13'	28°34'	8°59'	11°29'	20°23'	25°34'	5°18	4°33	19°56	23°26	W 9
T 10	23 51 57	26° 3'54"	26°42'	3°45'	21°40	28°54'	28°29'	9° 0	11°29'	20°23'	25°36'	5° 4	4°30	20° 2	23°23	T 10
F 11	23 55 53	27° 2'46"	8 ^h Y40	2°42'	21°55	29°35'	28°23'	9° 0	11°29'	20°24'	25°38'	4°50	4°26	20° 9	23°21	F 11
S 12	23 59 50	28° 1'41"	20°33'	1°37'	22°12	0 ^h 16'	28°17'	9° 1	11°D29	20°25'	25°40'	4°36	4°23	20°16	23°18	S 12
S 13	0 3 46	29° 0'37"	2 ^h 24'	0°29	22°31	0°57'	28°11'	9° 2	11°29'	20°25'	25°43'	4°25	4°20	20°23	23°16	S 13
M14	0 7 43	29°59'36"	14°15'	29 ^h 21'	22°51	1°38'	28° 4	9° 3	11°29'	20°26'	25°45'	4°15	4°17	20°29	23°13	M14
T 15	0 11 39	0 ^h 58'38"	26° 8	28°15	23°14	2°19	27°58'	9° 4	11°29'	20°27'	25°47'	4° 9	4°14	20°36	23°10	T 15
W16	0 15 36	1°57'41"	8 ^h II 8	27°12	23°38	3° 1	27°52'	9° 5	11°29'	20°27'	25°49'	4° 5	4°11	20°43	23° 8	W16
T 17	0 19 32	2°56'47"	20°19	26°14	24° 4	3°42'	27°45'	9° 6	11°30'	20°28'	25°52'	4° 3	4° 7	20°50	23° 5	T 17
F 18	0 23 29	3°55'55"	2 ^h 36'	25°23	24°31	4°24	27°38'	9° 8	11°30'	20°29'	25°54'	4° 3	4° 4	20°56	23° 2	F 18
S 19	0 27 26	4°55'06"	15°33'	24°40	25° 1	5° 5	27°31'	9° 9	11°30'	20°30'	25°56'	4° 3	4° 1	21° 3	23° 0	S 19
S 20	0 31 22	5°54'19"	28°46'	24° 6	25°31	5°47'	27°24'	9°11	11°31'	20°31'	25°59'	4° 2	3°58	21°10	22°57	S 20
M21	0 35 19	6°53'34"	12 ^h 27'	23°43	26° 4	6°28'	27°17'	9°12	11°31'	20°32'	26° 1	3°58	3°55	21°16	22°54	M21
T 22	0 39 15	7°52'51"	26°39	23°30	26°37	7°10	27°10'	9°14	11°32'	20°33'	26° 3	3°52	3°51	21°23	22°51	T 22
W23	0 43 12	8°52'11"	11 ^h 19	23°D28	27°12	7°52'	27° 3	9°16	11°32'	20°34'	26° 6	3°44	3°48	21°30	22°48	W23
T 24	0 47 8	9°51'33"	26°21	23°36	27°49	8°34	26°55'	9°18	11°33'	20°35'	26° 8	3°33	3°45	21°37	22°46	T 24
F 25	0 51 5	10°50'57"	11 ^h 38	23°55	28°27	9°16	26°48'	9°20	11°34'	20°36'	26°10	3°22	3°42	21°43	22°43	F 25
S 26	0 55 1	11°50'23"	26°57	24°24	29° 5	9°58'	26°40'	9°22	11°34'	20°37'	26°13	3°11	3°39	21°50	22°40	S 26
S 27	0 58 58	12°49'51"	12 ^h 7	25° 3	29°46	10°40	26°33'	9°24	11°35'	20°38'	26°15	3° 2	3°36	21°57	22°37	S 27
M28	1 2 55	13°49'22"	26°59	25°50	0 ^h 27	11°22	26°25'	9°26	11°36'	20°39'	26°17	2°56	3°32	22° 3	22°34	M28
T 29	1 6 51	14°48'54"	11 ^h 26	26°45	1° 9	12° 4	26°17'	9°29	11°37'	20°40'	26°20	2°52	3°29	22°10	22°31	T 29
W30	1 10 48	15°48'28"	25 ^h 25	27 ^h 47	1 ^h 52	12 ^h 47	26°Y 9	9 ^h 31	11 ^h 38	20 ^h 41	26°22	2 ^h 50	3 ^h 26	22 ^h Y17	22 ^h Y28	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	5n 3	23s22	2s50	6s58	3s55	7n43	7s 9	8s53	0n 1	9n48	1s31	22s59	0n13	23s26	0s26	21s53	1n16	5n25	16n20	23s23	23s25	12n 5	9n44	0n32	
W 2	4 40	24 28	1 44	6 59	3 57	7 53	7 0	9 8	0 0	9 47	1 31	22 59	0 13	23 26	0 26	21 54	1 16	5 23	16 19	23 23	23 25	12 8	9 43	0 32	
T 3	4 17	24 5	0 35	6 56	3 58	8 4	6 50	9 24	0s 1	9 45	1 32	22 59	0 13	23 26	0 26	21 54	1 16	5 22	16 19	23 23	23 25	12 10	9 42	0 31	
F 4	3 54	22 22	0n34	6 49	3 58	8 14	6 40	9 40	0 1	9 43	1 32	22 59	0 13	23 26	0 26	21 54	1 16	5 21	16 18	23 23	23 25	12 12	9 41	0 31	
S 5	3 31	19 30	1 41	6 38	3 57	8 23	6 29	9 55	0 2	9 41	1 32	22 59	0 13	23 26	0 26	21 54	1 16	5 20	16 18	23 23	23 25	12 15	9 40	0 31	
S 6	3 7	15 47	2 40	6 22	3 54	8 32	6 19	10 11	0 3	9 39	1 32	22 59	0 13	23 26	0 26	21 54	1 16	5 19	16 18	23 23	23 25	12 17	9 39	0 31	
M 7	2 44	11 26	3 32	6 2	3 49	8 40	6 8	10 26	0 3	9 37	1 32	22 59	0 13	23 26	0 26	21 54	1 16	5 18	16 18	23 23	23 25	12 19	9 38	0 31	
T 8	2 21	6 41	4 12	5 38	3 43	8 48	5 57	10 41	0 4	9 35	1 32	22 59	0 13	23 26	0 25	21 54	1 15	5 17	16 17	23 23	23 26	12 22	9 37	0 31	
W 9	1 58	1 44	4 41	5 9	3 34	8 55	5 47	10 57	0 5	9 33	1 33	23 0	0 13	23 26	0 25	21 54	1 15	5 16	16 17	23 24	23 26	12 24	9 36	0 31	
T 10	1 34	3n13	4 56	4 37	3 24	9 1	5 36	11 12	0 5	9 31	1 33	23 0	0 12	23 26	0 25	21 54	1 15	5 15	16 17	23 25	23 26	12 26	9 35	0 31	
F 11	1 11	8 1	4 59	4 1	3 12	9 7	5 25	11 27	0 6	9 29	1 33	23 0	0 12	23 26	0 25	21 54	1 15	5 14	16 16	23 25	23 26	12 29	9 34	0 31	
S 12	0 47	12 30	4 48	3 22	2 58	9 12	5 14	11 42	0 7	9 27	1 33	23 0	0 12	23 26	0 25	21 54	1 15	5 13	16 16	23 26	23 26	12 31	9 33	0 31	
S 13	0 24	16 29	4 25	2 40	2 42	9 16	5 3	11 57	0 7	9 24	1 33	23 0	0 12	23 26	0 25	21 54	1 15	5 12	16 16	23 26	23 26	12 33	9 32	0 31	
M14	0 0	19 50	3 51	1 57	2 25	9 20	4 52	12 12	0 8	9 22	1 33	23 0	0 12	23 26	0 25	21 55	1 15	5 11	16 16	23 26	23 26	12 36	9 31	0 31	
T 15	0s23	22 21	3 6	1 14	2 6	9 23	4 42	12 27	0 9	9 20	1 33	23 0	0 12	23 26	0 25	21 55	1 15	5 10	16 15	23 26	23 26	12 38	9 30	0 31	
W16	0 47	23 54	2 12	0 31	1 47	9 25	4 31	12 42	0 9	9 17	1 33	23 0	0 12	23 26	0 25	21 55	1 15	5 9	16 15	23 27	23 26	12 40	9 29	0 31	
T 17	1 10	24 21	1 12	0n11	1 26	9 27	4 20	12 57	0 10	9 15	1 33	23 0	0 12	23 26	0 25	21 55	1 15	5 8	16 15	23 27	23 26	12 43	9 28	0 30	
F 18	1 34	23 35	0 7	0 50	1 6	9 28	4 10	13 11	0 11	9 12	1 34	23 0	0 12	23 26	0 25	21 55	1 15	5 7	16 15	23 27	23 27	12 45	9 27	0 30	
S 19	1 58	21 36	1s 0	1 26	0 46	9 28	3 59	13 26	0 11	9 10	1 34	23 0	0 12	23 26	0 25	21 55	1 15	5 6	16 14	23 27	23 27	12 47	9 26	0 30	
S 20	2 21	18 24	2 7	1 57	0 26	9 28	3 49	13 40	0 12	9 7	1 34	23 0	0 11	23 26	0 25	21 55	1 15	5 5	16 14	23 27	23 27	12 50	9 25	0 30	
M21	2 45	14 7	3 8	2 24	0 7	9 26	3 38	13 55	0 13	9 5	1 34	23 0	0 11	23 25	0 25	21 55	1 15	5 4	16 14	23 27	23 27	12 52	9 24	0 30	
T 22	3 8	8 54	4 0	2 46	0n12	9 25	3 28	14 9	0 13	9 2	1 34	23 0	0 11	23 25	0 25	21 55	1 15	5 3	16 14	23 27	23 27	12 54	9 23	0 30	
W23	3 32	3 3	4 38	3 2	0 29	9 22	3 18	14 23	0 14	8 59	1 34	23 0	0 11	23 25	0 25	21 56	1 15	5 2	16 14	23 27	23 27	12 57	9 22	0 30	
T 24	3 55	3s 6	4 58	3 13	0 44	9 19	3 8	14 38	0 14	8 57	1 34	23 0	0 11	23 25	0 25	21 56	1 15	5 1	16 13	23 27	23 27	12 59	9 20	0 30	
F 25	4 18	9 10	4 57	3 19	0 58	9 16	2 58	14 52	0 15	8 54	1 34	23 0	0 11	23 25	0 25	21 56	1 15	5 0	16 13	23 28	23 27	13 1	9 19	0 30	
S 26	4 42	14 41	4 35	3 19	1 11	9 11	2 49	15 6	0 16	8 51	1 34	23 0	0 11	23 25	0 25	21 56	1 15	4 59	16 13	23 28	23 27	13 4	9 18	0 30	
S 27	5 5	19 13	3 54	3 14	1 22	9 6	2 39	15 19	0 16	8 48	1 34	23 0	0 11	23 25	0 25	21 56	1 15	4 58	16 13	23 28	23 27	13 6	9 17	0 30	
M28	5 28	22 25	2 57	3 4	1 32	9 1	2 30	15 33	0 17	8 45	1 34	23 0	0 11	23 25	0 25	21 56	1 15	4 58	16 13	23 28	23 28	13 8	9 16	0 30	
T 29	5 51	24 3	1 51	2 50	1 40	8 55	2 20	15 47	0 18	8 43	1 34	22 59	0 11	23 25	0 25	21 56	1 14	4 57	16 13	23 28	23 28	13 10	9 15	0 30	
W30	6s14	24s 5	0s39	2n31	1n47	8n48	2s11	16s 0	0s18	8n40	1s34	22s59	0n10	23s25	0s25	21s56	1n14	4n56	16n13	23s29	23s28	13n13	9n14	0n29	

ASTRODIENST EPHEMERIS for the year 1489

geocentric

OCTOBER 1489 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	1 14 44	16 ⁴⁸ 03	8 ⁵⁷ 57	28 ⁵⁵ 55	2 ³⁷ 37	13 ²⁹ 29	26 ¹ 1	9 ³⁴ 34	11 ³⁹ 39	20 ⁴² 42	26 ²⁵ 25	2 ^{D50} 50	3 ²³ 23	22 ²⁴ 24	22 ^{R26} 26	T 1
F 2	1 18 41	17 ⁴⁷ 41	22 ⁴ 4	0 ⁹ 9	3 ²² 22	14 ¹¹ 11	25 ⁵³ 53	9 ³⁶ 36	11 ⁴⁰ 40	20 ⁴⁴ 44	26 ²⁷ 27	2 ^{R50} 50	3 ²⁰ 20	22 ³⁰ 30	22 ^{Y23} 23	F 2
S 3	1 22 37	18 ⁴⁷ 20	4 ⁵⁰ 50	1 ²⁷ 27	4 ⁸ 8	14 ⁵⁴ 54	25 ⁴⁵ 45	9 ³⁹ 39	11 ⁴¹ 41	20 ⁴⁵ 45	26 ²⁹ 29	2 ³⁴⁹ 49	3 ¹⁷ 17	22 ³⁷ 37	22 ²⁰ 20	S 3
S 4	1 26 34	19 ⁴⁷ 00	17 ¹⁹ 19	2 ⁵⁰ 50	4 ⁵⁶ 56	15 ³⁶ 36	25 ³⁷ 37	9 ⁴² 42	11 ⁴² 42	20 ⁴⁶ 46	26 ³² 32	2 ⁴⁶ 46	3 ¹³ 13	22 ⁴⁴ 44	22 ¹⁷ 17	S 4
M 5	1 30 30	20 ⁴⁶ 43	29 ³⁵ 35	4 ¹⁶ 16	5 ⁴⁴ 44	16 ¹⁹ 19	25 ²⁹ 29	9 ⁴⁵ 45	11 ⁴³ 43	20 ⁴⁸ 48	26 ³⁴ 34	2 ⁴⁰ 40	3 ¹⁰ 10	22 ⁵⁰ 50	22 ¹⁴ 14	M 5
T 6	1 34 27	21 ⁴⁶ 27	11 ⁴² 42	5 ⁴⁶ 46	6 ³³ 33	17 ² 2	25 ²¹ 21	9 ⁴⁸ 48	11 ⁴⁴ 44	20 ⁴⁹ 49	26 ³⁷ 37	2 ³² 32	3 ⁷ 7	22 ⁵⁷ 57	22 ¹¹ 11	T 6
W 7	1 38 23	22 ⁴⁶ 13	23 ⁴² 42	7 ¹⁷ 17	7 ²³ 23	17 ⁴⁴ 44	25 ¹³ 13	9 ⁵¹ 51	11 ⁴⁵ 45	20 ⁵⁰ 50	26 ³⁹ 39	2 ²¹ 21	3 ⁴ 4	23 ⁴ 4	22 ⁸ 8	W 7
T 8	1 42 20	23 ⁴⁶ 01	5 ³⁸ 38	8 ⁵¹ 51	8 ¹³ 13	18 ²⁷ 27	25 ⁵ 5	9 ⁵⁴ 54	11 ⁴⁷ 47	20 ⁵² 52	26 ⁴¹ 41	2 ⁸ 8	3 ¹ 1	23 ¹¹ 11	22 ⁵ 5	T 8
F 9	1 46 17	24 ⁴⁵ 51	17 ³¹ 31	10 ²⁶ 26	9 ⁴ 4	19 ¹⁰ 10	24 ⁵⁷ 57	9 ⁵⁷ 57	11 ⁴⁸ 48	20 ⁵³ 53	26 ⁴⁴ 44	1 ⁵⁵ 55	2 ⁵⁷ 57	23 ¹⁷ 17	22 ² 2	F 9
S 10	1 50 13	25 ⁴⁵ 43	29 ²³ 23	12 ² 2	9 ⁵⁷ 57	19 ⁵³ 53	24 ⁴⁸ 48	10 ¹ 1	11 ⁴⁹ 49	20 ⁵⁵ 55	26 ⁴⁶ 46	1 ⁴² 42	2 ⁵⁴ 54	23 ²⁴ 24	21 ⁵⁹ 59	S 10
S 11	1 54 10	26 ⁴⁵ 36	11 ¹⁶ 16	13 ⁴⁰ 40	10 ⁴⁹ 49	20 ³⁶ 36	24 ⁴⁰ 40	10 ⁴ 4	11 ⁵¹ 51	20 ⁵⁶ 56	26 ⁴⁹ 49	1 ³¹ 31	2 ⁵¹ 51	23 ³¹ 31	21 ⁵⁶ 56	S 11
M 12	1 58 6	27 ⁴⁵ 32	23 ¹⁰ 10	15 ¹⁸ 18	11 ⁴³ 43	21 ¹⁹ 19	24 ³² 32	10 ⁸ 8	11 ⁵² 52	20 ⁵⁸ 58	26 ⁵¹ 51	1 ²² 22	2 ⁴⁸ 48	23 ³⁷ 37	21 ⁵⁴ 54	M 12
T 13	2 2 3	28 ⁴⁵ 30	5 ¹¹ 11	16 ⁵⁶ 56	12 ³⁷ 37	22 ² 2	24 ²⁴ 24	10 ¹¹ 11	11 ⁵⁴ 54	20 ⁵⁹ 59	26 ⁵⁴ 54	1 ¹⁶ 16	2 ⁴⁵ 45	23 ⁴⁴ 44	21 ⁵¹ 51	T 13
W 14	2 5 59	29 ⁴⁵ 30	17 ¹² 12	18 ³⁵ 35	13 ³² 32	22 ⁴⁵ 45	24 ¹⁶ 16	10 ¹⁵ 15	11 ⁵⁶ 56	21 ¹ 1	26 ⁵⁶ 56	1 ¹³ 13	2 ⁴² 42	23 ⁵¹ 51	21 ⁴⁸ 48	W 14
T 15	2 9 56	0 ⁴⁵ 32	29 ²⁶ 26	20 ¹⁵ 15	14 ²⁷ 27	23 ²⁸ 28	24 ⁸ 8	10 ¹⁹ 19	11 ⁵⁷ 57	21 ² 2	26 ⁵⁸ 58	1 ^{D12} 12	2 ³⁸ 38	23 ⁵⁸ 58	21 ⁴⁵ 45	T 15
F 16	2 13 52	1 ⁴⁵ 37	11 ⁵³ 53	21 ⁵⁴ 54	15 ²³ 23	24 ¹¹ 11	24 ⁰ 0	10 ²³ 23	11 ⁵⁹ 59	21 ⁴ 4	27 ¹ 1	1 ¹² 12	2 ³⁵ 35	24 ⁴ 4	21 ⁴² 42	F 16
S 17	2 17 49	2 ⁴⁵ 43	24 ³⁸ 38	23 ³³ 33	16 ²⁰ 20	24 ⁵⁵ 55	23 ⁵² 52	10 ²⁷ 27	12 ¹ 1	21 ⁶ 6	27 ³ 3	1 ¹³ 13	2 ³² 32	24 ¹¹ 11	21 ³⁹ 39	S 17
S 18	2 21 46	3 ⁴⁵ 52	7 ⁴⁵ 45	25 ¹² 12	17 ¹⁷ 17	25 ³⁸ 38	23 ⁴⁴ 44	10 ³¹ 31	12 ² 2	21 ⁷ 7	27 ⁶ 6	1 ^{R13} 13	2 ²⁹ 29	24 ¹⁸ 18	21 ³⁶ 36	S 18
M 19	2 25 42	4 ⁴⁶ 02	21 ¹⁸ 18	26 ⁵¹ 51	18 ¹⁵ 15	26 ²² 22	23 ³⁶ 36	10 ³⁵ 35	12 ⁴ 4	21 ⁹ 9	27 ⁸ 8	1 ¹² 12	2 ²⁶ 26	24 ²⁴ 24	21 ³³ 33	M 19
T 20	2 29 39	5 ⁴⁶ 15	5 ¹¹ 11	28 ³⁰ 30	19 ¹³ 13	27 ⁵ 5	23 ²⁸ 28	10 ³⁹ 39	12 ⁶ 6	21 ¹¹ 11	27 ¹¹ 11	1 ⁸ 8	2 ²² 22	24 ³¹ 31	21 ³¹ 31	T 20
W 21	2 33 35	6 ⁴⁶ 30	19 ⁴⁶ 46	0 ¹¹ 9	20 ¹² 12	27 ⁴⁹ 49	23 ²¹ 21	10 ⁴³ 43	12 ⁸ 8	21 ¹² 12	27 ¹³ 13	1 ³ 3	2 ¹⁹ 19	24 ³⁸ 38	21 ²⁸ 28	W 21
T 22	2 37 32	7 ⁴⁶ 47	4 ³⁸ 38	1 ⁴⁷ 47	21 ¹¹ 11	28 ³² 32	23 ¹³ 13	10 ⁴⁸ 48	12 ¹⁰ 10	21 ¹⁴ 14	27 ¹⁵ 15	0 ⁵⁵ 55	2 ¹⁶ 16	24 ⁴⁵ 45	21 ²⁵ 25	T 22
F 23	2 41 28	8 ⁴⁷ 06	19 ⁴⁷ 47	3 ²⁵ 25	22 ¹¹ 11	29 ¹⁶ 16	23 ⁶ 6	10 ⁵² 52	12 ¹² 12	21 ¹⁶ 16	27 ¹⁸ 18	0 ⁴⁷ 47	2 ¹³ 13	24 ⁵¹ 51	21 ²² 22	F 23
S 24	2 45 25	9 ⁴⁷ 26	5 ¹¹ 11	5 ³ 3	23 ¹¹ 11	29 ⁵⁹ 59	22 ⁵⁸ 58	10 ⁵⁶ 56	12 ¹⁴ 14	21 ¹⁸ 18	27 ²⁰ 20	0 ³⁹ 39	2 ¹⁰ 10	24 ⁵⁸ 58	21 ²⁰ 20	S 24
S 25	2 49 21	10 ⁴⁷ 49	20 ¹⁷ 17	6 ⁴¹ 41	24 ¹² 12	0 ⁴⁴ 44	22 ⁵¹ 51	11 ¹ 1	12 ¹⁶ 16	21 ¹⁹ 19	27 ²² 22	0 ³² 32	2 ⁷ 7	25 ⁵ 5	21 ¹⁷ 17	S 25
M 26	2 53 18	11 ⁴⁸ 13	5 ¹⁷ 17	8 ¹⁸ 18	25 ¹³ 13	1 ²⁸ 28	22 ⁴³ 43	11 ⁶ 6	12 ¹⁸ 18	21 ²¹ 21	27 ²⁵ 25	0 ²⁷ 27	2 ³ 3	25 ¹¹ 11	21 ¹⁴ 14	M 26
T 27	2 57 15	12 ⁴⁸ 39	19 ⁵⁴ 54	9 ⁵⁵ 55	26 ¹⁴ 14	2 ¹² 12	22 ³⁶ 36	11 ¹⁰ 10	12 ²⁰ 20	21 ²³ 23	27 ²⁷ 27	0 ²⁵ 25	2 ⁰ 0	25 ¹⁸ 18	21 ¹¹ 11	T 27
W 28	3 1 11	13 ⁴⁹ 06	4 ³ 4	11 ³¹ 31	27 ¹⁶ 16	2 ⁵⁶ 56	22 ²⁹ 29	11 ¹⁵ 15	12 ²³ 23	21 ²⁵ 25	27 ³⁰ 30	0 ^{D24} 24	1 ⁵⁷ 57	25 ²⁵ 25	21 ⁹ 9	W 28
T 29	3 5 8	14 ⁴⁹ 35	17 ⁴⁶ 46	13 ⁷ 7	28 ¹⁸ 18	3 ⁴⁰ 40	22 ²² 22	11 ²⁰ 20	12 ²⁵ 25	21 ²⁷ 27	27 ³² 32	0 ²⁵ 25	1 ⁵⁴ 54	25 ³² 32	21 ⁶ 6	T 29
F 30	3 9 4	15 ⁵⁰ 05	1 ⁰ 0	14 ⁴³ 43	29 ²¹ 21	4 ²⁴ 24	22 ¹⁵ 15	11 ²⁵ 25	12 ²⁷ 27	21 ²⁹ 29	27 ³⁴ 34	0 ²⁷ 27	1 ⁵¹ 51	25 ³⁸ 38	21 ⁴ 4	F 30
S 31	3 13 1	16 ⁵⁰ 36	13 ⁵⁰ 50	16 ¹¹ 11	0 ²⁴ 24	5 ⁸ 8	22 ^{Y9} 9	11 ³⁰ 30	12 ³⁰ 30	21 ³¹ 31	27 ³⁷ 37	0 ^{R28} 28	1 ³⁴⁸ 48	25 ^{Y45} 45	21 ^{Y1} 1	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	decl	lat	decl	lat	decl	lat
T 1	6s37	22s40	0n32	2n 9	1n53	8n40	2s 2	16s14	0s19	8n37	1s34	22s59	0n10	23s25	0s25	21s57	1n14	4n55	16n12	23s29	23s28	13n15	9n12	0n29									
F 2	7 0	20 3	1 40	1 44	1 57	8 32	1 53	16 27	0 19	8 34	1 34	22 59	0 10	23 25	0 25	21 57	1 14	4 54	16 12	23 29	23 28	13 17	9 11	0 29									
S 3	7 23	16 30	2 41	1 15	2 0	8 24	1 45	16 40	0 20	8 31	1 34	22 59	0 10	23 24	0 25	21 57	1 14	4 53	16 12	23 29	23 28	13 19	9 10	0 29									
S 4	7 45	12 19	3 33	0 44	2 2	8 14	1 36	16 53	0 21	8 28	1 34	22 59	0 10	23 24	0 25	21 57	1 14	4 52	16 12	23 29	23 28	13 22	9 9	0 29									
M 5	8 8	7 42	4 13	0 11	2 3	8 5	1 28	17 6	0 21	8 25	1 34	22 59	0 10	23 24	0 25	21 57	1 14	4 51	16 12	23 29	23 28	13 24	9 8	0 29									
T 6	8 30	2 51	4 42	0s25	2 3	7 54	1 19	17 19	0 22	8 22	1 34	22 59	0 10	23 24	0 25	21 57	1 14	4 50	16 12	23 29	23 28	13 26	9 7	0 29									
W 7	8 53	2n 3	4 58	1 2	2 2	7 43	1 11	17 32	0 23	8 19	1 34	22 59	0 10	23 24	0 25	21 57	1 14	4 49	16 12	23 29	23 28	13 28	9 5	0 29									
T 8	9 15	6 51	5 1	1 40	2 1	7 32	1 3	17 44	0 23	8 16	1 34	22 58	0 10	23 24	0 25	21 57	1 14	4 48	16 12	23 29	23 28	13 31	9 4	0 29									
F 9	9 37	11 22	4 51	2 19	1 59	7 20	0 55	17 57	0 24	8 14	1 34	22 58	0 10	23 24	0 25	21 58	1 14	4 47	16 12	23 30	23 28	13 33	9 3	0 29									
S 10	9 59	15 27	4 28	3 0	1 56	7 7	0 48	18 9	0 24	8 11	1 34	22 58	0 9	23 24	0 25	21 58	1 14	4 47	16 12	23 30	23 28	13 35	9 2	0 29									
S 11	10 21	18 56	3 53	3 41	1 52	6 54	0 40	18 21	0 25	8 8	1 34	22 58	0 9	23 23	0 25	21 58	1 14	4 46	16 12	23 30	23 28	13 37	9 1	0 29									
M 12	10 42	21 39	3 8	4 22	1 49	6 41	0 33	18 33	0 25	8 5	1 34	22 58	0 9	23 23	0 25	21 58	1 14	4 45	16 12	23 30	23 29	13 40	9 0	0 28									
T 13	11 4	23 25	2 14	5 4	1 44	6 27	0 26	18 45	0 26	8 2	1 34	22 58	0 9	23 23	0 25	21 58	1 14	4 44	16 12	23 30	23 29	13 42	8 58	0 28									
W 14	11 25	24 7	1 14	5 46	1 40	6 12	0 19	18 56	0 27	7 59	1 34	22 57	0 9	23 23	0 25	21 58	1 14	4 43	16 12	23 30	23 29	13 44	8 57	0 28									
T 15	11 46	23 40	0 9	6 28	1 35	5 57	0 12	19 8	0 27	7 56	1 33	22 57	0 9	23 23	0 25	21 58	1 14	4 42	16 12	23 30	23 29	13 46	8 56	0 28									
F 16	12 7	22 2	0s57	7 10	1 29	5 42	0 5	19 19	0 28	7 53	1 33	22 57	0 9	23 23	0 25	21 59	1 14	4 42	16 12	23 30	23 29	13 48	8 55	0 28									
S 17	12 28	19 15	2 2	7 52	1 24	5 26	0n 1	19 30	0 28	7 51	1 33	22 57	0 9	23 23	0 25	21 59	1 14	4 41	16 12	23 30	23 29	13 51	8 54	0 28									
S 18	12 48	15 26	3 3	8 34	1 18	5 9	0 8	19 41	0 29	7 48	1 33	22 57	0 9	23 22	0 25	21 59	1 14	4 40	16 12	23 30	23 29	13 53	8 53	0 28									
M 19	13 9	10 43	3 55	9 16	1 12	4 52	0 14	19 52	0 30	7 45	1 33	22 56	0 9	23 22	0 25	21 59	1 14	4 39	16 12	23 30	23 29	13 55	8 51	0 28									
T 20	13 29	5 19	4 36	9 57	1 6	4 35	0 20	20 3	0 30	7 42	1 33	22 56	0 9	23 22	0 25	21 59	1 14	4 38	16 12	23 30	23 29	13 57	8 50	0 28									
W 21	13 49	0s32	5 5	10 37	1 0	4 18	0 26	20 14	0 31	7 39	1 33	22 56	0 9	23 22	0 25	21 59	1 14	4 38	16 12	23 30	23 29	13 59	8 49	0 28									
T 22	14 9	6 31	5 5	11 18	0 53	4 0	0 32	20 24	0 31	7 37	1 33	22 56	0 8	23 22	0 25	22 0	1 14	4 37	16 12	23 30	23 29	14 2	8 48	0 28									
F 23	14 28	12 13	4 50	11 57	0 47	3 41	0 38	20 34	0 32	7 34	1 32	22 55	0 8	23 21	0 25	22 0	1 13	4 36	16 12	23 30	23 29	14 4	8 47	0 27									
S 24	14 47	17 13	4 13	12 37	0 40	3 22	0 43	20 44	0 32	7 32	1 32	22 55	0 8	23 21	0 25	22 0	1 13	4 35	16 12	23 30	23 29	14 6	8 46	0 27									
S 25	15 6	21 3	3 19	13 15	0 34	3 3	0 48	20 54	0 33	7 29	1 32	22 55	0 8	23 21	0 25	22 0	1 13	4 35	16 12	23 30	23 29	14 8	8 45	0 27									
M 26	15 25	23 23	2 11	13 53	0 27	2 44	0 54	21 3	0 33	7 26	1 32	22 54	0 8	23 21	0 25	22 0	1 13	4 34	16 13	23 30	23 29	14 10	8 44	0 27									
T 27	15 44	24 3	0 56	14 30	0 20	2 24	0 59	21 13	0 34	7 24	1 32	22 54	0 8	23 21	0 25	22 0	1 13	4 33	16 13	23 30	23 29	14 13	8 42	0 27									
W 28	16 2	23 7	0n20	15 7	0 13	2 4	1 3	21 22	0 35	7 21	1 32	22 54	0 8	23 20	0 25	22 0	1 13	4 33	16 13	23 30	23 29	14 15	8 41	0 27									
T 29	16 20	20 48	1 32	15 43	0 7	1 43	1 8	21 31	0 35	7 19	1 31	22 53	0 8	23 20	0 25	22 1	1 13	4 32	16 13	23 30	23 30	14 17	8 40	0 27									
F 30	16 37	17 25	2 38	16 18	0s 0	1 22	1 13	21 40	0 36	7 17	1 31	22 53	0 8	23 20	0 25	22 1	1 13	4 31	16 13	23 30	23 30	14 19	8 39	0 27									
S 31	16s55	13s19	3n33	16s52	0s 7	1n 1	1n17	21s48	0s36	7n14	1s31	22s53	0n 8	23s20	0s25	22s 1	1n13	4n31	16n13	23s30	23s30	14n21	8n38	0n27									

ASTRODIENST EPHEMERIS for the year 1489

geocentric

NOVEMBER 1489 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	3 16 57	17 ¹¹ 51'09	26 ²² 20	17 ¹¹ 54	1 ¹² 27	5 ²⁷ 52	22° R 2	11 ²³ 35	12 ²³ 32	21 ²⁷ 33	27 ²³ 39	0° R27	1 ²³ 44	25 ²⁷ 52	20° R58	S 1
M 2	3 20 54	18°51'42	8 ²³ 34	19°30	2°31	6°37	21 ²⁷ 56	11°40	12°34	21°35	27°41	0 ²³ 25	1°41	25°58	20 ²⁷ 56	M 2
T 3	3 24 50	19°52'17	20°38	21° 4	3°35	7°21	21°49	11°45	12°37	21°37	27°44	0°21	1°38	26° 5	20°53	T 3
W 4	3 28 47	20°52'54	2 ²⁷ 33	22°39	4°39	8° 6	21°43	11°51	12°39	21°39	27°46	0°15	1°35	26°12	20°51	W 4
T 5	3 32 44	21°53'31	14°26	24°14	5°44	8°50	21°37	11°56	12°42	21°41	27°48	0° 8	1°32	26°18	20°49	T 5
F 6	3 36 40	22°54'10	26°17	25°48	6°49	9°35	21°31	12° 1	12°44	21°43	27°50	0° 1	1°28	26°25	20°46	F 6
S 7	3 40 37	23°54'50	8 ²³ 10	27°22	7°54	10°19	21°25	12° 7	12°47	21°45	27°53	29 ²⁷ 54	1°25	26°32	20°44	S 7
S 8	3 44 33	24°55'32	20° 7	28°56	8°59	11° 4	21°20	12°12	12°50	21°47	27°55	29°48	1°22	26°39	20°42	S 8
M 9	3 48 30	25°56'15	2 ¹¹ 8	0 ²⁷ 30	10° 5	11°48	21°15	12°18	12°52	21°49	27°57	29°43	1°19	26°45	20°39	M 9
T 10	3 52 26	26°56'59	14°16	2° 4	11°11	12°33	21° 9	12°23	12°55	21°51	27°59	29°40	1°16	26°52	20°37	T 10
W11	3 56 23	27°57'44	26°32	3°37	12°17	13°18	21° 4	12°29	12°58	21°53	28° 1	29°D39	1°13	26°59	20°35	W11
T 12	4 0 19	28°58'32	8 ²³ 35	5°11	13°24	14° 3	20°59	12°35	13° 1	21°55	28° 4	29°39	1° 9	27° 5	20°33	T 12
F 13	4 4 16	29°59'20	21°35	6°44	14°31	14°48	20°55	12°41	13° 3	21°57	28° 6	29°41	1° 6	27°12	20°31	F 13
S 14	4 8 13	1 ²⁷ 0'10	4 ²² 28	8°17	15°38	15°33	20°50	12°46	13° 6	21°59	28° 8	29°42	1° 3	27°19	20°29	S 14
S 15	4 12 9	2° 1'01	17°37	9°51	16°45	16°18	20°46	12°52	13° 9	22° 2	28°10	29°44	1° 0	27°26	20°27	S 15
M16	4 16 6	3° 1'54	1 ¹¹ 6	11°24	17°53	17° 3	20°42	12°58	13°12	22° 4	28°12	29°R45	0°57	27°32	20°25	M16
T 17	4 20 2	4° 2'48	14°57	12°57	19° 0	17°48	20°38	13° 4	13°15	22° 6	28°14	29°44	0°54	27°39	20°23	T 17
W18	4 23 59	5° 3'43	29° 8	14°30	20° 8	18°33	20°34	13°10	13°18	22° 8	28°16	29°43	0°50	27°46	20°21	W18
T 19	4 27 55	6° 4'40	13 ²² 40	16° 3	21°16	19°18	20°30	13°16	13°21	22°10	28°18	29°40	0°47	27°52	20°19	T 19
F 20	4 31 52	7° 5'38	28°27	17°36	22°25	20° 4	20°27	13°23	13°24	22°13	28°20	29°37	0°44	27°59	20°17	F 20
S 21	4 35 48	8° 6'38	13 ¹¹ 23	19° 9	23°33	20°49	20°24	13°29	13°27	22°15	28°22	29°34	0°41	28° 6	20°15	S 21
S 22	4 39 45	9° 7'38	28°21	20°42	24°42	21°34	20°21	13°35	13°30	22°17	28°24	29°31	0°38	28°13	20°14	S 22
M23	4 43 42	10° 8'40	13 ²⁷ 10	22°14	25°51	22°20	20°18	13°41	13°33	22°19	28°26	29°29	0°34	28°19	20°12	M23
T 24	4 47 38	11° 9'42	27°45	23°47	27° 0	23° 5	20°15	13°48	13°36	22°21	28°28	29°D29	0°31	28°26	20°11	T 24
W25	4 51 35	12°10'46	11 ²⁷ 58	25°19	28° 9	23°51	20°13	13°54	13°39	22°24	28°30	29°29	0°28	28°33	20° 9	W25
T 26	4 55 31	13°11'49	25°45	26°51	29°18	24°36	20°11	14° 0	13°42	22°26	28°32	29°30	0°25	28°39	20° 8	T 26
F 27	4 59 28	14°12'54	9 ²² 7	28°23	0 ¹¹ 28	25°22	20° 9	14° 7	13°46	22°28	28°34	29°31	0°22	28°46	20° 6	F 27
S 28	5 3 24	15°13'58	22° 5	29°55	1°38	26° 8	20° 7	14°13	13°49	22°30	28°36	29°33	0°19	28°53	20° 5	S 28
S 29	5 7 21	16°15'04	4 ²⁷ 40	1 ²³ 26	2°48	26°54	20° 5	14°20	13°52	22°33	28°37	29°34	0°15	28°59	20° 3	S 29
M30	5 11 18	17 ²⁷ 16'09	16 ²⁷ 58	2 ²³ 56	3 ¹¹ 57	27 ²⁷ 39	20 ²⁷ 4	14 ²³ 26	13 ²³ 55	22 ²⁷ 35	28 ²³ 39	29°R34	0 ²³ 12	29 ²⁷ 6	20 ²⁷ 2	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	17s12	8s45	4n17	17s26	0s13	0n40	1n22	21s57	0s37	7n12	1s31	22s52	0n 8	23s19	0s25	22s 1	1n13	4n30	16n13	23s30	23s30	14n23	8n37	0n27			
M 2	17 29	3 56	4 48	17 58	0 20	0 18	1 26	22 5	0 37	7 10	1 31	22 52	0 7	23 19	0 25	22 1	1 13	4 29	16 14	23 30	23 30	14 25	8 36	0 27			
T 3	17 45	0n57	5 5	18 30	0 26	0s 3	1 30	22 13	0 38	7 8	1 30	22 52	0 7	23 19	0 25	22 1	1 13	4 29	16 14	23 30	23 30	14 28	8 35	0 26			
W 4	18 2	5 45	5 9	19 1	0 33	0 25	1 33	22 21	0 38	7 6	1 30	22 51	0 7	23 19	0 25	22 2	1 13	4 28	16 14	23 30	23 30	14 30	8 34	0 26			
T 5	18 17	10 19	5 0	19 31	0 39	0 48	1 37	22 28	0 39	7 4	1 30	22 51	0 7	23 18	0 25	22 2	1 13	4 28	16 14	23 30	23 30	14 32	8 33	0 26			
F 6	18 33	14 29	4 38	20 0	0 46	1 10	1 41	22 36	0 39	7 2	1 30	22 51	0 7	23 18	0 25	22 2	1 13	4 27	16 14	23 30	23 30	14 34	8 32	0 26			
S 7	18 48	18 7	4 4	20 28	0 52	1 33	1 44	22 43	0 40	7 0	1 29	22 50	0 7	23 18	0 25	22 2	1 13	4 26	16 14	23 30	23 30	14 36	8 31	0 26			
S 8	19 3	21 1	3 19	20 55	0 58	1 56	1 47	22 50	0 40	6 58	1 29	22 50	0 7	23 18	0 25	22 2	1 13	4 26	16 15	23 30	23 30	14 38	8 30	0 26			
M 9	19 18	23 0	2 25	21 21	1 4	2 19	1 50	22 56	0 41	6 56	1 29	22 49	0 7	23 17	0 25	22 2	1 13	4 25	16 15	23 30	23 30	14 40	8 29	0 26			
T 10	19 32	23 57	1 23	21 46	1 10	2 42	1 53	23 3	0 41	6 54	1 29	22 49	0 7	23 17	0 25	22 2	1 13	4 25	16 15	23 30	23 30	14 42	8 28	0 26			
W11	19 46	23 45	0 17	22 10	1 15	3 5	1 56	23 9	0 42	6 53	1 28	22 48	0 7	23 17	0 25	22 3	1 13	4 24	16 15	23 30	23 30	14 45	8 27	0 26			
T 12	19 59	22 21	0s51	22 33	1 21	3 29	1 59	23 15	0 42	6 51	1 28	22 48	0 7	23 17	0 25	22 3	1 13	4 24	16 16	23 30	23 30	14 47	8 26	0 26			
F 13	20 12	19 50	1 57	22 54	1 26	3 52	2 1	23 21	0 43	6 50	1 28	22 47	0 7	23 16	0 25	22 3	1 13	4 23	16 16	23 30	23 30	14 49	8 26	0 25			
S 14	20 25	16 18	2 59	23 15	1 31	4 16	2 4	23 26	0 43	6 48	1 28	22 47	0 6	23 16	0 25	22 3	1 13	4 23	16 16	23 30	23 30	14 51	8 25	0 25			
S 15	20 37	11 53	3 53	23 34	1 36	4 40	2 6	23 31	0 44	6 47	1 27	22 46	0 6	23 16	0 25	22 3	1 13	4 22	16 16	23 30	23 30	14 53	8 24	0 25			
M16	20 49	6 48	4 36	23 52	1 41	5 3	2 8	23 36	0 44	6 46	1 27	22 46	0 6	23 15	0 25	22 3	1 13	4 22	16 17	23 30	23 30	14 55	8 23	0 25			
T 17	21 1	1 16	5 4	24 9	1 45	5 27	2 10	23 41	0 45	6 44	1 27	22 45	0 6	23 15	0 25	22 3	1 13	4 22	16 17	23 30	23 30	14 57	8 22	0 25			
W18	21 12	4s28	5 14	24 25	1 49	5 51	2 12	23 46	0 45	6 43	1 26	22 45	0 6	23 15	0 25	22 4	1 13	4 21	16 17	23 30	23 30	14 59	8 21	0 25			
T 19	21 23	10 5	5 5	24 39	1 53	6 15	2 14	23 50	0 46	6 42	1 26	22 44	0 6	23 15	0 25	22 4	1 13	4 21	16 18	23 30	23 30	15 1	8 21	0 25			
F 20	21 33	15 14	4 36	24 52	1 57	6 39	2 15	23 54	0 46	6 41	1 26	22 44	0 6	23 14	0 25	22 4	1 13	4 20	16 18	23 30	23 30	15 3	8 20	0 25			
S 21	21 43	19 31	3 47	25 4	2 1	7 3	2 17	23 58	0 47	6 40	1 25	22 43	0 6	23 14	0 25	22 4	1 13	4 20	16 18	23 30	23 30	15 5	8 19	0 25			
S 22	21 53	22 30	2 43	25 14	2 4	7 27	2 18	24 1	0 47	6 39	1 25	22 43	0 6	23 14	0 25	22 4	1 13	4 20	16 19	23 30	23 30	15 7	8 18	0 24			
M23	22 2	23 55	1 29	25 23	2 7	7 51	2 19	24 4	0 47	6 39	1 25	22 42	0 6	23 13	0 25	22 4	1 13	4 19	16 19	23 30	23 30	15 9	8 18	0 24			
T 24	22 11	23 39	0 10	25 31	2 9	8 15	2 21	24 7	0 48	6 38	1 25	22 42	0 6	23 13	0 25	22 5	1 13	4 19	16 19	23 30	23 30	15 11	8 17	0 24			
W25	22 19	21 50	1n 8	25 37	2 11	8 39	2 22	24 10	0 48	6 37	1 24	22 41	0 6	23 13	0 25	22 5	1 13	4 19	16 20	23 30	23 30	15 14	8 16	0 24			
T 26	22 27	18 45	2 20	25 41	2 13	9 2	2 22	24 12	0 49	6 37	1 24	22 41	0 6	23 12	0 25	22 5	1 13	4 18	16 20	23 30	23 30	15 16	8 16	0 24			
F 27	22 34	14 46	3 22	25 44	2 15	9 26	2 23	24 15	0 49	6 36	1 24	22 40	0 5	23 12	0 25	22 5	1 13	4 18	16 20	23 30	23 30	15 18	8 15	0 24			
S 28	22 41	10 13	4 12	25 46	2 15	9 50	2 24	24 16	0 50	6 36	1 23	22 39	0 5	23 12	0 25	22 5	1 13	4 17	16 21	23 30	23 30	15 20	8 14	0 24			
S 29	22 48	5 22	4 47	25 46	2 16	10 13	2 24	24 18	0 50	6 36	1 23	22 39	0 5	23 11	0 25	22 5	1 13	4 17	16 21	23 30	23 30	15 22	8 14	0 24			
M30	22s54	0s25	5n 9	25s44	2s16	10s36	2n24	24s19	0s50	6n35	1s23	22s38	0n 5	23s11	0s25	22s 5	1n13	4n17	16n21	23s30	23s30	15n24	8n13	0n24			

ASTRODIENST EPHEMERIS for the year 1489
geocentric

DECEMBER 1489 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	5 15 14	18°17'15	29°17'2	4°26	5°18	28°25	20°R 3	14°33	13°59	22°37	28°41	29°R34	0°9	29°13	20°R 1	T 1
W 2	5 19 11	19°18'21	10°15'8	5°55	6°18	29°11	20°Y 2	14°40	14°2	22°39	28°43	29°R33	0°6	29°20	20°Y 0	W 2
T 3	5 23 7	20°19'28	22°49	7°23	7°28	29°57	20°1	14°46	14°5	22°42	28°44	29°32	0°3	29°26	19°59	T 3
F 4	5 27 4	21°20'35	4°41	8°50	8°39	0°43	20°1	14°53	14°9	22°44	28°46	29°30	29°59	29°33	19°58	F 4
S 5	5 31 0	22°21'42	16°35	10°16	9°49	1°29	20°0	15°0	14°12	22°46	28°48	29°29	29°56	29°40	19°57	S 5
S 6	5 34 57	23°22'49	28°37	11°40	11°0	2°15	20°D 0	15°6	14°15	22°49	28°49	29°28	29°53	29°46	19°56	S 6
M 7	5 38 53	24°23'57	10°14'7	13°2	12°11	3°1	20°0	15°13	14°19	22°51	28°51	29°28	29°50	29°53	19°55	M 7
T 8	5 42 50	25°25'05	23°8	14°21	13°22	3°47	20°1	15°20	14°22	22°53	28°53	29°28	29°47	29°59	19°54	T 8
W 9	5 46 47	26°26'14	5°41	15°38	14°33	4°33	20°1	15°27	14°26	22°55	28°54	29°D28	29°44	0°8	19°53	W 9
T 10	5 50 43	27°27'23	18°26	16°52	15°44	5°19	20°2	15°34	14°29	22°58	28°56	29°28	29°40	0°13	19°52	T 10
F 11	5 54 40	28°28'32	1°25	18°2	16°55	6°6	20°3	15°40	14°32	23°0	28°57	29°28	29°37	0°20	19°52	F 11
S 12	5 58 36	29°29'41	14°36	19°8	18°7	6°52	20°4	15°47	14°36	23°2	28°59	29°R28	29°34	0°27	19°51	S 12
S 13	6 2 33	0°30'51	28°1	20°8	19°18	7°38	20°5	15°54	14°39	23°4	29°0	29°28	29°31	0°33	19°51	S 13
M14	6 6 29	1°32'01	11°19	21°3	20°30	8°25	20°7	16°1	14°43	23°7	29°1	29°28	29°28	0°40	19°50	M14
T 15	6 10 26	2°33'12	25°30	21°51	21°42	9°11	20°8	16°8	14°46	23°9	29°3	29°28	29°25	0°47	19°50	T 15
W16	6 14 22	3°34'22	9°34	22°31	22°53	9°57	20°10	16°15	14°50	23°11	29°4	29°D28	29°21	0°53	19°49	W16
T 17	6 18 19	4°35'34	23°48	23°3	24°5	10°44	20°13	16°22	14°53	23°13	29°5	29°28	29°18	1°0	19°49	T 17
F 18	6 22 16	5°36'45	8°11	23°26	25°17	11°30	20°15	16°29	14°57	23°16	29°7	29°28	29°15	1°7	19°49	F 18
S 19	6 26 12	6°37'57	22°39	23°38	26°29	12°17	20°17	16°36	15°0	23°18	29°8	29°29	29°12	1°14	19°49	S 19
S 20	6 30 9	7°39'09	7°8	23°R40	27°41	13°3	20°20	16°43	15°4	23°20	29°9	29°30	29°9	1°20	19°49	S 20
M21	6 34 5	8°40'21	21°32	23°30	28°54	13°50	20°23	16°50	15°7	23°22	29°10	29°30	29°6	1°27	19°D49	M21
T 22	6 38 2	9°41'33	5°47	23°8	0°7	14°37	20°26	16°57	15°11	23°24	29°12	29°R30	29°2	1°34	19°49	T 22
W23	6 41 58	10°42'45	19°47	22°34	1°18	15°23	20°30	17°4	15°15	23°27	29°13	29°29	28°59	1°40	19°49	W23
T 24	6 45 55	11°43'57	3°29	21°49	2°30	16°10	20°33	17°11	15°18	23°29	29°14	29°28	28°56	1°47	19°49	T 24
F 25	6 49 51	12°45'08	16°51	20°54	3°43	16°57	20°37	17°19	15°22	23°31	29°15	29°27	28°53	1°54	19°49	F 25
S 26	6 53 48	13°46'18	29°51	19°50	4°55	17°44	20°41	17°26	15°25	23°33	29°16	29°24	28°50	2°1	19°49	S 26
S 27	6 57 45	14°47'28	12°30	18°38	6°8	18°30	20°45	17°33	15°29	23°35	29°17	29°22	28°46	2°7	19°50	S 27
M28	7 1 41	15°48'37	24°51	17°22	7°21	19°17	20°49	17°40	15°32	23°38	29°18	29°21	28°43	2°14	19°50	M28
T 29	7 5 38	16°49'46	6°58	16°3	8°33	20°4	20°54	17°47	15°36	23°40	29°19	29°19	28°40	2°21	19°50	T 29
W30	7 9 34	17°50'54	18°55	14°44	9°46	20°51	20°59	17°54	15°39	23°42	29°19	29°D19	28°37	2°27	19°51	W30
T 31	7 13 31	18°52'01	0°47	13°28	10°59	21°38	21°Y 4	18°3	15°43	23°44	29°20	29°R20	28°34	2°34	19°Y51	T 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
T 1	22s59	4n27	5n17	25s41	2s15	11s 0	2n25	24s21	0s51	6n35	1s22	22s37	0n 5	23s11	0s25	22s 5
W 2	23 4	9 6	5 10	25 37	2 14	11 23	2 25	24 21	0 51	6 35	1 22	22 37	0 5	23 10	0 25	22 6
T 3	23 9	13 24	4 51	25 30	2 13	11 46	2 25	24 22	0 52	6 35	1 22	22 36	0 5	23 10	0 25	22 6
F 4	23 13	17 11	4 19	25 23	2 10	12 8	2 25	24 22	0 52	6 35	1 21	22 35	0 5	23 10	0 25	22 6
S 5	23 17	20 17	3 36	25 13	2 7	12 31	2 25	24 22	0 52	6 35	1 21	22 35	0 5	23 9	0 25	22 6
S 6	23 20	22 33	2 43	25 3	2 4	12 53	2 24	24 22	0 53	6 36	1 21	22 34	0 5	23 9	0 25	22 6
M 7	23 23	23 48	1 42	24 51	1 59	13 15	2 24	24 21	0 53	6 36	1 21	22 33	0 5	23 9	0 25	22 6
T 8	23 26	23 55	0 35	24 37	1 54	13 37	2 23	24 21	0 54	6 36	1 20	22 33	0 5	23 8	0 25	22 6
W 9	23 27	22 49	0s34	24 22	1 48	13 59	2 23	24 19	0 54	6 37	1 20	22 32	0 5	23 8	0 25	22 7
T 10	23 29	20 31	1 43	24 6	1 41	14 20	2 22	24 18	0 54	6 37	1 20	22 31	0 4	23 7	0 25	22 7
F 11	23 30	17 10	2 48	23 49	1 33	14 41	2 21	24 16	0 55	6 38	1 19	22 31	0 4	23 7	0 25	22 7
S 12	23 30	12 54	3 45	23 31	1 23	15 2	2 20	24 15	0 55	6 39	1 19	22 30	0 4	23 7	0 25	22 7
S 13	23 30	7 57	4 31	23 12	1 13	15 22	2 19	24 12	0 55	6 40	1 19	22 29	0 4	23 6	0 25	22 7
M14	23 30	2 33	5 2	22 52	1 2	15 42	2 18	24 10	0 56	6 40	1 18	22 28	0 4	23 6	0 25	22 7
T 15	23 29	3s 3	5 17	22 33	0 50	16 2	2 17	24 7	0 56	6 41	1 18	22 28	0 4	23 6	0 25	22 7
W16	23 27	8 35	5 12	22 13	0 36	16 22	2 15	24 4	0 56	6 42	1 18	22 27	0 4	23 5	0 25	22 7
T 17	23 26	13 44	4 49	21 53	0 21	16 41	2 14	24 1	0 57	6 44	1 17	22 26	0 4	23 5	0 25	22 7
F 18	23 23	18 11	4 8	21 33	0 5	17 0	2 12	23 57	0 57	6 45	1 17	22 25	0 4	23 4	0 25	22 8
S 19	23 20	21 33	3 11	21 15	0n11	17 18	2 11	23 53	0 57	6 46	1 17	22 24	0 4	23 4	0 25	22 8
S 20	23 17	23 33	2 1	20 57	0 29	17 36	2 9	23 49	0 58	6 47	1 16	22 24	0 4	23 4	0 25	22 8
M21	23 13	23 58	0 44	20 40	0 48	17 54	2 8	23 45	0 58	6 49	1 16	22 23	0 4	23 3	0 25	22 8
T 22	23 9	22 48	0n35	20 25	1 7	18 11	2 6	23 40	0 58	6 50	1 16	22 22	0 4	23 3	0 25	22 8
W23	23 4	20 14	1 50	20 12	1 26	18 27	2 4	23 35	0 58	6 52	1 15	22 21	0 4	23 2	0 25	22 8
T 24	22 59	16 33	2 57	20 0	1 45	18 44	2 2	23 30	0 59	6 53	1 15	22 20	0 3	23 2	0 25	22 8
F 25	22 52	14 7	3 53	19 50	2 4	18 59	2 0	23 24	0 59	6 55	1 15	22 20	0 3	23 2	0 25	22 8
S 26	22 47	7 16	4 35	19 42	2 21	19 15	1 58	23 18	0 59	6 57	1 15	22 19	0 3	23 1	0 25	22 8
S 27	22 41	2 14	5 2	19 36	2 38	19 29	1 56	23 12	1 0	6 59	1 14	22 18	0 3	23 1	0 25	22 9
M28	22 34	2n46	5 15	19 32	2 52	19 44	1 53	23 6	1 0	7 1	1 14	22 17	0 3	23 0	0 25	22 9
T 29	22 27	7 34	5 13	19 30	3 4	19 58	1 51	23 0	1 0	7 3	1 14	22 16	0 3	23 0	0 25	22 9
W30	22 19	12 1	4 58	19 29	3 14	20 11	1 49	22 53	1 0	7 5	1 13	22 15	0 3	23 0	0 25	22 9
T 31	22s10	15n59	4n30	19s29	3n21	20s24	1n46	22s46	1s 1	7n 7	1s13	22s14	0n 3	22s59	0s25	22s 9

Julian Day Number = 2265249.5, Delta T = 05m12s
Ecliptic obliquity = 23°30'20", Nutation = 0°00'17", out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 17°37'24", Lahiri = 16°44'25" Julian Calendar 1 Dec. 1489 == Greg. Calendar 10 Dec. 1489