Astrodienst Ephemeris Tables

for the year 1589

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 AG, Dammstr. 23, CH-8702 Zollikon / Zürich, www.astro.com / order@astro.com

ASTRODIENST EPHEMERIS for the year 1589
geocentric

JANUARY 1589 GC

00:00 UT

Day	Sid.t	☉	☽	☿	♀	♂	♃	♄	♅	♆	♇	☊	☊	⚸	⚷	Day
S 1	6 42 1	10♑39'56	1♋14	13°R 4	24♏32	18♎ 3	17♍53	23°R50	13♓48	2°R53	10♈11	2°R35	4♍12	10♋ 0	4°R57	S 1
M 2	6 45 58	11°41'05	13° 5	11♑44	25°39	18°33	17°R54	23♉47	13°50	2♌52	10°12	2♍25	4° 9	10° 7	4♉56	M 2
T 3	6 49 54	12°42'14	24°56	10°24	26°45	19° 3	17°53	23°45	13°52	2°50	10°12	2°17	4° 6	10°14	4°55	T 3
W 4	6 53 51	13°43'22	6♌48	9° 5	27°52	19°32	17°53	23°42	13°54	2°49	10°12	2°11	4° 3	10°20	4°55	W 4
T 5	6 57 47	14°44'31	18°43	7°51	28°59	20° 1	17°53	23°40	13°56	2°47	10°12	2° 8	4° 0	10°27	4°54	T 5
F 6	7 1 44	15°45'39	0♍44	6°42	0♐ 6	20°31	17°52	23°38	13°58	2°45	10°13	2°D 7	3°56	10°34	4°53	F 6
S 7	7 5 40	16°46'47	12°55	5°42	1°13	21° 0	17°51	23°36	14° 1	2°44	10°13	2° 7	3°53	10°40	4°53	S 7
S 8	7 9 37	17°47'54	25°18	4°50	2°21	21°28	17°50	23°34	14° 3	2°42	10°13	2° 9	3°50	10°47	4°53	S 8
M 9	7 13 34	18°49'02	7♎58	4° 8	3°29	21°57	17°49	23°33	14° 5	2°41	10°13	2°10	3°47	10°54	4°52	M 9
T 10	7 17 30	19°50'09	21° 0	3°35	4°36	22°25	17°48	23°31	14° 7	2°39	10°14	2°R11	3°44	11° 1	4°52	T 10
W11	7 21 27	20°51'16	4♏27	3°11	5°45	22°54	17°46	23°29	14°10	2°37	10°14	2°10	3°41	11° 7	4°52	W11
T 12	7 25 23	21°52'23	18°21	2°58	6°53	23°22	17°44	23°28	14°12	2°36	10°15	2° 7	3°37	11°14	4°52	T 12
F 13	7 29 20	22°53'29	2♐43	2°D53	8° 1	23°50	17°43	23°27	14°14	2°34	10°15	2° 3	3°34	11°21	4°52	F 13
S 14	7 33 16	23°54'36	17°29	2°56	9°10	24°17	17°40	23°25	14°17	2°32	10°16	1°57	3°31	11°27	4°D51	S 14
S 15	7 37 13	24°55'42	2♑35	3° 7	10°19	24°45	17°38	23°24	14°19	2°31	10°16	1°51	3°28	11°34	4°52	S 15
M16	7 41 9	25°56'47	17°49	3°25	11°28	25°12	17°36	23°23	14°22	2°29	10°17	1°46	3°25	11°41	4°52	M16
T 17	7 45 6	26°57'51	3♒ 4	3°50	12°37	25°39	17°33	23°22	14°24	2°27	10°17	1°42	3°22	11°47	4°52	T 17
W18	7 49 3	27°58'55	18° 6	4°20	13°46	26° 6	17°30	23°22	14°27	2°26	10°18	1°39	3°18	11°54	4°52	W18
T 19	7 52 59	28°59'58	2♓50	4°56	14°55	26°32	17°27	23°21	14°30	2°24	10°18	1°D39	3°15	12° 1	4°52	T 19
F 20	7 56 56	0♒ 0'59	17° 7	5°37	16° 4	26°59	17°24	23°21	14°32	2°22	10°19	1°39	3°12	12° 7	4°53	F 20
S 21	8 0 52	1° 2'00	0♈58	6°23	17°14	27°25	17°20	23°20	14°35	2°21	10°19	1°41	3° 9	12°14	4°53	S 21
S 22	8 4 49	2° 2'59	14°20	7°12	18°24	27°51	17°16	23°20	14°38	2°19	10°20	1°42	3° 6	12°21	4°54	S 22
M23	8 8 45	3° 3'57	27°18	8° 5	19°33	28°17	17°13	23°20	14°40	2°17	10°21	1°R43	3° 2	12°28	4°54	M23
T 24	8 12 42	4° 4'54	9♉54	9° 2	20°43	28°42	17° 9	23°D19	14°43	2°15	10°21	1°43	2°59	12°34	4°55	T 24
W25	8 16 38	5° 5'50	22°13	10° 1	21°53	29° 7	17° 5	23°20	14°46	2°14	10°22	1°42	2°56	12°41	4°56	W25
T 26	8 20 35	6° 6'44	4♊20	11° 3	23° 3	29°32	17° 0	23°20	14°49	2°12	10°23	1°40	2°53	12°48	4°56	T 26
F 27	8 24 32	7° 7'37	16°17	12° 8	24°14	29°57	16°56	23°20	14°52	2°10	10°23	1°36	2°50	12°54	4°57	F 27
S 28	8 28 28	8° 8'28	28° 9	13°15	25°24	0♏21	16°51	23°20	14°55	2° 9	10°24	1°32	2°47	13° 1	4°58	S 28
S 29	8 32 25	9° 9'19	9♋59	14°24	26°34	0°46	16°46	23°21	14°58	2° 7	10°25	1°28	2°43	13° 8	4°59	S 29
M30	8 36 21	10°10'08	21°50	15°35	27°45	1° 9	16°41	23°21	15° 1	2° 5	10°26	1°24	2°40	13°14	5° 0	M30
T 31	8 40 18	11♒10'56	3♌43	16♑48	28♐55	1♏33	16♍36	23♉22	15♓ 4	2♌ 4	10♈27	1♍21	2♍37	13♋21	5♉ 1	T 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
S 1	23s 4	19n 1	4s28	20s18	2n33	16s 1	3n 1	5s21	1n53	5n58	1n17	16n42	2s 8	7s 5	0s45	19n24	0s10	11s42	17s 8	10n35	9n59	18n57	11n47	1s30
M 2	22 59	18 59	3 53	20 11	2 48	16 17	3 1	5 32	1 53	5 59	1 17	16 42	2 8	7 4	0 45	19 24	0 10	11 42	17 8	10 38	10 0	18 57	11 47	1 30
T 3	22 53	18 8	3 7	20 6	3 0	16 34	2 59	5 43	1 54	5 59	1 17	16 41	2 7	7 3	0 45	19 24	0 10	11 42	17 8	10 41	10 2	18 57	11 46	1 30
W 4	22 47	16 29	2 12	20 2	3 9	16 50	2 58	5 54	1 54	5 59	1 18	16 41	2 7	7 2	0 45	19 25	0 10	11 41	17 7	10 43	10 3	18 57	11 46	1 30
T 5	22 40	14 6	1 12	20 0	3 16	17 6	2 57	6 5	1 54	6 0	1 18	16 41	2 7	7 1	0 45	19 25	0 10	11 41	17 7	10 44	10 4	18 57	11 46	1 30
F 6	22 33	11 7	0 7	19 59	3 21	17 21	2 56	6 15	1 55	6 0	1 18	16 41	2 7	7 1	0 45	19 25	0 10	11 40	17 7	10 45	10 5	18 57	11 46	1 30
S 7	22 26	7 37	0n58	19 59	3 23	17 36	2 54	6 26	1 55	6 1	1 18	16 40	2 6	7 0	0 45	19 26	0 10	11 40	17 6	10 44	10 6	18 57	11 46	1 30
S 8	22 18	3 45	2 2	20 1	3 23	17 51	2 53	6 36	1 55	6 1	1 19	16 40	2 6	6 59	0 45	19 26	0 10	11 39	17 6	10 44	10 7	18 57	11 46	1 30
M 9	22 10	0s23	3 2	20 5	3 21	18 6	2 51	6 47	1 56	6 2	1 19	16 40	2 6	6 58	0 45	19 27	0 10	11 39	17 5	10 43	10 9	18 57	11 45	1 30
T 10	22 1	4 36	3 54	20 10	3 17	18 20	2 49	6 57	1 56	6 3	1 19	16 40	2 6	6 57	0 45	19 27	0 10	11 38	17 5	10 43	10 10	18 57	11 45	1 30
W11	21 52	8 42	4 35	20 15	3 12	18 34	2 47	7 7	1 56	6 4	1 19	16 40	2 5	6 56	0 45	19 27	0 10	11 38	17 5	10 44	10 11	18 57	11 45	1 30
T 12	21 43	12 29	5 2	20 22	3 5	18 47	2 45	7 17	1 57	6 5	1 20	16 40	2 5	6 55	0 45	19 28	0 10	11 37	17 4	10 45	10 12	18 57	11 45	1 30
F 13	21 33	15 40	5 11	20 30	2 58	19 1	2 43	7 27	1 57	6 6	1 20	16 40	2 5	6 54	0 45	19 28	0 10	11 37	17 4	10 46	10 13	18 57	11 45	1 30
S 14	21 22	17 56	4 59	20 38	2 49	19 13	2 41	7 37	1 57	6 7	1 20	16 40	2 4	6 53	0 45	19 29	0 10	11 36	17 4	10 48	10 14	18 57	11 45	1 30
S 15	21 11	19 1	4 27	20 47	2 40	19 26	2 39	7 47	1 58	6 8	1 21	16 40	2 4	6 52	0 45	19 29	0 10	11 36	17 3	10 50	10 15	18 57	11 45	1 30
M16	21 0	18 44	3 36	20 56	2 31	19 38	2 36	7 56	1 58	6 9	1 21	16 40	2 4	6 51	0 45	19 29	0 10	11 35	17 3	10 52	10 17	18 57	11 45	1 30
T 17	20 49	17 5	2 30	21 5	2 21	19 49	2 34	8 6	1 58	6 11	1 21	16 40	2 4	6 50	0 45	19 30	0 10	11 35	17 3	10 54	10 18	18 57	11 45	1 30
W18	20 37	14 16	1 13	21 14	2 11	20 0	2 31	8 15	1 59	6 12	1 21	16 40	2 3	6 49	0 45	19 30	0 10	11 34	17 2	10 55	10 19	18 57	11 45	1 30
T 19	20 24	10 35	0s 6	21 23	2 1	20 10	2 29	8 25	1 59	6 13	1 22	16 40	2 3	6 48	0 45	19 31	0 10	11 34	17 2	10 55	10 20	18 57	11 45	1 30
F 20	20 11	6 23	1 24	21 32	1 50	20 21	2 26	8 34	1 59	6 15	1 22	16 40	2 3	6 47	0 45	19 31	0 10	11 33	17 2	10 55	10 21	18 57	11 46	1 30
S 21	19 58	1 58	2 34	21 40	1 40	20 30	2 23	8 43	1 59	6 16	1 22	16 40	2 3	6 46	0 45	19 31	0 10	11 33	17 1	10 54	10 22	18 57	11 46	1 30
S 22	19 45	2n24	3 33	21 48	1 30	20 39	2 20	8 52	2 0	6 18	1 22	16 40	2 2	6 45	0 45	19 32	0 10	11 32	17 1	10 53	10 24	18 57	11 46	1 30
M23	19 31	6 30	4 19	21 55	1 19	20 48	2 17	9 1	2 0	6 20	1 23	16 41	2 2	6 44	0 44	19 32	0 10	11 32	17 1	10 53	10 25	18 57	11 46	1 30
T 24	19 17	10 12	4 52	22 2	1 9	20 56	2 14	9 10	2 0	6 22	1 23	16 41	2 2	6 43	0 44	19 32	0 10	11 31	17 0	10 53	10 26	18 57	11 46	1 30
W25	19 2	13 22	5 10	22 8	0 59	21 3	2 11	9 18	2 1	6 24	1 23	16 41	2 1	6 42	0 44	19 33	0 10	11 31	17 0	10 53	10 27	18 56	11 47	1 30
T 26	18 47	15 55	5 14	22 13	0 49	21 10	2 8	9 27	2 1	6 25	1 23	16 41	2 1	6 41	0 44	19 33	0 10	11 30	17 0	10 54	10 28	18 56	11 47	1 30
F 27	18 32	17 45	5 4	22 17	0 39	21 17	2 5	9 35	2 1	6 27	1 24	16 42	2 1	6 39	0 44	19 34	0 10	11 29	16 59	10 56	10 29	18 56	11 47	1 30
S 28	18 16	18 48	4 41	22 20	0 30	21 23	2 2	9 44	2 1	6 29	1 24	16 42	2 1	6 38	0 44	19 34	0 10	11 29	16 59	10 57	10 30	18 56	11 47	1 30
S 29	18 0	19 1	4 6	22 22	0 20	21 28	1 59	9 52	2 2	6 32	1 24	16 43	2 0	6 37	0 44	19 34	0 10	11 28	16 59	10 59	10 32	18 56	11 48	1 30
M30	17 44	18 25	3 21	22 24	0 11	21 33	1 56	10 0	2 2	6 34	1 24	16 43	2 0	6 36	0 44	19 35	0 10	11 28	16 58	11 0	10 33	18 56	11 48	1 30
T 31	17s27	16n59	2s26	22s24	0n 2	21s37	1n52	10s 8	2n 2	6n36	1n25	16n43	2s 0	6s35	0s44	19n35	0s10	11s27	16s58	11n 1	10n34	18n56	11n48	1s30

Julian Day Number = 2301430.5, Delta T = 104.91 sec
Ecliptic obliquity = 23°29'25, Nutation = - 0°00'07, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°00'16, Lahiri = 18°07'16Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1589
geocentric

FEBRUARY 1589 GC

00:00 UT

Day	Sid.t	☉	☽	☿	♀	♂	♃	♄	♅	♆	♇	☊	☊	⚸	⚷	Day
W 1	8 44 14	12♒11'42	15♌41	18♑ 3	0♑ 6	1♏56	16°R31	23♉23	15♓ 7	2°R 2	10♈27	1°R19	2♍34	13♋28	5♉ 2	W 1
T 2	8 48 11	13°12'27	27°46	19°19	1°17	2°19	16♍26	23°24	15°10	2♌ 0	10°28	1°D19	2°31	13°34	5° 3	T 2
F 3	8 52 7	14°13'11	9♍59	20°37	2°28	2°42	16°20	23°25	15°13	1°59	10°29	1♍19	2°27	13°41	5° 5	F 3
S 4	8 56 4	15°13'54	22°22	21°56	3°39	3° 5	16°14	23°26	15°16	1°57	10°30	1°20	2°24	13°48	5° 6	S 4
S 5	9 0 1	16°14'35	4♎57	23°16	4°50	3°27	16° 8	23°27	15°19	1°55	10°31	1°21	2°21	13°55	5° 7	S 5
M 6	9 3 57	17°15'15	17°46	24°38	6° 1	3°49	16° 2	23°29	15°22	1°54	10°32	1°22	2°18	14° 1	5° 9	M 6
T 7	9 7 54	18°15'54	0♏52	26° 0	7°12	4°10	15°56	23°30	15°25	1°52	10°33	1°23	2°15	14° 8	5°10	T 7
W 8	9 11 50	19°16'32	14°17	27°24	8°23	4°31	15°50	23°32	15°28	1°51	10°34	1°R24	2°12	14°15	5°12	W 8
T 9	9 15 47	20°17'09	28° 3	28°49	9°34	4°52	15°44	23°34	15°31	1°49	10°35	1°24	2° 8	14°21	5°13	T 9
F 10	9 19 43	21°17'45	12♐10	0♒16	10°46	5°12	15°37	23°35	15°34	1°47	10°36	1°23	2° 5	14°28	5°15	F 10
S 11	9 23 40	22°18'19	26°36	1°43	11°57	5°32	15°31	23°37	15°38	1°46	10°37	1°22	2° 2	14°35	5°17	S 11
S 12	9 27 36	23°18'53	11♑18	3°11	13° 9	5°52	15°24	23°39	15°41	1°44	10°38	1°21	1°59	14°41	5°19	S 12
M13	9 31 33	24°19'25	26°12	4°41	14°20	6°12	15°17	23°42	15°44	1°43	10°39	1°21	1°56	14°48	5°20	M13
T 14	9 35 30	25°19'55	11♒ 8	6°11	15°32	6°30	15°10	23°44	15°47	1°41	10°40	1°20	1°53	14°55	5°22	T 14
W15	9 39 26	26°20'24	26° 0	7°42	16°44	6°49	15° 3	23°46	15°51	1°40	10°41	1°D20	1°49	15° 1	5°24	W15
T 16	9 43 23	27°20'51	10♓39	9°14	17°55	7° 7	14°56	23°49	15°54	1°38	10°42	1°20	1°46	15° 8	5°26	T 16
F 17	9 47 19	28°21'16	24°59	10°48	19° 7	7°25	14°49	23°51	15°57	1°37	10°43	1°20	1°43	15°15	5°28	F 17
S 18	9 51 16	29°21'40	8♈55	12°22	20°19	7°42	14°42	23°54	16° 1	1°35	10°44	1°20	1°40	15°21	5°31	S 18
S 19	9 55 12	0♓22'02	22°26	13°57	21°31	7°59	14°34	23°57	16° 4	1°34	10°45	1°20	1°37	15°28	5°33	S 19
M20	9 59 9	1°22'21	5♉31	15°33	22°43	8°15	14°27	24° 0	16° 7	1°32	10°46	1°R20	1°33	15°35	5°35	M20
T 21	10 3 5	2°22'39	18°14	17°11	23°55	8°31	14°19	24° 3	16°11	1°31	10°47	1°20	1°30	15°41	5°37	T 21
W22	10 7 2	3°22'55	0♊37	18°49	25° 7	8°47	14°12	24° 6	16°14	1°30	10°49	1°D20	1°27	15°48	5°40	W22
T 23	10 10 59	4°23'08	12°45	20°28	26°19	9° 2	14° 4	24° 9	16°17	1°28	10°50	1°20	1°24	15°55	5°42	T 23
F 24	10 14 55	5°23'20	24°42	22° 8	27°31	9°17	13°57	24°12	16°21	1°27	10°51	1°21	1°21	16° 2	5°44	F 24
S 25	10 18 52	6°23'30	6♋34	23°50	28°43	9°31	13°49	24°16	16°24	1°26	10°52	1°21	1°18	16° 8	5°47	S 25
S 26	10 22 48	7°23'37	18°23	25°32	29°55	9°44	13°41	24°19	16°28	1°24	10°53	1°22	1°14	16°15	5°49	S 26
M27	10 26 45	8°23'42	0♌15	27°16	1♒ 7	9°57	13°33	24°23	16°31	1°23	10°55	1°22	1°11	16°22	5°52	M27
T 28	10 30 41	9♓23'46	12♌12	29♒ 0	2♒19	10♏10	13♍26	24♉26	16♓34	1♌22	10♈56	1♍23	1♍ 8	16♋28	5♉55	T 28

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
W 1	17s11	14n49	1s25	22s23	0s 7	21s40	1n49	10s15	2n 2	6n38	1n25	16n44	1s59	6s34	0s44	19n36	0s10	11s26	16s58	11n 2	10n35	18n56	11n49	1s30
T 2	16 53	11 58	0 20	22 21	0 15	21 43	1 46	10 23	2 3	6 40	1 25	16 44	1 59	6 32	0 44	19 36	0 10	11 26	16 57	11 2	10 36	18 56	11 49	1 30
F 3	16 36	8 35	0n48	22 17	0 23	21 46	1 42	10 31	2 3	6 43	1 25	16 45	1 59	6 31	0 44	19 36	0 10	11 25	16 57	11 2	10 37	18 56	11 50	1 30
S 4	16 18	4 47	1 54	22 13	0 31	21 48	1 39	10 38	2 3	6 45	1 26	16 46	1 58	6 30	0 44	19 37	0 10	11 25	16 57	11 1	10 38	18 56	11 50	1 30
S 5	16 0	0 43	2 56	22 7	0 39	21 49	1 35	10 45	2 3	6 48	1 26	16 46	1 58	6 29	0 44	19 37	0 10	11 24	16 56	11 1	10 40	18 56	11 51	1 30
M 6	15 42	3s27	3 50	22 0	0 46	21 49	1 32	10 53	2 4	6 50	1 26	16 47	1 58	6 28	0 44	19 38	0 10	11 23	16 56	11 1	10 41	18 56	11 51	1 30
T 7	15 23	7 32	4 33	21 52	0 54	21 49	1 28	11 0	2 4	6 53	1 26	16 47	1 58	6 26	0 44	19 38	0 10	11 23	16 56	11 0	10 42	18 55	11 52	1 30
W 8	15 4	11 20	5 3	21 43	1 1	21 49	1 25	11 6	2 4	6 55	1 26	16 48	1 57	6 25	0 44	19 38	0 9	11 22	16 56	11 0	10 43	18 55	11 52	1 30
T 9	14 45	14 37	5 17	21 32	1 7	21 48	1 21	11 13	2 4	6 58	1 27	16 49	1 57	6 24	0 44	19 39	0 9	11 21	16 55	11 0	10 44	18 55	11 53	1 30
F 10	14 26	17 9	5 12	21 20	1 13	21 46	1 18	11 20	2 4	7 1	1 27	16 49	1 57	6 23	0 44	19 39	0 9	11 21	16 55	11 0	10 45	18 55	11 53	1 30
S 11	14 6	18 40	4 47	21 7	1 19	21 43	1 14	11 26	2 5	7 4	1 27	16 50	1 57	6 21	0 44	19 39	0 9	11 20	16 55	11 1	10 46	18 55	11 54	1 30
S 12	13 47	18 58	4 3	20 52	1 25	21 40	1 10	11 33	2 5	7 6	1 27	16 51	1 56	6 20	0 44	19 40	0 9	11 20	16 54	11 1	10 48	18 55	11 54	1 30
M13	13 27	17 58	3 3	20 36	1 31	21 37	1 7	11 39	2 5	7 9	1 27	16 52	1 56	6 19	0 44	19 40	0 9	11 19	16 54	11 1	10 49	18 55	11 55	1 30
T 14	13 6	15 43	1 50	20 19	1 36	21 32	1 3	11 45	2 5	7 12	1 27	16 53	1 56	6 17	0 44	19 40	0 9	11 18	16 54	11 1	10 50	18 55	11 56	1 30
W15	12 46	12 25	0 30	20 0	1 40	21 27	1 0	11 51	2 5	7 15	1 28	16 54	1 55	6 16	0 44	19 41	0 9	11 18	16 54	11 2	10 51	18 55	11 56	1 30
T 16	12 25	8 23	0s52	19 40	1 45	21 22	0 56	11 57	2 5	7 18	1 28	16 54	1 55	6 15	0 44	19 41	0 9	11 17	16 53	11 2	10 52	18 54	11 57	1 30
F 17	12 4	3 57	2 8	19 19	1 49	21 16	0 52	12 2	2 5	7 21	1 28	16 55	1 55	6 14	0 44	19 41	0 9	11 16	16 53	11 1	10 53	18 54	11 58	1 30
S 18	11 43	0n34	3 14	18 56	1 53	21 9	0 49	12 8	2 5	7 24	1 28	16 56	1 55	6 12	0 44	19 42	0 9	11 16	16 53	11 1	10 54	18 54	11 58	1 30
S 19	11 22	4 55	4 8	18 32	1 56	21 1	0 45	12 13	2 6	7 27	1 28	16 57	1 54	6 11	0 44	19 42	0 9	11 15	16 53	11 1	10 55	18 54	11 59	1 30
M20	11 1	8 53	4 46	18 6	1 59	20 53	0 41	12 18	2 6	7 30	1 28	16 58	1 54	6 10	0 44	19 42	0 9	11 14	16 52	11 1	10 57	18 54	12 0	1 30
T 21	10 39	12 20	5 9	17 39	2 2	20 45	0 38	12 23	2 6	7 33	1 28	16 59	1 54	6 8	0 44	19 43	0 9	11 14	16 52	11 1	10 58	18 54	12 0	1 30
W22	10 17	15 9	5 18	17 11	2 4	20 36	0 34	12 28	2 6	7 36	1 29	17 0	1 53	6 7	0 44	19 43	0 9	11 13	16 52	11 1	10 59	18 54	12 1	1 30
T 23	9 55	17 14	5 11	16 41	2 6	20 26	0 31	12 33	2 6	7 39	1 29	17 1	1 53	6 6	0 44	19 43	0 9	11 12	16 52	11 1	11 0	18 53	12 2	1 30
F 24	9 33	18 32	4 52	16 10	2 7	20 16	0 27	12 38	2 6	7 42	1 29	17 2	1 53	6 4	0 44	19 44	0 9	11 12	16 52	11 1	11 1	18 53	12 3	1 30
S 25	9 11	19 0	4 20	15 37	2 8	20 5	0 24	12 42	2 6	7 45	1 29	17 3	1 53	6 3	0 44	19 44	0 9	11 11	16 51	11 1	11 2	18 53	12 4	1 30
S 26	8 49	18 39	3 37	15 3	2 9	19 53	0 20	12 46	2 6	7 48	1 29	17 4	1 52	6 2	0 44	19 44	0 9	11 11	16 51	11 1	11 3	18 53	12 4	1 30
M27	8 26	17 28	2 44	14 28	2 9	19 41	0 17	12 51	2 6	7 51	1 29	17 6	1 52	6 0	0 44	19 45	0 9	11 10	16 51	11 1	11 5	18 53	12 5	1 30
T 28	8s 4	15n30	1s45	13s51	2s 9	19s28	0n13	12s54	2n 6	7n54	1n29	17n 7	1s52	5s59	0s44	19n45	0s 9	11s 9	16s51	11n 0	11n 6	18n53	12n 6	1s30

Julian Day Number = 2301461.5, Delta T = 104.77 sec
Ecliptic obliquity = 23°29'25, Nutation = - 0°00'06, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°00'20, Lahiri = 18°07'21Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1589
geocentric

MARCH 1589 GC — 00:00 UT

Day	Sid.t	☉	☽	☿	♀	♂	♃	♄	♅	♆	♇	☊	☊	⚸	⚷	Day
W 1	10 34 38	10♓23'47	24♌18	0♓46	3♒32	10♏22	13°R18	24♉30	16♓38	1°R20	10♈57	1♍24	1♍ 5	16♋35	5♉57	W 1
T 2	10 38 34	11°23'46	6♍35	2°33	4°44	10°33	13♍10	24°34	16°41	1♌19	10°58	1°R24	1° 2	16°42	6° 0	T 2
F 3	10 42 31	12°23'44	19° 4	4°20	5°56	10°44	13° 2	24°38	16°45	1°18	11° 0	1°23	0°59	16°48	6° 3	F 3
S 4	10 46 27	13°23'39	1♎46	6° 9	7° 9	10°55	12°54	24°42	16°48	1°17	11° 1	1°22	0°55	16°55	6° 6	S 4
S 5	10 50 24	14°23'33	14°41	7°59	8°21	11° 5	12°47	24°46	16°52	1°16	11° 2	1°20	0°52	17° 2	6° 8	S 5
M 6	10 54 21	15°23'24	27°50	9°51	9°33	11°14	12°39	24°50	16°55	1°15	11° 4	1°18	0°49	17° 8	6°11	M 6
T 7	10 58 17	16°23'14	11♏13	11°43	10°46	11°22	12°31	24°55	16°58	1°14	11° 5	1°16	0°46	17°15	6°14	T 7
W 8	11 2 14	17°23'03	24°49	13°37	11°58	11°30	12°23	24°59	17° 2	1°12	11° 6	1°15	0°43	17°22	6°17	W 8
T 9	11 6 10	18°22'49	8♐38	15°31	13°11	11°38	12°15	25° 4	17° 5	1°11	11° 8	1°14	0°39	17°28	6°20	T 9
F 10	11 10 7	19°22'34	22°39	17°27	14°23	11°45	12° 8	25° 8	17° 9	1°10	11° 9	1°D14	0°36	17°35	6°23	F 10
S 11	11 14 3	20°22'18	6♑50	19°24	15°36	11°51	12° 0	25°13	17°12	1° 9	11°10	1°14	0°33	17°42	6°27	S 11
S 12	11 18 0	21°21'59	21°11	21°21	16°48	11°56	11°52	25°18	17°16	1° 8	11°12	1°15	0°30	17°48	6°30	S 12
M13	11 21 56	22°21'39	5♒38	23°20	18° 1	12° 1	11°45	25°22	17°19	1° 7	11°13	1°17	0°27	17°55	6°33	M13
T 14	11 25 53	23°21'17	20° 7	25°19	19°14	12° 5	11°37	25°27	17°22	1° 7	11°14	1°18	0°24	18° 2	6°36	T 14
W15	11 29 50	24°20'53	4♓33	27°20	20°26	12° 8	11°30	25°32	17°26	1° 6	11°16	1°R18	0°20	18° 9	6°39	W15
T 16	11 33 46	25°20'27	18°52	29°20	21°39	12°11	11°22	25°37	17°29	1° 5	11°17	1°17	0°17	18°15	6°43	T 16
F 17	11 37 43	26°19'59	2♈58	1♈21	22°52	12°13	11°15	25°43	17°33	1° 4	11°18	1°15	0°14	18°22	6°46	F 17
S 18	11 41 39	27°19'29	16°47	3°23	24° 5	12°14	11° 8	25°48	17°36	1° 3	11°20	1°12	0°11	18°29	6°49	S 18
S 19	11 45 36	28°18'57	0♉15	5°24	25°17	12°R15	11° 0	25°53	17°39	1° 2	11°21	1° 7	0° 8	18°35	6°53	S 19
M20	11 49 32	29°18'23	13°22	7°25	26°30	12°15	10°53	25°59	17°43	1° 2	11°23	1° 3	0° 4	18°42	6°56	M20
T 21	11 53 29	0♈17'46	26° 7	9°26	27°43	12°14	10°46	26° 4	17°46	1° 1	11°24	0°59	0° 1	18°49	7° 0	T 21
W22	11 57 25	1°17'07	8♊34	11°25	28°56	12°12	10°39	26°10	17°50	1° 0	11°26	0°55	29♌58	18°55	7° 3	W22
T 23	12 1 22	2°16'26	20°44	13°24	0♓ 8	12°10	10°32	26°15	17°53	1° 0	11°27	0°53	29°55	19° 2	7° 7	T 23
F 24	12 5 19	3°15'43	2♋43	15°21	1°21	12° 7	10°26	26°21	17°56	0°59	11°28	0°D53	29°52	19° 9	7°10	F 24
S 25	12 9 15	4°14'57	14°34	17°15	2°34	12° 3	10°19	26°27	18° 0	0°58	11°30	0°53	29°49	19°15	7°14	S 25
S 26	12 13 12	5°14'09	26°24	19° 8	3°47	11°58	10°12	26°32	18° 3	0°58	11°31	0°55	29°45	19°22	7°18	S 26
M27	12 17 8	6°13'18	8♌17	20°58	5° 0	11°53	10° 6	26°38	18° 6	0°57	11°33	0°56	29°42	19°29	7°21	M27
T 28	12 21 5	7°12'26	20°18	22°44	6°12	11°46	10° 0	26°44	18°10	0°57	11°34	0°58	29°39	19°35	7°25	T 28
W29	12 25 1	8°11'30	2♍30	24°27	7°25	11°40	9°54	26°50	18°13	0°56	11°35	0°R58	29°36	19°42	7°29	W29
T 30	12 28 58	9°10'33	14°58	26° 6	8°38	11°32	9°47	26°56	18°16	0°56	11°37	0°57	29°33	19°49	7°32	T 30
F 31	12 32 54	10♈ 9'34	27♍42	27♈41	9♓51	11♏23	9♍42	27♉ 2	18♓19	0♌56	11♈38	0♍55	29♌30	19♋55	7♉36	F 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
W 1	7s41	12n50	0s39	13s13	2s 8	19s15	0n10	12s58	2n 6	7n57	1n29	17n 8	1s52	5s58	0s44	19n45	0s 9	11s 9	16s51	11n 0	11n 7	18n52	12n 7	1s30
T 2	7 18	9 34	0n29	12 34	2 7	19 1	0 6	13 2	2 6	8 0	1 29	17 9	1 51	5 56	0 44	19 46	0 9	11 8	16 50	11 0	11 8	18 52	12 8	1 30
F 3	6 55	5 49	1 36	11 53	2 5	18 47	0 3	13 5	2 5	8 3	1 29	17 10	1 51	5 55	0 44	19 46	0 9	11 7	16 50	11 0	11 9	18 52	12 9	1 30
S 4	6 32	1 45	2 41	11 11	2 3	18 32	0s 0	13 9	2 5	8 6	1 29	17 11	1 51	5 54	0 44	19 46	0 9	11 7	16 50	11 1	11 10	18 52	12 10	1 30
S 5	6 9	2s27	3 37	10 27	2 1	18 17	0 4	13 12	2 5	8 9	1 29	17 13	1 51	5 52	0 44	19 46	0 9	11 6	16 50	11 1	11 11	18 52	12 11	1 30
M 6	5 46	6 37	4 24	9 42	1 58	18 1	0 7	13 15	2 5	8 12	1 30	17 14	1 50	5 51	0 44	19 47	0 9	11 5	16 50	11 2	11 12	18 52	12 12	1 30
T 7	5 23	10 31	4 57	8 56	1 54	17 44	0 10	13 18	2 5	8 15	1 30	17 15	1 50	5 50	0 44	19 47	0 9	11 5	16 50	11 3	11 14	18 51	12 13	1 30
W 8	5 0	13 56	5 14	8 9	1 50	17 27	0 13	13 21	2 5	8 18	1 30	17 17	1 50	5 48	0 44	19 47	0 9	11 4	16 49	11 3	11 15	18 51	12 14	1 30
T 9	4 36	16 38	5 13	7 20	1 45	17 10	0 17	13 23	2 4	8 21	1 30	17 18	1 50	5 47	0 44	19 47	0 9	11 3	16 49	11 4	11 16	18 51	12 15	1 30
F 10	4 13	18 23	4 54	6 30	1 40	16 52	0 20	13 25	2 4	8 24	1 30	17 19	1 49	5 46	0 44	19 48	0 9	11 3	16 49	11 4	11 17	18 51	12 16	1 30
S 11	3 49	19 2	4 17	5 39	1 34	16 33	0 23	13 28	2 4	8 27	1 30	17 21	1 49	5 44	0 44	19 48	0 9	11 2	16 49	11 4	11 18	18 51	12 17	1 30
S 12	3 26	18 28	3 24	4 47	1 28	16 15	0 26	13 29	2 3	8 30	1 30	17 22	1 49	5 43	0 44	19 48	0 9	11 1	16 49	11 3	11 19	18 50	12 18	1 30
M13	3 2	16 41	2 17	3 53	1 21	15 55	0 29	13 31	2 3	8 33	1 30	17 23	1 49	5 42	0 44	19 48	0 9	11 1	16 49	11 3	11 20	18 50	12 19	1 30
T 14	2 39	13 50	1 1	2 59	1 13	15 35	0 32	13 33	2 3	8 36	1 30	17 25	1 48	5 40	0 44	19 48	0 9	11 0	16 49	11 2	11 21	18 50	12 20	1 30
W15	2 15	10 8	0s18	2 4	1 5	15 15	0 35	13 34	2 2	8 39	1 30	17 26	1 48	5 39	0 44	19 49	0 9	11 0	16 49	11 2	11 23	18 50	12 21	1 30
T 16	1 51	5 52	1 35	1 8	0 57	14 55	0 37	13 36	2 2	8 42	1 30	17 27	1 48	5 38	0 44	19 49	0 9	10 59	16 48	11 2	11 24	18 49	12 22	1 30
F 17	1 28	1 21	2 46	0 11	0 48	14 33	0 40	13 37	2 1	8 44	1 30	17 29	1 48	5 36	0 44	19 49	0 9	10 58	16 48	11 3	11 25	18 49	12 23	1 30
S 18	1 4	3n 9	3 44	0n46	0 38	14 12	0 43	13 38	2 1	8 47	1 30	17 30	1 48	5 35	0 44	19 49	0 9	10 58	16 48	11 4	11 26	18 49	12 24	1 30
S 19	0 40	7 23	4 29	1 43	0 28	13 50	0 46	13 38	2 0	8 50	1 29	17 32	1 47	5 34	0 44	19 49	0 9	10 57	16 48	11 6	11 27	18 49	12 25	1 30
M20	0 17	11 8	4 59	2 41	0 18	13 28	0 48	13 39	2 0	8 53	1 29	17 33	1 47	5 32	0 44	19 50	0 9	10 57	16 48	11 7	11 28	18 48	12 26	1 30
T 21	0n 7	14 16	5 12	3 38	0 7	13 5	0 51	13 39	1 59	8 55	1 29	17 35	1 47	5 31	0 44	19 50	0 9	10 56	16 48	11 9	11 29	18 48	12 27	1 31
W22	0 31	16 40	5 11	4 35	0n 4	12 42	0 53	13 39	1 58	8 58	1 29	17 36	1 47	5 30	0 44	19 50	0 9	10 55	16 48	11 10	11 30	18 48	12 28	1 31
T 23	0 54	18 16	4 55	5 32	0 15	12 19	0 56	13 39	1 57	9 0	1 29	17 38	1 46	5 28	0 44	19 50	0 9	10 55	16 48	11 11	11 32	18 48	12 29	1 31
F 24	1 18	19 1	4 26	6 28	0 27	11 55	0 58	13 39	1 57	9 3	1 29	17 39	1 46	5 27	0 44	19 50	0 9	10 54	16 48	11 11	11 33	18 47	12 31	1 31
S 25	1 42	18 56	3 47	7 23	0 39	11 31	1 0	13 39	1 56	9 5	1 29	17 41	1 46	5 26	0 44	19 50	0 9	10 54	16 48	11 11	11 34	18 47	12 32	1 31
S 26	2 5	18 0	2 58	8 17	0 51	11 7	1 3	13 38	1 55	9 8	1 29	17 42	1 46	5 25	0 44	19 51	0 9	10 53	16 48	11 10	11 35	18 47	12 33	1 31
M27	2 29	16 17	2 1	9 10	1 3	10 42	1 5	13 37	1 54	9 10	1 29	17 44	1 46	5 23	0 44	19 51	0 9	10 52	16 48	11 10	11 36	18 47	12 34	1 31
T 28	2 52	13 50	0 58	10 1	1 14	10 17	1 7	13 36	1 53	9 12	1 29	17 46	1 45	5 22	0 44	19 51	0 9	10 52	16 48	11 9	11 37	18 46	12 35	1 31
W29	3 15	10 44	0n 8	10 50	1 26	9 52	1 9	13 35	1 52	9 15	1 29	17 47	1 45	5 21	0 44	19 51	0 9	10 51	16 48	11 9	11 38	18 46	12 36	1 31
T 30	3 39	7 6	1 15	11 37	1 37	9 27	1 11	13 34	1 51	9 17	1 29	17 49	1 45	5 19	0 44	19 51	0 9	10 51	16 48	11 9	11 39	18 46	12 37	1 31
F 31	4n 2	3n 4	2n20	12n21	1n48	9s 1	1s13	13s32	1n50	9n19	1n29	17n50	1s45	5s18	0s44	19n51	0s 9	10s50	16s48	11n10	11n40	18n46	12n39	1s31

Julian Day Number = 2301489.5, Delta T = 104.65 sec
Ecliptic obliquity = 23°29'26, Nutation = - 0°00'07, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°00'24, Lahiri = 18°07'24Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1589
geocentric

APRIL 1589 GC — 00:00 UT

Day	Sid.t	☉	☽	☿	♀	♂	♃	♄	♅	♆	♇	☊	☊	⚸	⚷	Day
S 1	12 36 51	11♈ 8'32	10♎44	29♈11	11♓ 4	11°R14	9°R36	27♉ 9	18♓23	0°R55	11♈40	0°R50	29♌26	20♋ 2	7♉40	S 1
S 2	12 40 47	12° 7'28	24° 4	0♉37	12°17	11♏ 4	9♍30	27°15	18°26	0♌55	11°41	0♍44	29°23	20° 9	7°44	S 2
M 3	12 44 44	13° 6'23	7♏39	1°57	13°30	10°53	9°25	27°21	18°29	0°55	11°43	0°37	29°20	20°15	7°48	M 3
T 4	12 48 41	14° 5'15	21°27	3°12	14°43	10°42	9°19	27°28	18°32	0°54	11°44	0°30	29°17	20°22	7°52	T 4
W 5	12 52 37	15° 4'06	5♐25	4°22	15°56	10°30	9°14	27°34	18°35	0°54	11°45	0°24	29°14	20°29	7°55	W 5
T 6	12 56 34	16° 2'55	19°29	5°26	17° 9	10°17	9° 9	27°40	18°39	0°54	11°47	0°19	29°10	20°35	7°59	T 6
F 7	13 0 30	17° 1'42	3♑37	6°24	18°22	10° 3	9° 4	27°47	18°42	0°54	11°48	0°16	29° 7	20°42	8° 3	F 7
S 8	13 4 27	18° 0'28	17°46	7°16	19°35	9°49	8°59	27°54	18°45	0°54	11°50	0°D15	29° 4	20°49	8° 7	S 8
S 9	13 8 23	18°59'12	1♒55	8° 2	20°48	9°34	8°54	28° 0	18°48	0°54	11°51	0°16	29° 1	20°55	8°11	S 9
M10	13 12 20	19°57'54	16° 3	8°43	22° 1	9°18	8°50	28° 7	18°51	0°53	11°53	0°17	28°58	21° 2	8°15	M10
T 11	13 16 16	20°56'34	0♓ 7	9°17	23°14	9° 1	8°46	28°14	18°54	0°D53	11°54	0°R18	28°55	21° 9	8°19	T 11
W12	13 20 13	21°55'13	14° 6	9°44	24°27	8°44	8°42	28°20	18°57	0°53	11°55	0°17	28°51	21°15	8°23	W12
T 13	13 24 10	22°53'49	27°58	10° 6	25°40	8°27	8°38	28°27	19° 0	0°53	11°57	0°14	28°48	21°22	8°27	T 13
F 14	13 28 6	23°52'24	11♈40	10°21	26°53	8° 9	8°34	28°34	19° 3	0°54	11°58	0° 8	28°45	21°29	8°31	F 14
S 15	13 32 3	24°50'58	25°10	10°31	28° 6	7°50	8°30	28°41	19° 6	0°54	12° 0	0° 1	28°42	21°35	8°35	S 15
S 16	13 35 59	25°49'29	8♉24	10°R34	29°19	7°31	8°27	28°48	19° 9	0°54	12° 1	29♌51	28°39	21°42	8°39	S 16
M17	13 39 56	26°47'58	21°22	10°32	0♈32	7°11	8°23	28°55	19°12	0°54	12° 3	29°41	28°35	21°49	8°43	M17
T 18	13 43 52	27°46'25	4♊ 3	10°24	1°45	6°51	8°20	29° 2	19°15	0°54	12° 4	29°31	28°32	21°55	8°48	T 18
W19	13 47 49	28°44'51	16°27	10°11	2°58	6°30	8°17	29° 9	19°17	0°54	12° 5	29°23	28°29	22° 2	8°52	W19
T 20	13 51 45	29°43'14	28°36	9°53	4°11	6°10	8°15	29°16	19°20	0°55	12° 7	29°16	28°26	22° 9	8°56	T 20
F 21	13 55 42	0♉41'35	10♋34	9°30	5°24	5°48	8°12	29°24	19°23	0°55	12° 8	29°11	28°23	22°15	9° 0	F 21
S 22	13 59 39	1°39'54	22°26	9° 4	6°37	5°27	8°10	29°31	19°26	0°55	12° 9	29° 9	28°20	22°22	9° 4	S 22
S 23	14 3 35	2°38'11	4♌15	8°34	7°50	5° 5	8° 7	29°38	19°29	0°56	12°11	29°D 9	28°16	22°29	9° 8	S 23
M24	14 7 32	3°36'26	16° 8	8° 0	9° 3	4°43	8° 5	29°45	19°31	0°56	12°12	29° 9	28°13	22°36	9°12	M24
T 25	14 11 28	4°34'39	28° 9	7°25	10°16	4°21	8° 3	29°53	19°34	0°57	12°13	29°R10	28°10	22°42	9°16	T 25
W26	14 15 25	5°32'50	10♍25	6°48	11°29	3°59	8° 2	29°59	19°37	0°57	12°15	29° 9	28° 7	22°49	9°21	W26
T 27	14 19 21	6°30'59	22°58	6°10	12°42	3°37	8° 0	0♊ 7	19°39	0°57	12°16	29° 7	28° 4	22°56	9°25	T 27
F 28	14 23 18	7°29'05	5♎53	5°31	13°56	3°15	7°59	0°15	19°42	0°58	12°17	29° 2	28° 1	23° 2	9°29	F 28
S 29	14 27 14	8°27'10	19°10	4°53	15° 9	2°53	7°58	0°22	19°44	0°59	12°19	28°54	27°57	23° 9	9°33	S 29
S 30	14 31 11	9♉25'14	2♏51	4♉16	16♈22	2♏31	7♍57	0♊30	19♓47	0♌59	12♈20	28♌45	27♌54	23♋16	9♉37	S 30

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
S 1	4n25	1s12	3n19	13n 3	1n59	8s35	1s15	13s30	1n49	9n21	1n28	17n52	1s45	5s17	0s44	19n51	0s 9	10s50	16s48	11n12	11n42	18n45	12n40	1s31
S 2	4 48	5 30	4 8	13 43	2 8	8 9	1 16	13 29	1 48	9 23	1 28	17 53	1 44	5 16	0 44	19 51	0 9	10 49	16 48	11 14	11 43	18 45	12 41	1 31
M 3	5 11	9 36	4 45	14 20	2 18	7 42	1 18	13 26	1 46	9 25	1 28	17 55	1 44	5 14	0 44	19 51	0 9	10 48	16 48	11 17	11 44	18 45	12 42	1 31
T 4	5 34	13 15	5 5	14 54	2 26	7 15	1 20	13 24	1 45	9 27	1 28	17 57	1 44	5 13	0 44	19 51	0 9	10 48	16 48	11 19	11 45	18 44	12 43	1 31
W 5	5 57	16 12	5 8	15 25	2 34	6 48	1 21	13 22	1 44	9 29	1 28	17 58	1 44	5 12	0 44	19 52	0 9	10 47	16 48	11 21	11 46	18 44	12 45	1 31
T 6	6 20	18 13	4 52	15 53	2 41	6 21	1 23	13 19	1 42	9 31	1 28	18 0	1 44	5 11	0 44	19 52	0 9	10 47	16 48	11 23	11 47	18 44	12 46	1 31
F 7	6 42	19 8	4 18	16 18	2 47	5 54	1 24	13 16	1 41	9 33	1 28	18 2	1 44	5 9	0 44	19 52	0 9	10 46	16 48	11 24	11 48	18 44	12 47	1 31
S 8	7 5	18 51	3 29	16 41	2 52	5 27	1 25	13 13	1 39	9 34	1 28	18 3	1 43	5 8	0 44	19 52	0 9	10 46	16 48	11 24	11 49	18 43	12 48	1 31
S 9	7 27	17 23	2 27	16 59	2 56	4 59	1 27	13 10	1 37	9 36	1 27	18 5	1 43	5 7	0 44	19 52	0 9	10 45	16 48	11 24	11 50	18 43	12 50	1 31
M10	7 49	14 51	1 16	17 15	2 59	4 31	1 28	13 7	1 36	9 37	1 27	18 6	1 43	5 6	0 44	19 52	0 9	10 45	16 48	11 24	11 52	18 43	12 51	1 31
T 11	8 11	11 26	0 1	17 28	3 1	4 3	1 29	13 3	1 34	9 39	1 27	18 8	1 43	5 5	0 44	19 52	0 9	10 44	16 48	11 24	11 53	18 42	12 52	1 31
W12	8 33	7 24	1s14	17 37	3 1	3 35	1 30	12 59	1 32	9 40	1 27	18 10	1 43	5 4	0 44	19 52	0 9	10 44	16 48	11 24	11 54	18 42	12 53	1 31
T 13	8 55	3 0	2 23	17 44	3 0	3 7	1 31	12 55	1 30	9 42	1 27	18 11	1 43	5 2	0 44	19 52	0 9	10 43	16 48	11 25	11 55	18 42	12 54	1 32
F 14	9 17	1n30	3 23	17 47	2 58	2 39	1 32	12 51	1 28	9 43	1 27	18 13	1 42	5 1	0 44	19 52	0 8	10 43	16 48	11 27	11 56	18 41	12 56	1 32
S 15	9 39	5 52	4 11	17 46	2 55	2 11	1 33	12 47	1 27	9 44	1 27	18 15	1 42	5 0	0 44	19 52	0 8	10 42	16 48	11 30	11 57	18 41	12 57	1 32
S 16	10 0	9 51	4 44	17 43	2 50	1 42	1 33	12 43	1 24	9 45	1 26	18 16	1 42	4 59	0 44	19 52	0 8	10 42	16 48	11 33	11 58	18 41	12 58	1 32
M17	10 21	13 17	5 2	17 37	2 44	1 14	1 34	12 38	1 22	9 46	1 26	18 18	1 42	4 58	0 44	19 52	0 8	10 41	16 48	11 36	11 59	18 40	12 59	1 32
T 18	10 42	16 1	5 4	17 27	2 37	0 45	1 35	12 34	1 20	9 47	1 26	18 20	1 42	4 57	0 44	19 52	0 8	10 41	16 48	11 40	12 0	18 40	13 1	1 32
W19	11 3	17 58	4 52	17 15	2 28	0 16	1 35	12 29	1 18	9 48	1 26	18 21	1 42	4 56	0 44	19 52	0 8	10 41	16 48	11 43	12 2	18 40	13 2	1 32
T 20	11 24	19 3	4 26	16 59	2 18	0n12	1 36	12 25	1 16	9 49	1 26	18 23	1 41	4 55	0 44	19 52	0 8	10 40	16 48	11 45	12 3	18 39	13 3	1 32
F 21	11 44	19 15	3 50	16 41	2 7	0 41	1 36	12 20	1 14	9 50	1 25	18 25	1 41	4 53	0 44	19 52	0 8	10 40	16 49	11 47	12 4	18 39	13 4	1 32
S 22	12 5	18 36	3 3	16 21	1 54	1 10	1 36	12 15	1 11	9 51	1 25	18 27	1 41	4 52	0 44	19 52	0 8	10 39	16 49	11 48	12 5	18 39	13 6	1 32
S 23	12 25	17 9	2 9	15 58	1 41	1 38	1 37	12 10	1 9	9 51	1 25	18 28	1 41	4 51	0 44	19 51	0 8	10 39	16 49	11 48	12 6	18 38	13 7	1 32
M24	12 45	14 56	1 9	15 34	1 26	2 7	1 37	12 5	1 6	9 52	1 25	18 30	1 41	4 50	0 44	19 51	0 8	10 38	16 49	11 48	12 7	18 38	13 8	1 32
T 25	13 4	12 3	0 5	15 8	1 11	2 36	1 37	12 0	1 4	9 53	1 25	18 32	1 41	4 49	0 44	19 51	0 8	10 38	16 49	11 47	12 8	18 37	13 9	1 32
W26	13 24	8 36	1n 0	14 40	0 55	3 4	1 37	11 55	1 1	9 53	1 25	18 33	1 41	4 48	0 45	19 51	0 8	10 38	16 49	11 48	12 9	18 37	13 11	1 32
T 27	13 43	4 41	2 3	14 12	0 38	3 33	1 37	11 50	0 59	9 53	1 24	18 35	1 41	4 47	0 45	19 51	0 8	10 37	16 49	11 48	12 10	18 37	13 12	1 33
F 28	14 2	0 27	3 2	13 43	0 21	4 1	1 37	11 44	0 56	9 54	1 24	18 37	1 40	4 46	0 45	19 51	0 8	10 37	16 49	11 50	12 11	18 36	13 13	1 33
S 29	14 21	3s56	3 53	13 14	0 4	4 30	1 36	11 39	0 54	9 54	1 24	18 38	1 40	4 45	0 45	19 51	0 8	10 37	16 50	11 53	12 13	18 36	13 14	1 33
S 30	14n40	8s13	4n32	12n45	0s14	4n58	1s36	11s34	0n51	9n54	1n24	18n40	1s40	4s44	0s45	19n51	0s 8	10s36	16s50	11n56	12n14	18n36	13n16	1s33

Julian Day Number = 2301520.5, Delta T = 104.52 sec
Ecliptic obliquity = 23°29'26, Nutation = - 0°00'09, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°00'28, Lahiri = 18°07'29Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1589
geocentric

MAY 1589 GC — 00:00 UT

Day	Sid.t	☉	☽	☿	♀	♂	♃	♄	♅	♆	♇	☊	☊	⚸	⚷	Day
M 1	14 35 8	10♉23'15	16♏51	3°R41	17♈35	2°R 9	7°R56	0♊37	19♓49	1♌ 0	12♈21	28°R34	27♌51	23♋22	9♉41	M 1
T 2	14 39 4	11°21'15	1♐ 6	3♉ 8	18°48	1♏47	7♍55	0°45	19°52	1° 0	12°23	28♌23	27°48	23°29	9°46	T 2
W 3	14 43 1	12°19'14	15°31	2°38	20° 1	1°26	7°55	0°52	19°54	1° 1	12°24	28°13	27°45	23°36	9°50	W 3
T 4	14 46 57	13°17'11	29°59	2°11	21°14	1° 4	7°55	1° 0	19°56	1° 2	12°25	28° 5	27°41	23°42	9°54	T 4
F 5	14 50 54	14°15'07	14♐25	1°48	22°27	0°43	7°D55	1° 7	19°59	1° 3	12°26	28° 0	27°38	23°49	9°58	F 5
S 6	14 54 50	15°13'01	28°44	1°29	23°40	0°23	7°55	1°15	20° 1	1° 3	12°28	27°58	27°35	23°56	10° 2	S 6
S 7	14 58 47	16°10'54	12♒54	1°13	24°54	0° 2	7°55	1°23	20° 3	1° 4	12°29	27°D57	27°32	24° 2	10° 6	S 7
M 8	15 2 43	17° 8'46	26°54	1° 2	26° 7	29♑42	7°56	1°30	20° 6	1° 5	12°30	27°R57	27°29	24° 9	10°10	M 8
T 9	15 6 40	18° 6'37	10♓43	0°56	27°20	29°23	7°57	1°38	20° 8	1° 6	12°31	27°56	27°26	24°16	10°15	T 9
W10	15 10 37	19° 4'26	24°22	0°D54	28°33	29° 4	7°57	1°46	20°10	1° 7	12°33	27°54	27°22	24°22	10°19	W10
T 11	15 14 33	20° 2'14	7♈51	0°57	29°46	28°46	7°58	1°53	20°12	1° 8	12°34	27°50	27°19	24°29	10°23	T 11
F 12	15 18 30	21° 0'01	21° 9	1° 4	0♉59	28°28	8° 0	2° 1	20°14	1° 9	12°35	27°42	27°16	24°36	10°27	F 12
S 13	15 22 26	21°57'47	4♉16	1°16	2°13	28°10	8° 1	2° 9	20°16	1°10	12°36	27°32	27°13	24°42	10°31	S 13
S 14	15 26 23	22°55'31	17°11	1°33	3°26	27°54	8° 3	2°16	20°18	1°11	12°37	27°20	27°10	24°49	10°35	S 14
M15	15 30 19	23°53'15	29°53	1°54	4°39	27°38	8° 4	2°24	20°20	1°12	12°38	27° 7	27° 7	24°56	10°39	M15
T 16	15 34 16	24°50'57	12♊21	2°19	5°52	27°22	8° 6	2°32	20°22	1°13	12°39	26°54	27° 3	25° 2	10°43	T 16
W17	15 38 12	25°48'37	24°37	2°48	7° 5	27° 8	8° 8	2°40	20°24	1°14	12°41	26°42	27° 0	25° 9	10°47	W17
T 18	15 42 9	26°46'16	6♋41	3°21	8°18	26°54	8°11	2°48	20°26	1°15	12°42	26°32	26°57	25°16	10°52	T 18
F 19	15 46 6	27°43'54	18°37	3°59	9°32	26°41	8°13	2°55	20°28	1°16	12°43	26°26	26°54	25°22	10°56	F 19
S 20	15 50 2	28°41'30	0♌26	4°40	10°45	26°28	8°16	3° 3	20°29	1°18	12°44	26°21	26°51	25°29	11° 0	S 20
S 21	15 53 59	29°39'05	12°14	5°25	11°58	26°16	8°19	3°11	20°31	1°19	12°45	26°19	26°47	25°36	11° 4	S 21
M22	15 57 55	0♊36'38	24° 6	6°14	13°11	26° 6	8°22	3°19	20°33	1°20	12°46	26°19	26°44	25°42	11° 8	M22
T 23	16 1 52	1°34'10	6♍ 6	7° 6	14°24	25°56	8°25	3°27	20°34	1°21	12°47	26°19	26°41	25°49	11°12	T 23
W24	16 5 48	2°31'40	18°21	8° 2	15°38	25°46	8°28	3°34	20°36	1°23	12°48	26°18	26°38	25°56	11°16	W24
T 25	16 9 45	3°29'10	0♎55	9° 1	16°51	25°38	8°32	3°42	20°37	1°24	12°49	26°16	26°35	26° 2	11°20	T 25
F 26	16 13 41	4°26'37	13°53	10° 3	18° 4	25°30	8°35	3°50	20°39	1°25	12°50	26°11	26°32	26° 9	11°23	F 26
S 27	16 17 38	5°24'04	27°18	11° 9	19°17	25°23	8°39	3°58	20°40	1°27	12°51	26° 4	26°28	26°16	11°27	S 27
S 28	16 21 35	6°21'29	11♏ 9	12°17	20°31	25°17	8°43	4° 6	20°42	1°28	12°52	25°55	26°25	26°22	11°31	S 28
M29	16 25 31	7°18'54	25°25	13°29	21°44	25°12	8°47	4°13	20°43	1°30	12°53	25°44	26°22	26°29	11°35	M29
T 30	16 29 28	8°16'17	10♐ 1	14°44	22°57	25° 8	8°52	4°21	20°44	1°31	12°54	25°33	26°19	26°36	11°39	T 30
W31	16 33 24	9♊13'40	24♐50	16♉ 1	24♉10	25♎ 4	8♍56	4♊29	20♓46	1♌33	12♈54	25♌23	26♌16	26♋42	11♉43	W31

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
M 1	14n58	12s11	4n56	12n17	0s31	5n26	1s36	11s29	0n48	9n54	1n24	18n42	1s40	4s43	0s45	19n51	0s 8	10s36	16s50	12n 0	12n15	18n35	13n17	1s33
T 2	15 16	15 30	5 1	11 50	0 48	5 55	1 35	11 24	0 46	9 54	1 23	18 43	1 40	4 42	0 45	19 51	0 8	10 36	16 50	12 4	12 16	18 35	13 18	1 33
W 3	15 34	17 55	4 48	11 24	1 4	6 23	1 35	11 19	0 43	9 54	1 23	18 45	1 40	4 42	0 45	19 50	0 8	10 35	16 50	12 7	12 17	18 34	13 19	1 33
T 4	15 52	19 13	4 17	11 0	1 20	6 51	1 34	11 15	0 40	9 54	1 23	18 47	1 40	4 41	0 45	19 50	0 8	10 35	16 50	12 10	12 18	18 34	13 20	1 33
F 5	16 9	19 15	3 29	10 38	1 35	7 18	1 34	11 10	0 37	9 54	1 23	18 48	1 40	4 40	0 45	19 50	0 8	10 35	16 51	12 12	12 19	18 34	13 22	1 33
S 6	16 26	18 2	2 28	10 18	1 50	7 46	1 33	11 5	0 35	9 54	1 23	18 50	1 39	4 39	0 45	19 50	0 8	10 34	16 51	12 12	12 20	18 33	13 23	1 33
S 7	16 43	15 43	1 19	9 59	2 4	8 14	1 32	11 1	0 32	9 53	1 22	18 52	1 39	4 38	0 45	19 50	0 8	10 34	16 51	12 13	12 21	18 33	13 24	1 33
M 8	16 59	12 29	0 6	9 44	2 16	8 41	1 32	10 56	0 29	9 53	1 22	18 53	1 39	4 37	0 45	19 50	0 8	10 34	16 51	12 13	12 22	18 32	13 25	1 33
T 9	17 16	8 36	1s 7	9 30	2 28	9 8	1 31	10 52	0 26	9 53	1 22	18 55	1 39	4 36	0 45	19 49	0 8	10 33	16 51	12 13	12 24	18 32	13 26	1 34
W10	17 32	4 18	2 15	9 20	2 39	9 35	1 30	10 48	0 24	9 52	1 22	18 56	1 39	4 35	0 45	19 49	0 8	10 33	16 52	12 14	12 25	18 31	13 28	1 34
T 11	17 47	0n 9	3 14	9 11	2 49	10 2	1 29	10 44	0 21	9 51	1 22	18 58	1 39	4 35	0 45	19 49	0 8	10 33	16 52	12 15	12 26	18 31	13 29	1 34
F 12	18 3	4 32	4 2	9 6	2 58	10 28	1 28	10 40	0 18	9 51	1 21	19 0	1 39	4 34	0 45	19 49	0 8	10 33	16 52	12 18	12 27	18 31	13 30	1 34
S 13	18 18	8 38	4 36	9 2	3 6	10 55	1 27	10 36	0 15	9 50	1 21	19 1	1 39	4 33	0 45	19 49	0 8	10 32	16 52	12 21	12 28	18 30	13 31	1 34
S 14	18 33	12 16	4 56	9 2	3 13	11 21	1 25	10 33	0 13	9 49	1 21	19 3	1 39	4 32	0 45	19 49	0 8	10 32	16 52	12 25	12 29	18 30	13 32	1 34
M15	18 47	15 17	5 0	9 3	3 18	11 47	1 24	10 30	0 10	9 48	1 21	19 5	1 39	4 32	0 45	19 48	0 8	10 32	16 53	12 30	12 30	18 29	13 34	1 34
T 16	19 1	17 32	4 50	9 7	3 23	12 12	1 23	10 27	0 7	9 48	1 21	19 6	1 38	4 31	0 45	19 48	0 8	10 32	16 53	12 34	12 31	18 29	13 35	1 34
W17	19 15	18 57	4 26	9 13	3 27	12 37	1 21	10 24	0 5	9 47	1 20	19 8	1 38	4 30	0 45	19 48	0 8	10 32	16 53	12 38	12 32	18 28	13 36	1 34
T 18	19 29	19 29	3 51	9 22	3 30	13 2	1 20	10 21	0 2	9 45	1 20	19 9	1 38	4 29	0 45	19 48	0 8	10 31	16 53	12 42	12 33	18 28	13 37	1 35
F 19	19 42	19 8	3 5	9 32	3 32	13 27	1 19	10 19	0s 1	9 44	1 20	19 11	1 38	4 29	0 45	19 47	0 8	10 31	16 54	12 44	12 34	18 28	13 38	1 35
S 20	19 55	17 57	2 13	9 45	3 34	13 52	1 17	10 17	0 3	9 43	1 20	19 12	1 38	4 28	0 45	19 47	0 8	10 31	16 54	12 45	12 35	18 27	13 39	1 35
S 21	20 7	15 59	1 14	9 59	3 34	14 16	1 16	10 15	0 6	9 42	1 20	19 14	1 38	4 28	0 45	19 47	0 8	10 31	16 54	12 46	12 37	18 27	13 41	1 35
M22	20 19	13 20	0 12	10 16	3 34	14 39	1 14	10 14	0 8	9 41	1 19	19 16	1 38	4 27	0 45	19 47	0 8	10 31	16 54	12 46	12 38	18 26	13 42	1 35
T 23	20 31	10 6	0n52	10 34	3 32	15 3	1 12	10 12	0 11	9 39	1 19	19 17	1 38	4 26	0 45	19 46	0 8	10 31	16 55	12 46	12 39	18 26	13 43	1 35
W24	20 43	6 22	1 54	10 54	3 30	15 26	1 11	10 11	0 13	9 38	1 19	19 19	1 38	4 26	0 45	19 46	0 8	10 30	16 55	12 47	12 40	18 25	13 44	1 35
T 25	20 54	2 16	2 52	11 15	3 28	15 48	1 9	10 11	0 16	9 36	1 19	19 20	1 38	4 25	0 45	19 46	0 8	10 30	16 55	12 47	12 41	18 25	13 45	1 35
F 26	21 5	2s 3	3 44	11 38	3 24	16 11	1 7	10 10	0 18	9 35	1 18	19 22	1 38	4 25	0 45	19 45	0 8	10 30	16 55	12 49	12 42	18 24	13 46	1 35
S 27	21 15	6 25	4 25	12 2	3 20	16 32	1 5	10 10	0 21	9 33	1 18	19 23	1 38	4 24	0 45	19 45	0 8	10 30	16 56	12 51	12 43	18 24	13 47	1 36
S 28	21 25	10 35	4 52	12 27	3 15	16 54	1 3	10 10	0 23	9 31	1 18	19 25	1 38	4 24	0 45	19 45	0 8	10 30	16 56	12 54	12 44	18 23	13 48	1 36
M29	21 35	14 17	5 1	12 54	3 10	17 15	1 1	10 10	0 25	9 30	1 18	19 26	1 38	4 23	0 46	19 45	0 8	10 30	16 56	12 58	12 45	18 23	13 49	1 36
T 30	21 44	17 11	4 52	13 21	3 4	17 35	0 59	10 11	0 28	9 28	1 18	19 28	1 38	4 23	0 46	19 44	0 8	10 30	16 57	13 2	12 46	18 22	13 50	1 36
W31	21n53	19s 1	4n23	13n50	2s58	17n56	0s57	10s11	0s30	9n26	1n18	19n29	1s37	4s22	0s46	19n44	0s 8	10s30	16s57	13n 5	12n47	18n22	13n51	1s36

Julian Day Number = 2301550.5, Delta T = 104.39 sec
Ecliptic obliquity = 23°29'26, Nutation = - 0°00'11, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°00'32, Lahiri = 18°07'33Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1589
geocentric

JUNE 1589 GC — 00:00 UT

Day	Sid.t	☉	☽	☿	♀	♂	♃	♄	♅	♆	♇	☊	☊	⚸	⚷	Day
T 1	16 37 21	10♊11'01	9♉42	17♉22	25♉24	25°R 2	9♍ 1	4♊37	20♓47	1♌34	12♈55	25°R15	26♌13	26♋49	11♉47	T 1
F 2	16 41 17	11° 8'22	24°30	18°46	26°37	25♎ 0	9° 5	4°45	20°48	1°36	12°56	25♌10	26° 9	26°56	11°50	F 2
S 3	16 45 14	12° 5'43	9♒ 7	20°12	27°50	24°59	9°10	4°52	20°49	1°37	12°57	25° 7	26° 6	27° 2	11°54	S 3
S 4	16 49 10	13° 3'03	23°29	21°41	29° 3	24°D58	9°15	5° 0	20°50	1°39	12°58	25°D 6	26° 3	27° 9	11°58	S 4
M 5	16 53 7	14° 0'22	7♓33	23°13	0♊17	24°59	9°21	5° 8	20°51	1°40	12°59	25°R 6	26° 0	27°16	12° 2	M 5
T 6	16 57 4	14°57'41	21°20	24°48	1°30	25° 0	9°26	5°16	20°52	1°42	12°59	25° 6	25°57	27°22	12° 5	T 6
W 7	17 1 0	15°54'59	4♈49	26°26	2°43	25° 2	9°31	5°24	20°53	1°44	13° 0	25° 5	25°53	27°29	12° 9	W 7
T 8	17 4 57	16°52'17	18° 4	28° 6	3°57	25° 5	9°37	5°31	20°54	1°45	13° 1	25° 1	25°50	27°36	12°12	T 8
F 9	17 8 53	17°49'35	1♉ 4	29°50	5°10	25° 9	9°43	5°39	20°55	1°47	13° 2	24°55	25°47	27°42	12°16	F 9
S 10	17 12 50	18°46'52	13°52	1♊36	6°24	25°13	9°49	5°47	20°56	1°49	13° 2	24°47	25°44	27°49	12°20	S 10
S 11	17 16 46	19°44'09	26°28	3°24	7°37	25°18	9°55	5°54	20°56	1°50	13° 3	24°36	25°41	27°56	12°23	S 11
M12	17 20 43	20°41'26	8♊53	5°15	8°50	25°24	10° 1	6° 2	20°57	1°52	13° 4	24°25	25°38	28° 2	12°27	M12
T 13	17 24 39	21°38'42	21° 7	7° 9	10° 4	25°31	10° 8	6°10	20°58	1°54	13° 4	24°13	25°34	28° 9	12°30	T 13
W14	17 28 36	22°35'57	3♋12	9° 5	11°17	25°38	10°14	6°17	20°58	1°56	13° 5	24° 3	25°31	28°15	12°34	W14
T 15	17 32 33	23°33'12	15°10	11° 4	12°31	25°46	10°21	6°25	20°59	1°58	13° 6	23°55	25°28	28°22	12°37	T 15
F 16	17 36 29	24°30'27	27° 0	13° 4	13°44	25°55	10°28	6°33	20°59	1°59	13° 6	23°49	25°25	28°29	12°40	F 16
S 17	17 40 26	25°27'41	8♌48	15° 7	14°57	26° 4	10°34	6°40	21° 0	2° 1	13° 7	23°46	25°22	28°35	12°44	S 17
S 18	17 44 22	26°24'55	20°35	17°12	16°11	26°14	10°41	6°48	21° 0	2° 3	13° 7	23°D44	25°19	28°42	12°47	S 18
M19	17 48 19	27°22'07	2♍26	19°18	17°24	26°25	10°49	6°55	21° 1	2° 5	13° 8	23°45	25°15	28°49	12°50	M19
T 20	17 52 15	28°19'20	14°26	21°26	18°38	26°37	10°56	7° 3	21° 1	2° 7	13° 8	23°46	25°12	28°55	12°54	T 20
W21	17 56 12	29°16'32	26°39	23°35	19°51	26°49	11° 3	7°10	21° 1	2° 9	13° 9	23°R46	25° 9	29° 2	12°57	W21
T 22	18 0 8	0♋13'43	9♎12	25°45	21° 5	27° 2	11°11	7°18	21° 2	2°11	13° 9	23°46	25° 6	29° 9	13° 0	T 22
F 23	18 4 5	1°10'54	22° 7	27°55	22°18	27°15	11°19	7°25	21° 2	2°13	13°10	23°44	25° 3	29°15	13° 3	F 23
S 24	18 8 2	2° 8'04	5♏30	0♋ 6	23°32	27°29	11°26	7°32	21° 2	2°15	13°10	23°40	24°59	29°22	13° 6	S 24
S 25	18 11 58	3° 5'14	19°22	2°17	24°45	27°44	11°34	7°40	21° 2	2°17	13°11	23°34	24°56	29°29	13° 9	S 25
M26	18 15 55	4° 2'24	3♐42	4°28	25°59	27°59	11°42	7°47	21°R 2	2°19	13°11	23°27	24°53	29°35	13°12	M26
T 27	18 19 51	4°59'34	18°26	6°38	27°12	28°15	11°51	7°54	21° 2	2°21	13°11	23°20	24°50	29°42	13°15	T 27
W28	18 23 48	5°56'43	3♑27	8°47	28°26	28°32	11°59	8° 1	21° 2	2°23	13°12	23°13	24°47	29°49	13°18	W28
T 29	18 27 44	6°53'53	18°36	10°56	29°40	28°48	12° 7	8° 9	21° 2	2°25	13°12	23° 8	24°44	29°55	13°21	T 29
F 30	18 31 41	7♋51'03	3♒42	13♋ 3	0♋53	29♎ 6	12♍16	8♊16	21♓ 2	2♌27	13♈12	23♌ 4	24♌40	0♌ 2	13♉24	F 30

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	22n 1	19s33	3n36	14n20	2s50	18n15	0s55	10s12	0s32	9n24	1n17	19n31	1s37	4s22	0s46	19n44	0s 8	10s30	16s57	13n 8	12n48	18n21	13n52	1s36	T 1
F 2	22 10	18 44	2 35	14 50	2 43	18 34	0 53	10 14	0 34	9 22	1 17	19 32	1 37	4 21	0 46	19 43	0 8	10 30	16 57	13 10	12 50	18 21	13 53	1 36	F 2
S 3	22 17	16 40	1 24	15 21	2 35	18 53	0 51	10 15	0 36	9 20	1 17	19 33	1 37	4 21	0 46	19 43	0 8	10 30	16 58	13 11	12 51	18 20	13 54	1 36	S 3
S 4	22 25	13 35	0 9	15 53	2 26	19 11	0 49	10 17	0 39	9 18	1 17	19 35	1 37	4 20	0 46	19 43	0 8	10 30	16 58	13 11	12 52	18 20	13 55	1 37	S 4
M 5	22 32	9 46	1s 6	16 25	2 17	19 29	0 47	10 19	0 41	9 16	1 17	19 36	1 37	4 20	0 46	19 42	0 8	10 30	16 58	13 11	12 53	18 19	13 56	1 37	M 5
T 6	22 38	5 30	2 15	16 57	2 7	19 46	0 45	10 22	0 43	9 14	1 16	19 38	1 37	4 20	0 46	19 42	0 8	10 30	16 59	13 11	12 54	18 19	13 57	1 37	T 6
W 7	22 45	1 3	3 15	17 30	1 57	20 3	0 43	10 24	0 45	9 11	1 16	19 39	1 37	4 19	0 46	19 42	0 8	10 30	16 59	13 11	12 55	18 18	13 58	1 37	W 7
T 8	22 50	3n21	4 3	18 2	1 47	20 19	0 40	10 27	0 47	9 9	1 16	19 41	1 37	4 19	0 46	19 41	0 8	10 30	16 59	13 12	12 56	18 18	13 59	1 37	T 8
F 9	22 56	7 32	4 38	18 35	1 37	20 35	0 38	10 30	0 49	9 7	1 16	19 42	1 37	4 19	0 46	19 41	0 8	10 30	17 0	13 15	12 57	18 17	14 0	1 37	F 9
S 10	23 1	11 18	4 58	19 7	1 26	20 50	0 36	10 34	0 50	9 4	1 16	19 43	1 37	4 18	0 46	19 40	0 8	10 30	17 0	13 17	12 58	18 17	14 1	1 37	S 10
S 11	23 6	14 29	5 3	19 39	1 15	21 5	0 34	10 37	0 52	9 2	1 15	19 45	1 37	4 18	0 46	19 40	0 8	10 30	17 0	13 21	12 59	18 16	14 2	1 38	S 11
M12	23 10	16 59	4 54	20 11	1 4	21 18	0 31	10 41	0 54	8 59	1 15	19 46	1 37	4 18	0 46	19 40	0 8	10 30	17 1	13 25	13 0	18 15	14 3	1 38	M12
T 13	23 14	18 41	4 31	20 41	0 52	21 32	0 29	10 45	0 56	8 57	1 15	19 47	1 37	4 18	0 46	19 39	0 8	10 30	17 1	13 29	13 1	18 15	14 4	1 38	T 13
W14	23 17	19 31	3 56	21 11	0 41	21 45	0 26	10 49	0 58	8 54	1 15	19 49	1 37	4 17	0 46	19 39	0 8	10 30	17 1	13 32	13 2	18 14	14 5	1 38	W14
T 15	23 20	19 28	3 11	21 40	0 29	21 57	0 24	10 54	0 59	8 51	1 15	19 50	1 37	4 17	0 46	19 39	0 8	10 30	17 2	13 35	13 4	18 14	14 6	1 38	T 15
F 16	23 23	18 32	2 18	22 7	0 18	22 8	0 22	10 59	1 1	8 49	1 15	19 51	1 37	4 17	0 46	19 38	0 8	10 30	17 2	13 37	13 5	18 13	14 7	1 38	F 16
S 17	23 25	16 49	1 19	22 33	0 7	22 19	0 19	11 4	1 3	8 46	1 14	19 53	1 37	4 17	0 46	19 38	0 8	10 30	17 2	13 38	13 6	18 13	14 8	1 39	S 17
S 18	23 26	14 24	0 17	22 57	0n 4	22 29	0 17	11 9	1 4	8 43	1 14	19 54	1 37	4 17	0 46	19 37	0 8	10 30	17 3	13 38	13 7	18 12	14 8	1 39	S 18
M19	23 28	11 21	0n47	23 19	0 15	22 39	0 15	11 14	1 6	8 40	1 14	19 55	1 37	4 17	0 46	19 37	0 7	10 30	17 3	13 38	13 8	18 12	14 9	1 39	M19
T 20	23 29	7 49	1 49	23 38	0 26	22 48	0 12	11 20	1 7	8 37	1 14	19 56	1 37	4 17	0 46	19 37	0 7	10 30	17 3	13 38	13 9	18 11	14 10	1 39	T 20
W21	23 29	3 54	2 48	23 56	0 36	22 56	0 10	11 26	1 9	8 34	1 14	19 58	1 37	4 17	0 46	19 36	0 7	10 31	17 4	13 38	13 10	18 10	14 11	1 39	W21
T 22	23 29	0s17	3 40	24 11	0 45	23 4	0 7	11 32	1 10	8 31	1 14	19 59	1 37	4 17	0 46	19 36	0 7	10 31	17 4	13 38	13 11	18 10	14 12	1 39	T 22
F 23	23 29	4 34	4 22	24 23	0 54	23 11	0 5	11 38	1 12	8 28	1 13	20 0	1 37	4 17	0 46	19 35	0 7	10 31	17 4	13 38	13 12	18 9	14 13	1 39	F 23
S 24	23 28	8 47	4 53	24 32	1 3	23 17	0 2	11 44	1 13	8 25	1 13	20 1	1 37	4 17	0 46	19 35	0 7	10 31	17 5	13 40	13 13	18 9	14 13	1 40	S 24
S 25	23 27	12 41	5 7	24 39	1 11	23 23	0 0	11 51	1 14	8 22	1 13	20 2	1 37	4 17	0 47	19 34	0 7	10 31	17 5	13 42	13 14	18 8	14 14	1 40	S 25
M26	23 26	15 59	5 3	24 43	1 18	23 28	0n 2	11 58	1 16	8 19	1 13	20 4	1 37	4 17	0 47	19 34	0 7	10 31	17 5	13 44	13 15	18 8	14 15	1 40	M26
T 27	23 24	18 21	4 39	24 44	1 25	23 32	0 5	12 5	1 17	8 15	1 13	20 5	1 37	4 17	0 47	19 34	0 7	10 32	17 6	13 46	13 16	18 7	14 16	1 40	T 27
W28	23 21	19 31	3 56	24 42	1 31	23 36	0 7	12 12	1 18	8 12	1 13	20 6	1 37	4 17	0 47	19 33	0 7	10 32	17 6	13 49	13 17	18 6	14 16	1 40	W28
T 29	23 19	19 18	2 55	24 38	1 36	23 39	0 10	12 19	1 20	8 9	1 12	20 7	1 37	4 17	0 47	19 33	0 7	10 32	17 6	13 50	13 18	18 6	14 17	1 40	T 29
F 30	23n15	17s42	1n43	24n31	1n40	23n41	0n12	12s26	1s21	8n 5	1n12	20n 8	1s37	4s17	0s47	19n32	0s 7	10s32	17s 7	13n51	13n20	18n 5	14n18	1s41	F 30

Julian Day Number = 2301581.5, Delta T = 104.25 sec
Ecliptic obliquity = 23°29'25, Nutation = - 0°00'10, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°00'37, Lahiri = 18°07'37Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1589
geocentric

JULY 1589 GC — 00:00 UT

Day	Sid.t	☉	☽	☿	♀	♂	♃	♄	♅	♆	♇	☊	☊	⚸	⚷	Day
S 1	18 35 37	8♋48'12	18♒38	15♋ 9	2♋ 7	29♎24	12♍24	8♊23	21°R 1	2♌29	13♈13	23°D 3	24♌37	0♌ 9	13♉27	S 1
S 2	18 39 34	9°45'23	3♓16	17°14	3°20	29°43	12°33	8°30	21♓ 1	2°31	13°13	23♌ 3	24°34	0°15	13°29	S 2
M 3	18 43 31	10°42'33	17°32	19°17	4°34	0♏ 2	12°42	8°37	21° 1	2°33	13°13	23° 4	24°31	0°22	13°32	M 3
T 4	18 47 27	11°39'44	1♈26	21°18	5°48	0°21	12°51	8°44	21° 0	2°35	13°13	23° 5	24°28	0°29	13°35	T 4
W 5	18 51 24	12°36'55	14°56	23°18	7° 1	0°41	13° 0	8°51	21° 0	2°37	13°14	23°R 6	24°24	0°35	13°37	W 5
T 6	18 55 20	13°34'07	28° 6	25°16	8°15	1° 2	13° 9	8°58	20°59	2°39	13°14	23° 5	24°21	0°42	13°40	T 6
F 7	18 59 17	14°31'19	10♉57	27°12	9°29	1°23	13°18	9° 5	20°59	2°42	13°14	23° 2	24°18	0°49	13°42	F 7
S 8	19 3 13	15°28'32	23°32	29° 7	10°43	1°44	13°27	9°12	20°58	2°44	13°14	22°58	24°15	0°55	13°45	S 8
S 9	19 7 10	16°25'46	5♊55	0♌59	11°56	2° 6	13°37	9°19	20°58	2°46	13°14	22°52	24°12	1° 2	13°47	S 9
M10	19 11 6	17°23'00	18° 6	2°50	13°10	2°29	13°46	9°25	20°57	2°48	13°14	22°46	24° 9	1° 9	13°50	M10
T 11	19 15 3	18°20'15	0♋ 9	4°39	14°24	2°52	13°56	9°32	20°56	2°50	13°14	22°40	24° 5	1°15	13°52	T 11
W12	19 19 0	19°17'30	12° 5	6°26	15°38	3°15	14° 6	9°39	20°56	2°52	13°14	22°34	24° 2	1°22	13°54	W12
T 13	19 22 56	20°14'46	23°56	8°11	16°51	3°39	14°15	9°45	20°55	2°55	13°14	22°30	23°59	1°29	13°56	T 13
F 14	19 26 53	21°12'02	5♌44	9°55	18° 5	4° 3	14°25	9°52	20°54	2°57	13°R14	22°27	23°56	1°35	13°59	F 14
S 15	19 30 49	22° 9'19	17°31	11°36	19°19	4°28	14°35	9°58	20°53	2°59	13°14	22°D26	23°53	1°42	14° 1	S 15
S 16	19 34 46	23° 6'36	29°20	13°16	20°33	4°53	14°45	10° 5	20°52	3° 1	13°14	22°26	23°50	1°49	14° 3	S 16
M17	19 38 42	24° 3'53	11♍14	14°54	21°47	5°18	14°56	10°11	20°51	3° 3	13°14	22°27	23°46	1°55	14° 5	M17
T 18	19 42 39	25° 1'11	23°16	16°30	23° 1	5°44	15° 6	10°18	20°50	3° 6	13°14	22°29	23°43	2° 2	14° 7	T 18
W19	19 46 35	25°58'29	5♎31	18° 4	24°15	6°10	15°16	10°24	20°49	3° 8	13°14	22°30	23°40	2° 9	14° 9	W19
T 20	19 50 32	26°55'48	18° 3	19°36	25°29	6°37	15°27	10°30	20°48	3°10	13°14	22°31	23°37	2°15	14°11	T 20
F 21	19 54 29	27°53'07	0♏56	21° 6	26°43	7° 4	15°37	10°36	20°47	3°12	13°14	22°R32	23°34	2°22	14°12	F 21
S 22	19 58 25	28°50'26	14°14	22°35	27°56	7°31	15°48	10°42	20°46	3°14	13°14	22°31	23°30	2°29	14°14	S 22
S 23	20 2 22	29°47'46	27°59	24° 1	29°10	7°59	15°58	10°48	20°45	3°17	13°13	22°29	23°27	2°35	14°16	S 23
M24	20 6 18	0♌45'07	12♐12	25°26	0♌24	8°27	16° 9	10°54	20°43	3°19	13°13	22°27	23°24	2°42	14°17	M24
T 25	20 10 15	1°42'28	26°49	26°49	1°38	8°55	16°20	11° 0	20°42	3°21	13°13	22°24	23°21	2°48	14°19	T 25
W26	20 14 11	2°39'50	11♑47	28°10	2°52	9°24	16°31	11° 6	20°41	3°23	13°13	22°22	23°18	2°55	14°21	W26
T 27	20 18 8	3°37'13	26°58	29°29	4° 6	9°53	16°42	11°12	20°39	3°25	13°12	22°20	23°15	3° 2	14°22	T 27
F 28	20 22 4	4°34'36	12♒11	0♍45	5°20	10°23	16°53	11°18	20°38	3°28	13°12	22°19	23°11	3° 8	14°23	F 28
S 29	20 26 1	5°32'01	27°18	2° 0	6°34	10°52	17° 4	11°23	20°37	3°30	13°12	22°D18	23° 8	3°15	14°25	S 29
S 30	20 29 58	6°29'27	12♓ 9	3°12	7°48	11°22	17°15	11°29	20°35	3°32	13°11	22°19	23° 5	3°22	14°26	S 30
M31	20 33 54	7♌26'53	26♓38	4♍22	9♌ 2	11♏52	17♍26	11♊35	20♓34	3♌34	13♈11	22♌20	23♌ 2	3♌28	14♉27	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	lat
S 1	23n12	14s54	0n24	24n21	1n44	23n43	0n14	12s34	1s22	8n 2	1n12	20n 9	1s37	4s17	0s47	19n32	0s 7	10s32	17s 7	13n52	13n21	18n 4	14n18	1s41
S 2	23 8	11 11	0s55	24 9	1 47	23 44	0 17	12 42	1 23	7 58	1 12	20 10	1 37	4 17	0 47	19 31	0 7	10 33	17 8	13 52	13 22	18 4	14 19	1 41
M 3	23 3	6 55	2 9	23 54	1 49	23 44	0 19	12 49	1 24	7 55	1 12	20 11	1 37	4 17	0 47	19 31	0 7	10 33	17 8	13 51	13 23	18 3	14 20	1 41
T 4	22 59	2 23	3 13	23 37	1 50	23 43	0 21	12 57	1 26	7 51	1 12	20 12	1 37	4 17	0 47	19 30	0 7	10 33	17 8	13 51	13 24	18 3	14 20	1 41
W 5	22 53	2n 8	4 5	23 18	1 51	23 42	0 24	13 5	1 27	7 48	1 12	20 13	1 37	4 18	0 47	19 30	0 7	10 33	17 9	13 51	13 25	18 2	14 21	1 41
T 6	22 48	6 26	4 42	22 57	1 51	23 40	0 26	13 14	1 28	7 44	1 11	20 15	1 37	4 18	0 47	19 29	0 7	10 34	17 9	13 51	13 26	18 1	14 21	1 42
F 7	22 42	10 19	5 4	22 34	1 51	23 37	0 28	13 22	1 29	7 40	1 11	20 16	1 37	4 18	0 47	19 29	0 7	10 34	17 9	13 52	13 27	18 1	14 22	1 42
S 8	22 35	13 41	5 11	22 10	1 49	23 34	0 30	13 31	1 30	7 37	1 11	20 17	1 37	4 18	0 47	19 28	0 7	10 34	17 10	13 54	13 28	18 0	14 23	1 42
S 9	22 29	16 22	5 3	21 44	1 48	23 30	0 33	13 39	1 31	7 33	1 11	20 18	1 37	4 19	0 47	19 28	0 7	10 34	17 10	13 55	13 29	17 59	14 23	1 42
M10	22 21	18 17	4 41	21 16	1 45	23 25	0 35	13 48	1 32	7 29	1 11	20 19	1 37	4 19	0 47	19 27	0 7	10 35	17 10	13 57	13 30	17 59	14 24	1 42
T 11	22 14	19 22	4 7	20 47	1 42	23 19	0 37	13 57	1 33	7 25	1 11	20 19	1 37	4 19	0 47	19 27	0 7	10 35	17 11	13 59	13 31	17 58	14 24	1 43
W12	22 6	19 34	3 23	20 18	1 38	23 13	0 39	14 6	1 34	7 21	1 11	20 20	1 37	4 19	0 47	19 27	0 7	10 35	17 11	14 1	13 32	17 58	14 25	1 43
T 13	21 58	18 54	2 30	19 46	1 34	23 6	0 41	14 15	1 35	7 17	1 10	20 21	1 37	4 20	0 47	19 26	0 7	10 36	17 11	14 3	13 33	17 57	14 25	1 43
F 14	21 49	17 25	1 30	19 14	1 30	22 59	0 43	14 24	1 36	7 14	1 10	20 22	1 37	4 20	0 47	19 26	0 7	10 36	17 12	14 3	13 34	17 56	14 26	1 43
S 15	21 40	15 11	0 27	18 42	1 25	22 50	0 45	14 33	1 36	7 10	1 10	20 23	1 37	4 21	0 47	19 25	0 7	10 36	17 12	14 4	13 35	17 56	14 26	1 43
S 16	21 30	12 19	0n38	18 8	1 19	22 42	0 47	14 42	1 37	7 6	1 10	20 24	1 38	4 21	0 47	19 25	0 7	10 37	17 13	14 4	13 36	17 55	14 26	1 44
M17	21 21	8 56	1 42	17 34	1 13	22 32	0 49	14 51	1 38	7 1	1 10	20 25	1 38	4 21	0 47	19 24	0 7	10 37	17 13	14 4	13 37	17 54	14 27	1 44
T 18	21 10	5 9	2 42	16 59	1 6	22 22	0 51	15 1	1 39	6 57	1 10	20 26	1 38	4 22	0 47	19 24	0 7	10 37	17 13	14 3	13 39	17 54	14 27	1 44
W19	21 0	1 6	3 35	16 24	1 0	22 11	0 53	15 10	1 40	6 53	1 10	20 27	1 38	4 22	0 47	19 23	0 7	10 38	17 14	14 2	13 40	17 53	14 28	1 44
T 20	20 49	3s 5	4 20	15 48	0 52	21 59	0 55	15 20	1 40	6 49	1 10	20 27	1 38	4 23	0 47	19 23	0 7	10 38	17 14	14 2	13 41	17 52	14 28	1 44
F 21	20 38	7 14	4 53	15 12	0 45	21 47	0 57	15 30	1 41	6 45	1 10	20 28	1 38	4 23	0 47	19 22	0 7	10 39	17 14	14 2	13 42	17 51	14 28	1 44
S 22	20 26	11 10	5 12	14 36	0 37	21 34	0 58	15 39	1 42	6 41	1 9	20 29	1 38	4 24	0 47	19 22	0 7	10 39	17 15	14 2	13 43	17 51	14 29	1 45
S 23	20 14	14 39	5 14	13 59	0 28	21 21	1 0	15 49	1 43	6 37	1 9	20 30	1 38	4 24	0 47	19 21	0 7	10 39	17 15	14 3	13 44	17 50	14 29	1 45
M24	20 2	17 24	4 57	13 23	0 20	21 7	1 2	15 59	1 43	6 32	1 9	20 31	1 38	4 25	0 48	19 21	0 7	10 40	17 15	14 4	13 45	17 49	14 29	1 45
T 25	19 49	19 7	4 20	12 46	0 11	20 52	1 3	16 9	1 44	6 28	1 9	20 31	1 38	4 25	0 48	19 20	0 7	10 40	17 16	14 5	13 46	17 49	14 30	1 45
W26	19 36	19 33	3 26	12 10	0 2	20 37	1 5	16 18	1 45	6 24	1 9	20 32	1 38	4 26	0 48	19 20	0 7	10 41	17 16	14 5	13 47	17 48	14 30	1 45
T 27	19 23	18 35	2 16	11 34	0s 8	20 21	1 6	16 28	1 45	6 19	1 9	20 33	1 38	4 26	0 48	19 19	0 7	10 41	17 16	14 6	13 48	17 47	14 30	1 46
F 28	19 10	16 17	0 56	10 57	0 17	20 4	1 8	16 38	1 46	6 15	1 9	20 34	1 38	4 27	0 48	19 19	0 7	10 41	17 17	14 6	13 49	17 47	14 30	1 46
S 29	18 56	12 52	0s28	10 22	0 27	19 47	1 9	16 48	1 46	6 10	1 9	20 34	1 38	4 28	0 48	19 18	0 7	10 42	17 17	14 6	13 50	17 46	14 31	1 46
S 30	18 41	8 41	1 48	9 46	0 38	19 30	1 11	16 58	1 47	6 6	1 9	20 35	1 38	4 28	0 48	19 18	0 7	10 42	17 17	14 6	13 51	17 45	14 31	1 46
M31	18n27	4s 4	2s59	9n11	0s48	19n11	1n12	17s 8	1s48	6n 2	1n 9	20n36	1s38	4s29	0s48	19n17	0s 7	10s43	17s18	14n 6	13n52	17n44	14n31	1s46

Julian Day Number = 2301611.5, Delta T = 104.12 sec
Ecliptic obliquity = 23°29'25, Nutation = - 0°00'09, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°00'41, Lahiri = 18°07'41Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1589
geocentric

AUGUST 1589 GC

00:00 UT

Day	Sid.t	☉	☽	☿	♀	♂	♃	♄	♅	♆	♇	☊	☊	⚸	⚷	Day
T 1	20 37 51	8♌24'21	10♈43	5♍30	10♌17	12♏23	17♍37	11♊40	20°R32	3♌37	13°R11	22♌21	22♌59	3♌35	14♉28	T 1
W 2	20 41 47	9°21'51	24°21	6°36	11°31	12°54	17°49	11°45	20♓30	3°39	13♈10	22°22	22°56	3°42	14°30	W 2
T 3	20 45 44	10°19'21	7♉34	7°38	12°45	13°25	18° 0	11°51	20°29	3°41	13°10	22°R22	22°52	3°48	14°31	T 3
F 4	20 49 40	11°16'53	20°24	8°39	13°59	13°56	18°12	11°56	20°27	3°43	13° 9	22°22	22°49	3°55	14°32	F 4
S 5	20 53 37	12°14'27	2♊55	9°36	15°13	14°28	18°23	12° 1	20°25	3°45	13° 9	22°22	22°46	4° 2	14°33	S 5
S 6	20 57 33	13°12'02	15°10	10°31	16°27	15° 0	18°35	12° 6	20°24	3°48	13° 9	22°21	22°43	4° 8	14°34	S 6
M 7	21 1 30	14° 9'39	27°14	11°22	17°41	15°32	18°46	12°11	20°22	3°50	13° 8	22°20	22°40	4°15	14°34	M 7
T 8	21 5 27	15° 7'17	9♋ 9	12°11	18°56	16° 5	18°58	12°16	20°20	3°52	13° 8	22°18	22°36	4°22	14°35	T 8
W 9	21 9 23	16° 4'56	20°59	12°56	20°10	16°38	19°10	12°21	20°18	3°54	13° 7	22°18	22°33	4°28	14°36	W 9
T 10	21 13 20	17° 2'37	2♌47	13°37	21°24	17°11	19°22	12°26	20°16	3°56	13° 6	22°17	22°30	4°35	14°36	T 10
F 11	21 17 16	18° 0'19	14°35	14°15	22°38	17°44	19°34	12°31	20°14	3°59	13° 6	22°17	22°27	4°42	14°37	F 11
S 12	21 21 13	18°58'02	26°25	14°49	23°52	18°18	19°46	12°35	20°13	4° 1	13° 5	22°D17	22°24	4°48	14°38	S 12
S 13	21 25 9	19°55'47	8♍20	15°19	25° 7	18°52	19°58	12°40	20°11	4° 3	13° 5	22°17	22°21	4°55	14°38	S 13
M14	21 29 6	20°53'33	20°22	15°44	26°21	19°26	20°10	12°44	20° 9	4° 5	13° 4	22°17	22°17	5° 2	14°38	M14
T 15	21 33 2	21°51'20	2♎33	16° 5	27°35	20° 0	20°22	12°49	20° 7	4° 7	13° 3	22°R17	22°14	5° 8	14°39	T 15
W16	21 36 59	22°49'09	14°56	16°20	28°49	20°34	20°34	12°53	20° 5	4° 9	13° 3	22°17	22°11	5°15	14°39	W16
T 17	21 40 56	23°46'59	27°33	16°31	0♍ 4	21° 9	20°46	12°57	20° 2	4°12	13° 2	22°17	22° 8	5°21	14°39	T 17
F 18	21 44 52	24°44'50	10♏28	16°R36	1°18	21°44	20°58	13° 1	20° 0	4°14	13° 1	22°17	22° 5	5°28	14°39	F 18
S 19	21 48 49	25°42'42	23°43	16°36	2°32	22°19	21°10	13° 5	19°58	4°16	13° 1	22°D17	22° 2	5°35	14°39	S 19
S 20	21 52 45	26°40'35	7♐21	16°30	3°47	22°55	21°23	13° 9	19°56	4°18	13° 0	22°17	21°58	5°41	14°R39	S 20
M21	21 56 42	27°38'30	21°21	16°18	5° 1	23°31	21°35	13°13	19°54	4°20	12°59	22°17	21°55	5°48	14°39	M21
T 22	22 0 38	28°36'26	5♑44	16° 0	6°15	24° 6	21°47	13°17	19°52	4°22	12°58	22°18	21°52	5°55	14°39	T 22
W23	22 4 35	29°34'24	20°27	15°36	7°30	24°42	22° 0	13°20	19°50	4°24	12°58	22°18	21°49	6° 1	14°39	W23
T 24	22 8 31	0♍32'23	5♒24	15° 5	8°44	25°19	22°12	13°24	19°47	4°26	12°57	22°19	21°46	6° 8	14°39	T 24
F 25	22 12 28	1°30'23	20°28	14°30	9°58	25°55	22°25	13°28	19°45	4°28	12°56	22°R19	21°42	6°15	14°39	F 25
S 26	22 16 25	2°28'25	5♓31	13°48	11°13	26°32	22°37	13°31	19°43	4°30	12°55	22°19	21°39	6°21	14°38	S 26
S 27	22 20 21	3°26'29	20°24	13° 2	12°27	27° 9	22°50	13°34	19°41	4°32	12°54	22°18	21°36	6°28	14°38	S 27
M28	22 24 18	4°24'34	5♈ 0	12°11	13°41	27°46	23° 2	13°37	19°38	4°34	12°53	22°17	21°33	6°35	14°37	M28
T 29	22 28 14	5°22'41	19°12	11°16	14°56	28°23	23°15	13°41	19°36	4°36	12°53	22°15	21°30	6°41	14°37	T 29
W30	22 32 11	6°20'50	2♉59	10°19	16°10	29° 0	23°28	13°44	19°34	4°38	12°52	22°14	21°27	6°48	14°36	W30
T 31	22 36 7	7♍19'01	16♉18	9♍21	17♍24	29♏38	23♍40	13♊46	19♓31	4♌40	12♈51	22♌12	21♌23	6♌55	14♉36	T 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	18n12	0n37	3s57	8n37	0s58	18n53	1n13	17s18	1s48	5n57	1n 8	20n36	1s38	4s29	0s48	19n16	0s 7	10s43	17s18	14n 5	13n53	17n44	14n31	1s47
W 2	17 57	5 7	4 40	8 3	1 9	18 33	1 14	17 28	1 49	5 53	1 8	20 37	1 39	4 30	0 48	19 16	0 7	10 44	17 18	14 5	13 54	17 43	14 31	1 47
T 3	17 41	9 14	5 7	7 29	1 20	18 14	1 15	17 38	1 49	5 48	1 8	20 38	1 39	4 31	0 48	19 15	0 7	10 44	17 19	14 5	13 55	17 42	14 31	1 47
F 4	17 26	12 47	5 17	6 57	1 31	17 53	1 16	17 48	1 50	5 43	1 8	20 38	1 39	4 31	0 48	19 15	0 7	10 45	17 19	14 5	13 56	17 41	14 31	1 47
S 5	17 10	15 41	5 12	6 25	1 42	17 32	1 18	17 58	1 50	5 39	1 8	20 39	1 39	4 32	0 48	19 14	0 7	10 45	17 19	14 5	13 57	17 41	14 31	1 47
S 6	16 53	17 49	4 52	5 54	1 53	17 11	1 18	18 8	1 51	5 34	1 8	20 39	1 39	4 33	0 48	19 14	0 7	10 45	17 20	14 6	13 58	17 40	14 32	1 48
M 7	16 37	19 7	4 20	5 24	2 4	16 49	1 19	18 18	1 51	5 30	1 8	20 40	1 39	4 34	0 48	19 13	0 7	10 46	17 20	14 6	13 59	17 39	14 32	1 48
T 8	16 20	19 34	3 37	4 56	2 15	16 27	1 20	18 28	1 51	5 25	1 8	20 41	1 39	4 34	0 48	19 13	0 7	10 46	17 20	14 6	14 0	17 39	14 32	1 48
W 9	16 3	19 8	2 45	4 28	2 26	16 4	1 21	18 38	1 52	5 20	1 8	20 41	1 39	4 35	0 48	19 12	0 7	10 47	17 21	14 7	14 2	17 38	14 32	1 48
T 10	15 46	17 51	1 46	4 2	2 37	15 41	1 22	18 48	1 52	5 15	1 8	20 42	1 39	4 36	0 48	19 12	0 7	10 47	17 21	14 7	14 3	17 37	14 32	1 49
F 11	15 28	15 49	0 43	3 38	2 48	15 18	1 22	18 57	1 53	5 11	1 8	20 42	1 39	4 37	0 48	19 11	0 7	10 48	17 21	14 7	14 4	17 36	14 32	1 49
S 12	15 10	13 6	0n23	3 15	2 59	14 54	1 23	19 7	1 53	5 6	1 8	20 43	1 39	4 37	0 48	19 11	0 7	10 48	17 22	14 7	14 5	17 35	14 32	1 49
S 13	14 52	9 49	1 28	2 53	3 9	14 29	1 24	19 17	1 53	5 1	1 8	20 43	1 39	4 38	0 48	19 10	0 7	10 49	17 22	14 7	14 6	17 35	14 31	1 49
M14	14 34	6 7	2 30	2 34	3 20	14 5	1 24	19 27	1 54	4 56	1 7	20 44	1 40	4 39	0 48	19 10	0 7	10 49	17 22	14 7	14 7	17 34	14 31	1 49
T 15	14 15	2 8	3 26	2 17	3 29	13 39	1 24	19 37	1 54	4 52	1 7	20 44	1 40	4 40	0 48	19 9	0 7	10 50	17 23	14 7	14 8	17 33	14 31	1 50
W16	13 56	2s 0	4 13	2 2	3 39	13 14	1 25	19 46	1 54	4 47	1 7	20 45	1 40	4 41	0 48	19 9	0 7	10 50	17 23	14 7	14 9	17 32	14 31	1 50
T 17	13 37	6 8	4 49	1 50	3 48	12 48	1 25	19 56	1 55	4 42	1 7	20 45	1 40	4 41	0 48	19 8	0 7	10 51	17 23	14 7	14 10	17 32	14 31	1 50
F 18	13 18	10 4	5 11	1 40	3 56	12 22	1 25	20 5	1 55	4 37	1 7	20 45	1 40	4 42	0 48	19 8	0 7	10 51	17 23	14 7	14 11	17 31	14 31	1 50
S 19	12 59	13 37	5 18	1 33	4 4	11 55	1 25	20 15	1 55	4 32	1 7	20 46	1 40	4 43	0 48	19 7	0 7	10 52	17 24	14 7	14 12	17 30	14 31	1 50
S 20	12 39	16 32	5 7	1 29	4 11	11 28	1 26	20 24	1 55	4 27	1 7	20 46	1 40	4 44	0 48	19 7	0 7	10 53	17 24	14 7	14 13	17 29	14 30	1 51
M21	12 19	18 35	4 38	1 28	4 17	11 1	1 26	20 33	1 56	4 22	1 7	20 47	1 40	4 45	0 48	19 6	0 7	10 53	17 24	14 7	14 14	17 28	14 30	1 51
T 22	11 59	19 31	3 51	1 31	4 22	10 34	1 25	20 43	1 56	4 17	1 7	20 47	1 40	4 46	0 48	19 6	0 7	10 54	17 24	14 7	14 15	17 28	14 30	1 51
W23	11 39	19 10	2 48	1 36	4 26	10 6	1 25	20 52	1 56	4 12	1 7	20 47	1 40	4 47	0 48	19 6	0 7	10 54	17 25	14 6	14 16	17 27	14 30	1 51
T 24	11 18	17 28	1 33	1 46	4 28	9 38	1 25	21 1	1 56	4 7	1 7	20 48	1 41	4 47	0 48	19 5	0 7	10 55	17 25	14 6	14 17	17 26	14 30	1 51
F 25	10 58	14 32	0 10	1 59	4 29	9 9	1 25	21 10	1 57	4 2	1 7	20 48	1 41	4 48	0 48	19 5	0 7	10 55	17 25	14 6	14 18	17 25	14 29	1 52
S 26	10 37	10 38	1s13	2 15	4 28	8 41	1 25	21 19	1 57	3 57	1 7	20 48	1 41	4 49	0 48	19 4	0 7	10 56	17 25	14 6	14 19	17 24	14 29	1 52
S 27	10 16	6 6	2 30	2 35	4 26	8 12	1 24	21 28	1 57	3 52	1 7	20 49	1 41	4 50	0 48	19 4	0 7	10 56	17 26	14 6	14 20	17 24	14 29	1 52
M28	9 55	1 18	3 35	2 59	4 21	7 43	1 24	21 36	1 57	3 47	1 7	20 49	1 41	4 51	0 48	19 3	0 7	10 57	17 26	14 7	14 21	17 23	14 28	1 52
T 29	9 34	3n26	4 26	3 25	4 15	7 14	1 23	21 45	1 57	3 42	1 7	20 49	1 41	4 52	0 48	19 3	0 7	10 57	17 26	14 7	14 22	17 22	14 28	1 52
W30	9 12	7 50	4 59	3 54	4 7	6 44	1 23	21 53	1 57	3 37	1 7	20 49	1 41	4 53	0 48	19 2	0 7	10 58	17 26	14 8	14 23	17 21	14 28	1 53
T 31	8n51	11n43	5s15	4n26	3s57	6n15	1n22	22s 2	1s57	3n32	1n 7	20n50	1s41	4s54	0s48	19n 2	0s 7	10s58	17s27	14n 8	14n24	17n20	14n27	1s53

Julian Day Number = 2301642.5, Delta T = 103.99 sec
Ecliptic obliquity = 23°29'26, Nutation = - 0°00'09, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°00'45, Lahiri = 18°07'45Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1589
geocentric

SEPTEMBER 1589 GC

00:00 UT

Day	Sid.t	☉	☽	☿	♀	♂	♃	♄	♅	♆	♇	☊	☊	⚸	⚷	Day
F 1	22 40 4	8♍17'15	29♉12	8°R22	18♍39	0♐16	23♍53	13♊49	19°R29	4♌42	12°R50	22°R11	21♌20	7♌ 1	14°R35	F 1
S 2	22 44 0	9°15'30	11♊44	7♍23	19°53	0°54	24° 6	13°52	19♓27	4°44	12♈49	22°D11	21°17	7° 8	14♉34	S 2
S 3	22 47 57	10°13'47	23°58	6°28	21° 8	1°32	24°18	13°55	19°24	4°46	12°48	22♌12	21°14	7°15	14°33	S 3
M 4	22 51 54	11°12'07	5♋59	5°36	22°22	2°10	24°31	13°57	19°22	4°48	12°47	22°13	21°11	7°21	14°32	M 4
T 5	22 55 50	12°10'28	17°51	4°48	23°36	2°48	24°44	13°59	19°20	4°50	12°46	22°14	21° 7	7°28	14°31	T 5
W 6	22 59 47	13° 8'52	29°39	4° 7	24°51	3°27	24°57	14° 2	19°17	4°51	12°45	22°16	21° 4	7°34	14°30	W 6
T 7	23 3 43	14° 7'18	11♌26	3°33	26° 5	4° 6	25°10	14° 4	19°15	4°53	12°44	22°17	21° 1	7°41	14°29	T 7
F 8	23 7 40	15° 5'45	23°17	3° 7	27°20	4°45	25°22	14° 6	19°12	4°55	12°43	22°R18	20°58	7°48	14°28	F 8
S 9	23 11 36	16° 4'15	5♍13	2°49	28°34	5°24	25°35	14° 8	19°10	4°57	12°42	22°17	20°55	7°54	14°27	S 9
S 10	23 15 33	17° 2'47	17°18	2°D41	29°49	6° 3	25°48	14°10	19° 8	4°59	12°41	22°15	20°52	8° 1	14°26	S 10
M11	23 19 29	18° 1'20	29°33	2°42	1♎ 3	6°43	26° 1	14°12	19° 5	5° 0	12°40	22°12	20°48	8° 8	14°24	M11
T 12	23 23 26	18°59'55	11♎59	2°53	2°17	7°22	26°14	14°13	19° 3	5° 2	12°39	22° 8	20°45	8°14	14°23	T 12
W13	23 27 22	19°58'33	24°38	3°13	3°32	8° 2	26°27	14°15	19° 0	5° 4	12°38	22° 3	20°42	8°21	14°22	W13
T 14	23 31 19	20°57'12	7♏29	3°42	4°46	8°42	26°40	14°16	18°58	5° 5	12°37	21°59	20°39	8°28	14°20	T 14
F 15	23 35 16	21°55'52	20°35	4°21	6° 1	9°22	26°53	14°18	18°55	5° 7	12°36	21°55	20°36	8°34	14°19	F 15
S 16	23 39 12	22°54'35	3♐56	5° 8	7°15	10° 2	27° 6	14°19	18°53	5° 9	12°35	21°52	20°33	8°41	14°17	S 16
S 17	23 43 9	23°53'19	17°32	6° 3	8°30	10°43	27°19	14°20	18°51	5°10	12°34	21°D51	20°29	8°48	14°15	S 17
M18	23 47 5	24°52'05	1♑24	7° 5	9°44	11°23	27°32	14°21	18°48	5°12	12°33	21°51	20°26	8°54	14°14	M18
T 19	23 51 2	25°50'53	15°31	8°14	10°59	12° 4	27°45	14°22	18°46	5°13	12°32	21°52	20°23	9° 1	14°12	T 19
W20	23 54 58	26°49'43	29°54	9°30	12°13	12°44	27°58	14°23	18°43	5°15	12°30	21°53	20°20	9° 8	14°10	W20
T 21	23 58 55	27°48'34	14♒29	10°51	13°28	13°25	28°11	14°24	18°41	5°17	12°29	21°R54	20°17	9°14	14° 8	T 21
F 22	0 2 51	28°47'27	29°12	12°17	14°42	14° 6	28°24	14°24	18°39	5°18	12°28	21°54	20°13	9°21	14° 6	F 22
S 23	0 6 48	29°46'22	13♓57	13°47	15°56	14°47	28°37	14°25	18°36	5°20	12°27	21°53	20°10	9°27	14° 4	S 23
S 24	0 10 45	0♎45'18	28°37	15°20	17°11	15°29	28°50	14°25	18°34	5°21	12°26	21°49	20° 7	9°34	14° 2	S 24
M25	0 14 41	1°44'17	13♈ 5	16°57	18°25	16°10	29° 3	14°25	18°32	5°22	12°25	21°44	20° 4	9°41	14° 0	M25
T 26	0 18 38	2°43'18	27°15	18°36	19°40	16°52	29°16	14°25	18°29	5°24	12°24	21°37	20° 1	9°47	13°58	T 26
W27	0 22 34	3°42'21	11♉ 3	20°17	20°54	17°33	29°29	14°R25	18°27	5°25	12°23	21°30	19°58	9°54	13°56	W27
T 28	0 26 31	4°41'26	24°25	22° 0	22° 8	18°15	29°42	14°25	18°25	5°26	12°21	21°24	19°54	10° 1	13°54	T 28
F 29	0 30 27	5°40'34	7♊23	23°44	23°23	18°57	29°54	14°25	18°23	5°28	12°20	21°19	19°51	10° 7	13°51	F 29
S 30	0 34 24	6♎39'44	19♊58	25♍29	24♎37	19♐39	0♎ 7	14♊25	18♓20	5♌29	12♈19	21♌15	19♌48	10♌14	13♉49	S 30

Day	☉	☽		☿		♀		♂		♃		♄		♅		♆		♇		☊	☊	⚸	⚷		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	8n29	14n54	5s14	4n59	3s45	5n45	1n21	22s10	1s58	3n27	1n 7	20n50	1s41	4s55	0s48	19n 1	0s 7	10s59	17s27	14n 9	14n25	17n19	14n27	1s53	F 1
S 2	8 7	17 19	4 59	5 33	3 31	5 15	1 21	22 18	1 58	3 22	1 7	20 50	1 42	4 56	0 48	19 1	0 7	11 0	17 27	14 9	14 26	17 19	14 26	1 53	S 2
S 3	7 45	18 52	4 29	6 8	3 15	4 45	1 20	22 26	1 58	3 17	1 7	20 50	1 42	4 57	0 48	19 0	0 7	11 0	17 27	14 9	14 27	17 18	14 26	1 54	S 3
M 4	7 23	19 33	3 49	6 43	2 59	4 15	1 19	22 34	1 58	3 12	1 7	20 50	1 42	4 58	0 48	19 0	0 7	11 1	17 27	14 8	14 28	17 17	14 25	1 54	M 4
T 5	7 1	19 20	2 59	7 16	2 41	3 44	1 18	22 41	1 58	3 7	1 7	20 51	1 42	4 58	0 48	19 0	0 7	11 1	17 28	14 8	14 29	17 16	14 25	1 54	T 5
W 6	6 38	18 17	2 2	7 49	2 22	3 14	1 17	22 49	1 58	3 2	1 7	20 51	1 42	4 59	0 48	18 59	0 7	11 2	17 28	14 7	14 30	17 15	14 24	1 54	W 6
T 7	6 16	16 26	1 0	8 19	2 3	2 43	1 16	22 56	1 58	2 57	1 7	20 51	1 42	5 0	0 48	18 59	0 7	11 2	17 28	14 7	14 31	17 14	14 24	1 54	T 7
F 8	5 53	13 52	0n 5	8 47	1 43	2 12	1 15	23 4	1 58	2 52	1 6	20 51	1 42	5 1	0 48	18 58	0 7	11 3	17 28	14 7	14 32	17 13	14 23	1 55	F 8
S 9	5 30	10 43	1 11	9 11	1 24	1 42	1 14	23 11	1 58	2 46	1 6	20 51	1 42	5 2	0 48	18 58	0 7	11 3	17 28	14 7	14 33	17 13	14 23	1 55	S 9
S 10	5 8	7 4	2 13	9 32	1 4	1 11	1 12	23 18	1 58	2 41	1 6	20 51	1 42	5 3	0 48	18 57	0 7	11 4	17 28	14 7	14 34	17 12	14 22	1 55	S 10
M11	4 45	3 6	3 11	9 50	0 45	0 40	1 11	23 25	1 58	2 36	1 6	20 51	1 43	5 4	0 48	18 57	0 7	11 4	17 29	14 9	14 35	17 11	14 22	1 55	M11
T 12	4 22	1s 4	4 0	10 3	0 27	0 9	1 10	23 31	1 58	2 31	1 6	20 51	1 43	5 5	0 48	18 57	0 7	11 5	17 29	14 10	14 36	17 10	14 21	1 55	T 12
W13	3 59	5 15	4 38	10 12	0 10	0s22	1 8	23 38	1 58	2 26	1 6	20 51	1 43	5 6	0 48	18 56	0 7	11 5	17 29	14 11	14 37	17 9	14 21	1 56	W13
T 14	3 36	9 15	5 3	10 17	0n 7	0 53	1 7	23 44	1 58	2 21	1 6	20 51	1 43	5 7	0 48	18 56	0 7	11 6	17 29	14 13	14 38	17 8	14 20	1 56	T 14
F 15	3 12	12 54	5 13	10 17	0 22	1 24	1 5	23 50	1 58	2 16	1 6	20 52	1 43	5 8	0 48	18 55	0 7	11 6	17 29	14 14	14 39	17 7	14 19	1 56	F 15
S 16	2 49	15 58	5 6	10 13	0 36	1 55	1 4	23 56	1 58	2 10	1 6	20 52	1 43	5 9	0 48	18 55	0 7	11 7	17 29	14 15	14 40	17 6	14 19	1 56	S 16
S 17	2 26	18 13	4 42	10 5	0 50	2 26	1 2	24 2	1 57	2 5	1 6	20 52	1 43	5 10	0 48	18 55	0 7	11 8	17 29	14 15	14 41	17 5	14 18	1 56	S 17
M18	2 3	19 27	4 2	9 53	1 1	2 56	1 0	24 8	1 57	2 0	1 6	20 52	1 43	5 11	0 48	18 54	0 7	11 8	17 30	14 15	14 42	17 5	14 17	1 57	M18
T 19	1 39	19 31	3 6	9 36	1 12	3 27	0 59	24 13	1 57	1 55	1 6	20 52	1 43	5 12	0 48	18 54	0 7	11 9	17 30	14 15	14 43	17 4	14 17	1 57	T 19
W20	1 16	18 18	1 57	9 17	1 21	3 58	0 57	24 19	1 57	1 50	1 7	20 52	1 44	5 13	0 48	18 53	0 7	11 9	17 30	14 15	14 44	17 3	14 16	1 57	W20
T 21	0 52	15 53	0 40	8 53	1 29	4 29	0 55	24 24	1 57	1 45	1 7	20 52	1 44	5 14	0 48	18 53	0 7	11 10	17 30	14 14	14 45	17 2	14 15	1 57	T 21
F 22	0 29	12 24	0s40	8 27	1 36	4 59	0 53	24 29	1 57	1 39	1 7	20 51	1 44	5 14	0 48	18 53	0 6	11 10	17 30	14 14	14 46	17 1	14 14	1 57	F 22
S 23	0 5	8 8	1 57	7 57	1 42	5 30	0 51	24 33	1 57	1 34	1 7	20 51	1 44	5 15	0 48	18 52	0 6	11 11	17 30	14 15	14 47	17 0	14 14	1 57	S 23
S 24	0s18	3 24	3 6	7 25	1 46	6 0	0 49	24 38	1 57	1 29	1 7	20 51	1 44	5 16	0 48	18 52	0 6	11 11	17 30	14 16	14 48	16 59	14 13	1 58	S 24
M25	0 42	1n27	4 3	6 51	1 50	6 31	0 47	24 42	1 56	1 24	1 7	20 51	1 44	5 17	0 48	18 52	0 6	11 12	17 30	14 18	14 49	16 58	14 12	1 58	M25
T 26	1 5	6 7	4 42	6 14	1 52	7 1	0 45	24 46	1 56	1 19	1 7	20 51	1 44	5 18	0 48	18 51	0 6	11 12	17 30	14 20	14 51	16 57	14 11	1 58	T 26
W27	1 29	10 21	5 5	5 36	1 54	7 31	0 43	24 50	1 56	1 14	1 7	20 51	1 44	5 19	0 48	18 51	0 6	11 13	17 30	14 22	14 52	16 56	14 10	1 58	W27
T 28	1 52	13 55	5 9	4 56	1 55	8 1	0 41	24 54	1 56	1 9	1 7	20 51	1 45	5 20	0 48	18 51	0 6	11 13	17 30	14 24	14 53	16 55	14 10	1 58	T 28
F 29	2 16	16 42	4 58	4 15	1 54	8 30	0 38	24 57	1 56	1 3	1 7	20 51	1 45	5 21	0 48	18 50	0 6	11 14	17 30	14 26	14 54	16 54	14 9	1 59	F 29
S 30	2s39	18n35	4s32	3n32	1n54	9s 0	0n36	25s 0	1s55	0n58	1n 7	20n51	1s45	5s22	0s48	18n50	0s 6	11s14	17s30	14n27	14n55	16n53	14n 8	1s59	S 30

Julian Day Number = 2301673.5, Delta T = 103.86 sec
Ecliptic obliquity = 23°29'27, Nutation = - 0°00'10, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°00'49, Lahiri = 18°07'50Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1589
geocentric

OCTOBER 1589 GC

00:00 UT

Day	Sid.t	☉	☽	☿	♀	♂	♃	♄	♅	♆	♇	☊	☊	⚸	⚷	Day
S 1	0 38 20	7♎38'56	2♋13	27♍14	25♎52	20♐21	0♎20	14°R24	18°R18	5♌30	12°R18	21°R14	19♌45	10♌21	13°R47	S 1
M 2	0 42 17	8°38'11	14°14	29° 0	27° 6	21° 3	0°33	14♊24	18♓16	5°32	12♈17	21°D14	19°42	10°27	13♉44	M 2
T 3	0 46 14	9°37'28	26° 6	0♎46	28°21	21°45	0°46	14°23	18°14	5°33	12°16	21♌15	19°39	10°34	13°42	T 3
W 4	0 50 10	10°36'47	7♌53	2°32	29°35	22°28	0°59	14°22	18°11	5°34	12°14	21°16	19°35	10°41	13°40	W 4
T 5	0 54 7	11°36'09	19°42	4°18	0♏49	23°10	1°12	14°22	18° 9	5°35	12°13	21°R17	19°32	10°47	13°37	T 5
F 6	0 58 3	12°35'32	1♍36	6° 4	2° 4	23°53	1°25	14°21	18° 7	5°36	12°12	21°16	19°29	10°54	13°34	F 6
S 7	1 2 0	13°34'58	13°40	7°49	3°18	24°35	1°38	14°20	18° 5	5°37	12°11	21°14	19°26	11° 1	13°32	S 7
S 8	1 5 56	14°34'27	25°56	9°34	4°33	25°18	1°51	14°18	18° 3	5°38	12°10	21° 9	19°23	11° 7	13°29	S 8
M 9	1 9 53	15°33'57	8♎26	11°18	5°47	26° 1	2° 3	14°17	18° 1	5°39	12° 9	21° 1	19°19	11°14	13°27	M 9
T 10	1 13 49	16°33'29	21°11	13° 2	7° 2	26°44	2°16	14°16	17°59	5°40	12° 8	20°52	19°16	11°20	13°24	T 10
W11	1 17 46	17°33'04	4♏11	14°45	8°16	27°27	2°29	14°14	17°57	5°41	12° 6	20°42	19°13	11°27	13°21	W11
T 12	1 21 42	18°32'40	17°25	16°28	9°30	28°11	2°42	14°12	17°55	5°42	12° 5	20°32	19°10	11°34	13°18	T 12
F 13	1 25 39	19°32'19	0♐51	18°10	10°45	28°54	2°54	14°11	17°53	5°43	12° 4	20°23	19° 7	11°40	13°16	F 13
S 14	1 29 36	20°31'59	14°28	19°52	11°59	29°37	3° 7	14° 9	17°51	5°44	12° 3	20°15	19° 4	11°47	13°13	S 14
S 15	1 33 32	21°31'41	28°14	21°33	13°14	0♑21	3°20	14° 7	17°49	5°45	12° 2	20°11	19° 0	11°54	13°10	S 15
M16	1 37 29	22°31'25	12♑ 8	23°13	14°28	1° 4	3°33	14° 5	17°47	5°46	12° 1	20° 8	18°57	12° 0	13° 7	M16
T 17	1 41 25	23°31'10	26° 9	24°53	15°42	1°48	3°45	14° 3	17°45	5°46	12° 0	20°D 8	18°54	12° 7	13° 4	T 17
W18	1 45 22	24°30'58	10♒17	26°32	16°57	2°32	3°58	14° 1	17°44	5°47	11°58	20° 8	18°51	12°14	13° 1	W18
T 19	1 49 18	25°30'46	24°31	28°10	18°11	3°16	4°10	13°58	17°42	5°48	11°57	20°R 8	18°48	12°20	12°58	T 19
F 20	1 53 15	26°30'37	8♓48	29°48	19°25	4° 0	4°23	13°56	17°40	5°48	11°56	20° 7	18°44	12°27	12°55	F 20
S 21	1 57 11	27°30'29	23° 7	1♏26	20°40	4°44	4°35	13°53	17°38	5°49	11°55	20° 3	18°41	12°34	12°52	S 21
S 22	2 1 8	28°30'23	7♈23	3° 2	21°54	5°28	4°48	13°51	17°37	5°50	11°54	19°57	18°38	12°40	12°49	S 22
M23	2 5 5	29°30'18	21°31	4°39	23° 8	6°12	5° 0	13°48	17°35	5°50	11°53	19°47	18°35	12°47	12°46	M23
T 24	2 9 1	0♏30'16	5♉25	6°15	24°23	6°56	5°12	13°45	17°34	5°51	11°52	19°36	18°32	12°53	12°43	T 24
W25	2 12 58	1°30'16	19° 3	7°50	25°37	7°40	5°25	13°42	17°32	5°51	11°51	19°24	18°29	13° 0	12°40	W25
T 26	2 16 54	2°30'17	2♊20	9°25	26°51	8°25	5°37	13°39	17°31	5°52	11°50	19°13	18°25	13° 7	12°37	T 26
F 27	2 20 51	3°30'21	15°15	10°59	28° 6	9° 9	5°49	13°36	17°29	5°52	11°48	19° 3	18°22	13°13	12°34	F 27
S 28	2 24 47	4°30'27	27°49	12°33	29°20	9°54	6° 1	13°33	17°28	5°53	11°47	18°55	18°19	13°20	12°31	S 28
S 29	2 28 44	5°30'35	10♋ 5	14° 7	0♐34	10°38	6°14	13°30	17°26	5°53	11°46	18°50	18°16	13°27	12°27	S 29
M30	2 32 40	6°30'45	22° 7	15°40	1°48	11°23	6°26	13°26	17°25	5°53	11°45	18°47	18°13	13°33	12°24	M30
T 31	2 36 37	7♏30'57	3♌59	17♏13	3♐ 3	12♑ 7	6♎38	13♊23	17♓24	5♌54	11♈44	18°D46	18♌10	13♌40	12♉21	T 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
S 1	3s 2	19n34	3s54	2n49	1n52	9s29	0n34	25s 3	1s55	0n53	1n 7	20n50	1s45	5s22	0s48	18n50	0s 6	11s14	17s30	14n27	14n56	16n52	14n 7	1s59
M 2	3 26	19 38	3 7	2 5	1 50	9 58	0 32	25 6	1 55	0 48	1 7	20 50	1 45	5 23	0 48	18 50	0 6	11 15	17 31	14 27	14 57	16 52	14 6	1 59
T 3	3 49	18 49	2 12	1 20	1 47	10 27	0 29	25 8	1 55	0 43	1 7	20 50	1 45	5 24	0 48	18 49	0 6	11 15	17 31	14 27	14 58	16 51	14 5	1 59
W 4	4 13	17 11	1 12	0 35	1 44	10 56	0 27	25 11	1 54	0 38	1 7	20 50	1 45	5 25	0 48	18 49	0 6	11 16	17 31	14 26	14 59	16 50	14 4	1 59
T 5	4 36	14 48	0 9	0s10	1 41	11 24	0 24	25 13	1 54	0 33	1 7	20 50	1 45	5 26	0 48	18 49	0 6	11 16	17 31	14 26	15 0	16 49	14 3	2 0
F 6	4 59	11 47	0n55	0 56	1 37	11 52	0 22	25 15	1 54	0 28	1 7	20 50	1 45	5 27	0 48	18 48	0 6	11 17	17 31	14 26	15 1	16 48	14 3	2 0
S 7	5 22	8 15	1 58	1 42	1 32	12 20	0 19	25 16	1 53	0 22	1 7	20 49	1 45	5 27	0 48	18 48	0 6	11 17	17 31	14 27	15 2	16 47	14 2	2 0
S 8	5 45	4 18	2 55	2 27	1 27	12 48	0 17	25 17	1 53	0 17	1 7	20 49	1 46	5 28	0 48	18 48	0 6	11 18	17 31	14 29	15 3	16 46	14 1	2 0
M 9	6 8	0 6	3 45	3 13	1 22	13 15	0 14	25 19	1 53	0 12	1 7	20 49	1 46	5 29	0 48	18 48	0 6	11 18	17 30	14 31	15 3	16 45	14 0	2 0
T 10	6 31	4s11	4 25	3 59	1 17	13 42	0 12	25 19	1 52	0 7	1 7	20 49	1 46	5 30	0 48	18 47	0 6	11 18	17 30	14 34	15 4	16 44	13 59	2 0
W11	6 54	8 21	4 52	4 44	1 11	14 9	0 9	25 20	1 52	0 2	1 7	20 48	1 46	5 31	0 48	18 47	0 6	11 19	17 30	14 37	15 5	16 43	13 58	2 1
T 12	7 17	12 12	5 4	5 29	1 6	14 35	0 7	25 20	1 52	0s 3	1 7	20 48	1 46	5 31	0 48	18 47	0 6	11 19	17 30	14 41	15 6	16 42	13 57	2 1
F 13	7 40	15 29	5 0	6 13	1 0	15 1	0 4	25 21	1 51	0 8	1 7	20 48	1 46	5 32	0 48	18 47	0 6	11 20	17 30	14 44	15 7	16 41	13 56	2 1
S 14	8 2	17 59	4 38	6 57	0 54	15 26	0 2	25 20	1 51	0 13	1 7	20 47	1 46	5 33	0 48	18 47	0 6	11 20	17 30	14 46	15 8	16 40	13 55	2 1
S 15	8 25	19 28	4 1	7 41	0 47	15 52	0s 1	25 20	1 51	0 18	1 7	20 47	1 46	5 34	0 48	18 46	0 6	11 20	17 30	14 47	15 9	16 39	13 54	2 1
M16	8 47	19 49	3 8	8 24	0 41	16 16	0 4	25 19	1 50	0 23	1 8	20 47	1 46	5 34	0 48	18 46	0 6	11 21	17 30	14 48	15 10	16 38	13 53	2 1
T 17	9 9	18 56	2 4	9 7	0 34	16 41	0 6	25 19	1 50	0 28	1 8	20 46	1 46	5 35	0 48	18 46	0 6	11 21	17 30	14 48	15 11	16 37	13 52	2 2
W18	9 31	16 52	0 52	9 49	0 28	17 5	0 9	25 17	1 49	0 33	1 8	20 46	1 46	5 36	0 48	18 46	0 6	11 21	17 30	14 48	15 12	16 36	13 51	2 2
T 19	9 53	13 45	0s23	10 31	0 21	17 28	0 12	25 16	1 49	0 38	1 8	20 46	1 47	5 36	0 48	18 46	0 6	11 22	17 30	14 48	15 13	16 35	13 50	2 2
F 20	10 15	9 48	1 38	11 12	0 14	17 51	0 14	25 14	1 49	0 42	1 8	20 45	1 47	5 37	0 48	18 46	0 6	11 22	17 30	14 49	15 14	16 34	13 49	2 2
S 21	10 37	5 17	2 46	11 52	0 8	18 14	0 17	25 12	1 48	0 47	1 8	20 45	1 47	5 38	0 48	18 45	0 6	11 22	17 30	14 50	15 15	16 33	13 48	2 2
S 22	10 58	0 29	3 43	12 32	0 1	18 36	0 20	25 10	1 48	0 52	1 8	20 45	1 47	5 38	0 48	18 45	0 6	11 23	17 30	14 52	15 16	16 32	13 47	2 2
M23	11 19	4n17	4 26	13 11	0s 6	18 58	0 23	25 8	1 47	0 57	1 8	20 44	1 47	5 39	0 48	18 45	0 6	11 23	17 29	14 55	15 17	16 31	13 46	2 2
T 24	11 40	8 45	4 53	13 50	0 12	19 19	0 25	25 5	1 47	1 2	1 8	20 44	1 47	5 39	0 48	18 45	0 6	11 23	17 29	14 58	15 18	16 30	13 45	2 2
W25	12 1	12 41	5 2	14 27	0 19	19 39	0 28	25 2	1 46	1 7	1 8	20 43	1 47	5 40	0 48	18 45	0 6	11 24	17 29	15 2	15 19	16 29	13 43	2 3
T 26	12 22	15 52	4 54	15 4	0 26	19 59	0 31	24 59	1 46	1 11	1 8	20 43	1 47	5 41	0 48	18 45	0 6	11 24	17 29	15 6	15 20	16 28	13 42	2 3
F 27	12 43	18 11	4 31	15 40	0 32	20 19	0 33	24 56	1 45	1 16	1 8	20 43	1 47	5 41	0 48	18 45	0 6	11 24	17 29	15 9	15 21	16 26	13 41	2 3
S 28	13 3	19 33	3 56	16 16	0 39	20 38	0 36	24 52	1 45	1 21	1 8	20 42	1 47	5 42	0 47	18 45	0 6	11 24	17 29	15 11	15 22	16 25	13 40	2 3
S 29	13 23	19 57	3 10	16 50	0 46	20 57	0 39	24 48	1 44	1 26	1 9	20 42	1 47	5 42	0 47	18 44	0 6	11 25	17 29	15 13	15 23	16 24	13 39	2 3
M30	13 43	19 26	2 17	17 24	0 52	21 14	0 41	24 44	1 44	1 30	1 9	20 41	1 47	5 43	0 47	18 44	0 6	11 25	17 29	15 14	15 24	16 23	13 38	2 3
T 31	14s 3	18n 3	1s18	17s57	0s58	21s32	0s44	24s39	1s43	1s35	1n 9	20n41	1s47	5s43	0s47	18n44	0s 6	11s25	17s28	15n14	15n25	16n22	13n37	2s 3

Julian Day Number = 2301703.5, Delta T = 103.73 sec
Ecliptic obliquity = 23°29'27, Nutation = - 0°00'12, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°00'53, Lahiri = 18°07'54Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1589
geocentric

NOVEMBER 1589 GC

00:00 UT

Day	Sid.t	☉	☽	☿	♀	♂	♃	♄	♅	♆	♇	☊	☊	⚸	⚷	Day
W 1	2 40 34	8♏31'11	15♌46	18♏45	4♐17	12♑52	6♎50	13°R19	17°R22	5♌54	11°R43	18°R46	18♌ 6	13♌47	12°R18	W 1
T 2	2 44 30	9°31'27	27°35	20°17	5°31	13°37	7° 2	13♊16	17♓21	5°54	11♈42	18♌46	18° 3	13°53	12♉15	T 2
F 3	2 48 27	10°31'45	9♍31	21°49	6°45	14°22	7°13	13°12	17°20	5°54	11°41	18°44	18° 0	14° 0	12°12	F 3
S 4	2 52 23	11°32'05	21°39	23°20	8° 0	15° 7	7°25	13° 8	17°19	5°54	11°40	18°41	17°57	14° 7	12° 8	S 4
S 5	2 56 20	12°32'27	4♎ 3	24°51	9°14	15°52	7°37	13° 4	17°18	5°55	11°39	18°34	17°54	14°13	12° 5	S 5
M 6	3 0 16	13°32'51	16°45	26°22	10°28	16°37	7°49	13° 0	17°17	5°55	11°38	18°25	17°50	14°20	12° 2	M 6
T 7	3 4 13	14°33'16	29°47	27°52	11°42	17°22	8° 0	12°56	17°16	5°55	11°37	18°13	17°47	14°27	11°59	T 7
W 8	3 8 9	15°33'44	13♏ 9	29°22	12°56	18° 7	8°12	12°52	17°15	5°R55	11°36	18° 0	17°44	14°33	11°56	W 8
T 9	3 12 6	16°34'13	26°48	0♐52	14°11	18°52	8°24	12°48	17°14	5°55	11°36	17°47	17°41	14°40	11°52	T 9
F 10	3 16 3	17°34'44	10♐41	2°21	15°25	19°38	8°35	12°44	17°13	5°55	11°35	17°35	17°38	14°46	11°49	F 10
S 11	3 19 59	18°35'16	24°43	3°50	16°39	20°23	8°46	12°40	17°12	5°55	11°34	17°25	17°35	14°53	11°46	S 11
S 12	3 23 56	19°35'49	8♑50	5°18	17°53	21° 8	8°58	12°35	17°12	5°54	11°33	17°18	17°31	15° 0	11°43	S 12
M13	3 27 52	20°36'24	22°59	6°46	19° 7	21°54	9° 9	12°31	17°11	5°54	11°32	17°14	17°28	15° 6	11°40	M13
T 14	3 31 49	21°37'01	7♒ 8	8°13	20°21	22°39	9°20	12°27	17°10	5°54	11°31	17°13	17°25	15°13	11°37	T 14
W15	3 35 45	22°37'38	21°14	9°40	21°36	23°25	9°31	12°22	17°10	5°54	11°30	17°13	17°22	15°20	11°34	W15
T 16	3 39 42	23°38'16	5♓17	11° 6	22°50	24°10	9°42	12°18	17° 9	5°54	11°29	17°13	17°19	15°26	11°31	T 16
F 17	3 43 38	24°38'56	19°16	12°32	24° 4	24°56	9°53	12°13	17° 8	5°53	11°29	17°11	17°16	15°33	11°27	F 17
S 18	3 47 35	25°39'36	3♈11	13°56	25°18	25°42	10° 4	12° 8	17° 8	5°53	11°28	17° 7	17°12	15°40	11°24	S 18
S 19	3 51 32	26°40'18	17° 0	15°20	26°32	26°27	10°15	12° 4	17° 8	5°53	11°27	16°59	17° 9	15°46	11°21	S 19
M20	3 55 28	27°41'01	0♉41	16°43	27°46	27°13	10°25	11°59	17° 7	5°52	11°26	16°49	17° 6	15°53	11°18	M20
T 21	3 59 25	28°41'45	14°12	18° 5	29° 0	27°59	10°36	11°54	17° 7	5°52	11°26	16°37	17° 3	16° 0	11°15	T 21
W22	4 3 21	29°42'30	27°29	19°25	0♑14	28°45	10°47	11°50	17° 7	5°52	11°25	16°24	17° 0	16° 6	11°12	W22
T 23	4 7 18	0♐43'17	10♊30	20°44	1°28	29°30	10°57	11°45	17° 7	5°51	11°24	16°11	16°56	16°13	11° 9	T 23
F 24	4 11 14	1°44'05	23°15	22° 1	2°42	0♒16	11° 7	11°40	17° 6	5°51	11°23	16° 0	16°53	16°19	11° 6	F 24
S 25	4 15 11	2°44'54	5♋42	23°17	3°56	1° 2	11°18	11°35	17° 6	5°50	11°23	15°51	16°50	16°26	11° 3	S 25
S 26	4 19 7	3°45'45	17°55	24°30	5°10	1°48	11°28	11°30	17° 6	5°49	11°22	15°45	16°47	16°33	11° 1	S 26
M27	4 23 4	4°46'37	29°55	25°40	6°24	2°34	11°38	11°25	17°D 6	5°49	11°22	15°41	16°44	16°39	10°58	M27
T 28	4 27 1	5°47'30	11♌46	26°48	7°37	3°20	11°48	11°20	17° 6	5°48	11°21	15°D40	16°41	16°46	10°55	T 28
W29	4 30 57	6°48'25	23°33	27°52	8°51	4° 6	11°58	11°15	17° 6	5°47	11°20	15°40	16°37	16°53	10°52	W29
T 30	4 34 54	7♐49'20	5♍22	28♐52	10♑ 5	4♒52	12♎ 8	11♊11	17♓ 7	5♌47	11♈20	15°R41	16♌34	16♌59	10♉49	T 30

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	
W 1	14 s22	15n53	0 s16	18 s28	1 s 5	21 s48	0 s46	24 s34	1 s43	1 s40	1n 9	20n40	1 s47	5 s44	0 s47	18n44	0 s 6	11 s25	17 s28	15n14	15n26	16n21	13n36	2 s	3
T 2	14 42	13 4	0n47	18 59	1 11	22 4	0 49	24 29	1 42	1 44	1 9	20 40	1 47	5 44	0 47	18 44	0 6	11 26	17 28	15 14	15 27	16 20	13 35	2	4
F 3	15 1	9 41	1 48	19 30	1 17	22 20	0 52	24 24	1 42	1 49	1 9	20 39	1 47	5 44	0 47	18 44	0 6	11 26	17 28	15 14	15 28	16 19	13 34	2	4
S 4	15 20	5 50	2 45	19 59	1 23	22 35	0 54	24 18	1 41	1 54	1 9	20 39	1 47	5 45	0 47	18 44	0 6	11 26	17 28	15 16	15 29	16 18	13 33	2	4
S 5	15 38	1 41	3 35	20 27	1 28	22 49	0 57	24 13	1 41	1 58	1 9	20 38	1 47	5 45	0 47	18 44	0 6	11 26	17 27	15 18	15 30	16 17	13 32	2	4
M 6	15 56	2 s39	4 16	20 54	1 34	23 2	0 59	24 7	1 40	2 3	1 9	20 38	1 47	5 46	0 47	18 44	0 6	11 26	17 27	15 21	15 31	16 16	13 31	2	4
T 7	16 14	6 58	4 45	21 20	1 39	23 15	1 2	24 0	1 40	2 7	1 10	20 37	1 47	5 46	0 47	18 44	0 6	11 27	17 27	15 24	15 32	16 15	13 30	2	4
W 8	16 32	11 4	4 59	21 45	1 44	23 27	1 4	23 54	1 39	2 12	1 10	20 37	1 48	5 46	0 47	18 44	0 6	11 27	17 27	15 28	15 33	16 14	13 29	2	4
T 9	16 50	14 40	4 57	22 9	1 49	23 39	1 6	23 47	1 38	2 16	1 10	20 36	1 48	5 47	0 47	18 44	0 6	11 27	17 27	15 32	15 34	16 13	13 28	2	4
F 10	17 7	17 32	4 37	22 32	1 54	23 50	1 9	23 40	1 38	2 20	1 10	20 36	1 48	5 47	0 47	18 44	0 6	11 27	17 26	15 36	15 35	16 11	13 27	2	4
S 11	17 24	19 24	4 0	22 54	1 59	24 0	1 11	23 32	1 37	2 25	1 10	20 35	1 48	5 47	0 47	18 44	0 6	11 27	17 26	15 39	15 36	16 10	13 26	2	4
S 12	17 40	20 4	3 8	23 15	2 3	24 9	1 13	23 25	1 37	2 29	1 10	20 35	1 48	5 47	0 47	18 44	0 6	11 27	17 26	15 41	15 37	16 9	13 24	2	4
M13	17 56	19 29	2 4	23 34	2 7	24 18	1 16	23 17	1 36	2 33	1 10	20 34	1 48	5 48	0 47	18 44	0 6	11 27	17 26	15 42	15 38	16 8	13 23	2	5
T 14	18 12	17 40	0 53	23 52	2 11	24 26	1 18	23 9	1 35	2 38	1 10	20 34	1 48	5 48	0 47	18 44	0 6	11 28	17 25	15 42	15 39	16 7	13 22	2	5
W15	18 28	14 47	0 s21	24 9	2 14	24 33	1 20	23 1	1 35	2 42	1 11	20 33	1 48	5 48	0 47	18 44	0 6	11 28	17 25	15 43	15 40	16 6	13 21	2	5
T 16	18 43	11 3	1 34	24 25	2 17	24 40	1 22	22 52	1 34	2 46	1 11	20 32	1 48	5 48	0 47	18 44	0 6	11 28	17 25	15 43	15 41	16 5	13 20	2	5
F 17	18 58	6 43	2 41	24 40	2 20	24 46	1 24	22 43	1 33	2 50	1 11	20 32	1 48	5 48	0 47	18 45	0 6	11 28	17 25	15 43	15 42	16 4	13 19	2	5
S 18	19 13	2 3	3 38	24 53	2 22	24 51	1 26	22 34	1 33	2 54	1 11	20 31	1 47	5 49	0 47	18 45	0 6	11 28	17 24	15 44	15 43	16 3	13 18	2	5
S 19	19 27	2n40	4 21	25 4	2 24	24 55	1 28	22 25	1 32	2 59	1 11	20 31	1 47	5 49	0 47	18 45	0 6	11 28	17 24	15 47	15 44	16 1	13 17	2	5
M20	19 41	7 13	4 49	25 15	2 26	24 58	1 30	22 15	1 31	3 3	1 11	20 30	1 47	5 49	0 47	18 45	0 6	11 28	17 24	15 50	15 45	16 0	13 16	2	5
T 21	19 55	11 21	5 1	25 23	2 27	25 1	1 32	22 6	1 31	3 7	1 11	20 29	1 47	5 49	0 47	18 45	0 6	11 28	17 24	15 53	15 46	15 59	13 15	2	5
W22	20 8	14 51	4 55	25 31	2 27	25 3	1 34	21 56	1 30	3 11	1 12	20 29	1 47	5 49	0 47	18 45	0 6	11 28	17 23	15 57	15 47	15 58	13 14	2	5
T 23	20 21	17 32	4 35	25 37	2 27	25 5	1 36	21 45	1 29	3 15	1 12	20 28	1 47	5 49	0 47	18 45	0 6	11 28	17 23	16 1	15 48	15 57	13 13	2	5
F 24	20 33	19 19	4 1	25 41	2 27	25 5	1 37	21 35	1 29	3 19	1 12	20 28	1 47	5 49	0 46	18 45	0 6	11 28	17 23	16 4	15 48	15 56	13 13	2	5
S 25	20 45	20 7	3 15	25 44	2 25	25 5	1 39	21 24	1 28	3 22	1 12	20 27	1 47	5 49	0 46	18 45	0 6	11 28	17 22	16 7	15 49	15 55	13 12	2	5
S 26	20 57	19 57	2 22	25 46	2 23	25 4	1 41	21 13	1 27	3 26	1 12	20 26	1 47	5 49	0 46	18 46	0 6	11 28	17 22	16 9	15 50	15 53	13 11	2	5
M27	21 8	18 52	1 23	25 46	2 21	25 2	1 42	21 2	1 27	3 30	1 12	20 26	1 47	5 49	0 46	18 46	0 6	11 28	17 22	16 10	15 51	15 52	13 10	2	5
T 28	21 19	16 58	0 21	25 44	2 17	25 0	1 44	20 51	1 26	3 34	1 12	20 25	1 47	5 49	0 46	18 46	0 6	11 28	17 22	16 10	15 52	15 51	13 9	2	5
W29	21 30	14 21	0n42	25 41	2 13	24 56	1 45	20 39	1 25	3 38	1 13	20 25	1 47	5 49	0 46	18 46	0 6	11 28	17 21	16 10	15 53	15 50	13 8	2	5
T 30	21 s40	11n10	1n43	25 s37	2 s 8	24 s52	1 s46	20 s28	1 s25	3 s41	1n13	20n24	1 s47	5 s49	0 s46	18n46	0 s 6	11 s28	17 s21	16n10	15n54	15n49	13n 7	2 s	5

Julian Day Number = 2301734.5, Delta T = 103.59 sec
Ecliptic obliquity = 23°29'27, Nutation = - 0°00'13, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°00'58, Lahiri = 18°07'58Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1589
geocentric

DECEMBER 1589 GC

00:00 UT

Day	Sid.t	☉	☽	☿	♀	♂	♃	♄	♅	♆	♇	☊	☊	⚸	⚷	Day
F 1	4 38 50	8♐50'17	17♍17	29♐48	11♑19	5♒38	12♎17	11°R 6	17♓ 7	5°R46	11°R19	15°R40	16♌31	17♌ 6	10°R47	F 1
S 2	4 42 47	9°51'16	29°25	0♑38	12°33	6°24	12°27	11♊ 1	17° 7	5♌45	11♈19	15♌38	16°28	17°13	10♉44	S 2
S 3	4 46 43	10°52'15	11♎50	1°23	13°46	7°10	12°36	10°56	17° 7	5°44	11°18	15°34	16°25	17°19	10°41	S 3
M 4	4 50 40	11°53'16	24°36	2° 1	15° 0	7°56	12°46	10°51	17° 8	5°44	11°18	15°27	16°21	17°26	10°39	M 4
T 5	4 54 36	12°54'18	7♏47	2°32	16°14	8°42	12°55	10°46	17° 8	5°43	11°17	15°18	16°18	17°33	10°36	T 5
W 6	4 58 33	13°55'20	21°22	2°54	17°28	9°28	13° 4	10°41	17° 9	5°42	11°17	15° 8	16°15	17°39	10°34	W 6
T 7	5 2 30	14°56'24	5♐19	3° 7	18°41	10°14	13°13	10°36	17° 9	5°41	11°16	14°57	16°12	17°46	10°31	T 7
F 8	5 6 26	15°57'29	19°36	3°R10	19°55	11° 1	13°22	10°31	17°10	5°40	11°16	14°47	16° 9	17°53	10°29	F 8
S 9	5 10 23	16°58'34	4♑ 5	3° 3	21° 8	11°47	13°31	10°26	17°10	5°39	11°16	14°39	16° 6	17°59	10°26	S 9
S 10	5 14 19	17°59'40	18°40	2°44	22°22	12°33	13°40	10°21	17°11	5°38	11°15	14°34	16° 2	18° 6	10°24	S 10
M11	5 18 16	19° 0'47	3♒14	2°13	23°36	13°19	13°48	10°16	17°12	5°37	11°15	14°31	15°59	18°12	10°22	M11
T 12	5 22 12	20° 1'54	17°43	1°31	24°49	14° 5	13°57	10°11	17°12	5°36	11°14	14°D31	15°56	18°19	10°19	T 12
W13	5 26 9	21° 3'01	2♓ 2	0°38	26° 2	14°52	14° 5	10° 7	17°13	5°35	11°14	14°32	15°53	18°26	10°17	W13
T 14	5 30 5	22° 4'08	16° 9	29♐35	27°16	15°38	14°13	10° 2	17°14	5°34	11°14	14°R33	15°50	18°32	10°15	T 14
F 15	5 34 2	23° 5'16	0♈ 4	28°23	28°29	16°24	14°21	9°57	17°15	5°33	11°14	14°32	15°47	18°39	10°13	F 15
S 16	5 37 59	24° 6'23	13°46	27° 6	29°43	17°10	14°29	9°52	17°16	5°32	11°13	14°31	15°43	18°46	10°11	S 16
S 17	5 41 55	25° 7'31	27°16	25°44	0♒56	17°57	14°37	9°48	17°17	5°30	11°13	14°26	15°40	18°52	10° 9	S 17
M18	5 45 52	26° 8'39	10♉34	24°21	2° 9	18°43	14°45	9°43	17°18	5°29	11°13	14°20	15°37	18°59	10° 7	M18
T 19	5 49 48	27° 9'47	23°40	23° 1	3°22	19°29	14°52	9°38	17°19	5°28	11°13	14°12	15°34	19° 6	10° 5	T 19
W20	5 53 45	28°10'56	6♊33	21°44	4°35	20°15	15° 0	9°34	17°20	5°27	11°13	14° 3	15°31	19°12	10° 3	W20
T 21	5 57 41	29°12'04	19°14	20°34	5°48	21° 2	15° 7	9°29	17°22	5°25	11°13	13°55	15°27	19°19	10° 1	T 21
F 22	6 1 38	0♉13'13	1♋42	19°32	7° 1	21°48	15°14	9°25	17°23	5°24	11°12	13°47	15°24	19°26	9°59	F 22
S 23	6 5 34	1°14'22	13°58	18°40	8°14	22°34	15°21	9°20	17°24	5°23	11°12	13°41	15°21	19°32	9°58	S 23
S 24	6 9 31	2°15'31	26° 3	17°58	9°27	23°20	15°28	9°16	17°26	5°21	11°12	13°37	15°18	19°39	9°56	S 24
M25	6 13 28	3°16'41	7♌59	17°27	10°40	24° 7	15°35	9°12	17°27	5°20	11°12	13°D36	15°15	19°45	9°55	M25
T 26	6 17 24	4°17'51	19°48	17° 6	11°53	24°53	15°42	9° 7	17°28	5°19	11°D12	13°36	15°12	19°52	9°53	T 26
W27	6 21 21	5°19'01	1♍35	16°55	13° 6	25°39	15°48	9° 3	17°30	5°17	11°12	13°37	15° 8	19°59	9°52	W27
T 28	6 25 17	6°20'11	13°23	16°D53	14°18	26°25	15°54	8°59	17°32	5°16	11°12	13°39	15° 5	20° 5	9°50	T 28
F 29	6 29 14	7°21'21	25°17	17° 1	15°31	27°11	16° 0	8°55	17°33	5°14	11°12	13°40	15° 2	20°12	9°49	F 29
S 30	6 33 10	8°22'32	7♎22	17°16	16°43	27°58	16° 6	8°51	17°35	5°13	11°13	13°R41	14°59	20°19	9°47	S 30
S 31	6 37 7	9♉23'42	19♎44	17♐40	17♒56	28♒44	16♎12	8♊47	17♓36	5♌12	11♈13	13♌41	14♌56	20♌25	9♉46	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	21s49	7n30	2n40	25s31	2s 1	24s48	1s48	20s16	1s24	3s45	1n13	20n23	1s47	5s49	0s46	18n46	0s 6	11s28	17s21	16n10	15n55	15n48	13n 6	2s 5
S 2	21 59	3 28	3 31	25 23	1 54	24 42	1 49	20 3	1 23	3 48	1 13	20 23	1 47	5 48	0 46	18 47	0 6	11 28	17 20	16 11	15 56	15 46	13 5	2 5
S 3	22 7	0s48	4 14	25 15	1 46	24 36	1 50	19 51	1 22	3 52	1 13	20 22	1 47	5 48	0 46	18 47	0 6	11 28	17 20	16 12	15 57	15 45	13 4	2 6
M 4	22 16	5 8	4 45	25 4	1 36	24 29	1 51	19 38	1 22	3 55	1 14	20 22	1 47	5 48	0 46	18 47	0 6	11 27	17 20	16 14	15 58	15 44	13 4	2 6
T 5	22 24	9 22	5 2	24 53	1 25	24 21	1 52	19 26	1 21	3 59	1 14	20 21	1 46	5 48	0 46	18 47	0 6	11 27	17 19	16 17	15 59	15 43	13 3	2 6
W 6	22 31	13 16	5 2	24 40	1 13	24 13	1 53	19 13	1 20	4 2	1 14	20 20	1 46	5 48	0 46	18 47	0 6	11 27	17 19	16 20	16 0	15 42	13 2	2 6
T 7	22 38	16 33	4 46	24 26	0 59	24 3	1 54	18 59	1 20	4 6	1 14	20 20	1 46	5 47	0 46	18 48	0 6	11 27	17 19	16 23	16 1	15 41	13 1	2 6
F 8	22 45	18 55	4 11	24 11	0 44	23 54	1 54	18 46	1 19	4 9	1 14	20 19	1 46	5 47	0 46	18 48	0 6	11 27	17 18	16 26	16 2	15 39	13 0	2 6
S 9	22 51	20 7	3 19	23 55	0 28	23 43	1 55	18 32	1 18	4 12	1 14	20 19	1 46	5 47	0 46	18 48	0 6	11 27	17 18	16 28	16 3	15 38	13 0	2 6
S 10	22 57	19 58	2 14	23 38	0 10	23 32	1 56	18 19	1 17	4 15	1 15	20 18	1 46	5 47	0 46	18 48	0 6	11 27	17 18	16 30	16 4	15 37	12 59	2 6
M11	23 2	18 30	1 0	23 20	0n 9	23 20	1 56	18 5	1 17	4 19	1 15	20 17	1 46	5 46	0 46	18 49	0 6	11 26	17 17	16 31	16 5	15 36	12 58	2 6
T 12	23 7	15 50	0s17	23 1	0 28	23 7	1 56	17 51	1 16	4 22	1 15	20 17	1 46	5 46	0 46	18 49	0 6	11 26	17 17	16 31	16 6	15 34	12 57	2 6
W13	23 11	12 13	1 33	22 41	0 48	22 54	1 57	17 36	1 15	4 25	1 15	20 16	1 46	5 46	0 46	18 49	0 6	11 26	17 17	16 31	16 7	15 33	12 57	2 6
T 14	23 15	7 57	2 42	22 21	1 8	22 40	1 57	17 22	1 14	4 28	1 15	20 16	1 45	5 45	0 46	18 50	0 6	11 26	17 16	16 30	16 8	15 32	12 56	2 6
F 15	23 19	3 20	3 40	22 1	1 28	22 25	1 57	17 7	1 13	4 31	1 16	20 15	1 45	5 45	0 46	18 50	0 6	11 25	17 16	16 30	16 8	15 31	12 55	2 6
S 16	23 22	1n23	4 25	21 41	1 47	22 10	1 57	16 53	1 13	4 34	1 16	20 15	1 45	5 44	0 46	18 50	0 6	11 25	17 16	16 31	16 9	15 30	12 55	2 6
S 17	23 24	5 57	4 54	21 21	2 4	21 54	1 57	16 38	1 12	4 36	1 16	20 14	1 45	5 44	0 46	18 50	0 6	11 25	17 15	16 32	16 10	15 28	12 54	2 6
M18	23 26	10 10	5 7	21 2	2 20	21 37	1 57	16 23	1 11	4 39	1 16	20 14	1 45	5 43	0 45	18 51	0 6	11 25	17 15	16 34	16 11	15 27	12 54	2 6
T 19	23 28	13 49	5 4	20 44	2 34	21 20	1 57	16 7	1 10	4 42	1 16	20 13	1 45	5 43	0 45	18 51	0 6	11 24	17 14	16 36	16 12	15 26	12 53	2 6
W20	23 29	16 46	4 45	20 29	2 46	21 3	1 57	15 52	1 10	4 45	1 17	20 12	1 45	5 43	0 45	18 51	0 6	11 24	17 14	16 39	16 13	15 25	12 52	2 6
T 21	23 29	18 52	4 12	20 15	2 55	20 44	1 56	15 36	1 9	4 47	1 17	20 12	1 44	5 42	0 45	18 52	0 6	11 24	17 14	16 41	16 14	15 23	12 52	2 6
F 22	23 29	20 1	3 27	20 4	3 1	20 25	1 56	15 21	1 8	4 50	1 17	20 11	1 44	5 41	0 45	18 52	0 6	11 24	17 13	16 43	16 15	15 22	12 51	2 6
S 23	23 29	20 12	2 34	19 55	3 6	20 6	1 55	15 5	1 7	4 52	1 17	20 11	1 44	5 41	0 45	18 52	0 6	11 23	17 13	16 45	16 16	15 21	12 51	2 6
S 24	23 28	19 27	1 34	19 50	3 8	19 46	1 55	14 49	1 6	4 55	1 18	20 10	1 44	5 40	0 45	18 53	0 6	11 23	17 13	16 46	16 17	15 20	12 50	2 6
M25	23 27	17 49	0 31	19 47	3 8	19 25	1 54	14 33	1 6	4 57	1 18	20 10	1 44	5 40	0 45	18 53	0 6	11 23	17 12	16 47	16 18	15 18	12 50	2 6
T 26	23 25	15 27	0n34	19 46	3 6	19 4	1 53	14 16	1 5	4 59	1 18	20 10	1 44	5 39	0 45	18 53	0 6	11 22	17 12	16 47	16 19	15 17	12 49	2 6
W27	23 23	12 26	1 37	19 48	3 3	18 43	1 52	14 0	1 4	5 2	1 18	20 9	1 43	5 39	0 45	18 54	0 6	11 22	17 12	16 46	16 20	15 16	12 49	2 6
T 28	23 20	8 56	2 35	19 53	2 59	18 21	1 51	13 44	1 3	5 4	1 18	20 9	1 43	5 38	0 45	18 54	0 6	11 22	17 11	16 46	16 21	15 15	12 48	2 6
F 29	23 17	5 4	3 28	19 59	2 53	17 58	1 50	13 27	1 2	5 6	1 19	20 8	1 43	5 37	0 45	18 54	0 6	11 21	17 11	16 45	16 22	15 13	12 48	2 6
S 30	23 14	0 56	4 13	20 7	2 47	17 35	1 49	13 10	1 2	5 8	1 19	20 8	1 43	5 37	0 45	18 55	0 6	11 21	17 10	16 45	16 23	15 12	12 48	2 5
S 31	23s 9	3s19	4n46	20s16	2n40	17s12	1s47	12s53	1s 1	5s10	1n19	20n 7	1s43	5s36	0s45	18n55	0s 6	11s21	17s10	16n45	16n24	15n11	12n47	2s 5

Julian Day Number = 2301764.5, Delta T = 103.46 sec
Ecliptic obliquity = 23°29'26, Nutation = - 0°00'13, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°01'02, Lahiri = 18°08'02Greg. Calendar