



Astrodienst Ephemeris Tables for the year 1691

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 1691

geocentric

JANUARY 1691 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	6 43 11	10°35'41"15	26°30'00"00	5°30'15"15	19°30'08"00	14°30'53"00	1°30'36"00	26°30'53"00	27°30'48"00	13°30'11"00	27°30'05"00	9°30'43"00	11°30'24"00	20°30'25"00	6°30'22"00	M 1
T 2	6 47 8	11°55'26"00	7°30'49"00	6°51'00"00	19°32'00"00	15°37'00"00	1°44'00"00	26°58'00"00	27°30'46"00	13°30'02"00	27°30'04"00	9°30'35"00	11°30'21"00	20°30'32"00	6°30'20"00	T 2
W 3	6 51 4	12°56'37"00	19°30'00"00	8°27'00"00	19°54'00"00	16°20'00"00	1°51'00"00	27°04'00"00	27°45'00"00	13°30'04"00	27°02'00"00	9°30'30"00	11°30'18"00	20°30'39"00	6°30'17"00	W 3
T 4	6 55 1	13°57'48"00	1°30'33"00	10°03'00"00	20°14'00"00	17°03'00"00	1°59'00"00	27°10'00"00	27°43'00"00	13°30'05"00	27°01'00"00	9°30'28"00	11°30'15"00	20°30'46"00	6°30'14"00	T 4
F 5	6 58 58	14°58'58"00	13°30'34"00	11°39'00"00	20°32'00"00	17°47'00"00	2°06'00"00	27°15'00"00	27°42'00"00	13°30'06"00	27°00'00"00	9°30'28"00	11°30'11"00	20°30'52"00	6°30'12"00	F 5
S 6	7 2 54	16°00'07"00	25°47'00"00	13°16'00"00	20°48'00"00	18°31'00"00	2°14'00"00	27°21'00"00	27°40'00"00	13°30'08"00	26°58'00"00	9°30'29"00	11°30'08"00	20°30'59"00	6°30'09"00	S 6
S 7	7 6 51	17°01'16"00	8°30'16"00	14°54'00"00	21°02'00"00	19°14'00"00	2°23'00"00	27°26'00"00	27°39'00"00	13°30'09"00	26°57'00"00	9°30'30"00	11°30'05"00	21°06'00"00	6°30'07"00	S 7
M 8	7 10 47	18°02'25"00	21°06'00"00	16°32'00"00	21°14'00"00	19°58'00"00	2°31'00"00	27°32'00"00	27°38'00"00	13°30'11"00	26°56'00"00	9°30'30"00	11°30'02"00	21°12'00"00	6°30'04"00	M 8
T 9	7 14 44	19°03'32"00	4°30'21"00	18°10'00"00	21°23'00"00	20°41'00"00	2°39'00"00	27°37'00"00	27°36'00"00	13°30'12"00	26°54'00"00	9°30'29"00	10°59'59"00	21°19'00"00	6°30'02"00	T 9
W10	7 18 40	20°04'39"00	18°06'00"00	19°49'00"00	21°31'00"00	21°25'00"00	2°48'00"00	27°42'00"00	27°35'00"00	13°30'14"00	26°53'00"00	9°30'26"00	10°55'59"00	21°26'00"00	6°30'00"00	W10
T 11	7 22 37	21°05'45"00	2°10'19"00	21°28'00"00	21°35'00"00	22°09'00"00	2°56'00"00	27°47'00"00	27°34'00"00	13°30'15"00	26°52'00"00	9°30'20"00	10°52'59"00	21°32'00"00	5°59'57"00	T 11
F 12	7 26 33	22°06'51"00	17°01'00"00	23°08'00"00	21°38'00"00	22°52'00"00	3°05'00"00	27°53'00"00	27°33'00"00	13°30'17"00	26°50'00"00	9°30'13"00	10°49'59"00	21°39'00"00	5°59'55"00	F 12
S 13	7 30 30	23°07'56"00	2°30'04"00	24°49'00"00	21°38'00"00	23°36'00"00	3°14'00"00	27°58'00"00	27°31'00"00	13°30'18"00	26°49'00"00	9°30'06"00	10°46'59"00	21°46'00"00	5°59'53"00	S 13
S 14	7 34 27	24°09'00"00	17°21'00"00	26°30'00"00	21°35'00"00	24°20'00"00	3°23'00"00	28°03'00"00	27°30'00"00	13°30'20"00	26°48'00"00	8°59'59"00	10°43'59"00	21°52'00"00	5°59'51"00	S 14
M15	7 38 23	25°10'04"00	2°30'41"00	28°11'00"00	21°30'00"00	25°04'00"00	3°33'00"00	28°08'00"00	27°29'00"00	13°30'22"00	26°46'00"00	8°59'53"00	10°40'59"00	21°59'00"00	5°59'49"00	M15
T 16	7 42 20	26°11'07"00	17°51'00"00	29°53'00"00	21°22'00"00	25°48'00"00	3°42'00"00	28°12'00"00	27°28'00"00	13°30'23"00	26°45'00"00	8°49'59"00	10°36'59"00	22°06'00"00	5°49'47"00	T 16
W17	7 46 16	27°12'09"00	2°10'44"00	1°30'36"00	21°12'00"00	26°32'00"00	3°52'00"00	28°17'00"00	27°27'00"00	13°30'25"00	26°44'00"00	8°49'48"00	10°33'59"00	22°13'00"00	5°49'45"00	W17
T 18	7 50 13	28°13'10"00	17°13'00"00	3°18'00"00	20°59'00"00	27°16'00"00	4°01'00"00	28°22'00"00	27°27'00"00	13°30'27"00	26°42'00"00	8°48'59"00	10°30'59"00	22°19'00"00	5°49'43"00	T 18
F 19	7 54 9	29°14'12"00	1°10'14"00	5°02'00"00	20°44'00"00	28°00'00"00	4°11'00"00	28°26'00"00	27°26'00"00	13°30'28"00	26°41'00"00	8°49'59"00	10°27'59"00	22°26'00"00	5°49'42"00	F 19
S 20	7 58 6	0°15'12"00	14°47'00"00	6°46'00"00	20°26'00"00	28°44'00"00	4°21'00"00	28°31'00"00	27°25'00"00	13°30'30"00	26°40'00"00	8°50'59"00	10°24'59"00	22°33'00"00	5°49'40"00	S 20
S 21	8 2 2	1°16'12"00	27°55'00"00	8°30'00"00	20°06'00"00	29°28'00"00	4°31'00"00	28°36'00"00	27°24'00"00	13°30'32"00	26°38'00"00	8°51'59"00	10°21'59"00	22°39'00"00	5°38'59"00	S 21
M22	8 5 59	2°17'12"00	10°30'40"00	10°14'00"00	19°44'00"00	0°30'12"00	4°41'00"00	28°40'00"00	27°23'00"00	13°30'34"00	26°37'00"00	8°51'59"00	10°17'59"00	22°46'00"00	5°38'57"00	M22
T 23	8 9 56	3°18'11"00	23°07'00"00	11°59'00"00	19°20'00"00	0°56'00"00	4°51'00"00	28°44'00"00	27°23'00"00	13°30'36"00	26°36'00"00	8°49'59"00	10°14'59"00	22°53'00"00	5°38'55"00	T 23
W24	8 13 52	4°19'09"00	5°30'20"00	13°44'00"00	18°53'00"00	1°41'00"00	5°01'00"00	28°49'00"00	27°22'00"00	13°30'37"00	26°34'00"00	8°46'59"00	10°11'59"00	22°59'00"00	5°38'53"00	W24
T 25	8 17 49	5°20'07"00	17°22'00"00	15°29'00"00	18°24'00"00	2°25'00"00	5°12'00"00	28°53'00"00	27°22'00"00	13°30'39"00	26°33'00"00	8°40'59"00	10°08'59"00	23°06'00"00	5°38'53"00	T 25
F 26	8 21 45	6°21'04"00	29°18'00"00	17°14'00"00	17°54'00"00	3°09'00"00	5°23'00"00	28°57'00"00	27°21'00"00	13°30'41"00	26°32'00"00	8°35'59"00	10°05'59"00	23°13'00"00	5°38'52"00	F 26
S 27	8 25 42	7°22'00"00	11°30'09"00	18°58'00"00	17°22'00"00	3°53'00"00	5°33'00"00	29°01'00"00	27°21'00"00	13°30'43"00	26°30'00"00	8°28'59"00	10°02'59"00	23°19'00"00	5°38'50"00	S 27
S 28	8 29 38	8°22'55"00	22°59'00"00	20°42'00"00	16°49'00"00	4°38'00"00	5°44'00"00	29°05'00"00	27°20'00"00	13°30'45"00	26°29'00"00	8°23'59"00	9°58'59"00	23°26'00"00	5°29'59"00	S 28
M29	8 33 35	9°23'48"00	4°40'49"00	22°25'00"00	16°14'00"00	5°22'00"00	5°55'00"00	29°09'00"00	27°20'00"00	13°30'47"00	26°28'00"00	8°18'59"00	9°55'59"00	23°33'00"00	5°28'59"00	M29
T 30	8 37 31	10°24'41"00	16°41'00"00	24°08'00"00	15°38'00"00	6°07'00"00	6°06'00"00	29°12'00"00	27°20'00"00	13°30'49"00	26°26'00"00	8°15'59"00	9°52'59"00	23°39'00"00	5°27'59"00	T 30
W31	8 41 28	11°25'33"00	28°30'37"00	25°40'49"00	15°30'02"00	6°30'51"00	6°30'17"00	29°16'00"00	27°20'00"00	13°30'51"00	26°25'00"00	8°13'59"00	9°49'59"00	23°46'00"00	5°27'59"00	W31

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
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ASTRODIENST EPHEMERIS for the year 1691

geocentric

FEBRUARY 1691 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	8 45 25	12°26'23	10°39	27°28	14°R25	7°36	6°28	29°11	27°R19	13°53	26°R24	8°D12	9°46	23°53	5°R26	T 1
F 2	8 49 21	13°27'12	22°49	29° 5	13°48	8°20	6°40	29°23	27°R19	13°55	26°R23	8°R13	9°42	24° 0	5°R25	F 2
S 3	8 53 18	14°28'00	5°10	0°40	13°11	9° 5	6°51	29°27	27°19	13°57	26°21	8°15	9°39	24° 6	5°24	S 3
S 4	8 57 14	15°28'46	17°45	2°11	12°34	9°49	7° 3	29°30	27°D19	13°59	26°20	8°16	9°36	24°13	5°24	S 4
M 5	9 1 11	16°29'30	0°37	3°39	11°57	10°34	7°14	29°33	27°19	14° 1	26°19	8°18	9°33	24°20	5°23	M 5
T 6	9 5 7	17°30'13	13°49	5° 2	11°21	11°19	7°26	29°36	27°19	14° 3	26°18	8°R18	9°30	24°26	5°23	T 6
W 7	9 9 4	18°30'54	27°24	6°21	10°47	12° 3	7°38	29°39	27°20	14° 5	26°16	8°18	9°27	24°33	5°23	W 7
T 8	9 13 0	19°31'34	11°12	7°33	10°13	12°48	7°50	29°42	27°20	14° 7	26°15	8°17	9°23	24°40	5°22	T 8
F 9	9 16 57	20°32'12	25°47	8°40	9°41	13°33	8° 2	29°45	27°20	14° 9	26°14	8°15	9°20	24°46	5°22	F 9
S 10	9 20 54	21°32'48	10°31	9°39	9°10	14°17	8°14	29°48	27°20	14°12	26°13	8°13	9°17	24°53	5°D22	S 10
S 11	9 24 50	22°33'23	25°31	10°30	8°42	15° 2	8°26	29°51	27°21	14°14	26°11	8°11	9°14	25° 0	5°22	S 11
M12	9 28 47	23°33'55	10°37	11°12	8°15	15°47	8°38	29°53	27°21	14°16	26°10	8° 9	9°11	25° 6	5°22	M12
T 13	9 32 43	24°34'27	25°42	11°46	7°50	16°32	8°51	29°56	27°22	14°18	26° 9	8° 8	9° 7	25°13	5°22	T 13
W14	9 36 40	25°34'56	10°36	12°10	7°28	17°17	9° 3	29°58	27°22	14°20	26° 8	8°D 8	9° 4	25°20	5°23	W14
T 15	9 40 36	26°35'24	25°10	12°24	7° 7	18° 2	9°15	0° 0	27°23	14°22	26° 7	8° 8	9° 1	25°26	5°23	T 15
F 16	9 44 33	27°35'51	9°21	12°R28	6°49	18°47	9°28	0° 3	27°23	14°25	26° 6	8° 9	8°58	25°33	5°23	F 16
S 17	9 48 29	28°36'16	23° 5	12°21	6°34	19°32	9°41	0° 5	27°24	14°27	26° 5	8°10	8°55	25°40	5°24	S 17
S 18	9 52 26	29°36'40	6°23	12° 5	6°21	20°17	9°53	0° 7	27°25	14°29	26° 4	8°11	8°52	25°46	5°24	S 18
M19	9 56 23	0°37'02	19°16	11°39	6°11	21° 2	10° 6	0° 9	27°25	14°31	26° 2	8°12	8°48	25°53	5°25	M19
T 20	10 0 19	1°37'23	1°47	11° 4	6° 3	21°47	10°19	0°10	27°26	14°33	26° 1	8°R12	8°45	26° 0	5°26	T 20
W21	10 4 16	2°37'43	14° 2	10°22	5°57	22°32	10°32	0°12	27°27	14°36	26° 0	8°12	8°42	26° 7	5°26	W21
T 22	10 8 12	3°38'01	26° 3	9°32	5°54	23°17	10°45	0°14	27°28	14°38	25°59	8°11	8°39	26°13	5°27	T 22
F 23	10 12 9	4°38'18	7°35	8°37	5°D54	24° 2	10°58	0°15	27°29	14°40	25°58	8°11	8°36	26°20	5°28	F 23
S 24	10 16 5	5°38'33	19°46	7°38	5°56	24°47	11°11	0°17	27°30	14°42	25°57	8°10	8°33	26°27	5°29	S 24
S 25	10 20 2	6°38'47	1°35	6°36	6° 0	25°33	11°24	0°18	27°31	14°45	25°56	8°10	8°29	26°33	5°30	S 25
M26	10 23 58	7°38'59	13°27	5°33	6° 6	26°18	11°37	0°19	27°32	14°47	25°55	8°10	8°26	26°40	5°31	M26
T 27	10 27 55	8°39'09	25°24	4°31	6°15	27° 3	11°51	0°20	27°34	14°49	25°54	8°D10	8°23	26°47	5°33	T 27
W28	10 31 52	9°39'17	7°29	3°30	6°26	27°48	12°17	0°21	27°35	14°52	25°53	8°R10	8°20	26°53	5°34	W28

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	
T 1	17s 6	7s23	0n13	13s13	0s54	9s14	7n37	23s51	0s35	1n29	1s11	18s 2	2n 3	19n26	0s10	T 1
F 2	16 49	1 38	1 20	12 29	0 44	9 17	7 45	23 49	0 36	1 34	1 11	18 3	2 3	19 26	0 10	F 2
S 3	16 31	4n15	2 23	11 46	0 32	9 20	7 52	23 47	0 37	1 39	1 11	18 3	2 3	19 26	0 10	S 3
S 4	16 13	10 4	3 21	11 2	0 21	9 24	7 58	23 44	0 38	1 43	1 10	18 4	2 4	19 26	0 10	S 4
M 5	15 55	15 36	4 10	10 19	0 8	9 29	8 4	23 42	0 38	1 48	1 10	18 5	2 4	19 26	0 10	M 5
T 6	15 37	20 35	4 47	9 36	0n 5	9 35	8 8	23 39	0 39	1 53	1 10	18 5	2 4	19 26	0 10	T 6
W 7	15 18	24 39	5 10	8 54	0 19	9 41	8 11	23 36	0 40	1 58	1 10	18 6	2 4	19 26	0 10	W 7
T 8	14 59	27 23	5 15	8 14	0 34	9 47	8 14	23 32	0 40	2 3	1 10	18 6	2 4	19 26	0 10	T 8
F 9	14 40	28 26	5 1	7 35	0 49	9 54	8 15	23 28	0 41	2 8	1 10	18 6	2 4	19 26	0 10	F 9
S 10	14 21	27 30	4 27	6 59	1 4	10 1	8 16	23 24	0 42	2 12	1 9	18 7	2 5	19 26	0 10	S 10
S 11	14 1	24 35	3 35	6 25	1 20	10 9	8 15	23 20	0 42	2 17	1 9	18 7	2 5	19 27	0 10	S 11
M12	13 41	19 57	2 26	5 54	1 36	10 16	8 14	23 16	0 43	2 22	1 9	18 8	2 5	19 27	0 10	M12
T 13	13 21	14 3	1 8	5 27	1 52	10 24	8 12	23 11	0 44	2 27	1 9	18 8	2 5	19 27	0 10	T 13
W14	13 1	7 24	0s14	5 3	2 7	10 32	8 9	23 6	0 45	2 32	1 9	18 8	2 5	19 27	0 10	W14
T 15	12 40	0 30	1 33	4 44	2 22	10 41	8 6	23 1	0 45	2 37	1 9	18 9	2 5	19 27	0 10	T 15
F 16	12 20	6s14	2 45	4 29	2 37	10 49	8 2	22 55	0 46	2 43	1 8	18 9	2 6	19 27	0 10	F 16
S 17	11 59	12 28	3 44	4 18	2 51	10 57	7 57	22 50	0 47	2 48	1 8	18 9	2 6	19 27	0 10	S 17
S 18	11 38	17 55	4 30	4 13	3 3	11 5	7 52	22 44	0 47	2 53	1 8	18 10	2 6	19 28	0 10	S 18
M19	11 16	22 23	5 0	4 12	3 15	11 14	7 46	22 38	0 48	2 58	1 8	18 10	2 6	19 28	0 10	M19
T 20	10 55	25 42	5 15	4 16	3 24	11 22	7 40	22 31	0 49	3 3	1 8	18 10	2 6	19 28	0 10	T 20
W21	10 33	27 45	5 16	4 25	3 32	11 29	7 33	22 25	0 50	3 8	1 8	18 10	2 6	19 28	0 10	W21
T 22	10 12	28 27	5 2	4 38	3 38	11 37	7 26	22 18	0 50	3 13	1 8	18 10	2 7	19 28	0 10	T 22
F 23	9 50	27 50	4 36	4 55	3 42	11 44	7 19	22 11	0 51	3 19	1 7	18 11	2 7	19 29	0 10	F 23
S 24	9 28	25 56	3 58	5 15	3 44	11 51	7 11	22 3	0 52	3 24	1 7	18 11	2 7	19 29	0 10	S 24
S 25	9 5	22 55	3 10	5 39	3 43	11 58	7 3	21 56	0 52	3 29	1 7	18 11	2 7	19 29	0 10	S 25
M26	8 43	18 56	2 13	6 4	3 41	12 5	6 55	21 48	0 53	3 34	1 7	18 11	2 7	19 30	0 10	M26
T 27	8 20	14 11	1 10	6 31	3 36	12 11	6 46	21 40	0 54	3 40	1 7	18 11	2 7	19 30	0 9	T 27
W28	7s58	8s50	0s 4	6s59	3n29	12s17	6n37	21s32	0s54	3n45	1s 7	18s11	2n 8	19n30	0s 9	W28

Julian Day Number = 2338716.5, Delta T = 17.91 sec

Ecliptic obliquity = 23°28'55, Nutation = 0°00'07, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 20°25'41, Lahiri = 19°32'42Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1691

geocentric

MARCH 1691 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	10 35 48	10 ^h 39'24"	19 ^h 44'	2°R32	6 ^h 39'	28 ^h 34'	12 ^h 17'	0 ^h 22'	27 ^h 36'	14 ^h 54'	25°R53	8°R10	8 ^h 17'	27 ^h 0'	5 ^h 35'	T 1
F 2	10 39 45	11°39'28"	2 ^h 10'	1 ^h 39'	6°55'	29°19'	12°31'	0°23'	27°38'	14°56'	25°52'	8 ^h 10'	8°13'	27°7'	5°37'	F 2
S 3	10 43 41	12°39'31"	14°47'	0°50'	7°12'	0 ^h 4'	12°44'	0°24'	27°39'	14°58'	25°51'	8°9'	8°10'	27°13'	5°38'	S 3
S 4	10 47 38	13°39'31"	27°38'	0°7'	7°31'	0°50'	12°58'	0°24'	27°40'	15°1'	25°50'	8°9'	8°7'	27°20'	5°40'	S 4
M 5	10 51 34	14°39'30"	10 ^h 44'	29°31'	7°52'	1°35'	13°11'	0°25'	27°42'	15°3'	25°49'	8°8'	8°4'	27°27'	5°42'	M 5
T 6	10 55 31	15°39'26"	24°4'	29°0'	8°15'	2°21'	13°25'	0°25'	27°43'	15°5'	25°48'	8°7'	8°1'	27°33'	5°43'	T 6
W 7	10 59 27	16°39'21"	7 ^h 11'	28°36'	8°39'	3°6'	13°39'	0°26'	27°45'	15°7'	25°48'	8°7'	7°58'	27°40'	5°45'	W 7
T 8	11 3 24	17°39'13"	21°34'	28°19'	9°6'	3°52'	13°52'	0°26'	27°47'	15°10'	25°47'	8°D 7'	7°54'	27°47'	5°47'	T 8
F 9	11 7 21	18°39'02"	5 ^h 43'	28°8'	9°34'	4°37'	14°6'	0°26'	27°48'	15°12'	25°46'	8°7'	7°51'	27°53'	5°49'	F 9
S 10	11 11 17	19°38'50"	20°6'	28°D 4'	10°3'	5°22'	14°20'	0°R26'	27°50'	15°14'	25°45'	8°8'	7°48'	28°0'	5°51'	S 10
S 11	11 15 14	20°38'35"	4 ^h 40'	28°6'	10°34'	6°8'	14°34'	0°26'	27°52'	15°17'	25°45'	8°9'	7°45'	28°7'	5°53'	S 11
M12	11 19 10	21°38'18"	19°21'	28°13'	11°7'	6°53'	14°48'	0°26'	27°54'	15°19'	25°44'	8°10'	7°42'	28°13'	5°55'	M12
T 13	11 23 7	22°37'58"	4 ^h 3'	28°26'	11°40'	7°39'	15°2'	0°25'	27°55'	15°21'	25°43'	8°R10'	7°39'	28°20'	5°58'	T 13
W14	11 27 3	23°37'37"	18°39'	28°45'	12°16'	8°25'	15°16'	0°25'	27°57'	15°23'	25°43'	8°10'	7°35'	28°27'	6°0'	W14
T 15	11 31 0	24°37'13"	3 ^h 4'	29°9'	12°52'	9°10'	15°30'	0°24'	27°59'	15°26'	25°42'	8°9'	7°32'	28°33'	6°2'	T 15
F 16	11 34 56	25°36'48"	17°10'	29°37'	13°30'	9°56'	15°44'	0°24'	28°1'	15°28'	25°42'	8°7'	7°29'	28°40'	6°5'	F 16
S 17	11 38 53	26°36'20"	0 ^h 56'	0 ^h 10'	14°9'	10°41'	15°58'	0°23'	28°3'	15°30'	25°41'	8°5'	7°26'	28°47'	6°7'	S 17
S 18	11 42 50	27°35'51"	14°18'	0°47'	14°49'	11°27'	16°12'	0°22'	28°5'	15°32'	25°40'	8°2'	7°23'	28°53'	6°10'	S 18
M19	11 46 46	28°35'20"	27°16'	1°28'	15°30'	12°13'	16°26'	0°21'	28°8'	15°35'	25°40'	7°59'	7°19'	29°0'	6°12'	M19
T 20	11 50 43	29°34'47"	9 ^h 25'	2°13'	16°12'	12°58'	16°40'	0°20'	28°10'	15°37'	25°39'	7°57'	7°16'	29°7'	6°15'	T 20
W21	11 54 39	0 ^h 34'13"	22°50'	3°1'	16°56'	13°44'	16°54'	0°19'	28°12'	15°39'	25°39'	7°56'	7°13'	29°13'	6°18'	W21
T 22	11 58 36	1°33'36"	4 ^h 31'	3°53'	17°40'	14°30'	17°9'	0°18'	28°14'	15°41'	25°39'	7°D55'	7°10'	29°20'	6°21'	T 22
F 23	12 2 32	2°32'58"	16°8'	4°47'	18°25'	15°15'	17°23'	0°17'	28°16'	15°43'	25°38'	7°56'	7°7'	29°27'	6°23'	F 23
S 24	12 6 29	3°32'18"	27°58'	5°45'	19°11'	16°1'	17°37'	0°15'	28°19'	15°46'	25°38'	7°57'	7°4'	29°34'	6°26'	S 24
S 25	12 10 25	4°31'36"	9 ^h 47'	6°46'	19°58'	16°47'	17°51'	0°14'	28°21'	15°48'	25°37'	7°59'	7°0'	29°40'	6°29'	S 25
M26	12 14 22	5°30'53"	21°42'	7°49'	20°46'	17°32'	18°6'	0°12'	28°23'	15°50'	25°37'	8°1'	6°57'	29°47'	6°33'	M26
T 27	12 18 19	6°30'07"	3 ^h 45'	8°54'	21°34'	18°18'	18°20'	0°11'	28°26'	15°52'	25°37'	8°R 2'	6°54'	29°54'	6°36'	T 27
W28	12 22 15	7°29'20"	15°59'	10°2'	22°24'	19°4'	18°34'	0°9'	28°28'	15°54'	25°36'	8°2'	6°51'	0 ^h 0'	6°39'	W28
T 29	12 26 12	8°28'30"	28°28'	11°12'	23°14'	19°50'	18°49'	0°7'	28°31'	15°56'	25°36'	8°0'	6°48'	0°7'	6°42'	T 29
F 30	12 30 8	9°27'39"	11°12'	12°25'	24°5'	20°35'	19°3'	0°5'	28°33'	15°59'	25°36'	7°57'	6°44'	0°14'	6°45'	F 30
S 31	12 34 5	10°26'45"	24°12'	13°39'	24°56'	21°21'	19°17'	0 ^h 3'	28°36'	16°1'	25°36'	7°52'	6°41'	0 ^h 20'	6°49'	S 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
T 1	7s35	3s 6	1n 4	7s28	3n21	12s22	6n28	21s23	0s55	3n50	1s 7	18s11	2n 8	19n30	0s 9	6s55
F 2	7 12	2n50	2 9	7 56	3 11	12 27	6 19	21 14	0 56	3 56	1 7	18 11	2 8	19 31	0 9	6 54
S 3	6 49	8 45	3 10	8 24	3 0	12 32	6 10	21 5	0 57	4 1	1 6	18 11	2 8	19 31	0 9	6 53
S 4	6 26	14 24	4 1	8 50	2 48	12 36	6 1	20 56	0 57	4 7	1 6	18 11	2 8	19 31	0 9	6 52
M 5	6 3	19 31	4 42	9 15	2 34	12 40	5 52	20 47	0 58	4 12	1 6	18 11	2 8	19 32	0 9	6 52
T 6	5 40	23 47	5 8	9 39	2 21	12 43	5 42	20 37	0 59	4 17	1 6	18 11	2 9	19 32	0 9	6 51
W 7	5 17	26 50	5 17	10 0	2 7	12 46	5 33	20 28	0 59	4 23	1 6	18 11	2 9	19 32	0 9	6 50
T 8	4 53	28 21	5 8	10 19	1 52	12 48	5 24	20 18	1 0	4 28	1 6	18 11	2 9	19 33	0 9	6 49
F 9	4 30	28 2	4 41	10 37	1 38	12 50	5 14	20 7	1 1	4 34	1 6	18 10	2 9	19 33	0 9	6 48
S 10	4 6	25 52	3 56	10 52	1 23	12 52	5 5	19 57	1 1	4 39	1 6	18 10	2 9	19 34	0 9	6 47
S 11	3 43	21 58	2 55	11 5	1 9	12 53	4 55	19 46	1 2	4 45	1 6	18 10	2 9	19 34	0 9	6 46
M12	3 19	16 40	1 42	11 15	0 55	12 53	4 46	19 36	1 3	4 50	1 6	18 10	2 10	19 35	0 9	6 45
T 13	2 56	10 24	0 23	11 24	0 41	12 53	4 37	19 25	1 3	4 55	1 5	18 10	2 10	19 35	0 9	6 45
W14	2 32	3 37	0s58	11 30	0 27	12 52	4 27	19 13	1 4	5 1	1 5	18 9	2 10	19 35	0 9	6 44
T 15	2 8	3s15	2 13	11 34	0 14	12 51	4 18	19 2	1 5	5 6	1 5	18 9	2 10	19 36	0 9	6 43
F 16	1 45	9 49	3 19	11 36	0 1	12 49	4 9	18 50	1 5	5 12	1 5	18 9	2 10	19 36	0 9	6 42
S 17	1 21	15 45	4 12	11 36	0s11	12 47	4 0	18 39	1 6	5 17	1 5	18 9	2 10	19 37	0 9	6 41
S 18	0 57	20 45	4 49	11 34	0 23	12 44	3 51	18 27	1 7	5 23	1 5	18 8	2 11	19 37	0 9	6 40
M19	0 34	24 36	5 10	11 30	0 34	12 41	3 42	18 15	1 7	5 28	1 5	18 8	2 11	19 38	0 9	6 39
T 20	0 10	27 10	5 15	11 24	0 45	12 37	3 33	18 2	1 8	5 34	1 5	18 7	2 11	19 38	0 9	6 39
W21	0n14	28 20	5 6	11 16	0 55	12 33	3 24	17 50	1 9	5 39	1 5	18 7	2 11	19 39	0 9	6 38
T 22	0 37	28 7	4 43	11 7	1 5	12 28	3 15	17 37	1 9	5 45	1 5	18 7	2 11	19 39	0 9	6 37
F 23	1 1	26 36	4 8	10 55	1 14	12 23	3 6	17 24	1 10	5 50	1 5	18 6	2 11	19 40	0 9	6 36
S 24	1 25	23 55	3 23	10 42	1 23	12 17	2 58	17 11	1 11	5 56	1 5	18 6	2 11	19 40	0 9	6 35
S 25	1 48	20 13	2 29	10 27	1 31	12 10	2 49	16 58	1 11	6 1	1 5	18 5	2 12	19 41	0 9	6 34
M26	2 12	15 42	1 29	10 11	1 39	12 3	2 41	16 45	1 12	6 7	1 4	18 5	2 12	19 41	0 9	6 34
T 27	2 35	10 31	0 24	9 53	1 46	11 56	2 33	16 31	1 12	6 12	1 4	18 4	2 12	19 42	0 9	6 33
W28	2 59	4 52	0n44	9 34	1 53	11 47	2 25	16 17	1 13	6 18	1 4	18 4	2 12	19 43	0 9	6 32
T 29	3 22	1n 4	1 50	9 13	1 59	11 39	2 17	16 4	1 14	6 23	1 4	18 3	2 12	19 43	0 9	6 31
F 30	3 45	7 4	2 52	8 50	2 5	11 30	2 9	15 50	1 14	6 29	1 4	18 3	2 12	19 44	0 9	6 30
S 31	4n 9	12n54	3n46	8s26	2s10	11s20	2n 1	15s35	1s15	6n34	1s 4	18s 2	2n12	19n44	0s 9	6s29

Julian Day Number = 2338744.5, Delta T = 17.87 sec
 Ecliptic obliquity = 23°28'55", Nutation = 0°00'07", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 20°25'45", Lahiri = 19°32'46"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1691

geocentric

APRIL 1691 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	12 38 1	11°25'50	7♂26	14♂56	25♂48	22♂7	19°32	0°R 1	28♂39	16♂3	25°R36	7°R47	6♂38	0♂27	6♂52	S 1
M 2	12 41 58	12°24'52	20°55	16°15	26°41	22°53	19°46	29♂59	28°41	16°5	25°35	7♂41	6°35	0°34	6°56	M 2
T 3	12 45 54	13°23'52	4♂25	17°35	27°34	23°38	20°1	29°56	28°44	16°7	25°35	7°36	6°32	0°40	6°59	T 3
W 4	12 49 51	14°22'50	18°25	18°57	28°28	24°24	20°15	29°54	28°47	16°9	25°35	7°32	6°29	0°47	7°3	W 4
T 5	12 53 47	15°21'46	2♂24	20°21	29°22	25°10	20°30	29°52	28°49	16°11	25°35	7°30	6°25	0°54	7°6	T 5
F 6	12 57 44	16°20'39	16°29	21°47	0♂17	25°56	20°44	29°49	28°52	16°13	25°35	7°D29	6°22	1°0	7°10	F 6
S 7	13 1 41	17°19'30	0♂40	23°15	1°13	26°42	20°58	29°46	28°55	16°15	25°35	7°30	6°19	1°7	7°14	S 7
S 8	13 5 37	18°18'19	14°54	24°44	2°9	27°27	21°13	29°44	28°58	16°17	25°D35	7°31	6°16	1°14	7°17	S 8
M 9	13 9 34	19°17'05	29°9	26°15	3°5	28°13	21°27	29°41	29°1	16°19	25°35	7°32	6°13	1°20	7°21	M 9
T 10	13 13 30	20°15'49	13♂23	27°48	4°2	28°59	21°42	29°38	29°4	16°21	25°35	7°R32	6°10	1°27	7°25	T 10
W 11	13 17 27	21°14'30	27°33	29°22	5°0	29°45	21°56	29°35	29°7	16°23	25°35	7°31	6°6	1°34	7°29	W 11
T 12	13 21 23	22°13'10	11♂35	0°Y58	5°57	0♂30	22°11	29°32	29°9	16°25	25°35	7°27	6°3	1°40	7°33	T 12
F 13	13 25 20	23°11'48	25°24	2°36	6°56	1°16	22°25	29°29	29°12	16°27	25°35	7°21	6°0	1°47	7°37	F 13
S 14	13 29 16	24°10'23	8♂57	4°15	7°54	2°2	22°40	29°26	29°15	16°29	25°35	7°14	5°57	1°54	7°41	S 14
S 15	13 33 13	25°8'57	22°12	5°56	8°53	2°48	22°54	29°23	29°19	16°31	25°36	7°5	5°54	2°0	7°45	S 15
M 16	13 37 10	26°7'30	5♂8	7°38	9°53	3°33	23°8	29°19	29°22	16°33	25°36	6°57	5°50	2°7	7°49	M 16
T 17	13 41 6	27°6'00	17°44	9°22	10°52	4°19	23°23	29°16	29°25	16°34	25°36	6°50	5°47	2°14	7°54	T 17
W 18	13 45 3	28°4'29	0♂3	11°8	11°53	5°5	23°37	29°12	29°28	16°36	25°36	6°44	5°44	2°20	7°58	W 18
T 19	13 48 59	29°2'56	12°7	12°56	12°53	5°51	23°52	29°9	29°31	16°38	25°37	6°40	5°41	2°27	8°2	T 19
F 20	13 52 56	0♂1'21	24°2	14°45	13°54	6°36	24°6	29°5	29°34	16°40	25°37	6°39	5°38	2°34	8°6	F 20
S 21	13 56 52	0°59'45	5♂52	16°36	14°55	7°22	24°21	29°2	29°37	16°42	25°37	6°D39	5°35	2°40	8°11	S 21
S 22	14 0 49	1°58'08	17°42	18°29	15°56	8°8	24°35	28°58	29°40	16°43	25°38	6°39	5°31	2°47	8°15	S 22
M 23	14 4 45	2°56'28	29°38	20°23	16°58	8°53	24°49	28°54	29°44	16°45	25°38	6°40	5°28	2°54	8°20	M 23
T 24	14 8 42	3°54'47	11♂45	22°19	18°0	9°39	25°4	28°51	29°47	16°47	25°38	6°R40	5°25	3°0	8°24	T 24
W 25	14 12 39	4°53'05	24°6	24°16	19°2	10°25	25°18	28°47	29°50	16°49	25°39	6°39	5°22	3°7	8°28	W 25
T 26	14 16 35	5°51'20	6°Y45	26°16	20°5	11°10	25°32	28°43	29°53	16°50	25°39	6°35	5°19	3°14	8°33	T 26
F 27	14 20 32	6°49'34	19°45	28°17	21°8	11°56	25°47	28°39	29°57	16°52	25°40	6°29	5°16	3°20	8°38	F 27
S 28	14 24 28	7°47'47	3♂5	0♂19	22°11	12°42	26°1	28°35	29°59	16°53	25°40	6°20	5°12	3°27	8°42	S 28
S 29	14 28 25	8°45'58	16°44	2°23	23°14	13°27	26°15	28°31	0♂3	16°55	25°41	6°10	5°9	3°34	8°47	S 29
M 30	14 32 21	9♂44'07	0♂40	4♂28	24♂17	14♂13	26°Y29	28♂27	0♂7	16♂57	25♂41	6♂0	5♂6	3♂40	8♂51	M 30

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	
S 1	4n32	18n15	4n29	8s 1	2s14	11s10	1n53	15s21	1s15	6n40	1s 4	18s 2	2n13	19n45	0s 9	S 1
M 2	4 55	22 48	4 58	7 34	2 19	10 59	1 45	15 7	1 16	6 45	1 4	18 1	2 13	19 45	0 9	M 2
T 3	5 18	26 11	5 11	7 6	2 22	10 48	1 38	14 52	1 17	6 51	1 4	18 1	2 13	19 46	0 9	T 3
W 4	5 41	28 3	5 6	6 36	2 25	10 37	1 30	14 37	1 17	6 56	1 4	18 0	2 13	19 47	0 9	W 4
T 5	6 4	28 10	4 42	6 5	2 28	10 25	1 23	14 23	1 18	7 2	1 4	17 59	2 13	19 47	0 9	T 5
F 6	6 26	26 28	4 2	5 33	2 30	10 12	1 16	14 8	1 18	7 7	1 4	17 59	2 13	19 48	0 9	F 6
S 7	6 49	23 5	3 7	5 0	2 31	9 59	1 9	13 53	1 19	7 13	1 4	17 58	2 13	19 49	0 9	S 7
S 8	7 11	18 18	2 0	4 26	2 32	9 46	1 2	13 37	1 20	7 18	1 4	17 57	2 13	19 49	0 9	S 8
M 9	7 34	12 30	0 45	3 50	2 33	9 32	0 55	13 22	1 20	7 24	1 4	17 57	2 14	19 50	0 9	M 9
T 10	7 56	6 3	0s32	3 13	2 33	9 18	0 49	13 6	1 21	7 29	1 4	17 56	2 14	19 50	0 9	T 10
W 11	8 18	0s39	1 46	2 35	2 32	9 3	0 42	12 51	1 21	7 35	1 4	17 55	2 14	19 51	0 9	W 11
T 12	8 40	7 15	2 54	1 56	2 31	8 48	0 35	12 35	1 22	7 40	1 4	17 54	2 14	19 52	0 9	T 12
F 13	9 2	13 24	3 49	1 15	2 30	8 32	0 29	12 19	1 22	7 45	1 4	17 54	2 14	19 52	0 9	F 13
S 14	9 23	18 47	4 31	0 34	2 28	8 16	0 23	12 4	1 23	7 51	1 4	17 53	2 14	19 53	0 9	S 14
S 15	9 45	23 8	4 57	0n 8	2 25	7 59	0 17	11 47	1 23	7 56	1 4	17 52	2 14	19 54	0 9	S 15
M 16	10 6	26 13	5 7	0 52	2 22	7 43	0 11	11 31	1 24	8 2	1 4	17 51	2 14	19 54	0 9	M 16
T 17	10 27	27 55	5 2	1 36	2 18	7 25	0 5	11 15	1 24	8 7	1 4	17 51	2 14	19 55	0 9	T 17
W 18	10 48	28 11	4 43	2 21	2 14	7 8	0s 1	10 59	1 25	8 12	1 4	17 50	2 14	19 56	0 9	W 18
T 19	11 9	27 5	4 11	3 8	2 10	6 50	0 6	10 42	1 25	8 18	1 3	17 49	2 15	19 56	0 9	T 19
F 20	11 30	24 46	3 29	3 55	2 4	6 32	0 12	10 26	1 26	8 23	1 3	17 48	2 15	19 57	0 9	F 20
S 21	11 50	21 23	2 38	4 42	1 59	6 13	0 17	10 9	1 26	8 28	1 3	17 47	2 15	19 58	0 9	S 21
S 22	12 11	17 8	1 40	5 31	1 53	5 54	0 22	9 53	1 27	8 33	1 3	17 46	2 15	19 59	0 9	S 22
M 23	12 31	12 12	0 38	6 20	1 46	5 34	0 27	9 36	1 27	8 39	1 3	17 45	2 15	19 59	0 9	M 23
T 24	12 51	6 45	0n27	7 10	1 39	5 15	0 32	9 19	1 28	8 44	1 3	17 45	2 15	20 0	0 9	T 24
W 25	13 10	0 56	1 32	8 1	1 31	4 55	0 37	9 2	1 28	8 49	1 3	17 44	2 15	20 1	0 9	W 25
T 26	13 30	5n 2	2 34	8 52	1 23	4 35	0 42	8 45	1 29	8 54	1 3	17 43	2 15	20 2	0 9	T 26
F 27	13 49	10 58	3 29	9 43	1 15	4 14	0 46	8 28	1 29	9 0	1 3	17 42	2 15	20 2	0 9	F 27
S 28	14 8	16 33	4 14	10 35	1 6	3 53	0 51	8 11	1 30	9 5	1 3	17 41	2 15	20 3	0 9	S 28
S 29	14 27	21 26	4 46	11 26	0 57	3 32	0 55	7 54	1 30	9 10	1 3	17 40	2 15	20 3	0 9	S 29
M 30	14n45	25n15	5n 2	12n18	0s47	3s11	0s59	7s37	1s30	9n15	1s 3	17s39	2n15	20n 4	0s 9	M 30

Julian Day Number = 2338775.5, Delta T = 17.83 sec
 Ecliptic obliquity = 23°28'55, Nutation = 0°00'06, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 20°25'49, Lahiri = 19°32'50Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1691

geocentric

MAY 1691 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	14 36 18	10♌42'15	14♏46	6♊35	25♋21	14♋58	26♌44	28♍23	0♎10	16♏58	25♐42	5♑R50	5♒ 3	3♓47	8♔56	T 1
W 2	14 40 14	11°40'20	29° 0	8°43	26°25	15°44	26°58	28♍18	0°13	17° 0	25°42	5♒43	5° 0	3°54	9° 1	W 2
T 3	14 44 11	12°38'24	13♌15	10°51	27°29	16°29	27°12	28°14	0°17	17° 1	25°43	5°37	4°56	4° 0	9° 6	T 3
F 4	14 48 8	13°36'26	27°29	13° 1	28°34	17°15	27°26	28°10	0°20	17° 3	25°44	5°34	4°53	4° 7	9°10	F 4
S 5	14 52 4	14°34'26	11♏40	15°11	29°38	18° 0	27°40	28° 6	0°24	17° 4	25°44	5°D33	4°50	4°14	9°15	S 5
S 6	14 56 1	15°32'23	25°45	17°22	0♌43	18°46	27°54	28° 1	0°27	17° 5	25°45	5°33	4°47	4°20	9°20	S 6
M 7	14 59 57	16°30'19	9♏44	19°33	1°48	19°31	28° 9	27°57	0°30	17° 7	25°46	5°R33	4°44	4°27	9°25	M 7
T 8	15 3 54	17°28'13	23°36	21°43	2°53	20°17	28°23	27°53	0°34	17° 8	25°46	5°32	4°41	4°34	9°30	T 8
W 9	15 7 50	18°26'06	7♏21	23°53	3°58	21° 2	28°37	27°48	0°37	17° 9	25°47	5°29	4°37	4°40	9°35	W 9
T 10	15 11 47	19°23'56	20°57	26° 3	5° 4	21°47	28°50	27°44	0°41	17°11	25°48	5°23	4°34	4°47	9°40	T 10
F 11	15 15 43	20°21'45	4♏22	28°11	6° 9	22°33	29° 4	27°40	0°44	17°12	25°49	5°14	4°31	4°54	9°45	F 11
S 12	15 19 40	21°19'33	17°35	0♎18	7°15	23°18	29°18	27°35	0°48	17°13	25°50	5° 3	4°28	5° 0	9°50	S 12
S 13	15 23 37	22°17'19	0♌34	2°24	8°21	24° 3	29°32	27°31	0°51	17°14	25°50	4°50	4°25	5° 7	9°54	S 13
M14	15 27 33	23°15'04	13°18	4°27	9°27	24°48	29°46	27°26	0°55	17°16	25°51	4°38	4°22	5°14	10° 0	M14
T 15	15 31 30	24°12'47	25°47	6°29	10°33	25°33	29°59	27°22	0°58	17°17	25°52	4°26	4°18	5°20	10° 5	T 15
W16	15 35 26	25°10'29	8♊ 1	8°29	11°40	26°19	0♌14	27°17	1° 2	17°18	25°53	4°17	4°15	5°27	10°10	W16
T 17	15 39 23	26° 8'10	20° 3	10°26	12°46	27° 4	0°27	27°13	1° 5	17°19	25°54	4°10	4°12	5°34	10°15	T 17
F 18	15 43 19	27° 5'50	1♌57	12°21	13°53	27°49	0°41	27° 8	1° 9	17°20	25°55	4° 5	4° 9	5°40	10°20	F 18
S 19	15 47 16	28° 3'29	13°46	14°13	15° 0	28°34	0°54	27° 4	1°12	17°21	25°56	4° 3	4° 6	5°47	10°25	S 19
S 20	15 51 13	29° 1'07	25°36	16° 2	16° 7	29°19	1° 8	27° 0	1°16	17°22	25°57	4° 3	4° 2	5°54	10°30	S 20
M21	15 55 9	29°58'44	7♋32	17°49	17°14	0♌4	1°22	26°55	1°19	17°23	25°58	4° 3	3°59	6° 0	10°35	M21
T 22	15 59 6	0♎56'20	19°39	19°33	18°21	0°49	1°35	26°51	1°23	17°24	25°59	4° 2	3°56	6° 7	10°40	T 22
W23	16 3 2	1°53'55	2♌4	21°14	19°28	1°34	1°48	26°46	1°26	17°25	26° 0	4° 0	3°53	6°14	10°45	W23
T 24	16 6 59	2°51'29	14°47	22°52	20°36	2°18	2° 2	26°42	1°30	17°26	26° 1	3°56	3°50	6°20	10°50	T 24
F 25	16 10 55	3°49'02	27°55	24°26	21°43	3° 3	2°15	26°37	1°33	17°27	26° 2	3°49	3°47	6°27	10°56	F 25
S 26	16 14 52	4°46'34	11♊29	25°58	22°51	3°48	2°28	26°33	1°37	17°28	26° 3	3°39	3°43	6°34	11° 1	S 26
S 27	16 18 48	5°44'05	25°26	27°27	23°59	4°33	2°42	26°28	1°40	17°28	26° 5	3°28	3°40	6°40	11° 6	S 27
M28	16 22 45	6°41'36	9♏44	28°53	25° 7	5°17	2°55	26°24	1°44	17°29	26° 6	3°17	3°37	6°47	11°11	M28
T 29	16 26 42	7°39'05	24°16	0♌15	26°15	6° 2	3° 8	26°20	1°47	17°30	26° 7	3° 6	3°34	6°54	11°16	T 29
W30	16 30 38	8°36'33	8♊55	1°35	27°23	6°47	3°21	26°15	1°51	17°31	26° 8	2°56	3°31	7° 0	11°21	W30
T 31	16 34 35	9♏34'01	23♌34	2♌51	28♌31	7♌31	3♌34	26♍11	1♎54	17♏31	26♐ 9	2♑50	3♒28	7♓ 7	11♔27	T 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat
T 1	15n 4	27n34	5n 0	13n 9	0s37	2s49	1s 4	7s19	1s31	9n20	1s 3	17s38	2n15	20n 5	0s 9	6s 8
W 2	15 22	28 8	4 39	14 0	0 27	2 27	1 7	7 2	1 31	9 25	1 3	17 37	2 15	20 6	0 9	6 7
T 3	15 40	26 49	4 1	14 51	0 17	2 5	1 11	6 45	1 32	9 30	1 3	17 36	2 15	20 6	0 9	6 7
F 4	15 57	23 46	3 8	15 40	0 6	1 43	1 15	6 27	1 32	9 36	1 3	17 35	2 15	20 7	0 9	6 6
S 5	16 14	19 18	2 3	16 29	0n 4	1 21	1 19	6 10	1 32	9 41	1 3	17 34	2 15	20 8	0 9	6 6
S 6	16 31	13 46	0 52	17 17	0 15	0 58	1 22	5 52	1 33	9 46	1 3	17 33	2 15	20 9	0 9	6 5
M 7	16 48	7 35	0s22	18 3	0 25	0 35	1 25	5 35	1 33	9 51	1 4	17 33	2 15	20 9	0 9	6 5
T 8	17 5	1 6	1 34	18 48	0 36	0 12	1 29	5 17	1 33	9 56	1 4	17 32	2 15	20 10	0 9	6 4
W 9	17 21	5s22	2 40	19 31	0 46	0n11	1 32	5 0	1 34	10 1	1 4	17 31	2 15	20 11	0 8	6 4
T 10	17 37	11 31	3 36	20 12	0 56	0 34	1 35	4 42	1 34	10 5	1 4	17 30	2 15	20 11	0 8	6 3
F 11	17 52	17 3	4 19	20 51	1 5	0 57	1 38	4 25	1 34	10 10	1 4	17 29	2 15	20 12	0 8	6 3
S 12	18 7	21 42	4 47	21 28	1 15	1 21	1 40	4 7	1 35	10 15	1 4	17 28	2 15	20 13	0 8	6 2
S 13	18 22	25 12	5 0	22 2	1 23	1 44	1 43	3 49	1 35	10 20	1 4	17 27	2 15	20 14	0 8	6 2
M14	18 37	27 21	4 57	22 34	1 31	2 8	1 45	3 32	1 35	10 25	1 4	17 26	2 15	20 14	0 8	6 2
T 15	18 51	28 5	4 41	23 3	1 39	2 32	1 48	3 14	1 36	10 30	1 4	17 25	2 15	20 15	0 8	6 1
W16	19 6	27 25	4 11	23 30	1 46	2 56	1 50	2 56	1 36	10 35	1 4	17 24	2 15	20 16	0 8	6 1
T 17	19 19	25 27	3 30	23 54	1 52	3 20	1 52	2 39	1 36	10 39	1 4	17 23	2 15	20 17	0 8	6 0
F 18	19 33	22 23	2 41	24 15	1 57	3 44	1 54	2 21	1 36	10 44	1 4	17 22	2 15	20 17	0 8	6 0
S 19	19 46	18 24	1 45	24 34	2 2	4 8	1 56	2 3	1 37	10 49	1 4	17 21	2 15	20 18	0 8	6 0
S 20	19 58	13 43	0 45	24 50	2 6	4 32	1 58	1 45	1 37	10 53	1 4	17 20	2 15	20 19	0 8	5 59
M21	20 11	8 29	0n18	25 4	2 9	4 56	2 0	1 28	1 37	10 58	1 4	17 19	2 15	20 19	0 8	5 59
T 22	20 23	2 51	1 22	25 15	2 12	5 20	2 1	1 10	1 37	11 3	1 4	17 18	2 15	20 20	0 8	5 59
W23	20 35	2n59	2 22	25 24	2 13	5 45	2 3	0 52	1 38	11 7	1 4	17 17	2 15	20 21	0 8	5 58
T 24	20 46	8 52	3 18	25 31	2 14	6 9	2 4	0 35	1 38	11 12	1 4	17 16	2 15	20 22	0 8	5 58
F 25	20 57	14 33	4 4	25 36	2 14	6 33	2 5	0 17	1 38	11 16	1 4	17 15	2 15	20 22	0 8	5 58
S 26	21 8	19 43	4 39	25 38	2 13	6 57	2 6	0n 1	1 38	11 21	1 4	17 14	2 14	20 23	0 8	5 57
S 27	21 18	23 58	4 58	25 39	2 11	7 21	2 7	0 18	1 38	11 25	1 4	17 13	2 14	20 24	0 8	5 57
M28	21 28	26 52	4 59	25 38	2 9	7 45	2 8	0 36	1 39	11 30	1 4	17 12	2 14	20 25	0 8	5 57
T 29	21 37	28 2	4 40	25 35	2 6	8 9	2 9	0 53	1 39	11 34	1 4	17 12	2 14	20 25	0 8	5 57
W30	21 47	27 14	4 4	25 30	2 2	8 33	2 10	1 11	1 39	11 39	1 4	17 11	2 14	20 26	0 8	5 56
T 31	21n55	24n34	3n11	25n24	1n57	8n56	2s10	1n28	1s39	11n43	1s 4	17s10	2n14	20n27	0s 8	5s56

Julian Day Number = 2338805.5, Delta T = 17.80 sec
 Ecliptic obliquity = 23°28'54", Nutation = 0°00'06", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 20°25'54", Lahiri = 19°32'54"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1691

geocentric

JUNE 1691 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	16 38 31	10 ^{II} 31'27	8 ^{II} 6	4 ^{II} 4	29 ^{VI} 39	8 ^{VI} 16	3 ^{II} 47	26 ^R 7	1 ^{II} 58	17 ^{II} 32	26 ^{II} 11	2 ^R 46	3 ^{II} 24	7 ^{II} 14	11 ^{II} 32	F 1
S 2	16 42 28	11°28'51	22°28	5°13	0 ^{II} 48	9° 0	4° 0	26 ^{II} 3	2° 1	17°32	26°12	2 ^{II} 44	3°21	7°20	11°37	S 2
S 3	16 46 24	12°26'15	6 ^{II} 36	6°20	1°56	9°44	4°13	25°58	2° 5	17°33	26°13	2°44	3°18	7°27	11°42	S 3
M 4	16 50 21	13°23'37	20°30	7°22	3° 5	10°29	4°25	25°54	2° 8	17°34	26°14	2°44	3°15	7°34	11°47	M 4
T 5	16 54 17	14°20'59	4 ^{II} 11	8°22	4°13	11°13	4°38	25°50	2°12	17°34	26°16	2°43	3°12	7°40	11°53	T 5
W 6	16 58 14	15°18'19	17°39	9°17	5°22	11°57	4°51	25°46	2°15	17°35	26°17	2°40	3° 8	7°47	11°58	W 6
T 7	17 2 11	16°15'38	0 ^{II} 54	10° 9	6°31	12°41	5° 3	25°42	2°19	17°35	26°18	2°34	3° 5	7°53	12° 3	T 7
F 8	17 6 7	17°12'56	13°58	10°58	7°40	13°25	5°16	25°38	2°22	17°35	26°20	2°25	3° 2	8° 0	12° 8	F 8
S 9	17 10 4	18°10'14	26°50	11°42	8°49	14° 9	5°28	25°34	2°26	17°36	26°21	2°14	2°59	8° 7	12°13	S 9
S 10	17 14 0	19° 7'31	9 ^{II} 30	12°22	9°58	14°53	5°40	25°30	2°29	17°36	26°22	2° 2	2°56	8°13	12°19	S 10
M 11	17 17 57	20° 4'47	21°58	12°58	11° 7	15°37	5°52	25°26	2°32	17°36	26°24	1°50	2°53	8°20	12°24	M 11
T 12	17 21 53	21° 2'02	4 ^{II} 15	13°31	12°16	16°21	6° 5	25°22	2°36	17°37	26°25	1°39	2°49	8°27	12°29	T 12
W 13	17 25 50	21°59'17	16°21	13°58	13°26	17° 4	6°17	25°19	2°39	17°37	26°27	1°29	2°46	8°33	12°34	W 13
T 14	17 29 46	22°56'32	28°18	14°22	14°35	17°48	6°29	25°15	2°43	17°37	26°28	1°22	2°43	8°40	12°39	T 14
F 15	17 33 43	23°53'46	10 ^{II} 8	14°41	15°44	18°32	6°41	25°11	2°46	17°37	26°29	1°18	2°40	8°47	12°44	F 15
S 16	17 37 40	24°51'00	21°56	14°56	16°54	19°15	6°53	25° 8	2°49	17°38	26°31	1°15	2°37	8°53	12°50	S 16
S 17	17 41 36	25°48'14	3 ^{II} 45	15° 6	18° 4	19°59	7° 4	25° 4	2°53	17°38	26°32	1°D15	2°34	9° 0	12°55	S 17
M 18	17 45 33	26°45'27	15°40	15°11	19°13	20°42	7°16	25° 1	2°56	17°38	26°34	1°15	2°30	9° 7	13° 0	M 18
T 19	17 49 29	27°42'41	27°46	15°R12	20°23	21°25	7°28	24°57	2°59	17°38	26°35	1°R16	2°27	9°13	13° 5	T 19
W 20	17 53 26	28°39'54	10 ^{VI} 9	15° 8	21°33	22° 9	7°39	24°54	3° 2	17°R38	26°37	1°15	2°24	9°20	13°10	W 20
T 21	17 57 22	29°37'07	22°53	15° 0	22°43	22°52	7°51	24°51	3° 6	17°38	26°38	1°13	2°21	9°27	13°15	T 21
F 22	18 1 19	0 ^{II} 34'20	6 ^{II} 2	14°48	23°53	23°35	8° 2	24°47	3° 9	17°38	26°40	1° 8	2°18	9°33	13°20	F 22
S 23	18 5 15	1°31'34	19°40	14°31	25° 3	24°18	8°13	24°44	3°12	17°38	26°41	1° 1	2°14	9°40	13°25	S 23
S 24	18 9 12	2°28'47	3 ^{II} 45	14°11	26°13	25° 1	8°24	24°41	3°15	17°38	26°43	0°53	2°11	9°47	13°30	S 24
M 25	18 13 9	3°26'00	18°14	13°46	27°23	25°44	8°35	24°38	3°18	17°37	26°45	0°44	2° 8	9°53	13°35	M 25
T 26	18 17 5	4°23'14	3 ^{II} 2	13°19	28°33	26°27	8°46	24°35	3°22	17°37	26°46	0°36	2° 5	10° 0	13°40	T 26
W 27	18 21 2	5°20'27	18° 1	12°48	29°44	27° 9	8°57	24°33	3°25	17°37	26°48	0°29	2° 2	10° 7	13°45	W 27
T 28	18 24 58	6°17'40	3 ^{II} 1	12°15	0 ^{II} 54	27°52	9° 8	24°30	3°28	17°37	26°49	0°24	1°59	10°13	13°50	T 28
F 29	18 28 55	7°14'53	17°54	11°40	2° 4	28°34	9°19	24°27	3°31	17°37	26°51	0°22	1°55	10°20	13°55	F 29
S 30	18 32 51	8°12'05	2 ^{II} 33	11° 4	3 ^{II} 15	29°VI17	9 ^{II} 29	24 ^{II} 24	3 ^{II} 34	17°II36	26°52	0°D21	1°II52	10°27	14°II 0	S 30

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	22n 4	20n18	2n 6	25n16	1n51	9n20	2s11	1n46	1s39	11n47	1s 5	17s 9	2n14	20n27	0s 8	F 1
S 2	22 12	14 54	0 54	25 8	1 45	9 43	2 11	2 3	1 39	11 52	1 5	17 8	2 14	20 28	0 8	S 2
S 3	22 20	8 47	0s20	24 58	1 38	10 7	2 11	2 20	1 39	11 56	1 5	17 7	2 14	20 29	0 8	S 3
M 4	22 27	2 21	1 33	24 46	1 30	10 30	2 11	2 38	1 39	12 0	1 5	17 6	2 13	20 29	0 8	M 4
T 5	22 34	4s 5	2 38	24 34	1 21	10 53	2 11	2 55	1 40	12 4	1 5	17 5	2 13	20 30	0 8	T 5
W 6	22 40	10 14	3 34	24 21	1 12	11 16	2 11	3 12	1 40	12 8	1 5	17 5	2 13	20 31	0 8	W 6
T 7	22 46	15 49	4 17	24 7	1 2	11 39	2 11	3 29	1 40	12 12	1 5	17 4	2 13	20 32	0 8	T 7
F 8	22 52	20 36	4 46	23 53	0 51	12 1	2 11	3 46	1 40	12 17	1 5	17 3	2 13	20 32	0 8	F 8
S 9	22 57	24 21	5 0	23 37	0 39	12 24	2 11	4 3	1 40	12 21	1 5	17 2	2 13	20 33	0 8	S 9
S 10	23 2	26 50	4 59	23 22	0 27	12 46	2 10	4 20	1 40	12 25	1 5	17 1	2 13	20 34	0 8	S 10
M 11	23 7	27 57	4 43	23 5	0 15	13 8	2 10	4 37	1 40	12 29	1 5	17 1	2 13	20 34	0 8	M 11
T 12	23 11	27 39	4 15	22 49	0 1	13 30	2 9	4 54	1 40	12 32	1 5	17 0	2 12	20 35	0 8	T 12
W 13	23 14	26 2	3 35	22 32	0s13	13 51	2 9	5 11	1 40	12 36	1 5	16 59	2 12	20 36	0 8	W 13
T 14	23 18	23 15	2 46	22 15	0 27	14 12	2 8	5 28	1 40	12 40	1 6	16 58	2 12	20 36	0 8	T 14
F 15	23 20	19 30	1 50	21 58	0 42	14 33	2 7	5 44	1 40	12 44	1 6	16 58	2 12	20 37	0 8	F 15
S 16	23 23	15 0	0 50	21 41	0 58	14 54	2 6	6 1	1 40	12 48	1 6	16 57	2 12	20 38	0 8	S 16
S 17	23 25	9 57	0n13	21 25	1 13	15 14	2 5	6 17	1 40	12 52	1 6	16 56	2 12	20 38	0 8	S 17
M 18	23 27	4 29	1 16	21 8	1 29	15 34	2 4	6 33	1 40	12 55	1 6	16 56	2 11	20 39	0 8	M 18
T 19	23 28	1n12	2 17	20 52	1 46	15 54	2 3	6 50	1 40	12 59	1 6	16 55	2 11	20 40	0 8	T 19
W 20	23 28	6 58	3 12	20 36	2 2	16 14	2 1	7 6	1 39	13 3	1 6	16 54	2 11	20 40	0 8	W 20
T 21	23 29	12 37	4 0	20 21	2 18	16 33	2 0	7 22	1 39	13 6	1 6	16 54	2 11	20 41	0 8	T 21
F 22	23 29	17 54	4 37	20 6	2 34	16 51	1 59	7 38	1 39	13 10	1 6	16 53	2 11	20 41	0 8	F 22
S 23	23 28	22 29	4 59	19 52	2 50	17 10	1 57	7 54	1 39	13 13	1 6	16 53	2 10	20 42	0 8	S 23
S 24	23 27	25 55	5 5	19 39	3 6	17 28	1 56	8 10	1 39	13 17	1 7	16 52	2 10	20 43	0 8	S 24
M 25	23 26	27 48	4 51	19 27	3 20	17 45	1 54	8 26	1 39	13 20	1 7	16 52	2 10	20 43	0 8	M 25
T 26	23 25	27 45	4 18	19 15	3 35	18 3	1 52	8 41	1 39	13 24	1 7	16 51	2 10	20 44	0 8	T 26
W 27	23 22	25 41	3 27	19 5	3 48	18 20	1 51	8 57	1 39	13 27	1 7	16 51	2 10	20 44	0 8	W 27
T 28	23 20	21 49	2 21	18 56	4 0	18 36	1 49	9 12	1 38	13 30	1 7	16 50	2 9	20 45	0 8	T 28
F 29	23 17	16 33	1 6	18 47	4 12	18 52	1 47	9 27	1 38	13 34	1 7	16 50	2 9	20 46	0 8	F 29
S 30	23n14	10n24	0s12	18n41	4s21	19n 7	1s45	9n43	1s38	13n37	1s 7	16s49	2n 9	20n46	0s 8	S 30

Julian Day Number = 2338836.5, Delta T = 17.76 sec
 Ecliptic obliquity = 23°28'54, Nutation = 0°00'07, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 20°25'58, Lahiri = 19°32'58Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1691

geocentric

JULY 1691 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	18 36 48	9°17'	16°54'	10°R27	4°II25	29°V59	9°840	24°R22	3°II37	17°R36	26°554	0°H22	1°H49	10°333	14°II 5	S 1
M 2	18 40 45	10° 6'29	0°54'	9°50	5°36	0°841	9°50	24°II19	3°40	17°H36	26°56	0°23	1°46	10°40	14°10	M 2
T 3	18 44 41	11° 3'41	14°34	9°13	6°47	1°23	10° 0	24°17	3°43	17°35	26°57	0°R23	1°43	10°47	14°15	T 3
W 4	18 48 38	12° 0'52	27°55	8°37	7°57	2° 5	10°10	24°15	3°46	17°35	26°59	0°22	1°40	10°53	14°20	W 4
T 5	18 52 34	12°58'04	10°II59	8° 3	9° 8	2°47	10°20	24°13	3°49	17°34	27° 1	0°18	1°36	11° 0	14°24	T 5
F 6	18 56 31	13°55'15	23°48	7°32	10°19	3°29	10°30	24°10	3°52	17°34	27° 2	0°13	1°33	11° 7	14°29	F 6
S 7	19 0 27	14°52'27	6°X23	7° 3	11°30	4°11	10°40	24° 8	3°55	17°33	27° 4	0° 7	1°30	11°13	14°34	S 7
S 8	19 4 24	15°49'38	18°47	6°38	12°41	4°52	10°50	24° 7	3°57	17°33	27° 5	29°59	1°27	11°20	14°38	S 8
M 9	19 8 20	16°46'50	1°3 0	6°16	13°52	5°34	10°59	24° 5	4° 0	17°32	27° 7	29°51	1°24	11°27	14°43	M 9
T 10	19 12 17	17°44'02	13° 5	5°59	15° 3	6°15	11° 9	24° 3	4° 3	17°32	27° 9	29°44	1°20	11°33	14°48	T 10
W11	19 16 14	18°41'14	25° 2	5°47	16°14	6°57	11°18	24° 1	4° 6	17°31	27°10	29°38	1°17	11°40	14°52	W11
T 12	19 20 10	19°38'27	6°X53	5°40	17°25	7°38	11°27	24° 0	4° 9	17°30	27°12	29°34	1°14	11°46	14°57	T 12
F 13	19 24 7	20°35'40	18°41	5°D38	18°36	8°19	11°36	23°58	4°11	17°30	27°14	29°31	1°11	11°53	15° 2	F 13
S 14	19 28 3	21°32'53	0°X29	5°41	19°47	9° 0	11°45	23°57	4°14	17°29	27°15	29°D31	1° 8	12° 0	15° 6	S 14
S 15	19 32 0	22°30'07	12°18	5°50	20°59	9°41	11°54	23°55	4°16	17°28	27°17	29°31	1° 5	12° 6	15°11	S 15
M16	19 35 56	23°27'22	24°15	6° 4	22°10	10°22	12° 3	23°54	4°19	17°27	27°19	29°33	1° 1	12°13	15°15	M16
T 17	19 39 53	24°24'38	6°V21	6°25	23°22	11° 2	12°12	23°53	4°22	17°26	27°20	29°34	0°58	12°20	15°19	T 17
W18	19 43 49	25°21'54	18°43	6°51	24°33	11°43	12°20	23°52	4°24	17°26	27°22	29°35	0°55	12°26	15°24	W18
T 19	19 47 46	26°19'11	1°26	7°23	25°45	12°23	12°28	23°51	4°27	17°25	27°24	29°R36	0°52	12°33	15°28	T 19
F 20	19 51 43	27°16'29	14°32	8° 0	26°56	13° 4	12°37	23°50	4°29	17°24	27°26	29°34	0°49	12°40	15°32	F 20
S 21	19 55 39	28°13'49	28° 5	8°44	28° 8	13°44	12°45	23°50	4°31	17°23	27°27	29°32	0°46	12°46	15°37	S 21
S 22	19 59 36	29°11'09	12°II 6	9°32	29°20	14°24	12°52	23°49	4°34	17°22	27°29	29°28	0°42	12°53	15°41	S 22
M23	20 3 32	0°8'30	26°34	10°27	0°532	15° 4	13° 0	23°48	4°36	17°21	27°31	29°24	0°39	13° 0	15°45	M23
T 24	20 7 29	1° 5'52	11°524	11°27	1°43	15°44	13° 8	23°48	4°38	17°20	27°32	29°20	0°36	13° 6	15°49	T 24
W25	20 11 25	2° 3'15	26°30	12°33	2°55	16°23	13°15	23°47	4°41	17°19	27°34	29°17	0°33	13°13	15°53	W25
T 26	20 15 22	3° 0'39	11°841	13°44	4° 7	17° 3	13°23	23°47	4°43	17°18	27°36	29°15	0°30	13°20	15°57	T 26
F 27	20 19 18	3°58'04	26°49	15° 0	5°19	17°42	13°30	23°47	4°45	17°17	27°37	29°D14	0°26	13°26	16° 1	F 27
S 28	20 23 15	4°55'29	11°844	16°21	6°31	18°21	13°37	23°D47	4°47	17°16	27°39	29°14	0°23	13°33	16° 5	S 28
S 29	20 27 12	5°52'55	26°19	17°46	7°43	19° 0	13°44	23°47	4°49	17°15	27°41	29°15	0°20	13°40	16° 9	S 29
M30	20 31 8	6°50'21	10°532	19°17	8°56	19°39	13°50	23°47	4°51	17°14	27°42	29°17	0°17	13°46	16°13	M30
T 31	20 35 5	7°8'4748	24°19	20°52	10°58	20°818	13°857	23°II47	4°II53	17°H12	27°544	29°X18	0°H14	13°X53	16°II17	T 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	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	
S 1	23n10	3n50	1s28	18n35	4s30	19n22	1s43	9n58	1s38	13n40	1s 7	16s49	2n 9	20n47	0s 8	S 1
M 2	23 6	2s45	2 37	18 31	4 37	19 37	1 41	10 13	1 38	13 43	1 7	16 48	2 9	20 47	0 8	M 2
T 3	23 1	9 3	3 35	18 28	4 43	19 51	1 39	10 27	1 37	13 46	1 8	16 48	2 8	20 48	0 8	T 3
W 4	22 56	14 48	4 20	18 26	4 47	20 5	1 37	10 42	1 37	13 49	1 8	16 48	2 8	20 49	0 8	W 4
T 5	22 51	19 45	4 51	18 26	4 49	20 18	1 35	10 57	1 37	13 52	1 8	16 47	2 8	20 49	0 8	T 5
F 6	22 45	23 42	5 6	18 27	4 50	20 31	1 32	11 11	1 37	13 55	1 8	16 47	2 8	20 50	0 8	F 6
S 7	22 39	26 26	5 6	18 29	4 49	20 43	1 30	11 25	1 36	13 58	1 8	16 47	2 8	20 50	0 8	S 7
S 8	22 32	27 51	4 52	18 33	4 47	20 54	1 28	11 40	1 36	14 1	1 8	16 47	2 7	20 51	0 8	S 8
M 9	22 26	27 53	4 24	18 37	4 43	21 6	1 25	11 54	1 36	14 4	1 8	16 46	2 7	20 51	0 8	M 9
T 10	22 18	26 34	3 45	18 44	4 37	21 16	1 23	12 8	1 35	14 7	1 9	16 46	2 7	20 52	0 8	T 10
W11	22 11	24 3	2 56	18 51	4 31	21 26	1 20	12 22	1 35	14 10	1 9	16 46	2 7	20 52	0 8	W11
T 12	22 2	20 31	2 0	18 59	4 23	21 36	1 18	12 35	1 35	14 12	1 9	16 46	2 6	20 53	0 8	T 12
F 13	21 54	16 11	0 59	19 8	4 14	21 44	1 15	12 49	1 34	14 15	1 9	16 46	2 6	20 53	0 8	F 13
S 14	21 45	11 14	0n 5	19 18	4 4	21 53	1 13	13 2	1 34	14 18	1 9	16 46	2 6	20 54	0 8	S 14
S 15	21 36	5 53	1 9	19 29	3 53	22 1	1 10	13 16	1 34	14 20	1 9	16 45	2 6	20 54	0 8	S 15
M16	21 26	0 17	2 11	19 40	3 41	22 8	1 7	13 29	1 33	14 23	1 9	16 45	2 5	20 55	0 8	M16
T 17	21 16	5n24	3 8	19 52	3 28	22 14	1 5	13 42	1 33	14 25	1 9	16 45	2 5	20 55	0 8	T 17
W18	21 6	11 0	3 57	20 4	3 15	22 20	1 2	13 55	1 32	14 28	1 10	16 45	2 5	20 56	0 8	W18
T 19	20 56	16 18	4 36	20 16	3 1	22 25	0 59	14 7	1 32	14 30	1 10	16 45	2 5	20 56	0 8	T 19
F 20	20 44	21 2	5 2	20 28	2 47	22 30	0 57	14 20	1 31	14 32	1 10	16 45	2 4	20 57	0 8	F 20
S 21	20 33	24 51	5 13	20 40	2 32	22 34	0 54	14 32	1 31	14 35	1 10	16 45	2 4	20 57	0 8	S 21
S 22	20 21	27 20	5 6	20 51	2 18	22 38	0 51	14 45	1 30	14 37	1 10	16 45	2 4	20 58	0 8	S 22
M23	20 9	28 5	4 39	21 2	2 3	22 41	0 48	14 57	1 30	14 39	1 10	16 46	2 4	20 58	0 8	M23
T 24	19 57	26 52	3 53	21 12	1 48	22 43	0 45	15 9	1 29	14 41	1 11	16 46	2 3	20 58	0 8	T 24
W25	19 44	23 41	2 50	21 21	1 33	22 44	0 43	15 21	1 29	14 43	1 11	16 46	2 3	20 59	0 8	W25
T 26	19 31	18 50	1 35	21 29	1 18	22 45	0 40	15 32	1 28	14 45	1 11	16 46	2 3	20 59	0 8	T 26
F 27	19 18	12 48	0 13	21 36	1 3	22 46	0 37	15 44	1 28	14 47	1 11	16 46	2 3	21 0	0 8	F 27
S 28	19 4	6 7	1s 8	21 41	0 49	22 45	0 34	15 55	1 27	14 49	1 11	16 46	2 2	21 0	0 8	S 28
S 29	18 50	0s44	2 24	21 44	0 34	22 44	0 31	16 7	1 27	14 51	1 11	16 47	2 2	21 0	0 8	S 29
M30	18 36	7 22	3 28	21 45	0 21	22 42	0 28	16 18	1 26	14 53	1 12	16 47	2 2	21 1	0 8	M30
T 31	18n21	13s27	4s19	21n44	0s 7	22n40	0s26	16n29	1s26	14n55	1s12	16s47	2n 2	21n 1	0s 8	T 31

Julian Day Number = 2338866.5, Delta T = 17.72 sec
 Ecliptic obliquity = 23°28'53", Nutation = 0°00'08", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 20°26'02", Lahiri = 19°33'02"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1691
geocentric

AUGUST 1691 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	20 39 1	8♌45°16	7♍43	22♌31	11♌20	20♌57	14♌3	23♍48	4♎55	17♏11	27♏46	29♏18	0♐11	14♐0	16♐21	W 1
T 2	20 42 58	9°42'45	20°44	24°14	12°32	21°35	14°10	23°48	4°57	17°10	27°47	29°18	0°7	14°6	16°24	T 2
F 3	20 46 54	10°40'15	3♊26	26°0	13°45	22°13	14°16	23°49	4°59	17°9	27°49	29°17	0°4	14°13	16°28	F 3
S 4	20 50 51	11°37'45	15°51	27°50	14°57	22°52	14°22	23°49	5°1	17°7	27°51	29°15	0°1	14°19	16°32	S 4
S 5	20 54 47	12°35'16	28°4	29°42	16°9	23°30	14°27	23°50	5°3	17°6	27°52	29°12	29°58	14°26	16°35	S 5
M 6	20 58 44	13°32'48	10♌7	1♌37	17°22	24°7	14°33	23°51	5°5	17°5	27°54	29°10	29°55	14°33	16°39	M 6
T 7	21 2 41	14°30'21	22°2	3°34	18°35	24°45	14°39	23°52	5°6	17°4	27°55	29°8	29°52	14°39	16°42	T 7
W 8	21 6 37	15°27'56	3♌53	5°33	19°47	25°23	14°44	23°53	5°8	17°2	27°57	29°6	29°48	14°46	16°46	W 8
T 9	21 10 34	16°25'31	15°42	7°33	21°0	26°0	14°49	23°54	5°10	17°1	27°59	29°5	29°45	14°53	16°49	T 9
F 10	21 14 30	17°23'08	27°30	9°34	22°12	26°37	14°54	23°55	5°11	17°0	28°0	29°D 5	29°42	14°59	16°52	F 10
S 11	21 18 27	18°20'45	9♊20	11°36	23°25	27°14	14°59	23°56	5°13	16°58	28°2	29°5	29°39	15°6	16°56	S 11
S 12	21 22 23	19°18'24	21°15	13°38	24°38	27°51	15°3	23°58	5°14	16°57	28°3	29°6	29°36	15°13	16°59	S 12
M13	21 26 20	20°16'05	3♊17	15°40	25°51	28°28	15°8	23°59	5°16	16°55	28°5	29°6	29°32	15°19	17°2	M13
T 14	21 30 16	21°13'47	15°29	17°42	27°4	29°4	15°12	24°1	5°17	16°54	28°7	29°7	29°29	15°26	17°5	T 14
W15	21 34 13	22°11'31	27°55	19°43	28°17	29°40	15°16	24°2	5°19	16°52	28°8	29°8	29°26	15°33	17°8	W15
T 16	21 38 10	23°9'16	10♌38	21°44	29°30	0♎17	15°20	24°4	5°20	16°51	28°10	29°8	29°23	15°39	17°11	T 16
F 17	21 42 6	24°7'03	23°41	23°44	0♌43	0°52	15°23	24°6	5°21	16°49	28°11	29°R 8	29°20	15°46	17°14	F 17
S 18	21 46 3	25°4'52	7♎8	25°43	1°56	1°28	15°27	24°8	5°22	16°48	28°13	29°8	29°17	15°53	17°17	S 18
S 19	21 49 59	26°2'43	20°59	27°41	3°9	2°4	15°30	24°10	5°24	16°46	28°14	29°8	29°13	15°59	17°19	S 19
M20	21 53 56	27°0'36	5♌16	29°38	4°22	2°39	15°33	24°12	5°25	16°45	28°16	29°8	29°10	16°6	17°22	M20
T 21	21 57 52	27°58'30	19°55	1♎34	5°36	3°14	15°36	24°14	5°26	16°43	28°17	29°8	29°7	16°13	17°25	T 21
W22	22 1 49	28°56'26	4♌52	3°29	6°49	3°49	15°39	24°16	5°27	16°42	28°19	29°D 8	29°4	16°19	17°27	W22
T 23	22 5 45	29°54'23	19°59	5°22	8°2	4°24	15°42	24°19	5°28	16°40	28°20	29°8	29°1	16°26	17°30	T 23
F 24	22 9 42	0♎52'23	5♎8	7°14	9°16	4°58	15°44	24°21	5°29	16°39	28°22	29°R 8	28°58	16°32	17°32	F 24
S 25	22 13 39	1°50'23	20°9	9°5	10°29	5°32	15°46	24°24	5°30	16°37	28°23	29°8	28°54	16°39	17°35	S 25
S 26	22 17 35	2°48'25	4♌55	10°55	11°43	6°6	15°48	24°27	5°30	16°36	28°25	29°7	28°51	16°46	17°37	S 26
M27	22 21 32	3°46'29	19°18	12°43	12°56	6°40	15°50	24°29	5°31	16°34	28°26	29°7	28°48	16°52	17°39	M27
T 28	22 25 28	4°44'34	3♍15	14°31	14°10	7°13	15°51	24°32	5°32	16°32	28°28	29°6	28°45	16°59	17°41	T 28
W29	22 29 25	5°42'41	16°46	16°16	15°23	7°47	15°53	24°35	5°33	16°31	28°29	29°6	28°42	17°6	17°43	W29
T 30	22 33 21	6°40'49	29°51	18°1	16°37	8°20	15°54	24°38	5°33	16°29	28°30	29°5	28°38	17°12	17°45	T 30
F 31	22 37 18	7♎38'58	12♊32	19°45	17°51	8♎52	15°55	24°41	5♎34	16°27	28°32	29°D 5	28°35	17°19	17°47	F 31

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
W 1	18n 6	18s44	4s54	21n41	0n 6	22n37	0s23	16n39	1s25	14n57	1s12	16s48	2n 1	21n 1	0s 8	6s 6	1s 8	23n58	3n23	11s44	11s26	18s 2	17n57	4s51									
T 2	17 51	22 59	5 12	21 36	0 18	22 34	0 20	16 50	1 24	14 58	1 12	16 48	2 1	21 2	0 8	6 7	1 8	23 58	3 23	11 44	11 27	17 59	17 57	4 52									
F 3	17 35	26 1	5 15	21 28	0 29	22 29	0 17	17 0	1 24	15 0	1 12	16 48	2 1	21 2	0 8	6 7	1 8	23 57	3 23	11 45	11 28	17 57	17 57	4 52									
S 4	17 20	27 45	5 3	21 17	0 40	22 24	0 14	17 11	1 23	15 1	1 12	16 49	2 1	21 3	0 8	6 8	1 8	23 57	3 23	11 45	11 29	17 54	17 57	4 52									
S 5	17 4	28 5	4 37	21 4	0 50	22 19	0 11	17 21	1 22	15 3	1 13	16 49	2 0	21 3	0 8	6 9	1 8	23 57	3 24	11 46	11 30	17 51	17 57	4 53									
M 6	16 47	27 4	3 59	20 48	1 0	22 13	0 8	17 31	1 22	15 4	1 13	16 50	2 0	21 3	0 8	6 9	1 8	23 57	3 24	11 47	11 31	17 48	17 57	4 53									
T 7	16 31	24 49	3 11	20 29	1 8	22 6	0 6	17 41	1 21	15 6	1 13	16 50	2 0	21 3	0 8	6 10	1 8	23 56	3 24	11 48	11 32	17 45	17 57	4 54									
W 8	16 14	21 30	2 15	20 8	1 16	21 58	0 3	17 50	1 20	15 7	1 13	16 50	2 0	21 4	0 8	6 10	1 8	23 56	3 24	11 48	11 34	17 43	17 57	4 54									
T 9	15 56	17 20	1 14	19 44	1 22	21 50	0 18	0	1 20	15 9	1 13	16 51	1 59	21 4	0 8	6 11	1 8	23 56	3 24	11 49	11 35	17 40	17 57	4 54									
F 10	15 39	12 30	0 9	19 18	1 28	21 41	0n 3	18 9	1 19	15 10	1 13	16 52	1 59	21 4	0 8	6 11	1 8	23 56	3 24	11 49	11 36	17 37	17 56	4 55									
S 11	15 21	7 13	0n57	18 50	1 33	21 32	0 5	18 18	1 18	15 11	1 14	16 52	1 59	21 5	0 8	6 12	1 8	23 55	3 24	11 49	11 37	17 34	17 56	4 55									
S 12	15 3	1 38	2 0	18 19	1 37	21 22	0 8	18 28	1 17	15 12	1 14	16 53	1 59	21 5	0 8	6 12	1 8	23 55	3 24	11 49	11 38	17 32	17 56	4 56									
M13	14 45	4n 2	2 59	17 46	1 41	21 11	0 11	18 36	1 17	15 13	1 14	16 53	1 58	21 5	0 8	6 13	1 8	23 55	3 24	11 48	11 39	17 29	17 56	4 56									
T 14	14 27	9 39	3 50	17 11	1 43	21 0	0 14	18 45	1 16	15 14	1 14	16 54	1 58	21 5	0 8	6 14	1 8	23 55	3 24	11 48	11 40	17 26	17 56	4 57									
W15	14 8	14 59	4 32	16 35	1 45	20 48	0 16	18 54	1 15	15 15	1 14	16 55	1 58	21 6	0 8	6 14	1 8	23 54	3 24	11 48	11 41	17 23	17 56	4 57									
T 16	13 49	19 48	5 1	15 57	1 46	20 36	0 19	19 2	1 14	15 16	1 15	16 55	1 58	21 6	0 8	6 15	1 8	23 54	3 25	11 48	11 43	17 20	17 56	4 57									
F 17	13 30	23 50	5 16	15 18	1 46	20 23	0 21	19 10	1 13	15 17	1 15	16 56	1 57	21 6	0 8	6 15	1 8	23 54	3 25	11 48	11 44	17 18	17 56	4 58									
S 18	13 11	26 42	5 15	14 38	1 46	20 9	0 24	19 18	1 13	15 18	1 15	16 57	1 57	21 6	0 8	6 16	1 8	23 54	3 25	11 48	11 45	17 15	17 55	4 58									
S 19	12 52	28 5	4 55	13 56	1 45	19 55	0 26	19 26	1 12	15 19	1 15	16 57	1 57	21 7	0 8	6 17	1 8	23 54	3 25	11 48	11 46	17 12	17 55	4 59									
M20	12 32	27 39	4 17	13 14	1 43	19 40	0 29	19 34	1 11	15 20	1 15	16 58	1 57	21 7	0 8	6 17	1 8	23 53	3 25	11 48	11 47	17 9	17 55	4 59									
T 21	12 12	25 19	3 21	12 30	1 41	19 25	0 31	19 42	1 10	15 20	1 15	16 59	1 57	21 7	0 8	6 18	1 8	23 53	3 25	11 48	11 48	17 6	17 55	5 0									
W22	11 52	21 12	2 11	11 46	1 38	19 9	0 34	19 49	1 9	15 21	1 16	17 0	1 56	21 7	0 8	6 18	1 8	23 53	3 25	11 48	11 49	17 4	17 55	5 0									
T 23	11 31	15 39	0 51	11 2	1 35	18 52	0 36	19 57	1 8	15 21	1 16	17 0	1 56	21 7	0 8	6 19	1 8	23 53	3 25	11 48	11 50	17 1	17 54	5 1									
F 24	11 11	9 8	0s33	10 17	1 31	18 35	0 39	20 4	1 7	15 22	1 16	17 1	1 56	21 7	0 8	6 20	1 8	23 53	3 25	11 48	11 51	16 58	17 54	5 1									
S 25	10 50	2 9	1 54	9 31	1 27	18 18	0 41	20 11	1 6	15 22	1 16	17 2	1 56	21 8	0 8	6 20	1 8	23 52	3 26	11 48	11 53	16 55	17 54	5 1									
S 26	10 29	4s48	3 6	8 46	1 23	18 0	0 43	20 18	1 5	15 23	1 16	17 3	1 55	21 8	0 8	6 21	1 8	23 52	3 26	11 48	11 54	16 52	17 54	5 2									
M27	10 8	11 20	4 4	8 0	1 18	17 41	0 45	20 24	1 4	15 23	1 17	17 4	1 55	21 8	0 8	6 22	1 8	23 52	3 26	11 48	11 55	16 49	17 53	5 2									
T 28	9 47	17 6	4 46	7 14	1 13	17 22	0 48	20 31	1 3	15 23	1 17	17 5	1 55	21 8	0 8	6 22	1 8	23 52	3 26	11 48	11 56	16 46	17 53	5 3									
W29	9 26	21 49	5 10	6 28	1 7	17 2	0 50	20 37	1 2	15 24	1 17	17 6	1 55	21 8	0 8	6 23	1 8	23 52	3 26	11 49	11 57	16 44	17 53	5 3									
T 30	9 5	25 19	5 17	5 41	1 2	16 42	0 52	20 44	1 1	15 24	1 17	17 7	1 54	21 8	0 8	6 24	1 8	23 52	3 26	11 49	11 58	16 41	17 52	5 4									
F 31	8n43	27s27	5s 9	4n55	0n56	16n22	0n54	20n50	1s 0	15n24	1s17	17s 8	1n54	21n 8	0s 8	6s24	1s 8	23n51	3n26	11s49	11s59	16s38	17n52	5s 4									

ASTRODIENST EPHEMERIS for the year 1691
geocentric

SEPTEMBER 1691 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	22 41 14	8 ^h 37'09	24 ^h 55	21 ^h 27	19 ^h 12 4	9 ^h 25	15 ^h 56	24 ^h 45	5 ^h 34	16 ^h 26	28 ^h 33	29 ^h 6	28 ^h 32	17 ^h 26	17 ^h 49	S 1
S 2	22 45 11	9°35'22	7 ^h 3 3	23° 8	20°18	9°57	15°56	24°48	5°35	16 ^h 24	28°34	29° 7	28°29	17°32	17°51	S 2
M 3	22 49 8	10°33'36	19° 0	24°48	21°32	10°29	15°57	24°51	5°35	16°23	28°36	29° 8	28°26	17°39	17°53	M 3
T 4	22 53 4	11°31'51	0 ^h 51	26°27	22°46	11° 1	15°R57	24°55	5°36	16°21	28°37	29° 9	28°23	17°46	17°55	T 4
W 5	22 57 1	12°30'08	12°39	28° 4	24° 0	11°32	15°57	24°58	5°36	16°19	28°38	29°10	28°19	17°52	17°56	W 5
T 6	23 0 57	13°28'27	24°27	29°40	25°14	12° 3	15°57	25° 2	5°36	16°18	28°40	29°R10	28°16	17°59	17°58	T 6
F 7	23 4 54	14°26'48	6 ^h 19	1 ^h 16	26°28	12°34	15°56	25° 6	5°36	16°16	28°41	29°10	28°13	18° 6	17°59	F 7
S 8	23 8 50	15°25'10	18°16	2°50	27°42	13° 5	15°56	25° 9	5°37	16°14	28°42	29° 9	28°10	18°12	18° 1	S 8
S 9	23 12 47	16°23'34	0 ^h 20	4°23	28°56	13°35	15°55	25°13	5°37	16°13	28°43	29° 8	28° 7	18°19	18° 2	S 9
M10	23 16 43	17°22'00	12°34	5°55	0 ^h 10	14° 5	15°54	25°17	5°37	16°11	28°44	29° 5	28° 3	18°25	18° 3	M10
T 11	23 20 40	18°20'28	24°59	7°26	1°24	14°35	15°53	25°21	5°R37	16° 9	28°46	29° 2	28° 0	18°32	18° 4	T 11
W12	23 24 37	19°18'59	7 ^h 36	8°56	2°38	15° 4	15°51	25°25	5°37	16° 8	28°47	28°59	27°57	18°39	18° 6	W12
T 13	23 28 33	20°17'31	20°27	10°24	3°53	15°33	15°50	25°29	5°37	16° 6	28°48	28°57	27°54	18°45	18° 7	T 13
F 14	23 32 30	21°16'06	3 ^h 35	11°52	5° 7	16° 2	15°48	25°34	5°36	16° 4	28°49	28°55	27°51	18°52	18° 8	F 14
S 15	23 36 26	22°14'42	16°59	13°18	6°21	16°30	15°46	25°38	5°36	16° 3	28°50	28°D54	27°48	18°59	18° 8	S 15
S 16	23 40 23	23°13'22	0 ^h 43	14°44	7°35	16°58	15°44	25°42	5°36	16° 1	28°51	28°54	27°44	19° 5	18° 9	S 16
M17	23 44 19	24°12'03	14°46	16° 8	8°50	17°26	15°41	25°47	5°36	15°59	28°52	28°55	27°41	19°12	18°10	M17
T 18	23 48 16	25°10'47	29° 7	17°31	10° 4	17°53	15°39	25°51	5°35	15°58	28°53	28°56	27°38	19°19	18°11	T 18
W19	23 52 12	26° 9'33	13 ^h 44	18°53	11°19	18°20	15°36	25°56	5°35	15°56	28°54	28°57	27°35	19°25	18°11	W19
T 20	23 56 9	27° 8'21	28°34	20°13	12°33	18°47	15°33	26° 1	5°35	15°55	28°55	28°R58	27°32	19°32	18°12	T 20
F 21	0 0 6	28° 7'11	13 ^h 28	21°33	13°48	19°13	15°30	26° 5	5°34	15°53	28°56	28°57	27°29	19°39	18°12	F 21
S 22	0 4 2	29° 6'03	28°21	22°51	15° 2	19°39	15°26	26°10	5°33	15°51	28°57	28°55	27°25	19°45	18°12	S 22
S 23	0 7 59	0 ^h 45	13 ^h 3	24° 7	16°17	20° 4	15°23	26°15	5°33	15°50	28°58	28°52	27°22	19°52	18°13	S 23
M24	0 11 55	1° 3'54	27°28	25°22	17°31	20°29	15°19	26°20	5°32	15°48	28°59	28°47	27°19	19°59	18°13	M24
T 25	0 15 52	2° 2'52	11 ^h 30	26°36	18°46	20°54	15°15	26°25	5°31	15°47	29° 0	28°42	27°16	20° 5	18°13	T 25
W26	0 19 48	3° 1'52	25° 6	27°48	20° 1	21°18	15°11	26°30	5°31	15°45	29° 1	28°37	27°13	20°12	18°R13	W26
T 27	0 23 45	4° 0'54	8 ^h 15	28°58	21°15	21°42	15° 7	26°35	5°30	15°43	29° 2	28°33	27° 9	20°18	18°13	T 27
F 28	0 27 41	4°59'58	21° 1	0 ^h 6	22°30	22° 5	15° 2	26°41	5°29	15°42	29° 3	28°30	27° 6	20°25	18°13	F 28
S 29	0 31 38	5°59'03	3 ^h 25	1°13	23°45	22°28	14°57	26°46	5°28	15°40	29° 4	28°D29	27° 3	20°32	18°13	S 29
S 30	0 35 35	6 ^h 58'11	15 ^h 32	2 ^h 17	25 ^h 0	22 ^h 50	14 ^h 53	26 ^h 51	5 ^h 27	15 ^h 39	29 ^h 4	28 ^h 30	27 ^h 0	20 ^h 38	18 ^h 12	S 30

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	8n21	28s 9	4s46	4n 9	0n49	16n 1	0n56	20n56	0s59	15n24	1s17	17s 9	1n54	21n 9	0s 8	6s25	1s 8	23n51	3n26	11s49	12s 0	16s35	17n52	5s 5							
S 2	7 59	27 28	4 11	3 23	0 43	15 39	0 58	21 2	0 58	15 24	1 18	17 10	1 54	21 9	0 8	6 25	1 8	23 51	3 27	11 48	12 1	16 32	17 51	5 5							
M 3	7 37	25 31	3 25	2 37	0 36	15 17	1 0	21 7	0 57	15 24	1 18	17 11	1 53	21 9	0 8	6 26	1 8	23 51	3 27	11 48	12 2	16 29	17 51	5 6							
T 4	7 15	22 27	2 31	1 52	0 29	14 55	1 1	21 13	0 56	15 24	1 18	17 12	1 53	21 9	0 8	6 27	1 8	23 51	3 27	11 47	12 4	16 26	17 51	5 6							
W 5	6 53	18 29	1 30	1 7	0 22	14 32	1 3	21 18	0 55	15 24	1 18	17 13	1 53	21 9	0 8	6 27	1 8	23 51	3 27	11 47	12 5	16 24	17 50	5 7							
T 6	6 30	13 48	0 26	0 22	0 15	14 9	1 5	21 24	0 53	15 23	1 18	17 14	1 53	21 9	0 8	6 28	1 8	23 51	3 27	11 47	12 6	16 21	17 50	5 7							
F 7	6 8	8 36	0n39	0s23	0 8	13 46	1 7	21 29	0 52	15 23	1 18	17 15	1 53	21 9	0 8	6 29	1 8	23 50	3 27	11 47	12 7	16 18	17 50	5 8							
S 8	5 45	3 4	1 44	1 7	0 0	13 22	1 8	21 34	0 51	15 23	1 19	17 16	1 52	21 9	0 8	6 29	1 8	23 50	3 27	11 47	12 8	16 15	17 49	5 8							
S 9	5 23	2n38	2 44	1 51	0s 7	12 57	1 10	21 39	0 50	15 22	1 19	17 17	1 52	21 9	0 8	6 30	1 8	23 50	3 27	11 48	12 9	16 12	17 49	5 9							
M10	5 0	8 18	3 37	2 35	0 15	12 33	1 11	21 44	0 48	15 22	1 19	17 18	1 52	21 9	0 8	6 31	1 8	23 50	3 28	11 49	12 10	16 9	17 49	5 9							
T 11	4 37	13 44	4 21	3 18	0 22	12 8	1 13	21 48	0 47	15 21	1 19	17 20	1 52	21 9	0 8	6 31	1 8	23 50	3 28	11 50	12 11	16 6	17 48	5 10							
W12	4 14	18 41	4 53	4 0	0 30	11 42	1 14	21 53	0 46	15 21	1 19	17 21	1 52	21 9	0 8	6 32	1 8	23 50	3 28	11 51	12 12	16 3	17 48	5 10							
T 13	3 51	22 54	5 12	4 42	0 38	11 16	1 15	21 57	0 45	15 20	1 19	17 22	1 51	21 9	0 8	6 33	1 9	23 50	3 28	11 52	12 13	16 1	17 47	5 11							
F 14	3 28	26 2	5 14	5 24	0 46	10 50	1 16	22 2	0 43	15 20	1 20	17 23	1 51	21 9	0 8	6 33	1 9	23 50	3 28	11 52	12 15	15 58	17 47	5 11							
S 15	3 5	27 49	4 59	6 5	0 53	10 24	1 18	22 6	0 42	15 19	1 20	17 24	1 51	21 9	0 8	6 34	1 9	23 49	3 28	11 53	12 16	15 55	17 47	5 12							
S 16	2 42	27 57	4 28	6 45	1 1	9 57	1 19	22 10	0 41	15 18	1 20	17 26	1 51	21 9	0 8	6 35	1 9	23 49	3 28	11 53	12 17	15 52	17 46	5 12							
M17	2 18	26 18	3 40	7 25	1 9	9 30	1 20	22 14	0 39	15 17	1 20	17 27	1 50	21 9	0 8	6 35	1 9	23 49	3 29	11 52	12 18	15 49	17 46	5 13							
T 18	1 55	22 56	2 37	8 4	1 17	9 3	1 21	22 18	0 38	15 16	1 20	17 28	1 50	21 9	0 8	6 36	1 9	23 49	3 29	11 52	12 19	15 46	17 45	5 13							
W19	1 32	18 3	1 23	8 42	1 24	8 36	1 22	22 22	0 36	15 15	1 20	17 29	1 50	21 9	0 8	6 37	1 9	23 49	3 29	11 51	12 20	15 43	17 45	5 14							
T 20	1 8	12 2	0 2	9 20	1 32	8 8	1 23	22 26	0 35	15 14	1 21	17 31	1 50	21 9	0 8	6 37	1 9	23 49	3 29	11 51	12 21	15 40	17 44	5 14							
F 21	0 45	5 18	1s19	9 57	1 40	7 40	1 23	22 29	0 33	15 13	1 21	17 32	1 50	21 9	0 8	6 38	1 9	23 49	3 29	11 51	12 22	15 37	17 44	5 15							
S 22	0 21	1s42	2 34	10 33	1 47	7 12	1 24	22 33	0 32	15 12	1 21	17 33	1 50	21 8	0 8	6 38	1 9	23 49	3 29	11 52	12 23	15 34	17 43	5 15							
S 23	0s 2	8 31	3 38	11 9	1 54	6 43	1 25	22 36	0 30	15 11	1 21	17 35	1 49	21 8	0 8	6 39	1 9	23 49	3 29	11 53	12 24	15 31	17 43	5 16							
M24	0 25	14 44	4 27	11 43	2 2	6 15	1 25	22 40	0 29	15 10	1 21	17 36	1 49	21 8	0 8	6 40	1 9	23 49	3 30	11 55	12 26	15 28	17 42	5 16							
T 25	0 49	20 2	4 58	12 17	2 9	5 46	1 26	22 43	0 27	15 9	1 21	17 37	1 49	21 8	0 8	6 40	1 9	23 49	3 30	11 57	12 27	15 25	17 42	5 17							
W26	1 12	24 6	5 11	12 49	2 16	5 17	1 26	22 46	0 26	15 7	1 21	17 39	1 49	21 8	0 8	6 41	1 9	23 49	3 30	11 59	12 28	15 23	17 41	5 17							
T 27	1 36	26 47	5 8	13 21	2 22	4 48	1 27	22 49	0 24	15 6	1 22	17 40	1 49	21 8	0 8	6 41	1 9	23 49	3 30	12 0	12 29	15 20	17 41	5 18							
F 28	1 59	27 58	4 48	13 51	2 29	4 19	1 27	22 52	0 22	15 4	1 22	17 41	1 48	21 8	0 8	6 42	1 9	23 49	3 30	12 1	12 30	15 17	17 40	5 18							
S 29	2 23	27 42	4 16	14 20	2 35	3 49	1 27	22 55	0 21	15 3	1 22	17 43	1 48	21 7	0 8	6 43	1 9	23 49	3 30	12 1	12 31	15 14	17 40	5 19							
S 30	2s46	26s 6	3s33	14s48	2s41	3n20	1n27	22n58	0s19	15n 1	1s22	17s44	1n48	21n 7	0s 8	6s43	1s 9	23n49	3n30	12s 1	12s32	15s11	17n39	5s19							

ASTRODIENST EPHEMERIS for the year 1691
geocentric

OCTOBER 1691 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	0 39 31	7♂57'20	27♂28	3♂19	26♂14	23♂12	14°R48	26♂57	5°R26	15°R37	29♂ 5	28♂31	26♂57	20♂45	18°R12	M 1
T 2	0 43 28	8°56'30	9♂17	4°18	27°29	23°34	14♂42	27° 2	5♂25	15♂36	29° 6	28°33	26°54	20°52	18♂12	T 2
W 3	0 47 24	9°55'43	21° 4	5°15	28°44	23°55	14°37	27° 8	5°24	15°34	29° 7	28°34	26°50	20°58	18°11	W 3
T 4	0 51 21	10°54'58	2♂54	6° 8	29°59	24°15	14°32	27°13	5°23	15°33	29° 7	28°R34	26°47	21° 5	18°10	T 4
F 5	0 55 17	11°54'14	14°51	6°59	1♂14	24°35	14°26	27°19	5°22	15°31	29° 8	28°33	26°44	21°12	18°10	F 5
S 6	0 59 14	12°53'32	26°57	7°45	2°29	24°54	14°20	27°24	5°21	15°30	29° 9	28°29	26°41	21°18	18° 9	S 6
S 7	1 3 10	13°52'52	9♂15	8°28	3°44	25°13	14°14	27°30	5°19	15°29	29° 9	28°23	26°38	21°25	18° 8	S 7
M 8	1 7 7	14°52'14	21°45	9° 7	4°59	25°32	14° 8	27°36	5°18	15°27	29°10	28°16	26°34	21°32	18° 7	M 8
T 9	1 11 3	15°51'39	4♂28	9°41	6°14	25°49	14° 2	27°42	5°17	15°26	29°10	28° 8	26°31	21°38	18° 6	T 9
W10	1 15 0	16°51'05	17°25	10° 9	7°29	26° 7	13°55	27°48	5°15	15°25	29°11	27°59	26°28	21°45	18° 5	W10
T 11	1 18 57	17°50'34	0♂34	10°32	8°44	26°23	13°49	27°54	5°14	15°23	29°11	27°51	26°25	21°51	18° 4	T 11
F 12	1 22 53	18°50'05	13°55	10°49	9°59	26°39	13°42	28° 0	5°12	15°22	29°12	27°44	26°22	21°58	18° 3	F 12
S 13	1 26 50	19°49'39	27°28	11° 0	11°14	26°55	13°35	28° 6	5°11	15°21	29°12	27°40	26°19	22° 5	18° 2	S 13
S 14	1 30 46	20°49'14	11♂13	11°R 3	12°29	27°10	13°28	28°12	5° 9	15°19	29°13	27°37	26°15	22°11	18° 0	S 14
M15	1 34 43	21°48'52	25° 8	10°58	13°44	27°24	13°21	28°18	5° 8	15°18	29°13	27°D37	26°12	22°18	17°59	M15
T 16	1 38 39	22°48'33	9♂15	10°45	14°59	27°38	13°14	28°24	5° 6	15°17	29°14	27°38	26° 9	22°25	17°57	T 16
W17	1 42 36	23°48'15	23°32	10°23	16°14	27°51	13° 7	28°30	5° 4	15°16	29°14	27°R38	26° 6	22°31	17°56	W17
T 18	1 46 32	24°48'00	7♂57	9°53	17°29	28° 3	13° 0	28°37	5° 3	15°14	29°14	27°38	26° 3	22°38	17°54	T 18
F 19	1 50 29	25°47'47	22°28	9°14	18°44	28°15	12°52	28°43	5° 1	15°13	29°15	27°36	26° 0	22°45	17°52	F 19
S 20	1 54 26	26°47'36	6♂58	8°26	20° 0	28°25	12°45	28°49	4°59	15°12	29°15	27°31	25°56	22°51	17°51	S 20
S 21	1 58 22	27°47'28	21°22	7°29	21°15	28°36	12°37	28°56	4°57	15°11	29°15	27°23	25°53	22°58	17°49	S 21
M22	2 2 19	28°47'21	5♂35	6°26	22°30	28°45	12°29	29° 2	4°55	15°10	29°16	27°13	25°50	23° 5	17°47	M22
T 23	2 6 15	29°47'16	19°30	5°16	23°45	28°54	12°22	29° 9	4°53	15° 9	29°16	27° 3	25°47	23°11	17°45	T 23
W24	2 10 12	0♂47'13	3♂ 3	4° 2	25° 1	29° 2	12°14	29°15	4°51	15° 8	29°16	26°52	25°44	23°18	17°43	W24
T 25	2 14 8	1°47'12	16°12	2°45	26°16	29° 9	12° 6	29°22	4°49	15° 7	29°16	26°43	25°40	23°24	17°41	T 25
F 26	2 18 5	2°47'13	28°59	1°28	27°31	29°16	11°58	29°28	4°47	15° 6	29°16	26°35	25°37	23°31	17°38	F 26
S 27	2 22 1	3°47'15	11♂24	0°13	28°46	29°21	11°50	29°35	4°45	15° 5	29°16	26°31	25°34	23°38	17°36	S 27
S 28	2 25 58	4°47'19	23°32	29♂ 2	0♂ 2	29°26	11°42	29°41	4°43	15° 4	29°16	26°28	25°31	23°44	17°34	S 28
M29	2 29 55	5°47'25	5♂28	27°59	1°17	29°30	11°34	29°48	4°41	15° 3	29°16	26°D27	25°28	23°51	17°32	M29
T 30	2 33 51	6°47'32	17°18	27° 4	2°32	29°34	11°26	29°55	4°39	15° 2	29°17	26°28	25°25	23°58	17°29	T 30
W31	2 37 48	7♂47'41	29♂ 5	26♂19	3♂48	29♂36	11♂17	0♂ 2	4♂37	15♂ 1	29°R17	26°R28	25♂21	24♂ 4	17♂27	W31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
M 1	3s10	23s20	2s41	15s15	2s47	2n50	1n27	23n 1	0s17	15n 0	1s22	17s46	1n48	21n 7	0s 8	6s44
T 2	3 33	19 37	1 43	15 41	2 52	2 20	1 28	23 4	0 16	14 58	1 22	17 47	1 48	21 7	0 8	6 44
W 3	3 56	15 9	0 41	16 5	2 57	1 51	1 27	23 7	0 14	14 57	1 22	17 48	1 48	21 7	0 8	6 45
T 4	4 20	10 5	0n24	16 27	3 2	1 21	1 27	23 9	0 12	14 55	1 22	17 50	1 47	21 7	0 8	6 46
F 5	4 43	4 38	1 27	16 48	3 6	0 51	1 27	23 12	0 10	14 53	1 22	17 51	1 47	21 6	0 8	6 46
S 6	5 6	1n 3	2 28	17 7	3 10	0 21	1 27	23 15	0 8	14 51	1 22	17 53	1 47	21 6	0 8	6 47
S 7	5 29	6 46	3 22	17 24	3 13	0s 9	1 27	23 17	0 6	14 50	1 22	17 54	1 47	21 6	0 8	6 47
M 8	5 52	12 19	4 7	17 38	3 15	0 40	1 26	23 20	0 5	14 48	1 23	17 56	1 47	21 6	0 8	6 48
T 9	6 15	17 27	4 42	17 51	3 17	1 10	1 26	23 22	0 3	14 46	1 23	17 57	1 47	21 5	0 8	6 48
W10	6 38	21 53	5 2	18 1	3 18	1 40	1 25	23 25	0 1	14 44	1 23	17 59	1 46	21 5	0 8	6 49
T 11	7 1	25 18	5 7	18 8	3 18	2 10	1 25	23 27	0n 1	14 42	1 23	18 0	1 46	21 5	0 8	6 49
F 12	7 23	27 23	4 55	18 13	3 17	2 40	1 24	23 30	0 3	14 40	1 23	18 1	1 46	21 5	0 8	6 50
S 13	7 46	27 54	4 27	18 14	3 15	3 10	1 24	23 32	0 6	14 38	1 23	18 3	1 46	21 4	0 8	6 50
S 14	8 9	26 43	3 43	18 12	3 12	3 40	1 23	23 35	0 8	14 36	1 23	18 4	1 46	21 4	0 8	6 51
M15	8 31	23 51	2 45	18 6	3 7	4 10	1 22	23 37	0 10	14 33	1 23	18 6	1 46	21 4	0 8	6 51
T 16	8 53	19 32	1 37	17 56	3 1	4 40	1 21	23 40	0 12	14 31	1 23	18 7	1 45	21 4	0 8	6 52
W17	9 15	14 3	0 22	17 42	2 53	5 10	1 20	23 42	0 14	14 29	1 23	18 9	1 45	21 3	0 8	6 52
T 18	9 37	7 45	0s55	17 24	2 44	5 39	1 19	23 44	0 16	14 27	1 23	18 10	1 45	21 3	0 8	6 53
F 19	9 59	1 1	2 9	17 1	2 33	6 9	1 18	23 47	0 19	14 25	1 23	18 12	1 45	21 3	0 8	6 53
S 20	10 21	5s44	3 14	16 33	2 20	6 38	1 17	23 49	0 21	14 22	1 23	18 13	1 45	21 2	0 8	6 53
S 21	10 42	12 9	4 6	16 1	2 5	7 8	1 16	23 52	0 23	14 20	1 23	18 15	1 45	21 2	0 8	6 54
M22	11 4	17 50	4 43	15 24	1 49	7 37	1 15	23 54	0 26	14 18	1 23	18 17	1 45	21 2	0 8	6 54
T 23	11 25	22 27	5 1	14 44	1 31	8 6	1 14	23 57	0 28	14 15	1 23	18 18	1 45	21 1	0 8	6 55
W24	11 46	25 44	5 2	14 1	1 12	8 35	1 12	23 59	0 30	14 13	1 23	18 20	1 44	21 1	0 8	6 55
T 25	12 7	27 31	4 46	13 16	0 52	9 3	1 11	24 2	0 33	14 11	1 23	18 21	1 44	21 1	0 8	6 55
F 26	12 28	27 46	4 17	12 30	0 31	9 32	1 9	24 4	0 35	14 8	1 23	18 23	1 44	21 0	0 8	6 56
S 27	12 48	26 35	3 36	11 44	0 11	10 0	1 8	24 7	0 38	14 6	1 23	18 24	1 44	21 0	0 8	6 56
S 28	13 8	24 9	2 46	11 0	0n10	10 28	1 6	24 9	0 40	14 3	1 23	18 26	1 44	21 0	0 8	6 56
M29	13 29	20 42	1 49	10 19	0 29	10 56	1 5	24 12	0 43	14 1	1 23	18 27	1 44	20 59	0 8	6 57
T 30	13 48	16 27	0 49	9 42	0 48	11 23	1 3	24 15	0 46	13 59	1 23	18 29	1 44	20 59	0 8	6 57
W31	14s 8	11s36	0n14	9s10	1n 5	11s50	1n 2	24n17	0n48	13n56	1s23	18s30	1n44	20n58	0s 8	6s57

Julian Day Number = 2338958.5, Delta T = 17.61 sec
Ecliptic obliquity = 23°28'54", Nutation = 0°00'09", out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°26'15", Lahiri = 19°33'15"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1691

geocentric

NOVEMBER 1691 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	2 41 44	8♌47°51	10♋57	25°R45	5♍ 3	29♊38	11°R 9	0♈ 8	4°R35	15°R 0	29°R16	26°R27	25♌18	24♌11	17°R24	T 1
F 2	2 45 41	9°48'03	22°58	25♌23	6°18	29°39	11♈ 1	0°15	4♊32	15♋ 0	29♋16	26♋24	25°15	24°18	17♊21	F 2
S 3	2 49 37	10°48'16	5°V11	25°D12	7°34	29°R39	10°53	0°22	4°30	14°59	29°16	26°18	25°12	24°24	17°19	S 3
S 4	2 53 34	11°48'31	17°40	25°13	8°49	29°38	10°45	0°29	4°28	14°58	29°16	26°10	25° 9	24°31	17°16	S 4
M 5	2 57 30	12°48'47	0♉27	25°24	10° 4	29°36	10°37	0°36	4°26	14°57	29°16	25°59	25° 6	24°38	17°13	M 5
T 6	3 1 127	13°49'06	13°31	25°46	11°20	29°33	10°28	0°43	4°23	14°57	29°16	25°46	25° 2	24°44	17°10	T 6
W 7	3 5 24	14°49'26	26°51	26°18	12°35	29°30	10°20	0°49	4°21	14°56	29°16	25°33	24°59	24°51	17° 7	W 7
T 8	3 9 20	15°49'48	10♊26	26°57	13°50	29°26	10°12	0°56	4°19	14°55	29°16	25°21	24°56	24°58	17° 4	T 8
F 9	3 13 17	16°50'11	24°11	27°45	15° 6	29°21	10° 4	1° 3	4°16	14°55	29°15	25°11	24°53	25° 4	17° 1	F 9
S 10	3 17 13	17°50'37	8♉ 3	28°39	16°21	29°15	9°56	1°10	4°14	14°54	29°15	25° 3	24°50	25°11	16°58	S 10
S 11	3 21 10	18°51'04	22° 1	29°39	17°36	29° 8	9°48	1°17	4°12	14°54	29°15	24°59	24°46	25°17	16°55	S 11
M12	3 25 6	19°51'34	6♊ 3	0♌44	18°52	29° 0	9°40	1°24	4° 9	14°53	29°14	24°57	24°43	25°24	16°52	M12
T 13	3 29 3	20°52'05	20° 6	1°54	20° 7	28°51	9°32	1°31	4° 7	14°53	29°14	24°56	24°40	25°31	16°49	T 13
W14	3 32 59	21°52'37	4♌12	3° 7	21°23	28°42	9°24	1°38	4° 4	14°52	29°14	24°56	24°37	25°37	16°46	W14
T 15	3 36 56	22°53'12	18°18	4°24	22°38	28°31	9°17	1°45	4° 2	14°52	29°13	24°55	24°34	25°44	16°42	T 15
F 16	3 40 53	23°53'49	2♌24	5°43	23°54	28°20	9° 9	1°52	3°59	14°52	29°13	24°51	24°31	25°51	16°39	F 16
S 17	3 44 49	24°54'27	16°27	7° 5	25° 9	28° 8	9° 1	2° 0	3°57	14°51	29°13	24°45	24°27	25°57	16°36	S 17
S 18	3 48 46	25°55'07	0♌25	8°29	26°24	27°55	8°54	2° 7	3°54	14°51	29°12	24°36	24°24	26° 4	16°32	S 18
M19	3 52 42	26°55'48	14°14	9°55	27°40	27°41	8°47	2°14	3°52	14°51	29°12	24°24	24°21	26°11	16°29	M19
T 20	3 56 39	27°56'31	27°49	11°22	28°55	27°26	8°39	2°21	3°49	14°51	29°11	24°10	24°18	26°17	16°25	T 20
W21	4 0 35	28°57'15	11♈ 8	12°50	0♈11	27°11	8°32	2°28	3°47	14°50	29°11	23°57	24°15	26°24	16°22	W21
T 22	4 4 32	29°58'01	24° 8	14°19	1°26	26°55	8°25	2°35	3°44	14°50	29°10	23°45	24°12	26°31	16°18	T 22
F 23	4 8 28	0♈58'48	6♉49	15°49	2°42	26°38	8°18	2°42	3°42	14°50	29° 9	23°35	24° 8	26°37	16°15	F 23
S 24	4 12 25	1°59'36	19°12	17°19	3°57	26°20	8°11	2°49	3°39	14°50	29° 9	23°28	24° 5	26°44	16°11	S 24
S 25	4 16 22	3° 0'25	1♌20	18°50	5°13	26° 2	8° 4	2°56	3°37	14°50	29° 8	23°24	24° 2	26°50	16° 8	S 25
M26	4 20 18	4° 1'15	13°15	20°22	6°28	25°43	7°58	3° 3	3°34	14°D50	29° 7	23°22	23°59	26°57	16° 4	M26
T 27	4 24 15	5° 2'05	25° 4	21°54	7°44	25°24	7°51	3°11	3°32	14°50	29° 7	23°D22	23°56	27° 4	16° 0	T 27
W28	4 28 11	6° 2'57	6♈52	23°26	8°59	25° 4	7°45	3°18	3°29	14°50	29° 6	23°R22	23°52	27°10	15°57	W28
T 29	4 32 8	7° 3'50	18°43	24°58	10°14	24°43	7°39	3°25	3°27	14°50	29° 5	23°21	23°49	27°17	15°53	T 29
F 30	4 36 4	8♈ 4'43	0°V45	26♌31	11♈30	24♊22	7♉33	3♈32	3♊24	14♋50	29♋ 5	23♋19	23♋46	27♋24	15♊49	F 30

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	14s27	6s18	1n16	8s43	1n20	12s17	1n 0	24n20	0n51	13n54	1s23	18s32	1n44	20n58	0s 8	6s58	1s 8	23n51	3n36	12s43	13s 7	13s35	17n20	5s34			
F 2	14 47	0 43	2 16	8 23	1 34	12 44	0 58	24 23	0 54	13 51	1 22	18 33	1 43	20 58	0 8	6 58	1 8	23 51	3 36	12 44	13 8	13 32	17 20	5 35			
S 3	15 6	4n58	3 10	8 8	1 45	13 10	0 56	24 25	0 57	13 49	1 22	18 35	1 43	20 57	0 8	6 58	1 8	23 51	3 36	12 46	13 9	13 29	17 19	5 35			
S 4	15 24	10 35	3 56	7 59	1 55	13 36	0 54	24 28	0 59	13 46	1 22	18 36	1 43	20 57	0 8	6 59	1 8	23 52	3 36	12 49	13 10	13 26	17 18	5 35			
M 5	15 43	15 53	4 32	7 56	2 3	14 2	0 53	24 31	1 2	13 44	1 22	18 38	1 43	20 56	0 8	6 59	1 8	23 52	3 36	12 53	13 11	13 23	17 18	5 36			
T 6	16 1	20 35	4 54	7 58	2 10	14 27	0 51	24 34	1 5	13 41	1 22	18 39	1 43	20 56	0 8	6 59	1 8	23 52	3 36	12 57	13 12	13 19	17 17	5 36			
W 7	16 19	24 21	5 0	8 5	2 14	14 52	0 49	24 37	1 8	13 39	1 22	18 41	1 43	20 56	0 8	6 59	1 8	23 52	3 37	13 2	13 13	13 16	17 17	5 36			
T 8	16 36	26 50	4 50	8 16	2 17	15 17	0 47	24 39	1 11	13 37	1 22	18 42	1 43	20 55	0 8	6 59	1 8	23 52	3 37	13 6	13 14	13 13	17 16	5 37			
F 9	16 54	27 44	4 23	8 31	2 19	15 41	0 45	24 42	1 14	13 34	1 22	18 44	1 43	20 55	0 8	7 0	1 8	23 53	3 37	13 9	13 15	13 10	17 15	5 37			
S 10	17 11	26 54	3 41	8 50	2 20	16 5	0 43	24 45	1 16	13 32	1 22	18 45	1 43	20 54	0 8	7 0	1 8	23 53	3 37	13 12	13 16	13 7	17 15	5 37			
S 11	17 28	24 23	2 45	9 11	2 20	16 28	0 40	24 48	1 19	13 29	1 21	18 47	1 43	20 54	0 8	7 0	1 8	23 53	3 37	13 13	13 17	13 4	17 14	5 38			
M12	17 44	20 23	1 38	9 35	2 18	16 51	0 38	24 51	1 22	13 27	1 21	18 48	1 43	20 53	0 8	7 0	1 8	23 53	3 37	13 14	13 18	13 1	17 13	5 38			
T 13	18 0	15 13	0 26	10 2	2 16	17 13	0 36	24 54	1 25	13 25	1 21	18 50	1 42	20 53	0 8	7 0	1 8	23 53	3 38	13 14	13 19	12 58	17 13	5 38			
W14	18 16	9 14	0s49	10 30	2 13	17 35	0 34	24 57	1 28	13 22	1 21	18 51	1 42	20 52	0 8	7 1	1 8	23 54	3 38	13 14	13 20	12 55	17 12	5 39			
T 15	18 32	2 48	2 0	10 59	2 9	17 57	0 32	25 0	1 31	13 20	1 21	18 53	1 42	20 52	0 8	7 1	1 8	23 54	3 38	13 14	13 21	12 52	17 12	5 39			
F 16	18 47	3s46	3 4	11 29	2 5	18 18	0 30	25 3	1 34	13 18	1 21	18 54	1 42	20 52	0 8	7 1	1 8	23 54	3 38	13 16	13 23	12 49	17 11	5 39			
S 17	19 2	10 7	3 56	12 1	2 0	18 39	0 27	25 5	1 37	13 16	1 20	18 56	1 42	20 51	0 8	7 1	1 8	23 54	3 38	13 18	13 24	12 46	17 10	5 40			
S 18	19 16	15 55	4 34	12 33	1 55	18 59	0 25	25 8	1 40	13 13	1 20	18 57	1 42	20 51	0 8	7 1	1 8	23 55	3 38	13 21	13 25	12 43	17 10	5 40			
M19	19 30	20 50	4 55	13 5	1 49	19 18	0 23	25 11	1 43	13 11	1 20	18 59	1 42	20 50	0 8	7 1	1 8	23 55	3 38	13 25	13 26	12 40	17 9	5 40			
T 20	19 44	24 34	4 59	13 37	1 44	19 37	0 20	25 14	1 46	13 9	1 20	19 0	1 42	20 50	0 8	7 1	1 8	23 55	3 39	13 29	13 27	12 36	17 8	5 40			
W21	19 58	26 53	4 47	14 10	1 37	19 56	0 18	25 16	1 49	13 7	1 20	19 1	1 42	20 49	0 8	7 1	1 7	23 55	3 39	13 34	13 28	12 33	17 8	5 41			
T 22	20 11	27 40	4 20	14 43	1 31	20 14	0 16	25 19	1 52	13 5	1 19	19 3	1 42	20 49	0 7	7 1	1 7	23 56	3 39	13 38	13 29	12 30	17 7	5 41			
F 23	20 23	26 58	3 40	15 15	1 24	20 31	0 13	25 21	1 55	13 3	1 19	19 4	1 42	20 48	0 7	7 1	1 7	23 56	3 39	13 41	13 30	12 27	17 7	5 41			
S 24	20 36	24 55	2 50	15 47	1 18	20 48	0 11	25 24	1 58	13 1	1 19	19 6	1 42	20 48	0 7	7 1	1 7	23 56	3 39	13 43	13 31	12 24	17 6	5 41			
S 25	20 48	21 45	1 54	16 19	1 11	21 4	0 9	25 26	2 1	12 59	1 19	19 7	1 42	20 47	0 7	7 1	1 7	23 57	3 39	13 45	13 32	12 21	17 6	5 42			
M26	20 59	17 43	0 53	16 51	1 4	21 19	0 6	25 29	2 4	12 57	1 19	19 9	1 42	20 47	0 7	7 1	1 7	23 57	3 40	13 45	13 33	12 18	17 5	5 42			
T 27	21 11	13 3	0n 9	17 21	0 57	21 34	0 4	25 31	2 7	12 55	1 18	19 10	1 42	20 46	0 7	7 1	1 7	23 57	3 40	13 45	13 34	12 15	17 4	5 42			
W28	21 21	7 54	1 11	17 52	0 50	21 49	0 1	25 33	2 10	12 53	1 18	19 11	1 42	20 46	0 7	7 1	1 7	23 57	3 40	13 45	13 35	12 12	17 4	5 42			
T 29	21 32	2 58	2 10	18 21	0 43	22 2	0s 1	25 35	2 12	12 51	1 18	19 13	1 42	20 45	0 7	7 1	1 7	23 58	3 40	13 46	13 36	12 9	17 3	5 42			
F 30	21s42	3n 7	3n 5	18s50	0n35	22s15	0s 3	25n37	2n15	12n50	1s18	19s14	1n42	20n45	0s 7	7s 1	1s 7	23n58	3n40	13s46	13s37	12s 5	17n 3	5s43			

ASTRODIENST EPHEMERIS for the year 1691

geocentric

DECEMBER 1691 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	4 40 1	9♂ 5'37	13♂ 1	28♂ 3	12♂ 45	24°R 0	7°R27	3♂ 39	3°R21	14♂ 50	29°R 4	23°R14	23♂ 43	27♂ 30	15°R46	S 1
S 2	4 43 57	10° 6'32	25°35	29°36	14° 1	23♂ 39	7♂ 21	3°46	3♂ 19	14°51	29♂ 3	23♂ 7	23°40	27°37	15♂ 42	S 2
M 3	4 47 54	11° 7'28	8♂ 32	1♂ 9	15°16	23°16	7°16	3°53	3°16	14°51	29° 2	22°57	23°37	27°44	15°38	M 3
T 4	4 51 51	12° 8'24	21°51	2°42	16°32	22°54	7°10	4° 0	3°14	14°51	29° 1	22°45	23°33	27°50	15°34	T 4
W 5	4 55 47	13° 9'22	5♂ 31	4°15	17°47	22°31	7° 5	4° 7	3°11	14°51	29° 1	22°33	23°30	27°57	15°31	W 5
T 6	4 59 44	14°10'20	19°30	5°49	19° 3	22° 8	7° 0	4°14	3° 9	14°52	29° 0	22°22	23°27	28° 4	15°27	T 6
F 7	5 3 40	15°11'19	3♂ 42	7°22	20°18	21°44	6°55	4°21	3° 7	14°52	28°59	22°13	23°24	28°10	15°23	F 7
S 8	5 7 37	16°12'20	18° 2	8°55	21°33	21°21	6°50	4°28	3° 4	14°52	28°58	22° 6	23°21	28°17	15°19	S 8
S 9	5 11 33	17°13'21	2♂ 25	10°29	22°49	20°57	6°46	4°35	3° 2	14°53	28°57	22° 1	23°18	28°24	15°16	S 9
M10	5 15 30	18°14'23	16°46	12° 2	24° 4	20°34	6°42	4°42	2°59	14°53	28°56	22°D 0	23°14	28°30	15°12	M10
T 11	5 19 27	19°15'26	1♂ 2	13°36	25°20	20°10	6°37	4°49	2°57	14°54	28°55	22° 0	23°11	28°37	15° 8	T 11
W12	5 23 23	20°16'30	15°10	15°10	26°35	19°47	6°33	4°56	2°54	14°54	28°54	22°R 1	23° 8	28°43	15° 4	W12
T 13	5 27 20	21°17'35	29°10	16°44	27°51	19°23	6°30	5° 3	2°52	14°55	28°53	22° 0	23° 5	28°50	15° 0	T 13
F 14	5 31 16	22°18'40	13♂ 1	18°18	29° 6	19° 0	6°26	5°10	2°50	14°56	28°52	21°58	23° 2	28°57	14°57	F 14
S 15	5 35 13	23°19'47	26°44	19°52	0♂ 21	18°37	6°23	5°17	2°47	14°56	28°51	21°54	22°58	29° 3	14°53	S 15
S 16	5 39 9	24°20'55	10♂ 17	21°26	1°37	18°15	6°20	5°24	2°45	14°57	28°50	21°47	22°55	29°10	14°49	S 16
M17	5 43 6	25°22'03	23°39	23° 1	2°52	17°52	6°17	5°31	2°43	14°58	28°49	21°38	22°52	29°17	14°46	M17
T 18	5 47 2	26°23'12	6♂ 49	24°36	4° 8	17°30	6°14	5°37	2°40	14°58	28°48	21°28	22°49	29°23	14°42	T 18
W19	5 50 59	27°24'21	19°47	26°11	5°23	17° 8	6°11	5°44	2°38	14°59	28°47	21°17	22°46	29°30	14°38	W19
T 20	5 54 56	28°25'31	2♂ 30	27°46	6°39	16°47	6° 9	5°51	2°36	15° 0	28°46	21° 8	22°43	29°37	14°35	T 20
F 21	5 58 52	29°26'41	14°58	29°21	7°54	16°27	6° 7	5°58	2°34	15° 1	28°44	21° 0	22°39	29°43	14°31	F 21
S 22	6 2 49	0♂ 27'52	27°13	0♂ 57	9° 9	16° 6	6° 5	6° 4	2°32	15° 2	28°43	20°55	22°36	29°50	14°27	S 22
S 23	6 6 45	1°29'02	9♂ 16	2°33	10°25	15°47	6° 3	6°11	2°30	15° 3	28°42	20°52	22°33	29°57	14°24	S 23
M24	6 10 42	2°30'13	21° 9	4° 9	11°40	15°28	6° 1	6°18	2°27	15° 4	28°41	20°D51	22°30	0♂ 3	14°20	M24
T 25	6 14 38	3°31'23	2♂ 57	5°45	12°56	15° 9	6° 0	6°24	2°25	15° 4	28°40	20°52	22°27	0°10	14°17	T 25
W26	6 18 35	4°32'34	14°44	7°22	14°11	14°52	5°59	6°31	2°23	15° 5	28°39	20°53	22°24	0°17	14°13	W26
T 27	6 22 31	5°33'44	26°34	8°59	15°26	14°35	5°58	6°37	2°21	15° 7	28°37	20°54	22°20	0°23	14°10	T 27
F 28	6 26 28	6°34'54	8♂ 34	10°37	16°42	14°18	5°57	6°44	2°19	15° 8	28°36	20°R55	22°17	0°30	14° 6	F 28
S 29	6 30 25	7°36'04	20°48	12°14	17°57	14° 3	5°57	6°50	2°17	15° 9	28°35	20°54	22°14	0°36	14° 3	S 29
S 30	6 34 21	8°37'13	3♂ 21	13°52	19°13	13°48	5°56	6°57	2°15	15°10	28°34	20°51	22°11	0°43	14° 0	S 30
M31	6 38 18	9♂ 38'23	16♂ 17	15♂ 31	20♂ 28	13♂ 34	5°D56	7♂ 57	2♂ 14	15♂ 11	28♂ 32	20♂ 46	22♂ 8	0♂ 50	13♂ 56	M31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	21s51	8n42	3n52	19s18	0n28	22s28	0s 6	25n38	2n18	12n48	1s17	19s15	1n41	20n45	0s 7	7s 1	S 1
S 2	22 0 14 4	4 28	19 45	0 21	22 39	0 8	25 40	2 21	12 46	1 17	19 17	1 41	20 44	0 7	7 1	1 7	S 2
M 3	22 9 18 59	4 53	20 12	0 14	22 50	0 11	25 42	2 23	12 45	1 17	19 18	1 41	20 44	0 7	7 1	1 7	M 3
T 4	22 17 23 7	5 2	20 37	0 7	23 1	0 13	25 43	2 26	12 43	1 17	19 19	1 41	20 43	0 7	7 0	1 7	T 4
W 5	22 25 26 5	4 54	21 2	0 0	23 10	0 15	25 44	2 28	12 42	1 16	19 21	1 41	20 43	0 7	7 0	1 7	W 5
T 6	22 32 27 32	4 29	21 25	0s 7	23 19	0 18	25 45	2 31	12 41	1 16	19 22	1 41	20 42	0 7	7 0	1 7	T 6
F 7	22 39 27 13	3 47	21 48	0 13	23 28	0 20	25 46	2 33	12 39	1 16	19 23	1 41	20 42	0 7	7 0	1 7	F 7
S 8	22 46 25 5	2 50	22 10	0 20	23 35	0 22	25 47	2 35	12 38	1 16	19 25	1 41	20 41	0 7	7 0	1 7	S 8
S 9	22 52 21 19	1 42	22 30	0 27	23 42	0 25	25 47	2 37	12 37	1 15	19 26	1 41	20 41	0 7	7 0	1 7	S 9
M10	22 58 16 17	0 28	22 49	0 33	23 48	0 27	25 48	2 40	12 36	1 15	19 27	1 41	20 40	0 7	6 59	1 7	M10
T 11	23 3 10 23	0s48	23 8	0 40	23 53	0 29	25 48	2 42	12 34	1 15	19 29	1 41	20 40	0 7	6 59	1 7	T 11
W12	23 7 4 0	2 0	23 25	0 46	23 58	0 32	25 48	2 44	12 33	1 14	19 30	1 41	20 39	0 7	6 59	1 7	W12
T 13	23 12 2s30	3 5	23 41	0 52	24 2	0 34	25 48	2 45	12 32	1 14	19 31	1 41	20 39	0 7	6 59	1 7	T 13
F 14	23 15 8 48	3 58	23 56	0 58	24 5	0 36	25 48	2 47	12 32	1 14	19 32	1 41	20 39	0 7	6 58	1 7	F 14
S 15	23 19 14 37	4 36	24 9	1 4	24 7	0 38	25 48	2 49	12 31	1 14	19 34	1 41	20 38	0 7	6 58	1 7	S 15
S 16	23 22 19 39	4 59	24 21	1 9	24 9	0 41	25 48	2 51	12 30	1 13	19 35	1 41	20 38	0 7	6 58	1 7	S 16
M17	23 24 23 38	5 5	24 32	1 15	24 10	0 43	25 47	2 52	12 29	1 13	19 36	1 41	20 37	0 7	6 58	1 7	M17
T 18	23 26 26 19	4 54	24 42	1 20	24 10	0 45	25 46	2 54	12 29	1 13	19 37	1 41	20 37	0 7	6 57	1 7	T 18
W19	23 27 27 33	4 29	24 50	1 25	24 9	0 47	25 46	2 55	12 28	1 12	19 38	1 41	20 36	0 7	6 57	1 7	W19
T 20	23 28 27 17	3 50	24 57	1 30	24 8	0 49	25 45	2 56	12 27	1 12	19 39	1 41	20 36	0 7	6 57	1 7	T 20
F 21	23 29 25 38	3 1	25 3	1 34	24 6	0 51	25 44	2 57	12 27	1 12	19 41	1 41	20 36	0 7	6 56	1 7	F 21
S 22	23 29 22 47	2 4	25 7	1 39	24 3	0 53	25 43	2 59	12 27	1 12	19 42	1 41	20 35	0 7	6 56	1 7	S 22
S 23	23 28 18 58	1 2	25 10	1 43	23 59	0 55	25 42	3 0	12 26	1 11	19 43	1 41	20 35	0 7	6 55	1 7	S 23
M24	23 27 14 27	0n 2	25 11	1 46	23 55	0 57	25 41	3 1	12 26	1 11	19 44	1 41	20 34	0 7	6 55	1 7	M24
T 25	23 26 9 26	1 5	25 11	1 50	23 50	0 59	25 39	3 1	12 26	1 11	19 45	1 41	20 34	0 7	6 55	1 6	T 25
W26	23 24 4 5	2 6	25 10	1 53	23 44	1 1	25 38	3 2	12 26	1 10	19 46	1 41	20 34	0 7	6 54	1 6	W26
T 27	23 22 1n25	3 1	25 7	1 56	23 37	1 2	25 37	3 3	12 26	1 10	19 47	1 41	20 33	0 7	6 54	1 6	T 27
F 28	23 19 6 55	3 50	25 2	1 59	23 30	1 4	25 36	3 4	12 26	1 10	19 48	1 41	20 33	0 7	6 53	1 6	F 28
S 29	23 16 12 17	4 29	24 56	2 1	23 22	1 6	25 34	3 4	12 26	1 9	19 49	1 41	20 32	0 7	6 53	1 6	S 29
S 30	23 12 17 17	4 56	24 48	2 3	23 13	1 8	25 33	3 5	12 26	1 9	19 50	1 42	20 32	0 7	6 53	1 6	S 30
M31	23s 8	21n40	5n 9	24s39	2s 5	23s 4	1s 9	25n32	3n 5	12n27	1s 9	19s51	1n42	20n32	0s 7	6s52	M31

Julian Day Number = 2339019.5, Delta T = 17.53 sec
 Ecliptic obliquity = 23°28'53, Nutation = 0°00'09, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 20°26'23, Lahiri = 19°33'23Greg. Calendar