



Astrodienst Ephemeris Tables for the year 2113

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 2113

geocentric

JANUARY 2113

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	6 42 21	10°26'33	25°11'57	15°34'49	26°38'40	22°11'51	20°11'36	11°11'58	12°11'19	15°11'40	14°11'56	9°11'37	9°11'30	1°11'12	4°11'26	S 1
M 2	6 46 18	11°27'41	9°11'55	17°27'27	27°33'23	23°33'20	20°47'12	12°2'12	12°11'17	15°40'14	14°56'09	9°37'27	9°27'19	1°19'19	4°28'28	M 2
T 3	6 50 14	12°28'49	22°17'19	19°4'28	28°24'24	24°16'20	20°57'12	12°7'12	12°14'12	15°41'14	14°55'09	9°37'24	9°24'12	1°26'12	4°31'31	T 3
W 4	6 54 11	13°29'57	5°11'3	20°42'29	29°14'24	24°59'21	20°8'12	12°12'12	12°12'12	15°41'14	14°54'09	9°37'21	9°21'13	1°32'13	4°34'34	W 4
T 5	6 58 7	14°31'05	17°34'22	22°20'01	4'25	25°41'21	21°18'12	12°17'12	12°10'10	15°42'14	14°54'09	9°36'18	9°18'13	1°39'13	4°37'37	T 5
F 6	7 2 4	15°32'13	29°51'23	23°58'05	53'26	26°24'21	21°28'12	12°22'12	12°8'8	15°42'14	14°53'09	9°36'15	9°15'14	1°46'14	4°40'40	F 6
S 7	7 6 0	16°33'21	11°11'56	25°37'14	1'41	27°7'21	21°38'12	12°27'12	12°6'6	15°43'14	14°53'09	9°35'11	9°11'15	1°53'15	4°43'43	S 7
S 8	7 9 57	17°34'29	23°53'27	27°15'22	28'28	27°49'21	21°48'12	12°32'12	12°4'4	15°43'14	14°53'09	9°34'9	9°8'8	1°59'15	4°46'46	S 8
M 9	7 13 53	18°35'38	5°11'46	28°54'31	14'28	28°32'21	21°58'12	12°38'12	12°2'2	15°43'14	14°52'09	9°33'9	9°5'2	2°6'2	4°49'49	M 9
T 10	7 17 50	19°36'46	17°39'08	33'35	29'15	29°15'22	22°8'12	12°43'12	12°1'1	15°43'14	14°52'09	9°33'9	9°2'2	2°13'13	4°52'52	T 10
W 11	7 21 47	20°37'55	29°37'2	12'44	29'57	22°17'12	12°48'11	12°48'11	11°59'15	15°44'14	14°51'09	9°33'8	8°59'2	2°19'19	4°55'55	W 11
T 12	7 25 43	21°39'04	11°11'43	35°50'52	26'01	22°27'12	12°54'11	12°54'11	11°57'15	15°44'14	14°51'09	9°34'8	8°56'2	2°26'26	4°58'58	T 12
F 13	7 29 40	22°40'12	24°4'52	6°8'12	23'25	22°36'12	12°59'11	12°59'11	11°55'15	15°44'14	14°51'09	9°35'8	8°52'2	2°33'33	5°1'1	F 13
S 14	7 33 36	23°41'21	6°11'43	7°6'6	64'9	2°5'22	22°45'13	13°5'11	11°53'15	15°44'14	14°50'09	9°36'8	8°49'2	2°40'40	5°5'5	S 14
S 15	7 37 33	24°42'30	19°43'8	8°43'7	29'2	2°48'22	22°55'13	13°11'11	11°52'15	15°44'14	14°50'09	9°37'8	8°46'2	2°46'46	5°8'8	S 15
M 16	7 41 29	25°43'38	3°5'10	10°20'8	7'3	3°31'23	23°4'13	13°16'11	11°50'15	15°44'14	14°50'09	9°38'8	8°43'2	2°53'53	5°11'11	M 16
T 17	7 45 26	26°44'47	16°50'11	11°55'8	44'4	4°13'23	23°13'13	13°22'11	11°49'15	15°44'14	14°49'09	9°38'8	8°40'3	3°0'0	5°15'15	T 17
W 18	7 49 22	27°45'54	0°54'13	13°30'9	20'9	4°56'23	23°22'13	13°28'11	11°47'15	15°44'14	14°49'09	9°37'8	8°36'3	3°7'7	5°18'18	W 18
T 19	7 53 19	28°47'02	15°15'15	15°2'9	54'5	5°39'23	23°30'13	13°34'11	11°45'15	15°44'14	14°49'09	9°35'8	8°33'3	3°13'13	5°21'21	T 19
F 20	7 57 16	29°48'08	29°47'16	16°33'10	27'6	6°21'23	23°39'13	13°40'11	11°44'15	15°44'14	14°49'09	9°32'8	8°30'3	3°20'20	5°25'25	F 20
S 21	8 1 12	0°49'14	14°11'22	18°1'10	58'7	7°4'23	23°48'13	13°46'11	11°43'15	15°44'14	14°49'09	9°29'8	8°27'2	3°27'27	5°28'28	S 21
S 22	8 5 9	1°50'19	28°55'19	19°26'11	28'11	7°47'23	23°56'13	13°52'11	11°41'15	15°44'14	14°48'09	9°27'8	8°24'2	3°33'33	5°32'32	S 22
M 23	8 9 5	2°51'23	13°11'21	20°48'11	56'8	8°29'24	24°4'13	13°58'11	11°40'15	15°44'14	14°48'09	9°24'8	8°21'2	3°40'40	5°35'35	M 23
T 24	8 13 2	3°52'26	27°36'22	6'12	22'2	9°12'24	24°12'14	14°4'11	11°39'15	15°43'14	14°48'09	9°23'8	8°17'2	3°47'47	5°39'39	T 24
W 25	8 16 58	4°53'29	11°11'37	23°19'12	46'9	9°54'24	24°20'14	14°11'11	11°37'15	15°43'14	14°48'09	9°23'8	8°14'3	3°54'54	5°42'42	W 25
T 26	8 20 55	5°54'30	25°24'24	24°26'13	9'10	10°37'24	24°28'14	14°17'11	11°36'15	15°43'14	14°48'09	9°24'8	8°11'4	4°0'0	5°46'46	T 26
F 27	8 24 51	6°55'30	8°11'56	25°27'13	30'11	11°20'24	24°36'14	14°23'11	11°35'15	15°42'14	14°48'09	9°26'8	8°8'8	4°7'7	5°50'50	F 27
S 28	8 28 48	7°56'29	22°14'26	21'13	49'12	12°2'24	24°43'14	14°30'11	11°34'15	15°42'14	14°48'09	9°28'8	8°5'2	4°14'14	5°53'53	S 28
S 29	8 32 45	8°57'27	5°11'20	27°7'14	5'12	12°45'24	24°51'14	14°36'11	11°33'15	15°42'14	14°48'09	9°28'8	8°2'2	4°21'21	5°57'57	S 29
M 30	8 36 41	9°58'24	18°13'27	27°44'14	20'13	13°27'24	24°58'14	14°42'11	11°32'15	15°41'14	14°48'09	9°28'8	7°58'2	4°27'27	6°1'1	M 30
T 31	8 40 38	10°59'20	0°11'55	28°12'14	32'14	14°10'25	25°11'14	14°49'11	11°31'15	15°41'14	14°48'09	9°26'8	7°55'2	4°34'34	6°11'11	T 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
S 1	23s 1	22n 7	1s15	24s31	2s 2	13s24	0s50	3s21	0s33	16s55	1n 0	8s49	1s53	22n15	0s 1	4s45
M 2	22 56	23 4	0 2	24 20	2 4	13 0	0 43	3 3	0 32	16 58	1 0	8 47	1 53	22 14	0 1	4 45
T 3	22 50	22 44	1n10	24 9	2 6	12 36	0 36	2 45	0 31	17 1	1 0	8 45	1 53	22 14	0 1	4 45
W 4	22 44	21 12	2 16	23 56	2 7	12 11	0 29	2 27	0 29	17 3	1 1	8 43	1 53	22 14	0 1	4 45
T 5	22 38	18 39	3 15	23 41	2 8	11 47	0 22	2 9	0 28	17 6	1 1	8 41	1 53	22 14	0 1	4 45
F 6	22 31	15 19	4 4	23 25	2 9	11 22	0 14	1 50	0 27	17 8	1 1	8 39	1 53	22 13	0 1	4 45
S 7	22 24	11 24	4 41	23 7	2 9	10 58	0 6	1 32	0 26	17 11	1 1	8 37	1 53	22 13	0 1	4 46
S 8	22 16	7 5	5 5	22 47	2 8	10 34	0n 2	1 14	0 24	17 13	1 1	8 35	1 52	22 13	0 1	4 46
M 9	22 8	2 33	5 16	22 26	2 7	10 9	0 10	0 56	0 23	17 16	1 1	8 33	1 52	22 13	0 1	4 46
T 10	21 59	2s 5	5 14	22 4	2 6	9 45	0 19	0 38	0 22	17 18	1 1	8 31	1 52	22 12	0 1	4 46
W 11	21 50	6 41	4 58	21 40	2 4	9 21	0 28	0 20	0 21	17 21	1 1	8 28	1 52	22 12	0 1	4 46
T 12	21 41	11 5	4 28	21 15	2 1	8 56	0 37	0 2	0 20	17 23	1 1	8 26	1 52	22 12	0 1	4 46
F 13	21 31	15 7	3 46	20 48	1 58	8 32	0 46	0n16	0 18	17 25	1 1	8 24	1 52	22 12	0 1	4 46
S 14	21 21	18 35	2 52	20 20	1 54	8 8	0 56	0 34	0 17	17 28	1 1	8 22	1 52	22 11	0 1	4 46
S 15	21 10	21 14	1 48	19 50	1 50	7 45	1 5	0 52	0 16	17 30	1 2	8 20	1 52	22 11	0 1	4 46
M 16	20 59	22 47	0 36	19 19	1 45	7 21	1 15	1 10	0 15	17 32	1 2	8 17	1 52	22 11	0 1	4 46
T 17	20 48	23 1	0s40	18 47	1 39	6 58	1 26	1 28	0 14	17 34	1 2	8 15	1 52	22 11	0 1	4 46
W 18	20 36	21 49	1 55	18 14	1 33	6 35	1 36	1 46	0 13	17 36	1 2	8 13	1 51	22 11	0 1	4 46
T 19	20 23	19 11	3 4	17 40	1 25	6 12	1 47	2 4	0 12	17 38	1 2	8 10	1 51	22 10	0 1	4 46
F 20	20 11	15 19	4 2	17 5	1 17	5 50	1 58	2 22	0 11	17 40	1 2	8 8	1 51	22 10	0 1	4 45
S 21	19 58	10 32	4 45	16 30	1 8	5 27	2 9	2 39	0 9	17 42	1 2	8 6	1 51	22 10	0 1	4 45
S 22	19 44	5 9	5 9	15 54	0 58	5 6	2 21	2 57	0 8	17 44	1 2	8 3	1 51	22 10	0 1	4 45
M 23	19 31	0n27	5 14	15 18	0 47	4 44	2 32	3 15	0 7	17 46	1 2	8 1	1 51	22 10	0 0	4 45
T 24	19 16	5 58	4 59	14 42	0 36	4 23	2 44	3 33	0 6	17 48	1 2	7 58	1 51	22 10	0 0	4 45
W 25	19 2	11 5	4 26	14 6	0 23	4 3	2 56	3 50	0 5	17 50	1 3	7 56	1 51	22 9	0 0	4 45
T 26	18 47	15 33	3 39	13 31	0 9	3 43	3 9	4 8	0 4	17 52	1 3	7 53	1 51	22 9	0 0	4 45
F 27	18 32	19 9	2 40	12 57	0n 5	3 23	3 21	4 26	0 3	17 53	1 3	7 51	1 51	22 9	0 0	4 44
S 28	18 16	21 39	1 33	12 25	0 20	3 4	3 34	4 43	0 2	17 55	1 3	7 48	1 51	22 9	0 0	4 44
S 29	18 0	22 56	0 23	11 54	0 36	2 46	3 47	5 1	0 1	17 57	1 3	7 46	1 51	22 9	0 0	4 44
M 30	17 44	22 58	0n48	11 26	0 53	2 28	4 0	5 18	0 0	17 59	1 3	7 43	1 51	22 9	0 0	4 44
T 31	17s28	21n48	1n55	11s 0	1n10	2s11	4n13	5n36	0n 1	18s 0	1n 3	7s41	1s51	22n 9	0s 0	4s44

Julian Day Number = 2492817.5, Delta T = 99.54 sec
 Ecliptic obliquity = 23°25'26, Nutation = - 0°00'17, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 26°19'09, Lahiri = 25°26'09

ASTRODIENST EPHEMERIS for the year 2113

geocentric

FEBRUARY 2113

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	8 44 34	12°01'5	13°26	28°29	14°42	14°52	25°12	14°56	11°R30	15°R40	14°48	9°R23	7°52	4°41	6°8	W 1
T 2	8 48 31	13°1'09	25°46	28°R35	14°50	15°34	25°19	15°2	11°R29	15°40	14°48	9°R18	7°49	4°47	6°12	T 2
F 3	8 52 27	14°2'02	7°57	28°31	14°56	16°17	25°26	15°9	11°28	15°39	14°48	9°11	7°46	4°54	6°16	F 3
S 4	8 56 24	15°2'54	19°59	28°15	14°59	16°59	25°33	15°16	11°27	15°39	14°49	9°4	7°42	5°1	6°19	S 4
S 5	9 0 20	16°3'45	1°55	27°48	14°R59	17°42	25°39	15°22	11°27	15°38	14°49	8°58	7°39	5°8	6°23	S 5
M 6	9 4 17	17°4'35	13°47	27°10	14°57	18°24	25°45	15°29	11°26	15°37	14°49	8°52	7°36	5°14	6°27	M 6
T 7	9 8 14	18°5'24	25°39	26°23	14°53	19°6	25°52	15°36	11°26	15°37	14°49	8°47	7°33	5°21	6°31	T 7
W 8	9 12 10	19°6'13	7°34	25°28	14°46	19°49	25°58	15°43	11°25	15°36	14°49	8°45	7°30	5°28	6°35	W 8
T 9	9 16 7	20°7'00	19°38	24°26	14°37	20°31	26°3	15°50	11°24	15°35	14°49	8°D44	7°27	5°34	6°39	T 9
F 10	9 20 3	21°7'47	1°55	23°18	14°25	21°13	26°9	15°57	11°24	15°34	14°50	8°44	7°23	5°41	6°43	F 10
S 11	9 24 0	22°8'32	14°30	22°8	14°11	21°55	26°15	16°3	11°24	15°34	14°50	8°46	7°20	5°48	6°46	S 11
S 12	9 27 56	23°9'17	27°27	20°57	13°54	22°38	26°20	16°10	11°23	15°33	14°50	8°47	7°17	5°55	6°50	S 12
M13	9 31 53	24°10'00	10°50	19°46	13°35	23°20	26°25	16°17	11°23	15°32	14°51	8°R48	7°14	6°1	6°54	M13
T 14	9 35 49	25°10'43	24°41	18°38	13°13	24°2	26°30	16°25	11°23	15°31	14°51	8°47	7°11	6°8	6°58	T 14
W15	9 39 46	26°11'24	8°58	17°34	12°50	24°44	26°35	16°32	11°23	15°30	14°51	8°43	7°8	6°15	7°2	W15
T 16	9 43 43	27°12'04	23°38	16°36	12°24	25°26	26°40	16°39	11°22	15°29	14°52	8°38	7°4	6°22	7°6	T 16
F 17	9 47 39	28°12'42	8°34	15°44	11°56	26°8	26°45	16°46	11°22	15°28	14°52	8°30	7°1	6°28	7°10	F 17
S 18	9 51 36	29°13'19	23°38	15°0	11°26	26°50	26°49	16°53	11°D22	15°27	14°53	8°22	6°58	6°35	7°14	S 18
S 19	9 55 32	0°13'54	8°38	14°22	10°54	27°33	26°53	17°0	11°22	15°26	14°53	8°14	6°55	6°42	7°18	S 19
M20	9 59 29	1°14'27	23°27	13°53	10°21	28°15	26°57	17°7	11°22	15°25	14°54	8°8	6°52	6°48	7°22	M20
T 21	10 3 25	2°14'59	7°57	13°31	9°47	28°57	27°1	17°15	11°23	15°24	14°54	8°3	6°48	6°55	7°26	T 21
W22	10 7 22	3°15'29	22°6	13°17	9°12	29°39	27°5	17°22	11°23	15°23	14°55	8°0	6°45	7°2	7°30	W22
T 23	10 11 18	4°15'57	5°11	13°D10	8°35	0°820	27°8	17°29	11°23	15°22	14°55	8°D0	6°42	7°9	7°34	T 23
F 24	10 15 15	5°16'23	19°15	13°10	7°58	1°2	27°12	17°36	11°23	15°21	14°56	8°0	6°39	7°15	7°38	F 24
S 25	10 19 12	6°16'48	2°20	13°17	7°21	1°44	27°15	17°44	11°24	15°19	14°56	8°R1	6°36	7°22	7°42	S 25
S 26	10 23 8	7°17'10	15°8	13°30	6°43	2°26	27°18	17°51	11°24	15°18	14°57	8°1	6°33	7°29	7°46	S 26
M27	10 27 5	8°17'31	27°43	13°48	6°6	3°8	27°21	17°58	11°25	15°17	14°57	7°59	6°29	7°36	7°50	M27
T 28	10 31 1	9°17'49	10°7	14°13	5°29	3°50	27°23	18°6	11°25	15°16	14°58	7°54	6°26	7°42	7°54	T 28

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	
W 1	17s11	19n34	2n55	10s38	1n27	1s55	4n26	5n53	0n2	18s2	1n3	7s38	1s51	22n8	0s0	W 1
T 2	16 54	16 28	3 46	10 19	1 44	1 40	4 40	6 10	0 3	18 3	1 4	7 35	1 50	22 8	0 0	T 2
F 3	16 36	12 41	4 26	10 5	2 2	1 25	4 53	6 27	0 4	18 5	1 4	7 33	1 50	22 8	0 0	F 3
S 4	16 19	8 27	4 53	9 55	2 19	1 12	5 7	6 44	0 5	18 6	1 4	7 30	1 50	22 8	0 0	S 4
S 5	16 1	3 57	5 8	9 49	2 35	0 59	5 21	7 2	0 6	18 8	1 4	7 27	1 50	22 8	0 0	S 5
M 6	15 42	0s41	5 9	9 47	2 50	0 47	5 34	7 19	0 7	18 9	1 4	7 25	1 50	22 8	0 0	M 6
T 7	15 24	5 18	4 57	9 50	3 3	0 36	5 48	7 35	0 7	18 10	1 4	7 22	1 50	22 8	0 0	T 7
W 8	15 5	9 44	4 32	9 58	3 15	0 26	6 1	7 52	0 8	18 12	1 4	7 19	1 50	22 8	0 0	W 8
T 9	14 46	13 52	3 55	10 9	3 25	0 18	6 14	8 9	0 9	18 13	1 4	7 17	1 50	22 8	0 0	T 9
F 10	14 27	17 29	3 6	10 23	3 33	0 10	6 27	8 26	0 10	18 14	1 5	7 14	1 50	22 8	0 0	F 10
S 11	14 7	20 25	2 8	10 41	3 38	0 4	6 40	8 42	0 11	18 15	1 5	7 11	1 50	22 8	0 0	S 11
S 12	13 47	22 23	1 1	11 1	3 41	0n2	6 53	8 59	0 12	18 16	1 5	7 9	1 50	22 8	0 0	S 12
M13	13 27	23 10	0s11	11 22	3 42	0 6	7 5	9 15	0 13	18 17	1 5	7 6	1 50	22 8	0 0	M13
T 14	13 7	22 34	1 25	11 45	3 40	0 8	7 17	9 32	0 14	18 18	1 5	7 3	1 50	22 8	0 0	T 14
W15	12 47	20 30	2 35	12 8	3 36	0 10	7 28	9 48	0 14	18 19	1 5	7 0	1 50	22 8	0 0	W15
T 16	12 26	17 3	3 37	12 31	3 30	0 10	7 39	10 4	0 15	18 20	1 5	6 57	1 50	22 8	0 0	T 16
F 17	12 5	12 27	4 26	12 53	3 22	0 9	7 49	10 20	0 16	18 21	1 6	6 55	1 50	22 8	0 0	F 17
S 18	11 44	7 4	4 56	13 15	3 13	0 7	7 59	10 36	0 17	18 22	1 6	6 52	1 50	22 8	0 0	S 18
S 19	11 23	1 16	5 6	13 35	3 3	0 3	8 7	10 52	0 18	18 23	1 6	6 49	1 50	22 8	0 0	S 19
M20	11 2	4n31	4 55	13 54	2 52	0s1	8 16	11 8	0 19	18 24	1 6	6 46	1 50	22 8	0 0	M20
T 21	10 40	9 57	4 26	14 12	2 40	0 7	8 23	11 24	0 19	18 24	1 6	6 43	1 50	22 8	0 0	T 21
W22	10 18	14 44	3 41	14 28	2 28	0 15	8 29	11 39	0 20	18 25	1 6	6 41	1 50	22 8	0 0	W22
T 23	9 56	18 35	2 43	14 42	2 15	0 23	8 35	11 55	0 21	18 26	1 6	6 38	1 50	22 8	0 0	T 23
F 24	9 34	21 21	1 39	14 55	2 2	0 32	8 39	12 10	0 22	18 26	1 6	6 35	1 50	22 8	0 0	F 24
S 25	9 12	22 54	0 30	15 5	1 49	0 42	8 43	12 25	0 22	18 27	1 7	6 32	1 50	22 8	0 0	S 25
S 26	8 50	23 12	0n38	15 14	1 36	0 53	8 46	12 40	0 23	18 28	1 7	6 29	1 50	22 8	0 0	S 26
M27	8 27	22 17	1 43	15 21	1 23	1 5	8 47	12 55	0 24	18 28	1 7	6 26	1 50	22 8	0 0	M27
T 28	8s5	20n18	2n42	15s26	1n10	1s18	8n48	13n10	0n25	18s29	1n7	6s24	1s50	22n8	0s0	T 28

Julian Day Number = 2492848.5, Delta T = 99.59 sec

Ecliptic obliquity = 23°25'27, Nutation = - 0°00'15, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 26°19'13, Lahiri = 25°26'14

ASTRODIENST EPHEMERIS for the year 2113
geocentric

MARCH 2113

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
W 1	10 34 58	10♈18'06	22♌22	14♊42	4♈52	4♌32	27♍26	18♈13	11♌26	15♈14	14♌59	7♈47	6♌23	7♊49	7♈58	W 1
T 2	10 38 54	11°18'21	4♎30	15°16	4♈17	5°13	27°28	18°20	11°26	15♌13	14°59	7♌37	6°20	7°56	8° 2	T 2
F 3	10 42 51	12°18'34	16°32	15°55	3°42	5°55	27°30	18°28	11°27	15°12	15° 0	7°25	6°17	8° 2	8° 6	F 3
S 4	10 46 47	13°18'45	28°30	16°37	3° 9	6°37	27°32	18°35	11°28	15°11	15° 1	7°12	6°14	8° 9	8°10	S 4
S 5	10 50 44	14°18'55	10♌23	17°24	2°38	7°18	27°34	18°42	11°28	15° 9	15° 2	6°59	6°10	8°16	8°14	S 5
M 6	10 54 40	15°19'03	22°15	18°13	2° 8	8° 0	27°35	18°50	11°29	15° 8	15° 2	6°48	6° 7	8°23	8°18	M 6
T 7	10 58 37	16°19'09	4♎ 7	19° 6	1°40	8°42	27°37	18°57	11°30	15° 6	15° 3	6°38	6° 4	8°29	8°22	T 7
W 8	11 2 34	17°19'14	16° 2	20° 3	1°14	9°23	27°38	19° 4	11°31	15° 5	15° 4	6°31	6° 1	8°36	8°26	W 8
T 9	11 6 30	18°19'17	28° 5	21° 2	0°50	10° 5	27°39	19°12	11°32	15° 4	15° 5	6°27	5°58	8°43	8°30	T 9
F 10	11 10 27	19°19'18	10♌18	22° 3	0°29	10°46	27°40	19°19	11°33	15° 2	15° 5	6°25	5°54	8°49	8°34	F 10
S 11	11 14 23	20°19'18	22°48	23° 7	0°10	11°28	27°40	19°27	11°34	15° 1	15° 6	6°D24	5°51	8°56	8°38	S 11
S 12	11 18 20	21°19'17	5♌39	24°14	29♌53	12° 9	27°41	19°34	11°35	14°59	15° 7	6°R25	5°48	9° 3	8°42	S 12
M13	11 22 16	22°19'14	18°56	25°23	29°39	12°51	27°41	19°41	11°36	14°58	15° 8	6°24	5°45	9°10	8°46	M13
T 14	11 26 13	23°19'09	2♌41	26°33	29°27	13°32	27°R41	19°49	11°38	14°56	15° 9	6°22	5°42	9°16	8°50	T 14
W15	11 30 9	24°19'02	16°56	27°46	29°17	14°13	27°41	19°56	11°39	14°55	15°10	6°17	5°39	9°23	8°54	W15
T 16	11 34 6	25°18'54	1♈39	29° 1	29°11	14°55	27°41	20° 4	11°40	14°53	15°11	6° 9	5°35	9°30	8°58	T 16
F 17	11 38 3	26°18'43	16°43	0♈17	29° 6	15°36	27°40	20°11	11°42	14°52	15°12	6° 0	5°32	9°37	9° 1	F 17
S 18	11 41 59	27°18'31	2♌ 1	1°36	29°D 4	16°17	27°39	20°18	11°43	14°50	15°13	5°48	5°29	9°43	9° 5	S 18
S 19	11 45 56	28°18'17	17°19	2°55	29° 5	16°58	27°39	20°26	11°44	14°49	15°14	5°37	5°26	9°50	9° 9	S 19
M20	11 49 52	29°18'01	2♌27	4°17	29° 7	17°40	27°37	20°33	11°46	14°47	15°15	5°27	5°23	9°57	9°13	M20
T 21	11 53 49	0♌17'42	17°16	5°40	29°13	18°21	27°36	20°40	11°48	14°45	15°16	5°20	5°19	10° 3	9°17	T 21
W22	11 57 45	1°17'22	1♌39	7° 5	29°20	19° 2	27°35	20°48	11°49	14°44	15°17	5°15	5°16	10°10	9°20	W22
T 23	12 1 42	2°16'59	15°34	8°31	29°29	19°43	27°33	20°55	11°51	14°42	15°18	5°13	5°13	10°17	9°24	T 23
F 24	12 5 38	3°16'34	29° 1	9°58	29°41	20°24	27°31	21° 2	11°53	14°41	15°19	5°12	5°10	10°24	9°28	F 24
S 25	12 9 35	4°16'07	12♌ 5	11°27	29°55	21° 5	27°29	21°10	11°54	14°39	15°20	5°12	5° 7	10°30	9°32	S 25
S 26	12 13 32	5°15'37	24°47	12°58	0♈11	21°46	27°27	21°17	11°56	14°37	15°21	5°11	5° 4	10°37	9°35	S 26
M27	12 17 28	6°15'05	7♌13	14°29	0°29	22°27	27°25	21°24	11°58	14°36	15°22	5° 9	5° 0	10°44	9°39	M27
T 28	12 21 25	7°14'31	19°27	16° 2	0°48	23° 8	27°22	21°31	12° 0	14°34	15°23	5° 3	4°57	10°50	9°43	T 28
W29	12 25 21	8°13'54	1♌32	17°37	1°10	23°49	27°19	21°38	12° 2	14°33	15°24	4°55	4°54	10°57	9°46	W29
T 30	12 29 18	9°13'16	13°31	19°13	1°33	24°30	27°16	21°46	12° 4	14°31	15°25	4°44	4°51	11° 4	9°50	T 30
F 31	12 33 14	10♌12'35	25♌26	20♈50	1♈58	25♌11	27♌13	21♈53	12♌ 6	14♌29	15♌26	4♌31	4♌48	11♌11	9♈54	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	7s42	17n24	3n33	15s30	0n57	1s31	8n48	13n25	0n25	18s29	1n 7	6s21	1s50	22n 8	0s 0	4s32	1n35	1n24	15s35	23n12	23n16	1n38	3s44	5n13
T 2	7 19	13 47	4 14	15 32	0 45	1 45	8 46	13 40	0 26	18 29	1 7	6 18	1 50	22 8	0 0	4 32	1 35	1 24	15 34	23 12	23 16	1 35	3 42	5 13
F 3	6 56	9 39	4 42	15 32	0 33	2 0	8 44	13 54	0 27	18 30	1 7	6 15	1 50	22 8	0 0	4 31	1 35	1 25	15 34	23 13	23 17	1 32	3 41	5 13
S 4	6 33	5 10	4 58	15 31	0 21	2 14	8 41	14 9	0 27	18 30	1 8	6 12	1 50	22 8	0 0	4 31	1 35	1 25	15 34	23 14	23 17	1 30	3 39	5 13
S 5	6 10	0 31	5 1	15 27	0 10	2 29	8 37	14 23	0 28	18 30	1 8	6 9	1 50	22 9	0 0	4 30	1 35	1 26	15 33	23 14	23 17	1 27	3 38	5 13
M 6	5 47	4s 9	4 51	15 23	0s 1	2 44	8 32	14 37	0 29	18 30	1 8	6 6	1 50	22 9	0 0	4 30	1 35	1 26	15 33	23 15	23 17	1 24	3 37	5 13
T 7	5 24	8 40	4 28	15 16	0 12	2 59	8 26	14 51	0 30	18 31	1 8	6 4	1 50	22 9	0 0	4 29	1 35	1 26	15 33	23 16	23 17	1 22	3 35	5 13
W 8	5 0	12 54	3 54	15 9	0 22	3 14	8 20	15 5	0 30	18 31	1 8	6 1	1 50	22 9	0 0	4 28	1 35	1 27	15 32	23 16	23 17	1 19	3 34	5 13
T 9	4 37	16 40	3 8	14 59	0 32	3 29	8 13	15 19	0 31	18 31	1 8	5 58	1 50	22 9	0 0	4 28	1 35	1 27	15 32	23 16	23 17	1 16	3 32	5 13
F 10	4 13	19 46	2 14	14 48	0 41	3 43	8 5	15 33	0 32	18 31	1 8	5 55	1 50	22 9	0 0	4 27	1 35	1 28	15 32	23 16	23 18	1 14	3 31	5 13
S 11	3 50	22 2	1 12	14 36	0 51	3 58	7 57	15 46	0 32	18 31	1 9	5 52	1 50	22 9	0 0	4 27	1 35	1 28	15 32	23 16	23 18	1 11	3 29	5 13
S 12	3 26	23 14	0 4	14 22	0 59	4 12	7 48	16 0	0 33	18 31	1 9	5 49	1 50	22 10	0 0	4 26	1 35	1 29	15 31	23 16	23 18	1 8	3 28	5 13
M13	3 3	23 11	1s 6	14 7	1 7	4 25	7 39	16 13	0 33	18 31	1 9	5 46	1 50	22 10	0 0	4 25	1 35	1 29	15 31	23 16	23 18	1 6	3 26	5 13
T 14	2 39	21 44	2 14	13 50	1 15	4 38	7 29	16 26	0 34	18 31	1 9	5 43	1 50	22 10	0 0	4 25	1 35	1 30	15 31	23 16	23 18	1 3	3 25	5 13
W15	2 15	18 52	3 17	13 32	1 23	4 51	7 19	16 39	0 35	18 30	1 9	5 41	1 51	22 10	0n 0	4 24	1 35	1 30	15 30	23 17	23 18	1 0	3 23	5 13
T 16	1 52	14 45	4 8	13 13	1 30	5 3	7 9	16 52	0 35	18 30	1 9	5 38	1 51	22 10	0 0	4 24	1 35	1 31	15 30	23 17	23 18	0 58	3 22	5 13
F 17	1 28	9 35	4 44	12 52	1 36	5 14	6 58	17 4	0 36	18 30	1 9	5 35	1 51	22 10	0 0	4 23	1 36	1 32	15 30	23 17	23 19	0 55	3 20	5 13
S 18	1 4	3 47	5 0	12 30	1 42	5 25	6 47	17 17	0 36	18 30	1 10	5 32	1 51	22 11	0 0	4 22	1 36	1 32	15 30	23 18	23 19	0 52	3 19	5 13
S 19	0 40	2n16	4 54	12 6	1 48	5 35	6 36	17 29	0 37	18 29	1 10	5 29	1 51	22 11	0 0	4 22	1 36	1 33	15 29	23 18	23 19	0 50	3 18	5 13
M20	0 17	8 7	4 28	11 42	1 53	5 45	6 25	17 41	0 38	18 29	1 10	5 26	1 51	22 11	0 0	4 21	1 36	1 33	15 29	23 19	23 19	0 47	3 16	5 13
T 21	0n 7	13 23	3 44	11 16	1 58	5 54	6 14	17 54	0 38	18 29	1 10	5 24	1 51	22 11	0 0	4 21	1 36	1 34	15 29	23 19	23 19	0 44	3 15	5 13
W22	0 31	17 45	2 47	10 48	2 3	6 2	6 2	18 5	0 39	18 28	1 10	5 21	1 51	22 12	0 0	4 20	1 36	1 34	15 29	23 19	23 19	0 42	3 13	5 13
T 23	0 54	20 57	1 42	10 20	2 7	6 9	5 51	18 17	0 39	18 28	1 10	5 18	1 51	22 12	0 0	4 19	1 36	1 35	15 28	23 19	23 19	0 39	3 12	5 13
F 24	1 18	22 53	0 33	9 50	2 10	6 16	5 40	18 29	0 40	18 27	1 10	5 15	1 51	22 12	0 0	4 19	1 36	1 35	15 28	23 19	23 19	0 36	3 10	5 13
S 25	1 42	23 29	0n36	9 19	2 13	6 22	5 28	18 40	0 40	18 27	1 10	5 12	1 51	22 12	0 0	4 18	1 36	1 36	15 28	23 19	23 20	0 33	3 9	5 13
S 26	2 5	22 49	1 41	8 47	2 16	6 27	5 17	18 51	0 41	18 26	1 11	5 10	1 51	22 12	0 0	4 17	1 36	1 36	15 28	23 19	23 20	0 31	3 7	5 14
M27	2 29	21 2	2 40	8 14	2 18	6 32	5 5	19 2	0 42	18 25	1 11	5 7	1 51	22 13	0 0	4 17	1 36	1 37	15 27	23 19	23 20	0 28	3 6	5 14
T 28	2 52	18 19	3 31	7 39	2 20	6 36	4 54	19 13	0 42	18 25	1 11	5 4	1 51	22 13	0 0	4 16	1 36	1 37	15 27	23 20	23 20	0 25	3 4	5 14
W29	3 16	14 50	4 11	7 3	2 21	6 39	4 43	19 24	0 43	18 24	1 11	5 1	1 52	22 13	0 0	4 15	1 36	1 38	15 27	23 20	23 20	0 23	3 3	5 14
T 30	3 39	10 46	4 39	6 27	2 22	6 41	4 31	19 35	0 43	18 23	1 11	4 59	1 52	22 14	0 0	4 15	1 36	1 38	15 27	23 20	23 20	0 20	3 2	5 14
F 31	4n 2	6n20	4n56	5s49	2s22	6s43	4n20	19n45	0n44	18s22	1n11	4s56	1s52	22n14	0n 0	4s14	1n36	1n39	15s27	23n21	23n20	0n17	3s 0	5n14

ASTRODIENST EPHEMERIS for the year 2113

geocentric

APRIL 2113

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	12 37 11	11°11'52	7°20	22°29	2°25	25°52	27°R10	22°0	12°8	14°R28	15°27	4°R16	4°45	11°17	9°57	S 1
S 2	12 41 7	12°11'06	19°12	24°9	2°54	26°32	27°M 7	22°7	12°10	14°26	15°29	4°2	4°41	11°24	10°1	S 2
M 3	12 45 4	13°10'19	1°M 5	25°50	3°24	27°13	27°3	22°14	12°12	14°24	15°30	3°49	4°38	11°31	10°4	M 3
T 4	12 49 1	14°9'30	13°1	27°33	3°55	27°54	26°59	22°21	12°14	14°23	15°31	3°38	4°35	11°38	10°8	T 4
W 5	12 52 57	15°8'39	25°0	29°17	4°28	28°35	26°55	22°28	12°17	14°21	15°32	3°30	4°32	11°44	10°11	W 5
T 6	12 56 54	16°7'47	7°X 6	1°Y 3	5°2	29°15	26°51	22°35	12°19	14°19	15°33	3°24	4°29	11°51	10°15	T 6
F 7	13 0 50	17°6'52	19°23	2°50	5°38	29°56	26°47	22°42	12°21	14°18	15°35	3°22	4°25	11°58	10°18	F 7
S 8	13 4 47	18°5'56	1°Z 53	4°39	6°14	0°II 37	26°43	22°49	12°24	14°16	15°36	3°D21	4°22	12°4	10°21	S 8
S 9	13 8 43	19°4'58	14°41	6°29	6°52	1°17	26°38	22°56	12°26	14°14	15°37	3°R21	4°19	12°11	10°25	S 9
M10	13 12 40	20°3'58	27°52	8°20	7°32	1°58	26°33	23°3	12°28	14°13	15°38	3°21	4°16	12°18	10°28	M10
T 11	13 16 36	21°2'57	11°28	10°13	8°12	2°38	26°28	23°10	12°31	14°11	15°40	3°19	4°13	12°25	10°31	T 11
W12	13 20 33	22°1'54	25°33	12°7	8°53	3°19	26°23	23°17	12°33	14°10	15°41	3°16	4°10	12°31	10°34	W12
T 13	13 24 30	23°0'49	10°H 6	14°3	9°36	3°59	26°18	23°23	12°36	14°8	15°42	3°9	4°6	12°38	10°38	T 13
F 14	13 28 26	23°59'42	25°2	16°0	10°19	4°39	26°13	23°30	12°38	14°6	15°43	3°1	4°3	12°45	10°41	F 14
S 15	13 32 23	24°58'33	10°Y 14	17°59	11°4	5°20	26°7	23°37	12°41	14°5	15°45	2°51	4°0	12°51	10°44	S 15
S 16	13 36 19	25°57'23	25°32	19°59	11°49	6°0	26°2	23°44	12°44	14°3	15°46	2°41	3°57	12°58	10°47	S 16
M17	13 40 16	26°56'10	10°B 45	22°1	12°35	6°41	25°56	23°50	12°46	14°1	15°47	2°32	3°54	13°5	10°50	M17
T 18	13 44 12	27°54'56	25°42	24°3	13°22	7°21	25°50	23°57	12°49	14°0	15°48	2°25	3°51	13°12	10°53	T 18
W19	13 48 9	28°53'39	10°II 16	26°7	14°10	8°1	25°44	24°3	12°52	13°58	15°50	2°21	3°47	13°18	10°56	W19
T 20	13 52 5	29°52'21	24°21	28°12	14°58	8°41	25°38	24°10	12°55	13°57	15°51	2°19	3°44	13°25	10°59	T 20
F 21	13 56 2	0°51'00	7°Z 57	0°B 18	15°48	9°22	25°32	24°16	12°57	13°55	15°52	2°D19	3°41	13°32	11°2	F 21
S 22	13 59 58	1°49'37	21°6	2°25	16°38	10°2	25°25	24°23	13°0	13°54	15°54	2°19	3°38	13°39	11°5	S 22
S 23	14 3 55	2°48'12	3°J 52	4°32	17°28	10°42	25°19	24°29	13°3	13°52	15°55	2°R20	3°35	13°45	11°7	S 23
M24	14 7 52	3°46'44	16°18	6°40	18°20	11°22	25°12	24°35	13°6	13°50	15°56	2°19	3°31	13°52	11°10	M24
T 25	14 11 48	4°45'14	28°30	8°48	19°12	12°2	25°6	24°42	13°9	13°49	15°58	2°16	3°28	13°59	11°13	T 25
W26	14 15 45	5°43'42	10°M 31	10°56	20°4	12°42	24°59	24°48	13°12	13°47	15°59	2°11	3°25	14°5	11°16	W26
T 27	14 19 41	6°42'09	22°26	13°4	20°58	13°22	24°52	24°54	13°15	13°46	16°0	2°3	3°22	14°12	11°18	T 27
F 28	14 23 38	7°40'33	4°A 18	15°11	21°51	14°2	24°45	25°0	13°18	13°44	16°2	1°54	3°19	14°19	11°21	F 28
S 29	14 27 34	8°38'55	16°10	17°17	22°46	14°42	24°38	25°6	13°21	13°43	16°3	1°44	3°16	14°26	11°23	S 29
S 30	14 31 31	9°37'15	28°A 4	19°B 22	23°H 41	15°II 22	24°M 31	25°H 12	13°II 24	13°A 41	16°B 4	1°Z 34	3°Z 12	14°A 32	11°H 26	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
S 1	4n26	1n40	4n59	5s10	2s22	6s43	4n 9	19n55	0n44	18s21	1n11	4s53	1s52	22n14	0n 0	4s14	1n36	1n39	15s26	23n21	23n20	0n15	2s59	5n14	
S 2	4 49	3s 3	4 49	4 29	2 22	6 43	3 58	20 6	0 45	18 21	1 11	4 50	1 52	22 14	0 0	4 13	1 36	1 40	15 26	23 22	23 20	0 12	2 57	5 14	
M 3	5 12	7 40	4 27	3 48	2 21	6 43	3 48	20 15	0 45	18 20	1 11	4 48	1 52	22 15	0 0	4 12	1 36	1 40	15 26	23 22	23 21	0 9	2 56	5 14	
T 4	5 35	12 2	3 53	3 6	2 19	6 42	3 37	20 25	0 46	18 19	1 12	4 45	1 52	22 15	0 0	4 12	1 36	1 41	15 26	23 22	23 21	0 6	2 55	5 14	
W 5	5 58	15 58	3 8	2 23	2 17	6 40	3 27	20 35	0 46	18 18	1 12	4 42	1 52	22 15	0 0	4 11	1 36	1 41	15 26	23 23	23 21	0 4	2 53	5 15	
T 6	6 20	19 17	2 14	1 38	2 14	6 37	3 16	20 44	0 46	18 17	1 12	4 40	1 52	22 16	0 0	4 10	1 36	1 42	15 25	23 23	23 21	0 1	2 52	5 15	
F 7	6 43	21 47	1 13	0 53	2 11	6 33	3 6	20 53	0 47	18 16	1 12	4 37	1 52	22 16	0 0	4 10	1 36	1 42	15 25	23 23	23 21	0s 2	2 50	5 15	
S 8	7 6	23 17	0 8	0 7	2 8	6 29	2 56	21 2	0 47	18 15	1 12	4 34	1 53	22 16	0 0	4 9	1 36	1 43	15 25	23 23	23 21	0 4	2 49	5 15	
S 9	7 28	23 36	1s 0	0n40	2 4	6 25	2 46	21 11	0 48	18 13	1 12	4 32	1 53	22 17	0 0	4 8	1 36	1 43	15 25	23 23	23 21	0 7	2 48	5 15	
M10	7 50	22 38	2 6	1 29	1 59	6 19	2 36	21 20	0 48	18 12	1 12	4 29	1 53	22 17	0 0	4 8	1 36	1 44	15 25	23 23	23 21	0 10	2 46	5 15	
T 11	8 13	20 20	3 8	2 18	1 54	6 13	2 27	21 28	0 49	18 11	1 12	4 26	1 53	22 17	0 0	4 7	1 36	1 44	15 25	23 23	23 21	0 13	2 45	5 15	
W12	8 35	16 45	4 0	3 7	1 49	6 7	2 17	21 37	0 49	18 10	1 12	4 24	1 53	22 18	0 0	4 6	1 36	1 44	15 25	23 23	23 22	0 15	2 44	5 15	
T 13	8 56	12 4	4 38	3 58	1 43	5 59	2 8	21 45	0 50	18 9	1 12	4 21	1 53	22 18	0 0	4 6	1 36	1 45	15 24	23 23	23 22	0 18	2 42	5 16	
F 14	9 18	6 33	4 59	4 49	1 36	5 52	1 59	21 53	0 50	18 7	1 12	4 19	1 53	22 18	0 0	4 5	1 36	1 45	15 24	23 23	23 22	0 21	2 41	5 16	
S 15	9 40	0 33	5 0	5 41	1 29	5 43	1 50	22 0	0 50	18 6	1 12	4 16	1 53	22 19	0 0	4 5	1 36	1 46	15 24	23 24	23 22	0 23	2 40	5 16	
S 16	10 1	5n32	4 39	6 33	1 21	5 34	1 41	22 8	0 51	18 5	1 12	4 14	1 54	22 19	0 0	4 4	1 36	1 46	15 24	23 24	23 22	0 26	2 38	5 16	
M17	10 22	11 16	3 58	7 26	1 14	5 25	1 32	22 15	0 51	18 3	1 12	4 11	1 54	22 19	0 0	4 3	1 36	1 47	15 24	23 24	23 22	0 29	2 37	5 16	
T 18	10 44	16 14	3 2	8 19	1 5	5 14	1 24	22 22	0 52	18 2	1 13	4 9	1 54	22 20	0 0	4 3	1 36	1 47	15 24	23 24	23 22	0 32	2 36	5 16	
W19	11 4	20 5	1 55	9 12	0 56	5 4	1 16	22 29	0 52	18 0	1 13	4 6	1 54	22 20	0 0	4 2	1 36	1 48	15 24	23 24	23 22	0 34	2 35	5 17	
T 20	11 25	22 36	0 42	10 6	0 47	4 53	1 8	22 36	0 52	17 59	1 13	4 4	1 54	22 20	0 0	4 2	1 36	1 48	15 23	23 24	23 22	0 37	2 33	5 17	
F 21	11 46	23 41	0n30	10 59	0 37	4 41	1 0	22 43	0 53	17 57	1 13	4 1	1 54	22 21	0 0	4 1	1 36	1 49	15 23	23 24	23 22	0 40	2 32	5 17	
S 22	12 6	23 24	1 39	11 52	0 27	4 29	0 52	22 49	0 53	17 56	1 13	3 59	1 54	22 21	0 0	4 0	1 36	1 49	15 23	23 24	23 22	0 42	2 31	5 17	
S 23	12 26	21 52	2 40	12 45	0 17	4 16	0 44	22 55	0 54	17 54	1 13	3 57	1 55	22 21	0 0	4 0	1 36	1 50	15 23	23 24	23 23	0 45	2 30	5 17	
M24	12 46	19 19	3 33	13 38	0 7	4 3	0 37	23 1	0 54	17 53	1 13	3 54	1 55	22 22	0 0	3 59	1 36	1 50	15 23	23 24	23 23	0 48	2 28	5 17	
T 25	13 6	15 57	4 14	14 29	0n 4	3 49	0 30	23 7	0 54	17 51	1 13	3 52	1 55	22 22	0 0	3 59	1 36	1 50	15 23	23 24	23 23	0 51	2 27	5 18	
W26	13 25	12 0	4 44	15 20	0 15	3 35	0 22	23 13	0 55	17 49	1 13	3 50	1 55	22 23	0 0	3 58	1 36	1 51	15 23	23 24	23 23	0 53	2 26	5 18	
T 27	13 45	7 36	5 1	16 9	0 25	3 21	0 16	23 18	0 55	17 48	1 13	3 47	1 55	22 23	0 0	3 57	1 36	1 51	15 23	23 25	23 23	0 56	2 25	5 18	
F 28	14 4	2 57	5 5	16 57	0 36	3 6	0 9	23 23	0 55	17 46	1 13	3 45	1 55	22 23	0 0	3 57	1 36	1 52	15 23	23 25	23 23	0 59	2 24	5 18	
S 29	14 23	1s48	4 55	17 44	0 47	2 50	0 2	23 28	0 56	17 44	1 13	3 43	1 56	22 24	0 0	3 56	1 36	1 52	15 23	23 25	23 23	1 2	2 22	5 18	
S 30	14n41	6s31	4n33	18n29	0n57	2s35	0s 4	23n33	0n56	17s43	1n13	3s41	1s56	22n24	0n 0	3s56	1n36	1n53	15s23	23n25	23n23	1s 4	2s21	5n19	

ASTRODIENST EPHEMERIS for the year 2113

geocentric

MAY 2113

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	14 35 27	10♂35'33	10♂ 1	21♂25	24♂36	16♂ 2	24°R24	25♂18	13♂27	13°R40	16♂ 6	1°R25	3♂ 9	14♂39	11♂28	M 1
T 2	14 39 24	11°33'49	22° 3	23°27	25°32	16°42	24♂17	25°24	13°30	13♂39	16° 7	1♂17	3° 6	14°46	11°31	T 2
W 3	14 43 21	12°32'04	4♂11	25°26	26°28	17°22	24° 9	25°30	13°33	13°37	16° 8	1°12	3° 3	14°52	11°33	W 3
T 4	14 47 17	13°30'17	16°28	27°23	27°25	18° 1	24° 2	25°36	13°36	13°36	16°10	1° 8	3° 0	14°59	11°36	T 4
F 5	14 51 14	14°28'29	28°55	29°18	28°22	18°41	23°54	25°41	13°40	13°34	16°11	1°D 7	2°56	15° 6	11°38	F 5
S 6	14 55 10	15°26'39	11♂34	1♂ 9	29°20	19°21	23°47	25°47	13°43	13°33	16°13	1° 8	2°53	15°13	11°40	S 6
S 7	14 59 7	16°24'48	24°28	2°57	0°Y18	20° 1	23°40	25°53	13°46	13°32	16°14	1° 9	2°50	15°19	11°42	S 7
M 8	15 3 3	17°22'55	7♂41	4°43	1°17	20°40	23°32	25°58	13°49	13°30	16°15	1°10	2°47	15°26	11°44	M 8
T 9	15 7 0	18°21'01	21°14	6°24	2°16	21°20	23°24	26° 4	13°53	13°29	16°17	1°R10	2°44	15°33	11°46	T 9
W10	15 10 56	19°19'05	5♂10	8° 3	3°15	22° 0	23°17	26° 9	13°56	13°28	16°18	1° 9	2°41	15°40	11°49	W10
T 11	15 14 53	20°17'08	19°29	9°37	4°15	22°39	23° 9	26°14	13°59	13°27	16°19	1° 6	2°37	15°46	11°51	T 11
F 12	15 18 50	21°15'10	4°Y 8	11° 9	5°15	23°19	23° 2	26°20	14° 2	13°25	16°21	1° 2	2°34	15°53	11°52	F 12
S 13	15 22 46	22°13'10	19° 2	12°36	6°15	23°59	22°54	26°25	14° 6	13°24	16°22	0°57	2°31	16° 0	11°54	S 13
S 14	15 26 43	23°11'09	4♂ 3	13°59	7°16	24°38	22°46	26°30	14° 9	13°23	16°23	0°51	2°28	16° 6	11°56	S 14
M15	15 30 39	24° 9'07	19° 3	15°19	8°17	25°18	22°39	26°35	14°12	13°22	16°25	0°46	2°25	16°13	11°58	M15
T 16	15 34 36	25° 7'03	3♂52	16°35	9°18	25°57	22°31	26°40	14°16	13°21	16°26	0°42	2°22	16°20	12° 0	T 16
W17	15 38 32	26° 4'58	18°23	17°46	10°19	26°37	22°23	26°45	14°19	13°20	16°27	0°40	2°18	16°27	12° 1	W17
T 18	15 42 29	27° 2'51	2♂30	18°54	11°21	27°16	22°16	26°50	14°23	13°18	16°29	0°D39	2°15	16°33	12° 3	T 18
F 19	15 46 25	28° 0'42	16°12	19°57	12°23	27°55	22° 8	26°55	14°26	13°17	16°30	0°40	2°12	16°40	12° 5	F 19
S 20	15 50 22	28°58'32	29°27	20°57	13°26	28°35	22° 1	26°59	14°30	13°16	16°31	0°42	2° 9	16°47	12° 6	S 20
S 21	15 54 19	29°56'20	12♂17	21°52	14°28	29°14	21°53	27° 4	14°33	13°15	16°33	0°43	2° 6	16°53	12° 8	S 21
M22	15 58 15	0♂54'06	24°48	22°43	15°31	29°54	21°46	27° 9	14°36	13°14	16°34	0°44	2° 2	17° 0	12° 9	M22
T 23	16 2 12	1°51'51	7♂ 2	23°29	16°34	0♂33	21°38	27°13	14°40	13°13	16°35	0°R44	1°59	17° 7	12°10	T 23
W24	16 6 8	2°49'34	19° 4	24°11	17°37	1°12	21°31	27°18	14°43	13°12	16°37	0°43	1°56	17°14	12°12	W24
T 25	16 10 5	3°47'16	0♂59	24°48	18°41	1°51	21°23	27°22	14°47	13°11	16°38	0°41	1°53	17°20	12°13	T 25
F 26	16 14 1	4°44'55	12°51	25°21	19°45	2°31	21°16	27°26	14°50	13°11	16°39	0°37	1°50	17°27	12°14	F 26
S 27	16 17 58	5°42'34	24°44	25°49	20°49	3°10	21° 9	27°30	14°54	13°10	16°41	0°33	1°47	17°34	12°15	S 27
S 28	16 21 54	6°40'11	6♂40	26°12	21°53	3°49	21° 2	27°35	14°57	13° 9	16°42	0°29	1°43	17°40	12°16	S 28
M29	16 25 51	7°37'47	18°43	26°31	22°57	4°28	20°55	27°39	15° 1	13° 8	16°43	0°26	1°40	17°47	12°17	M29
T 30	16 29 48	8°35'21	0♂54	26°45	24° 2	5° 7	20°48	27°43	15° 4	13° 7	16°45	0°23	1°37	17°54	12°18	T 30
W31	16 33 44	9♂32'55	13♂16	26♂54	25°Y 6	5♂47	20♂41	27♂46	15♂ 8	13♂ 7	16♂46	0♂21	1♂34	18♂ 1	12♂19	W31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
M 1	14n59	11s 1	3n59	19n11	1n 7	2s18	0s11	23n38	0n56	17s41	1n13	3s38	1s56	22n24	0n 0	3s55
T 2	15 18	15 8	3 14	19 52	1 17	2 2	0 17	23 42	0 57	17 39	1 13	3 36	1 56	22 25	0 0	3 55
W 3	15 35	18 41	2 20	20 31	1 27	1 45	0 23	23 46	0 57	17 37	1 13	3 34	1 56	22 25	0 0	3 54
T 4	15 53	21 26	1 18	21 7	1 36	1 28	0 29	23 50	0 57	17 36	1 13	3 32	1 56	22 26	0 0	3 54
F 5	16 10	23 13	0 12	21 41	1 44	1 10	0 34	23 54	0 58	17 34	1 13	3 30	1 57	22 26	0 0	3 53
S 6	16 27	23 51	0s56	22 12	1 52	0 52	0 40	23 58	0 58	17 32	1 13	3 28	1 57	22 26	0 0	3 53
S 7	16 44	23 14	2 3	22 41	1 59	0 34	0 45	24 1	0 58	17 30	1 13	3 26	1 57	22 27	0 0	3 52
M 8	17 1	21 19	3 5	23 7	2 5	0 16	0 50	24 4	0 58	17 28	1 12	3 24	1 57	22 27	0 0	3 52
T 9	17 17	18 10	3 58	23 31	2 11	0n 3	0 55	24 7	0 59	17 27	1 12	3 22	1 57	22 28	0 1	3 51
W10	17 33	13 56	4 39	23 52	2 16	0 22	1 0	24 10	0 59	17 25	1 12	3 20	1 58	22 28	0 1	3 51
T 11	17 48	8 49	5 3	24 11	2 20	0 42	1 5	24 12	0 59	17 23	1 12	3 18	1 58	22 28	0 1	3 50
F 12	18 4	3 6	5 9	24 27	2 23	1 1	1 9	24 15	1 0	17 21	1 12	3 16	1 58	22 29	0 1	3 50
S 13	18 19	2n54	4 55	24 41	2 25	1 21	1 14	24 17	1 0	17 19	1 12	3 14	1 58	22 29	0 1	3 49
S 14	18 33	8 47	4 20	24 53	2 27	1 41	1 18	24 19	1 0	17 17	1 12	3 12	1 58	22 30	0 1	3 49
M15	18 48	14 9	3 27	25 3	2 27	2 1	1 22	24 21	1 0	17 16	1 12	3 10	1 59	22 30	0 1	3 49
T 16	19 2	18 36	2 21	25 11	2 27	2 22	1 26	24 22	1 1	17 14	1 12	3 8	1 59	22 30	0 1	3 48
W17	19 16	21 49	1 6	25 16	2 25	2 42	1 30	24 24	1 1	17 12	1 12	3 7	1 59	22 31	0 1	3 48
T 18	19 29	23 34	0n10	25 20	2 23	3 3	1 34	24 25	1 1	17 10	1 12	3 5	1 59	22 31	0 1	3 47
F 19	19 42	23 50	1 24	25 22	2 20	3 24	1 37	24 26	1 1	17 8	1 12	3 3	1 59	22 32	0 1	3 47
S 20	19 55	22 43	2 31	25 22	2 16	3 45	1 41	24 27	1 2	17 6	1 12	3 2	2 0	22 32	0 1	3 47
S 21	20 7	20 26	3 28	25 21	2 11	4 6	1 44	24 27	1 2	17 5	1 11	3 0	2 0	22 32	0 1	3 46
M22	20 20	17 14	4 14	25 18	2 5	4 28	1 47	24 28	1 2	17 3	1 11	2 58	2 0	22 33	0 1	3 46
T 23	20 31	13 22	4 47	25 13	1 57	4 49	1 50	24 28	1 2	17 1	1 11	2 57	2 0	22 33	0 1	3 45
W24	20 43	9 1	5 7	25 7	1 50	5 10	1 53	24 28	1 3	16 59	1 11	2 55	2 1	22 34	0 1	3 45
T 25	20 54	4 24	5 13	25 0	1 41	5 32	1 55	24 27	1 3	16 57	1 11	2 54	2 1	22 34	0 1	3 45
F 26	21 4	0s22	5 6	24 51	1 31	5 54	1 58	24 27	1 3	16 56	1 11	2 52	2 1	22 34	0 1	3 44
S 27	21 15	5 8	4 46	24 41	1 20	6 15	2 0	24 26	1 3	16 54	1 11	2 51	2 1	22 35	0 1	3 44
S 28	21 25	9 45	4 13	24 30	1 8	6 37	2 3	24 26	1 3	16 52	1 10	2 49	2 1	22 35	0 1	3 44
M29	21 34	14 2	3 29	24 18	0 56	6 59	2 5	24 24	1 4	16 50	1 10	2 48	2 2	22 36	0 1	3 44
T 30	21 43	17 48	2 35	24 5	0 42	7 21	2 7	24 23	1 4	16 49	1 10	2 46	2 2	22 36	0 1	3 43
W31	21n52	20s51	1n33	23n51	0n28	7n43	2s 9	24n22	1n 4	16s47	1n10	2s45	2s 2	22n36	0n 1	3s43

Julian Day Number = 2492937.5, Delta T = 99.71 sec
 Ecliptic obliquity = 23°25'28", Nutation = - 0°00'19", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 26°19'25", Lahiri = 25°26'26"

ASTRODIENST EPHEMERIS for the year 2113

geocentric

JUNE 2113

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	16 37 41	10 ^{II} 30'27	25 [♂] 48	26 [♂] R59	26 [♀] Y11	6 [♂] 26	20 [♂] R34	27 [♂] 50	15 ^{II} 11	13 [♂] R 6	16 [♂] 47	0 [♂] D20	1 [♂] 31	18 [♂] 7	12 [♂] 20	T 1
F 2	16 41 37	11 [♂] 27'58	8 [♂] 32	26 ^{II} 59	27 [♂] 17	7 [♂] 5	20 ^{II} 27	27 [♂] 54	15 [♂] 15	13 [♂] 5	16 [♂] 48	0 [♂] 20	1 [♂] 28	18 [♂] 14	12 [♂] 21	F 2
S 3	16 45 34	12 [♂] 25'29	21 [♂] 28	26 [♂] 55	28 [♂] 22	7 [♂] 44	20 [♂] 20	27 [♂] 58	15 [♂] 18	13 [♂] 4	16 [♂] 50	0 [♂] 21	1 [♂] 24	18 [♂] 21	12 [♂] 22	S 3
S 4	16 49 30	13 [♂] 22'58	4 [♂] 39	26 [♂] 46	29 [♂] 27	8 [♂] 23	20 [♂] 14	28 [♂] 1	15 [♂] 22	13 [♂] 4	16 [♂] 51	0 [♂] 22	1 [♂] 21	18 [♂] 27	12 [♂] 22	S 4
M 5	16 53 27	14 [♂] 20'27	18 [♂] 4	26 [♂] 33	0 [♂] 33	9 [♂] 2	20 [♂] 7	28 [♂] 5	15 [♂] 26	13 [♂] 3	16 [♂] 52	0 [♂] 23	1 [♂] 18	18 [♂] 34	12 [♂] 23	M 5
T 6	16 57 24	15 [♂] 17'55	1 [♂] 45	26 [♂] 16	1 [♂] 39	9 [♂] 41	20 [♂] 1	28 [♂] 8	15 [♂] 29	13 [♂] 3	16 [♂] 53	0 [♂] 24	1 [♂] 15	18 [♂] 41	12 [♂] 24	T 6
W 7	17 1 20	16 [♂] 15'22	15 [♂] 40	25 [♂] 55	2 [♂] 45	10 [♂] 20	19 [♂] 55	28 [♂] 11	15 [♂] 33	13 [♂] 2	16 [♂] 55	0 [♂] R25	1 [♂] 12	18 [♂] 48	12 [♂] 24	W 7
T 8	17 5 17	17 [♂] 12'48	29 [♂] 50	25 [♂] 31	3 [♂] 51	10 [♂] 59	19 [♂] 49	28 [♂] 14	15 [♂] 36	13 [♂] 2	16 [♂] 56	0 [♂] 24	1 [♂] 8	18 [♂] 54	12 [♂] 25	T 8
F 9	17 9 13	18 [♂] 10'14	14 [♀] Y13	25 [♂] 5	4 [♂] 57	11 [♂] 38	19 [♂] 43	28 [♂] 18	15 [♂] 40	13 [♂] 1	16 [♂] 57	0 [♂] 23	1 [♂] 5	19 [♂] 1	12 [♂] 25	F 9
S 10	17 13 10	19 [♂] 7'40	28 [♂] 45	24 [♂] 35	6 [♂] 4	12 [♂] 17	19 [♂] 37	28 [♂] 21	15 [♂] 43	13 [♂] 1	16 [♂] 58	0 [♂] 22	1 [♂] 2	19 [♂] 8	12 [♂] 25	S 10
S 11	17 17 6	20 [♂] 5'04	13 [♂] 21	24 [♂] 4	7 [♂] 10	12 [♂] 55	19 [♂] 31	28 [♂] 23	15 [♂] 47	13 [♂] 0	16 [♂] 59	0 [♂] 21	0 [♂] 59	19 [♂] 14	12 [♂] 26	S 11
M 12	17 21 3	21 [♂] 2'29	27 [♂] 56	23 [♂] 32	8 [♂] 17	13 [♂] 34	19 [♂] 25	28 [♂] 26	15 [♂] 50	13 [♂] 0	17 [♂] 0	0 [♂] 20	0 [♂] 56	19 [♂] 21	12 [♂] 26	M 12
T 13	17 24 59	21 [♂] 59'52	12 ^{II} 24	22 [♂] 58	9 [♂] 24	14 [♂] 13	19 [♂] 20	28 [♂] 29	15 [♂] 54	12 [♂] 59	17 [♂] 2	0 [♂] 19	0 [♂] 53	19 [♂] 28	12 [♂] 26	T 13
W 14	17 28 56	22 [♂] 57'15	26 [♂] 39	22 [♂] 25	10 [♂] 31	14 [♂] 52	19 [♂] 15	28 [♂] 32	15 [♂] 57	12 [♂] 59	17 [♂] 3	0 [♂] D19	0 [♂] 49	19 [♂] 35	12 [♂] 26	W 14
T 15	17 32 53	23 [♂] 54'37	10 [♂] 36	21 [♂] 51	11 [♂] 38	15 [♂] 31	19 [♂] 9	28 [♂] 34	16 [♂] 1	12 [♂] 59	17 [♂] 4	0 [♂] 19	0 [♂] 46	19 [♂] 41	12 [♂] R26	T 15
F 16	17 36 49	24 [♂] 51'59	24 [♂] 12	21 [♂] 19	12 [♂] 45	16 [♂] 10	19 [♂] 4	28 [♂] 37	16 [♂] 4	12 [♂] 58	17 [♂] 5	0 [♂] 19	0 [♂] 43	19 [♂] 48	12 [♂] 26	F 16
S 17	17 40 46	25 [♂] 49'19	7 [♂] 26	20 [♂] 48	13 [♂] 52	16 [♂] 48	18 [♂] 59	28 [♂] 39	16 [♂] 8	12 [♂] 58	17 [♂] 6	0 [♂] 20	0 [♂] 40	19 [♂] 55	12 [♂] 26	S 17
S 18	17 44 42	26 [♂] 46'39	20 [♂] 18	20 [♂] 19	15 [♂] 0	17 [♂] 27	18 [♂] 55	28 [♂] 41	16 [♂] 11	12 [♂] 58	17 [♂] 7	0 [♂] 20	0 [♂] 37	20 [♂] 2	12 [♂] 26	S 18
M 19	17 48 39	27 [♂] 43'58	2 [♂] 11	19 [♂] 52	16 [♂] 7	18 [♂] 6	18 [♂] 50	28 [♂] 44	16 [♂] 15	12 [♂] 58	17 [♂] 8	0 [♂] 21	0 [♂] 34	20 [♂] 8	12 [♂] 26	M 19
T 20	17 52 35	28 [♂] 41'16	15 [♂] 8	19 [♂] 28	17 [♂] 15	18 [♂] 45	18 [♂] 45	28 [♂] 46	16 [♂] 18	12 [♂] 58	17 [♂] 9	0 [♂] 21	0 [♂] 30	20 [♂] 15	12 [♂] 26	T 20
W 21	17 56 32	29 [♂] 38'33	27 [♂] 12	19 [♂] 7	18 [♂] 23	19 [♂] 23	18 [♂] 41	28 [♂] 48	16 [♂] 22	12 [♂] 58	17 [♂] 10	0 [♂] 21	0 [♂] 27	20 [♂] 22	12 [♂] 25	W 21
T 22	18 0 28	0 [♂] 35'49	9 [♂] 8	18 [♂] 50	19 [♂] 30	20 [♂] 2	18 [♂] 37	28 [♂] 49	16 [♂] 25	12 [♂] 57	17 [♂] 11	0 [♂] 21	0 [♂] 24	20 [♂] 28	12 [♂] 25	T 22
F 23	18 4 25	1 [♂] 33'05	21 [♂] 1	18 [♂] 37	20 [♂] 38	20 [♂] 41	18 [♂] 33	28 [♂] 51	16 [♂] 29	12 [♂] 57	17 [♂] 12	0 [♂] 21	0 [♂] 21	20 [♂] 35	12 [♂] 25	F 23
S 24	18 8 22	2 [♂] 30'19	2 [♂] 55	18 [♂] 29	21 [♂] 47	21 [♂] 19	18 [♂] 29	28 [♂] 53	16 [♂] 32	12 [♂] D57	17 [♂] 14	0 [♂] 21	0 [♂] 18	20 [♂] 42	12 [♂] 24	S 24
S 25	18 12 18	3 [♂] 27'34	14 [♂] 54	18 [♂] D24	22 [♂] 55	21 [♂] 58	18 [♂] 26	28 [♂] 55	16 [♂] 36	12 [♂] 57	17 [♂] 15	0 [♂] 21	0 [♂] 14	20 [♂] 49	12 [♂] 24	S 25
M 26	18 16 15	4 [♂] 24'48	27 [♂] 2	18 [♂] 24	24 [♂] 3	22 [♂] 37	18 [♂] 22	28 [♂] 56	16 [♂] 39	12 [♂] 57	17 [♂] 15	0 [♂] 22	0 [♂] 11	20 [♂] 55	12 [♂] 23	M 26
T 27	18 20 11	5 [♂] 22'01	9 [♂] 22	18 [♂] 29	25 [♂] 11	23 [♂] 15	18 [♂] 19	28 [♂] 57	16 [♂] 42	12 [♂] 58	17 [♂] 16	0 [♂] 22	0 [♂] 8	21 [♂] 2	12 [♂] 22	T 27
W 28	18 24 8	6 [♂] 19'14	21 [♂] 56	18 [♂] 38	26 [♂] 20	23 [♂] 54	18 [♂] 16	28 [♂] 59	16 [♂] 46	12 [♂] 58	17 [♂] 17	0 [♂] 22	0 [♂] 5	21 [♂] 9	12 [♂] 22	W 28
T 29	18 28 4	7 [♂] 16'26	4 [♂] 45	18 [♂] 53	27 [♂] 28	24 [♂] 32	18 [♂] 13	29 [♂] 0	16 [♂] 49	12 [♂] 58	17 [♂] 18	0 [♂] R22	0 [♂] 2	21 [♂] 15	12 [♂] 21	T 29
F 30	18 32 1	8 [♂] 13'38	17 [♂] 51	19 ^{II} 12	28 [♂] 37	25 [♂] 11	18 ^{II} 10	29 [♂] 1	16 ^{II} 53	12 [♂] 58	17 [♂] 19	0 [♂] 22	29 ^{II} 59	21 [♂] 22	12 [♂] 20	F 30

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
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ASTRODIENST EPHEMERIS for the year 2113
geocentric

JULY 2113

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	18 35 57	9♂10'51	1♂11	19♂36	29♂46	25♂50	18°R 7	29♂ 2	16♂56	12♂58	17♂20	0°R21	29♂55	21♂29	12°R19	S 1
S 2	18 39 54	10° 8'03	14°46	20° 4	0♂55	26°28	18♂ 5	29° 3	16°59	12°58	17°21	0♂20	29°52	21°36	12♂18	S 2
M 3	18 43 51	11° 5'14	28°33	20°38	2° 4	27° 7	18° 2	29° 4	17° 3	12°59	17°22	0°19	29°49	21°42	12°17	M 3
T 4	18 47 47	12° 2'26	12♂31	21°16	3°13	27°45	18° 0	29° 4	17° 6	12°59	17°23	0°18	29°46	21°49	12°16	T 4
W 5	18 51 44	12°59'38	26°36	21°59	4°22	28°24	17°58	29° 5	17° 9	12°59	17°24	0°17	29°43	21°56	12°15	W 5
T 6	18 55 40	13°56'51	10♂48	22°46	5°31	29° 2	17°56	29° 6	17°12	13° 0	17°25	0°D16	29°40	22° 2	12°14	T 6
F 7	18 59 37	14°54'03	25° 2	23°38	6°40	29°41	17°55	29° 6	17°16	13° 0	17°25	0°17	29°36	22° 9	12°13	F 7
S 8	19 3 33	15°51'16	9♂17	24°34	7°50	0♂19	17°53	29° 6	17°19	13° 0	17°26	0°17	29°33	22°16	12°12	S 8
S 9	19 7 30	16°48'30	23°30	25°35	8°59	0°57	17°52	29° 6	17°22	13° 1	17°27	0°18	29°30	22°23	12°11	S 9
M10	19 11 26	17°45'43	7♂38	26°41	10° 9	1°36	17°51	29°R 7	17°25	13° 1	17°28	0°20	29°27	22°29	12° 9	M10
T 11	19 15 23	18°42'57	21°39	27°50	11°19	2°14	17°50	29° 7	17°28	13° 2	17°28	0°20	29°24	22°36	12° 8	T 11
W12	19 19 20	19°40'11	5♂29	29° 4	12°28	2°53	17°50	29° 6	17°32	13° 3	17°29	0°R21	29°20	22°43	12° 6	W12
T 13	19 23 16	20°37'26	19° 5	0♂22	13°38	3°31	17°49	29° 6	17°35	13° 3	17°30	0°20	29°17	22°49	12° 5	T 13
F 14	19 27 13	21°34'41	2♂27	1°44	14°48	4°10	17°49	29° 6	17°38	13° 4	17°31	0°18	29°14	22°56	12° 3	F 14
S 15	19 31 9	22°31'56	15°31	3°10	15°58	4°48	17°D49	29° 6	17°41	13° 4	17°31	0°15	29°11	23° 3	12° 2	S 15
S 16	19 35 6	23°29'10	28°18	4°41	17° 8	5°26	17°49	29° 5	17°44	13° 5	17°32	0°12	29° 8	23°10	12° 0	S 16
M17	19 39 2	24°26'25	10♂49	6°15	18°18	6° 5	17°49	29° 4	17°47	13° 6	17°33	0° 8	29° 5	23°16	11°59	M17
T 18	19 42 59	25°23'40	23° 5	7°53	19°28	6°43	17°49	29° 4	17°50	13° 7	17°33	0° 4	29° 1	23°23	11°57	T 18
W19	19 46 55	26°20'56	5♂ 9	9°34	20°38	7°21	17°50	29° 3	17°53	13° 7	17°34	0° 2	28°58	23°30	11°55	W19
T 20	19 50 52	27°18'11	17° 5	11°19	21°49	8° 0	17°51	29° 2	17°56	13° 8	17°34	0° 0	28°55	23°36	11°53	T 20
F 21	19 54 49	28°15'26	28°58	13° 7	22°59	8°38	17°52	29° 1	17°59	13° 9	17°35	29°D59	28°52	23°43	11°51	F 21
S 22	19 58 45	29°12'42	10♂51	14°59	24° 9	9°16	17°53	29° 0	18° 2	13°10	17°36	0° 0	28°49	23°50	11°49	S 22
S 23	20 2 42	0♂ 9'58	22°51	16°53	25°20	9°55	17°54	28°59	18° 4	13°11	17°36	0° 2	28°46	23°56	11°48	S 23
M24	20 6 38	1° 7'14	5♂ 1	18°50	26°31	10°33	17°56	28°57	18° 7	13°12	17°37	0° 3	28°42	24° 3	11°46	M24
T 25	20 10 35	2° 4'31	17°26	20°49	27°41	11°11	17°57	28°56	18°10	13°13	17°37	0° 5	28°39	24°10	11°43	T 25
W26	20 14 31	3° 1'48	0♂ 9	22°50	28°52	11°49	17°59	28°54	18°13	13°14	17°38	0°R 5	28°36	24°17	11°41	W26
T 27	20 18 28	3°59'06	13°12	24°53	0♂ 3	12°28	18° 1	28°53	18°15	13°15	17°38	0° 5	28°33	24°23	11°39	T 27
F 28	20 22 24	4°56'24	26°37	26°57	1°14	13° 6	18° 3	28°51	18°18	13°16	17°38	0° 2	28°30	24°30	11°37	F 28
S 29	20 26 21	5°53'42	10♂22	29° 2	2°24	13°44	18° 6	28°49	18°21	13°17	17°39	29♂58	28°26	24°37	11°35	S 29
S 30	20 30 18	6°51'01	24°24	1♂ 8	3°35	14°22	18° 8	28°48	18°23	13°18	17°39	29°53	28°23	24°43	11°33	S 30
M31	20 34 14	7♂48'21	8♂39	3♂14	4♂46	15♂ 1	18♂11	28♂46	18♂26	13♂19	17♂40	29♂48	28♂20	24♂50	11♂30	M31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl
S 1	23n 6	22s31	2s42	18n58	4s 4	17n57	2s11	22n 5	1n 8	16s12	1n 3	2s22	2s10	22n48	0n 1	3s41
S 2	23 2	19 55	3 42	19 8	3 56	18 13	2 9	21 58	1 8	16 12	1 3	2 22	2 10	22 48	0 1	3 41
M 3	22 58	16 10	4 29	19 19	3 48	18 28	2 8	21 50	1 8	16 11	1 3	2 22	2 11	22 49	0 1	3 41
T 4	22 53	11 29	5 1	19 30	3 38	18 43	2 6	21 43	1 8	16 11	1 3	2 22	2 11	22 49	0 1	3 42
W 5	22 47	6 10	5 15	19 43	3 28	18 58	2 4	21 35	1 8	16 11	1 2	2 22	2 11	22 49	0 1	3 42
T 6	22 42	0 30	5 11	19 56	3 18	19 12	2 3	21 27	1 8	16 10	1 2	2 22	2 11	22 50	0 1	3 42
F 7	22 36	5n14	4 47	20 10	3 7	19 26	2 1	21 19	1 9	16 10	1 2	2 22	2 12	22 50	0 1	3 42
S 8	22 29	10 41	4 6	20 24	2 55	19 39	1 59	21 11	1 9	16 10	1 2	2 22	2 12	22 50	0 1	3 42
S 9	22 22	15 34	3 10	20 38	2 43	19 52	1 57	21 3	1 9	16 10	1 1	2 23	2 12	22 51	0 1	3 43
M10	22 15	19 34	2 2	20 52	2 31	20 4	1 55	20 54	1 9	16 10	1 1	2 23	2 13	22 51	0 1	3 43
T 11	22 7	22 22	0 48	21 7	2 18	20 16	1 53	20 46	1 9	16 10	1 1	2 23	2 13	22 51	0 1	3 43
W12	21 59	23 47	0n28	21 20	2 5	20 27	1 51	20 37	1 9	16 10	1 1	2 23	2 13	22 51	0 1	3 43
T 13	21 51	23 44	1 41	21 34	1 52	20 38	1 48	20 28	1 9	16 10	1 0	2 24	2 13	22 52	0 1	3 44
F 14	21 42	22 19	2 48	21 46	1 39	20 48	1 46	20 19	1 9	16 10	1 0	2 24	2 14	22 52	0 1	3 44
S 15	21 33	19 44	3 43	21 58	1 25	20 58	1 44	20 10	1 9	16 10	1 0	2 24	2 14	22 52	0 1	3 44
S 16	21 23	16 13	4 27	22 9	1 12	21 7	1 41	20 1	1 9	16 11	1 0	2 25	2 14	22 53	0 1	3 44
M17	21 13	12 4	4 56	22 18	0 59	21 16	1 39	19 51	1 9	16 11	0 59	2 25	2 14	22 53	0 1	3 45
T 18	21 3	7 30	5 11	22 26	0 45	21 24	1 36	19 42	1 9	16 11	0 59	2 26	2 15	22 53	0 1	3 45
W19	20 52	2 44	5 12	22 32	0 32	21 32	1 34	19 32	1 9	16 12	0 59	2 27	2 15	22 53	0 1	3 45
T 20	20 41	2s 5	5 0	22 37	0 20	21 39	1 31	19 22	1 9	16 12	0 59	2 27	2 15	22 54	0 1	3 46
F 21	20 30	6 49	4 34	22 39	0 7	21 46	1 29	19 12	1 9	16 13	0 58	2 28	2 15	22 54	0 1	3 46
S 22	20 18	11 19	3 57	22 40	0n 5	21 52	1 26	19 2	1 9	16 13	0 58	2 28	2 16	22 54	0 1	3 47
S 23	20 6	15 25	3 10	22 38	0 16	21 57	1 23	18 52	1 9	16 14	0 58	2 29	2 16	22 55	0 1	3 47
M24	19 54	18 57	2 13	22 33	0 27	22 2	1 21	18 41	1 9	16 15	0 58	2 30	2 16	22 55	0 1	3 48
T 25	19 41	21 42	1 9	22 26	0 38	22 6	1 18	18 31	1 9	16 15	0 57	2 31	2 16	22 55	0 1	3 48
W26	19 28	23 26	0s 0	22 17	0 48	22 10	1 15	18 20	1 9	16 16	0 57	2 32	2 17	22 55	0 1	3 48
T 27	19 15	23 57	1 11	22 4	0 57	22 13	1 12	18 10	1 9	16 17	0 57	2 32	2 17	22 56	0 1	3 49
F 28	19 7	23 6	2 20	21 49	1 5	22 16	1 9	17 59	1 9	16 18	0 57	2 33	2 17	22 56	0 1	3 49
S 29	18 47	20 52	3 22	21 32	1 13	22 18	1 7	17 48	1 9	16 19	0 56	2 34	2 17	22 56	0 1	3 49
S 30	18 33	17 21	4 13	21 11	1 20	22 19	1 4	17 37	1 9	16 19	0 56	2 35	2 18	22 56	0 1	3 50
M31	18n18	12s47	4s49	20n49	1n26	22n20	1s 1	17n25	1n 9	16s20	0n56	2s36	2s18	22n57	0n 1	3s50

Julian Day Number = 2492998.5, Delta T = 99.80 sec
Ecliptic obliquity = 23°25'28, Nutation = -0°00'17, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 26°19'34, Lahiri = 25°26'34

ASTRODIENST EPHEMERIS for the year 2113

geocentric

AUGUST 2113

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	20 38 11	8♌45'42	23♋1	5♊21	5♊58	15♌39	18♌14	28♌R44	18♌II29	13♌20	17♌40	29♌R42	28♌II17	24♌57	11♌R28	T 1
W 2	20 42 7	9♌43'04	7♌Y26	7♌27	7♌9	16♌17	18♌17	28♌K41	18♌31	13♌21	17♌40	29♌II38	28♌14	25° 4	11♌K26	W 2
T 3	20 46 4	10♌40'27	21♌49	9♌33	8♌20	16♌55	18♌20	28♌39	18♌34	13♌23	17♌41	29♌34	28♌11	25°10	11°23	T 3
F 4	20 50 0	11♌37'51	6♌5	11°38	9°31	17°34	18°24	28°37	18°36	13°24	17°41	29°D33	28° 7	25°17	11°21	F 4
S 5	20 53 57	12°35'17	20°13	13°43	10°43	18°12	18°27	28°34	18°38	13°25	17°41	29°33	28° 4	25°24	11°19	S 5
S 6	20 57 53	13°32'43	4♌II10	15°46	11°54	18°50	18°31	28°32	18°41	13°26	17°41	29°34	28° 1	25°30	11°16	S 6
M 7	21 1 50	14°30'11	17°57	17°48	13° 6	19°28	18°35	28°29	18°43	13°28	17°42	29°35	27°58	25°37	11°14	M 7
T 8	21 5 47	15°27'40	1♌53	19°49	14°17	20° 6	18°39	28°27	18°46	13°29	17°42	29°R36	27°55	25°44	11°11	T 8
W 9	21 9 43	16°25'11	14°58	21°49	15°29	20°45	18°43	28°24	18°48	13°30	17°42	29°35	27°52	25°51	11° 9	W 9
T 10	21 13 40	17°22'42	28°11	23°48	16°41	21°23	18°47	28°21	18°50	13°32	17°42	29°31	27°48	25°57	11° 6	T 10
F 11	21 17 36	18°20'15	11♌II13	25°45	17°53	22° 1	18°52	28°18	18°52	13°33	17°42	29°26	27°45	26° 4	11° 3	F 11
S 12	21 21 33	19°17'48	24° 1	27°41	19° 4	22°39	18°57	28°15	18°54	13°35	17°42	29°19	27°42	26°11	11° 1	S 12
S 13	21 25 29	20°15'23	6♌II37	29°35	20°16	23°17	19° 2	28°12	18°56	13°36	17°43	29°10	27°39	26°17	10°58	S 13
M14	21 29 26	21°12'59	19° 0	1♌II27	21°28	23°56	19° 7	28° 9	18°59	13°38	17°43	29° 0	27°36	26°24	10°55	M14
T 15	21 33 22	22°10'35	1♌11	3°19	22°40	24°34	19°12	28° 6	19° 1	13°39	17°43	28°51	27°32	26°31	10°53	T 15
W16	21 37 19	23° 8'13	13°12	5° 8	23°52	25°12	19°17	28° 2	19° 3	13°41	17°43	28°43	27°29	26°37	10°50	W16
T 17	21 41 16	24° 5'52	25° 6	6°56	25° 4	25°50	19°23	27°59	19° 4	13°42	17°R43	28°37	27°26	26°44	10°47	T 17
F 18	21 45 12	25° 3'32	6♌II57	8°43	26°17	26°28	19°28	27°56	19° 6	13°44	17°43	28°33	27°23	26°51	10°44	F 18
S 19	21 49 9	26° 1'13	18°48	10°29	27°29	27° 6	19°34	27°52	19° 8	13°45	17°43	28°31	27°20	26°58	10°42	S 19
S 20	21 53 5	26°58'54	0♌Y46	12°12	28°41	27°45	19°40	27°49	19°10	13°47	17°43	28°D31	27°17	27° 4	10°39	S 20
M21	21 57 2	27°56'37	12°55	13°55	29°54	28°23	19°46	27°45	19°12	13°49	17°43	28°32	27°13	27°11	10°36	M21
T 22	22 0 58	28°54'21	25°20	15°36	1♌6	29° 1	19°52	27°41	19°13	13°50	17°43	28°R32	27°10	27°18	10°33	T 22
W23	22 4 55	29°52'07	8♌5	17°15	2°18	29°39	19°59	27°37	19°15	13°52	17°42	28°32	27° 7	27°24	10°30	W23
T 24	22 8 51	0♌49'53	21°15	18°53	3°31	0♌II17	20° 5	27°34	19°17	13°54	17°42	28°30	27° 4	27°31	10°27	T 24
F 25	22 12 48	1°47'41	4♌52	20°30	4°43	0°56	20°12	27°30	19°18	13°56	17°42	28°25	27° 1	27°38	10°25	F 25
S 26	22 16 45	2°45'29	18°54	22° 5	5°56	1°34	20°19	27°26	19°20	13°57	17°42	28°18	26°58	27°44	10°22	S 26
S 27	22 20 41	3°43'20	3♌18	23°39	7° 9	2°12	20°26	27°22	19°21	13°59	17°42	28° 9	26°54	27°51	10°19	S 27
M28	22 24 38	4°41'11	17°59	25°12	8°22	2°50	20°33	27°18	19°23	14° 1	17°42	27°59	26°51	27°58	10°16	M28
T 29	22 28 34	5°39'04	2♌Y48	26°43	9°34	3°28	20°40	27°14	19°24	14° 3	17°41	27°50	26°48	28° 5	10°13	T 29
W30	22 32 31	6°36'59	17°38	28°13	10°47	4° 6	20°47	27° 9	19°26	14° 5	17°41	27°41	26°45	28°11	10°10	W30
T 31	22 36 27	7♌34'56	2♌20	29♌II41	12♌0	4♌II45	20♌II55	27♌5	19♌II27	14♌7	17♌41	27♌II35	26♌II42	28♌18	10♌K7	T 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
T 1	18n 3	7s29	5 s 8	20n24	1n31	22n20	0s58	17n14	1n 9	16s22	0n56	2s37	2s18	22n57	0n 1	3s51
W 2	17 48	1 45	5 7	19 56	1 35	22 19	0 55	17 3	1 9	16 23	0 55	2 38	2 18	22 57	0 1	3 51
T 3	17 33	4n 3	4 47	19 27	1 39	22 18	0 52	16 51	1 9	16 24	0 55	2 39	2 19	22 57	0 1	3 52
F 4	17 17	9 37	4 9	18 55	1 42	22 16	0 49	16 39	1 9	16 25	0 55	2 41	2 19	22 57	0 1	3 52
S 5	17 1	14 38	3 17	18 22	1 44	22 14	0 46	16 28	1 9	16 26	0 55	2 42	2 19	22 58	0 1	3 53
S 6	16 45	18 47	2 13	17 47	1 45	22 11	0 43	16 16	1 9	16 27	0 54	2 43	2 19	22 58	0 1	3 53
M 7	16 28	21 50	1 3	17 10	1 46	22 7	0 40	16 4	1 9	16 29	0 54	2 44	2 20	22 58	0 1	3 54
T 8	16 11	23 36	0n11	16 32	1 46	22 3	0 37	15 52	1 9	16 30	0 54	2 45	2 20	22 58	0 1	3 55
W 9	15 54	23 57	1 22	15 53	1 45	21 58	0 34	15 40	1 9	16 31	0 54	2 47	2 20	22 58	0 1	3 55
T 10	15 37	22 55	2 28	15 13	1 44	21 52	0 31	15 27	1 9	16 33	0 53	2 48	2 20	22 59	0 1	3 56
F 11	15 19	20 41	3 25	14 32	1 42	21 46	0 28	15 15	1 9	16 34	0 53	2 49	2 20	22 59	0 1	3 56
S 12	15 2	17 26	4 10	13 50	1 40	21 39	0 25	15 2	1 9	16 36	0 53	2 51	2 21	22 59	0 1	3 57
S 13	14 43	13 27	4 43	13 7	1 37	21 32	0 22	14 50	1 9	16 37	0 53	2 52	2 21	22 59	0 1	3 58
M14	14 25	8 58	5 1	12 24	1 33	21 24	0 19	14 37	1 9	16 39	0 52	2 54	2 21	22 59	0 1	3 58
T 15	14 7	4 12	5 5	11 40	1 29	21 15	0 16	14 24	1 9	16 41	0 52	2 55	2 21	23 0	0 1	3 59
W16	13 48	0s40	4 56	10 56	1 25	21 6	0 13	14 11	1 9	16 42	0 52	2 57	2 22	23 0	0 1	3 59
T 17	13 29	5 27	4 34	10 12	1 20	20 56	0 10	13 58	1 9	16 44	0 52	2 58	2 22	23 0	0 1	4 0
F 18	13 10	10 2	4 0	9 27	1 15	20 46	0 7	13 45	1 8	16 46	0 51	3 0	2 22	23 0	0 1	4 1
S 19	12 50	14 16	3 16	8 42	1 9	20 35	0 4	13 32	1 8	16 47	0 51	3 1	2 22	23 0	0 1	4 1
S 20	12 31	17 58	2 23	7 57	1 3	20 23	0 1	13 19	1 8	16 49	0 51	3 3	2 22	23 0	0 1	4 2
M21	12 11	20 58	1 23	7 12	0 57	20 11	0n 2	13 6	1 8	16 51	0 51	3 4	2 22	23 1	0 1	4 3
T 22	11 51	23 3	0 17	6 27	0 50	19 58	0 4	12 52	1 8	16 53	0 51	3 6	2 23	23 1	0 1	4 3
W23	11 31	24 1	0s51	5 42	0 44	19 45	0 7	12 39	1 8	16 55	0 50	3 8	2 23	23 1	0 1	4 4
T 24	11 10	23 41	1 58	4 57	0 37	19 31	0 10	12 25	1 8	16 57	0 50	3 9	2 23	23 1	0 2	4 5
F 25	10 50	21 58	3 1	4 13	0 29	19 17	0 13	12 12	1 8	16 59	0 50	3 11	2 23	23 1	0 2	4 5
S 26	10 29	18 52	3 55	3 28	0 22	19 2	0 16	11 58	1 8	17 1	0 50	3 13	2 23	23 1	0 2	4 6
S 27	10 8	14 33	4 35	2 44	0 14	18 46	0 18	11 44	1 8	17 3	0 49	3 15	2 23	23 1	0 2	4 7
M28	9 47	9 19	4 58	2 0	0 7	18 30	0 21	11 31	1 8	17 5	0 49	3 16	2 24	23 2	0 2	4 8
T 29	9 26	3 30	5 1	1 17	0s 1	18 14	0 24	11 17	1 8	17 7	0 49	3 18	2 24	23 2	0 2	4 8
W30	9 5	2n32	4 45	0 34	0 10	17 56	0 26	11 3	1 8	17 9	0 49	3 20	2 24	23 2	0 2	4 9
T 31	8n43	8n22	4s 9	0s 9	0s18	17n39	0n29	10n49	1n 7	17s11	0n49	3s22	2s24	23n 2	0n 2	4s10

Julian Day Number = 2493029.5, Delta T = 99.84 sec
 Ecliptic obliquity = 23°25'29", Nutation = - 0°00'16", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 26°19'38", Lahiri = 25°26'39"

ASTRODIENST EPHEMERIS for the year 2113

geocentric

SEPTEMBER 2113

00:00 UT

Day	Sid.t	☉	☽	♀	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	22 40 24	8 ^m 32'54	16 ^h 34'48	1 ^h 5 9	13 ^h 13'13	5 ^m 23	21 ^m 18	27°R 1	19 ^h 28	14 ^h 8	17°R41	27°R31	26 ^h 38	28 ^h 25	10°R 4	F 1	
S 2	22 44 20	9°30'55	1 ^h 11 0	2°34	14°26	6° 1	21°10	26 ^h 57	19°29	14°10	17 ^h 40	27 ^h 29	26°35	28°31	10 ^h 1	S 2	
S 3	22 48 17	10°28'57	14°53	3°58	15°39	6°39	21°18	26°52	19°31	14°12	17°40	27°D29	26°32	28°38	9°58	S 3	
M 4	22 52 14	11°27'01	28°29	5°21	16°52	7°17	21°26	26°48	19°32	14°14	17°40	27°R29	26°29	28°45	9°56	M 4	
T 5	22 56 10	12°25'08	11 ^h 34	6°42	18° 6	7°55	21°34	26°44	19°33	14°16	17°39	27°28	26°26	28°52	9°53	T 5	
W 6	23 0 7	13°23'16	24°54	8° 2	19°19	8°34	21°42	26°39	19°34	14°18	17°39	27°26	26°23	28°58	9°50	W 6	
T 7	23 4 3	14°21'26	7 ^h 47	9°20	20°32	9°12	21°51	26°35	19°35	14°20	17°38	27°20	26°19	29° 5	9°47	T 7	
F 8	23 8 0	15°19'38	20°29	10°37	21°46	9°50	21°59	26°30	19°36	14°22	17°38	27°12	26°16	29°12	9°44	F 8	
S 9	23 11 56	16°17'51	3 ^m 0	11°52	22°59	10°28	22° 8	26°26	19°36	14°24	17°38	27° 1	26°13	29°18	9°41	S 9	
S 10	23 15 53	17°16'07	15°22	13° 5	24°12	11° 6	22°16	26°21	19°37	14°26	17°37	26°48	26°10	29°25	9°38	S 10	
M11	23 19 49	18°14'24	27°34	14°16	25°26	11°45	22°25	26°17	19°38	14°28	17°37	26°35	26° 7	29°32	9°35	M11	
T 12	23 23 46	19°12'43	9 ^h 38	15°26	26°39	12°23	22°34	26°12	19°39	14°30	17°36	26°21	26° 3	29°38	9°32	T 12	
W13	23 27 43	20°11'04	21°34	16°33	27°53	13° 1	22°43	26° 7	19°39	14°32	17°36	26° 9	26° 0	29°45	9°30	W13	
T 14	23 31 39	21° 9'26	3 ^m 25	17°39	29° 7	13°39	22°52	26° 3	19°40	14°34	17°35	25°59	25°57	29°52	9°27	T 14	
F 15	23 35 36	22° 7'50	15°14	18°42	0 ^m 20	14°18	23° 2	25°58	19°41	14°36	17°34	25°52	25°54	29°59	9°24	F 15	
S 16	23 39 32	23° 6'16	27° 3	19°42	1°34	14°56	23°11	25°54	19°41	14°38	17°34	25°48	25°51	0 ^m 5	9°21	S 16	
S 17	23 43 29	24° 4'43	8 ^h 58	20°41	2°48	15°34	23°20	25°49	19°42	14°41	17°33	25°46	25°48	0°12	9°18	S 17	
M18	23 47 25	25° 3'12	21° 4	21°36	4° 2	16°12	23°30	25°44	19°42	14°43	17°33	25°45	25°44	0°19	9°15	M18	
T 19	23 51 22	26° 1'43	3 ^h 36	22°29	5°16	16°51	23°40	25°40	19°42	14°45	17°32	25°45	25°41	0°25	9°13	T 19	
W20	23 55 18	27° 0'15	16° 8	23°18	6°29	17°29	23°49	25°35	19°43	14°47	17°31	25°44	25°38	0°32	9°10	W20	
T 21	23 59 15	27°58'49	29°17	24° 4	7°43	18° 7	23°59	25°30	19°43	14°49	17°31	25°42	25°35	0°39	9° 7	T 21	
F 22	0 3 12	28°57'24	12 ^h 54	24°46	8°57	18°45	24° 9	25°26	19°43	14°51	17°30	25°37	25°32	0°45	9° 5	F 22	
S 23	0 7 8	29°56'02	27° 1	25°25	10°11	19°24	24°19	25°21	19°43	14°53	17°29	25°29	25°29	0°52	9° 2	S 23	
S 24	0 11 5	0 ^h 54'40	11 ^h 35	25°59	11°25	20° 2	24°30	25°17	19°43	14°56	17°29	25°19	25°25	0°59	8°59	S 24	
M25	0 15 1	1°53'21	26°31	26°29	12°40	20°40	24°40	25°12	19°R43	14°58	17°28	25° 8	25°22	1° 5	8°57	M25	
T 26	0 18 58	2°52'04	11°40	26°53	13°54	21°18	24°50	25° 7	19°43	15° 0	17°27	24°57	25°19	1°12	8°54	T 26	
W27	0 22 54	3°50'48	26°51	27°13	15° 8	21°57	25° 1	25° 3	19°43	15° 2	17°26	24°47	25°16	1°19	8°51	W27	
T 28	0 26 51	4°49'35	11 ^h 54	27°27	16°22	22°35	25°11	24°58	19°43	15° 4	17°26	24°40	25°13	1°26	8°49	T 28	
F 29	0 30 47	5°48'24	26°40	27°34	17°36	23°13	25°22	24°54	19°43	15° 7	17°25	24°35	25° 9	1°32	8°46	F 29	
S 30	0 34 44	6 ^h 47'16	11 ^h 5	27°R35	18 ^h 51	23 ^h 52	25 ^h 33	24 ^h 49	19 ^h 43	15 ^h 9	17 ^h 24	24 ^h 33	25 ^h 6	1 ^h 39	8 ^h 44	S 30	

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
F 1	8n22	13n41	3s18	0s51	0s26	17n21	0n31	10n35	1n 7	17s14	0n48	3s23	2s24	23n 2	0n 2	4s11	1n31
S 2	8 0	18 8	2 16	1 33	0 35	17 2	0 34	10 21	1 7	17 16	0 48	3 25	2 24	23 2	0 2	4 11	1 31
S 3	7 38	21 28	1 6	2 14	0 43	16 43	0 36	10 6	1 7	17 18	0 48	3 27	2 24	23 2	0 2	4 12	1 31
M 4	7 16	23 30	0n 5	2 55	0 52	16 23	0 39	9 52	1 7	17 20	0 48	3 29	2 25	23 2	0 2	4 13	1 31
T 5	6 54	24 9	1 15	3 35	1 0	16 3	0 41	9 38	1 7	17 23	0 48	3 31	2 25	23 2	0 2	4 14	1 31
W 6	6 32	23 26	2 20	4 14	1 9	15 43	0 44	9 23	1 7	17 25	0 47	3 33	2 25	23 3	0 2	4 14	1 31
T 7	6 9	21 28	3 16	4 53	1 18	15 22	0 46	9 9	1 7	17 27	0 47	3 34	2 25	23 3	0 2	4 15	1 31
F 8	5 47	18 28	4 1	5 31	1 26	15 0	0 48	8 54	1 7	17 30	0 47	3 36	2 25	23 3	0 2	4 16	1 31
S 9	5 24	14 40	4 34	6 9	1 35	14 38	0 50	8 40	1 6	17 32	0 47	3 38	2 25	23 3	0 2	4 17	1 31
S 10	5 2	10 17	4 54	6 45	1 44	14 16	0 53	8 25	1 6	17 34	0 47	3 40	2 25	23 3	0 2	4 18	1 31
M 11	4 39	5 33	5 0	7 21	1 52	13 54	0 55	8 10	1 6	17 37	0 46	3 42	2 25	23 3	0 2	4 18	1 31
T 12	4 16	0 40	4 52	7 56	2 1	13 31	0 57	7 56	1 6	17 39	0 46	3 44	2 25	23 3	0 2	4 19	1 31
W 13	3 53	4s12	4 31	8 29	2 9	13 7	0 59	7 41	1 6	17 42	0 46	3 46	2 25	23 3	0 2	4 20	1 31
T 14	3 30	8 54	3 59	9 2	2 17	12 43	1 1	7 26	1 6	17 44	0 46	3 48	2 25	23 3	0 2	4 21	1 31
F 15	3 7	13 15	3 17	9 34	2 25	12 19	1 2	7 11	1 6	17 47	0 46	3 50	2 26	23 3	0 2	4 22	1 31
S 16	2 44	17 8	2 25	10 4	2 33	11 55	1 4	6 56	1 6	17 49	0 46	3 52	2 26	23 3	0 2	4 22	1 31
S 17	2 21	20 20	1 28	10 34	2 41	11 30	1 6	6 42	1 5	17 52	0 45	3 53	2 26	23 3	0 2	4 23	1 31
M 18	1 58	22 43	0 25	11 1	2 49	11 5	1 8	6 27	1 5	17 54	0 45	3 55	2 26	23 3	0 2	4 24	1 31
T 19	1 35	24 3	0s41	11 28	2 56	10 39	1 9	6 12	1 5	17 57	0 45	3 57	2 26	23 3	0 2	4 25	1 31
W 20	1 11	24 12	1 46	11 53	3 3	10 13	1 11	5 56	1 5	18 0	0 45	3 59	2 26	23 3	0 2	4 26	1 31
T 21	0 48	23 1	2 47	12 16	3 10	9 47	1 12	5 41	1 5	18 2	0 45	4 1	2 26	23 3	0 2	4 27	1 31
F 22	0 25	20 28	3 42	12 38	3 16	9 21	1 14	5 26	1 5	18 5	0 44	4 3	2 26	23 3	0 2	4 27	1 31
S 23	0 2	16 38	4 25	12 57	3 22	8 54	1 15	5 11	1 5	18 8	0 44	4 5	2 26	23 3	0 2	4 28	1 31
S 24	0s22	11 43	4 52	13 15	3 27	8 27	1 17	4 56	1 4	18 10	0 44	4 6	2 26	23 3	0 2	4 29	1 31
M 25	0 45	5 58	5 0	13 30	3 32	8 0	1 18	4 41	1 4	18 13	0 44	4 8	2 26	23 3	0 2	4 30	1 31
T 26	1 8	0n12	4 48	13 43	3 36	7 33	1 19	4 26	1 4	18 15	0 44	4 10	2 26	23 3	0 2	4 31	1 31
W 27	1 32	6 22	4 15	13 53	3 40	7 5	1 20	4 10	1 4	18 18	0 44	4 12	2 26	23 3	0 2	4 32	1 31
T 28	1 55	12 9	3 25	14 1	3 42	6 38	1 21	3 55	1 4	18 21	0 43	4 14	2 26	23 3	0 2	4 32	1 31
F 29	2 18	17 6	2 22	14 5	3 44	6 10	1 22	3 40	1 4	18 24	0 43	4 16	2 26	23 3	0 2	4 33	1 31
S 30	2s42	20n55	1s11	14s 6	3s45	5n41	1n23	3n24	1n 3	18s26	0n43	4s17	2s26	23n 3	0n 2	4s34	1n31

Julian Day Number = 2493060.5, Delta T = 99.89 sec

Ecliptic obliquity = 23°25'29, Nutation = - 0°00'17, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 26°19'42, Lahiri = 25°26'43

ASTRODIENST EPHEMERIS for the year 2113

geocentric

OCTOBER 2113

00:00 UT

Day	Sid.t	☉	☽	♀	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	0 38 40	7♏46'09	25♊ 5	27°R30	20♍ 5	24♍30	25♍43	24°R45	19°R42	15♏11	17°R23	24°D32	25♊ 3	1♍46	8°R42	S 1	
M 2	0 42 37	8°45'05	8♏41	27♏17	21°19	25° 8	25°54	24♏40	19♊42	15°13	17♏22	24°R33	25° 0	1°52	8♏39	M 2	
T 3	0 46 34	9°44'04	21°56	26°56	22°34	25°47	26° 5	24°36	19°42	15°15	17°22	24♊32	24°57	1°59	8°37	T 3	
W 4	0 50 30	10°43'04	4♏52	26°28	23°48	26°25	26°16	24°32	19°41	15°18	17°21	24°30	24°54	2° 6	8°34	W 4	
T 5	0 54 27	11°42'07	17°32	25°52	25° 3	27° 4	26°28	24°27	19°41	15°20	17°20	24°25	24°50	2°12	8°32	T 5	
F 6	0 58 23	12°41'12	29°59	25° 9	26°17	27°42	26°39	24°23	19°40	15°22	17°19	24°17	24°47	2°19	8°30	F 6	
S 7	1 2 20	13°40'19	12♍17	24°18	27°32	28°20	26°50	24°19	19°40	15°24	17°18	24° 7	24°44	2°26	8°28	S 7	
S 8	1 6 16	14°39'29	24°26	23°21	28°46	28°59	27° 1	24°14	19°39	15°27	17°17	23°55	24°41	2°33	8°25	S 8	
M 9	1 10 13	15°38'40	6♏28	22°18	0♏ 1	29°37	27°13	24°10	19°38	15°29	17°16	23°42	24°38	2°39	8°23	M 9	
T 10	1 14 9	16°37'54	18°24	21°11	1°16	0♏16	27°24	24° 6	19°38	15°31	17°15	23°29	24°34	2°46	8°21	T 10	
W 11	1 18 6	17°37'09	0♍16	20° 1	2°30	0°54	27°36	24° 2	19°37	15°33	17°14	23°18	24°31	2°53	8°19	W 11	
T 12	1 22 3	18°36'27	12° 5	18°50	3°45	1°32	27°48	23°58	19°36	15°36	17°13	23° 8	24°28	2°59	8°17	T 12	
F 13	1 25 59	19°35'46	23°54	17°39	5° 0	2°11	27°59	23°54	19°35	15°38	17°12	23° 1	24°25	3° 6	8°15	F 13	
S 14	1 29 56	20°35'08	5♏44	16°32	6°15	2°49	28°11	23°50	19°34	15°40	17°11	22°57	24°22	3°13	8°13	S 14	
S 15	1 33 52	21°34'31	17°40	15°29	7°30	3°28	28°23	23°46	19°33	15°42	17°10	22°D56	24°19	3°19	8°11	S 15	
M 16	1 37 49	22°33'57	29°46	14°32	8°44	4° 6	28°35	23°43	19°32	15°45	17° 9	22°56	24°15	3°26	8° 9	M 16	
T 17	1 41 45	23°33'24	12♌ 5	13°44	9°59	4°45	28°47	23°39	19°31	15°47	17° 8	22°57	24°12	3°33	8° 8	T 17	
W 18	1 45 42	24°32'52	24°44	13° 6	11°14	5°23	28°59	23°35	19°30	15°49	17° 7	22°R57	24° 9	3°39	8° 6	W 18	
T 19	1 49 38	25°32'23	7♏47	12°37	12°29	6° 2	29°11	23°32	19°29	15°51	17° 6	22°56	24° 6	3°46	8° 4	T 19	
F 20	1 53 35	26°31'55	21°17	12°20	13°44	6°40	29°23	23°28	19°28	15°53	17° 5	22°53	24° 3	3°53	8° 2	F 20	
S 21	1 57 32	27°31'29	5♏17	12°D14	14°59	7°19	29°35	23°25	19°26	15°56	17° 4	22°49	24° 0	4° 0	8° 1	S 21	
S 22	2 1 28	28°31'05	19°46	12°19	16°14	7°57	29°48	23°21	19°25	15°58	17° 3	22°42	23°56	4° 6	7°59	S 22	
M 23	2 5 25	29°30'42	4♏40	12°34	17°29	8°36	0♏ 0	23°18	19°24	16° 0	17° 2	22°34	23°53	4°13	7°58	M 23	
T 24	2 9 21	0♍30'21	19°52	13° 0	18°44	9°14	0°12	23°15	19°22	16° 2	17° 1	22°26	23°50	4°20	7°56	T 24	
W 25	2 13 18	1°30'02	5♏11	13°35	19°59	9°53	0°25	23°12	19°21	16° 4	17° 0	22°18	23°47	4°26	7°55	W 25	
T 26	2 17 14	2°29'46	20°26	14°20	21°14	10°31	0°37	23° 9	19°19	16° 6	16°59	22°13	23°44	4°33	7°54	T 26	
F 27	2 21 11	3°29'31	5♊28	15°12	22°29	11°10	0°50	23° 6	19°18	16° 9	16°58	22° 9	23°40	4°40	7°52	F 27	
S 28	2 25 7	4°29'18	20° 7	16°11	23°44	11°49	1° 3	23° 3	19°16	16°11	16°57	22°D 8	23°37	4°46	7°51	S 28	
S 29	2 29 4	5°29'08	4♏21	17°16	24°59	12°27	1°15	23° 0	19°15	16°13	16°56	22° 9	23°34	4°53	7°50	S 29	
M 30	2 33 1	6°29'00	18° 7	18°27	26°14	13° 6	1°28	22°57	19°13	16°15	16°55	22°10	23°31	5° 0	7°49	M 30	
T 31	2 36 57	7♍28'54	1♌26	19♏43	27♏29	13♏45	1♏41	22♏55	19♊11	16♏17	16♏53	22°R11	23♊28	5♍ 6	7♏48	T 31	

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	3s 5	23n23	0n 3	14s 4	3s44	5n13	1n24	3n 9	1n 3	18s29	0n43	4s19	2s26	23n 3	0n 2	4s35	1n31
M 2	3 28	24 23	1 14	13 57	3 42	4 44	1 25	2 54	1 3	18 32	0 43	4 21	2 26	23 3	0 2	4 36	1 31
T 3	3 51	23 56	2 20	13 47	3 39	4 16	1 26	2 38	1 3	18 34	0 43	4 23	2 26	23 3	0 2	4 37	1 31
W 4	4 14	22 13	3 16	13 32	3 34	3 47	1 26	2 23	1 3	18 37	0 42	4 24	2 26	23 3	0 2	4 38	1 31
T 5	4 37	19 24	4 2	13 13	3 28	3 18	1 27	2 7	1 2	18 40	0 42	4 26	2 26	23 3	0 2	4 38	1 31
F 6	5 1	15 45	4 35	12 49	3 20	2 49	1 27	1 52	1 2	18 43	0 42	4 28	2 26	23 3	0 2	4 39	1 31
S 7	5 23	11 30	4 55	12 21	3 9	2 20	1 28	1 37	1 2	18 45	0 42	4 29	2 26	23 3	0 2	4 40	1 31
S 8	5 46	6 49	5 2	11 49	2 57	1 50	1 28	1 21	1 2	18 48	0 42	4 31	2 26	23 3	0 2	4 41	1 31
M 9	6 9	1 56	4 54	11 12	2 44	1 21	1 29	1 6	1 2	18 51	0 42	4 32	2 26	23 3	0 2	4 42	1 31
T 10	6 32	2s59	4 34	10 33	2 28	0 51	1 29	0 50	1 1	18 54	0 42	4 34	2 25	23 3	0 2	4 43	1 31
W 11	6 55	7 47	4 2	9 50	2 11	0 22	1 29	0 35	1 1	18 56	0 41	4 36	2 25	23 3	0 2	4 44	1 31
T 12	7 17	12 17	3 20	9 6	1 52	0s 8	1 29	0 19	1 1	18 59	0 41	4 37	2 25	23 3	0 2	4 44	1 31
F 13	7 40	16 20	2 28	8 21	1 33	0 37	1 29	0 4	1 1	19 2	0 41	4 39	2 25	23 3	0 2	4 45	1 31
S 14	8 2	19 46	1 31	7 36	1 12	1 7	1 29	0s12	1 1	19 5	0 41	4 40	2 25	23 3	0 2	4 46	1 31
S 15	8 24	22 23	0 28	6 53	0 52	1 36	1 29	0 27	1 0	19 7	0 41	4 41	2 25	23 3	0 2	4 47	1 31
M 16	8 47	24 2	0s37	6 12	0 31	2 6	1 29	0 43	1 0	19 10	0 41	4 43	2 25	23 3	0 2	4 48	1 31
T 17	9 9	24 33	1 41	5 35	0 11	2 36	1 29	0 58	1 0	19 13	0 41	4 44	2 25	23 3	0 2	4 49	1 31
W 18	9 30	23 49	2 42	5 2	0n 8	3 5	1 28	1 13	1 0	19 16	0 41	4 46	2 25	23 3	0 2	4 49	1 31
T 19	9 52	21 48	3 37	4 35	0 26	3 35	1 28	1 29	0 59	19 18	0 40	4 47	2 25	23 3	0 2	4 50	1 31
F 20	10 14	18 31	4 21	4 12	0 43	4 4	1 28	1 44	0 59	19 21	0 40	4 48	2 25	23 3	0 2	4 51	1 31
S 21	10 35	14 6	4 52	3 56	0 59	4 33	1 27	2 0	0 59	19 24	0 40	4 49	2 24	23 2	0 2	4 52	1 31
S 22	10 56	8 44	5 6	3 45	1 13	5 3	1 27	2 15	0 59	19 27	0 40	4 51	2 24	23 2	0 2	4 53	1 31
M 23	11 18	2 44	4 59	3 40	1 25	5 32	1 26	2 31	0 59	19 29	0 40	4 52	2 24	23 2	0 2	4 54	1 31
T 24	11 39	3n34	4 32	3 40	1 35	6 1	1 25	2 46	0 58	19 32	0 40	4 53	2 24	23 2	0 2	4 54	1 31
W 25	11 59	9 42	3 45	3 46	1 44	6 30	1 25	3 1	0 58	19 35	0 40	4 54	2 24	23 2	0 2	4 55	1 31
T 26	12 20	15 14	2 42	3 56	1 52	6 59	1 24	3 17	0 58	19 38	0 39	4 55	2 24	23 2	0 2	4 56	1 31
F 27	12 40	19 45	1 29	4 11	1 57	7 28	1 23	3 32	0 58	19 40	0 39	4 56	2 24	23 2	0 2	4 57	1 31
S 28	13 1	22 53	0 11	4 29	2 2	7 56	1 22	3 47	0 57	19 43	0 39	4 57	2 24	23 2	0 2	4 58	1 31
S 29	13 21	24 27	1n 6	4 51	2 5	8 25	1 21	4 3	0 57	19 46	0 39	4 58	2 23	23 2	0 2	4 59	1 31
M 30	13 40	24 27	2 16	5 16	2 7	8 53	1 20	4 18	0 57	19 48	0 39	4 59	2 23	23 1	0 2	4 59	1 31
T 31	14s 0	23n 1	3n16	5s44	2n 8	9s21	1n19	4s33	0n56	19s51	0n39	5s 0	2s23	23n 1	0n 2	5s 0	1n31

Julian Day Number = 2493090.5, Delta T = 99.93 sec
 Ecliptic obliquity = 23°25'29", Nutation = - 0°00'18", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 26°19'47", Lahiri = 25°26'47"

ASTRODIENST EPHEMERIS for the year 2113

geocentric

NOVEMBER 2113

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	2 40 54	8♌28'51	14♏23	21♌3	28♏44	14♏23	1♌53	22°R52	19°R10	16♌19	16°R52	22°R11	23♏25	5♌13	7°R47	W 1	
T 2	2 44 50	9°28'49	27° 0	22°26	29°59	15° 2	2° 6	22♌50	19♏8	16°21	16♏51	22♏9	23°21	5°20	7♌46	T 2	
F 3	2 48 47	10°28'50	9♏21	23°52	1♌15	15°41	2°19	22°47	19° 6	16°23	16°50	22° 6	23°18	5°26	7°45	F 3	
S 4	2 52 43	11°28'52	21°30	25°20	2°30	16°19	2°32	22°45	19° 4	16°26	16°49	22° 0	23°15	5°33	7°44	S 4	
S 5	2 56 40	12°28'57	3♌31	26°50	3°45	16°58	2°45	22°43	19° 2	16°28	16°48	21°53	23°12	5°40	7°43	S 5	
M 6	3 0 36	13°29'04	15°25	28°22	5° 1	17°37	2°58	22°41	19° 1	16°30	16°47	21°46	23° 9	5°47	7°42	M 6	
T 7	3 4 33	14°29'13	27°17	29°56	6°16	18°15	3°11	22°39	18°59	16°32	16°46	21°39	23° 6	5°53	7°42	T 7	
W 8	3 8 30	15°29'23	9♌7	1♌30	7°31	18°54	3°24	22°37	18°57	16°34	16°45	21°32	23° 2	6° 0	7°41	W 8	
T 9	3 12 26	16°29'36	20°57	3° 5	8°46	19°33	3°37	22°35	18°55	16°36	16°43	21°27	22°59	6° 7	7°40	T 9	
F 10	3 16 23	17°29'50	2♌49	4°41	10° 2	20°12	3°50	22°33	18°53	16°38	16°42	21°23	22°56	6°13	7°40	F 10	
S 11	3 20 19	18°30'06	14°46	6°17	11°17	20°50	4° 3	22°32	18°50	16°40	16°41	21°21	22°53	6°20	7°40	S 11	
S 12	3 24 16	19°30'24	26°48	7°53	12°32	21°29	4°16	22°30	18°48	16°42	16°40	21°D21	22°50	6°27	7°39	S 12	
M13	3 28 12	20°30'43	9♏0	9°30	13°48	22° 8	4°29	22°29	18°46	16°44	16°39	21°22	22°46	6°33	7°39	M13	
T 14	3 32 9	21°31'04	21°25	11° 7	15° 3	22°47	4°43	22°28	18°44	16°46	16°38	21°24	22°43	6°40	7°39	T 14	
W15	3 36 5	22°31'26	4♌5	12°43	16°18	23°26	4°56	22°27	18°42	16°47	16°37	21°26	22°40	6°47	7°38	W15	
T 16	3 40 2	23°31'49	17° 6	14°20	17°34	24° 4	5° 9	22°25	18°40	16°49	16°36	21°27	22°37	6°53	7°38	T 16	
F 17	3 43 59	24°32'14	0♌29	15°57	18°49	24°43	5°22	22°24	18°37	16°51	16°34	21°R27	22°34	7° 0	7°38	F 17	
S 18	3 47 55	25°32'40	14°17	17°33	20° 4	25°22	5°36	22°24	18°35	16°53	16°33	21°26	22°31	7° 7	7°D38	S 18	
S 19	3 51 52	26°33'08	28°31	19°10	21°20	26° 1	5°49	22°23	18°33	16°55	16°32	21°23	22°27	7°13	7°38	S 19	
M20	3 55 48	27°33'36	13°Y 9	20°46	22°35	26°40	6° 2	22°22	18°31	16°57	16°31	21°20	22°24	7°20	7°38	M20	
T 21	3 59 45	28°34'06	28° 5	22°22	23°51	27°19	6°16	22°22	18°28	16°58	16°30	21°17	22°21	7°27	7°38	T 21	
W22	4 3 41	29°34'38	13♏14	23°58	25° 6	27°58	6°29	22°21	18°26	17° 0	16°29	21°14	22°18	7°34	7°39	W22	
T 23	4 7 38	0♌35'11	28°24	25°34	26°21	28°36	6°42	22°21	18°23	17° 2	16°28	21°12	22°15	7°40	7°39	T 23	
F 24	4 11 34	1°35'45	13♏27	27° 9	27°37	29°15	6°56	22°21	18°21	17° 4	16°27	21°11	22°12	7°47	7°39	F 24	
S 25	4 15 31	2°36'21	28°13	28°44	28°52	29°54	7° 9	22°20	18°19	17° 5	16°26	21°D11	22° 8	7°54	7°40	S 25	
S 26	4 19 28	3°36'58	12♏37	0♌20	0♌8	0♌33	7°22	22°D20	18°16	17° 7	16°25	21°12	22° 5	8° 0	7°40	S 26	
M27	4 23 24	4°37'37	26°34	1°55	1°23	1°12	7°36	22°20	18°14	17° 9	16°24	21°13	22° 2	8° 7	7°41	M27	
T 28	4 27 21	5°38'18	10♏4	3°29	2°39	1°51	7°49	22°21	18°11	17°10	16°22	21°14	21°59	8°14	7°41	T 28	
W29	4 31 17	6°39'00	23° 8	5° 4	3°54	2°30	8° 3	22°21	18° 9	17°12	16°21	21°15	21°56	8°20	7°42	W29	
T 30	4 35 14	7♌39'44	5♏49	6♌39	5♌9	3♌9	8♌16	22♌21	18♏6	17♌14	16♏20	21°R16	21♏52	8♌27	7♌42	T 30	

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	decl lat	
W 1	14s19	20n25	4n 5	6s14	2n 8	9s49	1n18	4s48	0n56	19s54	0n39	5s 1	2s23	23n 1	0n 2	5s 1	1n31
T 2	14 38	16 54	4 40	6 45	2 7	10 16	1 16	5 3	0 56	19 56	0 39	5 2	2 23	23 1	0 2	5 2	1 31
F 3	14 57	12 43	5 2	7 19	2 5	10 44	1 15	5 19	0 56	19 59	0 39	5 3	2 23	23 1	0 2	5 2	1 31
S 4	15 16	8 6	5 10	7 53	2 3	11 11	1 14	5 34	0 55	20 2	0 38	5 3	2 23	23 1	0 2	5 3	1 31
S 5	15 34	3 15	5 3	8 29	2 0	11 38	1 12	5 49	0 55	20 4	0 38	5 4	2 22	23 1	0 2	5 4	1 31
M 6	15 53	1s42	4 44	9 5	1 56	12 4	1 11	6 4	0 55	20 7	0 38	5 5	2 22	23 1	0 2	5 5	1 31
T 7	16 11	6 34	4 12	9 42	1 52	12 31	1 9	6 19	0 55	20 9	0 38	5 5	2 22	23 0	0 2	5 5	1 31
W 8	16 28	11 12	3 30	10 19	1 47	12 57	1 8	6 34	0 54	20 12	0 38	5 6	2 22	23 0	0 2	5 6	1 31
T 9	16 45	15 26	2 38	10 56	1 42	13 22	1 6	6 49	0 54	20 14	0 38	5 7	2 22	23 0	0 2	5 7	1 31
F 10	17 3	19 5	1 40	11 33	1 37	13 48	1 5	7 4	0 54	20 17	0 38	5 7	2 21	23 0	0 2	5 8	1 31
S 11	17 19	21 57	0 36	12 10	1 31	14 13	1 3	7 18	0 53	20 20	0 38	5 8	2 21	23 0	0 2	5 8	1 31
S 12	17 36	23 53	0s30	12 47	1 25	14 37	1 1	7 33	0 53	20 22	0 38	5 8	2 21	23 0	0 2	5 9	1 31
M13	17 52	24 42	1 35	13 24	1 19	15 2	0 59	7 48	0 53	20 25	0 38	5 8	2 21	22 59	0 2	5 10	1 31
T 14	18 8	24 19	2 37	14 0	1 13	15 25	0 58	8 3	0 52	20 27	0 37	5 9	2 21	22 59	0 2	5 11	1 31
W15	18 23	22 41	3 33	14 35	1 7	15 49	0 56	8 17	0 52	20 30	0 37	5 9	2 21	22 59	0 2	5 11	1 31
T 16	18 39	19 50	4 20	15 11	1 0	16 12	0 54	8 32	0 52	20 32	0 37	5 9	2 20	22 59	0 2	5 12	1 31
F 17	18 54	15 52	4 54	15 45	0 53	16 35	0 52	8 46	0 51	20 35	0 37	5 9	2 20	22 59	0 2	5 13	1 31
S 18	19 8	10 59	5 12	16 19	0 47	16 57	0 50	9 1	0 51	20 37	0 37	5 10	2 20	22 59	0 2	5 13	1 31
S 19	19 22	5 22	5 12	16 52	0 40	17 19	0 48	9 15	0 51	20 39	0 37	5 10	2 20	22 58	0 2	5 14	1 32
M20	19 36	0n42	4 52	17 24	0 33	17 40	0 46	9 30	0 50	20 42	0 37	5 10	2 20	22 58	0 2	5 15	1 32
T 21	19 50	6 52	4 12	17 56	0 26	18 1	0 44	9 44	0 50	20 44	0 37	5 10	2 19	22 58	0 2	5 15	1 32
W22	20 3	12 43	3 14	18 27	0 19	18 21	0 42	9 58	0 50	20 47	0 37	5 10	2 19	22 58	0 3	5 16	1 32
T 23	20 16	17 48	2 2	18 56	0 12	18 41	0 39	10 12	0 49	20 49	0 37	5 10	2 19	22 58	0 3	5 17	1 32
F 24	20 28	21 42	0 43	19 25	0 5	19 1	0 37	10 26	0 49	20 51	0 37	5 10	2 19	22 57	0 3	5 17	1 32
S 25	20 40	24 4	0n39	19 53	0s 1	19 19	0 35	10 40	0 49	20 53	0 36	5 10	2 19	22 57	0 3	5 18	1 32
S 26	20 52	24 45	1 56	20 20	0 8	19 38	0 33	10 54	0 48	20 56	0 36	5 9	2 18	22 57	0 3	5 18	1 32
M27	21 3	23 50	3 3	20 46	0 15	19 56	0 31	11 8	0 48	20 58	0 36	5 9	2 18	22 57	0 3	5 19	1 32
T 28	21 14	21 32	3 59	21 11	0 21	20 13	0 28	11 22	0 48	21 0	0 36	5 9	2 18	22 57	0 3	5 20	1 32
W29	21 24	18 12	4 39	21 35	0 28	20 29	0 26	11 36	0 47	21 2	0 36	5 9	2 18	22 56	0 3	5 20	1 32
T 30	21s34	14n 6	5n 5	21s58	0s34	20s45	0n24	11s49	0n47	21s 5	0n36	5s 8	2s18	22n56	0n 3	5s21	1n32

Julian Day Number = 2493121.5, Delta T = 99.97 sec

Ecliptic obliquity = 23°25'29", Nutation = - 0°00'18", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 26°19'51", Lahiri = 25°26'51"

ASTRODIENST EPHEMERIS for the year 2113
geocentric

DECEMBER 2113

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	4 39 10	8♌40'29	18♏11	8♌13	6♌25	3♏48	8♌30	22♏22	18°R 4	17♏15	16°R19	21°R16	21♏49	8♏34	7♏43	F 1
S 2	4 43 7	9°41'16	0♏19	9°48	7°40	4°27	8°43	22°22	18♏1	17°17	16♏18	21♏15	21°46	8°40	7°44	S 2
S 3	4 47 3	10°42'04	12°16	11°22	8°56	5° 6	8°56	22°23	17°59	17°18	16°17	21°13	21°43	8°47	7°45	S 3
M 4	4 51 0	11°42'54	24° 7	12°56	10°11	5°45	9°10	22°24	17°56	17°20	16°16	21°12	21°40	8°54	7°46	M 4
T 5	4 54 57	12°43'45	5♏57	14°30	11°27	6°25	9°23	22°25	17°54	17°21	16°15	21°11	21°37	9° 0	7°47	T 5
W 6	4 58 53	13°44'37	17°47	16° 4	12°42	7° 4	9°37	22°26	17°51	17°23	16°14	21°10	21°33	9° 7	7°48	W 6
T 7	5 2 50	14°45'31	29°40	17°38	13°58	7°43	9°50	22°27	17°49	17°24	16°13	21° 9	21°30	9°14	7°49	T 7
F 8	5 6 46	15°46'26	11♌40	19°13	15°13	8°22	10° 4	22°28	17°46	17°25	16°12	21° 8	21°27	9°20	7°50	F 8
S 9	5 10 43	16°47'22	23°47	20°47	16°29	9° 1	10°17	22°30	17°44	17°27	16°11	21°D 8	21°24	9°27	7°51	S 9
S 10	5 14 39	17°48'19	6♏3	22°21	17°44	9°40	10°30	22°31	17°41	17°28	16°10	21° 8	21°21	9°34	7°53	S 10
M11	5 18 36	18°49'16	18°30	23°55	19° 0	10°19	10°44	22°33	17°38	17°29	16°10	21° 9	21°18	9°40	7°54	M11
T 12	5 22 32	19°50'15	1♏9	25°29	20°15	10°58	10°57	22°35	17°36	17°31	16° 9	21° 9	21°14	9°47	7°55	T 12
W13	5 26 29	20°51'14	14° 2	27° 3	21°31	11°38	11°11	22°36	17°33	17°32	16° 8	21°R 9	21°11	9°54	7°57	W13
T 14	5 30 26	21°52'14	27°10	28°37	22°46	12°17	11°24	22°38	17°31	17°33	16° 7	21° 9	21° 8	10° 1	7°58	T 14
F 15	5 34 22	22°53'14	10♏35	0♏12	24° 2	12°56	11°37	22°40	17°28	17°34	16° 6	21° 9	21° 5	10° 7	8° 0	F 15
S 16	5 38 19	23°54'15	24°18	1°46	25°17	13°35	11°51	22°42	17°26	17°35	16° 5	21°D 9	21° 2	10°14	8° 1	S 16
S 17	5 42 15	24°55'16	8♏18	3°21	26°33	14°14	12° 4	22°45	17°23	17°36	16° 4	21° 9	20°58	10°21	8° 3	S 17
M18	5 46 12	25°56'18	22°36	4°55	27°48	14°54	12°17	22°47	17°21	17°38	16° 3	21° 9	20°55	10°27	8° 5	M18
T 19	5 50 8	26°57'20	7♏9	6°30	29° 4	15°33	12°30	22°49	17°18	17°39	16° 3	21°10	20°52	10°34	8° 7	T 19
W20	5 54 5	27°58'23	21°52	8° 4	0♏19	16°12	12°44	22°52	17°16	17°40	16° 2	21°10	20°49	10°41	8° 8	W20
T 21	5 58 2	28°59'26	6♏40	9°39	1°35	16°51	12°57	22°54	17°13	17°41	16° 1	21°11	20°46	10°47	8°10	T 21
F 22	6 1 58	0♏0'29	21°26	11°13	2°50	17°31	13°10	22°57	17°11	17°42	16° 0	21°R11	20°43	10°54	8°12	F 22
S 23	6 5 55	1° 1'33	6♏2	12°48	4° 6	18°10	13°23	23° 0	17° 8	17°43	15°59	21°11	20°39	11° 1	8°14	S 23
S 24	6 9 51	2° 2'38	20°23	14°22	5°21	18°49	13°36	23° 3	17° 6	17°43	15°59	21°10	20°36	11° 7	8°16	S 24
M25	6 13 48	3° 3'43	4♏22	15°56	6°37	19°28	13°49	23° 6	17° 3	17°44	15°58	21° 8	20°33	11°14	8°18	M25
T 26	6 17 44	4° 4'49	17°58	17°30	7°52	20° 8	14° 2	23° 9	17° 1	17°45	15°57	21° 7	20°30	11°21	8°20	T 26
W27	6 21 41	5° 5'55	1♏9	19° 4	9° 7	20°47	14°15	23°12	16°59	17°46	15°57	21° 5	20°27	11°27	8°23	W27
T 28	6 25 37	6° 7'02	13°56	20°37	10°23	21°26	14°28	23°15	16°56	17°47	15°56	21° 3	20°24	11°34	8°25	T 28
F 29	6 29 34	7° 8'09	26°23	22°10	11°38	22° 6	14°41	23°19	16°54	17°47	15°55	21° 2	20°20	11°41	8°27	F 29
S 30	6 33 31	8° 9'17	8♏33	23°42	12°54	22°45	14°54	23°22	16°52	17°48	15°55	21°D 2	20°17	11°47	8°30	S 30
S 31	6 37 27	9♏10'25	20♏31	25♏13	14♏9	23♏25	15♌7	23♏26	16♏49	17♏49	15♏54	21♏2	20♏14	11♏54	8♏32	S 31

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	
F 1	21s44	9n31	5n16	22s20	0s41	21s 1	0n21	12s 3	0n46	21s 7	0n36	5s 8	2s17	22n56	0n 3	5s21	1n32	1n26	15s55	23n 8	23n10	11s 0	3s46	5n17						
S 2	21 53	4 40	5 13	22 41	0 47	21 16	0 19	12 17	0 46	21 9	0 36	5 7	2 17	22 56	0 3	5 22	1 32	1 26	15 55	23 8	23 10	11 3	3 46	5 17						
S 3	22 2	0s18	4 56	23 0	0 53	21 30	0 17	12 30	0 46	21 11	0 36	5 7	2 17	22 56	0 3	5 22	1 32	1 26	15 54	23 8	23 10	11 5	3 46	5 16						
M 4	22 11	5 13	4 26	23 19	0 59	21 44	0 14	12 43	0 45	21 13	0 36	5 6	2 17	22 55	0 3	5 23	1 32	1 25	15 54	23 8	23 10	11 8	3 46	5 16						
T 5	22 19	9 57	3 45	23 36	1 5	21 57	0 12	12 57	0 45	21 15	0 36	5 6	2 17	22 55	0 3	5 23	1 32	1 25	15 54	23 8	23 10	11 11	3 46	5 16						
W 6	22 26	14 19	2 55	23 52	1 11	22 9	0 10	13 10	0 44	21 17	0 36	5 5	2 16	22 55	0 3	5 24	1 32	1 25	15 54	23 8	23 9	11 14	3 46	5 15						
T 7	22 33	18 10	1 56	24 7	1 16	22 21	0 7	13 23	0 44	21 20	0 36	5 5	2 16	22 55	0 3	5 24	1 32	1 25	15 54	23 8	23 9	11 16	3 45	5 15						
F 8	22 40	21 18	0 52	24 20	1 21	22 32	0 5	13 36	0 44	21 22	0 36	5 4	2 16	22 54	0 3	5 25	1 32	1 25	15 54	23 8	23 9	11 19	3 45	5 15						
S 9	22 46	23 31	0s15	24 33	1 27	22 42	0 2	13 49	0 43	21 24	0 35	5 3	2 16	22 54	0 3	5 25	1 32	1 25	15 53	23 8	23 9	11 22	3 45	5 14						
S 10	22 52	24 39	1 22	24 44	1 32	22 51	0 0	14 1	0 43	21 26	0 35	5 3	2 16	22 54	0 3	5 26	1 32	1 25	15 53	23 8	23 9	11 24	3 45	5 14						
M 11	22 57	24 34	2 26	24 53	1 36	23 0	0s 2	14 14	0 42	21 28	0 35	5 2	2 15	22 54	0 3	5 26	1 32	1 25	15 53	23 8	23 8	11 27	3 45	5 13						
T 12	23 2	23 13	3 25	25 2	1 41	23 9	0 5	14 27	0 42	21 29	0 35	5 1	2 15	22 54	0 3	5 27	1 33	1 25	15 53	23 8	23 8	11 30	3 45	5 13						
W 13	23 7	20 39	4 14	25 9	1 45	23 16	0 7	14 39	0 41	21 31	0 35	5 0	2 15	22 53	0 3	5 27	1 33	1 25	15 53	23 8	23 8	11 33	3 45	5 13						
T 14	23 11	16 59	4 50	25 14	1 49	23 23	0 10	14 52	0 41	21 33	0 35	4 59	2 15	22 53	0 3	5 27	1 33	1 25	15 52	23 8	23 8	11 35	3 44	5 12						
F 15	23 14	12 24	5 12	25 18	1 53	23 29	0 12	15 4	0 41	21 35	0 35	4 58	2 15	22 53	0 3	5 28	1 33	1 25	15 52	23 8	23 7	11 38	3 44	5 12						
S 16	23 17	7 7	5 17	25 21	1 56	23 35	0 14	15 16	0 40	21 37	0 35	4 57	2 14	22 53	0 3	5 28	1 33	1 25	15 52	23 8	23 7	11 41	3 44	5 12						
S 17	23 20	1 22	5 4	25 23	2 0	23 39	0 17	15 28	0 40	21 39	0 35	4 56	2 14	22 52	0 3	5 29	1 33	1 25	15 52	23 8	23 7	11 43	3 44	5 11						
M 18	23 22	4n35	4 31	25 22	2 3	23 43	0 19	15 40	0 39	21 41	0 35	4 55	2 14	22 52	0 3	5 29	1 33	1 25	15 51	23 8	23 7	11 46	3 43	5 11						
T 19	23 23	10 24	3 41	25 21	2 5	23 47	0 21	15 52	0 39	21 42	0 35	4 54	2 14	22 52	0 3	5 29	1 33	1 25	15 51	23 8	23 7	11 49	3 43	5 11						
W 20	23 25	15 43	2 36	25 18	2 7	23 49	0 24	16 4	0 38	21 44	0 35	4 53	2 14	22 52	0 3	5 30	1 33	1 25	15 51	23 8	23 6	11 52	3 43	5 10						
T 21	23 25	20 6	1 20	25 13	2 9	23 51	0 26	16 15	0 38	21 46	0 35	4 51	2 13	22 51	0 3	5 30	1 33	1 25	15 51	23 8	23 6	11 54	3 42	5 10						
F 22	23 25	23 10	0n 1	25 7	2 11	23 52	0 28	16 27	0 37	21 47	0 35	4 50	2 13	22 51	0 3	5 30	1 33	1 25	15 50	23 8	23 6	11 57	3 42	5 10						
S 23	23 25	24 39	1 22	25 0	2 12	23 52	0 30	16 38	0 37	21 49	0 35	4 49	2 13	22 51	0 3	5 31	1 33	1 25	15 50	23 8	23 6	12 0	3 41	5 9						
S 24	23 25	24 26	2 35	24 51	2 13	23 52	0 33	16 50	0 36	21 51	0 35	4 47	2 13	22 51	0 3	5 31	1 33	1 25	15 50	23 8	23 6	12 2	3 41	5 9						
M 25	23 23	22 40	3 37	24 40	2 13	23 51	0 35	17 1	0 36	21 52	0 35	4 46	2 13	22 51	0 3	5 31	1 33	1 25	15 50	23 8	23 5	12 5	3 40	5 9						
T 26	23 22	19 38	4 25	24 28	2 13	23 49	0 37	17 12	0 35	21 54	0 34	4 45	2 12	22 50	0 3	5 31	1 33	1 25	15 49	23 8	23 5	12 8	3 40	5 8						
W 27	23 20	15 42	4 58	24 15	2 12	23 46	0 39	17 23	0 35	21 56	0 34	4 43	2 12	22 50	0 3	5 32	1 33	1 25	15 49	23 7	23 5	12 10	3 39	5 8						
T 28	23 17	11 9	5 14	24 0	2 11	23 42	0 41	17 34	0 34	21 57	0 34	4 42	2 12	22 50	0 3	5 32	1 33	1 25	15 49	23 7	23 5	12 13	3 39	5 8						
F 29	23 14	6 15	5 15	23 43	2 9	23 38	0 44	17 44	0 34	21 59	0 34	4 40	2 12	22 50	0 3	5 32	1 33	1 25	15 49	23 7	23 4	12 16	3 38	5 7						
S 30	23 10	1 14	5 2	23 25	2 7	23 33	0 46	17 55	0 33	22 0	0 34	4 39	2 12	22 49	0 3	5 32	1 34	1 25	15 48	23 7	23 4	12 18	3 38	5 7						
S 31	23s 6	3s45	4n36	23s 6	2s 4	23s28	0s48	18s 5	0n33	22s 2	0n34	4s37	2s11	22n49	0n 3	5s33	1n34	1n25	15s48	23n 7	23n 4	12s21	3s37	5n 7						