



Astrodienst Ephemeris Tables for the year 1977

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 1977
geocentric

JANUARY 1977

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
S 1	6 42 8	10°32'48	20°8'16	21°R55	26°≈ 1	29°♊59	21°R32	15°R50	10°M53	14°♋39	14°♌ 7	1°R10	29°♍53	17°♎27	27°R19	S 1
S 2	6 46 4	11°28'57	2°II 8	21°♌ 5	27° 9	0°♌44	21°♌29	15°♌46	10°55	14°41	14° 8	1°M 6	29°50	17°33	27°Y19	S 2
M 3	6 50 1	12°30'05	14° 8	20° 5	28°16	1°28	21°26	15°43	10°58	14°43	14° 8	0°58	29°47	17°40	27°18	M 3
T 4	6 53 57	13°31'13	26°18	18°56	29°24	2°13	21°24	15°39	11° 0	14°45	14° 9	0°48	29°44	17°47	27°18	T 4
W 5	6 57 54	14°32'22	8°♌41	17°41	0°♌31	2°58	21°22	15°35	11° 2	14°47	14° 9	0°36	29°40	17°53	27°18	W 5
T 6	7 1 51	15°33'30	21°18	16°21	1°37	3°43	21°20	15°31	11° 4	14°49	14°10	0°23	29°37	18° 0	27°18	T 6
F 7	7 5 47	16°34'38	4°♌ 7	15° 1	2°44	4°28	21°18	15°27	11° 6	14°51	14°10	0° 9	29°34	18° 7	27°D18	F 7
S 8	7 9 44	17°35'45	17° 8	13°41	3°50	5°14	21°16	15°23	11° 8	14°53	14°10	29°♍57	29°31	18°13	27°18	S 8
S 9	7 13 40	18°36'53	0°♎20	12°25	4°57	5°59	21°15	15°19	11°10	14°55	14°10	29°47	29°28	18°20	27°18	S 9
M10	7 17 37	19°38'01	13°43	11°14	6° 2	6°44	21°14	15°15	11°12	14°57	14°11	29°40	29°25	18°26	27°18	M10
T 11	7 21 33	20°39'09	27°16	10°11	7° 8	7°29	21°12	15°11	11°14	14°59	14°11	29°36	29°21	18°33	27°18	T 11
W12	7 25 30	21°40'16	11°♌ 0	9°17	8°13	8°14	21°12	15° 7	11°16	15° 1	14°11	29°34	29°18	18°40	27°18	W12
T 13	7 29 26	22°41'24	24°54	8°31	9°18	9° 0	21°11	15° 2	11°18	15° 3	14°11	29°34	29°15	18°46	27°19	T 13
F 14	7 33 23	23°42'31	8°M59	7°56	10°23	9°45	21°11	14°58	11°19	15° 5	14°11	29°33	29°12	18°53	27°19	F 14
S 15	7 37 20	24°43'39	23°14	7°30	11°28	10°30	21°D10	14°54	11°21	15° 7	14°11	29°32	29° 9	19° 0	27°19	S 15
S 16	7 41 16	25°44'46	7°♊38	7°14	12°32	11°16	21°10	14°49	11°23	15° 9	14°R11	29°28	29° 5	19° 6	27°20	S 16
M17	7 45 13	26°45'53	22° 8	7°D 6	13°36	12° 1	21°11	14°45	11°24	15°10	14°11	29°21	29° 2	19°13	27°20	M17
T 18	7 49 9	27°47'00	6°♌37	7° 8	14°39	12°47	21°11	14°40	11°26	15°12	14°11	29°12	28°59	19°20	27°21	T 18
W19	7 53 6	28°48'07	21° 0	7°17	15°43	13°33	21°12	14°36	11°27	15°14	14°11	29° 0	28°56	19°26	27°22	W19
T 20	7 57 2	29°49'12	5°♌10	7°34	16°46	14°18	21°13	14°31	11°29	15°16	14°11	28°47	28°53	19°33	27°22	T 20
F 21	8 0 59	0°≈50'17	19° 1	7°57	17°48	15° 4	21°14	14°26	11°30	15°17	14°11	28°34	28°50	19°40	27°23	F 21
S 22	8 4 55	1°51'22	2°♌30	8°27	18°50	15°49	21°15	14°22	11°32	15°19	14°11	28°23	28°46	19°46	27°24	S 22
S 23	8 8 52	2°52'25	15°35	9° 2	19°52	16°35	21°16	14°17	11°33	15°21	14°11	28°15	28°43	19°53	27°25	S 23
M24	8 12 49	3°53'27	28°16	9°42	20°54	17°21	21°18	14°12	11°34	15°23	14°10	28° 9	28°40	20° 0	27°26	M24
T 25	8 16 45	4°54'29	10°Y37	10°27	21°55	18° 7	21°20	14° 7	11°35	15°24	14°10	28° 6	28°37	20° 6	27°27	T 25
W26	8 20 42	5°55'29	22°42	11°16	22°55	18°52	21°22	14° 2	11°36	15°26	14°10	28° 5	28°34	20°13	27°28	W26
T 27	8 24 38	6°56'28	4°♌36	12° 8	23°55	19°38	21°24	13°58	11°37	15°27	14° 9	28° 5	28°31	20°20	27°29	T 27
F 28	8 28 35	7°57'26	16°25	13° 4	24°55	20°24	21°27	13°53	11°38	15°29	14° 9	28° 5	28°27	20°26	27°30	F 28
S 29	8 32 31	8°58'23	28°13	14° 3	25°54	21°10	21°29	13°48	11°39	15°30	14° 9	28° 3	28°24	20°33	27°31	S 29
S 30	8 36 28	9°59'19	10°II 7	15° 5	26°53	21°56	21°32	13°43	11°40	15°32	14° 8	28° 0	28°21	20°40	27°33	S 30
M31	8 40 24	11°≈ 0'14	22°II11	16°♌10	27°♌51	22°♌42	21°♌35	13°♌38	11°M41	15°♌33	14°♌ 8	27°♌53	28°♌18	20°♌46	27°Y34	M31

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	23s 2	16n13	1s40	20s27	1n14	14s21	1s36	24s 4	0s37	17n12	0s59	16n56	0n53	14s40	0n26	21s 7	1n27	10n 4	16n58	11s53	11s26	15n33	10n23	0s 9	
S 2	22 57	18 2	2 37	20 15	1 33	13 55	1 33	24 4	0 38	17 12	0 58	16 57	0 53	14 41	0 26	21 7	1 27	10 5	16 59	11 51	11 25	15 34	10 23	0 9	
M 3	22 51	19 4	3 27	20 5	1 52	13 29	1 30	24 4	0 38	17 11	0 58	16 58	0 53	14 42	0 26	21 7	1 27	10 5	16 59	11 49	11 24	15 35	10 22	0 9	
T 4	22 45	19 14	4 9	19 57	2 10	13 2	1 26	24 4	0 39	17 11	0 58	17 0	0 53	14 43	0 26	21 7	1 27	10 5	17 0	11 45	11 23	15 36	10 22	0 9	
W 5	22 39	18 30	4 40	19 51	2 27	12 35	1 23	24 4	0 39	17 10	0 58	17 1	0 53	14 43	0 26	21 8	1 27	10 6	17 0	11 41	11 21	15 37	10 22	0 9	
T 6	22 32	16 52	4 57	19 46	2 42	12 8	1 19	24 3	0 40	17 10	0 57	17 2	0 54	14 44	0 26	21 8	1 27	10 6	17 1	11 36	11 20	15 38	10 22	0 9	
F 7	22 25	14 22	5 0	19 42	2 55	11 40	1 15	24 2	0 41	17 10	0 57	17 3	0 54	14 44	0 26	21 8	1 27	10 7	17 1	11 32	11 19	15 39	10 22	0 9	
S 8	22 17	11 8	4 48	19 40	3 5	11 12	1 11	24 1	0 41	17 10	0 57	17 5	0 54	14 45	0 26	21 8	1 27	10 7	17 2	11 27	11 18	15 40	10 22	0 9	
S 9	22 9	7 18	4 20	19 40	3 13	10 44	1 7	24 0	0 42	17 10	0 57	17 6	0 54	14 46	0 26	21 8	1 27	10 7	17 3	11 24	11 17	15 41	10 22	0 9	
M10	22 0	3 3	3 37	19 40	3 18	10 16	1 3	23 58	0 42	17 10	0 56	17 7	0 54	14 46	0 26	21 9	1 27	10 8	17 3	11 21	11 16	15 42	10 22	0 9	
T 11	21 51	1s24	2 42	19 42	3 21	9 48	0 58	23 56	0 43	17 10	0 56	17 9	0 54	14 47	0 26	21 9	1 28	10 8	17 4	11 20	11 15	15 43	10 22	0 9	
W12	21 42	5 50	1 37	19 46	3 22	9 19	0 54	23 54	0 43	17 10	0 56	17 10	0 54	14 47	0 26	21 9	1 28	10 9	17 4	11 19	11 14	15 44	10 22	0 10	
T 13	21 32	10 1	0 25	19 50	3 20	8 50	0 49	23 52	0 44	17 10	0 55	17 12	0 55	14 48	0 27	21 9	1 28	10 9	17 5	11 19	11 12	15 45	10 22	0 10	
F 14	21 22	13 42	0n50	19 56	3 17	8 21	0 44	23 49	0 44	17 10	0 55	17 13	0 55	14 48	0 27	21 9	1 28	10 10	17 6	11 19	11 11	15 46	10 22	0 10	
S 15	21 11	16 37	2 2	20 2	3 12	7 52	0 40	23 46	0 45	17 10	0 55	17 14	0 55	14 49	0 27	21 9	1 28	10 10	17 6	11 18	11 10	15 47	10 22	0 10	
S 16	21 0	18 31	3 7	20 9	3 6	7 23	0 35	23 43	0 45	17 10	0 55	17 16	0 55	14 49	0 27	21 10	1 28	10 11	17 7	11 17	11 9	15 48	10 22	0 10	
M17	20 48	19 13	4 0	20 17	2 59	6 54	0 29	23 39	0 46	17 11	0 54	17 17	0 55	14 50	0 27	21 10	1 28	10 11	17 7	11 15	11 8	15 49	10 22	0 10	
T 18	20 36	18 39	4 38	20 25	2 50	6 25	0 24	23 36	0 46	17 11	0 54	17 19	0 55	14 50	0 27	21 10	1 28	10 12	17 8	11 11	11 7	15 50	10 23	0 10	
W19	20 24	16 54	4 57	20 33	2 42	5 55	0 19	23 32	0 47	17 12	0 54	17 20	0 55	14 51	0 27	21 10	1 28	10 13	17 8	11 7	11 6	15 51	10 23	0 10	
T 20	20 11	14 9	4 58	20 41	2 32	5 26	0 13	23 27	0 47	17 12	0 53	17 22	0 56	14 51	0 27	21 10	1 28	10 13	17 9	11 2	11 5	15 52	10 23	0 10	
F 21	19 58	10 39	4 42	20 50	2 23	4 56	0 8	23 23	0 48	17 13	0 53	17 23	0 56	14 52	0 27	21 10	1 28	10 14	17 10	10 58	11 3	15 53	10 23	0 10	
S 22	19 45	6 42	4 9	20 58	2 13	4 27	0 2	23 18	0 48	17 13	0 53	17 25	0 56	14 52	0 27	21 11	1 28	10 14	17 10	10 54	11 2	15 54	10 23	0 10	
S 23	19 31	2 32	3 25	21 6	2 2	3 57	0n 4	23 13	0 49	17 14	0 53	17 26	0 56	14 52	0 27	21 11	1 28	10 15	17 11	10 51	11 1	15 55	10 24	0 10	
M24	19 17	1n37	2 31	21 13	1 52	3 27	0 10	23 8	0 49	17 15	0 52	17 28	0 56	14 53	0 27	21 11	1 28	10 16	17 11	10 49	11 0	15 56	10 24	0 10	
T 25	19 2	5 36	1 31	21 20	1 42	2 58	0 16	23 2	0 50	17 15	0 52	17 29	0 56	14 53	0 27	21 11	1 28	10 16	17 12	10 48	10 59	15 57	10 24	0 10	
W26	18 47	9 16	0 29	21 27	1 31	2 28	0 22	22 57	0 50	17 16	0 52	17 31	0 56	14 54	0 27	21 11	1 28	10 17	17 12	10 48	10 58	15 58	10 24	0 10	
T 27	18 32	12 31	0s35	21 33	1 21	1 58	0 29	22 51	0 51	17 17	0 52	17 32	0 56	14 54	0 27	21 11	1 28	10 17	17 13	10 48	10 57	15 59	10 25	0 11	
F 28	18 17	15 13	1 36	21 38	1 11	1 29	0 35	22 44	0 51	17 18	0 51	17 34	0 57	14 54	0 27	21 11	1 28	10 18	17 14	10 48	10 56	16 0	10 25	0 11	
S 29	18 1	17 17	2 33	21 42	1 0	0 59	0 42	22 38	0 52	17 19	0 51	17 35	0 57	14 54	0 27	21 12	1 28	10 19	17 14	10 47	10 54	16 1	10 26	0 11	
S 30	17 45	18 37	3 23	21 45	0 50	0 30	0 49	22 31	0 52	17 20	0 51	17 37	0 57	14 55	0 27	21 12	1 28	10 19	17 15	10 46	10 53	16 2	10 26	0 11	
M31	17s28	19n 7	4s 6	21s47	0n41	0s 0	0n55	22s24	0s53	17n21	0s50	17n38	0n57	14s55	0n27	21s12	1n28	10n20	17n15	10s43	10s52	16n 3	10n26	0s11	

Julian Day Number = 2443144.5, Delta T = 47.52 sec
Ecliptic obliquity = 23°26'24, Nutation = 0°00'09, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 24°25'09, Lahiri = 23°32'09

ASTRODIENST EPHEMERIS for the year 1977

geocentric

FEBRUARY 1977

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	8 44 21	12♈ 1'07	4♉28	17♊17	28♋49	23♌28	21♍38	13°R33	11♎42	15♏35	14°R 7	27°R44	28♐15	20♑53	27♒35	T 1
W 2	8 48 18	13° 1'59	17° 2	18°25	29°46	24°14	21°42	13♎28	11°43	15°36	14♏ 7	27♐33	28°11	21° 0	27°37	W 2
T 3	8 52 14	14° 2'50	29°54	19°36	0°Y43	25° 0	21°46	13°23	11°43	15°38	14° 6	27°20	28° 8	21° 6	27°38	T 3
F 4	8 56 11	15° 3'39	13♌ 3	20°49	1°39	25°46	21°49	13°18	11°44	15°39	14° 5	27° 7	28° 5	21°13	27°40	F 4
S 5	9 0 7	16° 4'28	26°27	22° 4	2°34	26°32	21°53	13°14	11°45	15°40	14° 5	26°56	28° 2	21°20	27°41	S 5
S 6	9 4 4	17° 5'15	10♎ 5	23°20	3°29	27°18	21°58	13° 9	11°45	15°42	14° 4	26°46	27°59	21°26	27°43	S 6
M 7	9 8 0	18° 6'01	23°52	24°37	4°23	28° 5	22° 2	13° 4	11°46	15°43	14° 3	26°39	27°56	21°33	27°44	M 7
T 8	9 11 57	19° 6'46	7♏47	25°56	5°16	28°51	22° 6	12°59	11°46	15°44	14° 2	26°35	27°52	21°39	27°46	T 8
W 9	9 15 53	20° 7'31	21°46	27°16	6° 9	29°37	22°11	12°54	11°46	15°46	14° 2	26°D34	27°49	21°46	27°48	W 9
T 10	9 19 50	21° 8'14	5♎49	28°38	7° 1	0♏23	22°16	12°49	11°47	15°47	14° 1	26°34	27°46	21°53	27°50	T 10
F 11	9 23 47	22° 8'56	19°54	0♏ 0	7°52	1°10	22°21	12°44	11°47	15°48	14° 0	26°R34	27°43	21°59	27°52	F 11
S 12	9 27 43	23° 9'37	4♏ 1	1°24	8°42	1°56	22°26	12°40	11°47	15°49	13°59	26°34	27°40	22° 6	27°54	S 12
S 13	9 31 40	24°10'17	18° 7	2°49	9°32	2°42	22°32	12°35	11°47	15°50	13°58	26°31	27°37	22°13	27°56	S 13
M14	9 35 36	25°10'56	2♊13	4°15	10°21	3°29	22°38	12°30	11°47	15°51	13°57	26°26	27°33	22°19	27°58	M14
T 15	9 39 33	26°11'34	16°14	5°42	11° 9	4°15	22°43	12°25	11°R47	15°52	13°56	26°19	27°30	22°26	28° 0	T 15
W16	9 43 29	27°12'10	0♏ 9	7°10	11°56	5° 1	22°49	12°21	11°47	15°53	13°55	26°10	27°27	22°33	28° 2	W16
T 17	9 47 26	28°12'45	13°53	8°39	12°42	5°48	22°55	12°16	11°47	15°54	13°54	25°59	27°24	22°39	28° 4	T 17
F 18	9 51 22	29°13'19	27°22	10° 9	13°27	6°34	23° 2	12°12	11°47	15°55	13°53	25°49	27°21	22°46	28° 6	F 18
S 19	9 55 19	0♏13'51	10♋34	11°40	14°11	7°21	23° 8	12° 7	11°47	15°56	13°52	25°40	27°17	22°53	28° 8	S 19
S 20	9 59 16	1°14'22	23°28	13°12	14°54	8° 7	23°15	12° 2	11°47	15°57	13°51	25°33	27°14	22°59	28°11	S 20
M21	10 3 12	2°14'50	6°Y 4	14°45	15°36	8°54	23°22	11°58	11°46	15°58	13°50	25°29	27°11	23° 6	28°13	M21
T 22	10 7 9	3°15'17	18°22	16°19	16°17	9°40	23°28	11°54	11°46	15°59	13°49	25°27	27° 8	23°13	28°15	T 22
W23	10 11 5	4°15'42	0♊27	17°54	16°56	10°27	23°36	11°49	11°45	16° 0	13°48	25°D27	27° 5	23°19	28°18	W23
T 24	10 15 2	5°16'06	12°22	19°30	17°35	11°14	23°43	11°45	11°45	16° 0	13°47	25°28	27° 2	23°26	28°20	T 24
F 25	10 18 58	6°16'27	24°11	21° 6	18°12	12° 0	23°50	11°41	11°44	16° 1	13°45	25°29	26°58	23°33	28°23	F 25
S 26	10 22 55	7°16'47	6♊ 0	22°44	18°47	12°47	23°58	11°37	11°44	16° 2	13°44	25°R30	26°55	23°39	28°25	S 26
S 27	10 26 51	8°17'04	17°54	24°23	19°22	13°33	24° 5	11°32	11°43	16° 2	13°43	25°29	26°52	23°46	28°28	S 27
M28	10 30 48	9♋17'20	29♊59	26♏ 3	19°Y55	14♏20	24♏13	11♌28	11♎43	16♏ 3	13♏42	25♏27	26♏49	23♏53	28°Y31	M28

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	17s11	18n45	4s37	21s49	0n31	0n29	1n 2	22s17	0s53	17n22	0s50	17n40	0n57	14s55	0n27	21s12	1n28	10n21	17n16	10s40	10s51	16n 4	10n27	0s11			
W 2	16 54	17 27	4 56	21 49	0 22	0 58	1 9	22 9	0 54	17 23	0 50	17 41	0 57	14 55	0 27	21 12	1 28	10 22	17 16	10 36	10 50	16 5	10 27	0 11			
T 3	16 37	15 16	5 1	21 48	0 12	1 27	1 17	22 1	0 54	17 24	0 50	17 43	0 57	14 56	0 27	21 12	1 28	10 22	17 17	10 31	10 49	16 6	10 28	0 11			
F 4	16 19	12 16	4 50	21 46	0 3	1 56	1 24	21 53	0 55	17 26	0 49	17 44	0 57	14 56	0 27	21 12	1 28	10 23	17 17	10 27	10 48	16 6	10 28	0 11			
S 5	16 1	8 34	4 23	21 43	0s 5	2 25	1 31	21 45	0 55	17 27	0 49	17 46	0 57	14 56	0 27	21 12	1 28	10 24	17 18	10 23	10 46	16 7	10 29	0 11			
S 6	15 43	4 23	3 40	21 39	0 14	2 54	1 39	21 37	0 56	17 28	0 49	17 47	0 57	14 56	0 27	21 13	1 28	10 24	17 18	10 19	10 45	16 8	10 29	0 11			
M 7	15 24	0s 5	2 45	21 34	0 22	3 22	1 47	21 28	0 56	17 30	0 49	17 49	0 58	14 56	0 27	21 13	1 28	10 25	17 19	10 17	10 44	16 9	10 30	0 11			
T 8	15 6	4 35	1 38	21 27	0 30	3 51	1 54	21 19	0 57	17 31	0 48	17 50	0 58	14 56	0 27	21 13	1 28	10 26	17 19	10 15	10 43	16 10	10 30	0 11			
W 9	14 47	8 53	0 25	21 20	0 38	4 19	2 2	21 10	0 57	17 32	0 48	17 52	0 58	14 56	0 27	21 13	1 28	10 27	17 20	10 15	10 42	16 11	10 31	0 11			
T 10	14 27	12 41	0n49	21 11	0 46	4 46	2 10	21 0	0 57	17 34	0 48	17 53	0 58	14 56	0 27	21 13	1 28	10 27	17 20	10 15	10 41	16 12	10 31	0 11			
F 11	14 8	15 46	2 1	21 1	0 53	5 14	2 18	20 51	0 58	17 35	0 48	17 55	0 58	14 56	0 27	21 13	1 29	10 28	17 21	10 15	10 40	16 13	10 32	0 11			
S 12	13 48	17 54	3 6	20 49	1 0	5 42	2 26	20 41	0 58	17 37	0 47	17 56	0 58	14 57	0 27	21 13	1 29	10 29	17 21	10 15	10 39	16 14	10 33	0 12			
S 13	13 28	18 56	3 59	20 36	1 6	6 9	2 35	20 31	0 59	17 39	0 47	17 58	0 58	14 57	0 27	21 13	1 29	10 30	17 22	10 14	10 37	16 15	10 33	0 12			
M14	13 8	18 47	4 38	20 22	1 13	6 36	2 43	20 20	0 59	17 40	0 47	17 59	0 58	14 57	0 27	21 13	1 29	10 31	17 22	10 12	10 36	16 16	10 34	0 12			
T 15	12 47	17 29	5 0	20 7	1 19	7 2	2 51	20 10	1 0	17 42	0 47	18 0	0 58	14 57	0 27	21 13	1 29	10 31	17 23	10 9	10 35	16 17	10 35	0 12			
W16	12 27	15 10	5 4	19 51	1 25	7 28	3 0	19 59	1 0	17 44	0 46	18 2	0 58	14 57	0 27	21 13	1 29	10 32	17 23	10 6	10 34	16 18	10 35	0 12			
T 17	12 6	12 2	4 50	19 33	1 30	7 54	3 8	19 48	1 0	17 46	0 46	18 3	0 58	14 56	0 27	21 13	1 29	10 33	17 24	10 2	10 33	16 18	10 36	0 12			
F 18	11 45	8 19	4 20	19 14	1 35	8 20	3 17	19 37	1 1	17 47	0 46	18 5	0 58	14 56	0 27	21 13	1 29	10 34	17 24	9 59	10 32	16 19	10 37	0 12			
S 19	11 23	4 15	3 37	18 53	1 40	8 45	3 26	19 25	1 1	17 49	0 46	18 6	0 58	14 56	0 27	21 14	1 29	10 34	17 25	9 55	10 31	16 20	10 38	0 12			
S 20	11 2	0 6	2 43	18 31	1 44	9 10	3 35	19 14	1 2	17 51	0 45	18 7	0 59	14 56	0 27	21 14	1 29	10 35	17 25	9 53	10 29	16 21	10 38	0 12			
M21	10 40	3n58	1 42	18 8	1 48	9 35	3 44	19 2	1 2	17 53	0 45	18 8	0 59	14 56	0 27	21 14	1 29	10 36	17 25	9 51	10 28	16 22	10 39	0 12			
T 22	10 19	7 47	0 38	17 44	1 52	9 59	3 52	18 50	1 2	17 55	0 45	18 10	0 59	14 56	0 27	21 14	1 29	10 37	17 26	9 51	10 27	16 23	10 40	0 12			
W23	9 57	11 13	0s27	17 18	1 56	10 22	4 1	18 38	1 3	17 57	0 45	18 11	0 59	14 56	0 27	21 14	1 29	10 38	17 26	9 50	10 26	16 24	10 41	0 12			
T 24	9 35	14 7	1 30	16 51	1 59	10 45	4 11	18 25	1 3	17 59	0 44	18 12	0 59	14 56	0 27	21 14	1 29	10 39	17 27	9 51	10 25	16 25	10 42	0 12			
F 25	9 13	16 25	2 29	16 23	2 2	11 8	4 20	18 12	1 3	18 1	0 44	18 14	0 59	14 56	0 27	21 14	1 29	10 39	17 27	9 51	10 24	16 26	10 42	0 12			
S 26	8 50	18 0	3 21	15 53	2 4	11 30	4 29	18 0	1 4	18 3	0 44	18 15	0 59	14 55	0 27	21 14	1 29	10 40	17 27	9 52	10 23	16 26	10 43	0 12			
S 27	8 28	18 49	4 5	15 22	2 6	11 52	4 38	17 47	1 4	18 5	0 44	18 16	0 59	14 55	0 27	21 14	1 29	10 41	17 28	9 51	10 21	16 27	10 44	0 13			
M28	8s 5	18n47	4s39	14s50	2s 7	12n13	4n47	17s34	1s 4	18n 7	0s44	18n17	0n59	14s55	0n27	21s14	1n29	10n42	17n28	9s50	10s20	16n28	10n45	0s13			

Julian Day Number = 2443175.5, Delta T = 47.61 sec

Ecliptic obliquity = 23°26'24", Nutation = 0°00'10", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 24°25'13", Lahiri =

ASTRODIENST EPHEMERIS for the year 1977
geocentric

MARCH 1977

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	10 34 45	10 ^h 17'33	12 ^h 51'19	27 ^h 43'33	20 ^h 26'26	15 ^h 53'07	24 ^h 21'21	11 ^h 24'24	11 ^h 42'42	16 ^h 17'47	13 ^h 40'40	25 ^h 22'22	26 ^h 46'46	23 ^h 59'59	28 ^h 33'33	T 1
W 2	10 38 41	11 ^h 17'45	24 ^h 57'29	29 ^h 25'25	20 ^h 56'56	15 ^h 53'53	24 ^h 29'29	11 ^h 20'20	11 ^h 41'41	16 ^h 04'04	13 ^h 39'39	25 ^h 16'16	26 ^h 42'42	24 ^h 06'06	28 ^h 36'36	W 2
T 3	10 42 38	12 ^h 17'54	7 ^h 52'56	1 ^h 18'08	21 ^h 24'24	16 ^h 40'40	24 ^h 38'38	11 ^h 17'17	11 ^h 40'40	16 ^h 05'05	13 ^h 38'38	25 ^h 09'09	26 ^h 39'39	24 ^h 13'13	28 ^h 39'39	T 3
F 4	10 46 34	13 ^h 18'02	21 ^h 18'25	2 ^h 52'52	21 ^h 50'50	17 ^h 27'27	24 ^h 46'46	11 ^h 13'13	11 ^h 39'39	16 ^h 05'05	13 ^h 36'36	25 ^h 02'02	26 ^h 36'36	24 ^h 19'19	28 ^h 41'41	F 4
S 5	10 50 31	14 ^h 18'07	5 ^h 19'00	4 ^h 37'37	22 ^h 15'15	18 ^h 14'14	24 ^h 55'55	11 ^h 09'09	11 ^h 38'38	16 ^h 06'06	13 ^h 35'35	24 ^h 55'55	26 ^h 33'33	24 ^h 26'26	28 ^h 44'44	S 5
S 6	10 54 27	15 ^h 18'11	19 ^h 00'00	6 ^h 23'23	22 ^h 38'38	19 ^h 00'00	25 ^h 03'03	11 ^h 06'06	11 ^h 37'37	16 ^h 06'06	13 ^h 33'33	24 ^h 49'49	26 ^h 30'30	24 ^h 33'33	28 ^h 47'47	S 6
M 7	10 58 24	16 ^h 18'12	3 ^h 14'14	8 ^h 10'10	22 ^h 59'59	19 ^h 47'47	25 ^h 12'12	11 ^h 02'02	11 ^h 36'36	16 ^h 07'07	13 ^h 32'32	24 ^h 46'46	26 ^h 27'27	24 ^h 39'39	28 ^h 50'50	M 7
T 8	11 2 20	17 ^h 18'12	17 ^h 36'36	9 ^h 58'58	23 ^h 18'18	20 ^h 34'34	25 ^h 21'21	10 ^h 58'58	11 ^h 35'35	16 ^h 07'07	13 ^h 30'30	24 ^h 44'44	26 ^h 23'23	24 ^h 46'46	28 ^h 53'53	T 8
W 9	11 6 17	18 ^h 18'10	2 ^h 11'11	11 ^h 48'48	23 ^h 35'35	21 ^h 20'20	25 ^h 30'30	10 ^h 55'55	11 ^h 34'34	16 ^h 07'07	13 ^h 29'29	24 ^h 44'44	26 ^h 20'20	24 ^h 53'53	28 ^h 56'56	W 9
T 10	11 10 13	19 ^h 18'07	16 ^h 27'27	13 ^h 38'38	23 ^h 50'50	22 ^h 07'07	25 ^h 39'39	10 ^h 52'52	11 ^h 33'33	16 ^h 08'08	13 ^h 28'28	24 ^h 45'45	26 ^h 17'17	24 ^h 59'59	28 ^h 59'59	T 10
F 11	11 14 10	20 ^h 18'02	0 ^h 17'47	15 ^h 30'30	24 ^h 03'03	22 ^h 54'54	25 ^h 48'48	10 ^h 49'49	11 ^h 32'32	16 ^h 08'08	13 ^h 26'26	24 ^h 47'47	26 ^h 14'14	25 ^h 06'06	29 ^h 02'02	F 11
S 12	11 18 7	21 ^h 17'55	14 ^h 59'59	17 ^h 23'23	24 ^h 13'13	23 ^h 41'41	25 ^h 58'58	10 ^h 45'45	11 ^h 30'30	16 ^h 08'08	13 ^h 25'25	24 ^h 48'48	26 ^h 11'11	25 ^h 13'13	29 ^h 05'05	S 12
S 13	11 22 3	22 ^h 17'47	29 ^h 02'02	19 ^h 16'16	24 ^h 22'22	24 ^h 28'28	26 ^h 07'07	10 ^h 42'42	11 ^h 29'29	16 ^h 08'08	13 ^h 23'23	24 ^h 48'48	26 ^h 08'08	25 ^h 19'19	29 ^h 08'08	S 13
M14	11 26 0	23 ^h 17'37	12 ^h 55'55	21 ^h 11'11	24 ^h 28'28	25 ^h 14'14	26 ^h 17'17	10 ^h 39'39	11 ^h 28'28	16 ^h 08'08	13 ^h 21'21	24 ^h 46'46	26 ^h 04'04	25 ^h 26'26	29 ^h 11'11	M14
T 15	11 29 56	24 ^h 17'26	26 ^h 37'37	23 ^h 07'07	24 ^h 32'32	26 ^h 01'01	26 ^h 27'27	10 ^h 37'37	11 ^h 26'26	16 ^h 09'09	13 ^h 20'20	24 ^h 43'43	26 ^h 01'01	25 ^h 33'33	29 ^h 14'14	T 15
W16	11 33 53	25 ^h 17'13	10 ^h 55'55	25 ^h 04'04	24 ^h 33'33	26 ^h 48'48	26 ^h 37'37	10 ^h 34'34	11 ^h 25'25	16 ^h 09'09	13 ^h 18'18	24 ^h 39'39	25 ^h 58'58	25 ^h 39'39	29 ^h 17'17	W16
T 17	11 37 49	26 ^h 16'58	23 ^h 23'23	27 ^h 02'02	24 ^h 33'33	27 ^h 35'35	26 ^h 47'47	10 ^h 31'31	11 ^h 23'23	16 ^h 09'09	13 ^h 17'17	24 ^h 35'35	25 ^h 55'55	25 ^h 46'46	29 ^h 21'21	T 17
F 18	11 41 46	27 ^h 16'41	6 ^h 17'47	29 ^h 01'01	24 ^h 29'29	28 ^h 22'22	26 ^h 57'57	10 ^h 28'28	11 ^h 22'22	16 ^h 09'09	13 ^h 15'15	24 ^h 30'30	25 ^h 52'52	25 ^h 53'53	29 ^h 24'24	F 18
S 19	11 45 42	28 ^h 16'22	19 ^h 17'17	1 ^h 19'19	24 ^h 23'23	29 ^h 09'09	27 ^h 07'07	10 ^h 26'26	11 ^h 20'20	16 ^h 09'09	13 ^h 14'14	24 ^h 26'26	25 ^h 48'48	25 ^h 59'59	29 ^h 27'27	S 19
S 20	11 49 39	29 ^h 16'01	1 ^h 19'53	3 ^h 00'00	24 ^h 15'15	29 ^h 55'55	27 ^h 17'17	10 ^h 24'24	11 ^h 18'18	16 ^h 09'09	13 ^h 12'12	24 ^h 23'23	25 ^h 45'45	26 ^h 06'06	29 ^h 30'30	S 20
M21	11 53 36	0 ^h 15'38	14 ^h 16'16	5 ^h 01'01	24 ^h 04'04	0 ^h 17'47	27 ^h 28'28	10 ^h 21'21	11 ^h 17'17	16 ^h 09'09	13 ^h 10'10	24 ^h 21'21	25 ^h 42'42	26 ^h 13'13	29 ^h 34'34	M21
T 22	11 57 32	1 ^h 15'13	26 ^h 26'26	7 ^h 02'02	23 ^h 51'51	1 ^h 29'29	27 ^h 38'38	10 ^h 19'19	11 ^h 15'15	16 ^h 09'09	13 ^h 09'09	24 ^h 21'21	25 ^h 39'39	26 ^h 19'19	29 ^h 37'37	T 22
W23	12 1 29	2 ^h 14'46	8 ^h 27'27	9 ^h 02'02	23 ^h 35'35	2 ^h 16'16	27 ^h 49'49	10 ^h 17'17	11 ^h 13'13	16 ^h 08'08	13 ^h 07'07	24 ^h 22'22	25 ^h 36'36	26 ^h 26'26	29 ^h 40'40	W23
T 24	12 5 25	3 ^h 14'17	20 ^h 20'20	11 ^h 03'03	23 ^h 17'17	3 ^h 03'03	28 ^h 00'00	10 ^h 15'15	11 ^h 12'12	16 ^h 08'08	13 ^h 05'05	24 ^h 23'23	25 ^h 33'33	26 ^h 33'33	29 ^h 44'44	T 24
F 25	12 9 22	4 ^h 13'46	2 ^h 11'09	13 ^h 04'04	22 ^h 57'57	3 ^h 50'50	28 ^h 11'11	10 ^h 13'13	11 ^h 10'10	16 ^h 08'08	13 ^h 04'04	24 ^h 25'25	25 ^h 29'29	26 ^h 39'39	29 ^h 47'47	F 25
S 26	12 13 18	5 ^h 13'12	13 ^h 58'58	15 ^h 03'03	22 ^h 34'34	4 ^h 37'37	28 ^h 22'22	10 ^h 11'11	11 ^h 08'08	16 ^h 08'08	13 ^h 02'02	24 ^h 26'26	25 ^h 26'26	26 ^h 46'46	29 ^h 50'50	S 26
S 27	12 17 15	6 ^h 12'36	25 ^h 52'52	17 ^h 02'02	22 ^h 09'09	5 ^h 23'23	28 ^h 33'33	10 ^h 10'10	11 ^h 06'06	16 ^h 08'08	13 ^h 00'00	24 ^h 27'27	25 ^h 23'23	26 ^h 53'53	29 ^h 54'54	S 27
M28	12 21 11	7 ^h 11'58	7 ^h 55'55	18 ^h 59'59	21 ^h 42'42	6 ^h 10'10	28 ^h 44'44	10 ^h 08'08	11 ^h 04'04	16 ^h 07'07	12 ^h 59'59	24 ^h 28'28	25 ^h 20'20	26 ^h 59'59	29 ^h 57'57	M28
T 29	12 25 8	8 ^h 11'18	20 ^h 13'13	20 ^h 54'54	21 ^h 12'12	6 ^h 57'57	28 ^h 55'55	10 ^h 07'07	11 ^h 02'02	16 ^h 07'07	12 ^h 57'57	24 ^h 27'27	25 ^h 17'17	27 ^h 06'06	0 ^h 10'10	T 29
W30	12 29 5	9 ^h 10'35	2 ^h 12'50	22 ^h 47'47	20 ^h 42'42	7 ^h 44'44	29 ^h 06'06	10 ^h 05'05	11 ^h 00'00	16 ^h 07'07	12 ^h 55'55	24 ^h 26'26	25 ^h 13'13	27 ^h 13'13	0 ^h 04'04	W30
T 31	12 33 1	10 ^h 19'50	15 ^h 12'49	24 ^h 19'37	20 ^h 19'19	8 ^h 17'17	29 ^h 18'18	10 ^h 04'04	10 ^h 15'15	16 ^h 17'17	12 ^h 54'54	24 ^h 25'25	25 ^h 10'10	27 ^h 19'19	0 ^h 08'08	T 31

Day	☉	☾		♊		♋		♌		♍		♎		♏		♐		♑		♒	♓	♈	♉	♊	♋	♌
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	decl	decl	decl	decl	lat	
T 1	7s43	17n52	5s 1	14s16	2s 8	12n33	4n56	17s20	1s 5	18n10	0s43	18n18	0n59	14s55	0n27	21s14	1n29	10n43	17n29	9s49	10s19	16n29	10n46	0s13		
W 2	7 20	16 4	5 9	13 42	2 9	12 53	5 6	17 7	1 5	18 12	0 43	18 19	0 59	14 54	0 27	21 14	1 29	10 43	17 29	9 47	10 18	16 30	10 47	0 13		
T 3	6 57	13 25	5 2	13 5	2 10	13 12	5 15	16 53	1 5	18 14	0 43	18 20	0 59	14 54	0 27	21 14	1 29	10 44	17 29	9 44	10 17	16 31	10 48	0 13		
F 4	6 34	10 1	4 38	12 28	2 9	13 31	5 24	16 39	1 6	18 16	0 43	18 22	0 59	14 54	0 27	21 14	1 29	10 45	17 30	9 41	10 16	16 32	10 49	0 13		
S 5	6 11	6 0	3 57	11 49	2 9	13 49	5 33	16 25	1 6	18 19	0 42	18 23	0 59	14 54	0 27	21 14	1 29	10 46	17 30	9 39	10 14	16 32	10 50	0 13		
S 6	5 48	1 34	3 2	11 9	2 8	14 6	5 43	16 11	1 6	18 21	0 42	18 24	0 59	14 53	0 27	21 14	1 29	10 47	17 30	9 37	10 13	16 33	10 50	0 13		
M 7	5 24	3s 2	1 54	10 28	2 6	14 22	5 52	15 56	1 7	18 23	0 42	18 25	0 59	14 53	0 27	21 14	1 30	10 48	17 31	9 35	10 12	16 34	10 51	0 13		
T 8	5 1	7 30	0 39	9 45	2 4	14 38	6 1	15 42	1 7	18 25	0 42	18 26	0 59	14 53	0 27	21 14	1 30	10 48	17 31	9 35	10 11	16 35	10 52	0 13		
W 9	4 38	11 34	0n40	9 1	2 2	14 52	6 10	15 27	1 7	18 28	0 42	18 27	0 59	14 52	0 27	21 14	1 30	10 49	17 31	9 35	10 10	16 36	10 53	0 13		
T 10	4 14	14 54	1 56	8 16	1 59	15 6	6 18	15 12	1 8	18 30	0 41	18 27	0 59	14 52	0 27	21 14	1 30	10 50	17 31	9 35	10 9	16 37	10 54	0 13		
F 11	3 51	17 19	3 4	7 29	1 55	15 19	6 27	14 57	1 8	18 33	0 41	18 28	0 59	14 51	0 27	21 14	1 30	10 51	17 32	9 36	10 8	16 37	10 55	0 13		
S 12	3 27	18 36	4 1	6 42	1 51	15 31	6 35	14 42	1 8	18 35	0 41	18 29	0 59	14 51	0 27	21 14	1 30	10 52	17 32	9 36	10 6	16 38	10 56	0 13		
S 13	3 3	18 44	4 42	5 53	1 47	15 42	6 44	14 27	1 8	18 37	0 41	18 30	0 59	14 51	0 27	21 14	1 30	10 52	17 32	9 36	10 5	16 39	10 57	0 13		
M14	2 40	17 44	5 6	5 3	1 42	15 51	6 52	14 11	1 9	18 40	0 41	18 31	0 59	14 50	0 27	21 14	1 30	10 53	17 32	9 36	10 4	16 40	10 58	0 13		
T 15	2 16	15 43	5 13	4 12	1 36	16 0	7 0	13 56	1 9	18 42	0 40	18 32	0 59	14 50	0 27	21 14	1 30	10 54	17 33	9 35	10 3	16 41	11 0	0 14		
W16	1 52	12 52	5 2	3 20	1 30	16 8	7 7	13 40	1 9	18 45	0 40	18 33	0 59	14 49	0 27	21 14	1 30	10 55	17 33	9 33	10 2	16 42	11 1	0 14		
T 17	1 29	9 24	4 34	2 27	1 24	16 14	7 14	13 24	1 9	18 47	0 40	18 33	0 59	14 49	0 27	21 14	1 30	10 56	17 33	9 31	10 1	16 42	11 2	0 14		
F 18	1 5	5 32	3 53	1 34	1 16	16 19	7 21	13 8	1 10	18 50	0 40	18 34	0 59	14 48	0 27	21 14	1 30	10 56	17 33	9 30	10 0	16 43	11 3	0 14		
S 19	0 41	1 28	3 1	0 39	1 9	16 23	7 28	12 52	1 10	18 52	0 40	18 35	0 59	14 48	0 27	21 14	1 30	10 57	17 33	9 28	9 58	16 44	11 4	0 14		
S 20	0 17	2n36	2 1	0n16	1 0	16 25	7 34	12 36	1 10	18 55	0 39	18 35	0 59	14 47	0 27	21 14	1 30	10 58	17 34	9 27	9 57	16 45	11 5	0 14		
M21	0n 6	6 28	0 55	1 12	0 51	16 26	7 39	12 19	1 10	18 57	0 39	18 36	0 59	14 47	0 28	21 13	1 30	10 59	17 34	9 27	9 56	16 46	11 6	0 14		
T 22	0 30	10 1	0s12	2 9	0 42	16 26	7 44	12 3	1 11	19 0	0 39	18 37	0 59	14 46	0 28	21 13	1 30	10 59	17 34	9 26	9 55	16 46	11 7	0 14		
W23	0 54	13 6	1 17	3 5	0 32	16 24	7 49	11 46	1 11	19 3	0 39	18 37	0 59	14 46	0 28	21 13	1 30	11 0	17 34	9 27	9 54	16 47	11 8	0 14		
T 24	1 17	15 36	2 19	4 2	0 22	16 21	7 53	11 29	1 11	19 5	0 39	18 38	0 59	14 45	0 28	21 13	1 30	11 1	17 34	9 27	9 53	16 48	11 9	0 14		
F 25	1 41	17 25	3 14	4 59	0 11	16 16	7 56	11 13	1 11	19 8	0 38	18 38	0 59	14 45	0 28	21 13	1 30	11 2	17 34	9 28	9 51	16 49	11 10	0 14		
S 26	2 4	18 29	4 1	5 55	0 0	16 10	7 59	10 56	1 11	19 10	0 38	18 39	0 59	14 44	0 28	21 13	1 30	11 2	17 34	9 28	9 50	16 50	11 12	0 14		
S 27	2 28	18 45	4 38	6 51	0n11	16 2	8 1	10 39	1 11	19 13	0 38	18 39	0 59	14 43	0 28	21 13	1 30	11 3	17 35	9 29	9 49	16 50	11 13	0 14		
M28	2 51	18 9	5 4	7 47	0 23	15 53	8 2	10 21	1 12	19 16	0 38	18 40	0 59	14 43	0 28	21 13	1 30	11 4	17 35	9 29	9 48	16 51	11 14	0 14		
T 29	3 15	16 43	5 16	8 41	0 34	15 42	8 2	10 4	1 12	19 18	0 38	18 40	0 59	14 42	0 28	21 13	1 31	11 4	17 35	9 29	9 47	16 52	11 15	0 14		
W30	3 38	14 27	5 13	9 35	0 46	15 30	8 1	9 47	1 12	19 21	0 38	18 40	0 59	14 41	0 28	21 13	1 31	11 5	17 35	9 28	9 46	16 53	11 16	0 15		
T 31	4n 2	11n24	4s55	10n26	0n58	15n16	8n 0	9s30	1s12	19n23	0s37	18n41	0n59	14s41	0n28	21s13	1n31	11n 6	17n35	9s28	9s44	16n53	11n17	0s15		

ASTRODIENST EPHEMERIS for the year 1977

geocentric

APRIL 1977

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	12 36 58	11°02'	29°12'	26°25'	19°35'	9°17'	29°29'	10°R 3	10°R56	16°R 6	12°R52	24°R23	25°R 7	27°R26	0°R11	F 1
S 2	12 40 54	12° 8'12	13° 0	28° 9	19° 0	10° 4	29°41	10° 2	10° 54	16° 5	12° 50	24° 21	25° 4	27° 33	0° 15	S 2
S 3	12 44 51	13° 7'21	27°13	29°49	18°23	10°51	29°52	10° 1	10°52	16° 5	12°49	24°20	25° 1	27°39	0°18	S 3
M 4	12 48 47	14° 6'26	11° 44	18°25	17°46	11°38	0° 4	10° 0	10°50	16° 4	12°47	24°19	24°58	27°46	0°22	M 4
T 5	12 52 44	15° 5'30	26°30	2°56	17° 9	12°24	0°16	9°59	10°47	16° 4	12°45	24°D19	24°54	27°53	0°25	T 5
W 6	12 56 40	16° 4'32	11° 22	4°23	16°31	13°11	0°28	9°59	10°45	16° 3	12°44	24°19	24°51	27°59	0°29	W 6
T 7	13 0 37	17° 3'33	26°13	5°45	15°53	13°58	0°40	9°58	10°43	16° 2	12°42	24°20	24°48	28° 6	0°33	T 7
F 8	13 4 33	18° 2'31	10° 56	7° 1	15°15	14°45	0°52	9°58	10°41	16° 2	12°40	24°20	24°45	28°13	0°36	F 8
S 9	13 8 30	19° 1'28	25°26	8°12	14°38	15°31	1° 4	9°57	10°38	16° 1	12°39	24°21	24°42	28°19	0°40	S 9
S 10	13 12 27	20° 0'23	9° 38	9°17	14° 1	16°18	1°16	9°57	10°36	16° 0	12°37	24°21	24°39	28°26	0°43	S 10
M 11	13 16 23	20°59'16	23°31	10°16	13°26	17° 5	1°28	9°D57	10°34	16° 0	12°35	24°R21	24°35	28°33	0°47	M 11
T 12	13 20 20	21°58'07	7° 5	11° 9	12°52	17°52	1°41	9°57	10°31	15°59	12°34	24°21	24°32	28°39	0°51	T 12
W 13	13 24 16	22°56'57	20°20	11°56	12°19	18°38	1°53	9°57	10°29	15°58	12°32	24°21	24°29	28°46	0°54	W 13
T 14	13 28 13	23°55'45	3° 19	12°37	11°47	19°25	2° 5	9°58	10°27	15°57	12°30	24°D21	24°26	28°53	0°58	T 14
F 15	13 32 9	24°54'31	16° 2	13°12	11°18	20°12	2°18	9°58	10°24	15°57	12°29	24°21	24°23	28°59	1° 2	F 15
S 16	13 36 6	25°53'15	28°31	13°40	10°50	20°58	2°30	9°58	10°22	15°56	12°27	24°21	24°19	29° 6	1° 5	S 16
S 17	13 40 2	26°51'58	10° 49	14° 2	10°25	21°45	2°43	9°59	10°19	15°55	12°26	24°21	24°16	29°13	1° 9	S 17
M 18	13 43 59	27°50'39	22°58	14°18	10° 1	22°31	2°56	10° 0	10°17	15°54	12°24	24°R21	24°13	29°19	1°13	M 18
T 19	13 47 56	28°49'17	4° 58	14°27	9°40	23°18	3° 8	10° 0	10°14	15°53	12°22	24°21	24°10	29°26	1°16	T 19
W 20	13 51 52	29°47'54	16°52	14°R31	9°21	24° 4	3°21	10° 1	10°12	15°52	12°21	24°21	24° 7	29°33	1°20	W 20
T 21	13 55 49	0° 46'29	28°43	14°28	9° 4	24°51	3°34	10° 2	10° 9	15°51	12°19	24°20	24° 4	29°39	1°24	T 21
F 22	13 59 45	1°45'02	10° 31	14°20	8°50	25°37	3°47	10° 3	10° 7	15°50	12°18	24°19	24° 0	29°46	1°27	F 22
S 23	14 3 42	2°43'33	22°22	14° 7	8°38	26°24	4° 0	10° 5	10° 4	15°49	12°16	24°18	23°57	29°53	1°31	S 23
S 24	14 7 38	3°42'02	4° 16	13°48	8°29	27°10	4°13	10° 6	10° 2	15°48	12°15	24°17	23°54	29°59	1°35	S 24
M 25	14 11 35	4°40'29	16°20	13°25	8°22	27°57	4°26	10° 7	9°59	15°47	12°13	24°16	23°51	0° 6	1°39	M 25
T 26	14 15 31	5°38'53	28°36	12°58	8°17	28°43	4°39	10° 9	9°57	15°45	12°12	24°15	23°48	0°13	1°42	T 26
W 27	14 19 28	6°37'16	11° 8	12°27	8°D15	29°30	4°52	10°11	9°54	15°44	12°10	24°D15	23°45	0°19	1°46	W 27
T 28	14 23 25	7°35'36	24° 2	11°54	8°15	0° 16	5° 5	10°12	9°52	15°43	12° 9	24°16	23°41	0°26	1°50	T 28
F 29	14 27 21	8°33'54	7° 20	11°17	8°18	1° 2	5°19	10°14	9°49	15°42	12° 7	24°17	23°38	0°33	1°53	F 29
S 30	14 31 18	9° 32'10	21° 4	10° 40	8° 23	1° 48	5° 32	10° 16	9° 47	15° 41	12° 6	24° 18	23° 35	0° 39	1° 57	S 30

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
F 1	4n25	7n41	4s20	11n17	1n10	15n 1	7n58	9s12	1s12	19n26	0s37	18n41	0n59	14s40	0n28	21s13	1n31	11n 7	17n35	9s27	9s43	16n54	11n19	0s15	
S 2	4 48	3 27	3 30	12 5	1 22	14 45	7 55	8 55	1 12	19 29	0 37	18 41	0 59	14 40	0 28	21 13	1 31	11 7	17 35	9 26	9 42	16 55	11 20	0 15	
S 3	5 11	1s 6	2 25	12 51	1 33	14 27	7 51	8 37	1 12	19 31	0 37	18 42	0 59	14 39	0 28	21 13	1 31	11 8	17 35	9 26	9 41	16 56	11 21	0 15	
M 4	5 34	5 42	1 9	13 35	1 44	14 8	7 46	8 19	1 13	19 34	0 37	18 42	0 59	14 38	0 28	21 12	1 31	11 9	17 35	9 26	9 40	16 56	11 22	0 15	
T 5	5 57	10 2	0n12	14 17	1 55	13 48	7 40	8 1	1 13	19 37	0 37	18 42	0 59	14 38	0 28	21 12	1 31	11 9	17 35	9 26	9 39	16 57	11 23	0 15	
W 6	6 19	13 46	1 33	14 56	2 5	13 27	7 33	7 44	1 13	19 39	0 36	18 42	0 59	14 37	0 28	21 12	1 31	11 10	17 35	9 26	9 37	16 58	11 24	0 15	
T 7	6 42	16 35	2 48	15 33	2 14	13 6	7 26	7 26	1 13	19 42	0 36	18 42	0 59	14 36	0 28	21 12	1 31	11 10	17 35	9 26	9 36	16 59	11 26	0 15	
F 8	7 5	18 16	3 51	16 7	2 23	12 43	7 17	7 8	1 13	19 45	0 36	18 42	0 59	14 35	0 28	21 12	1 31	11 11	17 35	9 26	9 35	16 59	11 27	0 15	
S 9	7 27	18 44	4 38	16 37	2 31	12 20	7 8	6 50	1 13	19 47	0 36	18 42	0 59	14 35	0 28	21 12	1 31	11 12	17 35	9 26	9 34	17 0	11 28	0 15	
S 10	7 49	17 59	5 7	17 5	2 39	11 57	6 59	6 32	1 13	19 50	0 36	18 42	0 59	14 34	0 28	21 12	1 31	11 12	17 35	9 26	9 33	17 1	11 29	0 15	
M11	8 11	16 10	5 18	17 30	2 45	11 34	6 48	6 13	1 13	19 52	0 36	18 42	0 59	14 33	0 28	21 12	1 31	11 13	17 35	9 26	9 32	17 2	11 30	0 15	
T 12	8 33	13 30	5 10	17 52	2 50	11 10	6 37	5 55	1 13	19 55	0 36	18 42	0 59	14 33	0 28	21 12	1 31	11 13	17 35	9 26	9 30	17 2	11 32	0 15	
W13	8 55	10 11	4 46	18 11	2 55	10 46	6 25	5 37	1 13	19 58	0 35	18 42	0 59	14 32	0 28	21 11	1 31	11 14	17 35	9 26	9 29	17 3	11 33	0 15	
T 14	9 17	6 27	4 7	18 27	2 58	10 23	6 13	5 19	1 13	20 0	0 35	18 42	0 59	14 31	0 28	21 11	1 31	11 14	17 35	9 26	9 28	17 4	11 34	0 16	
F 15	9 39	2 29	3 17	18 39	3 0	9 59	6 0	5 0	1 13	20 3	0 35	18 42	0 59	14 30	0 28	21 11	1 31	11 15	17 34	9 26	9 27	17 4	11 35	0 16	
S 16	10 0	1n32	2 19	18 49	3 1	9 36	5 47	4 42	1 13	20 6	0 35	18 42	0 59	14 30	0 28	21 11	1 31	11 15	17 34	9 26	9 26	17 5	11 37	0 16	
S 17	10 21	5 26	1 15	18 55	3 0	9 14	5 34	4 24	1 13	20 8	0 35	18 42	0 59	14 29	0 28	21 11	1 31	11 16	17 34	9 26	9 25	17 6	11 38	0 16	
M18	10 42	9 3	0 8	18 58	2 59	8 52	5 20	4 5	1 13	20 11	0 35	18 42	0 59	14 28	0 28	21 11	1 31	11 16	17 34	9 26	9 23	17 7	11 39	0 16	
T 19	11 3	12 15	0s59	18 58	2 56	8 31	5 6	3 47	1 13	20 13	0 34	18 41	0 59	14 27	0 28	21 11	1 31	11 17	17 34	9 26	9 22	17 7	11 40	0 16	
W20	11 24	14 56	2 2	18 55	2 51	8 11	4 52	3 28	1 13	20 16	0 34	18 41	0 59	14 26	0 28	21 11	1 31	11 17	17 34	9 26	9 21	17 8	11 41	0 16	
T 21	11 45	16 57	2 59	18 49	2 45	7 51	4 38	3 10	1 13	20 18	0 34	18 41	0 59	14 26	0 28	21 10	1 31	11 18	17 34	9 26	9 20	17 9	11 43	0 16	
F 22	12 5	18 15	3 49	18 39	2 38	7 33	4 24	2 51	1 13	20 21	0 34	18 41	0 59	14 25	0 28	21 10	1 31	11 18	17 33	9 26	9 19	17 9	11 44	0 16	
S 23	12 25	18 44	4 29	18 27	2 30	7 15	4 10	2 33	1 13	20 24	0 34	18 40	0 59	14 24	0 28	21 10	1 31	11 19	17 33	9 25	9 18	17 10	11 45	0 16	
S 24	12 45	18 24	4 58	18 12	2 20	6 58	3 56	2 14	1 13	20 26	0 34	18 40	0 59	14 23	0 28	21 10	1 31	11 19	17 33	9 25	9 16	17 11	11 46	0 16	
M25	13 5	17 15	5 14	17 55	2 9	6 43	3 42	1 56	1 13	20 29	0 34	18 39	0 59	14 22	0 28	21 10	1 32	11 20	17 33	9 25	9 15	17 11	11 47	0 16	
T 26	13 24	15 17	5 16	17 35	1 56	6 28	3 28	1 37	1 13	20 31	0 34	18 39	0 59	14 22	0 28	21 10	1 32	11 20	17 33	9 24	9 14	17 12	11 49	0 16	
W27	13 44	12 34	5 3	17 12	1 43	6 15	3 14	1 19	1 13	20 34	0 33	18 39	0 59	14 21	0 28	21 10	1 32	11 20	17 33	9 24	9 13	17 13	11 50	0 16	
T 28	14 3	9 11	4 35	16 48	1 28	6 2	3 1	1 0	1 13	20 36	0 33	18 38	0 59	14 20	0 28	21 9	1 32	11 21	17 32	9 24	9 12	17 14	11 51	0 17	
F 29	14 21	5 14	3 52	16 22	1 13	5 51	2 47	0 42	1 13	20 39	0 33	18 38	0 59	14 19	0 28	21 9	1 32	11 21	17 32	9 25	9 11	17 14	11 52	0 17	
S 30	14n40	0n53	2s54	15n55	0n57	5n41	2n34	0s23	1s13	20n41	0s33	18n37	0n59	14s19	0n28	21s 9	1n32	11n21	17n32	9s25	9s 9	17n15	11n53	0s17	

ASTRODIENST EPHEMERIS for the year 1977

geocentric

MAY 1977

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	14 35 14	10°30'24	5°15	10°R 1	8°Y30	2°Y35	5°II45	10°J18	9°R44	15°R40	12°R 4	24°19	23°32	0°II46	2°8 1	S 1
M 2	14 39 11	11°28'37	19°50	9°822	8°39	3°21	5°59	10°20	9°M42	15°38	12°3	24°R20	23°29	0°53	2°4	M 2
T 3	14 43 7	12°26'47	4°M46	8°44	8°50	4°7	6°12	10°23	9°39	15°37	12°1	24°19	23°25	0°59	2°8	T 3
W 4	14 47 4	13°24'56	19°53	8°6	9°4	4°53	6°25	10°25	9°36	15°36	12°0	24°18	23°22	1°6	2°11	W 4
T 5	14 51 0	14°23'03	5°7 4	7°31	9°19	5°39	6°39	10°27	9°34	15°34	11°59	24°16	23°19	1°13	2°15	T 5
F 6	14 54 57	15°21'08	20°9	6°57	9°37	6°26	6°52	10°30	9°31	15°33	11°57	24°14	23°16	1°19	2°19	F 6
S 7	14 58 54	16°19'12	4°358	6°27	9°56	7°12	7°6	10°33	9°29	15°32	11°56	24°11	23°13	1°26	2°22	S 7
S 8	15 2 50	17°17'15	19°26	6°0	10°17	7°58	7°19	10°35	9°26	15°30	11°55	24°8	23°10	1°33	2°26	S 8
M 9	15 6 47	18°15'16	3°28	5°36	10°40	8°44	7°33	10°38	9°24	15°29	11°53	24°7	23°6	1°39	2°30	M 9
T 10	15 10 43	19°13'16	17°5	5°17	11°5	9°30	7°47	10°41	9°21	15°28	11°52	24°D 6	23°3	1°46	2°33	T 10
W11	15 14 40	20°11'15	0°17	5°2	11°31	10°16	8°0	10°44	9°19	15°26	11°51	24°6	23°0	1°53	2°37	W11
T 12	15 18 36	21°9'12	13°7	4°51	11°59	11°1	8°14	10°47	9°16	15°25	11°50	24°7	22°57	1°59	2°40	T 12
F 13	15 22 33	22°7'08	25°38	4°44	12°29	11°47	8°28	10°51	9°14	15°23	11°48	24°9	22°54	2°6	2°44	F 13
S 14	15 26 29	23°5'03	7°Y54	4°D43	13°0	12°33	8°41	10°54	9°11	15°22	11°47	24°11	22°50	2°13	2°47	S 14
S 15	15 30 26	24°2'56	20°0	4°46	13°32	13°19	8°55	10°57	9°9	15°20	11°46	24°R12	22°47	2°19	2°51	S 15
M16	15 34 23	25°0'48	1°857	4°53	14°6	14°5	9°9	11°1	9°7	15°19	11°45	24°11	22°44	2°26	2°54	M16
T 17	15 38 19	25°58'39	13°49	5°5	14°41	14°50	9°23	11°5	9°4	15°17	11°44	24°10	22°41	2°33	2°58	T 17
W18	15 42 16	26°56'28	25°39	5°22	15°17	15°36	9°37	11°8	9°2	15°16	11°43	24°6	22°38	2°39	3°1	W18
T 19	15 46 12	27°54'16	7°II28	5°43	15°54	16°22	9°50	11°12	8°59	15°14	11°42	24°2	22°35	2°46	3°5	T 19
F 20	15 50 9	28°52'03	19°18	6°8	16°33	17°7	10°4	11°16	8°57	15°13	11°41	23°56	22°31	2°53	3°8	F 20
S 21	15 54 5	29°49'48	1°812	6°38	17°12	17°53	10°18	11°20	8°55	15°11	11°40	23°49	22°28	2°59	3°11	S 21
S 22	15 58 2	0°II47'32	13°11	7°11	17°53	18°38	10°32	11°24	8°52	15°10	11°39	23°43	22°25	3°6	3°15	S 22
M23	16 1 58	1°45'14	25°18	7°49	18°35	19°24	10°46	11°28	8°50	15°8	11°38	23°37	22°22	3°13	3°18	M23
T 24	16 5 55	2°42'55	7°J36	8°30	19°17	20°9	11°0	11°32	8°48	15°7	11°37	23°33	22°19	3°20	3°22	T 24
W25	16 9 52	3°40'34	20°8	9°15	20°1	20°54	11°14	11°37	8°46	15°5	11°36	23°30	22°16	3°26	3°25	W25
T 26	16 13 48	4°38'12	2°M58	10°4	20°46	21°40	11°28	11°41	8°43	15°3	11°35	23°D29	22°12	3°33	3°28	T 26
F 27	16 17 45	5°35'48	16°9	10°56	21°31	22°25	11°42	11°45	8°41	15°2	11°35	23°30	22°9	3°40	3°31	F 27
S 28	16 21 41	6°33'23	29°44	11°52	22°17	23°10	11°56	11°50	8°39	15°0	11°34	23°31	22°6	3°46	3°35	S 28
S 29	16 25 38	7°30'56	13°45	12°51	23°4	23°55	12°9	11°55	8°37	14°59	11°33	23°32	22°3	3°53	3°38	S 29
M30	16 29 34	8°28'28	28°12	13°53	23°52	24°40	12°23	11°59	8°35	14°57	11°32	23°R32	22°0	4°0	3°41	M30
T 31	16 33 31	9°II25'58	13°M 2	14°859	24°Y41	25°Y25	12°II37	12°J 4	8°M33	14°355	11°32	23°31	21°56	4°II 6	3°844	T 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	14n58	3s40	1s44	15n27	0n40	5n32	2n21	0s 5	1s12	20n44	0s33	18n36	0n59	14s18	0n28	21s 9	1n32
M 2	15 17	8 8	0 25	14 59	0 23	5 24	2 9	0n14	1 12	20 46	0 33	18 36	0 59	14 17	0 28	21 9	1 32
T 3	15 34	12 12	0n57	14 30	0 6	5 17	1 56	0 32	1 12	20 48	0 33	18 35	0 59	14 16	0 28	21 9	1 32
W 4	15 52	15 31	2 17	14 2	0s11	5 11	1 44	0 50	1 12	20 51	0 32	18 34	0 59	14 15	0 27	21 8	1 32
T 5	16 9	17 46	3 26	13 34	0 29	5 7	1 32	1 9	1 12	20 53	0 32	18 34	0 59	14 15	0 27	21 8	1 32
F 6	16 26	18 44	4 21	13 7	0 46	5 3	1 21	1 27	1 12	20 56	0 32	18 33	0 59	14 14	0 27	21 8	1 32
S 7	16 43	18 23	4 58	12 41	1 2	5 0	1 9	1 46	1 12	20 58	0 32	18 32	0 59	14 13	0 27	21 8	1 32
S 8	17 0	16 51	5 14	12 17	1 18	4 58	0 59	2 4	1 11	21 0	0 32	18 32	0 59	14 12	0 27	21 8	1 32
M 9	17 16	14 20	5 11	11 55	1 34	4 57	0 48	2 22	1 11	21 3	0 32	18 31	0 59	14 11	0 27	21 8	1 32
T 10	17 32	11 6	4 50	11 35	1 48	4 58	0 37	2 40	1 11	21 5	0 32	18 30	0 59	14 11	0 27	21 7	1 32
W11	17 48	7 24	4 15	11 17	2 2	4 59	0 27	2 59	1 11	21 7	0 32	18 29	0 59	14 10	0 27	21 7	1 32
T 12	18 3	3 27	3 27	11 1	2 15	5 0	0 18	3 17	1 11	21 10	0 32	18 28	0 59	14 9	0 27	21 7	1 32
F 13	18 18	0n34	2 31	10 48	2 27	5 3	0 8	3 35	1 10	21 12	0 31	18 27	0 59	14 8	0 27	21 7	1 32
S 14	18 33	4 29	1 28	10 37	2 38	5 7	0s 1	3 53	1 10	21 14	0 31	18 26	0 59	14 8	0 27	21 7	1 32
S 15	18 47	8 10	0 23	10 28	2 48	5 11	0 10	4 11	1 10	21 16	0 31	18 25	0 59	14 7	0 27	21 7	1 32
M16	19 1	11 29	0s42	10 22	2 57	5 16	0 19	4 29	1 10	21 19	0 31	18 24	0 59	14 6	0 27	21 6	1 32
T 17	19 15	14 19	1 45	10 19	3 5	5 22	0 27	4 47	1 9	21 21	0 31	18 23	0 59	14 5	0 27	21 6	1 32
W18	19 28	16 31	2 44	10 18	3 12	5 29	0 35	5 5	1 9	21 23	0 31	18 22	0 59	14 5	0 27	21 6	1 32
T 19	19 42	18 2	3 35	10 19	3 18	5 36	0 43	5 22	1 9	21 25	0 31	18 21	0 59	14 4	0 27	21 6	1 32
F 20	19 54	18 45	4 16	10 22	3 23	5 44	0 51	5 40	1 9	21 27	0 31	18 20	0 59	14 3	0 27	21 6	1 32
S 21	20 7	18 39	4 47	10 28	3 27	5 52	0 58	5 58	1 8	21 29	0 31	18 19	0 59	14 2	0 27	21 6	1 32
S 22	20 19	17 43	5 5	10 36	3 30	6 1	1 5	6 15	1 8	21 31	0 30	18 18	0 59	14 2	0 27	21 5	1 32
M23	20 31	15 59	5 10	10 46	3 32	6 11	1 12	6 33	1 8	21 34	0 30	18 17	0 59	14 1	0 27	21 5	1 32
T 24	20 42	13 31	5 1	10 58	3 34	6 21	1 18	6 50	1 8	21 36	0 30	18 16	0 59	14 0	0 27	21 5	1 32
W25	20 53	10 22	4 38	11 11	3 34	6 32	1 24	7 7	1 7	21 38	0 30	18 14	0 59	13 59	0 27	21 5	1 32
T 26	21 4	6 41	4 0	11 27	3 34	6 43	1 30	7 25	1 7	21 40	0 30	18 13	0 59	13 59	0 27	21 5	1 32
F 27	21 14	2 34	3 9	11 44	3 33	6 54	1 36	7 42	1 7	21 42	0 30	18 12	0 59	13 58	0 27	21 4	1 32
S 28	21 24	1s49	2 6	12 2	3 31	7 6	1 41	7 59	1 6	21 44	0 30	18 11	0 59	13 57	0 27	21 4	1 32
S 29	21 34	6 14	0 53	12 23	3 29	7 19	1 47	8 16	1 6	21 45	0 30	18 9	0 59	13 57	0 27	21 4	1 32
M30	21 43	10 26	0n25	12 44	3 26	7 32	1 52	8 32	1 6	21 47	0 30	18 8	0 59	13 56	0 27	21 4	1 32
T 31	21n52	14s 6	1n44	13n 7	3s22	7n45	1s57	8n49	1s 5	21n49	0s30	18n 7	0n59	13s55	0n27	21s 4	1n32

Julian Day Number = 2443264.5, Delta T = 47.86 sec
 Ecliptic obliquity = 23°26'24, Nutation = 0°00'06, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°25'25, Lahiri = 23°32'26

ASTRODIENST EPHEMERIS for the year 1977
geocentric

JUNE 1977

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day	
W 1	16 37 27	10 ^{II} 23'28	28 ^{III} 10	16 ⁸ 7	25 ^V 30	26 ^V 10	12 ^{II} 51	12 ^{II} 9	8°R31	14°R54	11°R31	23°R27	21 ^{II} 53	4 ^{II} 13	3 ⁸ 47	W 1	
T 2	16 41 24	11°20'56	13 ^{II} 26	17°19	26°20	26°55	13° 5	12°14	8 ^{III} 29	14 ^{II} 52	11 ^{II} 30	23 ^{II} 22	21°50	4°20	3°50	T 2	
F 3	16 45 21	12°18'24	28°40	18°33	27°11	27°40	13°19	12°19	8°27	14°51	11°30	23°15	21°47	4°26	3°53	F 3	
S 4	16 49 17	13°15'50	13 ^{II} 41	19°51	28° 2	28°25	13°33	12°24	8°25	14°49	11°29	23° 8	21°44	4°33	3°57	S 4	
S 5	16 53 14	14°13'16	28°22	21°11	28°54	29°10	13°47	12°29	8°23	14°47	11°28	23° 1	21°41	4°40	4° 0	S 5	
M 6	16 57 10	15°10'41	12 ^{II} 35	22°34	29°46	29°54	14° 1	12°34	8°21	14°46	11°28	22°55	21°37	4°46	4° 3	M 6	
T 7	17 1 7	16° 8'05	26°19	24° 0	0 ⁸ 40	0 ⁸ 39	14°15	12°40	8°19	14°44	11°27	22°51	21°34	4°53	4° 5	T 7	
W 8	17 5 3	17° 5'29	9 ^{II} 34	25°29	1°33	1°24	14°29	12°45	8°17	14°42	11°27	22°50	21°31	5° 0	4° 8	W 8	
T 9	17 9 0	18° 2'52	22°24	27° 0	2°27	2° 8	14°43	12°50	8°16	14°41	11°27	22°D49	21°28	5° 6	4°11	T 9	
F 10	17 12 56	19° 0'15	4 ^{II} 52	28°35	3°22	2°53	14°57	12°56	8°14	14°39	11°26	22°50	21°25	5°13	4°14	F 10	
S 11	17 16 53	19°57'37	17° 3	0 ^{II} 12	4°17	3°37	15°11	13° 2	8°12	14°38	11°26	22°R51	21°22	5°20	4°17	S 11	
S 12	17 20 50	20°54'58	29° 2	1°52	5°13	4°22	15°25	13° 7	8°10	14°36	11°25	22°51	21°18	5°26	4°20	S 12	
M13	17 24 46	21°52'19	10 ^{II} 54	3°34	6° 9	5° 6	15°39	13°13	8° 9	14°34	11°25	22°49	21°15	5°33	4°23	M13	
T 14	17 28 43	22°49'40	22°43	5°19	7° 6	5°50	15°53	13°19	8° 7	14°33	11°25	22°45	21°12	5°40	4°25	T 14	
W15	17 32 39	23°47'00	4 ^{II} 31	7° 7	8° 3	6°35	16° 6	13°24	8° 6	14°31	11°25	22°38	21° 9	5°47	4°28	W15	
T 16	17 36 36	24°44'20	16°21	8°57	9° 1	7°19	16°20	13°30	8° 4	14°30	11°24	22°29	21° 6	5°53	4°31	T 16	
F 17	17 40 32	25°41'39	28°16	10°50	9°58	8° 3	16°34	13°36	8° 3	14°28	11°24	22°19	21° 2	6° 0	4°33	F 17	
S 18	17 44 29	26°38'57	10 ^{II} 17	12°46	10°57	8°47	16°48	13°42	8° 1	14°26	11°24	22° 7	20°59	6° 7	4°36	S 18	
S 19	17 48 25	27°36'15	22°24	14°44	11°55	9°31	17° 2	13°48	8° 0	14°25	11°24	21°55	20°56	6°13	4°38	S 19	
M20	17 52 22	28°33'33	4 ^{II} 41	16°44	12°54	10°15	17°16	13°55	7°59	14°23	11°24	21°45	20°53	6°20	4°41	M20	
T 21	17 56 19	29°30'49	17° 7	18°46	13°54	10°58	17°29	14° 1	7°57	14°22	11°24	21°36	20°50	6°27	4°43	T 21	
W22	18 0 15	0 ^{II} 28'05	29°45	20°50	14°53	11°42	17°43	14° 7	7°56	14°20	11°D24	21°30	20°47	6°33	4°46	W22	
T 23	18 4 12	1°25'20	12 ^{II} 37	22°56	15°53	12°26	17°57	14°13	7°55	14°19	11°24	21°26	20°43	6°40	4°48	T 23	
F 24	18 8 8	2°22'35	25°46	25° 3	16°54	13°10	18°11	14°20	7°54	14°17	11°24	21°25	20°40	6°47	4°50	F 24	
S 25	18 12 5	3°19'49	9 ^{II} 16	27°12	17°54	13°53	18°24	14°26	7°53	14°16	11°24	21°D25	20°37	6°53	4°53	S 25	
S 26	18 16 1	4°17'02	23° 7	29°21	18°55	14°37	18°38	14°32	7°52	14°14	11°24	21°R25	20°34	7° 0	4°55	S 26	
M27	18 19 58	5°14'15	7 ^{II} 21	1 ^{II} 32	19°57	15°20	18°52	14°39	7°51	14°13	11°24	21°24	20°31	7° 7	4°57	M27	
T 28	18 23 54	6°11'27	21°57	3°43	20°58	16° 3	19° 5	14°46	7°50	14°11	11°25	21°21	20°28	7°13	4°59	T 28	
W29	18 27 51	7° 8'39	6 ^{II} 50	5°54	22° 0	16°47	19°19	14°52	7°49	14°10	11°25	21°16	20°24	7°20	5° 2	W29	
T 30	18 31 48	8° ^{II} 5'51	21 ^{II} 56	8° ^{II} 5	23 ^{II} 8	2	17 ^{II} 30	19 ^{II} 32	14° ^{II} 59	7 ^{II} 48	14° ^{II} 8	11 ^{II} 25	21° ^{II} 8	20° ^{II} 21	7 ^{II} 27	5° ^{II} 4	T 30

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
W 1	22n 0	16s53	2n56	13n31	3s17	7n59	2s 1	9n 6	1s 5	21n51	0s29	18n 5	0n59	13s55	0n27	21s 4	1n32	11n23	17n20	9s 7	8s32	17n35	12n29	0s19	
T 2	22 8	18 30	3 56	13 56	3 12	8 13	2 5	9 22	1 4	21 53	0 29	18 4	0 59	13 54	0 27	21 3	1 32	11 23	17 19	9 5	8 30	17 35	12 30	0 19	
F 3	22 16	18 46	4 40	14 22	3 6	8 27	2 10	9 39	1 4	21 55	0 29	18 3	0 59	13 54	0 27	21 3	1 32	11 23	17 19	9 2	8 29	17 36	12 31	0 19	
S 4	22 23	17 42	5 3	14 49	3 0	8 42	2 14	9 55	1 4	21 57	0 29	18 1	0 59	13 53	0 27	21 3	1 32	11 23	17 18	8 59	8 28	17 36	12 32	0 19	
S 5	22 30	15 29	5 6	15 16	2 53	8 57	2 17	10 11	1 3	21 58	0 29	18 0	0 59	13 52	0 27	21 3	1 32	11 23	17 18	8 57	8 27	17 37	12 33	0 19	
M 6	22 37	12 24	4 50	15 45	2 45	9 12	2 21	10 28	1 3	22 0	0 29	17 58	0 59	13 52	0 27	21 3	1 32	11 22	17 17	8 55	8 26	17 37	12 34	0 20	
T 7	22 43	8 43	4 17	16 14	2 37	9 27	2 24	10 44	1 2	22 2	0 29	17 57	0 59	13 51	0 27	21 3	1 32	11 22	17 17	8 53	8 25	17 38	12 34	0 20	
W 8	22 49	4 43	3 31	16 43	2 29	9 43	2 27	10 59	1 2	22 4	0 29	17 55	0 59	13 51	0 27	21 2	1 32	11 22	17 16	8 53	8 23	17 39	12 35	0 20	
T 9	22 54	0 38	2 36	17 13	2 20	9 58	2 30	11 15	1 1	22 5	0 29	17 54	0 59	13 50	0 27	21 2	1 32	11 21	17 16	8 53	8 22	17 39	12 36	0 20	
F 10	22 59	3n23	1 35	17 43	2 11	10 14	2 33	11 31	1 1	22 7	0 29	17 52	0 59	13 50	0 27	21 2	1 32	11 21	17 15	8 53	8 21	17 40	12 37	0 20	
S 11	23 4	7 11	0 31	18 13	2 1	10 30	2 36	11 46	1 1	22 9	0 29	17 50	0 59	13 49	0 27	21 2	1 32	11 21	17 15	8 53	8 20	17 40	12 38	0 20	
S 12	23 8	10 37	0s33	18 43	1 51	10 47	2 38	12 2	1 0	22 10	0 29	17 49	0 59	13 49	0 27	21 2	1 32	11 20	17 14	8 53	8 19	17 41	12 39	0 20	
M13	23 11	13 35	1 35	19 13	1 41	11 3	2 40	12 17	1 0	22 12	0 28	17 47	0 59	13 48	0 27	21 1	1 32	11 20	17 14	8 52	8 17	17 41	12 40	0 20	
T 14	23 15	15 59	2 33	19 43	1 30	11 19	2 42	12 32	0 59	22 13	0 28	17 46	0 59	13 48	0 27	21 1	1 32	11 20	17 13	8 51	8 16	17 42	12 41	0 20	
W15	23 18	17 42	3 23	20 12	1 19	11 36	2 44	12 47	0 59	22 15	0 28	17 44	0 59	13 47	0 27	21 1	1 32	11 19	17 13	8 48	8 15	17 42	12 41	0 20	
T 16	23 20	18 40	4 5	20 41	1 8	11 53	2 46	13 2	0 58	22 16	0 28	17 42	0 59	13 47	0 27	21 1	1 32	11 19	17 12	8 45	8 14	17 43	12 42	0 20	
F 17	23 22	18 49	4 37	21 8	0 57	12 9	2 48	13 17	0 58	22 18	0 28	17 41	0 59	13 46	0 27	21 1	1 32	11 19	17 12	8 41	8 13	17 43	12 43	0 21	
S 18	23 24	18 7	4 56	21 35	0 45	12 26	2 49	13 31	0 57	22 19	0 28	17 39	0 59	13 46	0 27	21 1	1 32	11 18	17 11	8 37	8 11	17 44	12 44	0 21	
S 19	23 25	16 36	5 3	22 0	0 34	12 43	2 50	13 46	0 57	22 21	0 28	17 37	0 59	13 45	0 27	21 0	1 32	11 18	17 11	8 32	8 10	17 44	12 45	0 21	
M20	23 26	14 19	4 55	22 24	0 22	12 59	2 51	14 0	0 56	22 22	0 28	17 35	0 59	13 45	0 27	21 0	1 32	11 17	17 10	8 28	8 9	17 45	12 45	0 21	
T 21	23 26	11 21	4 34	22 47	0 11	13 16	2 52	14 14	0 56	22 23	0 28	17 34	0 59	13 45	0 27	21 0	1 32	11 17	17 10	8 25	8 8	17 45	12 46	0 21	
W22	23 26	7 50	3 59	23 7	0 0	13 33	2 53	14 28	0 55	22 25	0 28	17 32	0 59	13 44	0 27	21 0	1 32	11 16	17 9	8 23	8 7	17 46	12 47	0 21	
T 23	23 26	3 53	3 11	23 26	0n11	13 49	2 54	14 42	0 55	22 26	0 28	17 30	0 59	13 44	0 26	21 0	1 32	11 16	17 9	8 21	8 6	17 46	12 48	0 21	
F 24	23 25	0s20	2 12	23 42	0 22	14 6	2 54	14 56	0 54	22 27	0 28	17 28	0 59	13 44	0 26	21 0	1 32	11 15	17 8	8 21	8 4	17 47	12 48	0 21	
S 25	23 24	4 39	1 4	23 56	0 32	14 22	2 54	15 9	0 53	22 29	0 28	17 26	0 59	13 43	0 26	21 0	1 32	11 15	17 7	8 21	8 3	17 47	12 49	0 21	
S 26	23 22	8 51	0n 9	24 8	0 42	14 39	2 55	15 23	0 53	22 30	0 27	17 24	0 59	13 43	0 26	20 59	1 32	11 14	17 7	8 21	8 2	17 48	12 50	0 21	
M27	23 20	12 39	1 24	24 17	0 51	14 55	2 55	15 36	0 52	22 31	0 27	17 22	0 59	13 43	0 26	20 59	1 32	11 14	17 6	8 21	8 1	17 48	12 50	0 21	
T 28	23 18	15 46	2 34	24 23	1 0	15 11	2 55	15 49	0 52	22 32	0 27	17 21	0 59	13 42	0 26	20 59	1 32	11 13	17 6	8 20	8 0	17 49	12 51	0 21	
W29	23 15	17 54	3 36	24 26	1 8	15 27	2 54	16 2	0 51	22 33	0 27	17 19	0 59	13 42	0 26	20 59	1 32	11 12	17 5	8 18	7 58	17 49	12 51	0 22	
T 30	23n12	18s49	4n23	24n27	1n15	15n43	2s54	16n15	0s50	22n35	0s27	17n17	0n59	13s42	0n26	20s59	1n32	11n12	17n 5	8s15	7s57	17n50	12n52	0s22	

ASTRODIENST EPHEMERIS for the year 1977
geocentric

JULY 1977

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	18 35 44	9 ⁵⁵ 3'02	7 ³⁸ 3	10 ⁵¹ 15	24 ⁸ 4	18 ⁸ 13	19 ¹¹ 46	15 ⁵ 5	7 ⁹ 47	14 ⁷ 5	11 ²⁵ 25	20 ¹⁸ 58	20 ¹⁸ 58	7 ¹¹ 33	5 ⁸ 6	F 1
S 2	18 39 41	10 ⁰ 0'14	22 ⁰ 2	12 ²⁵	25 ⁰ 7	18 ⁵⁶	19 ⁵⁹	15 ¹²	7 ¹¹ 47	14 ⁷ 5	11 ²⁶	20 ¹⁸ 48	20 ¹⁵	7 ⁴⁰	5 ⁰ 8	S 2
S 3	18 43 37	10 ⁵⁷ 25	6 ³⁸ 44	14 ³⁵	26 ¹⁰	19 ³⁹	20 ¹³	15 ¹⁹	7 ⁴⁶	14 ⁰ 4	11 ²⁶	20 ³⁷	20 ¹²	7 ⁴⁷	5 ¹⁰	S 3
M 4	18 47 34	11 ⁵⁴ 36	21 ⁰ 1	16 ⁴³	27 ¹³	20 ²²	20 ²⁶	15 ²⁶	7 ⁴⁵	14 ⁰ 2	11 ²⁷	20 ²⁹	20 ⁰ 8	7 ⁵⁴	5 ¹¹	M 4
T 5	18 51 30	12 ⁵¹ 47	4 ³⁸ 50	18 ⁵⁰	28 ¹⁶	21 ⁰ 5	20 ⁴⁰	15 ³³	7 ⁴⁵	14 ⁰ 1	11 ²⁷	20 ²²	20 ⁰ 5	8 ⁰ 0	5 ¹³	T 5
W 6	18 55 27	13 ⁴⁸ 59	18 ⁰ 9	20 ⁵⁵	29 ²⁰	21 ⁴⁸	20 ⁵³	15 ⁴⁰	7 ⁴⁴	14 ⁰ 0	11 ²⁷	20 ¹⁸	20 ⁰ 2	8 ⁰ 7	5 ¹⁵	W 6
T 7	18 59 23	14 ⁴⁶ 11	1 ¹⁹ 2	22 ⁵⁹	0 ¹¹ 24	22 ³⁰	21 ⁰ 6	15 ⁴⁶	7 ⁴³	13 ⁵⁸	11 ²⁸	20 ¹⁶	19 ⁵⁹	8 ¹⁴	5 ¹⁷	T 7
F 8	19 3 20	15 ⁴³ 23	13 ³¹	25 ⁰ 1	1 ²⁸	23 ¹³	21 ²⁰	15 ⁵³	7 ⁴³	13 ⁵⁷	11 ²⁸	20 ¹⁵	19 ⁵⁶	8 ²⁰	5 ¹⁹	F 8
S 9	19 7 17	16 ⁴⁰ 36	25 ⁴³	27 ⁰ 2	2 ³²	23 ⁵⁶	21 ³³	16 ⁰ 0	7 ⁴³	13 ⁵⁶	11 ²⁹	20 ¹⁵	19 ⁵³	8 ²⁷	5 ²⁰	S 9
S 10	19 11 13	17 ³⁷ 49	7 ⁴²	29 ⁰ 1	3 ³⁶	24 ³⁸	21 ⁴⁶	16 ⁰ 7	7 ⁴²	13 ⁵⁴	11 ³⁰	20 ¹⁵	19 ⁴⁹	8 ³⁴	5 ²²	S 10
M 11	19 15 10	18 ³⁵ 02	19 ³³	0 ⁵⁸	4 ⁴¹	25 ²¹	21 ⁵⁹	16 ¹⁵	7 ⁴²	13 ⁵³	11 ³⁰	20 ¹²	19 ⁴⁶	8 ⁴⁰	5 ²⁴	M 11
T 12	19 19 6	19 ³² 16	1 ¹¹ 21	2 ⁵⁴	5 ⁴⁶	26 ⁰ 3	22 ¹²	16 ²²	7 ⁴²	13 ⁵²	11 ³¹	20 ⁰ 7	19 ⁴³	8 ⁴⁷	5 ²⁵	T 12
W 13	19 23 3	20 ²⁹ 31	13 ¹¹	4 ⁴⁷	6 ⁵¹	26 ⁴⁵	22 ²⁵	16 ²⁹	7 ⁴¹	13 ⁵¹	11 ³²	20 ⁰ 0	19 ⁴⁰	8 ⁵⁴	5 ²⁷	W 13
T 14	19 26 59	21 ²⁶ 45	25 ⁰ 6	6 ³⁹	7 ⁵⁶	27 ²⁷	22 ³⁸	16 ³⁶	7 ⁴¹	13 ⁴⁹	11 ³²	19 ⁵⁰	19 ³⁷	9 ⁰ 0	5 ²⁸	T 14
F 15	19 30 56	22 ²⁴ 01	7 ⁵⁸ 7	8 ²⁹	9 ⁰ 1	28 ¹⁰	22 ⁵¹	16 ⁴³	7 ⁴¹	13 ⁴⁸	11 ³³	19 ³⁷	19 ³⁴	9 ⁰ 7	5 ²⁹	F 15
S 16	19 34 52	23 ²¹ 16	19 ¹⁸	10 ¹⁶	10 ⁰ 7	28 ⁵²	23 ⁰ 4	16 ⁵¹	7 ⁴¹ D41	13 ⁴⁷	11 ³⁴	19 ²⁴	19 ³⁰	9 ¹⁴	5 ³¹	S 16
S 17	19 38 49	24 ¹⁸ 32	1 ⁵⁸ 38	12 ⁰ 2	11 ¹³	29 ³³	23 ¹⁷	16 ⁵⁸	7 ⁴¹	13 ⁴⁶	11 ³⁵	19 ¹¹	19 ²⁷	9 ²¹	5 ³²	S 17
M 18	19 42 46	25 ¹⁵ 49	14 ⁰ 8	13 ⁴⁷	12 ¹⁹	0 ¹¹ 15	23 ³⁰	17 ⁰ 5	7 ⁴¹	13 ⁴⁵	11 ³⁶	18 ⁵⁸	19 ²⁴	9 ²⁷	5 ³³	M 18
T 19	19 46 42	26 ¹³ 05	26 ⁴⁹	15 ²⁹	13 ²⁵	0 ⁵⁷	23 ⁴³	17 ¹²	7 ⁴¹	13 ⁴⁴	11 ³⁶	18 ⁴⁸	19 ²¹	9 ³⁴	5 ³⁴	T 19
W 20	19 50 39	27 ¹⁰ 22	9 ¹¹ 46	17 ⁰ 9	14 ³¹	1 ³⁹	23 ⁵⁵	17 ²⁰	7 ⁴²	13 ⁴³	11 ³⁷	18 ⁴¹	19 ¹⁸	9 ⁴¹	5 ³⁵	W 20
T 21	19 54 35	28 ⁰ 739	22 ⁴⁵	18 ⁴⁸	15 ³⁷	2 ²⁰	24 ⁰ 8	17 ²⁷	7 ⁴²	13 ⁴²	11 ³⁸	18 ³⁶	19 ¹⁴	9 ⁴⁷	5 ³⁷	T 21
F 22	19 58 32	29 ⁰ 4'57	6 ¹² 2	20 ²⁴	16 ⁴⁴	3 ⁰ 2	24 ²¹	17 ³⁵	7 ⁴²	13 ⁴¹	11 ³⁹	18 ³⁴	19 ¹¹	9 ⁵⁴	5 ³⁸	F 22
S 23	20 2 28	0 ⁵⁹ 2'15	19 ³³	21 ⁵⁹	17 ⁵⁰	3 ⁴³	24 ³³	17 ⁴²	7 ⁴²	13 ⁴⁰	11 ⁴⁰	18 ⁰ D34	19 ⁰ 8	10 ⁰ 1	5 ³⁸	S 23
S 24	20 6 25	0 ⁵⁹ 33	3 ¹¹ 21	23 ³²	18 ⁵⁷	4 ²⁵	24 ⁴⁶	17 ⁵⁰	7 ⁴³	13 ³⁹	11 ⁴¹	18 ⁰ R34	19 ⁰ 5	10 ⁰ 7	5 ³⁹	S 24
M 25	20 10 21	1 ⁵⁶ 51	17 ²⁵	25 ⁰ 3	20 ⁰ 4	5 ⁰ 6	24 ⁵⁸	17 ⁵⁷	7 ⁴³	13 ³⁸	11 ⁴²	18 ³³	19 ⁰ 2	10 ¹⁴	5 ⁴⁰	M 25
T 26	20 14 18	2 ⁵⁴ 10	1 ⁴⁶	26 ³²	21 ¹¹	5 ⁴⁷	25 ¹⁰	18 ⁰ 5	7 ⁴⁴	13 ³⁷	11 ⁴⁴	18 ³¹	18 ⁵⁹	10 ²¹	5 ⁴¹	T 26
W 27	20 18 15	3 ⁵¹ 29	16 ²¹	27 ⁵⁹	22 ¹⁹	6 ²⁸	25 ²³	18 ¹²	7 ⁴⁴	13 ³⁶	11 ⁴⁵	18 ²⁶	18 ⁵⁵	10 ²⁷	5 ⁴²	W 27
T 28	20 22 11	4 ⁴⁸ 49	1 ³⁸ 5	29 ²⁴	23 ²⁶	7 ⁰ 9	25 ³⁵	18 ²⁰	7 ⁴⁵	13 ³⁵	11 ⁴⁶	18 ¹⁸	18 ⁵²	10 ³⁴	5 ⁴³	T 28
F 29	20 26 8	5 ⁴⁶ 09	15 ⁵²	0 ¹¹ 47	24 ³⁴	7 ⁵⁰	25 ⁴⁷	18 ²⁷	7 ⁴⁵	13 ³⁴	11 ⁴⁷	18 ⁰ 9	18 ⁴⁹	10 ⁴¹	5 ⁴³	F 29
S 30	20 30 4	6 ⁴³ 30	0 ³⁴	2 ⁰ 9	25 ⁴¹	8 ³¹	25 ⁵⁹	18 ³⁵	7 ⁴⁶	13 ³³	11 ⁴⁸	17 ⁵⁹	18 ⁴⁶	10 ⁴⁸	5 ⁴⁴	S 30
S 31	20 34 1	7 ⁴⁰ 40'52	15 ³³ 3	3 ¹¹ 28	26 ¹¹ 49	9 ¹¹ 11	26 ¹¹ 11	18 ⁴²	7 ¹¹ 47	13 ³³ 33	11 ⁴⁹ 50	17 ⁴⁸	18 ⁴³	10 ¹¹ 54	5 ⁴⁴	S 31

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
F 1	23n 8	18s23	4n52	24n25	1n22	15n59	2s54	16n27	0s50	22n36	0s27	17n15	0n59	13s42	0n26	20s59	1n32	11n11	17n 4	8s11	7s56	17n50	12n53	0s22							
S 2	23 4	16 41	5 1	24 20	1 29	16 14	2 53	16 40	0 49	22 37	0 27	17 13	0 59	13 41	0 26	20 59	1 32	11 11	17 4	8 7	7 55	17 51	12 53	0 22							
S 3	22 59	13 55	4 50	24 12	1 34	16 30	2 53	16 52	0 49	22 38	0 27	17 11	0 59	13 41	0 26	20 58	1 32	11 10	17 3	8 3	7 54	17 51	12 54	0 22							
M 4	22 54	10 23	4 20	24 2	1 39	16 45	2 52	17 4	0 48	22 39	0 27	17 9	0 59	13 41	0 26	20 58	1 32	11 9	17 3	8 0	7 52	17 52	12 54	0 22							
T 5	22 49	6 23	3 36	23 49	1 43	17 0	2 51	17 16	0 47	22 40	0 27	17 7	0 59	13 41	0 26	20 58	1 31	11 9	17 2	7 57	7 51	17 52	12 55	0 22							
W 6	22 43	2 13	2 41	23 33	1 46	17 15	2 50	17 28	0 47	22 41	0 27	17 5	0 59	13 41	0 26	20 58	1 31	11 8	17 1	7 56	7 50	17 53	12 55	0 22							
T 7	22 37	1n56	1 40	23 16	1 48	17 29	2 49	17 39	0 46	22 42	0 27	17 3	0 59	13 41	0 26	20 58	1 31	11 7	17 1	7 55	7 49	17 53	12 56	0 22							
F 8	22 31	5 53	0 36	22 56	1 50	17 43	2 47	17 51	0 45	22 43	0 27	17 1	0 59	13 40	0 26	20 58	1 31	11 7	17 0	7 55	7 48	17 53	12 56	0 22							
S 9	22 24	9 29	0s29	22 34	1 51	17 57	2 46	18 2	0 45	22 44	0 27	16 59	0 59	13 40	0 26	20 58	1 31	11 6	17 0	7 55	7 46	17 54	12 57	0 23							
S 10	22 17	12 39	1 31	22 10	1 51	18 11	2 45	18 13	0 44	22 45	0 27	16 57	0 59	13 40	0 26	20 58	1 31	11 5	16 59	7 55	7 45	17 54	12 57	0 23							
M 11	22 9	15 14	2 28	21 45	1 51	18 24	2 43	18 24	0 43	22 45	0 26	16 54	0 59	13 40	0 26	20 57	1 31	11 4	16 59	7 54	7 44	17 55	12 58	0 23							
T 12	22 1	17 11	3 19	21 17	1 50	18 37	2 42	18 35	0 43	22 46	0 26	16 52	0 59	13 40	0 26	20 57	1 31	11 4	16 58	7 52	7 43	17 55	12 58	0 23							
W 13	21 53	18 24	4 1	20 49	1 48	18 50	2 40	18 45	0 42	22 47	0 26	16 50	0 59	13 40	0 26	20 57	1 31	11 3	16 58	7 49	7 42	17 56	12 59	0 23							
T 14	21 44	18 48	4 33	20 19	1 46	19 2	2 38	18 55	0 41	22 48	0 26	16 48	0 59	13 40	0 26	20 57	1 31	11 2	16 57	7 45	7 40	17 56	12 59	0 23							
F 15	21 35	18 22	4 53	19 48	1 43	19 14	2 36	19 5	0 41	22 49	0 26	16 46	0 59	13 40	0 26	20 57	1 31	11 1	16 57	7 41	7 39	17 57	12 59	0 23							
S 16	21 25	17 6	5 0	19 16	1 39	19 25	2 34	19 15	0 40	22 49	0 26	16 44	0 59	13 40	0 26	20 57	1 31	11 1	16 56	7 36	7 38	17 57	13 0	0 23							
S 17	21 15	15 2	4 53	18 42	1 35	19 37	2 32	19 25	0 39	22 50	0 26	16 42	0 59	13 40	0 26	20 57	1 31	11 0	16 56	7 30	7 37	17 57	13 0	0 23							
M 18	21 5	12 15	4 32	18 8	1 31	19 47	2 30	19 35	0 38	22 51	0 26	16 39	0 59	13 40	0 26	20 57	1 31	10 59	16 55	7 26	7 36	17 58	13 0	0 23							
T 19	20 54	8 51	3 57	17 33	1 26	19 58	2 28	19 44	0 38	22 51	0 26	16 37	0 59	13 40	0 26	20 57	1 31	10 58	16 55	7 22	7 34	17 58	13 1	0 23							
W 20	20 43	5 0	3 10	16 58	1 20	20 8	2 26	19 53	0 37	22 52	0 26	16 35	0 59	13 40	0 26	20 57	1 31	10 57	16 54	7 19	7 33	17 59	13 1	0 24							
T 21	20 32	0 51	2 12	16 22	1 14	20 17	2 23	20 2	0 36	22 53	0 26	16 33	0 59	13 40	0 26	20 56	1 31	10 56	16 54	7 17	7 32	17 59	13 1	0 24							
F 22	20 21	3s24	1 6	15 45	1 8	20 27	2 21	20 11	0 35	22 53	0 26	16 31	0 59	13 41	0 26	20 56	1 31	10 56	16 53	7 17	7 31	17 59	13 1	0 24							
S 23	20 9	7 34	0n 5	15 8	1 1	20 35	2 18	20 20	0 35	22 54	0 26	16 28	1 0	13 41	0 26	20 56	1 31	10 55	16 53	7 17	7 30	18 0	13 2	0 24							
S 24	19 56	11 25	1 18	14 31	0 54	20 44	2 16	20 28	0 34	22 54	0 26	16 26	1 0	13 41	0 26	20 56	1 31	10 54	16 52	7 17	7 28	18 0	13 2	0 24							
M 25	19 44	14 41	2 27	13 54	0 46	20 51	2 13	20 36	0 33	22 55	0 26	16 24	1 0	13 41	0 25	20 56	1 31	10 53	16 52	7 16	7 27	18 1	13 2	0 24							
T 26	19 31	17 7	3 28	13 16	0 38	20 59	2 10	20 45	0 32	22 56	0 26	16 22	1 0	13 41	0 25	20 56	1 31	10 52	16 51	7 15	7 26	18 1	13 2	0 24							
W 27	19 17	18 29	4 16	12 38	0 30	21 6	2 8	20 52	0 31	22 56	0 26	16 19	1 0	13 41	0 25	20 56	1 31	10 51	16 51	7 13	7 25	18 1	13 2	0 24							
T 28	19 4	18 38	4 49	12 1	0 21	21 12	2 5	21 0	0 31	22 56	0 25	16 17	1 0	13 42	0 25	20 56	1 31	10 50	16 50	7 11	7 24	18 2	13 3	0 24							
F 29	18 50	17 30	5 2	11 23	0 12	21 18	2 2	21 8	0 30	22 57	0 25	16 15	1 0	13 42	0 25	20 56	1 31	10 50	16 50	7 7	7 22	18 2	13 3	0 24							
S 30	18 36	15 14	4 55	10 45	0 3	21 23	1 59	21 15	0 29	22 57	0 25	16 12	1 0	13 42	0 25	20 56	1 30	10 49	16 49	7 3	7 21	18 3	13 3	0 25							
S 31	18n21	12s 2	4n29	10n 8	0s 7	21n28	1s56	21n22	0s28	22n58	0s25	16n10	1n 0	13s42	0n25	20s56	1n30	10n48	16n49	6s59	7s20	18n 3	13n 3	0s25							

ASTRODIENST EPHEMERIS for the year 1977

geocentric

AUGUST 1977

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	20 37 57	8♌38°14	29♋12	4♍45	27♏57	9♏52	26♏23	18♏50	7♏48	13♏32	11♏51	17♏40	18♏40	11♏1	5♏45	M 1
T 2	20 41 54	9♏35°37	12♏56	6° 0	29° 5	10°33	26°35	18°57	7°48	13♏31	11°52	17♏33	18°36	11° 8	5°45	T 2
W 3	20 45 50	10°33°02	26°15	7°13	0♏13	11°13	26°47	19° 5	7°49	13°30	11°53	17°29	18°33	11°14	5°46	W 3
T 4	20 49 47	11°30°27	9♏ 9	8°23	1°22	11°53	26°58	19°13	7°50	13°30	11°55	17°27	18°30	11°21	5°46	T 4
F 5	20 53 44	12°27°54	21°40	9°31	2°30	12°34	27°10	19°20	7°51	13°29	11°56	17°D27	18°27	11°28	5°46	F 5
S 6	20 57 40	13°25°22	3♏54	10°37	3°39	13°14	27°22	19°28	7°52	13°28	11°58	17°27	18°24	11°34	5°46	S 6
S 7	21 1 37	14°22°51	15°54	11°40	4°47	13°54	27°33	19°36	7°53	13°28	11°59	17°R28	18°20	11°41	5°47	S 7
M 8	21 5 33	15°20°22	27°47	12°41	5°56	14°34	27°44	19°43	7°55	13°27	12° 1	17°27	18°17	11°48	5°47	M 8
T 9	21 9 30	16°17°54	9♏37	13°39	7° 5	15°14	27°56	19°51	7°56	13°27	12° 2	17°24	18°14	11°54	5°47	T 9
W10	21 13 26	17°15°27	21°30	14°34	8°14	15°53	28° 7	19°59	7°57	13°26	12° 4	17°19	18°11	12° 1	5°47	W10
T 11	21 17 23	18°13°01	3♏29	15°26	9°24	16°33	28°18	20° 6	7°58	13°26	12° 5	17°12	18° 8	12° 8	5°47	T 11
F 12	21 21 19	19°10°37	15°37	16°15	10°33	17°13	28°29	20°14	8° 0	13°25	12° 7	17° 3	18° 5	12°15	5°46	F 12
S 13	21 25 16	20° 8°14	27°57	17° 0	11°42	17°52	28°40	20°22	8° 1	13°25	12° 8	16°52	18° 1	12°21	5°46	S 13
S 14	21 29 13	21° 5°53	10♌31	17°42	12°52	18°31	28°51	20°29	8° 2	13°24	12°10	16°42	17°58	12°28	5°46	S 14
M15	21 33 9	22° 3°33	23°18	18°20	14° 1	19°10	29° 2	20°37	8° 4	13°24	12°12	16°33	17°55	12°35	5°46	M15
T 16	21 37 6	23° 1°13	6♏18	18°55	15°11	19°50	29°13	20°45	8° 6	13°24	12°13	16°25	17°52	12°41	5°45	T 16
W17	21 41 2	23°58°56	19°31	19°25	16°21	20°29	29°23	20°52	8° 7	13°23	12°15	16°20	17°49	12°48	5°45	W17
T 18	21 44 59	24°56°39	2♏55	19°51	17°31	21° 7	29°34	21° 0	8° 9	13°23	12°17	16°17	17°45	12°55	5°45	T 18
F 19	21 48 55	25°54°23	16°29	20°12	18°41	21°46	29°44	21° 8	8°10	13°23	12°18	16°D16	17°42	13° 1	5°44	F 19
S 20	21 52 52	26°52°09	0♏14	20°28	19°51	22°25	29°55	21°15	8°12	13°23	12°20	16°17	17°39	13° 8	5°44	S 20
S 21	21 56 48	27°49°55	14° 9	20°40	21° 1	23° 3	0♏ 5	21°23	8°14	13°23	12°22	16°18	17°36	13°15	5°43	S 21
M22	22 0 45	28°47°43	28°12	20°46	22°11	23°42	0°15	21°31	8°16	13°22	12°24	16°R19	17°33	13°22	5°42	M22
T 23	22 4 42	29°45°32	12♏24	20°R46	23°22	24°20	0°25	21°38	8°18	13°22	12°26	16°18	17°30	13°28	5°42	T 23
W24	22 8 38	0♏43°22	26°43	20°41	24°32	24°58	0°35	21°46	8°20	13°22	12°28	16°15	17°26	13°35	5°41	W24
T 25	22 12 35	1°41°13	11♏ 4	20°30	25°43	25°36	0°45	21°54	8°22	13°22	12°29	16°11	17°23	13°42	5°40	T 25
F 26	22 16 31	2°39°06	25°25	20°13	26°54	26°14	0°54	22° 1	8°24	13°D22	12°31	16° 5	17°20	13°48	5°39	F 26
S 27	22 20 28	3°37°00	9♏41	19°50	28° 4	26°52	1° 4	22° 9	8°26	13°22	12°33	15°59	17°17	13°55	5°38	S 27
S 28	22 24 24	4°34°55	23°46	19°21	29°15	27°30	1°13	22°16	8°28	13°22	12°35	15°52	17°14	14° 2	5°37	S 28
M29	22 28 21	5°32°51	7♏35	18°47	0♏26	28° 7	1°23	22°24	8°30	13°22	12°37	15°46	17°11	14° 8	5°36	M29
T 30	22 32 17	6°30°50	21° 5	18° 7	1°37	28°45	1°32	22°31	8°32	13°23	12°39	15°42	17° 7	14°15	5°35	T 30
W31	22 36 14	7♏28°49	4♏15	17♏21	2♏48	29♏22	1♏41	22♏39	8♏34	13♏23	12♏41	15♏40	17♏ 4	14♏22	5♏34	W31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
M 1	18n 6	8s12	3n47	9n31	0s16	21n32	1s53	21n29	0s27	22n58	0s25	16n 8	1n 0	13s43	0n25	20s56
T 2	17 51	4 3	2 53	8 54	0 26	21 36	1 50	21 35	0 27	22 59	0 25	16 6	1 0	13 43	0 25	20 56
W 3	17 36	0n12	1 50	8 18	0 36	21 39	1 47	21 42	0 26	22 59	0 25	16 3	1 0	13 43	0 25	20 56
T 4	17 20	4 18	0 44	7 42	0 47	21 42	1 44	21 48	0 25	22 59	0 25	16 1	1 0	13 44	0 25	20 56
F 5	17 4 8	6 0s23	7 7	0 57	21 44	1 41	21 54	0 24	23 0	0 25	15 59	1 0	13 44	0 25	20 56	1 30
S 6	16 48	11 27	1 27	6 32	1 8	21 46	1 37	22 0	0 23	23 0	0 25	15 56	1 0	13 44	0 25	20 56
S 7	16 31	14 16	2 26	5 58	1 19	21 47	1 34	22 6	0 22	23 0	0 25	15 54	1 0	13 45	0 25	20 56
M 8	16 14	16 27	3 18	5 25	1 30	21 48	1 31	22 12	0 21	23 0	0 25	15 52	1 0	13 45	0 25	20 56
T 9	15 57	17 55	4 2	4 52	1 41	21 47	1 28	22 17	0 20	23 1	0 25	15 49	1 1	13 45	0 25	20 56
W10	15 40	18 36	4 35	4 51	1 52	21 47	1 24	22 22	0 20	23 1	0 25	15 47	1 1	13 46	0 25	20 55
T 11	15 22	18 36	4 56	3 21	2 3	21 46	1 21	22 27	0 19	23 1	0 25	15 44	1 1	13 46	0 25	20 55
F 12	15 4	17 29	5 5	3 22	2 15	21 44	1 18	22 32	0 18	23 1	0 25	15 42	1 1	13 47	0 25	20 55
S 13	14 46	15 41	4 59	2 54	2 26	21 41	1 14	22 36	0 17	23 1	0 25	15 40	1 1	13 47	0 25	20 55
S 14	14 28	13 7	4 39	2 27	2 37	21 38	1 11	22 41	0 16	23 1	0 25	15 37	1 1	13 48	0 25	20 56
M15	14 9	9 54	4 5	2 2	2 48	21 35	1 8	22 45	0 15	23 2	0 25	15 35	1 1	13 48	0 25	20 56
T 16	13 51	6 8	3 18	1 39	2 59	21 31	1 4	22 49	0 14	23 2	0 25	15 33	1 1	13 49	0 25	20 56
W17	13 32	2 2	2 19	1 17	3 9	21 26	1 1	22 53	0 13	23 2	0 24	15 30	1 1	13 49	0 25	20 56
T 18	13 12	2s15	1 11	0 58	3 20	21 21	0 57	22 56	0 12	23 2	0 24	15 28	1 1	13 50	0 25	20 56
F 19	12 53	6 28	0n 1	0 40	3 30	21 15	0 54	23 0	0 11	23 2	0 24	15 25	1 1	13 51	0 25	20 56
S 20	12 33	10 23	1 15	0 25	3 40	21 8	0 50	23 3	0 10	23 2	0 24	15 23	1 1	13 51	0 25	20 56
S 21	12 14	13 47	2 25	0 12	3 49	21 1	0 47	23 6	0 9	23 2	0 24	15 21	1 1	13 52	0 25	20 56
M22	11 54	16 24	3 27	0 1	3 57	20 54	0 44	23 9	0 8	23 2	0 24	15 18	1 2	13 52	0 25	20 56
T 23	11 33	18 2	4 17	0s 6	4 5	20 46	0 40	23 12	0 7	23 2	0 24	15 16	1 2	13 53	0 25	20 56
W24	11 13	18 33	4 51	0 11	4 12	20 37	0 37	23 14	0 6	23 2	0 24	15 14	1 2	13 54	0 25	20 56
T 25	10 52	17 52	5 7	0 12	4 19	20 27	0 33	23 17	0 5	23 2	0 24	15 11	1 2	13 54	0 25	20 56
F 26	10 32	16 4	5 5	0 10	4 24	20 17	0 30	23 19	0 4	23 2	0 24	15 9	1 2	13 55	0 25	20 56
S 27	10 11	13 17	4 43	0 5	4 28	20 7	0 26	23 21	0 3	23 2	0 24	15 6	1 2	13 56	0 25	20 56
S 28	9 50	9 45	4 4	0n 4	4 31	19 56	0 23	23 23	0 2	23 2	0 24	15 4	1 2	13 56	0 24	20 56
M29	9 29	5 45	3 12	0 16	4 32	19 44	0 20	23 24	0 1	23 2	0 24	15 2	1 2	13 57	0 24	20 56
T 30	9 7	1 33	2 10	0 32	4 31	19 32	0 16	23 26	0 0	23 2	0 24	14 59	1 2	13 58	0 24	20 56
W31	8n46	2n38	1n 2	0n52	4s29	19n19	0s13	23n27	0n 1	23n 2	0s24	14n57	1n 2	13s58	0n24	20s56

Julian Day Number = 2443356.5, Delta T = 48.11 sec
 Ecliptic obliquity = 23°26'23", Nutation = 0°00'07", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°25'38", Lahiri = 23°32'38"

ASTRODIENST EPHEMERIS for the year 1977

geocentric

SEPTEMBER 1977

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	22 40 11	8 ^h 26 ^m 51 ^s	17 ^h 4 ^m	16°R32	4 ^h 0 ^m	29 ^h 59 ^m	1 ^h 50 ^m	22 ^h 46 ^m	8 ^h 37 ^m	13 ^h 23 ^m	12 ^h 43 ^m	15°D39	17 ^h 1 ^m	14 ^h 29 ^m	5°R33	T 1
F 2	22 44 7	9°24'54"	29°33'	15 ^h 39 ^m	5°11'	0 ^h 37 ^m	1°59'	22°54'	8°39'	13°23'	12°45'	15°40'	16°58'	14°35'	5 ^h 31 ^m	F 2
S 3	22 48 4	10°23'00"	11 ^h 8 ^m 47 ^s	14°43'	6°22'	1°14'	2°8'	23°1'	8°41'	13°23'	12°47'	15°42'	16°55'	14°42'	5°30'	S 3
S 4	22 52 0	11°21'07"	23°49'	13°45'	7°34'	1°50'	2°16'	23°9'	8°44'	13°24'	12°49'	15°43'	16°51'	14°49'	5°29'	S 4
M 5	22 55 57	12°19'16"	5 ^h 14 ^m 43 ^s	12°47'	8°45'	2°27'	2°25'	23°16'	8°46'	13°24'	12°51'	15°45'	16°48'	14°55'	5°27'	M 5
T 6	22 59 53	13°17'27"	17°35'	11°49'	9°57'	3°4'	2°33'	23°24'	8°49'	13°24'	12°53'	15°R45	16°45'	15°2'	5°26'	T 6
W 7	23 3 50	14°15'41"	29°29'	10°54'	11°9'	3°40'	2°41'	23°31'	8°51'	13°25'	12°56'	15°43'	16°42'	15°9'	5°25'	W 7
T 8	23 7 46	15°13'56"	11 ^h 33 ^m 40 ^s	10°1'	12°21'	4°16'	2°49'	23°38'	8°54'	13°25'	12°58'	15°41'	16°39'	15°15'	5°23'	T 8
F 9	23 11 43	16°12'13"	23°42'	9°14'	13°33'	4°52'	2°57'	23°46'	8°56'	13°26'	13°0'	15°37'	16°36'	15°22'	5°21'	F 9
S 10	23 15 39	17°10'32"	6 ^h 9 ^m 8 ^s	8°31'	14°45'	5°28'	3°5'	23°53'	8°59'	13°26'	13°2'	15°33'	16°32'	15°29'	5°20'	S 10
S 11	23 19 36	18°8'54"	18°51'	7°56'	15°57'	6°4'	3°13'	24°0'	9°1'	13°27'	13°4'	15°28'	16°29'	15°36'	5°18'	S 11
M12	23 23 33	19°7'17"	1 ^h 19 ^m 53 ^s	7°29'	17°9'	6°40'	3°21'	24°7'	9°4'	13°27'	13°6'	15°24'	16°26'	15°42'	5°16'	M12
T 13	23 27 29	20°5'42"	15°12'	7°9'	18°21'	7°15'	3°28'	24°15'	9°7'	13°28'	13°9'	15°21'	16°23'	15°49'	5°15'	T 13
W14	23 31 26	21°4'08"	28°47'	6°59'	19°33'	7°51'	3°35'	24°22'	9°10'	13°28'	13°11'	15°19'	16°20'	15°56'	5°13'	W14
T 15	23 35 22	22°2'37"	12 ^h 23 ^m 37 ^s	6°D58	20°46'	8°26'	3°42'	24°29'	9°13'	13°29'	13°13'	15°D18	16°17'	16°2'	5°11'	T 15
F 16	23 39 19	23°1'08"	26°37'	7°6'	21°58'	9°1'	3°49'	24°36'	9°15'	13°30'	13°15'	15°18'	16°13'	16°9'	5°9'	F 16
S 17	23 43 15	23°59'40"	10 ^h 14 ^m 46 ^s	7°23'	23°11'	9°36'	3°56'	24°43'	9°18'	13°30'	13°18'	15°19'	16°10'	16°16'	5°7'	S 17
S 18	23 47 12	24°58'14"	24°59'	7°50'	24°23'	10°11'	4°3'	24°50'	9°21'	13°31'	13°20'	15°21'	16°7'	16°22'	5°5'	S 18
M19	23 51 8	25°56'49"	9 ^h 21 ^m 13 ^s	8°26'	25°36'	10°45'	4°9'	24°57'	9°24'	13°32'	13°22'	15°22'	16°4'	16°29'	5°3'	M19
T 20	23 55 5	26°55'27"	23°27'	9°11'	26°49'	11°20'	4°16'	25°4'	9°27'	13°33'	13°24'	15°R22	16°1'	16°36'	5°1'	T 20
W21	23 59 2	27°54'05"	7 ^h 33 ^m 38 ^s	10°4'	28°1'	11°54'	4°22'	25°11'	9°30'	13°34'	13°27'	15°22'	15°57'	16°43'	4°59'	W21
T 22	0 2 58	28°52'46"	21°43'	11°4'	29°14'	12°28'	4°28'	25°18'	9°33'	13°34'	13°29'	15°21'	15°54'	16°49'	4°57'	T 22
F 23	0 6 55	29°51'28"	5 ^h 22 ^m 41 ^s	12°11'	0 ^h 19 ^m 27 ^s	13°2'	4°34'	25°25'	9°36'	13°35'	13°31'	15°20'	15°51'	16°56'	4°55'	F 23
S 24	0 10 51	0 ^h 20 ^m 50 ^s 12"	19°30'	13°25'	1°40'	13°35'	4°40'	25°31'	9°39'	13°36'	13°33'	15°18'	15°48'	17°3'	4°52'	S 24
S 25	0 14 48	1°48'57"	3 ^h 11 ^m 6 ^s	14°45'	2°53'	14°9'	4°45'	25°38'	9°42'	13°37'	13°36'	15°16'	15°45'	17°9'	4°50'	S 25
M26	0 18 44	2°47'45"	16°30'	16°9'	4°6'	14°42'	4°51'	25°45'	9°46'	13°38'	13°38'	15°14'	15°42'	17°16'	4°48'	M26
T 27	0 22 41	3°46'34"	29°38'	17°38'	5°19'	15°15'	4°56'	25°51'	9°49'	13°39'	13°40'	15°13'	15°38'	17°23'	4°46'	T 27
W28	0 26 37	4°45'25"	12 ^h 21 ^m 31 ^s	19°11'	6°33'	15°48'	5°1'	25°58'	9°52'	13°40'	13°43'	15°D13	15°35'	17°29'	4°43'	W28
T 29	0 30 34	5°44'19"	25°9'	20°47'	7°46'	16°21'	5°6'	26°4'	9°55'	13°41'	13°45'	15°13'	15°32'	17°36'	4°41'	T 29
F 30	0 34 30	6 ^h 23 ^m 43 ^s 14"	7 ^h 8 ^m 32 ^s	22 ^h 26 ^m	8 ^h 19 ^m 59 ^s	16 ^h 25 ^m 45 ^s	5 ^h 25 ^m 10 ^s	26 ^h 41 ^m 11 ^s	9 ^h 15 ^m 59 ^s	13 ^h 27 ^m 43 ^s	13 ^h 24 ^m 47 ^s	15 ^h 24 ^m 14 ^s	15 ^h 22 ^m 29 ^s	17 ^h 11 ^m 43 ^s	4 ^h 38 ^m	F 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	
T 1	8n24	6n35	0s 8	1n14	4s25	19n 6	0s10	23n 28	0n 2	23n 2	0s24	14n55	1n 3	13s59	0n24	T 1
F 2	8 2 10 9	1 15	1 40	4 19	18 52	0 7	23 29	0 3 23	2 0	24 14 52	1 3	14 0	0 24	20 56	1 29	F 2
S 3	7 40 13 11	2 18	2 9	4 11	18 38	0 3	23 30	0 4 23	2 0	24 14 50	1 3	14 1	0 24	20 56	1 29	S 3
S 4	7 18 15 36	3 13	2 40	4 2	18 23	0 0	23 31	0 5 23	2 0	24 14 48	1 3	14 2	0 24	20 57	1 29	S 4
M 5	6 56 17 19	4 0	3 13	3 50	18 7	0n 3	23 31	0 6 23	1 0	24 14 45	1 3	14 2	0 24	20 57	1 29	M 5
T 6	6 34 18 17	4 36	3 47	3 37	17 51	0 6	23 32	0 7 23	1 0	24 14 43	1 3	14 3	0 24	20 57	1 28	T 6
W 7	6 12 18 26	5 0	4 22	3 22	17 35	0 9	23 32	0 9 23	1 0	24 14 41	1 3	14 4	0 24	20 57	1 28	W 7
T 8	5 49 17 46	5 12	4 57	3 5	17 18	0 12	23 32	0 10 23	1 0	24 14 38	1 3	14 5	0 24	20 57	1 28	T 8
F 9	5 27 16 16	5 10	5 31	2 48	17 0	0 16	23 32	0 11 23	1 0	24 14 36	1 3	14 6	0 24	20 57	1 28	F 9
S 10	5 4 14 0	4 53	6 4	2 29	16 42	0 19	23 32	0 12 23	1 0	23 14 34	1 4	14 7	0 24	20 57	1 28	S 10
S 11	4 41 11 1	4 22	6 35	2 10	16 24	0 22	23 31	0 13 23	1 0	23 14 31	1 4	14 7	0 24	20 57	1 28	S 11
M12	4 18 7 26	3 36	7 3	1 51	16 5	0 24	23 31	0 14 23	0 0	23 14 29	1 4	14 8	0 24	20 57	1 28	M12
T 13	3 55 3 24	2 38	7 28	1 31	15 46	0 27	23 30	0 15 23	0 0	23 14 27	1 4	14 9	0 24	20 58	1 28	T 13
W14	3 32 0s53	1 30	7 50	1 12	15 26	0 30	23 29	0 17 23	0 0	23 14 24	1 4	14 10	0 24	20 58	1 28	W14
T 15	3 9 5 13	0 15	8 9	0 53	15 6	0 33	23 28	0 18 23	0 0	23 14 22	1 4	14 11	0 24	20 58	1 28	T 15
F 16	2 46 9 18	1n 2	8 23	0 34	14 45	0 36	23 27	0 19 23	0 0	23 14 20	1 4	14 12	0 24	20 58	1 28	F 16
S 17	2 23 12 54	2 16	8 33	0 16	14 24	0 38	23 26	0 20 23	0 0	23 14 18	1 4	14 13	0 24	20 58	1 28	S 17
S 18	2 0 15 45	3 22	8 38	0n 1	14 2	0 41	23 24	0 21 23	0 0	23 14 15	1 5	14 14	0 24	20 58	1 28	S 18
M19	1 37 17 38	4 15	8 39	0 16	13 40	0 44	23 23	0 23 22	59	0 23 14 13	1 5	14 15	0 24	20 58	1 28	M19
T 20	1 13 18 24	4 53	8 36	0 31	13 18	0 46	23 21	0 24 22	59	0 23 14 11	1 5	14 16	0 24	20 59	1 28	T 20
W21	0 50 18 1	5 13	8 29	0 44	12 55	0 49	23 19	0 25 22	59	0 23 14 9	1 5	14 17	0 24	20 59	1 28	W21
T 22	0 27 16 31	5 14	8 17	0 57	12 32	0 51	23 18	0 26 22	59	0 23 14 7	1 5	14 18	0 24	20 59	1 28	T 22
F 23	0 3 14 4	4 56	8 2	1 8	12 9	0 54	23 16	0 28 22	59	0 23 14 4	1 5	14 19	0 24	20 59	1 28	F 23
S 24	0s20 10 50	4 21	7 43	1 17	11 45	0 56	23 13	0 29 22	59	0 23 14 2	1 5	14 20	0 24	20 59	1 27	S 24
S 25	0 43 7 4	3 32	7 20	1 26	11 21	0 58	23 11	0 30 22	58	0 23 14 0	1 5	14 21	0 24	20 59	1 27	S 25
M26	1 7 2 59	2 32	6 54	1 33	10 56	1 0	23 9	0 31 22	58	0 23 13 58	1 6	14 22	0 24	21 0	1 27	M26
T 27	1 30 1n10	1 25	6 25	1 39	10 32	1 2	23 7	0 33 22	58	0 23 13 56	1 6	14 23	0 24	21 0	1 27	T 27
W28	1 53 5 11	0 15	5 53	1 44	10 7	1 4	23 4	0 34 22	58	0 23 13 54	1 6	14 24	0 24	21 0	1 27	W28
T 29	2 17 8 53	0s55	5 18	1 48	9 41	1 6	23 1	0 35 22	58	0 23 13 52	1 6	14 25	0 24	21 0	1 27	T 29
F 30	2s40 12n 7	2s 1	4n42	1n51	9n15	1n 8	22n59	0n37 22n58	0s23 13n50	1n 6	14s26	0n24 21s 0	1n27 9n47	16n31	6s 0	F 30

Julian Day Number = 2443387.5, Delta T = 48.20 sec
 Ecliptic obliquity = 23°26'23", Nutation = 0°00'06", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°25'42", Lahiri = 23°32'42"

ASTRODIENST EPHEMERIS for the year 1977
geocentric

OCTOBER 1977

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	0 38 27	7♌42'12	19♋42	24♏7	10♏13	17♏26	5♏15	26♏17	10♏2	13♏44	13♏50	15♏14	15♏26	17♏50	4♏36	S 1
S 2	0 42 24	8°41'11	1♏43	25°50	11°26	17°58	5°19	26°24	10° 5	13°45	13°52	15°15	15°22	17°56	4♏34	S 2
M 3	0 46 20	9°40'14	13°37	27°34	12°40	18°30	5°24	26°30	10° 9	13°46	13°54	15°16	15°19	18° 3	4°31	M 3
T 4	0 50 17	10°39'18	25°29	29°19	13°53	19° 2	5°28	26°36	10°12	13°47	13°57	15°16	15°16	18°10	4°28	T 4
W 5	0 54 13	11°38'25	7♏22	1♏ 5	15° 7	19°34	5°31	26°43	10°15	13°49	13°59	15°R16	15°13	18°16	4°26	W 5
T 6	0 58 10	12°37'34	19°22	2°51	16°21	20° 5	5°35	26°49	10°19	13°50	14° 2	15°16	15°10	18°23	4°23	T 6
F 7	1 2 6	13°36'45	1♏33	4°38	17°34	20°36	5°39	26°55	10°22	13°51	14° 4	15°16	15° 7	18°30	4°21	F 7
S 8	1 6 3	14°35'58	14° 0	6°24	18°48	21° 7	5°42	27° 1	10°26	13°52	14° 6	15°16	15° 3	18°37	4°18	S 8
S 9	1 9 59	15°35'14	26°46	8°11	20° 2	21°38	5°45	27° 7	10°29	13°54	14° 9	15°D16	15° 0	18°43	4°15	S 9
M10	1 13 56	16°34'32	9♏54	9°57	21°16	22° 8	5°48	27°13	10°33	13°55	14°11	15°16	14°57	18°50	4°13	M10
T 11	1 17 53	17°33'52	23°24	11°43	22°30	22°38	5°51	27°19	10°36	13°57	14°13	15°16	14°54	18°57	4°10	T 11
W12	1 21 49	18°33'15	7♌17	13°28	23°44	23° 8	5°53	27°24	10°40	13°58	14°16	15°17	14°51	19° 3	4° 7	W12
T 13	1 25 46	19°32'39	21°29	15°13	24°58	23°38	5°56	27°30	10°43	14° 0	14°18	15°R17	14°48	19°10	4° 5	T 13
F 14	1 29 42	20°32'06	5♏57	16°58	26°12	24° 8	5°58	27°36	10°47	14° 1	14°20	15°16	14°44	19°17	4° 2	F 14
S 15	1 33 39	21°31'34	20°33	18°42	27°27	24°37	6° 0	27°41	10°50	14° 3	14°23	15°16	14°41	19°24	3°59	S 15
S 16	1 37 35	22°31'05	5♏13	20°25	28°41	25° 6	6° 1	27°47	10°54	14° 4	14°25	15°15	14°38	19°30	3°56	S 16
M17	1 41 32	23°30'37	19°50	22° 8	29°55	25°34	6° 3	27°52	10°58	14° 6	14°27	15°14	14°35	19°37	3°54	M17
T 18	1 45 28	24°30'11	4♏18	23°50	1♏ 9	26° 3	6° 4	27°58	11° 1	14° 7	14°30	15°13	14°32	19°44	3°51	T 18
W19	1 49 25	25°29'47	18°33	25°31	2°24	26°31	6° 6	28° 3	11° 5	14° 9	14°32	15°13	14°28	19°50	3°48	W19
T 20	1 53 22	26°29'25	2♏33	27°12	3°38	26°59	6° 7	28° 8	11° 8	14°11	14°34	15°D13	14°25	19°57	3°45	T 20
F 21	1 57 18	27°29'04	16°17	28°52	4°52	27°26	6° 7	28°13	11°12	14°12	14°37	15°13	14°22	20° 4	3°42	F 21
S 22	2 1 15	28°28'44	29°45	0♏31	6° 7	27°54	6° 8	28°18	11°16	14°14	14°39	15°14	14°19	20°10	3°39	S 22
S 23	2 5 11	29°28'27	12♏58	2°10	7°21	28°21	6° 8	28°23	11°20	14°16	14°41	15°16	14°16	20°17	3°37	S 23
M24	2 9 8	0♏28'11	25°57	3°49	8°36	28°47	6°R 8	28°28	11°23	14°17	14°44	15°17	14°13	20°24	3°34	M24
T 25	2 13 4	1°27'57	8♏43	5°27	9°50	29°14	6° 8	28°33	11°27	14°19	14°46	15°17	14° 9	20°31	3°31	T 25
W26	2 17 1	2°27'45	21°17	7° 4	11° 5	29°40	6° 8	28°38	11°31	14°21	14°48	15°R17	14° 6	20°37	3°28	W26
T 27	2 20 57	3°27'35	3♏39	8°40	12°20	0♏ 5	6° 8	28°42	11°34	14°23	14°51	15°16	14° 3	20°44	3°25	T 27
F 28	2 24 54	4°27'27	15°52	10°16	13°34	0°31	6° 7	28°47	11°38	14°25	14°53	15°15	14° 0	20°51	3°22	F 28
S 29	2 28 51	5°27'21	27°56	11°52	14°49	0°56	6° 6	28°51	11°42	14°26	14°55	15°12	13°57	20°57	3°19	S 29
S 30	2 32 47	6°27'16	9♏54	13°27	16° 4	1°21	6° 5	28°56	11°46	14°28	14°57	15° 8	13°53	21° 4	3°17	S 30
M31	2 36 44	7♏27'14	21♏46	15♏ 2	17♌19	1♏45	6♏ 4	29♏ 0	11♏49	14♏30	14♏59	15♏ 4	13♏50	21♏11	3♏14	M31

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	3s 3	14n46	3s 0	4n 4	1n53	8n49	1n10	22n56	0n38	22n58	0s23	13n48	1n 6	14s27	0n24	21s 0	1n27	9n46	16n31	6s 0	6s 4	18n20	12n34	0s31			
S 2	3 27	16 45	3 50	3 24	1 54	8 23	1 12	22 53	0 39	22 57	0 23	13 46	1 7	14 28	0 24	21 1	1 27	9 45	16 31	6 0	6 3	18 20	12 33	0 31			
M 3	3 50	17 58	4 30	2 43	1 54	7 57	1 14	22 50	0 41	22 57	0 22	13 44	1 7	14 29	0 24	21 1	1 27	9 45	16 31	6 1	6 2	18 21	12 32	0 31			
T 4	4 13	18 23	4 59	2 0	1 54	7 30	1 16	22 47	0 42	22 57	0 22	13 42	1 7	14 30	0 24	21 1	1 27	9 44	16 31	6 1	6 1	18 21	12 31	0 31			
W 5	4 36	18 0	5 14	1 17	1 52	7 3	1 17	22 44	0 44	22 57	0 22	13 40	1 7	14 31	0 24	21 1	1 27	9 43	16 31	6 1	6 0	18 21	12 31	0 31			
T 6	4 59	16 49	5 17	0 33	1 50	6 36	1 19	22 41	0 45	22 57	0 22	13 38	1 7	14 32	0 24	21 1	1 27	9 42	16 31	6 1	5 58	18 21	12 30	0 31			
F 7	5 22	14 51	5 5	0s11	1 48	6 8	1 20	22 37	0 46	22 57	0 22	13 36	1 7	14 33	0 24	21 2	1 27	9 41	16 31	6 1	5 57	18 21	12 29	0 31			
S 8	5 45	12 11	4 38	0 56	1 45	5 41	1 22	22 34	0 48	22 57	0 22	13 34	1 7	14 35	0 24	21 2	1 27	9 40	16 31	6 1	5 56	18 22	12 28	0 31			
S 9	6 8	8 52	3 58	1 42	1 41	5 13	1 23	22 31	0 49	22 57	0 22	13 32	1 8	14 36	0 24	21 2	1 27	9 39	16 31	6 1	5 55	18 22	12 27	0 32			
M10	6 31	5 1	3 4	2 27	1 37	4 45	1 24	22 27	0 51	22 57	0 22	13 30	1 8	14 37	0 24	21 2	1 27	9 38	16 31	6 1	5 53	18 22	12 26	0 32			
T 11	6 54	0 48	1 58	3 12	1 33	4 17	1 25	22 24	0 52	22 57	0 22	13 28	1 8	14 38	0 23	21 2	1 27	9 38	16 31	6 1	5 52	18 22	12 25	0 32			
W12	7 16	3s34	0 44	3 58	1 28	3 49	1 26	22 20	0 54	22 57	0 22	13 26	1 8	14 39	0 23	21 3	1 27	9 37	16 31	6 1	5 51	18 22	12 24	0 32			
T 13	7 39	7 51	0n34	4 43	1 23	3 20	1 27	22 17	0 55	22 56	0 22	13 25	1 8	14 40	0 23	21 3	1 27	9 36	16 31	6 1	5 50	18 22	12 23	0 32			
F 14	8 1	11 44	1 52	5 28	1 18	2 52	1 28	22 13	0 57	22 56	0 22	13 23	1 8	14 41	0 23	21 3	1 27	9 35	16 32	6 1	5 49	18 22	12 22	0 32			
S 15	8 24	14 56	3 4	6 12	1 12	2 23	1 29	22 9	0 58	22 56	0 22	13 21	1 9	14 42	0 23	21 3	1 26	9 34	16 32	6 1	5 47	18 23	12 21	0 32			
S 16	8 46	17 11	4 3	6 57	1 7	1 54	1 30	22 6	1 0	22 56	0 22	13 19	1 9	14 44	0 23	21 4	1 26	9 34	16 32	6 0	5 46	18 23	12 20	0 32			
M17	9 8	18 17	4 46	7 41	1 1	1 25	1 31	22 2	1 1	22 56	0 22	13 18	1 9	14 45	0 23	21 4	1 26	9 33	16 32	6 0	5 45	18 23	12 19	0 32			
T 18	9 30	18 11	5 11	8 24	0 55	0 56	1 32	21 58	1 3	22 56	0 22	13 16	1 9	14 46	0 23	21 4	1 26	9 32	16 32	6 0	5 44	18 23	12 18	0 32			
W19	9 52	16 56	5 16	9 7	0 48	0 27	1 32	21 54	1 5	22 56	0 22	13 14	1 9	14 47	0 23	21 4	1 26	9 31	16 32	6 0	5 42	18 23	12 17	0 32			
T 20	10 13	14 41	5 3	9 49	0 42	0s 2	1 33	21 51	1 6	22 56	0 22	13 13	1 10	14 48	0 23	21 4	1 26	9 30	16 32	6 0	5 41	18 23	12 15	0 33			
F 21	10 35	11 38	4 32	10 31	0 35	0 31	1 33	21 47	1 8	22 56	0 22	13 11	1 10	14 49	0 23	21 5	1 26	9 30	16 32	6 0	5 40	18 23	12 14	0 33			
S 22	10 56	8 2	3 46	11 12	0 29	1 0	1 33	21 43	1 9	22 56	0 21	13 9	1 10	14 50	0 23	21 5	1 26	9 29	16 32	6 0	5 39	18 23	12 13	0 33			
S 23	11 17	4 5	2 49	11 53	0 22	1 29	1 34	21 39	1 11	22 56	0 21	13 8	1 10	14 52	0 23	21 5	1 26	9 28	16 33	6 1	5 37	18 24	12 12	0 33			
M24	11 38	0 0	1 45	12 33	0 15	1 58	1 34	21 35	1 13	22 56	0 21	13 6	1 10	14 53	0 23	21 5	1 26	9 27	16 33	6 1	5 36	18 24	12 11	0 33			
T 25	11 59	4n 1	0 36	13 12	0 9	2 27	1 34	21 32	1 14	22 57	0 21	13 5	1 10	14 54	0 23	21 6	1 26	9 27	16 33	6 1	5 35	18 24	12 10	0 33			
W26	12 20	7 47	0s33	13 50	0 2	2 56	1 34	21 28	1 16	22 57	0 21	13 3	1 11	14 55	0 23	21 6	1 26	9 26	16 33	6 1	5 34	18 24	12 9	0 33			
T 27	12 40	11 10	1 40	14 28	0s 5	3 26	1 34	21 24	1 18	22 57	0 21	13 2	1 11	14 56	0 23	21 6	1 26	9 25	16 33	6 1	5 33	18 24	12 8	0 33			
F 28	13 0	14 1	2 41	15 5	0 12	3 55	1 34	21 20	1 20	22 57	0 21	13 0	1 11	14 57	0 23	21 6	1 26	9 25	16 33	6 0	5 31	18 24	12 7	0 33			
S 29	13 20	16 14	3 34	15 41	0 18	4 24	1 34	21 17	1 21	22 57	0 21	12 59	1 11	14 58	0 23	21 7	1 26	9 24	16 34	5 59	5 30	18 24	12 6	0 33			
S 30	13 40	17 42	4 17	16 17	0 25	4 53	1 34	21 13	1 23	22 57	0 21	12 58	1 11	15 0	0 23	21 7	1 26	9 23	16 34	5 58	5 29	18 24	12 5	0 33			
M31	14s 0	18n23	4s49	16s51	0s32	5s21	1n34	21n 9	1n25	22n57	0s21	12n56	1n12	15s 1	0n23	21s 7	1n26	9n23	16n34	5s56	5s28	18n24	12n 4	0s33			

ASTRODIENST EPHEMERIS for the year 1977

geocentric

NOVEMBER 1977

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	2 40 40	8♉27°14	3♊37	16♉36	18♊33	2♉9	6♉3	29♉4	11♉53	14♉32	15♊2	15♉1	13♊47	21♉18	3♉11	T 1
W 2	2 44 37	9°27'16	15°30	18°10	19°48	2°33	6♊1	29°9	11°57	14°34	15°4	14♊58	13°44	21°24	3♊8	W 2
T 3	2 48 33	10°27'21	27°28	19°43	21°3	2°56	5°59	29°13	12°1	14°36	15°6	14°56	13°41	21°31	3°5	T 3
F 4	2 52 30	11°27'27	9♉36	21°16	22°18	3°19	5°57	29°17	12°4	14°38	15°8	14°D55	13°38	21°38	3°2	F 4
S 5	2 56 26	12°27'35	21°58	22°48	23°33	3°42	5°55	29°21	12°8	14°40	15°10	14°55	13°34	21°44	3°0	S 5
S 6	3 0 23	13°27'46	4♉39	24°21	24°48	4°4	5°53	29°24	12°12	14°42	15°13	14°57	13°31	21°51	2°57	S 6
M 7	3 4 20	14°27'58	17°43	25°52	26°3	4°25	5°50	29°28	12°16	14°44	15°15	14°58	13°28	21°58	2°54	M 7
T 8	3 8 16	15°28'12	1♊14	27°24	27°18	4°47	5°47	29°32	12°19	14°46	15°17	15°0	13°25	22°5	2°51	T 8
W 9	3 12 13	16°28'29	15°11	28°55	28°33	5°8	5°44	29°35	12°23	14°48	15°19	15°R 0	13°22	22°11	2°48	W 9
T 10	3 16 9	17°28'47	29°35	0♊25	29°48	5°28	5°41	29°39	12°27	14°50	15°21	15°0	13°19	22°18	2°46	T 10
F 11	3 20 6	18°29'08	14♉20	1°55	1♉3	5°48	5°38	29°42	12°31	14°52	15°23	14°57	13°15	22°25	2°43	F 11
S 12	3 24 2	19°29'30	29°20	3°25	2°18	6°8	5°34	29°45	12°34	14°54	15°25	14°53	13°12	22°31	2°40	S 12
S 13	3 27 59	20°29'53	14♊26	4°55	3°33	6°27	5°30	29°48	12°38	14°56	15°27	14°48	13°9	22°38	2°37	S 13
M14	3 31 55	21°30'19	29°29	6°24	4°48	6°45	5°26	29°51	12°42	14°58	15°29	14°42	13°6	22°45	2°35	M14
T 15	3 35 52	22°30'45	14♊18	7°52	6°4	7°4	5°22	29°54	12°45	15°0	15°31	14°37	13°3	22°52	2°32	T 15
W16	3 39 49	23°31'13	28°49	9°20	7°19	7°21	5°18	29°57	12°49	15°3	15°33	14°33	12°59	22°58	2°30	W16
T 17	3 43 45	24°31'43	12♊56	10°48	8°34	7°38	5°13	29°59	12°53	15°5	15°35	14°31	12°56	23°5	2°27	T 17
F 18	3 47 42	25°32'13	26°39	12°15	9°49	7°55	5°9	0♉2	12°57	15°7	15°37	14°D30	12°53	23°12	2°24	F 18
S 19	3 51 38	26°32'45	9♊59	13°42	11°4	8°11	5°4	0°5	13°0	15°9	15°39	14°31	12°50	23°18	2°22	S 19
S 20	3 55 35	27°33'18	22°58	15°8	12°20	8°27	4°59	0°7	13°4	15°11	15°41	14°33	12°47	23°25	2°19	S 20
M21	3 59 31	28°33'52	5♉41	16°33	13°35	8°42	4°54	0°10	13°8	15°13	15°43	14°34	12°44	23°32	2°17	M21
T 22	4 3 28	29°34'27	18°9	17°57	14°50	8°56	4°48	0°12	13°11	15°15	15°45	14°R34	12°40	23°39	2°14	T 22
W23	4 7 24	0♊35'04	0♊26	19°21	16°5	9°10	4°43	0°14	13°15	15°18	15°46	14°33	12°37	23°45	2°12	W23
T 24	4 11 21	1°35'42	12°34	20°44	17°21	9°24	4°37	0°16	13°19	15°20	15°48	14°29	12°34	23°52	2°9	T 24
F 25	4 15 18	2°36'21	24°37	22°5	18°36	9°37	4°31	0°18	13°22	15°22	15°50	14°23	12°31	23°59	2°7	F 25
S 26	4 19 14	3°37'02	6♉34	23°25	19°51	9°49	4°25	0°19	13°26	15°24	15°52	14°15	12°28	24°5	2°5	S 26
S 27	4 23 11	4°37'44	18°28	24°44	21°7	10°0	4°19	0°21	13°29	15°27	15°53	14°5	12°25	24°12	2°2	S 27
M28	4 27 7	5°38'27	0♊20	26°2	22°22	10°11	4°13	0°23	13°33	15°29	15°55	13°54	12°21	24°19	2°0	M28
T 29	4 31 4	6°39'12	12°12	27°17	23°37	10°22	4°7	0°24	13°36	15°31	15°57	13°44	12°18	24°26	1°58	T 29
W30	4 35 0	7♊39'58	24♊5	28♊30	24♉53	10♉31	4♊0	0♉26	13♉40	15♊33	15♊59	13♊35	12♊15	24♉32	1♊56	W30

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	14s19	18n16	5s 8	17s25	0s38	5s50	1n33	21n 5	1n27	22n57	0s21	12n55	1n12	15s 2	0n23	21s 7	1n26	9n22	16n34	5s55	5s26	18n24	12n 3	0s34					
W 2	14 39	17 20	5 14	17 57	0 45	6 19	1 33	21 2	1 29	22 57	0 21	12 54	1 12	15 3	0 23	21 8	1 26	9 22	16 35	5 54	5 25	18 25	12 2	0 34					
T 3	14 57	15 39	5 7	18 29	0 51	6 47	1 32	20 58	1 31	22 58	0 21	12 53	1 12	15 4	0 23	21 8	1 26	9 21	16 35	5 53	5 24	18 25	12 1	0 34					
F 4	15 16	13 16	4 46	19 0	0 58	7 16	1 32	20 55	1 32	22 58	0 21	12 51	1 12	15 5	0 23	21 8	1 26	9 20	16 35	5 53	5 23	18 25	12 0	0 34					
S 5	15 35	10 14	4 11	19 30	1 4	7 44	1 31	20 51	1 34	22 58	0 21	12 50	1 13	15 7	0 23	21 8	1 26	9 20	16 35	5 53	5 21	18 25	11 59	0 34					
S 6	15 53	6 39	3 23	19 59	1 10	8 12	1 30	20 48	1 36	22 58	0 21	12 49	1 13	15 8	0 23	21 9	1 26	9 19	16 36	5 53	5 20	18 25	11 58	0 34					
M 7	16 11	2 39	2 24	20 28	1 16	8 40	1 30	20 45	1 38	22 58	0 20	12 48	1 13	15 9	0 23	21 9	1 26	9 19	16 36	5 54	5 19	18 25	11 57	0 34					
T 8	16 28	1s38	1 15	20 55	1 22	9 8	1 29	20 41	1 40	22 58	0 20	12 47	1 13	15 10	0 23	21 9	1 26	9 18	16 36	5 55	5 18	18 25	11 56	0 34					
W 9	16 46	5 58	0n 1	21 21	1 28	9 35	1 28	20 38	1 42	22 59	0 20	12 46	1 13	15 11	0 23	21 9	1 26	9 18	16 36	5 55	5 16	18 25	11 55	0 34					
T 10	17 3	10 6	1 19	21 46	1 33	10 3	1 27	20 35	1 44	22 59	0 20	12 45	1 14	15 12	0 23	21 10	1 26	9 17	16 37	5 54	5 15	18 25	11 54	0 34					
F 11	17 20	13 42	2 33	22 10	1 39	10 30	1 26	20 32	1 46	22 59	0 20	12 44	1 14	15 13	0 23	21 10	1 26	9 17	16 37	5 53	5 14	18 25	11 53	0 34					
S 12	17 36	16 27	3 38	22 33	1 44	10 57	1 25	20 29	1 48	22 59	0 20	12 43	1 14	15 15	0 23	21 10	1 25	9 16	16 37	5 52	5 13	18 25	11 52	0 34					
S 13	17 52	18 5	4 28	22 54	1 49	11 23	1 24	20 26	1 50	23 0	0 20	12 42	1 14	15 16	0 23	21 10	1 25	9 16	16 38	5 50	5 12	18 25	11 51	0 34					
M14	18 8	18 26	5 0	23 15	1 54	11 50	1 23	20 24	1 52	23 0	0 20	12 41	1 14	15 17	0 23	21 11	1 25	9 15	16 38	5 48	5 10	18 25	11 50	0 34					
T 15	18 24	17 31	5 11	23 34	1 59	12 16	1 21	20 21	1 55	23 0	0 20	12 40	1 15	15 18	0 23	21 11	1 25	9 15	16 38	5 46	5 9	18 25	11 49	0 35					
W16	18 39	15 29	5 1	23 53	2 3	12 41	1 20	20 19	1 57	23 0	0 20	12 39	1 15	15 19	0 23	21 11	1 25	9 15	16 39	5 44	5 8	18 25	11 48	0 35					
T 17	18 54	12 33	4 34	24 10	2 7	13 7	1 19	20 16	1 59	23 1	0 20	12 39	1 15	15 20	0 23	21 11	1 25	9 14	16 39	5 43	5 7	18 25	11 47	0 35					
F 18	19 9	9 1	3 51	24 25	2 11	13 32	1 17	20 14	2 1	23 1	0 20	12 38	1 15	15 21	0 23	21 12	1 25	9 14	16 39	5 43	5 5	18 25	11 46	0 35					
S 19	19 23	5 6	2 57	24 40	2 14	13 57	1 16	20 12	2 3	23 1	0 19	12 37	1 16	15 22	0 23	21 12	1 25	9 13	16 40	5 43	5 4	18 26	11 45	0 35					
S 20	19 37	1 2	1 54	24 53	2 17	14 21	1 14	20 10	2 5	23 1	0 19	12 37	1 16	15 24	0 23	21 12	1 25	9 13	16 40	5 44	5 3	18 26	11 44	0 35					
M21	19 50	2n59	0 48	25 5	2 20	14 46	1 13	20 8	2 8	23 2	0 19	12 36	1 16	15 25	0 23	21 12	1 25	9 13	16 41	5 44	5 2	18 26	11 43	0 35					
T 22	20 4	6 49	0s19	25 16	2 23	15 9	1 11	20 7	2 10	23 2	0 19	12 35	1 16	15 26	0 23	21 13	1 25	9 12	16 41	5 45	5 0	18 26	11 42	0 35					
W23	20 16	10 18	1 25	25 25	2 25	15 33	1 9	20 5	2 12	23 2	0 19	12 35	1 16	15 27	0 23	21 13	1 25	9 12	16 41	5 44	4 59	18 26	11 41	0 35					
T 24	20 29	13 18	2 25	25 33	2 26	15 56	1 8	20 4	2 15	23 3	0 19	12 34	1 17	15 28	0 23	21 13	1 25	9 12	16 42	5 43	4 58	18 26	11 40	0 35					
F 25	20 41	15 43	3 19	25 39	2 28	16 18	1 6	20 3	2 17	23 3	0 19	12 34	1 17	15 29	0 23	21 13	1 25	9 11	16 42	5 40	4 57	18 26	11 40	0 35					
S 26	20 53	17 25	4 3	25 45	2 28	16 40	1 4	20 2	2 19	23 3	0 19	12 34	1 17	15 30	0 23	21 14	1 25	9 11	16 43	5 37	4 55	18 26	11 39	0 35					
S 27	21 4	18 21	4 36	25 48	2 28	17 2	1 2	20 1	2 22	23 3	0 19	12 33	1 17	15 31	0 23	21 14	1 25	9 11	16 43	5 33	4 54	18 26	11 38	0 35					
M28	21 15	18 29	4 57	25 51	2 28	17 23	1 0	20 0	2 24	23 4	0 19	12 33	1 18	15 32	0 23	21 14	1 25	9 11	16 43	5 29	4 53	18 26	11 37	0 35					
T 29	21 25	17 49	5 5	25 52	2 27	17 44	0 58	20 0	2 26	23 4	0 18	12 33	1 18	15 33	0 23	21 14	1 25	9 10	16 44	5 25	4 52	18 26	11 36	0 35					
W30	21s35	16n22	5s 0	25s51	2s25	18s 5	0n56	19n59	2n29	23n 4	0s18	12n32	1n18	15s34	0n23	21s15	1n25	9n10	16n44	5s22	4s50	18n26	11n35	0s35					

ASTRODIENST EPHEMERIS for the year 1977

geocentric

DECEMBER 1977

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	4 38 57	8 2 40'46	6 0 4	29 2 41	26 0 8	10 0 41	3°R53	0 0 27	13 0 43	15 2 36	16 0 0	13°R28	12 0 12	24 0 39	1°R53	T 1	
F 2	4 42 53	9°41'35	18°10	0 0 49	27°23	10°49	3 0 47	0°28	13°47	15°38	16° 2	13 0 23	12° 9	24°46	1 0 51	F 2	
S 3	4 46 50	10°42'25	0 0 28	1°53	28°39	10°57	3°40	0°29	13°50	15°40	16° 3	13°20	12° 5	24°52	1°49	S 3	
S 4	4 50 47	11°43'17	13° 3	2°54	29°54	11° 4	3°33	0°30	13°54	15°42	16° 5	13°D19	12° 2	24°59	1°47	S 4	
M 5	4 54 43	12°44'10	25°59	3°50	1 2 10	11°10	3°26	0°31	13°57	15°45	16° 6	13°20	11°59	25° 6	1°45	M 5	
T 6	4 58 40	13°45'04	9 2 21	4°42	2°25	11°16	3°18	0°31	14° 1	15°47	16° 8	13°R21	11°56	25°13	1°43	T 6	
W 7	5 2 36	14°46'00	23°10	5°28	3°41	11°20	3°11	0°32	14° 4	15°49	16° 9	13°20	11°53	25°19	1°41	W 7	
T 8	5 6 33	15°46'57	7 0 29	6° 8	4°56	11°25	3° 4	0°32	14° 7	15°51	16°11	13°18	11°50	25°26	1°39	T 8	
F 9	5 10 29	16°47'55	22°15	6°40	6°12	11°28	2°56	0°33	14°11	15°54	16°12	13°13	11°46	25°33	1°38	F 9	
S 10	5 14 26	17°48'55	7 2 22	7° 5	7°27	11°31	2°48	0°33	14°14	15°56	16°14	13° 5	11°43	25°39	1°36	S 10	
S 11	5 18 22	18°49'55	22°41	7°21	8°42	11°32	2°41	0°33	14°17	15°58	16°15	12°56	11°40	25°46	1°34	S 11	
M12	5 22 19	19°50'56	8 0 1	7°R27	9°58	11°33	2°33	0°R33	14°21	16° 0	16°16	12°45	11°37	25°53	1°32	M12	
T 13	5 26 16	20°51'58	23°10	7°23	11°13	11°R34	2°25	0°33	14°24	16° 3	16°18	12°35	11°34	26° 0	1°31	T 13	
W14	5 30 12	21°53'01	7 2 59	7° 7	12°29	11°33	2°17	0°33	14°27	16° 5	16°19	12°27	11°31	26° 6	1°29	W14	
T 15	5 34 9	22°54'03	22°50	6°40	13°44	11°32	2° 9	0°32	14°30	16° 7	16°20	12°21	11°27	26°13	1°28	T 15	
F 16	5 38 5	23°55'07	6 0 13	6° 1	15° 0	11°30	2° 1	0°32	14°33	16° 9	16°21	12°17	11°24	26°20	1°26	F 16	
S 17	5 42 2	24°56'10	19°36	5°12	16°15	11°27	1°53	0°31	14°36	16°12	16°22	12°D16	11°21	26°27	1°25	S 17	
S 18	5 45 58	25°57'15	2 0 Y34	4°11	17°31	11°23	1°45	0°31	14°39	16°14	16°24	12°16	11°18	26°33	1°23	S 18	
M19	5 49 55	26°58'19	15°11	3° 2	18°46	11°18	1°37	0°30	14°42	16°16	16°25	12°R16	11°15	26°40	1°22	M19	
T 20	5 53 51	27°59'24	27°31	1°46	20° 2	11°13	1°29	0°29	14°45	16°18	16°26	12°15	11°11	26°47	1°21	T 20	
W21	5 57 48	29° 0'29	9 0 38	0°25	21°17	11° 6	1°21	0°28	14°48	16°21	16°27	12°12	11° 8	26°53	1°19	W21	
T 22	6 1 45	0 0 1'34	21°38	29 2 2	22°33	10°59	1°13	0°27	14°51	16°23	16°28	12° 6	11° 5	27° 0	1°18	T 22	
F 23	6 5 41	1° 2'39	3 0 II32	27°41	23°48	10°51	1° 5	0°26	14°54	16°25	16°29	11°57	11° 2	27° 7	1°17	F 23	
S 24	6 9 38	2° 3'45	15°25	26°22	25° 4	10°42	0°56	0°24	14°57	16°27	16°30	11°45	10°59	27°14	1°16	S 24	
S 25	6 13 34	3° 4'52	27°17	25°10	26°19	10°33	0°48	0°23	15° 0	16°29	16°31	11°31	10°56	27°20	1°15	S 25	
M26	6 17 31	4° 5'58	9 0 10	24° 5	27°35	10°22	0°40	0°21	15° 3	16°32	16°31	11°16	10°52	27°27	1°14	M26	
T 27	6 21 27	5° 7'05	21° 5	23°10	28°50	10°11	0°32	0°20	15° 5	16°34	16°32	11° 1	10°49	27°34	1°13	T 27	
W28	6 25 24	6° 8'13	3 0 4	22°25	0 0 6	9°59	0°24	0°18	15° 8	16°36	16°33	10°48	10°46	27°40	1°12	W28	
T 29	6 29 20	7° 9'20	15° 8	21°50	1°21	9°46	0°16	0°16	15°11	16°38	16°34	10°37	10°43	27°47	1°12	T 29	
F 30	6 33 17	8°10'28	27°20	21°26	2°37	9°33	0° 8	0°14	15°13	16°40	16°35	10°28	10°40	27°54	1°11	F 30	
S 31	6 37 14	9 0 11'36	9 0 41	21 2 12	3 0 52	9°018	29 0 II59	0 0 12	15 0 16	16 2 42	16 0 35	10 0 23	10 0 37	28 0 II 1	1 0 810	S 31	

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	21s45	14n12	4s42	25s49	2s23	18s24	0n54	19n59	2n31	23n05	0s18	12n32	1n18	15s35	0n23	21s15	1n25
F 2	21 54	11 24	4 11	25 46	2 19	18 44	0 52	19 59	2 34	23 5	0 18	12 32	1 18	15 36	0 23	21 15	1 25
S 3	22 3	8 3	3 28	25 41	2 15	19 3	0 50	20 0	2 36	23 5	0 18	12 32	1 19	15 38	0 23	21 15	1 25
S 4	22 12	4 17	2 35	25 35	2 10	19 21	0 48	20 0	2 39	23 6	0 18	12 32	1 19	15 39	0 23	21 16	1 25
M 5	22 19	0 12	1 31	25 27	2 4	19 39	0 46	20 1	2 42	23 6	0 18	12 32	1 19	15 40	0 23	21 16	1 25
T 6	22 27	4s 2	0 21	25 19	1 57	19 56	0 44	20 2	2 44	23 6	0 18	12 32	1 19	15 41	0 23	21 16	1 25
W 7	22 34	8 12	0n52	25 9	1 49	20 12	0 42	20 3	2 47	23 7	0 18	12 32	1 20	15 42	0 23	21 16	1 25
T 8	22 41	12 2	2 5	24 58	1 40	20 28	0 39	20 4	2 49	23 7	0 17	12 32	1 20	15 43	0 23	21 17	1 25
F 9	22 47	15 15	3 12	24 46	1 30	20 44	0 37	20 6	2 52	23 7	0 17	12 32	1 20	15 44	0 23	21 17	1 25
S 10	22 53	17 29	4 6	24 33	1 18	20 59	0 35	20 8	2 55	23 7	0 17	12 32	1 20	15 45	0 23	21 17	1 25
S 11	22 58	18 31	4 44	24 19	1 5	21 13	0 32	20 10	2 57	23 8	0 17	12 32	1 20	15 45	0 23	21 17	1 25
M 12	23 3	18 11	5 1	24 4	0 50	21 27	0 30	20 12	3 0	23 8	0 17	12 32	1 21	15 46	0 23	21 18	1 25
T 13	23 7	16 34	4 57	23 48	0 34	21 40	0 28	20 14	3 3	23 8	0 17	12 32	1 21	15 47	0 23	21 18	1 25
W 14	23 11	13 52	4 33	23 32	0 17	21 52	0 25	20 17	3 5	23 9	0 17	12 33	1 21	15 48	0 23	21 18	1 25
T 15	23 15	10 24	3 52	23 15	0n 1	22 4	0 23	20 20	3 8	23 9	0 17	12 33	1 21	15 49	0 23	21 18	1 25
F 16	23 18	6 28	2 59	22 58	0 20	22 15	0 21	20 23	3 11	23 9	0 16	12 33	1 22	15 50	0 23	21 19	1 25
S 17	23 21	2 19	1 57	22 40	0 40	22 26	0 18	20 27	3 13	23 9	0 16	12 34	1 22	15 51	0 23	21 19	1 25
S 18	23 23	1n48	0 51	22 22	1 0	22 35	0 16	20 30	3 16	23 10	0 16	12 34	1 22	15 52	0 23	21 19	1 25
M 19	23 24	5 44	0s15	22 4	1 20	22 44	0 14	20 34	3 19	23 10	0 16	12 35	1 22	15 53	0 23	21 19	1 25
T 20	23 25	9 21	1 20	21 46	1 39	22 53	0 11	20 38	3 21	23 10	0 16	12 35	1 23	15 54	0 23	21 20	1 25
W 21	23 26	12 30	2 20	21 29	1 58	23 1	0 9	20 43	3 24	23 10	0 16	12 36	1 23	15 55	0 23	21 20	1 25
T 22	23 26	15 5	3 12	21 12	2 14	23 8	0 6	20 47	3 27	23 10	0 16	12 37	1 23	15 55	0 23	21 20	1 25
F 23	23 26	17 0	3 56	20 57	2 29	23 14	0 4	20 52	3 29	23 11	0 15	12 37	1 23	15 56	0 23	21 20	1 25
S 24	23 25	18 11	4 29	20 42	2 41	23 19	0 1	20 57	3 32	23 11	0 15	12 38	1 23	15 57	0 23	21 20	1 25
S 25	23 24	18 34	4 50	20 30	2 51	23 24	0s 1	21 2	3 35	23 11	0 15	12 39	1 24	15 58	0 23	21 21	1 25
M 26	23 23	18 9	4 59	20 20	2 58	23 28	0 3	21 7	3 37	23 11	0 15	12 39	1 24	15 59	0 23	21 21	1 25
T 27	23 20	16 56	4 55	20 13	3 3	23 32	0 6	21 13	3 40	23 11	0 15	12 40	1 24	16 0	0 23	21 21	1 25
W 28	23 18	14 58	4 38	20 7	3 6	23 35	0 8	21 19	3 42	23 12	0 15	12 41	1 24	16 0	0 23	21 21	1 25
T 29	23 15	12 21	4 8	20 5	3 7	23 37	0 11	21 25	3 45	23 12	0 15	12 42	1 25	16 1	0 23	21 21	1 25
F 30	23 11	9 10	3 26	20 4	3 6	23 38	0 13	21 31	3 47	23 12	0 14	12 43	1 25	16 2	0 23	21 22	1 25
S 31	23s 7	5n33	2s34	20s 6	3n 3	23s38	0s15	21n37	3n50	23n12	0s14	12n44	1n25	16s 3	0n23	21s22	1n25

Julian Day Number = 2443478.5, Delta T = 48.45 sec
 Ecliptic obliquity = 23°26'22", Nutation = 0°00'03", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°25'55", Lahiri = 23°32'55"