



Astrodienst Ephemeris Tables for the year 1999

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 1999
geocentric

JANUARY 1999

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	6 40 49	10♌ 6'21	24♏ 58	21♌ 16	25♌ 23	18♏ 23	21♌ 56	26♏ 46	10♏ 57	1♏ 4	9♌ 7	22°R52	24♏ 24	12♏ 35	29♏ 18	F 1
S 2	6 44 46	11° 7'28	9♏ 33	22°40	26°38	18°53	22° 5	26°47	11° 1	1° 6	9° 9	22♏ 45	24°21	12°42	29°25	S 2
S 3	6 48 42	12° 8'36	23°51	24° 5	27°53	19°22	22°14	26°47	11° 4	1° 8	9°11	22°40	24°17	12°49	29°31	S 3
M 4	6 52 39	13° 9'44	7♏ 47	25°31	29° 9	19°51	22°23	26°48	11° 7	1°10	9°13	22°37	24°14	12°55	29°38	M 4
T 5	6 56 35	14°10'52	21°19	26°58	0♏24	20°21	22°33	26°48	11°10	1°12	9°15	22°D36	24°11	13° 2	29°44	T 5
W 6	7 0 32	15°12'01	4♏ 26	28°25	1°39	20°50	22°42	26°49	11°13	1°14	9°17	22°37	24° 8	13° 9	29°51	W 6
T 7	7 4 28	16°13'09	17° 9	29°52	2°54	21°18	22°52	26°50	11°17	1°17	9°19	22°38	24° 5	13°16	29°57	T 7
F 8	7 8 25	17°14'17	29°33	1♌ 21	4° 9	21°47	23° 1	26°51	11°20	1°19	9°21	22°40	24° 2	13°22	0♌ 4	F 8
S 9	7 12 21	18°15'26	11♏ 42	2°50	5°24	22°15	23°11	26°52	11°23	1°21	9°23	22°41	23°58	13°29	0°10	S 9
S 10	7 16 18	19°16'34	23°39	4°19	6°39	22°44	23°21	26°53	11°26	1°23	9°25	22°R42	23°55	13°36	0°16	S 10
M 11	7 20 15	20°17'43	5♏ 32	5°49	7°55	23°12	23°31	26°55	11°30	1°26	9°27	22°40	23°52	13°42	0°22	M 11
T 12	7 24 11	21°18'51	17°23	7°20	9°10	23°40	23°41	26°56	11°33	1°28	9°29	22°37	23°49	13°49	0°28	T 12
W 13	7 28 8	22°20'00	29°19	8°51	10°25	24° 7	23°51	26°57	11°36	1°30	9°31	22°33	23°46	13°56	0°34	W 13
T 14	7 32 4	23°21'08	11♌ 21	10°22	11°40	24°35	24° 2	26°59	11°40	1°32	9°32	22°28	23°42	14° 3	0°40	T 14
F 15	7 36 1	24°22'17	23°34	11°54	12°55	25° 2	24°12	27° 1	11°43	1°35	9°34	22°23	23°39	14° 9	0°46	F 15
S 16	7 39 57	25°23'25	6♌ 0	13°27	14°10	25°29	24°23	27° 3	11°46	1°37	9°36	22°18	23°36	14°16	0°52	S 16
S 17	7 43 54	26°24'32	18°39	15° 0	15°25	25°56	24°34	27° 5	11°50	1°39	9°38	22°14	23°33	14°23	0°57	S 17
M 18	7 47 50	27°25'40	1♏ 31	16°33	16°40	26°23	24°44	27° 7	11°53	1°41	9°40	22°11	23°30	14°29	1° 3	M 18
T 19	7 51 47	28°26'46	14°38	18° 7	17°55	26°49	24°55	27° 9	11°57	1°44	9°41	22°10	23°27	14°36	1° 9	T 19
W 20	7 55 44	29°27'52	27°57	19°42	19°10	27°16	25° 7	27°11	12° 0	1°46	9°43	22°D10	23°23	14°43	1°14	W 20
T 21	7 59 40	0♏28'57	11♌ 28	21°17	20°25	27°42	25°18	27°14	12° 4	1°48	9°45	22°11	23°20	14°50	1°20	T 21
F 22	8 3 37	1°30'02	25°10	22°52	21°40	28° 7	25°29	27°16	12° 7	1°51	9°46	22°12	23°17	14°56	1°25	F 22
S 23	8 7 33	2°31'05	9♏ 1	24°29	22°55	28°33	25°40	27°19	12°11	1°53	9°48	22°14	23°14	15° 3	1°30	S 23
S 24	8 11 30	3°32'07	23° 2	26° 6	24°10	28°58	25°52	27°21	12°14	1°55	9°50	22°15	23°11	15°10	1°35	S 24
M 25	8 15 26	4°33'09	7♌ 9	27°43	25°25	29°23	26° 3	27°24	12°17	1°57	9°51	22°R15	23° 8	15°17	1°40	M 25
T 26	8 19 23	5°34'09	21°23	29°21	26°40	29°48	26°15	27°27	12°21	2° 0	9°53	22°14	23° 4	15°23	1°45	T 26
W 27	8 23 19	6°35'08	5♏ 40	1♏ 0	27°54	0♏12	26°27	27°30	12°24	2° 2	9°54	22°13	23° 1	15°30	1°50	W 27
T 28	8 27 16	7°36'06	19°57	2°39	29° 9	0°36	26°39	27°33	12°28	2° 4	9°56	22°11	22°58	15°37	1°55	T 28
F 29	8 31 13	8°37'03	4♏ 16	4°19	0♌24	1° 0	26°51	27°36	12°31	2° 6	9°57	22° 9	22°55	15°43	2° 0	F 29
S 30	8 35 9	9°37'59	18°16	5°59	1°24	1°24	27° 3	27°40	12°35	2° 9	9°59	22° 8	22°52	15°50	2° 5	S 30
S 31	8 39 6	10♏38'54	2♏ 9	7♏41	2♌54	1♏47	27♌15	27°♏43	12♏38	2♏11	10♌ 0	22♏ 6	22♏48	15♏57	2♌ 9	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
F 1	23s 3	18n59	4s22	22s33	0n36	22s21	1s19	5s27	1n54	4s20	1s14	7n57	2s33	18s 5	0s38	19s38	0n18	10s33	11n23	13n54	13n23	10s49	17s14	2n50			
S 2	22 58	19 34	3 32	22 47	0 28	22 8	1 20	5 38	1 54	4 16	1 14	7 57	2 32	18 4	0 38	19 37	0 18	10 34	11 23	13 56	13 24	10 50	17 15	2 50			
S 3	22 53	18 53	2 30	22 59	0 20	21 55	1 21	5 49	1 55	4 13	1 14	7 58	2 32	18 4	0 38	19 37	0 18	10 34	11 23	13 57	13 25	10 52	17 16	2 51			
M 4	22 47	17 2	1 20	23 10	0 12	21 40	1 22	5 59	1 55	4 9	1 14	7 58	2 32	18 3	0 38	19 36	0 18	10 34	11 23	13 58	13 26	10 54	17 17	2 51			
T 5	22 41	14 17	0 7	23 20	0 4	21 26	1 24	6 10	1 55	4 5	1 14	7 59	2 32	18 2	0 38	19 36	0 18	10 34	11 23	13 59	13 28	10 56	17 18	2 51			
W 6	22 34	10 53	1n 4	23 29	0s 3	21 10	1 25	6 20	1 56	4 1	1 13	7 59	2 31	18 1	0 38	19 35	0 18	10 34	11 24	13 58	13 29	10 58	17 19	2 52			
T 7	22 27	7 4	2 10	23 37	0 11	20 54	1 26	6 31	1 56	3 57	1 13	8 0	2 31	18 0	0 38	19 35	0 18	10 34	11 24	13 58	13 30	11 0	17 20	2 52			
F 8	22 20	3 3	3 8	23 44	0 18	20 37	1 27	6 41	1 57	3 53	1 13	8 0	2 31	17 59	0 38	19 34	0 18	10 35	11 24	13 57	13 31	11 1	17 21	2 53			
S 9	22 12	1s 0	3 56	23 49	0 25	20 20	1 28	6 51	1 57	3 49	1 13	8 1	2 30	17 58	0 38	19 34	0 18	10 35	11 24	13 57	13 32	11 3	17 22	2 53			
S 10	22 3	4 57	4 33	23 54	0 32	20 2	1 29	7 1	1 57	3 45	1 13	8 2	2 30	17 57	0 38	19 34	0 18	10 35	11 24	13 57	13 33	11 5	17 22	2 54			
M11	21 54	8 40	4 59	23 57	0 39	19 44	1 30	7 11	1 58	3 41	1 12	8 2	2 30	17 56	0 38	19 33	0 18	10 35	11 24	13 57	13 34	11 7	17 23	2 54			
T 12	21 45	12 3	5 11	23 59	0 45	19 25	1 30	7 21	1 58	3 37	1 12	8 3	2 30	17 55	0 38	19 33	0 18	10 35	11 24	13 58	13 35	11 9	17 24	2 55			
W13	21 35	14 57	5 10	24 0	0 52	19 5	1 31	7 31	1 58	3 33	1 12	8 4	2 29	17 54	0 38	19 32	0 18	10 35	11 25	14 0	13 36	11 10	17 25	2 55			
T 14	21 25	17 15	4 56	24 0	0 58	18 45	1 32	7 41	1 59	3 28	1 12	8 5	2 29	17 53	0 38	19 32	0 18	10 35	11 25	14 1	13 37	11 12	17 26	2 56			
F 15	21 14	18 50	4 28	23 58	1 4	18 25	1 32	7 50	1 59	3 24	1 12	8 6	2 29	17 53	0 38	19 31	0 18	10 35	11 25	14 3	13 38	11 14	17 26	2 56			
S 16	21 4	19 32	3 47	23 55	1 10	18 3	1 33	8 0	2 0	3 20	1 12	8 7	2 28	17 52	0 38	19 31	0 18	10 35	11 25	14 5	13 39	11 16	17 27	2 57			
S 17	20 52	19 16	2 54	23 50	1 15	17 42	1 33	8 9	2 0	3 15	1 11	8 8	2 28	17 51	0 38	19 30	0 18	10 35	11 25	14 6	13 40	11 18	17 28	2 57			
M18	20 40	18 1	1 51	23 44	1 20	17 20	1 34	8 19	2 0	3 11	1 11	8 9	2 28	17 50	0 38	19 30	0 18	10 35	11 26	14 7	13 41	11 19	17 28	2 57			
T 19	20 28	15 47	0 41	23 37	1 25	16 57	1 34	8 28	2 1	3 6	1 11	8 10	2 28	17 49	0 38	19 29	0 18	10 35	11 26	14 7	13 42	11 21	17 29	2 58			
W20	20 16	12 41	0s32	23 29	1 30	16 34	1 34	8 37	2 1	3 2	1 11	8 11	2 27	17 48	0 38	19 29	0 18	10 36	11 26	14 7	13 43	11 23	17 30	2 58			
T 21	20 3	8 52	1 44	23 19	1 35	16 10	1 34	8 46	2 1	2 57	1 11	8 12	2 27	17 47	0 38	19 28	0 18	10 36	11 26	14 7	13 44	11 25	17 30	2 59			
F 22	19 49	4 33	2 52	23 7	1 39	15 46	1 34	8 55	2 2	2 52	1 11	8 13	2 27	17 46	0 38	19 28	0 18	10 36	11 26	14 7	13 45	11 27	17 31	3 0			
S 23	19 36	0n 3	3 50	22 55	1 43	15 22	1 34	9 3	2 2	2 48	1 10	8 14	2 26	17 45	0 38	19 27	0 18	10 36	11 27	14 6	13 46	11 28	17 31	3 0			
S 24	19 22	4 41	4 36	22 40	1 47	14 57	1 34	9 12	2 2	2 43	1 10	8 15	2 26	17 44	0 38	19 27	0 18	10 36	11 27	14 6	13 47	11 30	17 32	3 1			
M25	19 7	9 6	5 5	22 25	1 50	14 32	1 34	9 20	2 3	2 38	1 10	8 17	2 26	17 43	0 38	19 26	0 18	10 36	11 27	14 6	13 48	11 32	17 32	3 1			
T 26	18 53	13 1	5 16	22 8	1 53	14 6	1 34	9 29	2 3	2 34	1 10	8 18	2 26	17 42	0 38	19 26	0 18	10 36	11 27	14 6	13 50	11 34	17 33	3 2			
W27	18 38	16 12	5 7	21 49	1 56	13 40	1 34	9 37	2 3	2 29	1 10	8 19	2 25	17 41	0 38	19 25	0 18	10 36	11 28	14 6	13 51	11 36	17 33	3 2			
T 28	18 22	18 25	4 40	21 29	1 58	13 14	1 34	9 45	2 4	2 24	1 10	8 21	2 25	17 40	0 38	19 25	0 18	10 35	11 28	14 7	13 52	11 37	17 34	3 3			
F 29	18 6	19 27	3 55	21 8	2 0	12 47	1 33	9 53	2 4	2 19	1 10	8 22	2 25	17 39	0 38	19 24	0 18	10 35	11 28	14 7	13 53	11 39	17 34	3 3			
S 30	17 50	19 17	2 56	20 45	2 2	12 20	1 33	10 1	2 4	2 14	1 9	8 24	2 24	17 38	0 38	19 24	0 18	10 35	11 28	14 8	13 54	11 41	17 34	3 4			
S 31	17s34	17n55	1s48	20s20	2s 3	11s52	1s32	10s 9	2n 5	2s 9	1s 9	8n25	2s24	17s37	0s38	19s23	0n18	10s35	11n28	14n 8	13n55	11s43	17s35	3n 4			

ASTRODIENST EPHEMERIS for the year 1999

geocentric

MARCH 1999

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	10 33 26	9♂56'50	24♂31	27♂44	8♂46	10♂27	3♂36	29♂59	14♂18	3♂13	10♂27	22♂10	21♂16	19♂12	3♂40	M 1
T 2	10 37 22	10°57'03	7♂31	28°57	10° 0	10°38	3°50	0♂ 5	14°21	3°14	10°27	22♂ 9	21°13	19°19	3°42	T 2
W 3	10 41 19	11°57'14	20°17	0♂ 3	11°13	10°49	4° 4	0°11	14°24	3°16	10°28	22° 7	21°10	19°25	3°43	W 3
T 4	10 45 15	12°57'23	2♂49	1° 2	12°27	10°59	4°18	0°17	14°27	3°18	10°28	22° 4	21° 7	19°32	3°45	T 4
F 5	10 49 12	13°57'30	15° 9	1°54	13°40	11° 8	4°32	0°23	14°30	3°20	10°28	22° 1	21° 4	19°39	3°46	F 5
S 6	10 53 8	14°57'36	27°18	2°37	14°54	11°17	4°46	0°30	14°33	3°22	10°29	21°57	21° 0	19°45	3°47	S 6
S 7	10 57 5	15°57'40	9♂18	3°12	16° 7	11°25	5° 1	0°36	14°37	3°24	10°29	21°53	20°57	19°52	3°48	S 7
M 8	11 1 2	16°57'42	21°13	3°38	17°20	11°33	5°15	0°42	14°40	3°25	10°29	21°50	20°54	19°59	3°49	M 8
T 9	11 4 58	17°57'43	3♂ 5	3°55	18°34	11°40	5°29	0°48	14°43	3°27	10°29	21°48	20°51	20° 6	3°50	T 9
W10	11 8 55	18°57'42	15° 0	4°R 3	19°47	11°46	5°43	0°54	14°46	3°29	10°30	21°D47	20°48	20°12	3°51	W10
T11	11 12 51	19°57'39	27° 1	4° 2	21° 0	11°52	5°57	1° 1	14°49	3°31	10°30	21°47	20°45	20°19	3°52	T11
F12	11 16 48	20°57'35	9♂15	3°52	22°13	11°57	6°12	1° 7	14°52	3°32	10°30	21°48	20°41	20°26	3°52	F12
S13	11 20 44	21°57'29	21°44	3°34	23°26	12° 1	6°26	1°14	14°55	3°34	10°30	21°50	20°38	20°33	3°53	S13
S14	11 24 41	22°57'22	4♂34	3° 8	24°39	12° 5	6°40	1°20	14°58	3°36	10°R30	21°52	20°35	20°39	3°53	S14
M15	11 28 37	23°57'13	17°48	2°34	25°52	12° 8	6°55	1°27	15° 1	3°37	10°30	21°R52	20°32	20°46	3°53	M15
T16	11 32 34	24°57'02	1♂26	1°55	27° 4	12°10	7° 9	1°34	15° 4	3°39	10°30	21°52	20°29	20°53	3°R53	T16
W17	11 36 31	25°56'49	15°29	1°10	28°17	12°11	7°23	1°40	15° 6	3°41	10°30	21°50	20°25	20°59	3°53	W17
T18	11 40 27	26°56'34	29°52	0°20	29°30	12°12	7°38	1°47	15° 9	3°42	10°30	21°47	20°22	21° 6	3°53	T18
F19	11 44 24	27°56'17	14♂31	29♂28	0♂42	12°R12	7°52	1°54	15°12	3°44	10°29	21°42	20°19	21°13	3°53	F19
S20	11 48 20	28°55'58	29°18	28°33	1°55	12°11	8° 7	2° 1	15°15	3°45	10°29	21°36	20°16	21°20	3°53	S20
S21	11 52 17	29°55'37	14♂ 5	27°38	3° 7	12°10	8°21	2° 7	15°18	3°47	10°29	21°30	20°13	21°26	3°52	S21
M22	11 56 13	0♂55'14	28°44	26°43	4°20	12° 8	8°36	2°14	15°20	3°48	10°29	21°26	20°10	21°33	3°52	M22
T23	12 0 10	1°54'48	13♂11	25°50	5°32	12° 5	8°50	2°21	15°23	3°49	10°28	21°22	20° 6	21°40	3°51	T23
W24	12 4 6	2°54'21	27°21	24°59	6°44	12° 1	9° 5	2°28	15°26	3°51	10°28	21°D21	20° 3	21°46	3°50	W24
T25	12 8 3	3°53'50	11♂13	24°11	7°57	11°57	9°19	2°35	15°28	3°52	10°28	21°21	20° 0	21°53	3°49	T25
F26	12 12 0	4°53'18	24°47	23°28	9° 9	11°52	9°34	2°42	15°31	3°54	10°27	21°22	19°57	22° 0	3°48	F26
S27	12 15 56	5°52'43	8♂ 4	22°49	10°21	11°46	9°48	2°50	15°33	3°55	10°27	21°23	19°54	22° 7	3°47	S27
S28	12 19 53	6°52'06	21° 7	22°15	11°33	11°39	10° 3	2°57	15°36	3°56	10°26	21°R24	19°51	22°13	3°46	S28
M29	12 23 49	7°51'26	3♂57	21°47	12°44	11°31	10°17	3° 4	15°38	3°57	10°26	21°23	19°47	22°20	3°45	M29
T30	12 27 46	8°50'45	16°35	21°25	13°56	11°23	10°32	3°11	15°41	3°59	10°25	21°20	19°44	22°27	3°44	T30
W31	12 31 42	9♂50'01	29♂ 4	21♂ 8	15♂ 8	11♂14	10♂46	3♂18	15°43	4° 0	10♂25	21♂15	19♂41	22♂34	3♂42	W31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
M 1	7s50	13n33	0n13	0n 5	1n 4	2n46	0s47	12s53	2n11	0n25	1s 6	9n19	2s17	17s 9	0s38	19s 9
T 2	7 28	10 3	1 24	0 47	1 19	3 17	0 44	12 56	2 11	0 31	1 6	9 22	2 17	17 8	0 38	19 9
W 3	7 5	6 8	2 29	1 27	1 33	3 48	0 42	12 59	2 11	0 36	1 6	9 24	2 17	17 7	0 38	19 8
T 4	6 42	2 1	3 26	2 3	1 47	4 19	0 39	13 2	2 11	0 42	1 6	9 26	2 17	17 6	0 38	19 8
F 5	6 19	2s 6	4 12	2 37	2 2	4 50	0 36	13 5	2 11	0 48	1 6	9 28	2 17	17 5	0 38	19 8
S 6	5 55	6 4	4 45	3 6	2 15	5 21	0 34	13 8	2 11	0 53	1 6	9 31	2 16	17 4	0 38	19 7
S 7	5 32	9 45	5 6	3 32	2 28	5 52	0 31	13 10	2 11	0 59	1 6	9 33	2 16	17 3	0 38	19 7
M 8	5 9	13 1	5 14	3 54	2 41	6 22	0 28	13 13	2 11	1 5	1 6	9 35	2 16	17 3	0 38	19 6
T 9	4 46	15 44	5 8	4 12	2 52	6 53	0 25	13 15	2 11	1 10	1 6	9 38	2 16	17 2	0 38	19 6
W10	4 22	17 49	4 49	4 24	3 3	7 23	0 22	13 17	2 11	1 16	1 6	9 40	2 16	17 1	0 38	19 6
T11	3 59	19 8	4 17	4 33	3 12	7 53	0 20	13 19	2 11	1 22	1 6	9 42	2 16	17 0	0 38	19 5
F12	3 35	19 35	3 33	4 36	3 20	8 23	0 17	13 21	2 11	1 27	1 6	9 45	2 15	16 59	0 38	19 5
S13	3 11	19 5	2 38	4 35	3 27	8 53	0 14	13 22	2 11	1 33	1 6	9 47	2 15	16 58	0 38	19 4
S14	2 48	17 36	1 33	4 29	3 31	9 23	0 11	13 23	2 10	1 39	1 6	9 50	2 15	16 57	0 38	19 4
M15	2 24	15 9	0 22	4 18	3 34	9 52	0 8	13 25	2 10	1 44	1 6	9 52	2 15	16 57	0 38	19 4
T16	2 0	11 46	0s52	4 3	3 36	10 21	0 5	13 25	2 10	1 50	1 5	9 54	2 15	16 56	0 38	19 3
W17	1 37	7 39	2 5	3 45	3 35	10 50	0 1	13 26	2 9	1 56	1 5	9 57	2 15	16 55	0 38	19 3
T18	1 13	2 59	3 12	3 22	3 32	11 19	0n 2	13 27	2 9	2 2	1 5	9 59	2 14	16 54	0 38	19 3
F19	0 49	1n55	4 8	2 57	3 27	11 48	0 5	13 27	2 9	2 7	1 5	10 2	2 14	16 53	0 38	19 2
S20	0 25	6 44	4 47	2 29	3 20	12 16	0 8	13 27	2 8	2 13	1 5	10 4	2 14	16 53	0 38	19 2
S21	0 2	11 10	5 8	2 0	3 12	12 44	0 11	13 27	2 8	2 19	1 5	10 7	2 14	16 52	0 39	19 2
M22	0n22	14 52	5 8	1 29	3 2	13 11	0 14	13 27	2 7	2 24	1 5	10 9	2 14	16 51	0 39	19 1
T23	0 46	17 37	4 48	0 57	2 51	13 39	0 18	13 27	2 7	2 30	1 5	10 12	2 14	16 50	0 39	19 1
W24	1 9	19 13	4 11	0 26	2 38	14 6	0 21	13 26	2 6	2 36	1 5	10 14	2 14	16 49	0 39	19 1
T25	1 33	19 38	3 20	0s 6	2 25	14 32	0 24	13 26	2 6	2 42	1 5	10 17	2 13	16 49	0 39	19 0
F26	1 57	18 53	2 19	0 36	2 10	14 58	0 27	13 25	2 5	2 47	1 5	10 19	2 13	16 48	0 39	19 0
S27	2 20	17 6	1 12	1 5	1 55	15 24	0 31	13 23	2 4	2 53	1 5	10 22	2 13	16 47	0 39	19 0
S28	2 44	14 26	0 2	1 33	1 40	15 50	0 34	13 22	2 3	2 59	1 5	10 24	2 13	16 47	0 39	18 59
M29	3 7	11 6	1n 7	1 58	1 24	16 15	0 37	13 21	2 3	3 4	1 5	10 27	2 13	16 46	0 39	18 59
T30	3 30	7 19	2 12	2 21	1 8	16 40	0 41	13 19	2 2	3 10	1 5	10 29	2 13	16 45	0 39	18 59
W31	3n54	3n15	3n 9	2s42	0n53	17n 4	0n44	13s17	2n 1	3n16	1s 5	10n32	2s13	16s44	0s39	18s58

Julian Day Number = 2451238.5, Delta T = 63.53 sec
 Ecliptic obliquity = 23°26'15, Nutation = - 0°00'10, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°43'43, Lahiri = 23°50'43

ASTRODIENST EPHEMERIS for the year 1999

geocentric

APRIL 1999

00:00 UT

Day	Sid.t	☉	☾	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	12 35 39	10°49'15	11°23	20°R58	16°8'19	11°R 4	11°V 1	3°8'26	15°45	4°4 1	10°R24	21°R 8	19°Ω38	22°M40	3°R41	T 1	
F 2	12 39 35	11°48'27	23°33	20°D53	17°31	10°M54	11°15	3°33	15°48	4° 2	10°24	20°Ω59	19°35	22°47	3°39	F 2	
S 3	12 43 32	12°47'37	5°M36	20°X53	18°42	10°42	11°30	3°40	15°50	4° 3	10°23	20°49	19°31	22°54	3°37	S 3	
S 4	12 47 28	13°46'45	17°34	20°59	19°54	10°30	11°44	3°48	15°52	4° 4	10°22	20°39	19°28	23° 0	3°35	S 4	
M 5	12 51 25	14°45'52	29°27	21°11	21° 5	10°18	11°59	3°55	15°54	4° 5	10°22	20°29	19°25	23° 7	3°33	M 5	
T 6	12 55 22	15°44'56	11°18	21°27	22°16	10° 4	12°13	4° 2	15°57	4° 6	10°21	20°22	19°22	23°14	3°31	T 6	
W 7	12 59 18	16°43'59	23°12	21°49	23°27	9°50	12°28	4°10	15°59	4° 7	10°20	20°17	19°19	23°21	3°29	W 7	
T 8	13 3 15	17°43'00	5°31	22°15	24°38	9°35	12°42	4°17	16° 1	4° 8	10°19	20°14	19°16	23°27	3°27	T 8	
F 9	13 7 11	18°41'59	17°22	22°45	25°49	9°19	12°57	4°25	16° 3	4° 9	10°19	20°D13	19°12	23°34	3°25	F 9	
S 10	13 11 8	19°40'56	29°47	23°20	27° 0	9° 3	13°11	4°32	16° 5	4°10	10°18	20°13	19° 9	23°41	3°22	S 10	
S 11	13 15 4	20°39'52	12°33	23°58	28°10	8°46	13°26	4°40	16° 7	4°11	10°17	20°14	19° 6	23°47	3°20	S 11	
M12	13 19 1	21°38'46	25°45	24°41	29°21	8°29	13°40	4°47	16° 9	4°12	10°16	20°R14	19° 3	23°54	3°17	M12	
T 13	13 22 57	22°37'38	9°23	25°27	0°H31	8°11	13°55	4°55	16°11	4°13	10°15	20°12	19° 0	24° 1	3°15	T 13	
W14	13 26 54	23°36'28	23°31	26°16	1°42	7°52	14° 9	5° 2	16°13	4°13	10°14	20° 9	18°56	24° 8	3°12	W14	
T 15	13 30 51	24°35'16	8°V 5	27° 9	2°52	7°33	14°23	5°10	16°14	4°14	10°13	20° 2	18°53	24°14	3° 9	T 15	
F 16	13 34 47	25°34'03	23° 0	28° 5	4° 2	7°13	14°38	5°18	16°16	4°15	10°12	19°54	18°50	24°21	3° 6	F 16	
S 17	13 38 44	26°32'48	8°8	29° 3	5°12	6°53	14°52	5°25	16°18	4°16	10°11	19°44	18°47	24°28	3° 3	S 17	
S 18	13 42 40	27°31'30	23°18	0°V 5	6°22	6°32	15° 7	5°33	16°19	4°16	10°10	19°34	18°44	24°35	3° 0	S 18	
M19	13 46 37	28°30'11	8°H20	1° 9	7°32	6°11	15°21	5°40	16°21	4°17	10° 9	19°25	18°41	24°41	2°57	M19	
T 20	13 50 33	29°28'49	23° 5	2°16	8°42	5°50	15°35	5°48	16°23	4°17	10° 8	19°18	18°37	24°48	2°54	T 20	
W21	13 54 30	0°8'27	7°28	3°25	9°52	5°29	15°49	5°56	16°24	4°18	10° 7	19°14	18°34	24°55	2°51	W21	
T 22	13 58 26	1°26'00	21°26	4°37	11° 1	5° 7	16° 4	6° 3	16°26	4°18	10° 5	19°12	18°31	25° 1	2°47	T 22	
F 23	14 2 23	2°24'32	4°Ω59	5°51	12°10	4°45	16°18	6°11	16°27	4°19	10° 4	19°D12	18°28	25° 8	2°44	F 23	
S 24	14 6 20	3°23'01	18°10	7° 7	13°20	4°22	16°32	6°19	16°28	4°19	10° 3	19°R12	18°25	25°15	2°40	S 24	
S 25	14 10 16	4°21'29	1°H 2	8°25	14°29	4° 0	16°46	6°26	16°30	4°20	10° 2	19°12	18°22	25°22	2°37	S 25	
M26	14 14 13	5°19'54	13°38	9°46	15°38	3°38	17° 0	6°34	16°31	4°20	10° 1	19° 9	18°18	25°28	2°33	M26	
T 27	14 18 9	6°18'17	26° 1	11° 9	16°47	3°15	17°15	6°42	16°32	4°20	9°59	19° 5	18°15	25°35	2°30	T 27	
W28	14 22 6	7°16'38	8°Δ16	12°33	17°55	2°53	17°29	6°49	16°33	4°21	9°58	18°57	18°12	25°42	2°26	W28	
T 29	14 26 2	8°14'57	20°22	14° 0	19° 4	2°30	17°43	6°57	16°35	4°21	9°57	18°46	18° 9	25°48	2°22	T 29	
F 30	14 29 59	9°13'14	2°M24	15°V28	20°H12	2°M 8	17°V57	7°8	16°36	4°21	9°55	18°Ω34	18°Ω 6	25°M55	2°18	F 30	

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	4n17	0s53	3n56	3s 1	0n37	17n28	0n47	13s15	2n 0	3n21	1s 5	10n35	2s13	16s44	0s39	18s58	0n17
F 2	4 40	4 56	4 32	3 16	0 22	17 52	0 50	13 13	1 59	3 27	1 5	10 37	2 13	16 43	0 39	18 58	0 17
S 3	5 3	8 45	4 55	3 30	0 8	18 15	0 54	13 10	1 58	3 33	1 5	10 40	2 12	16 42	0 39	18 58	0 17
S 4	5 26	12 11	5 5	3 40	0s 7	18 38	0 57	13 7	1 57	3 39	1 5	10 42	2 12	16 42	0 39	18 57	0 17
M 5	5 49	15 7	5 2	3 49	0 21	19 0	1 0	13 5	1 56	3 44	1 5	10 45	2 12	16 41	0 39	18 57	0 17
T 6	6 12	17 25	4 46	3 54	0 34	19 22	1 4	13 1	1 54	3 50	1 5	10 47	2 12	16 41	0 39	18 57	0 17
W 7	6 35	18 59	4 17	3 57	0 46	19 43	1 7	12 58	1 53	3 55	1 5	10 50	2 12	16 40	0 39	18 57	0 17
T 8	6 57	19 43	3 37	3 58	0 58	20 4	1 10	12 55	1 52	4 1	1 5	10 53	2 12	16 39	0 39	18 56	0 17
F 9	7 20	19 34	2 46	3 57	1 10	20 24	1 13	12 51	1 50	4 7	1 5	10 55	2 12	16 39	0 39	18 56	0 17
S 10	7 42	18 27	1 47	3 53	1 21	20 44	1 16	12 48	1 49	4 12	1 5	10 58	2 12	16 38	0 39	18 56	0 17
S 11	8 4	16 23	0 41	3 47	1 31	21 3	1 20	12 44	1 47	4 18	1 5	11 0	2 12	16 38	0 39	18 56	0 17
M12	8 26	13 24	0s29	3 39	1 40	21 21	1 23	12 40	1 46	4 24	1 5	11 3	2 12	16 37	0 39	18 56	0 17
T 13	8 48	9 36	1 40	3 29	1 49	21 40	1 26	12 35	1 44	4 29	1 5	11 5	2 12	16 37	0 39	18 55	0 17
W14	9 10	5 8	2 48	3 17	1 57	21 57	1 29	12 31	1 42	4 35	1 5	11 8	2 12	16 36	0 39	18 55	0 17
T 15	9 32	0 15	3 46	3 3	2 5	22 14	1 32	12 26	1 41	4 40	1 5	11 11	2 11	16 36	0 39	18 55	0 17
F 16	9 53	4n45	4 30	2 47	2 12	22 31	1 35	12 22	1 39	4 46	1 5	11 13	2 11	16 35	0 39	18 55	0 17
S 17	10 14	9 32	4 56	2 29	2 18	22 46	1 38	12 17	1 37	4 51	1 5	11 16	2 11	16 35	0 39	18 55	0 17
S 18	10 36	13 43	5 2	2 10	2 24	23 2	1 41	12 12	1 35	4 57	1 5	11 18	2 11	16 34	0 39	18 55	0 17
M19	10 56	16 59	4 46	1 49	2 29	23 16	1 44	12 7	1 33	5 2	1 5	11 21	2 11	16 34	0 39	18 54	0 17
T 20	11 17	19 4	4 12	1 27	2 33	23 31	1 47	12 2	1 31	5 8	1 5	11 23	2 11	16 33	0 39	18 54	0 17
W21	11 38	19 52	3 22	1 3	2 37	23 44	1 50	11 57	1 29	5 13	1 5	11 26	2 11	16 33	0 39	18 54	0 17
T 22	11 58	19 24	2 22	0 37	2 40	23 57	1 52	11 52	1 27	5 19	1 5	11 29	2 11	16 32	0 40	18 54	0 17
F 23	12 19	17 49	1 15	0 10	2 43	24 9	1 55	11 46	1 25	5 24	1 6	11 31	2 11	16 32	0 40	18 54	0 17
S 24	12 39	15 18	0 6	0n18	2 45	24 21	1 58	11 41	1 22	5 29	1 6	11 34	2 11	16 32	0 40	18 54	0 17
S 25	12 58	12 5	1n 2	0 47	2 47	24 32	2 0	11 36	1 20	5 35	1 6	11 36	2 11	16 31	0 40	18 54	0 17
M26	13 18	8 22	2 6	1 18	2 48	24 42	2 3	11 30	1 18	5 40	1 6	11 39	2 11	16 31	0 40	18 54	0 17
T 27	13 37	4 22	3 2	1 50	2 48	24 52	2 5	11 25	1 15	5 46	1 6	11 41	2 11	16 31	0 40	18 54	0 17
W28	13 56	0 13	3 48	2 23	2 48	25 1	2 8	11 20	1 13	5 51	1 6	11 44	2 11	16 30	0 40	18 54	0 17
T 29	14 15	3s52	4 24	2 57	2 47	25 9	2 10	11 14	1 10	5 56	1 6	11 46	2 11	16 30	0 40	18 53	0 17
F 30	14n34	7s47	4n48	3n33	2s45	25n17	2n13	11s 9	1n 8	6n 1	1s 6	11n49	2s11	16s30	0s40	18s53	0n17

Julian Day Number = 2451269.5, Delta T = 63.57 sec

Ecliptic obliquity = 23°26'15, Nutation = - 0°00'12, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 24°43'47, Lahiri = 23°50'48

ASTRODIENST EPHEMERIS for the year 1999

geocentric

MAY 1999

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	14 33 55	10♈11'30	14♉21	16♊59	21♋20	1°R46	18♌11	7♍12	16♎37	4♏22	9°R54	18°R20	18♏2	26♐2	2°R14	S 1
S 2	14 37 52	11° 9'44	26°14	18°31	22°29	1♌23	18°25	7°20	16°38	4°22	9♊53	18♏6	17°59	26° 9	2♊11	S 2
M 3	14 41 49	12° 7'56	8♊6	20° 6	23°37	1° 2	18°39	7°28	16°39	4°22	9°51	17°53	17°56	26°15	2° 7	M 3
T 4	14 45 45	13° 6'06	19°59	21°42	24°44	0°40	18°52	7°35	16°40	4°22	9°50	17°42	17°53	26°22	2° 3	T 4
W 5	14 49 42	14° 4'15	1♈54	23°20	25°52	0°19	19° 6	7°43	16°40	4°22	9°49	17°34	17°50	26°29	1°58	W 5
T 6	14 53 38	15° 2'23	13°54	25° 0	27° 0	29♊58	19°20	7°51	16°41	4°22	9°47	17°29	17°47	26°36	1°54	T 6
F 7	14 57 35	16° 0'29	26° 4	26°42	28° 7	29°37	19°34	7°58	16°42	4°R22	9°46	17°26	17°43	26°42	1°50	F 7
S 8	15 1 31	16°58'33	8♊28	28°26	29°14	29°17	19°47	8° 6	16°43	4°22	9°44	17°25	17°40	26°49	1°46	S 8
S 9	15 5 28	17°56'37	21°10	0♈12	0♉21	28°58	20° 1	8°13	16°43	4°22	9°43	17°25	17°37	26°56	1°42	S 9
M10	15 9 24	18°54'38	4♊16	1°59	1°28	28°38	20°15	8°21	16°44	4°22	9°41	17°25	17°34	27° 2	1°38	M10
T 11	15 13 21	19°52'39	17°49	3°49	2°34	28°20	20°28	8°29	16°45	4°22	9°40	17°23	17°31	27° 9	1°33	T 11
W12	15 17 18	20°50'38	1♊51	5°40	3°41	28° 2	20°42	8°36	16°45	4°22	9°38	17°18	17°28	27°16	1°29	W12
T 13	15 21 14	21°48'36	16°22	7°34	4°47	27°44	20°55	8°44	16°46	4°22	9°37	17°12	17°24	27°23	1°25	T 13
F 14	15 25 11	22°46'32	1♈18	9°29	5°53	27°27	21° 9	8°51	16°46	4°21	9°35	17° 3	17°21	27°29	1°21	F 14
S 15	15 29 7	23°44'27	16°31	11°26	6°59	27°11	21°22	8°59	16°46	4°21	9°34	16°52	17°18	27°36	1°16	S 15
S 16	15 33 4	24°42'21	1♉50	13°25	8° 5	26°55	21°35	9° 6	16°47	4°21	9°32	16°41	17°15	27°43	1°12	S 16
M17	15 37 0	25°40'13	17° 5	15°26	9°10	26°41	21°48	9°14	16°47	4°20	9°30	16°31	17°12	27°49	1° 7	M17
T 18	15 40 57	26°38'04	2♈4	17°29	10°16	26°26	22° 2	9°21	16°47	4°20	9°29	16°24	17° 8	27°56	1° 3	T 18
W19	15 44 53	27°35'53	16°40	19°33	11°21	26°13	22°15	9°29	16°47	4°20	9°27	16°19	17° 5	28° 3	0°59	W19
T 20	15 48 50	28°33'40	0♉48	21°39	12°26	26° 0	22°28	9°36	16°48	4°19	9°26	16°16	17° 2	28°10	0°54	T 20
F 21	15 52 47	29°31'26	14°28	23°46	13°30	25°49	22°41	9°43	16°48	4°19	9°24	16°D15	16°59	28°16	0°50	F 21
S 22	15 56 43	0♊29'10	27°42	25°54	14°35	25°37	22°54	9°51	16°R48	4°18	9°23	16°R15	16°56	28°23	0°45	S 22
S 23	16 0 40	1°26'52	10♊33	28° 4	15°39	25°27	23° 7	9°58	16°48	4°18	9°21	16°15	16°53	28°30	0°41	S 23
M24	16 4 36	2°24'33	23° 4	0♊14	16°43	25°18	23°19	10° 5	16°47	4°17	9°19	16°13	16°49	28°37	0°37	M24
T25	16 8 33	3°22'12	5♊22	2°26	17°46	25° 9	23°32	10°13	16°47	4°17	9°18	16° 9	16°46	28°43	0°32	T25
W26	16 12 29	4°19'50	17°28	4°37	18°50	25° 1	23°45	10°20	16°47	4°16	9°16	16° 3	16°43	28°50	0°28	W26
T 27	16 16 26	5°17'26	29°28	6°49	19°53	24°54	23°58	10°27	16°47	4°16	9°14	15°54	16°40	28°57	0°23	T 27
F 28	16 20 22	6°15'01	11♌23	9° 1	20°55	24°48	24°10	10°34	16°47	4°15	9°13	15°43	16°37	29° 3	0°19	F 28
S 29	16 24 19	7°12'35	23°16	11°12	21°58	24°42	24°23	10°42	16°46	4°14	9°11	15°30	16°33	29°10	0°15	S 29
S 30	16 28 16	8°10'07	5♊8	13°23	23° 0	24°38	24°35	10°49	16°46	4°14	9°10	15°18	16°30	29°17	0°10	S 30
M31	16 32 12	9♊7'39	17♊2	15♊33	24♊2	24♊34	24♊47	10♊56	16♎46	4♏13	9♊8	15♏6	16♏27	29♐24	0♊6	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	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat
S 1	14n52	11s23	4n59	4n 9	2s44	25n24	2n15	11s 4	1n 5	6n 7	1s 6	11n51	2s11	16s29	0s40	18s53	0n17	10s11	11n52	15n20	15n25	14s18	16s45	3n56	4n00
S 2	15 11	14 30	4 57	4 46	2 41	25 30	2 17	10 58	1 3	6 12	1 6	11 54	2 11	16 29	0 40	18 53	0 17	10 11	11 52	15 24	15 26	14 20	16 44	3 56	4 00
M 3	15 29	17 1	4 42	5 25	2 38	25 36	2 19	10 53	1 0	6 17	1 6	11 56	2 11	16 29	0 40	18 53	0 17	10 11	11 52	15 28	15 27	14 22	16 43	3 57	4 01
T 4	15 46	18 50	4 14	6 4	2 35	25 41	2 21	10 48	0 58	6 22	1 6	11 59	2 11	16 29	0 40	18 53	0 17	10 10	11 52	15 31	15 28	14 23	16 41	3 57	4 02
W 5	16 4	19 50	3 36	6 44	2 30	25 45	2 23	10 43	0 55	6 28	1 6	12 1	2 11	16 28	0 40	18 53	0 17	10 10	11 52	15 34	15 29	14 25	16 40	3 58	4 03
T 6	16 21	19 56	2 47	7 25	2 26	25 49	2 25	10 38	0 52	6 33	1 6	12 4	2 11	16 28	0 40	18 53	0 17	10 10	11 52	15 36	15 30	14 27	16 39	3 58	4 04
F 7	16 38	19 8	1 50	8 6	2 21	25 52	2 27	10 34	0 50	6 38	1 6	12 6	2 11	16 28	0 40	18 53	0 17	10 10	11 53	15 37	15 31	14 28	16 38	3 59	4 05
S 8	16 54	17 23	0 47	8 49	2 15	25 54	2 28	10 29	0 47	6 43	1 6	12 8	2 11	16 28	0 40	18 53	0 17	10 9	11 53	15 37	15 32	14 30	16 37	3 59	4 06
S 9	17 11	14 45	0s20	9 32	2 9	25 56	2 30	10 25	0 44	6 48	1 6	12 11	2 11	16 28	0 40	18 53	0 17	10 9	11 53	15 37	15 33	14 31	16 36	3 59	4 07
M10	17 27	11 18	1 28	10 15	2 2	25 57	2 31	10 20	0 42	6 53	1 6	12 13	2 11	16 28	0 40	18 53	0 17	10 9	11 53	15 37	15 34	14 33	16 34	4 0	4 08
T 11	17 42	7 10	2 33	10 59	1 55	25 57	2 33	10 16	0 39	6 58	1 7	12 16	2 11	16 27	0 40	18 53	0 17	10 8	11 53	15 38	15 35	14 35	16 33	4 0	4 09
W12	17 58	2 30	3 32	11 43	1 48	25 57	2 34	10 12	0 36	7 3	1 7	12 18	2 11	16 27	0 40	18 53	0 17	10 8	11 53	15 39	15 36	14 36	16 32	4 0	4 10
T 13	18 13	2n27	4 19	12 28	1 40	25 56	2 35	10 9	0 34	7 8	1 7	12 20	2 11	16 27	0 40	18 53	0 17	10 8	11 53	15 41	15 37	14 38	16 31	4 0	4 11
F 14	18 28	7 24	4 49	13 12	1 31	25 55	2 36	10 5	0 31	7 13	1 7	12 23	2 11	16 27	0 40	18 53	0 17	10 8	11 53	15 44	15 38	14 40	16 30	4 1	4 12
S 15	18 42	11 58	5 0	13 57	1 23	25 52	2 37	10 2	0 28	7 18	1 7	12 25	2 11	16 27	0 40	18 53	0 17	10 7	11 53	15 47	15 39	14 41	16 28	4 1	4 13
S 16	18 57	15 47	4 50	14 42	1 13	25 49	2 38	9 58	0 26	7 23	1 7	12 27	2 11	16 27	0 40	18 54	0 17	10 7	11 53	15 50	15 40	14 43	16 27	4 2	4 14
M17	19 11	18 30	4 19	15 27	1 4	25 46	2 39	9 56	0 23	7 28	1 7	12 30	2 11	16 27	0 40	18 54	0 17	10 7	11 53	15 53	15 41	14 45	16 26	4 2	4 15
T 18	19 24	19 54	3 31	16 11	0 54	25 42	2 40	9 53	0 21	7 32	1 7	12 32	2 11	16 27	0 41	18 54	0 17	10 7	11 53	15 55	15 42	14 46	16 25	4 2	4 16
W19	19 37	19 55	2 30	16 55	0 44	25 37	2 40	9 50	0 18	7 37	1 7	12 34	2 11	16 27	0 41	18 54	0 17	10 7	11 53	15 57	15 43	14 48	16 24	4 3	4 17
T 20	19 50	18 40	1 21	17 38	0 34	25 31	2 41	9 48	0 15	7 42	1 7	12 37	2 11	16 27	0 41	18 54	0 17	10 6	11 53	15 58	15 44	14 49	16 22	4 3	4 18
F 21	20 3	16 20	0 9	18 20	0 23	25 25	2 41	9 46	0 13	7 47	1 7	12 39	2 11	16 27	0 41	18 54	0 17	10 6	11 53	15 58	15 45	14 51	16 21	4 3	4 19
S 22	20 15	13 13	1n 0	19 2	0 13	25 19	2 41	9 45	0 10	7 51	1 8	12 41	2 11	16 27	0 41	18 54	0 17	10 6	11 53	15 58	15 46	14 53	16 20	4 3	4 20
S 23	20 27	9 32	2 5	19 42	0 2	25 11	2 41	9 43	0 8	7 56	1 8	12 43	2 11	16 27	0 41	18 54	0 17	10 6	11 53	15 58	15 47	14 54	16 19	4 4	4 21
M24	20 38	5 32	3 2	20 20	0n 8	25 4	2 41	9 42	0 5	8 1	1 8	12 46	2 11	16 27	0 41	18 54	0 17	10 6	11 53	15 58	15 48	14 56	16 18	4 4	4 22
T 25	20 50	1 23	3 49	20 57	0 19	24 55	2 41	9 41	0 3	8 5	1 8	12 48	2 11	16 27	0 41	18 54	0 17	10 5	11 53	16 0	15 49	14 57	16 17	4 4	4 23
W26	21 0	2s46	4 25	21 32	0 29	24 46	2 41	9 41	0 1	8 10	1 8	12 50	2 12	16 27	0 41	18 55	0 17	10 5	11 53	16 2	15 49	14 59	16 16	4 4	4 24
T 27	21 11	6 46	4 49	22 6	0 39	24 37	2 41	9 40	0s 2	8 14	1 8	12 52	2 12	16 27	0 41	18 55	0 17	10 5	11 53	16 4	15 50	15 1	16 15	4 5	4 25
F 28	21 21	10 28	5 1	22 36	0 49	24 27	2 40	9 40	0 4	8 19	1 8	12 54	2 12	16 27	0 41	18 55	0 17	10 5	11 53	16 8	15 51	15 2	16 13	4 5	4 26
S 29	21 31	13 46	4 59	23 5	0 58	24 16	2 39	9 40	0 7	8 23	1 8	12 57	2 12	16 28	0 41	18 55	0 17	10 5	11 53	16 11	15 52	15 4	16 12	4 5	4 27
S 30	21 40	16 30	4 44	23 31	1 7	24 5	2 38	9 41	0 9	8 28	1 8	12 59	2 12	16 28	0 41	18 55	0 17	10 4	11 53	16 15	15 53	15 5	16 11	4 5	4 28
M31	21n49	18s33	4n17	23n55	1n16	23n53	2n38	9s41	0s11	8n32	1s 9	13n 1	2s12	16s28	0s41	18s55	0n17	10s 4	11n53	16n18	15n54	15s 7	16s10	4n	4 5

ASTRODIENST EPHEMERIS for the year 1999
geocentric

JUNE 1999

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	16 36 9	10 ^{II} 5'09	28 [♂] 57	17 ^{II} 42	25 [♂] 4	24°R31	24 [♀] 59	11 [♂] 3	16°R45	4°R12	9°R 6	14°R56	16 [♂] 24	29 [♂] 30	0°R 2	T 1
W 2	16 40 5	11° 2'38	10 [♂] 58	19°49	26° 5	24 [♂] 29	25°12	11°10	16 [♂] 45	4 [♂] 11	9 [♂] 5	14 [♂] 49	16°21	29°37	29 [♂] 57	W 2
T 3	16 44 2	12° 0'07	23° 4	21°55	27° 6	24°27	25°24	11°17	16°44	4°11	9° 3	14°44	16°18	29°44	29°53	T 3
F 4	16 47 58	12°57'35	5 [♂] 20	23°59	28° 6	24°D27	25°36	11°24	16°43	4°10	9° 1	14°42	16°14	29°50	29°49	F 4
S 5	16 51 55	13°55'01	17°48	26° 1	29° 7	24°27	25°48	11°31	16°43	4° 9	9° 0	14°D42	16°11	29°57	29°45	S 5
S 6	16 55 51	14°52'27	0 [♂] 32	28° 1	0 [♂] 6	24°28	26° 0	11°38	16°42	4° 8	8°58	14°42	16° 8	0 [♂] 4	29°41	S 6
M 7	16 59 48	15°49'53	13°36	29°59	1° 6	24°30	26°11	11°44	16°41	4° 7	8°56	14°R43	16° 5	0°11	29°37	M 7
T 8	17 3 45	16°47'18	27° 4	1 [♂] 54	2° 5	24°32	26°23	11°51	16°41	4° 6	8°55	14°43	16° 2	0°17	29°33	T 8
W 9	17 7 41	17°44'42	10 [♀] 58	3°47	3° 4	24°36	26°35	11°58	16°40	4° 5	8°53	14°40	15°59	0°24	29°28	W 9
T 10	17 11 38	18°42'06	25°18	5°38	4° 2	24°40	26°46	12° 5	16°39	4° 4	8°52	14°36	15°55	0°31	29°24	T 10
F 11	17 15 34	19°39'29	10 [♂] 2	7°26	5° 0	24°44	26°57	12°11	16°38	4° 3	8°50	14°30	15°52	0°37	29°21	F 11
S 12	17 19 31	20°36'51	25° 4	9°12	5°58	24°50	27° 9	12°18	16°37	4° 2	8°48	14°22	15°49	0°44	29°17	S 12
S 13	17 23 27	21°34'13	10 ^{II} 16	10°55	6°55	24°56	27°20	12°24	16°36	4° 1	8°47	14°14	15°46	0°51	29°13	S 13
M14	17 27 24	22°31'35	25°27	12°36	7°51	25° 3	27°31	12°31	16°35	4° 0	8°45	14° 7	15°43	0°58	29° 9	M14
T 15	17 31 20	23°28'56	10 [♂] 27	14°14	8°47	25°11	27°42	12°37	16°34	3°59	8°44	14° 2	15°39	1° 4	29° 5	T 15
W16	17 35 17	24°26'16	25° 8	15°49	9°43	25°19	27°53	12°44	16°33	3°58	8°42	13°58	15°36	1°11	29° 2	W16
T 17	17 39 14	25°23'35	9 [♂] 23	17°22	10°38	25°28	28° 4	12°50	16°32	3°57	8°41	13°D57	15°33	1°18	28°58	T 17
F 18	17 43 10	26°20'53	23°10	18°53	11°33	25°38	28°15	12°57	16°30	3°55	8°39	13°57	15°30	1°25	28°54	F 18
S 19	17 47 7	27°18'11	6 [♂] 30	20°20	12°27	25°49	28°25	13° 3	16°29	3°54	8°38	13°58	15°27	1°31	28°51	S 19
S 20	17 51 3	28°15'27	19°25	21°45	13°20	26° 0	28°36	13° 9	16°28	3°53	8°36	13°59	15°24	1°38	28°47	S 20
M21	17 55 0	29°12'43	1 [♂] 59	23° 8	14°13	26°11	28°46	13°15	16°26	3°52	8°35	13°R59	15°20	1°45	28°44	M21
T 22	17 58 56	0 [♂] 9'58	14°16	24°27	15° 5	26°24	28°57	13°21	16°25	3°50	8°33	13°58	15°17	1°51	28°41	T 22
W23	18 2 53	1° 7'13	26°21	25°44	15°57	26°37	29° 7	13°27	16°24	3°49	8°32	13°55	15°14	1°58	28°37	W23
T 24	18 6 49	2° 4'27	8 [♂] 18	26°58	16°48	26°50	29°17	13°33	16°22	3°48	8°30	13°51	15°11	2° 5	28°34	T 24
F 25	18 10 46	3° 1'40	20°11	28° 9	17°38	27° 4	29°27	13°39	16°21	3°46	8°29	13°44	15° 8	2°12	28°31	F 25
S 26	18 14 43	3°58'53	2 [♂] 3	29°17	18°27	27°19	29°37	13°45	16°19	3°45	8°27	13°38	15° 5	2°18	28°28	S 26
S 27	18 18 39	4°56'05	13°57	0 [♂] 22	19°16	27°35	29°47	13°51	16°17	3°44	8°26	13°30	15° 1	2°25	28°25	S 27
M28	18 22 36	5°53'17	25°54	1°24	20° 4	27°51	29°56	13°56	16°16	3°42	8°24	13°24	14°58	2°32	28°22	M28
T 29	18 26 32	6°50'29	7 [♂] 57	2°23	20°52	28° 7	0 [♂] 6	14° 2	16°14	3°41	8°23	13°18	14°55	2°38	28°19	T 29
W30	18 30 29	7 [♂] 47'40	20 [♂] 6	3 [♂] 19	21 [♂] 38	28 [♂] 24	0 [♂] 15	14 [♂] 8	16 [♂] 13	3 [♂] 40	8 [♂] 22	13 [♂] 14	14 [♂] 52	2 [♂] 45	28 [♂] 17	W30

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	21n58	19s48	3n38	24n15	1n24	23n41	2n36	9s42	0s13	8n37	1 s 9	13n 3	2s12	16s28	0s41	18s56	0n17	10s 4	11n52	16n21	15n55	15s 9	16s 9	4n 6	
W 2	22 6	20 10	2 50	24 33	1 31	23 28	2 35	9 44	0 16	8 41	1 9	13 5	2 12	16 28	0 41	18 56	0 17	10 4	11 52	16 23	15 56	15 10	16 8	4 6	
T 3	22 14	19 37	1 53	24 49	1 38	23 15	2 34	9 45	0 18	8 45	1 9	13 7	2 12	16 28	0 41	18 56	0 17	10 4	11 52	16 25	15 57	15 12	16 7	4 6	
F 4	22 21	18 8	0 50	25 1	1 43	23 1	2 32	9 47	0 20	8 49	1 9	13 9	2 12	16 29	0 41	18 56	0 17	10 4	11 52	16 25	15 58	15 13	16 6	4 6	
S 5	22 28	15 46	0s17	25 11	1 49	22 47	2 31	9 49	0 22	8 54	1 9	13 11	2 12	16 29	0 41	18 56	0 17	10 4	11 52	16 25	15 59	15 15	16 5	4 6	
S 6	22 35	12 35	1 24	25 18	1 53	22 33	2 29	9 51	0 24	8 58	1 9	13 13	2 12	16 29	0 41	18 57	0 17	10 4	11 52	16 25	16 0	15 17	16 4	4 6	
M 7	22 41	8 44	2 28	25 23	1 57	22 18	2 27	9 54	0 26	9 2	1 9	13 15	2 13	16 29	0 41	18 57	0 17	10 3	11 52	16 25	16 1	15 18	16 3	4 7	
T 8	22 47	4 20	3 27	25 25	2 0	22 2	2 25	9 57	0 28	9 6	1 10	13 17	2 13	16 30	0 41	18 57	0 17	10 3	11 52	16 25	16 2	15 20	16 2	4 7	
W 9	22 52	0n26	4 15	25 25	2 2	21 47	2 22	10 0	0 30	9 10	1 10	13 19	2 13	16 30	0 41	18 57	0 17	10 3	11 51	16 26	16 3	15 21	16 1	4 7	
T 10	22 57	5 18	4 49	25 22	2 3	21 30	2 20	10 3	0 32	9 14	1 10	13 21	2 13	16 30	0 41	18 58	0 17	10 3	11 51	16 27	16 4	15 23	16 0	4 7	
F 11	23 2	10 0	5 5	25 18	2 4	21 14	2 17	10 6	0 34	9 18	1 10	13 23	2 13	16 30	0 41	18 58	0 17	10 3	11 51	16 29	16 5	15 25	15 59	4 7	
S 12	23 6	14 10	5 1	25 11	2 4	20 57	2 14	10 10	0 36	9 22	1 10	13 25	2 13	16 31	0 41	18 58	0 17	10 3	11 51	16 31	16 6	15 26	15 58	4 7	
S 13	23 10	17 27	4 35	25 2	2 3	20 40	2 11	10 14	0 38	9 26	1 10	13 27	2 13	16 31	0 41	18 58	0 17	10 3	11 51	16 33	16 7	15 28	15 57	4 7	
M14	23 14	19 31	3 50	24 51	2 1	20 22	2 8	10 18	0 39	9 30	1 10	13 29	2 13	16 32	0 42	18 59	0 17	10 3	11 51	16 35	16 8	15 29	15 57	4 7	
T 15	23 17	20 12	2 50	24 39	1 59	20 4	2 5	10 23	0 41	9 34	1 11	13 30	2 13	16 32	0 42	18 59	0 17	10 3	11 50	16 37	16 8	15 31	15 56	4 7	
W16	23 19	19 28	1 40	24 25	1 56	19 46	2 1	10 28	0 43	9 37	1 11	13 32	2 13	16 32	0 42	18 59	0 17	10 3	11 50	16 38	16 9	15 32	15 55	4 7	
T 17	23 21	17 31	0 25	24 10	1 52	19 27	1 57	10 32	0 45	9 41	1 11	13 34	2 14	16 33	0 42	18 59	0 17	10 3	11 50	16 39	16 10	15 34	15 54	4 7	
F 18	23 23	14 35	0n50	23 53	1 48	19 8	1 54	10 38	0 46	9 45	1 11	13 36	2 14	16 33	0 42	19 0	0 17	10 3	11 50	16 38	16 11	15 36	15 53	4 7	
S 19	23 25	10 58	1 59	23 36	1 43	18 49	1 49	10 43	0 48	9 48	1 11	13 38	2 14	16 33	0 42	19 0	0 17	10 3	11 50	16 38	16 12	15 37	15 52	4 7	
S 20	23 26	6 57	3 0	23 17	1 37	18 30	1 45	10 48	0 49	9 52	1 11	13 39	2 14	16 34	0 42	19 0	0 17	10 3	11 49	16 38	16 13	15 39	15 52	4 7	
M21	23 26	2 44	3 50	22 57	1 31	18 10	1 41	10 54	0 51	9 55	1 11	13 41	2 14	16 34	0 42	19 1	0 17	10 3	11 49	16 38	16 14	15 40	15 51	4 7	
T 22	23 26	1s30	4 29	22 36	1 24	17 50	1 36	11 0	0 53	9 59	1 12	13 43	2 14	16 35	0 42	19 1	0 17	10 3	11 49	16 38	16 15	15 42	15 50	4 7	
W23	23 26	5 35	4 55	22 14	1 16	17 30	1 31	11 6	0 54	10 2	1 12	13 44	2 14	16 35	0 42	19 1	0 17	10 3	11 49	16 39	16 16	15 43	15 50	4 7	
T 24	23 25	9 25	5 8	21 52	1 8	17 10	1 26	11 12	0 56	10 6	1 12	13 46	2 15	16 36	0 42	19 1	0 17	10 3	11 48	16 40	16 17	15 45	15 49	4 7	
F 25	23 24	12 51	5 7	21 29	0 59	16 50	1 21	11 19	0 57	10 9	1 12	13 48	2 15	16 36	0 42	19 2	0 17	10 3	11 48	16 42	16 18	15 46	15 48	4 7	
S 26	23 23	15 46	4 53	21 6	0 49	16 29	1 15	11 26	0 58	10 12	1 12	13 49	2 15	16 37	0 42	19 2	0 17	10 3	11 48	16 44	16 19	15 48	15 48	4 7	
S 27	23 21	18 3	4 27	20 42	0 39	16 9	1 10	11 32	1 0	10 16	1 12	13 51	2 15	16 37	0 42	19 2	0 17	10 3	11 48	16 46	16 20	15 49	15 47	4 7	
M28	23 18	19 34	3 49	20 19	0 29	15 48	1 4	11 39	1 1	10 19	1 13	13 52	2 15	16 38	0 42	19 3	0 17	10 3	11 47	16 48	16 21	15 51	15 46	4 7	
T 29	23 16	20 32	3 0	19 55	0 18	15 27	0 58	11 47	1 1	10 22	1 13	13 54	2 15	16 38	0 42	19 3	0 17	10 3	11 47	16 49	16 22	15 53	15 46	4 7	
W30	23n12	19s55	2n 3	19n31	0n 6	15n 6	0n51	11s54	1s 4	10n25	1s13	13n55	2s15	16s39	0s42	19s 3	0n17	10s 3	11n47	16n51	16n22	15s54	15s45	4n 7	

ASTRODIENST EPHEMERIS for the year 1999

geocentric

JULY 1999

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	18 34 25	8°44'52	2°25	4°11	22°24	28°42	0°24	14°13	16°R11	3°R38	8°R20	13°R12	14°49	2°52	28°R14	T 1
F 2	18 38 22	9°42'03	14°53	4°59	23° 8	29° 0	0°34	14°19	16°R 9	3°R37	8°R19	13°D12	14°45	2°59	28°R11	F 2
S 3	18 42 18	10°39'14	27°34	5°45	23°52	29°18	0°43	14°24	16° 7	3°35	8°18	13°R13	14°42	3° 5	28° 9	S 3
S 4	18 46 15	11°36'26	10°28	6°26	24°35	29°37	0°52	14°29	16° 6	3°34	8°16	13°14	14°39	3°12	28° 6	S 4
M 5	18 50 12	12°33'37	23°39	7° 3	25°17	29°57	1° 0	14°35	16° 4	3°32	8°15	13°15	14°36	3°19	28° 4	M 5
T 6	18 54 8	13°30'49	7°9	7°37	25°58	0°17	1° 9	14°40	16° 2	3°31	8°14	13°R16	14°33	3°25	28° 2	T 6
W 7	18 58 5	14°28'01	20°58	8° 6	26°37	0°37	1°18	14°45	16° 0	3°29	8°13	13°16	14°30	3°32	28° 0	W 7
T 8	19 2 1	15°25'14	5°8	8°31	27°16	0°58	1°26	14°50	15°58	3°28	8°11	13°15	14°26	3°39	27°58	T 8
F 9	19 5 58	16°22'27	19°36	8°52	27°54	1°20	1°34	14°55	15°56	3°26	8°10	13°13	14°23	3°46	27°56	F 9
S 10	19 9 54	17°19'40	4°19	9° 8	28°30	1°41	1°42	15° 0	15°54	3°25	8° 9	13°10	14°20	3°52	27°54	S 10
S 11	19 13 51	18°16'54	19°10	9°20	29° 5	2° 4	1°50	15° 5	15°52	3°23	8° 8	13° 6	14°17	3°59	27°52	S 11
M12	19 17 47	19°14'08	4°3	9°27	29°39	2°27	1°58	15° 9	15°50	3°22	8° 7	13° 3	14°14	4° 6	27°50	M12
T 13	19 21 44	20°11'22	18°49	9°R29	0°12	2°50	2° 6	15°14	15°48	3°20	8° 6	13° 1	14°11	4°12	27°48	T 13
W14	19 25 41	21° 8'37	3°12	9°27	0°43	3°13	2°13	15°19	15°46	3°19	8° 5	13° 0	14° 7	4°19	27°47	W14
T 15	19 29 37	22° 5'52	17°32	9°20	1°13	3°37	2°21	15°23	15°44	3°17	8° 3	13°D 0	14° 4	4°26	27°45	T 15
F 16	19 33 34	23° 3'07	1°20	9° 8	1°41	4° 2	2°28	15°28	15°42	3°15	8° 2	13° 0	14° 1	4°33	27°44	F 16
S 17	19 37 30	24° 0'22	14°43	8°51	2° 8	4°27	2°35	15°32	15°39	3°14	8° 1	13° 2	13°58	4°39	27°43	S 17
S 18	19 41 27	24°57'37	27°42	8°30	2°33	4°52	2°42	15°36	15°37	3°12	8° 0	13° 3	13°55	4°46	27°42	S 18
M19	19 45 23	25°54'52	10°20	8° 5	2°56	5°17	2°49	15°40	15°35	3°11	7°59	13° 4	13°51	4°53	27°41	M19
T 20	19 49 20	26°52'08	22°40	7°35	3°18	5°43	2°56	15°44	15°33	3° 9	7°59	13°R 5	13°48	4°59	27°40	T 20
W21	19 53 16	27°49'23	4°46	7° 2	3°38	6°10	3° 2	15°48	15°31	3° 7	7°58	13° 5	13°45	5° 6	27°39	W21
T 22	19 57 13	28°46'39	16°44	6°26	3°56	6°36	3° 8	15°52	15°28	3° 6	7°57	13° 4	13°42	5°13	27°38	T 22
F 23	20 1 10	29°43'56	28°37	5°47	4°12	7° 3	3°15	15°56	15°26	3° 4	7°56	13° 2	13°39	5°20	27°37	F 23
S 24	20 5 6	0°41'12	10°29	5° 7	4°27	7°31	3°21	16° 0	15°24	3° 2	7°55	13° 1	13°36	5°26	27°37	S 24
S 25	20 9 3	1°38'29	22°25	4°24	4°39	7°59	3°26	16° 4	15°22	3° 1	7°54	12°59	13°32	5°33	27°36	S 25
M26	20 12 59	2°35'47	4°28	3°42	4°49	8°27	3°32	16° 7	15°19	2°59	7°54	12°58	13°29	5°40	27°36	M26
T 27	20 16 56	3°33'05	16°39	2°59	4°57	8°55	3°38	16°11	15°17	2°58	7°53	12°57	13°26	5°46	27°36	T 27
W28	20 20 52	4°30'23	29° 1	2°17	5° 3	9°24	3°43	16°14	15°15	2°56	7°52	12°56	13°23	5°53	27°36	W28
T 29	20 24 49	5°27'43	11°35	1°37	5° 6	9°53	3°48	16°17	15°12	2°54	7°51	12°D56	13°20	6° 0	27°D36	T 29
F 30	20 28 45	6°25'03	24°22	0°59	5°R 8	10°22	3°53	16°21	15°10	2°53	7°51	12°56	13°17	6° 7	27°36	F 30
S 31	20 32 42	7°12'23	7°22	0°12	5°17	10°52	3°58	16°24	15°R 8	2°51	7°50	12°56	13°13	6°13	27°36	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
T 1	23n 9	18s40	0n59	19n 7	0s 6	14n45	0n45	12s 1	1s 5	10n28	1s13	13n57	2s16	16s39	0s42	19s 4
F 2	23 5	16 31	0s 9	18 43	0 19	14 24	0 38	12 9	1 6	10 31	1 13	13 58	2 16	16 40	0 42	19 4
S 3	23 1	13 32	1 18	18 19	0 32	14 3	0 31	12 17	1 8	10 34	1 13	14 0	2 16	16 40	0 42	19 4
S 4	22 56	9 51	2 24	17 56	0 45	13 42	0 24	12 25	1 9	10 37	1 14	14 1	2 16	16 41	0 42	19 5
M 5	22 51	5 38	3 23	17 33	0 59	13 21	0 16	12 33	1 10	10 40	1 14	14 2	2 16	16 41	0 42	19 5
T 6	22 45	1 3	4 13	17 11	1 13	13 0	0 8	12 41	1 11	10 43	1 14	14 4	2 16	16 42	0 42	19 5
W 7	22 39	3n42	4 50	16 50	1 27	12 39	0 0	12 49	1 12	10 46	1 14	14 5	2 17	16 43	0 42	19 6
T 8	22 33	8 21	5 10	16 29	1 42	12 18	0s 8	12 57	1 13	10 48	1 14	14 6	2 17	16 43	0 42	19 6
F 9	22 26	12 38	5 12	16 10	1 57	11 57	0 16	13 6	1 15	10 51	1 15	14 8	2 17	16 44	0 42	19 7
S 10	22 19	16 13	4 53	15 51	2 11	11 36	0 25	13 15	1 16	10 54	1 15	14 9	2 17	16 44	0 42	19 7
S 11	22 11	18 47	4 14	15 34	2 26	11 15	0 34	13 23	1 17	10 56	1 15	14 10	2 17	16 45	0 42	19 7
M12	22 3	20 5	3 18	15 18	2 41	10 55	0 43	13 32	1 18	10 59	1 15	14 11	2 18	16 46	0 42	19 8
T 13	21 55	19 59	2 9	15 3	2 56	10 35	0 53	13 41	1 19	11 1	1 15	14 12	2 18	16 46	0 42	19 8
W14	21 47	18 33	0 53	14 50	3 10	10 15	1 3	13 50	1 20	11 4	1 16	14 14	2 18	16 47	0 42	19 8
T 15	21 38	15 58	0n25	14 38	3 24	9 55	1 13	13 59	1 21	11 6	1 16	14 15	2 18	16 48	0 42	19 9
F 16	21 28	12 33	1 39	14 28	3 38	9 35	1 23	14 8	1 22	11 8	1 16	14 16	2 18	16 48	0 42	19 9
S 17	21 18	8 34	2 46	14 20	3 51	9 16	1 33	14 18	1 23	11 11	1 16	14 17	2 18	16 49	0 42	19 10
S 18	21 8	4 19	3 42	14 13	4 3	8 57	1 44	14 27	1 23	11 13	1 16	14 18	2 19	16 50	0 42	19 10
M19	20 58	0s 1	4 26	14 9	4 15	8 38	1 55	14 37	1 24	11 15	1 17	14 19	2 19	16 50	0 42	19 10
T 20	20 47	4 14	4 56	14 6	4 25	8 20	2 6	14 46	1 25	11 17	1 17	14 20	2 19	16 51	0 42	19 11
W21	20 36	8 12	5 13	14 5	4 34	8 2	2 18	14 56	1 26	11 19	1 17	14 21	2 19	16 52	0 42	19 11
T 22	20 24	11 48	5 15	14 6	4 42	7 45	2 29	15 5	1 27	11 21	1 17	14 22	2 19	16 52	0 42	19 11
F 23	20 12	14 54	5 4	14 9	4 49	7 28	2 41	15 15	1 28	11 23	1 18	14 23	2 20	16 53	0 42	19 12
S 24	20 0	17 23	4 40	14 14	4 53	7 11	2 54	15 25	1 28	11 25	1 18	14 24	2 20	16 54	0 43	19 12
S 25	19 48	19 9	4 4	14 21	4 57	6 55	3 6	15 34	1 29	11 26	1 18	14 24	2 20	16 54	0 43	19 13
M26	19 35	20 5	3 17	14 29	4 58	6 40	3 19	15 44	1 30	11 28	1 18	14 25	2 20	16 55	0 43	19 13
T 27	19 22	20 5	2 20	14 39	4 58	6 25	3 31	15 54	1 31	11 30	1 18	14 26	2 20	16 56	0 43	19 13
W28	19 8	19 7	1 16	14 50	4 56	6 11	3 44	16 4	1 31	11 31	1 19	14 27	2 21	16 56	0 43	19 14
T 29	18 54	17 11	0 7	15 3	4 52	5 57	3 57	16 14	1 32	11 33	1 19	14 27	2 21	16 57	0 43	19 14
F 30	18 40	14 23	1s 3	15 16	4 47	5 45	4 10	16 24	1 33	11 34	1 19	14 28	2 21	16 58	0 43	19 15
S 31	18n26	10s50	2s11	15n30	4s40	5n33	4s24	16s34	1s34	11n36	1s19	14n29	2s21	16s59	0s43	19s15

Julian Day Number = 2451360.5, Delta T = 63.66 sec
 Ecliptic obliquity = 23°26'15, Nutation = - 0°00'12, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°44'00, Lahiri = 23°51'00

ASTRODIENST EPHEMERIS for the year 1999

geocentric

AUGUST 1999

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	20 36 39	8♌19'45	20♋37	29♊R54	5♋R 3	11♌21	4♋3	16♋27	15♋R 5	2♋R49	7♋R50	12♌57	13♌10	6♋20	27♌36	S 1
M 2	20 40 35	9°17'08	4♋Y 4	29♋27	4♋Y58	11°52	4° 7	16°30	15≈ 3	2≈48	7♋49	12°57	13° 7	6°27	27°36	M 2
T 3	20 44 32	10°14'32	17°46	29° 6	4°50	12°22	4°12	16°33	15° 0	2°46	7°48	12°57	13° 4	6°33	27°37	T 3
W 4	20 48 28	11°11'57	18°40	28°49	4°39	12°53	4°16	16°35	14°58	2°45	7°48	12°57	13° 1	6°40	27°37	W 4
T 5	20 52 25	12° 9'23	15°46	28°39	4°26	13°24	4°20	16°38	14°56	2°43	7°47	12°R57	12°57	6°47	27°38	T 5
F 6	20 56 21	13° 6'51	0♌II 2	28°D35	4°11	13°55	4°23	16°40	14°53	2°41	7°47	12°D57	12°54	6°54	27°39	F 6
S 7	21 0 18	14° 4'20	14°25	28°37	3°54	14°27	4°27	16°43	14°51	2°40	7°47	12°57	12°51	7° 0	27°39	S 7
S 8	21 4 14	15° 1'50	28°52	28°46	3°34	14°59	4°30	16°45	14°48	2°38	7°46	12°58	12°48	7° 7	27°40	S 8
M 9	21 8 11	15°59'22	13♌19	29° 2	3°12	15°31	4°34	16°47	14°46	2°37	7°46	12°58	12°45	7°14	27°41	M 9
T 10	21 12 8	16°56'54	27°40	29°25	2°48	16° 3	4°37	16°50	14°44	2°35	7°46	12°58	12°42	7°20	27°42	T 10
W11	21 16 4	17°54'28	11♌51	29°54	2°22	16°36	4°40	16°52	14°41	2°34	7°45	12°R58	12°38	7°27	27°44	W11
T 12	21 20 1	18°52'03	25°47	0♌30	1°54	17° 9	4°42	16°54	14°39	2°32	7°45	12°58	12°35	7°34	27°45	T 12
F 13	21 23 57	19°49'39	9♋Y25	1°13	1°24	17°42	4°45	16°55	14°36	2°30	7°45	12°58	12°32	7°41	27°46	F 13
S 14	21 27 54	20°47'16	22°43	2° 3	0°53	18°15	4°47	16°57	14°34	2°29	7°45	12°57	12°29	7°47	27°48	S 14
S 15	21 31 50	21°44'55	5♌41	2°59	0°20	18°49	4°49	16°59	14°32	2°27	7°45	12°56	12°26	7°54	27°50	S 15
M16	21 35 47	22°42'34	18°19	4° 1	29♌46	19°22	4°51	17° 0	14°29	2°26	7°44	12°55	12°23	8° 1	27°51	M16
T 17	21 39 43	23°40'14	0♌41	5°10	29°11	19°56	4°53	17° 2	14°27	2°24	7°44	12°53	12°19	8° 7	27°53	T 17
W18	21 43 40	24°37'55	12°49	6°24	28°35	20°31	4°54	17° 3	14°25	2°23	7°44	12°53	12°16	8°14	27°55	W18
T 19	21 47 37	25°35'38	24°47	7°44	27°58	21° 5	4°56	17° 4	14°22	2°21	7°D44	12°D52	12°13	8°21	27°57	T 19
F 20	21 51 33	26°33'21	6♋40	9°10	27°21	21°40	4°57	17° 5	14°20	2°20	7°44	12°53	12°10	8°27	27°59	F 20
S 21	21 55 30	27°31'06	18°33	10°40	26°43	22°15	4°58	17° 6	14°18	2°19	7°44	12°53	12° 7	8°34	28° 1	S 21
S 22	21 59 26	28°28'52	0♌30	12°15	26° 6	22°50	4°58	17° 7	14°15	2°17	7°44	12°55	12° 3	8°41	28° 4	S 22
M23	22 3 23	29°26'39	12°36	13°54	25°29	23°25	4°59	17° 8	14°13	2°16	7°45	12°56	12° 0	8°48	28° 6	M23
T 24	22 7 19	0♋Y24'27	24°54	15°37	24°53	24° 1	4°59	17° 9	14°11	2°14	7°45	12°57	11°57	8°54	28° 9	T 24
W25	22 11 16	1°22'16	7♋≈27	17°23	24°17	24°37	4°R59	17° 9	14° 9	2°13	7°45	12°R58	11°54	9° 1	28°11	W25
T 26	22 15 12	2°20'07	20°17	19°12	23°43	25°13	4°59	17°10	14° 6	2°12	7°45	12°58	11°51	9° 8	28°14	T 26
F 27	22 19 9	3°17'59	3♋≈24	21° 4	23° 9	25°49	4°59	17°10	14° 4	2°10	7°45	12°57	11°48	9°14	28°17	F 27
S 28	22 23 6	4°15'53	16°49	22°57	22°37	26°25	4°58	17°11	14° 2	2° 9	7°46	12°55	11°44	9°21	28°20	S 28
S 29	22 27 2	5°13'48	0♋Y29	24°52	22° 7	27° 2	4°58	17°11	14° 0	2° 8	7°46	12°52	11°41	9°28	28°23	S 29
M30	22 30 59	6°11'45	14°22	26°48	21°38	27°38	4°57	17°R11	13°58	2° 6	7°46	12°49	11°38	9°35	28°26	M30
T 31	22 34 55	7♋Y44	28♋Y26	28♋Y45	21♋Y11	28♋Y15	4♋Y56	17♋Y11	13≈55	2≈ 5	7♋47	12♋Y46	11♋Y35	9♋41	28♋Y29	T 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	18n11	6s42	3s14	15n45	4s31	5n21	4s37	16s44	1s34	11n37	1s20	14n29	2s22	16s59	0s43	19s15	0n17
M 2	17 56	2 10	4 7	16 1	4 21	5 11	4 50	16 54	1 35	11 38	1 20	14 30	2 22	17 0	0 43	19 16	0 17
T 3	17 40	2n33	4 47	16 16	4 9	5 1	5 4	17 4	1 35	11 40	1 20	14 31	2 22	17 1	0 43	19 16	0 17
W 4	17 25	7 11	5 11	16 32	3 57	4 53	5 17	17 14	1 36	11 41	1 20	14 31	2 22	17 1	0 43	19 16	0 17
T 5	17 9	11 30	5 17	16 47	3 43	4 45	5 30	17 24	1 37	11 42	1 20	14 32	2 22	17 2	0 43	19 17	0 17
F 6	16 53	15 13	5 3	17 2	3 29	4 38	5 43	17 34	1 37	11 43	1 21	14 32	2 23	17 3	0 43	19 17	0 17
S 7	16 36	18 3	4 31	17 16	3 14	4 32	5 56	17 44	1 38	11 44	1 21	14 33	2 23	17 4	0 43	19 18	0 17
S 8	16 20	19 45	3 41	17 30	2 58	4 28	6 9	17 54	1 38	11 45	1 21	14 33	2 23	17 4	0 43	19 18	0 17
M 9	16 3	20 10	2 37	17 43	2 42	4 24	6 21	18 4	1 39	11 46	1 21	14 34	2 23	17 5	0 43	19 18	0 17
T 10	15 45	19 15	1 24	17 54	2 25	4 21	6 34	18 14	1 39	11 47	1 22	14 34	2 24	17 6	0 43	19 19	0 17
W11	15 28	17 8	0 6	18 5	2 8	4 19	6 45	18 23	1 40	11 47	1 22	14 34	2 24	17 6	0 43	19 19	0 17
T 12	15 10	14 2	1n10	18 13	1 52	4 18	6 57	18 33	1 40	11 48	1 22	14 35	2 24	17 7	0 43	19 19	0 17
F 13	14 52	10 13	2 21	18 21	1 35	4 19	7 7	18 43	1 41	11 49	1 22	14 35	2 24	17 8	0 43	19 20	0 17
S 14	14 34	6 0	3 23	18 26	1 19	4 20	7 17	18 53	1 41	11 49	1 23	14 35	2 25	17 8	0 43	19 20	0 17
S 15	14 15	1 36	4 12	18 29	1 2	4 22	7 27	19 3	1 42	11 50	1 23	14 35	2 25	17 9	0 43	19 20	0 17
M16	13 57	2s45	4 48	18 30	0 47	4 26	7 36	19 13	1 42	11 50	1 23	14 36	2 25	17 10	0 43	19 21	0 17
T 17	13 38	6 53	5 9	18 28	0 31	4 30	7 44	19 22	1 43	11 50	1 23	14 36	2 25	17 11	0 43	19 21	0 17
W18	13 19	10 39	5 16	18 24	0 16	4 35	7 52	19 32	1 43	11 51	1 23	14 36	2 25	17 11	0 43	19 22	0 17
T 19	12 59	13 57	5 10	18 18	0 2	4 41	7 58	19 41	1 43	11 51	1 24	14 36	2 26	17 12	0 43	19 22	0 17
F 20	12 40	16 40	4 50	18 9	0n11	4 48	8 4	19 51	1 44	11 51	1 24	14 36	2 26	17 13	0 43	19 22	0 17
S 21	12 20	18 40	4 17	17 57	0 24	4 56	8 9	20 0	1 44	11 51	1 24	14 36	2 26	17 13	0 43	19 23	0 16
S 22	12 0	19 53	3 34	17 42	0 36	5 4	8 13	20 10	1 45	11 51	1 24	14 36	2 26	17 14	0 43	19 23	0 16
M23	11 40	20 11	2 40	17 24	0 47	5 13	8 16	20 19	1 45	11 51	1 25	14 36	2 27	17 15	0 43	19 23	0 16
T 24	11 20	19 32	1 38	17 3	0 57	5 23	8 18	20 28	1 45	11 51	1 25	14 36	2 27	17 15	0 43	19 24	0 16
W25	10 59	17 55	0 30	16 40	1 6	5 33	8 20	20 38	1 46	11 51	1 25	14 36	2 27	17 16	0 43	19 24	0 16
T 26	10 39	15 22	0s40	16 14	1 14	5 44	8 20	20 47	1 46	11 51	1 25	14 36	2 27	17 17	0 43	19 24	0 16
F 27	10 18	11 58	1 50	15 46	1 21	5 55	8 20	20 56	1 46	11 50	1 26	14 36	2 28	17 17	0 43	19 25	0 16
S 28	9 57	7 54	2 56	15 15	1 28	6 6	8 19	21 5	1 46	11 50	1 26	14 36	2 28	17 18	0 43	19 25	0 16
S 29	9 36	3 21	3 52	14 41	1 33	6 18	8 17	21 13	1 47	11 49	1 26	14 36	2 28	17 18	0 43	19 25	0 16
M30	9 14	1n25	4 36	14 6	1 37	6 29	8 14	21 22	1 47	11 49	1 26	14 36	2 28	17 19	0 43	19 25	0 16
T 31	8n53	6n10	5s 4	13n29	1n41	6n41	8s10	21s31	1s47	11n48	1s26	14n35	2s28	17s20	0s43	19s26	0n16

Julian Day Number = 2451391.5, Delta T = 63.69 sec
 Ecliptic obliquity = 23°26'15", Nutation = - 0°00'12", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°44'04", Lahiri = 23°51'04"

ASTRODIENST EPHEMERIS for the year 1999

geocentric

OCTOBER 1999

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	0 37 8	7♂22'21	21♂59	23♂42	25♂28	18♂38	2♂R49	16♂R18	13♂R 4	1♂R38	8♂14	11♂R19	9♂56	13♂9	0♂47	F 1
S 2	0 41 5	8°21'20	6♂10	25°13	26° 6	19°20	2♂43	16♂15	13♂3	1♂38	8°16	11°D18	9°53	13°16	0°53	S 2
S 3	0 45 1	9°20'22	20° 7	26°43	26°44	20° 1	2°36	16°12	13° 2	1°37	8°17	11♂18	9°50	13°22	0°58	S 3
M 4	0 48 58	10°19'25	3♂25	28°12	27°24	20°43	2°29	16° 8	13° 1	1°37	8°19	11°19	9°47	13°29	1° 4	M 4
T 5	0 52 55	11°18'31	17°24	29°41	28° 4	21°25	2°22	16° 5	13° 0	1°37	8°20	11♂R19	9°44	13°36	1°10	T 5
W 6	0 56 51	12°17'40	0♂44	1♂ 9	28°46	22° 7	2°15	16° 1	12°59	1°36	8°22	11°17	9°40	13°43	1°16	W 6
T 7	1 0 48	13°16'50	13°54	2°35	29°29	22°49	2° 7	15°58	12°58	1°36	8°23	11°13	9°37	13°49	1°22	T 7
F 8	1 4 44	14°16'03	26°52	4° 1	0♂13	23°32	2° 0	15°54	12°58	1°36	8°25	11° 6	9°34	13°56	1°28	F 8
S 9	1 8 41	15°15'18	9♂38	5°26	0°58	24°14	1°53	15°50	12°57	1°36	8°26	10°56	9°31	14° 3	1°34	S 9
S 10	1 12 37	16°14'34	22°13	6°50	1°44	24°57	1°45	15°46	12°56	1°36	8°28	10°45	9°28	14° 9	1°40	S 10
M11	1 16 34	17°13'53	4♂37	8°13	2°31	25°39	1°38	15°43	12°55	1°35	8°29	10°32	9°25	14°16	1°46	M11
T 12	1 20 30	18°13'14	16°49	9°35	3°19	26°22	1°30	15°39	12°55	1°35	8°31	10°20	9°21	14°23	1°52	T 12
W13	1 24 27	19°12'37	28°51	10°56	4° 7	27° 5	1°22	15°35	12°54	1°35	8°33	10° 9	9°18	14°29	1°59	W13
T 14	1 28 23	20°12'02	10♂45	12°16	4°56	27°48	1°14	15°30	12°54	1°D35	8°34	10° 0	9°15	14°36	2° 5	T 14
F 15	1 32 20	21°11'28	22°35	13°35	5°47	28°31	1° 6	15°26	12°53	1°35	8°36	9°54	9°12	14°43	2°11	F 15
S 16	1 36 17	22°10'57	4♂24	14°52	6°37	29°14	0°58	15°22	12°53	1°35	8°38	9°50	9° 9	14°50	2°18	S 16
S 17	1 40 13	23°10'27	16°18	16° 8	7°29	29°57	0°50	15°18	12°53	1°35	8°40	9°49	9° 5	14°56	2°24	S 17
M18	1 44 10	24° 9'59	28°20	17°23	8°21	0♂40	0°42	15°14	12°52	1°36	8°41	9°D49	9° 2	15° 3	2°31	M18
T 19	1 48 6	25° 9'33	10♂37	18°36	9°14	1°24	0°34	15° 9	12°52	1°36	8°43	9°R49	8°59	15°10	2°37	T 19
W20	1 52 3	26° 9'08	23°15	19°47	10° 8	2° 7	0°26	15° 5	12°52	1°36	8°45	9°48	8°56	15°16	2°44	W20
T 21	1 55 59	27° 8'45	6♂16	20°57	11° 3	2°51	0°18	15° 0	12°52	1°36	8°47	9°46	8°53	15°23	2°51	T 21
F 22	1 59 56	28° 8'24	19°45	22° 5	11°57	3°35	0°10	14°56	12°52	1°36	8°49	9°41	8°50	15°30	2°57	F 22
S 23	2 3 52	29° 8'05	3♂43	23°10	12°53	4°18	0° 2	14°51	12°D52	1°37	8°51	9°33	8°46	15°36	3° 4	S 23
S 24	2 7 49	0♂ 7'47	18° 6	24°14	13°49	5° 2	29♂54	14°47	12°52	1°37	8°53	9°23	8°43	15°43	3°11	S 24
M25	2 11 46	1° 7'32	2♂50	25°14	14°46	5°46	29°46	14°42	12°52	1°37	8°55	9°11	8°40	15°50	3°18	M25
T 26	2 15 42	2° 7'18	17°47	26°12	15°43	6°30	29°38	14°37	12°52	1°38	8°56	9° 0	8°37	15°56	3°24	T 26
W27	2 19 39	3° 7'07	2♂46	27° 7	16°41	7°14	29°29	14°33	12°52	1°38	8°58	8°50	8°34	16° 3	3°31	W27
T 28	2 23 35	4° 6'58	17°40	27°58	17°39	7°58	29°21	14°28	12°52	1°39	9° 0	8°41	8°31	16°10	3°38	T 28
F 29	2 27 32	5° 6'50	2♂20	28°45	18°38	8°42	29°13	14°23	12°53	1°39	9° 2	8°36	8°27	16°17	3°45	F 29
S 30	2 31 28	6° 6'46	16°41	29°28	19°37	9°27	29° 5	14°19	12°53	1°40	9° 4	8°33	8°24	16°23	3°52	S 30
S 31	2 35 25	7♂ 6'43	0♂42	0♂ 6	20♂37	10♂11	28♂57	14♂14	12°53	1°40	9♂ 7	8♂33	8♂21	16♂30	3♂59	S 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	2s56	19n20	3s53	9s42	0s33	9n38	3s37	24s46	1s49	11n 1	1s32	14n15	2s35	17s34	0s42	F 1
S 2	3 19	20 21	2 57	10 23	0 40	9 34	3 27	24 49	1 49	10 58	1 32	14 13	2 35	17 34	0 42	S 2
S 3	3 42	20 6	1 51	11 2	0 47	9 30	3 18	24 52	1 49	10 56	1 32	14 12	2 35	17 34	0 42	S 3
M 4	4 5	18 39	0 40	11 41	0 55	9 26	3 8	24 55	1 49	10 54	1 32	14 11	2 35	17 35	0 42	M 4
T 5	4 28	16 8	0n32	12 19	1 2	9 20	2 59	24 58	1 49	10 51	1 32	14 10	2 35	17 35	0 42	T 5
W 6	4 52	12 48	1 42	12 57	1 9	9 15	2 50	25 0	1 48	10 49	1 32	14 9	2 35	17 35	0 42	W 6
T 7	5 15	8 52	2 45	13 34	1 16	9 8	2 41	25 3	1 48	10 46	1 32	14 8	2 36	17 35	0 42	T 7
F 8	5 38	4 35	3 38	14 10	1 23	9 1	2 32	25 5	1 48	10 43	1 32	14 7	2 36	17 35	0 42	F 8
S 9	6 0	0 9	4 19	14 45	1 30	8 54	2 23	25 6	1 48	10 41	1 32	14 6	2 36	17 36	0 42	S 9
S 10	6 23	4s13	4 47	15 19	1 37	8 46	2 15	25 8	1 48	10 38	1 32	14 4	2 36	17 36	0 42	S 10
M11	6 46	8 20	5 0	15 53	1 44	8 37	2 6	25 9	1 47	10 36	1 32	14 3	2 36	17 36	0 42	M11
T 12	7 9	12 4	5 0	16 25	1 50	8 28	1 58	25 10	1 47	10 33	1 33	14 2	2 36	17 36	0 42	T 12
W13	7 31	15 14	4 46	16 57	1 56	8 18	1 49	25 11	1 47	10 30	1 33	14 1	2 36	17 36	0 42	W13
T 14	7 54	17 46	4 40	17 28	2 3	8 8	1 41	25 12	1 47	10 27	1 33	13 59	2 36	17 36	0 42	T 14
F 15	8 16	19 31	3 43	17 58	2 9	7 57	1 33	25 12	1 47	10 25	1 33	13 58	2 36	17 36	0 42	F 15
S 16	8 38	20 26	2 56	18 26	2 15	7 46	1 25	25 12	1 46	10 22	1 33	13 57	2 36	17 37	0 42	S 16
S 17	9 0	20 26	2 1	18 54	2 20	7 34	1 17	25 12	1 46	10 19	1 33	13 55	2 37	17 37	0 42	S 17
M18	9 22	19 30	1 1	19 21	2 26	7 21	1 10	25 12	1 46	10 16	1 33	13 54	2 37	17 37	0 41	M18
T 19	9 44	17 38	0s 4	19 46	2 31	7 8	1 2	25 11	1 46	10 14	1 33	13 53	2 37	17 37	0 41	T 19
W20	10 6	14 53	1 11	20 11	2 35	6 55	0 55	25 10	1 45	10 11	1 33	13 52	2 37	17 37	0 41	W20
T 21	10 27	11 18	2 15	20 34	2 40	6 41	0 48	25 9	1 45	10 8	1 32	13 50	2 37	17 37	0 41	T 21
F 22	10 49	7 2	3 15	20 56	2 44	6 27	0 41	25 8	1 45	10 5	1 32	13 49	2 37	17 37	0 41	F 22
S 23	11 10	2 16	4 4	21 16	2 48	6 12	0 34	25 6	1 44	10 2	1 32	13 47	2 37	17 37	0 41	S 23
S 24	11 31	2n47	4 40	21 35	2 51	5 57	0 27	25 4	1 44	10 0	1 32	13 46	2 37	17 37	0 41	S 24
M25	11 52	7 46	4 59	21 53	2 54	5 41	0 20	25 2	1 44	9 57	1 32	13 45	2 37	17 37	0 41	M25
T 26	12 13	12 23	4 57	22 9	2 56	5 25	0 14	25 0	1 43	9 54	1 32	13 43	2 37	17 37	0 41	T 26
W27	12 33	16 13	4 35	22 23	2 58	5 9	0 7	24 57	1 43	9 51	1 32	13 42	2 37	17 36	0 41	W27
T 28	12 53	18 59	3 54	22 36	2 59	4 52	0 1	24 54	1 43	9 49	1 32	13 41	2 37	17 36	0 41	T 28
F 29	13 14	20 26	2 59	22 47	2 59	4 34	0n 5	24 51	1 42	9 46	1 32	13 39	2 37	17 36	0 41	F 29
S 30	13 33	20 32	1 53	22 56	2 58	4 17	0 11	24 48	1 42	9 43	1 32	13 38	2 37	17 36	0 41	S 30
S 31	13s53	19n20	0s41	23s 3	2s57	3n59	0n17	24s44	1s41	9n40	1s32	13n36	2s37	17s36	0s41	S 31

Julian Day Number = 2451452.5, Delta T = 63.75 sec

Ecliptic obliquity = 23°26'16, Nutation = - 0°00'14, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 24°44'12, Lahiri = 23°51'13

ASTRODIENST EPHEMERIS for the year 1999

geocentric

NOVEMBER 1999

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	2 39 21	8♉ 6'43	14♏23	0♈38	21♏37	10♈56	28♏49	14♏9	12♈54	1♈41	9♈9	8♏R33	8♏18	16♈37	4♈6	M 1
T 2	2 43 18	9° 6'44	27°44	1° 5	22°38	11°40	28♏42	14♏4	12°54	1°41	9°11	8♏32	8°15	16°43	4°13	T 2
W 3	2 47 15	10° 6'48	10♏49	1°25	23°39	12°25	28°34	13°59	12°55	1°42	9°13	8°29	8°11	16°50	4°20	W 3
T 4	2 51 11	11° 6'54	23°41	1°38	24°41	13° 9	28°26	13°55	12°55	1°43	9°15	8°24	8° 8	16°57	4°28	T 4
F 5	2 55 8	12° 7'02	6♏20	1°R44	25°43	13°54	28°18	13°50	12°56	1°43	9°17	8°16	8° 5	17° 3	4°35	F 5
S 6	2 59 4	13° 7'12	18°49	1°40	26°45	14°39	28°11	13°45	12°57	1°44	9°19	8° 5	8° 2	17°10	4°42	S 6
S 7	3 3 1	14° 7'23	1♉9	1°28	27°48	15°24	28° 3	13°40	12°57	1°45	9°21	7°51	7°59	17°17	4°49	S 7
M 8	3 6 57	15° 7'37	13°20	1° 6	28°51	16° 9	27°56	13°35	12°58	1°46	9°23	7°37	7°56	17°23	4°57	M 8
T 9	3 10 54	16° 7'53	25°23	0°34	29°54	16°54	27°48	13°30	12°59	1°47	9°26	7°22	7°52	17°30	5° 4	T 9
W10	3 14 50	17° 8'10	7♏20	29♏53	0♏58	17°39	27°41	13°25	13° 0	1°47	9°28	7° 9	7°49	17°37	5°11	W10
T 11	3 18 47	18° 8'29	19°11	29° 2	2° 2	18°24	27°34	13°21	13° 1	1°48	9°30	6°58	7°46	17°44	5°18	T 11
F 12	3 22 44	19° 8'49	0♈59	28° 1	3° 6	19° 9	27°27	13°16	13° 2	1°49	9°32	6°50	7°43	17°50	5°26	F 12
S 13	3 26 40	20° 9'12	12°47	26°53	4°10	19°54	27°20	13°11	13° 3	1°50	9°34	6°45	7°40	17°57	5°33	S 13
S 14	3 30 37	21° 9'35	24°39	25°39	5°15	20°39	27°13	13° 6	13° 4	1°51	9°37	6°43	7°37	18° 4	5°41	S 14
M15	3 34 33	22°10'00	6♏39	24°20	6°21	21°25	27° 6	13° 1	13° 5	1°52	9°39	6°D42	7°33	18°10	5°48	M15
T 16	3 38 30	23°10'26	18°52	22°59	7°26	22°10	27° 0	12°57	13° 6	1°53	9°41	6°R42	7°30	18°17	5°55	T 16
W17	3 42 26	24°10'54	1♏24	21°39	8°32	22°56	26°54	12°52	13° 7	1°54	9°43	6°42	7°27	18°24	6° 3	W17
T 18	3 46 23	25°11'23	14°20	20°23	9°38	23°41	26°47	12°47	13° 9	1°56	9°46	6°41	7°24	18°30	6°10	T 18
F 19	3 50 19	26°11'53	27°45	19°12	10°44	24°27	26°41	12°43	13°10	1°57	9°48	6°37	7°21	18°37	6°18	F 19
S 20	3 54 16	27°12'24	11♏39	18° 9	11°51	25°12	26°35	12°38	13°11	1°58	9°50	6°30	7°17	18°44	6°25	S 20
S 21	3 58 13	28°12'57	26° 4	17°16	12°57	25°58	26°29	12°33	13°13	1°59	9°53	6°22	7°14	18°50	6°33	S 21
M22	4 2 9	29°13'31	10♈54	16°34	14° 4	26°44	26°24	12°29	13°14	2° 0	9°55	6°12	7°11	18°57	6°40	M22
T 23	4 6 6	0♈14'06	26° 3	16° 4	15°11	27°29	26°18	12°24	13°16	2° 2	9°57	6° 1	7° 8	19° 4	6°48	T 23
W24	4 10 2	1°14'43	11♏19	15°45	16°19	28°15	26°13	12°20	13°17	2° 3	10° 0	5°52	7° 5	19°11	6°55	W24
T 25	4 13 59	2°15'22	26°33	15°D37	17°27	29° 1	26° 8	12°15	13°19	2° 4	10° 2	5°44	7° 2	19°17	7° 3	T 25
F 26	4 17 55	3°16'02	11♏33	15°41	18°34	29°47	26° 3	12°11	13°21	2° 6	10° 4	5°40	6°58	19°24	7°10	F 26
S 27	4 21 52	4°16'43	26°13	15°55	19°43	0♈33	25°58	12° 7	13°22	2° 7	10° 7	5°37	6°55	19°31	7°18	S 27
S 28	4 25 48	5°17'26	10♏27	16°18	20°51	1°19	25°53	12° 3	13°24	2° 9	10° 9	5°D37	6°52	19°37	7°25	S 28
M29	4 29 45	6°18'11	24°16	16°50	21°59	2° 4	25°49	11°58	13°26	2°10	10°11	5°38	6°49	19°44	7°33	M29
T 30	4 33 42	7♏18'57	7♏40	17♏30	23♏8	2♈50	25°45	11♏54	13♈28	2♈11	10♏14	5°R38	6♏46	19♏51	7♏40	T 30

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	
M 1	14s13	17n 0	0n31	23s 8	2s55	3n40	0n23	24s40	1s41	9n38	1s32	13n35	2s37	17s36	0s41	M 1
T 2	14 32	13 49	1 40	23 10	2 52	3 21	0 28	24 36	1 41	9 35	1 31	13 34	2 37	17 36	0 41	T 2
W 3	14 51	10 0	2 42	23 10	2 47	3 2	0 34	24 31	1 40	9 32	1 31	13 32	2 37	17 36	0 41	W 3
T 4	15 10	5 47	3 34	23 8	2 42	2 43	0 39	24 27	1 40	9 30	1 31	13 31	2 37	17 35	0 41	T 4
F 5	15 28	1 23	4 15	23 2	2 35	2 23	0 44	24 22	1 39	9 27	1 31	13 29	2 37	17 35	0 41	F 5
S 6	15 47	3s 0	4 43	22 53	2 26	2 3	0 49	24 16	1 39	9 25	1 31	13 28	2 37	17 35	0 41	S 6
S 7	16 5	7 13	4 58	22 41	2 16	1 42	0 54	24 11	1 39	9 22	1 31	13 27	2 37	17 35	0 41	S 7
M 8	16 22	11 6	4 58	22 25	2 5	1 21	0 59	24 5	1 38	9 20	1 31	13 25	2 37	17 34	0 41	M 8
T 9	16 40	14 29	4 45	22 5	1 52	1 0	1 3	23 59	1 38	9 17	1 30	13 24	2 37	17 34	0 41	T 9
W10	16 57	17 15	4 20	21 42	1 37	0 39	1 8	23 53	1 37	9 15	1 30	13 22	2 37	17 34	0 41	W10
T 11	17 14	19 17	3 43	21 15	1 20	0 18	1 12	23 46	1 37	9 12	1 30	13 21	2 37	17 34	0 41	T 11
F 12	17 31	20 29	2 57	20 44	1 2	0s 4	1 16	23 39	1 36	9 10	1 30	13 20	2 37	17 33	0 41	F 12
S 13	17 47	20 47	2 3	20 10	0 43	0 26	1 20	23 32	1 36	9 8	1 30	13 18	2 37	17 33	0 41	S 13
S 14	18 3	20 9	1 4	19 33	0 23	0 48	1 24	23 25	1 35	9 5	1 30	13 17	2 37	17 33	0 41	S 14
M15	18 19	18 36	0 0	18 54	0 3	1 10	1 28	23 18	1 35	9 3	1 29	13 16	2 36	17 32	0 41	M15
T 16	18 34	16 11	1s 4	18 14	0n18	1 33	1 31	23 10	1 34	9 1	1 29	13 14	2 36	17 32	0 41	T 16
W17	18 49	12 57	2 7	17 34	0 38	1 56	1 35	23 2	1 34	8 59	1 29	13 13	2 36	17 32	0 41	W17
T 18	19 4	9 1	3 6	16 55	0 57	2 18	1 38	22 53	1 33	8 57	1 29	13 12	2 36	17 31	0 41	T 18
F 19	19 18	4 31	3 56	16 19	1 15	2 41	1 42	22 45	1 33	8 55	1 28	13 10	2 36	17 31	0 41	F 19
S 20	19 32	0n23	4 35	15 46	1 32	3 5	1 45	22 36	1 32	8 53	1 28	13 9	2 36	17 30	0 40	S 20
S 21	19 46	5 26	4 58	15 17	1 46	3 28	1 48	22 27	1 32	8 51	1 28	13 8	2 36	17 30	0 40	S 21
M22	19 59	10 19	5 2	14 53	1 59	3 51	1 50	22 18	1 31	8 49	1 28	13 7	2 36	17 29	0 40	M22
T 23	20 12	14 39	4 45	14 35	2 9	4 15	1 53	22 8	1 30	8 48	1 27	13 5	2 36	17 29	0 40	T 23
W24	20 24	18 3	4 7	14 21	2 18	4 38	1 56	21 59	1 30	8 46	1 27	13 4	2 35	17 28	0 40	W24
T 25	20 37	20 11	3 12	14 13	2 24	5 2	1 58	21 49	1 29	8 44	1 27	13 3	2 35	17 28	0 40	T 25
F 26	20 48	20 52	2 5	14 10	2 29	5 25	2 0	21 38	1 29	8 43	1 27	13 2	2 35	17 27	0 40	F 26
S 27	21 0	20 5	0 50	14 11	2 31	5 49	2 2	21 28	1 28	8 41	1 26	13 1	2 35	17 27	0 40	S 27
S 28	21 11	18 2	0n26	14 16	2 33	6 13	2 4	21 17	1 28	8 40	1 26	12 59	2 35	17 26	0 40	S 28
M29	21 22	14 58	1 38	14 26	2 33	6 37	2 6	21 7	1 27	8 38	1 26	12 58	2 35	17 26	0 40	M29
T 30	21s32	11n13	2n43	14s38	2n31	7s 0	2n 8	20s55	1s26	8n37	1s26	12n57	2s34	17s25	0s40	T 30

Julian Day Number = 2451483.5, Delta T = 63.78 sec
 Ecliptic obliquity = 23°26'16, Nutation = - 0°00'15, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°44'17, Lahiri = 23°51'17

ASTRODIENST EPHEMERIS for the year 1999
geocentric

DECEMBER 1999

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	4 37 38	8♂19'44	20♂42	18♂16	24♂17	3♂37	25°R40	11°R50	13♂30	2♂13	10♂16	5°R37	6♂43	19♂57	7♂48	W 1
T 2	4 41 35	9°20'33	3♂26	19° 9	25°26	4°23	25°Y37	11♂46	13°31	2°14	10°18	5♂34	6°39	20° 4	7°55	T 2
F 3	4 45 31	10°21'24	15°54	20° 7	26°35	5° 9	25°33	11°42	13°33	2°16	10°21	5°29	6°36	20°11	8° 3	F 3
S 4	4 49 28	11°22'16	28°11	21° 9	27°45	5°55	25°29	11°38	13°35	2°18	10°23	5°21	6°33	20°17	8°10	S 4
S 5	4 53 24	12°23'09	10♂18	22°16	28°54	6°41	25°26	11°34	13°37	2°19	10°25	5°12	6°30	20°24	8°18	S 5
M 6	4 57 21	13°24'03	22°19	23°26	0♂14	7°27	25°23	11°31	13°40	2°21	10°28	5° 1	6°27	20°31	8°25	M 6
T 7	5 1 17	14°24'59	4♂14	24°38	1°14	8°13	25°20	11°27	13°42	2°22	10°30	4°51	6°23	20°37	8°33	T 7
W 8	5 5 14	15°25'56	16° 6	25°54	2°24	9° 0	25°17	11°23	13°44	2°24	10°32	4°41	6°20	20°44	8°40	W 8
T 9	5 9 11	16°26'53	27°55	27°12	3°34	9°46	25°15	11°20	13°46	2°26	10°35	4°33	6°17	20°51	8°48	T 9
F 10	5 13 7	17°27'52	9♂44	28°31	4°44	10°32	25°12	11°16	13°48	2°28	10°37	4°28	6°14	20°58	8°55	F 10
S 11	5 17 4	18°28'51	21°35	29°53	5°54	11°19	25°10	11°13	13°51	2°29	10°39	4°24	6°11	21° 4	9° 3	S 11
S 12	5 21 0	19°29'52	3♂30	1♂15	7° 5	12° 5	25° 8	11°10	13°53	2°31	10°42	4°D23	6° 8	21°11	9°10	S 12
M13	5 24 57	20°30'52	15°33	2°39	8°16	12°51	25° 7	11° 7	13°55	2°33	10°44	4°24	6° 4	21°18	9°17	M13
T 14	5 28 53	21°31'54	27°47	4° 4	9°26	13°38	25° 5	11° 4	13°58	2°35	10°46	4°25	6° 1	21°24	9°25	T 14
W15	5 32 50	22°32'55	10♂18	5°30	10°37	14°24	25° 4	11° 1	14° 0	2°37	10°48	4°27	5°58	21°31	9°32	W15
T 16	5 36 47	23°33'58	23° 9	6°57	11°48	15°11	25° 3	10°58	14° 3	2°38	10°51	4°R28	5°55	21°38	9°39	T 16
F 17	5 40 43	24°35'00	6°Y25	8°24	12°59	15°57	25° 2	10°55	14° 5	2°40	10°53	4°27	5°52	21°44	9°47	F 17
S 18	5 44 40	25°36'03	20° 8	9°53	14°11	16°43	25° 1	10°52	14° 8	2°42	10°55	4°24	5°48	21°51	9°54	S 18
S 19	5 48 36	26°37'07	4♂20	11°21	15°22	17°30	25° 1	10°49	14°10	2°44	10°58	4°20	5°45	21°58	10° 1	S 19
M20	5 52 33	27°38'11	18°59	12°50	16°33	18°16	25° 1	10°47	14°13	2°46	11° 0	4°15	5°42	22° 4	10° 9	M20
T 21	5 56 29	28°39'15	4♂11	14°20	17°45	19° 3	25°D 1	10°44	14°16	2°48	11° 2	4° 9	5°39	22°11	10°16	T 21
W22	6 0 26	29°40'20	19°15	15°50	18°57	19°49	25° 1	10°42	14°18	2°50	11° 4	4° 4	5°36	22°18	10°23	W22
T 23	6 4 22	0♂41'25	4♂32	17°20	20° 8	20°36	25° 1	10°40	14°21	2°52	11° 7	4° 0	5°33	22°24	10°30	T 23
F 24	6 8 19	1°42'30	19°43	18°51	21°20	21°22	25° 2	10°38	14°24	2°54	11° 9	3°58	5°29	22°31	10°37	F 24
S 25	6 12 16	2°43'36	4♂36	20°22	22°32	22° 9	25° 3	10°36	14°27	2°56	11°11	3°D57	5°26	22°38	10°45	S 25
S 26	6 16 12	3°44'43	19° 6	21°53	23°44	22°55	25° 4	10°34	14°30	2°58	11°13	3°58	5°23	22°44	10°52	S 26
M27	6 20 9	4°45'50	3♂8	23°24	24°56	23°42	25° 5	10°32	14°32	3° 0	11°15	3°59	5°20	22°51	10°59	M27
T 28	6 24 5	5°46'58	16°43	24°56	26° 8	24°28	25° 6	10°30	14°35	3° 2	11°18	4° 1	5°17	22°58	11° 6	T 28
W29	6 28 2	6°48'06	29°52	26°28	27°20	25°15	25° 8	10°29	14°38	3° 4	11°20	4° 2	5°14	23° 4	11°13	W29
T 30	6 31 58	7°49'14	12♂38	28° 1	28°33	26° 1	25°10	10°27	14°41	3° 6	11°22	4°R 2	5°10	23°11	11°20	T 30
F 31	6 35 55	8♂50'24	25♂5	29♂34	29♂45	26♂48	25°Y12	10♂26	14♂44	3♂8	11♂24	4♂1	5♂7	23♂18	11♂27	F 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
W 1	21s42	7n 1	3n37	14s53	2n29	7s24	2n10	20s44	1s26	8n36	1s25	12n56	2s34	17s25	0s40	19s26
T 2	21 51	2 36	4 19	15 10	2 26	7 48	2 11	20 33	1 25	8 35	1 25	12 55	2 34	17 24	0 40	19 25
F 3	22 0	1s49	4 48	15 29	2 22	8 11	2 13	20 21	1 25	8 34	1 25	12 54	2 34	17 24	0 40	19 25
S 4	22 9	6 6	5 3	15 50	2 17	8 35	2 14	20 9	1 24	8 33	1 24	12 53	2 34	17 23	0 40	19 25
S 5	22 17	10 5	5 4	16 12	2 12	8 59	2 15	19 57	1 23	8 32	1 24	12 52	2 34	17 22	0 40	19 24
M 6	22 24	13 38	4 52	16 35	2 6	9 22	2 16	19 44	1 23	8 31	1 24	12 51	2 33	17 22	0 40	19 24
T 7	22 32	16 37	4 27	16 59	2 0	9 45	2 17	19 32	1 22	8 30	1 24	12 50	2 33	17 21	0 40	19 24
W 8	22 38	18 54	3 50	17 23	1 54	10 9	2 18	19 19	1 21	8 29	1 23	12 49	2 33	17 20	0 40	19 23
T 9	22 45	20 21	3 4	17 48	1 47	10 32	2 18	19 6	1 21	8 29	1 23	12 48	2 33	17 20	0 40	19 23
F 10	22 51	20 56	2 9	18 12	1 40	10 55	2 19	18 53	1 20	8 28	1 23	12 47	2 32	17 19	0 40	19 23
S 11	22 56	20 34	1 9	18 37	1 33	11 18	2 19	18 39	1 19	8 28	1 22	12 46	2 32	17 18	0 40	19 22
S 12	23 1	19 18	0 5	19 1	1 26	11 40	2 20	18 26	1 19	8 27	1 22	12 46	2 32	17 18	0 40	19 22
M13	23 6	17 8	1s 0	19 25	1 18	12 3	2 20	18 12	1 18	8 27	1 22	12 45	2 32	17 17	0 40	19 21
T 14	23 10	14 11	2 4	19 48	1 11	12 25	2 20	17 58	1 17	8 27	1 22	12 45	2 32	17 16	0 40	19 21
W15	23 14	10 31	3 3	20 11	1 3	12 47	2 20	17 44	1 17	8 26	1 21	12 44	2 31	17 16	0 40	19 21
T 16	23 17	6 18	3 35	20 33	0 56	13 9	2 20	17 30	1 16	8 26	1 21	12 43	2 31	17 15	0 40	19 20
F 17	23 20	1 40	4 34	20 55	0 48	13 31	2 20	17 15	1 15	8 26	1 21	12 43	2 31	17 14	0 40	19 20
S 18	23 22	3n13	5 2	21 16	0 40	13 52	2 19	17 0	1 15	8 26	1 20	12 42	2 31	17 13	0 40	19 19
S 19	23 24	8 5	5 11	21 36	0 33	14 14	2 19	16 46	1 14	8 27	1 20	12 41	2 30	17 13	0 40	19 19
M20	23 25	12 38	5 1	21 55	0 25	14 34	2 18	16 31	1 13	8 27	1 20	12 41	2 30	17 12	0 40	19 18
T 21	23 26	16 31	4 30	22 13	0 18	14 55	2 18	16 16	1 12	8 27	1 19	12 40	2 30	17 11	0 40	19 18
W22	23 26	19 21	3 40	22 31	0 10	15 15	2 17	16 0	1 12	8 27	1 19	12 40	2 30	17 10	0 40	19 18
T 23	23 26	20 48	2 34	22 47	0 3	15 35	2 16	15 45	1 11	8 28	1 19	12 39	2 29	17 9	0 40	19 17
F 24	23 26	20 43	1 17	23 2	0s 4	15 55	2 15	15 29	1 10	8 28	1 18	12 39	2 29	17 9	0 40	19 17
S 25	23 25	19 10	0n 4	23 16	0 11	16 14	2 14	15 13	1 10	8 29	1 18	12 39	2 29	17 8	0 40	19 16
S 26	23 23	16 24	1 22	23 29	0 18	16 33	2 13	14 58	1 9	8 30	1 18	12 38	2 29	17 7	0 40	19 16
M27	23 21	12 44	2 33	23 41	0 25	16 52	2 12	14 42	1 8	8 30	1 17	12 38	2 28	17 6	0 40	19 15
T 28	23 19	8 31	3 34	23 52	0 32	17 10	2 11	14 25	1 7	8 31	1 17	12 38	2 28	17 5	0 40	19 15
W29	23 16	4 2	4 20	24 2	0 38	17 28	2 9	14 9	1 7	8 32	1 17	12 37	2 28	17 4	0 40	19 14
T 30	23 12	0s30	4 53	24 10	0 44	17 45	2 8	13 53	1 6	8 33	1 17	12 37	2 27	17 3	0 40	19 14
F 31	23s 9	4s53	5n11	24s17	0s51	18s 2	2n 6	13s36	1s 5	8n34	1s16	12n37	2s27	17s 3	0s40	19s14

Julian Day Number = 2451513.5, Delta T = 63.80 sec
Ecliptic obliquity = 23°26'16, Nutation = - 0°00'15, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 24°44'21, Lahiri = 23°51'21