



# Astrodienst Ephemeris Tables for the year 1998

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 1998

## geocentric

JANUARY 1998

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	6 41 47	10°21'26	9°59	18°29	3°R24	10°46	22°15	13°45	7°7	28°57	6°46	12°R20	13°44	1°54	15°M31	T 1
F 2	6 45 43	11°22'36	24° 8	19° 7	3°10	11°33	22°27	13°47	7°10	28°59	6°48	12°M16	13°40	2° 1	15°37	F 2
S 3	6 49 40	12°23'46	8°19	19°50	2°54	12°20	22°40	13°49	7°14	29° 1	6°50	12°D15	13°37	2° 7	15°43	S 3
S 4	6 53 36	13°24'56	22°30	20°39	2°35	13° 8	22°53	13°51	7°17	29° 3	6°52	12°15	13°34	2°14	15°49	S 4
M 5	6 57 33	14°26'06	6°Y39	21°32	2°14	13°55	23° 5	13°53	7°20	29° 5	6°54	12°16	13°31	2°21	15°55	M 5
T 6	7 1 29	15°27'16	20°44	22°28	1°50	14°42	23°18	13°55	7°24	29° 8	6°56	12°R16	13°28	2°27	16° 0	T 6
W 7	7 5 26	16°28'25	4°B44	23°28	1°24	15°30	23°31	13°57	7°27	29°10	6°58	12°14	13°24	2°34	16° 6	W 7
T 8	7 9 22	17°29'33	18°39	24°32	0°57	16°17	23°44	14° 0	7°30	29°12	7° 0	12°10	13°21	2°41	16°12	T 8
F 9	7 13 19	18°30'41	2°II28	25°38	0°27	17° 4	23°57	14° 2	7°34	29°14	7° 2	12° 4	13°18	2°47	16°17	F 9
S 10	7 17 16	19°31'49	16° 8	26°46	29°356	17°51	24°10	14° 5	7°37	29°17	7° 4	11°56	13°15	2°54	16°23	S 10
S 11	7 21 12	20°32'56	29°36	27°57	29°23	18°39	24°23	14° 8	7°40	29°19	7° 5	11°47	13°12	3° 1	16°28	S 11
M12	7 25 9	21°34'03	12°51	29° 9	28°49	19°26	24°37	14°10	7°44	29°21	7° 7	11°37	13° 9	3° 7	16°33	M12
T 13	7 29 5	22°35'10	25°51	0°324	28°14	20°13	24°50	14°13	7°47	29°23	7° 9	11°29	13° 5	3°14	16°38	T 13
W14	7 33 2	23°36'16	8°J35	1°40	27°38	21° 1	25° 3	14°16	7°51	29°26	7°11	11°22	13° 2	3°21	16°43	W14
T 15	7 36 58	24°37'22	21° 3	2°58	27° 2	21°48	25°16	14°19	7°54	29°28	7°13	11°18	12°59	3°27	16°48	T 15
F 16	7 40 55	25°38'28	3°M17	4°16	26°25	22°35	25°30	14°23	7°57	29°30	7°14	11°16	12°56	3°34	16°53	F 16
S 17	7 44 51	26°39'33	15°18	5°37	25°48	23°23	25°43	14°26	8° 1	29°32	7°16	11°D15	12°53	3°41	16°58	S 17
S 18	7 48 48	27°40'38	27°11	6°58	25°11	24°10	25°57	14°29	8° 4	29°35	7°18	11°16	12°50	3°47	17° 3	S 18
M19	7 52 45	28°41'43	8°A59	8°20	24°35	24°57	26°11	14°33	8° 8	29°37	7°19	11°18	12°46	3°54	17° 7	M19
T 20	7 56 41	29°42'47	20°48	9°44	23°59	25°45	26°24	14°36	8°11	29°39	7°21	11°19	12°43	4° 1	17°12	T 20
W21	8 0 38	0°43'51	2°M42	11° 8	23°24	26°32	26°38	14°40	8°15	29°42	7°23	11°R20	12°40	4° 7	17°16	W21
T 22	8 4 34	1°44'54	14°48	12°33	22°51	27°19	26°52	14°44	8°18	29°44	7°24	11°19	12°37	4°14	17°21	T 22
F 23	8 8 31	2°45'57	27°10	13°59	22°19	28° 7	27° 5	14°48	8°22	29°46	7°26	11°16	12°34	4°21	17°25	F 23
S 24	8 12 27	3°47'00	9°A52	15°26	21°48	28°54	27°19	14°52	8°25	29°48	7°27	11°12	12°30	4°27	17°29	S 24
S 25	8 16 24	4°48'03	22°56	16°53	21°19	29°41	27°33	14°56	8°29	29°51	7°29	11° 6	12°27	4°34	17°33	S 25
M26	8 20 20	5°49'04	6°325	18°22	20°52	0°K29	27°47	15° 0	8°32	29°53	7°30	11° 0	12°24	4°41	17°37	M26
T 27	8 24 17	6°50'05	20°18	19°51	20°28	1°16	28° 1	15° 4	8°36	29°55	7°32	10°54	12°21	4°47	17°41	T 27
W28	8 28 14	7°51'05	4°A30	21°21	20° 5	2° 3	28°15	15° 8	8°39	29°57	7°33	10°49	12°18	4°54	17°45	W28
T 29	8 32 10	8°52'05	18°58	22°51	19°44	2°51	28°29	15°13	8°43	29°59	7°35	10°46	12°15	5° 1	17°48	T 29
F 30	8 36 7	9°53'03	3°K35	24°22	19°26	3°38	28°43	15°17	8°46	0° 2	7°36	10°44	12°11	5° 7	17°52	F 30
S 31	8 40 3	10°54'00	18°K14	25°354	19°311	4°K25	28°557	15°Y22	8°50	0° 4	7°37	10°D44	12°M 8	5°14	17°M55	S 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	
T 1	23s 2	15s 7	2n43	20s24	2n32	17s24	2n 3	18s39	1s10	14s55	0s52	3n 7	2s31	19s 4	0s36	T 1
F 2	22 57	11 59	1 35	20 35	2 25	17 12	2 18	18 26	1 10	14 51	0 52	3 8	2 30	19 4	0 36	F 2
S 3	22 52	8 7	0 21	20 47	2 17	17 1	2 33	18 13	1 10	14 47	0 52	3 9	2 30	19 3	0 36	S 3
S 4	22 46	3 49	0s55	20 59	2 8	16 50	2 49	17 59	1 9	14 43	0 52	3 10	2 30	19 2	0 36	S 4
M 5	22 39	0n42	2 7	21 11	2 0	16 40	3 4	17 45	1 9	14 38	0 52	3 11	2 30	19 1	0 36	M 5
T 6	22 33	5 8	3 11	21 23	1 51	16 30	3 20	17 31	1 9	14 34	0 52	3 12	2 29	19 0	0 36	T 6
W 7	22 25	9 16	4 3	21 35	1 42	16 20	3 36	17 17	1 8	14 30	0 52	3 13	2 29	18 59	0 36	W 7
T 8	22 18	12 52	4 41	21 47	1 33	16 11	3 51	17 2	1 8	14 26	0 52	3 14	2 29	18 58	0 36	T 8
F 9	22 9	15 43	5 2	21 58	1 24	16 2	4 6	16 48	1 8	14 21	0 52	3 15	2 28	18 58	0 36	F 9
S 10	22 1	17 39	5 5	22 9	1 15	15 54	4 21	16 33	1 7	14 17	0 52	3 17	2 28	18 57	0 36	S 10
S 11	21 52	18 34	4 52	22 20	1 6	15 46	4 36	16 18	1 7	14 13	0 52	3 18	2 28	18 56	0 36	S 11
M12	21 43	18 28	4 42	22 29	0 57	15 39	4 51	16 3	1 7	14 8	0 52	3 19	2 28	18 55	0 36	M12
T 13	21 33	17 22	3 40	22 38	0 48	15 32	5 5	15 47	1 6	14 4	0 52	3 21	2 27	18 54	0 36	T 13
W14	21 22	15 25	2 47	22 46	0 39	15 26	5 18	15 32	1 6	13 59	0 52	3 22	2 27	18 53	0 36	W14
T 15	21 12	12 47	1 47	22 54	0 31	15 20	5 31	15 16	1 6	13 55	0 52	3 23	2 27	18 52	0 36	T 15
F 16	21 1	9 38	0 43	23 0	0 22	15 15	5 44	15 1	1 5	13 50	0 52	3 25	2 27	18 51	0 36	F 16
S 17	20 49	6 8	0n22	23 5	0 14	15 10	5 55	14 45	1 5	13 46	0 52	3 26	2 26	18 51	0 36	S 17
S 18	20 37	2 26	1 25	23 10	0 5	15 5	6 6	14 29	1 4	13 41	0 52	3 28	2 26	18 50	0 36	S 18
M19	20 25	1s20	2 25	23 13	0s 3	15 2	6 17	14 12	1 4	13 36	0 52	3 29	2 26	18 49	0 36	M19
T 20	20 13	5 3	3 18	23 15	0 10	14 58	6 26	13 56	1 4	13 32	0 52	3 31	2 26	18 48	0 36	T 20
W21	20 0	8 36	4 4	23 16	0 18	14 55	6 35	13 40	1 3	13 27	0 52	3 33	2 25	18 47	0 36	W21
T 22	19 46	11 50	4 39	23 16	0 26	14 53	6 42	13 23	1 3	13 22	0 52	3 34	2 25	18 46	0 36	T 22
F 23	19 32	14 37	5 2	23 15	0 33	14 51	6 49	13 6	1 2	13 18	0 52	3 36	2 25	18 45	0 36	F 23
S 24	19 18	16 48	5 11	23 12	0 40	14 50	6 56	12 49	1 2	13 13	0 52	3 38	2 25	18 44	0 36	S 24
S 25	19 4	18 11	5 5	23 9	0 47	14 49	7 1	12 32	1 2	13 8	0 52	3 40	2 24	18 43	0 36	S 25
M26	18 49	18 36	4 42	23 3	0 53	14 48	7 5	12 15	1 1	13 3	0 52	3 41	2 24	18 42	0 36	M26
T 27	18 34	17 56	4 1	22 57	1 0	14 48	7 9	11 58	1 1	12 59	0 52	3 43	2 24	18 41	0 36	T 27
W28	18 18	16 8	3 5	22 50	1 6	14 49	7 12	11 41	1 0	12 54	0 52	3 45	2 24	18 41	0 36	W28
T 29	18 2	13 17	1 56	22 41	1 12	14 49	7 14	11 23	1 0	12 49	0 52	3 47	2 24	18 40	0 36	T 29
F 30	17 46	9 35	0 39	22 31	1 17	14 50	7 16	11 6	0 59	12 44	0 52	3 49	2 23	18 39	0 36	F 30
S 31	17s30	5s17	0s41	22s19	1s23	14s52	7n16	10s48	0s59	12s39	0s52	3n51	2s23	18s38	0s36	S 31

Julian Day Number = 2450814.5, Delta T = 62.97 sec  
 Ecliptic obliquity = 23°26'13, Nutation = - 0°00'04, out-of-bounds declination in red  
 Ayanamsha: Fagan/Bradley = 24°42'45, Lahiri = 23°49'45

## ASTRODIENST EPHEMERIS for the year 1998

geocentric

FEBRUARY 1998

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	8 44 0	11°54'56	2°49	27°32	18°R57	5°13	29°11	15°26	8°53	0°6	7°39	10°45	12°5	5°20	17°M59	S 1
M 2	8 47 56	12°55'51	17°16	29° 0	18°347	6° 0	29°25	15°31	8°57	0° 9	7°40	10°47	12° 2	5°27	18° 2	M 2
T 3	8 51 53	13°56'44	1°32	0°34	18°38	6°47	29°39	15°36	9° 0	0°11	7°41	10°48	11°59	5°34	18° 5	T 3
W 4	8 55 49	14°57'36	15°33	2° 9	18°32	7°34	29°54	15°41	9° 4	0°13	7°42	10°R49	11°56	5°40	18° 8	W 4
T 5	8 59 46	15°58'26	29°21	3°45	18°29	8°22	0°8	15°46	9° 7	0°15	7°44	10°48	11°52	5°47	18°11	T 5
F 6	9 3 43	16°59'15	12°II53	5°21	18°D28	9° 9	0°22	15°51	9°11	0°18	7°45	10°46	11°49	5°54	18°14	F 6
S 7	9 7 39	18° 0'03	26°11	6°58	18°30	9°56	0°36	15°56	9°14	0°20	7°46	10°43	11°46	6° 0	18°16	S 7
S 8	9 11 36	19° 0'49	9°36	8°36	18°33	10°43	0°51	16° 1	9°18	0°22	7°47	10°40	11°43	6° 7	18°19	S 8
M 9	9 15 32	20° 1'34	22° 6	10°14	18°40	11°30	1° 5	16° 6	9°21	0°24	7°48	10°37	11°40	6°14	18°21	M 9
T 10	9 19 29	21° 2'17	4°44	11°53	18°48	12°17	1°19	16°12	9°25	0°26	7°49	10°34	11°36	6°20	18°24	T 10
W11	9 23 25	22° 2'59	17°10	13°34	18°59	13° 5	1°34	16°17	9°28	0°28	7°50	10°31	11°33	6°27	18°26	W11
T 12	9 27 22	23° 3'40	29°25	15°15	19°12	13°52	1°48	16°23	9°32	0°31	7°51	10°30	11°30	6°34	18°28	T 12
F 13	9 31 18	24° 4'19	11°29	16°56	19°27	14°39	2° 2	16°28	9°35	0°33	7°52	10°D30	11°27	6°40	18°30	F 13
S 14	9 35 15	25° 4'57	23°26	18°39	19°44	15°26	2°17	16°34	9°38	0°35	7°53	10°30	11°24	6°47	18°32	S 14
S 15	9 39 12	26° 5'33	5°17	20°22	20° 3	16°13	2°31	16°40	9°42	0°37	7°54	10°31	11°21	6°54	18°34	S 15
M16	9 43 8	27° 6'09	17° 5	22° 7	20°24	17° 0	2°45	16°45	9°45	0°39	7°54	10°32	11°17	7° 0	18°35	M16
T 17	9 47 5	28° 6'43	28°54	23°52	20°46	17°47	3° 0	16°51	9°49	0°41	7°55	10°34	11°14	7° 7	18°37	T 17
W18	9 51 1	29° 7'15	10°M49	25°38	21°11	18°34	3°14	16°57	9°52	0°43	7°56	10°35	11°11	7°14	18°38	W18
T 19	9 54 58	0°8	7°47	22°53	27°25	21°37	19°21	3°29	17° 3	9°55	7°57	10°35	11° 8	7°20	18°40	T 19
F 20	9 58 54	1° 8'17	5°12	29°13	22° 5	20° 8	3°43	17° 9	9°59	0°47	7°57	10°R35	11° 5	7°27	18°41	F 20
S 21	10 2 51	2° 8'46	17°49	1°2	22°35	20°54	3°58	17°15	10° 2	0°49	7°58	10°35	11° 2	7°34	18°42	S 21
S 22	10 6 47	3° 9'14	0°350	2°52	23° 6	21°41	4°12	17°21	10° 5	0°51	7°59	10°34	10°58	7°40	18°43	S 22
M23	10 10 44	4° 9'40	14°16	4°42	23°39	22°28	4°27	17°27	10° 9	0°53	7°59	10°34	10°55	7°47	18°44	M23
T 24	10 14 41	5°10'05	28° 8	6°34	24°13	23°15	4°41	17°34	10°12	0°55	8° 0	10°33	10°52	7°54	18°45	T 24
W25	10 18 37	6°10'29	12°26	8°26	24°48	24° 2	4°56	17°40	10°15	0°57	8° 0	10°32	10°49	8° 0	18°45	W25
T 26	10 22 34	7°10'50	27° 6	10°19	25°25	24°48	5°10	17°46	10°18	0°59	8° 1	10°32	10°46	8° 7	18°46	T 26
F 27	10 26 30	8°11'11	12°1	12°12	26° 3	25°35	5°24	17°53	10°22	1° 1	8° 1	10°D32	10°42	8°14	18°46	F 27
S 28	10 30 27	9°11'29	27°3	14°6	26°42	26°22	5°39	17°59	10°25	1° 3	8° 2	10°32	10°39	8°20	18°47	S 28

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
S 1	17s13	0s41	1s58	22s 6	1s28	14s54	7n16	10s30	0s58	12s34	0s52	3n53	2s23	18s37	0s36	19s47
M 2	16 56	3n54	3 7	21 52	1 33	14 56	7 16	10 12	0 58	12 29	0 52	3 55	2 23	18 36	0 36	19 46
T 3	16 38	8 11	4 4	21 36	1 37	14 58	7 15	9 55	0 57	12 24	0 52	3 57	2 22	18 35	0 36	19 46
W 4	16 21	11 57	4 45	21 19	1 41	15 0	7 13	9 37	0 57	12 19	0 52	3 59	2 22	18 34	0 36	19 45
T 5	16 3	14 59	5 8	21 1	1 45	15 3	7 11	9 18	0 56	12 14	0 52	4 1	2 22	18 33	0 36	19 45
F 6	15 45	17 8	5 15	20 41	1 49	15 6	7 8	9 0	0 56	12 9	0 52	4 3	2 22	18 32	0 36	19 44
S 7	15 26	18 20	5 3	20 20	1 52	15 9	7 5	8 42	0 55	12 4	0 52	4 5	2 22	18 31	0 36	19 44
S 8	15 7	18 31	4 37	19 58	1 55	15 12	7 1	8 24	0 55	11 59	0 52	4 8	2 21	18 30	0 36	19 43
M 9	14 48	17 44	3 56	19 34	1 58	15 15	6 57	8 5	0 54	11 54	0 52	4 10	2 21	18 30	0 36	19 43
T 10	14 29	16 5	3 5	19 9	2 0	15 18	6 53	7 47	0 54	11 49	0 52	4 12	2 21	18 29	0 36	19 42
W11	14 10	13 42	2 5	18 42	2 2	15 22	6 48	7 28	0 53	11 44	0 52	4 14	2 21	18 28	0 36	19 42
T 12	13 50	10 43	1 1	18 14	2 4	15 25	6 43	7 10	0 53	11 39	0 52	4 16	2 21	18 27	0 36	19 42
F 13	13 30	7 20	0n 6	17 44	2 5	15 28	6 38	6 51	0 52	11 34	0 52	4 19	2 20	18 26	0 36	19 41
S 14	13 10	3 42	1 11	17 13	2 6	15 31	6 32	6 32	0 52	11 29	0 52	4 21	2 20	18 25	0 36	19 41
S 15	12 49	0s 4	2 13	16 41	2 6	15 34	6 26	6 14	0 51	11 24	0 53	4 23	2 20	18 24	0 36	19 40
M16	12 29	3 48	3 9	16 7	2 6	15 37	6 20	5 55	0 51	11 18	0 53	4 26	2 20	18 23	0 36	19 40
T 17	12 8	7 23	3 58	15 32	2 5	15 40	6 14	5 36	0 50	11 13	0 53	4 28	2 20	18 22	0 36	19 39
W18	11 47	10 42	4 36	14 56	2 4	15 43	6 8	5 17	0 50	11 8	0 53	4 31	2 20	18 21	0 36	19 39
T 19	11 26	13 36	5 3	14 18	2 3	15 45	6 1	4 58	0 49	11 3	0 53	4 33	2 19	18 21	0 36	19 38
F 20	11 4	15 59	5 16	13 38	2 1	15 48	5 54	4 39	0 49	10 58	0 53	4 35	2 19	18 20	0 36	19 38
S 21	10 43	17 39	5 15	12 57	1 59	15 50	5 48	4 20	0 48	10 53	0 53	4 38	2 19	18 19	0 36	19 38
S 22	10 21	18 28	4 58	12 15	1 56	15 52	5 41	4 1	0 48	10 47	0 53	4 40	2 19	18 18	0 36	19 37
M23	9 59	18 17	4 25	11 32	1 52	15 53	5 34	3 42	0 47	10 42	0 53	4 43	2 19	18 17	0 36	19 37
T 24	9 37	17 2	3 35	10 47	1 48	15 54	5 27	3 23	0 46	10 37	0 53	4 45	2 19	18 16	0 36	19 36
W25	9 15	14 40	2 30	10 1	1 44	15 56	5 19	3 4	0 46	10 32	0 53	4 48	2 18	18 15	0 36	19 36
T 26	8 52	11 19	1 14	9 14	1 39	15 56	5 12	2 45	0 45	10 26	0 53	4 50	2 18	18 14	0 36	19 35
F 27	8 30	7 11	0s 8	8 25	1 33	15 57	5 5	2 26	0 45	10 21	0 53	4 53	2 18	18 14	0 36	19 35
S 28	8s 7	2s33	1s31	7s35	1s27	15s57	4n57	2s 7	0s44	10s16	0s53	4n56	2s18	18s13	0s36	19s35

Julian Day Number = 2450845.5, Delta T = 63.02 sec

Ecliptic obliquity = 23°26'14, Nutation = - 0°00'04, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 24°42'49, Lahiri = 23°49'49

# ASTRODIENST EPHEMERIS for the year 1998

## geocentric

MARCH 1998

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	10 34 23	10°11'45	12°14'4	16°11'1	27°23'23	27°11'9	5°11'53	18°11'6	10°11'28	1°11'5	8°11'2	10°11'32	10°11'36	8°11'27	18°11'47	S 1
M 2	10 38 20	11°12'00	26°56'1	17°56'4	28°56'4	27°55'5	6°8'8	18°12'1	10°31'1	1°7'7	8°2'2	10°11'32	10°33'3	8°34'3	18°11'47	M 2
T 3	10 42 16	12°12'13	11°11'31	19°51'1	28°47'1	28°42'2	6°22'2	18°19'1	10°34'1	1°9'9	8°3'3	10°32'2	10°30'3	8°40'3	18°11'47	T 3
W 4	10 46 13	13°12'23	25°46'1	21°46'6	29°30'1	29°28'2	6°37'7	18°25'1	10°37'1	1°10'10	8°3'3	10°32'2	10°27'3	8°47'3	18°11'47	W 4
T 5	10 50 10	14°12'32	9°11'39	23°41'1	0°11'14	0°11'15	6°51'1	18°32'1	10°40'1	1°12'12	8°3'3	10°D32'2	10°23'3	8°54'3	18°11'46	T 5
F 6	10 54 6	15°12'38	23°9'9	25°35'1	1°0'0	1°1'1	7°5'5	18°39'1	10°43'1	1°14'14	8°3'3	10°32'2	10°20'3	9°0'0	18°11'46	F 6
S 7	10 58 3	16°12'42	6°11'17	27°28'1	1°46'1	1°48'1	7°20'1	18°46'1	10°47'1	1°16'16	8°3'3	10°32'2	10°17'3	9°7'7	18°11'46	S 7
S 8	11 1 59	17°12'44	19°7'7	29°21'1	2°33'1	2°34'1	7°34'1	18°52'1	10°50'1	1°17'17	8°4'4	10°33'2	10°14'3	9°14'3	18°11'45	S 8
M 9	11 5 56	18°12'44	1°11'41	1°11'11	3°21'1	3°21'1	7°48'1	18°59'1	10°52'1	1°19'19	8°4'4	10°33'2	10°11'3	9°20'3	18°11'44	M 9
T 10	11 9 52	19°12'42	14°1'1	3°0'0	4°10'1	4°7'7	8°3'3	19°6'6	10°55'1	1°21'21	8°4'4	10°34'2	10°7'7	9°27'7	18°11'43	T 10
W 11	11 13 49	20°12'38	26°11'1	4°47'1	5°0'0	4°53'3	8°17'1	19°13'1	10°58'1	1°23'23	8°R4'4	10°35'2	10°4'4	9°34'4	18°11'42	W 11
T 12	11 17 45	21°12'32	8°11'31	6°30'1	5°50'1	5°40'1	8°31'1	19°20'1	11°1'1	1°24'24	8°4'4	10°R35'2	10°1'1	9°40'1	18°11'41	T 12
F 13	11 21 42	22°12'23	20°8'8	8°10'1	6°41'1	6°26'1	8°46'1	19°27'1	11°4'4	1°26'26	8°4'4	10°35'2	9°58'8	9°47'7	18°11'40	F 13
S 14	11 25 38	23°12'13	1°11'59	9°46'1	7°33'1	7°12'1	9°0'0	19°34'1	11°7'7	1°27'27	8°4'4	10°34'2	9°55'5	9°54'4	18°11'39	S 14
S 15	11 29 35	24°12'01	13°49'1	11°18'1	8°26'1	7°58'1	9°14'1	19°41'1	11°10'1	1°29'29	8°4'4	10°33'2	9°52'2	10°0'0	18°11'38	S 15
M 16	11 33 32	25°11'47	25°38'1	12°45'1	9°19'1	8°44'1	9°28'1	19°48'1	11°12'1	1°30'30	8°3'3	10°31'2	9°48'8	10°7'7	18°11'36	M 16
T 17	11 37 28	26°11'31	7°11'30	14°7'7	10°12'1	9°30'1	9°43'1	19°56'1	11°15'1	1°32'32	8°3'3	10°28'2	9°45'5	10°14'14	18°11'35	T 17
W 18	11 41 25	27°11'13	19°27'1	15°22'1	11°7'7	10°16'1	9°57'1	20°3'1	11°18'1	1°33'33	8°3'3	10°26'2	9°42'2	10°20'2	18°11'33	W 18
T 19	11 45 21	28°10'54	1°11'33	16°32'1	12°1'1	11°2'2	10°11'1	20°10'1	11°21'1	1°35'35	8°3'3	10°23'2	9°39'9	10°27'7	18°11'31	T 19
F 20	11 49 18	29°10'33	13°51'1	17°34'1	12°57'1	11°48'1	10°25'1	20°17'1	11°23'1	1°36'36	8°2'2	10°22'2	9°36'6	10°34'4	18°11'29	F 20
S 21	11 53 14	0°11'10	26°25'1	18°30'1	13°53'1	12°34'1	10°39'1	20°25'1	11°26'1	1°38'38	8°2'2	10°D21'2	9°33'3	10°40'0	18°11'27	S 21
S 22	11 57 11	1°9'45	9°11'19	19°19'1	14°49'1	13°20'1	10°53'1	20°32'1	11°28'1	1°39'39	8°2'2	10°21'2	9°29'9	10°47'7	18°11'25	S 22
M 23	12 1 7	2°9'19	22°37'1	20°0'0	15°46'1	14°6'6	11°7'7	20°39'1	11°31'1	1°41'41	8°1'1	10°22'2	9°26'6	10°54'4	18°11'23	M 23
T 24	12 5 4	3°8'51	6°11'30	20°33'1	16°44'1	14°52'1	11°21'1	20°47'1	11°33'1	1°42'42	8°1'1	10°24'2	9°23'3	11°0'0	18°11'21	T 24
W 25	12 9 1	4°8'21	20°30'1	20°59'1	17°42'1	15°37'1	11°35'1	20°54'1	11°36'1	1°43'43	8°1'1	10°25'2	9°20'2	11°7'7	18°11'19	W 25
T 26	12 12 57	5°7'49	5°11'5	21°17'1	18°40'1	16°23'1	11°49'1	21°1'1	11°38'1	1°44'44	8°0'0	10°R26'2	9°17'7	11°14'14	18°11'16	T 26
F 27	12 16 54	6°7'15	20°1'1	21°27'1	19°39'1	17°9'9	12°3'3	21°9'9	11°41'1	1°46'46	8°0'0	10°26'2	9°13'3	11°20'2	18°11'14	F 27
S 28	12 20 50	7°6'40	5°11'12	21°R30'1	20°38'1	17°54'1	12°16'1	21°16'1	11°43'1	1°47'47	7°59'9	10°24'2	9°10'0	11°27'7	18°11'11	S 28
S 29	12 24 47	8°6'02	20°27'1	21°25'1	21°37'1	18°40'1	12°30'1	21°24'1	11°45'1	1°48'48	7°58'8	10°21'2	9°7'7	11°34'4	18°11'8	S 29
M 30	12 28 43	9°5'22	5°11'36	21°12'1	22°37'1	19°26'1	12°44'1	21°31'1	11°48'1	1°49'49	7°58'8	10°17'2	9°4'4	11°40'0	18°11'5	M 30
T 31	12 32 40	10°11'41	20°11'30	20°11'53	23°11'37	20°11'11	12°11'58	21°11'39	11°11'50	1°11'50	7°11'57	10°11'13	9°11'1	11°11'47	18°11'2	T 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
S 1	7s45	2n13	2s47	6s45	1s20	15s56	4n50	1s48	0s44	10s11	0s53	4n58	2s18	18s12	0s36	19s34
M 2	7 22	6 47	3 51	5 53	1 13	15 56	4 43	1 29	0 43	10 5	0 53	5 1	2 18	18 11	0 36	19 34
T 3	6 59	10 52	4 38	5 1	1 5	15 55	4 35	1 10	0 42	10 0	0 53	5 3	2 18	18 10	0 36	19 33
W 4	6 36	14 13	5 8	4 7	0 56	15 53	4 28	0 51	0 42	9 55	0 54	5 6	2 17	18 9	0 36	19 33
T 5	6 13	16 39	5 18	3 13	0 37	15 51	4 20	0 32	0 41	9 50	0 54	5 9	2 17	18 9	0 37	19 33
F 6	5 50	18 6	5 10	2 19	0 17	15 49	4 13	0 13	0 41	9 44	0 54	5 11	2 17	18 8	0 37	19 32
S 7	5 26	18 31	4 47	1 25	0 26	15 46	4 5	0n 6	0 40	9 39	0 54	5 14	2 17	18 7	0 37	19 32
S 8	5 3	17 58	4 9	0 30	0 16	15 43	3 58	0 25	0 39	9 34	0 54	5 17	2 17	18 6	0 37	19 31
M 9	4 40	16 32	3 20	0n25	0 4	15 40	3 50	0 44	0 39	9 28	0 54	5 20	2 17	18 5	0 37	19 31
T 10	4 16	14 21	2 22	1 19	0n 8	15 36	3 43	1 3	0 38	9 23	0 54	5 22	2 17	18 5	0 37	19 31
W 11	3 53	11 33	1 19	2 12	0 20	15 31	3 36	1 22	0 38	9 18	0 54	5 25	2 17	18 4	0 37	19 30
T 12	3 29	8 17	0 13	3 5	0 33	15 27	3 28	1 41	0 37	9 13	0 54	5 28	2 16	18 3	0 37	19 30
F 13	3 6	4 43	0n53	3 56	0 45	15 21	3 21	2 0	0 36	9 7	0 54	5 30	2 16	18 2	0 37	19 30
S 14	2 42	0 59	1 56	4 46	0 59	15 16	3 14	2 19	0 36	9 2	0 54	5 33	2 16	18 2	0 37	19 29
S 15	2 18	2s47	2 54	5 34	1 12	15 9	3 6	2 37	0 35	8 57	0 54	5 36	2 16	18 1	0 37	19 29
M 16	1 55	6 25	3 44	6 20	1 25	15 3	2 59	2 56	0 35	8 52	0 55	5 39	2 16	18 0	0 37	19 29
T 17	1 31	9 50	4 25	7 4	1 38	14 55	2 52	3 15	0 34	8 46	0 55	5 42	2 16	17 59	0 37	19 28
W 18	1 7	12 51	4 55	7 45	1 50	14 48	2 45	3 33	0 33	8 41	0 55	5 44	2 16	17 59	0 37	19 28
T 19	0 43	15 22	5 12	8 23	2 3	14 40	2 38	3 52	0 33	8 36	0 55	5 47	2 16	17 58	0 37	19 28
F 20	0 20	17 15	5 15	8 58	2 15	14 31	2 31	4 11	0 32	8 31	0 55	5 50	2 16	17 57	0 37	19 27
S 21	0n 4	18 20	5 4	9 30	2 26	14 22	2 24	4 29	0 31	8 25	0 55	5 53	2 16	17 56	0 37	19 27
S 22	0 28	18 31	4 37	9 58	2 37	14 12	2 17	4 47	0 31	8 20	0 55	5 55	2 16	17 56	0 37	19 27
M 23	0 51	17 41	3 54	10 23	2 46	14 2	2 10	5 6	0 30	8 15	0 55	5 58	2 15	17 55	0 37	19 26
T 24	1 15	15 50	2 57	10 44	2 55	13 52	2 3	5 24	0 30	8 10	0 55	6 1	2 15	17 54	0 37	19 26
W 25	1 39	12 57	1 48	11 1	3 3	13 41	1 56	5 42	0 29	8 4	0 55	6 4	2 15	17 54	0 37	19 26
T 26	2 2	9 11	0 29	11 14	3 10	13 30	1 50	6 0	0 28	7 59	0 56	6 7	2 15	17 53	0 37	19 26
F 27	2 26	4 45	0s53	11 23	3 15	13 18	1 43	6 19	0 28	7 54	0 56	6 10	2 15	17 53	0 37	19 25
S 28	2 49	0n 3	2 12	11 27	3 19	13 5	1 37	6 37	0 27	7 49	0 56	6 12	2 15	17 52	0 37	19 25
S 29	3 13	4 51	3 22	11 28	3 21	12 53	1 30	6 54	0 26	7 44	0 56	6 15	2 15	17 51	0 37	19 25
M 30	3 36	9 20	4 18	11 24	3 22	12 39	1 24	7 12	0 26	7 39	0 56	6 18	2 15	17 51	0 37	19 24
T 31	3n59	13n 8	4s55	11n16	3n22	12s26	1n17	7n30	0s25	7s33	0s56	6n21	2s15	17s50	0s37	19s24

Julian Day Number = 2450873.5, Delta T = 63.06 sec  
 Ecliptic obliquity = 23°26'14", Nutation = - 0°00'05", out-of-bounds declination in red  
 Ayanamsha: Fagan/Bradley = 24°42'53", Lahiri = 23°49'53"

# ASTRODIENST EPHEMERIS for the year 1998

## geocentric

APRIL 1998

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	12 36 36	11° 3' 56"	5° 11' 1"	20° 28' 28"	24° 38' 38"	20° 57' 57"	13° 11' 11"	21° 46' 46"	11° 52' 52"	1° 51' 51"	7° 57' 57"	10° 9' 9"	8° 58' 58"	11° 54' 54"	17° 59' 59"	W 1
T 2	12 40 33	12° 3' 10"	19° 6' 6"	19° 57' 57"	25° 39' 39"	21° 42' 42"	13° 25' 25"	21° 54' 54"	11° 54' 54"	1° 53' 53"	7° 56' 56"	10° 6' 6"	8° 54' 54"	12° 0' 0"	17° 56' 56"	T 2
F 3	12 44 30	13° 2' 21"	2° 54' 42"	19° 22' 22"	26° 40' 40"	22° 27' 27"	13° 38' 38"	22° 1' 1"	11° 56' 56"	1° 54' 54"	7° 55' 55"	10° 4' 4"	8° 51' 51"	12° 7' 7"	17° 53' 53"	F 3
S 4	12 48 26	14° 1' 30"	15° 52' 52"	18° 42' 42"	27° 41' 41"	23° 13' 13"	13° 52' 52"	22° 9' 9"	11° 58' 58"	1° 55' 55"	7° 54' 54"	10° 4' 4"	8° 48' 48"	12° 14' 14"	17° 50' 50"	S 4
S 5	12 52 23	15° 0' 37"	28° 38' 38"	17° 58' 58"	28° 43' 43"	23° 58' 58"	14° 5' 5"	22° 16' 16"	12° 1' 1"	1° 56' 56"	7° 54' 54"	10° 4' 4"	8° 45' 45"	12° 20' 20"	17° 47' 47"	S 5
M 6	12 56 19	15° 59' 41"	11° 6' 5"	17° 13' 13"	29° 45' 45"	24° 43' 43"	14° 19' 19"	22° 24' 24"	12° 2' 2"	1° 56' 56"	7° 53' 53"	10° 6' 6"	8° 42' 42"	12° 27' 27"	17° 43' 43"	M 6
T 7	13 0 16	16° 58' 43"	23° 16' 16"	16° 26' 26"	0° 48' 48"	25° 28' 28"	14° 32' 32"	22° 32' 32"	12° 4' 4"	1° 57' 57"	7° 52' 52"	10° 8' 8"	8° 39' 39"	12° 34' 34"	17° 40' 40"	T 7
W 8	13 4 12	17° 57' 43"	5° 16' 16"	15° 38' 38"	1° 50' 50"	26° 13' 13"	14° 45' 45"	22° 39' 39"	12° 6' 6"	1° 58' 58"	7° 51' 51"	10° 9' 9"	8° 35' 35"	12° 40' 40"	17° 36' 36"	W 8
T 9	13 8 9	18° 56' 40"	17° 9' 9"	14° 51' 51"	2° 53' 53"	26° 58' 58"	14° 58' 58"	22° 47' 47"	12° 8' 8"	1° 59' 59"	7° 50' 50"	10° 9' 9"	8° 32' 32"	12° 47' 47"	17° 33' 33"	T 9
F 10	13 12 5	19° 55' 36"	28° 59' 59"	14° 5' 5"	3° 57' 57"	27° 43' 43"	15° 12' 12"	22° 54' 54"	12° 10' 10"	2° 0' 0"	7° 49' 49"	10° 7' 7"	8° 29' 29"	12° 54' 54"	17° 29' 29"	F 10
S 11	13 16 2	20° 54' 29"	10° 47' 47"	13° 21' 21"	5° 0' 0"	28° 28' 28"	15° 25' 25"	23° 2' 2"	12° 12' 12"	2° 1' 1"	7° 48' 48"	10° 3' 3"	8° 26' 26"	13° 0' 0"	17° 25' 25"	S 11
S 12	13 19 58	21° 53' 20"	22° 37' 37"	12° 40' 40"	6° 4' 4"	29° 13' 13"	15° 38' 38"	23° 9' 9"	12° 14' 14"	2° 1' 1"	7° 47' 47"	9° 57' 57"	8° 23' 23"	13° 7' 7"	17° 22' 22"	S 12
M13	13 23 55	22° 52' 09"	4° 13' 30"	12° 3' 3"	7° 8' 8"	29° 58' 58"	15° 51' 51"	23° 17' 17"	12° 15' 15"	2° 2' 2"	7° 46' 46"	9° 50' 50"	8° 19' 19"	13° 14' 14"	17° 18' 18"	M13
T 14	13 27 52	23° 50' 56"	16° 28' 28"	11° 29' 29"	8° 12' 12"	0° 43' 43"	16° 4' 4"	23° 25' 25"	12° 17' 17"	2° 3' 3"	7° 45' 45"	9° 42' 42"	8° 16' 16"	13° 20' 20"	17° 14' 14"	T 14
W15	13 31 48	24° 49' 42"	28° 33' 33"	11° 0' 0"	9° 16' 16"	1° 28' 28"	16° 16' 16"	23° 32' 32"	12° 18' 18"	2° 4' 4"	7° 44' 44"	9° 33' 33"	8° 13' 13"	13° 27' 27"	17° 10' 10"	W15
T 16	13 35 45	25° 48' 25"	10° 46' 46"	10° 35' 35"	10° 21' 21"	2° 12' 12"	16° 29' 29"	23° 40' 40"	12° 20' 20"	2° 4' 4"	7° 43' 43"	9° 25' 25"	8° 10' 10"	13° 34' 34"	17° 6' 6"	T 16
F 17	13 39 41	26° 47' 07"	23° 9' 9"	10° 16' 16"	11° 26' 26"	2° 57' 57"	16° 42' 42"	23° 47' 47"	12° 22' 22"	2° 5' 5"	7° 42' 42"	9° 19' 19"	8° 7' 7"	13° 40' 40"	17° 2' 2"	F 17
S 18	13 43 38	27° 45' 47"	5° 34' 46"	10° 1' 1"	12° 31' 31"	3° 42' 42"	16° 55' 55"	23° 55' 55"	12° 23' 23"	2° 5' 5"	7° 41' 41"	9° 15' 15"	8° 4' 4"	13° 47' 47"	16° 58' 58"	S 18
S 19	13 47 34	28° 44' 26"	18° 39' 39"	9° 52' 52"	13° 36' 36"	4° 26' 26"	17° 7' 7"	24° 3' 3"	12° 24' 24"	2° 6' 6"	7° 40' 40"	9° 12' 12"	8° 0' 0"	13° 54' 54"	16° 54' 54"	S 19
M20	13 51 31	29° 43' 03"	1° 50' 48"	9° 48' 48"	14° 41' 41"	5° 11' 11"	17° 20' 20"	24° 10' 10"	12° 26' 26"	2° 6' 6"	7° 39' 39"	9° 12' 12"	7° 57' 57"	14° 0' 0"	16° 49' 49"	M20
T 21	13 55 27	0° 41' 38"	15° 24' 24"	9° 49' 49"	15° 47' 47"	5° 55' 55"	17° 32' 32"	24° 18' 18"	12° 27' 27"	2° 7' 7"	7° 37' 37"	9° 12' 12"	7° 54' 54"	14° 7' 7"	16° 45' 45"	T 21
W22	13 59 24	1° 40' 11"	29° 21' 21"	9° 55' 55"	16° 53' 53"	6° 39' 39"	17° 44' 44"	24° 25' 25"	12° 28' 28"	2° 7' 7"	7° 36' 36"	9° 13' 13"	7° 51' 51"	14° 14' 14"	16° 41' 41"	W22
T 23	14 3 21	2° 38' 43"	13° 43' 43"	10° 6' 6"	17° 58' 58"	7° 24' 24"	17° 57' 57"	24° 33' 33"	12° 30' 30"	2° 8' 8"	7° 35' 35"	9° 14' 14"	7° 48' 48"	14° 20' 20"	16° 37' 37"	T 23
F 24	14 7 17	3° 37' 13"	28° 27' 27"	10° 21' 21"	19° 5' 5"	8° 8' 8"	18° 9' 9"	24° 40' 40"	12° 31' 31"	2° 8' 8"	7° 34' 34"	9° 12' 12"	7° 44' 44"	14° 27' 27"	16° 32' 32"	F 24
S 25	14 11 14	4° 35' 41"	13° 28' 28"	10° 42' 42"	20° 11' 11"	8° 52' 52"	18° 21' 21"	24° 48' 48"	12° 32' 32"	2° 8' 8"	7° 32' 32"	9° 8' 8"	7° 41' 41"	14° 34' 34"	16° 28' 28"	S 25
S 26	14 15 10	5° 34' 08"	28° 38' 38"	11° 7' 7"	21° 17' 17"	9° 37' 37"	18° 33' 33"	24° 56' 56"	12° 33' 33"	2° 9' 9"	7° 31' 31"	9° 2' 2"	7° 38' 38"	14° 40' 40"	16° 23' 23"	S 26
M27	14 19 7	6° 32' 33"	13° 49' 49"	11° 36' 36"	22° 24' 24"	10° 21' 21"	18° 45' 45"	25° 3' 3"	12° 34' 34"	2° 9' 9"	7° 30' 30"	8° 54' 54"	7° 35' 35"	14° 47' 47"	16° 19' 19"	M27
T 28	14 23 3	7° 30' 56"	28° 49' 49"	12° 9' 9"	23° 30' 30"	11° 5' 5"	18° 57' 57"	25° 11' 11"	12° 35' 35"	2° 9' 9"	7° 28' 28"	8° 45' 45"	7° 32' 32"	14° 54' 54"	16° 14' 14"	T 28
W29	14 27 0	8° 29' 17"	13° 29' 29"	12° 46' 46"	24° 37' 37"	11° 49' 49"	19° 9' 9"	25° 18' 18"	12° 36' 36"	2° 9' 9"	7° 27' 27"	8° 36' 36"	7° 29' 29"	15° 0' 0"	16° 10' 10"	W29
T 30	14 30 56	9° 27' 37"	27° 42' 42"	13° 27' 27"	25° 44' 44"	12° 33' 33"	19° 21' 21"	25° 26' 26"	12° 37' 37"	2° 9' 9"	7° 26' 26"	8° 29' 29"	7° 25' 25"	15° 7' 7"	16° 16' 16"	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	decl	lat
W 1	4n23	16n 1	5s12	11n 4	3n19	12s12	1n11	7n48	0s24	7s28	0s56	6n24	2s15	17s49	0s37	19s24	0n21	9s28	12n19	7n46	8n13	2s 7	15s19	1n57			
T 2	4 46	17 51	5 9	10 49	3 15	11 57	1 5	8 5	0 24	7 23	0 56	6 27	2 15	17 49	0 37	19 24	0 21	9 28	12 19	7 47	8 14	2 9	15 17	1 58			
F 3	5 9	18 35	4 49	10 30	3 9	11 42	0 59	8 23	0 23	7 18	0 56	6 29	2 15	17 48	0 37	19 23	0 21	9 27	12 19	7 48	8 15	2 11	15 16	1 58			
S 4	5 32	18 17	4 14	10 8	3 2	11 27	0 53	8 40	0 22	7 13	0 57	6 32	2 15	17 48	0 37	19 23	0 21	9 27	12 20	7 48	8 16	2 13	15 15	1 59			
S 5	5 55	17 2	3 28	9 43	2 53	11 11	0 47	8 58	0 22	7 8	0 57	6 35	2 15	17 47	0 37	19 23	0 21	9 26	12 20	7 47	8 17	2 15	15 13	1 59			
M 6	6 18	15 0	2 32	9 16	2 42	10 55	0 41	9 15	0 21	7 3	0 57	6 38	2 15	17 47	0 37	19 23	0 21	9 26	12 20	7 47	8 19	2 17	15 12	2 0			
T 7	6 40	12 20	1 31	8 46	2 30	10 38	0 36	9 32	0 21	6 58	0 57	6 41	2 15	17 46	0 37	19 23	0 21	9 26	12 20	7 46	8 20	2 19	15 11	2 0			
W 8	7 3	9 10	0 27	8 16	2 17	10 21	0 30	9 49	0 20	6 53	0 57	6 44	2 15	17 46	0 37	19 22	0 21	9 25	12 21	7 46	8 21	2 21	15 9	2 1			
T 9	7 25	5 39	0n38	7 45	2 3	10 4	0 24	10 6	0 19	6 48	0 57	6 46	2 15	17 45	0 37	19 22	0 21	9 25	12 21	7 46	8 22	2 23	15 8	2 1			
F 10	7 47	1 57	1 41	7 13	1 48	9 46	0 19	10 22	0 19	6 43	0 57	6 49	2 15	17 45	0 38	19 22	0 21	9 25	12 21	7 47	8 23	2 24	15 6	2 2			
S 11	8 10	1s50	2 39	6 42	1 33	9 28	0 14	10 39	0 18	6 38	0 58	6 52	2 15	17 44	0 38	19 22	0 21	9 24	12 21	7 48	8 24	2 26	15 5	2 2			
S 12	8 32	5 33	3 30	6 11	1 16	9 9	0 8	10 56	0 17	6 33	0 58	6 55	2 15	17 44	0 38	19 22	0 21	9 24	12 22	7 50	8 26	2 28	15 3	2 2			
M13	8 54	9 4	4 12	5 41	1 0	8 51	0 3	11 12	0 17	6 28	0 58	6 58	2 15	17 43	0 38	19 22	0 21	9 23	12 22	7 53	8 27	2 30	15 2	2 3			
T 14	9 15	12 14	4 44	5 12	0 43	8 31	0s2	11 28	0 16	6 23	0 58	7 0	2 15	17 43	0 38	19 21	0 21	9 23	12 22	7 56	8 28	2 32	15 0	2 3			
W15	9 37	14 55	5 3	4 46	0 27	8 12	0 7	11 44	0 15	6 19	0 58	7 3	2 15	17 43	0 38	19 21	0 21	9 23	12 22	7 59	8 29	2 34	14 59	2 4			
T 16	9 58	16 58	5 8	4 21	0 10	7 52	0 12	12 0	0 15	6 14	0 58	7 6	2 15	17 42	0 38	19 21	0 21	9 22	12 23	8 2	8 30	2 36	14 57	2 4			
F 17	10 20	18 17	4 59	3 59	0s6	7 32	0 16	12 16	0 14	6 9	0 58	7 9	2 15	17 42	0 38	19 21	0 21	9 22	12 23	8 5	8 32	2 38	14 56	2 5			
S 18	10 41	18 43	4 36	3 39	0 21	7 11	0 21	12 32	0 13	6 4	0 59	7 12	2 15	17 41	0 38	19 21	0 21	9 22	12 23	8 6	8 33	2 40	14 54	2 5			
S 19	11 2	18 12	3 58	3 21	0 36	6 51	0 26	12 48	0 13	5 59	0 59	7 14	2 15	17 41	0 38	19 21	0 21	9 21	12 23	8 7	8 34	2 42	14 53	2 5			
M20	11 22	16 42	3 7	3 6	0 51	6 30	0 30	13 3	0 12	5 55	0 59	7 17	2 15	17 41	0 38	19 21	0 21	9 21	12 23	8 7	8 35	2 44	14 51	2 6			
T 21	11 43	14 14	2 5	2 54	1 5	6 8	0 34	13 19	0 11	5 50	0 59	7 20	2 15	17 40	0 38	19 21	0 21	9 21	12 23	8 7	8 36	2 45	14 49	2 6			
W22	12 3	10 52	0 53	2 44	1 18	5 47	0 39	13 34	0 11	5 45	0 59	7 23	2 15	17 40	0 38	19 20	0 21	9 20	12 24	8 7	8 38	2 47	14 48	2 7			
T 23	12 23	6 47	0s24	2 37	1 30	5 25	0 43	13 49	0 10	5 45	0 59	7 25	2 15	17 40	0 38	19 20	0 21	9 20	12 24	8 7	8 39	2 49	14 46	2 7			
F 24	12 43	2 10	1 41	2 32	1 42	5 3	0 47	14 4	0 9	5 36	1 0	7 28	2 15	17 39	0 38	19 20	0 21	9 20	12 24	8 7	8 40	2 51	14 45	2 7			
S 25	13 3	2n39	2 53	2 30	1 53	4 40	0 51	14 19	0 9	5 31	1 0	7 31	2 15	17 39	0 38	19 20	0 21	9 19	12 24	8 9	8 41	2 53	14 43	2 8			
S 26	13 23	7 21	3 53	2 31	2 3	4 18	0 55	14 34	0 8	5 27	1 0	7 33	2 15	17 39	0 38	19 20	0 21	9 19	12 24	8 11	8 42	2 55	14 41	2 8			
M27	13 42	11 35	4 37	2 33	2 12	3 55	0 58	14 48	0 8	5 22	1 0	7 36	2 15	17 39	0 38	19 20	0 21	9 18	12 24	8 14	8 43	2 57	14 40	2 9			
T 28	14 1	15 0	5 0	2 39	2 21	3 32	1 2	15 3	0 7	5 18	1 0	7 39	2 15	17 38	0 38	19 20	0 21	9 18	12 25	8 17	8 45	2 59	14 38	2 9			
W29	14 20	17 23	5 4	2 46	2 28	3 8	1 6	15 17	0 6	5 13	1 0	7 41	2 15	17 38	0 38	19 20	0 21	9 18	12 25	8 20	8 46	3 1	14 36	2 9			
T 30	14n39	18n37	4s48	2n55	2s35	2s45	1s 9	15n31	0s6	5s 9	1s 1	7n44	2s15	17s38	0s38	19s20	0n21	9s17	12n25	8n23	8n47	3s 3	14s35	2n10			

ASTRODIENST EPHEMERIS for the year 1998  
geocentric

MAY 1998

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	14 34 53	10 <sup>8</sup> 25'54	11 <sup>2</sup> 27	14 <sup>1</sup> 12	26 <sup>2</sup> 51	13 <sup>8</sup> 17	19 <sup>1</sup> 32	25 <sup>5</sup> 33	12 <sup>2</sup> 38	2 <sup>2</sup> 10	7 <sup>0</sup> 24	8 <sup>0</sup> 23	7 <sup>1</sup> 22	15 <sup>1</sup> 14	16 <sup>0</sup> R 1	F 1
S 2	14 38 50	11 <sup>0</sup> 24'09	24 <sup>0</sup> 42	15 <sup>0</sup> 0	27 <sup>0</sup> 59	14 <sup>0</sup> 1	19 <sup>0</sup> 44	25 <sup>0</sup> 40	12 <sup>0</sup> 39	2 <sup>0</sup> 10	7 <sup>1</sup> 23	8 <sup>0</sup> 20	7 <sup>0</sup> 19	15 <sup>0</sup> 20	15 <sup>0</sup> M 56	S 2
S 3	14 42 46	12 <sup>0</sup> 22'22	7 <sup>0</sup> 31	15 <sup>0</sup> 52	29 <sup>0</sup> 6	14 <sup>0</sup> 45	19 <sup>0</sup> 55	25 <sup>0</sup> 48	12 <sup>0</sup> 39	2 <sup>0</sup> 10	7 <sup>0</sup> 21	8 <sup>0</sup> D18	7 <sup>0</sup> 16	15 <sup>0</sup> 27	15 <sup>0</sup> 52	S 3
M 4	14 46 43	13 <sup>0</sup> 20'33	19 <sup>0</sup> 58	16 <sup>0</sup> 47	0 <sup>0</sup> 13	15 <sup>0</sup> 28	20 <sup>0</sup> 7	25 <sup>0</sup> 55	12 <sup>0</sup> 40	2 <sup>0</sup> R10	7 <sup>0</sup> 20	8 <sup>0</sup> 18	7 <sup>0</sup> 13	15 <sup>0</sup> 34	15 <sup>0</sup> 47	M 4
T 5	14 50 39	14 <sup>0</sup> 18'42	2 <sup>0</sup> 17	17 <sup>0</sup> 45	1 <sup>0</sup> 21	16 <sup>0</sup> 12	20 <sup>0</sup> 18	26 <sup>0</sup> 3	12 <sup>0</sup> 41	2 <sup>0</sup> 10	7 <sup>0</sup> 18	8 <sup>0</sup> R19	7 <sup>0</sup> 10	15 <sup>0</sup> 40	15 <sup>0</sup> 43	T 5
W 6	14 54 36	15 <sup>0</sup> 16'49	14 <sup>0</sup> 5	18 <sup>0</sup> 45	2 <sup>0</sup> 29	16 <sup>0</sup> 56	20 <sup>0</sup> 29	26 <sup>0</sup> 10	12 <sup>0</sup> 41	2 <sup>0</sup> 10	7 <sup>0</sup> 17	8 <sup>0</sup> 19	7 <sup>0</sup> 6	15 <sup>0</sup> 47	15 <sup>0</sup> 38	W 6
T 7	14 58 32	16 <sup>0</sup> 14'54	25 <sup>0</sup> 55	19 <sup>0</sup> 49	3 <sup>0</sup> 36	17 <sup>0</sup> 40	20 <sup>0</sup> 40	26 <sup>0</sup> 17	12 <sup>0</sup> 42	2 <sup>0</sup> 10	7 <sup>0</sup> 15	8 <sup>0</sup> 17	7 <sup>0</sup> 3	15 <sup>0</sup> 54	15 <sup>0</sup> 34	T 7
F 8	15 2 29	17 <sup>0</sup> 12'58	7 <sup>0</sup> 43	20 <sup>0</sup> 56	4 <sup>0</sup> 44	18 <sup>0</sup> 23	20 <sup>0</sup> 51	26 <sup>0</sup> 25	12 <sup>0</sup> 42	2 <sup>0</sup> 10	7 <sup>0</sup> 14	8 <sup>0</sup> 14	7 <sup>0</sup> 0	16 <sup>0</sup> 0	15 <sup>0</sup> 29	F 8
S 9	15 6 25	18 <sup>0</sup> 10'59	19 <sup>0</sup> 31	22 <sup>0</sup> 5	5 <sup>0</sup> 52	19 <sup>0</sup> 7	21 <sup>0</sup> 2	26 <sup>0</sup> 32	12 <sup>0</sup> 43	2 <sup>0</sup> 9	7 <sup>0</sup> 12	8 <sup>0</sup> 7	6 <sup>0</sup> 57	16 <sup>0</sup> 7	15 <sup>0</sup> 25	S 9
S 10	15 10 22	19 <sup>0</sup> 8'59	1 <sup>0</sup> 24	23 <sup>0</sup> 17	7 <sup>0</sup> 0	19 <sup>0</sup> 50	21 <sup>0</sup> 13	26 <sup>0</sup> 39	12 <sup>0</sup> 43	2 <sup>0</sup> 9	7 <sup>0</sup> 11	7 <sup>0</sup> 58	6 <sup>0</sup> 54	16 <sup>0</sup> 14	15 <sup>0</sup> 20	S 10
M 11	15 14 19	20 <sup>0</sup> 6'57	13 <sup>0</sup> 24	24 <sup>0</sup> 31	8 <sup>0</sup> 9	20 <sup>0</sup> 34	21 <sup>0</sup> 23	26 <sup>0</sup> 46	12 <sup>0</sup> 44	2 <sup>0</sup> 9	7 <sup>0</sup> 9	7 <sup>0</sup> 47	6 <sup>0</sup> 50	16 <sup>0</sup> 20	15 <sup>0</sup> 15	M 11
T 12	15 18 15	21 <sup>0</sup> 4'53	25 <sup>0</sup> 31	25 <sup>0</sup> 48	9 <sup>0</sup> 17	21 <sup>0</sup> 17	21 <sup>0</sup> 34	26 <sup>0</sup> 53	12 <sup>0</sup> 44	2 <sup>0</sup> 9	7 <sup>0</sup> 8	7 <sup>0</sup> 34	6 <sup>0</sup> 47	16 <sup>0</sup> 27	15 <sup>0</sup> 11	T 12
W 13	15 22 12	22 <sup>0</sup> 2'48	7 <sup>0</sup> 47	27 <sup>0</sup> 7	10 <sup>0</sup> 25	22 <sup>0</sup> 0	21 <sup>0</sup> 44	27 <sup>0</sup> 1	12 <sup>0</sup> 44	2 <sup>0</sup> 9	7 <sup>0</sup> 6	7 <sup>0</sup> 21	6 <sup>0</sup> 44	16 <sup>0</sup> 34	15 <sup>0</sup> 6	W 13
T 14	15 26 8	23 <sup>0</sup> 0'42	20 <sup>0</sup> 13	28 <sup>0</sup> 28	11 <sup>0</sup> 34	22 <sup>0</sup> 43	21 <sup>0</sup> 55	27 <sup>0</sup> 8	12 <sup>0</sup> 44	2 <sup>0</sup> 8	7 <sup>0</sup> 5	7 <sup>0</sup> 9	6 <sup>0</sup> 41	16 <sup>0</sup> 40	15 <sup>0</sup> 2	T 14
F 15	15 30 5	23 <sup>0</sup> 58'34	2 <sup>0</sup> 50	29 <sup>0</sup> 52	12 <sup>0</sup> 42	23 <sup>0</sup> 27	22 <sup>0</sup> 5	27 <sup>0</sup> 15	12 <sup>0</sup> 44	2 <sup>0</sup> 8	7 <sup>0</sup> 3	6 <sup>0</sup> 59	6 <sup>0</sup> 38	16 <sup>0</sup> 47	14 <sup>0</sup> 57	F 15
S 16	15 34 1	24 <sup>0</sup> 56'25	15 <sup>0</sup> 37	1 <sup>0</sup> 19	13 <sup>0</sup> 51	24 <sup>0</sup> 10	22 <sup>0</sup> 15	27 <sup>0</sup> 22	12 <sup>0</sup> 45	2 <sup>0</sup> 8	7 <sup>0</sup> 2	6 <sup>0</sup> 51	6 <sup>0</sup> 35	16 <sup>0</sup> 54	14 <sup>0</sup> 53	S 16
S 17	15 37 58	25 <sup>0</sup> 54'14	28 <sup>0</sup> 38	2 <sup>0</sup> 47	15 <sup>0</sup> 0	24 <sup>0</sup> 53	22 <sup>0</sup> 25	27 <sup>0</sup> 29	12 <sup>0</sup> 45	2 <sup>0</sup> 7	7 <sup>0</sup> 0	6 <sup>0</sup> 46	6 <sup>0</sup> 31	17 <sup>0</sup> 0	14 <sup>0</sup> 49	S 17
M 18	15 41 54	26 <sup>0</sup> 52'03	11 <sup>0</sup> 53	4 <sup>0</sup> 18	16 <sup>0</sup> 9	25 <sup>0</sup> 36	22 <sup>0</sup> 35	27 <sup>0</sup> 36	12 <sup>0</sup> R45	2 <sup>0</sup> 7	6 <sup>0</sup> 58	6 <sup>0</sup> 44	6 <sup>0</sup> 28	17 <sup>0</sup> 7	14 <sup>0</sup> 44	M 18
T 19	15 45 51	27 <sup>0</sup> 49'50	25 <sup>0</sup> 24	5 <sup>0</sup> 51	17 <sup>0</sup> 18	26 <sup>0</sup> 19	22 <sup>0</sup> 45	27 <sup>0</sup> 43	12 <sup>0</sup> 45	2 <sup>0</sup> 6	6 <sup>0</sup> 57	6 <sup>0</sup> D43	6 <sup>0</sup> 25	17 <sup>0</sup> 14	14 <sup>0</sup> 40	T 19
W 20	15 49 48	28 <sup>0</sup> 47'36	9 <sup>0</sup> 13	7 <sup>0</sup> 26	18 <sup>0</sup> 27	27 <sup>0</sup> 2	22 <sup>0</sup> 55	27 <sup>0</sup> 50	12 <sup>0</sup> 44	2 <sup>0</sup> 6	6 <sup>0</sup> 55	6 <sup>0</sup> R43	6 <sup>0</sup> 22	17 <sup>0</sup> 20	14 <sup>0</sup> 36	W 20
T 21	15 53 44	29 <sup>0</sup> 45'21	23 <sup>0</sup> 21	9 <sup>0</sup> 3	19 <sup>0</sup> 36	27 <sup>0</sup> 45	23 <sup>0</sup> 4	27 <sup>0</sup> 57	12 <sup>0</sup> 44	2 <sup>0</sup> 5	6 <sup>0</sup> 53	6 <sup>0</sup> 43	6 <sup>0</sup> 19	17 <sup>0</sup> 27	14 <sup>0</sup> 31	T 21
F 22	15 57 41	0 <sup>0</sup> 11'43'05	7 <sup>0</sup> 48	10 <sup>0</sup> 43	20 <sup>0</sup> 45	28 <sup>0</sup> 28	23 <sup>0</sup> 14	28 <sup>0</sup> 3	12 <sup>0</sup> 44	2 <sup>0</sup> 5	6 <sup>0</sup> 52	6 <sup>0</sup> 40	6 <sup>0</sup> 16	17 <sup>0</sup> 34	14 <sup>0</sup> 27	F 22
S 23	16 1 37	1 <sup>0</sup> 40'48	22 <sup>0</sup> 31	12 <sup>0</sup> 25	21 <sup>0</sup> 54	29 <sup>0</sup> 11	23 <sup>0</sup> 23	28 <sup>0</sup> 10	12 <sup>0</sup> 44	2 <sup>0</sup> 4	6 <sup>0</sup> 50	6 <sup>0</sup> 35	6 <sup>0</sup> 12	17 <sup>0</sup> 41	14 <sup>0</sup> 23	S 23
S 24	16 5 34	2 <sup>0</sup> 38'29	7 <sup>0</sup> 23	14 <sup>0</sup> 9	23 <sup>0</sup> 4	29 <sup>0</sup> 53	23 <sup>0</sup> 32	28 <sup>0</sup> 17	12 <sup>0</sup> 44	2 <sup>0</sup> 4	6 <sup>0</sup> 49	6 <sup>0</sup> 28	6 <sup>0</sup> 9	17 <sup>0</sup> 47	14 <sup>0</sup> 19	S 24
M 25	16 9 30	3 <sup>0</sup> 36'10	22 <sup>0</sup> 19	15 <sup>0</sup> 55	24 <sup>0</sup> 13	0 <sup>0</sup> 13	23 <sup>0</sup> 41	28 <sup>0</sup> 24	12 <sup>0</sup> 43	2 <sup>0</sup> 3	6 <sup>0</sup> 47	6 <sup>0</sup> 18	6 <sup>0</sup> 6	17 <sup>0</sup> 54	14 <sup>0</sup> 15	M 25
T 26	16 13 27	4 <sup>0</sup> 33'50	7 <sup>0</sup> 11	17 <sup>0</sup> 43	25 <sup>0</sup> 23	1 <sup>0</sup> 19	23 <sup>0</sup> 50	28 <sup>0</sup> 30	12 <sup>0</sup> 43	2 <sup>0</sup> 2	6 <sup>0</sup> 45	6 <sup>0</sup> 7	6 <sup>0</sup> 3	18 <sup>0</sup> 1	14 <sup>0</sup> 10	T 26
W 27	16 17 23	5 <sup>0</sup> 31'28	21 <sup>0</sup> 41	19 <sup>0</sup> 34	26 <sup>0</sup> 32	2 <sup>0</sup> 1	23 <sup>0</sup> 59	28 <sup>0</sup> 37	12 <sup>0</sup> 42	2 <sup>0</sup> 2	6 <sup>0</sup> 44	5 <sup>0</sup> 55	6 <sup>0</sup> 0	18 <sup>0</sup> 7	14 <sup>0</sup> 6	W 27
T 28	16 21 20	6 <sup>0</sup> 29'05	5 <sup>0</sup> 53	21 <sup>0</sup> 27	27 <sup>0</sup> 42	2 <sup>0</sup> 44	24 <sup>0</sup> 8	28 <sup>0</sup> 44	12 <sup>0</sup> 42	2 <sup>0</sup> 1	6 <sup>0</sup> 42	5 <sup>0</sup> 45	5 <sup>0</sup> 56	18 <sup>0</sup> 14	14 <sup>0</sup> 2	T 28
F 29	16 25 17	7 <sup>0</sup> 26'41	19 <sup>0</sup> 38	23 <sup>0</sup> 22	28 <sup>0</sup> 52	3 <sup>0</sup> 26	24 <sup>0</sup> 17	28 <sup>0</sup> 50	12 <sup>0</sup> 41	2 <sup>0</sup> 0	6 <sup>0</sup> 40	5 <sup>0</sup> 37	5 <sup>0</sup> 53	18 <sup>0</sup> 21	13 <sup>0</sup> 59	F 29
S 30	16 29 13	8 <sup>0</sup> 24'15	2 <sup>0</sup> 56	25 <sup>0</sup> 19	0 <sup>0</sup> 1	4 <sup>0</sup> 9	24 <sup>0</sup> 25	28 <sup>0</sup> 57	12 <sup>0</sup> 41	1 <sup>0</sup> 59	6 <sup>0</sup> 39	5 <sup>0</sup> 32	5 <sup>0</sup> 50	18 <sup>0</sup> 27	13 <sup>0</sup> 55	S 30
S 31	16 33 10	9 <sup>0</sup> 11'21'48	15 <sup>0</sup> 248	27 <sup>0</sup> 18	1 <sup>0</sup> 11	4 <sup>0</sup> 11	24 <sup>0</sup> 33	29 <sup>0</sup> 13	12 <sup>0</sup> 40	1 <sup>0</sup> 59	6 <sup>0</sup> 37	5 <sup>0</sup> 29	5 <sup>0</sup> 47	18 <sup>0</sup> 34	13 <sup>0</sup> 51	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	14n57	18n41	4s16	3n 7	2s42	2s21	1s12	15n45	0s 5	5s 5	1s 1	7n47	2s15	17s38	0s38	19s20	0n21	9s17	12n25	8n25	8n48	3s 5	14s33	2n10			
S 2	15 15	17 43	3 31	3 20	2 47	1 58	1 16	15 59	0 4	5 0	1 1	7 49	2 15	17 37	0 38	19 20	0 21	9 17	12 25	8 27	8 49	3 7	14 32	2 10			
S 3	15 33	15 52	2 37	3 36	2 52	1 34	1 19	16 12	0 4	4 56	1 1	7 52	2 15	17 37	0 38	19 20	0 21	9 16	12 25	8 27	8 51	3 8	14 30	2 11			
M 4	15 51	13 18	1 36	3 53	2 56	1 10	1 22	16 26	0 3	4 52	1 1	7 55	2 15	17 37	0 38	19 20	0 21	9 16	12 25	8 27	8 52	3 10	14 28	2 11			
T 5	16 8	10 12	0 33	4 12	2 59	0 45	1 25	16 39	0 2	4 47	1 2	7 57	2 15	17 37	0 38	19 20	0 21	9 16	12 25	8 27	8 53	3 12	14 27	2 11			
W 6	16 25	6 44	0n31	4 33	3 2	0 21	1 27	16 52	0 2	4 43	1 2	8 0	2 15	17 37	0 38	19 20	0 21	9 16	12 25	8 27	8 54	3 14	14 25	2 12			
T 7	16 42	3 2	1 32	4 55	3 4	0n 3	1 30	17 5	0 1	4 39	1 2	8 2	2 15	17 37	0 39	19 20	0 21	9 15	12 26	8 28	8 55	3 16	14 23	2 12			
F 8	16 58	0s46	2 30	5 19	3 5	0 28	1 33	17 18	0 0	4 35	1 2	8 5	2 16	17 37	0 39	19 20	0 21	9 15	12 26	8 29	8 56	3 18	14 22	2 12			
S 9	17 15	4 33	3 21	5 44	3 5	0 53	1 35	17 30	0n 0	4 31	1 2	8 8	2 16	17 37	0 39	19 20	0 21	9 15	12 26	8 31	8 58	3 20	14 20	2 13			
S 10	17 31	8 10	4 3	6 10	3 5	1 17	1 37	17 43	0 1	4 27	1 3	8 10	2 16	17 36	0 39	19 20	0 21	9 14	12 26	8 35	8 59	3 22	14 19	2 13			
M11	17 46	11 29	4 35	6 38	3 5	1 42	1 40	17 55	0 2	4 23	1 3	8 13	2 16	17 36	0 39	19 20	0 21	9 14	12 26	8 39	9 0	3 24	14 17	2 13			
T 12	18 2	14 22	4 55	7 7	3 3	2 7	1 42	18 7	0 2	4 19	1 3	8 15	2 16	17 36	0 39	19 20	0 21	9 14	12 26	8 44	9 1	3 26	14 15	2 14			
W13	18 17	16 39	5 1	7 37	3 1	2 32	1 44	18 19	0 3	4 15	1 3	8 18	2 16	17 36	0 39	19 20	0 21	9 14	12 26	8 48	9 2	3 28	14 14	2 14			
T 14	18 31	18 12	4 53	8 9	2 59	2 57	1 46	18 30	0 3	4 11	1 3	8 20	2 16	17 36	0 39	19 20	0 21	9 13	12 26	8 53	9 3	3 30	14 12	2 14			
F 15	18 46	18 53	4 32	8 41	2 56	3 22	1 48	18 42	0 4	4 7	1 4	8 22	2 16	17 36	0 39	19 20	0 21	9 13	12 26	8 57	9 5	3 31	14 11	2 15			
S 16	19 0	18 37	3 56	9 14	2 52	3 47	1 49	18 53	0 5	4 3	1 4	8 25	2 16	17 36	0 39	19 20	0 21	9 13	12 26	9 0	9 6	3 33	14 9	2 15			
S 17	19 14	17 23	3 7	9 49	2 48	4 12	1 51	19 4	0 5	3 59	1 4	8 27	2 16	17 36	0 39	19 20	0 21	9 13	12 26	9 1	9 7	3 35	14 8	2 15			
M18	19 27	15 11	2 8	10 24	2 43	4 37	1 52	19 15	0 6	3 56	1 4	8 30	2 16	17 36	0 39	19 20	0 21	9 12	12 26	9 2	9 8	3 37	14 6	2 15			
T 19	19 40	12 7	1 0	11 0	2 37	5 2	1 54	19 26	0 7	3 52	1 5	8 32	2 16	17 36	0 39	19 21	0 21	9 12	12 26	9 3	9 9	3 39	14 4	2 16			
W20	19 53	8 19	0s13	11 36	2 31	5 27	1 55	19 37	0 7	3 48	1 5	8 34	2 17	17 36	0 39	19 21	0 21	9 12	12 26	9 3	9 11	3 41	14 3	2 16			
T 21	20 6	3 58	1 27	12 13	2 25	5 52	1 56	19 47	0 8	3 45	1 5	8 37	2 17	17 37	0 39	19 21	0 21	9 12	12 26	9 3	9 12	3 43	14 1	2 16			
F 22	20 18	0n42	2 36	12 51	2 18	6 17	1 57	19 57	0 9	3 41	1 5	8 39	2 17	17 37	0 39	19 21	0 21	9 11	12 26	9 4	9 13	3 45	14 0	2 16			
S 23	20 30	5 24	3 37	13 29	2 11	6 42	1 58	20 7	0 9	3 38	1 5	8 41	2 17	17 37	0 39	19 21	0 21	9 11	12 26	9 6	9 14	3 47	13 58	2 17			
S 24	20 41	9 49	4 23	14 8	2 3	7 7	1 59	20 17	0 10	3 34	1 6	8 44	2 17	17 37	0 39	19 21	0 21	9 11	12 26	9 8	9 15	3 49	13 57	2 17			
M25	20 52	13 38	4 52	14 46	1 54	7 32	2 0	20 27	0 10	3 31	1 6	8 46	2 17	17 37	0 39	19 21	0 21	9 11	12 26	9 12	9 16	3 51	13 56	2 17			
T 26	21 3	16 33	5 1	15 25	1 46	7 56	2 1	20 36	0 11	3 27	1 6	8 48	2 17	17 37	0 39	19 21	0 21	9 11	12 26	9 16	9 18	3 53	13 54	2 17			
W27	21 13	18 22	4 49	16 4	1 37	8 21	2 1	20 45	0 12	3 24	1 6	8 50	2 17	17 37	0 39	19 22	0 21	9 10	12 26	9 20	9 19	3 55	13 53	2 18			
T 28	21 23	18 58	4 21	16 43	1 27	8 45	2 2	20 54	0 12	3 21	1 7	8 53	2 18	17 37	0 39	19 22	0 21	9 10	12 25	9 24	9 20	3 56	13 51	2 18			
F 29	21 33	18 25	3 37	17 22	1 17	9 10	2 2	21 3	0 13	3 18	1 7	8 55	2 18	17 38	0 39	19 22	0 21	9 10	12 25	9 27	9 21	3 58	13 50	2 18			
S 30	21 42	16 51	2 43	18 0	1 7	9 34	2 3	21 12	0 13	3 15	1 7	8 57	2 18	17 38	0 39	19 22	0 21	9 10	12 25	9 29	9 22	4 0	13 49	2 18			
S 31	21n51	14n28	1s42	18n38	0s57	9n58	2s 3	21n20	0n14	3s12	1s 7	8n59	2s18	17s38	0s39	19s22	0n21	9s10	12n25	9n30	9n23	4s 2	13s47	2n18			

# ASTRODIENST EPHEMERIS for the year 1998

## geocentric

JUNE 1998

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	16 37 6	10II19'20	28Ω17	29♂19	2♂21	5II34	24♂41	29♀9	12°R40	1°R58	6°R35	5°R28	5♂44	18♂41	13°R47	M 1
T 2	16 41 3	11°16'50	10♂28	1II22	3°31	6°16	24°49	29°16	12°39	1°57	6°34	5°28	5°41	18°47	13°43	T 2
W 3	16 44 59	12°14'19	22°27	3°26	4°41	6°58	24°57	29°22	12°38	1°56	6°32	5°28	5°37	18°54	13°40	W 3
T 4	16 48 56	13°11'47	4♂18	5°33	5°51	7°40	25° 5	29°28	12°37	1°55	6°31	5°26	5°34	19° 1	13°36	T 4
F 5	16 52 52	14° 9'13	16° 7	7°40	7° 1	8°23	25°13	29°34	12°36	1°54	6°29	5°23	5°31	19° 7	13°33	F 5
S 6	16 56 49	15° 6'39	27°58	9°50	8°11	9° 5	25°20	29°40	12°36	1°53	6°27	5°17	5°28	19°14	13°29	S 6
S 7	17 0 46	16° 4'03	9♂56	12° 0	9°21	9°47	25°28	29°47	12°35	1°52	6°26	5° 8	5°25	19°21	13°26	S 7
M 8	17 4 42	17° 1'26	22° 3	14°11	10°32	10°29	25°35	29°53	12°34	1°51	6°24	4°57	5°21	19°27	13°23	M 8
T 9	17 8 39	17°58'48	4♂21	16°23	11°42	11°11	25°42	29°58	12°33	1°50	6°23	4°45	5°18	19°34	13°20	T 9
W10	17 12 35	18°56'10	16°51	18°35	12°52	11°53	25°49	0♂4	12°31	1°49	6°21	4°32	5°15	19°41	13°16	W10
T 11	17 16 32	19°53'30	29°33	20°47	14° 3	12°34	25°55	0°10	12°30	1°48	6°19	4°20	5°12	19°47	13°13	T 11
F 12	17 20 28	20°50'50	12♂28	22°58	15°13	13°16	26° 2	0°16	12°29	1°47	6°18	4°10	5° 9	19°54	13°10	F 12
S 13	17 24 25	21°48'10	25°34	25°10	16°24	13°58	26° 8	0°22	12°28	1°46	6°16	4° 2	5° 6	20° 1	13° 8	S 13
S 14	17 28 21	22°45'28	8♂51	27°21	17°34	14°40	26°15	0°27	12°27	1°45	6°15	3°58	5° 2	20° 8	13° 5	S 14
M15	17 32 18	23°42'47	22°20	29°30	18°45	15°21	26°21	0°33	12°25	1°44	6°13	3°55	4°59	20°14	13° 2	M15
T 16	17 36 15	24°40'04	5♂59	19♂39	19°56	16° 3	26°27	0°38	12°24	1°42	6°12	3°D55	4°56	20°21	13° 0	T 16
W17	17 40 11	25°37'22	19°51	3°46	21° 6	16°44	26°32	0°44	12°23	1°41	6°10	3°R55	4°53	20°28	12°57	W17
T 18	17 44 8	26°34'39	3°Y54	5°51	22°17	17°26	26°38	0°49	12°21	1°40	6° 9	3°55	4°50	20°34	12°55	T 18
F 19	17 48 4	27°31'56	18° 8	7°55	23°28	18° 7	26°43	0°55	12°20	1°39	6° 7	3°54	4°47	20°41	12°52	F 19
S 20	17 52 1	28°29'13	2♂32	9°57	24°39	18°49	26°49	1° 0	12°18	1°37	6° 6	3°50	4°43	20°48	12°50	S 20
S 21	17 55 57	29°26'29	17° 2	11°57	25°50	19°30	26°54	1° 5	12°17	1°36	6° 4	3°44	4°40	20°54	12°48	S 21
M22	17 59 54	0♂23'46	1II33	13°55	27° 1	20°11	26°59	1°10	12°15	1°35	6° 3	3°35	4°37	21° 1	12°46	M22
T 23	18 3 50	1°21'02	15°58	15°51	28°12	20°53	27° 4	1°15	12°14	1°34	6° 1	3°26	4°34	21° 8	12°44	T 23
W24	18 7 47	2°18'18	0♂12	17°45	29°23	21°34	27° 8	1°20	12°12	1°32	6° 0	3°16	4°31	21°14	12°42	W24
T 25	18 11 44	3°15'33	14° 9	19°37	0II34	22°15	27°13	1°25	12°11	1°31	5°58	3° 8	4°27	21°21	12°40	T 25
F 26	18 15 40	4°12'48	27°44	21°26	1°45	22°56	27°17	1°30	12° 9	1°29	5°57	3° 1	4°24	21°28	12°38	F 26
S 27	18 19 37	5°10'03	10♂57	23°13	2°57	23°37	27°21	1°35	12° 7	1°28	5°56	2°57	4°21	21°34	12°37	S 27
S 28	18 23 33	6° 7'17	23°46	24°59	4° 8	24°18	27°25	1°39	12° 5	1°27	5°54	2°54	4°18	21°41	12°35	S 28
M29	18 27 30	7° 4'31	6♂15	26°41	5°19	24°59	27°29	1°44	12° 4	1°25	5°53	2°D54	4°15	21°48	12°34	M29
T 30	18 31 26	8♂ 1'44	18♂27	28♂22	6II30	25II40	27♂32	1♂48	12° 2	1°24	5°52	2♂55	4♂12	21♂55	12♂32	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
M 1	22n 0	11n28	0s38	19n15	0s46	10n22	2s 3	21n28	0n15	3s 9	1s 8	9n 1	2s18	17s38	0s39	19s22	0n21	9s10	12n25	9n30	9n25	4s 4	13s46	2n19	
T 2	22 8	8 3	0n26	19 51	0 36	10 46	2 3	21 36	0 15	3 6	1 8	9 3	2 18	17 39	0 39	19 23	0 21	9 9	12 25	9 30	9 26	4 6	13 45	2 19	
W 3	22 16	4 21	1 29	20 26	0 25	11 9	2 3	21 44	0 16	3 3	1 8	9 5	2 18	17 39	0 40	19 23	0 21	9 9	12 25	9 30	9 27	4 8	13 44	2 19	
T 4	22 23	0 32	2 26	21 0	0 14	11 32	2 3	21 52	0 17	3 0	1 8	9 7	2 19	17 39	0 40	19 23	0 21	9 9	12 25	9 31	9 28	4 10	13 42	2 19	
F 5	22 30	3s18	3 18	21 32	0 3	11 55	2 2	21 59	0 17	2 57	1 9	9 9	2 19	17 39	0 40	19 23	0 21	9 9	12 25	9 32	9 29	4 12	13 41	2 19	
S 6	22 36	7 1	4 0	22 2	0n 7	12 18	2 2	22 6	0 18	2 54	1 9	9 11	2 19	17 40	0 40	19 24	0 21	9 9	12 24	9 35	9 30	4 14	13 40	2 20	
S 7	22 43	10 28	4 33	22 31	0 18	12 41	2 2	22 13	0 18	2 52	1 9	9 13	2 19	17 40	0 40	19 24	0 21	9 9	12 24	9 38	9 32	4 16	13 39	2 20	
M 8	22 48	13 33	4 53	22 58	0 28	13 4	2 1	22 20	0 19	2 49	1 9	9 15	2 19	17 40	0 40	19 24	0 21	9 9	12 24	9 42	9 33	4 18	13 38	2 20	
T 9	22 54	16 5	5 1	23 22	0 38	13 26	2 1	22 26	0 20	2 47	1 10	9 17	2 19	17 41	0 40	19 24	0 21	9 9	12 24	9 46	9 34	4 19	13 37	2 20	
W10	22 59	17 54	4 54	23 44	0 48	13 48	2 0	22 33	0 20	2 44	1 10	9 19	2 20	17 41	0 40	19 24	0 21	9 9	12 24	9 51	9 35	4 21	13 36	2 20	
T 11	23 3	18 53	4 33	24 4	0 57	14 9	1 59	22 39	0 21	2 42	1 10	9 21	2 20	17 41	0 40	19 25	0 21	9 8	12 24	9 55	9 36	4 23	13 34	2 20	
F 12	23 7	18 55	3 57	24 20	1 6	14 31	1 58	22 45	0 21	2 39	1 10	9 23	2 20	17 42	0 40	19 25	0 21	9 8	12 23	9 59	9 37	4 25	13 33	2 21	
S 13	23 11	17 56	3 9	24 34	1 14	14 52	1 58	22 50	0 22	2 37	1 11	9 25	2 20	17 42	0 40	19 25	0 21	9 8	12 23	10 2	9 39	4 27	13 32	2 21	
S 14	23 14	15 58	2 9	24 46	1 21	15 12	1 57	22 56	0 23	2 35	1 11	9 26	2 20	17 42	0 40	19 25	0 21	9 8	12 23	10 3	9 40	4 29	13 31	2 21	
M15	23 17	13 6	1 1	24 54	1 28	15 33	1 55	23 1	0 23	2 33	1 11	9 28	2 20	17 43	0 40	19 26	0 21	9 8	12 23	10 4	9 41	4 31	13 31	2 21	
T 16	23 20	9 29	0s11	25 0	1 34	15 53	1 54	23 6	0 24	2 30	1 12	9 30	2 21	17 43	0 40	19 26	0 21	9 8	12 23	10 4	9 42	4 33	13 30	2 21	
W17	23 22	5 18	1 24	25 3	1 40	16 13	1 53	23 11	0 24	2 28	1 12	9 32	2 21	17 44	0 40	19 26	0 21	9 8	12 22	10 4	9 43	4 35	13 29	2 21	
T 18	23 24	0 47	2 32	25 3	1 44	16 32	1 52	23 15	0 25	2 26	1 12	9 33	2 21	17 44	0 40	19 27	0 21	9 8	12 22	10 4	9 44	4 37	13 28	2 21	
F 19	23 25	3n50	3 33	25 0	1 48	16 51	1 51	23 20	0 26	2 25	1 12	9 35	2 21	17 44	0 40	19 27	0 21	9 8	12 22	10 5	9 46	4 39	13 27	2 21	
S 20	23 26	8 17	4 20	24 55	1 52	17 10	1 49	23 24	0 26	2 23	1 13	9 37	2 21	17 45	0 40	19 27	0 21	9 8	12 22	10 6	9 47	4 41	13 26	2 22	
S 21	23 26	12 16	4 51	24 48	1 54	17 28	1 48	23 28	0 27	2 21	1 13	9 38	2 22	17 45	0 40	19 27	0 21	9 8	12 21	10 8	9 48	4 43	13 26	2 22	
M22	23 26	15 31	5 3	24 38	1 56	17 46	1 46	23 32	0 27	2 19	1 13	9 40	2 22	17 46	0 40	19 28	0 21	9 8	12 21	10 11	9 49	4 44	13 25	2 22	
T 23	23 26	17 47	4 56	24 26	1 57	18 4	1 44	23 35	0 28	2 18	1 14	9 41	2 22	17 46	0 40	19 28	0 21	9 8	12 21	10 15	9 50	4 46	13 24	2 22	
W24	23 25	18 55	4 31	24 12	1 57	18 21	1 43	23 39	0 28	2 16	1 14	9 43	2 22	17 47	0 40	19 28	0 21	9 8	12 21	10 18	9 51	4 48	13 23	2 22	
T 25	23 24	18 52	3 50	23 56	1 57	18 37	1 41	23 42	0 29	2 15	1 14	9 44	2 22	17 47	0 40	19 29	0 21	9 8	12 20	10 21	9 52	4 50	13 23	2 22	
F 26	23 22	17 44	2 57	23 38	1 56	18 53	1 39	23 44	0 30	2 13	1 14	9 46	2 23	17 48	0 40	19 29	0 21	9 8	12 20	10 24	9 54	4 52	13 22	2 22	
S 27	23 20	15 39	1 55	23 19	1 54	19 9	1 37	23 47	0 30	2 12	1 15	9 47	2 23	17 48	0 40	19 29	0 21	9 8	12 20	10 25	9 55	4 54	13 22	2 22	
S 28	23 18	12 50	0 49	22 58	1 51	19 24	1 35	23 50	0 31	2 10	1 15	9 49	2 23	17 49	0 40	19 30	0 21	9 8	12 19	10 26	9 56	4 56	13 21	2 22	
M29	23 15	9 30	0n18	22 35	1 48	19 39	1 34	23 52	0 31	2 9	1 15	9 50	2 23	17 49	0 40	19 30	0 21	9 8	12 19	10 26	9 57	4 58	13 21	2 22	
T 30	23n12	5n50	1n23	22n12	1n45	19n53	1s32	23n54	0n32	2s 8	1s16	9n51	2s23	17s50	0s40	19s30	0n21	9s 9	12n19	10n26	9n58	5s 0	13s20	2n23	

## ASTRODIENST EPHEMERIS for the year 1998

geocentric

JULY 1998

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	18 35 23	8°58'57	0°27	0°1	7°42	26°21	27°35	1°53	12°R 0	1°R22	5°R50	2°M56	4°M 8	22°1	12°R31	W 1
T 2	18 39 19	9°56'09	12°20	1°37	8°53	27° 2	27°39	1°57	11°58	1°21	5°49	2°R56	4° 5	22° 8	12°M30	T 2
F 3	18 43 16	10°53'21	24°11	3°11	10° 5	27°43	27°42	2° 1	11°56	1°19	5°48	2°55	4° 2	22°15	12°29	F 3
S 4	18 47 13	11°50'33	6°11	4°42	11°16	28°23	27°44	2° 6	11°54	1°18	5°46	2°52	3°59	22°21	12°28	S 4
S 5	18 51 9	12°47'44	18° 6	6°12	12°28	29° 4	27°47	2°10	11°52	1°16	5°45	2°47	3°56	22°28	12°28	S 5
M 6	18 55 6	13°44'56	0°19	7°39	13°39	29°45	27°49	2°14	11°50	1°15	5°44	2°40	3°53	22°35	12°27	M 6
T 7	18 59 2	14°42'07	12°45	9° 4	14°51	0°25	27°52	2°18	11°48	1°13	5°43	2°32	3°49	22°41	12°26	T 7
W 8	19 2 59	15°39'18	25°28	10°26	16° 3	1° 6	27°54	2°21	11°46	1°12	5°42	2°24	3°46	22°48	12°26	W 8
T 9	19 6 55	16°36'29	8°26	11°47	17°14	1°46	27°56	2°25	11°44	1°10	5°40	2°17	3°43	22°55	12°25	T 9
F 10	19 10 52	17°33'40	21°41	13° 4	18°26	2°27	27°57	2°29	11°42	1° 9	5°39	2°10	3°40	23° 1	12°25	F 10
S 11	19 14 49	18°30'52	5° 9	14°19	19°38	3° 7	27°59	2°32	11°40	1° 7	5°38	2° 5	3°37	23° 8	12°25	S 11
S 12	19 18 45	19°28'03	18°50	15°32	20°50	3°48	28° 0	2°36	11°38	1° 5	5°37	2° 3	3°33	23°15	12°D25	S 12
M13	19 22 42	20°25'15	2°41	16°42	22° 2	4°28	28° 1	2°39	11°35	1° 4	5°36	2°D 2	3°30	23°21	12°25	M13
T 14	19 26 38	21°22'27	16°40	17°50	23°14	5° 8	28° 2	2°43	11°33	1° 2	5°35	2° 3	3°27	23°28	12°25	T 14
W15	19 30 35	22°19'40	0°44	18°54	24°26	5°49	28° 3	2°46	11°31	1° 1	5°34	2° 4	3°24	23°35	12°25	W15
T 16	19 34 31	23°16'54	14°53	19°56	25°38	6°29	28° 3	2°49	11°29	0°59	5°33	2° 5	3°21	23°42	12°26	T 16
F 17	19 38 28	24°14'08	29° 5	20°55	26°50	7° 9	28° 3	2°52	11°27	0°57	5°32	2°R 5	3°18	23°48	12°26	F 17
S 18	19 42 24	25°11'23	13°17	21°51	28° 2	7°49	28°R 4	2°55	11°24	0°56	5°31	2° 4	3°14	23°55	12°27	S 18
S 19	19 46 21	26° 8'38	27°28	22°43	29°14	8°29	28° 4	2°58	11°22	0°54	5°30	2° 1	3°11	24° 2	12°27	S 19
M20	19 50 17	27° 5'55	11°34	23°33	0°26	9° 9	28° 3	3° 1	11°20	0°53	5°30	1°57	3° 8	24° 8	12°28	M20
T 21	19 54 14	28° 3'12	25°33	24°19	1°38	9°49	28° 3	3° 3	11°17	0°51	5°29	1°52	3° 5	24°15	12°29	T 21
W22	19 58 11	29° 0'29	9°20	25° 1	2°51	10°29	28° 2	3° 6	11°15	0°49	5°28	1°47	3° 2	24°22	12°30	W22
T 23	20 2 7	29°57'48	22°53	25°40	4° 3	11° 9	28° 1	3° 8	11°13	0°48	5°27	1°42	2°59	24°28	12°31	T 23
F 24	20 6 4	0°55'07	6°19	26°15	5°16	11°49	28° 0	3°11	11°10	0°46	5°26	1°39	2°55	24°35	12°32	F 24
S 25	20 10 0	1°52'26	19° 7	26°46	6°28	12°29	27°59	3°13	11° 8	0°44	5°26	1°37	2°52	24°42	12°34	S 25
S 26	20 13 57	2°49'46	1°48	27°12	7°40	13° 8	27°57	3°15	11° 6	0°43	5°25	1°D36	2°49	24°48	12°35	S 26
M27	20 17 53	3°47'07	14°12	27°34	8°53	13°48	27°56	3°17	11° 3	0°41	5°24	1°37	2°46	24°55	12°37	M27
T 28	20 21 50	4°44'28	26°22	27°52	10° 5	14°28	27°54	3°19	11° 1	0°40	5°24	1°38	2°43	25° 2	12°38	T 28
W29	20 25 47	5°41'49	8°22	28° 5	11°18	15° 7	27°52	3°21	10°59	0°38	5°23	1°40	2°39	25° 9	12°40	W29
T 30	20 29 43	6°39'11	20°15	28°13	12°31	15°47	27°50	3°23	10°56	0°36	5°23	1°41	2°36	25°15	12°42	T 30
F 31	20 33 40	7°36'34	2°11	28°R16	13°43	16°27	27°47	3°25	10°54	0°35	5°22	1°R42	2°M33	25°22	12°M44	F 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
W 1	23n 8	2n 0	2n23	21n47	1n40	20n 7	1s29	23n56	0n32	2s 7	1s16	9n53	2s24	17s50	0s40	19s30
T 2	23 4	1s52	3 16	21 21	1 35	20 21	1 27	23 57	0 33	2 6	1 16	9 54	2 24	17 51	0 40	19 31
F 3	22 59	5 39	4 0	20 54	1 30	20 33	1 25	23 59	0 34	2 5	1 16	9 55	2 24	17 51	0 40	19 31
S 4	22 55	9 13	4 35	20 26	1 24	20 46	1 23	24 0	0 34	2 4	1 17	9 56	2 24	17 52	0 40	19 31
S 5	22 49	12 27	4 57	19 58	1 17	20 57	1 21	24 1	0 35	2 4	1 17	9 58	2 24	17 53	0 40	19 32
M 6	22 44	15 12	5 7	19 29	1 10	21 8	1 18	24 1	0 35	2 3	1 17	9 59	2 25	17 53	0 40	19 32
T 7	22 38	17 19	5 3	18 59	1 2	21 19	1 16	24 2	0 36	2 2	1 18	10 0	2 25	17 54	0 40	19 33
W 8	22 31	18 39	4 43	18 29	0 54	21 29	1 14	24 2	0 36	2 2	1 18	10 1	2 25	17 54	0 41	19 33
T 9	22 24	19 2	4 9	17 59	0 45	21 39	1 11	24 2	0 37	2 1	1 18	10 2	2 25	17 55	0 41	19 33
F 10	22 17	18 23	3 21	17 28	0 36	21 47	1 9	24 2	0 37	2 1	1 19	10 3	2 26	17 56	0 41	19 34
S 11	22 9	16 42	2 20	16 58	0 27	21 56	1 6	24 2	0 38	2 1	1 19	10 4	2 26	17 56	0 41	19 34
S 12	22 1	14 3	1 11	16 27	0 17	22 3	1 4	24 1	0 39	2 0	1 19	10 5	2 26	17 57	0 41	19 34
M13	21 53	10 34	0s 4	15 56	0 7	22 11	1 1	24 1	0 39	2 0	1 19	10 6	2 26	17 57	0 41	19 35
T 14	21 44	6 28	1 19	15 25	0s 4	22 17	0 59	24 0	0 40	2 0	1 20	10 7	2 27	17 58	0 41	19 35
W15	21 35	2 0	2 30	14 55	0 15	22 23	0 56	23 59	0 40	2 0	1 20	10 8	2 27	17 59	0 41	19 35
T 16	21 26	2n36	3 32	14 25	0 38	22 28	0 54	23 57	0 41	2 0	1 20	10 9	2 27	17 59	0 41	19 36
F 17	21 16	7 4	4 21	13 55	0 27	22 33	0 51	23 56	0 41	2 0	1 21	10 9	2 27	18 0	0 41	19 36
S 18	21 6	11 8	4 55	13 26	0 50	22 37	0 48	23 54	0 42	2 1	1 21	10 10	2 28	18 1	0 41	19 36
S 19	20 55	14 33	5 10	12 57	1 3	22 40	0 46	23 52	0 42	2 1	1 21	10 11	2 28	18 1	0 41	19 37
M20	20 44	17 6	5 7	12 29	1 15	22 43	0 43	23 50	0 43	2 1	1 22	10 12	2 28	18 2	0 41	19 37
T 21	20 33	18 37	4 45	12 2	1 28	22 45	0 40	23 48	0 43	2 2	1 22	10 12	2 28	18 2	0 41	19 37
W22	20 21	19 0	4 7	11 36	1 41	22 47	0 38	23 45	0 44	2 2	1 22	10 13	2 29	18 3	0 41	19 38
T 23	20 9	18 17	3 16	11 10	1 54	22 48	0 35	23 42	0 44	2 3	1 23	10 14	2 29	18 4	0 41	19 38
F 24	19 57	16 33	2 15	10 46	2 7	22 48	0 32	23 39	0 45	2 4	1 23	10 14	2 29	18 4	0 41	19 39
S 25	19 44	14 1	1 8	10 23	2 21	22 47	0 29	23 36	0 45	2 4	1 23	10 15	2 29	18 5	0 41	19 39
S 26	19 32	10 51	0n 1	10 2	2 34	22 46	0 27	23 33	0 46	2 5	1 23	10 15	2 30	18 6	0 41	19 39
M27	19 18	7 16	1 9	9 42	2 47	22 45	0 24	23 30	0 46	2 6	1 24	10 16	2 30	18 6	0 41	19 40
T 28	19 5	3 28	2 12	9 24	3 0	22 42	0 21	23 26	0 47	2 7	1 24	10 16	2 30	18 7	0 41	19 40
W29	18 51	0s26	3 8	9 7	3 13	22 39	0 18	23 22	0 48	2 8	1 24	10 16	2 30	18 8	0 41	19 40
T 30	18 37	4 16	3 56	8 53	3 25	22 35	0 16	23 18	0 48	2 9	1 25	10 17	2 31	18 8	0 41	19 41
F 31	18n22	7s55	4n34	8n40	3s38	22n31	0s13	23n14	0n49	2s11	1s25	10n17	2s31	18s 9	0s41	19s41

Julian Day Number = 2450995.5, Delta T = 63.24 sec

Ecliptic obliquity = 23°26'13, Nutation = - 0°00'07, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 24°43'09, Lahiri = 23°50'10



## ASTRODIENST EPHEMERIS for the year 1998

geocentric

AUGUST 1998

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	20 37 36	8♂33'57	14♂ 1	28°R14	14♂56	17♂ 6	27°R45	3♂26	10°R51	0°R33	5°R22	1°R42	2♂30	25♂29	12♂46	S 1
S 2	20 41 33	9°31'21	26° 3	28♂ 7	16° 9	17°46	27♂42	3°28	10♂49	0♂32	5♂21	1♂41	2°27	25°35	12°48	S 2
M 3	20 45 29	10°28'45	8♂17	27°54	17°22	18°25	27°39	3°29	10°47	0°30	5°21	1°39	2°24	25°42	12°50	M 3
T 4	20 49 26	11°26'10	20°48	27°37	18°34	19° 4	27°36	3°30	10°44	0°28	5°20	1°37	2°20	25°49	12°53	T 4
W 5	20 53 22	12°23'36	3♂37	27°14	19°47	19°44	27°32	3°32	10°42	0°27	5°20	1°34	2°17	25°55	12°55	W 5
T 6	20 57 19	13°21'03	16°46	26°46	21° 0	20°23	27°29	3°33	10°40	0°25	5°20	1°31	2°14	26° 2	12°58	T 6
F 7	21 1 16	14°18'30	0♂16	26°14	22°13	21° 2	27°25	3°34	10°37	0°24	5°19	1°29	2°11	26° 9	13° 0	F 7
S 8	21 5 12	15°15'58	14° 6	25°38	23°26	21°41	27°21	3°35	10°35	0°22	5°19	1°28	2° 8	26°16	13° 3	S 8
S 9	21 9 9	16°13'28	28°11	24°57	24°39	22°21	27°17	3°35	10°32	0°20	5°19	1°D27	2° 5	26°22	13° 6	S 9
M10	21 13 5	17°10'58	12♂18	24°13	25°52	23° 0	27°13	3°36	10°30	0°19	5°18	1°27	2° 1	26°29	13° 9	M10
T 11	21 17 2	18° 8'30	26°53	23°27	27° 5	23°39	27° 8	3°36	10°28	0°17	5°18	1°28	1°58	26°36	13°12	T 11
W12	21 20 58	19° 6'03	11♂21	22°39	28°18	24°18	27° 4	3°37	10°25	0°16	5°18	1°29	1°55	26°42	13°15	W12
T 13	21 24 55	20° 3'37	25°46	21°50	29°32	24°57	26°59	3°37	10°23	0°14	5°18	1°30	1°52	26°49	13°18	T 13
F 14	21 28 51	21° 1'13	10♂ 6	21° 0	0♂45	25°36	26°54	3°38	10°21	0°13	5°18	1°31	1°49	26°56	13°21	F 14
S 15	21 32 48	21°58'51	24°17	20°12	1°58	26°15	26°49	3°38	10°18	0°11	5°18	1°R31	1°45	27° 2	13°25	S 15
S 16	21 36 44	22°56'30	8♂17	19°25	3°11	26°54	26°44	3°R38	10°16	0°10	5°D18	1°30	1°42	27° 9	13°28	S 16
M17	21 40 41	23°54'10	22° 5	18°41	4°25	27°33	26°38	3°38	10°14	0° 8	5°18	1°30	1°39	27°16	13°32	M17
T 18	21 44 38	24°51'53	5♂41	18° 1	5°38	28°11	26°33	3°37	10°11	0° 7	5°18	1°29	1°36	27°22	13°36	T 18
W19	21 48 34	25°49'36	19° 2	17°25	6°52	28°50	26°27	3°37	10° 9	0° 6	5°18	1°28	1°33	27°29	13°39	W19
T 20	21 52 31	26°47'22	2♂10	16°54	8° 5	29°29	26°21	3°37	10° 7	0° 4	5°18	1°28	1°30	27°36	13°43	T 20
F 21	21 56 27	27°45'08	15° 4	16°30	9°19	0♂ 8	26°15	3°36	10° 4	0° 3	5°18	1°27	1°26	27°43	13°47	F 21
S 22	22 0 24	28°42'56	27°44	16°12	10°32	0°46	26° 9	3°36	10° 2	0° 1	5°18	1°D27	1°23	27°49	13°51	S 22
S 23	22 4 20	29°40'46	10♂10	16° 1	11°46	1°25	26° 3	3°35	10° 0	0° 0	5°19	1°27	1°20	27°56	13°56	S 23
M24	22 8 17	0♂38'37	22°25	15°D58	13° 0	2° 4	25°56	3°34	9°58	29♂59	5°19	1°27	1°17	28° 3	14° 0	M24
T 25	22 12 13	1°36'29	4♂30	16° 2	14°13	2°42	25°50	3°33	9°56	29°57	5°19	1°R27	1°14	28° 9	14° 4	T 25
W26	22 16 10	2°34'22	16°27	16°14	15°27	3°21	25°43	3°32	9°53	29°56	5°19	1°27	1°11	28°16	14° 9	W26
T 27	22 20 7	3°32'17	28°19	16°35	16°41	3°59	25°36	3°31	9°51	29°55	5°20	1°27	1° 7	28°23	14°13	T 27
F 28	22 24 3	4°30'13	10♂ 9	17° 3	17°54	4°37	25°29	3°30	9°49	29°53	5°20	1°27	1° 4	28°29	14°18	F 28
S 29	22 28 0	5°28'11	22° 3	17°39	19° 8	5°16	25°22	3°29	9°47	29°52	5°20	1°27	1° 1	28°36	14°22	S 29
S 30	22 31 56	6°26'10	4♂ 4	18°23	20°22	5°54	25°15	3°27	9°45	29°51	5°21	1°D26	0°58	28°43	14°27	S 30
M31	22 35 53	7♂24'10	16♂16	19♂14	21♂36	6♂32	25♂ 8	3♂26	9♂43	29♂50	5♂21	1♂27	0♂55	28♂50	14♂32	M31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl
S 1	18n 7	11s16	5n 0	8n30	3s49	22n26	0s10	23n 9	0n49	2s12	1s25	10n17	2s31	18s10	0s41	19s41
S 2	17 52	14 11	5 13	8 22	4 1	22 20	0 7	23 5	0 50	2 13	1 25	10 18	2 31	18 10	0 41	19 42
M 3	17 37	16 32	5 13	8 16	4 11	22 14	0 5	23 0	0 50	2 15	1 26	10 18	2 32	18 11	0 41	19 42
T 4	17 21	18 10	4 58	8 13	4 20	22 7	0 2	22 55	0 51	2 16	1 26	10 18	2 32	18 12	0 41	19 43
W 5	17 5	18 56	4 27	8 13	4 29	21 59	0n 1	22 50	0 51	2 18	1 26	10 18	2 32	18 12	0 41	19 43
T 6	16 49	18 42	3 42	8 15	4 37	21 51	0 3	22 44	0 52	2 20	1 27	10 18	2 32	18 13	0 41	19 43
F 7	16 32	17 25	2 44	8 20	4 43	21 42	0 6	22 39	0 52	2 21	1 27	10 18	2 33	18 14	0 41	19 44
S 8	16 15	15 5	1 35	8 28	4 47	21 33	0 9	22 33	0 53	2 23	1 27	10 18	2 33	18 14	0 41	19 44
S 9	15 58	11 49	0 18	8 38	4 51	21 23	0 11	22 27	0 53	2 25	1 27	10 18	2 33	18 15	0 41	19 44
M10	15 41	7 49	1s 1	8 51	4 52	21 12	0 14	22 21	0 54	2 27	1 28	10 18	2 34	18 16	0 41	19 45
T 11	15 23	3 19	2 16	9 6	4 52	21 0	0 16	22 15	0 54	2 29	1 28	10 18	2 34	18 16	0 41	19 45
W12	15 6	1n22	3 23	9 23	4 50	20 48	0 19	22 9	0 55	2 31	1 28	10 18	2 34	18 17	0 41	19 45
T 13	14 48	5 57	4 17	9 43	4 46	20 36	0 21	22 2	0 55	2 33	1 28	10 18	2 34	18 18	0 41	19 46
F 14	14 29	10 10	4 55	10 4	4 40	20 23	0 24	21 56	0 56	2 35	1 29	10 18	2 35	18 18	0 41	19 46
S 15	14 11	13 45	5 14	10 26	4 33	20 9	0 26	21 49	0 56	2 38	1 29	10 18	2 35	18 19	0 41	19 46
S 16	13 52	16 30	5 15	10 49	4 23	19 55	0 29	21 42	0 56	2 40	1 29	10 18	2 35	18 19	0 41	19 47
M17	13 33	18 16	4 57	11 13	4 12	19 40	0 31	21 35	0 57	2 42	1 29	10 17	2 35	18 20	0 41	19 47
T 18	13 14	18 57	4 22	11 37	4 0	19 24	0 34	21 28	0 57	2 45	1 30	10 17	2 36	18 21	0 41	19 47
W19	12 55	18 33	3 34	12 1	3 46	19 8	0 36	21 20	0 58	2 47	1 30	10 17	2 36	18 21	0 41	19 48
T 20	12 35	17 9	2 35	12 25	3 31	18 51	0 38	21 13	0 58	2 50	1 30	10 16	2 36	18 22	0 41	19 48
F 21	12 15	14 53	1 30	12 48	3 15	18 34	0 40	21 5	0 59	2 52	1 30	10 16	2 36	18 23	0 41	19 48
S 22	11 55	11 56	0 21	13 9	2 58	18 17	0 43	20 57	0 59	2 55	1 30	10 15	2 37	18 23	0 41	19 49
S 23	11 35	8 30	0n48	13 29	2 40	17 58	0 45	20 49	1 0	2 58	1 31	10 15	2 37	18 24	0 41	19 49
M24	11 15	4 45	1 54	13 47	2 22	17 40	0 47	20 41	1 0	3 0	1 31	10 14	2 37	18 24	0 41	19 49
T 25	10 54	0 52	2 53	14 3	2 4	17 21	0 49	20 32	1 1	3 3	1 31	10 14	2 37	18 25	0 41	19 49
W26	10 33	3s 0	3 45	14 17	1 46	17 1	0 51	20 24	1 1	3 6	1 31	10 13	2 38	18 25	0 41	19 50
T 27	10 13	6 44	4 26	14 28	1 28	16 41	0 53	20 15	1 2	3 9	1 31	10 13	2 38	18 26	0 41	19 50
F 28	9 52	10 11	4 56	14 37	1 10	16 20	0 55	20 7	1 2	3 12	1 32	10 12	2 38	18 27	0 41	19 50
S 29	9 30	13 14	5 13	14 42	0 53	15 59	0 57	19 58	1 3	3 15	1 32	10 11	2 38	18 27	0 41	19 51
S 30	9 9	15 46	5 17	14 45	0 36	15 37	0 59	19 49	1 3	3 18	1 32	10 11	2 39	18 28	0 41	19 51
M31	8n47	17s39	5n 7	14n44	0s20	15n15	1n 0	19n40	1n 4	3s20	1s32	10n10	2s39	18s28	0s41	19s51

Julian Day Number = 2451026.5, Delta T = 63.28 sec

Ecliptic obliquity = 23°26'14, Nutation = -0°00'07, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 24°43'14, Lahiri = 23°50'14

# ASTRODIENST EPHEMERIS for the year 1998

## geocentric

SEPTEMBER 1998

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	22 39 49	8♍22'12	28♌45	20♊13	22♊50	7♊11	25°R 1	3°R24	9°R41	29°R49	5♌22	1♍27	0♍51	28♌56	14♌37	T 1
W 2	22 43 46	9°20'14	11♌33	21°18	24° 4	7°49	24♌53	3♌22	9♌39	29♌47	5°22	1°28	0°48	29° 3	14°42	W 2
T 3	22 47 42	10°18'19	24°45	22°31	25°18	8°27	24°46	3°20	9°37	29°46	5°23	1°28	0°45	29°10	14°47	T 3
F 4	22 51 39	11°16'25	8♌21	23°49	26°32	9° 5	24°38	3°18	9°35	29°45	5°24	1°29	0°42	29°16	14°52	F 4
S 5	22 55 36	12°14'32	22°22	25°12	27°46	9°43	24°31	3°16	9°33	29°44	5°24	1°30	0°39	29°23	14°57	S 5
S 6	22 59 32	13°12'41	6♌45	26°41	29° 0	10°21	24°23	3°14	9°31	29°43	5°25	1°R30	0°36	29°30	15° 2	S 6
M 7	23 3 29	14°10'51	21°26	28°14	0♍14	10°59	24°15	3°12	9°30	29°42	5°26	1°29	0°32	29°37	15° 8	M 7
T 8	23 7 25	15° 9'04	6♍17	29°52	1°28	11°37	24° 8	3°10	9°28	29°41	5°26	1°28	0°29	29°43	15°13	T 8
W 9	23 11 22	16° 7'18	21°10	1♍33	2°43	12°15	24° 0	3° 7	9°26	29°40	5°27	1°26	0°26	29°50	15°19	W 9
T 10	23 15 18	17° 5'34	5♌59	3°17	3°57	12°53	23°52	3° 5	9°24	29°39	5°28	1°24	0°23	29°57	15°24	T 10
F 11	23 19 15	18° 3'52	20°36	5° 3	5°11	13°31	23°44	3° 2	9°23	29°38	5°29	1°23	0°20	0♍ 3	15°30	F 11
S 12	23 23 11	19° 2'13	4♌57	6°52	6°25	14° 9	23°36	3° 0	9°21	29°37	5°30	1°22	0°16	0°10	15°36	S 12
S 13	23 27 8	20° 0'35	18°57	8°42	7°40	14°47	23°28	2°57	9°19	29°36	5°31	1°D21	0°13	0°17	15°42	S 13
M14	23 31 5	20°59'00	2♌38	10°33	8°54	15°24	23°20	2°54	9°18	29°35	5°31	1°21	0°10	0°23	15°47	M14
T 15	23 35 1	21°57'27	15°59	12°25	10° 8	16° 2	23°12	2°51	9°16	29°34	5°32	1°22	0° 7	0°30	15°53	T 15
W16	23 38 58	22°55'56	29° 2	14°18	11°23	16°40	23° 4	2°48	9°15	29°34	5°33	1°24	0° 4	0°37	15°59	W16
T 17	23 42 54	23°54'27	11♌49	16°11	12°37	17°17	22°56	2°45	9°13	29°33	5°34	1°25	0° 1	0°44	16° 5	T 17
F 18	23 46 51	24°53'00	24°23	18° 4	13°52	17°55	22°48	2°42	9°12	29°32	5°36	1°26	29♌57	0°50	16°12	F 18
S 19	23 50 47	25°51'35	6♍45	19°57	15° 6	18°32	22°40	2°39	9°10	29°31	5°37	1°R26	29°54	0°57	16°18	S 19
S 20	23 54 44	26°50'12	18°57	21°49	16°21	19°10	22°32	2°35	9° 9	29°31	5°38	1°25	29°51	1° 4	16°24	S 20
M21	23 58 40	27°48'51	1♌ 2	23°41	17°35	19°47	22°24	2°32	9° 7	29°30	5°39	1°23	29°48	1°10	16°30	M21
T 22	0 2 37	28°47'32	13° 0	25°33	18°50	20°25	22°17	2°28	9° 6	29°29	5°40	1°19	29°45	1°17	16°37	T 22
W23	0 6 33	29°46'15	24°53	27°23	20° 5	21° 2	22° 9	2°25	9° 5	29°29	5°41	1°14	29°42	1°24	16°43	W23
T 24	0 10 30	0♌45'00	6♍44	29°13	21°19	21°40	22° 1	2°21	9° 4	29°28	5°43	1° 9	29°38	1°30	16°50	T 24
F 25	0 14 27	1°43'46	18°34	1♌ 3	22°34	22°17	21°53	2°17	9° 3	29°28	5°44	1° 4	29°35	1°37	16°56	F 25
S 26	0 18 23	2°42'35	0♌28	2°51	23°49	22°54	21°45	2°14	9° 1	29°27	5°45	0°59	29°32	1°44	17° 3	S 26
S 27	0 22 20	3°41'25	12°27	4°39	25° 3	23°31	21°38	2°10	9° 0	29°27	5°46	0°56	29°29	1°51	17°10	S 27
M28	0 26 16	4°40'17	24°37	6°25	26°18	24° 8	21°30	2° 6	8°59	29°26	5°48	0°54	29°26	1°57	17°16	M28
T 29	0 30 13	5°39'10	7♌ 1	8°11	27°33	24°46	21°23	2° 2	8°58	29°26	5°49	0°D53	29°22	2° 4	17°23	T 29
W30	0 34 9	6♌38'06	19♌43	9♌56	28♍48	25♊23	21♌15	1♌58	8♌57	29♌25	5♌51	0♍54	29♊19	2♍11	17♍30	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	8n26	18s44	4n42	14n41	0s 4	14n53	1n 2	19n30	1n 4	3s24	1s32	10n 9	2s39	18s29	0s41	19s51	0n20	9s31	11n52	10n58	11n10	7s 0	13s55	2n25					
W 2	8 4	18 54	4 3	14 34	0n10	14 30	1 4	19 21	1 4	3 27	1 32	10 8	2 39	18 29	0 41	19 52	0 20	9 31	11 51	10 57	11 11	7 2	13 56	2 25					
T 3	7 42	18 4	3 10	14 23	0 24	14 7	1 5	19 12	1 5	3 30	1 32	10 7	2 40	18 30	0 41	19 52	0 20	9 32	11 51	10 57	11 12	7 4	13 58	2 25					
F 4	7 20	16 10	2 5	14 10	0 37	13 43	1 7	19 2	1 5	3 33	1 33	10 7	2 40	18 30	0 41	19 52	0 20	9 32	11 50	10 57	11 13	7 6	13 59	2 25					
S 5	6 58	13 16	0 50	13 53	0 48	13 19	1 9	18 52	1 6	3 36	1 33	10 6	2 40	18 31	0 41	19 52	0 20	9 33	11 50	10 57	11 15	7 8	14 1	2 25					
S 6	6 36	9 29	0s29	13 33	0 59	12 55	1 10	18 42	1 6	3 39	1 33	10 5	2 40	18 31	0 41	19 53	0 20	9 34	11 49	10 57	11 16	7 10	14 2	2 25					
M 7	6 13	5 3	1 48	13 9	1 9	12 30	1 11	18 32	1 7	3 42	1 33	10 4	2 41	18 32	0 41	19 53	0 20	9 34	11 49	10 57	11 17	7 12	14 4	2 25					
T 8	5 51	0 16	3 1	12 43	1 17	12 5	1 13	18 22	1 7	3 45	1 33	10 3	2 41	18 32	0 41	19 53	0 20	9 35	11 48	10 57	11 18	7 14	14 5	2 25					
W 9	5 28	4n32	4 1	12 14	1 24	11 40	1 14	18 12	1 8	3 49	1 33	10 2	2 41	18 33	0 41	19 53	0 20	9 35	11 48	10 58	11 19	7 16	14 7	2 25					
T 10	5 6	9 1	4 45	11 43	1 31	11 14	1 15	18 2	1 8	3 52	1 33	10 1	2 41	18 33	0 41	19 54	0 20	9 36	11 47	10 58	11 20	7 17	14 8	2 25					
F 11	4 43	12 55	5 10	11 9	1 36	10 48	1 16	17 52	1 9	3 55	1 33	10 0	2 41	18 34	0 41	19 54	0 20	9 37	11 47	10 59	11 21	7 19	14 10	2 25					
S 12	4 20	15 57	5 15	10 33	1 41	10 21	1 17	17 41	1 9	3 58	1 33	9 59	2 42	18 34	0 41	19 54	0 20	9 37	11 46	10 59	11 22	7 21	14 11	2 25					
S 13	3 57	17 59	5 1	9 55	1 44	9 55	1 19	17 30	1 9	4 1	1 33	9 57	2 42	18 34	0 41	19 54	0 20	9 38	11 46	11 0	11 24	7 23	14 13	2 25					
M14	3 34	18 55	4 30	9 15	1 47	9 28	1 20	17 20	1 10	4 5	1 34	9 56	2 42	18 35	0 41	19 54	0 20	9 38	11 45	10 59	11 25	7 25	14 15	2 25					
T 15	3 11	18 45	3 45	8 34	1 48	9 0	1 20	17 9	1 10	4 8	1 34	9 55	2 42	18 35	0 41	19 55	0 20	9 39	11 45	10 59	11 26	7 27	14 16	2 25					
W16	2 48	17 35	2 49	7 51	1 49	8 33	1 21	16 58	1 11	4 11	1 34	9 54	2 42	18 36	0 40	19 55	0 20	9 40	11 45	10 59	11 27	7 29	14 18	2 25					
T 17	2 25	15 33	1 46	7 8	1 49	8 5	1 22	16 47	1 11	4 14	1 34	9 53	2 43	18 36	0 40	19 55	0 20	9 40	11 44	10 58	11 28	7 31	14 20	2 26					
F 18	2 2	12 47	0 39	6 23	1 49	7 37	1 23	16 36	1 12	4 17	1 34	9 51	2 43	18 36	0 40	19 55	0 20	9 41	11 44	10 58	11 29	7 33	14 21	2 26					
S 19	1 39	9 29	0n29	5 38	1 47	7 9	1 23	16 25	1 12	4 21	1 34	9 50	2 43	18 37	0 40	19 55	0 20	9 41	11 43	10 58	11 30	7 35	14 23	2 26					
S 20	1 15	5 49	1 35	4 52	1 45	6 41	1 24	16 13	1 12	4 24	1 34	9 49	2 43	18 37	0 40	19 56	0 20	9 42	11 43	10 58	11 31	7 36	14 25	2 26					
M21	0 52	1 58	2 35	4 5	1 43	6 12	1 25	16 2	1 13	4 27	1 34	9 48	2 43	18 37	0 40	19 56	0 20	9 43	11 42	10 59	11 33	7 38	14 26	2 26					
T 22	0 29	1s56	3 28	3 18	1 40	5 43	1 25	15 50	1 13	4 30	1 34	9 46	2 43	18 38	0 40	19 56	0 20	9 43	11 42	11 0	11 34	7 40	14 28	2 26					
W23	0 5	5 43	4 12	2 31	1 37	5 14	1 25	15 39	1 14	4 33	1 34	9 45	2 44	18 38	0 40	19 56	0 20	9 44	11 41	11 2	11 35	7 42	14 30	2 26					
T 24	0s18	9 17	4 44	1 44	1 33	4 45	1 26	15 27	1 14	4 36	1 34	9 43	2 44	18 38	0 40	19 56	0 20	9 45	11 41	11 4	11 36	7 44	14 32	2 26					
F 25	0 41	12 28	5 5	0 56	1 29	4 16	1 26	15 16	1 15	4 39	1 34	9 42	2 44	18 39	0 40	19 56	0 20	9 45	11 40	11 6	11 37	7 46	14 33	2 26					
S 26	1 5	15 9	5 12	0 9	1 24	3 47	1 26	15 4	1 15	4 42	1 34	9 41	2 44	18 39	0 40	19 56	0 20	9 46	11 40	11 7	11 38	7 48	14 35	2 26					
S 27	1 28	17 14	5 6	0s38	1 19	3 17	1 26	14 52	1 16	4 45	1 34	9 39	2 44	18 39	0 40	19 57	0 20	9 47	11 40	11 9	11 39	7 50	14 37	2 26					
M28	1 51	18 34	4 46	1 25	1 14	2 47	1 26	14 40	1 16	4 48	1 34	9 38	2 44	18 39	0 40	19 57	0 20	9 47	11 39	11 9	11 40	7 52	14 39	2 26					
T 29	2 15	19 3	4 12	2 12	1 8	2 18	1 26	14 28	1 16	4 51	1 34	9 36	2 44	18 40	0 40	19 57	0 20	9 48	11 39	11 10	11 41	7 54	14 41	2 27					
W30	2s38	18s36	3n26	2s59	1n 3	1n48	1n26	14n16	1n17	4s54	1s34	9n35	2s45	18s40	0s40	19s57	0n20	9s48	11n38	11n 9	11n43	7s55	14s42	2n27					

# ASTRODIENST EPHEMERIS for the year 1998

## geocentric

OCTOBER 1998

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	0 38 6	7♂37'03	2♂49	11♂40	0♂ 2	26♂ 0	21♂ 8	1♂R54	8♂R57	29♂R25	5♂52	0♂55	29♂16	2♂17	17♂37	T 1
F 2	0 42 2	8°36'02	16°22	13°23	1°17	26°37	21♂ 0	1♂50	8♂56	29♂25	5°53	0°57	29°13	2°24	17°44	F 2
S 3	0 45 59	9°35'03	0♂22	15° 6	2°32	27°14	20°53	1°45	8°55	29°24	5°55	0°R57	29°10	2°31	17°51	S 3
S 4	0 49 56	10°34'05	14°49	16°47	3°47	27°50	20°46	1°41	8°54	29°24	5°56	0°57	29° 7	2°38	17°58	S 4
M 5	0 53 52	11°33'09	29°40	18°28	5° 2	28°27	20°39	1°37	8°53	29°24	5°58	0°54	29° 3	2°44	18° 5	M 5
T 6	0 57 49	12°32'16	14♂47	20° 7	6°17	29° 4	20°32	1°32	8°53	29°24	6° 0	0°50	29° 0	2°51	18°12	T 6
W 7	1 1 45	13°31'24	0♂ 2	21°46	7°32	29°41	20°26	1°28	8°52	29°23	6° 1	0°44	28°57	2°58	18°19	W 7
T 8	1 5 42	14°30'34	15°13	23°24	8°46	0♂18	20°19	1°24	8°52	29°23	6° 3	0°37	28°54	3° 4	18°26	T 8
F 9	1 9 38	15°29'47	0♂10	25° 2	10° 1	0°54	20°12	1°19	8°51	29°23	6° 4	0°31	28°51	3°11	18°34	F 9
S 10	1 13 35	16°29'02	14°46	26°38	11°16	1°31	20° 6	1°15	8°51	29°23	6° 6	0°26	28°47	3°18	18°41	S 10
S 11	1 17 31	17°28'20	28°57	28°14	12°31	2° 8	20° 0	1°10	8°50	29°23	6° 8	0°22	28°44	3°24	18°48	S 11
M12	1 21 28	18°27'39	12♂41	29°49	13°46	2°44	19°54	1° 5	8°50	29°D23	6°10	0°D20	28°41	3°31	18°55	M12
T 13	1 25 25	19°27'01	25°58	1♂24	15° 1	3°21	19°48	1° 1	8°49	29°23	6°11	0°20	28°38	3°38	19° 3	T 13
W14	1 29 21	20°26'26	8♂53	2°57	16°16	3°57	19°42	0°56	8°49	29°23	6°13	0°21	28°35	3°45	19°10	W14
T 15	1 33 18	21°25'52	21°29	4°30	17°32	4°33	19°36	0°51	8°49	29°23	6°15	0°23	28°32	3°51	19°18	T 15
F 16	1 37 14	22°25'21	3♂49	6° 3	18°47	5°10	19°31	0°47	8°49	29°23	6°17	0°R23	28°28	3°58	19°25	F 16
S 17	1 41 11	23°24'52	15°58	7°34	20° 2	5°46	19°25	0°42	8°49	29°24	6°18	0°21	28°25	4° 5	19°33	S 17
S 18	1 45 7	24°24'26	27°59	9° 5	21°17	6°22	19°20	0°37	8°49	29°24	6°20	0°18	28°22	4°11	19°40	S 18
M19	1 49 4	25°24'01	9♂55	10°36	22°32	6°59	19°15	0°32	8°D49	29°24	6°22	0°11	28°19	4°18	19°48	M19
T 20	1 53 0	26°23'38	21°48	12° 6	23°47	7°35	19°10	0°28	8°49	29°24	6°24	0° 3	28°16	4°25	19°56	T 20
W21	1 56 57	27°23'18	3♂39	13°35	25° 2	8°11	19° 5	0°23	8°49	29°25	6°26	29♂52	28°13	4°32	20° 3	W21
T 22	2 0 53	28°22'59	15°30	15° 3	26°17	8°47	19° 1	0°18	8°49	29°25	6°28	29°40	28° 9	4°38	20°11	T 22
F 23	2 4 50	29°22'43	27°23	16°31	27°32	9°23	18°57	0°13	8°49	29°25	6°30	29°29	28° 6	4°45	20°19	F 23
S 24	2 8 47	0♂22'28	9♂19	17°58	28°48	9°59	18°52	0° 9	8°49	29°26	6°32	29°18	28° 3	4°52	20°27	S 24
S 25	2 12 43	1°22'15	21°21	19°24	0♂ 3	10°35	18°48	0° 4	8°50	29°26	6°34	29° 9	28° 0	4°58	20°34	S 25
M26	2 16 40	2°22'04	3♂32	20°50	1°18	11°11	18°45	29♂59	8°50	29°27	6°36	29° 2	27°57	5° 5	20°42	M26
T 27	2 20 36	3°21'55	15°54	22°15	2°33	11°47	18°41	29°54	8°50	29°27	6°38	28°59	27°53	5°12	20°50	T 27
W28	2 24 33	4°21'47	28°32	23°39	3°48	12°22	18°38	29°49	8°51	29°28	6°40	28°57	27°50	5°19	20°58	W28
T 29	2 28 29	5°21'41	11♂31	25° 2	5° 4	12°58	18°34	29°45	8°51	29°28	6°42	28°D57	27°47	5°25	21° 6	T 29
F 30	2 32 26	6°21'37	24°53	26°25	6°19	13°34	18°31	29°40	8°52	29°29	6°44	28°R57	27°44	5°32	21°14	F 30
S 31	2 36 22	7♂21'34	8♂43	27♂46	7♂34	14♂ 9	18♂28	29♂35	8♂52	29♂29	6♂46	28♂57	27♂41	5♂39	21♂21	S 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
T 1	3s 1	17s 8	2n27	3s45	0n57	1n18	1n26	14n 4	1n17	4s57	1s33	9n33	2s45	18s40	0s40	19s57
F 2	3 25	14 41	1 19	4 31	0 50	0 48	1 26	13 52	1 18	5 0	1 33	9 32	2 45	18 40	0 40	19 57
S 3	3 48	11 18	0 3	5 16	0 44	0 18	1 26	13 39	1 18	5 2	1 33	9 30	2 45	18 40	0 40	19 57
S 4	4 11	7 8	1s15	6 1	0 38	0s12	1 25	13 27	1 18	5 5	1 33	9 29	2 45	18 41	0 40	19 57
M 5	4 34	2 25	2 29	6 45	0 31	0 42	1 25	13 15	1 19	5 8	1 33	9 27	2 45	18 41	0 40	19 57
T 6	4 57	2n31	3 35	7 29	0 25	1 12	1 24	13 2	1 19	5 10	1 33	9 25	2 45	18 41	0 40	19 57
W 7	5 20	7 20	4 26	8 12	0 18	1 42	1 24	12 50	1 20	5 13	1 33	9 24	2 45	18 41	0 40	19 57
T 8	5 43	11 39	4 58	8 55	0 11	2 12	1 23	12 37	1 20	5 16	1 33	9 22	2 45	18 41	0 40	19 57
F 9	6 6	15 9	5 9	9 37	0 4	2 42	1 23	12 24	1 21	5 18	1 33	9 21	2 45	18 41	0 40	19 57
S 10	6 29	17 37	4 59	10 19	0s 3	3 12	1 22	12 12	1 21	5 20	1 33	9 19	2 46	18 41	0 40	19 58
S 11	6 52	18 55	4 31	11 0	0 10	3 42	1 21	11 59	1 21	5 23	1 32	9 17	2 46	18 41	0 40	19 58
M12	7 14	19 2	3 49	11 40	0 17	4 12	1 20	11 46	1 22	5 25	1 32	9 16	2 46	18 41	0 40	19 58
T 13	7 37	18 5	2 55	12 20	0 24	4 42	1 19	11 33	1 22	5 27	1 32	9 14	2 46	18 42	0 40	19 58
W14	7 59	16 13	1 53	12 59	0 31	5 12	1 18	11 21	1 23	5 29	1 32	9 12	2 46	18 42	0 40	19 58
T 15	8 21	13 35	0 48	13 37	0 38	5 41	1 17	11 8	1 23	5 31	1 32	9 11	2 46	18 42	0 40	19 58
F 16	8 44	10 24	0n19	14 14	0 45	6 11	1 16	10 55	1 23	5 34	1 32	9 9	2 46	18 42	0 40	19 58
S 17	9 6	6 48	1 23	14 51	0 51	6 40	1 15	10 42	1 24	5 35	1 32	9 7	2 46	18 42	0 40	19 58
S 18	9 28	2 59	2 23	15 27	0 58	7 9	1 14	10 29	1 24	5 37	1 31	9 6	2 46	18 42	0 40	19 58
M19	9 49	0s56	3 15	16 2	1 5	7 38	1 13	10 16	1 25	5 39	1 31	9 4	2 46	18 42	0 40	19 58
T 20	10 11	4 47	3 59	16 36	1 12	8 7	1 11	10 2	1 25	5 41	1 31	9 2	2 46	18 42	0 40	19 58
W21	10 33	8 27	4 33	17 9	1 18	8 36	1 10	9 49	1 25	5 43	1 31	9 1	2 46	18 42	0 40	19 57
T 22	10 54	11 47	4 54	17 42	1 24	9 5	1 9	9 36	1 26	5 44	1 31	8 59	2 46	18 41	0 40	19 57
F 23	11 15	14 39	5 3	18 13	1 31	9 33	1 7	9 23	1 26	5 46	1 31	8 57	2 46	18 41	0 40	19 57
S 24	11 36	16 55	4 59	18 44	1 37	10 1	1 6	9 10	1 27	5 47	1 30	8 56	2 46	18 41	0 40	19 57
S 25	11 57	18 29	4 41	19 14	1 43	10 29	1 4	8 57	1 27	5 49	1 30	8 54	2 46	18 41	0 39	19 57
M26	12 18	19 13	4 11	19 43	1 49	10 57	1 3	8 43	1 28	5 50	1 30	8 53	2 46	18 41	0 39	19 57
T 27	12 38	19 3	3 28	20 10	1 54	11 24	1 1	8 30	1 28	5 51	1 30	8 51	2 46	18 41	0 39	19 57
W28	12 58	17 56	2 34	20 37	2 0	11 51	0 59	8 17	1 28	5 52	1 30	8 49	2 46	18 41	0 39	19 57
T 29	13 18	15 52	1 31	21 3	2 5	12 18	0 57	8 3	1 29	5 53	1 29	8 48	2 46	18 41	0 39	19 57
F 30	13 38	12 53	0 22	21 28	2 10	12 45	0 56	7 50	1 29	5 54	1 29	8 46	2 46	18 40	0 39	19 57
S 31	13s58	9s 6	0s52	21s51	2s15	13s11	0n54	7n37	1n30	5s55	1s29	8n44	2s46	18s40	0s39	19s57

Julian Day Number = 2451087.5, Delta T = 63.36 sec  
 Ecliptic obliquity = 23°26'15, Nutation = - 0°00'09, out-of-bounds declination in red  
 Ayanamsha: Fagan/Bradley = 24°43'22, Lahiri = 23°50'23

# ASTRODIENST EPHEMERIS for the year 1998

## geocentric

NOVEMBER 1998

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	2 40 19	8♍21'33	23♋1	29♍7	8♍49	14♍45	18°R26	29°R30	8♍53	29♋30	6♌48	28°R55	27♏38	5♍45	21♍29	S 1
M 2	2 44 16	9°21'33	7♏46	0♌26	10° 5	15°20	18♋23	29°R26	8°54	29°31	6°51	28♏50	27°34	5°52	21°37	M 2
T 3	2 48 12	10°21'35	22°52	1°44	11°20	15°55	18°21	29°21	8°54	29°31	6°53	28°43	27°31	5°59	21°45	T 3
W 4	2 52 9	11°21'39	8♌11	3° 1	12°35	16°31	18°19	29°16	8°55	29°32	6°55	28°33	27°28	6° 6	21°53	W 4
T 5	2 56 5	12°21'45	23°32	4°17	13°50	17° 6	18°17	29°12	8°56	29°33	6°57	28°23	27°25	6°12	22° 1	T 5
F 6	3 0 2	13°21'52	8♏43	5°31	15° 5	17°41	18°16	29° 7	8°57	29°34	6°59	28°12	27°22	6°19	22° 9	F 6
S 7	3 3 58	14°22'02	23°33	6°43	16°21	18°16	18°14	29° 3	8°58	29°35	7° 1	28° 3	27°19	6°26	22°17	S 7
S 8	3 7 55	15°22'14	7♌57	7°53	17°36	18°52	18°13	28°58	8°59	29°36	7° 4	27°56	27°15	6°32	22°25	S 8
M 9	3 11 51	16°22'27	21°50	9° 2	18°51	19°27	18°12	28°54	9° 0	29°37	7° 6	27°51	27°12	6°39	22°33	M 9
T 10	3 15 48	17°22'43	5♏13	10° 7	20° 7	20° 2	18°11	28°49	9° 1	29°38	7° 8	27°49	27° 9	6°46	22°41	T 10
W11	3 19 45	18°23'00	18° 9	11°10	21°22	20°37	18°10	28°45	9° 2	29°39	7°10	27°D49	27° 6	6°53	22°49	W11
T 12	3 23 41	19°23'20	0♍43	12°10	22°37	21°11	18°10	28°41	9° 3	29°40	7°13	27°R49	27° 3	6°59	22°57	T 12
F 13	3 27 38	20°23'42	12°59	13° 7	23°52	21°46	18°10	28°36	9° 5	29°41	7°15	27°48	26°59	7° 6	23° 5	F 13
S 14	3 31 34	21°24'05	25° 2	13°59	25° 8	22°21	18°D10	28°32	9° 6	29°42	7°17	27°45	26°56	7°13	23°13	S 14
S 15	3 35 31	22°24'30	6♌58	14°48	26°23	22°56	18°10	28°28	9° 7	29°43	7°19	27°40	26°53	7°19	23°21	S 15
M16	3 39 27	23°24'57	18°49	15°31	27°38	23°30	18°10	28°24	9° 9	29°44	7°22	27°32	26°50	7°26	23°29	M16
T 17	3 43 24	24°25'26	0♍39	16° 9	28°54	24° 5	18°11	28°20	9°10	29°45	7°24	27°21	26°47	7°33	23°37	T 17
W18	3 47 20	25°25'57	12°30	16°41	0♌9	24°39	18°12	28°16	9°12	29°46	7°26	27° 7	26°44	7°40	23°45	W18
T 19	3 51 17	26°26'29	24°25	17° 6	1° 24	25°14	18°13	28°12	9°13	29°48	7°29	26°52	26°40	7°46	23°53	T 19
F 20	3 55 14	27°27'03	6♌24	17°23	2°40	25°48	18°14	28° 8	9°15	29°49	7°31	26°37	26°37	7°53	24° 1	F 20
S 21	3 59 10	28°27'38	18°28	17°R32	3°55	26°22	18°15	28° 4	9°16	29°50	7°33	26°23	26°34	8° 0	24° 9	S 21
S 22	4 3 7	29°28'15	0♌38	17°32	5°10	26°56	18°17	28° 0	9°18	29°51	7°36	26°11	26°31	8° 6	24°17	S 22
M23	4 7 3	0♌28'53	12°57	17°22	6°26	27°30	18°19	27°57	9°20	29°53	7°38	26° 2	26°28	8°13	24°25	M23
T 24	4 11 0	1°29'32	25°25	17° 2	7°41	28° 4	18°21	27°53	9°22	29°54	7°40	25°56	26°25	8°20	24°33	T 24
W25	4 14 56	2°30'12	8♌6	16°31	8°56	28°38	18°23	27°50	9°23	29°56	7°43	25°53	26°21	8°27	24°41	W25
T 26	4 18 53	3°30'54	21° 3	15°49	10°12	29°12	18°26	27°46	9°25	29°57	7°45	25°53	26°18	8°33	24°49	T 26
F 27	4 22 49	4°31'36	4♋20	14°57	11°27	29°46	18°28	27°43	9°27	29°58	7°47	25°53	26°15	8°40	24°57	F 27
S 28	4 26 46	5°32'20	17°59	13°55	12°43	0♌19	18°31	27°40	9°29	29°59	7°50	25°52	26°12	8°47	25° 5	S 28
S 29	4 30 43	6°33'04	2♏2	12°45	13°58	0°53	18°34	27°36	9°31	0♌1	7°52	25°50	26° 9	8°53	25°13	S 29
M30	4 34 39	7♌33'50	16°Y30	11♌28	15♌13	1♌26	18♋38	27°Y33	9♌33	0♌3	7♌54	25♏46	26♏5	9♍0	25♍21	M30

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	
S 1	14s17	4s40	2s 4	22s14	2s20	13s37	0n52	7n23	1n30	5s56	1s29	8n43	2s46	18s40	0s39	S 1
M 2	14 37	0n10	3 10	22 35	2 24	14 3	0 50	7 10	1 30	5 57	1 28	8 41	2 46	18 40	0 39	M 2
T 3	14 56	5 6	4 5	22 55	2 28	14 28	0 48	6 57	1 31	5 58	1 28	8 40	2 45	18 40	0 39	T 3
W 4	15 14	9 46	4 43	23 14	2 31	14 53	0 46	6 43	1 31	5 58	1 28	8 38	2 45	18 39	0 39	W 4
T 5	15 33	13 48	5 0	23 32	2 34	15 17	0 44	6 30	1 32	5 59	1 28	8 37	2 45	18 39	0 39	T 5
F 6	15 51	16 52	4 56	23 48	2 37	15 42	0 42	6 17	1 32	5 59	1 28	8 35	2 45	18 39	0 39	F 6
S 7	16 9	18 45	4 32	24 3	2 39	16 5	0 40	6 3	1 32	5 59	1 27	8 34	2 45	18 39	0 39	S 7
S 8	16 27	19 21	3 52	24 16	2 41	16 29	0 38	5 50	1 33	6 0	1 27	8 32	2 45	18 38	0 39	S 8
M 9	16 44	18 44	2 58	24 29	2 43	16 51	0 36	5 36	1 33	6 0	1 27	8 31	2 45	18 38	0 39	M 9
T 10	17 1	17 5	1 57	24 39	2 43	17 14	0 33	5 23	1 34	6 0	1 27	8 29	2 45	18 38	0 39	T 10
W11	17 18	14 35	0 51	24 49	2 43	17 36	0 31	5 10	1 34	6 0	1 26	8 28	2 45	18 37	0 39	W11
T 12	17 34	11 27	0n15	24 56	2 43	17 57	0 29	4 56	1 34	6 0	1 26	8 26	2 44	18 37	0 39	T 12
F 13	17 51	7 54	1 19	25 3	2 42	18 18	0 27	4 43	1 35	6 0	1 26	8 25	2 44	18 37	0 39	F 13
S 14	18 7	4 5	2 19	25 7	2 40	18 39	0 24	4 30	1 35	6 0	1 26	8 24	2 44	18 36	0 39	S 14
S 15	18 22	0 10	3 11	25 10	2 37	18 59	0 22	4 16	1 36	5 59	1 25	8 22	2 44	18 36	0 39	S 15
M16	18 38	3s45	3 55	25 11	2 33	19 19	0 20	4 3	1 36	5 59	1 25	8 21	2 44	18 35	0 39	M16
T 17	18 52	7 31	4 28	25 10	2 28	19 38	0 18	3 50	1 36	5 58	1 25	8 20	2 44	18 35	0 39	T 17
W18	19 7	10 59	4 50	25 7	2 22	19 56	0 15	3 36	1 37	5 58	1 25	8 18	2 44	18 35	0 39	W18
T 19	19 21	14 2	4 59	25 2	2 14	20 14	0 13	3 23	1 37	5 57	1 24	8 17	2 43	18 34	0 39	T 19
F 20	19 35	16 32	4 55	24 55	2 6	20 31	0 10	3 10	1 38	5 57	1 24	8 16	2 43	18 34	0 39	F 20
S 21	19 49	18 19	4 38	24 46	1 56	20 48	0 8	2 56	1 38	5 56	1 24	8 15	2 43	18 33	0 39	S 21
S 22	20 2	19 18	4 8	24 35	1 44	21 4	0 6	2 43	1 38	5 55	1 24	8 14	2 43	18 33	0 39	S 22
M23	20 15	19 24	3 26	24 21	1 31	21 20	0 3	2 30	1 39	5 54	1 23	8 13	2 43	18 32	0 39	M23
T 24	20 27	18 32	2 33	24 5	1 17	21 35	0 1	2 17	1 39	5 53	1 23	8 11	2 42	18 32	0 39	T 24
W25	20 40	16 45	1 32	23 46	1 1	21 49	0s 2	2 4	1 39	5 52	1 23	8 10	2 42	18 31	0 39	W25
T 26	20 51	14 5	0 25	23 24	0 43	22 3	0 4	1 51	1 40	5 51	1 23	8 9	2 42	18 31	0 39	T 26
F 27	21 3	10 37	0s45	23 0	0 25	22 16	0 6	1 38	1 40	5 49	1 22	8 8	2 42	18 30	0 39	F 27
S 28	21 14	6 30	1 54	22 33	0 5	22 28	0 9	1 25	1 41	5 48	1 22	8 7	2 42	18 30	0 39	S 28
S 29	21 24	1 55	2 59	22 4	0n15	22 40	0 11	1 12	1 41	5 47	1 22	8 6	2 41	18 29	0 39	S 29
M30	21s34	2n53	3s54	21s34	0n36	22s51	0s14	0n59	1n41	5s45	1s22	8n 6	2s41	18s29	0s38	M30

Julian Day Number = 2451118.5, Delta T = 63.40 sec

Ecliptic obliquity = 23°26'14, Nutation = - 0°00'11, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 24°43'26, Lahiri = 23°50'27

ASTRODIENST EPHEMERIS for the year 1998  
geocentric

DECEMBER 1998

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	4 38 36	8♌34'36	1♋19	10°R 7	16♌29	2♊0	18♌41	27°R30	9♌35	0♈5	7♌57	25°R38	26♊2	9♌7	25♌29	T 1
W 2	4 42 32	9°35'24	16°24	8♌44	17°44	2°33	18°45	27°R27	9°37	0°6	7°59	25♊29	25°59	9°14	25°37	W 2
T 3	4 46 29	10°36'12	1♋35	7°22	18°59	3°6	18°48	27°24	9°39	0°8	8°1	25°18	25°56	9°20	25°45	T 3
F 4	4 50 25	11°37'02	16°42	6°5	20°14	3°40	18°52	27°22	9°42	0°9	8°4	25°6	25°53	9°27	25°52	F 4
S 5	4 54 22	12°37'53	1♋33	4°54	21°30	4°13	18°57	27°19	9°44	0°11	8°6	24°56	25°50	9°34	26°0	S 5
S 6	4 58 18	13°38'45	16°2	3°51	22°45	4°46	19°1	27°17	9°46	0°13	8°8	24°49	25°46	9°40	26°8	S 6
M 7	5 2 15	14°39'38	0♊3	2°58	24°0	5°18	19°6	27°14	9°48	0°14	8°11	24°44	25°43	9°47	26°16	M 7
T 8	5 6 12	15°40'32	13°34	2°16	25°16	5°51	19°10	27°12	9°51	0°16	8°13	24°41	25°40	9°54	26°24	T 8
W 9	5 10 8	16°41'28	26°37	1°46	26°31	6°24	19°15	27°9	9°53	0°18	8°15	24°D41	25°37	10°1	26°31	W 9
T 10	5 14 5	17°42'25	9♌15	1°27	27°46	6°56	19°21	27°7	9°56	0°20	8°18	24°41	25°34	10°7	26°39	T 10
F 11	5 18 1	18°43'23	21°34	1°D19	29°2	7°29	19°26	27°5	9°58	0°22	8°20	24°R41	25°30	10°14	26°47	F 11
S 12	5 21 58	19°44'22	3♊39	1°21	0♋17	8°1	19°31	27°3	10°1	0°23	8°22	24°40	25°27	10°21	26°54	S 12
S 13	5 25 54	20°45'22	15°34	1°33	1°32	8°33	19°37	27°1	10°3	0°25	8°25	24°37	25°24	10°27	27°2	S 13
M14	5 29 51	21°46'23	27°24	1°54	2°48	9°6	19°43	27°0	10°6	0°27	8°27	24°31	25°21	10°34	27°9	M14
T 15	5 33 47	22°47'26	9♌14	2°23	4°3	9°38	19°49	26°58	10°8	0°29	8°29	24°23	25°18	10°41	27°17	T 15
W16	5 37 44	23°48'29	21°8	2°59	5°18	10°10	19°55	26°56	10°11	0°31	8°32	24°12	25°15	10°48	27°24	W16
T 17	5 41 41	24°49'33	3♌7	3°42	6°34	10°41	20°2	26°55	10°14	0°33	8°34	24°1	25°11	10°54	27°32	T 17
F 18	5 45 37	25°50'38	15°13	4°30	7°49	11°13	20°8	26°54	10°16	0°35	8°36	23°49	25°8	11°1	27°39	F 18
S 19	5 49 34	26°51'43	27°28	5°23	9°4	11°45	20°15	26°52	10°19	0°37	8°39	23°37	25°5	11°8	27°46	S 19
S 20	5 53 30	27°52'50	9♋53	6°21	10°20	12°16	20°22	26°51	10°22	0°39	8°41	23°28	25°2	11°15	27°54	S 20
M21	5 57 27	28°53'56	22°27	7°23	11°35	12°47	20°29	26°50	10°25	0°41	8°43	23°21	24°59	11°21	28°1	M21
T 22	6 1 23	29°55'03	5♌11	8°28	12°50	13°19	20°36	26°49	10°27	0°43	8°45	23°17	24°56	11°28	28°8	T 22
W23	6 5 20	0♋56'11	18°6	9°36	14°6	13°50	20°43	26°49	10°30	0°45	8°47	23°D15	24°52	11°35	28°15	W23
T 24	6 9 17	1°57'18	1♋14	10°46	15°21	14°21	20°51	26°48	10°33	0°47	8°50	23°15	24°49	11°41	28°23	T 24
F 25	6 13 13	2°58'26	14°37	11°59	16°36	14°51	20°58	26°47	10°36	0°49	8°52	23°16	24°46	11°48	28°30	F 25
S 26	6 17 10	3°59'34	28°15	13°15	17°52	15°22	21°6	26°47	10°39	0°51	8°54	23°R17	24°43	11°55	28°37	S 26
S 27	6 21 6	5°0'42	12°Y10	14°31	19°7	15°53	21°14	26°46	10°42	0°53	8°56	23°17	24°40	12°2	28°44	S 27
M28	6 25 3	6°1'49	26°22	15°50	20°22	16°23	21°22	26°46	10°45	0°55	8°58	23°15	24°36	12°8	28°51	M28
T 29	6 28 59	7°2'57	10♋49	17°10	21°37	16°53	21°31	26°46	10°48	0°57	9°1	23°11	24°33	12°15	28°58	T 29
W30	6 32 56	8°4'05	25°29	18°31	22°53	17°23	21°39	26°D46	10°51	0°59	9°3	23°6	24°30	12°22	29°4	W30
T 31	6 36 52	9♋5'13	10♋14	19♌53	24♋8	17♊53	21♌48	26°Y46	10♌54	1♌1	9♌5	22♊59	24♊27	12♌28	29♌11	T 31

Day	☉	☾		♊		♋		♌		♍		♎		♏		♐		♑		♒		♓	♈	♉	♊	♋	♌
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	decl	decl	decl	decl	lat
T 1	21s44	7n38	4s35	21s 3	0n56	23s 1	0s16	0n46	1n42	5s43	1s21	8n 5	2s41	18s28	0s38	19s50	0n18	10s24	11n22	12n58	12n50	9s52	16s34	2n38			
W 2	21 53	11 59	4 57	20 31	1 15	23 11	0 18	0 33	1 42	5 42	1 21	8 4	2 41	18 28	0 38	19 50	0 18	10 24	11 22	13 2	12 51	9 53	16 35	2 39			
T 3	22 2	15 35	4 59	20 0	1 34	23 20	0 21	0 20	1 43	5 40	1 21	8 3	2 41	18 27	0 38	19 49	0 18	10 25	11 22	13 5	12 52	9 55	16 37	2 39			
F 4	22 11	18 7	4 40	19 31	1 50	23 28	0 23	0 7	1 43	5 38	1 21	8 2	2 40	18 26	0 38	19 49	0 18	10 25	11 22	13 9	12 54	9 57	16 39	2 39			
S 5	22 19	19 23	4 2	19 4	2 5	23 35	0 26	0s 5	1 43	5 36	1 20	8 2	2 40	18 26	0 38	19 49	0 18	10 26	11 22	13 12	12 55	9 59	16 40	2 40			
S 6	22 26	19 20	3 10	18 40	2 17	23 42	0 28	0 18	1 44	5 34	1 20	8 1	2 40	18 25	0 38	19 48	0 18	10 26	11 22	13 15	12 56	10 1	16 42	2 40			
M 7	22 33	18 4	2 7	18 20	2 27	23 48	0 30	0 31	1 44	5 32	1 20	8 0	2 40	18 24	0 38	19 48	0 18	10 26	11 22	13 17	12 57	10 3	16 43	2 40			
T 8	22 40	15 49	0 59	18 4	2 35	23 54	0 33	0 43	1 45	5 30	1 20	8 0	2 39	18 24	0 38	19 48	0 18	10 27	11 22	13 17	12 58	10 5	16 44	2 41			
W 9	22 46	12 48	0n10	17 53	2 41	23 58	0 35	0 56	1 45	5 28	1 19	7 59	2 39	18 23	0 38	19 47	0 18	10 27	11 22	13 18	12 59	10 6	16 46	2 41			
T 10	22 52	9 17	1 17	17 45	2 45	24 2	0 37	1 8	1 45	5 26	1 19	7 59	2 39	18 22	0 38	19 47	0 18	10 27	11 22	13 18	13 0	10 8	16 47	2 41			
F 11	22 58	5 27	2 18	17 42	2 47	24 5	0 39	1 21	1 46	5 24	1 19	7 58	2 39	18 22	0 38	19 46	0 18	10 28	11 22	13 17	13 1	10 10	16 49	2 42			
S 12	23 2	1 29	3 12	17 42	2 47	24 8	0 42	1 33	1 46	5 21	1 19	7 58	2 38	18 21	0 38	19 46	0 18	10 28	11 22	13 18	13 2	10 12	16 50	2 42			
S 13	23 7	2s29	3 56	17 46	2 46	24 9	0 44	1 46	1 47	5 19	1 18	7 57	2 38	18 20	0 38	19 46	0 18	10 29	11 22	13 19	13 3	10 14	16 52	2 42			
M14	23 11	6 20	4 31	17 52	2 43	24 10	0 46	1 58	1 47	5 16	1 18	7 57	2 38	18 20	0 38	19 45	0 18	10 29	11 22	13 21	13 4	10 16	16 53	2 43			
T 15	23 14	9 56	4 53	18 1	2 40	24 11	0 48	2 10	1 47	5 14	1 18	7 56	2 38	18 19	0 38	19 45	0 18	10 29	11 22	13 24	13 5	10 17	16 54	2 43			
W16	23 18	13 10	5 3	18 13	2 36	24 10	0 50	2 22	1 48	5 11	1 18	7 56	2 37	18 18	0 38	19 45	0 18	10 29	11 22	13 27	13 6	10 19	16 56	2 43			
T 17	23 20	15 52	5 0	18 26	2 30	24 9	0 52	2 34	1 48	5 8	1 18	7 56	2 37	18 17	0 38	19 44	0 18	10 30	11 22	13 31	13 7	10 21	16 57	2 44			
F 18	23 22	17 56	4 43	18 40	2 24	24 7	0 54	2 46	1 49	5 6	1 17	7 56	2 37	18 17	0 38	19 44	0 18	10 30	11 22	13 35	13 8	10 23	16 58	2 44			
S 19	23 24	19 12	4 13	18 56	2 18	24 4	0 56	2 58	1 49	5 3	1 17	7 55	2 36	18 16	0 38	19 43	0 18	10 30	11 22	13 39	13 10	10 25	16 59	2 44			
S 20	23 25	19 34	3 31	19 13	2 11	24 0	0 58	3 10	1 49	5 0	1 17	7 55	2 36	18 15	0 38	19 43	0 18	10 31	11 22	13 42	13 11	10 27	17 1	2 45			
M21	23 26	18 59	2 37	19 30	2 4	23 56	1 0	3 22	1 50	4 57	1 17	7 55	2 36	18 14	0 38	19 43	0 18	10 31	11 22	13 44	13 12	10 28	17 2	2 45			
T 22	23 26	17 26	1 35	19 48	1 56	23 51	1 2	3 34	1 50	4 54	1 16	7 55	2 36	18 14	0 38	19 42	0 18	10 31	11 22	13 45	13 13	10 30	17 3	2 46			
W23	23 26	14 58	0 28	20 6	1 49	23 45	1 4	3 45	1 50	4 51	1 16	7 55	2 35	18 13	0 38	19 42	0 18	10 31	11 22	13 46	13 14	10 32	17 4	2 46			
T 24	23 25	11 42	0s43	20 24	1 41	23 39	1 6	3 57	1 51	4 48	1 16	7 55	2 35	18 12	0 38	19 41	0 18	10 32	11 22	13 46	13 15	10 34	17 6	2 46			
F 25	23 24	7 47	1 52	20 42	1 33	23 31	1 8	4 9	1 51	4 44	1 16	7 55	2 35	18 11	0 38	19 41	0 18	10 32	11 22	13 46	13 16	10 36	17 7	2 47			
S 26	23 23	3 24	2 57	20 59	1 25	23 23	1 9	4 20	1 52	4 41	1 16	7 55	2 34	18 10	0 38	19 40	0 18	10 32	11 22	13 45	13 17	10 38	17 8	2 47			
S 27	23 21	1n14	3 53	21 16	1 16	23 15	1 11	4 31	1 52	4 38	1 15	7 55	2 34	18 10	0 38	19 40	0 18	10 32	11 22	13 45	13 18	10 39	17 9	2 48			
M28	23 18	5 54	4 35	21 33	1 8	23 5	1 13	4 43	1 52	4 34	1 15	7 56	2 34	18 9	0 38	19 40	0 18	10 33	11 23	13 46	13 19	10 41	17 10	2 48			
T 29	23 15	10 18	5 1	21 49	1 0	22 55	1 14	4 54	1 53	4 31	1 15	7 56	2 34	18 8	0 38	19 39	0 18	10 33	11 23	13 47	13 20	10 43	17 11	2 48			
W30	23 12	14 8	5 8	22 5	0 52	22 44	1 16	5 5	1 53	4 27	1 15	7 56	2 33	18 7	0 38	19 39	0 18	10 33	11 23	13 49	13 21	10 45	17 12	2 49			
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