



Astrodienst Ephemeris Tables for the year 1990

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 1990
geocentric

JANUARY 1990

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	6 41 33	10°18'16	26°33	25°R48	6°R17	9°39	5°R13	15°36	5°345	12°3 1	17°M 5	16°52	18°28	6°M24	13°R51	M 1
T 2	6 45 29	11°19'26	10°H 2	25°30	6°9	10°21	5°5	15°43	5°49	12° 3	17° 6	16°53	18°25	6°31	13°47	T 2
W 3	6 49 26	12°20'36	23°42	25° 0	5°59	11° 3	4°57	15°50	5°53	12° 6	17° 8	16°55	18°21	6°38	13°43	W 3
T 4	6 53 22	13°21'46	7°Y35	24°19	5°46	11°46	4°49	15°57	5°56	12° 8	17°10	16°R56	18°18	6°45	13°39	T 4
F 5	6 57 19	14°22'55	21°40	23°27	5°31	12°28	4°41	16° 4	6° 0	12°10	17°11	16°56	18°15	6°51	13°34	F 5
S 6	7 1 16	15°24'04	5°B55	22°25	5°13	13°10	4°33	16°11	6° 3	12°13	17°13	16°54	18°12	6°58	13°30	S 6
S 7	7 5 12	16°25'13	20°20	21°15	4°53	13°53	4°25	16°19	6° 7	12°15	17°14	16°51	18° 9	7° 5	13°26	S 7
M 8	7 9 9	17°26'21	4°II49	19°59	4°30	14°35	4°17	16°26	6°10	12°17	17°16	16°47	18° 5	7°12	13°22	M 8
T 9	7 13 5	18°27'29	19°17	18°40	4° 5	15°18	4°10	16°33	6°14	12°19	17°17	16°43	18° 2	7°18	13°18	T 9
W10	7 17 2	19°28'36	3°B39	17°19	3°39	16° 0	4° 2	16°40	6°18	12°22	17°18	16°38	17°59	7°25	13°14	W10
T 11	7 20 58	20°29'43	17°49	16° 1	3°10	16°43	3°55	16°47	6°21	12°24	17°20	16°35	17°56	7°32	13°10	T 11
F 12	7 24 55	21°30'50	1°A42	14°46	2°39	17°25	3°47	16°54	6°25	12°26	17°21	16°33	17°53	7°38	13° 6	F 12
S 13	7 28 52	22°31'57	15°14	13°37	2° 7	18° 8	3°40	17° 1	6°28	12°28	17°23	16°D32	17°50	7°45	13° 2	S 13
S 14	7 32 48	23°33'03	28°24	12°36	1°34	18°51	3°33	17° 8	6°32	12°31	17°24	16°33	17°46	7°52	12°58	S 14
M15	7 36 45	24°34'09	11°M13	11°43	0°59	19°33	3°25	17°15	6°35	12°33	17°25	16°34	17°43	7°59	12°54	M15
T 16	7 40 41	25°35'15	23°43	11° 0	0°23	20°16	3°18	17°22	6°39	12°35	17°26	16°36	17°40	8° 5	12°50	T 16
W17	7 44 38	26°36'20	5°A56	10°27	29°347	20°59	3°12	17°29	6°42	12°37	17°27	16°37	17°37	8°12	12°46	W17
T 18	7 48 34	27°37'25	17°58	10° 3	29°10	21°41	3° 5	17°37	6°45	12°39	17°29	16°38	17°34	8°19	12°42	T 18
F 19	7 52 31	28°38'30	29°52	9°48	28°33	22°24	2°58	17°44	6°49	12°42	17°30	16°R39	17°31	8°25	12°38	F 19
S 20	7 56 27	29°39'35	11°M44	9°D42	27°56	23° 7	2°52	17°51	6°52	12°44	17°31	16°38	17°27	8°32	12°34	S 20
S 21	8 0 24	0°40'39	23°39	9°45	27°20	23°50	2°45	17°58	6°56	12°46	17°32	16°37	17°24	8°39	12°30	S 21
M22	8 4 20	1°41'43	5°A40	9°55	26°44	24°33	2°39	18° 5	6°59	12°48	17°33	16°35	17°21	8°46	12°26	M22
T 23	8 8 17	2°42'46	17°52	10°12	26° 9	25°16	2°33	18°12	7° 2	12°50	17°34	16°33	17°18	8°52	12°22	T 23
W24	8 12 14	3°43'49	0°B17	10°36	25°35	25°59	2°27	18°19	7° 6	12°53	17°35	16°31	17°15	8°59	12°19	W24
T 25	8 16 10	4°44'52	12°58	11° 6	25° 2	26°42	2°21	18°25	7° 9	12°55	17°36	16°29	17°11	9° 6	12°15	T 25
F 26	8 20 7	5°45'53	25°56	11°42	24°30	27°25	2°15	18°32	7°12	12°57	17°37	16°28	17° 8	9°13	12°11	F 26
S 27	8 24 3	6°46'54	9°A11	12°22	24° 1	28° 8	2°10	18°39	7°16	12°59	17°38	16°27	17° 5	9°19	12° 8	S 27
S 28	8 28 0	7°47'54	22°41	13° 7	23°33	28°51	2° 4	18°46	7°19	13° 1	17°38	16°D27	17° 2	9°26	12° 4	S 28
M29	8 31 56	8°48'53	6°H24	13°56	23° 7	29°34	1°59	18°53	7°22	13° 3	17°39	16°28	16°59	9°33	12° 1	M29
T 30	8 35 53	9°49'50	20°19	14°49	22°43	0°B18	1°54	19° 0	7°25	13° 5	17°40	16°28	16°56	9°39	11°57	T 30
W31	8 39 50	10°50'47	4°Y22	15°345	22°322	1°B 1	1°549	19°3 7	7°328	13°3 7	17°M41	16°A29	16°52	9°M46	11°B54	W31

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	23s 3	11s50	0n53	20s31	0n28	16s59	1n47	21s56	0s 2	23n13	0s 7	22s14	0n18	23s35	0s16	22s 3	0n51	2s15	15n17	15s47	15s18	18s24	15n27	7s18	
T 2	22 58	5 55	2 3	20 16	0 47	16 47	2 1	22 2	0 2	23 14	0 7	22 14	0 18	23 35	0 16	22 3	0 51	2 15	15 17	15 47	15 19	18 27	15 28	7 18	
W 3	22 52	0n22	3 7	20 2	1 7	16 34	2 16	22 9	0 3	23 14	0 7	22 13	0 17	23 35	0 16	22 3	0 51	2 15	15 18	15 46	15 20	18 29	15 28	7 18	
T 4	22 46	6 43	4 2	19 51	1 26	16 23	2 32	22 16	0 4	23 15	0 7	22 12	0 17	23 35	0 16	22 3	0 51	2 15	15 18	15 46	15 21	18 31	15 28	7 19	
F 5	22 40	12 48	4 43	19 41	1 45	16 12	2 47	22 22	0 4	23 15	0 7	22 11	0 17	23 35	0 16	22 3	0 51	2 15	15 18	15 46	15 22	18 34	15 29	7 19	
S 6	22 33	18 19	5 7	19 33	2 4	16 1	3 2	22 28	0 5	23 15	0 6	22 10	0 17	23 34	0 16	22 2	0 51	2 15	15 19	15 46	15 23	18 36	15 29	7 19	
S 7	22 26	22 50	5 12	19 26	2 21	15 51	3 18	22 34	0 6	23 16	0 6	22 10	0 17	23 34	0 16	22 2	0 51	2 15	15 19	15 47	15 24	18 39	15 29	7 19	
M 8	22 18	25 58	4 57	19 22	2 37	15 41	3 34	22 39	0 6	23 16	0 6	22 9	0 17	23 34	0 16	22 2	0 51	2 15	15 20	15 48	15 25	18 41	15 30	7 19	
T 9	22 10	27 23	4 24	19 20	2 51	15 31	3 49	22 45	0 7	23 17	0 6	22 8	0 17	23 34	0 16	22 2	0 51	2 15	15 20	15 50	15 26	18 43	15 30	7 19	
W10	22 2	26 57	3 34	19 18	3 2	15 23	4 4	22 50	0 8	23 17	0 6	22 7	0 17	23 34	0 16	22 2	0 51	2 15	15 20	15 51	15 27	18 46	15 30	7 19	
T 11	21 53	24 45	2 31	19 19	3 11	15 14	4 20	22 55	0 8	23 17	0 6	22 7	0 17	23 34	0 16	22 1	0 51	2 15	15 21	15 52	15 28	18 48	15 31	7 19	
F 12	21 43	21 6	1 21	19 21	3 18	15 7	4 35	23 0	0 9	23 18	0 5	22 6	0 17	23 34	0 16	22 1	0 51	2 15	15 21	15 53	15 29	18 51	15 31	7 19	
S 13	21 34	16 23	0 7	19 24	3 22	14 59	4 49	23 4	0 10	23 18	0 5	22 5	0 17	23 33	0 16	22 1	0 51	2 15	15 22	15 53	15 29	18 53	15 32	7 19	
S 14	21 23	11 1	1s 5	19 28	3 24	14 53	5 4	23 9	0 10	23 19	0 5	22 4	0 17	23 33	0 16	22 1	0 51	2 15	15 22	15 53	15 30	18 55	15 32	7 19	
M15	21 13	5 20	2 12	19 33	3 23	14 46	5 18	23 13	0 11	23 19	0 5	22 3	0 17	23 33	0 16	22 0	0 51	2 15	15 23	15 52	15 31	18 58	15 33	7 18	
T 16	21 2	0s25	3 11	19 39	3 21	14 41	5 31	23 17	0 12	23 19	0 5	22 2	0 17	23 33	0 16	22 0	0 51	2 15	15 23	15 52	15 32	19 0	15 33	7 18	
W17	20 50	6 1	3 59	19 46	3 16	14 36	5 44	23 21	0 13	23 19	0 5	22 2	0 17	23 33	0 16	22 0	0 51	2 15	15 23	15 51	15 33	19 2	15 33	7 18	
T 18	20 38	11 19	4 37	19 54	3 11	14 31	5 56	23 24	0 13	23 20	0 5	22 1	0 16	23 33	0 16	22 0	0 51	2 14	15 24	15 51	15 34	19 5	15 34	7 18	
F 19	20 26	16 8	5 2	20 2	3 4	14 27	6 8	23 27	0 14	23 20	0 4	22 0	0 16	23 32	0 16	22 0	0 51	2 14	15 24	15 51	15 35	19 7	15 34	7 18	
S 20	20 13	20 20	5 14	20 10	2 56	14 24	6 18	23 31	0 15	23 20	0 4	21 59	0 16	23 32	0 16	21 59	0 51	2 14	15 25	15 51	15 36	19 9	15 35	7 18	
S 21	20 0	23 44	5 13	20 18	2 47	14 21	6 28	23 33	0 15	23 21	0 4	21 58	0 16	23 32	0 16	21 59	0 51	2 14	15 25	15 52	15 37	19 12	15 35	7 18	
M22	19 47	26 9	4 58	20 27	2 38	14 18	6 38	23 36	0 16	23 21	0 4	21 57	0 16	23 32	0 16	21 59	0 51	2 14	15 26	15 52	15 38	19 14	15 36	7 18	
T 23	19 33	27 22	4 30	20 35	2 28	14 16	6 46	23 38	0 17	23 21	0 4	21 56	0 16	23 32	0 16	21 59	0 51	2 14	15 26	15 53	15 39	19 16	15 36	7 17	
W24	19 19	27 15	3 48	20 44	2 18	14 15	6 54	23 40	0 18	23 21	0 4	21 56	0 16	23 32	0 16	21 59	0 51	2 13	15 27	15 53	15 40	19 19	15 37	7 17	
T 25	19 5	25 43	2 55	20 51	2 8	14 14	7 0	23 42	0 18	23 22	0 4	21 55	0 16	23 31	0 16	21 58	0 51	2 13	15 27	15 54	15 41	19 21	15 37	7 17	
F 26	18 50	22 47	1 51	20 59	1 57	14 13	7 6	23 44	0 19	23 22	0 3	21 54	0 16	23 31	0 17	21 58	0 51	2 13	15 27	15 54	15 42	19 23	15 38	7 17	
S 27	18 35	18 36	0 40	21 6	1 47	14 13	7 11	23 46	0 20	23 22	0 3	21 53	0 16	23 31	0 17	21 58	0 51	2 13	15 28	15 54	15 43	19 26	15 38	7 17	
S 28	18 19	13 25	0n34	21 12	1 36	14 14	7 16	23 47	0 21	23 22	0 3	21 52	0 16	23 31	0 17	21 58	0 51	2 12	15 28	15 54	15 44	19 28	15 39	7 16	
M29	18 3	7 29	1 48	21 18	1 26	14 15	7 19	23 48	0 21	23 23	0 3	21 51	0 16	23 31	0 17	21 58	0 51	2 12	15 29	15 54	15 45	19 30	15 40	7 16	
T 30	17 47	1 8	2 57	21 23	1 15	14 16	7 22	23 49	0 22	23 23	0 3	21 50	0 16	23 31	0 17	21 57	0 51	2 12	15 29	15 54	15 46	19 33	15 40	7 16	
W31	17s31	5n20	3n55	21s26	1n 5	14s17	7n24	23s49	0s23	23n23	0s 3	21s49	0n16	23s30	0s17	21s57	0n51	2s12	15n30	15s54	15s47	19s35	15n41	7s16	

ASTRODIENST EPHEMERIS for the year 1990

geocentric

FEBRUARY 1990

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	8 43 46	11°51'42	18°30'	16°34'	22°R 2	1°34'	1°R44	19°313	7°32	13°9	17°M41	16°29	16°49	9°M53	11°R50	T 1
F 2	8 47 43	12°52'36	2°41	17°46	21°346	2°27	1°340	19°20	7°35	13°12	17°42	16°29	16°46	10°0	11°347	F 2
S 3	8 51 39	13°53'29	16°53	18°50	21°31	3°11	1°36	19°27	7°38	13°14	17°42	16°R30	16°43	10°6	11°44	S 3
S 4	8 55 36	14°54'20	1°II 3	19°57	21°19	3°54	1°31	19°33	7°41	13°16	17°43	16°29	16°40	10°13	11°40	S 4
M 5	8 59 32	15°55'10	15°10	21°6	21°9	4°38	1°27	19°40	7°44	13°18	17°44	16°29	16°37	10°20	11°37	M 5
T 6	9 3 29	16°55'59	29°10	22°17	21°2	5°21	1°24	19°47	7°47	13°20	17°44	16°D29	16°33	10°26	11°34	T 6
W 7	9 7 25	17°56'46	13°1	23°29	20°58	6°4	1°20	19°53	7°50	13°22	17°45	16°29	16°30	10°33	11°31	W 7
T 8	9 11 22	18°57'31	26°42	24°44	20°D55	6°48	1°17	20°0	7°53	13°23	17°45	16°30	16°27	10°40	11°28	T 8
F 9	9 15 19	19°58'16	10°9	26°0	20°56	7°31	1°13	20°6	7°56	13°25	17°45	16°R30	16°24	10°47	11°25	F 9
S 10	9 19 15	20°58'58	23°22	27°17	20°58	8°15	1°10	20°13	7°59	13°27	17°46	16°30	16°21	10°53	11°23	S 10
S 11	9 23 12	21°59'40	6°M20	28°36	21°3	8°59	1°8	20°19	8°1	13°29	17°46	16°29	16°17	11°0	11°20	S 11
M12	9 27 8	23°0'20	19°1	29°56	21°11	9°42	1°5	20°26	8°4	13°31	17°46	16°29	16°14	11°7	11°17	M12
T 13	9 31 5	24°0'59	1°A28	1°17	21°20	10°26	1°2	20°32	8°7	13°33	17°47	16°28	16°11	11°14	11°14	T 13
W14	9 35 1	25°1'37	13°41	2°40	21°32	11°9	1°0	20°38	8°10	13°35	17°47	16°27	16°8	11°20	11°12	W14
T 15	9 38 58	26°2'13	25°44	4°4	21°46	11°53	0°58	20°45	8°13	13°37	17°47	16°26	16°5	11°27	11°9	T 15
F 16	9 42 54	27°2'49	7°M39	5°29	22°2	12°37	0°56	20°51	8°15	13°38	17°47	16°24	16°2	11°34	11°7	F 16
S 17	9 46 51	28°3'23	19°32	6°55	22°21	13°21	0°55	20°57	8°18	13°40	17°47	16°24	15°58	11°40	11°5	S 17
S 18	9 50 48	29°3'56	1°M26	8°22	22°41	14°4	0°53	21°3	8°20	13°42	17°47	16°D24	15°55	11°47	11°3	S 18
M19	9 54 44	0°H 4'27	13°26	9°50	23°3	14°48	0°52	21°9	8°23	13°44	17°47	16°24	15°52	11°54	11°0	M19
T 20	9 58 41	1°4'58	25°38	11°20	23°26	15°32	0°51	21°15	8°26	13°45	17°47	16°25	15°49	12°1	10°58	T 20
W21	10 2 37	2°5'27	8°3	12°50	23°52	16°16	0°50	21°21	8°28	13°47	17°47	16°26	15°46	12°7	10°56	W21
T 22	10 6 34	3°5'54	20°49	14°21	24°19	17°0	0°49	21°27	8°31	13°49	17°47	16°28	15°42	12°14	10°54	T 22
F 23	10 10 30	4°6'21	3°56	15°53	24°48	17°44	0°49	21°33	8°33	13°50	17°47	16°29	15°39	12°21	10°53	F 23
S 24	10 14 27	5°6'46	17°25	17°27	25°18	18°28	0°49	21°39	8°35	13°52	17°47	16°R29	15°36	12°28	10°51	S 24
S 25	10 18 23	6°7'09	1°H16	19°1	25°50	19°12	0°D48	21°45	8°38	13°53	17°47	16°29	15°33	12°34	10°49	S 25
M26	10 22 20	7°7'30	15°26	20°36	26°24	19°56	0°49	21°50	8°40	13°55	17°46	16°27	15°30	12°41	10°48	M26
T 27	10 26 17	8°7'50	29°50	22°12	26°58	20°40	0°49	21°56	8°42	13°56	17°46	16°24	15°27	12°48	10°46	T 27
W28	10 30 13	9°H 8'07	14°Y23	23°50	27°34	21°34	0°50	22°3	8°44	13°58	17°M46	16°21	15°23	12°M54	10°545	W28

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	17s14	11n34	4n40	21s30	0n55	14s19	7n25	23s49	0s24	23n23	0s3	21s48	0n16	23s30	0s17	21s57	0n51	2s11	15n30	15s54	15s48	19s37	15n41	7s15			
F 2	16 57	17 13	5 8	21 32	0 44	14 21	7 25	23 49	0 24	23 24	0 2	21 48	0 15	23 30	0 17	21 57	0 51	2 11	15 31	15 54	15 49	19 39	15 42	7 15			
S 3	16 40	21 57	5 17	21 33	0 35	14 24	7 25	23 49	0 25	23 24	0 2	21 47	0 15	23 30	0 17	21 57	0 51	2 11	15 31	15 54	15 50	19 42	15 42	7 15			
S 4	16 22	25 23	5 7	21 33	0 25	14 27	7 24	23 49	0 26	23 24	0 2	21 46	0 15	23 30	0 17	21 56	0 51	2 10	15 32	15 54	15 51	19 44	15 43	7 14			
M 5	16 4	27 14	4 38	21 32	0 16	14 29	7 22	23 48	0 27	23 24	0 2	21 45	0 15	23 30	0 17	21 56	0 51	2 10	15 32	15 54	15 52	19 46	15 44	7 14			
T 6	15 46	27 20	3 53	21 30	0 6	14 33	7 20	23 47	0 27	23 24	0 2	21 44	0 15	23 29	0 17	21 56	0 51	2 10	15 33	15 54	15 53	19 48	15 44	7 14			
W 7	15 27	25 43	2 55	21 27	0s3	14 36	7 18	23 46	0 28	23 24	0 2	21 43	0 15	23 29	0 17	21 56	0 51	2 9	15 33	15 54	15 54	19 51	15 45	7 13			
T 8	15 9	22 35	1 48	21 22	0 11	14 39	7 14	23 45	0 29	23 25	0 2	21 42	0 15	23 29	0 17	21 56	0 51	2 9	15 34	15 54	15 55	19 53	15 45	7 13			
F 9	14 50	18 16	0 35	21 17	0 20	14 43	7 11	23 43	0 30	23 25	0 1	21 41	0 15	23 29	0 17	21 55	0 51	2 9	15 34	15 54	15 55	19 55	15 46	7 13			
S 10	14 30	13 8	0s38	21 10	0 28	14 46	7 7	23 41	0 30	23 25	0 1	21 40	0 15	23 29	0 17	21 55	0 51	2 8	15 35	15 54	15 56	19 57	15 47	7 12			
S 11	14 11	7 31	1 48	21 2	0 36	14 50	7 2	23 39	0 31	23 25	0 1	21 40	0 15	23 29	0 17	21 55	0 51	2 8	15 35	15 54	15 57	20 0	15 47	7 12			
M12	13 51	1 44	2 51	20 53	0 44	14 54	6 57	23 37	0 32	23 25	0 1	21 39	0 15	23 29	0 17	21 55	0 51	2 8	15 36	15 54	15 58	20 2	15 48	7 11			
T 13	13 31	4s1	3 44	20 42	0 51	14 57	6 52	23 35	0 33	23 25	0 1	21 38	0 15	23 28	0 17	21 55	0 51	2 7	15 36	15 54	15 59	20 4	15 48	7 11			
W14	13 11	9 29	4 26	20 31	0 58	15 1	6 47	23 32	0 34	23 26	0 1	21 37	0 15	23 28	0 17	21 54	0 51	2 7	15 37	15 55	16 0	20 6	15 49	7 11			
T 15	12 50	14 32	4 56	20 18	1 5	15 5	6 41	23 29	0 34	23 26	0 1	21 36	0 15	23 28	0 17	21 54	0 51	2 6	15 37	15 55	16 1	20 8	15 50	7 10			
F 16	12 30	18 59	5 13	20 3	1 11	15 8	6 35	23 26	0 35	23 26	0 1	21 35	0 15	23 28	0 17	21 54	0 51	2 6	15 38	15 55	16 2	20 11	15 50	7 10			
S 17	12 9	22 41	5 16	19 48	1 18	15 11	6 29	23 22	0 36	23 26	0 0	21 34	0 15	23 28	0 17	21 54	0 51	2 5	15 38	15 55	16 3	20 13	15 51	7 9			
S 18	11 48	25 26	5 6	19 31	1 23	15 15	6 23	23 18	0 37	23 26	0 0	21 33	0 15	23 28	0 17	21 54	0 51	2 5	15 39	15 56	16 4	20 15	15 51	7 9			
M19	11 27	27 5	4 42	19 13	1 29	15 18	6 16	23 14	0 37	23 26	0 0	21 32	0 14	23 28	0 17	21 53	0 51	2 5	15 39	15 55	16 5	20 17	15 52	7 8			
T 20	11 5	27 27	4 5	18 54	1 34	15 20	6 9	23 10	0 38	23 26	0n0	21 32	0 14	23 27	0 17	21 53	0 51	2 4	15 40	15 55	16 6	20 19	15 53	7 8			
W21	10 44	26 28	3 17	18 33	1 39	15 23	6 2	23 6	0 39	23 27	0 0	21 31	0 14	23 27	0 17	21 53	0 51	2 4	15 40	15 55	16 7	20 21	15 53	7 8			
T 22	10 22	24 5	2 17	18 11	1 44	15 25	5 55	23 1	0 40	23 27	0 0	21 30	0 14	23 27	0 17	21 53	0 51	2 3	15 40	15 54	16 8	20 24	15 54	7 7			
F 23	10 0	20 23	1 9	17 48	1 48	15 27	5 48	22 56	0 41	23 27	0 0	21 29	0 14	23 27	0 17	21 53	0 51	2 3	15 41	15 54	16 9	20 26	15 55	7 7			
S 24	9 38	15 32	0n5	17 23	1 52	15 29	5 41	22 51	0 41	23 27	0 1	21 28	0 14	23 27	0 17	21 53	0 51	2 2	15 41	15 54	16 10	20 28	15 55	7 6			
S 25	9 16	9 46	1 21	16 57	1 55	15 31	5 34	22 46	0 42	23 27	0 1	21 27	0 14	23 27	0 17	21 52	0 51	2 2	15 42	15 54	16 11	20 30	15 56	7 6			
M26	8 54	3 24	2 33	16 30	1 59	15 32	5 26	22 40	0 43	23 27	0 1	21 26	0 14	23 27	0 17	21 52	0 51	2 1	15 42	15 55	16 12	20 32	15 56	7 5			
T 27	8 31	3n15	3 36	16 2	2 1	15 33	5 19	22 35	0 44	23 27	0 1	21 26	0 14	23 26	0 17	21 52	0 51	2 1	15 43	15 55	16 12	20 34	15 57	7 5			
W28	8s9	9n46	4n27	15s32	2s4	15s34	5n11	22s29	0s45	23n27	0n1	21s25	0n14	23s26	0s17	21s52	0n51	2s0	15n43	15s56	16s13	20s36	15n58	7s4			

Julian Day Number = 2447923.5, Delta T = 56.91 sec

Ecliptic obliquity = 23°26'33", Nutation = 0°00'13", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 24°36'06", Lahiri = 23°43'07"

ASTRODIENST EPHEMERIS for the year 1990
geocentric

MARCH 1990

00:00 UT

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

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
T 1	7s46	15n46	5n 0	15s 1	2s 6	15s34	5n 4	22s22	0s45	23n28	0n 1	21s24	0n14	23s26	0s17	21s52
F 2	7 23	20 52	5 13	14 28	2 8	15 34	4 56	22 16	0 46	23 28	0 1	21 23	0 14	23 26	0 17	21 52
S 3	7 0	24 40	5 7	13 55	2 9	15 33	4 48	22 9	0 47	23 28	0 1	21 22	0 14	23 26	0 17	21 51
S 4	6 37	26 54	4 43	13 20	2 10	15 32	4 41	22 2	0 48	23 28	0 2	21 21	0 14	23 26	0 17	21 51
M 5	6 14	27 24	4 2	12 43	2 10	15 31	4 33	21 55	0 49	23 28	0 2	21 21	0 14	23 26	0 17	21 51
T 6	5 51	26 12	3 7	12 6	2 10	15 30	4 25	21 48	0 50	23 28	0 2	21 20	0 14	23 26	0 17	21 51
W 7	5 28	23 29	2 3	11 27	2 10	15 27	4 18	21 40	0 50	23 28	0 2	21 19	0 14	23 26	0 17	21 51
T 8	5 4	19 33	0 54	10 47	2 9	15 25	4 10	21 32	0 51	23 28	0 2	21 18	0 13	23 25	0 17	21 51
F 9	4 41	14 44	0s17	10 5	2 7	15 22	4 2	21 24	0 52	23 28	0 2	21 17	0 13	23 25	0 17	21 50
S 10	4 18	9 20	1 26	9 23	2 5	15 19	3 55	21 16	0 53	23 28	0 2	21 17	0 13	23 25	0 17	21 50
S 11	3 54	3 39	2 30	8 39	2 3	15 15	3 47	21 8	0 54	23 29	0 2	21 16	0 13	23 25	0 17	21 50
M 12	3 31	2s 5	3 25	7 54	2 0	15 11	3 39	20 59	0 54	23 29	0 2	21 15	0 13	23 25	0 17	21 50
T 13	3 7	7 39	4 10	7 8	1 57	15 6	3 32	20 50	0 55	23 29	0 3	21 14	0 13	23 25	0 17	21 50
W 14	2 43	12 51	4 43	6 20	1 53	15 1	3 24	20 41	0 56	23 29	0 3	21 14	0 13	23 25	0 17	21 50
T 15	2 20	17 31	5 3	5 31	1 49	14 55	3 17	20 32	0 57	23 29	0 3	21 13	0 13	23 25	0 17	21 50
F 16	1 56	21 28	5 10	4 42	1 44	14 49	3 9	20 23	0 58	23 29	0 3	21 12	0 13	23 25	0 17	21 50
S 17	1 32	24 32	5 3	3 51	1 38	14 42	3 2	20 13	0 59	23 29	0 3	21 12	0 13	23 25	0 17	21 49
S 18	1 9	26 32	4 43	2 59	1 32	14 35	2 55	20 3	0 59	23 29	0 3	21 11	0 13	23 25	0 18	21 49
M 19	0 45	27 20	4 11	2 6	1 26	14 28	2 47	19 53	1 0	23 29	0 3	21 10	0 13	23 24	0 18	21 49
T 20	0 21	26 51	3 27	1 12	1 19	14 20	2 40	19 43	1 1	23 29	0 3	21 10	0 13	23 24	0 18	21 49
W 21	0n 3	25 2	2 33	0 18	1 11	14 11	2 33	19 32	1 2	23 29	0 3	21 9	0 13	23 24	0 18	21 49
T 22	0 26	21 54	1 30	0n37	1 3	14 2	2 26	19 22	1 3	23 29	0 4	21 8	0 13	23 24	0 18	21 49
F 23	0 50	17 36	0 21	1 33	0 54	13 53	2 19	19 11	1 3	23 29	0 4	21 8	0 13	23 24	0 18	21 49
S 24	1 14	12 16	0n52	2 30	0 45	13 43	2 12	19 0	1 4	23 29	0 4	21 7	0 13	23 24	0 18	21 49
S 25	1 37	6 10	2 4	3 26	0 36	13 32	2 5	18 49	1 5	23 29	0 4	21 6	0 12	23 24	0 18	21 49
M 26	2 1	0n25	3 10	4 23	0 25	13 21	1 58	18 38	1 6	23 29	0 4	21 6	0 12	23 24	0 18	21 48
T 27	2 24	7 7	4 5	5 20	0 15	13 10	1 51	18 26	1 7	23 29	0 4	21 5	0 12	23 24	0 18	21 48
W 28	2 48	13 31	4 44	6 16	0 4	12 58	1 44	18 14	1 8	23 29	0 4	21 5	0 12	23 24	0 18	21 48
T 29	3 11	19 7	5 4	7 13	0n 7	12 46	1 38	18 3	1 8	23 29	0 4	21 4	0 12	23 24	0 18	21 48
F 30	3 35	23 30	5 2	8 8	0 19	12 33	1 31	17 51	1 9	23 29	0 4	21 4	0 12	23 24	0 18	21 48
S 31	3n58	26n17	4n41	9n 3	0n30	12s20	1n25	17s38	1s10	23n29	0n 4	21s 3	0n12	23s24	0s18	21s48

Julian Day Number = 2447951.5, Delta T = 56.96 sec
Ecliptic obliquity = 23°26'33", Nutation = 0°00'13", out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 24°36'10", Lahiri = 23°43'11"

ASTRODIENST EPHEMERIS for the year 1990

geocentric

APRIL 1990

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	12 36 23	11°0'23"	22°11'28"	23°57'57"	24°33'33"	15°33'07"	2°46'46"	24°32'25"	9°31'31"	14°30'30"	17°R20	14°R48	13°42'42"	16°M30	10°47'47"	S 1
M 2	12 40 19	11°59'36"	6°28'28"	25°50'50"	25°33'33"	15°52'52"	2°52'52"	24°28'28"	9°32'32"	14°31'31"	17°M18	14°D46	13°39'39"	16°36'36"	10°48'48"	M 2
T 3	12 44 16	12°58'46"	20°0'6"	27°40'40"	26°33'33"	16°36'36"	2°59'59"	24°31'31"	9°32'32"	14°31'31"	17°17'17"	14°46'46"	13°35'35"	16°43'43"	10°50'50"	T 3
W 4	12 48 12	13°57'55"	3°02'23"	29°27'27"	27°34'34"	17°21'21"	3°0'0"	24°34'34"	9°33'33"	14°32'32"	17°16'16"	14°47'47"	13°32'32"	16°50'50"	10°52'52"	W 4
T 5	12 52 9	14°57'01"	16°22'22"	1°18'10"	28°35'35"	18°0'6"	3°12'12"	24°37'37"	9°33'33"	14°32'32"	17°15'15"	14°R47	13°29'29"	16°56'56"	10°54'54"	T 5
F 6	12 56 6	15°56'04"	29°0'7"	2°50'50"	29°36'36"	18°51'51"	3°19'19"	24°40'40"	9°34'34"	14°33'33"	17°13'13"	14°46'46"	13°26'26"	17°0'0"	10°55'55"	F 6
S 7	13 0 2	16°55'05"	11°11'38"	4°25'25"	0°18'38"	19°35'35"	3°26'26"	24°42'42"	9°34'34"	14°33'33"	17°12'12"	14°43'43"	13°23'23"	17°10'10"	10°57'57"	S 7
S 8	13 3 59	17°54'04"	24°0'0"	5°56'56"	1°40'40"	20°20'20"	3°34'34"	24°45'45"	9°34'34"	14°33'33"	17°10'10"	14°37'37"	13°19'19"	17°17'17"	11°0'0"	S 8
M 9	13 7 55	18°53'01"	6°14'14"	7°22'22"	2°42'42"	21°0'5'	3°41'41"	24°47'47"	9°35'35"	14°34'34"	17°9'9"	14°29'29"	13°16'16"	17°23'23"	11°2'2"	M 9
T 10	13 11 52	19°51'56"	18°20'20"	8°43'43"	3°45'45"	21°50'50"	3°49'49"	24°50'50"	9°35'35"	14°34'34"	17°8'8"	14°18'18"	13°13'13"	17°30'30"	11°4'4"	T 10
W 11	13 15 48	20°50'49"	0°11'21"	9°59'59"	4°47'47"	22°35'35"	3°56'56"	24°52'52"	9°35'35"	14°34'34"	17°6'6"	14°0'5'	13°10'10"	17°37'37"	11°6'6"	W 11
T 12	13 19 45	21°49'40"	12°17'17"	11°0'9"	5°50'50"	23°20'20"	4°0'4"	24°55'55"	9°35'35"	14°34'34"	17°5'5"	13°53'53"	13°0'7"	17°44'44"	11°9'9"	T 12
F 13	13 23 41	22°48'29"	24°10'10"	12°14'14"	6°54'54"	24°0'4"	4°12'12"	24°57'57"	9°35'35"	14°34'34"	17°3'3"	13°40'40"	13°0'4"	17°50'50"	11°11'11"	F 13
S 14	13 27 38	23°47'16"	6°12'2"	13°12'12"	7°57'57"	24°49'49"	4°20'20"	24°59'59"	9°R35	14°34'34"	17°2'2"	13°30'30"	13°0'0"	17°57'57"	11°14'14"	S 14
S 15	13 31 35	24°46'02"	17°55'55"	14°0'5'	9°0'1"	25°34'34"	4°29'29"	25°0'1"	9°35'35"	14°34'34"	17°0'0"	13°22'22"	12°57'57"	18°0'4"	11°16'16"	S 15
M 16	13 35 31	25°44'45"	29°53'53"	14°52'52"	10°0'5'	26°19'19"	4°37'37"	25°0'3"	9°35'35"	14°34'34"	16°59'59"	13°16'16"	12°54'54"	18°10'10"	11°19'19"	M 16
T 17	13 39 28	26°43'27"	11°11'35"	15°33'33"	11°0'9"	27°0'4"	4°45'45"	25°0'4"	9°35'35"	14°R34	16°57'57"	13°14'14"	12°51'51"	18°17'17"	11°22'22"	T 17
W 18	13 43 24	27°42'08"	24°19'19"	16°0'8"	12°14'14"	27°49'49"	4°54'54"	25°0'6"	9°35'35"	14°34'34"	16°56'56"	13°D13	12°48'48"	18°24'24"	11°25'25"	W 18
T 19	13 47 21	28°40'46"	6°45'57"	16°37'37"	13°18'18"	28°34'34"	5°0'3"	25°0'8"	9°35'35"	14°34'34"	16°54'54"	13°R13	12°45'45"	18°31'31"	11°28'28"	T 19
F 20	13 51 17	29°39'23"	19°58'58"	17°0'0"	14°23'23"	29°19'19"	5°12'12"	25°0'9"	9°34'34"	14°34'34"	16°52'52"	13°13'13"	12°41'41"	18°37'37"	11°31'31"	F 20
S 21	13 55 14	0°13'57"	3°11'27"	17°16'16"	15°28'28"	0°18'3"	5°21'21"	25°11'11"	9°34'34"	14°34'34"	16°51'51"	13°11'11"	12°38'38"	18°44'44"	11°34'34"	S 21
S 22	13 59 10	1°36'32"	17°24'24"	17°27'27"	16°34'34"	0°48'48"	5°30'30"	25°12'12"	9°34'34"	14°34'34"	16°49'49"	13°0'8"	12°35'35"	18°51'51"	11°37'37"	S 22
M 23	14 3 7	2°35'04"	1°15'51"	17°R31	17°39'39"	1°33'33"	5°39'39"	25°13'13"	9°33'33"	14°34'34"	16°48'48"	13°0'2"	12°32'32"	18°57'57"	11°41'41"	M 23
T 24	14 7 4	3°33'34"	16°43'43"	17°30'30"	18°45'45"	2°18'18"	5°48'48"	25°14'14"	9°33'33"	14°34'34"	16°46'46"	12°53'53"	12°29'29"	19°0'4"	11°44'44"	T 24
W 25	14 11 0	4°32'02"	1°18'53"	17°23'23"	19°50'50"	3°0'3"	5°58'58"	25°15'15"	9°32'32"	14°33'33"	16°44'44"	12°42'42"	12°25'25"	19°11'11"	11°47'47"	W 25
T 26	14 14 57	5°30'29"	17°10'10"	17°11'11"	20°56'56"	3°48'48"	6°0'7"	25°16'16"	9°32'32"	14°33'33"	16°43'43"	12°31'31"	12°22'22"	19°18'18"	11°51'51"	T 26
F 27	14 18 53	6°28'54"	2°11'24"	16°54'54"	22°0'2"	4°33'33"	6°17'17"	25°17'17"	9°31'31"	14°33'33"	16°41'41"	12°21'21"	12°19'19"	19°24'24"	11°54'54"	F 27
S 28	14 22 50	7°27'17"	17°24'24"	16°33'33"	23°0'9"	5°18'18"	6°27'27"	25°18'18"	9°30'30"	14°32'32"	16°39'39"	12°13'13"	12°16'16"	19°31'31"	11°58'58"	S 28
S 29	14 26 46	8°25'38"	2°28'1"	16°0'7"	24°15'15"	6°0'2"	6°37'37"	25°19'19"	9°30'30"	14°32'32"	16°38'38"	12°0'7"	12°13'13"	19°38'38"	12°0'2"	S 29
M 30	14 30 43	9°23'57"	16°21'12"	15°18'38"	25°11'22"	6°14'47"	6°46'46"	25°19'19"	9°29'29"	14°31'31"	16°M36	12°33'33"	12°10'10"	19°M45	12°28'28"	M 30

Day	☉	☾	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	4n21	27n16	4n 3	9n57	0n42	12s 7	1n18	17s26	1s11	23n29	0n 5	21s 2	0n12	23s24	0s18	21s48	0n52	1s41	15n56
M 2	4 45	26 27	3 10	10 49	0 54	11 53	1 12	17 13	1 12	23 29	0 5	21 2	0 12	23 24	0 18	21 48	0 52	1 41	15 56
T 3	5 8	24 3	2 8	11 40	1 5	11 38	1 6	17 1	1 12	23 29	0 5	21 1	0 12	23 24	0 18	21 48	0 52	1 40	15 56
W 4	5 31	20 23	1 1	12 29	1 17	11 23	0 59	16 48	1 13	23 29	0 5	21 1	0 12	23 24	0 18	21 48	0 52	1 40	15 56
T 5	5 53	15 48	0s 8	13 16	1 28	11 8	0 53	16 35	1 14	23 29	0 5	21 1	0 12	23 24	0 18	21 48	0 52	1 39	15 57
F 6	6 16	10 36	1 16	14 1	1 39	10 52	0 47	16 22	1 15	23 29	0 5	21 0	0 12	23 24	0 18	21 48	0 52	1 38	15 57
S 7	6 39	5 4	2 18	14 43	1 50	10 36	0 41	16 9	1 16	23 29	0 5	21 0	0 12	23 24	0 18	21 48	0 52	1 38	15 57
S 8	7 1	0s34	3 13	15 23	2 0	10 20	0 36	15 55	1 16	23 29	0 5	20 59	0 12	23 24	0 18	21 47	0 52	1 37	15 57
M 9	7 24	6 7	3 58	16 1	2 10	10 3	0 30	15 42	1 17	23 29	0 5	20 59	0 12	23 24	0 18	21 47	0 52	1 37	15 58
T 10	7 46	11 22	4 32	16 36	2 19	9 46	0 24	15 28	1 18	23 29	0 5	20 58	0 12	23 24	0 18	21 47	0 52	1 36	15 58
W 11	8 8	16 10	4 53	17 8	2 27	9 28	0 19	15 14	1 19	23 29	0 6	20 58	0 12	23 24	0 18	21 47	0 52	1 36	15 58
T 12	8 30	20 18	5 1	17 37	2 34	9 10	0 13	15 0	1 20	23 28	0 6	20 58	0 11	23 24	0 18	21 47	0 52	1 35	15 58
F 13	8 52	23 36	4 57	18 3	2 41	8 51	0 8	14 46	1 20	23 28	0 6	20 57	0 11	23 24	0 18	21 47	0 52	1 34	15 58
S 14	9 14	25 54	4 39	18 27	2 46	8 33	0 3	14 32	1 21	23 28	0 6	20 57	0 11	23 24	0 18	21 47	0 52	1 34	15 59
S 15	9 36	27 2	4 9	18 47	2 51	8 14	0s 2	14 17	1 22	23 28	0 6	20 57	0 11	23 24	0 18	21 47	0 52	1 33	15 59
M 16	9 57	26 55	3 28	19 5	2 54	7 54	0 7	14 3	1 23	23 28	0 6	20 57	0 11	23 24	0 18	21 47	0 52	1 33	15 59
T 17	10 18	25 31	2 37	19 19	2 57	7 34	0 12	13 48	1 24	23 27	0 6	20 56	0 11	23 24	0 18	21 47	0 52	1 32	15 59
W 18	10 39	22 52	1 38	19 30	2 58	7 14	0 17	13 33	1 24	23 27	0 6	20 56	0 11	23 24	0 18	21 47	0 52	1 32	15 59
T 19	11 0	19 4	0 33	19 39	2 58	6 54	0 22	13 18	1 25	23 27	0 6	20 56	0 11	23 24	0 18	21 47	0 52	1 31	15 59
F 20	11 21	14 16	0n36	19 44	2 57	6 33	0 26	13 3	1 26	23 27	0 6	20 56	0 11	23 24	0 18	21 47	0 52	1 31	16 0
S 21	11 42	8 37	1 45	19 46	2 54	6 12	0 31	12 48	1 27	23 27	0 6	20 55	0 11	23 24	0 18	21 47	0 52	1 30	16 0
S 22	12 2	2 22	2 50	19 46	2 50	5 51	0 35	12 33	1 27	23 26	0 7	20 55	0 11	23 24	0 18	21 47	0 52	1 30	16 0
M 23	12 22	4n12	3 47	19 42	2 45	5 29	0 40	12 18	1 28	23 26	0 7	20 55	0 11	23 24	0 18	21 47	0 52	1 29	16 0
T 24	12 42	10 43	4 30	19 36	2 39	5 8	0 44	12 2	1 29	23 26	0 7	20 55	0 11	23 24	0 18	21 47	0 52	1 28	16 0
W 25	13 2	16 44	4 55	19 26	2 31	4 45	0 48	11 47	1 30	23 25	0 7	20 55	0 11	23 24	0 18	21 47	0 52	1 28	16 0
T 26	13 22	21 45	4 59	19 14	2 22	4 23	0 52	11 31	1 30	23 25	0 7	20 55	0 11	23 24	0 18	21 47	0 52	1 27	16 0
F 27	13 41	25 15	4 42	18 59	2 11	4 1	0 56	11 16	1 31	23 25	0 7	20 55	0 11	23 24	0 18	21 47	0 52	1 27	16 0
S 28	14 0	26 56	4 6	18 41	1 59	3 38	0 59	11 0	1 32	23 24	0 7	20 55	0 10	23 25	0 18	21 47	0 52	1 27	16 0
S 29	14 19	26 40	3 14	18 22	1 47	3 15	1 3	10 44	1 33	23 24	0 7	20 54	0 10	23 25	0 19	21 47	0 52	1 26	16 0
M 30	14n38	24n39	2n12	18n 0	1n33	2s52	1s 7	10s28	1s33	23n23	0n 7	20s54	0n10	23s25	0s19	21s47	0n52	1s26	16n 0

Julian Day Number = 2447982.5, Delta T = 57.02 sec
 Ecliptic obliquity = 23°26'33", Nutation = 0°00'12", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°36'15", Lahiri = 23°43'15"

ASTRODIENST EPHEMERIS for the year 1990
geocentric

MAY 1990

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	14 34 39	10♈22'13	29♌55	15°R 5	26♋28	7♋32	6♌57	25♈20	9°R28	14°R31	16°R34	12°R 2	12♋ 6	19♌51	12♌ 9	T 1
W 2	14 38 36	11°20'28	13♌13	14♈30	27°35	8°17	7° 7	25°20	9♈27	14♈31	16♌33	12♋ 2	12° 3	19°58	12°13	W 2
T 3	14 42 33	12°18'40	26° 8	13°54	28°42	9° 2	7°17	25°20	9°26	14°30	16°31	12° 2	12° 0	20° 5	12°17	T 3
F 4	14 46 29	13°16'51	8♌45	13°16	29°49	9°46	7°27	25°20	9°25	14°30	16°29	12° 0	11°57	20°11	12°21	F 4
S 5	14 50 26	14°14'59	21° 7	12°38	0°Y56	10°31	7°38	25°R20	9°24	14°29	16°28	11°56	11°54	20°18	12°26	S 5
S 6	14 54 22	15°13'06	3♌18	12° 0	2° 4	11°16	7°48	25°20	9°23	14°28	16°26	11°50	11°51	20°25	12°30	S 6
M 7	14 58 19	16°11'10	15°22	11°23	3°11	12° 1	7°59	25°20	9°22	14°28	16°24	11°40	11°47	20°32	12°34	M 7
T 8	15 2 15	17° 9'13	27°20	10°48	4°19	12°45	8°10	25°20	9°21	14°27	16°23	11°28	11°44	20°38	12°38	T 8
W 9	15 6 12	18° 7'15	9♌15	10°15	5°26	13°30	8°20	25°20	9°20	14°26	16°21	11°15	11°41	20°45	12°43	W 9
T 10	15 10 8	19° 5'14	21° 8	9°44	6°34	14°15	8°31	25°19	9°19	14°26	16°19	11° 1	11°38	20°52	12°47	T 10
F 11	15 14 5	20° 3'12	3♌ 0	9°17	7°42	14°59	8°42	25°19	9°17	14°25	16°18	10°47	11°35	20°58	12°52	F 11
S 12	15 18 2	21° 1'09	14°54	8°53	8°50	15°44	8°53	25°18	9°16	14°24	16°16	10°36	11°31	21° 5	12°56	S 12
S 13	15 21 58	21°59'04	26°50	8°33	9°58	16°29	9° 4	25°17	9°15	14°23	16°14	10°26	11°28	21°12	13° 1	S 13
M14	15 25 55	22°56'58	8♌51	8°17	11° 7	17°13	9°16	25°16	9°13	14°22	16°13	10°20	11°25	21°19	13° 6	M14
T 15	15 29 51	23°54'50	21° 1	8° 5	12°15	17°58	9°27	25°15	9°12	14°22	16°11	10°16	11°22	21°25	13°10	T 15
W16	15 33 48	24°52'41	3♌22	7°58	13°23	18°42	9°38	25°14	9°10	14°21	16° 9	10°15	11°19	21°32	13°15	W16
T 17	15 37 44	25°50'31	16° 0	7°D55	14°32	19°27	9°50	25°13	9° 9	14°20	16° 8	10°D15	11°16	21°39	13°20	T 17
F 18	15 41 41	26°48'20	28°58	7°57	15°40	20°11	10° 1	25°12	9° 7	14°19	16° 6	10°R15	11°12	21°46	13°25	F 18
S 19	15 45 37	27°46'08	12♋20	8° 3	16°49	20°56	10°13	25°11	9° 6	14°18	16° 4	10°14	11° 9	21°52	13°30	S 19
S 20	15 49 34	28°43'54	26°10	8°14	17°58	21°40	10°24	25° 9	9° 4	14°17	16° 3	10°12	11° 6	21°59	13°35	S 20
M21	15 53 31	29°41'39	10°Y27	8°30	19° 7	22°25	10°36	25° 8	9° 2	14°16	16° 1	10° 7	11° 3	22° 6	13°40	M21
T 22	15 57 27	0♈39'24	25°12	8°50	20°16	23° 9	10°48	25° 6	9° 1	14°15	15°59	9°59	11° 0	22°12	13°45	T 22
W23	16 1 24	1°37'07	10♌16	9°14	21°25	23°53	11° 0	25° 5	8°59	14°14	15°58	9°50	10°57	22°19	13°50	W23
T 24	16 5 20	2°34'49	25°32	9°43	22°34	24°38	11°12	25° 3	8°57	14°13	15°56	9°40	10°53	22°26	13°55	T 24
F 25	16 9 17	3°32'30	10♈49	10°16	23°43	25°22	11°24	25° 1	8°55	14°12	15°55	9°31	10°50	22°33	14° 1	F 25
S 26	16 13 13	4°30'10	25°55	10°52	24°53	26° 6	11°36	24°59	8°53	14°10	15°53	9°24	10°47	22°39	14° 6	S 26
S 27	16 17 10	5°27'48	10♌42	11°33	26° 2	26°51	11°48	24°57	8°52	14° 9	15°51	9°18	10°44	22°46	14°11	S 27
M28	16 21 6	6°25'25	25° 3	12°17	27°11	27°35	12° 0	24°55	8°50	14° 8	15°50	9°15	10°41	22°53	14°17	M28
T 29	16 25 3	7°23'01	8♌55	13° 5	28°21	28°19	12°12	24°53	8°48	14° 7	15°48	9°D15	10°37	22°59	14°22	T 29
W30	16 29 0	8°20'35	22°19	13°57	29°30	29° 3	12°24	24°51	8°46	14° 6	15°47	9°15	10°34	23° 6	14°28	W30
T 31	16 32 56	9♈18'08	5♌17	14♈52	0♈40	29♋47	12♌37	24♈48	8♌44	14♈ 4	15♌45	9°R16	10♋31	23♌13	14♌33	T 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat
T 1	14n56	21n12	1n 4	17n36	1n18	2s29	1s10	10s12	1s34	23n23	0n 7	20s54	0n10	23s25	0s19	21s47
W 2	15 14	16 45	0s 6	17 11	1 2	2 5	1 13	9 56	1 35	23 22	0 7	20 54	0 10	23 25	0 19	21 47
T 3	15 32	11 39	1 14	16 44	0 46	1 41	1 17	9 40	1 35	23 22	0 7	20 54	0 10	23 25	0 19	21 47
F 4	15 50	6 11	2 16	16 17	0 29	1 18	1 20	9 23	1 36	23 22	0 8	20 54	0 10	23 25	0 19	21 47
S 5	16 7	0 36	3 11	15 49	0 12	0 54	1 23	9 7	1 37	23 21	0 8	20 55	0 10	23 25	0 19	21 47
S 6	16 24	4s55	3 55	15 21	0s 6	0 29	1 26	8 51	1 38	23 20	0 8	20 55	0 10	23 25	0 19	21 47
M 7	16 41	10 11	4 29	14 53	0 23	0 5	1 29	8 34	1 38	23 20	0 8	20 55	0 10	23 25	0 19	21 48
T 8	16 57	15 2	4 51	14 26	0 40	0n19	1 31	8 18	1 39	23 19	0 8	20 55	0 10	23 25	0 19	21 48
W 9	17 14	19 18	4 59	13 59	0 57	0 44	1 34	8 1	1 40	23 19	0 8	20 55	0 10	23 26	0 19	21 48
T 10	17 30	22 47	4 55	13 34	1 14	1 8	1 36	7 45	1 40	23 18	0 8	20 55	0 10	23 26	0 19	21 48
F 11	17 45	25 18	4 38	13 10	1 30	1 33	1 39	7 28	1 41	23 18	0 8	20 55	0 10	23 26	0 19	21 48
S 12	18 1	26 42	4 8	12 48	1 45	1 58	1 41	7 11	1 42	23 17	0 8	20 55	0 10	23 26	0 19	21 48
S 13	18 16	26 52	3 28	12 28	1 59	2 22	1 43	6 54	1 42	23 16	0 8	20 56	0 9	23 26	0 19	21 48
M14	18 31	25 46	2 38	12 10	2 13	2 47	1 45	6 38	1 43	23 16	0 8	20 56	0 9	23 26	0 19	21 48
T 15	18 45	23 27	1 40	11 55	2 25	3 12	1 47	6 21	1 43	23 15	0 9	20 56	0 9	23 26	0 19	21 48
W16	18 59	20 0	0 36	11 41	2 37	3 37	1 49	6 4	1 44	23 14	0 9	20 56	0 9	23 26	0 19	21 48
T 17	19 13	15 34	0n30	11 31	2 47	4 2	1 50	5 47	1 45	23 13	0 9	20 57	0 9	23 26	0 19	21 48
F 18	19 27	10 19	1 38	11 22	2 57	4 27	1 52	5 30	1 45	23 13	0 9	20 57	0 9	23 27	0 19	21 48
S 19	19 40	4 27	2 41	11 16	3 6	4 52	1 54	5 13	1 46	23 12	0 9	20 57	0 9	23 27	0 19	21 48
S 20	19 53	1n49	3 38	11 12	3 13	5 17	1 55	4 56	1 47	23 11	0 9	20 57	0 9	23 27	0 19	21 48
M21	20 5	8 10	4 23	11 11	3 20	5 42	1 56	4 39	1 47	23 10	0 9	20 58	0 9	23 27	0 19	21 49
T 22	20 17	14 17	4 52	11 12	3 25	6 6	1 57	4 22	1 48	23 9	0 9	20 58	0 9	23 27	0 19	21 49
W23	20 29	19 41	5 2	11 16	3 30	6 31	1 58	4 5	1 48	23 8	0 9	20 59	0 9	23 27	0 19	21 49
T 24	20 41	23 51	4 51	11 21	3 33	6 56	1 59	3 48	1 49	23 7	0 9	20 59	0 9	23 27	0 19	21 49
F 25	20 52	26 20	4 19	11 29	3 36	7 21	2 0	3 31	1 49	23 7	0 9	20 59	0 9	23 28	0 19	21 49
S 26	21 3	26 52	3 29	11 39	3 37	7 45	2 1	3 14	1 50	23 6	0 9	21 0	0 9	23 28	0 19	21 49
S 27	21 13	25 26	2 26	11 50	3 38	8 10	2 2	2 57	1 50	23 5	0 10	21 0	0 8	23 28	0 19	21 49
M28	21 23	22 21	1 15	12 4	3 38	8 34	2 2	2 40	1 51	23 4	0 10	21 1	0 8	23 28	0 19	21 49
T 29	21 33	18 4	0 2	12 19	3 37	8 58	2 3	2 23	1 52	23 3	0 10	21 1	0 8	23 28	0 19	21 49
W30	21 42	12 59	1s 9	12 35	3 36	9 23	2 3	2 6	1 52	23 2	0 10	21 2	0 8	23 28	0 19	21 50
T 31	21n51	7n29	2s14	12n54	3s33	9n47	2s 4	1s49	1s53	23n 0	0n10	21s 2	0n 8	23s28	0s19	21s50

Julian Day Number = 2448012.5, Delta T = 57.08 sec
Ecliptic obliquity = 23°26'32", Nutation = 0°00'12", out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 24°36'19", Lahiri = 23°43'19"

ASTRODIENST EPHEMERIS for the year 1990
geocentric

JUNE 1990

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	16 36 53	10II15'39	17II55	15850	1850	0Y31	12249	24°R46	8°R42	14°R 3	15°R44	9°R15	10228	23II20	14239	F 1
S 2	16 40 49	11°13'09	0215	16°52	2°59	1°15	13° 1	24343	8340	143 2	15II42	9213	10°25	23°26	14°44	S 2
S 3	16 44 46	12°10'37	12°22	17°57	4° 9	1°59	13°14	24°41	8°38	14° 1	15°41	9° 9	10°22	23°33	14°50	S 3
M 4	16 48 42	13° 8'05	24°22	19° 5	5°19	2°42	13°26	24°38	8°36	13°59	15°39	9° 3	10°18	23°40	14°56	M 4
T 5	16 52 39	14° 5'31	6II16	20°16	6°29	3°26	13°39	24°35	8°33	13°58	15°38	8°55	10°15	23°47	15° 1	T 5
W 6	16 56 35	15° 2'56	18° 8	21°31	7°39	4°10	13°52	24°32	8°31	13°57	15°37	8°45	10°12	23°53	15° 7	W 6
T 7	17 0 32	16° 0'21	027 0	22°48	8°49	4°54	14° 4	24°29	8°29	13°55	15°35	8°35	10° 9	24° 0	15°13	T 7
F 8	17 4 29	16°57'44	11°55	24° 8	9°59	5°37	14°17	24°26	8°27	13°54	15°34	8°26	10° 6	24° 7	15°19	F 8
S 9	17 8 25	17°55'06	23°53	25°31	11° 9	6°21	14°30	24°23	8°25	13°52	15°32	8°17	10° 3	24°13	15°25	S 9
S 10	17 12 22	18°52'28	5357	26°57	12°19	7° 4	14°42	24°20	8°23	13°51	15°31	8°11	9°59	24°20	15°31	S 10
M11	17 16 18	19°49'49	18° 7	28°26	13°30	7°48	14°55	24°17	8°20	13°50	15°30	8° 7	9°56	24°27	15°37	M11
T 12	17 20 15	20°47'09	0226	29°58	14°40	8°31	15° 8	24°14	8°18	13°48	15°28	8° 5	9°53	24°34	15°43	T 12
W13	17 24 11	21°44'29	12°57	1II33	15°50	9°14	15°21	24°11	8°16	13°47	15°27	8°D 5	9°50	24°40	15°49	W13
T 14	17 28 8	22°41'48	25°42	3°10	17° 1	9°58	15°34	24° 7	8°13	13°45	15°26	8° 6	9°47	24°47	15°55	T 14
F 15	17 32 4	23°39'07	8II43	4°50	18°11	10°41	15°47	24° 4	8°11	13°44	15°25	8° 7	9°43	24°54	16° 1	F 15
S 16	17 36 1	24°36'26	22° 5	6°33	19°22	11°24	16° 0	24° 0	8° 9	13°42	15°23	8°R 8	9°40	25° 0	16° 7	S 16
S 17	17 39 58	25°33'44	5Y49	8°19	20°33	12° 7	16°13	23°57	8° 6	13°41	15°22	8° 7	9°37	25° 7	16°13	S 17
M18	17 43 54	26°31'01	19°57	10° 7	21°43	12°50	16°26	23°53	8° 4	13°39	15°21	8° 5	9°34	25°14	16°19	M18
T 19	17 47 51	27°28'19	4326	11°58	22°54	13°33	16°39	23°49	8° 2	13°38	15°20	8° 1	9°31	25°21	16°25	T 19
W20	17 51 47	28°25'36	19°14	13°52	24° 5	14°16	16°52	23°45	7°59	13°36	15°19	7°56	9°28	25°27	16°31	W20
T 21	17 55 44	29°22'54	4II14	15°48	25°16	14°59	17° 5	23°42	7°57	13°35	15°18	7°51	9°24	25°34	16°37	T 21
F 22	17 59 40	0220'11	19°17	17°46	26°26	15°41	17°19	23°38	7°54	13°33	15°17	7°45	9°21	25°41	16°44	F 22
S 23	18 3 37	1°17'27	4215	19°47	27°37	16°24	17°32	23°34	7°52	13°31	15°16	7°41	9°18	25°47	16°50	S 23
S 24	18 7 34	2°14'43	18°57	21°50	28°48	17° 6	17°45	23°30	7°50	13°30	15°15	7°38	9°15	25°54	16°56	S 24
M25	18 11 30	3°11'59	3218	23°54	29°59	17°49	17°58	23°26	7°47	13°28	15°14	7°D37	9°12	26° 1	17° 2	M25
T 26	18 15 27	4° 9'14	17°14	26° 1	1II10	18°31	18°12	23°22	7°45	13°27	15°13	7°37	9° 9	26° 8	17° 9	T 26
W27	18 19 23	5° 6'29	0II43	28° 9	2°21	19°13	18°25	23°18	7°42	13°25	15°12	7°38	9° 5	26°14	17°15	W27
T 28	18 23 20	6° 3'43	13°47	0217	3°33	19°56	18°38	23°14	7°40	13°24	15°11	7°40	9° 2	26°21	17°21	T 28
F 29	18 27 16	7° 0'56	26°28	2°27	4°44	20°38	18°51	23°10	7°38	13°22	15°10	7°41	8°59	26°28	17°28	F 29
S 30	18 31 13	7258'09	8251	4238	5II55	21Y20	1925 5	233 5	7335	13320	15II 9	7°R42	8256	26II34	17234	S 30

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
F 1	21n59	1n51	3s11	13n13	3s30	10n10	2s 4	1s31	1s53	22n59	0n10	21s 3	0n 8	23s29	0s19	21s50	0n53	1s16	15n56	17s56	17s37	23s28	16n21	6s19	
S 2	22 8	3s44	3 58	13 35	3 26	10 34	2 4	1 14	1 54	22 58	0 10	21 3	0 8	23 29	0 19	21 50	0 53	1 16	15 56	17 57	17 38	23 29	16 21	6 19	
S 3	22 15	9 4	4 33	13 57	3 22	10 58	2 4	0 57	1 54	22 57	0 10	21 4	0 8	23 29	0 19	21 50	0 53	1 15	15 56	17 58	17 39	23 31	16 21	6 19	
M 4	22 23	14 1	4 55	14 20	3 17	11 21	2 4	0 40	1 54	22 56	0 10	21 4	0 8	23 29	0 19	21 50	0 53	1 15	15 55	18 0	17 40	23 32	16 20	6 18	
T 5	22 30	18 24	5 5	14 45	3 11	11 44	2 4	0 24	1 55	22 55	0 10	21 5	0 8	23 29	0 19	21 50	0 53	1 15	15 55	18 2	17 40	23 34	16 20	6 18	
W 6	22 36	22 3	5 1	15 10	3 5	12 7	2 3	0 7	1 55	22 54	0 10	21 5	0 8	23 29	0 19	21 50	0 53	1 15	15 55	18 4	17 41	23 35	16 19	6 18	
T 7	22 42	24 47	4 44	15 36	2 58	12 30	2 3	0n10	1 56	22 52	0 10	21 6	0 8	23 29	0 19	21 51	0 53	1 15	15 54	18 7	17 42	23 37	16 19	6 18	
F 8	22 48	26 26	4 15	16 3	2 50	12 52	2 3	0 27	1 56	22 51	0 11	21 7	0 8	23 30	0 19	21 51	0 53	1 15	15 54	18 10	17 43	23 38	16 19	6 17	
S 9	22 54	26 52	3 35	16 31	2 42	13 14	2 2	0 44	1 57	22 50	0 11	21 7	0 8	23 30	0 19	21 51	0 53	1 15	15 54	18 12	17 44	23 40	16 18	6 17	
S 10	22 59	26 2	2 44	16 59	2 34	13 36	2 2	1 1	1 57	22 48	0 11	21 8	0 7	23 30	0 19	21 51	0 53	1 15	15 53	18 13	17 45	23 41	16 18	6 17	
M11	23 3	23 57	1 45	17 28	2 25	13 58	2 1	1 18	1 57	22 47	0 11	21 8	0 7	23 30	0 19	21 51	0 53	1 15	15 53	18 14	17 46	23 43	16 17	6 17	
T 12	23 7	20 44	0 41	17 56	2 15	14 20	2 0	1 34	1 58	22 46	0 11	21 9	0 7	23 30	0 19	21 51	0 53	1 15	15 53	18 15	17 46	23 44	16 17	6 17	
W13	23 11	16 31	0n26	18 25	2 6	14 41	1 59	1 51	1 58	22 44	0 11	21 10	0 7	23 30	0 19	21 51	0 53	1 15	15 52	18 15	17 47	23 46	16 16	6 16	
T 14	23 14	11 29	1 34	18 54	1 56	15 2	1 58	2 8	1 59	22 43	0 11	21 10	0 7	23 31	0 19	21 52	0 53	1 15	15 52	18 15	17 48	23 47	16 16	6 16	
F 15	23 17	5 51	2 38	19 23	1 45	15 22	1 57	2 24	1 59	22 42	0 11	21 11	0 7	23 31	0 19	21 52	0 53	1 15	15 51	18 14	17 49	23 48	16 15	6 16	
S 16	23 20	0n10	3 35	19 51	1 34	15 42	1 56	2 41	1 59	22 40	0 11	21 12	0 7	23 31	0 19	21 52	0 53	1 15	15 51	18 14	17 50	23 50	16 15	6 16	
S 17	23 22	6 19	4 22	20 19	1 23	16 2	1 55	2 57	2 0	22 39	0 11	21 12	0 7	23 31	0 19	21 52	0 53	1 15	15 51	18 14	17 51	23 51	16 14	6 16	
M18	23 24	12 20	4 54	20 47	1 12	16 22	1 54	3 14	2 0	22 37	0 11	21 13	0 7	23 31	0 19	21 52	0 53	1 15	15 50	18 15	17 52	23 53	16 14	6 16	
T 19	23 25	17 51	5 9	21 13	1 1	16 41	1 53	3 30	2 0	22 36	0 11	21 14	0 7	23 31	0 19	21 52	0 53	1 15	15 50	18 16	17 52	23 54	16 13	6 15	
W20	23 26	22 24	5 4	21 39	0 49	17 0	1 51	3 46	2 1	22 34	0 12	21 15	0 7	23 32	0 19	21 53	0 53	1 16	15 49	18 17	17 53	23 56	16 13	6 15	
T 21	23 26	25 32	4 38	22 3	0 38	17 18	1 50	4 3	2 1	22 32	0 12	21 15	0 7	23 32	0 19	21 53	0 53	1 16	15 49	18 19	17 54	23 57	16 12	6 15	
F 22	23 26	26 52	3 53	22 26	0 26	17 36	1 48	4 19	2 1	22 31	0 12	21 16	0 6	23 32	0 20	21 53	0 53	1 16	15 49	18 20	17 55	23 58	16 11	6 15	
S 23	23 26	26 14	2 52	22 48	0 15	17 54	1 47	4 35	2 1	22 29	0 12	21 17	0 6	23 32	0 20	21 53	0 53	1 16	15 48	18 21	17 56	24 0	16 11	6 15	
S 24	23 25	23 45	1 40	23 8	0 4	18 11	1 45	4 51	2 2	22 28	0 12	21 18	0 6	23 32	0 20	21 53	0 53	1 16	15 48	18 22	17 57	24 1	16 10	6 15	
M25	23 24	19 48	0 24	23 25	0n 7	18 28	1 43	5 7	2 2	22 26	0 12	21 18	0 6	23 32	0 20	21 53	0 53	1 16	15 47	18 22	17 57	24 3	16 9	6 15	
T 26	23 23	14 50	0s52	23 41	0 18	18 44	1 42	5 23	2 2	22 24	0 12	21 19	0 6	23 32	0 20	21 53	0 53	1 16	15 47	18 22	17 58	24 4	16 9	6 15	
W27	23 21	9 18	2 3	23 54	0 28	19 0	1 40	5 38	2 2	22 23	0 12	21 20	0 6	23 33	0 20	21 54	0 53	1 17	15 46	18 22	17 59	24 5	16 8	6 15	
T 28	23 18	3 32	3 5	24 5	0 38	19 16	1 38	5 54	2 3	22 21	0 12	21 21	0 6	23 33	0 20	21 54	0 53	1 17	15 46	18 21	18 0	24 7	16 7	6 15	
F 29	23 15	2s12	3 56	24 13	0 48	19 31	1 36	6 10	2 3	22 19	0 12	21 21	0 6	23 33	0 20	21 54	0 53	1 17	15 45	18 21	18 1	24 8	16 7	6 14	
S 30	23n12	7s43	4s34	24n19	0m57	19n45	1s34	6n25	2s 3	22n17	0n12	21s22	0n 6	23s33	0s20	21s54	0n53	1s17	15n45	18s21	18s 2	24s 9	16n 6	6s14	

ASTRODIENST EPHEMERIS for the year 1990
geocentric

AUGUST 1990

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	20 37 23	8♂30'31	4♂57	3♂34	14♂18	12♂39	26♂14	20°R46	6°R23	12°R30	14♂59	7♂18	7♂14	0♂9	20♂59	W 1
T 2	20 41 19	9°27'55	16°53	4°55	15°30	13°17	26°27	20♂42	6♂21	12♂29	14°59	7°18	7°11	0°16	21°5	T 2
F 3	20 45 16	10°25'19	28°55	6°14	16°43	13°54	26°41	20°38	6°19	12°27	14°59	7°18	7°8	0°23	21°12	F 3
S 4	20 49 12	11°22'44	11♂7	7°31	17°56	14°31	26°54	20°34	6°17	12°26	14°59	7°19	7°5	0°30	21°18	S 4
S 5	20 53 9	12°20'10	23°32	8°46	19°9	15°8	27°7	20°30	6°15	12°25	15°0	7°19	7°1	0°36	21°24	S 5
M 6	20 57 5	13°17'37	6♂12	9°59	20°22	15°45	27°20	20°26	6°13	12°23	15°0	7°R19	6°58	0°43	21°30	M 6
T 7	21 1 2	14°15'05	19°6	11°9	21°34	16°21	27°33	20°22	6°12	12°22	15°1	7°19	6°55	0°50	21°37	T 7
W 8	21 4 59	15°12'33	2♂16	12°17	22°47	16°58	27°47	20°19	6°10	12°21	15°1	7°18	6°52	0°56	21°43	W 8
T 9	21 8 55	16°10'03	15°40	13°23	24°0	17°34	28°0	20°15	6°8	12°19	15°1	7°18	6°49	1°3	21°49	T 9
F 10	21 12 52	17°7'34	29°18	14°26	25°13	18°10	28°13	20°11	6°7	12°18	15°2	7°16	6°46	1°10	21°55	F 10
S 11	21 16 48	18°5'06	13♂8	15°27	26°26	18°45	28°26	20°7	6°5	12°17	15°2	7°15	6°42	1°16	22°1	S 11
S 12	21 20 45	19°2'40	27°7	16°25	27°40	19°21	28°39	20°4	6°3	12°16	15°3	7°14	6°39	1°23	22°7	S 12
M13	21 24 41	20°0'15	11♂14	17°20	28°53	19°56	28°52	20°0	6°2	12°15	15°4	7°13	6°36	1°30	22°13	M13
T 14	21 28 38	20°57'51	25°26	18°12	0♂6	20°31	29°5	19°57	6°0	12°13	15°4	7°D13	6°33	1°37	22°19	T 14
W15	21 32 34	21°55'30	9♂41	19°1	1°19	21°6	29°18	19°53	5°59	12°12	15°5	7°14	6°30	1°43	22°25	W15
T 16	21 36 31	22°53'09	23°57	19°46	2°32	21°40	29°30	19°50	5°58	12°11	15°6	7°15	6°27	1°50	22°31	T 16
F 17	21 40 28	23°50'51	8♂10	20°28	3°46	22°15	29°43	19°47	5°56	12°10	15°6	7°16	6°23	1°57	22°37	F 17
S 18	21 44 24	24°48'34	22°18	21°7	4°59	22°49	29°56	19°43	5°55	12°9	15°7	7°17	6°20	2°3	22°43	S 18
S 19	21 48 21	25°46'18	6♂17	21°41	6°12	23°22	0♂9	19°40	5°54	12°8	15°8	7°R17	6°17	2°10	22°49	S 19
M20	21 52 17	26°44'04	20°4	22°12	7°26	23°56	0°21	19°37	5°52	12°7	15°9	7°17	6°14	2°17	22°54	M20
T 21	21 56 14	27°41'51	3♂37	22°38	8°39	24°29	0°34	19°34	5°51	12°6	15°10	7°16	6°11	2°24	23°0	T 21
W22	22 0 10	28°39'39	16°53	22°59	9°53	25°2	0°47	19°31	5°50	12°5	15°10	7°13	6°7	2°30	23°6	W22
T 23	22 4 7	29°37'28	29°51	23°16	11°7	25°35	0°59	19°28	5°49	12°4	15°11	7°10	6°4	2°37	23°12	T 23
F 24	22 8 3	0♂35'19	12♂32	23°27	12°20	26°7	1°12	19°26	5°48	12°3	15°12	7°6	6°1	2°44	23°17	F 24
S 25	22 12 0	1°33'11	24°56	23°33	13°34	26°39	1°24	19°23	5°47	12°2	15°13	7°3	5°58	2°50	23°23	S 25
S 26	22 15 57	2°31'05	7♂7	23°R34	14°47	27°11	1°37	19°20	5°46	12°1	15°14	7°0	5°55	2°57	23°28	S 26
M27	22 19 53	3°29'00	19°7	23°28	16°1	27°43	1°49	19°18	5°45	12°0	15°15	6°58	5°52	3°4	23°34	M27
T 28	22 23 50	4°26'56	1♂1	23°17	17°15	28°14	2°1	19°15	5°44	11°59	15°17	6°D57	5°48	3°11	23°39	T 28
W29	22 27 46	5°24'53	12°53	23°0	18°29	28°45	2°14	19°13	5°43	11°58	15°18	6°57	5°45	3°17	23°45	W29
T 30	22 31 43	6°22'52	24°48	22°37	19°42	29°15	2°26	19°10	5°42	11°58	15°19	6°58	5°42	3°24	23°50	T 30
F 31	22 35 39	7♂20'52	6♂52	22♂7	20♂56	29♂45	2♂38	19♂8	5♂41	11♂57	15♂20	7♂0	5♂39	3♂31	23♂55	F 31

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
W 1	18n 8	25s44	4s41	10n17	0n 6	22n28	0s13	13n43	2s 1	21n 9	0n15	21s47	0n 3	23s37	0s20	21s59	0n52	1s31	15n28	18s27	18s28	24s49	15n36	6s16							
T 2	17 53	26 51	4 5	9 39	0s 3	22 22	0 10	13 54	2 1	21 7	0 15	21 48	0 3	23 37	0 20	22 0	0 52	1 32	15 27	18 27	18 29	24 50	15 35	6 17							
F 3	17 38	26 43	3 17	9 2	0 13	22 16	0 7	14 5	2 1	21 5	0 16	21 49	0 3	23 37	0 20	22 0	0 52	1 32	15 26	18 27	18 30	24 51	15 34	6 17							
S 4	17 22	25 18	2 20	8 24	0 23	22 10	0 5	14 17	2 0	21 2	0 16	21 49	0 3	23 37	0 20	22 0	0 52	1 33	15 26	18 27	18 30	24 52	15 33	6 17							
S 5	17 6	22 38	1 16	7 47	0 33	22 3	0 2	14 28	2 0	21 0	0 16	21 50	0 3	23 37	0 20	22 0	0 52	1 34	15 25	18 27	18 31	24 53	15 32	6 17							
M 6	16 50	18 50	0 6	7 10	0 43	21 55	0n 1	14 39	2 0	20 57	0 16	21 51	0 3	23 37	0 20	22 0	0 52	1 34	15 25	18 27	18 32	24 55	15 30	6 17							
T 7	16 33	14 4	1n 5	6 34	0 53	21 46	0 4	14 49	1 59	20 55	0 16	21 51	0 2	23 38	0 20	22 0	0 52	1 35	15 24	18 27	18 33	24 56	15 29	6 18							
W 8	16 17	8 35	2 14	5 58	1 4	21 37	0 6	15 0	1 59	20 52	0 16	21 52	0 2	23 38	0 20	22 0	0 52	1 36	15 23	18 27	18 34	24 57	15 28	6 18							
T 9	16 0	2 38	3 17	5 23	1 14	21 27	0 9	15 11	1 58	20 50	0 16	21 53	0 2	23 38	0 20	22 1	0 52	1 36	15 23	18 27	18 34	24 58	15 27	6 18							
F 10	15 42	3n32	4 9	4 49	1 25	21 17	0 11	15 21	1 58	20 47	0 16	21 53	0 2	23 38	0 20	22 1	0 52	1 37	15 22	18 27	18 35	24 59	15 26	6 18							
S 11	15 25	9 37	4 49	4 16	1 36	21 6	0 14	15 31	1 58	20 45	0 16	21 54	0 2	23 38	0 20	22 1	0 52	1 38	15 22	18 28	18 36	25 0	15 25	6 19							
S 12	15 7	15 17	5 11	3 43	1 47	20 54	0 17	15 41	1 57	20 42	0 16	21 55	0 2	23 38	0 20	22 1	0 52	1 38	15 21	18 28	18 37	25 1	15 23	6 19							
M13	14 49	20 11	5 15	3 12	1 58	20 42	0 19	15 51	1 57	20 40	0 17	21 55	0 2	23 38	0 20	22 1	0 52	1 39	15 21	18 28	18 38	25 2	15 22	6 19							
T 14	14 31	23 59	5 0	2 42	2 9	20 29	0 22	16 1	1 56	20 37	0 17	21 56	0 2	23 38	0 20	22 1	0 52	1 40	15 20	18 28	18 38	25 3	15 21	6 20							
W15	14 12	26 18	4 27	2 12	2 20	20 16	0 24	16 10	1 56	20 35	0 17	21 56	0 2	23 38	0 20	22 1	0 52	1 40	15 19	18 28	18 39	25 4	15 20	6 20							
T 16	13 53	26 55	3 37	1 45	2 30	20 2	0 27	16 20	1 55	20 32	0 17	21 57	0 2	23 38	0 20	22 2	0 52	1 41	15 19	18 28	18 40	25 5	15 19	6 20							
F 17	13 34	25 45	2 34	1 18	2 41	19 47	0 29	16 29	1 55	20 29	0 17	21 57	0 2	23 38	0 20	22 2	0 52	1 42	15 18	18 27	18 41	25 6	15 17	6 20							
S 18	13 15	22 57	1 22	0 53	2 52	19 32	0 31	16 38	1 54	20 27	0 17	21 58	0 1	23 38	0 20	22 2	0 52	1 43	15 18	18 27	18 41	25 7	15 16	6 21							
S 19	12 56	18 48	0 6	0 30	3 3	19 16	0 34	16 47	1 53	20 24	0 17	21 59	0 1	23 38	0 20	22 2	0 52	1 43	15 17	18 27	18 42	25 8	15 15	6 21							
M20	12 36	13 41	1s10	0 9	3 13	19 0	0 36	16 56	1 53	20 22	0 17	21 59	0 1	23 38	0 20	22 2	0 52	1 44	15 17	18 27	18 43	25 9	15 14	6 21							
T 21	12 16	8 0	2 20	0s11	3 23	18 43	0 38	17 5	1 52	20 19	0 17	22 0	0 1	23 38	0 20	22 2	0 51	1 45	15 16	18 28	18 44	25 10	15 12	6 22							
W22	11 56	2 6	3 21	0 28	3 33	18 26	0 41	17 13	1 52	20 16	0 18	22 0	0 1	23 38	0 20	22 2	0 51	1 46	15 16	18 28	18 45	25 11	15 11	6 22							
T 23	11 36	3s46	4 10	0 43	3 42	18 8	0 43	17 22	1 51	20 14	0 18	22 1	0 1	23 38	0 20	22 2	0 51	1 46	15 15	18 29	18 45	25 12	15 10	6 22							
F 24	11 16	9 20	4 45	0 56	3 51	17 49	0 45	17 30	1 50	20 11	0 18	22 1	0 1	23 39	0 20	22 3	0 51	1 47	15 14	18 30	18 46	25 13	15 9	6 23							
S 25	10 55	14 24	5 7	1 6	3 59	17 30	0 47	17 38	1 49	20 8	0 18	22 2	0 1	23 39	0 20	22 3	0 51	1 48	15 14	18 31	18 47	25 14	15 7	6 23							
S 26	10 35	18 49	5 14	1 13	4 6	17 11	0 49	17 46	1 49	20 6	0 18	22 2	0 1	23 39	0 20	22 3	0 51	1 49	15 13	18 32	18 48	25 15	15 6	6 23							
M27	10 14	22 25	5 7	1 17	4 13	16 51	0 51	17 54	1 48	20 3	0 18	22 3	0 1	23 39	0 20	22 3	0 51	1 50	15 13	18 32	18 49	25 16	15 5	6 24							
T 28	9 53	25 2	4 47	1 17	4 18	16 31	0 53	18 2	1 47	20 1	0 18	22 3	0 1	23 39	0 20	22 3	0 51	1 50	15 12	18 32	18 49	25 17	15 3	6 24							
W29	9 32	26 33	4 14	1 15	4 23	16 10	0 55	18 9	1 46	19 58	0 18	22 3	0 1	23 39	0 20	22 3	0 51	1 51	15 12	18 32	18 50	25 18	15 2	6 25							
T 30	9 10	26 51	3 31	1 9	4 26	15 49	0 57	18 16	1 46	19 55	0 19	22 4	0 0	23 39	0 20	22 3	0 51	1 52	15 11	18 32	18 51	25 19	15 1	6 25							
F 31	8n49	25s53	2s38	0s59	4s28	15n27	0n59	18n24	1s45	19n53	0n19	22s 4	0n 0	23s39	0s20	22s 3	0n51	1s53	15n11	18s32	18s52	25s19	15n 0	6s25							

ASTRODIENST EPHEMERIS for the year 1990
geocentric

SEPTEMBER 1990

00:00 UT

Day	Sid.t	☉	☾	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	22 39 36	8♍18°53	19♌8	21°R32	22♏10	0♏15	2♏50	19°R 6	5°R41	11°R56	15♍21	7♍1	5♍36	3♍37	24♌1	S 1
S 2	22 43 32	9°16'56	1♍40	20♍51	23°24	0°45	3° 2	19♌4	5♌40	11♌55	15°22	7°R 2	5°32	3°44	24° 6	S 2
M 3	22 47 29	10°15'00	14°31	20° 5	24°38	1°14	3°14	19° 2	5°40	11°55	15°24	7° 2	5°29	3°51	24°11	M 3
T 4	22 51 26	11°13'06	27°43	19°15	25°52	1°43	3°26	19° 0	5°39	11°54	15°25	7° 1	5°26	3°57	24°16	T 4
W 5	22 55 22	12°11'13	11♋15	18°20	27° 6	2°11	3°38	18°58	5°38	11°54	15°26	6°57	5°23	4° 4	24°21	W 5
T 6	22 59 19	13° 9'22	25° 6	17°23	28°20	2°40	3°50	18°57	5°38	11°53	15°28	6°53	5°20	4°11	24°26	T 6
F 7	23 3 15	14° 7'33	9♍12	16°25	29°34	3° 7	4° 1	18°55	5°38	11°52	15°29	6°47	5°17	4°18	24°31	F 7
S 8	23 7 12	15° 5'46	23°28	15°25	0♍48	3°35	4°13	18°54	5°37	11°52	15°31	6°41	5°13	4°24	24°36	S 8
S 9	23 11 8	16° 4'00	7♌50	14°27	2° 3	4° 2	4°25	18°52	5°37	11°51	15°32	6°36	5°10	4°31	24°41	S 9
M10	23 15 5	17° 2'17	22°12	13°30	3°17	4°28	4°36	18°51	5°37	11°51	15°33	6°32	5° 7	4°38	24°46	M10
T 11	23 19 1	18° 0'36	6♏30	12°37	4°31	4°54	4°47	18°50	5°36	11°51	15°35	6°30	5° 4	4°44	24°51	T 11
W12	23 22 58	18°58'57	20°41	11°49	5°45	5°20	4°59	18°48	5°36	11°50	15°36	6°D29	5° 1	4°51	24°56	W12
T 13	23 26 55	19°57'20	4♌44	11° 7	7° 0	5°45	5°10	18°47	5°36	11°50	15°38	6°30	4°58	4°58	25° 0	T 13
F 14	23 30 51	20°55'46	18°38	10°32	8°14	6°10	5°21	18°46	5°36	11°49	15°40	6°31	4°54	5° 5	25° 5	F 14
S 15	23 34 48	21°54'13	2♏21	10° 5	9°28	6°35	5°32	18°46	5°D36	11°49	15°41	6°R32	4°51	5°11	25° 9	S 15
S 16	23 38 44	22°52'43	15°54	9°46	10°43	6°59	5°43	18°45	5°36	11°49	15°43	6°32	4°48	5°18	25°14	S 16
M17	23 42 41	23°51'14	29°17	9°37	11°57	7°22	5°54	18°44	5°36	11°49	15°45	6°30	4°45	5°25	25°18	M17
T 18	23 46 37	24°49'47	12♍27	9°D37	13°12	7°45	6° 5	18°44	5°36	11°48	15°46	6°25	4°42	5°31	25°23	T 18
W19	23 50 34	25°48'23	25°25	9°46	14°26	8° 7	6°16	18°43	5°36	11°48	15°48	6°18	4°38	5°38	25°27	W19
T 20	23 54 30	26°47'00	8♏10	10° 5	15°41	8°29	6°27	18°43	5°37	11°48	15°50	6°10	4°35	5°45	25°31	T 20
F 21	23 58 27	27°45'39	20°42	10°34	16°55	8°51	6°37	18°42	5°37	11°48	15°51	6° 0	4°32	5°51	25°35	F 21
S 22	0 2 24	28°44'20	3♍1	11°11	18°10	9°12	6°48	18°42	5°37	11°48	15°53	5°51	4°29	5°58	25°39	S 22
S 23	0 6 20	29°43'03	15° 8	11°57	19°24	9°32	6°58	18°D42	5°38	11°48	15°55	5°42	4°26	6° 5	25°43	S 23
M24	0 10 17	0♏41'48	27° 6	12°52	20°39	9°52	7° 9	18°42	5°38	11°D48	15°57	5°35	4°23	6°12	25°47	M24
T 25	0 14 13	1°40'34	8♍57	13°53	21°54	10°11	7°19	18°42	5°39	11°48	15°59	5°30	4°19	6°18	25°51	T 25
W26	0 18 10	2°39'23	20°48	15° 2	23° 8	10°30	7°29	18°43	5°39	11°48	16° 1	5°27	4°16	6°25	25°55	W26
T 27	0 22 6	3°38'13	2♌41	16°17	24°23	10°48	7°39	18°43	5°40	11°48	16° 3	5°D26	4°13	6°32	25°59	T 27
F 28	0 26 3	4°37'04	14°42	17°37	25°38	11° 5	7°49	18°43	5°41	11°48	16° 4	5°26	4°10	6°38	26° 2	F 28
S 29	0 29 59	5°35'58	26°57	19° 3	26°52	11°22	7°59	18°44	5°41	11°48	16° 6	5°27	4° 7	6°45	26° 6	S 29
S 30	0 33 56	6♏34'53	9♍30	20♍32	28♍7	11♏38	8♏9	18♌45	5♌42	11♌49	16♍8	5°R27	4♍4	6♍52	26♌9	S 30

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	8n27	23s40	1s36	0s45	4s29	15n 5	1n 1	18n31	1s44	19n50	0n19	22s 5	0n 0	23s39	0s20	22s 3	0n51	1s54	15n10	18s31	18s52	25s20	14n58	6s26	
S 2	8 5	20 16	0 29	0 28	4 28	14 42	1 2	18 38	1 43	19 47	0 19	22 5	0 0	23 39	0 20	22 4	0 51	1 55	15 10	18 31	18 53	25 21	14 57	6 26	
M 3	7 44	15 50	0n41	0 8	4 25	14 19	1 4	18 45	1 42	19 45	0 19	22 5	0 0	23 39	0 20	22 4	0 51	1 55	15 9	18 31	18 54	25 22	14 56	6 26	
T 4	7 22	10 32	1 50	0n16	4 20	13 56	1 6	18 51	1 41	19 42	0 19	22 6	0 0	23 39	0 20	22 4	0 51	1 56	15 9	18 31	18 55	25 23	14 54	6 27	
W 5	6 59	4 38	2 55	0 44	4 13	13 32	1 7	18 58	1 40	19 39	0 19	22 6	0s 0	23 39	0 20	22 4	0 51	1 57	15 8	18 32	18 56	25 24	14 53	6 28	
T 6	6 37	1n36	3 52	1 14	4 5	13 8	1 9	19 4	1 39	19 37	0 19	22 6	0 0	23 39	0 20	22 4	0 51	1 58	15 8	18 33	18 56	25 25	14 52	6 28	
F 7	6 15	7 51	4 35	1 46	3 54	12 43	1 10	19 11	1 38	19 34	0 20	22 7	0 0	23 39	0 20	22 4	0 51	1 59	15 7	18 35	18 57	25 26	14 51	6 28	
S 8	5 52	13 47	5 2	2 20	3 42	12 18	1 12	19 17	1 37	19 31	0 20	22 7	0 0	23 39	0 20	22 4	0 51	2 0	15 7	18 36	18 58	25 26	14 49	6 29	
S 9	5 30	19 0	5 10	2 56	3 28	11 53	1 13	19 23	1 36	19 29	0 20	22 7	0 0	23 39	0 20	22 4	0 51	2 0	15 6	18 37	18 59	25 27	14 48	6 29	
M10	5 7	23 7	4 58	3 32	3 12	11 28	1 14	19 29	1 35	19 26	0 20	22 7	0 0	23 39	0 20	22 4	0 51	2 1	15 6	18 38	18 59	25 28	14 47	6 30	
T 11	4 44	25 48	4 29	4 8	2 55	11 2	1 16	19 35	1 34	19 24	0 20	22 8	0 1	23 39	0 20	22 4	0 51	2 2	15 5	18 39	19 0	25 29	14 45	6 30	
W12	4 22	26 49	3 42	4 43	2 37	10 35	1 17	19 40	1 33	19 21	0 20	22 8	0 1	23 39	0 20	22 4	0 51	2 3	15 5	18 39	19 1	25 30	14 44	6 31	
T 13	3 59	26 5	2 43	5 16	2 18	10 9	1 18	19 46	1 32	19 18	0 20	22 8	0 1	23 39	0 19	22 4	0 51	2 4	15 4	18 39	19 2	25 31	14 43	6 31	
F 14	3 36	23 43	1 35	5 47	1 58	9 42	1 19	19 51	1 31	19 16	0 20	22 8	0 1	23 39	0 19	22 4	0 51	2 5	15 4	18 39	19 2	25 31	14 42	6 32	
S 15	3 13	20 0	0 23	6 16	1 39	9 15	1 20	19 56	1 29	19 13	0 21	22 9	0 1	23 39	0 19	22 5	0 51	2 6	15 3	18 38	19 3	25 32	14 40	6 32	
S 16	2 50	15 16	0s50	6 41	1 19	8 48	1 21	20 2	1 28	19 11	0 21	22 9	0 1	23 39	0 19	22 5	0 51	2 7	15 3	18 39	19 4	25 33	14 39	6 33	
M17	2 26	9 52	1 59	7 3	1 0	8 20	1 22	20 7	1 27	19 8	0 21	22 9	0 1	23 39	0 19	22 5	0 51	2 7	15 2	18 39	19 5	25 34	14 38	6 33	
T 18	2 3	4 6	3 1	7 20	0 41	7 52	1 22	20 12	1 26	19 6	0 21	22 9	0 1	23 39	0 19	22 5	0 51	2 8	15 2	18 40	19 6	25 35	14 36	6 34	
W19	1 40	1s44	3 52	7 34	0 22	7 24	1 23	20 17	1 24	19 3	0 21	22 9	0 1	23 39	0 19	22 5	0 50	2 9	15 2	18 42	19 6	25 35	14 35	6 34	
T 20	1 17	7 23	4 30	7 42	0 5	6 56	1 24	20 21	1 23	19 0	0 21	22 9	0 1	23 39	0 19	22 5	0 50	2 10	15 1	18 44	19 7	25 36	14 34	6 35	
F 21	0 53	12 38	4 55	7 47	0n11	6 28	1 24	20 26	1 22	18 58	0 21	22 10	0 1	23 39	0 19	22 5	0 50	2 11	15 1	18 46	19 8	25 37	14 33	6 36	
S 22	0 30	17 17	5 5	7 47	0 26	5 59	1 25	20 31	1 20	18 55	0 22	22 10	0 1	23 39	0 19	22 5	0 50	2 12	15 0	18 49	19 9	25 38	14 31	6 36	
S 23	0 7	21 10	5 1	7 42	0 41	5 30	1 25	20 35	1 19	18 53	0 22	22 10	0 2	23 39	0 19	22 5	0 50	2 13	15 0	18 51	19 9	25 38	14 30	6 37	
M24	0s17	24 7	4 45	7 33	0 53	5 1	1 26	20 39	1 17	18 50	0 22	22 10	0 2	23 39	0 19	22 5	0 50	2 14	15 0	18 53	19 10	25 39	14 29	6 37	
T 25	0 40	26 0	4 15	7 20	1 5	4 32	1 26	20 44	1 16	18 48	0 22	22 10	0 2	23 39	0 19	22 5	0 50	2 14	14 59	18 54	19 11	25 40	14 28	6 38	
W26	1 3	26 42	3 35	7 3	1 15	4 3	1 26	20 48	1 14	18 46	0 22	22 10	0 2	23 39	0 19	22 5	0 50	2 15	14 59	18 55	19 12	25 41	14 26	6 38	
T 27	1 27	26 11	2 46	6 42	1 24	3 33	1 26	20 52	1 13	18 43	0 22	22 10	0 2	23 39	0 19	22 5	0 50	2 16	14 58	18 55	19 12	25 41	14 25	6 39	
F 28	1 50	24 26	1 49	6 18	1 32	3 4	1 26	20 56	1 11	18 41	0 22	22 10	0 2	23 39	0 19	22 5	0 50	2 17	14 58	18 55	19 13	25 42	14 24	6 39	
S 29	2 13	21 31	0 45	5 51	1 38	2 34	1 26	21 0	1 9	18 38	0 23	22 10	0 2	23 39	0 19	22 5	0 50	2 18	14 58	18 55	19 14	25 43	14 23	6 40	
S 30	2s37	17s32	0n22	5n20	1n44	2n 4	1n26	21n 4	1s 8	18n36	0n23	22s10	0s 2	23s38	0s19	22s 5	0n50	2s19	14n57	18s54	19s15	25s43	14n21	6s41	

ASTRODIENST EPHEMERIS for the year 1990

geocentric

OCTOBER 1990

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	0 37 53	7♂33'50	22♂26	22♂ 5	29♂22	11♂54	8♂18	18♂45	5♂43	11♂49	16♂10	5°R26	4♂ 0	6♂58	26♂13	M 1
T 2	0 41 49	8°32'48	5♂47	23°42	0♂37	12° 9	8°28	18°46	5°44	11°49	16°12	5♂22	3°57	7° 5	26°16	T 2
W 3	0 45 46	9°31'49	19°34	25°20	1°52	12°23	8°37	18°47	5°45	11°49	16°14	5°16	3°54	7°12	26°19	W 3
T 4	0 49 42	10°30'51	3♂46	27° 1	3° 6	12°37	8°46	18°48	5°45	11°50	16°16	5° 8	3°51	7°19	26°23	T 4
F 5	0 53 39	11°29'55	18°17	28°44	4°21	12°50	8°56	18°49	5°46	11°50	16°18	4°58	3°48	7°25	26°26	F 5
S 6	0 57 35	12°29'02	3♂ 1	0♂27	5°36	13° 2	9° 5	18°50	5°48	11°50	16°21	4°48	3°44	7°32	26°29	S 6
S 7	1 1 32	13°28'11	17°50	2°12	6°51	13°14	9°14	18°52	5°49	11°51	16°23	4°38	3°41	7°39	26°32	S 7
M 8	1 5 28	14°27'22	2♂35	3°57	8° 6	13°25	9°23	18°53	5°50	11°51	16°25	4°30	3°38	7°45	26°35	M 8
T 9	1 9 25	15°26'35	17°10	5°42	9°21	13°35	9°31	18°55	5°51	11°52	16°27	4°25	3°35	7°52	26°37	T 9
W10	1 13 22	16°25'51	1♂29	7°28	10°36	13°44	9°40	18°56	5°52	11°52	16°29	4°22	3°32	7°59	26°40	W10
T 11	1 17 18	17°25'08	15°32	9°14	11°51	13°53	9°48	18°58	5°54	11°53	16°31	4°D21	3°29	8° 5	26°43	T 11
F 12	1 21 15	18°24'29	29°17	11° 0	13° 6	14° 1	9°57	19° 0	5°55	11°53	16°33	4°R21	3°25	8°12	26°45	F 12
S 13	1 25 11	19°23'51	12♂46	12°45	14°21	14° 8	10° 5	19° 2	5°56	11°54	16°36	4°21	3°22	8°19	26°48	S 13
S 14	1 29 8	20°23'16	26° 0	14°30	15°36	14°14	10°13	19° 4	5°58	11°55	16°38	4°20	3°19	8°26	26°50	S 14
M15	1 33 4	21°22'43	9♂ 1	16°15	16°51	14°19	10°21	19° 6	5°59	11°55	16°40	4°15	3°16	8°32	26°52	M15
T 16	1 37 1	22°22'13	21°51	17°59	18° 6	14°24	10°29	19° 8	6° 1	11°56	16°42	4° 8	3°13	8°39	26°55	T 16
W17	1 40 57	23°21'44	4♂29	19°43	19°21	14°27	10°37	19°10	6° 2	11°57	16°45	3°58	3° 9	8°46	26°57	W17
T 18	1 44 54	24°21'17	16°58	21°26	20°36	14°30	10°44	19°13	6° 4	11°58	16°47	3°46	3° 6	8°52	26°59	T 18
F 19	1 48 50	25°20'53	29°17	23° 8	21°51	14°32	10°52	19°15	6° 6	11°58	16°49	3°32	3° 3	8°59	27° 1	F 19
S 20	1 52 47	26°20'31	11♂27	24°50	23° 6	14°33	10°59	19°18	6° 7	11°59	16°51	3°18	3° 0	9° 6	27° 2	S 20
S 21	1 56 44	27°20'10	23°28	26°32	24°22	14°R34	11° 6	19°20	6° 9	12° 0	16°54	3° 4	2°57	9°12	27° 4	S 21
M22	2 0 40	28°19'52	5♂22	28°12	25°37	14°33	11°13	19°23	6°11	12° 1	16°56	2°53	2°54	9°19	27° 6	M22
T 23	2 4 37	29°19'35	17°11	29°53	26°52	14°32	11°20	19°26	6°13	12° 2	16°58	2°44	2°50	9°26	27° 7	T 23
W24	2 8 33	0♂19'21	29° 0	1♂32	28° 7	14°29	11°27	19°29	6°15	12° 3	17° 1	2°38	2°47	9°33	27° 9	W24
T 25	2 12 30	1°19'08	10♂50	3°11	29°22	14°26	11°33	19°32	6°17	12° 4	17° 3	2°35	2°44	9°39	27°10	T 25
F 26	2 16 26	2°18'56	22°48	4°50	0♂37	14°22	11°39	19°35	6°19	12° 5	17° 5	2°34	2°41	9°46	27°12	F 26
S 27	2 20 23	3°18'46	4♂59	6°28	1°53	14°17	11°46	19°38	6°21	12° 6	17° 8	2°34	2°38	9°53	27°13	S 27
S 28	2 24 19	4°18'38	17°28	8° 5	3° 8	14°11	11°52	19°41	6°23	12° 7	17°10	2°34	2°35	9°59	27°14	S 28
M29	2 28 16	5°18'32	0♂21	9°42	4°23	14° 4	11°58	19°45	6°25	12° 8	17°13	2°32	2°31	10° 6	27°15	M29
T 30	2 32 13	6°18'27	13°41	11°18	5°38	13°56	12° 4	19°48	6°27	12° 9	17°15	2°28	2°28	10°13	27°16	T 30
W31	2 36 9	7♂18'24	27♂30	12♂54	6♂53	13♂48	12♂ 9	19♂52	6♂29	12♂11	17♂17	2♂22	2♂25	10♂19	27♂17	W31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
M 1	3s 0	12s38	1n29	4n47	1n48	1n34	1n26	21n 8	1s 6	18n34	0n23	22s10	0s 2	23s38	0s19	22s 5
T 2	3 23	7 0	2 34	4 12	1 51	1 4	1 26	21 11	1 4	18 31	0 23	22 10	0 2	23 38	0 19	22 5
W 3	3 47	0 53	3 32	3 35	1 53	0 35	1 26	21 15	1 3	18 29	0 23	22 10	0 2	23 38	0 19	22 5
T 4	4 10	5n27	4 19	2 56	1 55	0 5	1 26	21 19	1 1	18 27	0 23	22 10	0 2	23 38	0 19	22 5
F 5	4 33	11 38	4 50	2 16	1 55	0s25	1 25	21 22	0 59	18 24	0 24	22 10	0 2	23 38	0 19	22 5
S 6	4 56	17 15	5 2	1 34	1 55	0 56	1 25	21 25	0 57	18 22	0 24	22 10	0 3	23 38	0 19	22 5
S 7	5 19	21 51	4 54	0 52	1 53	1 26	1 24	21 29	0 55	18 20	0 24	22 9	0 3	23 38	0 19	22 5
M 8	5 42	25 3	4 27	0 8	1 52	1 56	1 24	21 32	0 53	18 18	0 24	22 9	0 3	23 38	0 19	22 5
T 9	6 5	26 31	3 43	0s36	1 49	2 26	1 23	21 35	0 51	18 16	0 24	22 9	0 3	23 38	0 19	22 5
W10	6 28	26 11	2 45	1 20	1 46	2 56	1 23	21 38	0 49	18 13	0 24	22 9	0 3	23 38	0 19	22 5
T 11	6 50	24 10	1 38	2 5	1 43	3 26	1 22	21 42	0 47	18 11	0 24	22 9	0 3	23 38	0 19	22 5
F 12	7 13	20 45	0 27	2 50	1 39	3 56	1 21	21 45	0 45	18 9	0 25	22 9	0 3	23 38	0 19	22 5
S 13	7 36	16 16	0s44	3 35	1 35	4 25	1 20	21 48	0 43	18 7	0 25	22 9	0 3	23 38	0 19	22 5
S 14	7 58	11 6	1 52	4 20	1 30	4 55	1 19	21 50	0 40	18 5	0 25	22 8	0 3	23 38	0 19	22 5
M15	8 20	5 32	2 52	5 5	1 25	5 25	1 18	21 53	0 38	18 3	0 25	22 8	0 3	23 38	0 19	22 5
T 16	8 43	0s11	3 43	5 49	1 20	5 54	1 17	21 56	0 36	18 1	0 25	22 8	0 3	23 38	0 19	22 5
W17	9 5	5 47	4 22	6 34	1 14	6 24	1 16	21 59	0 34	17 59	0 25	22 8	0 3	23 37	0 19	22 5
T 18	9 27	11 5	4 47	7 18	1 9	6 53	1 15	22 2	0 31	17 57	0 26	22 7	0 3	23 37	0 19	22 5
F 19	9 48	15 52	4 59	8 1	1 3	7 22	1 14	22 4	0 29	17 55	0 26	22 7	0 4	23 37	0 19	22 5
S 20	10 10	19 58	4 57	8 44	0 57	7 51	1 13	22 7	0 26	17 54	0 26	22 7	0 4	23 37	0 19	22 5
S 21	10 32	23 11	4 41	9 27	0 50	8 20	1 11	22 9	0 24	17 52	0 26	22 6	0 4	23 37	0 19	22 5
M22	10 53	25 21	4 14	10 9	0 44	8 49	1 10	22 12	0 21	17 50	0 26	22 6	0 4	23 37	0 19	22 5
T 23	11 14	26 24	3 35	10 51	0 38	9 17	1 9	22 14	0 19	17 48	0 27	22 6	0 4	23 37	0 19	22 5
W24	11 35	26 14	2 47	11 32	0 31	9 46	1 7	22 17	0 16	17 47	0 27	22 5	0 4	23 37	0 19	22 5
T 25	11 56	24 52	1 52	12 12	0 24	10 14	1 6	22 19	0 13	17 45	0 27	22 5	0 4	23 37	0 19	22 5
F 26	12 17	22 22	0 51	12 51	0 18	10 41	1 4	22 21	0 11	17 43	0 27	22 5	0 4	23 37	0 19	22 5
S 27	12 37	18 49	0n13	13 30	0 11	11 9	1 2	22 23	0 8	17 42	0 27	22 4	0 4	23 37	0 19	22 5
S 28	12 58	14 22	1 18	14 8	0 4	11 36	1 1	22 25	0 5	17 40	0 27	22 4	0 4	23 36	0 19	22 5
M29	13 18	9 9	2 21	14 46	0s 3	12 3	0 59	22 27	0 2	17 39	0 28	22 4	0 4	23 36	0 19	22 4
T 30	13 37	3 21	3 19	15 22	0 9	12 30	0 57	22 29	0n 1	17 37	0 28	22 3	0 4	23 36	0 19	22 4
W31	13s57	2n47	4n 7	15s58	0s16	12s57	0n56	22n31	0n 4	17n36	0n28	22s 3	0s 4	23s36	0s19	22s 4

Julian Day Number = 2448165.5, Delta T = 57.38 sec
 Ecliptic obliquity = 23°26'32", Nutation = 0°00'14", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 24°36'40", Lahiri = 23°43'40"

ASTRODIENST EPHEMERIS for the year 1990

geocentric

NOVEMBER 1990

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	2 40 6	8♈18'23	11♏49	14♈29	8♈ 9	13°R38	12♈15	19♈55	6♈32	12♈12	17♈20	2°R13	2♈22	10♈26	27♈17	T 1
F 2	2 44 2	9°18'23	26°34	16° 4	9°24	13♈28	12°20	19°59	6°34	12°13	17°22	2° 2	2°19	10°33	27°18	F 2
S 3	2 47 59	10°18'25	11♏36	17°38	10°39	13°17	12°25	20° 3	6°36	12°14	17°25	1°50	2°15	10°39	27°19	S 3
S 4	2 51 55	11°18'29	26°47	19°12	11°54	13° 5	12°30	20° 7	6°39	12°16	17°27	1°39	2°12	10°46	27°19	S 4
M 5	2 55 52	12°18'35	11♈55	20°46	13°10	12°52	12°35	20°11	6°41	12°17	17°29	1°30	2° 9	10°53	27°19	M 5
T 6	2 59 48	13°18'43	26°51	22°19	14°25	12°39	12°39	20°15	6°44	12°18	17°32	1°24	2° 6	11° 0	27°20	T 6
W 7	3 3 45	14°18'53	11♏28	23°52	15°40	12°24	12°44	20°19	6°46	12°20	17°34	1°20	2° 3	11° 6	27°20	W 7
T 8	3 7 42	15°19'05	25°42	25°24	16°56	12° 9	12°48	20°23	6°49	12°21	17°37	1°D19	2° 0	11°13	27°R20	T 8
F 9	3 11 38	16°19'20	9♈31	26°57	18°11	11°53	12°52	20°27	6°51	12°23	17°39	1°R19	1°56	11°20	27°20	F 9
S 10	3 15 35	17°19'36	22°58	28°28	19°26	11°36	12°56	20°32	6°54	12°24	17°41	1°19	1°53	11°26	27°20	S 10
S 11	3 19 31	18°19'54	6♈ 5	29°59	20°41	11°19	13° 0	20°36	6°56	12°26	17°44	1°18	1°50	11°33	27°20	S 11
M12	3 23 28	19°20'14	18°54	1♈31	21°57	11° 1	13° 4	20°41	6°59	12°27	17°46	1°14	1°47	11°40	27°19	M12
T 13	3 27 24	20°20'36	1♈29	3° 1	23°12	10°42	13° 7	20°45	7° 2	12°29	17°49	1° 8	1°44	11°46	27°19	T 13
W14	3 31 21	21°21'00	13°53	4°32	24°27	10°23	13°10	20°50	7° 5	12°30	17°51	0°59	1°41	11°53	27°18	W14
T 15	3 35 17	22°21'25	26° 8	6° 2	25°43	10° 3	13°13	20°55	7° 7	12°32	17°54	0°47	1°37	12° 0	27°18	T 15
F 16	3 39 14	23°21'53	8♈14	7°31	26°58	9°43	13°16	20°59	7°10	12°33	17°56	0°34	1°34	12° 6	27°17	F 16
S 17	3 43 11	24°22'22	20°14	9° 1	28°13	9°22	13°19	21° 4	7°13	12°35	17°58	0°21	1°31	12°13	27°16	S 17
S 18	3 47 7	25°22'53	2♈ 9	10°29	29°29	9° 1	13°21	21° 9	7°16	12°37	18° 1	0° 9	1°28	12°20	27°15	S 18
M19	3 51 4	26°23'25	14° 0	11°58	0♈44	8°40	13°23	21°14	7°19	12°38	18° 3	29♈58	1°25	12°27	27°14	M19
T 20	3 55 0	27°23'59	25°48	13°26	1°59	8°18	13°26	21°19	7°22	12°40	18° 6	29°50	1°21	12°33	27°13	T 20
W21	3 58 57	28°24'35	7♈37	14°53	3°15	7°56	13°27	21°24	7°25	12°42	18° 8	29°44	1°18	12°40	27°12	W21
T 22	4 2 53	29°25'11	19°29	16°20	4°30	7°33	13°29	21°30	7°28	12°44	18°10	29°42	1°15	12°47	27°11	T 22
F 23	4 6 50	0♈25'49	1♈27	17°47	5°45	7°11	13°31	21°35	7°31	12°45	18°13	29°D41	1°12	12°53	27°10	F 23
S 24	4 10 47	1°26'28	13°36	19°12	7° 1	6°48	13°32	21°40	7°34	12°47	18°15	29°42	1° 9	13° 0	27° 8	S 24
S 25	4 14 43	2°27'08	26° 2	20°37	8°16	6°25	13°33	21°46	7°37	12°49	18°18	29°43	1° 6	13° 7	27° 7	S 25
M26	4 18 40	3°27'49	8♈49	22° 1	9°32	6° 3	13°34	21°51	7°40	12°51	18°20	29°R43	1° 2	13°13	27° 5	M26
T 27	4 22 36	4°28'31	22° 1	23°24	10°47	5°40	13°35	21°57	7°43	12°53	18°22	29°41	0°59	13°20	27° 3	T 27
W28	4 26 33	5°29'14	5♈42	24°46	12° 2	5°17	13°35	22° 2	7°46	12°55	18°25	29°37	0°56	13°27	27° 2	W28
T 29	4 30 29	6°29'59	19°54	26° 7	13°18	4°55	13°36	22° 8	7°49	12°56	18°27	29°31	0°53	13°33	27° 0	T 29
F 30	4 34 26	7♈30'44	4♈33	27♈26	14♈33	4♈33	13°R36	22♈14	7♈53	12♈58	18♈29	29♈24	0♈50	13♈40	26♈58	F 30

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	14s17	9n 0	4n42	16s33	0s23	13s23	0n54	22n33	0n 6	17n35	0n28	22s 2	0s 4	23s36	0s19	22s 4	0n49	2s45	14n49	19s40	19s38	26s 2	13n48	7s 2			
F 2	14 36	14 53	4 59	17 7	0 29	13 48	0 52	22 34	0 9	17 33	0 28	22 2	0 5	23 36	0 19	22 4	0 49	2 46	14 49	19 43	19 39	26 2	13 48	7 2			
S 3	14 55	20 0	4 56	17 40	0 36	14 14	0 50	22 36	0 12	17 32	0 29	22 1	0 5	23 36	0 19	22 4	0 49	2 47	14 49	19 45	19 40	26 2	13 47	7 3			
S 4	15 13	23 51	4 32	18 13	0 43	14 39	0 48	22 38	0 15	17 31	0 29	22 1	0 5	23 36	0 19	22 4	0 49	2 48	14 49	19 48	19 40	26 3	13 46	7 4			
M 5	15 32	26 1	3 50	18 44	0 49	15 4	0 46	22 39	0 18	17 30	0 29	22 0	0 5	23 35	0 19	22 4	0 49	2 48	14 49	19 50	19 41	26 3	13 45	7 4			
T 6	15 50	26 16	2 51	19 15	0 55	15 28	0 44	22 40	0 22	17 29	0 29	22 0	0 5	23 35	0 19	22 4	0 49	2 49	14 49	19 51	19 42	26 4	13 45	7 5			
W 7	16 8	24 39	1 43	19 44	1 2	15 52	0 42	22 41	0 25	17 28	0 29	21 59	0 5	23 35	0 19	22 4	0 49	2 50	14 49	19 52	19 42	26 4	13 44	7 6			
T 8	16 26	21 30	0 30	20 13	1 8	16 16	0 40	22 43	0 28	17 27	0 30	21 59	0 5	23 35	0 19	22 4	0 49	2 50	14 49	19 52	19 43	26 5	13 43	7 6			
F 9	16 43	17 10	0s43	20 41	1 14	16 39	0 38	22 43	0 31	17 26	0 30	21 58	0 5	23 35	0 19	22 4	0 49	2 51	14 48	19 52	19 44	26 5	13 43	7 7			
S 10	17 0	12 6	1 52	21 7	1 20	17 1	0 35	22 44	0 34	17 25	0 30	21 57	0 5	23 35	0 19	22 3	0 49	2 52	14 48	19 52	19 45	26 5	13 42	7 8			
S 11	17 17	6 36	2 53	21 33	1 26	17 24	0 33	22 45	0 37	17 24	0 30	21 57	0 5	23 35	0 19	22 3	0 49	2 52	14 48	19 52	19 45	26 6	13 41	7 8			
M12	17 34	0 57	3 44	21 57	1 31	17 45	0 31	22 46	0 40	17 23	0 30	21 56	0 5	23 34	0 19	22 3	0 49	2 53	14 48	19 53	19 46	26 6	13 41	7 9			
T 13	17 50	4s37	4 23	22 21	1 37	18 7	0 29	22 46	0 43	17 22	0 31	21 56	0 5	23 34	0 19	22 3	0 48	2 54	14 48	19 55	19 47	26 6	13 40	7 10			
W14	18 6	9 54	4 49	22 43	1 42	18 27	0 27	22 46	0 46	17 21	0 31	21 55	0 5	23 34	0 19	22 3	0 48	2 54	14 48	19 57	19 47	26 7	13 40	7 10			
T 15	18 22	14 45	5 1	23 4	1 47	18 48	0 24	22 47	0 50	17 21	0 31	21 54	0 5	23 34	0 19	22 3	0 48	2 55	14 48	19 59	19 48	26 7	13 39	7 11			
F 16	18 37	18 58	4 59	23 24	1 52	19 8	0 22	22 47	0 53	17 20	0 31	21 54	0 5	23 34	0 19	22 3	0 48	2 56	14 48	20 2	19 49	26 8	13 38	7 12			
S 17	18 52	22 22	4 44	23 43	1 56	19 27	0 20	22 47	0 56	17 20	0 31	21 53	0 6	23 34	0 19	22 3	0 48	2 56	14 48	20 5	19 49	26 8	13 38	7 12			
S 18	19 7	24 47	4 17	24 1	2 1	19 46	0 17	22 46	0 59	17 19	0 32	21 52	0 6	23 34	0 19	22 2	0 48	2 57	14 48	20 7	19 50	26 8	13 37	7 13			
M19	19 21	26 6	3 38	24 17	2 5	20 4	0 15	22 46	1 2	17 19	0 32	21 52	0 6	23 33	0 19	22 2	0 48	2 58	14 48	20 10	19 51	26 8	13 37	7 14			
T 20	19 35	26 13	2 50	24 32	2 9	20 21	0 13	22 46	1 5	17 18	0 32	21 51	0 6	23 33	0 19	22 2	0 48	2 58	14 48	20 11	19 52	26 9	13 37	7 14			
W21	19 48	25 8	1 55	24 46	2 12	20 38	0 10	22 45	1 8	17 18	0 32	21 50	0 6	23 33	0 19	22 2	0 48	2 59	14 48	20 12	19 52	26 9	13 36	7 15			
T 22	20 2	22 56	0 54	24 59	2 15	20 55	0 8	22 44	1 11	17 18	0 32	21 49	0 6	23 33	0 19	22 2	0 48	2 59	14 48	20 13	19 53	26 9	13 36	7 16			
F 23	20 15	19 41	0n 9	25 10	2 18	21 11	0 5	22 44	1 14	17 17	0 33	21 49	0 6	23 33	0 19	22 2	0 48	3 0	14 48	20 13	19 54	26 10	13 35	7 16			
S 24	20 27	15 34	1 14	25 20	2 21	21 26	0 3	22 43	1 17	17 17	0 33	21 48	0 6	23 33	0 19	22 2	0 48	3 0	14 48	20 13	19 54	26 10	13 35	7 17			
S 25	20 39	10 42	2 16	25 29	2 23	21 41	0 1	22 41	1 20	17 17	0 33	21 47	0 6	23 32	0 19	22 2	0 48	3 1	14 49	20 13	19 55	26 10	13 35	7 18			
M26	20 51	5 16	3 14	25 36	2 25	21 55	0s 2	22 40	1 22	17 17	0 33	21 46	0 6	23 32	0 19	22 1	0 48	3 2	14 49	20 13	19 56	26 11	13 34	7 18			
T 27	21 2	0n34	4 3	25 42	2 26	22 8	0 4	22 39	1 25	17 17	0 33	21 45	0 6	23 32	0 19	22 1	0 48	3 2	14 49	20 13	19 56	26 11	13 34	7 19			
W28	21 13	6 33	4 41	25 47	2 27	22 21	0 7	22 38	1 28	17 17	0 34	21 45	0 6	23 32	0 19	22 1	0 48	3 3	14 49	20 14	19 57	26 11	13 34	7 19			
T 29	21 24	12 36	5 2	25 50	2 27	22 33	0 9	22 36	1 31	17 17	0 34	21 44	0 6	23 32	0 19	22 1	0 48	3 3	14 49	20 15	19 58	26 11	13 34	7 20			
F 30	21s34	17n50	5n 5	25s52	2s27	22s44	0s11	22n35	1n33	17n17	0n34	21s43	0s 6	23s31	0s19	22s 1	0n48	3s 4	14n49	20s17	19s58	26s12	13n33	7s21			

ASTRODIENST EPHEMERIS for the year 1990

geocentric

DECEMBER 1990

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	4 38 22	8°31'30	19°36	28°44	15°48	4°R11	13°R36	22°319	7°356	13°3 0	18°M32	29°R16	0°47	13°47	26°R56	S 1
S 2	4 42 19	9°32'18	4°II52	29°59	17° 4	3°II49	13°II35	22°25	7°59	13° 2	18°34	29°3 8	0°43	13°53	26°53	S 2
M 3	4 46 16	10°33'06	20°12	1°313	18°19	3°27	13°35	22°31	8° 2	13° 4	18°36	29° 1	0°40	14° 0	26°51	M 3
T 4	4 50 12	11°33'56	5°523	2°24	19°34	3° 6	13°34	22°37	8° 6	13° 6	18°39	28°57	0°37	14° 7	26°49	T 4
W 5	4 54 9	12°34'48	20°17	3°32	20°50	2°46	13°34	22°43	8° 9	13° 8	18°41	28°55	0°34	14°14	26°47	W 5
T 6	4 58 5	13°35'40	4°II47	4°36	22° 5	2°26	13°32	22°49	8°12	13°10	18°43	28°D55	0°31	14°20	26°44	T 6
F 7	5 2 2	14°36'34	18°50	5°37	23°20	2° 6	13°31	22°55	8°16	13°12	18°45	28°56	0°27	14°27	26°42	F 7
S 8	5 5 58	15°37'29	2°II26	6°33	24°36	1°47	13°30	23° 1	8°19	13°14	18°48	28°57	0°24	14°34	26°39	S 8
S 9	5 9 55	16°38'25	15°37	7°24	25°51	1°28	13°28	23° 7	8°23	13°16	18°50	28°R58	0°21	14°40	26°36	S 9
M10	5 13 51	17°39'22	28°25	8° 9	27° 6	1°10	13°26	23°14	8°26	13°19	18°52	28°57	0°18	14°47	26°33	M10
T 11	5 17 48	18°40'20	10°II56	8°48	28°22	0°53	13°24	23°20	8°29	13°21	18°54	28°55	0°15	14°54	26°31	T 11
W12	5 21 45	19°41'20	23°12	9°19	29°37	0°36	13°22	23°26	8°33	13°23	18°56	28°50	0°12	15° 0	26°28	W12
T 13	5 25 41	20°42'21	5°II18	9°43	0°52	0°20	13°20	23°32	8°36	13°25	18°58	28°44	0° 8	15° 7	26°25	T 13
F 14	5 29 38	21°43'23	17°16	9°56	2° 8	0° 5	13°17	23°39	8°40	13°27	19° 1	28°38	0° 5	15°14	26°22	F 14
S 15	5 33 34	22°44'25	29° 9	10°R 0	3°23	29°II50	13°14	23°45	8°43	13°29	19° 3	28°30	0° 2	15°20	26°18	S 15
S 16	5 37 31	23°45'29	10°II59	9°54	4°38	29°36	13°11	23°52	8°47	13°31	19° 5	28°23	29°359	15°27	26°15	S 16
M17	5 41 27	24°46'33	22°49	9°36	5°54	29°23	13° 8	23°58	8°50	13°34	19° 7	28°18	29°56	15°34	26°12	M17
T 18	5 45 24	25°47'39	4°339	9° 6	7° 9	29°11	13° 5	24° 5	8°54	13°36	19° 9	28°14	29°53	15°40	26° 9	T 18
W19	5 49 20	26°48'44	16°32	8°25	8°25	29° 0	13° 1	24°11	8°57	13°38	19°11	28°11	29°49	15°47	26° 5	W19
T 20	5 53 17	27°49'50	28°30	7°32	9°40	28°49	12°57	24°18	9° 1	13°40	19°13	28°D10	29°46	15°54	26° 2	T 20
F 21	5 57 14	28°50'57	10°II36	6°30	10°55	28°39	12°53	24°25	9° 4	13°42	19°15	28°11	29°43	16° 1	25°58	F 21
S 22	6 1 10	29°52'04	22°51	5°19	12°10	28°30	12°49	24°31	9° 8	13°45	19°17	28°13	29°40	16° 7	25°55	S 22
S 23	6 5 7	0°353'11	5°II21	4° 1	13°26	28°22	12°45	24°38	9°11	13°47	19°19	28°14	29°37	16°14	25°51	S 23
M24	6 9 3	1°54'18	18° 7	2°40	14°41	28°14	12°41	24°45	9°15	13°49	19°21	28°16	29°33	16°21	25°47	M24
T 25	6 13 0	2°55'25	1°II15	1°18	15°56	28° 8	12°36	24°52	9°19	13°51	19°23	28°R17	29°30	16°27	25°44	T 25
W26	6 16 56	3°56'33	14°46	29°II57	17°12	28° 2	12°31	24°58	9°22	13°53	19°25	28°16	29°27	16°34	25°40	W26
T 27	6 20 53	4°57'40	28°44	28°40	18°27	27°57	12°26	25° 5	9°26	13°56	19°27	28°15	29°24	16°41	25°36	T 27
F 28	6 24 49	5°58'48	13°II 7	27°29	19°42	27°53	12°21	25°12	9°29	13°58	19°28	28°12	29°21	16°47	25°32	F 28
S 29	6 28 46	6°59'56	27°52	26°27	20°58	27°50	12°16	25°19	9°33	14° 0	19°30	28° 9	29°18	16°54	25°28	S 29
S 30	6 32 43	8° 1'03	12°II54	25°34	22°13	27°48	12°10	25°26	9°37	14° 2	19°32	28° 6	29°14	17° 1	25°24	S 30
M31	6 36 39	9°3 2'11	28°II 5	24°II51	23°328	27°II46	12°II 5	25°333	9°340	14°3 5	19°II34	28°3 4	29°311	17°II 7	25°20	M31

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	21s44	22n15	4n48	25s52	2s26	22s55	0s14	22n33	1n36	17n18	0n34	21s42	0s 6	23s31	0s19	22s 1	0n48	3s 4	14n49	20s18	19s59	26s12	13n33	7s21			
S 2	21 53	25 12	4 10	25 51	2 24	23 5	0 16	22 31	1 38	17 18	0 35	21 41	0 7	23 31	0 19	22 0	0 48	3 4	14 49	20 20	20 0	26 12	13 33	7 22			
M 3	22 2	26 17	3 13	25 48	2 22	23 14	0 19	22 30	1 41	17 18	0 35	21 40	0 7	23 31	0 19	22 0	0 48	3 5	14 49	20 21	20 1	26 12	13 33	7 22			
T 4	22 10	25 23	2 4	25 44	2 19	23 23	0 21	22 28	1 43	17 19	0 35	21 39	0 7	23 31	0 19	22 0	0 48	3 5	14 50	20 22	20 1	26 12	13 33	7 23			
W 5	22 18	22 41	0 46	25 39	2 15	23 31	0 23	22 26	1 45	17 19	0 35	21 38	0 7	23 30	0 19	22 0	0 48	3 6	14 50	20 23	20 2	26 13	13 33	7 23			
T 6	22 26	18 33	0s32	25 32	2 11	23 38	0 26	22 24	1 47	17 20	0 35	21 37	0 7	23 30	0 19	22 0	0 48	3 6	14 50	20 23	20 3	26 13	13 32	7 24			
F 7	22 33	13 30	1 46	25 24	2 5	23 44	0 28	22 22	1 50	17 20	0 36	21 36	0 7	23 30	0 19	22 0	0 48	3 7	14 50	20 23	20 3	26 13	13 32	7 25			
S 8	22 40	7 56	2 51	25 15	1 58	23 50	0 30	22 20	1 52	17 21	0 36	21 36	0 7	23 30	0 19	21 59	0 48	3 7	14 50	20 22	20 4	26 13	13 32	7 25			
S 9	22 46	2 12	3 46	25 5	1 51	23 55	0 33	22 19	1 54	17 21	0 36	21 35	0 7	23 30	0 19	21 59	0 48	3 7	14 50	20 22	20 5	26 13	13 32	7 26			
M10	22 52	3s28	4 27	24 53	1 42	24 0	0 35	22 17	1 55	17 22	0 36	21 34	0 7	23 29	0 19	21 59	0 48	3 8	14 51	20 22	20 5	26 13	13 32	7 26			
T 11	22 58	8 51	4 55	24 41	1 32	24 3	0 37	22 15	1 57	17 23	0 37	21 33	0 7	23 29	0 19	21 59	0 48	3 8	14 51	20 23	20 6	26 14	13 32	7 27			
W12	23 2	13 47	5 9	24 27	1 21	24 6	0 39	22 13	1 59	17 24	0 37	21 32	0 7	23 29	0 19	21 59	0 48	3 9	14 51	20 24	20 7	26 14	13 32	7 27			
T 13	23 7	18 7	5 8	24 13	1 8	24 8	0 42	22 11	2 1	17 25	0 37	21 31	0 7	23 29	0 19	21 58	0 48	3 9	14 51	20 25	20 7	26 14	13 32	7 28			
F 14	23 11	21 41	4 54	23 58	0 54	24 9	0 44	22 10	2 2	17 26	0 37	21 30	0 7	23 29	0 19	21 58	0 48	3 9	14 51	20 26	20 8	26 14	13 33	7 28			
S 15	23 15	24 19	4 27	23 43	0 39	24 10	0 46	22 8	2 4	17 27	0 37	21 28	0 7	23 28	0 19	21 58	0 48	3 10	14 52	20 28	20 9	26 14	13 33	7 29			
S 16	23 18	25 52	3 49	23 27	0 23	24 10	0 48	22 7	2 5	17 28	0 38	21 27	0 7	23 28	0 19	21 58	0 48	3 10	14 52	20 29	20 9	26 14	13 33	7 29			
M17	23 20	26 16	3 1	23 11	0 5	24 9	0 50	22 5	2 7	17 29	0 38	21 26	0 8	23 28	0 19	21 58	0 48	3 10	14 52	20 30	20 10	26 14	13 33	7 29			
T 18	23 22	25 27	2 5	22 54	0n14	24 7	0 52	22 4	2 8	17 30	0 38	21 25	0 8	23 28	0 19	21 57	0 48	3 10	14 52	20 31	20 11	26 15	13 33	7 30			
W19	23 24	23 28	1 3	22 37	0 33	24 5	0 54	22 2	2 9	17 31	0 38	21 24	0 8	23 27	0 19	21 57	0 48	3 11	14 53	20 32	20 11	26 15	13 33	7 30			
T 20	23 25	20 26	0n 2	22 21	0 53	24 2	0 56	22 1	2 11	17 32	0 38	21 23	0 8	23 27	0 19	21 57	0 48	3 11	14 53	20 32	20 12	26 15	13 34	7 31			
F 21	23 26	16 30	1 8	22 4	1 13	23 58	0 58	22 0	2 12	17 34	0 39	21 22	0 8	23 27	0 19	21 57	0 48	3 11	14 53	20 32	20 13	26 15	13 34	7 31			
S 22	23 26	11 50	2 11	21 48	1 33	23 53	1 0	21 59	2 13	17 35	0 39	21 21	0 8	23 27	0 19	21 57	0 48	3 11	14 53	20 31	20 13	26 15	13 34	7 31			
S 23	23 26	6 36	3 10	21 32	1 51	23 48	1 2	21 58	2 14	17 37	0 39	21 20	0 8	23 26	0 19	21 56	0 48	3 12	14 54	20 31	20 14	26 15	13 34	7 32			
M24	23 26	1 0	4 1	21 16	2 9	23 42	1 4	21 58	2 15	17 38	0 39	21 19	0 8	23 26	0 19	21 56	0 48	3 12	14 54	20 31	20 15	26 15	13 35	7 32			
T 25	23 25	4n47	4 41	21 2	2 24	23 35	1 6	21 57	2 16	17 40	0 39	21 17	0 8	23 26	0 19	21 56	0 48	3 12	14 54	20 30	20 15	26 15	13 35	7 33			
W26	23 23	10 32	5 6	20 49	2 38	23 27	1 8	21 56	2 16	17 41	0 40	21 16	0 8	23 26	0 19	21 56	0 48	3 12	14 54	20 31	20 16	26 15	13 35	7 33			
T 27	23 21	15 55	5 15	20 37	2 49	23 19	1 9	21 56	2 17	17 43	0 40	21 15	0 8	23 25	0 19	21 56	0 47	3 12	14 55	20 31	20 17	26 15	13 36	7 33			
F 28	23 18	20 36	5 4	20 28	2 57	23 10	1 11	21 56	2 18	17 44	0 40	21 14	0 8	23 25	0 19	21 55	0 47	3 13	14 55	20 31	20 17	26 15	13 36	7 33			
S 29	23 15	24 8	4 34	20 20	3 4	23 0	1 13	21 56	2 19	17 46	0 40	21 13	0 8	23 25	0 19	21 55	0 47	3 13	14 55	20 32	20 18	26 15	13 36	7 34			
S 30	23 12	26 3	3 44	20 15	3 7	22 50	1 14	21 56	2 19	17 48	0 41	21 12	0 8	23 25	0 19	21 55	0 47	3 13	14 56	20 33	20 19	26 15	13 37	7 34			
M31	23 s 8	26n 4	2n38	20s12	3n 9	22s39	1s16	21n56	2n20	17n50	0n41	21s10	0s 9	23s24	0s19	21s55	0n47	3s13	14n56	20s33	20s19	26s15	13n37	7s34			