



# Astrodienst Ephemeris Tables for the year 1948

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 1948

### geocentric

**FEBRUARY 1948**

00:00 UT

Day	Sid.t	☉	☽	♈	♀	♊	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	Day
S 1	8 40 29	11≈ 2'19	28♂38	28≈38	16♂59	4°R 1	21♂21	19°R54	22°R28	12°R55	13°R50	19°R34	19♂11	10≈49	23♂34	S 1	
M 2	8 44 25	12° 3'13	11♂48	29°58	18°12	3♂43	21°32	19♂49	22♂26	12♂54	13♂49	19♂33	19° 7	10°56	23°38	M 2	
T 3	8 48 22	13° 4'06	24°33	1♂12	19°24	3°24	21°43	19°44	22°25	12°53	13°47	19°33	19° 4	11° 3	23°42	T 3	
W 4	8 52 18	14° 4'58	7♂ 0	2°20	20°37	3° 4	21°53	19°40	22°24	12°53	13°46	19°32	19° 1	11°10	23°45	W 4	
T 5	8 56 15	15° 5'50	19°13	3°22	21°50	2°44	22° 4	19°35	22°22	12°52	13°44	19°29	18°58	11°16	23°49	T 5	
F 6	9 0 12	16° 6'40	1♂15	4°16	23° 2	2°23	22°15	19°30	22°21	12°51	13°43	19°24	18°55	11°23	23°52	F 6	
S 7	9 4 8	17° 7'30	13°11	5° 2	24°14	2° 2	22°25	19°25	22°20	12°51	13°42	19°15	18°52	11°30	23°55	S 7	
S 8	9 8 5	18° 8'18	25° 4	5°39	25°27	1°41	22°35	19°20	22°19	12°50	13°40	19° 3	18°48	11°37	23°59	S 8	
M 9	9 12 1	19° 9'05	6≈56	6° 7	26°39	1°18	22°45	19°15	22°18	12°49	13°39	18°49	18°45	11°43	24° 2	M 9	
T 10	9 15 58	20° 9'51	18°48	6°24	27°51	0°56	22°56	19°10	22°17	12°48	13°37	18°34	18°42	11°50	24° 5	T 10	
W 11	9 19 54	21°10'36	0♂41	6°R31	29° 3	0°33	23° 6	19° 5	22°16	12°47	13°36	18°19	18°39	11°57	24° 7	W 11	
T 12	9 23 51	22°11'19	12°38	6°27	0°Y15	0°10	23°15	19° 0	22°15	12°47	13°35	18° 5	18°36	12° 3	24°10	T 12	
F 13	9 27 47	23°12'01	24°39	6°13	1°27	29♂47	23°25	18°56	22°14	12°46	13°33	17°53	18°33	12°10	24°13	F 13	
S 14	9 31 44	24°12'41	6°Y46	5°48	2°39	29°23	23°35	18°51	22°13	12°45	13°32	17°45	18°29	12°17	24°15	S 14	
S 15	9 35 40	25°13'19	19° 2	5°13	3°51	29° 0	23°44	18°46	22°12	12°44	13°30	17°39	18°26	12°24	24°18	S 15	
M 16	9 39 37	26°13'56	1♂30	4°29	5° 3	28°36	23°54	18°41	22°12	12°43	13°29	17°36	18°23	12°30	24°20	M 16	
T 17	9 43 34	27°14'31	14°13	3°38	6°14	28°12	24° 3	18°36	22°11	12°42	13°28	17°D35	18°20	12°37	24°22	T 17	
W 18	9 47 30	28°15'05	27°16	2°40	7°26	27°48	24°12	18°31	22°10	12°41	13°26	17°R35	18°17	12°44	24°25	W 18	
T 19	9 51 27	29°15'36	10♂43	1°37	8°37	27°24	24°22	18°27	22°10	12°40	13°25	17°35	18°13	12°51	24°27	T 19	
F 20	9 55 23	0♂16'06	24°35	0°31	9°48	27° 0	24°31	18°22	22° 9	12°38	13°23	17°33	18°10	12°57	24°28	F 20	
S 21	9 59 20	1°16'34	8♂55	29≈24	10°59	26°36	24°39	18°17	22° 9	12°37	13°22	17°29	18° 7	13° 4	24°30	S 21	
S 22	10 3 16	2°17'00	23°41	28°17	12°10	26°13	24°48	18°13	22° 8	12°36	13°21	17°22	18° 4	13°11	24°32	S 22	
M 23	10 7 13	3°17'24	8♂46	27°12	13°21	25°49	24°57	18° 8	22° 8	12°35	13°19	17°12	18° 1	13°17	24°33	M 23	
T 24	10 11 10	4°17'47	24° 2	26°11	14°32	25°26	25° 5	18° 3	22° 7	12°34	13°18	17° 1	17°58	13°24	24°35	T 24	
W 25	10 15 6	5°18'07	9♂18	25°14	15°43	25° 3	25°14	17°59	22° 7	12°33	13°17	16°51	17°54	13°31	24°36	W 25	
T 26	10 19 3	6°18'26	24°23	24°22	16°53	24°41	25°22	17°54	22° 7	12°31	13°16	16°41	17°51	13°38	24°37	T 26	
F 27	10 22 59	7°18'43	9♂ 7	23°37	18° 4	24°19	25°30	17°50	22° 7	12°30	13°14	16°34	17°48	13°44	24°39	F 27	
S 28	10 26 56	8°18'59	23°24	22°59	19°14	23°57	25°38	17°45	22° 7	12°29	13°13	16°29	17°45	13°51	24°40	S 28	
S 29	10 30 52	9♂19'13	7♂11	22≈28	20°Y24	23♂35	25♂46	17♂41	22♂ 7	12♂28	13♂12	16♂27	17♂42	13≈58	24♂41	S 29	

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	17s28	9s18	1n48	12s19	0s23	6s14	1s11	14n 4	4n20	22s38	0n32	16n 0	1n13	23n23	0n 9	3s40	1n34	23n44	7n23	17n38	17n31	22s25	16s33	2n12	
M 2	17 11	14 44	0 41	11 39	0 10	5 43	1 8	14 12	4 21	22 39	0 32	16 2	1 13	23 23	0 9	3 39	1 34	23 45	7 23	17 38	17 31	22 23	16 33	2 12	
T 3	16 54	19 21	0s26	11 0	0n 3	5 12	1 6	14 20	4 23	22 40	0 32	16 3	1 13	23 23	0 9	3 39	1 34	23 45	7 23	17 38	17 30	22 21	16 34	2 13	
W 4	16 37	22 59	1 31	10 22	0 18	4 41	1 3	14 29	4 24	22 40	0 32	16 5	1 13	23 23	0 9	3 39	1 34	23 46	7 24	17 37	17 29	22 20	16 34	2 14	
T 5	16 19	25 30	2 30	9 46	0 33	4 10	1 0	14 37	4 25	22 41	0 32	16 6	1 13	23 23	0 9	3 39	1 34	23 46	7 24	17 37	17 28	22 18	16 34	2 14	
F 6	16 1	26 47	3 21	9 12	0 49	3 39	0 58	14 45	4 26	22 42	0 32	16 8	1 13	23 23	0 9	3 38	1 34	23 47	7 24	17 35	17 27	22 16	16 35	2 14	
S 7	15 43	26 49	4 3	8 40	1 5	3 8	0 55	14 54	4 27	22 42	0 32	16 10	1 13	23 23	0 9	3 38	1 34	23 47	7 24	17 33	17 26	22 14	16 35	2 15	
S 8	15 24	25 37	4 34	8 11	1 21	2 36	0 52	15 2	4 27	22 43	0 32	16 11	1 13	23 23	0 9	3 38	1 34	23 48	7 24	17 29	17 25	22 12	16 35	2 15	
M 9	15 5	23 16	4 53	7 45	1 38	2 5	0 49	15 11	4 28	22 43	0 32	16 13	1 13	23 23	0 9	3 37	1 34	23 48	7 24	17 26	17 25	22 11	16 35	2 16	
T 10	14 46	19 56	4 59	7 24	1 54	1 34	0 46	15 20	4 29	22 44	0 32	16 15	1 14	23 22	0 9	3 37	1 34	23 49	7 24	17 21	17 24	22 9	16 36	2 16	
W 11	14 27	15 47	4 52	7 6	2 11	1 2	0 43	15 28	4 29	22 45	0 32	16 16	1 14	23 22	0 9	3 36	1 34	23 49	7 24	17 17	17 23	22 7	16 36	2 17	
T 12	14 7	11 1	4 32	6 53	2 27	0 31	0 40	15 37	4 30	22 45	0 32	16 18	1 14	23 22	0 9	3 36	1 34	23 50	7 24	17 13	17 22	22 5	16 36	2 18	
F 13	13 47	5 48	4 1	6 44	2 42	0n 1	0 37	15 46	4 30	22 46	0 32	16 19	1 14	23 22	0 9	3 36	1 34	23 50	7 24	17 10	17 21	22 3	16 36	2 18	
S 14	13 27	0 20	3 17	6 40	2 56	0 33	0 34	15 54	4 30	22 46	0 32	16 21	1 14	23 22	0 9	3 35	1 34	23 51	7 24	17 8	17 20	22 2	16 36	2 19	
S 15	13 7	5n14	2 25	6 41	3 8	1 4	0 30	16 3	4 30	22 47	0 32	16 23	1 14	23 22	0 9	3 35	1 34	23 51	7 24	17 6	17 19	22 0	16 36	2 19	
M 16	12 47	10 41	1 24	6 46	3 19	1 36	0 27	16 11	4 30	22 47	0 31	16 24	1 14	23 22	0 9	3 34	1 34	23 52	7 24	17 5	17 18	21 58	16 36	2 20	
T 17	12 26	15 50	0 18	6 56	3 29	2 7	0 23	16 19	4 30	22 47	0 31	16 26	1 14	23 22	0 9	3 34	1 35	23 52	7 24	17 5	17 18	21 56	16 36	2 20	
W 18	12 5	20 23	0n51	7 10	3 36	2 39	0 20	16 27	4 30	22 48	0 31	16 27	1 14	23 22	0 9	3 33	1 35	23 52	7 24	17 5	17 17	21 54	16 36	2 21	
T 19	11 44	24 1	1 59	7 28	3 41	3 10	0 16	16 35	4 29	22 48	0 31	16 29	1 14	23 22	0 9	3 33	1 35	23 53	7 24	17 5	17 16	21 52	16 36	2 21	
F 20	11 23	26 22	3 2	7 49	3 43	3 41	0 13	16 43	4 29	22 49	0 31	16 30	1 14	23 22	0 9	3 33	1 35	23 53	7 24	17 4	17 15	21 50	16 36	2 22	
S 21	11 1	27 4	3 56	8 12	3 44	4 13	0 9	16 51	4 28	22 49	0 31	16 32	1 14	23 22	0 9	3 32	1 35	23 54	7 24	17 3	17 14	21 48	16 36	2 22	
S 22	10 40	25 54	4 36	8 36	3 42	4 44	0 5	16 58	4 28	22 49	0 31	16 33	1 14	23 22	0 9	3 32	1 35	23 54	7 24	17 1	17 13	21 47	16 36	2 23	
M 23	10 18	22 52	4 58	9 2	3 38	5 15	0 2	17 6	4 27	22 50	0 31	16 35	1 15	23 22	0 9	3 31	1 35	23 55	7 24	16 59	17 12	21 45	16 36	2 24	
T 24	9 56	18 13	4 59	9 29	3 31	5 46	0n 2	17 13	4 26	22 50	0 31	16 36	1 15	23 22	0 9	3 31	1 35	23 55	7 24	16 56	17 11	21 43	16 36	2 24	
W 25	9 34	12 23	4 39	9 55	3 24	6 17	0 6	17 20	4 25	22 50	0 31	16 38	1 15	23 22	0 9	3 30	1 35	23 55	7 24	16 52	17 10	21 41	16 35	2 25	
T 26	9 12	5 54	3 59	10 21	3 14	6 47	0 10	17 26	4 24	22 51	0 31	16 39	1 15	23 22	0 9	3 30	1 35	23 56	7 24	16 50	17 10	21 39	16 35	2 25	
F 27	8 50	0s47	3 4	10 46	3 4	7 18	0 14	17 33	4 23	22 51	0 31	16 41	1 15	23 22	0 9	3 29	1 35	23 56	7 24	16 48	17 9	21 37	16 35	2 26	
S 28	8 27	7 15	1 59	11 9	2 52	7 48	0 18	17 39	4 21	22 51	0 31	16 42	1 15	23 22	0 9	3 29	1 35	23 56	7 24	16 46	17 8	21 35	16 34	2 26	
S 29	8s 5	13s 8	0n49	11s31	2n40	8n18	0n22	17n45	4n20	22s51	0n31	16n44	1n15	23n22	0n 9	3s28	1n35	23n57	7n24	16n46	17n 7	21s33	16s34	2n27	

Julian Day Number = 2432582.5. Delta T = 28.27 sec

Ecliptic obliquity = 23°26'52, Nutation = - 0°00'12, out-of-bounds declination in red

Avanamsha: Fagan/Bradley = 24°00'55, Lahiri = 23°07'55

## ASTRODIENST EPHEMERIS for the year 1948

geocentric

MARCH 1948

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	10 34 49	10♈19'26	20♌29	22°R 4	21°V34	23°R15	25°♂54	17°R37	22°D 7	12°R26	13°R10	16°D27	17♍39	14°♌4	24♌41	M 1
T 2	10 38 45	11°19'37	3♈21	21°♌47	22°44	22°♌54	26° 1	17°♌32	22°II 7	12°♌25	13°♌ 9	16°♌27	17°35	14°11	24°42	T 2
W 3	10 42 42	12°19'47	15°51	21°36	23°53	22°34	26° 9	17°28	22° 7	12°24	13° 8	16°R28	17°32	14°18	24°43	W 3
T 4	10 46 38	13°19'55	28° 4	21°D33	25° 3	22°15	26°16	17°24	22° 7	12°22	13° 7	16°26	17°29	14°25	24°43	T 4
F 5	10 50 35	14°20'02	10♈5	21°36	26°13	21°56	26°23	17°20	22° 7	12°21	13° 6	16°23	17°26	14°31	24°43	F 5
S 6	10 54 32	15°20'07	21°59	21°45	27°22	21°38	26°30	17°16	22° 7	12°19	13° 4	16°17	17°23	14°38	24°44	S 6
S 7	10 58 28	16°20'10	3♈50	22° 0	28°31	21°21	26°37	17°12	22° 8	12°18	13° 3	16° 9	17°19	14°45	24°44	S 7
M 8	11 2 25	17°20'12	15°41	22°21	29°40	21° 4	26°44	17° 8	22° 8	12°16	13° 2	15°58	17°16	14°52	24°R44	M 8
T 9	11 6 21	18°20'12	27°34	22°46	0♈49	20°48	26°50	17° 4	22° 9	12°15	13° 1	15°47	17°13	14°58	24°44	T 9
W10	11 10 18	19°20'09	9♈32	23°17	1°57	20°32	26°57	17° 0	22° 9	12°14	13° 0	15°36	17°10	15° 5	24°43	W10
T 11	11 14 14	20°20'05	21°37	23°52	3° 6	20°18	27° 3	16°57	22°10	12°12	12°59	15°25	17° 7	15°12	24°43	T 11
F 12	11 18 11	21°20'00	3°V48	24°31	4°14	20° 4	27° 9	16°53	22°10	12°11	12°58	15°16	17° 4	15°18	24°43	F 12
S 13	11 22 7	22°19'52	16° 7	25°14	5°22	19°51	27°15	16°50	22°11	12° 9	12°57	15°10	17° 0	15°25	24°42	S 13
S 14	11 26 4	23°19'42	28°36	26° 0	6°30	19°38	27°21	16°46	22°11	12° 7	12°56	15° 6	16°57	15°32	24°41	S 14
M15	11 30 1	24°19'29	11♈16	26°50	7°38	19°27	27°27	16°43	22°12	12° 6	12°55	15°D 5	16°54	15°39	24°41	M15
T 16	11 33 57	25°19'15	24° 9	27°44	8°46	19°16	27°32	16°39	22°13	12° 4	12°54	15° 5	16°51	15°45	24°40	T 16
W17	11 37 54	26°18'59	7♈17	28°40	9°53	19° 6	27°37	16°36	22°14	12° 3	12°53	15° 6	16°48	15°52	24°39	W17
T 18	11 41 50	27°18'40	20°44	29°39	11° 1	18°57	27°43	16°33	22°15	12° 1	12°52	15°R 7	16°44	15°59	24°38	T 18
F 19	11 45 47	28°18'19	4♈30	0♈41	12° 8	18°48	27°48	16°30	22°16	12° 0	12°51	15° 7	16°41	16° 5	24°37	F 19
S 20	11 49 43	29°17'56	18°37	1°45	13°14	18°40	27°52	16°27	22°17	11°58	12°50	15° 5	16°38	16°12	24°35	S 20
S 21	11 53 40	0°V17'30	3♈3	2°52	14°21	18°34	27°57	16°24	22°18	11°56	12°49	15° 2	16°35	16°19	24°34	S 21
M22	11 57 36	1°17'02	17°47	4° 1	15°27	18°27	28° 2	16°22	22°19	11°55	12°48	14°56	16°32	16°26	24°33	M22
T 23	12 1 33	2°16'32	2♈40	5°12	16°33	18°22	28° 6	16°19	22°20	11°53	12°47	14°50	16°29	16°32	24°31	T 23
W24	12 5 30	3°16'00	17°37	6°25	17°39	18°18	28°10	16°16	22°21	11°52	12°46	14°43	16°25	16°39	24°29	W24
T 25	12 9 26	4°15'25	2♈27	7°40	18°45	18°14	28°14	16°14	22°22	11°50	12°46	14°38	16°22	16°46	24°27	T 25
F 26	12 13 23	5°14'48	17° 2	8°57	19°50	18°11	28°18	16°12	22°24	11°48	12°45	14°33	16°19	16°53	24°26	F 26
S 27	12 17 19	6°14'09	1♈16	10°16	20°56	18° 9	28°22	16° 9	22°25	11°47	12°44	14°31	16°16	16°59	24°24	S 27
S 28	12 21 16	7°13'29	15° 6	11°37	22° 0	18° 7	28°25	16° 7	22°27	11°45	12°43	14°D30	16°13	17° 6	24°21	S 28
M29	12 25 12	8°12'47	28°29	12°59	23° 5	18° 6	28°28	16° 5	22°28	11°43	12°43	14°31	16°10	17°13	24°19	M29
T 30	12 29 9	9°12'02	11♈27	14°23	24° 9	18°D 6	28°31	16° 3	22°30	11°42	12°42	14°32	16° 6	17°19	24°17	T 30
W31	12 33 5	10°V11'17	24♈3	15♈49	25♈14	18♈7	28♈34	16♈1	22°II31	11♈40	12♈41	14♈34	16♈3	17°26	24♈15	W31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
M 1	7s42	18s13	0s21	11s51	2n26	8n48	0n26	17n50	4n19	22s52	0n31	16n45	1n15	23n22	0n 9	3s27
T 2	7 19	22 17	1 29	12 9	2 13	9 18	0 30	17 56	4 17	22 52	0 31	16 46	1 15	23 22	0 9	3 27
W 3	6 56	25 11	2 30	12 26	1 59	9 48	0 34	18 1	4 15	22 52	0 31	16 48	1 15	23 22	0 9	3 26
T 4	6 33	26 49	3 23	12 40	1 45	10 17	0 38	18 6	4 14	22 52	0 31	16 49	1 15	23 22	0 9	3 26
F 5	6 10	27 9	4 5	12 52	1 31	10 46	0 42	18 10	4 12	22 53	0 31	16 50	1 15	23 22	0 9	3 25
S 6	5 47	26 13	4 37	13 2	1 18	11 15	0 46	18 14	4 10	22 53	0 31	16 51	1 15	23 22	0 9	3 25
S 7	5 24	24 6	4 57	13 10	1 4	11 44	0 50	18 18	4 8	22 53	0 31	16 53	1 15	23 22	0 9	3 24
M 8	5 0	20 58	5 4	13 16	0 51	12 13	0 55	18 22	4 6	22 53	0 31	16 54	1 15	23 22	0 9	3 23
T 9	4 37	16 58	4 57	13 20	0 38	12 41	0 59	18 25	4 4	22 53	0 31	16 55	1 15	23 22	0 9	3 23
W10	4 13	12 17	4 38	13 22	0 25	13 9	1 3	18 28	4 2	22 53	0 31	16 56	1 15	23 22	0 9	3 22
T 11	3 50	7 6	4 6	13 22	0 13	13 36	1 7	18 31	4 0	22 54	0 31	16 57	1 15	23 22	0 9	3 22
F 12	3 26	1 35	3 22	13 20	0 1	14 4	1 12	18 34	3 58	22 54	0 31	16 58	1 15	23 22	0 9	3 21
S 13	3 3	4n 3	2 29	13 17	0s10	14 31	1 16	18 36	3 56	22 54	0 31	17 0	1 15	23 22	0 9	3 20
S 14	2 39	9 37	1 27	13 12	0 22	14 57	1 20	18 38	3 54	22 54	0 31	17 1	1 15	23 22	0 9	3 20
M15	2 15	14 53	0 20	13 4	0 32	15 24	1 25	18 39	3 51	22 54	0 31	17 2	1 15	23 22	0 9	3 19
T 16	1 52	19 36	0n49	12 56	0 42	15 50	1 29	18 40	3 49	22 54	0 31	17 3	1 15	23 22	0 9	3 18
W17	1 28	23 27	1 57	12 45	0 52	16 15	1 33	18 41	3 47	22 54	0 31	17 4	1 15	23 22	0 9	3 18
T 18	1 4	26 7	3 0	12 33	1 1	16 41	1 37	18 42	3 44	22 54	0 31	17 4	1 15	23 22	0 9	3 17
F 19	0 40	27 17	3 55	12 20	1 10	17 6	1 42	18 43	3 42	22 55	0 31	17 5	1 15	23 22	0 9	3 17
S 20	0 17	26 43	4 36	12 4	1 18	17 30	1 46	18 43	3 40	22 55	0 31	17 6	1 15	23 23	0 9	3 16
S 21	0n 7	24 22	5 2	11 48	1 26	17 54	1 50	18 43	3 37	22 55	0 31	17 7	1 15	23 23	0 9	3 15
M22	0 31	20 23	5 8	11 30	1 34	18 18	1 54	18 42	3 35	22 55	0 31	17 8	1 15	23 23	0 9	3 15
T 23	0 54	15 5	4 54	11 10	1 41	18 41	1 59	18 42	3 32	22 55	0 31	17 9	1 15	23 23	0 9	3 14
W24	1 18	8 53	4 19	10 49	1 47	19 4	2 3	18 41	3 30	22 55	0 31	17 9	1 15	23 23	0 9	3 13
T 25	1 42	2 12	3 28	10 27	1 53	19 27	2 7	18 40	3 28	22 55	0 31	17 10	1 15	23 23	0 9	3 13
F 26	2 5	4s29	2 23	10 3	1 58	19 49	2 11	18 38	3 25	22 55	0 31	17 11	1 15	23 23	0 9	3 12
S 27	2 29	10 48	1 11	9 38	2 4	20 10	2 15	18 37	3 23	22 55	0 31	17 12	1 15	23 23	0 9	3 11
S 28	2 52	16 25	0s 3	9 11	2 8	20 31	2 19	18 35	3 20	22 55	0 31	17 12	1 15	23 23	0 9	3 11
M29	3 16	21 3	1 15	8 43	2 12	20 52	2 24	18 33	3 18	22 55	0 31	17 13	1 15	23 23	0 9	3 10
T 30	3 39	24 30	2 21	8 14	2 16	21 12	2 28	18 30	3 15	22 55	0 31	17 13	1 15	23 23	0 9	3 9
W31	4n 2	26s37	3s19	7s44	2s19	21n32	2n32	18n28	3n13	22s55	0n31	17n14	1n15	23n23	0n 9	3s 9

Julian Day Number = 2432611.5, Delta T = 28.29 sec

Ecliptic obliquity = 23°26'52, Nutation = - 0°00'12, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 24°00'59, Lahiri = 23°07'59

# ASTRODIENST EPHEMERIS for the year 1948

## geocentric

APRIL 1948

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	12 37 2	11°10'29	6°32'0	17°16'16	26°8'17	18°11'8	28°40'37	15°58'59	22°33'33	11°38'38	12°41'41	14°35'35	16°0'0	17°33'33	24°12'12	T 1
F 2	12 40 59	12° 9'39	18°25'18	18°45'27	27°21'18	18°11'11	28°40'40	15°58'58	22°34'34	11°38'38	12°41'41	14°35'35	15°57'57	17°40'40	24°10'10	F 2
S 3	12 44 55	13° 8'48	0°22'21	20°15'28	28°24'18	18°13'13	28°42'42	15°56'56	22°36'36	11°35'35	12°40'40	14°33'33	15°54'54	17°46'46	24° 7'7	S 3
S 4	12 48 52	14° 7'55	12°12'12	21°47'29	29°27'18	18°17'17	28°44'44	15°55'55	22°38'38	11°33'33	12°39'39	14°30'30	15°50'50	17°53'53	24° 4'4	S 4
M 5	12 52 48	15° 7'00	24° 5'23	23°21'00	30°18'21	18°21'21	28°46'46	15°53'53	22°40'40	11°32'32	12°38'38	14°26'26	15°47'47	18° 0'0	24° 2'2	M 5
T 6	12 56 45	16° 6'03	6°11'24	24°56'13	32°13'26	18°26'26	28°48'48	15°52'52	22°41'41	11°30'30	12°38'38	14°22'22	15°44'44	18° 7'7	23°59'59	T 6
W 7	13 0 41	17° 5'05	18° 4'26	26°32'23	34°18'32	18°32'32	28°50'50	15°51'51	22°43'43	11°29'29	12°37'37	14°17'17	15°41'41	18°13'13	23°56'56	W 7
T 8	13 4 38	18° 4'04	0°19'16	28°10'33	36°18'38	18°38'38	28°51'51	15°50'50	22°45'45	11°27'27	12°37'37	14°12'12	15°38'38	18°20'20	23°53'53	T 8
F 9	13 8 34	19° 3'01	12°39'29	29°50'43	38°18'45	18°45'45	28°53'53	15°49'49	22°47'47	11°25'25	12°37'37	14° 9'9	15°35'35	18°27'27	23°50'50	F 9
S 10	13 12 31	20° 1'57	25°15'15	1°19'31	5°37'53	18°52'52	28°54'54	15°48'48	22°49'49	11°24'24	12°36'36	14° 6'6	15°31'31	18°33'33	23°46'46	S 10
S 11	13 16 27	21° 0'50	8° 2'3	3°13'6	6°38'38	19° 0'0	28°55'55	15°47'47	22°51'51	11°22'22	12°36'36	14°D 5	15°28'28	18°40'40	23°43'43	S 11
M 12	13 20 24	21°59'42	21° 2'2	4°58'7	7°38'38	19° 9'9	28°55'55	15°47'47	22°53'53	11°20'20	12°35'35	14° 5'5	15°25'25	18°47'47	23°40'40	M 12
T 13	13 24 21	22°58'31	4°11'15	6°43'8	8°38'38	19°18'18	28°56'56	15°46'46	22°55'55	11°19'19	12°35'35	14° 6'6	15°22'22	18°54'54	23°36'36	T 13
W 14	13 28 17	23°57'18	17°41'17	8°30'9	9°37'37	19°28'28	28°56'56	15°46'46	22°58'58	11°17'17	12°35'35	14° 7'7	15°19'19	19° 0'0	23°33'33	W 14
T 15	13 32 14	24°56'03	1°19'19	10°19'10	10°36'36	19°39'39	28°56'56	15°46'46	23° 0'0	11°16'16	12°34'34	14° 9'9	15°16'16	19° 7'7	23°29'29	T 15
F 16	13 36 10	25°54'46	15°11'12	12° 9'11	11°34'34	19°50'50	28°56'56	15°45'45	23° 2'2	11°14'14	12°34'34	14°10'10	15°12'12	19°14'14	23°26'26	F 16
S 17	13 40 7	26°53'26	29°15'14	14° 1'12	12°32'20	20° 1'1	28°56'56	15°D 45	23° 4'4	11°12'12	12°34'34	14°R 10	15° 9'9	19°20'20	23°22'22	S 17
S 18	13 44 3	27°52'05	13°30'30	15°55'13	13°30'30	20°13'13	28°56'56	15°45'45	23° 7'7	11°11'11	12°34'34	14° 9'9	15° 6'6	19°27'27	23°18'18	S 18
M 19	13 48 0	28°50'40	27°53'17	17°50'14	14°27'27	20°26'26	28°55'55	15°46'46	23° 9'9	11° 9'9	12°34'34	14° 8'8	15° 3'3	19°34'34	23°14'14	M 19
T 20	13 51 57	29°49'14	12°19'19	19°46'15	15°23'23	20°39'39	28°54'54	15°46'46	23°11'11	11° 8'8	12°33'33	14° 7'7	15° 0'0	19°41'41	23°11'11	T 20
W 21	13 55 53	0°14'45	26°50'21	21°44'16	16°19'19	20°53'53	28°53'53	15°46'46	23°14'14	11° 6'6	12°33'33	14° 5'5	14°56'56	19°47'47	23° 7'7	W 21
T 22	13 59 50	1°46'15	11°13'13	23°44'17	17°14'14	21° 7'7	28°52'52	15°47'47	23°16'16	11° 5'5	12°33'33	14° 3'3	14°53'53	19°54'54	23° 3'3	T 22
F 23	14 3 46	2°44'42	25°25'25	25°45'18	18° 9'9	21°22'22	28°51'51	15°47'47	23°19'19	11° 3'3	12°33'33	14° 2'2	14°50'50	20° 1'1	22°59'59	F 23
S 24	14 7 43	3°43'07	9°13'23	27°48'19	19° 3'3	21°37'37	28°49'49	15°48'48	23°22'22	11° 2'2	12°33'33	14°D 2	14°47'47	20° 8'8	22°55'55	S 24
S 25	14 11 39	4°41'31	23° 1'29	29°52'19	19°57'57	21°52'52	28°48'48	15°49'49	23°24'24	11° 0'0	12°D 33	14° 2'2	14°44'44	20°14'14	22°51'51	S 25
M 26	14 15 36	5°39'53	6°19'19	1°57'18	20°50'50	22° 8'8	28°46'46	15°50'50	23°27'27	10°59'59	12°33'33	14° 2'2	14°41'41	20°21'21	22°46'46	M 26
T 27	14 19 32	6°38'13	19°16'4	4° 3'21	21°42'42	22°25'25	28°44'44	15°51'51	23°29'29	10°57'57	12°33'33	14° 3'3	14°37'37	20°28'28	22°42'42	T 27
W 28	14 23 29	7°36'32	1°35'54	6°10'22	22°34'42	22°42'42	28°42'42	15°52'52	23°32'32	10°56'56	12°33'33	14° 4'4	14°34'34	20°34'34	22°38'38	W 28
T 29	14 27 26	8°34'49	14°14'8	8°19'23	23°25'25	22°59'59	28°39'39	15°53'53	23°35'35	10°54'54	12°33'33	14° 4'4	14°31'31	20°41'41	22°34'34	T 29
F 30	14 31 22	9°33'05	26°32'22	10°28'28	24°11'11	23°17'17	28°37'37	15°54'54	23°38'38	10°53'53	12°34'34	14° 5'5	14°28'28	20°48'48	22°29'29	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	4n25	27s23	4s 5	7s12	2s22	21n51	2n35	18n25	3n11	22s55	0n31	17n14	1n15	23n23	0n 9	3s 8	1n36	24n 4	7n22	16n13	16n38	20s28	16s10	2n45			
F 2	4 49	26 49	4 40	6 39	2 24	22 10	2 39	18 22	3 8	22 55	0 31	17 15	1 15	23 24	0 9	3 8	1 36	24 4	7 22	16 13	16 37	20 26	16 9	2 45			
S 3	5 12	25 0	5 3	6 5	2 25	22 28	2 43	18 19	3 6	22 55	0 31	17 15	1 15	23 24	0 9	3 7	1 36	24 4	7 22	16 13	16 36	20 24	16 8	2 46			
S 4	5 35	22 8	5 12	5 30	2 27	22 45	2 47	18 16	3 3	22 55	0 31	17 16	1 15	23 24	0 9	3 6	1 36	24 4	7 22	16 12	16 35	20 22	16 7	2 46			
M 5	5 57	18 20	5 8	4 54	2 27	23 3	2 51	18 12	3 1	22 55	0 31	17 16	1 15	23 24	0 9	3 6	1 36	24 4	7 22	16 11	16 34	20 20	16 6	2 47			
T 6	6 20	13 48	4 50	4 16	2 28	23 19	2 54	18 8	2 59	22 56	0 31	17 16	1 15	23 24	0 9	3 5	1 36	24 4	7 22	16 9	16 33	20 18	16 4	2 47			
W 7	6 43	8 42	4 20	3 38	2 27	23 35	2 58	18 4	2 56	22 56	0 31	17 17	1 15	23 24	0 9	3 4	1 36	24 4	7 22	16 8	16 32	20 15	16 3	2 48			
T 8	7 5	3 13	3 37	2 58	2 27	23 51	3 2	18 0	2 54	22 56	0 31	17 17	1 15	23 24	0 9	3 4	1 36	24 4	7 21	16 6	16 32	20 13	16 2	2 48			
F 9	7 28	2n29	2 44	2 17	2 25	24 6	3 5	17 56	2 52	22 56	0 31	17 17	1 15	23 24	0 9	3 3	1 36	24 4	7 21	16 5	16 31	20 11	16 1	2 49			
S 10	7 50	8 12	1 42	1 36	2 24	24 20	3 8	17 51	2 49	22 56	0 31	17 17	1 15	23 24	0 9	3 2	1 36	24 4	7 21	16 5	16 30	20 9	15 59	2 49			
S 11	8 12	13 40	0 33	0 53	2 21	24 34	3 12	17 47	2 47	22 56	0 31	17 18	1 15	23 25	0 9	3 2	1 36	24 4	7 21	16 4	16 29	20 7	15 58	2 50			
M12	8 34	18 38	0n38	0 9	2 18	24 48	3 15	17 42	2 45	22 56	0 31	17 18	1 14	23 25	0 9	3 1	1 36	24 4	7 21	16 4	16 28	20 5	15 57	2 50			
T 13	8 56	22 47	1 49	0n36	2 15	25 1	3 18	17 37	2 43	22 56	0 31	17 18	1 14	23 25	0 9	3 0	1 36	24 4	7 21	16 5	16 27	20 2	15 56	2 51			
W14	9 18	25 46	2 55	1 22	2 11	25 13	3 21	17 32	2 41	22 56	0 31	17 18	1 14	23 25	0 9	3 0	1 36	24 4	7 21	16 5	16 26	20 0	15 54	2 51			
T 15	9 39	27 18	3 52	2 8	2 7	25 25	3 24	17 26	2 38	22 56	0 31	17 18	1 14	23 25	0 9	2 59	1 36	24 4	7 21	16 5	16 25	19 58	15 53	2 51			
F 16	10 1	27 9	4 36	2 56	2 2	25 36	3 27	17 21	2 36	22 56	0 31	17 18	1 14	23 25	0 9	2 59	1 36	24 4	7 20	16 6	16 24	19 56	15 52	2 52			
S 17	10 22	25 17	5 5	3 44	1 57	25 46	3 30	17 15	2 34	22 56	0 31	17 18	1 14	23 25	0 9	2 58	1 36	24 4	7 20	16 6	16 23	19 54	15 50	2 52			
S 18	10 43	21 48	5 15	4 33	1 51	25 56	3 32	17 9	2 32	22 56	0 31	17 18	1 14	23 25	0 9	2 57	1 36	24 4	7 20	16 6	16 22	19 51	15 49	2 53			
M19	11 4	17 0	5 6	5 23	1 45	26 6	3 35	17 3	2 30	22 56	0 31	17 18	1 14	23 25	0 9	2 57	1 36	24 4	7 20	16 5	16 21	19 49	15 48	2 53			
T 20	11 25	11 12	4 38	6 13	1 38	26 15	3 37	16 57	2 28	22 56	0 31	17 18	1 14	23 26	0 9	2 56	1 36	24 4	7 20	16 5	16 20	19 47	15 46	2 54			
W21	11 45	4 49	3 52	7 4	1 31	26 23	3 40	16 50	2 26	22 56	0 31	17 18	1 14	23 26	0 9	2 56	1 36	24 4	7 20	16 4	16 19	19 45	15 45	2 54			
T 22	12 6	1s48	2 52	7 56	1 23	26 31	3 42	16 44	2 24	22 56	0 31	17 17	1 14	23 26	0 9	2 55	1 36	24 4	7 20	16 4	16 19	19 43	15 43	2 55			
F 23	12 26	8 16	1 41	8 47	1 15	26 38	3 44	16 37	2 22	22 56	0 31	17 17	1 14	23 26	0 9	2 54	1 36	24 4	7 20	16 3	16 18	19 40	15 42	2 55			
S 24	12 46	14 13	0 26	9 40	1 6	26 45	3 46	16 30	2 19	22 56	0 31	17 17	1 14	23 26	0 9	2 54	1 36	24 4	7 19	16 3	16 17	19 38	15 41	2 56			
S 25	13 5	19 20	0s50	10 32	0 57	26 51	3 48	16 23	2 18	22 56	0 31	17 17	1 14	23 26	0 9	2 53	1 36	24 3	7 19	16 3	16 16	19 36	15 39	2 56			
M26	13 25	23 21	2 0	11 24	0 48	26 57	3 50	16 16	2 16	22 56	0 31	17 16	1 14	23 26	0 9	2 53	1 36	24 3	7 19	16 3	16 15	19 34	15 38	2 56			
T 27	13 44	26 3	3 3	12 16	0 38	27 2	3 51	16 9	2 14	22 56	0 31	17 16	1 14	23 27	0 9	2 52	1 36	24 3	7 19	16 4	16 14	19 31	15 36	2 57			
W28	14 3	27 21	3 55	13 8	0 28	27 7	3 53	16 2	2 12	22 56	0 31	17 16	1 14	23 27	0 9	2 52	1 36	24 3	7 19	16 4	16 13	19 29	15 35	2 57			
T 29	14 22	27 15	4 35	14 0	0 18	27 11	3 54	15 54	2 10	22 56	0 30	17 15	1 14	23 27	0 9	2 51	1 36	24 3	7 19	16 4	16 12	19 27	15 33	2 58			
F 30	14n41	25s49	5s 2	14n51	0s 8	27n14	3n55	15n47	2n 8	22s56	0n30	17n15	1n14	23n27	0n 9	2s51	1n36	24n 3	7n19	16n 4	16n11	19s24	15s32	2n58			

ASTRODIENST EPHEMERIS for the year 1948  
geocentric

MAY 1948

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	14 35 19	10♈31'19	8♋20	12♈37	25♈5	23♈35	28♈R34	15♈56	23♈40	10♈R52	12♈34	14♈R 5	14♈25	20♈55	22♈R25	S 1
S 2	14 39 15	11°29'31	20°14	14°46	25°53	23°53	28♈31	15°57	23°43	10♈50	12°34	14♈5	14°22	21°1	22♈M21	S 2
M 3	14 43 12	12°27'42	2♈7	16°56	26°41	24°12	28°28	15°59	23°46	10°49	12°34	14°5	14°18	21°8	22°16	M 3
T 4	14 47 8	13°25'52	14°5	19°5	27°28	24°32	28°24	16°1	23°49	10°47	12°34	14°5	14°15	21°15	22°12	T 4
W 5	14 51 5	14°24'00	26°12	21°14	28°15	24°51	28°21	16°2	23°52	10°46	12°35	14°D 5	14°12	21°21	22°8	W 5
T 6	14 55 1	15°22'06	8♈30	23°22	29°0	25°12	28°17	16°4	23°55	10°45	12°35	14°5	14°9	21°28	22°3	T 6
F 7	14 58 58	16°20'11	21°3	25°28	29°45	25°32	28°13	16°6	23°58	10°44	12°35	14°5	14°6	21°35	21°59	F 7
S 8	15 2 54	17°18'15	3♈53	27°33	0♈28	25°53	28°9	16°9	24°1	10°42	12°36	14°5	14°2	21°42	21°54	S 8
S 9	15 6 51	18°16'17	16°59	29°36	1°11	26°14	28°5	16°11	24°4	10°41	12°36	14°R 5	13°59	21°48	21°50	S 9
M10	15 10 48	19°14'17	0♈23	1♈38	1°52	26°35	28°1	16°13	24°7	10°40	12°36	14°5	13°56	21°55	21°45	M10
T 11	15 14 44	20°12'16	14°1	3°37	2°33	26°57	27°56	16°16	24°10	10°39	12°37	14°4	13°53	22°2	21°41	T 11
W12	15 18 41	21°10'13	27°53	5°33	3°12	27°19	27°52	16°18	24°13	10°37	12°37	14°4	13°50	22°9	21°36	W12
T 13	15 22 37	22°8'09	11♈55	7°27	3°50	27°42	27°47	16°21	24°16	10°36	12°38	14°3	13°47	22°15	21°32	T 13
F 14	15 26 34	23°6'02	26°4	9°18	4°27	28°5	27°42	16°24	24°19	10°35	12°38	14°2	13°43	22°22	21°27	F 14
S 15	15 30 30	24°3'54	10♈17	11°6	5°3	28°28	27°37	16°26	24°23	10°34	12°39	14°1	13°40	22°29	21°23	S 15
S 16	15 34 27	25°1'44	24°31	12°52	5°37	28°51	27°31	16°29	24°26	10°33	12°39	14°D 1	13°37	22°35	21°18	S 16
M17	15 38 24	25°59'33	8♈44	14°34	6°10	29°15	27°26	16°32	24°29	10°32	12°40	14°1	13°34	22°42	21°14	M17
T 18	15 42 20	26°57'19	22°53	16°12	6°42	29°39	27°21	16°35	24°32	10°31	12°41	14°2	13°31	22°49	21°10	T 18
W19	15 46 17	27°55'04	6♈57	17°48	7°12	0♈3	27°15	16°39	24°36	10°30	12°41	14°3	13°28	22°56	21°5	W19
T 20	15 50 13	28°52'47	20°52	19°20	7°40	0°28	27°9	16°42	24°39	10°29	12°42	14°4	13°24	23°2	21°1	T 20
F 21	15 54 10	29°50'29	4♈36	20°49	8°7	0°53	27°3	16°45	24°42	10°28	12°43	14°5	13°21	23°9	20°56	F 21
S 22	15 58 6	0♈48'09	18°9	22°14	8°33	1°18	26°57	16°49	24°46	10°27	12°43	14°R 5	13°18	23°16	20°52	S 22
S 23	16 2 3	1°45'48	1♈27	23°36	8°56	1°43	26°51	16°52	24°49	10°26	12°44	14°4	13°15	23°22	20°48	S 23
M24	16 5 59	2°43'26	14°30	24°55	9°18	2°9	26°45	16°56	24°52	10°25	12°45	14°3	13°12	23°29	20°43	M24
T 25	16 9 56	3°41'03	27°18	26°10	9°39	2°34	26°38	17°0	24°56	10°24	12°46	14°0	13°8	23°36	20°39	T 25
W26	16 13 53	4°38'38	9♈50	27°21	9°57	3°0	26°32	17°4	24°59	10°24	12°46	13°57	13°5	23°43	20°35	W26
T 27	16 17 49	5°36'13	22°9	28°29	10°13	3°27	26°25	17°8	25°2	10°23	12°47	13°54	13°2	23°49	20°30	T 27
F 28	16 21 46	6°33'46	4♈16	29°32	10°28	3°53	26°19	17°12	25°6	10°22	12°48	13°51	12°59	23°56	20°26	F 28
S 29	16 25 42	7°31'19	16°14	0♈32	10°40	4°20	26°12	17°16	25°9	10°21	12°49	13°48	12°56	24°3	20°22	S 29
S 30	16 29 39	8°28'50	28°8	1°29	10°50	4°47	26°5	17°20	25°13	10°21	12°50	13°47	12°53	24°10	20°18	S 30
M31	16 33 35	9♈26'21	10♈2	2°21	10°58	5♈14	25°58	17°24	25♈16	10°20	12°51	13°D46	12♈49	24°16	20♈14	M31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	decl	decl	decl	lat
S 1	14n59	23s15	5s15	15n41	0n 3	27n17	3n56	15n39	2n 6	22s56	0n30	17n14	1n14	23n27	0n 9	2s50	1n36	24n 3	7n19	16n 4	16n10	19s22	15s30	2n58
S 2	15 17	19 43	5 15	16 29	0 14	27 19	3 57	15 31	2 4	22 56	0 30	17 14	1 14	23 27	0 9	2 50	1 36	24 2	7 18	16 4	16 9	19 20	15 29	2 59
M 3	15 35	15 24	5 1	17 17	0 24	27 21	3 57	15 23	2 2	22 56	0 30	17 13	1 13	23 27	0 9	2 49	1 35	24 2	7 18	16 4	16 8	19 18	15 28	2 59
T 4	15 53	10 29	4 34	18 3	0 35	27 23	3 58	15 15	2 0	22 56	0 30	17 13	1 13	23 27	0 9	2 49	1 35	24 2	7 18	16 4	16 7	19 15	15 26	2 59
W 5	16 10	5 7	3 55	18 48	0 45	27 24	3 58	15 6	1 59	22 56	0 30	17 12	1 13	23 28	0 9	2 48	1 35	24 2	7 18	16 4	16 6	19 13	15 25	3 0
T 6	16 27	0n33	3 5	19 31	0 55	27 24	3 58	14 58	1 57	22 56	0 30	17 11	1 13	23 28	0 9	2 48	1 35	24 2	7 18	16 4	16 5	19 11	15 23	3 0
F 7	16 44	6 18	2 4	20 11	1 5	27 24	3 58	14 49	1 55	22 56	0 30	17 11	1 13	23 28	0 9	2 47	1 35	24 1	7 18	16 4	16 4	19 8	15 22	3 0
S 8	17 0	11 56	0 56	20 50	1 15	27 24	3 57	14 40	1 53	22 56	0 30	17 10	1 13	23 28	0 9	2 47	1 35	24 1	7 18	16 4	16 4	19 6	15 20	3 1
S 9	17 17	17 10	0n16	21 26	1 24	27 23	3 57	14 32	1 52	22 56	0 30	17 9	1 13	23 28	0 9	2 46	1 35	24 1	7 17	16 4	16 3	19 4	15 19	3 1
M10	17 32	21 41	1 29	22 0	1 32	27 22	3 56	14 23	1 50	22 56	0 30	17 9	1 13	23 28	0 9	2 46	1 35	24 1	7 17	16 4	16 2	19 1	15 17	3 1
T 11	17 48	25 7	2 38	22 31	1 40	27 20	3 55	14 14	1 48	22 56	0 30	17 8	1 13	23 28	0 9	2 45	1 35	24 0	7 17	16 4	16 1	18 59	15 16	3 2
W12	18 3	27 5	3 39	23 0	1 47	27 18	3 53	14 4	1 47	22 56	0 30	17 7	1 13	23 29	0 9	2 45	1 35	24 0	7 17	16 4	16 0	18 57	15 14	3 2
T 13	18 19	27 22	4 28	23 26	1 54	27 15	3 52	13 55	1 45	22 56	0 30	17 6	1 13	23 29	0 9	2 44	1 35	24 0	7 17	16 4	15 59	18 54	15 13	3 2
F 14	18 33	25 52	5 1	23 50	2 0	27 12	3 50	13 46	1 43	22 56	0 30	17 5	1 13	23 29	0 9	2 44	1 35	24 0	7 17	16 3	15 58	18 52	15 12	3 3
S 15	18 48	22 44	5 16	24 11	2 5	27 9	3 48	13 36	1 42	22 56	0 30	17 4	1 13	23 29	0 9	2 44	1 35	23 59	7 17	16 3	15 57	18 50	15 10	3 3
S 16	19 2	18 14	5 11	24 30	2 10	27 5	3 46	13 26	1 40	22 56	0 30	17 4	1 13	23 29	0 9	2 43	1 35	23 59	7 17	16 3	15 56	18 47	15 9	3 3
M17	19 16	12 44	4 47	24 46	2 13	27 1	3 43	13 17	1 38	22 56	0 30	17 3	1 13	23 29	0 9	2 43	1 35	23 59	7 16	16 3	15 55	18 45	15 7	3 4
T 18	19 29	6 36	4 6	24 59	2 16	26 56	3 40	13 7	1 37	22 56	0 29	17 2	1 13	23 29	0 9	2 42	1 35	23 58	7 16	16 3	15 54	18 43	15 6	3 4
W19	19 42	0 10	3 11	25 11	2 18	26 52	3 37	12 57	1 35	22 56	0 29	17 1	1 13	23 30	0 9	2 42	1 35	23 58	7 16	16 4	15 53	18 40	15 4	3 4
T 20	19 55	6s13	2 5	25 20	2 19	26 46	3 33	12 47	1 34	22 56	0 29	16 59	1 13	23 30	0 9	2 42	1 35	23 58	7 16	16 4	15 52	18 38	15 3	3 4
F 21	20 7	12 15	0 52	25 27	2 20	26 41	3 29	12 36	1 32	22 56	0 29	16 58	1 13	23 30	0 9	2 41	1 35	23 58	7 16	16 4	15 51	18 35	15 2	3 5
S 22	20 20	17 36	0s22	25 32	2 19	26 35	3 25	12 26	1 31	22 56	0 29	16 57	1 13	23 30	0 9	2 41	1 35	23 57	7 16	16 4	15 50	18 33	15 0	3 5
S 23	20 31	22 0	1 34	25 35	2 18	26 29	3 21	12 15	1 29	22 56	0 29	16 56	1 13	23 30	0 9	2 41	1 35	23 57	7 16	16 4	15 49	18 31	14 59	3 5
M24	20 43	25 12	2 40	25 36	2 15	26 23	3 16	12 5	1 28	22 55	0 29	16 55	1 13	23 30	0 9	2 40	1 35	23 57	7 16	16 4	15 48	18 28	14 58	3 5
T 25	20 54	27 1	3 36	25 36	2 12	26 16	3 11	11 54	1 26	22 55	0 29	16 54	1 12	23 30	0 9	2 40	1 35	23 56	7 16	16 3	15 47	18 26	14 56	3 5
W26	21 4	27 25	4 20	25 34	2 8	26 9	3 5	11 43	1 25	22 55	0 29	16 53	1 12	23 31	0 9	2 40	1 35	23 56	7 15	16 2	15 46	18 23	14 55	3 6
T 27	21 15	26 25	4 52	25 30	2 4	26 2	2 59	11 33	1 23	22 55	0 29	16 51	1 12	23 31	0 9	2 40	1 35	23 55	7 15	16 1	15 45	18 21	14 54	3 6
F 28	21 25	24 12	5 10	25 25	1 58	25 54	2 53	11 22	1 22	22 55	0 29	16 50	1 12	23 31	0 9	2 39	1 35	23 55	7 15	16 0	15 44	18 19	14 52	3 6
S 29	21 34	20 57	5 14	25 18	1 51	25 46	2 46	11 10	1 21	22 55	0 29	16 49	1 12	23 31	0 9	2 39	1 35	23 55	7 15	15 59	15 43	18 16	14 51	3 6
S 30	21 44	16 53	5 4	25 10	1 44	25 38	2 39	10 59	1 19	22 55	0 28	16 48	1 12	23 31	0 9	2 39	1 35	23 54	7 15	15 59	15 43	18 14	14 50	3 6
M31	21n52	12s 9	4s42	25n 1	1n36	25n30	2n31	10n48	1n18	22s55	0n28	16n46	1n12	23n31	0n 9	2s39	1n35	23n54	7n15	15n59	15n42	18s11	14s49	3n 7



# ASTRODIENST EPHEMERIS for the year 1948

## geocentric

JUNE 1948

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	16 37 32	10II23'51	21K59	359 9	1158 4	5m42	25°R51	17Ω29	25II20	10°R19	12Ω52	13847	12846	24≈23	20°R10	T 1
W 2	16 41 28	11°21'20	4Y 6	3°54	11° 8	6° 9	25°A44	17°33	25°23	10°A19	12°53	13°48	12°43	24°30	20M 6	W 2
T 3	16 45 25	12°18'48	16°27	4°34	11°R 9	6°37	25°36	17°38	25°27	10°18	12°54	13°50	12°40	24°36	20° 2	T 3
F 4	16 49 22	13°16'16	29° 5	5° 9	11° 8	7° 5	25°29	17°42	25°30	10°18	12°55	13°51	12°37	24°43	19°58	F 4
S 5	16 53 18	14°13'43	128 4	5°41	11° 5	7°34	25°22	17°47	25°34	10°17	12°56	13°R52	12°33	24°50	19°54	S 5
S 6	16 57 15	15°11'09	25°25	6° 8	10°59	8° 2	25°14	17°52	25°37	10°16	12°57	13°51	12°30	24°57	19°51	S 6
M 7	17 1 11	16° 8'35	9II 8	6°31	10°51	8°31	25° 7	17°56	25°41	10°16	12°58	13°49	12°27	25° 3	19°47	M 7
T 8	17 5 8	17° 6'00	23°11	6°49	10°40	9° 0	24°59	18° 1	25°44	10°16	12°59	13°46	12°24	25°10	19°43	T 8
W 9	17 9 4	18° 3'24	7530	7° 2	10°28	9°29	24°52	18° 6	25°48	10°15	13° 0	13°41	12°21	25°17	19°40	W 9
T 10	17 13 1	19° 0'47	22° 0	7°11	10°12	9°58	24°44	18°11	25°51	10°15	13° 1	13°36	12°18	25°23	19°36	T 10
F 11	17 16 57	19°58'09	6Ω34	7°R16	9°55	10°28	24°37	18°17	25°55	10°14	13° 3	13°31	12°14	25°30	19°33	F 11
S 12	17 20 54	20°55'30	21° 5	7°16	9°35	10°57	24°29	18°22	25°59	10°14	13° 4	13°27	12°11	25°37	19°29	S 12
S 13	17 24 51	21°52'50	5m30	7°11	9°12	11°27	24°22	18°27	26° 2	10°14	13° 5	13°24	12° 8	25°44	19°26	S 13
M14	17 28 47	22°50'09	19°44	7° 2	8°48	11°57	24°14	18°32	26° 6	10°14	13° 6	13°D23	12° 5	25°50	19°23	M14
T 15	17 32 44	23°47'27	3A45	6°49	8°22	12°27	24° 6	18°38	26° 9	10°13	13° 7	13°24	12° 2	25°57	19°20	T 15
W16	17 36 40	24°44'44	17°32	6°32	7°53	12°58	23°59	18°43	26°13	10°13	13° 9	13°25	11°59	26° 4	19°17	W16
T 17	17 40 37	25°42'00	1M 5	6°11	7°23	13°28	23°51	18°49	26°16	10°13	13°10	13°26	11°55	26°11	19°14	T 17
F 18	17 44 33	26°39'15	14°26	5°47	6°51	13°59	23°43	18°54	26°20	10°13	13°11	13°R27	11°52	26°17	19°11	F 18
S 19	17 48 30	27°36'30	27°34	5°19	6°18	14°30	23°36	19° 0	26°24	10°13	13°13	13°26	11°49	26°24	19° 8	S 19
S 20	17 52 26	28°33'44	10A31	4°49	5°43	15° 1	23°28	19° 6	26°27	10°13	13°14	13°23	11°46	26°31	19° 5	S 20
M21	17 56 23	29°30'58	23°15	4°17	5° 8	15°32	23°20	19°12	26°31	10°D13	13°15	13°18	11°43	26°37	19° 2	M21
T 22	18 0 20	0528'11	5349	3°44	4°31	16° 3	23°13	19°17	26°34	10°13	13°17	13°11	11°40	26°44	19° 0	T 22
W23	18 4 16	1°25'24	18°11	3° 9	3°54	16°35	23° 5	19°23	26°38	10°13	13°18	13° 3	11°36	26°51	18°57	W23
T 24	18 8 13	2°22'37	0A23	2°34	3°16	17° 7	22°58	19°29	26°41	10°13	13°20	12°54	11°33	26°58	18°55	T 24
F 25	18 12 9	3°19'49	12°26	1°59	2°39	17°38	22°50	19°35	26°45	10°13	13°21	12°45	11°30	27° 4	18°52	F 25
S 26	18 16 6	4°17'02	24°22	1°25	2° 1	18°10	22°43	19°41	26°49	10°13	13°23	12°37	11°27	27°11	18°50	S 26
S 27	18 20 2	5°14'14	6K14	0°52	1°24	18°42	22°36	19°48	26°52	10°13	13°24	12°31	11°24	27°18	18°48	S 27
M28	18 23 59	6°11'26	18° 6	0°22	0°47	19°15	22°28	19°54	26°56	10°13	13°26	12°27	11°20	27°24	18°46	M28
T 29	18 27 56	7° 8'38	0Y 2	29II53	0°12	19°47	22°21	20° 0	26°59	10°14	13°27	12°26	11°17	27°31	18°44	T 29
W30	18 31 52	855'50	12Y 7	29II28	29II37	20m19	22A14	20Ω 6	27II 3	10A14	13Ω29	12°D25	11814	27≈38	18M42	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
T 1	22n 1	6s57	4s 7	24n51	1n26	25n22	2n23	10n37	1n16	22s55	0n28	16n45	1n12	23n31	0n 9	2s38	1n35	23n54	7n15	15n59	15n41	18s 9	14s47	3n 7			
W 2	22 9	1 26	3 21	24 40	1 16	25 13	2 14	10 25	1 15	22 55	0 28	16 43	1 12	23 31	0 9	2 38	1 35	23 53	7 15	15 59	15 40	18 6	14 46	3 7			
T 3	22 17	4n15	2 25	24 28	1 6	25 4	2 6	10 14	1 14	22 54	0 28	16 42	1 12	23 32	0 9	2 38	1 34	23 53	7 15	16 0	15 39	18 4	14 45	3 7			
F 4	22 24	9 54	1 20	24 15	0 54	24 55	1 56	10 2	1 12	22 54	0 28	16 41	1 12	23 32	0 9	2 38	1 34	23 52	7 14	16 0	15 38	18 1	14 44	3 7			
S 5	22 31	15 18	0 10	24 1	0 42	24 45	1 47	9 50	1 11	22 54	0 28	16 39	1 12	23 32	0 9	2 38	1 34	23 52	7 14	16 0	15 37	17 59	14 43	3 7			
S 6	22 37	20 8	1n 3	23 47	0 29	24 36	1 36	9 38	1 10	22 54	0 28	16 38	1 12	23 32	0 9	2 37	1 34	23 52	7 14	16 0	15 36	17 56	14 42	3 8			
M 7	22 44	24 2	2 14	23 32	0 15	24 26	1 26	9 26	1 8	22 54	0 28	16 36	1 12	23 32	0 9	2 37	1 34	23 51	7 14	16 0	15 35	17 54	14 40	3 8			
T 8	22 49	26 34	3 18	23 17	0 1	24 16	1 15	9 14	1 7	22 54	0 27	16 35	1 12	23 32	0 9	2 37	1 34	23 51	7 14	15 59	15 34	17 52	14 39	3 8			
W 9	22 55	27 25	4 11	23 1	0s14	24 5	1 3	9 2	1 6	22 54	0 27	16 33	1 12	23 32	0 9	2 37	1 34	23 50	7 14	15 57	15 33	17 49	14 38	3 8			
T 10	23 0	26 24	4 49	22 46	0 30	23 55	0 51	8 50	1 5	22 53	0 27	16 31	1 12	23 32	0 10	2 37	1 34	23 50	7 14	15 56	15 32	17 47	14 37	3 8			
F 11	23 4	23 36	5 8	22 29	0 46	23 44	0 39	8 37	1 3	22 53	0 27	16 30	1 12	23 33	0 10	2 37	1 34	23 50	7 14	15 54	15 31	17 44	14 36	3 8			
S 12	23 8	19 20	5 8	22 13	1 2	23 33	0 27	8 25	1 2	22 53	0 27	16 28	1 12	23 33	0 10	2 37	1 34	23 49	7 14	15 53	15 30	17 42	14 35	3 8			
S 13	23 12	13 57	4 48	21 57	1 19	23 21	0 14	8 13	1 1	22 53	0 27	16 26	1 12	23 33	0 10	2 37	1 34	23 49	7 14	15 52	15 29	17 39	14 34	3 8			
M14	23 15	7 54	4 10	21 40	1 35	23 10	0 0	8 0	1 0	22 53	0 27	16 25	1 12	23 33	0 10	2 37	1 34	23 48	7 14	15 52	15 28	17 37	14 33	3 8			
T 15	23 18	1 33	3 18	21 24	1 52	22 58	0s13	7 47	0 58	22 52	0 27	16 23	1 12	23 33	0 10	2 37	1 34	23 48	7 13	15 52	15 27	17 34	14 32	3 9			
W16	23 21	4s48	2 16	21 8	2 9	22 46	0 27	7 35	0 57	22 52	0 26	16 21	1 12	23 33	0 10	2 37	1 34	23 47	7 13	15 52	15 26	17 32	14 31	3 9			
T 17	23 23	10 49	1 6	20 52	2 26	22 34	0 41	7 22	0 56	22 52	0 26	16 20	1 12	23 33	0 10	2 37	1 34	23 47	7 13	15 53	15 25	17 29	14 31	3 9			
F 18	23 24	16 16	0s 5	20 37	2 42	22 21	0 55	7 9	0 55	22 52	0 26	16 18	1 12	23 33	0 10	2 37	1 34	23 46	7 13	15 53	15 24	17 26	14 30	3 9			
S 19	23 26	20 51	1 16	20 23	2 58	22 9	1 9	6 56	0 54	22 52	0 26	16 16	1 12	23 33	0 10	2 37	1 34	23 46	7 13	15 53	15 23	17 24	14 29	3 9			
S 20	23 26	24 21	2 21	20 9	3 13	21 56	1 23	6 43	0 53	22 51	0 26	16 14	1 12	23 34	0 10	2 37	1 34	23 45	7 13	15 52	15 22	17 21	14 28	3 9			
M21	23 27	26 34	3 18	19 55	3 28	21 43	1 38	6 30	0 51	22 51	0 26	16 12	1 12	23 34	0 10	2 37	1 34	23 45	7 13	15 50	15 21	17 19	14 27	3 9			
T 22	23 27	27 23	4 4	19 43	3 41	21 31	1 52	6 16	0 50	22 51	0 26	16 11	1 12	23 34	0 10	2 37	1 34	23 45	7 13	15 48	15 20	17 16	14 27	3 9			
W23	23 26	26 48	4 38	19 31	3 53	21 18	2 6	6 3	0 49	22 51	0 26	16 9	1 12	23 34	0 10	2 37	1 34	23 44	7 13	15 46	15 19	17 14	14 26	3 9			
T 24	23 26	24 56	4 59	19 21	4 5	21 5	2 19	5 50	0 48	22 50	0 25	16 7	1 12	23 34	0 10	2 37	1 34	23 44	7 13	15 43	15 18	17 11	14 25	3 9			
F 25	23 24	21 58	5 6	19 12	4 14	20 52	2 33	5 36	0 47	22 50	0 25	16 5	1 12	23 34	0 10	2 37	1 33	23 43	7 13	15 40	15 17	17 9	14 25	3 9			
S 26	23 23	18 7	5 0	19 4	4 23	20 40	2 46	5 23	0 46	22 50	0 25	16 3	1 12	23 34	0 10	2 37	1 33	23 43	7 13	15 38	15 16	17 6	14 24	3 9			
S 27	23 21	13 34	4 41	18 57	4 30	20 27	2 59	5 9	0 45	22 50	0 25	16 1	1 12	23 34	0 10	2 37	1 33	23 42	7 13	15 36	15 15	17 4	14 23	3 9			
M28	23 18	8 32	4 9	18 51	4 35	20 15	3 12	4 56	0 44	22 49	0 25	15 59	1 12	23 34	0 10	2 37	1 33	23 42	7 13	15 35	15 14	17 1	14 23	3 9			
T 29	23 15	3 9	3 27	18 47	4 39	20 3	3 24	4 42	0 42	22 49	0 25	15 57	1 12	23 34	0 10	2 37	1 33	23 41	7 13	15 34	15 13	16 58	14 22	3 9			
W30	23n12	2n25	2s35	18n45	4s42	19n51	3s35	4n28	0n41	22s49	0n24	15n55	1n12	23n35	0n10	2s37	1n33	23n41	7n13	15n34	15n12	16s56	14s22	3n			

ASTRODIENST EPHEMERIS for the year 1948  
geocentric

JULY 1948

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	18 35 49	9 <sup>55</sup> 3'02	24 <sup>17</sup> 26	29°R 6	29°R 3	20 <sup>17</sup> 52	22°R 7	20 <sup>18</sup> 13	27 <sup>11</sup> 6	10 <sup>14</sup> 14	13 <sup>10</sup> 30	12 <sup>12</sup> 26	11 <sup>11</sup> 11	27 <sup>11</sup> 45	18°R 40	T 1
F 2	18 39 45	10° 0'15	7 <sup>18</sup> 4	28 <sup>11</sup> 47	28 <sup>11</sup> 31	21°25	22 <sup>17</sup> 0	20°19	27°10	10°15	13°32	12°R 27	11° 8	27°51	18 <sup>11</sup> 38	F 2
S 3	18 43 42	10°57'28	20° 4	28°33	28° 1	21°58	21°53	20°26	27°13	10°15	13°33	12°27	11° 5	27°58	18°37	S 3
S 4	18 47 38	11°54'41	3 <sup>11</sup> 31	28°23	27°32	22°31	21°46	20°32	27°17	10°15	13°35	12°25	11° 1	28° 5	18°35	S 4
M 5	18 51 35	12°51'54	17°25	28°18	27° 6	23° 4	21°39	20°39	27°20	10°16	13°36	12°21	10°58	28°11	18°34	M 5
T 6	18 55 31	13°49'07	1 <sup>54</sup> 45	28°D18	26°41	23°37	21°33	20°45	27°24	10°16	13°38	12°14	10°55	28°18	18°33	T 6
W 7	18 59 28	14°46'21	16°25	28°23	26°18	24°11	21°26	20°52	27°27	10°17	13°40	12° 6	10°52	28°25	18°31	W 7
T 8	19 3 25	15°43'35	1 <sup>10</sup> 19	28°33	25°58	24°44	21°20	20°59	27°31	10°17	13°41	11°56	10°49	28°32	18°30	T 8
F 9	19 7 21	16°40'48	16°18	28°48	25°40	25°18	21°14	21° 5	27°34	10°18	13°43	11°47	10°46	28°38	18°29	F 9
S 10	19 11 18	17°38'02	1 <sup>17</sup> 12	29° 8	25°24	25°52	21° 7	21°12	27°38	10°18	13°44	11°39	10°42	28°45	18°28	S 10
S 11	19 15 14	18°35'15	15°54	29°34	25°10	26°26	21° 1	21°19	27°41	10°19	13°46	11°33	10°39	28°52	18°27	S 11
M12	19 19 11	19°32'29	0 <sup>17</sup> 17	0 <sup>55</sup> 4	24°59	27° 0	20°55	21°26	27°44	10°20	13°48	11°30	10°36	28°58	18°27	M12
T 13	19 23 7	20°29'42	14°21	0°40	24°50	27°34	20°49	21°33	27°48	10°20	13°49	11°29	10°33	29° 5	18°26	T 13
W14	19 27 4	21°26'55	28° 3	1°21	24°44	28° 8	20°44	21°40	27°51	10°21	13°51	11°D28	10°30	29°12	18°26	W14
T 15	19 31 0	22°24'09	11 <sup>11</sup> 26	2° 7	24°40	28°43	20°38	21°47	27°54	10°22	13°53	11°R29	10°26	29°19	18°25	T 15
F 16	19 34 57	23°21'22	24°31	2°59	24°D38	29°17	20°33	21°54	27°58	10°22	13°55	11°28	10°23	29°25	18°25	F 16
S 17	19 38 54	24°18'36	7 <sup>17</sup> 22	3°55	24°39	29°52	20°28	22° 1	28° 1	10°23	13°56	11°26	10°20	29°32	18°25	S 17
S 18	19 42 50	25°15'50	20° 0	4°56	24°42	0 <sup>17</sup> 27	20°22	22° 8	28° 4	10°24	13°58	11°21	10°17	29°39	18°24	S 18
M19	19 46 47	26°13'04	2 <sup>13</sup> 28	6° 2	24°47	1° 2	20°17	22°15	28° 8	10°25	14° 0	11°13	10°14	29°46	18°D24	M19
T 20	19 50 43	27°10'19	14°47	7°13	24°54	1°37	20°13	22°22	28°11	10°26	14° 1	11° 2	10°11	29°52	18°25	T 20
W21	19 54 40	28° 7'34	26°57	8°29	25° 4	2°12	20° 8	22°29	28°14	10°27	14° 3	10°50	10° 7	29°59	18°25	W21
T 22	19 58 36	29° 4'49	9 <sup>11</sup> 1	9°49	25°15	2°47	20° 3	22°37	28°17	10°28	14° 5	10°37	10° 4	0 <sup>11</sup> 6	18°25	T 22
F 23	20 2 33	0 <sup>10</sup> 2'05	20°58	11°14	25°29	3°23	19°59	22°44	28°20	10°29	14° 7	10°24	10° 1	0°12	18°25	F 23
S 24	20 6 29	0°59'22	2 <sup>11</sup> 52	12°43	25°45	3°58	19°55	22°51	28°24	10°30	14° 9	10°12	9°58	0°19	18°26	S 24
S 25	20 10 26	1°56'40	14°42	14°17	26° 2	4°34	19°51	22°58	28°27	10°31	14°10	10° 2	9°55	0°26	18°27	S 25
M26	20 14 23	2°53'58	26°33	15°54	26°22	5° 9	19°47	23° 6	28°30	10°32	14°12	9°55	9°51	0°33	18°27	M26
T 27	20 18 19	3°51'17	8 <sup>17</sup> 28	17°36	26°43	5°45	19°43	23°13	28°33	10°33	14°14	9°51	9°48	0°39	18°28	T 27
W28	20 22 16	4°48'37	20°32	19°21	27° 6	6°21	19°40	23°20	28°36	10°34	14°16	9°49	9°45	0°46	18°29	W28
T 29	20 26 12	5°45'58	2 <sup>18</sup> 48	21° 9	27°30	6°57	19°36	23°28	28°39	10°35	14°17	9°48	9°42	0°53	18°30	T 29
F 30	20 30 9	6°43'21	15°23	23° 0	27°57	7°33	19°33	23°35	28°42	10°36	14°19	9°48	9°39	0°59	18°31	F 30
S 31	20 34 5	7 <sup>10</sup> 40'44	28 <sup>18</sup> 20	24 <sup>55</sup> 55	28 <sup>11</sup> 25	8 <sup>11</sup> 9	19 <sup>17</sup> 30	23 <sup>10</sup> 43	28 <sup>11</sup> 45	10 <sup>14</sup> 38	14 <sup>10</sup> 21	9 <sup>11</sup> 47	9 <sup>11</sup> 36	1 <sup>11</sup> 6	18 <sup>11</sup> 32	S 31

Day	☉	☾		♊		♋		♌		♍		♎		♏		♐		♑		♒	♓	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	23n 8	8n 0	1s35	18n44	4s43	19n40	3s47	4n14	0n40	22s49	0n24	15n53	1n12	23n35	0n10	2s38	1n33	23n40	7n12	15n34	15n11	16s53	14s21	3n 9									
F 2	23 4	13 25	0 29	18 44	4 42	19 29	3 57	4 0	0 39	22 48	0 24	15 51	1 12	23 35	0 10	2 38	1 33	23 40	7 12	15 35	15 10	16 51	14 21	3 9									
S 3	23 0	18 25	0n41	18 46	4 40	19 19	4 7	3 46	0 38	22 48	0 24	15 49	1 12	23 35	0 10	2 38	1 33	23 39	7 12	15 35	15 9	16 48	14 20	3 9									
S 4	22 55	22 40	1 50	18 49	4 37	19 9	4 17	3 32	0 37	22 48	0 24	15 47	1 12	23 35	0 10	2 38	1 33	23 39	7 12	15 34	15 8	16 45	14 20	3 9									
M 5	22 50	25 46	2 55	18 54	4 32	19 0	4 25	3 18	0 36	22 47	0 24	15 45	1 12	23 35	0 10	2 38	1 33	23 38	7 12	15 33	15 7	16 43	14 19	3 9									
T 6	22 44	27 17	3 51	19 0	4 27	18 51	4 34	3 4	0 35	22 47	0 24	15 43	1 12	23 35	0 10	2 39	1 33	23 38	7 12	15 31	15 6	16 40	14 19	3 9									
W 7	22 38	26 58	4 33	19 7	4 20	18 43	4 41	2 50	0 34	22 47	0 23	15 41	1 12	23 35	0 10	2 39	1 33	23 37	7 12	15 28	15 5	16 38	14 19	3 9									
T 8	22 31	24 43	4 58	19 15	4 12	18 35	4 48	2 36	0 33	22 47	0 23	15 38	1 12	23 35	0 10	2 39	1 33	23 37	7 12	15 25	15 4	16 35	14 18	3 9									
F 9	22 24	20 45	5 2	19 24	4 3	18 28	4 55	2 21	0 32	22 46	0 23	15 36	1 12	23 35	0 10	2 39	1 33	23 36	7 12	15 23	15 3	16 32	14 18	3 9									
S 10	22 17	15 30	4 46	19 34	3 53	18 22	5 1	2 7	0 31	22 46	0 23	15 34	1 12	23 35	0 10	2 40	1 33	23 36	7 12	15 20	15 2	16 30	14 18	3 9									
S 11	22 9	9 25	4 11	19 44	3 42	18 16	5 6	1 53	0 30	22 46	0 23	15 32	1 12	23 35	0 10	2 40	1 33	23 35	7 12	15 18	15 1	16 27	14 18	3 9									
M12	22 1	2 57	3 20	19 56	3 31	18 11	5 11	1 38	0 29	22 46	0 23	15 30	1 12	23 36	0 10	2 40	1 33	23 35	7 12	15 17	15 0	16 24	14 18	3 9									
T 13	21 53	3s31	2 19	20 8	3 19	18 6	5 15	1 24	0 28	22 46	0 22	15 27	1 12	23 36	0 10	2 40	1 33	23 34	7 12	15 17	14 59	16 22	14 18	3 9									
W14	21 44	9 41	1 11	20 20	3 7	18 2	5 19	1 9	0 27	22 45	0 22	15 25	1 12	23 36	0 10	2 41	1 33	23 34	7 12	15 17	14 58	16 19	14 17	3 9									
T 15	21 35	15 16	0 0	20 32	2 54	17 59	5 22	0 55	0 26	22 45	0 22	15 23	1 12	23 36	0 10	2 41	1 33	23 33	7 12	15 17	14 57	16 16	14 17	3 9									
F 16	21 26	20 1	1s 9	20 44	2 40	17 56	5 24	0 40	0 25	22 45	0 22	15 21	1 12	23 36	0 10	2 41	1 33	23 33	7 12	15 17	14 56	16 14	14 17	3 9									
S 17	21 16	23 44	2 13	20 57	2 27	17 54	5 27	0 25	0 24	22 45	0 22	15 18	1 12	23 36	0 10	2 42	1 32	23 32	7 12	15 16	14 55	16 11	14 17	3 9									
S 18	21 5	26 13	3 9	21 8	2 13	17 52	5 28	0 11	0 23	22 44	0 21	15 16	1 12	23 36	0 10	2 42	1 32	23 32	7 12	15 14	14 54	16 9	14 17	3 9									
M19	20 55	27 21	3 55	21 20	1 59	17 51	5 30	0s 4	0 22	22 44	0 21	15 14	1 12	23 36	0 10	2 43	1 32	23 31	7 12	15 12	14 53	16 6	14 17	3 9									
T 20	20 44	27 6	4 30	21 30	1 45	17 51	5 31	0 19	0 21	22 44	0 21	15 12	1 12	23 36	0 10	2 43	1 32	23 31	7 12	15 9	14 52	16 3	14 17	3 9									
W21	20 33	25 32	4 51	21 40	1 31	17 50	5 31	0 34	0 20	22 44	0 21	15 9	1 12	23 36	0 10	2 43	1 32	23 30	7 12	15 5	14 51	16 0	14 18	3 9									
T 22	20 21	22 50	5 0	21 49	1 17	17 51	5 31	0 49	0 19	22 44	0 21	15 7	1 12	23 36	0 10	2 44	1 32	23 30	7 12	15 1	14 50	15 58	14 18	3 9									
F 23	20 9	19 10	4 55	21 56	1 2	17 51	5 31	1 4	0 18	22 44	0 21	15 4	1 12	23 36	0 10	2 44	1 32	23 29	7 12	14 57	14 49	15 55	14 18	3 8									
S 24	19 57	14 46	4 37	22 2	0 49	17 52	5 31	1 19	0 18	22 43	0 20	15 2	1 12	23 36	0 10	2 45	1 32	23 29	7 12	14 53	14 48	15 52	14 18	3 8									
S 25	19 44	9 50	4 8	22 6	0 35	17 54	5 30	1 33	0 17	22 43	0 20	15 0	1 12	23 36	0 10	2 45	1 32	23 28	7 12	14 50	14 47	15 50	14 18	3 8									
M26	19 31	4 32	3 27	22 9	0 22	17 55	5 29	1 48	0 16	22 43	0 20	14 57	1 12	23 36	0 10	2 45	1 32	23 28	7 12	14 48	14 46	15 47	14 19	3 8									
T 27	19 18	0n57	2 37	22 9	0 9	17 57	5 27	2 3	0 15	22 43	0 20	14 55	1 12	23 36	0 10	2 46	1 32	23 27	7 12	14 46	14 45	15 44	14 19	3 8									
W28	19 4	6 29	1 40	22 7	0n 4	18 0	5 25	2 18	0 14	22 43	0 20	14 53	1 12	23 36	0 10	2 46	1 32	23 27	7 12	14 46	14 44	15 42	14 19	3 8									
T 29	18 50	11 52	0 37	22 3	0 16	18 2	5 23	2 34	0 13	22 43	0 20	14 50	1 12	23 37	0 10	2 47	1 32	23 26	7 12	14 45	14 43	15 39	14 19	3 8									
F 30	18 36	16 55	0n29	21 56	0 27	18 5	5 21	2 49	0 12	22 43	0 19	14 48	1 12	23 37	0 10	2 47	1 32	23 26	7 13	14 45	14 42	15 36	14 20	3 8									
S 31	18n21	21n22	1n36	21n46	0n38	18n 7	5s19	3s 4	0n11	22s43	0n19	14n45	1n12	23n37	0n10	2s48	1n32	23n25	7n13	14n45	14n41	15s33	14s20	3n 8									



# ASTRODIENST EPHEMERIS for the year 1948

## geocentric

AUGUST 1948

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
S 1	20 38 2	8♌38°09	11♌45	26♌51	28♌54	8♌45	19°R27	23♌50	28♌48	10♌39	14♌23	9°R45	9♌32	1♌13	18♌34	S 1
M 2	20 41 58	9°35'35	25°39	28°50	29°25	9°22	19♌24	23°58	28°51	10°40	14°25	9♌40	9°29	1°20	18°35	M 2
T 3	20 45 55	10°33'02	10♌2	0♌51	29°57	9°58	19°22	24°5	28°54	10°41	14°26	9°33	9°26	1°26	18°37	T 3
W 4	20 49 52	11°30'30	24°51	2°53	0♌30	10°35	19°20	24°13	28°57	10°43	14°28	9°23	9°23	1°33	18°38	W 4
T 5	20 53 48	12°27'59	9♌58	4°56	1°5	11°12	19°17	24°20	29°0	10°44	14°30	9°12	9°20	1°40	18°40	T 5
F 6	20 57 45	13°25'29	25°13	7°0	1°41	11°48	19°15	24°28	29°2	10°45	14°32	9°2	9°17	1°46	18°42	F 6
S 7	21 1 141	14°23'00	10♌25	9°4	2°19	12°25	19°14	24°35	29°5	10°47	14°34	8°52	9°13	1°53	18°44	S 7
S 8	21 5 38	15°20'31	25°23	11°8	2°57	13°2	19°12	24°43	29°8	10°48	14°36	8°45	9°10	2°0	18°46	S 8
M 9	21 9 34	16°18'04	10♌1	13°12	3°37	13°39	19°11	24°50	29°11	10°50	14°37	8°40	9°7	2°7	18°48	M 9
T 10	21 13 31	17°15'37	24°14	15°16	4°17	14°17	19°9	24°58	29°13	10°51	14°39	8°38	9°4	2°13	18°50	T 10
W 11	21 17 27	18°13'12	8♌1	17°19	4°59	14°54	19°8	25°6	29°16	10°53	14°41	8°D38	9°1	2°20	18°53	W 11
T 12	21 21 24	19°10'47	21°23	19°22	5°41	15°31	19°8	25°13	29°18	10°54	14°43	8°R38	8°57	2°27	18°55	T 12
F 13	21 25 21	20°8'23	4♌24	21°23	6°25	16°9	19°7	25°21	29°21	10°56	14°45	8°37	8°54	2°33	18°58	F 13
S 14	21 29 17	21°6'00	17°6	23°24	7°9	16°46	19°6	25°29	29°24	10°57	14°46	8°35	8°51	2°40	19°0	S 14
S 15	21 33 14	22°3'39	29°34	25°23	7°55	17°24	19°6	25°36	29°26	10°59	14°48	8°30	8°48	2°47	19°3	S 15
M 16	21 37 10	23°1'18	11♌50	27°21	8°41	18°2	19°D 6	25°44	29°28	11°0	14°50	8°22	8°45	2°53	19°6	M 16
T 17	21 41 7	23°58'58	23°57	29°18	9°28	18°40	19°6	25°51	29°31	11°2	14°52	8°12	8°42	3°0	19°9	T 17
W 18	21 45 3	24°56'40	5♌59	1♌13	10°16	19°18	19°6	25°59	29°33	11°4	14°54	8°0	8°38	3°7	19°12	W 18
T 19	21 49 0	25°54'22	17°55	3°7	11°4	19°56	19°7	26°7	29°36	11°5	14°55	7°47	8°35	3°14	19°15	T 19
F 20	21 52 56	26°52'06	29°49	5°0	11°54	20°34	19°7	26°14	29°38	11°7	14°57	7°34	8°32	3°20	19°18	F 20
S 21	21 56 53	27°49'52	11♌40	6°52	12°44	21°12	19°8	26°22	29°40	11°9	14°59	7°23	8°29	3°27	19°21	S 21
S 22	22 0 50	28°47'38	23°31	8°42	13°35	21°50	19°9	26°30	29°42	11°11	15°1	7°13	8°26	3°34	19°25	S 22
M 23	22 4 46	29°45'27	5♌25	10°30	14°26	22°29	19°11	26°37	29°45	11°12	15°2	7°6	8°23	3°40	19°28	M 23
T 24	22 8 43	0♌43'17	17°22	12°18	15°18	23°7	19°12	26°45	29°47	11°14	15°4	7°2	8°19	3°47	19°32	T 24
W 25	22 12 39	1°41'08	29°28	14°4	16°11	23°46	19°13	26°53	29°49	11°16	15°6	7°0	8°16	3°54	19°35	W 25
T 26	22 16 36	2°39'02	11♌45	15°48	17°5	24°25	19°15	27°0	29°51	11°18	15°8	7°D 0	8°13	4°1	19°39	T 26
F 27	22 20 32	3°36'57	24°19	17°32	17°58	25°3	19°17	27°8	29°53	11°20	15°9	7°0	8°10	4°7	19°43	F 27
S 28	22 24 29	4°34'54	7♌13	19°14	18°53	25°42	19°19	27°15	29°55	11°21	15°11	7°R 1	8°7	4°14	19°47	S 28
S 29	22 28 25	5°32'53	20°32	20°54	19°48	26°21	19°22	27°23	29°57	11°23	15°13	7°0	8°3	4°21	19°51	S 29
M 30	22 32 22	6°30'54	4♌19	22°34	20°44	27°0	19°24	27°31	29°59	11°25	15°15	6°57	8°0	4°27	19°55	M 30
T 31	22 36 19	7♌28'57	18♌35	24♌12	21♌40	27♌39	19♌27	27♌38	0♌1	11♌27	15♌16	6♌51	7♌57	4♌34	19♌59	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	decl	lat	decl	lat
S 1	18n 7	24n51	2n40	21n34	0n48	18n10	5s16	3s19	0n10	22s43	0n19	14n43	1n12	23n37	0n10	2s48	1n32	23n25	7n13	14n44	14n40	15s31	14s21	3n 8											
M 2	17 51	26 59	3 37	21 20	0 57	18 13	5 13	3 34	0 10	22 43	0 19	14 40	1 12	23 37	0 10	2 49	1 32	23 24	7 13	14 43	14 39	15 28	14 21	3 8											
T 3	17 36	27 25	4 22	21 3	1 6	18 17	5 10	3 49	0 9	22 43	0 19	14 38	1 12	23 37	0 10	2 50	1 32	23 24	7 13	14 41	14 38	15 25	14 22	3 8											
W 4	17 20	25 56	4 51	20 43	1 13	18 20	5 7	4 4	0 8	22 43	0 19	14 36	1 12	23 37	0 10	2 50	1 32	23 23	7 13	14 38	14 37	15 23	14 22	3 8											
T 5	17 4	22 34	5 0	20 20	1 20	18 23	5 4	4 19	0 7	22 43	0 18	14 33	1 12	23 37	0 10	2 51	1 32	23 23	7 13	14 34	14 36	15 20	14 23	3 8											
F 6	16 48	17 39	4 48	19 55	1 26	18 26	5 0	4 35	0 6	22 43	0 18	14 31	1 12	23 37	0 10	2 51	1 32	23 22	7 13	14 31	14 35	15 17	14 23	3 8											
S 7	16 31	11 37	4 16	19 28	1 31	18 29	4 57	4 50	0 5	22 43	0 18	14 28	1 12	23 37	0 10	2 52	1 32	23 22	7 13	14 28	14 34	15 14	14 24	3 7											
S 8	16 14	5 0	3 27	18 58	1 36	18 32	4 53	5 5	0 4	22 43	0 18	14 26	1 12	23 37	0 10	2 52	1 32	23 21	7 13	14 25	14 33	15 12	14 24	3 7											
M 9	15 57	1s45	2 25	18 27	1 39	18 35	4 49	5 20	0 4	22 43	0 18	14 23	1 13	23 37	0 10	2 53	1 32	23 21	7 13	14 24	14 32	15 9	14 25	3 7											
T 10	15 40	8 14	1 15	17 53	1 42	18 38	4 45	5 35	0 3	22 43	0 17	14 21	1 13	23 37	0 10	2 54	1 32	23 20	7 13	14 23	14 31	15 6	14 26	3 7											
W 11	15 22	14 8	0 3	17 18	1 44	18 41	4 41	5 51	0 2	22 43	0 17	14 18	1 13	23 37	0 10	2 54	1 31	23 20	7 13	14 23	14 30	15 3	14 26	3 7											
T 12	15 5	19 12	1s 7	16 41	1 45	18 44	4 36	6 6	0 1	22 43	0 17	14 16	1 13	23 37	0 10	2 55	1 31	23 19	7 13	14 23	14 29	15 1	14 27	3 7											
F 13	14 47	23 11	2 12	16 3	1 46	18 46	4 32	6 21	0 0	22 43	0 17	14 13	1 13	23 37	0 10	2 55	1 31	23 19	7 13	14 23	14 28	14 58	14 28	3 7											
S 14	14 28	25 57	3 8	15 23	1 46	18 48	4 27	6 36	0s 0	22 43	0 17	14 11	1 13	23 37	0 10	2 56	1 31	23 18	7 14	14 22	14 27	14 55	14 29	3 7											
S 15	14 10	27 22	3 55	14 43	1 45	18 50	4 23	6 51	0 1	22 43	0 17	14 8	1 13	23 37	0 10	2 57	1 31	23 18	7 14	14 20	14 26	14 52	14 30	3 7											
M 16	13 51	27 24	4 30	14 1	1 43	18 52	4 18	7 6	0 2	22 44	0 16	14 6	1 13	23 37	0 10	2 57	1 31	23 17	7 14	14 18	14 25	14 49	14 30	3 7											
T 17	13 32	26 7	4 52	13 18	1 41	18 54	4 13	7 22	0 3	22 44	0 16	14 3	1 13	23 37	0 10	2 58	1 31	23 17	7 14	14 15	14 24	14 47	14 31	3 7											
W 18	13 13	23 38	5 1	12 35	1 39	18 55	4 8	7 37	0 4	22 44	0 16	14 0	1 13	23 37	0 10	2 59	1 31	23 16	7 14	14 11	14 23	14 44	14 32	3 7											
T 19	12 53	20 10	4 56	11 51	1 36	18 56	4 3	7 52	0 4	22 44	0 16	13 58	1 13	23 37	0 10	2 59	1 31	23 16	7 14	14 7	14 22	14 41	14 33	3 7											
F 20	12 34	15 53	4 39	11 7	1 32	18 57	3 59	8 7	0 5	22 44	0 16	13 55	1 13	23 37	0 10	3 0	1 31	23 16	7 14	14 2	14 21	14 38	14 34	3 6											
S 21	12 14	11 2	4 9	10 22	1 28	18 58	3 53	8 22	0 6	22 45	0 16	13 53	1 13	23 37	0 10	3 1	1 31	23 15	7 14	13 59	14 20	14 35	14 35	3 6											
S 22	11 54	5 46	3 29	9 37	1 24	18 58	3 48	8 37	0 7	22 45	0 15	13 50	1 13	23 37	0 10	3 2	1 31	23 15	7 14	13 56	14 19	14 33	14 36	3 6											
M 23	11 34	0 18	2 40	8 51	1 19	18 58	3 43	8 52	0 8	22 45	0 15	13 48	1 13	23 37	0 10	3 2	1 31	23 14	7 14	13 53	14 18	14 30	14 37	3 6											
T 24	11 13	5n15	1 43	8 5	1 14	18 58	3 38	9 7	0 8	22 45	0 15	13 45	1 14	23 37	0 10	3 3	1 31	23 14	7 15	13 52	14 17	14 27	14 38	3 6											
W 25	10 53	10 40	0 40	7 20	1 9	18 57	3 33	9 22	0 9	22 46	0 15	13 43	1 14	23 37	0 10	3 4	1 31	23 14	7 15	13 51	14 16	14 24	14 39	3 6											
T 26	10 32	15 46	0n25	6 34	1 3	18 56	3 27	9 37	0 10	22 46	0 15	13 40	1 14	23 37	0 10	3 4	1 31	23 13	7 15	13 51	14 15	14 21	14 40	3 6											
F 27	10 11	20 20	1 31	5 48	0 57	18 54	3 22	9 52	0 11	22 46	0 15	13 38	1 14	23 37	0 10	3 5	1 31	23 13	7 15	13 51	14 14	14 19	14 41	3 6											
S 28	9 50	24 3	2 34	5 2	0 50	18 52	3 17	10 7	0 11	22 47	0 14	13 35	1 14	23 37	0 11	3 6	1 31	23 12	7 15	13 52	14 13	14 16	14 42	3 6											
S 29	9 29	26 37	3 31	4 17	0 44	18 50	3 11	10 22	0 12	22 47	0 14	13 33	1 14	23 37	0 11	3 7	1 31	23 12	7 15	13 51	14 12	14 13	14 43	3 6											
M 30	9 7	27 40	4 17	3 31	0 37	18 47	3 6	10 36	0 13	22 47	0 14	13 30	1 14	23 37	0 11	3 7	1 31	23 12	7 15	13 50	14 11	14 10	14 44	3 6											
T 31	8n46	26n56	4n50	2n46	0n30	18n44	3s 1	10s51	0s13	22s48	0n14	13n27	1n14	23n37	0n11	3s 8	1n31	23n11	7n16	13n48	14n10	14s 7	14s46	3n 6											

## ASTRODIENST EPHEMERIS for the year 1948

geocentric

SEPTEMBER 1948

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	22 40 15	8 <sup>m</sup> 27'02	3 <sup>h</sup> 01'17	25 <sup>m</sup> 49	22 <sup>h</sup> 37	28 <sup>h</sup> 18	19 <sup>h</sup> 30	27 <sup>h</sup> 04	0 <sup>h</sup> 2	11 <sup>h</sup> 29	15 <sup>h</sup> 18	6 <sup>h</sup> R44	7 <sup>h</sup> 54	4 <sup>h</sup> 41	20 <sup>m</sup> 3	W 1
T 2	22 44 12	9°25'08	18°21	27°24	23°34	28°58	19°33	27°53	0° 4	11°31	15°20	6 <sup>h</sup> 36	7°51	4°48	20° 8	T 2
F 3	22 48 8	10°23'16	3 <sup>m</sup> 36	28°59	24°31	29°37	19°36	28° 1	0° 6	11°33	15°21	6°27	7°48	4°54	20°12	F 3
S 4	22 52 5	11°21'26	18°53	0 <sup>h</sup> 32	25°29	0 <sup>h</sup> 17	19°39	28° 8	0° 8	11°35	15°23	6°20	7°44	5° 1	20°17	S 4
S 5	22 56 1	12°19'38	4 <sup>h</sup> 1	2° 4	26°28	0°56	19°43	28°16	0° 9	11°37	15°25	6°14	7°41	5° 8	20°21	S 5
M 6	22 59 58	13°17'51	18°49	3°34	27°27	1°36	19°46	28°23	0°11	11°39	15°26	6°11	7°38	5°14	20°26	M 6
T 7	23 3 54	14°16'06	3 <sup>m</sup> 13	5° 4	28°26	2°15	19°50	28°31	0°12	11°41	15°28	6°D 9	7°35	5°21	20°31	T 7
W 8	23 7 51	15°14'22	17° 9	6°32	29°26	2°55	19°54	28°38	0°14	11°43	15°30	6°10	7°32	5°28	20°36	W 8
T 9	23 11 48	16°12'40	0 <sup>h</sup> 38	7°59	0 <sup>h</sup> 26	3°35	19°59	28°46	0°15	11°45	15°31	6°11	7°29	5°34	20°40	T 9
F 10	23 15 44	17°11'00	13°41	9°25	1°26	4°15	20° 3	28°53	0°17	11°47	15°33	6°R12	7°25	5°41	20°45	F 10
S 11	23 19 41	18° 9'21	26°23	10°49	2°27	4°55	20° 8	29° 1	0°18	11°49	15°34	6°11	7°22	5°48	20°51	S 11
S 12	23 23 37	19° 7'43	8 <sup>h</sup> 48	12°12	3°28	5°35	20°12	29° 8	0°19	11°51	15°36	6° 9	7°19	5°55	20°56	S 12
M13	23 27 34	20° 6'07	20°59	13°34	4°30	6°16	20°17	29°15	0°20	11°53	15°38	6° 5	7°16	6° 1	21° 1	M13
T14	23 31 30	21° 4'33	3 <sup>h</sup> 1	14°55	5°32	6°56	20°22	29°23	0°22	11°55	15°39	5°59	7°13	6° 8	21° 6	T14
W15	23 35 27	22° 3'01	14°56	16°14	6°34	7°36	20°28	29°30	0°23	11°58	15°41	5°52	7° 9	6°15	21°12	W15
T16	23 39 23	23° 1'30	26°49	17°31	7°37	8°17	20°33	29°37	0°24	12° 0	15°42	5°44	7° 6	6°21	21°17	T16
F17	23 43 20	24° 0'01	8 <sup>h</sup> 41	18°47	8°39	8°57	20°39	29°44	0°25	12° 2	15°44	5°36	7° 3	6°28	21°22	F17
S18	23 47 17	24°58'33	20°33	20° 2	9°43	9°38	20°44	29°51	0°26	12° 4	15°45	5°28	7° 0	6°35	21°28	S18
S19	23 51 13	25°57'08	2 <sup>h</sup> 28	21°14	10°46	10°18	20°50	29°59	0°27	12° 6	15°47	5°23	6°57	6°42	21°34	S19
M20	23 55 10	26°55'44	14°28	22°25	11°50	10°59	20°56	0 <sup>h</sup> 6	0°28	12° 8	15°48	5°19	6°54	6°48	21°39	M20
T21	23 59 6	27°54'23	26°34	23°35	12°54	11°40	21° 2	0°13	0°29	12°10	15°50	5°17	6°50	6°55	21°45	T21
W22	0 3 3	28°53'04	8 <sup>h</sup> 49	24°42	13°58	12°21	21° 9	0°20	0°29	12°13	15°51	5°D16	6°47	7° 2	21°51	W22
T23	0 6 59	29°51'46	21°14	25°47	15° 3	13° 2	21°15	0°27	0°30	12°15	15°52	5°17	6°44	7° 8	21°57	T23
F24	0 10 56	0 <sup>h</sup> 50'32	3 <sup>h</sup> 15	26°50	16° 8	13°43	21°22	0°34	0°31	12°17	15°54	5°19	6°41	7°15	22° 3	F24
S25	0 14 52	1°49'19	16°51	27°50	17°13	14°24	21°29	0°41	0°31	12°19	15°55	5°20	6°38	7°22	22° 9	S25
S26	0 18 49	2°48'09	0 <sup>h</sup> 8	28°49	18°18	15° 6	21°36	0°48	0°32	12°21	15°56	5°R21	6°34	7°28	22°15	S26
M27	0 22 46	3°47'01	13°48	29°44	19°24	15°47	21°43	0°55	0°32	12°24	15°58	5°21	6°31	7°35	22°21	M27
T28	0 26 42	4°45'55	27°52	0 <sup>h</sup> 36	20°30	16°28	21°50	1° 1	0°33	12°26	15°59	5°19	6°28	7°42	22°27	T28
W29	0 30 39	5°44'52	12 <sup>h</sup> 19	1°25	21°36	17°10	21°57	1° 8	0°33	12°28	16° 0	5°16	6°25	7°49	22°34	W29
T30	0 34 35	6 <sup>h</sup> 43'51	27 <sup>h</sup> 06	2 <sup>h</sup> 11	22 <sup>h</sup> 42	17 <sup>h</sup> 51	22 <sup>h</sup> 57	1 <sup>h</sup> 15	0 <sup>h</sup> 34	12 <sup>h</sup> 30	16 <sup>h</sup> 02	5 <sup>h</sup> 12	6 <sup>h</sup> 22	7 <sup>h</sup> 55	22 <sup>h</sup> 40	T30

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	8n24	24n21	5n 4	2n 1	0n23	18n40	2s55	11s 6	0s14	22s48	0n14	13n25	1n14	23n37	0n11	3s 9	1n31	23n11	7n16	13n46	14n 9	14s 4	14s47	3n 6			
T 2	8 2	20 4	4 59	1 16	0 15	18 36	2 50	11 21	0 15	22 49	0 14	13 22	1 14	23 37	0 11	3 10	1 31	23 10	7 16	13 43	14 8	14 1	14 48	3 6			
F 3	7 41	14 24	4 32	0 32	0 8	18 32	2 44	11 35	0 16	22 49	0 13	13 20	1 14	23 38	0 11	3 11	1 31	23 10	7 16	13 41	14 7	13 59	14 49	3 6			
S 4	7 18	7 51	3 45	0s12	0 0	18 27	2 39	11 50	0 16	22 49	0 13	13 17	1 15	23 38	0 11	3 11	1 31	23 10	7 16	13 38	14 6	13 56	14 50	3			
S 5	6 56	0 54	2 44	0 56	0s 8	18 21	2 33	12 4	0 17	22 50	0 13	13 15	1 15	23 38	0 11	3 12	1 31	23 9	7 16	13 36	14 5	13 53	14 52	3 6			
M 6	6 34	5s58	1 32	1 39	0 15	18 16	2 28	12 19	0 18	22 50	0 13	13 12	1 15	23 38	0 11	3 13	1 31	23 9	7 16	13 35	14 4	13 50	14 53	3			
T 7	6 12	12 21	0 16	2 22	0 23	18 9	2 22	12 33	0 18	22 51	0 13	13 10	1 15	23 38	0 11	3 14	1 31	23 9	7 17	13 35	14 3	13 47	14 54	3			
W 8	5 49	17 54	0s59	3 5	0 31	18 3	2 17	12 47	0 19	22 51	0 13	13 7	1 15	23 38	0 11	3 15	1 31	23 8	7 17	13 35	14 2	13 44	14 56	3			
T 9	5 27	22 22	2 8	3 46	0 39	17 55	2 12	13 2	0 20	22 52	0 13	13 5	1 15	23 38	0 11	3 15	1 31	23 8	7 17	13 35	14 1	13 41	14 57	3			
F 10	5 4	25 34	3 8	4 28	0 48	17 48	2 6	13 16	0 21	22 52	0 12	13 2	1 15	23 38	0 11	3 16	1 31	23 8	7 17	13 35	14 0	13 39	14 58	3			
S 11	4 41	27 21	3 57	5 8	0 56	17 40	2 1	13 30	0 21	22 53	0 12	13 0	1 15	23 38	0 11	3 17	1 31	23 7	7 17	13 35	13 59	13 36	15 0	3			
S 12	4 18	27 43	4 34	5 48	1 4	17 31	1 55	13 44	0 22	22 53	0 12	12 57	1 15	23 38	0 11	3 18	1 31	23 7	7 18	13 35	13 58	13 33	15 1	3			
M13	3 55	26 42	4 57	6 28	1 12	17 22	1 50	13 58	0 23	22 54	0 12	12 55	1 16	23 38	0 11	3 19	1 31	23 7	7 18	13 33	13 56	13 30	15 2	3			
T14	3 32	24 29	5 8	7 7	1 20	17 12	1 45	14 12	0 23	22 54	0 12	12 53	1 16	23 38	0 11	3 19	1 31	23 6	7 18	13 31	13 55	13 27	15 4	3			
W15	3 9	21 12	5 4	7 45	1 28	17 2	1 39	14 26	0 24	22 55	0 12	12 50	1 16	23 38	0 11	3 20	1 31	23 6	7 18	13 29	13 54	13 24	15 5	3			
T16	2 46	17 5	4 48	8 22	1 36	16 52	1 34	14 40	0 25	22 55	0 12	12 48	1 16	23 38	0 11	3 21	1 31	23 6	7 18	13 26	13 53	13 21	15 7	3			
F17	2 23	12 19	4 19	8 58	1 44	16 41	1 29	14 53	0 25	22 56	0 11	12 45	1 16	23 38	0 11	3 22	1 31	23 6	7 18	13 23	13 52	13 18	15 8	3			
S18	2 0	7 6	3 39	9 34	1 52	16 29	1 23	15 7	0 26	22 56	0 11	12 43	1 16	23 38	0 11	3 23	1 31	23 5	7 19	13 21	13 51	13 15	15 9	3			
S19	1 37	1 36	2 49	10 9	2 0	16 17	1 18	15 20	0 27	22 57	0 11	12 40	1 16	23 38	0 11	3 24	1 31	23 5	7 19	13 19	13 50	13 12	15 11	3			
M20	1 13	4n 0	1 51	10 43	2 8	16 5	1 13	15 34	0 27	22 57	0 11	12 38	1 16	23 38	0 11	3 25	1 31	23 5	7 19	13 18	13 49	13 10	15 12	3			
T21	0 50	9 31	0 47	11 15	2 16	15 52	1 8	15 47	0 28	22 58	0 11	12 36	1 16	23 38	0 11	3 25	1 31	23 4	7 19	13 17	13 48	13 7	15 14	3			
W22	0 27	14 45	0n19	11 47	2 23	15 38	1 3	16 0	0 28	22 59	0 11	12 33	1 17	23 38	0 11	3 26	1 31	23 4	7 19	13 17	13 47	13 4	15 15	3			
T23	0 3	19 28	1 26	12 18	2 30	15 25	0 58	16 13	0 29	22 59	0 11	12 31	1 17	23 38	0 11	3 27	1 31	23 4	7 20	13 17	13 46	13 1	15 17	3			
F24	0s20	23 23	2 30	12 47	2 37	15 10	0 53	16 26	0 30	23 0	0 10	12 29	1 17	23 38	0 11	3 28	1 31	23 4	7 20	13 18	13 45	12 58	15 18	3			
S25	0 43	26 14	3 28	13 16	2 44	14 56	0 48	16 39	0 30	23 0	0 10	12 26	1 17	23 38	0 11	3 29	1 31	23 4	7 20	13 18	13 44	12 55	15 20	3			
S26	1 7	27 43	4 16	13 43	2 50	14 40	0 43	16 52	0 31	23 1	0 10	12 24	1 17	23 38	0 11	3 30	1 31	23 3	7 20	13 19	13 43	12 52	15 21	3			
M27	1 30	27 34	4 51	14 8	2 57	14 25	0 38	17 4	0 32	23 1	0 10	12 22	1 17	23 38	0 11	3 31	1 31	23 3	7 21	13 19	13 42	12 49	15 23	3			
T28	1 54	25 40	5 10	14 32	3 3	14 9	0 33	17 17	0 32	23 2	0 10	12 19	1 17	23 38	0 11	3 31	1 31	23 3	7 21	13 18	13 41	12 46	15 25	3			
W29	2 17	22 4	5 11	14 54	3 8	13 52	0 28	17 29	0 32	23 3	0 10	12 17	1 17	23 38	0 11	3 32	1 31	23 3	7 21	13 17	13 40	12 43	15 26	3			
T30	2s40	17n 2	4n51	15s15	3s13	13n35	0s23	17s42	0s33	23s 3	0n10	12n15	1n18	23n38	0n11	3s33	1n31	23n 3	7n21	13n16	13n39	12s40	15s28	3n			

ASTRODIENST EPHEMERIS for the year 1948  
geocentric

OCTOBER 1948

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	0 38 32	7♂42'52	12♂ 6	2♂52	23♂49	18♂33	22♂12	1♂22	0♂34	12♂33	16♂ 3	5♂R 8	6♂19	8♂ 2	22♂46	F 1
S 2	0 42 28	8°41'55	27°11	3°30	24°56	19°15	22°20	1°28	0°34	12°35	16° 4	5♂ 5	6°15	8° 9	22°53	S 2
S 3	0 46 25	9°41'00	12♂11	4° 3	26° 3	19°57	22°28	1°35	0°35	12°37	16° 5	5° 2	6°12	8°15	22°59	S 3
M 4	0 50 21	10°40'08	26°59	4°31	27°10	20°38	22°36	1°41	0°35	12°39	16° 6	5° 1	6° 9	8°22	23° 6	M 4
T 5	0 54 18	11°39'17	11♂26	4°54	28°17	21°20	22°44	1°48	0°35	12°41	16° 8	5°D 1	6° 6	8°29	23°12	T 5
W 6	0 58 14	12°38'28	25°28	5°11	29°25	22° 2	22°53	1°54	0°R35	12°44	16° 9	5° 2	6° 3	8°35	23°19	W 6
T 7	1 2 11	13°37'41	9♂ 4	5°21	0♂33	22°45	23° 1	2° 1	0°35	12°46	16°10	5° 3	6° 0	8°42	23°26	T 7
F 8	1 6 8	14°36'56	22°14	5°R25	1°41	23°27	23°10	2° 7	0°35	12°48	16°11	5° 5	5°56	8°49	23°33	F 8
S 9	1 10 4	15°36'13	5♂ 0	5°22	2°49	24° 9	23°18	2°13	0°35	12°50	16°12	5° 6	5°53	8°56	23°39	S 9
S 10	1 14 1	16°35'32	17°27	5°11	3°57	24°51	23°27	2°19	0°34	12°53	16°13	5°R 6	5°50	9° 2	23°46	S 10
M 11	1 17 57	17°34'52	29°39	4°52	5° 6	25°34	23°36	2°26	0°34	12°55	16°14	5° 5	5°47	9° 9	23°53	M 11
T 12	1 21 54	18°34'14	11♂39	4°25	6°14	26°16	23°45	2°32	0°34	12°57	16°15	5° 4	5°44	9°16	24° 0	T 12
W 13	1 25 50	19°33'38	23°33	3°50	7°23	26°59	23°54	2°38	0°34	12°59	16°16	5° 2	5°40	9°22	24° 7	W 13
T 14	1 29 47	20°33'04	5♂42	3° 6	8°32	27°41	24° 4	2°44	0°33	13° 2	16°17	5° 0	5°37	9°29	24°14	T 14
F 15	1 33 43	21°32'31	17°16	2°14	9°42	28°24	24°13	2°50	0°33	13° 4	16°18	4°58	5°34	9°36	24°21	F 15
S 16	1 37 40	22°32'00	29°12	1°15	10°51	29° 7	24°23	2°56	0°32	13° 6	16°19	4°56	5°31	9°42	24°28	S 16
S 17	1 41 37	23°31'31	11♂14	0°10	12° 0	29°50	24°32	3° 1	0°32	13° 8	16°20	4°55	5°28	9°49	24°35	S 17
M 18	1 45 33	24°31'05	23°24	29♂ 0	13°10	0♂33	24°42	3° 7	0°31	13°10	16°21	4°54	5°25	9°56	24°42	M 18
T 19	1 49 30	25°30'40	5♂43	27°47	14°20	1°16	24°52	3°13	0°31	13°13	16°21	4°D54	5°21	10° 3	24°50	T 19
W 20	1 53 26	26°30'17	18°14	26°32	15°30	1°59	25° 2	3°18	0°30	13°15	16°22	4°54	5°18	10° 9	24°57	W 20
T 21	1 57 23	27°29'57	0♂56	25°18	16°40	2°42	25°12	3°24	0°29	13°17	16°23	4°54	5°15	10°16	25° 4	T 21
F 22	2 1 19	28°29'38	13°52	24° 8	17°50	3°25	25°22	3°29	0°28	13°19	16°24	4°55	5°12	10°23	25°11	F 22
S 23	2 5 16	29°29'22	27° 2	23° 2	19° 1	4° 8	25°33	3°35	0°28	13°21	16°25	4°56	5° 9	10°29	25°19	S 23
S 24	2 9 12	0♂29'09	10♂27	22° 4	20°11	4°52	25°43	3°40	0°27	13°23	16°25	4°56	5° 6	10°36	25°26	S 24
M 25	2 13 9	1°28'57	24° 8	21°15	21°22	5°35	25°53	3°45	0°26	13°26	16°26	4°56	5° 2	10°43	25°34	M 25
T 26	2 17 6	2°28'48	8♂ 5	20°36	22°33	6°19	26° 4	3°50	0°25	13°28	16°27	4°R56	4°59	10°49	25°41	T 26
W 27	2 21 2	3°28'41	22°17	20° 8	23°44	7° 2	26°15	3°56	0°24	13°30	16°27	4°56	4°56	10°56	25°49	W 27
T 28	2 24 59	4°28'36	6♂42	19°51	24°55	7°46	26°26	4° 1	0°23	13°32	16°28	4°D56	4°53	11° 3	25°56	T 28
F 29	2 28 55	5°28'33	21°17	19°D46	26° 6	8°29	26°36	4° 5	0°22	13°34	16°28	4°56	4°50	11°10	26° 4	F 29
S 30	2 32 52	6°28'32	5♂57	19°52	27°17	9°13	26°47	4°10	0°20	13°36	16°29	4°56	4°46	11°16	26°11	S 30
S 31	2 36 48	7♂28'34	20♂36	20♂ 8	28♂29	9♂57	26♂58	4♂15	0♂19	13♂38	16♂29	4♂56	4♂43	11♂23	26♂19	S 31

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
F 1	3s 4	10n53	4n11	15s34	3s18	13n18	0s19	17s54	0s34	23s 4	0n 9	12n12	1n18	23n38	0n11	3s34	1n31	23n 2	7n21	13n14	13n38	12s37	15s29	3n 5					
S 2	3 27	4 4	3 13	15 50	3 22	13 0	0 14	18 6	0 35	23 4	0 9	12 10	1 18	23 38	0 11	3 35	1 31	23 2	7 22	13 13	13 37	12 34	15 31	3 5					
S 3	3 50	2s57	2 2	16 5	3 25	12 41	0 10	18 18	0 35	23 5	0 9	12 8	1 18	23 38	0 11	3 36	1 31	23 2	7 22	13 12	13 36	12 31	15 32	3 5					
M 4	4 13	9 43	0 44	16 17	3 27	12 23	0 5	18 30	0 36	23 5	0 9	12 6	1 18	23 38	0 11	3 37	1 31	23 2	7 22	13 12	13 35	12 28	15 34	3 5					
T 5	4 37	15 49	0s35	16 27	3 29	12 4	0 1	18 41	0 36	23 6	0 9	12 4	1 18	23 38	0 11	3 37	1 31	23 2	7 22	13 12	13 34	12 25	15 36	3 5					
W 6	5 0	20 55	1 50	16 33	3 30	11 44	0n 4	18 53	0 37	23 7	0 9	12 1	1 19	23 38	0 11	3 38	1 31	23 2	7 23	13 12	13 32	12 22	15 37	3 5					
T 7	5 23	24 44	2 57	16 37	3 30	11 24	0 8	19 4	0 37	23 7	0 9	11 59	1 19	23 38	0 11	3 39	1 31	23 2	7 23	13 13	13 31	12 19	15 39	3 5					
F 8	5 46	27 4	3 52	16 37	3 29	11 4	0 12	19 15	0 38	23 8	0 9	11 57	1 19	23 38	0 11	3 40	1 31	23 2	7 23	13 13	13 30	12 16	15 40	3 5					
S 9	6 9	27 54	4 33	16 34	3 27	10 44	0 16	19 26	0 39	23 8	0 8	11 55	1 19	23 38	0 11	3 41	1 31	23 1	7 23	13 13	13 29	12 13	15 42	3 5					
S 10	6 31	27 17	5 1	16 27	3 23	10 23	0 20	19 37	0 39	23 9	0 8	11 53	1 19	23 38	0 11	3 42	1 31	23 1	7 24	13 14	13 28	12 10	15 44	3 5					
M11	6 54	25 21	5 14	16 15	3 18	10 1	0 24	19 48	0 40	23 9	0 8	11 51	1 19	23 38	0 11	3 43	1 31	23 1	7 24	13 13	13 27	12 7	15 45	3 5					
T 12	7 17	22 19	5 13	16 0	3 11	9 40	0 28	19 59	0 40	23 10	0 8	11 49	1 20	23 38	0 11	3 43	1 31	23 1	7 24	13 13	13 26	12 4	15 47	3 5					
W13	7 39	18 23	4 59	15 40	3 3	9 18	0 32	20 9	0 41	23 11	0 8	11 47	1 20	23 38	0 11	3 44	1 31	23 1	7 24	13 12	13 25	12 1	15 49	3 6					
T 14	8 2	13 45	4 32	15 15	2 52	8 55	0 36	20 19	0 41	23 11	0 8	11 45	1 20	23 38	0 11	3 45	1 31	23 1	7 25	13 12	13 24	11 58	15 50	3 6					
F 15	8 24	8 37	3 54	14 46	2 40	8 33	0 39	20 29	0 42	23 12	0 8	11 43	1 20	23 38	0 11	3 46	1 31	23 1	7 25	13 11	13 23	11 55	15 52	3 6					
S 16	8 46	3 9	3 5	14 12	2 26	8 10	0 43	20 39	0 42	23 12	0 7	11 41	1 20	23 38	0 11	3 47	1 31	23 1	7 25	13 10	13 22	11 52	15 53	3 6					
S 17	9 8	2n30	2 7	13 34	2 11	7 47	0 47	20 49	0 43	23 13	0 7	11 39	1 21	23 38	0 11	3 48	1 31	23 1	7 25	13 10	13 21	11 49	15 55	3 6					
M18	9 30	8 7	1 3	12 53	1 53	7 23	0 50	20 59	0 43	23 13	0 7	11 37	1 21	23 38	0 11	3 49	1 31	23 1	7 26	13 9	13 20	11 46	15 57	3 6					
T 19	9 52	13 30	0n 5	12 10	1 35	6 59	0 53	21 8	0 44	23 14	0 7	11 35	1 21	23 38	0 11	3 49	1 31	23 1	7 26	13 9	13 19	11 43	15 58	3 6					
W 20	10 14	18 26	1 13	11 24	1 15	6 35	0 57	21 17	0 44	23 14	0 7	11 33	1 21	23 38	0 12	3 50	1 31	23 1	7 26	13 10	13 18	11 40	16 0	3 6					
T 21	10 35	22 38	2 19	10 38	0 55	6 11	1 0	21 26	0 45	23 15	0 7	11 32	1 21	23 38	0 12	3 51	1 31	23 1	7 26	13 10	13 17	11 37	16 2	3 6					
F 22	10 57	25 47	3 20	9 53	0 34	5 46	1 3	21 35	0 45	23 15	0 7	11 30	1 21	23 38	0 12	3 52	1 31	23 1	7 27	13 10	13 16	11 34	16 3	3 6					
S 23	11 18	27 35	4 11	9 10	0 13	5 22	1 6	21 44	0 46	23 16	0 7	11 28	1 22	23 38	0 12	3 53	1 31	23 1	7 27	13 10	13 15	11 31	16 5	3 6					
S 24	11 39	27 50	4 49	8 30	0n 7	4 57	1 9	21 52	0 46	23 16	0 7	11 26	1 22	23 38	0 12	3 54	1 31	23 1	7 27	13 10	13 13	11 28	16 7	3 6					
M25	12 0	26 24	5 12	7 54	0 26	4 31	1 12	22 1	0 47	23 17	0 6	11 24	1 22	23 38	0 12	3 54	1 31	23 1	7 28	13 10	13 12	11 25	16 8	3 6					
T 26	12 20	23 21	5 17	7 22	0 44	4 6	1 14	22 9	0 47	23 17	0 6	11 23	1 22	23 38	0 12	3 55	1 31	23 1	7 28	13 10	13 11	11 22	16 10	3 7					
W27	12 41	18 52	5 3	6 57	1 0	3 40	1 17	22 17	0 48	23 17	0 6	11 21	1 22	23 38	0 12	3 56	1 31	23 1	7 28	13 10	13 10	11 19	16 12	3 7					
T 28	13 1	13 14	4 30	6 37	1 15	3 14	1 20	22 24	0 48	23 18	0 6	11 19	1 23	23 39	0 12	3 57	1 31	23 1	7 28	13 10	13 9	11 16	16 13	3 7					
F 29	13 21	6 49	3 39	6 22	1 28	2 48	1 22	22 32	0 49	23 18	0 6	11 18	1 23	23 39	0 12	3 58	1 31	23 1	7 29	13 10	13 8	11 13	16 15	3 7					
S 30	13 41	0s 0	2 34	6 14	1 39	2 22	1 24	22 39	0 49	23 19	0 6	11 16	1 23	23 39	0 12	3 58	1 31	23 1	7 29	13 10	13 7	11 10	16 16	3 7					
S 31	14s 1	6s50	1n19	6s12	1n49	1n56	1n27	22s46	0s50	23s19	0n 6	11n15	1n23	23n39	0n12	3s59	1n31	23n 2	7n29	13n10	13n 6	11s 7	16s18	3n 7					

## ASTRODIENST EPHEMERIS for the year 1948

geocentric

NOVEMBER 1948

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	2 40 45	8♉28'37	5♉ 6	20♊35	29♉40	10♊41	27♊10	4♉20	0°R18	13♊40	16♊30	4°R56	4♉40	11♊30	26♉26	M 1
T 2	2 44 41	9°28'43	19°23	21°11	0♊52	11°25	27°21	4°24	0♊17	13°42	16°30	4♉56	4°37	11°36	26°34	T 2
W 3	2 48 38	10°28'50	3♊22	21°56	2° 3	12° 9	27°32	4°29	0°15	13°45	16°31	4°56	4°34	11°43	26°42	W 3
T 4	2 52 35	11°28'59	16°58	22°47	3°15	12°53	27°44	4°33	0°14	13°47	16°31	4°55	4°31	11°50	26°49	T 4
F 5	2 56 31	12°29'10	0♋11	23°46	4°27	13°37	27°55	4°38	0°12	13°49	16°32	4°54	4°27	11°56	26°57	F 5
S 6	3 0 28	13°29'22	13° 2	24°50	5°39	14°21	28° 7	4°42	0°11	13°51	16°32	4°53	4°24	12° 3	27° 5	S 6
S 7	3 4 24	14°29'36	25°33	26° 0	6°51	15° 6	28°18	4°46	0° 9	13°53	16°32	4°52	4°21	12°10	27°12	S 7
M 8	3 8 21	15°29'51	7♋47	27°14	8° 4	15°50	28°30	4°50	0° 8	13°55	16°33	4°52	4°18	12°16	27°20	M 8
T 9	3 12 17	16°30'08	19°48	28°31	9°16	16°34	28°42	4°54	0° 6	13°57	16°33	4°D52	4°15	12°23	27°28	T 9
W10	3 16 14	17°30'26	1♋42	29°52	10°28	17°19	28°54	4°58	0° 4	13°59	16°33	4°52	4°12	12°30	27°35	W10
T 11	3 20 10	18°30'46	13°33	1♉15	11°41	18° 3	29° 6	5° 2	0° 3	14° 0	16°33	4°53	4° 8	12°37	27°43	T 11
F 12	3 24 7	19°31'07	25°25	2°41	12°53	18°48	29°18	5° 6	0° 1	14° 2	16°33	4°54	4° 5	12°43	27°51	F 12
S 13	3 28 4	20°31'30	7♉24	4° 9	14° 6	19°33	29°30	5° 9	29♊59	14° 4	16°34	4°56	4° 2	12°50	27°59	S 13
S 14	3 32 0	21°31'54	19°32	5°38	15°19	20°17	29°42	5°13	29°57	14° 6	16°34	4°57	3°59	12°57	28° 7	S 14
M15	3 35 57	22°32'19	1♊52	7° 8	16°31	21° 2	29°55	5°16	29°56	14° 8	16°34	4°R58	3°56	13° 3	28°14	M15
T 16	3 39 53	23°32'46	14°27	8°39	17°44	21°47	0♋ 7	5°20	29°54	14°10	16°34	4°57	3°52	13°10	28°22	T 16
W17	3 43 50	24°33'15	27°17	10°11	18°57	22°32	0°19	5°23	29°52	14°12	16°34	4°56	3°49	13°17	28°30	W17
T 18	3 47 46	25°33'45	10♊22	11°44	20°10	23°17	0°32	5°26	29°50	14°13	16°R34	4°54	3°46	13°23	28°38	T 18
F 19	3 51 43	26°34'17	23°42	13°17	21°23	24° 2	0°44	5°29	29°48	14°15	16°34	4°51	3°43	13°30	28°46	F 19
S 20	3 55 39	27°34'51	7♋16	14°51	22°37	24°47	0°57	5°32	29°46	14°17	16°34	4°47	3°40	13°37	28°53	S 20
S 21	3 59 36	28°35'26	21° 1	16°25	23°50	25°32	1° 9	5°35	29°44	14°19	16°34	4°44	3°37	13°44	29° 1	S 21
M22	4 3 33	29°36'03	4♉55	17°59	25° 3	26°17	1°22	5°38	29°42	14°20	16°34	4°41	3°33	13°50	29° 9	M22
T 23	4 7 29	0♋36'42	18°57	19°34	26°17	27° 2	1°35	5°41	29°39	14°22	16°34	4°40	3°30	13°57	29°17	T 23
W24	4 11 26	1°37'22	3♉ 4	21° 8	27°30	27°48	1°48	5°43	29°37	14°24	16°33	4°D39	3°27	14° 4	29°25	W24
T 25	4 15 22	2°38'04	17°14	22°42	28°44	28°33	2° 1	5°46	29°35	14°25	16°33	4°40	3°24	14°10	29°32	T 25
F 26	4 19 19	3°38'47	1♊27	24°17	29°57	29°18	2°14	5°48	29°33	14°27	16°33	4°41	3°21	14°17	29°40	F 26
S 27	4 23 15	4°39'32	15°40	25°51	1♉11	0♋ 4	2°27	5°50	29°31	14°29	16°33	4°43	3°18	14°24	29°48	S 27
S 28	4 27 12	5°40'19	29°49	27°26	2°25	0°49	2°40	5°52	29°28	14°30	16°32	4°R44	3°14	14°30	29°56	S 28
M29	4 31 8	6°41'07	13♉53	29° 0	3°38	1°35	2°53	5°54	29°26	14°32	16°32	4°43	3°11	14°37	0♋ 4	M29
T 30	4 35 5	7♊41'57	27♉47	0♋35	4♉52	2♋21	3♋ 6	5♉56	29♊24	14♊33	16♊32	4♋42	3♋ 8	14♋44	0♋11	T 30

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
M 1	14s20	13s15	0s 1	6s14	1n57	1n29	22s53	0s50	23s19	0n 6	11n13	1n23	23n39	0n12	4s 0	1n31
T 2	14 39	18 51	1 19	6 22	2 3	1 31	23 0	0 51	23 20	0 6	11 12	1 24	23 39	0 12	4 1	1 31
W 3	14 58	23 18	2 31	6 34	2 8	0 36	1 33	23 6	0 51	23 20	0 5	11 10	1 24	23 39	0 12	4 1
T 4	15 17	26 20	3 33	6 50	2 11	0 9	1 35	23 12	0 51	23 20	0 5	11 9	1 24	23 39	0 12	4 2
F 5	15 35	27 48	4 21	7 10	2 13	0s17	1 37	23 18	0 52	23 21	0 5	11 7	1 24	23 39	0 12	4 3
S 6	15 54	27 41	4 54	7 33	2 14	0 44	1 38	23 24	0 52	23 21	0 5	11 6	1 24	23 39	0 12	4 4
S 7	16 12	26 9	5 13	7 58	2 14	1 11	1 40	23 29	0 53	23 21	0 5	11 5	1 25	23 39	0 12	4 5
M 8	16 29	23 25	5 16	8 26	2 13	1 39	1 42	23 34	0 53	23 22	0 5	11 3	1 25	23 39	0 12	4 5
T 9	16 47	19 43	5 6	8 55	2 11	2 6	1 43	23 39	0 53	23 22	0 5	11 2	1 25	23 39	0 12	4 6
W10	17 4	15 16	4 43	9 26	2 8	2 33	1 44	23 44	0 54	23 22	0 5	11 1	1 25	23 39	0 12	4 7
T 11	17 21	10 17	4 8	9 58	2 5	3 0	1 46	23 49	0 54	23 22	0 5	11 0	1 25	23 39	0 12	4 7
F 12	17 37	4 54	3 22	10 31	2 1	3 27	1 47	23 53	0 55	23 22	0 4	10 58	1 26	23 39	0 12	4 8
S 13	17 53	0n42	2 27	11 5	1 56	3 54	1 48	23 57	0 55	23 23	0 4	10 57	1 26	23 39	0 12	4 9
S 14	18 9	6 21	1 24	11 39	1 51	4 22	1 49	24 1	0 55	23 23	0 4	10 56	1 26	23 39	0 12	4 10
M15	18 25	11 52	0 17	12 13	1 46	4 49	1 50	24 4	0 56	23 23	0 4	10 55	1 26	23 39	0 12	4 10
T 16	18 40	17 0	0n52	12 48	1 41	5 16	1 50	24 8	0 56	23 23	0 4	10 54	1 27	23 39	0 12	4 11
W17	18 55	21 30	2 0	13 23	1 35	5 43	1 51	24 11	0 56	23 23	0 4	10 53	1 27	23 39	0 12	4 12
T 18	19 9	25 2	3 3	13 57	1 29	6 10	1 52	24 13	0 57	23 23	0 4	10 52	1 27	23 39	0 12	4 12
F 19	19 24	27 15	3 57	14 31	1 22	6 37	1 52	24 16	0 57	23 23	0 4	10 51	1 27	23 39	0 12	4 13
S 20	19 38	27 53	4 39	15 5	1 16	7 3	1 53	24 18	0 57	23 23	0 4	10 50	1 28	23 39	0 12	4 13
S 21	19 51	26 50	5 5	15 39	1 9	7 30	1 53	24 20	0 58	23 23	0 3	10 50	1 28	23 39	0 12	4 14
M22	20 4	24 7	5 14	16 12	1 2	7 57	1 53	24 22	0 58	23 23	0 3	10 49	1 28	23 39	0 12	4 15
T 23	20 17	19 58	5 4	16 44	0 56	8 23	1 53	24 23	0 58	23 23	0 3	10 48	1 28	23 39	0 12	4 15
W24	20 30	14 40	4 36	17 16	0 49	8 49	1 53	24 25	0 59	23 23	0 3	10 47	1 28	23 39	0 12	4 16
T 25	20 42	8 35	3 51	17 47	0 42	9 16	1 53	24 25	0 59	23 23	0 3	10 47	1 29	23 39	0 12	4 17
F 26	20 53	2 3	2 52	18 17	0 35	9 42	1 53	24 26	0 59	23 23	0 3	10 46	1 29	23 39	0 12	4 17
S 27	21 5	4s35	1 43	18 47	0 28	10 7	1 53	24 27	1 0	23 23	0 3	10 45	1 29	23 39	0 12	4 18
S 28	21 16	11 0	0 27	19 15	0 21	10 33	1 53	24 27	1 0	23 22	0 3	10 45	1 29	23 39	0 12	4 18
M29	21 26	16 48	0s50	19 43	0 14	10 58	1 52	24 27	1 0	23 22	0 3	10 44	1 30	23 39	0 12	4 19
T 30	21s36	21s40	2s 3	20s10	0n 7	11s24	1n52	24s26	1s 1	23s22	0n 3	10n44	1n30	23n39	0n12	4s19

Julian Day Number = 2432856.5, Delta T = 28.52 sec

Ecliptic obliquity = 23°26'53, Nutation = - 0°00'11, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 24°01'32, Lahiri = 23°08'33

ASTRODIENST EPHEMERIS for the year 1948  
geocentric

DECEMBER 1948

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	4 39 2	8°42'48	11°28	2°9	6°6	3°6	3°19	5°58	29°R21	14°35	16°R31	4°R38	3°5	14°50	0°19	W 1
T 2	4 42 58	9°43'40	24°54	3°43	7°20	3°52	3°32	6°0	29°II19	14°36	16°R31	4°R33	3°2	14°57	0°27	T 2
F 3	4 46 55	10°44'33	8°3	5°18	8°34	4°38	3°45	6°1	29°17	14°38	16°31	4°26	2°58	15°4	0°35	F 3
S 4	4 50 51	11°45'28	20°50	6°52	9°48	5°24	3°59	6°3	29°14	14°39	16°30	4°19	2°55	15°10	0°42	S 4
S 5	4 54 48	12°46'23	3°21	8°26	11°2	6°9	4°12	6°4	29°12	14°40	16°30	4°13	2°52	15°17	0°50	S 5
M 6	4 58 44	13°47'18	15°36	10°0	12°16	6°55	4°25	6°6	29°9	14°42	16°29	4°8	2°49	15°24	0°58	M 6
T 7	5 2 41	14°48'15	27°38	11°34	13°30	7°41	4°39	6°7	29°7	14°43	16°29	4°4	2°46	15°31	1°5	T 7
W 8	5 6 38	15°49'12	9°32	13°9	14°44	8°27	4°52	6°8	29°4	14°44	16°28	4°3	2°43	15°37	1°13	W 8
T 9	5 10 34	16°50'10	21°22	14°43	15°58	9°13	5°6	6°9	29°2	14°46	16°28	4°D 2	2°39	15°44	1°21	T 9
F 10	5 14 31	17°51'09	3°Y13	16°17	17°13	10°0	5°19	6°10	28°59	14°47	16°27	4°4	2°36	15°51	1°28	F 10
S 11	5 18 27	18°52'08	15°12	17°51	18°27	10°46	5°33	6°10	28°57	14°48	16°26	4°5	2°33	15°57	1°36	S 11
S 12	5 22 24	19°53'07	27°22	19°26	19°41	11°32	5°46	6°11	28°54	14°49	16°26	4°6	2°30	16°4	1°43	S 12
M13	5 26 20	20°54'08	9°48	21°0	20°56	12°18	6°0	6°11	28°52	14°50	16°25	4°R 6	2°27	16°11	1°51	M13
T 14	5 30 17	21°55'09	22°33	22°34	22°10	13°4	6°14	6°12	28°49	14°52	16°24	4°5	2°24	16°17	1°58	T 14
W15	5 34 13	22°56'11	5°II39	24°9	23°24	13°51	6°27	6°12	28°47	14°53	16°24	4°1	2°20	16°24	2°6	W15
T 16	5 38 10	23°57'13	19°6	25°44	24°39	14°37	6°41	6°12	28°44	14°54	16°23	3°54	2°17	16°31	2°13	T 16
F 17	5 42 7	24°58'16	2°53	27°19	25°53	15°23	6°55	6°R12	28°42	14°55	16°22	3°46	2°14	16°37	2°21	F 17
S 18	5 46 3	25°59'19	16°56	28°54	27°8	16°10	7°8	6°12	28°39	14°56	16°21	3°37	2°11	16°44	2°28	S 18
S 19	5 50 0	27°0'24	1°10	0°29	28°22	16°56	7°22	6°12	28°36	14°57	16°21	3°28	2°8	16°51	2°35	S 19
M20	5 53 56	28°1'29	15°29	2°4	29°37	17°43	7°36	6°12	28°34	14°58	16°20	3°21	2°4	16°57	2°43	M20
T 21	5 57 53	29°2'35	29°49	3°39	0°51	18°29	7°50	6°11	28°31	14°59	16°19	3°15	2°1	17°4	2°50	T 21
W22	6 1 49	0°3'41	14°5	5°15	2°6	19°16	8°4	6°11	28°29	15°0	16°18	3°11	1°58	17°11	2°57	W22
T 23	6 5 46	1°4'48	28°15	6°51	3°21	20°3	8°17	6°10	28°26	15°0	16°17	3°D10	1°55	17°18	3°4	T 23
F 24	6 9 42	2°5'56	12°17	8°27	4°35	20°49	8°31	6°10	28°24	15°1	16°16	3°10	1°52	17°24	3°11	F 24
S 25	6 13 39	3°7'04	26°11	10°3	5°50	21°36	8°45	6°9	28°21	15°2	16°15	3°R11	1°49	17°31	3°18	S 25
S 26	6 17 36	4°8'14	9°56	11°40	7°5	22°23	8°59	6°8	28°18	15°3	16°14	3°11	1°45	17°38	3°26	S 26
M27	6 21 32	5°9'24	23°33	13°17	8°19	23°10	9°13	6°7	28°16	15°3	16°13	3°9	1°42	17°44	3°33	M27
T 28	6 25 29	6°10'34	7°0	14°53	9°34	23°56	9°27	6°6	28°13	15°4	16°12	3°5	1°39	17°51	3°40	T 28
W29	6 29 25	7°11'45	20°17	16°30	10°49	24°43	9°41	6°4	28°11	15°5	16°11	2°57	1°36	17°58	3°47	W29
T 30	6 33 22	8°12'56	3°23	18°7	12°4	25°30	9°55	6°3	28°8	15°5	16°10	2°47	1°33	18°4	3°53	T 30
F 31	6 37 18	9°14'07	16°15	19°44	13°19	26°17	10°3	6°1	28°II 6	15°6	16°10	2°35	1°30	18°11	4°0	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
W 1	21s46	25s15	3s 7	20s36	0s 0	11s48	1n51	24s25	1s 1	23s22	0n 2	10n43	1n30	23n39	0n12	4s20	1n32	23n 9	7n38	13n 4	12n33	9s31	17s 4	3n13					
T 2	21 55	27 20	4 0	21 1	0 7	12 13	1 51	24 25	1 1	23 22	0 2	10 43	1 30	23 39	0 12	4 20	1 32	23 10	7 38	13 2	12 32	9 28	17 6	3 13					
F 3	22 4	27 50	4 38	21 25	0 14	12 38	1 50	24 23	1 1	23 21	0 2	10 43	1 31	23 39	0 12	4 21	1 32	23 10	7 39	13 0	12 30	9 25	17 7	3 14					
S 4	22 12	26 48	5 2	21 48	0 20	13 2	1 49	24 22	1 2	23 21	0 2	10 42	1 31	23 39	0 12	4 21	1 32	23 10	7 39	12 58	12 29	9 21	17 8	3 14					
S 5	22 20	24 26	5 10	22 10	0 27	13 25	1 48	24 20	1 2	23 21	0 2	10 42	1 31	23 39	0 12	4 22	1 32	23 11	7 39	12 56	12 28	9 18	17 10	3 14					
M 6	22 28	21 0	5 4	22 30	0 33	13 49	1 47	24 18	1 2	23 20	0 2	10 42	1 31	23 39	0 12	4 22	1 32	23 11	7 39	12 54	12 27	9 15	17 11	3 15					
T 7	22 35	16 45	4 45	22 50	0 40	14 12	1 46	24 16	1 2	23 20	0 2	10 41	1 32	23 39	0 12	4 23	1 32	23 12	7 40	12 53	12 26	9 12	17 12	3 15					
W 8	22 42	11 54	4 13	23 9	0 46	14 35	1 45	24 13	1 3	23 20	0 2	10 41	1 32	23 39	0 12	4 23	1 32	23 12	7 40	12 52	12 25	9 9	17 13	3 15					
T 9	22 48	6 39	3 31	23 26	0 52	14 58	1 44	24 10	1 3	23 19	0 2	10 41	1 32	23 39	0 12	4 24	1 33	23 13	7 40	12 52	12 24	9 6	17 15	3 15					
F 10	22 54	1 9	2 39	23 42	0 58	15 20	1 43	24 7	1 3	23 19	0 2	10 41	1 32	23 39	0 12	4 24	1 33	23 13	7 40	12 53	12 23	9 3	17 16	3 16					
S 11	22 59	4n26	1 41	23 57	1 4	15 42	1 42	24 4	1 3	23 18	0 1	10 41	1 33	23 39	0 12	4 25	1 33	23 13	7 41	12 53	12 22	8 59	17 17	3 16					
S 12	23 4	9 58	0 36	24 11	1 9	16 3	1 40	24 0	1 3	23 18	0 1	10 41	1 33	23 39	0 12	4 25	1 33	23 14	7 41	12 54	12 21	8 56	17 18	3 16					
M13	23 8	15 14	0n31	24 23	1 15	16 24	1 39	23 56	1 4	23 17	0 1	10 41	1 33	23 39	0 12	4 25	1 33	23 14	7 41	12 54	12 20	8 53	17 19	3 17					
T 14	23 12	19 59	1 38	24 34	1 20	16 45	1 37	23 52	1 4	23 17	0 1	10 41	1 33	23 39	0 12	4 26	1 33	23 15	7 41	12 53	12 18	8 50	17 21	3 17					
W15	23 16	23 54	2 41	24 44	1 25	17 5	1 36	23 47	1 4	23 16	0 1	10 41	1 34	23 39	0 12	4 26	1 33	23 15	7 42	12 52	12 17	8 47	17 22	3 17					
T 16	23 19	26 37	3 38	24 53	1 30	17 25	1 34	23 42	1 4	23 16	0 1	10 41	1 34	23 39	0 12	4 27	1 33	23 16	7 42	12 49	12 16	8 44	17 23	3 18					
F 17	23 21	27 48	4 23	25 0	1 35	17 44	1 33	23 37	1 4	23 15	0 1	10 42	1 34	23 39	0 12	4 27	1 33	23 16	7 42	12 47	12 15	8 40	17 24	3 18					
S 18	23 23	27 13	4 53	25 6	1 39	18 3	1 31	23 32	1 4	23 14	0 1	10 42	1 34	23 39	0 12	4 27	1 33	23 17	7 42	12 44	12 14	8 37	17 25	3 18					
S 19	23 25	24 52	5 5	25 10	1 43	18 21	1 29	23 27	1 5	23 14	0 1	10 42	1 35	23 39	0 12	4 28	1 33	23 17	7 43	12 41	12 13	8 34	17 26	3 19					
M20	23 26	20 57	4 59	25 13	1 47	18 39	1 27	23 21	1 5	23 13	0 1	10 43	1 35	23 39	0 12	4 28	1 33	23 18	7 43	12 38	12 12	8 31	17 27	3 19					
T 21	23 27	15 48	4 34	25 15	1 51	18 57	1 25	23 15	1 5	23 12	0 1	10 43	1 35	23 39	0 12	4 28	1 33	23 18	7 43	12 36	12 11	8 28	17 28	3 19					
W22	23 27	9 49	3 52	25 15	1 54	19 14	1 23	23 8	1 5	23 12	0 0	10 43	1 35	23 39	0 12	4 28	1 33	23 19	7 43	12 35	12 10	8 24	17 29	3 20					
T 23	23 27	3 23	2 56	25 14	1 57	19 30	1 21	23 2	1 5	23 11	0 0	10 44	1 35	23 39	0 12	4 29	1 33	23 19	7 44	12 34	12 9	8 21	17 30	3 20					
F 24	23 26	3s11	1 49	25 11	2 0	19 46	1 19	22 55	1 5	23 10	0 0	10 44	1 36	23 39	0 12	4 29	1 33	23 20	7 44	12 35	12 8	8 18	17 31	3 21					
S 25	23 25	9 32	0 37	25 6	2 3	20 1	1 17	22 47	1 5	23 9	0 0	10 45	1 36	23 39	0 13	4 29	1 33	23 20	7 44	12 35	12 6	8 15	17 32	3 21					
S 26	23 23	15 22	0s36	25 1	2 5	20 16	1 15	22 40	1 6	23 9	0 0	10 45	1 36	23 39	0 13	4 29	1 33	23 21	7 44	12 35	12 5	8 12	17 33	3 21					
M27	23 21	20 23	1 46	24 53	2 7	20 30	1 13	22 32	1 6	23 8	0s 0	10 46	1 36	23 39	0 13	4 30	1 34	23 21	7 44	12 34	12 4	8 8	17 34	3 22					
T 28	23 18	24 17	2 50	24 44	2 8	20 44	1 11	22 24	1 6	23 7	0 0	10 47	1 37	23 39	0 13	4 30	1 34	23 22	7 45	12 33	12 3	8 5	17 35	3 22					
W29	23 15	26 48	3 43	24 34	2 9	20 57	1 8	22 16	1 6	23 6	0 0	10 47	1 37	23 39	0 13	4 30	1 34	23 22	7 45	12 30	12 2	8 2	17 36	3 22					
T 30	23 12	27 48	4 24	24 22	2 10	21 9	1 6	22 8	1 6	23 5	0 0	10 48	1 37	23 39	0 13	4 30	1 34	23 23	7 45	12 27	12 1	7 59	17 37	3 22					
F 31	23s 8	27s15	4s50	24s 8	2s10	21s21	1n 4	21s59	1s 6	23s 4	0s 0	10n49	1n37	23n39	0n13	4s30	1n34	23n23	7n45	12n22	12n 0	7s56	17s38	3n23					