



Astrodienst Ephemeris Tables for the year 1733

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 D5EPH

ASTRODIENST EPHEMERIS for the year 1733
geocentric

JANUARY 1733

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	6 42 31	10 ³ 42'38	17 ⁵ 39	29 ³ 46	0 ² 56	9 ¹ 7	5 ¹ 44	10 ¹ 24	12 ¹ 15	17 ¹ R43	20 ¹ 26	10 ¹ R24	9 ¹ 5	19 ¹ 23	3 ¹ R11	T 1
F 2	6 46 28	11 ¹ 43'47	1 ¹ 5	0 ¹ 26	2 ¹ 8	9 ¹ 52	5 ¹ 53	10 ¹ 27	12 ¹ 18	17 ¹ II41	20 ¹ 27	10 ¹ 20	9 ¹ 2	19 ¹ 30	3 ¹ 810	F 2
S 3	6 50 24	12 ¹ 44'56	14 ¹ 12	0 ¹ 56	3 ¹ 21	10 ¹ 37	6 ¹ 1	10 ¹ 29	12 ¹ 21	17 ¹ 39	20 ¹ 27	10 ¹ 14	8 ¹ 59	19 ¹ 36	3 ¹ 10	S 3
S 4	6 54 21	13 ¹ 46'05	26 ¹ 59	1 ¹ 17	4 ¹ 33	11 ¹ 22	6 ¹ 10	10 ¹ 31	12 ¹ 25	17 ¹ 38	20 ¹ 28	10 ¹ 8	8 ¹ 56	19 ¹ 43	3 ¹ 9	S 4
M 5	6 58 17	14 ¹ 47'13	9 ¹ 28	1 ¹ R28	5 ¹ 45	12 ¹ 7	6 ¹ 18	10 ¹ 34	12 ¹ 28	17 ¹ 37	20 ¹ 29	10 ¹ 3	8 ¹ 53	19 ¹ 50	3 ¹ 9	M 5
T 6	7 2 14	15 ¹ 48'22	21 ¹ 42	1 ¹ 27	6 ¹ 58	12 ¹ 52	6 ¹ 26	10 ¹ 36	12 ¹ 31	17 ¹ 35	20 ¹ 29	9 ¹ 59	8 ¹ 49	19 ¹ 56	3 ¹ 8	T 6
W 7	7 6 10	16 ¹ 49'31	3 ¹ 43	1 ¹ 15	8 ¹ 11	13 ¹ 37	6 ¹ 34	10 ¹ 39	12 ¹ 34	17 ¹ 34	20 ¹ 30	9 ¹ 56	8 ¹ 46	20 ¹ 3	3 ¹ 8	W 7
T 8	7 10 7	17 ¹ 50'39	15 ¹ 36	0 ¹ 51	9 ¹ 23	14 ¹ 22	6 ¹ 42	10 ¹ 42	12 ¹ 37	17 ¹ 32	20 ¹ 31	9 ¹ D55	8 ¹ 43	20 ¹ 10	3 ¹ 7	T 8
F 9	7 14 4	18 ¹ 51'48	27 ¹ 26	0 ¹ 16	10 ¹ 36	15 ¹ 7	6 ¹ 50	10 ¹ 45	12 ¹ 41	17 ¹ 31	20 ¹ 31	9 ¹ 55	8 ¹ 40	20 ¹ 17	3 ¹ 7	F 9
S 10	7 18 0	19 ¹ 52'56	9 ¹ 18	29 ¹ 29	11 ¹ 49	15 ¹ 52	6 ¹ 57	10 ¹ 48	12 ¹ 44	17 ¹ 29	20 ¹ 32	9 ¹ 56	8 ¹ 37	20 ¹ 23	3 ¹ 7	S 10
S 11	7 21 57	20 ¹ 54'05	21 ¹ 18	28 ¹ 32	13 ¹ 1	16 ¹ 37	7 ¹ 5	10 ¹ 51	12 ¹ 47	17 ¹ 28	20 ¹ 32	9 ¹ 58	8 ¹ 34	20 ¹ 30	3 ¹ 7	S 11
M 12	7 25 53	21 ¹ 55'13	3 ¹ 29	27 ¹ 27	14 ¹ 14	17 ¹ 22	7 ¹ 12	10 ¹ 54	12 ¹ 50	17 ¹ 27	20 ¹ 32	9 ¹ 59	8 ¹ 30	20 ¹ 37	3 ¹ D7	M 12
T 13	7 29 50	22 ¹ 56'20	15 ¹ 56	26 ¹ 15	15 ¹ 27	18 ¹ 7	7 ¹ 19	10 ¹ 57	12 ¹ 53	17 ¹ 25	20 ¹ 33	9 ¹ R59	8 ¹ 27	20 ¹ 43	3 ¹ 7	T 13
W 14	7 33 46	23 ¹ 57'28	28 ¹ 43	24 ¹ 59	16 ¹ 40	18 ¹ 52	7 ¹ 26	11 ¹ 0	12 ¹ 56	17 ¹ 24	20 ¹ 33	9 ¹ 58	8 ¹ 24	20 ¹ 50	3 ¹ 7	W 14
T 15	7 37 43	24 ¹ 58'35	11 ¹ 350	23 ¹ 41	17 ¹ 53	19 ¹ 37	7 ¹ 33	11 ¹ 4	12 ¹ 59	17 ¹ 23	20 ¹ 33	9 ¹ 54	8 ¹ 21	20 ¹ 57	3 ¹ 7	T 15
F 16	7 41 39	25 ¹ 59'41	25 ¹ 17	22 ¹ 24	19 ¹ 6	20 ¹ 22	7 ¹ 40	11 ¹ 7	13 ¹ 2	17 ¹ 21	20 ¹ 34	9 ¹ 48	8 ¹ 18	21 ¹ 3	3 ¹ 7	F 16
S 17	7 45 36	27 ¹ 0'47	9 ¹ 3	21 ¹ 9	20 ¹ 19	21 ¹ 6	7 ¹ 46	11 ¹ 11	13 ¹ 5	17 ¹ 20	20 ¹ 34	9 ¹ 40	8 ¹ 14	21 ¹ 10	3 ¹ 8	S 17
S 18	7 49 33	28 ¹ 1'52	23 ¹ 3	19 ¹ 59	21 ¹ 32	21 ¹ 51	7 ¹ 53	11 ¹ 15	13 ¹ 8	17 ¹ 19	20 ¹ 34	9 ¹ 31	8 ¹ 11	21 ¹ 17	3 ¹ 8	S 18
M 19	7 53 29	29 ¹ 2'56	7 ¹ 14	18 ¹ 55	22 ¹ 45	22 ¹ 36	7 ¹ 59	11 ¹ 19	13 ¹ 10	17 ¹ 18	20 ¹ 34	9 ¹ 23	8 ¹ 8	21 ¹ 23	3 ¹ 8	M 19
T 20	7 57 26	0 ¹ 3'59	21 ¹ 29	17 ¹ 59	23 ¹ 59	23 ¹ 21	8 ¹ 5	11 ¹ 23	13 ¹ 13	17 ¹ 17	20 ¹ 34	9 ¹ 16	8 ¹ 5	21 ¹ 30	3 ¹ 9	T 20
W 21	8 1 22	1 ¹ 5'01	5 ¹ 46	17 ¹ 12	25 ¹ 12	24 ¹ 6	8 ¹ 11	11 ¹ 27	13 ¹ 16	17 ¹ 16	20 ¹ 34	9 ¹ 11	8 ¹ 2	21 ¹ 37	3 ¹ 9	W 21
T 22	8 5 19	2 ¹ 6'02	19 ¹ 59	16 ¹ 33	26 ¹ 25	24 ¹ 50	8 ¹ 17	11 ¹ 31	13 ¹ 19	17 ¹ 14	20 ¹ 34	9 ¹ 9	7 ¹ 59	21 ¹ 43	3 ¹ 10	T 22
F 23	8 9 15	3 ¹ 7'01	4 ¹ 8	16 ¹ 3	27 ¹ 38	25 ¹ 35	8 ¹ 23	11 ¹ 35	13 ¹ 21	17 ¹ 13	20 ¹ R34	9 ¹ D8	7 ¹ 55	21 ¹ 50	3 ¹ 11	F 23
S 24	8 13 12	4 ¹ 8'00	18 ¹ 9	15 ¹ 43	28 ¹ 52	26 ¹ 20	8 ¹ 28	11 ¹ 39	13 ¹ 24	17 ¹ 12	20 ¹ 34	9 ¹ 9	7 ¹ 52	21 ¹ 57	3 ¹ 11	S 24
S 25	8 17 8	5 ¹ 8'57	2 ¹ 14	15 ¹ 30	0 ¹ 5	27 ¹ 4	8 ¹ 34	11 ¹ 44	13 ¹ 27	17 ¹ 11	20 ¹ 34	9 ¹ R9	7 ¹ 49	22 ¹ 4	3 ¹ 12	S 25
M 26	8 21 5	6 ¹ 9'53	15 ¹ 51	15 ¹ D27	1 ¹ 18	27 ¹ 49	8 ¹ 39	11 ¹ 48	13 ¹ 29	17 ¹ 10	20 ¹ 34	9 ¹ 9	7 ¹ 46	22 ¹ 10	3 ¹ 13	M 26
T 27	8 25 2	7 ¹ 10'48	29 ¹ 30	15 ¹ 30	2 ¹ 32	28 ¹ 33	8 ¹ 44	11 ¹ 53	13 ¹ 32	17 ¹ 9	20 ¹ 34	9 ¹ 7	7 ¹ 43	22 ¹ 17	3 ¹ 14	T 27
W 28	8 28 58	8 ¹ 11'42	12 ¹ 59	15 ¹ 42	3 ¹ 45	29 ¹ 18	8 ¹ 49	11 ¹ 57	13 ¹ 34	17 ¹ 8	20 ¹ 34	9 ¹ 3	7 ¹ 40	22 ¹ 24	3 ¹ 15	W 28
T 29	8 32 55	9 ¹ 12'34	26 ¹ 18	15 ¹ 59	4 ¹ 59	0 ¹ 3	8 ¹ 53	12 ¹ 2	13 ¹ 37	17 ¹ 7	20 ¹ 34	8 ¹ 56	7 ¹ 36	22 ¹ 30	3 ¹ 16	T 29
F 30	8 36 51	10 ¹ 13'26	9 ¹ 25	16 ¹ 23	6 ¹ 12	0 ¹ 47	8 ¹ 58	12 ¹ 7	13 ¹ 39	17 ¹ 7	20 ¹ 33	8 ¹ 46	7 ¹ 33	22 ¹ 37	3 ¹ 17	F 30
S 31	8 40 48	11 ¹ 14'16	22 ¹ 18	16 ¹ 53	7 ¹ 26	1 ¹ 31	9 ¹ 12	12 ¹ 12	13 ¹ 42	17 ¹ II6	20 ¹ 33	8 ¹ 35	7 ¹ 30	22 ¹ 44	3 ¹ 18	S 31

Delta T = 11.71 sec

Greg. Calendar

FEBRUARY 1733

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	8 44 44	12 ¹ 15'05	4 ¹ 57	17 ¹ 28	8 ¹ 39	2 ¹ 16	9 ¹ 16	12 ¹ 17	13 ¹ 44	17 ¹ R 5	20 ¹ R33	8 ¹ R23	7 ¹ 27	22 ¹ 50	3 ¹ 819	S 1
M 2	8 48 41	13 ¹ 15'52	17 ¹ 21	18 ¹ 8	9 ¹ 53	3 ¹ 0	9 ¹ 10	12 ¹ 22	13 ¹ 46	17 ¹ II 4	20 ¹ 33	8 ¹ 11	7 ¹ 24	22 ¹ 57	3 ¹ 21	M 2
T 3	8 52 37	14 ¹ 16'39	29 ¹ 32	18 ¹ 52	11 ¹ 6	3 ¹ 45	9 ¹ 14	12 ¹ 27	13 ¹ 49	17 ¹ 3	20 ¹ 32	8 ¹ 1	7 ¹ 20	23 ¹ 4	3 ¹ 22	T 3
W 4	8 56 34	15 ¹ 17'25	11 ¹ 32	19 ¹ 39	12 ¹ 20	4 ¹ 29	9 ¹ 18	12 ¹ 32	13 ¹ 51	17 ¹ 2	20 ¹ 32	7 ¹ 53	7 ¹ 17	23 ¹ 10	3 ¹ 23	W 4
T 5	9 0 31	16 ¹ 18'09	23 ¹ 25	20 ¹ 31	13 ¹ 33	5 ¹ 13	9 ¹ 22	12 ¹ 37	13 ¹ 53	17 ¹ 2	20 ¹ 31	7 ¹ 48	7 ¹ 14	23 ¹ 17	3 ¹ 25	T 5
F 6	9 4 27	17 ¹ 18'53	5 ¹ 14	21 ¹ 26	14 ¹ 47	5 ¹ 57	9 ¹ 25	12 ¹ 42	13 ¹ 55	17 ¹ 1	20 ¹ 31	7 ¹ 45	7 ¹ 11	23 ¹ 24	3 ¹ 26	F 6
S 7	9 8 24	18 ¹ 19'35	17 ¹ 4	22 ¹ 24	16 ¹ 1	6 ¹ 42	9 ¹ 28	12 ¹ 48	13 ¹ 57	17 ¹ 0	20 ¹ 30	7 ¹ D44	7 ¹ 8	23 ¹ 30	3 ¹ 28	S 7
S 8	9 12 20	19 ¹ 20'16	29 ¹ 2	23 ¹ 24	17 ¹ 14	7 ¹ 26	9 ¹ 31	12 ¹ 53	13 ¹ 59	17 ¹ 0	20 ¹ 30	7 ¹ 45	7 ¹ 5	23 ¹ 37	3 ¹ 29	S 8
M 9	9 16 17	20 ¹ 20'57	11 ¹ 13	24 ¹ 28	18 ¹ 28	8 ¹ 10	9 ¹ 34	12 ¹ 59	14 ¹ 1	16 ¹ 59	20 ¹ 29	7 ¹ R45	7 ¹ 1	23 ¹ 44	3 ¹ 31	M 9
T 10	9 20 13	21 ¹ 21'36	23 ¹ 41	25 ¹ 33	19 ¹ 42	8 ¹ 54	9 ¹ 36	13 ¹ 4	14 ¹ 3	16 ¹ 59	20 ¹ 28	7 ¹ 44	6 ¹ 58	23 ¹ 50	3 ¹ 33	T 10
W 11	9 24 10	22 ¹ 22'14	6 ¹ 31	26 ¹ 41	20 ¹ 56	9 ¹ 38	9 ¹ 39	13 ¹ 10	14 ¹ 5	16 ¹ 58	20 ¹ 28	7 ¹ 41	6 ¹ 55	23 ¹ 57	3 ¹ 35	W 11
T 12	9 28 6	23 ¹ 22'50	19 ¹ 46	27 ¹ 51	22 ¹ 9	10 ¹ 22	9 ¹ 41	13 ¹ 16	14 ¹ 7	16 ¹ 58	20 ¹ 27	7 ¹ 35	6 ¹ 52	24 ¹ 4	3 ¹ 36	T 12
F 13	9 32 3	24 ¹ 23'26	3 ¹ 28	29 ¹ 3	23 ¹ 23	11 ¹ 6	9 ¹ 43	13 ¹ 22	14 ¹ 9	16 ¹ 57	20 ¹ 26	7 ¹ 26	6 ¹ 49	24 ¹ 10	3 ¹ 38	F 13
S 14	9 36 0	25 ¹ 24'00	17 ¹ 34	0 ¹ 16	24 ¹ 37	11 ¹ 50	9 ¹ 45	13 ¹ 28	14 ¹ 11	16 ¹ 57	20 ¹ 26	7 ¹ 15	6 ¹ 46	24 ¹ 17	3 ¹ 40	S 14
S 15	9 39 56	26 ¹ 24'32	1 ¹ 59	1 ¹ 32	25 ¹ 51	12 ¹ 34	9 ¹ 47	13 ¹ 34	14 ¹ 12	16 ¹ 56	20 ¹ 25	7 ¹ 3	6 ¹ 42	24 ¹ 24	3 ¹ 42	S 15
M 16	9 43 53	27 ¹ 25'02	16 ¹ 38	2 ¹ 48	27 ¹ 5	13 ¹ 18	9 ¹ 48	13 ¹ 40	14 ¹ 14	16 ¹ 56	20 ¹ 24	6 ¹ 51	6 ¹ 39	24 ¹ 31	3 ¹ 44	M 16
T 17	9 47 49	28 ¹ 25'31	1 ¹ 22	4 ¹ 7	28 ¹ 18	14 ¹ 2	9 ¹ 50	13 ¹ 46	14 ¹ 15	16 ¹ 56	20 ¹ 23	6 ¹ 41	6 ¹ 36	24 ¹ 37	3 ¹ 46	T 17
W 18	9 51 46	29 ¹ 25'58	16 ¹ 3	5 ¹ 27	29 ¹ 32	14 ¹ 46	9 ¹ 51	13 ¹ 52	14 ¹ 17	16 ¹ 55	20 ¹ 22	6 ¹ 33	6 ¹ 33	24 ¹ 44	3 ¹ 49	W 18
T 19	9 55 42	0 ¹ 26'24	0 ¹ 36	6 ¹ 48	0 ¹ 46	15 ¹ 30	9 ¹ 52	13 ¹ 58	14 ¹ 19	16 ¹ 55	20 ¹ 21	6 ¹ 28	6 ¹ 30	24 ¹ 51	3 ¹ 51	T 19
F 20	9 59 39	1 ¹ 26'47	14 ¹ 55	8 ¹ 10	2 ¹ 0	16 ¹ 13	9 ¹ 52	14 ¹ 4	14 ¹ 20	16 ¹ 55	20 ¹ 21	6 ¹ 25	6 ¹ 26	24 ¹ 57	3 ¹ 53	F 20
S 21	10 3 35	2 ¹ 27'08	28 ¹ 58	9 ¹ 34	3 ¹ 14	16 ¹ 57	9 ¹ 53	14 ¹ 10	14 ¹ 21	16 ¹ 55	20 ¹ 20	6 ¹ 25	6 ¹ 23	25 ¹ 4	3 ¹ 55	S 21
S 22	10 7 32	3 ¹ 27'28	12 ¹ 14	10 ¹ 59	4 ¹ 28	17 ¹ 41	9 ¹ 53	14 ¹ 17	14 ¹ 23	16 ¹ 55	20 ¹ 19	6 ¹ 25	6 ¹ 20	25 ¹ 11	3 ¹ 58	S 22
M 23	10 11 29	4 ¹ 27'45	26 ¹ 19	12 ¹ 25	5 ¹ 42	18 ¹ 24	9 ¹ 54	14 ¹ 23	14 ¹ 24	16 ¹ 55	20 ¹ 18	6 ¹ 24	6 ¹ 17	25 ¹ 17	4 ¹ 0	M 23
T 24	10 15 25	5 ¹ 28'00	9 ¹ 39	13 ¹ 53	6 ¹ 55	19 ¹ 8	9 ¹ R54	14 ¹ 30	14 ¹ 25	16 ¹ 54	20 ¹ 17	6 ¹ 21	6 ¹ 14	25 ¹ 24	4 ¹ 3	T 24
W 25	10 19 22	6 ¹ 28'13	22 ¹ 46	15 ¹ 21	8 ¹ 9	19 ¹ 51	9 ¹ 53	14 ¹ 36	14 ¹ 27	16 ¹ 54	20 ¹ 16	6 ¹ 15	6 ¹ 11	25 ¹ 31	4 ¹ 5	W 25
T 26	10 23 18	7 ¹ 28'25	5 ¹ 14	16 ¹ 51	9 ¹ 23	20 ¹ 35	9 ¹ 53	14 ¹ 43	14 ¹ 28	16 ¹ D54	20 ¹ 14	6 ¹ 7	6 ¹ 7	25 ¹ 37	4 ¹ 8	T 26
F 27	10 27 15	8 ¹ 28'34	18 ¹ 28	18 ¹ 22	10 ¹ 37	21 ¹ 18	9 ¹ 52	14 ¹ 49	14 ¹ 29	16 ¹ 54	20 ¹ 13	5 ¹ 55	6 ¹ 4	25 ¹ 44	4 ¹ 10	F 27
S 28	10 31 11	9 ¹ 28'41	1 ¹ 11	19 ¹ 54	11 ¹ 51	22 ¹ 11	9 ¹ 52	14 ¹ 56	14 ¹ 30	16 ¹ II 54	20 ¹ 12	5 ¹ 42	6 ¹ 1	25 ¹ 51	4 ¹ 13	S 28

ASTRODIENST EPHEMERIS for the year 1733

geocentric

MARCH 1733

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	10 35 8	10 ^h 28'46"	13 ^m 28'	21 ^s 27"	13 ^s 27"	22 ^s 45"	9 ^s 51"	15 ^s 3"	14 ^s 31"	16 ^s 55"	20 ^s 11"	5 ^s 27"	5 ^s 58"	25 ^s 57"	4 ^s 16"	S 1
M 2	10 39 4	11 ^h 28'50"	25 ^m 42'	23 ^s 1"	14 ^s 19"	23 ^s 29"	9 ^s 50"	15 ^s 9"	14 ^s 32"	16 ^s 55"	20 ^s 10"	5 ^s 14"	5 ^s 55"	26 ^s 4"	4 ^s 18"	M 2
T 3	10 43 1	12 ^h 28'51"	7 ^m 46'	24 ^s 37"	15 ^s 33"	24 ^s 12"	9 ^s 48"	15 ^s 16"	14 ^s 33"	16 ^s 55"	20 ^s 9"	5 ^s 1"	5 ^s 52"	26 ^s 11"	4 ^s 21"	T 3
W 4	10 46 57	13 ^h 28'51"	19 ^m 42'	26 ^s 13"	16 ^s 47"	24 ^s 55"	9 ^s 47"	15 ^s 23"	14 ^s 34"	16 ^s 55"	20 ^s 7"	4 ^s 51"	5 ^s 48"	26 ^s 17"	4 ^s 24"	W 4
T 5	10 50 54	14 ^h 28'49"	1 ^m 32'	27 ^s 51"	18 ^s 1"	25 ^s 38"	9 ^s 45"	15 ^s 30"	14 ^s 34"	16 ^s 55"	20 ^s 6"	4 ^s 44"	5 ^s 45"	26 ^s 24"	4 ^s 27"	T 5
F 6	10 54 51	15 ^h 28'46"	13 ^m 20'	29 ^s 29"	19 ^s 14"	26 ^s 22"	9 ^s 43"	15 ^s 37"	14 ^s 35"	16 ^s 56"	20 ^s 5"	4 ^s 40"	5 ^s 42"	26 ^s 31"	4 ^s 30"	F 6
S 7	10 58 47	16 ^h 28'41"	25 ^m 10'	1 ^s 9"	20 ^s 28"	27 ^s 5"	9 ^s 41"	15 ^s 44"	14 ^s 36"	16 ^s 56"	20 ^s 3"	4 ^s 39"	5 ^s 39"	26 ^s 37"	4 ^s 33"	S 7
S 8	11 2 44	17 ^h 28'34"	7 ^m 7'	2 ^s 50"	21 ^s 42"	27 ^s 48"	9 ^s 39"	15 ^s 51"	14 ^s 37"	16 ^s 56"	20 ^s 2"	4 ^s 38"	5 ^s 36"	26 ^s 44"	4 ^s 36"	S 8
M 9	11 6 40	18 ^h 28'25"	19 ^m 14'	4 ^s 32"	22 ^s 56"	28 ^s 31"	9 ^s 37"	15 ^s 58"	14 ^s 37"	16 ^s 57"	20 ^s 1"	4 ^s 38"	5 ^s 32"	26 ^s 51"	4 ^s 39"	M 9
T 10	11 10 37	19 ^h 28'15"	1 ^m 39'	6 ^s 16"	24 ^s 10"	29 ^s 14"	9 ^s 34"	16 ^s 5"	14 ^s 38"	16 ^s 57"	19 ^s 59"	4 ^s 38"	5 ^s 29"	26 ^s 57"	4 ^s 42"	T 10
W 11	11 14 33	20 ^h 28'03"	14 ^m 27'	8 ^s 0"	25 ^s 24"	29 ^s 57"	9 ^s 31"	16 ^s 12"	14 ^s 38"	16 ^s 57"	19 ^s 58"	4 ^s 35"	5 ^s 26"	27 ^s 4"	4 ^s 45"	W 11
T 12	11 18 30	21 ^h 27'50"	27 ^m 41'	9 ^s 46"	26 ^s 38"	0 ^s 40"	9 ^s 28"	16 ^s 19"	14 ^s 39"	16 ^s 58"	19 ^s 57"	4 ^s 31"	5 ^s 23"	27 ^s 11"	4 ^s 48"	T 12
F 13	11 22 26	22 ^h 27'34"	11 ^m 24'	11 ^s 33"	27 ^s 52"	1 ^s 23"	9 ^s 25"	16 ^s 26"	14 ^s 39"	16 ^s 58"	19 ^s 55"	4 ^s 24"	5 ^s 20"	27 ^s 17"	4 ^s 51"	F 13
S 14	11 26 23	23 ^h 27'17"	25 ^m 36'	13 ^s 21"	29 ^s 6"	2 ^s 6"	9 ^s 22"	16 ^s 33"	14 ^s 39"	16 ^s 59"	19 ^s 54"	4 ^s 14"	5 ^s 17"	27 ^s 24"	4 ^s 54"	S 14
S 15	11 30 20	24 ^h 26'58"	10 ^m 13'	15 ^s 10"	0 ^s 20"	2 ^s 48"	9 ^s 18"	16 ^s 41"	14 ^s 40"	16 ^s 59"	19 ^s 52"	4 ^s 4"	5 ^s 13"	27 ^s 31"	4 ^s 58"	S 15
M 16	11 34 16	25 ^h 26'36"	25 ^m 9'	17 ^s 1"	1 ^s 34"	3 ^s 31"	9 ^s 15"	16 ^s 48"	14 ^s 40"	17 ^s 0"	19 ^s 51"	3 ^s 53"	5 ^s 10"	27 ^s 37"	5 ^s 1"	M 16
T 17	11 38 13	26 ^h 26'13"	10 ^m 19'	18 ^s 53"	2 ^s 48"	4 ^s 14"	9 ^s 11"	16 ^s 55"	14 ^s 40"	17 ^s 1"	19 ^s 49"	3 ^s 43"	5 ^s 7"	27 ^s 44"	5 ^s 4"	T 17
W 18	11 42 9	27 ^h 25'48"	25 ^m 19'	20 ^s 46"	4 ^s 2"	4 ^s 57"	9 ^s 7"	17 ^s 2"	14 ^s 40"	17 ^s 1"	19 ^s 48"	3 ^s 36"	5 ^s 4"	27 ^s 51"	5 ^s 8"	W 18
T 19	11 46 6	28 ^h 25'21"	10 ^m 13'	22 ^s 40"	5 ^s 16"	5 ^s 39"	9 ^s 3"	17 ^s 10"	14 ^s 40"	17 ^s 2"	19 ^s 46"	3 ^s 32"	5 ^s 1"	27 ^s 57"	5 ^s 11"	T 19
F 20	11 50 2	29 ^h 24'51"	24 ^m 51'	24 ^s 35"	6 ^s 30"	6 ^s 22"	8 ^s 58"	17 ^s 17"	14 ^s 40"	17 ^s 3"	19 ^s 45"	3 ^s 30"	4 ^s 57"	28 ^s 4"	5 ^s 15"	F 20
S 21	11 53 59	0 ^h 24'19"	9 ^m 11'	26 ^s 32"	7 ^s 44"	7 ^s 4"	8 ^s 54"	17 ^s 25"	14 ^s 40"	17 ^s 4"	19 ^s 43"	3 ^s 30"	4 ^s 54"	28 ^s 11"	5 ^s 18"	S 21
S 22	11 57 55	1 ^h 23'45"	23 ^m 3"	28 ^s 30"	8 ^s 58"	7 ^s 47"	8 ^s 49"	17 ^s 32"	14 ^s 40"	17 ^s 4"	19 ^s 41"	3 ^s 30"	4 ^s 51"	28 ^s 18"	5 ^s 22"	S 22
M 23	12 1 52	2 ^h 23'08"	6 ^m 36'	0 ^s 29"	10 ^s 12"	8 ^s 29"	8 ^s 44"	17 ^s 39"	14 ^s 40"	17 ^s 5"	19 ^s 40"	3 ^s 30"	4 ^s 48"	28 ^s 24"	5 ^s 25"	M 23
T 24	12 5 49	3 ^h 22'29"	19 ^m 49'	2 ^s 29"	11 ^s 26"	9 ^s 12"	8 ^s 39"	17 ^s 47"	14 ^s 40"	17 ^s 6"	19 ^s 38"	3 ^s 29"	4 ^s 45"	28 ^s 31"	5 ^s 29"	T 24
W 25	12 9 45	4 ^h 21'48"	2 ^m 45'	4 ^s 30"	12 ^s 40"	9 ^s 54"	8 ^s 34"	17 ^s 54"	14 ^s 39"	17 ^s 7"	19 ^s 37"	3 ^s 25"	4 ^s 42"	28 ^s 38"	5 ^s 32"	W 25
T 26	12 13 42	5 ^h 21'04"	15 ^m 27'	6 ^s 32"	13 ^s 53"	10 ^s 37"	8 ^s 29"	18 ^s 2"	14 ^s 39"	17 ^s 8"	19 ^s 35"	3 ^s 19"	4 ^s 38"	28 ^s 44"	5 ^s 36"	T 26
F 27	12 17 38	6 ^h 20'18"	27 ^m 57'	8 ^s 35"	15 ^s 7"	11 ^s 19"	8 ^s 24"	18 ^s 9"	14 ^s 39"	17 ^s 9"	19 ^s 33"	3 ^s 11"	4 ^s 35"	28 ^s 51"	5 ^s 39"	F 27
S 28	12 21 35	7 ^h 19'30"	10 ^m 16'	10 ^s 38"	16 ^s 21"	12 ^s 1"	8 ^s 18"	18 ^s 17"	14 ^s 38"	17 ^s 10"	19 ^s 32"	3 ^s 1"	4 ^s 32"	28 ^s 58"	5 ^s 43"	S 28
S 29	12 25 31	8 ^h 18'39"	22 ^m 26'	12 ^s 41"	17 ^s 35"	12 ^s 43"	8 ^s 12"	18 ^s 24"	14 ^s 38"	17 ^s 11"	19 ^s 30"	2 ^s 51"	4 ^s 29"	29 ^s 4"	5 ^s 47"	S 29
M 30	12 29 28	9 ^h 17'47"	4 ^m 29'	14 ^s 45"	18 ^s 49"	13 ^s 25"	8 ^s 7"	18 ^s 32"	14 ^s 37"	17 ^s 12"	19 ^s 29"	2 ^s 40"	4 ^s 26"	29 ^s 11"	5 ^s 50"	M 30
T 31	12 33 24	10 ^h 16'52"	16 ^m 25'	16 ^s 49"	20 ^s 31"	14 ^s 8"	8 ^m 1"	18 ^s 39"	14 ^s 37"	17 ^s 13"	19 ^s 27"	2 ^s 31"	4 ^s 23"	29 ^s 18"	5 ^s 54"	T 31

Delta T = 11.74 sec

Greg. Calendar

APRIL 1733

00:00 UT

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

ASTRODIENST EPHEMERIS for the year 1733

geocentric

MAY 1733

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	14 35 38	10 ⁸ 32'58	0 ⁷ 46	25°R 1	28°V12	5 ^{II} 33	4°R18	22°V34	13°R56	17 ^{II} 59	18°R36	1°D23	2 ⁷ 44	2 ^{III} 44	7 ⁸ 57	F 1
S 2	14 39 34	11°31'03	12°43	24 ⁸ 56	29°26	6°14	4 ^{III} 10	22°41	13 ⁷ 54	18° 1	18 ^Δ 34	1 ⁷ 23	2°41	2°51	8° 1	S 2
S 3	14 43 31	12°29'06	24°47	24°46	0 ⁸ 39	6°55	4° 3	22°48	13°52	18° 3	18°33	1°24	2°38	2°58	8° 5	S 3
M 4	14 47 27	13°27'07	7 ³ 2	24°32	1°53	7°36	3°55	22°56	13°51	18° 5	18°31	1°26	2°34	3° 4	8° 9	M 4
T 5	14 51 24	14°25'07	19°31	24°13	3° 7	8°16	3°48	23° 3	13°48	18° 7	18°30	1°27	2°31	3°11	8°13	T 5
W 6	14 55 20	15°23'06	2 ^Δ 17	23°51	4°20	8°57	3°41	23°10	13°46	18° 9	18°28	1°28	2°28	3°18	8°17	W 6
T 7	14 59 17	16°21'03	15°24	23°25	5°34	9°38	3°33	23°17	13°44	18°11	18°27	1°R29	2°25	3°24	8°21	T 7
F 8	15 3 13	17°18'59	28°55	22°56	6°48	10°18	3°26	23°25	13°42	18°13	18°25	1°28	2°22	3°31	8°25	F 8
S 9	15 7 10	18°16'54	12 ^Δ 50	22°24	8° 2	10°59	3°19	23°32	13°40	18°15	18°24	1°27	2°19	3°38	8°29	S 9
S 10	15 11 7	19°14'47	27°11	21°51	9°15	11°39	3°11	23°39	13°38	18°17	18°22	1°26	2°15	3°44	8°34	S 10
M 11	15 15 3	20°12'39	11 ⁷ 53	21°16	10°29	12°20	3° 4	23°46	13°36	18°19	18°21	1°25	2°12	3°51	8°38	M 11
T 12	15 19 0	21°10'30	26°52	20°41	11°43	13° 0	2°57	23°53	13°34	18°21	18°20	1°24	2° 9	3°58	8°42	T 12
W 13	15 22 56	22° 8'20	12 ⁸ 0	20° 5	12°56	13°41	2°50	24° 0	13°31	18°23	18°18	1°23	2° 6	4° 4	8°46	W 13
T 14	15 26 53	23° 6'08	27° 7	19°31	14°10	14°21	2°44	24° 7	13°29	18°25	18°17	1°D22	2° 3	4°11	8°50	T 14
F 15	15 30 49	24° 3'55	12 ^{II} 5	18°57	15°24	15° 2	2°37	24°14	13°27	18°27	18°16	1°22	2° 0	4°18	8°53	F 15
S 16	15 34 46	25° 1'41	26°46	18°25	16°38	15°42	2°30	24°21	13°25	18°29	18°14	1°23	1°56	4°24	8°57	S 16
S 17	15 38 42	25°59'25	11 ^Δ 3	17°55	17°51	16°22	2°24	24°28	13°22	18°31	18°13	1°23	1°53	4°31	9° 1	S 17
M 18	15 42 39	26°57'07	24°55	17°29	19° 5	17° 3	2°17	24°35	13°20	18°33	18°12	1°24	1°50	4°38	9° 5	M 18
T 19	15 46 36	27°54'48	8 ^Δ 20	17° 5	20°19	17°43	2°11	24°42	13°18	18°35	18°11	1°24	1°47	4°44	9° 9	T 19
W 20	15 50 32	28°52'27	21°21	16°44	21°32	18°23	2° 5	24°48	13°15	18°38	18°10	1°24	1°44	4°51	9°13	W 20
T 21	15 54 29	29°50'04	3 ^{III} 59	16°28	22°46	19° 3	1°59	24°55	13°13	18°40	18° 8	1°R24	1°40	4°57	9°17	T 21
F 22	15 58 25	0 ^{II} 47'40	16°19	16°15	24° 0	19°43	1°53	25° 2	13°11	18°42	18° 7	1°24	1°37	5° 4	9°21	F 22
S 23	16 2 22	1°45'15	28°25	16° 7	25°13	20°23	1°47	25° 8	13° 8	18°44	18° 6	1°D24	1°34	5°11	9°25	S 23
S 24	16 6 18	2°42'48	10 ^Δ 22	16°D 3	26°27	21° 3	1°41	25°15	13° 6	18°46	18° 5	1°24	1°31	5°17	9°29	S 24
M 25	16 10 15	3°40'20	22°12	16° 3	27°41	21°43	1°36	25°22	13° 3	18°48	18° 4	1°25	1°28	5°24	9°32	M 25
T 26	16 14 11	4°37'50	4 ^{III} 0	16° 8	28°54	22°23	1°30	25°28	13° 1	18°50	18° 3	1°25	1°25	5°31	9°36	T 26
W 27	16 18 8	5°35'20	15°50	16°17	0 ^{II} 8	23° 3	1°25	25°35	12°58	18°53	18° 2	1°25	1°21	5°37	9°40	W 27
T 28	16 22 5	6°32'48	27°43	16°31	1°22	23°43	1°20	25°41	12°56	18°55	18° 1	1°R25	1°18	5°44	9°44	T 28
F 29	16 26 1	7°30'15	9 ⁷ 42	16°50	2°35	24°23	1°15	25°47	12°54	18°57	18° 0	1°25	1°15	5°51	9°47	F 29
S 30	16 29 58	8°27'41	21°49	17°12	3°49	25° 3	1°10	25°54	12°51	18°59	17°59	1°25	1°12	5°57	9°51	S 30
S 31	16 33 54	9 ^{II} 25'06	4 ³ 6	17 ⁸ 39	5 ^{II} 3	25 ^{II} 43	1 ^{III} 5	26°V 0	12 ⁷ 49	19 ^{II} 1	17 ^Δ 58	1 ⁷ 24	1 ⁷ 9	6 ^{III} 4	9 ⁸ 55	S 31

Delta T = 11.77 sec

Greg. Calendar

JUNE 1733

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	16 37 51	10 ^{II} 22'31	16 ³ 34	18 ⁸ 10	6 ^{II} 16	26 ^{II} 23	1°R 0	26°V 6	12°R46	19 ^{II} 4	17°R57	1°R23	1 ⁷ 6	6 ^{III} 11	9 ⁸ 58	M 1
T 2	16 41 47	11°19'55	29°16	18°46	7°30	27° 2	0 ^{III} 56	26°12	12 ⁷ 44	19° 6	17 ^Δ 57	1 ⁷ 22	1° 2	6°17	10° 2	T 2
W 3	16 45 44	12°17'17	12 ^Δ 12	19°25	8°44	27°42	0°52	26°18	12°41	19° 8	17°56	1°21	0°59	6°24	10° 6	W 3
T 4	16 49 40	13°14'40	25°25	20° 9	9°57	28°22	0°48	26°24	12°39	19°10	17°55	1°20	0°56	6°31	10° 9	T 4
F 5	16 53 37	14°12'01	8 ^Δ 56	20°56	11°11	29° 2	0°44	26°30	12°36	19°13	17°54	1°D19	0°53	6°37	10°13	F 5
S 6	16 57 34	15° 9'23	22°45	21°47	12°25	29°41	0°40	26°36	12°34	19°15	17°53	1°19	0°50	6°44	10°16	S 6
S 7	17 1 30	16° 6'43	6°V53	22°42	13°38	0 ^Δ 21	0°36	26°42	12°31	19°17	17°53	1°20	0°46	6°51	10°20	S 7
M 8	17 5 27	17° 4'03	21°18	23°41	14°52	1° 0	0°33	26°48	12°29	19°19	17°52	1°21	0°43	6°57	10°23	M 8
T 9	17 9 23	18° 1'23	5 ⁸ 57	24°43	16° 6	1°40	0°29	26°54	12°26	19°22	17°52	1°22	0°40	7° 4	10°27	T 9
W 10	17 13 20	18°58'43	20°45	25°48	17°19	2°20	0°26	26°59	12°24	19°24	17°51	1°23	0°37	7°11	10°30	W 10
T 11	17 17 16	19°56'02	5 ^{II} 36	26°57	18°33	2°59	0°23	27° 5	12°22	19°26	17°50	1°R23	0°34	7°17	10°34	T 11
F 12	17 21 13	20°53'20	20°22	28°10	19°47	3°39	0°21	27°11	12°19	19°28	17°50	1°22	0°31	7°24	10°37	F 12
S 13	17 25 9	21°50'38	4 ^Δ 57	29°25	21° 1	4°18	0°18	27°16	12°17	19°30	17°49	1°21	0°27	7°31	10°40	S 13
S 14	17 29 6	22°47'55	19°14	0 ^{II} 44	22°14	4°58	0°16	27°21	12°14	19°33	17°49	1°18	0°24	7°37	10°43	S 14
M 15	17 33 3	23°45'12	3 ^Δ 8	2° 6	23°28	5°37	0°13	27°27	12°12	19°35	17°48	1°15	0°21	7°44	10°47	M 15
T 16	17 36 59	24°42'28	16°38	3°32	24°42	6°16	0°11	27°32	12°10	19°37	17°48	1°12	0°18	7°51	10°50	T 16
W 17	17 40 56	25°39'43	29°42	5° 0	25°55	6°56	0° 9	27°37	12° 7	19°39	17°48	1° 9	0°15	7°57	10°53	W 17
T 18	17 44 52	26°36'57	12 ^{III} 24	6°32	27° 9	7°35	0° 8	27°42	12° 5	19°42	17°47	1° 7	0°12	8° 4	10°56	T 18
F 19	17 48 49	27°34'11	24°46	8° 7	28°23	8°14	0° 6	27°48	12° 2	19°44	17°47	1°D 6	0° 8	8°11	10°59	F 19
S 20	17 52 45	28°31'24	6 ^Δ 52	9°45	29°36	8°54	0° 5	27°53	12° 0	19°46	17°47	1° 7	0° 5	8°17	11° 2	S 20
S 21	17 56 42	29°28'36	18°48	11°26	0 ^Δ 50	9°33	0° 4	27°57	11°58	19°48	17°46	1° 8	0° 2	8°24	11° 5	S 21
M 22	18 0 38	0 ^Δ 25'48	0 ^{III} 38	13°10	2° 4	10°12	0° 3	28° 2	11°55	19°51	17°46	1° 9	29 ^{III} 59	8°31	11° 8	M 22
T 23	18 4 35	1°23'00	12°26	14°57	3°18	10°51	0° 2	28° 7	11°53	19°53	17°46	1°11	29°56	8°37	11°11	T 23
W 24	18 8 32	2°20'11	24°18	16°47	4°31	11°30	0° 1	28°12	11°51	19°55	17°46	1°12	29°52	8°44	11°14	W 24
T 25	18 12 28	3°17'21	6 ⁷ 16	18°40	5°45	12°10	0° 1	28°16	11°49	19°57	17°46	1°R12	29°49	8°51	11°17	T 25
F 26	18 16 25	4°14'32	18°24	20°35	6°59	12°49	0° 0	28°21	11°46	19°59	17°46	1°11	29°46	8°57	11°20	F 26
S 27	18 20 21	5°11'42	0 ³ 45	22°33	8°13	13°28	0°D 0	28°25	11°44	20° 1	17°46	1° 8	29°43	9° 4	11°23	S 27
S 28	18 24 18	6° 8'52	13°18	24°33	9°26	14° 7	0° 0	28°30	11°42	20° 4	17°D46	1° 4	29°40	9°10	11°26	S 28
M 29	18 28 14	7° 6'02	26° 6	26°35	10°40	14°46	0° 1	28°34	11°40	20° 6	17°46	0°58	29°37	9°17	11°28	M 29
T 30	18 32 11	8 ^Δ 3'12	9 ^Δ 7	28 ^{II} 39	11 ^Δ 54	15 ^Δ 25	0 ^{III} 1	28°V38	11 ⁷ 38	20 ^{II} 8	17 ^Δ 46	0 ⁷ 52	29 ^{III} 33	9 ^{III} 24	11 ⁸ 31	T 30

Delta T = 11.79 sec

Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1733

geocentric

JULY 1733

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	18 36 8	9 ⁵⁵ 0'22	22 ²⁸ 23	0 ⁵⁴ 45	13 ⁵⁸ 8	16 ⁵⁴ 4	0 ¹¹ 2	28 ⁵⁷ 42	11 ³⁶ 36	20 ¹¹ 10	17 ⁴⁴ 46	0 ³⁶ 46	29 ¹¹ 30	9 ¹¹ 30	11 ³⁸ 34	W 1
T 2	18 40 4	9 ⁵⁷ 33	5 ³⁶ 51	2 ⁵²	14 ²¹	16 ⁴³	0 ²	28 ⁴⁶	11 ³⁷ 34	20 ¹²	17 ⁴⁶	0 ³⁷ 41	29 ¹² 27	9 ³⁷	11 ³⁶	T 2
F 3	18 44 1	10 ⁵⁴ 43	19 ³¹	5 ⁰	15 ³⁵	17 ²²	0 ³	28 ⁵⁰	11 ³²	20 ¹⁴	17 ⁴⁶	0 ³⁸	29 ¹² 24	9 ⁴⁴	11 ³⁹	F 3
S 4	18 47 57	11 ⁵¹ 54	3 ⁵⁷ 23	7 ⁹	16 ⁴⁹	18 ¹	0 ⁵	28 ⁵⁴	11 ³⁰	20 ¹⁷	17 ⁴⁶	0 ³⁶	29 ¹² 21	9 ⁵⁰	11 ⁴¹	S 4
S 5	18 51 54	12 ⁴⁹ 06	17 ²⁵	9 ¹⁹	18 ³	18 ⁴⁰	0 ⁶	28 ⁵⁸	11 ²⁸	20 ¹⁹	17 ⁴⁶	0 ³⁶ D36	29 ¹⁸	9 ⁵⁷	11 ⁴⁴	S 5
M 6	18 55 50	13 ⁴⁶ 18	1 ³⁶	11 ²⁹	19 ¹⁶	19 ¹⁹	0 ⁷	29 ²	11 ²⁶	20 ²¹	17 ⁴⁷	0 ³⁷	29 ¹⁴	10 ⁴	11 ⁴⁶	M 6
T 7	18 59 47	14 ⁴³ 30	15 ⁵⁶	13 ³⁸	20 ³⁰	19 ⁵⁷	0 ⁹	29 ⁶	11 ²⁴	20 ²³	17 ⁴⁷	0 ³⁸	29 ¹¹	10 ¹⁰	11 ⁴⁸	T 7
W 8	19 3 43	15 ⁴⁰ 43	0 ¹¹ 21	15 ⁴⁸	21 ⁴⁴	20 ³⁶	0 ¹¹	29 ⁹	11 ²²	20 ²⁵	17 ⁴⁷	0 ³⁸ R39	29 ⁸	10 ¹⁷	11 ⁵¹	W 8
T 9	19 7 40	16 ³⁷ 57	14 ⁴⁸	17 ⁵⁶	22 ⁵⁸	21 ¹⁵	0 ¹³	29 ¹³	11 ²⁰	20 ²⁷	17 ⁴⁸	0 ³⁸	29 ⁵	10 ²⁴	11 ⁵³	T 9
F 10	19 11 37	17 ³⁵ 11	29 ¹²	20 ⁵	24 ¹²	21 ⁵⁴	0 ¹⁵	29 ¹⁶	11 ¹⁸	20 ²⁹	17 ⁴⁸	0 ³⁵	29 ²	10 ³⁰	11 ⁵⁵	F 10
S 11	19 15 33	18 ³² 25	13 ⁵⁸ 29	22 ¹²	25 ²⁵	22 ³³	0 ¹⁸	29 ¹⁹	11 ¹⁶	20 ³¹	17 ⁴⁹	0 ³⁰	28 ⁵⁸	10 ³⁷	11 ⁵⁷	S 11
S 12	19 19 30	19 ²⁹ 40	27 ³²	24 ¹⁷	26 ³⁹	23 ¹²	0 ²⁰	29 ²²	11 ¹⁴	20 ³³	17 ⁴⁹	0 ²³	28 ⁵⁵	10 ⁴⁴	11 ⁵⁹	S 12
M 13	19 23 26	20 ²⁶ 55	11 ⁵¹ 18	26 ²²	27 ⁵³	23 ⁵⁰	0 ²³	29 ²⁵	11 ¹³	20 ³⁵	17 ⁵⁰	0 ¹⁵	28 ⁵²	10 ⁵⁰	12 ¹	M 13
T 14	19 27 23	21 ²⁴ 10	24 ⁴³	28 ²⁵	29 ⁷	24 ²⁹	0 ²⁶	29 ²⁸	11 ¹¹	20 ³⁷	17 ⁵⁰	0 ⁷	28 ⁴⁹	10 ⁵⁷	12 ³	T 14
W 15	19 31 19	22 ²¹ 26	7 ¹¹ 46	0 ⁵¹ 27	0 ⁵¹ 21	25 ⁸	0 ²⁹	29 ³¹	11 ⁹	20 ³⁹	17 ⁵¹	29 ¹¹ 59	28 ⁴⁶	11 ⁴	12 ⁵	W 15
T 16	19 35 16	23 ¹⁸ 41	20 ²⁷	2 ²⁷	1 ³⁵	25 ⁴⁷	0 ³²	29 ³⁴	11 ⁸	20 ⁴¹	17 ⁵¹	29 ⁵³	28 ⁴³	11 ¹⁰	12 ⁷	T 16
F 17	19 39 12	24 ¹⁵ 57	2 ⁴⁹	4 ²⁶	2 ⁴⁸	26 ²⁵	0 ³⁶	29 ³⁷	11 ⁶	20 ⁴³	17 ⁵²	29 ⁴⁸	28 ³⁹	11 ¹⁷	12 ⁹	F 17
S 18	19 43 9	25 ¹³ 14	14 ⁵⁶	6 ²²	4 ²	27 ⁴	0 ³⁹	29 ³⁹	11 ⁵	20 ⁴⁵	17 ⁵³	29 ⁴⁶	28 ³⁶	11 ²⁴	12 ¹¹	S 18
S 19	19 47 6	26 ¹⁰ 30	26 ⁵²	8 ¹⁷	5 ¹⁶	27 ⁴³	0 ⁴³	29 ⁴²	11 ³	20 ⁴⁷	17 ⁵³	29 ⁴⁵ D45	28 ³³	11 ³⁰	12 ¹²	S 19
M 20	19 51 2	27 ⁷ 47	8 ¹¹ 41	10 ¹¹	6 ³⁰	28 ²¹	0 ⁴⁷	29 ⁴⁴	11 ²	20 ⁴⁹	17 ⁵⁴	29 ⁴⁶	28 ³⁰	11 ³⁷	12 ¹⁴	M 20
T 21	19 54 59	28 ⁵ 05	20 ³¹	12 ²	7 ⁴⁴	29 ⁰	0 ⁵¹	29 ⁴⁷	11 ⁰	20 ⁵⁰	17 ⁵⁵	29 ⁴⁷	28 ²⁷	11 ⁴³	12 ¹⁶	T 21
W 22	19 58 55	29 ² 23	2 ²⁵	13 ⁵²	8 ⁵⁸	29 ³⁸	0 ⁵⁵	29 ⁴⁹	10 ⁵⁹	20 ⁵²	17 ⁵⁵	29 ⁴⁷ R47	28 ²⁴	11 ⁵⁰	12 ¹⁷	W 22
T 23	20 2 52	29 ⁵⁹ 41	14 ²⁸	15 ⁴¹	10 ¹²	0 ⁵¹ 17	1 ⁰	29 ⁵¹	10 ⁵⁸	20 ⁵⁴	17 ⁵⁶	29 ⁴⁶	28 ²⁰	11 ⁵⁷	12 ¹⁹	T 23
F 24	20 6 48	0 ⁵⁷ 00	26 ⁴⁴	17 ²⁷	11 ²⁵	0 ⁵⁶	1 ⁴	29 ⁵³	10 ⁵⁶	20 ⁵⁶	17 ⁵⁷	29 ⁴³	28 ¹⁷	12 ³	12 ²⁰	F 24
S 25	20 10 45	1 ⁵⁴ 19	9 ³¹ 17	19 ¹²	12 ³⁹	1 ³⁴	1 ⁹	29 ⁵⁵	10 ⁵⁵	20 ⁵⁸	17 ⁵⁸	29 ³⁷	28 ¹⁴	12 ¹⁰	12 ²²	S 25
S 26	20 14 41	2 ⁵¹ 39	22 ⁷	20 ⁵⁵	13 ⁵³	2 ¹³	1 ¹⁴	29 ⁵⁷	10 ⁵⁴	21 ⁰	17 ⁵⁹	29 ²⁹	28 ¹¹	12 ¹⁷	12 ²³	S 26
M 27	20 18 38	3 ⁴⁹ 00	5 ¹⁶	22 ³⁶	15 ⁷	2 ⁵¹	1 ¹⁹	29 ⁵⁹	10 ⁵³	21 ¹	18 ⁰	29 ¹⁹	28 ⁸	12 ²³	12 ²⁴	M 27
T 28	20 22 35	4 ⁴⁶ 22	18 ⁴¹	24 ¹⁶	16 ²¹	3 ³⁰	1 ²⁴	0 ⁵⁸ 0	10 ⁵¹	21 ³	18 ¹	29 ⁹	28 ⁴	12 ³⁰	12 ²⁶	T 28
W 29	20 26 31	5 ⁴³ 45	2 ¹¹	25 ⁵⁴	17 ³⁵	4 ⁸	1 ²⁹	0 ²	10 ⁵⁰	21 ⁵	18 ²	28 ⁵⁸	28 ¹	12 ³⁷	12 ²⁷	W 29
T 30	20 30 28	6 ⁴¹ 08	16 ¹²	27 ³⁰	18 ⁴⁹	4 ⁴⁷	1 ³⁵	0 ³	10 ⁴⁹	21 ⁶	18 ³	28 ⁴⁹	27 ⁵⁸	12 ⁴³	12 ²⁸	T 30
F 31	20 34 24	7 ⁵¹ 38 33	0 ⁵⁷ 11	29 ⁵¹ 5	20 ⁵¹ 2	5 ⁵¹ 25	1 ¹¹ 40	0 ⁵⁸ 4	10 ⁵⁷ 48	21 ¹¹ 8	18 ⁴ 4	28 ¹¹ 42	27 ¹¹ 55	12 ¹¹ 50	12 ²⁸ 29	F 31

Delta T = 11.80 sec

Greg. Calendar

AUGUST 1733

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	20 38 21	8♂35'59	14♂15	0♂38	21♂16	6♂ 3	1♂46	0♂ 6	10♂47	21♂10	18♂ 5	28♂R38	27♂52	12♂57	12♂30	S 1
S 2	20 42 17	9°33'26	28°22	2° 9	22°30	6°42	1°52	0° 7	10♂47	21°11	18° 6	28♂36	27°49	13° 3	12°31	S 2
M 3	20 46 14	10°30'55	12♂30	3°38	23°44	7°20	1°58	0° 8	10°46	21°13	18° 8	28°D35	27°45	13°10	12°32	M 3
T 4	20 50 10	11°28'25	26°38	5° 6	24°58	7°59	2° 4	0° 9	10°45	21°15	18° 9	28♂R36	27°42	13°17	12°33	T 4
W 5	20 54 7	12°25'57	10♂44	6°32	26°12	8°37	2°11	0°10	10°44	21°16	18°10	28°35	27°39	13°23	12°33	W 5
T 6	20 58 4	13°23'29	24°48	7°57	27°26	9°16	2°17	0°10	10°43	21°18	18°11	28°33	27°36	13°30	12°34	T 6
F 7	21 2 0	14°21'04	8♂47	9°19	28°40	9°54	2°24	0°11	10°43	21°19	18°13	28°28	27°33	13°37	12°35	F 7
S 8	21 5 57	15°18'39	22°39	10°40	29°53	10°32	2°31	0°11	10°42	21°21	18°14	28°21	27°29	13°43	12°35	S 8
S 9	21 9 53	16°16'16	6♂20	11°59	1♂ 7	11°11	2°37	0°12	10°42	21°22	18°15	28°11	27°26	13°50	12°36	S 9
M10	21 13 50	17°13'54	19°48	13°16	2°21	11°49	2°44	0°12	10°41	21°24	18°17	27°59	27°23	13°57	12°36	M10
T 11	21 17 46	18°11'33	3♂ 0	14°31	3°35	12°27	2°52	0°12	10°41	21°25	18°18	27°46	27°20	14° 3	12°37	T 11
W12	21 21 43	19° 9'14	15°53	15°44	4°49	13° 6	2°59	0♂R12	10°40	21°26	18°19	27°35	27°17	14°10	12°37	W12
T 13	21 25 39	20° 6'55	28°28	16°55	6° 3	13°44	3° 6	0°12	10°40	21°28	18°21	27°24	27°14	14°16	12°37	T 13
F 14	21 29 36	21° 4'38	10♂47	18° 4	7°17	14°22	3°14	0°12	10°40	21°29	18°22	27°17	27°10	14°23	12°38	F 14
S 15	21 33 33	22° 2'22	22°51	19°10	8°31	15° 1	3°22	0°12	10°39	21°30	18°24	27°11	27° 7	14°30	12°38	S 15
S 16	21 37 29	23° 0'07	4♂46	20°14	9°45	15°39	3°29	0°11	10°39	21°32	18°25	27° 9	27° 4	14°36	12°38	S 16
M17	21 41 26	23°57'53	16°35	21°16	10°58	16°17	3°37	0°11	10°39	21°33	18°27	27° 8	27° 1	14°43	12°R38	M17
T 18	21 45 22	24°55'41	28°24	22°15	12°12	16°55	3°46	0°10	10°39	21°34	18°29	27° 8	26°58	14°50	12°38	T 18
W19	21 49 19	25°53'29	10♂18	23°12	13°26	17°34	3°54	0°10	10°39	21°35	18°30	27° 7	26°55	14°56	12°38	W19
T 20	21 53 15	26°51'19	22°23	24° 5	14°40	18°12	4° 2	0° 9	10°D39	21°37	18°32	27° 6	26°51	15° 3	12°38	T 20
F 21	21 57 12	27°49'10	4♂43	24°56	15°54	18°50	4°10	0° 8	10°39	21°38	18°34	27° 2	26°48	15°10	12°38	F 21
S 22	22 1 8	28°47'03	17°24	25°43	17° 8	19°28	4°19	0° 7	10°39	21°39	18°35	26°56	26°45	15°16	12°37	S 22
S 23	22 5 5	29°44'56	0♂26	26°27	18°22	20° 6	4°28	0° 6	10°39	21°40	18°37	26°47	26°42	15°23	12°37	S 23
M24	22 9 2	0♂42'51	13°51	27° 7	19°35	20°45	4°36	0° 5	10°39	21°41	18°39	26°36	26°39	15°30	12°37	M24
T 25	22 12 58	1°40'48	27°38	27°43	20°49	21°23	4°45	0° 3	10°39	21°42	18°41	26°24	26°35	15°36	12°36	T 25
W26	22 16 55	2°38'46	11♂42	28°15	22° 3	22° 1	4°54	0° 2	10°40	21°43	18°42	26°12	26°32	15°43	12°36	W26
T 27	22 20 51	3°36'46	26° 0	28°43	23°17	22°39	5° 3	0° 1	10°40	21°44	18°44	26° 2	26°29	15°50	12°35	T 27
F 28	22 24 48	4°34'47	10♂24	29° 6	24°31	23°17	5°13	29♂59	10°40	21°45	18°46	25°54	26°26	15°56	12°35	F 28
S 29	22 28 44	5°32'51	24°50	29°24	25°45	23°55	5°22	29°57	10°41	21°46	18°48	25°49	26°23	16° 3	12°34	S 29
S 30	22 32 41	6°30'56	9♂12	29°38	26°58	24°34	5°31	29°55	10°41	21°47	18°50	25°46	26°20	16° 9	12°33	S 30
M31	22 36 37	7♂29'03	23♂28	29♂45	28♂12	25♂12	5♂41	29♂54	10♂42	21♂47	18♂52	25°D45	26♂16	16♂16	12♂32	M31

ASTRODIENST EPHEMERIS for the year 1733

geocentric

SEPTEMBER 1733

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	22 40 34	8 ^h 27'13"	7 ^h 11'35"	29°R47	29 ^h 26'	25 ^h 50'	5 ^h 50'	29°R52	10°43'	21 ^h 48'	18 ^h 54'	25°R45	26 ^h 13'	16 ^h 23'	12°R32	T 1
W 2	22 44 30	9°25'24"	21°33'	29 ^h 43'	0 ^h 40'	26°28'	6° 0'	29°Y50	10°43'	21°49'	18°56'	25 ^h 45'	26°10'	16°29'	12°R31	W 2
T 3	22 48 27	10°23'38"	5 ^h 52'	29°32'	1°53'	27° 6'	6°10'	29°47'	10°44'	21°50'	18°57'	25°43'	26° 7'	16°36'	12°30'	T 3
F 4	22 52 24	11°21'54"	19° 0'	29°15'	3° 7'	27°44'	6°20'	29°45'	10°45'	21°50'	18°59'	25°38'	26° 4'	16°43'	12°29'	F 4
S 5	22 56 20	12°20'11"	2 ^h 02'28"	28°52'	4°21'	28°22'	6°30'	29°43'	10°46'	21°51'	19° 1'	25°31'	26° 1'	16°49'	12°28'	S 5
S 6	23 0 17	13°18'31"	15°46'	28°22'	5°35'	29° 0'	6°40'	29°40'	10°46'	21°52'	19° 4'	25°21'	25°57'	16°56'	12°26'	S 6
M 7	23 4 13	14°16'53"	28°51'	27°46'	6°49'	29°39'	6°50'	29°38'	10°47'	21°52'	19° 6'	25°10'	25°54'	17° 3'	12°25'	M 7
T 8	23 8 10	15°15'16"	11 ^h 43'	27° 3'	8° 2'	0 ^h 17'	7° 0'	29°35'	10°48'	21°53'	19° 8'	24°57'	25°51'	17° 9'	12°24'	T 8
W 9	23 12 6	16°13'41"	24°21'	26°15'	9°16'	0°55'	7°11'	29°32'	10°49'	21°54'	19°10'	24°46'	25°48'	17°16'	12°23'	W 9
T 10	23 16 3	17°12'08"	6 ^h 45'	25°22'	10°30'	1°33'	7°21'	29°29'	10°50'	21°54'	19°12'	24°36'	25°45'	17°23'	12°21'	T 10
F 11	23 19 59	18°10'37"	18°56'	24°24'	11°43'	2°11'	7°32'	29°27'	10°51'	21°55'	19°14'	24°28'	25°41'	17°29'	12°20'	F 11
S 12	23 23 56	19° 9'08"	0 ^h 56'	23°24'	12°57'	2°49'	7°43'	29°24'	10°53'	21°55'	19°16'	24°23'	25°38'	17°36'	12°18'	S 12
S 13	23 27 53	20° 7'40"	12°47'	22°21'	14°11'	3°27'	7°53'	29°20'	10°54'	21°55'	19°18'	24°20'	25°35'	17°42'	12°17'	S 13
M14	23 31 49	21° 6'15"	24°34'	21°18'	15°25'	4° 5'	8° 4'	29°17'	10°55'	21°56'	19°20'	24°D19	25°32'	17°49'	12°15'	M14
T 15	23 35 46	22° 4'51"	6 ^h 22'	20°15'	16°38'	4°43'	8°15'	29°14'	10°56'	21°56'	19°23'	24°20'	25°29'	17°56'	12°14'	T 15
W16	23 39 42	23° 3'28"	18°15'	19°15'	17°52'	5°21'	8°26'	29°11'	10°58'	21°56'	19°25'	24°R20	25°26'	18° 2'	12°12'	W16
T 17	23 43 39	24° 2'08"	0 ^h 31'	18°19'	19° 6'	5°59'	8°37'	29° 7'	10°59'	21°57'	19°27'	24°20'	25°22'	18° 9'	12°10'	T 17
F 18	23 47 35	25° 0'49"	12°38'	17°29'	20°19'	6°37'	8°48'	29° 4'	11° 1'	21°57'	19°29'	24°19'	25°19'	18°16'	12° 8'	F 18
S 19	23 51 32	25°59'31"	25°19'	16°45'	21°33'	7°15'	8°59'	29° 0'	11° 2'	21°57'	19°31'	24°15'	25°16'	18°22'	12° 6'	S 19
S 20	23 55 28	26°58'16"	8 ^h 25'	16° 9'	22°47'	7°53'	9°11'	28°57'	11° 4'	21°57'	19°34'	24° 9'	25°13'	18°29'	12° 5'	S 20
M21	23 59 25	27°57'02"	21°57'	15°42'	24° 0'	8°31'	9°22'	28°53'	11° 5'	21°58'	19°36'	24° 1'	25°10'	18°36'	12° 3'	M21
T 22	0 3 22	28°55'50"	5 ^h 55'	15°24'	25°14'	9° 9'	9°33'	28°49'	11° 7'	21°58'	19°38'	23°52'	25° 6'	18°42'	12° 1'	T 22
W23	0 7 18	29°54'40"	20°16'	15°D17	26°27'	9°47'	9°45'	28°45'	11° 9'	21°58'	19°40'	23°43'	25° 3'	18°49'	11°59'	W23
T 24	0 11 15	0 ^h 53'32"	4 ^h Y55'	15°19'	27°41'	10°25'	9°56'	28°41'	11°10'	21°58'	19°43'	23°36'	25° 0'	18°56'	11°57'	T 24
F 25	0 15 11	1°52'26"	19°43'	15°32'	28°54'	11° 3'	10° 8'	28°37'	11°12'	21°R58	19°45'	23°30'	24°57'	19° 2'	11°54'	F 25
S 26	0 19 8	2°51'22"	4 ^h 34'	15°54'	0 ^h 8'	11°41'	10°20'	28°33'	11°14'	21°58'	19°47'	23°26'	24°54'	19° 9'	11°52'	S 26
S 27	0 23 4	3°50'20"	19°19'	16°26'	1°21'	12°19'	10°32'	28°29'	11°16'	21°58'	19°50'	23°D25	24°51'	19°16'	11°50'	S 27
M28	0 27 1	4°49'21"	3 ^h 11'53"	17° 8'	2°35'	12°58'	10°43'	28°25'	11°18'	21°58'	19°52'	23°25'	24°47'	19°22'	11°48'	M28
T 29	0 30 57	5°48'24"	18°11'	17°57'	3°48'	13°36'	10°55'	28°21'	11°20'	21°57'	19°54'	23°26'	24°44'	19°29'	11°45'	T 29
W30	0 34 54	6 ^h 47'29"	2 ^h 51'3	18 ^h 55'	5 ^h 2'	14 ^h 14'	11 ^h 7'	28°Y17	11°22'	21°57'	19°57'	23°R27	24 ^h 41'	19 ^h 35'	11°43'	W30

Delta T = 11.83 sec

Greg. Calendar

OCTOBER 1733

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	0 38 50	7 ^h 46'37"	15 ^h 57'	20 ^h 0'	6 ^h 15'	14 ^h 52'	11 ^h 19'	28°R12	11°24'	21°R57	19°59'	23°R27	24 ^h 38'	19 ^h 42'	11°R41	T 1
F 2	0 42 47	8°45'47"	29°25'	21°11'	7°29'	15°30'	11°31'	28°Y 8	11°26'	21°57'	20° 1'	23 ^h 25'	24°35'	19°49'	11°R38	F 2
S 3	0 46 44	9°45'00"	12 ^h 02'37"	22°28'	8°42'	16° 8'	11°43'	28° 4'	11°28'	21°57'	20° 4'	23°21'	24°32'	19°55'	11°36'	S 3
S 4	0 50 40	10°44'14"	25°35'	23°50'	9°56'	16°46'	11°56'	27°59'	11°30'	21°56'	20° 6'	23°15'	24°28'	20° 2'	11°33'	S 4
M 5	0 54 37	11°43'31"	8 ^h 20'	25°16'	11° 9'	17°24'	12° 8'	27°55'	11°33'	21°56'	20° 9'	23° 8'	24°25'	20° 9'	11°31'	M 5
T 6	0 58 33	12°42'50"	20°52'	26°46'	12°23'	18° 2'	12°20'	27°50'	11°35'	21°56'	20°11'	23° 0'	24°22'	20°15'	11°28'	T 6
W 7	1 2 30	13°42'11"	3 ^h 41'	28°19'	13°36'	18°40'	12°32'	27°46'	11°37'	21°55'	20°13'	22°53'	24°19'	20°22'	11°25'	W 7
T 8	1 6 26	14°41'35"	15°24'	29°54'	14°49'	19°18'	12°45'	27°41'	11°40'	21°55'	20°16'	22°47'	24°16'	20°29'	11°23'	T 8
F 9	1 10 23	15°41'00"	27°25'	1 ^h 31'	16° 3'	19°56'	12°57'	27°36'	11°42'	21°54'	20°18'	22°42'	24°12'	20°35'	11°20'	F 9
S 10	1 14 19	16°40'28"	9 ^h 19'	3°10'	17°16'	20°34'	13°10'	27°32'	11°44'	21°54'	20°21'	22°39'	24° 9'	20°42'	11°17'	S 10
S 11	1 18 16	17°39'57"	21° 7'	4°51'	18°29'	21°11'	13°22'	27°27'	11°47'	21°53'	20°23'	22°D38	24° 6'	20°49'	11°15'	S 11
M12	1 22 13	18°39'29"	2 ^h 53'	6°32'	19°43'	21°49'	13°35'	27°22'	11°49'	21°53'	20°25'	22°39'	24° 3'	20°55'	11°12'	M12
T 13	1 26 9	19°39'02"	14°40'	8°14'	20°56'	22°27'	13°47'	27°17'	11°52'	21°52'	20°28'	22°40'	24° 0'	21° 2'	11° 9'	T 13
W14	1 30 6	20°38'37"	26°33'	9°57'	22° 9'	23° 5'	14° 0'	27°13'	11°54'	21°52'	20°30'	22°42'	23°57'	21° 8'	11° 6'	W14
T 15	1 34 2	21°38'14"	8 ^h 35'	11°39'	23°22'	23°43'	14°13'	27° 8'	11°57'	21°51'	20°33'	22°44'	23°53'	21°15'	11° 3'	T 15
F 16	1 37 59	22°37'52"	20°52'	13°22'	24°36'	24°21'	14°25'	27° 3'	12° 0'	21°50'	20°35'	22°R45	23°50'	21°22'	11° 0'	F 16
S 17	1 41 55	23°37'33"	3 ^h 29'	15° 5'	25°49'	24°59'	14°38'	26°58'	12° 2'	21°50'	20°37'	22°44'	23°47'	21°28'	10°57'	S 17
S 18	1 45 52	24°37'15"	16°30'	16°48'	27° 2'	25°37'	14°51'	26°54'	12° 5'	21°49'	20°40'	22°42'	23°44'	21°35'	10°55'	S 18
M19	1 49 48	25°36'59"	29°58'	18°30'	28°15'	26°15'	15° 4'	26°49'	12° 8'	21°48'	20°42'	22°40'	23°41'	21°42'	10°52'	M19
T 20	1 53 45	26°36'44"	13 ^h 54'	20°12'	29°28'	26°53'	15°17'	26°44'	12°11'	21°47'	20°45'	22°36'	23°38'	21°48'	10°49'	T 20
W21	1 57 42	27°36'31"	28°17'	21°54'	0 ^h 42'	27°31'	15°30'	26°39'	12°14'	21°47'	20°47'	22°32'	23°34'	21°55'	10°46'	W21
T 22	2 1 38	28°36'20"	13 ^h Y 3	23°35'	1°55'	28° 9'	15°43'	26°34'	12°16'	21°46'	20°49'	22°29'	23°31'	22° 2'	10°43'	T 22
F 23	2 5 35	29°36'11"	28° 5'	25°16'	3° 8'	28°47'	15°56'	26°29'	12°19'	21°45'	20°52'	22°26'	23°28'	22° 8'	10°40'	F 23
S 24	2 9 31	0 ^h 36'04"	13 ^h 8'14"	26°57'	4°21'	29°25'	16° 9'	26°25'	12°22'	21°44'	20°54'	22°25'	23°25'	22°15'	10°37'	S 24
S 25	2 13 28	1°35'59"	28°20'	28°37'	5°34'	0 ^h 3	16°22'	26°20'	12°25'	21°43'	20°57'	22°D25	23°22'	22°22'	10°33'	S 25
M26	2 17 24	2°35'57"	13 ^h 11'16"	0 ^h 17'	6°47'	0°41'	16°35'	26°15'	12°28'	21°42'	20°59'	22°26'	23°18'	22°28'	10°30'	M26
T 27	2 21 21	3°35'56"	27°53'	1°56'	8° 0'	1°19'	16°48'	26°10'	12°31'	21°41'	21° 1'	22°27'	23°15'	22°35'	10°27'	T 27
W28	2 25 17	4°35'57"	12 ^h 9'	3°34'	9°13'	1°57'	17° 1'	26° 6'	12°34'	21°40'	21° 4'	22°28'	23°12'	22°41'	10°24'	W28
T 29	2 29 14	5°36'01"	26° 1'	5°13'	10°26'	2°35'	17°14'	26° 1'	12°37'	21°39'	21° 6'	22°29'	23° 9'	22°48'	10°21'	T 29
F 30	2 33 11	6°36'07"	9 ^h 02'29"	6°50'	11°39'	3°13'	17°27'	25°56'	12°41'	21°38'	21° 8'	22°R29	23° 6'	22°55'	10°18'	F 30
S 31	2 37 7	7 ^h 36'15"	22 ^h 02'36"	8 ^h 12'28"	12 ^h 51'	3 ^h 51'	17 ^h 40'	25°Y52	12°44'	21°37'	21°11'	22 ^h 29'	23 ^h 3	23 ^h 1	10°15'	S 31

Delta T = 11.85 sec

Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1733

geocentric

NOVEMBER 1733

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	2 41 4	8♉36°25	5♊24	10♉5	14♉4	4♉29	17♉53	25°R47	12♉47	21°R36	21♉13	22°R28	22♉59	23♉8	10°R12	S 1
M 2	2 45 0	9°36'37	17°55	11°41	15°17	5°7	18°7	25°Y42	12°50	21°II34	21°15	22°M26	22°56	23°15	10°B9	M 2
T 3	2 48 57	10°36'51	0♉13	13°17	16°30	5°44	18°20	25°38	12°53	21°33	21°18	22°24	22°53	23°21	10°6	T 3
W 4	2 52 53	11°37'07	12°20	14°53	17°43	6°22	18°33	25°33	12°56	21°32	21°20	22°23	22°50	23°28	10°2	W 4
T 5	2 56 50	12°37'24	24°19	16°28	18°55	7°0	18°46	25°29	13°0	21°31	21°22	22°21	22°47	23°35	9°59	T 5
F 6	3 0 46	13°37'44	6♉12	18°3	20°8	7°38	19°0	25°24	13°3	21°30	21°24	22°20	22°43	23°41	9°56	F 6
S 7	3 4 43	14°38'06	18°0	19°38	21°21	8°16	19°13	25°20	13°6	21°28	21°27	22°D20	22°40	23°48	9°53	S 7
S 8	3 8 39	15°38'29	29°47	21°12	22°33	8°54	19°26	25°15	13°10	21°27	21°29	22°20	22°37	23°55	9°50	S 8
M 9	3 12 36	16°38'54	11♉35	22°46	23°46	9°32	19°40	25°11	13°13	21°26	21°31	22°20	22°34	24°1	9°47	M 9
T 10	3 16 33	17°39'20	23°25	24°20	24°59	10°10	19°53	25°7	13°16	21°24	21°33	22°21	22°31	24°8	9°44	T 10
W 11	3 20 29	18°39'48	5♉21	25°53	26°11	10°48	20°6	25°3	13°20	21°23	21°36	22°21	22°28	24°15	9°41	W 11
T 12	3 24 26	19°40'18	17°26	27°26	27°24	11°26	20°19	24°58	13°23	21°22	21°38	22°22	22°24	24°21	9°38	T 12
F 13	3 28 22	20°40'49	29°44	28°59	28°36	12°4	20°33	24°54	13°27	21°20	21°40	22°22	22°21	24°28	9°35	F 13
S 14	3 32 19	21°41'21	12♉18	0♉32	29°49	12°42	20°46	24°50	13°30	21°19	21°42	22°22	22°18	24°34	9°32	S 14
S 15	3 36 15	22°41'54	25°13	2°4	1♉1	13°20	20°59	24°46	13°34	21°17	21°44	22°22	22°15	24°41	9°29	S 15
M 16	3 40 12	23°42'29	8♉31	3°36	2°13	13°57	21°13	24°42	13°37	21°16	21°46	22°22	22°12	24°48	9°26	M 16
T 17	3 44 9	24°43'04	22°16	5°8	3°26	14°35	21°26	24°39	13°41	21°14	21°49	22°22	22°9	24°54	9°23	T 17
W 18	3 48 5	25°43'41	6♉Y27	6°40	4°38	15°13	21°39	24°35	13°44	21°13	21°51	22°22	22°5	25°1	9°20	W 18
T 19	3 52 2	26°44'19	21°3	8°12	5°50	15°51	21°53	24°31	13°48	21°11	21°53	22°23	22°2	25°8	9°17	T 19
F 20	3 55 58	27°44'58	6♉0	9°43	7°2	16°29	22°6	24°28	13°51	21°10	21°55	22°23	21°59	25°14	9°14	F 20
S 21	3 59 55	28°45'39	21°11	11°14	8°14	17°7	22°19	24°24	13°55	21°8	21°57	22°R23	21°56	25°21	9°11	S 21
S 22	4 3 51	29°46'21	6♉25	12°45	9°26	17°45	22°32	24°21	13°58	21°7	21°59	22°23	21°53	25°28	9°8	S 22
M 23	4 7 48	0♉47'05	21°35	14°15	10°38	18°23	22°46	24°17	14°2	21°5	22°1	22°23	21°49	25°34	9°5	M 23
T 24	4 11 44	1°47'49	6♉29	15°46	11°50	19°1	22°59	24°14	14°5	21°4	22°3	22°22	21°46	25°41	9°2	T 24
W 25	4 15 41	2°48'36	21°1	17°16	13°2	19°38	23°12	24°11	14°9	21°2	22°5	22°20	21°43	25°48	8°59	W 25
T 26	4 19 38	3°49'24	5♉7	18°45	14°14	20°16	23°25	24°7	14°13	21°1	22°7	22°19	21°40	25°54	8°57	T 26
F 27	4 23 34	4°50'13	18°46	20°14	15°25	20°54	23°39	24°4	14°16	20°59	22°9	22°18	21°37	26°1	8°54	F 27
S 28	4 27 31	5°51'03	1♉57	21°43	16°37	21°32	23°52	24°1	14°20	20°57	22°11	22°D18	21°34	26°7	8°51	S 28
S 29	4 31 27	6°51'55	14°44	23°11	17°49	22°10	24°5	23°59	14°24	20°56	22°12	22°18	21°30	26°14	8°49	S 29
M 30	4 35 24	7♉52'49	27°11	24♉39	19♉0	22°48	24♉18	23°Y56	14♉27	20°II54	22°14	22°M18	21°M27	26°M21	8°46	M 30

Delta T = 11.87 sec

Greg. Calendar

DECEMBER 1733

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	4 39 20	8♉53'44	9♉21	26♉6	20♉11	23♉26	24♉31	23°R53	14♉31	20°R52	22°16	22°M20	21°M24	26°M27	8°R43	T 1
W 2	4 43 17	9°54'40	21°20	27°32	21°23	24°3	24°44	23°Y51	14°34	20°II51	22°18	22°21	21°21	26°34	8°B41	W 2
T 3	4 47 13	10°55'37	3♉12	28°58	22°34	24°41	24°58	23°48	14°38	20°49	22°20	22°23	21°18	26°41	8°38	T 3
F 4	4 51 10	11°56'35	14°59	0♉22	23°45	25°19	25°11	23°46	14°42	20°47	22°21	22°24	21°15	26°47	8°36	F 4
S 5	4 55 7	12°57'35	26°46	1°45	24°56	25°57	25°24	23°43	14°45	20°46	22°23	22°R24	21°11	26°54	8°33	S 5
S 6	4 59 3	13°58'36	8♉34	3°6	26°8	26°35	25°37	23°41	14°49	20°44	22°25	22°23	21°8	27°1	8°31	S 6
M 7	5 3 0	14°59'37	20°26	4°26	27°19	27°13	25°50	23°39	14°53	20°42	22°26	22°21	21°5	27°7	8°29	M 7
T 8	5 6 56	16°0'40	2♉25	5°43	28°29	27°50	26°3	23°37	14°56	20°41	22°28	22°17	21°2	27°14	8°26	T 8
W 9	5 10 53	17°1'43	14°30	6°59	29°40	28°28	26°16	23°35	15°0	20°39	22°30	22°13	20°59	27°21	8°24	W 9
T 10	5 14 49	18°2'46	26°45	8°11	0♉51	29°6	26°28	23°33	15°4	20°37	22°31	22°9	20°55	27°27	8°22	T 10
F 11	5 18 46	19°3'51	9♉12	9°20	2°1	29°44	26°41	23°32	15°7	20°36	22°33	22°4	20°52	27°34	8°20	F 11
S 12	5 22 42	20°4'56	21°51	10°26	3°12	0♉22	26°54	23°30	15°11	20°34	22°34	22°1	20°49	27°41	8°17	S 12
S 13	5 26 39	21°6'01	4♉46	11°27	4°22	0°59	27°7	23°29	15°15	20°32	22°36	21°58	20°46	27°47	8°15	S 13
M 14	5 30 36	22°7'06	17°59	12°23	5°33	1°37	27°20	23°27	15°18	20°30	22°37	21°D57	20°43	27°54	8°13	M 14
T 15	5 34 32	23°8'12	1°Y33	13°14	6°43	2°15	27°32	23°26	15°22	20°29	22°39	21°57	20°40	28°0	8°11	T 15
W 16	5 38 29	24°9'18	15°28	13°58	7°53	2°52	27°45	23°25	15°26	20°27	22°40	21°58	20°36	28°7	8°9	W 16
T 17	5 42 25	25°10'24	29°45	14°34	9°3	3°30	27°58	23°24	15°29	20°25	22°42	22°0	20°33	28°14	8°7	T 17
F 18	5 46 22	26°11'31	14♉23	15°3	10°12	4°8	28°10	23°23	15°33	20°24	22°43	22°1	20°30	28°20	8°6	F 18
S 19	5 50 18	27°12'38	29°17	15°22	11°22	4°46	28°23	23°22	15°37	20°22	22°44	22°R1	20°27	28°27	8°4	S 19
S 20	5 54 15	28°13'45	14♉21	15°R31	12°32	5°23	28°35	23°21	15°40	20°20	22°46	21°59	20°24	28°34	8°2	S 20
M 21	5 58 11	29°14'52	29°26	15°30	13°41	6°1	28°48	23°21	15°44	20°19	22°47	21°56	20°21	28°40	8°1	M 21
T 22	6 2 8	0♉16'00	14♉22	15°17	14°50	6°39	29°0	23°20	15°47	20°17	22°48	21°50	20°17	28°47	7°59	T 22
W 23	6 6 5	1°17'08	29°2	14°52	15°59	7°16	29°12	23°20	15°51	20°15	22°49	21°44	20°14	28°54	7°57	W 23
T 24	6 10 1	2°18'17	13♉18	14°16	17°8	7°54	29°24	23°19	15°54	20°14	22°50	21°38	20°11	29°0	7°56	T 24
F 25	6 13 58	3°19'26	27°6	13°28	18°17	8°32	29°37	23°19	15°58	20°12	22°52	21°32	20°8	29°7	7°54	F 25
S 26	6 17 54	4°20'35	10♉26	12°30	19°25	9°9	29°49	23°D19	16°1	20°10	22°53	21°27	20°5	29°14	7°53	S 26
S 27	6 21 51	5°21'45	23°19	11°22	20°34	9°47	0♉1	23°19	16°5	20°9	22°54	21°24	20°1	29°20	7°52	S 27
M 28	6 25 47	6°22'55	5♉48	10°8	21°42	10°25	0°13	23°19	16°9	20°7	22°55	21°D24	19°58	29°27	7°50	M 28
T 29	6 29 44	7°24'05	17°59	8°49	22°50	11°2	0°25	23°20	16°12	20°5	22°56	21°24	19°55	29°34	7°49	T 29
W 30	6 33 40	8°25'16	29°56	7°27	23°58	11°40	0°37	23°20	16°15	20°4	22°57	21°25	19°52	29°40	7°48	W 30
T 31	6 37 37	9♉26'27	11♉45	6♉7	25°5	12♉17	0♉49	23°Y21	16♉19	20°II2	22°58	21°M27	19°M49	29°M47	7°B47	T 31

Delta T = 11.88 sec

Greg. Calendar