



# Astrodienst Ephemeris Tables for the year 2060

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 2060  
geocentric

JANUARY 2060

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	6 41 42	10 <sup>3</sup> 18'09	7 <sup>1</sup> 14	11 <sup>3</sup> 8	17 <sup>1</sup> 18	1 <sup>1</sup> 42	21 <sup>1</sup> R10	27 <sup>1</sup> R 9	7 <sup>1</sup> 29	16 <sup>1</sup> R34	19 <sup>1</sup> 53	16 <sup>1</sup> R10	14 <sup>1</sup> 35	4 <sup>1</sup> 49	21 <sup>1</sup> 35	T 1
F 2	6 45 39	11 <sup>1</sup> 19'19	20 <sup>1</sup> 14	12 <sup>1</sup> 45	18 <sup>1</sup> 31	2 <sup>1</sup> 29	21 <sup>1</sup> 8 7	27 <sup>1</sup> 8 6	7 <sup>1</sup> 31	16 <sup>1</sup> 32	19 <sup>1</sup> 53	16 <sup>1</sup> 8 5	14 <sup>1</sup> 32	4 <sup>1</sup> 55	21 <sup>1</sup> 38	F 2
S 3	6 49 35	12 <sup>1</sup> 20'30	3 <sup>1</sup> 34	14 <sup>1</sup> 22	19 <sup>1</sup> 44	3 <sup>1</sup> 17	21 <sup>1</sup> 4	27 <sup>1</sup> 4	7 <sup>1</sup> 33	16 <sup>1</sup> 30	19 <sup>1</sup> 54	15 <sup>1</sup> 58	14 <sup>1</sup> 29	5 <sup>1</sup> 2	21 <sup>1</sup> 42	S 3
S 4	6 53 32	13 <sup>1</sup> 21'41	17 <sup>1</sup> 16	15 <sup>1</sup> 59	20 <sup>1</sup> 57	4 <sup>1</sup> 4	21 <sup>1</sup> 2	27 <sup>1</sup> 1	7 <sup>1</sup> 35	16 <sup>1</sup> 29	19 <sup>1</sup> 55	15 <sup>1</sup> 49	14 <sup>1</sup> 26	5 <sup>1</sup> 9	21 <sup>1</sup> 45	S 4
M 5	6 57 29	14 <sup>1</sup> 22'52	1 <sup>1</sup> 14	17 <sup>1</sup> 37	22 <sup>1</sup> 10	4 <sup>1</sup> 51	21 <sup>1</sup> 0	26 <sup>1</sup> 59	7 <sup>1</sup> 37	16 <sup>1</sup> 28	19 <sup>1</sup> 56	15 <sup>1</sup> 39	14 <sup>1</sup> 23	5 <sup>1</sup> 15	21 <sup>1</sup> 49	M 5
T 6	7 1 25	15 <sup>1</sup> 24'02	15 <sup>1</sup> 24	19 <sup>1</sup> 15	23 <sup>1</sup> 23	5 <sup>1</sup> 38	20 <sup>1</sup> 58	26 <sup>1</sup> 56	7 <sup>1</sup> 39	16 <sup>1</sup> 26	19 <sup>1</sup> 56	15 <sup>1</sup> 29	14 <sup>1</sup> 19	5 <sup>1</sup> 22	21 <sup>1</sup> 53	T 6
W 7	7 5 22	16 <sup>1</sup> 25'13	29 <sup>1</sup> 41	20 <sup>1</sup> 53	24 <sup>1</sup> 35	6 <sup>1</sup> 25	20 <sup>1</sup> 56	26 <sup>1</sup> 54	7 <sup>1</sup> 41	16 <sup>1</sup> 25	19 <sup>1</sup> 57	15 <sup>1</sup> 20	14 <sup>1</sup> 16	5 <sup>1</sup> 29	21 <sup>1</sup> 56	W 7
T 8	7 9 18	17 <sup>1</sup> 26'23	14 <sup>1</sup> 0	22 <sup>1</sup> 32	25 <sup>1</sup> 48	7 <sup>1</sup> 12	20 <sup>1</sup> 54	26 <sup>1</sup> 52	7 <sup>1</sup> 43	16 <sup>1</sup> 23	19 <sup>1</sup> 58	15 <sup>1</sup> 13	14 <sup>1</sup> 13	5 <sup>1</sup> 36	22 <sup>1</sup> 0	T 8
F 9	7 13 15	18 <sup>1</sup> 27'32	28 <sup>1</sup> 17	24 <sup>1</sup> 11	27 <sup>1</sup> 0	8 <sup>1</sup> 0	20 <sup>1</sup> 53	26 <sup>1</sup> 50	7 <sup>1</sup> 45	16 <sup>1</sup> 22	19 <sup>1</sup> 59	15 <sup>1</sup> 9	14 <sup>1</sup> 10	5 <sup>1</sup> 42	22 <sup>1</sup> 4	F 9
S 10	7 17 11	19 <sup>1</sup> 28'41	12 <sup>1</sup> 28	25 <sup>1</sup> 50	28 <sup>1</sup> 13	8 <sup>1</sup> 47	20 <sup>1</sup> 52	26 <sup>1</sup> 48	7 <sup>1</sup> 46	16 <sup>1</sup> 20	20 <sup>1</sup> 0	15 <sup>1</sup> 7	14 <sup>1</sup> 7	5 <sup>1</sup> 49	22 <sup>1</sup> 8	S 10
S 11	7 21 8	20 <sup>1</sup> 29'50	26 <sup>1</sup> 32	27 <sup>1</sup> 30	29 <sup>1</sup> 25	9 <sup>1</sup> 34	20 <sup>1</sup> 51	26 <sup>1</sup> 46	7 <sup>1</sup> 48	16 <sup>1</sup> 19	20 <sup>1</sup> 1	15 <sup>1</sup> D 7	14 <sup>1</sup> 3	5 <sup>1</sup> 56	22 <sup>1</sup> 12	S 11
M 12	7 25 4	21 <sup>1</sup> 30'58	10 <sup>1</sup> 28	29 <sup>1</sup> 10	0 <sup>1</sup> 37	10 <sup>1</sup> 21	20 <sup>1</sup> 50	26 <sup>1</sup> 44	7 <sup>1</sup> 50	16 <sup>1</sup> 18	20 <sup>1</sup> 2	15 <sup>1</sup> R 7	14 <sup>1</sup> 0	6 <sup>1</sup> 2	22 <sup>1</sup> 15	M 12
T 13	7 29 1	22 <sup>1</sup> 32'05	24 <sup>1</sup> 16	0 <sup>1</sup> 50	1 <sup>1</sup> 49	11 <sup>1</sup> 9	20 <sup>1</sup> 50	26 <sup>1</sup> 42	7 <sup>1</sup> 51	16 <sup>1</sup> 16	20 <sup>1</sup> 3	15 <sup>1</sup> 7	13 <sup>1</sup> 57	6 <sup>1</sup> 9	22 <sup>1</sup> 19	T 13
W 14	7 32 58	23 <sup>1</sup> 33'12	7 <sup>1</sup> 56	2 <sup>1</sup> 31	3 <sup>1</sup> 1	11 <sup>1</sup> 56	20 <sup>1</sup> 49	26 <sup>1</sup> 41	7 <sup>1</sup> 53	16 <sup>1</sup> 15	20 <sup>1</sup> 3	15 <sup>1</sup> 5	13 <sup>1</sup> 54	6 <sup>1</sup> 16	22 <sup>1</sup> 23	W 14
T 15	7 36 54	24 <sup>1</sup> 34'19	21 <sup>1</sup> 28	4 <sup>1</sup> 11	4 <sup>1</sup> 13	12 <sup>1</sup> 43	20 <sup>1</sup> D49	26 <sup>1</sup> 39	7 <sup>1</sup> 55	16 <sup>1</sup> 14	20 <sup>1</sup> 4	15 <sup>1</sup> 0	13 <sup>1</sup> 51	6 <sup>1</sup> 22	22 <sup>1</sup> 27	T 15
F 16	7 40 51	25 <sup>1</sup> 35'25	4 <sup>1</sup> 50	5 <sup>1</sup> 52	5 <sup>1</sup> 25	13 <sup>1</sup> 31	20 <sup>1</sup> 49	26 <sup>1</sup> 38	7 <sup>1</sup> 56	16 <sup>1</sup> 13	20 <sup>1</sup> 5	14 <sup>1</sup> 52	13 <sup>1</sup> 48	6 <sup>1</sup> 29	22 <sup>1</sup> 31	F 16
S 17	7 44 47	26 <sup>1</sup> 36'30	18 <sup>1</sup> 0	7 <sup>1</sup> 33	6 <sup>1</sup> 37	14 <sup>1</sup> 18	20 <sup>1</sup> 50	26 <sup>1</sup> 36	7 <sup>1</sup> 58	16 <sup>1</sup> 12	20 <sup>1</sup> 6	14 <sup>1</sup> 42	13 <sup>1</sup> 44	6 <sup>1</sup> 36	22 <sup>1</sup> 35	S 17
S 18	7 48 44	27 <sup>1</sup> 37'35	0 <sup>1</sup> 58	9 <sup>1</sup> 13	7 <sup>1</sup> 49	15 <sup>1</sup> 5	20 <sup>1</sup> 50	26 <sup>1</sup> 35	7 <sup>1</sup> 59	16 <sup>1</sup> 10	20 <sup>1</sup> 8	14 <sup>1</sup> 29	13 <sup>1</sup> 41	6 <sup>1</sup> 42	22 <sup>1</sup> 39	S 18
M 19	7 52 40	28 <sup>1</sup> 38'39	13 <sup>1</sup> 42	10 <sup>1</sup> 53	9 <sup>1</sup> 1	15 <sup>1</sup> 53	20 <sup>1</sup> 51	26 <sup>1</sup> 34	8 <sup>1</sup> 0	16 <sup>1</sup> 9	20 <sup>1</sup> 9	14 <sup>1</sup> 16	13 <sup>1</sup> 38	6 <sup>1</sup> 49	22 <sup>1</sup> 43	M 19
T 20	7 56 37	29 <sup>1</sup> 39'43	26 <sup>1</sup> 12	12 <sup>1</sup> 33	10 <sup>1</sup> 12	16 <sup>1</sup> 40	20 <sup>1</sup> 52	26 <sup>1</sup> 33	8 <sup>1</sup> 1	16 <sup>1</sup> 8	20 <sup>1</sup> 10	14 <sup>1</sup> 3	13 <sup>1</sup> 35	6 <sup>1</sup> 56	22 <sup>1</sup> 47	T 20
W 21	8 0 34	0 <sup>1</sup> 40'46	8 <sup>1</sup> 27	14 <sup>1</sup> 13	11 <sup>1</sup> 24	17 <sup>1</sup> 27	20 <sup>1</sup> 53	26 <sup>1</sup> 33	8 <sup>1</sup> 3	16 <sup>1</sup> 7	20 <sup>1</sup> 11	13 <sup>1</sup> 51	13 <sup>1</sup> 32	7 <sup>1</sup> 2	22 <sup>1</sup> 51	W 21
T 22	8 4 30	1 <sup>1</sup> 41'49	20 <sup>1</sup> 31	15 <sup>1</sup> 51	12 <sup>1</sup> 35	18 <sup>1</sup> 15	20 <sup>1</sup> 54	26 <sup>1</sup> 32	8 <sup>1</sup> 4	16 <sup>1</sup> 6	20 <sup>1</sup> 12	13 <sup>1</sup> 42	13 <sup>1</sup> 29	7 <sup>1</sup> 9	22 <sup>1</sup> 55	T 22
F 23	8 8 27	2 <sup>1</sup> 42'51	2 <sup>1</sup> 25	17 <sup>1</sup> 29	13 <sup>1</sup> 46	19 <sup>1</sup> 2	20 <sup>1</sup> 56	26 <sup>1</sup> 31	8 <sup>1</sup> 5	16 <sup>1</sup> 5	20 <sup>1</sup> 13	13 <sup>1</sup> 35	13 <sup>1</sup> 25	7 <sup>1</sup> 16	22 <sup>1</sup> 59	F 23
S 24	8 12 23	3 <sup>1</sup> 43'53	14 <sup>1</sup> 14	19 <sup>1</sup> 5	14 <sup>1</sup> 57	19 <sup>1</sup> 50	20 <sup>1</sup> 57	26 <sup>1</sup> 31	8 <sup>1</sup> 6	16 <sup>1</sup> 4	20 <sup>1</sup> 14	13 <sup>1</sup> 32	13 <sup>1</sup> 22	7 <sup>1</sup> 22	23 <sup>1</sup> 4	S 24
S 25	8 16 20	4 <sup>1</sup> 44'54	26 <sup>1</sup> 3	20 <sup>1</sup> 39	16 <sup>1</sup> 8	20 <sup>1</sup> 37	20 <sup>1</sup> 59	26 <sup>1</sup> 30	8 <sup>1</sup> 7	16 <sup>1</sup> 3	20 <sup>1</sup> 15	13 <sup>1</sup> 30	13 <sup>1</sup> 19	7 <sup>1</sup> 29	23 <sup>1</sup> 8	S 25
M 26	8 20 16	5 <sup>1</sup> 45'55	7 <sup>1</sup> 56	22 <sup>1</sup> 12	17 <sup>1</sup> 19	21 <sup>1</sup> 25	21 <sup>1</sup> 1	26 <sup>1</sup> 30	8 <sup>1</sup> 8	16 <sup>1</sup> 2	20 <sup>1</sup> 16	13 <sup>1</sup> 30	13 <sup>1</sup> 16	7 <sup>1</sup> 36	23 <sup>1</sup> 12	M 26
T 27	8 24 13	6 <sup>1</sup> 46'56	19 <sup>1</sup> 59	23 <sup>1</sup> 41	18 <sup>1</sup> 30	22 <sup>1</sup> 12	21 <sup>1</sup> 4	26 <sup>1</sup> 30	8 <sup>1</sup> 9	16 <sup>1</sup> 1	20 <sup>1</sup> 18	13 <sup>1</sup> 30	13 <sup>1</sup> 13	7 <sup>1</sup> 42	23 <sup>1</sup> 16	T 27
W 28	8 28 9	7 <sup>1</sup> 47'55	2 <sup>1</sup> 19	25 <sup>1</sup> 8	19 <sup>1</sup> 41	22 <sup>1</sup> 59	21 <sup>1</sup> 6	26 <sup>1</sup> D30	8 <sup>1</sup> 10	16 <sup>1</sup> 0	20 <sup>1</sup> 19	13 <sup>1</sup> 29	13 <sup>1</sup> 9	7 <sup>1</sup> 49	23 <sup>1</sup> 20	W 28
T 29	8 32 6	8 <sup>1</sup> 48'55	14 <sup>1</sup> 59	26 <sup>1</sup> 31	20 <sup>1</sup> 51	23 <sup>1</sup> 47	21 <sup>1</sup> 9	26 <sup>1</sup> 30	8 <sup>1</sup> 10	15 <sup>1</sup> 59	20 <sup>1</sup> 20	13 <sup>1</sup> 26	13 <sup>1</sup> 6	7 <sup>1</sup> 56	23 <sup>1</sup> 25	T 29
F 30	8 36 3	9 <sup>1</sup> 49'53	28 <sup>1</sup> 3	27 <sup>1</sup> 50	22 <sup>1</sup> 2	24 <sup>1</sup> 34	21 <sup>1</sup> 12	26 <sup>1</sup> 30	8 <sup>1</sup> 11	15 <sup>1</sup> 58	20 <sup>1</sup> 21	13 <sup>1</sup> 20	13 <sup>1</sup> 3	8 <sup>1</sup> 2	23 <sup>1</sup> 29	F 30
S 31	8 39 59	10 <sup>1</sup> 50'51	11 <sup>1</sup> 34	29 <sup>1</sup> 4	23 <sup>1</sup> 12	25 <sup>1</sup> 22	21 <sup>1</sup> 15	26 <sup>1</sup> 31	8 <sup>1</sup> 12	15 <sup>1</sup> 57	20 <sup>1</sup> 23	13 <sup>1</sup> 11	13 <sup>1</sup> 8	8 <sup>1</sup> 9	23 <sup>1</sup> 33	S 31

Delta T = 77.64 sec

FEBRUARY 2060

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	8 43 56	11 <sup>1</sup> 51'49	25 <sup>1</sup> 31	0 <sup>1</sup> 12	24 <sup>1</sup> 22	26 <sup>1</sup> 9	21 <sup>1</sup> 18	26 <sup>1</sup> 31	8 <sup>1</sup> 12	15 <sup>1</sup> R56	20 <sup>1</sup> 24	13 <sup>1</sup> R 0	12 <sup>1</sup> 57	8 <sup>1</sup> 16	23 <sup>1</sup> 37	S 1
M 2	8 47 52	12 <sup>1</sup> 52'45	9 <sup>1</sup> 51	1 <sup>1</sup> 14	25 <sup>1</sup> 32	26 <sup>1</sup> 57	21 <sup>1</sup> 22	26 <sup>1</sup> 32	8 <sup>1</sup> 13	15 <sup>1</sup> 56	20 <sup>1</sup> 25	12 <sup>1</sup> 58	12 <sup>1</sup> 54	8 <sup>1</sup> 22	23 <sup>1</sup> 41	M 2
T 3	8 51 49	13 <sup>1</sup> 53'40	24 <sup>1</sup> 28	2 <sup>1</sup> 8	26 <sup>1</sup> 42	27 <sup>1</sup> 44	21 <sup>1</sup> 25	26 <sup>1</sup> 32	8 <sup>1</sup> 13	15 <sup>1</sup> 55	20 <sup>1</sup> 26	12 <sup>1</sup> 35	12 <sup>1</sup> 50	8 <sup>1</sup> 29	23 <sup>1</sup> 46	T 3
W 4	8 55 45	14 <sup>1</sup> 54'34	9 <sup>1</sup> 13	2 <sup>1</sup> 54	27 <sup>1</sup> 52	28 <sup>1</sup> 32	21 <sup>1</sup> 29	26 <sup>1</sup> 33	8 <sup>1</sup> 14	15 <sup>1</sup> 54	20 <sup>1</sup> 28	12 <sup>1</sup> 24	12 <sup>1</sup> 47	8 <sup>1</sup> 36	23 <sup>1</sup> 50	W 4
T 5	8 59 42	15 <sup>1</sup> 55'27	23 <sup>1</sup> 59	3 <sup>1</sup> 31	29 <sup>1</sup> 2	29 <sup>1</sup> 19	21 <sup>1</sup> 33	26 <sup>1</sup> 34	8 <sup>1</sup> 14	15 <sup>1</sup> 53	20 <sup>1</sup> 29	12 <sup>1</sup> 15	12 <sup>1</sup> 44	8 <sup>1</sup> 42	23 <sup>1</sup> 54	T 5
F 6	9 3 38	16 <sup>1</sup> 56'18	8 <sup>1</sup> 38	3 <sup>1</sup> 59	0 <sup>1</sup> 11	0 <sup>1</sup> 7	21 <sup>1</sup> 38	26 <sup>1</sup> 35	8 <sup>1</sup> 15	15 <sup>1</sup> 53	20 <sup>1</sup> 30	12 <sup>1</sup> 10	12 <sup>1</sup> 41	8 <sup>1</sup> 49	23 <sup>1</sup> 59	F 6
S 7	9 7 35	17 <sup>1</sup> 57'08	23 <sup>1</sup> 5	4 <sup>1</sup> 16	1 <sup>1</sup> 20	0 <sup>1</sup> 54	21 <sup>1</sup> 42	26 <sup>1</sup> 36	8 <sup>1</sup> 15	15 <sup>1</sup> 52	20 <sup>1</sup> 32	12 <sup>1</sup> 7	12 <sup>1</sup> 38	8 <sup>1</sup> 56	24 <sup>1</sup> 3	S 7
S 8	9 11 32	18 <sup>1</sup> 57'56	7 <sup>1</sup> 17	4 <sup>1</sup> R23	2 <sup>1</sup> 29	1 <sup>1</sup> 42	21 <sup>1</sup> 47	26 <sup>1</sup> 37	8 <sup>1</sup> 15	15 <sup>1</sup> 52	20 <sup>1</sup> 33	12 <sup>1</sup> 6	12 <sup>1</sup> 34	9 <sup>1</sup> 2	24 <sup>1</sup> 7	S 8
M 9	9 15 28	19 <sup>1</sup> 58'43	21 <sup>1</sup> 12	4 <sup>1</sup> 19	3 <sup>1</sup> 38	2 <sup>1</sup> 29	21 <sup>1</sup> 51	26 <sup>1</sup> 39	8 <sup>1</sup> 15	15 <sup>1</sup> 51	20 <sup>1</sup> 34	12 <sup>1</sup> 6	12 <sup>1</sup> 31	9 <sup>1</sup> 9	24 <sup>1</sup> 12	M 9
T 10	9 19 25	20 <sup>1</sup> 59'29	4 <sup>1</sup> 52	4 <sup>1</sup> 4	4 <sup>1</sup> 47	3 <sup>1</sup> 16	21 <sup>1</sup> 56	26 <sup>1</sup> 40	8 <sup>1</sup> 15	15 <sup>1</sup> 51	20 <sup>1</sup> 36	12 <sup>1</sup> 5	12 <sup>1</sup> 28	9 <sup>1</sup> 16	24 <sup>1</sup> 16	T 10
W 11	9 23 21	22 <sup>1</sup> 0'13	18 <sup>1</sup> 17	3 <sup>1</sup> 38	5 <sup>1</sup> 56	4 <sup>1</sup> 4	22 <sup>1</sup> 2	26 <sup>1</sup> 42	8 <sup>1</sup> R15	15 <sup>1</sup> 50	20 <sup>1</sup> 37	12 <sup>1</sup> 3	12 <sup>1</sup> 25	9 <sup>1</sup> 22	24 <sup>1</sup> 20	W 11
T 12	9 27 18	23 <sup>1</sup> 0'55	1 <sup>1</sup> 28	3 <sup>1</sup> 2	7 <sup>1</sup> 4	4 <sup>1</sup> 51	22 <sup>1</sup> 7	26 <sup>1</sup> 43	8 <sup>1</sup> 15	15 <sup>1</sup> 50	20 <sup>1</sup> 39	11 <sup>1</sup> 58	12 <sup>1</sup> 22	9 <sup>1</sup> 29	24 <sup>1</sup> 24	T 12
F 13	9 31 14	24 <sup>1</sup> 1'36	14 <sup>1</sup> 28	2 <sup>1</sup> 17	8 <sup>1</sup> 13	5 <sup>1</sup> 39	22 <sup>1</sup> 12	26 <sup>1</sup> 45	8 <sup>1</sup> 15	15 <sup>1</sup> 49	20 <sup>1</sup> 40	11 <sup>1</sup> 50	12 <sup>1</sup> 19	9 <sup>1</sup> 36	24 <sup>1</sup> 29	F 13
S 14	9 35 11	25 <sup>1</sup> 2'15	27 <sup>1</sup> 17	1 <sup>1</sup> 24	9 <sup>1</sup> 21	6 <sup>1</sup> 26	22 <sup>1</sup> 18	26 <sup>1</sup> 47	8 <sup>1</sup> 15	15 <sup>1</sup> 49	20 <sup>1</sup> 42	11 <sup>1</sup> 39	12 <sup>1</sup> 15	9 <sup>1</sup> 42	24 <sup>1</sup> 33	S 14
S 15	9 39 7	26 <sup>1</sup> 2'53	9 <sup>1</sup> 55	0 <sup>1</sup> 24	10 <sup>1</sup> 29	7 <sup>1</sup> 13	22 <sup>1</sup> 24	26 <sup>1</sup> 49	8 <sup>1</sup> 15	15 <sup>1</sup> 48	20 <sup>1</sup> 43	11 <sup>1</sup> 27	12 <sup>1</sup> 12	9 <sup>1</sup> 49	24 <sup>1</sup> 37	S 15
M 16	9 43 4	27 <sup>1</sup> 3'29	22 <sup>1</sup> 22	29 <sup>1</sup> 20	11 <sup>1</sup> 36	8 <sup>1</sup> 1	22 <sup>1</sup> 30	26 <sup>1</sup> 51	8 <sup>1</sup> 15	15 <sup>1</sup> 48	20 <sup>1</sup> 44	11 <sup>1</sup> 13	12 <sup>1</sup> 9	9 <sup>1</sup> 56	24 <sup>1</sup> 42	M

## ASTRODIENST EPHEMERIS for the year 2060

geocentric

MARCH 2060

00:00 UT

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

Delta T = 77.69 sec

APRIL 2060

00:00 UT

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

Delta T = 77.72 sec

## ASTRODIENST EPHEMERIS for the year 2060

geocentric

MAY 2060

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	14 38 46	11♌23°33	19♌29	16♌52	11♌1	5♌53	5♌43	3♌28	6°R 0	16♌56	22♌33	8°R10	8♌11	18♌15	29≈ 0	S 1
S 2	14 42 42	12°21'49	4♌20	19° 0	11°R 2	6°38	5°57	3°35	5♌58	16°57	22°34	8♌10	8° 8	18°22	29° 2	S 2
M 3	14 46 39	13°20'03	18°51	21° 8	11° 0	7°22	6°10	3°42	5°55	16°59	22°35	8° 9	8° 4	18°28	29° 4	M 3
T 4	14 50 35	14°18'16	2♌58	23°14	10°56	8° 7	6°24	3°50	5°53	17° 1	22°37	8° 8	8° 1	18°35	29° 5	T 4
W 5	14 54 32	15°16'26	16°38	25°19	10°49	8°52	6°37	3°57	5°50	17° 3	22°38	8° 8	7°58	18°42	29° 7	W 5
T 6	14 58 28	16°14'34	29°52	27°23	10°40	9°36	6°51	4° 5	5°48	17° 5	22°39	8° 7	7°55	18°48	29° 9	T 6
F 7	15 2 25	17°12'41	12♌42	29°24	10°29	10°21	7° 4	4°12	5°45	17° 7	22°40	8°D 7	7°52	18°55	29°10	F 7
S 8	15 6 21	18°10'45	25°11	1♌23	10°15	11° 5	7°18	4°20	5°43	17° 9	22°41	8° 7	7°49	19° 2	29°12	S 8
S 9	15 10 18	19° 8'48	7♌23	3°20	9°58	11°49	7°32	4°28	5°40	17°11	22°42	8° 7	7°45	19° 8	29°13	S 9
M10	15 14 15	20° 6'48	19°22	5°14	9°40	12°34	7°45	4°35	5°38	17°13	22°43	8° 8	7°42	19°15	29°15	M10
T 11	15 18 11	21° 4'47	1♌14	7° 6	9°19	13°18	7°59	4°43	5°35	17°15	22°44	8° 9	7°39	19°22	29°16	T 11
W12	15 22 8	22° 2'44	13° 2	8°54	8°55	14° 2	8°13	4°50	5°33	17°17	22°44	8°11	7°36	19°28	29°17	W12
T 13	15 26 4	23° 0'39	24°50	10°39	8°30	14°46	8°26	4°58	5°31	17°19	22°45	8°12	7°33	19°35	29°19	T 13
F 14	15 30 1	23°58'33	6♌41	12°21	8° 2	15°30	8°40	5° 6	5°28	17°22	22°46	8°R12	7°29	19°42	29°20	F 14
S 15	15 33 57	24°56'25	18°38	14° 0	7°33	16°14	8°54	5°14	5°26	17°24	22°47	8°12	7°26	19°48	29°21	S 15
S 16	15 37 54	25°54'16	0♌43	15°35	7° 2	16°58	9° 8	5°21	5°24	17°26	22°48	8°11	7°23	19°55	29°22	S 16
M17	15 41 50	26°52'05	12°57	17° 7	6°29	17°42	9°22	5°29	5°21	17°28	22°49	8° 9	7°20	20° 2	29°23	M17
T 18	15 45 47	27°49'53	25°23	18°35	5°55	18°26	9°36	5°37	5°19	17°30	22°50	8° 6	7°17	20° 8	29°24	T 18
W19	15 49 44	28°47'39	8♌1	20° 0	5°20	19°10	9°50	5°44	5°17	17°32	22°50	8° 3	7°14	20°15	29°25	W19
T 20	15 53 40	29°45'25	20°53	21°21	4°43	19°53	10° 3	5°52	5°14	17°34	22°51	8° 0	7°10	20°22	29°26	T 20
F 21	15 57 37	0♌43'09	3♌59	22°39	4° 7	20°37	10°17	6° 0	5°12	17°36	22°52	7°57	7° 7	20°28	29°27	F 21
S 22	16 1 33	1°40'52	17°22	23°52	3°29	21°21	10°31	6° 8	5°10	17°39	22°53	7°55	7° 4	20°35	29°27	S 22
S 23	16 5 30	2°38'34	1♌1	25° 2	2°51	22° 4	10°45	6°15	5° 8	17°41	22°53	7°D55	7° 1	20°42	29°28	S 23
M24	16 9 26	3°36'15	14°58	26° 9	2°14	22°48	10°59	6°23	5° 6	17°43	22°54	7°55	6°58	20°48	29°28	M24
T 25	16 13 23	4°33'55	29°11	27°11	1°36	23°32	11°13	6°31	5° 3	17°45	22°55	7°56	6°55	20°55	29°29	T 25
W26	16 17 19	5°31'34	13°Y39	28° 9	0°59	24°15	11°27	6°39	5° 1	17°47	22°55	7°58	6°51	21° 1	29°29	W26
T 27	16 21 16	6°29'12	28°19	29° 4	0°23	24°58	11°41	6°47	4°59	17°50	22°56	7°59	6°48	21° 8	29°30	T 27
F 28	16 25 13	7°26'49	13♌6	29°54	29♌48	25°42	11°55	6°54	4°57	17°52	22°56	7°R59	6°45	21°15	29°30	F 28
S 29	16 29 9	8°24'25	27°53	0♌40	29°13	26°25	12° 9	7° 2	4°55	17°54	22°57	7°58	6°42	21°21	29°30	S 29
S 30	16 33 6	9°22'00	12♌33	1°22	28°41	27° 8	12°23	7°10	4°53	17°56	22°58	7°55	6°39	21°28	29°31	S 30
M31	16 37 2	10♌19'34	26♌59	1♌59	28♌9	27♌51	12♌37	7♌18	4♌51	17♌58	22♌58	7♌51	6♌35	21♌35	29≈31	M31

Delta T = 77.75 sec

JUNE 2060

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	16 40 59	11♌17'07	11♌6	2♌33	27°R40	28♌35	12♌51	7♌25	4°R49	18♌1	22♌59	7°R46	6♌32	21♌41	29≈31	T 1
W 2	16 44 55	12°14'39	24°48	3° 1	27♌12	29°18	13° 5	7°33	4♌48	18° 3	22°59	7♌41	6°29	21°48	29°R31	W 2
T 3	16 48 52	13°12'09	8♌6	3°26	26°46	0♌1	13°19	7°41	4°46	18° 5	23° 0	7°36	6°26	21°55	29°31	T 3
F 4	16 52 49	14° 9'39	20°59	3°45	26°22	0°44	13°33	7°49	4°44	18° 7	23° 0	7°32	6°23	22° 1	29°31	F 4
S 5	16 56 45	15° 7'06	3♌31	4° 0	26° 1	1°27	13°47	7°56	4°42	18°10	23° 0	7°30	6°20	22° 8	29°31	S 5
S 6	17 0 42	16° 4'33	15°44	4°11	25°42	2° 9	14° 1	8° 4	4°41	18°12	23° 1	7°D29	6°16	22°15	29°30	S 6
M 7	17 4 38	17° 1'58	27°44	4°17	25°25	2°52	14°15	8°12	4°39	18°14	23° 1	7°30	6°13	22°21	29°30	M 7
T 8	17 8 35	17°59'23	9♌35	4°R18	25°10	3°35	14°29	8°20	4°37	18°16	23° 1	7°31	6°10	22°28	29°30	T 8
W 9	17 12 31	18°56'46	21°23	4°14	24°58	4°18	14°43	8°27	4°36	18°19	23° 2	7°33	6° 7	22°35	29°29	W 9
T 10	17 16 28	19°54'08	3♌13	4° 7	24°48	5° 0	14°57	8°35	4°34	18°21	23° 2	7°R34	6° 4	22°41	29°29	T 10
F 11	17 20 24	20°51'29	15° 8	3°55	24°40	5°43	15°11	8°43	4°33	18°23	23° 2	7°34	6° 1	22°48	29°29	F 11
S 12	17 24 21	21°48'50	27°12	3°39	24°35	6°25	15°25	8°50	4°31	18°25	23° 3	7°32	5°57	22°55	29°28	S 12
S 13	17 28 18	22°46'09	9♌28	3°19	24°33	7° 8	15°39	8°58	4°30	18°28	23° 3	7°28	5°54	23° 1	29°27	S 13
M14	17 32 14	23°43'28	21°58	2°56	24°D32	7°50	15°53	9° 6	4°28	18°30	23° 3	7°22	5°51	23° 8	29°27	M14
T 15	17 36 11	24°40'46	4♌42	2°30	24°34	8°33	16° 6	9°13	4°27	18°32	23° 3	7°15	5°48	23°14	29°26	T 15
W16	17 40 7	25°38'04	17°40	2° 1	24°38	9°15	16°20	9°21	4°26	18°34	23° 3	7° 7	5°45	23°21	29°25	W16
T 17	17 44 4	26°35'21	0♌53	1°30	24°45	9°57	16°34	9°28	4°24	18°36	23° 4	6°58	5°41	23°28	29°24	T 17
F 18	17 48 0	27°32'37	14°18	0°58	24°54	10°39	16°48	9°36	4°23	18°39	23° 4	6°51	5°38	23°34	29°23	F 18
S 19	17 51 57	28°29'53	27°55	0°24	25° 4	11°21	17° 2	9°43	4°22	18°41	23° 4	6°46	5°35	23°41	29°22	S 19
S 20	17 55 53	29°27'09	11♌42	29♌49	25°17	12° 4	17°16	9°51	4°21	18°43	23° 4	6°42	5°32	23°48	29°21	S 20
M21	17 59 50	0♌24'25	25°38	29°15	25°32	12°46	17°29	9°58	4°20	18°45	23° 4	6°D41	5°29	23°54	29°20	M21
T 22	18 3 47	1°21'40	9♌44	28°41	25°49	13°28	17°43	10° 6	4°19	18°48	23°R 4	6°41	5°26	24° 1	29°19	T 22
W23	18 7 43	2°18'56	23°57	28° 9	26° 8	14° 9	17°57	10°13	4°18	18°50	23° 4	6°42	5°22	24° 8	29°18	W23
T 24	18 11 40	3°16'11	8♌16	27°38	26°28	14°51	18°11	10°21	4°17	18°52	23° 4	6°R42	5°19	24°14	29°16	T 24
F 25	18 15 36	4°13'26	22°39	27°10	26°51	15°33	18°24	10°28	4°16	18°54	23° 4	6°41	5°16	24°21	29°15	F 25
S 26	18 19 33	5°10'42	7♌2	26°44	27°15	16°15	18°38	10°35	4°15	18°56	23° 4	6°38	5°13	24°28	29°14	S 26
S 27	18 23 29	6° 7'57	21°20	26°22	27°40	16°57	18°52	10°43	4°14	18°58	23° 4	6°32	5°10	24°34	29°12	S 27
M28	18 27 26	7° 5'12	5♌28	26° 3	28° 7	17°38	19° 5	10°50	4°14	19° 1	23° 3	6°24	5° 7	24°41	29°11	M28
T 29	18 31 22	8° 2'27	19°22	25°48	28°36	18°20	19°19	10°57	4°13	19° 3	23° 3	6°15	5° 3	24°48	29° 9	T 29
W30	18 35 19	8♌59'41	2♌56	25♌38	29♌6	19♌2	19♌32	11♌4	4♌12	19♌5	23♌3	6♌4	5♌0	24♌54	29≈ 8	W30

Delta T = 77.78 sec

ASTRODIENST EPHEMERIS for the year 2060  
geocentric

JULY 2060

00:00 UT

Day	Sid.t	☉	☾	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	18 39 16	9♂56'55	16♂ 9	25°R31	29♂38	19♂43	19♂46	11♂12	4°R12	19♂ 7	23°R 3	5°R55	4♂57	25♂ 1	29°R 6	T 1
F 2	18 43 12	10°54'09	29° 0	25°D30	0♂11	20°25	19°59	11°19	4♂11	19° 9	23°R 3	5♂46	4°54	25° 8	29°R 4	F 2
S 3	18 47 9	11°51'22	11♂31	25♂33	0°45	21° 6	20°13	11°26	4°11	19°11	23° 3	5°40	4°51	25°14	29° 3	S 3
S 4	18 51 5	12°48'36	23°44	25°42	1°20	21°47	20°26	11°33	4°10	19°13	23° 2	5°36	4°47	25°21	29° 1	S 4
M 5	18 55 2	13°45'48	5♂44	25°55	1°57	22°29	20°40	11°40	4°10	19°15	23° 2	5°35	4°44	25°27	28°59	M 5
T 6	18 58 58	14°43'01	17°36	26°13	2°35	23°10	20°53	11°47	4°10	19°18	23° 2	5°D34	4°41	25°34	28°57	T 6
W 7	19 2 55	15°40'13	29°25	26°36	3°14	23°51	21° 6	11°54	4° 9	19°20	23° 1	5°R35	4°38	25°41	28°55	W 7
T 8	19 6 51	16°37'25	11♂15	27° 5	3°54	24°32	21°20	12° 1	4° 9	19°22	23° 1	5°35	4°35	25°47	28°53	T 8
F 9	19 10 48	17°34'37	23°14	27°38	4°35	25°13	21°33	12° 8	4° 9	19°24	23° 1	5°33	4°32	25°54	28°51	F 9
S 10	19 14 45	18°31'49	5♂24	28°16	5°17	25°54	21°46	12°14	4° 9	19°26	23° 0	5°30	4°28	26° 1	28°49	S 10
S 11	19 18 41	19°29'01	17°50	29° 0	6° 0	26°35	21°59	12°21	4° 9	19°28	23° 0	5°24	4°25	26° 7	28°47	S 11
M12	19 22 38	20°26'13	0♂34	29°48	6°44	27°16	22°12	12°28	4°D 9	19°30	22°59	5°15	4°22	26°14	28°45	M12
T 13	19 26 34	21°23'25	13°36	0♂41	7°29	27°57	22°25	12°35	4° 9	19°32	22°59	5° 5	4°19	26°21	28°43	T 13
W14	19 30 31	22°20'38	26°57	1°39	8°14	28°38	22°38	12°41	4° 9	19°34	22°59	4°53	4°16	26°27	28°40	W14
T 15	19 34 27	23°17'50	10♂34	2°42	9° 1	29°19	22°51	12°48	4° 9	19°36	22°58	4°42	4°13	26°34	28°38	T 15
F 16	19 38 24	24°15'03	24°23	3°49	9°48	29°59	23° 4	12°54	4° 9	19°37	22°57	4°31	4° 9	26°41	28°36	F 16
S 17	19 42 21	25°12'17	8♂22	5° 1	10°36	0♂40	23°17	13° 1	4°10	19°39	22°57	4°23	4° 6	26°47	28°33	S 17
S 18	19 46 17	26° 9'31	22°27	6°17	11°25	1°21	23°30	13° 7	4°10	19°41	22°56	4°17	4° 3	26°54	28°31	S 18
M19	19 50 14	27° 6'45	6♂34	7°38	12°15	2° 1	23°42	13°14	4°10	19°43	22°56	4°14	4° 0	27° 1	28°29	M19
T 20	19 54 10	28° 4'01	20°43	9° 3	13° 5	2°42	23°55	13°20	4°11	19°45	22°55	4°13	3°57	27° 7	28°26	T 20
W21	19 58 7	29° 1'17	4♂50	10°33	13°56	3°22	24° 8	13°26	4°11	19°47	22°55	4°13	3°53	27°14	28°24	W21
T 22	20 2 3	29°58'34	18°56	12° 7	14°47	4° 3	24°20	13°32	4°12	19°49	22°54	4°13	3°50	27°20	28°21	T 22
F 23	20 6 0	0♂55'52	3♂ 0	13°44	15°40	4°43	24°33	13°38	4°12	19°50	22°53	4°11	3°47	27°27	28°18	F 23
S 24	20 9 56	1°53'11	16°59	15°26	16°32	5°23	24°45	13°45	4°13	19°52	22°53	4° 6	3°44	27°34	28°16	S 24
S 25	20 13 53	2°50'30	0♂52	17°11	17°26	6° 3	24°57	13°51	4°13	19°54	22°52	3°59	3°41	27°40	28°13	S 25
M26	20 17 50	3°47'51	14°56	18°59	18°20	6°44	25°10	13°56	4°14	19°56	22°51	3°49	3°38	27°47	28°10	M26
T 27	20 21 46	4°45'12	28° 8	20°50	19°14	7°24	25°22	14° 2	4°15	19°57	22°51	3°37	3°34	27°54	28° 8	T 27
W28	20 25 43	5°42'34	11♂25	22°45	20° 9	8° 4	25°34	14° 8	4°16	19°59	22°50	3°25	3°31	28° 0	28° 5	W28
T 29	20 29 39	6°39'56	24°25	24°42	21° 4	8°44	25°46	14°14	4°17	20° 1	22°49	3°13	3°28	28° 7	28° 2	T 29
F 30	20 33 36	7°37'19	7♂ 7	26°41	22° 0	9°24	25°58	14°20	4°18	20° 2	22°48	3° 2	3°25	28°14	27°59	F 30
S 31	20 37 32	8♂34'43	19♂32	28♂41	22♂57	10♂ 4	26♂10	14♂25	4♂19	20♂ 4	22♂47	2♂54	3♂22	28♂20	27♂57	S 31

Delta T = 77.80 sec

AUGUST 2060

00:00 UT

Day	Sid.t	☉	☾	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	20 41 29	9♂32'07	1♂42	0♂44	23♂54	10♂44	26♂22	14♂31	4♂20	20♂ 6	22°R47	2°R48	3♂19	28♂27	27°R51	S 1
M 2	20 45 25	10°29'32	13°40	2°47	24°51	11°24	26°34	14°36	4°21	20° 7	22°R46	2♂45	3°15	28°34	27°R54	M 2
T 3	20 49 22	11°26'58	25°30	4°52	25°49	12° 4	26°46	14°42	4°22	20° 9	22°45	2°44	3°12	28°40	27°48	T 3
W 4	20 53 19	12°24'24	7♂18	6°57	26°47	12°43	26°57	14°47	4°23	20°10	22°44	2°43	3° 9	28°47	27°45	W 4
T 5	20 57 15	13°21'51	19° 9	9° 2	27°45	13°23	27° 9	14°52	4°24	20°12	22°43	2°43	3° 6	28°53	27°42	T 5
F 6	21 1 12	14°19'19	1♂ 8	11° 7	28°44	14° 3	27°20	14°58	4°25	20°13	22°42	2°42	3° 3	29° 0	27°39	F 6
S 7	21 5 8	15°16'47	13°21	13°12	29°43	14°42	27°32	15° 3	4°27	20°15	22°41	2°39	2°59	29° 7	27°36	S 7
S 8	21 9 5	16°14'16	25°52	15°16	0♂43	15°22	27°43	15° 8	4°28	20°16	22°40	2°34	2°56	29°13	27°33	S 8
M 9	21 13 1	17°11'46	8♂44	17°19	1°43	16° 1	27°54	15°13	4°30	20°18	22°39	2°26	2°53	29°20	27°30	M 9
T 10	21 16 58	18° 9'17	22° 0	19°22	2°43	16°41	28° 6	15°18	4°31	20°19	22°38	2°17	2°50	29°27	27°27	T 10
W11	21 20 54	19° 6'49	5♂38	21°23	3°44	17°20	28°17	15°23	4°33	20°20	22°38	2° 6	2°47	29°33	27°24	W11
T 12	21 24 51	20° 4'22	19°36	23°24	4°45	17°59	28°28	15°27	4°34	20°22	22°37	1°55	2°44	29°40	27°21	T 12
F 13	21 28 48	21° 1'56	3♂50	25°23	5°46	18°39	28°39	15°32	4°36	20°23	22°36	1°45	2°40	29°47	27°18	F 13
S 14	21 32 44	21°59'32	18°15	27°21	6°48	19°18	28°49	15°37	4°38	20°24	22°35	1°37	2°37	29°53	27°15	S 14
S 15	21 36 41	22°57'08	2♂44	29°18	7°50	19°57	29° 0	15°41	4°39	20°26	22°33	1°31	2°34	29°59	27°12	S 15
M16	21 40 37	23°54'46	17°11	1♂13	8°52	20°36	29°11	15°46	4°41	20°27	22°32	1°29	2°31	0♂ 7	27° 9	M16
T 17	21 44 34	24°52'26	1♂33	3° 7	9°55	21°15	29°21	15°50	4°43	20°28	22°31	1°D28	2°28	0°13	27° 6	T 17
W18	21 48 30	25°50'07	15°47	4°59	10°58	21°54	29°32	15°54	4°45	20°29	22°30	1°28	2°24	0°20	27° 3	W18
T 19	21 52 27	26°47'49	29°51	6°50	12° 1	22°33	29°42	15°58	4°47	20°30	22°29	1°R28	2°21	0°27	27° 0	T 19
F 20	21 56 23	27°45'34	13♂44	8°40	13° 4	23°12	29°52	16° 3	4°49	20°31	22°28	1°27	2°18	0°33	26°57	F 20
S 21	22 0 20	28°43'20	27°27	10°28	14° 8	23°51	0♂ 2	16° 7	4°51	20°33	22°27	1°24	2°15	0°40	26°54	S 21
S 22	22 4 17	29°41'08	10♂59	12°15	15°12	24°30	0°12	16°10	4°53	20°34	22°26	1°18	2°12	0°46	26°51	S 22
M23	22 8 13	0♂38'58	24°20	14° 0	16°16	25° 9	0°22	16°14	4°55	20°35	22°25	1°11	2° 9	0°53	26°48	M23
T 24	22 12 10	1°36'49	7♂28	15°44	17°21	25°47	0°32	16°18	4°57	20°36	22°24	1° 1	2° 5	1° 0	26°45	T 24
W25	22 16 6	2°34'41	20°23	17°27	18°25	26°26	0°42	16°22	4°59	20°37	22°23	0°51	2° 2	1° 6	26°42	W25
T 26	22 20 3	3°32'35	3♂ 5	19° 8	19°30	27° 5	0°51	16°25	5° 1	20°37	22°21	0°40	1°59	1°13	26°39	T 26
F 27	22 23 59	4°30'31	15°33	20°48	20°35	27°43	1° 1	16°29	5° 3	20°38	22°20	0°32	1°56	1°20	26°36	F 27
S 28	22 27 56	5°28'27	27°48	22°27	21°41	28°22	1°10	16°32	5° 6	20°39	22°19	0°25	1°53	1°26	26°33	S 28
S 29	22 31 52	6°26'26	9♂51	24° 4	22°46	29° 0	1°20	16°35	5° 8	20°40	22°18	0°20	1°50	1°33	26°30	S 29
M30	22 35 49	7°24'26	21°45	25°40	23°52	29°38	1°29	16°39	5°10	20°41	22°17	0°18	1°46	1°40	26°27	M30
T 31	22 39 45	8♂22'27	3♂34	27♂15	24♂58	0♂17	1♂38	16♂42	5♂13	20♂42	22♂16	0°D18	1♂43	1♂46	26♂24	T 31

Delta T = 77.83 sec

ASTRODIENST EPHEMERIS for the year 2060  
geocentric

SEPTEMBER 2060

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	22 43 42	9♍20'29	15♌20	28♍48	26♌4	0♌55	1♌47	16♌45	5♌15	20♌42	22°R14	0♌18	1♌40	1♌53	26°R21	W 1
T 2	22 47 39	10°18'33	27°10	0♌20	27°10	1°33	1°55	16°47	5°18	20°43	22°K13	0°20	1°37	2°0	26°18	T 2
F 3	22 51 35	11°16'39	9♍8	1°51	28°17	2°12	2°4	16°50	5°20	20°44	22°12	0°R20	1°34	2°6	26°15	F 3
S 4	22 55 32	12°14'46	21°20	3°21	29°23	2°50	2°12	16°53	5°23	20°44	22°11	0°20	1°30	2°13	26°12	S 4
S 5	22 59 28	13°12'54	3♌51	4°49	0♌30	3°28	2°21	16°56	5°26	20°45	22°10	0°18	1°27	2°19	26°10	S 5
M 6	23 3 25	14°11'04	16°44	6°16	1°37	4°6	2°29	16°58	5°28	20°46	22°8	0°14	1°24	2°26	26°7	M 6
T 7	23 7 21	15°9'15	0♌3	7°42	2°45	4°44	2°37	17°0	5°31	20°46	22°7	0°8	1°21	2°33	26°4	T 7
W 8	23 11 18	16°7'28	13°48	9°6	3°52	5°22	2°45	17°3	5°34	20°47	22°6	0°1	1°18	2°39	26°1	W 8
T 9	23 15 15	17°5'43	27°58	10°29	5°0	5°59	2°53	17°5	5°36	20°47	22°5	29°Y55	1°15	2°46	25°58	T 9
F 10	23 19 11	18°3'58	12♌30	11°51	6°8	6°37	3°1	17°7	5°39	20°48	22°4	29°48	1°11	2°53	25°56	F 10
S 11	23 23 8	19°2'16	27°15	13°11	7°16	7°15	3°8	17°9	5°42	20°48	22°2	29°43	1°8	2°59	25°53	S 11
S 12	23 27 4	20°0'36	12°Y8	14°30	8°24	7°53	3°16	17°11	5°45	20°48	22°1	29°40	1°5	3°6	25°50	S 12
M13	23 31 1	20°58'57	26°59	15°47	9°32	8°30	3°23	17°13	5°48	20°49	22°0	29°D39	1°2	3°13	25°47	M13
T 14	23 34 57	21°57'21	11♌42	17°3	10°40	9°8	3°30	17°14	5°51	20°49	21°59	29°40	0°59	3°19	25°45	T 14
W15	23 38 54	22°55'46	26°12	18°17	11°49	9°46	3°37	17°16	5°54	20°49	21°57	29°41	0°56	3°26	25°42	W15
T 16	23 42 50	23°54'14	10♌25	19°29	12°58	10°23	3°44	17°17	5°57	20°50	21°56	29°42	0°52	3°33	25°40	T 16
F 17	23 46 47	24°52'44	24°20	20°39	14°7	11°0	3°50	17°19	6°0	20°50	21°55	29°R43	0°49	3°39	25°37	F 17
S 18	23 50 43	25°51'17	7♌57	21°48	15°16	11°38	3°57	17°20	6°3	20°50	21°54	29°42	0°46	3°46	25°35	S 18
S 19	23 54 40	26°49'51	21°17	22°54	16°25	12°15	4°3	17°21	6°6	20°50	21°53	29°40	0°43	3°52	25°32	S 19
M20	23 58 37	27°48'28	4♌21	23°59	17°34	12°52	4°10	17°22	6°9	20°50	21°51	29°37	0°40	3°59	25°30	M20
T 21	0 2 33	28°47'07	17°10	25°1	18°44	13°30	4°16	17°23	6°12	20°50	21°50	29°32	0°36	4°6	25°27	T 21
W22	0 6 30	29°45'47	29°46	26°1	19°54	14°7	4°22	17°24	6°15	20°51	21°49	29°27	0°33	4°12	25°25	W22
T 23	0 10 26	0♌44'30	12♍9	26°58	21°3	14°44	4°27	17°24	6°19	20°R51	21°48	29°22	0°30	4°19	25°23	T 23
F 24	0 14 23	1°43'15	24°22	27°52	22°13	15°21	4°33	17°25	6°22	20°50	21°47	29°18	0°27	4°26	25°20	F 24
S 25	0 18 19	2°42'02	6♌25	28°43	23°23	15°58	4°38	17°26	6°25	20°50	21°45	29°14	0°24	4°32	25°18	S 25
S 26	0 22 16	3°40'51	18°21	29°31	24°33	16°35	4°44	17°26	6°28	20°50	21°44	29°13	0°21	4°39	25°16	S 26
M27	0 26 12	4°39'42	0♌11	0♌16	25°44	17°12	4°49	17°26	6°32	20°50	21°43	29°D12	0°17	4°46	25°14	M27
T 28	0 30 9	5°38'35	11°57	0°56	26°54	17°48	4°53	17°26	6°35	20°50	21°42	29°13	0°14	4°52	25°12	T 28
W29	0 34 6	6°37'29	23°44	1°33	28°5	18°25	4°58	17°R26	6°39	20°50	21°41	29°14	0°11	4°59	25°10	W29
T 30	0 38 2	7♌36'26	5♌34	2♌5	29♌15	19♌2	5♌3	17♌26	6♌42	20♌50	21♌39	29°Y16	0♌8	5♌6	25°8	T 30

Delta T = 77.86 sec

OCTOBER 2060

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	0 41 59	8♌35'24	17♌32	2♌32	0♍26	19♌38	5♌7	17°R26	6♌45	20°R49	21°R38	29°Y17	0♌5	5♌12	25°R6	F 1
S 2	0 45 55	9°34'24	29°42	2°53	1°37	20°15	5°11	17°II26	6°49	20°II49	21°K37	29°18	0°2	5°19	25°4	S 2
S 3	0 49 52	10°33'26	12♌9	3°9	2°48	20°52	5°15	17°25	6°52	20°49	21°36	29°R19	29°Y58	5°25	25°2	S 3
M 4	0 53 48	11°32'30	24°58	3°19	3°59	21°28	5°19	17°25	6°56	20°49	21°35	29°18	29°55	5°32	25°0	M 4
T 5	0 57 45	12°31'35	8♌12	3°R22	5°10	22°4	5°23	17°24	6°59	20°48	21°34	29°17	29°52	5°39	24°59	T 5
W 6	1 1 41	13°30'42	21°53	3°18	6°21	22°41	5°26	17°23	7°3	20°48	21°33	29°15	29°49	5°45	24°57	W 6
T 7	1 5 38	14°29'51	6♌1	3°6	7°33	23°17	5°30	17°23	7°6	20°47	21°31	29°13	29°46	5°52	24°55	T 7
F 8	1 9 35	15°29'01	20°35	2°47	8°44	23°53	5°33	17°22	7°10	20°47	21°30	29°11	29°42	5°59	24°54	F 8
S 9	1 13 31	16°28'14	5°Y29	2°20	9°56	24°29	5°36	17°21	7°13	20°46	21°29	29°10	29°39	6°5	24°52	S 9
S 10	1 17 28	17°27'28	20°35	1°44	11°8	25°5	5°38	17°19	7°17	20°46	21°28	29°9	29°36	6°12	24°51	S 10
M11	1 21 24	18°26'45	5♌45	1°1	12°19	25°41	5°41	17°18	7°21	20°45	21°27	29°D9	29°33	6°19	24°49	M11
T 12	1 25 21	19°26'04	20°49	0°9	13°31	26°17	5°43	17°17	7°24	20°45	21°26	29°10	29°30	6°25	24°48	T 12
W13	1 29 17	20°25'25	5♌39	29♌11	14°43	26°53	5°45	17°15	7°28	20°44	21°25	29°10	29°27	6°32	24°47	W13
T 14	1 33 14	21°24'48	20°9	28°7	15°55	27°28	5°47	17°14	7°31	20°43	21°24	29°11	29°23	6°39	24°45	T 14
F 15	1 37 10	22°24'14	4♌16	26°58	17°8	28°4	5°49	17°12	7°35	20°43	21°23	29°12	29°20	6°45	24°44	F 15
S 16	1 41 7	23°23'42	17°58	25°46	18°20	28°40	5°51	17°10	7°39	20°42	21°22	29°R12	29°17	6°52	24°43	S 16
S 17	1 45 4	24°23'12	1♌16	24°32	19°32	29°15	5°52	17°8	7°42	20°41	21°21	29°12	29°14	6°59	24°42	S 17
M18	1 49 0	25°22'44	14°12	23°20	20°45	29°51	5°53	17°6	7°46	20°40	21°20	29°12	29°11	7°5	24°41	M18
T 19	1 52 57	26°22'19	26°50	22°10	21°57	0♍26	5°54	17°4	7°50	20°39	21°19	29°11	29°7	7°12	24°40	T 19
W20	1 56 53	27°21'56	9♍12	21°6	23°10	1°2	5°55	17°2	7°54	20°39	21°18	29°11	29°4	7°18	24°39	W20
T 21	2 0 50	28°21'35	21°22	20°8	24°23	1°37	5°56	17°0	7°57	20°38	21°17	29°11	29°1	7°25	24°38	T 21
F 22	2 4 46	29°21'17	3♌23	19°19	25°36	2°12	5°56	16°57	8°1	20°37	21°16	29°D11	28°58	7°32	24°37	F 22
S 23	2 8 43	0♌21'00	15°17	18°40	26°48	2°47	5°R56	16°55	8°5	20°36	21°15	29°11	28°55	7°38	24°37	S 23
S 24	2 12 39	1°20'45	27°6	18°11	28°1	3°22	5°56	16°52	8°8	20°35	21°14	29°R11	28°52	7°45	24°36	S 24
M25	2 16 36	2°20'33	8♌53	17°54	29°14	3°57	5°56	16°49	8°12	20°34	21°13	29°11	28°48	7°52	24°35	M25
T 26	2 20 33	3°20'22	20°41	17°D48	0♌28	4°32	5°56	16°47	8°16	20°33	21°13	29°11	28°45	7°58	24°35	T 26
W27	2 24 29	4°20'14	2♌30	17°54	1°41	5°7	5°55	16°44	8°20	20°32	21°12	29°10	28°42	8°5	24°34	W27
T 28	2 28 26	5°20'07	14°25	18°10	2°54	5°42	5°54	16°41	8°23	20°31	21°11	29°9	28°39	8°12	24°34	T 28
F 29	2 32 22	6°20'02	26°27	18°36	4°7	6°16	5°53	16°38	8°27	20°30	21°10	29°8	28°36	8°18	24°34	F 29
S 30	2 36 19	7°19'59	8♌40	19°12	5°21	6°51	5°52	16°34	8°31	20°29	21°9	29°7	28°33	8°25	24°33	S 30
S 31	2 40 15	8♌19'57	21♌7	19♌56	6♌34	7♍25	5♌50	16♌31	8♌35	20♌27	21♌8	29°Y7	28°Y29	8♌32	24°33	S 31

Delta T = 77.88 sec

ASTRODIENST EPHEMERIS for the year 2060  
geocentric

NOVEMBER 2060

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	2 44 12	9♉19°58	3♊52	20♊48	7♊48	8♉0	5°R49	16°R28	8♉39	20°R26	21°R 8	29°D 6	28°Y26	8♉38	24°R33	M 1
T 2	2 48 8	10°19'59	16°58	21°47	9° 1	8°34	5♊47	16♉24	8°42	20♉25	21♉7	29°Y 6	28°23	8°45	24°33	T 2
W 3	2 52 5	11°20'02	0♉28	22°52	10°15	9° 8	5°45	16°21	8°46	20°24	21° 6	29° 7	28°20	8°52	24°D33	W 3
T 4	2 56 2	12°20'07	14°24	24° 2	11°28	9°42	5°43	16°17	8°50	20°23	21° 6	29° 8	28°17	8°58	24°33	T 4
F 5	2 59 58	13°20'13	28°46	25°16	12°42	10°16	5°40	16°14	8°54	20°21	21° 5	29° 9	28°13	9° 5	24°33	F 5
S 6	3 3 55	14°20'21	13°Y32	26°34	13°56	10°50	5°38	16°10	8°57	20°20	21° 4	29°10	28°10	9°11	24°33	S 6
S 7	3 7 51	15°20'30	28°35	27°56	15°10	11°24	5°35	16° 6	9° 1	20°19	21° 4	29°R10	28° 7	9°18	24°33	S 7
M 8	3 11 48	16°20'42	13♊48	29°20	16°24	11°58	5°32	16° 2	9° 5	20°17	21° 3	29°10	28° 4	9°25	24°33	M 8
T 9	3 15 44	17°20'55	29° 1	0♉47	17°38	12°31	5°29	15°58	9° 9	20°16	21° 2	29° 8	28° 1	9°31	24°34	T 9
W10	3 19 41	18°21'09	14♉5	2°15	18°52	13° 5	5°25	15°54	9°12	20°15	21° 2	29° 6	27°58	9°38	24°34	W10
T 11	3 23 37	19°21'26	28°51	3°45	20° 6	13°38	5°22	15°50	9°16	20°13	21° 1	29° 4	27°54	9°45	24°35	T 11
F 12	3 27 34	20°21'45	13♊12	5°17	21°20	14°12	5°18	15°46	9°20	20°12	21° 1	29° 1	27°51	9°51	24°35	F 12
S 13	3 31 31	21°22'06	27° 5	6°49	22°34	14°45	5°14	15°42	9°23	20°11	21° 0	28°58	27°48	9°58	24°36	S 13
S 14	3 35 27	22°22'28	10♊30	8°22	23°48	15°18	5°10	15°38	9°27	20° 9	21° 0	28°57	27°45	10° 5	24°36	S 14
M15	3 39 24	23°22'53	23°28	9°56	25° 2	15°51	5° 5	15°33	9°31	20° 8	20°59	28°D56	27°42	10°11	24°37	M15
T 16	3 43 20	24°23'19	6♉4	11°30	26°17	16°24	5° 1	15°29	9°35	20° 6	20°59	28°57	27°39	10°18	24°38	T 16
W17	3 47 17	25°23'47	18°21	13° 5	27°31	16°57	4°56	15°24	9°38	20° 5	20°58	28°58	27°35	10°25	24°39	W17
T 18	3 51 13	26°24'17	0♉24	14°40	28°45	17°30	4°51	15°20	9°42	20° 3	20°58	29° 0	27°32	10°31	24°40	T 18
F 19	3 55 10	27°24'49	12°17	16°15	29°59	18° 2	4°46	15°15	9°46	20° 2	20°58	29° 2	27°29	10°38	24°41	F 19
S 20	3 59 6	28°25'22	24° 6	17°50	1♉14	18°35	4°41	15°11	9°49	20° 0	20°57	29°R 3	27°26	10°45	24°42	S 20
S 21	4 3 3	29°25'57	5♉52	19°26	2°29	19° 7	4°36	15° 6	9°53	19°58	20°57	29° 2	27°23	10°51	24°43	S 21
M22	4 7 0	0♉26°34	17°40	21° 1	3°43	19°39	4°30	15° 2	9°56	19°57	20°57	29° 1	27°19	10°58	24°44	M22
T 23	4 10 56	1°27'12	29°31	22°36	4°58	20°11	4°25	14°57	10° 0	19°55	20°56	28°57	27°16	11° 4	24°45	T 23
W24	4 14 53	2°27'52	11♉28	24°11	6°12	20°44	4°19	14°52	10° 3	19°54	20°56	28°53	27°13	11°11	24°46	W24
T 25	4 18 49	3°28'33	23°32	25°46	7°27	21°15	4°13	14°47	10° 7	19°52	20°56	28°46	27°10	11°18	24°48	T 25
F 26	4 22 46	4°29'16	5♊45	27°21	8°42	21°47	4° 7	14°43	10°11	19°51	20°56	28°40	27° 7	11°24	24°49	F 26
S 27	4 26 42	5°29'59	18° 7	28°56	9°56	22°19	4° 0	14°38	10°14	19°49	20°56	28°33	27° 4	11°31	24°50	S 27
S 28	4 30 39	6°30'44	0♉42	0♉31	11°11	22°50	3°54	14°33	10°18	19°47	20°55	28°27	27° 0	11°38	24°52	S 28
M29	4 34 35	7°31'30	13°31	2° 6	12°26	23°22	3°47	14°28	10°21	19°46	20°55	28°23	26°57	11°44	24°54	M29
T 30	4 38 32	8♉32'17	26♊36	3♉40	13♉41	23♉53	3♊41	14♉23	10♉24	19♉44	20♉55	28°Y20	26°Y54	11♉51	24°55	T 30

Delta T = 77.91 sec

DECEMBER 2060

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	4 42 29	9♉33°04	9♉59	5♉15	14♉56	24♉24	3°R34	14°R18	10♉28	19°R42	20°R55	28°D19	26°Y51	11♉58	24°57	W 1
T 2	4 46 25	10°33'53	23°42	6°49	16°10	24°55	3♊27	14♉13	10°31	19°41	20°55	28°Y20	26°48	12° 4	24°59	T 2
F 3	4 50 22	11°34'42	7°Y47	8°24	17°25	25°26	3°20	14° 8	10°35	19°39	20°55	28°21	26°45	12°11	25° 0	F 3
S 4	4 54 18	12°35'32	22°12	9°58	18°40	25°56	3°13	14° 3	10°38	19°37	20°D55	28°R23	26°41	12°18	25° 2	S 4
S 5	4 58 15	13°36'23	6♊57	11°32	19°55	26°27	3° 6	13°59	10°41	19°36	20°55	28°22	26°38	12°24	25° 4	S 5
M 6	5 2 11	14°37'16	21°55	13° 7	21°10	26°57	2°58	13°54	10°45	19°34	20°55	28°20	26°35	12°31	25° 6	M 6
T 7	5 6 8	15°38'09	6♉59	14°41	22°25	27°27	2°51	13°49	10°48	19°32	20°55	28°16	26°32	12°38	25° 8	T 7
W 8	5 10 4	16°39'03	22° 0	16°15	23°40	27°58	2°43	13°44	10°51	19°30	20°55	28° 9	26°29	12°44	25°10	W 8
T 9	5 14 1	17°39'58	6♊48	17°49	24°55	28°27	2°36	13°39	10°54	19°29	20°55	28° 2	26°25	12°51	25°12	T 9
F 10	5 17 58	18°40'54	21°16	19°23	26°10	28°57	2°28	13°34	10°58	19°27	20°55	27°53	26°22	12°58	25°15	F 10
S 11	5 21 54	19°41'51	5♊18	20°58	27°25	29°27	2°20	13°29	11° 1	19°25	20°55	27°45	26°19	13° 4	25°17	S 11
S 12	5 25 51	20°42'49	18°51	22°32	28°40	29°56	2°12	13°24	11° 4	19°24	20°56	27°39	26°16	13°11	25°19	S 12
M13	5 29 47	21°43'48	1♉56	24° 7	29°55	0♉25	2° 5	13°19	11° 7	19°22	20°56	27°35	26°13	13°18	25°21	M13
T 14	5 33 44	22°44'49	14°36	25°41	1♉10	0°55	1°57	13°15	11°10	19°20	20°56	27°32	26°10	13°24	25°24	T 14
W15	5 37 40	23°45'50	26°54	27°16	2°25	1°23	1°49	13°10	11°13	19°19	20°56	27°D32	26° 6	13°31	25°26	W15
T 16	5 41 37	24°46'52	8♉57	28°50	3°40	1°52	1°41	13° 5	11°16	19°17	20°57	27°33	26° 3	13°37	25°29	T 16
F 17	5 45 34	25°47'55	20°49	0♉25	4°55	2°21	1°33	13° 0	11°19	19°15	20°57	27°34	26° 0	13°44	25°31	F 17
S 18	5 49 30	26°49'00	2♉35	2° 0	6°10	2°49	1°24	12°55	11°22	19°14	20°57	27°R34	25°57	13°51	25°34	S 18
S 19	5 53 27	27°50'05	14°22	3°35	7°26	3°17	1°16	12°51	11°25	19°12	20°58	27°32	25°54	13°57	25°37	S 19
M20	5 57 23	28°51'10	26°12	5°11	8°41	3°45	1° 8	12°46	11°28	19°10	20°58	27°28	25°51	14° 4	25°39	M20
T 21	6 1 20	29°52'17	8♉9	6°46	9°56	4°13	1° 0	12°41	11°31	19° 9	20°58	27°21	25°47	14°11	25°42	T 21
W22	6 5 16	0♉53°24	20°15	8°22	11°11	4°40	0°52	12°37	11°33	19° 7	20°59	27°11	25°44	14°17	25°45	W22
T 23	6 9 13	1°54'32	20°32	9°57	12°26	5° 8	0°44	12°32	11°36	19° 5	20°59	27° 0	25°41	14°24	25°48	T 23
F 24	6 13 9	2°55'40	15° 1	11°33	13°42	5°35	0°36	12°28	11°39	19° 4	21° 0	26°47	25°38	14°31	25°51	F 24
S 25	6 17 6	3°56'49	27°42	13° 9	14°57	6° 2	0°27	12°24	11°41	19° 2	21° 0	26°35	25°35	14°37	25°53	S 25
S 26	6 21 3	4°57'58	10♊34	14°45	16°12	6°28	0°19	12°19	11°44	19° 0	21° 1	26°23	25°31	14°44	25°56	S 26
M27	6 24 59	5°59'07	23°37	16°21	17°27	6°55	0°11	12°15	11°47	18°59	21° 1	26°14	25°28	14°51	25°59	M27
T 28	6 28 56	7° 0'16	6♉52	17°58	18°43	7°21	0° 3	12°11	11°49	18°57	21° 2	26° 8	25°25	14°57	26° 3	T 28
W29	6 32 52	8° 1'25	20°19	19°34	19°58	7°47	29♉55	12° 6	11°52	18°56	21° 2	26° 4	25°22	15° 4	26° 6	W29
T 30	6 36 49	9° 2'33	3°Y59	21°10	21°13	8°13	29°47	12° 2	11°54	18°54	21° 3	26°D 3	25°19	15°11	26° 9	T 30
F 31	6 40 45	10♉3'42	17°Y53	22♉45	22♉28	8♉38	29♉39	11♉58	11♉57	18♉52	21♉4	26°Y 3	25°Y16	15♉17	26°55	F 31

Delta T = 77.94 sec