



Astrodienst Ephemeris Tables for the year 1640

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 1640

geocentric

JANUARY 1640 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	6 40 39	10 ³ 17'02	7 ⁴ 50	24 ³ 8	5 ² 49	17 ¹ 24	22 ² 4	16 ² 24	2 ¹ 12	24 ¹ 31	29 ⁰ R44	8 ⁰ D57	7 ² 50	15 ¹ 10	19 ⁰ R27	S 1
M 2	6 44 35	11 ⁰ 18'12	19 ⁰ 41	25 ⁰ 44	6 ⁰ 6	18 ⁰ 3	22 ⁰ 17	16 ⁰ 30	2 ⁰ 14	24 ⁰ 33	29 ⁰ R43	8 ⁰ 57	7 ⁰ 47	15 ⁰ 17	19 ⁰ R25	M 2
T 3	6 48 32	12 ⁰ 19'22	1 ⁸ 33	27 ⁰ 19	6 ⁰ 24	18 ⁰ 42	22 ⁰ 31	16 ⁰ 37	2 ⁰ 16	24 ⁰ 35	29 ⁰ 42	8 ⁰ 59	7 ⁰ 44	15 ⁰ 23	19 ⁰ 24	T 3
W 4	6 52 29	13 ⁰ 20'32	13 ⁰ 31	28 ⁰ 53	6 ⁰ 45	19 ⁰ 20	22 ⁰ 44	16 ⁰ 43	2 ⁰ 18	24 ⁰ 36	29 ⁰ 42	9 ⁰ 0	7 ⁰ 41	15 ⁰ 30	19 ⁰ 22	W 4
T 5	6 56 25	14 ⁰ 21'41	25 ⁰ 41	0 ⁰ 25	7 ⁰ 8	19 ⁰ 59	22 ⁰ 57	16 ⁰ 49	2 ⁰ 20	24 ⁰ 38	29 ⁰ 41	9 ⁰ 2	7 ⁰ 37	15 ⁰ 37	19 ⁰ 20	T 5
F 6	7 0 22	15 ⁰ 22'49	8 ¹ 5	1 ⁰ 56	7 ⁰ 32	20 ⁰ 38	23 ⁰ 10	16 ⁰ 56	2 ⁰ 21	24 ⁰ 40	29 ⁰ 40	9 ⁰ R 3	7 ⁰ 34	15 ⁰ 43	19 ⁰ 19	F 6
S 7	7 4 18	16 ⁰ 23'57	20 ⁰ 47	3 ⁰ 25	7 ⁰ 58	21 ⁰ 17	23 ⁰ 24	17 ⁰ 2	2 ⁰ 23	24 ⁰ 41	29 ⁰ 39	9 ⁰ 2	7 ⁰ 31	15 ⁰ 50	19 ⁰ 17	S 7
S 8	7 8 15	17 ⁰ 25'05	3 ⁰ 50	4 ⁰ 52	8 ⁰ 26	21 ⁰ 55	23 ⁰ 37	17 ⁰ 9	2 ⁰ 25	24 ⁰ 43	29 ⁰ 39	9 ⁰ 0	7 ⁰ 28	15 ⁰ 57	19 ⁰ 16	S 8
M 9	7 12 11	18 ⁰ 26'12	17 ⁰ 12	6 ⁰ 16	8 ⁰ 55	22 ⁰ 34	23 ⁰ 50	17 ⁰ 16	2 ⁰ 26	24 ⁰ 44	29 ⁰ 38	8 ⁰ 55	7 ⁰ 25	16 ⁰ 4	19 ⁰ 15	M 9
T 10	7 16 8	19 ⁰ 27'19	0 ⁰ 52	7 ⁰ 37	9 ⁰ 26	23 ⁰ 13	24 ⁰ 3	17 ⁰ 22	2 ⁰ 28	24 ⁰ 46	29 ⁰ 37	8 ⁰ 49	7 ⁰ 21	16 ⁰ 10	19 ⁰ 14	T 10
W 11	7 20 4	20 ⁰ 28'25	14 ⁰ 48	8 ⁰ 54	9 ⁰ 59	23 ⁰ 52	24 ⁰ 16	17 ⁰ 29	2 ⁰ 29	24 ⁰ 47	29 ⁰ 37	8 ⁰ 42	7 ⁰ 18	16 ⁰ 17	19 ⁰ 12	W 11
T 12	7 24 1	21 ⁰ 29'31	28 ⁰ 54	10 ⁰ 7	10 ⁰ 33	24 ⁰ 30	24 ⁰ 29	17 ⁰ 36	2 ⁰ 31	24 ⁰ 49	29 ⁰ 36	8 ⁰ 35	7 ⁰ 15	16 ⁰ 24	19 ⁰ 11	T 12
F 13	7 27 58	22 ⁰ 30'36	13 ¹ 7	11 ⁰ 14	11 ⁰ 8	25 ⁰ 9	24 ⁰ 42	17 ⁰ 42	2 ⁰ 32	24 ⁰ 50	29 ⁰ 35	8 ⁰ 29	7 ⁰ 12	16 ⁰ 30	19 ⁰ 10	F 13
S 14	7 31 54	23 ⁰ 31'41	27 ⁰ 23	12 ⁰ 15	11 ⁰ 45	25 ⁰ 48	24 ⁰ 54	17 ⁰ 49	2 ⁰ 33	24 ⁰ 51	29 ⁰ 35	8 ⁰ 24	7 ⁰ 9	16 ⁰ 37	19 ⁰ 9	S 14
S 15	7 35 51	24 ⁰ 32'46	11 ¹ 36	13 ⁰ 10	12 ⁰ 23	26 ⁰ 26	25 ⁰ 7	17 ⁰ 56	2 ⁰ 34	24 ⁰ 53	29 ⁰ 34	8 ⁰ 21	7 ⁰ 6	16 ⁰ 44	19 ⁰ 9	S 15
M 16	7 39 47	25 ⁰ 33'50	25 ⁰ 46	13 ⁰ 56	13 ⁰ 3	27 ⁰ 5	25 ⁰ 20	18 ⁰ 3	2 ⁰ 36	24 ⁰ 54	29 ⁰ 33	8 ⁰ D20	7 ⁰ 2	16 ⁰ 50	19 ⁰ 8	M 16
T 17	7 43 44	26 ⁰ 34'54	9 ¹ 50	14 ⁰ 35	13 ⁰ 43	27 ⁰ 44	25 ⁰ 33	18 ⁰ 10	2 ⁰ 37	24 ⁰ 56	29 ⁰ 33	8 ⁰ 21	6 ⁰ 59	16 ⁰ 57	19 ⁰ 7	T 17
W 18	7 47 40	27 ⁰ 35'58	23 ⁰ 47	15 ⁰ 3	14 ⁰ 25	28 ⁰ 23	25 ⁰ 45	18 ⁰ 17	2 ⁰ 38	24 ⁰ 57	29 ⁰ 32	8 ⁰ 22	6 ⁰ 56	17 ⁰ 4	19 ⁰ 6	W 18
T 19	7 51 37	28 ⁰ 37'01	7 ² 37	15 ⁰ 22	15 ⁰ 8	29 ⁰ 1	25 ⁰ 58	18 ⁰ 24	2 ⁰ 39	24 ⁰ 58	29 ⁰ 32	8 ⁰ R23	6 ⁰ 53	17 ⁰ 10	19 ⁰ 6	T 19
F 20	7 55 33	29 ⁰ 38'04	21 ⁰ 19	15 ⁰ R29	15 ⁰ 52	29 ⁰ 40	26 ⁰ 11	18 ⁰ 31	2 ⁰ 40	24 ⁰ 59	29 ⁰ 31	8 ⁰ 22	6 ⁰ 50	17 ⁰ 17	19 ⁰ 5	F 20
S 21	7 59 30	0 ⁰ 39'06	4 ² 52	15 ⁰ 26	16 ⁰ 37	0 ² 19	26 ⁰ 23	18 ⁰ 38	2 ⁰ 41	25 ⁰ 0	29 ⁰ 31	8 ⁰ 19	6 ⁰ 47	17 ⁰ 24	19 ⁰ 5	S 21
S 22	8 3 27	1 ⁰ 40'07	18 ⁰ 14	15 ⁰ 11	17 ⁰ 23	0 ⁰ 58	26 ⁰ 36	18 ⁰ 45	2 ⁰ 42	25 ⁰ 2	29 ⁰ 30	8 ⁰ 13	6 ⁰ 43	17 ⁰ 31	19 ⁰ 4	S 22
M 23	8 7 23	2 ⁰ 41'08	1 ² 25	14 ⁰ 44	18 ⁰ 9	1 ⁰ 36	26 ⁰ 48	18 ⁰ 52	2 ⁰ 43	25 ⁰ 3	29 ⁰ 30	8 ⁰ 5	6 ⁰ 40	17 ⁰ 37	19 ⁰ 4	M 23
T 24	8 11 20	3 ⁰ 42'07	14 ⁰ 21	14 ⁰ 7	18 ⁰ 57	2 ⁰ 15	27 ⁰ 0	18 ⁰ 59	2 ⁰ 43	25 ⁰ 4	29 ⁰ 30	7 ⁰ 55	6 ⁰ 37	17 ⁰ 44	19 ⁰ 4	T 24
W 25	8 15 16	4 ⁰ 43'06	27 ⁰ 3	13 ⁰ 20	19 ⁰ 46	2 ⁰ 54	27 ⁰ 12	19 ⁰ 6	2 ⁰ 44	25 ⁰ 5	29 ⁰ 29	7 ⁰ 44	6 ⁰ 34	17 ⁰ 51	19 ⁰ 3	W 25
T 26	8 19 13	5 ⁰ 44'03	9 ² 30	12 ⁰ 24	20 ⁰ 35	3 ⁰ 32	27 ⁰ 25	19 ⁰ 13	2 ⁰ 45	25 ⁰ 6	29 ⁰ 29	7 ⁰ 33	6 ⁰ 31	17 ⁰ 57	19 ⁰ 3	T 26
F 27	8 23 9	6 ⁰ 44'59	21 ⁰ 43	11 ⁰ 20	21 ⁰ 25	4 ⁰ 11	27 ⁰ 37	19 ⁰ 20	2 ⁰ 45	25 ⁰ 7	29 ⁰ 28	7 ⁰ 23	6 ⁰ 27	18 ⁰ 4	19 ⁰ D 3	F 27
S 28	8 27 6	7 ⁰ 45'53	3 ¹ 45	10 ⁰ 11	22 ⁰ 16	4 ⁰ 50	27 ⁰ 49	19 ⁰ 27	2 ⁰ 46	25 ⁰ 8	29 ⁰ 28	7 ⁰ 16	6 ⁰ 24	18 ⁰ 11	19 ⁰ 3	S 28
S 29	8 31 2	8 ⁰ 46'47	15 ⁰ 39	8 ⁰ 59	23 ⁰ 8	5 ⁰ 29	28 ⁰ 1	19 ⁰ 34	2 ⁰ 46	25 ⁰ 9	29 ⁰ 28	7 ⁰ 10	6 ⁰ 21	18 ⁰ 17	19 ⁰ 3	S 29
M 30	8 34 59	9 ⁰ 47'39	27 ⁰ 28	7 ⁰ 46	24 ⁰ 0	6 ⁰ 7	28 ⁰ 13	19 ⁰ 41	2 ⁰ 47	25 ⁰ 10	29 ⁰ 27	7 ⁰ 7	6 ⁰ 18	18 ⁰ 24	19 ⁰ 3	M 30
T 31	8 38 56	10 ⁰ 48'29	9 ² 18	6 ⁰ 33	24 ⁰ 53	6 ² 46	28 ⁰ 25	19 ⁰ 48	2 ⁰ 47	25 ⁰ 11	29 ⁰ R27	7 ⁰ D 6	6 ² 15	18 ⁰ 31	19 ⁰ R 4	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
S 1	23s 5	7n19	4n34	23s19	2s 2	16s44	4n40	16s23	0n43	22s54	0n21	17s 2	1s 8	11s47	0n31	17s17	1n42	7n54	12s30	21s50	21s39	9n45	14n34	3s11					
M 2	23 0	11 23	3 58	22 59	1 59	16 43	4 43	16 34	0 42	22 55	0 21	17 0	1 8	11 47	0 31	17 18	1 42	7 54	12 30	21 50	21 39	9 48	14 34	3 11					
T 3	22 55	15 1	3 11	22 37	1 55	16 43	4 46	16 45	0 42	22 56	0 21	16 58	1 8	11 48	0 31	17 18	1 42	7 54	12 30	21 50	21 38	9 50	14 33	3 11					
W 4	22 49	18 4	2 15	22 13	1 50	16 44	4 49	16 56	0 41	22 56	0 21	16 56	1 8	11 49	0 31	17 18	1 42	7 54	12 29	21 51	21 38	9 52	14 33	3 10					
T 5	22 43	20 23	1 12	21 48	1 44	16 45	4 51	17 7	0 41	22 57	0 21	16 54	1 8	11 49	0 31	17 19	1 42	7 54	12 29	21 51	21 37	9 54	14 32	3 10					
F 6	22 36	21 47	0 5	21 22	1 38	16 47	4 53	17 18	0 40	22 58	0 21	16 52	1 8	11 50	0 31	17 19	1 42	7 54	12 29	21 51	21 37	9 56	14 32	3 10					
S 7	22 29	22 6	1s 4	20 54	1 31	16 50	4 55	17 29	0 40	22 59	0 20	16 50	1 8	11 50	0 31	17 19	1 42	7 55	12 29	21 51	21 36	9 58	14 32	3 10					
S 8	22 21	21 15	2 11	20 26	1 23	16 53	4 56	17 39	0 39	22 59	0 20	16 48	1 8	11 51	0 31	17 20	1 42	7 55	12 29	21 50	21 36	10 0	14 32	3 10					
M 9	22 13	19 12	3 12	19 57	1 15	16 56	4 57	17 50	0 39	23 0	0 20	16 46	1 8	11 51	0 31	17 20	1 42	7 55	12 28	21 50	21 35	10 2	14 31	3 10					
T 10	22 4	16 2	4 4	19 27	1 5	17 0	4 58	18 0	0 38	23 1	0 20	16 44	1 8	11 52	0 31	17 20	1 42	7 55	12 28	21 49	21 35	10 4	14 31	3 10					
W 11	21 55	11 55	4 43	18 56	0 54	17 5	4 58	18 10	0 38	23 1	0 20	16 42	1 8	11 52	0 31	17 21	1 42	7 55	12 28	21 48	21 34	10 6	14 31	3 10					
T 12	21 46	7 7	5 4	18 26	0 43	17 9	4 58	18 20	0 37	23 2	0 20	16 40	1 8	11 53	0 31	17 21	1 42	7 55	12 28	21 47	21 34	10 9	14 31	3 10					
F 13	21 36	1 54	5 8	17 55	0 30	17 14	4 58	18 30	0 36	23 3	0 20	16 38	1 8	11 53	0 31	17 21	1 43	7 55	12 27	21 46	21 33	10 11	14 31	3 10					
S 14	21 26	3s25	4 52	17 25	0 17	17 20	4 57	18 40	0 36	23 3	0 20	16 36	1 8	11 54	0 31	17 22	1 43	7 55	12 27	21 45	21 33	10 13	14 30	3 10					
S 15	21 15	8 34	4 19	16 56	0 2	17 25	4 56	18 49	0 35	23 4	0 20	16 34	1 8	11 54	0 31	17 22	1 43	7 55	12 27	21 44	21 32	10 15	14 30	3 9					
M 16	21 4	13 13	3 29	16 28	0n13	17 31	4 55	18 59	0 35	23 4	0 20	16 32	1 8	11 55	0 31	17 22	1 43	7 55	12 27	21 44	21 32	10 17	14 30	3 9					
T 17	20 53	17 7	2 28	16 1	0 29	17 37	4 54	19 8	0 34	23 5	0 20	16 30	1 8	11 55	0 31	17 22	1 43	7 56	12 26	21 44	21 31	10 19	14 30	3 9					
W 18	20 41	20 1	1 18	15 37	0 46	17 44	4 53	19 18	0 33	23 5	0 20	16 28	1 8	11 55	0 31	17 23	1 43	7 56	12 26	21 45	21 31	10 21	14 30	3 9					
T 19	20 29	21 41	0 4	15 15	1 4	17 50	4 51	19 27	0 33	23 6	0 20	16 26	1 8	11 56	0 31	17 23	1 43	7 56	12 26	21 45	21 30	10 23	14 30	3 9					
F 20	20 16	22 3	1n 9	14 55	1 22	17 56	4 49	19 36	0 32	23 6	0 20	16 23	1 8	11 56	0 31	17 23	1 43	7 56	12 26	21 45	21 29	10 25	14 30	3 9					
S 21	20 3	21 6	2 17	14 39	1 40	18 3	4 47	19 44	0 32	23 7	0 20	16 21	1 8	11 56	0 31	17 23	1 43	7 56	12 25	21 44	21 29	10 27	14 30	3 9					
S 22	19 50	18 59	3 17	14 26	1 58	18 10	4 45	19 53	0 31	23 7	0 19	16 19	1 8	11 56	0 31	17 24	1 43	7 56	12 25	21 43	21 28	10 29	14 30	3 9					
M 23	19 36	15 54	4 5	14 17	2 15	18 16	4 42	20 2	0 30	23 7	0 19	16 17	1 8	11 57	0 31	17 24	1 43	7 57	12 25	21 42	21 28	10 31	14 30	3 9					
T 24	19 22	12 6	4 39	14 12	2 32	18 23	4 40	20 10	0 30	23 8	0 19	16 15	1 8	11 57	0 31	17 24	1 43	7 57	12 24	21 40	21 27	10 33	14 30	3 8					
W 25	19 7	7 50	4 59	14 11	2 47	18 29	4 37	20 18	0 29	23 8	0 19	16 13	1 8	11 57	0 31	17 24	1 43	7 57	12 24	21 38	21 27	10 35	14 30	3 8					
T 26	18 52	3 19	5 4	14 13	3 1	18 36	4 34	20 26	0 28	23 8	0 19	16 10	1 9	11 57	0 31	17 24	1 43	7 57	12 24	21 37	21 26	10 37	14 30	3 8					
F 27	18 37	1n14	4 55	14 18	3 14	18 42	4 31	20 34	0 28	23 9	0 19	16 8	1 9	11 58	0 31	17 25	1 43	7 57	12 24	21 35	21 26	10 39	14 30	3 8					
S 28	18 22	5 40	4 33	14 27	3 24	18 48	4 28	20 42	0 27	23 9	0 19	16 6	1 9	11 58	0 31	17 25	1 43	7 58	12 23	21 34	21 25	10 41	14 30	3 8					
S 29	18 6	9 51	3 59	14 38	3 32	18 54	4 24	20 50	0 26	23 9	0 19	16 4	1 9	11 58	0 31	17 25	1 43	7 58	12 23	21 33	21 25	10 43	14 30	3 8					
M 30	17 50	13 38	3 15	14 52	3 37	19 0	4 21	20 57	0 26	23 9	0 19	16 2	1 9	11 58	0 31	17 25	1 43	7 58	12 23	21 32	21 24	10 45	14 30	3 8					
T 31	17s33	16n53	2n23	15s 7	3n40	19s 6	4n17	21s 4	0n25	23s10	0n19	15s59	1s 9	11s58	0n31	17s25	1n43	7n58	12s23	21s32	21s24	10n47	14n31	3s 8					

ASTRODIENST EPHEMERIS for the year 1640

geocentric

FEBRUARY 1640 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	8 42 52	11 ⁴⁹ 18	21 ¹⁸ 15	5 ⁰ R23	25 ²⁷ 47	7 ²⁷ 24	28 ²⁷ 36	19 ²⁷ 56	2 ¹⁸ 47	25 ¹⁸ 12	29 ⁰ R27	7 ²⁷ 6	6 ²⁷ 12	18 ¹⁷ 37	19 ¹⁸ 4	W 1
T 2	8 46 49	12 ⁵⁰ 06	3 ¹¹ 23	4 ²⁷ 18	26 ² 41	8 ⁰ 3	28 ²⁸ 48	20 ⁰ 3	2 ²⁰ 48	25 ²⁵ 12	29 ⁰ R27	7 ²⁷ R 7	6 ⁰ 8	18 ¹⁸ 44	19 ⁰ 4	T 2
F 3	8 50 45	13 ⁵⁰ 52	15 ⁴⁷	3 ¹⁸	27 ²⁷ 36	8 ² 42	29 ⁰ 0	20 ²⁰ 10	2 ²⁰ 48	25 ²⁵ 13	29 ⁰ 26	7 ²⁷ 7	6 ⁰ 5	18 ¹⁸ 51	19 ⁰ 5	F 3
S 4	8 54 42	14 ⁵¹ 37	28 ²⁸ 33	2 ²⁵	28 ²⁸ 31	9 ²⁰	29 ⁰ 11	20 ²⁰ 17	2 ²⁰ 48	25 ²⁵ 14	29 ⁰ 26	7 ²⁷ 5	6 ⁰ 2	18 ¹⁸ 57	19 ⁰ 5	S 4
S 5	8 58 38	15 ⁵² 20	11 ⁴⁸ 44	1 ³⁹	29 ²⁹ 27	9 ⁵⁹	29 ²⁹ 23	20 ²⁰ 24	2 ²⁰ 48	25 ²⁵ 15	29 ⁰ 26	7 ²⁷ 0	5 ⁵⁹	19 ⁰ 4	19 ⁰ 6	S 5
M 6	9 2 35	16 ⁵³ 02	25 ²⁵ 20	1 ⁰ 2	0 ³ 24	10 ³⁸	29 ²⁹ 34	20 ²⁰ 32	2 ²⁰ 48	25 ²⁵ 15	29 ⁰ 26	6 ⁵³	5 ⁵⁶	19 ⁰ 11	19 ⁰ 7	M 6
T 7	9 6 32	17 ⁵³ 42	9 ⁰ 21	0 ³²	1 ²¹	11 ¹⁶	29 ²⁹ 45	20 ²⁰ 39	2 ²⁰ 48	25 ²⁵ 16	29 ⁰ 26	6 ⁴³	5 ⁵³	19 ⁰ 18	19 ⁰ 7	T 7
W 8	9 10 28	18 ⁵⁴ 20	23 ²³ 42	0 ¹¹	2 ¹⁹	11 ⁵⁵	29 ²⁹ 56	20 ²⁰ 46	2 ²⁰ 48	25 ²⁵ 17	29 ⁰ 26	6 ³²	5 ⁴⁹	19 ⁰ 24	19 ⁰ 8	W 8
T 9	9 14 25	19 ⁵⁴ 57	8 ¹⁷ 17	29 ²⁹ 57	3 ¹⁷	12 ³³	0 ³ 7	20 ²⁰ 53	2 ²⁰ 48	25 ²⁵ 17	29 ⁰ 26	6 ²⁰	5 ⁴⁶	19 ⁰ 31	19 ⁰ 9	T 9
F 10	9 18 21	20 ⁵⁵ 33	22 ²² 59	29 ²⁹ D51	4 ¹⁵	13 ¹²	0 ¹⁸	21 ⁰ 1	2 ²⁰ 48	25 ²⁵ 18	29 ⁰ 25	6 ¹⁰	5 ⁴³	19 ⁰ 38	19 ⁰ 10	F 10
S 11	9 22 18	21 ⁵⁶ 07	7 ²² 41	29 ²⁹ 52	5 ¹⁴	13 ⁵¹	0 ²⁹	21 ⁰ 8	2 ²⁰ 47	25 ²⁵ 18	29 ⁰ 25	6 ⁰ 2	5 ⁴⁰	19 ⁰ 44	19 ⁰ 11	S 11
S 12	9 26 14	22 ⁵⁶ 41	22 ²² 14	0 ²⁷ 0	6 ¹⁴	14 ²⁹	0 ⁴⁰	21 ⁰ 15	2 ²⁰ 47	25 ²⁵ 19	29 ⁰ D25	5 ⁵⁶	5 ³⁷	19 ⁰ 51	19 ⁰ 12	S 12
M13	9 30 11	23 ⁵⁷ 12	6 ¹⁸ 35	0 ¹⁴	7 ¹³	15 ⁰ 8	0 ⁵¹	21 ⁰ 22	2 ²⁰ 47	25 ²⁵ 19	29 ⁰ 25	5 ⁵³	5 ³³	19 ⁰ 58	19 ⁰ 13	M13
T 14	9 34 7	24 ⁵⁷ 43	20 ²⁰ 41	0 ³⁵	8 ¹⁴	15 ⁴⁶	1 ⁰ 2	21 ⁰ 29	2 ²⁰ 46	25 ²⁵ 20	29 ⁰ 25	5 ⁰ D52	5 ³⁰	20 ⁰ 4	19 ⁰ 14	T 14
W15	9 38 4	25 ⁵⁸ 13	4 ²⁷ 32	1 ⁰ 1	9 ¹⁴	16 ²⁵	1 ⁰ 12	21 ⁰ 37	2 ²⁰ 46	25 ²⁵ 20	29 ⁰ 26	5 ⁰ R52	5 ²⁷	20 ⁰ 11	19 ⁰ 15	W15
T 16	9 42 0	26 ⁵⁸ 41	18 ⁰ 8	1 ³¹	10 ¹⁵	17 ⁰ 3	1 ⁰ 23	21 ⁰ 44	2 ²⁰ 45	25 ²⁵ 20	29 ⁰ 26	5 ⁵¹	5 ²⁴	20 ⁰ 18	19 ⁰ 17	T 16
F 17	9 45 57	27 ⁵⁹ 08	1 ³ 31	2 ⁰ 7	11 ¹⁷	17 ⁴²	1 ³³	21 ⁰ 51	2 ²⁰ 45	25 ²⁵ 21	29 ⁰ 26	5 ⁴⁹	5 ²¹	20 ⁰ 24	19 ⁰ 18	F 17
S 18	9 49 54	28 ⁵⁹ 33	14 ⁴¹	2 ⁴⁷	12 ¹⁸	18 ²⁰	1 ⁴³	21 ⁰ 58	2 ²⁰ 44	25 ²⁵ 21	29 ⁰ 26	5 ⁴⁵	5 ¹⁸	20 ⁰ 31	19 ⁰ 20	S 18
S 19	9 53 50	29 ⁵⁹ 57	27 ⁴⁰	3 ³¹	13 ²⁰	18 ⁵⁹	1 ⁵³	22 ⁰ 6	2 ²⁰ 44	25 ²⁵ 21	29 ⁰ 26	5 ³⁷	5 ¹⁴	20 ⁰ 38	19 ⁰ 21	S 19
M20	9 57 47	1 ¹⁸ 0'19	10 ²² 29	4 ¹⁹	14 ²³	19 ³⁷	2 ⁰ 4	22 ⁰ 13	2 ²⁰ 43	25 ²⁵ 21	29 ⁰ 26	5 ²⁶	5 ¹¹	20 ⁰ 44	19 ⁰ 23	M20
T 21	10 1 43	2 ⁰ 40	23 ⁰ 7	5 ¹⁰	15 ²⁵	20 ¹⁶	2 ¹³	22 ⁰ 20	2 ²⁰ 42	25 ²⁵ 21	29 ⁰ 26	5 ¹³	5 ⁰ 8	20 ⁰ 51	19 ⁰ 24	T 21
W22	10 5 40	3 ⁰ 59	5 ¹⁸ 34	6 ⁰ 5	16 ²⁸	20 ⁵⁴	2 ²³	22 ⁰ 27	2 ²⁰ 41	25 ²⁵ 22	29 ⁰ 26	4 ⁵⁹	5 ⁰ 5	20 ⁰ 58	19 ⁰ 26	W22
T 23	10 9 36	4 ⁰ 1'16	17 ⁵⁰	7 ⁰ 2	17 ³²	21 ³²	2 ³³	22 ⁰ 34	2 ²⁰ 40	25 ²⁵ 22	29 ⁰ 27	4 ⁴⁴	5 ⁰ 2	21 ⁰ 4	19 ⁰ 28	T 23
F 24	10 13 33	5 ⁰ 1'31	29 ⁵⁶	8 ⁰ 2	18 ³⁵	22 ¹¹	2 ⁴³	22 ⁰ 41	2 ²⁰ 39	25 ²⁵ 22	29 ⁰ 27	4 ³¹	4 ⁵⁸	21 ⁰ 11	19 ⁰ 30	F 24
S 25	10 17 29	6 ⁰ 1'44	11 ⁰ 54	9 ⁰ 5	19 ³⁹	22 ⁴⁹	2 ⁵²	22 ⁰ 48	2 ²⁰ 38	25 ²⁵ 22	29 ⁰ 27	4 ²⁰	4 ⁵⁵	21 ⁰ 18	19 ⁰ 31	S 25
S 26	10 21 26	7 ⁰ 1'56	23 ⁴⁵	10 ¹⁰	20 ⁴³	23 ²⁷	3 ⁰ 2	22 ⁰ 56	2 ²⁰ 37	25 ²⁵ R22	29 ⁰ 27	4 ¹²	4 ⁵²	21 ⁰ 25	19 ⁰ 33	S 26
M27	10 25 23	8 ⁰ 2'05	5 ¹⁸ 33	11 ¹⁷	21 ⁴⁷	24 ⁰ 6	3 ¹¹	23 ⁰ 3	2 ²⁰ 36	25 ²⁵ 22	29 ⁰ 28	4 ⁰ 7	4 ⁴⁹	21 ⁰ 31	19 ⁰ 35	M27
T 28	10 29 19	9 ⁰ 2'12	17 ²²	12 ²⁷	22 ⁵²	24 ⁴⁴	3 ²⁰	23 ⁰ 10	2 ²⁰ 35	25 ²⁵ 22	29 ⁰ 28	4 ⁰ 4	4 ⁴⁶	21 ⁰ 38	19 ⁰ 38	T 28
W29	10 33 16	10 ¹⁸	29 ¹⁸ 16	13 ²⁷ 38	23 ⁵⁶	25 ²⁷ 22	3 ²⁹	23 ²⁷ 17	2 ²⁰ 34	25 ²⁵ M22	29 ⁰ R28	4 ²⁷ 3	4 ²⁷ 43	21 ⁰ 45	19 ⁰ 40	W29

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	17s17	19n27	1n24	15s24	3n40	19s12	4n14	21s12	0n24	23s10	0n19	15s57	1s9	11s58	0n32	17s25	1n43	7n58	12s22	21s32	21s23	10n49	14n31	3s8			
T 2	16 59	21 12	0 20	15 41	3 39	19 17	4 10	21 18	0 23	23 10	0 19	15 55	1 9	11 58	0 32	17 26	1 44	7 59	12 22	21 32	21 22	10 51	14 31	3 7			
F 3	16 42	21 58	0s46	15 58	3 35	19 22	4 6	21 25	0 23	23 10	0 19	15 53	1 9	11 58	0 32	17 26	1 44	7 59	12 22	21 32	21 22	10 54	14 31	3 7			
S 4	16 24	21 37	1 52	16 16	3 29	19 27	4 2	21 32	0 22	23 10	0 19	15 50	1 9	11 58	0 32	17 26	1 44	7 59	12 21	21 32	21 21	10 56	14 32	3 7			
S 5	16 7	20 6	2 53	16 33	3 22	19 31	3 58	21 38	0 21	23 10	0 19	15 48	1 9	11 58	0 32	17 26	1 44	7 59	12 21	21 31	21 21	10 58	14 32	3 7			
M 6	15 48	17 24	3 47	16 50	3 13	19 36	3 53	21 45	0 20	23 11	0 19	15 46	1 9	11 58	0 32	17 26	1 44	8 0	12 21	21 30	21 20	11 0	14 32	3 7			
T 7	15 30	13 38	4 28	17 5	3 3	19 40	3 49	21 51	0 20	23 11	0 18	15 44	1 9	11 58	0 32	17 26	1 44	8 0	12 21	21 28	21 20	11 2	14 32	3 7			
W 8	15 11	9 1	4 54	17 20	2 53	19 43	3 45	21 57	0 19	23 11	0 18	15 41	1 9	11 58	0 32	17 26	1 44	8 0	12 20	21 26	21 19	11 4	14 33	3 7			
T 9	14 52	3 49	5 1	17 34	2 41	19 46	3 40	22 3	0 18	23 11	0 18	15 39	1 9	11 58	0 32	17 26	1 44	8 0	12 20	21 25	21 19	11 6	14 33	3 7			
F 10	14 33	1s38	4 49	17 47	2 29	19 49	3 36	22 9	0 17	23 11	0 18	15 37	1 9	11 58	0 32	17 26	1 44	8 1	12 20	21 23	21 18	11 7	14 33	3 6			
S 11	14 13	6 59	4 17	17 59	2 17	19 52	3 31	22 14	0 16	23 11	0 18	15 35	1 9	11 58	0 32	17 27	1 44	8 1	12 19	21 21	21 17	11 9	14 34	3 6			
S 12	13 54	11 54	3 29	18 9	2 5	19 54	3 27	22 19	0 15	23 11	0 18	15 32	1 9	11 58	0 32	17 27	1 44	8 1	12 19	21 20	21 17	11 11	14 34	3 6			
M13	13 34	16 4	2 28	18 18	1 53	19 56	3 22	22 25	0 15	23 11	0 18	15 30	1 9	11 58	0 32	17 27	1 44	8 2	12 19	21 20	21 16	11 13	14 35	3 6			
T 14	13 14	19 14	1 19	18 26	1 40	19 57	3 17	22 30	0 14	23 11	0 18	15 28	1 10	11 58	0 32	17 27	1 44	8 2	12 18	21 20	21 16	11 15	14 35	3 6			
W15	12 53	21 12	0 7	18 33	1 28	19 58	3 12	22 35	0 13	23 11	0 18	15 26	1 10	11 57	0 32	17 27	1 44	8 2	12 18	21 20	21 15	11 17	14 35	3 6			
T 16	12 33	21 53	1n4	18 38	1 16	19 58	3 8	22 39	0 12	23 11	0 18	15 23	1 10	11 57	0 32	17 27	1 44	8 2	12 18	21 19	21 15	11 19	14 36	3 6			
F 17	12 12	21 17	2 11	18 42	1 3	19 58	3 3	22 44	0 11	23 11	0 18	15 21	1 10	11 57	0 32	17 27	1 44	8 3	12 18	21 19	21 14	11 21	14 36	3 6			
S 18	11 51	19 32	3 10	18 44	0 52	19 58	2 58	22 48	0 10	23 11	0 18	15 19	1 10	11 57	0 32	17 27	1 44	8 3	12 17	21 18	21 13	11 23	14 37	3 6			
S 19	11 30	16 47	3 57	18 45	0 40	19 57	2 53	22 52	0 9	23 11	0 18	15 16	1 10	11 57	0 32	17 27	1 44	8 3	12 17	21 17	21 13	11 25	14 37	3 5			
M20	11 8	13 17	4 32	18 45	0 29	19 55	2 48	22 56	0 8	23 10	0 18	15 14	1 10	11 56	0 32	17 27	1 45	8 4	12 17	21 15	21 12	11 27	14 38	3 5			
T 21	10 47	9 13	4 53	18 43	0 18	19 54	2 43	23 0	0 7	23 10	0 18	15 12	1 10	11 56	0 32	17 27	1 45	8 4	12 16	21 13	21 12	11 29	14 38	3 5			
W22	10 25	4 51	5 0	18 41	0 7	19 51	2 38	23 4	0 7	23 10	0 18	15 10	1 10	11 56	0 32	17 27	1 45	8 4	12 16	21 10	21 11	11 31	14 39	3 5			
T 23	10 3	0 20	4 52	18 36	0s3	19 48	2 33	23 7	0 6	23 10	0 18	15 7	1 10	11 55	0 32	17 27	1 45	8 5	12 16	21 8	21 11	11 33	14 40	3 5			
F 24	9 41	4n7	4 31	18 30	0 13	19 45	2 28	23 11	0 5	23 10	0 17	15 5	1 10	11 55	0 32	17 27	1 45	8 5	12 16	21 5	21 10	11 35	14 40	3 5			
S 25	9 19	8 22	3 59	18 23	0 23	19 41	2 23	23 14	0 4	23 10	0 17	15 3	1 10	11 55	0 32	17 27	1 45	8 5	12 15	21 3	21 9	11 37	14 41	3 5			
S 26	8 57	12 16	3 16	18 15	0 32	19 37	2 18	23 17	0 3	23 10	0 17	15 1	1 10	11 54	0 32	17 27	1 45	8 6	12 15	21 2	21 9	11 39	14 41	3 5			
M27	8 34	15 40	2 25	18 5	0 41	19 32	2 13	23 20	0 2	23 10	0 17	14 58	1 11	11 54	0 32	17 27	1 45	8 6	12 15	21 1	21 8	11 41	14 42	3 5			
T 28	8 12	18 26	1 27	17 54	0 50	19 27	2 8	23 22	0 1	23 9	0 17	14 56	1 11	11 54	0 32	17 26	1 45	8 6	12 14	21 0	21 8	11 43	14 43	3 4			
W29	7s49	20n27	0n25	17s41	0s58	19s21	2n3	23s25	0s0	23s9	0n17	14s54	1s11	11s53	0n32	17s26	1n45	8n7	12s14	21s0	021s7	11n45	14n43	3s5			

ASTRODIENST EPHEMERIS for the year 1640
geocentric

MARCH 1640 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	10 37 12	11 ¹¹ 2'21	11 ¹¹ 21	14 ⁵⁵ 51	25 ²⁸ 1	26 ²⁷ 1	3 ³⁸ 38	23 ²⁴ 24	2 ³³ 33	25 ²² 22	29 ²⁹ 29	4 ³ 3	4 ³⁹ 39	21 ⁵¹ 51	19 ⁴² 42	T 1
F 2	10 41 9	12° 2'22	23° 42	16° 7	26° 7	26° 39	3° 47	23° 31	2 ³² 32	25 ²¹ 21	29° 29	4 ³ 3	4° 36	21° 58	19° 44	F 2
S 3	10 45 5	13° 2'21	6 ²⁵ 25	17° 24	27° 12	27° 17	3° 55	23° 38	2° 30	25° 21	29° 30	4° 1	4° 33	22° 5	19° 46	S 3
S 4	10 49 2	14° 2'17	19° 35	18° 42	28° 17	27° 55	4° 4	23° 45	2° 29	25° 21	29° 30	3° 57	4° 30	22° 11	19° 49	S 4
M 5	10 52 58	15° 2'11	3 ²¹ 21	20° 2	29° 23	28° 33	4° 12	23° 52	2° 27	25° 21	29° 31	3° 50	4° 27	22° 18	19° 51	M 5
T 6	10 56 55	16° 2'04	17° 20	21° 24	0 ²⁹ 29	29° 12	4° 21	23° 58	2° 26	25° 20	29° 31	3° 41	4° 24	22° 25	19° 54	T 6
W 7	11 0 52	17° 1'54	1 ⁵³ 53	22° 47	1° 35	29° 50	4° 29	24° 5	2° 24	25° 20	29° 31	3° 30	4° 20	22° 31	19° 56	W 7
T 8	11 4 48	18° 1'41	16° 46	24° 12	2° 42	0 ²⁸ 28	4° 37	24° 12	2° 23	25° 20	29° 32	3° 19	4° 17	22° 38	19° 59	T 8
F 9	11 8 45	19° 1'27	1 ⁵⁰ 50	25° 38	3° 48	1° 6	4° 45	24° 19	2° 21	25° 19	29° 33	3° 8	4° 14	22° 45	20° 2	F 9
S 10	11 12 41	20° 1'11	16° 56	27° 5	4° 55	1° 44	4° 52	24° 26	2° 20	25° 19	29° 33	3° 0	4° 11	22° 51	20° 4	S 10
S 11	11 16 38	21° 0'53	1 ⁵³ 53	28° 34	6° 2	2° 22	5° 0	24° 32	2° 18	25° 18	29° 34	2° 54	4° 8	22° 58	20° 7	S 11
M 12	11 20 34	22° 0'34	16° 33	0 ⁴ 4	7° 9	3° 0	5° 8	24° 39	2° 16	25° 18	29° 34	2° 51	4° 4	23° 5	20° 10	M 12
T 13	11 24 31	23° 0'13	0 ⁵⁴ 54	1° 36	8° 16	3° 38	5° 15	24° 46	2° 15	25° 17	29° 35	2° 50	4° 1	23° 11	20° 13	T 13
W 14	11 28 27	23° 59'50	14° 52	3° 9	9° 23	4° 16	5° 22	24° 53	2° 13	25° 17	29° 36	2° 50	3° 58	23° 18	20° 16	W 14
T 15	11 32 24	24° 59'25	28° 28	4° 43	10° 31	4° 54	5° 29	24° 59	2° 11	25° 16	29° 36	2° 50	3° 55	23° 25	20° 19	T 15
F 16	11 36 21	25° 58'58	11 ³⁴ 44	6° 18	11° 38	5° 31	5° 36	25° 6	2° 9	25° 16	29° 37	2° 49	3° 52	23° 31	20° 22	F 16
S 17	11 40 17	26° 58'30	24° 43	7° 55	12° 46	6° 9	5° 43	25° 12	2° 7	25° 15	29° 38	2° 46	3° 49	23° 38	20° 25	S 17
S 18	11 44 14	27° 58'00	7 ²⁸ 28	9° 33	13° 54	6° 47	5° 49	25° 19	2° 5	25° 14	29° 38	2° 40	3° 45	23° 45	20° 28	S 18
M 19	11 48 10	28° 57'28	20° 0	11° 12	15° 2	7° 25	5° 56	25° 25	2° 3	25° 14	29° 39	2° 31	3° 42	23° 51	20° 31	M 19
T 20	11 52 7	29° 56'54	2 ⁴ 24	12° 53	16° 10	8° 3	6° 2	25° 32	2° 1	25° 13	29° 40	2° 21	3° 39	23° 58	20° 34	T 20
W 21	11 56 3	0 ⁵⁶ 56	14° 21	14° 35	17° 18	8° 40	6° 8	25° 38	1° 59	25° 12	29° 41	2° 9	3° 36	24° 5	20° 37	W 21
T 22	12 0 0	1° 55'41	26° 38	16° 19	18° 27	9° 18	6° 14	25° 44	1° 57	25° 11	29° 41	1° 57	3° 33	24° 11	20° 41	T 22
F 23	12 3 56	2° 55'01	8 ³⁶ 36	18° 3	19° 35	9° 55	6° 20	25° 51	1° 55	25° 11	29° 42	1° 46	3° 30	24° 18	20° 44	F 23
S 24	12 7 53	3° 54'19	20° 28	19° 49	20° 44	10° 33	6° 26	25° 57	1° 53	25° 10	29° 43	1° 37	3° 26	24° 25	20° 48	S 24
S 25	12 11 49	4° 53'35	2 ¹⁷ 17	21° 37	21° 52	11° 10	6° 31	26° 3	1° 51	25° 9	29° 44	1° 31	3° 23	24° 32	20° 51	S 25
M 26	12 15 46	5° 52'48	14° 4	23° 25	23° 1	11° 48	6° 37	26° 9	1° 49	25° 8	29° 45	1° 26	3° 20	24° 38	20° 54	M 26
T 27	12 19 43	6° 52'00	25° 54	25° 16	24° 10	12° 25	6° 42	26° 15	1° 47	25° 7	29° 45	1° 25	3° 17	24° 45	20° 58	T 27
W 28	12 23 39	7° 51'09	7 ⁴⁹ 49	27° 7	25° 19	13° 3	6° 47	26° 21	1° 44	25° 6	29° 46	1° 25	3° 14	24° 52	21° 2	W 28
T 29	12 27 36	8° 50'16	19° 53	29° 0	26° 28	13° 40	6° 52	26° 27	1° 42	25° 5	29° 47	1° 26	3° 10	24° 58	21° 5	T 29
F 30	12 31 32	9° 49'21	2 ⁵³ 53	0 ⁵⁴ 54	27° 37	14° 17	6° 56	26° 33	1° 40	25° 4	29° 48	1° 27	3° 7	25° 5	21° 9	F 30
S 31	12 35 29	10 ⁵⁴ 54	14 ⁵³ 53	2 ⁵⁰ 50	28 ⁴⁷ 47	14 ⁵⁴ 54	7 ³ 3	26 ³⁹ 39	1 ³⁷ 37	25 ³ 3	29 ⁴⁹ 49	1° 27	3 ⁴ 4	25 ¹² 12	21 ¹³ 13	S 31

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	decl	lat
T 1	7s26	21n33	0s39	17s27	1s 6	19s15	1n57	23s27	0s 1	23s 9	0n17	14s52	1s11	11s53	0n32	17s26	1n45	8n 7	12s14	21s 0	21s 7	11n47	14n44	3s 4		
F 2	7 4	21 38	1 42	17 12	1 13	19 8	1 52	23 29	0 3	23 9	0 17	14 49	1 11	11 52	0 32	17 26	1 45	8 7	12 13	21 0	21 6	11 48	14 45	3 4		
S 3	6 41	20 37	2 43	16 56	1 20	19 0	1 47	23 31	0 4	23 9	0 17	14 47	1 11	11 52	0 32	17 26	1 45	8 8	12 13	20 59	21 5	11 50	14 45	3 4		
S 4	6 18	18 29	3 36	16 38	1 27	18 52	1 42	23 33	0 5	23 8	0 17	14 45	1 11	11 51	0 32	17 26	1 45	8 8	12 13	20 59	21 5	11 52	14 46	3 4		
M 5	5 54	15 16	4 20	16 18	1 33	18 44	1 37	23 34	0 6	23 8	0 17	14 43	1 11	11 51	0 32	17 26	1 45	8 9	12 13	20 57	21 4	11 54	14 47	3 4		
T 6	5 31	11 4	4 49	15 58	1 39	18 35	1 32	23 36	0 7	23 8	0 17	14 41	1 11	11 50	0 32	17 26	1 45	8 9	12 12	20 56	21 4	11 56	14 48	3 4		
W 7	5 8	6 8	5 1	15 36	1 45	18 26	1 27	23 37	0 8	23 8	0 17	14 38	1 11	11 50	0 32	17 26	1 45	8 9	12 12	20 54	21 3	11 58	14 48	3 4		
T 8	4 45	0 44	4 53	15 12	1 50	18 16	1 22	23 38	0 9	23 8	0 17	14 36	1 12	11 49	0 32	17 26	1 45	8 10	12 12	20 51	21 3	12 0	14 49	3 4		
F 9	4 21	4s47	4 25	14 48	1 54	18 5	1 17	23 39	0 10	23 7	0 17	14 34	1 12	11 49	0 32	17 25	1 46	8 10	12 12	20 49	21 2	12 2	14 50	3 4		
S 10	3 58	10 1	3 38	14 22	1 59	17 54	1 12	23 40	0 11	23 7	0 17	14 32	1 12	11 48	0 32	17 25	1 46	8 10	12 11	20 48	21 1	12 4	14 51	3 3		
S 11	3 34	14 36	2 36	13 55	2 3	17 43	1 8	23 40	0 13	23 7	0 16	14 30	1 12	11 47	0 32	17 25	1 46	8 11	12 11	20 47	21 1	12 6	14 52	3 3		
M 12	3 11	18 11	1 25	13 26	2 6	17 31	1 3	23 41	0 14	23 7	0 16	14 28	1 12	11 47	0 32	17 25	1 46	8 11	12 11	20 46	21 0	12 7	14 52	3 3		
T 13	2 47	20 33	0 10	12 56	2 9	17 18	0 58	23 41	0 15	23 6	0 16	14 25	1 12	11 46	0 32	17 25	1 46	8 12	12 10	20 46	21 0	12 9	14 53	3 3		
W 14	2 23	21 34	1n 4	12 25	2 12	17 5	0 53	23 41	0 16	23 6	0 16	14 23	1 12	11 46	0 32	17 25	1 46	8 12	12 10	20 46	20 59	12 11	14 54	3 3		
T 15	2 0	21 17	2 12	11 53	2 14	16 52	0 48	23 41	0 18	23 6	0 16	14 21	1 12	11 45	0 32	17 24	1 46	8 12	12 10	20 46	20 58	12 13	14 55	3 3		
F 16	1 36	19 47	3 11	11 19	2 16	16 38	0 44	23 41	0 19	23 6	0 16	14 19	1 12	11 44	0 32	17 24	1 46	8 13	12 10	20 46	20 58	12 15	14 56	3 3		
S 17	1 12	17 17	4 0	10 44	2 17	16 23	0 39	23 41	0 20	23 6	0 16	14 17	1 13	11 44	0 32	17 24	1 46	8 13	12 9	20 45	20 57	12 17	14 57	3 3		
S 18	0 49	14 0	4 35	10 8	2 18	16 8	0 34	23 40	0 21	23 5	0 16	14 15	1 13	11 43	0 32	17 24	1 46	8 14	12 9	20 44	20 57	12 19	14 58	3 3		
M 19	0 25	10 9	4 56	9 30	2 18	15 53	0 30	23 39	0 23	23 5	0 16	14 13	1 13	11 42	0 32	17 24	1 46	8 14	12 9	20 42	20 56	12 21	14 59	3 3		
T 20	0 1	5 56	5 3	8 51	2 18	15 37	0 25	23 38	0 24	23 5	0 16	14 11	1 13	11 42	0 32	17 23	1 46	8 14	12 9	20 40	20 55	12 22	14 59	3 3		
W 21	0n22	1 32	4 56	8 11	2 17	15 21	0 21	23 37	0 25	23 5	0 16	14 9	1 13	11 41	0 32	17 23	1 46	8 15	12 8	20 38	20 55	12 24	15 0	3 3		
T 22	0 46	2n53	4 36	7 30	2 16	15 4	0 17	23 36	0 27	23 4	0 16	14 7	1 13	11 40	0 32	17 23	1 46	8 15	12 8	20 36	20 54	12 26	15 1	3 3		
F 23	1 10	7 9	4 4	6 48	2 15	14 47	0 12	23 35	0 28	23 4	0 16	14 5	1 13	11 39	0 32	17 23	1 46	8 16	12 8	20 33	20 54	12 28	15 2	3 3		
S 24	1 33	11 7	3 21	6 4	2 13	14 29	0 8	23 33	0 29	23 4	0 16	14 3	1 14	11 39	0 32	17 22	1 46	8 16	12 8	20 32	20 53	12 30	15 3	3 2		
S 25	1 57	14 38	2 30	5 20	2 10	14 11	0 4	23 32	0 31	23 4	0 16	14 1	1 14	11 38	0 32	17 22	1 46	8 16	12 7	20 30	20 52	12 32	15 4	3 2		
M 26	2 20	17 33	1 32	4 34	2 7	13 53	0s 0	23 30	0 32	23 4	0 16	13 59	1 14	11 37	0 32	17 22	1 46	8 17	12 7	20 29	20 52	12 33	15 5	3 2		
T 27	2 44	19 45	0 30	3 47	2 4	13 34	0 5	23 28	0 34	23 3	0 15	13 57	1 14	11 36	0 32	17 22	1 46	8 17	12 7	20 29	20 51	12 35	15 6	3 2		
W 28	3 7	21 5	0s34	2 59	2 0	13 15	0 9	23 26	0 35	23 3	0 15	13 55	1 14	11 36	0 32	17 21	1 46	8 18	12 7	20 29	20 51	12 37	15 7	3 2		
T 29	3 31	21 28	1 38	2 9	1 55	12 55	0 13	23 23	0 37	23 3	0 15	13 53	1 14	11 35	0 32	17 21	1 46	8 18	12 6	20 29	20 50	12 39	15 8	3 2		
F 30	3 54	20 50	2 38	1 19	1 50	12 35	0 17	23 21	0 38	23 3	0 15	13 51	1 14	11 34	0 32	17 21	1 47	8 18	12 6	20 29	20 49	12 41	15 9	3 2		
S 31	4n17	19n 8	3s33	0s28	1s44	12s14	0s20	23s18	0s40	23s 3	0n15	13s49	1s14	11s33	0n32	17s20	1n47	8n19	12s 6	20s29	20s49	12n43	15n10	3s 2		

ASTRODIENST EPHEMERIS for the year 1640
geocentric

MAY 1640 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	14 37 42	11♌ 2'25	4♎26	1♊47	5♍6	3♈32	7°R52	29♈10	0°R20	24°R21	0♊25	0°R18	1♌26	28♍38	23♌21	T 1
W 2	14 41 39	12° 0'26	18°43	3° 2	6°17	4° 7	7♌51	29°14	0♎18	24♎20	0°26	0♌16	1°22	28°45	23°26	W 2
T 3	14 45 35	12°58'25	3♌24	4°12	7°28	4°41	7°49	29°17	0°15	24°18	0°27	0°14	1°19	28°52	23°30	T 3
F 4	14 49 32	13°56'23	18°23	5°17	8°39	5°15	7°47	29°21	0°13	24°17	0°28	0°12	1°16	28°58	23°35	F 4
S 5	14 53 28	14°54'18	3♎33	6°18	9°50	5°49	7°45	29°24	0°10	24°15	0°30	0°10	1°13	29° 5	23°39	S 5
S 6	14 57 25	15°52'12	18°44	7°15	11° 2	6°23	7°43	29°27	0° 8	24°14	0°31	0°10	1°10	29°12	23°44	S 6
M 7	15 1 21	16°50'05	3♌46	8° 7	12°13	6°57	7°41	29°31	0° 5	24°12	0°32	0°D 9	1° 6	29°18	23°49	M 7
T 8	15 5 18	17°47'56	18°31	8°55	13°24	7°31	7°39	29°34	0° 3	24°10	0°34	0°10	1° 3	29°25	23°53	T 8
W 9	15 9 14	18°45'46	2♌54	9°38	14°36	8° 4	7°36	29°37	0° 1	24° 9	0°35	0°11	1° 0	29°32	23°58	W 9
T 10	15 13 11	19°43'35	16°51	10°16	15°47	8°38	7°33	29°40	29♌58	24° 7	0°36	0°12	0°57	29°38	24° 2	T 10
F 11	15 17 8	20°41'22	0♈20	10°49	16°58	9°11	7°30	29°43	29°56	24° 5	0°38	0°12	0°54	29°45	24° 7	F 11
S 12	15 21 4	21°39'08	13°25	11°18	18°10	9°44	7°27	29°46	29°54	24° 4	0°39	0°13	0°51	29°52	24°11	S 12
S 13	15 25 1	22°36'53	26° 7	11°42	19°21	10°17	7°24	29°48	29°51	24° 2	0°40	0°R13	0°47	29°58	24°16	S 13
M14	15 28 57	23°34'37	8♌30	12° 0	20°33	10°50	7°20	29°51	29°49	24° 1	0°42	0°13	0°44	0♌ 5	24°20	M14
T 15	15 32 54	24°32'20	20°38	12°15	21°44	11°22	7°17	29°54	29°47	23°59	0°43	0°12	0°41	0°12	24°25	T 15
W16	15 36 50	25°30'01	2♍36	12°24	22°56	11°55	7°13	29°56	29°45	23°57	0°44	0°12	0°38	0°18	24°30	W16
T 17	15 40 47	26°27'42	14°28	12°R28	24° 7	12°27	7° 9	29°59	29°43	23°56	0°46	0°11	0°35	0°25	24°34	T 17
F 18	15 44 43	27°25'21	26°16	12°28	25°19	12°59	7° 5	0♌ 1	29°40	23°54	0°47	0°11	0°32	0°32	24°39	F 18
S 19	15 48 40	28°23'00	8♌ 4	12°23	26°31	13°31	7° 0	0° 3	29°38	23°52	0°49	0°10	0°28	0°38	24°43	S 19
S 20	15 52 36	29°20'37	19°55	12°14	27°42	14° 2	6°56	0° 5	29°36	23°51	0°50	0°10	0°25	0°45	24°48	S 20
M21	15 56 33	0♊18'13	1♊51	12° 0	28°54	14°34	6°51	0° 7	29°34	23°49	0°51	0°10	0°22	0°52	24°52	M21
T 22	16 0 30	1°15'48	13°55	11°43	0♌ 6	15° 5	6°46	0° 9	29°32	23°48	0°53	0°10	0°19	0°58	24°57	T 22
W23	16 4 26	2°13'22	26° 7	11°22	1°18	15°36	6°41	0°11	29°30	23°46	0°54	0°10	0°16	1° 5	25° 2	W23
T 24	16 8 23	3°10'54	8♌30	10°58	2°29	16° 6	6°36	0°12	29°28	23°44	0°55	0°10	0°12	1°12	25° 6	T 24
F 25	16 12 19	4° 8'26	21° 7	10°31	3°41	16°37	6°31	0°14	29°26	23°43	0°57	0° 9	0° 9	1°18	25°11	F 25
S 26	16 16 16	5° 5'56	3♌58	10° 1	4°53	17° 7	6°26	0°16	29°24	23°41	0°58	0° 9	0° 6	1°25	25°15	S 26
S 27	16 20 12	6° 3'24	17° 6	9°30	6° 5	17°37	6°20	0°17	29°22	23°40	0°59	0° 8	0° 3	1°32	25°20	S 27
M28	16 24 9	7° 0'52	0♎32	8°57	7°17	18° 7	6°14	0°18	29°20	23°38	1° 1	0°D 8	29♎59	1°38	25°24	M28
T 29	16 28 6	7°58'18	14°17	8°24	8°29	18°36	6° 8	0°20	29°19	23°36	1° 2	0° 8	29°57	1°45	25°29	T 29
W30	16 32 2	8°55'42	28°23	7°50	9°41	19° 5	6° 3	0°21	29°17	23°35	1° 4	0° 8	29°53	1°52	25°33	W30
T 31	16 35 59	9♊53'06	12♌47	7♊17	10♌53	19♈34	5♌56	0♌22	29♌15	23♎33	1♊ 5	0♌ 9	29♎50	1♌58	25♌38	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
T 1	15n10	5n 1	5s15	23n 3	2n32	0n30	1s40	20s57	1s36	23s 2	0n13	13s 2	1s20	11s 7
W 2	15 28	0s 8	5 0	23 19	2 34	0 57	1 42	20 51	1 38	23 2	0 13	13 1	1 20	11 6
T 3	15 46	5 24	4 25	23 33	2 34	1 24	1 43	20 45	1 41	23 3	0 13	13 0	1 20	11 5
F 4	16 3	10 28	3 31	23 45	2 34	1 51	1 44	20 39	1 43	23 3	0 13	12 59	1 20	11 4
S 5	16 20	14 57	2 22	23 54	2 32	2 18	1 45	20 33	1 45	23 3	0 12	12 58	1 20	11 3
S 6	16 37	18 26	1 3	24 1	2 30	2 45	1 46	20 27	1 47	23 3	0 12	12 57	1 21	11 2
M 7	16 54	20 37	0n20	24 6	2 26	3 12	1 46	20 20	1 50	23 3	0 12	12 56	1 21	11 1
T 8	17 10	21 20	1 40	24 10	2 22	3 39	1 47	20 14	1 52	23 4	0 12	12 55	1 21	11 1
W 9	17 26	20 35	2 52	24 11	2 16	4 6	1 48	20 7	1 54	23 4	0 12	12 54	1 21	11 0
T 10	17 42	18 36	3 51	24 10	2 10	4 34	1 48	20 1	1 57	23 4	0 12	12 53	1 21	10 59
F 11	17 58	15 38	4 35	24 7	2 2	5 0	1 49	19 54	1 59	23 4	0 12	12 52	1 22	10 58
S 12	18 13	11 58	5 4	24 3	1 53	5 27	1 49	19 48	2 1	23 5	0 12	12 51	1 22	10 57
S 13	18 28	7 52	5 17	23 57	1 44	5 54	1 49	19 41	2 4	23 5	0 12	12 50	1 22	10 57
M14	18 42	3 32	5 14	23 49	1 33	6 21	1 49	19 35	2 6	23 5	0 12	12 50	1 22	10 56
T 15	18 56	0n51	4 58	23 39	1 21	6 48	1 49	19 28	2 9	23 6	0 11	12 49	1 22	10 55
W16	19 10	5 8	4 48	23 18	1 9	7 14	1 50	19 21	2 12	23 6	0 11	12 48	1 23	10 54
T 17	19 24	9 12	3 28	23 25	0 55	7 41	1 49	19 15	2 14	23 6	0 11	12 48	1 23	10 54
F 18	19 37	12 55	2 57	23 1	0 41	8 7	1 49	19 8	2 17	23 7	0 11	12 47	1 23	10 53
S 19	19 50	16 7	2 0	22 45	0 26	8 33	1 49	19 1	2 19	23 7	0 11	12 47	1 23	10 52
S 20	20 3	18 40	0 57	22 29	0 10	8 59	1 49	18 55	2 22	23 7	0 11	12 46	1 24	10 51
M21	20 15	20 25	0s 9	22 11	0s 6	9 25	1 48	18 48	2 25	23 8	0 11	12 45	1 24	10 51
T 22	20 27	21 16	1 16	21 52	0 23	9 51	1 48	18 41	2 27	23 8	0 11	12 45	1 24	10 50
W23	20 39	21 6	2 19	21 32	0 40	10 16	1 47	18 35	2 30	23 8	0 11	12 45	1 24	10 49
T 24	20 50	19 56	3 17	21 11	0 57	10 41	1 47	18 28	2 33	23 9	0 10	12 44	1 24	10 49
F 25	21 1	17 45	4 7	20 50	1 15	11 6	1 46	18 22	2 36	23 9	0 10	12 44	1 25	10 48
S 26	21 11	14 41	4 45	20 29	1 32	11 31	1 45	18 15	2 39	23 10	0 10	12 43	1 25	10 47
S 27	21 22	10 49	5 9	20 7	1 49	11 56	1 45	18 9	2 41	23 10	0 10	12 43	1 25	10 47
M28	21 31	6 21	5 17	19 46	2 6	12 20	1 44	18 2	2 44	23 10	0 10	12 43	1 25	10 46
T 29	21 41	1 27	5 8	19 24	2 22	12 44	1 43	17 56	2 47	23 11	0 10	12 43	1 25	10 45
W30	21 50	3s38	4 40	19 4	2 38	13 8	1 42	17 49	2 50	23 11	0 10	12 42	1 26	10 45
T 31	21n58	8s39	3s54	18n44	2s52	13n31	1s41	17s43	2s53	23s11	0n10	12s42	1s26	10s44

Julian Day Number = 2320178.5, Delta T = 50.14 sec
Ecliptic obliquity = 23°29'06, Nutation = 0°00'14, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°43'13, Lahiri = 18°50'13Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1640

geocentric

JUNE 1640 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	16 39 55	10 ^{II} 50'28	27 [♂] 26	6°R45	12 [♂] 5	20 [♂] 3	5°R50	0 [♂] 23	29°R13	23°R32	1 ^{II} 6	0 [♂] 10	29 [♂] 47	2 [♂] 5	25 [♂] 42	F 1
S 2	16 43 52	11°47'50	12 [♂] 16	6 ^{II} 14	13°17	20°31	5 [♂] 44	0°24	29 [♂] 12	23 [♂] 30	1°8	0°11	29°44	2°12	25°47	S 2
S 3	16 47 48	12°45'10	27°10	5°45	14°29	20°59	5°38	0°24	29°10	23°29	1°9	0°R11	29°41	2°18	25°51	S 3
M 4	16 51 45	13°42'30	12 [♂] 1	5°19	15°41	21°27	5°31	0°25	29°8	23°27	1°10	0°11	29°38	2°25	25°56	M 4
T 5	16 55 41	14°39'49	26°41	4°56	16°53	21°54	5°24	0°25	29°7	23°26	1°12	0°10	29°34	2°32	26°0	T 5
W 6	16 59 38	15°37'07	11 [♂] 3	4°36	18°5	22°22	5°18	0°26	29°5	23°24	1°13	0°8	29°31	2°38	26°4	W 6
T 7	17 3 35	16°34'25	25°3	4°20	19°17	22°48	5°11	0°26	29°4	23°23	1°14	0°6	29°28	2°45	26°9	T 7
F 8	17 7 31	17°31'42	8 [♂] 38	4°8	20°29	23°15	5°4	0°26	29°3	23°21	1°16	0°4	29°25	2°52	26°13	F 8
S 9	17 11 28	18°28'58	21°47	4°0	21°41	23°41	4°57	0°27	29°1	23°20	1°17	0°2	29°22	2°58	26°18	S 9
S 10	17 15 24	19°26'14	4 [♂] 33	3°D56	22°54	24°7	4°50	0°R27	29°0	23°19	1°18	0°1	29°18	3°5	26°22	S 10
M11	17 19 21	20°23'30	16°59	3°56	24°6	24°32	4°43	0°27	28°59	23°17	1°20	29°D59	29°15	3°12	26°26	M11
T 12	17 23 17	21°20'46	29°8	4°2	25°18	24°57	4°35	0°26	28°57	23°16	1°21	0°0	29°12	3°18	26°30	T 12
W13	17 27 14	22°18'01	11°Y6	4°12	26°30	25°22	4°28	0°26	28°56	23°14	1°22	0°1	29°9	3°25	26°35	W13
T 14	17 31 10	23°15'16	22°56	4°26	27°43	25°46	4°21	0°26	28°55	23°13	1°23	0°3	29°6	3°32	26°39	T 14
F 15	17 35 7	24°12'31	4 [♂] 44	4°45	28°55	26°10	4°13	0°25	28°54	23°12	1°25	0°4	29°3	3°38	26°43	F 15
S 16	17 39 4	25°9'45	16°34	5°9	0 ^{II} 7	26°33	4°6	0°25	28°53	23°10	1°26	0°6	28°59	3°45	26°47	S 16
S 17	17 43 0	26°7'00	28°30	5°37	1°20	26°56	3°58	0°24	28°52	23°9	1°27	0°R6	28°56	3°52	26°52	S 17
M18	17 46 57	27°4'14	10 ^{II} 34	6°10	2°32	27°19	3°51	0°24	28°51	23°8	1°28	0°6	28°53	3°58	26°56	M18
T 19	17 50 53	28°1'28	22°50	6°48	3°45	27°41	3°43	0°23	28°50	23°6	1°30	0°4	28°50	4°5	27°0	T 19
W20	17 54 50	28°58'42	5 [♂] 18	7°30	4°57	28°3	3°36	0°22	28°49	23°5	1°31	0°1	28°47	4°12	27°4	W20
T 21	17 58 46	29°55'55	18°0	8°16	6°10	28°24	3°28	0°21	28°48	23°4	1°32	29 [♂] 57	28°44	4°18	27°8	T 21
F 22	18 2 43	0 [♂] 53'08	0 [♂] 55	9°6	7°22	28°44	3°20	0°20	28°48	23°3	1°33	29°52	28°40	4°25	27°12	F 22
S 23	18 6 39	1°50'21	14°5	10°1	8°35	29°5	3°13	0°18	28°47	23°2	1°35	29°47	28°37	4°31	27°16	S 23
S 24	18 10 36	2°47'33	27°28	11°0	9°47	29°24	3°5	0°17	28°46	23°0	1°36	29°43	28°34	4°38	27°20	S 24
M25	18 14 33	3°44'45	11 [♂] 4	12°3	11°0	29°43	2°57	0°16	28°46	22°59	1°37	29°39	28°31	4°45	27°24	M25
T 26	18 18 29	4°41'57	24°53	13°10	12°13	0 [♂] 2	2°49	0°14	28°45	22°58	1°38	29°38	28°28	4°51	27°28	T 26
W27	18 22 26	5°39'08	8 [♂] 53	14°21	13°25	0°20	2°42	0°13	28°44	22°57	1°39	29°D37	28°24	4°58	27°32	W27
T 28	18 26 22	6°36'18	23°4	15°37	14°38	0°38	2°34	0°11	28°44	22°56	1°40	29°38	28°21	5°5	27°36	T 28
F 29	18 30 19	7°33'29	7 [♂] 24	16°56	15°51	0°54	2°26	0°9	28°44	22°55	1°42	29°39	28°18	5°11	27°39	F 29
S 30	18 34 15	8 [♂] 30'39	21 [♂] 51	18 ^{II} 18	17 ^{II} 3	1 [♂] 11	2 [♂] 19	0 [♂] 7	28 [♂] 43	22 [♂] 54	1 ^{II} 43	29 [♂] 41	28 [♂] 15	5 [♂] 18	27 [♂] 43	S 30

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
F 1	22n 7	13s15	2s52	18n25	3s 6	13n55	1s39	17s37	2s56	23s12	0n 9	12s42	1s26	10s44	0n32	16s58	1n47	8n41	11s59	20s13	20s 9	14n28	16n13	3s 5	
S 2	22 15	17 6	1 38	18 7	3 19	14 18	1 38	17 30	2 59	23 12	0 9	12 42	1 26	10 43	0 32	16 57	1 47	8 41	11 59	20 14	20 8	14 30	16 14	3 5	
S 3	22 22	19 50	0 17	17 51	3 30	14 40	1 37	17 24	3 2	23 13	0 9	12 42	1 27	10 42	0 32	16 57	1 47	8 41	11 59	20 14	20 7	14 31	16 15	3 5	
M 4	22 29	21 12	1n 5	17 36	3 41	15 2	1 36	17 18	3 5	23 13	0 9	12 42	1 27	10 42	0 32	16 57	1 47	8 42	11 59	20 14	20 7	14 33	16 16	3 6	
T 5	22 36	21 5	2 22	17 23	3 50	15 24	1 34	17 12	3 8	23 13	0 9	12 42	1 27	10 41	0 31	16 56	1 47	8 42	11 59	20 13	20 6	14 34	16 17	3 6	
W 6	22 42	19 35	3 27	17 12	3 58	15 46	1 33	17 6	3 12	23 14	0 9	12 42	1 27	10 41	0 31	16 56	1 47	8 42	11 59	20 13	20 5	14 36	16 18	3 6	
T 7	22 48	16 55	4 19	17 3	4 4	16 7	1 31	17 0	3 15	23 14	0 9	12 42	1 27	10 40	0 31	16 55	1 47	8 42	11 59	20 13	20 4	14 38	16 19	3 6	
F 8	22 54	13 24	4 54	16 56	4 9	16 28	1 30	16 54	3 18	23 15	0 9	12 42	1 28	10 40	0 31	16 55	1 47	8 42	11 59	20 12	20 4	14 39	16 19	3 6	
S 9	22 59	9 20	5 13	16 51	4 13	16 48	1 28	16 49	3 21	23 15	0 8	12 42	1 28	10 39	0 31	16 55	1 47	8 43	11 59	20 12	20 3	14 41	16 20	3 6	
S 10	23 4	4 58	5 15	16 47	4 16	17 8	1 26	16 43	3 24	23 15	0 8	12 42	1 28	10 39	0 31	16 54	1 47	8 43	11 59	20 11	20 2	14 42	16 21	3 7	
M11	23 8	0 31	5 2	16 46	4 17	17 28	1 24	16 38	3 28	23 16	0 8	12 43	1 28	10 39	0 31	16 54	1 47	8 43	11 59	20 11	20 2	14 44	16 22	3 7	
T 12	23 12	3n53	4 36	16 47	4 17	17 47	1 23	16 32	3 31	23 16	0 8	12 43	1 28	10 38	0 31	16 54	1 47	8 43	11 59	20 11	20 1	14 45	16 23	3 7	
W13	23 16	8 3	3 58	16 50	4 16	18 6	1 21	16 27	3 34	23 17	0 8	12 43	1 29	10 38	0 31	16 54	1 47	8 43	11 59	20 12	20 0	14 47	16 24	3 7	
T 14	23 19	11 53	3 11	16 55	4 14	18 24	1 19	16 22	3 38	23 17	0 8	12 44	1 29	10 37	0 31	16 53	1 47	8 44	11 59	20 12	20 0	14 48	16 24	3 7	
F 15	23 21	15 15	2 15	17 1	4 10	18 42	1 17	16 17	3 41	23 17	0 8	12 44	1 29	10 37	0 31	16 53	1 47	8 44	11 59	20 12	19 59	14 50	16 25	3 7	
S 16	23 24	18 0	1 14	17 10	4 6	19 0	1 15	16 12	3 45	23 18	0 8	12 44	1 29	10 37	0 31	16 53	1 47	8 44	11 59	20 13	19 58	14 51	16 26	3 8	
S 17	23 26	20 0	0 9	17 20	4 1	19 17	1 13	16 7	3 48	23 18	0 7	12 45	1 30	10 36	0 31	16 52	1 47	8 44	11 59	20 13	19 58	14 53	16 27	3 8	
M18	23 27	21 8	0s57	17 31	3 55	19 33	1 11	16 3	3 52	23 18	0 7	12 45	1 30	10 36	0 31	16 52	1 47	8 44	11 59	20 13	19 57	14 54	16 27	3 8	
T 19	23 28	21 16	2 2	17 44	3 48	19 49	1 9	15 58	3 55	23 19	0 7	12 46	1 30	10 36	0 31	16 52	1 47	8 45	12 0	20 12	19 56	14 56	16 28	3 8	
W20	23 29	20 22	3 1	17 58	3 41	20 4	1 7	15 54	3 59	23 19	0 7	12 46	1 30	10 36	0 31	16 51	1 47	8 45	12 0	20 12	19 55	14 58	16 29	3 8	
T 21	23 29	18 26	3 53	18 14	3 32	20 19	1 4	15 50	4 2	23 19	0 7	12 47	1 30	10 35	0 31	16 51	1 47	8 45	12 0	20 11	19 55	14 59	16 30	3 9	
F 22	23 29	15 32	4 34	18 31	3 23	20 34	1 2	15 46	4 6	23 20	0 7	12 47	1 31	10 35	0 31	16 51	1 47	8 45	12 0	20 10	19 54	15 1	16 30	3 9	
S 23	23 28	11 50	5 1	18 48	3 14	20 47	1 0	15 42	4 9	23 20	0 7	12 48	1 31	10 35	0 31	16 51	1 47	8 45	12 0	20 9	19 53	15 2	16 31	3 9	
S 24	23 27	7 29	5 12	19 6	3 4	21 1	0 58	15 39	4 13	23 20	0 6	12 49	1 31	10 35	0 31	16 50	1 47	8 45	12 0	20 8	19 53	15 4	16 32	3 9	
M25	23 26	2 43	5 6	19 25	2 53	21 13	0 55	15 36	4 17	23 21	0 6	12 49	1 31	10 34	0 31	16 50	1 46	8 45	12 0	20 7	19 52	15 5	16 32	3 9	
T 26	23 24	2s17	4 42	19 45	2 42	21 26	0 53	15 32	4 20	23 21	0 6	12 50	1 31	10 34	0 31	16 50	1 46	8 46	12 0	20 7	19 51	15 7	16 33	3 10	
W27	23 22	7 14	4 2	20 5	2 30	21 37	0 51	15 29	4 24	23 21	0 6	12 51	1 32	10 34	0 31	16 50	1 46	8 46	12 0	20 6	19 51	15 8	16 34	3 10	
T 28	23 19	11 52	3 6	20 25	2 18	21 48	0 48	15 27	4 28	23 22	0 6	12 52	1 32	10 34	0 31	16 50	1 46	8 46	12 0	20 7	19 50	15 10	16 34	3 10	
F 29	23 16	15 52	1 58	20 45	2 6	21 58	0 46	15 24	4 32	23 22	0 6	12 52	1 32	10 34	0 31	16 49	1 46	8 46	12 0	20 7	19 49	15 11	16 35	3 10	
S 30	23n13	18s57	0s43	21n 5	1s54	22n 8	0s43	15s21	4s35	23s22	0n 6	12s53	1s32	10s34	0n31	16s49	1n46	8n46	12s 1	20s 7	19s48	15n12	16n36	3s11	

ASTRODIENST EPHEMERIS for the year 1640

geocentric

JULY 1640 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	18 38 12	9 ⁵² 2749	6 ²¹ 21	19 ¹¹ 45	18 ¹¹ 16	1 ¹ 27	2°R11	0°R 5	28°R43	22°R53	1 ¹¹ 44	29°R41	28 ¹¹ 12	5 ⁸ 25	27 ⁸ 47	S 1
M 2	18 42 8	10°25'00	20°49	21°16	19°29	1°42	2 ² 4	0 ¹ 3	28 ¹¹ 43	22 ¹¹ 52	1°45	29 ¹¹ 39	28° 9	5°31	27°51	M 2
T 3	18 46 5	11°22'10	5 ³ 10	22°50	20°42	1°56	1°56	0° 1	28°42	22°51	1°46	29°35	28° 5	5°38	27°54	T 3
W 4	18 50 2	12°19'20	19°19	24°27	21°55	2°10	1°49	29 ¹¹ 59	28°42	22°50	1°47	29°30	28° 2	5°45	27°58	W 4
T 5	18 53 58	13°16'30	3 ¹¹ 11	26° 9	23° 7	2°24	1°41	29°57	28°42	22°49	1°48	29°23	27°59	5°51	28° 2	T 5
F 6	18 57 55	14°13'41	16°42	27°53	24°20	2°37	1°34	29°54	28°42	22°48	1°49	29°16	27°56	5°58	28° 5	F 6
S 7	19 1 51	15°10'52	29°50	29°41	25°33	2°49	1°27	29°52	28°D42	22°47	1°50	29° 9	27°53	6° 5	28° 9	S 7
S 8	19 5 48	16° 8'04	12 ¹¹ 37	1 ¹¹ 32	26°46	3° 0	1°19	29°49	28°42	22°47	1°51	29° 3	27°50	6°11	28°12	S 8
M 9	19 9 44	17° 5'16	25° 3	3°26	27°59	3°11	1°12	29°47	28°42	22°46	1°52	28°59	27°46	6°18	28°15	M 9
T 10	19 13 41	18° 2'28	7 ¹¹ 13	5°22	29°12	3°21	1° 5	29°44	28°42	22°45	1°53	28°57	27°43	6°25	28°19	T 10
W11	19 17 37	18°59'41	19°11	7°21	0 ¹¹ 25	3°30	0°58	29°41	28°43	22°44	1°54	28°D56	27°40	6°31	28°22	W11
T 12	19 21 34	19°56'55	1 ¹¹ 2	9°22	1°38	3°38	0°51	29°38	28°43	22°44	1°55	28°56	27°37	6°38	28°26	T 12
F 13	19 25 31	20°54'10	12°51	11°25	2°52	3°46	0°44	29°35	28°43	22°43	1°56	28°58	27°34	6°45	28°29	F 13
S 14	19 29 27	21°51'26	24°43	13°29	4° 5	3°53	0°38	29°32	28°44	22°42	1°57	28°R58	27°30	6°51	28°32	S 14
S 15	19 33 24	22°48'42	6 ¹¹ 43	15°35	5°18	3°59	0°31	29°29	28°44	22°42	1°58	28°58	27°27	6°58	28°35	S 15
M16	19 37 20	23°45'59	18°55	17°42	6°31	4° 5	0°24	29°26	28°44	22°41	1°59	28°56	27°24	7° 5	28°38	M16
T 17	19 41 17	24°43'16	1 ¹¹ 22	19°49	7°44	4°10	0°18	29°23	28°45	22°41	2° 0	28°52	27°21	7°11	28°41	T 17
W18	19 45 13	25°40'35	14° 6	21°56	8°58	4°14	0°12	29°19	28°46	22°40	2° 1	28°45	27°18	7°18	28°44	W18
T 19	19 49 10	26°37'54	27° 8	24° 4	10°11	4°17	0° 5	29°16	28°46	22°39	2° 2	28°37	27°15	7°25	28°47	T 19
F 20	19 53 6	27°35'14	10 ¹¹ 27	26°11	11°24	4°19	29 ¹¹ 59	29°13	28°47	22°39	2° 3	28°27	27°11	7°31	28°50	F 20
S 21	19 57 3	28°32'34	24° 1	28°17	12°38	4°21	29°53	29° 9	28°48	22°39	2° 3	28°17	27° 8	7°38	28°53	S 21
S 22	20 1 0	29°29'55	7 ¹¹ 47	0 ¹¹ 23	13°51	4°R21	29°48	29° 6	28°48	22°38	2° 4	28° 8	27° 5	7°45	28°56	S 22
M23	20 4 56	0 ¹¹ 27'16	21°43	2°29	15° 4	4°21	29°42	29° 2	28°49	22°38	2° 5	28° 1	27° 2	7°51	28°59	M23
T 24	20 8 53	1°24'38	5 ¹¹ 44	4°33	16°18	4°20	29°36	28°58	28°50	22°37	2° 6	27°56	26°59	7°58	29° 2	T 24
W25	20 12 49	2°22'01	19°50	6°35	17°31	4°19	29°31	28°54	28°51	22°37	2° 7	27°54	26°56	8° 4	29° 4	W25
T 26	20 16 46	3°19'24	3 ¹¹ 58	8°37	18°45	4°16	29°26	28°51	28°52	22°37	2° 7	27°D53	26°52	8°11	29° 7	T 26
F 27	20 20 42	4°16'47	18° 6	10°37	19°58	4°13	29°21	28°47	28°53	22°37	2° 8	27°54	26°49	8°18	29° 9	F 27
S 28	20 24 39	5°14'12	2 ¹¹ 15	12°36	21°12	4° 9	29°16	28°43	28°54	22°36	2° 9	27°R54	26°46	8°24	29°12	S 28
S 29	20 28 35	6°11'37	16°21	14°33	22°25	4° 5	29°11	28°39	28°55	22°36	2°10	27°53	26°43	8°31	29°14	S 29
M30	20 32 32	7° 9'02	0 ¹¹ 24	16°29	23°39	3°59	29° 6	28°35	28°56	22°36	2°10	27°49	26°40	8°38	29°17	M30
T 31	20 36 29	8 ¹¹ 2	14 ¹¹ 21	18 ¹¹ 23	24 ¹¹ 53	3 ¹¹ 53	29 ¹¹ 2	28 ¹¹ 31	28 ¹¹ 58	22 ¹¹ 36	2 ¹¹ 11	27 ¹¹ 43	26 ¹¹ 36	8 ¹¹ 44	29 ¹¹ 19	T 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	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	
S 1	23n 9	20s49	0n36	21n24	1s41	22n17	0s41	15s19	4s39	23s23	0n 5	12s54	1s32	10s34	0n31	S 1
M 2	23 4	21 18	1 52	21 43	1 29	22 26	0 38	15 17	4 43	23 23	0 5	12 55	1 33	10 34	0 31	M 2
T 3	23 0	20 23	3 1	22 2	1 16	22 34	0 36	15 15	4 47	23 23	0 5	12 56	1 33	10 34	0 31	T 3
W 4	22 55	18 11	3 57	22 19	1 3	22 41	0 33	15 14	4 50	23 23	0 5	12 57	1 33	10 34	0 31	W 4
T 5	22 49	14 59	4 37	22 35	0 50	22 48	0 31	15 13	4 54	23 24	0 5	12 58	1 33	10 34	0 31	T 5
F 6	22 43	11 4	5 1	22 50	0 38	22 54	0 28	15 11	4 58	23 24	0 5	12 59	1 33	10 34	0 30	F 6
S 7	22 37	6 44	5 9	23 4	0 25	22 59	0 26	15 11	5 2	23 24	0 5	13 0	1 34	10 34	0 30	S 7
S 8	22 30	2 13	5 0	23 16	0 13	23 4	0 23	15 10	5 6	23 24	0 4	13 1	1 34	10 34	0 30	S 8
M 9	22 23	2n17	4 38	23 25	0 1	23 8	0 21	15 10	5 9	23 24	0 4	13 2	1 34	10 34	0 30	M 9
T 10	22 16	6 35	4 3	23 33	0n11	23 11	0 18	15 9	5 13	23 25	0 4	13 3	1 34	10 34	0 30	T 10
W11	22 8	10 35	3 18	23 38	0 22	23 14	0 15	15 10	5 17	23 25	0 4	13 5	1 34	10 34	0 30	W11
T 12	22 0	14 7	2 25	23 41	0 32	23 16	0 13	15 10	5 21	23 25	0 4	13 6	1 35	10 34	0 30	T 12
F 13	21 51	17 5	1 26	23 42	0 42	23 17	0 10	15 11	5 24	23 25	0 4	13 7	1 35	10 34	0 30	F 13
S 14	21 42	19 21	0 23	23 39	0 52	23 18	0 8	15 11	5 28	23 25	0 4	13 8	1 35	10 34	0 30	S 14
S 15	21 33	20 47	0s42	23 34	1 1	23 18	0 5	15 13	5 32	23 26	0 3	13 9	1 35	10 34	0 30	S 15
M16	21 23	21 16	1 45	23 27	1 9	23 17	0 3	15 14	5 36	23 26	0 3	13 11	1 35	10 35	0 30	M16
T 17	21 13	20 44	2 45	23 16	1 16	23 15	0 0	15 16	5 39	23 26	0 3	13 12	1 35	10 35	0 30	T 17
W18	21 3	19 8	3 38	23 3	1 22	23 13	0n 2	15 17	5 43	23 26	0 3	13 13	1 36	10 35	0 30	W18
T 19	20 52	16 31	4 20	22 47	1 28	23 11	0 5	15 20	5 46	23 26	0 3	13 15	1 36	10 35	0 30	T 19
F 20	20 41	13 0	4 50	22 29	1 33	23 7	0 7	15 22	5 50	23 26	0 3	13 16	1 36	10 36	0 30	F 20
S 21	20 29	8 46	5 3	22 8	1 37	23 3	0 10	15 25	5 53	23 27	0 3	13 17	1 36	10 36	0 30	S 21
S 22	20 18	4 1	5 0	21 45	1 41	22 58	0 12	15 28	5 57	23 27	0 2	13 19	1 36	10 36	0 30	S 22
M23	20 5	0s59	4 39	21 19	1 43	22 53	0 15	15 31	6 0	23 27	0 2	13 20	1 36	10 37	0 30	M23
T 24	19 53	5 58	4 1	20 52	1 45	22 47	0 17	15 34	6 3	23 27	0 2	13 22	1 37	10 37	0 30	T 24
W25	19 40	10 40	3 8	20 23	1 47	22 40	0 20	15 38	6 7	23 27	0 2	13 23	1 37	10 37	0 30	W25
T 26	19 27	14 48	2 4	19 52	1 47	22 32	0 22	15 41	6 10	23 27	0 2	13 25	1 37	10 38	0 30	T 26
F 27	19 14	18 5	0 52	19 19	1 47	22 24	0 25	15 45	6 13	23 27	0 2	13 26	1 37	10 38	0 30	F 27
S 28	19 0	20 16	0n23	18 45	1 46	22 15	0 27	15 50	6 16	23 27	0 2	13 28	1 37	10 39	0 30	S 28
S 29	18 46	21 11	1 37	18 10	1 45	22 6	0 29	15 54	6 18	23 28	0 1	13 29	1 37	10 39	0 30	S 29
M30	18 31	20 45	2 44	17 33	1 43	21 56	0 31	15 58	6 21	23 28	0 1	13 31	1 37	10 39	0 30	M30
T 31	18n16	19s 3	3n40	16n56	1n40	21n45	0n34	16s 3	6s24	23s28	0n 1	13s32	1s38	10s40	0n30	T 31

Julian Day Number = 2320239.5, Delta T = 50.02 sec
 Ecliptic obliquity = 23°29'04", Nutation = 0°00'15", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 19°43'21", Lahiri = 18°50'22"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1640
geocentric

AUGUST 1640 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	20 40 25	9♌ 3'56	28♌ 7	20♌16	26♌ 6	3°R46	28°R57	28°R27	28♌59	22°R36	2♐12	27°R34	26♌33	8♌51	29♌21	W 1
T 2	20 44 22	10° 1'25	11♌40	22° 7	27°20	3°K38	28°K53	28°K23	29° 0	22♌36	2°12	27♌23	26°30	8°58	29°24	T 2
F 3	20 48 18	10°58'54	24°58	23°57	28°34	3°30	28°49	28°18	29° 2	22°36	2°13	27°12	26°27	9° 4	29°26	F 3
S 4	20 52 15	11°56'25	7♌57	25°45	29°47	3°21	28°45	28°14	29° 3	22°D36	2°13	27° 0	26°24	9°11	29°28	S 4
S 5	20 56 11	12°53'56	20°37	27°31	1♌ 1	3°11	28°42	28°10	29° 5	22°36	2°14	26°50	26°21	9°18	29°30	S 5
M 6	21 0 8	13°51'29	3°Y 1	29°16	2°15	3° 1	28°38	28° 6	29° 6	22°36	2°14	26°42	26°17	9°24	29°32	M 6
T 7	21 4 4	14°49'04	15° 9	1♐ 0	3°29	2°50	28°35	28° 1	29° 8	22°36	2°15	26°36	26°14	9°31	29°34	T 7
W 8	21 8 1	15°46'40	27° 6	2°42	4°43	2°38	28°32	27°57	29° 9	22°36	2°15	26°33	26°11	9°38	29°36	W 8
T 9	21 11 58	16°44'17	8♌56	4°22	5°57	2°26	28°29	27°53	29°11	22°36	2°16	26°31	26° 8	9°44	29°38	T 9
F 10	21 15 54	17°41'56	20°45	6° 2	7°11	2°13	28°26	27°48	29°13	22°36	2°16	26°31	26° 5	9°51	29°39	F 10
S 11	21 19 51	18°39'37	2♐37	7°39	8°24	2° 0	28°23	27°44	29°15	22°37	2°17	26°31	26° 2	9°58	29°41	S 11
S 12	21 23 47	19°37'19	14°39	9°15	9°38	1°46	28°21	27°39	29°16	22°37	2°17	26°30	25°58	10° 4	29°43	S 12
M13	21 27 44	20°35'03	26°55	10°50	10°53	1°32	28°18	27°35	29°18	22°37	2°18	26°27	25°55	10°11	29°44	M13
T 14	21 31 40	21°32'48	9♌30	12°23	12° 7	1°18	28°16	27°30	29°20	22°37	2°18	26°22	25°52	10°18	29°46	T 14
W15	21 35 37	22°30'35	22°26	13°55	13°21	1° 3	28°14	27°26	29°22	22°38	2°18	26°14	25°49	10°24	29°47	W15
T 16	21 39 33	23°28'24	5♌44	15°25	14°35	0°47	28°13	27°21	29°24	22°38	2°19	26° 3	25°46	10°31	29°49	T 16
F 17	21 43 30	24°26'14	19°24	16°54	15°49	0°32	28°11	27°17	29°26	22°39	2°19	25°52	25°42	10°37	29°50	F 17
S 18	21 47 27	25°24'05	3♐22	18°21	17° 3	0°16	28°10	27°12	29°28	22°39	2°19	25°40	25°39	10°44	29°51	S 18
S 19	21 51 23	26°21'58	17°35	19°47	18°17	0° 0	28° 9	27° 8	29°30	22°39	2°20	25°28	25°36	10°51	29°52	S 19
M20	21 55 20	27°19'53	1♌56	21°11	19°31	29°44	28° 8	27° 3	29°33	22°40	2°20	25°19	25°33	10°57	29°54	M20
T 21	21 59 16	28°17'48	16°19	22°34	20°46	29°28	28° 7	26°59	29°35	22°41	2°20	25°13	25°30	11° 4	29°55	T 21
W22	22 3 13	29°15'45	0♐40	23°55	22° 0	29°12	28° 6	26°54	29°37	22°41	2°20	25° 9	25°27	11°11	29°56	W22
T 23	22 7 9	0♐13'44	14°56	25°15	23°14	28°56	28° 6	26°50	29°39	22°42	2°21	25° 8	25°23	11°17	29°56	T 23
F 24	22 11 6	1°11'43	29° 5	26°33	24°29	28°40	28°D 6	26°45	29°42	22°42	2°21	25° 8	25°20	11°24	29°57	F 24
S 25	22 15 2	2° 9'44	13♌ 5	27°49	25°43	28°25	28° 6	26°41	29°44	22°43	2°21	25° 8	25°17	11°31	29°58	S 25
S 26	22 18 59	3° 7'47	26°56	29° 3	26°57	28° 9	28° 6	26°36	29°47	22°44	2°21	25° 6	25°14	11°37	29°59	S 26
M27	22 22 56	4° 5'51	10♌38	0♌16	28°12	27°54	28° 6	26°32	29°49	22°45	2°21	25° 2	25°11	11°44	29°59	M27
T 28	22 26 52	5° 3'56	24°11	1°27	29°26	27°38	28° 7	26°27	29°52	22°45	2°21	24°55	25° 7	11°51	0♐ 0	T 28
W29	22 30 49	6° 2'03	7♌33	2°35	0♐40	27°24	28° 8	26°23	29°54	22°46	2°21	24°46	25° 4	11°57	0° 1	W29
T 30	22 34 45	7° 0'11	20°44	3°42	1°55	27° 9	28° 9	26°18	29°57	22°47	2°21	24°35	25° 1	12° 4	0° 1	T 30
F 31	22 38 42	7♐58'21	3♌41	4♌46	3♐ 9	26°55	28°K10	26°K14	29♌59	22♌48	2♐22	24♌22	24♌58	12♌11	0♐ 1	F 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
W 1	18n 1	16s16	4n23	16n17	1n37	21n33	0n36	16s 8	6s26	23s28	0n 1	13s34	1s38	10s40	0n30	16s46
T 2	17 46	12 40	4 51	15 38	1 33	21 21	0 38	16 13	6 29	23 28	0 1	13 35	1 38	10 41	0 30	16 46
F 3	17 30	8 29	5 1	14 58	1 29	21 9	0 40	16 18	6 31	23 28	0 1	13 37	1 38	10 41	0 29	16 46
S 4	17 15	4 1	4 56	14 17	1 25	20 55	0 42	16 24	6 33	23 28	0 1	13 39	1 38	10 42	0 29	16 46
S 5	16 58	0n31	4 36	13 36	1 20	20 42	0 44	16 29	6 35	23 28	0 0	13 40	1 38	10 43	0 29	16 46
M 6	16 42	4 56	4 4	12 55	1 15	20 27	0 47	16 35	6 37	23 28	0 0	13 42	1 38	10 43	0 29	16 46
T 7	16 25	9 4	3 21	12 13	1 9	20 12	0 49	16 40	6 39	23 28	0 0	13 43	1 38	10 44	0 29	16 47
W 8	16 8	12 47	2 29	11 31	1 3	19 56	0 50	16 46	6 40	23 29	0 0	13 45	1 39	10 44	0 29	16 47
T 9	15 51	15 57	1 32	10 48	0 57	19 40	0 52	16 52	6 41	23 29	0s 0	13 47	1 39	10 45	0 29	16 47
F 10	15 33	18 28	0 31	10 6	0 50	19 23	0 54	16 57	6 43	23 29	0 0	13 48	1 39	10 46	0 29	16 47
S 11	15 16	20 12	0s32	9 23	0 43	19 6	0 56	17 3	6 44	23 29	0 0	13 50	1 39	10 46	0 29	16 47
S 12	14 58	21 2	1 35	8 40	0 36	18 48	0 58	17 9	6 45	23 29	0 1	13 52	1 39	10 47	0 29	16 47
M13	14 39	20 53	2 34	7 58	0 29	18 30	1 0	17 15	6 45	23 29	0 1	13 53	1 39	10 48	0 29	16 47
T 14	14 21	19 42	3 27	7 15	0 21	18 11	1 1	17 20	6 46	23 29	0 1	13 55	1 39	10 48	0 29	16 47
W15	14 2	17 30	4 11	6 32	0 13	17 51	1 3	17 26	6 46	23 29	0 1	13 56	1 39	10 49	0 29	16 48
T 16	13 43	14 19	4 42	5 50	0 5	17 31	1 4	17 32	6 46	23 29	0 1	13 58	1 39	10 50	0 29	16 48
F 17	13 24	10 18	4 59	5 8	0s 3	17 11	1 6	17 37	6 46	23 30	0 1	14 0	1 39	10 50	0 29	16 48
S 18	13 5	5 39	4 58	4 26	0 12	16 50	1 7	17 43	6 46	23 30	0 1	14 1	1 40	10 51	0 29	16 48
S 19	12 45	0 38	4 39	3 45	0 20	16 28	1 9	17 48	6 45	23 30	0 1	14 3	1 40	10 52	0 29	16 48
M20	12 25	4s28	4 2	3 4	0 29	16 6	1 10	17 53	6 44	23 30	0 2	14 5	1 40	10 53	0 29	16 48
T 21	12 5	9 21	3 10	2 23	0 37	15 44	1 12	17 58	6 43	23 30	0 2	14 6	1 40	10 54	0 29	16 49
W22	11 45	13 41	2 6	1 43	0 46	15 21	1 13	18 2	6 42	23 30	0 2	14 8	1 40	10 54	0 29	16 49
T 23	11 25	17 12	0 54	1 3	0 55	14 58	1 14	18 7	6 41	23 30	0 2	14 10	1 40	10 55	0 29	16 49
F 24	11 4	19 39	0n21	0 24	1 4	14 34	1 15	18 11	6 39	23 30	0 2	14 11	1 40	10 56	0 29	16 49
S 25	10 43	20 52	1 34	0s15	1 13	14 10	1 16	18 15	6 38	23 30	0 2	14 13	1 40	10 57	0 29	16 49
S 26	10 23	20 47	2 40	0 53	1 22	13 46	1 17	18 19	6 36	23 31	0 2	14 14	1 40	10 58	0 29	16 50
M27	10 2	19 28	3 36	1 30	1 31	13 21	1 18	18 22	6 34	23 31	0 2	14 16	1 40	10 59	0 29	16 50
T 28	9 40	17 4	4 19	2 6	1 40	12 56	1 19	18 26	6 31	23 31	0 3	14 17	1 40	11 0	0 29	16 50
W29	9 19	13 47	4 48	2 42	1 49	12 30	1 20	18 28	6 29	23 31	0 3	14 19	1 40	11 1	0 29	16 50
T 30	8 57	9 52	5 0	3 17	1 58	12 4	1 21	18 31	6 26	23 31	0 3	14 21	1 40	11 2	0 29	16 51
F 31	8n36	5s33	4n57	3s51	2s 7	11n38	1n21	18s33	6s23	23s31	0s 3	14s22	1s40	11s 3	0n29	16s51

Julian Day Number = 2320270.5, Delta T = 49.96 sec
Ecliptic obliquity = 23°29'04", Nutation = 0°00'16", out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°43'25", Lahiri = 18°50'26"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1640

geocentric

SEPTEMBER 1640 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	22 42 38	8♍56'32	16♋25	5♊48	4♏24	26°R41	28♌11	26°R10	0♍ 2	22♌49	2°R22	24°R10	24♌55	12♌17	0♏ 2	S 1
S 2	22 46 35	9°54'45	28°54	6°48	5°38	26°28	28°13	26°5	0° 5	22°50	2♏22	23♌59	24°52	12°24	0° 2	S 2
M 3	22 50 31	10°53'01	11♏9	7°45	6°53	26°15	28°14	26° 1	0° 7	22°51	2°21	23°49	24°48	12°30	0° 2	M 3
T 4	22 54 28	11°51'18	23°12	8°39	8° 7	26° 3	28°16	25°57	0°10	22°52	2°21	23°43	24°45	12°37	0° 2	T 4
W 5	22 58 25	12°49'37	5♌6	9°30	9°22	25°52	28°18	25°52	0°13	22°53	2°21	23°39	24°42	12°44	0°R 2	W 5
T 6	23 2 21	13°47'58	16°54	10°18	10°36	25°40	28°21	25°48	0°16	22°54	2°21	23°37	24°39	12°50	0° 2	T 6
F 7	23 6 18	14°46'22	28°42	11° 2	11°51	25°30	28°23	25°44	0°19	22°55	2°21	23°D37	24°36	12°57	0° 2	F 7
S 8	23 10 14	15°44'47	10♏33	11°43	13° 6	25°20	28°26	25°40	0°22	22°56	2°21	23°R38	24°33	13° 4	0° 2	S 8
S 9	23 14 11	16°43'15	22°34	12°20	14°20	25°11	28°29	25°36	0°25	22°57	2°21	23°38	24°29	13°10	0° 2	S 9
M10	23 18 7	17°41'45	4♌50	12°53	15°35	25° 2	28°32	25°32	0°28	22°58	2°21	23°36	24°26	13°17	0° 2	M10
T 11	23 22 4	18°40'17	17°26	13°21	16°50	24°55	28°35	25°28	0°31	22°59	2°20	23°33	24°23	13°24	0° 1	T 11
W12	23 26 0	19°38'51	0♏26	13°44	18° 4	24°48	28°38	25°24	0°34	23° 0	2°20	23°27	24°20	13°30	0° 1	W12
T 13	23 29 57	20°37'28	13°51	14° 2	19°19	24°41	28°42	25°20	0°37	23° 2	2°20	23°19	24°17	13°37	0° 0	T 13
F 14	23 33 54	21°36'06	27°43	14°14	20°34	24°36	28°45	25°16	0°40	23° 3	2°20	23° 9	24°13	13°44	29♌59	F 14
S 15	23 37 50	22°34'47	11♏59	14°R20	21°49	24°31	28°49	25°12	0°43	23° 4	2°19	22°59	24°10	13°50	29°59	S 15
S 16	23 41 47	23°33'29	26°32	14°20	23° 3	24°27	28°53	25° 9	0°46	23° 6	2°19	22°50	24° 7	13°57	29°58	S 16
M17	23 45 43	24°32'14	11♏17	14°14	24°18	24°23	28°58	25° 5	0°49	23° 7	2°19	22°43	24° 4	14° 4	29°58	M17
T 18	23 49 40	25°31'00	26° 5	14° 0	25°33	24°21	29° 2	25° 1	0°52	23° 8	2°18	22°38	24° 1	14°10	29°57	T 18
W19	23 53 36	26°29'49	10♌50	13°39	26°48	24°19	29° 7	24°58	0°56	23°10	2°18	22°35	23°58	14°17	29°56	W19
T 20	23 57 33	27°28'39	25°23	13°10	28° 3	24°D19	29°11	24°54	0°59	23°11	2°18	22°D35	23°54	14°23	29°55	T 20
F 21	0 1 29	28°27'31	9♌43	12°35	29°17	24°19	29°16	24°51	1° 2	23°13	2°17	22°35	23°51	14°30	29°54	F 21
S 22	0 5 26	29°26'24	23°47	11°52	0♏32	24°19	29°21	24°48	1° 6	23°14	2°17	22°R36	23°48	14°37	29°53	S 22
S 23	0 9 22	0♏25'20	7♌34	11° 2	1°47	24°21	29°27	24°44	1° 9	23°16	2°16	22°36	23°45	14°43	29°52	S 23
M24	0 13 19	1°24'17	21° 6	10° 6	3° 2	24°24	29°32	24°41	1°12	23°17	2°16	22°34	23°42	14°50	29°50	M24
T25	0 17 16	2°23'16	4♏22	9° 5	4°17	24°27	29°38	24°38	1°16	23°19	2°16	22°30	23°39	14°57	29°49	T25
W26	0 21 12	3°22'16	17°25	7°59	5°32	24°31	29°43	24°35	1°19	23°20	2°15	22°24	23°35	15° 3	29°48	W26
T 27	0 25 9	4°21'19	0♋14	6°51	6°47	24°36	29°49	24°32	1°23	23°22	2°15	22°16	23°32	15°10	29°46	T 27
F 28	0 29 5	5°20'23	12°52	5°42	8° 2	24°41	29°55	24°29	1°26	23°24	2°14	22° 8	23°29	15°17	29°45	F 28
S 29	0 33 2	6°19'29	25°18	4°33	9°16	24°47	0♌ 2	24°27	1°29	23°25	2°13	21°59	23°26	15°23	29°43	S 29
S 30	0 36 58	7♏18'37	7♏33	3♏27	10♏31	24°55	0♌ 8	24°24	1♌33	23♌27	2♏13	21♌51	23♌23	15♌30	29♌42	S 30

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	8n14	1s 5	4n39	4s24	2s16	11n11	1n22	18s35	6s20	23s31	0s 3	14s24	1s40	11s 4	0n29	16s51	1n43	8n42	12s12	18s51	19s 2	16n38	16n47	3s29			
S 2	7 52	3n21	4 8	4 55	2 25	10 44	1 23	18 37	6 17	23 31	0 3	14 25	1 40	11 4	0 29	16 52	1 43	8 41	12 13	18 48	19 1	16 39	16 47	3 30			
M 3	7 30	7 34	3 25	5 26	2 33	10 17	1 23	18 39	6 14	23 32	0 3	14 27	1 40	11 5	0 29	16 52	1 43	8 41	12 13	18 46	19 0	16 40	16 46	3 30			
T 4	7 8	11 25	2 34	5 55	2 42	9 50	1 24	18 40	6 11	23 32	0 3	14 28	1 40	11 6	0 29	16 52	1 42	8 41	12 13	18 44	19 0	16 41	16 46	3 30			
W 5	6 45	14 46	1 37	6 23	2 50	9 22	1 24	18 40	6 7	23 32	0 3	14 30	1 40	11 7	0 29	16 52	1 42	8 41	12 13	18 43	18 59	16 42	16 46	3 31			
T 6	6 23	17 29	0 36	6 49	2 58	8 54	1 24	18 41	6 4	23 32	0 4	14 31	1 40	11 8	0 28	16 53	1 42	8 40	12 13	18 43	18 58	16 44	16 46	3 31			
F 7	6 0	19 28	0s27	7 13	3 6	8 26	1 25	18 41	6 0	23 32	0 4	14 32	1 40	11 10	0 28	16 53	1 42	8 40	12 14	18 43	18 57	16 45	16 45	3 31			
S 8	5 38	20 36	1 29	7 36	3 13	7 58	1 25	18 41	5 56	23 32	0 4	14 34	1 40	11 11	0 28	16 53	1 42	8 40	12 14	18 43	18 56	16 46	16 45	3 32			
S 9	5 15	20 49	2 28	7 57	3 20	7 29	1 25	18 40	5 52	23 32	0 4	14 35	1 40	11 12	0 28	16 54	1 42	8 40	12 14	18 43	18 56	16 47	16 44	3 32			
M10	4 52	20 2	3 22	8 16	3 27	7 0	1 25	18 39	5 48	23 33	0 4	14 37	1 40	11 13	0 28	16 54	1 42	8 39	12 14	18 43	18 55	16 48	16 44	3 32			
T 11	4 29	18 16	4 7	8 33	3 33	6 31	1 25	18 38	5 44	23 33	0 4	14 38	1 40	11 14	0 28	16 54	1 42	8 39	12 15	18 42	18 54	16 50	16 44	3 33			
W12	4 6	15 32	4 41	8 47	3 38	6 2	1 25	18 37	5 40	23 33	0 4	14 39	1 40	11 15	0 28	16 55	1 42	8 39	12 15	18 40	18 53	16 51	16 43	3 33			
T 13	3 43	11 54	5 0	8 58	3 43	5 32	1 25	18 35	5 35	23 33	0 4	14 41	1 40	11 16	0 28	16 55	1 42	8 39	12 15	18 38	18 53	16 52	16 43	3 33			
F 14	3 20	7 32	5 4	9 7	3 47	5 2	1 25	18 32	5 31	23 33	0 4	14 42	1 40	11 17	0 28	16 56	1 42	8 38	12 15	18 36	18 52	16 53	16 42	3 34			
S 15	2 57	2 38	4 48	9 12	3 50	4 33	1 24	18 30	5 27	23 33	0 5	14 43	1 40	11 18	0 28	16 56	1 42	8 38	12 15	18 33	18 51	16 54	16 42	3 34			
S 16	2 34	2s30	4 14	9 14	3 52	4 3	1 24	18 27	5 22	23 33	0 5	14 44	1 40	11 19	0 28	16 56	1 42	8 38	12 16	18 31	18 50	16 55	16 41	3 34			
M17	2 10	7 35	3 23	9 12	3 53	3 33	1 24	18 24	5 17	23 34	0 5	14 46	1 40	11 20	0 28	16 57	1 42	8 38	12 16	18 29	18 49	16 57	16 41	3 35			
T 18	1 47	12 13	2 17	9 7	3 53	3 3	1 23	18 20	5 13	23 34	0 5	14 47	1 40	11 22	0 28	16 57	1 42	8 37	12 16	18 28	18 49	16 58	16 40	3 35			
W19	1 24	16 6	1 3	8 57	3 52	2 32	1 23	18 17	5 8	23 34	0 5	14 48	1 40	11 23	0 28	16 57	1 42	8 37	12 16	18 27	18 48	16 59	16 40	3 35			
T 20	1 0	18 54	0n15	8 43	3 49	2 2	1 22	18 12	5 4	23 34	0 5	14 49	1 40	11 24	0 28	16 58	1 42	8 37	12 16	18 27	18 47	17 0	16 39	3 36			
F 21	0 37	20 27	1 31	8 25	3 44	1 32	1 21	18 8	4 59	23 34	0 5	14 50	1 40	11 25	0 28	16 58	1 42	8 37	12 17	18 27	18 46	17 1	16 39	3 36			
S 22	0 13	20 41	2 40	8 2	3 37	1 1	1 21	18 3	4 54	23 34	0 5	14 51	1 40	11 26	0 28	16 59	1 42	8 36	12 17	18 27	18 46	17 2	16 38	3 36			
S 23	0s10	19 38	3 38	7 35	3 29	0 31	1 20	17 58	4 50	23 34	0 5	14 52	1 40	11 27	0 28	16 59	1 41	8 36	12 17	18 27	18 45	17 4	16 38	3 37			
M24	0 34	17 30	4 23	7 3	3 19	0 0	1 19	17 53	4 45	23 35	0 5	14 53	1 40	11 29	0 28	17 0	1 41	8 36	12 17	18 27	18 44	17 5	16 37	3 37			
T 25	0 57	14 28	4 53	6 28	3 7	0s30	1 18	17 48	4 40	23 35	0 6	14 54	1 40	11 30	0 28	17 0	1 41	8 35	12 17	18 26	18 43	17 6	16 37	3 37			
W26	1 21	10 46	5 6	5 49	2 53	1 1	1 17	17 42	4 35	23 35	0 6	14 55	1 40	11 31	0 28	17 0	1 41	8 35	12 18	18 24	18 42	17 7	16 36	3 38			
T 27	1 44	6 39	5 5	5 8	2 37	1 32	1 16	17 36	4 31	23 35	0 6	14 56	1 40	11 32	0 28	17 1	1 41	8 35	12 18	18 22	18 42	17 8	16 35	3 38			
F 28	2 8	2 18	4 48	4 24	2 20	2 2	1 15	17 30	4 26	23 35	0 6	14 57	1 40	11 33	0 28	17 1	1 41	8 35	12 18	18 20	18 41	17 9	16 35	3 38			
S 29	2 31	2n 4	4 18	3 40	2 1	2 33	1 14	17 23	4 21	23 35	0 6	14 58	1 40	11 35	0 28	17 2	1 41	8 34	12 18	18 18	18 40	17 10	16 34	3 39			
S 30	2s54	6n18	3n36	2s56	1s41	3s 3	1n13	17s16	4s17	23s35	0s 6	14s59	1s40	11s36	0n28	17s 2	1n41	8n34	12s18	18s16	18s39	17n11	16n33	3s39			

ASTRODIENST EPHEMERIS for the year 1640
geocentric

OCTOBER 1640 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	0 40 55	8♂1747	19♂38	2°R26	11♂46	25≈ 2	0♂14	24°R21	1♂36	23♂29	2°R12	21°R45	23♂19	15♂37	29°R40	M 1
T 2	0 44 51	9°17'00	1♂34	1♂30	13° 1	25°11	0°21	24≈19	1°40	23°30	2♂12	21♂41	23°16	15°43	29♂38	T 2
W 3	0 48 48	10°16'15	13°24	0°43	14°16	25°20	0°28	24°16	1°44	23°32	2°11	21°39	23°13	15°50	29°36	W 3
T 4	0 52 45	11°15'31	25°11	0° 4	15°31	25°30	0°35	24°14	1°47	23°34	2°10	21°D39	23°10	15°57	29°35	T 4
F 5	0 56 41	12°14'51	6♂58	29♂36	16°46	25°41	0°42	24°12	1°51	23°36	2°10	21°40	23° 7	16° 3	29°33	F 5
S 6	1 0 38	13°14'12	18°49	29°17	18° 1	25°52	0°49	24° 9	1°54	23°37	2° 9	21°41	23° 4	16°10	29°31	S 6
S 7	1 4 34	14°13'36	0♂49	29°D10	19°16	26° 4	0°57	24° 7	1°58	23°39	2° 8	21°43	23° 0	16°16	29°29	S 7
M 8	1 8 31	15°13'02	13° 3	29°14	20°31	26°17	1° 4	24° 5	2° 2	23°41	2° 8	21°R44	22°57	16°23	29°27	M 8
T 9	1 12 27	16°12'30	25°35	29°29	21°46	26°30	1°12	24° 3	2° 5	23°43	2° 7	21°43	22°54	16°30	29°24	T 9
W10	1 16 24	17°12'01	8♂31	29°53	23° 1	26°44	1°20	24° 1	2° 9	23°45	2° 6	21°41	22°51	16°36	29°22	W10
T 11	1 20 20	18°11'34	21°54	0♂28	24°16	26°59	1°28	24° 0	2°12	23°47	2° 5	21°38	22°48	16°43	29°20	T 11
F 12	1 24 17	19°11'09	5♂45	1°11	25°31	27°14	1°36	23°58	2°16	23°49	2° 5	21°33	22°44	16°50	29°18	F 12
S 13	1 28 14	20°10'47	20° 3	2° 3	26°46	27°30	1°44	23°57	2°20	23°51	2° 4	21°29	22°41	16°56	29°15	S 13
S 14	1 32 10	21°10'26	4♂45	3° 2	28° 1	27°47	1°53	23°55	2°24	23°53	2° 3	21°24	22°38	17° 3	29°13	S 14
M15	1 36 7	22°10'08	19°43	4° 7	29°16	28° 4	2° 1	23°54	2°27	23°55	2° 2	21°20	22°35	17°10	29°10	M15
T 16	1 40 3	23° 9'52	4♂50	5°18	0♂31	28°21	2°10	23°53	2°31	23°56	2° 1	21°18	22°32	17°16	29° 8	T 16
W17	1 44 0	24° 9'38	19°55	6°35	1°46	28°40	2°19	23°51	2°35	23°58	2° 0	21°D17	22°29	17°23	29° 5	W17
T 18	1 47 56	25° 9'26	4♂50	7°55	3° 1	28°58	2°28	23°50	2°38	24° 1	2° 0	21°18	22°25	17°30	29° 3	T 18
F 19	1 51 53	26° 9'15	19°29	9°19	4°17	29°18	2°37	23°49	2°42	24° 3	1°59	21°19	22°22	17°36	29° 0	F 19
S 20	1 55 49	27° 9'06	3♂47	10°46	5°32	29°37	2°46	23°49	2°46	24° 5	1°58	21°20	22°19	17°43	28°57	S 20
S 21	1 59 46	28° 8'59	17°42	12°16	6°47	29°58	2°55	23°48	2°50	24° 7	1°57	21°22	22°16	17°49	28°55	S 21
M22	2 3 43	29° 8'54	1≈14	13°48	8° 2	0♂19	3° 5	23°47	2°53	24° 9	1°56	21°R22	22°13	17°56	28°52	M22
T 23	2 7 39	0♂8'50	14°25	15°21	9°17	0°40	3°14	23°47	2°57	24°11	1°55	21°21	22°10	18° 3	28°49	T 23
W24	2 11 36	1° 8'48	27°17	16°56	10°32	1° 2	3°24	23°46	3° 1	24°13	1°54	21°20	22° 6	18° 9	28°46	W24
T 25	2 15 32	2° 8'47	9♂53	18°32	11°47	1°24	3°34	23°46	3° 5	24°15	1°53	21°17	22° 3	18°16	28°43	T 25
F 26	2 19 29	3° 8'49	22°15	20° 9	13° 2	1°47	3°44	23°46	3° 8	24°17	1°52	21°14	22° 0	18°23	28°40	F 26
S 27	2 23 25	4° 8'51	4♂26	21°46	14°17	2°10	3°54	23°46	3°12	24°19	1°51	21°11	21°57	18°29	28°37	S 27
S 28	2 27 22	5° 8'56	16°28	23°24	15°32	2°34	4° 4	23°D45	3°16	24°21	1°50	21° 9	21°54	18°36	28°34	S 28
M29	2 31 18	6° 9'02	26°24	25° 2	16°47	2°58	4°14	23°46	3°20	24°24	1°49	21° 7	21°50	18°43	28°31	M29
T 30	2 35 15	7° 9'11	10♂14	26°41	18° 2	3°22	4°24	23°46	3°23	24°26	1°48	21° 6	21°47	18°49	28°28	T 30
W31	2 39 11	8♂9'21	22♂2	28♂19	19♂17	3♂47	4♂35	23≈46	3♂27	24♂28	1♂47	21°D 6	21♂44	18♂56	28♂25	W31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat
M 1	3s18	10n14	2n45	2s12	1s21	3s34	1n12	17s 9	4s12	23s35	0s 6	15s 0	1s40	11s37	0n28	17s 3
T 2	3 41	13 43	1 47	1 32	1 0	4 4	1 10	17 2	4 8	23 35	0 6	15 1	1 40	11 38	0 28	17 3
W 3	4 4	16 36	0 45	0 54	0 40	4 35	1 9	16 54	4 3	23 35	0 6	15 1	1 40	11 40	0 28	17 4
T 4	4 28	18 47	0s19	0 20	0 20	5 5	1 8	16 47	3 58	23 35	0 6	15 2	1 40	11 41	0 28	17 4
F 5	4 51	20 9	1 23	0n 9	0 1	5 35	1 6	16 39	3 54	23 36	0 7	15 3	1 40	11 42	0 28	17 5
S 6	5 14	20 38	2 23	0 33	0n17	6 5	1 5	16 31	3 49	23 36	0 7	15 3	1 39	11 43	0 28	17 5
S 7	5 37	20 11	3 18	0 51	0 34	6 35	1 3	16 22	3 45	23 36	0 7	15 4	1 39	11 45	0 28	17 6
M 8	6 0	18 47	4 5	1 4	0 50	7 5	1 1	16 14	3 41	23 36	0 7	15 5	1 39	11 46	0 28	17 6
T 9	6 23	16 27	4 41	1 11	1 4	7 34	1 0	16 5	3 36	23 36	0 7	15 5	1 39	11 47	0 28	17 7
W10	6 46	13 16	5 5	1 12	1 16	8 4	0 58	15 56	3 32	23 36	0 7	15 6	1 39	11 48	0 28	17 7
T 11	7 9	9 18	5 13	1 9	1 27	8 33	0 56	15 47	3 27	23 36	0 7	15 6	1 39	11 50	0 28	17 8
F 12	7 32	4 43	5 3	1 0	1 36	9 2	0 55	15 38	3 23	23 36	0 7	15 7	1 39	11 51	0 28	17 8
S 13	7 54	0s16	4 35	0 47	1 44	9 31	0 53	15 28	3 19	23 36	0 7	15 7	1 39	11 52	0 28	17 9
S 14	8 17	5 23	3 48	0 29	1 51	10 0	0 51	15 19	3 15	23 36	0 7	15 8	1 39	11 54	0 28	17 9
M15	8 39	10 16	2 45	0 8	1 56	10 28	0 49	15 9	3 11	23 36	0 7	15 8	1 39	11 55	0 28	17 10
T 16	9 1	14 33	1 29	0s17	2 0	10 57	0 47	14 59	3 7	23 36	0 8	15 8	1 39	11 56	0 28	17 10
W17	9 23	17 52	0 8	0 44	2 2	11 25	0 45	14 49	3 3	23 36	0 8	15 9	1 39	11 57	0 28	17 11
T 18	9 45	19 56	1n14	1 15	2 4	11 52	0 43	14 38	2 59	23 35	0 8	15 9	1 39	11 59	0 28	17 11
F 19	10 7	20 35	2 29	1 47	2 5	12 20	0 41	14 28	2 55	23 35	0 8	15 9	1 38	12 0	0 28	17 12
S 20	10 29	19 53	3 33	2 22	2 4	12 47	0 39	14 17	2 51	23 35	0 8	15 9	1 38	12 1	0 28	17 12
S 21	10 50	17 58	4 23	2 58	2 3	13 14	0 37	14 6	2 47	23 35	0 8	15 10	1 38	12 3	0 28	17 13
M22	11 12	15 6	4 57	3 35	2 1	13 40	0 34	13 55	2 43	23 35	0 8	15 10	1 38	12 4	0 28	17 13
T 23	11 33	11 32	5 13	4 14	1 59	14 6	0 32	13 44	2 39	23 35	0 8	15 10	1 38	12 5	0 28	17 14
W24	11 54	7 31	5 14	4 53	1 56	14 32	0 30	13 33	2 36	23 35	0 8	15 10	1 38	12 6	0 28	17 14
T 25	12 15	3 15	4 59	5 33	1 52	14 58	0 28	13 22	2 32	23 35	0 8	15 10	1 38	12 8	0 28	17 15
F 26	12 35	1n 4	4 31	6 13	1 48	15 23	0 25	13 10	2 28	23 34	0 8	15 10	1 38	12 9	0 28	17 15
S 27	12 56	5 17	3 51	6 54	1 44	15 47	0 23	12 58	2 25	23 34	0 9	15 10	1 38	12 10	0 28	17 16
S 28	13 16	9 16	3 0	7 35	1 39	16 12	0 21	12 46	2 21	23 34	0 9	15 10	1 38	12 12	0 28	17 17
M29	13 36	12 50	2 3	8 15	1 34	16 35	0 18	12 35	2 18	23 34	0 9	15 10	1 38	12 13	0 28	17 17
T 30	13 56	15 52	1 0	8 56	1 28	16 59	0 16	12 22	2 14	23 33	0 9	15 9	1 37	12 14	0 28	17 18
W31	14s15	18n14	0s 5	9s37	1n22	17s22	0n14	12s10	2s11	23s33	0s 9	15s 9	1s37	12s15	0n28	17s18

Julian Day Number = 2320331.5, Delta T = 49.84 sec
Ecliptic obliquity = 23°29'05, Nutation = 0°00'13, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°43'34, Lahiri = 18°50'34Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1640
geocentric

DECEMBER 1640 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	4 41 25	9 ²⁸ 28'21	6 ³⁸ 38	17 ³⁷ 37	28 ⁵ 5	19 ¹⁰ 10	10 ³ 42	24 ⁴⁵ 45	5 ¹⁸ 18	25 ³⁷ 37	1 ¹³ 13	21 ¹⁸ 18	20 ⁶ 6	22 ²² 22	26 ¹⁸ 18	S 1
S 2	4 45 21	10 ²⁹ 18	18 ⁵¹	19 ¹⁰	29 ²⁰	19 ⁴³	10 ⁵⁵	24 ⁴⁹	5 ²¹	25 ⁴⁰	1 ¹² 12	21 ³ 3	20 ² 2	22 ²⁹	26 ³⁸ 38	S 2
M 3	4 49 18	11 ³⁰ 15	1 ¹⁴ 14	20 ⁴⁴	0 ³⁵ 35	20 ¹⁷	11 ⁸	24 ⁵³	5 ²⁴	25 ⁴²	1 ¹⁰ 10	21 ⁰ 0	19 ⁵⁹	22 ³⁵	26 ³⁴	M 3
T 4	4 53 14	12 ³¹ 14	13 ⁵⁰	22 ¹⁷	1 ⁵⁰	20 ⁵⁰	11 ²¹	24 ⁵⁶	5 ²⁸	25 ⁴⁴	1 ⁹ 9	20 ⁵⁷	19 ⁵⁶	22 ⁴²	26 ³¹	T 4
W 5	4 57 11	13 ³² 14	26 ⁴¹	23 ⁵¹	3 ⁵ 5	21 ²⁴	11 ³⁴	25 ⁰	5 ³¹	25 ⁴⁶	1 ⁸ 8	20 ⁵⁵	19 ⁵³	22 ⁴⁸	26 ²⁸	W 5
T 6	5 1 7	14 ³³ 15	9 ⁵¹ 51	25 ²⁴	4 ²⁰	21 ⁵⁸	11 ⁴⁸	25 ⁴	5 ³⁴	25 ⁴⁸	1 ⁷ 7	20 ⁵⁴	19 ⁵⁰	22 ⁵⁵	26 ²⁵	T 6
F 7	5 5 4	15 ³⁴ 17	23 ²²	26 ⁵⁸	5 ³⁵	22 ³²	12 ¹	25 ⁸	5 ³⁷	25 ⁵⁰	1 ⁶ 6	20 ⁵⁴	19 ⁴⁷	23 ²	26 ²¹	F 7
S 8	5 9 1	16 ³⁵ 20	7 ¹⁴ 14	28 ³¹	6 ⁴⁹	23 ⁷	12 ¹⁴	25 ¹²	5 ⁴⁰	25 ⁵³	1 ⁵ 5	20 ⁵⁵	19 ⁴³	23 ⁸	26 ¹⁸	S 8
S 9	5 12 57	17 ³⁶ 24	21 ²⁹	0 ³ 4	8 ⁴	23 ⁴¹	12 ²⁷	25 ¹⁶	5 ⁴³	25 ⁵⁵	1 ⁴ 4	20 ⁵⁶	19 ⁴⁰	23 ¹⁵	26 ¹⁵	S 9
M10	5 16 54	18 ³⁷ 30	6 ¹¹ 5	1 ³⁷	9 ¹⁹	24 ¹⁶	12 ⁴¹	25 ²⁰	5 ⁴⁶	25 ⁵⁷	1 ³ 3	20 ⁵⁸	19 ³⁷	23 ²²	26 ¹²	M10
T 11	5 20 50	19 ³⁸ 36	20 ⁵⁸	3 ¹⁰	10 ³⁴	24 ⁵⁰	12 ⁵⁴	25 ²⁴	5 ⁴⁹	25 ⁵⁹	1 ² 2	20 ⁵⁸	19 ³⁴	23 ²⁸	26 ⁹	T 11
W12	5 24 47	20 ³⁹ 43	6 ¹ 1	4 ⁴³	11 ⁴⁹	25 ²⁵	13 ⁸	25 ²⁸	5 ⁵²	26 ¹	1 ¹ 1	20 ⁵⁸	19 ³¹	23 ³⁵	26 ⁶	W12
T 13	5 28 43	21 ⁴⁰ 51	21 ⁶	6 ¹⁵	13 ⁴	26 ⁰	13 ²¹	25 ³³	5 ⁵⁵	26 ³	1 ⁰ 0	20 ⁵⁵	19 ²⁷	23 ⁴²	26 ³	T 13
F 14	5 32 40	22 ⁴² 00	6 ³ 3	7 ⁴⁷	14 ¹⁹	26 ³⁵	13 ³⁵	25 ³⁷	5 ⁵⁸	26 ⁵	0 ⁵⁹	20 ⁵¹	19 ²⁴	23 ⁴⁸	26 ⁰	F 14
S 15	5 36 37	23 ⁴³ 08	20 ⁴⁷	9 ¹⁸	15 ³⁴	27 ¹¹	13 ⁴⁸	25 ⁴²	6 ¹ 1	26 ⁷	0 ⁵⁷	20 ⁴⁶	19 ²¹	23 ⁵⁵	25 ⁵⁷	S 15
S 16	5 40 33	24 ⁴⁴ 18	5 ⁷ 7	10 ⁴⁸	16 ⁴⁹	27 ⁴⁶	14 ²	25 ⁴⁷	6 ⁴	26 ⁹	0 ⁵⁶	20 ⁴¹	19 ¹⁸	24 ²	25 ⁵⁴	S 16
M17	5 44 30	25 ⁴⁵ 27	18 ⁵⁹	12 ¹⁸	18 ⁴	28 ²²	14 ¹⁶	25 ⁵¹	6 ⁶ 6	26 ¹¹	0 ⁵⁵	20 ³⁶	19 ¹⁵	24 ⁸	25 ⁵¹	M17
T 18	5 48 26	26 ⁴⁶ 36	2 ²³ 23	13 ⁴⁶	19 ¹⁹	28 ⁵⁷	14 ³⁰	25 ⁵⁶	6 ⁹ 9	26 ¹³	0 ⁵⁴	20 ³²	19 ¹²	24 ¹⁵	25 ⁴⁸	T 18
W19	5 52 23	27 ⁴⁷ 46	15 ²⁰	15 ¹⁴	20 ³⁴	29 ³³	14 ⁴³	26 ¹	6 ¹²	26 ¹⁵	0 ⁵³	20 ²⁹	19 ⁸	24 ²²	25 ⁴⁶	W19
T 20	5 56 19	28 ⁴⁸ 56	27 ⁵⁴	16 ³⁹	21 ⁴⁹	0 ¹⁹ 9	14 ⁵⁷	26 ⁶	6 ¹⁴	26 ¹⁷	0 ⁵²	20 ^{D29}	19 ⁵	24 ²⁸	25 ⁴³	T 20
F 21	6 0 16	29 ⁵⁰ 05	10 ¹⁹ 8	18 ³	23 ³	0 ⁴⁵	15 ¹¹	26 ¹¹	6 ¹⁷	26 ¹⁹	0 ⁵¹	20 ²⁹	19 ²	24 ³⁵	25 ⁴⁰	F 21
S 22	6 4 12	0 ³ 51'15	22 ⁸	19 ²⁵	24 ¹⁸	1 ²¹	15 ²⁵	26 ¹⁶	6 ²⁰	26 ²¹	0 ⁵⁰	20 ³¹	18 ⁵⁹	24 ⁴¹	25 ³⁷	S 22
S 23	6 8 9	1 ⁵² 25	3 ⁸ 58	20 ⁴⁴	25 ³³	1 ⁵⁷	15 ³⁸	26 ²¹	6 ²²	26 ²³	0 ⁴⁹	20 ³²	18 ⁵⁶	24 ⁴⁸	25 ³⁵	S 23
M24	6 12 6	2 ⁵³ 34	15 ⁴⁵	22 ⁰	26 ⁴⁸	2 ³³	15 ⁵²	26 ²⁶	6 ²⁵	26 ²⁵	0 ⁴⁹	20 ^{R33}	18 ⁵³	24 ⁵⁵	25 ³²	M24
T 25	6 16 2	3 ⁵⁴ 44	27 ³²	23 ¹³	28 ³	3 ⁹	16 ⁶	26 ³²	6 ²⁷	26 ²⁷	0 ⁴⁸	20 ³³	18 ⁴⁹	25 ¹	25 ³⁰	T 25
W26	6 19 59	4 ⁵⁵ 54	9 ¹¹ 23	24 ²¹	29 ¹⁷	3 ⁴⁶	16 ²⁰	26 ³⁷	6 ²⁹	26 ²⁹	0 ⁴⁷	20 ³¹	18 ⁴⁶	25 ⁸	25 ²⁷	W26
T 27	6 23 55	5 ⁵⁷ 03	21 ²⁰	25 ²⁴	0 ³² 32	4 ²²	16 ³⁴	26 ⁴²	6 ³²	26 ³¹	0 ⁴⁶	20 ²⁷	18 ⁴³	25 ¹⁵	25 ²⁵	T 27
F 28	6 27 52	6 ⁵⁸ 13	3 ²⁷ 27	26 ²²	1 ⁴⁷	4 ⁵⁹	16 ⁴⁸	26 ⁴⁸	6 ³⁴	26 ³³	0 ⁴⁵	20 ²⁰	18 ⁴⁰	25 ²¹	25 ²³	F 28
S 29	6 31 48	7 ⁵⁹ 22	15 ⁴⁴	27 ¹⁴	3 ¹	5 ³⁵	17 ²	26 ⁵⁴	6 ³⁶	26 ³⁴	0 ⁴⁴	20 ¹²	18 ³⁷	25 ²⁸	25 ²⁰	S 29
S 30	6 35 45	9 ⁰ 32	28 ¹²	27 ⁵⁸	4 ¹⁶	6 ¹²	17 ¹⁶	26 ⁵⁹	6 ³⁹	26 ³⁶	0 ⁴³	20 ³	18 ³³	25 ³⁵	25 ¹⁸	S 30
M31	6 39 41	10 ³ 1'42	10 ¹² 52	28 ³ 34	5 ³¹	6 ¹⁹ 49	17 ³ 30	27 ³ 35	6 ¹⁴ 14	26 ³⁸	0 ¹¹ 42	19 ¹⁸ 53	18 ¹⁸ 30	25 ³ 41	25 ¹⁶	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	21s55	19n34	3s46	24s40	1s46	24s28	1s 0	5s 1	0s47	23s15	0s11	14s46	1s34	12s53	0n28	17s35	1n40	8n19	12s22	18s 4	17s48	18n12	15n42	3s51
S 2	22 4	17 45	4 27	24 53	1 51	24 31	1 2	4 46	0 45	23 14	0 12	14 45	1 34	12 54	0 28	17 35	1 40	8 19	12 22	18 3	17 47	18 13	15 41	3 51
M 3	22 12	15 6	4 57	25 4	1 54	24 33	1 4	4 31	0 43	23 13	0 12	14 44	1 34	12 55	0 28	17 36	1 40	8 19	12 22	18 2	17 46	18 14	15 41	3 51
T 4	22 20	11 42	5 13	25 13	1 58	24 35	1 6	4 16	0 41	23 12	0 12	14 43	1 34	12 56	0 28	17 36	1 40	8 18	12 22	18 2	17 45	18 14	15 40	3 51
W 5	22 28	7 43	5 14	25 22	2 1	24 35	1 8	4 1	0 39	23 10	0 12	14 41	1 34	12 57	0 28	17 37	1 40	8 18	12 22	18 1	17 45	18 15	15 39	3 51
T 6	22 35	3 17	4 58	25 28	2 4	24 35	1 10	3 46	0 37	23 9	0 12	14 40	1 34	12 58	0 28	17 37	1 40	8 18	12 22	18 1	17 44	18 16	15 38	3 51
F 7	22 42	1s26	4 26	25 34	2 7	24 34	1 12	3 30	0 35	23 8	0 12	14 38	1 34	12 59	0 28	17 38	1 40	8 18	12 22	18 1	17 43	18 17	15 38	3 51
S 8	22 48	6 13	3 38	25 38	2 9	24 32	1 14	3 15	0 33	23 7	0 12	14 37	1 34	13 0	0 28	17 38	1 40	8 18	12 22	18 1	17 42	18 18	15 37	3 51
S 9	22 54	10 47	2 35	25 40	2 11	24 30	1 16	3 0	0 31	23 6	0 12	14 36	1 34	13 1	0 28	17 39	1 40	8 18	12 22	18 1	17 41	18 19	15 36	3 51
M10	23 0	14 51	1 21	25 41	2 13	24 26	1 17	2 44	0 30	23 5	0 12	14 34	1 33	13 2	0 28	17 39	1 40	8 18	12 22	18 2	17 40	18 19	15 35	3 51
T 11	23 5	18 2	0 0	25 41	2 14	24 22	1 19	2 29	0 28	23 4	0 12	14 33	1 33	13 3	0 28	17 40	1 40	8 18	12 22	18 2	17 39	18 20	15 35	3 51
W12	23 9	20 1	1n22	25 38	2 15	24 18	1 21	2 13	0 26	23 2	0 12	14 31	1 33	13 4	0 28	17 40	1 40	8 18	12 21	18 2	17 39	18 21	15 34	3 51
T 13	23 13	20 34	2 38	25 35	2 15	24 12	1 22	1 58	0 24	23 1	0 12	14 29	1 33	13 5	0 28	17 41	1 40	8 17	12 21	18 1	17 38	18 22	15 33	3 51
F 14	23 17	19 38	3 42	25 30	2 14	24 6	1 24	1 42	0 22	23 0	0 13	14 28	1 33	13 6	0 28	17 41	1 40	8 17	12 21	18 0	17 37	18 23	15 33	3 51
S 15	23 20	17 25	4 31	25 23	2 14	23 59	1 25	1 26	0 21	22 59	0 13	14 26	1 33	13 7	0 28	17 42	1 40	8 17	12 21	17 59	17 36	18 23	15 32	3 51
S 16	23 23	14 9	5 1	25 15	2 12	23 51	1 27	1 11	0 19	22 57	0 13	14 25	1 33	13 8	0 28	17 42	1 40	8 17	12 21	17 57	17 35	18 24	15 31	3 51
M17	23 25	10 13	5 12	25 5	2 10	23 43	1 28	0 55	0 17	22 56	0 13	14 23	1 33	13 9	0 28	17 43	1 40	8 17	12 21	17 56	17 34	18 25	15 31	3 51
T 18	23 27	5 53	5 6	24 53	2 8	23 34	1 29	0 39	0 16	22 54	0 13	14 21	1 33	13 10	0 28	17 43	1 40	8 17	12 21	17 55	17 33	18 26	15 30	3 51
W19	23 28	1 26	4 44	24 41	2 5	23 24	1 30	0 24	0 14	22 53	0 13	14 19	1 33	13 10	0 28	17 43	1 40	8 17	12 20	17 54	17 32	18 26	15 30	3 51
T 20	23 29	2n57	4 8	24 26	2 1	23 13	1 32	0 8	0 12	22 52	0 13	14 18	1 33	13 11	0 28	17 44	1 40	8 17	12 20	17 54	17 32	18 27	15 29	3 51
F 21	23 29	7 7	3 23	24 11	1 56	23 2	1 33	0n 8	0 11	22 50	0 13	14 16	1 33	13 12	0 28	17 44	1 40	8 17	12 20	17 54	17 31	18 28	15 28	3 51
S 22	23 29	10 56	2 29	23 54	1 50	22 50	1 34	0 24	0 9	22 49	0 13	14 14	1 33	13 13	0 28	17 45	1 40	8 17	12 20	17 55	17 30	18 29	15 28	3 51
S 23	23 28	14 16	1 29	23 36	1 44	22 37	1 35	0 39	0 8	22 47	0 13	14 12	1 32	13 14	0 28	17 45	1 41	8 17	12 20	17 55	17 29	18 30	15 27	3 51
M24	23 27	17 0	0 26	23 16	1 37	22 24	1 36	0 55	0 6	22 46	0 13	14 10	1 32	13 15	0 28	17 46	1 41	8 17	12 20	17 55	17 28	18 30	15 27	3 51
T 25	23 26	19 2	0s38	22 56	1 28	22 10	1 36	1 11	0 5	22 44	0 14	14 9	1 32	13 15	0 28	17 46	1 41	8 17	12 19	17 55	17 27	18 31	15 26	3 51
W26	23 24	20 15	1 40	22 35	1 19	21 55	1 37	1 27	0 3	22 42	0 14	14 7	1 32	13 16	0 28	17 46	1 41	8 17	12 19	17 55	17 26	18 32	15 26	3 51
T 27	23 21	20 33	2 39	22 13	1 9	21 40	1 38	1 43	0 2	22 41	0 14	14 5	1 32	13 17	0 28	17 47	1 41	8 17	12 19	17 54	17 25	18 33	15 25	3 50
F 28	23 18	19 56	3 31	21 51	0 57	21 24	1 39	1 58	0 1	22 39	0 14	14 3	1 32	13 18	0 28	17 47	1 41	8 17	12 19	17 52	17 25	18 33	15 25	3 50
S 29	23 15	18 21	4 14	21 29	0 45	21 8	1 39	2 14	0n 1	22 38	0 14	14 1	1 32	13 18	0 28	17 48	1 41	8 17	12 19	17 50	17 24	18 34	15 24	3 50
S 30	23 11	15 54	4 45	21 7	0 31	20 50	1 40	2 30	0 2	22 36	0 14	13 59	1 32	13 19	0 28	17 48	1 41	8 17	12 18	17 47	17 23	18 35	15 24	3 50
M31	23s 6	12n41	5s 3	20s45	0s16	20s33	1s40	2n46	0n 4	22s34	0s14	13s57	1s32	13s20	0n28	17s48	1n41	8n17	12s18	17s45	17s22	18n35	15n23	3s50