



Astrodienst Ephemeris Tables for the year 1646

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 1646
geocentric

JANUARY 1646 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	6 42 46	10 ³ 49'32	29 ^{II} 48	18 ³ 8	22 ³ 46	2 ³ 4	29 ^R 41	27 ^V 24	28 ^{III} 30	7 ¹ 12	5 ^R 35	10 ^R 17	11 ^Ω 45	19 ¹ 22	5 ^R 23	M 1
T 2	6 46 43	11 [°] 50'41	14 ³ 59	19 [°] 47	23 [°] 57	2 [°] 50	29 ^{II} 33	27 [°] 24	28 [°] 33	7 [°] 14	5 ^{II} 34	10 [°] 14	11 [°] 42	19 [°] 28	5 ³ 19	T 2
W 3	6 50 40	12 [°] 51'49	29 [°] 59	21 [°] 26	25 [°] 7	3 [°] 35	29 [°] 25	27 [°] 24	28 [°] 36	7 [°] 16	5 [°] 33	10 [°] 12	11 [°] 39	19 [°] 35	5 [°] 15	W 3
T 4	6 54 36	13 [°] 52'58	14 ^Ω 39	23 [°] 6	26 [°] 18	4 [°] 21	29 [°] 18	27 [°] 25	28 [°] 39	7 [°] 17	5 [°] 32	10 [°] D12	11 [°] 36	19 [°] 42	5 [°] 11	T 4
F 5	6 58 33	14 [°] 54'06	28 [°] 54	24 [°] 45	27 [°] 29	5 [°] 6	29 [°] 10	27 [°] 26	28 [°] 42	7 [°] 19	5 [°] 31	10 [°] 13	11 [°] 32	19 [°] 48	5 [°] 6	F 5
S 6	7 2 29	15 [°] 55'14	12 ^{III} 42	26 [°] 25	28 [°] 39	5 [°] 52	29 [°] 3	27 [°] 26	28 [°] 44	7 [°] 21	5 [°] 31	10 [°] 14	11 [°] 29	19 [°] 55	5 [°] 2	S 6
S 7	7 6 26	16 [°] 56'22	26 [°] 3	28 [°] 5	29 [°] 50	6 [°] 38	28 [°] 55	27 [°] 27	28 [°] 47	7 [°] 23	5 [°] 30	10 [°] 16	11 [°] 26	20 [°] 2	4 [°] 58	S 7
M 8	7 10 22	17 [°] 57'30	8 ^Δ 58	29 [°] 44	1 ^{II} 0	7 [°] 23	28 [°] 48	27 [°] 28	28 [°] 50	7 [°] 25	5 [°] 29	10 [°] 17	11 [°] 23	20 [°] 8	4 [°] 54	M 8
T 9	7 14 19	18 [°] 58'38	21 [°] 32	1 ^Δ 24	2 [°] 10	8 [°] 9	28 [°] 41	27 [°] 29	28 [°] 53	7 [°] 27	5 [°] 28	10 [°] R17	11 [°] 20	20 [°] 15	4 [°] 50	T 9
W10	7 18 15	19 [°] 59'46	3 ^{III} 48	3 [°] 3	3 [°] 20	8 [°] 55	28 [°] 34	27 [°] 31	28 [°] 55	7 [°] 29	5 [°] 27	10 [°] 17	11 [°] 16	20 [°] 22	4 [°] 46	W10
T 11	7 22 12	21 [°] 0'53	15 [°] 52	4 [°] 41	4 [°] 30	9 [°] 41	28 [°] 27	27 [°] 32	28 [°] 58	7 [°] 30	5 [°] 27	10 [°] 15	11 [°] 13	20 [°] 28	4 [°] 42	T 11
F 12	7 26 9	22 [°] 2'01	27 [°] 47	6 [°] 19	5 [°] 39	10 [°] 27	28 [°] 20	27 [°] 33	29 [°] 1	7 [°] 32	5 [°] 26	10 [°] 12	11 [°] 10	20 [°] 35	4 [°] 38	F 12
S 13	7 30 5	23 [°] 3'08	9 ¹ 38	7 [°] 56	6 [°] 49	11 [°] 12	28 [°] 13	27 [°] 35	29 [°] 3	7 [°] 34	5 [°] 25	10 [°] 10	11 [°] 7	20 [°] 42	4 [°] 34	S 13
S 14	7 34 2	24 [°] 4'14	21 [°] 27	9 [°] 31	7 [°] 58	11 [°] 58	28 [°] 6	27 [°] 37	29 [°] 6	7 [°] 35	5 [°] 24	10 [°] 7	11 [°] 4	20 [°] 49	4 [°] 31	S 14
M15	7 37 58	25 [°] 5'20	3 ³ 18	11 [°] 5	9 [°] 7	12 [°] 44	28 [°] 0	27 [°] 38	29 [°] 8	7 [°] 37	5 [°] 24	10 [°] 4	11 [°] 1	20 [°] 55	4 [°] 27	M15
T 16	7 41 55	26 [°] 6'25	15 [°] 14	12 [°] 37	10 [°] 16	13 [°] 30	27 [°] 53	27 [°] 40	29 [°] 11	7 [°] 39	5 [°] 23	10 [°] 2	10 [°] 57	21 [°] 2	4 [°] 23	T 16
W17	7 45 51	27 [°] 7'30	27 [°] 15	14 [°] 7	11 [°] 25	14 [°] 16	27 [°] 47	27 [°] 42	29 [°] 13	7 [°] 40	5 [°] 22	10 [°] 1	10 [°] 54	21 [°] 9	4 [°] 19	W17
T 18	7 49 48	28 [°] 8'34	9 ^Δ 24	15 [°] 33	12 [°] 34	15 [°] 3	27 [°] 41	27 [°] 44	29 [°] 15	7 [°] 42	5 [°] 22	10 [°] D 1	10 [°] 51	21 [°] 15	4 [°] 16	T 18
F 19	7 53 44	29 [°] 9'37	21 [°] 43	16 [°] 56	13 [°] 43	15 [°] 49	27 [°] 35	27 [°] 47	29 [°] 18	7 [°] 44	5 [°] 21	10 [°] 1	10 [°] 48	21 [°] 22	4 [°] 12	F 19
S 20	7 57 41	0 ^Δ 10'39	4 ^{II} 12	18 [°] 15	14 [°] 51	16 [°] 35	27 [°] 29	27 [°] 49	29 [°] 20	7 [°] 45	5 [°] 21	10 [°] 2	10 [°] 45	21 [°] 29	4 [°] 8	S 20
S 21	8 1 38	1 [°] 11'41	16 [°] 54	19 [°] 29	15 [°] 59	17 [°] 21	27 [°] 24	27 [°] 51	29 [°] 22	7 [°] 47	5 [°] 20	10 [°] 3	10 [°] 42	21 [°] 35	4 [°] 5	S 21
M22	8 5 34	2 [°] 12'41	29 [°] 50	20 [°] 38	17 [°] 7	18 [°] 7	27 [°] 18	27 [°] 54	29 [°] 24	7 [°] 48	5 [°] 19	10 [°] 4	10 [°] 38	21 [°] 42	4 [°] 1	M22
T 23	8 9 31	3 [°] 13'39	13 [°] 9'2	21 [°] 40	18 [°] 15	18 [°] 53	27 [°] 13	27 [°] 56	29 [°] 27	7 [°] 50	5 [°] 19	10 [°] 4	10 [°] 35	21 [°] 49	3 [°] 58	T 23
W24	8 13 27	4 [°] 14'37	26 [°] 31	22 [°] 35	19 [°] 23	19 [°] 40	27 [°] 8	27 [°] 59	29 [°] 29	7 [°] 51	5 [°] 18	10 [°] 5	10 [°] 32	21 [°] 55	3 [°] 54	W24
T 25	8 17 24	5 [°] 15'33	10 ^Δ 20	23 [°] 22	20 [°] 30	20 [°] 26	27 [°] 3	28 [°] 2	29 [°] 31	7 [°] 53	5 [°] 18	10 [°] R 5	10 [°] 29	22 [°] 2	3 [°] 51	T 25
F 26	8 21 20	6 [°] 16'28	24 [°] 27	24 [°] 0	21 [°] 37	21 [°] 12	26 [°] 58	28 [°] 5	29 [°] 33	7 [°] 54	5 [°] 17	10 [°] 4	10 [°] 26	22 [°] 9	3 [°] 48	F 26
S 27	8 25 17	7 [°] 17'22	8 ^{II} 51	24 [°] 29	22 [°] 44	21 [°] 59	26 [°] 53	28 [°] 8	29 [°] 35	7 [°] 55	5 [°] 17	10 [°] 4	10 [°] 22	22 [°] 16	3 [°] 45	S 27
S 28	8 29 13	8 [°] 18'14	23 [°] 29	24 [°] 47	23 [°] 51	22 [°] 45	26 [°] 49	28 [°] 11	29 [°] 36	7 [°] 57	5 [°] 16	10 [°] 4	10 [°] 19	22 [°] 22	3 [°] 41	S 28
M29	8 33 10	9 [°] 19'05	8 ³ 17	24 [°] R55	24 [°] 57	23 [°] 31	26 [°] 44	28 [°] 14	29 [°] 38	7 [°] 58	5 [°] 16	10 [°] 4	10 [°] 16	22 [°] 29	3 [°] 38	M29
T 30	8 37 7	10 [°] 19'55	23 [°] 7	24 [°] 52	26 [°] 4	24 [°] 18	26 [°] 40	28 [°] 18	29 [°] 40	7 [°] 59	5 [°] 15	10 [°] D 4	10 [°] 13	22 [°] 36	3 [°] 35	T 30
W31	8 41 3	11 ^Δ 20'43	7 ^Ω 52	24 ^Δ 38	27 ^{II} 10	25 ³ 4	26 ^{II} 36	28 [°] V21	29 ^{III} 42	8 ^Δ 1	5 ^{II} 15	10 [°] R 4	10 [°] Ω10	22 ^Δ 42	3 ³ 32	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
M 1	23s 2	20n 5	3s24	24s21	2s 7	15s33	1s42	24s10	0s42	23n20	0s 9	8n12	2s32	19s40	0n12	20s 2	1n33	10n12	11s15	17n42	17n18	18s59	16n15	7s 8					
T 2	22 57	20 25	2 14	24 7	2 7	15 8	1 39	24 10	0 43	23 21	0 8	8 12	2 32	19 41	0 12	20 2	1 33	10 12	11 15	17 43	17 19	19 0	16 15	7 8					
W 3	22 52	19 17	0 56	23 52	2 7	14 42	1 37	24 9	0 43	23 21	0 8	8 13	2 31	19 41	0 12	20 2	1 33	10 12	11 14	17 43	17 19	19 1	16 15	7 8					
T 4	22 45	16 51	0n24	23 35	2 7	14 15	1 35	24 9	0 44	23 21	0 8	8 13	2 31	19 42	0 12	20 2	1 33	10 12	11 14	17 43	17 20	19 2	16 15	7 8					
F 5	22 39	13 27	1 41	23 17	2 6	13 49	1 32	24 7	0 44	23 21	0 8	8 14	2 31	19 43	0 12	20 3	1 33	10 12	11 14	17 43	17 21	19 4	16 15	7 8					
S 6	22 32	9 25	2 49	22 57	2 4	13 22	1 30	24 6	0 45	23 21	0 8	8 14	2 30	19 43	0 12	20 3	1 33	10 12	11 14	17 43	17 22	19 5	16 16	7 8					
S 7	22 24	5 2	3 46	22 35	2 2	12 54	1 27	24 4	0 45	23 21	0 8	8 15	2 30	19 44	0 12	20 3	1 33	10 12	11 14	17 42	17 23	19 6	16 16	7 8					
M 8	22 17	0 34	4 30	22 11	2 0	12 27	1 24	24 2	0 46	23 21	0 8	8 16	2 30	19 44	0 12	20 4	1 33	10 12	11 13	17 42	17 24	19 7	16 16	7 8					
T 9	22 8	3s47	4 59	21 47	1 56	11 59	1 21	24 0	0 46	23 21	0 7	8 16	2 30	19 45	0 12	20 4	1 33	10 12	11 13	17 42	17 25	19 8	16 16	7 8					
W10	21 59	7 53	5 13	21 20	1 53	11 31	1 18	23 58	0 47	23 21	0 7	8 17	2 29	19 46	0 12	20 4	1 33	10 12	11 13	17 42	17 26	19 9	16 16	7 8					
T 11	21 50	11 36	5 14	20 52	1 48	11 3	1 15	23 55	0 47	23 21	0 7	8 18	2 29	19 46	0 12	20 4	1 33	10 12	11 13	17 42	17 26	19 10	16 17	7 8					
F 12	21 41	14 49	5 1	20 23	1 43	10 34	1 12	23 52	0 48	23 21	0 7	8 19	2 29	19 47	0 12	20 5	1 33	10 12	11 13	17 43	17 27	19 11	16 17	7 7					
S 13	21 31	17 24	4 35	19 53	1 37	10 5	1 8	23 49	0 48	23 22	0 7	8 19	2 28	19 47	0 12	20 5	1 33	10 13	11 12	17 44	17 28	19 12	16 17	7 7					
S 14	21 20	19 16	3 57	19 21	1 30	9 36	1 5	23 45	0 49	23 22	0 7	8 20	2 28	19 48	0 12	20 5	1 33	10 13	11 12	17 45	17 29	19 13	16 17	7 7					
M15	21 9	20 17	3 9	18 48	1 22	9 7	1 1	23 41	0 49	23 22	0 6	8 21	2 28	19 48	0 12	20 5	1 33	10 13	11 12	17 45	17 30	19 14	16 18	7 7					
T 16	20 58	20 25	2 13	18 14	1 14	8 37	0 58	23 37	0 50	23 22	0 6	8 22	2 27	19 49	0 12	20 6	1 33	10 13	11 12	17 46	17 31	19 15	16 18	7 7					
W17	20 46	19 36	1 10	17 40	1 5	8 7	0 54	23 33	0 50	23 22	0 6	8 23	2 27	19 49	0 12	20 6	1 33	10 13	11 11	17 46	17 32	19 16	16 18	7 7					
T 18	20 34	17 53	0 3	17 4	0 55	7 38	0 50	23 28	0 51	23 22	0 6	8 24	2 27	19 50	0 12	20 6	1 33	10 13	11 11	17 46	17 33	19 17	16 19	7 6					
F 19	20 22	15 19	1s 4	16 29	0 44	7 8	0 46	23 24	0 51	23 22	0 6	8 25	2 27	19 50	0 12	20 6	1 33	10 13	11 11	17 46	17 33	19 18	16 19	7 6					
S 20	20 9	12 0	2 10	15 53	0 32	6 37	0 42	23 18	0 52	23 22	0 6	8 26	2 26	19 51	0 12	20 6	1 33	10 13	11 11	17 46	17 34	19 19	16 19	7 6					
S 21	19 56	8 7	3 11	15 18	0 19	6 7	0 38	23 13	0 52	23 22	0 6	8 27	2 26	19 51	0 12	20 7	1 33	10 13	11 11	17 46	17 35	19 20	16 20	7 6					
M22	19 42	3 47	4 3	14 44	0 5	5 37	0 34	23 7	0 53	23 22	0 5	8 29	2 26	19 52	0 12	20 7	1 33	10 14	11 10	17 45	17 36	19 21	16 20	7 6					
T 23	19 28	0n48	4 43	14 10	0n 9	5 6	0 29	23 2	0 53	23 22	0 5	8 30	2 25	19 52	0 12	20 7	1 33	10 14	11 10	17 45	17 37	19 22	16 20	7 5					
W24	19 14	5 27	5 9	13 38	0 24	4 36	0 25	22 55	0 54	23 22	0 5	8 31	2 25	19 53	0 12	20 7	1 33	10 14	11 10	17 45	17 38	19 23	16 21	7 5					
T 25	18 59	9 55	5 18	13 7	0 40	4 5	0 20	22 49	0 54	23 22	0 5	8 32	2 25	19 53	0 12	20 7	1 34	10 14	11 10	17 45	17 39	19 24	16 21	7 5					
F 26	18 44	13 56	5 8	12 39	0 57	3 34	0 16	22 42	0 54	23 22	0 5	8 34	2 25	19 54	0 12	20 8	1 34	10 14	11 9	17 45	17 40	19 25	16 21	7 4					
S 27	18 29	17 14	4 39	12 13	1 14	3 4	0 11	22 35	0 55	23 22	0 5	8 35	2 24	19 54	0 12	20 8	1 34	10 14	11 9	17 45	17 40	19 26	16 22	7 4					
S 28	18 13	19 29	3 51	11 51	1 31	2 33	0 6	22 28	0 55	23 22	0 5	8 36	2 24	19 55	0 12	20 8	1 34	10 15	11 9	17 45	17 41	19 27	16 22	7 4					
M29	17 57	20 26	2 48	11 32	1 48	2 2	0 2	22 21	0 56	23 22	0 4	8 38	2 24	19 55	0 12	20 8	1 34	10 15	11 9	17 45	17 42	19 28	16 23	7 4					
T 30	17 41	19 58	1 33	11 17	2 6	1 31	0n 3	22 13	0 56	23 22	0 4	8 39	2 23	19 55	0 12	20 8	1 34	10 15	11 8	17 45	17 43	19 29	16 23	7 3					
W31	17s24	18n 8	0s12	11s 6	2n22	1s 0	0n 8	22s 5	0s57	23n22	0s 4	8n41	2s23	19s56	0n12	20s 9	1n34	10n15	11s 8	17n45	17n44	19s30	16n23	7s 3					

ASTRODIENST EPHEMERIS for the year 1646

geocentric

FEBRUARY 1646 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	8 45 0	12 ²² 13'1	22 ²² 25	24 ²⁴ R12	28 ²⁸ 15	25 ²⁵ 51	26 ²⁶ R33	28 ²⁸ Y25	29 ²⁹ M44	8 ⁸ 2	5 ⁵ R15	10 ¹⁰ R 4	10 ¹⁰ Ω 7	22 ²² 749	3 ³ R29	T 1
F 2	8 48 56	13 ²² 22'16	6 ¹⁰ 39	23 ²³ 37	29 ²⁹ 21	26 ²⁶ 37	26 ²⁶ II29	28 ²⁸ 28	29 ²⁹ 45	8 ⁸ 3	5 ⁵ II14	10 ¹⁰ Ω 4	10 ¹⁰ 3	22 ²² 56	3 ³ Ω27	F 2
S 3	8 52 53	14 ²³ 23'01	20 ²⁰ 31	22 ²² 52	0 ⁰ Y26	27 ²⁷ 24	26 ²⁶ 26	28 ²⁸ 32	29 ²⁹ 47	8 ⁸ 4	5 ⁵ 14	10 ¹⁰ 3	10 ¹⁰ 0	23 ²³ 2	3 ³ 24	S 3
S 4	8 56 49	15 ²³ 23'45	3 ³ 58	21 ²¹ 59	1 ¹ 31	28 ²⁸ 10	26 ²⁶ 22	28 ²⁸ 36	29 ²⁹ 48	8 ⁸ 5	5 ⁵ 14	10 ¹⁰ 3	9 ⁹ 57	23 ²³ 9	3 ³ 21	S 4
M 5	9 0 46	16 ²⁴ 24'27	17 ¹⁷ 1	20 ²⁰ 58	2 ² 35	28 ²⁸ 57	26 ²⁶ 19	28 ²⁸ 40	29 ²⁹ 50	8 ⁸ 7	5 ⁵ 13	10 ¹⁰ 2	9 ⁹ 54	23 ²³ 16	3 ³ 19	M 5
T 6	9 4 42	17 ²⁵ 25'08	29 ²⁹ 41	19 ¹⁹ 53	3 ³ 40	29 ²⁹ 44	26 ²⁶ 17	28 ²⁸ 44	29 ²⁹ 51	8 ⁸ 8	5 ⁵ 13	10 ¹⁰ 1	9 ⁹ 51	23 ²³ 22	3 ³ 16	T 6
W 7	9 8 39	18 ²⁵ 25'48	12 ¹² M 2	18 ¹⁸ 44	4 ⁴ 43	0 ⁰ 30	26 ²⁶ 14	28 ²⁸ 48	29 ²⁹ 53	8 ⁸ 9	5 ⁵ 13	10 ¹⁰ 1	9 ⁹ 47	23 ²³ 29	3 ³ 14	W 7
T 8	9 12 36	19 ²⁶ 26'27	24 ²⁴ 8	17 ¹⁷ 34	5 ⁵ 47	1 ¹ 17	26 ²⁶ 12	28 ²⁸ 52	29 ²⁹ 54	8 ⁸ 10	5 ⁵ 13	10 ¹⁰ D 1	9 ⁹ 44	23 ²³ 36	3 ³ 11	T 8
F 9	9 16 32	20 ²⁷ 27'05	6 ⁶ 7 4	16 ¹⁶ 25	6 ⁶ 50	2 ² 4	26 ²⁶ 9	28 ²⁸ 56	29 ²⁹ 55	8 ⁸ 11	5 ⁵ 13	10 ¹⁰ 1	9 ⁹ 41	23 ²³ 42	3 ³ 9	F 9
S 10	9 20 29	21 ²⁷ 27'42	17 ¹⁷ 55	15 ¹⁵ 18	7 ⁷ 53	2 ² 50	26 ²⁶ 7	29 ²⁹ 0	29 ²⁹ 57	8 ⁸ 12	5 ⁵ 12	10 ¹⁰ 2	9 ⁹ 38	23 ²³ 49	3 ³ 7	S 10
S 11	9 24 25	22 ²⁸ 28'17	29 ²⁹ 44	14 ¹⁴ 14	8 ⁸ 56	3 ³ 37	26 ²⁶ 6	29 ²⁹ 5	29 ²⁹ 58	8 ⁸ 13	5 ⁵ 12	10 ¹⁰ 3	9 ⁹ 35	23 ²³ 56	3 ³ 4	S 11
M 12	9 28 22	23 ²⁸ 28'52	11 ¹¹ 37	13 ¹³ 16	9 ⁹ 58	4 ⁴ 24	26 ²⁶ 4	29 ²⁹ 9	29 ²⁹ 59	8 ⁸ 13	5 ⁵ 12	10 ¹⁰ 5	9 ⁹ 32	24 ²⁴ 3	3 ³ 2	M 12
T 13	9 32 18	24 ²⁹ 29'24	23 ²³ 37	12 ¹² 23	11 ¹¹ 0	5 ⁵ 11	26 ²⁶ 2	29 ²⁹ 14	0 ⁰ 7 0	8 ⁸ 14	5 ⁵ 12	10 ¹⁰ 6	9 ⁹ 28	24 ²⁴ 9	3 ³ 0	T 13
W 14	9 36 15	25 ²⁹ 29'56	5 ⁵ 47	11 ¹¹ 38	12 ¹² 2	5 ⁵ 57	26 ²⁶ 1	29 ²⁹ 19	0 ⁰ 1	8 ⁸ 15	5 ⁵ 12	10 ¹⁰ R 6	9 ⁹ 25	24 ²⁴ 16	2 ² 58	W 14
T 15	9 40 11	26 ³⁰ 30'25	18 ¹⁸ 9	10 ¹⁰ 59	13 ¹³ 3	6 ⁶ 44	26 ²⁶ 0	29 ²⁹ 23	0 ⁰ 2	8 ⁸ 16	5 ⁵ 12	10 ¹⁰ 6	9 ⁹ 22	24 ²⁴ 23	2 ² 57	T 15
F 16	9 44 8	27 ³⁰ 30'54	0 ⁰ 45	10 ¹⁰ 28	14 ¹⁴ 4	7 ⁷ 31	25 ²⁵ 59	29 ²⁹ 28	0 ⁰ 3	8 ⁸ 17	5 ⁵ 12	10 ¹⁰ 5	9 ⁹ 19	24 ²⁴ 29	2 ² 55	F 16
S 17	9 48 5	28 ³¹ 31'20	13 ¹³ 35	10 ¹⁰ 5	15 ¹⁵ 4	8 ⁸ 18	25 ²⁵ 59	29 ²⁹ 33	0 ⁰ 4	8 ⁸ 17	5 ⁵ 12	10 ¹⁰ 3	9 ⁹ 16	24 ²⁴ 36	2 ² 53	S 17
S 18	9 52 1	29 ³¹ 31'45	26 ²⁶ 39	9 ⁹ 49	16 ¹⁶ 4	9 ⁹ 5	25 ²⁵ 58	29 ²⁹ 38	0 ⁰ 5	8 ⁸ 18	5 ⁵ D12	10 ¹⁰ 1	9 ⁹ 13	24 ²⁴ 43	2 ² 52	S 18
M 19	9 55 58	0 ⁰ 32'07	9 ⁹ Y57	9 ⁹ 40	17 ¹⁷ 3	9 ⁹ 51	25 ²⁵ 58	29 ²⁹ 43	0 ⁰ 6	8 ⁸ 19	5 ⁵ 12	9 ⁹ 57	9 ⁹ 9	24 ²⁴ 49	2 ² 50	M 19
T 20	9 59 54	1 ³² 32'28	2 ² 18	9 ⁹ D38	18 ¹⁸ 2	10 ¹⁰ 38	25 ²⁵ D58	29 ²⁹ 49	0 ⁰ 6	8 ⁸ 19	5 ⁵ 12	9 ⁹ 54	9 ⁹ 6	24 ²⁴ 56	2 ² 49	T 20
W 21	10 3 51	2 ³² 32'47	7 ⁷ 10	9 ⁹ 43	19 ¹⁹ 1	11 ¹¹ 25	25 ²⁵ 58	29 ²⁹ 54	0 ⁰ 7	8 ⁸ 20	5 ⁵ 12	9 ⁹ 52	9 ⁹ 3	25 ²⁵ 3	2 ² 47	W 21
T 22	10 7 47	3 ³³ 33'04	21 ²¹ 3	9 ⁹ 54	19 ¹⁹ 59	12 ¹² 12	25 ²⁵ 59	29 ²⁹ 59	0 ⁰ 8	8 ⁸ 21	5 ⁵ 12	9 ⁹ 50	9 ⁹ 0	25 ²⁵ 9	2 ² 46	T 22
F 23	10 11 44	4 ³³ 33'19	5 ⁵ II 6	10 ¹⁰ 11	20 ²⁰ 56	12 ¹² 59	25 ²⁵ 59	0 ⁰ 8 5	0 ⁰ 8	8 ⁸ 21	5 ⁵ 12	9 ⁹ D50	8 ⁸ 57	25 ²⁵ 16	2 ² 45	F 23
S 24	10 15 40	5 ³³ 33'32	19 ¹⁹ 16	10 ¹⁰ 33	21 ²¹ 53	13 ¹³ 46	26 ²⁶ 0	0 ⁰ 10	0 ⁰ 9	8 ⁸ 22	5 ⁵ 12	9 ⁹ 50	8 ⁸ 53	25 ²⁵ 23	2 ² 44	S 24
S 25	10 19 37	6 ³³ 33'43	3 ³ Ω33	11 ¹¹ 0	22 ²² 49	14 ¹⁴ 33	26 ²⁶ 1	0 ⁰ 16	0 ⁰ 9	8 ⁸ 22	5 ⁵ 12	9 ⁹ 51	8 ⁸ 50	25 ²⁵ 29	2 ² 43	S 25
M 26	10 23 34	7 ³³ 33'52	17 ¹⁷ 53	11 ¹¹ 33	23 ²³ 45	15 ¹⁵ 20	26 ²⁶ 2	0 ⁰ 21	0 ⁰ 10	8 ⁸ 23	5 ⁵ 13	9 ⁹ 53	8 ⁸ 47	25 ²⁵ 36	2 ² 42	M 26
T 27	10 27 30	8 ³³ 33'58	2 ² Ω14	12 ¹² 9	24 ²⁴ 40	16 ¹⁶ 7	26 ²⁶ 4	0 ⁰ 27	0 ⁰ 10	8 ⁸ 23	5 ⁵ 13	9 ⁹ 54	8 ⁸ 44	25 ²⁵ 43	2 ² 41	T 27
W 28	10 31 27	9 ³⁴ 34'03	16 ¹⁶ Ω32	12 ¹² 50	25 ²⁵ Y35	16 ¹⁶ 54	26 ²⁶ II 5	0 ⁰ 833	0 ⁰ 710	8 ⁸ 23	5 ⁵ II13	9 ⁹ R54	8 ⁸ Ω41	25 ²⁵ 49	2 ² Ω41	W 28

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat
T 1	17s 8	15n 8	1n 8	10s59	2n38	0s29	0n14	21s57	0s57	23n22	0s 4	8n42	2s23	19s56	0n12	20s 9
F 2	16 50	11 17	2 22	10 57	2 53	0n 2	0 19	21 48	0 57	23 22	0 4	8 44	2 23	19 56	0 12	20 9
S 3	16 33	6 56	3 26	10 59	3 6	0 32	0 24	21 40	0 58	23 22	0 4	8 45	2 22	19 57	0 12	20 9
S 4	16 15	2 21	4 17	11 5	3 18	1 3	0 29	21 31	0 58	23 23	0 3	8 47	2 22	19 57	0 12	20 9
M 5	15 57	2s12	4 52	11 15	3 28	1 34	0 35	21 22	0 59	23 23	0 3	8 48	2 22	19 57	0 12	20 9
T 6	15 39	6 30	5 12	11 28	3 35	2 5	0 40	21 12	0 59	23 23	0 3	8 50	2 22	19 58	0 12	20 9
W 7	15 20	10 26	5 17	11 44	3 40	2 35	0 46	21 3	0 59	23 23	0 3	8 52	2 21	19 58	0 12	20 10
T 8	15 1	13 52	5 8	12 3	3 43	3 6	0 52	20 53	1 0	23 23	0 3	8 54	2 21	19 58	0 12	20 10
F 9	14 42	16 41	4 45	12 23	3 44	3 36	0 57	20 43	1 0	23 23	0 3	8 55	2 21	19 59	0 12	20 10
S 10	14 23	18 46	4 11	12 45	3 42	4 6	1 3	20 32	1 0	23 23	0 3	8 57	2 21	19 59	0 12	20 10
S 11	14 3	20 3	3 26	13 7	3 38	4 36	1 9	20 22	1 1	23 23	0 3	8 59	2 20	19 59	0 12	20 10
M 12	13 43	20 28	2 31	13 29	3 32	5 6	1 15	20 11	1 1	23 23	0 2	9 1	2 20	19 59	0 12	20 10
T 13	13 23	19 56	1 30	13 51	3 24	5 36	1 21	20 0	1 2	23 23	0 2	9 3	2 20	20 0	0 12	20 10
W 14	13 3	18 28	0 24	14 12	3 15	6 6	1 27	19 49	1 2	23 23	0 2	9 4	2 20	20 0	0 12	20 10
T 15	12 42	16 7	0s44	14 32	3 5	6 36	1 33	19 38	1 2	23 23	0 2	9 6	2 19	20 0	0 12	20 10
F 16	12 21	12 58	1 52	14 52	2 54	7 5	1 39	19 26	1 3	23 24	0 2	9 8	2 19	20 0	0 12	20 10
S 17	12 1	9 9	2 55	15 9	2 42	7 34	1 46	19 14	1 3	23 24	0 2	9 10	2 19	20 0	0 12	20 10
S 18	11 40	4 51	3 49	15 26	2 29	8 3	1 52	19 2	1 3	23 24	0 2	9 12	2 19	20 1	0 12	20 11
M 19	11 18	0 14	4 33	15 40	2 16	8 32	1 58	18 50	1 4	23 24	0 1	9 14	2 18	20 1	0 12	20 11
T 20	10 57	4n27	5 2	15 54	2 3	9 0	2 5	18 37	1 4	23 24	0 1	9 16	2 18	20 1	0 12	20 11
W 21	10 35	8 58	5 14	16 5	1 50	9 29	2 11	18 25	1 4	23 24	0 1	9 18	2 18	20 1	0 12	20 11
T 22	10 13	13 5	5 9	16 15	1 37	9 57	2 17	18 12	1 4	23 24	0 1	9 20	2 18	20 1	0 12	20 11
F 23	9 51	16 31	4 45	16 23	1 24	10 24	2 24	17 59	1 5	23 24	0 1	9 22	2 17	20 1	0 12	20 11
S 24	9 29	19 0	4 3	16 29	1 11	10 52	2 31	17 46	1 5	23 25	0 1	9 25	2 17	20 1	0 12	20 11
S 25	9 7	20 20	3 7	16 34	0 58	11 19	2 37	17 32	1 5	23 25	0 1	9 27	2 17	20 1	0 12	20 11
M 26	8 45	20 20	1 58	16 37	0 46	11 46	2 44	17 19	1 6	23 25	0 1	9 29	2 17	20 2	0 12	20 11
T 27	8 22	19 1	0 42	16 39	0 33	12 13	2 50	17 5	1 6	23 25	0 0	9 31	2 17	20 2	0 12	20 11
W 28	8s 0	16n29	0n36	16s39	0n22	12n39	2n57	16s51	1s 6	23n25	0s 0	9n33	2s16	20s 2	0n12	20s11

ASTRODIENST EPHEMERIS for the year 1646

geocentric

MARCH 1646 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	10 35 23	10 ^h 34'05"	0 ^m 42"	13 ^h 35'	26 ^h 29'	17 ^h 41'	26 ^h 11'	0 ^h 38'	0 ^h 10'	8 ^h 24'	5 ^h 13'	9 ^h 53'	8 ^h 38'	25 ^h 56'	2 ^h 40'	T 1
F 2	10 39 20	11 ^h 34'06"	14 ^m 40"	14 ^h 23'	27 ^h 22'	18 ^h 28'	26 ^h 9'	0 ^h 44'	0 ^h 11'	8 ^h 24'	5 ^h 13'	9 ^h 50'	8 ^h 34'	26 ^h 3'	2 ^h 54'	F 2
S 3	10 43 16	12 ^h 34'04"	28 ^m 22"	15 ^h 15'	28 ^h 14'	19 ^h 14'	26 ^h 11'	0 ^h 50'	0 ^h 11'	8 ^h 24'	5 ^h 14'	9 ^h 45'	8 ^h 31'	26 ^h 9'	2 ^h 39'	S 3
S 4	10 47 13	13 ^h 34'01"	11 ^m 44"	16 ^h 10'	29 ^h 6'	20 ^h 1'	26 ^h 13'	0 ^h 56'	0 ^h 11'	8 ^h 24'	5 ^h 14'	9 ^h 39'	8 ^h 28'	26 ^h 16'	2 ^h 39'	S 4
M 5	10 51 9	14 ^h 33'56"	24 ^m 47"	17 ^h 8'	29 ^h 57'	20 ^h 48'	26 ^h 16'	1 ^h 2'	0 ^h 11'	8 ^h 25'	5 ^h 14'	9 ^h 34'	8 ^h 25'	26 ^h 23'	2 ^h 39'	M 5
T 6	10 55 6	15 ^h 33'49"	7 ^m 29"	18 ^h 8'	0 ^h 47'	21 ^h 35'	26 ^h 19'	1 ^h 8'	0 ^h 11'	8 ^h 25'	5 ^h 15'	9 ^h 28'	8 ^h 22'	26 ^h 30'	2 ^h 39'	T 6
W 7	10 59 3	16 ^h 33'41"	19 ^m 52"	19 ^h 11'	1 ^h 37'	22 ^h 22'	26 ^h 21'	1 ^h 15'	0 ^h 11'	8 ^h 25'	5 ^h 15'	9 ^h 23'	8 ^h 19'	26 ^h 36'	2 ^h 39'	W 7
T 8	11 2 59	17 ^h 33'30"	2 ^m 1	20 ^h 16'	2 ^h 25'	23 ^h 9'	26 ^h 24'	1 ^h 21'	0 ^h 11'	8 ^h 25'	5 ^h 15'	9 ^h 20'	8 ^h 15'	26 ^h 43'	2 ^h 39'	T 8
F 9	11 6 56	18 ^h 33'18"	13 ^m 58"	21 ^h 24'	3 ^h 13'	23 ^h 56'	26 ^h 28'	1 ^h 27'	0 ^h 10'	8 ^h 25'	5 ^h 16'	9 ^h D19	8 ^h 12'	26 ^h 50'	2 ^h 39'	F 9
S 10	11 10 52	19 ^h 33'05"	25 ^m 50"	22 ^h 34'	4 ^h 0'	24 ^h 43'	26 ^h 31'	1 ^h 33'	0 ^h 10'	8 ^h R25	5 ^h 16'	9 ^h 19'	8 ^h 9'	26 ^h 56'	2 ^h 39'	S 10
S 11	11 14 49	20 ^h 32'49"	7 ^m 340"	23 ^h 46'	4 ^h 46'	25 ^h 30'	26 ^h 35'	1 ^h 40'	0 ^h 10'	8 ^h 25'	5 ^h 17'	9 ^h 20'	8 ^h 6'	27 ^h 3'	2 ^h 39'	S 11
M12	11 18 45	21 ^h 32'32"	19 ^m 33"	25 ^h 0'	5 ^h 31'	26 ^h 17'	26 ^h 39'	1 ^h 46'	0 ^h 9'	8 ^h 25'	5 ^h 17'	9 ^h 22'	8 ^h 3'	27 ^h 10'	2 ^h 40'	M12
T 13	11 22 42	22 ^h 32'13"	1 ^m 36"	26 ^h 16'	6 ^h 15'	27 ^h 4'	26 ^h 43'	1 ^h 53'	0 ^h 9'	8 ^h 25'	5 ^h 18'	9 ^h 23'	7 ^h 59'	27 ^h 16'	2 ^h 40'	T 13
W14	11 26 38	23 ^h 31'53"	13 ^m 52"	27 ^h 33'	6 ^h 58'	27 ^h 51'	26 ^h 47'	1 ^h 59'	0 ^h 9'	8 ^h 25'	5 ^h 18'	9 ^h R23	7 ^h 56'	27 ^h 23'	2 ^h 41'	W14
T 15	11 30 35	24 ^h 31'30"	26 ^m 24"	28 ^h 53'	7 ^h 40'	28 ^h 38'	26 ^h 51'	2 ^h 6'	0 ^h 8'	8 ^h 25'	5 ^h 19'	9 ^h 22'	7 ^h 53'	27 ^h 30'	2 ^h 42'	T 15
F 16	11 34 31	25 ^h 31'06"	9 ^m 15"	0 ^h 14"	8 ^h 21'	29 ^h 25'	26 ^h 56'	2 ^h 13'	0 ^h 8'	8 ^h 25'	5 ^h 19'	9 ^h 18'	7 ^h 50'	27 ^h 36'	2 ^h 42'	F 16
S 17	11 38 28	26 ^h 30'39"	22 ^m 25"	1 ^h 36'	9 ^h 1'	0 ^h 12"	27 ^h 0'	2 ^h 19'	0 ^h 7'	8 ^h 24'	5 ^h 20'	9 ^h 12'	7 ^h 47'	27 ^h 43'	2 ^h 43'	S 17
S 18	11 42 25	27 ^h 30'10"	5 ^m 54"	3 ^h 1'	9 ^h 39'	0 ^h 59'	27 ^h 5'	2 ^h 26'	0 ^h 6'	8 ^h 24'	5 ^h 21'	9 ^h 5'	7 ^h 44'	27 ^h 50'	2 ^h 44'	S 18
M19	11 46 21	28 ^h 29'40"	19 ^m 39"	4 ^h 26'	10 ^h 17'	1 ^h 46'	27 ^h 10'	2 ^h 33'	0 ^h 6'	8 ^h 24'	5 ^h 21'	8 ^h 57'	7 ^h 40'	27 ^h 56'	2 ^h 45'	M19
T 20	11 50 18	29 ^h 29'07"	3 ^m 37"	5 ^h 54"	10 ^h 53'	2 ^h 33'	27 ^h 15'	2 ^h 40'	0 ^h 5'	8 ^h 24'	5 ^h 22'	8 ^h 48'	7 ^h 37'	28 ^h 3'	2 ^h 47'	T 20
W21	11 54 14	0 ^h 28'32"	17 ^m 43"	7 ^h 22'	11 ^h 27'	3 ^h 20'	27 ^h 21'	2 ^h 47'	0 ^h 4'	8 ^h 23'	5 ^h 22'	8 ^h 41'	7 ^h 34'	28 ^h 10'	2 ^h 48'	W21
T 22	11 58 11	1 ^h 27'55"	1 ^m 54"	8 ^h 53'	12 ^h 0'	4 ^h 7'	27 ^h 26'	2 ^h 54'	0 ^h 3'	8 ^h 23'	5 ^h 23'	8 ^h 35'	7 ^h 31'	28 ^h 16'	2 ^h 49'	T 22
F 23	12 2 7	2 ^h 27'15"	16 ^m 6"	10 ^h 24'	12 ^h 32'	4 ^h 54"	27 ^h 32'	3 ^h 1'	0 ^h 2'	8 ^h 22'	5 ^h 24'	8 ^h 32'	7 ^h 28'	28 ^h 23'	2 ^h 51'	F 23
S 24	12 6 4	3 ^h 26'33"	0 ^m 16"	11 ^h 57'	13 ^h 2'	5 ^h 41'	27 ^h 38'	3 ^h 8'	0 ^h 1'	8 ^h 22'	5 ^h 25'	8 ^h D31	7 ^h 24'	28 ^h 30'	2 ^h 52'	S 24
S 25	12 10 0	4 ^h 25'49"	14 ^m 23"	13 ^h 32'	13 ^h 31'	6 ^h 28'	27 ^h 44'	3 ^h 15'	0 ^h 0'	8 ^h 22'	5 ^h 25'	8 ^h 31'	7 ^h 21'	28 ^h 36'	2 ^h 54'	S 25
M26	12 13 57	5 ^h 25'03"	28 ^m 25"	15 ^h 8'	13 ^h 58'	7 ^h 15'	27 ^h 50'	3 ^h 22'	29 ^m 59"	8 ^h 21'	5 ^h 26'	8 ^h 32'	7 ^h 18'	28 ^h 43'	2 ^h 55'	M26
T 27	12 17 54	6 ^h 24'14"	12 ^m 22"	16 ^h 45'	14 ^h 23'	8 ^h 2'	27 ^h 56'	3 ^h 29'	29 ^m 58"	8 ^h 21'	5 ^h 27'	8 ^h R32	7 ^h 15'	28 ^h 50'	2 ^h 57'	T 27
W28	12 21 50	7 ^h 23'22"	26 ^m 13"	18 ^h 24'	14 ^h 47'	8 ^h 48'	28 ^h 3'	3 ^h 36'	29 ^m 57"	8 ^h 20'	5 ^h 28'	8 ^h 31'	7 ^h 12'	28 ^h 56'	2 ^h 59'	W28
T 29	12 25 47	8 ^h 22'28"	9 ^m 16"	20 ^h 4'	15 ^h 9'	9 ^h 35'	28 ^h 9'	3 ^h 44'	29 ^m 56"	8 ^h 19'	5 ^h 28'	8 ^h 27'	7 ^h 9'	29 ^h 3'	3 ^h 1'	T 29
F 30	12 29 43	9 ^h 21'33"	23 ^m 29"	21 ^h 46'	15 ^h 29'	10 ^h 22'	28 ^h 16'	3 ^h 51'	29 ^m 54"	8 ^h 19'	5 ^h 29'	8 ^h 20'	7 ^h 5'	29 ^h 10'	3 ^h 3'	F 30
S 31	12 33 40	10 ^h 20'34"	6 ^m 50"	23 ^h 12'	15 ^h 46'	11 ^h 11'	28 ^h 12'	3 ^h 58'	29 ^m 53"	8 ^h 18'	5 ^h 30'	8 ^h D12	7 ^h 2'	29 ^h 16'	3 ^h 5'	S 31

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
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ASTRODIENST EPHEMERIS for the year 1646

geocentric

APRIL 1646 GC

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Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	12 37 36	11°19'34	19°58	25°14	16°8 2	11°15	28°13	4°8 5	29°R52	8°R17	5°II31	8°R 1	6°Ω59	29°23	3°5 7	S 1
M 2	12 41 33	12°18'32	2°49	27° 0	16°16	12°42	28°37	4°13	29°M50	8°R17	5°32	7°Ω50	6°56	29°30	3°10	M 2
T 3	12 45 29	13°17'28	15°25	28°47	16°28	13°29	28°44	4°20	29°49	8°16	5°33	7°38	6°53	29°36	3°12	T 3
W 4	12 49 26	14°16'22	27°45	0°Y36	16°37	14°16	28°52	4°27	29°48	8°15	5°34	7°29	6°50	29°43	3°15	W 4
T 5	12 53 23	15°15'15	9°52	2°26	16°45	15° 3	28°59	4°35	29°46	8°14	5°34	7°21	6°46	29°50	3°17	T 5
F 6	12 57 19	16°14'05	21°49	4°18	16°50	15°49	29° 7	4°42	29°45	8°14	5°35	7°16	6°43	29°56	3°20	F 6
S 7	13 1 16	17°12'54	3°340	6°12	16°52	16°36	29°15	4°50	29°43	8°13	5°36	7°13	6°40	0°3 3	3°23	S 7
S 8	13 5 12	18°11'41	15°29	8° 7	16°R53	17°23	29°23	4°57	29°41	8°12	5°37	7°D12	6°37	0°10	3°25	S 8
M 9	13 9 9	19°10'26	27°23	10° 3	16°51	18°10	29°31	5° 5	29°40	8°11	5°38	7°12	6°34	0°16	3°28	M 9
T 10	13 13 5	20°9'10	9°26	12° 1	16°46	18°56	29°39	5°12	29°38	8°10	5°39	7°R12	6°30	0°23	3°31	T 10
W11	13 17 2	21° 7'52	21°43	14° 0	16°39	19°43	29°48	5°20	29°36	8° 9	5°40	7°11	6°27	0°30	3°34	W11
T 12	13 20 58	22° 6'32	4°K20	16° 1	16°30	20°29	29°56	5°27	29°35	8° 8	5°41	7° 8	6°24	0°37	3°37	T 12
F 13	13 24 55	23° 5'10	17°20	18° 3	16°18	21°16	0°5 5	5°35	29°33	8° 7	5°42	7° 3	6°21	0°43	3°41	F 13
S 14	13 28 52	24° 3'46	0°Y44	20° 7	16° 4	22° 3	0°14	5°43	29°31	8° 6	5°43	6°55	6°18	0°50	3°44	S 14
S 15	13 32 48	25° 2'21	14°32	22°11	15°47	22°49	0°22	5°50	29°29	8° 5	5°45	6°45	6°15	0°57	3°47	S 15
M16	13 36 45	26° 0'54	28°40	24°17	15°28	23°36	0°31	5°58	29°27	8° 4	5°46	6°33	6°11	1° 3	3°51	M16
T 17	13 40 41	26°59'25	13°8 5	26°24	15° 7	24°22	0°40	6° 5	29°25	8° 3	5°47	6°22	6° 8	1°10	3°54	T 17
W18	13 44 38	27°57'54	27°38	28°31	14°43	25° 8	0°50	6°13	29°23	8° 2	5°48	6°11	6° 5	1°17	3°58	W18
T 19	13 48 34	28°56'21	12°II14	0°839	14°18	25°55	0°59	6°21	29°21	8° 1	5°49	6° 3	6° 2	1°23	4° 1	T 19
F 20	13 52 31	29°54'46	26°45	2°48	13°50	26°41	1° 8	6°28	29°19	7°59	5°50	5°58	5°59	1°30	4° 5	F 20
S 21	13 56 27	0°53'09	11°5 7	4°56	13°20	27°28	1°18	6°36	29°17	7°58	5°51	5°55	5°55	1°37	4° 9	S 21
S 22	14 0 24	1°51'29	25°17	7° 5	12°49	28°14	1°28	6°44	29°15	7°57	5°52	5°54	5°52	1°43	4°13	S 22
M23	14 4 21	2°49'48	9°Ω15	9°13	12°16	29° 0	1°37	6°52	29°13	7°56	5°54	5°54	5°49	1°50	4°17	M23
T 24	14 8 17	3°48'04	23° 0	11°20	11°42	29°46	1°47	6°59	29°11	7°55	5°55	5°53	5°46	1°57	4°21	T 24
W25	14 12 14	4°46'18	6°II32	13°27	11° 6	0°Y33	1°57	7° 7	29° 8	7°53	5°56	5°51	5°43	2° 3	4°25	W25
T 26	14 16 10	5°44'30	19°53	15°32	10°30	1°19	2° 7	7°15	29° 6	7°52	5°57	5°46	5°40	2°10	4°29	T 26
F 27	14 20 7	6°42'41	3°3 3	17°35	9°53	2° 5	2°17	7°22	29° 4	7°51	5°58	5°39	5°36	2°17	4°33	F 27
S 28	14 24 3	7°40'49	16° 2	19°37	9°15	2°51	2°28	7°30	29° 2	7°49	6° 0	5°28	5°33	2°23	4°37	S 28
S 29	14 28 0	8°38'55	28°49	21°36	8°37	3°37	2°38	7°38	29° 0	7°48	6° 1	5°16	5°30	2°30	4°42	S 29
M30	14 31 56	9°37'00	11°II25	23°833	7°859	4°Y23	2°548	7°845	28°M57	7°47	6°II 2	5°Ω 3	5°Ω27	2°337	4°546	M30

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S 1	4n29	3s22	4n48	3s59	2s17	22n36	6n13	8s11	1s11	23n32	0n 3	10n51	2s11	19s58	0n12	20s 8
M 2	4 52	7 45	5 2	3 15	2 14	22 44	6 17	7 54	1 11	23 32	0 3	10 53	2 11	19 57	0 12	20 8
T 3	5 15	11 42	5 0	2 29	2 11	22 51	6 20	7 36	1 11	23 32	0 4	10 56	2 11	19 57	0 12	20 8
W 4	5 38	15 4	4 45	1 42	2 7	22 57	6 24	7 18	1 11	23 32	0 4	10 58	2 11	19 57	0 12	20 8
T 5	6 1	17 45	4 16	0 54	2 3	23 2	6 27	6 59	1 11	23 33	0 4	11 1	2 11	19 57	0 12	20 8
F 6	6 24	19 37	3 37	0 6	1 58	23 6	6 30	6 41	1 11	23 33	0 4	11 4	2 11	19 56	0 12	20 8
S 7	6 46	20 38	2 48	0n44	1 53	23 9	6 32	6 23	1 11	23 33	0 4	11 6	2 11	19 56	0 12	20 7
S 8	7 9	20 43	1 53	1 35	1 47	23 11	6 34	6 5	1 11	23 33	0 4	11 9	2 11	19 56	0 12	20 7
M 9	7 31	19 52	0 52	2 26	1 41	23 12	6 35	5 47	1 11	23 33	0 4	11 11	2 11	19 55	0 12	20 7
T 10	7 53	18 7	0s12	3 19	1 34	23 12	6 36	5 28	1 11	23 33	0 4	11 14	2 10	19 55	0 12	20 7
W11	8 16	15 30	1 16	4 12	1 27	23 10	6 36	5 10	1 11	23 33	0 4	11 16	2 10	19 54	0 12	20 7
T 12	8 38	12 5	2 19	5 5	1 19	23 7	6 36	4 51	1 11	23 33	0 4	11 19	2 10	19 54	0 12	20 7
F 13	8 59	8 1	3 16	6 0	1 11	23 3	6 36	4 33	1 11	23 34	0 5	11 22	2 10	19 54	0 12	20 6
S 14	9 21	3 26	4 4	6 54	1 3	22 58	6 34	4 14	1 10	23 34	0 5	11 24	2 10	19 53	0 12	20 6
S 15	9 43	1n27	4 39	7 49	0 54	22 51	6 33	3 56	1 10	23 34	0 5	11 27	2 10	19 53	0 12	20 6
M16	10 4	6 23	4 58	8 45	0 44	22 43	6 30	3 37	1 10	23 34	0 5	11 29	2 10	19 52	0 12	20 6
T 17	10 25	11 2	4 59	9 40	0 35	22 33	6 27	3 19	1 10	23 34	0 5	11 32	2 10	19 52	0 12	20 6
W18	10 46	15 7	4 40	10 35	0 25	22 22	6 23	3 0	1 10	23 34	0 5	11 34	2 10	19 52	0 12	20 5
T 19	11 7	18 17	4 4	11 30	0 14	22 10	6 19	2 42	1 10	23 34	0 5	11 37	2 10	19 51	0 12	20 5
F 20	11 28	20 15	3 11	12 24	0 4	21 57	6 13	2 23	1 10	23 34	0 5	11 40	2 10	19 51	0 12	20 5
S 21	11 48	20 54	2 7	13 18	0n 7	21 42	6 7	2 5	1 10	23 34	0 5	11 42	2 10	19 50	0 12	20 5
S 22	12 8	20 12	0 56	14 11	0 18	21 26	6 1	1 46	1 10	23 34	0 5	11 45	2 10	19 50	0 12	20 4
M23	12 29	18 16	0n18	15 2	0 28	21 8	5 53	1 28	1 9	23 34	0 6	11 47	2 10	19 49	0 12	20 4
T 24	12 48	15 17	1 29	15 53	0 39	20 50	5 45	1 9	1 9	23 34	0 6	11 50	2 10	19 49	0 12	20 4
W25	13 8	11 31	2 34	16 42	0 50	20 30	5 36	0 50	1 9	23 34	0 6	11 52	2 10	19 49	0 12	20 4
T 26	13 28	7 14	3 30	17 29	1 0	20 9	5 26	0 32	1 9	23 34	0 6	11 55	2 10	19 48	0 12	20 4
F 27	13 47	2 40	4 14	18 14	1 10	19 48	5 16	0 13	1 9	23 34	0 6	11 57	2 10	19 48	0 12	20 3
S 28	14 6	1s58	4 43	18 57	1 20	19 25	5 5	0n 5	1 9	23 34	0 6	12 0	2 9	19 47	0 12	20 3
S 29	14 25	6 26	4 58	19 38	1 29	19 2	4 54	0 24	1 8	23 34	0 6	12 2	2 9	19 47	0 12	20 3
M30	14n43	10s33	4n58	20n16	1n38	18n38	4n42	0n42	1s 8	23n33	0n 6	12n 5	2s 9	19s46	0n12	20s 3

Julian Day Number = 2322339.5, Delta T = 45.94 sec
 Ecliptic obliquity = 23°29'02, Nutation = - 0°00'14, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 19°48'10, Lahiri = 18°55'10Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1646
geocentric

MAY 1646 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	14 35 53	10♌35°03	23♍48	25♌28	7°R21	5♍9	2♌59	7♌53	28°R55	7°R45	6♐3	4°R49	5♏24	2♌43	4♌51	T 1
W 2	14 39 49	11°33'05	6♌0	27°19	6♌44	5°55	3°10	8°1	28♍53	7♌44	6°5	4♏38	5°21	2°50	4°55	W 2
T 3	14 43 46	12°31'05	18°2	29°8	6°8	6°41	3°20	8°9	28°50	7°42	6°6	4°28	5°17	2°57	5°0	T 3
F 4	14 47 43	13°29'03	29°56	0♐54	5°33	7°27	3°31	8°16	28°48	7°41	6°7	4°21	5°14	3°3	5°4	F 4
S 5	14 51 39	14°27'00	11♌45	2°36	4°58	8°13	3°42	8°24	28°45	7°40	6°8	4°17	5°11	3°10	5°9	S 5
S 6	14 55 36	15°24'56	23°33	4°15	4°26	8°59	3°53	8°32	28°43	7°38	6°10	4°15	5°8	3°17	5°14	S 6
M 7	14 59 32	16°22'51	5♌25	5°50	3°55	9°44	4°4	8°39	28°41	7°37	6°11	4°D15	5°5	3°23	5°19	M 7
T 8	15 3 29	17°20'44	17°27	7°22	3°25	10°30	4°15	8°47	28°38	7°35	6°12	4°R15	5°1	3°30	5°23	T 8
W 9	15 7 25	18°18'36	29°44	8°50	2°58	11°16	4°26	8°55	28°36	7°34	6°14	4°14	4°58	3°37	5°28	W 9
T 10	15 11 22	19°16'27	12♌20	10°14	2°32	12°1	4°37	9°2	28°33	7°32	6°15	4°12	4°55	3°43	5°33	T 10
F 11	15 15 18	20°14'16	25°21	11°35	2°9	12°47	4°49	9°10	28°31	7°31	6°16	4°8	4°52	3°50	5°38	F 11
S 12	15 19 15	21°12'04	8♍49	12°52	1°48	13°33	5°0	9°18	28°28	7°29	6°18	4°1	4°49	3°57	5°43	S 12
S 13	15 23 12	22°9'51	22°45	14°5	1°29	14°18	5°12	9°25	28°26	7°28	6°19	3°53	4°46	4°3	5°49	S 13
M14	15 27 8	23°7'37	7♌7	15°15	1°13	15°4	5°23	9°33	28°23	7°26	6°20	3°42	4°42	4°10	5°54	M14
T 15	15 31 5	24°5'22	21°49	16°20	0°59	15°49	5°35	9°40	28°21	7°24	6°22	3°32	4°39	4°17	5°59	T 15
W16	15 35 1	25°3'05	6♐43	17°21	0°48	16°34	5°47	9°48	28°19	7°23	6°23	3°22	4°36	4°23	6°4	W16
T 17	15 38 58	26°0'47	21°42	18°19	0°38	17°20	5°58	9°55	28°16	7°21	6°24	3°15	4°33	4°30	6°10	T 17
F 18	15 42 54	26°58'28	6♌35	19°12	0°32	18°5	6°10	10°3	28°14	7°20	6°26	3°10	4°30	4°37	6°15	F 18
S 19	15 46 51	27°56'07	21°16	20°1	0°27	18°50	6°22	10°10	28°11	7°18	6°27	3°8	4°27	4°43	6°21	S 19
S 20	15 50 47	28°53'45	5♏39	20°45	0°D25	19°35	6°34	10°18	28°9	7°16	6°28	3°D7	4°23	4°50	6°26	S 20
M21	15 54 44	29°51'21	19°43	21°25	0°26	20°21	6°46	10°25	28°6	7°15	6°30	3°8	4°20	4°57	6°32	M21
T 22	15 58 41	0♐48'55	3♐28	22°1	0°28	21°6	6°58	10°33	28°4	7°13	6°31	3°R8	4°17	5°3	6°37	T 22
W23	16 2 37	1°46'28	16°54	22°33	0°33	21°51	7°10	10°40	28°1	7°12	6°32	3°7	4°14	5°10	6°43	W23
T 24	16 6 34	2°44'00	0♌3	22°59	0°40	22°36	7°22	10°47	27°59	7°10	6°34	3°4	4°11	5°17	6°48	T 24
F 25	16 10 30	3°41'30	12°57	23°21	0°49	23°20	7°35	10°55	27°56	7°8	6°35	2°58	4°7	5°23	6°54	F 25
S 26	16 14 27	4°38'59	25°39	23°39	1°1	24°5	7°47	11°2	27°54	7°7	6°37	2°50	4°4	5°30	7°0	S 26
S 27	16 18 23	5°36'27	8♍9	23°52	1°14	24°50	7°59	11°9	27°51	7°5	6°38	2°41	4°1	5°37	7°6	S 27
M28	16 22 20	6°33'53	20°28	24°0	1°30	25°35	8°12	11°17	27°49	7°4	6°39	2°31	3°58	5°43	7°11	M28
T 29	16 26 16	7°31'19	2♌38	24°R4	1°47	26°20	8°24	11°24	27°46	7°2	6°41	2°21	3°55	5°50	7°17	T 29
W30	16 30 13	8°28'43	14°40	24°3	2°6	27°4	8°37	11°31	27°44	7°0	6°42	2°12	3°52	5°57	7°23	W30
T 31	16 34 10	9♐26'07	26♌35	23♐57	2♌27	27°R49	8♌49	11♌38	27♍41	6♌59	6♐43	2♏5	3♏48	6♌3	7♌29	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	decl	decl	decl	lat	
T 1	15n 2	14s10	4n44	20n52	1n46	18n14	4n29	1n 1	1s 8	23n33	0n 6	12n 7	2s 9	19s46	0n12	20s 2	1n38	10n44	10s47	19n 6	18n57	20s40	17n 5	6s19			
W 2	15 20	17 8	4 17	21 26	1 53	17 49	4 16	1 19	1 8	23 33	0 6	12 10	2 9	19 45	0 12	20 2	1 38	10 44	10 47	19 8	18 58	20 41	17 5	6 19			
T 3	15 37	19 19	3 39	21 57	2 0	17 24	4 3	1 37	1 8	23 33	0 6	12 12	2 9	19 45	0 12	20 2	1 38	10 45	10 47	19 11	18 59	20 42	17 5	6 18			
F 4	15 55	20 38	2 51	22 26	2 6	17 0	3 49	1 56	1 7	23 33	0 7	12 15	2 9	19 44	0 12	20 2	1 38	10 45	10 46	19 12	19 0	20 42	17 5	6 18			
S 5	16 12	21 2	1 56	22 52	2 11	16 35	3 35	2 14	1 7	23 33	0 7	12 17	2 9	19 44	0 12	20 1	1 38	10 45	10 46	19 13	19 0	20 43	17 6	6 18			
S 6	16 29	20 30	0 56	23 15	2 16	16 11	3 21	2 32	1 7	23 32	0 7	12 20	2 9	19 43	0 12	20 1	1 38	10 46	10 46	19 14	19 1	20 43	17 6	6 17			
M 7	16 46	19 3	0s 6	23 37	2 20	15 46	3 7	2 51	1 7	23 32	0 7	12 22	2 9	19 43	0 12	20 1	1 38	10 46	10 46	19 14	19 2	20 44	17 6	6 17			
T 8	17 3	16 44	1 10	23 55	2 23	15 23	2 53	3 9	1 6	23 32	0 7	12 25	2 9	19 42	0 12	20 1	1 38	10 46	10 46	19 14	19 3	20 45	17 6	6 17			
W 9	17 19	13 38	2 11	24 12	2 25	15 0	2 38	3 27	1 6	23 31	0 7	12 27	2 9	19 41	0 12	20 0	1 38	10 47	10 46	19 14	19 4	20 45	17 6	6 16			
T 10	17 35	9 50	3 8	24 26	2 26	14 38	2 24	3 45	1 6	23 31	0 7	12 30	2 9	19 41	0 12	20 0	1 38	10 47	10 46	19 15	19 4	20 46	17 6	6 16			
F 11	17 50	5 28	3 56	24 38	2 26	14 16	2 9	4 3	1 5	23 31	0 7	12 32	2 9	19 40	0 12	20 0	1 38	10 47	10 46	19 16	19 5	20 46	17 7	6 16			
S 12	18 6	0 42	4 34	24 47	2 26	13 55	1 55	4 21	1 5	23 31	0 7	12 34	2 9	19 40	0 12	20 0	1 38	10 48	10 45	19 17	19 6	20 47	17 7	6 15			
S 13	18 21	4n16	4 57	24 55	2 24	13 36	1 41	4 39	1 5	23 30	0 7	12 37	2 9	19 39	0 12	19 59	1 38	10 48	10 45	19 19	19 7	20 47	17 7	6 15			
M14	18 35	9 9	5 2	25 1	2 22	13 17	1 27	4 57	1 5	23 30	0 7	12 39	2 9	19 39	0 12	19 59	1 38	10 48	10 45	19 22	19 7	20 48	17 7	6 15			
T 15	18 50	13 37	4 47	25 5	2 18	12 59	1 14	5 15	1 4	23 29	0 7	12 41	2 9	19 38	0 12	19 59	1 38	10 48	10 45	19 24	19 8	20 49	17 7	6 14			
W16	19 4	17 19	4 13	25 6	2 14	12 43	1 0	5 33	1 4	23 29	0 8	12 44	2 9	19 38	0 12	19 59	1 38	10 49	10 45	19 26	19 9	20 49	17 7	6 14			
T 17	19 18	19 52	3 22	25 7	2 9	12 27	0 47	5 50	1 4	23 29	0 8	12 46	2 9	19 37	0 12	19 58	1 38	10 49	10 45	19 28	19 10	20 50	17 7	6 14			
F 18	19 31	21 3	2 16	25 5	2 3	12 13	0 35	6 8	1 3	23 28	0 8	12 48	2 10	19 37	0 12	19 58	1 38	10 49	10 45	19 29	19 10	20 50	17 7	6 13			
S 19	19 44	20 46	1 3	25 2	1 56	12 0	0 22	6 25	1 3	23 28	0 8	12 51	2 10	19 36	0 12	19 58	1 38	10 50	10 45	19 30	19 11	20 51	17 7	6 13			
S 20	19 57	19 7	0n14	24 57	1 48	11 48	0 10	6 43	1 3	23 27	0 8	12 53	2 10	19 35	0 12	19 57	1 38	10 50	10 45	19 30	19 12	20 51	17 7	6 13			
M21	20 9	16 19	1 27	24 51	1 39	11 37	0s 2	7 0	1 2	23 27	0 8	12 55	2 10	19 35	0 12	19 57	1 38	10 50	10 45	19 30	19 13	20 52	17 7	6 13			
T 22	20 22	12 39	2 35	24 44	1 29	11 27	0 13	7 17	1 2	23 26	0 8	12 58	2 10	19 34	0 12	19 57	1 38	10 50	10 45	19 30	19 13	20 52	17 7	6 12			
W23	20 33	8 26	3 32	24 35	1 19	11 19	0 24	7 35	1 1	23 26	0 8	13 0	2 10	19 34	0 12	19 57	1 38	10 51	10 45	19 30	19 14	20 53	17 7	6 12			
T 24	20 45	3 54	4 16	24 25	1 7	11 11	0 35	7 52	1 1	23 25	0 8	13 2	2 10	19 33	0 12	19 56	1 38	10 51	10 45	19 31	19 15	20 53	17 7	6 12			
F 25	20 56	0s43	4 47	24 14	0 55	11 5	0 45	8 9	1 1	23 24	0 8	13 4	2 10	19 33	0 12	19 56	1 38	10 51	10 45	19 32	19 16	20 54	17 7	6 11			
S 26	21 6	5 14	5 2	24 2	0 42	11 0	0 55	8 26	1 0	23 24	0 8	13 6	2 10	19 32	0 12	19 56	1 38	10 52	10 44	19 34	19 16	20 54	17 7	6 11			
S 27	21 17	9 27	5 3	23 48	0 28	10 55	1 4	8 42	1 0	23 23	0 9	13 9	2 10	19 32	0 12	19 56	1 38	10 52	10 44	19 36	19 17	20 55	17 7	6 11			
M28	21 27	13 14	4 50	23 34	0 13	10 52	1 13	8 59	0 59	23 22	0 9	13 11	2 10	19 31	0 12	19 55	1 38	10 52	10 44	19 38	19 18	20 55	17 7	6 11			
T 29	21 36	16 25	4 24	23 19	0s 2	10 50	1 22	9 16	0 59	23 22	0 9	13 13	2 10	19 31	0 12	19 55	1 38	10 52	10 44	19 40	19 19	20 56	17 7	6 11			
W30	21 46	18 51	3 46	23 3	0 18	10 49	1 31	9 32	0 59	23 21	0 9	13 15	2 10	19 30	0 12	19 55	1 38	10 53	10 44	19 42	19 19	20 56	17 7	6 10			
T 31	21n54	20s28	2n58	22n47	0s34	10n48	1s39	9n49	0s58	23n20	0n 9	13n17	2s10	19s30	0n12	19s55	1n38	10n53	10s44	19n44	19n20	20s57	17n 7	6s10			

ASTRODIENST EPHEMERIS for the year 1646

geocentric

JUNE 1646 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	16 38 6	10 ^{II} 23'30	8 ^{III} 25	23°R47	2 ^{II} 50	28 ^V 33	9 ^{II} 2	11 ^{II} 45	27°R39	6°R57	6 ^{II} 45	1°R59	3 ^{II} 45	6 ^{II} 10	7 ^{II} 35	F 1
S 2	16 42 3	11°20'52	20°13	23 ^{II} 34	3°14	29°18	9°14	11°52	27 ^{III} 37	6 ^{II} 55	6°46	1 ^{II} 57	3°42	6°16	7°41	S 2
S 3	16 45 59	12°18'14	2 ^{III} 1	23°16	3°40	0 ^{II} 2	9°27	11°59	27°34	6°54	6°48	1°D56	3°39	6°23	7°47	S 3
M 4	16 49 56	13°15'35	13°54	22°55	4°8	0°47	9°40	12°6	27°32	6°52	6°49	1°57	3°36	6°30	7°53	M 4
T 5	16 53 52	14°12'55	25°56	22°30	4°37	1°31	9°53	12°13	27°29	6°51	6°50	1°58	3°33	6°36	7°59	T 5
W 6	16 57 49	15°10'15	8 ^{III} 12	22°3	5°8	2°15	10°5	12°20	27°27	6°49	6°52	1°59	3°29	6°43	8°5	W 6
T 7	17 1 45	16°7'34	20°47	21°33	5°40	2°59	10°18	12°27	27°25	6°47	6°53	1°R59	3°26	6°50	8°11	T 7
F 8	17 5 42	17°4'53	3 ^V 45	21°1	6°13	3°43	10°31	12°34	27°22	6°46	6°54	1°58	3°23	6°56	8°17	F 8
S 9	17 9 39	18°2'11	17°10	20°28	6°48	4°28	10°44	12°41	27°20	6°44	6°56	1°54	3°20	7°3	8°24	S 9
S 10	17 13 35	18°59'30	1 ^{II} 3	19°55	7°24	5°12	10°57	12°48	27°18	6°43	6°57	1°50	3°17	7°10	8°30	S 10
M 11	17 17 32	19°56'47	15°25	19°21	8°1	5°56	11°10	12°54	27°16	6°41	6°58	1°44	3°13	7°16	8°36	M 11
T 12	17 21 28	20°54'05	0 ^{II} 10	18°47	8°40	6°39	11°23	13°1	27°13	6°39	7°0	1°38	3°10	7°23	8°42	T 12
W 13	17 25 25	21°51'22	15°13	18°14	9°19	7°23	11°36	13°8	27°11	6°38	7°1	1°32	3°7	7°30	8°48	W 13
T 14	17 29 21	22°48'39	0 ^{II} 23	17°43	9°59	8°7	11°49	13°14	27°9	6°36	7°2	1°28	3°4	7°36	8°55	T 14
F 15	17 33 18	23°45'55	15°32	17°14	10°41	8°51	12°2	13°21	27°7	6°35	7°4	1°25	3°1	7°43	9°1	F 15
S 16	17 37 15	24°43'11	0 ^{II} 30	16°47	11°23	9°34	12°15	13°27	27°5	6°33	7°5	1°D24	2°58	7°50	9°7	S 16
S 17	17 41 11	25°40'26	15°9	16°24	12°7	10°18	12°28	13°34	27°3	6°32	7°6	1°25	2°54	7°56	9°14	S 17
M 18	17 45 8	26°37'40	29°26	16°4	12°51	11°1	12°42	13°40	27°1	6°30	7°8	1°26	2°51	8°3	9°20	M 18
T 19	17 49 4	27°34'53	13 ^{III} 19	15°47	13°36	11°45	12°55	13°46	26°59	6°29	7°9	1°28	2°48	8°10	9°27	T 19
W 20	17 53 1	28°32'06	26°48	15°35	14°22	12°28	13°8	13°53	26°57	6°27	7°10	1°R28	2°45	8°16	9°33	W 20
T 21	17 56 57	29°29'19	9 ^{II} 55	15°26	15°9	13°12	13°21	13°59	26°55	6°26	7°12	1°28	2°42	8°23	9°39	T 21
F 22	18 0 54	0 ^{II} 26'31	22°42	15°D23	15°56	13°55	13°35	14°5	26°53	6°24	7°13	1°26	2°39	8°30	9°46	F 22
S 23	18 4 50	1°23'42	5 ^{III} 14	15°24	16°45	14°38	13°48	14°11	26°51	6°23	7°14	1°23	2°35	8°36	9°52	S 23
S 24	18 8 47	2°20'53	17°32	15°29	17°34	15°21	14°1	14°17	26°49	6°22	7°16	1°19	2°32	8°43	9°59	S 24
M 25	18 12 44	3°18'04	29°40	15°40	18°23	16°4	14°14	14°23	26°47	6°20	7°17	1°14	2°29	8°50	10°5	M 25
T 26	18 16 40	4°15'14	11 ^{II} 39	15°55	19°14	16°47	14°28	14°29	26°45	6°19	7°18	1°9	2°26	8°56	10°12	T 26
W 27	18 20 37	5°12'25	23°33	16°16	20°5	17°30	14°41	14°35	26°43	6°17	7°19	1°5	2°23	9°3	10°18	W 27
T 28	18 24 33	6°9'35	5 ^{III} 23	16°41	20°57	18°13	14°54	14°41	26°42	6°16	7°20	1°2	2°19	9°10	10°25	T 28
F 29	18 28 30	7°6'45	17°12	17°11	21°49	18°55	15°8	14°46	26°40	6°15	7°22	1°0	2°16	9°16	10°31	F 29
S 30	18 32 26	8 ^{II} 3'56	29 ^{II} 0	17 ^{II} 46	22 ^{II} 42	19 ^{II} 38	15 ^{II} 21	14 ^{II} 52	26 ^{III} 38	6 ^{II} 13	7 ^{II} 23	1°D0	2 ^{II} 13	9 ^{II} 23	10 ^{II} 38	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 3	21s10	2n 3	22n29	0s51	10n49	1s46	10n 5	0s58	23n19	0n 9	13n19	2s10	19s29	0n12	19s54	1n38	10n53	10s44	19n45	19n21	20s57	17n 7	6s10	
S 2	22 11	20 55	1 3	22 12	1 8	10 50	1 54	10 21	0 57	23 19	0 9	13 21	2 10	19 28	0 12	19 54	1 38	10 53	10 44	19 46	19 22	20 58	17 6	6 10	
S 3	22 19	19 45	0s 0	21 54	1 25	10 52	2 1	10 37	0 57	23 18	0 9	13 24	2 10	19 28	0 12	19 54	1 38	10 54	10 44	19 46	19 22	20 58	17 6	6 10	
M 4	22 26	17 43	1 4	21 35	1 42	10 55	2 7	10 53	0 56	23 17	0 9	13 26	2 10	19 27	0 12	19 54	1 38	10 54	10 44	19 46	19 23	20 59	17 6	6 9	
T 5	22 33	14 53	2 6	21 17	1 59	10 59	2 14	11 9	0 56	23 16	0 9	13 28	2 11	19 27	0 12	19 53	1 38	10 54	10 44	19 46	19 24	20 59	17 6	6 9	
W 6	22 39	11 21	3 4	20 59	2 16	11 4	2 20	11 25	0 55	23 15	0 9	13 30	2 11	19 26	0 12	19 53	1 38	10 54	10 44	19 45	19 25	21 0	17 6	6 9	
T 7	22 46	7 14	3 54	20 41	2 33	11 9	2 25	11 40	0 55	23 14	0 9	13 32	2 11	19 26	0 12	19 53	1 38	10 54	10 44	19 45	19 25	21 0	17 6	6 9	
F 8	22 51	2 41	4 33	20 23	2 48	11 15	2 31	11 56	0 54	23 13	0 10	13 34	2 11	19 25	0 12	19 53	1 38	10 55	10 44	19 46	19 26	21 1	17 5	6 9	
S 9	22 57	2n 8	5 0	20 5	3 3	11 21	2 36	12 11	0 54	23 13	0 10	13 36	2 11	19 25	0 12	19 52	1 38	10 55	10 44	19 46	19 27	21 1	17 5	6 9	
S 10	23 2	7 1	5 10	19 49	3 18	11 28	2 41	12 26	0 53	23 12	0 10	13 38	2 11	19 24	0 12	19 52	1 38	10 55	10 44	19 47	19 28	21 1	17 5	6 9	
M11	23 6	11 41	5 1	19 33	3 31	11 36	2 45	12 42	0 53	23 11	0 10	13 39	2 11	19 24	0 12	19 52	1 38	10 55	10 44	19 49	19 28	21 2	17 5	6 8	
T 12	23 10	15 47	4 33	19 18	3 43	11 44	2 49	12 56	0 52	23 10	0 10	13 41	2 11	19 23	0 12	19 52	1 38	10 55	10 44	19 50	19 29	21 2	17 4	6 8	
W13	23 14	18 56	3 45	19 5	3 54	11 53	2 53	13 11	0 52	23 9	0 10	13 43	2 11	19 23	0 12	19 51	1 38	10 56	10 44	19 51	19 30	21 3	17 4	6 8	
T 14	23 17	20 48	2 41	18 53	4 3	12 2	2 57	13 26	0 51	23 7	0 10	13 45	2 11	19 22	0 11	19 51	1 38	10 56	10 44	19 52	19 31	21 3	17 4	6 8	
F 15	23 20	21 10	1 25	18 42	4 12	12 12	3 1	13 41	0 51	23 6	0 10	13 47	2 12	19 22	0 11	19 51	1 37	10 56	10 44	19 53	19 31	21 4	17 3	6 8	
S 16	23 23	20 0	0 5	18 33	4 18	12 22	3 4	13 55	0 50	23 5	0 10	13 49	2 12	19 21	0 11	19 51	1 37	10 56	10 44	19 53	19 32	21 4	17 3	6 8	
S 17	23 25	17 30	1n14	18 25	4 24	12 32	3 7	14 9	0 49	23 4	0 10	13 51	2 12	19 21	0 11	19 50	1 37	10 56	10 44	19 53	19 33	21 4	17 3	6 8	
M18	23 26	13 59	2 27	18 19	4 28	12 43	3 10	14 23	0 49	23 3	0 10	13 52	2 12	19 20	0 11	19 50	1 37	10 57	10 44	19 53	19 33	21 5	17 2	6 8	
T 19	23 28	9 47	3 29	18 15	4 30	12 54	3 12	14 37	0 48	23 2	0 11	13 54	2 12	19 20	0 11	19 50	1 37	10 57	10 44	19 52	19 34	21 5	17 2	6 8	
W20	23 29	5 13	4 18	18 13	4 31	13 5	3 14	14 51	0 48	23 1	0 11	13 56	2 12	19 20	0 11	19 50	1 37	10 57	10 44	19 52	19 35	21 6	17 2	6 8	
T 21	23 29	0 32	4 51	18 12	4 31	13 17	3 16	15 5	0 47	22 59	0 11	13 58	2 12	19 19	0 11	19 49	1 37	10 57	10 45	19 52	19 36	21 6	17 1	6 8	
F 22	23 29	4s 4	5 9	18 13	4 29	13 28	3 18	15 18	0 47	22 58	0 11	13 59	2 12	19 19	0 11	19 49	1 37	10 57	10 45	19 53	19 36	21 6	17 1	6 8	
S 23	23 29	8 23	5 12	18 16	4 26	13 40	3 20	15 32	0 46	22 57	0 11	14 1	2 13	19 18	0 11	19 49	1 37	10 57	10 45	19 53	19 37	21 7	17 0	6 8	
S 24	23 28	12 17	5 1	18 21	4 22	13 53	3 21	15 45	0 45	22 56	0 11	14 3	2 13	19 18	0 11	19 49	1 37	10 57	10 45	19 54	19 38	21 7	17 0	6 8	
M25	23 27	15 38	4 36	18 27	4 17	14 5	3 23	15 58	0 45	22 54	0 11	14 4	2 13	19 17	0 11	19 49	1 37	10 58	10 45	19 55	19 39	21 7	16 59	6 8	
T 26	23 25	18 17	3 59	18 34	4 11	14 18	3 24	16 11	0 44	22 53	0 11	14 6	2 13	19 17	0 11	19 48	1 37	10 58	10 45	19 56	19 39	21 8	16 59	6 8	
W27	23 23	20 8	3 12	18 43	4 4	14 30	3 25	16 23	0 43	22 52	0 11	14 7	2 13	19 17	0 11	19 48	1 37	10 58	10 45	19 57	19 40	21 8	16 59	6 7	
T 28	23 20	21 6	2 16	18 54	3 56	14 43	3 25	16 36	0 43	22 50	0 11	14 9	2 13	19 16	0 11	19 48	1 37	10 58	10 45	19 58	19 41	21 9	16 58	6 8	
F 29	23 18	21 8	1 15	19 6	3 47	14 56	3 26	16 48	0 42	22 49	0 11	14 10	2 13	19 16	0 11	19 48	1 37	10 58	10 45	19 58	19 41	21 9	16 58	6 8	
S 30	23n14	20s13	0n11	19n18	3s38	15n 9	3s26	17n 0	0s42	22n47	0n11	14n12	2s13	19s15	0n11	19s48	1n37	10n58	10s45	19n58	19n42	21s 9	16n57	6s 8	

ASTRODIENST EPHEMERIS for the year 1646

geocentric

JULY 1646 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	18 36 23	9°58'17	10°52'39	18°11'11	23°35'28	20°21'15	15°48'15	14°58'26	26°R37	6°R12	7°II24	1°R 0	2°R10	9°R30	10°R44	S 1
M 2	18 40 19	10°55'27	11°52'39	17°16'16	20°55'26	21°46'16	16°1'15	15°9'26	26°34	6°9'7	7°27	1°2'2	2°4'9	9°43	10°57	M 2
T 3	18 44 16	11°52'39	17°16'16	20°55'26	21°46'16	16°1'15	15°9'26	16°15'15	26°32	6°8'7	7°28	1°4'2	2°0'9	9°50	11°4'4	T 3
W 4	18 48 13	12°49'50	29°52'21	21°53'27	23°10'16	28°10'23	16°42'15	15°25'26	26°29	6°6'7	7°29	1°5'1	1°57'9	10°3'3	11°17'11	W 4
T 5	18 52 9	13°47'02	12°49'50	22°57'28	28°10'23	16°42'15	15°25'26	16°42'15	26°29	6°6'7	7°30	1°R 5	1°54'10	10°3'3	11°17'11	T 5
F 6	18 56 6	14°44'15	26°9'24	24°5'29	24°35'16	16°55'15	15°30'26	16°55'15	26°28	6°5'7	7°31	1°5'1	1°51'10	10°10'11	11°23'11	F 6
S 7	19 0 2	15°41'28	9°58'17	22°50'19	24°29'21	21°3'15	15°48'15	15°35'26	26°26	6°3'7	7°32	1°4'1	1°48'10	10°16'11	11°30'11	S 7
S 8	19 3 59	16°38'42	24°6'27	25°5'19	25°17'17	25°17'17	17°9'15	15°35'26	26°26	6°3'7	7°32	1°4'1	1°48'10	10°16'11	11°30'11	S 8
M 9	19 7 55	17°35'56	8°II42	27°55'15	26°41'17	17°35'15	15°45'26	15°45'26	26°24	6°1'7	7°34	1°1'1	1°41'10	10°30'11	11°43'11	M 9
T 10	19 11 52	18°33'11	23°38'29	29°20'25	27°23'17	17°49'15	15°50'26	15°50'26	26°23	6°0'7	7°36	1°0'1	1°38'10	10°36'11	11°49'11	T 10
W11	19 15 48	19°30'27	8°54'00	3°56'28	18°2'15	15°55'26	16°21'55	16°21'55	26°20	5°58'7	7°37	0°58'10	1°35'10	10°43'11	11°56'11	W11
T 12	19 19 45	20°27'43	23°56'2	4°55'28	18°16'15	15°59'26	16°20'55	16°20'55	26°19	5°57'7	7°39	0°58'10	1°29'10	10°56'11	12°9'12	T 12
F 13	19 23 42	21°25'00	9°R 0	4°0'54	5°54'29	18°29'16	16°4'26	16°4'26	26°19	5°57'7	7°39	0°58'10	1°29'10	10°56'11	12°9'12	F 13
S 14	19 27 38	22°22'16	23°50'54	6°53'0	0°II 9	18°43'16	16°9'26	16°9'26	26°18	5°56'7	7°40	0°58'10	1°25'11	11°3'12	12°15'12	S 14
S 15	19 31 35	23°19'34	8°II18	7°26'7	0°51'18	18°56'16	16°13'26	16°13'26	26°17	5°55'7	7°41	0°59'10	1°22'11	11°9'12	12°22'12	S 15
M16	19 35 31	24°16'51	22°21'9	8°54'13	1°32'19	16°18'16	16°16'54	16°16'54	26°16	5°54'7	7°42	1°0'1	1°19'10	11°16'11	12°28'11	M16
T 17	19 39 28	25°14'09	5°58'11	9°54'21	2°13'19	19°23'16	16°22'26	16°22'26	26°15	5°53'7	7°43	1°0'1	1°16'10	11°23'11	12°35'11	T 17
W18	19 43 24	26°11'27	1°55'25	2°33'25	6'17'7	7°0'20	20°56'16	20°56'16	26°10	5°47'7	7°44	1°0'1	1°13'10	11°29'11	12°41'11	W18
T 19	19 47 21	27°8'45	1°55'25	2°33'25	6'17'7	7°0'20	20°56'16	20°56'16	26°10	5°47'7	7°44	1°0'1	1°13'10	11°29'11	12°41'11	T 19
F 20	19 51 17	28°6'04	14°26'16	16°54'12	12°58'4	17°20'3	16°34'26	16°34'26	26°13	5°50'7	7°46	1°0'1	1°6'10	11°43'11	12°54'11	F 20
S 21	19 55 14	29°3'24	26°39'18	18°55'14	14°0'4	4°58'20	16°38'26	16°38'26	26°12	5°50'7	7°47	1°0'1	1°3'10	11°49'11	13°0'12	S 21
S 22	19 59 11	0°R 0	8°54'00	3°56'28	18°2'15	15°55'26	16°21'55	16°21'55	26°20	5°58'7	7°38	0°58'10	1°32'10	10°49'11	12°2'12	S 22
M23	20 3 7	0°58'04	20°34'23	1°16'4	6°19'20	20°43'16	16°46'26	16°46'26	26°11	5°48'7	7°48	1°D 0	0°57'12	12°3'13	13°13'13	M23
T 24	20 7 4	1°55'25	2°33'25	6'17'7	7°0'20	20°56'16	20°56'16	20°56'16	26°10	5°47'7	7°49	1°0'1	0°54'10	12°9'12	13°19'12	T 24
W25	20 11 0	2°52'47	14°12'27	18°10'7	7°40'21	21°23'16	16°57'26	16°57'26	26°9	5°46'7	7°51	1°R 0	0°47'10	12°23'11	13°32'11	W25
T 26	20 14 57	3°50'10	26°1'29	19°13'8	21°17'9	21°36'17	16°9'26	16°9'26	26°9	5°45'7	7°52	1°0'1	0°44'10	12°29'11	13°38'11	T 26
F 27	20 18 53	4°47'33	7°55'18	20°17'9	9°1'21	21°36'17	16°9'26	16°9'26	26°9	5°45'7	7°52	1°0'1	0°44'10	12°29'11	13°38'11	F 27
S 28	20 22 50	5°44'58	19°54'3	3°28'21	21°20'9	21°49'17	16°9'26	16°9'26	26°9	5°45'7	7°53	1°0'1	0°41'10	12°36'11	13°45'11	S 28
S 29	20 26 46	6°42'23	2°H 2	5°33'22	22°24'10	22°2'2	17°7'26	16°8'54	26°8	5°44'7	7°54	0°59'10	0°38'10	12°43'11	13°51'11	S 29
M30	20 30 43	7°R39'50	14°H20	7°R37	23°II28	11°II 2	22°516	17°R10	26°R 8	5°R44	7°II54	0°R59	0°R35	12°R49	13°R57	M30
T 31	20 34 40															T 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
S 1	23n11	18s24	0s54	19n32	3s28	15n22	3s27	17n13	0s41	22n46	0n12	14n13	2s14	19s15	0n11	19s47
M 2	23 6	15 47	1 58	19 46	3 17	15 35	3 27	17 24	0 40	22 44	0 12	14 15	2 14	19 15	0 11	19 47
T 3	23 2	12 27	2 57	20 2	3 5	15 48	3 26	17 36	0 40	22 43	0 12	14 16	2 14	19 14	0 11	19 47
W 4	22 57	8 33	3 49	20 17	2 54	16 1	3 26	17 48	0 39	22 41	0 12	14 18	2 14	19 14	0 11	19 47
T 5	22 52	4 12	4 31	20 33	2 41	16 14	3 26	17 59	0 38	22 40	0 12	14 19	2 14	19 14	0 11	19 47
F 6	22 46	0n27	5 1	20 49	2 29	16 27	3 25	18 10	0 38	22 38	0 12	14 21	2 14	19 13	0 11	19 47
S 7	22 40	5 13	5 15	21 6	2 16	16 40	3 24	18 21	0 37	22 37	0 12	14 22	2 15	19 13	0 11	19 46
S 8	22 34	9 52	5 13	21 22	2 2	16 53	3 24	18 32	0 36	22 35	0 12	14 23	2 15	19 13	0 11	19 46
M 9	22 27	14 7	4 51	21 37	1 49	17 6	3 23	18 43	0 35	22 33	0 12	14 24	2 15	19 13	0 11	19 46
T 10	22 19	17 40	4 11	21 52	1 36	17 18	3 21	18 53	0 35	22 32	0 12	14 26	2 15	19 12	0 11	19 46
W11	22 12	20 7	3 13	22 7	1 22	17 31	3 20	19 4	0 34	22 30	0 12	14 27	2 15	19 12	0 11	19 46
T 12	22 4	21 12	2 0	22 20	1 9	17 43	3 19	19 14	0 33	22 28	0 13	14 28	2 15	19 12	0 11	19 46
F 13	21 55	20 43	0 39	22 32	0 55	17 55	3 17	19 24	0 33	22 27	0 13	14 29	2 16	19 12	0 11	19 45
S 14	21 47	18 45	0n45	22 43	0 42	18 7	3 16	19 33	0 32	22 25	0 13	14 31	2 16	19 11	0 11	19 45
S 15	21 37	15 33	2 4	22 53	0 29	18 19	3 14	19 43	0 31	22 23	0 13	14 32	2 16	19 11	0 11	19 45
M16	21 28	11 27	3 13	23 6	0 16	18 30	3 12	19 52	0 30	22 21	0 13	14 33	2 16	19 11	0 11	19 45
T 17	21 18	6 50	4 8	23 0	0 4	18 42	3 10	20 1	0 30	22 20	0 13	14 34	2 16	19 11	0 11	19 45
W18	21 8	2 2	4 48	23 9	0n 8	18 53	3 8	20 10	0 29	22 18	0 13	14 35	2 17	19 10	0 11	19 45
T 19	20 57	2s43	5 11	23 11	0 20	19 3	3 6	20 19	0 28	22 16	0 13	14 36	2 17	19 10	0 11	19 45
F 20	20 46	7 12	5 18	23 9	0 31	19 14	3 4	20 28	0 27	22 14	0 13	14 37	2 17	19 10	0 11	19 45
S 21	20 35	11 16	5 9	23 5	0 41	19 24	3 1	20 36	0 26	22 12	0 13	14 38	2 17	19 10	0 11	19 45
S 22	20 23	14 48	4 47	22 59	0 51	19 34	2 59	20 45	0 26	22 10	0 14	14 39	2 17	19 10	0 11	19 44
M23	20 11	17 39	4 12	22 50	0 59	19 43	2 56	20 53	0 25	22 9	0 14	14 40	2 17	19 10	0 11	19 44
T 24	19 59	19 43	3 26	22 38	1 8	19 52	2 54	21 0	0 24	22 7	0 14	14 41	2 18	19 10	0 11	19 44
W25	19 46	20 55	2 32	22 23	1 15	20 1	2 51	21 8	0 23	22 5	0 14	14 41	2 18	19 9	0 11	19 44
T 26	19 33	21 12	1 32	22 6	1 22	20 10	2 48	21 16	0 22	22 3	0 14	14 42	2 18	19 9	0 11	19 44
F 27	19 20	20 32	0 28	21 46	1 28	20 18	2 46	21 23	0 22	22 1	0 14	14 43	2 18	19 9	0 11	19 44
S 28	19 6	18 56	0s38	21 24	1 33	20 25	2 43	21 30	0 21	21 59	0 14	14 44	2 19	19 9	0 11	19 44
S 29	18 52	16 30	1 43	20 59	1 37	20 33	2 40	21 37	0 20	21 57	0 14	14 45	2 19	19 9	0 11	19 44
M30	18 38	13 19	2 44	20 32	1 40	20 40	2 37	21 44	0 19	21 55	0 14	14 45	2 19	19 9	0 11	19 44
T 31	18n23	9s32	3s38	20n 3	1n43	20n46	2s34	21n50	0s18	21n53	0n14	14n46	2s19	19s 9	0n11	19s44

Julian Day Number = 2322430.5, Delta T = 45.76 sec
 Ecliptic obliquity = 23°29'01", Nutation = - 0°00'14", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 19°48'22", Lahiri = 18°55'23Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1646
geocentric

AUGUST 1646 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	20 38 36	8♌37°17'	26♋50	9♌41	24♏33	11♏42	22♏29	17♏13	26°R 8	5°R43	7♏55	0°R58	0♌31	12♏56	14♏3	W 1
T 2	20 42 33	9°34'46"	9♏34	11°43'	25°37'	12°22'	22°42'	17°16'	26♏8	5♏42	7°56	0♌57	0°28'	13°3'	14°9'	T 2
F 3	20 46 29	10°32'16"	22°35'	13°45'	26°42'	13°2'	22°55'	17°19'	26°8	5°42	7°57	0°56	0°25'	13°9'	14°15'	F 3
S 4	20 50 26	11°29'48"	5♏54	15°45'	27°47'	13°42'	23°8'	17°22'	26°7	5°42	7°57	0°D55	0°22'	13°16'	14°22'	S 4
S 5	20 54 22	12°27'20"	19°34'	17°44'	28°52'	14°22'	23°21'	17°25'	26°D 7	5°41	7°58	0°56	0°19'	13°22'	14°28'	S 5
M 6	20 58 19	13°24'55"	3♏34	19°42'	29°58'	15°1'	23°34'	17°27'	26°8	5°41	7°59	0°56	0°16'	13°29'	14°34'	M 6
T 7	21 2 15	14°22'31"	17°55'	21°38'	1♏4	15°41'	23°47'	17°30'	26°8	5°40	7°59	0°57	0°12'	13°36'	14°40'	T 7
W 8	21 6 12	15°20'08"	2♏33	23°33'	2°9	16°20'	24°0'	17°32'	26°8	5°40	8°0	0°58	0°9	13°42'	14°46'	W 8
T 9	21 10 9	16°17'47"	17°24'	25°26'	3°16'	16°59'	24°13'	17°35'	26°8	5°40	8°1	0°59	0°6	13°49'	14°52'	T 9
F 10	21 14 5	17°15'28"	2♏22	27°18'	4°22'	17°39'	24°26'	17°37'	26°8	5°40	8°1	0°R59	0°3	13°56'	14°58'	F 10
S 11	21 18 2	18°13'09"	17°18'	29°9'	5°28'	18°18'	24°38'	17°39'	26°9	5°39	8°2	0°59	29♏59	14°2'	15°3'	S 11
S 12	21 21 58	19°10'52"	2♏5	0♏58	6°35'	18°57'	24°51'	17°41'	26°9	5°39	8°2	0°57	29°56	14°9'	15°9'	S 12
M13	21 25 55	20°8'37"	16°35'	2°46'	7°41'	19°36'	25°4'	17°43'	26°9	5°39	8°3	0°55	29°53	14°16'	15°15'	M13
T 14	21 29 51	21°6'22"	0♌43	4°32'	8°48'	20°14'	25°17'	17°45'	26°10	5°39	8°3	0°52	29°50	14°22'	15°21'	T 14
W15	21 33 48	22°4'08"	14°26'	6°17'	9°55'	20°53'	25°29'	17°46'	26°10	5°39	8°4	0°50	29°47	14°29'	15°27'	W15
T 16	21 37 44	23°1'56"	27°42'	8°0'	11°3'	21°32'	25°42'	17°48'	26°11	5°39	8°4	0°47	29°44	14°36'	15°32'	T 16
F 17	21 41 41	23°59'45"	10♏34	9°42'	12°10'	22°10'	25°55'	17°50'	26°11	5°39	8°5	0°46	29°41	14°42'	15°38'	F 17
S 18	21 45 38	24°57'35"	23°4'	11°22'	13°18'	22°49'	26°7'	17°51'	26°12	5°D39	8°5	0°D45	29°37	14°49'	15°44'	S 18
S 19	21 49 34	25°55'26"	5♏16	13°2'	14°25'	23°27'	26°20'	17°52'	26°13	5°39	8°6	0°45	29°34	14°56'	15°49'	S 19
M20	21 53 31	26°53'19"	17°16'	14°40'	15°33'	24°5'	26°32'	17°53'	26°14	5°39	8°6	0°46	29°31	15°2'	15°55'	M20
T 21	21 57 27	27°51'13"	29°7'	16°16'	16°41'	24°43'	26°44'	17°54'	26°14	5°39	8°6	0°48	29°28	15°9'	16°0'	T 21
W22	22 1 24	28°49'08"	10♏56	17°51'	17°49'	25°21'	26°57'	17°55'	26°15	5°39	8°7	0°50	29°25	15°16'	16°6'	W22
T 23	22 5 20	29°47'05"	22°45'	19°25'	18°58'	25°59'	27°9'	17°56'	26°16	5°39	8°7	0°51	29°22	15°22'	16°11'	T 23
F 24	22 9 17	0♏45'03"	4♏38	20°58'	20°6'	26°37'	27°21'	17°57'	26°17	5°39	8°7	0°R51	29°18	15°29'	16°16'	F 24
S 25	22 13 13	1°43'02"	16°39'	22°29'	21°15'	27°14'	27°33'	17°58'	26°18	5°40	8°8	0°50	29°15	15°36'	16°22'	S 25
S 26	22 17 10	2°41'03"	28°50'	23°59'	22°24'	27°52'	27°45'	17°58'	26°19	5°40	8°8	0°47	29°12	15°42'	16°27'	S 26
M27	22 21 7	3°39'06"	11♏12	25°27'	23°32'	28°29'	27°57'	17°59'	26°20	5°40	8°8	0°43	29°9	15°49'	16°32'	M27
T 28	22 25 3	4°37'10"	23°46'	26°55'	24°41'	29°6'	28°9'	17°59'	26°22	5°40	8°9	0°38	29°6	15°55'	16°37'	T 28
W29	22 29 0	5°35'16"	6♏34	28°20'	25°51'	29°43'	28°21'	17°59'	26°23	5°41	8°9	0°32	29°2	16°2'	16°42'	W29
T 30	22 32 56	6°33'24"	19°35'	29°45'	27°0'	0♏20	28°33'	17°59'	26°24	5°41	8°9	0°26	28°59	16°9'	16°47'	T 30
F 31	22 36 53	7♏31'34"	2♏50	1♌8	28♏9	0♏57	28♏45	17°R59	26♏25	5♏42	8♏9	0♌21	28♏56	16♏15	16♏52	F 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
W 1	18n 8	5s17	4s23	19n32	1n45	20n52	2s30	21n57	0s18	21n51	0n15	14n47	2s19	19s 9	0n11	19s44
T 2	17 53	0 44	4 55	19 0	1 46	20 58	2 27	22 3	0 17	21 49	0 15	14 47	2 20	19 9	0 11	19 44
F 3	17 38	3n57	5 14	18 26	1 46	21 3	2 24	22 9	0 16	21 47	0 15	14 48	2 20	19 9	0 11	19 44
S 4	17 22	8 33	5 16	17 50	1 46	21 7	2 21	22 14	0 15	21 44	0 15	14 49	2 20	19 9	0 11	19 44
S 5	17 6	12 50	5 1	17 13	1 45	21 12	2 17	22 20	0 14	21 42	0 15	14 49	2 20	19 9	0 11	19 44
M 6	16 50	16 32	4 27	16 35	1 44	21 15	2 14	22 25	0 13	21 40	0 15	14 50	2 20	19 9	0 11	19 44
T 7	16 33	19 20	3 37	15 55	1 42	21 18	2 10	22 31	0 12	21 38	0 15	14 50	2 21	19 9	0 11	19 44
W 8	16 16	20 56	2 31	15 15	1 39	21 21	2 7	22 36	0 11	21 36	0 15	14 51	2 21	19 9	0 11	19 44
T 9	15 59	21 7	1 15	14 34	1 36	21 23	2 3	22 40	0 11	21 34	0 15	14 51	2 21	19 9	0 11	19 44
F 10	15 41	19 48	0n 8	13 53	1 33	21 25	2 0	22 45	0 10	21 32	0 16	14 51	2 21	19 9	0 10	19 44
S 11	15 24	17 6	1 29	13 10	1 29	21 26	1 56	22 49	0 9	21 30	0 16	14 52	2 21	19 9	0 10	19 44
S 12	15 6	13 18	2 44	12 28	1 24	21 27	1 52	22 54	0 8	21 27	0 16	14 52	2 22	19 9	0 10	19 44
M13	14 48	8 46	3 46	11 45	1 19	21 27	1 49	22 58	0 7	21 25	0 16	14 52	2 22	19 10	0 10	19 44
T 14	14 29	3 53	4 33	11 1	1 14	21 27	1 45	23 2	0 6	21 23	0 16	14 53	2 22	19 10	0 10	19 44
W15	14 11	1s 3	5 3	10 17	1 9	21 26	1 41	23 5	0 5	21 21	0 16	14 53	2 22	19 10	0 10	19 44
T 16	13 52	5 46	5 15	9 33	1 3	21 24	1 37	23 9	0 4	21 19	0 16	14 53	2 23	19 10	0 10	19 44
F 17	13 33	10 6	5 11	8 49	0 57	21 22	1 34	23 12	0 3	21 16	0 16	14 53	2 23	19 10	0 10	19 44
S 18	13 14	13 52	4 52	8 5	0 50	21 20	1 30	23 15	0 2	21 14	0 16	14 54	2 23	19 10	0 10	19 44
S 19	12 54	16 57	4 20	7 21	0 43	21 17	1 26	23 18	0 1	21 12	0 17	14 54	2 23	19 10	0 10	19 44
M20	12 34	19 16	3 37	6 37	0 36	21 13	1 22	23 21	0 0	21 10	0 17	14 54	2 23	19 11	0 10	19 44
T 21	12 14	20 43	2 46	5 53	0 29	21 9	1 18	23 23	0n 1	21 7	0 17	14 54	2 24	19 11	0 10	19 44
W22	11 54	21 15	1 47	5 9	0 22	21 4	1 15	23 26	0 2	21 5	0 17	14 54	2 24	19 11	0 10	19 44
T 23	11 34	20 50	0 44	4 25	0 14	20 58	1 11	23 28	0 3	21 3	0 17	14 54	2 24	19 11	0 10	19 44
F 24	11 14	19 29	0s21	3 41	0 7	20 52	1 7	23 30	0 4	21 1	0 17	14 54	2 24	19 12	0 10	19 44
S 25	10 53	17 14	1 26	2 58	0s 1	20 46	1 3	23 32	0 5	20 58	0 17	14 54	2 25	19 12	0 10	19 45
S 26	10 32	14 12	2 27	2 15	0 9	20 39	0 59	23 34	0 6	20 56	0 17	14 54	2 25	19 12	0 10	19 45
M27	10 11	10 30	3 23	1 33	0 17	20 31	0 55	23 35	0 7	20 54	0 17	14 54	2 25	19 12	0 10	19 45
T 28	9 50	6 18	4 9	0 50	0 26	20 23	0 52	23 37	0 8	20 51	0 18	14 54	2 25	19 13	0 10	19 45
W29	9 29	1 44	4 44	0 9	0 34	20 14	0 48	23 38	0 9	20 49	0 18	14 54	2 26	19 13	0 10	19 45
T 30	9 7	2n58	5 5	0s33	0 42	20 5	0 44	23 39	0 10	20 47	0 18	14 53	2 26	19 13	0 10	19 45
F 31	8n46	7n36	5s11	1s14	0s51	19n55	0s40	23n40	0n11	20n45	0n18	14n53	2s26	19s14	0n10	19s45

Julian Day Number = 2322461.5, Delta T = 45.70 sec
Ecliptic obliquity = 23°29'02", Nutation = - 0°00'14", out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 19°48'27", Lahiri = 18°55'27"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1646

geocentric

SEPTEMBER 1646 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	22 40 49	8 ^h 29'46"	16 ^h 17'	2 ^h 30'	29 ^h 19'	1 ^h 34'	28 ^h 57'	17 ^h 59'	26 ^h 27'	5 ^h 42'	8 ^h 11'	0 ^h 18'	28 ^h 53'	16 ^h 22'	16 ^h 57'	S 1
S 2	22 44 46	9 ^h 28'00"	29 ^h 58'	3 ^h 50'	0 ^h 29'	2 ^h 11'	29 ^h 8'	17 ^h 59'	26 ^h 28'	5 ^h 43'	8 ^h 9'	0 ^h 16'	28 ^h 50'	16 ^h 29'	17 ^h 2'	S 2
M 3	22 48 42	10 ^h 26'16"	13 ^h 11'53"	5 ^h 8'	1 ^h 38'	2 ^h 47'	29 ^h 20'	17 ^h 59'	26 ^h 30'	5 ^h 43'	8 ^h 9'	0 ^h 15'	28 ^h 47'	16 ^h 35'	17 ^h 7'	M 3
T 4	22 52 39	11 ^h 24'34"	28 ^h 0'	6 ^h 25'	2 ^h 48'	3 ^h 24'	29 ^h 32'	17 ^h 58'	26 ^h 31'	5 ^h 44'	8 ^h 10'	0 ^h 16'	28 ^h 43'	16 ^h 42'	17 ^h 12'	T 4
W 5	22 56 35	12 ^h 22'54"	12 ^h 19'	7 ^h 41'	3 ^h 58'	4 ^h 0'	29 ^h 43'	17 ^h 58'	26 ^h 33'	5 ^h 44'	8 ^h 10'	0 ^h 18'	28 ^h 40'	16 ^h 49'	17 ^h 16'	W 5
T 6	23 0 32	13 ^h 21'17"	26 ^h 48'	8 ^h 55'	5 ^h 9'	4 ^h 36'	29 ^h 54'	17 ^h 57'	26 ^h 34'	5 ^h 45'	8 ^h 10'	0 ^h 18'	28 ^h 37'	16 ^h 55'	17 ^h 21'	T 6
F 7	23 4 29	14 ^h 19'41"	11 ^h 22'	10 ^h 7'	6 ^h 19'	5 ^h 12'	0 ^h 16'	17 ^h 56'	26 ^h 36'	5 ^h 45'	8 ^h 10'	0 ^h 18'	28 ^h 34'	17 ^h 2'	17 ^h 26'	F 7
S 8	23 8 25	15 ^h 18'08"	25 ^h 58'	11 ^h 17'	7 ^h 29'	5 ^h 48'	0 ^h 17'	17 ^h 56'	26 ^h 38'	5 ^h 46'	8 ^h 10'	0 ^h 16'	28 ^h 31'	17 ^h 9'	17 ^h 30'	S 8
S 9	23 12 22	16 ^h 16'36"	10 ^h 28'	12 ^h 25'	8 ^h 40'	6 ^h 24'	0 ^h 28'	17 ^h 55'	26 ^h 40'	5 ^h 47'	8 ^h 10'	0 ^h 11'	28 ^h 28'	17 ^h 15'	17 ^h 35'	S 9
M10	23 16 18	17 ^h 15'07"	24 ^h 48'	13 ^h 32'	9 ^h 50'	6 ^h 59'	0 ^h 39'	17 ^h 53'	26 ^h 41'	5 ^h 48'	8 ^h 10'	0 ^h 5'	28 ^h 24'	17 ^h 22'	17 ^h 39'	M10
T 11	23 20 15	18 ^h 13'39"	8 ^h 49'	14 ^h 36'	11 ^h 1'	7 ^h 35'	0 ^h 50'	17 ^h 52'	26 ^h 43'	5 ^h 48'	8 ^h 10'	29 ^h 57'	28 ^h 21'	17 ^h 29'	17 ^h 43'	T 11
W12	23 24 11	19 ^h 12'13"	22 ^h 30'	15 ^h 37'	12 ^h 12'	8 ^h 10'	1 ^h 1'	17 ^h 51'	26 ^h 45'	5 ^h 49'	8 ^h 9'	29 ^h 49'	28 ^h 18'	17 ^h 35'	17 ^h 47'	W12
T 13	23 28 8	20 ^h 10'49"	5 ^h 47'	16 ^h 37'	13 ^h 23'	8 ^h 45'	1 ^h 12'	17 ^h 50'	26 ^h 47'	5 ^h 50'	8 ^h 9'	29 ^h 41'	28 ^h 15'	17 ^h 42'	17 ^h 52'	T 13
F 14	23 32 4	21 ^h 9'26"	18 ^h 40'	17 ^h 33'	14 ^h 34'	9 ^h 20'	1 ^h 23'	17 ^h 48'	26 ^h 49'	5 ^h 51'	8 ^h 9'	29 ^h 35'	28 ^h 12'	17 ^h 48'	17 ^h 56'	F 14
S 15	23 36 1	22 ^h 8'05"	1 ^h 11'	18 ^h 27'	15 ^h 45'	9 ^h 55'	1 ^h 33'	17 ^h 47'	26 ^h 51'	5 ^h 52'	8 ^h 9'	29 ^h 30'	28 ^h 8'	17 ^h 55'	18 ^h 0'	S 15
S 16	23 39 58	23 ^h 6'46"	13 ^h 25'	19 ^h 18'	16 ^h 56'	10 ^h 29'	1 ^h 44'	17 ^h 45'	26 ^h 53'	5 ^h 53'	8 ^h 9'	29 ^h 28'	28 ^h 5'	18 ^h 2'	18 ^h 4'	S 16
M17	23 43 54	24 ^h 5'29"	25 ^h 24'	20 ^h 5'	18 ^h 8'	11 ^h 4'	1 ^h 54'	17 ^h 43'	26 ^h 55'	5 ^h 54'	8 ^h 9'	29 ^h 27'	28 ^h 2'	18 ^h 8'	18 ^h 8'	M17
T 18	23 47 51	25 ^h 4'14"	7 ^h 16'	20 ^h 49'	19 ^h 19'	11 ^h 38'	2 ^h 5'	17 ^h 41'	26 ^h 57'	5 ^h 55'	8 ^h 9'	29 ^h 28'	27 ^h 59'	18 ^h 15'	18 ^h 11'	T 18
W19	23 51 47	26 ^h 3'00"	19 ^h 4'	21 ^h 29'	20 ^h 31'	12 ^h 13'	2 ^h 15'	17 ^h 39'	27 ^h 0'	5 ^h 56'	8 ^h 8'	29 ^h 29'	27 ^h 56'	18 ^h 22'	18 ^h 15'	W19
T 20	23 55 44	27 ^h 1'48"	0 ^h 54'	22 ^h 5'	21 ^h 42'	12 ^h 47'	2 ^h 25'	17 ^h 37'	27 ^h 2'	5 ^h 57'	8 ^h 8'	29 ^h 30'	27 ^h 53'	18 ^h 28'	18 ^h 19'	T 20
F 21	23 59 40	28 ^h 0'37"	12 ^h 51'	22 ^h 36'	22 ^h 54'	13 ^h 21'	2 ^h 35'	17 ^h 35'	27 ^h 4'	5 ^h 58'	8 ^h 8'	29 ^h 29'	27 ^h 49'	18 ^h 35'	18 ^h 23'	F 21
S 22	0 3 37	28 ^h 59'29"	24 ^h 59'	23 ^h 3'	24 ^h 6'	13 ^h 54'	2 ^h 45'	17 ^h 33'	27 ^h 6'	5 ^h 59'	8 ^h 7'	29 ^h 25'	27 ^h 46'	18 ^h 42'	18 ^h 26'	S 22
S 23	0 7 33	29 ^h 58'22"	7 ^h 21'	23 ^h 24'	25 ^h 18'	14 ^h 28'	2 ^h 55'	17 ^h 30'	27 ^h 9'	6 ^h 0'	8 ^h 7'	29 ^h 20'	27 ^h 43'	18 ^h 48'	18 ^h 30'	S 23
M24	0 11 30	0 ^h 57'17"	19 ^h 59'	23 ^h 39'	26 ^h 30'	15 ^h 1'	3 ^h 5'	17 ^h 28'	27 ^h 11'	6 ^h 1'	8 ^h 7'	29 ^h 12'	27 ^h 40'	18 ^h 55'	18 ^h 33'	M24
T 25	0 15 27	1 ^h 56'15"	2 ^h 53'	23 ^h 49'	27 ^h 42'	15 ^h 34'	3 ^h 14'	17 ^h 25'	27 ^h 14'	6 ^h 2'	8 ^h 6'	29 ^h 2'	27 ^h 37'	19 ^h 2'	18 ^h 36'	T 25
W26	0 19 23	2 ^h 55'14"	16 ^h 4'	23 ^h 52'	28 ^h 54'	16 ^h 8'	3 ^h 24'	17 ^h 22'	27 ^h 16'	6 ^h 4'	8 ^h 6'	28 ^h 51'	27 ^h 33'	19 ^h 8'	18 ^h 39'	W26
T 27	0 23 20	3 ^h 54'15"	29 ^h 28'	23 ^h 47'	0 ^h 27'	16 ^h 40'	3 ^h 33'	17 ^h 20'	27 ^h 19'	6 ^h 5'	8 ^h 6'	28 ^h 40'	27 ^h 30'	19 ^h 15'	18 ^h 43'	T 27
F 28	0 27 16	4 ^h 53'19"	13 ^h 5'	23 ^h 36'	1 ^h 19'	17 ^h 13'	3 ^h 43'	17 ^h 17'	27 ^h 21'	6 ^h 6'	8 ^h 5'	28 ^h 30'	27 ^h 27'	19 ^h 21'	18 ^h 46'	F 28
S 29	0 31 13	5 ^h 52'24"	26 ^h 51'	23 ^h 17'	2 ^h 31'	17 ^h 46'	3 ^h 52'	17 ^h 14'	27 ^h 24'	6 ^h 8'	8 ^h 5'	28 ^h 22'	27 ^h 24'	19 ^h 28'	18 ^h 49'	S 29
S 30	0 35 9	6 ^h 51'33"	10 ^h 11'45"	22 ^h 50'	3 ^h 27'	18 ^h 18'	4 ^h 1'	17 ^h 11'	27 ^h 27'	6 ^h 9'	8 ^h 11'	28 ^h 17'	27 ^h 21'	19 ^h 35'	18 ^h 51'	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	decl	lat
S 1	8n24	11n58	4s59	1s54	0s59	19n44	0s36	23n40	0n12	20n42	0n18	14n53	2s26	19s14	0n10	19s45	1n34	10n56	10s55	20n 8	20n25	21s22	16n 3	6s24					
S 2	8 2	15 47	4 30	2 34	1 8	19 33	0 33	23 41	0 13	20 40	0 18	14 53	2 26	19 14	0 10	19 46	1 34	10 56	10 55	20 8	20 26	21 22	16 2	6 24					
M 3	7 40	18 47	3 46	3 13	1 16	19 22	0 29	23 41	0 14	20 38	0 18	14 52	2 27	19 15	0 10	19 46	1 34	10 55	10 55	20 8	20 27	21 22	16 1	6 25					
T 4	7 18	20 42	2 46	3 51	1 25	19 10	0 25	23 41	0 15	20 35	0 18	14 52	2 27	19 15	0 10	19 46	1 34	10 55	10 55	20 8	20 27	21 22	16 0	6 25					
W 5	6 56	21 19	1 36	4 29	1 33	18 57	0 22	23 42	0 16	20 33	0 19	14 52	2 27	19 15	0 10	19 46	1 34	10 55	10 55	20 8	20 28	21 22	15 59	6 26					
T 6	6 33	20 32	0 19	5 6	1 42	18 44	0 18	23 41	0 17	20 31	0 19	14 51	2 27	19 16	0 10	19 46	1 34	10 55	10 56	20 7	20 29	21 22	15 58	6 26					
F 7	6 11	18 21	1n 0	5 42	1 50	18 30	0 14	23 41	0 18	20 29	0 19	14 51	2 27	19 16	0 10	19 46	1 33	10 55	10 56	20 7	20 29	21 22	15 57	6 27					
S 8	5 48	15 0	2 14	6 17	1 58	18 16	0 11	23 41	0 19	20 26	0 19	14 50	2 28	19 17	0 10	19 46	1 33	10 54	10 56	20 8	20 30	21 22	15 56	6 28					
S 9	5 25	10 44	3 20	6 52	2 7	18 1	0 7	23 40	0 21	20 24	0 19	14 50	2 28	19 17	0 10	19 47	1 33	10 54	10 56	20 9	20 30	21 22	15 55	6 28					
M10	5 3	5 55	4 12	7 25	2 15	17 46	0 4	23 40	0 22	20 22	0 19	14 49	2 28	19 17	0 10	19 47	1 33	10 54	10 56	20 10	20 31	21 22	15 54	6 29					
T 11	4 40	0 54	4 47	7 57	2 23	17 30	0 0	23 39	0 23	20 20	0 19	14 49	2 28	19 18	0 10	19 47	1 33	10 54	10 57	20 12	20 32	21 22	15 53	6 29					
W12	4 17	4s 3	5 5	8 29	2 31	17 13	0n 3	23 38	0 24	20 17	0 20	14 48	2 28	19 18	0 10	19 47	1 33	10 54	10 57	20 14	20 32	21 22	15 52	6 30					
T 13	3 54	8 40	5 6	8 59	2 38	16 57	0 7	23 37	0 25	20 15	0 20	14 48	2 29	19 19	0 10	19 47	1 33	10 53	10 57	20 15	20 33	21 22	15 50	6 30					
F 14	3 31	12 45	4 51	9 27	2 46	16 39	0 10	23 35	0 26	20 13	0 20	14 47	2 29	19 19	0 10	19 48	1 33	10 53	10 57	20 17	20 34	21 22	15 49	6 31					
S 15	3 8	16 9	4 22	9 55	2 53	16 22	0 14	23 34	0 27	20 11	0 20	14 47	2 29	19 20	0 10	19 48	1 33	10 53	10 57	20 18	20 34	21 22	15 48	6 31					
S 16	2 44	18 47	3 42	10 20	3 0	16 3	0 17	23 33	0 28	20 8	0 20	14 46	2 29	19 20	0 10	19 48	1 33	10 53	10 58	20 18	20 35	21 22	15 47	6 32					
M17	2 21	20 32	2 53	10 45	3 6	15 45	0 20	23 31	0 30	20 6	0 20	14 45	2 29	19 21	0 10	19 48	1 33	10 53	10 58	20 18	20 36	21 22	15 46	6 33					
T 18	1 58	21 21	1 57	11 7	3 13	15 25	0 23	23 29	0 31	20 4	0 20	14 45	2 30	19 21	0 10	19 49	1 33	10 52	10 58	20 18	20 36	21 22	15 45	6 33					
W19	1 34	21 12	0 56	11 27	3 18	15 6	0 26	23 27	0 32	20 2	0 21	14 44	2 30	19 22	0 10	19 49	1 33	10 52	10 58	20 18	20 37	21 22	15 44	6 34					
T 20	1 11	20 7	0s 8	11 46	3 24	14 46	0 30	23 25	0 33	20 0	0 21	14 43	2 30	19 22	0 10	19 49	1 33	10 52	10 58	20 18	20 38	21 22	15 43	6 34					
F 21	0 48	18 7	1 11	12 2	3 28	14 25	0 33	23 23	0 34	19 57	0 21	14 42	2 30	19 23	0 10	19 49	1 33	10 52	10 59	20 18	20 38	21 22	15 42	6 35					
S 22	0 24	15 17	2 12	12 15	3 32	14 4	0 36	23 21	0 36	19 55	0 21	14 41	2 30	19 23	0 10	19 49	1 33	10 51	10 59	20 19	20 39	21 22	15 41	6 36					
S 23	0 1	11 44	3 8	12 26	3 36	13 43	0 38	23 19	0 37	19 53	0 21	14 41	2 31	19 24	0 10	19 50	1 33	10 51	10 59	20 20	20 39	21 22	15 40	6 36					
M24	0s23	7 35	3 56	12 35	3 38	13 21	0 41	23 16	0 38	19 51	0 21	14 40	2 31	19 25	0 10	19 50	1 33	10 51	10 59	20 21	20 40	21 22	15 39	6 37					
T 25	0 46	3 1	4 33	12 40	3 40	12 59	0 44	23 14	0 39	19 49	0 21	14 39	2 31	19 25	0 10	19 50	1 33	10 51	10 59	20 23	20 41	21 22	15 38	6 37					
W26	1 10	1n47	4 56	12 41	3 40	12 37	0 47	23 11	0 41	19 47	0 22	14 38	2 31	19 26	0 10	19 50	1 32	10 51	10 59	20 26	20 41	21 22	15 37	6 38					
T 27	1 33	6 35	5 3	12 39	3 40	12 14	0 50	23 8	0 42	19 45	0 22	14 37	2 31	19 26	0 10	19 51	1 32	10 50	11 0	20 28	20 42	21 22	15 35	6 39					
F 28	1 57	11 8	4 53	12 33	3 38	11 51	0 52	23 5	0 43	19 43	0 22	14 36	2 31	19 27	0 10	19 51	1 32	10 50	11 0	20 30	20 43	21 22	15 34	6 39					
S 29	2 20	15 10	4 27	12 23	3 34	11 27	0 55	23 2	0 45	19 41	0 22	14 35	2 32	19 28	0 10	19 51	1 32	10 50	11 0	20 32	20 43	21 22	15 33	6 40					
S 30	2s44	18n24	3s44	12s 8	3s29	11n 3	0n57	22n59	0n46	19n39	0n22	14n34	2s32	19s28	0n10	19s52	1n32	10n50	11s 0	20n33	20n44	21s22	15n32	6s41					

ASTRODIENST EPHEMERIS for the year 1646

geocentric

OCTOBER 1646 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	0 39 6	7♂50°43	24♂44	22°R15	4♂56	18♂50	4♂10	17°R 8	27♂29	6♂10	8°R 4	28°R15	27♂18	19♂41	18♂54	M 1
T 2	0 43 2	8°49'56	8♂47	21♂32	6° 9	19°22	4°19	17♂ 5	27°32	6°12	8♂ 3	28°D14	27°14	19°48	18°57	T 2
W 3	0 46 59	9°49'11	22°54	20°42	7°22	19°54	4°28	17° 1	27°35	6°13	8° 3	28°R14	27°11	19°55	19° 0	W 3
T 4	0 50 56	10°48'29	7♂ 4	19°45	8°34	20°25	4°37	16°58	27°37	6°14	8° 2	28♂14	27° 8	20° 1	19° 2	T 4
F 5	0 54 52	11°47'49	21°15	18°42	9°47	20°57	4°45	16°54	27°40	6°16	8° 2	28°12	27° 5	20° 8	19° 5	F 5
S 6	0 58 49	12°47'11	5♂25	17°34	11° 0	21°28	4°54	16°51	27°43	6°17	8° 1	28° 8	27° 2	20°15	19° 7	S 6
S 7	1 2 45	13°46'35	19°30	16°24	12°13	21°59	5° 2	16°47	27°46	6°19	8° 1	28° 1	26°59	20°21	19° 9	S 7
M 8	1 6 42	14°46'02	3♂27	15°11	13°27	22°30	5°10	16°44	27°49	6°21	8° 0	27°51	26°55	20°28	19°12	M 8
T 9	1 10 38	15°45'31	17°11	13°59	14°40	23° 0	5°18	16°40	27°52	6°22	7°59	27°39	26°52	20°35	19°14	T 9
W10	1 14 35	16°45'01	0♂38	12°50	15°53	23°30	5°26	16°36	27°55	6°24	7°59	27°26	26°49	20°41	19°16	W10
T 11	1 18 31	17°44'34	13°47	11°46	17° 6	24° 0	5°34	16°32	27°58	6°25	7°58	27°14	26°46	20°48	19°18	T 11
F 12	1 22 28	18°44'09	26°35	10°48	18°20	24°30	5°41	16°28	28° 1	6°27	7°57	27° 3	26°43	20°55	19°20	F 12
S 13	1 26 24	19°43'45	9♂ 4	9°58	19°33	25° 0	5°49	16°24	28° 4	6°29	7°57	26°55	26°39	21° 1	19°21	S 13
S 14	1 30 21	20°43'24	21°17	9°18	20°47	25°29	5°56	16°20	28° 7	6°30	7°56	26°49	26°36	21° 8	19°23	S 14
M15	1 34 18	21°43'04	3♂16	8°49	22° 0	25°58	6° 3	16°16	28°10	6°32	7°55	26°46	26°33	21°14	19°25	M15
T 16	1 38 14	22°42'46	15° 7	8°30	23°14	26°27	6°10	16°12	28°13	6°34	7°54	26°45	26°30	21°21	19°26	T 16
W17	1 42 11	23°42'29	26°54	8°D23	24°28	26°56	6°17	16° 7	28°17	6°36	7°54	26°45	26°27	21°28	19°28	W17
T 18	1 46 7	24°42'15	8♂45	8°27	25°41	27°24	6°24	16° 3	28°20	6°37	7°53	26°45	26°24	21°34	19°29	T 18
F 19	1 50 4	25°42'02	20°43	8°42	26°55	27°52	6°31	15°59	28°23	6°39	7°52	26°43	26°20	21°41	19°30	F 19
S 20	1 54 0	26°41'51	2♂54	9° 7	28° 9	28°20	6°37	15°54	28°26	6°41	7°51	26°40	26°17	21°48	19°31	S 20
S 21	1 57 57	27°41'41	15°23	9°42	29°23	28°47	6°44	15°50	28°30	6°43	7°51	26°33	26°14	21°54	19°32	S 21
M22	2 1 53	28°41'33	28°12	10°25	0♂37	29°15	6°50	15°45	28°33	6°45	7°50	26°24	26°11	22° 1	19°33	M22
T 23	2 5 50	29°41'27	11°V22	11°16	1°51	29°42	6°56	15°41	28°36	6°47	7°49	26°13	26° 8	22° 8	19°34	T 23
W24	2 9 47	0♂41'23	24°54	12°15	3° 5	0♂ 8	7° 2	15°36	28°40	6°48	7°48	26° 0	26° 4	22°14	19°35	W24
T 25	2 13 43	1°41'21	8♂43	13°19	4°19	0°35	7° 7	15°31	28°43	6°50	7°47	25°47	26° 1	22°21	19°35	T 25
F 26	2 17 40	2°41'21	22°47	14°29	5°33	1° 1	7°13	15°27	28°46	6°52	7°46	25°36	25°58	22°28	19°36	F 26
S 27	2 21 36	3°41'23	6♂59	15°44	6°48	1°27	7°18	15°22	28°50	6°54	7°45	25°27	25°55	22°34	19°36	S 27
S 28	2 25 33	4°41'27	21°16	17° 2	8° 2	1°52	7°24	15°17	28°53	6°56	7°44	25°21	25°52	22°41	19°37	S 28
M29	2 29 29	5°41'33	5♂32	18°24	9°16	2°17	7°29	15°13	28°57	6°58	7°43	25°17	25°49	22°47	19°37	M29
T 30	2 33 26	6°41'41	19°45	19°49	10°31	2°42	7°33	15° 8	29° 0	7° 0	7°42	25°D16	25°45	22°54	19°37	T 30
W31	2 37 22	7♂41'51	3♂53	21♂16	11♂45	3♂ 7	7♂38	15♂ 3	29♂ 4	7♂ 2	7♂41	25°R16	25♂42	23♂ 1	19°R37	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
M 1	3s 7	20n35	2s48	11s49	3s23	10n39	1n 0	22n56	0n47	19n37	0n22	14n33	2s32	19s29	0n10	19s52	1n32	10n49	11s 0	20n33	20n44	21s22	15n31	6s41					
T 2	3 30	21 30	1 41	11 25	3 15	10 14	1 2	22 53	0 48	19 35	0 23	14 32	2 32	19 29	0 10	19 52	1 32	10 49	11 0	20 33	20 45	21 22	15 30	6 42					
W 3	3 54	21 4	0 28	10 57	3 4	9 49	1 4	22 50	0 50	19 33	0 23	14 31	2 32	19 30	0 10	19 52	1 32	10 49	11 1	20 33	20 46	21 21	15 29	6 43					
T 4	4 17	19 18	0n47	10 24	2 52	9 24	1 7	22 46	0 51	19 31	0 23	14 30	2 32	19 31	0 10	19 53	1 32	10 49	11 1	20 33	20 46	21 21	15 28	6 43					
F 5	4 40	16 19	1 59	9 47	2 38	8 59	1 9	22 43	0 53	19 29	0 23	14 29	2 32	19 31	0 10	19 53	1 32	10 48	11 1	20 34	20 47	21 21	15 27	6 44					
S 6	5 4	12 23	3 3	9 6	2 23	8 33	1 11	22 39	0 54	19 27	0 23	14 28	2 33	19 32	0 10	19 53	1 32	10 48	11 1	20 34	20 48	21 21	15 26	6 45					
S 7	5 27	7 47	3 56	8 23	2 5	8 7	1 13	22 36	0 55	19 25	0 23	14 27	2 33	19 33	0 9	19 54	1 32	10 48	11 1	20 36	20 48	21 21	15 25	6 45					
M 8	5 50	2 49	4 34	7 38	1 47	7 40	1 15	22 32	0 57	19 23	0 23	14 25	2 33	19 33	0 9	19 54	1 32	10 48	11 1	20 38	20 49	21 21	15 24	6 46					
T 9	6 13	2s12	4 56	6 52	1 27	7 14	1 17	22 28	0 58	19 22	0 24	14 24	2 33	19 34	0 9	19 54	1 32	10 47	11 2	20 40	20 49	21 21	15 23	6 47					
W10	6 36	7 1	5 0	6 6	1 7	6 47	1 19	22 25	0 59	19 20	0 24	14 23	2 33	19 35	0 9	19 55	1 32	10 47	11 2	20 43	20 50	21 21	15 22	6 47					
T 11	6 59	11 25	4 49	5 22	0 46	6 20	1 20	22 21	1 1	19 18	0 24	14 22	2 33	19 35	0 9	19 55	1 32	10 47	11 2	20 45	20 51	21 21	15 22	6 48					
F 12	7 21	15 10	4 22	4 40	0 26	5 53	1 22	22 17	1 2	19 16	0 24	14 21	2 33	19 36	0 9	19 55	1 32	10 47	11 2	20 47	20 51	21 20	15 21	6 49					
S 13	7 44	18 10	3 44	4 2	0 5	5 25	1 24	22 13	1 4	19 15	0 24	14 19	2 33	19 37	0 9	19 56	1 32	10 46	11 2	20 49	20 52	21 20	15 20	6 49					
S 14	8 6	20 16	2 56	3 29	0n14	4 58	1 25	22 9	1 5	19 13	0 24	14 18	2 33	19 38	0 9	19 56	1 32	10 46	11 2	20 50	20 52	21 20	15 19	6 50					
M15	8 29	21 26	2 1	3 1	0 32	4 30	1 26	22 5	1 7	19 12	0 25	14 17	2 34	19 38	0 9	19 56	1 32	10 46	11 2	20 50	20 53	21 20	15 18	6 51					
T 16	8 51	21 37	1 1	2 38	0 48	4 2	1 28	22 1	1 8	19 10	0 25	14 16	2 34	19 39	0 9	19 57	1 32	10 46	11 3	20 51	20 54	21 20	15 17	6 51					
W17	9 13	20 50	0s 1	2 22	1 3	3 34	1 29	21 57	1 10	19 8	0 25	14 14	2 34	19 40	0 9	19 57	1 32	10 45	11 3	20 51	20 54	21 20	15 16	6 52					
T 18	9 35	19 7	1 3	2 11	1 17	3 6	1 30	21 53	1 11	19 7	0 25	14 13	2 34	19 40	0 9	19 57	1 31	10 45	11 3	20 51	20 55	21 19	15 15	6 53					
F 19	9 57	16 34	2 3	2 6	1 29	2 37	1 31	21 49	1 13	19 5	0 25	14 12	2 34	19 41	0 9	19 58	1 31	10 45	11 3	20 51	20 55	21 19	15 14	6 54					
S 20	10 19	13 14	2 59	2 6	1 39	2 9	1 32	21 45	1 14	19 4	0 26	14 10	2 34	19 42	0 9	19 58	1 31	10 45	11 3	20 52	20 56	21 19	15 13	6 54					
S 21	10 40	9 16	3 47	2 12	1 48	1 40	1 33	21 41	1 16	19 2	0 26	14 9	2 34	19 43	0 9	19 58	1 31	10 44	11 3	20 53	20 57	21 19	15 13	6 55					
M22	11 2	4 46	4 25	2 23	1 55	1 12	1 34	21 37	1 18	19 1	0 26	14 8	2 34	19 43	0 9	19 59	1 31	10 44	11 3	20 55	20 57	21 19	15 12	6 56					
T 23	11 23	0n 3	4 51	2 38	2 0	0 43	1 35	21 33	1 19	19 0	0 26	14 6	2 34	19 44	0 9	19 59	1 31	10 44	11 3	20 57	20 58	21 18	15 11	6 56					
W24	11 44	5 0	5 0	2 56	2 4	0 14	1 36	21 28	1 21	18 58	0 26	14 5	2 34	19 45	0 9	19 59	1 31	10 44	11 4	20 59	20 58	21 18	15 10	6 57					
T 25	12 5	9 48	4 53	3 19	2 7	0s15	1 36	21 24	1 22	18 57	0 26	14 4	2 34	19 46	0 9	20 0	1 31	10 43	11 4	21 2	20 59	21 18	15 9	6 58					
F 26	12 26	14 11	4 28	3 44	2 9	0 44	1 37	21 20	1 24	18 56	0 27	14 2	2 34	19 46	0 9	20 0	1 31	10 43	11 4	21 4	21 0	21 18	15 9	6 59					
S 27	12 46	17 48	3 46	4 13	2 10	1 13	1 37	21 16	1 26	18 55	0 27	14 1	2 34	19 47	0 9	20 0	1 31	10 43	11 4	21 5	21 0	21 18	15 8	6 59					
S 28	13 7	20 23	2 50	4 43	2 9	1 42	1 38	21 12	1 27	18 54	0 27	14 0	2 34	19 48	0 9	20 1	1 31	10 43	11 4	21 7	21 1	21 17	15 7	7 0					
M29	13 27	21 40	1 42	5 15	2 8	2 11	1 38	21 8	1 29	18 52	0 27	13 58	2 34	19 49	0 9	20 1	1 31	10 43	11 4	21 7	21 1	21 17	15 6	7 1					
T 30	13 47	21 33	0 29	5 49	2 6	2 39	1 39	21 4	1 31	18 51	0 27	13 57	2 34	19 49	0 9	20 1	1 31	10 43	11 4	21 7	21 1	21 17	15 6	7 1					
W31	14s 6	20n 3	0n46	6s24	2n 4	3s 8	1n39	21n 0	1n33	18n50	0n28	13n55	2s34	19s50	0n 9	20s 2	1n31	10n42	11s 4	21n 7	21n 3	21s17	15n 5	7s 2					

ASTRODIENST EPHEMERIS for the year 1646

geocentric

DECEMBER 1646 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	4 39 36	9♂ 0'25	26♂12	10♂ 9	20♂27	12♂15	8°R33	12°R38	0♂57	8♂10	7°R 8	22°R51	24♂ 4	26♂27	18°R53	S 1
S 2	4 43 32	10° 1'22	9♂36	11°43	21°42	12°25	8♂32	12♂34	1° 0	8°12	7♂ 7	22♂48	24° 1	26°33	18♂50	S 2
M 3	4 47 29	11° 2'21	22°45	13°17	22°58	12°33	8°30	12°30	1° 4	8°14	7° 5	22°42	23°57	26°40	18°47	M 3
T 4	4 51 25	12° 3'20	5♂42	14°52	24°13	12°41	8°29	12°26	1° 8	8°17	7° 4	22°35	23°54	26°47	18°44	T 4
W 5	4 55 22	13° 4'21	18°26	16°26	25°28	12°48	8°27	12°22	1°11	8°19	7° 3	22°28	23°51	26°53	18°41	W 5
T 6	4 59 18	14° 5'23	0♂58	18° 0	26°44	12°55	8°25	12°19	1°15	8°21	7° 2	22°21	23°48	27° 0	18°38	T 6
F 7	5 3 15	15° 6'26	13°19	19°35	27°59	13° 0	8°22	12°15	1°19	8°23	7° 1	22°14	23°45	27° 7	18°35	F 7
S 8	5 7 12	16° 7'29	25°28	21° 9	29°14	13° 5	8°20	12°11	1°22	8°26	7° 0	22° 9	23°42	27°13	18°32	S 8
S 9	5 11 8	17° 8'33	7♂28	22°44	0♂30	13°10	8°17	12° 8	1°26	8°28	6°59	22° 6	23°38	27°20	18°28	S 9
M10	5 15 5	18° 9'38	19°21	24°19	1°45	13°13	8°14	12° 4	1°29	8°30	6°57	22°D 5	23°35	27°27	18°25	M10
T 11	5 19 1	19°10'44	1♂ 8	25°54	3° 0	13°16	8°11	12° 1	1°33	8°32	6°56	22° 5	23°32	27°33	18°21	T 11
W12	5 22 58	20°11'49	12°54	27°29	4°16	13°18	8° 8	11°58	1°37	8°35	6°55	22° 7	23°29	27°40	18°18	W12
T 13	5 26 54	21°12'56	24°43	29° 4	5°31	13°20	8° 4	11°54	1°40	8°37	6°54	22° 9	23°26	27°47	18°14	T 13
F 14	5 30 51	22°14'02	6♂38	0♂39	6°47	13°R20	8° 1	11°51	1°44	8°39	6°53	22°10	23°22	27°53	18°11	F 14
S 15	5 34 47	23°15'09	18°46	2°14	8° 2	13°20	7°57	11°48	1°47	8°41	6°52	22°R11	23°19	28° 0	18° 7	S 15
S 16	5 38 44	24°16'16	1°V10	3°49	9°17	13°19	7°53	11°45	1°51	8°44	6°51	22°11	23°16	28° 6	18° 3	S 16
M17	5 42 41	25°17'23	13°57	5°25	10°33	13°17	7°49	11°43	1°54	8°46	6°50	22°10	23°13	28°13	18° 0	M17
T 18	5 46 37	26°18'31	27° 8	7° 0	11°48	13°15	7°44	11°40	1°58	8°48	6°49	22° 7	23°10	28°20	17°56	T 18
W19	5 50 34	27°19'38	10♂48	8°35	13° 3	13°11	7°40	11°37	2° 1	8°50	6°48	22° 4	23° 7	28°26	17°52	W19
T 20	5 54 30	28°20'46	24°55	10°11	14°19	13° 7	7°35	11°35	2° 4	8°52	6°46	22° 0	23° 3	28°33	17°48	T 20
F 21	5 58 27	29°21'54	9♂27	11°46	15°34	13° 2	7°30	11°32	2° 8	8°54	6°45	21°57	23° 0	28°40	17°44	F 21
S 22	6 2 23	0♂23'02	24°18	13°21	16°50	12°56	7°25	11°30	2°11	8°57	6°44	21°54	22°57	28°46	17°40	S 22
S 23	6 6 20	1°24'10	9♂22	14°56	18° 5	12°49	7°20	11°27	2°15	8°59	6°43	21°53	22°54	28°53	17°36	S 23
M24	6 10 17	2°25'19	24°27	16°30	19°20	12°42	7°15	11°25	2°18	9° 1	6°42	21°D53	22°51	29° 0	17°32	M24
T25	6 14 13	3°26'28	9♂27	18° 4	20°36	12°34	7° 9	11°23	2°21	9° 3	6°41	21°53	22°48	29° 6	17°28	T 25
W26	6 18 10	4°27'37	24°13	19°37	21°51	12°24	7° 4	11°21	2°25	9° 5	6°40	21°54	22°44	29°13	17°24	W26
T 27	6 22 6	5°28'46	8♂40	21°10	23° 7	12°14	6°58	11°19	2°28	9° 7	6°39	21°56	22°41	29°20	17°19	T 27
F 28	6 26 3	6°29'56	22°44	22°41	24°22	12° 4	6°52	11°18	2°31	9° 9	6°38	21°57	22°38	29°26	17°15	F 28
S 29	6 29 59	7°31'06	6♂26	24°11	25°37	11°52	6°46	11°16	2°34	9°11	6°37	21°R57	22°35	29°33	17°11	S 29
S 30	6 33 56	8°32'16	19°46	25°40	26°53	11°40	6°40	11°14	2°37	9°13	6°36	21°57	22°32	29°39	17° 7	S 30
M31	6 37 52	9♂33'27	2♂45	27♂ 6	28♂ 8	11♂26	6♂33	11♂13	2♂41	9♂15	6♂35	21♂56	22♂28	29♂46	17♂ 3	M31

Day	☉	☾		♂		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	21s50	5n45	4n37	23s 5	1s 5	16s46	1n10	19n40	2n37	18n42	0n34	13n16	2s31	20s15	0n 9	20s13	1n30	10n36	11s 5	21n33	21n20	21s 7	14n51	7s22			
S 2	22 0	0 49	5 2	23 24	1 10	17 8	1 8	19 39	2 39	18 43	0 34	13 15	2 31	20 15	0 9	20 14	1 30	10 36	11 5	21 33	21 21	21 6	14 51	7 22			
M 3	22 8	4s 4	5 10	23 41	1 16	17 29	1 6	19 39	2 41	18 43	0 34	13 13	2 31	20 16	0 9	20 14	1 30	10 36	11 5	21 34	21 21	21 6	14 51	7 23			
T 4	22 17	8 42	5 2	23 58	1 21	17 50	1 4	19 39	2 44	18 44	0 35	13 12	2 31	20 17	0 9	20 14	1 30	10 36	11 5	21 35	21 22	21 6	14 51	7 24			
W 5	22 25	12 53	4 39	24 13	1 26	18 10	1 2	19 40	2 46	18 45	0 35	13 12	2 30	20 18	0 9	20 15	1 30	10 36	11 5	21 36	21 22	21 5	14 51	7 24			
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T 13	23 12	15 58	2 50	25 28	1 59	20 32	0 45	19 50	3 7	18 52	0 37	13 5	2 29	20 23	0 9	20 17	1 30	10 35	11 4	21 40	21 27	21 2	14 51	7 28			
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S 15	23 19	8 29	4 23	25 32	2 4	21 2	0 40	19 55	3 12	18 55	0 37	13 3	2 28	20 25	0 9	20 18	1 31	10 35	11 4	21 39	21 28	21 1	14 51	7 28			
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