



Astrodienst Ephemeris Tables for the year 1609

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 1609
geocentric

JANUARY 1609 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	6 42 37	10 ³ 48'11	10 ¹⁰ 58	3°R15	4 ⁴⁸ 10	1 ¹⁷ 55	5 ⁵⁸ 53	0 ⁰⁰ 3	5°R33	17°R42	0°R 4	6°R21	7 ⁰ 22	13 ⁰ 38	19 ⁰ 22	T 1
F 2	6 46 34	11°49'22	23°10	2 ³ 8	5°25	2°34	5°53	0°9	5 ¹¹ 31	17 ¹⁷ 41	0 ⁰ 3	6 ⁰ 18	7°19	13°44	19°28	F 2
S 3	6 50 31	12°50'33	5 ²⁷ 38	1°11	6°39	3°13	5°53	0°16	5°29	17°41	0°3	6°14	7°16	13°51	19°35	S 3
S 4	6 54 27	13°51'44	18°22	0°22	7°54	3°52	5°54	0°23	5°27	17°40	0°3	6°10	7°13	13°58	19°41	S 4
M 5	6 58 24	14°52'55	1 ³ 23	29 ²⁷ 43	9°9	4°31	5°55	0°30	5°25	17°40	0°3	6°7	7°10	14°4	19°48	M 5
T 6	7 2 20	15°54'05	14°42	29°14	10°24	5°10	5°56	0°37	5°24	17°39	0°2	6°4	7°7	14°11	19°54	T 6
W 7	7 6 17	16°55'15	28°16	28°55	11°38	5°49	5°58	0°44	5°22	17°39	0°2	6°3	7°3	14°18	20°1	W 7
T 8	7 10 13	17°56'25	12 ⁰⁰ 4	28°45	12°53	6°29	5°59	0°51	5°20	17°38	0°2	6°D 3	7°0	14°25	20°7	T 8
F 9	7 14 10	18°57'34	26°2	28°D44	14°8	7°8	6°1	0°58	5°19	17°37	0°2	6°4	6°57	14°31	20°13	F 9
S 10	7 18 7	19°58'43	10 ¹⁰ 8	28°51	15°22	7°47	6°3	1°5	5°17	17°37	0°2	6°5	6°54	14°38	20°20	S 10
S 11	7 22 3	20°59'50	24°18	29°6	16°37	8°26	6°5	1°12	5°15	17°36	0°2	6°6	6°51	14°45	20°26	S 11
M 12	7 26 0	22°0'57	8 ¹⁷ 30	29°28	17°52	9°6	6°8	1°19	5°14	17°35	0°2	6°7	6°47	14°51	20°32	M 12
T 13	7 29 56	23°2'03	22°42	29°56	19°6	9°45	6°10	1°27	5°12	17°34	0°D 2	6°R 7	6°44	14°58	20°38	T 13
W 14	7 33 53	24°3'08	6 ⁰ 51	0 ⁰ 31	20°21	10°24	6°13	1°34	5°11	17°34	0°2	6°7	6°41	15°5	20°44	W 14
T 15	7 37 49	25°4'11	20°55	1°10	21°35	11°4	6°16	1°41	5°10	17°33	0°2	6°6	6°38	15°12	20°50	T 15
F 16	7 41 46	26°5'15	4 ¹¹ 53	1°54	22°49	11°43	6°19	1°48	5°8	17°32	0°2	6°5	6°35	15°18	20°56	F 16
S 17	7 45 42	27°6'17	18°41	2°42	24°4	12°23	6°23	1°55	5°7	17°31	0°2	6°4	6°32	15°25	21°2	S 17
S 18	7 49 39	28°7'18	2 ⁰ 19	3°34	25°18	13°2	6°26	2°2	5°6	17°30	0°2	6°3	6°28	15°32	21°8	S 18
M 19	7 53 36	29°8'18	15°43	4°30	26°33	13°41	6°30	2°9	5°4	17°29	0°2	6°2	6°25	15°38	21°14	M 19
T 20	7 57 32	0 ⁰⁰ 9'17	28°53	5°29	27°47	14°21	6°34	2°16	5°3	17°28	0°2	6°2	6°22	15°45	21°20	T 20
W 21	8 1 29	1°10'16	11 ⁰ 48	6°31	29°1	15°0	6°38	2°24	5°2	17°27	0°2	6°D 2	6°19	15°52	21°26	W 21
T 22	8 5 25	2°11'13	24°27	7°35	0 ⁰ 15	15°40	6°42	2°31	5°1	17°26	0°3	6°2	6°16	15°59	21°32	T 22
F 23	8 9 22	3°12'10	6 ¹⁷ 51	8°41	1°30	16°19	6°47	2°38	5°0	17°25	0°3	6°2	6°13	16°5	21°37	F 23
S 24	8 13 18	4°13'06	19°2	9°50	2°44	16°59	6°52	2°45	4°59	17°24	0°3	6°3	6°9	16°12	21°43	S 24
S 25	8 17 15	5°14'01	1 ⁰ 4	11°1	3°58	17°38	6°56	2°52	4°58	17°23	0°3	6°3	6°6	16°19	21°48	S 25
M 26	8 21 11	6°14'55	12°58	12°14	5°12	18°18	7°1	2°59	4°57	17°22	0°4	6°R 3	6°3	16°25	21°54	M 26
T 27	8 25 8	7°15'48	24°50	13°28	6°26	18°57	7°7	3°6	4°56	17°20	0°4	6°3	6°0	16°32	21°59	T 27
W 28	8 29 4	8°16'40	6 ¹⁰ 44	14°44	7°40	19°37	7°12	3°14	4°56	17°19	0°4	6°D 3	5°57	16°39	22°5	W 28
T 29	8 33 1	9°17'32	18°44	16°2	8°54	20°16	7°18	3°21	4°55	17°18	0°5	6°3	5°53	16°46	22°10	T 29
F 30	8 36 58	10°18'23	0 ⁰ 56	17°20	10°8	20°56	7°23	3°28	4°54	17°17	0°5	6°3	5°50	16°52	22°16	F 30
S 31	8 40 54	11°19'13	13 ⁰ 23	18 ⁰ 41	11 ⁰ 22	21 ⁰ 35	7 ²⁸ 29	3°35	4 ¹¹ 54	17 ¹⁷ 16	0 ⁰ 5	6 ⁰ 3	5 ⁰ 47	16 ⁰ 59	22 ⁰ 21	S 31

Day	☉	☽		♊		♋		♌		♍		♎		♏		♐		♑		♒		♓		♈	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	23s 3	10s11	5n13	20s16	3n11	20s50	1s37	0n39	0s 8	12n26	1s 8	20s38	0s28	21n12	0s 4	5n55	1n 8	4s 5	16s38	18n43	18n28	1s 3	18s 4	5n 0	
F 2	22 58	13 45	5 0	20 12	3 16	20 32	1 37	0 55	0 6	12 27	1 8	20 37	0 28	21 12	0 4	5 55	1 8	4 5	16 38	18 44	18 29	1 5	18 4	5 1	
S 3	22 52	16 48	4 34	20 10	3 19	20 14	1 38	1 12	0 5	12 27	1 7	20 35	0 28	21 12	0 4	5 56	1 8	4 5	16 37	18 45	18 30	1 7	18 5	5 1	
S 4	22 46	19 6	3 53	20 10	3 19	19 55	1 38	1 29	0 4	12 28	1 7	20 34	0 28	21 11	0 4	5 56	1 9	4 4	16 37	18 46	18 30	1 10	18 5	5 1	
M 5	22 39	20 29	3 0	20 12	3 17	19 35	1 39	1 46	0 3	12 28	1 7	20 32	0 28	21 11	0 4	5 56	1 9	4 4	16 37	18 47	18 31	1 12	18 5	5 2	
T 6	22 32	20 46	1 55	20 15	3 14	19 15	1 39	2 2	0 1	12 29	1 6	20 31	0 28	21 11	0 4	5 56	1 9	4 4	16 36	18 48	18 32	1 14	18 5	5 2	
W 7	22 25	19 51	0 43	20 20	3 9	18 55	1 39	2 19	0 0	12 30	1 6	20 30	0 28	21 11	0 4	5 57	1 9	4 4	16 36	18 48	18 33	1 16	18 5	5 2	
T 8	22 17	17 45	0s33	20 26	3 3	18 34	1 39	2 36	0n 1	12 31	1 6	20 28	0 28	21 10	0 4	5 57	1 9	4 3	16 36	18 48	18 34	1 19	18 5	5 3	
F 9	22 9	14 34	1 48	20 33	2 56	18 12	1 39	2 52	0 2	12 32	1 5	20 27	0 28	21 10	0 4	5 57	1 9	4 3	16 35	18 48	18 34	1 21	18 5	5 3	
S 10	22 0	10 31	2 57	20 41	2 48	17 50	1 39	3 9	0 3	12 32	1 5	20 25	0 28	21 10	0 4	5 58	1 9	4 3	16 35	18 47	18 35	1 23	18 5	5 3	
S 11	21 51	5 53	3 56	20 49	2 40	17 28	1 39	3 25	0 5	12 33	1 5	20 24	0 28	21 9	0 4	5 58	1 9	4 2	16 34	18 47	18 36	1 25	18 6	5 4	
M 12	21 41	0 55	4 41	20 58	2 31	17 5	1 39	3 42	0 6	12 35	1 5	20 22	0 28	21 9	0 4	5 58	1 9	4 2	16 34	18 47	18 37	1 28	18 6	5 4	
T 13	21 31	4n 5	5 8	21 8	2 21	16 41	1 38	3 59	0 7	12 36	1 4	20 21	0 29	21 9	0 4	5 59	1 9	4 2	16 34	18 47	18 38	1 30	18 6	5 4	
W 14	21 21	8 50	5 16	21 18	2 12	16 17	1 38	4 15	0 8	12 37	1 4	20 19	0 29	21 9	0 4	5 59	1 9	4 1	16 33	18 47	18 38	1 32	18 6	5 5	
T 15	21 10	13 6	5 6	21 27	2 2	15 53	1 38	4 32	0 9	12 38	1 4	20 18	0 29	21 8	0 4	5 59	1 9	4 1	16 33	18 47	18 39	1 34	18 6	5 5	
F 16	20 59	16 36	4 38	21 37	1 52	15 28	1 37	4 48	0 10	12 39	1 3	20 16	0 29	21 8	0 4	6 0	1 9	4 1	16 33	18 47	18 40	1 37	18 6	5 6	
S 17	20 47	19 8	3 53	21 46	1 42	15 3	1 36	5 4	0 11	12 41	1 3	20 15	0 29	21 8	0 4	6 0	1 9	4 0	16 32	18 48	18 41	1 39	18 6	5 6	
S 18	20 35	20 32	2 56	21 55	1 32	14 37	1 36	5 21	0 12	12 42	1 3	20 13	0 29	21 8	0 4	6 1	1 9	4 0	16 32	18 48	18 42	1 41	18 6	5 6	
M 19	20 22	20 44	1 50	22 3	1 22	14 11	1 35	5 37	0 13	12 44	1 2	20 11	0 29	21 8	0 4	6 1	1 9	4 0	16 32	18 48	18 42	1 44	18 6	5 7	
T 20	20 10	19 47	0 40	22 11	1 12	13 44	1 34	5 53	0 14	12 45	1 2	20 10	0 29	21 7	0 4	6 1	1 9	3 59	16 31	18 48	18 43	1 46	18 6	5 7	
W 21	19 56	17 48	0n32	22 18	1 2	13 18	1 33	6 10	0 15	12 47	1 2	20 8	0 29	21 7	0 4	6 2	1 9	3 59	16 31	18 48	18 44	1 48	18 6	5 8	
T 22	19 43	14 59	1 40	22 24	0 52	12 51	1 32	6 26	0 16	12 49	1 2	20 7	0 29	21 7	0 4	6 2	1 9	3 58	16 31	18 48	18 45	1 50	18 6	5 8	
F 23	19 29	11 32	2 43	22 30	0 42	12 23	1 31	6 42	0 17	12 50	1 1	20 5	0 29	21 7	0 4	6 3	1 9	3 58	16 30	18 48	18 46	1 53	18 5	5 8	
S 24	19 15	7 40	3 37	22 34	0 33	11 55	1 30	6 58	0 18	12 52	1 1	20 4	0 29	21 7	0 4	6 3	1 9	3 58	16 30	18 48	18 46	1 55	18 5	5 9	
S 25	19 0	3 33	4 20	22 38	0 24	11 27	1 29	7 14	0 19	12 54	1 1	20 2	0 29	21 7	0 4	6 4	1 9	3 57	16 29	18 48	18 47	1 57	18 5	5 9	
M 26	18 45	0s39	4 52	22 41	0 15	10 59	1 28	7 30	0 20	12 56	1 0	20 0	0 29	21 6	0 4	6 4	1 9	3 57	16 29	18 48	18 48	2 0	18 5	5 10	
T 27	18 30	4 48	5 11	22 43	0 6	10 30	1 26	7 46	0 21	12 58	1 0	19 59	0 30	21 6	0 4	6 5	1 9	3 56	16 29	18 48	18 49	2 2	18 5	5 10	
W 28	18 14	8 47	5 17	22 43	0s 3	10 1	1 25	8 2	0 22	13 0	1 0	19 57	0 30	21 6	0 4	6 5	1 9	3 56	16 28	18 48	18 49	2 4	18 5	5 11	
T 29	17 58	12 28	5 10	22 43	0 11	9 32	1 23	8 17	0 23	13 2	1 0	19 56	0 30	21 6	0 4	6 6	1 10	3 55	16 28	18 48	18 50	2 6	18 5	5 11	
F 30	17 42	15 41	4 48	22 41	0 19	9 33	1 22	8 33	0 24	13 4	0 59	19 54	0 30	21 6	0 4	6 6	1 10	3 55	16 28	18 48	18 51	2 9	18 5	5 12	
S 31	17:25	18s16	4n13	22s38	0s27	8s33	1s20	8n49	0n25	13n 6	0s59	19s53	0s30	21n 6	0s 4	6n 7	1n10	3s55	16s27	18n48	18n52	2s11	18s 4	5n12	

ASTRODIENST EPHEMERIS for the year 1609
geocentric

FEBRUARY 1609 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	8 44 51	12 ²⁰ 0'01	26 ²⁷ 9	20 ²⁸ 2	12 ³⁶ 36	22 ¹⁵ 15	7 ³⁵ 35	3 ⁴² 42	4 ⁵³ 53	17 ¹⁴ 14	0 ⁸ 6	6 ⁴ 4	5 ⁴⁴ 44	17 ²⁶ 6	22 ²⁷ 26	S 1
M 2	8 48 47	13 ²⁰ 4'49	9 ³¹ 17	21 ²⁴ 24	13 ⁴⁹ 49	22 ⁵⁵ 55	7 ⁴² 42	3 ⁴⁹ 49	4 ⁵³ 53	17 ¹³ 13	0 ⁶ 6	6 ⁵ 5	5 ⁴¹ 41	17 ¹² 12	22 ³¹ 31	M 2
T 3	8 52 44	14 ²¹ 3'36	22 ⁴⁸ 48	22 ⁴⁸ 48	15 ³ 3	23 ³⁴ 34	7 ⁴⁸ 48	3 ⁵⁶ 56	4 ⁵² 52	17 ¹² 12	0 ⁷ 7	6 ⁵ 5	5 ³⁸ 38	17 ¹⁹ 19	22 ³⁶ 36	T 3
W 4	8 56 40	15 ²² 2'22	6 ⁴¹ 41	24 ¹³ 13	16 ¹⁷ 17	24 ¹⁴ 14	7 ⁵⁵ 55	4 ³ 3	4 ⁵² 52	17 ¹⁰ 10	0 ⁷ 7	6 ⁵ 5	5 ³⁴ 34	17 ²⁶ 26	22 ⁴¹ 41	W 4
T 5	9 0 37	16 ²³ 0'06	20 ⁵³ 53	25 ³⁹ 39	17 ³⁰ 30	24 ⁵³ 53	8 ¹ 1	4 ¹⁰ 10	4 ⁵¹ 51	17 ⁹ 9	0 ⁷ 7	6 ⁵ 5	5 ³¹ 31	17 ³³ 33	22 ⁴⁶ 46	T 5
F 6	9 4 34	17 ²³ 4'48	5 ²⁰ 20	27 ⁵ 5	18 ⁴⁴ 44	25 ³³ 33	8 ⁸ 8	4 ¹⁷ 17	4 ⁵¹ 51	17 ⁸ 8	0 ⁸ 8	6 ⁴ 4	5 ²⁸ 28	17 ³⁹ 39	22 ⁵¹ 51	F 6
S 7	9 8 30	18 ²⁴ 3'0	19 ⁵⁶ 56	28 ³³ 33	19 ⁵⁸ 58	26 ¹² 12	8 ¹⁵ 15	4 ²⁴ 24	4 ⁵¹ 51	17 ⁶ 6	0 ⁸ 8	6 ³ 3	5 ²⁵ 25	17 ⁴⁶ 46	22 ⁵⁶ 56	S 7
S 8	9 12 27	19 ²⁵ 0'09	4 ³⁴ 34	0 ² 2	21 ¹¹ 11	26 ⁵² 52	8 ²³ 23	4 ³¹ 31	4 ⁵¹ 51	17 ⁵ 5	0 ⁹ 9	6 ¹ 1	5 ²² 22	17 ⁵³ 53	23 ⁰ 0	S 8
M 9	9 16 23	20 ²⁵ 4'7	19 ⁹ 9	1 ³² 32	22 ²⁵ 25	27 ³² 32	8 ³⁰ 30	4 ³⁸ 38	4 ⁵⁰ 50	17 ³ 3	0 ¹⁰ 10	6 ⁰ 0	5 ¹⁸ 18	17 ⁵⁹ 59	23 ⁵ 5	M 9
T 10	9 20 20	21 ²⁶ 2'3	3 ³⁴ 34	3 ² 2	23 ³⁸ 38	28 ¹¹ 11	8 ³⁸ 38	4 ⁴⁵ 45	4 ⁵⁰ 50	17 ² 2	0 ¹⁰ 10	5 ⁵⁸ 58	5 ¹⁵ 15	18 ⁶ 6	23 ¹⁰ 10	T 10
W 11	9 24 16	22 ²⁶ 5'7	17 ⁴⁶ 46	4 ³⁴ 34	24 ⁵¹ 51	28 ⁵¹ 51	8 ⁴⁵ 45	4 ⁵² 52	4 ⁵⁰ 50	17 ⁰ 0	0 ¹¹ 11	5 ⁵⁸ 58	5 ¹² 12	18 ¹³ 13	23 ¹⁴ 14	W 11
T 12	9 28 13	23 ²⁷ 3'0	1 ⁴⁴ 44	6 ⁶ 6	26 ⁴ 4	29 ³⁰ 30	8 ⁵³ 53	4 ⁵⁹ 59	4 ⁵⁰ 50	16 ⁵⁹ 59	0 ¹¹ 11	5 ⁵⁸ 58	5 ⁹ 9	18 ²⁰ 20	23 ¹⁹ 19	T 12
F 13	9 32 9	24 ²⁸ 0'0	15 ²⁶ 26	7 ⁴⁰ 40	27 ¹⁸ 18	0 ¹⁰ 10	9 ¹ 1	5 ⁶ 6	4 ⁵⁰ 50	16 ⁵⁷ 57	0 ¹² 12	5 ⁵⁹ 59	5 ⁶ 6	18 ²⁶ 26	23 ²³ 23	F 13
S 14	9 36 6	25 ²⁸ 2'9	28 ⁵³ 53	9 ¹⁴ 14	28 ³¹ 31	0 ⁴⁹ 49	9 ⁹ 9	5 ¹³ 13	4 ⁵¹ 51	16 ⁵⁶ 56	0 ¹³ 13	6 ⁰ 0	5 ³ 3	18 ³³ 33	23 ²⁷ 27	S 14
S 15	9 40 2	26 ²⁸ 5'6	12 ⁵⁶ 56	10 ⁴⁹ 49	29 ⁴⁴ 44	1 ²⁹ 29	9 ¹⁸ 18	5 ²⁰ 20	4 ⁵¹ 51	16 ⁵⁴ 54	0 ¹³ 13	6 ¹ 1	4 ⁵⁹ 59	18 ⁴⁰ 40	23 ³² 32	S 15
M 16	9 43 59	27 ²⁹ 2'1	25 ⁵ 5	12 ²⁵ 25	0 ⁵⁷ 57	2 ⁸ 8	9 ²⁶ 26	5 ²⁷ 27	4 ⁵¹ 51	16 ⁵³ 53	0 ¹⁴ 14	6 ³ 3	4 ⁵⁶ 56	18 ⁴⁶ 46	23 ³⁶ 36	M 16
T 17	9 47 56	28 ²⁹ 4'5	7 ⁵¹ 51	14 ³ 3	2 ¹⁰ 10	2 ⁴⁸ 48	9 ³⁴ 34	5 ³³ 33	4 ⁵¹ 51	16 ⁵¹ 51	0 ¹⁵ 15	6 ³ 3	4 ⁵³ 53	18 ⁵³ 53	23 ⁴⁰ 40	T 17
W 18	9 51 52	29 ³⁰ 0'6	20 ²⁶ 26	15 ⁴¹ 41	3 ²³ 23	3 ²⁸ 28	9 ⁴³ 43	5 ⁴⁰ 40	4 ⁵² 52	16 ⁵⁰ 50	0 ¹⁶ 16	6 ² 2	4 ⁵⁰ 50	19 ⁰ 0	23 ⁴⁴ 44	W 18
T 19	9 55 49	0 ³⁰ 2'6	2 ⁵⁰ 50	17 ²⁰ 20	4 ³⁵ 35	4 ⁷ 7	9 ⁵² 52	5 ⁴⁷ 47	4 ⁵² 52	16 ⁴⁸ 48	0 ¹⁶ 16	6 ⁰ 0	4 ⁴⁷ 47	19 ⁷ 7	23 ⁴⁸ 48	T 19
F 20	9 59 45	1 ³⁰ 4'4	15 ⁵ 5	19 ⁰ 0	5 ⁴⁸ 48	4 ⁴⁷ 47	10 ¹ 1	5 ⁵⁴ 54	4 ⁵² 52	16 ⁴⁷ 47	0 ¹⁷ 17	5 ⁵⁷ 57	4 ⁴⁴ 44	19 ¹³ 13	23 ⁵² 52	F 20
S 21	10 3 42	2 ³¹ 0'0	27 ¹⁰ 10	20 ⁴¹ 41	7 ¹ 1	5 ²⁶ 26	10 ¹⁰ 10	6 ⁰ 0	4 ⁵³ 53	16 ⁴⁵ 45	0 ¹⁸ 18	5 ⁵² 52	4 ⁴⁰ 40	19 ²⁰ 20	23 ⁵⁵ 55	S 21
S 22	10 7 38	3 ³¹ 1'4	9 ² 2	22 ²³ 23	8 ¹³ 13	6 ⁶ 6	10 ¹⁹ 19	6 ⁷ 7	4 ⁵³ 53	16 ⁴³ 43	0 ¹⁹ 19	5 ⁴⁷ 47	4 ³⁷ 37	19 ²⁷ 27	23 ⁵⁹ 59	S 22
M 23	10 11 35	4 ³¹ 2'7	21 ³ 3	24 ⁶ 6	9 ²⁶ 26	6 ⁴⁵ 45	10 ²⁸ 28	6 ¹³ 13	4 ⁵⁴ 54	16 ⁴² 42	0 ²⁰ 20	5 ⁴² 42	4 ³⁴ 34	19 ³⁴ 34	24 ³ 3	M 23
T 24	10 15 31	5 ³¹ 3'8	2 ⁵⁵ 55	25 ⁵⁰ 50	10 ³⁸ 38	7 ²⁴ 24	10 ³⁸ 38	6 ²⁰ 20	4 ⁵⁵ 55	16 ⁴⁰ 40	0 ²⁰ 20	5 ³⁸ 38	4 ³¹ 31	19 ⁴⁰ 40	24 ⁶ 6	T 24
W 25	10 19 28	6 ³¹ 4'8	14 ⁵⁸ 58	27 ³⁵ 35	11 ⁵⁰ 50	8 ⁴ 4	10 ⁴⁷ 47	6 ²⁷ 27	4 ⁵⁵ 55	16 ³⁸ 38	0 ²¹ 21	5 ³⁵ 35	4 ²⁸ 28	19 ⁴⁷ 47	24 ¹⁰ 10	W 25
T 26	10 23 25	7 ³¹ 5'7	26 ⁴⁶ 46	29 ²² 22	13 ³ 3	8 ⁴³ 43	10 ⁵⁷ 57	6 ³³ 33	4 ⁵⁶ 56	16 ³⁷ 37	0 ²² 22	5 ³² 32	4 ²⁴ 24	19 ⁵⁴ 54	24 ¹³ 13	T 26
F 27	10 27 21	8 ³² 0'3	8 ⁵⁵ 55	1 ⁹ 9	14 ¹⁵ 15	9 ²³ 23	11 ⁷ 7	6 ⁴⁰ 40	4 ⁵⁷ 57	16 ³⁵ 35	0 ²³ 23	5 ³² 32	4 ²¹ 21	20 ⁰ 0	24 ¹⁶ 16	F 27
S 28	10 31 18	9 ³² 0'9	21 ¹⁸ 18	2 ⁵⁷ 57	15 ²⁷ 27	10 ⁸ 8	11 ⁸ 17	6 ⁴⁶ 46	4 ⁵⁸ 58	16 ³⁴ 34	0 ²⁴ 24	5 ³² 32	4 ¹⁸ 18	20 ⁷ 7	24 ²⁰ 20	S 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
S 1	17s 8	20s 2	3n24	22s34	0s35	8s 3	1s18	9n 4	0n26	13n 9	0s59	19s51	0s30	21n 6	0s 4	6n 7	1n10	3s54	16s27	18n48	18n53	2s13	18s 4	5n13			
M 2	16 51	20 47	2 23	22 29	0 42	7 33	1 17	9 20	0 26	13 11	0 59	19 49	0 30	21 6	0 4	6 8	1 10	3 54	16 27	18 47	18 53	2 16	18 4	5 13			
T 3	16 33	20 21	1 13	22 22	0 50	7 3	1 15	9 35	0 27	13 13	0 58	19 48	0 30	21 6	0 4	6 8	1 10	3 53	16 26	18 47	18 54	2 18	18 4	5 14			
W 4	16 16	18 42	0s 3	22 15	0 57	6 33	1 13	9 51	0 28	13 16	0 58	19 46	0 30	21 6	0 4	6 9	1 10	3 53	16 26	18 47	18 55	2 20	18 4	5 14			
T 5	15 57	15 51	1 21	22 6	1 3	6 2	1 11	10 6	0 29	13 18	0 58	19 45	0 30	21 5	0 4	6 9	1 10	3 52	16 26	18 47	18 56	2 22	18 3	5 15			
F 6	15 39	11 58	2 35	21 55	1 10	5 31	1 9	10 21	0 30	13 21	0 57	19 43	0 30	21 5	0 4	6 10	1 10	3 52	16 25	18 48	18 57	2 25	18 3	5 15			
S 7	15 21	7 21	3 40	21 44	1 16	5 0	1 7	10 37	0 30	13 23	0 57	19 41	0 30	21 5	0 4	6 10	1 10	3 51	16 25	18 48	18 57	2 27	18 3	5 16			
S 8	15 2	2 18	4 30	21 31	1 21	4 29	1 4	10 52	0 31	13 26	0 57	19 40	0 30	21 5	0 4	6 11	1 10	3 51	16 25	18 48	18 58	2 29	18 2	5 16			
M 9	14 43	2n51	5 3	21 16	1 27	3 58	1 2	11 7	0 32	13 28	0 57	19 38	0 31	21 5	0 4	6 12	1 10	3 50	16 24	18 49	18 59	2 32	18 2	5 17			
T 10	14 23	7 47	5 16	21 1	1 32	3 27	1 0	11 22	0 33	13 31	0 56	19 37	0 31	21 5	0 3	6 12	1 10	3 50	16 24	18 49	19 0	2 34	18 2	5 17			
W 11	14 4	12 13	5 9	20 44	1 37	2 56	0 57	11 36	0 33	13 34	0 56	19 35	0 31	21 5	0 3	6 13	1 10	3 49	16 24	18 49	19 0	2 36	18 2	5 18			
T 12	13 44	15 54	4 45	20 25	1 42	2 24	0 55	11 51	0 34	13 36	0 56	19 33	0 31	21 5	0 3	6 13	1 10	3 49	16 23	18 49	19 1	2 39	18 1	5 18			
F 13	13 24	18 39	4 4	20 6	1 46	1 53	0 52	12 6	0 35	13 39	0 56	19 32	0 31	21 5	0 3	6 14	1 10	3 48	16 23	18 49	19 2	2 41	18 1	5 19			
S 14	13 3	20 18	3 11	19 45	1 50	1 21	0 50	12 20	0 36	13 42	0 55	19 30	0 31	21 5	0 3	6 15	1 10	3 48	16 23	18 49	19 3	2 43	18 1	5 19			
S 15	12 43	20 48	2 8	19 22	1 53	0 50	0 47	12 35	0 36	13 45	0 55	19 29	0 31	21 5	0 3	6 15	1 10	3 47	16 22	18 48	19 3	2 45	18 0	5 20			
M 16	12 22	20 11	1 0	18 58	1 56	0 18	0 45	12 49	0 37	13 48	0 55	19 27	0 31	21 6	0 3	6 16	1 10	3 47	16 22	18 48	19 4	2 48	18 0	5 21			
T 17	12 1	18 30	0n10	18 33	1 59	0n13	0 42	13 4	0 38	13 51	0 55	19 25	0 31	21 6	0 3	6 17	1 10	3 46	16 22	18 48	19 5	2 50	17 59	5 21			
W 18	11 40	15 57	1 18	18 6	2 2	0 45	0 39	13 18	0 38	13 54	0 54	19 24	0 31	21 6	0 3	6 17	1 10	3 46	16 21	18 48	19 6	2 52	17 59	5 22			
T 19	11 19	12 41	2 22	17 38	2 4	1 17	0 36	13 32	0 39	13 57	0 54	19 22	0 31	21 6	0 3	6 18	1 10	3 45	16 21	18 49	19 7	2 55	17 59	5 22			
F 20	10 58	8 56	3 18	17 9	2 5	1 48	0 33	13 46	0 40	14 0	0 54	19 21	0 32	21 6	0 3	6 18	1 10	3 44	16 21	18 49	19 7	2 57	17 58	5 23			
S 21	10 36	4 52	4 5	16 38	2 7	2 20	0 30	14 0	0 40	14 3	0 54	19 19	0 32	21 6	0 3	6 19	1 10	3 44	16 20	18 51	19 8	2 59	17 58	5 23			
S 22	10 14	0 39	4 40	16 5	2 8	2 51	0 27	14 13	0 41	14 6	0 54	19 18	0 32	21 6	0 3	6 20	1 10	3 43	16 20	18 52	19 9	3 2	17 57	5 24			
M 23	9 52	3s33	5 2	15 32	2 8	3 23	0 24	14 27	0 42	14 9	0 53	19 16	0 32	21 6	0 3	6 20	1 10	3 43	16 20	18 53	19 10	3 4	17 57	5 25			
T 24	9 30	7 37	5 12	14 56	2 8	3 54	0 21	14 41	0 42	14 12	0 53	19 15	0 32	21 6	0 3	6 21	1 10	3 42	16 20	18 54	19 10	3 6	17 57	5 25			
W 25	9 8	11 24	5 8	14 20	2 8	4 25	0 18	14 54	0 43	14 15	0 53	19 13	0 32	21 6	0 3	6 22	1 10	3 42	16 19	18 55	19 11	3 8	17 56	5 26			
T 26	8 46	14 45	4 51	13 42	2 7	4 56	0 15	15 7	0 44	14 19	0 53	19 11	0 32	21 7	0 3	6 22	1 10	3 41	16 19	18 55	19 12	3 11	17 56	5 26			
F 27	8 23	17 32	4 21	13 2	2 5	5 27	0 11	15 21	0 44	14 22	0 52	19 10	0 32	21 7	0 3	6 23	1 10	3 41	16 19	18 56	19 13	3 13	17 55	5 27			
S 28	8s 1	19s34	3n38	12s22	2s 4	5n58	0s 8	15n34	0n45	14n25	0s52	19s 8	0s32	21n 7	0s 3	6n24	1n10	3s40	16s18	18n55	19n13	3s15	17s55	5n28			

ASTRODIENST EPHEMERIS for the year 1609

geocentric

MARCH 1609 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	10 35 14	10 ^h 32'12"	4 ^h 00'	4 ^h 47'	16 ^h 39'	10 ^h 42'	11 ^h 27'	6 ^h 52'	4 ^h 59'	16 ^h 32'	0 ^h 25'	5 ^h 24'	4 ^h 15'	20 ^h 14'	24 ^h 23'	S 1
M 2	10 39 11	11 ^h 32'14"	17° 5'	6°38'	17°51'	11°21'	11°37'	6°59'	5° 0'	16 ^h 30'	0°26'	5°35'	4°12'	20°21'	24°26'	M 2
T 3	10 43 7	12 ^h 32'14"	0 ^h 37'	8°29'	19° 3'	12° 0'	11°47'	7° 5'	5° 1'	16°29'	0°27'	5°R36'	4° 9'	20°27'	24°29'	T 3
W 4	10 47 4	13 ^h 32'13"	14°35'	10°22'	20°15'	12°40'	11°58'	7°11'	5° 2'	16°27'	0°28'	5°36'	4° 5'	20°34'	24°32'	W 4
T 5	10 51 0	14 ^h 32'09"	29° 0'	12°16'	21°26'	13°19'	12° 8'	7°17'	5° 3'	16°25'	0°29'	5°34'	4° 2'	20°41'	24°34'	T 5
F 6	10 54 57	15 ^h 32'04"	13 ^h 46'	14°11'	22°38'	13°59'	12°19'	7°24'	5° 4'	16°24'	0°30'	5°30'	3°59'	20°47'	24°37'	F 6
S 7	10 58 54	16 ^h 31'57"	28°46'	16° 7'	23°49'	14°38'	12°29'	7°30'	5° 5'	16°22'	0°31'	5°25'	3°56'	20°54'	24°40'	S 7
S 8	11 2 50	17°31'48"	13 ^h 50'	18° 3'	25° 1'	15°17'	12°40'	7°36'	5° 7'	16°20'	0°32'	5°18'	3°53'	21° 1'	24°42'	S 8
M 9	11 6 47	18°31'36"	28°51'	20° 1'	26°12'	15°57'	12°51'	7°42'	5° 8'	16°19'	0°33'	5°12'	3°50'	21° 8'	24°45'	M 9
T 10	11 10 43	19°31'23"	13 ^h 37'	21°59'	27°23'	16°36'	13° 2'	7°48'	5° 9'	16°17'	0°34'	5° 6'	3°46'	21°14'	24°47'	T 10
W11	11 14 40	20°31'07"	28° 4'	23°58'	28°34'	17°15'	13°13'	7°54'	5°11'	16°15'	0°35'	5° 2'	3°43'	21°21'	24°49'	W11
T 12	11 18 36	21°30'49"	12 ^h 11'	25°58'	29°45'	17°55'	13°24'	7°59'	5°12'	16°14'	0°36'	5° 0'	3°40'	21°28'	24°52'	T 12
F 13	11 22 33	22°30'29"	25°49'	27°58'	0 ^h 56'	18°34'	13°36'	8° 5'	5°14'	16°12'	0°37'	5°D 0'	3°37'	21°34'	24°54'	F 13
S 14	11 26 29	23°30'06"	9 ^h 27'	29°58'	2° 7'	19°13'	13°47'	8°11'	5°15'	16°10'	0°38'	5° 1'	3°34'	21°41'	24°56'	S 14
S 15	11 30 26	24°29'41"	22° 6'	1 ^h 58'	3°18'	19°52'	13°58'	8°17'	5°17'	16° 9'	0°39'	5° 2'	3°30'	21°48'	24°57'	S 15
M16	11 34 23	25°29'14"	4 ^h 28'	3°58'	4°28'	20°32'	14°10'	8°22'	5°19'	16° 7'	0°41'	5°R 2'	3°27'	21°55'	24°59'	M16
T 17	11 38 19	26°28'44"	17°17'	5°58'	5°39'	21°11'	14°22'	8°28'	5°20'	16° 5'	0°42'	5° 2'	3°24'	22° 1'	25° 1'	T 17
W18	11 42 16	27°28'12"	29°35'	7°56'	6°49'	21°50'	14°33'	8°33'	5°22'	16° 4'	0°43'	4°59'	3°21'	22° 8'	25° 3'	W18
T 19	11 46 12	28°27'38"	11 ^h 45'	9°53'	7°59'	22°29'	14°45'	8°39'	5°24'	16° 2'	0°44'	4°53'	3°18'	22°15'	25° 4'	T 19
F 20	11 50 9	29°27'02"	23°49'	11°48'	9° 9'	23° 9'	14°57'	8°44'	5°26'	16° 0'	0°45'	4°45'	3°15'	22°21'	25° 6'	F 20
S 21	11 54 5	0 ^h 26'24"	5 ^h 47'	13°42'	10°19'	23°48'	15° 9'	8°49'	5°28'	15°59'	0°47'	4°35'	3°11'	22°28'	25° 7'	S 21
S 22	11 58 2	1°25'44"	17°42'	15°33'	11°29'	24°27'	15°21'	8°55'	5°29'	15°57'	0°48'	4°24'	3° 8'	22°35'	25° 8'	S 22
M23	12 1 58	2°25'01"	29°35'	17°21'	12°39'	25° 6'	15°33'	9° 0'	5°31'	15°56'	0°49'	4°13'	3° 5'	22°42'	25° 9'	M23
T 24	12 5 55	3°24'17"	11 ^h 27'	19° 6'	13°48'	25°45'	15°45'	9° 5'	5°33'	15°54'	0°50'	4° 3'	3° 2'	22°48'	25°10'	T 24
W25	12 9 51	4°23'31"	23°21'	20°47'	14°58'	26°24'	15°57'	9°10'	5°36'	15°52'	0°51'	3°54'	2°59'	22°55'	25°11'	W25
T 26	12 13 48	5°22'43"	5 ^h 20'	22°24'	16° 7'	27° 3'	16°10'	9°15'	5°38'	15°51'	0°53'	3°47'	2°55'	23° 2'	25°12'	T 26
F 27	12 17 45	6°21'53"	17°28'	23°57'	17°16'	27°42'	16°22'	9°20'	5°40'	15°49'	0°54'	3°43'	2°52'	23° 9'	25°13'	F 27
S 28	12 21 41	7°21'02"	29°48'	25°25'	18°25'	28°21'	16°34'	9°25'	5°42'	15°48'	0°55'	3°41'	2°49'	23°15'	25°14'	S 28
S 29	12 25 38	8°20'09"	12 ^h 25'	26°48'	19°34'	29° 0'	16°47'	9°30'	5°44'	15°46'	0°56'	3°D41'	2°46'	23°22'	25°14'	S 29
M30	12 29 34	9°19'14"	25°24'	28° 6'	20°42'	29°39'	16°59'	9°35'	5°46'	15°45'	0°58'	3°41'	2°43'	23°29'	25°15'	M30
T 31	12 33 31	10 ^h 18'17"	8 ^h 48'	29 ^h 18'	21 ^h 51'	0 ^h 118'	17 ^h 12'	9 ^h 39'	5 ^h 49'	15 ^h 43'	0 ^h 59'	3°R41'	2°40'	23 ^h 35'	25 ^h 15'	T 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
S 1	7s38	20s42	2n44	11s39	2s 1	6n29	0s 5	15n47	0n45	14n28	0s52	19s 7	0s32	21n 7	0s 3	6n24
M 2	7 15	20 45	1 39	10 56	1 59	7 0	0 1	16 0	0 46	14 32	0 52	19 5	0 32	21 7	0 3	6 25
T 3	6 52	19 37	0 27	10 11	1 55	7 30	0n 2	16 12	0 46	14 35	0 52	19 4	0 33	21 7	0 3	6 26
W 4	6 29	17 16	0s49	9 25	1 51	8 1	0 6	16 25	0 47	14 38	0 51	19 2	0 33	21 8	0 3	6 26
T 5	6 6	13 47	2 4	8 37	1 47	8 31	0 9	16 37	0 47	14 42	0 51	19 1	0 33	21 8	0 3	6 27
F 6	5 43	9 21	3 12	7 49	1 42	9 1	0 13	16 50	0 48	14 45	0 51	18 59	0 33	21 8	0 3	6 28
S 7	5 20	4 17	4 8	6 59	1 37	9 31	0 16	17 2	0 49	14 49	0 51	18 58	0 33	21 8	0 3	6 28
S 8	4 56	1n 3	4 48	6 7	1 31	10 0	0 20	17 14	0 49	14 52	0 51	18 57	0 33	21 9	0 3	6 29
M 9	4 33	6 18	5 7	5 15	1 24	10 30	0 23	17 26	0 50	14 56	0 50	18 55	0 33	21 9	0 3	6 30
T 10	4 9	11 6	5 5	4 22	1 17	10 59	0 27	17 38	0 50	14 59	0 50	18 54	0 33	21 9	0 3	6 30
W11	3 46	15 9	4 44	3 27	1 9	11 28	0 30	17 50	0 51	15 3	0 50	18 52	0 33	21 9	0 3	6 31
T 12	3 22	18 13	4 7	2 32	1 1	11 56	0 34	18 1	0 51	15 6	0 50	18 51	0 34	21 10	0 3	6 32
F 13	2 59	20 10	3 16	1 37	0 52	12 25	0 38	18 13	0 51	15 10	0 50	18 49	0 34	21 10	0 3	6 32
S 14	2 35	20 56	2 15	0 40	0 43	12 53	0 41	18 24	0 52	15 13	0 49	18 48	0 34	21 10	0 3	6 33
S 15	2 11	20 32	1 9	0n17	0 33	13 21	0 45	18 35	0 52	15 17	0 49	18 47	0 34	21 11	0 3	6 34
M16	1 48	19 5	0 1	1 14	0 23	13 48	0 49	18 46	0 53	15 21	0 49	18 45	0 34	21 11	0 3	6 34
T 17	1 24	16 43	1n 5	2 11	0 12	14 15	0 52	18 57	0 53	15 24	0 49	18 44	0 34	21 11	0 3	6 35
W18	1 0	13 38	2 8	3 8	0 1	14 42	0 56	19 8	0 54	15 28	0 49	18 43	0 34	21 11	0 3	6 35
T 19	0 37	10 0	3 4	4 5	0n10	15 9	1 0	19 18	0 54	15 31	0 48	18 41	0 34	21 12	0 3	6 36
F 20	0 13	5 59	3 51	5 1	0 22	15 35	1 4	19 29	0 55	15 35	0 48	18 40	0 34	21 12	0 3	6 37
S 21	0n11	1 47	4 27	5 56	0 34	16 0	1 7	19 39	0 55	15 39	0 48	18 39	0 35	21 13	0 3	6 37
S 22	0 34	2s28	4 51	6 51	0 46	16 26	1 11	19 49	0 55	15 42	0 48	18 37	0 35	21 13	0 3	6 38
M23	0 58	6 37	5 3	7 43	0 58	16 51	1 15	19 59	0 56	15 46	0 48	18 36	0 35	21 13	0 3	6 39
T 24	1 21	10 31	5 1	8 35	1 10	17 16	1 18	20 9	0 56	15 50	0 48	18 35	0 35	21 14	0 3	6 39
W25	1 45	14 1	4 47	9 24	1 22	17 40	1 22	20 18	0 57	15 53	0 47	18 34	0 35	21 14	0 3	6 40
T 26	2 8	16 59	4 20	10 11	1 34	18 4	1 26	20 28	0 57	15 57	0 47	18 32	0 35	21 14	0 3	6 40
F 27	2 32	19 14	3 40	10 57	1 45	18 27	1 29	20 37	0 57	16 1	0 47	18 31	0 35	21 15	0 3	6 41
S 28	2 55	20 39	2 50	11 39	1 56	18 50	1 33	20 46	0 58	16 5	0 47	18 30	0 35	21 15	0 3	6 42
S 29	3 19	21 4	1 51	12 19	2 7	19 12	1 36	20 55	0 58	16 8	0 47	18 29	0 35	21 16	0 3	6 42
M30	3 42	20 23	0 44	12 57	2 17	19 34	1 40	21 4	0 59	16 12	0 47	18 28	0 36	21 16	0 3	6 43
T 31	4n 5	18s32	0s27	13n31	2n26	19n56	1n43	21n13	0n59	16n16	0s46	18s27	0s36	21n16	0s 3	6n43

Julian Day Number = 2308794.5, Delta T = 77.60 sec
 Ecliptic obliquity = 23°29'20", Nutation = - 0°00'13", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 19°17'08", Lahiri = 18°24'08"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1609
geocentric

MAY 1609 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	14 35 44	10♈32'25	0♈25	26°R12	25♈38	20♈20	24♈7	11♈24	7♈17	15°R7	1♈41	0°R34	1♈1	27♈4	24°R43	F 1
S 2	14 39 40	11°30'28	15°25	25♈57	26°39	20°58	24°21	11°26	7°20	15♈6	1°42	0♈25	0°58	27°11	24°R41	S 2
S 3	14 43 37	12°28'30	0♈38	25°46	27°40	21°37	24°35	11°28	7°23	15°6	1°44	0°15	0°55	27°17	24°38	S 3
M 4	14 47 34	13°26'30	15°55	25°40	28°41	22°15	24°49	11°30	7°26	15°5	1°45	0°5	0°52	27°24	24°36	M 4
T 5	14 51 30	14°24'29	1♈4	25°D39	29°41	22°54	25°3	11°31	7°30	15°4	1°46	29°55	0°48	27°31	24°33	T 5
W 6	14 55 27	15°22'26	15°55	25°43	0♈41	23°32	25°17	11°33	7°33	15°4	1°48	29°47	0°45	27°37	24°30	W 6
T 7	14 59 23	16°20'21	0♈20	25°51	1°40	24°11	25°31	11°34	7°36	15°3	1°49	29°41	0°42	27°44	24°28	T 7
F 8	15 3 20	17°18'15	14°17	26°3	2°39	24°49	25°45	11°36	7°40	15°2	1°51	29°39	0°39	27°51	24°25	F 8
S 9	15 7 16	18°16'07	27°44	26°21	3°37	25°28	25°59	11°37	7°43	15°2	1°52	29°D38	0°36	27°58	24°22	S 9
S 10	15 11 13	19°13'57	10♈45	26°42	4°36	26°6	26°13	11°38	7°47	15°1	1°53	29°38	0°32	28°4	24°19	S 10
M 11	15 15 10	20°11'45	23°23	27°8	5°33	26°44	26°27	11°39	7°50	15°1	1°54	29°R38	0°29	28°11	24°16	M 11
T 12	15 19 6	21°9'32	5♈43	27°38	6°30	27°23	26°41	11°40	7°53	15°0	1°56	29°37	0°26	28°18	24°13	T 12
W 13	15 23 3	22°7'17	17°49	28°12	7°27	28°1	26°55	11°41	7°57	15°0	1°57	29°34	0°23	28°25	24°10	W 13
T 14	15 26 59	23°5'00	29°47	28°50	8°23	28°39	27°9	11°42	8°0	14°59	1°58	29°29	0°20	28°31	24°7	T 14
F 15	15 30 56	24°2'41	11♈40	29°32	9°19	29°18	27°23	11°43	8°4	14°59	2°0	29°21	0°17	28°38	24°3	F 15
S 16	15 34 52	25°0'21	23°32	0♈18	10°14	29°56	27°37	11°44	8°7	14°59	2°1	29°11	0°13	28°45	24°0	S 16
S 17	15 38 49	25°58'00	5♈25	1°7	11°9	0♈34	27°51	11°44	8°11	14°58	2°2	28°59	0°10	28°51	23°57	S 17
M 18	15 42 45	26°55'37	17°20	2°0	12°3	1°13	28°5	11°45	8°14	14°58	2°4	28°48	0°7	28°58	23°53	M 18
T 19	15 46 42	27°53'14	29°21	2°56	12°57	1°51	28°19	11°45	8°18	14°58	2°5	28°37	0°4	29°5	23°50	T 19
W 20	15 50 38	28°50'48	11♈28	3°55	13°49	2°29	28°34	11°45	8°21	14°58	2°6	28°27	0°1	29°12	23°47	W 20
T 21	15 54 35	29°48'22	23°41	4°57	14°42	3°7	28°48	11°45	8°25	14°57	2°7	28°20	29°58	29°18	23°43	T 21
F 22	15 58 32	0♈45'55	6♈4	6°3	15°33	3°46	29°2	11°R45	8°28	14°57	2°9	28°15	29°54	29°25	23°39	F 22
S 23	16 2 28	1°43'27	18°37	7°12	16°24	4°24	29°16	11°45	8°32	14°57	2°10	28°13	29°51	29°32	23°36	S 23
S 24	16 6 25	2°40'57	1♈23	8°23	17°15	5°2	29°30	11°45	8°35	14°57	2°11	28°D12	29°48	29°38	23°32	S 24
M 25	16 10 21	3°38'27	14°24	9°38	18°4	5°40	29°44	11°45	8°39	14°57	2°12	28°13	29°45	29°45	23°28	M 25
T 26	16 14 18	4°35'57	27°44	10°55	18°53	6°19	29°58	11°44	8°42	14°D57	2°13	28°14	29°42	29°52	23°25	T 26
W 27	16 18 14	5°33'25	11♈24	12°15	19°41	6°57	0♈12	11°44	8°46	14°57	2°15	28°R14	29°38	29°59	23°21	W 27
T 28	16 22 11	6°30'52	25°27	13°38	20°28	7°35	0°26	11°43	8°49	14°57	2°16	28°12	29°35	0♈5	23°17	T 28
F 29	16 26 7	7°28'19	9♈51	15°4	21°14	8°13	0°40	11°43	8°53	14°57	2°17	28°9	29°32	0°12	23°13	F 29
S 30	16 30 4	8°25'45	24°33	16°32	22°0	8°51	0°54	11°42	8°57	14°57	2°18	28°4	29°29	0°19	23°9	S 30
S 31	16 34 1	9♈23'11	9♈29	18♈3	22°545	9°529	1♈8	11°441	9♈0	14°57	2♈19	27°57	29°26	0♈26	23°76	S 31

Day	☉	☽		♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
F 1	15n 1	3s49	4s21	8n47	1s27	26n30	3n 5	24n15	1n 7	18n 9	0s42	18s 2	0s40	21n32	0s 3	6n57	1n10	3s 7	16s10	20n 4	19n58	5s39	17s16	6n 7	
S 2	15 19	1n36	4 51	8 28	1 41	26 33	3 6	24 18	1 7	18 13	0 42	18 2	0 40	21 32	0 3	6 57	1 10	3 7	16 10	20 6	19 59	5 42	17 15	6 8	
S 3	15 37	7 1	5 1	8 12	1 55	26 35	3 7	24 21	1 7	18 16	0 42	18 1	0 40	21 33	0 3	6 57	1 10	3 6	16 10	20 8	20 0	5 44	17 15	6 8	
M 4	15 54	12 1	4 50	7 58	2 7	26 37	3 8	24 23	1 8	18 20	0 42	18 1	0 40	21 33	0 3	6 58	1 10	3 6	16 10	20 11	20 0	5 46	17 14	6 9	
T 5	16 12	16 12	4 18	7 46	2 19	26 39	3 9	24 25	1 8	18 23	0 42	18 1	0 40	21 34	0 3	6 58	1 10	3 5	16 10	20 13	20 1	5 49	17 13	6 9	
W 6	16 29	19 16	3 29	7 38	2 30	26 39	3 10	24 28	1 8	18 27	0 42	18 0	0 41	21 34	0 3	6 58	1 10	3 5	16 11	20 14	20 2	5 51	17 13	6 10	
T 7	16 46	21 1	2 29	7 31	2 40	26 39	3 11	24 30	1 8	18 30	0 42	18 0	0 41	21 35	0 3	6 58	1 10	3 5	16 11	20 15	20 3	5 53	17 12	6 10	
F 8	17 2	21 23	1 21	7 28	2 49	26 39	3 11	24 31	1 8	18 34	0 42	18 0	0 41	21 36	0 3	6 59	1 10	3 4	16 11	20 16	20 3	5 56	17 12	6 11	
S 9	17 18	20 30	0 10	7 27	2 57	26 38	3 11	24 33	1 8	18 37	0 42	18 0	0 41	21 36	0 2	6 59	1 10	3 4	16 11	20 16	20 4	5 58	17 11	6 12	
S 10	17 34	18 31	0n59	7 28	3 4	26 36	3 12	24 34	1 9	18 40	0 42	17 59	0 41	21 37	0 2	6 59	1 10	3 4	16 11	20 16	20 5	6 0	17 10	6 12	
M11	17 50	15 41	2 3	7 31	3 10	26 34	3 12	24 36	1 9	18 44	0 41	17 59	0 41	21 37	0 2	6 59	1 10	3 3	16 11	20 16	20 5	6 3	17 10	6 12	
T 12	18 5	12 13	2 59	7 37	3 15	26 31	3 11	24 37	1 9	18 47	0 41	17 59	0 42	21 38	0 2	6 59	1 10	3 3	16 11	20 16	20 6	6 5	17 9	6 13	
W13	18 20	8 18	3 47	7 46	3 19	26 28	3 11	24 37	1 9	18 50	0 41	17 59	0 42	21 38	0 2	6 59	1 10	3 3	16 11	20 17	20 7	6 7	17 9	6 13	
T 14	18 35	4 7	4 24	7 56	3 22	26 24	3 11	24 38	1 9	18 54	0 41	17 59	0 42	21 39	0 2	7 0	1 10	3 2	16 11	20 18	20 7	6 10	17 8	6 14	
F 15	18 49	0s12	4 49	8 8	3 25	26 19	3 10	24 38	1 9	18 57	0 41	17 59	0 42	21 39	0 2	7 0	1 10	3 2	16 11	20 20	20 8	6 12	17 7	6 14	
S 16	19 3	4 29	5 1	8 23	3 26	26 14	3 9	24 39	1 9	19 0	0 41	17 59	0 42	21 40	0 2	7 0	1 9	3 2	16 11	20 22	20 9	6 14	17 7	6 15	
S 17	19 17	8 37	5 1	8 39	3 27	26 9	3 8	24 39	1 9	19 4	0 41	17 59	0 42	21 41	0 2	7 0	1 9	3 1	16 11	20 24	20 9	6 17	17 6	6 15	
M18	19 31	12 27	4 47	8 57	3 27	26 3	3 7	24 39	1 10	19 7	0 41	17 59	0 42	21 41	0 2	7 0	1 9	3 1	16 12	20 27	20 10	6 19	17 6	6 16	
T 19	19 44	15 48	4 21	9 17	3 27	25 57	3 6	24 38	1 10	19 10	0 41	17 59	0 43	21 42	0 2	7 0	1 9	3 1	16 12	20 29	20 11	6 21	17 5	6 16	
W20	19 57	18 32	3 43	9 38	3 25	25 50	3 4	24 38	1 10	19 13	0 41	17 59	0 43	21 42	0 2	7 0	1 9	3 0	16 12	20 31	20 11	6 24	17 5	6 16	
T 21	20 9	20 27	2 54	10 1	3 23	25 42	3 3	24 37	1 10	19 16	0 41	17 59	0 43	21 43	0 2	7 0	1 9	3 0	16 12	20 32	20 12	6 26	17 4	6 17	
F 22	20 21	21 25	1 56	10 25	3 20	25 34	3 1	24 36	1 10	19 19	0 41	17 59	0 43	21 43	0 2	7 0	1 9	3 0	16 12	20 33	20 13	6 28	17 3	6 17	
S 23	20 33	21 21	0 51	10 51	3 16	25 26	2 59	24 35	1 10	19 23	0 40	17 59	0 43	21 44	0 2	7 0	1 9	3 0	16 12	20 34	20 13	6 31	17 3	6 18	
S 24	20 44	20 10	0s17	11 18	3 12	25 18	2 57	24 34	1 10	19 26	0 40	18 0	0 43	21 45	0 2	7 0	1 9	2 59	16 12	20 34	20 14	6 33	17 2	6 18	
M25	20 55	17 55	1 26	11 46	3 7	25 9	2 54	24 32	1 10	19 29	0 40	18 0	0 43	21 45	0 2	7 0	1 9	2 59	16 13	20 34	20 15	6 35	17 2	6 18	
T 26	21 6	14 39	2 32	12 15	3 2	24 59	2 51	24 31	1 10	19 32	0 40	18 0	0 44	21 46	0 2	7 0	1 9	2 59	16 13	20 33	20 15	6 38	17 1	6 19	
W27	21 17	10 33	3 31	12 45	2 56	24 49	2 49	24 29	1 10	19 35	0 40	18 0	0 44	21 46	0 2	7 0	1 9	2 59	16 13	20 33	20 16	6 40	17 1	6 19	
T 28	21 26	5 46	4 19	13 16	2 49	24 39	2 45	24 27	1 11	19 38	0 40	18 1	0 44	21 47	0 2	7 0	1 9	2 58	16 13	20 34	20 17	6 42	17 0	6 19	
F 29	21 36	0 34	4 52	13 48	2 42	24 28	2 42	24 24	1 11	19 41	0 40	18 1	0 44	21 47	0 2	7 0	1 9	2 58	16 13	20 34	20 17	6 45	17 0	6 20	
S 30	21 45	4n47	5 6	14 21	2 35	24 18	2 38	24 22	1 11	19 44	0 40	18 1	0 44	21 48	0 2	7 0	1 9	2 58	16 13	20 36	20 18	6 47	16 59	6 20	
S 31	21n54	9n55	5s 1	14n54	2s27	24n 6	2n35	24n19	1n11	19n47	0s40	18s 2	0s44	21n48	0s 2	7n 0	1n 9	2s58	16s14	20n37	20n19	6s49	16s59	6n20	

ASTRODIENST EPHEMERIS for the year 1609

geocentric

JUNE 1609 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	16 37 57	10 ^{II} 20'36	24 [♂] 30	19 [♂] 37	23 [♂] 28	10 [♂] 8	1 ^{II} 22	11°R40	9 ^{II} 4	14 [♂] 57	2 [♂] 20	27°R50	29 [♂] 23	0 [♂] 32	23°R 2	M 1
T 2	16 41 54	11°18'00	9 ^{II} 26	21°13	24°11	10°46	1°36	11°39	9° 7	14°58	2°21	27°43	29°19	0°39	22°58	T 2
W 3	16 45 50	12°15'23	24° 9	22°52	24°53	11°24	1°50	11°38	9°11	14°58	2°23	27°38	29°16	0°46	22°54	W 3
T 4	16 49 47	13°12'46	8 [♂] 32	24°34	25°34	12° 2	2° 4	11°37	9°14	14°58	2°24	27°34	29°13	0°52	22°50	T 4
F 5	16 53 43	14°10'08	22°30	26°18	26°14	12°40	2°17	11°36	9°18	14°58	2°25	27°D33	29°10	0°59	22°46	F 5
S 6	16 57 40	15° 7'28	6 [♂] 1	28° 5	26°52	13°18	2°31	11°34	9°21	14°59	2°26	27°33	29° 7	1° 6	22°42	S 6
S 7	17 1 37	16° 4'48	19° 6	29°55	27°29	13°56	2°45	11°33	9°25	14°59	2°27	27°34	29° 4	1°13	22°38	S 7
M 8	17 5 33	17° 2'06	1 [♂] 48	1 ^{II} 46	28° 6	14°34	2°59	11°31	9°28	14°59	2°28	27°36	29° 0	1°19	22°34	M 8
T 9	17 9 30	17°59'24	14°11	3°41	28°41	15°13	3°13	11°30	9°32	15° 0	2°29	27°R36	28°57	1°26	22°30	T 9
W10	17 13 26	18°56'41	26°19	5°38	29°14	15°51	3°27	11°28	9°35	15° 0	2°30	27°36	28°54	1°33	22°26	W10
T 11	17 17 23	19°53'57	8 [♂] 18	7°37	29°46	16°29	3°40	11°26	9°39	15° 1	2°31	27°34	28°51	1°40	22°22	T 11
F 12	17 21 19	20°51'12	20°11	9°38	0 [♂] 17	17° 7	3°54	11°24	9°42	15° 1	2°32	27°31	28°48	1°46	22°17	F 12
S 13	17 25 16	21°48'26	2 [♂] 4	11°41	0°47	17°45	4° 8	11°22	9°46	15° 2	2°33	27°26	28°44	1°53	22°13	S 13
S 14	17 29 12	22°45'40	13°59	13°46	1°15	18°23	4°21	11°20	9°49	15° 3	2°34	27°21	28°41	2° 0	22° 9	S 14
M15	17 33 9	23°42'53	25°59	15°53	1°41	19° 1	4°35	11°18	9°53	15° 3	2°35	27°15	28°38	2° 6	22° 5	M15
T 16	17 37 6	24°40'06	8 [♂] 6	18° 1	2° 5	19°39	4°49	11°15	9°56	15° 4	2°36	27° 9	28°35	2°13	22° 1	T 16
W17	17 41 2	25°37'18	20°24	20°10	2°28	20°17	5° 2	11°13	10° 0	15° 4	2°37	27° 4	28°32	2°20	21°57	W17
T 18	17 44 59	26°34'30	2 [♂] 51	22°20	2°50	20°55	5°16	11°11	10° 3	15° 5	2°37	27° 1	28°29	2°27	21°53	T 18
F 19	17 48 55	27°31'41	15°30	24°31	3° 9	21°33	5°29	11° 8	10° 7	15° 6	2°38	26°59	28°25	2°33	21°49	F 19
S 20	17 52 52	28°28'53	28°21	26°42	3°26	22°11	5°43	11° 5	10°10	15° 7	2°39	26°D59	28°22	2°40	21°45	S 20
S 21	17 56 48	29°26'04	11°24	28°53	3°42	22°49	5°56	11° 3	10°13	15° 8	2°40	26°59	28°19	2°47	21°41	S 21
M22	18 0 45	0 [♂] 23'15	24°41	1 [♂] 4	3°56	23°27	6° 9	11° 0	10°17	15° 8	2°41	27° 1	28°16	2°53	21°37	M22
T 23	18 4 41	1°20'26	8 [♂] 12	3°15	4° 7	24° 5	6°23	10°57	10°20	15° 9	2°42	27° 2	28°13	3° 0	21°33	T 23
W24	18 8 38	2°17'37	21°58	5°25	4°17	24°43	6°36	10°54	10°24	15°10	2°42	27° 3	28°10	3° 7	21°29	W24
T 25	18 12 35	3°14'48	5°58	7°34	4°24	25°21	6°49	10°51	10°27	15°11	2°43	27°R 3	28° 6	3°14	21°25	T 25
F 26	18 16 31	4°11'59	20°12	9°41	4°29	25°59	7° 2	10°48	10°30	15°12	2°44	27° 3	28° 3	3°20	21°21	F 26
S 27	18 20 28	5° 9'11	4 [♂] 38	11°48	4°32	26°37	7°16	10°45	10°34	15°13	2°45	27° 1	28° 0	3°27	21°17	S 27
S 28	18 24 24	6° 6'23	19°11	13°53	4°R33	27°15	7°29	10°42	10°37	15°14	2°45	26°59	27°57	3°34	21°14	S 28
M29	18 28 21	7° 3'35	3 ^{II} 46	15°57	4°31	27°53	7°42	10°39	10°40	15°15	2°46	26°56	27°54	3°41	21°10	M29
T 30	18 32 17	8 [♂] 0'48	18 ^{II} 18	17 [♂] 58	4 [♂] 27	28 [♂] 31	7 ^{II} 55	10°35	10 ^{II} 43	15 [♂] 16	2 [♂] 47	26°54	27°50	3 [♂] 47	21° 6	T 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
M 1	22n 3	14n29	4s35	15n27	2s18	23n55	2n31	24n17	1n11	19n50	0s40	18s 2	0s45	21n49	0s 2	7n 0	1n 9	2s58	16s14	20n38	20n19	6s52	16s58	6n20	
T 2	22 11	18 7	3 50	16 2	2 9	23 43	2 26	24 14	1 11	19 52	0 40	18 2	0 45	21 50	0 2	7 0	1 9	2 57	16 14	20 40	20 20	6 54	16 58	6 21	
W 3	22 19	20 31	2 50	16 36	2 0	23 31	2 22	24 11	1 11	19 55	0 40	18 3	0 45	21 50	0 2	7 0	1 9	2 57	16 14	20 41	20 21	6 56	16 57	6 21	
T 4	22 26	21 32	1 41	17 10	1 50	23 19	2 17	24 7	1 11	19 58	0 40	18 3	0 45	21 51	0 2	7 0	1 9	2 57	16 14	20 41	20 21	6 59	16 57	6 21	
F 5	22 33	21 9	0 27	17 45	1 40	23 6	2 12	24 4	1 11	20 1	0 40	18 4	0 45	21 51	0 2	6 59	1 9	2 57	16 15	20 42	20 22	7 1	16 57	6 21	
S 6	22 39	19 33	0n46	18 19	1 29	22 54	2 6	24 0	1 11	20 4	0 39	18 4	0 45	21 52	0 2	6 59	1 9	2 57	16 15	20 42	20 23	7 3	16 56	6 22	
S 7	22 46	16 56	1 54	18 54	1 19	22 41	2 1	23 56	1 11	20 7	0 39	18 5	0 45	21 52	0 2	6 59	1 9	2 57	16 15	20 41	20 23	7 6	16 56	6 22	
M 8	22 51	13 35	2 55	19 27	1 8	22 28	1 55	23 52	1 11	20 9	0 39	18 6	0 46	21 53	0 2	6 59	1 9	2 56	16 15	20 41	20 24	7 8	16 55	6 22	
T 9	22 57	9 43	3 46	20 0	0 57	22 14	1 49	23 48	1 11	20 12	0 39	18 6	0 46	21 53	0 2	6 59	1 9	2 56	16 15	20 41	20 25	7 10	16 55	6 22	
W10	23 2	5 32	4 26	20 33	0 45	22 1	1 42	23 44	1 11	20 15	0 39	18 7	0 46	21 54	0 2	6 58	1 9	2 56	16 16	20 41	20 25	7 13	16 55	6 22	
T 11	23 6	1 12	4 53	21 4	0 34	21 48	1 35	23 39	1 11	20 17	0 39	18 7	0 46	21 54	0 2	6 58	1 9	2 56	16 16	20 41	20 26	7 15	16 54	6 22	
F 12	23 10	3s 9	5 8	21 34	0 23	21 34	1 28	23 34	1 11	20 20	0 39	18 8	0 46	21 55	0 2	6 58	1 9	2 56	16 16	20 42	20 27	7 17	16 54	6 23	
S 13	23 14	7 22	5 10	22 2	0 12	21 20	1 21	23 29	1 11	20 23	0 39	18 9	0 46	21 55	0 2	6 58	1 9	2 56	16 16	20 43	20 27	7 20	16 53	6 23	
S 14	23 17	11 20	4 58	22 29	0 1	21 7	1 13	23 24	1 11	20 25	0 39	18 10	0 46	21 56	0 2	6 58	1 9	2 56	16 17	20 44	20 28	7 22	16 53	6 23	
M15	23 20	14 52	4 33	22 54	0n10	20 53	1 5	23 19	1 11	20 28	0 39	18 10	0 47	21 57	0 2	6 57	1 9	2 56	16 17	20 45	20 29	7 24	16 53	6 23	
T 16	23 23	17 50	3 55	23 18	0 21	20 39	0 57	23 13	1 11	20 30	0 39	18 11	0 47	21 57	0 2	6 57	1 9	2 56	16 17	20 46	20 29	7 27	16 52	6 23	
W17	23 25	20 2	3 7	23 38	0 31	20 26	0 48	23 8	1 11	20 33	0 39	18 12	0 47	21 58	0 2	6 57	1 9	2 56	16 17	20 47	20 30	7 29	16 52	6 23	
T 18	23 27	21 19	2 8	23 57	0 41	20 12	0 39	23 2	1 11	20 35	0 39	18 13	0 47	21 58	0 2	6 56	1 9	2 56	16 17	20 48	20 31	7 31	16 52	6 23	
F 19	23 28	21 33	1 2	24 13	0 50	19 58	0 30	22 56	1 11	20 38	0 39	18 13	0 47	21 59	0 2	6 56	1 8	2 55	16 18	20 48	20 31	7 34	16 51	6 23	
S 20	23 29	20 39	0s 7	24 26	0 59	19 45	0 20	22 50	1 11	20 40	0 39	18 14	0 47	21 59	0 2	6 56	1 8	2 55	16 18	20 48	20 32	7 36	16 51	6 23	
S 21	23 29	18 39	1 18	24 37	1 7	19 31	0 10	22 44	1 11	20 42	0 39	18 15	0 47	22 0	0 2	6 55	1 8	2 55	16 18	20 48	20 32	7 38	16 51	6 23	
M22	23 29	15 37	2 26	24 44	1 15	19 18	0s 1	22 37	1 11	20 45	0 39	18 16	0 48	22 0	0 2	6 55	1 8	2 55	16 19	20 48	20 33	7 41	16 51	6 23	
T 23	23 29	11 43	3 27	24 49	1 22	19 5	0 11	22 31	1 11	20 47	0 39	18 17	0 48	22 1	0 2	6 55	1 8	2 55	16 19	20 48	20 34	7 43	16 50	6 23	
W24	23 28	7 8	4 17	24 51	1 28	18 52	0 23	22 24	1 11	20 49	0 39	18 18	0 48	22 1	0 2	6 54	1 8	2 55	16 19	20 47	20 34	7 45	16 50	6 23	
T 25	23 27	2 7	4 53	24 50	1 34	18 39	0 34	22 17	1 11	20 52	0 39	18 19	0 48	22 2	0 2	6 54	1 8	2 55	16 19	20 47	20 35	7 48	16 50	6 23	
F 26	23 25	3n 5	5 12	24 47	1 39	18 26	0 46	22 10	1 11	20 54	0 38	18 20	0 48	22 2	0 2	6 54	1 8	2 55	16 20	20 48	20 36	7 50	16 50	6 23	
S 27	23 23	8 12	5 12	24 40	1 43	18 14	0 58	22 3	1 11	20 56	0 38	18 21	0 48	22 3	0 2	6 53	1 8	2 55	16 20	20 48	20 36	7 52	16 49	6 23	
S 28	23 21	12 53	4 51	24 31	1 46	18 2	1 10	21 55	1 11	20 58	0 38	18 22	0 48	22 3	0 2	6 53	1 8	2 55	16 20	20 48	20 37	7 55	16 49	6 23	
M29	23 18	16 49	4 12	24 20	1 49	17 50	1 23	21 48	1 11	21 0	0 38	18 23	0 49	22 4	0 2	6 52	1 8	2 55	16 20	20 49	20 38	7 57	16 49	6 23	
T 30	23n15	19n42	3s17	24n 7	1n51	17n38	1s36	21n40	1n11	21n 3	0s38	18s24	0s49	22n 4	0s 2	6n52	1n 8	2s56	16s21	20n49	20n38	7s59	16s49	6n23	

ASTRODIENST EPHEMERIS for the year 1609
geocentric

JULY 1609 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
W 1	18 36 14	8 ⁵⁸ 01	2 ⁴⁰	19 ⁵⁹	4 ^{R21}	29 ⁹	8 ^{II} 8	10 ^{R32}	10 ^{II} 47	15 ^m 17	2 ⁸ 47	26 ^R 52	27 ⁴⁷	3 ^m 54	21 ^R 2	W 1
T 2	18 40 10	9 ⁵⁵ 13	16 ⁴⁸	21 ⁵⁷	4 ^l 12	29 ⁴⁷	8 ²¹	10 ²⁸	10 ⁵⁰	15 ¹⁸	2 ⁴⁸	26 ⁵¹	27 ⁴⁴	4 ¹	20 ⁵⁹	T 2
F 3	18 44 7	10 ⁵² 26	0 ^l 35	23 ⁵³	4 ¹	0 ^l 25	8 ³⁴	10 ²⁵	10 ⁵³	15 ¹⁹	2 ⁴⁹	26 ^D 51	27 ⁴¹	4 ⁷	20 ⁵⁵	F 3
S 4	18 48 4	11 ⁴⁹ 39	14 ²	25 ⁴⁸	3 ⁴⁷	1 ³	8 ⁴⁶	10 ²¹	10 ⁵⁶	15 ²¹	2 ⁴⁹	26 ⁵¹	27 ³⁸	4 ¹⁴	20 ⁵¹	S 4
S 5	18 52 0	12 ⁴⁶ 52	27 ⁶	27 ⁴¹	3 ³¹	1 ⁴¹	8 ⁵⁹	10 ¹⁷	10 ⁵⁹	15 ²²	2 ⁵⁰	26 ⁵²	27 ³⁵	4 ²¹	20 ⁴⁸	S 5
M 6	18 55 57	13 ⁴⁴ 05	9 ^m 49	29 ³¹	3 ¹³	2 ¹⁹	9 ¹²	10 ¹⁴	11 ²	15 ²³	2 ⁵¹	26 ⁵³	27 ³¹	4 ²⁸	20 ⁴⁴	M 6
T 7	18 59 53	14 ⁴¹ 18	22 ¹⁴	1 ^l 20	2 ⁵²	2 ⁵⁷	9 ²⁵	10 ¹⁰	11 ⁶	15 ²⁴	2 ⁵¹	26 ⁵⁴	27 ²⁸	4 ³⁴	20 ⁴¹	T 7
W 8	19 3 50	15 ³⁸ 30	4 ²⁵	3 ⁷	2 ³⁰	3 ³⁵	9 ³⁷	10 ⁶	11 ⁹	15 ²⁶	2 ⁵²	26 ⁵⁵	27 ²⁵	4 ⁴¹	20 ³⁷	W 8
T 9	19 7 46	16 ³⁵ 43	16 ²⁵	4 ⁵²	2 ⁵	4 ¹³	9 ⁵⁰	10 ²	11 ¹²	15 ²⁷	2 ⁵²	26 ^R 55	27 ²²	4 ⁴⁸	20 ³⁴	T 9
F 10	19 11 43	17 ³² 56	28 ²⁰	6 ³⁵	1 ³⁸	4 ⁵¹	10 ²	9 ⁵⁸	11 ¹⁵	15 ²⁸	2 ⁵³	26 ⁵⁵	27 ¹⁹	4 ⁵⁵	20 ³⁰	F 10
S 11	19 15 39	18 ³⁰ 09	10 ^m 13	8 ¹⁷	1 ⁹	5 ²⁹	10 ¹⁵	9 ⁵⁴	11 ¹⁸	15 ³⁰	2 ⁵³	26 ⁵⁴	27 ¹⁶	5 ¹	20 ²⁷	S 11
S 12	19 19 36	19 ²⁷ 23	22 ¹⁰	9 ⁵⁶	0 ³⁹	6 ⁶	10 ²⁷	9 ⁵⁰	11 ²¹	15 ³¹	2 ⁵⁴	26 ⁵⁴	27 ¹²	5 ⁸	20 ²⁴	S 12
M13	19 23 33	20 ²⁴ 36	4 ² 13	11 ³³	0 ⁷	6 ⁴⁴	10 ³⁹	9 ⁴⁶	11 ²⁴	15 ³²	2 ⁵⁴	26 ⁵³	27 ⁹	5 ¹⁵	20 ²⁰	M13
T 14	19 27 29	21 ²¹ 50	16 ²⁷	13 ⁹	29 ³³	7 ²²	10 ⁵¹	9 ⁴²	11 ²⁷	15 ³⁴	2 ⁵⁴	26 ⁵²	27 ⁶	5 ²¹	20 ¹⁷	T 14
W15	19 31 26	22 ¹⁹ 04	28 ⁵⁴	14 ⁴²	28 ⁵⁹	8 ⁰	11 ³	9 ³⁸	11 ²⁹	15 ³⁵	2 ⁵⁵	26 ⁵¹	27 ³	5 ²⁸	20 ¹⁴	W15
T 16	19 35 22	23 ¹⁶ 19	11 ³ 36	16 ¹⁴	28 ²³	8 ³⁸	11 ¹⁵	9 ³⁴	11 ³²	15 ³⁷	2 ⁵⁵	26 ⁵¹	27 ⁰	5 ³⁵	20 ¹¹	T 16
F 17	19 39 19	24 ¹³ 34	24 ³³	17 ⁴³	27 ⁴⁶	9 ¹⁶	11 ²⁷	9 ³⁰	11 ³⁵	15 ³⁸	2 ⁵⁵	26 ^D 51	26 ⁵⁶	5 ⁴²	20 ⁸	F 17
S 18	19 43 15	25 ¹⁰ 50	7 ² 46	19 ¹¹	27 ⁹	9 ⁵⁴	11 ³⁹	9 ²⁶	11 ³⁸	15 ⁴⁰	2 ⁵⁶	26 ⁵¹	26 ⁵³	5 ⁴⁸	20 ⁵	S 18
S 19	19 47 12	26 ⁸ 07	21 ¹³	20 ³⁷	26 ³²	10 ³²	11 ⁵¹	9 ²¹	11 ⁴¹	15 ⁴²	2 ⁵⁶	26 ⁵¹	26 ⁵⁰	5 ⁵⁵	20 ²	S 19
M20	19 51 8	27 ⁵ 24	4 ² 54	22 ¹	25 ⁵⁴	11 ¹⁰	12 ³	9 ¹⁷	11 ⁴³	15 ⁴³	2 ⁵⁶	26 ^R 51	26 ⁴⁷	6 ²	20 ⁰	M20
T 21	19 55 5	28 ² 42	18 ⁴⁷	23 ²²	25 ¹⁷	11 ⁴⁸	12 ¹⁵	9 ¹³	11 ⁴⁶	15 ⁴⁵	2 ⁵⁷	26 ⁵¹	26 ⁴⁴	6 ⁸	19 ⁵⁷	T 21
W22	19 59 2	29 ⁰ 01	2 ² 48	24 ⁴²	24 ⁴⁰	12 ²⁶	12 ²⁶	9 ⁸	11 ⁴⁹	15 ⁴⁶	2 ⁵⁷	26 ⁵¹	26 ⁴¹	6 ¹⁵	19 ⁵⁴	W22
T 23	20 2 58	29 ⁵⁷ 21	16 ⁵⁷	25 ⁵⁹	24 ⁴	13 ⁴	12 ³⁸	9 ⁴	11 ⁵¹	15 ⁴⁸	2 ⁵⁷	26 ⁵¹	26 ³⁷	6 ²²	19 ⁵²	T 23
F 24	20 6 55	0 ^l 5442	1 ⁸ 10	27 ¹⁵	23 ²⁸	13 ⁴²	12 ⁴⁹	9 ⁰	11 ⁵⁴	15 ⁵⁰	2 ⁵⁷	26 ^D 51	26 ³⁴	6 ²⁹	19 ⁴⁹	F 24
S 25	20 10 51	1 ⁵² 04	15 ²⁵	28 ²⁸	22 ⁵⁴	14 ²⁰	13 ¹	8 ⁵⁵	11 ⁵⁷	15 ⁵¹	2 ⁵⁸	26 ⁵¹	26 ³¹	6 ³⁵	19 ⁴⁷	S 25
S 26	20 14 48	2 ⁴⁹ 28	29 ³⁹	29 ³⁹	22 ²¹	14 ⁵⁸	13 ¹²	8 ⁵¹	11 ⁵⁹	15 ⁵³	2 ⁵⁸	26 ⁵¹	26 ²⁸	6 ⁴²	19 ⁴⁴	S 26
M27	20 18 44	3 ⁴⁶ 52	13 ^{II} 50	0 ^m 47	21 ⁵⁰	15 ³⁶	13 ²³	8 ⁴⁶	12 ²	15 ⁵⁵	2 ⁵⁸	26 ⁵²	26 ²⁵	6 ⁴⁹	19 ⁴²	M27
T 28	20 22 41	4 ⁴⁴ 18	27 ⁵⁴	1 ⁵³	21 ²⁰	16 ¹⁴	13 ³⁴	8 ⁴²	12 ⁴	15 ⁵⁷	2 ⁵⁸	26 ⁵²	26 ²²	6 ⁵⁶	19 ⁴⁰	T 28
W29	20 26 37	5 ⁴¹ 45	11 ⁵ 49	2 ⁵⁷	20 ⁵²	16 ⁵²	13 ⁴⁵	8 ³⁷	12 ⁷	15 ⁵⁸	2 ⁵⁸	26 ⁵³	26 ¹⁸	7 ²	19 ³⁸	W29
T 30	20 30 34	6 ³⁹ 13	25 ³²	3 ⁵⁷	20 ²⁵	17 ³⁰	13 ⁵⁶	8 ³³	12 ⁹	16 ⁰	2 ⁵⁸	26 ^R 53	26 ¹⁵	7 ⁹	19 ³⁶	T 30
F 31	20 34 31	7 ^l 3643	9 ^l 1	4 ^m 56	20 ⁵ 1	18 ^l 8	14 ^{II} 7	8 ²⁸	12 ^{II} 11	16 ^m 2	2 ⁵⁸	26 ⁵³	26 ¹²	7 ^m 16	19 ³⁴	F 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
W 1	23n11	21n18	2s 9	23n51	1n52	17n27	1s49	21n32	1n11	21n 5	0s38	18s25	0s49	22n 4	0s 2	6n51	1n 8	2s56	16s21	20n50	20n39	8s 2	16s49	6n23
T 2	23 7	21 31	0 55	23 33	1 52	17 16	2 3	21 24	1 11	21 7	0 38	18 26	0 49	22 5	0 2	6 51	1 8	2 56	16 21	20 50	20 39	8 4	16 49	6 23
F 3	23 3	20 24	0n21	23 13	1 52	17 5	2 16	21 16	1 11	21 9	0 38	18 27	0 49	22 5	0 2	6 50	1 8	2 56	16 22	20 50	20 40	8 6	16 48	6 23
S 4	22 58	18 9	1 34	22 51	1 51	16 55	2 30	21 7	1 11	21 11	0 38	18 28	0 49	22 6	0 2	6 50	1 8	2 56	16 22	20 50	20 41	8 9	16 48	6 23
S 5	22 52	15 0	2 39	22 28	1 50	16 45	2 44	20 59	1 11	21 13	0 38	18 29	0 49	22 6	0 2	6 50	1 8	2 56	16 22	20 50	20 41	8 11	16 48	6 23
M 6	22 47	11 14	3 36	22 3	1 48	16 35	2 58	20 50	1 11	21 15	0 38	18 31	0 49	22 7	0 2	6 49	1 8	2 56	16 22	20 49	20 42	8 13	16 48	6 23
T 7	22 41	7 4	4 20	21 36	1 45	16 26	3 12	20 42	1 11	21 17	0 38	18 32	0 50	22 7	0 2	6 49	1 8	2 56	16 23	20 49	20 43	8 16	16 48	6 23
W 8	22 34	2 43	4 52	21 9	1 42	16 17	3 26	20 33	1 11	21 19	0 38	18 33	0 50	22 8	0 2	6 48	1 8	2 56	16 23	20 49	20 43	8 18	16 48	6 22
T 9	22 27	1s41	5 11	20 40	1 38	16 9	3 41	20 24	1 11	21 21	0 38	18 34	0 50	22 8	0 2	6 47	1 8	2 56	16 23	20 49	20 44	8 20	16 48	6 22
F 10	22 20	5 58	5 16	20 10	1 33	16 1	3 55	20 14	1 11	21 22	0 38	18 35	0 50	22 8	0 2	6 47	1 8	2 56	16 24	20 49	20 44	8 22	16 48	6 22
S 11	22 12	10 2	5 8	19 39	1 28	15 54	4 9	20 5	1 11	21 24	0 38	18 36	0 50	22 9	0 2	6 46	1 8	2 57	16 24	20 49	20 45	8 25	16 48	6 22
S 12	22 4	13 44	4 46	19 8	1 23	15 47	4 22	19 56	1 11	21 26	0 38	18 38	0 50	22 9	0 2	6 46	1 8	2 57	16 24	20 49	20 46	8 27	16 48	6 22
M13	21 56	16 54	4 12	18 35	1 17	15 40	4 36	19 46	1 11	21 28	0 38	18 39	0 50	22 10	0 2	6 45	1 8	2 57	16 25	20 49	20 46	8 29	16 48	6 22
T 14	21 47	19 23	3 26	18 2	1 11	15 34	4 49	19 36	1 11	21 30	0 38	18 40	0 50	22 10	0 2	6 45	1 8	2 57	16 25	20 50	20 47	8 32	16 48	6 21
W15	21 38	21 0	2 29	17 28	1 4	15 29	5 2	19 26	1 11	21 31	0 38	18 41	0 51	22 11	0 2	6 44	1 8	2 57	16 25	20 50	20 48	8 34	16 48	6 21
T 16	21 29	21 36	1 24	16 54	0 57	15 24	5 14	19 16	1 10	21 33	0 38	18 42	0 51	22 11	0 2	6 43	1 8	2 57	16 26	20 50	20 48	8 36	16 48	6 21
F 17	21 19	21 3	0 13	16 20	0 49	15 19	5 26	19 6	1 10	21 35	0 38	18 44	0 51	22 11	0 2	6 43	1 8	2 58	16 26	20 50	20 49	8 39	16 48	6 21
S 18	21 9	19 20	1s 0	15 45	0 41	15 15	5 38	18 56	1 10	21 36	0 38	18 45	0 51	22 12	0 2	6 42	1 8	2 58	16 26	20 50	20 49	8 41	16 48	6 20
S 19	20 58	16 31	2 11	15 10	0 33	15 11	5 48	18 46	1 10	21 38	0 38	18 46	0 51	22 12	0 2	6 42	1 8	2 58	16 27	20 50	20 50	8 43	16 48	6 20
M20	20 47	12 46	3 16	14 35	0 24	15 8	5 59	18 35	1 10	21 39	0 38	18 47	0 51	22 12	0 2	6 41	1 8	2 58	16 27	20 50	20 51	8 46	16 48	6 20
T 21	20 36	8 17	4 10	14 0	0 15	15 5	6 8	18 24	1 10	21 41	0 38	18 49	0 51	22 13	0 2	6 40	1 8	2 58	16 27	20 50	20 51	8 48	16 48	6 20
W22	20 24	3 19	4 49	13 24	0 6	15 3	6 17	18 14	1 10	21 43	0 38	18 50	0 51	22 13	0 2	6 40	1 8	2 59	16 27	20 50	20 52	8 50	16 48	6 19
T 23	20 12	1n52	5 12	12 49	0s 4	15 1	6 25	18 3	1 10	21 44	0 38	18 51	0 51	22 14	0 2	6 39	1 8	2 59	16 28	20 50	20 52	8 53	16 48	6 19
F 24	20 0	6 58	5 16	12 14	0 14	15 0	6 32	17 52	1 10	21 46	0 38	18 52	0 51	22 14	0 2	6 38	1 8	2 59	16 28	20 50	20 53	8 55	16 48	6 19
S 25	19 47	11 42	5 0	11 40	0 24	14 59	6 39	17 41	1 10	21 47	0 38	18 54	0 52	22 14	0 2	6 38	1 8	2 59	16 28	20 50	20 54	8 57	16 48	6 19
S 26	19 34	15 47	4 27	11 5	0 34	14 58	6 45	17 29	1 10	21 48	0 38	18 55	0 52	22 15	0 2	6 37	1 8	3 0	16 29	20 50	20 54	9 0	16 48	6 18
M27	19 21	18 56	3 36	10 31	0 45	14 58	6 50	17 18	1 10	21 50	0 38	18 56	0 52	22 15	0 2	6 36	1 8	3 0	16 29	20 50	20 55	9 2	16 48	6 18
T 28	19 7	20 55	2 34	9 58	0 55	14 58	6 54	17 6	1 9	21 51	0 38	18 57	0 52	22 15	0 2	6 36	1 8	3 0	16 29	20 50	20 55	9 4	16 49	6 18
W29	18 53	21 36	1 22	9 25	1 6	14 59	6 58	16 55	1 9	21 53	0 38	18 59	0 52	22 16	0 2	6 35	1 8	3 0	16 30	20 49	20 56	9 7	16 49	6 17
T 30	18 39	20 57	0 7	8 52	1 18	15 0	7 0	16 43	1 9	21 54	0 38	19 0	0 52	22 16	0 2	6 34	1 8	3 1	16 30	20 49	20 57	9 9	16 49	6 17
F 31	18n24	19n 7	1n 7	8n21	1s29	15n 1	7s 3	16n31	1n 9	21n55	0s38	19s 1	0s52	22n16	0s 2	6n33	1n 8	3s 1	16s30	20n49	20n57	9s11	16s49	6n17

ASTRODIENST EPHEMERIS for the year 1609

geocentric

AUGUST 1609 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	20 38 27	8♌34'13	22♏13	5♍51	19♍39	18♏46	14♏18	8♍24	12♏14	16♍4	2♌58	26♍52	26♏9	7♍22	19♍32	S 1
S 2	20 42 24	9°31'44	5♍9	6°43	19♏20	19°24	14°28	8♌19	12°16	16°6	2♌58	26♏51	26°6	7°29	19♌30	S 2
M 3	20 46 20	10°29'16	17°47	7°32	19°2	20°2	14°39	8°15	12°18	16°8	2°58	26°49	26°2	7°36	19°28	M 3
T 4	20 50 17	11°26'48	0♌11	8°17	18°47	20°40	14°49	8°10	12°20	16°9	2°58	26°47	25°59	7°43	19°26	T 4
W 5	20 54 13	12°24'22	12°21	8°59	18°34	21°19	15°0	8°6	12°23	16°11	2°58	26°45	25°56	7°49	19°25	W 5
T 6	20 58 10	13°21'57	24°21	9°38	18°24	21°57	15°10	8°2	12°25	16°13	2°58	26°43	25°53	7°56	19°23	T 6
F 7	21 2 6	14°19'33	6♍16	10°12	18°16	22°35	15°20	7°57	12°27	16°15	2°58	26°42	25°50	8°3	19°22	F 7
S 8	21 6 3	15°17'09	18°9	10°43	18°10	23°13	15°30	7°53	12°29	16°17	2°58	26°D42	25°47	8°9	19°20	S 8
S 9	21 10 0	16°14'47	0♌5	11°9	18°7	23°51	15°40	7°48	12°31	16°19	2°58	26°43	25°43	8°16	19°19	S 9
M10	21 13 56	17°12'26	12°9	11°30	18°D6	24°29	15°50	7°44	12°33	16°21	2°58	26°44	25°40	8°23	19°18	M10
T 11	21 17 53	18°10'05	24°26	11°47	18°7	25°7	16°0	7°39	12°35	16°23	2°58	26°46	25°37	8°30	19°17	T 11
W12	21 21 49	19°7'46	6♌58	11°59	18°11	25°45	16°9	7°35	12°37	16°25	2°57	26°47	25°34	8°36	19°16	W12
T 13	21 25 46	20°5'29	19°50	12°5	18°16	26°23	16°19	7°31	12°38	16°27	2°57	26°48	25°31	8°43	19°15	T 13
F 14	21 29 42	21°3'12	3♌2	12°R6	18°24	27°1	16°28	7°27	12°40	16°29	2°57	26°R48	25°27	8°50	19°14	F 14
S 15	21 33 39	22°0'56	16°35	12°1	18°35	27°40	16°37	7°22	12°42	16°31	2°57	26°47	25°24	8°56	19°13	S 15
S 16	21 37 35	22°58'42	0♌28	11°51	18°47	28°18	16°47	7°18	12°44	16°33	2°56	26°45	25°21	9°3	19°13	S 16
M17	21 41 32	23°56'30	14°37	11°35	19°1	28°56	16°56	7°14	12°45	16°35	2°56	26°41	25°18	9°10	19°12	M17
T 18	21 45 29	24°54'19	28°57	11°13	19°18	29°34	17°4	7°10	12°47	16°38	2°56	26°37	25°15	9°17	19°12	T 18
W19	21 49 25	25°52'09	13°V23	10°45	19°36	0♍12	17°13	7°6	12°48	16°40	2°55	26°33	25°12	9°23	19°11	W19
T 20	21 53 22	26°50'02	27°50	10°12	19°56	0°50	17°22	7°1	12°50	16°42	2°55	26°30	25°8	9°30	19°11	T 20
F 21	21 57 18	27°47'56	12♌12	9°33	20°18	1°29	17°30	6°57	12°51	16°44	2°55	26°28	25°5	9°37	19°11	F 21
S 22	22 1 15	28°45'52	26°27	8°49	20°42	2°7	17°39	6°53	12°53	16°46	2°54	26°D27	25°2	9°44	19°11	S 22
S 23	22 5 11	29°43'50	10♏32	8°1	21°7	2°45	17°47	6°49	12°54	16°48	2°54	26°27	24°59	9°50	19°D10	S 23
M24	22 9 8	0♍41'50	24°25	7°9	21°34	3°23	17°55	6°46	12°56	16°50	2°54	26°28	24°56	9°57	19°10	M24
T 25	22 13 4	1°39'52	8♌6	6°15	22°3	4°1	18°3	6°42	12°57	16°53	2°53	26°30	24°53	10°4	19°11	T 25
W26	22 17 1	2°37'56	21°37	5°18	22°33	4°40	18°11	6°38	12°58	16°55	2°53	26°R31	24°49	10°10	19°11	W26
T 27	22 20 58	3°36'01	4♏54	4°21	23°4	5°18	18°19	6°34	12°59	16°57	2°52	26°31	24°46	10°17	19°11	T 27
F 28	22 24 54	4°34'09	18°0	3°25	23°37	5°56	18°26	6°30	13°0	16°59	2°52	26°29	24°43	10°24	19°12	F 28
S 29	22 28 51	5°32'18	0♍53	2°30	24°11	6°35	18°34	6°27	13°1	17°1	2°51	26°25	24°40	10°31	19°12	S 29
S 30	22 32 47	6°30'29	13°34	1°38	24°47	7°13	18°41	6°23	13°2	17°3	2°51	26°19	24°37	10°37	19°13	S 30
M31	22 36 44	7♍28'42	26♍3	0♍50	25♏24	7♍51	18♏48	6♌20	13♏3	17♍6	2♌50	26♏12	24♏33	10♍44	19♌13	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
S 1	18n 9	16n16	2n16	7n50	1s40	15n 3	7s 4	16n19	1n 9	21n56	0s38	19s 2	0s52	22n17	0s 2	6n33	1n 8	3s 1	16s31	20n50	20n58	9s13	16s49	6n16	
S 2	17 54	12 41	3 16	7 20	1 52	15 5	7 5	16 7	1 9	21 58	0 38	19 4	0 52	22 17	0 2	6 32	1 8	3 2	16 31	20 50	20 58	9 16	16 50	6 16	
M 3	17 39	8 36	4 5	6 52	2 3	15 7	7 5	15 55	1 9	21 59	0 38	19 5	0 52	22 17	0 2	6 31	1 8	3 2	16 31	20 50	20 59	9 18	16 50	6 16	
T 4	17 23	4 15	4 42	6 24	2 15	15 10	7 4	15 43	1 9	22 0	0 38	19 6	0 52	22 17	0 2	6 30	1 7	3 2	16 32	20 51	21 0	9 20	16 50	6 15	
W 5	17 7	0s12	5 6	5 58	2 26	15 13	7 3	15 31	1 9	22 1	0 38	19 7	0 53	22 18	0 2	6 30	1 7	3 2	16 32	20 51	21 0	9 23	16 50	6 15	
T 6	16 51	4 34	5 15	5 33	2 38	15 15	7 2	15 18	1 8	22 2	0 38	19 9	0 53	22 18	0 2	6 29	1 7	3 3	16 32	20 51	21 1	9 25	16 50	6 14	
F 7	16 34	8 44	5 11	5 9	2 49	15 19	7 0	15 5	1 8	22 3	0 38	19 10	0 53	22 18	0 2	6 28	1 7	3 3	16 33	20 51	21 1	9 27	16 51	6 14	
S 8	16 17	12 34	4 54	4 47	3 0	15 22	6 57	14 53	1 8	22 5	0 38	19 11	0 53	22 19	0 2	6 27	1 7	3 3	16 33	20 52	21 2	9 30	16 51	6 14	
S 9	16 0	15 55	4 24	4 27	3 11	15 25	6 54	14 40	1 8	22 6	0 38	19 12	0 53	22 19	0 2	6 27	1 7	3 4	16 33	20 51	21 3	9 32	16 51	6 13	
M10	15 43	18 38	3 42	4 9	3 22	15 29	6 50	14 27	1 8	22 7	0 38	19 14	0 53	22 19	0 2	6 26	1 7	3 4	16 34	20 51	21 3	9 34	16 52	6 13	
T 11	15 25	20 34	2 49	3 53	3 32	15 33	6 47	14 14	1 8	22 8	0 38	19 15	0 53	22 19	0 2	6 25	1 7	3 4	16 34	20 51	21 4	9 37	16 52	6 13	
W12	15 7	21 31	1 47	3 40	3 42	15 36	6 42	14 1	1 8	22 9	0 38	19 16	0 53	22 20	0 2	6 24	1 7	3 5	16 34	20 51	21 4	9 39	16 52	6 12	
T 13	14 49	21 23	0 38	3 28	3 52	15 40	6 38	13 48	1 7	22 10	0 38	19 17	0 53	22 20	0 2	6 23	1 7	3 5	16 35	20 50	21 5	9 41	16 53	6 12	
F 14	14 31	20 5	0s34	3 20	4 0	15 44	6 33	13 35	1 7	22 11	0 38	19 18	0 53	22 20	0 2	6 23	1 7	3 6	16 35	20 50	21 6	9 43	16 53	6 11	
S 15	14 12	17 35	1 47	3 14	4 8	15 47	6 28	13 22	1 7	22 12	0 38	19 19	0 53	22 20	0 2	6 22	1 7	3 6	16 35	20 51	21 6	9 46	16 53	6 11	
S 16	13 53	14 3	2 54	3 11	4 16	15 51	6 23	13 8	1 7	22 12	0 38	19 21	0 53	22 21	0 2	6 21	1 7	3 6	16 35	20 51	21 7	9 48	16 54	6 11	
M17	13 34	9 39	3 52	3 12	4 22	15 55	6 17	12 55	1 7	22 13	0 38	19 22	0 53	22 21	0 2	6 20	1 7	3 7	16 36	20 52	21 7	9 50	16 54	6 10	
T 18	13 15	4 39	4 37	3 15	4 27	15 58	6 11	12 41	1 7	22 14	0 38	19 23	0 53	22 21	0 2	6 19	1 7	3 7	16 36	20 52	21 8	9 53	16 54	6 10	
W19	12 55	0n37	5 4	3 22	4 31	16 2	6 5	12 28	1 6	22 15	0 38	19 24	0 53	22 21	0 2	6 19	1 7	3 7	16 36	20 53	21 8	9 55	16 55	6 9	
T 20	12 36	5 52	5 12	3 32	4 33	16 5	5 59	12 14	1 6	22 16	0 38	19 25	0 53	22 21	0 2	6 18	1 7	3 8	16 37	20 54	21 9	9 57	16 55	6 9	
F 21	12 16	10 45	5 1	3 46	4 34	16 8	5 53	12 0	1 6	22 17	0 38	19 26	0 54	22 22	0 2	6 17	1 7	3 8	16 37	20 54	21 10	10 0	16 56	6 8	
S 22	11 56	15 1	4 31	4 3	4 34	16 11	5 46	11 46	1 6	22 17	0 38	19 27	0 54	22 22	0 2	6 16	1 7	3 9	16 37	20 54	21 10	10 2	16 56	6 8	
S 23	11 35	18 22	3 45	4 23	4 31	16 14	5 39	11 32	1 6	22 18	0 38	19 28	0 54	22 22	0 2	6 15	1 7	3 9	16 38	20 54	21 11	10 4	16 56	6 8	
M24	11 15	20 36	2 46	4 46	4 27	16 17	5 33	11 18	1 6	22 19	0 38	19 29	0 54	22 22	0 2	6 14	1 7	3 9	16 38	20 54	21 11	10 6	16 57	6 7	
T 25	10 54	21 36	1 39	5 12	4 20	16 19	5 26	11 4	1 5	22 20	0 38	19 30	0 54	22 22	0 2	6 14	1 7	3 10	16 38	20 54	21 12	10 9	16 57	6 7	
W26	10 33	21 19	0 27	5 41	4 12	16 21	5 19	10 50	1 5	22 20	0 38	19 31	0 54	22 23	0 2	6 13	1 7	3 10	16 38	20 54	21 12	10 11	16 58	6 6	
T 27	10 12	19 49	0n46	6 11	4 2	16 23	5 12	10 36	1 5	22 21	0 38	19 32	0 54	22 23	0 2	6 12	1 7	3 11	16 39	20 54	21 13	10 13	16 58	6 6	
F 28	9 51	17 17	1 54	6 42	3 50	16 25	5 5	10 21	1 5	22 22	0 38	19 33	0 54	22 23	0 2	6 11	1 7	3 11	16 39	20 54	21 14	10 16	16 59	6 5	
S 29	9 30	13 55	2 56	7 15	3 36	16 26	4 58	10 7	1 5	22 22	0 38	19 34	0 54	22 23	0 2	6 10	1 7	3 12	16 39	20 55	21 14	10 18	16 59	6 5	
S 30	9 9	9 58	3 47	7 47	3 31	16 27	4 51	9 53	1 5	22 23	0 38	19 35	0 54	22 23	0 2	6 9	1 7	3 12	16 40	20 56	21 15	10 20	17 0	6 4	
M31	8n47	5n39	4n27	8n20	3s 4	16n27	4s43	9n38	1n 4	22n23	0s38	19s36	0s54	22n23	0s 2	6n 8	1n 7	3s12	16s40	20n57	21n15	10s23	17s 0	6n 4	

ASTRODIENST EPHEMERIS for the year 1609

geocentric

SEPTEMBER 1609 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	22 40 40	8♍26'56	8♌19	0°R 8	26♌2	8♍30	18♌55	6°R16	13♌4	17♍8	2°R49	26°R 4	24♌30	10♌51	19♌14	T 1
W 2	22 44 37	9°25'12	20°26	29♌32	26°41	9° 8	19° 2	6♌13	13° 5	17°10	2♌49	25♌57	24°27	10°57	19°15	W 2
T 3	22 48 33	10°23'29	2♌24	29° 3	27°21	9°46	19° 9	6°10	13° 6	17°12	2°48	25°50	24°24	11° 4	19°16	T 3
F 4	22 52 30	11°21'48	14°17	28°42	28° 3	10°25	19°15	6° 6	13° 7	17°14	2°48	25°45	24°21	11°11	19°17	F 4
S 5	22 56 27	12°20'09	26° 8	28°30	28°45	11° 3	19°22	6° 3	13° 8	17°17	2°47	25°41	24°18	11°18	19°18	S 5
S 6	23 0 23	13°18'32	8♌2	28°D27	29°28	11°42	19°28	6° 0	13° 8	17°19	2°46	25°D39	24°14	11°24	19°19	S 6
M 7	23 4 20	14°16'56	20° 3	28°33	0♌13	12°20	19°34	5°57	13° 9	17°21	2°46	25°40	24°11	11°31	19°20	M 7
T 8	23 8 16	15°15'21	2♌18	28°48	0°58	12°58	19°40	5°54	13° 9	17°23	2°45	25°41	24° 8	11°38	19°22	T 8
W 9	23 12 13	16°13'49	14°50	29°13	1°44	13°37	19°46	5°51	13°10	17°26	2°44	25°42	24° 5	11°44	19°23	W 9
T 10	23 16 9	17°12'18	27°44	29°46	2°31	14°15	19°51	5°48	13°10	17°28	2°43	25°R42	24° 2	11°51	19°25	T 10
F 11	23 20 6	18°10'48	11♌3	0♍28	3°19	14°54	19°57	5°46	13°11	17°30	2°43	25°41	23°59	11°58	19°26	F 11
S 12	23 24 2	19° 9'21	24°48	1°19	4° 8	15°32	20° 2	5°43	13°11	17°32	2°42	25°38	23°55	12° 5	19°28	S 12
S 13	23 27 59	20° 7'55	8♌59	2°17	4°57	16°11	20° 7	5°41	13°12	17°35	2°41	25°32	23°52	12°11	19°30	S 13
M14	23 31 56	21° 6'31	23°31	3°22	5°48	16°49	20°12	5°38	13°12	17°37	2°40	25°25	23°49	12°18	19°32	M14
T 15	23 35 52	22° 5'09	8♌18	4°34	6°39	17°28	20°17	5°36	13°12	17°39	2°40	25°16	23°46	12°25	19°34	T 15
W16	23 39 49	23° 3'49	23°12	5°52	7°30	18° 6	20°21	5°33	13°12	17°41	2°39	25° 7	23°43	12°31	19°36	W16
T 17	23 43 45	24° 2'31	8♌3	7°15	8°23	18°45	20°26	5°31	13°12	17°43	2°38	25° 0	23°39	12°38	19°38	T 17
F 18	23 47 42	25° 1'15	22°44	8°43	9°16	19°24	20°30	5°29	13°12	17°46	2°37	24°54	23°36	12°45	19°40	F 18
S 19	23 51 38	26° 0'02	7♌10	10°15	10°10	20° 2	20°34	5°27	13°R12	17°48	2°36	24°50	23°33	12°52	19°43	S 19
S 20	23 55 35	26°58'51	21°16	11°51	11° 4	20°41	20°38	5°25	13°12	17°50	2°35	24°D48	23°30	12°58	19°45	S 20
M21	23 59 31	27°57'43	5♌4	13°29	11°59	21°19	20°41	5°23	13°12	17°52	2°34	24°48	23°27	13° 5	19°47	M21
T 22	0 3 28	28°56'37	18°33	15°10	12°54	21°58	20°45	5°21	13°12	17°54	2°34	24°R49	23°24	13°12	19°50	T 22
W23	0 7 24	29°55'33	1♌45	16°53	13°50	22°37	20°48	5°20	13°12	17°57	2°33	24°49	23°20	13°18	19°53	W23
T 24	0 11 21	0♌54'31	14°43	18°38	14°47	23°16	20°51	5°18	13°12	17°59	2°32	24°47	23°17	13°25	19°55	T 24
F 25	0 15 18	1°53'32	27°29	20°23	15°44	23°54	20°54	5°17	13°11	18° 1	2°31	24°43	23°14	13°32	19°58	F 25
S 26	0 19 14	2°52'34	10♍3	22°10	16°42	24°33	20°57	5°15	13°11	18° 3	2°30	24°36	23°11	13°39	20° 1	S 26
S 27	0 23 11	3°51'39	22°28	23°57	17°40	25°12	20°59	5°14	13°11	18° 5	2°29	24°26	23° 8	13°45	20° 4	S 27
M28	0 27 7	4°50'46	4♌44	25°44	18°38	25°51	21° 2	5°13	13°10	18° 8	2°28	24°14	23° 4	13°52	20° 7	M28
T 29	0 31 4	5°49'55	16°51	27°32	19°37	26°29	21° 4	5°12	13°10	18°10	2°27	24° 0	23° 1	13°59	20°10	T 29
W30	0 35 0	6♌49'06	28♌52	29♍19	20♌37	27♍8	21♌6	5♌11	13♌9	18♍12	2♌26	23♌47	22♌58	14♌5	20♌13	W30

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	
T 1	8n25	1n11	4n54	8n51	2s47	16n28	4s36	9n24	1n 4	22n24	0s38	19s37	0s54	22n23	0s 2	T 1
W 2	8 3	3s15	5 7	9 21	2 28	16 28	4 29	9 9	1 4	22 25	0 38	19 38	0 54	22 23	0 2	W 2
T 3	7 41	7 32	5 6	9 49	2 9	16 27	4 22	8 54	1 4	22 25	0 38	19 39	0 54	22 24	0 2	T 3
F 4	7 19	11 30	4 52	10 14	1 50	16 26	4 14	8 40	1 4	22 26	0 38	19 39	0 54	22 24	0 2	F 4
S 5	6 57	15 1	4 26	10 36	1 30	16 25	4 7	8 25	1 3	22 26	0 38	19 40	0 54	22 24	0 1	S 5
S 6	6 34	17 56	3 48	10 55	1 11	16 24	4 0	8 10	1 3	22 27	0 38	19 41	0 54	22 24	0 1	S 6
M 7	6 12	20 7	3 0	11 11	0 53	16 22	3 52	7 55	1 3	22 27	0 38	19 42	0 54	22 24	0 1	M 7
T 8	5 49	21 26	2 3	11 23	0 34	16 19	3 45	7 40	1 3	22 28	0 38	19 43	0 54	22 24	0 1	T 8
W 9	5 27	21 42	0 58	11 30	0 17	16 16	3 38	7 25	1 3	22 28	0 38	19 43	0 54	22 24	0 1	W 9
T 10	5 4	20 50	0s11	11 34	0 0	16 13	3 31	7 10	1 2	22 28	0 38	19 44	0 54	22 24	0 1	T 10
F 11	4 41	18 48	1 21	11 34	0n15	16 9	3 23	6 55	1 2	22 29	0 38	19 45	0 54	22 24	0 1	F 11
S 12	4 18	15 38	2 30	11 30	0 30	16 5	3 16	6 40	1 2	22 29	0 38	19 45	0 54	22 24	0 1	S 12
S 13	3 55	11 28	3 30	11 21	0 43	16 0	3 9	6 25	1 2	22 30	0 38	19 46	0 54	22 24	0 1	S 13
M14	3 32	6 32	4 19	11 9	0 55	15 55	3 2	6 9	1 1	22 30	0 38	19 47	0 54	22 24	0 1	M14
T 15	3 9	1 10	4 51	10 53	1 6	15 50	2 55	5 54	1 1	22 30	0 38	19 47	0 54	22 24	0 1	T 15
W16	2 46	4n19	5 4	10 33	1 16	15 44	2 48	5 39	1 1	22 31	0 38	19 48	0 54	22 24	0 1	W16
T 17	2 22	9 32	4 57	10 10	1 24	15 37	2 41	5 23	1 1	22 31	0 38	19 48	0 54	22 24	0 1	T 17
F 18	1 59	14 9	4 30	9 44	1 31	15 30	2 34	5 8	1 0	22 31	0 38	19 49	0 54	22 25	0 1	F 18
S 19	1 36	17 50	3 46	9 15	1 38	15 23	2 27	4 53	1 0	22 31	0 38	19 49	0 54	22 25	0 1	S 19
S 20	1 12	20 24	2 49	8 43	1 43	15 15	2 20	4 37	1 0	22 32	0 38	19 50	0 54	22 25	0 1	S 20
M21	0 49	21 40	1 43	8 9	1 47	15 6	2 13	4 22	1 0	22 32	0 38	19 50	0 54	22 25	0 1	M21
T 22	0 25	21 39	0 33	7 32	1 50	14 57	2 6	4 6	0 59	22 32	0 38	19 51	0 54	22 25	0 1	T 22
W23	0 2	20 25	0n37	6 54	1 52	14 48	2 0	3 51	0 59	22 32	0 38	19 51	0 54	22 24	0 1	W23
T 24	0s22	18 6	1 44	6 14	1 53	14 38	1 53	3 35	0 59	22 33	0 38	19 52	0 54	22 24	0 1	T 24
F 25	0 45	14 57	2 44	5 33	1 53	14 28	1 46	3 19	0 59	22 33	0 38	19 52	0 54	22 24	0 1	F 25
S 26	1 9	11 8	3 36	4 51	1 53	14 17	1 40	3 4	0 58	22 33	0 38	19 52	0 54	22 24	0 1	S 26
S 27	1 32	6 55	4 16	4 7	1 52	14 5	1 33	2 48	0 58	22 33	0 38	19 53	0 54	22 24	0 1	S 27
M28	1 56	2 28	4 44	3 23	1 50	13 54	1 27	2 33	0 58	22 33	0 38	19 53	0 54	22 24	0 1	M28
T 29	2 19	2s 2	4 58	2 38	1 48	13 41	1 21	2 17	0 58	22 33	0 38	19 53	0 54	22 24	0 1	T 29
W30	2s43	6s25	5n 0	1n52	1n45	13n29	1s14	2n 1	0n57	22n34	0s38	19s53	0s54	22n24	0s 1	W30

Julian Day Number = 2308978.5, Delta T = 77.04 sec

Ecliptic obliquity = 23°29'21", Nutation = - 0°00'15", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 19°17'33", Lahiri = 18°24'34"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1609

geocentric

OCTOBER 1609 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	0 38 57	7♂48'19	10♂46	1♂ 6	21♂37	27♂47	21♂ 8	5°R10	13°R 8	18♂14	2°R25	23°R35	22♂55	14♂12	20♂17	T 1
F 2	0 42 53	8°47'34	22°37	2°53	22°37	28°26	21° 9	5♂ 9	13♂ 8	18°16	2♂24	23♂25	22°52	14°19	20°20	F 2
S 3	0 46 50	9°46'51	4♂26	4°40	23°38	29° 5	21°11	5° 8	13° 7	18°18	2°23	23°17	22°49	14°26	20°23	S 3
S 4	0 50 47	10°46'10	16°18	6°26	24°39	29°44	21°12	5° 8	13° 6	18°20	2°22	23°12	22°45	14°32	20°27	S 4
M 5	0 54 43	11°45'31	28°17	8°11	25°41	0♂23	21°13	5° 7	13° 5	18°22	2°21	23°10	22°42	14°39	20°31	M 5
T 6	0 58 40	12°44'53	10♂27	9°56	26°42	1° 1	21°14	5° 7	13° 5	18°24	2°20	23°D 9	22°39	14°46	20°34	T 6
W 7	1 2 36	13°44'17	22°54	11°40	27°45	1°40	21°14	5° 6	13° 4	18°27	2°19	23°R 9	22°36	14°52	20°38	W 7
T 8	1 6 33	14°43'43	5♂44	13°24	28°47	2°19	21°15	5° 6	13° 3	18°29	2°18	23° 8	22°33	14°59	20°42	T 8
F 9	1 10 29	15°43'11	19° 0	15° 7	29°50	2°58	21°R15	5° 6	13° 2	18°31	2°17	23° 6	22°30	15° 6	20°46	F 9
S 10	1 14 26	16°42'41	2♂46	16°49	0♂53	3°37	21°15	5°D 6	13° 1	18°33	2°15	23° 2	22°26	15°13	20°50	S 10
S 11	1 18 22	17°42'12	17° 2	18°30	1°57	4°16	21°15	5° 6	13° 0	18°35	2°14	22°55	22°23	15°19	20°54	S 11
M12	1 22 19	18°41'45	1°Y44	20°11	3° 1	4°55	21°14	5° 6	12°58	18°37	2°13	22°45	22°20	15°26	20°58	M12
T 13	1 26 16	19°41'20	16°47	21°52	4° 5	5°34	21°14	5° 7	12°57	18°39	2°12	22°34	22°17	15°33	21° 2	T 13
W14	1 30 12	20°40'57	2♂ 0	23°31	5°10	6°14	21°13	5° 7	12°56	18°41	2°11	22°23	22°14	15°39	21° 6	W14
T 15	1 34 9	21°40'37	17°13	25°10	6°14	6°53	21°12	5° 7	12°55	18°43	2°10	22°12	22°10	15°46	21°10	T 15
F 16	1 38 5	22°40'18	2♂16	26°48	7°20	7°32	21°11	5° 8	12°53	18°44	2° 9	22° 4	22° 7	15°53	21°15	F 16
S 17	1 42 2	23°40'02	16°59	28°26	8°25	8°11	21° 9	5° 9	12°52	18°46	2° 8	21°58	22° 4	16° 0	21°19	S 17
S 18	1 45 58	24°39'48	1♂18	0♂ 3	9°31	8°50	21° 8	5°10	12°51	18°48	2° 7	21°56	22° 1	16° 6	21°23	S 18
M19	1 49 55	25°39'36	15°11	1°40	10°37	9°29	21° 6	5°10	12°49	18°50	2° 5	21°55	21°58	16°13	21°28	M19
T 20	1 53 51	26°39'27	28°40	3°16	11°43	10° 9	21° 4	5°11	12°48	18°52	2° 4	21°55	21°55	16°20	21°32	T 20
W21	1 57 48	27°39'20	11♂46	4°52	12°49	10°48	21° 2	5°13	12°46	18°54	2° 3	21°54	21°51	16°26	21°37	W21
T 22	2 1 45	28°39'15	24°34	6°27	13°56	11°27	20°59	5°14	12°44	18°56	2° 2	21°52	21°48	16°33	21°42	T 22
F 23	2 5 41	29°39'12	7♂ 7	8° 1	15° 3	12° 6	20°57	5°15	12°43	18°57	2° 1	21°47	21°45	16°40	21°47	F 23
S 24	2 9 38	0♂39'11	19°28	9°35	16°10	12°46	20°54	5°17	12°41	18°59	2° 0	21°40	21°42	16°47	21°51	S 24
S 25	2 13 34	1°39'13	1♂39	11° 9	17°17	13°25	20°51	5°18	12°39	19° 1	1°59	21°29	21°39	16°53	21°56	S 25
M26	2 17 31	2°39'16	13°44	12°42	18°25	14° 4	20°48	5°20	12°38	19° 3	1°58	21°16	21°36	17° 0	22° 1	M26
T 27	2 21 27	3°39'22	25°43	14°14	19°33	14°44	20°44	5°21	12°36	19° 4	1°56	21° 2	21°32	17° 7	22° 6	T 27
W28	2 25 24	4°39'29	7♂38	15°47	20°41	15°23	20°41	5°23	12°34	19° 6	1°55	20°47	21°29	17°13	22°11	W28
T 29	2 29 20	5°39'38	19°29	17°18	21°49	16° 3	20°37	5°25	12°32	19° 8	1°54	20°34	21°26	17°20	22°16	T 29
F 30	2 33 17	6°39'49	1♂19	18°50	22°57	16°42	20°33	5°27	12°30	19° 9	1°53	20°23	21°23	17°27	22°22	F 30
S 31	2 37 13	7♂40'02	13♂10	20♂21	24♂ 6	17♂22	20♂29	5♂29	12♂28	19♂11	1♂52	20♂14	21♂20	17♂33	22♂27	S 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
T 1	3s 6	10s32	4n48	1n 7	1n42	13n15	1s 8	1n45	0n57	22n34	0s38	19s54	0s54	22n24	0s 1	5n42
F 2	3 30	14 13	4 23	0 21	1 38	13 2	1 2	1 30	0 57	22 34	0 38	19 54	0 54	22 24	0 1	5 41
S 3	3 53	17 21	3 48	0s25	1 34	12 47	0 56	1 14	0 57	22 34	0 38	19 54	0 54	22 24	0 1	5 40
S 4	4 16	19 46	3 2	1 12	1 29	12 33	0 50	0 58	0 56	22 34	0 38	19 54	0 54	22 24	0 1	5 40
M 5	4 40	21 21	2 8	1 58	1 24	12 18	0 44	0 42	0 56	22 34	0 38	19 54	0 54	22 24	0 1	5 39
T 6	5 3	21 58	1 7	2 44	1 19	12 2	0 38	0 27	0 56	22 34	0 38	19 54	0 54	22 24	0 1	5 38
W 7	5 26	21 31	0 1	3 30	1 14	11 46	0 33	0 11	0 55	22 34	0 38	19 54	0 54	22 24	0 1	5 37
T 8	5 49	19 57	1s 6	4 15	1 8	11 30	0 27	0s 5	0 55	22 34	0 38	19 54	0 54	22 23	0 1	5 36
F 9	6 12	17 15	2 12	5 0	1 2	11 13	0 22	0 21	0 55	22 34	0 38	19 54	0 54	22 23	0 1	5 36
S 10	6 35	13 30	3 13	5 45	0 56	10 56	0 16	0 37	0 55	22 34	0 38	19 54	0 54	22 23	0 1	5 35
S 11	6 58	8 52	4 4	6 30	0 50	10 38	0 11	0 52	0 54	22 34	0 38	19 54	0 54	22 23	0 1	5 34
M12	7 20	3 36	4 40	7 14	0 44	10 20	0 6	1 8	0 54	22 34	0 38	19 54	0 54	22 23	0 1	5 33
T 13	7 43	2n 1	4 59	7 58	0 37	10 2	0 0	1 24	0 54	22 34	0 38	19 54	0 54	22 23	0 1	5 33
W14	8 6	7 34	4 56	8 41	0 31	9 43	0n 5	1 40	0 53	22 34	0 38	19 54	0 54	22 23	0 1	5 32
T 15	8 28	12 39	4 32	9 23	0 24	9 23	0 10	1 56	0 53	22 34	0 38	19 54	0 54	22 23	0 1	5 31
F 16	8 50	16 54	3 50	10 5	0 17	9 4	0 14	2 11	0 53	22 34	0 38	19 54	0 54	22 22	0 1	5 30
S 17	9 12	19 59	2 53	10 46	0 11	8 44	0 19	2 27	0 52	22 34	0 38	19 54	0 54	22 22	0 1	5 30
S 18	9 34	21 42	1 47	11 27	0 4	8 23	0 24	2 43	0 52	22 34	0 38	19 54	0 54	22 22	0 1	5 29
M19	9 56	22 2	0 35	12 7	0s 3	8 3	0 29	2 59	0 52	22 34	0 38	19 53	0 54	22 22	0 1	5 28
T 20	10 18	21 3	0n36	12 47	0 10	7 42	0 33	3 14	0 51	22 34	0 38	19 53	0 54	22 22	0 1	5 28
W21	10 40	18 56	1 43	13 25	0 16	7 20	0 37	3 30	0 51	22 33	0 38	19 53	0 54	22 21	0 1	5 27
T 22	11 1	15 55	2 43	14 4	0 23	6 58	0 42	3 46	0 51	22 33	0 38	19 52	0 54	22 21	0 1	5 26
F 23	11 22	12 14	3 34	14 41	0 30	6 36	0 46	4 1	0 50	22 33	0 38	19 52	0 54	22 21	0 1	5 26
S 24	11 43	8 5	4 15	15 17	0 36	6 14	0 50	4 17	0 50	22 33	0 38	19 52	0 54	22 21	0 1	5 25
S 25	12 4	3 40	4 43	15 53	0 43	5 51	0 54	4 33	0 50	22 33	0 38	19 51	0 54	22 21	0 1	5 24
M26	12 25	0s52	4 57	16 28	0 50	5 29	0 58	4 48	0 49	22 33	0 38	19 51	0 54	22 20	0 1	5 24
T 27	12 46	5 19	4 59	17 2	0 56	5 1	1 5	4	0 49	22 32	0 38	19 50	0 54	22 20	0 1	5 23
W28	13 6	9 33	4 47	17 35	1 2	4 42	1 5	5 19	0 49	22 32	0 38	19 50	0 54	22 20	0 1	5 22
T 29	13 26	13 25	4 23	18 8	1 9	4 18	1 9	5 35	0 48	22 32	0 38	19 50	0 54	22 20	0 1	5 22
F 30	13 46	16 45	3 48	18 39	1 15	3 54	1 12	5 51	0 48	22 32	0 38	19 49	0 54	22 20	0 1	5 21
S 31	14s 6	19s24	3n 2	19s10	1s21	3n30	1n15	6s 6	0n47	22n31	0s37	19s49	0s54	22n19	0s 1	5n20

Julian Day Number = 2309008.5, Delta T = 76.95 sec
 Ecliptic obliquity = 23°29'21", Nutation = - 0°00'17", out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 19°17'37", Lahiri = 18°24'38"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1609

geocentric

NOVEMBER 1609 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	2 41 10	8♉40°17	25♊ 3	21♉51	25♉14	18♉ 1	20°R25	5♉31	12°R26	19♉13	1°R51	20°R 9	21♉16	17♉40	22♊32	S 1
M 2	2 45 7	9°40'33	7♊ 2	23°21	26°23	18°41	20♉20	5°34	12♉24	19°14	1♉50	20♉ 6	21°13	17°47	22°37	M 2
T 3	2 49 3	10°40'50	19°12	24°51	27°33	19°20	20°15	5°36	12°22	19°16	1°49	20°D 5	21°10	17°54	22°43	T 3
W 4	2 53 0	11°41'09	1♉36	26°20	28°42	20° 0	20°11	5°39	12°20	19°17	1°47	20° 5	21° 7	18° 0	22°48	W 4
T 5	2 56 56	12°41'30	14°21	27°49	29°51	20°39	20° 5	5°41	12°18	19°19	1°46	20°R 5	21° 4	18° 7	22°54	T 5
F 6	3 0 53	13°41'52	27°30	29°18	1♉ 1	21°19	20° 0	5°44	12°16	19°20	1°45	20° 4	21° 1	18°14	22°59	F 6
S 7	3 4 49	14°42'15	11♊ 7	0♊46	2°11	21°59	19°55	5°47	12°14	19°22	1°44	20° 2	20°57	18°20	23° 5	S 7
S 8	3 8 46	15°42'40	25°14	2°13	3°20	22°38	19°49	5°49	12°12	19°23	1°43	19°56	20°54	18°27	23°10	S 8
M 9	3 12 42	16°43'06	9♊49	3°40	4°31	23°18	19°44	5°52	12°10	19°25	1°42	19°49	20°51	18°34	23°16	M 9
T 10	3 16 39	17°43'34	24°50	5° 6	5°41	23°58	19°38	5°55	12° 7	19°26	1°41	19°39	20°48	18°41	23°21	T 10
W11	3 20 36	18°44'03	10♊ 6	6°32	6°51	24°37	19°32	5°59	12° 5	19°27	1°40	19°30	20°45	18°47	23°27	W11
T 12	3 24 32	19°44'33	25°27	7°57	8° 2	25°17	19°26	6° 2	12° 3	19°29	1°39	19°21	20°41	18°54	23°33	T 12
F 13	3 28 29	20°45'05	10♉42	9°21	9°12	25°57	19°20	6° 5	12° 0	19°30	1°38	19°14	20°38	19° 1	23°39	F 13
S 14	3 32 25	21°45'39	25°40	10°44	10°23	26°37	19°13	6° 9	11°58	19°31	1°37	19° 9	20°35	19° 7	23°44	S 14
S 15	3 36 22	22°46'15	10♉14	12° 6	11°34	27°17	19° 7	6°12	11°56	19°32	1°36	19° 7	20°32	19°14	23°50	S 15
M16	3 40 18	23°46'52	24°20	13°27	12°45	27°56	19° 0	6°16	11°53	19°34	1°35	19°D 7	20°29	19°21	23°56	M16
T 17	3 44 15	24°47'31	7♉58	14°47	13°56	28°36	18°53	6°19	11°51	19°35	1°34	19° 8	20°26	19°28	24° 2	T 17
W18	3 48 11	25°48'12	21°10	16° 6	15° 7	29°16	18°46	6°23	11°49	19°36	1°32	19°R 8	20°22	19°34	24° 8	W18
T 19	3 52 8	26°48'54	3♉58	17°23	16°19	29°56	18°39	6°27	11°46	19°37	1°31	19° 8	20°19	19°41	24°14	T 19
F 20	3 56 5	27°49'38	16°28	18°38	17°30	0♉36	18°32	6°31	11°44	19°38	1°30	19° 6	20°16	19°48	24°20	F 20
S 21	4 0 1	28°50'24	28°43	19°51	18°42	1°16	18°25	6°35	11°41	19°39	1°29	19° 2	20°13	19°54	24°26	S 21
S 22	4 3 58	29°51'11	10♉47	21° 2	19°54	1°56	18°18	6°39	11°39	19°40	1°28	18°56	20°10	20° 1	24°32	S 22
M23	4 7 54	0♊51'59	22°45	22°10	21° 5	2°36	18°10	6°43	11°36	19°41	1°28	18°47	20° 7	20° 8	24°38	M23
T 24	4 11 51	1°52'49	4♉38	23°15	22°17	3°16	18° 3	6°47	11°34	19°42	1°27	18°38	20° 3	20°14	24°44	T 24
W25	4 15 47	2°53'40	16°29	24°17	23°29	3°56	17°55	6°52	11°31	19°43	1°26	18°28	20° 0	20°21	24°51	W25
T 26	4 19 44	3°54'33	28°20	25°14	24°41	4°36	17°47	6°56	11°29	19°44	1°25	18°20	19°57	20°28	24°57	T 26
F 27	4 23 40	4°55'27	10♊13	26° 7	25°54	5°17	17°39	7° 1	11°26	19°45	1°24	18°12	19°54	20°35	25° 3	F 27
S 28	4 27 37	5°56'22	22° 8	26°54	27° 6	5°57	17°32	7° 5	11°24	19°46	1°23	18° 7	19°51	20°41	25° 9	S 28
S 29	4 31 34	6°57'18	4♊ 8	27°35	28°18	6°37	17°24	7°10	11°21	19°47	1°22	18° 3	19°47	20°48	25°15	S 29
M30	4 35 30	7♊58'15	16♊15	28♊10	29♊31	7♉17	17♉16	7♉14	11♉19	19♉47	1♉21	18°D 2	19°544	20♉55	25♊22	M30

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	
S 1	14s25	21s15	2n 9	19s40	1s27	3n 6	1n19	6s21	0n47	22n31	0s37	19s48	0s54	22n19	0s 1	5n41
M 2	14 45	22 9	1 9	20 8	1 32	2 41	1 22	6 37	0 47	22 31	0 37	19 47	0 54	22 19	0 1	5 41
T 3	15 4	22 2	0 5	20 36	1 38	2 16	1 25	6 52	0 46	22 31	0 37	19 47	0 54	22 19	0 1	5 40
W 4	15 22	20 50	1s 1	21 3	1 43	1 51	1 28	7 7	0 46	22 30	0 37	19 46	0 54	22 18	0 1	5 40
T 5	15 41	18 34	2 5	21 29	1 48	1 26	1 30	7 23	0 46	22 30	0 37	19 45	0 54	22 18	0 1	5 40
F 6	15 59	15 16	3 5	21 53	1 53	1 1	1 33	7 38	0 45	22 30	0 37	19 45	0 54	22 18	0 1	5 40
S 7	16 17	11 4	3 57	22 17	1 58	0 36	1 36	7 53	0 45	22 29	0 37	19 44	0 54	22 17	0 1	5 40
S 8	16 35	6 8	4 36	22 39	2 3	0 10	1 38	8 8	0 44	22 29	0 37	19 43	0 54	22 17	0 1	5 39
M 9	16 52	0 41	4 59	23 0	2 7	0s16	1 40	8 23	0 44	22 29	0 37	19 43	0 54	22 17	0 1	5 39
T 10	17 9	4n56	5 3	23 20	2 11	0 41	1 43	8 38	0 44	22 28	0 37	19 42	0 54	22 17	0 1	5 39
W11	17 26	10 22	4 45	23 39	2 15	1 7	1 45	8 53	0 43	22 28	0 37	19 41	0 54	22 16	0 1	5 39
T 12	17 43	15 11	4 6	23 57	2 18	1 33	1 47	9 8	0 43	22 27	0 37	19 40	0 54	22 16	0 1	5 39
F 13	17 59	18 57	3 10	24 13	2 21	1 59	1 49	9 23	0 42	22 27	0 37	19 39	0 54	22 16	0 1	5 38
S 14	18 15	21 23	2 2	24 28	2 24	2 26	1 50	9 38	0 42	22 26	0 37	19 39	0 54	22 15	0 1	5 38
S 15	18 30	22 18	0 47	24 42	2 26	2 52	1 52	9 53	0 42	22 26	0 37	19 38	0 54	22 15	0 1	5 38
M16	18 45	21 45	0n28	24 54	2 28	3 18	1 54	10 7	0 41	22 26	0 37	19 37	0 54	22 15	0 1	5 38
T 17	19 0	19 55	1 39	25 5	2 29	3 44	1 55	10 22	0 41	22 25	0 36	19 36	0 54	22 15	0 1	5 38
W18	19 15	17 3	2 43	25 15	2 30	4 11	1 56	10 37	0 40	22 25	0 36	19 35	0 54	22 14	0 1	5 38
T 19	19 29	13 26	3 37	25 23	2 30	4 37	1 58	10 51	0 40	22 24	0 36	19 34	0 54	22 14	0 1	5 38
F 20	19 43	9 20	4 19	25 29	2 30	5 3	1 59	11 6	0 39	22 24	0 36	19 33	0 54	22 14	0 1	5 38
S 21	19 57	4 55	4 48	25 35	2 29	5 30	2 0	11 20	0 39	22 23	0 36	19 32	0 54	22 13	0 1	5 37
S 22	20 10	0 23	5 4	25 38	2 27	5 56	2 1	11 34	0 38	22 22	0 36	19 31	0 54	22 13	0 1	5 37
M23	20 22	4s 7	5 6	25 40	2 25	6 22	2 2	11 48	0 38	22 22	0 36	19 30	0 54	22 13	0 1	5 37
T 24	20 35	8 27	4 55	25 41	2 22	6 48	2 2	12 2	0 38	22 21	0 36	19 29	0 54	22 12	0 1	5 37
W25	20 47	12 28	4 32	25 40	2 18	7 14	2 3	12 17	0 37	22 21	0 36	19 28	0 54	22 12	0 1	5 37
T 26	20 58	15 59	3 56	25 37	2 13	7 40	2 4	12 31	0 37	22 20	0 36	19 26	0 54	22 12	0 1	5 37
F 27	21 10	18 53	3 10	25 33	2 7	8 6	2 4	12 44	0 36	22 20	0 36	19 25	0 54	22 11	0 1	5 37
S 28	21 21	21 0	2 16	25 27	2 0	8 32	2 4	12 58	0 36	22 19	0 35	19 24	0 54	22 11	0 1	5 37
S 29	21 31	22 11	1 15	25 20	1 52	8 57	2 5	13 12	0 35	22 18	0 35	19 23	0 54	22 11	0 1	5 37
M30	21s41	22s20	0n10	25s11	1s43	9s23	2n 5	13s26	0n35	22n18	0s35	19s22	0s54	22n10	0s 1	5n37

Julian Day Number = 2309039.5, Delta T = 76.85 sec

Ecliptic obliquity = 23°29'21", Nutation = - 0°00'18", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 19°17'42", Lahiri = 18°24'42"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1609

geocentric

DECEMBER 1609 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	4 39 27	8°59'12	28°32	28°37	0m43	7m57	17°R 8	7°19	11°R16	19m48	1°R20	18°3	19°341	21m1	25°28	T 1
W 2	4 43 23	10° 0'11	11°1	28°56	1°56	8°38	17°II 0	7°24	11°II14	19°49	1°19	18° 4	19°38	21° 8	25°34	W 2
T 3	4 47 20	11° 1'10	23°47	29°R 5	3° 9	9°18	16°52	7°29	11°11	19°49	1°19	18° 6	19°35	21°15	25°41	T 3
F 4	4 51 16	12° 2'10	6°53	29° 4	4°21	9°58	16°43	7°34	11° 8	19°50	1°18	18°R 7	19°32	21°21	25°47	F 4
S 5	4 55 13	13° 3'10	20°22	28°52	5°34	10°39	16°35	7°39	11° 6	19°51	1°17	18° 7	19°28	21°28	25°53	S 5
S 6	4 59 10	14° 4'11	4°16	28°30	6°47	11°19	16°27	7°44	11° 3	19°51	1°16	18° 5	19°25	21°35	26° 0	S 6
M 7	5 3 6	15° 5'12	18°35	27°55	8° 0	11°59	16°19	7°50	11° 1	19°52	1°15	18° 2	19°22	21°42	26° 6	M 7
T 8	5 7 3	16° 6'14	3°17	27° 9	9°13	12°40	16°11	7°55	10°58	19°52	1°15	17°58	19°19	21°48	26°12	T 8
W 9	5 10 59	17° 7'17	18°17	26°13	10°26	13°20	16° 3	8° 0	10°56	19°53	1°14	17°53	19°16	21°55	26°19	W 9
T 10	5 14 56	18° 8'20	3°II26	25° 7	11°39	14° 1	15°54	8° 6	10°53	19°53	1°13	17°49	19°13	22° 2	26°25	T 10
F 11	5 18 52	19° 9'23	18°35	23°53	12°53	14°41	15°46	8°11	10°51	19°54	1°12	17°45	19° 9	22° 8	26°32	F 11
S 12	5 22 49	20°10'28	3°34	22°33	14° 6	15°22	15°38	8°17	10°48	19°54	1°12	17°43	19° 6	22°15	26°38	S 12
S 13	5 26 45	21°11'33	18°14	21°11	15°19	16° 2	15°30	8°22	10°46	19°54	1°11	17°D43	19° 3	22°22	26°44	S 13
M14	5 30 42	22°12'39	2°130	19°48	16°33	16°43	15°22	8°28	10°43	19°55	1°10	17°43	19° 0	22°28	26°51	M14
T 15	5 34 39	23°13'45	16°18	18°28	17°46	17°23	15°14	8°34	10°41	19°55	1°10	17°45	18°57	22°35	26°57	T 15
W16	5 38 35	24°14'52	29°40	17°13	19° 0	18° 4	15° 6	8°39	10°38	19°55	1° 9	17°46	18°53	22°42	27° 4	W16
T 17	5 42 32	25°16'00	12°36	16° 5	20°13	18°44	14°58	8°45	10°36	19°55	1° 8	17°47	18°50	22°49	27°10	T 17
F 18	5 46 28	26°17'08	25°10	15° 7	21°27	19°25	14°50	8°51	10°33	19°55	1° 8	17°R48	18°47	22°55	27°17	F 18
S 19	5 50 25	27°18'17	7°27	14°18	22°40	20° 6	14°42	8°57	10°31	19°55	1° 7	17°48	18°44	23° 2	27°23	S 19
S 20	5 54 21	28°19'27	19°30	13°39	23°54	20°47	14°35	9° 3	10°29	19°56	1° 7	17°46	18°41	23° 9	27°30	S 20
M21	5 58 18	29°20'37	1m26	13°12	25° 8	21°27	14°27	9° 9	10°26	19°56	1° 6	17°44	18°38	23°15	27°36	M21
T 22	6 2 14	0°21'48	13°16	12°55	26°22	22° 8	14°19	9°15	10°24	19°56	1° 6	17°41	18°34	23°22	27°42	T 22
W23	6 6 11	1°22'59	25° 6	12°D48	27°35	22°49	14°12	9°21	10°21	19°56	1° 5	17°38	18°31	23°29	27°49	W23
T 24	6 10 8	2°24'11	6°19	12°51	28°49	23°30	14° 5	9°27	10°19	19°56	1° 5	17°36	18°28	23°35	27°55	T 24
F 25	6 14 4	3°25'23	18°56	13° 2	0°17 3	24°10	13°57	9°34	10°17	19°55	1° 4	17°34	18°25	23°42	28° 2	F 25
S 26	6 18 1	4°26'35	0°359	13°21	1°17	24°51	13°50	9°40	10°15	19°55	1° 4	17°32	18°22	23°49	28° 8	S 26
S 27	6 21 57	5°27'47	13°11	13°48	2°31	25°32	13°43	9°46	10°12	19°55	1° 3	17°D32	18°19	23°56	28°14	S 27
M28	6 25 54	6°28'59	25°33	14°21	3°45	26°13	13°36	9°53	10°10	19°55	1° 3	17°32	18°15	24° 2	28°21	M28
T 29	6 29 50	7°30'11	8°5	15° 1	4°59	26°54	13°29	9°59	10° 8	19°55	1° 3	17°32	18°12	24° 9	28°27	T 29
W30	6 33 47	8°31'23	20°51	15°45	6°13	27°35	13°22	10° 6	10° 6	19°55	1° 2	17°33	18° 9	24°16	28°34	W30
T 31	6 37 43	9°32'34	3°49	16°35	7°27	28°16	13°II16	10°12	10°II 4	19m54	1° 2	17°34	18°6	24m22	28°40	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	
T 1	21s51	21s26	0s57	25s 1	1s32	9s48	2n 5	13s39	0n34	22n17	0s35	19s21	0s54	22n10	0s 1	T 1
W 2	22 0	19 27	2 2	24 49	1 20	10 13	2 5	13 52	0 34	22 16	0 35	19 19	0 54	22 10	0 1	W 2
T 3	22 9	16 29	3 2	24 36	1 7	10 38	2 4	14 6	0 33	22 16	0 35	19 18	0 54	22 9	0 1	T 3
F 4	22 17	12 38	3 55	24 21	0 52	11 3	2 4	14 19	0 33	22 15	0 35	19 17	0 54	22 9	0 1	F 4
S 5	22 25	8 4	4 37	24 5	0 36	11 28	2 4	14 32	0 32	22 14	0 35	19 15	0 54	22 9	0 1	S 5
S 6	22 32	2 57	5 3	23 47	0 18	11 52	2 3	14 45	0 32	22 14	0 34	19 14	0 54	22 8	0 1	S 6
M 7	22 39	2n29	5 12	23 28	0n 0	12 16	2 3	14 58	0 31	22 13	0 34	19 13	0 54	22 8	0 1	M 7
T 8	22 46	7 55	5 1	23 8	0 20	12 40	2 2	15 11	0 31	22 12	0 34	19 11	0 54	22 7	0 1	T 8
W 9	22 52	12 59	4 30	22 47	0 40	13 3	2 2	15 24	0 30	22 12	0 34	19 10	0 54	22 7	0 1	W 9
T 10	22 58	17 18	3 39	22 24	1 0	13 27	2 1	15 36	0 30	22 11	0 34	19 9	0 54	22 7	0 1	T 10
F 11	23 3	20 27	2 33	22 1	1 20	13 50	2 0	15 49	0 29	22 10	0 34	19 7	0 54	22 6	0 1	F 11
S 12	23 7	22 10	1 17	21 38	1 39	14 13	1 59	16 1	0 29	22 9	0 34	19 6	0 54	22 6	0 1	S 12
S 13	23 12	22 18	0n 3	21 15	1 57	14 35	1 58	16 13	0 28	22 9	0 33	19 4	0 54	22 6	0 1	S 13
M14	23 16	20 57	1 20	20 53	2 13	14 57	1 57	16 25	0 28	22 8	0 33	19 3	0 54	22 5	0 1	M14
T 15	23 19	18 23	2 31	20 33	2 27	15 19	1 56	16 38	0 27	22 7	0 33	19 1	0 54	22 5	0 1	T 15
W16	23 22	14 54	3 1	20 14	2 39	15 40	1 54	16 49	0 26	22 7	0 33	19 0	0 54	22 5	0 1	W16
T 17	23 24	10 49	4 18	19 58	2 49	16 1	1 53	17 1	0 26	22 6	0 33	18 58	0 54	22 4	0 1	T 17
F 18	23 26	6 23	4 51	19 45	2 56	16 22	1 52	17 13	0 25	22 5	0 33	18 57	0 54	22 4	0 1	F 18
S 19	23 28	1 47	5 10	19 34	3 1	16 42	1 50	17 24	0 25	22 4	0 32	18 55	0 54	22 4	0 1	S 19
S 20	23 29	2s47	5 15	19 27	3 3	17 2	1 48	17 36	0 24	22 4	0 32	18 54	0 54	22 3	0 1	S 20
M21	23 29	7 12	5 6	19 23	3 4	17 22	1 47	17 47	0 24	22 3	0 32	18 52	0 54	22 3	0 1	M21
T 22	23 29	11 20	4 45	19 22	3 3	17 41	1 45	17 58	0 23	22 2	0 32	18 50	0 54	22 3	0 0	T 22
W23	23 29	15 1	4 11	19 24	3 0	17 59	1 43	18 9	0 22	22 2	0 32	18 49	0 54	22 2	0 0	W23
T 24	23 28	18 8	3 26	19 28	2 56	18 17	1 42	18 20	0 22	22 1	0 32	18 47	0 54	22 2	0 0	T 24
F 25	23 27	20 30	2 32	19 35	2 51	18 35	1 40	18 31	0 21	22 0	0 31	18 46	0 54	22 2	0 0	F 25
S 26	23 25	21 59	1 30	19 43	2 45	18 52	1 38	18 41	0 21	21 59	0 31	18 44	0 54	22 1	0 0	S 26
S 27	23 23	22 26	0 24	19 53	2 39	19 9	1 36	18 52	0 20	21 59	0 31	18 42	0 54	22 1	0 0	S 27
M28	23 20	21 48	0s44	20 4	2 31	19 25	1 34	19 2	0 19	21 58	0 31	18 40	0 54	22 1	0 0	M28
T 29	23 17	20 5	1 52	20 16	2 23	19 40	1 32	19 12	0 19	21 57	0 31	18 39	0 54	22 0	0 0	T 29
W30	23 13	17 20	2 54	20 29	2 15	19 55	1 29	19 22	0 18	21 57	0 30	18 37	0 54	22 0	0 0	W30
T 31	23s 9	13s41	3s50	20s42	2n 7	20s10	1n27	19s32	0n18	21n56	0s30	18s35	0s54	22n 0	0s 0	T 31

Julian Day Number = 2309069.5, Delta T = 76.76 sec

Ecliptic obliquity = 23°29'20", Nutation = - 0°00'17", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 19°17'46", Lahiri = 18°24'46"Greg. Calendar