



Astrodienst Ephemeris Tables for the year 1669

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 1669
geocentric

JANUARY 1669 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day	
T 1	6 44 28	11°34'57	20°23	18°34	28°13	1°14	2°R26	11°53	29°35	25°44	29°R32	18°R33	16°53	25°5	1°29	T 1	
W 2	6 48 25	12°16'09	5°29	19°18	29°23	2° 1	2°II21	11°59	29°37	25°47	29°II31	18°27	16°50	25°12	1°32	W 2	
T 3	6 52 21	13°17'21	20°47	20° 6	0°34	2°47	2°17	12° 6	29°40	25°49	29°29	18°19	16°47	25°19	1°35	T 3	
F 4	6 56 18	14°18'32	6°4	20°59	1°44	3°33	2°12	12°12	29°43	25°51	29°28	18°10	16°43	25°25	1°38	F 4	
S 5	7 0 14	15°19'43	21°11	21°55	2°55	4°19	2° 8	12°19	29°45	25°53	29°27	18° 1	16°40	25°32	1°41	S 5	
S 6	7 4 11	16°20'54	5°57	22°55	4° 6	5° 5	2° 4	12°26	29°48	25°56	29°26	17°53	16°37	25°39	1°44	S 6	
M 7	7 8 7	17°22'03	20°17	23°58	5°17	5°51	2° 0	12°33	29°51	25°58	29°25	17°48	16°34	25°45	1°47	M 7	
T 8	7 12 4	18°23'12	4°9	25° 4	6°28	6°37	1°57	12°39	29°54	26° 0	29°24	17°45	16°31	25°52	1°50	T 8	
W 9	7 16 0	19°24'21	17°32	26°12	7°39	7°23	1°53	12°46	29°56	26° 2	29°22	17°D44	16°28	25°59	1°53	W 9	
T 10	7 19 57	20°25'28	0°31	27°22	8°50	8° 9	1°50	12°53	29°59	26° 5	29°21	17°44	16°24	26° 6	1°57	T 10	
F 11	7 23 54	21°26'35	13° 9	28°34	10° 2	8°55	1°47	13° 0	0°H 2	26° 7	29°20	17°R45	16°21	26°12	2° 0	F 11	
S 12	7 27 50	22°27'41	25°30	29°48	11°13	9°41	1°44	13° 7	0° 5	26° 9	29°19	17°44	16°18	26°19	2° 3	S 12	
S 13	7 31 47	23°28'46	7°II39	1°3	12°25	10°27	1°42	13°14	0° 8	26°11	29°18	17°42	16°15	26°26	2° 6	S 13	
M14	7 35 43	24°29'51	19°40	2°21	13°36	11°13	1°39	13°21	0°11	26°14	29°17	17°38	16°12	26°32	2°10	M14	
T 15	7 39 40	25°30'54	1°35	3°39	14°48	11°59	1°37	13°28	0°14	26°16	29°16	17°30	16° 9	26°39	2°13	T 15	
W16	7 43 36	26°31'57	13°28	4°59	16° 0	12°45	1°35	13°35	0°17	26°18	29°15	17°20	16° 5	26°46	2°16	W16	
T 17	7 47 33	27°32'59	25°20	6°20	17°11	13°31	1°33	13°42	0°20	26°21	29°14	17° 7	16° 2	26°53	2°20	T 17	
F 18	7 51 29	28°34'01	7°12	7°42	18°23	14°16	1°32	13°49	0°23	26°23	29°13	16°53	15°59	26°59	2°23	F 18	
S 19	7 55 26	29°35'01	19° 7	9° 5	19°35	15° 2	1°31	13°56	0°26	26°25	29°12	16°39	15°56	27° 6	2°27	S 19	
S 20	7 59 23	0°36'01	1°19	4	10°29	20°47	15°48	1°29	14° 3	0°29	26°27	29°11	16°26	15°53	27°13	2°30	S 20
M21	8 3 19	1°37'00	13° 7	11°54	21°59	16°34	1°28	14°10	0°32	26°30	29°10	16°15	15°49	27°19	2°34	M21	
T 22	8 7 16	2°37'58	25°16	13°19	23°11	17°19	1°28	14°17	0°35	26°32	29° 9	16° 7	15°46	27°26	2°37	T 22	
W23	8 11 12	3°38'56	7°12	14°46	24°23	18° 5	1°27	14°24	0°38	26°34	29° 8	16° 1	15°43	27°33	2°41	W23	
T 24	8 15 9	4°39'53	20°10	16°14	25°36	18°51	1°27	14°31	0°42	26°36	29° 7	15°59	15°40	27°40	2°45	T 24	
F 25	8 19 5	5°40'49	3°12	17°42	26°48	19°36	1°D27	14°38	0°45	26°39	29° 6	15°D58	15°37	27°46	2°48	F 25	
S 26	8 23 2	6°41'44	16°15	19°11	28° 0	20°22	1°27	14°45	0°48	26°41	29° 5	15°R58	15°34	27°53	2°52	S 26	
S 27	8 26 58	7°42'39	29°54	20°41	29°13	21° 8	1°27	14°53	0°51	26°43	29° 4	15°57	15°30	28° 0	2°55	S 27	
M28	8 30 55	8°43'33	14°10	22°12	0°25	21°53	1°27	15° 0	0°54	26°45	29° 3	15°55	15°27	28° 6	2°59	M28	
T 29	8 34 52	9°44'26	28°34	23°43	1°38	22°39	1°28	15° 7	0°58	26°48	29° 2	15°50	15°24	28°13	3° 3	T 29	
W30	8 38 48	10°45'19	13°31	25°15	2°50	23°24	1°29	15°14	1° 1	26°50	29° 1	15°43	15°21	28°20	3° 7	W30	
T 31	8 42 45	11°46'10	28°34	26°48	4°3	24°10	1°II30	15°21	1°H 4	26°52	29°II 0	15°32	15°18	28°27	3°10	T 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	decl	decl	decl	decl	decl	decl	decl	decl	decl	decl	decl
T 1	23s 0	25s49	2s42	20s39	2n21	17s22	2n29	11s58	0s59	19n58	0s44	18s10	0s56	12s20	0s44	20s41	0n22	18n30	4s59	17n23	16n55	25n51	5s57	5n22										
W 2	22 55	27 6	3 44	20 51	2 13	17 39	2 28	11 41	0 58	19 58	0 43	18 8	0 56	12 19	0 44	20 40	0 22	18 30	4 59	17 21	16 54	25 50	5 56	5 22										
T 3	22 49	26 20	4 31	21 3	2 4	17 55	2 26	11 23	0 57	19 57	0 43	18 6	0 56	12 18	0 44	20 40	0 22	18 30	4 59	17 19	16 53	25 49	5 55	5 21										
F 4	22 43	23 36	4 58	21 16	1 55	18 11	2 25	11 6	0 56	19 56	0 43	18 4	0 56	12 17	0 44	20 40	0 22	18 30	4 59	17 16	16 52	25 48	5 54	5 21										
S 5	22 36	19 16	5 4	21 28	1 46	18 27	2 23	10 48	0 56	19 56	0 43	18 2	0 56	12 16	0 44	20 39	0 22	18 30	4 59	17 14	16 51	25 47	5 55	5 21										
S 6	22 29	13 50	4 50	21 41	1 37	18 42	2 21	10 31	0 55	19 55	0 43	18 0	0 56	12 15	0 44	20 39	0 22	18 30	4 59	17 12	16 50	25 46	5 53	5 20										
M 7	22 21	7 48	4 18	21 53	1 28	18 57	2 19	10 13	0 54	19 55	0 42	17 59	0 56	12 14	0 44	20 38	0 22	18 30	4 59	17 10	16 49	25 45	5 52	5 20										
T 8	22 13	1 34	3 31	22 5	1 18	19 11	2 17	9 55	0 53	19 54	0 42	17 57	0 57	12 13	0 44	20 38	0 22	18 30	4 59	17 9	16 48	25 44	5 51	5 20										
W 9	22 5	4n32	2 34	22 17	1 9	19 25	2 15	9 37	0 52	19 54	0 42	17 55	0 57	12 12	0 44	20 38	0 22	18 30	4 59	17 9	16 47	25 43	5 51	5 20										
T 10	21 56	10 16	1 31	22 27	1 0	19 38	2 13	9 19	0 51	19 53	0 42	17 53	0 57	12 11	0 44	20 37	0 22	18 30	4 59	17 9	16 46	25 42	5 50	5 19										
F 11	21 46	15 25	0 25	22 37	0 51	19 51	2 10	9 1	0 50	19 53	0 41	17 51	0 57	12 10	0 44	20 37	0 22	18 31	4 58	17 9	16 46	25 41	5 49	5 19										
S 12	21 37	19 50	0n41	22 47	0 42	20 3	2 8	8 43	0 50	19 53	0 41	17 49	0 57	12 9	0 44	20 36	0 22	18 31	4 58	17 9	16 45	25 40	5 48	5 19										
S 13	21 26	23 20	1 44	22 55	0 33	20 15	2 6	8 25	0 49	19 52	0 41	17 47	0 57	12 8	0 44	20 36	0 21	18 31	4 58	17 9	16 44	25 39	5 47	5 19										
M14	21 16	25 45	2 41	23 3	0 25	20 26	2 3	8 7	0 48	19 52	0 41	17 45	0 57	12 7	0 44	20 36	0 21	18 31	4 58	17 7	16 43	25 38	5 46	5 18										
T 15	21 5	26 59	3 31	23 10	0 16	20 37	2 1	7 48	0 47	19 52	0 40	17 43	0 57	12 6	0 44	20 35	0 21	18 31	4 58	17 5	16 42	25 37	5 45	5 18										
W16	20 53	26 57	4 10	23 15	0 8	20 47	1 58	7 30	0 46	19 52	0 40	17 41	0 57	12 5	0 44	20 35	0 21	18 31	4 58	17 2	16 41	25 36	5 44	5 18										
T 17	20 41	25 41	4 39	23 20	0s 0	20 57	1 55	7 12	0 45	19 52	0 40	17 39	0 57	12 4	0 44	20 34	0 21	18 31	4 58	16 59	16 40	25 35	5 43	5 18										
F 18	20 29	23 17	4 56	23 24	0 8	21 6	1 53	6 53	0 45	19 52	0 40	17 37	0 57	12 2	0 44	20 34	0 21	18 31	4 58	16 55	16 39	25 34	5 42	5 18										
S 19	20 17	19 52	5 0	23 26	0 16	21 15	1 50	6 35	0 44	19 51	0 39	17 35	0 57	12 1	0 44	20 33	0 21	18 31	4 58	16 51	16 38	25 33	5 41	5 17										
S 20	20 4	15 38	4 51	23 28	0 24	21 23	1 47	6 16	0 43	19 51	0 39	17 33	0 57	12 0	0 44	20 33	0 21	18 31	4 57	16 47	16 37	25 32	5 40	5 17										
M21	19 50	10 47	4 29	23 28	0 31	21 30	1 44	5 58	0 42	19 52	0 39	17 31	0 57	11 59	0 44	20 33	0 21	18 32	4 57	16 44	16 36	25 31	5 39	5 17										
T 22	19 36	5 27	3 54	23 27	0 38	21 37	1 41	5 39	0 41	19 52	0 39	17 29	0 57	11 58	0 44	20 32	0 21	18 32	4 57	16 41	16 35	25 30	5 38	5 17										
W23	19 22	0s 9	3 8	23 25	0 45	21 43	1 39	5 20	0 40	19 52	0 38	17 27	0 57	11 57	0 44	20 32	0 21	18 32	4 57	16 40	16 35	25 29	5 37	5 16										
T 24	19 8	5 52	2 12	23 21	0 52	21 49	1 36	5 2	0 40	19 52	0 38	17 25	0 57	11 56	0 44	20 31	0 21	18 32	4 57	16 39	16 34	25 28	5 36	5 16										
F 25	18 53	11 29	1 8	23 17	0 58	21 54	1 33	4 43	0 39	19 52	0 38	17 23	0 57	11 55	0 44	20 31	0 21	18 32	4 57	16 39	16 33	25 27	5 35	5 16										
S 26	18 38	16 45	0s 2	23 10	1 5	21 59	1 30	4 24	0 38	19 52	0 38	17 21	0 57	11 53	0 44	20 31	0 21	18 32	4 57	16 39	16 32	25 26	5 33	5 16										
S 27	18 23	21 21	1 13	23 3	1 11	22 2	1 26	4 6	0 37	19 53	0 37	17 19	0 57	11 52	0 44	20 30	0 21	18 32	4 57	16 39	16 31	25 24	5 32	5 16										
M28	18 7	24 53	2 22	22 54	1 16	22 6	1 23	3 47	0 36	19 53	0 37	17 17	0 57	11 51	0 44	20 30	0 21	18 32	4 56	16 38	16 30	25 23	5 31	5 16										
T 29	17 51	26 53	3 24	22 44	1 22	22 8	1 20	3 28	0 35	19 53	0 37	17 15	0 57	11 50	0 44	20 29	0 21	18 32	4 56	16 37	16 29	25 22	5 30	5 15										
W30	17 34	27 1	4 14	22 33	1 27	22 10	1 17	3 9	0 35	19 54	0 37	17 13	0 58	11 49	0 44	20 29	0 21	18 33	4 56	16 34	16 28	25 21	5 29	5 15										
T 31	17s17	25s 8	4s47	22s20	1s32	22s12	1n14	2s50	0s34	19n54	0s37	17s11	0s58	11s48	0s44	20s28	0n21	18n33	4s56	16n31	16n27	25n20	5s28	5n15										

ASTRODIENST EPHEMERIS for the year 1669

geocentric

FEBRUARY 1669 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	8 46 41	12 ²² 47'00	14 ²² 5	28 ²² 32	5 ²² 16	24 ²² 55	1 ²² 31	15 ²² 29	1 ²² 8	26 ²² 54	29 ²² R 0	15 ²² R21	15 ²² 815	28 ²² 33	3 ²² 14	F 1	
S 2	8 50 38	13°47'49	29°19	29°57	6°28	25°40	1°33	15°36	1°11	26°57	28 ²² II59	15 ²² 8 9	15°11	28°40	3°18	S 2	
S 3	8 54 34	14°48'36	14 ²² 17	1 ²² 32	7°41	26°26	1°34	15°43	1°14	26°59	28°58	14°58	15° 8	28°47	3°22	S 3	
M 4	8 58 31	15°49'22	28°49	3° 8	8°54	27°11	1°36	15°50	1°18	27° 1	28°57	14°50	15° 5	28°53	3°26	M 4	
T 5	9 2 27	16°50'06	12 ²² Y52	4°45	10° 7	27°57	1°38	15°57	1°21	27° 3	28°56	14°45	15° 2	29° 0	3°29	T 5	
W 6	9 6 24	17°50'49	26°25	6°23	11°19	28°42	1°41	16° 5	1°24	27° 5	28°56	14°42	14°59	29° 7	3°33	W 6	
T 7	9 10 21	18°51'30	9 ²² 30	8° 1	12°32	29°27	1°43	16°12	1°28	27° 7	28°55	14°42	14°55	29°14	3°37	T 7	
F 8	9 14 17	19°52'09	22°10	9°41	13°45	0 ²² Y12	1°46	16°19	1°31	27°10	28°54	14°42	14°52	29°20	3°41	F 8	
S 9	9 18 14	20°52'46	4 ²² II30	11°21	14°58	0°57	1°49	16°26	1°34	27°12	28°53	14°41	14°49	29°27	3°45	S 9	
S 10	9 22 10	21°53'22	16°37	13° 2	16°11	1°43	1°52	16°33	1°38	27°14	28°53	14°39	14°46	29°34	3°49	S 10	
M11	9 26 7	22°53'56	28°33	14°44	17°24	2°28	1°55	16°41	1°41	27°16	28°52	14°34	14°43	29°40	3°53	M11	
T 12	9 30 3	23°54'29	10 ²² 25	16°27	18°37	3°13	1°58	16°48	1°45	27°18	28°52	14°27	14°40	29°47	3°57	T 12	
W13	9 34 0	24°55'00	22°16	18°10	19°50	3°58	2° 2	16°55	1°48	27°20	28°51	14°16	14°36	29°54	4° 1	W13	
T 14	9 37 56	25°55'28	4 ²² Ω 7	19°55	21° 3	4°43	2° 6	17° 2	1°52	27°22	28°50	14° 4	14°33	0 ²² Ω 1	4° 5	T 14	
F 15	9 41 53	26°55'56	16° 2	21°40	22°16	5°28	2°10	17° 9	1°55	27°24	28°50	13°50	14°30	0° 7	4° 9	F 15	
S 16	9 45 50	27°56'21	28° 2	23°27	23°29	6°12	2°14	17°16	1°59	27°26	28°49	13°35	14°27	0°14	4°13	S 16	
S 17	9 49 46	28°56'45	10 ²² η 8	25°14	24°42	6°57	2°18	17°23	2° 2	27°28	28°49	13°22	14°24	0°21	4°17	S 17	
M18	9 53 43	29°57'07	22°21	27° 3	25°55	7°42	2°23	17°31	2° 5	27°30	28°48	13°11	14°20	0°28	4°20	M18	
T 19	9 57 39	0 ²² Y57'28	4 ²² Ω 42	28°52	27° 9	8°27	2°27	17°38	2° 9	27°32	28°48	13° 2	14°17	0°34	4°24	T 19	
W20	10 1 36	1°57'47	17°12	0 ²² Y42	28°22	9°12	2°32	17°45	2°12	27°34	28°47	12°56	14°14	0°41	4°28	W20	
T 21	10 5 32	2°58'04	29°54	2°34	29°35	9°56	2°37	17°52	2°16	27°36	28°47	12°54	14°11	0°48	4°32	T 21	
F 22	10 9 29	3°58'20	12 ²² η 49	4°26	0 ²² Y48	10°41	2°43	17°59	2°19	27°38	28°46	12°D53	14° 8	0°54	4°36	F 22	
S 23	10 13 25	4°58'35	26° 2	6°19	2° 1	11°26	2°48	18° 6	2°23	27°40	28°46	12°53	14° 5	1° 1	4°40	S 23	
S 24	10 17 22	5°58'48	9 ²² Y35	8°12	3°15	12°10	2°54	18°13	2°26	27°42	28°45	12°R53	14° 1	1° 8	4°44	S 24	
M25	10 21 19	6°58'59	23°30	10° 7	4°28	12°55	2°59	18°20	2°30	27°44	28°45	12°52	13°58	1°15	4°48	M25	
T 26	10 25 15	7°59'10	7 ²² 347	12° 2	5°41	13°39	3° 5	18°27	2°33	27°46	28°45	12°49	13°55	1°21	4°52	T 26	
W27	10 29 12	8°59'18	22°26	13°58	6°55	14°24	3°11	18°34	2°36	27°48	28°44	12°43	13°52	1°28	4°56	W27	
T 28	10 33 8	9 ²² Y59'25	7 ²² Ω 20	15 ²² Y54	8 ²² 8	15 ²² Y 8	3 ²² II18	18 ²² Ω 41	2 ²² Y40	27 ²² Ω 49	28 ²² II44	12 ²² Y35	13 ²² Y49	1 ²² Ω 35	5 ²² Y 0	T 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
F 1	17s 0	21s25	5s 0	22s 6	1s36	22s12	1n11	2s32	0s33	19n55	0s36	17s 9	0s58	11s46	0s44	20s28	0n21	18n33	4s56	16n28	16n26	25n19	5s26	5n15							
S 2	16 43	16 16	4 51	21 50	1 41	22 12	1 7	2 13	0 32	19 55	0 36	17 7	0 58	11 45	0 44	20 28	0 21	18 33	4 56	16 25	16 25	25 18	5 25	5 15							
S 3	16 25	10 13	4 22	21 34	1 45	22 12	1 4	1 54	0 31	19 56	0 36	17 4	0 58	11 44	0 44	20 27	0 21	18 33	4 56	16 22	16 24	25 16	5 24	5 15							
M 4	16 7	3 47	3 37	21 15	1 49	22 10	1 1	1 35	0 31	19 56	0 36	17 2	0 58	11 43	0 44	20 27	0 21	18 33	4 56	16 19	16 23	25 15	5 23	5 14							
T 5	15 49	2n39	2 39	20 55	1 52	22 8	0 58	1 16	0 30	19 57	0 35	17 0	0 58	11 42	0 44	20 26	0 21	18 33	4 55	16 18	16 23	25 14	5 21	5 14							
W 6	15 31	8 44	1 35	20 34	1 55	22 6	0 54	0 58	0 29	19 58	0 35	16 58	0 58	11 40	0 43	20 26	0 21	18 34	4 55	16 17	16 22	25 13	5 20	5 14							
T 7	15 12	14 15	0 27	20 11	1 58	22 3	0 51	0 39	0 28	19 58	0 35	16 56	0 58	11 39	0 43	20 26	0 21	18 34	4 55	16 17	16 21	25 12	5 19	5 14							
F 8	14 53	18 59	0n39	19 47	2 0	21 59	0 48	0 20	0 27	19 59	0 35	16 54	0 58	11 38	0 43	20 25	0 21	18 34	4 55	16 17	16 20	25 10	5 18	5 14							
S 9	14 34	22 46	1 43	19 22	2 2	21 54	0 44	0 1	0 26	20 0	0 34	16 52	0 58	11 37	0 43	20 25	0 21	18 34	4 55	16 16	16 19	25 9	5 16	5 14							
S 10	14 14	25 28	2 40	18 54	2 3	21 49	0 41	0n17	0 26	20 1	0 34	16 50	0 58	11 35	0 43	20 24	0 21	18 34	4 55	16 16	16 18	25 8	5 15	5 14							
M11	13 55	26 58	3 29	18 26	2 5	21 43	0 38	0 36	0 25	20 2	0 34	16 48	0 58	11 34	0 43	20 24	0 21	18 34	4 55	16 14	16 17	25 7	5 14	5 14							
T 12	13 35	27 13	4 9	17 56	2 5	21 37	0 35	0 55	0 24	20 3	0 34	16 46	0 58	11 33	0 43	20 23	0 21	18 34	4 54	16 12	16 16	25 5	5 13	5 13							
W13	13 14	26 13	4 38	17 24	2 6	21 30	0 31	1 13	0 23	20 4	0 34	16 43	0 58	11 32	0 43	20 23	0 21	18 34	4 54	16 9	16 15	25 4	5 11	5 13							
T 14	12 54	24 2	4 55	16 51	2 6	21 22	0 28	1 32	0 22	20 5	0 33	16 41	0 59	11 31	0 43	20 23	0 21	18 35	4 54	16 5	16 14	25 3	5 10	5 13							
F 15	12 33	20 49	5 0	16 17	2 5	21 14	0 25	1 50	0 22	20 6	0 33	16 39	0 59	11 29	0 43	20 22	0 21	18 35	4 54	16 1	16 13	25 2	5 9	5 13							
S 16	12 13	16 43	4 51	15 41	2 4	21 5	0 21	2 9	0 21	20 7	0 33	16 37	0 59	11 28	0 43	20 22	0 21	18 35	4 54	15 57	16 12	25 0	5 7	5 13							
S 17	11 52	11 55	4 28	15 4	2 3	20 56	0 18	2 28	0 20	20 8	0 33	16 35	0 59	11 27	0 43	20 22	0 21	18 35	4 54	15 53	16 11	24 59	5 6	5 13							
M18	11 31	6 37	3 54	14 25	2 1	20 45	0 15	2 46	0 19	20 9	0 32	16 33	0 59	11 26	0 43	20 21	0 21	18 35	4 54	15 49	16 10	24 58	5 5	5 13							
T 19	11 9	1 0	3 8	13 45	1 59	20 35	0 12	3 4	0 19	20 10	0 32	16 31	0 59	11 24	0 43	20 21	0 21	18 35	4 53	15 47	16 9	24 57	5 3	5 13							
W20	10 48	4s44	2 12	13 3	1 56	20 23	0 9	3 23	0 18	20 11	0 32	16 29	0 59	11 23	0 43	20 20	0 21	18 36	4 53	15 45	16 8	24 55	5 2	5 13							
T 21	10 26	10 23	1 8	12 20	1 52	20 11	0 5	3 41	0 17	20 12	0 32	16 27	0 59	11 22	0 43	20 20	0 21	18 36	4 53	15 44	16 7	24 54	5 0	5 13							
F 22	10 4	15 43	0 0	11 35	1 49	19 59	0 2	3 59	0 16	20 13	0 32	16 25	0 59	11 21	0 43	20 20	0 21	18 36	4 53	15 44	16 7	24 53	4 59	5 13							
S 23	9 42	20 25	1s 9	10 49	1 44	19 46	0s 1	4 17	0 15	20 15	0 31	16 23	0 59	11 19	0 43	20 19	0 21	18 36	4 53	15 44	16 6	24 51	4 58	5 13							
S 24	9 20	24 11	2 17	10 2	1 39	19 32	0 4	4 36	0 15	20 16	0 31	16 20	0 59	11 18	0 43	20 19	0 21	18 36	4 53	15 44	16 5	24 50	4 56	5 13							
M25	8 58	26 37	3 18	9 14	1 33	19 18	0 7	4 54	0 14	20 17	0 31	16 18	1 0	11 17	0 43	20 18	0 21	18 36	4 52	15 44	16 4	24 49	4 55	5 13							
T 26	8 35	27 24	4 9	8 24	1 27	19 3	0 10	5 12	0 13	20 19	0 31	16 16	1 0	11 16	0 43	20 18	0 21	18 36	4 52	15 43	16 3	24 47	4 54	5 12							
W27	8 13	26 18	4 45	7 33	1 20	18 47	0 13	5 30	0 12	20 20	0 31	16 14	1 0	11 14	0 43	20 18	0 21	18 37	4 52	15 41	16 2	24 46	4 52	5 12							
T 28	7s50	23s20	5s 2	6s42	1s13	18s31	0s16	5n48	0s12	20n21	0s30	16s12	1s 0	11s13	0s43	20s17	0n21	18n37	4s52	15n39	16n 1	24n45	4s51	5n12							

ASTRODIENST EPHEMERIS for the year 1669

geocentric

MARCH 1669 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
F 1	10 37 5	10 ^h 59'30	22 ^m 22	17 ^h 50	9 ^m 21	15 ^h 52	3 ^h 24	18 ^m 47	2 ^h 43	27 ^m 51	28 ^h R44	12 ^h R26	13 ^h 846	1 ^h 241	5 ^h 4	F 1
S 2	10 41 1	11 ^h 59'34	7 ^m 24	19 ^h 47	10 ^m 35	16 ^h 37	3 ^h 30	18 ^m 54	2 ^h 47	27 ^m 53	28 ^h II44	12 ^h 816	13 ^h 42	1 ^h 48	5 ^h 8	S 2
S 3	10 44 58	12 ^h 59'35	22 ^m 14	21 ^h 43	11 ^h 48	17 ^h 21	3 ^h 37	19 ^h 1	2 ^h 50	27 ^m 55	28 ^h 43	12 ^h 7	13 ^h 39	1 ^h 55	5 ^h 12	S 3
M 4	10 48 54	13 ^h 59'34	6 ^m 46	23 ^h 39	13 ^h 2	18 ^h 5	3 ^h 44	19 ^h 8	2 ^h 54	27 ^m 56	28 ^h 43	12 ^h 0	13 ^h 36	2 ^h 2	5 ^h 16	M 4
T 5	10 52 51	14 ^h 59'32	20 ^m 52	25 ^h 34	14 ^h 15	18 ^h 49	3 ^h 51	19 ^h 15	2 ^h 57	27 ^m 58	28 ^h 43	11 ^h 56	13 ^h 33	2 ^h 8	5 ^h 20	T 5
W 6	10 56 48	15 ^h 59'27	4 ^m 31	27 ^h 28	15 ^h 29	19 ^h 34	3 ^h 58	19 ^h 21	3 ^h 0	28 ^h 0	28 ^h 43	11 ^h 54	13 ^h 30	2 ^h 15	5 ^h 24	W 6
T 7	11 0 44	16 ^h 59'20	17 ^m 42	29 ^h 21	16 ^h 42	20 ^h 18	4 ^h 5	19 ^h 28	3 ^h 4	28 ^h 1	28 ^h 43	11 ^h D54	13 ^h 26	2 ^h 22	5 ^h 28	T 7
F 8	11 4 41	17 ^h 59'11	0 ^m II28	1 ^h Y12	17 ^h 55	21 ^h 2	4 ^h 13	19 ^h 35	3 ^h 7	28 ^h 3	28 ^h 43	11 ^h 55	13 ^h 23	2 ^h 28	5 ^h 32	F 8
S 9	11 8 37	18 ^h 59'00	12 ^m 53	3 ^h 1	19 ^h 9	21 ^h 46	4 ^h 21	19 ^h 41	3 ^h 10	28 ^h 5	28 ^h 43	11 ^h 56	13 ^h 20	2 ^h 35	5 ^h 36	S 9
S 10	11 12 34	19 ^h 58'47	25 ^m 2	4 ^h 47	20 ^h 22	22 ^h 30	4 ^h 28	19 ^h 48	3 ^h 14	28 ^h 6	28 ^h 42	11 ^h R56	13 ^h 17	2 ^h 42	5 ^h 39	S 10
M 11	11 16 30	20 ^h 58'31	7 ^m 31	6 ^h 31	21 ^h 36	23 ^h 14	4 ^h 36	19 ^h 54	3 ^h 17	28 ^h 8	28 ^h 42	11 ^h 54	13 ^h 14	2 ^h 49	5 ^h 43	M 11
T 12	11 20 27	21 ^h 58'13	18 ^m 53	8 ^h 10	22 ^h 49	23 ^h 57	4 ^h 44	20 ^h 1	3 ^h 20	28 ^h 9	28 ^h D42	11 ^h 50	13 ^h 11	2 ^h 55	5 ^h 47	T 12
W 13	11 24 23	22 ^h 57'52	0 ^m II44	9 ^h 46	24 ^h 3	24 ^h 41	4 ^h 52	20 ^h 7	3 ^h 24	28 ^h 11	28 ^h 42	11 ^h 45	13 ^h 7	3 ^h 2	5 ^h 51	W 13
T 14	11 28 20	23 ^h 57'30	12 ^m 37	11 ^h 16	25 ^h 16	25 ^h 25	5 ^h 1	20 ^h 14	3 ^h 27	28 ^h 12	28 ^h 42	11 ^h 37	13 ^h 4	3 ^h 9	5 ^h 55	T 14
F 15	11 32 17	24 ^h 57'05	24 ^m 36	12 ^h 42	26 ^h 30	26 ^h 9	5 ^h 9	20 ^h 20	3 ^h 30	28 ^h 14	28 ^h 43	11 ^h 28	13 ^h 1	3 ^h 16	5 ^h 59	F 15
S 16	11 36 13	25 ^h 56'38	6 ^m II43	14 ^h 3	27 ^h 43	26 ^h 53	5 ^h 18	20 ^h 27	3 ^h 34	28 ^h 15	28 ^h 43	11 ^h 19	12 ^h 58	3 ^h 22	6 ^h 2	S 16
S 17	11 40 10	26 ^h 56'09	18 ^m 58	15 ^h 17	28 ^h 57	27 ^h 36	5 ^h 26	20 ^h 33	3 ^h 37	28 ^h 17	28 ^h 43	11 ^h 11	12 ^h 55	3 ^h 29	6 ^h 6	S 17
M 18	11 44 6	27 ^h 55'38	1 ^m 25	16 ^h 26	0 ^h X10	28 ^h 20	5 ^h 35	20 ^h 39	3 ^h 40	28 ^h 18	28 ^h 43	11 ^h 4	12 ^h 52	3 ^h 36	6 ^h 10	M 18
T 19	11 48 3	28 ^h 55'04	14 ^m 1	17 ^h 28	1 ^h 24	29 ^h 3	5 ^h 44	20 ^h 45	3 ^h 43	28 ^h 19	28 ^h 43	10 ^h 59	12 ^h 48	3 ^h 42	6 ^h 14	T 19
W 20	11 51 59	29 ^h 54'29	26 ^m 50	18 ^h 23	2 ^h 37	29 ^h 47	5 ^h 53	20 ^h 51	3 ^h 46	28 ^h 21	28 ^h 43	10 ^h 56	12 ^h 45	3 ^h 49	6 ^h 17	W 20
T 21	11 55 56	0 ^h Y53'52	9 ^m II49	19 ^h 11	3 ^h 51	0 ^h 830	6 ^h 2	20 ^h 58	3 ^h 50	28 ^h 22	28 ^h 43	10 ^h D55	12 ^h 42	3 ^h 56	6 ^h 21	T 21
F 22	11 59 52	1 ^h 53'13	23 ^m 2	19 ^h 52	5 ^h 4	1 ^h 14	6 ^h 12	21 ^h 4	3 ^h 53	28 ^h 23	28 ^h 44	10 ^h 56	12 ^h 39	4 ^h 3	6 ^h 25	F 22
S 23	12 3 49	2 ^h 52'32	6 ^m X27	20 ^h 25	6 ^h 18	1 ^h 57	6 ^h 21	21 ^h 10	3 ^h 56	28 ^h 25	28 ^h 44	10 ^h 57	12 ^h 36	4 ^h 9	6 ^h 28	S 23
S 24	12 7 46	3 ^h 51'50	20 ^m 6	20 ^h 51	7 ^h 31	2 ^h 40	6 ^h 30	21 ^h 16	3 ^h 59	28 ^h 26	28 ^h 44	10 ^h 58	12 ^h 32	4 ^h 16	6 ^h 32	S 24
M 25	12 11 42	4 ^h 51'06	4 ^m 31	21 ^h 9	8 ^h 45	3 ^h 24	6 ^h 40	21 ^h 22	4 ^h 2	28 ^h 27	28 ^h 44	10 ^h R59	12 ^h 29	4 ^h 23	6 ^h 36	M 25
T 26	12 15 39	5 ^h 50'20	18 ^m 8	21 ^h 20	9 ^h 58	4 ^h 7	6 ^h 50	21 ^h 27	4 ^h 5	28 ^h 28	28 ^h 45	10 ^h 58	12 ^h 26	4 ^h 29	6 ^h 39	T 26
W 27	12 19 35	6 ^h 49'32	2 ^m 29	21 ^h R24	11 ^h 12	4 ^h 50	7 ^h 0	21 ^h 33	4 ^h 8	28 ^h 29	28 ^h 45	10 ^h 56	12 ^h 23	4 ^h 36	6 ^h 43	W 27
T 28	12 23 32	7 ^h 48'43	17 ^m 0	21 ^h 21	12 ^h 25	5 ^h 33	7 ^h 10	21 ^h 39	4 ^h 11	28 ^h 30	28 ^h 45	10 ^h 53	12 ^h 20	4 ^h 43	6 ^h 46	T 28
F 29	12 27 28	8 ^h 47'51	1 ^h X36	21 ^h 11	13 ^h 39	6 ^h 16	7 ^h 20	21 ^h 45	4 ^h 14	28 ^h 31	28 ^h 46	10 ^h 48	12 ^h 17	4 ^h 50	6 ^h 50	F 29
S 30	12 31 25	9 ^h 46'58	16 ^m 11	20 ^h 54	14 ^h 53	6 ^h 59	7 ^h 30	21 ^h 50	4 ^h 17	28 ^h 32	28 ^h 46	10 ^h 43	12 ^h 13	4 ^h 56	6 ^h 53	S 30
S 31	12 35 21	10 ^h Y46'03	0 ^h Y39	20 ^h Y31	16 ^h X6	7 ^h 842	7 ^h II40	21 ^h 56	4 ^h X20	28 ^h 33	28 ^h II46	10 ^h 839	12 ^h 810	5 ^h 23	6 ^h X57	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	decl	lat
F 1	7s27	18s47	4s59	5s49	1s 5	18s15	0s19	6n 5	0s11	20n23	0s30	16s10	1s 0	11s12	0s43	20s17	0n21	18n37	4s52	15n36	16n 0	24n43	4s49	5n12			
S 2	7 5	13 4	4 35	4 55	0 56	17 58	0 22	6 23	0 10	20 24	0 30	16 8	1 0	11 11	0 43	20 17	0 21	18 37	4 52	15 33	15 59	24 42	4 48	5 12			
S 3	6 42	6 39	3 53	4 1	0 47	17 40	0 25	6 41	0 9	20 26	0 30	16 6	1 0	11 9	0 43	20 16	0 21	18 37	4 51	15 30	15 58	24 41	4 46	5 12			
M 4	6 19	0 0	2 56	3 6	0 37	17 22	0 27	6 58	0 9	20 27	0 30	16 4	1 0	11 8	0 43	20 16	0 21	18 37	4 51	15 28	15 57	24 39	4 45	5 12			
T 5	5 55	6n28	1 50	2 11	0 27	17 4	0 30	7 16	0 8	20 29	0 29	16 2	1 0	11 7	0 44	20 16	0 21	18 38	4 51	15 27	15 56	24 38	4 44	5 12			
W 6	5 32	12 26	0 39	1 15	0 16	16 45	0 33	7 33	0 7	20 30	0 29	16 0	1 0	11 6	0 44	20 15	0 21	18 38	4 51	15 26	15 55	24 36	4 42	5 12			
T 7	5 9	17 38	0n31	0 20	0 5	16 26	0 36	7 51	0 6	20 32	0 29	15 58	1 1	11 5	0 44	20 15	0 21	18 38	4 51	15 26	15 54	24 35	4 41	5 12			
F 8	4 45	21 53	1 38	0n35	0n 7	16 6	0 38	8 8	0 6	20 33	0 29	15 56	1 1	11 3	0 44	20 15	0 21	18 38	4 51	15 26	15 53	24 34	4 39	5 12			
S 9	4 22	25 0	2 38	1 30	0 19	15 45	0 41	8 25	0 5	20 35	0 29	15 54	1 1	11 2	0 44	20 14	0 21	18 38	4 50	15 27	15 52	24 32	4 38	5 12			
S 10	3 59	26 54	3 30	2 23	0 31	15 25	0 43	8 42	0 4	20 37	0 28	15 52	1 1	11 1	0 44	20 14	0 21	18 38	4 50	15 27	15 51	24 31	4 37	5 12			
M11	3 35	27 30	4 12	3 16	0 44	15 3	0 46	8 59	0 3	20 38	0 28	15 50	1 1	11 0	0 44	20 14	0 21	18 39	4 50	15 26	15 50	24 29	4 35	5 12			
T 12	3 11	26 49	4 43	4 7	0 57	14 42	0 48	9 16	0 3	20 40	0 28	15 48	1 1	110 59	0 44	20 13	0 21	18 39	4 50	15 25	15 49	24 28	4 34	5 12			
W13	2 48	24 56	5 1	4 57	1 10	14 20	0 51	9 33	0 2	20 42	0 28	15 46	1 1	110 57	0 44	20 13	0 21	18 39	4 50	15 23	15 48	24 26	4 32	5 12			
T 14	2 24	21 57	5 7	5 44	1 23	13 57	0 53	9 50	0 1	20 43	0 28	15 44	1 1	110 56	0 44	20 13	0 21	18 39	4 50	15 21	15 47	24 25	4 31	5 13			
F 15	2 1	18 2	4 59	6 29	1 35	13 34	0 55	10 6	0 1	20 45	0 27	15 42	1 1	110 55	0 44	20 13	0 21	18 39	4 49	15 18	15 47	24 24	4 29	5 13			
S 16	1 37	13 21	4 38	7 12	1 48	13 11	0 57	10 23	0n0	20 47	0 27	15 40	1 2	110 54	0 44	20 12	0 21	18 39	4 49	15 15	15 46	24 22	4 28	5 13			
S 17	1 13	8 6	4 3	7 53	2 0	12 48	0 59	10 39	0 1	20 48	0 27	15 39	1 2	110 53	0 44	20 12	0 21	18 40	4 49	15 13	15 45	24 21	4 27	5 13			
M18	0 50	2 27	3 17	8 30	2 12	12 24	1 2	10 55	0 2	20 50	0 27	15 37	1 2	110 52	0 44	20 12	0 21	18 40	4 49	15 11	15 44	24 19	4 25	5 13			
T 19	0 26	3s23	2 20	9 4	2 23	11 59	1 4	11 12	0 2	20 52	0 27	15 35	1 2	110 50	0 44	20 11	0 21	18 40	4 49	15 9	15 43	24 18	4 24	5 13			
W20	0 2	9 11	1 16	9 35	2 23	11 35	1 6	11 28	0 3	20 54	0 27	15 33	1 2	110 49	0 44	20 11	0 21	18 40	4 49	15 8	15 42	24 16	4 22	5 13			
T 21	0n21	14 42	0 6	10 2	2 43	11 10	1 7	11 44	0 4	20 55	0 26	15 31	1 2	110 48	0 44	20 11	0 21	18 40	4 48	15 8	15 41	24 15	4 21	5 13			
F 22	0 45	19 37	1s 5	10 26	2 52	10 45	1 9	11 59	0 4	20 57	0 26	15 29	1 2	110 47	0 44	20 11	0 21	18 40	4 48	15 8	15 40	24 13	4 20	5 13			
S 23	1 9	23 38	2 14	10 45	2 59	10 19	1 11	12 15	0 5	20 59	0 26	15 28	1 2	110 46	0 44	20 10	0 21	18 41	4 48	15 8	15 39	24 12	4 18	5 13			
S 24	1 32	26 23	3 17	11 1	3 6	9 53	1 13	12 31	0 6	21 1	0 26	15 26	1 3	110 45	0 44	20 10	0 21	18 41	4 48	15 9	15 38	24 10	4 17	5 13			
M25	1 56	27 34	4 9	11 14	3 12	9 27	1 14	12 46	0 6	21 2	0 26	15 24	1 3	110 44	0 44	20 10	0 21	18 41	4 48	15 9	15 37	24 9	4 14	5 13			
T 26	2 19	27 0	4 47	11 22	3 16	9 1	1 16	13 1	0 7	21 4	0 26	15 22	1 3	110 43	0 44	20 10	0 21	18 41	4 48	15 9	15 36	24 7	4 14	5 13			
W27	2 43	24 38	5 8	11 26	3 19	8 34	1 18	13 17	0 8	21 6	0 25	15 20	1 3	110 41	0 44	20 9	0 21	18 41	4 47	15 8	15 35	24 6	4 13	5 13			
T 28	3 6	20 41	5 10	11 26	3 20	8 8	1 19	13 32	0 8	21 8	0 25	15 19	1 3	110 40	0 44	20 9	0 21	18 41	4 47	15 7	15 34	24 4	4 11	5 13			
F 29	3 30	15 27	4 51	11 21	3 20	7 41	1 20	13 47	0 9	21 10	0 25	15 17	1 3	110 39	0 44	20 9	0 21	18 42	4 47	15 6	15 33	24 2	4 10	5 14			
S 30	3 53	9 22	4 14	11 14	3 18	7 13	1 22	14 1	0 10	21 12	0 25	15 15	1 3	110 38	0 44	20 9	0 21	18 42	4 47	15 4	15 32	24 1	4 8	5 14			
S 31	4n16	2s49	3s21	11n 2	3n14	6s46	1s23	14n16	0n10	21n13	0s25	15s14	1s 4	10s37	0s44	20s 9	0n21	18n42	4s47	15n 3	15n31	23n59	4s 7	5n14			

ASTRODIENST EPHEMERIS for the year 1669

geocentric

APRIL 1669 GC

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Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	12 39 18	11°45'05	14°45'53	20°R 3	17°42'20	8°25	7°11'51	22°28	1	4°23	28°34	28°47	10°R36	12°8 7	5°10	7°41 0	M 1
T 2	12 43 15	12°44'06	28°48	19°43'30	18°33	9° 8	8° 1	22° 7		4°26	28°35	28°47	10°R34	12° 4	5°17	7° 4	T 2
W 3	12 47 11	13°43'04	12°21	18°53	19°47	9°51	8°12	22°12		4°29	28°36	28°48	10°D34	12° 1	5°23	7° 7	W 3
T 4	12 51 8	14°42'01	25°31	18°13	21° 0	10°34	8°22	22°17		4°32	28°37	28°48	10°34	11°57	5°30	7°10	T 4
F 5	12 55 4	15°40'55	8°11'19	17°30	22°14	11°17	8°33	22°23		4°34	28°38	28°49	10°36	11°54	5°37	7°14	F 5
S 6	12 59 1	16°39'47	20°48	16°45	23°28	11°59	8°44	22°28		4°37	28°39	28°49	10°37	11°51	5°43	7°17	S 6
S 7	13 2 57	17°38'37	3°28 1	16° 0	24°41	12°42	8°55	22°33		4°40	28°40	28°50	10°39	11°48	5°50	7°20	S 7
M 8	13 6 54	18°37'25	15° 2	15°14	25°55	13°25	9° 6	22°38		4°43	28°40	28°51	10°R40	11°45	5°57	7°23	M 8
T 9	13 10 50	19°36'10	26°57	14°30	27° 8	14° 7	9°17	22°43		4°45	28°41	28°51	10°39	11°42	6° 4	7°26	T 9
W10	13 14 47	20°34'53	8°12'49	13°47	28°22	14°50	9°28	22°48		4°48	28°42	28°52	10°38	11°38	6°10	7°30	W10
T 11	13 18 44	21°33'34	20°45	13° 7	29°35	15°32	9°40	22°53		4°51	28°42	28°53	10°36	11°35	6°17	7°33	T 11
F 12	13 22 40	22°32'12	2°10'46	12°30	0°49'49	16°15	9°51	22°58		4°53	28°43	28°53	10°34	11°32	6°24	7°36	F 12
S 13	13 26 37	23°30'49	14°58	11°56	2° 2	16°57	10° 2	23° 2		4°56	28°44	28°54	10°31	11°29	6°30	7°39	S 13
S 14	13 30 33	24°29'23	27°22	11°26	3°16	17°39	10°14	23° 7		4°58	28°44	28°55	10°29	11°26	6°37	7°42	S 14
M15	13 34 30	25°27'55	10°21 1	11° 1	4°29	18°22	10°26	23°12		5° 1	28°45	28°55	10°27	11°23	6°44	7°45	M15
T 16	13 38 26	26°26'25	22°54	10°41	5°43	19° 4	10°37	23°16		5° 3	28°45	28°56	10°25	11°19	6°51	7°48	T 16
W17	13 42 23	27°24'53	6°11 4	10°25	6°57	19°46	10°49	23°21		5° 6	28°46	28°57	10°D25	11°16	6°57	7°50	W17
T 18	13 46 19	28°23'20	19°27	10°14	8°10	20°28	11° 1	23°25		5° 8	28°46	28°58	10°25	11°13	7° 4	7°53	T 18
F 19	13 50 16	29°21'44	3°21 4	10° 9	9°24	21°10	11°13	23°29		5°10	28°46	28°58	10°25	11°10	7°11	7°56	F 19
S 20	13 54 12	0°20'07	16°52	10°D 8	10°37	21°53	11°25	23°33		5°13	28°47	28°59	10°26	11° 7	7°18	7°59	S 20
S 21	13 58 9	1°18'29	0°35'50	10°12	11°51	22°35	11°37	23°38		5°15	28°47	29° 0	10°27	11° 3	7°24	8° 2	S 21
M22	14 2 6	2°16'49	14°56	10°22	13° 4	23°17	11°49	23°42		5°17	28°47	29° 1	10°28	11° 0	7°31	8° 4	M22
T 23	14 6 2	3°15'07	29° 7	10°35	14°18	23°59	12° 1	23°46		5°20	28°48	29° 2	10°R28	10°57	7°38	8° 7	T 23
W24	14 9 59	4°13'24	13°21	10°54	15°31	24°40	12°13	23°49		5°22	28°48	29° 3	10°28	10°54	7°44	8° 9	W24
T 25	14 13 55	5°11'39	27°36	11°17	16°45	25°22	12°26	23°53		5°24	28°48	29° 4	10°28	10°51	7°51	8°12	T 25
F 26	14 17 52	6° 9'53	11°48	11°45	17°58	26° 4	12°38	23°57		5°26	28°48	29° 5	10°27	10°48	7°58	8°15	F 26
S 27	14 21 48	7° 8'05	25°55	12°16	19°12	26°46	12°50	24° 1		5°28	28°48	29° 6	10°27	10°44	8° 5	8°17	S 27
S 28	14 25 45	8° 6'16	9°45'54	12°52	20°25	27°28	13° 3	24° 4		5°30	28°48	29° 7	10°26	10°41	8°11	8°19	S 28
M29	14 29 41	9° 4'25	23°41	13°32	21°39	28° 9	13°16	24° 8		5°32	28°48	29° 8	10°26	10°38	8°18	8°22	M29
T 30	14 33 38	10°8 2'32	7°14	14°45'15	22°49'53	28°51	13°11'28	24°11		5°34	28°R48	29°II 9	10°R26	10°R35	8°12'25	8°24	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	decl	lat
M 1	4n39	3n47	2s16	10n46	3n 9	6s18	1s24	14n31	0n11	21n15	0s25	15s12	1s 4	10s36	0s44	20s 8	0n21	18n42	4s47	15n 2	15n30	23n58	4s 6	5n14			
T 2	5 2	10 4	1 4	10 28	3 3	5 50	1 25	14 45	0 12	21 17	0 24	15 10	1 4	10 35	0 44	20 8	0 21	18 42	4 47	15 1	15 29	23 56	4 4	5 14			
W 3	5 25	15 44	0n10	10 6	2 54	5 22	1 26	14 59	0 12	21 19	0 24	15 9	1 4	10 34	0 44	20 8	0 21	18 42	4 46	15 1	15 28	23 55	4 3	5 14			
T 4	5 48	20 29	1 21	9 41	2 45	4 54	1 27	15 13	0 13	21 21	0 24	15 7	1 4	10 33	0 44	20 8	0 21	18 43	4 46	15 1	15 27	23 53	4 2	5 14			
F 5	6 11	24 9	2 27	9 15	2 34	4 26	1 28	15 27	0 14	21 23	0 24	15 6	1 4	10 32	0 44	20 8	0 21	18 43	4 46	15 2	15 26	23 51	4 0	5 14			
S 6	6 34	26 33	3 23	8 46	2 21	3 58	1 29	15 41	0 14	21 25	0 24	15 4	1 4	10 31	0 44	20 8	0 21	18 43	4 46	15 2	15 25	23 50	3 59	5 15			
S 7	6 56	27 36	4 9	8 16	2 8	3 29	1 30	15 55	0 15	21 26	0 24	15 2	1 5	10 30	0 44	20 7	0 21	18 43	4 46	15 3	15 24	23 48	3 58	5 15			
M 8	7 19	27 20	4 44	7 45	1 53	3 1	1 30	16 8	0 15	21 28	0 23	15 1	1 5	10 29	0 44	20 7	0 21	18 43	4 46	15 3	15 23	23 47	3 56	5 15			
T 9	7 41	25 48	5 6	7 14	1 38	2 32	1 31	16 22	0 16	21 30	0 23	14 59	1 5	10 28	0 44	20 7	0 21	18 43	4 45	15 3	15 22	23 45	3 55	5 15			
W10	8 3	23 8	5 14	6 42	1 22	2 3	1 31	16 35	0 17	21 32	0 23	14 58	1 5	10 27	0 44	20 7	0 21	18 44	4 45	15 3	15 21	23 43	3 54	5 15			
T 11	8 25	19 30	5 10	6 11	1 5	1 34	1 32	16 48	0 17	21 34	0 23	14 56	1 5	10 26	0 44	20 7	0 21	18 44	4 45	15 2	15 20	23 42	3 52	5 15			
F 12	8 47	15 2	4 51	5 42	0 49	1 5	1 32	17 1	0 18	21 36	0 23	14 55	1 5	10 25	0 44	20 7	0 21	18 44	4 45	15 1	15 19	23 40	3 51	5 15			
S 13	9 9	9 56	4 20	5 13	0 32	0 36	1 33	17 14	0 19	21 37	0 23	14 54	1 6	10 24	0 44	20 7	0 21	18 44	4 45	15 0	15 18	23 38	3 50	5 16			
S 14	9 30	4 21	3 36	4 46	0 15	0 7	1 33	17 26	0 19	21 39	0 23	14 52	1 6	10 24	0 44	20 6	0 21	18 44	4 45	15 0	15 17	23 37	3 49	5 16			
M15	9 52	1s31	2 40	4 21	0s 1	0n22	1 33	17 39	0 20	21 41	0 22	14 51	1 6	10 23	0 44	20 6	0 21	18 44	4 44	14 59	15 16	23 35	3 47	5 16			
T 16	10 13	7 27	1 35	3 58	0 17	0 51	1 33	17 51	0 20	21 43	0 22	14 50	1 6	10 22	0 44	20 6	0 21	18 44	4 44	14 58	15 15	23 33	3 46	5 16			
W17	10 34	13 11	0 24	3 38	0 33	1 20	1 33	18 3	0 21	21 45	0 22	14 48	1 6	10 21	0 44	20 6	0 21	18 45	4 44	14 58	15 14	23 32	3 45	5 16			
T 18	10 55	18 26	0s50	3 20	0 48	1 49	1 33	18 15	0 22	21 46	0 22	14 47	1 6	10 20	0 44	20 6	0 21	18 45	4 44	14 58	15 13	23 30	3 44	5 16			
F 19	11 16	22 48	2 2	3 4	1 2	2 18	1 33	18 27	0 22	21 48	0 22	14 46	1 7	10 19	0 44	20 6	0 21	18 45	4 44	14 59	15 12	23 28	3 43	5 17			
S 20	11 37	25 57	3 8	2 51	1 16	2 47	1 33	18 38	0 23	21 50	0 22	14 45	1 7	10 18	0 44	20 6	0 21	18 45	4 44	14 59	15 11	23 27	3 41	5 17			
S 21	11 57	27 33	4 4	2 41	1 29	3 16	1 33	18 50	0 23	21 52	0 22	14 43	1 7	10 18	0 44	20 6	0 21	18 45	4 44	14 59	15 10	23 25	3 40	5 17			
M22	12 17	27 23	4 46	2 34	1 41	3 45	1 33	19 1	0 24	21 54	0 21	14 42	1 7	10 17	0 45	20 6	0 21	18 45	4 43	14 59	15 9	23 23	3 39	5 17			
T 23	12 37	25 26	5 10	2 29	1 52	4 14	1 32	19 12	0 24	21 55	0 21	14 41	1 7	10 16	0 45	20 6	0 21	18 46	4 43	14 59	15 8	23 21	3 38	5 17			
W24	12 57	21 53	5 16	2 26	2 3	4 43	1 32	19 23	0 25	21 57	0 21	14 40	1 7	10 15	0 45	20 6	0 21	18 46	4 43	14 59	15 7	23 20	3 37	5 18			
T 25	13 17	17 4	5 3	2 26	2 13	5 11	1 31	19 33	0 26	21 59	0 21	14 39	1 8	10 14	0 45	20 6	0 21	18 46	4 43	14 59	15 6	23 18	3 36	5 18			
F 26	13 36	11 19	4 31	2 29	2 22	5 40	1 31	19 44	0 26	22 1	0 21	14 38	1 8	10 14	0 45	20 6	0 21	18 46	4 43	14 59	15 5	23 16	3 35	5 18			
S 27	13 55	5 1	3 42	2 33	2 30	6 8	1 30	19 54	0 27	22 2	0 21	14 37	1 8	10 13	0 45	20 6	0 21	18 46	4 43	14 59	15 4	23 14	3 33	5 18			
S 28	14 14	1n27	2 41	2 41	2 37	6 37	1 29	20 4	0 27	22 4	0 21	14 36	1 8	10 12	0 45	20 6	0 21	18 46	4 43	14 59	15 3	23 13	3 32	5 18			
M29	14 33	7 48	1 32	2 50	2 44	7 5	1 29	20 14	0 28	22 6	0 21	14 35	1 8	10 12	0 45	20 6	0 21	18 46	4 42	14 59	15 2	23 11	3 31	5 19			
T 30	14n51	13n40	0s18	3n 1	2s50	7n33	1s28	20n24	0n28	22n 7	0s20	14s34	1s 8	10s11	0s45	20s 6	0n21	18n47	4s42	14n59	15n 1	23n 9	3s30	5n19			

Julian Day Number = 2330740.5, Delta T = 30.22 sec
 Ecliptic obliquity = 23°29'04, Nutation = - 0°00'12, out-of-bounds declination in red
 Ayanamsha: Fagan/Bradley = 20°07'25, Lahiri = 19°14'25Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1669
geocentric

MAY 1669 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
W 1	14 37 35	11°08'38	20°31'31	15°02'24	24°06'29	29°33'13	13°41'24	24°14'24	5°36'28	28°48'29	10°10'10	10°26'10	10°32'10	8°31'10	8°26'10	W 1
T 2	14 41 31	11°58'42	3°30'11	15°52'25	25°20'00	0°11'14	13°53'24	24°18'24	5°38'28	28°34'48	29°11'10	10°26'10	10°29'10	8°38'10	8°29'10	T 2
F 3	14 45 28	12°56'45	16°13'16	16°45'26	26°33'05	0°56'14	14°06'24	24°21'24	5°39'28	28°48'29	29°12'10	10°26'10	10°25'10	8°45'10	8°31'10	F 3
S 4	14 49 24	13°54'46	28°39'17	17°42'27	27°47'13	1°37'14	14°19'24	24°24'24	5°41'28	28°48'29	29°13'10	10°26'10	10°22'10	8°52'10	8°33'10	S 4
S 5	14 53 21	14°52'44	10°52'18	18°42'29	29°00'21	2°18'14	14°32'24	24°27'24	5°43'28	28°48'29	29°14'10	10°25'10	10°19'10	8°58'10	8°35'10	S 5
M 6	14 57 17	15°50'42	22°55'19	19°45'08	0°14'30	3°00'14	14°45'24	24°30'24	5°45'28	28°48'29	29°15'10	10°25'10	10°16'10	9°05'10	8°37'10	M 6
T 7	15 1 14	16°48'37	4°50'20	20°50'12	1°27'34	3°41'14	14°58'24	24°32'24	5°46'28	28°48'29	29°16'10	10°24'10	10°13'10	9°12'10	8°39'10	T 7
W 8	15 5 10	17°46'30	16°43'21	21°59'24	2°41'15	4°23'15	15°11'24	24°35'24	5°48'28	28°48'29	29°17'10	10°24'10	10°09'10	9°19'10	8°41'10	W 8
T 9	15 9 7	18°44'22	28°39'23	23°10'35	3°54'15	5°04'15	15°24'24	24°38'24	5°49'28	28°47'29	29°18'10	10°24'10	10°06'10	9°25'10	8°43'10	T 9
F 10	15 13 4	19°42'12	10°41'20	24°23'58	5°08'15	5°45'15	15°37'24	24°40'24	5°51'28	28°47'29	29°20'10	10°25'10	10°03'10	9°32'10	8°45'10	F 10
S 11	15 17 0	20°40'00	22°54'25	25°40'06	6°21'06	6°26'15	15°50'24	24°43'24	5°52'28	28°47'29	29°21'10	10°26'10	10°00'10	9°39'10	8°46'10	S 11
S 12	15 20 57	21°37'46	5°22'26	26°58'07	7°35'07	7°07'16	16°03'24	24°45'24	5°54'28	28°46'29	29°22'10	10°27'10	9°57'10	9°45'10	8°48'10	S 12
M13	15 24 53	22°35'31	18°09'28	28°20'08	8°48'07	7°48'16	16°16'24	24°47'24	5°55'28	28°46'29	29°23'10	10°28'10	9°54'10	9°52'10	8°50'10	M13
T 14	15 28 50	23°33'15	1°15'29	29°43'10	10°02'08	8°29'16	16°29'24	24°49'24	5°56'28	28°46'29	29°24'10	10°28'10	9°50'10	9°59'10	8°51'10	T 14
W15	15 32 46	24°30'56	14°42'18	30°56'11	11°15'09	9°10'16	16°43'24	24°51'24	5°58'28	28°45'29	29°26'10	10°28'10	9°47'10	10°06'10	8°53'10	W15
T 16	15 36 43	25°28'37	28°29'23	31°29'12	12°29'08	9°51'16	16°56'24	24°53'24	5°59'28	28°45'29	29°27'10	10°28'10	9°44'10	10°12'10	8°55'10	T 16
F 17	15 40 39	26°26'16	12°32'49	4°09'13	13°42'10	10°32'17	17°09'24	24°55'24	6°00'28	28°44'29	29°28'10	10°26'10	9°41'10	10°19'10	8°56'10	F 17
S 18	15 44 36	27°23'54	26°49'54	5°42'14	14°56'11	11°13'17	17°23'24	24°57'24	6°01'28	28°44'29	29°29'10	10°24'10	9°38'10	10°26'10	8°57'10	S 18
S 19	15 48 33	28°21'31	11°31'07	7°17'16	16°09'11	11°54'17	17°36'24	24°58'24	6°02'28	28°43'29	29°31'10	10°22'10	9°35'10	10°33'10	8°59'10	S 19
M20	15 52 29	29°19'07	25°41'08	8°55'17	17°23'12	12°35'17	17°49'25	25°00'24	6°03'28	28°42'29	29°32'10	10°20'10	9°31'10	10°39'10	9°00'10	M20
T 21	15 56 26	0°11'16	10°33'06	10°35'18	18°36'13	13°15'18	18°03'25	25°02'24	6°04'28	28°42'29	29°33'10	10°18'10	9°28'10	10°46'10	9°01'10	T 21
W22	16 0 22	1°14'16	24°24'12	12°17'19	19°50'13	13°56'18	18°16'25	25°03'24	6°05'28	28°41'29	29°35'10	10°17'10	9°25'10	10°53'10	9°03'10	W22
T 23	16 4 19	2°11'50	8°34'14	14°02'21	21°03'14	14°37'18	18°30'25	25°04'24	6°06'28	28°40'29	29°36'10	10°17'10	9°22'10	10°59'10	9°04'10	T 23
F 24	16 8 15	3°09'22	22°32'15	15°49'22	22°17'15	15°18'18	18°43'25	25°05'24	6°07'28	28°40'29	29°37'10	10°18'10	9°19'10	11°06'10	9°05'10	F 24
S 25	16 12 12	4°06'53	6°19'17	17°38'23	23°30'15	15°58'18	18°57'25	25°06'24	6°08'28	28°39'29	29°39'10	10°19'10	9°15'10	11°13'10	9°06'10	S 25
S 26	16 16 9	5°04'24	19°52'19	19°30'24	24°44'16	16°39'19	19°10'25	25°07'24	6°09'28	28°38'29	29°40'10	10°21'10	9°12'10	11°20'10	9°07'10	S 26
M27	16 20 5	6°01'54	3°13'21	21°24'25	25°57'17	17°19'19	19°24'25	25°08'24	6°09'28	28°37'29	29°41'10	10°22'10	9°09'10	11°26'10	9°08'10	M27
T 28	16 24 2	6°59'23	16°22'23	23°19'27	27°11'18	18°00'19	19°38'25	25°09'24	6°10'28	28°37'29	29°43'10	10°22'10	9°06'10	11°33'10	9°09'10	T 28
W29	16 27 58	7°56'51	29°17'25	25°18'28	28°25'18	18°40'19	19°51'25	25°10'24	6°11'28	28°36'29	29°44'10	10°21'10	9°03'10	11°40'10	9°09'10	W29
T 30	16 31 55	8°54'18	12°00'27	27°18'29	29°38'19	19°21'20	20°05'25	25°10'24	6°11'28	28°35'29	29°45'10	10°18'10	9°00'10	11°47'10	9°10'10	T 30
F 31	16 35 51	9°51'44	24°31'29	29°20'20	0°11'52	20°11'20	20°11'19	25°11'11	6°12'28	28°34'29	29°47'10	10°18'10	8°56'10	11°53'10	9°11'10	F 31

Day	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
W 1	15n10	18n48	0n56	3n15	2s55	8n 1	1s27	20n34	0n29	22n 9	0s20	14s33	1s 9	10s10
T 2	15 27	22 56	2 4	3 30	2 59	8 29	1 26	20 43	0 29	22 11	0 20	14 32	1 9	10 10
F 3	15 45	25 51	3 5	3 47	3 2	8 56	1 25	20 52	0 30	22 12	0 20	14 31	1 9	10 9
S 4	16 3	27 25	3 56	4 7	3 5	9 24	1 24	21 1	0 30	22 14	0 20	14 30	1 9	10 8
S 5	16 20	27 37	4 36	4 27	3 7	9 51	1 23	21 10	0 31	22 16	0 20	14 29	1 9	10 8
M 6	16 37	26 30	5 2	4 50	3 8	10 18	1 22	21 19	0 32	22 17	0 20	14 28	1 10	10 7
T 7	16 53	24 11	5 15	5 14	3 9	10 45	1 20	21 27	0 32	22 19	0 20	14 28	1 10	10 7
W 8	17 10	20 51	5 15	5 39	3 9	11 11	1 19	21 35	0 33	22 20	0 19	14 27	1 10	10 6
T 9	17 26	16 40	5 1	6 6	3 8	11 37	1 18	21 44	0 33	22 22	0 19	14 26	1 10	10 6
F 10	17 42	11 47	4 34	6 34	3 7	12 3	1 16	21 51	0 34	22 23	0 19	14 26	1 10	10 5
S 11	17 57	6 24	3 54	7 4	3 5	12 29	1 15	21 59	0 34	22 25	0 19	14 25	1 10	10 5
S 12	18 12	0 39	3 2	7 35	3 2	12 54	1 13	22 7	0 35	22 26	0 19	14 24	1 11	10 4
M13	18 27	5s16	2 0	8 7	2 59	13 19	1 12	22 14	0 35	22 28	0 19	14 24	1 11	10 4
T 14	18 42	11 8	0 51	8 40	2 55	13 44	1 10	22 21	0 36	22 29	0 19	14 23	1 11	10 3
W15	18 56	16 39	0s23	9 14	2 51	14 9	1 9	22 28	0 36	22 31	0 19	14 23	1 11	10 3
T 16	19 10	21 27	1 38	9 49	2 46	14 33	1 7	22 34	0 37	22 32	0 18	14 22	1 11	10 2
F 17	19 24	25 7	2 48	10 25	2 40	14 57	1 5	22 41	0 37	22 34	0 18	14 22	1 12	10 2
S 18	19 37	27 15	3 48	11 1	2 34	15 20	1 4	22 47	0 38	22 35	0 18	14 21	1 12	10 1
S 19	19 50	27 35	4 35	11 39	2 28	15 43	1 2	22 53	0 38	22 36	0 18	14 21	1 12	10 1
M20	20 3	26 2	5 5	12 17	2 21	16 6	1 0	22 59	0 38	22 38	0 18	14 21	1 12	10 1
T 21	20 15	22 48	5 15	12 55	2 13	16 28	0 58	23 5	0 39	22 39	0 18	14 20	1 12	10 0
W22	20 27	18 12	5 5	13 34	2 5	16 50	0 56	23 10	0 39	22 40	0 18	14 20	1 13	10 0
T 23	20 38	12 39	4 37	14 14	1 57	17 11	0 54	23 15	0 40	22 42	0 18	14 20	1 13	10 0
F 24	20 50	6 32	3 53	14 53	1 48	17 32	0 52	23 20	0 40	22 43	0 18	14 20	1 13	10 0
S 25	21 1	0 11	2 56	15 33	1 38	17 53	0 50	23 25	0 41	22 44	0 17	14 20	1 13	9 59
S 26	21 11	6n 5	1 50	16 13	1 29	18 13	0 48	23 30	0 41	22 45	0 17	14 19	1 13	9 59
M27	21 21	12 0	0 39	16 52	1 19	18 32	0 46	23 34	0 42	22 46	0 17	14 19	1 14	9 59
T 28	21 31	17 17	0n33	17 32	1 9	18 51	0 44	23 38	0 42	22 48	0 17	14 19	1 14	9 59
W29	21 40	21 41	1 42	18 11	0 58	19 10	0 42	23 42	0 43	22 49	0 17	14 19	1 14	9 58
T 30	21 50	24 59	2 44	18 49	0 48	19 28	0 39	23 46	0 43	22 50	0 17	14 19	1 14	9 58
F 31	21n58	27n 0	3n38	19n27	0s37	19n46	0s37	23n50	0n43	22n51	0s17	14s19	1s14	9s58

Julian Day Number = 2330770.5, Delta T = 30.17 sec
Ecliptic obliquity = 23°29'03", Nutation = - 0°00'12", out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°07'29", Lahiri = 19°14'29"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1669
geocentric

JUNE 1669 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	16 39 48	10II49°10	6♌49	1II24	2II 5	20II41	20II32	25♏11	6♋12	28°R33	29II48	10°R 9	8♊53	12♌0	9♋12	S 1
S 2	16 43 44	11°46'34	18°58	3°29	3°19	21°22	20°46	25°12	6°12	28♌32	29°50	10♊4	8°50	12° 7	9°12	S 2
M 3	16 47 41	12°43'58	0♌58	5°37	4°32	22° 2	21° 0	25°12	6°13	28°31	29°51	9°58	8°47	12°13	9°13	M 3
T 4	16 51 38	13°41'20	12°52	7°45	5°46	22°42	21°13	25°R12	6°13	28°30	29°52	9°54	8°44	12°20	9°13	T 4
W 5	16 55 34	14°38'41	24°44	9°55	6°59	23°22	21°27	25°12	6°13	28°29	29°54	9°51	8°41	12°27	9°14	W 5
T 6	16 59 31	15°36'01	6♍38	12° 6	8°13	24° 3	21°41	25°12	6°14	28°28	29°55	9°49	8°37	12°34	9°14	T 6
F 7	17 3 27	16°33'20	18°39	14°17	9°27	24°43	21°55	25°12	6°14	28°27	29°57	9°D48	8°34	12°40	9°14	F 7
S 8	17 7 24	17°30'39	0♌50	16°29	10°40	25°23	22° 8	25°11	6°14	28°26	29°58	9°49	8°31	12°47	9°14	S 8
S 9	17 11 20	18°27'56	13°18	18°41	11°54	26° 3	22°22	25°11	6°14	28°25	29°59	9°50	8°28	12°54	9°15	S 9
M10	17 15 17	19°25'12	26° 5	20°53	13° 7	26°43	22°36	25°10	6°R14	28°23	0♌1	9°52	8°25	13° 0	9°15	M10
T 11	17 19 13	20°22'28	9♍17	23° 4	14°21	27°23	22°49	25°10	6°14	28°22	0° 2	9°R53	8°21	13° 7	9°15	T 11
W12	17 23 10	21°19'43	22°53	25°15	15°35	28° 3	23° 3	25° 9	6°14	28°21	0° 4	9°52	8°18	13°14	9°R15	W12
T 13	17 27 7	22°16'57	6♋55	27°25	16°48	28°43	23°17	25° 8	6°14	28°20	0° 5	9°49	8°15	13°21	9°15	T 13
F 14	17 31 3	23°14'11	21°20	29°34	18° 2	29°23	23°31	25° 7	6°14	28°19	0° 7	9°45	8°12	13°27	9°15	F 14
S 15	17 35 0	24°11'27	6♌2	1♌41	19°15	0♌3	23°44	25° 6	6°13	28°17	0° 8	9°39	8° 9	13°34	9°14	S 15
S 16	17 38 56	25° 8'37	20°53	3°47	20°29	0°42	23°58	25° 5	6°13	28°16	0°10	9°32	8° 6	13°41	9°14	S 16
M17	17 42 53	26° 5'50	5♏46	5°51	21°43	1°22	24°12	25° 4	6°13	28°15	0°11	9°26	8° 2	13°48	9°14	M17
T 18	17 46 49	27° 3'02	20°31	7°53	22°56	2° 2	24°26	25° 3	6°13	28°13	0°13	9°20	7°59	13°54	9°14	T 18
W19	17 50 46	28° 0'14	5♋4	9°54	24°10	2°42	24°39	25° 2	6°12	28°12	0°14	9°16	7°56	14° 1	9°13	W19
T 20	17 54 42	28°57'27	19°19	11°53	25°24	3°21	24°53	25° 0	6°12	28°11	0°16	9°14	7°53	14° 8	9°13	T 20
F 21	17 58 39	29°54'39	3♍14	13°49	26°37	4° 1	25° 7	24°59	6°11	28° 9	0°17	9°D14	7°50	14°14	9°12	F 21
S 22	18 2 36	0♌51'51	16°50	15°44	27°51	4°41	25°21	24°57	6°11	28° 8	0°19	9°15	7°47	14°21	9°12	S 22
S 23	18 6 32	1°49'03	0♊8	17°37	29° 5	5°20	25°34	24°55	6°10	28° 7	0°20	9°15	7°43	14°28	9°11	S 23
M24	18 10 29	2°46'15	13°10	19°27	0♌18	6° 0	25°48	24°53	6° 9	28° 5	0°22	9°R16	7°40	14°35	9°10	M24
T 25	18 14 25	3°43'28	25°58	21°15	1°32	6°39	26° 2	24°52	6° 9	28° 4	0°23	9°14	7°37	14°41	9°10	T 25
W26	18 18 22	4°40'41	8II34	23° 2	2°46	7°19	26°15	24°50	6° 8	28° 2	0°25	9°11	7°34	14°48	9° 9	W26
T 27	18 22 18	5°37'53	21° 0	24°46	3°59	7°58	26°29	24°48	6° 7	28° 1	0°26	9° 5	7°31	14°55	9° 8	T 27
F 28	18 26 15	6°35'06	3♌17	26°28	5°13	8°38	26°43	24°45	6° 6	27°59	0°27	8°56	7°27	15° 2	9° 7	F 28
S 29	18 30 11	7°32'19	15°26	28° 7	6°27	9°17	26°56	24°43	6° 6	27°58	0°29	8°46	7°24	15° 8	9° 6	S 29
S 30	18 34 8	8♌29'31	27♌28	29♌45	7♌41	9♌57	27II10	24♏41	6♋5	27♌56	0♌30	8♊35	7♌21	15♌15	9♋5	S 30

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	22n 7	27n39	4n21	20n 3	0s26	20n 3	0s35	23n53	0n44	22n52	0s17	14s19	1s15	9s58	0s46	20s 9	0n21	18n50	4s39	14n53	14n29	22n 9	3s 5	5n27			
S 2	22 14	26 56	4 51	20 39	0 15	20 19	0 33	23 56	0 44	22 53	0 17	14 19	1 15	9 58	0 46	20 9	0 21	18 50	4 39	14 52	14 28	22 7	3 5	5 27			
M 3	22 22	24 59	5 7	21 13	0 4	20 35	0 30	23 59	0 45	22 54	0 17	14 19	1 15	9 58	0 46	20 9	0 21	18 50	4 39	14 50	14 27	22 5	3 4	5 27			
T 4	22 29	21 56	5 11	21 45	0n 7	20 51	0 28	24 2	0 45	22 55	0 16	14 20	1 15	9 58	0 46	20 9	0 21	18 51	4 39	14 49	14 26	22 3	3 4	5 28			
W 5	22 36	18 1	5 1	22 16	0 17	21 6	0 26	24 5	0 46	22 56	0 16	14 20	1 15	9 58	0 46	20 10	0 21	18 51	4 38	14 48	14 25	22 1	3 4	5 28			
T 6	22 42	13 23	4 38	22 44	0 27	21 20	0 23	24 7	0 46	22 57	0 16	14 20	1 16	9 58	0 46	20 10	0 21	18 51	4 38	14 47	14 24	21 59	3 3	5 28			
F 7	22 48	8 13	4 3	23 11	0 37	21 34	0 21	24 9	0 46	22 58	0 16	14 20	1 16	9 58	0 46	20 10	0 21	18 51	4 38	14 47	14 23	21 57	3 3	5 28			
S 8	22 54	2 40	3 16	23 35	0 47	21 47	0 19	24 11	0 47	22 59	0 16	14 20	1 16	9 57	0 46	20 10	0 21	18 51	4 38	14 47	14 22	21 55	3 2	5 29			
S 9	22 59	3s 7	2 19	23 56	0 56	21 59	0 16	24 13	0 47	23 0	0 16	14 21	1 16	9 58	0 46	20 10	0 21	18 51	4 38	14 47	14 21	21 53	3 2	5 29			
M10	23 4	8 57	1 14	24 15	1 5	22 11	0 14	24 14	0 48	23 1	0 16	14 21	1 16	9 58	0 46	20 11	0 21	18 51	4 38	14 48	14 20	21 51	3 2	5 29			
T 11	23 8	14 34	0 3	24 31	1 13	22 22	0 12	24 16	0 48	23 2	0 16	14 22	1 17	9 58	0 46	20 11	0 21	18 51	4 38	14 48	14 19	21 49	3 2	5 29			
W12	23 12	19 39	1s10	24 44	1 20	22 33	0 9	24 17	0 48	23 2	0 16	14 22	1 17	9 58	0 46	20 11	0 21	18 51	4 38	14 48	14 18	21 47	3 1	5 30			
T 13	23 16	23 49	2 21	24 55	1 27	22 43	0 7	24 17	0 49	23 3	0 16	14 22	1 17	9 58	0 46	20 11	0 21	18 51	4 38	14 47	14 17	21 45	3 1	5 30			
F 14	23 19	26 37	3 25	25 2	1 33	22 52	0 4	24 18	0 49	23 4	0 15	14 23	1 17	9 58	0 46	20 12	0 21	18 51	4 38	14 46	14 16	21 43	3 1	5 30			
S 15	23 21	27 37	4 17	25 7	1 39	23 1	0 2	24 19	0 50	23 5	0 15	14 23	1 17	9 58	0 47	20 12	0 21	18 51	4 38	14 44	14 15	21 41	3 1	5 31			
S 16	23 24	26 40	4 52	25 9	1 44	23 9	0n 0	24 19	0 50	23 6	0 15	14 24	1 18	9 58	0 47	20 12	0 21	18 51	4 38	14 42	14 14	21 39	3 1	5 31			
M17	23 26	23 49	5 7	25 9	1 48	23 16	0 3	24 19	0 50	23 6	0 15	14 25	1 18	9 58	0 47	20 12	0 21	18 51	4 38	14 40	14 13	21 37	3 0	5 31			
T 18	23 27	19 26	5 2	25 5	1 51	23 23	0 5	24 19	0 51	23 7	0 15	14 25	1 18	9 58	0 47	20 13	0 21	18 51	4 38	14 38	14 12	21 35	3 0	5 31			
W19	23 28	13 58	4 37	25 0	1 53	23 29	0 7	24 18	0 51	23 8	0 15	14 26	1 18	9 59	0 47	20 13	0 21	18 52	4 37	14 37	14 11	21 33	3 0	5 32			
T 20	23 29	7 51	3 56	24 52	1 55	23 34	0 10	24 18	0 51	23 8	0 15	14 26	1 18	9 59	0 47	20 13	0 21	18 52	4 37	14 36	14 10	21 31	3 0	5 32			
F 21	23 29	1 29	3 1	24 41	1 56	23 39	0 12	24 17	0 52	23 9	0 15	14 27	1 18	9 59	0 47	20 14	0 21	18 52	4 37	14 36	14 9	21 29	3 0	5 32			
S 22	23 29	4n49	1 58	24 29	1 56	23 43	0 15	24 16	0 52	23 9	0 15	14 28	1 19	9 59	0 47	20 14	0 21	18 52	4 37	14 36	14 8	21 26	3 0	5 32			
S 23	23 28	10 47	0 49	24 14	1 56	23 46	0 17	24 15	0 53	23 10	0 15	14 29	1 19	9 59	0 47	20 14	0 21	18 52	4 37	14 36	14 7	21 24	3 0	5 33			
M24	23 27	16 9	0n21	23 58	1 55	23 48	0 19	24 14	0 53	23 11	0 14	14 29	1 19	10 0	0 47	20 14	0 21	18 52	4 37	14 36	14 6	21 22	3 0	5 33			
T 25	23 26	20 43	1 28	23 40	1 53	23 50	0 21	24 12	0 53	23 11	0 14	14 30	1 19	10 0	0 47	20 15	0 21	18 52	4 37	14 36	14 5	21 20	3 0	5 33			
W26	23 24	24 15	2 30	23 20	1 51	23 51	0 24	24 10	0 54	23 12	0 14	14 31	1 19	10 0	0 47	20 15	0 21	18 52	4 37	14 35	14 4	21 18	3 0	5 33			
T 27	23 22	26 34	3 24	22 59	1 48	23 51	0 26	24 8	0 54	23 12	0 14	14 32	1 20	10 1	0 47	20 15	0 21	18 52	4 37	14 33	14 3	21 16	3 0	5 34			
F 28	23 19	27 34	4 7	22 36	1 44	23 51	0 28	24 6	0 54	23 12	0 14	14 33	1 20	10 1	0 47	20 16	0 21	18 52	4 37	14 30	14 2	21 14	3 0	5 34			
S 29	23 16	27 12	4 39	22 12	1 40	23 50	0 31	24 4	0 55	23 13	0 14	14 34	1 20	10 1	0 47	20 16	0 21	18 52	4 37	14 27	14 0	21 12	3 0	5 34			
S 30	23n13	25n34	4n58	21n47	1n35	23n48	0n33	24n 1	0n55	23n13	0s14	14s35	1s20	10s 2	0s47	20s16	0n21	18n52	4s37	14n23	13n59	21n 9	3s 1	5n34			

ASTRODIENST EPHEMERIS for the year 1669
geocentric

JULY 1669 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	18 38 5	9 ²⁶ 44	9 ²⁶ 44	1 ²¹ 21	8 ⁵⁵ 54	10 ⁵³ 36	27 ¹¹ 23	24 ²⁴ R38	6 ¹⁸ R 4	27 ²⁷ R55	0 ⁵³ 32	8 ¹⁸ R24	7 ¹⁸ 18	15 ²² 22	9 ¹⁸ R 4	M 1
T 2	18 42 1	10 ²³ 56	21 ¹⁶ 16	2 ⁵⁴ 10	10 ⁸ 11	11 ¹⁵ 27	27 ³⁷ 37	24 ³⁶ 36	6 ³ 3	27 ⁵³ 53	0 ³³ 33	8 ¹⁴ 14	7 ¹⁵ 15	15 ²⁸ 28	9 ³ 3	T 2
W 3	18 45 58	11 ²¹ 09	3 ¹⁷ 7	4 ²⁵ 11	11 ⁵⁵ 27	11 ⁵⁵ 27	27 ⁵⁰ 50	24 ³³ 33	6 ² 2	27 ⁵² 52	0 ³⁵ 35	8 ⁶ 6	7 ¹² 12	15 ³⁵ 35	9 ² 2	W 3
T 4	18 49 54	12 ¹⁸ 21	14 ⁵⁹ 5	5 ⁵⁴ 12	12 ³⁶ 12	12 ³⁴ 28	28 ⁴ 4	24 ³¹ 31	6 ¹ 1	27 ⁵⁰ 50	0 ³⁶ 36	8 ⁰ 0	7 ⁸ 8	15 ⁴² 42	9 ¹ 1	T 4
F 5	18 53 51	13 ¹⁵ 33	26 ⁵⁸ 7	7 ²¹ 13	13 ⁵⁰ 13	13 ¹³ 28	28 ¹⁷ 17	24 ²⁸ 28	5 ⁵⁹ 27	27 ⁴⁹ 49	0 ³⁸ 38	7 ⁵⁷ 7	7 ⁵ 5	15 ⁴⁹ 49	9 ⁰ 0	F 5
S 6	18 57 47	14 ¹² 45	9 ²⁶ 44	8 ⁴⁶ 15	15 ³ 13	13 ⁵³ 28	28 ³¹ 31	24 ²⁵ 24	5 ⁵⁸ 27	27 ⁴⁷ 47	0 ³⁹ 39	7 ⁵⁵ 7	7 ² 2	15 ⁵⁵ 55	8 ⁵⁸ 8	S 6
S 7	19 1 44	15 ⁹ 57	21 ³¹ 10	10 ⁸ 16	16 ¹⁷ 14	14 ³² 28	28 ⁴⁴ 24	24 ²² 24	5 ⁵⁷ 27	27 ⁴⁶ 46	0 ⁴¹ 41	7 ⁵⁵ 7	6 ⁵⁹ 6	16 ² 2	8 ⁵⁷ 8	S 7
M 8	19 5 40	16 ⁷ 09	4 ¹⁵ 11	11 ²⁸ 17	17 ³¹ 15	15 ¹¹ 28	28 ⁵⁸ 24	24 ¹⁹ 24	5 ⁵⁶ 27	27 ⁴⁴ 44	0 ⁴² 42	7 ⁵⁶ 7	6 ⁵⁶ 6	16 ⁹ 9	8 ⁵⁵ 8	M 8
T 9	19 9 37	17 ⁴ 21	17 ²⁴ 12	12 ⁴⁶ 18	18 ⁴⁵ 15	15 ⁵⁰ 29	29 ¹¹ 24	24 ¹⁶ 24	5 ⁵⁵ 27	27 ⁴² 42	0 ⁴³ 43	7 ⁵⁵ 7	6 ⁵³ 6	16 ¹⁵ 15	8 ⁵⁴ 8	T 9
W10	19 13 34	18 ¹ 34	1 ¹⁷ 1	14 ¹ 14	19 ⁵⁹ 16	16 ²⁹ 29	29 ²⁴ 24	24 ¹³ 24	5 ⁵³ 27	27 ⁴¹ 41	0 ⁴⁵ 45	7 ⁵³ 7	6 ⁴⁹ 6	16 ²² 22	8 ⁵² 8	W10
T 11	19 17 30	18 ⁵⁸ 46	15 ⁷ 15	15 ¹⁴ 21	21 ¹² 17	17 ⁸ 29	29 ³⁸ 24	24 ¹⁰ 24	5 ⁵² 27	27 ³⁹ 39	0 ⁴⁶ 46	7 ⁴⁹ 7	6 ⁴⁶ 6	16 ²⁹ 29	8 ⁵¹ 8	T 11
F 12	19 21 27	19 ⁵⁵ 59	29 ⁴¹ 16	22 ²⁶ 17	17 ⁴⁷ 29	29 ⁵¹ 24	24 ⁶ 24	24 ⁶ 24	5 ⁵⁰ 27	27 ³⁸ 38	0 ⁴⁸ 48	7 ⁴² 7	6 ⁴³ 6	16 ³⁶ 36	8 ⁴⁹ 8	F 12
S 13	19 25 23	20 ⁵³ 12	14 ³⁷ 17	23 ⁴⁰ 18	26 ⁵ 24	26 ⁵ 24	24 ³ 24	24 ³ 24	5 ⁴⁹ 27	27 ³⁶ 36	0 ⁴⁹ 49	7 ³⁴ 7	6 ⁴⁰ 6	16 ⁴² 42	8 ⁴⁸ 8	S 13
S 14	19 29 20	21 ⁵⁰ 26	29 ⁴⁶ 18	23 ⁴⁰ 18	26 ⁵ 24	26 ⁵ 24	24 ³ 24	24 ³ 24	5 ⁴⁷ 27	27 ³⁴ 34	0 ⁵⁰ 50	7 ²⁴ 7	6 ³⁷ 6	16 ⁴⁹ 49	8 ⁴⁶ 8	S 14
M15	19 33 16	22 ⁴⁷ 40	14 ³⁷ 17	19 ⁴⁰ 26	26 ⁸ 19	19 ⁴⁴ 24	24 ³ 24	24 ³ 24	5 ⁴⁶ 27	27 ³³ 33	0 ⁵² 52	7 ¹³ 7	6 ³³ 6	16 ⁵⁶ 56	8 ⁴⁴ 8	M15
T 16	19 37 13	23 ⁴⁴ 54	0 ³ 5	20 ³⁹ 27	22 ² 20	22 ² 20	20 ²³ 20	20 ²³ 20	5 ⁴⁴ 27	27 ³¹ 31	0 ⁵³ 53	7 ⁵ 7	6 ³⁰ 6	17 ³ 3	8 ⁴² 8	T 16
W17	19 41 10	24 ⁴² 09	14 ⁵⁵ 21	21 ³⁶ 28	28 ³⁶ 21	21 ² 0	0 ⁵⁷ 23	23 ⁴⁹ 23	5 ⁴³ 27	27 ³⁰ 30	0 ⁵⁵ 55	6 ⁵⁸ 6	6 ²⁷ 6	17 ⁹ 9	8 ⁴¹ 8	W17
T 18	19 45 6	25 ³⁹ 25	29 ²¹ 22	22 ²⁹ 29	29 ⁵⁰ 21	21 ⁴¹ 10	10 ¹⁰ 23	23 ⁴⁶ 23	5 ⁴¹ 27	27 ²⁸ 28	0 ⁵⁶ 56	6 ⁵³ 6	6 ²⁴ 6	17 ¹⁶ 16	8 ³⁹ 8	T 18
F 19	19 49 3	26 ³⁶ 42	13 ²³ 19	16 ¹² 16	16 ¹² 16	16 ¹² 16	16 ¹² 16	16 ¹² 16	5 ⁴⁰ 27	27 ²⁶ 26	0 ⁵⁷ 57	6 ⁵¹ 6	6 ²¹ 6	17 ²³ 23	8 ³⁷ 8	F 19
S 20	19 52 59	27 ³⁴ 00	26 ⁵⁹ 24	24 ⁶ 22	22 ⁵⁹ 22	22 ⁵⁹ 22	22 ⁵⁹ 22	22 ⁵⁹ 22	5 ³⁸ 27	27 ²⁵ 25	0 ⁵⁹ 59	6 ⁵¹ 6	6 ¹⁸ 6	17 ²⁹ 29	8 ³⁵ 8	S 20
S 21	19 56 56	28 ³¹ 19	10 ¹¹ 24	24 ⁴⁹ 3	3 ³¹ 23	23 ³⁸ 1	1 ⁴⁹ 23	23 ³⁴ 23	5 ³⁶ 27	27 ²³ 23	1 ⁰ 21	6 ⁵¹ 6	6 ¹⁴ 6	17 ³⁶ 36	8 ³³ 8	S 21
M22	20 0 52	29 ²⁸ 39	23 ⁴ 25	25 ²⁹ 4	4 ⁴⁵ 24	24 ¹⁷ 2	2 ² 23	23 ³⁰ 23	5 ³⁴ 27	27 ²¹ 21	1 ¹ 21	6 ⁵⁰ 6	6 ¹¹ 6	17 ⁴³ 43	8 ³¹ 8	M22
T 23	20 4 49	0 ²⁶ 00	5 ¹¹ 40	26 ⁵ 5	5 ⁵⁹ 24	24 ⁵⁶ 2	2 ¹⁵ 23	23 ²⁶ 23	5 ³³ 27	27 ²⁰ 20	1 ³ 21	6 ⁴⁸ 6	6 ⁸ 6	17 ⁵⁰ 50	8 ²⁹ 8	T 23
W24	20 8 45	1 ²³ 22	18 ⁴ 26	26 ³⁶ 7	7 ¹³ 25	25 ³⁴ 2	2 ²⁷ 23	23 ²² 23	5 ³¹ 27	27 ¹⁸ 18	1 ⁴ 21	6 ⁴³ 6	6 ⁵ 6	17 ⁵⁶ 56	8 ²⁶ 8	W24
T 25	20 12 42	2 ²⁰ 45	0 ⁵⁷ 17	27 ⁴ 8	8 ²⁷ 26	26 ¹³ 2	2 ⁴⁰ 23	23 ¹⁸ 23	5 ²⁹ 27	27 ¹⁷ 17	1 ⁵ 21	6 ³⁵ 6	6 ² 6	18 ³ 3	8 ²⁴ 8	T 25
F 26	20 16 39	3 ¹⁸ 09	12 ²² 27	27 ²⁷ 9	9 ⁴¹ 26	26 ⁵² 2	2 ⁵³ 23	23 ¹⁴ 23	5 ²⁷ 27	27 ¹⁵ 15	1 ⁶ 21	6 ²⁴ 6	5 ⁵⁹ 5	18 ¹⁰ 10	8 ²² 8	F 26
S 27	20 20 35	4 ¹⁵ 34	24 ²² 27	27 ⁴⁶ 10	10 ⁵⁵ 27	27 ³¹ 3	3 ⁶ 23	23 ¹⁰ 23	5 ²⁵ 27	27 ¹³ 13	1 ⁸ 21	6 ¹¹ 6	5 ⁵⁵ 5	18 ¹⁶ 16	8 ²⁰ 8	S 27
S 28	20 24 32	5 ¹³ 00	6 ¹⁸ 28	28 ⁰ 12	12 ⁹ 28	28 ⁹ 28	3 ¹⁸ 3	23 ⁶ 23	5 ²³ 27	27 ¹² 12	1 ⁹ 21	5 ⁵⁷ 5	5 ⁵² 5	18 ²³ 23	8 ¹⁸ 8	S 28
M29	20 28 28	6 ¹⁰ 26	18 ¹⁰ 28	28 ⁹ 13	13 ²³ 28	28 ⁴⁸ 3	3 ³¹ 23	23 ² 23	5 ²¹ 27	27 ¹⁰ 10	1 ¹⁰ 21	5 ⁴³ 5	5 ⁴⁹ 5	18 ³⁰ 30	8 ¹⁵ 8	M29
T 30	20 32 25	7 ⁷ 54	0 ¹⁷ 2	28 ¹³ 14	14 ³⁷ 29	29 ²⁷ 3	3 ⁴³ 22	22 ⁵⁸ 2	5 ¹⁹ 27	27 ⁸ 8	1 ¹¹ 21	5 ³⁰ 5	5 ⁴⁶ 5	18 ³⁷ 37	8 ¹³ 8	T 30
W31	20 36 21	8 ¹² 52	11 ¹⁷ 53	28 ¹² 15	15 ¹² 15	15 ¹² 15	0 ¹² 5	3 ⁵⁶ 22	5 ¹⁷ 27	27 ⁷ 7	1 ¹² 21	5 ²⁰ 5	5 ⁴³ 5	18 ⁴³ 43	8 ¹⁰ 8	W31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
M 1	23n 9	22n48	5n 3	21n21	1n30	23n46	0n35	23n59	0n55	23n14	0s14	14s36	1s20	10s 2	0s47	20s16
T 2	23 5	19 6	4 56	20 54	1 24	23 43	0 37	23 56	0 56	23 14	0 14	14 37	1 21	10 3	0 47	20 17
W 3	23 0	14 39	4 35	20 27	1 17	23 39	0 39	23 53	0 56	23 14	0 14	14 38	1 21	10 3	0 47	20 17
T 4	22 55	9 39	4 3	19 58	1 10	23 34	0 41	23 49	0 56	23 15	0 14	14 39	1 21	10 3	0 47	20 17
F 5	22 49	4 16	3 20	19 29	1 3	23 29	0 43	23 46	0 57	23 15	0 13	14 40	1 21	10 4	0 47	20 18
S 6	22 43	1s22	2 27	18 59	0 55	23 23	0 45	23 42	0 57	23 15	0 13	14 41	1 21	10 4	0 47	20 18
S 7	22 37	7 4	1 26	18 29	0 47	23 16	0 47	23 38	0 57	23 15	0 13	14 42	1 21	10 5	0 47	20 18
M 8	22 31	12 39	0 20	17 59	0 38	23 9	0 49	23 34	0 58	23 16	0 13	14 43	1 22	10 5	0 47	20 19
T 9	22 23	17 52	0s50	17 28	0 29	23 1	0 51	23 30	0 58	23 16	0 13	14 44	1 22	10 6	0 47	20 19
W10	22 16	22 21	1 59	16 58	0 19	22 52	0 53	23 26	0 58	23 16	0 13	14 46	1 22	10 6	0 47	20 19
T 11	22 8	25 42	3 4	16 27	0 9	22 43	0 55	23 21	0 59	23 16	0 13	14 47	1 22	10 7	0 47	20 20
F 12	22 0	27 27	3 58	15 56	0s 1	22 33	0 57	23 16	0 59	23 16	0 13	14 48	1 22	10 7	0 47	20 20
S 13	21 51	27 17	4 38	15 25	0 12	22 22	0 59	23 11	0 59	23 16	0 13	14 49	1 22	10 8	0 48	20 20
S 14	21 43	25 6	4 58	14 55	0 23	22 11	1 0	23 6	0 59	23 16	0 13	14 51	1 23	10 8	0 48	20 21
M15	21 33	21 7	4 58	14 25	0 34	21 59	1 2	23 1	1 0	23 16	0 13	14 52	1 23	10 9	0 48	20 21
T 16	21 24	15 47	4 37	13 55	0 46	21 46	1 4	22 55	1 0	23 16	0 13	14 53	1 23	10 10	0 48	20 21
W17	21 13	9 37	3 58	13 26	0 57	21 33	1 5	22 50	1 0	23 16	0 12	14 55	1 23	10 10	0 48	20 22
T 18	21 3	3 4	3 4	12 57	1 10	21 19	1 7	22 44	1 1	23 16	0 12	14 56	1 23	10 11	0 48	20 22
F 19	20 52	3n26	2 1	12 29	1 22	21 4	1 8	22 38	1 1	23 16	0 12	14 57	1 23	10 12	0 48	20 22
S 20	20 41	9 36	0 52	12 2	1 34	20 49	1 10	22 32	1 1	23 16	0 12	14 59	1 23	10 12	0 48	20 23
S 21	20 30	15 11	0n18	11 36	1 47	20 33	1 11	22 25	1 1	23 16	0 12	15 0	1 24	10 13	0 48	20 23
M22	20 18	19 56	1 25	11 10	2 0	20 17	1 12	22 19	1 2	23 16	0 12	15 2	1 24	10 14	0 48	20 23
T 23	20 6	23 41	2 26	10 46	2 13	20 0	1 14	22 12	1 2	23 16	0 12	15 3	1 24	10 14	0 48	20 24
W24	19 53	26 15	3 19	10 23	2 25	19 42	1 15	22 5	1 2	23 16	0 12	15 4	1 24	10 15	0 48	20 24

ASTRODIENST EPHEMERIS for the year 1669
geocentric

AUGUST 1669 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	20 40 18	9♌ 2°52	23♍ 47	28°R 6	17♌ 5	0♌44	4♌ 8	22°R49	5°R15	27°R 5	1♌14	5°R12	5♊39	18♌50	8°R 8	T 1
F 2	20 44 14	10° 0'22	5♌46	27♌54	18°19	1°22	4°20	22♌45	5♊13	27♊ 4	1°15	5♊ 6	5°36	18°57	8♊ 6	F 2
S 3	20 48 11	10°57'53	17°55	27°37	19°33	2° 1	4°33	22°40	5°11	27° 2	1°16	5° 4	5°33	19° 4	8° 3	S 3
S 4	20 52 8	11°55'24	0♌18	27°15	20°47	2°40	4°45	22°36	5° 9	27° 1	1°17	5° 3	5°30	19°10	8° 1	S 4
M 5	20 56 4	12°52'57	12°59	26°47	22° 1	3°18	4°57	22°32	5° 7	26°59	1°19	5° 3	5°27	19°17	7°58	M 5
T 6	21 0 1	13°50'31	26° 3	26°15	23°16	3°57	5° 9	22°27	5° 4	26°57	1°20	5° 3	5°24	19°24	7°55	T 6
W 7	21 3 57	14°48'05	9♊34	25°38	24°30	4°35	5°21	22°23	5° 2	26°56	1°21	5° 1	5°20	19°30	7°53	W 7
T 8	21 7 54	15°45'41	23°34	24°57	25°44	5°14	5°33	22°18	5° 0	26°54	1°22	4°57	5°17	19°37	7°50	T 8
F 9	21 11 50	16°43'17	8♊ 4	24°12	26°58	5°52	5°45	22°14	4°58	26°53	1°23	4°50	5°14	19°44	7°48	F 9
S 10	21 15 47	17°40'55	22°59	23°25	28°12	6°31	5°57	22° 9	4°56	26°51	1°24	4°41	5°11	19°51	7°45	S 10
S 11	21 19 43	18°38'33	8♌11	22°35	29°26	7° 9	6° 8	22° 5	4°53	26°50	1°25	4°31	5° 8	19°57	7°42	S 11
M12	21 23 40	19°36'13	23°32	21°44	0♍40	7°47	6°20	22° 0	4°51	26°48	1°26	4°21	5° 5	20° 4	7°39	M12
T 13	21 27 37	20°33'54	8♊48	20°52	1°54	8°26	6°32	21°56	4°49	26°47	1°27	4°12	5° 1	20°11	7°37	T 13
W14	21 31 33	21°31'37	23°50	20° 2	3° 8	9° 4	6°43	21°51	4°46	26°46	1°28	4° 5	4°58	20°17	7°34	W14
T 15	21 35 30	22°29'21	8♊29	19°13	4°22	9°42	6°55	21°47	4°44	26°44	1°29	4° 0	4°55	20°24	7°31	T 15
F 16	21 39 26	23°27'07	22°40	18°27	5°36	10°21	7° 6	21°42	4°42	26°43	1°30	3°58	4°52	20°31	7°28	F 16
S 17	21 43 23	24°24'54	6♊23	17°44	6°50	10°59	7°17	21°38	4°39	26°41	1°31	3°D57	4°49	20°38	7°26	S 17
S 18	21 47 19	25°22'43	19°39	17° 6	8° 5	11°37	7°28	21°33	4°37	26°40	1°32	3°R58	4°45	20°44	7°23	S 18
M19	21 51 16	26°20'34	2♌32	16°34	9°19	12°16	7°40	21°29	4°35	26°39	1°33	3°58	4°42	20°51	7°20	M19
T 20	21 55 12	27°18'27	15° 4	16° 8	10°33	12°54	7°51	21°24	4°32	26°37	1°34	3°56	4°39	20°58	7°17	T 20
W21	21 59 9	28°16'22	27°22	15°49	11°47	13°32	8° 2	21°20	4°30	26°36	1°35	3°53	4°36	21° 4	7°14	W21
T 22	22 3 6	29°14'18	9♌29	15°37	13° 1	14°10	8°12	21°15	4°28	26°35	1°36	3°46	4°33	21°11	7°11	T 22
F 23	22 7 2	0♍12'17	21°28	15°D33	14°15	14°49	8°23	21°11	4°25	26°33	1°37	3°38	4°30	21°18	7° 8	F 23
S 24	22 10 59	1°10'17	3♌22	15°37	15°29	15°27	8°34	21° 6	4°23	26°32	1°38	3°27	4°26	21°25	7° 6	S 24
S 25	22 14 55	2° 8'18	15°14	15°50	16°43	16° 5	8°44	21° 2	4°20	26°31	1°39	3°15	4°23	21°31	7° 3	S 25
M26	22 18 52	3° 6'21	27° 6	16°11	17°58	16°43	8°55	20°58	4°18	26°30	1°39	3° 4	4°20	21°38	7° 0	M26
T 27	22 22 48	4° 4'26	8♍58	16°40	19°12	17°21	9° 5	20°53	4°16	26°28	1°40	2°53	4°17	21°45	6°57	T 27
W28	22 26 45	5° 2'33	20°54	17°17	20°26	17°59	9°16	20°49	4°13	26°27	1°41	2°44	4°14	21°51	6°54	W28
T 29	22 30 41	6° 0'41	2♌53	18° 2	21°40	18°38	9°26	20°45	4°11	26°26	1°42	2°38	4°10	21°58	6°51	T 29
F 30	22 34 38	6°58'51	14°59	18°55	22°54	19°16	9°36	20°40	4° 8	26°25	1°42	2°34	4° 7	22° 5	6°48	F 30
S 31	22 38 35	7♍57'02	27♌14	19♌55	24♍ 8	19♌54	9♌46	20♌36	4♊ 6	26♊24	1♌43	2°D32	4♊ 4	22♌12	6♊45	S 31

Day	☉	☾		♊		♋		♌		♍		♎		♏		♐		♑		♒	♓	♈	♉	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	decl	decl	decl	lat
T 1	18n 2	5n31	3n19	8n23	4s 1	17n 3	1n23	21n 5	1n 4	23n14	0s11	15s16	1s25	10s21	0s48	20s27	0n21	18n52	4s37	13n17	13n26	19n58	3s16	5n40
F 2	17 46	0s 2	2 28	8 18	4 11	16 41	1 23	20 56	1 5	23 14	0 11	15 18	1 25	10 22	0 48	20 27	0 21	18 52	4 37	13 15	13 25	19 55	3 17	5 40
S 3	17 31	5 40	1 29	8 15	4 20	16 19	1 24	20 48	1 5	23 13	0 11	15 20	1 25	10 22	0 48	20 27	0 21	18 52	4 37	13 14	13 24	19 53	3 18	5 40
S 4	17 15	11 12	0 25	8 15	4 28	15 55	1 24	20 39	1 5	23 13	0 11	15 21	1 25	10 23	0 48	20 27	0 21	18 52	4 37	13 14	13 23	19 51	3 19	5 40
M 5	16 59	16 26	0s42	8 18	4 35	15 32	1 25	20 31	1 5	23 13	0 11	15 23	1 25	10 24	0 48	20 28	0 21	18 52	4 37	13 14	13 22	19 48	3 20	5 41
T 6	16 42	21 4	1 49	8 23	4 40	15 8	1 25	20 22	1 5	23 12	0 11	15 24	1 26	10 25	0 48	20 28	0 21	18 52	4 37	13 14	13 21	19 46	3 21	5 41
W 7	16 25	24 45	2 52	8 32	4 44	14 44	1 26	20 13	1 6	23 12	0 11	15 26	1 26	10 26	0 48	20 28	0 21	18 52	4 37	13 13	13 20	19 44	3 21	5 41
T 8	16 8	27 6	3 47	8 43	4 47	14 19	1 26	20 4	1 6	23 11	0 11	15 27	1 26	10 27	0 48	20 29	0 21	18 52	4 37	13 12	13 19	19 41	3 22	5 41
F 9	15 51	27 43	4 29	8 57	4 48	13 54	1 26	19 55	1 6	23 11	0 11	15 29	1 26	10 27	0 48	20 29	0 21	18 52	4 37	13 9	13 17	19 39	3 23	5 41
S 10	15 34	26 22	4 55	9 13	4 47	13 29	1 27	19 45	1 6	23 11	0 10	15 30	1 26	10 28	0 48	20 29	0 21	18 52	4 37	13 7	13 16	19 37	3 24	5 41
S 11	15 16	23 5	5 0	9 32	4 44	13 3	1 27	19 36	1 7	23 10	0 10	15 32	1 26	10 29	0 48	20 30	0 21	18 52	4 37	13 3	13 15	19 34	3 25	5 41
M12	14 58	18 10	4 45	9 53	4 39	12 37	1 27	19 26	1 7	23 10	0 10	15 33	1 26	10 30	0 48	20 30	0 21	18 52	4 37	13 0	13 14	19 32	3 26	5 41
T 13	14 40	12 7	4 8	10 15	4 33	12 10	1 27	19 16	1 7	23 9	0 10	15 35	1 26	10 31	0 48	20 30	0 20	18 52	4 37	12 57	13 13	19 29	3 27	5 41
W14	14 21	5 27	3 16	10 39	4 24	11 43	1 27	19 6	1 7	23 9	0 10	15 37	1 26	10 32	0 48	20 31	0 20	18 52	4 37	12 54	13 12	19 27	3 28	5 41
T 15	14 3	1n22	2 11	11 4	4 14	11 16	1 26	18 56	1 7	23 8	0 10	15 38	1 26	10 32	0 48	20 31	0 20	18 52	4 37	12 53	13 11	19 25	3 29	5 41
F 16	13 44	7 55	1 0	11 29	4 2	10 49	1 26	18 46	1 8	23 8	0 10	15 40	1 26	10 33	0 48	20 31	0 20	18 52	4 37	12 52	13 10	19 22	3 30	5 41
S 17	13 25	13 53	0n13	11 55	3 49	10 21	1 26	18 36	1 8	23 7	0 10	15 41	1 26	10 34	0 48	20 31	0 20	18 52	4 37	12 52	13 9	19 20	3 31	5 41
S 18	13 5	19 0	1 22	12 20	3 34	9 53	1 26	18 25	1 8	23 7	0 10	15 43	1 27	10 35	0 48	20 32	0 20	18 52	4 37	12 52	13 8	19 17	3 32	5 41
M19	12 46	23 5	2 26	12 45	3 18	9 25	1 25	18 15	1 8	23 6	0 10	15 44	1 27	10 36	0 48	20 32	0 20	18 52	4 37	12 52	13 7	19 15	3 33	5 41
T 20	12 26	25 58	3 20	13 9	3 1	8 56	1 25	18 4	1 8	23 6	0 10	15 46	1 27	10 37	0 48	20 32	0 20	18 51	4 37	12 51	13 6	19 13	3 34	5 41
W21	12 6	27 32	4 4	13 31	2 44	8 27	1 24	17 53	1 9	23 5	0 10	15 47	1 27	10 38	0 48	20 33	0 20	18 51	4 37	12 50	13 5	19 10	3 35	5 41
T 22	11 46	27 44	4 36	13 52	2 26	7 58	1 24	17 42	1 9	23 4	0 9	15 49	1 27	10 39	0 48	20 33	0 20	18 51	4 37	12 48	13 4	19 8	3 36	5 41
F 23	11 25	26 39	4 56	14 10	2 7	7 29	1 23	17 31	1 9	23 4	0 9	15 50	1 27	10 39	0 48	20 33	0 20	18 51	4 37	12 45	13 3	19 5	3 37	5 41
S 24	11 5	24 21	5 3	14 27	1 49	7 0	1 22	17 20	1 9	23 3	0 9	15 52	1 27	10 40	0 48	20 33	0 20	18 51	4 37	12 41	13 1	19 3	3 38	5 41
S 25	10 44	21 1	4 56	14 41	1 31	6 30	1 21	17 9	1 9	23 3	0 9	15 53	1 27	10 41	0 48	20 34	0 20	18 51	4 37	12 37	13 0	19 0	3 39	5 41
M26	10 23	16 50	4 37	14 52	1 13	6 0	1 20	16 58	1 10	23 2	0 9	15 55	1 27	10 42	0 48	20 34	0 20	18 51	4 37	12 33	12 59	18 58	3 41	5 41
T 27	10 2	12 1	4 6	15 0	0 55	5 30	1 20	16 46	1 10	23 1	0 9	15 56	1 27	10 43	0 48	20 34	0 20	18 51	4 37	12 30	12 58	18 55	3 42	5 41
W28	9 41	6 44	3 23	15 5	0 38	5 0	1 19	16 35	1 10	23 1	0 9	15 57	1 27	10 44	0 48	20 34	0 20	18 51	4 37	12 27	12 57	18 53	3 43	5 41
T 29	9 19	1 10	2 32	15 7	0 21	4 30	1 17	16 23	1 10	23 0	0 9	15 59	1 27	10 45	0 48	20 35	0 20	18 51	4 37	12 24	12 56	18 51	3 44	5 41
F 30	8 58	4s30	1 33	15 6	0 5	3 59	1 16	16 11	1 10	22 59	0 9	16 0	1 27	10 46	0 48	20 35	0 20	18 51	4 37	12 23	12 55	18 48	3 45	5 41
S 31	8n36	10s 4	0n28	15n 1	0n 9	3n29	1n15	15n59	1n10	22n59	0s 9	16s 2	1s27	10s46	0s48	20s35	0n20	18n51	4s38	12n23	12n54	18n46	3s46	5n41

ASTRODIENST EPHEMERIS for the year 1669

geocentric

SEPTEMBER 1669 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	22 42 31	8♍55'15	9♎42	21♊3	25♎22	20♊32	9♍56	20°R32	4°R 4	26°R23	1♍44	2♊32	4♊1	22♊18	6°R42	S 1
M 2	22 46 28	9°53'30	22°25	22°16	26°36	21°10	10° 5	20°28	4♋1	26°21	1°44	2°33	3°58	22°25	6♋39	M 2
T 3	22 50 24	10°51'46	5♌28	23°36	27°51	21°48	10°15	20°24	3°59	26°20	1°45	2°R34	3°55	22°32	6°36	T 3
W 4	22 54 21	11°50'03	18°53	25° 1	29° 5	22°26	10°25	20°20	3°57	26°19	1°46	2°34	3°51	22°38	6°34	W 4
T 5	22 58 17	12°48'23	2♌44	26°30	0♎19	23° 4	10°34	20°16	3°54	26°18	1°46	2°32	3°48	22°45	6°31	T 5
F 6	23 2 14	13°46'43	17° 2	28° 5	1°33	23°42	10°44	20°12	3°52	26°17	1°47	2°28	3°45	22°52	6°28	F 6
S 7	23 6 10	14°45'06	1♌43	29°43	2°47	24°20	10°53	20° 8	3°49	26°16	1°48	2°23	3°42	22°59	6°25	S 7
S 8	23 10 7	15°43'30	16°43	1♎24	4° 1	24°58	11° 2	20° 4	3°47	26°16	1°48	2°16	3°39	23° 5	6°22	S 8
M 9	23 14 4	16°41'55	1♋53	3° 8	5°15	25°36	11°11	20° 0	3°45	26°15	1°49	2° 9	3°36	23°12	6°19	M 9
T 10	23 18 0	17°40'22	17° 4	4°54	6°29	26°14	11°20	19°56	3°43	26°14	1°49	2° 3	3°32	23°19	6°16	T 10
W11	23 21 57	18°38'51	2♎6	6°42	7°43	26°52	11°28	19°53	3°40	26°13	1°50	1°58	3°29	23°25	6°14	W11
T 12	23 25 53	19°37'23	16°48	8°31	8°57	27°30	11°37	19°49	3°38	26°12	1°50	1°55	3°26	23°32	6°11	T 12
F 13	23 29 50	20°35'56	1♌7	10°22	10°11	28° 8	11°46	19°46	3°36	26°11	1°50	1°D54	3°23	23°39	6° 8	F 13
S 14	23 33 46	21°34'31	14°57	12°13	11°26	28°46	11°54	19°42	3°33	26°11	1°51	1°55	3°20	23°46	6° 5	S 14
S 15	23 37 43	22°33'09	28°20	14° 4	12°40	29°23	12° 2	19°39	3°31	26°10	1°51	1°56	3°16	23°52	6° 2	S 15
M16	23 41 39	23°31'49	11♎18	15°56	13°54	0♎1	12°10	19°35	3°29	26° 9	1°52	1°58	3°13	23°59	6° 0	M16
T 17	23 45 36	24°30'31	23°54	17°47	15° 8	0°39	12°18	19°32	3°27	26° 8	1°52	1°R58	3°10	24° 6	5°57	T 17
W18	23 49 33	25°29'16	6♌12	19°39	16°22	1°17	12°26	19°29	3°25	26° 8	1°52	1°58	3° 7	24°12	5°54	W18
T 19	23 53 29	26°28'02	18°17	21°30	17°36	1°55	12°34	19°26	3°22	26° 7	1°53	1°56	3° 4	24°19	5°52	T 19
F 20	23 57 26	27°26'51	0♎14	23°20	18°50	2°33	12°41	19°23	3°20	26° 7	1°53	1°52	3° 1	24°26	5°49	F 20
S 21	0 1 22	28°25'42	12° 6	25°10	20° 4	3°11	12°49	19°20	3°18	26° 6	1°53	1°47	2°57	24°33	5°46	S 21
S 22	0 5 19	29°24'36	23°57	26°59	21°18	3°48	12°56	19°17	3°16	26° 6	1°53	1°41	2°54	24°39	5°44	S 22
M23	0 9 15	0♎23'31	5♎50	28°48	22°32	4°26	13° 3	19°14	3°14	26° 5	1°54	1°35	2°51	24°46	5°41	M23
T 24	0 13 12	1°22'29	17°47	0♎36	23°46	5° 4	13°10	19°11	3°12	26° 5	1°54	1°30	2°48	24°53	5°39	T 24
W25	0 17 8	2°21'28	29°50	2°23	25° 0	5°42	13°17	19° 8	3°10	26° 4	1°54	1°26	2°45	24°59	5°36	W25
T 26	0 21 5	3°20'30	12♎0	4° 9	26°14	6°19	13°24	19° 6	3° 8	26° 4	1°54	1°23	2°42	25° 6	5°34	T 26
F 27	0 25 1	4°19'34	24°19	5°54	27°28	6°57	13°30	19° 3	3° 6	26° 3	1°54	1°21	2°38	25°13	5°31	F 27
S 28	0 28 58	5°18'40	6♎48	7°39	28°42	7°35	13°37	19° 1	3° 4	26° 3	1°54	1°D21	2°35	25°20	5°29	S 28
S 29	0 32 55	6°17'47	19°29	9°22	29°56	8°13	13°43	18°58	3° 2	26° 3	1°54	1°22	2°32	25°26	5°26	S 29
M30	0 36 51	7°16'57	2♎24	11♎5	1♎10	8♎50	13°49	18°56	3♋0	26°3	1°54	1♎23	2♎29	25°33	5♋24	M30

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	8n14	15s21	0s38	14n53	0n23	2n58	1n14	15n47	1n11	22n58	0s 9	16s 3	1s27	10s47	0s48	20s35	0n20	18n51	4s38	12n23	12n53	18n43	3s47	5n41	
M 2	7 52	20 6	1 45	14 41	0 36	2 28	1 13	15 35	1 11	22 58	0 9	16 4	1 27	10 48	0 48	20 35	0 20	18 51	4 38	12 23	12 52	18 41	3 48	5 41	
T 3	7 30	24 0	2 48	14 26	0 48	1 57	1 11	15 23	1 11	22 57	0 8	16 6	1 27	10 49	0 48	20 36	0 20	18 51	4 38	12 23	12 51	18 38	3 49	5 41	
W 4	7 8	26 43	3 43	14 8	0 59	1 26	1 10	15 11	1 11	22 56	0 8	16 7	1 27	10 50	0 48	20 36	0 20	18 51	4 38	12 23	12 50	18 36	3 51	5 41	
T 5	6 46	27 55	4 27	13 47	1 9	0 55	1 8	14 59	1 11	22 56	0 8	16 8	1 27	10 51	0 48	20 36	0 20	18 51	4 38	12 23	12 49	18 33	3 52	5 40	
F 6	6 23	27 18	4 57	13 22	1 17	0 24	1 7	14 46	1 11	22 55	0 8	16 10	1 27	10 52	0 48	20 36	0 20	18 51	4 38	12 21	12 47	18 31	3 53	5 40	
S 7	6 1	24 49	5 8	12 55	1 25	0s 7	1 5	14 34	1 12	22 54	0 8	16 11	1 27	10 52	0 48	20 36	0 20	18 51	4 38	12 19	12 46	18 28	3 54	5 40	
S 8	5 38	20 35	4 58	12 25	1 31	0 38	1 3	14 21	1 12	22 54	0 8	16 12	1 27	10 53	0 48	20 37	0 20	18 50	4 38	12 17	12 45	18 26	3 55	5 40	
M 9	5 16	14 59	4 28	11 53	1 37	1 9	1 2	14 8	1 12	22 53	0 8	16 13	1 27	10 54	0 48	20 37	0 20	18 50	4 38	12 15	12 44	18 23	3 56	5 40	
T 10	4 53	8 28	3 38	11 18	1 41	1 40	1 0	13 56	1 12	22 52	0 8	16 14	1 27	10 55	0 48	20 37	0 20	18 50	4 38	12 12	12 43	18 20	3 58	5 40	
W11	4 30	1 31	2 34	10 41	1 45	2 11	0 58	13 43	1 12	22 52	0 8	16 16	1 27	10 56	0 48	20 37	0 20	18 50	4 38	12 11	12 42	18 18	3 59	5 40	
T 12	4 7	5n22	1 21	10 3	1 47	2 42	0 56	13 30	1 12	22 51	0 8	16 17	1 27	10 57	0 48	20 37	0 20	18 50	4 38	12 10	12 41	18 15	4 0	5 40	
F 13	3 44	11 49	0 4	9 23	1 49	3 13	0 54	13 17	1 12	22 50	0 8	16 18	1 27	10 57	0 48	20 38	0 20	18 50	4 38	12 10	12 40	18 13	4 1	5 39	
S 14	3 21	17 28	1n10	8 41	1 50	3 44	0 52	13 4	1 13	22 50	0 7	16 19	1 27	10 58	0 48	20 38	0 20	18 50	4 38	12 10	12 39	18 10	4 2	5 39	
S 15	2 58	22 5	2 19	7 58	1 50	4 14	0 50	12 51	1 13	22 49	0 7	16 20	1 27	10 59	0 48	20 38	0 20	18 50	4 38	12 10	12 38	18 8	4 3	5 39	
M16	2 34	25 26	3 18	7 14	1 49	4 45	0 48	12 37	1 13	22 48	0 7	16 21	1 27	11 0	0 48	20 38	0 20	18 50	4 38	12 11	12 37	18 5	4 4	5 39	
T 17	2 11	27 26	4 5	6 30	1 48	5 16	0 46	12 24	1 13	22 48	0 7	16 22	1 27	11 1	0 48	20 38	0 20	18 50	4 38	12 11	12 36	18 3	4 6	5 39	
W18	1 48	28 0	4 40	5 44	1 46	5 46	0 44	12 11	1 13	22 47	0 7	16 23	1 27	11 1	0 48	20 38	0 20	18 50	4 38	12 11	12 34	18 0	4 7	5 39	
T 19	1 24	27 14	5 2	4 58	1 44	6 17	0 42	11 57	1 13	22 46	0 7	16 24	1 27	11 2	0 48	20 38	0 20	18 50	4 38	12 10	12 33	17 57	4 8	5 38	
F 20	1 1	25 12	5 11	4 12	1 41	6 47	0 39	11 44	1 13	22 46	0 7	16 25	1 27	11 3	0 48	20 39	0 20	18 50	4 39	12 9	12 32	17 55	4 9	5 38	
S 21	0 38	22 5	5 6	3 25	1 38	7 17	0 37	11 30	1 13	22 45	0 7	16 26	1 27	11 4	0 48	20 39	0 20	18 50	4 39	12 7	12 31	17 52	4 10	5 38	
S 22	0 14	18 5	4 48	2 38	1 34	7 47	0 35	11 16	1 14	22 45	0 7	16 27	1 27	11 4	0 48	20 39	0 20	18 50	4 39	12 5	12 30	17 50	4 11	5 38	
M23	0s 9	13 23	4 18	1 51	1 30	8 17	0 32	11 3	1 14	22 44	0 7	16 28	1 27	11 5	0 48	20 39	0 20	18 50	4 39	12 3	12 29	17 47	4 12	5 38	
T 24	0 33	8 9	3 36	1 4	1 25	8 47	0 30	10 49	1 14	22 43	0 7	16 29	1 27	11 6	0 48	20 39	0 20	18 50	4 39	12 1	12 28	17 45	4 14	5 37	
W25	0 56	2 34	2 44	0 17	1 20	9 16	0 27	10 35	1 14	22 43	0 6	16 29	1 27	11 6	0 48	20 39	0 20	18 49	4 39	12 0	12 27	17 42	4 15	5 37	
T 26	1 20	3s 9	1 44	0s30	1 15	9 46	0 25	10 21	1 14	22 42	0 6	16 30	1 27	11 7	0 48	20 39	0 20	18 49	4 39	11 58	12 26	17 39	4 16	5 37	
F 27	1 43	8 51	0 39	1 17	1 10	10 15	0 22	10 7	1 14	22 42	0 6	16 31	1 27	11 8	0 48	20 39	0 20	18 49	4 39	11 58	12 25	17 37	4 17	5 37	
S 28	2 7	14 17	0s30	2 4	1 4	10 43	0 20	9 53	1 14	22 41	0 6	16 32	1 27	11 9	0 48	20 39	0 20	18 49	4 39	11 58	12 24	17 34	4 18	5 37	
S 29	2 30	19 12	1 38	2 50	0 58	11 12	0 17	9 39	1 14	22 41	0 6	16 32	1 27	11 9	0 48	20 40	0 20	18 49	4 39	11 58	12 22	17 31	4 19	5 36	
M30	2s54	23s20	2s43	3s36	0n52	11s40	0n15	9n25	1n14	22n40	0s 6	16s33	1s27	11s10	0s48	20s40	0n20	18n49	4s39	11n59	12n21	17n29	4s20	5n36	

ASTRODIENST EPHEMERIS for the year 1669

OCTOBER 1669 GC

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	0 40 48	8♌16°08	15♌34	12♌47	2♌24	9♍28	13♎55	18°R54	2°R59	26°R 2	1♎54	1♏25	2♏26	25♏40	5°R22	T 1
W 2	0 44 44	9°15'22	29° 2	14°29	3°38	10° 6	14° 1	18♌52	2♋57	26♎2	1°R54	1°26	2°22	25°46	5♋19	W 2
T 3	0 48 41	10°14'37	12♌48	16° 9	4°52	10°43	14° 6	18°50	2°55	26° 2	1°54	1°R26	2°19	25°53	5°17	T 3
F 4	0 52 37	11°13'54	26°54	17°49	6° 6	11°21	14°12	18°48	2°53	26° 2	1°54	1°26	2°16	26° 0	5°15	F 4
S 5	0 56 34	12°13'12	11♌17	19°27	7°20	11°59	14°17	18°46	2°52	26° 2	1°54	1°24	2°13	26° 7	5°13	S 5
S 6	1 0 30	13°12'32	25°55	21° 6	8°34	12°36	14°22	18°45	2°50	26° 2	1°54	1°22	2°10	26°13	5°11	S 6
M 7	1 4 27	14°11'54	10♋43	22°43	9°48	13°14	14°27	18°43	2°48	26° 2	1°54	1°20	2° 7	26°20	5° 9	M 7
T 8	1 8 24	15°11'18	25°33	24°20	11° 2	13°52	14°32	18°41	2°47	26°D 2	1°54	1°18	2° 3	26°27	5° 7	T 8
W 9	1 12 20	16°10'44	10♍18	25°56	12°15	14°29	14°36	18°40	2°45	26° 2	1°54	1°16	2° 0	26°33	5° 5	W 9
T 10	1 16 17	17°10'12	24°50	27°31	13°29	15° 7	14°41	18°39	2°44	26° 2	1°54	1°D15	1°57	26°40	5° 3	T 10
F 11	1 20 13	18° 9'42	9♎ 4	29° 5	14°43	15°44	14°45	18°37	2°42	26° 2	1°53	1°15	1°54	26°47	5° 1	F 11
S 12	1 24 10	19° 9'14	22°55	0♌39	15°57	16°22	14°49	18°36	2°41	26° 2	1°53	1°16	1°51	26°54	4°59	S 12
S 13	1 28 6	20° 8'48	6♌22	2°13	17°11	16°59	14°53	18°35	2°39	26° 2	1°53	1°17	1°47	27° 0	4°57	S 13
M 14	1 32 3	21° 8'25	19°24	3°45	18°25	17°37	14°57	18°34	2°38	26° 2	1°53	1°18	1°44	27° 7	4°55	M 14
T 15	1 35 59	22° 8'04	2♎ 5	5°18	19°39	18°14	15° 0	18°34	2°37	26° 3	1°52	1°19	1°41	27°14	4°54	T 15
W 16	1 39 56	23° 7'45	14°27	6°49	20°52	18°52	15° 4	18°33	2°36	26° 3	1°52	1°19	1°38	27°20	4°52	W 16
T 17	1 43 53	24° 7'28	26°34	8°20	22° 6	19°29	15° 7	18°32	2°34	26° 3	1°52	1°R20	1°35	27°27	4°50	T 17
F 18	1 47 49	25° 7'14	8♏32	9°50	23°20	20° 7	15°10	18°32	2°33	26° 3	1°51	1°19	1°32	27°34	4°49	F 18
S 19	1 51 46	26° 7'02	20°24	11°20	24°34	20°44	15°13	18°31	2°32	26° 4	1°51	1°19	1°28	27°41	4°47	S 19
S 20	1 55 42	27° 6'52	2♍16	12°49	25°48	21°22	15°15	18°31	2°31	26° 4	1°51	1°18	1°25	27°47	4°46	S 20
M 21	1 59 39	28° 6'45	14°10	14°18	27° 1	21°59	15°18	18°31	2°30	26° 5	1°50	1°18	1°22	27°54	4°44	M 21
T 22	2 3 35	29° 6'39	26°12	15°46	28°15	22°37	15°20	18°31	2°29	26° 5	1°50	1°17	1°19	28° 1	4°43	T 22
W 23	2 7 32	0♌ 6'35	8♌23	17°13	29°29	23°14	15°22	18°D31	2°28	26° 6	1°49	1°17	1°16	28° 7	4°42	W 23
T 24	2 11 28	1° 6'34	20°45	18°40	0♎43	23°52	15°24	18°31	2°27	26° 6	1°49	1°D17	1°13	28°14	4°40	T 24
F 25	2 15 25	2° 6'34	3♌20	20° 6	1°56	24°29	15°25	18°31	2°26	26° 7	1°48	1°R17	1° 9	28°21	4°39	F 25
S 26	2 19 22	3° 6'37	16°10	21°31	3°10	25° 6	15°27	18°31	2°25	26° 7	1°48	1°17	1° 6	28°27	4°38	S 26
S 27	2 23 18	4° 6'41	29°13	22°56	4°24	25°44	15°28	18°32	2°25	26° 8	1°47	1°17	1° 3	28°34	4°37	S 27
M 28	2 27 15	5° 6'48	12♎29	24°19	5°37	26°21	15°29	18°32	2°24	26° 9	1°47	1°17	1° 0	28°41	4°36	M 28
T 29	2 31 11	6° 6'55	25°59	25°42	6°51	26°59	15°30	18°33	2°23	26° 9	1°46	1°16	0°57	28°48	4°35	T 29
W 30	2 35 8	7° 7'05	9♎41	27° 4	8° 5	27°36	15°31	18°34	2°23	26°10	1°45	1°15	0°53	28°54	4°34	W 30
T 31	2 39 4	8♌ 7'16	23♎33	28♌26	9♎18	28♍13	15♎31	18♌34	2♋22	26♎11	1♎45	1♏15	0♏50	29♌ 1	4♋33	T 31

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
T 1	3s17	26s21	3s40	4s22	0n46	12s 9	0n12	9n11	1n15	22n40	0s 6	16s34	1s27	11s10	0s48	20s40	0n20	18n49	4s39	11n59	12n20	17n26	4s21	5n36	
W 2	3 41	27 55	4 26	5 7	0 39	12 36	0 9	8 57	1 15	22 39	0 6	16 34	1 27	11 11	0 48	20 40	0 20	18 49	4 39	12 0	12 19	17 24	4 22	5 36	
T 3	4 4	27 49	4 59	5 52	0 33	13 4	0 7	8 43	1 15	22 39	0 6	16 35	1 27	11 12	0 48	20 40	0 19	18 49	4 39	12 0	12 18	17 21	4 23	5 35	
F 4	4 27	25 57	5 14	6 36	0 26	13 31	0 4	8 28	1 15	22 38	0 6	16 35	1 27	11 12	0 48	20 40	0 19	18 49	4 39	12 0	12 17	17 18	4 24	5 35	
S 5	4 50	22 23	5 10	7 20	0 20	13 58	0 1	8 14	1 15	22 38	0 5	16 36	1 27	11 13	0 48	20 40	0 19	18 49	4 39	11 59	12 16	17 16	4 25	5 35	
S 6	5 13	22 24	4 47	8 3	0 13	14 25	0s 2	8 0	1 15	22 37	0 5	16 36	1 27	11 13	0 48	20 40	0 19	18 49	4 39	11 58	12 15	17 13	4 26	5 34	
M 7	5 37	11 19	4 4	8 46	0 6	14 51	0 4	7 45	1 15	22 37	0 5	16 37	1 26	11 14	0 48	20 40	0 19	18 49	4 39	11 57	12 14	17 10	4 27	5 34	
T 8	6 0	4 36	3 5	9 28	0s 1	15 17	0 7	7 31	1 15	22 36	0 5	16 37	1 26	11 15	0 48	20 40	0 19	18 49	4 40	11 57	12 13	17 8	4 28	5 34	
W 9	6 23	2n21	1 53	10 9	0 8	15 42	0 10	7 16	1 15	22 36	0 5	16 38	1 26	11 15	0 48	20 40	0 19	18 49	4 40	11 56	12 12	17 5	4 29	5 34	
T10	6 45	9 5	0 35	10 50	0 15	16 7	0 13	7 2	1 15	22 36	0 5	16 38	1 26	11 16	0 48	20 40	0 19	18 49	4 40	11 56	12 10	17 2	4 30	5 33	
F11	7 8	15 13	0n43	11 30	0 22	16 32	0 16	6 47	1 15	22 35	0 5	16 38	1 26	11 16	0 48	20 40	0 19	18 49	4 40	11 56	12 9	17 0	4 31	5 33	
S12	7 31	20 25	1 57	12 10	0 28	16 56	0 18	6 33	1 15	22 35	0 5	16 39	1 26	11 17	0 48	20 40	0 19	18 49	4 40	11 56	12 8	16 57	4 32	5 33	
S13	7 53	24 24	3 2	12 49	0 35	17 20	0 21	6 18	1 15	22 34	0 5	16 39	1 26	11 17	0 48	20 40	0 19	18 49	4 40	11 57	12 7	16 54	4 33	5 32	
M14	8 16	26 59	3 56	13 27	0 42	17 43	0 24	6 4	1 16	22 34	0 5	16 39	1 26	11 18	0 48	20 40	0 19	18 48	4 40	11 57	12 6	16 52	4 34	5 32	
T15	8 38	28 5	4 37	14 5	0 49	18 6	0 27	5 49	1 16	22 34	0 4	16 39	1 26	11 18	0 47	20 40	0 19	18 48	4 40	11 57	12 5	16 49	4 35	5 32	
W16	9 0	27 43	5 3	14 41	0 56	18 29	0 30	5 34	1 16	22 34	0 4	16 39	1 26	11 18	0 47	20 40	0 19	18 48	4 40	11 57	12 4	16 46	4 36	5 32	
T17	9 22	26 3	5 16	15 17	1 2	18 51	0 32	5 20	1 16	22 33	0 4	16 40	1 26	11 19	0 47	20 40	0 19	18 48	4 40	11 57	12 3	16 43	4 37	5 31	
F18	9 44	23 13	5 14	15 53	1 9	19 13	0 35	5 5	1 16	22 33	0 4	16 40	1 26	11 19	0 47	20 40	0 19	18 48	4 40	11 57	12 2	16 41	4 38	5 31	
S19	10 6	19 26	5 0	16 27	1 15	19 34	0 38	4 50	1 16	22 33	0 4	16 40	1 26	11 20	0 47	20 40	0 19	18 48	4 40	11 57	12 1	16 38	4 38	5 31	
S20	10 28	14 55	4 32	17 1	1 22	19 54	0 41	4 35	1 16	22 33	0 4	16 40	1 26	11 20	0 47	20 40	0 19	18 48	4 40	11 57	11 59	16 35	4 39	5 30	
M21	10 49	9 49	3 53	17 33	1 28	20 14	0 44	4 21	1 16	22 33	0 4	16 40	1 26	11 20	0 47	20 40	0 19	18 48	4 40	11 57	11 58	16 33	4 40	5 30	
T22	11 11	4 18	3 3	18 5	1 34	20 34	0 46	4 6	1 16	22 32	0 4	16 40	1 25	11 21	0 47	20 40	0 19	18 48	4 40	11 57	11 57	16 30	4 41	5 30	
W23	11 32	1s26	2 4	18 36	1 40	20 53	0 49	3 51	1 16	22 32	0 4	16 40	1 25	11 21	0 47	20 40	0 19	18 48	4 40	11 57	11 56	16 27	4 42	5 29	
T24	11 53	7 13	0 58	19 6	1 46	21 11	0 52	3 36	1 16	22 32	0 3	16 40	1 25	11 21	0 47	20 39	0 19	18 48	4 40	11 57	11 55	16 24	4 42	5 29	
F25	12 14	12 50	0s11	19 35	1 51	21 29	0 55	3 22	1 16	22 32	0 3	16 39	1 25	11 22	0 47	20 39	0 19	18 48	4 40	11 57	11 54	16 22	4 43	5 29	
S26	12 34	18 0	1 22	20 3	1 57	21 46	0 57	3 7	1 16	22 32	0 3	16 39	1 25	11 22	0 47	20 39	0 19	18 48	4 40	11 57	11 53	16 19	4 44	5 28	
S27	12 55	22 26	2 29	20 30	2 2	22 3	1 0	2 52	1 16	22 32	0 3	16 39	1 25	11 22	0 47	20 39	0 19	18 48	4 40	11 57	11 52	16 16	4 45	5 28	
M28	13 15	25 47	3 29	20 56	2 7	22 19	1 3	2 37	1 16	22 32	0 3	16 39	1 25	11 22	0 47	20 39	0 19	18 48	4 40	11 56	11 51	16 13	4 45	5 28	
T29	13 35	27 44	4 19	21 21	2 12	22 34	1 5	2 22	1 16	22 32	0 3	16 39	1 25	11 23	0 47	20 39	0 19	18 48	4 40	11 56	11 49	16 11	4 46	5 27	
W30	13 55	28 2	4 55	21 45	2 16	22 39	1 8	2 7	1 16	22 32	0 3	16 38	1 25	11 23	0 47	20 39	0 19	18 48	4 41	11 56	11 48	16 8	4 47	5 27	
T31	14s14	26s35	5s14	22s 7	2s20	23s 3	1s11	1n52	1n16	22n32	0s 3	16s38	1s25	11s23	0s47	20s39	0n19	18n48	4s41	11n56	11n47	16n 5	4s47	5n27	

Julian Day Number = 2330923.5. Delta T = 29.90 sec

Ecliptic obliquity = $23^{\circ}29'04''$, Nutation = $-0^{\circ}00'10''$, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 20°07'50, Lahiri = 19°14'50Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1669
geocentric

NOVEMBER 1669 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	2 43 1	9♉ 7'29	7♊36	29♉46	10♊32	28♉50	15♊31	18♊35	2°R21	26♊12	1°R44	1°D15	0♊47	29♉ 8	4°R32	F 1
S 2	2 46 57	10° 7'43	21°48	1♊ 5	11°46	29°28	15°R31	18°36	2♊21	26°13	1♊43	1♊15	0°44	29°14	4♊31	S 2
S 3	2 50 54	11° 7'58	6♊ 5	2°22	12°59	0♊ 5	15°31	18°37	2°20	26°13	1°43	1°15	0°41	29°21	4°31	S 3
M 4	2 54 51	12° 8'15	20°26	3°39	14°13	0°42	15°31	18°39	2°20	26°14	1°42	1°16	0°38	29°28	4°30	M 4
T 5	2 58 47	13° 8'33	4♊48	4°53	15°26	1°19	15°30	18°40	2°20	26°15	1°41	1°17	0°34	29°35	4°29	T 5
W 6	3 2 44	14° 8'53	19° 5	6° 6	16°40	1°57	15°30	18°41	2°20	26°16	1°41	1°18	0°31	29°41	4°29	W 6
T 7	3 6 40	15° 9'15	3♊13	7°17	17°53	2°34	15°29	18°43	2°19	26°17	1°40	1°R18	0°28	29°48	4°28	T 7
F 8	3 10 37	16° 9'38	17° 9	8°26	19° 7	3°11	15°28	18°45	2°19	26°18	1°39	1°18	0°25	29°55	4°28	F 8
S 9	3 14 33	17°10'03	0♊49	9°32	20°20	3°48	15°26	18°46	2°19	26°19	1°38	1°16	0°22	0♊ 1	4°28	S 9
S 10	3 18 30	18°10'29	14°10	10°36	21°33	4°25	15°25	18°48	2°19	26°20	1°37	1°14	0°19	0° 8	4°27	S 10
M 11	3 22 26	19°10'58	27°11	11°36	22°47	5° 3	15°23	18°50	2°D19	26°21	1°37	1°12	0°15	0°15	4°27	M 11
T 12	3 26 23	20°11'28	9♊53	12°33	24° 0	5°40	15°21	18°52	2°19	26°23	1°36	1° 9	0°12	0°21	4°27	T 12
W 13	3 30 20	21°12'00	22°17	13°26	25°14	6°17	15°19	18°54	2°19	26°24	1°35	1° 6	0° 9	0°28	4°27	W 13
T 14	3 34 16	22°12'33	4♊27	14°14	26°27	6°54	15°17	18°57	2°19	26°25	1°34	1° 4	0° 6	0°35	4°D27	T 14
F 15	3 38 13	23°13'09	16°26	14°57	27°40	7°31	15°14	18°59	2°19	26°26	1°33	1° 3	0° 3	0°42	4°27	F 15
S 16	3 42 9	24°13'46	28°18	15°35	28°53	8° 8	15°11	19° 1	2°19	26°27	1°32	1°D 3	29°Y59	0°48	4°27	S 16
S 17	3 46 6	25°14'24	10♊10	16° 6	0♊ 7	8°45	15° 9	19° 4	2°20	26°29	1°31	1° 4	29°56	0°55	4°27	S 17
M 18	3 50 2	26°15'05	22° 5	16°29	1°20	9°22	15° 5	19° 6	2°20	26°30	1°30	1° 5	29°53	1° 2	4°27	M 18
T 19	3 53 59	27°15'47	4♊ 8	16°45	2°33	9°59	15° 2	19° 9	2°20	26°31	1°29	1° 7	29°50	1° 8	4°28	T 19
W 20	3 57 55	28°16'30	16°23	16°R52	3°46	10°36	14°59	19°12	2°21	26°33	1°28	1° 9	29°47	1°15	4°28	W 20
T 21	4 1 52	29°17'16	28°55	16°50	4°59	11°13	14°55	19°15	2°21	26°34	1°27	1°R 9	29°44	1°22	4°28	T 21
F 22	4 5 49	0♊18'02	11♉45	16°37	6°12	11°50	14°51	19°18	2°22	26°36	1°26	1° 9	29°40	1°29	4°29	F 22
S 23	4 9 45	1°18'51	24°54	16°13	7°26	12°27	14°47	19°21	2°23	26°37	1°25	1° 7	29°37	1°35	4°29	S 23
S 24	4 13 42	2°19'40	8♊22	15°39	8°39	13° 4	14°43	19°24	2°23	26°39	1°24	1° 3	29°34	1°42	4°30	S 24
M 25	4 17 38	3°20'31	22° 6	14°53	9°52	13°41	14°38	19°28	2°24	26°40	1°23	0°59	29°31	1°49	4°30	M 25
T 26	4 21 35	4°21'23	6♊ 4	13°58	11° 5	14°18	14°34	19°31	2°25	26°42	1°22	0°53	29°28	1°55	4°31	T 26
W 27	4 25 31	5°22'16	20°11	12°52	12°17	14°55	14°29	19°34	2°25	26°43	1°21	0°48	29°25	2° 2	4°32	W 27
T 28	4 29 28	6°23'09	4♊24	11°39	13°30	15°31	14°24	19°38	2°26	26°45	1°20	0°43	29°21	2° 9	4°32	T 28
F 29	4 33 25	7°24'04	18°37	10°20	14°43	16° 8	14°19	19°42	2°27	26°46	1°19	0°40	29°18	2°15	4°33	F 29
S 30	4 37 21	8♊24'59	2♊50	8♊58	15♊56	16♊45	14♊14	19♊45	2♊28	26♊48	1♊18	0°D39	29°Y15	2♊22	4♊34	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	14s34	23s28	5s15	22s29	2s24	23s16	1s13	1n38	1n16	22n32	0s 2	16s38	1s25	11s23	0s47	20s39	0n19	18n48	4s41	11n56	11n46	16n 2	4s48	5n26	
S 2	14 53	18 57	4 57	22 49	2 28	23 29	1 16	1 23	1 16	22 32	0 2	16 37	1 25	11 23	0 47	20 38	0 19	18 48	4 41	11 56	11 45	16 0	4 49	5 26	
S 3	15 12	13 19	4 20	23 8	2 31	23 41	1 18	1 8	1 16	22 33	0 2	16 37	1 25	11 23	0 47	20 38	0 19	18 48	4 41	11 56	11 44	15 57	4 49	5 25	
M 4	15 30	6 58	3 27	23 26	2 33	23 53	1 20	0 53	1 16	22 33	0 2	16 36	1 25	11 23	0 47	20 38	0 19	18 48	4 41	11 56	11 43	15 54	4 50	5 25	
T 5	15 49	0 15	2 22	23 42	2 36	24 4	1 23	0 38	1 16	22 33	0 2	16 36	1 24	11 23	0 47	20 38	0 19	18 48	4 41	11 57	11 42	15 51	4 50	5 25	
W 6	16 7	6n27	1 7	23 57	2 38	24 14	1 25	0 23	1 16	22 33	0 2	16 35	1 24	11 24	0 47	20 38	0 19	18 48	4 41	11 57	11 41	15 48	4 51	5 24	
T 7	16 25	12 47	0n11	24 11	2 39	24 23	1 28	0 9	1 16	22 33	0 2	16 35	1 24	11 24	0 47	20 38	0 19	18 48	4 41	11 57	11 39	15 46	4 51	5 24	
F 8	16 42	18 22	1 27	24 23	2 40	24 32	1 30	0s 6	1 16	22 34	0 2	16 34	1 24	11 24	0 47	20 37	0 19	18 48	4 41	11 57	11 38	15 43	4 52	5 24	
S 9	17 0	22 54	2 36	24 33	2 40	24 40	1 32	0 21	1 16	22 34	0 2	16 34	1 24	11 24	0 47	20 37	0 19	18 48	4 41	11 56	11 37	15 40	4 52	5 23	
S 10	17 16	26 6	3 35	24 42	2 39	24 47	1 34	0 36	1 16	22 34	0 1	16 33	1 24	11 24	0 47	20 37	0 19	18 48	4 41	11 56	11 36	15 37	4 53	5 23	
M11	17 33	27 49	4 21	24 50	2 38	24 53	1 36	0 51	1 16	22 34	0 1	16 32	1 24	11 24	0 47	20 37	0 19	18 48	4 41	11 55	11 35	15 34	4 53	5 23	
T 12	17 50	28 0	4 54	24 56	2 36	24 59	1 38	1 5	1 16	22 35	0 1	16 31	1 24	11 24	0 46	20 37	0 19	18 48	4 41	11 54	11 34	15 32	4 54	5 22	
W13	18 6	26 45	5 11	25 0	2 33	25 4	1 40	1 20	1 16	22 35	0 1	16 31	1 24	11 23	0 46	20 37	0 19	18 48	4 41	11 53	11 33	15 29	4 54	5 22	
T 14	18 21	24 16	5 14	25 2	2 30	25 8	1 42	1 35	1 16	22 36	0 1	16 30	1 24	11 23	0 46	20 36	0 19	18 48	4 41	11 52	11 32	15 26	4 54	5 21	
F 15	18 37	20 46	5 4	25 2	2 25	25 12	1 44	1 49	1 16	22 36	0 1	16 29	1 24	11 23	0 46	20 36	0 19	18 48	4 41	11 52	11 31	15 23	4 55	5 21	
S 16	18 52	16 27	4 40	25 0	2 19	25 15	1 46	2 4	1 16	22 36	0 1	16 28	1 24	11 23	0 46	20 36	0 19	18 48	4 41	11 52	11 29	15 20	4 55	5 21	
S 17	19 7	11 33	4 5	24 57	2 12	25 17	1 48	2 19	1 16	22 37	0 0	16 27	1 24	11 23	0 46	20 36	0 19	18 48	4 41	11 52	11 28	15 17	4 55	5 20	
M18	19 21	6 11	3 18	24 51	2 4	25 18	1 49	2 33	1 16	22 37	0 0	16 27	1 23	11 23	0 46	20 35	0 18	18 48	4 41	11 52	11 27	15 15	4 56	5 20	
T 19	19 35	0 33	2 23	24 43	1 54	25 19	1 51	2 48	1 16	22 38	0 0	16 26	1 23	11 23	0 46	20 35	0 18	18 48	4 41	11 53	11 26	15 12	4 56	5 20	
W20	19 49	5s13	1 20	24 33	1 43	25 18	1 53	3 2	1 16	22 38	0 0	16 25	1 23	11 23	0 46	20 35	0 18	18 48	4 41	11 54	11 25	15 9	4 56	5 19	
T 21	20 2	10 55	0 12	24 20	1 31	25 17	1 54	3 17	1 16	22 39	0n 0	16 24	1 23	11 22	0 46	20 35	0 18	18 48	4 41	11 54	11 24	15 6	4 56	5 19	
F 22	20 15	16 18	0s58	24 5	1 17	25 16	1 56	3 32	1 16	22 40	0 0	16 23	1 23	11 22	0 46	20 34	0 18	18 48	4 41	11 54	11 23	15 3	4 56	5 18	
S 23	20 28	21 4	2 6	23 47	1 1	25 13	1 57	3 46	1 16	22 40	0 0	16 22	1 23	11 22	0 46	20 34	0 18	18 48	4 41	11 53	11 22	15 0	4 57	5 18	
S 24	20 40	24 51	3 9	23 26	0 44	25 10	1 58	4 0	1 16	22 41	0 0	16 21	1 23	11 22	0 46	20 34	0 18	18 48	4 41	11 52	11 20	14 58	4 57	5 18	
M25	20 52	27 17	4 3	23 3	0 26	25 6	1 59	4 15	1 16	22 41	0 1	16 19	1 23	11 21	0 46	20 34	0 18	18 48	4 41	11 50	11 19	14 55	4 57	5 17	
T 26	21 3	28 3	4 42	22 38	0 6	25 1	2 0	4 29	1 16	22 42	0 1	16 18	1 23	11 21	0 46	20 33	0 18	18 48	4 41	11 48	11 18	14 52	4 57	5 17	
W27	21 14	27 0	5 6	22 10	0n14	24 56	2 2	4 44	1 15	22 43	0 1	16 17	1 23	11 21	0 46	20 33	0 18	18 48	4 41	11 46	11 17	14 49	4 57	5 17	
T 28	21 25	24 13	5 10	21 40	0 34	24 50	2 2	4 58	1 15	22 43	0 1	16 16	1 23	11 20	0 46	20 33	0 18	18 48	4 41	11 45	11 16	14 46	4 57	5 16	
F 29	21 35	19 57	4 56	21 9	0 54	24 43	2 3	5 12	1 15	22 44	0 1	16 15	1 23	11 20	0 46	20 33	0 18	18 48	4 41	11 44	11 15	14 43	4 57	5 16	
S 30	21s45	14s35	4s23	20s37	1n14	24s35	2s 4	5s26	1n15	22n45	0n 1	16s14	1s23	11s20	0s46	20s32	0n18	18n48	4s41	11n43	11n14	14n40	4s57	5n15	

ASTRODIENST EPHEMERIS for the year 1669
geocentric

DECEMBER 1669 GC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	4 41 18	9♂25'55	16♂58	7°R35	17♂9	17♂22	14°R 8	19♂49	2♂29	26♂50	1°R17	0♂39	29♂12	2♂29	4♂35	S 1
M 2	4 45 14	10°26'52	1♂0	6♂15	18°21	17°59	14♂3	19°53	2°30	26°51	1♂16	0°40	29°9	2°36	4°36	M 2
T 3	4 49 11	11°27'49	14°57	4°59	19°34	18°35	13°57	19°57	2°31	26°53	1°14	0°41	29°5	2°42	4°37	T 3
W 4	4 53 7	12°28'47	28°45	3°51	20°47	19°12	13°51	20°1	2°32	26°55	1°13	0°R42	29°2	2°49	4°38	W 4
T 5	4 57 4	13°29'46	12♂26	2°51	21°59	19°49	13°45	20°5	2°34	26°57	1°12	0°41	28°59	2°56	4°40	T 5
F 6	5 1 0	14°30'45	25°56	2°2	23°12	20°25	13°39	20°9	2°35	26°58	1°11	0°39	28°56	3°2	4°41	F 6
S 7	5 4 57	15°31'46	9♂14	1°24	24°24	21°2	13°33	20°14	2°36	27°0	1°10	0°34	28°53	3°9	4°42	S 7
S 8	5 8 54	16°32'47	22°20	0°57	25°37	21°38	13°26	20°18	2°37	27°2	1°9	0°27	28°50	3°16	4°44	S 8
M 9	5 12 50	17°33'49	5♂11	0°41	26°49	22°15	13°20	20°23	2°39	27°4	1°8	0°18	28°46	3°22	4°45	M 9
T 10	5 16 47	18°34'51	17°46	0°D36	28°1	22°52	13°13	20°27	2°40	27°6	1°6	0°9	28°43	3°29	4°46	T 10
W11	5 20 43	19°35'55	0♂8	0°41	29°13	23°28	13°6	20°32	2°42	27°8	1°5	29♂59	28°40	3°36	4°48	W11
T 12	5 24 40	20°36'59	12°16	0°55	0♂25	24°5	12°59	20°37	2°43	27°10	1°4	29°52	28°37	3°43	4°50	T 12
F 13	5 28 36	21°38'04	24°14	1°18	1°37	24°41	12°52	20°41	2°45	27°12	1°3	29°46	28°34	3°49	4°51	F 13
S 14	5 32 33	22°39'10	6♂6	1°48	2°49	25°17	12°45	20°46	2°46	27°13	1°2	29°42	28°31	3°56	4°53	S 14
S 15	5 36 29	23°40'17	17°56	2°26	4°1	25°54	12°38	20°51	2°48	27°15	1°0	29°40	28°27	4°3	4°55	S 15
M16	5 40 26	24°41'24	29°49	3°9	5°13	26°30	12°30	20°56	2°50	27°17	0°59	29°D40	28°24	4°9	4°56	M16
T 17	5 44 23	25°42'32	11♂51	3°58	6°25	27°7	12°23	21°1	2°52	27°19	0°58	29°41	28°21	4°16	4°58	T 17
W18	5 48 19	26°43'41	24°6	4°51	7°37	27°43	12°15	21°6	2°53	27°21	0°57	29°R42	28°18	4°23	5°0	W18
T 19	5 52 16	27°44'51	6♂39	5°49	8°48	28°19	12°8	21°12	2°55	27°23	0°56	29°41	28°15	4°29	5°2	T 19
F 20	5 56 12	28°46'01	19°36	6°50	10°0	28°56	12°0	21°17	2°57	27°25	0°54	29°39	28°11	4°36	5°4	F 20
S 21	6 0 9	29°47'11	2♂56	7°55	11°11	29°32	11°52	21°22	2°59	27°28	0°53	29°35	28°8	4°43	5°6	S 21
S 22	6 4 5	0♂48'23	16°42	9°3	12°22	0♂8	11°45	21°28	3°1	27°30	0°52	29°28	28°5	4°50	5°8	S 22
M23	6 8 2	1°49'34	0♂51	10°13	13°34	0°44	11°37	21°33	3°3	27°32	0°51	29°19	28°2	4°56	5°11	M23
T 24	6 11 58	2°50'46	15°17	11°26	14°45	1°20	11°29	21°39	3°5	27°34	0°49	29°8	27°59	5°3	5°13	T 24
W25	6 15 55	3°51'58	29°54	12°40	15°56	1°56	11°21	21°44	3°7	27°36	0°48	28°58	27°56	5°10	5°15	W25
T 26	6 19 52	4°53'10	14♂35	13°56	17°7	2°32	11°13	21°50	3°9	27°38	0°47	28°48	27°52	5°16	5°17	T 26
F 27	6 23 48	5°54'21	29°11	15°14	18°18	3°8	11°5	21°56	3°12	27°40	0°46	28°41	27°49	5°23	5°20	F 27
S 28	6 27 45	6°55'33	13♂38	16°33	19°29	3°44	10°57	22°2	3°14	27°42	0°45	28°36	27°46	5°30	5°22	S 28
S 29	6 31 41	7°56'44	27°52	17°54	20°39	4°20	10°49	22°7	3°16	27°45	0°43	28°34	27°43	5°36	5°25	S 29
M30	6 35 38	8°57'54	11♂50	19°16	21°50	4°56	10°40	22°13	3°18	27°47	0°42	28°D34	27°40	5°43	5°27	M30
T 31	6 39 34	9♂59'05	25♂34	20♂38	23♂0	5♂32	10♂32	22♂19	3♂21	27♂49	0♂41	28°R34	27♂37	5♂50	5♂30	T 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat
S 1	21s54	8s27	3s35	20s 5	1n33	24s27	2s 5	5s40	1n15	22n45	0n 1	16s12	1s23	11s19	0s46	20s32
M 2	22 3	1 57	2 34	19 35	1 50	24 18	2 5	5 54	1 15	22 46	0 2	16 11	1 23	11 19	0 46	20 32
T 3	22 12	4n36	1 24	19 7	2 5	24 8	2 6	6 9	1 15	22 47	0 2	16 10	1 22	11 18	0 46	20 31
W 4	22 20	10 53	0 11	18 42	2 18	23 57	2 6	6 23	1 15	22 48	0 2	16 8	1 22	11 18	0 46	20 31
T 5	22 28	16 36	1n 3	18 20	2 29	23 46	2 7	6 36	1 15	22 48	0 2	16 7	1 22	11 17	0 46	20 31
F 6	22 35	21 25	2 12	18 2	2 38	23 34	2 7	6 50	1 15	22 49	0 2	16 6	1 22	11 17	0 46	20 30
S 7	22 42	25 3	3 13	17 48	2 44	23 22	2 7	7 4	1 15	22 50	0 2	16 4	1 22	11 16	0 46	20 30
S 8	22 48	27 17	4 2	17 39	2 48	23 9	2 7	7 18	1 14	22 51	0 2	16 3	1 22	11 16	0 45	20 30
M 9	22 54	28 1	4 38	17 33	2 50	22 55	2 7	7 32	1 14	22 51	0 3	16 1	1 22	11 15	0 45	20 29
T 10	23 0	27 15	5 0	17 32	2 51	22 40	2 7	7 45	1 14	22 52	0 3	16 0	1 22	11 15	0 45	20 29
W11	23 5	25 9	5 7	17 34	2 50	22 25	2 7	7 59	1 14	22 53	0 3	15 58	1 22	11 14	0 45	20 29
T 12	23 9	21 56	4 59	17 39	2 48	22 10	2 7	8 13	1 14	22 54	0 3	15 57	1 22	11 14	0 45	20 28
F 13	23 13	17 51	4 39	17 47	2 44	21 53	2 6	8 26	1 14	22 55	0 3	15 55	1 22	11 13	0 45	20 28
S 14	23 17	13 7	4 7	17 57	2 40	21 36	2 6	8 40	1 14	22 56	0 3	15 53	1 22	11 12	0 45	20 28
S 15	23 20	7 55	3 25	18 10	2 35	21 19	2 5	8 53	1 14	22 56	0 3	15 52	1 22	11 12	0 45	20 27
M16	23 23	2 25	2 33	18 24	2 29	21 1	2 4	9 6	1 13	22 57	0 4	15 50	1 22	11 11	0 45	20 27
T 17	23 25	3s15	1 34	18 39	2 22	20 42	2 4	9 19	1 13	22 58	0 4	15 48	1 22	11 11	0 45	20 26
W18	23 27	8 54	0 30	18 56	2 15	20 23	2 3	9 33	1 13	22 59	0 4	15 47	1 22	11 10	0 45	20 26
T 19	23 28	14 21	0s37	19 13	2 8	20 3	2 2	9 46	1 13	23 0	0 4	15 45	1 22	11 9	0 45	20 26
F 20	23 29	19 20	1 44	19 31	2 0	19 43	2 0	9 59	1 13	23 1	0 4	15 43	1 22	11 8	0 45	20 25
S 21	23 29	23 32	2 48	19 49	1 52	19 22	1 59	10 12	1 13	23 1	0 4	15 41	1 22	11 8	0 45	20 25
S 22	23 29	26 31	3 43	20 8	1 44	19 0	1 58	10 25	1 12	23 2	0 4	15 40	1 21	11 7	0 45	20 25
M23	23 28	27 56	4 27	20 26	1 36	18 39	1 56	10 37	1 12	23 3	0 5	15 38	1 21	11 6	0 45	20 24
T 24	23 27	27 28	4 54	20 44	1 28	18 16	1 55	10 50	1 12	23 4	0 5	15 36	1 21	11 5	0 45	20 24
W25	23 26	25 8	5 3	21 3	1 20	17 53	1 53	11 3	1 12	23 5	0 5	15 34	1 21	11 5	0 45	20 23
T 26	23 24	21 8	4 51	21 20	1 11	17 30	1 51	11 15	1 12	23 6	0 5	15 32	1 21	11 4	0 45	20 23
F 27	23 21	15 51	4 21	21 37	1 3	17 7	1 50	11 28	1 11	23 6	0 5	15 30	1 21	11 3	0 45	20 23
S 28	23 18	9 45	3 35	21 54	0 55	16 42	1 48	11 40	1 11	23 7	0 5	15 28	1 21	11 2	0 45	20 22
S 29	23 15	3 14	2 35	22 10	0 46	16 18	1 45	11 53	1 11	23 8	0 5	15 27	1 21	11 1	0 45	20 22
M30	23 11	3n21	1 28	22 25	0 38	15 53	1 43	12 5	1 11	23 9	0 6	15 25	1 21	11 0	0 45	20 21
T 31	23s 6	9n40	0s16	22s39	0n30	15s28	1s41	12s17	1n11	23n10	0n 6	15s23	1s21	11s 0	0s45	20s21

Julian Day Number = 2330984.5, Delta T = 29.80 sec
Ecliptic obliquity = 23°29'04, Nutation = - 0°00'09, out-of-bounds declination in red
Ayanamsha: Fagan/Bradley = 20°07'58, Lahiri = 19°14'59Greg. Calendar