



# Astrodienst Ephemeris Tables for the year 1667

tropical geocentric zodiac

contains Sun, Moon, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, True Node, Moon's Node, Lilith, Chiron

Programming  
Dieter Koch and Alois Treindl  
based on Swiss Ephemeris  
Code D5EPH

# ASTRODIENST EPHEMERIS for the year 1667

## geocentric

JANUARY 1667 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	6 42 26	10°34'23	26°50	29°35	22°41	13°28	22°37	21°22	21°56	21°29	27°R19	26°R12	25°II35	3°50	22°51	S 1
S 2	6 46 22	11°44'33	8°55	0°57	23°16	14°15	22°45	21°29	21°59	21°31	27°II18	26°D11	25°32	3°57	22°54	S 2
M 3	6 50 19	12°45'43	20°50	1°53	23°50	15° 2	22°54	21°36	22° 1	21°33	27°16	26°II12	25°29	4° 4	22°58	M 3
T 4	6 54 15	13°46'52	2°41	2°42	24°23	15°49	23° 3	21°43	22° 4	21°36	27°15	26°12	25°26	4°10	23° 1	T 4
W 5	6 58 12	14°48'01	14°32	3°24	24°54	16°37	23°13	21°50	22° 7	21°38	27°14	26°14	25°23	4°17	23° 5	W 5
T 6	7 2 8	15°49'10	26°28	3°56	25°24	17°24	23°22	21°57	22°10	21°40	27°13	26°16	25°20	4°24	23° 8	T 6
F 7	7 6 5	16°50'18	8°II33	4°19	25°52	18°11	23°32	22° 4	22°13	21°42	27°12	26°17	25°16	4°30	23°12	F 7
S 8	7 10 2	17°51'25	20°50	4°32	26°18	18°58	23°41	22°11	22°16	21°45	27°11	26°R18	25°13	4°37	23°15	S 8
S 9	7 13 58	18°52'32	3°21	4°R33	26°42	19°46	23°51	22°18	22°19	21°47	27°10	26°18	25°10	4°44	23°19	S 9
M10	7 17 55	19°53'38	16° 9	4°23	27° 5	20°33	24° 1	22°26	22°22	21°49	27° 9	26°17	25° 7	4°51	23°23	M10
T 11	7 21 51	20°54'44	29°13	4° 1	27°25	21°20	24°11	22°33	22°25	21°52	27° 7	26°14	25° 4	4°57	23°26	T 11
W12	7 25 48	21°55'49	12°II33	3°27	27°44	22° 7	24°21	22°40	22°28	21°54	27° 6	26°11	25° 1	5° 4	23°30	W12
T 13	7 29 44	22°56'54	26° 7	2°43	28° 0	22°54	24°31	22°47	22°31	21°56	27° 5	26° 6	24°57	5°11	23°34	T 13
F 14	7 33 41	23°57'59	9°II52	1°48	28°15	23°42	24°42	22°54	22°35	21°58	27° 4	26° 2	24°54	5°17	23°38	F 14
S 15	7 37 38	24°59'03	23°47	0°45	28°27	24°29	24°52	23° 1	22°38	22° 1	27° 3	25°58	24°51	5°24	23°41	S 15
S 16	7 41 34	26° 0'06	7°II49	29°35	28°37	25°16	25° 3	23° 8	22°41	22° 3	27° 2	25°56	24°48	5°31	23°45	S 16
M17	7 45 31	27° 1'09	21°55	28°20	28°45	26° 3	25°13	23°15	22°44	22° 5	27° 1	25°D54	24°45	5°37	23°49	M17
T 18	7 49 27	28° 2'12	6°II 4	27° 3	28°50	26°50	25°24	23°22	22°47	22° 7	27° 0	25°54	24°41	5°44	23°53	T 18
W19	7 53 24	29° 3'15	20°14	25°47	28°53	27°38	25°35	23°29	22°51	22°10	26°59	25°56	24°38	5°51	23°57	W19
T 20	7 57 20	0° 4'17	4°II24	24°32	28°R54	28°25	25°46	23°37	22°54	22°12	26°58	25°57	24°35	5°57	24° 1	T 20
F 21	8 1 17	1° 5'18	18°30	23°22	28°52	29°12	25°57	23°44	22°57	22°14	26°57	25°58	24°32	6° 4	24° 5	F 21
S 22	8 5 13	2° 6'19	2°32	22°18	28°48	29°59	26° 9	23°51	23° 0	22°17	26°56	25°R58	24°29	6°11	24° 9	S 22
S 23	8 9 10	3° 7'19	16°26	21°21	28°41	0°II46	26°20	23°58	23° 4	22°19	26°55	25°57	24°26	6°18	24°12	S 23
M24	8 13 7	4° 8'18	0° 8	20°32	28°31	1°33	26°31	24° 5	23° 7	22°21	26°54	25°53	24°22	6°24	24°16	M24
T 25	8 17 3	5° 9'16	13°36	19°52	28°19	2°20	26°43	24°12	23°10	22°23	26°53	25°47	24°19	6°31	24°21	T 25
W26	8 21 0	6°10'13	26°47	19°20	28° 5	3° 8	26°55	24°19	23°14	22°25	26°52	25°40	24°16	6°38	24°25	W26
T 27	8 24 56	7°11'09	9°II41	18°57	27°48	3°55	27° 6	24°26	23°17	22°28	26°52	25°33	24°13	6°44	24°29	T 27
F 28	8 28 53	8°12'04	22°17	18°43	27°29	4°42	27°18	24°33	23°20	22°30	26°51	25°25	24°10	6°51	24°33	F 28
S 29	8 32 49	9°12'57	4°II36	18°D36	27° 7	5°29	27°30	24°40	23°24	22°32	26°50	25°19	24° 7	6°58	24°37	S 29
S 30	8 36 46	10°13'49	16°42	18°38	26°43	6°16	27°42	24°47	23°27	22°34	26°49	25°14	24° 3	7° 4	24°41	S 30
M31	8 40 42	11°14'40	28°Y37	18°37	26°17	7°II 3	27°II54	24°35	23°31	22°37	26°II48	25°II11	24°II 0	7°II11	24°45	M31

Delta T = 31.69 sec

Greg. Calendar

FEBRUARY 1667 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	8 44 39	12°15'29	10°II28	19°32	25°R49	7°II50	28°II 6	25°31	23°34	22°39	26°R47	25°D 9	23°II57	7°II18	24°49	T 1
W 2	8 48 36	13°16'16	22°18	19°24	25°R19	8°37	28°19	25° 8	23°37	22°41	26°II47	25°II10	23°54	7°24	24°53	W 2
T 3	8 52 32	14°17'03	4°II14	19°51	24°48	9°24	28°31	25°14	23°41	22°43	26°46	25°11	23°51	7°31	24°57	T 3
F 4	8 56 29	15°17'47	16°19	20°24	24°14	10°11	28°43	25°21	23°44	22°45	26°45	25°12	23°47	7°38	25° 1	F 4
S 5	9 0 25	16°18'30	28°40	21° 1	23°40	10°58	28°56	25°28	23°48	22°47	26°44	25°R13	23°44	7°44	25° 6	S 5
S 6	9 4 22	17°19'12	11°II19	21°43	23° 4	11°44	29° 8	25°35	23°51	22°49	26°44	25°11	23°41	7°51	25°10	S 6
M 7	9 8 18	18°19'52	24°20	22°29	22°28	12°31	29°21	25°42	23°55	22°52	26°43	25° 8	23°38	7°58	25°14	M 7
T 8	9 12 15	19°20'30	7°II43	23°19	21°51	13°18	29°34	25°48	23°58	22°54	26°42	25° 2	23°35	8° 5	25°18	T 8
W 9	9 16 11	20°21'07	21°27	24°12	21°13	14° 5	29°47	25°55	24° 1	22°56	26°42	24°53	23°32	8°11	25°22	W 9
T 10	9 20 8	21°21'43	5°II29	25° 8	20°36	14°52	29°59	26° 2	24° 5	22°58	26°41	24°44	23°28	8°18	25°26	T 10
F 11	9 24 5	22°22'17	19°44	26° 7	19°58	15°38	0°II12	26° 8	24° 8	23° 0	26°40	24°34	23°25	8°25	25°31	F 11
S 12	9 28 1	23°22'49	4° 7	27° 9	19°21	16°25	0°25	26°15	24°12	23° 2	26°40	24°25	23°22	8°31	25°35	S 12
S 13	9 31 58	24°23'21	18°31	28°13	18°45	17°12	0°38	26°22	24°15	23° 4	26°39	24°18	23°19	8°38	25°39	S 13
M14	9 35 54	25°23'51	2°II51	29°20	18°10	17°58	0°51	26°28	24°19	23° 6	26°39	24°14	23°16	8°45	25°43	M14
T 15	9 39 51	26°24'19	17° 5	0°28	17°36	18°45	1° 5	26°35	24°22	23° 8	26°38	24°12	23°13	8°51	25°47	T 15
W16	9 43 47	27°24'47	1°II10	1°39	17° 3	19°32	1°18	26°41	24°26	23°10	26°37	24°D11	23° 9	8°58	25°51	W16
T 17	9 47 44	28°25'13	15° 6	2°52	16°32	20°18	1°31	26°47	24°29	23°12	26°37	24°12	23° 6	9° 5	25°56	T 17
F 18	9 51 40	29°25'38	28°52	4° 6	16° 3	21° 5	1°45	26°54	24°33	23°14	26°36	24°R12	23° 3	9°11	26° 0	F 18
S 19	9 55 37	0°II26'02	12°32	5°22	15°35	21°51	1°58	27° 0	24°36	23°16	26°36	24°11	23° 0	9°18	26° 4	S 19
S 20	9 59 34	1°26'24	25°56	6°40	15°10	22°38	2°11	27° 6	24°40	23°18	26°36	24° 7	22°57	9°25	26° 8	S 20
M21	10 3 30	2°26'44	9°II13	7°59	14°47	23°24	2°25	27°13	24°43	23°19	26°35	24° 0	22°53	9°31	26°12	M21
T 22	10 7 27	3°27'03	22°19	9°19	14°26	24°11	2°39	27°19	24°46	23°21	26°35	23°50	22°50	9°38	26°17	T 22
W23	10 11 23	4°27'20	5°II12	10°41	14° 7	24°57	2°52	27°25	24°50	23°23	26°34	23°38	22°47	9°45	26°21	W23
T 24	10 15 20	5°27'35	17°53	12° 5	13°51	25°43	3° 6	27°31	24°53	23°25	26°34	23°25	22°44	9°51	26°25	T 24
F 25	10 19 16	6°27'49	0°II20	13°29	13°37	26°30	3°20	27°37	24°57	23°27	26°34	23°12	22°41	9°58	26°29	F 25
S 26	10 23 13	7°28'00	12°34	14°55	13°26	27°16	3°33	27°43	25° 0	23°29	26°33	23° 0	22°38	10° 5	26°33	S 26
S 27	10 27 9	8°28'10	24°37	16°22	13°17	28° 2	3°47	27°49	25° 4	23°30	26°33	22°50	22°34	10°11	26°37	S 27
M28	10 31 6	9°II28'17	6°31	17°51	13°10	28°II48	4°II 1	27°35	25° 7	23°32	26°II33	22°II43	22°II31	10°II18	26°41	M28

Delta T = 31.63 sec

Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1667

## geocentric

MARCH 1667 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	10 35 3	10°18'22"	18°21'	19°20'	13°R 6	29°13'34"	4°15'	28°31'	25°10'	23°34'	26°R33	22°R39	22°II28	10°25'	26°45'	T 1
W 2	10 38 59	11°28'26"	0°II 9	20°51'	13°D 5	0°12'21"	4°29'	28° 7'	25°14'	23°35'	26°II32	22°II37	22°25'	10°32'	26°49'	W 2
T 3	10 42 56	12°28'27"	12° 3	22°23'	13°26'	1° 7'	4°43'	28°13'	25°17'	23°37'	26°32'	22°D36	22°22'	10°38'	26°54'	T 3
F 4	10 46 52	13°28'26"	24° 6	23°56'	13° 9	1°53'	4°57'	28°18'	25°20'	23°39'	26°32'	22°R36	22°18'	10°45'	26°58'	F 4
S 5	10 50 49	14°28'23"	6°26'	25°30'	13°14'	2°39'	5°11'	28°24'	25°24'	23°40'	26°32'	22°36'	22°15'	10°52'	27° 2'	S 5
S 6	10 54 45	15°28'18"	19° 6	27° 6'	13°22'	3°25'	5°25'	28°30'	25°27'	23°42'	26°32'	22°33'	22°12'	10°58'	27° 6'	S 6
M 7	10 58 42	16°28'10"	2°II10	28°42'	13°32'	4°11'	5°39'	28°35'	25°30'	23°43'	26°32'	22°29'	22° 9'	11° 5'	27°10'	M 7
T 8	11 2 38	17°28'01"	15°42'	0°12'20"	13°44'	4°56'	5°53'	28°41'	25°34'	23°45'	26°32'	22°21'	22° 6'	11°12'	27°14'	T 8
W 9	11 6 35	18°27'49"	29°40'	1°59'	13°59'	5°42'	6° 7'	28°46'	25°37'	23°47'	26°32'	22°11'	22° 3'	11°18'	27°18'	W 9
T 10	11 10 32	19°27'35"	14°II 2	3°39'	14°15'	6°28'	6°21'	28°52'	25°40'	23°48'	26°32'	22° 0'	21°59'	11°25'	27°22'	T 10
F 11	11 14 28	20°27'19"	28°42'	5°20'	14°33'	7°14'	6°36'	28°57'	25°43'	23°49'	26°D32	21°48'	21°56'	11°32'	27°25'	F 11
S 12	11 18 25	21°27'01"	13°23'32"	7° 3'	14°54'	8° 0'	6°50'	29° 2'	25°47'	23°51'	26°32'	21°37'	21°53'	11°38'	27°29'	S 12
S 13	11 22 21	22°26'41"	28°22'	8°47'	15°16'	8°45'	7° 4'	29° 7'	25°50'	23°52'	26°32'	21°28'	21°50'	11°45'	27°33'	S 13
M14	11 26 18	23°26'19"	13°II 6	10°31'	15°39'	9°31'	7°18'	29°12'	25°53'	23°54'	26°32'	21°21'	21°47'	11°52'	27°37'	M14
T 15	11 30 14	24°25'56"	27°37'	12°18'	16° 5'	10°16'	7°33'	29°17'	25°56'	23°55'	26°32'	21°18'	21°44'	11°58'	27°41'	T 15
W16	11 34 11	25°25'31"	11°17'51"	14° 5'	16°32'	11° 2'	7°47'	29°22'	25°59'	23°56'	26°32'	21°17'	21°40'	12° 5'	27°45'	W16
T 17	11 38 7	26°25'04"	25°48'	15°54'	17° 1'	11°47'	8° 1'	29°27'	26° 2'	23°58'	26°32'	21°17'	21°37'	12°12'	27°49'	T 17
F 18	11 42 4	27°24'35"	9°23'27"	17°44'	17°32'	12°33'	8°16'	29°32'	26° 5'	23°59'	26°32'	21°16'	21°34'	12°18'	27°52'	F 18
S 19	11 46 0	28°24'05"	22°51'	19°35'	18° 4'	13°18'	8°30'	29°37'	26° 8'	24° 0'	26°32'	21°14'	21°31'	12°25'	27°56'	S 19
S 20	11 49 57	29°23'33"	6°28' 0	21°28'	18°37'	14° 4'	8°45'	29°42'	26°11'	24° 1'	26°33'	21°10'	21°28'	12°32'	28° 0'	S 20
M21	11 53 54	0°12'22'59"	18°57'	23°22'	19°11'	14°49'	8°59'	29°46'	26°14'	24° 3'	26°33'	21° 3'	21°24'	12°38'	28° 3'	M21
T 22	11 57 50	1°22'24"	1°11'42"	25°17'	19°47'	15°34'	9°14'	29°51'	26°17'	24° 4'	26°33'	20°53'	21°21'	12°45'	28° 7'	T 22
W23	12 1 47	2°21'46"	14°16'	27°13'	20°25'	16°19'	9°28'	29°55'	26°20'	24° 5'	26°33'	20°41'	21°18'	12°52'	28°11'	W23
T 24	12 5 43	3°21'06"	26°40'	29°11'	21° 3'	17° 5'	9°42'	29°59'	26°23'	24° 6'	26°34'	20°27'	21°15'	12°58'	28°14'	T 24
F 25	12 9 40	4°20'24"	8°12'55"	1°19' 9	21°43'	17°50'	9°57'	0°22' 4	26°26'	24° 7'	26°34'	20°14'	21°12'	13° 5'	28°18'	F 25
S 26	12 13 36	5°19'41"	21° 0'	3° 9'	22°23'	18°35'	10°11'	0° 8'	26°29'	24° 8'	26°34'	20° 1'	21° 9'	13°12'	28°21'	S 26
S 27	12 17 33	6°18'55"	2°18'57"	5°10'	23° 5'	19°20'	10°26'	0°13'	26°32'	24° 9'	26°35'	19°51'	21° 5'	13°18'	28°25'	S 27
M28	12 21 29	7°18'06"	14°48'	7°12'	23°48'	20° 5'	10°40'	0°17'	26°35'	24°10'	26°35'	19°43'	21° 2'	13°25'	28°28'	M28
T 29	12 25 26	8°17'16"	26°35'	9°15'	24°31'	20°50'	10°55'	0°21'	26°38'	24°11'	26°35'	19°38'	20°59'	13°32'	28°32'	T 29
W30	12 29 23	9°16'24"	8°II23	11°19'	25°16'	21°35'	11° 9'	0°25'	26°40'	24°12'	26°36'	19°35'	20°56'	13°38'	28°35'	W30
T 31	12 33 19	10°15'29"	20°II15	13°19'23"	26°22' 2	22°19'20"	11°19'24"	0°29'29"	26°44'33"	24°13'13"	26°II36	19°D35	20°II53	13°45'	28°39'	T 31

Delta T = 31.58 sec

Greg. Calendar

APRIL 1667 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	12 37 16	11°14'32"	2°25'17"	15°19'28"	26°22'48"	23°19' 4	11°19'38"	0°22'32"	26°22'46"	24°14'14"	26°II37	19°II35	20°II50	13°52'58"	28°42'42"	F 1
S 2	12 41 12	12°13'33"	14°34'	17°32'	27°35'	23°49'	11°53'	0°36'	26°49'	24°14'	26°37'	19°R35	20°46'	13°58'	28°45'	S 2
S 3	12 45 9	13°12'31"	27°11'	19°37'	28°23'	24°34'	12° 7'	0°40'	26°51'	24°15'	26°38'	19°34'	20°43'	14° 5'	28°48'	S 3
M 4	12 49 5	14°11'27"	10°II13	21°41'	29°12'	25°18'	12°22'	0°43'	26°54'	24°16'	26°38'	19°31'	20°40'	14°12'	28°52'	M 4
T 5	12 53 2	15°10'21"	23°43'	23°45'	0°12' 2	26° 3'	12°36'	0°47'	26°56'	24°17'	26°39'	19°26'	20°37'	14°18'	28°55'	T 5
W 6	12 56 58	16° 9'12"	7°II42	25°48'	0°52'	26°48'	12°51'	0°50'	26°59'	24°17'	26°40'	19°19'	20°34'	14°25'	28°58'	W 6
T 7	13 0 55	17° 8'01"	22°10'	27°49'	1°43'	27°32'	13° 5'	0°53'	27° 2'	24°18'	26°40'	19°10'	20°30'	14°32'	29° 1'	T 7
F 8	13 4 52	18° 6'48"	7°II 0	29°49'	2°35'	28°16'	13°20'	0°57'	27° 4'	24°19'	26°41'	19° 0'	20°27'	14°39'	29° 4'	F 8
S 9	13 8 48	19° 5'33"	22° 5'	1°18'47"	3°27'	29° 1'	13°34'	1° 0'	27° 6'	24°19'	26°41'	18°51'	20°24'	14°45'	29° 7'	S 9
S 10	13 12 45	20° 4'16"	7°II15	3°42'	4°20'	29°45'	13°48'	1° 3'	27° 9'	24°20'	26°42'	18°44'	20°21'	14°52'	29°10'	S 10
M11	13 16 41	21° 2'57"	22°20'	5°35'	5°13'	0°12'29"	14° 3'	1° 6'	27°11'	24°20'	26°43'	18°39'	20°18'	14°59'	29°13'	M11
T 12	13 20 38	22° 1'37"	7°11'41"	7°25'	6° 8'	1°14'	14°17'	1° 9'	27°14'	24°21'	26°43'	18°37'	20°15'	15° 5'	29°16'	T 12
W13	13 24 34	23° 0'14"	21°42'	9°11'	7° 2'	1°58'	14°32'	1°11'	27°16'	24°21'	26°44'	18°D36	20°11'	15°12'	29°19'	W13
T 14	13 28 31	23°58'50"	5°23'51"	10°54'	7°57'	2°42'	14°46'	1°14'	27°18'	24°22'	26°45'	18°37'	20° 8'	15°19'	29°22'	T 14
F 15	13 32 27	24°57'25"	19°36'	12°34'	8°53'	3°26'	15° 0'	1°17'	27°20'	24°22'	26°46'	18°R38	20° 5'	15°25'	29°24'	F 15
S 16	13 36 24	25°55'58"	2°22'58"	14° 9'	9°49'	4°10'	15°15'	1°19'	27°23'	24°22'	26°46'	18°38'	20° 2'	15°32'	29°27'	S 16
S 17	13 40 21	26°54'29"	16° 1'	15°40'	10°46'	4°54'	15°29'	1°22'	27°25'	24°23'	26°47'	18°36'	19°59'	15°39'	29°30'	S 17
M18	13 44 17	27°52'58"	28°47'	17° 6'	11°43'	5°38'	15°43'	1°24'	27°27'	24°23'	26°48'	18°32'	19°55'	15°45'	29°32'	M18
T 19	13 48 14	28°51'26"	11°11'19"	18°28'	12°41'	6°22'	15°58'	1°26'	27°29'	24°23'	26°49'	18°26'	19°52'	15°52'	29°35'	T 19
W20	13 52 10	29°49'52"	23°39'	19°46'	13°38'	7° 6'	16°12'	1°28'	27°31'	24°24'	26°50'	18°18'	19°49'	15°59'	29°38'	W20
T 21	13 56 7	0°12'48'16"	5°19'49"	20°58'	14°37'	7°50'	16°26'	1°30'	27°33'	24°24'	26°51'	18° 9'	19°46'	16° 5'	29°40'	T 21
F 22	14 0 3	1°46'39"	17°52'	22° 6'	15°36'	8°33'	16°41'	1°32'	27°35'	24°24'	26°52'	18° 0'	19°43'	16°12'	29°42'	F 22
S 23	14 4 0	2°45'00"	29°48'	23° 9'	16°35'	9°17'	16°55'	1°34'	27°37'	24°24'	26°52'	17°52'	19°40'	16°19'	29°45'	S 23
S 24	14 7 56	3°43'19"	11°18'39"	24° 7'	17°34'	10° 1'	17° 9'	1°36'	27°39'	24°24'	26°53'	17°45'	19°36'	16°25'	29°47'	S 24
M25	14 11 53	4°41'36"	23°28'	25° 0'	18°34'	10°44'	17°23'	1°37'	27°40'	24°24'	26°54'	17°40'	19°33'	16°32'	29°49'	M25
T 26	14 15 49	5°39'51"	5°II15	25°47'	19°34'	11°28'	17°37'	1°39'	27°42'	24°R24	26°55'	17°37'	19°30'	16°39'	29°52'	T 26
W27	14 19 46	6°38'05"	17° 5'	26°30'	20°35'	12°11'	17°51'	1°40'	27°44'	24°24'	26°56'	17°D36	19°27'	16°45'	29°54'	W27
T 28	14 23 43	7°36'16"	28°59'	27° 7'	21°36'	12°55'	18° 5'	1°42'	27°46'	24°24'	26°57'	17°37'	19°24'	16°52'	29°56'	T 28
F 29	14 27 39	8°34'26"	11°II 3	27°39'	22°37'	13°38'	18°19'	1°43'	27°47'	24°24'	26°58'	17°38'	19°21'	16°59'	29°58'	F 29
S 30	14 31 36	9°32'34"	23°II21	28° 5'	23°13'38"	14°18'21"	18°19'33"	1°44'	27°49'	24°24'	26°II59	17°II40	19°II17	17° 5'	0°11' 0	S 30

Delta T = 31.53 sec

Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1667

## geocentric

MAY 1667 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	14 35 32	10°30'40	5°56'28	28°26'24	15°8'5	18°47'15	1°45'27	27°51'24	24°24'27	27°11'0	17°41'19	19°14'17	17°12'18	0°2'1	S 1	
M 2	14 39 29	11°28'43	18°54'28	28°42'25	15°48'19	1°46'27	27°52'24	27°1'17	24°22'27	27°1'17	17°41'19	19°11'17	17°19'19	0°4'4	M 2	
T 3	14 43 25	12°26'45	2°18'18	28°53'26	16°31'19	1°47'27	27°54'24	27°2'17	24°23'27	27°2'17	17°39'19	19°8'17	17°25'19	0°6'6	T 3	
W 4	14 47 22	13°24'45	16°10'28	28°58'27	17°14'19	1°48'27	27°55'24	27°3'4	24°23'27	27°3'4	17°36'19	19°5'17	17°32'19	0°8'8	W 4	
T 5	14 51 18	14°22'43	0°30'28	28°58'28	17°57'19	1°49'27	27°56'24	27°5'17	24°23'27	27°5'17	17°32'19	19°1'17	17°39'19	0°9'9	T 5	
F 6	14 55 15	15°20'39	15°15'28	28°54'29	18°40'19	1°49'27	27°58'24	27°6'17	24°23'27	27°6'17	17°27'18	18°58'17	17°45'19	0°11'11	F 6	
S 7	14 59 12	16°18'34	0°19'28	28°44'0	19°23'20	1°50'27	27°59'24	27°7'17	24°22'27	27°7'17	17°23'18	18°55'17	17°52'19	0°13'13	S 7	
S 8	15 3 8	17°16'26	15°33'28	28°30'1	20°6'20	1°50'28	27°59'24	27°8'17	24°22'27	27°8'17	17°20'18	18°52'17	17°59'19	0°14'14	S 8	
M 9	15 7 5	18°14'18	0°47'28	28°12'3	20°49'20	1°51'28	27°59'24	27°9'17	24°22'27	27°9'17	17°17'18	18°49'18	18°5'19	0°16'16	M 9	
T 10	15 11 1	19°12'08	15°51'27	27°50'4	21°32'20	1°51'28	27°59'24	27°10'17	24°21'27	27°10'17	17°10'18	18°46'18	18°12'19	0°17'17	T 10	
W 11	15 14 58	20°9'56	0°37'27	27°25'5	22°15'21	1°51'28	27°59'24	27°11'17	24°21'27	27°11'17	17°11'18	18°42'18	18°19'19	0°19'19	W 11	
T 12	15 18 54	21°7'44	14°59'26	26°57'6	22°57'21	1°51'28	27°59'24	27°12'17	24°20'27	27°12'17	17°12'18	18°39'18	18°25'19	0°20'20	T 12	
F 13	15 22 51	22°5'30	28°55'26	26°26'7	23°40'21	1°51'28	27°59'24	27°13'17	24°20'27	27°13'17	17°13'18	18°36'18	18°32'19	0°22'22	F 13	
S 14	15 26 48	23°3'15	12°25'25	25°53'8	24°23'21	1°51'28	27°59'24	27°14'17	24°19'27	27°14'17	17°14'18	18°33'18	18°39'19	0°23'23	S 14	
S 15	15 30 44	24°0'59	25°31'25	25°20'9	25°5'21	1°50'28	27°59'24	27°15'17	24°19'27	27°15'17	17°15'18	18°30'18	18°45'19	0°24'24	S 15	
M 16	15 34 41	24°58'42	8°15'24	24°45'10	25°48'22	1°50'28	27°59'24	27°16'17	24°18'27	27°16'17	17°16'18	18°27'18	18°52'19	0°25'25	M 16	
T 17	15 38 37	25°56'24	20°42'24	24°11'11	26°30'22	1°49'28	27°59'24	27°17'17	24°17'27	27°17'17	17°17'18	18°23'18	18°59'19	0°26'26	T 17	
W 18	15 42 34	26°54'04	2°55'23	12°45'27	27°13'22	1°49'28	27°59'24	27°18'17	24°17'27	27°18'17	17°18'18	18°20'18	19°5'19	0°27'27	W 18	
T 19	15 46 30	27°51'44	14°57'23	13°51'27	27°55'22	1°48'28	27°59'24	27°19'17	24°16'27	27°19'17	17°19'18	18°17'18	19°12'19	0°28'28	T 19	
F 20	15 50 27	28°49'22	26°52'22	14°57'28	28°37'23	1°47'28	27°59'24	27°20'17	24°15'27	27°20'17	17°20'18	18°14'18	19°19'19	0°29'29	F 20	
S 21	15 54 23	29°47'00	8°42'22	22°3'16	29°20'23	1°47'28	27°59'24	27°21'17	24°15'27	27°21'17	17°21'18	18°11'18	19°25'19	0°30'30	S 21	
S 22	15 58 20	0°44'36	20°30'21	21°36'17	0°11'2	23°30'23	1°46'28	28°13'24	24°14'27	27°26'27	17°6'18	18°7'18	19°32'19	0°31'31	S 22	
M 23	16 2 16	1°42'11	2°11'21	21°13'18	0°44'23	23°43'23	1°45'28	28°13'24	24°13'27	27°27'27	17°4'18	18°4'18	19°39'19	0°32'32	M 23	
T 24	16 6 13	2°39'45	14°9'20	20°53'19	1°26'23	23°56'23	1°43'28	28°14'24	24°12'27	27°28'27	17°10'18	18°1'18	19°45'19	0°32'32	T 24	
W 25	16 10 10	3°37'18	26°5'20	20°36'20	2°8'24	24°8'24	1°42'28	28°14'24	24°11'27	27°30'27	17°4'18	17°58'18	19°52'19	0°33'33	W 25	
T 26	16 14 6	4°34'50	8°7'20	20°24'21	2°50'24	24°21'24	1°41'28	28°15'24	24°10'27	27°31'27	17°5'18	17°55'18	19°59'19	0°33'33	T 26	
F 27	16 18 3	5°32'21	20°19'20	20°16'22	3°32'24	24°34'24	1°39'28	28°15'24	24°10'27	27°32'27	17°6'18	17°52'18	20°5'19	0°34'34	F 27	
S 28	16 21 59	6°29'50	2°43'20	20°12'23	4°14'24	24°46'24	1°38'28	28°15'24	24°9'27	27°34'27	17°7'18	17°48'18	20°12'19	0°34'34	S 28	
S 29	16 25 56	7°27'18	15°24'20	20°12'24	4°56'25	24°58'24	1°36'28	28°15'24	24°8'27	27°35'27	17°8'18	17°45'18	20°19'19	0°35'35	S 29	
M 30	16 29 52	8°24'45	28°23'20	20°17'26	5°38'25	25°11'25	1°35'28	28°16'24	24°7'27	27°36'27	17°8'18	17°42'18	20°25'19	0°35'35	M 30	
T 31	16 33 49	9°22'10	11°43'20	20°8'27	27°40'27	6°11'20	1°33'28	28°16'24	24°6'27	27°38'27	17°8'18	17°39'18	20°32'19	0°36'36	T 31	

Delta T = 31.47 sec

Greg. Calendar

JUNE 1667 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day	
W 1	16 37 46	10Ⅱ19'35	25Ⅱ27	20Ⅲ40	28Ⅱ17	7Ⅱ 1	25Ⅱ35	1°R31	28Ⅱ16	24°R 5	27Ⅱ39	17°R 8	17Ⅱ36	20Ⅲ38	0Ⅲ35	W 1
T 2	16 41 42	11°16'58	9Ⅱ35	20°59	29°25	7°43	25°48	1Ⅱ29	28°R16	24Ⅲ 4	27°41	17Ⅱ 8	17°33	20°45	0°36	T 2
F 3	16 45 39	12°14'20	24° 6	21°22	0Ⅲ32	8°25	26° 0	1°27	28°16	24° 2	27°42	17° 7	17°29	20°52	0°36	F 3
S 4	16 49 35	13°11'41	8Ⅱ55	21°49	1°40	9° 6	26°12	1°25	28°16	24° 1	27°43	17° 7	17°26	20°58	0°R36	S 4
S 5	16 53 32	14° 9'01	23°57	22°20	2°48	9°48	26°24	1°23	28°16	24° 0	27°45	17° 6	17°23	21° 5	0°36	S 5
M 6	16 57 28	15° 6'20	9Ⅱ 7	22°56	3°56	10°29	26°35	1°20	28°16	23°59	27°46	17° 6	17°20	21°12	0°35	M 6
T 7	17 1 25	16° 3'38	24° 6	23°35	5° 4	11°11	26°47	1°18	28°15	23°58	27°48	17°D 6	17°17	21°18	0°35	T 7
W 8	17 5 21	17° 0'56	8Ⅲ55	24°19	6°12	11°52	26°59	1°16	28°15	23°57	27°49	17°R 6	17°13	21°25	0°35	W 8
T 9	17 9 18	17°58'13	23°24	25° 7	7°20	12°33	27°10	1°13	28°15	23°56	27°51	17° 6	17°10	21°32	0°35	T 9
F 10	17 13 15	18°55'30	7Ⅲ28	25°59	8°29	13°15	27°22	1°10	28°15	23°54	27°52	17° 6	17° 7	21°38	0°34	F 10
S 11	17 17 11	19°52'46	21° 7	26°54	9°37	13°56	27°33	1° 8	28°14	23°53	27°53	17° 6	17° 4	21°45	0°34	S 11
S 12	17 21 8	20°50'02	4Ⅲ19	27°54	10°46	14°37	27°45	1° 5	28°14	23°52	27°55	17° 5	17° 1	21°52	0°34	S 12
M 13	17 25 4	21°47'17	17° 7	28°57	11°54	15°18	27°56	1° 2	28°13	23°50	27°56	17°D 5	16°58	21°58	0°33	M 13
T 14	17 29 1	22°44'33	29°34	0Ⅲ 3	13° 3	15°59	28° 7	0°59	28°13	23°49	27°58	17° 5	16°54	22° 5	0°33	T 14
W 15	17 32 57	23°41'48	11°46	1°13	14°12	16°40	28°18	0°56	28°12	23°48	27°59	17° 6	16°51	22°12	0°32	W 15
T 16	17 36 54	24°39'02	23°45	2°27	15°21	17°21	28°29	0°53	28°11	23°46	28° 1	17° 6	16°48	22°18	0°31	T 16
F 17	17 40 50	25°36'17	5Ⅲ37	3°44	16°30	18° 2	28°40	0°50	28°11	23°45	28° 2	17° 7	16°45	22°25	0°30	F 17
S 18	17 44 47	26°33'32	17°25	5° 5	17°39	18°43	28°51	0°47	28°10	23°44	28° 4	17° 8	16°42	22°32	0°30	S 18
S 19	17 48 44	27°30'46	29°13	6°28	18°48	19°24	29° 1	0°43	28° 9	23°42	28° 5	17° 9	16°39	22°38	0°29	S 19
M 20	17 52 40	28°28'00	11Ⅱ 4	7°56	19°57	20° 5	29°12	0°40	28° 9	23°41	28° 6	17° 9	16°35	22°45	0°28	M 20
T 21	17 56 37	29°25'14	23° 1	9°26	21° 7	20°46	29°22	0°37	28° 8	23°39	28° 8	17°R 9	16°32	22°52	0°27	T 21
W 22	18 0 33	0Ⅲ22'28	5Ⅲ 6	11° 0	22°16	21°27	29°33	0°33	28° 7	23°38	28° 9	17° 9	16°29	22°58	0°26	W 22
T 23	18 4 30	1°19'41	17°22	12°37	23°25	22° 7	29°43	0°30	28° 6	23°37	28°11	17° 7	16°26	23° 5	0°25	T 23
F 24	18 8 26	2°16'54	29°48	14°18	24°35	22°48	29°53	0°26	28° 5	23°35	28°12	17° 5	16°23	23°12	0°24	F 24
S 25	18 12 23	3°14'07	12Ⅱ27	16° 1	25°45	23°29	0Ⅲ 3	0°22	28° 4	23°34	28°14	17° 3	16°19	23°18	0°22	S 25
S 26	18 16 19	4°11'20	25°21	17°48	26°54	24° 9	0°13	0°19	28° 3	23°32	28°15	17° 1	16°16	23°25	0°21	S 26
M 27	18 20 16	5° 8'32	8Ⅱ29	19°37	28° 4	24°50	0°22	0°15	28° 2	23°31	28°17	16°59	16°13	23°32	0°20	M 27
T 28	18 24 13	6° 5'43	21°54	21°30	29°14	25°30	0°32	0°11	28° 0	23°29	28°18	16°58	16°10	23°38	0°18	T 28
W 29	18 28 9	7° 2'55	5Ⅲ36	23°24	0Ⅲ24	26°11	0°42	0° 7	27°59	23°28	28°20	16°D57	16° 7	23°45	0°17	W 29
T 30	18 32 6	8Ⅲ 0'06	19Ⅲ35	25Ⅱ22	1Ⅲ34	26Ⅱ51	0Ⅲ51	0Ⅲ 3	27Ⅲ58	23Ⅲ26	28Ⅱ21	16Ⅱ57	16Ⅱ 4	23Ⅲ52	0Ⅲ16	T 30

Delta T = 31.42 sec

Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1667  
geocentric

JULY 1667 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	18 36 2	8♂57'17	3♂50	27♂22	2♂44	27♂31	1♂ 0	29°R59	27°R57	23°R24	28♂22	16♂58	16♂ 0	23♂58	0°R14	F 1
S 2	18 39 59	9°54'27	18°20	29°24	3°54	28°12	1°10	29♂55	27♂55	23♂23	28°24	17° 0	15°57	24° 5	0♂12	S 2
S 3	18 43 55	10°51'38	3♂ 1	1♂28	5° 4	28°52	1°19	29°51	27°54	23°21	28°25	17° 1	15°54	24°12	0°11	S 3
M 4	18 47 52	11°48'48	17°47	3°33	6°14	29°32	1°28	29°47	27°53	23°20	28°27	17°R 1	15°51	24°18	0° 9	M 4
T 5	18 51 48	12°45'59	2♂33	5°40	7°25	0♂12	1°36	29°43	27°51	23°18	28°28	17° 1	15°48	24°25	0° 7	T 5
W 6	18 55 45	13°43'10	17°10	7°48	8°35	0°53	1°45	29°39	27°50	23°17	28°30	16°59	15°45	24°32	0° 6	W 6
T 7	18 59 42	14°40'21	1♂34	9°57	9°46	1°33	1°54	29°35	27°48	23°15	28°31	16°56	15°41	24°38	0° 4	T 7
F 8	19 3 38	15°37'32	15°37	12° 6	10°56	2°13	2° 2	29°31	27°47	23°13	28°32	16°52	15°38	24°45	0° 2	F 8
S 9	19 7 35	16°34'43	29°18	14°15	12° 7	2°53	2°10	29°26	27°45	23°12	28°34	16°47	15°35	24°52	0° 0	S 9
S 10	19 11 31	17°31'55	12♂33	16°24	13°17	3°33	2°18	29°22	27°44	23°10	28°35	16°43	15°32	24°58	29♂58	S 10
M 11	19 15 28	18°29'08	25°24	18°33	14°28	4°13	2°26	29°18	27°42	23° 9	28°37	16°40	15°29	25° 5	29°56	M 11
T 12	19 19 24	19°26'21	7°V54	20°41	15°39	4°53	2°34	29°13	27°40	23° 7	28°38	16°38	15°25	25°11	29°54	T 12
W 13	19 23 21	20°23'35	20° 7	22°48	16°50	5°32	2°42	29° 9	27°38	23° 5	28°39	16°D37	15°22	25°18	29°52	W 13
T 14	19 27 18	21°20'50	2♂ 6	24°54	18° 1	6°12	2°49	29° 5	27°37	23° 4	28°41	16°38	15°19	25°25	29°50	T 14
F 15	19 31 14	22°18'05	13°57	26°59	19°12	6°52	2°57	29° 0	27°35	23° 2	28°42	16°39	15°16	25°31	29°48	F 15
S 16	19 35 11	23°15'21	25°46	29° 3	20°23	7°32	3° 4	28°56	27°33	23° 0	28°43	16°41	15°13	25°38	29°46	S 16
S 17	19 39 7	24°12'38	7♂35	1♂ 6	21°34	8°11	3°11	28°51	27°31	22°59	28°45	16°42	15°10	25°45	29°43	S 17
M 18	19 43 4	25° 9'56	19°31	3° 7	22°45	8°51	3°18	28°47	27°29	22°57	28°46	16°R43	15° 6	25°51	29°41	M 18
T 19	19 47 0	26° 7'14	1♂36	5° 6	23°56	9°31	3°25	28°43	27°27	22°56	28°47	16°41	15° 3	25°58	29°39	T 19
W 20	19 50 57	27° 4'34	13°53	7° 4	25° 8	10°10	3°32	28°38	27°26	22°54	28°49	16°38	15° 0	26° 5	29°36	W 20
T 21	19 54 53	28° 1'54	26°24	9° 0	26°19	10°50	3°38	28°34	27°24	22°52	28°50	16°34	14°57	26°11	29°34	T 21
F 22	19 58 50	28°59'14	9♂ 9	10°54	27°30	11°29	3°45	28°29	27°22	22°51	28°51	16°27	14°54	26°18	29°31	F 22
S 23	20 2 47	29°56'36	22° 9	12°47	28°42	12° 9	3°51	28°25	27°20	22°49	28°53	16°20	14°51	26°25	29°29	S 23
S 24	20 6 43	0♂53'58	5♂24	14°38	29°53	12°48	3°57	28°20	27°18	22°47	28°54	16°13	14°47	26°31	29°26	S 24
M 25	20 10 40	1°51'20	18°51	16°28	1♂ 5	13°28	4° 3	28°16	27°15	22°46	28°55	16° 6	14°44	26°38	29°24	M 25
T 26	20 14 36	2°48'43	2♂29	18°16	2°16	14° 7	4° 8	28°11	27°13	22°44	28°56	16° 1	14°41	26°45	29°21	T 26
W 27	20 18 33	3°46'07	16°18	20° 2	3°28	14°46	4°14	28° 7	27°11	22°43	28°58	15°57	14°38	26°51	29°19	W 27
T 28	20 22 29	4°43'31	0♂17	21°46	4°40	15°26	4°19	28° 3	27° 9	22°41	28°59	15°D56	14°35	26°58	29°16	T 28
F 29	20 26 26	5°40'56	14°23	23°29	5°52	16° 5	4°25	27°58	27° 7	22°39	29° 0	15°56	14°31	27° 5	29°13	F 29
S 30	20 30 22	6°38'21	28°37	25°10	7° 4	16°44	4°30	27°54	27° 5	22°38	29° 1	15°57	14°28	27°11	29°11	S 30
S 31	20 34 19	7♂35'48	12♂56	26♂50	8♂15	17♂23	4♂35	27♂50	27♂ 3	22♂36	29♂ 3	15°R58	14♂25	27♂18	29♂ 8	S 31

Delta T = 31.36 sec

Greg. Calendar

AUGUST 1667 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	20 38 16	8♂33'15	27♂18	28♂27	9♂27	18♂ 2	4♂39	27°R45	27°R 0	22°R33	29♂ 4	15°R58	14♂22	27♂25	29°R 5	M 1
T 2	20 42 12	9°30'43	11♂39	0♂ 4	10°39	18°41	4°44	27♂41	26♂58	22♂33	29° 5	15♂55	14°19	27°31	29♂ 2	T 2
W 3	20 46 9	10°28'11	25°55	1°38	11°52	19°20	4°48	27°37	26°56	22°32	29° 6	15°50	14°16	27°38	29° 0	W 3
T 4	20 50 5	11°25'41	10♂ 1	3°11	13° 4	19°59	4°52	27°32	26°54	22°30	29° 7	15°43	14°12	27°44	28°57	T 4
F 5	20 54 2	12°23'12	23°52	4°43	14°16	20°38	4°56	27°28	26°51	22°29	29° 8	15°35	14° 9	27°51	28°54	F 5
S 6	20 57 58	13°20'44	7♂24	6°12	15°28	21°17	5° 0	27°24	26°49	22°27	29° 9	15°25	14° 6	27°58	28°51	S 6
S 7	21 1 55	14°18'17	20°35	7°40	16°40	21°56	5° 4	27°20	26°47	22°26	29°11	15°16	14° 3	28° 4	28°48	S 7
M 8	21 5 51	15°15'52	3°V25	9° 7	17°53	22°35	5° 7	27°16	26°44	22°24	29°12	15° 8	14° 0	28°11	28°45	M 8
T 9	21 9 48	16°13'27	15°54	10°32	19° 5	23°14	5°10	27°12	26°42	22°23	29°13	15° 1	13°56	28°18	28°42	T 9
W 10	21 13 45	17°11'05	28° 7	11°55	20°18	23°53	5°14	27° 8	26°40	22°21	29°14	14°57	13°53	28°24	28°40	W 10
T 11	21 17 41	18° 8'44	10♂ 6	13°16	21°30	24°32	5°16	27° 4	26°37	22°20	29°15	14°55	13°50	28°31	28°37	T 11
F 12	21 21 38	19° 6'24	21°57	14°35	22°43	25°10	5°19	27° 0	26°35	22°19	29°16	14°D55	13°47	28°38	28°34	F 12
S 13	21 25 34	20° 4'06	3♂46	15°53	23°55	25°49	5°22	26°56	26°33	22°17	29°17	14°55	13°44	28°44	28°31	S 13
S 14	21 29 31	21° 1'50	15°37	17° 9	25° 8	26°28	5°24	26°52	26°30	22°16	29°18	14°R56	13°41	28°51	28°28	S 14
M 15	21 33 27	21°59'36	27°36	18°23	26°21	27° 6	5°26	26°48	26°28	22°14	29°19	14°55	13°37	28°58	28°25	M 15
T 16	21 37 24	22°57'23	9♂47	19°35	27°34	27°45	5°28	26°44	26°26	22°13	29°20	14°52	13°34	29° 4	28°22	T 16
W 17	21 41 20	23°55'11	22°14	20°45	28°47	28°23	5°30	26°41	26°23	22°12	29°21	14°47	13°31	29°11	28°19	W 17
T 18	21 45 17	24°53'02	4♂59	21°52	29°59	29° 2	5°31	26°37	26°21	22°10	29°22	14°39	13°28	29°18	28°16	T 18
F 19	21 49 14	25°50'53	18° 4	22°58	1♂12	29°40	5°33	26°33	26°18	22° 9	29°22	14°29	13°25	29°24	28°13	F 19
S 20	21 53 10	26°48'47	1♂26	24° 1	2°25	0♂19	5°34	26°30	26°16	22° 8	29°23	14°18	13°22	29°31	28°10	S 20
S 21	21 57 7	27°46'41	15° 6	25° 1	3°39	0°57	5°35	26°26	26°14	22° 7	29°24	14° 6	13°18	29°38	28° 7	S 21
M 22	22 1 3	28°44'37	28°58	25°59	4°52	1°36	5°35	26°23	26°11	22° 5	29°25	13°56	13°15	29°44	28° 4	M 22
T 23	22 5 0	29°42'35	12♂59	26°54	6° 5	2°14	5°36	26°19	26° 9	22° 4	29°26	13°47	13°12	29°51	28° 1	T 23
W 24	22 8 56	0♂40'34	27° 5	27°47	7°18	2°52	5°36	26°16	26° 6	22° 3	29°27	13°41	13° 9	29°57	27°58	W 24
T 25	22 12 53	1°38'34	11♂14	28°36	8°31	3°31	5°R36	26°13	26° 4	22° 2	29°27	13°38	13° 6	0♂ 4	27°55	T 25
F 26	22 16 49	2°36'36	25°23	29°22	9°45	4° 9	5°36	26°10	26° 2	22° 1	29°28	13°36	13° 2	0°11	27°52	F 26
S 27	22 20 46	3°34'39	9♂30	0♂ 4	10°58	4°47	5°36	26° 7	25°59	22° 0	29°29	13°36	12°59	0°17	27°49	S 27
S 28	22 24 43	4°32'43	23°35	0°43	12°11	5°25	5°36	26° 4	25°57	21°58	29°30	13°36	12°56	0°24	27°46	S 28
M 29	22 28 39	5°30'49	7♂36	1°17	13°25	6° 3	5°35	26° 1	25°55	21°57	29°30	13°35	12°53	0°31	27°43	M 29
T 30	22 32 36	6°28'56	21°33	1°47	14°38	6°41	5°34	25°58	25°52	21°56	29°31	13°31	12°50	0°37	27°40	T 30
W 31	22 36 32	7♂27'05	5♂23	2♂13	15♂52	7♂19	5♂33	25♂55	25♂50	21♂55	29♂32	13♂24	12♂47	0♂44	27♂37	W 31

Delta T = 31.31 sec

Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1667

## geocentric

SEPTEMBER 1667 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	22 40 29	8 <sup>h</sup> 25'15"	19 <sup>h</sup> 55'	2 <sup>h</sup> 34'	17 <sup>h</sup> 05'	7 <sup>h</sup> 05'	5 <sup>h</sup> 32'	25 <sup>h</sup> 53'	25 <sup>h</sup> 48'	21 <sup>h</sup> 54'	29 <sup>h</sup> 32'	13 <sup>h</sup> 14'	12 <sup>h</sup> 43'	0 <sup>h</sup> 51'	27 <sup>h</sup> 34'	T 1
F 2	22 44 25	9 <sup>h</sup> 23'27"	2 <sup>h</sup> 34'	2 <sup>h</sup> 50'	18 <sup>h</sup> 19'	8 <sup>h</sup> 35'	5 <sup>h</sup> 30'	25 <sup>h</sup> 50'	25 <sup>h</sup> 45'	21 <sup>h</sup> 53'	29 <sup>h</sup> 33'	13 <sup>h</sup> 13'	12 <sup>h</sup> 40'	0 <sup>h</sup> 57'	27 <sup>h</sup> 31'	F 2
S 3	22 48 22	10 <sup>h</sup> 21'41"	15 <sup>h</sup> 49'	3 <sup>h</sup> 0'	19 <sup>h</sup> 33'	9 <sup>h</sup> 13'	5 <sup>h</sup> 29'	25 <sup>h</sup> 47'	25 <sup>h</sup> 43'	21 <sup>h</sup> 52'	29 <sup>h</sup> 34'	12 <sup>h</sup> 50'	12 <sup>h</sup> 37'	1 <sup>h</sup> 4'	27 <sup>h</sup> 28'	S 3
S 4	22 52 18	11 <sup>h</sup> 19'56"	28 <sup>h</sup> 47'	3 <sup>h</sup> 5'	20 <sup>h</sup> 46'	9 <sup>h</sup> 51'	5 <sup>h</sup> 27'	25 <sup>h</sup> 45'	25 <sup>h</sup> 41'	21 <sup>h</sup> 51'	29 <sup>h</sup> 34'	12 <sup>h</sup> 37'	12 <sup>h</sup> 34'	1 <sup>h</sup> 11'	27 <sup>h</sup> 25'	S 4
M 5	22 56 15	12 <sup>h</sup> 18'13"	11 <sup>h</sup> 28'	3 <sup>h</sup> 3'	22 <sup>h</sup> 0'	10 <sup>h</sup> 29'	5 <sup>h</sup> 25'	25 <sup>h</sup> 43'	25 <sup>h</sup> 38'	21 <sup>h</sup> 51'	29 <sup>h</sup> 35'	12 <sup>h</sup> 26'	12 <sup>h</sup> 31'	1 <sup>h</sup> 17'	27 <sup>h</sup> 22'	M 5
T 6	23 0 11	13 <sup>h</sup> 16'33"	23 <sup>h</sup> 53'	2 <sup>h</sup> 55'	23 <sup>h</sup> 14'	11 <sup>h</sup> 7'	5 <sup>h</sup> 23'	25 <sup>h</sup> 40'	25 <sup>h</sup> 36'	21 <sup>h</sup> 50'	29 <sup>h</sup> 35'	12 <sup>h</sup> 17'	12 <sup>h</sup> 28'	1 <sup>h</sup> 24'	27 <sup>h</sup> 20'	T 6
W 7	23 4 8	14 <sup>h</sup> 14'54"	6 <sup>h</sup> 2'	2 <sup>h</sup> 41'	24 <sup>h</sup> 28'	11 <sup>h</sup> 45'	5 <sup>h</sup> 20'	25 <sup>h</sup> 38'	25 <sup>h</sup> 34'	21 <sup>h</sup> 49'	29 <sup>h</sup> 36'	12 <sup>h</sup> 10'	12 <sup>h</sup> 24'	1 <sup>h</sup> 31'	27 <sup>h</sup> 17'	W 7
T 8	23 8 5	15 <sup>h</sup> 13'17"	18 <sup>h</sup> 0'	2 <sup>h</sup> 20'	25 <sup>h</sup> 42'	12 <sup>h</sup> 22'	5 <sup>h</sup> 18'	25 <sup>h</sup> 36'	25 <sup>h</sup> 32'	21 <sup>h</sup> 48'	29 <sup>h</sup> 36'	12 <sup>h</sup> 6'	12 <sup>h</sup> 21'	1 <sup>h</sup> 37'	27 <sup>h</sup> 14'	T 8
F 9	23 12 1	16 <sup>h</sup> 11'43"	29 <sup>h</sup> 50'	1 <sup>h</sup> 52'	26 <sup>h</sup> 56'	13 <sup>h</sup> 0'	5 <sup>h</sup> 15'	25 <sup>h</sup> 34'	25 <sup>h</sup> 30'	21 <sup>h</sup> 47'	29 <sup>h</sup> 37'	12 <sup>h</sup> 5'	12 <sup>h</sup> 18'	1 <sup>h</sup> 44'	27 <sup>h</sup> 11'	F 9
S 10	23 15 58	17 <sup>h</sup> 10'10"	11 <sup>h</sup> 38'	1 <sup>h</sup> 17'	28 <sup>h</sup> 10'	13 <sup>h</sup> 38'	5 <sup>h</sup> 12'	25 <sup>h</sup> 32'	25 <sup>h</sup> 27'	21 <sup>h</sup> 46'	29 <sup>h</sup> 37'	12 <sup>h</sup> 4'	12 <sup>h</sup> 15'	1 <sup>h</sup> 50'	27 <sup>h</sup> 8'	S 10
S 11	23 19 54	18 <sup>h</sup> 8'40"	23 <sup>h</sup> 29'	0 <sup>h</sup> 36'	29 <sup>h</sup> 24'	14 <sup>h</sup> 16'	5 <sup>h</sup> 9'	25 <sup>h</sup> 30'	25 <sup>h</sup> 25'	21 <sup>h</sup> 46'	29 <sup>h</sup> 38'	12 <sup>h</sup> 4'	12 <sup>h</sup> 12'	1 <sup>h</sup> 57'	27 <sup>h</sup> 6'	S 11
M12	23 23 51	19 <sup>h</sup> 7'12"	5 <sup>h</sup> 28'	29 <sup>h</sup> 49'	0 <sup>h</sup> 38'	14 <sup>h</sup> 53'	5 <sup>h</sup> 5'	25 <sup>h</sup> 28'	25 <sup>h</sup> 23'	21 <sup>h</sup> 45'	29 <sup>h</sup> 38'	12 <sup>h</sup> 3'	12 <sup>h</sup> 8'	2 <sup>h</sup> 4'	27 <sup>h</sup> 3'	M12
T 13	23 27 47	20 <sup>h</sup> 5'47"	17 <sup>h</sup> 41'	28 <sup>h</sup> 57'	1 <sup>h</sup> 52'	15 <sup>h</sup> 31'	5 <sup>h</sup> 2'	25 <sup>h</sup> 27'	25 <sup>h</sup> 21'	21 <sup>h</sup> 44'	29 <sup>h</sup> 39'	12 <sup>h</sup> 1'	12 <sup>h</sup> 5'	2 <sup>h</sup> 10'	27 <sup>h</sup> 0'	T 13
W14	23 31 44	21 <sup>h</sup> 4'23"	0 <sup>h</sup> 13'	27 <sup>h</sup> 59'	3 <sup>h</sup> 6'	16 <sup>h</sup> 8'	4 <sup>h</sup> 58'	25 <sup>h</sup> 25'	25 <sup>h</sup> 19'	21 <sup>h</sup> 44'	29 <sup>h</sup> 39'	11 <sup>h</sup> 56'	12 <sup>h</sup> 2'	2 <sup>h</sup> 17'	26 <sup>h</sup> 58'	W14
T 15	23 35 40	22 <sup>h</sup> 3'02"	13 <sup>h</sup> 6'	26 <sup>h</sup> 58'	4 <sup>h</sup> 20'	16 <sup>h</sup> 46'	4 <sup>h</sup> 54'	25 <sup>h</sup> 24'	25 <sup>h</sup> 17'	21 <sup>h</sup> 43'	29 <sup>h</sup> 39'	11 <sup>h</sup> 48'	11 <sup>h</sup> 59'	2 <sup>h</sup> 24'	26 <sup>h</sup> 55'	T 15
F 16	23 39 37	23 <sup>h</sup> 1'42"	26 <sup>h</sup> 23'	25 <sup>h</sup> 54'	5 <sup>h</sup> 34'	17 <sup>h</sup> 24'	4 <sup>h</sup> 50'	25 <sup>h</sup> 22'	25 <sup>h</sup> 15'	21 <sup>h</sup> 43'	29 <sup>h</sup> 40'	11 <sup>h</sup> 38'	11 <sup>h</sup> 56'	2 <sup>h</sup> 30'	26 <sup>h</sup> 52'	F 16
S 17	23 43 34	24 <sup>h</sup> 0'25"	10 <sup>h</sup> 4'	24 <sup>h</sup> 49'	6 <sup>h</sup> 49'	18 <sup>h</sup> 1'	4 <sup>h</sup> 45'	25 <sup>h</sup> 21'	25 <sup>h</sup> 13'	21 <sup>h</sup> 42'	29 <sup>h</sup> 40'	11 <sup>h</sup> 27'	11 <sup>h</sup> 53'	2 <sup>h</sup> 37'	26 <sup>h</sup> 50'	S 17
S 18	23 47 30	24 <sup>h</sup> 59'10"	24 <sup>h</sup> 5'	23 <sup>h</sup> 45'	8 <sup>h</sup> 3'	18 <sup>h</sup> 38'	4 <sup>h</sup> 41'	25 <sup>h</sup> 20'	25 <sup>h</sup> 11'	21 <sup>h</sup> 41'	29 <sup>h</sup> 40'	11 <sup>h</sup> 15'	11 <sup>h</sup> 49'	2 <sup>h</sup> 44'	26 <sup>h</sup> 47'	S 18
M19	23 51 27	25 <sup>h</sup> 57'56"	8 <sup>h</sup> 23'	22 <sup>h</sup> 42'	9 <sup>h</sup> 17'	19 <sup>h</sup> 16'	4 <sup>h</sup> 36'	25 <sup>h</sup> 19'	25 <sup>h</sup> 9'	21 <sup>h</sup> 41'	29 <sup>h</sup> 40'	11 <sup>h</sup> 4'	11 <sup>h</sup> 46'	2 <sup>h</sup> 50'	26 <sup>h</sup> 45'	M19
T 20	23 55 23	26 <sup>h</sup> 56'45"	22 <sup>h</sup> 50'	21 <sup>h</sup> 44'	10 <sup>h</sup> 32'	19 <sup>h</sup> 53'	4 <sup>h</sup> 31'	25 <sup>h</sup> 18'	25 <sup>h</sup> 7'	21 <sup>h</sup> 41'	29 <sup>h</sup> 41'	10 <sup>h</sup> 55'	11 <sup>h</sup> 43'	2 <sup>h</sup> 57'	26 <sup>h</sup> 42'	T 20
W21	23 59 20	27 <sup>h</sup> 55'36"	7 <sup>h</sup> 12'	20 <sup>h</sup> 50'	11 <sup>h</sup> 46'	20 <sup>h</sup> 31'	4 <sup>h</sup> 26'	25 <sup>h</sup> 17'	25 <sup>h</sup> 5'	21 <sup>h</sup> 40'	29 <sup>h</sup> 41'	10 <sup>h</sup> 49'	11 <sup>h</sup> 40'	3 <sup>h</sup> 4'	26 <sup>h</sup> 40'	W21
T 22	0 3 16	28 <sup>h</sup> 54'28"	21 <sup>h</sup> 50'	20 <sup>h</sup> 3'	13 <sup>h</sup> 1'	21 <sup>h</sup> 8'	4 <sup>h</sup> 21'	25 <sup>h</sup> 16'	25 <sup>h</sup> 3'	21 <sup>h</sup> 40'	29 <sup>h</sup> 41'	10 <sup>h</sup> 45'	11 <sup>h</sup> 37'	3 <sup>h</sup> 10'	26 <sup>h</sup> 37'	T 22
F 23	0 7 13	29 <sup>h</sup> 53'22"	6 <sup>h</sup> 13'	19 <sup>h</sup> 24'	14 <sup>h</sup> 15'	21 <sup>h</sup> 45'	4 <sup>h</sup> 16'	25 <sup>h</sup> 15'	25 <sup>h</sup> 1'	21 <sup>h</sup> 39'	29 <sup>h</sup> 41'	10 <sup>h</sup> D44'	11 <sup>h</sup> 33'	3 <sup>h</sup> 17'	26 <sup>h</sup> 35'	F 23
S 24	0 11 9	0 <sup>h</sup> 52'18"	20 <sup>h</sup> 25'	18 <sup>h</sup> 54'	15 <sup>h</sup> 30'	22 <sup>h</sup> 22'	4 <sup>h</sup> 10'	25 <sup>h</sup> 15'	24 <sup>h</sup> 59'	21 <sup>h</sup> 39'	29 <sup>h</sup> 41'	10 <sup>h</sup> 44'	11 <sup>h</sup> 30'	3 <sup>h</sup> 24'	26 <sup>h</sup> 33'	S 24
S 25	0 15 6	1 <sup>h</sup> 51'16"	4 <sup>h</sup> 38'	18 <sup>h</sup> 33'	16 <sup>h</sup> 44'	22 <sup>h</sup> 59'	4 <sup>h</sup> 4'	25 <sup>h</sup> 14'	24 <sup>h</sup> 58'	21 <sup>h</sup> 39'	29 <sup>h</sup> 42'	10 <sup>h</sup> R44'	11 <sup>h</sup> 27'	3 <sup>h</sup> 30'	26 <sup>h</sup> 30'	S 25
M26	0 19 3	2 <sup>h</sup> 50'16"	18 <sup>h</sup> 19'	18 <sup>h</sup> D23'	17 <sup>h</sup> 59'	23 <sup>h</sup> 37'	3 <sup>h</sup> 59'	25 <sup>h</sup> 14'	24 <sup>h</sup> 56'	21 <sup>h</sup> 38'	29 <sup>h</sup> 42'	10 <sup>h</sup> 43'	11 <sup>h</sup> 24'	3 <sup>h</sup> 37'	26 <sup>h</sup> 28'	M26
T 27	0 22 59	3 <sup>h</sup> 49'17"	1 <sup>h</sup> 59'	18 <sup>h</sup> 23'	19 <sup>h</sup> 13'	24 <sup>h</sup> 14'	3 <sup>h</sup> 53'	25 <sup>h</sup> 14'	24 <sup>h</sup> 54'	21 <sup>h</sup> 38'	29 <sup>h</sup> 42'	10 <sup>h</sup> 40'	11 <sup>h</sup> 21'	3 <sup>h</sup> 43'	26 <sup>h</sup> 26'	T 27
W28	0 26 56	4 <sup>h</sup> 48'20"	15 <sup>h</sup> 27'	18 <sup>h</sup> 34'	20 <sup>h</sup> 28'	24 <sup>h</sup> 51'	3 <sup>h</sup> 46'	25 <sup>h</sup> 13'	24 <sup>h</sup> 53'	21 <sup>h</sup> 38'	29 <sup>h</sup> 42'	10 <sup>h</sup> 34'	11 <sup>h</sup> 18'	3 <sup>h</sup> 50'	26 <sup>h</sup> 24'	W28
T 29	0 30 52	5 <sup>h</sup> 47'25"	28 <sup>h</sup> 45'	18 <sup>h</sup> 54'	21 <sup>h</sup> 43'	25 <sup>h</sup> 28'	3 <sup>h</sup> 40'	25 <sup>h</sup> 13'	24 <sup>h</sup> 51'	21 <sup>h</sup> 38'	29 <sup>h</sup> 42'	10 <sup>h</sup> 26'	11 <sup>h</sup> 14'	3 <sup>h</sup> 57'	26 <sup>h</sup> 22'	T 29
F 30	0 34 49	6 <sup>h</sup> 46'31"	11 <sup>h</sup> 51'	19 <sup>h</sup> 24'	22 <sup>h</sup> 57'	26 <sup>h</sup> 05'	3 <sup>h</sup> 34'	25 <sup>h</sup> D13'	24 <sup>h</sup> 49'	21 <sup>h</sup> 38'	29 <sup>h</sup> R42'	10 <sup>h</sup> II16'	11 <sup>h</sup> II11'	4 <sup>h</sup> II 3'	26 <sup>h</sup> 20'	F 30

Delta T = 31.25 sec

Greg. Calendar

OCTOBER 1667 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	0 38 45	7 <sup>h</sup> 45'39"	24 <sup>h</sup> 45'	20 <sup>h</sup> 4'	24 <sup>h</sup> 12'	26 <sup>h</sup> 04'	3 <sup>h</sup> R27'	25 <sup>h</sup> 31'	24 <sup>h</sup> R48'	21 <sup>h</sup> R38'	29 <sup>h</sup> R42'	10 <sup>h</sup> R 5'	11 <sup>h</sup> II 8'	4 <sup>h</sup> II10'	26 <sup>h</sup> R18'	S 1
S 2	0 42 42	8 <sup>h</sup> 44'50"	7 <sup>h</sup> 25'	20 <sup>h</sup> 52'	25 <sup>h</sup> 27'	27 <sup>h</sup> 19'	3 <sup>h</sup> 21'	25 <sup>h</sup> 13'	24 <sup>h</sup> 46'	21 <sup>h</sup> 38'	29 <sup>h</sup> II42'	9 <sup>h</sup> II54'	11 <sup>h</sup> 5'	4 <sup>h</sup> 17'	26 <sup>h</sup> 16'	S 2
M 3	0 46 38	9 <sup>h</sup> 44'02"	19 <sup>h</sup> 52'	21 <sup>h</sup> 48'	26 <sup>h</sup> 42'	27 <sup>h</sup> 55'	3 <sup>h</sup> 14'	25 <sup>h</sup> 14'	24 <sup>h</sup> 45'	21 <sup>h</sup> 38'	29 <sup>h</sup> 42'	9 <sup>h</sup> 44'	11 <sup>h</sup> 2'	4 <sup>h</sup> 23'	26 <sup>h</sup> 14'	M 3
T 4	0 50 35	10 <sup>h</sup> 43'17"	2 <sup>h</sup> 7'	22 <sup>h</sup> 52'	27 <sup>h</sup> 56'	28 <sup>h</sup> 32'	3 <sup>h</sup> 7'	25 <sup>h</sup> 14'	24 <sup>h</sup> 43'	21 <sup>h</sup> D38'	29 <sup>h</sup> 42'	9 <sup>h</sup> 35'	10 <sup>h</sup> 59'	4 <sup>h</sup> 30'	26 <sup>h</sup> 12'	T 4
W 5	0 54 32	11 <sup>h</sup> 42'34"	14 <sup>h</sup> 10'	24 <sup>h</sup> 2'	29 <sup>h</sup> 11'	29 <sup>h</sup> 9'	3 <sup>h</sup> 0'	25 <sup>h</sup> 15'	24 <sup>h</sup> 42'	21 <sup>h</sup> 38'	29 <sup>h</sup> 41'	9 <sup>h</sup> 30'	10 <sup>h</sup> 55'	4 <sup>h</sup> 37'	26 <sup>h</sup> 10'	W 5
T 6	0 58 28	12 <sup>h</sup> 41'53"	26 <sup>h</sup> 4'	25 <sup>h</sup> 17'	0 <sup>h</sup> 26'	29 <sup>h</sup> 46'	2 <sup>h</sup> 53'	25 <sup>h</sup> 15'	24 <sup>h</sup> 41'	21 <sup>h</sup> 38'	29 <sup>h</sup> 41'	9 <sup>h</sup> 27'	10 <sup>h</sup> 52'	4 <sup>h</sup> 43'	26 <sup>h</sup> 8'	T 6
F 7	1 2 25	13 <sup>h</sup> 41'14"	7 <sup>h</sup> II52'	26 <sup>h</sup> 38'	1 <sup>h</sup> 41'	0 <sup>h</sup> 23'	2 <sup>h</sup> 45'	25 <sup>h</sup> 16'	24 <sup>h</sup> 39'	21 <sup>h</sup> 38'	29 <sup>h</sup> 41'	9 <sup>h</sup> D25'	10 <sup>h</sup> 49'	4 <sup>h</sup> 50'	26 <sup>h</sup> 7'	F 7
S 8	1 6 21	14 <sup>h</sup> 40'38"	19 <sup>h</sup> 39'	28 <sup>h</sup> 2'	2 <sup>h</sup> 56'	0 <sup>h</sup> 59'	2 <sup>h</sup> 38'	25 <sup>h</sup> 17'	24 <sup>h</sup> 38'	21 <sup>h</sup> 38'	29 <sup>h</sup> 41'	9 <sup>h</sup> 26'	10 <sup>h</sup> 46'	4 <sup>h</sup> 57'	26 <sup>h</sup> 5'	S 8
S 9	1 10 18	15 <sup>h</sup> 40'04"	1 <sup>h</sup> 28'	29 <sup>h</sup> 31'	4 <sup>h</sup> 11'	1 <sup>h</sup> 36'	2 <sup>h</sup> 31'	25 <sup>h</sup> 18'	24 <sup>h</sup> 37'	21 <sup>h</sup> 38'	29 <sup>h</sup> 41'	9 <sup>h</sup> 27'	10 <sup>h</sup> 43'	5 <sup>h</sup> 3'	26 <sup>h</sup> 3'	S 9
M10	1 14 14	16 <sup>h</sup> 39'32"	13 <sup>h</sup> 26'	1 <sup>h</sup> 2'	5 <sup>h</sup> 26'	2 <sup>h</sup> 13'	2 <sup>h</sup> 23'	25 <sup>h</sup> 18'	24 <sup>h</sup> 36'	21 <sup>h</sup> 38'	29 <sup>h</sup> 41'	9 <sup>h</sup> R28'	10 <sup>h</sup> 39'	5 <sup>h</sup> 10'	26 <sup>h</sup> 2'	M10
T 11	1 18 11	17 <sup>h</sup> 39'03"	25 <sup>h</sup> 38'	2 <sup>h</sup> 36'	6 <sup>h</sup> 41'	2 <sup>h</sup> 49'	2 <sup>h</sup> 16'	25 <sup>h</sup> 20'	24 <sup>h</sup> 34'	21 <sup>h</sup> 38'	29 <sup>h</sup> 40'	9 <sup>h</sup> 27'	10 <sup>h</sup> 36'	5 <sup>h</sup> 16'	26 <sup>h</sup> 0'	T 11
W12	1 22 7	18 <sup>h</sup> 38'35"	8 <sup>h</sup> 08'	4 <sup>h</sup> 12'	7 <sup>h</sup> 56'	3 <sup>h</sup> 26'	2 <sup>h</sup> 8'	25 <sup>h</sup> 21'	24 <sup>h</sup> 33'	21 <sup>h</sup> 39'	29 <sup>h</sup> 40'	9 <sup>h</sup> 25'	10 <sup>h</sup> 33'	5 <sup>h</sup> 23'	25 <sup>h</sup> 59'	W12
T 13	1 26 4	19 <sup>h</sup> 38'11"	21 <sup>h</sup> 1'	5 <sup>h</sup> 50'	9 <sup>h</sup> 11'	4 <sup>h</sup> 2'	2 <sup>h</sup> 0'	25 <sup>h</sup> 22'	24 <sup>h</sup> 32'	21 <sup>h</sup> 39'	29 <sup>h</sup> 40'	9 <sup>h</sup> 21'	10 <sup>h</sup> 30'	5 <sup>h</sup> 30'	25 <sup>h</sup> 57'	T 13
F 14	1 30 1	20 <sup>h</sup> 37'48"	4 <sup>h</sup> 21'	7 <sup>h</sup> 29'	10 <sup>h</sup> 26'	4 <sup>h</sup> 39'	1 <sup>h</sup> 52'	25 <sup>h</sup> 23'	24 <sup>h</sup> 31'	21 <sup>h</sup> 39'	29 <sup>h</sup> 40'	9 <sup>h</sup> 15'	10 <sup>h</sup> 27'	5 <sup>h</sup> 36'	25 <sup>h</sup> 56'	F 14
S 15	1 33 57	21 <sup>h</sup> 37'28"	18 <sup>h</sup> 7'	9 <sup>h</sup> 8'	11 <sup>h</sup> 41'	5 <sup>h</sup> 15'	1 <sup>h</sup> 44'	25 <sup>h</sup> 25'	24 <sup>h</sup> 30'	21 <sup>h</sup> 40'	29 <sup>h</sup> 39'	9 <sup>h</sup> 8'	10 <sup>h</sup> 24'	5 <sup>h</sup> 43'	25 <sup>h</sup> 55'	S 15
S 16	1 37 54	22 <sup>h</sup> 37'09"	2 <sup>h</sup> 20'	10 <sup>h</sup> 49'	12 <sup>h</sup> 56'	5 <sup>h</sup> 51'	1 <sup>h</sup> 36'	25 <sup>h</sup> 26'	24 <sup>h</sup> 29'	21 <sup>h</sup> 40'	29 <sup>h</sup> 39'	9 <sup>h</sup> 0'	10 <sup>h</sup> 20'	5 <sup>h</sup> 50'	25 <sup>h</sup> 53'	S 16

ASTRODIENST EPHEMERIS for the year 1667  
geocentric

NOVEMBER 1667 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	2 40 58	8♉36'26	10♈43	7♉32	3♉0	15♉27	29°R27	26♈5	24°R21	21♈51	29°R30	8°R12	9♉30	7♉36	25°R41	T 1
W 2	2 44 55	9°36'38	22°38	9°9	4°15	16°2	29°Y19	26°8	24°≈21	21°52	29°R30	8°R9	9°26	7°43	25°≈41	W 2
T 3	2 48 52	10°36'51	4♉28	10°46	5°30	16°38	29°11	26°11	24°D21	21°53	29°29	8°D8	9°23	7°49	25°41	T 3
F 4	2 52 48	11°37'07	16°15	12°22	6°46	17°13	29°4	26°15	24°21	21°54	29°28	8°8	9°20	7°56	25°41	F 4
S 5	2 56 45	12°37'25	28°2	13°58	8°1	17°49	28°56	26°18	24°21	21°55	29°27	8°9	9°17	8°3	25°D40	S 5
S 6	3 0 41	13°37'44	9♉52	15°34	9°16	18°24	28°48	26°22	24°21	21°56	29°27	8°11	9°14	8°9	25°40	S 6
M 7	3 4 38	14°38'05	21°50	17°10	10°32	18°59	28°41	26°25	24°21	21°57	29°26	8°13	9°11	8°16	25°41	M 7
T 8	3 8 34	15°38'29	4♉0	18°45	11°47	19°35	28°33	26°29	24°21	21°58	29°25	8°14	9°7	8°23	25°41	T 8
W 9	3 12 31	16°38'54	16°27	20°19	13°2	20°10	28°26	26°33	24°22	22°0	29°24	8°R15	9°4	8°29	25°41	W 9
T 10	3 16 28	17°39'21	29°15	21°54	14°18	20°45	28°19	26°37	24°22	22°1	29°23	8°14	9°1	8°36	25°41	T 10
F 11	3 20 24	18°39'50	12♉28	23°28	15°33	21°20	28°11	26°41	24°22	22°2	29°22	8°13	8°58	8°42	25°41	F 11
S 12	3 24 21	19°40'21	26°9	25°2	16°49	21°55	28°4	26°45	24°23	22°3	29°22	8°11	8°55	8°49	25°42	S 12
S 13	3 28 17	20°40'53	10♉17	26°36	18°4	22°30	27°57	26°49	24°23	22°5	29°21	8°8	8°51	8°56	25°42	S 13
M14	3 32 14	21°41'28	24°52	28°9	19°20	23°5	27°51	26°53	24°24	22°6	29°20	8°6	8°48	9°2	25°43	M14
T 15	3 36 10	22°42'04	9♉46	29°43	20°35	23°40	27°44	26°57	24°24	22°7	29°19	8°4	8°45	9°9	25°43	T 15
W16	3 40 7	23°42'41	24°54	1♉16	21°50	24°15	27°37	27°1	24°25	22°9	29°18	8°3	8°42	9°16	25°44	W16
T 17	3 44 3	24°43'21	10♉6	2°49	23°6	24°49	27°31	27°6	24°25	22°10	29°17	8°D3	8°39	9°22	25°45	T 17
F 18	3 48 0	25°44'01	25°11	4°21	24°21	25°24	27°25	27°10	24°26	22°11	29°16	8°3	8°36	9°29	25°45	F 18
S 19	3 51 57	26°44'43	10♈2	5°54	25°37	25°59	27°18	27°15	24°27	22°13	29°15	8°4	8°32	9°36	25°46	S 19
S 20	3 55 53	27°45'26	24°32	7°26	26°52	26°33	27°12	27°20	24°28	22°14	29°14	8°5	8°29	9°42	25°47	S 20
M21	3 59 50	28°46'10	8≈38	8°59	28°8	27°8	27°7	27°24	24°29	22°16	29°13	8°6	8°26	9°49	25°48	M21
T 22	4 3 46	29°46'55	22°19	10°31	29°23	27°42	27°1	27°29	24°30	22°17	29°12	8°6	8°23	9°56	25°49	T 22
W23	4 7 43	0♉47'41	5♈36	12°2	0♉39	28°16	26°55	27°34	24°31	22°19	29°11	8°R6	8°20	10°2	25°50	W23
T 24	4 11 39	1°48'28	18°32	13°34	1°54	28°50	26°50	27°39	24°32	22°21	29°10	8°6	8°17	10°9	25°51	T 24
F 25	4 15 36	2°49'16	1°Y8	15°6	3°10	29°25	26°45	27°44	24°33	22°22	29°9	8°5	8°13	10°16	25°52	F 25
S 26	4 19 32	3°50'05	13°29	16°37	4°25	29°59	26°40	27°49	24°34	22°24	29°8	8°5	8°10	10°22	25°53	S 26
S 27	4 23 29	4°50'55	25°39	18°8	5°41	0♉33	26°35	27°54	24°35	22°25	29°7	8°4	8°7	10°29	25°55	S 27
M28	4 27 26	5°51'46	7♈39	19°39	6°56	1°7	26°30	27°59	24°36	22°27	29°6	8°4	8°4	10°35	25°56	M28
T 29	4 31 22	6°52'38	19°32	21°9	8°12	1°41	26°26	28°5	24°37	22°29	29°5	8°4	8°1	10°42	25°58	T 29
W30	4 35 19	7♉53'31	1♉22	22♉40	9♉27	2♉14	26°Y22	28♈10	24≈39	22♈31	29°R3	8°D4	7♉57	10♉49	25≈59	W30

Delta T = 31.14 sec

Greg. Calendar

DECEMBER 1667 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	4 39 15	8♉54'24	13♉10	24♉9	10♉42	2♉48	26°R17	28♈16	24≈40	22♈32	29°R2	8°R4	7♉54	10♉55	26≈1	T 1
F 2	4 43 12	9°55'19	24°58	25°39	11°58	3°22	26°Y14	28°21	24°42	22°34	29°R1	8°R4	7°51	11°2	26°2	F 2
S 3	4 47 8	10°56'16	6♉48	27°8	13°13	3°55	26°10	28°27	24°43	22°36	29°0	8°3	7°48	11°9	26°4	S 3
S 4	4 51 5	11°57'13	18°44	28°36	14°29	4°29	26°6	28°32	24°44	22°38	28°59	8°3	7°45	11°15	26°5	S 4
M 5	4 55 1	12°58'11	0♉47	0♈3	15°44	5°2	26°3	28°38	24°46	22°40	28°58	8°2	7°42	11°22	26°7	M 5
T 6	4 58 58	13°59'10	13°1	1°30	17°0	5°35	26°0	28°43	24°48	22°41	28°57	8°2	7°38	11°29	26°9	T 6
W 7	5 2 55	15°0'11	25°28	2°56	18°15	6°9	25°57	28°49	24°49	22°43	28°55	8°1	7°35	11°35	26°11	W 7
T 8	5 6 51	16°1'12	8♉13	4°20	19°31	6°42	25°54	28°55	24°51	22°45	28°54	8°1	7°32	11°42	26°13	T 8
F 9	5 10 48	17°2'14	21°19	5°43	20°46	7°15	25°51	29°1	24°53	22°47	28°53	8°D0	7°29	11°49	26°15	F 9
S 10	5 14 44	18°3'18	4♉48	7°4	22°2	7°48	25°49	29°7	24°54	22°49	28°52	8°1	7°26	11°55	26°17	S 10
S 11	5 18 41	19°4'22	18°43	8°23	23°17	8°21	25°47	29°13	24°56	22°51	28°51	8°2	7°22	12°2	26°19	S 11
M12	5 22 37	20°5'27	3♉3	9°40	24°33	8°53	25°45	29°19	24°58	22°53	28°50	8°3	7°19	12°8	26°21	M12
T 13	5 26 34	21°6'34	17°46	10°54	25°48	9°26	25°43	29°25	25°0	22°55	28°48	8°4	7°16	12°15	26°23	T 13
W14	5 30 30	22°7'41	2♉48	12°5	27°4	9°59	25°42	29°31	25°2	22°57	28°47	8°R4	7°13	12°22	26°25	W14
T 15	5 34 27	23°8'49	17°59	13°13	28°19	10°31	25°40	29°37	25°4	22°59	28°46	8°4	7°10	12°28	26°28	T 15
F 16	5 38 24	24°9'57	3♈12	14°16	29°35	11°4	25°39	29°43	25°6	23°1	28°45	8°3	7°7	12°35	26°30	F 16
S 17	5 42 20	25°11'06	18°15	15°14	0♈50	11°36	25°38	29°50	25°8	23°3	28°44	8°1	7°3	12°42	26°32	S 17
S 18	5 46 17	26°12'16	3≈0	16°6	2°6	12°8	25°38	29°56	25°10	23°5	28°42	7°59	7°0	12°48	26°35	S 18
M19	5 50 13	27°13'25	17°22	16°52	3°21	12°40	25°37	0≈2	25°12	23°7	28°41	7°56	6°57	12°55	26°37	M19
T 20	5 54 10	28°14'34	1♈15	17°31	4°36	13°12	25°37	0°9	25°15	23°9	28°40	7°54	6°54	13°2	26°40	T 20
W21	5 58 6	29°15'44	14°41	18°1	5°52	13°44	25°D37	0°15	25°17	23°12	28°39	7°52	6°51	13°8	26°43	W21
T 22	6 2 3	0♈16'53	27°40	18°22	7°7	14°15	25°37	0°22	25°19	23°14	28°38	7°D51	6°48	13°15	26°45	T 22
F 23	6 5 59	1°18'03	10°Y16	18°33	8°23	14°47	25°37	0°28	25°22	23°16	28°36	7°52	6°44	13°22	26°48	F 23
S 24	6 9 56	2°19'12	22°33	18°R33	9°38	15°18	25°38	0°35	25°24	23°18	28°35	7°53	6°41	13°28	26°51	S 24
S 25	6 13 53	3°20'21	4♈36	18°22	10°54	15°50	25°39	0°41	25°26	23°20	28°34	7°55	6°38	13°35	26°53	S 25
M26	6 17 49	4°21'31	16°30	17°59	12°9	16°21	25°40	0°48	25°29	23°22	28°33	7°56	6°35	13°42	26°56	M26
T 27	6 21 46	5°22'40	28°18	17°25	13°24	16°52	25°41	0°55	25°31	23°24	28°31	7°58	6°32	13°48	26°59	T 27
W28	6 25 42	6°23'49	10♉5	16°38	14°40	17°23	25°42	1°1	25°34	23°27	28°30	7°R58	6°29	13°55	27°2	W28
T 29	6 29 39	7°24'58	21°53	15°42	15°55	17°54	25°44	1°8	25°36	23°29	28°29	7°57	6°25	14°1	27°5	T 29
F 30	6 33 35	8°26'07	3♈45	14°36	17°11	18°25	25°46	1°15	25°39	23°31	28°28	7°55	6°22	14°8	27°8	F 30
S 31	6 37 32	9♈27'16	15♈43	13♈22	18♈26	18♈55	25°Y48	1≈22	25≈41	23♈33	28°R27	7°R50	6°R19	14°R15	27≈11	S 31

Delta T = 31.09 sec

Greg. Calendar