



Astrodienst Ephemeris Tables for the year 1642

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 1642
geocentric

JANUARY 1642 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	6 42 40	10°38'05	8°34'6	0°R 1	11°11'10	2°12'29	14°32'32	8°13'13	11°11'9	28°11'46	1°R40	0°R 9	29°11'7	6°24'24	1°R35	W 1
T 2	6 46 37	11°49'17	24° 7	29°11'8	12°24'3	3°10'10	14°45'14	8°18'18	11°11'11	28°48'48	1°11'39	29°11'58	29° 4	6°31'31	1°11'33	T 2
F 3	6 50 34	12°50'29	9°11'17	28°25'13	3°52'52	14°58'58	8°23'23	11°14'14	28°50'50	1°38'38	29°47'47	29° 1	29° 1	6°38'38	1°30'30	F 3
S 4	6 54 30	13°51'40	24° 6	27°52'52	14°53'53	4°33'33	15°12'12	8°28'28	11°16'16	28°51'51	1°37'37	29°38'38	28°58'58	6°45'45	1°28'28	S 4
S 5	6 58 27	14°52'51	8°11'29	27°29'29	16° 8	5°15'15	15°25'25	8°33'33	11°18'18	28°53'53	1°37'37	29°31'31	28°55'55	6°51'51	1°26'26	S 5
M 6	7 2 23	15°54'01	22°21'21	27°16'16	17°22'22	5°57'57	15°39'39	8°39'39	11°20'20	28°55'55	1°36'36	29°26'26	28°51'51	6°58'58	1°23'23	M 6
T 7	7 6 20	16°55'11	5°11'43	27°D11	18°37'37	6°38'38	15°52'52	8°44'44	11°22'22	28°57'57	1°35'35	29°24'24	28°48'48	7° 5	1°21'21	T 7
W 8	7 10 16	17°56'19	18°38'38	27°16'16	19°51'51	7°20'20	16° 6	8°49'49	11°24'24	28°58'58	1°34'34	29°D24	28°45'45	7°11'11	1°19'19	W 8
T 9	7 14 13	18°57'28	18°12'12	27°28'28	21° 6	8° 2	16°19'19	8°55'55	11°26'26	29° 0	1°33'33	29°R24	28°42'42	7°18'18	1°17'17	T 9
F 10	7 18 9	19°58'35	13°27'27	27°48'48	22°20'20	8°44'44	16°33'33	9° 1	11°28'28	29° 1	1°33'33	29°23'23	28°39'39	7°25'25	1°15'15	F 10
S 11	7 22 6	20°59'42	25°31'31	28°14'14	23°35'35	9°26'26	16°46'46	9° 6	11°30'30	29° 3	1°32'32	29°21'21	28°36'36	7°32'32	1°13'13	S 11
S 12	7 26 3	22° 0'48	7°11'26	28°46'46	24°50'50	10° 7	17° 0	9°12'12	11°32'32	29° 5	1°31'31	29°16'16	28°32'32	7°38'38	1°11'11	S 12
M13	7 29 59	23° 1'53	19°17'17	29°24'24	26° 4	10°49'49	17°14'14	9°18'18	11°34'34	29° 6	1°31'31	29° 7	28°29'29	7°45'45	1° 9	M13
T 14	7 33 56	24° 2'58	1°11'8	0°11'8	27°19'19	11°31'31	17°28'28	9°24'24	11°35'35	29° 8	1°30'30	28°56'56	28°26'26	7°52'52	1° 8	T 14
W15	7 37 52	25° 4'01	13° 0	0°54'54	28°33'33	12°13'13	17°42'42	9°30'30	11°37'37	29° 9	1°29'29	28°42'42	28°23'23	7°58'58	1° 6	W15
T 16	7 41 49	26° 5'05	24°55'55	1°45'45	29°48'48	12°55'55	17°55'55	9°36'36	11°39'39	29°10'10	1°29'29	28°28'28	28°20'20	8° 5	1° 4	T 16
F 17	7 45 45	27° 6'07	6°11'54	2°40'40	1°11'3	13°37'37	18° 9	9°42'42	11°40'40	29°12'12	1°28'28	28°12'12	28°17'17	8°12'12	1° 3	F 17
S 18	7 49 42	28° 7'08	18°58'58	3°38'38	2°17'17	14°19'19	18°23'23	9°48'48	11°42'42	29°13'13	1°28'28	27°58'58	28°13'13	8°19'19	1° 1	S 18
S 19	7 53 38	29° 8'09	1°11'8	4°39'39	3°32'32	15° 1	18°37'37	9°54'54	11°43'43	29°15'15	1°27'27	27°46'46	28°10'10	8°25'25	1° 0	S 19
M20	7 57 35	0° 9'09	13°27'27	5°43'43	4°47'47	15°43'43	18°51'51	10° 0	11°45'45	29°16'16	1°27'27	27°37'37	28° 7	8°32'32	0°59'59	M20
T 21	8 1 32	1°10'09	25°55'55	6°49'49	6° 1	16°25'25	19° 5	10° 6	11°46'46	29°17'17	1°26'26	27°32'32	28° 4	8°39'39	0°57'57	T 21
W22	8 5 28	2°11'08	8°11'37	7°58'58	7°16'16	17° 8	19°20'20	10°13'13	11°47'47	29°19'19	1°26'26	27°28'28	28° 1	8°45'45	0°56'56	W22
T 23	8 9 25	3°12'06	21°34'34	9° 8	8°31'31	17°50'50	19°34'34	10°19'19	11°49'49	29°20'20	1°25'25	27°27'27	27°57'57	8°52'52	0°55'55	T 23
F 24	8 13 21	4°13'03	4°11'51	10°21'21	9°45'45	18°32'32	19°48'48	10°25'25	11°50'50	29°21'21	1°25'25	27°27'27	27°54'54	8°59'59	0°54'54	F 24
S 25	8 17 18	5°14'00	18°30'30	11°35'35	11° 0	19°14'14	20° 2	10°32'32	11°51'51	29°22'22	1°24'24	27°27'27	27°51'51	9° 6	0°53'53	S 25
S 26	8 21 14	6°14'56	2°11'33	12°50'50	12°15'15	19°56'56	20°16'16	10°38'38	11°52'52	29°23'23	1°24'24	27°25'25	27°48'48	9°12'12	0°52'52	S 26
M27	8 25 11	7°15'52	17° 1	14° 8	13°29'29	20°39'39	20°31'31	10°45'45	11°53'53	29°24'24	1°23'23	27°20'20	27°45'45	9°19'19	0°51'51	M27
T 28	8 29 7	8°16'47	1°11'3	15°26'26	14°44'44	21°21'21	20°45'45	10°51'51	11°54'54	29°26'26	1°23'23	27°13'13	27°42'42	9°26'26	0°51'51	T 28
W29	8 33 4	9°17'40	16°56'56	16°46'46	15°59'59	22° 3	20°59'59	10°58'58	11°55'55	29°27'27	1°23'23	27° 3	27°38'38	9°32'32	0°50'50	W29
T 30	8 37 1	10°18'33	2°11'7	18° 7	17°14'14	22°46'46	21°13'13	11° 5	11°56'56	29°28'28	1°22'22	26°52'52	27°35'35	9°39'39	0°49'49	T 30
F 31	8 40 57	11°19'25	17°11'14	19°11'29	18°11'28	23°11'28	21°11'28	11°11'11	11°11'57	29°11'29	1°11'22	26°11'40	27°11'32	9°11'46	0°11'49	F 31

Delta T = 48.94 sec

Greg. Calendar

FEBRUARY 1642 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	8 44 54	12°20'15	2°11'5	20°53	19°343	24°11	21°42	11°18	11°58	29°130	1°R22	26°R30	27°29	9°53	0°R48	S 1
S 2	8 48 50	13°21'04	16°33	22°17	20°58	24°53	21°56	11°25	11°58	29°31	1°1121	26°22	27°26	9°59	0°148	S 2
M 3	8 52 47	14°21'51	0°1733	23°43	22°13	25°35	22°11	11°32	11°59	29°31	1°21	26°17	27°23	10° 6	0°48	M 3
T 4	8 56 43	15°22'37	14° 4	25° 9	23°27	26°18	22°25	11°39	12° 0	29°32	1°21	26°15	27°19	10°13	0°48	T 4
W 5	9 0 40	16°23'21	27° 6	26°37	24°42	27° 1	22°40	11°46	12° 0	29°33	1°21	26°D14	27°16	10°19	0°47	W 5
T 6	9 4 36	17°24'03	9°45	28° 5	25°57	27°43	22°54	11°52	12° 1	29°34	1°21	26°14	27°13	10°26	0°D47	T 6
F 7	9 8 33	18°24'44	22° 3	29°34	27°11	28°26	23° 8	11°59	12° 1	29°35	1°20	26°R15	27°10	10°33	0°47	F 7
S 8	9 12 30	19°25'24	4°11 7	1°4	28°26	29° 8	23°23	12° 6	12° 2	29°35	1°20	26°13	27° 7	10°40	0°47	S 8
S 9	9 16 26	20°26'01	16° 3	2°36	29°41	29°51	23°37	12°13	12° 2	29°36	1°20	26°10	27° 3	10°46	0°48	S 9
M10	9 20 23	21°26'37	27°53	4° 8	0°56	0°333	23°52	12°20	12° 2	29°37	1°20	26° 4	27° 0	10°53	0°48	M10
T 11	9 24 19	22°27'11	9°44	5°41	2°10	1°16	24° 6	12°28	12° 3	29°38	1°20	25°56	26°57	11° 0	0°48	T 11
W12	9 28 16	23°27'44	21°37	7°14	3°25	1°59	24°21	12°35	12° 3	29°38	1°20	25°45	26°54	11° 7	0°48	W12
T 13	9 32 12	24°28'14	3°136	8°49	4°40	2°42	24°35	12°42	12° 3	29°39	1°20	25°33	26°51	11°13	0°49	T 13
F 14	9 36 9	25°28'43	15°43	10°25	5°54	3°24	24°49	12°49	12° 3	29°39	1°D20	25°21	26°48	11°20	0°49	F 14
S 15	9 40 5	26°29'11	27°58	12° 1	7° 9	4° 7	25° 4	12°56	12°R 3	29°40	1°20	25°10	26°44	11°27	0°50	S 15
S 16	9 44 2	27°29'36	10°122	13°39	8°24	4°50	25°18	13° 3	12° 3	29°40	1°20	25° 0	26°41	11°33	0°51	S 16
M17	9 47 59	28°30'01	22°56	15°17	9°38	5°33	25°33	13°10	12° 3	29°41	1°20	24°53	26°38	11°40	0°52	M17
T 18	9 51 55	29°30'23	5°40	16°57	10°53	6°16	25°47	13°18	12° 3	29°41	1°20	24°49	26°35	11°47	0°52	T 18
W19	9 55 52	0°130'44	18°36	18°37	12° 8	6°58	26° 2	13°25	12° 3	29°41	1°20	24°D47	26°32	11°54	0°53	W19
T 20	9 59 48	1°31'04	1°144	20°18	13°22	7°41	26°16	13°32	12° 2	29°42	1°20	24°47	26°28	12° 0	0°54	T 20
F 21	10 3 45	2°31'22	15° 6	22° 1	14°37	8°24	26°30	13°40	12° 2	29°42	1°21	24°48	26°25	12° 7	0°55	F 21
S 22	10 7 41	3°31'38	28°45	23°44	15°52	9° 7	26°45	13°47	12° 2	29°42	1°21	24°R49	26°22	12°14	0°56	S 22
S 23	10 11 38	4°31'54	12°141	25°29	17° 6	9°50	26°59	13°54	12° 1	29°43	1°21	24°49	26°19	12°20	0°58	S 23
M24	10 15 34	5°32'08	26°54	27°14	18°21	10°33	27°14	14° 1	12° 1	29°43	1°21	24°47	26°16	12°27	0°59	M24
T 25	10 19 31	6°32'20	11°123	29° 0	19°36	11°16	27°28	14° 9	12° 0	29°43	1°21	24°43	26°13	12°34	1° 0	T 25
W26	10 23 28	7°32'31	26° 3	0°148	20°50	11°59	27°42	14°16	12° 0	29°43	1°22	24°37	26° 9	12°41	1° 2	W26
T 27	10 27 24	8°32'40	10°150	2°37	22° 5	12°42	27°57	14°23	11°59	29°43	1°22	24°30	26° 6	12°47	1° 3	T 27
F 28	10 31 21	9°132'47	25°134	4°126	23°120	13°125	28°111	14°131	11°158	29°143	1°1122	24°122	26°13	12°54	1°115	F 28

ASTRODIENST EPHEMERIS for the year 1642

geocentric

MARCH 1642 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	10 35 17	10 ^h 32'52"	10 ^h 9'	6 ^h 17'	24 ^h 34'	14 ^h 9'	28 ^h 25'	14 ^h 38'	11 ^h 58'	29 ^h 43'	1 ^h 23'	24 ^h 16'	26 ^h 0'	13 ^h 1'	1 ^h 6'	S 1
S 2	10 39 14	11 ^h 32'56"	24 ^h 26'	8 ^h 9'	25 ^h 49'	14 ^h 52'	28 ^h 40'	14 ^h 46'	11 ^h 57'	29 ^h 43'	1 ^h 23'	24 ^h 11'	25 ^h 57'	13 ^h 7'	1 ^h 8'	S 2
M 3	10 43 10	12 ^h 32'57"	8 ^h 22'	10 ^h 2'	27 ^h 4'	15 ^h 35'	28 ^h 54'	14 ^h 53'	11 ^h 56'	29 ^h 43'	1 ^h 23'	24 ^h 7'	25 ^h 54'	13 ^h 14'	1 ^h 10'	M 3
T 4	10 47 7	13 ^h 32'57"	21 ^h 53'	11 ^h 55'	28 ^h 18'	16 ^h 18'	29 ^h 8'	15 ^h 0'	11 ^h 55'	29 ^h 43'	1 ^h 24'	24 ^h D 6	25 ^h 50'	13 ^h 21'	1 ^h 12'	T 4
W 5	10 51 3	14 ^h 32'54"	4 ^h 59'	13 ^h 50'	29 ^h 33'	17 ^h 1'	29 ^h 22'	15 ^h 8'	11 ^h 54'	29 ^h 43'	1 ^h 24'	24 ^h 7'	25 ^h 47'	13 ^h 28'	1 ^h 14'	W 5
T 6	10 55 0	15 ^h 32'50"	17 ^h 42'	15 ^h 46'	0 ^h 47'	17 ^h 44'	29 ^h 37'	15 ^h 15'	11 ^h 53'	29 ^h 43'	1 ^h 24'	24 ^h 8'	25 ^h 44'	13 ^h 34'	1 ^h 15'	T 6
F 7	10 58 56	16 ^h 32'43"	0 ^h 11'	17 ^h 43'	2 ^h 2'	18 ^h 28'	29 ^h 51'	15 ^h 22'	11 ^h 52'	29 ^h 43'	1 ^h 25'	24 ^h 10'	25 ^h 41'	13 ^h 41'	1 ^h 18'	F 7
S 8	11 2 53	17 ^h 32'34"	12 ^h 13'	19 ^h 40'	3 ^h 17'	19 ^h 11'	0 ^h 5'	15 ^h 30'	11 ^h 51'	29 ^h 43'	1 ^h 25'	24 ^h R11	25 ^h 38'	13 ^h 48'	1 ^h 20'	S 8
S 9	11 6 50	18 ^h 32'22"	24 ^h 11'	21 ^h 38'	4 ^h 31'	19 ^h 54'	0 ^h 19'	15 ^h 37'	11 ^h 50'	29 ^h 42'	1 ^h 26'	24 ^h 11'	25 ^h 34'	13 ^h 54'	1 ^h 22'	S 9
M10	11 10 46	19 ^h 32'09"	6 ^h 3'	23 ^h 37'	5 ^h 46'	20 ^h 37'	0 ^h 33'	15 ^h 45'	11 ^h 49'	29 ^h 42'	1 ^h 26'	24 ^h 9'	25 ^h 31'	14 ^h 1'	1 ^h 24'	M10
T 11	11 14 43	20 ^h 31'53"	17 ^h 55'	25 ^h 36'	7 ^h 0'	21 ^h 21'	0 ^h 47'	15 ^h 52'	11 ^h 47'	29 ^h 42'	1 ^h 27'	24 ^h 6'	25 ^h 28'	14 ^h 8'	1 ^h 26'	T 11
W12	11 18 39	21 ^h 31'35"	29 ^h 51'	27 ^h 36'	8 ^h 15'	22 ^h 4'	1 ^h 1'	15 ^h 59'	11 ^h 46'	29 ^h 42'	1 ^h 27'	24 ^h 2'	25 ^h 25'	14 ^h 15'	1 ^h 29'	W12
T 13	11 22 36	22 ^h 31'14"	11 ^h 14'	29 ^h 36'	9 ^h 29'	22 ^h 47'	1 ^h 15'	16 ^h 7'	11 ^h 45'	29 ^h 41'	1 ^h 28'	23 ^h 57'	25 ^h 22'	14 ^h 21'	1 ^h 31'	T 13
F 14	11 26 32	23 ^h 30'52"	24 ^h 7'	1 ^h 35'	10 ^h 44'	23 ^h 31'	1 ^h 29'	16 ^h 14'	11 ^h 44'	29 ^h 41'	1 ^h 29'	23 ^h 51'	25 ^h 19'	14 ^h 28'	1 ^h 34'	F 14
S 15	11 30 29	24 ^h 30'27"	6 ^h 33'	3 ^h 34'	11 ^h 58'	24 ^h 14'	1 ^h 43'	16 ^h 21'	11 ^h 42'	29 ^h 40'	1 ^h 29'	23 ^h 46'	25 ^h 15'	14 ^h 35'	1 ^h 36'	S 15
S 16	11 34 25	25 ^h 30'00"	19 ^h 11'	5 ^h 33'	13 ^h 13'	24 ^h 57'	1 ^h 57'	16 ^h 29'	11 ^h 41'	29 ^h 40'	1 ^h 30'	23 ^h 42'	25 ^h 12'	14 ^h 42'	1 ^h 39'	S 16
M17	11 38 22	26 ^h 29'31"	2 ^h 43'	7 ^h 30'	14 ^h 27'	25 ^h 41'	2 ^h 11'	16 ^h 36'	11 ^h 39'	29 ^h 39'	1 ^h 31'	23 ^h 39'	25 ^h 9'	14 ^h 48'	1 ^h 42'	M17
T 18	11 42 19	27 ^h 29'00"	15 ^h 9'	9 ^h 26'	15 ^h 42'	26 ^h 24'	2 ^h 24'	16 ^h 43'	11 ^h 38'	29 ^h 39'	1 ^h 31'	23 ^h 37'	25 ^h 6'	14 ^h 55'	1 ^h 44'	T 18
W19	11 46 15	28 ^h 28'27"	28 ^h 27'	11 ^h 20'	16 ^h 56'	27 ^h 8'	2 ^h 38'	16 ^h 51'	11 ^h 36'	29 ^h 38'	1 ^h 32'	23 ^h D37	25 ^h 3'	15 ^h 2'	1 ^h 47'	W19
T 20	11 50 12	29 ^h 27'52"	11 ^h 58'	13 ^h 12'	18 ^h 11'	27 ^h 51'	2 ^h 52'	16 ^h 58'	11 ^h 34'	29 ^h 38'	1 ^h 33'	23 ^h 38'	25 ^h 0'	15 ^h 8'	1 ^h 50'	T 20
F 21	11 54 8	0 ^h 27'15"	25 ^h 39'	15 ^h 1'	19 ^h 25'	28 ^h 34'	3 ^h 5'	17 ^h 5'	11 ^h 33'	29 ^h 37'	1 ^h 33'	23 ^h 39'	24 ^h 56'	15 ^h 15'	1 ^h 53'	F 21
S 22	11 58 5	1 ^h 26'37"	9 ^h 31'	16 ^h 47'	20 ^h 40'	29 ^h 18'	3 ^h 19'	17 ^h 12'	11 ^h 31'	29 ^h 37'	1 ^h 34'	23 ^h 41'	24 ^h 53'	15 ^h 22'	1 ^h 56'	S 22
S 23	12 2 1	2 ^h 25'56"	23 ^h 32'	18 ^h 30'	21 ^h 54'	0 ^h 1'	3 ^h 33'	17 ^h 20'	11 ^h 29'	29 ^h 36'	1 ^h 35'	23 ^h 42'	24 ^h 50'	15 ^h 29'	1 ^h 59'	S 23
M24	12 5 58	3 ^h 25'14"	7 ^h 34'	20 ^h 8'	23 ^h 8'	0 ^h 45'	3 ^h 46'	17 ^h 27'	11 ^h 28'	29 ^h 35'	1 ^h 36'	23 ^h R42	24 ^h 47'	15 ^h 35'	2 ^h 2'	M24
T 25	12 9 54	4 ^h 24'31"	21 ^h 57'	21 ^h 43'	24 ^h 23'	1 ^h 28'	4 ^h 0'	17 ^h 34'	11 ^h 26'	29 ^h 34'	1 ^h 36'	23 ^h 41'	24 ^h 44'	15 ^h 42'	2 ^h 5'	T 25
W26	12 13 51	5 ^h 23'45"	6 ^h 16'	23 ^h 13'	25 ^h 37'	2 ^h 12'	4 ^h 13'	17 ^h 41'	11 ^h 24'	29 ^h 34'	1 ^h 37'	23 ^h 39'	24 ^h 40'	15 ^h 49'	2 ^h 8'	W26
T 27	12 17 48	6 ^h 22'58"	20 ^h 36'	24 ^h 37'	26 ^h 52'	2 ^h 56'	4 ^h 26'	17 ^h 48'	11 ^h 22'	29 ^h 33'	1 ^h 38'	23 ^h 37'	24 ^h 37'	15 ^h 55'	2 ^h 12'	T 27
F 28	12 21 44	7 ^h 22'09"	4 ^h 51'	25 ^h 57'	28 ^h 6'	3 ^h 39'	4 ^h 40'	17 ^h 55'	11 ^h 20'	29 ^h 32'	1 ^h 39'	23 ^h 35'	24 ^h 34'	16 ^h 2'	2 ^h 15'	F 28
S 29	12 25 41	8 ^h 21'17"	18 ^h 57'	27 ^h 11'	29 ^h 20'	4 ^h 23'	4 ^h 53'	18 ^h 3'	11 ^h 18'	29 ^h 31'	1 ^h 40'	23 ^h 33'	24 ^h 31'	16 ^h 9'	2 ^h 18'	S 29
S 30	12 29 37	9 ^h 20'24"	2 ^h 51'	28 ^h 19'	0 ^h 35'	5 ^h 6'	5 ^h 6'	18 ^h 10'	11 ^h 16'	29 ^h 30'	1 ^h 41'	23 ^h 32'	24 ^h 28'	16 ^h 16'	2 ^h 22'	S 30
M31	12 33 34	10 ^h 19'29"	16 ^h 29'	29 ^h 21'	1 ^h 49'	5 ^h 50'	5 ^h 19'	18 ^h 17'	11 ^h 14'	29 ^h 29'	1 ^h 42'	23 ^h 31'	24 ^h 25'	16 ^h 22'	2 ^h 25'	M31

Delta T = 48.83 sec

Greg. Calendar

APRIL 1642 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	12 37 30	11°18'32	29°48'	08°17'	3°17'	6°33'	5°32'	18°24'	11°12'	29°R29	1°42'	23°D31	24°21'	16°29'	2°11'	T 1
W 2	12 41 27	12°17'32	12°47'	1°7'	4°18'	7°17'	5°45'	18°31'	11°10'	29°M.28	1°43'	23°31'	24°18'	16°36'	2°32'	W 2
T 3	12 45 23	13°16'31	25°28'	1°50'	5°32'	8°0'	5°58'	18°38'	11°8'	29°27	1°44'	23°32'	24°15'	16°43'	2°36'	T 3
F 4	12 49 20	14°15'27	7°11'	2°26'	6°46'	8°44'	6°11'	18°45'	11°6'	29°26	1°45'	23°33'	24°12'	16°49'	2°40'	F 4
S 5	12 53 16	15°14'21	20°3'	2°56'	8°1'	9°28'	6°24'	18°51'	11°4'	29°25	1°46'	23°34'	24°9'	16°56'	2°43'	S 5
S 6	12 57 13	16°13'13	2°3'	3°19'	9°15'	10°11'	6°37'	18°58'	11°1'	29°24	1°47'	23°35'	24°5'	17°3'	2°47'	S 6
M 7	13 1 10	17°12'03	13°57'	3°36'	10°29'	10°55'	6°49'	19°5'	10°59	29°22	1°48'	23°R35	24°2'	17°9'	2°51'	M 7
T 8	13 5 6	18°10'50	25°50'	3°46'	11°43'	11°38'	7°2'	19°12'	10°57	29°21	1°49'	23°35'	23°59'	17°16'	2°55'	T 8
W 9	13 9 3	19°9'35	7°14'	3°R50	12°58'	12°22'	7°15'	19°19'	10°55	29°20	1°50'	23°35'	23°56'	17°23'	2°59'	W 9
T 10	13 12 59	20°8'17	19°51'	3°47'	14°12'	13°6'	7°27'	19°25'	10°52	29°19	1°51'	23°34'	23°53'	17°30'	3°3'	T 10
F 11	13 16 56	21°6'58	2°11'	3°39'	15°26'	13°49'	7°39'	19°32'	10°50	29°18	1°52'	23°34'	23°50'	17°36'	3°7'	F 11
S 12	13 20 52	22°5'36	14°39'	3°24'	16°40'	14°33'	7°52'	19°39'	10°48	29°17	1°53'	23°34'	23°46'	17°43'	3°11'	S 12
S 13	13 24 49	23°4'12	27°28'	3°5'	17°54'	15°16'	8°4'	19°45'	10°45	29°16	1°55'	23°34'	23°43'	17°50'	3°15'	S 13
M14	13 28 45	24°2'46	10°36'	2°40'	19°8'	16°0'	8°16'	19°52'	10°43	29°14	1°56'	23°D34	23°40'	17°56'	3°19'	M14
T 15	13 32 42	25°1'18	24°2'	2°12'	20°23'	16°44'	8°28'	19°58'	10°41	29°13	1°57'	23°R34	23°37'	18°3'	3°23'	T 15
W16	13 36 39	25°59'48	7°14'	1°39'	21°37'	17°27'	8°40'	20°5'	10°38	29°12	1°58'	23°34'	23°34'	18°10'	3°27'	W16
T 17	13 40 35	26°58'16	21°43'	1°4'	22°51'	18°11'	8°52'	20°11'	10°36	29°10	1°59'	23°33'	23°31'	18°17'	3°31'	T 17
F 18	13 44 32	27°56'43	5°15'	0°26'	24°5'	18°54'	9°4'	20°18'	10°33	29°9	2°0'	23°33'	23°27'	18°23'	3°36'	F 18
S 19	13 48 28	28°55'08	20°8'	2°19'	25°19'	19°38'	9°16'	20°24'	10°31	29°8	2°1'	23°32'	23°24'	18°30'	3°40'	S 19
S 20	13 52 25	29°53'31	4°27'	2°9'	26°33'	20°22'	9°28'	20°30'	10°28	29°6	2°3'	23°32'	23°21'	18°37'	3°44'	S 20
M21	13 56 21	08°51'53	18°46'	28°25'	27°47'	21°5'	9°39'	20°37'	10°26	29°5	2°4'	23°31'	23°18'	18°44'	3°49'	M21
T 22	14 0 18	1°50'13	3°30'	0°27'45	29°1'	21°49'	9°51'	20°43'	10°23	29°4	2°5'	23°D31	23°15'	18°50'	3°53'	T 22
W23	14 4 14	2°48'31	17°8'	27°6'	08°15'	22°32'	10°2'	20°49'	10°21	29°2	2°6'	23°32'	23°11'	18°57'	3°58'	W23
T 24	14 8 11	3°46'48	11°8'	26°29'	1°29'	23°16'	10°13'	20°55'	10°18	29°1	2°7'	23°32'	23°8'	19°4'	4°2'	T 24
F 25	14 12 8	4°45'04	14°58'	25°54'	2°43'	23°59'	10°25'	21°1'	10°16	28°59	2°9'	23°33'	23°5'	19°10'	4°7'	F 25
S 26	14 16 4	5°43'18	28°36'	25°23'	3°57'	24°43'	10°36'	21°7'	10°13	28°58	2°10'	23°34'	23°2'	19°17'	4°11'	S 26
S 27	14 20 1	6°41'30	12°13'	24°55'	5°11'	25°27'	10°47'	21°13'	10°11	28°57	2°11'	23°35'	22°59'	19°24'	4°16'	S 27
M28	14 23 57	7°39'40	25°16'	24°31'	6°25'	26°10'	10°58'	21°19'	10°8	28°55	2°12'	23°R35	22°56'	19°31'	4°20'	M28
T 29	14 27 54	8°37'49	8°16'	24°11'	7°39'	26°54'	11°9'	21°25'	10°6	28°54	2°14'	23°35'	22°52'	19°37'	4°25'	T 29
W30	14 31 50	9°35'57	21°8'	23°15'	8°53'	27°37'	11°19'	21°30'	10°13	28°52	2°15'	23°33'	22°49'	19°34'	4°29'	W30

ASTRODIENST EPHEMERIS for the year 1642

geocentric

MAY 1642 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	14 35 47	10°34'02	3°33	23°R45	10°8 7	28°20	11°30	21°36	10°R 1	28°R51	2°16	23°R31	22°46	19°51	4°34	T 1
F 2	14 39 43	11°32'06	15°51	23°Y39	11°21	29° 4	11°41	21°42	9°M58	28°M49	2°17	23°A29	22°43	19°57	4°39	F 2
S 3	14 43 40	12°30'08	27°59	23°D37	12°35	29°47	11°51	21°47	9°56	28°47	2°19	23°26	22°40	20° 4	4°43	S 3
S 4	14 47 37	13°28'09	9°59	23°40	13°49	0°31	12° 1	21°53	9°53	28°46	2°20	23°23	22°36	20°11	4°48	S 4
M 5	14 51 33	14°26'07	21°53	23°48	15° 3	1°14	12°12	21°58	9°51	28°44	2°21	23°21	22°33	20°18	4°53	M 5
T 6	14 55 30	15°24'04	3°24	24° 0	16°17	1°57	12°22	22° 4	9°48	28°43	2°23	23°19	22°30	20°24	4°58	T 6
W 7	14 59 26	16°21'59	15°41	24°17	17°31	2°41	12°32	22° 9	9°46	28°41	2°24	23°D18	22°27	20°31	5° 3	W 7
T 8	15 3 23	17°19'52	27°44	24°38	18°45	3°24	12°41	22°14	9°43	28°40	2°25	23°19	22°24	20°38	5° 7	T 8
F 9	15 7 19	18°17'43	10°0 0	25° 4	19°59	4° 7	12°51	22°20	9°41	28°38	2°27	23°20	22°21	20°45	5°12	F 9
S 10	15 11 16	19°15'32	22°32	25°34	21°13	4°50	13° 1	22°25	9°38	28°36	2°28	23°22	22°17	20°51	5°17	S 10
S 11	15 15 12	20°13'20	5°25	26° 8	22°26	5°33	13°10	22°30	9°36	28°35	2°29	23°23	22°14	20°58	5°22	S 11
M12	15 19 9	21°11'06	18°41	26°46	23°40	6°17	13°20	22°35	9°33	28°33	2°31	23°R24	22°11	21° 5	5°27	M12
T 13	15 23 5	22° 8'50	2°M21	27°27	24°54	7° 0	13°29	22°40	9°31	28°32	2°32	23°24	22° 8	21°11	5°32	T 13
W14	15 27 2	23° 6'33	16°23	28°13	26° 8	7°43	13°38	22°44	9°28	28°30	2°33	23°22	22° 5	21°18	5°37	W14
T 15	15 30 59	24° 4'15	0°A46	29° 1	27°22	8°26	13°47	22°49	9°26	28°28	2°35	23°19	22° 2	21°25	5°42	T 15
F 16	15 34 55	25° 1'55	15°22	29°54	28°35	9° 9	13°56	22°54	9°23	28°27	2°36	23°15	21°58	21°32	5°47	F 16
S 17	15 38 52	25°59'34	0°3 6	0°B50	29°49	9°52	14° 5	22°59	9°21	28°25	2°37	23°11	21°55	21°38	5°51	S 17
S 18	15 42 48	26°57'12	14°50	1°49	1°II 3	10°35	14°14	23° 3	9°19	28°24	2°39	23° 6	21°52	21°45	5°56	S 18
M19	15 46 45	27°54'49	29°27	2°51	2°17	11°18	14°22	23° 8	9°16	28°22	2°40	23° 2	21°49	21°52	6° 1	M19
T 20	15 50 41	28°52'25	13°25	3°56	3°30	12° 1	14°31	23°12	9°14	28°20	2°41	23° 0	21°46	21°59	6° 6	T 20
W21	15 54 38	29°50'00	28° 0	5° 4	4°44	12°43	14°39	23°16	9°12	28°19	2°43	23°D59	21°42	22° 5	6°11	W21
T 22	15 58 34	0°II47'34	11°K52	6°15	5°58	13°26	14°47	23°21	9° 9	28°17	2°44	23° 0	21°39	22°12	6°16	T 22
F 23	16 2 31	1°45'07	25°27	7°29	7°12	14° 9	14°55	23°25	9° 7	28°15	2°46	23° 1	21°36	22°19	6°21	F 23
S 24	16 6 28	2°42'40	8°Y45	8°46	8°25	14°52	15° 3	23°29	9° 5	28°14	2°47	23° 2	21°33	22°25	6°26	S 24
S 25	16 10 24	3°40'11	21°49	10° 6	9°39	15°34	15°10	23°33	9° 2	28°12	2°48	23°R 3	21°30	22°32	6°31	S 25
M26	16 14 21	4°37'42	4°B40	11°28	10°53	16°17	15°18	23°37	9° 0	28°11	2°50	23° 2	21°27	22°39	6°36	M26
T 27	16 18 17	5°35'12	17°20	12°53	12° 7	16°59	15°25	23°41	8°58	28° 9	2°51	23° 0	21°23	22°46	6°41	T 27
W28	16 22 14	6°32'40	29°48	14°20	13°20	17°42	15°33	23°45	8°56	28° 7	2°52	22°55	21°20	22°52	6°47	W28
T 29	16 26 10	7°30'08	12°II 7	15°51	14°34	18°24	15°40	23°48	8°54	28° 6	2°54	22°49	21°17	22°59	6°52	T 29
F 30	16 30 7	8°27'35	24°17	17°24	15°48	19° 6	15°47	23°52	8°52	28° 4	2°55	22°41	21°14	23° 6	6°57	F 30
S 31	16 34 3	9°II25'01	6°B19	18°B59	17°II 1	19°K49	15°K54	23°K55	8°M50	28°M 3	2°II56	22°A32	21°A11	23°B12	7°II 2	S 31

Delta T = 48.71 sec

Greg. Calendar

JUNE 1642 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	16 38 0	10°II22'26	18°B15	20°B37	18°II15	20°K31	16°K 0	23°K59	8°R48	28°R 1	2°II58	22°R23	21°A 8	23°B19	7°II 7	S 1
M 2	16 41 57	11°19'50	0°B 7	22°18	19°29	21°13	16° 7	24° 2	8°M46	27°M59	2°59	22°A16	21° 4	23°26	7°12	M 2
T 3	16 45 53	12°17'13	11°59	24° 1	20°43	21°55	16°13	24° 5	8°44	27°58	3° 1	22°10	21° 1	23°33	7°17	T 3
W 4	16 49 50	13°14'34	23°53	25°47	21°56	22°37	16°19	24° 9	8°42	27°56	3° 2	22° 6	20°58	23°39	7°22	W 4
T 5	16 53 46	14°11'55	5°II54	27°35	23°10	23°19	16°25	24°12	8°40	27°55	3° 3	22° 4	20°55	23°46	7°27	T 5
F 6	16 57 43	15° 9'14	18° 7	29°26	24°23	24° 1	16°31	24°15	8°38	27°53	3° 5	22°D 3	20°52	23°53	7°32	F 6
S 7	17 1 139	16° 6'33	0°A36	1°II19	25°37	24°42	16°37	24°18	8°36	27°52	3° 6	22° 4	20°48	24° 0	7°37	S 7
S 8	17 5 36	17° 3'51	13°27	3°15	26°51	25°24	16°42	24°20	8°34	27°50	3° 7	22° 5	20°45	24° 6	7°42	S 8
M 9	17 9 32	18° 1'07	26°43	5°13	28° 4	26° 6	16°48	24°23	8°32	27°49	3° 9	22°R 5	20°42	24°13	7°47	M 9
T 10	17 13 29	18°58'23	10°M26	7°13	29°18	26°47	16°53	24°26	8°31	27°47	3°10	22° 4	20°39	24°20	7°52	T 10
W11	17 17 26	19°55'38	24°37	9°15	0°B32	27°28	16°58	24°28	8°29	27°46	3°11	22° 0	20°36	24°26	7°57	W11
T 12	17 21 22	20°52'53	9°A14	11°19	1°45	28°10	17° 3	24°31	8°27	27°44	3°13	21°54	20°33	24°33	8° 2	T 12
F 13	17 25 19	21°50'07	24° 9	13°25	2°59	28°51	17° 8	24°33	8°26	27°43	3°14	21°46	20°29	24°40	8° 7	F 13
S 14	17 29 15	22°47'20	9°B16	15°32	4°12	29°32	17°12	24°35	8°24	27°41	3°15	21°38	20°26	24°47	8°12	S 14
S 15	17 33 12	23°44'33	24°23	17°41	5°26	0°Y13	17°16	24°37	8°23	27°40	3°16	21°29	20°23	24°53	8°16	S 15
M16	17 37 8	24°41'46	9°A20	19°51	6°39	0°54	17°21	24°40	8°21	27°39	3°18	21°21	20°20	25° 0	8°21	M16
T 17	17 41 5	25°38'58	24° 1	22° 2	7°53	1°35	17°25	24°42	8°20	27°37	3°19	21°15	20°17	25° 7	8°26	T 17
W18	17 45 2	26°36'11	8°K19	24°13	9° 7	2°16	17°28	24°43	8°18	27°36	3°20	21°12	20°14	25°14	8°31	W18
T 19	17 48 58	27°33'23	22°13	26°24	10°20	2°56	17°32	24°45	8°17	27°34	3°22	21°D11	20°10	25°20	8°36	T 19
F 20	17 52 55	28°30'35	5°Y44	28°35	11°34	3°37	17°36	24°47	8°16	27°33	3°23	21°11	20° 7	25°27	8°41	F 20
S 21	17 56 51	29°27'47	18°53	0°B46	12°47	4°17	17°39	24°48	8°14	27°32	3°24	21°R11	20° 4	25°34	8°46	S 21
S 22	18 0 48	0°B25'00	1°B44	2°57	14° 1	4°58	17°42	24°50	8°13	27°30	3°25	21°11	20° 1	25°40	8°50	S 22
M23	18 4 44	1°22'12	14°20	5° 7	15°14	5°38	17°45	24°51	8°12	27°29	3°27	21° 9	19°58	25°47	8°55	M23
T 24	18 8 41	2°19'24	26°44	7°15	16°28	6°18	17°48	24°53	8°11	27°28	3°28	21° 4	19°54	25°54	9° 0	T 24
W25	18 12 37	3°16'37	8°II59	9°23	17°41	6°58	17°50	24°54	8°10	27°27	3°29	20°56	19°51	26° 1	9° 5	W25
T 26	18 16 34	4°13'49	21° 5	11°29	18°55	7°38	17°52	24°55	8° 9	27°25	3°30	20°46	19°48	26° 7	9°10	T 26
F 27	18 20 31	5°11'02	3°B 6	13°33	20° 8	8°17	17°55	24°56	8° 8	27°24	3°31	20°34	19°45	26°14	9°14	F 27
S 28	18 24 27	6° 8'14	15° 3	15°36	21°22	8°57	17°57	24°57	8° 7	27°23	3°33	20°21	19°42	26°21	9°19	S 28
S 29	18 28 24	7° 5'26	26°56	17°38	22°35	9°36	17°58	24°58	8° 6	27°22	3°34	20° 8	19°39	26°27	9°24	S 29
M30	18 32 20	8°B 2'38	8°B47	19°B37	23°B49	10°Y15	18°K 0	24°K58	8°M 5	27°M21	3°II35	19°A56	19°A35	26°B34	9°II28	M30

Delta T = 48.65 sec

Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1642
geocentric

JULY 1642 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	18 36 17	8 ⁵⁵ 51	20 ⁰ 38	21 ⁵³ 35	25 ⁵ 2	10 ⁵⁵ 55	18 ¹ 1	24 ¹ 59	8 ^R 4	27 ^R 20	3 ^{II} 36	19 ^R 46	19 ⁵ 32	26 ⁵ 41	9 ^{II} 33	T 1
W 2	18 40 13	9 ⁵⁷ 02	2 ¹⁰ 33	23 ³ 31	26 ¹⁶	11 ³⁴	18 ²	24 ⁵⁹	8 ^{III} 3	27 ^{III} 18	3 ³ 37	19 ⁵ 38	19 ²⁹	26 ⁴⁸	9 ³⁷	W 2
T 3	18 44 10	10 ⁵⁴ 14	14 ³⁴	25 ²⁴	27 ²⁹	12 ¹²	18 ³	25 ⁰	8 ³	27 ¹⁷	3 ³ 38	19 ³³	19 ²⁶	26 ⁵⁴	9 ⁴²	T 3
F 4	18 48 6	11 ⁵¹ 26	26 ⁴⁵	27 ¹⁶	28 ⁴³	12 ⁵¹	18 ⁴	25 ⁰	8 ²	27 ¹⁶	3 ³ 39	19 ³¹	19 ²³	27 ¹	9 ⁴⁶	F 4
S 5	18 52 3	12 ⁴⁸ 38	9 ⁵ 12	29 ⁶	29 ⁵⁶	13 ²⁹	18 ⁵	25 ⁰	8 ¹	27 ¹⁵	3 ⁴¹	19 ³⁰	19 ²⁰	27 ⁸	9 ⁵¹	S 5
S 6	18 56 0	13 ⁴⁵ 49	21 ⁵⁸	0 ⁵ 54	1 ¹⁰ 10	14 ⁸	18 ⁵	25 ^R 0	8 ¹	27 ¹⁴	3 ⁴²	19 ³⁰	19 ¹⁶	27 ¹⁵	9 ⁵⁵	S 6
M 7	18 59 56	14 ⁴³ 01	5 ^{III} 9	2 ⁴⁰	2 ²³	14 ⁴⁶	18 ⁶	25 ⁰	8 ⁰	27 ¹³	3 ⁴³	19 ³⁰	19 ¹³	27 ²¹	10 ⁰	M 7
T 8	19 3 53	15 ⁴⁰ 12	18 ⁴⁸	4 ²⁵	3 ³⁶	15 ²⁴	18 ^R 6	25 ⁰	8 ⁰	27 ¹²	3 ⁴⁴	19 ²⁸	19 ¹⁰	27 ²⁸	10 ⁴	T 8
W 9	19 7 49	16 ³⁷ 24	2 ¹ 56	6 ⁷	4 ⁵⁰	16 ²	18 ⁵	25 ⁰	7 ⁵⁹	27 ¹¹	3 ⁴⁵	19 ²³	19 ⁷	27 ³⁵	10 ⁸	W 9
T 10	19 11 46	17 ³⁴ 36	17 ³³	7 ⁴⁷	6 ³	16 ³⁹	18 ⁵	25 ⁰	7 ⁵⁹	27 ¹¹	3 ⁴⁶	19 ¹⁶	19 ⁴	27 ⁴¹	10 ¹³	T 10
F 11	19 15 42	18 ³¹ 48	2 ³ 34	9 ²⁵	7 ¹⁷	17 ¹⁷	18 ⁴	24 ⁵⁹	7 ⁵⁹	27 ¹⁰	3 ⁴⁷	19 ⁷	19 ⁰	27 ⁴⁸	10 ¹⁷	F 11
S 12	19 19 39	19 ²⁹ 00	17 ⁴⁹	11 ²	8 ³⁰	17 ⁵⁴	18 ⁴	24 ⁵⁹	7 ⁵⁸	27 ⁹	3 ⁴⁸	18 ⁵⁶	18 ⁵⁷	27 ⁵⁵	10 ²¹	S 12
S 13	19 23 35	20 ²⁶ 13	3 ^{III} 9	12 ³⁶	9 ⁴³	18 ³¹	18 ³	24 ⁵⁸	7 ⁵⁸	27 ⁸	3 ⁴⁹	18 ⁴⁶	18 ⁵⁴	28 ²	10 ²⁶	S 13
M14	19 27 32	21 ²³ 26	18 ²¹	14 ⁸	10 ⁵⁷	19 ⁸	18 ²	24 ⁵⁷	7 ⁵⁸	27 ⁷	3 ⁵⁰	18 ³⁶	18 ⁵¹	28 ⁸	10 ³⁰	M14
T 15	19 31 29	22 ²⁰ 40	3 ^{III} 16	15 ³⁹	12 ¹⁰	19 ⁴⁵	18 ⁰	24 ⁵⁶	7 ⁵⁸	27 ⁶	3 ⁵¹	18 ²⁹	18 ⁴⁸	28 ¹⁵	10 ³⁴	T 15
W16	19 35 25	23 ¹⁷ 55	17 ⁴⁷	17 ⁷	13 ²³	20 ²¹	17 ⁵⁹	24 ⁵⁵	7 ⁵⁸	27 ⁶	3 ⁵²	18 ²⁴	18 ⁴⁵	28 ²²	10 ³⁸	W16
T 17	19 39 22	24 ¹⁵ 10	1 ^Y 50	18 ³⁴	14 ³⁷	20 ⁵⁷	17 ⁵⁷	24 ⁵⁴	7 ^D 58	27 ⁵	3 ⁵³	18 ²²	18 ⁴¹	28 ²⁸	10 ⁴²	T 17
F 18	19 43 18	25 ¹² 26	15 ²⁵	19 ⁵⁸	15 ⁵⁰	21 ³⁴	17 ⁵⁵	24 ⁵³	7 ⁵⁸	27 ⁴	3 ⁵⁴	18 ^D 21	18 ³⁸	28 ³⁵	10 ⁴⁶	F 18
S 19	19 47 15	26 ⁹ 43	28 ³⁴	21 ²¹	17 ³	22 ⁹	17 ⁵³	24 ⁵²	7 ⁵⁸	27 ⁴	3 ⁵⁵	18 ^R 21	18 ³⁵	28 ⁴²	10 ⁵⁰	S 19
S 20	19 51 11	27 ⁷ 01	11 ⁸ 21	22 ⁴¹	18 ¹⁷	22 ⁴⁵	17 ⁵¹	24 ⁵¹	7 ⁵⁸	27 ³	3 ⁵⁶	18 ²¹	18 ³²	28 ⁴⁹	10 ⁵⁴	S 20
M21	19 55 8	28 ⁴ 20	23 ⁵¹	23 ⁵⁹	19 ³⁰	23 ²⁰	17 ⁴⁸	24 ⁴⁹	7 ⁵⁸	27 ²	3 ⁵⁶	18 ¹⁹	18 ²⁹	28 ⁵⁵	10 ⁵⁸	M21
T 22	19 59 4	29 ¹ 41	6 ^{II} 7	25 ¹⁵	20 ⁴³	23 ⁵⁶	17 ⁴⁶	24 ⁴⁸	7 ⁵⁸	27 ²	3 ⁵⁷	18 ¹⁴	18 ²⁶	29 ²	11 ²	T 22
W23	20 3 1	29 ⁵⁹ 02	18 ¹²	26 ²⁹	21 ⁵⁶	24 ³¹	17 ⁴³	24 ⁴⁶	7 ⁵⁹	27 ¹	3 ⁵⁸	18 ⁷	18 ²²	29 ⁹	11 ⁶	W23
T 24	20 6 58	0 ⁵⁶ 24	0 ⁵ 11	27 ⁴⁰	23 ¹⁰	25 ⁵	17 ⁴⁰	24 ⁴⁵	7 ⁵⁹	27 ¹	3 ⁵⁹	17 ⁵⁶	18 ¹⁹	29 ¹⁶	11 ⁹	T 24
F 25	20 10 54	1 ⁵³ 47	12 ⁶	28 ⁴⁹	24 ²³	25 ⁴⁰	17 ³⁶	24 ⁴³	8 ⁰	27 ⁰	4 ⁰	17 ⁴⁴	18 ¹⁶	29 ²²	11 ¹³	F 25
S 26	20 14 51	2 ⁵¹ 10	23 ⁵⁹	29 ⁵⁶	25 ³⁶	26 ¹⁴	17 ³³	24 ⁴¹	8 ⁰	27 ⁰	4 ¹	17 ³¹	18 ¹³	29 ²⁹	11 ¹⁷	S 26
S 27	20 18 47	3 ⁴⁸ 35	5 ⁵ 50	1 ¹⁰ 0	26 ⁴⁹	26 ⁴⁸	17 ²⁹	24 ³⁹	8 ¹	27 ⁰	4 ¹	17 ¹⁸	18 ¹⁰	29 ³⁶	11 ²⁰	S 27
M28	20 22 44	4 ⁴⁶ 01	17 ⁴³	2 ¹	28 ²	27 ²¹	17 ²⁶	24 ³⁷	8 ¹	26 ⁵⁹	4 ²	17 ⁶	18 ⁶	29 ⁴²	11 ²⁴	M28
T 29	20 26 40	5 ⁴³ 27	29 ³⁷	3 ⁰	29 ¹⁶	27 ⁵⁵	17 ²²	24 ³⁵	8 ²	26 ⁵⁹	4 ³	16 ⁵⁶	18 ³	29 ⁴⁹	11 ²⁷	T 29
W30	20 30 37	6 ⁴⁰ 55	11 ¹⁰ 36	3 ⁵⁶	0 ¹⁰ 29	28 ²⁸	17 ¹⁷	24 ³³	8 ²	26 ⁵⁸	4 ⁴	16 ⁴⁸	18 ⁰	29 ⁵⁶	11 ³¹	W30
T 31	20 34 33	7 ⁵ 38	23 ¹⁰ 42	4 ¹⁰ 49	1 ¹⁰ 42	29 ⁵⁰	17 ¹³	24 ³⁰	8 ^{III} 3	26 ^{III} 58	4 ^{II} 4	16 ⁵ 43	17 ⁵ 57	0 ⁵ 3	11 ^{II} 34	T 31

Delta T = 48.59 sec

Greg. Calendar

AUGUST 1642 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	20 38 30	8 ⁵⁵ 52	5 ⁵ 57	5 ¹⁰ 38	2 ¹⁰ 55	29 ⁵⁰ 33	17 ^R 9	24 ^R 28	8 ^{III} 4	26 ^R 58	4 ^{II} 5	16 ^R 41	17 ⁵ 54	0 ⁵ 9	11 ^{II} 38	F 1
S 2	20 42 27	9 ³³ 21	18 ²⁵	6 ²⁴	4 ⁸	0 ⁸ 5	17 ¹ 1	24 ¹ 25	8 ⁵	26 ^{III} 58	4 ⁶	16 ^D 40	17 ⁵¹	0 ¹⁶	11 ⁴¹	S 2
S 3	20 46 23	10 ³⁰ 52	1 ^{III} 11	7 ⁷	5 ²¹	0 ³⁷	16 ⁵⁹	24 ²³	8 ⁶	26 ⁵⁷	4 ⁶	16 ⁵ 41	17 ⁴⁷	0 ²³	11 ⁴⁴	S 3
M 4	20 50 20	11 ²⁸ 23	14 ¹⁸	7 ⁴⁶	6 ³⁴	1 ⁸	16 ⁵⁴	24 ²⁰	8 ⁶	26 ⁵⁷	4 ⁷	16 ^R 41	17 ⁴⁴	0 ²⁹	11 ⁴⁸	M 4
T 5	20 54 16	12 ²⁵ 56	27 ⁵¹	8 ²²	7 ⁴⁷	1 ⁴⁰	16 ⁴⁹	24 ¹⁷	8 ⁷	26 ⁵⁷	4 ⁸	16 ⁴⁰	17 ⁴¹	0 ³⁶	11 ⁵¹	T 5
W 6	20 58 13	13 ²³ 29	11 ¹ 51	8 ⁵³	9 ¹	2 ¹¹	16 ⁴⁴	24 ¹⁴	8 ⁸	26 ⁵⁷	4 ⁸	16 ³⁷	17 ³⁸	0 ⁴³	11 ⁵⁴	W 6
T 7	21 2 9	14 ²¹ 03	26 ¹⁷	9 ²⁰	10 ¹⁴	2 ⁴¹	16 ³⁸	24 ¹¹	8 ¹⁰	26 ⁵⁷	4 ⁹	16 ³²	17 ³⁵	0 ⁵⁰	11 ⁵⁷	T 7
F 8	21 6 6	15 ¹⁸ 38	11 ⁸ 8	9 ⁴²	11 ²⁷	3 ¹¹	16 ³³	24 ⁸	8 ¹¹	26 ⁵⁷	4 ⁹	16 ²⁴	17 ³¹	0 ⁵⁶	12 ⁰	F 8
S 9	21 10 2	16 ¹⁶ 14	26 ¹⁷	10 ⁰	12 ⁴⁰	3 ⁴¹	16 ²⁷	24 ⁵	8 ¹²	26 ^D 57	4 ¹⁰	16 ¹⁶	17 ²⁸	1 ³	12 ³	S 9
S 10	21 13 59	17 ¹³ 51	11 ³³ 33	10 ¹²	13 ⁵²	4 ¹¹	16 ²¹	24 ²	8 ¹³	26 ⁵⁷	4 ¹⁰	16 ⁷	17 ²⁵	1 ¹⁰	12 ⁶	S 10
M11	21 17 56	18 ¹¹ 30	26 ⁴⁶	10 ²⁰	15 ⁵	4 ⁴⁰	16 ¹⁵	23 ⁵⁹	8 ¹⁴	26 ⁵⁷	4 ¹¹	15 ⁵⁹	17 ²²	1 ¹⁷	12 ⁸	M11
T 12	21 21 52	19 ⁹ 10	11 ¹ 46	10 ^R 22	16 ¹⁸	5 ⁹	16 ⁹	23 ⁵⁶	8 ¹⁶	26 ⁵⁷	4 ¹¹	15 ⁵³	17 ¹⁹	1 ²³	12 ¹¹	T 12
W13	21 25 49	20 ⁶ 51	26 ²⁴	10 ¹⁹	17 ³¹	5 ³⁷	16 ²	23 ⁵²	8 ¹⁷	26 ⁵⁷	4 ¹²	15 ⁵⁰	17 ¹⁶	1 ³⁰	12 ¹⁴	W13
T 14	21 29 45	21 ⁴ 33	10 ^Y 35	10 ¹⁰	18 ⁴⁴	6 ⁵	15 ⁵⁶	23 ⁴⁹	8 ¹⁹	26 ⁵⁷	4 ¹²	15 ^D 48	17 ¹²	1 ³⁷	12 ¹⁷	T 14
F 15	21 33 42	22 ² 18	24 ¹⁷	9 ⁵⁶	19 ⁵⁷	6 ³³	15 ⁴⁹	23 ⁴⁵	8 ²⁰	26 ⁵⁸	4 ¹³	15 ⁴⁸	17 ⁹	1 ⁴³	12 ¹⁹	F 15
S 16	21 37 38	23 ⁰ 04	7 ⁸ 32	9 ³⁵	21 ¹⁰	7 ⁰	15 ⁴³	23 ⁴²	8 ²²	26 ⁵⁸	4 ¹³	15 ⁴⁹	17 ⁶	1 ⁵⁰	12 ²²	S 16
S 17	21 41 35	23 ⁵⁷ 52	20 ²²	9 ⁹	22 ²³	7 ²⁷	15 ³⁶	23 ³⁸	8 ²³	26 ⁵⁸	4 ¹³	15 ^R 50	17 ³	1 ⁵⁷	12 ²⁴	S 17
M18	21 45 31	24 ⁵⁵ 41	2 ^{II} 52	8 ³⁷	23 ³⁵	7 ⁵³	15 ²⁹	23 ³⁴	8 ²⁵	26 ⁵⁸	4 ¹⁴	15 ⁵⁰	17 ⁰	2 ⁴	12 ²⁷	M18
T 19	21 49 28	25 ⁵³ 33	15 ⁷	8 ⁰	24 ⁴⁸	8 ¹⁹	15 ²²	23 ³¹	8 ²⁶	26 ⁵⁹	4 ¹⁴	15 ⁴⁸	16 ⁵⁷	2 ¹⁰	12 ²⁹	T 19
W20	21 53 25	26 ⁵¹ 26	27 ¹⁰	7 ¹⁸	26 ¹	8 ⁴⁴	15 ¹⁵	23 ²⁷	8 ²⁸	26 ⁵⁹	4 ¹⁴	15 ⁴⁴	16 ⁵³	2 ¹⁷	12 ³¹	W20
T 21	21 57 21	27 ⁴⁹ 21	9 ⁵ 5	6 ³²	27 ¹⁴	9 ⁹	15 ⁸	23 ²³	8 ³⁰	26 ⁵⁹	4 ¹⁵	15 ³⁸	16 ⁵⁰	2 ²⁴	12 ³³	T 21</

ASTRODIENST EPHEMERIS for the year 1642

geocentric

SEPTEMBER 1642 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	22 40 43	8 ^h 28'14"	24 ^m 14"	27°R35	10 ^h 32	13 ^h 10	13°R44	22°R37	8 ^m 52	27 ^m 6	4 ^h 17	14 ^h 54	16 ^h 15	3 ^h 38	12 ^h 53	M 1
T 2	22 44 40	9°26'29"	7 ^h 44"	27°12	11°45	13°28	13 ^h 36	22 ^h 32	8°55	27° 7	4°17	14°R55	16°12	3°44	12°55	T 2
W 3	22 48 36	10°24'44"	21°36	26°58	12°57	13°46	13°28	22°28	8°57	27° 7	4°17	14°54	16° 9	3°51	12°56	W 3
T 4	22 52 33	11°23'02"	5 ^h 50	26°D52	14° 9	14° 3	13°20	22°23	8°59	27° 8	4°R17	14°52	16° 6	3°58	12°57	T 4
F 5	22 56 29	12°21'20"	20°24	26°55	15°22	14°20	13°12	22°19	9° 2	27° 9	4°17	14°49	16° 3	4° 4	12°58	F 5
S 6	23 0 26	13°19'41"	5 ^h 13	27° 7	16°34	14°36	13° 4	22°14	9° 4	27°10	4°17	14°45	15°59	4°11	12°59	S 6
S 7	23 4 22	14°18'03"	20°10	27°28	17°46	14°51	12°56	22°10	9° 7	27°11	4°17	14°40	15°56	4°18	13° 0	S 7
M 8	23 8 19	15°16'26"	5 ^h 8	27°58	18°58	15° 6	12°48	22° 5	9° 9	27°12	4°16	14°36	15°53	4°25	13° 1	M 8
T 9	23 12 16	16°14'52"	19°58	28°36	20°11	15°20	12°40	22° 1	9°12	27°13	4°16	14°34	15°50	4°31	13° 2	T 9
W10	23 16 12	17°13'19"	4 ^h 31	29°24	21°23	15°33	12°32	21°56	9°14	27°14	4°16	14°32	15°47	4°38	13° 3	W10
T 11	23 20 9	18°11'49"	18°42	0 ^h 19	22°35	15°45	12°24	21°51	9°17	27°15	4°16	14°D32	15°43	4°45	13° 4	T 11
F 12	23 24 5	19°10'20"	2 ^h 27	1°21	23°47	15°57	12°16	21°47	9°20	27°16	4°16	14°33	15°40	4°51	13° 5	F 12
S 13	23 28 2	20° 8'54"	15°47	2°31	24°59	16° 8	12° 8	21°42	9°22	27°17	4°16	14°34	15°37	4°58	13° 5	S 13
S 14	23 31 58	21° 7'30"	28°43	3°46	26°11	16°19	12° 1	21°37	9°25	27°18	4°15	14°36	15°34	5° 5	13° 6	S 14
M15	23 35 53	22° 6'08"	11 ^h 17	5° 8	27°23	16°28	11°53	21°33	9°28	27°19	4°15	14°37	15°31	5°12	13° 6	M15
T 16	23 39 51	23° 4'48"	23°34	6°34	28°35	16°37	11°45	21°28	9°31	27°21	4°15	14°R37	15°28	5°18	13° 6	T 16
W17	23 43 48	24° 3'31"	5 ^h 38	8° 5	29°47	16°45	11°38	21°23	9°34	27°22	4°15	14°37	15°24	5°25	13° 7	W17
T 18	23 47 45	25° 2'16"	17°34	9°39	0 ^h 58	16°52	11°30	21°19	9°37	27°23	4°14	14°35	15°21	5°32	13° 7	T 18
F 19	23 51 41	26° 1'03"	29°26	11°17	2°11	16°58	11°22	21°14	9°39	27°24	4°14	14°33	15°18	5°38	13° 7	F 19
S 20	23 55 38	26°59'52"	11 ^h 18	12°58	3°23	17° 3	11°15	21°10	9°42	27°26	4°14	14°30	15°15	5°45	13°R 7	S 20
S 21	23 59 34	27°58'43"	23°14	14°40	4°34	17° 8	11° 8	21° 5	9°45	27°27	4°13	14°28	15°12	5°52	13° 7	S 21
M22	0 3 31	28°57'37"	5 ^h 16	16°25	5°46	17°12	11° 0	21° 0	9°48	27°28	4°13	14°25	15° 8	5°59	13° 7	M22
T 23	0 7 27	29°56'32"	17°27	18°10	6°58	17°15	10°53	20°56	9°51	27°30	4°13	14°23	15° 5	6° 5	13° 7	T 23
W24	0 11 24	0 ^h 55'30"	29°48	19°57	8° 9	17°17	10°46	20°51	9°55	27°31	4°12	14°22	15° 2	6°12	13° 7	W24
T 25	0 15 20	1°54'30"	12 ^h 20	21°45	9°21	17°18	10°39	20°47	9°58	27°33	4°12	14°D22	14°59	6°19	13° 6	T 25
F 26	0 19 17	2°53'32"	25° 5	23°33	10°33	17°R18	10°33	20°42	10° 1	27°34	4°11	14°22	14°56	6°25	13° 6	F 26
S 27	0 23 13	3°52'36"	8 ^m 3	25°21	11°44	17°17	10°26	20°38	10° 4	27°36	4°11	14°22	14°53	6°32	13° 5	S 27
S 28	0 27 10	4°51'41"	21°14	27° 9	12°56	17°16	10°19	20°33	10° 7	27°37	4°10	14°23	14°49	6°39	13° 5	S 28
M29	0 31 7	5°50'49"	4 ^h 39	28°57	14° 7	17°13	10°13	20°29	10°10	27°39	4°10	14°24	14°46	6°46	13° 4	M29
T 30	0 35 3	6 ^h 49'58"	18 ^h 18	0 ^h 44	15 ^m 19	17 ^h 10	10 ^h 6	20 ^h 25	10 ^m 14	27 ^m 40	4 ^h 11	14 ^h 25	14 ^h 43	6 ^h 52	13 ^h 4	T 30

Delta T = 48.47 sec

Greg. Calendar

OCTOBER 1642 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	0 39 0	7 ^h 49'10"	2 ^h 31	2 ^h 32	16 ^m 30	17°R 6	10°R 0	20°R20	10 ^m 17	27 ^m 42	4°R 9	14°R25	14 ^h 40	6 ^h 59	13°R 3	W 1
T 2	0 42 56	8°48'23"	16°16	4°18	17°41	17°R 0	9 ^h 54	20 ^h 16	10°20	27°43	4 ^h 8	14 ^h 25	14°37	7° 6	13 ^h 2	T 2
F 3	0 46 53	9°47'37"	0 ^h 34	6° 5	18°52	16°54	9°48	20°12	10°24	27°45	4° 8	14°25	14°34	7°12	13° 1	F 3
S 4	0 50 49	10°46'54"	15° 0	7°50	20° 4	16°47	9°42	20° 8	10°27	27°47	4° 7	14°24	14°30	7°19	13° 0	S 4
S 5	0 54 46	11°46'12"	29°31	9°35	21°15	16°40	9°37	20° 3	10°30	27°48	4° 6	14°24	14°27	7°26	12°59	S 5
M 6	0 58 42	12°45'32"	14 ^h 3	11°20	22°26	16°31	9°31	19°59	10°34	27°50	4° 6	14°24	14°24	7°33	12°58	M 6
T 7	1 2 39	13°44'54"	28°28	13° 3	23°37	16°21	9°26	19°55	10°37	27°52	4° 5	14°24	14°21	7°39	12°57	T 7
W 8	1 6 36	14°44'17"	12 ^h 43	14°46	24°48	16°11	9°21	19°51	10°41	27°54	4° 4	14°24	14°18	7°46	12°55	W 8
T 9	1 10 32	15°43'43"	26°42	16°29	25°59	16° 0	9°16	19°47	10°44	27°55	4° 4	14°24	14°14	7°53	12°54	T 9
F 10	1 14 29	16°43'11"	10 ^h 21	18°10	27°10	15°48	9°11	19°43	10°48	27°57	4° 3	14°24	14°11	7°59	12°53	F 10
S 11	1 18 25	17°42'41"	23°40	19°51	28°20	15°35	9° 7	19°40	10°51	27°59	4° 2	14°23	14° 8	8° 6	12°51	S 11
S 12	1 22 22	18°42'14"	6 ^h 36	21°31	29°31	15°22	9° 2	19°36	10°55	28° 1	4° 2	14°23	14° 5	8°13	12°50	S 12
M13	1 26 18	19°41'49"	19°13	23°11	0 ^h 42	15° 7	8°58	19°32	10°58	28° 3	4° 1	14°22	14° 2	8°20	12°48	M13
T 14	1 30 15	20°41'26"	1 ^h 33	24°50	1°52	14°52	8°54	19°29	11° 2	28° 4	4° 0	14°22	13°59	8°26	12°46	T 14
W15	1 34 11	21°41'05"	13°39	26°28	3° 3	14°37	8°50	19°25	11° 5	28° 6	3°59	14°21	13°55	8°33	12°45	W15
T 16	1 38 8	22°40'46"	25°36	28° 6	4°13	14°20	8°46	19°22	11° 9	28° 8	3°58	14°D21	13°52	8°40	12°43	T 16
F 17	1 42 5	23°40'30"	7 ^h 28	29°43	5°24	14° 3	8°42	19°18	11°12	28°10	3°58	14°22	13°49	8°46	12°41	F 17
S 18	1 46 1	24°40'16"	19°21	1 ^h 19	6°34	13°45	8°39	19°15	11°16	28°12	3°57	14°22	13°46	8°53	12°39	S 18
S 19	1 49 58	25°40'04"	1 ^h 18	2°55	7°44	13°27	8°36	19°11	11°20	28°14	3°56	14°23	13°43	9° 0	12°37	S 19
M20	1 53 54	26°39'55"	13°24	4°31	8°55	13° 8	8°33	19° 8	11°23	28°16	3°55	14°25	13°40	9° 6	12°35	M20
T 21	1 57 51	27°39'47"	25°42	6° 6	10° 5	12°49	8°30	19° 5	11°27	28°18	3°54	14°26	13°36	9°13	12°33	T 21
W22	2 1 47	28°39'42"	8 ^h 15	7°40	11°15	12°29	8°27	19° 2	11°31	28°20	3°53	14°R26	13°33	9°20	12°30	W22
T 23	2 5 44	29°39'39"	21° 5	9°14	12°25	12° 9	8°25	18°59	11°34	28°22	3°52	14°26	13°30	9°27	12°28	T 23
F 24	2 9 40	0 ^h 39'37"	4 ^m 11	10°47	13°34	11°49	8°23	18°56	11°38	28°24	3°51	14°25	13°27	9°33	12°26	F 24
S 25	2 13 37	1°39'38"	17°34	12°20	14°44	11°28	8°21	18°54	11°42	28°26	3°50	14°24	13°24	9°40	12°23	S 25
S 26	2 17 33	2°39'40"	1 ^h 12	13°52	15°54	11° 7	8°19	18°51	11°45	28°28	3°50	14°21	13°20	9°47	12°21	S 26
M27	2 21 30	3°39'45"	15° 1	15°24	17° 4	10°46	8°18	18°48	11°49	28°30	3°49	14°19	13°17	9°53	12°18	M27
T 28	2 25 27	4°39'51"	29° 1	16°56	18°13	10°25	8°16	18°46	11°53	28°32	3°48	14°16	13°14	10° 0	12°16	T 28
W29	2 29 23	5°39'58"	13 ^h 6	18°27	19°22	10° 3	8°15	18°43	11°57	28°34	3°47	14°14	13°11	10° 7	12°13	W29
T 30	2 33 20	6°40'07"	27°16	19°57	20°32	9°42	8°14	18°41	12° 0	28°37	3°46	14°12	13° 8	10°14	12°10	T 30
F 31	2 37 16	7 ^m 40'18"	11 ^h 27	21 ^m 27	21 ^h 41	9 ^h 20	8 ^h 13	18 ^h 39	12 ^m 4	28 ^m 39	3 ^h 45	14°D12	13 ^h 5	10 ^h 20	12 ^h 8	F 31

Delta T = 48.41 sec

Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1642

geocentric

NOVEMBER 1642 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	2 41 13	8♂40'30	25♂38	22♂57	22♂50	8°R59	8°R13	18°R37	12♂ 8	28♂41	3°R44	14♂13	13♂ 1	10♂27	12°R 5	S 1
S 2	2 45 9	9°40'44	9♂45	24°26	23°59	8♂38	8♂12	18♂34	12°11	28°43	3♂43	14°14	12°58	10°34	12♂ 2	S 2
M 3	2 49 6	10°40'59	23°49	25°55	25° 8	8°17	8°D12	18°33	12°15	28°45	3°42	14°16	12°55	10°40	11°59	M 3
T 4	2 53 2	11°41'15	7♂45	27°23	26°17	7°56	8°12	18°31	12°19	28°47	3°41	14°R17	12°52	10°47	11°56	T 4
W 5	2 56 59	12°41'33	21°33	28°51	27°25	7°36	8°13	18°29	12°23	28°50	3°40	14°17	12°49	10°54	11°53	W 5
T 6	3 0 56	13°41'53	5♂ 9	0♂18	28°34	7°16	8°13	18°27	12°26	28°52	3°38	14°15	12°45	11° 1	11°50	T 6
F 7	3 4 52	14°42'14	18°31	1°45	29°42	6°56	8°14	18°26	12°30	28°54	3°37	14°12	12°42	11° 7	11°47	F 7
S 8	3 8 49	15°42'37	1♂38	3°11	0♂50	6°37	8°15	18°24	12°34	28°56	3°36	14° 8	12°39	11°14	11°44	S 8
S 9	3 12 45	16°43'02	14°29	4°37	1°58	6°18	8°16	18°23	12°38	28°58	3°35	14° 2	12°36	11°21	11°41	S 9
M10	3 16 42	17°43'29	27° 3	6° 1	3° 6	5°59	8°17	18°22	12°41	29° 1	3°34	13°56	12°33	11°27	11°38	M10
T 11	3 20 38	18°43'57	9♂22	7°25	4°14	5°41	8°18	18°20	12°45	29° 3	3°33	13°50	12°30	11°34	11°34	T 11
W12	3 24 35	19°44'28	21°28	8°49	5°21	5°24	8°20	18°19	12°49	29° 5	3°32	13°46	12°26	11°41	11°31	W12
T 13	3 28 31	20°45'00	3♂25	10°11	6°29	5° 7	8°22	18°18	12°53	29° 7	3°31	13°42	12°23	11°47	11°28	T 13
F 14	3 32 28	21°45'33	15°17	11°32	7°36	4°51	8°24	18°18	12°56	29°10	3°30	13°41	12°20	11°54	11°24	F 14
S 15	3 36 25	22°46'09	27° 8	12°52	8°43	4°35	8°26	18°17	13° 0	29°12	3°29	13°D40	12°17	12° 1	11°21	S 15
S 16	3 40 21	23°46'46	9♂ 4	14°11	9°50	4°20	8°29	18°16	13° 4	29°14	3°28	13°41	12°14	12° 8	11°18	S 16
M17	3 44 18	24°47'25	21°10	15°28	10°57	4° 6	8°32	18°16	13° 7	29°16	3°26	13°43	12°11	12°14	11°14	M17
T 18	3 48 14	25°48'06	3♂31	16°43	12° 3	3°53	8°35	18°15	13°11	29°19	3°25	13°44	12° 7	12°21	11°11	T 18
W19	3 52 11	26°48'48	16°10	17°57	13°10	3°40	8°38	18°15	13°15	29°21	3°24	13°R45	12° 4	12°28	11° 7	W19
T 20	3 56 7	27°49'32	29°10	19° 8	14°16	3°28	8°41	18°15	13°18	29°23	3°23	13°44	12° 1	12°34	11° 4	T 20
F 21	4 0 4	28°50'17	12♂34	20°16	15°22	3°17	8°44	18°D15	13°22	29°25	3°22	13°40	11°58	12°41	11° 0	F 21
S 22	4 4 0	29°51'04	26°19	21°22	16°28	3° 7	8°48	18°15	13°26	29°28	3°21	13°35	11°55	12°48	10°57	S 22
S 23	4 7 57	0♂51'52	10♂24	22°24	17°33	2°57	8°52	18°15	13°29	29°30	3°20	13°28	11°51	12°54	10°53	S 23
M24	4 11 54	1°52'41	24°44	23°23	18°39	2°48	8°56	18°15	13°33	29°32	3°18	13°20	11°48	13° 1	10°49	M24
T 25	4 15 50	2°53'32	9♂12	24°17	19°44	2°40	9° 0	18°15	13°36	29°34	3°17	13°11	11°45	13° 8	10°46	T 25
W26	4 19 47	3°54'23	23°42	25° 6	20°48	2°33	9° 5	18°16	13°40	29°37	3°16	13° 4	11°42	13°15	10°42	W26
T 27	4 23 43	4°55'16	8♂ 9	25°49	21°53	2°27	9° 9	18°16	13°44	29°39	3°15	12°59	11°39	13°21	10°38	T 27
F 28	4 27 40	5°56'09	22°28	26°27	22°57	2°22	9°14	18°17	13°47	29°41	3°14	12°56	11°36	13°28	10°35	F 28
S 29	4 31 36	6°57'03	6♂35	26°57	24° 1	2°17	9°19	18°18	13°51	29°43	3°13	12°D55	11°32	13°35	10°31	S 29
S 30	4 35 33	7♂57'58	20♂31	27♂18	25♂ 5	2♂13	9♂24	18♂19	13♂54	29♂46	3♂12	12♂56	11♂29	13♂41	10♂27	S 30

Delta T = 48.35 sec

Greg. Calendar

DECEMBER 1642 GC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	4 39 29	8♂58'53	4♂15	27♂31	26♂ 8	2°R10	9♂30	18♂20	13♂58	29♂48	3°R10	12♂57	11♂26	13♂48	10°R24	M 1
T 2	4 43 26	9°59'49	17°48	27°R35	27°11	2♂ 8	9°35	18°21	14° 1	29°50	3♂ 9	12°R57	11°23	13°55	10♂20	T 2
W 3	4 47 23	11° 0'46	1♂ 9	27°28	28°14	2° 7	9°41	18°22	14° 5	29°52	3° 8	12°55	11°20	14° 2	10°16	W 3
T 4	4 51 19	12° 1'44	14°20	27°10	29°17	2°D 6	9°47	18°23	14° 8	29°55	3° 7	12°51	11°17	14° 8	10°13	T 4
F 5	4 55 16	13° 2'42	27°20	26°40	0♂19	2° 7	9°53	18°24	14°11	29°57	3° 6	12°44	11°13	14°15	10° 9	F 5
S 6	4 59 12	14° 3'41	10♂ 9	25°59	1°20	2° 8	9°59	18°26	14°15	29°59	3° 5	12°35	11°10	14°22	10° 5	S 6
S 7	5 3 9	15° 4'41	22°46	25° 7	2°22	2°10	10° 6	18°28	14°18	0♂ 1	3° 4	12°23	11° 7	14°28	10° 2	S 7
M 8	5 7 5	16° 5'42	5♂11	24° 5	3°23	2°12	10°12	18°29	14°21	0° 3	3° 3	12°11	11° 4	14°35	9°58	M 8
T 9	5 11 2	17° 6'44	17°25	22°55	4°23	2°16	10°19	18°31	14°25	0° 6	3° 1	11°59	11° 1	14°42	9°54	T 9
W10	5 14 59	18° 7'47	29°28	21°37	5°23	2°20	10°26	18°33	14°28	0° 8	3° 0	11°48	10°57	14°48	9°51	W10
T 11	5 18 55	19° 8'50	11♂23	20°16	6°23	2°25	10°33	18°35	14°31	0°10	2°59	11°39	10°54	14°55	9°47	T 11
F 12	5 22 52	20° 9'54	23°13	18°53	7°22	2°30	10°40	18°37	14°35	0°12	2°58	11°33	10°51	15° 2	9°44	F 12
S 13	5 26 48	21°11'00	5♂ 2	17°31	8°21	2°36	10°48	18°39	14°38	0°14	2°57	11°29	10°48	15° 9	9°40	S 13
S 14	5 30 45	22°12'05	16°55	16°13	9°19	2°43	10°55	18°42	14°41	0°16	2°56	11°28	10°45	15°15	9°36	S 14
M15	5 34 41	23°13'12	28°58	15° 2	10°17	2°51	11° 3	18°44	14°44	0°18	2°55	11°D28	10°42	15°22	9°33	M15
T 16	5 38 38	24°14'20	11♂15	13°59	11°14	2°59	11°11	18°47	14°47	0°21	2°54	11°R28	10°38	15°29	9°29	T 16
W17	5 42 34	25°15'28	23°53	13° 6	12°11	3° 8	11°19	18°49	14°50	0°23	2°53	11°27	10°35	15°35	9°26	W17
T 18	5 46 31	26°16'37	6♂54	12°23	13° 7	3°18	11°27	18°52	14°53	0°25	2°52	11°25	10°32	15°42	9°22	T 18
F 19	5 50 28	27°17'47	20°23	11°51	14° 2	3°28	11°35	18°55	14°56	0°27	2°51	11°20	10°29	15°49	9°19	F 19
S 20	5 54 24	28°18'57	4♂21	11°30	14°57	3°39	11°44	18°58	14°59	0°29	2°50	11°12	10°26	15°55	9°15	S 20
S 21	5 58 21	29°20'08	18°44	11°19	15°52	3°51	11°52	19° 1	15° 2	0°31	2°49	11° 1	10°23	16° 2	9°12	S 21
M22	6 2 17	0♂21'19	3♂27	11°D18	16°45	4° 3	12° 1	19° 4	15° 5	0°33	2°48	10°50	10°19	16° 9	9° 9	M22
T 23	6 6 14	1°22'30	18°22	11°26	17°38	4°16	12°10	19° 7	15° 8	0°35	2°47	10°38	10°16	16°16	9° 5	T 23
W24	6 10 10	2°23'42	3♂20	11°42	18°31	4°29	12°19	19°11	15°11	0°37	2°46	10°27	10°13	16°22	9° 2	W24
T 25	6 14 7	3°24'53	18°11	12° 6	19°22	4°43	12°28	19°14	15°14	0°39	2°45	10°19	10°10	16°29	8°59	T 25
F 26	6 18 3	4°26'04	2♂49	12°38	20°13	4°57	12°38	19°18	15°17	0°41	2°44	10°13	10° 7	16°36	8°55	F 26
S 27	6 22 0	5°27'15	17° 9	13°15	21° 3	5°12	12°47	19°21	15°19	0°43	2°43	10°10	10° 3	16°42	8°52	S 27
S 28	6 25 57	6°28'26	1♂ 8	13°58	21°52	5°28	12°57	19°25	15°22	0°45	2°42	10°10	10° 0	16°49	8°49	S 28
M29	6 29 53	7°29'36	14°47	14°46	22°40	5°44	13° 6	19°29	15°25	0°47	2°41	10° 9	9°57	16°56	8°46	M29
T 30	6 33 50	8°30'47	28° 8	15°38	23°28	6° 0	13°16	19°32	15°27	0°49	2°40	10° 9	9°54	17° 2	8°43	T 30
W31	6 37 46	9♂31'56	11♂13	16♂35	24♂14	6♂17	13♂26	19♂36	15♂30	0♂50	2♂39	10♂6	9♂51	17♂ 9	8♂40	W31

Delta T = 48.29 sec

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