



# Astrodienst Ephemeris Tables for the year 2245

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 2245

geocentric

JANUARY 2245

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	6 42 29	10°32'40"	29°35'	20°34'	6°34'	12°R33	29°28'	0°36'	21°3'	5°R15	7°47'	8°R 1	6°II31	2°11'9"	13°29'	W 1
T 2	6 46 26	11°25'19"	14°34'	22°18'	7°59'	12°29'	29°42'	0°37'	21°6'	5°R14	7°50'	7°II56	6°28'	2°16'	13°33'	T 2
F 3	6 50 22	12°26'28"	29°30'	23°55'	9°14'	11°45'	29°55'	0°38'	21°9'	5°12'	7°52'	7°51'	6°24'	2°23'	13°36'	F 3
S 4	6 54 19	13°27'37"	14°38'	25°31'	10°30'	11°21'	0°38'	0°38'	21°13'	5°11'	7°54'	7°46'	6°21'	2°30'	13°39'	S 4
S 5	6 58 15	14°28'46"	28°31'	27°7'	11°45'	10°58'	0°22'	0°39'	21°16'	5°9'	7°56'	7°44'	6°18'	2°36'	13°41'	S 5
M 6	7 2 12	15°29'55"	12°35'	28°43'	13°1'	10°34'	0°36'	0°40'	21°20'	5°8'	7°58'	7°D42	6°15'	2°43'	13°44'	M 6
T 7	7 6 8	16°31'04"	26°22'	0°19'	14°16'	10°11'	0°49'	0°40'	21°24'	5°6'	8°0'	7°43'	6°12'	2°50'	13°47'	T 7
W 8	7 10 5	17°32'12"	9°34'	1°54'	15°32'	9°49'	1°3'	0°40'	21°27'	5°4'	8°2'	7°44'	6°8'	2°57'	13°49'	W 8
T 9	7 14 1	18°33'20"	23°1'	3°28'	16°47'	9°26'	1°16'	0°40'	21°31'	5°3'	8°3'	7°46'	6°5'	3°3'	13°51'	T 9
F 10	7 17 58	19°34'28"	5°II58	5°2'	18°3'	9°4'	1°29'	0°R40	21°34'	5°1'	8°5'	7°R46	6°2'	3°10'	13°54'	F 10
S 11	7 21 55	20°35'35"	18°42'	6°34'	19°18'	8°43'	1°43'	0°40'	21°38'	5°0'	8°7'	7°46'	5°59'	3°17'	13°56'	S 11
S 12	7 25 51	21°36'43"	1°15'	8°5'	20°34'	8°22'	1°56'	0°40'	21°41'	4°58'	8°9'	7°43'	5°56'	3°23'	13°58'	S 12
M13	7 29 48	22°37'50"	13°39'	9°35'	21°49'	8°1'	2°9'	0°40'	21°45'	4°56'	8°11'	7°38'	5°53'	3°30'	14°0'	M13
T 14	7 33 44	23°38'56"	25°54'	11°2'	23°5'	7°41'	2°22'	0°39'	21°49'	4°55'	8°13'	7°31'	5°49'	3°37'	14°1'	T 14
W15	7 37 41	24°40'03"	8°1'	12°27'	24°20'	7°22'	2°36'	0°39'	21°52'	4°53'	8°15'	7°22'	5°46'	3°44'	14°3'	W15
T 16	7 41 37	25°41'09"	20°1'	13°49'	25°36'	7°3'	2°49'	0°38'	21°56'	4°51'	8°16'	7°12'	5°43'	3°50'	14°4'	T 16
F 17	7 45 34	26°42'15"	1°11'56	15°7'	26°51'	6°45'	3°2'	0°38'	21°59'	4°50'	8°18'	7°3'	5°40'	3°57'	14°6'	F 17
S 18	7 49 30	27°43'21"	13°48'	16°22'	28°7'	6°27'	3°15'	0°37'	22°3'	4°48'	8°20'	6°54'	5°37'	4°4'	14°7'	S 18
S 19	7 53 27	28°44'26"	25°40'	17°31'	29°22'	6°10'	3°28'	0°36'	22°6'	4°46'	8°22'	6°46'	5°34'	4°11'	14°8'	S 19
M20	7 57 24	29°45'32"	7°13'	18°35'	0°37'	5°54'	3°41'	0°35'	22°10'	4°45'	8°23'	6°41'	5°30'	4°17'	14°9'	M20
T 21	8 1 20	0°46'37"	19°35'	19°33'	1°53'	5°39'	3°54'	0°34'	22°13'	4°43'	8°25'	6°38'	5°27'	4°24'	14°10'	T 21
W22	8 5 17	1°47'42"	1°11'48	20°24'	3°8'	5°24'	4°7'	0°32'	22°17'	4°41'	8°27'	6°D38	5°24'	4°31'	14°11'	W22
T 23	8 9 13	2°48'46"	14°18'	21°6'	4°24'	5°10'	4°20'	0°31'	22°21'	4°40'	8°28'	6°38'	5°21'	4°37'	14°12'	T 23
F 24	8 13 10	3°49'51"	27°10'	21°40'	5°39'	4°57'	4°32'	0°29'	22°24'	4°38'	8°30'	6°39'	5°18'	4°44'	14°12'	F 24
S 25	8 17 6	4°50'55"	10°28'	22°4'	6°55'	4°44'	4°45'	0°28'	22°28'	4°36'	8°31'	6°R39	5°14'	4°51'	14°13'	S 25
S 26	8 21 3	5°51'59"	24°14'	22°17'	8°10'	4°33'	4°58'	0°26'	22°31'	4°35'	8°33'	6°38'	5°11'	4°58'	14°13'	S 26
M27	8 24 59	6°53'02"	8°32'29	22°R19	9°25'	4°22'	5°11'	0°24'	22°35'	4°33'	8°34'	6°34'	5°8'	5°4'	14°13'	M27
T 28	8 28 56	7°54'05"	23°11'	22°10'	10°41'	4°12'	5°23'	0°22'	22°38'	4°31'	8°36'	6°28'	5°5'	5°11'	14°R13	T 28
W29	8 32 53	8°55'07"	8°33'	21°49'	11°56'	4°3'	5°36'	0°20'	22°42'	4°29'	8°37'	6°19'	5°2'	5°18'	14°13'	W29
T 30	8 36 49	9°56'08"	23°25'	21°17'	13°12'	3°54'	5°48'	0°18'	22°45'	4°28'	8°39'	6°9'	4°59'	5°24'	14°13'	T 30
F 31	8 40 46	10°57'08"	8°37'	20°35'	14°27'	3°54'	6°31'	0°16'	22°48'	4°26'	8°40'	5°II59	4°II55	5°11'31"	14°13'	F 31

Delta T = 213.88 sec

FEBRUARY 2245

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	8 44 42	11°58'07"	23°39'	19°R42	15°42'	3°R40	6°31'	0°R14	22°35'	4°R24	8°41'	5°R50	4°II52	5°11'38"	14°R12	S 1
S 2	8 48 39	12°59'05"	8°21'	18°42'	16°58'	3°34'	6°25'	0°12'	22°55'	4°R23	8°43'	5°II43	4°49'	5°45'	14°12'	S 2
M 3	8 52 35	14°0'02"	22°39'	17°35'	18°13'	3°29'	6°38'	0°9'	22°59'	4°21'	8°44'	5°39'	4°46'	5°51'	14°11'	M 3
T 4	8 56 32	15°0'58"	6°31'	16°23'	19°28'	3°25'	6°50'	0°6'	23°2'	4°19'	8°45'	5°37'	4°43'	5°58'	14°10'	T 4
W 5	9 0 28	16°1'52"	19°57'	15°9'	20°44'	3°21'	7°2'	0°4'	23°5'	4°18'	8°46'	5°D37	4°39'	6°5'	14°9'	W 5
T 6	9 4 25	17°2'45"	3°II 1	13°55'	21°59'	3°19'	7°14'	0°1'	23°9'	4°16'	8°48'	5°R37	4°36'	6°12'	14°8'	T 6
F 7	9 8 22	18°3'37"	15°47'	12°43'	23°14'	3°17'	7°26'	29°11'58	23°12'	4°14'	8°49'	5°37'	4°33'	6°18'	14°7'	F 7
S 8	9 12 18	19°4'27"	28°17'	11°34'	24°30'	3°16'	7°38'	29°55'	23°15'	4°13'	8°50'	5°34'	4°30'	6°25'	14°6'	S 8
S 9	9 16 15	20°5'16"	10°35'	10°31'	25°45'	3°D15	7°50'	29°52'	23°19'	4°11'	8°51'	5°29'	4°27'	6°32'	14°4'	S 9
M10	9 20 11	21°6'04"	22°45'	9°34'	27°0'	3°16'	8°1'	29°49'	23°22'	4°10'	8°52'	5°22'	4°24'	6°38'	14°3'	M10
T 11	9 24 8	22°6'50"	4°11'48	8°44'	28°15'	3°17'	8°13'	29°46'	23°25'	4°8'	8°53'	5°11'	4°20'	6°45'	14°1'	T 11
W12	9 28 4	23°7'35"	16°47'	8°2'	29°31'	3°19'	8°25'	29°43'	23°28'	4°6'	8°54'	4°58'	4°17'	6°52'	14°0'	W12
T 13	9 32 1	24°8'19"	28°43'	7°29'	0°46'	3°21'	8°36'	29°39'	23°32'	4°5'	8°55'	4°43'	4°14'	6°59'	13°58'	T 13
F 14	9 35 57	25°9'02"	10°11'36	7°4'	2°1'	3°24'	8°48'	29°36'	23°35'	4°3'	8°56'	4°28'	4°11'	7°5'	13°56'	F 14
S 15	9 39 54	26°9'43"	22°28'	6°47'	3°16'	3°28'	8°59'	29°32'	23°38'	4°2'	8°57'	4°15'	4°8'	7°12'	13°54'	S 15
S 16	9 43 51	27°10'23"	4°11'21	6°37'	4°31'	3°33'	9°10'	29°29'	23°41'	4°0'	8°58'	4°3'	4°5'	7°19'	13°52'	S 16
M17	9 47 47	28°11'02"	16°17'	6°D36	5°47'	3°39'	9°22'	29°25'	23°44'	3°59'	8°58'	3°54'	4°1'	7°26'	13°49'	M17
T 18	9 51 44	29°11'39"	28°19'	6°41'	7°2'	3°45'	9°33'	29°21'	23°47'	3°57'	8°59'	3°48'	3°58'	7°32'	13°47'	T 18
W19	9 55 40	0°12'16"	10°11'31	6°53'	8°17'	3°51'	9°44'	29°18'	23°50'	3°56'	9°0'	3°45'	3°55'	7°39'	13°45'	W19
T 20	9 59 37	1°12'51"	22°58'	7°11'	9°32'	3°59'	9°55'	29°14'	23°53'	3°54'	9°1'	3°44'	3°52'	7°46'	13°42'	T 20
F 21	10 3 33	2°13'25"	5°11'43	7°35'	10°47'	4°7'	10°6'	29°10'	23°56'	3°53'	9°1'	3°44'	3°49'	7°52'	13°39'	F 21
S 22	10 7 30	3°13'58"	18°53'	8°4'	12°2'	4°15'	10°16'	29°6'	23°59'	3°51'	9°2'	3°43'	3°45'	7°59'	13°37'	S 22
S 23	10 11 26	4°14'30"	2°30'	8°39'	13°17'	4°24'	10°27'	29°2'	24°2'	3°50'	9°3'	3°41'	3°42'	8°6'	13°34'	S 23
M24	10 15 23	5°15'01"	16°37'	9°17'	14°32'	4°34'	10°38'	28°58'	24°5'	3°48'	9°3'	3°37'	3°39'	8°13'	13°31'	M24
T 25	10 19 20	6°15'30"	1°11'12	10°0'	15°47'	4°44'	10°48'	28°54'	24°8'	3°47'	9°4'	3°30'	3°36'	8°19'	13°28'	T 25
W26	10 23 16	7°15'58"	16°12'	10°47'	17°2'	4°55'	10°58'	28°49'	24°11'	3°46'	9°4'	3°20'	3°33'	8°26'	13°25'	W26
T 27	10 27 13	8°16'24"	1°11'29	11°37'	18°17'	5°7'	11°9'	28°45'	24°14'	3°44'	9°5'	3°9'	3°30'	8°33'	13°21'	T 27
F 28	10 31 9	9°16'49"	16°11'51	12°31'	19°11'32	5°19'	11°31'	28°41'	24°17'	3°43'	9°5'	2°II58	3°II26	8°11'39"	13°18'	F 28

Delta T = 213.99 sec

## ASTRODIENST EPHEMERIS for the year 2245

geocentric

MARCH 2245

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	10 35 6	10°17'11	2°19' 6	13°27' 27	20°47' 47	5°31' 31	11°29' 29	28°R36	24°31' 19	3°R42	9°♂ 6	2°R47	3°II23	8°♂46	13°R15	S 1
S 2	10 39 2	11°17'33	17° 4	14°27' 22	22° 2	5°45' 45	11°39' 39	28°♂32	24°22' 22	3°L40	9° 6	2°II39	3°20	8°53' 53	13°♂11	S 2
M 3	10 42 59	12°17'52	18°38' 38	15°29' 23	23°17' 17	5°58' 58	11°49' 49	28°28' 28	24°25' 25	3°39' 39	9° 6	2°33' 33	3°17' 17	9° 0' 0	13° 8' 8	M 3
T 4	10 46 55	13°18'09	15°42' 42	16°33' 33	24°32' 32	6°12' 12	11°59' 59	28°23' 23	24°27' 27	3°38' 38	9° 7	2°30' 30	3°14' 14	9° 6' 6	13° 4' 4	T 4
W 5	10 50 52	14°18'24	29°17' 17	17°40' 40	25°47' 47	6°27' 27	12° 8' 8	28°19' 19	24°30' 30	3°37' 37	9° 7	2°D29	3°11' 11	9°13' 13	13° 0' 0	W 5
T 6	10 54 49	15°18'38	12°II25	18°49' 49	27° 2	6°42' 42	12°18' 18	28°14' 14	24°33' 33	3°36' 36	9° 7	2°R29	3° 7' 7	9°20' 20	12°56' 56	T 6
F 7	10 58 45	16°18'49	25°10' 10	20° 0' 0	28°17' 17	6°58' 58	12°27' 27	28° 9' 9	24°35' 35	3°34' 34	9° 7	2°29' 29	3° 4' 4	9°27' 27	12°53' 53	F 7
S 8	11 2 42	17°18'58	7°37' 37	21°12' 12	29°31' 31	7°14' 14	12°36' 36	28° 5' 5	24°38' 38	3°33' 33	9° 8	2°27' 27	3° 1' 1	9°33' 33	12°49' 49	S 8
S 9	11 6 38	18°19'05	19°49' 49	22°27' 27	0°Y46	7°30' 30	12°46' 46	28° 0' 0	24°40' 40	3°32' 32	9° 8	2°23' 23	2°58' 58	9°40' 40	12°45' 45	S 9
M10	11 10 35	19°19'10	18°L52	23°43' 43	2° 1' 1	7°47' 47	12°55' 55	27°56' 56	24°43' 43	3°31' 31	9° 8	2°16' 16	2°55' 55	9°47' 47	12°41' 41	M10
T 11	11 14 31	20°19'13	13°49' 49	25° 1' 1	3°16' 16	8° 4' 4	13° 3' 3	27°51' 51	24°45' 45	3°30' 30	9° 8	2° 7' 7	2°51' 51	9°53' 53	12°36' 36	T 11
W12	11 18 28	21°19'14	25°42' 42	26°21' 21	4°30' 30	8°22' 22	13°12' 12	27°46' 46	24°47' 47	3°29' 29	9°R 8	1°55' 55	2°48' 48	10° 0' 0	12°32' 32	W12
T 13	11 22 24	22°19'13	7°♂34	27°42' 42	5°45' 45	8°40' 40	13°21' 21	27°41' 41	24°50' 50	3°28' 28	9° 8	1°42' 42	2°45' 45	10° 7' 7	12°28' 28	T 13
F 14	11 26 21	23°19'10	19°27' 27	29° 5' 5	7° 0' 0	8°59' 59	13°30' 30	27°37' 37	24°52' 52	3°27' 27	9° 8	1°28' 28	2°42' 42	10°14' 14	12°24' 24	F 14
S 15	11 30 18	24°19'05	1°♂22	0°X29	8°14' 14	9°18' 18	13°38' 38	27°32' 32	24°54' 54	3°26' 26	9° 8	1°16' 16	2°39' 39	10°20' 20	12°19' 19	S 15
S 16	11 34 14	25°18'59	13°20' 20	1°54' 54	9°29' 29	9°37' 37	13°46' 46	27°27' 27	24°56' 56	3°25' 25	9° 8	1° 5' 5	2°36' 36	10°27' 27	12°15' 15	S 16
M17	11 38 11	26°18'50	25°22' 22	3°21' 21	10°43' 43	9°57' 57	13°54' 54	27°23' 23	24°58' 58	3°24' 24	9° 8	0°57' 57	2°32' 32	10°34' 34	12°10' 10	M17
T 18	11 42 7	27°18'39	7°♂32	4°49' 49	11°58' 58	10°17' 17	14° 2' 2	27°18' 18	25° 0' 0	3°23' 23	9° 7	0°52' 52	2°29' 29	10°40' 40	12° 6' 6	T 18
W19	11 46 4	28°18'27	19°50' 50	6°19' 19	13°12' 12	10°37' 37	14°10' 10	27°13' 13	25° 3' 3	3°22' 22	9° 7	0°49' 49	2°26' 26	10°47' 47	12° 1' 1	W19
T 20	11 50 0	29°18'13	2°♂21	7°50' 50	14°27' 27	10°58' 58	14°18' 18	27° 8' 8	25° 5' 5	3°22' 22	9° 7	0°D48	2°23' 23	10°54' 54	11°57' 57	T 20
F 21	11 53 57	0°Y17'58	15° 8' 8	9°22' 22	15°41' 41	11°19' 19	14°26' 26	27° 3' 3	25° 7' 7	3°21' 21	9° 7	0°49' 49	2°20' 20	11° 1' 1	11°52' 52	F 21
S 22	11 57 53	1°17'41	28°15' 15	10°55' 55	16°56' 56	11°40' 40	14°33' 33	26°59' 59	25° 9' 9	3°20' 20	9° 6	0°R50	2°17' 17	11° 7' 7	11°48' 48	S 22
S 23	12 1 50	2°17'22	11°34'5	12°30' 30	18°10' 10	12° 2' 2	14°41' 41	26°54' 54	25°10' 10	3°19' 19	9° 6	0°49' 49	2°13' 13	11°14' 14	11°43' 43	S 23
M24	12 5 47	3°17'01	25°40' 40	14° 6' 6	19°24' 24	12°24' 24	14°48' 48	26°49' 49	25°12' 12	3°19' 19	9° 6	0°47' 47	2°10' 10	11°21' 21	11°38' 38	M24
T 25	12 9 43	4°16'39	10°♂2	15°43' 43	20°39' 39	12°46' 46	14°55' 55	26°45' 45	25°14' 14	3°18' 18	9° 5	0°43' 43	2° 7' 7	11°28' 28	11°33' 33	T 25
W26	12 13 40	5°16'15	24°46' 46	17°21' 21	21°53' 53	13° 9' 9	15° 2' 2	26°40' 40	25°16' 16	3°17' 17	9° 5	0°36' 36	2° 4' 4	11°34' 34	11°29' 29	W26
T 27	12 17 36	6°15'49	9°X49	19° 1' 1	23° 7' 7	13°32' 32	15° 9' 9	26°35' 35	25°18' 18	3°17' 17	9° 4	0°28' 28	2° 1' 1	11°41' 41	11°24' 24	T 27
F 28	12 21 33	7°15'21	25° 0' 0	20°42' 42	24°22' 22	13°55' 55	15°15' 15	26°31' 31	25°19' 19	3°16' 16	9° 4	0°20' 20	1°57' 57	11°48' 48	11°19' 19	F 28
S 29	12 25 29	8°14'52	10°Y11	22°24' 24	25°36' 36	14°18' 18	15°22' 22	26°26' 26	25°21' 21	3°16' 16	9° 3	0°12' 12	1°54' 54	11°54' 54	11°14' 14	S 29
S 30	12 29 26	9°14'20	25° 9' 9	24° 8' 8	26°50' 50	14°42' 42	15°28' 28	26°21' 21	25°22' 22	3°15' 15	9° 3	0° 6' 6	1°51' 51	12° 1' 1	11°10' 10	S 30
M31	12 33 22	10°Y13'46	9°X47	25°X53	28°Y 4	15°36' 36	15°34' 34	26°♂17	25°32' 32	3°L15	9°♂ 2	0°II 2	1°II48	12°♂ 8	11°♂ 5	M31

Delta T = 214.09 sec

APRIL 2245

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	12 37 19	11°Y13'10	24°X 0	27°X39	29°Y18	15°30' 30	15°34' 34	26°R12	25°32' 32	3°R14	9°R 1	0°D 0	1°II45	12°♂15	11°R 0	T 1
W 2	12 41 15	12°12'32	7°II44	29°27' 27	0°X32	15°55' 55	15°46' 46	26°♂ 8	25°27' 27	3°L14	9°♂ 1	0°II 0	1°42' 42	12°21' 21	10°♂55	W 2
T 3	12 45 12	13°11'52	21° 0' 0	1°Y16	1°46' 46	16°20' 20	15°52' 52	26° 3' 3	25°28' 28	3°14' 14	9° 0' 0	0° 1' 1	1°38' 38	12°28' 28	10°50' 50	T 3
F 4	12 49 9	14°11'09	3°35' 35	3° 6' 6	3° 1' 1	16°45' 45	15°57' 57	25°59' 59	25°30' 30	3°13' 13	8°59' 59	0° 3' 3	1°35' 35	12°35' 35	10°46' 46	F 4
S 5	12 53 5	15°10'24	16°21' 21	4°58' 58	4°15' 15	17°10' 10	16° 3' 3	25°55' 55	25°31' 31	3°13' 13	8°58' 58	0°R 3	1°32' 32	12°41' 41	10°41' 41	S 5
S 6	12 57 2	16° 9'37	28°35' 35	6°51' 51	5°28' 28	17°35' 35	16° 8' 8	25°50' 50	25°32' 32	3°13' 13	8°58' 58	0° 2' 2	1°29' 29	12°48' 48	10°36' 36	S 6
M 7	13 0 58	17° 8'47	10°L37	8°45' 45	6°42' 42	18° 1' 1	16°13' 13	25°46' 46	25°33' 33	3°12' 12	8°57' 57	29°X59	1°26' 26	12°55' 55	10°31' 31	M 7
T 8	13 4 55	18° 7'55	22°32' 32	10°41' 41	7°56' 56	18°27' 27	16°18' 18	25°42' 42	25°34' 34	3°12' 12	8°56' 56	29°55' 55	1°22' 22	13° 2' 2	10°26' 26	T 8
W 9	13 8 51	19° 7'01	4°♂24	12°38' 38	9°10' 10	18°53' 53	16°22' 22	25°38' 38	25°35' 35	3°12' 12	8°55' 55	29°48' 48	1°19' 19	13° 8' 8	10°22' 22	W 9
T 10	13 12 48	20° 6'04	16°16' 16	14°37' 37	10°24' 24	19°20' 20	16°27' 27	25°34' 34	25°37' 37	3°12' 12	8°54' 54	29°41' 41	1°16' 16	13°15' 15	10°17' 17	T 10
F 11	13 16 44	21° 5'05	28°10' 10	16°37' 37	11°38' 38	19°46' 46	16°31' 31	25°29' 29	25°38' 38	3°12' 12	8°53' 53	29°34' 34	1°13' 13	13°22' 22	10°12' 12	F 11
S 12	13 20 41	22° 4'05	10°♂10	18°38' 38	12°51' 51	20°13' 13	16°36' 36	25°25' 25	25°38' 38	3°12' 12	8°52' 52	29°27' 27	1°10' 10	13°29' 29	10° 8' 8	S 12
S 13	13 24 38	23° 3'02	22°16' 16	20°40' 40	14° 5' 5	20°40' 40	16°40' 40	25°22' 22	25°39' 39	3°12' 12	8°51' 51	29°21' 21	1° 7' 7	13°35' 35	10° 3' 3	S 13
M14	13 28 34	24° 1'57	4°♂29	22°43' 43	15°19' 19	21° 7' 7	16°43' 43	25°18' 18	25°40' 40	3°D12	8°50' 50	29°17' 17	1° 3' 3	13°42' 42	9°59' 59	M14
T 15	13 32 31	25° 0'50	16°52' 52	24°47' 47	16°32' 32	21°34' 34	16°47' 47	25°14' 14	25°41' 41	3°12' 12	8°49' 49	29°14' 14	1° 0' 0	13°49' 49	9°54' 54	T 15
W16	13 36 27	25°59'42	29°25' 25	26°52' 52	17°46' 46	22° 2' 2	16°51' 51	25°10' 10	25°42' 42	3°12' 12	8°48' 48	29°D14	0°57' 57	13°55' 55	9°49' 49	W16
T 17	13 40 24	26°58'31	12°♂10	28°58' 58	19° 0' 0	22°29' 29	16°54' 54	25° 6' 6	25°42' 42	3°12' 12	8°47' 47	29°14' 14	0°54' 54	14° 2' 2	9°45' 45	T 17
F 18	13 44 20	27°57'19	25° 9' 9	1°X 4	20°13' 13	22°57' 57	16°57' 57	25° 3' 3	25°43' 43	3°12' 12	8°46' 46	29°16' 16	0°51' 51	14° 9' 9	9°41' 41	F 18
S 19	13 48 17	28°56'05	8°32' 32	3°11' 11	21°27' 27	23°25' 25	17° 0' 0	24°59' 59	25°44' 44	3°12' 12	8°45' 45	29°17' 17	0°48' 48	14°16' 16	9°36' 36	S 19
S 20	13 52 13	29°54'50	21°56' 56	5°17' 17	22°40' 40	23°54' 54	17° 3' 3	24°56' 56	25°44' 44	3°12' 12	8°44' 44	29°18' 18	0°44' 44	14°22' 22	9°32' 32	S 20
M21	13 56 10	0°X53'33	5°♂47	7°24' 24	23°53' 53	24°22' 22	17° 6' 6	24°52' 52	25°45' 45	3°13' 13	8°43' 43	29°R19	0°41' 41	14°29' 29	9°28' 28	M21
T 22	14 0 7	1°52'14	19°56' 56	9°30' 30	25° 7' 7	24°51' 51	17° 8' 8	24°49' 49	25°45' 45	3°13' 13	8°41' 41	29°18' 18	0°38' 38	14°36' 36	9°23' 23	T 22
W23	14 4 3	2°50'53	4°X23	11°35' 35	26°20' 20	25°19' 19	17°10' 10	24°46' 46	25°45' 45	3°13' 13	8°40' 40	29°15' 15	0°35' 35	14°42' 42	9°19' 19	W23
T 24	14 8 0	3°49'31	19° 3' 3	13°39' 39	27°33' 33	25°48' 48	17°12' 12	24°43' 43	25°46' 46	3°13' 13	8°39' 39	29°12' 12	0°32' 32	14°49' 49	9°15' 15	T 24
F 25	14 11 56	4°48'07	3°Y51	15°41' 41	28°47' 47	26°17' 17	17°14' 14	24°40' 40	25°46' 46	3°14' 14	8°38' 38	29° 9' 9	0°28' 28	14°56' 56	9°11' 11	F 25
S 26	14 15 53	5°46'41	18°40' 40	17°42' 42	29°59' 59	26°46' 46	17°16' 16	24°37' 37	25°46' 46	3°14' 14	8°36' 36	29° 6' 6	0°25' 25	15° 3' 3	9° 7' 7	S 26
S 27	14 19 49	6°45'14	3°X22	19°40' 40	1°II13	27°16' 16	17°17' 17	24°34' 34	25°47' 47	3°15' 15	8°35' 35	29° 3' 3	0°22' 22	15° 9' 9	9° 3' 3	S 27
M28	14 23 46	7°43'45	17°49' 49	21°36' 36	2°26' 26	27°45' 45	17°19' 19	24°31' 31	25°47' 47	3°15' 15	8°34' 34	29° 2' 2	0°19' 19	15°16' 16	9° 0' 0	M28
T 29	14 27 42	8°42'14	1°II57	23°30' 30	3°39' 39	28°15' 15	17°20' 20	24°28' 28	25°47' 47	3°16' 16	8°32' 32	29°D 1	0°16' 16	15°23' 23	8°56' 56	T 29
W30	14 31 39	9°X40'40	15°II41	25°X20	4°II52	28°34' 34	17°32' 32	24°♂25	25°R47	3°L16	8°♂31	29°X 2	0°II13	15°♂29	8°♂52	W30

ASTRODIENST EPHEMERIS for the year 2245  
geocentric

MAY 2245

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	14 35 36	10♈39°05	29♊ 0	27♋ 7	6♊ 5	29♈14	17♋22	24°R23	25°R47	3♊17	8°R30	29♋ 3	0♊ 9	15♎36	8°R49	T 1
F 2	14 39 32	11°37'28	11♌56	28°51	7°18	29°44	17°22	24♎20	25♋47	3°17	8♌28	29° 5	0° 6	15°43	8♌45	F 2
S 3	14 43 29	12°35'49	24°32	0♊31	8°31	0♊15	17°23	24°18	25°47	3°18	8°27	29° 6	0° 3	15°50	8°42	S 3
S 4	14 47 25	13°34'08	6♊49	2° 8	9°44	0°45	17°R23	24°16	25°46	3°19	8°25	29° 7	29♋59	15°56	8°38	S 4
M 5	14 51 22	14°32'25	18°54	3°40	10°57	1°15	17°23	24°14	25°46	3°19	8°24	29°R 7	29°57	16° 3	8°35	M 5
T 6	14 55 18	15°30'39	0♎50	5° 9	12°10	1°46	17°23	24°11	25°46	3°20	8°22	29° 6	29°54	16°10	8°32	T 6
W 7	14 59 15	16°28'52	12°43	6°33	13°23	2°16	17°22	24° 9	25°46	3°21	8°21	29° 5	29°50	16°16	8°29	W 7
T 8	15 3 11	17°27'03	24°36	7°53	14°35	2°47	17°22	24° 8	25°45	3°22	8°19	29° 3	29°47	16°23	8°26	T 8
F 9	15 7 8	18°25'11	6♌33	9° 9	15°48	3°18	17°21	24° 6	25°45	3°22	8°18	29° 2	29°44	16°30	8°23	F 9
S 10	15 11 5	19°23'18	18°37	10°20	17° 1	3°49	17°20	24° 4	25°44	3°23	8°16	29° 0	29°41	16°37	8°20	S 10
S 11	15 15 1	20°21'23	0♎51	11°27	18°13	4°20	17°19	24° 2	25°44	3°24	8°15	28°59	29°38	16°43	8°17	S 11
M12	15 18 58	21°19'27	13°18	12°30	19°26	4°51	17°17	24° 1	25°43	3°25	8°13	28°59	29°34	16°50	8°15	M12
T 13	15 22 54	22°17'28	25°57	13°28	20°38	5°23	17°16	23°59	25°43	3°26	8°12	28°D58	29°31	16°57	8°12	T 13
W14	15 26 51	23°15'29	8♌50	14°21	21°51	5°54	17°14	23°58	25°42	3°27	8°10	28°58	29°28	17° 3	8°10	W14
T 15	15 30 47	24°13'27	21°57	15°10	23° 3	6°26	17°12	23°57	25°41	3°28	8° 9	28°59	29°25	17°10	8° 7	T 15
F 16	15 34 44	25°11'25	5♋17	15°53	24°15	6°57	17°10	23°56	25°41	3°29	8° 7	28°59	29°22	17°17	8° 5	F 16
S 17	15 38 40	26° 9'21	18°51	16°32	25°28	7°29	17° 8	23°55	25°40	3°30	8° 5	28°59	29°19	17°24	8° 3	S 17
S 18	15 42 37	27° 7'15	2♌37	17° 7	26°40	8° 1	17° 6	23°54	25°39	3°31	8° 4	29° 0	29°15	17°30	8° 1	S 18
M19	15 46 34	28° 5'09	16°34	17°36	27°52	8°33	17° 3	23°53	25°38	3°32	8° 2	29° 0	29°12	17°37	7°59	M19
T 20	15 50 30	29° 3'01	0♎42	18° 0	29° 4	9° 5	17° 0	23°52	25°37	3°33	8° 1	29° 0	29° 9	17°44	7°57	T 20
W21	15 54 27	0♊ 0'52	14°57	18°19	0♌16	9°37	16°57	23°52	25°36	3°34	7°59	29° 0	29° 6	17°51	7°55	W21
T 22	15 58 23	0°58'42	29°18	18°34	1°28	10° 9	16°54	23°51	25°35	3°36	7°57	29° 0	29° 3	17°57	7°54	T 22
F 23	16 2 20	1°56'30	13°Y41	18°43	2°40	10°42	16°51	23°51	25°34	3°37	7°56	29° 0	29° 0	18° 4	7°52	F 23
S 24	16 6 16	2°54'18	28° 2	18°R48	3°52	11°14	16°47	23°51	25°33	3°38	7°54	29° 0	28°56	18°11	7°51	S 24
S 25	16 10 13	3°52'04	12♋17	18°48	5° 4	11°47	16°44	23°50	25°32	3°39	7°52	29° 1	28°53	18°17	7°50	S 25
M26	16 14 9	4°49'50	26°21	18°43	6°16	12°19	16°40	23°D50	25°30	3°41	7°51	29°R 1	28°50	18°24	7°48	M26
T 27	16 18 6	5°47'34	10♊11	18°34	7°28	12°52	16°36	23°50	25°29	3°42	7°49	29° 1	28°47	18°31	7°47	T 27
W28	16 22 3	6°45'16	23°44	18°20	8°39	13°25	16°32	23°50	25°28	3°43	7°47	29° 0	28°44	18°38	7°46	W28
T 29	16 25 59	7°42'58	6♌57	18° 3	9°51	13°57	16°27	23°51	25°27	3°45	7°46	29° 0	28°40	18°44	7°45	T 29
F 30	16 29 56	8°40'38	19°51	17°42	11° 3	14°30	16°23	23°51	25°25	3°46	7°44	28°58	28°37	18°51	7°45	F 30
S 31	16 33 52	9♊38'17	2♊26	17♊17	12♌14	15♊ 3	16♋18	23♎51	25♋24	3♊48	7♌43	28♋57	28♋34	18♎58	7♌44	S 31

Delta T = 214.30 sec

JUNE 2245

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	16 37 49	10♊35'54	14♊45	16°R50	13♌26	15♊37	16°R13	23♎52	25°R22	3♊49	7°R41	28°R56	28♋31	19♎ 4	7°R44	S 1
M 2	16 41 45	11°33'29	26°52	16♊21	14°37	16°10	16♋ 8	23°53	25♋21	3°51	7♌39	28♋55	28°28	19°11	7♌43	M 2
T 3	16 45 42	12°31'04	8♎49	15°49	15°48	16°43	16° 3	23°53	25°19	3°52	7°38	28°D54	28°25	19°18	7°43	T 3
W 4	16 49 39	13°28'37	20°42	15°16	17° 0	17°16	15°58	23°54	25°18	3°54	7°36	28°54	28°21	19°25	7°43	W 4
T 5	16 53 35	14°26'08	2♌36	14°43	18°11	17°50	15°53	23°55	25°16	3°55	7°34	28°55	28°18	19°31	7°D43	T 5
F 6	16 57 32	15°23'38	14°34	14° 9	19°22	18°23	15°47	23°56	25°15	3°57	7°33	28°56	28°15	19°38	7°43	F 6
S 7	17 1 128	16°21'07	26°42	13°36	20°33	18°57	15°42	23°57	25°13	3°58	7°31	28°58	28°12	19°45	7°43	S 7
S 8	17 5 25	17°18'35	9♎ 2	13° 4	21°44	19°31	15°36	23°58	25°11	4° 0	7°29	28°59	28° 9	19°51	7°43	S 8
M 9	17 9 21	18°16'02	21°39	12°33	22°55	20° 4	15°30	24° 0	25° 9	4° 2	7°28	29° 0	28° 6	19°58	7°44	M 9
T 10	17 13 18	19°13'28	4♌33	12° 4	24° 6	20°38	15°24	24° 1	25° 8	4° 3	7°26	29°R 0	28° 2	20° 5	7°44	T 10
W11	17 17 14	20°10'53	17°46	11°38	25°17	21°12	15°18	24° 3	25° 6	4° 5	7°25	28°59	27°59	20°12	7°45	W11
T 12	17 21 11	21° 8'17	1♋17	11°15	26°28	21°46	15°11	24° 4	25° 4	4° 7	7°23	28°57	27°56	20°18	7°46	T 12
F 13	17 25 8	22° 5'40	15° 4	10°55	27°38	22°20	15° 5	24° 6	25° 2	4° 9	7°21	28°54	27°53	20°25	7°47	F 13
S 14	17 29 4	23° 3'02	29° 4	10°39	28°49	22°54	14°58	24° 8	25° 0	4°10	7°20	28°51	27°50	20°32	7°48	S 14
S 15	17 33 1	24° 0'24	13♌14	10°27	29°59	23°28	14°52	24°10	24°58	4°12	7°18	28°47	27°46	20°38	7°49	S 15
M16	17 36 57	24°57'45	27°29	10°19	1♊10	24° 2	14°45	24°12	24°56	4°14	7°17	28°45	27°43	20°45	7°50	M16
T 17	17 40 54	25°55'06	11♋45	10°D15	2°20	24°37	14°38	24°14	24°54	4°16	7°15	28°43	27°40	20°52	7°51	T 17
W18	17 44 50	26°52'26	26° 0	10°16	3°30	25°11	14°31	24°16	24°52	4°18	7°14	28°D42	27°37	20°59	7°53	W18
T 19	17 48 47	27°49'46	10°Y10	10°21	4°41	25°45	14°24	24°19	24°50	4°19	7°12	28°43	27°34	21° 5	7°54	T 19
F 20	17 52 43	28°47'06	24°15	10°31	5°51	26°20	14°17	24°21	24°48	4°21	7°11	28°44	27°31	21°12	7°56	F 20
S 21	17 56 40	29°44'25	8♋12	10°45	7° 1	26°54	14°10	24°24	24°46	4°23	7° 9	28°45	27°27	21°19	7°58	S 21
S 22	18 0 37	0♌41'44	22° 0	11° 4	8°11	27°29	14° 3	24°26	24°44	4°25	7° 8	28°R46	27°24	21°25	7°59	S 22
M23	18 4 33	1°39'03	5♊38	11°28	9°21	28° 4	13°56	24°29	24°42	4°27	7° 6	28°46	27°21	21°32	8° 1	M23
T 24	18 8 30	2°36'21	19° 4	11°56	10°31	28°38	13°48	24°32	24°40	4°29	7° 5	28°45	27°18	21°39	8° 4	T 24
W25	18 12 26	3°33'39	2♌17	12°28	11°40	29°13	13°41	24°35	24°38	4°31	7° 3	28°42	27°15	21°46	8° 6	W25
T 26	18 16 23	4°30'57	15°15	13° 5	12°50	29°48	13°33	24°38	24°35	4°33	7° 2	28°37	27°12	21°52	8° 8	T 26
F 27	18 20 19	5°28'14	27°59	13°46	13°59	0♎23	13°26	24°41	24°33	4°35	7° 1	28°31	27° 8	21°59	8°11	F 27
S 28	18 24 16	6°25'30	10♊29	14°32	15° 9	0°58	13°18	24°44	24°31	4°37	6°59	28°24	27° 5	22° 6	8°13	S 28
S 29	18 28 12	7°22'46	22°45	15°22	16°18	1°33	13°11	24°47	24°29	4°39	6°58	28°18	27° 2	22°12	8°16	S 29
M30	18 32 9	8♌20'02	4♎49	16♊16	17♊27	2♎ 8	13♋ 3	24♎51	24♋26	4♊41	6♌56	28♋12	26♋59	22♎19	8♌19	M30

Delta T = 214.41 sec

# ASTRODIENST EPHEMERIS for the year 2245

## geocentric

JULY 2245

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	18 36 6	9°17'17"	16°46'	17°11'14"	18°12'37"	2°43'	12°R55	24°45'	24°R24	4°43'	6°R55	28°R 8	26°45'	22°46'	8°21'	T 1
W 2	18 40 2	10°14'31"	28°38'	18°16'	19°46'	3°19'	12°48'	24°58'	24°32'	4°45'	6°54'	28°B 6	26°52'	22°32'	8°24'	W 2
T 3	18 43 59	11°11'45"	10°43'	19°22'	20°55'	3°54'	12°40'	25° 1'	24°19'	4°47'	6°53'	28°D 5	26°49'	22°39'	8°27'	T 3
F 4	18 47 55	12° 8'58"	22°32'	20°32'	22° 3'	4°29'	12°32'	25° 5'	24°17'	4°49'	6°51'	28° 5	26°46'	22°46'	8°31'	F 4
S 5	18 51 52	13° 6'11"	4°43'	21°46'	23°12'	5° 5'	12°25'	25° 9'	24°15'	4°51'	6°50'	28° 7	26°43'	22°53'	8°34'	S 5
S 6	18 55 48	14° 3'24"	16°58'	23° 3'	24°21'	5°40'	12°17'	25°12'	24°12'	4°53'	6°49'	28° 8	26°40'	22°59'	8°37'	S 6
M 7	18 59 45	15° 0'36"	29°39'	24°25'	25°29'	6°16'	12° 9'	25°16'	24°10'	4°55'	6°48'	28°R 9	26°37'	23° 6'	8°41'	M 7
T 8	19 3 41	15°57'48"	12°43'	25°50'	26°38'	6°51'	12° 2'	25°20'	24° 8'	4°58'	6°46'	28° 7	26°33'	23°13'	8°45'	T 8
W 9	19 7 38	16°55'00"	26°11'	27°19'	27°46'	7°27'	11°54'	25°25'	24° 5'	5° 0'	6°45'	28° 5	26°30'	23°19'	8°48'	W 9
T 10	19 11 35	17°52'12"	10°32'	28°51'	28°54'	8° 3'	11°46'	25°29'	24° 3'	5° 2'	6°44'	27°59'	26°27'	23°26'	8°52'	T 10
F 11	19 15 31	18°49'24"	24°14'	0°27'	0°42'	8°38'	11°39'	25°33'	24° 1'	5° 4'	6°43'	27°53'	26°24'	23°33'	8°56'	F 11
S 12	19 19 28	19°46'35"	8°41'	2° 7'	1°10'	9°14'	11°31'	25°37'	23°58'	5° 6'	6°42'	27°45'	26°21'	23°40'	9° 0'	S 12
S 13	19 23 24	20°43'47"	23°18'	3°50'	2°18'	9°50'	11°24'	25°42'	23°56'	5° 8'	6°41'	27°37'	26°18'	23°46'	9° 4'	S 13
M14	19 27 21	21°41'00"	7°57'	5°36'	3°25'	10°26'	11°16'	25°46'	23°53'	5°10'	6°40'	27°30'	26°14'	23°53'	9° 8'	M14
T 15	19 31 17	22°38'12"	22°31'	7°25'	4°33'	11° 2'	11° 9'	25°51'	23°51'	5°13'	6°39'	27°25'	26°11'	24° 0'	9°13'	T 15
W16	19 35 14	23°35'25"	6°55'	9°18'	5°40'	11°38'	11° 1'	25°56'	23°48'	5°15'	6°38'	27°21'	26° 8'	24° 6'	9°17'	W16
T 17	19 39 11	24°32'39"	21° 7'	11°13'	6°47'	12°14'	10°54'	26° 0'	23°46'	5°17'	6°37'	27°D20	26° 5'	24°13'	9°21'	T 17
F 18	19 43 7	25°29'53"	5°8'	13°10'	7°54'	12°50'	10°47'	26° 5'	23°44'	5°19'	6°36'	27°21'	26° 2'	24°20'	9°26'	F 18
S 19	19 47 4	26°27'08"	18°46'	15°10'	9° 1'	13°26'	10°40'	26°10'	23°41'	5°21'	6°35'	27°21'	25°58'	24°27'	9°31'	S 19
S 20	19 51 0	27°24'23"	2°14'	17°12'	10° 8'	14° 3'	10°32'	26°15'	23°39'	5°24'	6°34'	27°R21	25°55'	24°33'	9°35'	S 20
M21	19 54 57	28°21'39"	15°30'	19°16'	11°15'	14°39'	10°25'	26°20'	23°36'	5°26'	6°33'	27°20'	25°52'	24°40'	9°40'	M21
T 22	19 58 53	29°18'55"	28°33'	21°21'	12°21'	15°15'	10°18'	26°25'	23°34'	5°28'	6°32'	27°16'	25°49'	24°47'	9°45'	T 22
W23	20 2 50	0°16'13"	11°25'	23°28'	13°27'	15°52'	10°12'	26°30'	23°32'	5°30'	6°32'	27°10'	25°46'	24°53'	9°50'	W23
T 24	20 6 46	1°13'30"	24° 6'	25°35'	14°34'	16°28'	10° 5'	26°35'	23°29'	5°32'	6°31'	27° 1'	25°43'	25° 0'	9°55'	T 24
F 25	20 10 43	2°10'48"	6°43'	27°43'	15°40'	17° 5'	9°58'	26°41'	23°27'	5°35'	6°30'	26°50'	25°39'	25° 7'	10° 1'	F 25
S 26	20 14 40	3° 8'07"	18°54'	29°51'	16°45'	17°41'	9°52'	26°46'	23°24'	5°37'	6°29'	26°38'	25°36'	25°13'	10° 6'	S 26
S 27	20 18 36	4° 5'26"	1°43'	1°59'	17°51'	18°18'	9°45'	26°51'	23°22'	5°39'	6°29'	26°26'	25°33'	25°20'	10°11'	S 27
M28	20 22 33	5° 2'45"	13° 3'	4° 6'	18°56'	18°55'	9°39'	26°57'	23°20'	5°41'	6°28'	26°16'	25°30'	25°27'	10°17'	M28
T 29	20 26 29	6° 0'05"	24°57'	6°13'	20° 2'	19°31'	9°33'	27° 2'	23°17'	5°44'	6°28'	26° 7'	25°27'	25°34'	10°22'	T 29
W30	20 30 26	6°57'25"	6°47'	8°19'	21° 7'	20° 8'	9°27'	27° 8'	23°15'	5°46'	6°27'	26° 1'	25°24'	25°40'	10°28'	W30
T 31	20 34 22	7°54'46"	18°43'	10°25'	22°12'	20°45'	9°21'	27°14'	23°13'	5°48'	6°26'	25°57'	25°42'	25°47'	10°34'	T 31

Delta T = 214.52 sec

AUGUST 2245

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	20 38 19	8°52'07"	0°43'	12°29'	23°16'	21°22'	9°R15	27°19'	23°R10	5°50'	6°R26	25°R55	25°B17	25°45'	10°40'	F 1
S 2	20 42 15	9°49'28"	12°38'	14°32'	24°21'	21°59'	9°32'	27°25'	23°B 8	5°52'	6°25'	25°D55	25°14'	26° 0'	10°45'	S 2
S 3	20 46 12	10°46'50"	24°58'	16°33'	25°25'	22°36'	9° 3'	27°31'	23° 6'	5°55'	6°25'	25°R55	25°11'	26° 7'	10°51'	S 3
M 4	20 50 9	11°44'13"	7°43'	18°34'	26°29'	23°13'	8°58'	27°37'	23° 4'	5°57'	6°24'	25°B54	25° 8'	26°14'	10°57'	M 4
T 5	20 54 5	12°41'36"	20°44'	20°33'	27°33'	23°50'	8°53'	27°43'	23° 1'	5°59'	6°24'	25°52'	25° 4'	26°20'	11° 4'	T 5
W 6	20 58 2	13°39'00"	4°31'	22°30'	28°36'	24°27'	8°48'	27°49'	22°59'	6° 1'	6°24'	25°48'	25° 1'	26°27'	11°10'	W 6
T 7	21 1 58	14°36'25"	18°19'	24°25'	29°40'	25° 4'	8°43'	27°55'	22°57'	6° 4'	6°23'	25°41'	24°58'	26°34'	11°16'	T 7
F 8	21 5 55	15°33'50"	2°46'	26°20'	0°43'	25°42'	8°38'	28° 1'	22°55'	6° 6'	6°23'	25°32'	24°55'	26°41'	11°22'	F 8
S 9	21 9 51	16°31'16"	17°33'	28°12'	1°46'	26°19'	8°33'	28° 7'	22°53'	6° 8'	6°23'	25°21'	24°52'	26°47'	11°29'	S 9
S 10	21 13 48	17°28'43"	2°43'	0°43'	2°48'	26°56'	8°29'	28°14'	22°51'	6°10'	6°22'	25°10'	24°49'	26°54'	11°35'	S 10
M11	21 17 44	18°26'11"	17°36'	1°53'	3°50'	27°34'	8°24'	28°20'	22°48'	6°12'	6°22'	25° 1'	24°45'	27° 1'	11°42'	M11
T 12	21 21 41	19°23'40"	2°43'	3°40'	4°52'	28°11'	8°20'	28°26'	22°46'	6°14'	6°22'	24°53'	24°42'	27° 7'	11°48'	T 12
W13	21 25 38	20°21'10"	17°12'	5°27'	5°54'	28°49'	8°16'	28°32'	22°44'	6°17'	6°22'	24°48'	24°39'	27°14'	11°55'	W13
T 14	21 29 34	21°18'42"	1°34'	7°11'	6°56'	29°26'	8°12'	28°39'	22°42'	6°19'	6°22'	24°45'	24°36'	27°21'	12° 2'	T 14
F 15	21 33 31	22°16'15"	15°34'	8°55'	7°57'	0°42'	8° 8'	28°45'	22°40'	6°21'	6°22'	24°44'	24°33'	27°28'	12° 9'	F 15
S 16	21 37 27	23°13'49"	29°12'	10°36'	8°57'	0°42'	8° 5'	28°52'	22°38'	6°23'	6°22'	24°44'	24°29'	27°34'	12°16'	S 16
S 17	21 41 24	24°11'25"	12°31'	12°16'	9°58'	1°19'	8° 2'	28°58'	22°36'	6°25'	6°D22	24°44'	24°26'	27°41'	12°23'	S 17
M18	21 45 20	25° 9'03"	25°33'	13°55'	10°58'	1°57'	7°58'	29° 5'	22°34'	6°27'	6°22'	24°41'	24°23'	27°48'	12°30'	M18
T 19	21 49 17	26° 6'42"	8°21'	15°32'	11°58'	2°35'	7°55'	29°12'	22°33'	6°30'	6°22'	24°37'	24°20'	27°54'	12°37'	T 19
W20	21 53 13	27° 4'22"	20°56'	17° 8'	12°58'	3°13'	7°53'	29°18'	22°31'	6°32'	6°22'	24°29'	24°17'	28° 1'	12°44'	W20
T 21	21 57 10	28° 2'04"	3°20'	18°42'	13°57'	3°51'	7°50'	29°25'	22°29'	6°34'	6°22'	24°19'	24°14'	28° 8'	12°51'	T 21
F 22	22 1 7	28°59'47"	15°36'	20°14'	14°55'	4°29'	7°47'	29°32'	22°27'	6°36'	6°22'	24° 6'	24°10'	28°14'	12°58'	F 22
S 23	22 5 3	29°57'32"	27°44'	21°46'	15°54'	5° 7'	7°45'	29°39'	22°25'	6°38'	6°22'	23°52'	24° 7'	28°21'	13° 6'	S 23
S 24	22 9 0	0°55'17"	9°44'	23°15'	16°52'	5°45'	7°43'	29°45'	22°24'	6°40'	6°22'	23°39'	24° 4'	28°28'	13°13'	S 24
M25	22 12 56	1°53'04"	21°39'	24°43'	17°50'	6°23'	7°41'	29°52'	22°22'	6°42'	6°23'	23°26'	24° 1'	28°35'	13°20'	M25
T 26	22 16 53	2°50'53"	3°42'	26°10'	18°47'	7° 1'	7°39'	29°59'	22°20'	6°44'	6°23'	23°15'	23°58'	28°41'	13°28'	T 26
W27	22 20 49	3°48'42"	15°18'	27°35'	19°43'	7°40'	7°38'	0°42'	22°19'	6°46'	6°23'	23° 7'	23°55'	28°48'	13°35'	W27
T 28	22 24 46	4°46'33"	27° 8'	28°59'	20°40'	8°18'	7°37'	0°13'	22°17'	6°48'	6°24'	23° 2'	23°51'	28°55'	13°43'	T 28
F 29	22 28 42	5°44'25"	9°11'	0°42'	21°36'	8°56'	7°35'	0°20'	22°16'	6°50'	6°24'	23° 0'	23°48'	29° 1'	13°51'	F 29
S 30	22 32 39	6°42'18"	21° 6'	1°41'	22°31'	9°35'	7°34'	0°27'	22°14'	6°52'	6°24'	22°D59	23°45'	29° 8'	13°58'	S 30
S 31	22 36 36	7°40'13"	3°42'	2°45'	23°42'	10°43'	7°34'	0°34'	22°13'	6°54'	6°25'	22°R59	23°42'	29°15'	14° 6'	S 31

Delta T = 214.63 sec

# ASTRODIENST EPHEMERIS for the year 2245

## geocentric

SEPTEMBER 2245

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	22 40 32	8♐38'09	16♌1	4♊16	24♊20	10♊52	7°R33	0♊41	22°R11	6♊56	6♊25	22°R59	23♊39	29♐21	14♊14	M 1
T 2	22 44 29	9°36'06	29° 2	5°31	25°14	11°31	7♌33	0°48	22♌10	6°58	6°26	22♌58	23°35	29°28	14°22	T 2
W 3	22 48 25	10°34'04	12♌32	6°45	26° 7	12° 9	7°32	0°55	22° 8	7° 0	6°26	22°54	23°32	29°35	14°30	W 3
T 4	22 52 22	11°32'04	26°32	7°56	27° 0	12°48	7°D32	1° 3	22° 7	7° 2	6°27	22°48	23°29	29°41	14°38	T 4
F 5	22 56 18	12°30'05	11♍1	9° 5	27°52	13°27	7°33	1°10	22° 6	7° 4	6°28	22°40	23°26	29°48	14°45	F 5
S 6	23 0 15	13°28'08	25°54	10°13	28°43	14° 5	7°33	1°17	22° 5	7° 6	6°28	22°30	23°23	29°55	14°54	S 6
S 7	23 4 11	14°26'12	11♋5	11°18	29°34	14°44	7°34	1°24	22° 3	7° 8	6°29	22°20	23°20	0♊2	15° 2	S 7
M 8	23 8 8	15°24'17	26°22	12°20	0♋24	15°23	7°34	1°31	22° 2	7° 9	6°30	22°11	23°16	0° 8	15°10	M 8
T 9	23 12 5	16°22'25	11♌34	13°21	1°13	16° 2	7°35	1°39	22° 1	7°11	6°30	22° 4	23°13	0°15	15°18	T 9
W10	23 16 1	17°20'34	26°32	14°18	2° 2	16°41	7°36	1°46	22° 0	7°13	6°31	21°59	23°10	0°22	15°26	W10
T 11	23 19 58	18°18'45	11♌8	15°13	2°50	17°20	7°38	1°53	21°59	7°15	6°32	21°57	23° 7	0°28	15°34	T 11
F 12	23 23 54	19°16'58	25°19	16° 5	3°37	17°59	7°39	2° 1	21°58	7°17	6°33	21°D57	23° 4	0°35	15°42	F 12
S 13	23 27 51	20°15'13	9♊3	16°54	4°23	18°39	7°41	2° 8	21°57	7°18	6°34	21°57	23° 1	0°42	15°51	S 13
S 14	23 31 47	21°13'31	22°23	17°40	5° 9	19°18	7°43	2°15	21°56	7°20	6°35	21°R58	22°57	0°48	15°59	S 14
M15	23 35 44	22°11'50	5♌22	18°22	5°53	19°57	7°45	2°23	21°56	7°22	6°36	21°57	22°54	0°55	16° 7	M15
T 16	23 39 40	23°10'11	18° 2	19° 0	6°37	20°36	7°47	2°30	21°55	7°23	6°37	21°54	22°51	1° 2	16°16	T 16
W17	23 43 37	24° 8'35	0♋27	19°34	7°20	21°16	7°49	2°37	21°54	7°25	6°38	21°48	22°48	1° 9	16°24	W17
T 18	23 47 34	25° 7'01	12°41	20° 4	8° 1	21°55	7°52	2°45	21°53	7°27	6°39	21°41	22°45	1°15	16°33	T 18
F 19	23 51 30	26° 5'28	24°46	20°29	8°42	22°35	7°55	2°52	21°53	7°28	6°40	21°31	22°41	1°22	16°41	F 19
S 20	23 55 27	27° 3'57	6♐45	20°49	9°22	23°14	7°58	3° 0	21°52	7°30	6°41	21°21	22°38	1°29	16°50	S 20
S 21	23 59 23	28° 2'29	18°38	21° 3	10° 0	23°54	8° 1	3° 7	21°52	7°31	6°42	21°10	22°35	1°35	16°58	S 21
M22	0 3 20	29° 1'02	0♊29	21°12	10°38	24°34	8° 4	3°15	21°51	7°33	6°43	21° 1	22°32	1°42	17° 7	M22
T 23	0 7 16	29°59'37	12°19	21°R14	11°14	25°13	8° 8	3°22	21°51	7°35	6°44	20°53	22°29	1°49	17°15	T 23
W24	0 11 13	0♊58'14	24° 9	21°11	11°49	25°53	8°11	3°30	21°50	7°36	6°46	20°47	22°26	1°55	17°24	W24
T 25	0 15 9	1°56'53	6♋1	21° 0	12°23	26°33	8°15	3°37	21°50	7°38	6°47	20°44	22°22	2° 2	17°32	T 25
F 26	0 19 6	2°55'34	17°59	20°42	12°55	27°13	8°19	3°44	21°50	7°39	6°48	20°D42	22°19	2° 9	17°41	F 26
S 27	0 23 2	3°54'16	0♌6	20°17	13°26	27°53	8°24	3°52	21°50	7°40	6°49	20°43	22°16	2°15	17°50	S 27
S 28	0 26 59	4°53'01	12°26	19°45	13°56	28°33	8°28	3°59	21°49	7°42	6°51	20°44	22°13	2°22	17°58	S 28
M29	0 30 56	5°51'47	25° 2	19° 6	14°24	29°13	8°33	4° 7	21°49	7°43	6°52	20°45	22°10	2°29	18° 7	M29
T 30	0 34 52	6♊50'34	8♌0	18♊20	14♋50	29♊53	8♌37	4♊14	21♌49	7♋44	6♊53	20°R46	22♌7	2♊35	18♊16	T 30

Delta T = 214.74 sec

OCTOBER 2245

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	0 38 49	7♊49'24	21♌23	17°R27	15♋15	0♋33	8♌42	4♊22	21°D49	7♋46	6♊55	20°R45	22♌3	2♊42	18♊25	W 1
T 2	0 42 45	8°48'15	5♋14	16♊29	15°38	1°13	8°47	4°29	21♌49	7°47	6°56	20♌42	22° 0	2°49	18°33	T 2
F 3	0 46 42	9°47'08	19°32	15°26	15°59	1°54	8°53	4°37	21°49	7°48	6°58	20°38	21°57	2°56	18°42	F 3
S 4	0 50 38	10°46'02	4♋16	14°20	16°19	2°34	8°58	4°44	21°49	7°50	6°59	20°32	21°54	3° 2	18°51	S 4
S 5	0 54 35	11°44'58	19°20	13°12	16°36	3°14	9° 4	4°51	21°50	7°51	7° 1	20°27	21°51	3° 9	19° 0	S 5
M 6	0 58 31	12°43'56	4♌35	12° 4	16°52	3°55	9° 9	4°59	21°50	7°52	7° 2	20°21	21°47	3°16	19° 8	M 6
T 7	1 2 28	13°42'56	19°51	10°57	17° 6	4°35	9°15	5° 6	21°50	7°53	7° 4	20°17	21°44	3°22	19°17	T 7
W 8	1 6 25	14°41'58	4♊56	9°54	17°17	5°16	9°21	5°14	21°50	7°54	7° 6	20°14	21°41	3°29	19°26	W 8
T 9	1 10 21	15°41'02	19°43	8°56	17°27	5°56	9°27	5°21	21°51	7°55	7° 7	20°D14	21°38	3°36	19°35	T 9
F 10	1 14 18	16°40'09	4♋6	8° 5	17°34	6°37	9°34	5°28	21°51	7°56	7° 9	20°14	21°35	3°42	19°44	F 10
S 11	1 18 14	17°39'18	18° 1	7°22	17°39	7°18	9°40	5°36	21°52	7°57	7°11	20°15	21°32	3°49	19°53	S 11
S 12	1 22 11	18°38'29	1♌29	6°48	17°42	7°59	9°47	5°43	21°52	7°58	7°12	20°17	21°28	3°56	20° 1	S 12
M13	1 26 7	19°37'42	14°32	6°25	17°R42	8°39	9°54	5°50	21°53	7°59	7°14	20°R18	21°25	4° 2	20°10	M13
T 14	1 30 4	20°36'58	27°13	6°12	17°40	9°20	10° 1	5°58	21°53	8° 0	7°16	20°18	21°22	4° 9	20°19	T 14
W15	1 34 0	21°36'16	9♋36	6°D10	17°36	10° 1	10° 8	6° 5	21°54	8° 1	7°18	20°17	21°19	4°16	20°28	W15
T 16	1 37 57	22°35'36	21°45	6°19	17°29	10°42	10°15	6°12	21°55	8° 2	7°19	20°14	21°16	4°23	20°37	T 16
F 17	1 41 54	23°34'59	3♐45	6°38	17°20	11°23	10°23	6°20	21°56	8° 3	7°21	20°10	21°12	4°29	20°46	F 17
S 18	1 45 50	24°34'23	15°38	7° 7	17° 9	12° 4	10°30	6°27	21°56	8° 4	7°23	20° 6	21° 9	4°36	20°54	S 18
S 19	1 49 47	25°33'50	27°29	7°46	16°55	12°46	10°38	6°34	21°57	8° 4	7°25	20° 1	21° 6	4°43	21° 3	S 19
M20	1 53 43	26°33'19	9♊19	8°33	16°39	13°27	10°46	6°41	21°58	8° 5	7°27	19°57	21° 3	4°49	21°12	M20
T 21	1 57 40	27°32'50	21°10	9°28	16°20	14° 8	10°54	6°48	21°59	8° 6	7°29	19°54	21° 0	4°56	21°21	T 21
W22	2 1 36	28°32'23	3♋5	10°30	16° 0	14°49	11° 2	6°55	22° 0	8° 7	7°31	19°52	20°57	5° 3	21°30	W22
T 23	2 5 33	29°31'59	15° 6	11°39	15°37	15°31	11°10	7° 2	22° 1	8° 7	7°33	19°D51	20°53	5° 9	21°38	T 23
F 24	2 9 29	0♋31'36	27°14	12°53	15°12	16°12	11°18	7°10	22° 2	8° 8	7°35	19°51	20°50	5°16	21°47	F 24
S 25	2 13 26	1°31'15	9♌31	14°11	14°45	16°54	11°27	7°17	22° 4	8° 8	7°37	19°52	20°47	5°23	21°56	S 25
S 26	2 17 23	2°30'56	22° 0	15°34	14°16	17°35	11°36	7°24	22° 5	8° 9	7°39	19°53	20°44	5°29	22° 5	S 26
M27	2 21 19	3°30'39	4♌44	17° 0	13°46	18°17	11°44	7°31	22° 6	8° 9	7°41	19°55	20°41	5°36	22°13	M27
T 28	2 25 16	4°30'23	17°45	18°29	13°13	18°59	11°53	7°38	22° 7	8°10	7°43	19°56	20°38	5°43	22°22	T 28
W29	2 29 12	5°30'09	1♋6	20° 0	12°40	19°40	12° 2	7°44	22° 9	8°10	7°45	19°R56	20°34	5°49	22°31	W29
T 30	2 33 9	6°29'57	14°48	21°34	12° 6	20°22	12°12	7°51	22°10	8°11	7°47	19°56	20°31	5°56	22°40	T 30
F 31	2 37 5	7♋29'46	28♋53	23♊8	11♋30	21♋4	12♌21	7♊58	22♌12	8♋11	7♊49	19♋55	20♌28	6♊3	22♊48	F 31

Delta T = 214.85 sec

# ASTRODIENST EPHEMERIS for the year 2245

## geocentric

NOVEMBER 2245

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	2 41 2	8♉29°37	13♋19	24♊44	10♈R54	21♉46	12♋30	8♊5	22♋13	8♊11	7♊51	19♈R54	20♋25	6♊9	22♊57	S 1
S 2	2 44 58	9°29'30	28° 3	26°21	10♉18	22°28	12°40	8°12	22°15	8°12	7°53	19♋53	20°22	6°16	23° 6	S 2
M 3	2 48 55	10°29'24	12°59	27°59	9°41	23°10	12°49	8°18	22°16	8°12	7°55	19°52	20°18	6°23	23°14	M 3
T 4	2 52 52	11°29'20	28° 0	29°37	9° 4	23°52	12°59	8°25	22°18	8°12	7°57	19°51	20°15	6°30	23°23	T 4
W 5	2 56 48	12°29'18	12♋57	1♉16	8°28	24°34	13° 9	8°32	22°20	8°13	8° 0	19°D51	20°12	6°36	23°31	W 5
T 6	3 0 45	13°29'18	27°41	2°55	7°52	25°16	13°19	8°38	22°22	8°13	8° 2	19°51	20° 9	6°43	23°40	T 6
F 7	3 4 41	14°29'19	12♉7	4°34	7°17	25°59	13°29	8°45	22°23	8°13	8° 4	19°51	20° 6	6°50	23°48	F 7
S 8	3 8 38	15°29'23	26° 9	6°13	6°44	26°41	13°39	8°51	22°25	8°13	8° 6	19°51	20° 3	6°56	23°57	S 8
S 9	3 12 34	16°29'29	9♋45	7°52	6°11	27°23	13°50	8°58	22°27	8°13	8° 8	19°52	19°59	7° 3	24° 5	S 9
M10	3 16 31	17°29'37	22°55	9°30	5°40	28° 6	14° 0	9° 4	22°29	8°13	8°11	19°52	19°56	7°10	24°14	M10
T 11	3 20 27	18°29'47	5♊42	11° 9	5°10	28°48	14°11	9°11	22°31	8°R13	8°13	19°52	19°53	7°16	24°22	T 11
W12	3 24 24	19°29'59	18° 8	12°47	4°43	29°30	14°21	9°17	22°33	8°13	8°15	19°52	19°50	7°23	24°30	W12
T 13	3 28 21	20°30'13	0♉18	14°25	4°17	0♊13	14°32	9°23	22°35	8°13	8°17	19°52	19°47	7°30	24°39	T 13
F 14	3 32 17	21°30'29	12°17	16° 3	3°54	0°56	14°43	9°29	22°37	8°13	8°20	19°52	19°44	7°36	24°47	F 14
S 15	3 36 14	22°30'47	24° 9	17°40	3°32	1°38	14°54	9°35	22°39	8°13	8°22	19°53	19°40	7°43	24°55	S 15
S 16	3 40 10	23°31'06	5♊58	19°18	3°13	2°21	15° 5	9°41	22°42	8°13	8°24	19°53	19°37	7°50	25° 3	S 16
M17	3 44 7	24°31'28	17°49	20°55	2°57	3° 4	15°16	9°48	22°44	8°12	8°27	19°53	19°34	7°56	25°12	M17
T 18	3 48 3	25°31'52	29°44	22°31	2°43	3°47	15°27	9°53	22°46	8°12	8°29	19°54	19°31	8° 3	25°20	T 18
W19	3 52 0	26°32'17	11♉46	24° 8	2°31	4°30	15°38	9°59	22°48	8°12	8°31	19°54	19°28	8°10	25°28	W19
T 20	3 55 56	27°32'44	23°58	25°44	2°21	5°13	15°50	10° 5	22°51	8°12	8°34	19°R54	19°24	8°16	25°36	T 20
F 21	3 59 53	28°33'13	6♊21	27°19	2°15	5°56	16° 1	10°11	22°53	8°11	8°36	19°54	19°21	8°23	25°44	F 21
S 22	4 3 50	29°33'43	18°57	28°55	2°10	6°39	16°13	10°17	22°56	8°11	8°38	19°53	19°18	8°30	25°52	S 22
S 23	4 7 46	0♊34°15	1♋45	0♊30	2°D 8	7°22	16°24	10°22	22°58	8°10	8°41	19°52	19°15	8°36	26° 0	S 23
M24	4 11 43	1°34'48	14°46	2° 5	2° 9	8° 5	16°36	10°28	23° 0	8°10	8°43	19°50	19°12	8°43	26° 8	M24
T 25	4 15 39	2°35'23	28° 2	3°40	2°12	8°48	16°48	10°34	23° 3	8°10	8°45	19°49	19° 9	8°50	26°15	T 25
W26	4 19 36	3°35'58	11♋31	5°15	2°17	9°32	17° 0	10°39	23° 6	8° 9	8°48	19°47	19° 5	8°56	26°23	W26
T 27	4 23 32	4°36'35	25°14	6°49	2°25	10°15	17°12	10°44	23° 8	8° 8	8°50	19°46	19° 2	9° 3	26°31	T 27
F 28	4 27 29	5°37'13	9♋12	8°23	2°34	10°58	17°24	10°50	23°11	8° 8	8°52	19°D46	18°59	9°10	26°39	F 28
S 29	4 31 25	6°37'52	23°22	9°57	2°46	11°42	17°36	10°55	23°14	8° 7	8°55	19°47	18°56	9°17	26°46	S 29
S 30	4 35 22	7♊38°32	7♉43	11♊31	3♉1	12♊25	17♋48	11♊0	23♋16	8♊7	8♊57	19♋48	18♋53	9♊23	26♊54	S 30

Delta T = 214.96 sec

DECEMBER 2245

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	4 39 19	8♊39°13	22♉13	13♊5	3♉17	13♊9	18♋1	11♊5	23♋19	8°R 6	8♊59	19♋49	18♋50	9♊30	27♊1	M 1
T 2	4 43 15	9°39'55	6♋47	14°39	3°35	13°52	18°13	11°10	23°22	8° 5	9° 2	19°50	18°46	9°37	27° 9	T 2
W 3	4 47 12	10°40'39	21°20	16°12	3°55	14°36	18°25	11°15	23°25	8° 5	9° 4	19°R51	18°43	9°43	27°16	W 3
T 4	4 51 8	11°41'23	5♉47	17°46	4°18	15°20	18°38	11°20	23°27	8° 4	9° 7	19°50	18°40	9°50	27°23	T 4
F 5	4 55 5	12°42'09	20° 1	19°19	4°42	16° 4	18°50	11°25	23°30	8° 3	9° 9	19°48	18°37	9°57	27°30	F 5
S 6	4 59 1	13°42'56	3♋57	20°53	5° 8	16°47	19° 3	11°30	23°33	8° 2	9°11	19°45	18°34	10° 3	27°38	S 6
S 7	5 2 58	14°43'44	17°33	22°26	5°35	17°31	19°16	11°34	23°36	8° 1	9°14	19°41	18°30	10°10	27°45	S 7
M 8	5 6 54	15°44'34	0♊46	23°59	6° 4	18°15	19°28	11°39	23°39	8° 1	9°16	19°37	18°27	10°17	27°52	M 8
T 9	5 10 51	16°45'25	13°37	25°32	6°35	18°59	19°41	11°43	23°42	8° 0	9°18	19°33	18°24	10°23	27°59	T 9
W10	5 14 48	17°46'17	26° 7	27° 6	7° 8	19°43	19°54	11°48	23°45	7°59	9°21	19°30	18°21	10°30	28° 6	W10
T 11	5 18 44	18°47'10	8♉20	28°39	7°42	20°27	20° 7	11°52	23°48	7°58	9°23	19°28	18°18	10°37	28°13	T 11
F 12	5 22 41	19°48'05	20°20	0♋12	8°17	21°11	20°20	11°56	23°51	7°57	9°25	19°D27	18°15	10°43	28°19	F 12
S 13	5 26 37	20°49'01	2♊12	1°45	8°54	21°56	20°33	12° 1	23°54	7°56	9°28	19°28	18°11	10°50	28°26	S 13
S 14	5 30 34	21°49'58	14° 1	3°18	9°32	22°40	20°46	12° 5	23°58	7°55	9°30	19°30	18° 8	10°57	28°33	S 14
M15	5 34 30	22°50'56	25°52	4°50	10°11	23°24	20°59	12° 9	24° 1	7°54	9°32	19°32	18° 5	11° 3	28°39	M15
T 16	5 38 27	23°51'56	7♉50	6°23	10°52	24° 8	21°12	12°13	24° 4	7°53	9°35	19°33	18° 2	11°10	28°46	T 16
W17	5 42 23	24°52'56	19°59	7°56	11°33	24°53	21°26	12°16	24° 7	7°51	9°37	19°R34	17°59	11°17	28°52	W17
T 18	5 46 20	25°53'58	2♊21	9°28	12°16	25°37	21°39	12°20	24°10	7°50	9°39	19°33	17°56	11°23	28°58	T 18
F 19	5 50 17	26°55'00	15° 0	11° 0	13° 0	26°22	21°52	12°24	24°14	7°49	9°42	19°30	17°52	11°30	29° 5	F 19
S 20	5 54 13	27°56'04	27°55	12°32	13°45	27° 6	22° 6	12°27	24°17	7°48	9°44	19°26	17°49	11°37	29°11	S 20
S 21	5 58 10	28°57'08	11♋8	14° 3	14°31	27°51	22°19	12°31	24°20	7°47	9°46	19°19	17°46	11°43	29°17	S 21
M22	6 2 6	29°58'12	24°35	15°34	15°18	28°36	22°33	12°34	24°23	7°45	9°48	19°12	17°43	11°50	29°23	M22
T 23	6 6 3	0♋59°17	8♊16	17° 4	16° 6	29°20	22°46	12°37	24°27	7°44	9°51	19° 5	17°40	11°57	29°29	T 23
W24	6 9 59	2° 0'23	22° 6	18°33	16°54	0♋5	23° 0	12°40	24°30	7°43	9°53	18°59	17°36	12° 3	29°35	W24
T 25	6 13 56	3° 1'28	6♋4	20° 1	17°44	0°50	23°13	12°43	24°33	7°42	9°55	18°54	17°33	12°10	29°40	T 25
F 26	6 17 53	4° 2'34	20° 7	21°28	18°34	1°35	23°27	12°46	24°37	7°40	9°57	18°51	17°30	12°17	29°46	F 26
S 27	6 21 49	5° 3'40	4♉13	22°54	19°25	2°19	23°41	12°49	24°40	7°39	9°59	18°D50	17°27	12°23	29°52	S 27
S 28	6 25 46	6° 4'47	18°21	24°18	20°17	3° 4	23°54	12°52	24°44	7°38	10° 2	18°50	17°24	12°30	29°57	S 28
M29	6 29 42	7° 5'53	2♋29	25°40	21°10	3°49	24° 8	12°55	24°47	7°36	10° 4	18°52	17°21	12°37	0♉3	M29
T 30	6 33 39	8° 6'59	16°36	27° 0	22° 3	4°34	24°22	12°57	24°51	7°35	10° 6	18°R52	17°17	12°43	0° 8	T 30
W31	6 37 35	9♋8'06	0♉40	28♋17	22♉57	5♋19	24♋36	13♊0	24♋54	7♉33	10♊8	18♋52	17♋14	12♊50	0♉13	W31

Delta T = 215.06 sec