



# Astrodienst Ephemeris Tables for the year 2068

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 2068

**JANUARY 2068**

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	Day
S 1	6 41 59	10°22'08	17°13'13	27°29'17	17°53'22	22°06'21	21°17'24	24°07'12	12°16'40	4°58'29	29°07'11	11°13'09	9°52'00	0°11'23	23°43'43	S 1
M 2	6 45 55	11°23'19	0°31'28	28°56'19	19°06'22	22°36'21	21°31'24	24°07'12	12°19'45	4°57'29	29°08'11	11°15'09	9°49'00	0°18'23	23°44'44	M 2
T 3	6 49 52	12°24'29	14°15'00	20°18'21	20°18'23	23°06'21	21°45'24	24°07'12	12°23'45	4°55'29	29°08'11	11°15'09	9°45'00	0°25'23	23°46'46	T 3
W 4	6 53 49	13°25'40	28°25'14	21°31'23	23°36'21	21°58'24	21°58'24	24°07'12	12°26'45	4°53'29	29°09'11	11°14'09	9°42'00	0°31'23	23°47'47	W 4
T 5	6 57 45	14°26'52	12°56'30	22°44'22	24°06'22	22°12'24	22°12'24	24°07'12	12°29'45	4°52'29	29°09'11	11°11'09	9°39'00	0°38'23	23°49'49	T 5
F 6	7 1 42	15°28'03	27°44'40	23°56'25	23°56'25	24°36'22	22°26'24	24°07'12	12°32'45	4°50'29	29°10'11	11°07'09	9°36'00	0°45'23	23°51'51	F 6
S 7	7 5 38	16°29'14	12°40'53	25°09'25	25°09'25	25°07'22	22°40'24	24°07'12	12°36'44	4°48'29	29°10'11	11°01'09	9°33'00	0°52'23	23°53'53	S 7
S 8	7 9 35	17°30'24	27°35'12	26°21'27	26°21'27	25°37'26	22°54'23	24°06'12	12°39'44	4°47'29	29°11'10	10°56'09	9°30'00	0°58'23	23°54'54	S 8
M 9	7 13 31	18°31'35	12°20'74	27°33'26	27°33'26	26°08'23	23°09'24	24°06'12	12°42'44	4°45'29	29°12'10	10°51'09	9°26'00	1°05'23	23°56'56	M 9
T 10	7 17 28	19°32'44	26°51'83	28°46'29	28°46'29	26°39'23	23°23'24	24°05'12	12°45'43	4°43'29	29°12'10	10°47'09	9°23'00	1°12'23	23°58'58	T 10
W 11	7 21 24	20°33'54	11°02'09	29°29'27	29°29'27	27°10'23	23°37'24	24°04'12	12°48'44	4°42'29	29°13'10	10°45'09	9°20'00	1°19'24	24°00'00	W 11
T 12	7 25 21	21°35'02	24°52'10	10°11'11	10°11'11	27°42'23	23°51'24	24°03'12	12°51'44	4°40'29	29°14'10	10°44'09	9°17'00	1°25'24	24°02'00	T 12
F 13	7 29 18	22°36'11	8°22'10	10°44'22	10°44'22	28°13'24	24°05'24	24°02'12	12°54'43	4°39'29	29°14'10	10°45'09	9°14'00	1°32'24	24°04'00	F 13
S 14	7 33 14	23°37'18	21°33'11	11°08'30	11°08'30	28°45'24	24°19'24	24°01'12	12°58'43	4°37'29	29°15'10	10°47'09	9°11'00	1°39'24	24°06'00	S 14
S 15	7 37 11	24°38'25	4°12'11	11°21'46	11°21'46	29°17'24	24°33'24	24°00'13	13°01'43	4°35'29	29°16'10	10°48'09	9°07'00	1°45'24	24°09'00	S 15
M 16	7 41 7	25°39'32	17°09'11	11°23'57	11°23'57	29°49'24	24°47'23	23°59'13	13°03'43	4°34'29	29°17'10	10°48'09	9°04'00	1°52'24	24°11'00	M 16
T 17	7 45 4	26°40'38	29°39'11	11°14'07	11°14'07	0°21'25	25°01'23	23°57'13	13°06'43	4°32'29	29°17'10	10°46'09	9°01'00	1°59'24	24°13'00	T 17
W 18	7 49 0	27°41'43	12°00'10	10°53'08	10°53'08	0°54'25	25°15'23	23°56'13	13°09'43	4°31'29	29°18'10	10°42'09	8°58'00	2°06'24	24°15'00	W 18
T 19	7 52 57	28°42'48	24°12'10	10°20'09	10°20'09	1°26'25	25°29'23	23°54'13	13°12'42	4°29'29	29°19'10	10°35'09	8°55'00	2°12'24	24°18'00	T 19
F 20	7 56 53	29°43'52	6°12'17	9°36'10	10°43'10	1°59'25	25°43'23	23°52'13	13°15'42	4°28'29	29°20'10	10°26'09	8°51'00	2°19'24	24°20'00	F 20
S 21	8 0 50	0°44'55	18°17'18	8°42'11	11°55'11	2°31'25	25°57'23	23°50'13	13°18'42	4°26'29	29°21'10	10°16'09	8°48'00	2°26'24	24°22'00	S 21
S 22	8 4 47	1°45'58	0°11'20	7°40'13	13°06'14	3°04'26	26°11'23	23°49'13	13°21'42	4°25'29	29°22'10	10°06'09	8°45'00	2°32'24	24°25'00	S 22
M 23	8 8 43	2°47'01	12°03'30	6°30'14	14°17'17	3°37'26	26°25'23	23°46'13	13°23'42	4°23'29	29°23'10	9°56'09	8°42'00	2°39'24	24°27'00	M 23
T 24	8 12 40	3°48'03	23°55'51	5°16'15	15°28'40	4°10'26	26°39'23	23°44'13	13°26'42	4°22'29	29°24'10	9°47'09	8°39'00	2°46'24	24°30'00	T 24
W 25	8 16 36	4°49'04	5°49'04	4°00'16	16°38'43	4°43'26	26°53'42	23°42'13	13°29'40	4°20'29	29°25'10	9°41'09	8°36'00	2°53'24	24°32'00	W 25
T 26	8 20 33	5°50'05	17°49'24	2°43'17	17°49'50	5°17'27	27°07'23	23°40'13	13°31'49	4°19'29	29°25'10	9°36'09	8°32'00	2°59'24	24°35'00	T 26
F 27	8 24 29	6°51'05	0°10'18	1°28'19	19°00'20	5°50'27	27°21'23	23°37'13	13°34'41	4°18'29	29°26'10	9°34'09	8°29'00	3°06'24	24°38'00	F 27
S 28	8 28 26	7°52'05	12°27'00	0°18'20	20°10'20	6°24'27	27°35'23	23°35'13	13°36'41	4°16'29	29°27'10	9°D34	8°26'00	3°13'24	24°40'00	S 28
S 29	8 32 22	8°53'04	25°13'29	23°13'21	21°20'22	6°57'27	27°49'23	23°32'13	13°39'41	4°15'29	29°28'10	9°35'09	8°23'00	3°20'24	24°43'00	S 29
M 30	8 36 19	9°54'03	8°25'28	28°16'22	22°30'71	7°31'28	28°03'23	23°29'13	13°41'41	4°13'30	29°30'10	9°R35	8°20'00	3°26'24	24°46'00	M 30
T 31	8 40 16	10°55'01	22°04'27	23°26'23	23°41'08	8°05'28	28°17'23	23°27'13	13°44'45	4°12'29	29°31'10	9°R35	8°17'00	3°33'24	24°49'00	T 31

Delta T = 80.31 sec

FEBRUARY 2068

00:00 UT

Day	Sid.t	☉	☽	♀	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	8 44 12	11°55'58	6°31'3	26°R45	24°H50	8°B39	28°B31	23°R24	13°A46	4°R11	29°H32	9°R32	8°A13	3°M40	24°H51	W 1	
T 2	8 48 9	12°56'55	20°50	26°B13	26° 0	9°13	28°45	23°M21	13°48	4°B10	29°33	9°A26	8°10	3°46	24°54	T 2	
F 3	8 52 5	13°57'50	5°550	25°49	27°10	9°47	28°59	23°18	13°51	4° 8	29°34	9°18	8° 7	3°53	24°57	F 3	
S 4	8 56 2	14°58'45	21° 4	25°34	28°19	10°21	29°13	23°15	13°53	4° 7	29°35	9° 9	8° 4	4° 0	25° 0	S 4	
S 5	8 59 58	15°59'38	6°H21	25°D27	29°29	10°55	29°26	23°11	13°55	4° 6	29°36	8°58	8° 1	4° 7	25° 3	S 5	
M 6	9 3 55	17° 0'30	21°30	25°28	0°Y38	11°30	29°40	23° 8	13°57	4° 5	29°37	8°48	7°57	4°13	25° 6	M 6	
T 7	9 7 51	18° 1'21	6°Y21	25°36	1°47	12° 4	29°54	23° 5	13°59	4° 4	29°39	8°40	7°54	4°20	25° 9	T 7	
W 8	9 11 48	19° 2'10	20°48	25°51	2°55	12°39	0°A 8	23° 1	14° 2	4° 3	29°40	8°35	7°51	4°27	25°12	W 8	
T 9	9 15 45	20° 2'58	4°B47	26°12	4° 4	13°14	0°21	22°58	14° 4	4° 2	29°41	8°32	7°48	4°34	25°15	T 9	
F 10	9 19 41	21° 3'45	18°20	26°39	5°13	13°48	0°35	22°54	14° 6	4° 0	29°42	8°D31	7°45	4°40	25°18	F 10	
S 11	9 23 38	22° 4'29	1°II28	27°11	6°21	14°23	0°49	22°50	14° 7	3°59	29°43	8°R31	7°42	4°47	25°21	S 11	
S 12	9 27 34	23° 5'12	14°15	27°48	7°29	14°58	1° 2	22°47	14° 9	3°58	29°45	8°31	7°38	4°54	25°24	S 12	
M13	9 31 31	24° 5'54	26°45	28°29	8°37	15°33	1°16	22°43	14°11	3°57	29°46	8°30	7°35	5° 0	25°28	M13	
T 14	9 35 27	25° 6'34	9°B 2	29°14	9°44	16° 8	1°29	22°39	14°13	3°57	29°47	8°26	7°32	5° 7	25°31	T 14	
W15	9 39 24	26° 7'12	21°10	0°A 4	10°52	16°43	1°43	22°35	14°15	3°56	29°48	8°19	7°29	5°14	25°34	W15	
T 16	9 43 20	27° 7'49	3°L11	0°56	11°59	17°18	1°56	22°31	14°16	3°55	29°50	8°10	7°26	5°21	25°37	T 16	
F 17	9 47 17	28° 8'24	15° 8	1°52	13° 6	17°53	2°10	22°27	14°18	3°54	29°51	7°57	7°23	5°27	25°41	F 17	
S 18	9 51 14	29° 8'58	27° 3	2°51	14°13	18°28	2°23	22°23	14°20	3°53	29°52	7°43	7°19	5°34	25°44	S 18	
S 19	9 55 10	0°H 9'30	8°M56	3°52	15°20	19° 4	2°36	22°18	14°21	3°52	29°54	7°28	7°16	5°41	25°47	S 19	
M20	9 59 7	1°10'01	20°48	4°56	16°26	19°39	2°50	22°14	14°23	3°51	29°55	7°14	7°13	5°47	25°50	M20	
T 21	10 3 3	2°10'30	2°A42	6° 3	17°32	20°14	3° 3	22°10	14°24	3°51	29°56	7° 1	7°10	5°54	25°54	T 21	
W22	10 7 0	3°10'57	14°39	7°11	18°38	20°50	3°16	22° 5	14°25	3°50	29°58	6°51	7° 7	6° 1	25°57	W22	
T 23	10 10 56	4°11'24	26°42	8°21	19°43	21°25	3°29	22° 1	14°27	3°49	29°59	6°43	7° 3	6° 8	26° 1	T 23	
F 24	10 14 53	5°11'49	8°M54	9°34	20°49	22° 1	3°42	21°57	14°28	3°49	0°Y 1	6°39	7° 0	6°14	26° 4	F 24	
S 25	10 18 49	6°12'12	21°19	10°48	21°54	22°36	3°55	21°52	14°29	3°48	0° 2	6°37	6°57	6°21	26° 7	S 25	
S 26	10 22 46	7°12'34	4°A 1	12° 4	22°58	23°12	4° 8	21°48	14°31	3°47	0° 3	6°37	6°54	6°28	26°11	S 26	
M27	10 26 43	8°12'55	17° 5	13°21	24° 3	23°48	4°21	21°43	14°32	3°47	0° 5	6°37	6°51	6°35	26°14	M27	
T 28	10 30 39	9°13'15	0°B35	14°40	25° 7	24°24	4°34	21°39	14°33	3°46	0° 6	6°35	6°48	6°41	26°18	T 28	
W29	10 34 36	10°H13'33	14°B34	16°A 1	26°Y11	24°B59	4°A47	21°M34	14°A34	3°B46	0°Y 8	6°A32	6°A44	6°M48	26°H21	W29	

Delta T = 80.34 sec

## ASTRODIENST EPHEMERIS for the year 2068

geocentric

MARCH 2068

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	10 38 32	11°13'49"	29°31'	17°23'	27°14'	25°35'	4°59'	21°R29	14°35'	3°R45	0°Y 9	6°R27	6°41'	6°55'	26°25'	T 1
F 2	10 42 29	12°14'04"	13°35'4"	18°46'	28°18'	26°11'	5°12'	21°R25	14°36'	3°R45	0°11'	6°41'18"	6°38'	7°1'	26°28'	F 2
S 3	10 46 25	13°14'17"	29°6'	20°10'	29°21'	26°47'	5°25'	21°20'	14°37'	3°45'	0°12'	6°8'	6°35'	7°8'	26°32'	S 3
S 4	10 50 22	14°14'29"	14°27'	21°36'	0°23'	27°23'	5°37'	21°15'	14°37'	3°44'	0°14'	5°56'	6°32'	7°15'	26°35'	S 4
M 5	10 54 18	15°14'39"	29°45'	23°3'	1°25'	27°59'	5°50'	21°10'	14°38'	3°44'	0°15'	5°45'	6°28'	7°22'	26°39'	M 5
T 6	10 58 15	16°14'46"	14°Y49	24°31'	2°27'	28°35'	6°2'	21°6'	14°39'	3°44'	0°16'	5°36'	6°25'	7°28'	26°42'	T 6
W 7	11 2 12	17°14'52"	29°29'	26°1'	3°29'	29°11'	6°14'	21°1'	14°39'	3°43'	0°18'	5°29'	6°22'	7°35'	26°46'	W 7
T 8	11 6 8	18°14'56"	13°8'42"	27°32'	4°30'	29°47'	6°27'	20°56'	14°40'	3°43'	0°19'	5°25'	6°19'	7°42'	26°50'	T 8
F 9	11 10 5	19°14'57"	27°24'	29°3'	5°30'	0°II23	6°39'	20°51'	14°41'	3°43'	0°21'	5°24'	6°16'	7°48'	26°53'	F 9
S 10	11 14 1	20°14'57"	10°II38	0°X37	6°31'	0°59'	6°51'	20°47'	14°41'	3°43'	0°22'	5°D23	6°13'	7°55'	26°57'	S 10
S 11	11 17 58	21°14'54"	23°28'	2°11'	7°31'	1°36'	7°3'	20°42'	14°42'	3°43'	0°24'	5°R24	6°9'	8°2'	27°0'	S 11
M12	11 21 54	22°14'49"	5°57'	3°46'	8°30'	2°12'	7°15'	20°37'	14°42'	3°43'	0°25'	5°23'	6°6'	8°9'	27°4'	M12
T 13	11 25 51	23°14'42"	18°11'	5°23'	9°29'	2°48'	7°27'	20°32'	14°42'	3°43'	0°27'	5°20'	6°3'	8°15'	27°7'	T 13
W14	11 29 47	24°14'33"	0°Ω13	7°0'	10°27'	3°24'	7°39'	20°28'	14°43'	3°D43	0°28'	5°15'	6°0'	8°22'	27°11'	W14
T 15	11 33 44	25°14'21"	12°9'	8°39'	11°25'	4°1'	7°50'	20°23'	14°43'	3°43'	0°30'	5°6'	5°57'	8°29'	27°15'	T 15
F 16	11 37 41	26°14'07"	24°2'	10°19'	12°23'	4°37'	8°2'	20°18'	14°43'	3°43'	0°31'	4°56'	5°54'	8°36'	27°18'	F 16
S 17	11 41 37	27°13'51"	5°II54	12°1'	13°20'	5°14'	8°13'	20°13'	14°43'	3°43'	0°33'	4°44'	5°50'	8°42'	27°22'	S 17
S 18	11 45 34	28°13'33"	17°47'	13°43'	14°16'	5°50'	8°25'	20°9'	14°43'	3°43'	0°34'	4°31'	5°47'	8°49'	27°25'	S 18
M19	11 49 30	29°13'13"	29°42'	15°27'	15°12'	6°26'	8°36'	20°4'	14°R43	3°43'	0°36'	4°18'	5°44'	8°56'	27°29'	M19
T 20	11 53 27	0°Y12'51"	11°42'	17°12'	16°7'	7°3'	8°48'	19°59'	14°43'	3°43'	0°37'	4°7'	5°41'	9°2'	27°33'	T 20
W21	11 57 23	1°12'27"	23°47'	18°58'	17°1'	7°39'	8°59'	19°55'	14°43'	3°43'	0°39'	3°58'	5°38'	9°9'	27°36'	W21
T 22	12 1 20	2°12'01"	5°II58	20°45'	17°55'	8°16'	9°10'	19°50'	14°43'	3°44'	0°41'	3°52'	5°34'	9°16'	27°40'	T 22
F 23	12 5 16	3°11'34"	18°19'	22°34'	18°49'	8°52'	9°21'	19°45'	14°43'	3°44'	0°42'	3°48'	5°31'	9°23'	27°43'	F 23
S 24	12 9 13	4°11'04"	0°X51	24°24'	19°41'	9°29'	9°32'	19°41'	14°42'	3°44'	0°44'	3°D47	5°28'	9°29'	27°47'	S 24
S 25	12 13 9	5°10'33"	13°37'	26°15'	20°33'	10°5'	9°43'	19°36'	14°42'	3°45'	0°45'	3°47'	5°25'	9°36'	27°51'	S 25
M26	12 17 6	6°10'00"	26°42'	28°8'	21°25'	10°42'	9°53'	19°32'	14°42'	3°45'	0°47'	3°48'	5°22'	9°43'	27°54'	M26
T 27	12 21 3	7°9'25"	10°37'	0°Y 2	22°15'	11°18'	10°4'	19°27'	14°41'	3°45'	0°48'	3°R48	5°19'	9°50'	27°58'	T 27
W28	12 24 59	8°8'49"	23°56'	1°57'	23°5'	11°55'	10°15'	19°23'	14°41'	3°46'	0°50'	3°47'	5°15'	9°56'	28°1'	W28
T 29	12 28 56	9°8'10"	8°X 9	3°53'	23°54'	12°32'	10°25'	19°19'	14°40'	3°46'	0°51'	3°44'	5°12'	10°3'	28°5'	T 29
F 30	12 32 52	10°7'30"	22°46'	5°51'	24°42'	13°8'	10°35'	19°14'	14°40'	3°47'	0°53'	3°38'	5°9'	10°10'	28°8'	F 30
S 31	12 36 49	11°Y 6'48"	7°X41	7°Y50	25°8'29"	13°II45	10°X46	19°II10	14°X39	3°R48	0°Y54	3°X31	5°X 6	10°II16	28°X12	S 31

Delta T = 80.37 sec

APRIL 2068

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	12 40 45	12°Y 6'05"	22°X46	9°Y50	26°8'16"	14°II21	10°X56	19°R 6	14°R39	3°R48	0°Y56	3°R23	5°X 3	10°II23	28°X15	S 1
M 2	12 44 42	13°5'19"	7°Y54	11°51'	27°1'	14°58'	11°6'	19°II 2	14°X38	3°49'	0°57'	3°X15	5°0'	10°30'	28°19'	M 2
T 3	12 48 38	14°4'31"	22°52'	13°53'	27°46'	15°35'	11°15'	18°58'	14°37'	3°49'	0°59'	3°9'	4°56'	10°37'	28°22'	T 3
W 4	12 52 35	15°3'41"	7°X33	15°56'	28°29'	16°12'	11°25'	18°54'	14°36'	3°50'	1°0'	3°4'	4°53'	10°43'	28°26'	W 4
T 5	12 56 32	16°2'49"	21°50'	18°0'	29°12'	16°48'	11°35'	18°50'	14°35'	3°51'	1°2'	3°2'	4°50'	10°50'	28°29'	T 5
F 6	13 0 28	17°1'55"	5°II39	20°4'	29°53'	17°25'	11°44'	18°46'	14°35'	3°52'	1°3'	3°D 1	4°47'	10°57'	28°33'	F 6
S 7	13 4 25	18°0'59"	19°1'	22°9'	0°II34	18°2'	11°54'	18°42'	14°34'	3°52'	1°4'	3°2'	4°44'	11°3'	28°36'	S 7
S 8	13 8 21	19°0'00"	1°57'	24°14'	1°13'	18°39'	12°3'	18°38'	14°33'	3°53'	1°6'	3°3'	4°40'	11°10'	28°40'	S 8
M 9	13 12 18	19°58'59"	14°31'	26°19'	1°51'	19°15'	12°12'	18°34'	14°32'	3°54'	1°7'	3°R 4	4°37'	11°17'	28°43'	M 9
T 10	13 16 14	20°57'56"	26°47'	28°23'	2°27'	19°52'	12°21'	18°31'	14°30'	3°55'	1°9'	3°4'	4°34'	11°24'	28°47'	T 10
W11	13 20 11	21°56'50"	8°Ω51	0°X27	3°3'	20°29'	12°30'	18°27'	14°29'	3°56'	1°10'	3°3'	4°31'	11°30'	28°50'	W11
T 12	13 24 7	22°55'42"	20°47'	2°30'	3°37'	21°6'	12°39'	18°23'	14°28'	3°57'	1°12'	2°59'	4°28'	11°37'	28°53'	T 12
F 13	13 28 4	23°54'32"	2°II39	4°32'	4°9'	21°43'	12°48'	18°20'	14°27'	3°58'	1°13'	2°54'	4°25'	11°44'	28°57'	F 13
S 14	13 32 1	24°53'20"	14°31'	6°32'	4°40'	22°20'	12°56'	18°17'	14°26'	3°59'	1°15'	2°48'	4°21'	11°51'	29°0'	S 14
S 15	13 35 57	25°52'05"	26°25'	8°30'	5°10'	22°56'	13°5'	18°13'	14°24'	4°0'	1°16'	2°41'	4°18'	11°57'	29°3'	S 15
M16	13 39 54	26°50'49"	8°Ω26	10°26'	5°38'	23°33'	13°13'	18°10'	14°23'	4°1'	1°17'	2°34'	4°15'	12°4'	29°6'	M16
T 17	13 43 50	27°49'30"	20°33'	12°19'	6°4'	24°10'	13°21'	18°7'	14°22'	4°2'	1°19'	2°28'	4°12'	12°11'	29°10'	T 17
W18	13 47 47	28°48'09"	2°II49	14°9'	6°29'	24°47'	13°29'	18°4'	14°20'	4°3'	1°20'	2°24'	4°9'	12°17'	29°13'	W18
T 19	13 51 43	29°46'47"	15°15'	15°56'	6°52'	25°24'	13°37'	18°1'	14°19'	4°4'	1°21'	2°21'	4°5'	12°24'	29°16'	T 19
F 20	13 55 40	0°X45'22"	27°51'	17°39'	7°13'	26°1'	13°45'	17°58'	14°17'	4°5'	1°23'	2°D20	4°2'	12°31'	29°19'	F 20
S 21	13 59 36	1°43'56"	10°X39	19°19'	7°32'	26°38'	13°52'	17°55'	14°16'	4°7'	1°24'	2°20'	3°59'	12°38'	29°23'	S 21
S 22	14 3 33	2°42'28"	23°41'	20°54'	7°50'	27°15'	14°0'	17°53'	14°14'	4°8'	1°25'	2°21'	3°56'	12°44'	29°26'	S 22
M23	14 7 29	3°40'59"	6°X57	22°25'	8°5'	27°51'	14°7'	17°50'	14°12'	4°9'	1°27'	2°23'	3°53'	12°51'	29°29'	M23
T 24	14 11 26	4°39'27"	20°28'	23°53'	8°18'	28°28'	14°14'	17°48'	14°11'	4°10'	1°28'	2°24'	3°50'	12°58'	29°32'	T 24
W25	14 15 23	5°37'55"	4°X16	25°15'	8°29'	29°5'	14°21'	17°45'	14°9'	4°12'	1°29'	2°R25	3°46'	13°4'	29°35'	W25
T 26	14 19 19	6°36'20"	18°22'	26°33'	8°38'	29°42'	14°28'	17°43'	14°7'	4°13'	1°31'	2°24'	3°43'	13°11'	29°38'	T 26
F 27	14 23 16	7°34'44"	2°X42	27°46'	8°45'	0°519	14°35'	17°41'	14°5'	4°14'	1°32'	2°23'	3°40'	13°18'	29°41'	F 27
S 28	14 27 12	8°33'07"	17°16'	28°55'	8°50'	0°56'	14°42'	17°38'	14°3'	4°16'	1°33'	2°20'	3°37'	13°25'	29°44'	S 28
S 29	14 31 9	9°31'27"	1°Y57	29°58'	8°R52	1°33'	14°48'	17°36'	14°2'	4°17'	1°35'	2°17'	3°34'	13°31'	29°47'	S 29
M30	14 35 5	10°29'47"	16°Y40	0°II57	8°II52	2°510	14°X54	17°II34	14°X 0	4°R19	1°Y36	2°X14	3°X31	13°II38	29°X50	M30

Delta T = 80.40 sec

## ASTRODIENST EPHEMERIS for the year 2068

geocentric

MAY 2068

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	14 39 2	11♌28'04	1♌17	1♏51	8°R49	2♌47	15° 0	17°R33	13°R58	4♌20	1°V37	2°R12	3♌27	13♏45	29♏53	T 1
W 2	14 42 58	12°26'20	15°42	2°39	8♏45	3°24	15° 6	17°R31	13°R56	4°22	1°38	2♌10	3°24	13°52	29°56	W 2
T 3	14 46 55	13°24'35	29°49	3°22	8°37	4° 1	15°12	17°29	13°54	4°23	1°39	2°D 9	3°21	13°58	29°58	T 3
F 4	14 50 52	14°22'47	13♏35	4° 0	8°27	4°38	15°18	17°28	13°52	4°25	1°41	2°10	3°18	14° 5	0°V 1	F 4
S 5	14 54 48	15°20'58	26°57	4°33	8°15	5°15	15°23	17°26	13°50	4°26	1°42	2°10	3°15	14°12	0° 4	S 5
S 6	14 58 45	16°19'06	9♌56	5° 1	8° 1	5°52	15°29	17°25	13°48	4°28	1°43	2°12	3°11	14°18	0° 7	S 6
M 7	15 2 41	17°17'13	22°34	5°23	7°43	6°29	15°34	17°23	13°46	4°30	1°44	2°13	3° 8	14°25	0° 9	M 7
T 8	15 6 38	18°15'18	4♏54	5°40	7°24	7° 6	15°39	17°22	13°43	4°31	1°45	2°14	3° 5	14°32	0°12	T 8
W 9	15 10 34	19°13'21	17° 1	5°51	7° 2	7°43	15°44	17°21	13°41	4°33	1°46	2°R14	3° 2	14°39	0°15	W 9
T 10	15 14 31	20°11'22	28°59	5°58	6°38	8°20	15°48	17°20	13°39	4°35	1°47	2°14	2°59	14°45	0°17	T 10
F 11	15 18 27	21° 9'21	10♏52	5°R59	6°12	8°57	15°53	17°19	13°37	4°36	1°48	2°13	2°56	14°52	0°20	F 11
S 12	15 22 24	22° 7'18	22°45	5°56	5°44	9°34	15°57	17°19	13°35	4°38	1°49	2°12	2°52	14°59	0°22	S 12
S 13	15 26 21	23° 5'13	4♌42	5°47	5°14	10°11	16° 1	17°18	13°32	4°40	1°50	2°11	2°49	15° 5	0°25	S 13
M14	15 30 17	24° 3'07	16°46	5°34	4°43	10°48	16° 5	17°17	13°30	4°42	1°52	2°10	2°46	15°12	0°27	M14
T 15	15 34 14	25° 0'59	29° 2	5°17	4°10	11°25	16° 9	17°17	13°28	4°43	1°53	2° 9	2°43	15°19	0°29	T 15
W16	15 38 10	25°58'50	11♏29	4°56	3°35	12° 2	16°12	17°17	13°25	4°45	1°53	2° 8	2°40	15°26	0°32	W16
T 17	15 42 7	26°56'39	24°11	4°32	2°59	12°40	16°16	17°16	13°23	4°47	1°54	2° 8	2°37	15°32	0°34	T 17
F 18	15 46 3	27°54'26	7♌7	4° 4	2°23	13°17	16°19	17°16	13°21	4°49	1°55	2°D 8	2°33	15°39	0°36	F 18
S 19	15 50 0	28°52'12	20°17	3°34	1°46	13°54	16°22	17°D16	13°18	4°51	1°56	2° 8	2°30	15°46	0°39	S 19
S 20	15 53 56	29°49'57	3♌42	3° 2	1° 8	14°31	16°25	17°16	13°16	4°53	1°57	2° 8	2°27	15°52	0°41	S 20
M21	15 57 53	0♏47'41	17°19	2°28	0°30	15° 8	16°28	17°17	13°14	4°55	1°58	2° 9	2°24	15°59	0°43	M21
T 22	16 1 50	1°45'24	1♌ 9	1°54	29♌52	15°45	16°30	17°17	13°11	4°56	1°59	2°R 9	2°21	16° 6	0°45	T 22
W23	16 5 46	2°43'05	15° 8	1°20	29°15	16°22	16°32	17°17	13° 9	4°58	2° 0	2° 9	2°17	16°13	0°47	W23
T 24	16 9 43	3°40'45	29°15	0°45	28°38	16°59	16°35	17°18	13° 6	5° 0	2° 1	2°D 9	2°14	16°19	0°49	T 24
F 25	16 13 39	4°38'25	13♌29	0°12	28° 2	17°36	16°37	17°18	13° 4	5° 2	2° 2	2° 9	2°11	16°26	0°51	F 25
S 26	16 17 36	5°36'03	27°46	29♌41	27°27	18°13	16°38	17°19	13° 2	5° 4	2° 2	2° 9	2° 8	16°33	0°53	S 26
S 27	16 21 32	6°33'41	12°V 5	29°11	26°53	18°50	16°40	17°20	12°59	5° 6	2° 3	2° 9	2° 5	16°40	0°55	S 27
M28	16 25 29	7°31'18	26°20	28°44	26°21	19°28	16°41	17°21	12°57	5° 8	2° 4	2°10	2° 2	16°46	0°57	M28
T 29	16 29 25	8°28'53	10♌30	28°20	25°50	20° 5	16°42	17°22	12°54	5°10	2° 5	2°10	1°58	16°53	0°59	T 29
W30	16 33 22	9°26'28	24°29	27°59	25°21	20°42	16°43	17°23	12°52	5°12	2° 5	2°10	1°55	17° 0	1° 0	W30
T 31	16 37 19	10♏24'02	8♏15	27♌42	24♌54	21♌19	16°44	17°R24	12°R49	5♌14	2°V 6	2°R10	1♌52	17°R 6	1°V 2	T 31

Delta T = 80.42 sec

JUNE 2068

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	16 41 15	11♏21'35	21♏45	27°R29	24°R29	21♌56	16°45	17°R25	12°R47	5♌16	2°V 7	2°R10	1♌49	17°R13	1°V 4	F 1
S 2	16 45 12	12°19'06	4♌58	27♌19	24♌ 6	22°33	16°45	17°27	12°R44	5°19	2° 7	2♌ 9	1°46	17°20	1° 5	S 2
S 3	16 49 8	13°16'37	17°52	27°15	23°45	23°10	16°46	17°28	12°42	5°21	2° 8	2° 8	1°43	17°27	1° 7	S 3
M 4	16 53 5	14°14'06	0♏28	27°D14	23°27	23°48	16°R46	17°30	12°39	5°23	2° 9	2° 6	1°39	17°33	1° 9	M 4
T 5	16 57 1	15°11'34	12°49	27°18	23°11	24°25	16°45	17°32	12°37	5°25	2° 9	2° 5	1°36	17°40	1°10	T 5
W 6	17 0 58	16° 9'01	24°56	27°27	22°57	25° 2	16°45	17°33	12°34	5°27	2°10	2° 3	1°33	17°47	1°11	W 6
T 7	17 4 55	17° 6'27	6♏55	27°39	22°45	25°39	16°45	17°35	12°32	5°29	2°10	2° 2	1°30	17°53	1°13	T 7
F 8	17 8 51	18° 3'51	18° 3'51	27°57	22°36	26°16	16°44	17°37	12°29	5°31	2°11	2°D 2	1°27	18° 0	1°14	F 8
S 9	17 12 48	19° 1'15	0♌42	28°19	22°30	26°54	16°43	17°39	12°27	5°33	2°11	2° 2	1°23	18° 7	1°15	S 9
S 10	17 16 44	19°58'37	12°40	28°45	22°25	27°31	16°42	17°42	12°24	5°36	2°12	2° 3	1°20	18°14	1°17	S 10
M11	17 20 41	20°55'58	24°47	29°15	22°D23	28° 8	16°41	17°44	12°22	5°38	2°12	2° 5	1°17	18°20	1°18	M11
T 12	17 24 37	21°53'19	7♏ 6	29°50	22°24	28°45	16°39	17°46	12°20	5°40	2°13	2° 6	1°14	18°27	1°19	T 12
W13	17 28 34	22°50'38	19°42	0♏29	22°27	29°22	16°37	17°49	12°17	5°42	2°13	2° 7	1°11	18°34	1°20	W13
T 14	17 32 30	23°47'57	2♌37	1°12	22°32	29°59	16°36	17°51	12°15	5°44	2°14	2°R 8	1° 8	18°40	1°21	T 14
F 15	17 36 27	24°45'15	15°51	1°59	22°39	0♏37	16°34	17°54	12°12	5°47	2°14	2° 7	1° 4	18°47	1°22	F 15
S 16	17 40 24	25°42'32	29°25	2°50	22°48	1°14	16°31	17°57	12°10	5°49	2°14	2° 5	1° 1	18°54	1°23	S 16
S 17	17 44 20	26°39'49	13♌16	3°45	23° 0	1°51	16°29	18° 0	12° 8	5°51	2°15	2° 3	0°58	19° 1	1°24	S 17
M18	17 48 17	27°37'05	27°21	4°44	23°13	2°29	16°26	18° 3	12° 5	5°53	2°15	1°59	0°55	19° 7	1°25	M18
T 19	17 52 13	28°34'21	11♌36	5°46	23°29	3° 6	16°24	18° 6	12° 3	5°55	2°15	1°56	0°52	19°14	1°26	T 19
W20	17 56 10	29°31'36	25°56	6°52	23°46	3°43	16°21	18° 9	12° 1	5°58	2°16	1°52	0°49	19°21	1°26	W20
T 21	18 0 6	0♌28'51	10♌16	8° 1	24° 5	4°20	16°17	18°12	11°58	6° 0	2°16	1°50	0°45	19°27	1°27	T 21
F 22	18 4 3	1°26'06	24°34	9°15	24°26	4°58	16°14	18°15	11°56	6° 2	2°16	1°49	0°42	19°34	1°28	F 22
S 23	18 7 59	2°23'21	8°V45	10°31	24°49	5°35	16°11	18°19	11°54	6° 4	2°16	1°D49	0°39	19°41	1°28	S 23
S 24	18 11 56	3°20'35	22°49	11°51	25°14	6°12	16° 7	18°22	11°51	6° 6	2°17	1°50	0°36	19°48	1°29	S 24
M25	18 15 53	4°17'50	6♌43	13°15	25°40	6°49	16° 3	18°26	11°49	6° 9	2°17	1°51	0°33	19°54	1°29	M25
T 26	18 19 49	5°15'05	20°27	14°42	26° 8	7°27	15°59	18°30	11°47	6°11	2°17	1°52	0°29	20° 1	1°30	T 26
W27	18 23 46	6°12'20	4♏ 0	16°12	26°37	8° 4	15°55	18°33	11°45	6°13	2°17	1°R53	0°26	20° 8	1°30	W27
T 28	18 27 42	7° 9'34	17°21	17°46	27° 8	8°41	15°50	18°37	11°43	6°15	2°17	1°52	0°23	20°14	1°30	T 28
F 29	18 31 39	8° 6'49	0♌30	19°22	27°40	9°19	15°46	18°41	11°40	6°18	2°17	1°49	0°20	20°21	1°31	F 29
S 30	18 35 35	9♌40'3	13♌26	21♏ 2	28♌13	9♏56	15°41	18°R45	11°R38	6♌20	2°V17	1♌45	0♌17	20°R28	1°V31	S 30

Delta T = 80.45 sec

## ASTRODIENST EPHEMERIS for the year 2068

geocentric

JULY 2068

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	18 39 32	10°58'17"	26°08'08"	22°08'48"	28°08'48"	10°08'33"	15°08'36"	18°08'49"	11°08'36"	6°08'22"	2°08'17"	1°08'39"	0°08'14"	20°08'35"	1°08'31"	S 1
M 2	18 43 28	10°58'31"	8°08'36"	24°08'32"	29°08'24"	11°08'11"	15°08'31"	18°08'53"	11°08'34"	6°08'24"	2°08'17"	1°08'32"	0°08'10"	20°08'41"	1°08'31"	M 2
T 3	18 47 25	11°55'44"	20°08'52"	26°08'21"	0°08'11"	11°08'48"	15°08'26"	18°08'58"	11°08'32"	6°08'27"	2°08'17"	1°08'25"	0°08'07"	20°08'48"	1°08'31"	T 3
W 4	18 51 22	12°52'58"	2°08'57"	28°08'13"	0°08'39"	12°08'26"	15°08'21"	19°08'02"	11°08'30"	6°08'29"	2°08'17"	1°08'18"	0°08'04"	20°08'55"	1°08'31"	W 4
T 5	18 55 18	13°50'11"	14°08'54"	0°08'08"	1°08'18"	13°08'03"	15°08'16"	19°08'06"	11°08'28"	6°08'31"	2°08'17"	1°08'13"	0°08'01"	21°08'01"	1°08'31"	T 5
F 6	18 59 15	14°47'23"	26°08'47"	2°08'05"	1°08'59"	13°08'40"	15°08'10"	19°08'11"	11°08'26"	6°08'33"	2°08'17"	1°08'10"	29°08'58"	21°08'08"	1°08'31"	F 6
S 7	19 03 11	15°44'36"	8°08'39"	4°08'05"	2°08'40"	14°08'18"	15°08'04"	19°08'16"	11°08'24"	6°08'35"	2°08'17"	1°08'08"	29°08'54"	21°08'15"	1°08'31"	S 7
S 8	19 07 08	16°41'48"	20°08'35"	6°08'07"	3°08'22"	14°08'55"	14°08'58"	19°08'20"	11°08'22"	6°08'38"	2°08'17"	1°08'08"	29°08'51"	21°08'22"	1°08'30"	S 8
M 9	19 11 04	17°39'00"	2°08'41"	8°08'11"	4°08'06"	15°08'33"	14°08'52"	19°08'25"	11°08'21"	6°08'40"	2°08'17"	1°08'09"	29°08'48"	21°08'28"	1°08'30"	M 9
T 10	19 15 01	18°36'13"	15°08'11"	10°08'16"	4°08'50"	16°08'10"	14°08'46"	19°08'30"	11°08'19"	6°08'42"	2°08'16"	1°08'10"	29°08'45"	21°08'35"	1°08'30"	T 10
W 11	19 18 57	19°33'25"	27°08'40"	12°08'23"	5°08'35"	16°08'48"	14°08'40"	19°08'35"	11°08'17"	6°08'44"	2°08'16"	1°08'11"	29°08'42"	21°08'42"	1°08'30"	W 11
T 12	19 22 54	20°30'37"	10°08'41"	14°08'31"	6°08'21"	17°08'25"	14°08'34"	19°08'39"	11°08'15"	6°08'46"	2°08'16"	1°08'10"	29°08'39"	21°08'48"	1°08'29"	T 12
F 13	19 26 51	21°27'49"	24°08'07"	16°08'40"	7°08'08"	18°08'03"	14°08'27"	19°08'44"	11°08'14"	6°08'49"	2°08'16"	1°08'08"	29°08'35"	21°08'55"	1°08'29"	F 13
S 14	19 30 47	22°25'01"	7°08'57"	18°08'49"	7°08'55"	18°08'40"	14°08'20"	19°08'50"	11°08'12"	6°08'51"	2°08'15"	1°08'04"	29°08'32"	22°08'02"	1°08'28"	S 14
S 15	19 34 44	23°22'14"	22°08'10"	20°08'58"	8°08'44"	19°08'18"	14°08'14"	19°08'55"	11°08'10"	6°08'53"	2°08'15"	0°08'58"	29°08'29"	22°08'09"	1°08'28"	S 15
M 16	19 38 40	24°19'26"	6°08'42"	23°08'07"	9°08'33"	19°08'55"	14°08'07"	20°08'00"	11°08'09"	6°08'55"	2°08'15"	0°08'50"	29°08'26"	22°08'15"	1°08'27"	M 16
T 17	19 42 37	25°16'39"	21°08'24"	25°08'15"	10°08'22"	20°08'33"	14°08'00"	20°08'05"	11°08'07"	6°08'57"	2°08'15"	0°08'42"	29°08'23"	22°08'22"	1°08'26"	T 17
W 18	19 46 33	26°13'53"	6°08'49"	27°08'23"	11°08'13"	21°08'10"	13°08'53"	20°08'10"	11°08'06"	6°08'59"	2°08'14"	0°08'34"	29°08'20"	22°08'29"	1°08'25"	W 18
T 19	19 50 30	27°11'07"	20°08'50"	29°08'31"	12°08'04"	21°08'48"	13°08'46"	20°08'16"	11°08'04"	7°08'02"	2°08'14"	0°08'28"	29°08'16"	22°08'35"	1°08'25"	T 19
F 20	19 54 26	28°08'22"	5°08'21"	1°08'37"	12°08'56"	22°08'25"	13°08'39"	20°08'21"	11°08'03"	7°08'04"	2°08'13"	0°08'24"	29°08'13"	22°08'42"	1°08'24"	F 20
S 21	19 58 23	29°05'37"	19°08'38"	3°08'42"	13°08'48"	23°08'03"	13°08'32"	20°08'27"	11°08'01"	7°08'06"	2°08'13"	0°08'21"	29°08'10"	22°08'49"	1°08'23"	S 21
S 22	20 02 20	0°08'25"	3°08'37"	5°08'46"	14°08'41"	23°08'40"	13°08'24"	20°08'32"	11°08'00"	7°08'08"	2°08'13"	0°08'21"	29°08'07"	22°08'56"	1°08'22"	S 22
M 23	20 06 16	1°08'11"	17°08'20"	7°08'48"	15°08'34"	24°08'18"	13°08'17"	20°08'38"	10°08'59"	7°08'10"	2°08'12"	0°08'22"	29°08'04"	23°08'02"	1°08'21"	M 23
T 24	20 10 13	1°57'29"	0°08'47"	9°08'49"	16°08'29"	24°08'56"	13°08'09"	20°08'44"	10°08'57"	7°08'12"	2°08'12"	0°08'22"	29°08'00"	23°08'09"	1°08'20"	T 24
W 25	20 14 09	2°54'48"	14°08'00"	11°08'48"	17°08'23"	25°08'33"	13°08'02"	20°08'50"	10°08'56"	7°08'14"	2°08'11"	0°08'21"	28°08'57"	23°08'16"	1°08'19"	W 25
T 26	20 18 06	3°52'08"	27°08'00"	13°08'46"	18°08'18"	26°08'11"	12°08'54"	20°08'55"	10°08'55"	7°08'16"	2°08'11"	0°08'18"	28°08'54"	23°08'22"	1°08'18"	T 26
F 27	20 22 02	4°49'29"	9°08'48"	15°08'42"	19°08'14"	26°08'49"	12°08'47"	21°08'01"	10°08'54"	7°08'18"	2°08'10"	0°08'13"	28°08'51"	23°08'29"	1°08'17"	F 27
S 28	20 25 59	5°46'51"	22°08'26"	17°08'37"	20°08'10"	27°08'26"	12°08'39"	21°08'07"	10°08'53"	7°08'20"	2°08'09"	0°08'05"	28°08'48"	23°08'36"	1°08'15"	S 28
S 29	20 29 55	6°44'13"	4°08'52"	19°08'30"	21°08'07"	28°08'04"	12°08'31"	21°08'13"	10°08'52"	7°08'22"	2°08'09"	29°08'54"	28°08'45"	23°08'43"	1°08'14"	S 29
M 30	20 33 52	7°41'36"	17°08'10"	21°08'21"	22°08'04"	28°08'42"	12°08'23"	21°08'19"	10°08'51"	7°08'24"	2°08'08"	29°08'42"	28°08'41"	23°08'49"	1°08'13"	M 30
T 31	20 37 49	8°08'39'00"	29°08'17"	23°08'10"	23°08'11"	29°08'20"	12°08'16"	21°08'25"	10°08'50"	7°08'26"	2°08'08"	29°08'30"	28°08'38"	23°08'56"	1°08'11"	T 31

Delta T = 80.48 sec

AUGUST 2068

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	20 41 45	9♂36'24	11♐17	24♂58	23♂59	29♂57	12°R 8	21♐32	10°R49	7♂28	2°R 7	29°R18	28♂35	24♐ 3	1°R10	W 1
T 2	20 45 42	10°33'49	23°11	26°44	24°57	0♐35	12≈ 0	21°38	10♌48	7°30	2°Y 6	29♂ 8	28°32	24° 9	1°Y 9	T 2
F 3	20 49 38	11°31'15	5♂ 1	28°29	25°56	1°13	11°52	21°44	10°47	7°32	2° 6	29° 1	28°29	24°16	1° 7	F 3
S 4	20 53 35	12°28'42	16°51	0♐12	26°55	1°51	11°44	21°50	10°47	7°34	2° 5	28°55	28°26	24°23	1° 6	S 4
S 5	20 57 31	13°26'09	28°46	1°53	27°54	2°28	11°37	21°57	10°46	7°36	2° 4	28°53	28°22	24°30	1° 4	S 5
M 6	21 1 128	14°23'37	10♂49	3°32	28°54	3° 6	11°29	22° 3	10°45	7°38	2° 4	28°D52	28°19	24°36	1° 2	M 6
T 7	21 5 24	15°21'05	23° 6	5°10	29°54	3°44	11°21	22°10	10°45	7°40	2° 3	28°R52	28°16	24°43	1° 1	T 7
W 8	21 9 21	16°18'35	5♌42	6°47	0♂54	4°22	11°13	22°16	10°44	7°41	2° 2	28°52	28°13	24°50	0°59	W 8
T 9	21 13 18	17°16'05	18°43	8°21	1°55	5° 0	11° 6	22°23	10°43	7°43	2° 1	28°50	28°10	24°56	0°57	T 9
F 10	21 17 14	18°13'36	2♂11	9°54	2°56	5°38	10°58	22°29	10°43	7°45	2° 1	28°47	28° 6	25° 3	0°55	F 10
S 11	21 21 11	19°11'08	16° 8	11°26	3°58	6°16	10°50	22°36	10°43	7°47	2° 0	28°41	28° 3	25°10	0°54	S 11
S 12	21 25 7	20° 8'41	0≈33	12°56	4°59	6°54	10°43	22°43	10°42	7°49	1°59	28°33	28° 0	25°17	0°52	S 12
M13	21 29 4	21° 6'15	15°20	14°24	6° 1	7°31	10°35	22°49	10°42	7°50	1°58	28°23	27°57	25°23	0°50	M13
T 14	21 33 0	22° 3'50	0♌23	15°50	7° 4	8° 9	10°28	22°56	10°42	7°52	1°57	28°12	27°54	25°30	0°48	T 14
W15	21 36 57	23° 1'26	15°31	17°15	8° 6	8°47	10°20	23° 3	10°41	7°54	1°56	28° 1	27°51	25°37	0°46	W15
T 16	21 40 53	23°59'04	0°Y34	18°39	9° 9	9°25	10°13	23°10	10°41	7°55	1°55	27°53	27°47	25°43	0°44	T 16
F 17	21 44 50	24°56'43	15°23	20° 0	10°12	10° 3	10° 5	23°17	10°41	7°57	1°55	27°46	27°44	25°50	0°42	F 17
S 18	21 48 47	25°54'23	29°52	21°20	11°16	10°41	9°58	23°23	10°41	7°59	1°54	27°43	27°41	25°57	0°40	S 18
S 19	21 52 43	26°52'05	13♌58	22°38	12°19	11°19	9°51	23°30	10°D41	8° 0	1°53	27°41	27°38	26° 3	0°38	S 19
M20	21 56 40	27°49'49	27°41	23°54	13°23	11°58	9°44	23°37	10°41	8° 2	1°52	27°41	27°35	26°10	0°35	M20
T 21	22 0 36	28°47'35	11♂ 2	25° 8	14°28	12°36	9°37	23°44	10°41	8° 3	1°51	27°41	27°32	26°17	0°33	T 21
W22	22 4 33	29°45'22	24° 4	26°20	15°32	13°14	9°30	23°51	10°41	8° 5	1°50	27°39	27°28	26°24	0°31	W22
T 23	22 8 29	0♐43'11	6♂50	27°30	16°37	13°52	9°23	23°58	10°42	8° 7	1°49	27°36	27°25	26°30	0°29	T 23
F 24	22 12 26	1°41'02	19°23	28°38	17°42	14°30	9°16	24° 6	10°42	8° 8	1°48	27°29	27°22	26°37	0°26	F 24
S 25	22 16 22	2°38'54	1♂45	29°44	18°47	15° 8	9°10	24°13	10°42	8° 9	1°47	27°20	27°19	26°44	0°24	S 25
S 26	22 20 19	3°36'47	13°59	0♌47	19°52	15°46	9° 3	24°20	10°42	8°11	1°46	27° 8	27°16	26°50	0°22	S 26
M27	22 24 16	4°34'43	26° 5	1°48	20°58	16°25	8°57	24°27	10°43	8°12	1°45	26°55	27°12	26°57	0°19	M27
T 28	22 28 12	5°32'40	8♐ 4	2°46	22° 3	17° 3	8°51	24°34	10°43	8°14	1°44	26°41	27° 9	27° 4	0°17	T 28
W29	22 32 9	6°30'38	19°59	3°42	23° 9	17°41	8°45	24°41	10°44	8°15	1°43	26°28	27° 6	27°10	0°15	W29
T 30	22 36 5	7°28'38	1♂50	4°35	24°16	18°19	8°39	24°49	10°44	8°16	1°42	26°16	27° 3	27°17	0°12	T 30
F 31	22 40 2	8♐26'39	13♌39	5♌24	25♂22	18♐58	8≈33	24♐56	10♌45	8♂18	1°Y40	26♂ 7	27♂ 0	27♐24	0°Y10	F 31

## ASTRODIENST EPHEMERIS for the year 2068

geocentric

SEPTEMBER 2068

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	22 43 58	9 <sup>h</sup> 24'42"	25 <sup>h</sup> 29'	6 <sup>h</sup> 11'	26 <sup>h</sup> 29'	19 <sup>h</sup> 36'	8 <sup>h</sup> 27'	25 <sup>h</sup> 3'	10 <sup>h</sup> 46'	8 <sup>h</sup> 19'	1 <sup>h</sup> 39'	26 <sup>h</sup> 0'	26 <sup>h</sup> 57'	27 <sup>h</sup> 31'	0 <sup>h</sup> 7'	S 1
S 2	22 47 55	10 <sup>h</sup> 22'46"	7 <sup>h</sup> 23'	6 <sup>h</sup> 53'	27 <sup>h</sup> 35'	20 <sup>h</sup> 15'	8 <sup>h</sup> 22'	25 <sup>h</sup> 10'	10 <sup>h</sup> 46'	8 <sup>h</sup> 20'	1 <sup>h</sup> 38'	25 <sup>h</sup> 57'	26 <sup>h</sup> 53'	27 <sup>h</sup> 37'	0 <sup>h</sup> 5'	S 2
M 3	22 51 51	11 <sup>h</sup> 20'52"	19 <sup>h</sup> 25'	7 <sup>h</sup> 33'	28 <sup>h</sup> 42'	20 <sup>h</sup> 53'	8 <sup>h</sup> 16'	25 <sup>h</sup> 18'	10 <sup>h</sup> 47'	8 <sup>h</sup> 22'	1 <sup>h</sup> 37'	25 <sup>h</sup> 55'	26 <sup>h</sup> 50'	27 <sup>h</sup> 44'	0 <sup>h</sup> 2'	M 3
T 4	22 55 48	12 <sup>h</sup> 18'59"	1 <sup>h</sup> 44'	8 <sup>h</sup> 8'	29 <sup>h</sup> 49'	21 <sup>h</sup> 31'	8 <sup>h</sup> 11'	25 <sup>h</sup> 25'	10 <sup>h</sup> 48'	8 <sup>h</sup> 23'	1 <sup>h</sup> 36'	25 <sup>h</sup> D55'	26 <sup>h</sup> 47'	27 <sup>h</sup> 51'	29 <sup>h</sup> 59'	T 4
W 5	22 59 45	13 <sup>h</sup> 17'07"	14 <sup>h</sup> 14'	8 <sup>h</sup> 39'	0 <sup>h</sup> 57'	22 <sup>h</sup> 10'	8 <sup>h</sup> 6'	25 <sup>h</sup> 32'	10 <sup>h</sup> 49'	8 <sup>h</sup> 24'	1 <sup>h</sup> 35'	25 <sup>h</sup> R56'	26 <sup>h</sup> 44'	27 <sup>h</sup> 57'	29 <sup>h</sup> 57'	W 5
T 6	23 3 41	14 <sup>h</sup> 15'18"	27 <sup>h</sup> 10'	9 <sup>h</sup> 5'	2 <sup>h</sup> 4'	22 <sup>h</sup> 48'	8 <sup>h</sup> 1'	25 <sup>h</sup> 40'	10 <sup>h</sup> 50'	8 <sup>h</sup> 25'	1 <sup>h</sup> 34'	25 <sup>h</sup> 55'	26 <sup>h</sup> 41'	28 <sup>h</sup> 4'	29 <sup>h</sup> 54'	T 6
F 7	23 7 38	15 <sup>h</sup> 13'29"	10 <sup>h</sup> 33'	9 <sup>h</sup> 27'	3 <sup>h</sup> 12'	23 <sup>h</sup> 27'	7 <sup>h</sup> 56'	25 <sup>h</sup> 47'	10 <sup>h</sup> 51'	8 <sup>h</sup> 26'	1 <sup>h</sup> 33'	25 <sup>h</sup> 52'	26 <sup>h</sup> 38'	28 <sup>h</sup> 11'	29 <sup>h</sup> 52'	F 7
S 8	23 11 34	16 <sup>h</sup> 11'42"	24 <sup>h</sup> 26'	9 <sup>h</sup> 43'	4 <sup>h</sup> 19'	24 <sup>h</sup> 5'	7 <sup>h</sup> 52'	25 <sup>h</sup> 55'	10 <sup>h</sup> 52'	8 <sup>h</sup> 27'	1 <sup>h</sup> 32'	25 <sup>h</sup> 48'	26 <sup>h</sup> 34'	28 <sup>h</sup> 18'	29 <sup>h</sup> 49'	S 8
S 9	23 15 31	17 <sup>h</sup> 9'56"	8 <sup>h</sup> 48'	9 <sup>h</sup> 54'	5 <sup>h</sup> 27'	24 <sup>h</sup> 44'	7 <sup>h</sup> 47'	26 <sup>h</sup> 2'	10 <sup>h</sup> 53'	8 <sup>h</sup> 28'	1 <sup>h</sup> 30'	25 <sup>h</sup> 41'	26 <sup>h</sup> 31'	28 <sup>h</sup> 24'	29 <sup>h</sup> 46'	S 9
M10	23 19 27	18 <sup>h</sup> 8'12"	23 <sup>h</sup> 37'	10 <sup>h</sup> R 0	6 <sup>h</sup> 35'	25 <sup>h</sup> 22'	7 <sup>h</sup> 43'	26 <sup>h</sup> 9'	10 <sup>h</sup> 54'	8 <sup>h</sup> 29'	1 <sup>h</sup> 29'	25 <sup>h</sup> 32'	26 <sup>h</sup> 28'	28 <sup>h</sup> 31'	29 <sup>h</sup> 44'	M10
T 11	23 23 24	19 <sup>h</sup> 6'30"	8 <sup>h</sup> 46'	9 <sup>h</sup> 59'	7 <sup>h</sup> 44'	26 <sup>h</sup> 1'	7 <sup>h</sup> 39'	26 <sup>h</sup> 17'	10 <sup>h</sup> 55'	8 <sup>h</sup> 30'	1 <sup>h</sup> 28'	25 <sup>h</sup> 22'	26 <sup>h</sup> 25'	28 <sup>h</sup> 38'	29 <sup>h</sup> 41'	T 11
W12	23 27 20	20 <sup>h</sup> 4'49"	24 <sup>h</sup> 4'	9 <sup>h</sup> 52'	8 <sup>h</sup> 52'	26 <sup>h</sup> 39'	7 <sup>h</sup> 35'	26 <sup>h</sup> 24'	10 <sup>h</sup> 56'	8 <sup>h</sup> 31'	1 <sup>h</sup> 27'	25 <sup>h</sup> 13'	26 <sup>h</sup> 22'	28 <sup>h</sup> 44'	29 <sup>h</sup> 38'	W12
T 13	23 31 17	21 <sup>h</sup> 3'10"	9 <sup>h</sup> Y21	9 <sup>h</sup> 38'	10 <sup>h</sup> 1'	27 <sup>h</sup> 18'	7 <sup>h</sup> 31'	26 <sup>h</sup> 32'	10 <sup>h</sup> 58'	8 <sup>h</sup> 32'	1 <sup>h</sup> 26'	25 <sup>h</sup> 5'	26 <sup>h</sup> 18'	28 <sup>h</sup> 51'	29 <sup>h</sup> 36'	T 13
F 14	23 35 13	22 <sup>h</sup> 1'33"	24 <sup>h</sup> 25'	9 <sup>h</sup> 18'	11 <sup>h</sup> 9'	27 <sup>h</sup> 57'	7 <sup>h</sup> 27'	26 <sup>h</sup> 39'	10 <sup>h</sup> 59'	8 <sup>h</sup> 33'	1 <sup>h</sup> 25'	24 <sup>h</sup> 59'	26 <sup>h</sup> 15'	28 <sup>h</sup> 58'	29 <sup>h</sup> 33'	F 14
S 15	23 39 10	22 <sup>h</sup> 59'58"	9 <sup>h</sup> 8'	8 <sup>h</sup> 51'	12 <sup>h</sup> 18'	28 <sup>h</sup> 35'	7 <sup>h</sup> 24'	26 <sup>h</sup> 47'	11 <sup>h</sup> 0'	8 <sup>h</sup> 34'	1 <sup>h</sup> 23'	24 <sup>h</sup> 56'	26 <sup>h</sup> 12'	29 <sup>h</sup> 4'	29 <sup>h</sup> 30'	S 15
S 16	23 43 7	23 <sup>h</sup> 58'26"	23 <sup>h</sup> 27'	8 <sup>h</sup> 17'	13 <sup>h</sup> 27'	29 <sup>h</sup> 14'	7 <sup>h</sup> 21'	26 <sup>h</sup> 54'	11 <sup>h</sup> 2'	8 <sup>h</sup> 35'	1 <sup>h</sup> 22'	24 <sup>h</sup> D55'	26 <sup>h</sup> 9'	29 <sup>h</sup> 11'	29 <sup>h</sup> 28'	S 16
M17	23 47 3	24 <sup>h</sup> 56'55"	7 <sup>h</sup> 118'	7 <sup>h</sup> 37'	14 <sup>h</sup> 37'	29 <sup>h</sup> 53'	7 <sup>h</sup> 18'	27 <sup>h</sup> 2'	11 <sup>h</sup> 3'	8 <sup>h</sup> 36'	1 <sup>h</sup> 21'	24 <sup>h</sup> 55'	26 <sup>h</sup> 6'	29 <sup>h</sup> 18'	29 <sup>h</sup> 25'	M17
T 18	23 51 0	25 <sup>h</sup> 55'27"	20 <sup>h</sup> 43'	6 <sup>h</sup> 50'	15 <sup>h</sup> 46'	0 <sup>h</sup> 31'	7 <sup>h</sup> 15'	27 <sup>h</sup> 9'	11 <sup>h</sup> 5'	8 <sup>h</sup> 36'	1 <sup>h</sup> 20'	24 <sup>h</sup> R56'	26 <sup>h</sup> 3'	29 <sup>h</sup> 25'	29 <sup>h</sup> 22'	T 18
W19	23 54 56	26 <sup>h</sup> 54'01"	3 <sup>h</sup> 34'	5 <sup>h</sup> 58'	16 <sup>h</sup> 55'	1 <sup>h</sup> 10'	7 <sup>h</sup> 12'	27 <sup>h</sup> 17'	11 <sup>h</sup> 6'	8 <sup>h</sup> 37'	1 <sup>h</sup> 19'	24 <sup>h</sup> 56'	25 <sup>h</sup> 59'	29 <sup>h</sup> 31'	29 <sup>h</sup> 20'	W19
T 20	23 58 53	27 <sup>h</sup> 52'37"	16 <sup>h</sup> 26'	5 <sup>h</sup> 1'	18 <sup>h</sup> 5'	1 <sup>h</sup> 49'	7 <sup>h</sup> 10'	27 <sup>h</sup> 24'	11 <sup>h</sup> 8'	8 <sup>h</sup> 38'	1 <sup>h</sup> 17'	24 <sup>h</sup> 54'	25 <sup>h</sup> 56'	29 <sup>h</sup> 38'	29 <sup>h</sup> 17'	T 20
F 21	0 2 49	28 <sup>h</sup> 51'15"	28 <sup>h</sup> 52'	4 <sup>h</sup> 0'	19 <sup>h</sup> 15'	2 <sup>h</sup> 28'	7 <sup>h</sup> 7'	27 <sup>h</sup> 31'	11 <sup>h</sup> 9'	8 <sup>h</sup> 39'	1 <sup>h</sup> 16'	24 <sup>h</sup> 50'	25 <sup>h</sup> 53'	29 <sup>h</sup> 45'	29 <sup>h</sup> 14'	F 21
S 22	0 6 46	29 <sup>h</sup> 49'55"	11 <sup>h</sup> 8'	2 <sup>h</sup> 56'	20 <sup>h</sup> 25'	3 <sup>h</sup> 7'	7 <sup>h</sup> 5'	27 <sup>h</sup> 39'	11 <sup>h</sup> 11'	8 <sup>h</sup> 39'	1 <sup>h</sup> 15'	24 <sup>h</sup> 44'	25 <sup>h</sup> 50'	29 <sup>h</sup> 51'	29 <sup>h</sup> 11'	S 22
S 23	0 10 42	0 <sup>h</sup> 48'38"	23 <sup>h</sup> 9'	1 <sup>h</sup> 51'	21 <sup>h</sup> 35'	3 <sup>h</sup> 46'	7 <sup>h</sup> 3'	27 <sup>h</sup> 46'	11 <sup>h</sup> 13'	8 <sup>h</sup> 40'	1 <sup>h</sup> 14'	24 <sup>h</sup> 35'	25 <sup>h</sup> 47'	29 <sup>h</sup> 58'	29 <sup>h</sup> 9'	S 23
M24	0 14 39	1 <sup>h</sup> 47'22"	5 <sup>h</sup> 7'	0 <sup>h</sup> 46'	22 <sup>h</sup> 45'	4 <sup>h</sup> 24'	7 <sup>h</sup> 2'	27 <sup>h</sup> 54'	11 <sup>h</sup> 15'	8 <sup>h</sup> 40'	1 <sup>h</sup> 13'	24 <sup>h</sup> 25'	25 <sup>h</sup> 43'	0 <sup>h</sup> 5'	29 <sup>h</sup> 6'	M24
T 25	0 18 36	2 <sup>h</sup> 46'09"	17 <sup>h</sup> 0'	29 <sup>h</sup> 43'	23 <sup>h</sup> 55'	5 <sup>h</sup> 3'	7 <sup>h</sup> 0'	28 <sup>h</sup> 1'	11 <sup>h</sup> 16'	8 <sup>h</sup> 41'	1 <sup>h</sup> 11'	24 <sup>h</sup> 15'	25 <sup>h</sup> 40'	0 <sup>h</sup> 11'	29 <sup>h</sup> 3'	T 25
W26	0 22 32	3 <sup>h</sup> 44'57"	28 <sup>h</sup> 51'	28 <sup>h</sup> 44'	25 <sup>h</sup> 5'	5 <sup>h</sup> 42'	6 <sup>h</sup> 59'	28 <sup>h</sup> 9'	11 <sup>h</sup> 18'	8 <sup>h</sup> 42'	1 <sup>h</sup> 10'	24 <sup>h</sup> 5'	25 <sup>h</sup> 37'	0 <sup>h</sup> 18'	29 <sup>h</sup> 0'	W26
T 27	0 26 29	4 <sup>h</sup> 43'48"	10 <sup>h</sup> 42'	27 <sup>h</sup> 49'	26 <sup>h</sup> 16'	6 <sup>h</sup> 21'	6 <sup>h</sup> 58'	28 <sup>h</sup> 16'	11 <sup>h</sup> 20'	8 <sup>h</sup> 42'	1 <sup>h</sup> 9'	23 <sup>h</sup> 57'	25 <sup>h</sup> 34'	0 <sup>h</sup> 25'	28 <sup>h</sup> 58'	T 27
F 28	0 30 25	5 <sup>h</sup> 42'41"	22 <sup>h</sup> 33'	27 <sup>h</sup> 2'	27 <sup>h</sup> 27'	7 <sup>h</sup> 0'	6 <sup>h</sup> 57'	28 <sup>h</sup> 24'	11 <sup>h</sup> 22'	8 <sup>h</sup> 43'	1 <sup>h</sup> 8'	23 <sup>h</sup> 50'	25 <sup>h</sup> 31'	0 <sup>h</sup> 31'	28 <sup>h</sup> 55'	F 28
S 29	0 34 22	6 <sup>h</sup> 41'35"	4 <sup>h</sup> 27'	26 <sup>h</sup> 22'	28 <sup>h</sup> 37'	7 <sup>h</sup> 39'	6 <sup>h</sup> 56'	28 <sup>h</sup> 31'	11 <sup>h</sup> 24'	8 <sup>h</sup> 43'	1 <sup>h</sup> 7'	23 <sup>h</sup> 46'	25 <sup>h</sup> 28'	0 <sup>h</sup> 38'	28 <sup>h</sup> 52'	S 29
S 30	0 38 18	7 <sup>h</sup> 40'32"	16 <sup>h</sup> 26'	25 <sup>h</sup> 50'	29 <sup>h</sup> 48'	8 <sup>h</sup> 18'	6 <sup>h</sup> 55'	28 <sup>h</sup> 39'	11 <sup>h</sup> 26'	8 <sup>h</sup> 43'	1 <sup>h</sup> 5'	23 <sup>h</sup> 44'	25 <sup>h</sup> 24'	0 <sup>h</sup> 45'	28 <sup>h</sup> 50'	S 30

Delta T = 80.54 sec

OCTOBER 2068

00:00 UT

Day	Sid.t	☉	☾	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	0 42 15	8♂39'30	28♂33	25°R29	0♂59	8♂58	6°R55	28♂46	11♂28	8♂44	1°R 4	23°D44	25♂21	0♂52	28°R47	M 1
T 2	0 46 11	9°38'30	10♂52	25♂17	2°10	9°37	6°D55	28°53	11°31	8°44	1°Y 3	23♂45	25°18	0°58	28♂44	T 2
W 3	0 50 8	10°37'32	23°26	25°D16	3°21	10°16	6♂55	29° 1	11°33	8°44	1° 2	23°46	25°15	1° 5	28°42	W 3
T 4	0 54 5	11°36'36	6♂20	25°26	4°33	10°55	6°55	29° 8	11°35	8°45	1° 1	23°R47	25°12	1°12	28°39	T 4
F 5	0 58 1	12°35'42	19°37	25°46	5°44	11°34	6°56	29°15	11°37	8°45	1° 0	23°47	25° 9	1°18	28°36	F 5
S 6	1 1 58	13°34'49	3♂21	26°15	6°55	12°14	6°56	29°23	11°40	8°45	0°58	23°45	25° 5	1°25	28°34	S 6
S 7	1 5 54	14°33'58	17°32	26°54	8° 7	12°53	6°57	29°30	11°42	8°45	0°57	23°42	25° 2	1°32	28°31	S 7
M 8	1 9 51	15°33'09	2♂ 8	27°41	9°19	13°32	6°58	29°37	11°44	8°45	0°56	23°37	24°59	1°38	28°29	M 8
T 9	1 13 47	16°32'21	2° 6	28°37	10°30	14°11	7° 0	29°45	11°47	8°45	0°55	23°32	24°56	1°45	28°26	T 9
W10	1 17 44	17°31'35	17°17	29°39	11°42	14°51	7° 1	29°52	11°49	8°45	0°54	23°26	24°53	1°52	28°23	W10
T 11	1 21 40	18°30'51	17°31	0♂49	12°54	15°30	7° 3	29°59	11°52	8°R45	0°53	23°22	24°49	1°59	28°21	T 11
F 12	1 25 37	19°30'10	2♂39	2° 4	14° 6	16°10	7° 5	0♂ 6	11°54	8°45	0°52	23°19	24°46	2° 5	28°18	F 12
S 13	1 29 33	20°29'30	17°30	3°24	15°18	16°49	7° 7	0°14	11°57	8°45	0°50	23°D18	24°43	2°12	28°16	S 13
S 14	1 33 30	21°28'53	1♂58	4°48	16°31	17°29	7° 9	0°21	12° 0	8°45	0°49	23°18	24°40	2°19	28°13	S 14
M15	1 37 27	22°28'18	16° 0	6°16	17°43	18° 8	7°11	0°28	12° 2	8°45	0°48	23°19	24°37	2°25	28°11	M15
T 16	1 41 23	23°27'45	29°34	7°47	18°56	18°48	7°14	0°35	12° 5	8°45	0°47	23°20	24°34	2°32	28° 9	T 16
W17	1 45 20	24°27'15	12♂41	9°20	20° 8	19°27	7°17	0°42	12° 8	8°45	0°46	23°22	24°30	2°39	28° 6	W17
T 18	1 49 16	25°26'47	25°26	10°56	21°21	20° 7	7°20	0°49	12°10	8°45	0°45	23°R22	24°27	2°45	28° 4	T 18
F 19	1 53 13	26°26'21	7♂52	12°33	22°33	20°46	7°23	0°56	12°13	8°44	0°44	23°22	24°24	2°52	28° 2	F 19
S 20	1 57 9	27°25'57	20° 3	14°12	23°46	21°26	7°26	1° 3	12°16	8°44	0°43	23°20	24°21	2°59	27°59	S 20
S 21	2 1 6	28°25'36	2♂ 3	15°51	24°59	22° 6	7°30	1°10	12°19	8°44	0°42	23°17	24°18	3° 5	27°57	S 21
M22	2 5 2	29°25'16	13°57	17°31	26°12	22°46	7°33	1°17	12°22	8°43	0°41	23°13	24°14	3°12	27°55	M22
T 23	2 8 59	0♂24°59	25°47	19°12	27°25	23°25	7°37	1°24	12°25	8°43	0°40	23° 9	24°11	3°19	27°53	T 23
W24	2 12 56	1°24'44	7♂37	20°53	28°38	24° 5	7°41	1°31	12°28	8°43	0°39	23° 5	24° 8	3°26	27°50	W24
T 25	2 16 52	2°24'32	19°30	22°35	29°51	24°45	7°46	1°37	12°31	8°42	0°38	23° 2	24° 5	3°32	27°48	T 25
F 26	2 20 49	3°24'21	1♂26	24°16	1♂ 4	25°25	7°50	1°44	12°34	8°42	0°37	23° 0	24° 2	3°39	27°46	F 26
S 27	2 24 45	4°24'12	13°29	25°57	2°18	26° 5	7°55	1°51	12°37	8°41	0°36	22°58	23°59	3°46	27°44	S 27
S 28	2 28 42	5°24'05	25°39	27°39	3°31	26°45	8° 0	1°57	12°40	8°41	0°35	22°D58	23°55	3°52	27°42	S 28
M29	2 32 38	6°24'00	7♂59	29°19	4°44	27°25	8° 5	2° 4	12°43	8°40	0°34	22°59	23°52	3°59	27°40	M29
T 30	2 36 35	7°23'57	20°30	1♂ 0	5°58	28° 5	8°10	2°11	12°46	8°39	0°33	23° 0	23°49	4° 6	27°38	T 30
W31	2 40 31	8♂23'55	3♂14	2♂40	7♂11	28♂45	8♂15	2♂17	12♂49	8♂39	0°Y32	23♂ 1	23♂46	4♂12	27♂36	W31

## ASTRODIENST EPHEMERIS for the year 2068

geocentric

NOVEMBER 2068

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	2 44 28	9♉23°56	16♊15	4♉20	8♉25	29♉25	8♉21	2♉24	12♉53	8♉38	0♉31	23♉2	23♉43	4♉19	27♉34	T 1
F 2	2 48 25	10♊23°57	29°33	6° 0	9°39	0♉5	8°26	2°30	12°56	8♉37	0♉30	23° 3	23°40	4°26	27♉33	F 2
S 3	2 52 21	11°24'01	13♈11	7°39	10°52	0°45	8°32	2°37	12°59	8°37	0°29	23°R 3	23°36	4°32	27°31	S 3
S 4	2 56 18	12°24'06	27°10	9°18	12° 6	1°25	8°38	2°43	13° 2	8°36	0°29	23° 3	23°33	4°39	27°29	S 4
M 5	3 0 14	13°24'12	11♋29	10°56	13°20	2° 5	8°45	2°49	13° 6	8°35	0°28	23° 2	23°30	4°46	27°27	M 5
T 6	3 4 11	14°24'20	26° 5	12°34	14°34	2°46	8°51	2°55	13° 9	8°34	0°27	23° 1	23°27	4°53	27°26	T 6
W 7	3 8 7	15°24'29	10♌54	14°12	15°48	3°26	8°58	3° 2	13°12	8°33	0°26	23° 0	23°24	4°59	27°24	W 7
T 8	3 12 4	16°24'40	25°49	15°49	17° 2	4° 6	9° 4	3° 8	13°16	8°32	0°25	22°59	23°20	5° 6	27°23	T 8
F 9	3 16 0	17°24'53	10♍42	17°25	18°16	4°47	9°11	3°14	13°19	8°32	0°25	22°59	23°17	5°13	27°21	F 9
S 10	3 19 57	18°25'07	25°26	19° 2	19°30	5°27	9°18	3°20	13°23	8°31	0°24	22°D59	23°14	5°19	27°20	S 10
S 11	3 23 54	19°25'24	9♎53	20°38	20°44	6° 7	9°25	3°26	13°26	8°30	0°23	22°59	23°11	5°26	27°18	S 11
M12	3 27 50	20°25'42	23°58	22°13	21°58	6°48	9°33	3°32	13°29	8°29	0°22	22°59	23° 8	5°33	27°17	M12
T 13	3 31 47	21°26'02	7♏38	23°49	23°12	7°28	9°40	3°38	13°33	8°28	0°22	23° 0	23° 5	5°39	27°15	T 13
W14	3 35 43	22°26'24	20°53	25°24	24°26	8° 9	9°48	3°43	13°36	8°27	0°21	23° 0	23° 1	5°46	27°14	W14
T 15	3 39 40	23°26'47	3♐44	26°59	25°41	8°49	9°55	3°49	13°40	8°26	0°20	23°R 0	22°58	5°53	27°13	T 15
F 16	3 43 36	24°27'13	16°14	28°33	26°55	9°30	10° 3	3°55	13°43	8°24	0°20	23° 0	22°55	5°59	27°12	F 16
S 17	3 47 33	25°27'41	28°27	0♑7	28°10	10°11	10°11	4° 0	13°47	8°23	0°19	23°D 0	22°52	6° 6	27°11	S 17
S 18	3 51 29	26°28'10	10♒28	1°41	29°24	10°51	10°20	4° 6	13°50	8°22	0°19	23° 0	22°49	6°13	27°10	S 18
M19	3 55 26	27°28'41	22°20	3°15	0♒38	11°32	10°28	4°11	13°54	8°21	0°18	23° 0	22°46	6°19	27° 9	M19
T 20	3 59 23	28°29'14	4♐10	4°48	1°53	12°13	10°36	4°17	13°58	8°20	0°17	23° 1	22°42	6°26	27° 8	T 20
W21	4 3 19	29°29'48	16° 1	6°22	3° 8	12°53	10°45	4°22	14° 1	8°19	0°17	23° 1	22°39	6°33	27° 7	W21
T 22	4 7 16	0♑30'25	27°56	7°55	4°22	13°34	10°54	4°27	14° 5	8°17	0°16	23° 2	22°36	6°40	27° 6	T 22
F 23	4 11 12	1°31'02	10♒0	9°28	5°37	14°15	11° 3	4°32	14° 8	8°16	0°16	23° 3	22°33	6°46	27° 5	F 23
S 24	4 15 9	2°31'42	22°13	11° 0	6°51	14°56	11°12	4°37	14°12	8°15	0°15	23°R 3	22°30	6°53	27° 4	S 24
S 25	4 19 5	3°32'23	4♑38	12°33	8° 6	15°37	11°21	4°43	14°16	8°13	0°15	23° 3	22°26	7° 0	27° 3	S 25
M26	4 23 2	4°33'05	17°16	14° 5	9°21	16°18	11°30	4°47	14°19	8°12	0°15	23° 2	22°23	7° 6	27° 3	M26
T 27	4 26 58	5°33'49	0♒8	15°38	10°36	16°59	11°40	4°52	14°23	8°11	0°14	23° 0	22°20	7°13	27° 2	T 27
W28	4 30 55	6°34'34	13°13	17°10	11°50	17°40	11°49	4°57	14°27	8° 9	0°14	22°59	22°17	7°20	27° 2	W28
T 29	4 34 52	7°35'20	26°32	18°42	13° 5	18°21	11°59	5° 2	14°30	8° 8	0°13	22°57	22°14	7°26	27° 1	T 29
F 30	4 38 48	8♑36'07	10♒3	20♑14	14♒20	19♒2	12♒9	5♒6	14♑34	8♑7	0♑13	22♒55	22♒11	7♒33	27♒1	F 30

Delta T = 80.60 sec

DECEMBER 2068

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	4 42 45	9♑36°55	23♒47	21♑45	15♒35	19♒43	12♒19	5♒11	14♑38	8°R 5	0°R13	22°R53	22♒7	7♒40	27°R 0	S 1
S 2	4 46 41	10°37'43	7♒43	23°17	16°50	20°24	12°29	5°15	14°41	8♑4	0°Y13	22°D53	22° 4	7°46	27♒0	S 2
M 3	4 50 38	11°38'33	21°50	24°48	18° 5	21° 5	12°39	5°20	14°45	8° 2	0°12	22♒53	22° 1	7°53	27° 0	M 3
T 4	4 54 34	12°39'23	6♑6	26°19	19°20	21°47	12°49	5°24	14°49	8° 1	0°12	22°54	21°58	8° 0	26°59	T 4
W 5	4 58 31	13°40'15	20°29	27°50	20°34	22°28	13° 0	5°28	14°52	7°59	0°12	22°55	21°55	8° 6	26°59	W 5
T 6	5 2 27	14°41'07	4♒56	29°20	21°49	23° 9	13°10	5°33	14°56	7°58	0°12	22°57	21°52	8°13	26°59	T 6
F 7	5 6 24	15°42'00	19°22	0♒50	23° 4	23°50	13°21	5°37	15° 0	7°56	0°11	22°R57	21°48	8°20	26°D59	F 7
S 8	5 10 21	16°42'54	3♒43	2°19	24°19	24°32	13°32	5°41	15° 3	7°55	0°11	22°57	21°45	8°26	26°59	S 8
S 9	5 14 17	17°43'49	17°53	3°48	25°34	25°13	13°42	5°44	15° 7	7°53	0°11	22°55	21°42	8°33	26°59	S 9
M10	5 18 14	18°44'45	1♒48	5°17	26°49	25°55	13°53	5°48	15°11	7°51	0°11	22°53	21°39	8°40	26°59	M10
T 11	5 22 10	19°45'41	15°24	6°45	28° 5	26°36	14° 4	5°52	15°14	7°50	0°11	22°49	21°36	8°47	26°59	T 11
W12	5 26 7	20°46'39	28°39	8°11	29°20	27°18	14°16	5°55	15°18	7°48	0°11	22°44	21°32	8°53	27° 0	W12
T 13	5 30 3	21°47'38	11♒32	9°37	0♒35	27°59	14°27	5°59	15°22	7°47	0°11	22°39	21°29	9° 0	27° 0	T 13
F 14	5 34 0	22°48'38	24° 6	11° 2	1°50	28°41	14°38	6° 2	15°25	7°45	0°D11	22°35	21°26	9° 7	27° 0	F 14
S 15	5 37 56	23°49'38	6♒22	12°25	3° 5	29°22	14°50	6° 6	15°29	7°43	0°11	22°32	21°23	9°13	27° 1	S 15
S 16	5 41 53	24°50'40	18°24	13°47	4°20	0♑4	15° 1	6° 9	15°33	7°42	0°11	22°31	21°20	9°20	27° 1	S 16
M17	5 45 50	25°51'43	0♒18	15° 6	5°35	0°46	15°13	6°12	15°36	7°40	0°11	22°D31	21°17	9°27	27° 2	M17
T 18	5 49 46	26°52'46	12° 7	16°23	6°50	1°28	15°24	6°15	15°40	7°38	0°11	22°32	21°13	9°33	27° 2	T 18
W19	5 53 43	27°53'51	23°58	17°38	8° 6	2° 9	15°36	6°18	15°43	7°37	0°11	22°33	21°10	9°40	27° 3	W19
T 20	5 57 39	28°54'56	5♒55	18°49	9°21	2°51	15°48	6°21	15°47	7°35	0°11	22°35	21° 7	9°47	27° 3	T 20
F 21	6 1 36	29°56'03	18° 3	19°57	10°36	3°33	16° 0	6°24	15°51	7°33	0°12	22°R36	21° 4	9°53	27° 4	F 21
S 22	6 5 32	0♒57'10	0♑25	21° 1	11°51	4°15	16°12	6°26	15°54	7°32	0°12	22°36	21° 1	10° 0	27° 5	S 22
S 23	6 9 29	1°58'17	13° 4	21°59	13° 6	4°57	16°24	6°29	15°58	7°30	0°12	22°34	20°58	10° 7	27° 6	S 23
M24	6 13 26	2°59'25	26° 1	22°52	14°22	5°39	16°37	6°31	16° 1	7°28	0°12	22°30	20°54	10°13	27° 7	M24
T 25	6 17 22	4° 0'34	9♒16	23°39	15°37	6°21	16°49	6°34	16° 5	7°27	0°13	22°24	20°51	10°20	27° 8	T 25
W26	6 21 19	5° 1'43	22°48	24°18	16°52	7° 3	17° 1	6°36	16° 8	7°25	0°13	22°17	20°48	10°27	27° 9	W26
T 27	6 25 15	6° 2'52	6♒34	24°49	18° 8	7°45	17°14	6°38	16°12	7°23	0°13	22° 9	20°45	10°33	27°10	T 27
F 28	6 29 12	7° 4'02	20°30	25°11	19°23	8°27	17°26	6°40	16°16	7°21	0°13	22° 2	20°42	10°40	27°11	F 28
S 29	6 33 8	8° 5'11	4♒34	25°23	20°38	9° 9	17°39	6°42	16°19	7°20	0°14	21°56	20°38	10°47	27°12	S 29
S 30	6 37 5	9° 6'20	18°41	25°R24	21°53	9°51	17°52	6°44	16°22	7°18	0°14	21°52	20°35	10°53	27°13	S 30
M31	6 41 1	10♒7'29	2♑49	25♒14	23♒9	10♑34	18♒5	6♒45	16♑26	7♑16	0°Y15	21♒50	20♒32	11♒0	27♒14	M31

Delta T = 80.63 sec