



# Astrodienst Ephemeris Tables for the year 1820

tropical geocentric zodiac

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

Programming  
Dieter Koch and Alois Treindl  
based on Swiss Ephemeris  
Code D5EPX

# ASTRODIENST EPHEMERIS for the year 1820

## geocentric

JANUARY 1820

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	6 38 16	9°33'10	15°33	22°R19	29°352	1°R44	18°19	25°H 0	25°35	28°49	25°35	6°R10	6°V28	19°16	24°H58	S 1
S 2	6 42 13	10°34'19	27°38	22°8	1°7	1°125	18°32	25°3	25°38	28°51	25°36	5°V55	6°25	19°23	24°59	S 2
M 3	6 46 10	11°35'28	9°36	22°D 6	2°22	1°5	18°44	25°7	25°42	28°53	25°36	5°43	6°22	19°29	25°1	M 3
T 4	6 50 6	12°36'37	21°28	22°13	3°37	0°44	18°57	25°11	25°45	28°55	25°37	5°33	6°19	19°36	25°2	T 4
W 5	6 54 3	13°37'45	3°16	22°28	4°52	0°23	19°10	25°14	25°49	28°58	25°38	5°26	6°15	19°43	25°4	W 5
T 6	6 57 59	14°38'54	15°4	22°50	6°7	0°2	19°23	25°18	25°52	29°0	25°38	5°22	6°12	19°49	25°6	T 6
F 7	7 1 56	15°40'03	26°57	23°19	7°22	29°340	19°36	25°22	25°56	29°2	25°39	5°21	6°9	19°56	25°7	F 7
S 8	7 5 52	16°41'12	8°59	23°55	8°37	29°17	19°50	25°26	25°59	29°4	25°40	5°D21	6°6	20°3	25°9	S 8
S 9	7 9 49	17°42'21	21°16	24°35	9°52	28°54	20°3	25°31	26°3	29°6	25°40	5°R21	6°3	20°9	25°11	S 9
M10	7 13 45	18°43'31	3°153	25°21	11°7	28°31	20°16	25°35	26°6	29°9	25°41	5°20	6°0	20°16	25°13	M10
T 11	7 17 42	19°44'40	16°55	26°11	12°22	28°8	20°30	25°39	26°9	29°11	25°42	5°17	5°56	20°23	25°15	T 11
W12	7 21 39	20°45'49	0°26	27°5	13°36	27°44	20°43	25°44	26°13	29°13	25°42	5°11	5°53	20°30	25°17	W12
T 13	7 25 35	21°46'58	14°27	28°3	14°51	27°20	20°57	25°48	26°16	29°15	25°43	5°3	5°50	20°36	25°18	T 13
F 14	7 29 32	22°48'06	28°56	29°4	16°6	26°56	21°10	25°53	26°20	29°17	25°44	4°53	5°47	20°43	25°21	F 14
S 15	7 33 28	23°49'15	13°49	0°3	17°21	26°32	21°24	25°57	26°23	29°19	25°45	4°42	5°44	20°50	25°23	S 15
S 16	7 37 25	24°50'23	28°56	1°13	18°36	26°8	21°37	26°2	26°26	29°21	25°46	4°31	5°41	20°56	25°25	S 16
M17	7 41 21	25°51'30	14°8	2°22	19°50	25°44	21°51	26°7	26°29	29°24	25°46	4°22	5°37	21°3	25°27	M17
T 18	7 45 18	26°52'37	29°14	3°32	21°5	25°20	22°5	26°12	26°33	29°26	25°47	4°15	5°34	21°10	25°29	T 18
W19	7 49 15	27°53'42	14°5	4°45	22°20	24°56	22°18	26°17	26°36	29°28	25°48	4°11	5°31	21°16	25°31	W19
T 20	7 53 11	28°54'47	28°34	5°59	23°34	24°32	22°32	26°22	26°39	29°30	25°49	4°D 9	5°28	21°23	25°34	T 20
F 21	7 57 8	29°55'51	12°V40	7°15	24°49	24°9	22°46	26°27	26°42	29°32	25°50	4°9	5°25	21°30	25°36	F 21
S 22	8 1 4	0°56'54	26°21	8°32	26°4	23°45	23°0	26°32	26°46	29°34	25°51	4°R10	5°21	21°36	25°38	S 22
S 23	8 5 1	1°57'55	9°40	9°51	27°18	23°22	23°14	26°38	26°49	29°36	25°52	4°10	5°18	21°43	25°41	S 23
M24	8 8 57	2°58'56	22°40	11°11	28°33	23°0	23°28	26°43	26°52	29°38	25°53	4°8	5°15	21°50	25°43	M24
T 25	8 12 54	3°59'56	5°123	12°32	29°47	22°37	23°42	26°49	26°55	29°40	25°54	4°3	5°12	21°56	25°46	T 25
W26	8 16 50	5°0'54	17°53	13°54	1°H 2	22°16	23°56	26°54	26°58	29°42	25°55	3°56	5°9	22°3	25°48	W26
T 27	8 20 47	6°1'51	0°12	15°17	2°16	21°54	24°10	27°0	27°1	29°44	25°56	3°47	5°6	22°10	25°51	T 27
F 28	8 24 44	7°2'48	12°22	16°41	3°30	21°33	24°24	27°5	27°4	29°45	25°57	3°36	5°2	22°16	25°54	F 28
S 29	8 28 40	8°3'43	24°25	18°7	4°45	21°13	24°38	27°11	27°7	29°47	25°58	3°25	4°59	22°23	25°56	S 29
S 30	8 32 37	9°4'37	6°122	19°33	5°59	20°53	24°52	27°17	27°10	29°49	25°59	3°14	4°56	22°30	25°59	S 30
M31	8 36 33	10°5'30	18°125	21°3	7°H13	20°34	25°57	27°H23	27°H13	29°H51	26°H 0	3°V 4	4°V53	22°137	26°H 2	M31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl
S 1	23s 7	27n27	4n55	20s 8	3n 7	21s40	1s30	23n36	3n55	16s 9	0s50	4s 5	2s16	23s32	0s 9	22s19
S 2	23 3	25 12	4 38	20 11	3 4	21 25	1 31	23 43	3 57	16 5	0 50	4 3	2 16	23 33	0 9	22 19
M 3	22 58	21 52	4 9	20 16	2 59	21 9	1 32	23 49	3 59	16 1	0 50	4 1	2 16	23 33	0 9	22 19
T 4	22 52	17 40	3 30	20 22	2 53	20 52	1 33	23 56	4 1	15 57	0 50	4 0	2 16	23 33	0 9	22 19
W 5	22 46	12 49	2 41	20 30	2 46	20 35	1 34	24 2	4 3	15 53	0 50	3 58	2 16	23 33	0 9	22 19
T 6	22 40	7 30	1 45	20 38	2 38	20 17	1 35	24 9	4 5	15 49	0 50	3 56	2 15	23 33	0 9	22 19
F 7	22 33	1 54	0 44	20 48	2 30	19 59	1 35	24 15	4 6	15 45	0 50	3 55	2 15	23 33	0 9	22 19
S 8	22 25	3s52	0s19	20 58	2 21	19 40	1 36	24 22	4 8	15 41	0 50	3 53	2 15	23 33	0 9	22 19
S 9	22 18	9 35	1 23	21 9	2 13	19 20	1 36	24 28	4 10	15 36	0 50	3 51	2 15	23 33	0 9	22 19
M10	22 9	15 6	2 25	21 20	2 3	19 0	1 37	24 34	4 11	15 32	0 50	3 49	2 15	23 34	0 9	22 19
T 11	22 1	20 7	3 21	21 31	1 54	18 40	1 37	24 41	4 12	15 28	0 50	3 47	2 15	23 34	0 9	22 19
W12	21 52	24 19	4 9	21 41	1 45	18 18	1 37	24 47	4 14	15 24	0 50	3 45	2 14	23 34	0 9	22 19
T 13	21 42	27 14	4 43	21 52	1 35	17 57	1 37	24 53	4 15	15 19	0 50	3 43	2 14	23 34	0 9	22 19
F 14	21 32	28 28	5 0	22 2	1 26	17 35	1 37	24 58	4 16	15 15	0 50	3 41	2 14	23 34	0 9	22 19
S 15	21 22	27 41	4 58	22 12	1 16	17 12	1 37	25 4	4 17	15 11	0 50	3 39	2 14	23 34	0 9	22 19
S 16	21 11	24 53	4 35	22 21	1 7	16 49	1 37	25 10	4 18	15 6	0 50	3 37	2 14	23 34	0 9	22 19
M17	21 0	20 19	3 53	22 29	0 58	16 25	1 37	25 15	4 18	15 2	0 50	3 35	2 14	23 34	0 9	22 19
T 18	20 48	14 28	2 54	22 37	0 48	16 1	1 37	25 20	4 19	14 57	0 50	3 33	2 13	23 34	0 9	22 19
W19	20 36	7 53	1 45	22 43	0 39	15 37	1 37	25 25	4 19	14 53	0 50	3 31	2 13	23 34	0 9	22 19
T 20	20 24	1 1	0 30	22 49	0 30	15 12	1 37	25 30	4 20	14 48	0 50	3 29	2 13	23 35	0 9	22 19
F 21	20 11	5n42	0n45	22 54	0 22	14 46	1 36	25 34	4 20	14 44	0 50	3 27	2 13	23 35	0 9	22 19
S 22	19 58	11 58	1 55	22 58	0 13	14 21	1 36	25 39	4 20	14 39	0 50	3 24	2 13	23 35	0 9	22 19
S 23	19 45	17 32	2 57	23 1	0 5	13 55	1 35	25 43	4 20	14 35	0 50	3 22	2 13	23 35	0 9	22 19
M24	19 31	22 8	3 49	23 3	0s 4	13 28	1 34	25 47	4 20	14 30	0 50	3 20	2 12	23 35	0 9	22 19
T 25	19 17	25 36	4 27	23 4	0 12	13 1	1 34	25 51	4 20	14 26	0 50	3 18	2 12	23 35	0 9	22 19
W26	19 2	27 46	4 53	23 4	0 20	12 34	1 33	25 54	4 20	14 21	0 50	3 15	2 12	23 35	0 9	22 19
T 27	18 47	28 32	5 4	23 2	0 27	12 7	1 32	25 57	4 20	14 16	0 50	3 13	2 12	23 35	0 9	22 19
F 28	18 32	27 53	5 1	23 0	0 35	11 39	1 31	26 0	4 19	14 12	0 50	3 11	2 12	23 35	0 9	22 19
S 29	18 16	25 55	4 44	22 56	0 42	11 11	1 30	26 3	4 19	14 7	0 50	3 8	2 12	23 35	0 9	22 19
S 30	18 0	22 49	4 16	22 51	0 49	10 42	1 29	26 6	4 18	14 2	0 50	3 6	2 12	23 35	0 9	22 19
M31	17s44	18n48	3n36	22s44	0s55	10s14	1s28	26n 8	4n17	13s57	0s50	3s 3	2s11	23s36	0s 9	22s19

Julian Day Number = 2385800.5, Delta T = 16.60 sec  
 Ecliptic obliquity = 23°27'54, Nutation = - 0°00'01, out-of-bounds declination in red  
 Ayanamsha: Fagan/Bradley = 22°13'37, Lahiri = 21°20'37

ASTRODIENST EPHEMERIS for the year 1820  
geocentric

FEBRUARY 1820

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	8 40 30	11° 6' 22"	0° 5' 22"	22° 27' 27"	8° 28' 28"	20° 15' 15"	25° 21' 21"	27° 28' 28"	27° 16' 16"	29° 53' 53"	26° 2' 2"	2° 57' 57"	4° 50' 50"	22° 43' 43"	26° 5' 5"	T 1
W 2	8 44 26	12° 7' 13"	11° 53' 53"	23° 56' 56"	9° 42' 42"	19° 57' 57"	25° 35' 35"	27° 34' 34"	27° 19' 19"	29° 55' 55"	26° 3' 3"	2° 52' 52"	4° 47' 47"	22° 50' 50"	26° 7' 7"	W 2
T 3	8 48 23	13° 8' 03"	23° 43' 43"	25° 26' 26"	10° 56' 56"	19° 40' 40"	25° 49' 49"	27° 40' 40"	27° 21' 21"	29° 56' 56"	26° 4' 4"	2° 49' 49"	4° 43' 43"	22° 57' 57"	26° 10' 10"	T 3
F 4	8 52 19	14° 8' 52"	5° 38' 38"	26° 56' 56"	12° 10' 10"	19° 23' 23"	26° 4' 4"	27° 46' 46"	27° 24' 24"	29° 58' 58"	26° 5' 5"	2° 49' 49"	4° 40' 40"	23° 3' 3"	26° 13' 13"	F 4
S 5	8 56 16	15° 9' 39"	17° 42' 42"	28° 27' 27"	13° 24' 24"	19° 7' 7"	26° 18' 18"	27° 53' 53"	27° 27' 27"	0° 0' 0"	26° 6' 6"	2° 50' 50"	4° 37' 37"	23° 10' 10"	26° 16' 16"	S 5
S 6	9 0 12	16° 10' 26"	29° 58' 58"	29° 59' 59"	14° 38' 38"	18° 52' 52"	26° 32' 32"	27° 59' 59"	27° 30' 30"	0° 2' 2"	26° 7' 7"	2° 51' 51"	4° 34' 34"	23° 17' 17"	26° 19' 19"	S 6
M 7	9 4 9	17° 11' 12"	12° 32' 32"	1° 32' 32"	15° 52' 52"	18° 37' 37"	26° 47' 47"	28° 5' 5"	27° 32' 32"	0° 3' 3"	26° 9' 9"	2° 52' 52"	4° 31' 31"	23° 23' 23"	26° 22' 22"	M 7
T 8	9 8 6	18° 11' 57"	25° 28' 28"	3° 5' 5"	17° 6' 6"	18° 23' 23"	27° 1' 1"	28° 11' 11"	27° 35' 35"	0° 5' 5"	26° 10' 10"	2° 52' 52"	4° 27' 27"	23° 30' 30"	26° 25' 25"	T 8
W 9	9 12 2	19° 12' 41"	8° 51' 51"	4° 40' 40"	18° 20' 20"	18° 10' 10"	27° 15' 15"	28° 18' 18"	27° 38' 38"	0° 7' 7"	26° 11' 11"	2° 50' 50"	4° 24' 24"	23° 37' 37"	26° 28' 28"	W 9
T 10	9 15 59	20° 13' 24"	22° 42' 42"	6° 15' 15"	19° 34' 34"	17° 58' 58"	27° 30' 30"	28° 24' 24"	27° 40' 40"	0° 8' 8"	26° 12' 12"	2° 47' 47"	4° 21' 21"	23° 43' 43"	26° 31' 31"	T 10
F 11	9 19 55	21° 14' 06"	7° 3' 3"	7° 51' 51"	20° 48' 48"	17° 47' 47"	27° 44' 44"	28° 30' 30"	27° 43' 43"	0° 10' 10"	26° 14' 14"	2° 41' 41"	4° 18' 18"	23° 50' 50"	26° 34' 34"	F 11
S 12	9 23 52	22° 14' 47"	21° 48' 48"	9° 28' 28"	22° 2' 2"	17° 36' 36"	27° 58' 58"	28° 37' 37"	27° 45' 45"	0° 12' 12"	26° 15' 15"	2° 35' 35"	4° 15' 15"	23° 57' 57"	26° 37' 37"	S 12
S 13	9 27 48	23° 15' 26"	6° 54' 54"	11° 6' 6"	23° 16' 16"	17° 26' 26"	28° 13' 13"	28° 43' 43"	27° 48' 48"	0° 13' 13"	26° 16' 16"	2° 29' 29"	4° 12' 12"	24° 3' 3"	26° 40' 40"	S 13
M14	9 31 45	24° 16' 04"	22° 11' 11"	12° 44' 44"	24° 29' 29"	17° 17' 17"	28° 27' 27"	28° 50' 50"	27° 50' 50"	0° 15' 15"	26° 18' 18"	2° 23' 23"	4° 8' 8"	24° 10' 10"	26° 44' 44"	M14
T 15	9 35 42	25° 16' 41"	7° 26' 26"	14° 24' 24"	25° 43' 43"	17° 9' 9"	28° 42' 42"	28° 57' 57"	27° 52' 52"	0° 16' 16"	26° 19' 19"	2° 19' 19"	4° 5' 5"	24° 17' 17"	26° 47' 47"	T 15
W16	9 39 38	26° 17' 16"	22° 32' 32"	16° 4' 4"	26° 57' 57"	17° 1' 1"	28° 56' 56"	29° 3' 3"	27° 55' 55"	0° 18' 18"	26° 20' 20"	2° 17' 17"	4° 2' 2"	24° 23' 23"	26° 50' 50"	W16
T 17	9 43 35	27° 17' 49"	7° 18' 18"	17° 45' 45"	28° 10' 10"	16° 55' 55"	29° 11' 11"	29° 10' 10"	27° 57' 57"	0° 19' 19"	26° 22' 22"	2° 17' 17"	3° 59' 59"	24° 30' 30"	26° 53' 53"	T 17
F 18	9 47 31	28° 18' 20"	21° 39' 39"	19° 27' 27"	29° 24' 24"	16° 49' 49"	29° 25' 25"	29° 17' 17"	27° 59' 59"	0° 20' 20"	26° 23' 23"	2° 18' 18"	3° 56' 56"	24° 37' 37"	26° 57' 57"	F 18
S 19	9 51 28	29° 18' 49"	5° 34' 34"	21° 11' 11"	0° 37' 37"	16° 44' 44"	29° 40' 40"	29° 24' 24"	28° 1' 1"	0° 22' 22"	26° 24' 24"	2° 20' 20"	3° 53' 53"	24° 43' 43"	27° 0' 0"	S 19
S 20	9 55 24	0° 19' 17"	19° 2' 2"	22° 55' 55"	1° 50' 50"	16° 39' 39"	29° 54' 54"	29° 30' 30"	28° 4' 4"	0° 23' 23"	26° 26' 26"	2° 21' 21"	3° 49' 49"	24° 50' 50"	27° 3' 3"	S 20
M21	9 59 21	1° 19' 43"	2° 11' 11"	24° 40' 40"	3° 4' 4"	16° 36' 36"	0° 37' 37"	29° 37' 37"	28° 6' 6"	0° 25' 25"	26° 27' 27"	2° 22' 22"	3° 46' 46"	24° 57' 57"	27° 7' 7"	M21
T 22	10 3 17	2° 20' 07"	14° 48' 48"	26° 25' 25"	4° 17' 17"	16° 33' 33"	0° 23' 23"	29° 44' 44"	28° 8' 8"	0° 26' 26"	26° 28' 28"	2° 21' 21"	3° 43' 43"	25° 3' 3"	27° 10' 10"	T 22
W23	10 7 14	3° 20' 29"	27° 13' 13"	28° 12' 12"	5° 30' 30"	16° 31' 31"	0° 37' 37"	29° 51' 51"	28° 10' 10"	0° 27' 27"	26° 30' 30"	2° 19' 19"	3° 40' 40"	25° 10' 10"	27° 13' 13"	W23
T 24	10 11 11	4° 20' 49"	9° 25' 25"	0° 3' 3"	6° 43' 43"	16° 30' 30"	0° 52' 52"	29° 58' 58"	28° 12' 12"	0° 28' 28"	26° 31' 31"	2° 15' 15"	3° 37' 37"	25° 17' 17"	27° 17' 17"	T 24
F 25	10 15 7	5° 21' 07"	21° 27' 27"	1° 49' 49"	7° 56' 56"	16° 30' 30"	1° 6' 6"	0° 5' 5"	28° 14' 14"	0° 30' 30"	26° 33' 33"	2° 11' 11"	3° 33' 33"	25° 23' 23"	27° 20' 20"	F 25
S 26	10 19 4	6° 21' 23"	3° 22' 22"	3° 39' 39"	9° 9' 9"	16° 30' 30"	1° 21' 21"	0° 12' 12"	28° 16' 16"	0° 31' 31"	26° 34' 34"	2° 6' 6"	3° 30' 30"	25° 30' 30"	27° 24' 24"	S 26
S 27	10 23 0	7° 21' 37"	15° 13' 13"	5° 30' 30"	10° 22' 22"	16° 31' 31"	1° 35' 35"	0° 19' 19"	28° 17' 17"	0° 32' 32"	26° 36' 36"	2° 2' 2"	3° 27' 27"	25° 37' 37"	27° 27' 27"	S 27
M28	10 26 57	8° 21' 50"	27° 2' 2"	7° 21' 21"	11° 35' 35"	16° 33' 33"	1° 50' 50"	0° 26' 26"	28° 19' 19"	0° 33' 33"	26° 37' 37"	1° 58' 58"	3° 24' 24"	25° 43' 43"	27° 31' 31"	M28
T 29	10 30 53	9° 22' 00"	8° 52' 52"	9° 14' 14"	12° 48' 48"	16° 35' 35"	2° 4' 4"	0° 33' 33"	28° 21' 21"	0° 34' 34"	26° 38' 38"	1° 55' 55"	3° 21' 21"	25° 45' 45"	27° 34' 34"	T 29

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
T 1	17s28	14n 3	2n47	22s37	1s 2	9s45	1s27	26n10	4n17	13s53	0s50	3s 1	2s11	23s36	0s 9	22s19
W 2	17 11	8 49	1 50	22 28	1 8	9 16	1 25	26 12	4 16	13 48	0 50	2 58	2 11	23 36	0 9	22 19
T 3	16 54	3 15	0 49	22 17	1 14	8 46	1 24	26 14	4 15	13 43	0 51	2 56	2 11	23 36	0 9	22 19
F 4	16 36	2s29	0s15	22 6	1 20	8 17	1 23	26 15	4 14	13 38	0 51	2 53	2 11	23 36	0 9	22 19
S 5	16 18	8 11	1 20	21 53	1 25	7 47	1 21	26 16	4 13	13 33	0 51	2 51	2 11	23 36	0 9	22 19
S 6	16 0	13 41	2 21	21 39	1 30	7 17	1 20	26 17	4 12	13 29	0 51	2 48	2 11	23 36	0 9	22 19
M 7	15 42	18 45	3 18	21 23	1 35	6 47	1 18	26 18	4 10	13 24	0 51	2 46	2 11	23 36	0 9	22 19
T 8	15 23	23 8	4 6	21 6	1 39	6 16	1 16	26 19	4 9	13 19	0 51	2 43	2 10	23 36	0 9	22 19
W 9	15 5	26 28	4 43	20 48	1 44	5 46	1 14	26 19	4 8	13 14	0 51	2 40	2 10	23 36	0 10	22 19
T 10	14 46	28 20	5 5	20 28	1 47	5 15	1 13	26 20	4 6	13 9	0 51	2 38	2 10	23 36	0 10	22 19
F 11	14 26	28 25	5 9	20 7	1 51	4 44	1 11	26 20	4 5	13 4	0 51	2 35	2 10	23 36	0 10	22 19
S 12	14 7	26 31	4 53	19 44	1 54	4 13	1 9	26 20	4 4	12 59	0 51	2 32	2 10	23 36	0 10	22 19
S 13	13 47	22 42	4 16	19 20	1 57	3 42	1 7	26 20	4 2	12 54	0 51	2 30	2 10	23 36	0 10	22 19
M14	13 27	17 18	3 21	18 55	2 0	3 11	1 5	26 19	4 0	12 49	0 51	2 27	2 10	23 36	0 10	22 19
T 15	13 7	10 49	2 11	18 28	2 2	2 39	1 2	26 19	3 59	12 44	0 51	2 24	2 10	23 36	0 10	22 19
W16	12 46	3 47	0 53	18 0	2 4	2 8	1 0	26 18	3 57	12 39	0 51	2 21	2 10	23 37	0 10	22 19
T 17	12 25	3n19	0n27	17 31	2 5	1 37	0 58	26 17	3 56	12 34	0 51	2 19	2 10	23 37	0 10	22 19
F 18	12 5	10 3	1 44	17 0	2 6	1 5	0 55	26 16	3 54	12 29	0 51	2 16	2 9	23 37	0 10	22 19
S 19	11 43	16 5	2 52	16 27	2 7	0 34	0 53	26 15	3 52	12 24	0 51	2 13	2 9	23 37	0 10	22 19
S 20	11 22	21 9	3 48	15 53	2 7	0 2	0 50	26 14	3 50	12 19	0 51	2 10	2 9	23 37	0 10	22 19
M21	11 1	25 1	4 31	15 18	2 6	0n29	0 48	26 13	3 49	12 14	0 51	2 8	2 9	23 37	0 10	22 19
T 22	10 39	27 32	4 59	14 41	2 6	1 1	0 45	26 11	3 47	12 9	0 51	2 5	2 9	23 37	0 10	22 19
W23	10 17	28 38	5 12	14 3	2 5	1 32	0 43	26 10	3 45	12 4	0 52	2 2	2 9	23 37	0 10	22 19
T 24	9 56	28 18	5 11	13 24	2 3	2 4	0 40	26 8	3 43	11 59	0 52	1 59	2 9	23 37	0 10	22 19
F 25	9 34	26 37	4 56	12 43	2 1	2 35	0 37	26 6	3 41	11 54	0 52	1 56	2 9	23 37	0 10	22 18
S 26	9 11	23 46	4 28	12 1	1 58	3 6	0 34	26 5	3 40	11 49	0 52	1 53	2 9	23 37	0 10	22 18
S 27	8 49	19 56	3 49	11 17	1 55	3 38	0 31	26 3	3 38	11 44	0 52	1 50	2 9	23 37	0 10	22 18
M28	8 27	15 20	3 0	10 32	1 51	4 9	0 29	26 1	3 36	11 39	0 52	1 48	2 9	23 37	0 10	22 18
T 29	8s 4	10n 9	2n 3	9s46	1s47	4n40	0s26	25n59	3n34	11s34	0s52	1s45	2s 9	23s37	0s10	22s18

Julian Day Number = 2385831.5, Delta T = 16.58 sec  
Ecliptic obliquity = 23°27'55", Nutation = 0°00'00", out-of-bounds declination in red  
Ayanamsha: Fagan/Bradley = 22°13'41", Lahiri = 21°20'42"



ASTRODIENST EPHEMERIS for the year 1820  
geocentric

APRIL 1820

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	12 37 3	11°11'07	6♉20	27°22	20♊54	23♋4	9♌32	4♍30	28♎51	0♏53	27♐26	1°R54	1°V39	29♑24	29♒30	S 1
S 2	12 41 0	12°10'12	19° 0	27°31	22° 3	23°24	9°45	4°38	28°51	0°R53	27°28	1°V53	1°36	29°30	29°33	S 2
M 3	12 44 56	13° 9'16	1♊54	27°R34	23°13	23°44	9°58	4°45	28°R51	0°53	27°29	1°52	1°33	29°37	29°37	M 3
T 4	12 48 53	14° 8'17	15° 2	27°29	24°22	24° 4	10°11	4°53	28°51	0°53	27°31	1°50	1°30	29°44	29°40	T 4
W 5	12 52 49	15° 7'17	28°26	27°19	25°32	24°25	10°25	5° 0	28°51	0°53	27°32	1°49	1°26	29°50	29°44	W 5
T 6	12 56 46	16° 6'15	12♊7	27° 1	26°41	24°46	10°38	5° 7	28°50	0°52	27°34	1°D49	1°23	29°57	29°48	T 6
F 7	13 0 42	17° 5'11	26° 4	26°39	27°50	25° 8	10°51	5°15	28°50	0°52	27°35	1°49	1°20	0♐4	29°51	F 7
S 8	13 4 39	18° 4'06	10♋17	26°11	28°59	25°29	11° 4	5°22	28°50	0°52	27°37	1°49	1°17	0°10	29°55	S 8
S 9	13 8 35	19° 2'59	24°44	25°38	0♐7	25°51	11°17	5°30	28°50	0°52	27°38	1°51	1°14	0°17	29°58	S 9
M10	13 12 32	20° 1'50	9♌22	25° 2	1°16	26°14	11°30	5°37	28°49	0°52	27°40	1°52	1°10	0°24	0°V2	M10
T 11	13 16 29	21° 0'39	24° 5	24°23	2°24	26°36	11°42	5°44	28°49	0°51	27°41	1°53	1° 7	0°30	0° 5	T 11
W12	13 20 25	21°59'26	8♍48	23°41	3°33	26°59	11°55	5°51	28°48	0°51	27°42	1°R53	1° 4	0°37	0° 9	W12
T 13	13 24 22	22°58'12	23°24	22°58	4°41	27°23	12° 8	5°59	28°48	0°51	27°44	1°52	1° 1	0°44	0°12	T 13
F 14	13 28 18	23°56'55	7♌47	22°14	5°49	27°46	12°20	6° 6	28°47	0°50	27°45	1°49	0°58	0°50	0°15	F 14
S 15	13 32 15	24°55'36	21°50	21°30	6°57	28°10	12°33	6°13	28°47	0°50	27°47	1°46	0°55	0°57	0°19	S 15
S 16	13 36 11	25°54'16	5♐30	20°47	8° 5	28°34	12°45	6°21	28°46	0°50	27°48	1°43	0°51	1° 4	0°22	S 16
M17	13 40 8	26°52'53	18°47	20° 6	9°12	28°58	12°58	6°28	28°46	0°49	27°49	1°39	0°48	1°10	0°25	M17
T 18	13 44 4	27°51'28	1♌40	19°28	10°19	29°23	13°10	6°35	28°45	0°49	27°51	1°36	0°45	1°17	0°29	T 18
W19	13 48 1	28°50'01	14°11	18°52	11°27	29°48	13°22	6°42	28°44	0°48	27°52	1°34	0°42	1°24	0°32	W19
T 20	13 51 58	29°48'32	26°25	18°20	12°34	0♑13	13°34	6°49	28°43	0°48	27°53	1°D33	0°39	1°30	0°35	T 20
F 21	13 55 54	0♊47'01	8♏25	17°51	13°40	0°38	13°46	6°56	28°42	0°47	27°55	1°33	0°36	1°37	0°39	F 21
S 22	13 59 51	1°45'27	20°18	17°27	14°47	1° 4	13°58	7° 3	28°41	0°46	27°56	1°35	0°32	1°44	0°42	S 22
S 23	14 3 47	2°43'51	2♐6	17° 8	15°53	1°30	14°10	7°10	28°40	0°46	27°57	1°36	0°29	1°50	0°45	S 23
M24	14 7 44	3°42'13	13°57	16°53	17° 0	1°56	14°22	7°17	28°39	0°45	27°59	1°38	0°26	1°57	0°48	M24
T 25	14 11 40	4°40'33	25°52	16°43	18° 6	2°22	14°34	7°24	28°38	0°44	28° 0	1°R39	0°23	2° 4	0°51	T 25
W26	14 15 37	5°38'51	7♌57	16°38	19°11	2°48	14°45	7°31	28°37	0°44	28° 1	1°39	0°20	2°10	0°55	W26
T 27	14 19 33	6°37'07	20°15	16°D38	20°17	3°15	14°57	7°38	28°36	0°43	28° 2	1°37	0°16	2°17	0°58	T 27
F 28	14 23 30	7°35'22	2♐46	16°43	21°22	3°42	15° 8	7°45	28°35	0°42	28° 4	1°34	0°13	2°24	1° 1	F 28
S 29	14 27 27	8°33'34	15°33	16°52	22°27	4° 9	15°20	7°52	28°34	0°41	28° 5	1°29	0°10	2°30	1° 4	S 29
S 30	14 31 23	9♊31'45	28♐34	17°V7	23♐32	4♑36	15°H31	7°V58	28♎32	0♏41	28♐6	1°V23	0°V7	2♐37	1°V7	S 30

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat
S 1	4n26	16s28	2s59	13n32	3n12	19n20	1n23	24n 6	2n39	8s52	0s55	0s11	2s 9	23s38	0s10	22s17
S 2	4 49	21 13	3 52	13 38	3 15	19 42	1 27	24 1	2 38	8 47	0 56	0 8	2 9	23 38	0 10	22 17
M 3	5 12	25 3	4 34	13 39	3 15	20 3	1 30	23 56	2 36	8 42	0 56	0 5	2 9	23 38	0 10	22 17
T 4	5 35	27 39	5 3	13 37	3 15	20 24	1 34	23 51	2 35	8 37	0 56	0 2	2 9	23 38	0 10	22 17
W 5	5 58	28 43	5 16	13 31	3 13	20 44	1 37	23 46	2 33	8 32	0 56	0n 1	2 9	23 38	0 10	22 17
T 6	6 20	28 5	5 11	13 22	3 9	21 4	1 40	23 41	2 32	8 27	0 56	0 4	2 9	23 38	0 11	22 17
F 7	6 43	25 41	4 49	13 9	3 4	21 23	1 44	23 35	2 30	8 22	0 56	0 7	2 9	23 38	0 11	22 17
S 8	7 6	21 40	4 8	12 52	2 57	21 41	1 47	23 30	2 29	8 18	0 56	0 10	2 9	23 38	0 11	22 17
S 9	7 28	16 18	3 11	12 32	2 49	22 0	1 50	23 24	2 27	8 13	0 57	0 13	2 9	23 38	0 11	22 17
M10	7 50	9 56	2 1	12 10	2 39	22 17	1 53	23 19	2 26	8 8	0 57	0 15	2 9	23 38	0 11	22 17
T 11	8 12	3 0	0 43	11 45	2 28	22 34	1 57	23 13	2 24	8 3	0 57	0 18	2 9	23 38	0 11	22 17
W12	8 35	4n 5	0n38	11 18	2 15	22 51	2 0	23 7	2 23	7 59	0 57	0 21	2 9	23 38	0 11	22 17
T 13	8 56	10 54	1 56	10 49	2 2	23 7	2 3	23 1	2 22	7 54	0 57	0 24	2 9	23 38	0 11	22 17
F 14	9 18	17 2	3 5	10 19	1 47	23 22	2 6	22 55	2 20	7 49	0 57	0 27	2 9	23 38	0 11	22 17
S 15	9 40	22 8	4 1	9 49	1 32	23 37	2 9	22 49	2 19	7 45	0 57	0 29	2 10	23 38	0 11	22 17
S 16	10 1	25 52	4 42	9 18	1 16	23 51	2 12	22 43	2 18	7 40	0 58	0 32	2 10	23 38	0 11	22 17
M17	10 22	28 5	5 6	8 47	0 59	24 4	2 15	22 36	2 16	7 35	0 58	0 35	2 10	23 38	0 11	22 17
T 18	10 43	28 41	5 14	8 17	0 42	24 17	2 17	22 30	2 15	7 31	0 58	0 38	2 10	23 38	0 11	22 17
W19	11 4	27 47	5 7	7 48	0 26	24 29	2 20	22 23	2 14	7 26	0 58	0 40	2 10	23 38	0 11	22 17
T 20	11 25	25 33	4 45	7 20	0 9	24 41	2 23	22 17	2 12	7 22	0 58	0 43	2 10	23 38	0 11	22 17
F 21	11 46	22 13	4 12	6 54	0s 8	24 52	2 25	22 10	2 11	7 17	0 59	0 46	2 10	23 38	0 11	22 17
S 22	12 6	18 1	3 28	6 29	0 24	25 3	2 28	22 3	2 10	7 13	0 59	0 49	2 10	23 38	0 11	22 17
S 23	12 26	13 9	2 35	6 7	0 40	25 12	2 30	21 56	2 8	7 8	0 59	0 51	2 10	23 38	0 11	22 17
M24	12 46	7 48	1 35	5 47	0 55	25 22	2 33	21 49	2 7	7 4	0 59	0 54	2 10	23 38	0 11	22 17
T 25	13 6	2 8	0 32	5 30	1 10	25 30	2 35	21 42	2 6	7 0	0 59	0 57	2 11	23 38	0 11	22 17
W26	13 25	3s41	0s34	5 15	1 24	25 38	2 37	21 35	2 5	6 55	0 59	0 59	2 11	23 38	0 11	22 17
T 27	13 44	9 28	1 40	5 3	1 37	25 45	2 39	21 27	2 3	6 51	1 0	1 2	2 11	23 38	0 11	22 17
F 28	14 3	14 58	2 41	4 54	1 49	25 52	2 41	21 20	2 2	6 47	1 0	1 4	2 11	23 38	0 11	22 17
S 29	14 22	19 57	3 36	4 47	2 1	25 58	2 43	21 12	2 1	6 43	1 0	1 7	2 11	23 38	0 11	22 17
S 30	14n41	24s 6	4s21	4n42	2s11	26n 3	2n45	21n 4	2n 0	6s38	1s 0	1n10	2s11	23s38	0s11	22s17

Julian Day Number = 2385891.5, Delta T = 16.55 sec  
Ecliptic obliquity = 23°27'55, Nutation = - 0°00'01, out-of-bounds declination in red  
Ayanamsha: Fagan/Bradley = 22°13'49, Lahiri = 21°20'50

# ASTRODIENST EPHEMERIS for the year 1820

## geocentric

MAY 1820

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
M 1	14 35 20	10♌29'54	11♊50	17♉25	24♋37	5♌ 3	15♈42	8♉ 5	28°R31	0°R40	28♈ 7	1°R17	0°V 4	2♉44	1♉10	M 1
T 2	14 39 16	11°28'02	25°20	17°49	25°41	5°31	15°53	8°12	28♈30	0♌39	28° 8	1°V11	0° 1	2°50	1°13	T 2
W 3	14 43 13	12°26'08	9♌ 1	18°16	26°45	5°59	16° 4	8°19	28°28	0°38	28° 9	1° 6	29♈57	2°57	1°16	W 3
T 4	14 47 9	13°24'13	22°51	18°48	27°49	6°27	16°15	8°25	28°27	0°37	28°11	1° 2	29°54	3° 4	1°19	T 4
F 5	14 51 6	14°22'16	6♌51	19°24	28°53	6°55	16°26	8°32	28°25	0°36	28°12	1° 0	29°51	3°10	1°22	F 5
S 6	14 55 2	15°20'18	20°57	20° 4	29°56	7°23	16°37	8°38	28°24	0°35	28°13	1°D 0	29°48	3°17	1°24	S 6
S 7	14 58 59	16°18'19	5♈ 9	20°47	0♌59	7°52	16°47	8°45	28°22	0°34	28°14	1° 1	29°45	3°23	1°27	S 7
M 8	15 2 56	17°16'18	19°26	21°34	2° 2	8°20	16°58	8°51	28°21	0°33	28°15	1° 2	29°42	3°30	1°30	M 8
T 9	15 6 52	18°14'16	3♉44	22°24	3° 5	8°49	17° 8	8°58	28°19	0°32	28°16	1°R 3	29°38	3°37	1°33	T 9
W10	15 10 49	19°12'12	18° 1	23°18	4° 7	9°18	17°18	9° 4	28°17	0°31	28°17	1° 1	29°35	3°43	1°36	W10
T11	15 14 45	20°10'07	2♌13	24°15	5° 9	9°47	17°28	9°10	28°16	0°30	28°18	0°58	29°32	3°50	1°38	T11
F12	15 18 42	21° 8'01	16°15	25°15	6°10	10°17	17°39	9°17	28°14	0°28	28°19	0°52	29°29	3°57	1°41	F12
S13	15 22 38	22° 5'54	0♋ 3	26°18	7°12	10°46	17°48	9°23	28°12	0°27	28°20	0°45	29°26	4° 3	1°43	S13
S14	15 26 35	23° 3'45	13°34	27°24	8°12	11°16	17°58	9°29	28°10	0°26	28°21	0°36	29°22	4°10	1°46	S14
M15	15 30 31	24° 1'34	26°45	28°33	9°13	11°46	18° 8	9°35	28° 8	0°25	28°22	0°27	29°19	4°17	1°49	M15
T16	15 34 28	24°59'22	9♌36	29°45	10°13	12°15	18°18	9°41	28° 6	0°24	28°23	0°19	29°16	4°23	1°51	T16
W17	15 38 25	25°57'08	22° 7	0♌59	11°13	12°46	18°27	9°47	28° 5	0°22	28°24	0°12	29°13	4°30	1°54	W17
T18	15 42 21	26°54'53	4♌21	2°16	12°12	13°16	18°36	9°53	28° 3	0°21	28°25	0° 7	29°10	4°37	1°56	T18
F19	15 46 18	27°52'36	16°22	3°35	13°12	13°46	18°46	9°59	28° 1	0°20	28°26	0° 5	29° 7	4°43	1°58	F19
S20	15 50 14	28°50'17	28°15	4°57	14°10	14°17	18°55	10° 5	27°59	0°19	28°27	0°D 4	29° 3	4°50	2° 1	S20
S21	15 54 11	29°47'57	10♉ 4	6°21	15° 8	14°47	19° 4	10°10	27°57	0°17	28°27	0° 4	29° 0	4°57	2° 3	S21
M22	15 58 7	0♋45'35	21°55	7°48	16° 6	15°18	19°12	10°16	27°55	0°16	28°28	0° 5	28°57	5° 3	2° 5	M22
T23	16 2 4	1°43'12	3♌53	9°17	17° 3	15°49	19°21	10°22	27°52	0°15	28°29	0°R 5	28°54	5°10	2° 7	T23
W24	16 6 0	2°40'47	16° 3	10°49	18° 0	16°20	19°30	10°27	27°50	0°13	28°30	0° 4	28°51	5°17	2°10	W24
T25	16 9 57	3°38'21	28°29	12°23	18°57	16°51	19°38	10°33	27°48	0°12	28°31	0° 0	28°47	5°23	2°12	T25
F26	16 13 54	4°35'53	11♌13	14° 0	19°52	17°22	19°47	10°38	27°46	0°10	28°31	29♈55	28°44	5°30	2°14	F26
S27	16 17 50	5°33'25	24°18	15°39	20°48	17°54	19°55	10°43	27°44	0° 9	28°32	29°46	28°41	5°37	2°16	S27
S28	16 21 47	6°30'55	7♌41	17°20	21°43	18°25	20° 3	10°49	27°42	0° 8	28°33	29°36	28°38	5°43	2°18	S28
M29	16 25 43	7°28'24	21°22	19° 4	22°37	18°57	20°11	10°54	27°39	0° 6	28°34	29°26	28°35	5°50	2°20	M29
T30	16 29 40	8°25'52	5♌18	20°50	23°30	19°29	20°18	10°59	27°37	0° 5	28°34	29°15	28°32	5°57	2°22	T30
W31	16 33 36	9♋23'20	19♌23	22♌38	24♌23	20♌ 0	20♈26	11♉ 4	27♈35	0♌ 3	28♈35	29♈ 6	28♈28	6♉ 3	2♉23	W31

Day	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉
	decl	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat	decl lat
M 1	14n59	27s 3	4s52	4n40	2s21	26n 8	2n47	20n57	1n59	6s34	1s 0	1n12	2s11	23s38
T 2	15 17	28 31	5 8	4 41	2 30	26 12	2 49	20 49	1 57	6 30	1 1	1 15	2 11	23 38
W 3	15 35	28 16	5 7	4 44	2 38	26 16	2 50	20 41	1 56	6 26	1 1	1 17	2 12	23 38
T 4	15 53	26 15	4 48	4 49	2 45	26 18	2 52	20 32	1 55	6 22	1 1	1 20	2 12	23 38
F 5	16 10	22 38	4 11	4 57	2 52	26 21	2 53	20 24	1 54	6 18	1 1	1 22	2 12	23 38
S 6	16 27	17 41	3 20	5 7	2 57	26 22	2 54	20 16	1 53	6 14	1 1	1 24	2 12	23 38
S 7	16 44	11 44	2 15	5 19	3 2	26 23	2 55	20 7	1 52	6 10	1 2	1 27	2 12	23 38
M 8	17 0	5 9	1 2	5 32	3 6	26 23	2 56	19 59	1 51	6 6	1 2	1 29	2 12	23 38
T 9	17 17	1n42	0n15	5 48	3 9	26 23	2 57	19 50	1 49	6 2	1 2	1 32	2 12	23 38
W10	17 33	8 28	1 30	6 6	3 12	26 22	2 58	19 41	1 48	5 59	1 2	1 34	2 13	23 38
T11	17 48	14 45	2 40	6 25	3 13	26 21	2 59	19 32	1 47	5 55	1 2	1 36	2 13	23 38
F12	18 4	20 12	3 39	6 46	3 14	26 18	2 59	19 23	1 46	5 51	1 3	1 39	2 13	23 38
S13	18 19	24 29	4 24	7 8	3 15	26 16	3 0	19 14	1 45	5 47	1 3	1 41	2 13	23 38
S14	18 34	27 18	4 53	7 32	3 14	26 12	3 0	19 5	1 44	5 44	1 3	1 43	2 13	23 38
M15	18 48	28 31	5 5	7 58	3 13	26 8	3 0	18 56	1 43	5 40	1 3	1 45	2 13	23 38
T16	19 2	28 8	5 2	8 25	3 11	26 4	3 0	18 46	1 42	5 37	1 4	1 48	2 14	23 38
W17	19 16	26 19	4 44	8 53	3 9	25 9	3 0	18 37	1 41	5 33	1 4	1 50	2 14	23 38
T18	19 29	23 18	4 14	9 22	3 6	25 53	3 0	18 27	1 40	5 30	1 4	1 52	2 14	23 38
F19	19 43	19 19	3 32	9 52	3 2	25 47	2 59	18 17	1 39	5 26	1 4	1 54	2 14	23 38
S20	19 55	14 38	2 42	10 23	2 58	25 40	2 59	18 7	1 38	5 23	1 4	1 56	2 14	23 38
S21	20 8	9 26	1 45	10 56	2 53	25 33	2 58	17 57	1 37	5 20	1 5	1 58	2 14	23 38
M22	20 20	3 53	0 44	11 29	2 48	25 25	2 57	17 47	1 36	5 16	1 5	2 0	2 15	23 38
T23	20 32	1s51	0s20	12 3	2 42	25 17	2 56	17 37	1 35	5 13	1 5	2 2	2 15	23 38
W24	20 43	7 37	1 24	12 38	2 35	25 8	2 55	17 27	1 34	5 10	1 5	2 4	2 15	23 38
T25	20 54	13 13	2 25	13 13	2 28	24 59	2 53	17 16	1 33	5 7	1 6	2 6	2 15	23 38
F26	21 5	18 23	3 21	13 49	2 21	24 49	2 52	17 6	1 32	5 4	1 6	2 8	2 15	23 38
S27	21 15	22 51	4 7	14 25	2 13	24 39	2 50	16 55	1 31	5 1	1 6	2 10	2 16	23 38
S28	21 25	26 14	4 41	15 2	2 4	24 29	2 48	16 45	1 30	4 58	1 6	2 12	2 16	23 38
M29	21 35	28 10	4 59	15 39	1 55	24 18	2 46	16 34	1 29	4 55	1 7	2 14	2 16	23 38
T30	21 44	28 22	5 1	16 16	1 46	24 6	2 44	16 23	1 28	4 52	1 7	2 16	2 16	23 38
W31	21n53	26s45	4s44	16n53	1s37	23n54	2n41	16n12	1n27	4s49	1s 7	2n17	2s16	23s38

Julian Day Number = 2385921.5, Delta T = 16.53 sec  
 Ecliptic obliquity = 23°27'55, Nutation = - 0°00'01, out-of-bounds declination in red  
 Ayanamsha: Fagan/Bradley = 22°13'54, Lahiri = 21°20'54



# ASTRODIENST EPHEMERIS for the year 1820

## geocentric

JUNE 1820

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	16 37 33	10 <sup>II</sup> 20'46	3 <sup>III</sup> 34	24 <sup>II</sup> 829	25 <sup>II</sup> 16	20 <sup>II</sup> 32	20 <sup>II</sup> 33	11 <sup>II</sup> 9	27 <sup>II</sup> R33	0 <sup>II</sup> R 2	28 <sup>II</sup> 36	29 <sup>II</sup> R 0	28 <sup>II</sup> 25	6 <sup>II</sup> 10	2 <sup>II</sup> 25	T 1
F 2	16 41 29	11°18'12	17°46	26°22	26° 8	21° 5	20°41	11°14	27 <sup>II</sup> 30	0 <sup>II</sup> 0	28°36	28 <sup>II</sup> 55	28°22	6°17	2°27	F 2
S 3	16 45 26	12°15'37	1 <sup>II</sup> 58	28°17	26°59	21°37	20°48	11°19	27°28	29 <sup>II</sup> 59	28°37	28°53	28°19	6°23	2°29	S 3
S 4	16 49 23	13°13'01	16° 6	0 <sup>II</sup> 15	27°49	22° 9	20°55	11°24	27°26	29°57	28°37	28°D53	28°16	6°30	2°30	S 4
M 5	16 53 19	14°10'25	0 <sup>II</sup> 11	2°14	28°39	22°41	21° 2	11°29	27°23	29°56	28°38	28°R53	28°13	6°37	2°32	M 5
T 6	16 57 16	15° 7'48	14°11	4°16	29°28	23°14	21° 9	11°33	27°21	29°54	28°38	28°53	28° 9	6°43	2°34	T 6
W 7	17 1 12	16° 5'11	28° 4	6°20	0 <sup>II</sup> 16	23°47	21°15	11°38	27°19	29°53	28°39	28°50	28° 6	6°50	2°35	W 7
T 8	17 5 9	17° 2'33	11 <sup>II</sup> 51	8°25	1° 4	24°19	21°22	11°42	27°16	29°51	28°39	28°45	28° 3	6°57	2°37	T 8
F 9	17 9 5	17°59'55	25°28	10°32	1°51	24°52	21°28	11°47	27°14	29°49	28°40	28°37	28° 0	7° 3	2°38	F 9
S 10	17 13 2	18°57'16	8 <sup>II</sup> 55	12°40	2°37	25°25	21°34	11°51	27°11	29°48	28°40	28°26	27°57	7°10	2°40	S 10
S 11	17 16 59	19°54'36	22° 7	14°50	3°22	25°58	21°40	11°55	27° 9	29°46	28°41	28°14	27°53	7°17	2°41	S 11
M12	17 20 55	20°51'56	5 <sup>II</sup> 4	17° 1	4° 6	26°31	21°46	12° 0	27° 7	29°45	28°41	28° 1	27°50	7°23	2°42	M12
T 13	17 24 52	21°49'15	17°45	19°12	4°49	27° 4	21°51	12° 4	27° 4	29°43	28°41	27°49	27°47	7°30	2°43	T 13
W14	17 28 48	22°46'34	0 <sup>II</sup> 9	21°24	5°31	27°38	21°57	12° 8	27° 2	29°41	28°42	27°39	27°44	7°36	2°45	W14
T 15	17 32 45	23°43'51	12°20	23°36	6°12	28°11	22° 2	12°12	26°59	29°40	28°42	27°31	27°41	7°43	2°46	T 15
F 16	17 36 41	24°41'08	24°18	25°47	6°52	28°45	22° 7	12°16	26°57	29°38	28°42	27°26	27°38	7°50	2°47	F 16
S 17	17 40 38	25°38'24	6 <sup>II</sup> 9	27°59	7°31	29°18	22°12	12°19	26°54	29°37	28°43	27°24	27°34	7°56	2°48	S 17
S 18	17 44 34	26°35'39	17°58	0 <sup>II</sup> 9	8° 9	29°52	22°17	12°23	26°52	29°35	28°43	27°23	27°31	8° 3	2°49	S 18
M19	17 48 31	27°32'53	29°48	2°19	8°46	0 <sup>II</sup> 26	22°22	12°27	26°49	29°33	28°43	27°22	27°28	8°10	2°50	M19
T 20	17 52 28	28°30'07	11 <sup>II</sup> 47	4°28	9°21	1° 0	22°26	12°30	26°47	29°32	28°43	27°22	27°25	8°16	2°51	T 20
W21	17 56 24	29°27'20	23°59	6°35	9°55	1°34	22°30	12°34	26°45	29°30	28°44	27°21	27°22	8°23	2°51	W21
T 22	18 0 21	0 <sup>II</sup> 24'33	6 <sup>II</sup> 28	8°41	10°28	2° 8	22°34	12°37	26°42	29°29	28°44	27°17	27°19	8°30	2°52	T 22
F 23	18 4 17	1°21'45	19°20	10°46	11° 0	2°42	22°38	12°40	26°40	29°27	28°44	27°11	27°15	8°36	2°53	F 23
S 24	18 8 14	2°18'57	2 <sup>II</sup> 35	12°48	11°30	3°16	22°42	12°43	26°37	29°25	28°44	27° 2	27°12	8°43	2°54	S 24
S 25	18 12 10	3°16'08	16°15	14°49	11°58	3°50	22°45	12°47	26°35	29°24	28°44	26°52	27° 9	8°50	2°54	S 25
M26	18 16 7	4°13'19	0 <sup>II</sup> 17	16°48	12°25	4°25	22°49	12°50	26°32	29°22	28°44	26°40	27° 6	8°56	2°55	M26
T 27	18 20 3	5°10'30	14°37	18°45	12°50	4°59	22°52	12°52	26°30	29°20	28°44	26°29	27° 3	9° 3	2°55	T 27
W28	18 24 0	6° 7'40	29° 8	20°40	13°14	5°34	22°55	12°55	26°28	29°19	28°44	26°19	27° 0	9°10	2°56	W28
T 29	18 27 57	7° 4'51	13 <sup>II</sup> 43	22°33	13°36	6° 9	22°58	12°58	26°25	29°17	28°R44	26°12	26°56	9°16	2°56	T 29
F 30	18 31 53	8 <sup>II</sup> 2'01	28 <sup>II</sup> 17	24 <sup>II</sup> 23	13 <sup>II</sup> 56	6 <sup>II</sup> 43	23 <sup>II</sup> 0	13 <sup>II</sup> 1	26 <sup>II</sup> 23	29 <sup>II</sup> 16	28 <sup>II</sup> 44	26 <sup>II</sup> 7	26 <sup>II</sup> 53	9 <sup>II</sup> 23	2 <sup>II</sup> 56	F 30

Day	☉	☾		♊		♋		♌		♍		♎		♏		♐		♑	♒	♓	♈			
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	decl	decl	decl	lat		
T 1	22n 1	23s25	4s10	17n30	1s27	23n42	2n39	16n 1	1n26	4s47	1s 7	2n19	2s17	23s38	0s11	22s16	1n12	15s12	16s 0	0s24	0s38	11n 4	4n 0	3n18
F 2	22 10	18 41	3 20	18 7	1 17	23 30	2 36	15 50	1 25	4 44	1 8	2 21	2 17	23 38	0 11	22 16	1 12	15 13	16 1	0 26	0 39	11 1	4 0	3 18
S 3	22 17	12 56	2 18	18 43	1 6	23 17	2 33	15 38	1 24	4 42	1 8	2 23	2 17	23 38	0 11	22 16	1 12	15 13	16 1	0 26	0 40	10 58	4 1	3 18
S 4	22 25	6 31	1 7	19 19	0 55	23 3	2 29	15 27	1 23	4 39	1 8	2 24	2 17	23 38	0 11	22 16	1 12	15 13	16 1	0 27	0 42	10 55	4 2	3 18
M 5	22 32	0n11	0n 7	19 54	0 45	22 50	2 26	15 16	1 22	4 37	1 9	2 26	2 18	23 38	0 11	22 16	1 12	15 13	16 2	0 27	0 43	10 52	4 3	3 18
T 6	22 38	6 50	1 20	20 28	0 34	22 36	2 22	15 4	1 21	4 34	1 9	2 28	2 18	23 38	0 11	22 16	1 12	15 13	16 2	0 27	0 44	10 48	4 3	3 19
W 7	22 44	13 6	2 28	21 1	0 23	22 22	2 18	14 52	1 20	4 32	1 9	2 29	2 18	23 38	0 11	22 16	1 12	15 13	16 2	0 28	0 45	10 45	4 4	3 19
T 8	22 50	18 41	3 26	21 32	0 12	22 7	2 14	14 40	1 19	4 29	1 9	2 31	2 18	23 38	0 12	22 16	1 12	15 13	16 3	0 30	0 47	10 42	4 5	3 19
F 9	22 55	23 14	4 12	22 2	0 1	21 53	2 10	14 29	1 18	4 27	1 10	2 32	2 18	23 38	0 12	22 16	1 12	15 13	16 3	0 33	0 48	10 39	4 5	3 19
S 10	23 0	26 29	4 44	22 30	0n10	21 38	2 5	14 17	1 17	4 25	1 10	2 34	2 19	23 38	0 12	22 16	1 12	15 14	16 4	0 37	0 49	10 35	4 6	3 19
S 11	23 5	28 12	4 59	22 56	0 20	21 22	2 0	14 5	1 17	4 23	1 10	2 35	2 19	23 38	0 12	22 16	1 12	15 14	16 4	0 42	0 50	10 32	4 7	3 19
M12	23 9	28 20	4 58	23 20	0 31	21 7	1 55	13 52	1 16	4 21	1 10	2 37	2 19	23 38	0 12	22 16	1 12	15 14	16 4	0 47	0 52	10 29	4 7	3 19
T 13	23 13	26 58	4 43	23 42	0 41	20 51	1 50	13 40	1 15	4 19	1 11	2 38	2 19	23 38	0 12	22 16	1 12	15 14	16 5	0 52	0 53	10 26	4 8	3 19
W14	23 16	24 17	4 14	24 1	0 50	20 36	1 44	13 28	1 14	4 17	1 11	2 39	2 20	23 37	0 12	22 16	1 12	15 14	16 5	0 56	0 54	10 22	4 8	3 19
T 15	23 19	20 33	3 34	24 17	0 59	20 20	1 38	13 15	1 13	4 15	1 11	2 41	2 20	23 37	0 12	22 16	1 12	15 15	16 5	0 59	0 55	10 19	4 9	3 20
F 16	23 22	16 2	2 46	24 31	1 7	20 4	1 32	13 3	1 12	4 14	1 12	2 42	2 20	23 37	0 12	22 16	1 12	15 15	16 6	1 1	0 57	10 16	4 10	3 20
S 17	23 24	10 58	1 50	24 42	1 15	19 48	1 26	12 50	1 11	4 12	1 12	2 43	2 20	23 37	0 12	22 16	1 12	15 15	16 6	1 2	0 58	10 12	4 10	3 20
S 18	23 25	5 32	0 50	24 50	1 22	19 31	1 19	12 38	1 10	4 10	1 12	2 44	2 21	23 37	0 12	22 16	1 12	15 15	16 6	1 3	0 59	10 9	4 11	3 20
M19	23 27	0s 7	0s13	24 56	1 29	19 15	1 12	12 25	1 9	4 9	1 12	2 46	2 21	23 37	0 12	22 16	1 12	15 15	16 7	1 3	1 0	10 6	4 11	3 20
T 20	23 27	5 49	1 16	24 58	1 35	18 59	1 5	12 12	1 9	4 7	1 13	2 47	2 21	23 37	0 12	22 16	1 12	15 16	16 7	1 3	1 2	10 3	4 12	3 20
W21	23 28	11 25	2 16	24 58	1 40	18 42	0 57	11 59	1 8	4 6	1 13	2 48	2 21	23 37	0 12	22 16	1 12	15 16	16 8	1 3	1 3	9 59	4 12	3 20
T 22	23 28	16 42	3 11	24 55	1 44	18 26	0 50	11 46	1 7	4 4	1 13	2 49	2 22	23 37	0 12	22 16	1 12	15 16	16 8	1 5	1 4	9 56	4 12	3 20
F 23	23 27	21 24	3 58	24 49	1 48	18 9	0 42	11 33	1 6	4 3	1 14	2 50	2 22	23 37	0 12	22 16	1 12	15 17	16 8	1 7	1 6	9 53	4 13	3 21
S 24	23 27	25 11	4 34	24 41	1 51	17 53	0 33	11 20	1 5	4 2	1 14	2 51	2 22	23 37	0 12	22 16	1 12	15 17	16 9	1 11	1 7	9 50	4 13	3 21
S 25	23 25	27 39	4 56	24 30	1 53	17 37	0 25	11 7	1 4	4 1	1 14	2 52	2 22	23 37	0 12	22 16	1 12	15 17	16 9	1 15	1 8	9 46	4 14	3 21
M26	23 24	28 28	5 0	24 18	1 54	17 21	0 16	10 53	1 3	4 0	1 15	2 53	2 23	23 37	0 12	22 16	1 12	15 17	16 9	1 20	1 9	9 43	4 14	3 21
T 27	23 22	27 24	4 46	24 3	1 55	17 5	0 6	10 40	1 3	3 59	1 15	2 54	2 23	23 37	0 12	22 16	1 12	15 18	16 10	1 24	1 11	9 40	4 14	3 21
W28	23 19	24 29	4 13	23 46	1 55	16 49	0s 3	10 26	1 2	3 58	1 15	2 55	2 23	23 37	0 12	22 16	1 12	15 18	16 10	1 28	1 12	9 36	4 14	3 21
T 29	23 17	19 59	3 24	23 27	1 54	16 33	0 13	10 13	1 1	3 57	1 15	2 55	2 24	23 37	0 12	22 16	1 12	15 18	16 11	1 31	1 13	9 33	4 15	3 21
F 30	23n13	14s18	2s22	23n 7	1n53	16n17	0s24	9n59	1n 0	3s56	1s16	2n56	2s24	23s37	0s12	22s16	1n12	15s19	16s11	1s33	1s14	9n30	4n15	3n21

ASTRODIENST EPHEMERIS for the year 1820  
geocentric

JULY 1820

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	18 35 50	8°59'12	12°43	26°52	14°14	7°18	23°3	13°3	26°R20	29°R14	28°R44	26°R 5	26°H50	9°30	2°V57	S 1
S 2	18 39 46	9°56'23	27° 0	27°59	14°31	7°53	23° 5	13° 6	26°18	29°12	28°H44	26°D 5	26°47	9°36	2°57	S 2
M 3	18 43 43	10°53'34	11°V 4	29°44	14°45	8°28	23° 7	13° 8	26°16	29°11	28°44	26°R 5	26°44	9°43	2°57	M 3
T 4	18 47 39	11°50'46	24°56	14°26	14°58	9° 3	23° 9	13°10	26°13	29° 9	28°44	26°H 4	26°40	9°50	2°57	T 4
W 5	18 51 36	12°47'58	8°35	3° 7	15° 8	9°38	23°11	13°12	26°11	29° 8	28°44	26° 2	26°37	9°56	2°57	W 5
T 6	18 55 32	13°45'11	22° 2	4°45	15°16	10°13	23°12	13°14	26° 9	29° 6	28°44	25°57	26°34	10° 3	2°R57	T 6
F 7	18 59 29	14°42'23	5°II 18	6°22	15°23	10°49	23°13	13°16	26° 7	29° 5	28°44	25°50	26°31	10° 9	2°57	F 7
S 8	19 3 26	15°39'37	18°22	7°56	15°26	11°24	23°14	13°18	26° 4	29° 3	28°43	25°40	26°28	10°16	2°57	S 8
S 9	19 7 22	16°36'50	1°53	9°28	15°R28	11°59	23°15	13°20	26° 2	29° 2	28°43	25°29	26°25	10°23	2°57	S 9
M10	19 11 19	17°34'04	13°52	10°58	15°28	12°35	23°16	13°22	26° 0	29° 0	28°43	25°17	26°21	10°29	2°57	M10
T 11	19 15 15	18°31'18	26°18	12°26	15°25	13°11	23°17	13°23	25°58	28°59	28°43	25° 6	26°18	10°36	2°57	T 11
W12	19 19 12	19°28'33	8°32	13°52	15°19	13°46	23°17	13°25	25°55	28°57	28°42	24°56	26°15	10°43	2°57	W12
T 13	19 23 8	20°25'47	20°35	15°16	15°12	14°22	23°R17	13°26	25°53	28°56	28°42	24°49	26°12	10°49	2°56	T 13
F 14	19 27 5	21°23'02	2°19	16°37	15° 2	14°58	23°17	13°27	25°51	28°54	28°42	24°44	26° 9	10°56	2°56	F 14
S 15	19 31 2	22°20'17	14°18	17°56	14°49	15°34	23°17	13°28	25°49	28°53	28°41	24°41	26° 6	11° 3	2°55	S 15
S 16	19 34 58	23°17'32	26° 5	19°13	14°34	16°10	23°16	13°29	25°47	28°51	28°41	24°D41	26° 2	11° 9	2°55	S 16
M17	19 38 55	24°14'47	7°54	20°28	14°17	16°46	23°15	13°30	25°45	28°50	28°41	24°41	25°59	11°16	2°54	M17
T 18	19 42 51	25°12'03	19°52	21°40	13°58	17°22	23°15	13°31	25°43	28°48	28°40	24°R42	25°56	11°23	2°54	T 18
W19	19 46 48	26° 9'19	2°11	22°49	13°36	17°58	23°14	13°32	25°41	28°47	28°40	24°42	25°53	11°29	2°53	W19
T 20	19 50 44	27° 6'35	14°31	23°56	13°12	18°34	23°12	13°33	25°39	28°46	28°39	24°40	25°50	11°36	2°52	T 20
F 21	19 54 41	28° 3'51	27°24	25° 1	12°46	19°11	23°11	13°33	25°37	28°44	28°39	24°37	25°46	11°43	2°52	F 21
S 22	19 58 37	29° 1'08	10°42	26° 2	12°18	19°47	23° 9	13°34	25°35	28°43	28°38	24°31	25°43	11°49	2°51	S 22
S 23	20 2 34	29°58'26	24°28	27° 1	11°48	20°24	23° 7	13°34	25°33	28°41	28°38	24°24	25°40	11°56	2°50	S 23
M24	20 6 31	0°55'43	8°34	27°57	11°17	21° 0	23° 5	13°34	25°31	28°40	28°37	24°16	25°37	12° 3	2°49	M24
T 25	20 10 27	1°53'02	23°14	28°50	10°44	21°37	23° 3	13°34	25°29	28°39	28°37	24° 8	25°34	12° 9	2°48	T 25
W26	20 14 24	2°50'21	8°34	29°39	10°10	22°13	23° 1	13°R34	25°28	28°38	28°36	24° 1	25°31	12°16	2°47	W26
T 27	20 18 20	3°47'41	23° 2	0°26	9°34	22°50	22°58	13°34	25°26	28°36	28°36	23°55	25°27	12°23	2°46	T 27
F 28	20 22 17	4°45'01	7°H57	1° 8	8°58	23°27	22°55	13°34	25°24	28°35	28°35	23°52	25°24	12°29	2°45	F 28
S 29	20 26 13	5°42'23	22°44	1°47	8°21	24° 4	22°52	13°34	25°23	28°34	28°34	23°D51	25°21	12°36	2°44	S 29
S 30	20 30 10	6°39'46	7°V17	2°22	7°44	24°41	22°49	13°33	25°21	28°33	28°34	23°52	25°18	12°42	2°42	S 30
M31	20 34 6	7°37'10	21°V31	2°53	7°34	25°18	22°46	13°V33	25°19	28°32	28°H33	23°H53	25°H15	12°49	2°V41	M31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl
S 1	23n10	7s52	1s10	22n45	1n51	16n 2	0s34	9n45	0n59	3s56	1s16	2n57	2s24	23s37	0s12	22s16
S 2	23 6	1 7	0n 5	22 21	1 48	15 47	0 45	9 32	0 58	3 55	1 16	2 58	2 24	23 37	0 12	22 16
M 3	23 1	5n35	1 19	21 56	1 45	15 32	0 56	9 18	0 58	3 54	1 17	2 58	2 25	23 36	0 12	22 16
T 4	22 56	11 56	2 27	21 30	1 41	15 17	1 8	9 4	0 57	3 54	1 17	2 59	2 25	23 36	0 12	22 16
W 5	22 51	17 37	3 25	21 3	1 36	15 3	1 19	8 50	0 56	3 54	1 17	2 59	2 25	23 36	0 12	22 16
T 6	22 45	22 20	4 11	20 34	1 31	14 49	1 31	8 36	0 55	3 53	1 18	3 0	2 25	23 36	0 12	22 16
F 7	22 39	25 51	4 43	20 5	1 26	14 35	1 44	8 22	0 54	3 53	1 18	3 0	2 26	23 36	0 12	22 16
S 8	22 33	27 56	5 0	19 35	1 20	14 22	1 56	8 7	0 54	3 53	1 18	3 1	2 26	23 36	0 12	22 16
S 9	22 26	28 28	5 1	19 5	1 13	14 9	2 9	7 53	0 53	3 53	1 19	3 1	2 26	23 36	0 12	22 16
M10	22 19	27 30	4 47	18 33	1 6	13 57	2 22	7 39	0 52	3 53	1 19	3 2	2 27	23 36	0 12	22 16
T 11	22 11	25 9	4 19	18 2	0 59	13 45	2 36	7 24	0 51	3 53	1 19	3 2	2 27	23 36	0 12	22 16
W12	22 3	21 41	3 40	17 30	0 51	13 34	2 49	7 10	0 50	3 53	1 19	3 2	2 27	23 36	0 12	22 16
T 13	21 55	17 21	2 51	16 57	0 42	13 23	3 3	6 55	0 50	3 53	1 20	3 3	2 27	23 36	0 12	22 16
F 14	21 46	12 24	1 56	16 24	0 34	13 13	3 17	6 41	0 49	3 54	1 20	3 3	2 28	23 36	0 12	22 16
S 15	21 37	7 2	0 55	15 52	0 24	13 3	3 31	6 26	0 48	3 54	1 20	3 3	2 28	23 36	0 12	22 16
S 16	21 27	1 27	0s 7	15 19	0 15	12 54	3 45	6 11	0 47	3 55	1 21	3 3	2 28	23 36	0 12	22 16
M17	21 17	4s13	1 10	14 46	0 5	12 45	3 59	5 57	0 47	3 55	1 21	3 3	2 29	23 36	0 12	22 16
T 18	21 7	9 47	2 11	14 13	0s 5	12 37	4 13	5 42	0 46	3 56	1 21	3 3	2 29	23 36	0 12	22 16
W19	20 56	15 7	3 6	13 41	0 16	12 30	4 27	5 27	0 45	3 56	1 22	3 3	2 29	23 35	0 12	22 16
T 20	20 46	19 57	3 55	13 8	0 27	12 23	4 41	5 12	0 44	3 57	1 22	3 3	2 29	23 35	0 12	22 16
F 21	20 34	24 1	4 33	12 36	0 38	12 17	4 54	4 57	0 43	3 58	1 22	3 3	2 30	23 35	0 12	22 16
S 22	20 23	26 59	4 58	12 5	0 49	12 12	5 8	4 42	0 43	3 59	1 22	3 3	2 30	23 35	0 12	22 16
S 23	20 11	28 27	5 6	11 34	1 1	12 8	5 21	4 27	0 42	4 0	1 23	3 3	2 30	23 35	0 12	22 16
M24	19 58	28 7	4 57	11 4	1 13	12 4	5 34	4 12	0 41	4 1	1 23	3 3	2 30	23 35	0 12	22 16
T 25	19 46	25 52	4 28	10 34	1 25	12 0	5 46	3 57	0 40	4 2	1 23	3 3	2 31	23 35	0 12	22 16
W26	19 33	21 49	3 41	10 6	1 37	11 58	5 58	3 42	0 40	4 3	1 24	3 2	2 31	23 35	0 12	22 16
T 27	19 19	16 21	2 38	9 38	1 49	11 56	6 9	3 26	0 39	4 5	1 24	3 2	2 31	23 35	0 12	22 16
F 28	19 6	9 54	1 25	9 11	2 1	11 55	6 20	3 11	0 38	4 6	1 24	3 2	2 32	23 35	0 12	22 16
S 29	18 52	2 59	0 6	8 46	2 14	11 54	6 30	2 56	0 37	4 8	1 25	3 2	2 32	23 35	0 12	22 17
S 30	18 38	4n 0	1n12	8 22	2 26	11 54	6 40	2 41	0 37	4 9	1 25	3 1	2 32	23 35	0 12	22 17
M31	18n23	10n37	2n24	7n59	2s39	11n55	6s49	2n25	0n36	4s11	1s25	3n 1	2s32	23s35	0s12	22s17

Julian Day Number = 2385982.5, Delta T = 16.49 sec  
Ecliptic obliquity = 23°27'54, Nutation = 0°00'02, out-of-bounds declination in red  
Ayanamsha: Fagan/Bradley = 22°14'02, Lahiri = 21°21'02



# ASTRODIENST EPHEMERIS for the year 1820

## geocentric

AUGUST 1820

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	20 38 3	8♂34'35	5♂26	3♂20	6♂R29	25♂55	22♂R42	13♂R32	25♂R18	28♂R30	28♂R32	23♂R54	25♂11	12♂56	2♂R40	T 1
W 2	20 42 0	9°32'01	19° 1	3°43	5♂52	26°32	22♂39	13♂Y32	25♂16	28♂29	28♂32	23♂54	25° 8	13° 2	2♂Y39	W 2
T 3	20 45 56	10°29'29	2♂19	4° 0	5°16	27° 9	22°35	13°31	25°15	28°28	28°31	23°51	25° 5	13° 9	2°37	T 3
F 4	20 49 53	11°26'58	15°20	4°13	4°40	27°47	22°31	13°30	25°13	28°27	28°30	23°47	25° 2	13°16	2°36	F 4
S 5	20 53 49	12°24'28	28° 7	4°22	4° 5	28°24	22°26	13°29	25°12	28°26	28°29	23°42	24°59	13°22	2°34	S 5
S 6	20 57 46	13°22'00	10♂40	4♂R24	3°32	29° 2	22°22	13°28	25°11	28°25	28°29	23°35	24°56	13°29	2°33	S 6
M 7	21 1 42	14°19'33	23° 2	4°22	3° 0	29°39	22°17	13°27	25° 9	28°24	28°28	23°28	24°52	13°36	2°31	M 7
T 8	21 5 39	15°17'07	5♂14	4°14	2°29	0♂17	22°13	13°25	25° 8	28°23	28°27	23°21	24°49	13°42	2°29	T 8
W 9	21 9 35	16°14'42	17°16	4° 1	2° 0	0°54	22° 8	13°24	25° 7	28°22	28°26	23°16	24°46	13°49	2°28	W 9
T 10	21 13 32	17°12'18	29°11	3°43	1°33	1°32	22° 2	13°23	25° 5	28°21	28°25	23°12	24°43	13°56	2°26	T 10
F 11	21 17 29	18° 9'55	11♂1	3°19	1° 8	2°10	21°57	13°21	25° 4	28°20	28°25	23° 9	24°40	14° 2	2°24	F 11
S 12	21 21 25	19° 7'34	22°47	2°49	0°45	2°48	21°52	13°19	25° 3	28°19	28°24	23°D 8	24°37	14° 9	2°22	S 12
S 13	21 25 22	20° 5'13	4♂34	2°15	0°25	3°26	21°46	13°17	25° 2	28°18	28°23	23° 9	24°33	14°16	2°21	S 13
M14	21 29 18	21° 2'54	16°24	1°36	0° 6	4° 4	21°41	13°16	25° 1	28°18	28°22	23°10	24°30	14°22	2°19	M14
T 15	21 33 15	22° 0'36	28°22	0°53	29♂50	4°42	21°35	13°14	25° 0	28°17	28°21	23°12	24°27	14°29	2°17	T 15
W16	21 37 11	22°58'19	10♂32	0° 6	29°36	5°20	21°29	13°12	24°59	28°16	28°20	23°13	24°24	14°35	2°15	W16
T 17	21 41 8	23°56'03	22°59	29♂17	29°25	5°58	21°23	13° 9	24°58	28°15	28°19	23°R14	24°21	14°42	2°13	T 17
F 18	21 45 4	24°53'48	5♂48	28°25	29°15	6°36	21°16	13° 7	24°57	28°15	28°18	23°14	24°17	14°49	2°11	F 18
S 19	21 49 1	25°51'34	19° 2	27°33	29° 9	7°15	21°10	13° 5	24°57	28°14	28°17	23°12	24°14	14°55	2° 9	S 19
S 20	21 52 58	26°49'22	2♂44	26°40	29° 4	7°53	21° 3	13° 2	24°56	28°13	28°16	23° 9	24°11	15° 2	2° 7	S 20
M21	21 56 54	27°47'10	16°54	25°48	29°D 2	8°31	20°57	13° 0	24°55	28°13	28°15	23° 6	24° 8	15° 9	2° 5	M21
T 22	22 0 51	28°45'00	1♂29	24°58	29° 3	9°10	20°50	12°57	24°55	28°12	28°14	23° 2	24° 5	15°15	2° 2	T 22
W23	22 4 47	29°42'52	16°24	24°12	29° 6	9°49	20°43	12°55	24°54	28°11	28°13	22°59	24° 2	15°22	2° 0	W23
T 24	22 8 44	0♂40'44	1♂32	23°29	29°11	10°27	20°36	12°52	24°53	28°11	28°12	22°57	23°58	15°29	1°56	T 24
F 25	22 12 40	1°38'38	16°44	22°52	29°18	11° 6	20°29	12°49	24°53	28°10	28°11	22°D56	23°55	15°35	1°56	F 25
S 26	22 16 37	2°36'34	1♂48	22°21	29°27	11°45	20°22	12°46	24°53	28°10	28°10	22°56	23°52	15°42	1°53	S 26
S 27	22 20 33	3°34'31	16°38	21°56	29°39	12°24	20°15	12°43	24°52	28° 9	28° 9	22°57	23°49	15°49	1°51	S 27
M28	22 24 30	4°32'31	1♂ 8	21°39	29°52	13° 2	20° 7	12°40	24°52	28° 9	28° 8	22°59	23°46	15°55	1°49	M28
T 29	22 28 27	5°30'32	15°14	21°30	0♂ 8	13°41	20° 0	12°37	24°51	28° 9	28° 7	23° 0	23°43	16° 2	1°46	T 29
W30	22 32 23	6°28'35	28°55	21°D29	0°25	14°20	19°52	12°33	24°51	28° 8	28° 6	23° 0	23°39	16° 9	1°44	W30
T 31	22 36 20	7♂26'41	12♂12	21♂36	0♂45	15♂ 0	19♂45	12♂Y30	24♂51	28♂ 8	28♂ 5	23°R 1	23♂36	16♂15	1♂Y41	T 31

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
T 1	18n 8	16n34	3n26	7n38	2s51	11n56	6s57	2n10	0n35	4s12	1s25	3n 0	2s33	23s35	0s12	22s17
W 2	17 53	21 34	4 14	7 19	3 3	11 58	7 4	1 54	0 34	4 14	1 26	3 0	2 33	23 35	0 12	22 17
T 3	17 38	25 21	4 48	7 1	3 15	12 0	7 11	1 39	0 34	4 16	1 26	2 59	2 33	23 35	0 12	22 17
F 4	17 22	27 44	5 6	6 45	3 27	12 3	7 16	1 23	0 33	4 18	1 26	2 59	2 34	23 35	0 12	22 17
S 5	17 6	28 36	5 9	6 32	3 38	12 6	7 21	1 8	0 32	4 20	1 26	2 58	2 34	23 35	0 12	22 17
S 6	16 50	27 57	4 56	6 21	3 49	12 9	7 25	0 52	0 31	4 22	1 27	2 57	2 34	23 34	0 12	22 17
M 7	16 33	25 56	4 30	6 12	3 59	12 13	7 29	0 36	0 31	4 24	1 27	2 57	2 34	23 34	0 12	22 17
T 8	16 16	22 43	3 51	6 6	4 9	12 18	7 31	0 21	0 30	4 26	1 27	2 56	2 35	23 34	0 12	22 17
W 9	15 59	18 35	3 3	6 2	4 18	12 22	7 33	0 5	0 29	4 28	1 27	2 55	2 35	23 34	0 12	22 17
T 10	15 42	13 45	2 7	6 2	4 26	12 27	7 34	0s10	0 29	4 30	1 28	2 54	2 35	23 34	0 12	22 17
F 11	15 24	8 27	1 6	6 4	4 32	12 32	7 34	0 26	0 28	4 32	1 28	2 53	2 35	23 34	0 12	22 17
S 12	15 6	2 54	0 2	6 9	4 38	12 37	7 34	0 42	0 27	4 35	1 28	2 52	2 36	23 34	0 12	22 17
S 13	14 48	2s46	1s 2	6 18	4 42	12 43	7 33	0 58	0 26	4 37	1 28	2 52	2 36	23 34	0 12	22 17
M14	14 30	8 22	2 4	6 29	4 44	12 48	7 31	1 13	0 26	4 40	1 29	2 51	2 36	23 34	0 12	22 17
T 15	14 11	13 43	3 1	6 43	4 45	12 54	7 28	1 29	0 25	4 42	1 29	2 50	2 36	23 34	0 12	22 17
W16	13 52	18 39	3 51	7 0	4 45	12 59	7 25	1 45	0 24	4 45	1 29	2 49	2 37	23 34	0 12	22 17
T 17	13 33	22 55	4 32	7 20	4 42	13 5	7 22	2 1	0 23	4 47	1 29	2 47	2 37	23 34	0 12	22 17
F 18	13 14	26 13	5 0	7 42	4 37	13 11	7 18	2 17	0 23	4 50	1 30	2 46	2 37	23 34	0 12	22 17
S 19	12 55	28 13	5 13	8 6	4 31	13 17	7 13	2 32	0 22	4 53	1 30	2 45	2 37	23 34	0 12	22 17
S 20	12 35	28 36	5 10	8 31	4 23	13 22	7 9	2 48	0 21	4 56	1 30	2 44	2 38	23 34	0 12	22 17
M21	12 15	27 9	4 48	8 58	4 12	13 28	7 3	3 4	0 21	4 58	1 30	2 43	2 38	23 34	0 12	22 17
T 22	11 55	23 51	4 7	9 26	4 1	13 33	6 58	3 20	0 20	5 1	1 30	2 42	2 38	23 34	0 12	22 17
W23	11 35	18 55	3 8	9 54	3 47	13 39	6 52	3 36	0 19	5 4	1 30	2 40	2 38	23 34	0 12	22 17
T 24	11 15	12 44	1 55	10 22	3 32	13 44	6 45	3 52	0 19	5 7	1 31	2 39	2 38	23 34	0 12	22 17
F 25	10 54	5 46	0 34	10 49	3 16	13 49	6 39	4 7	0 18	5 10	1 31	2 38	2 39	23 34	0 12	22 17
S 26	10 33	1n28	0n49	11 15	2 59	13 53	6 32	4 23	0 17	5 13	1 31	2 37	2 39	23 34	0 12	22 17
S 27	10 12	8 30	2 7	11 40	2 41	13 58	6 25	4 39	0 16	5 16	1 31	2 35	2 39	23 34	0 12	22 17
M28	9 51	14 56	3 16	12 3	2 23	14 2	6 18	4 55	0 16	5 19	1 31	2 34	2 39	23 34	0 12	22 17
T 29	9 30	20 24	4 10	12 24	2 4	14 6	6 11	5 11	0 15	5 22	1 31	2 32	2 40	23 34	0 12	22 17
W30	9 9	24 38	4 49	12 42	1 45	14 10	6 3	5 26	0 14	5 25	1 32	2 31	2 40	23 34	0 12	22 17
T 31	8n47	27n25	5n11	12n57	1s27	14n13	5s56	5s42	0n14	5s28	1s32	2n29	2s40	23s34	0s12	22s18

Julian Day Number = 2386013.5, Delta T = 16.46 sec  
 Ecliptic obliquity = 23°27'54, Nutation = 0°00'02, out-of-bounds declination in red  
 Ayanamsha: Fagan/Bradley = 22°14'06, Lahiri = 21°21'07

# ASTRODIENST EPHEMERIS for the year 1820

## geocentric

SEPTEMBER 1820

00:00 UT

Day	Sid.t	☉	☽	♀	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	22 40 16	8 <sup>m</sup> 24'48	25 <sup>II</sup> 8	21 <sup>Ω</sup> 52	1 <sup>Ω</sup> 6	15 <sup>♂</sup> 39	19°R37	12°R27	24°R51	28°R 8	28°R 4	23°R 0	23 <sup>♂</sup> 33	16 <sup>m</sup> 22	1°R39	F 1
S 2	22 44 13	9°22'57	7 <sup>♂</sup> 45	22°17	1°29	16°18	19 <sup>♂</sup> 29	12°V23	24 <sup>♂</sup> 51	28 <sup>♂</sup> 7	28 <sup>♂</sup> 2	22 <sup>♂</sup> 59	23°30	16°28	1°V36	S 2
S 3	22 48 9	10°21'08	20° 7	22°49	1°54	16°57	19°22	12°20	24°D51	28° 7	28° 1	22°57	23°27	16°35	1°34	S 3
M 4	22 52 6	11°19'21	2 <sup>Ω</sup> 17	23°31	2°20	17°37	19°14	12°16	24°51	28° 7	28° 0	22°55	23°23	16°42	1°31	M 4
T 5	22 56 2	12°17'36	14°17	24°20	2°49	18°16	19° 6	12°12	24°51	28° 7	27°59	22°54	23°20	16°48	1°29	T 5
W 6	22 59 59	13°15'53	26°11	25°17	3°18	18°56	18°58	12° 9	24°51	28° 7	27°58	22°52	23°17	16°55	1°26	W 6
T 7	23 3 56	14°14'12	8 <sup>m</sup> 0	26°21	3°49	19°35	18°50	12° 5	24°51	28° 7	27°57	22°52	23°14	17° 2	1°24	T 7
F 8	23 7 52	15°12'32	19°47	27°31	4°22	20°15	18°42	12° 1	24°51	28° 6	27°56	22°D51	23°11	17° 8	1°21	F 8
S 9	23 11 49	16°10'55	1 <sup>♂</sup> 35	28°48	4°55	20°54	18°34	11°57	24°51	28° 6	27°54	22°51	23° 8	17°15	1°18	S 9
S 10	23 15 45	17° 9'19	13°24	0 <sup>m</sup> 11	5°31	21°34	18°26	11°53	24°52	28°D 6	27°53	22°52	23° 4	17°22	1°16	S 10
M11	23 19 42	18° 7'44	25°19	1°38	6° 7	22°14	18°18	11°49	24°52	28° 6	27°52	22°52	23° 1	17°28	1°13	M11
T 12	23 23 38	19° 6'12	7 <sup>m</sup> 22	3°11	6°45	22°54	18°10	11°45	24°53	28° 6	27°51	22°53	22°58	17°35	1°10	T 12
W13	23 27 35	20° 4'41	19°36	4°47	7°24	23°34	18° 2	11°41	24°53	28° 7	27°50	22°53	22°55	17°42	1° 8	W13
T 14	23 31 31	21° 3'12	2 <sup>♂</sup> 5	6°26	8° 4	24°14	17°54	11°36	24°54	28° 7	27°49	22°53	22°52	17°48	1° 5	T 14
F 15	23 35 28	22° 1'45	14°52	8° 8	8°45	24°54	17°46	11°32	24°54	28° 7	27°47	22°53	22°49	17°55	1° 2	F 15
S 16	23 39 24	23° 0'19	28° 0	9°53	9°27	25°34	17°38	11°28	24°55	28° 7	27°46	22°53	22°45	18° 1	0°59	S 16
S 17	23 43 21	23°58'55	11 <sup>♂</sup> 33	11°40	10°10	26°14	17°30	11°23	24°55	28° 7	27°45	22°53	22°42	18° 8	0°57	S 17
M18	23 47 18	24°57'33	25°32	13°28	10°54	26°55	17°23	11°19	24°56	28° 8	27°44	22°54	22°39	18°15	0°54	M18
T 19	23 51 14	25°56'12	9 <sup>♂</sup> 55	15°17	11°39	27°35	17°15	11°15	24°57	28° 8	27°43	22°54	22°36	18°21	0°51	T 19
W20	23 55 11	26°54'53	24°41	17° 6	12°25	28°15	17° 7	11°10	24°58	28° 8	27°41	22°54	22°33	18°28	0°48	W20
T 21	23 59 7	27°53'36	9 <sup>♂</sup> 44	18°57	13°12	28°56	16°59	11° 6	24°59	28° 9	27°40	22°54	22°29	18°35	0°46	T 21
F 22	0 3 4	28°52'21	24°55	20°47	14° 0	29°36	16°52	11° 1	24°59	28° 9	27°39	22°R55	22°26	18°41	0°43	F 22
S 23	0 7 0	29°51'07	10°V 5	22°38	14°49	0 <sup>m</sup> 17	16°44	10°57	25° 0	28° 9	27°38	22°54	22°23	18°48	0°40	S 23
S 24	0 10 57	0 <sup>♂</sup> 49'56	25° 6	24°28	15°38	0°58	16°37	10°52	25° 1	28°10	27°37	22°54	22°20	18°55	0°37	S 24
M25	0 14 53	1°48'46	9 <sup>♂</sup> 48	26°18	16°28	1°38	16°29	10°47	25° 3	28°10	27°35	22°53	22°17	19° 1	0°34	M25
T 26	0 18 50	2°47'40	24° 6	28° 8	17°19	2°19	16°22	10°43	25° 4	28°11	27°34	22°52	22°14	19° 8	0°32	T 26
W27	0 22 47	3°46'35	7 <sup>II</sup> 58	29°57	18°11	3° 0	16°14	10°38	25° 5	28°11	27°33	22°51	22°10	19°15	0°29	W27
T 28	0 26 43	4°45'33	21°22	1 <sup>♂</sup> 45	19° 3	3°41	16° 7	10°33	25° 6	28°12	27°32	22°50	22° 7	19°21	0°26	T 28
F 29	0 30 40	5°44'33	4 <sup>♂</sup> 20	3°33	19°56	4°22	16° 0	10°29	25° 7	28°13	27°31	22°D49	22° 4	19°28	0°23	F 29
S 30	0 34 36	6 <sup>♂</sup> 43'35	16 <sup>♂</sup> 56	5 <sup>♂</sup> 20	20 <sup>♂</sup> 50	5 <sup>m</sup> 3	15 <sup>♂</sup> 53	10°V24	25 <sup>♂</sup> 9	28 <sup>♂</sup> 13	27 <sup>♂</sup> 29	22 <sup>♂</sup> 50	22 <sup>♂</sup> 1	19 <sup>m</sup> 35	0°V21	S 30

Day	☉	☽		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
F 1	8n25	28n39	5n16	13n 9	1s 8	14n16	5s48	5s58	0n13	5s31	1s32	2n28	2s40	23s34	0s12	22s18	1n10	15s51	16s29	2s47	2s34	5n59	3n49	3n26			
S 2	8 4	28 20	5 6	13 18	0 50	14 19	5 40	6 14	0 12	5 34	1 32	2 26	2 40	23 34	0 12	22 18	1 10	15 52	16 29	2 47	2 35	5 55	3 48	3 27			
S 3	7 42	26 36	4 42	13 24	0 33	14 22	5 32	6 29	0 12	5 38	1 32	2 25	2 41	23 34	0 12	22 18	1 9	15 52	16 29	2 48	2 36	5 52	3 47	3 27			
M 4	7 20	23 39	4 5	13 26	0 17	14 24	5 24	6 45	0 11	5 41	1 32	2 23	2 41	23 34	0 12	22 18	1 9	15 53	16 29	2 49	2 38	5 49	3 46	3 27			
T 5	6 57	19 43	3 18	13 25	0 1	14 25	5 16	7 1	0 10	5 44	1 32	2 22	2 41	23 34	0 12	22 18	1 9	15 53	16 29	2 49	2 39	5 45	3 45	3 27			
W 6	6 35	15 2	2 23	13 20	0n14	14 27	5 8	7 16	0 10	5 47	1 32	2 20	2 41	23 34	0 12	22 18	1 9	15 54	16 30	2 50	2 40	5 42	3 44	3 27			
T 7	6 13	9 50	1 22	13 11	0 28	14 27	5 0	7 32	0 9	5 50	1 32	2 18	2 41	23 34	0 12	22 18	1 9	15 55	16 30	2 50	2 41	5 39	3 43	3 26			
F 8	5 50	4 19	0 17	12 59	0 41	14 28	4 52	7 48	0 8	5 54	1 33	2 17	2 41	23 34	0 12	22 18	1 9	15 55	16 30	2 50	2 43	5 35	3 42	3 26			
S 9	5 27	1s22	0s48	12 43	0 53	14 28	4 44	8 3	0 8	5 57	1 33	2 15	2 42	23 34	0 12	22 18	1 9	15 56	16 30	2 50	2 44	5 32	3 41	3 26			
S 10	5 5	7 1	1 52	12 24	1 3	14 28	4 35	8 19	0 7	6 0	1 33	2 13	2 42	23 34	0 12	22 18	1 9	15 56	16 30	2 50	2 45	5 28	3 39	3 26			
M11	4 42	12 27	2 51	12 2	1 13	14 27	4 27	8 34	0 6	6 3	1 33	2 12	2 42	23 34	0 12	22 18	1 9	15 57	16 30	2 50	2 46	5 25	3 38	3 26			
T 12	4 19	17 30	3 43	11 37	1 21	14 25	4 19	8 50	0 6	6 6	1 33	2 10	2 42	23 34	0 12	22 18	1 9	15 57	16 30	2 50	2 48	5 21	3 37	3 26			
W13	3 56	21 55	4 26	11 8	1 28	14 24	4 11	9 5	0 5	6 9	1 33	2 8	2 42	23 34	0 12	22 18	1 9	15 58	16 30	2 50	2 49	5 18	3 36	3 26			
T 14	3 33	25 27	4 57	10 37	1 34	14 22	4 3	9 20	0 4	6 13	1 33	2 6	2 42	23 34	0 12	22 18	1 9	15 58	16 30	2 50	2 50	5 15	3 35	3 26			
F 15	3 10	27 49	5 15	10 4	1 39	14 19	3 55	9 36	0 4	6 16	1 33	2 5	2 42	23 34	0 12	22 18	1 9	15 59	16 30	2 49	2 51	5 11	3 34	3 26			
S 16	2 47	28 44	5 17	9 28	1 44	14 16	3 47	9 51	0 3	6 19	1 33	2 3	2 42	23 34	0 12	22 18	1 9	15 59	16 30	2 49	2 53	5 8	3 33	3 26			
S 17	2 24	27 58	5 1	8 51	1 47	14 12	3 39	10 6	0 2	6 22	1 33	2 1	2 43	23 34	0 12	22 18	1 9	16 0	16 30	2 49	2 54	5 4	3 32	3 26			
M18	2 0	25 27	4 28	8 11	1 49	14 8	3 31	10 22	0 2	6 25	1 33	1 59	2 43	23 34	0 12	22 18	1 9	16 0	16 30	2 49	2 55	5 1	3 31	3 26			
T 19	1 37	21 16	3 37	7 30	1 50	14 4	3 23	10 37	0 1	6 28	1 33	1 57	2 43	23 34	0 12	22 18	1 9	16 1	16 30	2 49	2 56	4 58	3 29	3 26			
W20	1 14	15 40	2 31	6 48	1 51	13 59	3 15	10 52	0 0	6 31	1 33	1 55	2 43	23 34	0 12	22 18	1 9	16 1	16 30	2 49	2 58	4 54	3 28	3 26			
T 21	0 50	9 3	1 13	6 4	1 51	13 53	3 7	11 7	0s 0	6 34	1 33	1 54	2 43	23 34	0 12	22 19	1 9	16 2	16 30	2 49	2 59	4 51	3 27	3 26			
F 22	0 27	1 51	0n11	5 20	1 50	13 47	2 59	11 22	0 1	6 37	1 33	1 52	2 43	23 34	0 12	22 19	1 9	16 2	16 30	2 49	3 0	4 47	3 26	3 26			
S 23	0 4	5n27	1 34	4 35	1 48	13 41	2 51	11 37	0 2	6 40	1 33	1 50	2 43	23 34	0 12	22 19	1 9	16 3	16 31	2 49	3 1	4 44	3 25	3 26			
S 24	0s20	12 21	2 49	3 49	1 46	13 34	2 44	11 51	0 2	6 43	1 33	1 48	2 43	23 34	0 12	22 19	1 8	16 3	16 30	2 49	3 3	4 41	3 24	3 26			
M25	0 43	18 26	3 52	3 3	1 43	13 26	2 36	12 6	0 3	6 46	1 33	1 46	2 43	23 34	0 12	22 19	1 8	16 4	16 30	2 50	3 4	4 37	3 22	3 26			
T 26	1 7	23 19	4 38	2 17	1 40	13 18	2 29	12 21	0 4	6 49	1 33	1 44	2 43	23 34	0 12	22 19	1 8	16 4	16 30	2 50	3 5	4 34	3 21	3 26			
W27	1 30	26 42	5 7	1 30	1 37	13 9	2 21	12 36	0 4	6 51	1 33	1 42	2 43	23 34	0 12	22 19	1 8	16 5	16 30	2 51	3 7	4 30	3 20	3 26			
T 28	1 54	28 27	5 17	0 43	1 33	13 0	2 14	12 50	0 5	6 54	1 33	1 41	2 43	23 34	0 12	22 19	1 8	16 5	16 30	2 51	3 8	4 27	3 19	3 25			
F 29	2 17	28 34	5 11	0s 4	1 28	12 51	2 6	13 5	0 6	6 57	1 32	1 39	2 44	23 34	0 12	22 19	1 8	16 6	16 30	2 51	3 9	4 23	3 18	3 25			
S 30	2s40	27n11	4n50	0s51	1n23	12n41	1s59	13s19	0s 6	6s59	1s32	1n37	2s44	23s34	0s12	22s19	1n 8	16s 6	16s30	2s51	3s10	4n20	3n17	3n25			

# ASTRODIENST EPHEMERIS for the year 1820

## geocentric

OCTOBER 1820

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	0 38 33	7 <sup>h</sup> 42'40	29 <sup>h</sup> 13	7 <sup>h</sup> 47	21 <sup>h</sup> 44	5 <sup>h</sup> 44	15 <sup>h</sup> 46	10 <sup>h</sup> 19	25 <sup>h</sup> 10	28 <sup>h</sup> 14	27 <sup>h</sup> 28	22 <sup>h</sup> 50	21 <sup>h</sup> 58	19 <sup>h</sup> 41	0 <sup>h</sup> 18	S 1
M 2	0 42 29	8 <sup>h</sup> 41'47	11 <sup>h</sup> 17	8 <sup>h</sup> 52	22 <sup>h</sup> 39	6 <sup>h</sup> 25	15 <sup>h</sup> 40	10 <sup>h</sup> 15	25 <sup>h</sup> 11	28 <sup>h</sup> 15	27 <sup>h</sup> 27	22 <sup>h</sup> 52	21 <sup>h</sup> 55	19 <sup>h</sup> 48	0 <sup>h</sup> 15	M 2
T 3	0 46 26	9 <sup>h</sup> 40'56	23 <sup>h</sup> 11	10 <sup>h</sup> 37	23 <sup>h</sup> 35	7 <sup>h</sup> 7	15 <sup>h</sup> 33	10 <sup>h</sup> 10	25 <sup>h</sup> 13	28 <sup>h</sup> 15	27 <sup>h</sup> 26	22 <sup>h</sup> 53	21 <sup>h</sup> 51	19 <sup>h</sup> 54	0 <sup>h</sup> 12	T 3
W 4	0 50 22	10 <sup>h</sup> 40'07	5 <sup>h</sup> 11 0	12 <sup>h</sup> 21	24 <sup>h</sup> 31	7 <sup>h</sup> 48	15 <sup>h</sup> 26	10 <sup>h</sup> 5	25 <sup>h</sup> 14	28 <sup>h</sup> 16	27 <sup>h</sup> 25	22 <sup>h</sup> 54	21 <sup>h</sup> 48	20 <sup>h</sup> 1	0 <sup>h</sup> 10	W 4
T 5	0 54 19	11 <sup>h</sup> 39'20	16 <sup>h</sup> 47	14 <sup>h</sup> 4	25 <sup>h</sup> 27	8 <sup>h</sup> 29	15 <sup>h</sup> 20	10 <sup>h</sup> 0	25 <sup>h</sup> 16	28 <sup>h</sup> 17	27 <sup>h</sup> 24	22 <sup>h</sup> 55	21 <sup>h</sup> 45	20 <sup>h</sup> 8	0 <sup>h</sup> 7	T 5
F 6	0 58 16	12 <sup>h</sup> 38'36	28 <sup>h</sup> 34	15 <sup>h</sup> 47	26 <sup>h</sup> 25	9 <sup>h</sup> 11	15 <sup>h</sup> 14	9 <sup>h</sup> 56	25 <sup>h</sup> 18	28 <sup>h</sup> 18	27 <sup>h</sup> 22	22 <sup>h</sup> 55	21 <sup>h</sup> 42	20 <sup>h</sup> 14	0 <sup>h</sup> 4	F 6
S 7	1 2 12	13 <sup>h</sup> 37'54	10 <sup>h</sup> 26	17 <sup>h</sup> 28	27 <sup>h</sup> 22	9 <sup>h</sup> 52	15 <sup>h</sup> 8	9 <sup>h</sup> 51	25 <sup>h</sup> 19	28 <sup>h</sup> 19	27 <sup>h</sup> 21	22 <sup>h</sup> 54	21 <sup>h</sup> 39	20 <sup>h</sup> 21	0 <sup>h</sup> 2	S 7
S 8	1 6 9	14 <sup>h</sup> 37'14	22 <sup>h</sup> 23	19 <sup>h</sup> 9	28 <sup>h</sup> 20	10 <sup>h</sup> 34	15 <sup>h</sup> 2	9 <sup>h</sup> 46	25 <sup>h</sup> 21	28 <sup>h</sup> 20	27 <sup>h</sup> 20	22 <sup>h</sup> 52	21 <sup>h</sup> 35	20 <sup>h</sup> 28	29 <sup>h</sup> 59	S 8
M 9	1 10 5	15 <sup>h</sup> 36'36	4 <sup>h</sup> 28	20 <sup>h</sup> 49	29 <sup>h</sup> 19	11 <sup>h</sup> 15	14 <sup>h</sup> 56	9 <sup>h</sup> 42	25 <sup>h</sup> 23	28 <sup>h</sup> 21	27 <sup>h</sup> 19	22 <sup>h</sup> 49	21 <sup>h</sup> 32	20 <sup>h</sup> 34	29 <sup>h</sup> 56	M 9
T 10	1 14 2	16 <sup>h</sup> 35'59	16 <sup>h</sup> 42	22 <sup>h</sup> 29	0 <sup>h</sup> 18	11 <sup>h</sup> 57	14 <sup>h</sup> 50	9 <sup>h</sup> 37	25 <sup>h</sup> 24	28 <sup>h</sup> 22	27 <sup>h</sup> 18	22 <sup>h</sup> 45	21 <sup>h</sup> 29	20 <sup>h</sup> 41	29 <sup>h</sup> 54	T 10
W 11	1 17 58	17 <sup>h</sup> 35'25	29 <sup>h</sup> 7	24 <sup>h</sup> 7	1 <sup>h</sup> 18	12 <sup>h</sup> 39	14 <sup>h</sup> 45	9 <sup>h</sup> 32	25 <sup>h</sup> 26	28 <sup>h</sup> 23	27 <sup>h</sup> 17	22 <sup>h</sup> 41	21 <sup>h</sup> 26	20 <sup>h</sup> 48	29 <sup>h</sup> 51	W 11
T 12	1 21 55	18 <sup>h</sup> 34'53	11 <sup>h</sup> 24	25 <sup>h</sup> 45	2 <sup>h</sup> 18	13 <sup>h</sup> 21	14 <sup>h</sup> 39	9 <sup>h</sup> 28	25 <sup>h</sup> 28	28 <sup>h</sup> 24	27 <sup>h</sup> 16	22 <sup>h</sup> 37	21 <sup>h</sup> 23	20 <sup>h</sup> 54	29 <sup>h</sup> 48	T 12
F 13	1 25 51	19 <sup>h</sup> 34'23	24 <sup>h</sup> 37	27 <sup>h</sup> 23	3 <sup>h</sup> 18	14 <sup>h</sup> 2	14 <sup>h</sup> 34	9 <sup>h</sup> 23	25 <sup>h</sup> 30	28 <sup>h</sup> 25	27 <sup>h</sup> 15	22 <sup>h</sup> 34	21 <sup>h</sup> 20	21 <sup>h</sup> 1	29 <sup>h</sup> 46	F 13
S 14	1 29 48	20 <sup>h</sup> 33'54	7 <sup>h</sup> 346	28 <sup>h</sup> 59	4 <sup>h</sup> 19	14 <sup>h</sup> 44	14 <sup>h</sup> 29	9 <sup>h</sup> 18	25 <sup>h</sup> 32	28 <sup>h</sup> 26	27 <sup>h</sup> 13	22 <sup>h</sup> 32	21 <sup>h</sup> 16	21 <sup>h</sup> 8	29 <sup>h</sup> 43	S 14
S 15	1 33 45	21 <sup>h</sup> 33'27	21 <sup>h</sup> 13	0 <sup>h</sup> 35	5 <sup>h</sup> 20	15 <sup>h</sup> 26	14 <sup>h</sup> 24	9 <sup>h</sup> 14	25 <sup>h</sup> 34	28 <sup>h</sup> 27	27 <sup>h</sup> 12	22 <sup>h</sup> 31	21 <sup>h</sup> 13	21 <sup>h</sup> 14	29 <sup>h</sup> 41	S 15
M 16	1 37 41	22 <sup>h</sup> 33'02	5 <sup>h</sup> 0	2 <sup>h</sup> 11	6 <sup>h</sup> 22	16 <sup>h</sup> 9	14 <sup>h</sup> 19	9 <sup>h</sup> 9	25 <sup>h</sup> 36	28 <sup>h</sup> 28	27 <sup>h</sup> 11	22 <sup>h</sup> 32	21 <sup>h</sup> 10	21 <sup>h</sup> 21	29 <sup>h</sup> 38	M 16
T 17	1 41 38	23 <sup>h</sup> 32'39	19 <sup>h</sup> 8	3 <sup>h</sup> 45	7 <sup>h</sup> 24	16 <sup>h</sup> 51	14 <sup>h</sup> 15	9 <sup>h</sup> 5	25 <sup>h</sup> 38	28 <sup>h</sup> 29	27 <sup>h</sup> 10	22 <sup>h</sup> 33	21 <sup>h</sup> 7	21 <sup>h</sup> 27	29 <sup>h</sup> 36	T 17
W 18	1 45 34	24 <sup>h</sup> 32'17	3 <sup>h</sup> 35	5 <sup>h</sup> 19	8 <sup>h</sup> 26	17 <sup>h</sup> 33	14 <sup>h</sup> 10	9 <sup>h</sup> 0	25 <sup>h</sup> 40	28 <sup>h</sup> 30	27 <sup>h</sup> 9	22 <sup>h</sup> 35	21 <sup>h</sup> 4	21 <sup>h</sup> 34	29 <sup>h</sup> 33	W 18
T 19	1 49 31	25 <sup>h</sup> 31'57	18 <sup>h</sup> 18	6 <sup>h</sup> 53	9 <sup>h</sup> 29	18 <sup>h</sup> 15	14 <sup>h</sup> 6	8 <sup>h</sup> 56	25 <sup>h</sup> 43	28 <sup>h</sup> 32	27 <sup>h</sup> 8	22 <sup>h</sup> 36	21 <sup>h</sup> 0	21 <sup>h</sup> 41	29 <sup>h</sup> 31	T 19
F 20	1 53 27	26 <sup>h</sup> 31'38	3 <sup>h</sup> 13	8 <sup>h</sup> 26	10 <sup>h</sup> 32	18 <sup>h</sup> 57	14 <sup>h</sup> 2	8 <sup>h</sup> 52	25 <sup>h</sup> 45	28 <sup>h</sup> 33	27 <sup>h</sup> 7	22 <sup>h</sup> 35	20 <sup>h</sup> 57	21 <sup>h</sup> 47	29 <sup>h</sup> 29	F 20
S 21	1 57 24	27 <sup>h</sup> 31'22	18 <sup>h</sup> 13	9 <sup>h</sup> 58	11 <sup>h</sup> 35	19 <sup>h</sup> 40	13 <sup>h</sup> 59	8 <sup>h</sup> 47	25 <sup>h</sup> 47	28 <sup>h</sup> 34	27 <sup>h</sup> 6	22 <sup>h</sup> 33	20 <sup>h</sup> 54	21 <sup>h</sup> 54	29 <sup>h</sup> 26	S 21
S 22	2 1 20	28 <sup>h</sup> 31'07	3 <sup>h</sup> 8	11 <sup>h</sup> 30	12 <sup>h</sup> 39	20 <sup>h</sup> 22	13 <sup>h</sup> 55	8 <sup>h</sup> 43	25 <sup>h</sup> 49	28 <sup>h</sup> 35	27 <sup>h</sup> 5	22 <sup>h</sup> 30	20 <sup>h</sup> 51	22 <sup>h</sup> 1	29 <sup>h</sup> 24	S 22
M 23	2 5 17	29 <sup>h</sup> 30'55	17 <sup>h</sup> 52	13 <sup>h</sup> 1	13 <sup>h</sup> 43	21 <sup>h</sup> 5	13 <sup>h</sup> 51	8 <sup>h</sup> 39	25 <sup>h</sup> 52	28 <sup>h</sup> 37	27 <sup>h</sup> 4	22 <sup>h</sup> 24	20 <sup>h</sup> 48	22 <sup>h</sup> 7	29 <sup>h</sup> 22	M 23
T 24	2 9 14	0 <sup>h</sup> 30'44	2 <sup>h</sup> 11	14 <sup>h</sup> 31	14 <sup>h</sup> 47	21 <sup>h</sup> 47	13 <sup>h</sup> 48	8 <sup>h</sup> 34	25 <sup>h</sup> 54	28 <sup>h</sup> 38	27 <sup>h</sup> 3	22 <sup>h</sup> 18	20 <sup>h</sup> 45	22 <sup>h</sup> 14	29 <sup>h</sup> 19	T 24
W 25	2 13 10	1 <sup>h</sup> 30'36	16 <sup>h</sup> 13	16 <sup>h</sup> 2	15 <sup>h</sup> 52	22 <sup>h</sup> 30	13 <sup>h</sup> 45	8 <sup>h</sup> 30	25 <sup>h</sup> 57	28 <sup>h</sup> 40	27 <sup>h</sup> 2	22 <sup>h</sup> 12	20 <sup>h</sup> 41	22 <sup>h</sup> 21	29 <sup>h</sup> 17	W 25
T 26	2 17 7	2 <sup>h</sup> 30'30	29 <sup>h</sup> 44	17 <sup>h</sup> 31	16 <sup>h</sup> 57	23 <sup>h</sup> 13	13 <sup>h</sup> 42	8 <sup>h</sup> 26	25 <sup>h</sup> 59	28 <sup>h</sup> 41	27 <sup>h</sup> 1	22 <sup>h</sup> 7	20 <sup>h</sup> 38	22 <sup>h</sup> 27	29 <sup>h</sup> 15	T 26
F 27	2 21 3	3 <sup>h</sup> 30'26	12 <sup>h</sup> 47	19 <sup>h</sup> 0	18 <sup>h</sup> 2	23 <sup>h</sup> 55	13 <sup>h</sup> 40	8 <sup>h</sup> 22	26 <sup>h</sup> 2	28 <sup>h</sup> 43	27 <sup>h</sup> 0	22 <sup>h</sup> 3	20 <sup>h</sup> 35	22 <sup>h</sup> 34	29 <sup>h</sup> 13	F 27
S 28	2 25 0	4 <sup>h</sup> 30'25	25 <sup>h</sup> 27	20 <sup>h</sup> 28	19 <sup>h</sup> 8	24 <sup>h</sup> 38	13 <sup>h</sup> 37	8 <sup>h</sup> 18	26 <sup>h</sup> 4	28 <sup>h</sup> 44	26 <sup>h</sup> 59	22 <sup>h</sup> 1	20 <sup>h</sup> 32	22 <sup>h</sup> 41	29 <sup>h</sup> 10	S 28
S 29	2 28 56	5 <sup>h</sup> 30'25	7 <sup>h</sup> 45	21 <sup>h</sup> 56	20 <sup>h</sup> 13	25 <sup>h</sup> 21	13 <sup>h</sup> 35	8 <sup>h</sup> 14	26 <sup>h</sup> 7	28 <sup>h</sup> 46	26 <sup>h</sup> 59	22 <sup>h</sup> 0	20 <sup>h</sup> 29	22 <sup>h</sup> 47	29 <sup>h</sup> 8	S 29
M 30	2 32 53	6 <sup>h</sup> 30'28	19 <sup>h</sup> 48	23 <sup>h</sup> 24	21 <sup>h</sup> 19	26 <sup>h</sup> 4	13 <sup>h</sup> 33	8 <sup>h</sup> 10	26 <sup>h</sup> 9	28 <sup>h</sup> 47	26 <sup>h</sup> 58	22 <sup>h</sup> 1	20 <sup>h</sup> 26	22 <sup>h</sup> 54	29 <sup>h</sup> 6	M 30
T 31	2 36 49	7 <sup>h</sup> 30'32	1 <sup>h</sup> 41	24 <sup>h</sup> 50	22 <sup>h</sup> 26	26 <sup>h</sup> 47	13 <sup>h</sup> 31	8 <sup>h</sup> 7	26 <sup>h</sup> 12	28 <sup>h</sup> 49	26 <sup>h</sup> 57	22 <sup>h</sup> 3	20 <sup>h</sup> 22	23 <sup>h</sup> 0	29 <sup>h</sup> 4	T 31

Day	☉	☾		♀		♀		♂		♂		♄	♅		♆		♇		♁	♂	♂	♂	♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	decl	decl	decl	lat
S 1	3s 4	24n30	4n16	1s38	1n18	12n30	1s52	13s33	0s 7	7s 2	1s32	1n35	2s44	23s34	0s12	22s19	1n 8	16s 6	16s30	2s51	3s12	4n17	3n15	3n25
M 2	3 27	20 47	3 31	2 24	1 13	12 19	1 45	13 48	0 7	7 5	1 32	1 33	2 44	23 34	0 12	22 19	1 8	16 7	16 30	2 50	3 13	4 13	3 14	3 25
T 3	3 50	16 17	2 37	3 10	1 7	12 8	1 38	14 2	0 8	7 7	1 32	1 31	2 44	23 35	0 12	22 19	1 8	16 7	16 30	2 50	3 14	4 10	3 13	3 25
W 4	4 14	11 12	1 38	3 56	1 2	11 56	1 31	14 16	0 9	7 9	1 32	1 29	2 44	23 35	0 12	22 19	1 8	16 8	16 30	2 49	3 15	4 6	3 12	3 25
T 5	4 37	5 45	0 34	4 42	0 56	11 44	1 24	14 30	0 9	7 12	1 32	1 28	2 44	23 35	0 12	22 19	1 8	16 8	16 30	2 49	3 17	4 3	3 11	3 25
F 6	5 0	0 6	0s31	5 27	0 49	11 31	1 18	14 44	0 10	7 14	1 32	1 26	2 44	23 35	0 12	22 19	1 8	16 8	16 30	2 49	3 18	3 59	3 9	3 25
S 7	5 23	5s35	1 35	6 12	0 43	11 17	1 11	14 57	0 11	7 16	1 32	1 24	2 44	23 35	0 12	22 19	1 8	16 9	16 30	2 49	3 19	3 56	3 8	3 25
S 8	5 46	11 7	2 35	6 57	0 37	11 3	1 4	15 11	0 11	7 19	1 31	1 22	2 44	23 35	0 12	22 19	1 8	16 9	16 30	2 50	3 20	3 53	3 7	3 24
M 9	6 9	16 18	3 29	7 40	0 30	10 49	0 58	15 25	0 12	7 21	1 31	1 20	2 44	23 35	0 12	22 20	1 8	16 10	16 30	2 51	3 22	3 49	3 6	3 24
T 10	6 32	20 54	4 14	8 24	0 23	10 34	0 52	15 38	0 13	7 23	1 31	1 18	2 44	23 35	0 12	22 20	1 8	16 10	16 30	2 53	3 23	3 46	3 5	3 24
W 11	6 55	24 40	4 48	9 6	0 17	10 19	0 45	15 52	0 13	7 25	1 31	1 17	2 44	23 35	0 12	22 20	1 8	16 10	16 29	2 54	3 24	3 42	3 4	3 24
T 12	7 17	27 18	5 8	9 49	0 10	10 4	0 39	16 5	0 14	7 27	1 31	1 15	2 44	23 35	0 12	22 20	1 8	16 11	16 29	2 56	3 25	3 39	3 2	3 24
F 13	7 40	28 35	5 14	10 30	0 3	9 47	0 33	16 18	0 14	7 29	1 31	1 13	2 44	23 35	0 12	22 20	1 8	16 11	16 29	2 57	3 27	3 35	3 1	3 24
S 14	8 2	28 17	5 3	11 11	0s 4	9 31	0 27	16 31	0 15	7 30	1 31	1 11	2 43	23 35	0 12	22 20	1 8	16 11	16 29	2 58	3 28	3 32	3 0	3 24
S 15	8 25	26 19	4 35	11 51	0 11	9 14	0 21	16 44	0 16	7 32	1 30	1 9	2 43	23 35	0 12	22 20	1 8	16 12	16 29	2 58	3 29	3 32	2 59	3 23
M 16	8 47	22 47	3 52	12 31	0 17	8 57	0 16	16 57	0 16	7 34	1 30	1 8	2 43	23 35	0 12	22 20	1 7	16 12	16 29	2 58	3 30	3 25	2 58	3 23
T 17	9 9	17 51	2 53	13 10	0 24	8 39	0 10	17 9	0 17	7 35	1 30	1 6	2 43	23 35	0 12	22 20	1 7	16 12	16 29	2 57	3 32	3 22	2 57	3 23
W 18	9 31	11 48	1 42	13 48	0 31	8 21	0 4	17 22	0 17	7 37	1 30	1 4	2 43	23 35	0 12	22 20	1 7	16 12	16 28	2 57	3 33	3 18	2 56	3 23
T 19	9 53	4 59	0 23	14 25	0 38	8 2	0n 1	17 34	0 18	7 38	1 30	1 3	2 43	23 36	0 12	22 20	1 7	16 13	16 28	2 57	3 34	3 15	2 55	3 23
F 20	10 15	2n10	0n58	15 2	0 45	7 44	0 6	17 47	0 19	7 40	1 30	1 1	2 43	23 36	0 12	22 20	1 7	16 13	16 28	2 57	3 35	3 11	2 53	3 23
S 21	10 36	9 14	2 15	15 38	0 51	7 24	0 12	17 59	0 19	7 41	1 29	0 59	2 43	23 36	0 12	22 20	1 7	16 13	16 28	2 57	3 37	3 8	2 52	3 23
S 22	10 58	15 45	3 23	16 13	0 58	7 5	0 17	18 11	0 20	7 42	1 29	0 58	2 43	23 36	0 12	22 20	1 7	16 13	16 28	2 59	3 38	3 5	2 51	3 22
M 23	11 19	21 16	4 16	16 47	1 4	6 45	0 22	18 23	0 20	7 43	1 29	0 56	2 43	23 36	0 12	22 20	1 7	16 14	16 28	3 1	3 39	3 1	2 50	3 22
T 24	11 40	25 24	4 52	17 20	1 11	6 25	0 27	18 34	0 21	7 45	1 29	0 55	2 43	23 36	0 12	22 20	1 7	16 14	16 27	3 3	3 40	2 58	2 49	3 22
W 25	12 1	27 52	5 9	17 53	1 17	6 4	0 31	18 46	0 22	7 46	1 29	0 53	2 43	23 36	0 12	22 20	1 7	16 14	16 27	3 6	3 42	2 54	2 48	3 22
T 26	12 21	28 36	5 8	18 25	1 23	5 43	0 36	18 57	0 22	7 46	1 28	0 52	2 43	23 36	0 12	22 20	1 7	16 14	16 27	3 8	3 43	2 51	2 47	3 22
F 27	12 42	27 40	4 51	18 55	1 29	5 22	0 41	19 8	0 23	7 47	1 28	0 50	2 42	23 36	0 12	22 20	1 7	16 14	16 27	3 9	3 44	2 47	2 46	3 22
S 28	13 2	25 19	4 20	19 25	1 35	5 0	0 45	19 20	0 23	7 48	1 28	0 49	2 42	23 36	0 12	22 21	1 7	16 15	16 27	3 10	3 45	2 44	2 45	3 21
S 29	13 22	21 51	3 37	19 54	1 41	4 38	0 50	19 31	0 24	7 49	1 28	0 47	2 42	23 36	0 12	22 21	1 7	16 15	16 26	3 10	3 47	2 41	2 44	3 21
M 30	13 42	17 31	2 46	20 22	1 47	4 16	0 54	19 41	0 25	7 49	1 28	0 46	2 42	23 36	0 12	22 21	1 7	16 15	16 26	3 10	3 48	2 37	2 43	3 21
T 31	14s 2	12n34	1n48	20s49	1s52	3n54	0n58	19s52	0s25	7s50	1s27	0n44	2s42	23s36	0s12	22s21	1n 7	16s15	16s26	3s 9	3s49	2n34	2n42	3n21

ASTRODIENST EPHEMERIS for the year 1820  
geocentric

NOVEMBER 1820

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	2 40 46	8 <sup>m</sup> 30'39	13 <sup>m</sup> 28	26 <sup>m</sup> 16	23 <sup>m</sup> 32	27 <sup>m</sup> 30	13°R29	8°R 3	26 <sup>m</sup> 15	28 <sup>m</sup> 50	26°R56	22 <sup>m</sup> 4	20 <sup>m</sup> 19	23 <sup>m</sup> 7	29°R 2	W 1
T 2	2 44 43	9°30'48	25°15	27°42	24°39	28°13	13 <sup>m</sup> 28	7°Y59	26°17	28°52	26 <sup>m</sup> 55	22°R 4	20°16	23°14	29 <sup>m</sup> 0	T 2
F 3	2 48 39	10°30'59	7 <sup>m</sup> 5	29° 6	25°46	28°56	13°27	7°56	26°20	28°53	26°54	22° 3	20°13	23°20	28°58	F 3
S 4	2 52 36	11°31'12	19° 2	0 <sup>m</sup> 30	26°53	29°39	13°26	7°52	26°23	28°55	26°53	21°59	20°10	23°27	28°57	S 4
S 5	2 56 32	12°31'26	1 <sup>m</sup> 10	1°54	28° 1	0 <sup>m</sup> 23	13°25	7°49	26°26	28°57	26°53	21°53	20° 6	23°34	28°55	S 5
M 6	3 0 29	13°31'43	13°28	3°16	29° 9	1° 6	13°24	7°45	26°29	28°59	26°52	21°45	20° 3	23°40	28°53	M 6
T 7	3 4 25	14°32'01	25°59	4°37	0 <sup>m</sup> 16	1°50	13°24	7°42	26°32	29° 0	26°51	21°36	20° 0	23°47	28°51	T 7
W 8	3 8 22	15°32'21	8 <sup>m</sup> 43	5°57	1°25	2°33	13°23	7°39	26°34	29° 2	26°50	21°25	19°57	23°54	28°49	W 8
T 9	3 12 18	16°32'43	21°39	7°16	2°33	3°17	13°D23	7°36	26°37	29° 4	26°50	21°16	19°54	24° 0	28°48	T 9
F 10	3 16 15	17°33'06	4 <sup>m</sup> 47	8°34	3°41	4° 0	13°24	7°33	26°40	29° 6	26°49	21° 7	19°51	24° 7	28°46	F 10
S 11	3 20 12	18°33'31	18° 7	9°50	4°50	4°44	13°24	7°30	26°43	29° 7	26°48	21° 1	19°47	24°14	28°45	S 11
S 12	3 24 8	19°33'57	1 <sup>m</sup> 39	11° 5	5°59	5°28	13°25	7°27	26°47	29° 9	26°48	20°57	19°44	24°20	28°43	S 12
M13	3 28 5	20°34'24	15°23	12°18	7° 8	6°11	13°25	7°24	26°50	29°11	26°47	20°D55	19°41	24°27	28°42	M13
T 14	3 32 1	21°34'53	29°20	13°29	8°17	6°55	13°26	7°21	26°53	29°13	26°46	20°55	19°38	24°34	28°40	T 14
W15	3 35 58	22°35'23	13 <sup>m</sup> 29	14°37	9°26	7°39	13°28	7°19	26°56	29°15	26°46	20°R56	19°35	24°40	28°39	W15
T 16	3 39 54	23°35'54	27°50	15°43	10°36	8°23	13°29	7°16	26°59	29°17	26°45	20°56	19°32	24°47	28°38	T 16
F 17	3 43 51	24°36'26	12 <sup>m</sup> Y20	16°46	11°46	9° 7	13°31	7°14	27° 2	29°19	26°45	20°54	19°28	24°53	28°36	F 17
S 18	3 47 47	25°37'00	26°56	17°45	12°55	9°51	13°33	7°11	27° 5	29°21	26°44	20°50	19°25	25° 0	28°35	S 18
S 19	3 51 44	26°37'35	11 <sup>m</sup> 831	18°41	14° 5	10°35	13°35	7° 9	27° 9	29°23	26°44	20°43	19°22	25° 7	28°34	S 19
M20	3 55 41	27°38'11	25°58	19°32	15°16	11°19	13°37	7° 7	27°12	29°25	26°43	20°33	19°19	25°13	28°33	M20
T 21	3 59 37	28°38'49	10 <sup>m</sup> II12	20°18	16°26	12° 4	13°39	7° 5	27°15	29°27	26°43	20°22	19°16	25°20	28°32	T 21
W22	4 3 34	29°39'29	24° 6	20°59	17°36	12°48	13°42	7° 3	27°18	29°29	26°42	20°11	19°12	25°27	28°31	W22
T 23	4 7 30	0 <sup>m</sup> 40'10	7 <sup>m</sup> 236	21°33	18°47	13°32	13°45	7° 1	27°22	29°31	26°42	20° 0	19° 9	25°33	28°30	T 23
F 24	4 11 27	1°40'52	20°42	22° 1	19°58	14°17	13°48	6°59	27°25	29°33	26°41	19°51	19° 6	25°40	28°29	F 24
S 25	4 15 23	2°41'36	3 <sup>m</sup> Q23	22°21	21° 8	15° 1	13°51	6°58	27°28	29°35	26°41	19°45	19° 3	25°47	28°28	S 25
S 26	4 19 20	3°42'21	15°44	22°32	22°19	15°45	13°54	6°56	27°32	29°37	26°41	19°41	19° 0	25°53	28°27	S 26
M27	4 23 16	4°43'08	27°49	22°R33	23°30	16°30	13°58	6°55	27°35	29°39	26°40	19°40	18°57	26° 0	28°27	M27
T 28	4 27 13	5°43'57	9 <sup>m</sup> 42	22°25	24°42	17°15	14° 2	6°53	27°39	29°41	26°40	19°D40	18°53	26° 7	28°26	T 28
W29	4 31 10	6°44'46	21°30	22° 6	25°53	17°59	14° 6	6°52	27°42	29°43	26°40	19°R40	18°50	26°13	28°25	W29
T 30	4 35 6	7 <sup>m</sup> 45'38	3 <sup>m</sup> Q18	21 <sup>m</sup> 36	27 <sup>m</sup> 4	18 <sup>m</sup> 44	14 <sup>m</sup> 10	6°Y51	27 <sup>m</sup> 45	29 <sup>m</sup> 45	26 <sup>m</sup> 40	19 <sup>m</sup> 39	18 <sup>m</sup> 47	26 <sup>m</sup> 20	28 <sup>m</sup> 25	T 30

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
W 1	14s21	7n13	0n46	21s15	1s57	3n31	1n 2	20s 2	0s26	7s50	1s27	0n43	2s42	23s37	0s12	22s21	1n 7	16s15	16s26	3s 9	3s50	2n30	2n41	3n21			
T 2	14 41	1 38	0s17	21 39	2 2	3 8	1 6	20 13	0 26	7 51	1 27	0 42	2 42	23 37	0 12	22 21	1 7	16 15	16 25	3 9	3 52	2 27	2 40	3 20			
F 3	15 0	4s 2	1 20	22 3	2 7	2 45	1 9	20 23	0 27	7 51	1 27	0 41	2 41	23 37	0 12	22 21	1 7	16 15	16 25	3 9	3 53	2 23	2 39	3 20			
S 4	15 18	9 37	2 20	22 25	2 12	2 21	1 13	20 33	0 27	7 51	1 26	0 39	2 41	23 37	0 12	22 21	1 7	16 15	16 25	3 11	3 54	2 20	2 38	3 20			
S 5	15 37	14 56	3 15	22 47	2 16	1 58	1 17	20 43	0 28	7 51	1 26	0 38	2 41	23 37	0 12	22 21	1 7	16 16	16 25	3 13	3 55	2 16	2 37	3 20			
M 6	15 55	19 43	4 1	23 7	2 20	1 34	1 20	20 52	0 29	7 51	1 26	0 37	2 41	23 37	0 12	22 21	1 7	16 16	16 24	3 16	3 57	2 13	2 36	3 20			
T 7	16 13	23 44	4 36	23 26	2 23	1 10	1 23	21 1	0 29	7 51	1 26	0 36	2 41	23 37	0 12	22 21	1 7	16 16	16 24	3 20	3 58	2 10	2 35	3 19			
W 8	16 31	26 41	4 58	23 44	2 27	0 46	1 27	21 11	0 30	7 51	1 25	0 35	2 41	23 37	0 12	22 21	1 7	16 16	16 24	3 24	3 59	2 6	2 35	3 19			
T 9	16 48	28 17	5 5	24 0	2 30	0 21	1 30	21 20	0 30	7 51	1 25	0 34	2 40	23 37	0 12	22 21	1 7	16 16	16 24	3 28	4 0	2 3	2 34	3 19			
F 10	17 5	28 19	4 57	24 15	2 32	0s 3	1 33	21 29	0 31	7 51	1 25	0 33	2 40	23 37	0 12	22 21	1 7	16 16	16 23	3 31	4 2	1 59	2 33	3 19			
S 11	17 22	26 44	4 32	24 29	2 34	0 28	1 35	21 37	0 31	7 50	1 25	0 32	2 40	23 37	0 12	22 21	1 7	16 16	16 23	3 34	4 3	1 56	2 32	3 19			
S 12	17 39	23 35	3 52	24 42	2 36	0 53	1 38	21 46	0 32	7 50	1 25	0 31	2 40	23 37	0 12	22 21	1 6	16 16	16 23	3 35	4 4	1 52	2 31	3 18			
M13	17 55	19 5	2 58	24 53	2 37	1 17	1 41	21 54	0 32	7 49	1 24	0 30	2 40	23 37	0 12	22 21	1 6	16 16	16 23	3 36	4 5	1 49	2 31	3 18			
T 14	18 11	13 29	1 53	25 2	2 37	1 42	1 43	22 2	0 33	7 49	1 24	0 29	2 39	23 38	0 12	22 21	1 6	16 16	16 22	3 36	4 7	1 45	2 30	3 18			
W15	18 26	7 7	0 40	25 11	2 37	2 8	1 46	22 10	0 34	7 48	1 24	0 28	2 39	23 38	0 12	22 21	1 6	16 16	16 22	3 36	4 8	1 42	2 29	3 18			
T 16	18 42	0 18	0n37	25 17	2 36	2 33	1 48	22 17	0 34	7 47	1 24	0 27	2 39	23 38	0 12	22 21	1 6	16 16	16 22	3 36	4 9	1 39	2 28	3 17			
F 17	18 56	6n35	1 52	25 22	2 35	2 58	1 50	22 25	0 35	7 46	1 23	0 26	2 39	23 38	0 12	22 21	1 6	16 16	16 21	3 37	4 10	1 35	2 28	3 17			
S 18	19 11	13 10	2 59	25 26	2 32	3 23	1 52	22 32	0 35	7 45	1 23	0 26	2 39	23 38	0 12	22 22	1 6	16 16	16 21	3 38	4 12	1 32	2 27	3 17			
S 19	19 25	19 2	3 55	25 28	2 29	3 49	1 54	22 39	0 36	7 44	1 23	0 25	2 38	23 38	0 12	22 22	1 6	16 15	16 21	3 41	4 13	1 28	2 26	3 17			
M20	19 39	23 43	4 35	25 28	2 25	4 14	1 56	22 46	0 36	7 43	1 23	0 24	2 38	23 38	0 12	22 22	1 6	16 15	16 20	3 45	4 14	1 25	2 26	3 17			
T 21	19 53	26 55	4 58	25 27	2 20	4 40	1 57	22 52	0 37	7 42	1 22	0 24	2 38	23 38	0 12	22 22	1 6	16 15	16 20	3 49	4 15	1 21	2 25	3 16			
W22	20 6	28 21	5 2	25 23	2 14	5 5	1 59	22 58	0 37	7 41	1 22	0 23	2 38	23 38	0 12	22 22	1 6	16 15	16 20	3 54	4 17	1 18	2 24	3 16			
T 23	20 19	28 3	4 48	25 18	2 7	5 31	2 0	23 4	0 38	7 39	1 22	0 23	2 38	23 38	0 12	22 22	1 6	16 15	16 19	3 58	4 18	1 14	2 24	3 16			
F 24	20 31	26 9	4 20	25 12	1 58	5 56	2 2	23 10	0 38	7 38	1 22	0 22	2 37	23 38	0 12	22 22	1 6	16 15	16 19	4 1	4 19	1 11	2 23	3 16			
S 25	20 43	22 59	3 40	25 3	1 49	6 21	2 3	23 16	0 39	7 37	1 21	0 22	2 37	23 38	0 12	22 22	1 6	16 15	16 19	4 4	4 20	1 8	2 23	3 15			
S 26	20 55	18 50	2 50	24 52	1 37	6 47	2 4	23 21	0 39	7 35	1 21	0 21	2 37	23 38	0 12	22 22	1 6	16 15	16 19	4 5	4 22	1 4	2 22	3 15			
M27	21 6	14 1	1 53	24 40	1 25	7 12	2 5	23 26	0 40	7 33	1 21	0 21	2 37	23 38	0 12	22 22	1 6	16 14	16 18	4 6	4 23	1 1	2 22	3 15			
T 28	21 17	8 45	0 53	24 25	1 10	7 37	2 6	23 31	0 40	7 32	1 21	0 21	2 36	23 39	0 12	22 22	1 6	16 14	16 18	4 6	4 24	0 57	2 21	3 15			
W29	21 28	3 14	0s10	24 8	0 55	8 2	2 7	23 36	0 41	7 30	1 20	0 20	2 36	23 39	0 12	22 22	1 6	16 14	16 18	4 6	4 25	0 54	2 21	3 14			
T 30	21s38	2s24	1s12	23s50	0s38	8s28	2n 7	23s40	0s41	7s28	1s20	0n20	2s36	23s39	0s12	22s22	1n 6	16s14	16s17	4s 6	4s27	0n50	2n20	3n14			

ASTRODIENST EPHEMERIS for the year 1820  
geocentric

DECEMBER 1820

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	4 39 3	8♂46'30	15♂10	20♂R54	28♂16	19♂29	14♂15	6♂R50	27♂49	29♂47	26♂R39	19♂R36	18♂44	26♂26	28♂R24	F 1
S 2	4 42 59	9♂47'24	27°13	20♂2	29°28	20°14	14°19	6♂49	27°52	29°50	26♂39	19♂31	18°41	26°33	28♂24	S 2
S 3	4 46 56	10♂48'19	9♂29	19° 0	0♂39	20°58	14°24	6°48	27°56	29°52	26°39	19°23	18°38	26°40	28°23	S 3
M 4	4 50 52	11♂49'16	22° 0	17°50	1°51	21°43	14°29	6°48	27°59	29°54	26°39	19°12	18°34	26°46	28°23	M 4
T 5	4 54 49	12♂50'14	4♂49	16°32	3° 3	22°28	14°34	6°47	28° 3	29°56	26°39	18°59	18°31	26°53	28°23	T 5
W 6	4 58 45	13♂51'12	17°53	15°11	4°15	23°13	14°39	6°47	28° 6	29°58	26°38	18°45	18°28	27° 0	28°22	W 6
T 7	5 2 42	14♂52'12	1♂13	13°48	5°27	23°59	14°45	6°46	28°10	0♂ 1	26°38	18°32	18°25	27° 6	28°22	T 7
F 8	5 6 39	15♂53'12	14°46	12°26	6°40	24°44	14°50	6°46	28°14	0° 3	26°38	18°20	18°22	27°13	28°22	F 8
S 9	5 10 35	16♂54'14	28°28	11° 8	7°52	25°29	14°56	6°46	28°17	0° 5	26°38	18°11	18°18	27°20	28°22	S 9
S 10	5 14 32	17♂55'15	12♂17	9°57	9° 4	26°14	15° 2	6°D46	28°21	0° 7	26°38	18° 5	18°15	27°26	28°D22	S 10
M 11	5 18 28	18♂56'18	26°12	8°54	10°17	26°59	15° 8	6°46	28°24	0° 9	26°D38	18° 2	18°12	27°33	28°22	M 11
T 12	5 22 25	19♂57'20	10♂12	8° 1	11°29	27°45	15°15	6°46	28°28	0°12	26°38	18° 1	18° 9	27°40	28°22	T 12
W 13	5 26 21	20♂58'23	24°15	7°19	12°42	28°30	15°21	6°46	28°31	0°14	26°38	18° 1	18° 6	27°46	28°22	W 13
T 14	5 30 18	21♂59'27	8♂21	6°48	13°54	29°16	15°28	6°47	28°35	0°16	26°38	18° 0	18° 3	27°53	28°23	T 14
F 15	5 34 15	23° 0'31	22°30	6°27	15° 7	0♂ 1	15°35	6°47	28°39	0°18	26°38	17°58	17°59	28° 0	28°23	F 15
S 16	5 38 11	24° 1'35	6♂39	6°D18	16°20	0°47	15°42	6°48	28°42	0°21	26°38	17°53	17°56	28° 6	28°23	S 16
S 17	5 42 8	25° 2'39	20°46	6°18	17°33	1°32	15°49	6°49	28°46	0°23	26°39	17°45	17°53	28°13	28°24	S 17
M 18	5 46 4	26° 3'44	4♂48	6°29	18°46	2°18	15°57	6°49	28°50	0°25	26°39	17°34	17°50	28°19	28°24	M 18
T 19	5 50 1	27° 4'50	18°38	6°47	19°59	3° 3	16° 4	6°50	28°53	0°27	26°39	17°22	17°47	28°26	28°25	T 19
W 20	5 53 57	28° 5'56	2♂14	7°14	21°12	3°49	16°12	6°51	28°57	0°30	26°39	17° 9	17°44	28°33	28°25	W 20
T 21	5 57 54	29° 7'02	15°32	7°48	22°25	4°35	16°20	6°53	29° 0	0°32	26°39	16°56	17°40	28°39	28°26	T 21
F 22	6 1 50	0♂ 8'09	28°30	8°28	23°38	5°21	16°28	6°54	29° 4	0°34	26°40	16°46	17°37	28°46	28°26	F 22
S 23	6 5 47	1° 9'16	11♂9	9°13	24°51	6° 6	16°36	6°55	29° 8	0°37	26°40	16°38	17°34	28°53	28°27	S 23
S 24	6 9 44	2°10'24	23°29	10° 4	26° 5	6°52	16°44	6°57	29°11	0°39	26°40	16°33	17°31	28°59	28°28	S 24
M 25	6 13 40	3°11'32	5♂34	10°59	27°18	7°38	16°52	6°58	29°15	0°41	26°41	16°31	17°28	29° 6	28°29	M 25
T 26	6 17 37	4°12'41	17°28	11°58	28°31	8°24	17° 1	7° 0	29°18	0°43	26°41	16°D30	17°24	29°13	28°30	T 26
W 27	6 21 33	5°13'50	29°16	13° 1	29°45	9°10	17°10	7° 2	29°22	0°46	26°41	16°31	17°21	29°19	28°31	W 27
T 28	6 25 30	6°15'00	11♂4	14° 6	0♂58	9°56	17°18	7° 4	29°26	0°48	26°42	16°R31	17°18	29°26	28°32	T 28
F 29	6 29 26	7°16'10	22°58	15°14	2°12	10°42	17°27	7° 6	29°29	0°50	26°42	16°29	17°15	29°33	28°33	F 29
S 30	6 33 23	8°17'20	5♂2	16°25	3°26	11°28	17°37	7° 8	29°33	0°52	26°43	16°26	17°12	29°39	28°34	S 30
S 31	6 37 19	9♂18'31	17♂21	17♂38	4♂39	12♂15	17♂46	7♂10	29♂36	0♂55	26♂43	16♂20	17♂ 9	29♂46	28♂35	S 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl
F 1	21s47	8s 0	2s11	23s29	0s20	8s53	2n 8	23s44	0s42	7s26	1s20	0n20	2s36	23s39	0s12	22s22
S 2	21 57	13 22	3 5	23 6	0 0	9 17	2 8	23 48	0 42	7 24	1 20	0 20	2 35	23 39	0 12	22 22
S 3	22 5	18 19	3 51	22 41	0n20	9 42	2 9	23 52	0 43	7 22	1 19	0 20	2 35	23 39	0 12	22 22
M 4	22 14	22 35	4 27	22 15	0 40	10 7	2 9	23 55	0 43	7 20	1 19	0 20	2 35	23 39	0 12	22 22
T 5	22 22	25 53	4 51	21 47	1 0	10 31	2 9	23 59	0 44	7 18	1 19	0 20	2 35	23 39	0 12	22 22
W 6	22 29	27 53	5 0	21 19	1 20	10 55	2 9	24 2	0 44	7 16	1 19	0 20	2 34	23 39	0 12	22 22
T 7	22 36	28 20	4 53	20 51	1 38	11 19	2 9	24 4	0 45	7 13	1 19	0 20	2 34	23 39	0 12	22 22
F 8	22 43	27 6	4 29	20 24	1 55	11 43	2 9	24 7	0 45	7 11	1 18	0 20	2 34	23 39	0 12	22 22
S 9	22 49	24 14	3 50	19 59	2 11	12 7	2 9	24 9	0 46	7 8	1 18	0 20	2 34	23 39	0 12	22 22
S 10	22 55	19 57	2 57	19 36	2 24	12 30	2 9	24 11	0 46	7 6	1 18	0 20	2 33	23 39	0 12	22 22
M 11	23 0	14 34	1 53	19 16	2 34	12 53	2 8	24 12	0 46	7 3	1 18	0 21	2 33	23 39	0 12	22 22
T 12	23 5	8 23	0 41	19 0	2 42	13 16	2 8	24 14	0 47	7 1	1 17	0 21	2 33	23 39	0 12	22 22
W 13	23 9	1 47	0n33	18 47	2 48	13 39	2 7	24 15	0 47	6 58	1 17	0 21	2 33	23 39	0 12	22 22
T 14	23 13	4n56	1 45	18 38	2 52	14 1	2 6	24 16	0 48	6 55	1 17	0 22	2 32	23 39	0 12	22 22
F 15	23 17	11 25	2 51	18 33	2 54	14 23	2 5	24 16	0 48	6 52	1 17	0 22	2 32	23 40	0 12	22 22
S 16	23 20	17 19	3 47	18 31	2 54	14 45	2 5	24 16	0 49	6 49	1 17	0 23	2 32	23 40	0 12	22 22
S 17	23 22	22 16	4 28	18 33	2 53	15 6	2 4	24 16	0 49	6 46	1 16	0 23	2 32	23 40	0 12	22 22
M 18	23 24	25 55	4 53	18 37	2 50	15 28	2 3	24 16	0 49	6 43	1 16	0 24	2 31	23 40	0 12	22 22
T 19	23 26	27 58	5 0	18 44	2 46	15 48	2 1	24 16	0 50	6 40	1 16	0 24	2 31	23 40	0 12	22 22
W 20	23 27	28 17	4 50	18 53	2 41	16 9	2 0	24 15	0 50	6 37	1 16	0 25	2 31	23 40	0 12	22 22
T 21	23 28	26 56	4 24	19 4	2 36	16 29	1 59	24 14	0 51	6 34	1 15	0 26	2 31	23 40	0 12	22 22
F 22	23 28	24 9	3 45	19 17	2 30	16 48	1 58	24 12	0 51	6 30	1 15	0 26	2 30	23 40	0 12	22 22
S 23	23 28	20 16	2 56	19 30	2 23	17 7	1 56	24 11	0 52	6 27	1 15	0 27	2 30	23 40	0 12	22 22
S 24	23 27	15 35	1 59	19 45	2 15	17 26	1 55	24 9	0 52	6 24	1 15	0 28	2 30	23 40	0 12	22 22
M 25	23 26	10 23	0 58	20 0	2 8	17 45	1 53	24 7	0 52	6 20	1 15	0 29	2 30	23 40	0 12	22 22
T 26	23 24	4 53	0s 5	20 16	2 0	18 3	1 51	24 4	0 53	6 17	1 14	0 30	2 29	23 40	0 12	22 22
W 27	23 22	0s44	1 7	20 32	1 52	18 20	1 50	24 2	0 53	6 13	1 14	0 31	2 29	23 40	0 12	22 22
T 28	23 19	6 20	2 7	20 48	1 43	18 37	1 48	23 59	0 53	6 9	1 14	0 32	2 29	23 40	0 12	22 22
F 29	23 16	11 44	3 1	21 5	1 35	18 54	1 46	23 56	0 54	6 6	1 14	0 33	2 29	23 40	0 12	22 22
S 30	23 12	16 48	3 48	21 20	1 26	19 10	1 44	23 52	0 54	6 2	1 14	0 34	2 28	23 40	0 12	22 22
S 31	23s 8	21s17	4s26	21s36	1n18	19s25	1n42	23s48	0s55	5s58	1s14	0n35	2s28	23s40	0s12	22s22

Julian Day Number = 2386135.5, Delta T = 16.37 sec  
Ecliptic obliquity = 23°27'54, Nutation = 0°00'02, out-of-bounds declination in red  
Ayanamsha: Fagan/Bradley = 22°14'23, Lahiri = 21°21'23