



# Astrodienst Ephemeris Tables for the year 1720

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 1720

## geocentric

JANUARY 1720

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	6 39 8	9°50'22	14°0'0	28°15	24°15.50	8°19	4°58	22°11.5	14°58	17°R55	19°R 6	19°R 4	20°R34	0°8 7	13°11	M 1
T 2	6 43 5	10°51'32	27°50	28°38	25°39	8°55	5° 2	22°10	14°59	17°R54	19°R 5	19° 6	20°30	0°14	13° 3	T 2
W 3	6 47 1	11°52'42	11°51	28°51	26°29	9°31	5° 5	22°16	15° 0	17°53	19° 5	19°R 6	20°27	0°21	13° 6	W 3
T 4	6 50 58	12°53'52	26° 1	28°R53	27°20	10° 7	5° 8	22°21	15° 0	17°52	19° 5	19° 6	20°24	0°28	13° 8	T 4
F 5	6 54 54	13°55'02	10°11.19	28°43	28°12	10°44	5°11	22°27	15° 1	17°51	19° 4	19° 3	20°21	0°34	13°10	F 5
S 6	6 58 51	14°56'12	24°43	28°22	29° 5	11°20	5°14	22°32	15° 2	17°50	19° 4	18°59	20°18	0°41	13°13	S 6
S 7	7 2 47	15°57'22	9°7 7	27°49	29°58	11°57	5°17	22°37	15° 3	17°50	19° 3	18°54	20°15	0°48	13°15	S 7
M 8	7 6 44	16°58'33	23°27	27° 4	0°52	12°34	5°19	22°42	15° 4	17°49	19° 3	18°49	20°11	0°54	13°17	M 8
T 9	7 10 40	17°59'43	7°37	26° 9	1°46	13°10	5°22	22°47	15° 4	17°48	19° 2	18°44	20° 8	1° 1	13°20	T 9
W10	7 14 37	19° 0'53	21°32	25° 5	2°41	13°47	5°24	22°52	15° 5	17°48	19° 2	18°41	20° 5	1° 8	13°22	W10
T 11	7 18 34	20° 2'02	5°8 8	23°54	3°37	14°24	5°26	22°57	15° 5	17°47	19° 1	18°38	20° 2	1°15	13°25	T 11
F 12	7 22 30	21° 3'11	18°23	22°39	4°34	15° 1	5°28	23° 2	15° 6	17°47	19° 0	18°D38	19°59	1°21	13°28	F 12
S 13	7 26 27	22° 4'19	1°18	21°20	5°30	15°38	5°29	23° 7	15° 6	17°46	19° 0	18°38	19°55	1°28	13°30	S 13
S 14	7 30 23	23° 5'26	13°52	20° 2	6°28	16°15	5°31	23°12	15° 7	17°45	18°59	18°40	19°52	1°35	13°33	S 14
M15	7 34 20	24° 6'33	26° 9	18°46	7°26	16°52	5°32	23°16	15° 7	17°45	18°58	18°41	19°49	1°41	13°36	M15
T 16	7 38 16	25° 7'39	8°14	17°34	8°24	17°29	5°33	23°21	15° 7	17°45	18°57	18°43	19°46	1°48	13°38	T 16
W17	7 42 13	26° 8'43	20° 9	16°29	9°23	18° 7	5°33	23°25	15° 7	17°44	18°57	18°44	19°43	1°55	13°41	W17
T 18	7 46 9	27° 9'47	2°8 1	15°31	10°22	18°44	5°34	23°30	15° 8	17°44	18°56	18°R44	19°40	2° 2	13°44	T 18
F 19	7 50 6	28°10'50	13°55	14°41	11°22	19°21	5°34	23°34	15° 8	17°43	18°55	18°43	19°36	2° 8	13°47	F 19
S 20	7 54 3	29°11'52	25°53	14° 0	12°22	19°58	5°35	23°38	15°R 8	17°43	18°54	18°41	19°33	2°15	13°50	S 20
S 21	7 57 59	0°52'53	8°11.2	13°29	13°23	20°36	5°R35	23°43	15° 8	17°43	18°53	18°39	19°30	2°22	13°53	S 21
M22	8 1 56	1°13'54	20°25	13° 7	14°24	21°13	5°35	23°47	15° 8	17°43	18°52	18°36	19°27	2°28	13°56	M22
T 23	8 5 52	2°14'53	3°33.3	12°53	15°25	21°51	5°34	23°51	15° 7	17°42	18°51	18°33	19°24	2°35	13°59	T 23
W24	8 9 49	3°15'51	15°59	12°D48	16°27	22°28	5°34	23°55	15° 7	17°42	18°50	18°31	19°21	2°42	14° 2	W24
T 25	8 13 45	4°16'48	29°12	12°51	17°29	23° 6	5°33	23°58	15° 7	17°42	18°49	18°29	19°17	2°49	14° 5	T 25
F 26	8 17 42	5°17'44	12°R42	13° 2	18°31	23°43	5°32	24° 2	15° 7	17°42	18°48	18°D29	19°14	2°55	14° 8	F 26
S 27	8 21 38	6°18'39	26°26	13°19	19°34	24°21	5°31	24° 6	15° 6	17°42	18°47	18°29	19°11	3° 2	14°11	S 27
S 28	8 25 35	7°19'33	10°11.22	13°42	20°37	24°59	5°30	24° 9	15° 6	17°42	18°46	18°29	19° 8	3° 9	14°14	S 28
M29	8 29 32	8°20'26	24°27	14°12	21°41	25°36	5°28	24°13	15° 5	17°D42	18°45	18°30	19° 5	3°15	14°18	M29
T 30	8 33 28	9°21'18	8°R38	14°46	22°44	26°14	5°26	24°16	15° 5	17°42	18°44	18°31	19° 1	3°22	14°21	T 30
W31	8 37 25	10°22'10	22°R51	15°R26	23°R48	26°R52	5°R25	24°R20	15°R 4	17°R42	18°R43	18°R32	18°R58	3°R29	14°R24	W31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
M 1	23s 6	8n19	2n12	20s47	0s15	15s12	3n55	3n24	0n 6	0s46	1n20	16s17	2n 6	5s17	0n40	15n28
T 2	23 2	3 51	3 15	20 27	0n 1	15 23	3 56	3 39	0 7	0 47	1 20	16 18	2 6	5 17	0 40	15 28
W 3	22 57	0s53	4 8	20 7	0 18	15 34	3 56	3 55	0 9	0 48	1 20	16 20	2 6	5 18	0 40	15 27
T 4	22 51	5 36	4 47	19 49	0 36	15 45	3 57	4 10	0 10	0 49	1 20	16 21	2 6	5 18	0 40	15 27
F 5	22 45	10 4	5 8	19 33	0 55	15 56	3 57	4 26	0 11	0 50	1 21	16 22	2 6	5 18	0 40	15 27
S 6	22 38	13 58	5 10	19 19	1 14	16 7	3 57	4 41	0 13	0 51	1 21	16 23	2 7	5 19	0 40	15 27
S 7	22 31	17 2	4 52	19 7	1 33	16 18	3 57	4 57	0 14	0 52	1 21	16 25	2 7	5 19	0 40	15 27
M 8	22 24	19 2	4 17	18 57	1 52	16 30	3 57	5 12	0 15	0 52	1 22	16 26	2 7	5 19	0 41	15 27
T 9	22 16	19 50	3 26	18 49	2 10	16 41	3 56	5 27	0 16	0 53	1 22	16 27	2 7	5 19	0 41	15 26
W10	22 7	19 24	2 23	18 44	2 27	16 52	3 56	5 43	0 17	0 54	1 22	16 28	2 7	5 20	0 41	15 26
T 11	21 59	17 50	1 13	18 41	2 43	17 4	3 55	5 58	0 19	0 54	1 22	16 29	2 7	5 20	0 41	15 26
F 12	21 49	15 19	0 1	18 40	2 57	17 15	3 54	6 14	0 20	0 54	1 23	16 30	2 7	5 20	0 41	15 26
S 13	21 40	12 6	1s 9	18 41	3 8	17 26	3 53	6 29	0 21	0 55	1 23	16 31	2 8	5 20	0 41	15 26
S 14	21 30	8 25	2 14	18 44	3 17	17 37	3 51	6 44	0 22	0 55	1 23	16 32	2 8	5 20	0 41	15 26
M15	21 19	4 28	3 12	18 48	3 24	17 48	3 50	6 59	0 23	0 55	1 23	16 33	2 8	5 20	0 41	15 26
T 16	21 8	0 24	4 0	18 53	3 28	17 59	3 48	7 15	0 24	0 55	1 24	16 34	2 8	5 20	0 41	15 26
W17	20 57	3n37	4 37	18 59	3 29	18 9	3 47	7 30	0 25	0 56	1 24	16 35	2 8	5 20	0 41	15 26
T 18	20 45	7 28	5 2	19 7	3 29	18 20	3 45	7 45	0 26	0 56	1 24	16 36	2 8	5 20	0 41	15 26
F 19	20 33	11 2	5 14	19 15	3 26	18 30	3 43	8 0	0 27	0 55	1 25	16 37	2 8	5 20	0 41	15 26
S 20	20 21	14 11	5 13	19 24	3 22	18 40	3 40	8 15	0 28	0 55	1 25	16 38	2 9	5 20	0 41	15 26
S 21	20 8	16 47	4 57	19 33	3 16	18 50	3 38	8 30	0 29	0 55	1 25	16 39	2 9	5 20	0 41	15 26
M22	19 55	18 40	4 28	19 42	3 8	18 59	3 36	8 45	0 30	0 55	1 25	16 40	2 9	5 20	0 41	15 26
T 23	19 41	19 41	3 45	19 52	3 0	19 8	3 33	9 0	0 31	0 54	1 26	16 41	2 9	5 20	0 41	15 26
W24	19 27	19 42	2 50	20 1	2 51	19 17	3 31	9 15	0 32	0 54	1 26	16 41	2 9	5 20	0 41	15 26
T 25	19 13	18 38	1 45	20 11	2 41	19 26	3 28	9 30	0 33	0 53	1 26	16 42	2 9	5 20	0 41	15 26
F 26	18 58	16 31	0 32	20 20	2 31	19 34	3 25	9 45	0 34	0 53	1 26	16 43	2 10	5 20	0 41	15 26
S 27	18 43	13 25	0n44	20 29	2 20	19 42	3 22	9 59	0 35	0 52	1 27	16 44	2 10	5 20	0 41	15 26
S 28	18 28	9 31	1 58	20 37	2 10	19 50	3 19	10 14	0 35	0 51	1 27	16 44	2 10	5 19	0 41	15 26
M29	18 12	5 3	3 6	20 45	1 59	19 57	3 16	10 29	0 36	0 50	1 27	16 45	2 10	5 19	0 41	15 26
T 30	17 56	0 18	4 3	20 52	1 48	20 4	3 13	10 43	0 37	0 49	1 28	16 46	2 10	5 19	0 41	15 26
W31	17s40	4s28	4n46	20s59	1n37	20s11	3n 9	10n58	0n38	0s49	1n28	16s46	2n10	5s19	0n41	15n26

Julian Day Number = 2349276.5, Delta T = 10.48 sec  
 Ecliptic obliquity = 23°28'25", Nutation = - 0°00'11", out-of-bounds declination in red  
 Ayanamsha: Fagan/Bradley = 20°49'53", Lahiri = 19°56'54"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1720  
geocentric

FEBRUARY 1720

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	8 41 21	11 <sup>23</sup> 01	7 <sup>11</sup> 4	16 <sup>31</sup> 10	24 <sup>27</sup> 53	27 <sup>19</sup> 30	5 <sup>0</sup> R23	24 <sup>11</sup> 23	15 <sup>0</sup> R 4	17 <sup>18</sup> 42	18 <sup>0</sup> R41	18 <sup>0</sup> R32	18 <sup>0</sup> Ω55	3 <sup>18</sup> 36	14 <sup>14</sup> 28	T 1
F 2	8 45 18	12 <sup>23</sup> 50	21 <sup>0</sup> 14	16 <sup>0</sup> 58	25 <sup>0</sup> 57	28 <sup>0</sup> 7	5 <sup>0</sup> Δ20	24 <sup>0</sup> 26	15 <sup>0</sup> Δ 3	17 <sup>0</sup> 42	18 <sup>0</sup> η40	18 <sup>0</sup> Ω32	18 <sup>0</sup> 52	3 <sup>0</sup> 42	14 <sup>0</sup> 31	F 2
S 3	8 49 14	13 <sup>24</sup> 39	5 <sup>0</sup> Δ20	17 <sup>0</sup> 49	27 <sup>0</sup> 2	28 <sup>0</sup> 45	5 <sup>0</sup> 18	24 <sup>0</sup> 29	15 <sup>0</sup> 2	17 <sup>0</sup> 42	18 <sup>0</sup> 39	18 <sup>0</sup> 32	18 <sup>0</sup> 49	3 <sup>0</sup> 49	14 <sup>0</sup> 34	S 3
S 4	8 53 11	14 <sup>25</sup> 28	19 <sup>0</sup> 19	18 <sup>0</sup> 44	28 <sup>0</sup> 7	29 <sup>0</sup> 23	5 <sup>0</sup> 15	24 <sup>0</sup> 32	15 <sup>0</sup> 1	17 <sup>0</sup> 43	18 <sup>0</sup> 38	18 <sup>0</sup> 31	18 <sup>0</sup> 46	3 <sup>0</sup> 56	14 <sup>0</sup> 38	S 4
M 5	8 57 7	15 <sup>26</sup> 15	3 <sup>0</sup> Ω10	19 <sup>0</sup> 42	29 <sup>0</sup> 12	0 <sup>0</sup> Ω 1	5 <sup>0</sup> 12	24 <sup>0</sup> 35	15 <sup>0</sup> 1	17 <sup>0</sup> 43	18 <sup>0</sup> 36	18 <sup>0</sup> 31	18 <sup>0</sup> 42	4 <sup>0</sup> 2	14 <sup>0</sup> 41	M 5
T 6	9 1 4	16 <sup>27</sup> 01	16 <sup>0</sup> 50	20 <sup>0</sup> 43	0 <sup>0</sup> Ω18	0 <sup>0</sup> 39	5 <sup>0</sup> 9	24 <sup>0</sup> 38	15 <sup>0</sup> 0	17 <sup>0</sup> 43	18 <sup>0</sup> 35	18 <sup>0</sup> 31	18 <sup>0</sup> 39	4 <sup>0</sup> 9	14 <sup>0</sup> 44	T 6
W 7	9 5 1	17 <sup>27</sup> 46	0 <sup>0</sup> Ω18	21 <sup>0</sup> 46	1 <sup>0</sup> 24	1 <sup>0</sup> 17	5 <sup>0</sup> 6	24 <sup>0</sup> 41	14 <sup>0</sup> 59	17 <sup>0</sup> 43	18 <sup>0</sup> 34	18 <sup>0</sup> 30	18 <sup>0</sup> 36	4 <sup>0</sup> 16	14 <sup>0</sup> 48	W 7
T 8	9 8 57	18 <sup>28</sup> 29	13 <sup>0</sup> 31	22 <sup>0</sup> 52	2 <sup>0</sup> 30	1 <sup>0</sup> 55	5 <sup>0</sup> 3	24 <sup>0</sup> 43	14 <sup>0</sup> 58	17 <sup>0</sup> 44	18 <sup>0</sup> 33	18 <sup>0</sup> 30	18 <sup>0</sup> 33	4 <sup>0</sup> 23	14 <sup>0</sup> 51	T 8
F 9	9 12 54	19 <sup>29</sup> 11	26 <sup>0</sup> 30	24 <sup>0</sup> 0	3 <sup>0</sup> 36	2 <sup>0</sup> 33	4 <sup>0</sup> 59	24 <sup>0</sup> 46	14 <sup>0</sup> 57	17 <sup>0</sup> 44	18 <sup>0</sup> 31	18 <sup>0</sup> 30	18 <sup>0</sup> 30	4 <sup>0</sup> 29	14 <sup>0</sup> 55	F 9
S 10	9 16 50	20 <sup>29</sup> 52	9 <sup>0</sup> Ω13	25 <sup>0</sup> 10	4 <sup>0</sup> 42	3 <sup>0</sup> 11	4 <sup>0</sup> 56	24 <sup>0</sup> 48	14 <sup>0</sup> 56	17 <sup>0</sup> 45	18 <sup>0</sup> 30	18 <sup>0</sup> 30	18 <sup>0</sup> 27	4 <sup>0</sup> 36	14 <sup>0</sup> 58	S 10
S 11	9 20 47	21 <sup>30</sup> 31	21 <sup>0</sup> 42	26 <sup>0</sup> 21	5 <sup>0</sup> 49	3 <sup>0</sup> 49	4 <sup>0</sup> 52	24 <sup>0</sup> 50	14 <sup>0</sup> 54	17 <sup>0</sup> 45	18 <sup>0</sup> 28	18 <sup>0</sup> 30	18 <sup>0</sup> 23	4 <sup>0</sup> 43	15 <sup>0</sup> 2	S 11
M12	9 24 43	22 <sup>31</sup> 09	3 <sup>0</sup> Υ57	27 <sup>0</sup> 35	6 <sup>0</sup> 55	4 <sup>0</sup> 27	4 <sup>0</sup> 48	24 <sup>0</sup> 53	14 <sup>0</sup> 53	17 <sup>0</sup> 45	18 <sup>0</sup> 27	18 <sup>0</sup> 30	18 <sup>0</sup> 20	4 <sup>0</sup> 50	15 <sup>0</sup> 6	M12
T 13	9 28 40	23 <sup>31</sup> 45	16 <sup>0</sup> 1	28 <sup>0</sup> 50	8 <sup>0</sup> 2	5 <sup>0</sup> 5	4 <sup>0</sup> 44	24 <sup>0</sup> 55	14 <sup>0</sup> 52	17 <sup>0</sup> 46	18 <sup>0</sup> 26	18 <sup>0</sup> 29	18 <sup>0</sup> 17	4 <sup>0</sup> 56	15 <sup>0</sup> 9	T 13
W14	9 32 36	24 <sup>32</sup> 19	27 <sup>0</sup> 57	0 <sup>0</sup> Ω 7	9 <sup>0</sup> 9	5 <sup>0</sup> 43	4 <sup>0</sup> 39	24 <sup>0</sup> 57	14 <sup>0</sup> 51	17 <sup>0</sup> 47	18 <sup>0</sup> 24	18 <sup>0</sup> 28	18 <sup>0</sup> 14	5 <sup>0</sup> 3	15 <sup>0</sup> 13	W14
T 15	9 36 33	25 <sup>32</sup> 51	9 <sup>0</sup> Ω50	1 <sup>0</sup> 25	10 <sup>0</sup> 17	6 <sup>0</sup> 21	4 <sup>0</sup> 35	24 <sup>0</sup> 59	14 <sup>0</sup> 49	17 <sup>0</sup> 47	18 <sup>0</sup> 23	18 <sup>0</sup> 28	18 <sup>0</sup> 11	5 <sup>0</sup> 10	15 <sup>0</sup> 16	T 15
F 16	9 40 30	26 <sup>33</sup> 22	21 <sup>0</sup> 43	2 <sup>0</sup> 45	11 <sup>0</sup> 24	6 <sup>0</sup> 59	4 <sup>0</sup> 30	25 <sup>0</sup> 0	14 <sup>0</sup> 48	17 <sup>0</sup> 48	18 <sup>0</sup> 21	18 <sup>0</sup> D27	18 <sup>0</sup> 7	5 <sup>0</sup> 16	15 <sup>0</sup> 20	F 16
S 17	9 44 26	27 <sup>33</sup> 50	3 <sup>0</sup> Π40	4 <sup>0</sup> 6	12 <sup>0</sup> 32	7 <sup>0</sup> 37	4 <sup>0</sup> 25	25 <sup>0</sup> 2	14 <sup>0</sup> 46	17 <sup>0</sup> 48	18 <sup>0</sup> 20	18 <sup>0</sup> 27	18 <sup>0</sup> 4	5 <sup>0</sup> 23	15 <sup>0</sup> 24	S 17
S 18	9 48 23	28 <sup>34</sup> 17	15 <sup>0</sup> 48	5 <sup>0</sup> 29	13 <sup>0</sup> 39	8 <sup>0</sup> 15	4 <sup>0</sup> 20	25 <sup>0</sup> 4	14 <sup>0</sup> 45	17 <sup>0</sup> 49	18 <sup>0</sup> 18	18 <sup>0</sup> 28	18 <sup>0</sup> 1	5 <sup>0</sup> 30	15 <sup>0</sup> 27	S 18
M19	9 52 19	29 <sup>34</sup> 42	28 <sup>0</sup> 9	6 <sup>0</sup> 52	14 <sup>0</sup> 47	8 <sup>0</sup> 53	4 <sup>0</sup> 15	25 <sup>0</sup> 5	14 <sup>0</sup> 43	17 <sup>0</sup> 50	18 <sup>0</sup> 17	18 <sup>0</sup> 29	17 <sup>0</sup> 58	5 <sup>0</sup> 37	15 <sup>0</sup> 31	M19
T 20	9 56 16	0 <sup>0</sup> Ω35'05	10 <sup>0</sup> Ω49	8 <sup>0</sup> 17	15 <sup>0</sup> 55	9 <sup>0</sup> 32	4 <sup>0</sup> 10	25 <sup>0</sup> 7	14 <sup>0</sup> 42	17 <sup>0</sup> 51	18 <sup>0</sup> 15	18 <sup>0</sup> 30	17 <sup>0</sup> 55	5 <sup>0</sup> 43	15 <sup>0</sup> 35	T 20
W21	10 0 12	1 <sup>0</sup> 35'27	23 <sup>0</sup> 50	9 <sup>0</sup> 43	17 <sup>0</sup> 3	10 <sup>0</sup> 10	4 <sup>0</sup> 4	25 <sup>0</sup> 8	14 <sup>0</sup> 40	17 <sup>0</sup> 51	18 <sup>0</sup> 14	18 <sup>0</sup> 31	17 <sup>0</sup> 52	5 <sup>0</sup> 50	15 <sup>0</sup> 38	W21
T 22	10 4 9	2 <sup>0</sup> 35'46	7 <sup>0</sup> Ω14	11 <sup>0</sup> 11	18 <sup>0</sup> 12	10 <sup>0</sup> 48	3 <sup>0</sup> 59	25 <sup>0</sup> 9	14 <sup>0</sup> 39	17 <sup>0</sup> 52	18 <sup>0</sup> 12	18 <sup>0</sup> 32	17 <sup>0</sup> 48	5 <sup>0</sup> 57	15 <sup>0</sup> 42	T 22
F 23	10 8 5	3 <sup>0</sup> 36'03	21 <sup>0</sup> 0	12 <sup>0</sup> 39	19 <sup>0</sup> 20	11 <sup>0</sup> 26	3 <sup>0</sup> 53	25 <sup>0</sup> 10	14 <sup>0</sup> 37	17 <sup>0</sup> 53	18 <sup>0</sup> 11	18 <sup>0</sup> R32	17 <sup>0</sup> 45	6 <sup>0</sup> 3	15 <sup>0</sup> 46	F 23
S 24	10 12 2	4 <sup>0</sup> 36'19	5 <sup>0</sup> η 8	14 <sup>0</sup> 9	20 <sup>0</sup> 29	12 <sup>0</sup> 4	3 <sup>0</sup> 47	25 <sup>0</sup> 11	14 <sup>0</sup> 35	17 <sup>0</sup> 54	18 <sup>0</sup> 9	18 <sup>0</sup> 31	17 <sup>0</sup> 42	6 <sup>0</sup> 10	15 <sup>0</sup> 50	S 24
S 25	10 15 59	5 <sup>0</sup> 36'33	19 <sup>0</sup> 32	15 <sup>0</sup> 39	21 <sup>0</sup> 37	12 <sup>0</sup> 42	3 <sup>0</sup> 41	25 <sup>0</sup> 12	14 <sup>0</sup> 33	17 <sup>0</sup> 55	18 <sup>0</sup> 8	18 <sup>0</sup> 30	17 <sup>0</sup> 39	6 <sup>0</sup> 17	15 <sup>0</sup> 53	S 25
M26	10 19 55	6 <sup>0</sup> 36'45	4 <sup>0</sup> Δ 7	17 <sup>0</sup> 11	22 <sup>0</sup> 46	13 <sup>0</sup> 21	3 <sup>0</sup> 35	25 <sup>0</sup> 13	14 <sup>0</sup> 32	17 <sup>0</sup> 56	18 <sup>0</sup> 6	18 <sup>0</sup> 28	17 <sup>0</sup> 36	6 <sup>0</sup> 24	15 <sup>0</sup> 57	M26
T 27	10 23 52	7 <sup>0</sup> 36'55	18 <sup>0</sup> 46	18 <sup>0</sup> 44	23 <sup>0</sup> 55	13 <sup>0</sup> 59	3 <sup>0</sup> 29	25 <sup>0</sup> 14	14 <sup>0</sup> 30	17 <sup>0</sup> 57	18 <sup>0</sup> 5	18 <sup>0</sup> 25	17 <sup>0</sup> 32	6 <sup>0</sup> 30	16 <sup>0</sup> 1	T 27
W28	10 27 48	8 <sup>0</sup> 37'04	3 <sup>0</sup> Π24	20 <sup>0</sup> 17	25 <sup>0</sup> 4	14 <sup>0</sup> 37	3 <sup>0</sup> 22	25 <sup>0</sup> 14	14 <sup>0</sup> 28	17 <sup>0</sup> 58	18 <sup>0</sup> 3	18 <sup>0</sup> 23	17 <sup>0</sup> 29	6 <sup>0</sup> 37	16 <sup>0</sup> 5	W28
T 29	10 31 45	9 <sup>0</sup> Ω37'11	17 <sup>0</sup> Π53	21 <sup>0</sup> Ω52	26 <sup>0</sup> Ω13	15 <sup>0</sup> Ω15	3 <sup>0</sup> Δ16	25 <sup>0</sup> Π15	14 <sup>0</sup> Δ26	17 <sup>0</sup> Ω59	18 <sup>0</sup> η 1	18 <sup>0</sup> Ω21	17 <sup>0</sup> Ω26	6 <sup>0</sup> Ω44	16 <sup>0</sup> Ω 8	T 29

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
T 1	17s23	9s 0	5n11	21s 5	1n26	20s17	3n 6	11n12	0n39	0s47	1n28	16s47	2n11	5s18
F 2	17 6 13	0 5	17 21	10 1	15 20	22 3	2 11	26 0	40 0	46 1	28 16	48 2	11 5	18 0
S 3	16 49	16 15	5 4	21 14	1 4	20 28	2 59	11 41	0 40	0 45	1 29	16 48	2 11	5 18
S 4	16 32	18 31	4 33	21 17	0 53	20 32	2 55	11 55	0 41	0 44	1 29	16 49	2 11	5 17
M 5	16 14	19 40	3 46	21 19	0 43	20 37	2 52	12 9	0 42	0 43	1 29	16 49	2 11	5 17
T 6	15 56	19 39	2 47	21 20	0 33	20 40	2 48	12 23	0 43	0 41	1 29	16 50	2 11	5 17
W 7	15 37	18 30	1 39	21 20	0 23	20 44	2 44	12 37	0 43	0 40	1 30	16 50	2 12	5 16
T 8	15 19	16 21	0 28	21 19	0 13	20 47	2 40	12 51	0 44	0 38	1 30	16 51	2 12	5 16
F 9	15 0	13 24	0s44	21 17	0 4	20 49	2 36	13 4	0 45	0 36	1 30	16 51	2 12	5 15
S 10	14 41	9 52	1 52	21 13	0s 5	20 51	2 32	13 18	0 45	0 35	1 30	16 51	2 12	5 15
S 11	14 21	5 58	2 54	21 9	0 14	20 52	2 28	13 32	0 46	0 33	1 31	16 52	2 12	5 15
M12	14 2	1 53	3 46	21 3	0 23	20 53	2 24	13 45	0 47	0 31	1 31	16 52	2 13	5 14
T 13	13 42	2n11	4 28	20 56	0 31	20 54	2 20	13 59	0 47	0 29	1 31	16 52	2 13	5 14
W14	13 22	6 8	4 57	20 48	0 39	20 54	2 16	14 12	0 48	0 27	1 31	16 53	2 13	5 13
T 15	13 1	9 49	5 13	20 38	0 47	20 53	2 12	14 25	0 49	0 25	1 32	16 53	2 13	5 12
F 16	12 41	13 7	5 16	20 28	0 55	20 52	2 8	14 39	0 49	0 23	1 32	16 53	2 13	5 12
S 17	12 20	15 55	5 6	20 16	1 2	20 50	2 4	14 52	0 50	0 21	1 32	16 53	2 14	5 11
S 18	11 59	18 3	4 42	20 2	1 9	20 47	1 59	15 5	0 51	0 19	1 32	16 54	2 14	5 11
M19	11 38	19 24	4 4	19 48	1 15	20 45	1 55	15 17	0 51	0 17	1 32	16 54	2 14	5 10
T 20	11 17	19 49	3 14	19 32	1 21	20 41	1 51	15 30	0 52	0 14	1 33	16 54	2 14	5 10
W21	10 55	19 12	2 13	19 15	1 27	20 37	1 47	15 43	0 52	0 12	1 33	16 54	2 14	5 9
T 22	10 34	17 29	1 2	18 56	1 33	20 33	1 42	15 55	0 53	0 10	1 33	16 54	2 15	5 8
F 23	10 12	14 44	0n14	18 36	1 38	20 28	1 38	16 8	0 53	0 7	1 33	16 54	2 15	5 8
S 24	9 50	11 3	1 30	18 15	1 43	20 22	1 34	16 20	0 54	0 5	1 33	16 54	2 15	5 7
S 25	9 28	6 39	2 43	17 53	1 47	20 16	1 30	16 32	0 55	0 2	1 34	16 54	2 15	5 6
M26	9 6	1 49	3 46	17 29	1 52	20 9	1 25	16 45	0 55	0n 0	1 34	16 54	2 15	5 5
T 27	8 43	3s 8	4 34	17 4	1 55	20 2	1 21	16 56	0 56	0 3	1 34	16 54	2 15	5 5
W28	8 21	7 53	5 4	16 37	1 59	19 54	1 17	17 8	0 56	0 6	1 34	16 54	2 16	5 4
T 29	7s58	12s 8	5n15	16s 9	2s 2	19s45	1n12	17n20	0n57	0n 8	1n34	16s54	2n16	5s 3

Julian Day Number = 2349307.5, Delta T = 10.48 sec  
Ecliptic obliquity = 23°28'25", Nutation = - 0°00'10", out-of-bounds declination in red  
Ayanamsha: Fagan/Bradley = 20°49'58", Lahiri = 19°56'58"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1720  
geocentric

MARCH 1720

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
F 1	10 35 41	10♈37'17	2♊10	23♌28	27♍23	15♎53	3♏R 9	25♐15	14♑R24	18♒0	18♓R 0	18♓R20	17♓23	6♈50	16♉12	F 1
S 2	10 39 38	11°37'22	16°12	25° 6	28°32	16°32	3♏ 2	25°15	14♑22	18° 1	17♓58	18♓D19	17°20	6°57	16°16	S 2
S 3	10 43 34	12°37'24	29°59	26°44	29°42	17°10	2°56	25°16	14°20	18° 2	17°57	18♓20	17°17	7° 4	16°20	S 3
M 4	10 47 31	13°37'25	13♌30	28°23	0♈51	17°48	2°49	25°R16	14°18	18° 3	17°55	18°22	17°13	7°11	16°24	M 4
T 5	10 51 28	14°37'25	26°46	0♈ 4	2° 1	18°26	2°42	25°16	14°16	18° 5	17°53	18°23	17°10	7°17	16°27	T 5
W 6	10 55 24	15°37'23	9♈48	1°45	3°11	19° 4	2°35	25°16	14°14	18° 6	17°52	18°24	17° 7	7°24	16°31	W 6
T 7	10 59 21	16°37'19	22°38	3°28	4°20	19°43	2°28	25°15	14°11	18° 7	17°50	18♓R25	17° 4	7°31	16°35	T 7
F 8	11 3 17	17°37'13	5♈16	5°12	5°30	20°21	2°20	25°15	14° 9	18° 8	17°49	18°23	17° 1	7°38	16°39	F 8
S 9	11 7 14	18°37'05	17°43	6°57	6°40	20°59	2°13	25°15	14° 7	18°10	17°47	18°21	16°58	7°44	16°43	S 9
S 10	11 11 10	19°36'55	0♈ 0	8°43	7°50	21°37	2° 6	25°14	14° 5	18°11	17°45	18°16	16°54	7°51	16°46	S 10
M 11	11 15 7	20°36'43	12° 9	10°30	9° 1	22°16	1°58	25°14	14° 2	18°12	17°44	18°11	16°51	7°58	16°50	M 11
T 12	11 19 3	21°36'29	24° 9	12°19	10°11	22°54	1°51	25°13	14° 0	18°14	17°42	18° 5	16°48	8° 4	16°54	T 12
W 13	11 23 0	22°36'13	6♈ 4	14° 9	11°21	23°32	1°43	25°12	13°58	18°15	17°40	17°58	16°45	8°11	16°58	W 13
T 14	11 26 56	23°35'55	17°56	16° 0	12°32	24°10	1°36	25°11	13°55	18°17	17°39	17°53	16°42	8°18	17° 2	T 14
F 15	11 30 53	24°35'34	29°48	17°52	13°42	24°49	1°28	25°10	13°53	18°18	17°37	17°48	16°38	8°25	17° 5	F 15
S 16	11 34 50	25°35'12	11♈44	19°46	14°53	25°27	1°20	25° 9	13°51	18°20	17°36	17°46	16°35	8°31	17° 9	S 16
S 17	11 38 46	26°34'47	23°48	21°40	16° 3	26° 5	1°13	25° 8	13°48	18°21	17°34	17°D44	16°32	8°38	17°13	S 17
M 18	11 42 43	27°34'20	6♈ 6	23°36	17°14	26°43	1° 5	25° 6	13°46	18°23	17°32	17°45	16°29	8°45	17°17	M 18
T 19	11 46 39	28°33'50	18°41	25°33	18°24	27°22	0°57	25° 5	13°43	18°24	17°31	17°46	16°26	8°51	17°20	T 19
W 20	11 50 36	29°33'18	1♊39	27°31	19°35	28° 0	0°49	25° 3	13°41	18°26	17°29	17°47	16°23	8°58	17°24	W 20
T 21	11 54 32	0♈32'44	15° 3	29°30	20°46	28°38	0°42	25° 2	13°38	18°27	17°28	17°R48	16°19	9° 5	17°28	T 21
F 22	11 58 29	1°32'08	28°54	1♈30	21°57	29°16	0°34	25° 0	13°36	18°29	17°26	17°48	16°16	9°12	17°32	F 22
S 23	12 2 25	2°31'29	13♈12	3°31	23° 8	29°54	0°26	24°58	13°33	18°31	17°25	17°45	16°13	9°18	17°35	S 23
S 24	12 6 22	3°30'48	27°53	5°33	24°19	0♈33	0°18	24°57	13°31	18°32	17°23	17°41	16°10	9°25	17°39	S 24
M 25	12 10 19	4°30'05	12♈51	7°36	25°30	1°11	0°11	24°55	13°28	18°34	17°22	17°35	16° 7	9°32	17°43	M 25
T 26	12 14 15	5°29'20	27°57	9°39	26°41	1°49	0° 3	24°53	13°26	18°36	17°20	17°27	16° 4	9°39	17°46	T 26
W 27	12 18 12	6°28'33	13♈ 0	11°42	27°52	2°27	29♈55	24°50	13°23	18°38	17°19	17°20	16° 0	9°45	17°50	W 27
T 28	12 22 8	7°27'44	27°52	13°45	29° 3	3° 5	29°48	24°48	13°21	18°39	17°17	17°14	15°57	9°52	17°54	T 28
F 29	12 26 5	8°26'53	12♈25	15°48	0♈14	3°44	29°40	24°46	13°18	18°41	17°16	17° 9	15°54	9°59	17°57	F 29
S 30	12 30 1	9°26'01	26°36	17°51	1°26	4°22	29°32	24°43	13°16	18°43	17°14	17° 6	15°51	10° 5	18° 1	S 30
S 31	12 33 58	10♈25'07	10♌23	19♈53	2♈37	5♈ 0	29♈25	24♈41	13♈13	18♈45	17♈13	17°D 5	15♈48	10♈12	18♈ 4	S 31

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	7s36	15s38	5n 6	15s40	2s 4	19s36	1n 8	17n32	0n57	0n11	1n34	16s54	2n16	5s 2	0n42	15n33	1s44	19n 4	15n37	15n21	15n39	9n 2	1s26	4n21			
S 2	7 13	18 8	4 39	15 10	2 7	19 27	1 4	17 43	0 58	0 14	1 35	16 54	2 16	5 2	0 42	15 33	1 44	19 5	15 37	15 22	15 40	9 4	1 25	4 21			
S 3	6 50	19 33	3 56	14 38	2 8	19 16	1 0	17 55	0 58	0 17	1 35	16 54	2 16	5 1	0 42	15 33	1 44	19 5	15 37	15 21	15 41	9 6	1 24	4 21			
M 4	6 27	19 48	3 0	14 5	2 10	19 6	0 55	18 6	0 58	0 20	1 35	16 54	2 17	5 0	0 42	15 34	1 44	19 6	15 37	15 21	15 42	9 8	1 22	4 21			
T 5	6 4	18 56	1 56	13 30	2 11	18 55	0 51	18 17	0 59	0 23	1 35	16 54	2 17	4 59	0 42	15 34	1 44	19 7	15 37	15 20	15 43	9 10	1 21	4 21			
W 6	5 41	17 4	0 47	12 55	2 11	18 43	0 47	18 28	0 59	0 26	1 35	16 53	2 17	4 58	0 42	15 35	1 44	19 7	15 37	15 20	15 44	9 12	1 19	4 21			
T 7	5 17	14 21	0s23	12 18	2 12	18 31	0 43	18 39	1 0	0 29	1 35	16 53	2 17	4 57	0 42	15 35	1 44	19 8	15 37	15 20	15 45	9 14	1 18	4 21			
F 8	4 54	11 0	1 31	11 39	2 11	18 18	0 39	18 50	1 0	0 32	1 35	16 53	2 17	4 57	0 42	15 35	1 44	19 9	15 37	15 20	15 46	9 16	1 17	4 21			
S 9	4 31	7 13	2 34	11 0	2 10	18 5	0 34	19 0	1 1	0 35	1 35	16 53	2 18	4 56	0 42	15 36	1 44	19 10	15 37	15 21	15 47	9 18	1 15	4 21			
S 10	4 7	3 10	3 28	10 19	2 9	17 51	0 30	19 11	1 1	0 38	1 35	16 52	2 18	4 55	0 42	15 36	1 44	19 10	15 37	15 22	15 47	9 20	1 14	4 21			
M 11	3 44	0n56	4 12	9 36	2 8	17 36	0 26	19 21	1 1	0 41	1 36	16 52	2 18	4 54	0 42	15 37	1 44	19 11	15 37	15 24	15 48	9 22	1 12	4 20			
T 12	3 20	4 58	4 44	8 53	2 5	17 22	0 22	19 31	1 2	0 44	1 36	16 52	2 18	4 53	0 42	15 37	1 44	19 12	15 37	15 26	15 49	9 24	1 11	4 20			
W 13	2 56	8 46	5 4	8 8	2 3	17 6	0 18	19 41	1 2	0 47	1 36	16 51	2 18	4 52	0 42	15 38	1 44	19 12	15 37	15 28	15 50	9 26	1 9	4 20			
T 14	2 33	12 13	5 11	7 22	1 59	16 50	0 14	19 51	1 3	0 50	1 36	16 51	2 18	4 51	0 42	15 38	1 44	19 13	15 37	15 30	15 51	9 28	1 8	4 20			
F 15	2 9	15 11	5 4	6 35	1 56	16 34	0 10	20 1	1 3	0 53	1 36	16 50	2 19	4 50	0 42	15 38	1 44	19 14	15 37	15 31	15 52	9 30	1 7	4 20			
S 16	1 45	17 32	4 44	5 46	1 52	16 17	0 7	20 11	1 3	0 56	1 36	16 50	2 19	4 49	0 42	15 39	1 44	19 14	15 37	15 32	15 53	9 32	1 5	4 20			
S 17	1 22	19 8	4 12	4 57	1 47	16 0	0 3	20 20	1 4	0 59	1 36	16 50	2 19	4 48	0 42	15 39	1 44	19 15	15 37	15 32	15 54	9 34	1 4	4 20			
M 18	0 58	19 53	3 27	4 6	1 42	15 43	0s 1	20 29	1 4	1 2	1 36	16 49	2 19	4 47	0 42	15 40	1 44	19 15	15 37	15 32	15 55	9 36	1 2	4 20			
T 19	0 34	19 40	2 31	3 14	1 36	15 24	0 5	20 39	1 4	1 5	1 36	16 49	2 19	4 46	0 42	15 40	1 44	19 16	15 37	15 32	15 56	9 38	1 1	4 20			
W 20	0 11	18 25	1 27	2 21	1 29	15 6	0 8	20 48	1 5	1 9	1 36	16 48	2 19	4 45	0 42	15 41	1 43	19 17	15 37	15 31	15 57	9 40	0 59	4 20			
T 21	0n13	16 6	0 15	1 28	1 23	14 47	0 12	20 56	1 5	1 12	1 36	16 48	2 20	4 45	0 42	15 41	1 43	19 17	15 37	15 31	15 58	9 42	0 58	4 20			
F 22	0 37	12 48	1n 0	0 33	1 15	14 27	0 16	21 5	1 5	1 15	1 36	16 47	2 20	4 44	0 42	15 42	1 43	19 18	15 37	15 31	15 59	9 44	0 56	4 20			
S 23	1 0	8 39	2 13	0n23	1 7	14 8	0 19	21 14	1 6	1 18	1 36	16 46	2 20	4 43	0 42	15 42	1 43	19 18	15 37	15 32	16 0	9 46	0 55	4 20			
S 24	1 24	3 53	3 19	1 19	0 59	13 47	0 22	21 22	1 6	1 21	1 36	16 46	2 20	4 42	0 42	15 43	1 43	19 19	15 37	15 33	16 1	9 48	0 54	4 20			
M 25	1 47	1s12	4 13	2 15	0 50	13 27	0 26	21 30	1 6	1 24	1 36	16 45	2 20	4 41	0 42	15 43	1 43	19 19	15 37	15 35	16 2	9 50	0 52	4 20			
T 26	2 11	6 15	4 50	3 12	0 40	13 6	0 29	21 38	1 7	1 27	1 36	16 45	2 20	4 40	0 42	15 44	1 43	19 20	15 37	15 37	16 3	9 52	0 51	4 20			
W 27	2 35	10 54	5 6	4 10	0 31	12 44	0 32	21 46	1 7	1 30	1 36	16 44	2 21	4 39	0 42	15 44	1 43	19 20	15 37	15 40	16 4	9 54	0 49	4 20			
T 28	2 58	14 48	5 2	5 7	0 20	12 23	0 36	21 54	1 7	1 33	1 36	16 43	2 21	4 38	0 42	15 45	1 43	19 21	15 37	15 42	16 5	9 56	0 48	4 20			
F 29	3 21	17 43	4 38	6 5	0 10	12 1	0 39	22 2	1 7	1 36	1 36	16 43	2 21	4 37	0 42	15 45	1 43	19 21	15 37	15 43	16 6	9 58	0 46	4 20			
S 30	3 45	19 28	3 57	7 2	0n 1	11 38	0 42	22 9	1 8	1 39	1 36	16 42	2 21	4 36	0 42	15 46	1 43	19 22	15 36	15 44	16 7	10 0	0 45	4 20			
S 31	4n 8	20s 0	3n 4	7n58	0n12	11s15	0s45	22n17	1n 8	1n42	1n36	16s41	2n21	4s35	0n42	15n46	1s43	19n22	15n36	15n44	16n 8	10n 2	0s44	4n20			

Julian Day Number = 2349336.5, Delta T = 10.48 sec  
Ecliptic obliquity = 23°28'26, Nutation = - 0°00'11, out-of-bounds declination in red  
Ayanamsha: Fagan/Bradley = 20°50'02, Lahiri = 19°57'02Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1720  
geocentric

APRIL 1720

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	12 37 54	11°24'11"	23°34'48"	21°53'53"	3°48'48"	5°11'38"	29°17'17"	24°38'38"	13°10'10"	18°47'47"	17°11'11"	17°06'06"	15°44'44"	10°19'19"	18°18'18"	M 1
T 2	12 41 51	12°23'14"	6°52'52"	23°52'52"	5°0'0"	6°16'16"	29°10'10"	24°13'13"	13°8'8"	18°49'49"	17°10'10"	17°7'7"	15°41'41"	10°26'26"	18°11'11"	T 2
W 3	12 45 48	13°22'15"	19°38'38"	25°50'50"	6°11'11"	6°54'54"	29°3'3"	24°33'33"	13°5'5"	18°50'50"	17°8'8"	17°R 7"	15°38'38"	10°32'32"	18°15'15"	W 3
T 4	12 49 44	14°21'13"	2°11'11"	27°45'45"	7°23'23"	7°33'33"	28°55'55"	24°30'30"	13°3'3"	18°52'52"	17°7'7"	17°6'6"	15°35'35"	10°39'39"	18°18'18"	T 4
F 5	12 53 41	15°20'10"	14°32'32"	29°38'38"	8°34'34"	8°11'11"	28°48'48"	24°27'27"	13°0'0"	18°54'54"	17°6'6"	17°2'2"	15°32'32"	10°46'46"	18°22'22"	F 5
S 6	12 57 37	16°19'05"	26°45'45"	1°27'27"	9°46'46"	8°49'49"	28°41'41"	24°24'24"	12°58'58"	18°56'56"	17°4'4"	16°56'56"	15°29'29"	10°52'52"	18°25'25"	S 6
S 7	13 1 34	17°17'58"	8°50'50"	3°14'14"	10°57'57"	9°27'27"	28°34'34"	24°21'21"	12°55'55"	18°58'58"	17°3'3"	16°48'48"	15°25'25"	10°59'59"	18°29'29"	S 7
M 8	13 5 30	18°16'49"	20°50'50"	4°56'56"	12°9'9"	10°5'5"	28°27'27"	24°18'18"	12°52'52"	19°0'0"	17°1'1"	16°37'37"	15°22'22"	11°6'6"	18°32'32"	M 8
T 9	13 9 27	19°15'38"	2°45'45"	6°35'35"	13°21'21"	10°43'43"	28°20'20"	24°15'15"	12°50'50"	19°2'2"	17°0'0"	16°25'25"	15°19'19"	11°13'13"	18°36'36"	T 9
W10	13 13 23	20°14'25"	14°38'38"	8°10'10"	14°32'32"	11°21'21"	28°13'13"	24°12'12"	12°47'47"	19°4'4"	16°59'59"	16°13'13"	15°16'16"	11°19'19"	18°39'39"	W10
T 11	13 17 20	21°13'10"	26°29'29"	9°40'40"	15°44'44"	11°59'59"	28°7'7"	24°8'8"	12°45'45"	19°6'6"	16°58'58"	16°1'1"	15°13'13"	11°26'26"	18°42'42"	T 11
F 12	13 21 16	22°11'53"	8°11'53"	11°6'6"	16°56'56"	12°38'38"	28°0'0"	24°5'5"	12°42'42"	19°8'8"	16°56'56"	15°52'52"	15°9'9"	11°33'33"	18°46'46"	F 12
S 13	13 25 13	23°10'34"	20°18'18"	12°27'27"	18°8'8"	13°16'16"	27°54'54"	24°1'1"	12°40'40"	19°10'10"	16°55'55"	15°44'44"	15°6'6"	11°40'40"	18°49'49"	S 13
S 14	13 29 10	24°9'13"	2°22'22"	13°43'43"	19°19'19"	13°54'54"	27°47'47"	23°58'58"	12°37'37"	19°12'12"	16°54'54"	15°40'40"	15°3'3"	11°46'46"	18°52'52"	S 14
M15	13 33 6	25°7'49"	14°36'36"	14°54'54"	20°31'31"	14°32'32"	27°41'41"	23°54'54"	12°35'35"	19°15'15"	16°53'53"	15°37'37"	15°0'0"	11°53'53"	18°55'55"	M15
T 16	13 37 3	26°6'23"	27°8'8"	15°59'59"	21°43'43"	15°10'10"	27°35'35"	23°51'51"	12°32'32"	19°17'17"	16°51'51"	15°D37'37"	14°57'57"	12°0'0"	18°59'59"	T 16
W17	13 40 59	27°4'55"	10°0'0"	17°0'0"	22°55'55"	15°48'48"	27°29'29"	23°47'47"	12°30'30"	19°19'19"	16°50'50"	15°R37'37"	14°54'54"	12°6'6"	19°2'2"	W17
T 18	13 44 56	28°3'25"	23°17'17"	17°54'54"	24°7'7"	16°26'26"	27°23'23"	23°43'43"	12°27'27"	19°21'21"	16°49'49"	15°37'37"	14°50'50"	12°13'13"	19°5'5"	T 18
F 19	13 48 52	29°1'52"	7°13'13"	18°44'44"	25°19'19"	17°4'4"	27°17'17"	23°39'39"	12°25'25"	19°23'23"	16°48'48"	15°35'35"	14°47'47"	12°20'20"	19°8'8"	F 19
S 20	13 52 49	0°18'18"	21°19'19"	19°27'27"	26°31'31"	17°42'42"	27°12'12"	23°36'36"	12°22'22"	19°25'25"	16°47'47"	15°32'32"	14°44'44"	12°27'27"	19°11'11"	S 20
S 21	13 56 45	0°58'41"	6°2'2"	20°6'6"	27°43'43"	18°20'20"	27°6'6"	23°32'32"	12°20'20"	19°27'27"	16°46'46"	15°25'25"	14°41'41"	12°33'33"	19°14'14"	S 21
M22	14 0 42	1°57'02"	21°6'6"	20°38'38"	28°55'55"	18°58'58"	27°1'1"	23°28'28"	12°18'18"	19°29'29"	16°45'45"	15°16'16"	14°38'38"	12°40'40"	19°17'17"	M22
T 23	14 4 39	2°55'21"	6°11'11"	21°5'5"	0°7'7"	19°36'36"	26°56'56"	23°24'24"	12°15'15"	19°32'32"	16°44'44"	15°6'6"	14°35'35"	12°47'47"	19°20'20"	T 23
W24	14 8 35	3°53'39"	21°43'43"	21°26'26"	1°19'19"	20°14'14"	26°51'51"	23°20'20"	12°13'13"	19°34'34"	16°43'43"	14°55'55"	14°31'31"	12°53'53"	19°23'23"	W24
T 25	14 12 32	4°51'55"	6°15'15"	21°41'41"	2°31'31"	20°52'52"	26°46'46"	23°15'15"	12°11'11"	19°36'36"	16°42'42"	14°46'46"	14°28'28"	13°0'0"	19°26'26"	T 25
F 26	14 16 28	5°50'09"	21°43'43"	21°51'51"	3°43'43"	21°30'30"	26°41'41"	23°11'11"	12°8'8"	19°38'38"	16°41'41"	14°38'38"	14°25'25"	13°7'7"	19°29'29"	F 26
S 27	14 20 25	6°48'22"	6°3'7"	21°R55'55"	4°55'55"	22°8'8"	26°37'37"	23°7'7"	12°6'6"	19°40'40"	16°40'40"	14°33'33"	14°22'22"	13°14'14"	19°32'32"	S 27
S 28	14 24 21	7°46'33"	20°3'3"	21°54'54"	6°7'7"	22°46'46"	26°32'32"	23°3'3"	12°4'4"	19°43'43"	16°39'39"	14°30'30"	14°19'19"	13°20'20"	19°34'34"	S 28
M29	14 28 18	8°44'43"	3°31'31"	21°48'48"	7°19'19"	23°24'24"	26°28'28"	22°59'59"	12°1'1"	19°45'45"	16°38'38"	14°29'29"	14°15'15"	13°27'27"	19°37'37"	M29
T 30	14 32 14	9°42'52"	16°34'34"	21°37'37"	8°Y31'31"	24°11'11"	26°17'17"	22°15'15"	11°59'59"	19°47'47"	16°38'38"	14°29'29"	14°12'12"	13°34'34"	19°40'40"	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
M 1	4n31	19s22	2n 2	8n54	0n24	10s52	0s48	22n24	1n 8	1n45	1n36	16s40	2n21	4s34	0n42	15n47	1s43	19n23	15n36	15n44	16n 8	10n 4	0s42	4n20	
T 2	4 54	17 42	0 55	9 49	0 35	10 29	0 51	22 31	1 8	1 48	1 36	16 40	2 21	4 33	0 42	15 48	1 43	19 23	15 36	15 44	16 9	10 6	0 41	4 20	
W 3	5 17	15 10	0s14	10 43	0 47	10 5	0 54	22 37	1 9	1 51	1 36	16 39	2 22	4 32	0 42	15 48	1 43	19 24	15 36	15 44	16 10	10 8	0 39	4 20	
T 4	5 40	11 57	1 20	11 36	0 58	9 41	0 56	22 44	1 9	1 54	1 36	16 38	2 22	4 31	0 42	15 49	1 43	19 24	15 36	15 44	16 11	10 10	0 38	4 20	
F 5	6 3	8 16	2 21	12 26	1 9	9 17	0 59	22 50	1 9	1 56	1 36	16 37	2 22	4 30	0 42	15 49	1 43	19 24	15 36	15 45	16 12	10 12	0 37	4 21	
S 6	6 26	4 17	3 15	13 15	1 21	8 52	1 2	22 57	1 9	1 59	1 36	16 36	2 22	4 29	0 42	15 50	1 43	19 25	15 35	15 47	16 13	10 14	0 35	4 21	
S 7	6 48	0 10	4 0	14 2	1 31	8 27	1 4	23 3	1 10	2 2	1 36	16 35	2 22	4 28	0 42	15 50	1 43	19 25	15 35	15 50	16 14	10 16	0 34	4 21	
M 8	7 11	3n55	4 33	14 47	1 42	8 2	1 7	23 9	1 10	2 5	1 35	16 35	2 22	4 27	0 42	15 51	1 43	19 25	15 35	15 53	16 15	10 18	0 32	4 21	
T 9	7 33	7 50	4 54	15 30	1 52	7 37	1 9	23 14	1 10	2 7	1 35	16 34	2 22	4 26	0 42	15 52	1 43	19 26	15 35	15 56	16 16	10 20	0 31	4 21	
W10	7 55	11 26	5 2	16 10	2 1	7 11	1 11	23 20	1 10	2 10	1 35	16 33	2 22	4 25	0 42	15 52	1 43	19 26	15 35	16 0	16 17	10 22	0 30	4 21	
T 11	8 17	14 34	4 58	16 47	2 10	6 46	1 13	23 25	1 10	2 12	1 35	16 32	2 22	4 24	0 42	15 53	1 43	19 26	15 34	16 3	16 18	10 24	0 28	4 21	
F 12	8 39	17 7	4 40	17 22	2 18	6 20	1 16	23 31	1 11	2 15	1 35	16 31	2 23	4 23	0 42	15 53	1 43	19 27	15 34	16 6	16 19	10 26	0 27	4 21	
S 13	9 1	18 58	4 10	17 54	2 26	5 54	1 18	23 36	1 11	2 17	1 35	16 30	2 23	4 22	0 42	15 54	1 43	19 27	15 34	16 8	16 20	10 28	0 26	4 21	
S 14	9 23	19 59	3 28	18 24	2 32	5 27	1 20	23 40	1 11	2 20	1 35	16 29	2 23	4 21	0 42	15 54	1 43	19 27	15 34	16 10	16 21	10 30	0 24	4 21	
M15	9 44	20 4	2 37	18 51	2 38	5 1	1 22	23 45	1 11	2 22	1 35	16 28	2 23	4 20	0 42	15 55	1 43	19 27	15 33	16 11	16 22	10 32	0 23	4 21	
T 16	10 6	19 11	1 37	19 14	2 43	4 34	1 23	23 50	1 11	2 24	1 35	16 27	2 23	4 19	0 42	15 56	1 42	19 28	15 33	16 11	16 23	10 34	0 22	4 21	
W17	10 27	17 17	0 30	19 36	2 47	4 7	1 25	23 54	1 11	2 27	1 34	16 26	2 23	4 18	0 42	15 56	1 42	19 28	15 33	16 11	16 23	10 36	0 20	4 21	
T 18	10 48	14 25	0n41	19 54	2 49	3 40	1 27	23 58	1 12	2 29	1 34	16 25	2 23	4 17	0 42	15 57	1 42	19 28	15 33	16 11	16 24	10 38	0 19	4 21	
F 19	11 9	10 39	1 51	20 10	2 51	3 13	1 28	24 2	1 12	2 31	1 34	16 24	2 23	4 16	0 42	15 57	1 42	19 28	15 32	16 11	16 25	10 40	0 18	4 22	
S 20	11 29	6 10	2 57	20 22	2 52	2 46	1 30	24 6	1 12	2 33	1 34	16 23	2 23	4 15	0 42	15 58	1 42	19 29	15 32	16 12	16 26	10 42	0 16	4 22	
S 21	11 50	1 10	3 53	20 32	2 51	2 19	1 31	24 9	1 12	2 35	1 34	16 22	2 23	4 14	0 42	15 59	1 42	19 29	15 32	16 14	16 27	10 44	0 15	4 22	
M22	12 10	4s 0	4 35	20 40	2 50	1 51	1 33	24 13	1 12	2 37	1 34	16 21	2 23	4 13	0 42	15 59	1 42	19 29	15 31	16 17	16 28	10 45	0 14	4 22	
T 23	12 30	8 59	4 57	20 44	2 47	1 24	1 34	24 16	1 12	2 39	1 33	16 20	2 23	4 12	0 42	16 0	1 42	19 29	15 31	16 20	16 29	10 47	0 13	4 22	
W24	12 50	13 25	4 59	20 46	2 43	0 56	1 35	24 19	1 12	2 41	1 33	16 19	2 23	4 11	0 42	16 0	1 42	19 29	15 31	16 23	16 30	10 49	0 11	4 22	
T 25	13 10	16 54	4 39	20 45	2 37	0 28	1 36	24 22	1 13	2 43	1 33	16 18	2 23	4 11	0 42	16 1	1 42	19 29	15 31	16 26	16 31	10 51	0 10	4 22	
F 26	13 29	19 13	4 1	20 41	2 31	0 1	1 37	24 25	1 13	2 44	1 33	16 17	2 24	4 10	0 42	16 2	1 42	19 29	15 30	16 28	16 32	10 53	0 9	4 22	
S 27	13 48	20 12	3 8	20 35	2 23	0n27	1 38	24 27	1 13	2 46	1 33	16 16	2 24	4 9	0 42	16 2	1 42	19 29	15 30	16 30	16 33	10 55	0 8	4 22	
S 28	14 7	19 54	2 5	20 26	2 14	0 55	1 39	24 29	1 13	2 48	1 32	16 15	2 24	4 8	0 42	16 3	1 42	19 29	15 30	16 30	16 34	10 57	0 7	4 22	
M29	14 26	18 28	0 58	20 14	2 4	1 23	1 40	24 32	1 13	2 49	1 32	16 14	2 24	4 7	0 42	16 3	1 42	19 29	15 29	16 31	16 35	10 59	0 5	4 23	
T 30	14n45	16s 4	0s11	20n 0	1n52	1n51	1s41	24n33	1n13	2n51	1n32	16s13	2n24	4s 6	0n42	16n 4	1s42	19n29	15n29	16n31	16n35	11n 1	0s 4	4n23	

ASTRODIENST EPHEMERIS for the year 1720  
geocentric

MAY 1720

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Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
W 1	14 36 11	10♈40'58	29♎15	21°R21	9°Y43	24♊40	26°R20	22°R50	11°R57	19♈49	16°R37	14°R29	14♎9	13♈41	19♈43	W 1
T 2	14 40 8	11°39'04	11♈40	21♈1	10°56	25°18	26♎16	22♎46	11♈55	19°51	16♎36	14♎27	14°6	13°47	19°45	T 2
F 3	14 44 4	12°37'08	23°52	20°37	12°8	25°56	26°13	22°41	11°53	19°54	16°35	14°22	14°3	13°54	19°48	F 3
S 4	14 48 1	13°35'10	5°Y55	20°10	13°20	26°34	26°9	22°37	11°51	19°56	16°34	14°15	14°0	14°1	19°50	S 4
S 5	14 51 57	14°33'11	17°53	19°40	14°32	27°12	26°6	22°33	11°49	19°58	16°34	14°5	13°56	14°7	19°53	S 5
M 6	14 55 54	15°31'11	29°47	19°7	15°45	27°50	26°3	22°28	11°47	20°0	16°33	13°52	13°53	14°14	19°56	M 6
T 7	14 59 50	16°29'09	11♈39	18°33	16°57	28°28	26°0	22°24	11°45	20°3	16°32	13°38	13°50	14°21	19°58	T 7
W 8	15 3 47	17°27'06	23°31	17°58	18°9	29°5	25°57	22°19	11°43	20°5	16°32	13°24	13°47	14°28	20°0	W 8
T 9	15 7 43	18°25'01	5♊24	17°22	19°22	29°43	25°55	22°15	11°41	20°7	16°31	13°11	13°44	14°34	20°3	T 9
F 10	15 11 40	19°22'54	17°20	16°46	20°34	0♈21	25°52	22°10	11°39	20°9	16°31	12°59	13°41	14°41	20°5	F 10
S 11	15 15 37	20°20'46	29°20	16°11	21°46	0°59	25°50	22°6	11°37	20°12	16°30	12°50	13°37	14°48	20°7	S 11
S 12	15 19 33	21°18'36	11♈28	15°37	22°59	1°37	25°48	22°1	11°35	20°14	16°30	12°44	13°34	14°55	20°10	S 12
M13	15 23 30	22°16'25	23°46	15°5	24°11	2°15	25°46	21°57	11°34	20°16	16°29	12°41	13°31	15°1	20°12	M13
T 14	15 27 26	23°14'12	6♎18	14°36	25°24	2°53	25°45	21°52	11°32	20°18	16°29	12°40	13°28	15°8	20°14	T 14
W15	15 31 23	24°11'57	19°8	14°9	26°36	3°31	25°43	21°48	11°30	20°21	16°28	12°40	13°25	15°15	20°16	W15
T 16	15 35 19	25°9'40	2♎20	13°46	27°48	4°9	25°42	21°43	11°29	20°23	16°28	12°40	13°21	15°21	20°18	T 16
F 17	15 39 16	26°7'22	15°58	13°26	29°1	4°46	25°41	21°39	11°27	20°25	16°28	12°38	13°18	15°28	20°20	F 17
S 18	15 43 12	27°5'02	0♈4	13°11	0♈13	5°24	25°40	21°35	11°25	20°27	16°27	12°35	13°15	15°35	20°22	S 18
S 19	15 47 9	28°2'41	14°37	12°59	1°26	6°2	25°39	21°30	11°24	20°30	16°27	12°29	13°12	15°42	20°24	S 19
M20	15 51 6	29°0'18	29°34	12°52	2°38	6°40	25°38	21°26	11°22	20°32	16°27	12°21	13°9	15°48	20°26	M20
T 21	15 55 2	29°57'54	14♎46	12°D49	3°51	7°18	25°38	21°21	11°21	20°34	16°27	12°12	13°6	15°55	20°28	T 21
W22	15 58 59	0♊55'28	0♈4	12°50	5°3	7°56	25°38	21°17	11°20	20°36	16°26	12°2	13°2	16°2	20°29	W22
T 23	16 2 55	1°53'02	15°17	12°57	6°16	8°33	25°D38	21°13	11°18	20°39	16°26	11°52	12°59	16°8	20°31	T 23
F 24	16 6 52	2°50'34	0♈13	13°7	7°28	9°11	25°38	21°8	11°17	20°41	16°26	11°45	12°56	16°15	20°33	F 24
S 25	16 10 48	3°48'05	14°46	13°22	8°41	9°49	25°38	21°4	11°16	20°43	16°26	11°40	12°53	16°22	20°34	S 25
S 26	16 14 45	4°45'35	28°51	13°42	9°53	10°27	25°39	21°0	11°14	20°45	16°26	11°37	12°50	16°29	20°36	S 26
M27	16 18 41	5°43'05	12♎26	14°6	11°6	11°5	25°40	20°55	11°13	20°47	16°D26	11°D37	12°47	16°35	20°37	M27
T 28	16 22 38	6°40'34	25°34	14°34	12°19	11°42	25°40	20°51	11°12	20°50	16°26	11°37	12°43	16°42	20°39	T 28
W29	16 26 35	7°38'01	8♈18	15°6	13°31	12°20	25°42	20°47	11°11	20°52	16°26	11°R38	12°40	16°49	20°40	W29
T 30	16 30 31	8°35'29	20°43	15°42	14°44	12°58	25°43	20°43	11°10	20°54	16°26	11°37	12°37	16°56	20°42	T 30
F 31	16 34 28	9♊32'55	2°Y54	16♈23	15♈57	13♈36	25♎44	20♎39	11♈9	20♈56	16♎26	11♎34	12♎34	17♈2	20♈43	F 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
W 1	15n 3	12s57	1s17	19n44	1n40	2n18	1s41	24n35	1n13	2n52	1n32	16s11	2n24	4s 5	0n42	16n 5	1s42	19n29	15n29	16n31	16n36	11n 3	0s 3	4n23
T 2	15 21	9 20	2 18	19 25	1 26	2 46	1 42	24 37	1 13	2 53	1 32	16 10	2 24	4 5	0 42	16 5	1 42	19 29	15 28	16 31	16 37	11 5	0 2	4 23
F 3	15 39	5 22	3 12	19 5	1 12	3 14	1 42	24 38	1 13	2 54	1 31	16 9	2 24	4 4	0 42	16 6	1 42	19 29	15 28	16 33	16 38	11 7	0 1	4 23
S 4	15 56	1 15	3 56	18 43	0 56	3 42	1 43	24 39	1 14	2 56	1 31	16 8	2 24	4 3	0 42	16 6	1 42	19 29	15 28	16 35	16 39	11 9	0n 0	4 23
S 5	16 14	2n52	4 29	18 19	0 40	4 9	1 43	24 40	1 14	2 57	1 31	16 7	2 24	4 2	0 42	16 7	1 42	19 29	15 27	16 38	16 40	11 11	0 2	4 23
M 6	16 31	6 52	4 51	17 54	0 23	4 37	1 43	24 41	1 14	2 58	1 31	16 6	2 24	4 1	0 42	16 8	1 42	19 29	15 27	16 41	16 41	11 13	0 3	4 24
T 7	16 47	10 36	4 59	17 28	0 6	5 5	1 43	24 42	1 14	2 59	1 31	16 5	2 24	4 1	0 42	16 8	1 42	19 29	15 26	16 45	16 42	11 15	0 4	4 24
W 8	17 4	13 55	4 55	17 2	0s11	5 32	1 43	24 42	1 14	3 0	1 30	16 4	2 24	4 0	0 42	16 9	1 42	19 29	15 26	16 49	16 43	11 17	0 5	4 24
T 9	17 20	16 41	4 38	16 35	0 29	6 0	1 43	24 42	1 14	3 0	1 30	16 3	2 24	3 59	0 42	16 9	1 42	19 29	15 26	16 53	16 44	11 19	0 6	4 24
F 10	17 36	18 45	4 8	16 8	0 46	6 27	1 43	24 42	1 14	3 1	1 30	16 1	2 24	3 59	0 42	16 10	1 42	19 29	15 25	16 56	16 45	11 21	0 7	4 24
S 11	17 52	20 1	3 27	15 42	1 3	6 54	1 43	24 42	1 14	3 2	1 30	16 0	2 24	3 58	0 42	16 11	1 42	19 29	15 25	16 59	16 46	11 23	0 8	4 24
S 12	18 7	20 22	2 37	15 16	1 20	7 21	1 43	24 42	1 14	3 2	1 29	15 59	2 24	3 57	0 42	16 11	1 42	19 29	15 25	17 1	16 46	11 25	0 9	4 24
M13	18 22	19 46	1 38	14 51	1 36	7 48	1 43	24 41	1 14	3 3	1 29	15 58	2 23	3 57	0 41	16 12	1 42	19 28	15 24	17 2	16 47	11 27	0 10	4 25
T 14	18 37	18 11	0 34	14 27	1 52	8 15	1 42	24 41	1 14	3 3	1 29	15 57	2 23	3 56	0 41	16 12	1 42	19 28	15 24	17 2	16 48	11 29	0 11	4 25
W15	18 51	15 39	0n34	14 5	2 7	8 41	1 42	24 40	1 14	3 4	1 29	15 56	2 23	3 55	0 41	16 13	1 42	19 28	15 23	17 2	16 49	11 30	0 12	4 25
T 16	19 5	12 15	1 42	13 45	2 21	9 8	1 41	24 39	1 14	3 4	1 29	15 55	2 23	3 55	0 41	16 14	1 42	19 28	15 23	17 2	16 50	11 32	0 13	4 25
F 17	19 19	8 6	2 47	13 27	2 34	9 34	1 41	24 38	1 14	3 4	1 28	15 54	2 23	3 54	0 41	16 14	1 42	19 27	15 23	17 2	16 51	11 34	0 14	4 25
S 18	19 32	3 23	3 43	13 11	2 46	10 0	1 40	24 36	1 14	3 4	1 28	15 53	2 23	3 53	0 41	16 15	1 42	19 27	15 22	17 3	16 52	11 36	0 15	4 25
S 19	19 45	1s40	4 27	12 57	2 57	10 26	1 39	24 35	1 14	3 4	1 28	15 52	2 23	3 53	0 41	16 15	1 42	19 27	15 22	17 5	16 53	11 38	0 16	4 26
M20	19 58	6 44	4 54	12 45	3 7	10 52	1 38	24 33	1 14	3 4	1 28	15 51	2 23	3 52	0 41	16 16	1 42	19 27	15 21	17 7	16 54	11 40	0 16	4 26
T 21	20 10	11 29	5 1	12 36	3 16	11 17	1 38	24 31	1 14	3 4	1 27	15 50	2 23	3 52	0 41	16 17	1 42	19 26	15 21	17 10	16 55	11 42	0 17	4 26
W22	20 22	15 31	4 47	12 29	3 24	11 42	1 37	24 29	1 14	3 4	1 27	15 48	2 23	3 51	0 41	16 17	1 42	19 26	15 21	17 13	16 56	11 44	0 18	4 26
T 23	20 34	18 29	4 12	12 24	3 30	12 7	1 36	24 26	1 15	3 4	1 27	15 47	2 23	3 51	0 41	16 18	1 42	19 26	15 20	17 15	16 56	11 46	0 19	4 26
F 24	20 45	20 7	3 21	12 22	3 36	12 32	1 35	24 24	1 15	3 4	1 27	15 46	2 23	3 50	0 41	16 18	1 42	19 25	15 20	17 17	16 57	11 48	0 20	4 26
S 25	20 56	20 23	2 18	12 22	3 40	12 56	1 33	24 21	1 15	3 3	1 26	15 45	2 23	3 50	0 41	16 19	1 42	19 25	15 19	17 19	16 58	11 50	0 21	4 27
S 26	21 7	19 19	1 7	12 25	3 44	13 20	1 32	24 18	1 15	3 3	1 26	15 44	2 22	3 49	0 41	16 19	1 42	19 25	15 19	17 19	16 59	11 52	0 21	4 27
M27	21 17	17 10	0s 4	12 30	3 46	13 44	1 31	24 15	1 15	3 2	1 26	15 43	2 22	3 49	0 41	16 20	1 42	19 24	15 18	17 20	17 0	11 54	0 22	4 27
T 28	21 27	14 10	1 14	12 36	3 47	14 8	1 30	24 12	1 15	3 2	1 26	15 42	2 22	3 49	0 41	16 21	1 42	19 24	15 18	17 19	17 1	11 56	0 23	4 27
W29	21 37	10 35	2 17	12 45	3 48	14 31	1 28	24 8	1 15	3 1	1 25	15 41	2 22	3 48	0 41	16 21	1 42	19 24	15 18	17 19	17 2	11 58	0 24	4 27
T 30	21 46	6 38	3 13	12 56	3 48	14 54	1 27	24 5	1 15	3 0	1 25	15 40	2 22	3 48	0 41	16 22	1 42	19 23	15 17	17 20	17 3	12 0	0 24	4 27
F 31	21n55	2s29	3s58	13n 9	3s46	15n16	1s25	24n 1	1n15	3n 0	1n25	15s39	2n22	3s48	0n41	16n22	1s42	19n23	15n17	17n20	17n 4	12n 1	0n25	4n28

# ASTRODIENST EPHEMERIS for the year 1720

## geocentric

JUNE 1720

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	16 38 24	10 <sup>II</sup> 30'21	14 <sup>V</sup> 54	17 <sup>III</sup> 7	17 <sup>III</sup> 9	14 <sup>III</sup> 13	25 <sup>III</sup> 46	20°R35	11°R 8	20 <sup>III</sup> 58	16 <sup>III</sup> 26	11°R29	12 <sup>III</sup> 31	17 <sup>III</sup> 9	20 <sup>III</sup> 44	S 1
S 2	16 42 21	11°27'46	26°48	17°55	18°22	14°51	25°47	20 <sup>III</sup> 30	11 <sup>III</sup> 7	21° 0	16°26	11 <sup>III</sup> 22	12°27	17°16	20°45	S 2
M 3	16 46 17	12°25'10	8 <sup>III</sup> 39	18°47	19°35	15°29	25°49	20°26	11° 7	21° 3	16°27	11°13	12°24	17°22	20°47	M 3
T 4	16 50 14	13°22'33	20°31	19°43	20°47	16° 7	25°52	20°23	11° 6	21° 5	16°27	11° 2	12°21	17°29	20°48	T 4
W 5	16 54 10	14°19'56	2 <sup>II</sup> 25	20°42	22° 0	16°44	25°54	20°19	11° 5	21° 7	16°27	10°51	12°18	17°36	20°49	W 5
T 6	16 58 7	15°17'19	14°22	21°44	23°13	17°22	25°56	20°15	11° 4	21° 9	16°27	10°41	12°15	17°43	20°50	T 6
F 7	17 2 4	16°14'40	26°25	22°50	24°26	18° 0	25°59	20°11	11° 4	21°11	16°28	10°32	12°12	17°49	20°51	F 7
S 8	17 6 0	17°12'01	8 <sup>III</sup> 35	23°59	25°38	18°38	26° 2	20° 7	11° 3	21°13	16°28	10°26	12° 8	17°56	20°52	S 8
S 9	17 9 57	18° 9'21	20°53	25°12	26°51	19°16	26° 5	20° 4	11° 3	21°15	16°29	10°22	12° 5	18° 3	20°52	S 9
M10	17 13 53	19° 6'40	3 <sup>II</sup> 21	26°28	28° 4	19°53	26° 8	20° 0	11° 2	21°17	16°29	10°20	12° 2	18°10	20°53	M10
T 11	17 17 50	20° 3'58	16° 2	27°47	29°17	20°31	26°11	19°56	11° 2	21°19	16°29	10°D20	11°59	18°16	20°54	T 11
W12	17 21 46	21° 1'15	28°59	29° 9	0 <sup>II</sup> 30	21° 9	26°15	19°53	11° 1	21°21	16°30	10°20	11°56	18°23	20°55	W12
T 13	17 25 43	21°58'32	12 <sup>III</sup> 13	0 <sup>II</sup> 34	1°43	21°47	26°18	19°49	11° 1	21°23	16°30	10°22	11°52	18°30	20°55	T 13
F 14	17 29 39	22°55'48	25°48	2° 3	2°55	22°24	26°22	19°46	11° 1	21°25	16°31	10°R22	11°49	18°36	20°56	F 14
S 15	17 33 36	23°53'02	9 <sup>III</sup> 46	3°34	4° 8	23° 2	26°26	19°43	11° 1	21°27	16°31	10°21	11°46	18°43	20°56	S 15
S 16	17 37 33	24°50'16	24° 6	5° 9	5° 21	23°40	26°30	19°39	11° 0	21°29	16°32	10°18	11°43	18°50	20°57	S 16
M17	17 41 29	25°47'30	8 <sup>III</sup> 45	6°46	6°34	24°18	26°34	19°36	11° 0	21°31	16°33	10°13	11°40	18°57	20°57	M17
T 18	17 45 26	26°44'42	23°40	8°27	7°47	24°55	26°39	19°33	11°D 0	21°33	16°33	10° 7	11°37	19° 3	20°58	T 18
W19	17 49 22	27°41'54	8 <sup>III</sup> 41	10°10	9° 0	25°33	26°43	19°30	11° 0	21°35	16°34	10° 1	11°33	19°10	20°58	W19
T 20	17 53 19	28°39'06	23°40	11°57	10°13	26°11	26°48	19°27	11° 0	21°37	16°35	9°55	11°30	19°17	20°58	T 20
F 21	17 57 15	29°36'18	8 <sup>III</sup> 29	13°46	11°26	26°48	26°53	19°24	11° 0	21°39	16°36	9°51	11°27	19°23	20°58	F 21
S 22	18 1 12	0 <sup>III</sup> 33'29	22°58	15°38	12°39	27°26	26°58	19°21	11° 1	21°40	16°36	9°48	11°24	19°30	20°58	S 22
S 23	18 5 9	1°30'40	7 <sup>III</sup> 4	17°33	13°52	28° 4	27° 3	19°19	11° 1	21°42	16°37	9°D47	11°21	19°37	20°58	S 23
M24	18 9 5	2°27'51	20°43	19°30	15° 5	28°42	27° 9	19°16	11° 1	21°44	16°38	9°47	11°18	19°44	20°R58	M24
T 25	18 13 2	3°25'02	3 <sup>III</sup> 55	21°29	16°18	29°19	27°14	19°13	11° 1	21°46	16°39	9°48	11°14	19°50	20°58	T 25
W26	18 16 58	4°22'12	16°44	23°31	17°31	29°57	27°20	19°11	11° 2	21°48	16°40	9°50	11°11	19°57	20°58	W26
T 27	18 20 55	5°19'24	29°13	25°34	18°44	0 <sup>II</sup> 35	27°26	19° 8	11° 2	21°49	16°41	9°51	11° 8	20° 4	20°58	T 27
F 28	18 24 51	6°16'35	11 <sup>III</sup> 25	27°40	19°58	1°13	27°31	19° 6	11° 3	21°51	16°42	9°R51	11° 5	20°11	20°58	F 28
S 29	18 28 48	7°13'46	23°26	29°47	21°11	1°50	27°38	19° 4	11° 3	21°53	16°43	9°50	11° 2	20°17	20°58	S 29
S 30	18 32 44	8 <sup>III</sup> 10'58	5 <sup>III</sup> 21	1 <sup>III</sup> 55	22 <sup>II</sup> 24	2 <sup>II</sup> 28	27 <sup>III</sup> 44	19 <sup>III</sup> 2	11 <sup>III</sup> 4	21 <sup>III</sup> 55	16 <sup>III</sup> 44	9 <sup>III</sup> 47	10 <sup>III</sup> 58	20 <sup>III</sup> 24	20 <sup>III</sup> 57	S 30

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	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	
S 1	22n 3	1n41 4s32	13n23 3s44	15n38 1s24	23n57 1n15	2n59 1n25	15s38 2n22	3s47 0n41	16n23 1s42	19n22 15n16	17n22 17n 5	12n 3 0n26	4n28			
S 2	22 11 5 46	4 54 13 39	3 41 16 0	1 22 23 53	1 14 2 58	1 24 15 38	2 22 3 47	0 41 16 23	1 42 19 22	15 16 17 24	17 5 12 5	0 26 4 28				
M 3	22 19 9 37	5 4 13 57	3 37 16 21	1 21 23 48	1 14 2 57	1 24 15 37	2 22 3 47	0 41 16 24	1 42 19 21	15 15 17 26	17 6 12 7	0 27 4 28				
T 4	22 26 13 5	5 0 14 16	3 33 16 42	1 19 23 44	1 14 2 56	1 24 15 36	2 21 3 46	0 41 16 24	1 42 19 21	15 15 17 32	17 7 12 9	0 28 4 28				
W 5	22 33 16 3	4 43 14 37	3 28 17 3	1 17 23 39	1 14 2 55	1 24 15 35	2 21 3 46	0 41 16 25	1 42 19 20	15 15 17 39	17 8 12 11	0 28 4 29				
T 6	22 40 18 21	4 14 14 58	3 22 17 23	1 15 23 34	1 14 2 54	1 23 15 34	2 21 3 46	0 41 16 26	1 42 19 20	15 14 17 35	17 9 12 13	0 29 4 29				
F 7	22 46 19 53	3 33 15 21	3 15 17 43	1 14 23 29	1 14 2 52	1 23 15 33	2 21 3 46	0 41 16 26	1 42 19 19	15 14 17 37	17 10 12 15	0 29 4 29				
S 8	22 51 20 30	2 42 15 45	3 8 18 2	1 12 23 24	1 14 2 51	1 23 15 32	2 21 3 45	0 41 16 27	1 42 19 19	15 13 17 39	17 11 12 17	0 30 4 29				
S 9	22 57 20 10	1 43 16 10	3 1 18 21	1 10 23 19	1 14 2 50	1 23 15 31	2 21 3 45	0 40 16 27	1 42 19 18	15 13 17 40	17 12 12 19	0 30 4 29				
M10	23 2 18 50	0 37 16 36	2 52 18 39	1 8 23 13	1 14 2 48	1 22 15 31	2 20 3 45	0 40 16 28	1 42 19 18	15 12 17 41	17 13 12 21	0 31 4 30				
T 11	23 6 16 32	0n31 17 2	2 44 18 57	1 6 23 8	1 14 2 47	1 22 15 30	2 20 3 45	0 40 16 28	1 42 19 17	15 12 17 41	17 13 12 23	0 31 4 30				
W12	23 10 13 23	1 39 17 29	2 35 19 15	1 4 23 2	1 14 2 45	1 22 15 29	2 20 3 45	0 40 16 29	1 42 19 17	15 12 17 40	17 14 12 24	0 32 4 30				
T 13	23 14 9 30	2 43 17 56	2 25 19 32	1 2 22 56	1 14 2 43	1 22 15 28	2 20 3 45	0 40 16 29	1 43 19 16	15 11 17 40	17 15 12 26	0 32 4 30				
F 14	23 17 5 2	3 40 18 24	2 15 19 48	1 0 22 50	1 14 2 42	1 21 15 28	2 20 3 45	0 40 16 30	1 43 19 15	15 11 17 40	17 16 12 28	0 33 4 30				
S 15	23 20 0 12	4 26 18 52	2 4 20 4	0 57 22 43	1 14 2 40	1 21 15 27	2 20 3 45	0 40 16 30	1 43 19 15	15 10 17 40	17 17 12 30	0 33 4 31				
S 16	23 22 4s46	4 56 19 19	1 54 20 19	0 55 22 37	1 14 2 38	1 21 15 26	2 19 3 45	0 40 16 31	1 43 19 14	15 10 17 41	17 18 12 32	0 33 4 31				
M17	23 24 9 34	5 8 19 47	1 43 20 34	0 53 22 30	1 14 2 36	1 21 15 26	2 19 3 45	0 40 16 31	1 43 19 14	15 10 17 42	17 19 12 34	0 34 4 31				
T 18	23 26 13 52	5 0 20 14	1 31 20 48	0 51 22 23	1 14 2 34	1 21 15 25	2 19 3 45	0 40 16 31	1 43 19 13	15 9 17 44	17 20 12 36	0 34 4 31				
W19	23 27 17 19	4 31 20 41	1 20 21 2	0 48 22 16	1 14 2 32	1 20 15 24	2 19 3 45	0 40 16 32	1 43 19 12	15 9 17 46	17 20 12 38	0 34 4 31				
T 20	23 28 19 36	3 44 21 8	1 8 21 15	0 46 22 9	1 14 2 30	1 20 15 24	2 19 3 45	0 40 16 32	1 43 19 12	15 8 17 47	17 21 12 40	0 34 4 32				
F 21	23 28 20 31	2 42 21 33	0 57 21 28	0 44 22 2	1 14 2 28	1 20 15 23	2 18 3 45	0 40 16 33	1 43 19 11	15 8 17 48	17 22 12 42	0 35 4 32				
S 22	23 28 20 2	1 30 21 57	0 45 21 40	0 41 21 54	1 14 2 25	1 20 15 23	2 18 3 45	0 40 16 33	1 43 19 10	15 7 17 49	17 23 12 43	0 35 4 32				
S 23	23 28 18 18	0 15 22 21	0 33 21 51	0 39 21 47	1 13 2 23	1 19 15 22	2 18 3 45	0 40 16 34	1 43 19 10	15 7 17 50	17 24 12 45	0 35 4 32				
M24	23 27 15 33	0s59 22 42	0 21 22 2	0 37 21 39	1 13 2 21	1 19 15 21	2 18 3 45	0 40 16 34	1 43 19 9	15 7 17 49	17 25 12 47	0 35 4 32				
T 25	23 26 12 4	2 8 23 2	0 10 22 12	0 34 21 31	1 13 2 18	1 19 15 21	2 18 3 45	0 40 16 35	1 43 19 8	15 6 17 49	17 26 12 49	0 36 4 32				
W26	23 24 8 7	3 8 23 20	0n 2 22 21	0 32 21 23	1 13 2 16	1 19 15 21	2 17 3 46	0 40 16 35	1 43 19 7	15 6 17 49	17 27 12 51	0 36 4 33				
T 27	23 22 3 56	3 57 23 37	0 13 22 30	0 29 21 15	1 13 2 13	1 18 15 20	2 17 3 46	0 40 16 35	1 43 19 7	15 5 17 48	17 28 12 53	0 36 4 33				
F 28	23 19 0n19	4 35 23 50	0 23 22 39	0 27 21 6	1 13 2 11	1 18 15 20	2 17 3 46	0 40 16 36	1 43 19 6	15 5 17 48	17 28 12 55	0 36 4 33				
S 29	23 17 4 29	4 59 24 2	0 34 22 46	0 25 20 58	1 13 2 8	1 18 15 19	2 17 3 46	0 40 16 36	1 43 19 5	15 5 17 49	17 29 12 57	0 36 4 33				
S 30	23n13 8n26	5s11 24n11	0n43 22n53	0s22 20n49	1n13 2n 6	1n18 15s19	2n16 3s47	0n40 16n37	1s43 19n 5	15n 4 17n49	17n30 12n59	0n36 4n33				

Julian Day Number = 2349428.5, Delta T = 10.47 sec  
 Ecliptic obliquity = 23°28'26", Nutation = - 0°00'14", out-of-bounds declination in red  
 Ayanamsha: Fagan/Bradley = 20°50'14",



ASTRODIENST EPHEMERIS for the year 1720  
geocentric

JULY 1720

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
M 1	18 36 41	9°58' 8"10	17°18' 13"	4°58' 4"	23°11' 37"	3°02' 6"	27°10' 50"	19°R 0	11°11' 4"	21°18' 56"	16°10' 45"	9°R 43	10°02' 55"	20°08' 31"	20°R 57	M 1
T 2	18 40 37	10° 5'22"	29° 6'	6°14'	24°50'	3°44'	27°57'	18°11' 58"	11° 5'	21°58'	16°46'	9°02' 39"	10°52'	20°37'	20°11' 57"	T 2
W 3	18 44 34	11° 2'34"	11°11' 3"	8°24'	26° 4'	4°21'	28° 3'	18°56'	11° 6'	22° 0'	16°47'	9°34'	10°49'	20°44'	20°56'	W 3
T 4	18 48 31	11°59' 47"	23° 7'	10°34'	27°17'	4°59'	28°10'	18°54'	11° 7'	22° 1'	16°48'	9°29'	10°46'	20°51'	20°56'	T 4
F 5	18 52 27	12°57' 00"	5°58' 20"	12°43'	28°30'	5°37'	28°17'	18°52'	11° 7'	22° 3'	16°49'	9°25'	10°43'	20°58'	20°55'	F 5
S 6	18 56 24	13°54' 13"	17°42'	14°53'	29°44'	6°15'	28°24'	18°51'	11° 8'	22° 4'	16°50'	9°22'	10°39'	21° 4'	20°54'	S 6
S 7	19 0 20	14°51' 27"	0°02' 16"	17° 2'	0°58' 57"	6°52'	28°31'	18°49'	11° 9'	22° 6'	16°52'	9°21'	10°36'	21°11'	20°54'	S 7
M 8	19 4 17	15°48' 40"	13° 2'	19° 9'	2°10'	7°30'	28°38'	18°47'	11°10'	22° 7'	16°53'	9°D 21	10°33'	21°18'	20°53'	M 8
T 9	19 8 13	16°45' 54"	26° 0'	21°16'	3°24'	8° 8'	28°46'	18°46'	11°11'	22° 9'	16°54'	9°21'	10°30'	21°24'	20°52'	T 9
W10	19 12 10	17°43' 07"	9°10' 12"	23°21'	4°37'	8°46'	28°53'	18°45'	11°12'	22°10'	16°55'	9°23'	10°27'	21°31'	20°51'	W10
T 11	19 16 7	18°40' 21"	22°39'	25°26'	5°51'	9°24'	29° 1'	18°44'	11°14'	22°12'	16°57'	9°24'	10°24'	21°38'	20°50'	T 11
F 12	19 20 3	19°37' 35"	6°12' 20"	27°28'	7° 4'	10° 1'	29° 9'	18°43'	11°15'	22°13'	16°58'	9°25'	10°20'	21°45'	20°49'	F 12
S 13	19 24 0	20°34' 48"	20°17'	29°29'	8°17'	10°39'	29°17'	18°42'	11°16'	22°14'	16°59'	9°R 25	10°17'	21°51'	20°48'	S 13
S 14	19 27 56	21°32' 02"	4°11' 28"	1°02' 28"	9°31'	11°17'	29°25'	18°41'	11°17'	22°16'	17° 1'	9°25'	10°14'	21°58'	20°47'	S 14
M15	19 31 53	22°29' 17"	18°51'	3°26'	10°44'	11°55'	29°33'	18°40'	11°19'	22°17'	17° 2'	9°24'	10°11'	22° 5'	20°46'	M15
T 16	19 35 49	23°26' 31"	3°17' 24"	5°22'	11°58'	12°33'	29°41'	18°39'	11°20'	22°18'	17° 4'	9°22'	10° 8'	22°12'	20°45'	T 16
W17	19 39 46	24°23' 46"	18° 0'	7°16'	13°12'	13°10'	29°49'	18°39'	11°22'	22°20'	17° 5'	9°20'	10° 4'	22°18'	20°44'	W17
T 18	19 43 42	25°21' 01"	2°38' 35"	9° 9'	14°25'	13°48'	29°58'	18°38'	11°23'	22°21'	17° 7'	9°19'	10° 1'	22°25'	20°42'	T 18
F 19	19 47 39	26°18' 16"	17° 2'	11° 0'	15°39'	14°26'	0°01' 6"	18°38'	11°25'	22°22'	17° 8'	9°17'	9°58'	22°32'	20°41'	F 19
S 20	19 51 36	27°15' 33"	1°11' 15"	12°49'	16°52'	15° 4'	0°15'	18°37'	11°26'	22°23'	17°10'	9°17'	9°55'	22°38'	20°40'	S 20
S 21	19 55 32	28°12' 49"	15°10'	14°36'	18° 6'	15°42'	0°24'	18°37'	11°28'	22°25'	17°11'	9°D 17	9°52'	22°45'	20°38'	S 21
M22	19 59 29	29°10' 07"	28°43'	16°21'	19°20'	16°20'	0°33'	18°37'	11°30'	22°26'	17°13'	9°17'	9°49'	22°52'	20°37'	M22
T 23	20 3 25	0°02' 72"	11°11' 55"	18° 5'	20°33'	16°57'	0°42'	18°D 37	11°31'	22°27'	17°14'	9°18'	9°45'	22°59'	20°35'	T 23
W24	20 7 22	1° 4'44"	24°45'	19°47'	21°47'	17°35'	0°51'	18°37'	11°33'	22°28'	17°16'	9°19'	9°42'	23° 5'	20°34'	W24
T 25	20 11 18	2° 2'04"	7°10' 16"	21°27'	23° 1'	18°13'	1° 0'	18°37'	11°35'	22°29'	17°18'	9°19'	9°39'	23°12'	20°32'	T 25
F 26	20 15 15	2°59' 25"	19°31'	23° 6'	24°15'	18°51'	1°10'	18°37'	11°37'	22°30'	17°19'	9°20'	9°36'	23°19'	20°31'	F 26
S 27	20 19 11	3°56' 48"	1°18' 34"	24°43'	25°28'	19°29'	1°19'	18°38'	11°39'	22°31'	17°21'	9°R 20	9°33'	23°25'	20°29'	S 27
S 28	20 23 8	4°54' 11"	13°30'	26°18'	26°42'	20° 7'	1°28'	18°38'	11°41'	22°32'	17°23'	9°20'	9°30'	23°32'	20°27'	S 28
M29	20 27 5	5°51' 36"	25°23'	27°51'	27°56'	20°45'	1°38'	18°39'	11°43'	22°33'	17°25'	9°20'	9°26'	23°39'	20°25'	M29
T 30	20 31 1	6°49' 02"	7°11' 17"	29°23'	29°10'	21°23'	1°48'	18°39'	11°45'	22°34'	17°26'	9°20'	9°23'	23°46'	20°24'	T 30
W31	20 34 58	7°02' 46"	19°11' 17"	0°10' 53"	0°02' 24"	22°02' 1"	1°58'	18°11' 40"	11°47'	22°35'	17°10' 28"	9°02' 19"	9°02' 20"	23°52'	20°11' 22"	W31

Day	☉	☽		♊		♋		♌		♍		♎		♏		♐		♑		♒	♓	♈	♉	
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	decl	decl	lat	lat
M 1	23n 9	12n 3	5s 9	24n17	0n53	23n 0	0s20	20n40	1n13	2n 3	1n18	15s19	2n16	3s47	0n40	16n37	1s43	19n 4	15n 4	17n50	17n31	13n 0	0n36	4n34
T 2	23 5	15 12	4 54	24 21	1 1	23 5	0 17	20 31	1 13	2 0	1 17	15 18	2 16	3 47	0 40	16 37	1 43	19 3	15 4	17 52	17 32	13 2	0 36	4 34
W 3	23 1	17 44	4 27	24 22	1 9	23 10	0 15	20 22	1 12	1 57	1 17	15 18	2 16	3 47	0 40	16 38	1 43	19 2	15 3	17 53	17 33	13 4	0 36	4 34
T 4	22 56	19 31	3 47	24 20	1 17	23 15	0 12	20 13	1 12	1 54	1 17	15 18	2 15	3 48	0 39	16 38	1 43	19 1	15 3	17 54	17 34	13 6	0 36	4 34
F 5	22 51	20 26	2 56	24 15	1 23	23 18	0 10	20 4	1 12	1 51	1 17	15 17	2 15	3 48	0 39	16 39	1 43	19 1	15 2	17 55	17 34	13 8	0 36	4 34
S 6	22 45	20 23	1 56	24 7	1 29	23 21	0 7	19 54	1 12	1 48	1 17	15 17	2 15	3 49	0 39	16 39	1 43	19 0	15 2	17 56	17 35	13 10	0 36	4 35
S 7	22 39	19 19	0 50	23 57	1 34	23 24	0 5	19 45	1 12	1 45	1 16	15 17	2 15	3 49	0 39	16 39	1 43	18 59	15 2	17 56	17 36	13 12	0 36	4 35
M 8	22 32	17 15	0n20	23 44	1 39	23 25	0 2	19 35	1 12	1 42	1 16	15 17	2 15	3 49	0 39	16 40	1 43	18 58	15 1	17 57	17 37	13 14	0 36	4 35
T 9	22 25	14 17	1 30	23 28	1 42	23 26	0n 0	19 25	1 12	1 39	1 16	15 17	2 14	3 50	0 39	16 40	1 43	18 57	15 1	17 56	17 38	13 16	0 35	4 35
W10	22 18	10 33	2 37	23 11	1 45	23 26	0 3	19 15	1 12	1 36	1 16	15 17	2 14	3 50	0 39	16 40	1 43	18 57	15 1	17 56	17 39	13 17	0 35	4 35
T 11	22 10	6 14	3 36	22 51	1 47	23 26	0 5	19 5	1 12	1 33	1 16	15 17	2 14	3 51	0 39	16 41	1 44	18 56	15 0	17 56	17 40	13 19	0 35	4 35
F 12	22 2	1 32	4 24	22 28	1 49	23 25	0 8	18 54	1 11	1 30	1 15	15 16	2 14	3 51	0 39	16 41	1 44	18 55	15 0	17 55	17 40	13 21	0 35	4 36
S 13	21 54	3s20	4 58	22 4	1 49	23 23	0 10	18 44	1 11	1 26	1 15	15 16	2 13	3 52	0 39	16 41	1 44	18 54	15 0	17 55	17 41	13 23	0 35	4 36
S 14	21 45	8 5	5 14	21 38	1 49	23 20	0 13	18 33	1 11	1 23	1 15	15 16	2 13	3 52	0 39	16 41	1 44	18 53	14 59	17 55	17 42	13 25	0 34	4 36
M15	21 36	12 28	5 11	21 11	1 49	23 17	0 15	18 23	1 11	1 19	1 15	15 16	2 13	3 53	0 39	16 42	1 44	18 52	14 59	17 56	17 43	13 27	0 34	4 36
T 16	21 26	16 9	4 48	20 41	1 48	23 13	0 17	18 12	1 11	1 16	1 15	15 17	2 13	3 54	0 39	16 42	1 44	18 51	14 59	17 56	17 44	13 29	0 34	4 36
W17	21 16	18 50	4 7	20 11	1 46	23 9	0 20	18 1	1 11	1 12	1 14	15 17	2 12	3 54	0 39	16 42	1 44	18 51	14 58	17 57	17 45	13 30	0 33	4 36
T 18	21 6	20 18	3 9	19 39	1 43	23 3	0 22	17 50	1 11	1 9	1 14	15 17	2 12	3 55	0 39	16 43	1 44	18 50	14 58	17 57	17 46	13 32	0 33	4 37
F 19	20 55	20 24	2 0	19 6	1 40	22 58	0 24	17 39	1 10	1 5	1 14	15 17	2 12	3 55	0 39	16 43	1 44	18 49	14 58	17 57	17 46	13 34	0 33	4 37
S 20	20 44	19 11	0 44	18 32	1 37	22 51	0 27	17 28	1 10	1 2	1 14	15 17	2 12	3 56	0 39	16 43	1 44	18 48	14 57	17 58	17 47	13 36	0 32	4 37
S 21	20 33	16 50	0s33	17 57	1 32	22 44	0 29	17 16	1 10	0 58	1 14	15 17	2 11	3 57	0 39	16 43	1 44	18 47	14 57	17 58	17 48	13 38	0 32	4 37
M22	20 21	13 35	1 46	17 21	1 28	22 36	0 31	17 5	1 10	0 54	1 13	15 17	2 11	3 57	0 39	16 44	1 44	18 46	14 57	17 57	17 49	13 40	0 31	4 37
T 23	20 9	9 44	2 51	16 45	1 23	22 27	0 33	16 53	1 10	0 51	1 13	15 18	2 11	3 58	0 39	16 44	1 44	18 45	14 56	17 57	17 50	13 42	0 31	4 37
W24	19 57	5 33	3 46	16 8	1 17	22 18	0 36	16 41	1 10	0 47	1 13	15 18	2 10	3 59	0 39	16 44	1 44	18 44	14 56	17 57	17 51	13 43	0 31	4 38
T 25	19 44	1 14	4 29	15 30	1 12	22 8	0 38	16 30	1 10	0 43	1 13	15 18	2 10	4 0	0 39	16 44	1 44	18 43	14 56	17 57	17 52	13 45	0 30	4 38
F 26	19 31	3n 3	4 58	14 52	1 5	21 57	0 40	16 18	1 9	0 39	1 13	15 19	2 10	4 0	0 39	16 44	1 44	18 42	14 56	17 57	17 52	13 47	0 29	4 38
S 27	19 18	7 7	5 14	14 13	0 59	21 46	0 42	16 6	1 9	0 35	1 13	15 19	2 10	4 1	0 39	16 45	1 44	18 42	14 55	17 57	17 53	13 49	0 29	4 38
S 28	19 4	10 53	5 16	13 35	0 52	21 34	0 44	15 53	1 9	0 31	1 12	15 19	2 9	4 2	0 39	16 45	1 44	18 41	14 55	17 57	17 54	13 51	0 28	4 38
M29	18 50	14 12	5 5	12 56	0 44	21 21	0 46	15 41	1 9	0 27	1 12	15 20	2 9	4 3	0 38	16 45	1 44	18 40	14 55	17 57	17 55	13 53	0 28	4 38
T 30	18 36	16 57	4 40	12 17	0 37	21 8	0 48	15 29	1 9	0 23	1 12	15 20	2 9	4 4	0 38	16 45	1 44	18 39	14 55	17 57	17 56	13 54	0 27	4 38
W31	18n21	19n 0	4s 3	11n37	0m29	20n55	0n50	15n16	1n 8	0n19	1n12	15s20	2n 9	4s 5	0n38	16n45	1s45	18n38	14n54	17n57	17n57	13n56	0m27	4n38



# ASTRODIENST EPHEMERIS for the year 1720

## geocentric

AUGUST 1720

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	20 38 54	8♂43'57	1♂27	2♂21	1♂38	22♂39	2♂7	18♂41	11♂49	22♂35	17♂30	9♂R19	9♂17	23♂59	20♂R20	T 1
F 2	20 42 51	9°41'26	13°48	3°47	2°52	23°17	2°17	18°42	11°51	22°36	17°32	9°D19	9°14	24°6	20♂18	F 2
S 3	20 46 47	10°38'57	26°24	5°12	4°6	23°55	2°27	18°43	11°53	22°37	17°33	9♂L19	9°10	24°12	20°16	S 3
S 4	20 50 44	11°36'28	9♂L15	6°35	5°19	24°32	2°38	18°44	11°56	22°38	17°35	9♂R19	9°7	24°19	20°14	S 4
M 5	20 54 40	12°34'01	22°23	7°56	6°33	25°10	2°48	18°45	11°58	22°38	17°37	9°19	9°4	24°26	20°12	M 5
T 6	20 58 37	13°31'35	5♂45	9°15	7°48	25°48	2°58	18°47	12°0	22°39	17°39	9°19	9°1	24°33	20°10	T 6
W 7	21 2 34	14°29'09	19°21	10°32	9°2	26°27	3°9	18°48	12°3	22°40	17°41	9°19	8°58	24°39	20°7	W 7
T 8	21 6 30	15°26'45	3♂9	11°47	10°16	27°5	3°19	18°50	12°5	22°40	17°43	9°18	8°55	24°46	20°5	T 8
F 9	21 10 27	16°24'22	17°8	13°0	11°30	27°43	3°30	18°51	12°8	22°41	17°45	9°17	8°51	24°53	20°3	F 9
S 10	21 14 23	17°21'59	1♂L14	14°11	12°44	28°21	3°40	18°53	12°10	22°41	17°47	9°17	8°48	25°0	20°1	S 10
S 11	21 18 20	18°19'38	15°26	15°20	13°58	28°59	3°51	18°55	12°13	22°42	17°49	9°D16	8°45	25°6	19°59	S 11
M12	21 22 16	19°17'17	29°40	16°27	15°12	29°37	4°2	18°57	12°15	22°42	17°51	9°16	8°42	25°13	19°56	M12
T 13	21 26 13	20°14'58	13♂55	17°31	16°26	0♂15	4°13	18°59	12°18	22°43	17°53	9°17	8°39	25°20	19°54	T 13
W14	21 30 9	21°12'40	28°7	18°33	17°40	0°53	4°24	19°1	12°21	22°43	17°55	9°18	8°36	25°26	19°51	W14
T 15	21 34 6	22°10'23	12♂14	19°32	18°55	1°31	4°35	19°3	12°23	22°44	17°57	9°19	8°32	25°33	19°49	T 15
F 16	21 38 3	23°8'07	26°14	20°28	20°9	2°9	4°46	19°5	12°26	22°44	17°59	9°20	8°29	25°40	19°47	F 16
S 17	21 41 59	24°5'52	10♂2	21°21	21°23	2°47	4°57	19°7	12°29	22°44	18°1	9°R20	8°26	25°47	19°44	S 17
S 18	21 45 56	25°3'39	23°37	22°12	22°37	3°25	5°8	19°10	12°32	22°45	18°3	9°20	8°23	25°53	19°42	S 18
M19	21 49 52	26°1'27	6♂56	22°59	23°52	4°4	5°20	19°12	12°35	22°45	18°5	9°18	8°20	26°0	19°39	M19
T 20	21 53 49	26°59'16	19°58	23°42	25°6	4°42	5°31	19°15	12°38	22°45	18°7	9°16	8°16	26°7	19°37	T 20
W21	21 57 45	27°57'07	2♂45	24°23	26°20	5°20	5°42	19°18	12°40	22°45	18°9	9°14	8°13	26°13	19°34	W21
T 22	22 1 42	28°55'00	15°11	24°59	27°35	5°58	5°54	19°21	12°43	22°45	18°11	9°11	8°10	26°20	19°31	T 22
F 23	22 5 38	29°52'54	27°26	25°31	28°49	6°36	6°5	19°23	12°46	22°46	18°13	9°8	8°7	26°27	19°29	F 23
S 24	22 9 35	0♂50'50	9♂29	25°59	0♂3	7°15	6°17	19°26	12°49	22°46	18°15	9°6	8°4	26°34	19°26	S 24
S 25	22 13 31	1°48'49	21°25	26°22	1°18	7°53	6°29	19°29	12°52	22°46	18°17	9°4	8°1	26°40	19°23	S 25
M26	22 17 28	2°46'49	3♂18	26°40	2°32	8°31	6°40	19°33	12°56	22°R46	18°20	9°D 4	7°57	26°47	19°21	M26
T 27	22 21 25	3°44'51	15°12	26°53	3°46	9°9	6°52	19°36	12°59	22°46	18°22	9°4	7°54	26°54	19°18	T 27
W28	22 25 21	4°42'54	27°12	27°1	5°1	9°48	7°4	19°39	13°2	22°46	18°24	9°5	7°51	27°0	19°15	W28
T 29	22 29 18	5°41'00	9♂24	27°R 3	6°15	10°26	7°16	19°43	13°5	22°46	18°26	9°7	7°48	27°7	19°13	T 29
F 30	22 33 14	6°39'08	21°50	26°59	7°30	11°4	7°28	19°46	13°8	22°45	18°28	9°9	7°45	27°14	19°10	F 30
S 31	22 37 11	7♂37'18	4♂35	26♂49	8♂44	11♂43	7♂40	19♂50	13♂11	22♂45	18♂30	9°R10	7♂41	27♂21	19♂7	S 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
T 1	18n 6	20n13	3s15	10n58	0n20	20n40	0n52	15n 4	1n 8	0n15	1n12	15s21	2n 8	4s 5	0n38	16n46
F 2	17 51	20 29	2 17	10 19	0 12	20 25	0 54	14 51	1 8	0 11	1 12	15 21	2 8	4 6	0 38	16 46
S 3	17 35	19 44	1 11	9 40	0 3	20 10	0 56	14 38	1 8	0 7	1 12	15 22	2 8	4 7	0 38	16 46
S 4	17 20	17 58	0 0	9 1	0s 6	19 53	0 57	14 25	1 8	0 3	1 11	15 23	2 8	4 8	0 38	16 46
M 5	17 4	15 12	1n12	8 22	0 15	19 37	0 59	14 13	1 8	0s 1	1 11	15 23	2 7	4 9	0 38	16 46
T 6	16 47	11 36	2 21	7 44	0 25	19 19	1 1	14 0	1 7	0 6	1 11	15 24	2 7	4 10	0 38	16 46
W 7	16 31	7 21	3 24	7 6	0 34	19 2	1 2	13 46	1 7	0 10	1 11	15 24	2 7	4 11	0 38	16 46
T 8	16 14	2 39	4 16	6 28	0 44	18 43	1 4	13 33	1 7	0 14	1 11	15 25	2 7	4 12	0 38	16 46
F 9	15 57	2s13	4 53	5 51	0 54	18 24	1 5	13 20	1 7	0 19	1 11	15 26	2 6	4 13	0 38	16 47
S 10	15 39	7 1	5 13	5 15	1 4	18 5	1 7	13 6	1 7	0 23	1 11	15 26	2 6	4 14	0 38	16 47
S 11	15 21	11 28	5 15	4 39	1 14	17 45	1 8	12 53	1 6	0 27	1 10	15 27	2 6	4 15	0 38	16 47
M12	15 4	15 16	4 57	4 4	1 24	17 25	1 10	12 39	1 6	0 32	1 10	15 28	2 6	4 16	0 38	16 47
T 13	14 45	18 11	4 21	3 29	1 35	17 4	1 11	12 26	1 6	0 36	1 10	15 29	2 5	4 17	0 38	16 47
W14	14 27	19 59	3 29	2 56	1 45	16 42	1 12	12 12	1 6	0 41	1 10	15 30	2 5	4 18	0 38	16 47
T 15	14 8	20 31	2 24	2 23	1 55	16 20	1 13	11 58	1 6	0 45	1 10	15 30	2 5	4 19	0 38	16 47
F 16	13 50	19 46	1 12	1 51	2 6	15 58	1 15	11 44	1 5	0 50	1 10	15 31	2 5	4 20	0 38	16 47
S 17	13 30	17 49	0s 4	1 21	2 16	15 35	1 16	11 30	1 5	0 54	1 10	15 32	2 4	4 22	0 38	16 47
S 18	13 11	14 54	1 18	0 52	2 26	15 12	1 17	11 16	1 5	0 59	1 10	15 33	2 4	4 23	0 38	16 47
M19	12 52	11 15	2 26	0 24	2 37	14 49	1 18	11 2	1 5	1 3	1 9	15 34	2 4	4 24	0 38	16 47
T 20	12 32	7 8	3 26	0s 3	2 47	14 25	1 19	10 48	1 4	1 8	1 9	15 35	2 4	4 25	0 38	16 47
W21	12 12	2 48	4 13	0 28	2 57	14 0	1 19	10 34	1 4	1 13	1 9	15 36	2 3	4 26	0 38	16 47
T 22	11 52	1n34	4 48	0 51	3 6	13 35	1 20	10 20	1 4	1 17	1 9	15 37	2 3	4 27	0 38	16 47
F 23	11 32	5 47	5 8	1 12	3 16	13 10	1 21	10 5	1 4	1 22	1 9	15 38	2 3	4 28	0 38	16 47
S 24	11 11	9 42	5 15	1 32	3 25	12 45	1 22	9 51	1 4	1 27	1 9	15 39	2 3	4 30	0 38	16 47
S 25	10 51	13 12	5 7	1 49	3 33	12 19	1 22	9 36	1 3	1 31	1 9	15 40	2 2	4 31	0 38	16 47
M26	10 30	16 9	4 47	2 4	3 42	11 52	1 23	9 22	1 3	1 36	1 9	15 41	2 2	4 32	0 38	16 47
T 27	10 9	18 26	4 14	2 16	3 49	11 26	1 23	9 7	1 3	1 41	1 9	15 42	2 2	4 33	0 38	16 47
W28	9 48	19 56	3 30	2 26	3 56	10 59	1 24	8 52	1 3	1 46	1 8	15 43	2 2	4 35	0 38	16 47
T 29	9 26	20 33	2 36	2 32	4 3	10 32	1 24	8 38	1 2	1 51	1 8	15 44	2 1	4 36	0 38	16 47
F 30	9 5	20 10	1 34	2 36	4 8	10 4	1 24	8 23	1 2	1 55	1 8	15 45	2 1	4 37	0 37	16 47
S 31	8n43	18n44	0s25	2s36	4s13	9n37	1n25	8n 8	1n 2	2s 0	1n 8	15s47	2n 1	4s38	0n37	16n46

Julian Day Number = 2349489.5, Delta T = 10.47 sec  
 Ecliptic obliquity = 23°28'26", Nutation = - 0°00'12", out-of-bounds declination in red  
 Ayanamsha: Fagan/Bradley = 20°50'23", Lahiri = 19°57'23"Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1720

## geocentric

SEPTEMBER 1720

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	22 41 7	8♍35'29	17♌41	26°R32	9♍59	12♍21	7♌52	19♍53	13♌15	22°R45	18♍32	9°R 9	7♌38	27♌27	19°R 4	S 1
M 2	22 45 4	9°33'42	1♍7	26♍10	11°13	12°59	8° 4	19°57	13°18	22♌45	18°35	9♌8	7°35	27°34	19°R 1	M 2
T 3	22 49 0	10°31'58	14°54	25°40	12°28	13°38	8°16	20° 1	13°21	22°45	18°37	9° 5	7°32	27°41	18°59	T 3
W 4	22 52 57	11°30'14	28°58	25° 5	13°42	14°16	8°28	20° 5	13°25	22°44	18°39	9° 0	7°29	27°47	18°56	W 4
T 5	22 56 54	12°28'33	13♌14	24°23	14°57	14°55	8°41	20° 9	13°28	22°44	18°41	8°55	7°26	27°54	18°53	T 5
F 6	23 0 50	13°26'53	27°38	23°36	16°12	15°33	8°53	20°13	13°31	22°44	18°43	8°50	7°22	28° 1	18°50	F 6
S 7	23 4 47	14°25'15	12♍4	22°44	17°26	16°12	9° 5	20°17	13°35	22°43	18°46	8°46	7°19	28° 8	18°47	S 7
S 8	23 8 43	15°23'38	26°27	21°48	18°41	16°50	9°18	20°21	13°38	22°43	18°48	8°43	7°16	28°14	18°45	S 8
M 9	23 12 40	16°22'03	10♌43	20°48	19°55	17°29	9°30	20°25	13°42	22°43	18°50	8°D42	7°13	28°21	18°42	M 9
T 10	23 16 36	17°20'30	24°50	19°47	21°10	18° 7	9°43	20°30	13°45	22°42	18°52	8°42	7°10	28°28	18°39	T 10
W11	23 20 33	18°18'58	8♌46	18°44	22°25	18°46	9°55	20°34	13°49	22°42	18°54	8°43	7° 7	28°34	18°36	W11
T 12	23 24 29	19°17'28	22°31	17°43	23°39	19°24	10° 8	20°39	13°52	22°41	18°57	8°44	7° 3	28°41	18°33	T 12
F 13	23 28 26	20°16'00	6♌5	16°43	24°54	20° 3	10°20	20°43	13°56	22°40	18°59	8°R45	7° 0	28°48	18°30	F 13
S 14	23 32 23	21°14'33	19°28	15°48	26° 9	20°42	10°33	20°48	13°59	22°40	19° 1	8°45	6°57	28°55	18°27	S 14
S 15	23 36 19	22°13'08	2♌39	14°57	27°23	21°20	10°45	20°53	14° 3	22°39	19° 3	8°42	6°54	29° 1	18°25	S 15
M16	23 40 16	23°11'44	15°38	14°13	28°38	21°59	10°58	20°57	14° 6	22°39	19° 5	8°38	6°51	29° 8	18°22	M16
T 17	23 44 12	24°10'23	28°24	13°36	29°53	22°37	11°11	21° 2	14°10	22°38	19° 8	8°31	6°47	29°15	18°19	T 17
W18	23 48 9	25° 9'03	10♌58	13° 8	1♌9	23°16	11°23	21° 7	14°14	22°37	19°10	8°23	6°44	29°21	18°16	W18
T 19	23 52 5	26° 7'46	23°19	12°49	2°22	23°55	11°36	21°12	14°17	22°36	19°12	8°14	6°41	29°28	18°13	T 19
F 20	23 56 2	27° 6'31	5♌30	12°D40	3°37	24°34	11°49	21°17	14°21	22°36	19°14	8° 5	6°38	29°35	18°11	F 20
S 21	23 59 58	28° 5'18	17°30	12°41	4°51	25°12	12° 2	21°22	14°24	22°35	19°16	7°58	6°35	29°42	18° 8	S 21
S 22	0 3 55	29° 4'07	29°24	12°52	6° 6	25°51	12°14	21°27	14°28	22°34	19°18	7°51	6°32	29°48	18° 5	S 22
M23	0 7 51	0♌25'9	11♌15	13°13	7°21	26°30	12°27	21°33	14°32	22°33	19°21	7°47	6°28	29°55	18° 2	M23
T 24	0 11 48	1° 1'52	23° 7	13°43	8°36	27° 9	12°40	21°38	14°35	22°32	19°23	7°45	6°25	0♌2	17°59	T 24
W25	0 15 45	2° 0'49	5♌6	14°23	9°50	27°48	12°53	21°43	14°39	22°31	19°25	7°D45	6°22	0° 8	17°57	W25
T 26	0 19 41	2°59'47	17°15	15°11	11° 5	28°26	13° 6	21°49	14°43	22°30	19°27	7°46	6°19	0°15	17°54	T 26
F 27	0 23 38	3°58'48	29°41	16° 7	12°20	29° 5	13°19	21°54	14°47	22°29	19°29	7°46	6°16	0°22	17°51	F 27
S 28	0 27 34	4°57'51	12♌27	17°11	13°35	29°44	13°32	22° 0	14°50	22°28	19°31	7°R47	6°13	0°29	17°49	S 28
S 29	0 31 31	5°56'56	25°39	18°21	14°50	0♌23	13°45	22° 5	14°54	22°27	19°34	7°45	6° 9	0°35	17°46	S 29
M30	0 35 27	6♌56'03	9♍16	19♍37	16♌4	1♌2	13♌58	22♌11	14♌58	22♌26	19♍36	7♌41	6♌6	0♌42	17°R43	M30

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
S 1	8n22	16n18	0n47	2s32	4s16	9n 9	1n25	7n53	1n 2	2s 5	1n 8	15s48	2n 1	4s40	0n37	16n46
M 2	8 0	12 55	1 57	2 25	4 18	8 40	1 25	7 38	1 1	2 10	1 8	15 49	2 1	4 41	0 37	16 46
T 3	7 38	8 46	3 3	2 14	4 19	8 12	1 25	7 23	1 1	2 15	1 8	15 50	2 0	4 42	0 37	16 46
W 4	7 16	4 4	3 59	1 59	4 18	7 43	1 25	7 8	1 1	2 20	1 8	15 52	2 0	4 44	0 37	16 46
T 5	6 53	0s56	4 41	1 41	4 15	7 14	1 25	6 53	1 1	2 24	1 8	15 53	2 0	4 45	0 37	16 46
F 6	6 31	5 54	5 5	1 18	4 11	6 45	1 25	6 38	1 0	2 29	1 8	15 54	2 0	4 46	0 37	16 46
S 7	6 8	10 33	5 10	0 52	4 5	6 16	1 24	6 23	1 0	2 34	1 8	15 55	1 59	4 48	0 37	16 46
S 8	5 46	14 35	4 56	0 22	3 57	5 46	1 24	6 7	1 0	2 39	1 7	15 57	1 59	4 49	0 37	16 45
M 9	5 23	17 44	4 24	0n10	3 47	5 17	1 24	5 52	0 59	2 44	1 7	15 58	1 59	4 50	0 37	16 45
T 10	5 0	19 47	3 36	0 46	3 35	4 47	1 23	5 37	0 59	2 49	1 7	15 59	1 59	4 52	0 37	16 45
W11	4 38	20 36	2 36	1 23	3 21	4 17	1 23	5 21	0 59	2 54	1 7	16 1	1 59	4 53	0 37	16 45
T 12	4 15	20 10	1 27	2 1	3 5	3 47	1 22	5 6	0 59	2 59	1 7	16 2	1 58	4 54	0 37	16 45
F 13	3 52	18 33	0 14	2 40	2 49	3 17	1 22	4 50	0 58	3 4	1 7	16 4	1 58	4 56	0 37	16 45
S 14	3 29	15 55	0s58	3 18	2 30	2 46	1 21	4 35	0 58	3 9	1 7	16 5	1 58	4 57	0 37	16 44
S 15	3 5	12 30	2 6	3 55	2 11	2 16	1 20	4 19	0 58	3 14	1 7	16 6	1 58	4 59	0 37	16 44
M16	2 42	8 32	3 6	4 30	1 52	1 45	1 19	4 4	0 57	3 19	1 7	16 8	1 58	5 0	0 37	16 44
T 17	2 19	4 14	4 35	5 3	1 32	1 15	1 18	3 48	0 57	3 24	1 7	16 9	1 57	5 1	0 37	16 44
W18	1 56	0n10	4 33	5 32	1 12	0 44	1 18	3 33	0 57	3 29	1 7	16 11	1 57	5 3	0 37	16 43
T 19	1 32	4 29	4 57	5 57	0 52	0 14	1 17	3 17	0 57	3 34	1 7	16 12	1 57	5 4	0 37	16 43
F 20	1 9	8 33	5 6	6 18	0 33	0s17	1 15	3 1	0 56	3 39	1 7	16 14	1 57	5 6	0 37	16 43
S 21	0 46	12 14	5 2	6 35	0 15	0 48	1 14	2 46	0 56	3 44	1 7	16 15	1 57	5 7	0 37	16 43
S 22	0 22	15 24	4 46	6 47	0n 3	1 18	1 13	2 30	0 56	3 49	1 7	16 17	1 56	5 9	0 37	16 42
M23	0s 1	17 56	4 16	6 54	0 19	1 49	1 12	2 14	0 55	3 54	1 7	16 18	1 56	5 10	0 37	16 42
T 24	0 25	19 42	3 36	6 56	0 34	2 20	1 11	1 59	0 55	3 59	1 7	16 20	1 56	5 11	0 37	16 42
W25	0 48	20 37	2 46	6 54	0 48	2 50	1 9	1 43	0 55	4 4	1 7	16 21	1 56	5 13	0 37	16 42
T 26	1 12	20 35	1 48	6 47	1 1	3 21	1 8	1 27	0 54	4 9	1 6	16 23	1 56	5 14	0 37	16 41
F 27	1 35	19 33	0 43	6 35	1 12	3 52	1 7	1 11	0 54	4 15	1 6	16 25	1 56	5 16	0 37	16 41
S 28	1 59	17 30	0n25	6 20	1 22	4 22	1 5	0 56	0 54	4 20	1 6	16 26	1 55	5 17	0 37	16 41
S 29	2 22	14 28	1 34	6 0	1 30	4 52	1 3	0 40	0 53	4 25	1 6	16 28	1 55	5 19	0 37	16 40
M30	2s45	10n34	2n40	5n37	1n38	5s23	1n 2	0n24	0n53	4s30	1n 6	16s29	1n55	5s20	0n37	16n40

Julian Day Number = 2349520.5, Delta T = 10.47 sec

Ecliptic obliquity = 23°28'27", Nutation = - 0°00'13", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 20°50'27", Lahiri = 19°57'27"Greg. Calendar

ASTRODIENST EPHEMERIS for the year 1720  
geocentric

OCTOBER 1720

00:00 UT

Day	Sid.t	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	Day
T 1	0 39 24	7♏55'13	23♐20	20♐58	17♏19	1♏41	14♏11	22♐17	15♏2	22°R25	19♐38	7°R35	6♏3	0♐49	17°R41	T 1
W 2	0 43 20	8°54'25	7♏46	22°24	18°34	2°20	14°24	22°23	15°5	22♏24	19°40	7♏27	6°0	0°55	17°R38	W 2
T 3	0 47 17	9°53'39	22°29	23°53	19°49	2°59	14°37	22°28	15°9	22°23	19°42	7°17	5°57	1°2	17°35	T 3
F 4	0 51 14	10°52'54	7♐21	25°26	21°4	3°38	14°50	22°34	15°13	22°22	19°44	7°7	5°53	1°9	17°33	F 4
S 5	0 55 10	11°52'12	22°12	27°2	22°18	4°17	15°3	22°40	15°17	22°21	19°46	6°58	5°50	1°15	17°30	S 5
S 6	0 59 7	12°51'32	6♏55	28°39	23°33	4°57	15°16	22°46	15°20	22°19	19°48	6°52	5°47	1°22	17°28	S 6
M 7	1 3 3	13°50'53	21°24	0♏19	24°48	5°36	15°29	22°52	15°24	22°18	19°50	6°47	5°44	1°29	17°25	M 7
T 8	1 7 0	14°50'17	5♏35	1°59	26°3	6°15	15°42	22°58	15°28	22°17	19°52	6°45	5°41	1°36	17°23	T 8
W 9	1 10 56	15°49'42	19°27	3°41	27°18	6°54	15°55	23°4	15°32	22°16	19°54	6°D45	5°38	1°42	17°21	W 9
T 10	1 14 53	16°49'09	3♏1	5°24	28°33	7°33	16°8	23°10	15°36	22°14	19°56	6°R45	5°34	1°49	17°18	T 10
F 11	1 18 49	17°48'37	16°18	7°7	29°47	8°12	16°21	23°17	15°39	22°13	19°58	6°45	5°31	1°56	17°16	F 11
S 12	1 22 46	18°48'07	29°21	8°50	1♐2	8°52	16°34	23°23	15°43	22°12	20°0	6°43	5°28	2°2	17°13	S 12
S 13	1 26 43	19°47'39	12♏11	10°34	2°17	9°31	16°47	23°29	15°47	22°10	20°2	6°38	5°25	2°9	17°11	S 13
M14	1 30 39	20°47'13	24°51	12°17	3°32	10°10	17°0	23°36	15°51	22°9	20°4	6°31	5°22	2°16	17°9	M14
T 15	1 34 36	21°46'49	7♐20	14°1	4°47	10°50	17°13	23°42	15°54	22°8	20°6	6°20	5°18	2°23	17°7	T 15
W16	1 38 32	22°46'27	19°40	15°44	6°1	11°29	17°26	23°48	15°58	22°6	20°8	6°8	5°15	2°29	17°5	W16
T 17	1 42 29	23°46'06	1♏51	17°27	7°16	12°8	17°39	23°55	16°2	22°5	20°10	5°54	5°12	2°36	17°2	T 17
F 18	1 46 25	24°45'48	13°55	19°9	8°31	12°48	17°52	24°1	16°6	22°3	20°12	5°40	5°9	2°43	17°0	F 18
S 19	1 50 22	25°45'32	25°51	20°51	9°46	13°27	18°5	24°8	16°10	22°2	20°14	5°27	5°6	2°49	16°58	S 19
S 20	1 54 18	26°45'18	7♐43	22°33	11°1	14°7	18°18	24°14	16°13	22°0	20°16	5°17	5°3	2°56	16°56	S 20
M21	1 58 15	27°45'06	19°32	24°14	12°16	14°46	18°31	24°21	16°17	21°59	20°18	5°8	4°59	3°3	16°54	M21
T 22	2 2 12	28°44'57	1♏22	25°55	13°30	15°26	18°44	24°28	16°21	21°57	20°20	5°3	4°56	3°9	16°52	T 22
W23	2 6 8	29°44'50	13°18	27°35	14°45	16°5	18°57	24°34	16°24	21°56	20°21	5°1	4°53	3°16	16°50	W23
T 24	2 10 5	0♐44'44	25°24	29°15	16°0	16°45	19°10	24°41	16°28	21°54	20°23	5°0	4°50	3°23	16°49	T 24
F 25	2 14 1	1°44'41	7♏45	0♐54	17°15	17°24	19°22	24°48	16°32	21°53	20°25	5°0	4°47	3°30	16°47	F 25
S 26	2 17 58	2°44'41	20°28	2°33	18°30	18°4	19°35	24°54	16°35	21°51	20°27	4°59	4°44	3°36	16°45	S 26
S 27	2 21 54	3°44'42	3♐36	4°11	19°44	18°44	19°48	25°1	16°39	21°49	20°28	4°57	4°40	3°43	16°43	S 27
M28	2 25 51	4°44'46	17°12	5°49	20°59	19°23	20°1	25°8	16°43	21°48	20°30	4°53	4°37	3°50	16°42	M28
T 29	2 29 47	5°44'51	1♏19	7°26	22°14	20°3	20°14	25°15	16°46	21°46	20°32	4°45	4°34	3°56	16°40	T 29
W30	2 33 44	6°44'59	15°54	9°3	23°29	20°43	20°27	25°22	16°50	21°45	20°33	4°36	4°31	4°3	16°38	W30
T 31	2 37 41	7♐45'08	0♐51	10♐39	24♐44	21♏22	20♏39	25♐29	16♏54	21♏43	20♐35	4♏24	4♏28	4♐10	16♏37	T 31

Day	☉	☽	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈	♉	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	
T 1	3s 9	5n59 3n38	5n10 1n44	5s53 1n 0	0n 8 0n53	4s35 1n 6	16s31 1n55	5s22 0n37	16n40 1s48	17n45 14n52	18n24 18n47	15n46 0s37	4n37		
W 2	3 32	0 57 4 24	4 41 1 48	6 23 0 59	0s 8 0 52	4 40 1 6	16 33 1 55	5 23 0 37	16 40 1 48	17 44 14 53	18 26 18 48	15 48 0 38	4 37		
T 3	3 55	4s13 4 53	4 9 1 52	6 53 0 57	0 24 0 52	4 45 1 6	16 34 1 55	5 25 0 37	16 39 1 48	17 43 14 53	18 29 18 49	15 50 0 39	4 37		
F 4	4 19	9 12 5 3	3 34 1 55	7 23 0 55	0 39 0 52	4 50 1 6	16 36 1 54	5 26 0 37	16 39 1 48	17 43 14 53	18 31 18 50	15 52 0 41	4 37		
S 5	4 42	13 38 4 53	2 58 1 56	7 52 0 53	0 55 0 51	4 55 1 6	16 37 1 54	5 27 0 37	16 39 1 48	17 42 14 53	18 33 18 50	15 53 0 42	4 37		
S 6	5 5	17 11 4 23	2 20 1 57	8 22 0 51	1 11 0 51	5 0 1 6	16 39 1 54	5 29 0 37	16 38 1 48	17 41 14 54	18 35 18 51	15 55 0 43	4 37		
M 7	5 28	19 36 3 37	1 40 1 57	8 51 0 49	1 27 0 51	5 5 1 6	16 41 1 54	5 30 0 37	16 38 1 48	17 41 14 54	18 36 18 52	15 57 0 44	4 36		
T 8	5 51	20 44 2 38	0 59 1 56	9 20 0 47	1 43 0 50	5 10 1 6	16 42 1 54	5 32 0 37	16 37 1 48	17 40 14 54	18 37 18 53	15 58 0 45	4 36		
W 9	6 14	20 34 1 31	0 17 1 55	9 49 0 45	1 59 0 50	5 15 1 6	16 44 1 54	5 33 0 37	16 37 1 48	17 40 14 54	18 37 18 54	16 0 0 46	4 36		
T 10	6 37	19 11 0 20	0s25 1 53	10 18 0 43	2 14 0 50	5 20 1 6	16 46 1 53	5 35 0 37	16 37 1 48	17 39 14 55	18 37 18 54	16 2 0 47	4 36		
F 11	7 0	16 47 0s50 1 9	1 50 10 46	0 41 2 30	0 49 5 25	1 6 16 47	1 53 5 36	0 37 16 36	1 48 17 39	14 55 18 37	18 55 16 3	0 48 4 36			
S 12	7 23	13 32 1 57	1 53 1 47	11 15 0 39	2 46 0 49	5 30 1 6	16 49 1 53	5 38 0 37	16 36 1 48	17 38 14 55	18 37 18 56	16 5 0 50	4 35		
S 13	7 45	9 42 2 56	2 37 1 43	11 42 0 37	3 2 0 49	5 35 1 6	16 51 1 53	5 39 0 37	16 36 1 48	17 37 14 55	18 38 18 57	16 7 0 51	4 35		
M14	8 8	5 30 3 45	3 21 1 39	12 10 0 35	3 18 0 48	5 40 1 6	16 53 1 53	5 41 0 37	16 35 1 48	17 37 14 56	18 40 18 57	16 9 0 52	4 35		
T 15	8 30	1 7 4 23	4 5 1 34	12 37 0 32	3 33 0 48	5 45 1 6	16 54 1 53	5 42 0 37	16 35 1 48	17 36 14 56	18 43 18 58	16 10 0 53	4 35		
W16	8 52	3n15 4 48	5 34 1 29	13 4 0 30	3 49 0 47	5 50 1 6	16 56 1 53	5 44 0 37	16 34 1 48	17 36 14 56	18 46 18 59	16 12 0 54	4 35		
T 17	9 14	7 27 4 59	5 34 1 24	13 31 0 28	4 5 0 47	5 55 1 6	16 58 1 53	5 45 0 37	16 34 1 48	17 35 14 57	18 49 19 0	16 14 0 55	4 34		
F 18	9 36	11 18 4 57	6 18 1 19	13 58 0 26	4 21 0 47	6 0 1 6	16 59 1 52	5 46 0 37	16 34 1 48	17 35 14 57	18 53 19 0	16 15 0 56	4 34		
S 19	9 58	14 41 4 42	7 2 1 13	14 24 0 23	4 36 0 46	6 5 1 6	17 1 1 52	5 48 0 37	16 33 1 48	17 35 14 57	18 56 19 1	16 17 0 57	4 34		
S 20	10 20	17 27 4 14	7 45 1 7	14 49 0 21	4 52 0 46	6 10 1 6	17 3 1 52	5 49 0 37	16 33 1 48	17 34 14 58	18 59 19 2	16 19 0 58	4 34		
M21	10 41	19 29 3 36	8 28 1 1	15 15 0 18	5 8 0 46	6 15 1 6	17 5 1 52	5 51 0 37	16 32 1 49	17 34 14 58	19 1 19 3	16 20 0 59	4 33		
T 22	11 3	20 40 2 48	9 11 0 55	15 40 0 16	5 23 0 45	6 20 1 6	17 6 1 52	5 52 0 37	16 32 1 49	17 33 14 58	19 2 19 4	16 22 1 0	4 33		
W23	11 24	20 57 1 52	9 53 0 48	16 4 0 14	5 39 0 45	6 25 1 6	17 8 1 52	5 54 0 37	16 32 1 49	17 33 14 59	19 2 19 4	16 24 1 1	4 33		
T 24	11 45	20 16 0 51	10 34 0 42	16 28 0 11	5 54 0 44	6 29 1 6	17 10 1 52	5 55 0 37	16 31 1 49	17 32 14 59	19 3 19 5	16 25 1 2	4 33		
F 25	12 6	18 36 0n15 11 15	0 35 16 52	0 9 6 10	0 44 6 34	1 6 17 11	1 52 5 56	0 37 16 31	1 49 17 32	14 59 19 3	19 6 16 27	1 3 4 32			
S 26	12 27	15 58 1 21	11 55 0 29	17 15 0 6	6 25 0 44	6 39 1 6	17 13 1 51	5 58 0 37	16 30 1 49	17 32 15 0	19 3 19 7	16 29 1 4	4 32		
S 27	12 47	12 27 2 25	12 35 0 22	17 38 0 4	6 41 0 43	6 44 1 6	17 15 1 51	5 59 0 37	16 30 1 49	17 31 15 0	19 3 19 7	16 30 1 5	4 32		
M28	13 7	8 11 3 23	13 14 0 16	18 1 0 1	6 56 0 43	6 49 1 6	17 17 1 51	6 1 0 37	16 30 1 49	17 31 15 0	19 4 19 8	16 32 1 5	4 32		
T 29	13 27	3 19 4 11	13 52 0 9	18 23 0s 1	7 12 0 42	6 54 1 6	17 18 1 51	6 2 0 37	16 29 1 49	17 31 15 1	19 6 19 9	16 33 1 6	4 31		
W30	13 47	1s53 4 45	14 30 0 2	18 44 0 4	7 27 0 42	6 58 1 6	17 20 1 51	6 3 0 37	16 29 1 49	17 30 15 1	19 8 19 10	16 35 1 7	4 31		
T 31	14s 7	7s 6 5n 0	15s 7 0s 5	19s 5 0s 6	7s42 0n42	7s 3 1n 6	17s22 1n51	6s 5 0n37	16n28 1s49	17n30 15n 2	19n11 19n10	16n37 1s 8	4n31		

Julian Day Number = 2349550.5, Delta T = 10.47 sec  
Ecliptic obliquity = 23°28'27", Nutation = - 0°00'15", out-of-bounds declination in red  
Ayanamsha: Fagan/Bradley = 20°50'31", Lahiri = 19°57'31"Greg. Calendar

# ASTRODIENST EPHEMERIS for the year 1720

## geocentric

NOVEMBER 1720

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	2 41 37	8♌45'20	16♍ 2	12♌15	25♍59	22♏ 2	20♏52	25♍35	16♏57	21♏41	20♏37	4♏R13	4♏24	4♏17	16♏R35	F 1
S 2	2 45 34	9°45'33	1♌15	13°51	27°14	22°42	21° 5	25°42	17° 1	21♏40	20°38	4♏ 2	4°21	4°23	16♏R34	S 2
S 3	2 49 30	10°45'48	16°20	15°26	28°28	23°22	21°18	25°49	17° 4	21°38	20°40	3°53	4°18	4°30	16°33	S 3
M 4	2 53 27	11°46'05	1♌ 8	17° 1	29°43	24° 2	21°30	25°56	17° 8	21°36	20°41	3°48	4°15	4°37	16°31	M 4
T 5	2 57 23	12°46'23	15°33	18°35	0♌58	24°42	21°43	26° 3	17°11	21°35	20°43	3°45	4°12	4°43	16°30	T 5
W 6	3 1 20	13°46'43	29°33	20°10	2°13	25°22	21°55	26°10	17°15	21°33	20°44	3°D44	4° 9	4°50	16°29	W 6
T 7	3 5 16	14°47'04	13♏ 9	21°43	3°28	26° 2	22° 8	26°17	17°18	21°31	20°46	3°R44	4° 5	4°57	16°28	T 7
F 8	3 9 13	15°47'27	26°22	23°17	4°42	26°41	22°20	26°24	17°22	21°30	20°47	3°43	4° 2	5° 3	16°27	F 8
S 9	3 13 10	16°47'50	9♌15	24°50	5°57	27°21	22°33	26°31	17°25	21°28	20°49	3°41	3°59	5°10	16°26	S 9
S 10	3 17 6	17°48'15	21°53	26°23	7°12	28° 2	22°45	26°38	17°29	21°26	20°50	3°37	3°56	5°17	16°25	S 10
M 11	3 21 3	18°48'42	4♏19	27°55	8°27	28°42	22°58	26°46	17°32	21°25	20°52	3°30	3°53	5°24	16°24	M 11
T 12	3 24 59	19°49'10	16°34	29°28	9°42	29°22	23°10	26°53	17°35	21°23	20°53	3°20	3°50	5°30	16°23	T 12
W 13	3 28 56	20°49'39	28°42	1♌ 0	10°56	0♌ 2	23°22	27° 0	17°39	21°21	20°54	3° 7	3°46	5°37	16°22	W 13
T 14	3 32 52	21°50'10	10♌43	2°31	12°11	0°42	23°35	27° 7	17°42	21°20	20°56	2°54	3°43	5°44	16°21	T 14
F 15	3 36 49	22°50'42	22°40	4° 3	13°26	1°22	23°47	27°14	17°45	21°18	20°57	2°40	3°40	5°50	16°20	F 15
S 16	3 40 45	23°51'16	4♏33	5°34	14°41	2° 2	23°59	27°21	17°49	21°16	20°58	2°27	3°37	5°57	16°20	S 16
S 17	3 44 42	24°51'52	16°23	7° 5	15°55	2°43	24°11	27°28	17°52	21°14	20°59	2°17	3°34	6° 4	16°19	S 17
M 18	3 48 39	25°52'29	28°13	8°36	17°10	3°23	24°23	27°35	17°55	21°13	21° 0	2° 9	3°30	6°10	16°19	M 18
T 19	3 52 35	26°53'07	10♏ 5	10° 7	18°25	4° 3	24°35	27°42	17°58	21°11	21° 2	2° 4	3°27	6°17	16°18	T 19
W 20	3 56 32	27°53'48	22° 2	11°37	19°40	4°43	24°47	27°49	18° 1	21° 9	21° 3	2° 1	3°24	6°24	16°18	W 20
T 21	4 0 28	28°54'29	4♏ 8	13° 7	20°54	5°24	24°59	27°57	18° 4	21° 8	21° 4	2°D 0	3°21	6°31	16°17	T 21
F 22	4 4 25	29°55'13	16°27	14°36	22° 9	6° 4	25°11	28° 4	18° 8	21° 6	21° 5	2° 1	3°18	6°37	16°17	F 22
S 23	4 8 21	0♌55'58	29° 5	16° 6	23°24	6°45	25°23	28°11	18°11	21° 4	21° 6	2°R 2	3°15	6°44	16°17	S 23
S 24	4 12 18	1°56'44	12♏ 7	17°34	24°39	7°25	25°34	28°18	18°14	21° 3	21° 7	2° 1	3°11	6°51	16°17	S 24
M 25	4 16 14	2°57'32	25°35	19° 3	25°53	8° 6	25°46	28°25	18°17	21° 1	21° 8	1°59	3° 8	6°57	16°16	M 25
T 26	4 20 11	3°58'22	9♏33	20°31	27° 8	8°46	25°58	28°32	18°19	20°59	21° 9	1°54	3° 5	7° 4	16°16	T 26
W 27	4 24 8	4°59'13	24° 0	21°58	28°23	9°27	26° 9	28°39	18°22	20°58	21°10	1°47	3° 2	7°11	16°D16	W 27
T 28	4 28 4	6° 0'05	8♌53	23°24	29°37	10° 7	26°21	28°46	18°25	20°56	21°11	1°39	2°59	7°17	16°16	T 28
F 29	4 32 1	7° 0'59	24° 4	24°50	0♌52	10°48	26°32	28°53	18°28	20°54	21°11	1°30	2°55	7°24	16°16	F 29
S 30	4 35 57	8♌1'54	9♌24	26♌15	2♌ 7	11♌28	26♏43	29♌ 0	18♏31	20♏53	21♏12	1♏22	2♏52	7♏31	16♏16	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
F 1	14s26	11s58	4n54	15s43	0s11	19s25	0s 9	7s58	0n41	7s 8	1n 6	17s23	1n51	6s 6	0n37	16n28	1s49	17n30	15n 2	19n14	19n11	16n38	1s 9	4n30	
S 2	14 46	16 5	4 27	16 18	0 18	19 45	0 12	8 13	0 41	7 13	1 7	17 25	1 51	6 7	0 37	16 27	1 49	17 30	15 2	19 17	19 12	16 40	1 10	4 30	
S 3	15 5	19 5	3 42	16 53	0 25	20 5	0 14	8 28	0 40	7 17	1 7	17 27	1 51	6 9	0 37	16 27	1 49	17 29	15 3	19 19	19 13	16 42	1 10	4 30	
M 4	15 23	20 45	2 43	17 26	0 31	20 23	0 17	8 43	0 40	7 22	1 7	17 29	1 51	6 10	0 37	16 27	1 49	17 29	15 3	19 20	19 13	16 43	1 11	4 30	
T 5	15 42	21 0	1 35	17 59	0 38	20 42	0 19	8 58	0 39	7 27	1 7	17 30	1 51	6 12	0 37	16 26	1 49	17 29	15 4	19 21	19 14	16 45	1 12	4 29	
W 6	16 0	19 55	0 22	18 31	0 44	20 59	0 22	9 13	0 39	7 31	1 7	17 32	1 50	6 13	0 37	16 26	1 49	17 29	15 4	19 21	19 15	16 47	1 13	4 29	
T 7	16 18	17 41	0s50	19 2	0 50	21 16	0 24	9 28	0 39	7 36	1 7	17 34	1 50	6 14	0 37	16 25	1 49	17 28	15 4	19 21	19 16	16 48	1 13	4 29	
F 8	16 35	14 35	1 57	19 32	0 57	21 33	0 27	9 43	0 38	7 41	1 7	17 35	1 50	6 15	0 37	16 25	1 49	17 28	15 5	19 21	19 16	16 50	1 14	4 28	
S 9	16 53	10 50	2 56	20 1	1 3	21 49	0 29	9 58	0 38	7 45	1 7	17 37	1 50	6 17	0 37	16 24	1 49	17 28	15 5	19 21	19 17	16 51	1 15	4 28	
S 10	17 10	6 40	3 46	20 29	1 9	22 4	0 32	10 13	0 37	7 50	1 7	17 39	1 50	6 18	0 37	16 24	1 49	17 28	15 6	19 22	19 18	16 53	1 15	4 28	
M11	17 27	2 19	4 23	20 56	1 15	22 19	0 34	10 27	0 37	7 54	1 7	17 40	1 50	6 19	0 37	16 23	1 49	17 28	15 6	19 24	19 19	16 55	1 16	4 28	
T 12	17 43	2n 5	4 48	21 22	1 20	22 33	0 37	10 42	0 36	7 59	1 7	17 42	1 50	6 21	0 37	16 23	1 49	17 28	15 7	19 26	19 19	16 56	1 17	4 27	
W13	17 59	6 21	5 0	21 47	1 26	22 46	0 39	10 56	0 36	8 3	1 7	17 44	1 50	6 22	0 37	16 23	1 49	17 28	15 7	19 29	19 20	16 58	1 17	4 27	
T 14	18 15	10 20	4 58	22 11	1 31	22 59	0 42	11 11	0 35	8 8	1 7	17 45	1 50	6 23	0 37	16 22	1 49	17 27	15 8	19 32	19 21	17 0	1 18	4 27	
F 15	18 31	13 54	4 43	22 34	1 37	23 11	0 44	11 25	0 35	8 12	1 7	17 47	1 50	6 24	0 37	16 22	1 49	17 27	15 8	19 36	19 22	17 1	1 18	4 26	
S 16	18 46	16 53	4 16	22 56	1 42	23 22	0 47	11 40	0 34	8 16	1 7	17 49	1 50	6 26	0 37	16 21	1 49	17 27	15 9	19 38	19 22	17 3	1 19	4 26	
S 17	19 1	19 10	3 38	23 17	1 47	23 32	0 49	11 54	0 34	8 21	1 7	17 50	1 50	6 27	0 37	16 21	1 49	17 27	15 9	19 41	19 23	17 4	1 19	4 26	
M18	19 15	20 38	2 50	23 36	1 51	23 42	0 51	12 8	0 33	8 25	1 7	17 52	1 50	6 28	0 37	16 20	1 49	17 27	15 9	19 43	19 24	17 6	1 20	4 25	
T 19	19 29	21 12	1 54	23 54	1 56	23 52	0 54	12 22	0 33	8 30	1 8	17 54	1 50	6 29	0 37	16 20	1 49	17 27	15 10	19 44	19 25	17 8	1 20	4 25	
W20	19 43	20 48	0 53	24 11	2 0	24 0	0 56	12 36	0 32	8 34	1 8	17 55	1 50	6 30	0 37	16 20	1 49	17 27	15 10	19 44	19 25	17 9	1 21	4 25	
T 21	19 57	19 26	0n11	24 27	2 4	24 8	0 58	12 50	0 32	8 38	1 8	17 57	1 50	6 32	0 37	16 19	1 49	17 27	15 11	19 44	19 26	17 11	1 21	4 24	
F 22	20 10	17 9	1 16	24 41	2 7	24 15	1 0	13 4	0 31	8 42	1 8	17 59	1 50	6 33	0 37	16 19	1 49	17 27	15 11	19 44	19 27	17 12	1 22	4 24	
S 23	20 22	13 59	2 20	24 55	2 10	24 21	1 3	13 18	0 31	8 47	1 8	18 0	1 50	6 34	0 37	16 18	1 49	17 27	15 12	19 44	19 28	17 14	1 22	4 24	
S 24	20 35	10 4	3 17	25 6	2 13	24 27	1 5	13 32	0 31	8 51	1 8	18 2	1 49	6 35	0 37	16 18	1 49	17 27	15 12	19 44	19 28	17 15	1 22	4 24	
M25	20 47	5 32	4 6	25 17	2 16	24 32	1 7	13 45	0 30	8 55	1 8	18 3	1 49	6 36	0 37	16 17	1 49	17 27	15 13	19 45	19 29	17 17	1 23	4 23	
T 26	20 58	0 33	4 43	25 26	2 18	24 36	1 9	13 59	0 29	8 59	1 8	18 5	1 49	6 37	0 37	16 17	1 49	17 28	15 13	19 46	19 30	17 19	1 23	4 23	
W27	21 10	4s38	5 3	25 34	2 20	24 39	1 11	14 12	0 29	9 3	1 8	18 7	1 49	6 38	0 37	16 17	1 49	17 28	15 14	19 47	19 31	17 20	1 23	4 23	
T 28	21 20	9 41	5 3	25 40	2 21	24 42	1 13	14 25	0 28	9 7	1 8	18 8	1 49	6 39	0 37	16 16	1 49	17 28	15 15	19 49	19 31	17 22	1 24	4 22	
F 29	21 31	14 15	4 42	25 45	2 22	24 43	1 15	14 39	0 28	9 11	1 8	18 10	1 49	6 40	0 37	16 16	1 49	17 28	15 15	19 51	19 32	17 23	1 24	4 22	
S 30	21s41	17s55	4n 1	25s48	2s23	24s44	1s17	14s52	0n27	9s15	1n 8	18s11	1n49	6s41	0n37	16n15	1s49	17n28	15n16	19n53	19n33	17n25	1s24	4n22	

ASTRODIENST EPHEMERIS for the year 1720  
geocentric

DECEMBER 1720

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	4 39 54	9♂ 2'50	24♂41	27♂39	3♂22	12♂ 9	26♂54	29♂ 8	18♂34	20°R51	21♂13	1°R15	2♂49	7♂38	16♂17	S 1
M 2	4 43 50	10° 3'48	9♂43	29° 1	4°36	12°50	27° 6	29°15	18°36	20♂50	21°14	1♂11	2°46	7°44	16°17	M 2
T 3	4 47 47	11° 4'46	24°24	0♂22	5°51	13°30	27°17	29°22	18°39	20°48	21°15	1°D 9	2°43	7°51	16°17	T 3
W 4	4 51 43	12° 5'44	8♂38	1°41	7° 5	14°11	27°28	29°29	18°42	20°47	21°15	1° 9	2°40	7°58	16°18	W 4
T 5	4 55 40	13° 6'43	22°25	2°59	8°20	14°52	27°39	29°36	18°44	20°45	21°16	1°10	2°36	8° 4	16°18	T 5
F 6	4 59 37	14° 7'43	5♂44	4°14	9°35	15°33	27°50	29°43	18°47	20°43	21°16	1°11	2°33	8°11	16°19	F 6
S 7	5 3 33	15° 8'44	18°40	5°26	10°49	16°14	28° 0	29°50	18°49	20°42	21°17	1°R11	2°30	8°18	16°19	S 7
S 8	5 7 30	16° 9'45	1♂16	6°35	12° 4	16°54	28°11	29°57	18°52	20°40	21°18	1°10	2°27	8°24	16°20	S 8
M 9	5 11 26	17°10'46	13°36	7°41	13°19	17°35	28°22	0♂ 3	18°54	20°39	21°18	1° 7	2°24	8°31	16°20	M 9
T 10	5 15 23	18°11'48	25°44	8°42	14°33	18°16	28°32	0°10	18°57	20°38	21°19	1° 1	2°21	8°38	16°21	T 10
W 11	5 19 19	19°12'51	7♂44	9°39	15°48	18°57	28°43	0°17	18°59	20°36	21°19	0°54	2°17	8°45	16°22	W 11
T 12	5 23 16	20°13'54	19°38	10°30	17° 2	19°38	28°53	0°24	19° 1	20°35	21°19	0°46	2°14	8°51	16°23	T 12
F 13	5 27 12	21°14'58	1♂30	11°15	18°17	20°19	29° 3	0°31	19° 3	20°33	21°20	0°38	2°11	8°58	16°24	F 13
S 14	5 31 9	22°16'02	13°21	11°53	19°31	21° 0	29°13	0°38	19° 6	20°32	21°20	0°31	2° 8	9° 5	16°25	S 14
S 15	5 35 6	23°17'07	25°13	12°23	20°46	21°41	29°23	0°44	19° 8	20°30	21°21	0°25	2° 5	9°11	16°26	S 15
M 16	5 39 2	24°18'12	7♂ 7	12°44	22° 0	22°22	29°33	0°51	19°10	20°29	21°21	0°20	2° 1	9°18	16°27	M 16
T 17	5 42 59	25°19'18	19° 6	12°56	23°14	23° 4	29°43	0°58	19°12	20°28	21°21	0°18	1°58	9°25	16°28	T 17
W 18	5 46 55	26°20'24	1♂11	12°R56	24°29	23°45	29°53	1° 5	19°14	20°26	21°21	0°D17	1°55	9°31	16°29	W 18
T 19	5 50 52	27°21'32	13°25	12°46	25°43	24°26	0♂ 3	1°11	19°16	20°25	21°21	0°18	1°52	9°38	16°30	T 19
F 20	5 54 48	28°22'39	25°51	12°24	26°58	25° 7	0°12	1°18	19°18	20°24	21°22	0°19	1°49	9°45	16°32	F 20
S 21	5 58 45	29°23'47	8♂32	11°50	28°12	25°48	0°22	1°24	19°20	20°23	21°22	0°21	1°46	9°52	16°33	S 21
S 22	6 2 41	0♂24'56	21°32	11° 5	29°26	26°30	0°31	1°31	19°22	20°21	21°22	0°22	1°42	9°58	16°34	S 22
M 23	6 6 38	1°26'06	4♂54	10° 9	0♂41	27°11	0°40	1°38	19°23	20°20	21°22	0°R23	1°39	10° 5	16°36	M 23
T 24	6 10 35	2°27'15	18°40	9° 3	1°55	27°52	0°49	1°44	19°25	20°19	21°R22	0°22	1°36	10°12	16°37	T 24
W 25	6 14 31	3°28'26	2♂51	7°50	3° 9	28°34	0°58	1°50	19°27	20°18	21°22	0°19	1°33	10°18	16°39	W 25
T 26	6 18 28	4°29'37	17°26	6°32	4°23	29°15	1° 7	1°57	19°28	20°17	21°22	0°16	1°30	10°25	16°40	T 26
F 27	6 22 24	5°30'48	2♂20	5°10	5°38	29°57	1°16	2° 3	19°30	20°16	21°22	0°12	1°27	10°32	16°42	F 27
S 28	6 26 21	6°32'00	17°26	3°49	6°52	0♂38	1°25	2°10	19°31	20°15	21°22	0° 9	1°23	10°38	16°44	S 28
S 29	6 30 17	7°33'12	2♂34	2°30	8° 6	1°20	1°33	2°16	19°33	20°14	21°21	0° 6	1°20	10°45	16°46	S 29
M 30	6 34 14	8°34'24	17°36	1°16	9°20	2° 1	1°42	2°22	19°34	20°13	21°21	0° 5	1°17	10°52	16°47	M 30
T 31	6 38 10	9♂35'36	2♂21	0♂ 9	10♂34	2♂43	1♂50	2♂28	19♂36	20♂12	21♂21	0°D 4	1♂14	10♂58	16♂49	T 31

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	21s50	20s19 3n 3	25s50	2s23 24s45	1s19 15s 5	0n27 9s19	1n 9	18s13	1n49	6s43	0n37	16n15	1s49	17n28	15n16	19n55
M 2	21 59	21 15 1 53	25 50	2 22 24 44	1 21 15 18	0 26 9 23	1 9	18 14	1 49	6 44	0 37	16 15	1 48	17 28	15 17	19 56
T 3	22 8	20 40 0 36	25 49	2 21 24 43	1 23 15 30	0 26 9 27	1 9	18 16	1 49	6 45	0 37	16 14	1 48	17 29	15 17	19 56
W 4	22 16	18 47 0s40	25 47	2 19 24 41	1 24 15 43	0 25 9 31	1 9	18 17	1 49	6 45	0 37	16 14	1 48	17 29	15 18	19 56
T 5	22 24	15 50 1 52	25 43	2 16 24 38	1 26 15 56	0 25 9 35	1 9	18 19	1 49	6 46	0 37	16 13	1 48	17 29	15 18	19 56
F 6	22 32	12 9 2 56	25 37	2 13 24 35	1 28 16 8	0 24 9 38	1 9	18 20	1 49	6 47	0 37	16 13	1 48	17 29	15 19	19 55
S 7	22 39	7 59 3 48	25 31	2 9 24 31	1 29 16 20	0 24 9 42	1 9	18 22	1 49	6 48	0 37	16 13	1 48	17 30	15 19	19 55
S 8	22 45	3 36 4 28	25 22	2 4 24 26	1 31 16 32	0 23 9 46	1 9	18 23	1 49	6 49	0 38	16 12	1 48	17 30	15 20	19 56
M 9	22 51	0n51 4 55	25 13	1 58 24 20	1 32 16 45	0 23 9 50	1 9	18 25	1 49	6 50	0 38	16 12	1 48	17 30	15 20	19 56
T 10	22 57	5 11 5 8	25 2	1 51 24 14	1 33 16 57	0 22 9 53	1 10	18 26	1 49	6 51	0 38	16 12	1 48	17 30	15 21	19 58
W 11	23 2	9 16 5 7	24 50	1 43 24 6	1 35 17 8	0 21 9 57	1 10	18 28	1 49	6 52	0 38	16 11	1 48	17 31	15 21	19 59
T 12	23 7	12 58 4 53	24 37	1 34 23 58	1 36 17 20	0 21 10 0	1 10	18 29	1 49	6 53	0 38	16 11	1 48	17 31	15 22	20 1
F 13	23 11	16 9 4 26	24 23	1 24 23 50	1 37 17 32	0 20 10 4	1 10	18 30	1 49	6 54	0 38	16 11	1 48	17 31	15 23	20 3
S 14	23 15	18 40 3 48	24 9	1 12 23 40	1 38 17 43	0 20 10 7	1 10	18 32	1 49	6 54	0 38	16 10	1 48	17 32	15 23	20 4
S 15	23 18	20 24 2 59	23 53	1 0 23 30	1 39 17 54	0 19 10 11	1 10	18 33	1 49	6 55	0 38	16 10	1 48	17 32	15 24	20 6
M 16	23 21	21 14 2 3	23 37	0 46 23 20	1 40 18 5	0 19 10 14	1 10	18 34	1 49	6 56	0 38	16 10	1 48	17 32	15 24	20 6
T 17	23 23	21 7 1 1	23 21	0 30 23 8	1 41 18 16	0 18 10 17	1 11	18 36	1 49	6 57	0 38	16 9	1 48	17 33	15 25	20 7
W 18	23 25	20 0 0n 5	23 4	0 14 22 56	1 42 18 27	0 17 10 21	1 11	18 37	1 49	6 57	0 38	16 9	1 48	17 33	15 25	20 7
T 19	23 27	17 57 1 11	22 48	0n 4 22 43	1 43 18 38	0 17 10 24	1 11	18 38	1 50	6 58	0 38	16 9	1 48	17 34	15 26	20 7
F 20	23 28	15 3 2 15	22 32	0 22 22 29	1 44 18 49	0 16 10 27	1 11	18 40	1 50	6 59	0 38	16 8	1 48	17 34	15 26	20 7
S 21	23 28	11 23 3 14	22 15	0 42 22 15	1 44 18 59	0 16 10 30	1 11	18 41	1 50	7 0	0 38	16 8	1 48	17 35	15 27	20 6
S 22	23 28	7 7 4 5	22 0	1 1 22 0	1 45 19 9	0 15 10 33	1 11	18 42	1 50	7 0	0 38	16 8	1 48	17 35	15 27	20 6
M 23	23 28	2 24 4 44	21 44	1 21 21 45	1 45 19 19	0 14 10 37	1 11	18 44	1 50	7 1	0 38	16 8	1 48	17 36	15 28	20 6
T 24	23 27	2s35 5 8	21 30	1 41 21 29	1 46 19 29	0 14 10 40	1 12	18 45	1 50	7 2	0 38	16 7	1 48	17 36	15 29	20 6
W 25	23 26	7 34 5 14	21 16	1 59 21 12	1 46 19 39	0 13 10 43	1 12	18 46	1 50	7 2	0 38	16 7	1 48	17 37	15 29	20 7
T 26	23 24	12 15 5 0	21 3	2 16 20 55	1 46 19 49	0 13 10 46	1 12	18 47	1 50	7 3	0 38	16 7	1 48	17 37	15 30	20 7
F 27	23 22	16 18 4 26	20 51	2 32 20 37	1 47 19 58	0 12 10 48	1 12	18 48	1 50	7 3	0 38	16 7	1 48	17 38	15 30	20 8
S 28	23 19	19 20 3 34	20 40	2 45 20 18	1 47 20 8	0 11 10 51	1 12	18 50	1 50	7 4	0 38	16 6	1 48	17 38	15 31	20 9
S 29	23 15	21 1 2 26	20 31	2 56 19 59	1 47 20 17	0 11 10 54	1 12	18 51	1 50	7 4	0 38	16 6	1 47	17 39	15 31	20 9
M 30	23 12	21 11 1 8	20 23	3 5 19 40	1 47 20 26	0 10 10 57	1 12	18 52	1 50	7 5	0 38	16 6	1 47	17 39	15 32	20 10
T 31	23s 8	19s52 0s13	20s18	3n11 19s19	1s47 20s35	0n 9 11s 0	1n13	18s53	1n50	7s 5	0n38	16n 6	1s47	17n40	15n32	20n10

Julian Day Number = 2349611.5, Delta T = 10.47 sec  
Ecliptic obliquity = 23°28'27", Nutation = - 0°00'16", out-of-bounds declination in red  
Ayanamsha: Fagan/Bradley = 20°50'39", Lahiri = 19°57'40"Greg. Calendar