



Astrodienst Ephemeris Tables for the year 1581

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 1581

geocentric

JANUARY 1581 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	7 21 13	20°34'14"	23°11' 8"	9°31' 5"	5°24' 2"	28°59' 1"	1°27' 2"	16°22' 2"	13°46' 14"	14°21' 1"	1°52' 7"	7°34' 8"	8°25' 15"	15°27' 2"	2°50' 2"	S 1
M 2	7 25 10	21°49'22"	6°15' 59"	10°17' 6"	6°32' 29"	29° 5' 1"	1°41' 16"	16° 9' 13"	13°49' 14"	1°53' 7"	7°32' 8"	8°22' 15"	15°34' 2"	2°51' 2"	M 2	
T 3	7 29 6	22°50'29"	21°18' 0"	10°55' 7"	7°40' 29"	29°12' 2"	1°54' 16"	16°15' 13"	13°52' 14"	1°53' 7"	7°30' 8"	8°18' 15"	15°41' 2"	2°53' 2"	T 3	
W 4	7 33 3	23°51'36"	6°30' 0"	11°24' 8"	8°48' 29"	29°19' 2"	2° 8' 16"	16°22' 13"	13°56' 14"	1°54' 7"	7°28' 8"	8°15' 15"	15°47' 2"	2°55' 2"	W 4	
T 5	7 36 59	24°52'42"	21° 0' 0"	11°42' 9"	9°57' 29"	29°27' 2"	2°21' 16"	16°29' 13"	13°59' 14"	1°55' 7"	7°27' 8"	8°12' 15"	15°54' 2"	2°56' 2"	T 5	
F 6	7 40 56	25°53'48"	6°38' 8"	11°R50	11° 5' 29"	29°36' 2"	2°34' 16"	16°36' 14"	14° 2' 14"	1°56' 7"	7°D27	8° 9' 16"	16° 1' 2"	2°58' 2"	F 6	
S 7	7 44 53	26°54'53"	21°15' 0"	11°46' 12"	12°14' 29"	29°46' 2"	2°47' 16"	16°43' 14"	14° 6' 14"	1°56' 7"	7°27' 8"	8° 6' 16"	16° 7' 3"	3° 0' 2"	S 7	
S 8	7 48 49	27°55'56"	6°13' 13"	11°31' 13"	13°23' 29"	29°56' 3"	3° 1' 16"	16°50' 14"	14° 9' 14"	1°57' 7"	7°28' 8"	8° 3' 16"	16°14' 3"	3° 2' 2"	S 8	
M 9	7 52 46	28°56'59"	20°55' 11"	4° 14' 32"	0°11' 7"	3°14' 16"	3°14' 16"	16°57' 14"	14° 8' 1°58	7°29' 7°59	16°21' 3"	4° 16°21	16°21' 3"	3° 4° 16	M 9	
T 10	7 56 42	29°58'00"	5°14' 10"	10°27' 15"	15°41' 0°18	3°27' 17"	4° 16°16	14° 6' 1°58	7°29' 7°56	16°27' 3"	6° 16°27	16°27' 3"	3° 6° 16	3° 6° 16	T 10	
W11	8 0 39	0°59'00"	19°10' 9"	9°39' 16"	16°50' 0°30	3°40' 17"	11° 14°19	14° 5' 1°59	7°30' 7°53	16°34' 3"	8° 16°34	16°34' 3"	3° 8° 16	3° 8° 16	W11	
T 12	8 4 35	2° 0'00"	2°18' 8"	8°42' 17"	17°59' 0°42	3°53' 17"	17°18' 14°23	14° 3' 2° 0	7°R30	7°50' 16°41	3°10' 3°10	3°10' 3°10	3°10' 3°10	3°10' 3°10	T 12	
F 13	8 8 32	3° 0'57"	15°50' 7"	7°38' 19"	9° 0°55	4° 6' 17"	25' 14°26	14° 2' 2° 1	7°30' 7°47	16°47' 3°12	F 13	3°12' 3°12	3°12' 3°12	3°12' 3°12	F 13	
S 14	8 12 28	4° 1'54"	28°39' 6"	28°18' 1° 9	4°19' 17°32	14°30' 14° 0	2° 2' 7°30	7°44' 16°54	3°15' 3°15	S 14	3°15' 3°15	3°15' 3°15	3°15' 3°15	3°15' 3°15	S 14	
S 15	8 16 25	5° 2'49"	11°11'10"	5°15' 21°28	1°23' 4°32	17°39' 14°33	13°58' 2° 3	7°29' 7°40	17° 1' 3°17	S 15	3°17' 3°17	3°17' 3°17	3°17' 3°17	3°17' 3°17	S 15	
M16	8 20 22	6° 3'44"	23°28' 4° 0	22°38' 1°37	4°45' 17°46	14°36' 13°57	2° 4' 7°29	7°37' 17° 7	3°19' 3°19	M16	3°19' 3°19	3°19' 3°19	3°19' 3°19	3°19' 3°19	M16	
T 17	8 24 18	7° 4'36"	5°35' 2°47	23°48' 1°52	4°57' 17°53	14°40' 13°55	2° 4' 7°D29	7°34' 17°14	3°21' 3°21	T 17	3°21' 3°21	3°21' 3°21	3°21' 3°21	3°21' 3°21	T 17	
W18	8 28 15	8° 5'28"	17°34' 1°36	24°58' 2° 8	5°10' 18° 1	14°43' 13°54	2° 5' 7°29	7°31' 17°20	3°24' 3°24	W18	3°24' 3°24	3°24' 3°24	3°24' 3°24	3°24' 3°24	W18	
T 19	8 32 11	9° 6'18"	29°27' 0°30	26° 8' 2°24	5°23' 18° 8	14°47' 13°52	2° 6' 7°29	7°28' 17°27	3°26' 3°26	T 19	3°26' 3°26	3°26' 3°26	3°26' 3°26	3°26' 3°26	T 19	
F 20	8 36 8	10° 7'07"	11°16'16"	29°30' 27°18	2°40' 5°35	18°15' 14°50	13°51' 2° 7	7°R29	7°24' 17°34	3°29' 3°29	F 20	3°29' 3°29	3°29' 3°29	3°29' 3°29	F 20	
S 21	8 40 4	11° 7'55"	23° 4' 28°37	28°28' 2°57	5°48' 18°22	14°54' 13°49	2° 8' 7°29	7°21' 17°40	3°31' 3°31	S 21	3°31' 3°31	3°31' 3°31	3°31' 3°31	3°31' 3°31	S 21	
S 22	8 44 1	12° 8'42"	4°15'53"	27°51' 29°39	3°15' 6° 0	18°29' 14°57	13°48' 2° 9	7°28' 7°18	17°47' 3°34	S 22	3°34' 3°34	3°34' 3°34	3°34' 3°34	3°34' 3°34	S 22	
M23	8 47 58	13° 9'27"	16°44' 27°14	0°34'9"	3°33' 6°13	18°36' 15° 1	13°46' 2°10	7°28' 7°15	17°54' 3°36	M23	3°36' 3°36	3°36' 3°36	3°36' 3°36	3°36' 3°36	M23	
T 24	8 51 54	14°10'11"	28°41' 26°45	2° 0' 3°51	6°25' 18°44	15° 4' 13°45	2°11' 7°27	7°12' 18° 0	3°39' 3°39	T 24	3°39' 3°39	3°39' 3°39	3°39' 3°39	3°39' 3°39	T 24	
W25	8 55 51	15°10'54"	10°47'26"	26°24' 3°11	4° 9' 6°37	18°51' 15° 8	13°44' 2°12	7°26' 7° 9	18° 7' 3°42	W25	3°42' 3°42	3°42' 3°42	3°42' 3°42	3°42' 3°42	W25	
T 26	8 59 47	16°11'36"	23° 5' 26°11	4°21' 4°28	6°50' 18°58	15°11' 13°42	2°14' 7°25	7° 5' 18°14	3°44' 3°44	T 26	3°44' 3°44	3°44' 3°44	3°44' 3°44	3°44' 3°44	T 26	
F 27	9 3 44	17°12'17"	5°13'38"	26°D 6' 5°32	4°48' 7° 2	19° 5' 15°15	13°41' 2°15	7°24' 7° 2	18°20' 3°47	F 27	3°47' 3°47	3°47' 3°47	3°47' 3°47	3°47' 3°47	F 27	
S 28	9 7 40	18°12'56"	18°30' 26° 8	6°43' 5° 8	7°14' 19°13	15°18' 13°39	2°16' 7°D24	6°59' 18°27	3°50' 3°50	S 28	3°50' 3°50	3°50' 3°50	3°50' 3°50	3°50' 3°50	S 28	
S 29	9 11 37	19°13'35"	1°14'45"	26°17' 7°54	5°28' 7°26	19°20' 15°22	13°38' 2°17	7°24' 6°56	18°34' 3°53	S 29	3°53' 3°53	3°53' 3°53	3°53' 3°53	3°53' 3°53	S 29	
M30	9 15 33	20°14'12"	15°24' 26°33	9° 5' 5°48	7°38' 19°27	15°25' 13°37	2°18' 7°25	6°53' 18°40	3°56' 3°56	M30	3°56' 3°56	3°56' 3°56	3°56' 3°56	3°56' 3°56	M30	
T 31	9 19 30	21°14'49"	29°13'30"	26°35'4	10°31'6"	6°11' 9	7°350	19°34	15°29	13°36	2°19	7°26	6°50	18°47	3°59	T 31

Day	☉	☾		♀		♀		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂		♂	
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ASTRODIENST EPHEMERIS for the year 1581

geocentric

FEBRUARY 1581 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	9 23 27	22 ²² 15'24	14 ¹⁴ 31	27 ²⁷ 31	11 ¹¹ 38	6 ⁶ 11	8 ⁸ 31	19 ¹⁹ 41	15 ¹⁵ 32	13 ¹³ R34	2 ² Y20	7 ⁷ 27	6 ⁶ 46	18 ¹⁸ 54	4 ⁴ Y 1	W 1
T 2	9 27 23	23 ²³ 15'57	28 ²⁸ 54	27 ²⁷ 53	12 ¹² 39	6 ⁶ 52	8 ⁸ 13	19 ¹⁹ 49	15 ¹⁵ 35	13 ¹³ 33	2 ² 21	7 ⁷ 28	6 ⁶ 43	19 ¹⁹ 0	4 ⁴ 4	T 2
F 3	9 31 20	24 ²⁴ 16'29	14 ¹⁴ 22	28 ²⁸ 29	13 ¹³ 50	7 ⁷ 14	8 ⁸ 25	19 ¹⁹ 56	15 ¹⁵ 39	13 ¹³ 32	2 ² 23	7 ⁷ R28	6 ⁶ 40	19 ¹⁹ 7	4 ⁴ 7	F 3
S 4	9 35 16	25 ²⁵ 17'00	29 ²⁹ 16	29 ²⁹ 10	15 ¹⁵ 2	7 ⁷ 36	8 ⁸ 36	20 ²⁰ 3	15 ¹⁵ 42	13 ¹³ 31	2 ² 24	7 ⁷ 27	6 ⁶ 37	19 ¹⁹ 14	4 ⁴ 10	S 4
S 5	9 39 13	26 ²⁶ 17'29	14 ¹⁴ X26	29 ²⁹ 55	16 ¹⁶ 13	7 ⁷ 59	8 ⁸ 48	20 ²⁰ 10	15 ¹⁵ 46	13 ¹³ 30	2 ² 25	7 ⁷ 25	6 ⁶ 34	19 ¹⁹ 20	4 ⁴ 13	S 5
M 6	9 43 9	27 ²⁷ 17'56	29 ²⁹ 24	0 ⁰ 44	17 ¹⁷ 25	8 ⁸ 22	8 ⁸ 59	20 ²⁰ 18	15 ¹⁵ 49	13 ¹³ 28	2 ² 26	7 ⁷ 23	6 ⁶ 30	19 ¹⁹ 27	4 ⁴ 17	M 6
T 7	9 47 6	28 ²⁸ 18'21	14 ¹⁴ Y 0	1 ¹ 36	18 ¹⁸ 36	8 ⁸ 45	9 ⁹ 11	20 ²⁰ 25	15 ¹⁵ 53	13 ¹³ 27	2 ² 28	7 ⁷ 20	6 ⁶ 27	19 ¹⁹ 33	4 ⁴ 20	T 7
W 8	9 51 2	29 ²⁹ 18'44	28 ²⁸ 10	2 ² 31	19 ¹⁹ 48	9 ⁹ 8	9 ⁹ 22	20 ²⁰ 32	15 ¹⁵ 56	13 ¹³ 26	2 ² 29	7 ⁷ 17	6 ⁶ 24	19 ¹⁹ 40	4 ⁴ 23	W 8
T 9	9 54 59	0 ⁰ X19'05	11 ¹¹ 35	3 ³ 29	21 ²¹ 0	9 ⁹ 32	9 ⁹ 33	20 ²⁰ 39	16 ¹⁶ 0	13 ¹³ 25	2 ² 30	7 ⁷ 15	6 ⁶ 21	19 ¹⁹ 47	4 ⁴ 26	T 9
F 10	9 58 56	1 ¹ 19'25	25 ²⁵ 6	4 ⁴ 30	22 ²² 11	9 ⁹ 56	9 ⁹ 44	20 ²⁰ 46	16 ¹⁶ 3	13 ¹³ 24	2 ² 31	7 ⁷ 14	6 ⁶ 18	19 ¹⁹ 53	4 ⁴ 29	F 10
S 11	10 2 52	2 ² 19'42	7 ⁷ 11	5 ⁵ 33	23 ²³ 23	10 ¹⁰ 20	9 ⁹ 55	20 ²⁰ 53	16 ¹⁶ 6	13 ¹³ 23	2 ² 33	7 ⁷ D14	6 ⁶ 15	20 ²⁰ 0	4 ⁴ 32	S 11
S 12	10 6 49	3 ³ 19'57	20 ²⁰ 24	6 ⁶ 39	24 ²⁴ 35	10 ¹⁰ 45	10 ¹⁰ 6	21 ²¹ 1	16 ¹⁶ 10	13 ¹³ 22	2 ² 34	7 ⁷ 15	6 ⁶ 11	20 ²⁰ 7	4 ⁴ 36	S 12
M13	10 10 45	4 ⁴ 20'11	2 ² 36	7 ⁷ 47	25 ²⁵ 47	11 ¹¹ 10	10 ¹⁰ 16	21 ²¹ 8	16 ¹⁶ 13	13 ¹³ 21	2 ² 35	7 ⁷ 17	6 ⁶ 8	20 ²⁰ 13	4 ⁴ 39	M13
T 14	10 14 42	5 ⁵ 20'22	14 ¹⁴ 35	8 ⁸ 57	26 ²⁶ 59	11 ¹¹ 35	10 ¹⁰ 27	21 ²¹ 15	16 ¹⁶ 16	13 ¹³ 20	2 ² 37	7 ⁷ 18	6 ⁶ 5	20 ²⁰ 20	4 ⁴ 42	T 14
W15	10 18 38	6 ⁶ 20'31	26 ²⁶ 27	10 ¹⁰ 9	28 ²⁸ 11	12 ¹² 0	10 ¹⁰ 38	21 ²¹ 22	16 ¹⁶ 20	13 ¹³ 19	2 ² 38	7 ⁷ 20	6 ⁶ 2	20 ²⁰ 27	4 ⁴ 46	W15
T 16	10 22 35	7 ⁷ 20'38	8 ⁸ 14	11 ¹¹ 22	29 ²⁹ 23	12 ¹² 26	10 ¹⁰ 48	21 ²¹ 29	16 ¹⁶ 23	13 ¹³ 18	2 ² 39	7 ⁷ R20	5 ⁵ 59	20 ²⁰ 33	4 ⁴ 49	T 16
F 17	10 26 31	8 ⁸ 20'43	20 ²⁰ 1	12 ¹² 38	0 ⁰ 35	12 ¹² 52	10 ¹⁰ 59	21 ²¹ 36	16 ¹⁶ 26	13 ¹³ 18	2 ² 41	7 ⁷ 20	5 ⁵ 56	20 ²⁰ 40	4 ⁴ 52	F 17
S 18	10 30 28	9 ⁹ 20'46	1 ¹ 50	13 ¹³ 55	1 ¹ 47	13 ¹³ 18	11 ¹¹ 9	21 ²¹ 43	16 ¹⁶ 30	13 ¹³ 17	2 ² 42	7 ⁷ 17	5 ⁵ 52	20 ²⁰ 47	4 ⁴ 56	S 18
S 19	10 34 25	10 ¹⁰ 20'47	13 ¹³ 44	15 ¹⁵ 14	2 ² 59	13 ¹³ 44	11 ¹¹ 19	21 ²¹ 50	16 ¹⁶ 33	13 ¹³ 16	2 ² 43	7 ⁷ 13	5 ⁵ 49	20 ²⁰ 53	4 ⁴ 59	S 19
M20	10 38 21	11 ¹¹ 20'46	25 ²⁵ 43	16 ¹⁶ 35	4 ⁴ 11	14 ¹⁴ 10	11 ¹¹ 29	21 ²¹ 57	16 ¹⁶ 36	13 ¹³ 15	2 ² 45	7 ⁷ 7	5 ⁵ 46	21 ²¹ 0	5 ⁵ 3	M20
T 21	10 42 18	12 ¹² 20'44	7 ⁷ 50	17 ¹⁷ 57	5 ⁵ 23	14 ¹⁴ 37	11 ¹¹ 39	22 ²² 4	16 ¹⁶ 39	13 ¹³ 15	2 ² 46	7 ⁷ 1	5 ⁵ 43	21 ²¹ 7	5 ⁵ 6	T 21
W22	10 46 14	13 ¹³ 20'39	20 ²⁰ 6	19 ¹⁹ 20	6 ⁶ 35	15 ¹⁵ 4	11 ¹¹ 49	22 ²² 11	16 ¹⁶ 43	13 ¹³ 14	2 ² 47	6 ⁶ 54	5 ⁵ 40	21 ²¹ 13	5 ⁵ 9	W22
T 23	10 50 11	14 ¹⁴ 20'33	2 ² 11	20 ²⁰ 45	7 ⁷ 48	15 ¹⁵ 31	11 ¹¹ 59	22 ²² 18	16 ¹⁶ 46	13 ¹³ 13	2 ² 49	6 ⁶ 48	5 ⁵ 36	21 ²¹ 20	5 ⁵ 13	T 23
F 24	10 54 7	15 ¹⁵ 20'25	15 ¹⁵ 13	22 ²² 11	9 ⁹ 0	15 ¹⁵ 58	12 ¹² 8	22 ²² 24	16 ¹⁶ 49	13 ¹³ 13	2 ² 50	6 ⁶ 43	5 ⁵ 33	21 ²¹ 26	5 ⁵ 16	F 24
S 25	10 58 4	16 ¹⁶ 20'15	28 ²⁸ 7	23 ²³ 38	10 ¹⁰ 12	16 ¹⁶ 26	12 ¹² 18	22 ²² 31	16 ¹⁶ 52	13 ¹³ 12	2 ² 52	6 ⁶ 40	5 ⁵ 30	21 ²¹ 33	5 ⁵ 20	S 25
S 26	11 2 0	17 ¹⁷ 20'04	11 ¹¹ X19	25 ²⁵ 7	11 ¹¹ 25	16 ¹⁶ 54	12 ¹² 27	22 ²² 38	16 ¹⁶ 55	13 ¹³ 11	2 ² 53	6 ⁶ 38	5 ⁵ 27	21 ²¹ 40	5 ⁵ 24	S 26
M27	11 5 57	18 ¹⁸ 19'51	24 ²⁴ 50	26 ²⁶ 37	12 ¹² 37	17 ¹⁷ 21	12 ¹² 36	22 ²² 45	16 ¹⁶ 58	13 ¹³ 11	2 ² 55	6 ⁶ D38	5 ⁵ 24	21 ²¹ 46	5 ⁵ 27	M27
T 28	11 9 53	19 ¹⁹ X19'36	8 ⁸ 34	28 ²⁸ 9	13 ¹³ 49	17 ¹⁷ 11	12 ¹² 35	22 ²² 52	17 ¹⁷ 1	13 ¹³ 10	2 ² Y56	6 ⁶ 39	5 ⁵ 21	21 ²¹ 53	5 ⁵ Y31	T 28

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	
W 1	14s 8	24s51	2s 6	19s13	1n33	21s42	1n18	23n46	2n22	23s 8	0n 7	16s 1	1s 7	16s51	0s39	22n 6
T 2	13 48	21 12	0 47	19 19	1 21	21 39	1 14	23 50	2 21	23 7	0 7	15 58	1 7	16 50	0 39	22 6
F 3	13 28	16 5	0n36	19 23	1 9	21 36	1 11	23 53	2 21	23 7	0 7	15 56	1 7	16 49	0 39	22 6
S 4	13 7	9 55	1 58	19 26	0 57	21 32	1 7	23 56	2 20	23 6	0 7	15 54	1 7	16 48	0 39	22 6
S 5	12 47	3 13	3 11	19 28	0 46	21 27	1 3	23 59	2 20	23 5	0 7	15 52	1 7	16 47	0 39	22 6
M 6	12 26	3n34	4 9	19 29	0 35	21 22	1 0	24 3	2 19	23 5	0 7	15 49	1 8	16 46	0 39	22 7
T 7	12 5	9 59	4 50	19 28	0 24	21 16	0 56	24 6	2 19	23 4	0 7	15 47	1 8	16 45	0 39	22 7
W 8	11 44	15 41	5 11	19 26	0 13	21 10	0 52	24 9	2 18	23 3	0 6	15 45	1 8	16 43	0 39	22 7
T 9	11 23	20 25	5 14	19 23	0 3	21 3	0 49	24 12	2 18	23 3	0 6	15 43	1 8	16 42	0 39	22 7
F 10	11 2	23 56	5 0	19 18	0s 7	20 55	0 45	24 15	2 17	23 2	0 6	15 41	1 8	16 41	0 39	22 7
S 11	10 40	26 9	4 31	19 12	0 17	20 47	0 42	24 18	2 17	23 1	0 6	15 38	1 8	16 40	0 39	22 7
S 12	10 18	26 59	3 50	19 5	0 26	20 38	0 38	24 21	2 16	23 1	0 6	15 36	1 8	16 39	0 40	22 7
M13	9 57	26 28	3 0	18 56	0 35	20 29	0 34	24 24	2 16	23 0	0 6	15 34	1 8	16 38	0 40	22 7
T 14	9 35	24 43	2 2	18 46	0 44	20 19	0 31	24 27	2 15	22 59	0 6	15 32	1 8	16 37	0 40	22 8
W15	9 12	21 53	1 0	18 35	0 52	20 8	0 27	24 30	2 15	22 58	0 6	15 30	1 8	16 36	0 40	22 8
T 16	8 50	18 10	0s 5	18 22	1 0	19 57	0 24	24 33	2 14	22 58	0 6	15 27	1 8	16 36	0 40	22 8
F 17	8 28	13 45	1 9	18 8	1 8	19 45	0 20	24 36	2 14	22 57	0 6	15 25	1 9	16 35	0 40	22 8
S 18	8 5	8 49	2 10	17 53	1 15	19 33	0 16	24 39	2 13	22 56	0 6	15 23	1 9	16 34	0 40	22 8
S 19	7 42	3 33	3 6	17 36	1 22	19 20	0 13	24 42	2 13	22 55	0 5	15 21	1 9	16 33	0 40	22 8
M20	7 20	1s52	3 54	17 18	1 28	19 6	0 9	24 44	2 12	22 55	0 5	15 19	1 9	16 32	0 40	22 8
T 21	6 57	7 16	4 32	16 59	1 34	18 52	0 6	24 47	2 12	22 54	0 5	15 16	1 9	16 31	0 40	22 8
W22	6 34	12 28	4 58	16 38	1 40	18 38	0 3	24 50	2 11	22 53	0 5	15 14	1 9	16 30	0 40	22 8
T 23	6 11	17 14	5 10	16 16	1 45	18 22	0s 1	24 52	2 11	22 52	0 5	15 12	1 9	16 29	0 40	22 9
F 24	5 47	21 20	5 7	15 53	1 50	18 7	0 4	24 55	2 10	22 51	0 5	15 10	1 9	16 28	0 40	22 9
S 25	5 24	24 29	4 49	15 28	1 55	17 51	0 7	24 57	2 10	22 51	0 5	15 8	1 9	16 27	0 40	22 9
S 26	5 1	26 25	4 16	15 3	1 59	17 34	0 11	24 59	2 9	22 50	0 5	15 6	1 9	16 26	0 40	22 9
M27	4 38	26 51	3 28	14 35	2 2	17 17	0 14	25 1	2 8	22 49	0 5	15 4	1 10	16 25	0 40	22 9
T 28	4s14	25s38	2s26	14s 7	2s 6	16s59	0s17	25n 4	2n 8	22s48	0n 5	15s 1	1s10	16s24	0s40	22n 9

ASTRODIENST EPHEMERIS for the year 1581

geocentric

MARCH 1581 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	11 13 50	20♌19'20	22♌56	29♌42	15♌2	18♌18	12♌55	22♌58	17♌4	13°R10	2♌57	6♌40	5♌17	22♌0	5♌34	W 1
T 2	11 17 47	21°19'02	7♌31	1♌16	16°14	18°46	13°3	23°5	17°7	13♌10	2°59	6°R41	5°14	22°6	5°38	T 2
F 3	11 21 43	22°18'42	22°22	2°51	17°27	19°15	13°12	23°12	17°10	13°9	3°0	6°40	5°11	22°13	5°41	F 3
S 4	11 25 40	23°18'20	7♌24	4°28	18°39	19°43	13°21	23°18	17°13	13°9	3°2	6°37	5°8	22°20	5°45	S 4
S 5	11 29 36	24°17'56	22°28	6°5	19°52	20°12	13°29	23°25	17°16	13°8	3°3	6°32	5°5	22°26	5°49	S 5
M 6	11 33 33	25°17'30	7♌25	7°45	21°5	20°41	13°38	23°31	17°19	13°8	3°5	6°25	5°2	22°33	5°52	M 6
T 7	11 37 29	26°17'02	22°6	9°25	22°17	21°10	13°46	23°38	17°22	13°8	3°6	6°17	4°58	22°40	5°56	T 7
W 8	11 41 26	27°16'32	6♌23	11°7	23°30	21°40	13°54	23°44	17°25	13°8	3°8	6°9	4°55	22°46	6°0	W 8
T 9	11 45 22	28°15'59	20°14	12°50	24°42	22°9	14°2	23°51	17°28	13°7	3°9	6°2	4°52	22°53	6°3	T 9
F 10	11 49 19	29°15'24	3♌35	14°34	25°55	22°39	14°10	23°57	17°31	13°7	3°10	5°56	4°49	23°0	6°7	F 10
S 11	11 53 16	0♌14'47	16°30	16°19	27°8	23°9	14°18	24°3	17°34	13°7	3°12	5°53	4°46	23°6	6°11	S 11
S 12	11 57 12	1°14'08	29°1	18°6	28°20	23°39	14°25	24°10	17°36	13°7	3°13	5°D52	4°42	23°13	6°14	S 12
M13	12 1 9	2°13'26	11♌13	19°55	29°33	24°9	14°33	24°16	17°39	13°7	3°15	5°53	4°39	23°20	6°18	M13
T 14	12 5 5	3°12'42	23°11	21°44	0♌46	24°39	14°40	24°22	17°42	13°D7	3°16	5°54	4°36	23°26	6°22	T 14
W15	12 9 2	4°11'56	5♌1	23°35	1°58	25°9	14°47	24°28	17°44	13°7	3°18	5°R54	4°33	23°33	6°25	W15
T 16	12 12 58	5°11'07	16°47	25°28	3°11	25°40	14°54	24°34	17°47	13°7	3°19	5°54	4°30	23°40	6°29	T 16
F 17	12 16 55	6°10'16	28°35	27°21	4°24	26°10	15°1	24°40	17°50	13°7	3°21	5°51	4°27	23°46	6°33	F 17
S 18	12 20 51	7°9'23	10♌27	29°17	5°37	26°41	15°8	24°46	17°52	13°7	3°22	5°46	4°23	23°53	6°37	S 18
S 19	12 24 48	8°8'27	22°27	1♌13	6°49	27°12	15°14	24°52	17°55	13°7	3°24	5°38	4°20	23°59	6°40	S 19
M20	12 28 45	9°7'30	4♌37	3°11	8°2	27°43	15°21	24°58	17°57	13°7	3°25	5°28	4°17	24°6	6°44	M20
T 21	12 32 41	10°6'30	16°58	5°10	9°15	28°14	15°27	25°4	18°0	13°8	3°27	5°16	4°14	24°13	6°48	T 21
W22	12 36 38	11°5'28	29°30	7°10	10°28	28°45	15°33	25°10	18°2	13°8	3°28	5°4	4°11	24°19	6°51	W22
T 23	12 40 34	12°4'25	12♌13	9°12	11°41	29°16	15°39	25°15	18°4	13°8	3°30	4°53	4°7	24°26	6°55	T 23
F 24	12 44 31	13°3'19	25°9	11°15	12°54	29°47	15°45	25°21	18°7	13°8	3°31	4°43	4°4	24°33	6°59	F 24
S 25	12 48 27	14°2'12	8♌16	13°18	14°6	0♌19	15°51	25°27	18°9	13°9	3°32	4°36	4°1	24°39	7°2	S 25
S 26	12 52 24	15°1'03	21°36	15°23	15°19	0°50	15°56	25°32	18°11	13°9	3°34	4°31	3°58	24°46	7°6	S 26
M27	12 56 20	15°59'52	5♌9	17°28	16°32	1°22	16°1	25°38	18°14	13°10	3°35	4°29	3°55	24°53	7°10	M27
T 28	13 0 17	16°58'39	18°56	19°34	17°45	1°54	16°7	25°43	18°16	13°10	3°37	4°D29	3°52	24°59	7°13	T 28
W29	13 4 14	17°57'25	2♌58	21°41	18°58	2°25	16°12	25°49	18°18	13°10	3°38	4°R29	3°48	25°6	7°17	W29
T 30	13 8 10	18°56'09	17°14	23°47	20°11	2°57	16°16	25°54	18°20	13°11	3°40	4°29	3°45	25°13	7°21	T 30
F 31	13 12 7	19°54'52	1♌44	25°54	21°24	3♌29	16°21	25°59	18°22	13♌11	3°41	4°26	3°42	25°19	7°24	F 31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
W 1	3s51	22s45	1s14	13s37	2s9	16s41	0s20	25n6	2n7	22s48	0n4	14s59	1s10	16s23	0s40	22n9
T 2	3 27	18 22	0n4	13 5	2 11	16 23	0 23	25 8	2 7	22 47	0 4	14 57	1 10	16 22	0 40	22 9
F 3	3 3	12 46	1 24	12 33	2 13	16 3	0 26	25 9	2 6	22 46	0 4	14 55	1 10	16 21	0 40	22 9
S 4	2 40	6 22	2 38	11 59	2 15	15 44	0 29	25 11	2 6	22 45	0 4	14 53	1 10	16 21	0 40	22 9
S 5	2 16	0n24	3 42	11 24	2 16	15 24	0 32	25 13	2 5	22 45	0 4	14 51	1 10	16 20	0 40	22 9
M 6	1 53	7 4	4 29	10 48	2 16	15 4	0 35	25 15	2 5	22 44	0 4	14 49	1 10	16 19	0 40	22 9
T 7	1 29	13 14	4 58	10 10	2 17	14 43	0 38	25 16	2 4	22 43	0 4	14 47	1 10	16 18	0 40	22 9
W 8	1 5	18 30	5 7	9 31	2 16	14 22	0 41	25 17	2 4	22 42	0 4	14 45	1 11	16 17	0 40	22 10
T 9	0 41	22 37	4 58	8 51	2 16	14 0	0 43	25 19	2 3	22 42	0 4	14 43	1 11	16 16	0 40	22 10
F 10	0 18	25 23	4 33	8 9	2 15	13 38	0 46	25 20	2 3	22 41	0 4	14 41	1 11	16 15	0 40	22 10
S 11	0n6	26 41	3 54	7 27	2 13	13 16	0 49	25 21	2 2	22 40	0 3	14 39	1 11	16 15	0 40	22 10
S 12	0 30	26 34	3 5	6 43	2 11	12 53	0 51	25 22	2 2	22 39	0 3	14 37	1 11	16 14	0 40	22 10
M13	0 53	25 10	2 9	5 58	2 8	12 30	0 54	25 23	2 1	22 39	0 3	14 35	1 11	16 13	0 40	22 10
T 14	1 17	22 37	1 8	5 12	2 5	12 6	0 56	25 24	2 1	22 38	0 3	14 33	1 11	16 12	0 40	22 10
W15	1 40	19 8	0 5	4 24	2 1	11 42	0 59	25 24	2 0	22 37	0 3	14 31	1 11	16 11	0 40	22 10
T 16	2 4	14 55	0s58	3 36	1 57	11 18	1 1	25 25	2 0	22 37	0 3	14 29	1 12	16 11	0 40	22 10
F 17	2 27	10 9	1 58	2 46	1 52	10 54	1 3	25 25	1 59	22 36	0 3	14 27	1 12	16 10	0 40	22 10
S 18	2 51	4 59	2 54	1 56	1 47	10 29	1 5	25 26	1 59	22 35	0 3	14 25	1 12	16 9	0 40	22 10
S 19	3 14	0s24	3 42	1 4	1 41	10 4	1 7	25 26	1 58	22 35	0 3	14 24	1 12	16 8	0 40	22 10
M20	3 37	5 49	4 21	0 11	1 35	9 39	1 9	25 26	1 58	22 34	0 3	14 22	1 12	16 8	0 40	22 10
T 21	4 1	11 6	4 48	0n42	1 28	9 13	1 11	25 26	1 57	22 33	0 2	14 20	1 12	16 7	0 40	22 10
W22	4 24	16 0	5 1	1 37	1 21	8 47	1 13	25 26	1 57	22 33	0 2	14 18	1 12	16 6	0 40	22 10
T 23	4 47	20 18	5 0	2 32	1 13	8 21	1 15	25 26	1 56	22 32	0 2	14 16	1 13	16 5	0 40	22 10
F 24	5 10	23 41	4 44	3 28	1 5	7 55	1 17	25 25	1 56	22 32	0 2	14 15	1 13	16 5	0 40	22 10
S 25	5 33	25 53	4 12	4 24	0 56	7 29	1 19	25 25	1 55	22 31	0 2	14 13	1 13	16 4	0 40	22 10
S 26	5 56	26 40	3 27	5 21	0 47	7 2	1 20	25 24	1 55	22 31	0 2	14 11	1 13	16 3	0 40	22 10
M27	6 18	25 53	2 29	6 18	0 38	6 35	1 22	25 23	1 54	22 30	0 2	14 9	1 13	16 3	0 41	22 10
T 28	6 41	23 30	1 22	7 15	0 28	6 8	1 23	25 22	1 53	22 30	0 2	14 8	1 13	16 2	0 41	22 10
W29	7 4	19 40	0 8	8 12	0 18	5 40	1 25	25 21	1 53	22 29	0 2	14 6	1 14	16 1	0 41	22 10
T 30	7 26	14 38	1n7	9 9	0 7	5 13	1 26	25 20	1 52	22 29	0 1	14 4	1 14	16 1	0 41	22 10
F 31	7n48	8s43	2n19	10n5	0n4	4s45	1s27	25n19	1n52	22s28	0n1	14s3	1s14	16s0	0s41	22n10

Julian Day Number = 2298577.5, Delta T = 117.95 sec

Ecliptic obliquity = 23°29'43", Nutation = 0°00'15", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 18°53'44", Lahiri = 18°00'44" Julian Calendar 1 March 1581 == Greg. Calendar 11 March 1581

ASTRODIENST EPHEMERIS for the year 1581

geocentric

APRIL 1581 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	13 16 3	20°53'32	16°23	28°0	22°37	4°2	16°26	26°4	18°24	13°12	3°42	4°R21	3°39	25°26	7°28	S 1
S 2	13 20 0	21°52'11	1°7	0°5	23°50	4°34	16°30	26°9	18°26	13°13	3°44	4°14	3°36	25°33	7°31	S 2
M 3	13 23 56	22°50'48	15°46	2°9	25°3	5°6	16°34	26°14	18°28	13°13	3°45	4°4	3°33	25°39	7°35	M 3
T 4	13 27 53	23°49'23	0°15	4°12	26°16	5°38	16°38	26°19	18°30	13°14	3°47	3°52	3°29	25°46	7°39	T 4
W 5	13 31 49	24°47'56	14°26	6°14	27°29	6°11	16°42	26°24	18°32	13°15	3°48	3°41	3°26	25°53	7°42	W 5
T 6	13 35 46	25°46'27	28°13	8°13	28°42	6°43	16°45	26°29	18°34	13°15	3°49	3°30	3°23	25°59	7°46	T 6
F 7	13 39 43	26°44'56	11°35	10°10	29°55	7°16	16°49	26°34	18°36	13°16	3°51	3°21	3°20	26°6	7°49	F 7
S 8	13 43 39	27°43'23	24°32	12°5	1°8	7°49	16°52	26°38	18°37	13°17	3°52	3°16	3°17	26°13	7°53	S 8
S 9	13 47 36	28°41'48	7°5	13°57	2°21	8°22	16°55	26°43	18°39	13°18	3°54	3°12	3°13	26°19	7°56	S 9
M10	13 51 32	29°40'10	19°19	15°45	3°34	8°54	16°58	26°48	18°41	13°19	3°55	3°11	3°10	26°26	8°0	M10
T 11	13 55 29	0°38'31	1°19	17°31	4°47	9°27	17°1	26°52	18°42	13°20	3°56	3°11	3°7	26°33	8°3	T 11
W12	13 59 25	1°36'50	13°11	19°12	6°0	10°0	17°3	26°56	18°44	13°20	3°58	3°10	3°4	26°39	8°7	W12
T 13	14 3 22	2°35'06	24°59	20°50	7°13	10°34	17°6	27°1	18°45	13°21	3°59	3°9	3°1	26°46	8°10	T 13
F 14	14 7 18	3°33'20	6°48	22°25	8°26	11°7	17°8	27°5	18°47	13°22	4°0	3°6	2°58	26°53	8°14	F 14
S 15	14 11 15	4°31'32	18°45	23°55	9°39	11°40	17°10	27°9	18°48	13°23	4°2	3°0	2°54	26°59	8°17	S 15
S 16	14 15 11	5°29'43	0°52	25°21	10°52	12°13	17°12	27°13	18°50	13°24	4°3	2°52	2°51	27°6	8°20	S 16
M17	14 19 8	6°27'51	13°11	26°43	12°5	12°47	17°13	27°17	18°51	13°25	4°4	2°41	2°48	27°12	8°24	M17
T 18	14 23 5	7°25'57	25°46	28°0	13°18	13°20	17°15	27°21	18°52	13°27	4°5	2°29	2°45	27°19	8°27	T 18
W19	14 27 1	8°24'02	8°35	29°14	14°31	13°54	17°16	27°25	18°54	13°28	4°7	2°16	2°42	27°26	8°30	W19
T 20	14 30 58	9°22'06	21°39	0°23	15°44	14°27	17°17	27°29	18°55	13°29	4°8	2°3	2°39	27°32	8°34	T 20
F 21	14 34 54	10°20'07	4°56	1°27	16°57	15°1	17°18	27°32	18°56	13°30	4°9	1°53	2°35	27°39	8°37	F 21
S 22	14 38 51	11°18'07	18°25	2°27	18°10	15°34	17°18	27°36	18°57	13°31	4°10	1°44	2°32	27°46	8°40	S 22
S 23	14 42 47	12°16'06	2°3	3°22	19°23	16°8	17°19	27°40	18°58	13°33	4°12	1°39	2°29	27°52	8°43	S 23
M24	14 46 44	13°14'03	15°49	4°13	20°36	16°42	17°19	27°43	18°59	13°34	4°13	1°36	2°26	27°59	8°47	M24
T 25	14 50 41	14°11'59	29°44	4°58	21°49	17°16	17°19	27°46	19°0	13°35	4°14	1°D36	2°23	28°6	8°50	T 25
W26	14 54 37	15°9'54	13°45	5°39	23°2	17°50	17°19	27°50	19°1	13°36	4°15	1°R36	2°19	28°12	8°53	W26
T 27	14 58 34	16°7'47	27°53	6°15	24°15	18°24	17°19	27°53	19°2	13°38	4°16	1°35	2°16	28°19	8°56	T 27
F 28	15 2 30	17°5'39	12°7	6°47	25°28	18°58	17°19	27°56	19°3	13°39	4°17	1°33	2°13	28°26	8°59	F 28
S 29	15 6 27	18°3'30	26°25	7°13	26°41	19°32	17°18	27°59	19°3	13°41	4°19	1°29	2°10	28°32	9°2	S 29
S 30	15 10 23	19°1'20	10°43	7°34	27°55	20°6	17°17	28°2	19°4	13°42	4°20	1°22	2°7	28°39	9°5	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	8n10	2s16	3n23	11n 1	0n15	4s17	1s28	25n17	1n51	22s28	0n 1	14s 1	1s14	16s 0	0s41	22n10
S 2	8 32	4n18	4 13	11 56	0 26	3 49	1 29	25 16	1 51	22 27	0 1	13 59	1 14	15 59	0 41	22 10
M 3	8 54	10 37	4 46	12 49	0 37	3 21	1 30	25 14	1 50	22 27	0 1	13 58	1 14	15 58	0 41	22 10
T 4	9 16	16 16	5 0	13 42	0 48	2 53	1 31	25 12	1 50	22 27	0 1	13 56	1 15	15 58	0 41	22 10
W 5	9 38	20 54	4 56	14 33	0 58	2 25	1 32	25 10	1 49	22 26	0 1	13 55	1 15	15 57	0 41	22 10
T 6	9 59	24 15	4 34	15 22	1 9	1 57	1 33	25 8	1 49	22 26	0 1	13 53	1 15	15 57	0 41	22 10
F 7	10 20	26 9	3 57	16 9	1 19	1 28	1 34	25 6	1 48	22 26	0 1	13 52	1 15	15 56	0 41	22 10
S 8	10 41	26 32	3 9	16 55	1 29	1 0	1 35	25 4	1 48	22 25	0 0	13 50	1 15	15 56	0 41	22 10
S 9	11 2	25 32	2 14	17 38	1 39	0 31	1 35	25 1	1 47	22 25	0 0	13 49	1 15	15 55	0 41	22 10
M10	11 23	23 18	1 13	18 19	1 48	0 3	1 36	24 58	1 47	22 25	0 0	13 48	1 16	15 55	0 41	22 10
T 11	11 43	20 4	0 10	18 57	1 56	0n26	1 36	24 56	1 46	22 25	0 0	13 46	1 16	15 54	0 41	22 9
W12	12 4	16 4	0s53	19 33	2 4	0 55	1 36	24 53	1 46	22 24	0s 0	13 45	1 16	15 54	0 41	22 9
T 13	12 24	11 27	1 53	20 6	2 11	1 23	1 37	24 49	1 45	22 24	0 0	13 44	1 16	15 53	0 41	22 9
F 14	12 44	6 26	2 48	20 37	2 17	1 52	1 37	24 46	1 45	22 24	0 0	13 42	1 16	15 53	0 41	22 9
S 15	13 4	1 9	3 36	21 6	2 23	2 20	1 37	24 43	1 44	22 24	0 0	13 41	1 16	15 52	0 41	22 9
S 16	13 23	4s15	4 15	21 31	2 27	2 49	1 37	24 39	1 44	22 24	0 1	13 40	1 17	15 52	0 41	22 9
M17	13 42	9 34	4 43	21 55	2 31	3 18	1 37	24 36	1 43	22 24	0 1	13 39	1 17	15 52	0 41	22 9
T 18	14 1	14 36	4 58	22 16	2 34	3 46	1 37	24 32	1 43	22 24	0 1	13 37	1 17	15 51	0 41	22 9
W19	14 20	19 6	4 58	22 34	2 36	4 15	1 37	24 28	1 42	22 24	0 1	13 36	1 17	15 51	0 41	22 9
T 20	14 39	22 46	4 43	22 50	2 37	4 43	1 37	24 24	1 42	22 24	0 1	13 35	1 17	15 51	0 41	22 9
F 21	14 57	25 18	4 12	23 4	2 37	5 11	1 36	24 20	1 41	22 24	0 1	13 34	1 18	15 50	0 41	22 9
S 22	15 15	26 26	3 27	23 15	2 36	5 39	1 36	24 15	1 41	22 24	0 1	13 33	1 18	15 50	0 41	22 9
S 23	15 33	25 58	2 30	23 24	2 34	6 8	1 36	24 11	1 40	22 24	0 2	13 32	1 18	15 50	0 41	22 9
M24	15 51	23 55	1 23	23 31	2 31	6 36	1 35	24 6	1 40	22 24	0 2	13 31	1 18	15 49	0 41	22 8
T 25	16 8	20 25	0 10	23 35	2 27	7 3	1 35	24 1	1 39	22 24	0 2	13 30	1 18	15 49	0 42	22 8
W26	16 25	15 43	1n 4	23 38	2 22	7 31	1 34	23 56	1 39	22 24	0 2	13 29	1 18	15 49	0 42	22 8
T 27	16 42	10 8	2 15	23 38	2 16	7 59	1 33	23 51	1 38	22 24	0 2	13 28	1 19	15 49	0 42	22 8
F 28	16 59	3 59	3 17	23 37	2 9	8 26	1 33	23 46	1 38	22 24	0 2	13 27	1 19	15 48	0 42	22 8
S 29	17 15	2n22	4 8	23 33	2 1	8 53	1 32	23 41	1 37	22 25	0 2	13 26	1 19	15 48	0 42	22 8
S 30	17n31	8n35	4n43	23n28	1n52	9n20	1s31	23n35	1n37	22s25	0s 2	13s26	1s19	15s48	0s42	22n 8

Julian Day Number = 2298608.5, Delta T = 117.80 sec

Ecliptic obliquity = 23°29'43", Nutation = 0°00'13", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 18°53'48", Lahiri = 18°00'48" Julian Calendar 1 Apr. 1581 == Greg. Calendar 11 Apr. 1581

ASTRODIENST EPHEMERIS for the year 1581

geocentric

MAY 1581 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
M 1	15 14 20	19°59'08	24°57	7°51	29°8	20°40	17°R16	28°5	19°5	13°43	4°21	1°R13	2°4	28°46	9°8	M 1
T 2	15 18 16	20°56'56	9°8	8°2	0°21	21°14	17°15	28°7	19°5	13°45	4°22	1°2	2°0	28°52	9°11	T 2
W 3	15 22 13	21°54'42	22°52	8°9	1°34	21°49	17°13	28°10	19°6	13°46	4°23	0°51	1°57	28°59	9°14	W 3
T 4	15 26 9	22°52'26	6°11	8°R11	2°47	22°23	17°12	28°13	19°7	13°48	4°24	0°41	1°54	29°6	9°17	T 4
F 5	15 30 6	23°50'09	19°37	8°8	4°0	22°58	17°10	28°15	19°7	13°49	4°25	0°33	1°51	29°12	9°20	F 5
S 6	15 34 3	24°47'51	2°27	8°0	5°13	23°32	17°8	28°17	19°7	13°51	4°26	0°27	1°48	29°19	9°23	S 6
S 7	15 37 59	25°45'31	14°58	7°48	6°27	24°7	17°6	28°20	19°8	13°53	4°27	0°24	1°45	29°26	9°26	S 7
M 8	15 41 56	26°43'10	27°12	7°32	7°40	24°41	17°4	28°22	19°8	13°54	4°28	0°D22	1°41	29°32	9°28	M 8
T 9	15 45 52	27°40'47	9°13	7°13	8°53	25°16	17°1	28°24	19°8	13°56	4°29	0°23	1°38	29°39	9°31	T 9
W10	15 49 49	28°38'23	21°5	6°49	10°6	25°50	16°58	28°26	19°9	13°58	4°30	0°23	1°35	29°46	9°34	W10
T 11	15 53 45	29°35'57	2°54	6°23	11°19	26°25	16°55	28°28	19°9	13°59	4°31	0°R24	1°32	29°52	9°36	T 11
F 12	15 57 42	0°11'33'30	14°46	5°55	12°32	27°0	16°52	28°30	19°9	14°1	4°32	0°22	1°29	29°59	9°39	F 12
S 13	16 1 39	1°31'01	26°45	5°24	13°45	27°35	16°49	28°31	19°9	14°3	4°33	0°19	1°25	0°11'6	9°42	S 13
S 14	16 5 35	2°28'31	8°56	4°51	14°59	28°10	16°46	28°33	19°R 9	14°4	4°34	0°14	1°22	0°12	9°44	S 14
M15	16 9 32	3°26'00	21°23	4°18	16°12	28°45	16°42	28°34	19°9	14°6	4°34	0°7	1°19	0°19	9°47	M15
T 16	16 13 28	4°23'27	4°11	3°44	17°25	29°20	16°38	28°36	19°9	14°8	4°35	29°58	1°16	0°26	9°49	T 16
W17	16 17 25	5°20'54	17°11	3°11	18°38	29°55	16°35	28°37	19°9	14°10	4°36	29°48	1°13	0°32	9°52	W17
T 18	16 21 21	6°18'19	0°13	2°38	19°51	0°130	16°30	28°38	19°9	14°12	4°37	29°40	1°10	0°39	9°54	T 18
F 19	16 25 18	7°15'43	14°13	2°7	21°5	1°5	16°26	28°40	19°9	14°13	4°38	29°32	1°6	0°46	9°56	F 19
S 20	16 29 14	8°13'07	28°5	1°37	22°18	1°40	16°22	28°41	19°8	14°15	4°38	29°26	1°3	0°52	9°59	S 20
S 21	16 33 11	9°10'30	12°8	1°10	23°31	2°15	16°17	28°42	19°8	14°17	4°39	29°23	1°0	0°59	10°1	S 21
M22	16 37 8	10°7'52	26°18	0°46	24°44	2°50	16°12	28°42	19°8	14°19	4°40	29°D22	0°57	1°6	10°3	M22
T 23	16 41 4	11°5'13	10°30	0°24	25°58	3°26	16°8	28°43	19°7	14°21	4°41	29°22	0°54	1°12	10°5	T 23
W24	16 45 1	12°2'33	24°43	0°7	27°11	4°1	16°3	28°44	19°7	14°23	4°41	29°23	0°51	1°19	10°7	W24
T 25	16 48 57	12°59'54	8°55	29°53	28°24	4°36	15°57	28°44	19°6	14°25	4°42	29°R24	0°47	1°26	10°9	T 25
F 26	16 52 54	13°57'13	23°4	29°43	29°37	5°12	15°52	28°45	19°6	14°27	4°43	29°24	0°44	1°32	10°11	F 26
S 27	16 56 50	14°54'32	7°7	29°38	0°11'51	5°47	15°47	28°45	19°5	14°29	4°43	29°22	0°41	1°39	10°13	S 27
S 28	17 0 47	15°51'51	21°5	29°D36	2°4	6°23	15°41	28°45	19°5	14°31	4°44	29°18	0°38	1°46	10°15	S 28
M29	17 4 43	16°49'10	4°54	29°40	3°17	6°58	15°35	28°45	19°4	14°33	4°45	29°12	0°35	1°52	10°17	M29
T 30	17 8 40	17°46'28	18°32	29°48	4°31	7°34	15°29	28°R46	19°3	14°35	4°45	29°6	0°31	1°59	10°19	T 30
W31	17 12 37	18°11'43'45	1°11'57	0°11	5°11'44	8°11'9	15°23	28°45	19°2	14°37	4°46	28°59	0°28	2°11'6	10°21	W31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
M 1	17n47	14n20	5n 0	23n20	1n41	9n47	1s30	23n29	1n36	22s25	0s 3	13s25	1s19	15s48	0s42	22n 8
T 2	18 2 19 15	4 59 23 11	1 30	10 14	1 29	23 24	1 36	22 26	0 3	13 24	1 20	15 48	0 42	22 8	0 40	13 29
W 3	18 17 23 3	4 40 23 0	1 18	10 40	1 28	23 18	1 35	22 26	0 3	13 23	1 20	15 48	0 42	22 7	0 40	13 29
T 4	18 32 25 28	4 6 22 47	1 5	11 7	1 27	23 12	1 35	22 26	0 3	13 23	1 20	15 47	0 42	22 7	0 40	13 28
F 5	18 47 26 24	3 19 22 33	0 51	11 32	1 26	23 5	1 34	22 27	0 3	13 22	1 20	15 47	0 42	22 7	0 40	13 28
S 6	19 1 25 51	2 23 22 17	0 36	11 58	1 24	22 59	1 34	22 27	0 3	13 21	1 20	15 47	0 42	22 7	0 40	13 28
S 7	19 15 24 0	1 21 21 59	0 20	12 24	1 23	22 52	1 33	22 27	0 3	13 21	1 21	15 47	0 42	22 7	0 40	13 28
M 8	19 28 21 3	0 17 21 41	0 4	12 49	1 22	22 46	1 33	22 28	0 4	13 20	1 21	15 47	0 42	22 7	0 40	13 28
T 9	19 41 17 14	0s47 21 21	0s13	13 14	1 20	22 39	1 32	22 28	0 4	13 20	1 21	15 47	0 42	22 7	0 39	13 28
W10	19 54 12 47	1 48 21 0	0 30	13 38	1 19	22 32	1 32	22 29	0 4	13 19	1 21	15 47	0 42	22 6	0 39	13 28
T 11	20 7 7 54	2 45 20 39	0 47	14 2	1 17	22 25	1 31	22 29	0 4	13 19	1 22	15 47	0 42	22 6	0 39	13 27
F 12	20 19 2 43	3 34 20 17	1 5	14 26	1 16	22 18	1 31	22 30	0 4	13 18	1 22	15 47	0 42	22 6	0 39	13 27
S 13	20 31 2s36	4 15 19 54	1 22	14 50	1 14	22 10	1 31	22 30	0 4	13 18	1 22	15 47	0 42	22 6	0 39	13 27
S 14	20 42 7 55	4 45 19 31	1 40	15 13	1 12	22 3	1 30	22 31	0 4	13 17	1 22	15 47	0 42	22 6	0 39	13 27
M15	20 53 13 1	5 2 19 9	1 56	15 36	1 11	21 55	1 30	22 31	0 5	13 17	1 22	15 47	0 42	22 6	0 39	13 27
T 16	21 4 17 42	5 5 18 46	2 13	15 58	1 9	21 47	1 29	22 32	0 5	13 17	1 23	15 47	0 42	22 5	0 39	13 27
W17	21 15 21 40	4 52 18 25	2 29	16 20	1 7	21 40	1 29	22 33	0 5	13 16	1 23	15 47	0 42	22 5	0 39	13 27
T 18	21 25 24 36	4 23 18 4	2 43	16 42	1 5	21 31	1 28	22 33	0 5	13 16	1 23	15 47	0 42	22 5	0 39	13 27
F 19	21 34 26 10	3 38 17 44	2 57	17 3	1 3	21 23	1 28	22 34	0 5	13 16	1 23	15 47	0 42	22 5	0 39	13 27
S 20	21 44 26 9	2 40 17 26	3 10	17 24	1 1	21 15	1 27	22 35	0 5	13 16	1 23	15 48	0 43	22 5	0 39	13 27
S 21	21 53 24 27	1 31 17 9	3 22	17 44	0 59	21 7	1 27	22 35	0 6	13 16	1 24	15 48	0 43	22 5	0 39	13 27
M22	22 1 21 13	0 17 16 53	3 33	18 4	0 57	20 58	1 26	22 36	0 6	13 16	1 24	15 48	0 43	22 4	0 39	13 27
T 23	22 9 16 41	1n 0 16 40	3 42	18 24	0 55	20 49	1 26	22 37	0 6	13 16	1 24	15 48	0 43	22 4	0 39	13 27
W24	22 17 11 14	2 13 16 28	3 50	18 43	0 53	20 40	1 25	22 38	0 6	13 16	1 24	15 48	0 43	22 4	0 39	13 27
T 25	22 25 5 12	3 17 16 19	3 57	19 1	0 51	20 32	1 25	22 38	0 6	13 16	1 24	15 48	0 43	22 4	0 39	13 27
F 26	22 32 1n 3	4 9 16 11	4 2	19 19	0 49	20 22	1 24	22 39	0 6	13 16	1 25	15 49	0 43	22 4	0 39	13 27
S 27	22 38 7 13	4 46 16 6	4 7	19 37	0 47	20 13	1 24	22 40	0 6	13 16	1 25	15 49	0 43	22 4	0 39	13 27
S 28	22 45 12 58	5 6 16 3	4 10	19 54	0 45	20 4	1 23	22 41	0 7	13 16	1 25	15 49	0 43	22 3	0 39	13 27
M29	22 50 18 0	5 8 16 2	4 11	20 10	0 42	19 54	1 23	22 42	0 7	13 16	1 25	15 49	0 43	22 3	0 39	13 27
T 30	22 56 22 3	4 52 16 3	4 12	20 26	0 40	19 45	1 22	22 42	0 7	13 16	1 26	15 49	0 43	22 3	0 39	13 28
W31	23n 1 24n50	4n20 16n 6	4s11	20n41	0s38	19n35	1n22	22s43	0s 7	13s16	1s26	15s50	0s43	22n 3	0s39	13s28

Julian Day Number = 2298638.5, Delta T = 117.66 sec

Ecliptic obliquity = 23°29'42", Nutation = 0°00'13", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 18°53'52", Lahiri = 18°00'53" Julian Calendar 1 May 1581 == Greg. Calendar 11 May 1581

ASTRODIENST EPHEMERIS for the year 1581

geocentric

JUNE 1581 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	17 16 33	19II41'03	15II 7	0II17	6II57	8II45	15°R17	28°R45	19°R 2	14°S39	4°Y46	28°R53	0°S25	2°M12	10°Y23	T 1
F 2	17 20 30	20°38'19	28° 2	0°39	8°11	9°21	15°S11	28°S45	19°S 1	14°41	4°47	28°S48	0°22	2°19	10°25	F 2
S 3	17 24 26	21°35'35	10°S39	1° 5	9°24	9°56	15° 5	28°45	19° 0	14°43	4°47	28°45	0°19	2°26	10°26	S 3
S 4	17 28 23	22°32'51	23° 2	1°36	10°37	10°32	14°58	28°44	18°59	14°45	4°48	28°D43	0°16	2°32	10°28	S 4
M 5	17 32 19	23°30'06	5°II11	2°11	11°51	11° 8	14°51	28°44	18°58	14°47	4°48	28°43	0°12	2°39	10°29	M 5
T 6	17 36 16	24°27'20	17° 9	2°51	13° 4	11°44	14°45	28°43	18°57	14°49	4°49	28°45	0° 9	2°46	10°31	T 6
W 7	17 40 12	25°24'34	29° 1	3°34	14°18	12°20	14°38	28°42	18°56	14°52	4°49	28°46	0° 6	2°52	10°32	W 7
T 8	17 44 9	26°21'47	10°M50	4°22	15°31	12°56	14°31	28°42	18°55	14°54	4°49	28°48	0° 3	2°59	10°34	T 8
F 9	17 48 6	27°18'59	22°42	5°15	16°45	13°32	14°24	28°41	18°53	14°56	4°50	28°R49	29°S59	3° 6	10°35	F 9
S 10	17 52 2	28°16'11	4°S42	6°11	17°58	14° 8	14°17	28°40	18°52	14°58	4°50	28°R49	29°56	3°12	10°37	S 10
S 11	17 55 59	29°13'22	16°54	7°11	19°11	14°44	14°10	28°38	18°51	15° 0	4°50	28°47	29°53	3°19	10°38	S 11
M12	17 59 55	0°S10'33	29°22	8°16	20°25	15°20	14° 3	28°37	18°50	15° 2	4°51	28°45	29°50	3°26	10°39	M12
T 13	18 3 52	1° 7'44	12°M10	9°24	21°38	15°56	13°55	28°36	18°48	15° 4	4°51	28°41	29°47	3°32	10°40	T 13
W14	18 7 48	2° 4'54	25°21	10°36	22°52	16°32	13°48	28°35	18°47	15° 7	4°51	28°37	29°44	3°39	10°41	W14
T 15	18 11 45	3° 2'04	8°S55	11°52	24° 5	17° 8	13°41	28°33	18°46	15° 9	4°51	28°34	29°41	3°46	10°42	T 15
F 16	18 15 41	3°59'14	22°50	13°12	25°19	17°45	13°33	28°31	18°44	15°11	4°52	28°30	29°37	3°52	10°44	F 16
S 17	18 19 38	4°56'23	7°S 4	14°35	26°32	18°21	13°26	28°30	18°43	15°13	4°52	28°28	29°34	3°59	10°44	S 17
S 18	18 23 35	5°53'33	21°31	16° 2	27°46	18°57	13°18	28°28	18°41	15°15	4°52	28°D27	29°31	4° 6	10°45	S 18
M19	18 27 31	6°50'43	6°S 6	17°33	29° 0	19°34	13°10	28°26	18°40	15°18	4°52	28°27	29°28	4°12	10°46	M19
T 20	18 31 28	7°47'53	20°43	19° 8	0°S13	20°10	13° 3	28°24	18°38	15°20	4°52	28°28	29°25	4°19	10°47	T 20
W21	18 35 24	8°45'03	5°S17	20°46	1°27	20°47	12°55	28°22	18°36	15°22	4°52	28°29	29°22	4°26	10°48	W21
T 22	18 39 21	9°42'13	19°43	22°27	2°40	21°23	12°47	28°20	18°35	15°24	4°53	28°30	29°18	4°32	10°49	T 22
F 23	18 43 17	10°39'24	3°Y57	24°12	3°54	22° 0	12°40	28°18	18°33	15°26	4°53	28°31	29°15	4°39	10°49	F 23
S 24	18 47 14	11°36'35	17°58	26° 0	5° 8	22°36	12°32	28°16	18°31	15°29	4°53	28°R31	29°12	4°46	10°50	S 24
S 25	18 51 10	12°33'47	1°S44	27°50	6°21	23°13	12°24	28°13	18°29	15°31	4°R53	28°30	29° 9	4°52	10°50	S 25
M26	18 55 7	13°30'59	15°15	29°44	7°35	23°49	12°17	28°11	18°28	15°33	4°53	28°29	29° 6	4°59	10°51	M26
T 27	18 59 4	14°28'12	28°32	1°S41	8°49	24°26	12° 9	28° 8	18°26	15°35	4°53	28°27	29° 2	5° 6	10°51	T 27
W28	19 3 0	15°25'26	11°II33	3°40	10° 2	25° 3	12° 1	28° 5	18°24	15°38	4°53	28°25	28°59	5°12	10°52	W28
T 29	19 6 57	16°22'40	24°21	5°41	11°16	25°40	11°53	28° 3	18°22	15°40	4°52	28°24	28°56	5°19	10°52	T 29
F 30	19 10 53	17°S19'54	6°S55	7°S43	12°S30	26°S16	11°S46	28°S 0	18°S20	15°S42	4°Y52	28°S22	28°S53	5°M26	10°Y52	F 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	
T 1	23n 6	26n13	3n35	16n11	4s10	20n56	0s36	19n25	1n21	22s44	0s 7	13s17	1s26	15s50	0s43	22n 3
F 2	23 10	26 8	2 39	16 18	4 7	21 10	0 33	19 15	1 21	22 45	0 7	13 17	1 26	15 50	0 43	22 2
S 3	23 14	24 41	1 37	16 27	4 4	21 24	0 31	19 5	1 20	22 46	0 7	13 17	1 26	15 51	0 43	22 2
S 4	23 17	22 2	0 31	16 38	3 59	21 37	0 29	18 55	1 20	22 47	0 8	13 18	1 27	15 51	0 43	22 2
M 5	23 20	18 27	0s35	16 50	3 54	21 50	0 26	18 45	1 19	22 48	0 8	13 18	1 27	15 51	0 43	22 2
T 6	23 23	14 9	1 39	17 3	3 47	22 1	0 24	18 34	1 19	22 49	0 8	13 18	1 27	15 52	0 43	22 1
W 7	23 25	9 22	2 38	17 19	3 40	22 13	0 22	18 24	1 18	22 49	0 8	13 19	1 27	15 52	0 43	22 1
T 8	23 27	4 17	3 30	17 35	3 33	22 23	0 19	18 13	1 18	22 50	0 8	13 19	1 27	15 52	0 43	22 1
F 9	23 28	0s59	4 14	17 52	3 24	22 33	0 17	18 2	1 17	22 51	0 8	13 20	1 28	15 53	0 43	22 1
S 10	23 29	6 15	4 46	18 11	3 15	22 43	0 14	17 51	1 17	22 52	0 9	13 20	1 28	15 53	0 43	22 1
S 11	23 30	11 22	5 7	18 30	3 6	22 51	0 12	17 40	1 16	22 53	0 9	13 21	1 28	15 54	0 43	22 0
M12	23 30	16 9	5 13	18 51	2 56	22 59	0 10	17 29	1 16	22 54	0 9	13 22	1 28	15 54	0 43	22 0
T 13	23 29	20 21	5 5	19 11	2 45	23 7	0 7	17 18	1 15	22 55	0 9	13 22	1 28	15 55	0 43	22 0
W14	23 29	23 41	4 40	19 33	2 34	23 13	0 5	17 6	1 15	22 56	0 9	13 23	1 29	15 55	0 43	22 0
T 15	23 28	25 47	3 59	19 54	2 23	23 19	0 2	16 55	1 14	22 57	0 9	13 24	1 29	15 55	0 43	21 59
F 16	23 26	26 21	3 4	20 16	2 11	23 25	0n 0	16 43	1 14	22 58	0 9	13 24	1 29	15 56	0 43	21 59
S 17	23 24	25 13	1 55	20 38	1 59	23 30	0 3	16 32	1 13	22 59	0 10	13 25	1 29	15 56	0 43	21 59
S 18	23 22	22 24	0 38	20 59	1 47	23 34	0 5	16 20	1 13	22 59	0 10	13 26	1 29	15 57	0 44	21 59
M19	23 19	18 7	0n42	21 21	1 34	23 37	0 7	16 8	1 12	23 0	0 10	13 27	1 30	15 57	0 44	21 59
T 20	23 16	12 43	2 0	21 41	1 22	23 39	0 10	15 56	1 12	23 1	0 10	13 28	1 30	15 58	0 44	21 58
W21	23 12	6 39	3 9	22 1	1 9	23 41	0 12	15 44	1 11	23 2	0 10	13 29	1 30	15 59	0 44	21 58
T 22	23 8	0 18	4 6	22 20	0 57	23 43	0 15	15 31	1 11	23 3	0 10	13 29	1 30	15 59	0 44	21 58
F 23	23 4	5n58	4 47	22 38	0 44	23 43	0 17	15 19	1 10	23 4	0 11	13 30	1 30	16 0	0 44	21 58
S 24	22 59	11 50	5 11	22 54	0 32	23 43	0 19	15 7	1 10	23 5	0 11	13 31	1 31	16 0	0 44	21 57
S 25	22 54	17 2	5 15	23 9	0 19	23 42	0 22	14 54	1 9	23 6	0 11	13 32	1 31	16 1	0 44	21 57
M26	22 48	21 16	5 3	23 22	0 7	23 40	0 24	14 42	1 9	23 6	0 11	13 33	1 31	16 1	0 44	21 57
T 27	22 42	24 19	4 34	23 33	0n 4	23 38	0 26	14 29	1 8	23 7	0 11	13 35	1 31	16 2	0 44	21 57
W28	22 36	26 2	3 51	23 42	0 16	23 35	0 28	14 16	1 8	23 8	0 11	13 36	1 31	16 3	0 44	21 56
T 29	22 29	26 20	2 57	23 49	0 26	23 31	0 31	14 3	1 7	23 9	0 11	13 37	1 32	16 3	0 44	21 56
F 30	22n22	25n15	1n56	23n53	0n37	23n27	0n33	13n50	1n 7	23s10	0s12	13s38	1s32	16s 4	0s44	21n56

Julian Day Number = 2298669.5, Delta T = 117.51 sec

Ecliptic obliquity = 23°29'41, Nutation = 0°00'14, out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 18°53'56, Lahiri = 18°00'57 Julian Calendar 1 June 1581 == Greg. Calendar 11 June 1581

ASTRODIENST EPHEMERIS for the year 1581

geocentric

JULY 1581 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	19 14 50	18 ⁵ 17'09	19 ⁵ 17	9 ⁵ 48	13 ⁵ 44	26 ⁰ 53	11 ⁰ R38	27 ⁰ R57	18 ⁰ R18	15 ⁵ 44	4 ⁰ R52	28 ⁰ R22	28 ⁵ 50	5 ⁰ 32	10 ⁰ Y53	S 1
S 2	19 18 46	19 ⁰ 14'24	1 ⁰ 28	11 ⁰ 54	14 ⁰ 57	27 ⁰ 30	11 ⁰ 30	27 ⁵ 54	18 ⁵ 16	15 ⁰ 47	4 ⁰ Y52	28 ⁰ D22	28 ⁰ 47	5 ⁰ 39	10 ⁰ 53	S 2
M 3	19 22 43	20 ⁰ 11'40	13 ⁰ 29	14 ⁰ 1	16 ⁰ 11	28 ⁰ 7	11 ⁰ 23	27 ⁰ 51	18 ⁰ 14	15 ⁰ 49	4 ⁰ 52	28 ⁵ 22	28 ⁰ 43	5 ⁰ 46	10 ⁰ 53	M 3
T 4	19 26 40	21 ⁰ 8'56	25 ⁰ 23	16 ⁰ 8	17 ⁰ 25	28 ⁰ 44	11 ⁰ 15	27 ⁰ 48	18 ⁰ 12	15 ⁰ 51	4 ⁰ 52	28 ⁰ 23	28 ⁰ 40	5 ⁰ 52	10 ⁰ 53	T 4
W 5	19 30 36	22 ⁰ 6'12	7 ⁰ 13	18 ⁰ 16	18 ⁰ 39	29 ⁰ 21	11 ⁰ 8	27 ⁰ 45	18 ⁰ 10	15 ⁰ 53	4 ⁰ 52	28 ⁰ 23	28 ⁰ 37	5 ⁰ 59	10 ⁰ R53	W 5
T 6	19 34 33	23 ⁰ 3'28	19 ⁰ 2	20 ⁰ 24	19 ⁰ 53	29 ⁰ 58	11 ⁰ 0	27 ⁰ 42	18 ⁰ 8	15 ⁰ 55	4 ⁰ 51	28 ⁰ 24	28 ⁰ 34	6 ⁰ 6	10 ⁰ 53	T 6
F 7	19 38 29	24 ⁰ 0'45	0 ⁰ 54	22 ⁰ 32	21 ⁰ 7	0 ⁰ 35	10 ⁰ 53	27 ⁰ 38	18 ⁰ 6	15 ⁰ 58	4 ⁰ 51	28 ⁰ 24	28 ⁰ 31	6 ⁰ 12	10 ⁰ 53	F 7
S 8	19 42 26	24 ⁰ 58'03	12 ⁰ 53	24 ⁰ 39	22 ⁰ 21	1 ⁰ 12	10 ⁰ 46	27 ⁰ 35	18 ⁰ 4	16 ⁰ 0	4 ⁰ 51	28 ⁰ 25	28 ⁰ 28	6 ⁰ 19	10 ⁰ 53	S 8
S 9	19 46 22	25 ⁰ 55'21	25 ⁰ 3	26 ⁰ 45	23 ⁰ 34	1 ⁰ 49	10 ⁰ 39	27 ⁰ 31	18 ⁰ 2	16 ⁰ 2	4 ⁰ 51	28 ⁰ R25	28 ⁰ 24	6 ⁰ 26	10 ⁰ 52	S 9
M10	19 50 19	26 ⁰ 52'39	7 ⁰ 30	28 ⁰ 51	24 ⁰ 48	2 ⁰ 27	10 ⁰ 31	27 ⁰ 28	18 ⁰ 0	16 ⁰ 4	4 ⁰ 50	28 ⁰ 25	28 ⁰ 21	6 ⁰ 32	10 ⁰ 52	M10
T 11	19 54 15	27 ⁰ 49'57	20 ⁰ 16	0 ⁰ 56	26 ⁰ 2	3 ⁰ 4	10 ⁰ 24	27 ⁰ 24	17 ⁰ 57	16 ⁰ 6	4 ⁰ 50	28 ⁰ 25	28 ⁰ 18	6 ⁰ 39	10 ⁰ 52	T 11
W12	19 58 12	28 ⁰ 47'17	3 ⁰ 25	3 ⁰ 0	27 ⁰ 16	3 ⁰ 41	10 ⁰ 17	27 ⁰ 21	17 ⁰ 55	16 ⁰ 9	4 ⁰ 50	28 ⁰ D25	28 ⁰ 15	6 ⁰ 46	10 ⁰ 51	W12
T 13	20 2 9	29 ⁰ 44'36	17 ⁰ 0	5 ⁰ 2	28 ⁰ 30	4 ⁰ 18	10 ⁰ 10	27 ⁰ 17	17 ⁰ 53	16 ⁰ 11	4 ⁰ 49	28 ⁰ 25	28 ⁰ 12	6 ⁰ 53	10 ⁰ 51	T 13
F 14	20 6 5	0 ⁰ 41'57	1 ⁰ 3	7 ⁰ 3	29 ⁰ 44	4 ⁰ 56	10 ⁰ 4	27 ⁰ 13	17 ⁰ 51	16 ⁰ 13	4 ⁰ 49	28 ⁰ 25	28 ⁰ 8	6 ⁰ 59	10 ⁰ 50	F 14
S 15	20 10 2	1 ⁰ 39'18	15 ⁰ 25	9 ⁰ 2	0 ⁰ 58	5 ⁰ 33	9 ⁰ 57	27 ⁰ 10	17 ⁰ 49	16 ⁰ 15	4 ⁰ 48	28 ⁰ 25	28 ⁰ 5	7 ⁰ 6	10 ⁰ 50	S 15
S 16	20 13 58	2 ⁰ 36'40	0 ⁰ 5	11 ⁰ 0	2 ⁰ 12	6 ⁰ 10	9 ⁰ 50	27 ⁰ 6	17 ⁰ 46	16 ⁰ 17	4 ⁰ 48	28 ⁰ R25	28 ⁰ 2	7 ⁰ 13	10 ⁰ 49	S 16
M17	20 17 55	3 ⁰ 34'02	15 ⁰ 5	12 ⁰ 57	3 ⁰ 26	6 ⁰ 48	9 ⁰ 44	27 ⁰ 2	17 ⁰ 44	16 ⁰ 19	4 ⁰ 47	28 ⁰ 25	27 ⁰ 59	7 ⁰ 19	10 ⁰ 49	M17
T 18	20 21 51	4 ⁰ 31'26	0 ⁰ 6	14 ⁰ 52	4 ⁰ 40	7 ⁰ 25	9 ⁰ 37	26 ⁰ 58	17 ⁰ 42	16 ⁰ 22	4 ⁰ 47	28 ⁰ 25	27 ⁰ 56	7 ⁰ 26	10 ⁰ 48	T 18
W19	20 25 48	5 ⁰ 28'50	15 ⁰ 3	16 ⁰ 45	5 ⁰ 54	8 ⁰ 3	9 ⁰ 31	26 ⁰ 54	17 ⁰ 39	16 ⁰ 24	4 ⁰ 47	28 ⁰ 24	27 ⁰ 53	7 ⁰ 33	10 ⁰ 47	W19
T 20	20 29 44	6 ⁰ 26'16	29 ⁰ 48	18 ⁰ 37	7 ⁰ 8	8 ⁰ 41	9 ⁰ 25	26 ⁰ 50	17 ⁰ 37	16 ⁰ 26	4 ⁰ 46	28 ⁰ 23	27 ⁰ 49	7 ⁰ 39	10 ⁰ 46	T 20
F 21	20 33 41	7 ⁰ 23'43	14 ⁰ Y16	20 ⁰ 27	8 ⁰ 22	9 ⁰ 18	9 ⁰ 19	26 ⁰ 46	17 ⁰ 35	16 ⁰ 28	4 ⁰ 45	28 ⁰ 22	27 ⁰ 46	7 ⁰ 46	10 ⁰ 46	F 21
S 22	20 37 38	8 ⁰ 21'11	28 ⁰ 24	22 ⁰ 16	9 ⁰ 36	9 ⁰ 56	9 ⁰ 13	26 ⁰ 41	17 ⁰ 32	16 ⁰ 30	4 ⁰ 45	28 ⁰ 22	27 ⁰ 43	7 ⁰ 53	10 ⁰ 45	S 22
S 23	20 41 34	9 ⁰ 18'41	12 ⁰ 8	24 ⁰ 3	10 ⁰ 50	10 ⁰ 33	9 ⁰ 7	26 ⁰ 37	17 ⁰ 30	16 ⁰ 32	4 ⁰ 44	28 ⁰ D22	27 ⁰ 40	7 ⁰ 59	10 ⁰ 44	S 23
M24	20 45 31	10 ⁰ 16'12	25 ⁰ 32	25 ⁰ 48	12 ⁰ 4	11 ⁰ 11	9 ⁰ 2	26 ⁰ 33	17 ⁰ 28	16 ⁰ 34	4 ⁰ 44	28 ⁰ 22	27 ⁰ 37	8 ⁰ 6	10 ⁰ 43	M24
T 25	20 49 27	11 ⁰ 13'45	8 ⁰ 35	27 ⁰ 32	13 ⁰ 19	11 ⁰ 49	8 ⁰ 56	26 ⁰ 29	17 ⁰ 25	16 ⁰ 36	4 ⁰ 43	28 ⁰ 23	27 ⁰ 34	8 ⁰ 13	10 ⁰ 42	T 25
W26	20 53 24	12 ⁰ 11'19	21 ⁰ 20	29 ⁰ 15	14 ⁰ 33	12 ⁰ 27	8 ⁰ 51	26 ⁰ 25	17 ⁰ 23	16 ⁰ 38	4 ⁰ 43	28 ⁰ 24	27 ⁰ 30	8 ⁰ 19	10 ⁰ 41	W26
T 27	20 57 20	13 ⁰ 8'55	3 ⁰ 50	0 ⁰ 55	15 ⁰ 47	13 ⁰ 5	8 ⁰ 46	26 ⁰ 20	17 ⁰ 21	16 ⁰ 40	4 ⁰ 42	28 ⁰ 25	27 ⁰ 27	8 ⁰ 26	10 ⁰ 39	T 27
F 28	21 1 17	14 ⁰ 6'31	16 ⁰ 8	2 ⁰ 35	17 ⁰ 1	13 ⁰ 43	8 ⁰ 41	26 ⁰ 16	17 ⁰ 18	16 ⁰ 42	4 ⁰ 41	28 ⁰ 26	27 ⁰ 24	8 ⁰ 33	10 ⁰ 38	F 28
S 29	21 5 13	15 ⁰ 4'10	28 ⁰ 15	4 ⁰ 13	18 ⁰ 15	14 ⁰ 21	8 ⁰ 36	26 ⁰ 11	17 ⁰ 16	16 ⁰ 44	4 ⁰ 41	28 ⁰ R26	27 ⁰ 21	8 ⁰ 39	10 ⁰ 37	S 29
S 30	21 9 10	16 ⁰ 1'49	10 ⁰ 15	5 ⁰ 49	19 ⁰ 29	14 ⁰ 59	8 ⁰ 31	26 ⁰ 7	17 ⁰ 13	16 ⁰ 46	4 ⁰ 40	28 ⁰ 26	27 ⁰ 18	8 ⁰ 46	10 ⁰ 36	S 30
M31	21 13 7	16 ⁰ 59'30	22 ⁰ 9	7 ⁰ 24	20 ⁰ 44	15 ⁰ 37	8 ⁰ 26	26 ⁰ 3	17 ⁰ 11	16 ⁰ 48	4 ⁰ Y39	28 ⁵ 25	27 ⁵ 14	8 ⁰ 53	10 ⁰ Y34	M31

Day	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	lat
S 1	22n15	22n56	0n50	23n54	0n46	23n22	0n35	13n37	1n 6	23s11	0s12	13s39	1s32	16s 4	0s44	21n56
S 2	22 7	19 36	0s17	23 53	0 56	23 16	0 37	13 24	1 6	23 11	0 12	13 40	1 32	16 5	0 44	21 55
M 3	21 58	15 29	1 23	23 49	1 4	23 10	0 39	13 11	1 5	23 12	0 12	13 41	1 32	16 6	0 44	21 55
T 4	21 50	10 49	2 24	23 42	1 12	23 2	0 41	12 57	1 5	23 13	0 12	13 43	1 33	16 6	0 44	21 55
W 5	21 41	5 48	3 19	23 33	1 19	22 55	0 43	12 44	1 4	23 14	0 12	13 44	1 33	16 7	0 44	21 55
T 6	21 31	0 35	4 6	23 21	1 25	22 46	0 45	12 30	1 4	23 15	0 12	13 45	1 33	16 8	0 44	21 54
F 7	21 21	4s40	4 42	23 6	1 30	22 37	0 47	12 17	1 3	23 15	0 12	13 47	1 33	16 8	0 44	21 54
S 8	21 11	9 47	5 6	22 48	1 35	22 27	0 49	12 3	1 3	23 16	0 13	13 48	1 33	16 9	0 44	21 54
S 9	21 1	14 38	5 17	22 28	1 39	22 16	0 51	11 49	1 2	23 17	0 13	13 49	1 33	16 10	0 44	21 54
M10	20 50	18 58	5 13	22 6	1 42	22 5	0 53	11 35	1 2	23 17	0 13	13 51	1 34	16 10	0 44	21 53
T 11	20 39	22 35	4 55	21 42	1 45	21 53	0 55	11 21	1 1	23 18	0 13	13 52	1 34	16 11	0 44	21 53
W12	20 27	25 9	4 20	21 15	1 46	21 41	0 57	11 7	1 1	23 19	0 13	13 53	1 34	16 12	0 44	21 53
T 13	20 15	26 21	3 30	20 47	1 47	21 28	0 58	10 53	1 0	23 19	0 13	13 55	1 34	16 12	0 44	21 53
F 14	20 3	25 56	2 26	20 17	1 47	21 14	1 0	10 39	1 0	23 20	0 13	13 56	1 34	16 13	0 44	21 52
S 15	19 50	23 47	1 12	19 45	1 47	21 0	1 2	10 25	0 59	23 21	0 14	13 58	1 34	16 14	0 44	21 52
S 16	19 37	20 1	0n10	19 12	1 46	20 45	1 3	10 11	0 59	23 21	0 14	13 59	1 34	16 15	0 44	21 52
M17	19 24	14 54	1 31	18 38	1 44	20 29	1 5	9 56	0 58	23 22	0 14	14 1	1 35	16 15	0 44	21 52
T 18	19 11	8 52	2 47	18 2	1 42	20 13	1 6	9 42	0 58	23 23	0 14	14 2	1 35	16 16	0 44	21 51
W19	18 57	2 21	3 51	17 26	1 39	19 56	1 8	9 27	0 57	23 23	0 14	14 4	1 35	16 17	0 44	21 51
T 20	18 42	4n11	4 39	16 48	1 36	19 39	1 9	9 13	0 57	23 24	0 14	14 5	1 35	16 17	0 44	21 51
F 21	18 28	10 22	5 7	16 10	1 32	19 21	1 11	8 58	0 56	23 24	0 14	14 7	1 35	16 18	0 44	21 51
S 22	18 13	15 51	5 17	15 31	1 28	19 3	1 12	8 43	0 56	23 25	0 14	14 8	1 35	16 19	0 44	21 50
S 23	17 58	20 24	5 8	14 51	1 23	18 44	1 13	8 29	0 55	23 25	0 14	14 10	1 35	16 20	0 44	21 50
M24	17 43	23 45	4 42	14 11	1 18	18 24	1 14	8 14	0 55	23 26	0 15	14 11	1 36	16 20	0 44	

ASTRODIENST EPHEMERIS for the year 1581

geocentric

AUGUST 1581 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
T 1	21 17 3	17 ⁰⁵ 12	4 ⁰⁰ 0	8 ⁰⁰ 57	21 ⁰⁵ 58	16 ⁰⁰ 15	8 ⁰⁰ 22	25 ⁰⁵ 58	17 ⁰⁰ 9	16 ⁰⁵ 50	4 ⁰⁰ 38	28 ⁰⁰ 22	27 ⁰⁰ 11	8 ⁰⁰ 59	10 ⁰⁰ 33	T 1
W 2	21 21 0	18 ⁰⁵ 55	15 ⁰⁰ 49	10 ⁰⁰ 29	23 ⁰⁰ 12	16 ⁰⁰ 53	8 ⁰⁰ 18	25 ⁰⁵ 54	17 ⁰⁰ 6	16 ⁰⁵ 52	4 ⁰⁰ 38	28 ⁰⁰ 19	27 ⁰⁰ 8	9 ⁰⁰ 6	10 ⁰⁰ 31	W 2
T 3	21 24 56	19 ⁰⁵ 23	27 ⁰⁰ 38	12 ⁰⁰ 0	24 ⁰⁰ 26	17 ⁰⁰ 31	8 ⁰⁰ 14	25 ⁰⁵ 49	17 ⁰⁰ 4	16 ⁰⁵ 54	4 ⁰⁰ 37	28 ⁰⁰ 16	27 ⁰⁰ 5	9 ⁰⁰ 13	10 ⁰⁰ 30	T 3
F 4	21 28 53	20 ⁰⁵ 02	9 ⁰⁰ 32	13 ⁰⁰ 28	25 ⁰⁰ 41	18 ⁰⁰ 9	8 ⁰⁰ 10	25 ⁰⁵ 45	17 ⁰⁰ 1	16 ⁰⁵ 56	4 ⁰⁰ 36	28 ⁰⁰ 12	27 ⁰⁰ 2	9 ⁰⁰ 19	10 ⁰⁰ 28	F 4
S 5	21 32 49	21 ⁰⁴ 12	21 ⁰⁰ 32	14 ⁰⁰ 56	26 ⁰⁰ 55	18 ⁰⁰ 47	8 ⁰⁰ 6	25 ⁰⁵ 40	16 ⁰⁰ 59	16 ⁰⁵ 58	4 ⁰⁰ 35	28 ⁰⁰ 9	26 ⁰⁰ 59	9 ⁰⁰ 26	10 ⁰⁰ 27	S 5
S 6	21 36 46	22 ⁰⁴ 00	3 ⁰⁰ 41	16 ⁰⁰ 22	28 ⁰⁰ 9	19 ⁰⁰ 26	8 ⁰⁰ 2	25 ⁰⁵ 36	16 ⁰⁰ 57	17 ⁰⁰ 0	4 ⁰⁰ 34	28 ⁰⁰ 7	26 ⁰⁰ 55	9 ⁰⁰ 33	10 ⁰⁰ 25	S 6
M 7	21 40 42	23 ⁰⁴ 39	16 ⁰⁰ 5	17 ⁰⁰ 46	29 ⁰⁰ 23	20 ⁰⁰ 4	7 ⁰⁰ 59	25 ⁰⁵ 31	16 ⁰⁰ 54	17 ⁰⁰ 2	4 ⁰⁰ 34	28 ⁰⁰ 6	26 ⁰⁰ 52	9 ⁰⁰ 39	10 ⁰⁰ 23	M 7
T 8	21 44 39	24 ⁰⁴ 39	28 ⁰⁰ 47	19 ⁰⁰ 8	0 ⁰⁰ 38	20 ⁰⁰ 42	7 ⁰⁰ 56	25 ⁰⁵ 27	16 ⁰⁰ 52	17 ⁰⁰ 4	4 ⁰⁰ 33	28 ⁰⁰ D 5	26 ⁰⁰ 49	9 ⁰⁰ 46	10 ⁰⁰ 22	T 8
W 9	21 48 36	25 ⁰³ 31	11 ⁰⁰ 50	20 ⁰⁰ 29	1 ⁰⁰ 52	21 ⁰⁰ 21	7 ⁰⁰ 53	25 ⁰⁵ 22	16 ⁰⁰ 50	17 ⁰⁰ 6	4 ⁰⁰ 32	28 ⁰⁰ 6	26 ⁰⁰ 46	9 ⁰⁰ 53	10 ⁰⁰ 20	W 9
T 10	21 52 32	26 ⁰³ 24	25 ⁰⁰ 18	21 ⁰⁰ 49	3 ⁰⁰ 6	21 ⁰⁰ 59	7 ⁰⁰ 50	25 ⁰⁵ 18	16 ⁰⁰ 47	17 ⁰⁰ 7	4 ⁰⁰ 31	28 ⁰⁰ 8	26 ⁰⁰ 43	10 ⁰⁰ 0	10 ⁰⁰ 18	T 10
F 11	21 56 29	27 ⁰³ 19	9 ⁰⁰ 13	23 ⁰⁰ 6	4 ⁰⁰ 21	22 ⁰⁰ 38	7 ⁰⁰ 47	25 ⁰⁵ 13	16 ⁰⁰ 45	17 ⁰⁰ 9	4 ⁰⁰ 30	28 ⁰⁰ 9	26 ⁰⁰ 40	10 ⁰⁰ 6	10 ⁰⁰ 16	F 11
S 12	22 0 25	28 ⁰³ 15	23 ⁰⁰ 35	24 ⁰⁰ 22	5 ⁰⁰ 35	23 ⁰⁰ 16	7 ⁰⁰ 45	25 ⁰⁵ 9	16 ⁰⁰ 43	17 ⁰⁰ 11	4 ⁰⁰ 29	28 ⁰⁰ R 10	26 ⁰⁰ 36	10 ⁰⁰ 13	10 ⁰⁰ 14	S 12
S 13	22 4 22	29 ⁰³ 12	8 ⁰⁰ 21	25 ⁰⁰ 36	6 ⁰⁰ 49	23 ⁰⁰ 55	7 ⁰⁰ 42	25 ⁰⁵ 4	16 ⁰⁰ 40	17 ⁰⁰ 13	4 ⁰⁰ 28	28 ⁰⁰ 10	26 ⁰⁰ 33	10 ⁰⁰ 20	10 ⁰⁰ 12	S 13
M14	22 8 18	0 ⁰⁰ 29	23 ⁰⁰ 26	26 ⁰⁰ 49	8 ⁰⁰ 4	24 ⁰⁰ 33	7 ⁰⁰ 40	25 ⁰⁵ 0	16 ⁰⁰ 38	17 ⁰⁰ 15	4 ⁰⁰ 27	28 ⁰⁰ 8	26 ⁰⁰ 30	10 ⁰⁰ 26	10 ⁰⁰ 10	M14
T 15	22 12 15	1 ⁰² 7	8 ⁰⁰ 40	27 ⁰⁰ 59	9 ⁰⁰ 18	25 ⁰⁰ 12	7 ⁰⁰ 38	24 ⁰⁵ 55	16 ⁰⁰ 36	17 ⁰⁰ 16	4 ⁰⁰ 26	28 ⁰⁰ 5	26 ⁰⁰ 27	10 ⁰⁰ 33	10 ⁰⁰ 8	T 15
W16	22 16 11	2 ⁰² 5	23 ⁰⁰ 54	29 ⁰⁰ 7	10 ⁰⁰ 32	25 ⁰⁰ 51	7 ⁰⁰ 37	24 ⁰⁵ 51	16 ⁰⁰ 33	17 ⁰⁰ 18	4 ⁰⁰ 26	28 ⁰⁰ 0	26 ⁰⁰ 24	10 ⁰⁰ 40	10 ⁰⁰ 6	W16
T 17	22 20 8	3 ⁰² 3	8 ⁰⁰ 58	0 ⁰⁰ 13	11 ⁰⁰ 47	26 ⁰⁰ 29	7 ⁰⁰ 35	24 ⁰⁵ 46	16 ⁰⁰ 31	17 ⁰⁰ 20	4 ⁰⁰ 25	27 ⁰⁰ 55	26 ⁰⁰ 20	10 ⁰⁰ 46	10 ⁰⁰ 4	T 17
F 18	22 24 5	4 ⁰² 1	23 ⁰⁰ 42	1 ⁰⁰ 17	13 ⁰⁰ 1	27 ⁰⁰ 8	7 ⁰⁰ 34	24 ⁰⁵ 42	16 ⁰⁰ 29	17 ⁰⁰ 21	4 ⁰⁰ 24	27 ⁰⁰ 50	26 ⁰⁰ 17	10 ⁰⁰ 53	10 ⁰⁰ 2	F 18
S 19	22 28 1	5 ⁰¹ 9	8 ⁰⁰ 2	2 ⁰⁰ 18	14 ⁰⁰ 16	27 ⁰⁰ 47	7 ⁰⁰ 32	24 ⁰⁵ 37	16 ⁰⁰ 27	17 ⁰⁰ 23	4 ⁰⁰ 23	27 ⁰⁰ 46	26 ⁰⁰ 14	11 ⁰⁰ 0	10 ⁰⁰ 0	S 19
S 20	22 31 58	6 ⁰¹ 7	21 ⁰⁰ 53	3 ⁰⁰ 17	15 ⁰⁰ 30	28 ⁰⁰ 26	7 ⁰⁰ 31	24 ⁰⁵ 33	16 ⁰⁰ 24	17 ⁰⁰ 25	4 ⁰⁰ 22	27 ⁰⁰ 44	26 ⁰⁰ 11	11 ⁰⁰ 6	9 ⁰⁰ 58	S 20
M21	22 35 54	7 ⁰¹ 5	5 ⁰⁰ 18	4 ⁰⁰ 13	16 ⁰⁰ 44	29 ⁰⁰ 5	7 ⁰⁰ 31	24 ⁰⁵ 28	16 ⁰⁰ 22	17 ⁰⁰ 26	4 ⁰⁰ 21	27 ⁰⁰ D 43	26 ⁰⁰ 8	11 ⁰⁰ 13	9 ⁰⁰ 56	M21
T 22	22 39 51	8 ⁰¹ 4	18 ⁰⁰ 17	5 ⁰⁰ 7	17 ⁰⁰ 59	29 ⁰⁰ 44	7 ⁰⁰ 30	24 ⁰⁵ 24	16 ⁰⁰ 20	17 ⁰⁰ 28	4 ⁰⁰ 20	27 ⁰⁰ 43	26 ⁰⁰ 5	11 ⁰⁰ 20	9 ⁰⁰ 53	T 22
W23	22 43 47	9 ⁰¹ 2	0 ⁰⁰ 54	5 ⁰⁰ 57	19 ⁰⁰ 13	0 ⁰⁰ 23	7 ⁰⁰ 30	24 ⁰⁵ 20	16 ⁰⁰ 18	17 ⁰⁰ 29	4 ⁰⁰ 18	27 ⁰⁰ 45	26 ⁰⁰ 1	11 ⁰⁰ 26	9 ⁰⁰ 51	W23
T 24	22 47 44	10 ⁰¹ 0	13 ⁰⁰ 14	6 ⁰⁰ 44	20 ⁰⁰ 28	1 ⁰⁰ 2	7 ⁰⁰ 29	24 ⁰⁵ 16	16 ⁰⁰ 16	17 ⁰⁰ 31	4 ⁰⁰ 17	27 ⁰⁰ 46	25 ⁰⁰ 58	11 ⁰⁰ 33	9 ⁰⁰ 49	T 24
F 25	22 51 40	11 ⁰⁰ 8	8 ⁰⁰ 56	25 ⁰⁰ 21	7 ⁰⁰ 28	21 ⁰⁰ 42	1 ⁰⁰ 41	7 ⁰⁰ D 29	24 ⁰⁵ 11	16 ⁰⁰ 14	4 ⁰⁰ 16	27 ⁰⁰ R 47	25 ⁰⁰ 55	11 ⁰⁰ 40	9 ⁰⁰ 46	F 25
S 26	22 55 37	12 ⁰⁰ 7	7 ⁰⁰ 18	8 ⁰⁰ 8	22 ⁰⁰ 56	2 ⁰⁰ 20	7 ⁰⁰ 29	24 ⁰⁵ 7	16 ⁰⁰ 12	17 ⁰⁰ 34	4 ⁰⁰ 15	27 ⁰⁰ 46	25 ⁰⁰ 52	11 ⁰⁰ 46	9 ⁰⁰ 44	S 26
S 27	22 59 34	13 ⁰⁰ 5	19 ⁰⁰ 11	8 ⁰⁰ 44	24 ⁰⁰ 11	2 ⁰⁰ 59	7 ⁰⁰ 30	24 ⁰⁵ 3	16 ⁰⁰ 9	17 ⁰⁰ 35	4 ⁰⁰ 14	27 ⁰⁰ 44	25 ⁰⁰ 49	11 ⁰⁰ 53	9 ⁰⁰ 41	S 27
M28	23 3 30	14 ⁰⁰ 4	1 ⁰⁰ 1	9 ⁰⁰ 15	25 ⁰⁰ 25	3 ⁰⁰ 39	7 ⁰⁰ 30	23 ⁰⁵ 59	16 ⁰⁰ 7	17 ⁰⁰ 37	4 ⁰⁰ 13	27 ⁰⁰ 39	25 ⁰⁰ 46	12 ⁰⁰ 0	9 ⁰⁰ 39	M28
T 29	23 7 27	15 ⁰⁰ 2	12 ⁰⁰ 50	9 ⁰⁰ 42	26 ⁰⁰ 40	4 ⁰⁰ 18	7 ⁰⁰ 31	23 ⁰⁵ 55	16 ⁰⁰ 5	17 ⁰⁰ 38	4 ⁰⁰ 12	27 ⁰⁰ 33	25 ⁰⁰ 42	12 ⁰⁰ 7	9 ⁰⁰ 36	T 29
W30	23 11 23	16 ⁰⁰ 1	1 ⁰⁰ 4	10 ⁰⁰ 4	27 ⁰⁰ 54	4 ⁰⁰ 57	7 ⁰⁰ 32	23 ⁰⁵ 51	16 ⁰⁰ 3	17 ⁰⁰ 39	4 ⁰⁰ 11	27 ⁰⁰ 24	25 ⁰⁰ 39	12 ⁰⁰ 13	9 ⁰⁰ 34	W30
T 31	23 15 20	16 ⁰⁰ 5	6 ⁰⁰ 34	10 ⁰⁰ 21	29 ⁰⁰ 9	5 ⁰⁰ 36	7 ⁰⁰ 33	23 ⁰⁵ 47	16 ⁰⁰ 2	17 ⁰⁰ 41	4 ⁰⁰ 10	27 ⁰⁰ 15	25 ⁰⁰ 36	12 ⁰⁰ 20	9 ⁰⁰ 31	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
T 1	15n29	7n13	3s 4	8n38	0n26	15n30	1n22	6n13	0n51	23s29	0s15	14s24	1s36	16s26	0s44	21n48	0s38	13s50	17s 7	20s32	20s46	5n 2	6n14	2n14					
W 2	15 11	2 2	3 52	7 56	0 18	15 7	1 22	5 58	0 50	23 30	0 16	14 26	1 37	16 27	0 44	21 48	0 38	13 51	17 7	20 33	20 47	4 59	6 14	2 14					
T 3	14 53	3s12	4 31	7 14	0 10	14 43	1 23	5 42	0 49	23 30	0 16	14 27	1 37	16 28	0 44	21 47	0 38	13 51	17 8	20 33	20 47	4 56	6 13	2 14					
F 4	14 35	8 21	4 58	6 32	0 2	14 18	1 24	5 27	0 49	23 30	0 16	14 29	1 37	16 28	0 44	21 47	0 38	13 52	17 8	20 34	20 48	4 53	6 13	2 14					
S 5	14 16	13 14	5 12	5 51	0s 7	13 53	1 24	5 11	0 48	23 31	0 16	14 31	1 37	16 29	0 44	21 47	0 38	13 52	17 8	20 35	20 49	4 50	6 12	2 14					
S 6	13 57	17 40	5 13	5 10	0 15	13 28	1 24	4 56	0 48	23 31	0 16	14 32	1 37	16 30	0 44	21 47	0 38	13 53	17 8	20 35	20 49	4 46	6 11	2 14					
M 7	13 38	21 27	4 59	4 29	0 24	13 2	1 25	4 40	0 47	23 31	0 16	14 34	1 37	16 31	0 44	21 46	0 38	13 53	17 9	20 35	20 50	4 43	6 11	2 14					
T 8	13 19	24 20	4 30	3 48	0 33	12 36	1 25	4 25	0 47	23 32	0 16	14 35	1 37	16 31	0 44	21 46	0 38	13 54	17 9	20 35	20 51	4 40	6 10	2 14					
W 9	13 0	26 1	3 47	3 8	0 42	12 10	1 25	4 9	0 46	23 32	0 16	14 37	1 37	16 32	0 44	21 46	0 38	13 55	17 9	20 35	20 51	4 37	6 9	2 14					
T 10	12 40	26 15	2 51	2 29	0 51	11 43	1 25	3 53	0 46	23 32	0 16	14 39	1 37	16 33	0 44	21 46	0 38	13 55	17 9	20 35	20 52	4 34	6 9	2 14					
F 11	12 20	24 52	1 42	1 50	1 0	11 16	1 25	3 37	0 45	23 32	0 16	14 40	1 37	16 33	0 44	21 45	0 38	13 56	17 10	20 35	20 52	4 31	6 8	2 14					
S 12	12 0	21 50	0 25	1 11	1 9	10 49	1 25	3 22	0 45	23 33	0 16	14 42	1 37	16 34	0 44	21 45	0 38	13 56	17 10	20 35	20 53	4 28	6 7	2 14					
S 13	11 40	17 19	0n56	0 33	1 18	10 21	1 25	3 6	0 44	23 33	0 17	14 43	1 37	16 35	0 44	21 45	0 38	13 57	17 10	20 35	20 54	4 25	6 6	2 14					
M14	11 20	11 38	2 14	0s 4	1 27	9 53	1 25	2 50	0 44	23 33	0 17	14 45	1 37	16 35	0 44	21 45	0 38	13 57	17 10	20 35	20 54	4 22	6 6	2 14					
T 15	10 59	5 12	3 23	0 40	1 37	9 25	1 25	2 34	0 43	23 33	0 17	14 47	1 37	16 36	0 44	21 44	0 38	13 58	17 11	20 36	20 55	4 19	6 5	2 14					
W16	10 38	1n31	4 18	1 16	1 46	8 56	1 25	2 18	0 43	23 33	0 17	14 48	1 38	16 37	0 44	21 44	0 38	13 58	17 11	20 37	20 55	4 15	6 4	2 14					
T 17	10 17	8 4	4 54	1 51	1 55	8 28	1 25	2 3	0 42	23 34	0 17	14 50	1 38	16 38	0 44	21 44	0 38	13 59	17 11	20 38	20 56	4 12	6 3	2 14					
F 18	9 56	14 1	5 10	2 25	2 4	7 59	1 24	1 47	0 42	23 34	0 17	14 51	1 38	16 38	0 44	21 44	0 38	14 0	17 11	20 39	20 57	4 9	6 2	2 14					
S 19	9 35	19 2	5 6	2 57	2 13	7 30	1 24	1 31	0 41	23 34	0 17	14 53	1 38	16 39	0 44	21 44	0 38	14 0	17 11	20 39	20 57	4 6	6 2	2 14					
S 20	9 13	22 51	4 44	3 29	2 22	7 0	1 23	1 15	0 40	23 34	0 17	14 54	1 38	16 40	0 44	21 43	0 38	14 1	17 12	20 40	20 58	4 3	6 1	2 14					
M21	8 52	25 17	4 7	4 0	2 31	6 31	1 23	0 59	0 40	23 34	0 17	14 56	1 38	16 40	0 44	21 43	0 38	14 1	17 12	20 40	20 58	4 0	6 0	2 14					
T 22	8 30	26 16	3 18	4 29	2 40	6 1	1 22	0 43	0 39	23 34	0 17	14 57	1 38	16 41	0 44	21 43	0 38	14 2	17 12	20 40	20 59	3 57	5 59	2 14					
W23	8 8	25 50	2 21	4 57	2 49	5 31	1 21	0 27	0 39	23 34	0 17	14 59	1 38	16 41	0 44	21 43	0 38	14 2	17 12	20 40	21 0	3 54	5 58	2 14					
T 24	7 46	24 8	1 18	5 23	2 57	5 1	1 21	0 10	0 38	23 34	0 17	15 0	1 38	16 42	0 44	21 43	0 38	14 3	17 12	20 39	21 0	3 51	5 57	2 14					
F 25	7 24	21 20	0 13	5 48	3 5	4 31	1 20	0s 6	0 38	23 34	0 18	15 2	1 38	16 43	0 44	21 42	0 39	14 4	17 12	20 39	21 1	3 48	5 56	2 14					
S 26	7 2	17 39	0s51	6 11	3 13	4 1	1 19	0 22	0 37	23 35	0 18	15 3	1 38	16 43	0 44	21 42	0 39	14 4	17 13	20 39	21 1	3 44	5 55	2 14					
S 27	6 39	13 19	1 53	6 32	3 20	3 30	1 18	0 38	0 37	23 35	0 18	15 4	1 38	16 44	0 44	21 42	0 39	14 5	17 13	20 40	21 2	3 41	5 54	2 14					
M28	6 17	8 30	2 50	6 51	3 27	3 0	1 17	0 54	0 36	23 35	0 18	15 6	1 38	16 45	0 44	21 42	0 39	14 5	17 13	20 41	21 3	3 38	5 53	2 14					
T 29	5 54	3 23	3 39	7 7	3 34	2 29	1 16	1 10	0 36	23 35	0 18	15 7	1 38	16 45	0 44	21 42	0 39	14 6	17 13	20 42	21 3	3 35	5 52	2 14					
W30	5 32	1s50	4 18	7 21	3 39	1 59	1 15	1 26	0 35	23 35	0 18	15 9	1 38	16 46	0 44	21 41	0 39	14 6	17 13	20 44	21 4	3 32	5 51	2 14					
T 31	5n 9	7s 0	4s47	7s33	3s45	1n28	1n13	1s42	0n35	23s35	0s18	15s10	1s38	16s46	0s44	21n41	0s39	14s 7	17s13	20s46	21s 4	3n29	5n50	2n14					

ASTRODIENST EPHEMERIS for the year 1581

geocentric

SEPTEMBER 1581 JC

00:00 UT

Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	23 19 16	17 ^h 58 ^m 08 ^s	18 ^h 33 ^m	10 ^h 32 ^m	0 ^h 23 ^m	6 ^h 16 ^m	7 ^h 34 ^m	23 ^h R43	16 ^h R 0	17 ^h 54 ^m	4 ^h R 9	27 ^h R 5	25 ^h 33 ^m	12 ^h 27 ^m	9 ^h R29	F 1
S 2	23 23 13	18 ^h 56 ^m 43 ^s	0 ^h 38 ^m	10 ^h R38	1 ^h 38	6 ^h 55	7 ^h 36	23 ^h 39	15 ^h 58	17 ^h 43	4 ^h Y 8	26 ^h 36	25 ^h 30	12 ^h 33	9 ^h Y26	S 2
S 3	23 27 9	19 ^h 55 ^m 20 ^s	12 ^h 52	10 ^h 36	2 ^h 52	7 ^h 35	7 ^h 38	23 ^h 35	15 ^h 56	17 ^h 44	4 ^h 6	26 ^h 49	25 ^h 26	12 ^h 40	9 ^h 24	S 3
M 4	23 31 6	20 ^h 53 ^m 59 ^s	25 ^h 08	10 ^h 29	4 ^h 7	8 ^h 14	7 ^h 40	23 ^h 31	15 ^h 54	17 ^h 46	4 ^h 5	26 ^h 43	25 ^h 23	12 ^h 47	9 ^h 21	M 4
T 5	23 35 2	21 ^h 52 ^m 39 ^s	7 ^h 58	10 ^h 14	5 ^h 21	8 ^h 54	7 ^h 42	23 ^h 28	15 ^h 52	17 ^h 47	4 ^h 4	26 ^h 40	25 ^h 20	12 ^h 53	9 ^h 18	T 5
W 6	23 38 59	22 ^h 51 ^m 21 ^s	20 ^h 57	9 ^h 52	6 ^h 36	9 ^h 34	7 ^h 44	23 ^h 24	15 ^h 50	17 ^h 48	4 ^h 3	26 ^h D39	25 ^h 17	13 ^h 0	9 ^h 16	W 6
T 7	23 42 56	23 ^h 50 ^m 05 ^s	4 ^h 37	9 ^h 23	7 ^h 50	10 ^h 13	7 ^h 46	23 ^h 20	15 ^h 49	17 ^h 49	4 ^h 2	26 ^h 39	25 ^h 14	13 ^h 7	9 ^h 13	T 7
F 8	23 46 52	24 ^h 48 ^m 51 ^s	18 ^h 1	8 ^h 47	9 ^h 4	10 ^h 53	7 ^h 49	23 ^h 17	15 ^h 47	17 ^h 50	4 ^h 1	26 ^h 40	25 ^h 11	13 ^h 13	9 ^h 10	F 8
S 9	23 50 49	25 ^h 47 ^m 38 ^s	2 ^h 11	8 ^h 4	10 ^h 19	11 ^h 33	7 ^h 52	23 ^h 13	15 ^h 45	17 ^h 51	4 ^h 0	26 ^h R40	25 ^h 7	13 ^h 20	9 ^h 7	S 9
S 10	23 54 45	26 ^h 46 ^m 27 ^s	16 ^h 46	7 ^h 14	11 ^h 33	12 ^h 13	7 ^h 55	23 ^h 10	15 ^h 44	17 ^h 52	3 ^h 58	26 ^h 39	25 ^h 4	13 ^h 27	9 ^h 5	S 10
M 11	23 58 42	27 ^h 45 ^m 17 ^s	1 ^h 42	6 ^h 18	12 ^h 48	12 ^h 53	7 ^h 58	23 ^h 7	15 ^h 42	17 ^h 53	3 ^h 57	26 ^h 35	25 ^h 1	13 ^h 33	9 ^h 2	M 11
T 12	0 2 38	28 ^h 44 ^m 10 ^s	16 ^h 54	5 ^h 18	14 ^h 2	13 ^h 32	8 ^h 1	23 ^h 3	15 ^h 41	17 ^h 54	3 ^h 56	26 ^h 28	24 ^h 58	13 ^h 40	8 ^h 59	T 12
W 13	0 6 35	29 ^h 43 ^m 04 ^s	2 ^h Y10	4 ^h 13	15 ^h 17	14 ^h 12	8 ^h 5	23 ^h 0	15 ^h 39	17 ^h 55	3 ^h 55	26 ^h 20	24 ^h 55	13 ^h 47	8 ^h 56	W 13
T 14	0 10 31	0 ^h 42 ^m 00 ^s	17 ^h 20	3 ^h 5	16 ^h 31	14 ^h 52	8 ^h 9	22 ^h 57	15 ^h 38	17 ^h 56	3 ^h 54	26 ^h 10	24 ^h 51	13 ^h 54	8 ^h 54	T 14
F 15	0 14 28	1 ^h 40 ^m 59 ^s	2 ^h 14	1 ^h 57	17 ^h 46	15 ^h 32	8 ^h 13	22 ^h 54	15 ^h 36	17 ^h 57	3 ^h 53	26 ^h 1	24 ^h 48	14 ^h 0	8 ^h 51	F 15
S 16	0 18 25	2 ^h 40 ^m 00 ^s	16 ^h 44	0 ^h 50	19 ^h 0	16 ^h 13	8 ^h 17	22 ^h 51	15 ^h 35	17 ^h 58	3 ^h 51	25 ^h 52	24 ^h 45	14 ^h 7	8 ^h 48	S 16
S 17	0 22 21	3 ^h 39 ^m 03 ^s	0 ^h II45	29 ^h 45	20 ^h 15	16 ^h 53	8 ^h 21	22 ^h 48	15 ^h 33	17 ^h 59	3 ^h 50	25 ^h 46	24 ^h 42	14 ^h 14	8 ^h 45	S 17
M 18	0 26 18	4 ^h 38 ^m 09 ^s	14 ^h 15	28 ^h 44	21 ^h 29	17 ^h 33	8 ^h 25	22 ^h 46	15 ^h 32	18 ^h 0	3 ^h 49	25 ^h 42	24 ^h 39	14 ^h 20	8 ^h 42	M 18
T 19	0 30 14	5 ^h 37 ^m 17 ^s	27 ^h 17	27 ^h 50	22 ^h 44	18 ^h 13	8 ^h 30	22 ^h 43	15 ^h 31	18 ^h 0	3 ^h 48	25 ^h 40	24 ^h 36	14 ^h 27	8 ^h 40	T 19
W 20	0 34 11	6 ^h 36 ^m 27 ^s	9 ^h 55	27 ^h 3	23 ^h 58	18 ^h 53	8 ^h 35	22 ^h 40	15 ^h 30	18 ^h 1	3 ^h 47	25 ^h D40	24 ^h 32	14 ^h 34	8 ^h 37	W 20
T 21	0 38 7	7 ^h 35 ^m 40 ^s	22 ^h 13	26 ^h 26	25 ^h 12	19 ^h 34	8 ^h 40	22 ^h 38	15 ^h 28	18 ^h 2	3 ^h 46	25 ^h R40	24 ^h 29	14 ^h 40	8 ^h 34	T 21
F 22	0 42 4	8 ^h 34 ^m 55 ^s	4 ^h 16	25 ^h 57	26 ^h 27	20 ^h 14	8 ^h 45	22 ^h 35	15 ^h 27	18 ^h 3	3 ^h 44	25 ^h 40	24 ^h 26	14 ^h 47	8 ^h 31	F 22
S 23	0 46 0	9 ^h 34 ^m 12 ^s	16 ^h 10	25 ^h 40	27 ^h 41	20 ^h 55	8 ^h 50	22 ^h 33	15 ^h 26	18 ^h 3	3 ^h 43	25 ^h 38	24 ^h 23	14 ^h 54	8 ^h 28	S 23
S 24	0 49 57	10 ^h 33 ^m 31 ^s	27 ^h 59	25 ^h D33	28 ^h 56	21 ^h 35	8 ^h 56	22 ^h 31	15 ^h 25	18 ^h 4	3 ^h 42	25 ^h 34	24 ^h 20	15 ^h 0	8 ^h 25	S 24
M 25	0 53 54	11 ^h 32 ^m 53 ^s	9 ^h 48	25 ^h 37	0 ^h 10	22 ^h 16	9 ^h 1	22 ^h 28	15 ^h 24	18 ^h 4	3 ^h 41	25 ^h 26	24 ^h 17	15 ^h 7	8 ^h 23	M 25
T 26	0 57 50	12 ^h 32 ^m 17 ^s	21 ^h 38	25 ^h 52	1 ^h 25	22 ^h 56	9 ^h 7	22 ^h 26	15 ^h 23	18 ^h 5	3 ^h 40	25 ^h 16	24 ^h 13	15 ^h 14	8 ^h 20	T 26
W 27	1 1 47	13 ^h 31 ^m 43 ^s	3 ^h 33	26 ^h 16	2 ^h 39	23 ^h 37	9 ^h 13	22 ^h 24	15 ^h 22	18 ^h 5	3 ^h 39	25 ^h 4	24 ^h 10	15 ^h 21	8 ^h 17	W 27
T 28	1 5 43	14 ^h 31 ^m 11 ^s	15 ^h 34	26 ^h 51	3 ^h 54	24 ^h 18	9 ^h 19	22 ^h 22	15 ^h 21	18 ^h 6	3 ^h 37	24 ^h 50	24 ^h 7	15 ^h 27	8 ^h 14	T 28
F 29	1 9 40	15 ^h 30 ^m 41 ^s	27 ^h 43	27 ^h 34	5 ^h 8	24 ^h 58	9 ^h 26	22 ^h 20	15 ^h 20	18 ^h 6	3 ^h 36	24 ^h 36	24 ^h 4	15 ^h 34	8 ^h 11	F 29
S 30	1 13 36	16 ^h 30 ^m 13 ^s	9 ^h 59	28 ^h 26	6 ^h 23	25 ^h 39	9 ^h 32	22 ^h 19	15 ^h 20	18 ^h 7	3 ^h Y35	24 ^h 33	24 ^h 3 1	15 ^h 41	8 ^h Y 9	S 30

Day	☉	☾	♀	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
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ASTRODIENST EPHEMERIS for the year 1581

geocentric

OCTOBER 1581 JC

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Day	Sid.t	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
S 1	1 17 33	17♏29°47	22♏25	29♏25	7♏37	26♏20	9♏39	22♏17	15♏19	18♏7	3♏34	24♏11	23♏57	15♏47	8♏6	S 1	
M 2	1 21 29	18°29'24	5♏0	0♏31	8°51	27°1	9°45	22♏16	15♏18	18°8	3♏33	24♏2	23°54	15°54	8♏3	M 2	
T 3	1 25 26	19°29'02	17°48	1°43	10°6	27°42	9°52	22°14	15°18	18°8	3°32	23°57	23°51	16°1	8°0	T 3	
W 4	1 29 23	20°28'41	0♏49	2°59	11°20	28°23	9°59	22°13	15°17	18°8	3°31	23°54	23°48	16°7	7°57	W 4	
T 5	1 33 19	21°28'23	14°7	4°20	12°35	29°4	10°7	22°12	15°17	18°8	3°29	23°53	23°45	16°14	7°55	T 5	
F 6	1 37 16	22°28'06	27°43	5°45	13°49	29°45	10°14	22°10	15°16	18°9	3°28	23°53	23°42	16°21	7°52	F 6	
S 7	1 41 12	23°27'51	11♏40	7°13	15°4	0♏26	10°22	22°9	15°16	18°9	3°27	23°52	23°38	16°27	7°49	S 7	
S 8	1 45 9	24°27'38	25°58	8°43	16°18	1°7	10°29	22°8	15°15	18°9	3°26	23°50	23°35	16°34	7°47	S 8	
M 9	1 49 5	25°27'26	10♏36	10°16	17°32	1°48	10°37	22°8	15°15	18°9	3°25	23°45	23°32	16°41	7°44	M 9	
T 10	1 53 2	26°27'16	25°29	11°50	18°47	2°30	10°45	22°7	15°15	18°9	3°24	23°38	23°29	16°48	7°41	T 10	
W 11	1 56 58	27°27'08	10♏30	13°26	20°1	3°11	10°53	22°6	15°14	18°9	3°23	23°28	23°26	16°54	7°39	W 11	
T 12	2 0 55	28°27'01	25°30	15°3	21°15	3°52	11°1	22°6	15°14	18°9	3°22	23°16	23°23	17°1	7°36	T 12	
F 13	2 4 52	29°26'57	10♏19	16°40	22°30	4°34	11°10	22°5	15°14	18°9	3°21	23°4	23°19	17°8	7°33	F 13	
S 14	2 8 48	0♏26°54	24°48	18°18	23°44	5°15	11°18	22°5	15°14	18°9	3°20	22°54	23°16	17°14	7°31	S 14	
S 15	2 12 45	1°26'54	8♏51	19°57	24°59	5°57	11°27	22°5	15°D14	18°9	3°19	22°46	23°13	17°21	7°28	S 15	
M 16	2 16 41	2°26'56	22°26	21°36	26°13	6°38	11°36	22°5	15°14	18°9	3°18	22°40	23°10	17°28	7°26	M 16	
T 17	2 20 38	3°27'00	5♏33	23°15	27°27	7°20	11°44	22°D 5	15°14	18°9	3°17	22°37	23°7	17°34	7°23	T 17	
W 18	2 24 34	4°27'06	18°15	24°54	28°42	8°1	11°54	22°5	15°14	18°8	3°16	22°D36	23°3	17°41	7°21	W 18	
T 19	2 28 31	5°27'14	0♏36	26°33	29°56	8°43	12°3	22°5	15°14	18°8	3°15	22°R36	23°0	17°48	7°18	T 19	
F 20	2 32 27	6°27'25	12°40	28°12	1♏10	9°25	12°12	22°5	15°14	18°8	3°14	22°36	22°57	17°54	7°16	F 20	
S 21	2 36 24	7°27'37	24°35	29°51	2°25	10°7	12°21	22°5	15°15	18°8	3°13	22°34	22°54	18°1	7°14	S 21	
S 22	2 40 21	8°27'51	6♏25	1♏29	3°39	10°49	12°31	22°6	15°15	18°7	3°12	22°31	22°51	18°8	7°11	S 22	
M 23	2 44 17	9°28'08	18°14	3°8	4°53	11°31	12°41	22°7	15°15	18°7	3°11	22°25	22°48	18°15	7°9	M 23	
T 24	2 48 14	10°28'26	0♏7	4°46	6°7	12°13	12°50	22°7	15°16	18°6	3°10	22°16	22°44	18°21	7°7	T 24	
W 25	2 52 10	11°28'46	12°7	6°23	7°22	12°55	13°0	22°8	15°16	18°6	3°9	22°5	22°41	18°28	7°5	W 25	
T 26	2 56 7	12°29'08	24°17	8°1	8°36	13°37	13°10	22°9	15°17	18°5	3°8	21°52	22°38	18°35	7°2	T 26	
F 27	3 0 3	13°29'32	6♏38	9°38	9°50	14°19	13°20	22°10	15°17	18°5	3°8	21°39	22°35	18°41	7°0	F 27	
S 28	3 4 0	14°29'58	19°9	11°15	11°5	15°1	13°30	22°11	15°18	18°4	3°7	21°26	22°32	18°48	6°58	S 28	
S 29	3 7 56	15°30'26	1♏52	12°52	12°19	15°43	13°41	22°12	15°19	18°4	3°6	21°16	22°28	18°55	6°56	S 29	
M 30	3 11 53	16°30'55	14°46	14°28	13°33	16°25	13°51	22°14	15°19	18°3	3°5	21°8	22°25	19°1	6°54	M 30	
T 31	3 15 50	17♏31°25	27♏51	16♏4	14♏47	17♏8	14♏2	22♏15	15♏20	18♏3	3♏4	21♏3	22♏22	19♏8	6♏52	T 31	

Day	☉	☽	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂
	decl	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat	decl	lat
S 1	6s53	22s41	4s25	1n51	1n46	13s54	0n12	9s55	0n17	23s28	0s20	15s38	1s37	16s58	0s43	21n37	0s39
M 2	7 16	24 55	3 47	1 30	1 52	14 20	0 9	10 11	0 17	23 28	0 20	15 39	1 37	16 58	0 43	21 37	0 39
T 3	7 38	25 53	2 58	1 6	1 56	14 47	0 6	10 26	0 16	23 27	0 20	15 39	1 36	16 59	0 43	21 37	0 39
W 4	8 1	25 28	1 59	0 38	2 0	15 12	0 4	10 41	0 15	23 27	0 20	15 39	1 36	16 59	0 43	21 37	0 39
T 5	8 23	23 36	0 51	0 8	2 2	15 38	0 1	10 56	0 15	23 27	0 20	15 40	1 36	16 59	0 43	21 37	0 39
F 6	8 46	20 20	0n20	0s24	2 3	16 3	0s 1	11 11	0 14	23 26	0 20	15 40	1 36	16 59	0 43	21 37	0 39
S 7	9 8	15 51	1 33	0 59	2 3	16 27	0 4	11 26	0 14	23 25	0 20	15 40	1 36	16 59	0 43	21 37	0 39
S 8	9 30	10 22	2 41	1 35	2 3	16 51	0 7	11 41	0 13	23 25	0 20	15 41	1 36	16 59	0 43	21 37	0 39
M 9	9 52	4 13	3 40	2 13	2 1	17 15	0 9	11 56	0 12	23 24	0 20	15 41	1 36	16 59	0 43	21 37	0 39
T 10	10 14	2n16	4 25	2 51	1 59	17 38	0 12	12 11	0 12	23 24	0 20	15 41	1 36	16 59	0 43	21 37	0 39
W 11	10 35	8 39	4 53	3 31	1 57	18 1	0 15	12 26	0 11	23 23	0 20	15 41	1 36	16 59	0 43	21 37	0 39
T 12	10 57	14 32	5 0	4 12	1 53	18 24	0 17	12 40	0 11	23 23	0 20	15 41	1 36	16 59	0 43	21 37	0 39
F 13	11 18	19 29	4 47	4 53	1 50	18 46	0 20	12 55	0 10	23 22	0 20	15 41	1 36	16 59	0 43	21 37	0 39
S 14	11 39	23 8	4 16	5 34	1 46	19 7	0 23	13 9	0 10	23 21	0 21	15 41	1 36	16 59	0 43	21 37	0 39
S 15	12 0	25 16	3 29	6 16	1 41	19 28	0 25	13 24	0 9	23 21	0 21	15 41	1 35	16 59	0 43	21 37	0 39
M 16	12 21	25 49	2 32	6 57	1 36	19 48	0 28	13 38	0 8	23 20	0 21	15 41	1 35	16 59	0 43	21 37	0 39
T 17	12 42	24 52	1 29	7 39	1 31	20 8	0 31	13 52	0 8	23 19	0 21	15 41	1 35	16 59	0 43	21 37	0 39
W 18	13 2	22 38	0 23	8 21	1 25	20 27	0 33	14 6	0 7	23 18	0 21	15 41	1 35	16 59	0 43	21 37	0 39
T 19	13 22	19 23	0s42	9 2	1 19	20 46	0 36	14 20	0 7	23 18	0 21	15 41	1 35	16 59	0 43	21 37	0 39
F 20	13 42	15 23	1 44	9 43	1 13	21 4	0 39	14 34	0 6	23 17	0 21	15 41	1 35	16 59	0 43	21 37	0 39
S 21	14 2	10 50	2 41	10 24	1 7	21 22	0 41	14 48	0 5	23 16	0 21	15 40	1 35	16 59	0 43	21 37	0 39
S 22	14 21	5 56	3 30	11 4	1 1	21 39	0 44	15 2	0 5	23 15	0 21	15 40	1 35	16 59	0 43	21 37	0 39
M 23	14 41	0 50	4 10	11 44	0 55	21 55	0 46	15 15	0 4	23 14	0 21	15 40	1 35	16 59	0 43	21 37	0 39
T 24	15 0	4s19	4 40	12 23	0 48	22 11	0 49	15 29	0 4	23 13	0 21	15 40	1 35	16 58	0 43	21 37	0 39
W 25	15 19	9 21	4 57	13 2	0 41	22 26	0 52	15 42	0 3	23 12	0 21	15 39	1 34	16 58	0 43	21 37	0 39
T 26	15 37	14 6	5 1	13 40	0 35	22 41	0 54	15 55	0 2	23 12	0 21	15 39	1 34	16 58	0 43	21 37	0 39
F 27	15 56	18 20	4 51	14 17	0 28	22 55	0 57	16 9	0 2	23 11	0 21	15 38	1 34	16 58	0 42	21 37	0 39
S 28	16 14	21 50	4 28	14 54	0 21	23 8	0 59	16 22	0 1	23 10	0 21	15 38	1 34	16 58	0 42	21 37	0 39
S 29	16 31	24 20	3 50	15 30	0 15	23 20	1 1	16 34	0 1	23 9	0 21	15 37	1 34	16 57	0 42	21 38	0 39
M 30	16 49	25 36	3 0	16 5	0 8	23 32	1 4	16 47	0s 0	23 8	0 21	15 37	1 34	16 57	0 42	21 38	0 39
T 31	17s 6	25s29	2s 0	16s40	0n 1	23s43	1s 6	17s 0	0s 1	23s 7	0s21	15s36	1s34	16s57	0s42	21n38	0s39

Julian Day Number = 2298791.5, Delta T = 116.93 sec

Ecliptic obliquity = 23°29'41", Nutation = 0°00'14", out-of-bounds declination in red

Ayanamsha: Fagan/Bradley = 18°54'13", Lahiri = 18°01'14" Julian Calendar 1 Oct. 1581 == Greg. Calendar 11 Oct. 1581

ASTRODIENST EPHEMERIS for the year 1581
geocentric

NOVEMBER 1581 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
W 1	3 19 46	18 ¹¹ 31'57	11 ¹³ 7	17 ¹¹ 39	16 ¹⁷ 2	17 ¹¹ 50	14 ¹³ 13	22 ¹¹ 17	15 ¹¹ 21	18°R 2	3°R 3	21°R 0	22 ¹³ 19	19 ¹¹ 15	6°R50	W 1
T 2	3 23 43	19°32'31	24°34	19°15	17°16	18°33	14°23	22°18	15°22	18 ¹³ 1	3°Y 3	21°D 0	22°16	19°22	6°Y48	T 2
F 3	3 27 39	20°33'05	8 ¹¹ 14	20°50	18°30	19°15	14°34	22°20	15°23	18° 1	3° 2	21 ¹³ 1	22°13	19°28	6°46	F 3
S 4	3 31 36	21°33'41	22° 6	22°25	19°44	19°58	14°45	22°22	15°24	18° 0	3° 1	21°R 1	22° 9	19°35	6°45	S 4
S 5	3 35 32	22°34'18	6 ¹¹ 13	24° 0	20°58	20°40	14°56	22°24	15°25	17°59	3° 1	21° 0	22° 6	19°42	6°43	S 5
M 6	3 39 29	23°34'55	20°32	25°34	22°13	21°23	15° 7	22°26	15°26	17°58	3° 0	20°57	22° 3	19°48	6°41	M 6
T 7	3 43 25	24°35'35	5°Y 1	27° 9	23°27	22° 5	15°19	22°28	15°27	17°57	2°59	20°52	22° 0	19°55	6°39	T 7
W 8	3 47 22	25°36'15	19°36	28°43	24°41	22°48	15°30	22°30	15°28	17°56	2°59	20°44	21°57	20° 2	6°38	W 8
T 9	3 51 19	26°36'56	4 ¹¹ 10	0 ¹¹ 17	25°55	23°31	15°41	22°32	15°29	17°56	2°58	20°36	21°54	20° 8	6°36	T 9
F 10	3 55 15	27°37'39	18°37	1°51	27° 9	24°14	15°53	22°35	15°31	17°55	2°57	20°27	21°50	20°15	6°35	F 10
S 11	3 59 12	28°38'23	2 ¹¹ 50	3°25	28°23	24°57	16° 5	22°37	15°32	17°54	2°57	20°18	21°47	20°22	6°33	S 11
S 12	4 3 8	29°39'09	16°43	4°58	29°37	25°39	16°16	22°40	15°33	17°53	2°56	20°12	21°44	20°29	6°32	S 12
M13	4 7 5	0 ¹¹ 39'56	0 ¹¹ 13	6°32	0 ¹¹ 51	26°22	16°28	22°43	15°35	17°52	2°56	20° 8	21°41	20°35	6°30	M13
T 14	4 11 1	1°40'44	13°20	8° 5	2° 5	27° 5	16°40	22°46	15°36	17°51	2°55	20° 6	21°38	20°42	6°29	T 14
W15	4 14 58	2°41'34	26° 3	9°39	3°19	27°48	16°52	22°48	15°38	17°50	2°55	20°D 6	21°34	20°49	6°28	W15
T 16	4 18 54	3°42'25	8 ¹¹ 27	11°12	4°33	28°32	17° 4	22°51	15°39	17°48	2°54	20° 7	21°31	20°55	6°26	T 16
F 17	4 22 51	4°43'17	20°35	12°45	5°47	29°15	17°16	22°55	15°41	17°47	2°54	20° 8	21°28	21° 2	6°25	F 17
S 18	4 26 48	5°44'11	2 ¹¹ 32	14°19	7° 1	29°58	17°28	22°58	15°42	17°46	2°53	20°R 9	21°25	21° 9	6°24	S 18
S 19	4 30 44	6°45'06	14°24	15°52	8°15	0 ¹¹ 41	17°40	23° 1	15°44	17°45	2°53	20° 9	21°22	21°16	6°23	S 19
M20	4 34 41	7°46'02	26°15	17°25	9°29	1°24	17°53	23° 4	15°46	17°44	2°52	20° 7	21°19	21°22	6°22	M20
T 21	4 38 37	8°47'00	8 ¹¹ 10	18°58	10°43	2° 8	18° 5	23° 8	15°48	17°43	2°52	20° 3	21°15	21°29	6°21	T 21
W22	4 42 34	9°47'58	20°13	20°31	11°57	2°51	18°18	23°11	15°49	17°41	2°52	19°57	21°12	21°36	6°20	W22
T 23	4 46 30	10°48'58	2 ¹¹ 29	22° 4	13°11	3°35	18°30	23°15	15°51	17°40	2°51	19°51	21° 9	21°42	6°19	T 23
F 24	4 50 27	11°50'00	14°59	23°37	14°24	4°18	18°43	23°19	15°53	17°39	2°51	19°43	21° 6	21°49	6°19	F 24
S 25	4 54 23	12°51'02	27°45	25° 9	15°38	5° 2	18°56	23°23	15°55	17°37	2°51	19°36	21° 3	21°56	6°18	S 25
S 26	4 58 20	13°52'05	10 ¹¹ 46	26°42	16°52	5°45	19° 8	23°27	15°57	17°36	2°50	19°31	21° 0	22° 2	6°17	S 26
M27	5 2 17	14°53'09	24° 2	28°14	18° 6	6°29	19°21	23°31	15°59	17°35	2°50	19°26	20°56	22° 9	6°16	M27
T 28	5 6 13	15°54'14	7 ¹¹ 31	29°47	19°19	7°13	19°34	23°35	16° 1	17°33	2°50	19°24	20°53	22°16	6°16	T 28
W29	5 10 10	16°55'19	21°12	1 ¹¹ 18	20°33	7°57	19°47	23°39	16° 3	17°32	2°50	19°D23	20°50	22°23	6°15	W29
T 30	5 14 6	17°56'25	5 ¹¹ 2	2 ¹¹ 50	21°347	8°40	20°30	23°43	16°56	17°31	2°Y50	19°24	20°347	22°1129	6°Y15	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
W 1	17s23	23s54	0s53	17s14	0s 6	23s54	1s 9	17s12	0s 1	23s 5	0s21	15s36	1s34	16s57	0s42	21n38	0s39	14s28	17s 8	21s51	21s39	0n18	4n41	2n 8	
T 2	17 39	20 57	0n19	17 46	0 12	24 4	1 11	17 25	0 2	23 4	0 22	15 35	1 34	16 56	0 42	21 38	0 39	14 28	17 8	21 51	21 39	0 15	4 40	2 8	
F 3	17 56	16 47	1 31	18 18	0 19	24 13	1 13	17 37	0 2	23 3	0 22	15 34	1 34	16 56	0 42	21 38	0 39	14 28	17 8	21 51	21 40	0 12	4 39	2 8	
S 4	18 12	11 41	2 38	18 50	0 25	24 21	1 15	17 49	0 3	23 2	0 22	15 34	1 34	16 56	0 42	21 38	0 39	14 28	17 7	21 51	21 40	0 9	4 38	2 8	
S 5	18 27	5 53	3 37	19 20	0 32	24 29	1 18	18 1	0 4	23 1	0 22	15 33	1 33	16 55	0 42	21 38	0 39	14 28	17 7	21 51	21 41	0 5	4 37	2 7	
M 6	18 43	0n17	4 24	19 49	0 38	24 36	1 20	18 13	0 4	23 0	0 22	15 32	1 33	16 55	0 42	21 38	0 39	14 28	17 7	21 51	21 41	0 2	4 36	2 7	
T 7	18 58	6 29	4 54	20 17	0 45	24 42	1 22	18 25	0 5	22 58	0 22	15 32	1 33	16 55	0 42	21 38	0 39	14 28	17 6	21 52	21 42	0s 1	4 36	2 7	
W 8	19 12	12 23	5 5	20 45	0 51	24 47	1 24	18 36	0 5	22 57	0 22	15 31	1 33	16 54	0 42	21 38	0 39	14 28	17 6	21 53	21 42	0 4	4 35	2 7	
T 9	19 27	17 35	4 57	21 11	0 57	24 52	1 26	18 48	0 6	22 56	0 22	15 30	1 33	16 54	0 42	21 39	0 39	14 28	17 6	21 55	21 43	0 7	4 34	2 7	
F 10	19 41	21 43	4 30	21 36	1 3	24 56	1 28	18 59	0 7	22 55	0 22	15 29	1 33	16 54	0 42	21 39	0 39	14 28	17 6	21 56	21 43	0 10	4 33	2 7	
S 11	19 54	24 28	3 46	22 0	1 9	24 59	1 30	19 10	0 7	22 53	0 22	15 28	1 33	16 53	0 42	21 39	0 39	14 28	17 5	21 57	21 44	0 13	4 32	2 6	
S 12	20 7	25 39	2 50	22 23	1 14	25 1	1 32	19 21	0 8	22 52	0 22	15 27	1 33	16 53	0 42	21 39	0 39	14 28	17 5	21 58	21 44	0 16	4 32	2 6	
M13	20 20	25 15	1 45	22 45	1 20	25 3	1 33	19 32	0 9	22 51	0 22	15 26	1 33	16 52	0 42	21 39	0 39	14 28	17 5	21 59	21 45	0 19	4 31	2 6	
T 14	20 33	23 26	0 36	23 6	1 25	25 4	1 35	19 42	0 9	22 49	0 22	15 25	1 33	16 52	0 42	21 39	0 39	14 28	17 4	21 59	21 45	0 22	4 30	2 6	
W15	20 45	20 28	0s32	23 26	1 30	25 4	1 37	19 53	0 10	22 48	0 22	15 24	1 32	16 51	0 42	21 39	0 39	14 28	17 4	21 59	21 46	0 25	4 30	2 6	
T 16	20 56	16 37	1 38	23 44	1 35	25 3	1 39	20 3	0 10	22 46	0 22	15 23	1 32	16 51	0 42	21 39	0 39	14 28	17 4	21 59	21 46	0 28	4 29	2 6	
F 17	21 8	12 11	2 37	24 2	1 40	25 2	1 40	20 13	0 11	22 45	0 22	15 22	1 32	16 50	0 42	21 40	0 39	14 28	17 3	21 59	21 47	0 31	4 28	2 5	
S 18	21 19	7 20	3 29	24 18	1 44	25 0	1 42	20 23	0 12	22 43	0 22	15 21	1 32	16 50	0 42	21 40	0 39	14 28	17 3	21 59	21 47	0 34	4 28	2 5	
S 19	21 29	2 17	4 12	24 33	1 49	24 57	1 43	20 32	0 12	22 42	0 22	15 20	1 32	16 49	0 42	21 40	0 39	14 27	17 3	21 59	21 48	0 37	4 27	2 5	
M20	21 39	2s50	4 43	24 46	1 53	24 53	1 44	20 42	0 13	22 40	0 23	15 18	1 32	16 49	0 42	21 40	0 39	14 27	17 2	21 59	21 48	0 40	4 27	2 5	
T 21	21 49	7 53	5 3	24 58	1 56	24 49	1 46	20 51	0 13	22 39	0 23	15 17	1 32	16 48	0 42	21 40	0 39	14 27	17 2	22 0	21 49	0 43	4 26	2 5	
W22	21 58	12 42	5 10	25 9	2 0	24 44	1 47	21 0	0 14	22 37	0 23	15 16	1 32	16 48	0 42	21 40	0 39	14 27	17 2	22 0	21 49	0 46	4 25	2 4	
T 23	22 7	17 5	5 2	25 18	2 3	24 38	1 48	21 9	0 15	22 35	0 23	15 15	1 32	16 47	0 42	21 40	0 39	14 27	17 1	22 1	21 50	0 49	4 25	2 4	
F 24	22 16	20 50	4 40	25 26	2 6	24 31	1 49	21 18	0 15	22 34	0 23	15 13	1 32	16 46	0 42	21 41	0 39	14 27	17 1	22 2	21 50	0 52	4 24	2 4	
S 25	22 24	23 40	4 4	25 33	2 9	24 24	1 50	21 27	0 16	22 32	0 23	15 12	1 32	16 46	0 42	21 41	0 39	14 26	17 1	22 3	21 51	0 55	4 24	2 4	
S 26	22 31	25 19	3 15	25 38	2 11	24 16	1 51	21 35	0 17	22 30	0 23	15 11	1 32	16 45	0 42	21 41	0 39	14 26	17 0	22 4	21 51	0 58	4 24	2 4	
M27	22 38	25 35	2 14	25 42	2 13	24 7	1 52	21 43	0 17	22 28	0 23	15 9	1 31	16 44	0 42	21 41	0 39	14 26	17 0	22 5	21 52	1 2	4 23	2 3	
T 28	22 45	24 21	1 4	25 44	2 14	23 58	1 53	21 51	0 18	22 27	0 23	15 8	1 31	16 44	0 41	21 41	0 39	14 26	17 0	22 5	21 52	1 5	4 23	2 3	
W29	22 51	21 39	0n10	25 44	2 15	23 47	1 54	21 59	0 18	22 25	0 23	15 6	1 31	16 43	0 41	21 42	0 39	14 26	16 59	22 5	21 53	1 8	4 22	2 3	
T 30	22s57	17s41	1n25	25s43	2s16	23s36	1s54	22s 7	0s19	22s23	0s23	15s 5	1s31	16s42	0s41	21n42	0s39	14s25	16s59	22s 5	21s53	1s11	4n22	2n 3	

ASTRODIENST EPHEMERIS for the year 1581

geocentric

DECEMBER 1581 JC

00:00 UT

Day	Sid.t	☉	☽	♂	♀	♂	♂	♂	♂	♂	♂	♂	♂	♂	♂	Day
F 1	5 18 3	18 ⁵⁷ 31	18 ⁵⁹	4 ²¹	23 ⁰	9 ²⁴	20 ¹³	23 ⁴⁷	16 ⁸	17 ²⁹	2 ⁴⁹	19 ²⁶	20 ⁴⁴	22 ³⁶	6 ¹⁵	F 1
S 2	5 21 59	19 ⁵⁸ 38	3 ²	5 ⁵¹	24 ¹⁴	10 ⁸	20 ²⁶	23 ⁵²	16 ¹⁰	17 ²⁸	2 ⁴⁹	19 ²⁷	20 ⁴⁰	22 ⁴³	6 ¹⁴	S 2
S 3	5 25 56	20 ⁵⁹ 45	17 ¹⁰	7 ²¹	25 ²⁸	10 ⁵²	20 ⁴⁰	23 ⁵⁶	16 ¹²	17 ²⁶	2 ⁴⁹	19 ²⁸	20 ³⁷	22 ⁴⁹	6 ¹⁴	S 3
M 4	5 29 52	22 ⁰ 52	1 ²⁰	8 ⁵⁰	26 ⁴¹	11 ³⁶	20 ⁵³	24 ¹	16 ¹⁵	17 ²⁵	2 ⁴⁹	19 ²⁸	20 ³⁴	22 ⁵⁶	6 ¹⁴	M 4
T 5	5 33 49	23 ¹ 59	15 ³¹	10 ¹⁷	27 ⁵⁵	12 ²⁰	21 ⁶	24 ⁵	16 ¹⁷	17 ²³	2 ⁴⁹	19 ²⁶	20 ³¹	23 ³	6 ¹³	T 5
W 6	5 37 46	24 ³ 07	29 ⁴¹	11 ⁴⁴	29 ⁸	13 ⁴	21 ¹⁹	24 ¹⁰	16 ²⁰	17 ²²	2 ⁴⁹	19 ²³	20 ²⁸	23 ¹⁰	6 ¹³	W 6
T 7	5 41 42	25 ⁴ 14	13 ⁴⁶	13 ⁹	0 ²¹	13 ⁴⁸	21 ³³	24 ¹⁵	16 ²²	17 ²⁰	2 ⁴⁹	19 ²⁰	20 ²⁵	23 ¹⁶	6 ¹³	T 7
F 8	5 45 39	26 ⁵ 22	27 ⁴³	14 ³²	1 ³⁵	14 ³²	21 ⁴⁶	24 ²⁰	16 ²⁴	17 ¹⁹	2 ⁴⁹	19 ¹⁶	20 ²¹	23 ²³	6 ¹³	F 8
S 9	5 49 35	27 ⁶ 30	11 ²⁸	15 ⁵²	2 ⁴⁸	15 ¹⁶	22 ⁰	24 ²⁵	16 ²⁷	17 ¹⁷	2 ⁴⁹	19 ¹³	20 ¹⁸	23 ³⁰	6 ¹³	S 9
S 10	5 53 32	28 ⁷ 39	24 ⁵⁹	17 ¹¹	4 ¹	16 ¹	22 ¹³	24 ³⁰	16 ³⁰	17 ¹⁶	2 ⁴⁹	19 ¹⁰	20 ¹⁵	23 ³⁶	6 ¹³	S 10
M 11	5 57 28	29 ⁸ 48	8 ¹³	18 ²⁶	5 ¹⁴	16 ⁴⁵	22 ²⁷	24 ³⁵	16 ³²	17 ¹⁴	2 ⁴⁹	19 ⁹	20 ¹²	23 ⁴³	6 ¹⁴	M 11
T 12	6 1 25	0 ³ 57	21 ⁹	19 ³⁸	6 ²⁸	17 ²⁹	22 ⁴⁰	24 ⁴⁰	16 ³⁵	17 ¹²	2 ⁴⁹	19 ⁹	20 ⁹	23 ⁵⁰	6 ¹⁴	T 12
W 13	6 5 22	1 ¹¹ 06	3 ⁴⁷	20 ⁴⁵	7 ⁴¹	18 ¹⁴	22 ⁵⁴	24 ⁴⁵	16 ³⁷	17 ¹¹	2 ⁴⁹	19 ⁹	20 ⁶	23 ⁵⁷	6 ¹⁴	W 13
T 14	6 9 18	2 ¹² 16	16 ¹⁰	21 ⁴⁸	8 ⁵⁴	18 ⁵⁸	23 ⁸	24 ⁵¹	16 ⁴⁰	17 ⁹	2 ⁴⁹	19 ¹¹	20 ²	24 ³	6 ¹⁵	T 14
F 15	6 13 15	3 ¹³ 26	28 ¹⁸	22 ⁴⁶	10 ⁷	19 ⁴³	23 ²²	24 ⁵⁶	16 ⁴³	17 ⁷	2 ⁵⁰	19 ¹²	19 ⁵⁹	24 ¹⁰	6 ¹⁵	F 15
S 16	6 17 11	4 ¹⁴ 36	10 ¹⁷	23 ³⁷	11 ²⁰	20 ²⁷	23 ³⁵	25 ¹	16 ⁴⁶	17 ⁶	2 ⁵⁰	19 ¹³	19 ⁵⁶	24 ¹⁷	6 ¹⁵	S 16
S 17	6 21 8	5 ¹⁵ 46	22 ¹⁰	24 ²⁰	12 ³²	21 ¹²	23 ⁴⁹	25 ⁷	16 ⁴⁸	17 ⁴	2 ⁵⁰	19 ¹⁴	19 ⁵³	24 ²³	6 ¹⁶	S 17
M 18	6 25 4	6 ¹⁶ 57	4 ²	24 ⁵⁶	13 ⁴⁵	21 ⁵⁶	24 ³	25 ¹²	16 ⁵¹	17 ²	2 ⁵⁰	19 ¹⁵	19 ⁵⁰	24 ³⁰	6 ¹⁷	M 18
T 19	6 29 1	7 ¹⁸ 08	15 ⁵⁷	25 ²³	14 ⁵⁸	22 ⁴¹	24 ¹⁷	25 ¹⁸	16 ⁵⁴	17 ¹	2 ⁵⁰	19 ¹⁵	19 ⁴⁶	24 ³⁷	6 ¹⁷	T 19
W 20	6 32 57	8 ¹⁹ 20	28 ⁰	25 ⁴⁰	16 ¹¹	23 ²⁶	24 ³¹	25 ²⁴	16 ⁵⁷	16 ⁵⁹	2 ⁵¹	19 ¹⁴	19 ⁴³	24 ⁴³	6 ¹⁸	W 20
T 21	6 36 54	9 ²⁰ 31	10 ¹⁷	25 ⁴⁶	17 ²³	24 ¹⁰	24 ⁴⁵	25 ²⁹	17 ⁰	16 ⁵⁷	2 ⁵¹	19 ¹³	19 ⁴⁰	24 ⁵⁰	6 ¹⁹	T 21
F 22	6 40 51	10 ²¹ 43	22 ⁵⁰	25 ⁴¹	18 ³⁶	24 ⁵⁵	24 ⁵⁹	25 ³⁵	17 ³	16 ⁵⁶	2 ⁵¹	19 ¹²	19 ³⁷	24 ⁵⁷	6 ¹⁹	F 22
S 23	6 44 47	11 ²² 54	5 ⁴²	25 ²⁴	19 ⁴⁸	25 ⁴⁰	25 ¹³	25 ⁴¹	17 ⁶	16 ⁵⁴	2 ⁵²	19 ¹⁰	19 ³⁴	25 ⁴	6 ²⁰	S 23
S 24	6 48 44	12 ²⁴ 06	18 ⁵⁵	24 ⁵⁵	21 ¹	26 ²⁵	25 ²⁷	25 ⁴⁷	17 ⁹	16 ⁵²	2 ⁵²	19 ¹⁰	19 ³¹	25 ¹⁰	6 ²¹	S 24
M 25	6 52 40	13 ²⁵ 18	2 ³⁸	24 ¹⁵	22 ¹³	27 ¹⁰	25 ⁴¹	25 ⁵³	17 ¹²	16 ⁵¹	2 ⁵³	19 ⁹	19 ²⁷	25 ¹⁷	6 ²²	M 25
T 26	6 56 37	14 ²⁶ 29	16 ²¹	23 ²⁴	23 ²⁶	27 ⁵⁵	25 ⁵⁵	25 ⁵⁹	17 ¹⁵	16 ⁴⁹	2 ⁵³	19 ⁹	19 ²⁴	25 ²⁴	6 ²³	T 26
W 27	7 0 33	15 ²⁷ 40	0 ²⁹	22 ²³	24 ³⁸	28 ⁴⁰	26 ⁹	26 ⁵	17 ¹⁸	16 ⁴⁷	2 ⁵³	19 ⁹	19 ²¹	25 ³⁰	6 ²⁴	W 27
T 28	7 4 30	16 ²⁸ 50	14 ⁴⁹	21 ¹⁴	25 ⁵⁰	29 ²⁵	26 ²³	26 ¹¹	17 ²¹	16 ⁴⁶	2 ⁵⁴	19 ⁹	19 ¹⁸	25 ³⁷	6 ²⁶	T 28
F 29	7 8 26	17 ³⁰ 00	29 ¹⁵	20 ⁰	27 ²	0 ¹⁰	26 ³⁷	26 ¹⁷	17 ²⁴	16 ⁴⁴	2 ⁵⁴	19 ⁹	19 ¹⁵	25 ⁴⁴	6 ²⁷	F 29
S 30	7 12 23	18 ³¹ 10	13 ⁴²	18 ⁴²	28 ¹⁴	0 ⁵⁵	26 ⁵¹	26 ²⁴	17 ²⁷	16 ⁴²	2 ⁵⁵	19 ⁹	19 ¹²	25 ⁵¹	6 ²⁸	S 30
S 31	7 16 20	19 ³² 18	28 ⁴	17 ²³	29 ²⁶	1 ³⁰	27 ³	26 ³⁰	17 ³⁰	16 ⁴¹	2 ⁵⁵	19 ⁹	19 ⁸	25 ⁵⁷	6 ²⁹	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
F 1	23s 2	12s43	2n35	25s41	2s16	23s25	1s55	22s14	0s20	22s21	0s23	15s 3	1s31	16s42	0s41	21n42	0s39	14s25	16s58	22s 5	21s54	1s14	4n22	2n 3	
S 2	23 7	7 3	3 37	25 37	2 15	23 12	1 55	22 21	0 20	22 19	0 23	15 2	1 31	16 41	0 41	21 42	0 39	14 25	16 58	22 5	21 54	1 17	4 21	2 3	
S 3	23 11	1 0	4 25	25 32	2 14	22 59	1 56	22 28	0 21	22 17	0 23	15 0	1 31	16 40	0 41	21 42	0 39	14 24	16 58	22 5	21 54	1 20	4 21	2 2	
M 4	23 15	5n 5	4 58	25 24	2 13	22 46	1 56	22 35	0 21	22 15	0 23	14 59	1 31	16 40	0 41	21 42	0 39	14 24	16 57	22 5	21 55	1 23	4 21	2 2	
T 5	23 19	10 56	5 13	25 16	2 11	22 31	1 56	22 41	0 22	22 13	0 23	14 57	1 31	16 39	0 41	21 43	0 39	14 24	16 57	22 5	21 55	1 26	4 21	2 2	
W 6	23 22	16 11	5 9	25 6	2 8	22 16	1 56	22 48	0 23	22 11	0 24	14 55	1 31	16 38	0 41	21 43	0 39	14 24	16 57	22 5	21 56	1 29	4 20	2 2	
T 7	23 24	20 33	4 46	24 54	2 4	22 1	1 56	22 54	0 23	22 9	0 24	14 54	1 31	16 37	0 41	21 43	0 39	14 23	16 56	22 6	21 56	1 32	4 20	2 2	
F 8	23 26	23 41	4 6	24 41	2 0	21 45	1 56	22 59	0 24	22 7	0 24	14 52	1 31	16 37	0 41	21 43	0 39	14 23	16 56	22 6	21 57	1 35	4 20	2 1	
S 9	23 28	25 23	3 13	24 27	1 55	21 28	1 56	23 5	0 25	22 5	0 24	14 50	1 31	16 36	0 41	21 43	0 39	14 23	16 56	22 7	21 57	1 38	4 20	2 1	
S 10	23 29	25 33	2 9	24 11	1 49	21 10	1 56	23 10	0 25	22 3	0 24	14 49	1 31	16 35	0 41	21 44	0 39	14 22	16 55	22 7	21 58	1 41	4 20	2 1	
M11	23 29	24 14	1 0	23 54	1 42	20 52	1 56	23 16	0 26	22 1	0 24	14 47	1 30	16 34	0 41	21 44	0 39	14 22	16 55	22 7	21 58	1 44	4 20	2 1	
T 12	23 30	21 39	0s11	23 36	1 34	20 34	1 55	23 20	0 26	21 59	0 24	14 45	1 30	16 33	0 41	21 44	0 39	14 21	16 55	22 7	21 59	1 47	4 20	2 1	
W13	23 29	18 3	1 20	23 18	1 25	20 14	1 55	23 25	0 27	21 56	0 24	14 43	1 30	16 33	0 41	21 44	0 39	14 21	16 54	22 7	21 59	1 50	4 20	2 0	
T 14	23 29	13 44	2 24	22 58	1 15	19 55	1 54	23 30	0 28	21 54	0 24	14 41	1 30	16 32	0 41	21 44	0 39	14 21	16 54	22 7	22 0	1 53	4 19	2 0	
F 15	23 27	8 58	3 20	22 38	1 5	19 34	1 54	23 34	0 28	21 52	0 24	14 39	1 30	16 31	0 41	21 45	0 39	14 20	16 53	22 7	22 0	1 56	4 19	2 0	
S 16	23 26	3 55	4 6	22 17	0 52	19 14	1 53	23 38	0 29	21 50	0 24	14 38	1 30	16 30	0 41	21 45	0 39	14 20	16 53	22 7	22 1	1 59	4 19	2 0	
S 17	23 23	1s12	4 42	21 56	0 39	18 52	1 52	23 41	0 29	21 47	0 24	14 36	1 30	16 29	0 41	21 45	0 39	14 19	16 53	22 7	22 1	2 2	4 20	2 0	
M18	23 21	6 16	5 6	21 36	0 25	18 30	1 51	23 45	0 30	21 45	0 24	14 34	1 30	16 28	0 41	21 45	0 39	14 19	16 52	22 7	22 2	2 5	4 20	2 0	
T 19	23 18	11 9	5 16	21 16	0 9	18 8	1 50	23 48	0 31	21 43	0 24	14 32	1 30	16 27	0 41	21 46	0 39	14 19	16 52	22 7	22 2	2 8	4 20	1 59	
W20	23 14	15 39	5 13	20 56	0n 7	17 45	1 49	23 51	0 31	21 40	0 25	14 30	1 30	16 27	0 41	21 46	0 39	14 18	16 52	22 7	22 2	2 11	4 20	1 59	
T 21	23 10	19 36	4 56	20 38	0 25	17 22	1 48	23 54	0 32	21 38	0 25	14 28	1 30	16 26	0 41	21 46	0 39	14 18	16 51	22 7	22 3	2 14	4 20	1 59	
F 22	23 5	22 46	4 24	20 21	0 43	16 58	1 46	23 56	0 32	21 35	0 25	14 26	1 30	16 25	0 41	21 46	0 39	14 17	16 51	22 7	22 3	2 17	4 20	1 59	
S 23	23 0	24 53	3 38	20 6	1 2	16 34	1 45	23 58	0 33	21 33	0 25	14 24	1 30	16 24	0 41	21 46	0 39	14 17	16 51	22 7	22 4	2 20	4 20	1 59	
S 24	22 55	25 41	2 40	19 52	1 21	16 9	1 43	24 0	0 34	21 30	0 25	14 22	1 30	16 23	0 41	21 47	0 39	14 16	16 50	22 7	22 4	2 23	4 20	1 58	
M25	22 49	24 59	1 31	19 40	1 40	15 44	1 42	24 2	0 34	21 28	0 25	14 20	1 30	16 22	0 41	21 47	0 39	14 16	16 50	22 7	22 5	2 26	4 21	1 58	
T 26	22 43	22 45	0 16	19 30	1 59	15 19	1 40	24 3	0 35	21 25	0 25	14 18	1 30	16 21	0 41	21 47	0 39	14 15	16 49	22 7	22 5	2 29	4 21	1 58	
W27	22 36	19 4	1n 3	19 23	2 17	14 53	1 38	24 5	0 35	21 23	0 25	14 15	1 30	16 20	0 41	21 47	0 39	14 15	16 49	22 7	22 6	2 32	4 21	1 58	
T 28	22 28	14 14	2 18	19 17	2 33	14 27	1 36	24 6	0 36	21 20	0 25	14 13	1 30	16 19	0 41	21 48	0 39	14 14	16 49	22 7	22 6	2 35	4 21	1 58	
F 29	22 21	8 34	3 25	19 14	2 48	14 0	1 34	24 6	0 37	21 18	0 25	14 11	1 30	16 18	0 41	21 48	0 39	14 14	16 48	22 7	22 7	2 38	4 22	1 57	
S 30	22 13	2 27	4 19	19 12	3 1	13 34	1 32	24 7	0 37	21 15	0 25	14 9	1 30	16 17	0 41	21 48	0 39	14 13	16 48	22 7	22 7	2 41	4 22	1 57	
S 31	22s 4	3n46	4n56	19s12	3n12	13s 6	1s30	24s 7	0s38	21s12	0s25	14s 7	1s30	16s16	0s41	21n48	0s39	14s13	16s48	22s 7	22s 7	2s44	4n22	1n57	