Ἄτλας Οὐράνιος,

The COELESTIAL ATLAS;

Or, A New

EPHEMERIS

For the Year of our LORD 1799.

Being the Third after

BISSEXTILE, or LEAP-YEAR.

Wherein are contained

The Heliocentrick and Geocentrick Places of the Planets, the Eclipses of the Luminaries, and other remarkable Phenomena that will happen this Year.

Carefully computed

From the genuine Tables of Dr. Edmund Halley, those of Professor Mayer, and other the latest and most correct Astronomical Tables.

ALSO

A Complete Almanack, containing the Feasts and Fasts of the Church of England; the Times of the Lunations; the Rising and Setting of the Sun, Moon, and Planets, &c.

Adapted to the

Meridian and Latitude of the Royal Observatory of GREENWICH.

To which are added

Several useful Tables: As, a Table of the Sun's semi-diurnal Arcs, by which the Times of the Sun's Rising and Setting may be known by Inspection, on every Day in the Year, and in any Part of Great-Britain or Ireland; a Tide-Table, and a very correct one of the Eclipses of Jupiter's first Satellite; a Table of the Sun's Right-Ascension; various exact [illegible]s of the most remarkable fixed Stars, corrected from M[illegible]'s Catalogue; and, lastly, a correct Table of Latitudes and Longitudes of the most remarkable Places in the World.

By ROBERT WH[illegible]

Teacher of the Mathematicks.

58 99

Οἱ οὐρανοὶ διηγοῦνται δόξαν Θεοῦ.

The Fiftieth Impression.

LONDON:

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Chronological Notes for the Year 1799.

Golden Number - -	14	Septuageſima Sund.	Jan. 20
Cycle of the Sun - -	16	Shrove Sunday -	Feb. 3
The Epact - - -	23	Eaſter Day - -	Mar. 24
Dominical Letter -	F	Whit Sunday -	May 12
Number of Direction -	3	Trinity Sunday -	May 19
Roman Indiction - -	2	Advent Sunday -	Dec. 1

Aſtronomical Characters explained.

♈ Aries	♋ Cancer	♎ Libra	♑ Capricorn
♉ Taurus	♌ Leo	♏ Scorpio	♒ Aquarius
♊ Gemini	♍ Virgo	♐ Sagittary	♓ Piſces

♄ Saturn	☉ Sol (the Sun)	☽ Luna (the Moon)	♅ Herſchel,
♃ Jupiter	♀ Venus	☊ Moon's N. Node	the New or
♂ Mars	☿ Mercury	☋ her S. Node	Georgian Planet.

☌ Conjunction when Planets are in the ſame Sign, Deg. Min. &c.
✶ Sextile when 2 Signs diſt. | △ Trine when 4 Signs diſt.
□ Quartile when 3 Signs diſt. | ☍ Oppoſition when 6 Signs diſt.

Of the Four Quarters of the Year 1799.

	d	h	m	
THE Spring Quarter begins - -	March 20	2	17	aftern.
The Summer Quarter begins - -	June 21	0	3	aftern.
The Autumnal Quarter begins - -	Sept. 23	1	49	morn.
The Winter Quarter begins - -	Dec. 21	6	33	aftern.

THE beautiful Planet Venus will be an Evening Star till Octob. the 16th; and after that Time ſhe will be a Morning Star to the Year's End.

Jupiter will be an Evening Star till May the 30th; then a Morning Star till the 17th Day of December, at which Time he becomes an Evening Star, and ſo continues to the Year's End.

The NAMES of the Learned JUDGES of the LAW.

I. Right Hon. Alexander Wedderburne Lord Loughborough, Lord High Chancellor of Great Britain.

Right Honourable Sir Richard Pepper Arden, Knt. Master of the Rolls.

II. In the K. Bench. } Right Hon. Lord Kenyon, L. C. J. Sir W. H. Ashhurst, Knt. Sir Soulden Lawrence, Knt. Sir Nash Grose, Knt.

III. In the C. Pleas. } Sir James Eyre, Knt. L. C. J. Sir Giles Rooke, Knt. John Heath, Esq. Sir Francis Buller, Bart.

IV. In the Exchequer } Sir Arch. Macdonald, Kt. L. C. B. Sir Beaumont Hotham, Kt. Sir Richard Perryn, Knt. Sir Alex. Thompson, Knt.

Sir John Scott, Knt. Attor. General; Sir John Mitford, Knt. Solic. Gen.

A TABLE of TERMS and Returns for the Year 1799.

Hilary Term begins Jan. 23, ends Feb. 12.

Returns or Essoign-days.	Exc.	Ret.	Ap.	W. D.
In eight Days of St. Hilary, - - Jan. 20	21	22	23	Wednes.
In fifteen Days of St. Hilary - - - 27	28	29	30	Wednes.
On the Mor. of the Purif. of the Bl. V. M. Feb. 3	4	5	6	Wednes.
In eight Days of the Purif. of the Bl. V. M. 9	10	11	12	Tuesday

Easter Term begins April 10, ends May 6.

In fifteen Days of Easter - - April 7	8	9	10	Wedn.
From Easter Day in three Weeks - 14	15	16	17	Wedn.
From Easter Day in one Month - 21	22	23	24	Wedn.
From Easter Day in five Weeks - 28	29	30	M1	Wedn.
On the Mor. of the Ascension of the Lord May 3	4	5	6	Monday

Trinity Term begins May 24, ends June 12.

On the Morrow of the Holy Trinity, - May 20	21	22	24	Friday.
In eight Days of the Holy Trinity, - 26	27	28	29	Wedn.
In fifteen Days of the Holy Trinity, June 2	3	4	5	Wedn.
From the Day of the Holy Trin in 3 Weeks 9	10	11	12	Wedn.

Michaelmas Term begins Nov. 6, ends Nov. 28.

On the Morrow of All Souls - - - Nov. 3	4	5	6	Wednes.
On the Morrow of St. Martin - - - 12	13	14	15	Friday
In eight Days of St. Martin - - - 18	19	20	21	Thursd.
In fifteen Days of St. Martin - - - - 25	26	27	28	Thursd.

N. B. No Sittings in Westminster-Hall on the Second of February, Ascension-day, and Midsummer-day.

The Exchequer opens eight Days before any Term begins, except Trinity, before which it opens but four Days.

Note, The first and last Days of every Term, are the first and last Days of Appearance.

BIRTH-DAYS of the ROYAL FAMILY.

King George III. June 4,	1738	Prince Aug. Fred. Jan. 27,	1773
Prince of Wales, Aug. 12,	1762	Prince Adolph. Fred. Feb. 24,	1774
Duke of York, Auguſt 16,	1763	Princeſs Mary, April 25, -	1776
Duke of Clarence, Aug. 21,	1765	Princeſs Sophia, Nov. 3, -	1777
Prs. of Wirtemberg, Sept. 29,	1766	Princeſs Amelia, Aug. 7, -	1783
Prince Edward, Nov. 2, -	1767	Queen Charlotte, May 19,	1744
Prs. Auguſta Sophia, Nov. 8,	1768	Ducheſs of Brunſwic, Aug. 11,	1737
Prs. Elizabeth, May 22, -	1770	Duke of Glouceſter, Nov. 25,	1743
Prince Erneſt Auguſtus, June 5,	1771		

SOVEREIGNS of EUROPE, their Acceſſion, &c.

Kingdoms, &c.	To whom ſubject.	When born.	Began to reign
England, &c.	George III.	June 4, 1738	Oct. 25, 1760
Ruſſia	Paul I.	Oct. 1, 1754	Nov. 17, 1796
Spain	Charles IV.	Nov. 11, 1748	Dec. , 1788
Portugal	Mary	Dec. 7, 1734	Feb. 24, 1777
Pruſſia	Frederic Wm. III.	Aug. 6, 1770	Nov. 16, 1797
Denmark & Norway	Chriſtian VII.	Jan. 29, 1749	Jan. 14, 1766
Sweden	Guſtavus IV.	Nov. 1, 1778	Mar. 29, 1792
Germany	Francis II.	Feb. 12, 1767	Mar. 1, 1792
Poland	Staniſlaus III.	Jan. 17, 1732	Nov. 25, 1764
Holland	William V.	March 8, 1748	Oct. 11, 1751
Popedom	Pius VI.	Dec. 27, 1717	Feb. 18, 1775
Sardinia	Victor	June 26, 1726	Mar. 20, 1773
Ottoman Empire	Selim III.	July 17, 1761	April 7, 1789

The FULL WEIGHT of the Coins, with the LEAST WEIGHT allowed to paſs of the Gold Coin.

GOLD.	Wt. allowed. dwt. gr.	Full Wt. dwt. gr.
Guinea, - -	5 8	5 9 3/9
Half Guinea, -	2 16	2 16 4/9
Quarter Guinea,	1 8	1 8 2/9

SILVER.	Full Wt. dwt. gr.
A Crown, - -	19 8 6/11
Half Crown, -	9 16 8/11
Shilling, - -	3 20 2/11
Six Pence, - -	1 22 1/11

According to the above proportions it appears, that the value of a *lb.* of ſilver is 62 s. or 3 l. 2 s. and of a *lb.* of gold is 44½ guineas, or 46 l. 14 s. 6 d. Alſo that the *oz.* of ſilver is 5 s. 2 d. and the *oz.* of gold 3 l. 17 s. 10 2/11 d. So that the value of the ſtandard gold is 15 times that of the ſilver, and 1-14th more.

A Table of the Kings and Queens of England since the Conquest.

Kings and Queens	Born A.D.	Began their Reign	Reigned Y.	M.	D.	Æ	Rem. Deaths and Dethroned	Where buried
Will. Conq.	1027	1066 Oct. 14	20	10	26	60	Burſt by Leap.	Caen, Norm
Will. Rufus	1057	1087 Sept. 9	12	10	24	43	Slain accidentally.	Winchester
Henry I.	1068	1100 Aug. 2	35	3	29	77		Reading
Stephen	1105	1135 Dec. 1	18	10	24	49		Feverſham
Henry II.	1133	1154 Oct. 25	34	8	11	55		Fonteveraud
Richard I.	1156	1189 July 6	9	9	0	43	Slain with an Arrow.	Fonteveraud
John	1165	1199 April 6	17	6	13	50		Worceſter
Henry III.	1207	1216 Oct. 19	56	0	28	65		Weſtminſter
Edward I.	1239	1272 Nov. 16	34	7	21	67		Weſtminſter
Edward II.	1284	1307 July 7	19	6	18	43		Glouceſter
Edward III.	1312	1327 Jan. 25	50	4	27	65		Weſtminſter
Richard II.	1366	1377 June 21	22	3	8	33	Dep. & murd.	Weſtminſter
Henry IV.	1367	1399 Sept. 29	13	5	20	46		Canterbury
Henry V.	1389	1413 Mar. 20	9	5	11	33		Weſtminſter
Henry VI.	1421	1422 Aug. 31	38	6	4	49	Dep. & murd.	Windſor
Edward IV.	1442	1461 Mar. 4	22	1	5	41		Windſor
Edward V.	1471	1483 April 9	0	2	15	12	Murder'd.	Not known
Richard III.	1443	1483 June 22	2	2	0	42	Slain in Battle.	Leiceſter
Henry VII.	1456	1485 Aug. 22	23	8	0	52		Weſtminſter
Henry VIII.	1492	1509 April 22	37	9	6	55		Windſor
Edward VI.	1537	1547 Jan. 28	6	5	8	15		Weſtminſter
Mary I.	1516	1553 July 6	5	4	11	42		Weſtminſter
Elizabeth	1533	1558 Nov. 17	44	4	7	69		Weſtminſter
James I.	1566	1603 Mar. 24	22	0	3	58		Weſtminſter
Charles I.	1600	1625 Mar. 27	23	10	3	48		Windſor
Charles II.	1630	1649 Jan. 30	36	0	7	54		Weſtminſter
James II.	1633	1685 Feb. 6	4	0	7	67	Abdicated.	St. Germain
Mary II.	1662	1689 Feb. 13	5	10	15	32		Weſtminſter
William III.	1650	1689 Feb. 13	13	0	23	52		Weſtminſter
Anne	1665	1702 Mar. 8	12	4	24	49		Weſtminſter
George I.	1660	1714 Aug. 1	12	10	10	67		Hanover
George II.	1683	1727 June 11	33	4	14	77		Weſtminſter
George III.	1738	1760 Oct. 25	Crowned Sept. 22, 1761.					

Above you view the Riſe and Fall of Kings,
Whoſe Fate ſometimes a uſeful Leſſon brings.
Well if all Men could profit from the paſt!
Each know his Duty, each excel the laſt,
And juſtly execute his ſtated Taſk.

A TABLE of the moſt Reverend, Right Reverend, and Reverend, the ARCHBISHOPS, BISHOPS and DEANS, exerciſing Eccleſiaſtical Juriſdiction, 1700.

BISHOPS.	Sees.	Date.	Succeeded.	DEANS.
Dr. John Moore	*Bangor*	1775	Ewer deceaſed	
Arch-Biſhop	Canterb. A.B	1783	Cornwallis dec.	Dr. Powys
Dr. Will. Markham	*Cheſter*	1771	Keene tranſlat.	
Arch-Biſhop	York A. B.	1777	Drummond de.	Dr. J. Fountayne
Dr. Beilby Porteus	*Cheſter*	1776	Markham tran.	
	London	1787	Lowth deceaſ.	Biſhop Pretyman
Ho. Dr. S. Barrington	*Landaff*	1769	Shipley tranſl.	
	Saliſbury	1782	Hume dec.	
	Durham	1791	Thurlow dec.	Biſhop Cornwallis
Hon. Dr. B. North	*Litch & Cov.*	1771	Egerton tranſl.	
	Worceſter	1774	Johnſon deceaſ.	
	Wincheſter	1781	Thomas deceaſ.	Dr. Newton Ogle
Dr. Charles Moſs	*St. David's*	1766	Lowth tranſl.	
	Bath & Wells	1774	Willes deceaſe	Ld. Fr. Seymour
H. Dr. James Yorke	*St. David's*	1774	Moſs tranſl.	
	Glouceſter	1779	Warburton dec.	
	Ely	1781	Keene deceaſed.	Dr. Wm. Pearce
Dr. Richard Hurd	*Litch. & Cov.*	1775	B. North tr.	
	Worceſter	1781	B. North tr.	Dr. Onſlow
Dr. John Butler	*Oxford*	1777	Lowth tranſl.	
	Hereford	1788	Harley deceaſ.	Dr. N. Wetherell
Dr. John Warren	*St. David's*	1779	Yorke tranſl.	
	Bangor	1783	Moore tranſl.	Mr. Warren
Dr. J. Cornwallis	Litch. & Cov.	1781	Hurd tranſl.	Dr. Bapt. Proby
Dr. Lewis Bagot	*Briſtol*	1782	Newton dec.	
	Norwich	1783	Yonge dec.	
	St. Aſaph	1790	Hall fax dec.	Mr. W. D. Shipley
Dr. Richard Watſon	Landaff	1782	Barrington tr.	Dr. R. Price, Pr.
Dr. Edward Smalwel	*St. David's*	1783	Warren tranſl.	
	Oxford	1788	Butler tranſl.	Dr. Cyril Jackſon
Dr. G. Pretyman	Lincoln	1787	Thurlow tran.	Sir Ri. Kaye, Bt.
Dr. John Douglas	*Carliſle*	1787	Law dec.	
	Saliſbury	1791	Barrington tra.	Dr. John Ekins
Dr. William Cleaver	Cheſter	1788	Porteus tran.	Dr. G. Cotton
Dr. Samuel Horſley	*St. David's*	1788	Smalwell tr.	
	Rocheſter	1793	Thomas dec.	Dr. T. Dampier
Dr. Richard Beadon	Glouceſter	1789	Halifax tran.	Dr. Joſiah Tucker
Dr. E. V. Vernon	Carliſle	1791	Douglas tranſl.	Dr. Iſaac Milner
Dr. Charles Sutton	Norwich	1792	Horne decea.	Dr. Joſeph Turner
Dr. Spencer Madan	*Briſtol*	1792	Bagot tranſl.	
	Peterborough	1794	Hinchliffe dec.	Dr. Tho. Kipling
Dr. Regi. Cou tenay	*Briſtol*	1794	Horſley tranſl.	Dr. C. Harward
	Exeter	1797	Madan tranſ.	Dr. John Hallam
Dr. Cornwall	Briſtol	1797	Buller dec.	Mr. Wollaſton, P.
Hon. Dr. Wm. Stuart	St. David's	1793	Cou tenay tra.	
Dr. Buckner	Chicheſter	1797	Aſhburnham d.	Mr. Combe Miller
	Weſtminſter	1793	Thomas dec.	Biſhop Horſley
	Windſor	1788	Douglas prom.	Biſhop Sutton
Dr. Crigan	Sodor and Man			

In the course of this year there will happen only two eclipses, and those both of the sun, but neither of them visible in these parts.

I. *May* 5, the Sun is eclipsed, but invisible here. The conjunction is at $45\frac{1}{2}$ minutes before 1 in the morning, in longitude 1^s 14° $27'$, the moon's latitude being $7'$ south. The Sun will be centrally eclipsed on the meridian, at oh $9\frac{1}{2}$m, in longitude 177° $37'\frac{1}{2}$ east, and latitude 8° north.

II. *October* 28, the Sun is eclipsed, but invisible here. The conjunction is at 5h $35\frac{3}{4}$m afternoon, in longitude 7^s 5° $19'$, the moon's latitude being $7'\frac{3}{4}$ north. The Sun will be centrally eclipsed on the meridian, at 5h 31m, in longitude $82^\circ\frac{3}{4}$ west, and latitude $5^\circ\frac{1}{4}$ south.

There will also happen this year, two remarkable occultations, or eclipses, of Jupiter and Venus by the moon, and a transit or passage of the planet Mercury over the face of the sun. The particulars of all which are as follow:

May 7, the planet Mercury will transit or pass over the sun's disk. The transit begins about half past 8 in the morning, and ends about 3 quarters past 3 afternoon; the planet passing over the lower part of the sun, ending at the very lowest point of the sun's disk, and beginning about 60° above the same on the left hand side, when looked at directly with the naked eye; but will appear to begin on the contrary side when looked at through a telescope which reverses.

June 16, Jupiter is occulted or eclipsed by the moon. Begins at 1h 49m in the morning, and ends at 2h 41m. The latitude of Jupiter being $5'\frac{1}{4}$ north of the moon's centre.

November 24, Venus is occulted by the moon. The beginning is at 4h $4\frac{1}{2}$m, and end at 5h $3\frac{1}{2}$m, in the morning. The latitude of Venus being, at beginning $1'\frac{1}{3}$ south, and at the end $4'\frac{1}{3}$ north of the moon's centre.

Obliquity of the Ecliptic.	1799.	Equation of Equinoctial Points.
23° $27'$ $58''.0$ -	January 1, -	$14''.3$
23 27 58. 4 -	April 1, -	13. 3
23 27 58. 9 -	July 1, -	12. 2
23 27 59. 3 -	October 1, -	11. 1
23 27 59. 6 -	Decemb. 31, -	9. 9

The Lunations.

New Moon the 6th day, at 14 minutes past 4 morning.
First quarter the 14th day, at 58 minutes past 3 morning.
Full Moon the 21st day, at 41 minutes past 5 afternoon.
Last quarter the 28th day, at 50 minutes past 10 morning.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ south	Clock bef. ☉
1	Circumcision	8 5	3 55	23 s 0	14 s 33	2 m4c	7 m44	4′ 8″
2		8 4	3 56	22 54	19 30	4 3	8 35	4 36
3		8 3	3 57	22 48	23 22	5 28	9 30	5 4
4		8 3	3 57	22 42	25 50	6 48	10 26	5 31
5	Old Chri. Day	8 2	3 58	22 35	26 46	7 55	11 23	5 58
F	Epiphany	Tw.day	3 59	22 28	26 9	☽ sets	0 a 20	6 25
7	Plough Monday	8 0	4 0	22 21	24 7	5 a 8	1 14	6 51
8	Lucian	7 59	4 1	22 13	20 54	6 20	2 4	7 16
9		7 58	4 2	22 4	16 49	7 35	2 50	7 41
10		7 57	4 3	21 55	12 7	8 46	3 33	8 6
11		7 56	4 4	21 46	7 3	9 56	4 14	8 30
12	Old New Yea.d.	7 55	4 5	21 36	1 45	11 5	4 53	8 53
F	1 S. aft. Epiph.	Ca.T.b.	4 6	21 26	3 n 34	morn	5 32	9 15
14	Ox.T.b. [Hila.	7 53	4 7	21 15	8 48	0 12	6 13	9 37
15		7 52	4 8	21 4	13 46	1 23	6 55	9 59
16		7 51	4 9	20 53	18 17	2 35	7 41	10 19
17	Old 12th Day	7 49	4 11	20 41	22 8	3 50	8 30	10 39
18	Q. Char. b. d. k.	7 48	4 12	20 29	24 59	5 3	9 24	10 58
19	[Prisca	7 47	4 13	20 16	26 35	6 16	10 21	11 16
F	Septuagesima S.	7 45	4 15	20 3	26 38	7 17	11 21	11 34
21	Agnes [Fabian	7 44	4 16	19 50	25 0	☽ rises	morn	11 50
22	Vincent	7 42	4 18	19 36	21 45	5 a 5	0 20	12 6
23	Hil. Term beg.	7 41	4 19	19 23	17 7	6 32	1 17	12 21
24		7 40	4 20	19 8	11 27	8 3	2 12	12 36
25	Conv. of St. Paul	7 38	4 22	18 53	5 11	9 28	3 3	12 49
26		7 37	4 23	18 38	1 s 20	10 53	3 53	13 2
F	Sexage. Pr. Au.	7 35	4 25	18 23	7 41	morn	4 42	13 14
28	[Fred. b.	7 33	4 27	18 7	13 35	0 19	5 32	13 25
29		7 32	4 28	17 51	18 42	1 43	6 22	13 36
30	K. Cha. I. mar.	7 30	4 30	17 34	22 45	3 8	7 16	13 46
31		7 28	4 32	17 17	25 30	4 26	8 11	13 54

Days	Day increas.	Length of Day.	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc long. ♀	Helioc long. ☿	♄ sets
1	0 7	7 51	22♒17	25♉48	22♉12	11♒11	12♑17	20♉ 6	9 m22
7	0 17	8 1	22 30	26 20	25 28	17 18	21 46	27♊43	8 58
13	0 29	8 13	22 43	26 52	28 43	23 25	1♒15	3♌51	8 25
19	0 43	8 27	22 57	27 24	1♊55	29 0	10 44	4 56	7 42
25	1 1	8 45	23 10	27 56	5 6	5 38	20 14	0♎35	7 9

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☽'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	5 59	6 1	2 10	22 ♉ 32	0 n 1	1 s 2	0 n 10	0 s 40	0 n 12
7	5 56	6 4	2 9	22 13	0 2	1 0	0 18	0 52	2 3
13	5 52	6 8	2 7	21 54	0 2	0 59	0 25	1 3	3 21
19	5 46	6 14	2 5	21 35	0 3	0 57	0 31	1 12	3 16
25	5 39	6 21	2 3	21 16	0 4	0 55	0 3	1 19	2 22

Days	☉'s longitude	☽'s long.	☽'s latitude	♄'s long.	♅'s long.	♂'s long.	♀'s long.	☿'s long.
1	♑ 11 11 3	12 ♏ 19	0 n 3	23 ♎ 37	16 ♉ 36	10 ♈ 46	11 ♑ 39	28 R 20
2	12 12 15	26 12	0 s 11	23 32	16 34	11 22	12 54	28 ♑ 20
3	13 13 27	9 ♐ 57	1 25	23 27	16 32	11 58	14 10	28 12
4	14 14 39	23 34	2 32	23 22	16 31	12 34	15 25	27 55
5	15 15 52	6 ♑ 59	3 30	23 17	16 30	13 10	16 41	27 26
6	16 17 4	20 12	4 15	23 12	16 29	13 46	17 56	26 43
7	17 18 15	3 ♒ 10	4 46	23 8	16 28	14 22	19 12	25 46
8	18 19 27	15 52	5 3	23 3	16 28	14 58	20 27	24 42
9	19 20 37	28 18	5 4	22 58	16 27	15 34	21 43	23 32
10	20 21 48	10 ♓ 31	4 51	22 53	16 D 27	16 11	22 58	22 17
11	21 22 57	22 31	4 26	22 48	16 27	16 47	24 14	20 58
12	22 24 6	4 ♈ 24	3 49	22 43	16 28	17 23	25 29	19 40
F	23 25 14	16 13	3 3	22 38	16 28	18 0	26 45	18 22
14	24 26 21	28 4	2 9	22 33	16 29	18 36	28 0	17 9
15	25 27 27	10 ♉ 3	1 8	22 28	16 30	19 13	29 15	16 3
16	26 28 32	22 13	0 4	22 23	16 31	19 50	0 ♒ 31	15 4
17	27 29 36	4 ♊ 42	1 n 3	22 18	16 32	20 27	1 46	14 13
18	28 30 40	17 31	2 7	22 13	16 34	21 4	3 1	13 31
19	29 31 42	0 ♋ 45	3 7	22 9	16 36	21 41	4 17	12 59
F	♒ 0 32 43	14 24	3 58	22 4	16 38	22 18	5 32	12 37
21	1 33 44	28 26	4 36	21 59	16 41	22 55	6 47	12 23
22	2 34 44	12 ♌ 46	4 58	21 54	16 43	23 32	8 3	12 D 17
23	3 35 42	27 19	5 1	21 49	16 46	24 9	9 18	12 19
24	4 36 41	11 ♍ 57	4 44	21 44	16 48	24 46	10 33	12 20
25	5 37 38	26 32	4 9	21 40	16 51	25 23	11 49	12 46
26	6 38 35	11 ♎ 0	3 18	21 35	16 54	26 0	13 4	13 10
F	7 39 31	25 16	2 15	21 31	16 57	26 37	14 19	13 40
28	8 40 26	9 ♏ 18	1 5	21 26	17 1	27 15	15 35	14 15
29	9 41 21	23 7	0 s 8	21 22	17 5	27 52	16 50	14 55
30	10 42 15	6 ♐ 42	1 19	21 17	17 9	28 30	18 5	15 39
31	11 43 8	20 5	2 24	21 13	17 13	29 7	19 21	16 26

Days	♃ sets	♂ sets	♀ sets	☿ sets	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	3 m 40	0 m 16	3 a 53	5 a 26	21 n 25	15 n 50	4 n 26	23 s 37	20 s 20
7	3 14	0 10	4 6	4 56	21 31	15 49	5 57	22 57	18 59
13	2 48	0 5	4 20	rises	21 36	15 51	7 27	21 52	18 53
19	2 23	0 1	4 35	6 m 31	21 42	15 55	8 56	20 23	19 35
25	1 58	11 a 58	4 51	6 11	21 47	16 0	10 24	18 32	20 30

The Lunations.

New Moon the 4th day, at 14 minutes past 8 night.
First quarter the 13th day, at 16 minutes bef. 1 morning.
Full Moon the 20th day, at 3 minutes past 5 morning.
Last quarter the 26th day, at 22 minutes past 8 night.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ south	Clock bef. ☉
1		7 27	4 33	17 s 0	26 s 47	5 m 37	9 m 7	14 2
2	Purif. or Candl.	7 25	4 35	16 43	26 33	6 36	10 3	14 10
F	Quinq. Shro. S.	7 23	4 37	16 25	24 53	7 26	10 58	14 16
4	[Blase	7 22	4 38	16 8	22 0	☽ sets	11 49	14 22
5	Shrove Tuesday	Agatha	4 40	15 49	18 8	5 a 12	0 a 37	14 26
6	Ash Wednesday	7 18	4 42	15 31	13 34	6 24	1 22	14 30
7		7 16	4 44	15 12	8 32	7 36	2 4	14 34
8		7 14	4 46	14 53	3 15	8 46	2 44	14 36
9		7 13	4 47	14 34	2 n 7	9 53	3 23	14 37
F	1 Sun. in Lent	7 11	4 49	14 14	7 23	11 3	4 3	14 38
11	[T. div. m.	7 9	4 51	13 55	12 26	morn	4 44	14 38
12	Term ends. Ca.	7 7	4 53	13 35	17 3	0 13	5 28	14 37
13	Ember Week	7 5	4 55	13 15	21 5	1 26	6 15	14 36
14	Valen. [OldCa.	7 3	4 57	12 54	24 16	2 40	7 6	14 33
15		7 1	4 59	12 34	26 10	3 51	8 1	14 30
16		7 0	5 0	12 13	26 58	4 58	8 59	14 26
F	2 Sund. in Len	6 58	5 2	11 52	26 2	5 53	9 59	14 21
18		6 56	5 4	11 31	23 25	6 36	10 59	14 16
19		6 54	5 6	11 9	19 14	7 6	11 56	14 10
20		6 52	5 8	10 48	13 47	☽ rises	morn	14 3
21		6 50	5 10	10 26	7 29	7 a 1	0 50	13 56
22		6 48	5 12	10 4	0 44	8 31	1 43	13 48
23		6 46	5 14	9 42	5 s 58	9 59	2 34	13 39
F	3 S. in L. St. Mat-	6 44	5 16	9 20	12 16	11 29	3 25	13 30
25	thi. Pr. A. F. b.	6 42	5 18	8 58	17 46	morn	4 18	13 20
26		6 40	5 20	8 36	22 11	0 56	5 12	13 10
27		6 38	5 22	8 13	25 15	2 19	6 7	12 59
28		6 36	5 24	7 50	26 51	3 34	7 4	12 48

Days	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long ♂	Helioc. long. ⊖	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	1 23	9 7	23 ♋ 26	28 ♉ 33	8 ♊ 45	12 ♌ 44	1 ♓ 18	25 ♎ 24	6 m 39
7	1 45	9 29	23 39	29 5	11 51	18 49	10 49	13 ♏ 53	6 1
13	2 7	9 51	23 53	29 37	14 56	24 53	20 20	0 ♐ 57	5 4
19	2 29	10 13	24 6	0 ♊ 9	17 58	0 ♍ 56	29 52	17 28	5 2
25	2 52	10 36	24 19	0 41	20 59	6 57	9 ♈ 25	4 ♑ 11	5

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☽'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	5 31	6 30	2 0	20 ♉ 54	0 n 4	0 s 53	0 n 42	1 s 25	1 n 7
7	5 22	6 39	1 59	20 35	0 5	0 52	0 47	1 28	0 7
13	5 12	6 48	1 57	20 16	0 6	0 50	0 51	1 28	0 s 45
19	5 0	7 0	1 57	19 57	0 6	0 49	0 53	1 26	1 25
25	4 50	7 10	1 58	19 38	0 7	0 47	0 57	1 21	1 54

Days	☉'s longitude	☽'s long.	☽'s latitude	♄'s long.	♅'s long.	♂'s long.	♀'s long.	☿'s long.
1	♒ 12 44 0	♑ 18	3 s 21	21 ♎ 8	17 ♉ 17	29 ♈ 45	20 ♒ 36	17 ♑ 17
2	13 44 51	16 19	4 6	21 4	17 21	0 ♉ 22	21 54	18 10
F	14 45 41	29 10	4 38	20 59	17 26	1 0	23 6	19 8
4	15 46 30	11 ♒ 50	4 56	20 55	17 31	1 37	24 21	20 12
5	16 47 18	24 18	4 59	20 51	17 36	2 1	25 36	21 17
6	17 48 5	6 ♓ 35	4 48	20 47	17 41	2 52	26 51	22 23
7	18 48 50	18 41	4 24	20 43	17 46	3 30	28 7	23 29
8	19 49 33	0 ♈ 38	3 49	20 39	17 52	4 7	29 22	24 37
9	20 50 15	12 29	3 32	20 35	17 58	4 45	0 ♓ 37	25 49
F	21 50 55	24 16	2 11	20 31	18 4	5 23	1 53	27 5
11	22 51 33	6 ♉ 5	1 12	20 27	18 10	6 0	3 8	28 21
12	23 52 9	18 0	0 10	20 23	18 16	6 38	4 23	29 38
13	24 52 44	0 ♊ 8	0 n 54	20 19	18 22	7 16	5 38	0 ♒ 56
14	25 53 16	12 33	1 57	20 15	18 28	7 54	6 53	2 16
15	26 53 47	25 20	2 56	20 12	18 35	8 32	8 8	3 37
16	27 54 16	8 ♋ 35	3 48	20 9	18 42	9 1	9 23	5 0
F	28 54 43	22 18	4 28	20 6	18 49	9 48	10 38	6 23
18	29 55 8	6 ♌ 28	4 54	20 3	18 56	10 26	11 53	7 48
19	♓ 0 55 32	21 5	5 1	20 0	19 3	11 4	13 7	9 14
20	1 55 54	5 ♍ 58	4 48	19 57	19 10	11 41	14 22	10 41
21	2 56 14	21 0	4 15	19 54	19 18	12 19	15 37	12 9
22	3 56 32	6 ♎ 1	3 25	19 51	19 26	12 57	16 52	13 39
23	4 56 49	20 52	2 21	19 48	19 34	13 35	18 7	15 10
F	5 57 5	5 ♏ 26	1 9	19 45	19 42	14 13	19 22	16 42
25	6 57 19	19 40	0 s 6	19 43	19 50	14 51	20 36	8 14
26	7 57 31	3 ♐ 33	1 19	19 40	19 58	15 29	21 51	19 47
27	8 57 42	17 6	2 26	19 37	20 7	16 7	23 6	21 21
28	9 57 52	0 ♑ 20	3 23	19 35	20 15	16 45	24 21	22 57

Days	♃ sets	♂ sets	♀ sets	☿ rises	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	1 m 32	11 a 55	5 a 12	6 m 6	21 n 53	16 n 9	12 n 3	15 59	21 s 14
7	1 8	11 3	5 30	6 10	21 57	16 19	13 29	13 31	21 19
13	0 45	11 2	5 49	6 15	22 1	16 31	14 45	10 49	20 42
19	0 23	11 1	6 9	6 19	22 5	16 44	16 0	7 58	19 20
25	0 3	11 50	6 31	6 20	22 8	16 58	17 14	4 58	17 11

The Lunations.

New Moon the 6th day, at 34 minutes past 1 afternoon.
First quarter the 14th day, at 22 minutes past 6 afternoon.
Full Moon the 21st day, at 53 minutes past 2 afternoon.
Last quarter the 28th day, at 34 minutes past 7 morning.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☽ rises & sets	☾ South	Clock bef. ☉
1	David	6 34	5 26	7 s 28	26 s 55	4 m 36	8 m 1	12′ 36″
2	Chad	6 32	5 28	7 5	25 33	5 24	8 56	12 23
F	4 or Midl. Sund.	6 30	5 30	6 42	22 56	5 56	9 48	12 11
4		6 29	5 31	6 19	19 18	6 21	10 36	11 57
5		6 27	5 33	5 56	14 53	6 40	11 22	11 44
6		6 25	5 35	5 32	9 57	☽ sets	0 a 4	11 29
7	Perpetua	6 23	5 37	5 9	4 41	6 a 36	0 45	11 15
8		6 21	5 39	4 46	0 n 43	7 46	1 25	11 0
9		6 19	5 41	4 22	6 4	8 54	2 4	10 44
F	5 Sund. in Lent	6 17	5 43	3 59	11 13	10 5	2 45	10 29
11		6 15	5 45	3 35	15 59	11 18	3 28	10 13
12	Gregory	6 13	5 47	3 12	20 11	morn	4 13	9 56
13		6 11	5 49	2 48	23 36	0 30	5 2	9 40
14		6 9	5 51	2 24	26 0	1 42	5 55	9 23
15	Cam. Ter. ends	6 7	5 53	2 1	27 9	2 51	6 50	9 5
16	Oxf. Ter. ends	6 5	5 55	1 37	26 49	3 48	7 48	8 48
F	6 or Palm Sun.	Patrick	5 57	1 13	24 54	4 34	8 47	8 30
18	Edwa. K. W. S.	6 1	5 59	0 50	21 25	5 10	9 44	8 12
19		5 59	6 1	0 26	16 31	5 35	10 39	7 54
20		5 57	6 3	0 2	10 31	5 56	11 33	7 36
21	Bene. Maun. T.	5 55	6 5	0 n 21	3 48	☽ rises	morn	7 17
22	Good Friday	5 53	6 7	0 45	3 s 10	7 a 33	0 26	6 59
23		5 51	6 9	1 9	9 56	9 6	1 19	6 40
F	Easter Day	5 49	6 11	1 32	16 2	10 39	2 13	6 22
25	Lady D. East. M.	5 47	6 13	1 56	21 4	morn	3 8	6 3
26	Easter Tuesday	5 45	6 15	2 19	24 43	0 8	4 5	5 44
27		5 43	6 17	2 43	26 47	1 30	5 4	5 25
28		5 41	6 19	3 6	27 15	2 38	6 2	5 7
29		5 39	6 21	3 30	26 12	3 31	6 59	4 48
30		5 37	6 23	3 53	23 50	4 9	7 53	4 30
F	Low Sunday	5 35	6 25	4 16	20 23	4 35	8 42	4 11

Days	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ♁	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	3 7	10 51	24♋26	1♊ 3	22♊59	10♍54	15♈47	15♑18	4 m 46
7	3 31	11 15	24 42	1 35	25 57	16 58	25 22	4♎36	4 24
13	3 55	11 39	24 55	2 6	28 53	22 57	4♉57	25 57	4 1
19	4 19	12 3	25 8	2 38	1♌48	28 55	14 33	21♓6	3 39
25	4 43	12 27	25 22	3 10	4 41	4♎51	24 10	21♈13	3 16

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☽'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	4 43	7 17	1 55	19♉25	0 n 7	0 s 46	0 n 59	1 s 17	2 s 5
7	4 30	7 30	1 56	19 6	0 8	0 45	1 2	1 9	2 11
13	4 17	7 43	1 57	18 47	0 8	0 44	1 4	0 59	2 1
19	4 5	7 56	1 58	18 28	0 9	0 43	1 6	0 47	1 31
25	3 50	8 10	2 0	18 9	0 9	0 42	1 8	0 33	0 44

Days	☉'s longitude	☽'s long.	☽'s latitude	♄'s long.	♅'s long.	♂'s long.	♀'s long.	☿'s long.
1	♓10 58 0	13♑17	4 s 1	19♋33	20♉24	17♉23	25♓35	24♒35
2	11 58 6	26 2	4 40	19 31	20 33	18 0	26 50	26 12
F	12 58 11	8♒34	4 59	19 29	20 42	18 38	28 4	27 50
4	13 58 14	20 57	5 2	19 27	20 52	19 16	29 15	29 30
5	14 58 15	3♓10	4 52	19 25	21 1	19 54	0♈33	1♓12
6	15 58 15	15 15	4 29	19 23	21 10	20 32	1 48	2 55
7	16 58 13	27 13	3 54	19 22	21 20	21 10	3 2	4 39
8	17 58 8	9♈5	3 9	19 20	21 29	21 48	4 17	6 24
9	18 58. 2	20 53	2 16	19 19	21 39	22 26	5 31	8 10
F	19 57 53	2♉40	1 17	19 18	21 45	23 5	6 45	9 56
11	20 57 43	14 21	0 14	19 17	21 59	23 43	8 0	11 43
12	21 57 30	26 25	0 n 50	19 16	22 9	24 21	9 14	13 32
13	22 57 14	8♊31	1 53	19 16	22 19	25 0	10 28	15 23
14	23 56 57	20 53	2 52	19 15	22 29	25 38	11 43	17 15
15	24 56 36	3♋35	3 44	19 15	22 40	26 16	12 57	19 8
16	25 56 14	16 44	4 26	19 14	22 50	26 54	14 12	21 1
F	26 55 49	0♌21	4 55	19 14	23 1	27 32	15 26	22 56
18	27 55 22	14 28	5 8	19 13	23 11	28 10	16 40	24 53
19	28 54 52	29 2	5 1	19 13	23 22	28 48	17 54	26 51
20	29 54 21	13♍59	4 34	19 13	23 33	29 26	19 8	28 50
21	♈0 53 47	29 11	3 47	19 D12	23 44	0♊4	20 22	0♈49
22	1 53 11	14♎26	2 44	19 12	23 55	0 42	21 36	2 49
23	2 52 34	29 35	1 30	19 13	24 6	1 20	22 50	4 50
F	3 51 34	14♏28	0 10	19 13	24 17	1 58	24 4	6 51
25	4 51 13	28 59	1 s 8	19 14	24 29	2 36	25 18	8 53
26	5 50 30	13♐6	2 20	19 14	24 40	3 14	26 32	10 56
27	6 49 45	26 47	3 22	19 15	24 52	3 52	27 46	12 59
28	7 48 58	10♑3	4 11	19 16	25 3	4 30	29 0	15 2
29	8 48 10	22 59	4 46	19 17	25 15	5 8	0♉13	17 5
30	9 47 20	5♒36	5 6	19 18	25 27	5 46	1 27	19 6
F	10 46 28	17 50	5 11	19 19	25 39	6 24	2 41	21 6

Days	♃ sets	♂ sets	♀ sets	☿ rises	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	11 a 57	11 a 48	6 a 45	6 m20	22 n 9	17 n 7	17 n 59	2 s 56	15 s 20
7	11 41	11 48	7 6	6 28	22 11	17 23	19 4	0 n 0	11 51
13	11 25	11 48	7 27	6 14	22 13	17 40	20 5	3 15	7 37
19	11 9	11 48	7 48	6 9	22 14	17 57	21 0	6 18	2 40
25	10 53	11 48	8 8	sets	22 14	18 14	21 49	9 17	2 n 51

The Lunations.

New Moon the 5th day, at 21 minutes past 7 morning.
First quarter the 13th day, at 47 minutes past 7 morning.
Full Moon the 19th day, at 40 minutes past 11 night.
Last quarter the 26th day, at 30 minutes past 8 night.

M. D.	Sundays & other remark days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock bef. ☉
1		5 33	6 27	4 n 39	16 s 8	4 m 56	9 m 29	3′ 53″
2	[Richard	5 31	6 29	5 2	11 18	5 11	10 11	3 35
3	Ox. & Ca. T. beg.	5 29	6 31	5 25	6 5	5 23	10 52	3 17
4	Ambrose	5 27	6 33	5 48	0 42	5 35	11 32	2 59
5	Old Lady day	5 25	6 35	6 11	4 n 43	☾ sets	0 a 12	2 41
6		5 23	6 37	6 34	9 58	8 a 0	0 52	2 24
7		5 21	6 39	6 56	14 54	9 12	1 34	2 6
F 8	2 Su. aft. Easter	5 19	6 41	7 19	19 17	10 28	2 19	1 49
9		5 17	6 43	7 41	22 57	11 42	3 6	1 32
10	Term begins	5 16	6 44	8 3	25 38	morn	3 57	1 16
11		5 14	6 46	8 25	27 8	0 50	4 51	0 59
12		5 12	6 48	8 47	27 15	1 51	5 46	0 43
13		5 10	6 50	9 9	25 53	2 40	6 43	0 28
F 14	3 S. af. Easter	5 8	6 52	9 31	23 1	3 18	7 38	0 12
15		5 6	6 54	9 52	18 45	3 44	8 33	oaf. 3
16		5 4	6 56	10 13	13 19	4 7	9 26	0 18
17		5 2	6 58	10 35	6 59	4 26	10 18	0 33
18		5 0	7 0	10 55	0 7	4 41	11 10	0 47
19	Alphege	4 58	7 2	11 16	6 s 49	☾ rises	morn	1 0
20		4 57	7 3	11 37	13 23	8 a 10	0 3	1 14
F 21	4 Sun. af. East.	4 55	7 5	11 57	19 5	9 46	0 59	1 27
22		4 53	7 7	12 17	23 30	11 14	1 57	1 39
23	St. George	4 51	7 9	12 37	26 19	morn	2 57	1 51
24	[Ma. b.	4 49	7 11	12 57	27 24	0 32	3 57	2 2
25	St. Marks. Prs.	4 47	7 13	13 17	26 48	1 34	4 57	2 13
26		4 45	7 15	13 36	24 44	2 17	5 53	2 24
27		4 44	7 16	13 55	21 30	2 47	6 45	2 34
F 28	5 or Roga. Sun.	4 42	7 18	14 14	17 23	3 9	7 32	2 43
29		4 40	7 20	14 33	12 39	3 25	8 17	2 52
30		4 38	7 22	14 51	7 30	3 39	8 58	3 1

Days	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long ☉	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	5 11	12 55	25 ♋ 37	3 ♊ 47	8 ♌ 1	11 ♎ 46	5 ♊ 26	2 ♊ 41	2 m 52
7	5 35	13 19	25 51	4 19	10 51	17 40	15 5	10 ♋ 20	2 30
13	5 57	13 41	26 4	4 51	13 40	23 32	24 46	14 ♋ 59	2 9
19	6 21	14 5	26 17	5 23	16 28	19 24	4 ♋ 28	14 ♊ 8	1 48
25	6 43	14 27	26 31	5 54	19 15	5 ♍ 14	14 11	8 ♎ 14	1 27

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☽'s node	♄'s latitude	♅'s latitude	♆'s latitude	♀'s latitude	☿'s latitude
1	3 33	8 27	2 3	17 ♉ 46	0 n 10	0 s 40	1 n 10	0 s 16	0 n 31
7	3 17	8 43	2 8	17 27	0 10	0 39	1 11	0 0	1 38
13	3 2	8 58	2 11	17 8	0 11	0 39	1 12	0 n 17	2 31
19	2 47	9 13	2 15	16 49	0 11	0 38	1 13	0 34	2 53
25	2 26	9 34	2 25	16 30	0 12	0 37	1 14	0 50	2 34

Days	☉'s longitude	☽'s long.	☽'s latitude	♄'s long.	♅'s long.	♆'s long.	♀'s long.	☿'s long.
1	♈ 11 45 35	0 ♓ 10	5 s 2	19 ♎ 20	25 ♉ 51	7 ♊ 2	3 ♉ 54	23 ♈ 5
2	12 44 40	12 12	4 40	19 21	26 3	7 40	5 8	25 3
3	13 43 43	24 8	4 6	19 23	26 15	8 18	6 21	26 58
4	14 42 44	5 ♈ 59	3 21	19 24	26 27	8 56	7 35	28 51
5	15 41 43	17 48	2 27	19 26	26 39	9 34	8 48	0 ♉ 41
6	16 40 40	29 36	1 28	19 27	26 51	10 12	10 2	2 27
7	17 39 35	11 ♉ 25	0 24	19 29	27 4	10 50	11 15	4 10
8	18 38 28	23 19	0 n 41	19 31	27 16	11 28	12 28	5 49
9	19 37 18	5 ♊ 19	1 45	19 33	27 29	12 6	13 42	7 24
10	20 36 6	17 30	2 46	19 35	27 41	12 44	14 55	8 55
11	21 34 52	29 54	3 40	19 38	27 54	13 22	16 9	10 21
12	22 33 36	12 ♋ 37	4 24	19 40	28 7	14 0	17 22	11 42
13	23 32 17	25 41	4 56	19 43	28 20	14 38	18 35	12 58
F	24 30 56	9 ♌ 11	5 13	19 45	28 32	15 16	19 48	14 9
15	25 29 33	23 6	5 13	19 48	28 45	15 54	21 1	15 14
16	26 28 8	7 ♍ 29	4 53	19 51	28 58	16 32	22 14	16 14
17	27 26 40	22 14	4 14	19 54	29 11	17 10	23 27	17 9
18	28 25 10	7 ♎ 17	3 17	19 57	29 24	17 48	24 40	17 58
19	29 23 38	22 29	2 5	20 0	29 37	18 25	25 53	18 41
20	♉ 0 22 5	7 ♏ 40	0 44	20 3	29 50	19 3	27 6	19 18
21	1 20 29	22 41	0 s 39	20 6	0 ♊ 3	19 41	28 19	19 50
22	2 18 52	7 ♐ 24	1 57	20 9	0 16	20 19	29 31	20 16
23	3 17 13	21 43	3 7	20 13	0 29	20 57	0 ♊ 44	20 36
24	4 15 33	5 ♑ 35	4 3	20 16	0 42	21 35	1 57	20 50
25	5 13 51	19 1	4 44	20 20	0 56	22 13	3 9	20 59
26	6 12 7	2 ♒ 2	5 8	20 24	1 9	22 51	4 22	21 R 2
27	7 10 23	14 41	5 17	20 28	1 23	23 29	5 34	21 0
F	8 8 37	27 2	5 11	20 32	1 36	24 7	6 47	20 52
29	9 6 49	9 ♓ 4	4 51	20 36	1 50	24 45	7 59	20 40
30	10 5 0	21 6	4 19	20 40	2 3	25 23	9 12	20 23

Days	♅ sets	♂ sets	♀ sets	☿ sets	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	10 a 35	11 a 44	8 a 33	7 a 32	22 n 14	18 n 35	22 n 40	12 n 35	9 n 28
7	10 20	11 47	8 54	8 20	22 13	18 53	23 16	15 14	14 28
13	10 5	11 45	9 15	8 54	22 12	19 11	23 47	17 39	18 9
19	9 50	11 42	9 36	9 6	22 10	19 26	24 11	19 48	20 10
25	9 36	11 38	9 56	8 56	22 7	19 40	24 28	21 38	20 30

The LUNATIONS.

New Moon the 4th day, at 14 minutes past 12 night.
First quarter the 12th day, at 9 minutes past 5 afternoon.
Full Moon the 19th day, at 51 minutes past 7 morning.
Last quarter the 26th day, at 5 minutes past 11 morning.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock aft. ☉
1	St. Phil. & Jam.	4 37	7 25	15 n 10	2 s 8	3 m 51	9 m 38	3 8
2	Afcen. Holy Th.	4 35	7 25	15 28	3 n 18	4 1	10 17	3 16
3	Inven. of Crofs	4 33	7 27	15 45	8 37	4 13	10 57	3 22
4		4 31	7 29	16 3	13 40	☾ fets	11 38	3 28
F	Sun. af. Afcen.	4 30	7 30	16 20	18 15	8 a 23	0 a 22	3 34
6	Term e. J. Eva.	4 28	7 32	16 37	22 9	9 35	1 8	3 39
7	[A.P.L.	4 26	7 34	16 54	25 7	10 46	1 58	3 43
8		4 25	7 35	17 10	26 55	11 50	2 51	3 47
9	Oxford T. ends	4 23	7 37	17 26	27 23	morn	3 46	3 51
10		4 21	7 39	17 42	26 25	0 43	4 41	3 53
11	[Old May D.	4 20	7 40	17 57	23 58	1 23	5 36	3 55
F	Whit Sunday	4 18	7 42	18 12	20 10	1 53	6 29	3 57
13	Whit Monday	4 17	7 43	18 27	15 13	2 16	7 20	3 58
14	Whit Tuefday	4 15	7 45	18 42	9 21	2 34	8 10	3 59
15	Ember Week	4 14	7 46	18 56	2 51	2 49	9 0	3 59
16		4 12	7 48	19 10	3 s 55	3 4	9 51	3 58
17	Prs. Wales b.	4 11	7 49	19 24	10 34	3 19	10 44	3 57
18		4 9	7 51	19 37	16 39	3 36	11 40	3 55
F	Tri. S. Q. Ch. b.	Dunft.	7 52	19 50	21 42	☾ rifes	morn	3 53
20	[Ca. T. di. m.	4 7	7 53	20 2	25 17	10 a 9	0 40	3 51
21		4 5	7 55	20 15	27 9	11 20	1 41	3 47
22	Prs. Elizab. bo.	Ox. T. b	7 56	20 27	27 12	morn	2 42	3 43
23	Corpus Chriſti	4 3	7 57	20 38	25 37	0 12	3 41	3 39
24	Term begins	4 1	7 59	20 49	22 41	0 49	4 37	3 34
25		4 0	8 0	21 0	18 44	1 14	5 27	3 29
F	1 Sun. af. Trin.	3 59	8 1	21 11	14 5	1 32	6 13	3 23
27	Ven. Be. [Aug.	3 58	8 2	21 21	8 58	1 46	6 56	3 16
28		3 57	8 3	21 31	3 37	1 59	7 37	3 9
29	K. Char. 2 reft.	3 56	8 4	21 40	1 n 49	2 10	8 16	3 2
30		3 55	8 5	21 49	7 11	2 20	8 55	2 54
31		3 54	8 6	21 58	12 19	2 33	9 37	2 45

Days	Day increaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ♁	Helioc. long. ♀	Helioc. long. ☿	♄ ſets
1	6 13	14 27	26♋44	6♊26	22♋ 0	11♏ 3	23♋55	28♌42	1 m 6
7	7 25	15 0	26 57	6 58	24 45	16 52	3♌40	19♏52	0 43
13	7 43	15 27	27 11	7 29	27 28	22 39	13 25	3♐47	0 20
19	8 1	15 45	27 24	8 1	0♌11	28 25	23 11	20 16	11 a 57
25	8 16	16 0	27 37	8 33	2 53	4♐11	2♍56	7♑ 6	11 34

M. D	Daylig. begins	Daylig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	2 6	9 57	2 37	16 ♉ 11	on 12	0 s 36	1 n 14	1 n 6	1 n 31
7	1 44	10 19	2 48	15 52	0 13	0 35	1 15	1 20	0 s 6
13	1 19	10 45	3 5	15 33	0 13	0 35	1 15	1 34	1 46
19	0 48	11 20	3 32	15 14	0 13	0 34	1 15	1 45	3 2
25	All daylight.			14 55	0 14	0 34	1 15	1 54	3 40

M. D	☉'s longitude	☾'s long.	☾'s latitude	♄'s longit.	♅'s longit	♂'s longit.	♀'s longit.	☿'s long.
1	♉ 11 3 10	29 ♈ 56	3 s 36	20 ♋ 44	2 ♊ 17	26 ♊ 0	10 ♊ 24	20 ♉ 1
2	12 1 18	14 44	2 44	20 48	2 30	26 38	11 37	19 38
3	12 59 25	26 32	1 45	20 53	2 44	27 16	12 49	19 10
4	13 57 30	8 ♉ 23	0 41	20 57	2 58	27 54	14 1	18 36
F	14 55 34	20 19	on 26	21 2	3 11	28 32	15 13	18 1
6	15 53 36	2 ♊ 21	1 31	21 6	3 25	29 10	16 25	17 26
7	16 51 36	14 33	2 34	21 11	3 39	29 47	17 37	16 51
8	17 49 34	26 55	3 30	21 16	3 52	0 ♋ 25	18 49	16 15
9	18 47 31	9 ♋ 31	4 17	21 21	4 6	1 3	20 1	15 39
10	19 45 26	22 22	4 52	21 26	4 20	1 41	21 13	15 4
11	20 43 18	5 ♌ 30	5 13	21 31	4 34	2 19	22 25	14 30
F	21 41 10	18 58	5 17	21 36	4 48	2 57	23 37	13 58
13	22 38 59	2 ♍ 46	5 4	21 41	5 2	3 34	24 48	13 29
14	23 36 46	16 54	4 32	21 46	5 15	4 12	26 0	13 3
15	24 34 32	1 ♎ 22	3 42	21 51	5 29	4 50	27 11	12 41
16	25 32 17	16 5	2 37	21 56	5 43	5 28	28 23	12 22
17	26 29 59	0 ♍ 59	1 21	22 2	5 57	6 6	29 34	12 7
18	27 27 40	15 56	0 s 1	22 7	6 11	6 44	0 ♋ 46	11 57
F	28 25 20	0 ♐ 49	1 23	22 13	6 25	7 21	1 57	11 50
20	29 22 59	15 29	2 38	22 18	6 39	7 59	3 8	11 D 48
21	♊ 0 20 36	29 51	3 41	22 24	6 53	8 37	4 19	11 51
22	1 18 12	13 ♑ 49	4 29	22 30	7 7	9 14	5 30	11 58
23	2 15 48	27 21	5 0	22 36	7 21	9 52	6 41	12 10
24	3 13 22	10 ♒ 28	5 15	22 42	7 35	10 30	7 52	12 26
25	4 10 56	23 11	5 13	22 48	7 49	11 7	9 3	12 47
F	5 8 28	5 ♓ 34	4 57	22 54	8 3	11 45	10 14	13 12
27	6 6 1	17 42	4 28	23 0	8 17	12 23	11 25	13 41
28	7 3 32	29 38	3 48	23 6	8 31	13 1	12 36	14 14
29	8 1 3	11 ♈ 28	2 58	23 12	8 45	13 38	13 46	14 51
30	8 58 33	23 15	2 c	23 19	8 59	14 16	14 57	15 32
31	9 56 2	5 ♉ 5	0 58	23 25	9 13	14 54	16 8	16 18

M. D	♃ sets	♂ sets	♀ sets	☿ sets	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	9 a 21	11 a 34	10 a 15	8 a 22	22 n 4	20 n 3	24 n 39	23 n 7	19 n 14
7	9 5	11 28	10 31	rises	22 0	20 20	24 43	24 14	16 48
13	8 48	11 21	10 44	4 m 5	21 56	20 36	24 40	24 56	14 13
19	8 33	11 13	10 53	3 47	21 51	20 51	24 31	25 12	12 31
25	8 16	11 3	11 0	3 20	21 46	21 5	24 15	25 3	12 52

The LUNATIONS.

New Moon the 3d day, at 5 minutes paſt 3 afternoon.
Firſt quarter the 10th day, at 28 minutes paſt 11 night.
Full Moon the 17th day, at 5 minutes paſt 4 afternoon.
Laſt quarter the 25th day, at 14 minutes paſt 3 morning.

M D	Sundays & other remark. days.	☉ riſes	☉ ſets	☉'s declin.	☽'s declin.	☽ riſes & ſets	☽ South	Clock aft. ☉
1	Nicomede	3 53	8 7	22 n 6	17 n 3	2 m 45	10 m 17	2' 36"
F	2 Sun. af. Trin.	3 52	8 8	22 14	21 10	3 3	11 3	2 27
3		3 51	8 9	22 22	24 26	☽ ſets	11 52	2 17
4	K. Geo. III. b.	3 50	8 10	22 29	26 33	9 a 42	0 a 45	2 3
5	Pr. Ern. Aug. b.	Bonifa.	8 11	22 35	27 22	10 39	1 39	1 57
6		3 49	8 11	22 42	26 42	11 22	2 35	1 46
7		3 48	8 12	22 48	24 34	11 56	3 30	1 35
8		3 47	8 13	22 53	21 3	morn	4 23	1 24
F	3 Sun. af. Trin.	3 47	8 13	22 58	16 23	0 19	5 14	1 13
10		3 46	8 14	23 3	10 49	0 38	6 3	1 8
11	St. Barnabas	3 45	8 15	23 7	4 37	0 53	6 51	0 49
12	Term ends	3 45	8 15	23 11	11 s 54	1 7	7 40	0 37
13		3 44	8 16	23 15	8 25	1 21	8 30	0 25
14		3 44	8 16	23 18	14 33	1 37	9 23	0 12
15		3 44	8 16	23 21	19 53	1 56	10 19	0 b. c
F	4 Sun. af. Tri.	3 44	8 16	23 23	24 1	2 20	11 18	0 13
17	St. Alban	3 43	8 17	23 25	26 34	☽ riſes	morn	0 26
18		3 43	8 17	23 26	27 20	9 a 55	0 20	0 39
19		3 43	8 17	23 27	26 22	10 40	1 20	0 51
20	Tra. Edw. K. W. S	3 43	8 17	23 28	23 51	11 10	2 19	1 4
21	Longeſt Day	3 43	8 17	23 28	20 10	11 31	3 12	1 17
22		3 43	8 17	23 28	15 38	11 48	4 1	1 30
F	5 Sun. aft. Tri.	3 43	8 17	23 27	10 34	morn	4 46	1 43
24	Nativ. J. Bapt.	3 43	8 17	23 26	15 11	0 0	5 27	1 56
25	[Midſ.	3 43	8 17	23 25	0 n 16	0 12	6 7	2 8
26		3 44	8 16	23 23	5 41	0 23	6 47	2 21
27		3 44	8 16	23 21	10 54	0 34	7 27	2 34
28		3 44	8 16	23 18	15 45	0 47	8 8	2 46
29	St. Peter	3 44	8 16	23 15	20 4	1 3	8 53	2 58
F	6 Sun. aft. Tri.	3 45	8 15	23 11	23 34	1 23	9 40	3 10

M D	Day increaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ ſets
1	8 30	16 14	27 ♋ 53	9 ♊ 10	6 ♌ 1	10 ♑ 54	14 ♏ 19	28 ♑ 11	11 a 8
7	8 40	16 24	28 6	9 41	8 41	16 38	24 3	18 ♐ 34	10 45
13	8 44	16 30	28 20	10 13	11 21	22 22	3 ♎ 46	12 ♑ 19	10 23
19	8 50	16 34	28 33	10 44	14 0	28 5	13 28	10 ♈ 43	10 0
25	8 50	16 34	28 46	11 16	16 39	3 ♒ 49	23 8	14 ♉ 25	9 38

M D	Daylig. begins	Daylig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1				14 ♉ 33	0 n 14	0 s 33	1 n 15	2 n 1	3 s 40
7	All	day	light.	14 14	0 15	0 32	1 15	2 4	3 9
13				13 55	0 15	0 32	1 15	2 3	2 18
19				13 35	0 16	0 32	1 14	1 59	1 12
25				13 16	0 16	0 31	1 14	1 52	0 n 3

M D	☉'s longitude	☽'s long.	☽'s latitude	♄'s long.	♅'s long.	♂'s long.	♀'s long.	☿'s long.
1	♊ 10 53 30	17 ♉ 1	0 n 7	23 ♋ 32	9 ♊ 27	15 ♋ 31	17 ♋ 18	17 ♉ 7
F	11 50 58	29 5	1 13	23 38	9 41	16 9	18 28	17 58
3	12 48 25	11 ♊ 20	2 17	23 45	9 55	16 47	19 38	18 54
4	13 45 51	23 48	3 14	23 51	10 9	17 25	20 48	19 56
5	14 43 16	6 ♋ 28	4 3	23 58	10 23	18 3	21 58	21 0
6	15 40 40	19 23	4 41	24 4	10 37	18 40	23 8	22 6
7	16 38 3	2 ♌ 31	5 5	24 11	10 51	19 18	24 18	23 15
8	17 35 25	15 53	5 12	24 17	11 5	19 56	25 28	24 28
F	18 32 46	29 28	5 3	24 24	11 19	20 34	26 38	25 44
10	19 30 6	13 ♍ 17	4 36	24 31	11 33	21 11	27 47	27 3
11	20 27 25	27 19	3 52	24 38	11 47	21 49	28 57	28 25
12	21 24 43	11 ♎ 32	2 54	24 35	12 1	22 27	0 ♌ 7	29 50
13	22 22 0	25 55	1 44	24 52	12 14	23 4	1 16	1 ♊ 19
14	23 19 16	10 ♏ 26	0 26	24 59	12 28	23 42	2 25	2 51
15	24 16 31	24 59	0 s 51	25 6	12 42	24 20	3 34	4 26
F	25 13 46	9 ♐ 31	2 8	25 13	12 56	24 57	4 43	6 3
17	26 11 0	23 55	3 15	25 20	13 10	25 35	5 52	7 43
18	27 8 14	8 ♑ 5	4 8	25 27	13 24	26 13	7 1	9 26
19	28 5 27	21 57	4 45	25 35	13 37	26 50	8 9	11 12
20	29 2 40	5 ♒ 27	5 5	25 42	13 51	27 28	9 18	13 1
21	29 59 52	18 34	5 8	25 49	14 5	28 6	10 26	14 53
22	♋ 0 57 5	1 ♓ 19	4 56	25 56	14 18	28 43	11 34	16 47
F	1 54 18	13 43	4 30	26 4	14 32	29 21	12 43	18 44
24	2 51 30	25 52	3 53	26 11	14 46	29 59	13 51	20 43
25	3 48 43	7 ♈ 49	3 5	26 19	14 50	0 ♌ 36	14 59	22 45
26	4 45 56	19 39	2 11	26 26	15 13	1 14	16 7	24 49
27	5 43 9	1 ♉ 28	1 10	26 33	15 26	1 52	17 14	26 54
28	6 40 23	13 20	0 7	26 41	15 39	2 29	18 22	29 0
29	7 37 36	25 21	0 n 58	26 48	15 53	3 7	19 29	1 ♋ 8
F	8 34 50	7 ♊ 33	2 0	26 53	16 6	3 45	20 37	3 17

M D	♅ rises	♂ sets	♀ rises	☿ rises	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	3 m 52	10 a 51	11 a 5	3 m 14	21 n 39	21 n 21	23 n 49	24 n 21	13 n 27
7	3 34	10 39	11 1	3 2	21 33	21 34	23 10	23 19	15 33
13	3 15	10 26	10 55	3 56	21 26	21 46	22 43	21 55	18 12
19	2 54	10 12	10 47	2 51	21 19	21 57	22 2	20 10	20 57
25	2 31	9 58	10 37	2 59	21 11	22 6	21 15	18 8	23 13

The Lunations.

New Moon the 3d day, at 27 minutes past 3 morning.
First quarter the 10th day, at 12 minutes past 4 morning.
Full Moon the 17th day, at 17 minutes past 1 morning.
Last quarter the 24th day, at 36 minutes past 8 night.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock bef. ☉
1		3 45	8 15	23 n 7	26 n 3	1 m 50	10 m 31	3' 23"
2	Visita. Cam.Co.	3 46	8 14	23 3	27 15	2 29	11 26	3 34
3	Dog days begin	3 46	8 14	22 58	26 59	☽ sets	0 a 22	3 45
4	Transf. St. Mar.	3 47	8 13	22 53	25 10	9 a 52	1 18	3 56
5	Cam. T. e. Old	3 48	8 12	22 48	21 55	10 17	2 13	4 7
6	[Midſ.	3 48	8 12	22 42	17 25	10 38	3 5	4 17
F 7	Sun. af. Trin.	3 49	8 11	22 36	11 57	10 54	3 55	4 27
8	Ox. Act[T.aBe.	3 50	8 10	22 29	5 51	11 9	4 44	4 36
9		3 51	8 9	22 22	0 s 35	11 22	5 31	4 46
10		3 51	8 9	22 14	7 1	11 37	6 20	4 54
11		3 52	8 8	22 6	13 8	11 55	7 11	5 2
12		3 53	8 7	21 58	18 35	morn	8 4	5 10
13	Oxfo. Ter. e.	3 54	8 6	21 50	22 58	0 15	9 1	5 18
F 14	Sun. af. Trin.	3 55	8 5	21 41	25 57	0 45	10 1	5 24
15	Swithin	3 56	8 4	21 31	27 17	1 28	11 1	5 31
16		3 58	8 2	21 22	26 53	2 25	morn	5 36
17		3 59	8 1	21 12	24 53	☽ rises	0 0	5 42
18		4 0	8 0	21 1	21 33	9 a 37	0 56	5 47
19		4 1	7 59	20 50	17 13	9 47	1 47	5 51
20	Margaret	4 2	7 58	20 39	12 14	10 2	2 34	5 54
F 21	Sun. af. Trin.	4 4	7 56	20 28	6 53	10 14	3 18	5 58
22	Magdalen	4 5	7 55	20 16	1 22	10 25	3 59	6 0
23		4 6	7 54	20 4	4 n 7	10 37	4 39	6 2
24		4 7	7 53	19 51	9 26	10 48	5 19	6 4
25	St. James	4 9	7 51	19 38	14 25	11 2	5 59	6 5
26	S. Anne	4 10	7 50	19 25	18 53	11 20	6 42	6 5
27		4 12	7 48	19 12	22 39	11 45	7 28	6 5
F 28	Sun. af. Tri.	4 13	7 47	18 58	25 28	morn	8 18	6 4
29		4 15	7 45	18 44	27 6	0 20	9 11	6 3
30		4 16	7 44	18 29	27 18	1 7	10 8	6 1
31		4 18	7 42	18 15	25 57	2 10	11 5	5 58

M D	Day decreaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ ſets
1	0 5	16 29	29 26 0	11 ♊ 47	19 ♌ 17	9 ♑ 32	2 ♍ 47	21 ♊ 48	9 a 15
7	0 12	16 22	29 13	12 19	21 55	15 15	12 24	28 ♋ 28	8 52
13	0 22	16 12	29 26	12 50	24 32	20 59	22 0	0 ♍ 26	8 29
19	0 36	15 58	29 40	13 21	27 10	26 42	1 ♎ 33	26 53	8 6
25	0 52	15 42	29 53	13 54	29 47	2 ♒ 26	11 6	18 ♎ 57	7 43

M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☽'s node	☿'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	♄'s latitude
1				12 ♉ 57	0 n 17	0 s 31	1 n 13	1 n 40	0 n 58
7	All	day	light.	12 38	0 17	0 30	1 12	1 24	1 37
13				12 19	0 18	0 30	1 11	1 4	1 50
19				12 0	0 18	0 30	1 10	0 40	1 38
25	0 45	11 7	3 20	11 41	0 19	0 30	1 9	0 12	1 8

M D	☉'s longitude	☽'s long.	☽'s latitude	☿'s long.	♃'s long.	♂'s long.	♀'s long.	♄'s long.
1	♋ 9 32 4	20 ♊ 1	2 n 58	27 ♋ 3	16 ♊ 19	4 ♌ 22	21 ♌ 44	5 ♋ 27
2	10 29 18	2 ♋ 45	3 49	27 11	16 32	5 0	22 51	7 37
3	11 26 31	15 46	4 28	27 18	16 46	5 38	23 57	9 47
4	12 23 45	29 4	4 54	27 26	16 59	6 16	25 4	11 58
5	13 20 59	12 ♌ 36	5 5	27 33	17 12	6 54	26 10	14 8
6	14 18 13	26 20	4 57	27 41	17 26	7 32	27 17	16 17
F	15 15 27	10 ♍ 13	4 33	27 49	17 39	8 9	28 23	18 25
8	16 12 40	24 12	3 52	27 56	17 52	8 47	29 29	20 32
9	17 9 54	8 ♎ 17	2 57	28 4	18 5	9 25	0 ♍ 35	22 38
10	18 7 7	22 24	1 58	28 11	18 18	10 2	1 40	24 43
11	19 4 20	6 ♍ 34	0 37	28 19	18 31	10 40	2 46	26 47
12	20 1 33	20 45	0 s 38	28 27	18 44	11 18	3 52	28 49
13	20 58 47	4 ♐ 54	1 51	28 35	18 56	11 55	4 57	0 ♌ 48
F	21 56 0	19 1	2 57	28 42	19 9	12 33	6 1	2 46
15	22 53 13	3 ♑ 0	3 51	28 50	19 22	13 11	7 6	4 43
16	23 50 27	16 49	4 31	28 58	19 34	13 49	8 10	6 38
17	24 47 41	0 ♒ 24	4 55	29 6	19 47	14 27	9 15	8 31
18	25 44 56	13 42	5 2	29 14	20 0	15 5	10 19	10 22
19	26 42 11	26 41	4 53	29 22	20 12	15 42	11 23	12 11
20	27 39 27	9 ♓ 20	4 28	29 30	20 25	16 20	12 27	13 59
F	28 36 44	21 43	3 54	29 38	20 37	16 58	13 30	15 45
22	29 34 1	3 ♈ 50	3 9	29 46	20 49	17 36	14 33	17 29
23	♌ 0 31 20	15 46	2 16	29 53	21 2	18 14	15 36	19 11
24	1 28 39	27 36	1 17	0 ♌ 1	21 14	19 2	16 39	20 52
25	2 26 0	9 ♉ 24	0 15	0 8	21 26	19 29	17 41	22 31
26	3 23 22	21 18	0 n 48	0 16	21 38	20 7	18 43	24 9
27	4 20 45	3 ♊ 21	1 50	0 24	21 50	20 45	19 44	25 45
F	5 18 9	15 39	2 48	0 32	22 2	21 23	20 46	27 18
29	6 15 34	28 15	3 38	0 39	22 14	22 1	21 47	28 50
30	7 13 0	11 ♋ 13	4 19	0 47	22 25	22 38	22 48	0 ♍ 20
31	8 10 27	24 31	4 48	0 55	22 37	23 16	23 49	1 48

M D	☿ rises	♂ sets	♀ sets	☿ rises	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	2 m 11	9 a 44	10 a 25	3 m 19	21 n 3	22 n 15	20 n 22	15 n 51	24 n 19
7	1 49	9 30	10 12	sets	20 54	22 23	19 25	13 22	23 48
13	1 28	9 14	9 58	8 a 48	20 46	22 31	18 23	10 42	21 47
19	1 7	8 57	9 42	8 51	20 36	22 37	17 16	7 55	18 44
25	0 52	8 39	9 25	8 45	20 27	22 42	16 5	5 4	15 5

The Lunations.

New Moon the 1st day, at 46 minutes past 1 afternoon.
First quarter the 8th day, at 55 minutes past 8 morning.
Full Moon the 15th day, at 29 minutes past noon.
Last quarter the 23d day, at 21 minutes past 2 afternoon.
New Moon the 30th day, at 0 minutes past 11 night.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock bef. ☉
1	Lammas Day	4 19	7 41	18 n 0	23 n 4	☽ sets	0 a 3	5 55
2		4 21	7 39	17 44	18 48	8 a 39	0 56	5 52
3		4 22	7 38	17 29	13 26	8 59	1 49	5 47
☿	11 Sun. a. Tri.	4 24	7 36	17 13	7 18	9 14	2 39	5 42
5		4 26	7 33	16 57	0 46	9 29	3 28	5 37
6	Transfiguration	4 27	7 33	16 40	5 s 48	9 43	4 17	5 31
7	Prs. Amelia bor	4 29	7 31	16 23	12 3	9 59	5 7	5 24
8	[Na. of Jesus	4 31	7 29	16 6	17 39	10 10	5 59	5 16
9		4 32	7 28	15 49	22 15	10 46	6 55	5 9
10	Lawrence	4 34	7 26	15 32	25 31	11 23	7 53	5 0
☿	12 S. a. Tr. Duc.	Do. d. e.	7 24	15 14	27 14	morn	8 53	4 51
12	Pr. Wa. b. [Br. b.	O. Lam	7 23	14 56	27 17	0 15	9 52	4 41
13		4 39	7 21	14 38	25 44	1 20	10 48	4 31
14		4 41	7 19	14 19	22 46	2 36	11 41	4 20
15	Assumption	4 43	7 17	14 0	18 43	☽ rises	morn	4 8
16	Du. of York b.	4 45	7 15	13 42	13 54	8 a 10	0 30	3 56
17		4 46	7 14	13 22	8 35	8 22	1 15	3 44
☿	13 Sun. a. Tri.	4 48	7 12	13 3	3 3	8 34	1 57	3 31
19		4 50	7 10	12 44	2 n 31	8 46	2 37	3 17
20		4 52	7 8	12 24	7 57	8 57	3 17	3 4
21	D. of Claren. b.	4 54	7 6	12 4	13 4	9 12	3 58	2 45
22		4 55	7 5	11 44	17 42	9 27	4 40	2 34
23		4 57	7 3	11 23	21 41	9 49	5 25	2 19
24	St. Bartholomew	4 59	7 1	11 3	24 49	10 19	6 12	2 3
☿	14 Sun. af. Tri.	5 1	6 59	10 42	26 51	10 50	7 4	1 47
26		5 3	6 57	10 21	27 35	11 54	7 59	1 31
27		5 5	6 55	10 0	26 48	morn	8 55	1 14
28	Augustine	5 7	6 53	9 39	24 29	1 6	9 52	0 57
29	John Bap. beh.	5 9	6 51	9 18	20 40	2 25	10 49	0 40
30		5 10	6 50	8 56	15 34	☽ sets	11 43	0 22
31		5 12	6 48	8 35	9 31	7 a 25	0 a 35	0 af. ☉

M D	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ♁	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	1 12	15 22	0♌ 8	14 11 29	21♍ 51	9♒ 8	22♌ 12	11♍ 6	3 m 3
7	1 31	15 3	0 22	15 1	5 28	14 53	1♎ 42	28 20	3 1
13	1 51	14 43	0 35	15 32	8 5	20 39	11 11	14♌ 53	2 5
19	2 13	14 21	0 48	16 3	10 43	26 25	20 40	1♏ 31	2 3
25	2 35	13 59	1 2	16 35	13 20	2♓ 12	0♒ 0	18 59	2

MD	Day-lig begins	Day-lig ends	Durat. twilig.	Pl. ☽'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitud
1	1 23	10 34	2 58	11 ♉ 19	0 n 19	0 s 29	1 n 8	0 s 25	0 n 15
7	1 47	10 13	2 46	11 0	0 20	0 29	1 7	1 2	0 s 41
13	2 9	9 51	2 34	10 41	0 20	0 29	1 6	1 42	1 43
19	2 29	9 30	2 25	10 22	0 21	0 29	1 4	2 25	2 45
25	2 47	9 13	2 18	10 3	0 22	0 28	1 3	3 11	3 42

MD	☉'s longitude	☽'s long.	☽'s latitude	♄'s long.	♅'s long.	♂'s long.	♀'s long.	☿'s long.
1	♌ 9 7 55	8 ♌ 11	5 n 0	15 ♌ 2	22 ♊ 48	23 ♌ 54	24 ♍ 49	3 ♍ 14
2	10 5 24	22 8	4 55	1 10	23 0	24 32	25 49	4 40
3	11 2 54	6 ♍ 17	4 33	1 18	23 11	25 10	26 48	6 3
F	12 0 24	20 34	3 53	1 26	23 22	25 48	27 47	7 24
5	12 57 56	4 ♎ 54	2 58	1 33	23 34	26 24	28 46	8 43
6	13 55 28	19 12	1 52	1 41	23 45	27 4	29 45	10 0
7	14 53 1	3 ♍ 25	0 39	1 48	23 56	27 42	0 ♎ 43	11 15
8	15 50 35	17 32	0 s 36	1 56	24 7	28 20	1 41	12 28
9	16 48 9	1 ♎ 32	1 47	2 4	24 18	28 58	2 38	13 39
10	17 45 45	15 24	2 52	2 11	24 29	29 36	3 35	14 48
F	18 43 21	29 8	3 46	2 19	24 39	0 ♍ 14	4 31	15 54
12	19 40 58	12 ♑ 44	4 27	2 27	24 50	0 52	5 27	16 58
13	20 38 36	26 8	4 52	2 34	25 0	1 30	6 22	17 59
14	21 36 15	9 ♒ 21	5 1	2 42	25 11	2 8	7 17	18 58
15	22 33 56	22 19	4 54	2 49	25 21	2 46	8 11	19 54
16	23 31 38	5 ♓ 3	4 33	2 57	25 31	3 24	9 5	20 48
17	24 29 20	17 32	3 59	3 4	25 41	4 2	9 58	21 38
F	25 27 5	29 47	3 14	3 12	25 51	4 40	10 51	22 24
19	26 24 51	11 ♈ 50	2 21	3 19	26 1	5 19	11 43	23 7
20	27 22 39	23 43	1 22	3 26	26 11	5 57	12 34	23 47
21	28 20 29	5 ♉ 31	0 20	3 34	26 20	6 35	13 25	24 23
22	29 18 20	17 19	0 n 43	3 41	26 30	7 14	14 15	24 56
23	♍ 0 16 13	29 12	1 44	3 48	26 39	7 52	15 5	25 24
24	1 14 8	11 ♊ 14	2 42	3 55	26 49	8 30	15 54	25 47
F	2 12 5	23 33	3 33	4 2	26 58	9 9	16 41	26 4
26	3 10 4	6 ♋ 12	4 16	4 10	27 7	9 47	17 28	26 16
27	4 8 5	19 14	4 46	4 17	27 16	10 25	18 15	26 R24
28	5 6 7	2 ♌ 42	5 2	4 24	27 25	11 3	19 1	26 27
29	6 4 12	16 35	5 1	4 31	27 33	11 41	19 46	26 24
30	7 2 18	0 ♍ 51	4 42	4 38	27 42	12 20	20 30	26 14
31	8 0 26	15 23	4 4	4 45	27 51	12 58	21 13	25 56

MD	♃ rises	♂ sets	♀ sets	☿ sets	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	0 m 32	8 a 21	9 a 6	8 a 33	20 n 16	22 n 47	14 n 38	1 n 40	10 n 34
7	0 11	8 6	8 49	8 18	20 6	22 51	13 20	1 s 14	6 43
13	11 a 49	7 53	8 31	8 1	19 57	22 54	11 59	4 5	3 10
19	11 28	7 34	8 13	7 41	19 47	22 56	10 34	6 51	0 12
25	11 6	7 18	7 55	7 17	19 37	22 58	9 7	9 30	1 s 49

The Lunations.

First quarter the 6th day, at 59 minutes past 2 afternoon.
Full Moon the 14th day, at 31 minutes past 2 morning.
Last quarter the 22d day, at 32 minutes past 7 morning.
New Moon the 29th day, at 4 minutes past 8 morning.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock aft. ☉
F 1	14 Sun. af. Tri.	5 14	6 46	8 n 13	2 n 52	7 a 38	1 a 26	0 15
2	Lond. bu. [Giles	5 16	6 44	7 51	3 s 58	7 54	2 17	0 34
3		5 18	6 42	7 29	10 34	8 11	3 8	0 53
4		5 20	6 40	7 7	16 32	8 30	4 1	1 12
5		5 22	6 38	6 44	21 29	8 55	4 57	1 32
6		5 24	6 36	6 22	25 8	9 28	5 55	1 52
7	Enurchus	5 26	6 34	6 0	27 12	10 14	6 54	2 12
W 8	15 Sun. af. Tri.	5 28	6 32	5 37	27 37	11 18	7 54	2 32
9	[Nativ. V. M.	5 30	6 30	5 14	26 24	morn	8 51	2 52
10		5 32	6 28	4 52	23 47	0 31	9 44	3 13
11		5 34	6 26	4 29	20 1	1 50	10 33	3 34
12		5 35	6 25	4 6	15 23	3 7	11 19	3 55
13		5 37	6 23	3 43	10 12	4 25	morn	4 16
14	Holy Crofs	5 39	6 21	3 20	4 42	☾ rises	0 2	4 37
F 15	16 Sun. af. Tri.	5 41	6 19	2 57	0 n 55	7 a 1	0 43	4 58
16		5 43	6 17	2 33	6 26	7 13	1 23	5 19
17	Lambert	5 45	6 15	2 10	11 41	7 25	2 3	5 40
18	Ember Week	5 47	6 13	1 47	16 31	7 40	2 45	6 1
19		5 49	6 11	1 24	20 43	7 59	3 28	6 22
20		5 51	6 9	1 0	24 8	8 25	4 14	6 43
21	St. Matthew	5 53	6 7	0 37	26 31	9 0	5 4	7 4
F 22	18 S. a. Tri. K.	5 55	6 5	0 13	27 42	9 46	5 57	7 25
23	[Geo. III. cr.	5 57	6 3	0 s 10	27 28	10 51	6 51	7 46
24		5 59	6 1	0 33	25 46	morn	7 47	8 6
25	Old Holyrood	6 1	5 59	0 57	22 34	0 7	8 42	8 26
26	St. Cyprian	6 3	5 57	1 20	18 1	1 31	9 37	8 47
27		6 5	5 55	1 44	12 20	3 0	10 30	9 7
28		6 7	5 53	2 7	5 49	4 29	11 22	9 26
F 29	19 S. af. Tri. St.	6 9	5 51	2 31	1 s 8	☽ sets	0 a 13	9 46
30	[Mi. Pra. Wir. b.	St. Jer.	5 49	2 54	8 5	6 a 24	1 5	10 5

M D	Day decreaf.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ♁	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	3 2	13 32	18 17	17 11	16 24	8 ♓ 59	11 ♒ 12	11 ♒ 34	1 m 57
7	3 25	13 0	1 30	17 42	19 3	14 48	20 42	4 ♓ 4	1 39
13	3 48	12 46	1 44	18 13	21 42	20 38	0 ♈ 11	0 ♈ 48	1 21
19	4 12	12 22	1 57	18 45	24 21	26 3	9 41	2 ♉ 46	1 3
25	4 36	11 58	2 10	19 16	27 0	2 ♈ 23	19 12	9 ♊ 10	0 46

MD	Day lig. begins	Day lig ends.	Durat. twilig.	Pl. ☽'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	3 7	8 50	2 11	9♉40	0 n 22	0 s 28	1 n 1	4 s 7	4 s 20
7	3 24	8 36	2 6	9 21	0 23	0 28	0 59	4 57	4 1
13	3 37	8 27	2 4	9 2	0 24	0 28	0 58	5 46	2 37
19	3 52	8 8	2 1	8 43	0 24	0 28	0 56	6 33	0 40
25	4 5	7 52	2 0	8 24	0 25	0 28	0 54	7 13	0 n 55

MD	☉'s longitude	☽'s long.	☽'s latitude	♄'s long.	♅'s long.	♂'s long.	♀'s long.	☿'s long.
F	♍ 8 58 35	0♎ 5	3 n 10	4♌52	27♊59	13♍36	21♎54	25♍33
2	9 56 46	14 49	2 2	4 59	28 7	14 14	22 35	25 7
3	10 54 59	29 28	0 47	5 6	28 15	14 53	23 15	24 32
4	11 53 13	13♍57	0 s 31	5 13	28 23	15 31	23 53	23 48
5	12 51 28	28 12	1 45	5 19	28 31	16 10	24 30	23 0
6	13 49 45	12♐13	2 52	5 26	28 39	16 48	25 6	22 9
7	14 48 4	25 59	3 48	5 32	28 46	17 27	25 41	21 15
F	15 46 24	9♑30	4 30	5 39	28 53	18 5	26 15	20 17
9	16 44 45	22 48	4 56	5 45	29 0	18 44	26 48	19 16
10	17 43 8	5♒51	5 7	5 52	29 7	19 22	27 20	18 13
11	18 41 32	18 43	5 2	5 58	29 14	20 1	27 50	17 12
12	19 39 58	1♓21	4 42	6 5	29 21	20 39	28 18	16 14
13	20 38 26	13 48	4 9	6 11	29 28	21 18	28 44	15 19
14	21 36 55	26 3	3 24	6 17	29 34	21 56	29 8	14 28
F	22 35 27	8♈8	2 31	6 23	29 41	22 35	29 31	13 44
16	23 34 1	20 4	1 32	6 29	29 47	23 14	29 53	13 8
17	24 32 36	1♉54	0 29	6 35	29 53	23 52	0♍13	12 39
18	25 31 14	13 41	0 n 35	6 41	29 59	24 31	0 31	12 20
19	26 29 54	25 28	1 37	6 47	0♎ 3	25 10	0 47	12 10
20	27 28 36	7♊18	2 36	6 53	0 11	25 49	1 1	12D 10
21	28 27 21	19 21	3 29	6 59	0 16	26 27	1 13	12 20
F	29 26 8	1♋38	4 14	7 5	0 21	27 6	1 23	12 40
23	♎ 0 24 57	14 14	4 48	7 11	0 26	27 45	1 31	13 10
24	1 23 49	27 13	5 8	7 17	0 31	28 23	1 36	13 49
25	2 22 43	10♌40	5 12	7 22	0 36	29 2	1 39	14 36
26	3 21 40	24 35	4 58	7 28	☉ 40	29 40	1 R40	15 31
27	4 20 38	8♍56	4 26	7 33	0 44	0♎19	1 38	16 33
28	5 19 39	23 39	3 35	7 38	0 48	0 58	1 34	17 43
F	6 18 42	8♎37	2 29	7 43	0 52	1 37	1 28	18 58
30	7 17 47	23 41	1 12	7 48	0 56	2 16	1 20	20 20

MD	♃ rises	♂ sets	♀ sets	☿ sets	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	10 a 52	7 a 0	7 a 32	6 a 46	19 n 26	22 n 59	7 n 24	12 s 22	2 s 13
7	10 33	6 44	7 11	6 20	19 17	22 59	5 52	14 33	0 14
13	10 14	6 29	6 49	rises	19 8	23 0	4 21	16 26	3 n 23
19	9 55	6 13	6 26	4 m 33	19 0	23 0	2 46	17 53	6 23
25	9 37	5 58	6 2	4 18	18 52	23 0	1 13	18 49	6 56

The Lunations.

First quarter the 5th day, at 34 minutes past 11 night.
Full Moon the 13th day, at 24 minutes past 7 afternoon.
Last quarter the 21st day, at 44 minutes past 10 night.
New Moon the 28th day, at 36 minutes past 5 afternoon.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock aft. ☉
1	Remigius	6 13	5 47	3 s 17	14 s 34	6 a 41	1 a 59	10 24″
2		6 15	5 45	3 41	20 8	7 4	2 56	10 43
3		6 17	5 43	4 4	24 22	7 35	3 55	11 1
4		6 19	5 41	4 27	26 59	8 18	4 56	11 19
5		6 21	5 39	4 50	27 50	9 17	5 57	11 37
F	20 Sun. af. Tri.	6 23	5 37	5 13	26 59	10 28	6 55	11 54
7	[Faith	6 25	5 35	5 36	24 39	11 46	7 50	12 11
8		6 27	5 33	5 59	21 7	morn	8 40	12 28
9	Denys	6 28	5 32	6 22	16 41	1 5	9 26	12 44
10	Ox. & Cam. T. b	6 30	5 30	6 45	11 38	2 21	10 9	13 0
11	[Old Mic.	6 32	5 28	7 8	6 13	3 35	10 50	13 15
12		6 34	5 26	7 30	0 37	4 47	11 30	13 30
F	21 Sun. a. Trin.	6 36	5 24	7 53	4 n 57	☽ rises	morn	13 44
14	[Tr. K. Edw. C.	6 38	5 22	8 15	10 19	5 a 40	0 10	13 58
15		6 40	5 20	8 38	15 18	5 56	0 51	14 11
16		6 42	5 18	9 0	19 43	6 12	1 34	14 24
17	Etheldred	6 44	5 16	9 22	23 22	6 34	2 19	14 36
18	St. Luke	6 46	5 14	9 44	26 4	7 4	3 6	14 47
19		6 48	5 12	10 5	27 35	7 47	3 57	14 58
F	22 Sun. af. Tri.	6 50	5 10	10 27	27 48	8 43	4 50	15 8
21		6 52	5 8	10 49	26 36	9 52	5 44	15 19
22		6 54	5 6	11 10	23 59	11 11	6 38	15 27
23		6 55	5 5	11 31	20 3	morn	7 31	15 35
24		6 57	5 3	11 52	14 56	0 34	8 23	15 42
25	K. Geo. 3. acc.	Crispin	5 1	12 13	8 52	2 0	9 13	15 49
26	K. Geo. 3. proc.	7 1	4 59	12 33	2 9	3 29	10 4	15 55
F	23 Sun. af. Tri.	7 3	4 57	12 54	4 s 50	4 57	10 55	16 0
28	St. Sim. & Jude	7 5	4 55	13 14	11 40	☽ sets	11 48	16 4
29		7 7	4 53	13 34	17 50	5 a 11	0 a 44	16 8
30		7 9	4 51	13 54	22 50	5 35	1 43	16 11
31		7 10	4 50	14 13	26 14	6 15	2 46	16 13

M D	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ♁	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	4 48	11 35	2♌23	19♊47	29♍41	8♈17	28♓44	16♎45	0 m 28
7	5 23	11 11	2 37	20 13	2♎22	14 12	8♈17	20♌31	0 6
13	5 46	10 48	2 50	20 49	5 4	20 0	17 50	18♍42	11 a 45
19	6 9	10 25	3 3	21 20	7 47	26 6	27 25	12♏ 3	11 24
25	6 32	10 2	3 17	21 51	10 30	2♉51	7♉0	2♐11	11 3

M D	Daylig. begins	Daylig. ends	Durat. twilig.	Pl. ☽'s node	☿'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	♄'s latitude
1	4 18	7 42	1 59	☊ 5	0 n 26	0 s 27	0 n 52	7 s 41	1 n 46
7	4 31	7 29	1 58	7 46	0 27	0 27	0 50	7 49	1 56
13	4 43	7 17	1 57	7 27	0 28	0 27	0 48	7 28	1 40
19	4 55	7 5	1 57	7 8	0 28	0 27	0 45	6 37	1 9
25	5 6	6 54	1 58	6 49	0 29	0 26	0 43	5 22	0 31

M D	☉'s longitude	☽'s long.	☽'s latitude	☿'s long.	♃'s long.	♂'s long.	♀'s long.	♄'s long.
1	♎ 8 16 54	♍ 42	0 s 10	♑ 53	♋ 0	♌ 55	♍ 11	♍ 45
2	9 16 3	♒ 32	1 30	7 58	1 3	3 34	0 59	23 12
3	10 15 13	♐ 6	2 43	8 3	1 6	4 13	0 44	24 44
4	11 14 25	22 19	3 45	8 8	1 9	4 52	0 27	26 22
5	12 13 40	♑ 9	4 31	8 13	1 12	5 31	0 7	28 1
F	13 12 55	19 39	5 1	8 18	1 15	6 10	29 ♎ 44	29 41
7	14 12 13	♒ 48	5 14	8 22	1 18	6 50	29 18	1 ♎ 22
8	15 11 32	15 39	5 12	8 27	1 20	7 29	28 50	3 4
9	16 10 53	28 15	4 54	8 31	1 22	8 8	28 21	4 47
10	17 10 16	♓ 37	4 22	8 36	1 24	8 48	27 51	6 30
11	18 9 41	22 49	3 39	8 40	1 26	9 27	27 20	8 14
12	19 9 8	♈ 52	2 47	8 44	1 28	10 6	26 48	9 58
F	20 8 36	16 47	1 48	8 48	1 29	10 46	26 14	11 43
14	21 8 6	28 38	0 44	8 52	1 30	11 25	25 38	13 27
15	22 7 39	♉ 26	0 n 21	8 56	1 31	12 4	25 2	15 11
16	23 7 15	22 13	1 25	9 0	1 32	12 43	24 25	16 55
17	24 6 50	♊ 2	2 26	9 4	1 33	13 23	23 48	18 38
18	25 6 30	15 56	3 21	9 8	1 33	14 2	23 12	20 20
19	26 6 11	28 0	4 8	9 11	1 R 33	14 41	22 37	22 2
F	27 5 55	♋ 16	4 45	9 15	1 33	15 21	22 2	23 43
21	28 5 41	22 49	5 9	9 18	1 33	16 0	21 27	25 24
22	29 5 30	♌ 43	5 18	9 22	1 32	16 40	20 53	27 5
23	♏ 0 5 21	19 2	5 11	9 25	1 31	17 19	20 20	28 45
24	1 5 14	♍ 48	4 46	9 28	1 30	17 59	19 48	0 ♏ 25
25	2 5 10	17 0	4 3	9 31	1 20	18 39	19 17	2 4
26	3 5 8	♎ 38	3 3	9 34	1 28	19 18	18 48	3 43
F	4 5 7	16 36	1 56	9 36	1 26	19 58	18 21	5 21
28	5 5 9	♏ 46	0 28	9 39	1 24	20 38	17 57	6 58
29	6 5 13	16 59	0 s 57	9 41	1 22	21 17	17 35	8 35
30	7 5 19	♐ 6	2 17	9 44	1 20	21 57	17 18	10 12
31	8 5 26	16 58	3 26	9 46	1 18	22 37	16 58	11 48

M D	♃ rises	♂ rises	♀ sets	☿ rises	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	9 a 17	5 m 39	5 a 35	4 m 30	18 n 44	23 n 1	0 s 22	19 s 5	4 n 54
7	8 56	5 39	5 11	5 3	18 38	23 1	1 57	18 32	1 14
13	8 34	5 39	4 46	5 40	18 32	23 1	3 32	17 6	3 s 7
19	8 12	5 39	4 21	6 18	18 26	23 1	5 6	14 56	7 32
25	7 50	5 40	3 57	sets	18 22	23 1	6 39	12 31	11 43

The Lunations.

First quarter the 4th day, at 34 minutes past 11 morning.
Full Moon the 12th day, at 8 minutes past 2 afternoon.
Last quarter the 20th day, at 50 minutes past 11 morning.
New Moon the 27th day, at 50 minutes past 3 morning.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock aft. ☉
1	All Saints	7 12	4 48	14 s 33	27 s 47	7 a 9	3 a 50	16′ 14″
2	Pr. Edward born	All Sou	4 46	14 52	27 29	8 16	4 50	16 15
3	24 Sun. a. T. Prs. S.	7 16	4 44	15 11	25 30	9 34	5 47	16 15
4	King W. Ian. [b.	7 18	4 42	15 29	22 11	10 54	6 40	16 14
5	Powder Plot	7 19	4 41	15 47	17 54	morn	7 27	16 12
6	Leonard Fer. b.	7 21	4 39	16 6	12 57	0 12	8 11	16 9
7		7 23	4 37	16 23	7 35	1 27	8 52	16 6
8	Prs. Au. Sop. b.	7 24	4 36	16 41	2 3	2 38	9 32	16 1
9	Lord Mayor's d.	7 26	4 34	16 58	3 n 32	3 49	10 12	15 56
10	25 Sun. a. Trin.	7 28	4 32	17 15	8 57	4 59	10 52	15 50
11	St. Martin	7 30	4 30	17 32	14 3	6 11	11 34	15 43
12	Cam. T. div. m.	7 31	4 29	17 48	18 38	☽ rises	morn	15 36
13	Britius	7 33	4 27	18 4	22 31	4 a 40	0 18	15 27
14		7 34	4 26	18 20	25 29	5 8	1 4	15 18
15	Machutus	7 36	4 24	18 35	27 19	5 46	1 54	15 8
16		7 37	4 23	18 50	27 51	6 36	2 46	14 57
17	26 Sun. af. Tri.	7 39	4 21	19 5	27 1	7 41	3 39	14 45
18	[Hugh	7 40	4 20	19 19	24 48	8 54	4 32	14 32
19		7 42	4 18	19 34	21 18	10 13	5 23	14 19
20	Edmund	7 43	4 17	19 47	16 30	11 36	6 13	14 4
21		7 45	4 15	20 1	11 5	morn	7 2	13 49
22	Cecilia. O. Mart.	7 46	4 14	20 14	4 48	0 59	7 50	13 33
23	Clement	7 47	4 13	20 26	1 s 53	2 23	8 38	13 16
24	27 Sun. af. Tri.	7 49	4 11	20 38	8 39	3 51	9 28	12 58
25	Duke of Glo. b.	Cather.	4 10	20 50	15 4	5 21	10 21	12 40
26		7 51	4 9	21 2	20 39	6 55	11 18	12 20
27		7 52	4 8	21 13	24 51	☽ sets	0 a 20	12 0
28	Mic. Term ends	7 54	4 6	21 23	27 18	4 a 45	1 24	11 40
29		7 55	4 5	21 34	27 46	5 49	2 28	11 18
30	St. Andrew	7 56	4 4	21 43	26 21	7 6	3 29	10 56

M D	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	6 57	9 36	3♑32	22♊27	13♎42	9♐ 6	18♐13	22♍45	10 a 38
7	7 20	9 14	3 45	22 58	16 28	15 7	27 51	9♎27	10 14
13	7 39	8 55	3 59	23 29	19 15	21 9	7♑30	25 58	9 50
19	7 58	8 36	4 12	24 ☌	22 3	27 13	17 10	13♐ 4	9 26
25	8 14	8 20	4 25	24 31	24 52	3♑17	26 52	1♒35	9 ▸

M D	Daylig. begins	Daylig. ends	Durat. twilig.	Pl. ☽'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	5 17	6 43	1 59	6♉27	0 n 30	0 s 26	0 n 40	3 s 39	0 s 16
7	5 25	6 35	2 30	6 7	0 31	0 26	0 37	2 11	0 55
13	5 34	6 26	2 10	5 48	0 32	0 25	0 35	0 52	1 30
19	5 41	6 12	2 51	5 29	0 33	0 25	0 32	0 n 15	1 59
25	5 48	6 12	2 32	5 10	0 34	0 24	0 29	1 10	2 18

M D	☉'s longitude	☽'s long.	☽'s latitude	♄'s long.	♅'s long.	♂'s long.	♀'s long.	☿'s long.
1	♏ 9 5 35	1♑27	4 s 20	9♌48	1♍16	23♎17	16♎43	13♏24
2	10 5 46	15 31	4 57	9 50	1 13	23 56	16 30	15 0
F	11 5 58	29 8	5 15	9 52	1 10	24 36	16 19	16 35
4	12 6 12	12♒19	5 17	9 54	1 7	25 16	16 10	18 9
5	13 6 27	25 8	5 2	9 56	1 4	25 56	16 4	19 43
6	14 6 44	7♓37	4 33	9 58	1 1	26 36	16D 1	21 17
7	15 7 2	19 50	3 53	9 59	0 57	27 16	16 3	22 50
8	16 7 22	1♈52	3 2	10 1	0 53	27 56	16 7	24 23
9	17 7 43	13 46	2 4	10 2	0 49	28 36	16 12	25 56
F	18 8 5	25 35	1 2	10 3	0 45	29 16	16 18	27 29
11	19 8 29	7♉23	0 n 3	10 4	0 41	29 56	16 26	29 1
12	20 8 55	19 11	1 8	10 5	0 37	0♏37	16 36	0♐33
13	21 9 22	1♊ 2	2 11	10 6	0 32	1 17	16 48	2 5
14	22 9 51	12 58	3 7	10 7	0 27	1 57	17 3	3 36
15	23 10 22	25 1	3 56	10 8	0 22	2 37	17 20	5 7
16	24 10 54	7♋12	4 35	10 9	0 16	3 17	17 39	6 38
F	25 11 29	19 35	5 2	10 9	0 11	3 58	18 0	8 9
18	26 12 5	2♌12	5 15	10 10	0 6	4 38	18 24	9 39
19	27 12 43	15 5	5 12	10 10	0 0	5 18	18 50	11 9
20	28 13 23	28 18	4 53	10 11	29♊54	5 59	19 17	12 39
21	29 14 4	11♍53	4 18	10 R11	29 48	6 39	19 46	14 8
22	♐ 0 14 48	25 51	3 26	10 11	29 42	7 20	20 16	15 37
23	1 15 33	10♎12	2 20	10 10	29 35	8 0	20 47	17 5
F	2 16 20	24 53	1 4	10 10	29 29	8 41	21 20	18 33
25	3 17 8	9♏51	0 s 18	10 9	29 22	9 21	21 55	20 1
26	4 17 58	24 59	1 39	10 9	29 16	10 2	22 31	21 28
27	5 18 48	10♐ 6	2 54	10 8	29 9	10 42	23 8	22 54
28	6 19 41	25 4	3 55	10 7	29 2	11 23	23 46	24 19
29	7 20 34	9♑44	4 40	10 6	28 55	12 3	24 26	25 44
30	8 21 28	24 0	5 6	10 5	28 48	12 44	25 8	27 7

M D	♅ rises	♂ rises	♀ rises	☿ sets	☽'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	7 a 22	5 m 39	5 m 16	4 a 56	18 n 18	23 n 2	8 s 26	9 s 57	16 s 8
7	6 55	5 37	4 51	4 49	18 16	23 2	9 56	8 20	19 23
13	6 29	5 36	4 28	4 46	18 15	23 3	11 24	7 25	22 5
19	6 3	5 35	4 8	4 45	18 15	23 3	12 49	7 9	24 6
25	5 36	5 34	3 51	4 48	18 16	23 4	14 10	7 [illegible]	25 24

The Lunations.

First quarter the 4th day, at 26 minutes past 3 morning.
Full Moon the 12th day, at 55 minutes past 8 morning.
Last quarter the 19th day, at 41 minutes past 10 night.
New Moon the 26th day, at 54 minutes past 2 afternoon.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock aft. ☉
F	Advent Sunday	7 57	4 3	21 s 53	23 s 22	8 a 27	4 a 23	10 34
2		7 58	4 2	22 2	19 15	9 49	5 16	10 10
3		7 59	4 1	22 10	14 21	11 7	6 1	9 46
4		8 0	4 0	22 19	9 0	morn	6 44	9 22
5		8 1	3 59	22 26	3 27	0 22	7 24	8 57
6	Nicholas	8 2	3 58	22 34	2 n 9	1 32	8 3	8 31
7		8 2	3 58	22 40	7 37	2 41	8 42	8 5
F	2 Sun. in Adve. [Concept.	8 3	3 57	22 47	12 47	3 49	9 23	7 39
9		8 4	3 56	22 53	17 31	5 0	10 6	7 12
10		8 4	3 56	22 58	21 35	6 12	10 51	6 45
11		8 5	3 55	23 3	24 48	7 23	11 40	6 17
12		8 5	3 55	23 8	26 55	☽ rises	morn	5 49
13	Lucy	8 6	3 54	23 12	27 46	4 a 22	0 32	5 21
14		8 6	3 54	23 16	27 14	5 22	1 25	4 52
F	3 Su. in Advent	8 7	3 53	23 19	25 17	6 35	2 18	4 23
16	Ca. T. e. O. Sap.	8 7	3 53	23 21	22 2	7 53	3 10	3 54
17	Oxford Term e.	8 7	3 53	23 24	17 40	9 12	4 0	3 24
18	Ember Week	8 8	3 52	23 25	12 22	10 33	4 48	2 54
19		8 8	3 52	23 27	6 24	11 54	5 34	2 25
20		8 8	3 52	23 28	0 0	morn	6 21	1 55
21	St. Thomas	Shor. d.	3 52	23 28	6 s 32	1 16	7 8	1 25
F	4 Sun. in Adve.	8 8	3 52	23 28	12 52	2 40	7 57	0 54
23		8 8	3 52	23 27	18 36	4 10	8 50	0 24
24		8 8	3 52	23 26	23 17	5 43	9 47	ob. 6
25	Christmas Day	8 8	3 52	23 25	26 26	7 11	10 49	0 36
26	St. Stephen	8 7	3 53	23 23	27 45	☽ sets	11 53	1 6
27	St. John Ev.	8 7	3 53	23 20	27 6	4 a 26	0 a 57	1 36
28	Innocents	8 7	3 53	23 17	24 40	5 45	1 56	2 6
F	1 Sun. af. Chri.	8 6	3 54	23 14	20 51	7 13	2 51	2 35
30		8 6	3 54	23 10	16 4	8 32	3 40	3 4
31	Silvester	8 5	3 55	23 6	10 42	9 49	4 25	3 33

M D	Day decreas.	Lengt. of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	8 28	8 6	4 ♌ 38	25 ♊ 2	27 ♎ 43	9 ♑ 22	6 ♐ 34	22 ♒ 28	8 a 34
7	8 38	7 56	4 52	25 33	0 ♏ 35	15 28	16 18	16 ♓ 57	8 8
13	8 46	7 48	5 5	26 3	3 29	21 34	26 2	16 ♈ 17	7 41
19	8 50	7 44	5 18	26 34	6 24	27 41	5 ♑ 47	20 ♉ 50	7 13
25	8 50	7 44	5 31	27 5	9 20	3 ♐ 48	15 33	28 29	6 43

M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☽'s node	☿'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	♄'s latitude
1	5 54	6 6	2 18	4 ♉ 51	0 n 35	0 s 24	0 n 26	1 n 53	2 s 23
7	5 57	6 3	2 10	4 32	0 36	0 23	0 22	2 26	2 7
13	5 59	6 1	2 12	4 13	0 37	0 22	0 19	2 50	1 18
19	6 1	5 59	2 11	3 54	0 38	0 21	0 15	3 6	0 n 15
25	6 1	5 59	2 11	3 35	0 39	0 20	0 12	3 14	2 10

M D	☉'s longitude	☽'s long.	☽'s latitude	♄'s long.	♃'s long.	♂'s long.	♀'s long.	♄'s long.
F	♐ 9 22 24	7 ♒ 47	5 s 13	10 ♌ 4	28 ♊ 41	13 ♍ 25	25 ♎ 51	28 ♐ 29
2	10 23 20	21 6	5 2	10 3	28 34	14 6	26 35	29 50
3	11 24 17	3 ♓ 59	4 37	10 1	28 26	14 47	27 20	1 ♑ 9
4	12 25 14	16 29	3 59	10 0	28 19	15 27	28 5	2 26
5	13 26 13	28 41	3 11	9 58	28 11	16 8	28 51	3 41
6	14 27 11	10 ♈ 39	2 15	9 57	28 3	16 48	29 38	4 53
7	15 28 11	22 30	1 14	9 55	27 55	17 29	0 ♍ 26	6 1
F	16 29 11	4 ♉ 16	0 11	9 53	27 47	18 10	1 15	7 6
9	17 30 12	16 4	0 n 53	9 51	27 39	18 51	2 5	8 7
10	18 31 13	27 55	1 55	9 49	27 31	19 32	2 56	9 5
11	19 32 15	9 ♊ 53	2 52	9 47	27 23	20 13	3 48	9 57
12	20 33 17	21 59	3 42	9 45	27 15	20 54	4 40	10 42
13	21 34 21	4 ♋ 16	4 23	9 42	27 7	21 35	5 33	11 21
14	22 35 25	16 43	4 51	9 40	26 59	22 16	6 27	11 52
F	23 36 30	29 21	5 6	9 37	26 51	22 57	7 22	12 14
16	24 37 36	12 ♌ 11	5 5	9 35	26 43	23 38	8 17	12 26
17	25 38 42	25 14	4 49	9 32	26 35	24 20	9 13	12R 28
18	26 39 50	8 ♍ 30	4 18	9 29	26 27	25 1	10 9	12 19
19	27 40 58	22 2	3 31	9 26	26 18	25 42	11 6	11 59
20	28 42 7	5 ♎ 40	2 32	9 23	26 10	26 23	12 3	11 27
21	29 43 17	19 54	1 22	9 20	26 2	27 5	13 1	10 43
F	♑ 0 44 28	4 ♏ 14	0 5	9 17	25 54	27 46	14 0	9 48
23	1 45 39	18 49	1 s 12	9 13	25 47	28 28	14 59	8 44
24	2 46 51	3 ♐ 35	2 26	9 10	25 38	29 9	15 59	7 32
25	3 48 3	18 24	3 30	9 6	25 30	29 51	16 59	6 13
26	4 49 16	3 ♑ 10	4 19	9 3	25 22	0 ♐ 33	17 59	4 49
27	5 50 28	17 44	4 51	8 59	25 14	1 14	19 0	3 28
28	6 51 41	1 ♒ 59	5 4	8 56	25 6	1 56	20 1	2 10
F	7 52 54	15 50	4 58	8 52	24 58	2 37	21 3	0 57
30	8 54 7	29 14	4 36	8 49	24 50	3 19	22 5	29 ♐ 49
31	9 55 19	12 ♓ 11	4 0	8 45	24 42	4 0	23 7	28 47

M D	♃ rises	♂ rises	♀ rises	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	5 a 7	5 m 32	3 m 46	4 a 56	18 n 19	23 n 4	15 s 29	8 s 14	25 s 51
7	4 39	5 30	3 43	5 1	18 22	23 4	16 43	9 21	25 27
13	4 10	5 27	3 44	5 12	18 26	23 4	17 53	10 43	24 17
19	3 39	5 23	3 47	4 59	18 31	23 4	18 58	12 14	22 41
25	3 7	5 19	3 53	4 18	18 38	23 3	19 57	13 49	21 10

Dates Months	Days	Heliocentric longitude	Heliocentric latitude	Geocentric longitude	Geocentric latitude	Declin.	South.
		° '	° '	° '	° '	° '	h m
January	1	19 ♍ 40	0 n 46	22 ♍ 36	0 n 47	3 n 39	16 42
	11	19 48	0 46	22 31	0 47	3 42	15 58
	21	19 56	0 46	22 20	0 48	3 46	15 15
February	1	20 4	0 46	22 2	0 48	3 54	14 29
	11	20 12	0 46	21 42	0 48	4 2	13 48
	21	20 20	0 46	21 19	0 48	4 11	13 8
March	1	20 26	0 46	20 59	0 48	4 19	12 36
	11	20 34	0 46	20 30	0 48	4 30	11 58
	21	20 42	0 46	20 6	0 48	4 40	11 20
April	1	20 51	0 46	19 39	0 48	4 50	10 38
	11	20 58	0 46	19 17	0 48	4 59	10 1
	21	21 6	0 46	18 58	0 48	5 6	9 22
May	1	21 14	0 46	18 43	0 47	5 12	8 44
	11	21 22	0 46	18 33	0 47	5 15	8 5
	21	21 30	0 46	18 28	0 47	5 17	7 25
June	1	21 38	0 46	18 28	0 46	5 10	6 40
	11	21 46	0 46	18 34	0 46	5 14	6 0
	21	21 54	0 46	18 45	0 45	5 9	5 19
July	1	22 2	0 46	19 2	0 45	5 2	4 39
	11	22 10	0 46	19 23	0 44	4 54	3 59
	21	22 18	0 46	19 48	0 44	4 43	3 20
August	1	22 26	0 46	20 20	0 44	4 30	2 39
	11	22 34	0 46	20 52	0 44	4 18	2 3
	21	22 42	0 46	21 27	0 43	4 3	1 27
September	1	22 50	0 46	22 7	0 43	3 47	0 50
	11	22 58	0 46	22 45	0 43	3 32	0 16
	21	23 6	0 46	23 23	0 43	3 17	23 39
October	1	23 14	0 45	24 1	0 43	3 3	23 6
	11	23 22	0 45	24 37	0 43	2 48	22 31
	21	23 30	0 45	25 12	0 43	2 34	21 56
November	1	23 38	0 46	25 47	0 44	2 21	21 16
	11	23 46	0 46	26 15	0 44	2 10	20 37
	21	23 54	0 46	26 40	0 45	2 1	19 57
December	1	24 2	0 45	26 59	0 45	1 53	19 16
	11	24 10	0 45	27 14	0 45	1 47	18 33
	21	24 17	0 45	27 23	0 45	1 44	17 50

Time of High-Water at LONDON in the morning and afternoon of every day in the year.

Mo. Days	JANUARY morn. h m	JANUARY aftern. h m	FEBRUARY morn. h m	FEBRUARY aftern. h m	MARCH morn. h m	MARCH aftern. h m	APRIL morn. h m	APRIL aftern. h m	Mo. Days
1	9 27	10 0	11 15	11 49	9 50	10 25	11 44		1
2	10 34	11 9		0 23	11 0	11 33	0 9	0 32	2
3	11 45		0 53	1 22		0 6	0 54	1 16	3
4	0 13	0 48	1 58	2 14	0 33	0 59	1 37	1 57	4
5	1 18	1 47	2 35	2 55	1 23	1 46	2 16	2 36	5
6	2 15	2 42	3 1	3 25	2 8	2 29	2 51	3 5	6
7	3 2	3 20	3 38	3 51	2 45	3 0	3 19	3 33	7
8	3 36	3 51	4 4	4 17	3 14	3 27	3 47	4 0	8
9	4 7	4 22	4 32	4 47	3 39	3 51	4 17	4 35	9
10	4 38	4 55	5 2	5 18	4 4	4 18	4 54	5 13	10
11	5 11	5 27	5 36	5 55	4 34	4 51	5 37	6 2	11
12	5 45	6 4	6 17	6 40	5 8	5 26	6 31	7 0	12
13	6 24	6 45	7 6	7 32	5 49	6 13	7 33	8 6	13
14	7 7	7 29	8 4	8 36	6 41	7 10	8 42	9 18	14
15	7 54	8 22	9 13	9 50	7 42	8 15	9 54	10 31	15
16	8 52	9 22	10 27	11 5	8 53	9 32	11 5	11 35	16
17	9 54	10 28	11 42		10 11	10 50		0 9	17
18	11 2	11 37	0 19	0 51	11 26		0 39	1 7	18
19		0 10	1 23	1 52	0 2	0 32	1 34	2 1	19
20	0 43	1 14	2 21	2 43	1 2	1 30	2 28	2 49	20
21	1 45	2 14	3 4	3 21	1 57	2 22	3 5	3 28	21
22	2 42	3 3	3 38	3 54	2 47	3 5	3 47	4 7	22
23	3 22	3 40	4 10	4 29	3 23	3 40	4 28	4 51	23
24	3 56	4 14	4 49	5 10	3 57	4 16	5 14	5 41	24
25	4 32	4 51	5 31	5 52	4 36	4 58	6 8	6 37	25
26	5 10	5 31	6 24	6 53	5 20	5 47	7 7	7 38	26
27	5 53	6 19	7 23	7 58	6 15	6 46	8 9	8 40	27
28	6 45	7 13	8 34	9 12	7 17	7 52	9 11	9 41	28
29	7 41	8 9			8 28	9 4	10 11	10 38	29
30	8 49	8 53			9 39	10 12	11 5	11 29	30
31	10 3	10 39			10 43	11 15			31

This Table may serve the following Places, by adding

	h	m
For Tinmouth Haven, Hartle-pool, *and* Amsterdam	0	30
Breft	1	0
Scilly	1	45
Mount's Bay	1	55
Bridlington Pier *and* Humber	2	0

Time of High-Water at London in the morning and afternoon of every day in the year.

M. Days	May morn. h	m	aftern. h	m	June morn. h	m	aftern. h	m	July morn. h	m	aftern. h	m	August morn h	m	aftern. h	m	Mo. Days
1	11	54			0	15	0	38	0	23	0	54	1	59	2	28	1
2	0	16	0	39	1	3	1	27	1	22	1	50	2	49	3	8	2
3	1	0	1	21	1	52	2	17	2	17	2	44	3	25	3	42	3
4	1	42	2	3	2	39	3	6	3	4	3	23	3	58	4	13	4
5	2	24	2	44	3	18	3	35	3	40	3	57	4	32	4	51	5
6	3	0	3	16	3	52	4	10	4	15	4	34	5	11	5	30	6
7	3	32	3	48	4	32	4	53	4	53	5	12	5	54	6	19	7
8	4	6	4	23	5	14	5	35	5	34	5	55	6	56	7	14	8
9	4	44	5	6	6	0	6	26	6	19	6	44	7	47	8	22	9
10	5	29	5	57	6	52	7	18	7	11	7	38	9	0	9	39	10
11	6	20	6	49	7	47	8	16	8	10	8	42	10	18	10	56	11
12	7	19	7	49	8	48	9	21	9	18	9	55	11	34			12
13	8	22	8	54	9	54	10	28	10	31	11	7	0	11	0	41	13
14	9	28	10	2	11	1	11	35	11	44			1	11	1	39	14
15	10	34	11	6			0	8	0	21	0	54	2	6	2	28	15
16	11	38			0	4	1	12	1	2	1	55	2	50	3	6	16
17	0	10	0	35	1	42	2	12	2	25	2	47	3	21	3	34	17
18	1	7	1	36	2	42	3	4	3	8	3	25	3	47	4	0	18
19	2	5	2	31	3	24	3	42	3	41	3	55	4	12	4	27	19
20	2	57	3	17	4	0	4	20	4	0	4	25	4	43	4	58	20
21	3	37	3	57	4	40	4	59	4	44	5	0	5	14	5	32	21
22	4	16	4	39	5	17	5	37	5	15	5	32	5	51	6	14	22
23	5	2	5	25	5	57	6	18	5	50	6	10	6	37	7	3	23
24	5	48	6	14	6	40	7	2	6	31	6	52	7	29	8	1	24
25	6	40	7	4	7	22	7	47	7	14	7	40	8	34	9	11	25
26	7	29	7	56	8	12	8	37	8	6	8	35	9	48	10	24	26
27	8	23	8	50	9	4	9	31	9	5	9	38	10	59	11	35	27
28	9	18	9	44	9	59	10	27	10	12	10	46			0	11	28
29	10	9	10	34	10	56	11	26	11	20	11	54	0	42	1	13	29
30	10	59	11	25	11	57					0	28	1	41	2	8	30
31	11	52							0	59	1	29	2	31	2	53	31

Adding	h	m
For Fowey, Loo *and* Plymouth — — — —	3	10
Dartmouth, Harborough *and* Hull — —	3	30
Torbay *and* Tinmouth — — — — —	3	40
Exmouth, Topsham *and* Lime — — —	3	50
Briſtol and Weymouth — — — — —	4	20
Bridgewater *and* Texel — — — — —	4	40
Portland and Martflew — — — — —	5	50

Time of High-Water at London in the morning and afternoon of every day in the year.

Mo. Days	September morn. h	m	aftern. h	m	October morn. h	m	aftern. h	m	November morn. h	m	aftern. h	m	December morn. h	m	aftern. h	m	Mo. Days
1	3	11	3	28	3	31	3	49	4	44	5	8	5	15	5	37	1
2	3	44	3	59	4	8	4	27	5	34	6	1	6	2	6	28	2
3	4	18	4	36	4	50	5	12	6	31	7	1	6	52	7	16	3
4	4	56	5	17	5	40	6	7	7	32	8	3	7	42	8	8	4
5	5	42	6	8	6	40	7	12	8	34	9	4	8	34	9	0	5
6	6	39	7	10	7	47	8	22	9	34	10	3	9	26	9	53	6
7	7	45	8	21	8	58	9	35	10	30	10	56	10	18	10	43	7
8	9	0	9	41	10	8	10	40	11	22	11	48	11	9	11	35	8
9	10	18	10	54	11	10	11	39			0	11	11	59			9
10	11	28					0	5	0	33	0	55	0	26	0	51	10
11	0	2	0	29	0	30	0	52	1	16	1	38	1	15	1	40	11
12	0	55	1	19	1	14	1	34	1	59	2	19	2	5	2	28	12
13	1	43	2	5	1	54	2	14	2	40	2	57	2	51	3	9	13
14	2	27	2	43	2	34	2	50	3	13	3	29	3	27	3	44	14
15	2	59	3	13	3	5	3	19	3	45	4	2	4	0	4	19	15
16	3	26	3	39	3	32	3	46	4	19	4	39	4	38	4	57	16
17	3	51	4	5	4	0	4	17	5	0	5	22	5	16	5	38	17
18	4	18	4	34	4	35	4	54	5	44	6	9	5	59	6	23	18
19	4	51	5	8	5	14	5	37	6	35	7	2	6	47	7	13	19
20	5	27	5	51	6	1	6	29	7	29	8	0	7	39	8	8	20
21	6	15	6	43	6	58	7	29	8	32	9	3	8	38	9	11	21
22	7	12	7	44	8	0	8	34	9	35	10	6	9	45	10	19	22
23	8	16	8	53	9	9	9	43	10	37	11	9	10	53	11	29	23
24	9	31	10	7	10	18	10	50	11	42					0	6	24
25	10	43	11	19	11	22	11	53	0	13	0	43	0	40	1	13	25
26	11	54					0	24	1	13	1	42	1	43	2	13	26
27	0	24	0	53	0	52	1	19	2	12	2	43	2	36	3	8	27
28	1	20	1	46	1	46	2	13	3	4	3	26	3	28	3	47	28
29	2	11	2	36	2	36	2	59	3	46	4	6	4	5	4	23	29
30	2	55	3	14	3	19	3	38	4	30	4	52	4	42	5	1	30
31					3	58	4	19					5	19	5	37	31

Subtracting	h	m
For Leigh, Maes, *and* Gouries Gut — — — —	0	5
Gravesend, Rochester, *and* Rammekins — — —	1	20
Buoy of the Nore *and* Flushing — — — — —	1	30
Portsmouth, Ostend, Shoe-Becon, *and* Red-Sand — —	2	0
Harwich, Dover, Spithead, *and* Calais — — — —	3	0
Gunfleet, Hastings, Shoreham, Orfordness, *and* Dieppe —	4	0
Yarmouth Pier *and* Needle — — — — — —	4	40
St. Helen's *and* Havre-de-Grace — — — — —	5	30

The Eclipses of Jupiter's

JANUARY				FEBRUARY				MARCH				APRIL			
Emersions				Emersions				Emersions				Emersions			
d	h	m	s	d	h	m	s	d	h	m	s	d	h	m	s
2	2	55	15	1	4	57	10	1	12	41	56	2*	9	31	53
3	21	23	18	2	23	25	55	3*	7	11	17	4	4	1	19
5	15	51	22	4	17	54	43	5	1	40	40	5	22	30	14
7*	10	19	30	6	12	23	32	6	20	10	3	7	17	0	10
9	4	47	37	8*	6	52	24	8	14	39	27	9	11	29	32
10	23	15	51	10	1	21	19	10*	9	8	51	11	5	58	59
12	17	44	0	11	19	50	18	12	3	38	16	13	0	28	18
14*	12	12	19	13	14	19	19	13	22	7	44	14	18	57	42
16*	6	40	36	15*	8	48	21	15	16	37	10	16	13	26	59
18	1	8	56	17	3	17	27	17	11	6	35	18*	7	56	17
19	19	37	19	18	21	46	33	19	5	36	6	20	2	25	34
21	14	5	43	20	16	15	46	21	0	5	32	21	20	54	50
23*	8	34	11	22*	10	44	53	22	18	35	4	23	15	24	1
25	3	2	42	24	5	14	11	24	13	4	31	25	9	53	15
26	21	31	15	25	23	43	21	26*	7	34	3	27	4	22	22
28	15	59	51	27	18	12	39	28	2	3	28	28	22	51	31
30*	10	28	29					29	20	32	59	30	17	20	38

MAY	JUNE	JULY	AUGUST
		Immersions	Immersions
		1 13 50 46	2 10 22 31
		3 8 19 3	4 4 51 9
		5 2 47 20	5 23 19 50
The eclipses		6 21 15 38	7 17 48 33
of Jupiter's		8 15 43 58	9 12 17 13
Satellites are		10 10 12 17	11 6 45 57
not visible this		12 4 40 35	13 1 14 46
Month, and		13 23 9 0	14 19 43 30
the next, Ju-		15 17 37 23	16* 14 12 21
piter being too		17 12 5 47	18 8 41 12
near the Sun.		19 6 34 12	20 3 10 2
		21 1 2 42	21 21 38 55
		22 19 31 9	23 16 7 50
		24* 13 59 40	25 10 36 43
		26 8 28 12	27 5 5 39
		28 2 56 46	28 23 34 35
		29 21 25 18	30 18 3 32
		31 15 53 55	

first Satellite for the Year 1799.

September				October				November				December			
Immersions				Immersions				Immersions				Immersions			
d	h	m	s	d	h	m	s	d	h	m	s	d	h	m	s
1*	12	32	29	1*	14	45	7	2*	11	21	15	2*	13	17	56
3	7	1	28	3	9	14	1	4	5	49	37	4*	7	45	42
5	1	30	26	5	3	42	55	6	0	17	54	6	2	13	25
6	19	59	25	6	22	11	48	7	18	46	11	7	20	41	7
8*	14	28	27	8*	16	40	36	9*	13	14	22	9*	15	8	49
10	8	57	25	10*	11	9	26	11	7	42	36	11*	9	36	31
12	3	26	27	12	5	38	13	13	2	10	43	13	4	4	11
13	21	55	23	14	0	7	0	14	20	38	51	14	22	31	51
15*	16	24	26	15	18	35	45	16*	15	6	54	16*	16	59	31
17	10	53	25	17*	13	4	29	18*	9	34	58	18*	13	38	20
19	5	22	25	19	7	33	9	20	4	2	58	20*	8	6	0
20	23	51	24	21	2	1	47	21	22	30	56	22	2	33	42
22	18	20	23	22	20	30	22	23*	16	58	50	23	21	1	22
24*	12	49	22	24*	14	58	57	25*	11	26	43	25*	15	29	1
26	7	18	19	26*	9	27	29	27	5	54	35	27*	9	56	46
28	7	47	17	28	3	56	1	29	0	22	23	29	2	24	29
29	20	16	12	29	22	24	27	30*	18	50	12	30	22	52	15
				31*	16	52	52								

The Times of the Eclipses contained in this Table are adapted to the Meridian of the Royal Observatory at Greenwich, and afford an excellent Method to discover the Longitude, or Difference of Meridians, between that and any other Place; which I shall illustrate by an EXAMPLE:

Suppose on the 29th Day of September of this Year, the Time of the Immersion of Jupiter's first Satellite be observed (by a Telescope) in an unknown Meridian, to happen at 22 h. 4 min. 32 sec.; I find by the Table, that the Time of this Immersion will happen at the British Observatory, at 20 h. 16 min. 12 sec. the same day: The Difference of the Times is 1 hour 48 min. 20 sec. which being converted into Degrees and Minutes of the Equator, will make 27 deg. 5 min. the Longitude of the Place of Observation, to the East, because the Time is more than that at the British Observatory.

N. B. Those marked with an Asterisk are visible at Greenwich.

Speculum Phænomenorum

January

1	☿	ſtationary
5	☌	☾ ♀ 12h.
6	☌	☾ ☿ 11h.
10	♃	ſtationary
10	☌	☉ ☿ 20h.
12	☍	☉ ♄ 7h
12	☾	in apoge
13	☌	☾ ♂ 4h.
15	☌	☾ ♃ 14h. occul.
19	☉	in ♒ 11h. 8m.
20	☌	☾ ♄ 13h.
22	☿	ſtationary
23	♀	in aphelion
24	☾	in perige

February

1	♄	in ♌
2	☌	☾ ☿ 4h.
4	☿	elong. max.
5	☌	☾ ♀ 3h.
5	□	☉ ♃ 21h.
9	☾	in apoge
11	☌	☾ ♂ oh.
12	☌	☾ ♃ 1h.
16	☌	☾ ♄ 20h.
18	☉	in ♓ 1h. 56m.
21	☾	in perige
28	♂	in ♌

March

4	☌	☾ ☿ 19h.
7	☌	☾ ♀ 12h.
8	☾	in apoge
10	☍	☉ ♅ 14h.
11	☌	☾ ♃ 15h.
11	☌	☾ ♂ 22h.
16	☌	☾ ♄ 4h.
20	☉	in ♈ 2h. 17m.
21	♄	ſtationary
21	☌	☉ ☿ 2h.
21	☾	in perige

April

5	☾	in apoge
6	☌	☾ ☿ 7h.
7	☌	☾ ♀ oh.
8	☌	☾ ♃ 8h.
8	□	☉ ♄ 22h.
9	☌	☾ ♂ 14h.
12	☌	☾ ♄ 13h.
14	☿	in ♌
16	☿	elong. max.
19	☉	in ♉ 14h. 56m.
19	☾	in perige
26	☿	ſtationary

May

1	☾	in apoge
4	☌	☾ ☿ 20h.
4	♀	in ♌
6	☌	☾ ♃ 2h.
6	♄	in ♌
7	☌	☾ ♀ 6h.
7	☿	tranſits ☉
8	☌	☾ ♂ 8h.
9	☌	☾ ♄ 22h.
11	☿	in ♌
17	☾	in perige
20	☉	in ♊ 15h. 25m.
20	☿	ſtationary
26	♅	ſtationary
28	☿	in ♌
29	☾	in apoge
30	☌	☉ ♃ oh.

June

1	☌	☾ ☿ oh.
2	☌	☾ ♃ 21h.
3	☿	elong. max.
5	☌	☾ ♂ 22h.
6	☌	☾ ♀ 8h.
6	☌	☾ ♄ 9h.
9	□	☉ ♅ oh.
14	☾	in perige
20	♀	in perihelion
20	☿	in perihelion
21	☉	in ♋ oh. 3m.
26	☾	in apoge
30	☌	☾ ♃ 16h.

ad Annum 1799.

July

2 ☌ ☾ ☿ 11h.
3 ☌ ☾ ♄ 20h.
4 ☌ ☉ ☿ 9h.
4 ☌ ☾ ♂ 13h.
6 ☌ ☾ ♀ 2h.
10 ♂ in aphelion
11 ☾ in perige
22 ☌ ☉ ♄ 5h.
22 ☉ in ♌ 10h. 53m.
24 ☾ in apoge
28 ☌ ☾ ♃ 14h.
31 ☌ ☾ ♄ 11h.

August

2 ☌ ☾ ♂ 4h.
3 ☌ ☾ ☿ 0h.
4 ☌ ☾ ♀ 13h.
5 ☾ in perige
8 ♀ elong. max.
14 ☿ elong. max.
20 ☾ in apoge
22 ☉ in ♍ 17h. 17m.
25 ☌ ☾ ♃ 7h.
27 ☿ ſtationary
28 ☌ ☾ ♄ 3h.
30 ☌ ☾ ♂ 20h.
31 ☌ ☾ ☿ 17h.

September

1 ☾ in perige
2 ☌ ☾ ♀ 13h.
10 ☌ ☉ ☿ 6h.
15 ☌ ☉ ♂ 0h.
15 ☌ ☉ ♅ 11h.
17 ☾ in apoge
20 ☿ ſtationary
21 ☌ ☾ ♃ 22h.
22 ☉ in ♎ 13h. 49m.
23 □ ☉ ♃ 0h.
24 ☌ ☾ ♄ 18h.
26 ♀ ſtationary
26 ☿ elong. max.
27 ☌ ☾ ☿ 12h.
28 ☌ ☾ ♂ 12h.
29 ☾ in perige
30 ☌ ☾ ♀ 12h.

October

14 ☾ in apoge
15 ☌ ☉ ♄ 19h.
19 ☌ ☾ ♃ 7h.
19 ♃ ſtationary
22 ☌ ☾ ♄ 7h.
22 ☉ in ♏ 21h. 51m.
25 ☌ ☉ ☿ 1h.
27 ☌ ☾ ♀ 3h.
27 ☌ ☾ ♂ 6h.
28 ☌ ☾ ☿ 9h.
28 ☉ eclipſed inviſ.
28 ☾ in perige

November

1 □ ☉ ♄ 17h.
1 ☿ in ♐
6 ♀ ſtationary
10 ☾ in apoge
15 ☌ ☾ ♃ 11h.
18 ☌ ☾ ♄ 15h.
21 ☉ in ♐ 18h. 9m.
21 ♄ ſtationary
21 ☿ in aphelion
23 ☌ ☾ ♀ 16h. occul.
25 ☌ ☾ ♂ 0h.
25 ☾ in perige
27 ☌ ☾ ☿ 23h.

December

8 ☾ in apoge
9 ☿ elong. max.
12 ☌ ☾ ♃ 10h.
15 ☌ ☾ ♄ 19h.
17 ☿ ſtationary
17 ☌ ☉ ♃ 19h.
18 □ ☉ ♅ 16h.
21 ☉ in ♑ 6h. 33m.
22 ☌ ☾ ♀ 17h.
23 ☌ ☾ ♂ 17h.
24 ☾ in perige
25 ♂ in ♐
26 ☌ ☉ ☿ 0h.
26 ☌ ☾ ☿ 2h.
28 ♀ elong. max.

A Table of the Sun's semi-diurnal Arches, or Times

The Sun's Declination North.

Degr.	Lat. 49		Lat. 50		Lat. 51		Lat. 52		Lat. 53		Lat. 54	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	6	8	6	8	6	8	6	9	6	9	6	9
2	6	12	6	13	6	13	6	14	6	14	6	15
3	6	17	6	18	6	18	6	19	6	19	6	29
4	6	22	6	22	6	22	6	24	6	25	6	25
5	6	26	6	27	6	27	6	29	6	30	6	31
6	6	31	6	32	6	33	6	34	6	36	6	37
7	6	36	6	37	6	38	6	40	6	41	6	43
8	6	41	6	42	6	43	6	45	6	47	6	48
9	6	45	6	47	6	48	6	50	6	52	6	54
10	6	50	6	52	6	54	6	56	6	58	7	0
11	6	55	6	57	6	59	7	1	7	3	7	6
12	7	0	7	2	7	4	7	7	7	9	7	12
13	7	5	7	7	7	10	7	12	7	15	7	18
14	7	10	7	13	7	15	7	18	7	21	7	24
15	7	15	7	18	7	21	7	24	7	27	7	31
16	7	21	7	24	7	27	7	30	7	33	7	37
17	7	26	7	29	7	33	7	36	7	40	7	44
18	7	31	7	35	7	38	7	42	7	46	7	51
19	7	37	7	41	7	45	7	49	7	53	7	58
20	7	43	7	47	7	51	7	55	8	0	8	5
21	7	49	7	53	7	57	8	2	8	7	8	12
22	7	55	7	59	8	4	8	9	8	14	8	20
23	8	1	8	6	8	11	8	16	8	22	8	28
24	8	7	8	12	8	18	8	24	8	30	8	36

By these Tables the Times of the Sun's Rising and Setting may be found, in any Part of the Kingdom of *Great-Britain* or *Ireland*, after the following Manner: Where the Latitude of the Place is known, take the Sun's Declination out of the Table, on the Noon of the Day you desire to know the Time of his Rising and Setting; and with it, according as it is either North or South, enter these Tables in the Left-

of his visible half Duration above the Horizon.

The Sun's Declination South.

Degr.	Lat. 49		Lat. 50		Lat. 51		Lat. 52		Lat. 53		Lat. 54	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	5	59	5	59	5	58	5	58	5	58	5	58
2	5	54	5	54	5	53	5	53	5	53	5	53
3	5	49	5	49	5	49	5	48	5	48	5	47
4	5	45	5	44	5	44	5	43	5	42	5	42
5	5	40	5	39	5	39	5	38	5	37	5	36
6	5	35	5	35	5	34	5	33	5	31	5	30
7	5	31	5	30	5	29	5	27	5	26	5	25
8	5	26	5	25	5	23	5	22	5	21	5	19
9	5	21	5	20	5	18	5	17	5	16	5	13
10	5	17	5	15	5	13	5	11	5	10	5	8
11	5	12	5	10	5	8	5	6	5	4	5	2
12	5	7	5	5	5	3	5	0	4	58	4	56
13	5	2	5	0	4	57	4	55	4	52	4	50
14	4	57	4	54	4	52	4	49	4	47	4	44
15	4	52	4	49	4	46	4	44	4	41	4	37
16	4	46	4	43	4	41	4	38	4	34	4	31
17	4	41	4	38	4	35	4	32	4	28	4	23
18	4	36	4	33	4	29	4	26	4	22	4	18
19	4	30	4	27	4	23	4	19	4	15	4	11
20	4	25	4	21	4	17	4	13	4	9	4	4
21	4	19	4	15	4	11	4	6	4	2	3	57
22	4	13	4	9	4	4	4	0	3	55	3	50
23	4	7	4	3	3	58	3	53	3	47	3	42
24	4	1	3	56	3	51	3	46	3	40	3	34

Left-hand Column, under the Word Degrees; then look for the Latitude of the Place in the Top of the Table; and in that Column, againſt the Sun's Declination, will be found the Time of his viſible half Duration above the Horizon, or Time of his Setting, correct by Refraction; then ſubtract the Time of his Setting from 12 Hours, the Remainder will be the Time of his Riſing; double the Time of his Setting, the

A Table of the Sun's semi-diurnal Arches, or Times

The Sun's Declination North.

Degr.	Lat. 55		Lat. 56		Lat. 57		Lat. 58		Lat. 59		Lat. 60	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	6	9	6	10	6	10	6	10	6	11	6	11
2	6	15	6	16	6	16	6	17	6	17	6	18
3	6	21	6	22	6	22	6	23	6	24	6	25
4	6	27	6	28	6	29	6	30	6	31	6	32
5	6	32	6	34	6	35	6	36	6	38	6	39
6	6	38	6	40	6	41	6	43	6	44	6	46
7	6	44	6	46	6	48	6	49	6	51	6	53
8	6	50	6	52	6	54	6	56	6	58	7	1
9	6	56	6	58	7	1	7	3	7	5	7	8
10	7	2	7	5	7	7	7	10	7	13	7	16
11	7	8	7	10	7	14	7	17	7	20	7	23
12	7	15	7	18	7	21	7	34	7	27	7	31
13	7	21	7	24	7	28	7	31	7	35	7	39
14	7	28	7	31	7	35	7	39	7	43	7	47
15	7	34	7	39	7	42	7	46	7	51	7	56
16	7	41	7	45	7	49	7	54	7	59	8	4
17	7	48	7	52	7	57	8	1	8	7	8	13
18	7	55	8	0	8	5	8	10	8	16	8	22
19	8	2	8	7	8	13	8	19	8	25	8	32
20	8	10	8	15	8	21	8	28	8	35	8	42
21	8	18	8	24	8	30	8	37	8	45	8	53
22	8	26	8	32	8	39	8	47	8	55	9	4
23	8	34	8	41	8	49	8	57	9	6	9	16
24	8	43	8	51	8	59	9	8	9	18	9	29

the Sum will be the Length of the Day; and double the Time of his Rising, the Sum will be the Length of the Night. But if the Latitude of the Place, and Declination of the Sun, consist of Degrees and Minutes, then a small Allowance must be made for the Minutes in both Cases, which may be done by a Person of an ordinary Capacity by a mental Proportion only. Thus, to find the Time of the Sun's Rising and Setting at

of his visible half Duration above the Horizon.

The Sun's Declination South.

Degr.	Lat. 55		Lat. 56		Lat. 57		Lat. 58		Lat. 59		Lat. 60	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	5	58	5	58	5	58	5	58	5	57	5	57
2	5	52	5	52	5	52	5	51	5	51	5	50
3	5	47	5	46	5	45	5	45	5	44	5	43
4	5	41	5	40	5	39	5	38	5	37	5	36
5	5	35	5	34	5	33	5	32	5	31	5	29
6	5	29	5	28	5	27	5	25	5	24	5	22
7	5	23	5	22	5	20	5	19	5	17	5	15
8	5	17	5	16	5	14	5	12	5	10	5	8
9	5	12	5	10	5	8	5	5	5	3	5	2
10	5	5	5	3	5	1	4	59	4	56	4	53
11	4	59	4	57	4	54	4	52	4	49	4	46
12	4	53	4	51	4	48	4	45	4	42	4	38
13	4	47	4	44	4	41	4	38	4	34	4	30
14	4	41	4	37	4	34	4	30	4	27	4	23
15	4	34	4	31	4	27	4	23	4	19	4	14
16	4	27	4	24	4	20	4	15	4	11	4	6
17	4	21	4	17	4	12	4	8	4	3	3	57
18	4	14	4	9	4	5	4	0	3	54	3	48
19	4	7	4	2	3	56	3	51	3	45	3	39
20	3	59	3	54	3	49	3	43	3	36	3	29
21	3	52	3	46	3	40	3	34	3	27	3	19
22	3	44	3	38	3	31	3	24	3	17	3	9
23	3	36	3	29	3	23	3	15	3	6	2	57
24	3	27	3	20	3	13	3	5	2	55	2	45

at Aberdeen in Scotland, on the Longeſt Day; the Latitude of that Place is accounted 57 Degr. 7 Min. North, and the Sun's Declination 23 Deg. 28 Min. likewiſe North. By theſe you will find by the Table, that 5 Min. for the Sun's Declination, and 1 Min. for the Latitude of the Place, are both, to be added to 8 Hours 49 Min. the Time belonging to 57 Degr. of Latitude and 23 Degr. of North Declination, and the Sum will be 8 Hours 55 Min. the Time of his apparent Setting at Aberdeen, on the longeſt Day, whoſe Complement to 12 Hours, viz. 3 Hours 5 Min. will be the Time of his Riſing, &c.

A Table of the Sun's Right-Ascension in Time, the greatest

Degr.	♈ h m s	♉ h m s	♊ h m s	♋ h m s	♌ h m s	♍ h m s
0	0 0 0	1 51 37	3 51 15	6 0 0	8 8 45	10 8 23
1	0 3 40	1 55 27	3 55 25	6 4 22	8 12 54	10 12 12
2	0 7 20	1 59 17	3 59 36	6 8 43	8 17 3	10 16 0
3	0 11 0	2 3 8	4 3 48	6 13 5	8 21 11	10 19 48
4	0 14 41	2 6 59	4 8 0	6 17 26	8 25 19	10 23 35
5	0 18 21	2 10 51	4 12 13	6 21 48	8 29 26	10 27 22
6	0 22 2	2 14 44	4 16 26	6 26 9	8 33 31	10 31 8
7	0 25 42	2 18 37	4 20 40	6 30 30	8 37 37	10 34 54
8	0 29 23	2 22 31	4 24 55	6 34 51	8 41 41	10 38 40
9	0 33 4	2 26 25	4 29 10	6 39 11	8 45 45	10 42 25
10	0 36 45	2 30 20	4 33 26	6 43 31	8 49 48	10 46 9
11	0 40 26	2 34 16	4 37 42	6 47 51	8 53 51	10 49 53
12	0 44 8	2 38 13	4 41 59	6 52 11	8 57 52	10 53 37
13	0 47 50	2 42 10	4 46 16	6 56 31	9 1 53	10 57 20
14	0 51 32	2 46 8	4 50 34	7 0 50	9 5 53	11 1 3
15	0 55 14	2 50 7	4 54 52	7 5 8	9 9 53	11 4 46
16	0 58 5	2 54 7	4 59 10	7 9 26	9 13 52	11 8 28
17	1 2 40	2 58 7	5 3 29	7 13 44	9 17 50	11 12 10
18	1 6 23	3 2 8	5 7 49	7 18 1	9 21 47	11 15 52
19	1 10 7	3 6 9	5 12 9	7 22 18	9 25 44	11 19 34
20	1 13 51	3 10 12	5 16 29	7 26 34	9 29 40	11 23 15
21	1 17 35	3 14 15	5 20 49	7 30 50	9 33 35	11 26 56
22	1 21 20	3 18 19	5 25 9	7 35 5	9 37 29	11 30 37
23	1 25 6	3 22 23	5 29 30	7 39 20	9 41 23	11 34 18
24	1 28 52	3 26 29	5 33 51	7 43 34	9 45 16	11 37 58
25	1 32 38	3 30 35	5 38 12	7 47 47	9 49 9	11 41 39
26	1 36 25	3 34 41	5 42 34	7 52 0	9 53 1	11 45 19
27	1 40 12	3 38 49	5 46 55	7 56 12	9 56 52	11 49 0
28	1 44 0	3 42 57	5 51 17	8 0 24	10 0 43	11 52 40
29	1 47 48	3 47 6	5 55 38	8 4 35	10 4 33	11 56 20
30	1 51 37	3 51 15	6 0 0	8 8 45	10 8 23	12 0 0

The time of the southing or meridian transits of the fixed stars in pa. 46, may be found thus. On the noon of the day, preceding the night in which you want to know the time of the southing of any of those stars, find the Sun's place in the Ephemeris, and with it take out of the above table his right ascension in time; this you may do by inspection to a minute, which will be sufficient for your present purpose: Then from the right-ascension of the star in pa. 46, subtract the right-ascension of the Sun, the remainder will be the estimate time of the star's southing, and will not differ from the true time above 2 or 3 minutes at most, which may be near enough for ordinary uses. But when great exactness is required, reduce the Sun's place to this estimate time, and with it find in the above table his right ascension to seconds, which being subtracted from that of the star, the remainder will be

the

Obliquity of the Ecliptic being 23° 28′.

Degr.	♎			♏			♐			♑			♒			♓		
	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s	h	m	s
0	12	0	0	13	51	37	15	51	15	18	0	0	20	8	45	22	8	23
1	12	3	40	13	55	27	15	55	25	18	4	22	20	12	54	22	12	12
2	12	7	20	13	59	17	15	59	36	18	8	43	20	17	3	22	16	0
3	12	11	0	14	3	8	16	3	48	18	13	5	20	21	11	22	19	48
4	12	14	41	14	6	59	16	7	0	18	17	26	20	25	19	22	23	35
5	12	18	21	14	10	51	16	12	13	18	21	48	20	29	26	22	27	22
6	12	22	2	14	14	44	16	16	26	18	26	9	20	33	31	22	31	8
7	12	25	42	14	18	37	16	20	40	18	30	30	20	37	37	22	34	54
8	12	29	23	14	22	31	16	24	55	18	34	51	20	41	41	22	38	40
9	12	33	4	14	26	25	16	29	10	18	39	11	20	45	45	22	42	25
10	12	36	45	14	30	20	16	33	26	18	43	31	20	49	48	22	46	9
11	12	40	26	14	34	16	16	37	42	18	47	51	20	53	51	22	49	53
12	12	44	8	14	38	13	16	41	59	18	52	11	20	57	52	22	53	37
13	12	47	50	14	42	10	16	46	16	18	56	31	21	1	53	22	57	20
14	12	51	32	14	46	8	16	50	34	19	0	50	21	5	53	23	1	3
15	12	55	14	14	50	7	16	54	52	19	5	8	21	9	53	23	4	46
16	12	58	57	14	54	7	16	59	10	19	9	26	21	13	52	23	8	28
17	13	2	40	14	58	7	17	3	29	19	13	44	21	17	50	23	12	10
18	13	6	23	15	2	8	17	7	49	19	18	1	21	21	47	23	15	52
19	13	10	7	15	6	9	17	12	9	19	22	18	21	25	44	23	19	34
20	13	13	51	15	10	12	17	16	29	19	26	34	21	29	40	23	23	15
21	13	17	35	15	14	15	17	20	49	19	30	50	21	33	35	23	26	56
22	13	21	20	15	18	19	17	25	9	19	35	5	21	37	29	23	30	37
23	13	25	6	15	22	23	17	29	30	19	39	20	21	41	23	23	34	18
24	13	28	52	15	26	29	17	33	51	19	43	34	21	45	16	23	37	58
25	13	32	38	15	30	35	17	38	12	19	47	47	21	49	9	23	41	39
26	13	36	25	15	34	41	17	42	34	19	52	0	21	53	1	23	45	19
27	13	40	12	15	38	45	17	46	55	19	56	12	21	56	52	23	49	0
28	13	44	0	15	42	57	17	51	17	20	0	24	22	0	43	23	52	40
29	13	47	48	15	47	6	17	55	38	20	4	35	22	4	33	23	56	20
30	13	51	37	15	51	15	18	0	0	20	8	45	22	8	23	24	0	0

the true time of the ſtar's culminating or ſouthing. And if from the time of the ſtar's ſouthing you ſubtract the ſemidiurnal arc belonging to it, the remainder will be the time of the ſtar's riſing; and being added to it, the ſum will be the time of its ſetting.

Annexed is an Ex. of SIRIUS for Jan. 31, 1799.

		h	m	s
☉'s place at noon	♒	11°	43′	
Rt. Aſc. of Sirius	- -		6	35 58
☉'s rt. aſc. ſubtract	-		20	56 43
✳'s eſtimate ſouthing	-		9	39 15
☉'s rt. aſc. at that time ſub.			20	58 22
✳'s true ſouthing	- -		9	37 36
Semid. arc ſub. & add	-		4	36 55
✳'s riſing aſtern.	- -		5	0 41
✳'s ſetting	- -		14	14 31

A Table of the mean Right-Aſcenſions in time, Semidurnal-Arcs, Declinations, and Magnitudes of 40 remarkable fixed Stars, with their Names, and Bayer's Literal Characters, for January 1, 1790.

Names of the Stars	Ch.	Rt. Aſc.			Declination				Semid. Ar.			Ma
		h	m	s	°	′	″		h	m	s	
Pole ſtar, Alruccabah -	α	0	48	57	88	11	34	n	ſets not			2
Andromeda's girdle, Mirach -	β	0	57	48	34	29	47	n	10	7	32	2
Andromeda's left foot, Almach	γ	1	51	10	41	18	41	n	ſets not			2
Ram's following horn -	α	1	55	18	22	27	43	n	8	9	35	2
Whale's jaw, Menkar -	α	2	51	19	3	15	11	n	6	19	48	2
Meduſa's head, Algol - -	β	2	54	32	40	7	41	n	ſets not			2
Perſeus's right ſide, Algenib	α	3	9	26	49	7	6	n	ſets not			2
Brighteſt of the 7 ſtars -	η	3	35	2	23	26	22	n	8	16	40	3
Bull's ſouth eye, Aldebaran	α	4	23	51	16	4	19	n	7	28	51	1
Auriga's left ſhoulder, Capella	α	5	1	11	45	46	57	n	ſets not			1
Orion's left foot, Rigel -	β	5	4	27	8	27	38	s	5	20	28	1
Bull's north horn - -	β	5	12	57	28	25	12	n	8	57	1	2
Orion's left ſhoulder, Bellatrix	γ	5	13	54	6	8	50	n	6	34	41	2
Orion's girdle - -	ε	5	25	32	1	21	22	s	5	56	42	2
Orion's right ſhoulder, Betelgeuſe	α	5	43	46	7	21	2	n	6	40	58	1
In the great Dog's mouth, Sirius	α	6	35	58	16	25	8	s	4	36	55	1
Head of the 1ſt Twin, Caſtor	α	7	21	11	32	19	57	n	9	38	21	1
In the leſs Dog's thigh, Procyon	α	7	28	21	5	46	33	n	6	32	50	1
Head of the 2d Twin, Pollux	β	7	32	30	28	31	19	n	8	58	13	2
Hydra's heart, Alphard -	α	9	17	15	7	45	30	s	5	24	20	2
Lyon's heart, Regulus -	α	9	57	11	12	58	43	n	7	11	28	1
Great Bear, Lower Pointer	β	10	49	4	57	30	19	n	ſets not			2
Great Bear, Upper Pointer -	α	10	50	39	62	53	25	n	ſets not			2
Lion's tail, Deneb - -	β	11	38	24	15	44	22	n	7	27	18	2
Great Bear, 1ſt in the tail, Aliath	ε	12	45	5	57	7	0	n	ſets not			2
Virgius's ſpike - -	α	13	14	10	10	3	38	s	5	12	20	1
Dragon's tail - -	α	13	58	42	65	20	53	n	ſets not			2
Bootes, Arcturus -	α	14	6	11	20	20	20	n	7	55	26	1
Libra, Southern Scale - -	α	14	39	22	15	9	30	s	4	44	23	2
Libra, Northern Scale - -	β	15	5	47	8	36	4	s	5	19	57	2
Bright ſtar in the North Crown	α	15	25	49	27	25	35	n	8	48	36	2
Scorpion's heart, Antares	α	16	16	35	25	56	54	s	3	34	56	1
Hercules's head, Raſ. Algethi	α	17	5	7	14	38	4	n	7	20	41	2
Head of Serpentarius - -	α	17	25	8	12	43	20	n	7	9	50	2
Dragon's head, Raſtaben -	γ	17	51	51	51	31	28	n	ſets not			2
Bright ſtar in the Harp, Lyra	α	18	29	45	38	35	39	n	ſets not			1
Bright ſtar in the Eagle, Atair	α	19	40	25	8	18	55	n	6	45	57	2
Mouth of ſouth Fiſh, Fomalhaut	α	22	45	53	30	43	12	s	2	52	6	1
Pegaſus's wing, Markab -	α	22	54	15	14	4	11	n	7	17	10	2
Andromeda's head - -	α	23	57	29	27	55	38	n	8	52	19	2

A Table of the Longitudes, Latitudes, and Magnitudes of the moſt remarkable fixed Stars that the Moon can Eclipſe, or make a near Appulſe unto; exactly rectified to the beginning of the year 1790.

Con.	Cha.	Long.	Lat.	Mag.
		° ′ ″	° ′ ″	
♓	δ	♈ 11 13 11	2 9 44 n	4
	ε	14 36 25	1 5 37 n	4
	ζ	16 56 25	0 13 11 s	4
♈	δ	♉ 17 54 44	1 48 7 n	4
♉	n	27 3 44	4 1 36 n	3
	γ	♊ 2 52 0	5 45 30 s	3
	ε	5 31 37	2 35 37 s	3
	α	6 51 20	5 29 2 s	1
	β	19 38 37	5 21 59 n	2
	ζ	21 51 15	2 13 29 s	3
♊	n	♋ 0 30 37	0 55 4 s	4
	μ	2 22 2	0 50 34 s	3
	γ	5 10 20	6 46 12 s	2
	ε	7 0 30	2 2 28 n	3
	δ	15 35 29	0 12 19 s	3
	β	20 19 34	6 40 4 n	1
♋	γ	♌ 4 36 51	3 10 22 n	4
	δ	5 47 9	0 4 13 n	4
♌	ξ	18 43 23	3 1 57 s	4
	o	21 19 38	3 46 1 s	4
	n	24 58 23	4 51 9 n	4
	α	26 54 49	0 27 27 n	1
	ρ	♍ 3 27 25	0 8 29 n	4
	τ	18 34 47	0 31 21 s	4
	υ	22 6 32	3 2 51 s	4
♍	β	24 10 47	0 41 36 n	3
	o	♎ 0 26 10	5 4 42 n	3
	n	1 54 16	1 22 24 n	3
	γ	7 14 41	2 48 57 n	3
	α	20 54 50	2 2 11 s	1

Con.	Cha.	Long.	Lat.	Mag.
		° ′ ″	° ′ ″	
♎	α	♍ 12 9 29	0 21 48 n	2
	12	18 4 37	1 49 14 s	3
	γ	22 12 9	4 24 41 n	3
	n	24 26 33	4 2 52 n	4
	κ	24 49 47	0 1 1 n	4
	θ	26 56 12	3 29 24 n	4
	λ	27 32 46	0 6 53 n	4
♏	δ	29 38 28	1 57 17 s	3
	π	♐ 0 0 35	5 26 15 s	3
	β	0 15 33	1 2 18 n	2
	ν	1 42 50	1 39 52 n	4
	σ	4 52 13	4 0 23 s	4
	α	6 49 58	4 32 17 s	1
	τ	8 31 42	6 5 21 s	4
♐	γ	28 20 3	6 56 48 s	3
	μ	♑ 0 16 58	2 22 24 n	4
	λ	3 23 31	2 5 31 s	4
	φ	7 14 48	3 55 22 s	3
	σ	9 27 17	3 24 55 s	3
	τ	11 54 32	5 2 33 s	3
	o	12 3 36	0 53 36 n	3
	π	13 19 21	1 28 7 n	4
♑	β	♒ 1 6 55	4 36 46 n	3
	ε	17 16 0	4 57 31 s	4
	γ	18 50 53	2 32 6 s	4
	δ	20 36 5	2 33 40 s	4
	ι	25 47 17	2 3 47 s	4
	θ	♓ 0 19 42	2 43 22 n	4
	λ	8 38 43	0 22 57 s	4
	φ	14 12 39	1 2 8 s	4

This table ſhewing the mean longitudes of 60 ſtars to the beginning of the year 1790, their mean longitudes for any other time may be found if 50$\frac{1}{3}$ ſeconds be added for each ſucceeding, and ſubtracted for each preceding year, and proportionably for a part of a year. Thus, to find the longitude of the firſt ſtar ♓ δ, or δ piſcium, for Feb. 15, 1792, or 2 years and one eighth after the tabular time; here 2$\frac{1}{8}$ times 50$\frac{1}{3}$ ſec. make 1′ 47″, which being added to the tabular longitude, gives ♈ 11° 14′ 58″ for the longitude required at the given time.——The latitudes vary not.

The Latitudes and Longitudes of Ninety Places.

	Lat. ° ′	Long. ° ′		Lat. ° ′	Long. ° ′
Alexandria, Egypt	31 11 n	30 17 e	Iſpahan	32 25 n	52 55 e
Amſterdam, Hol.	52 23 n	4 52 e	Land's end	50 6 n	5 50 w
Archangel, Ruſ.	64 34 n	38 30 e	Leghorn	43 33 n	10 25 e
Athens	37 40 n	23 52 e	Leoſtoff	52 38 n	1 54 e
Babelmandel	12 50 n	43 50 e	Liverpool	53 22 n	3 10 w
Batavia	6 12 s	106 45 e	Lima	12 1 s	76 50 w
Bengal	22 0 n	92 45 e	Liſbon	38 42 n	9 4 w
Berlin	52 33 n	13 26 e	Lizard	49 57 n	5 21 w
Bombay Iſle	19 42 n	73 3 e	London	51 31 n	0 0
Boſton, Amer.	42 25 n	70 37 w	Madras	13 8 n	80 7 e
Breſlau	51 3 n	17 13 e	Madrid	40 25 n	3 45 w
Breſt	48 23 n	4 30 w	Manilla	14 30 n	120 25 e
Briſtol	51 28 n	2 30 w	Marſeilles	43 18 n	5 21 e
Buenos Ayres	34 35 s	58 0 w	Mexico	19 54 n	100 5 w
Cadiz	36 31 n	6 7 w	Miſſiſſipi, mouth	29 0 n	89 17 w
Calais	50 58 n	1 51 e	Moſcow	55 25 n	37 51 e
Cairo, Egypt	30 2 n	31 26 e	Naples	40 51 n	14 19 e
Cambridge	52 13 n	0 4 e	Newcaſtle	55 0 n	1 18 w
Canaria Iſlands	28 1 n	15 0 w	Oporto	40 53 n	8 35 w
Canton	23 8 n	113 2 e	Orkney I. northend	59 24 n	3 23 w
Cape of Goodhope	34 29 s	18 23 e	Oxford	51 45 n	1 16 w
Cape Horn	55 59 s	67 26 w	Paris	48 50 n	2 25 e
Carthegena	10 27 n	75 26 w	Pekin	39 55 n	116 22 e
Charles Town Am.	33 22 n	79 50 w	Peterſburg	59 56 n	30 19 e
Conſtantinople	41 0 n	28 53 e	Philadelphia	39 57 n	75 18 w
Copenhagen	55 41 n	12 50 e	Plymouth	50 24 n	4 15 w
Corinth	37 30 n	23 0 e	Port Mahon	39 51 n	3 53 e
Corke	51 54 n	8 30 w	Port Royal, Jam.	17 40 n	76 37 w
Dantzic	54 22 n	18 36 e	Portſmouth	50 48 n	1 1 w
Dover	51 7 n	1 19 e	Prague	50 5 n	14 15 e
Dublin	53 20 n	6 55 w	Quebec	46 55 n	71 12 w
Edinburgh	55 58 n	3 1 w	Rome	41 54 n	12 32 e
Ferro, Iſle	27 48 n	18 6 w	Scilly Iſles	50 0 n	6 45 w
Finiſterre, Cape	42 57 n	9 36 w	Smyrna	38 28 n	27 25 e
Genoa	44 25 n	8 41 e	Stockholm	59 22 n	18 12 e
Gibraltar	36 5 n	4 46 w	Syracuſe	37 4 n	15 20 e
Glaſgow	55 52 n	4 5 w	Tangier	35 55 n	5 45 w
Goa	15 31 n	73 50 e	Teneriff	28 16 n	16 32 w
Gottingen	51 32 n	9 58 e	Tunis	36 47 n	10 16 e
Greenwich	51 29 n	0 5 e	Turin	45 5 n	7 45 e
Hacluit's Head.	79 55 n	12 0 e	Venice	45 27 n	12 24 e
Halifax, America	44 46 n	63 20 w	Verd, Cape	14 47 n	17 28 w
Havanna	23 12 n	81 11 w	Vienna	48 11 n	16 28 e
Helena, I. St.	15 55 s	5 49 w	Upſal	59 52 n	17 43 e
Jeruſalem	31 50 n	35 25 e	Uraniberg	55 54 n	12 52 e

FINIS.