'ΑΤΛΑΣ ΟΥΡΑ'ΝΙΟΣ,
The COELESTIAL ATLAS;
Or, A New
EPHEMERIS
For the Year of our LORD 1783.
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 Phænomena 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 Compleat 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 ancient and honourable CITY of LONDON.

To which are added,

Several uſeful Tables: As, a Table of the Sun's Declination; a Table 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 Satelles; and, laſtly, an exact Table of the Riſing, Southing, and Setting of Forty of the moſt remarkable fixed Stars, taken from Mr. Flamsteed's Catalogue.

By ROBERT WHITE,
Teacher of the Mathematicks.

'Οι ȣ̓ρανοὶ διηγȣ̃νται δόξαν Θεȣ̃.

The Thirty-fourth Impression.

LONDON:
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Chronological Notes for the Year 1783.

Golden Number - -	17	Septuagesima Sunday	Feb. 16
Cycle of the Sun - -	28	Shrove Sunday	Mar. 2
The Epact - - -	26	Easter Day -	April 20
Dominical Letter - -	E	Whit-Sunday -	June 8
Number of Direction -	30	Trinity Sunday -	June 15
Roman Indiction - -	1	Advent Sunday -	Nov. 30

Astronomical Characters explained.

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

♄ Saturn	☉ Sol (the Sun)	☽ Luna (the Moon)	⊖ Tellus,
♃ Jupiter	♀ Venus	☊ Moon's N. Node	Terra (or
♂ Mars	☿ Mercury	☋ her S. Node	the Earth)

☌ 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 1783.

THE Spring Quarter begins on the 20th Day of March, at 4 Minutes past 5 at Night, apparent Time.

The Summer Quarter begins June the 21st, 12 Minutes past 3 in the Afternoon.

The Autumnal Quarter begins September the 23d, 49 Minutes past 4 in the Morning.

The Winter Quarter begins December the 21st, 13 Minutes past 9 at Night.

THE beautiful Planet Venus will be an Evening Star from the 4th Day of January till October the 22d, at which Time she becomes a Morning Star, and so continues to the Year's End.

Jupiter will be a Morning Star until the 20th Day of July; and after that Time he will be an Evening Star to the Year's End.

The NAMES of the Learned JUDGES of the LAW.

I. The R. H. Edward Lord Thurlow, Lord High Chancellor of Great Britain

Right Honourable Sir Thomas Sewell, Knt. Maſter of the Rolls.

II. In the K. Bench. } R. H. Wm. Earl Mansfield, L. C. J. Edward Willes, Eſq; Sir W. H. Aſhurſt, Knt. Francis Buller, Eſq;

III. In the C. Pleas. } R. H. Alex. Lord Loughborough, L. C. J. Sir Henry Gould, Knt. Sir George Nares, Knt. John Heath, Eſq;

IV. In the Exchequer } Sir John Skynner, Knt. L. C. B. Sir James Eyre, Knt. Sir Beaumont Hotham, Knt. Sir Richard Perryn, Knt.

Lloyd Kenyon, Eſq; Attorney General.

A TABLE of TERMS and their RETURNS.

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	Thurſ.
From the Day of St. Hilary in 15 Days -	27	28	29	30	Thurſ.
On the Morrow of the Purif. Bleſſed Mary,	Feb. 3	4	5	6	Thurſ.
In eight Days of the Purif. of Bleſſed Mary, -	9	10	11	12	Wedn.

Eaſter Term begins May 7, ends June 2.

From the Day of Eaſter in 15 Days, -	May 4	5	6	7	Wedn.
From the Day of Eaſter in 3 Weeks, - - -	11	12	13	14	Wedn.
From the Day of Eaſter in 1 Month, - -	18	19	20	21	Wedn.
From the Day of Eaſter in 5 Weeks, -	25	26	27	28	Wedn.
On the Morrow of the Aſcenſion, - - -	30	31	J. 1	2	Monday

Trinity Term begins June 20, ends July 9.

On the Morrow of the Holy Trinity, -	June 16	17	18	20	Friday
In 8 Days of the Holy Trinity, - - -	22	23	24	25	Wedn.
In 15 Days of the Holy Trinity, - - -	29	30	J. 1	2	Wedn.
In 3 Weeks of the Holy Trinity, -	July 6	7	8	9	Wedn.

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

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

N. B. No Sittings in Weſtminſter-Hall on Aſcenſion-day, Midſummer-day, and the 2d of February.

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

Note, That 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 Adolph. Fred.	Feb. 24, 1774
Prince of Wales,	Aug. 12, 1762	Princess Mary,	April 25, - 1776
Prince Frederick,	Aug. 16, 1763	Princess Sophia,	Nov. 3, - 1777
Prince Wm. Henry,	Aug. 21, 1765	Prince Octavius,	Feb. 23, - 1779
Prs. Cha. Aug. Mat.	Sept. 29, 1766	Queen Charlotte,	May 19, 1744
Prince Edward,	Nov. 2, - 1767	Prs. Amelia,	June 10, - 1711
Prs. Augusta Sophia,	Nov. 8, 1768	Prs. Augusta of Brun.	Aug. 11, 1737
Prs. Elizabeth,	May 22, - 1770	Duke of Gloucester,	Nov. 25, 1743
Prince Ernest Augustus,	June 5, 1771	Duke of Cumberland,	Nov. 7, 1745
Prince Aug. Fred.	Jan. 27, 1773		

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
France	Lewis XVI.	Aug. 23, 1754	May 10, 1774
Russia	Catharine II.	May 2, 1729	July 9, 1762
Spain	Charles III.	Jan. 20, 1716	Aug. 10, 1759
Portugal	Mary	Dec. 7, 1734	Feb. 24, 1777
Prussia	Frederic III.	Jan. 24, 1712	May 20, 1740
Denmark & Norway	Christian VII.	Jan. 29, 1749	Jan. 14, 1766
Sweden	Gustavus III.	Jan. 24, 1746	Feb. 13, 1771
Germany	Joseph	Mar. 13, 1741	Aug. 18, 1765
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	Achmet IV.	Nov. 5, 1719	Jan. 21, 1774

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 $\frac{39}{89}$
Half Guinea, -	2 16	2 16 $\frac{64}{89}$
Quarter Guinea,	1 8	1 8 $\frac{32}{89}$

SILVER.	Full Wt. dwt. gr.
A Crown, - -	19 8 $\frac{16}{31}$
Half Crown, -	9 16 $\frac{8}{31}$
Shilling, - -	3 20 $\frac{2}{31}$
Six Pence, - -	1 22 $\frac{14}{31}$

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. 10½ 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.	Age	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	Died of Grief.	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	Beheaded.	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	Kill'd by a Fall	Weſtminſter
Anne	1665	1702 Mar. 8	12	4	24	49	from his Horſe.	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, 1783.

BISHOPS.	Sees.	Date.	Succeeded.	DEANS.
H. Dr. F. Cornwallis Arch-Biſhop	*Litch. & Cov.*	1749	Smallbroke de.	
	Canterb. A. B	1768	Secker deceaſ.	Dr. Horne
Dr. Will. Markham Arch-Biſhop	*Cheſter*	1748	Keene tranſlat.	
	York A. B.	1777	Drummond de.	Dr. J. Fountayne
Dr. Robert Lowth	*St. David's*	1761	Squire deceaſ.	
	Oxford	1757	Hume tranſl.	
	London	1777	Terrick dec.	Biſhop Thurlow
Dr. John Egerton	*Bangor*	1754	Willes tranſl.	
	Durham	1752	Trevor deceaſ.	Hon. W. Digby
Hon. Dr. B. North	*Litch & Cov.*	1768	Cornwallis tr.	
	Worceſter	1775	Johnſon deceaſ.	
	Wincheſter	1781	Thomas deceaſ.	Dr. Ogle
Lord J. Beauclerk	Hereford	1746	Egerton deceaſ.	Dr. Wetherell
Sir W. Aſhburnham	Chicheſter	1754	Mawſon tranſl.	Dr. Harward
Dr. S. Barrington	*Landaff*	1758	Shipley tranſl.	
	Saliſbury	1766	Hume dec.	Dr. Noel
Dr. Philip Yonge	*Briſtol*	1758	Hume tranſlat.	
	Norwich	1761	Hayter tranſl.	Dr. P. Lloyd
Dr. Lewis Bagot	Briſtol	1782	Newton, dec.	Dr. Hallam
Dr. Charles Moſs	*St. David's*	1766	Clagget tranſl.	
	Bath & Wells	1774	Willes deceaſed	Ld. Fr. Seymour
Dr. J. Shipley	St. Aſaph	1769	Newcome dec.	Dr. W. D. Shipley
Dr. Edmund Law	Carliſle	1769	Lyttelton dec.	Dr. Ekins
Dr. Watſon	Landaff	1782	Barrington tr.	Dr. Adams, A.D.
Dr. John Hinchliffe	Peterborough	1769	Lamb dec.	Dr. Ch. Tarrant
H. Dr. James Yorke	*Glouceſter*	1779	Warburton dec.	
	Ely	1781	Keene deceaſed	Dr. Cooke
Dr. John Thomas	Rocheſter	1774	Pearce dec.	Dr. Dampier
Dr. Hurd	*Litch. & Cov.*	1775	B. North tr.	
	Worceſter	1781	B. North tr.	Dr. Foley
Dr. Moore	Bangor	1775	Ewer deceaſed	Dr. Tho. Lloyd
Dr. Beilby Porteus	Cheſter	1777	Markham tran.	Dr. Will. Smith
Dr. John Butler	Oxford	1777	Lowth tranſl.	Biſhop Bagot
Dr. John Roſs	Exeter	1778	Keppel dec.	Dr. Jer. Milles
Dr. Thurlow	Lincoln	1779	Green dec.	Dr. Cuſt
Dr. John Warren	St. David's	1779	Yorke tranſl.	Mr. Wollaſton, P.
Dr. J. Cornwallis	Litch. & Cov.	1781	Hurd tranſl.	Dr. Proby
Dr. Samuel Hallifax	Glouceſter	1781	Yorke tranſl.	Dr. Joſiah Tucker
	Weſtminſter	1768		Biſhop Thomas
Dr. George Maſon	Sodor & Man	1779	Richmond dec.	
	Windſor	1778	Hon. &	Rev. Dr. Harley

A General Interest Table,

by which the Interest of any Sum, at any Rate, and for any Time, may be readily found.

Days	3 per Cent.				3½ per Cent.				4 per Cent.				4½ per Cent.				5 per Cent.			
	l.	s.	d.	q.	l.	s.	d.	q.	l.	s.	d.	q.	l.	s.	d.	q.	l.	s.	d.	q.
1			1	3			2	1			2	2			3	0			3	0
2			3	3			4	2			5	1			6	0			6	2
3			5	3			6	3			7	3			8	3			9	3
4			7	3			9	0			10	2			11	3		1	1	0
5			9	3			11	2		1	1	1		1	2	3		1	4	1
6			11	3		1	1	3		1	3	3		1	5	3		1	7	2
7		1	1	3		1	4	0		1	6	1		1	8	3		1	11	0
8		1	3	3		1	6	1		1	9	0		1	11	3		2	2	1
9		1	5	3		1	8	2		1	11	2		2	2	2		2	5	2
10		1	7	2		1	11	0		2	2	1		2	5	2		2	8	3
20		3	3	1		3	10	0		4	4	2		4	11	1		5	5	3
30		4	11	0		5	9	0		6	6	3		7	4	3		8	2	2
40		6	6	3		7	8	0		8	9	0		9	10	1		10	11	2
50		8	2	2		9	7	0		10	11	2		12	3	3		13	8	1
60		9	10	1		11	6	0		13	1	3		14	9	2		16	5	1
70		11	6	0		13	5	0		15	4	0		17	3	1		19	2	0
80		13	1	3		15	4	0		17	6	1		19	8	3	1	1	11	0
90		14	9	2		17	3	0		19	8	2	1	2	2	1	1	4	7	3
100		16	5	1		19	2	0	1	1	11	0	1	4	8	0	1	7	4	3
200	1	12	10	2	1	18	4	1	2	3	10	0	2	9	3	3	2	14	9	2
300	2	9	3	3	2	17	6	1	3	5	9	0	3	13	11	1	4	2	2	1

N. B. This Table contains the interest of 100l. for all the several days in the 1st column, and at the several rates of 3, 3½, 4, 4½, and 5 per cent. in the other 5 columns.

To find the interest of 100l. *for any other time*, as 1 year and 278 days, at 4½ per cent. Take the sums for the several days here annexed.

The interest for 1 year	-	4	10	0 0
Against 200 days is	-	2	9	3 3
——— 70 days	-	0	17	3 1
——— 8 days	-	0	1	11 3
Interest required	-	7	18	6 3

For any other Sum than 100l. First find for 100l. as above, and take it so many times or parts as the sum is of 100l. Thus, to find for 355l. at 4½, for 1 year and 278 days,

First, 3 times the above sum, (for 300l.) is	-	23	15	8 1
½ (for 50l.) is	-	3	19	3 1
$\frac{1}{10}$ of this (for 5l.) is		0	7	11 0
So for 355 it is	-	28	2	10 2

When the interest is required for any other rate than those in the table, it may easily be made out from them. So ½ of 5 is 2½, ½ of 4 is 2, ½ of 3 is 1½, ⅓ of 3 is 1, 1-6th of 3 is ½, and 1-12th of 3 is ¼. And so, by parts, or by adding or subtracting, any rate may be made out.

The Lunations.

New Moon the 3d day, 40 minutes past 7 morning,
First quarter the 10th day, 22 minutes past 9 morning,
Full Moon the 18th day, 11 minutes past 2 afternoon,
Last quarter the 26th day, 2 minutes past 3 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	27 s 27	6 m 32	10 m 1	4 7
2		8 4	3 56	22 55	28 28	7 54	11 7	4 36
3		8 3	3 57	22 49	27 22	☽ sets	0 a 14	5 4
4		8 3	3 57	22 43	24 8	5 a 12	1 17	5 31
E	2 S. aft. Christ.	Old Christ. day		22 36	19 42	6 43	2 14	5 58
6	Epiphany	8 1	3 59	22 29	14 8	8 12	3 6	6 25
7		8 0	4 0	22 22	8 3	9 32	3 53	6 51
8	Lucian	7 59	4 1	22 14	1 49	10 48	4 36	7 17
9		7 58	4 2	22 5	4 n 17	morn.	5 18	7 42
10		7 57	4 3	21 56	10 3	0 2	5 59	8 6
11		7 56	4 4	21 47	15 20	1 16	6 42	8 30
E	1 S. aft. Epiph.	O. N. Year's day		21 37	19 57	2 30	7 26	8 53
13	Cam. Term beg.	Hil. Pl. Mond.		21 27	23 44	3 44	8 12	9 16
14	Oxf. Term beg.	7 53	4 7	21 17	26 31	4 56	9 0	9 37
15		7 52	4 8	21 6	28 8	6 4	9 51	9 59
16		7 51	4 9	20 54	28 27	7 0	10 42	10 19
17	O. Twelfth day	7 49	4 11	20 43	27 26	7 46	11 34	10 39
18	Q. Char. b. d. k.	Prisca	4 12	20 31	25 5	☽ rises	morn.	10 58
E	2 S. aft. Epiph.	7 47	4 13	20 18	21 34	5 a 5	0 24	11 16
20	Fabian	7 45	4 15	20 5	17 2	6 23	1 12	11 34
21	Agnes	7 44	4 16	19 52	11 42	7 42	1 57	11 51
22	Vincent	7 42	4 18	19 38	5 49	8 59	2 41	12 7
23	Hil. Term beg.	7 41	4 19	19 24	0 s 24	10 17	3 24	12 22
24		7 40	4 20	19 10	6 44	11 36	4 8	12 37
25	Conv. St. Paul	7 38	4 22	18 55	12 52	morn.	4 54	12 51
E	3 S. aft. Epiph.	7 37	4 23	18 40	18 31	1 1	5 42	13 4
27	Pr. Aug. Fred. b.	7 35	4 25	18 24	23 17	2 29	6 37	13 16
28		7 33	4 27	18 9	26 44	3 58	7 35	13 27
29		7 32	4 28	17 53	28 27	5 23	8 34	13 38
30	K. Charl. I. mar.	7 30	4 30	17 36	28 10	6 31	9 44	13 47
31		7 28	4 32	17 19	25 53	7 18	10 47	13 56

Days	Day increas.	Length of Day.	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ☉	Helioc long. ♀	Helioc. long. ☿	♄ rises.
1	0 8	7 52	3♑59	10♑35	29♎47	11♑ 4	9♑15	19♐46	7 m 33
7	0 18	8 2	4 10	11 5	2♏40	17 12	18 44	6♑35	7 10
13	0 30	8 14	4 20	11 35	5 35	23 19	28 13	24 30	6 47
19	0 44	8 28	4 31	12 5	8 31	29 25	7♒42	14♒25	6 25
25	1 3	8 46	4 42	12 35	11 29	5♌31	17 11	7♓29	6 2

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	2♈ 1	0 n 42	0 s 2	0 n 26	0 s 36	1 s 17
7	5 56	6 4	2 9	1 42	0 42	0 3	0 22	0 48	1 45
13	5 52	6 8	2 7	1 22	0 41	0 3	0 19	0 59	2 1
19	5 46	6 14	2 5	1 3	0 41	0 4	0 14	1 9	2 5
25	5 39	6 21	2 3	0 44	0 41	0 4	0 10	1 17	1 52

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

Days	♅ rises	♂ rises	♀ rises	☿ rises	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	8 m 3	4 m21	8 m 6	7 m53	22 s 41	23 s 4	18 s 49	23 s 40	24 s 41
7	7 41	4 18	sets	8 0	22 40	22 58	19 47	23 4	24 29
13	7 21	4 15	4 a 14	sets	22 38	22 50	20 38	22 3	23 22
19	7 0	4 12	4 28	4 a 29	22 37	22 42	21 25	20 38	21 20
25	6 39	4 9	4 43	5 4	22 35	22 33	22 5	18 52	18 22

The Lunations.

New Moon the 1st day at 50 minutes past 6 at night,
First quarter the 9th day at 18 minutes past 5 morning,
Full Moon the 17th day at 2 minutes past 7 morning,
Last quarter the 24th day at 15 minutes past 11 morning,

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ south	Clock bef. ☉
1		7 27	4 33	17 s 2	21 s 53	☽ sets	11 m 48	14 5
E	4 S. aft. Epiph.	Purif. Candl. day		16 45	16 36	5 a 30	0 a 43	14 12
3	Blase	7 23	4 37	16 28	10 34	6 55	1 34	14 19
4		7 22	4 38	16 10	4 12	8 17	2 19	14 24
5	Agatha	7 20	4 40	15 51	2 n 10	9 35	3 3	14 29
6		7 18	4 42	15 33	8 15	10 51	3 46	14 33
7		7 16	4 44	15 14	13 50	morn	4 30	14 36
8		7 15	4 45	14 55	18 46	0 7	5 15	14 39
E	5 S. aft. Epiph.	7 13	4 47	14 36	22 52	1 22	6 1	14 40
10		7 11	4 49	14 17	25 59	2 37	6 49	14 41
11		7 9	4 51	13 57	27 57	3 47	7 40	14 41
12	Hil. Term ends	7 7	4 53	13 37	28 39	4 48	8 32	14 40
13		7 5	4 55	13 17	28 0	5 38	9 23	14 38
14	Valentine	7 3	4 57	12 57	26 1	6 15	10 13	14 36
15		7 2	4 58	12 36	22 48	6 42	11 3	14 33
E	Septuagesima	7 0	5 0	12 15	18 28	7 1	11 50	14 29
17		6 58	5 2	11 54	13 14	☽ rises	morn	14 24
18		6 56	5 4	11 33	7 21	6 a 43	0 35	14 19
19		6 54	5 6	11 12	1 4	8 1	1 20	14 13
20		6 52	5 8	10 50	5 s 22	9 22	2 5	14 6
21		6 50	5 10	10 29	11 40	10 47	2 51	13 59
22		6 48	5 12	10 7	17 28	morn	3 39	13 51
E	Sexages. Sunday	Pr. Octavius b.		9 45	22 26	0 15	4 30	13 42
24	St. Matthias	Pr. Adol. Fred. b.		9 23	26 10	1 44	5 27	13 33
25		6 42	5 18	9 1	28 19	3 9	6 28	13 24
26		6 40	5 20	8 38	28 35	4 24	7 32	13 13
27		6 38	5 22	8 16	26 57	5 15	8 36	13 3
28		6 37	5 23	7 53	23 34	5 50	9 36	12 51

D Days	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	1 24	9 8	4♑55	13♑17	14♏58	12♌37	28♒15	10♈ 4	5 m 36
7	1 42	9 31	5 5	13 47	18 0	18 42	7♓45	13 ♉42	5 15
13	2 7	9 51	5 16	14 17	21 3	24 46	17 16	21♊ 4	4 54
19	2 31	10 15	5 27	14 47	24 9	0♍49	26 48	27♋46	4 32
25	2 55	10 30	5 38	15 16	27 16	6 51	6♈21	20♌47	4 10

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	0♈22	0 n 40	0 s 5	0 n 5	1 s 24	1 s 9
7	5 12	6 39	1 59	0 3	0 40	0 6	0 0	1 26	0 4
13	5 12	6 48	1 57	29♓44	0 40	0 7	0 s 5	1 28	1 n 24
19	5 0	7 0	1 57	29 25	0 39	0 7	0 10	1 26	2 53
25	4 50	7 10	1 56	29 6	0 39	0 8	0 16	1 23	3 42

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

Days	♅ rises	♂ rises	♀ sets	☿ sets	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	6m 16	4 m 5	5 a 5	5 a49	22 s 33	22 s 21	22 s 44	16 s 23	13 s 49
7	5 57	4 1	5 27	6 21	22 30	22 12	23 10	13 59	9 25
13	5 38	3 57	5 47	6 42	22 28	22 2	23 27	11 19	5 32
19	5 19	3 52	6 7	6 39	22 26	21 50	23 38	8 30	3 27
25	5 0	3 48	6 26	5 50	22 24	21 39	23 42	5 32	4 9

The Lunations.

New Moon the 3d day at 13 minutes past 7 morning,
First quarter the 11th day at 2 in the morning,
Full Moon the 18th day at 23 minutes past 9 at night,
Last quarter the 25th day at 57 minutes past 5 at night.

M. D.	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South.	Clock bef. ☉
1	David	6 35	5 25	7 s 30	18 s 48	6 m 14	10 m 33	12 39
F	Quinqu. Sunday	Chad 33	5 27	7 7	13 5	6 32	11 24	12 27
3		6 31	5 29	6 44	6 49	☽ sets	0 a 12	12 14
4	Shrove Tuesda	6 29	5 31	6 21	0 23	7 a 12	0 57	12 1
5	Ash Wednesda	6 27	5 33	5 58	5 n 56	8 30	1 41	11 47
6		6 25	5 35	5 35	11 50	9 48	2 25	11 33
7	Perpetua	6 23	5 37	5 12	17 8	11 6	3 9	11 19
S		6 21	5 39	4 48	21 37	morn	3 56	11 4
E	Quad. 1 S. in Lent	6 19	5 41	4 25	25 9	0 21	4 44	10 48
10		6 17	5 43	4 1	27 31	1 34	5 34	10 33
11		6 15	5 45	3 38	28 40	2 43	6 26	10 16
12	Ember Week	Gregor.	5 47	3 14	28 28	3 38	7 18	10 0
13		6 11	5 49	2 51	26 57	4 19	8 10	9 43
14		6 9	5 51	2 27	24 9	4 51	8 59	9 26
15		6 7	5 53	2 3	20 11	5 14	9 47	9 9
E	2 Sun. in Lent.	6 5	5 55	1 40	15 15	5 28	10 34	8 51
17	St. Patrick	6 3	5 57	1 16	9 31	5 40	11 20	8 33
18	Edw. K. W. S.	6 1	5 59	0 52	3 15	☽ rises	morn	8 15
19	Equal d. and n.	5 59	6 1	0 29	3 s 19	7 a 12	0 6	7 57
20		5 57	6 3	0 5	9 51	8 35	0 52	7 39
21	Benedict	5 55	6 5	0 n 19	15 59	10 5	1 41	7 20
22		5 52	6 7	0 42	21 19	11 35	2 33	7 2
E	3 Sun. in Lent	5 51	6 9	1 6	25 28	morn	3 29	6 43
24		5 49	6 11	1 30	28 1	1 5	4 30	6 25
25	Annunc. Lady's	5 47	6 13	1 53	28 44	2 22	5 33	6 6
26		5 45	6 15	2 17	27 33	3 22	6 36	5 47
27		5 43	6 17	2 40	24 38	4 2	7 36	5 29
28		5 41	6 19	3 4	20 18	4 28	8 33	5 10
29		5 39	6 21	3 27	14 57	4 47	9 25	4 51
☽	4 or Midlent S.	5 37	6 23	3 50	8 57	5 3	10 14	4 33
31		5 35	6 25	4 14	2 38	5 15	11 0	4 15

Days	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long ☿	♄ rises
1	3 9	10 53	5♈45	15♈37	29♏22	10♒51	12♈43	18♒ 0	3 m 57
7	3 33	11 17	5 56	16 7	2 32	16 52	22 17	11♎25	3 36
13	3 57	11 41	6 7	16 37	5 44	22 50	1♉52	11♏26	3 16
19	4 21	12 5	6 17	17 8	8 59	28 48	11 28	19 20	2 55
25	4 45	12 29	6 28	17 38	12 15	4♎44	21 6	6♐ 7	2 36

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	28♓33	0 n 40	0 s 8	0 s 20	1 s 19	3 n 34
7	4 30	7 30	1 56	28 34	0 40	0 9	0 26	1 11	2 31
13	4 17	7 43	1 57	28 15	0 40	0 10	0 33	1 2	1 4
19	4 5	7 56	1 58	27 56	0 40	0 11	0 40	0 50	0 s 15
25	3 50	8 10	2 0	27 37	0 39	0 11	0 47	0 37	1 18

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

Days	♃ rises	♂ rises	♀ sets	☿ rises	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	4 m49	3 m45	6 a 39	6 m 6	22 s 23	21 s 31	23 s 41	3 s 30	5 s 48
7	4 30	3 41	6 59	5 41	22 20	21 20	23 32	0 24	8 34
13	4 11	3 35	7 21	5 24	22 18	21 9	23 17	2 n 41	10 24
19	3 52	3 28	7 43	5 13	22 16	20 58	22 54	5 45	10 53
25	3 33	3 21	8 4	5 6	22 15	20 47	22 25	8 44	10 10

The LUNATIONS.

New Moon the 1st day at 50 minutes past 8 at night,
First quarter the 9th day at 40 minutes past 9 at night,
Full Moon the 17th day at 47 minutes past 8 morning,
Last quarter the 23d day at 23 minutes past midnight.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☽ rises & sets	☾ South	Clock bef. ☉
1		5 33	6 27	4 n 37	3 n 40	☽ sets	11 m 42	3 56
2		5 31	6 29	5 0	9 43	7 a 34	0 a 26	3 38
3	Richard.	5 29	6 31	5 23	15 16	8 51	1 11	3 20
4	St. Ambrose.	5 27	6 33	5 46	20 6	10 10	1 57	3 2
5	Old Lady day.	5 25	6 35	6 8	24 0	11 26	2 45	2 44
F	5 Sun. in Lent	5 23	6 37	6 31	26 49	morn	3 34	2 26
7		5 21	6 39	6 54	28 23	0 36	4 25	2 9
8		5 20	6 40	7 16	28 39	1 36	5 17	1 52
9		5 18	6 42	7 39	27 35	2 23	6 8	1 35
10		5 16	6 44	8 1	25 15	2 56	6 58	1 18
11	Camb. T. ends	5 14	6 46	8 23	21 45	3 21	7 46	1 2
12	Oxf. Term ends	5 12	6 48	8 45	17 13	3 42	8 33	0 45
F	Palm Sunday	5 10	6 50	9 7	11 51	3 54	9 18	0 29
14		5 8	6 52	9 28	5 49	4 7	10 3	0 14
15		5 6	6 54	9 50	0 s 40	4 19	10 50	oaft. 1
16		5 4	6 56	10 11	7 18	4 31	11 38	0 16
17	Maundy Thurf.	5 2	6 58	10 32	13 44	☽ rises	morn	0 31
18	Good Friday	5 0	7 0	10 53	19 32	9 a 18	0 30	0 45
19	Alphege	4 58	7 2	11 14	24 13	10 51	1 27	0 59
F	Easter day	4 57	7 3	11 34	27 23	morn	2 27	1 12
21	Easter Monday	4 55	7 5	11 55	28 39	0 16	3 31	1 25
22	Easter Tuesday	4 53	7 7	12 15	27 55	1 24	4 35	1 38
23	St. George	4 51	7 9	12 35	25 21	2 10	5 37	1 50
24		4 49	7 11	12 55	21 19	2 41	6 36	2 1
25	St. Mark	Prs. Mary boro		13 15	16 12	3 1	7 29	2 12
26		4 46	7 14	13 34	10 24	3 16	8 18	2 23
F	1 S. aft. Easter	4 44	7 16	13 53	4 15	3 28	9 3	2 33
28		4 42	7 18	14 12	1 n 57	3 38	9 45	2 42
29		4 40	7 20	14 31	7 59	3 48	10 29	2 51
30	Ox. & Ca. T. beg.	4 38	7 22	14 49	13 37	4 0	11 12	3 0

Days	Day increaf.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long ☉	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	5 11	12 55	6♑41	18♑ 3	16♐ 7	11♎39	2♊21	25♐23	2 m 12
7	5 35	13 10	6 52	18 38	19 28	17 33	12 0	12♑28	1 51
13	5 57	13 41	7 2	19 9	22 51	23 25	21 41	0♒57	1 30
19	6 21	14 5	7 13	19 39	26 16	29 17	1♋22	21 47	1 8
25	6 42	14 27	7 22	20 10	29 43	5♏ 7	11 5	16♓11	0 44

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	27♓15	0 n 38	0 s 12	0 s 56	0 s 20	2 s 7
7	3 17	8 43	2 8	26 56	0 39	0 13	1 4	0 5	2 30
13	3 2	8 58	2 11	26 36	0 39	0 14	1 12	0 n 12	2 33
19	2 47	9 13	2 15	26 17	0 39	0 15	1 21	0 28	2 18
25	2 26	9 34	2 25	25 58	0 39	0 16	1 30	0 45	1 44

Days	☉'s longitude	☾'s long.	☾'s Latitude	♄'s long.	♅'s long.	♂'s long.	♀'s long.	☿'s long.
1	♈11 38 47	7♈15	0 n 52	12♑23	28♑49	26♑55	2♉36	14♓37
2	12 37 52	20 7	2 0	12 25	28 57	27 36	3 49	15 52
3	13 36 54	2♉44	3 1	12 26	29 5	28 17	5 3	17 9
4	14 35 54	15 9	3 52	12 28	29 13	28 58	6 17	18 27
5	15 34 52	27 21	4 32	12 29	29 20	29 39	7 31	19 47
6	16 33 48	9♊24	4 59	12 31	29 28	0♒20	8 45	21 9
7	17 32 42	21 19	5 13	12 32	29 36	1 1	9 58	22 34
8	18 31 34	3♋17	5 13	12 33	29 44	1 42	11 12	24 0
9	19 30 23	15 5	5 0	12 35	29 51	2 23	12 25	25 28
10	20 29 10	27 4	4 34	12 36	29 58	3 4	13 38	26 57
11	21 27 54	9♌14	3 56	12 38	0♒ 5	3 44	14 51	28 28
12	22 26 36	21 39	3 5	12 39	0 11	4 25	16 5	0♈ 1
E	23 25 15	4♍23	2 5	12 40	0 18	5 6	17 18	1 35
14	24 23 53	17 29	0 56	12 41	0 25	5 47	18 31	3 11
15	25 22 29	0♎59	0 s 18	12 41	0 31	6 28	19 44	4 49
16	26 21 3	14 52	1 33	12 42	0 37	7 8	20 58	6 28
17	27 19 34	29 7	2 44	12 42	0 43	7 49	22 11	8 10
18	28 18 3	13♏38	3 45	12 42	0 48	8 30	23 24	9 53
19	29 16 31	28 20	4 33	12 43	0 54	9 11	24 37	11 38
E	♉ 0 14 57	13♐ 3	5 2	12 43	1 0	9 52	25 50	13 24
21	1 13 22	27 42	5 12	12 43	1 5	10 32	27 3	15 11
22	2 11 45	12♑11	5 1	12 R43	1 11	11 13	28 16	17 0
23	3 10 7	26 26	4 32	12 43	1 16	11 54	29 39	18 51
24	4 8 27	10♒24	3 48	12 42	1 21	12 34	0♊42	20 44
25	5 6 46	24 5	2 51	12 42	1 25	13 15	1 54	22 38
26	6 5 3	7♓30	1 46	12 42	1 30	13 56	3 7	24 34
E	7 3 19	20 40	0 36	12 41	1 34	14 36	4 19	26 32
28	8 1 33	3♈36	0 n 34	12 41	1 38	15 17	5 32	28 32
29	8 59 46	16 21	1 41	12 40	1 42	15 57	6 45	0♉33
30	9 57 57	28 54	2 42	12 40	1 45	16 38	7 58	2 35

Days	♃ rises	♂ rises	♀ sets	☿ rises	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	3 m12	3 m11	8 a 27	5 m 2	22 s 14	20 s 37	21 s 43	12 n 4	8 s 1
7	2 53	3 2	8 49	4 55	22 13	20 29	21 6	14 45	5 15
13	2 32	2 51	9 10	4 48	22 13	20 20	20 11	17 12	1 42
19	2 12	2 40	9 31	4 42	22 12	20 13	19 17	19 24	2 n 30
25	1 51	2 29	9 40	4 34	22 12	20 8	18 18	21 18	7 12

The Lunations.

New Moon the 1st day at 16 minutes past 11 morning,
First quarter the 9th day at 54 minutes past 2 afternoon,
Full Moon the 16th day at 31 minutes past 5 afternoon,
Last quarter the 23d day at 40 minutes past 7 morning,
New Moon the 31st day at 4 minutes past 2 morning.

M D	Sunday & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☽ rises & sets	☾ South	Clock aft. ☉
1	St. Phil. & James	4 37	7 23	15 n 8	18 n 38	☽ sets	11 m 56	3 8
2		4 35	7 25	15 26	22 49	9 a 15	0 a 43	3 15
3	Inv. of the Crofs	4 33	7 27	15 43	25 58	10 28	1 31	3 22
4	2 Sun. aft. Easter	4 31	7 29	16 1	27 55	11 32	2 22	3 28
5		4 30	7 30	16 18	28 35	morn	3 14	3 34
6	St. John a. p. Lat.	4 28	7 32	16 35	27 55	0 24	4 6	3 39
7	Easter T. begins	4 26	7 34	16 52	25 58	1 1	4 56	3 44
8		4 25	7 35	17 8	22 52	1 30	5 44	3 48
9		4 23	7 37	17 24	18 45	1 50	6 30	3 51
10		4 22	7 38	17 40	13 46	2 5	7 14	3 54
11	3 Sun. aft. Easte	4 20	7 40	17 55	8 5	2 18	7 59	3 56
12		4 18	7 42	18 11	1 54	2 30	8 43	3 58
13		4 17	7 43	18 26	4 s 34	2 41	9 29	4 0
14		4 15	7 45	18 40	11 3	2 53	10 19	4 0
15		4 14	7 46	18 54	17 9	3 7	11 13	4 0
16		4 12	7 48	19 8	22 24	☽ rises	morn	4 0
17		4 11	7 49	19 22	26 16	9 a 53	0 12	3 59
18	4 Sun. aft. Easter	4 9	7 51	19 35	28 18	11 11	1 17	3 58
19	Q. Charl. born	Dunst.	7 52	19 48	28 13	morn	2 23	3 55
20		4 7	7 53	20 1	26 6	0 8	3 29	3 53
21		4 5	7 55	20 13	22 20	0 43	4 29	3 50
22	Prs. Eliz. born	4 4	7 56	20 25	17 21	1 8	5 26	3 46
23		4 3	7 57	20 37	11 37	1 25	6 17	3 41
24		4 1	7 59	20 48	5 30	1 37	7 3	3 36
25	Rogat. Sunday	4 0	8 0	20 59	0 n 41	1 49	7 45	3 31
26	Auguſtin	3 59	8 1	21 10	6 43	2 0	8 29	3 25
27	Venerable Bede	3 58	8 2	21 20	12 23	2 12	9 11	3 18
28		3 57	8 3	21 30	17 29	2 24	9 55	3 11
29	Aſcenſion	K. Ch. II. reſt.	21 39	21 49	2 38	10 39	3 4
30		3 55	8 5	21 48	25 12	2 57	11 28	2 56
31		3 54	8 6	21 57	27 27	☽ sets	0 a 17	2 48

Days	Day increaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	7 5	14 49	7♑35	20♑[illegible]	3♑12	10♏56	20♎49	15♈25	0 m 22
7	7 25	15 9	7 46	21 11	6 43	16 44	0♌34	19♉53	11 a 58
13	7 43	15 27	7 56	21 41	10 16	22 32	10 19	27 29	11 35
19	8 1	15 45	8 7	22 12	13 50	28 18	20 4	3♌35	11 11
25	8 16	16 0	8 18	22 43	17 27	4♐4	29 50	4♍39	10 45

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	2 6	9 57	2 37	25♓29	0 n 39	0 s 17	1 s 39	1 n 1	0 s 54
7	1 44	10 19	2 48	25 20	0 39	0 18	1 49	1 15	1 n 7
13	1 19	10 45	3 5	25 1	0 39	0 19	1 59	1 28	1 8
19	0 48	11 20	3 32	24 42	0 38	0 20	2 9	1 40	1 53
25	0	All day-light		24 23	0 38	0 22	2 19	1 50	2 12

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

Days	♅ rises	♂ rises	♀ sets	☿ rises	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	1m 29	2m 15	10 a 6	4 m30	22 s 13	20 s. 3	17 s 14	22 n 51	12 n 14
7	1 8	2 2	10 22	sets	22 14	20 c	16 8	24 1	17 11
13	0 45	1 49	10 34	8 a 37	22 15	19 58	14 58	24 47	21 23
19	0 21	1 33	10 43	9 25	22 16	19 58	13 45	25 8	24 13
25	11 a 55	1 18	10 52	9 56	22 18	20 c	12 31	25 4	25 31

The Lunations.

First quarter the 8th day at 59 minutes past 4 morning,
Full Moon the 14th day at 27 minutes past midnight,
Last quarter the 21st day at 51 minutes past 4 afternoon,
New Moon the 29th day at 5 evening.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☽ rises & sets	☾ South	Clock aft. ☉
E	S. aft. Ascension	Nicom.	8 7	22 n 5	28 n 25	10 a 17	1 a 8	2 39
2	Easter T. ends	3 52	8 8	22 13	28 4	10 59	2 0	2 30
3		3 51	8 9	22 21	26 26	11 30	2 50	2 20
4	K. Geo. III. born	3 50	8 10	22 28	23 38	11 52	3 38	2 10
5	Pr. Ern. Aug. bo.	Ox. T. ends.	Bon 22 35	19 48	morn.	4 24	2 0	
6		3 49	8 11	22 41	15 6	0 9	5 8	1 49
7		3 48	8 12	22 47	9 44	0 23	5 51	1 38
E	Whit-Sunday	3 47	8 13	22 53	3 51	0 34	6 33	1 27
9	Whit-Monday	3 47	8 13	22 58	2 s 22	0 43	7 17	1 16
10	Whit-Tuesday	Prs. Amelia born		23 3	8 41	0 54	8 3	1 5
11	Ember Week	St. Barnabas		23 7	14 49	1 7	8 54	0 53
12		3 45	8 15	23 11	20 21	1 23	9 49	0 41
13		3 45	8 15	23 15	24 48	1 45	10 50	0 29
14		3 44	8 16	23 18	27 38	2 19	11 57	0 16
E	Trinity Sunday	3 44	8 16	23 20	28 25	☽ rises	morn	0 4
16		3 44	8 16	23 23	27 2	10 a 34	1 4	bef. 8
17	St. Alban	3 43	8 17	23 25	23 42	11 4	2 10	0 21
18	Oxford T. beg.	3 43	8 17	23 26	18 54	11 24	3 10	0 34
19	Corpus Christi.	3 43	8 17	23 27	13 10	11 39	4 4	0 47
20	Trin. Term beg.	Tr. Edw K. W. S.		23 28	6 58	11 51	4 57	1 0
21	Longest day	3 43	8 17	23 28	0 38	morn	5 39	1 13
E	1 Sun. aft. Trin.	3 43	8 17	23 28	5 n 32	0 2	6 23	1 26
23		3 43	8 17	23 27	11 19	0 12	7 5	1 39
24	St. John Bapt.	3 43	8 17	23 27	16 32	0 23	7 48	1 51
25		3 43	8 17	23 25	21 1	0 38	8 32	2 4
26		3 44	8 16	23 23	24 35	0 57	9 20	2 17
27		3 44	8 16	23 21	27 3	1 21	10 9	2 30
28		3 44	8 16	23 18	28 18	1 56	10 59	2 42
E	2 Sun. aft. Trin.	St. Peter.	16	23 15	28 14	☽ sets	11 50	2 54
30		3 45	8 15	23 12	26 52	9 a 28	0 a 42	3 6

Days	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ♁	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	8 30	16 14	8♑31	23♑24	21♑42	10♐46	11♍12	4♎ 9	10 a 15
7	8 40	16 24	8 40	23 55	25 22	16 31	20 57	25 8	9 49
13	8 44	16 28	8 52	24 25	29 4	22 14	0♎40	13♍36	9 23
19	8 50	16 34	9 3	24 56	2♒47	27 58	10 22	0♐41	8 56
25	odec. 2	16 32	9 14	25 27	6 30	3♑41	20 3	17 11	8 41

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	☿'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	♄'s latitude
1				24♓ 1	0 n 38	0 s 23	2 s 32	1 n 58	1 n 59
7				23 42	0 38	0 24	2 42	2 1	1 18
13	All	day-	light.	23 23	0 37	0 25	2 53	2 2	0 10
19				23 4	0 37	0 26	3 5	1 59	1 s 18
25				22 45	0 37	0 28	3 17	1 52	2 55

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

Days	♃ rises	♂ rises	♀ sets	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	11 a 27	0 m 58	10 a 59	10 a 11	22 s 20	20 s 4	11 s 3	24 n 26	25 n 24
7	11 1	0 41	10 56	10 8	22 23	20 (	9 47	23 28	24 29
13	10 36	0 24	10 51	9 58	22 25	20 15	8 32	22 7	22 46
19	10 10	0 7	10 45	9 21	22 27	20 22	7 18	20 25	21 3
25	9 44	11 a 46	10 35	8 42	22 29	20 30	6 7	18 25	19 32

The Lunations.

First quarter the 7th day at 52 minutes past 3 afternoon,
Full Moon the 14th day at 56 minutes past 6 morning,
Last quarter the 21st day at 36 minutes past 4 morning,
New Moon the 29th day at 55 minutes past 7 morning.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☽ rises & sets	☾ South	Clock bef. ☉
1	Cam. Comm.	3 45	8 15	23 n 8	24 n 17	9 a 51	1 a 29	3 18
2	Visit. B. V. M.	3 46	8 14	23 4	20 38	10 9	2 17	3 30
3	Dog days begin	3 46	8 14	22 59	16 8	10 23	3 1	3 41
4	Camb. T. ends	Transf. St. Mart.		22 54	10 55	10 35	3 44	3 52
5		3 48	8 12	22 49	5 13	10 46	4 26	4 3
E 6	3 Sun. aft. Trin.	3 48	8 12	22 43	0 s 49	10 55	5 8	4 13
7	Tho. a Becket	3 49	8 11	22 37	6 58	11 7	5 51	4 23
8		3 50	8 10	22 30	13 c	11 21	6 37	4 33
9	Trin. Term ends	3 51	8 9	22 23	18 36	11 39	7 29	4 42
10		3 51	8 9	22 16	23 21	morn.	8 26	4 50
11		3 52	8 8	22 8	26 46	0 6	9 29	4 59
12	Oxford Act	3 53	8 7	22 0	28 24	0 47	10 36	5 6
F 13	4 Sun. aft. Trin.	3 54	8 6	21 51	27 54	1 49	11 43	5 14
14		3 55	8 5	21 42	25 19	☽ rises	morn.	5 21
15	Swithin	3 56	8 4	21 33	20 57	9 a 21	0 47	5 27
16		3 58	8 2	21 23	15 22	9 38	1 46	5 33
17		3 59	8 1	21 13	9 5	9 52	2 39	5 38
18		4 0	8 0	21 3	2 33	10 4	3 28	5 43
19	Oxf. Term ends	4 1	7 59	20 52	3 n 53	10 15	4 13	5 48
E 20	5 Sun. aft. Trin.	Margaret	58	20 41	9 56	10 26	4 57	5 51
21		4 3	7 57	20 29	15 25	10 40	5 41	5 55
22	Mary Magd.	4 5	7 55	20 18	20 9	10 57	6 26	5 57
23		4 6	7 54	20 6	23 58	11 19	7 12	6 0
24		4 7	7 53	19 53	26 42	11 51	8 1	6 1
25	St. James	4 9	7 51	19 40	28 13	morn.	8 52	6 2
26	St. Anne, M. V.	M. 10	7 50	19 27	28 27	0 36	9 43	6 3
E 27	6 Sun. aft. Trin.	4 12	7 48	19 14	27 21	1 32	10 34	6 3
28		4 13	7 47	19 0	25 1	2 37	11 24	6 2
29		4 15	7 45	18 46	21 34	☽ sets	0 a 11	6 1
30		4 16	7 44	18 31	17 11	8 a 29	0 57	5 59
31		4 18	7 42	18 17	12 4	8 40	1 40	5 57

Days	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	0 6	16 28	9♑25	25♑58	10♒16	9♑25	29♎43	3♑54	sets
7	0 14	16 20	9 35	26 29	14 3	15 8	9♏20	21 35	3 m32
13	0 24	16 10	9 46	26 59	17 50	20 51	18 55	11♒ 7	3 4
19	0 36	15 58	9 57	27 30	21 37	26 35	28 30	3♐36	2 37
25	0 54	15 40	10 8	28 1	25 25	2♒18	8 ♐ 2	0♈19	2 12

Days	Day lig. begins	Day lig. ends	Durat. twilig.	☽'s node	☿'s latitude	♀'s latitude	♂'s latitude	♃'s latitude	♄'s latitude
1				22♓25	0°n 35	0 s 29	3 s 28	1 n 42	4 s 16
7	All	day-	light	22 6	0 35	0 30	3 40	1 27	4 51
13				21 47	0 35	0 31	3 51	1 9	4 30
19				21 28	0 34	0 32	4 2	0 47	3 26
25	0 45	11 7	3 20	21 9	0 34	0 33	4 13	0 21	1 59

Days	☉'s longitude	☾'s long.	☾'s latitude	♄'s long.	♃'s long.	♂'s long.	♀'s long.	☿'s long.
1	♋ 9 24 38	28♋59	3 n 59	9♑25	29♑57	25♓33	20♌52	13♋54
2	10 21 51	10♌56	3 15	9 20	29 50	26 6	21 59	13 19
3	11 19 4	22 59	2 23	9 16	29 43	26 38	23 7	12 42
4	12 16 17	5♍10	1 23	9 11	29 36	27 11	24 14	12 2
5	13 13 30	17 32	0 18	9 7	29 29	27 43	25 22	11 24
E	14 10 43	0♎11	0 s 49	9 2	29 22	28 14	26 29	10 48
7	15 7 56	13 9	1 55	8 58	29 14	28 45	27 36	10 15
8	16 5 8	26 31	2 58	8 54	29 7	29 15	28 43	9 45
9	17 2 21	10♏19	3 52	8 49	29 0	29 46	29 49	9 16
10	17 59 33	24 35	4 33	8 45	28 52	0♈16	0♍55	8 49
11	18 56 45	9♐17	4 58	8 40	28 45	0 46	2 2	8 27
12	19 53 56	24 19	5 4	8 36	28 37	1 15	3 8	8 10
E	20 51 9	9♑33	4 48	8 32	28 30	1 45	4 14	7 58
14	21 48 22	24 49	4 11	8 28	28 22	2 14	5 19	7 51
15	22 45 36	9♒56	3 18	8 24	28 14	2 42	6 25	7D49
16	23 42 50	24 43	2 12	8 19	28 7	3 10	7 31	7 52
17	24 40 4	9♓6	0 59	8 15	27 59	3 38	8 36	8 0
18	25 37 19	22 59	0 n 16	8 11	27 51	4 5	9 41	8 15
19	26 34 35	6♈25	1 27	8 7	27 44	4 33	10 46	8 36
E	27 31 52	19 25	2 31	8 3	27 36	5 0	11 50	9 2
21	28 29 9	2♉3	3 26	7 59	27 28	5 26	12 55	9 34
22	29 26 27	14 24	4 10	7 55	27 21	5 51	13 59	10 11
23	♌ 0 23 47	26 31	4 42	7 51	27 13	6 17	15 4	10 55
24	1 21 8	8♊30	5 1	7 48	27 5	6 42	16 8	11 45
25	2 18 30	20 23	5 7	7 44	26 57	7 6	17 12	12 39
26	3 15 52	2♋15	5 0	7 40	26 49	7 30	18 15	13 39
E	4 13 16	14 7	4 40	7 36	26 41	7 53	19 18	14 44
28	5 10 41	26 2	4 7	7 33	26 34	8 16	20 20	15 54
29	6 8 7	8♌1	3 24	7 29	26 26	8 38	21 23	17 10
30	7 5 33	20 6	2 31	7 25	26 19	9 0	22 25	18 32
31	8 3 0	2♍18	1 30	7 21	26 11	9 22	23 27	20 1

Days	☿ rises	♂ rises	♀ sets	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	9 a 17	11 a 20	10 a 22	7 a 58	22 s 32	20 s 40	4 s 57	16 n 10	18 n 29
7	8 51	11 11	10 10	rises	22 34	20 50	3 51	13 41	18 14
13	8 25	10 51	9 46	3 m20	22 37	20 59	2 50	11 2	18 44
19	7 58	10 32	9 41	2 52	22 39	21 9	1 53	8 15	19 46
25	sets	10 14	9 25	2 43	22 41	21 19	1 3	5 22	20 53

The Lunations.

First quarter the 5th day at 6 minutes paſt midnight,
Full Moon the 12th day at 17 minutes paſt 2 afternoon,
Laſt quarter the 19th day at 19 minutes paſt 7 at night,
New Moon the 27th day at 33 minutes paſt 10 at night,

M D	Sundays & other remark. days	☉ riſes	☉ ſets	☉'s declin.	☽'s declin.	☾ riſes & ſets	☾ South	Clock bef. ☉
1	Lammas	4 19	7 41	18 n 2	6 n 25	8 a 51	2 a 22	5 54
2		4 21	7 39	17 46	0 26	9 1	3 5	5 50
3	7 Sun. aft. Trin.	4 22	7 38	17 31	5 ♑ 40	9 13	3 47	5 46
4		4 24	7 36	17 15	11 40	9 26	4 33	5 41
5		4 26	7 34	16 59	17 17	9 41	5 21	5 35
6	Transfiguration	4 27	7 33	16 42	22 11	10 3	6 15	5 29
7	Name of Jeſus	4 29	7 31	16 26	25 57	10 38	7 14	5 22
8		4 30	7 29	16 9	28 10	11 29	8 17	5 15
9		4 32	7 28	15 51	28 27	morn.	9 23	5 7
10	8 Sun. aft. Trin.	St. Laurence.	26	15 34	26 42	0 42	10 28	4 59
11	Pr. Brunſw. bo.	Dog-days end		15 16	23 3	2 13	11 29	4 50
12	Pr. Wales born	O. Lammas day		14 58	17 54	☽ riſes	morn.	4 40
13		4 39	7 21	14 40	11 47	7 a 58	0 25	4 30
14		4 41	7 19	14 22	5 10	8 11	1 16	4 19
15		4 43	7 17	14 3	1 n 30	8 23	2 4	4 7
16	Pr. Fred. born	4 44	7 16	13 44	7 54	8 34	2 51	3 56
17	9 Sun. aft. Trin.	4 46	7 14	13 25	13 46	8 48	3 37	3 43
18		4 48	7 12	13 6	18 53	9 3	4 22	3 30
19		4 50	7 10	12 46	23 4	9 24	5 9	3 17
20		4 52	7 8	12 26	26 10	9 52	5 58	3 3
21	Pr. Wm. Hen. b.	4 54	7 6	12 7	28 3	10 30	6 49	2 49
22		4 55	7 5	11 46	28 38	11 25	7 40	2 34
23		4 57	7 3	11 26	27 53	morn.	8 32	2 19
24	10 S. aft. Trin.	St. Bartholome.		11 6	25 52	0 30	9 23	2 4
25		5 1	6 59	10 45	22 41	1 40	10 11	1 48
26		5 3	6 57	10 24	18 30	2 55	10 58	1 32
27		5 5	6 55	10 3	13 30	☾ ſets	11 42	1 15
28	St. Auguſtine	5 7	6 53	9 42	7 54	7 a 5	0 a 26	0 58
29	Behead. J. Bap.	5 9	6 51	9 21	1 54	7 10	1 8	0 40
30		5 10	6 50	8 59	4 ♑ 17	7 26	1 51	0 23
31	11 S. aft. Trin.	5 12	6 48	8 37	10 23	7 38	2 37	caſt. 4

Days	Day decreaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ ſets
1	1 14	15 20	10♐21	28♐37	29♒52	9♒ 0	19♐ 9	8♉ 5	1 m45
7	1 31	15 3	10 31	29 8	3♓41	14 45	28 39	15♊ 6	1 19
13	1 51	14 43	10 42	29 39	7 29	20 31	8♐ 9	22♋14	0 54
19	2 13	14 21	10 53	0♒10	11 17	26 17	17 38	25♌ 7	0 31
25	2 35	13 59	11 4	0 41	15 5	2♓ 5	27 ℰ	22♍26	0 7

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	1 23	10 34	2 58	20♓47	0 n 33	0 s 33	4 s 26	0 s 15	0 s 17
7	1 47	10 13	2 46	20 28	0 32	0 34	4 35	0 49	0 n 53
13	2 9	9 51	2 34	20 9	0 31	0 35	4 44	1 26	1 34
19	2 29	9 30	2 25	19 50	0 31	0 35	4 51	2 7	1 46
25	2 47	9 13	2 18	19 31	0 30	0 35	4 57	2 50	1 34

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

Days	♃ sets	♂ rises	♀ sets	☿ rises.	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	3 m11	9 a 51	9 a 7	2 m44	22 s 43	21 s 29	0 s 13	1 n 58	21 n 28
7	2 44	9 31	8 5c	3 9	22 45	21 39	0 n 22	0 s 58	20 36
13	2 18	9 13	8 33	3 50	22 46	21 47	0 48	3 52	18 11
19	1 52	8 53	8 16	sets	22 48	21 53	1 6	6 42	14 32
25	1 28	8 33	7 58	7 a 19	22 49	21 59	1 14	9 25	10 11

The Lunations.

First quarter the 4th day at 37 minutes past 6 morning,
Full Moon the 10th day at 36 minutes past 11 at night,
Last quarter the 18th day at 54 minutes past noon,
New Moon the 26th day at 26 minutes past noon.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☽ rises & sets	☾ South	Clock aft. ☉
1	Giles	5 14	6 46	8 n 16	16 s 8	7 a 53	3 a 24	0 14
2	Lond. bur. 1666	5 16	6 44	7 54	21 12	8 14	4 16	0 33
3		5 18	6 42	7 32	25 13	8 42	5 13	0 52
4		5 20	6 40	7 10	27 49	9 27	6 13	1 11
5		5 22	6 38	6 47	28 40	10 31	7 17	1 30
6		5 24	6 36	6 25	27 35	11 52	8 21	1 50
E	12 S. aft. Trin.	Enurch.	6 34	6 2	24 38	morn.	9 21	2 10
8	Nativ. B.V. M	5 28	6 32	5 40	20 7	1 24	10 18	2 31
9		5 30	6 30	5 17	14 25	2 58	11 11	2 51
10		5 32	6 28	4 54	8 0	4 29	morn.	3 12
11		5 34	6 26	4 32	1 18	☽ rises	0 0	3 32
12		5 36	6 24	4 9	5 n 19	6 a 49	0 47	3 53
13		5 37	6 23	3 46	11 31	7 2	1 34	4 14
Z	13 S. aft. Trin.	Holy Cross	2	3 23	17 4	7 16	2 20	4 35
15		5 41	6 19	3 0	21 42	7 35	3 9	4 56
16		5 43	6 17	2 36	25 15	7 58	3 58	5 17
17	Ember Week	Lamb.	6 15	2 13	27 36	8 36	4 48	5 38
18		5 47	6 13	1 50	28 37	9 21	5 40	6 59
19		5 49	6 11	1 26	28 18	10 22	6 32	6 20
20		5 51	6 9	1 3	26 41	11 33	7 23	6 41
E	14 S. aft. Trin.	St. Matthew	7	⊙ 39	23 52	morn.	8 13	7 2
22	K. Geo. III. cro.	5 55	6 5	0 16	20 1	0 47	9 1	7 23
23		5 57	6 3	0 s 7	15 15	2 4	9 47	7 44
24	Equal d. and n.	5 59	6 1	0 31	9 48	3 20	10 30	8 4
25		6 1	5 59	0 54	3 50	4 36	11 14	8 24
26	St. Cyprian	6 3	5 57	1 17	2 s 24	☽ sets	11 57	8 44
27		6 5	5 55	1 41	8 39	5 a 57	0 a 42	9 4
E	15 S. aft. Trin.	6 7	5 53	2 4	14 38	6 11	1 29	9 24
29	St. Michael.	Prs. Ch. Aug. b.	2	2 28	20 2	6 29	2 21	9 44
30	St. Jerome	6 71	5 49	2 51	24 22	6 55	3 17	10 3

Days	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ♁	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	3 3	13 31	11♑16	1♒17	19♓30	8♓51	8♒10	18♎35	11 a 40
7	3 25	13 9	11 27	1 49	23 16	14 41	17 59	7♏45	11 17
13	3 49	12 45	12 38	2 20	27 2	20 31	27 8	25 10	10 55
19	4 13	12 21	11 49	2 51	0♈46	26 23	6♓38	11♐46	10 35
25	4 37	11 57	12 0	3 22	4 29	2♈16	16 9	28 20	10 14

Days	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 5	2 11	19♓ 9	0 n 20	0 s 35	4 s 59	3 s 43	0 n 59
7	3 24	8 36	2 6	18 40	0 28	0 36	4 58	4 30	0 20
13	3 37	8 23	2 4	18 30	0 28	0 36	4 52	5 17	0 s 25
19	3 52	8 8	2 1	18 11	0 2-	0 36	4 42	6 2	1 11
25	4 5	7 51	2 0	17 52	0 26	0 36	4 27	6 43	1 56

Days	☉'s longitude	☾'s long.	☾'s latitude	♄'s long.	♅'s long.	♂'s long.	♀'s long.	☿'s long.
1	♍ 8 51 14	3♍20	3 s 43	6♑ 9	23♑10	14♈44	23♎ 0	20♍14
2	9 49 25	16 53	4 30	6 8	23 7	14 41	23 46	21 58
3	10 47 37	0♐41	5 2	6 8	23 4	14 37	24 31	23 40
4	11 45 50	14 42	5 16	6 7	23 1	14 32	25 15	25 20
5	12 44 5	28 56	5 12	6 7	22 59	14 26	25 58	26 59
6	13 42 21	13♑20	4 48	6 7	22 56	14 19	26 40	28 38
E	14 40 39	27 51	4 6	6 6	22 53	14 11	27 20	0♎15
8	15 38 58	12♒24	3 8	6 6	22 51	14 3	27 59	1 51
9	16 37 19	26 53	1 58	6 D 6	22 49	13 54	28 37	3 26
10	17 35 42	11♓14	0 41	6 6	22 48	13 44	29 14	5 0
11	18 34 6	25 20	☉n 37	6 6	22 46	13 34	29 50	6 33
12	19 32 32	9♈ 7	1 51	6 6	22 45	13 23	0♍26	8 5
13	20 31 0	22 34	2 57	6 7	22 44	13 11	1 1	9 36
E	21 29 30	5♉39	3 52	6 7	22 43	12 58	1 34	11 6
15	22 28 2	18 23	4 34	6 7	22 42	12 45	2 5	12 35
16	23 26 37	0♊49	5 2	6 8	22 41	12 31	2 34	14 2
17	24 25 14	12 59	5 16	6 8	22 41	12 17	3 2	15 28
18	25 23 53	24 59	5 15	6 9	22 41	12 2	3 29	16 53
19	26 22 34	6♋53	5 1	6 10	22 D41	11 46	3 54	18 17
20	27 21 18	18 45	4 35	6 11	22 41	11 30	4 17	19 40
E	28 20 4	0♌39	3 56	6 13	22 42	11 13	4 38	21 2
22	29 18 52	12 41	3 7	6 14	22 42	10 56	4 58	22 22
23	♎ 0 17 43	24 54	2 8	6 15	22 43	10 39	5 16	23 41
24	1 16 36	7♍21	1 3	6 16	22 43	10 22	5 32	24 59
25	2 15 31	20 3	0 s 7	6 18	22 45	10 4	5 46	26 16
26	3 14 28	3♎ 1	1 18	6 19	22 46	9 46	5 58	27 31
27	4 13 27	16 16	2 26	6 21	22 47	9 28	6 8	28 45
E	5 12 28	29 46	3 28	6 22	22 49	9 10	6 15	29 57
29	6 11 31	13♍30	4 19	6 24	22 50	8 51	6 20	1♏ 7
30	7 10 36	27 24	4 54	6 26	22 52	8 32	6 24	2 15

Days	♅ sets	♂ rises	♀ sets.	☿ sets.	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	1 m 0	8 a 9	7 a 38	7 a 12	22 s 50	22 s 3	1 n 13	12 s 24	4 n 47
7	0 36	7 45	7 17	7 4	22 51	22 6	1 2	14 43	0 12
13	0 13	7 21	6 56	6 53	22 51	22 8	0 44	16 47	4 s 11
19	11 a 40	6 56	6 34	6 41	22 52	22 9	0 20	18 30	8 17
25	11 29	6 31	6 11	6 26	22 53	22 8	0 9	19 47	11 57

The Lunations.

First quarter the 3d day at 39 minutes past noon,
Full Moon the 10th day at 26 minutes past 11 morning,
Last quarter the 18th day at 37 minutes past 8 morning,
New Moon the 26th day at 9 minutes past 1 morning.

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 14	7 s 20	7 a 35	4 a 17	10 22
2		6 15	5 45	3 38	28 36	8 32	5 19	10 41
3		6 17	5 43	4 1	27 50	9 47	6 22	10 59
4		6 19	5 41	4 24	25 33	11 14	7 23	11 17
S	16 S. aft. Trin.	6 21	5 39	4 48	21 33	morn.	8 21	11 35
6	Faith	6 23	5 37	5 11	16 18	0 43	9 12	11 52
7		6 25	5 35	5 34	10 15	2 12	10 1	12 9
8		6 26	5 34	5 57	3 46	3 27	10 48	12 26
9	St. Denys	6 28	5 32	6 19	2 n 48	5 1	11 34	12 42
10	Ox. & Ca. T. beg	6 30	5 30	6 42	9 8	☽ rises	morn.	12 58
11		6 32	5 28	7 5	14 57	5 a 30	0 20	13 14
S	17 S. aft. Trin.	6 34	5 26	7 28	19 59	5 47	1 6	13 28
13	Tr. K. Edward	6 36	5 24	7 50	24 0	6 9	1 55	13 43
14		6 38	5 22	8 13	26 49	6 39	2 47	13 57
15		6 40	5 20	8 35	28 19	7 22	3 38	14 10
16		6 42	5 18	8 57	28 28	8 17	4 31	14 22
17	Etheldred	6 44	5 16	9 19	27 17	9 22	5 23	14 34
18	St. Luke	6 46	5 14	9 41	24 52	10 37	6 12	14 46
S	18 S. aft. Trin.	6 48	5 12	10 3	21 23	11 52	7 0	14 57
20		6 50	5 10	10 25	16 50	morn.	7 46	15 7
21		6 52	5 8	10 46	11 49	1 7	8 30	15 16
22		6 54	5 6	11 7	6 5	2 22	9 13	15 25
23		6 55	5 5	11 29	0 s 3	3 38	9 56	15 33
24		6 57	5 3	11 50	6 21	3 56	10 40	15 41
25	K. G. III. Accef.	Crifpin	5 1	12 10	12 32	4 16	11 27	15 47
S	19 S. aft. Trin.	K. Geo. III. Pro		12 31	18 15	☽ fets	0 a 18	15 53
27		7 3	4 57	12 51	23 4	5 a 4	1 13	15 58
28	St. Simon & Jude	7 5	4 55	13 12	26 33	5 38	2 13	16 3
29		7 7	4 53	13 32	28 19	6 30	3 17	16 7
30		7 8	4 52	13 52	28 9	7 41	4 21	16 10
31		7 10	4 50	14 11	26 6	9 5	5 23	16 12

Days	Day decreaf.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	☽ fets
1	4 49	11 35	12♑10	3♒53	8♈11	8♈10	25♓41	15♑36	9 a 53
7	5 23	11 11	12 21	4 24	11 51	14 5	5♈13	4♒24	9 32
13	5 47	10 47	12 32	4 56	15 30	20 1	14 47	25 46	9 12
19	6 9	10 25	12 43	5 27	19 7	25 59	24 21	20♓57	8 51
25	6 33	10 1	12 54	5 58	22 42	1♉58	3♉56	21♈6	8 30

	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	4 18	7 42	1 59	17♓33	0 n 25	0 s 36	4 s 4	7 s 16	2 s 37
2	4 31	7 29	1 58	17 14	0 25	0 36	3 43	7 33	3 7
3	4 43	7 17	1 57	16 55	0 24	0 36	3 17	7 29	3 16
4	4 55	7 5	1 57	16 36	0 23	0 36	2 50	6 56	2 50
5	5 6	6 54	1 58	16 17	0 22	0 36	2 22	5 53	1 26

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

	♅ sets	♂ sets	♀ sets	☿ sets	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	11 a 9	6 m 9	5 a 47	6 a 15	22 s 53	22 s 6	0 s 29	20 s 31	15 s 6
7	10 48	5 37	5 22	5 49	22 53	22 3	0 51	20 33	17 29
13	10 29	5 8	4 57	5 55	22 53	21 59	1 3	19 44	18 46
19	10 9	4 41	4 32	5 24	22 53	21 53	1 7	18 4	18 18
25	9 49	4 14	rises	5 1	22 53	21 47	1 c	15 47	15 19

The Lunations.

First quarter the 1st day at 26 minutes past 7 at night,
Full Moon the 9th day at 1 minute past 2 morning,
Last quarter the 24th day at 1 minute past 5 morning,
New Moon the 24th day at 40 minutes past noon.

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 30	22 s 25	10 a 36	6 a 20	16 14
F	20 S. aft. Trin. Pr. Edw. born			AllSoul	17 29	morn.	7 12	16 14
3	Prs. Sophia bor	7 16	4 44	15 8	11 42	0 4	8 1	16 14
4		7 18	4 42	15 27	5 27	1 28	8 48	16 13
5	Powder Plot	7 10	4 41	15 45	0 n 58	2 49	9 33	16 11
6	Mich. Term beg.	Leonard	4 39	16 4	7 15	4 8	10 18	16 9
7	D. Cumb. born	7 23	4 37	16 21	13 8	5 27	11 4	16 6
8	Prs. Aug. Sop. b.	7 24	4 36	16 39	18 21	6 47	11 51	16 1
F	21 S. aft. Trin.	Ld. Mayor's day		16 56	22 40	☽ rises	morn.	15 56
10		7 28	4 32	17 13	25 52	4 a 40	0 41	15 50
11	St. Martin	7 29	4 31	17 30	27 49	5 19	1 31	15 44
12		7 31	4 29	17 46	28 24	6 9	2 24	15 36
13	Britius	7 33	4 27	18 2	27 37	7 11	3 15	15 28
14		7 34	4 26	18 8	25 35	8 20	4 6	15 18
15	Machutus	6 36	4 24	18 34	22 27	9 34	4 54	15 8
F	22 S. aft. Trin.	7 37	4 23	18 49	18 22	10 48	5 39	14 57
17	Hugh	7 39	4 21	19 4	13 32	morn.	6 23	14 45
18		7 40	4 20	19 18	8 6	0 2	7 5	14 32
19		7 42	4 18	19 32	2 13	1 16	7 47	14 19
20	Edmund	7 43	4 17	19 46	3 s 54	2 30	8 29	14 4
21		7 45	4 15	19 59	10 5	3 47	9 14	13 49
22	Cecil. O. Mart. d.	7 46	4 14	20 12	15 59	5 11	10 2	13 33
F	23 S. aft. Trin.	St. Clement		20 25	21 13	6 46	10 55	13 16
24		7 49	4 11	20 37	25 19	☽ sets	11 54	12 58
25	D. Glouc. born	7 50	4 10	20 49	27 47	4 a 15	0 a 57	12 40
26		7 51	4 9	21 1	28 16	5 22	2 3	12 21
27		7 52	4 8	21 12	26 42	6 43	3 7	12 1
28	Mic. Term ends	7 54	4 6	21 22	23 19	8 14	4 8	11 40
29		7 55	4 5	21 33	18 33	9 42	5 3	11 19
F	Advent Sunday	St. Andrew	4	21 43	12 50	11 9	5 54	10 57

Days	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	6 59	9 35	13♑ 6	6♒35	26♈51	8♉59	15♉ 9	2♊36	8 a 4
7	7 21	9 13	13 17	7 6	0♉23	15 0	24 46	10♋15	7 42
13	7 30	8 55	13 28	7 37	3 52	21 2	4♊25	14♌52	7 20
19	7 58	8 36	13 39	8 9	7 19	27 6	14 5	19♍ 0	6 58
25	8 14	8 21	13 50	8 40	10 44	3♊10	23 46	8♎ 5	6 36

Day.	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	5 17	6 43	1 59	15♓55	0 n 22	0 s 35	1 s 53	4 s 15	0 n 53
7	5 25	6 35	2 2	15 36	0 21	0 35	1 29	2 44	2 6
13	5 34	6 26	2 3	15 17	0 21	0 36	1 7	1 19	2 20
19	5 41	6 19	2 5	14 57	0 20	0 36	0 48	0 5	1 59
25	5 48	6 12	2 7	14 38	0 10	0 36	0 32	0 n 57	1 22

Days	☉'s longitude.	☽'s long.	☾'s latitude	♄'s long.	♅'s long.	♂'s long.	♀'s long.	☿'s long.
1	♏ 8 58 34	4♒56	3 s 28	8♑15	25♑38	2♈D40	23♎ 6	29♎ 5
E	9 58 44	18 57	2 27	8 19	25 45	2 41	22 43	28 26
3	10 58 56	2♓47	1 18	8 24	25 53	2 43	22 22	27 48
4	11 59 9	16 25	0 5	8 29	26 1	2 46	22 2	27 26
5	12 59 23	29 53	1 n 6	8 34	26 0	2 49	21 44	27 18
6	13 59 39	13♈ 9	2 13	8 39	26 18	2 53	21 28	27D 20
7	14 59 57	26 15	3 12	8 44	26 27	2 58	21 15	27 31
8	16 0 16	9♉ 9	4 0	8 49	26 35	3 3	21 5	27 53
E	17 0 37	21 51	4 35	8 54	26 44	3 9	20 58	28 25
10	18 0 59	4♊22	4 56	9 0	26 53	3 16	20 57	29 6
11	19 1 23	16 40	5 3	9 5	27 2	3 23	20 56	29 54
12	20 1 49	28 47	4 56	9 10	27 12	3 31	20 49	0♏48
13	21 2 17	10♋45	4 36	9 16	27 21	3 40	20D 52	1 48
14	22 2 47	22 37	4 4	9 21	27 31	3 50	20 57	2 53
15	23 3 19	4♌26	3 22	9 27	27 40	4 0	21 4	4 3
E	24 3 53	16 18	2 31	9 32	27 50	4 11	21 13	5 17
17	25 4 29	28 17	1 33	9 38	28 0	4 23	21 24	6 34
18	26 5 7	10♍28	0 19	9 44	28 10	4 35	21 38	7 54
19	27 5 46	22 58	0 s 37	9 50	28 20	4 48	21 54	9 16
20	28 6 27	5♎51	1 43	9 56	28 30	5 1	22 12	10 40
21	29 7 9	19 10	2 46	10 2	28 41	5 15	22 32	12 5
22	♐ 0 7 53	2♏57	3 42	10 8	28 51	5 30	22 54	13 32
E	1 8 39	17 11	4 25	10 14	29 1	5 45	23 18	15 0
24	2 9 27	1♐47	4 52	10 20	29 12	6 1	23 43	16 29
25	3 10 16	16 37	5 1	10 26	29 22	6 18	24 10	17 59
26	4 11 6	1♑34	4 49	10 32	29 33	6 35	24 39	19 29
27	5 11 57	16 26	4 17	10 38	29 44	6 53	25 9	21 0
28	6 12 49	1♒ 8	3 29	10 44	29 55	7 11	25 41	22 32
29	7 13 42	15 33	2 28	10 50	0♒ 6	7 29	26 14	24 3
E	8 14 36	29 39	1 19	10 56	0 18	7 48	26 49	25 36

Days	♅ sets	♂ sets	♀ rises	☿ rises	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	9 a 27	3 m47	5 m58	6 m16	22 s 51	21 s 37	0 s 40	12 s 56	10 s 19
7	9 8	3 27	5 18	5 36	22 49	21 28	0 11	10 50	8 39
13	8 49	3 8	4 47	5 31	22 48	21 18	0 n 26	9 22	9 56
19	8 30	2 52	4 21	5 50	22 46	21 6	1 11	8 37	12 42
25	8 11	2 36	4 6	6 19	22 44	20 53	1 1	8 30	15 5

The Lunations.

First quarter the 1st day at 7 minutes past 4 morning,
Full Moon the 8th day at 2 minutes past 7 at night,
Last quarter the 16th day at 15 minutes past midnight,
New Moon the 23d day at 21 minutes past 11 at night,
First quarter the 30th day at 29 minutes past 3 afternoon.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☽ rises & sets	☾ South	Clock aft. ☉
1		7 57	4 3	21 s 52	6 s 38	morn.	6 a 41	10 34
2		7 58	4 2	22 1	0 15	0 32	7 25	10 11
3		7 59	4 1	22 10	6 n 0	1 52	8 9	9 48
4		8 0	4 0	22 18	11 53	3 9	8 53	9 23
5		8 1	3 59	22 26	17 10	4 27	9 39	8 58
6	Nicholas	8 2	3 58	22 33	21 39	5 44	10 27	8 33
E	2 S. in Advent	8 2	3 58	22 40	25 6	7 1	11 17	8 7
8	Concep.	8 3	3 57	22 46	27 21	☽ rises	morn.	7 41
9		8 4	3 56	22 52	28 16	3 a 55	0 8	7 14
10		8 4	3 56	22 58	27 50	4 52	1 0	6 47
11		8 5	3 55	23 3	26 7	5 59	1 51	6 19
12		8 5	3 55	23 7	23 15	7 9	2 40	5 51
13	Lucy	8 6	3 54	23 12	19 25	8 23	3 26	5 22
E	3 S. in Advent	8 6	3 54	23 15	14 49	9 36	4 9	4 53
15		8 7	3 53	23 19	9 37	10 48	4 50	4 24
16	O Sapientia	Camb. T. ends		23 21	3 59	11 59	5 31	3 55
17	Ember Week	Oxf. Term ends		23 24	1 s 55	morn.	6 11	3 26
18		8 8	3 52	23 25	7 56	1 14	6 53	2 56
19		8 8	3 52	23 27	13 47	2 32	7 38	2 26
20		8 8	3 52	23 28	19 12	3 55	8 27	1 56
E	4 S. in Advent	St. Tho. Sho. d.		23 28	23 45	5 22	9 22	1 26
22		8 8	3 52	23 28	26 56	6 52	10 23	0 55
23		8 8	3 52	23 28	28 17	☽ sets	11 29	0 25
24		8 8	3 52	23 27	27 31	4 a 0	0 a 36	obe. 5
25	Christmas day	8 8	3 52	23 25	24 41	5 31	1 39	0 35
26	St. Stephen	8 7	3 53	23 23	20 10	7 6	2 39	1 5
27	St. John	8 7	3 53	23 21	14 29	8 37	3 34	1 35
F	1 Sun. aft. Christ.	Innocents	53	23 18	8 10	10 3	4 24	2 4
29		8 6	3 54	23 15	1 37	11 22	5 10	2 34
30		8 6	3 54	23 11	4 n 48	morn.	5 55	3 3
31	Silvester	8 5	3 55	23 6	10 50	1 37	6 39	3 32

D Days	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	8 28	8 40	14♑ 1	9♒12	14 ♉ 8	9♊15	3♋28	28♌32	6 a 14
7	8 38	7 56	14 11	9 42	17 29	15 21	13 12	16♍42	5 52
13	8 46	7 48	14 22	10 15	20 48	21 27	22 56	3 ♎37	5 29
19	8 50	7 44	14 33	10 46	24 5	27 34	2♌41	20 7	5 6
25	oinc. 2	7 40	14 44	11 17	27 20	3♋41	12 26	6♑56	4 40

Days	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 8	14♓19	0 n 19	0 s 36	0 s 15	1 n 45	0 n 40
7	5 57	6 3	2 6	14 0	0 18	0 36	0 2	2 24	0 s 2
13	5 59	6 1	2 12	13 41	0 18	0 36	0 n 10	2 52	0 42
19	6 1	5 59	2 11	13 22	0 17	0 36	0 20	3 9	1 16
25	6 1	5 59	2 11	13 3	0 17	0 36	0 30	3 20	1 44

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

Days	♅ sets	♂ sets	♀ rises	☿ rises	♄'s declin.	♅'s declin.	♂'s declin	♀'s declin.	☿'s declin.
1	7 a 52	2 m 21	3 m 57	6 m 46	22 s 42	20 s 39	2 n 54	8 s 56	18 s 53
7	7 32	2 7	3 50	7 16	22 37	20 24	4 2	9 46	21 27
13	7 12	1 55	3 48	7 46	22 36	20 8	5 7	10 54	23 24
19	6 53	1 45	3 49	8 8	22 33	19 50	6 16	12 16	24 39
25	6 34	1 33	3 [illegible]	sets	22 29	19 31	7 28	13 44	25 7

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

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

This Table may serve the following Places, by adding

	h	m
For Tinmouth Haven, Hartle-pool, *and* Amsterdam	0	30
Breſt	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.

Mo. Days	MAY				JUNE				JULY				AUGUST				Mo. Days
	morn		aftern.		morn		aftern.		morn.		aftern.		morn.		aftern.		
	h	m	h	m	h	m	h	m	h	m	h	m	h	m	h	m	
1	1	59	2	21	2	58	3	16	3	14	3	30	3	49	4	2	1
2	2	39	2	57	3	33	3	49	3	45	3	59	4	18	4	34	2
3	3	14	3	30	4	6	4	22	4	14	4	30	4	50	5	6	3
4	3	46	4	2	4	41	5	0	4	47	5	4	5	25	5	44	4
5	4	22	4	42	5	18	5	36	5	21	5	38	6	8	6	33	5
6	5	1	5	20	5	58	6	20	5	59	6	20	7	2	7	32	6
7	5	43	6	7	6	42	7	5	6	42	7	5	8	9	8	47	7
8	6	32	6	58	7	29	7	54	7	32	8	0	9	29	10	11	8
9	7	24	7	50	8	22	8	50	8	34	9	8	10	54	11	36	9
10	8	18	8	47	9	21	9	53	9	45	10	22			0	13	10
11	9	17	9	48	10	25	10	58	11	3	11	44	0	50	1	22	11
12	10	16	10	44	11	33					0	22	1	53	2	20	12
13	11	14	11	44	0	8	0	41	0	59	1	34	2	46	3	4	13
14			0	13	1	14	1	43	2	8	2	35	3	22	3	37	14
15	0	41	1	9	2	22	2	48	3	2	3	21	3	51	4	7	15
16	1	37	2	6	3	14	3	35	3	40	3	57	4	23	4	41	16
17	2	36	2	59	3	55	4	17	4	14	4	32	4	59	5	17	17
18	3	22	3	43	4	38	4	59	4	51	5	8	5	35	5	58	18
19	4	3	4	28	5	20	5	42	5	26	5	47	6	21	6	47	19
20	4	52	5	17	6	4	6	28	6	8	6	31	7	14	7	44	20
21	5	41	6	10	6	52	7	17	6	54	7	19	8	14	8	47	21
22	6	38	7	7	7	42	8	3	7	45	8	14	9	21	9	55	22
23	7	35	8	4	8	25	8	58	8	44	9	17	10	30	11	3	23
24	8	32	9	0	9	32	10	2	9	50	10	22	11	35			24
25	9	28	9	57	10	32	11	2	10	55	11	28	0	4	0	32	25
26	10	27	10	54	11	32					0	1	0	58	1	24	26
27	11	20	11	47	0	1	0	30	0	29	0	57	1	46	2	7	27
28			0	14	0	56	1	23	1	23	1	48	2	27	2	47	28
29	0	38	1	2	1	49	2	15	2	11	2	34	3	2	3	16	29
30	1	27	1	52	2	37	2	58	2	51	3	8	3	30	3	44	30
31	2	16	2	40					3	22	3	36	3	58	4	12	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
Weymouth	4	20
Bridgewater *and* Texel	4	40
Portland and Hartflew	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	4	30	4	48	5	7	5	30	7	6	7	38	7	36	8	4	1
2	5	8	5	29	6	0	6	31	8	11	8	44	8	32	9	1	2
3	5	57	6	25	7	5	7	40	9	17	9	50	9	31	10	1	3
4	6	57	7	29	8	19	8	58	10	20	10	50	10	28	10	56	4
5	8	9	8	50	9	37	10	16	11	19	11	48	11	26	11	56	5
6	9	33	10	16	10	49	11	22			0	14			0	23	6
7	10	55	11	33	11	52			0	40	1	4	0	49	1	15	7
8			0	6	0	21	0	47	1	28	1	52	1	41	2	7	8
9	0	39	1	7	1	12	1	35	2	16	2	37	2	32	2	51	9
10	1	35	2	0	1	58	2	20	2	58	3	14	3	10	3	27	10
11	2	25	2	44	2	42	2	58	3	30	3	46	3	44	3	59	11
12	3	2	3	17	3	14	3	30	4	3	4	22	4	14	4	32	12
13	3	32	3	47	3	46	4	3	4	42	5	1	4	50	5	7	13
14	4	1	4	19	4	20	4	40	5	21	5	43	5	24	5	42	14
15	4	37	4	55	5	0	5	21	6	5	6	28	6	1	6	22	15
16	5	14	5	36	5	42	6	8	6	52	7	16	6	44	7	5	16
17	5	59	6	26	6	35	7	1	7	41	8	8	7	27	7	51	17
18	6	53	7	23	7	28	7	58	8	35	9	3	8	16	8	47	18
19	7	53	8	25	8	29	9	0	9	31	9	59	9	10	9	51	19
20	8	58	9	32	9	30	9	59	10	27	10	56	10	24	10	50	20
21	10	6	10	37	10	28	10	56	11	25	11	54	11	34			21
22	11	7	11	36	11	23	11	49			0	22	0	9	0	45	22
23			0	5			0	15	0	51	1	16	1	19	1	53	23
24	0	29	0	53	0	39	1	3	1	49	2	10	2	24	2	54	24
25	1	16	1	38	1	27	1	51	2	44	3	8	3	15	3	36	25
26	2	0	2	22	2	15	2	40	3	29	3	50	3	55	4	14	26
27	2	40	2	58	3	0	3	19	4	13	4	36	4	35	4	56	27
28	3	14	3	30	3	38	3	57	4	59	5	22	5	16	5	36	28
29	3	46	4	2	4	20	4	43	5	48	6	14	5	59	6	22	29
30	4	22	4	43	5	8	5	34	6	41	7	9	6	48	7	10	30
31					6	4	6	35					7	36	8	5	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, Ortordneſs, *and* Diep —	4	0
Yarmouth Pier *and* Needle — — — — — —	4	40
St. Helen's *and* Havre-de-Grace — — — — —	5	20

THERE will happen 6 eclipses this year, viz. 4 of the Sun, and 2 of the Moon:

I. The first is an eclipse of the Sun, on Monday the 3d day of March, bout 15 minutes past seven o'clock in the morning, invisible here; but ill be visible in New Holland, the Indian Sea, &c.

II. The 2d will be a total and visible eclipse of the Moon, on Tuesday the 3th of March:

	London			York			Edinb.			
	h	m	s	h	m	s	h	m	s	
eg. of the eclipse	7	31	8	7	26	41	7	17	55	March 18th
eg. of total darkness	8	31	38	8	27	11	8	18	25	afternoon,
Middle	9	22	38	9	18	11	9	9	25	apparent
nd of total darkness	10	13	38	10	9	11	10	0	25	time.
nd of the eclipse	11	14	8	11	9	41	11	0	55	
Digits eclipsed	21°	27′		21°	27′		21°	27′		

III. The third is an invisible eclipse of the Sun, on the 1st of April, near) at night, consequently invisible to us; but will be visible to the north-western parts of North America, and to the eastern parts of Asia.

IV. The 4th is an eclipse of the Sun, on August 27th, near half past 10 o'clock at night, invisible to us here in England; but will be visible in North America.

V. The 5th is another total and visible eclipse of the Moon, on Wednesday the 10th of September, near midnight:

	London			Notting.			York			
	h	m	s	h	m	s	h	m	s	
Beg. of the eclipse	9	43	38	9	39	38	9	39	11	Sept. 10th
Beg. of total darkness	10	43	23	10	39	23	10	38	56	afternoon,
Middle - -	11	34	23	11	30	23	11	29	56	apparent
End of total darkness	12	25	53	12	21	53	12	21	26	time.
End of the eclipse -	13	25	8	13	21	8	13	20	41	
Digits ecl pfed	21°	20′		21°	20′		21°	20′		

VI. The 6th and last eclipse is of the Sun, on the 26th of September, near our noon; but by reason of the Moon's great south latitude, it will be invisible to us; but will be visible at the Cape of Good Hope, &c. &c.

Speculum Phænomenorum

January

2	☌ ♄ ☾ 7h.
2	☌ ☿ ☽ 7h.
2	☌ ♃ ☾ 17h.
2	☌ ♀ ☾ 19h.
2	☌ ☉ ☾ 20h.
4	☌ ☉ ♀ 6h.
12	☌ ☉ ☿ 10h.
14	☾ in apogeo
19	☉ in ♒ 13h. 48m
19	♀ in aphelio
28	☌ ♂ ☾ 7h.
28	☾ in perigeo
29	☌ ♄ ☾ 22h.
30	☌ ♃ ☽ 13h.

February

1	☌ ☉ ☾ 7h.
1	☌ ♀ ☾ 19h.
2	☌ ☿ ☾ 9h.
8	☿ in ♌
11	☾ in apogeo
11	☿ elong. max. a ☉
12	☿ in perihelio
18	☿ ſtationary
18	☉ in ♓ 4h. 36m.
25	☌ ♂ ☾ 22h.
25	☾ in perigeo
26	☌ ♄ ☾ 10h.
26	☌ ☉ ☿ 21h.
27	☌ ♃ ☾ 7h.

March

2	☌ ☿ ☾ 6h.
2	☌ ☉ ☾ 19h.
3	☉ eclipſ. inviſible
10	☾ in apogeo
13	☿ ſtationary
18	☿ in ♓
18	☾ eclipſ. viſible
20	☉ in ♈ 5h. 4m.
24	☾ in perigeo
25	☌ ♄ ☾ 18h.
26	☌ ♂ ☽ 13h.
26	☌ ♃ ☾ 21h.
26	☿ elong. max. a ☉
28	☿ in aphelio
30	☌ ☿ ☾ 3h.

April

1	☉ eclipſ. inviſible
1	☌ ☉ ☾ 9h.
1	□ ☉ ♄ 18h.
3	☌ ♀ ☾ 5h.
7	☾ in apogeo
8	♀ in ♌
19	☉ in ♉ 17h. 52m.
20	□ ☉ ♃ 20h.
21	☾ in perigeo
22	☌ ♄ ☾ 1h.
22	♄ ſtationary
23	☌ ♃ ☾ 8h.
24	☌ ♂ ☾ 4h.
30	☌ ☿ ☾ 9h.
30	☌ ☉ ☾ 23h.

May

3	☌ ♀ ☾ 13h.
3	☿ in ♌
4	☾ in apogeo
6	☌ ☉ ☿ 10h.
11	♀ in perihelio.
11	☿ in perihelio
18	☾ in perigeo
19	☌ ♄ ☾ 8h.
20	☌ ♃ ☾ 17h.
20	☉ in ♊ 18h. 30m.
21	♃ ſtationary
22	□ ☉ ♂ 14h.
22	☌ ♂ ☾ 20h.
30	☌ ☉ ☾ 14h.

June

1	☾ in apogeo
1	☌ ☿ ☾ 16h.
2	☌ ♀ ☾ 21h.
7	☿ elong. max. a ☉
14	☿ in ♌
15	☌ ♄ ☾ 15h.
15	☾ in perigeo
17	☌ ♃ ☾ oh.
20	☌ ♂ ☾ 10h.
21	☉ in ♋ 3h. 12m.
21	☿ ſtationary
24	☿ in aphelio
28	☾ in apogeo.
29	☌ ☉ ☾ 5h.
29	☌ ☿ ☾ 19h.

ad Annum 1783.

July

1 ☌ ☉ ♄ oh.
3 ☌ ☿ ☾ oh.
3 ☌ ☉ ☿ 20h.
2 ☌ ♄ ☾ 22h.
2 ☾ in perigeo
4 ☌ ♃ ☾ 6h.
5 ☿ ſtationary
8 ☌ ♂ ☾ 21h.
0 ☌ ☉ ♃ 1h.
2 ☉ in ♌ 14h. 2m.
5 ☿ elong. max. a ☉
6 ☾ in apogeo
7 ☌ ☿ ☾ 1h.
8 ☌ ☉ ☾ 20h.

August

1 ☌ ☿ ☾ 20h.
2 ☿ in ♍
5 ♂ in perihelio
7 ☿ in perihelio
8 ☾ in perigeo
9 ☌ ♄ ☾ 6h.
10 ☌ ♃ ☾ 11h.
13 ♀ elong. max. a ☉
15 ☌ ♂ ☾ 22h.
19 ☌ ☉ ☿ 7h.
22 ☉ in ♍ 20h. 21m.
23 ☾ in apogeo
27 ☉ eclipſ. inviſ.
27 ☌ ☉ ☾ 11h.
28 ☌ ☿ ☾ 4h.
31 ☌ ☿ ☾ 4h.

September

1 ♀ in aphelio
5 ☌ ♄ ☾ 12h.
5 ☾ in perigeo
6 ☌ ♃ ☾ 16h.
10 ☿ in ♍
10 ☾ eclipſ. viſible
12 ☌ ♂ ☾ 8h.
19 ☾ in apogeo
20 ☿ in aphelio
22 ☉ in ♎ 16h. 14m.
26 ☌ ☉ ☾ oh.
26 ☉ eclipſ. inviſ.
28 ☌ ☿ ☾ oh.
28 ☌ ☿ ☾ 12h.
29 □ ☉ ♄ 5h.

October

1 ☍ ☉ ♂ 1h.
2 ☿ ſtationary
2 ☌ ♄ ☾ 19h.
3 ☌ ♃ ☾ 22h.
3 ☾ in perigeo
4 ☿ elong. max. a ☉
9 ☌ ♂ ☾ 4h.
16 □ ☉ ♃ 21h.
17 ☿ ſtationary
17 ☾ in apogeo
21 ☌ ☉ ♀ 18h.
23 ☉ in ♏ oh. 42m.
25 ☌ ♀ ☾ 3h.
25 ☌ ☉ ☾ 13h.
25 ☌ ☿ ☾ 22h.
27 ☌ ☉ ☿ 7h.
30 ☌ ♄ ☾ 3h.
31 ☌ ♃ ☾ 8h.
31 ☾ in perigeo

November.

3 ☿ in perihelio
5 ☌ ♂ ☾ 5h.
6 ☿ ſtationary
13 ☿ elong. max. a ☉
13 ☾ in apogeo
19 ♀ in ♍
21 ☉ in ♐ 20h. 53m.
21 ☌ ♀ ☾ 6h.
22 ☌ ☿ ☾ 20h.
24 ☌ ☉ ☾ 1h.
26 ☌ ♄ ☾ 15h.
27 ☌ ♃ ☾ 22h.
27 ☾ in perigeo

December.

2 ☌ ♂ ☾ 22h.
7 ☿ in ♍
8 ♂ in ♍
11 ☾ in apogeo
17 ☿ in aphelio
20 ☌ ♀ ☾ 2h.
21 ☉ in ♑ 9h. 13m.
22 ♀ in aphelio
23 ☌ ☉ ☿ 5h
23 ☌ ☉ ☾ 11h.
23 ☌ ☿ ☾ 12h.
24 ☌ ♄ ☾ 6h.
25 ☌ ♃ ☾ 16h.
25 ☾ in perigeo
31 ☌ ♂ ☾ 16h.

The Eclipses of Jupiter's

JANUARY	FEBRUARY	MARCH	APRIL
	Immersions	Immersions	Immersions
	1 0 0 33	1 7 36 5	2 4 14 46
	2 18 28 45	3 2 4 48	3 22 43 36
	4 12 57 0	4 20 33 31	5 17 12 25
The Eclipses	6 7 25 18	6 15 2 15	7 11 41 16
of Jupiter's	8 1 53 36	8 9 31 1	9 6 10 4
Satellites will	9 20 21 58	10 3 59 47	11 0 38 50
not be visible	11 14 50 22	11 22 28 36	12 19 7 36
this month,	13 9 18 49	13 16 57 25	14 13 36 21
Jupiter being	15 3 47 16	15 11 26 16	16 8 5 [illegible]
too near the	16 22 15 45	17 5 55 5	18 2 33 56
Sun.	18 16 44 18	19 0 23 56	19 21 2 32
	20 11 12 51	20 18 52 48	21 15 31 15
	22 5 41 27	22 13 21 41	23 9 59 56
	24 0 10 4	24 7 50 32	25 4 28 33
	25 18 38 44	26 2 19 22	26 22 57 11
	27 13 7 26	27 20 48 14	28 17 25 47
		29 15 17 5	30 11 54 20
		31 9 45 55	

MAY	JUNE	JULY	AUGUST
Immersions	Immersions	Immersions	Emersions
2 6 22 53	1 8 24 26	1 10 22 30	2 9 10 31
4 0 51 24	3 2 52 34	3 4 50 43	4 3 39 24
5 19 19 54	4 21 20 40	4 23 18 57	5 22 8 15
7 13 48 22	6 15 48 46	6 17 47 13	7 16 37 17
9 8 16 48	8 10 16 52	8 12 15 31	9 11 6 17
11 2 45 14	10 4 44 58	10 6 43 50	11 5 35 15
12 21 13 39	11 23 13 4	12 1 12 11	13 0 4 23
14 15 42 2	13 17 41 10	13 19 40 35	14 18 33 30
16 10 10 23	15 12 9 16	15 14 9 0	16 13 2 35
18 4 38 42	17 6 37 22	17 8 37 29	18 7 31 51
19 23 7 1	19 1 5 28	19 3 5 59	20 2 1 [illegible]
21 17 35 16	20 19 33 35	Emersions	21 20 30 19
23 12 3 31	22 14 1 42	20 23 49 32	23 14 59 38
25 6 31 45	24 8 29 49	22 18 18 8	25 9 28 57
27 0 59 57	26 2 57 58	24 12 46 46	27 3 58 16
28 19 28 8	27 21 26 8	26 7 15 26	28 22 27 35
30 13 56 17	29 15 54 17	28 1 44 9	30 16 57 [illegible]
		29 20 12 54	
		31 14 41 41	

first Satellite for 1783.

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

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 5th Day of October this Year, the Time of the Emerſion of Jupiter's firſt Satellite be obſerved (by a Teleſcope) in an unknown Meridian, to happen at 4 h. 55 min. 15 ſec. at night; I find by the Table, that the Time of this Emerſion will happen at the Britiſh Obſervatory, at 2 h. 47 min. 3 ſec. the ſame day: The Difference of the Times is 2 hours 8 min. 12 ſec. which being converted into Degrees and Minutes of the Equator, will make 32 deg. 3 min. the Longitude of the Place of Obſervation, to the Eaſt, becauſe the Time is more than that at the Britiſh Obſervatory.

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	45	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	2	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 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	52
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 Tim of his Rising, the Sum will be the Length of the Nigh But if the Latitude of the Place, and Declination of the Su consist of Degrees and Minutes, then a small Allowance mu be made for the Minutes in both Cases, which may be do by a Person of an ordinary Capacity by a mental Proportio only. Thus, to find the Time of the Sun's Rising and Setti

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 38
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 49	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. 4, 1783.

	h m s
☉'s place at noon ♑ 14° 8′	
Rt. Aſc. of Sirius - -	6 35 33
☉'s rt. aſc. ſubtract -	19 1 25
✳'s eſtimate ſouthing -	11 34 8
☉'s rt. aſc. at that time ſub.	19 3 14
✳'s true ſouthing - -	11 32 19
Semid. arc ſub. & add -	4 36 55
✳'s riſing aſtern. - -	6 55 24
✳'s ſetting - -	16 9 14

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, 1782.

Names of the Stars	Ch.	Rt. Aſc.			Declination				Semid. Ar			Ma
		h	m	s	°	′	″		h	m	s	
Pole ſtar, Alruccabah -	α	0	48	3	88	8	36	n	ſets not			2
Andromeda's girdle, Mirach -	β	0	57	36	34	27	35	n	10	7	32	2
Andromeda's left foot, Almach	γ	1	50	36	41	16	30	n	ſets not			2
Ram's following horn -	α	1	54	56	22	25	27	n	8	9	35	2
Whale's jaw, Menkar -	α	2	50	54	3	13	26	n	6	19	48	2
Meduſa's head, Algol - -	β	2	54	4	40	6	6	n	ſets not			2
Perſeus's right ſide, Algenib	α	3	8	51	49	4	11	n	ſets not			2
Brighteſt of the 7 ſtars -	η	3	34	34	23	25	2	n	8	16	40	3
Bull's ſouth eye, Aldebaran	α	4	23	26	16	3	23	n	7	28	51	1
Auriga's left ſhoulder, Capella	α	5	0	37	45	44	59	n	ſets not			1
Orion's left foot, Rigel -	β	5	4	4	8	28	3	s	5	20	28	1
Bull's north horn - -	β	5	12	32	28	24	22	n	8	57	1	2
Orion's left ſhoulder, Bellatrix	γ	5	13	27	6	8	10	n	6	34	41	2
Orion's girdle - -	ε	5	25	10	1	21	24	s	5	56	42	2
Orion's right ſhoulder, Betelgeuſe	α	5	43	23	7	20	59	n	6	40	58	1
In the great Dog's mouth, Sirius	α	6	35	33	16	25	14	s	4	36	55	1
Head of the 1ſt Twin, Caſtor	α	7	20	41	32	20	54	n	9	38	21	1
In the leſs Dog's thigh, Procyon	α	7	27	54	5	46	41	n	6	32	50	1
Head of the 2d Twin, Pollux	β	7	31	59	28	32	14	n	8	58	13	2
Hydra's heart, Alphard -	α	9	16	53	7	43	21	s	5	24	20	2
Lyon's heart, Regulus -	α	9	56	45	13	1	32	n	7	11	28	1
Great Bear, Lower Pointer	β	10	48	34	57	32	47	n	ſets not			2
Great Bear, Upper Pointer -	α	10	50	8	62	55	27	n	ſets not			2
Lion's tail, Deneb - -	β	11	37	56	15	47	28	n	7	27	18	2
Great Bear, 1ſt in the tail, Aliath	ε	12	44	22	57	8	46	n	ſets not			2
Virgius's ſpike - -	α	13	13	44	10	1	2	s	5	12	20	1
Dragon's tail - -	α	13	58	30	65	25	19	n	ſets not			2
Bootes, Arcturus -	α	14	5	46	20	20	5	n	7	55	26	1
Libra, Southern Scale - -	α	14	38	52	15	7	26	s	4	44	23	2
Libra, Northern Scale - -	β	15	5	18	8	33	59	s	5	19	57	2
Bright ſtar in the North Crown	α	15	25	28	27	27	35	n	8	48	36	2
Scorpion's heart, Antares	α	16	16	4	25	55	50	s	3	34	6	1
Hercules's head, Raſ. Algethi	α	17	4	43	14	39	8	n	7	20	41	2
Head of Serpentarius - -	α	17	24	49	12	44	2	n	7	9	50	2
Dragon's head, Raſtaben -	γ	17	51	34	51	31	19	n	ſets not			2
Bright ſtar in the Harp, Lyra	α	18	29	33	38	35	19	n	ſets not			1
Bright ſtar in the Eagle, Atair	α	19	40	8	8	18	10	n	6	45	57	2
Mouth of ſouth Fiſh, Fomalhaut	α	22	45	32	30	46	17	s	2	52	6	1
Pegaſus's wing, Markab -	α	22	53	55	14	2	8	n	7	17	10	2
Andromeda's head - -	α	23	57	9	27	53	2	n	8	52	19	2

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 1780.

☽	Cha.	Long.	Lat.	Mag.	Con.	Cha.	Long.	Lat.	Mag.
		° ′ ″	° ′ ″				° ′ ″	° ′ ″	
		♈ 11 4 48	2 9 44 n	4	♎	α	♍ 12 1 6	0 21 48 n	2
		14 28 2	1 5 37 n	4		12	17 56 14	1 49 14 s	3
		16 48 2	0 13 11 s	4		γ	22 3 46	4 24 41 n	3
		♉ 17 46 21	1 48 7 n	4		η	24 18 10	4 2 52 n	4
		26 55 21	4 1 36 n	3		π	24 41 24	0 1 1 n	4
		♊ 2 43 37	5 45 30 s	3		θ	26 47 49	3 29 24 n	4
		5 23 14	2 35 37 s	3		λ	27 24 23	0 6 53 n	4
		6 42 57	5 29 2 s	1	♍	δ	29 30 5	1 57 17 s	3
		19 30 14	5 21 59 n	2		π	29 52 12	5 26 15 s	3
		21 42 52	2 13 29 s	3		β	♎ 0 7 10	1 2 18 n	2
		♋ 0 22 14	0 55 4 s	4		ν	1 34 27	1 39 52 n	4
		2 13 39	0 50 34 s	3		σ	4 43 50	4 0 23 s	4
		5 1 57	6 46 12 s	2		α	6 41 35	4 32 17 s	1
		6 52 7	2 2 28 n	3		τ	8 23 19	6 5 21 s	4
		15 27 6	0 12 19 s	3	♎	γ	28 11 40	6 56 48 s	3
		20 11 11	6 40 4 n	1		μ	♑ 0 8 35	2 22 24 n	4
		♌ 4 28 28	3 10 22 n	4		λ	3 15 8	2 5 31 s	4
		5 38 46	0 4 13 n	4		ο	7 6 25	3 55 22 s	3
		18 35 0	3 1 57 s	4		σ	9 18 54	3 24 55 s	3
		21 11 15	3 46 1 s	4		τ	11 46 9	5 2 33 s	3
		24 50 0	4 51 9 n	4		ο	11 55 13	0 53 36 n	3
		26 46 26	0 27 27 n	1		π	13 10 58	1 28 7 n	4
		♍ 3 19 2	0 8 29 n	4	♑	β	♒ 0 58 32	4 36 46 n	3
		18 26 24	0 31 21 s	4		ε	17 7 37	4 57 31 s	4
		21 58 9	3 2 51 s	4		γ	18 42 30	2 32 6 s	4
		24 2 24	0 41 36 n	3		δ	20 27 42	2 33 40 s	3
		♎ 0 17 42	5 4 42 n	3	♒	ι	25 38 54	2 3 47 s	4
		1 45 5	1 22 24 n	3		θ	♓ 0 11 19	2 43 22 n	4
		7 6 18	2 48 57 n	3		λ	8 30 20	0 22 57 s	4
		20 46 27	2 2 11 s	1	♓	ο	14 4 16	1 2 8 s	4

This table shewing the mean longitudes of 60 stars to the beginning of the year 1780, their mean longitudes for any other time may be found if 50½ 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, 1782, or 2 years and one eighth after the tabular time; here 2⅛ times 50½ sec. make 1′ 47″, which being added to the tabular longitude, gives ♈ 11° 6′ 35″ 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 0 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	Leverpool	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	Manila	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 12 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.