ΆΤΛΑΣ ΟΥΡΑΝΙΟΣ,

The COELESTIAL ATLAS;

OR, A NEW

EPHEMERIS

For the YEAR of our LORD 1784.

Being the

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 semi-diurnal Arcs, by which the Times of the Sun's Rising and Setting may be known by Inspection, on every Day in the Year, and in any Part of GREAT-BRITAIN or IRELAND; a TIDE-TABLE, and a very correct one of the Eclipses of JUPITER's first Satelles; a TABLE of the Sun's Right-Ascension; various exact TABLES of the most remarkable fixed Stars, taken from Mr. FLAMSTEED's Catalogue; and, lastly, with a TABLE of Latitudes and Longitudes of the most remarkable Places in the World.

By ROBERT WHITE,

Teacher of the Mathematicks.

Οἱ ἀέναοι δίνηνται δοξαι Θεῦ.

The THIRTY-FIFTH IMPRESSION.

LONDON:

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Chronological Notes for the Year 1784.

Golden Number	18	Septuagesima Sunday	Feb. 8
Cycle of the Sun	1	Shrove Sunday	Feb. 22
The Epact	7	Easter Day	April 11
Dominical Letters	D C	Whit-Sunday	May 30
Number of Direction	21	Trinity Sunday	June 6
Roman Indiction	2	Advent Sunday	Nov. 28

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 1784.

THE Spring Quarter begins on the 19th Day of March, at 46 Minutes past 10 at Night, apparent Time.

The Summer Quarter begins June the 20th, 49 Minutes past 8 at Night.

The Autumnal Quarter begins September the 22d, 29 Minutes past 9 in the Morning.

The Winter Quarter begins December the 21st, 58 Minutes past 2 in the Morning.

THE beautiful Planet Venus will be a Morning Star 'till August the 8th; and after that Time she will be an Evening Star to the Year's End.

Jupiter will be a Morning Star from the 3d Day of February 'till August the 25th, at which Time he becomes an Evening Star; and so continues to the Year's End.

The NAMES of the Learned JUDGES of the LAW.

I. The Lords Commiſſioners of the Great Seal, Right Hon. Lord Loughborough; Sir Wm. Aſhhurſt, Knt. Sir Beaumont Hotham, Knt.

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.

James Wallace, Eſq; Attorney General; John Lee, Eſq; Solic. 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	Friday.
From the Day of St. Hilary in 15 Days - 27	28	29	30	Friday.
On the Morrow of the Purif. Bleſſed Mary, Feb. 3	4	5	6	Friday.
In eight Days of the Purif. of Bleſſed Mary, - 9	10	11	12	Thurſ.

Eaſter Term begins April 28, ends May 24.

From the Day of Eaſter in 15 Days, - April 25	26	27	28	Wedn.
From the Day of Eaſter in 3 Weeks, - May 2	3	4	5	Wedn.
From the Day of Eaſter in 1 Month, - - 9	10	11	12	Wedn.
From the Day of Eaſter in 5 Weeks, - 16	17	18	19	Wedn.
On the Morrow of the Aſcenſion, - - - 21	22	23	24	Monday

Trinity Term begins June 11, ends June 30.

On the Morrow of the Holy Trinity, - June 7	8	9	11	Friday.
In 8 Days of the Holy Trinity, - - - 13	14	15	16	Wedn.
In 15 Days of the Holy Trinity, - - - 20	21	22	23	Wedn.
In 3 Weeks of the Holy Trinity, - - - 27	28	29	30	Wedn.

Michaelmas Term begins Nov. 6, ends Nov. 29.

On the Morrow of All Souls, - - - Nov. 3	4	5	6	Saturd.
On the Morrow of St. Martin, - - - 12	13	14	15	Monday
In eight Days of St. Martin, - - - - 18	19	20	22	Monday
In 15 Days of St. Martin, - - - - 25	26	27	29	Monday

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 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	Princeſs Amelia, Aug. 7, -	1783
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 $\frac{28}{31}$
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, 1784.

BISHOPS.	Sees.	Date.	Succeeded.	DEANS.
Dr. John Moore	*Bangor*	1775	Ewer deceaſed	
Arch-Biſhop	Canterb. A. B	1783	Cornwallis dec.	Dr. Horne
Dr. Will. Markham	*Cheſter*	1748	Keene tranſlat.	
Arch-Biſhop	York A. B.	1777	Drummond de.	Dr. J. Fountayne
	St. David's	1761	Squire deceaſ.	
Dr. Robert Lowth	*Oxford*	1757	Hume tranſl.	
	London	1777	Terrick dec.	Biſhop Thurlow
	Bangor	1754	Willes tranſl.	
Dr. John Egerton	Durham	1752	Trevor deceaſ.	Hon. W. Digby
	Litch & Cov.	1768	Cornwallis tr.	
Hon. Dr. B. North	*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
	St. David's	1766	Clagget tranſl.	
Dr. Charles Moſs	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
	Landaff	1769	Shipley tranſl.	
Dr. S. Barrington	Saliſbury	1782	Hume dec.	Dr. Noel
Dr. John Hinchliffe	Peterborough	1769	Lamb dec.	Dr. Ch. Tarrant
	St. David s	1774	Moſs tranſl.	
H. Dr. James Yorke	*Glouceſter*	1779	Warburton dec.	
	Ely	1781	Keene deceaſed	Dr. Cooke
Dr. John Thomas	Rocheſter	1774	Pearce dec.	Dr. Dampier
	Litch. & Cov.	1775	B. North tr.	
Dr. Hurd	Worceſter	1781	B. North tr.	Dr. St. John
Dr. Beilby Porteus	Cheſter	1777	Markham tran.	Dr. Will. Smith
Dr. John Butler	Oxford	1777	Lowth tranſl.	Dr. Jackſon
Dr. John Roſs	Exeter	1778	Keppel dec.	Dr. Jer. Milles
Dr. Thurlow	Lincoln	1779	Green dec.	Dr. Cuſt
	St. David's	1779	Yorke tranſl.	
Dr. John Warren	Bangor	1783	Moore tranſl.	Dr. Tho. Lloyd
Dr. J. Cornwallis	Litch & Cov.	1781	Hurd tranſl.	Dr. Proby
Dr. Samuel Hallifax	Glouceſter	1781	Yorke tranſl.	Dr. Joſiah Tucker
	Briſtol	1782	Hume tranſlat	
Dr. Bagot	Norwich	1783	Yonge dec.	Dr. P. Lloyd
Dr. Watſon	Landaff	1782	Barrington tr.	Dr. Adams, A. D.
Dr. Smalwell	St. David's	1783	Warren tranſl	Mr. Wollaſton, P.
Dr. Wilſon	Briſtol	1783	Bagot tranſl.	Dr. Hallam
	Weſtminſter	1768		Biſhop Thomas
Dr. George Maſon	Sodor & Man	1779	Richmond dec	
	Windſor	1778	Hon. &	Rev. Dr Har'ey

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
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.

Full Moon the 7th day, at 52 minutes past 1 afternoon,
Last quarter the 15th day, at 34 minutes past 4 afternoon,
New Moon the 22d day, at 48 minutes past 9 morning,
First quarter the 29th day, at 49 minutes past 5 morning.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ south	Clock vef. ☉
1	Circumcision	8 5	3 55	23 s 2	16 n 16	2 m 3	7 a 24	4 1
2		8 4	3 56	22 56	20 54	3 20	8 11	4 29
3		8 4	3 56	22 51	24 32	4 38	9 c	4 57
D 4	2 S. aft. Christ	8 3	3 57	22 45	27 1	5 51	9 51	5 25
5	Old Christ. day	8 2	3 58	22 38	28 13	6 57	10 42	5 51
6	Epiphany	8 1	3 59	22 31	28 4	7 51	11 33	6 17
7		8 c	4 0	22 24	26 37	☽ rises	morn	6 44
8	Lucian	8 c	4 c	22 16	23 59	4 a 46	0 23	7 9
9		7 59	4 1	22 7	20 20	6 0	1 c	7 34
10		7 58	4 2	21 59	15 53	7 11	1 54	7 59
D 11	1 S. aft. Epiph.	7 57	4 3	21 49	10 48	8 22	2 30	8 23
12	Plow Monday	O.N. Year's d	4	21 40	5 17	9 28	3 1c	8 46
13	Cam. Term beg	Hilary	4 6	21 30	0 s 29	10 46	3 56	9 9
14	Oxf. Term beg.	7 53	4 7	21 19	6 21	morn	4 37	9 31
15		7 52	4 8	21 18	12 7	0 0	5 1c	9 52
16		7 51	4 9	20 57	17 32	1 18	6 6	10 13
17	O. Twelfth day	7 50	4 10	20 46	22 17	2 39	6 55	10 33
D 18	2 S. aft. Epiph.	Prisca	4 12	20 33	25 56	4 8	7 51	10 53
19	Q. Char. b. d. k.	7 47	4 13	20 21	28 2	5 33	8 52	11 11
20	Fabian	7 46	4 14	20 8	28 11	6 44	9 5c	11 29
21	Agnes	7 44	4 16	19 55	26 15	7 38	11 5	11 47
22	Vincent	7 43	4 17	19 41	22 23	☽ sets	ρ a 9	12 3
23	Hil. Term beg.	7 41	4 19	19 27	17 c	5 a 54	1 8	12 19
24		7 40	4 20	19 13	10 40	7 26	2 2	12 34
D 25	3 S. aft. Epiph	Conv. St. Paul		18 58	3 54	8 52	2 51	12 48
26		7 37	4 23	18 43	2 n 51	10 12	3 38	13 1
27	Pr. Aug. Fred. b	7 35	4 25	18 28	9 15	11 35	4 24	13 14
28		7 34	4 26	18 12	15 ?	morn	5 11	13 25
29		7 32	4 28	17 56	19 59	0 58	5 58	13 36
30	K. Charl. I. mart.	7 31	4 29	17 40	23 , 55	2 17	6 47	13 46
31		7 29	4 31	17 23	26 41	3 32	7 38	13 55

Days	Day increas.	Length of Day.	Heliac. long. ♄	Heliac. long. ♅	Heliac. long. ♂	Heliac long ♁	Heliac long. ♀	Heliac. long. ☿	♄ sets.
1	0 8	7 59	14♑56	11♒54	1♊ 5	10♌56	23♌50	28♑ 3	7 a 11
7	0 16	8 0	15 7	12 26	4 16	16 57	3♍35	18♒28	rises.
13	0 28	8 12	15 18	12 57	7 25	23 3	13 20	12♓15	7 m30
19	0 44	8 28	15 29	13 29	10 32	29 10	23 5	10♈42	7 7
25	1 0	8 44	15 40	14 0	13 37	5♎16	2♎48	14♉27	6 43

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	12♓41	0 n 16	0 s 37	0 n 35	3 n 23	2 s 4
7	5 56	6 4	2 9	12 22	0 16	0 37	0 46	3 20	2 6
13	5 52	6 8	2 7	12 3	0 15	0 37	0 52	3 12	1 51
19	5 46	6 14	2 5	11 44	0 15	0 38	0 57	2 59	1 12
25	5 39	6 21	2 3	11 25	0 15	0 38	1 1	2 43	0 3

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

Days	♃ sets	♂ sets	♀ rises	☿ sets	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	6 a 11	1 m20	3 m58	4 a 9	22 s 24	19 s 8	8 n 52	15 s 30	24 s 33
7	5 53	1 12	4 5	4 36	22 19	18 47	10 6	16 57	23 3
13	5 35	1 4	4 14	5 8	22 15	18 26	11 20	18 17	20 36
19	5 17	0 57	4 23	5 40	22 10	18 3	12 33	19 27	17 20
25	4 59	0 51	4 32	6 (	22 6	17 39	13 46	20 22	13 42

The Lunations.

Full Moon the 6th day, at 19 minutes past 9 morning,
Last quarter the 14th day, at 19 minutes past 5 morning,
New Moon the 20th day, at 25 minutes past 8 at night,
First quarter the 27th day, at 44 minutes past 10 at night.

M D	Sundays & other remark. days	☉ rises	☉ sets	☽'s declin.	☽'s decl n.	☽ rise & sets	☽ fouth	Clock bef. ☉
D	4 S. aft. Epiph.	7 27	4 33	17 s 7	28 n 11	4 m 41	8 a 30	14 3
2	Purif. Candl. day	7 26	4 34	16 49	28 20	5 39	9 21	14 10
3	Blaſe	7 24	4 36	16 32	27 10	6 22	10 12	14 17
4		7 22	4 38	16 14	24 47	6 53	11 0	14 23
5	Agatha	7 20	4 40	15 56	21 20	7 16	11 45	14 27
6		7 19	4 41	15 38	17 1	☽ rises	morn	14 31
7		7 17	4 43	15 19	12 2	6 a 7	0 28	14 35
D	Septuageſima	7 15	4 45	15 0	6 34	7 18	1 10	14 37
9		7 13	4 47	14 41	0 48	8 29	1 50	14 39
10		7 11	4 46	14 21	5 s 4	9 44	2 32	14 40
11		7 9	4 51	14 2	10 51	11 0	3 13	14 40
12	Hil. Term ends	7 8	4 52	13 42	16 17	morn	3 58	14 39
13		7 6	4 54	13 22	21 8	0 20	4 45	14 38
14	Valentine	7 4	4 56	13 2	25 2	1 45	5 37	14 36
D	Sexageſ. Sunday	7 2	4 58	12 41	27 36	3 20	6 34	14 33
16		7 0	5 0	12 20	28 28	4 23	7 36	14 29
17		6 58	5 2	11 59	27 24	5 23	8 40	14 25
18		6 56	5 4	11 38	24 23	6 5	9 44	14 20
19		6 55	5 5	11 17	19 41	6 35	10 45	14 15
20		6 53	5 7	10 56	13 44	☽ sets	11 45	14 8
21		6 51	5 9	10 34	7 1	6 a 16	0 a 36	14 1
D	Quinqu. Sunday	6 49	5 11	10 12	0 4	7 42	1 25	13 54
23		6 47	5 13	9 50	6 n 43	9 10	2 13	13 45
24	St. Matthias	Pr Adol. Fred. b. Shrove T			12 59	10 29	3 1	13 37
25	Aſh Wedneſday	6 43	5 17	9 6	18 26	11 57	3 50	13 27
26		6 41	5 19	8 44	22 50	morn	4 40	13 17
27		6 39	5 21	8 21	26 3	1 18	5 32	13 6
28		6 37	5 23	7 58	27 57	2 31	6 25	12 55
C	Quad. 1 S. in Lent	6 35	5 25	7 36	28 29	3 34	7 18	12 43

Day	Day increaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long ♂	Helioc. long. ♁	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	1 24	9 8	15 ♑ 52	14 ♒ 38	17 ♑ 10	12 ♌ 23	14 ♎ 7	28 ♑ 9	6 m 17
7	1 45	9 26	16 3	15 10	20 11	18 27	23 47	4 ♌ 12	5 56
13	2 7	9 40	16 14	15 41	23 1	24 31	3 ♍ 25	5 ♍ 9	5 35
19	2 29	10 10	16 25	16 13	26 8	♍ 34	13 2	♎ 43	5 13
25	2 51	10 34	16 36	16 45	29 5	6 36	22 37	22 10	4 52

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☽'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	5 30	6 30	2 0	11♓ 2	0 n 14	0 s 39	1 n 6	2 n 21	1 n 50
7	5 21	6 39	1 59	10 43	0 14	0 39	1 9	2 6	3 19
13	5 12	6 48	1 57	10 24	0 14	0 40	1 12	1 38	3 41
19	5 0	7 0	1 57	10 5	0 13	0 40	1 14	1 15	2 52
25	4 50	7 10	1 56	9 46	0 13	0 41	1 16	0 52	1 35

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

Days	♃ sets	♂ sets	♀ rises	☿ sets	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	4 a 39	0 m 42	4 m 41	6 a 9	22 s 0	17 s 11	15 n 9	21 s 6	10 s 26
7	rises	0 41	4 49	5 27	21 55	16 46	15 18	21 23	10 0
13	6 m 53	0 39	4 51	rises	21 50	16 21	17 24	21 10	11 45
19	6 33	0 38	5 0	5 m 5	21 45	15 55	18 27	20 55	13 58
25	6 13	0 36	5 2	5 4	21 41	15 29	19 26	20 9	15 24

The LUNATIONS.

Full Moon the 7th day, at 35 minutes paſt 3 morning,
Laſt quarter the 14th day, at 40 minutes paſt 2 afternoon,
New Moon the 21ſt day, at 13 minutes paſt 7 morning,
Firſt quarter the 28th day, at 23 minutes paſt 5 evening.

M D	Sundays & other remark. days	☉ riſes	☉ ſets	☉'s declin.	☽'s declin.	☽ riſes & ſets	☽ South.	Clock bef. ☉
1	David	6 33	5 27	7 s 13	27 n 40	4 m 24	8 a 8	12 31
2	Chad	6 31	5 29	6 50	25 36	4 56	8 57	12 18
3	Ember Week	6 29	5 31	6 27	22 26	5 25	9 44	12 5
4		6 27	5 33	6 4	18 20	5 43	10 29	11 51
5		6 25	5 35	5 41	13 29	5 57	11 11	11 37
6		6 23	5 37	5 17	8 5	6 9	11 52	11 22
C	2 Sun. in Lent.	Perpet.	5 39	4 54	2 19	☽ riſes	morn	11 7
8		6 19	5 41	4 31	3 s 36	7 a 37	0 33	10 51
9		6 17	5 43	4 7	9 26	8 53	1 15	10 36
10		6 15	5 45	3 44	15 4	10 14	1 59	10 20
11		6 13	5 47	3 20	20 5	11 34	2 47	10 3
12	Gregory	6 11	5 49	2 56	24 12	morn	3 38	9 47
13		6 9	5 51	2 33	27 * 5	0 59	4 33	9 30
C	3 Sun. in Lent	6 7	5 53	2 9	28 24	2 17	5 33	9 12
15		6 5	5 55	1 45	27 56	3 21	6 34	8 55
16		6 3	5 57	1 22	25 37	4 7	7 37	8 37
17	St. Patrick	6 1	5 59	0 58	21 37	4 41	8 36	8 20
18	Edw. K. W. S.	5 59	6 1	0 34	16 17	5 3	9 33	8 2
19	Equal d. and n.	5 57	6 3	0 11	9 59	5 20	10 26	7 44
20		5 55	6 5	0 n 13	3 11	5 40	11 17	7 26
C	4 or Midlent S.	Benedict	6 7	0 37	3 n 43	☽ ſets	0 a 6	7 7
22		5 51	6 9	1 0	10 17	8 a 10	0 56	6 49
23		5 49	6 11	1 24	16 12	9 36	1 46	6 31
24		5 47	6 13	1 48	21 9	11 1	2 36	6 12
25	Annunc. Ladyd.	5 46	6 14	2 11	24 56	morn	3 28	5 53
26		5 44	6 16	2 35	27 22	0 20	4 22	5 35
27		5 42	6 18	2 58	28 23	1 28	5 15	5 16
C	5 Sun. in Lent	5 40	6 20	3 22	28 0	2 25	6 8	4 58
29		5 38	6 22	3 45	26 18	3 6	6 59	4 39
30		5 36	6 24	4 8	23 28	3 34	7 47	4 20
31		5 34	6 26	4 31	19 30	3 57	8 33	4 2

Days	Day increaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ riſes
1	3 11	10 55	16 ♐ 45	17 ♏ 11	1 ♎ 30	11 ♓ 37	0 ♌ 35	7 ♓ 58	4 m 37
7	3 35	11 19	16 56	17 43	4 23	17 37	10 7	25 23	4 15
13	3 59	11 43	17 7	18 15	7 15	23 36	19 38	11 ♌ 59	3 56
19	4 23	12 7	17 17	18 47	10 6	29 33	29 8	28 33	3 36
25	4 47	12 31	17 28	19 19	12 55	5 ♍ 30	8 ♍ 38	15 ♈ 49	3 15

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	9♓30	0 n 13	0 s 41	1 n 18	0 n 32	0 n 31
7	4 30	7 30	1 16	9 11	0 12	0 42	1 19	0 10	0 s 35
13	4 17	7 43	1 57	8 52	0 12	0 43	1 20	0 s 11	1 26
19	4 4	7 56	1 58	8 33	0 11	0 43	1 21	0 30	2 1
25	3 50	8 10	2 0	8 14	0 11	0 45	1 22	0 47	2 20

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

Days	♃ rises	♂ sets	♀ rises	☿ rises	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	5 m58	0 m30	5 m 5	5 m37	21 s 36	15 s 7	20 n 13	19 s 15	15 s 48
7	5 38	0 27	5 3	5 34	21 31	14 41	21 5	17 53	15 20
13	5 18	0 25	4 59	5 32	21 27	14 15	21 52	16 12	13 57
19	5 0	0 24	4 52	5 29	21 23	13 49	22 35	14 14	11 44
25	4 40	0 22	4 49	5 24	21 20	13 24	23 12	12 3	8 47

The Lunations.

Full Moon the 5th day, at 7 minutes past 7 at night,
Last quarter the 12th day, at 32 minutes past 9 at night,
New Moon the 19th day, at 15 minutes past 6 evening,
First quarter the 27th day, at 27 minutes past noon.

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

Days	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long ☉	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	5 19	12 59	17♑41	19♒ 5	16♎11	12♏24	19♑42	8♒ 1	2 m 51
7	5 39	13 23	17 52	20 27	18 57	18 17	29 10	29 5°	2 29
13	6 1	13 45	18 3	20 59	21 43	24 10	8♒39	25♐5°	2 7
19	6 23	14 7	18 13	21 31	24 27	0♑1	13 8	27♈ 4	1 46
25	6 45	14 29	18 24	22 3	27 11	5 52	27 33	3♊ 3	1 25

Days	D 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	7♓52	0 n 11	0 s 46	1 n 23	1 s 5	2 s 21
7	3 17	8 43	2 8	7 33	0 10	0 47	1 23	1 17	2 3
13	3 2	8 58	2 11	7 14	0 10	0 48	1 23	1 27	1 26
19	2 47	9 13	2 15	6 55	0 10	0 50	1 23	1 34	0 33
25	2 26	9 34	2 25	6 35	0 9	0 51	1 23	1 38	0 n 30

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

Days	♃ rises	♂ sets	♀ rises	☿ rises	☿'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	4 m 10	0 m 19	4 m 42	5 m 19	1 s 16	12 s 54	3 n 48	9 s 13	4 s 17
7	3 59	0 17	4 33	5 14	1 15	12 31	4 13	6 38	0 n 15
13	3 40	0 13	4 27	5 10	1 12	12 8	4 31	3 56	5 19
19	3 19	0 9	4 16	sets	1 11	11 46	4 44	1 9	10 43
25	2 57	0 4	4 8	7 a 56	1 10	11 25	4 50	1 n 40	15 58

The Lunations.

Full Moon the 5th day, at 17 minutes past 7 morning,
Last quarter the 12th day, at 3 minutes past 3 morning,
New Moon the 19th day, at 48 minutes past 5 morning,
First quarter the 27th day, at 32 minutes past 6 morning.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☽ rises & sets	☾ South	Clock aft. ☉
1	St. Phil. & James	4 35	7 25	15 n 21	0 n 16	3 m 2	9 a 20	3 12
C 2	Sun. aft. Easter	4 34	7 26	15 39	5 s 40	3 13	10 4	3 10
3	Inv. of the Cross	4 32	7 28	15 57	11 31	3 22	10 49	3 26
4		4 30	7 30	16 14	17 1	3 33	11 39	3 32
5		4 28	7 32	16 31	21 48	☽ rises	morn	3 37
6	St. John a. p. Lat.	4 27	7 33	16 48	25 29	10 a 3	0 33	3 42
7		4 25	7 35	17 4	27 41	11 17	1 31	3 46
8		4 23	7 37	17 20	28 5	morn	2 33	3 50
C 9	Sun. aft. Easter	4 22	7 38	17 36	26 37	0 5	3 36	3 53
10		4 20	7 40	17 52	23 25	0 58	4 37	3 56
11		4 19	7 41	18 7	18 49	1 24	5 34	3 58
12		4 17	7 43	18 22	13 12	1 43	6 28	3 59
13		4 16	7 44	18 37	6 58	2 0	7 17	4 0
14		4 14	7 46	18 51	0 27	2 14	8 5	4 0
15		4 13	7 47	19 5	6 n 0	2 25	8 51	4 0
C 16	Rogat. Sunday	4 11	7 49	19 19	12 7	2 36	9 37	3 59
17		4 10	7 50	19 32	17 35	2 50	10 26	3 57
18		4 8	7 52	19 45	22 8	3 9	11 16	3 55
19	Q. Charl. born	Dunst.	7 53	19 58	25 30	☽ sets	0 a 9	3 52
20	Ascension	4 6	7 54	20 11	27 31	10 a 7	1 3	3 40
21		4 4	7 56	20 23	28 5	11 1	1 57	3 45
22	Prs. Eliz. born	4 3	7 57	20 34	27 14	11 38	2 50	3 40
C 23	S. aft. Ascension	4 2	7 58	20 46	25 6	morn	3 40	3 36
24	Easter T. ends	4 1	7 59	20 57	21 53	0 6	4 27	3 30
25		3 59	8 1	21 7	17 47	0 26	5 11	3 24
26	Augustin	3 58	8 2	21 18	13 1	0 42	5 53	3 18
27	Oxf. Term ends	Venerable Bede		21 28	7 45	0 57	6 34	3 11
28		3 56	8 4	21 37	2 8	1 6	7 14	3 4
29	K. Ch. II. rest.	3 55	8 5	21 46	3 s 40	1 15	7 55	2 56
C 30	Whit-Sunday	3 54	8 6	21 55	9 29	1 25	8 38	2 48
31	Whit-Monday	3 53	8 7	22 3	15 4	1 38	9 26	2 40

Days	Day increas.	Length of day	Heliocentric long. ♄	Heliocentric long. ♅	Heliocentric long. ♂	Heliocentric long. ♁	Heliocentric long. ♀	Heliocentric long. ☿	♄ rises
1	7 7	14 54	18♑35	22♋35	29♎53	11♊41	7♓8	10♎42	1 m 1
7	7 27	15 11	18 46	23 7	2♌36	17 29	16 39	15♌15	0 38
13	7 45	15 29	18 57	23 39	5 16	23 16	26 10	14♍19	0 15
19	8 4	15 47	19 8	24 11	7 57	29 2	5♈43	8♎22	11 a 49
25	8 19	16 3	19 19	24 43	10 37	4♍48	15 17	28 45	11 24

Days	Day lig. begins	Day lig ends	Durat. twilg.	Pl. ☾'s node	☿'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	♄'s latitude
	2 6	9 57	2 37	6♓16	0 n 9	0 s 52	1 n 23	1 s 39	1 n 30
7	1 44	10 19	2 48	5 57	0 8	0 53	1 22	1 38	2 11
13	1 19	10 45	3 5	5 38	0 8	0 54	1 22	1 34	2 25
19	0 48	11 20	3 32	5 19	0 7	0 56	1 21	1 28	2 6
25	0	All day-light		5 0	0 7	0 58	1 20	1 20	1 15

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

Days	♅ rises	♂ sets	♀ rises	☿ sets	☿'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	2 m36	11 a 58	3 m57	8 a 45	21 s 10	11 s 9	24 n 50	4 n 30	20 n 23
7	2 15	11 49	3 45	9 20	21 11	10 47	24 44	7 16	23 25
13	1 54	11 40	3 33	9 57	21 12	10 31	24 31	9 57	24 59
19	1 31	11 31	3 27	10 5	21 14	10 17	24 12	12 31	25 18
25	1 0	11 22	3 17	9 55	21 17	10 5	23 46	14 54	24 49

The Lunations.

Full Moon the 3d day, at 34 minutes paſt 4 afternoon,
Laſt quarter the 10th day, at 28 minutes paſt 8 morning,
New Moon the 17th day, at 26 minutes paſt 6 evening,
Firſt quarter the 25th day, at 33 minutes paſt 10 at night.

M D	Sundays & other remark. days	☉ riſes	☉ ſets	☉'s declin.	☾'s declin.	☽ riſes & ſets	☾ South	Clock aft. ☉
1	Whit-Tueſday	Nicom.	8 8	22 n 11	20 s 7	1 m 52	10 a 17	2 31
2	Ember Week	3 51	8 9	22 19	24 15	2 14	11 15	2 22
3		3 50	8 10	22 26	27 2	☽ riſes	morn	2 12
4	K. Geo. III. born	3 49	8 11	22 33	28 3	10 a 3	0 16	2 2
5	Pr. Ern. Aug. bo.	Bonif.	8 11	22 40	27 7	10 49	1 21	1 52
C 6	Trinity Sunday	3 48	8 12	22 46	24 18	11 22	2 25	1 41
7		3 47	8 13	22 51	19 55	11 46	3 25	1 30
8		3 47	8 13	22 57	14 24	morn	4 20	1 19
9	Oxford T. beg.	3 46	8 14	23 2	8 11	0 4	5 12	1 7
10	Pr. Amelia bor.	Co. Ch.	8 14	23 6	1 41	0 18	6 0	0 56
11	St. Barnabas	Trin. T. beg.	15	23 10	4 n 47	0 29	6 46	0 44
12		3 45	8 15	23 14	10 55	0 41	7 32	0 31
C 13	Sun. aft. Trin.	3 44	8 16	23 17	16 28	0 55	8 19	0 19
14		3 44	8 16	23 20	21 9	1 11	9 8	0 6
15		3 44	8 16	23 22	24 46	1 31	9 59	obef. 6
16		3 43	8 17	23 24	27 5	2 2	10 51	0 19
17	St. Alban	3 43	8 17	23 26	28 1	☽ ſets	11 45	0 32
18		3 43	8 17	23 27	27 32	9 a 34	0 a 38	0 45
19		3 43	8 17	23 28	25 44	10 4	1 29	0 58
C 20	Sun. aft. Trin.	Tr. Ed. K. W. S.	17	23 28	22 47	10 26	2 17	1 11
21	Longeſt day	3 43	8 17	23 28	18 54	10 44	3 2	1 25
22		3 43	8 17	23 28	14 19	10 57	3 45	1 37
23		3 43	8 17	23 27	9 11	11 8	4 25	1 50
24	St. John Bapt.	3 43	8 17	23 25	3 43	11 19	5 5	2 3
25		3 43	8 17	23 24	1 s 57	11 28	5 44	2 16
26		3 44	8 16	23 22	7 40	11 38	6 26	2 28
C 27	Sun. aft. Trin.	3 44	8 16	23 19	13 14	11 52	7 10	2 41
28		3 44	8 16	23 16	18 24	morn	7 59	2 53
29	St. Peter.	3 45	8 15	23 13	22 51	0 9	8 52	3 5
30	Trin. Term ends	3 45	8 15	23 9	26 9	0 36	9 51	3 16

Days	Day increaſ.	Length of day	Helioc. long. ♄	Helioc long. ♅	Helioc long ♂	Helioc. long. ♁	Helioc. long. ♀	Helioc. long. ☿	♄ riſes
1	8 33	16 7	19♑31	25♒21	13♌42	11♐30	26♈27	19♏46	10 a 53
7	8 42	16 26	19 42	25 53	16 21	17 14	6♉2	6♐33	10 28
13	8 46	16 30	19 53	26 25	18 59	22 58	15 39	23 3	10 3
19	8 50	16 34	20 4	26 57	21 38	28 42	25 17	10 1	9 38
25	odec. 2	16 32	20 15	27 29	24 15	4♑25	4♊56	28 15	9 12

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♅'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1				4 ♓ 38	0 n 6	0 s 59	1 n 19	1 s 8	0 s 22
				4 19	0 6	1 1	1 18	0 56	2 3
17	All	day-	light.	4 0	0 6	1 3	1 17	0 43	3 36
19				3 41	0 5	1 5	1 16	0 29	4 27
25				3 22	0 4	1 6	1 15	0 15	4 29

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

Days	♅ rises	♂ sets	♀ rises	☿ sets	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	0 m 42	11 a 5	3 m 9	9 a 22	21 s 20	9 s 53	23 n 9	17 n 26	23 n 5
7	0 20	10 51	3 1	8 40	21 23	9 49	22 32	19 19	21 21
13	11 a 53	10 36	2 57	rises.	21 27	9 40	21 48	20 53	19 41
19	11 29	10 23	2 54	3 m 34	21 31	9 30	20 59	22 8	18 39
25	11 4	10 7	2 57	3 6	21 36	9 38	20 4	23 0	18 32

The Lunations.

Full Moon the 3d day, at 6 minutes past midnight,
Last quarter the 9th day, at 1 minute past 3 afternoon,
New Moon the 17th day, at 36 minutes past 8 morning,
First quarter the 25th day, at 2 minutes past noon.

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

Days	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♅	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	0 4	16 30	20♑26	28♒ 2	26♌52	10♑ 8	14♏36	18♒41	8 a 43
7	0 12	16 22	20 36	28 34	29 29	15 51	24 17	12♓31	8 17
13	0 24	16 10	20 47	29 6	2♍ 7	21 35	3♐59	11♈ 1	sets
19	0 38	15 56	20 58	29 38	4 44	27 18	13 42	14♉48	3 m 32
25	0 54	15 40	21 9	0♓10	7 21	3♒ 2	23 26	22♏13	2 7

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1				3♓ 3	0 n 4	1 s 8	1 n 13	0 s 0	3 s 48
7	All	day-	light	2 44	0 4	1 10	1 12	0 n 14	2 41
13				2 24	0 3	1 12	1 11	0 28	1 21
19				2 5	0 3	1 13	1 9	0 41	0 2
25	0 45	11 7	3 20	1 46	0 2	1 15	1 8	0 53	1 n 1

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

Days	♃ rises	♂ sets	♀ rises	☿ rises	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	10 a 39	9 a 52	2 m59	2 m45	21 s 30	9 s 40	19 n 5	23 n 28	19 n 20
7	10 14	9 35	3 7	2 33	21 45	9 45	18 2	23 31	20 41
13	9 50	9 19	3 16	2 32	21 49	9 52	16 54	23 10	22 6
19	9 25	9 3	3 29	2 48	21 54	10 3	15 42	22 24	22 53
25	9 1	8 46	3 44	3 19	21 58	10 15	14 27	21 14	22 21

The Lunations.

Full Moon the 1ſt day, at 11 minutes paſt 7 morning,
Laſt quarter the 7th day, at 59 minutes paſt 11 at night,
New Moon the 15th day, at 18 minutes paſt midnight,
Firſt quarter the 23d day, at 9 minutes paſt 11 at night,
Full Moon the 30th day, at 51 minutes paſt 2 afternoon.

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

Day	Day decreaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ ſets
1	1 11	15 21	21♑22	0♓48	10♍25	9♌44	4♎49	4♎31	2 m37
7	1 31	15 3	21 33	1 21	13 3	15 29	14 34	5♍25	2 13
13	1 51	14 43	21 43	1 53	15 41	21 15	24 19	0♎57	1 48
19	2 13	14 21	21 54	2 25	18 19	27 1	4♍5	22 23	1 24
25	2 35	13 59	22 5	2 58	20 57	2♓40	13 40	11♍8	1 0

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	1♓24	0 n 1	1 s 16	1 n 6	1 n 5	1 n 40
7	1 47	10 13	2 46	1 5	0 1	1 18	1 4	1 13	1 45
13	2 9	9 51	2 34	0 46	0 c	1 19	1 2	1 15	1 27
19	2 29	9 31	2 25	0 27	0 c	1 20	1 1	1 23	0 55
25	2 47	9 13	2 18	0 8	0 s 1	1 20	0 59	1 25	0 12

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

Days	♃ rises	♂ sets	♀ rises.	☿ rises	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	8 a 31	8 a 27	4 m 4	4 m 9	22 s 3	10 s 32	12 n 55	19 n 24	19 n 47
7	8 7	8 10	4 23	sets	22 7	10 48	11 32	17 30	16 17
13	7 44	7 55	sets	7 a 50	22 10	11 5	10 7	15 17	12 7
19	7 21	7 39	7 a 23	7 42	22 13	11 22	8 39	12 48	7 41
25	sets	7 24	7 15	7 32	22 15	11 40	7 10	10 7	3 14

The Lunations.

Last quarter the 6th day, at 20 minutes past 2 afternoon,
New Moon the 14th day, at 45 minutes past 4 afternoon,
First quarter the 22d day, at 23 minutes past 8 morning,
Full Moon the 28th day, at 46 minutes past 11 at night.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☽ rises & sets	☾ South	Clock aft. ☉
1	Giles	5 16	6 44	7 n 59	5 n 11	7 a 13	1 m 10	0 29
2	Lond. Bur. 1666	5 18	6 42	7 37	11 46	7 27	2 2	0 48
3		5 19	6 41	7 15	17 33	7 46	2 53	1 7
4		5 21	6 39	6 53	22 15	8 8	3 45	1 27
5	13 S. aft. Trin.	5 23	6 37	6 30	25 30	8 40	4 37	1 47
6		5 25	6 35	6 8	27 38	9 21	5 32	2 7
7	Enurchus	5 27	6 33	5 45	28 10	10 16	6 27	2 27
8	Nativ. B.V. M.	5 29	6 31	5 23	27 18	11 23	7 20	2 47
9		5 31	6 29	5 0	25 10	morn	8 11	3 7
10		5 33	6 27	4 37	21 58	0 34	8 59	3 28
11		5 35	6 25	4 14	17 53	1 45	9 45	3 49
12	14 S. aft. Trin.	5 37	6 23	3 51	13 7	2 59	10 27	4 9
13		5 39	6 21	3 28	7 52	4 7	11 8	4 30
14	Holy Cross	5 41	6 19	3 5	2 19	☽ sets	11 49	4 51
15	Ember Week	5 43	6 17	2 41	3 s 22	6 a 10	0 a 29	5 12
16		5 45	6 15	2 19	9 0	6 22	1 10	5 33
17	Lambert	5 47	6 13	1 55	14 21	6 35	1 54	5 54
18		5 49	6 11	1 32	19 12	6 53	2 40	6 15
19	15 S. aft. Trin.	5 51	6 9	1 9	23 17	7 16	3 31	6 36
20		5 53	6 7	0 45	26 17	7 50	4 26	6 57
21	St. Matthew	5 54	6 6	☉ 22	27 54	8 40	5 25	7 17
22	K. Geo. III. cro.	5 56	6 4	0 s 1	27 54	9 48	6 24	7 38
23		5 58	6 2	0 25	26 9	11 13	7 24	7 59
24	Equal d. and n.	6 0	6 0	0 48	22 42	morn	8 23	8 19
25		6 2	5 58	1 12	17 47	0 44	9 19	8 39
26	16 S. aft. Trin.	St. Cyprian	5 56	1 35	11 45	2 20	10 13	9 0
27		6 6	5 54	1 59	5 1	3 49	11 5	9 19
28		6 8	5 52	2 22	2 n 0	☽ rises	11 56	9 39
29	St. Michael. Prs. Ch. Aug. Mat.			2 45	8 50	5 a 42	morn	9 59
30	St. Jerome	6 12	5 48	3 9	15 4	5 58	0 47	10 18

Days	Day increas.	Length of day	Heliocentric long. ♄	Heliocentric long. ♃	Heliocentric long. ♂	Heliocentric long. ☿	Heliocentric long. ♀	Heliocentric long. ☿	♄ sets
1	3 1	13 33	22 ♑ 18	3 ♓ 35	24 ♍ 3	9 ♓ 35	25 ♍ 11	1 ♐ 7	0 m 34
7	3 25	13 9	22 29	4 8	26 43	15 25	4 ♎ 54	17 37	0 11
13	3 49	12 45	22 40	4 40	29 23	21 15	14 35	4 ♑ 21	11 a 49
19	4 11	12 23	22 51	5 13	2 ♎ 5	27 7	24 15	22 3	11 26
25	4 35	11 59	23 1	5 45	4 46	3 ♈ c	3 ♍ 53	11 ♒ 38	11 4

Days	Day lig. begins	Day lig. ends	Durat. twilig.	☊ 1. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	3 7	8 53	2 11	29♒46	0 s 1	1 s 21	0 n 56	1 n 24	0 s 44
7	3 24	8 36	2 6	29 27	0 2	1 21	0 54	1 21	1 35
13	3 37	8 23	2 4	29 7	0 2	1 21	0 52	1 15	2 24
19	3 52	8 8	2 1	28 48	0 3	1 21	0 50	1 8	3 7
25	4 5	7 55	2 0	28 29	0 3	1 20	0 47	0 58	3 35

Days	☉'s longitude	☾'s long.	☾'s latitude	♄'s long.	♃'s long.	♂'s long.	♀'s long.	☿'s long.
1	♍ 9 35 14	5♈56	3 n 5	17♍34	2♐ 5	18♍35	16♍ 4	2♎39
2	10 33 24	20 28	4 4	17 44	1 57	19 14	17 18	4 2
3	11 31 35	4♉35	4 46	17 42	1 49	19 52	18 33	5 24
4	12 29 48	18 15	5 10	17 41	1 42	20 31	19 47	6 45
C	13 28 4	♊28	5 17	17 39	1 34	21 9	21 2	8 4
6	14 26 22	14 10	5 8	17 37	1 26	21 48	22 16	9 21
7	15 24 41	26 44	4 44	17 36	1 19	22 26	23 31	10 37
8	16 23 3	8♋55	4 8	17 35	1 12	23 5	24 45	11 51
9	17 21 27	20 53	3 22	17 34	1 4	23 44	26 0	13 3
10	18 19 54	2♌44	2 27	17 33	0 57	24 23	27 14	14 14
11	19 18 23	14 31	1 27	17 32	0 49	25 1	28 29	15 23
C	20 16 53	26 18	0 23	17 31	0 42	25 40	29 43	16 30
13	21 15 25	8♍ 8	0 s 43	17 30	0 35	26 19	0♎58	17 35
14	22 14 0	20 3	1 48	17 30	0 28	26 58	2 12	18 37
15	23 12 37	2♎ 5	2 46	17 29	0 22	27 37	3 27	19 36
16	24 11 16	14 17	3 39	17 29	0 15	28 15	4 41	20 33
17	25 9 56	26 39	4 22	17 28	0 9	28 54	5 56	21 28
18	26 8 38	9♏13	4 53	17 28	0 3	29 33	7 10	22 19
C	27 7 22	22 0	5 11	17 28	29♒56	0♎12	8 25	23 7
20	28 6 8	5♐ 2	5 13	17 28	29 50	0 51	9 40	23 51
21	29 4 55	18 21	4 58	17 D28	29 45	1 30	10 54	24 31
22	♎ 0 3 44	1♑58	4 26	17 28	29 39	2 9	12 9	25 9
23	1 2 34	15 54	3 39	17 28	29 33	2 48	13 24	25 42
24	2 1 26	0♒ 8	2 37	17 28	29 28	3 27	14 39	26 10
25	3 0 20	14 39	1 23	17 28	29 22	4 6	15 54	26 31
C	3 59 16	29 23	0 4	17 29	29 17	4 45	17 8	26 46
27	4 58 14	14♓16	1 n 17	17 29	29 12	5 24	18 23	26 56
28	5 57 13	29 10	2 32	17 30	29 7	6 3	19 37	27℞ 1
29	6 56 14	13♈56	3 37	17 31	29 2	6 42	20 52	26 57
30	7 55 17	28 28	4 26	17 32	28 58	7 22	22 6	26 48

Days	♅ sets	♂ sets	♀ sets.	☿ sets.	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	4 m 36	7 a 5	7 a 4	7 a 19	22 s 18	12 s 0	5 n 23	6 n 48	1 s 44
7	4 11	6 48	6 53	7 0	22 20	12 17	3 50	3 49	5 39
13	3 45	6 34	6 44	6 51	22 21	12 33	2 16	0 46	9 7
19	3 21	6 19	6 35	6 34	22 22	12 46	0 41	2 s 19	11 53
25	2 56	6 2	6 25	6 15	22 22	12 57	0 s 55	5 22	13 34

The Lunations.

Laſt quarter the 6th day, at 38 minutes paſt 4 morning,
New Moon the 14th day, at 49 minutes paſt 8 morning,
Firſt quarter the 21ſt day, at 27 minutes paſt 4 evening,
Full Moon the 28th day, at 27 minutes paſt 10 morning.

M D	Sundays & other remark. days	☉ riſes	☉ ſets	☉'s declin.	☾'s declin.	☽ riſes & ſets	☾ South	Clock aft. ☉
1	Remigius	6 14	5 46	3 s 32	20 n 22	6 a 18	1 m 40	10 37
2		6 16	5 44	3 58	24 24	6 46	2 34	10 55
C	17 S. aft. Trin.	6 18	5 42	4 19	26 58	7 24	3 28	11 14
4		6 20	5 40	4 42	28 1	8 16	4 25	11 32
5		6 22	5 38	5 5	27 35	9 17	5 21	11 49
6	Faith	6 24	5 36	5 28	25 49	10 29	6 13	12 6
7		6 26	5 34	5 51	22 54	11 43	7 2	12 23
8		6 28	5 32	6 14	19 3	morn	7 50	12 39
9	St. Denys	6 30	5 30	6 37	14 20	0 59	8 33	12 55
C	18 S. aft. Trin.	Camb.	T. beg.	7 0	9 23	2 9	9 14	13 10
11	Oxf. Term beg.	6 34	5 26	7 22	3 55	3 18	9 55	13 25
12		6 36	5 24	7 45	1 s 45	4 27	10 35	13 40
13	Tr. K. Edward	6 38	5 22	8 7	7 25	5 38	11 16	13 53
14		6 40	5 20	8 30	12 54	☽ ſets	11 59	14 6
15		6 42	5 18	8 52	17 57	5 a 5	0 a 45	14 19
16		6 43	5 17	9 14	22 16	5 29	1 35	14 31
C	19 S. aft. Trin.	Etheld.	5 15	9 36	25 33	6 1	2 29	14 43
18	St. Luke	6 47	5 13	9 58	27 30	6 46	3 27	14 53
19		6 49	5 11	10 19	27 52	7 46	4 26	15 4
20		6 51	5 9	10 41	26 33	9 3	5 24	15 13
21		6 53	5 7	11 2	23 35	10 29	6 22	15 22
22		6 55	5 5	11 24	19 12	11 56	7 17	15 31
23		6 57	5 3	11 45	13 41	morn	8 10	15 39
C	20 S. aft. Trin.	6 59	5 1	12 5	7 23	1 25	9 0	15 46
25	K.G.III. Acceſ.	Criſpin	4 50	12 26	0 40	2 51	9 40	15 52
26	K.Geo.III. Pro.	7 2	4 58	12 47	6 n 5	4 18	10 39	15 57
27		7 4	4 57	13 7	12 30	5 46	11 30	16 2
28	St.Simon & Jude	7 6	4 54	13 27	18 10	☽ riſes	morn	16 6
29		7 8	4 52	13 47	22 44	4 a 50	0 24	16 10
30		7 10	4 50	14 6	25 57	5 23	1 19	16 12
C	21 S. aft. Trin.	7 12	4 48	14 26	27 36	6 10	2 16	16 14

Days	Day decreaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Heliocc. long. ☉	Heliocc. long. ♀	Heliocc. long. ☿	☊ ſets
1	4 59	11 35	23♑12	6♓17	7♒22	8♏55	21♏30	4♐12	10 a 42
7	5 23	11 10	23 22	6 50	10 17	14 55	23 5	1♑ 1	10 22
13	5 45	10 48	23 34	7 22	12 57	20 47	24 ♎	3♑ 5	10 1
19	6 9	10 24	23 49	7 55	15 4	26 4	12 10	9 ♑42	9 40
25	6 31	10 2	24 5	8 27	16 21	29♎	11 41	17♑ 6	9 19

Days	Day lig. begins	Day lig. ends	Durat. twil'g.	Pl. ☿'s node	☽'s latitude	♀'s latitude	♂'s latitude	♃'s latitude	♄'s latitude
1	4 18	7 42	1 56	28♒10	0 s 4	1 s 20	0 n 45	0 n 46	3 s 32
7	4 31	7 29	1 58	27 51	0 4	1 19	0 42	0 33	2 36
13	4 43	7 17	1 57	27 32	0 5	1 18	0 39	0 19	0 43
19	4 53	7 5	1 57	27 13	0 5	1 17	0 37	0 4	1 n 6
25	5 6	6 54	1 58	26 54	0 5	1 16	0 34	0 s 11	2 2

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

Days	♃ sets	♂ rises	♀ sets	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin	☿'s declin.
1	2 m 32	rises	6 a 16	5 a 53	22 s 22	13 s 7	2 s 30	8 s 22	13 s 32
7	2 7	6 m 5	6 7	5 32	22 22	13 14	4 5	11 15	11 0
13	1 43	6 6	5 58	rises	22 21	13 19	5 40	13 58	6 36
19	1 18	6 7	5 50	5 m 16	22 19	13 21	7 13	16 30	3 33
25	0 55	6 7	5 44	5 8	22 17	13 21	8 45	18 46	3 46

The Lunations.

Last quarter the 4th day, at 18 minutes past midnight,
New Moon the 12th day, at 42 minutes past 11 at night,
First quarter the 19th day, at 6 minutes past midnight,
Full Moon the 26th day, at 20 minutes past 11 at night.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☽ rises & sets	☾ South	Clock aft. ☉
1	All Saints	7 13	4 47	14 s 45	27 n 42	7 a 9	3 m 13	16 15
2	Pr. Edw. born	AllSoul	4 45	15 4	26 21	8 13	4 7	16 15
3	Prs. Sophia born	7 17	4 43	15 22	23 46	9 29	4 59	16 15
4		7 19	4 41	15 41	20 11	10 46	5 47	16 13
5	Powder Plot	7 21	4 39	15 59	15 49	11 55	6 32	16 11
6	Mich. Term beg.	Leonard	4 38	16 17	10 54	morn	7 14	16 7
☾	22 S. aft. Trin.	D. Cumb. b.	4 36	16 35	5 35	1 6	7 54	16 3
8	Prs. Aug. Sop. b.	7 26	4 34	16 52	0 0	2 15	8 34	15 58
9	Ld. Mayor's day	7 27	4 33	17 9	5 s 38	3 25	9 15	15 52
10		7 29	4 31	17 26	11 11	4 37	9 56	15 46
11	St. Martin	7 31	4 29	17 42	16 25	5 53	10 40	15 38
12		7 32	4 28	17 59	21 0	☽ sets	11 29	15 30
13	Britius	7 34	4 26	18 14	24 38	4 a 1	0 a 22	15 20
☾	23 S. aft. Trin.	7 35	4 25	18 30	26 59	4 43	1 19	15 10
15	Machutus	7 37	4 23	18 45	27 45	5 36	2 19	14 59
16		7 38	4 22	19 0	26 47	6 49	3 19	14 47
17	Hugh	7 40	4 20	19 15	24 8	8 16	4 17	14 35
18		7 41	4 19	19 29	20 1	9 43	5 12	14 21
19		7 43	4 17	19 43	14 47	11 10	6 4	14 7
20	Edmund	7 44	4 16	19 56	8 45	morn	6 54	13 52
☾	24 S. aft. Trin.	7 46	4 14	20 9	2 17	0 35	7 43	13 36
22	Cecil. O. Mart. d.	7 47	4 13	20 22	4 n 16	1 58	8 30	13 20
23	St. Clement	7 48	4 12	20 34	10 35	3 23	9 18	13 3
24		7 50	4 10	20 46	16 21	4 47	10 9	12 45
25	D. Glouc. born	7 51	4 9	20 58	21 12	6 10	11 2	12 26
26		7 52	4 8	21 9	24 51	☽ rises	11 57	12 6
27		7 53	4 7	21 20	27 3	3 a 55	morn	11 46
☾	Advent Sunday	7 54	4 6	21 30	27 41	4 48	0 54	11 25
29	Mic. Term ends	7 56	4 4	21 40	26 49	5 53	1 50	11 3
30	St. Andrew	7 57	4 3	21 50	24 36	7 6	2 43	10 41

Days	Day decreas.	Length of day	Heliocentric long. ♄	Heliocentric long. ♅	Heliocentric long. ♂	Heliocentric long. ☉	Heliocentric long. ♀	Heliocentric long. ☿	☽ sets
1	6 57	9 37	24♑ 9	9♐ 5	21♒ 43	9♑ 44	2♑ 46	25♑ 50	8 a 54
7	7 19	9 15	24 19	9 38	24 35	15 46	12 15	23♐ 2	8 32
13	7 39	8 55	24 30	10 11	27 27	21 48	21 44	15♒ 40	☽ 10
19	7 58	8 36	24 41	10 43	♏ 17	27 52	1♒ 13	5♐ 10	7 48
25	8 14	8 20	24 52	11 16	3 11	♑ 56	10 42	22 47	7 26

Days	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	26♒32	0 s 6	1 s 15	0 n 31	0 s 30	2 n 6
7	5 25	6 35	2 2	26 13	0 6	1 14	0 28	0 45	1 42
13	5 34	6 26	2 3	25 54	0 7	1 13	0 25	1 0	1 5
19	5 41	6 19	2 5	25 35	0 7	1 12	0 21	1 13	0 24
25	5 48	6 12	2 7	25 16	0 8	1 10	0 18	1 25	0 s 16

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

Days	♅ sets	♂ rises	♀ sets	☿ rises	♄'s declin.	♅'s declin.	♂'s declin.	♀'s decl.n.	☿'s declin.
1	0 m3c	6 m 6	5 a 38	5 m30	22 s 14	13 s 16	10 s 31	21 s 3	6 s 54
7	0 7	6 6	5 34	6 0	22 11	13 10	11 5	22 37	10 31
13	11 a 45	6 5	5 34	6 33	22 8	13 2	13 23	23 48	14 13
19	11 23	6 4	5 39	7 4	22 4	12 53	14 44	24 33	17 37
25	11 1	6 2	5 42	7 35	21 59	12 28	16 2	24 52	20 22

The Lunations.

Laſt quarter the 4th day, at 52 minutes paſt 9 at night,
New Moon the 12th day, at 6 minutes paſt 1 afternoon,
Firſt quarter the 19th day, at 2 minutes paſt 8 morning,
Full Moon the 26th day, at 46 minutes paſt 2 afternoon.

M D	Sundays & other remark. days	☉ riſes	☉ ſets	☉'s declin.	☾'s declin.	☽ riſes & ſets	☾ South	Clock aſt. ☉
1		7 58	4 2	21 s 59	21 n 17	8 a 29	5 m 33	10 18
2		7 59	4 1	22 8	17 7	9 32	4 10	9 55
3		8 0	4 0	22 16	12 21	10 42	5 2	9 31
4		8 0	4 0	22 24	7 9	11 48	5 42	9 6
C	2 S. in Advent	8 1	3 59	22 31	1 41	morn	6 22	8 40
6	Nicholas	8 2	3 58	22 38	3 s 53	1 0	7 2	8 14
7		8 3	3 57	22 45	9 23	2 12	7 42	7 48
8	Conception	8 4	3 56	22 51	14 40	3 25	8 24	7 21
9		8 4	3 56	22 56	19 28	4 41	9 10	6 54
10		8 5	3 55	23 2	23 28	5 50	10 1	6 26
11		8 5	3 55	23 6	26 18	7 23	10 56	5 58
C	3 S. in Advent	8 6	3 54	23 11	27 37	☽ ſets	11 55	5 29
13	Lucy	8 6	3 54	23 14	27 10	4 a 25	0 a 58	5 0
14		8 7	3 53	23 18	24 54	5 48	1 58	4 31
15	Ember Week	8 7	3 53	23 21	21 2	7 16	2 56	4 2
16	Camb. T. ends	O Sapientia		53 23	23 15	54 8 45	3 50	3 32
17	Oxf. Term ends	8 8	3 52	23 25	9 55	10 11	4 41	3 2
18		8 8	3 52	23 27	3 28	11 35	5 29	2 32
C	4 S. in Advent	8 8	3 52	23 28	3 n 5	morn	6 16	2 2
20		8 8	3 52	23 28	9 24	0 57	7 3	1 32
21	St. Thomas	Sho. d.	3 52	23 28	15 11	2 20	7 51	1 2
22		8 8	3 52	23 28	20 9	3 44	8 42	0 32
23		8 8	3 52	23 27	24 2	5 7	9 36	0 2
24		8 8	3 52	23 25	26 35	6 26	10 32	clbe.27
25	Chriſtmas day	8 7	3 53	23 24	27 39	7 32	11 27	0 57
C	1 Sun. aft. Chriſt.	St. Stephen		53 23	21 27	13 ☽ riſes	morn	1 27
27	St. John	8 7	3 53	23 19	25 23	4 a 35	0 21	1 56
28	Innocents	8 6	3 53	23 15	22 21	5 49	1 12	2 26
29		8 6	3 54	23 12	18 24	7 3	2 0	2 55
30		8 5	3 55	23 7	13 45	8 14	2 44	3 24
31	Silveſter	8 5	3 55	23 3	8 30	9 23	3 25	3 53

Days	Day decreaſ.	Length of day	Heliocentric long. ♄	Heliocentric long. ♃	Heliocentric long. ♂	Heliocentric long. ☉	Heliocentric long. ♀	Heliocentric long. ☿	♄ ſets
1	8 28	8 6	25 ♑ 3	11 ♓ 48	6 ♍ 6	10 ♑ 1	20 ♏ 11	9 ♐ 28	7 a 3
7	8 40	7 54	25 14	12 21	9 3	16 7	29 41	26 0	6 39
13	8 46	7 48	25 25	12 54	12 1	22 14	0 ♐ 12	13 ♑ 7	6 16
19	8 50	7 44	25 36	13 26	15 1	28 21	18 44	1 ♒ 43	5 52
25	cinc.2	7 46	25 47	13 59	18 2	4 ♑ 28	28 15	22 27	4 29

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 5	24 ♒ 36	0 s 8	1 s 9	0 n 15	1 s 36	0 s 55
7	5 57	6 3	2 10	24 37	0 8	1 9	0 11	1 44	1 27
13	5 59	6 1	2 12	24 18	0 9	1 8	0 8	1 49	1 53
19	6 1	5 59	2 11	23 59	0 9	1 7	0 4	1 52	2 9
25	6 1	5 59	2 11	23 40	0 10	1 6	0 c	1 52	2 9

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

Days	♃ sets	♂ rises	♀ sets	☿ sets	♄'s declin.	♅'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	10 a 38	6 m 0	5 a 50	sets	21 s 54	12 s 22	17 s 15	24 s 45	22 s 52
7	10 16	5 57	6 0	4 a 0	21 49	12 5	18 25	24 10	24 29
13	9 54	5 55	6 12	4 8	21 43	11 46	19 26	23 8	25 21
19	9 23	5 52	6 26	4 24	21 37	11 24	20 26	21 43	25 21
25	9 11	5 48	6 43	4 47	21 30	11 1	21 18	19 55	24 24

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

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

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

IN the courſe of this year there will happen 4 eclipſes, viz. 2 of the Sun, and 2 of the Moon; but only one of the Moon will be viſible to us. They are as follow:

I. The firſt is an inviſible eclipſe of the Sun, on the 20th day of February, near half paſt eight o'clock at night: The Sun will be centrally eclipſed on the meridian in 119° weſt longitude, and 60° ſouth latitude.

II. The ſecond will be a viſible eclipſe of the Moon, on Sunday the 7th day of March; the time of which, ſee the following computation:

	London			York			Edinb.			
	h	m	s	h	m	s	h	m	s	
Beg. of the eclipſe	2	16	8	2	12	3	2	3	17	March 7th
Middle	3	27	38	3	23	33	3	14	47	morning,
End of the eclipſe	4	39	8	4	35	3	4	26	17	apparent
Digits eclipſed	4°	36′		4°	36′		4°	36′		time.

III. The third will be an eclipſe of the Sun, on the 15th day of Auguſt, near midnight, conſequently inviſible to us: The Sun will be centrally eclipſed on the meridian in longitude 177° weſt, and 63° north latitude.

IV. The fourth and laſt eclipſe will be an inviſible one of the Moon, on Monday the 30th day of Auguſt, near three quarters of an hour paſt 2 o'clock in the afternoon: This eclipſe will be viſible in New-Holland, and throughout Aſia, &c. &c.

Speculum Phænomenorum

January

1 ☿ elong. max. a ☉
5 ☌ ☉ ♄ 4h.
7 ☾ in apogeo
15 ☌ ☿ ☾ 15h.
19 ☉ in ♒ 19h. 36m.
20 ☌ ♄ ☾ 22h.
21 ☾ in perigeo
22 ☌ ♃ ☽ 13h.
23 ☌ ☿ ☽ 5h.
26 ☿ elong. max. a ☉
28 ☌ ♂ ☾ 12h.
30 ☿ in perihelio

February

1 ☿ ſtationary
3 ☌ ☉ ♃ 10h.
4 ☾ in apogeo
10 ☌ ☉ ☿ 6h.
17 ☌ ☿ ☾ 8h.
17 ☌ ♄ ☾ 13h.
18 ☾ in perigeo
18 ☉ in ♓ 10h. 24m.
19 ☌ ☿ ☾ 3h.
19 ☌ ♃ ☽ 11h.
20 ☉ eclipſ. inviſible
23 ☿ ſtationary
26 ☍ ☌ ♂ ☾ 3h.

March

2 ☾ in apogeo.
4 ☿ in ♓
6 ☾ eclipſ. viſible
7 ☿ elong. max. a ☉.
10 ☿ in ♓
16 ☾ in perigeo
16 ☌ ♄ ☾ 1h.
18 ☌ ☿ ☾ 3h.
18 ☌ ♃ ☾ 7h.
18 ☌ ☿ ☾ 23h.
19 ☉ in ♈ 10h. 46m.
25 ☌ ♂ ☽ 20h.
30 ☾ in apogeo

April

12 ☌ ♄ ☾ 10h.
12 □ ☉ ♄ 14h.
13 ☾ in perigeo
13 ☿ in aphelio
15 ☌ ♃ ☾ oh.
17 ☌ ☿ ☾ oh.
18 ☉ in ♉ 23h. 30m.
19 ☌ ☿ ☾ 5h.
22 ☿ in ♓
23 ☌ ♂ ☾ 15h.
27 ☾ in apogeo
28 ☿ in perihelio

May

3 ♄ ſtationary
9 ☌ ♄ ☾ 16h.
10 ☾ in perigeo
12 ☌ ♃ ☾ 13h.
16 ☌ ☿ ☾ 22h.
18 ☿ elong. max. a ☉
20 ☉ in ♊ oh. 5m.
20 ☌ ☿ ☾ 15h.
22 ☌ ♂ ☾ 10h.
24 ☾ in apogeo

June

1 ☿ ſtationary
5 ☌ ♄ ☾ 21h.
7 ☾ in perigeo
8 ☌ ♃ ☾ 23h.
10 ☿ in aphelio
12 ☌ ☉ ☿ 22h.
16 ☌ ☿ ☾ oh.
16 ☌ ☿ ☾ 18h.
19 ☌ ♂ ☾ 5h.
20 ☉ in ♋ 8h. 49m.
21 ☾ in apogeo

ad Annum 1784.

JULY

1 ☿ in ♌
3 ☽ ♄ ☾ 4h.
6 ☿ elong. max. a ☉
6 ☽ ♃ ☾ 7h.
12 ☾ ☉ ♄ 4h.
15 ☽ ☿ ☾ 6h.
16 ☽ ♀ ☾ 7h.
18 ☾ in apogeo
19 ☽ ♂ ☾ 0h.
21 ☉ in ♌ 19h. 40m.
22 ☿ in ♌
24 ☿ in perihelio.
30 ☽ ♄ ☾ 11h.

AUGUST

1 ☾ in perigeo
2 ☽ ☉ ☿ 4h.
3 ☽ ♃ ☾ 13h.
4 ♀ in perihelio
8 ☽ ☉ ♀ 9h.
15 ☾ in apogeo
15 ☽ ♀ ☾ 17h.
15 ☉ eclipſ. inviſible
16 ☽ ☿ ☾ 19h.
16 ☽ ♂ ☾ 20h.
22 ☉ in ♍ 2h. 2m.
26 ☽ ♄ ☾ 19h.
29 ☽ ♃ ☾ 19h.
29 ☾ in perigeo
30 ☾ eclipſ. inviſible

SEPTEMBER

6 ☿ in aphelio
11 ☾ in apogeo
14 ☿ elong. max. a ☉
14 ☽ ♂ ☾ 15h.
15 ☽ ♀ ☾ 3h.
16 ☽ ☿ ☾ 13h.
21 ☉ in ♎ 21h. 29m.
23 ☽ ♄ ☾ 3h.
25 ☾ in perigeo
26 ☽ ♃ ☾ 0h.
28 ☿ ſtationary
28 ☽ ☉ ♂

OCTOBER

7 ☿ elong. max. a ☉
9 ☾ in apogeo
9 □ ☉ ♄ 23h.
10 ☽ ☉ ☿ 8h.
13 ☽ ☿ ☾ 7h.
13 ☽ ♂ ☾ 10h.
15 ☽ ♀ ☾ 10h.
15 ☿ in ♌
19 ☿ ſtationary
20 ♀ in ♌
20 ☿ in perihelio
20 ☽ ♄ ☾ 10h.
22 ☉ in ♏ 6h. 25m.
22 ☽ ♃ ☾ 6h.
23 ☾ in perigeo
25 ☿ elong. max. a ☉
27 ♃ ſtationary

NOVEMBER.

5 ☾ in apogeo
11 ☽ ♂ ☾ 7h.
11 ☽ ☿ ☾ 13h.
14 ☽ ♀ ☾ 12h.
16 ☽ ♄ ☾ 19h.
17 ☾ in perigeo
19 ☽ ♃ ☾ 14h.
20 □ ☉ ♃ 13h.
21 ☉ in ♐ 2h. 36m.
23 ☿ in ♌
24 ♀ in aphelio

DECEMBER.

1 ☽ ☉ ☿ 8h.
3 ☾ in apogeo
3 ☿ in aphelio
10 ☽ ♂ ☾ 4h.
12 ☽ ☿ ☾ 12h.
14 ☽ ♄ ☾ 6h.
14 ☽ ♀ ☾ 11h.
17 ☽ ♃ ☾ 1h.
17 ☾ in perigeo
20 ☉ in ♑ 14h. 58m.

The Eclipses of Jupiter's

JANUARY	FEBRUARY	MARCH	APRIL
		Immersions	Immersions
		8 18 23 6	2 13 9 4
		10 12 52 6	4 7 38 4
		12 7 21 6	6 2 6 52
The Eclipses of Jupiter's Satellites will not be visible this month, Jupiter being too near the Sun.	The Eclipses of Jupiter's Satellites will not be visible this month, Jupiter being too near the Sun.	14 1 50 7	7 20 35 56
		15 20 19 8	9 15 4 51
		17 14 48 8	11 9 33 43
		19 9 17 9	13 4 2 36
		21 3 46 9	14 22 31 27
		22 22 15 10	16 17 0 18
		24 16 44 11	18 11 29 7
		26 11 13 12	20 5 57 53
		28 5 42 11	22 0 26 38
		30 0 11 10	23 18 55 22
		31 18 40 9	25 13 24 4
			27 7 52 45
			29 2 21 24
			30 20 50 0

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

first Satellite for 1784.

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

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 8th Day of November of 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. 35 min. 21 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. 1 ſec. the ſame day: The Difference of the Times is 1 hour 48 min. 20 ſec. which being converted into Degrees and Minutes of the Equator, will make 27 deg. 5 min. the Longitude of the Place of Obſervation, to the Eaſt, becauſe the Time is more than that at the Britiſh Obſervatory.

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	53
22	8	26	8	32	8	39	8	47	8	55	9	4
23	8	34	8	41	8	49	8	57	9	6	9	16
24	8	43	8	51	8	59	9	8	9	18	9	29

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

of his visible half Duration above the Horizon.

The Sun's Declination South.

Degr.	Lat. 55		Lat. 56		Lat. 57		Lat. 58		Lat. 59		Lat. 60	
	h	m	h	m	h	m	h	m	h	m	h	m
0	6	4	6	4	6	4	6	4	6	4	6	4
1	5	58	5	58	5	58	5	58	5	57	5	57
2	5	52	5	52	5	52	5	51	5	51	5	50
3	5	47	5	46	5	45	5	45	5	44	5	43
4	5	4	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	[illegible]	[illegible]
1	0 3 40	1 55 27	3 55 25	6 4 22	8 12 54	10 12 [illegible]
2	0 7 20	1 59 17	3 59 30	6 8 43	8 17 [illegible]	10 16 0
3	0 11 0	2 3 8	4 3 48	6 13 5	8 21 11	10 20 [illegible]
4	0 14 41	2 6 59	4 8 0	6 17 26	8 25 [illegible]	10 25 [illegible]
5	0 18 21	2 10 51	4 12 13	6 21 48	8 30 [illegible]	10 27 [illegible]
6	0 22 2	2 14 44	4 16 26	6 26 9	8 33 31	10 31 [illegible]
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 49
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 [illegible]
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 [illegible]
13	0 47 50	2 42 10	4 46 10	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 [illegible]
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 [illegible]
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′.

Day.	♋ 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. 31, 1784.

	h m s
☉'s place at noon ♒ 11° 22′	
Rt. Aſc. of Sirius - -	6 35 33
☉'s rt. aſc. ſubtract -	20 55 20
✻'s eſtimate ſouthing -	9 40 13
☉'s rt. aſc. at that time ſub.	20 56 31
✻'s true ſouthing - -	9 39 2
Semid. arc ſub. & add -	4 36 55
✻'s riſing aftern. - -	5 2 7
✻'s ſetting - -	14 15 57

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	o	′	″		h	m	s	
Pole ſtar, Alruccabah -	α	0	48	3	28	S	36	n	ſets not			2
Andromeda's girdle, Mirach -	β	0	57	36	34	27	35	n	10	7	3	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	23	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	32	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	34	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

A Table of the Longitudes, Latitudes, and Magnitudes of the moſt remarkable fixed Stars that the Moon can Eclipſe, or make a near Appulſe unto; exactly rectified to the beginning of the year 1780.

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

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