1802.

ΑΤΛΑΣ ΟΥΡΑΝΙΟΣ,
The COELESTIAL ATLAS;
Or, A New
E P H E M E R I S
For the YEAR of our LORD 1802.

Being the Sixth after

BISSEXTILE, or LEAP-YEAR,

And the Second Year of the 19th Century.

Wherein are contained

The Heliocentrick and Geocentrick Places of the Planets, the ECLIPSES of the Luminaries, and other remarkable PHENO-MENA that will happen this Year.

Carefully computed

From the genuine TABLES of Dr. EDMUND HALLEY, those of Professor MAYER, and other the latest and most correct ASTRONOMICAL TABLES.

ALSO

A Complete ALMANACK, containing the FEASTS and FASTS of the Church of ENGLAND; the Times of the LUNATIONS; the Rising and Setting of the Sun, Moon, and Planets, &c.

Adapted to the

Meridian and Latitude of the Royal Observatory of GREENWICH.

To which are added

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

By ROBERT WHITE,
Teacher of the Mathematicks,

Ὁι ὐρανοὶ διηγ ῦνται δόξαν Θεῦ.

The FIFTY-THIRD IMPRESSION.

Chronological Notes for the Year 1802.

Golden Number	- - 17	Septuagesima Sund.	Feb. 14
Cycle of the Sun	- - 19	Shrove Sunday -	Feb. 28
The Epact -	- - 26	Easter Day - -	Apr. 18
Dominical Letter	- C	Whit Sunday -	June 6
Number of Direction	- 28	Trinity Sunday -	June 13
Roman Indiction	- - 5	Advent Sunday -	Nov. 28

Astronomical CHARACTERS explained.

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

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

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

Of the Four Quarters of the YEAR 1802.

		d	h	m	
THE Spring Quarter begins	- - March	21	7	35	morn.
The Summer Quarter begins	- - June	22	5	27	morn.
The Autumnal Quarter begins	- - Sept.	23	7	8	aftern.
The Winter Quarter begins	- - Dec.	22	11	51	morn.

THE beautiful Planet VENUS will be a Morning Star till March the 17th; and after that Time she will be an Evening Star to the Year's End.

JUPITER will be an Evening Star till September the 9th; at which Time he becomes a Morning Star, and so continues to the Year's End.

The NAMES of the Learned JUDGES of the LAW.

I. Right Hon. Lord Eldon, Lord High Chancellor of Great Britain.

Right Hon. Sir William Grant, Knt. Master of the Rolls.

II. In the } Right Hon. Lord Kenyon, L. C. J. Sir Simon Le Blanc, Knt.
K. Bench. } Sir Soulden Lawrence, Knt.   Sir Nash Grose, Knt.

III. In the } Right Hon. Lord Alvanley, L.C. J. Sir Giles Rooke, Knt.
C. Pleas. } John Heath, Esq.   Sir Alan Chambre, Knt.

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

Sir Edward Law, Knt. Attor. Gen. Hon. Spencer Percival, Solicitor Gen.

A TABLE of TERMS and Returns for the Year 1802.

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	Saturday
In fifteen Days of St. Hilary	27	28	29	30	Saturday
On the Mor. of the Purif. of the Bl. V. M. Feb. 3	4	5	6	Saturday
In eight Days of the Purif. of the Bl. V. M.	9	10	11	12	Friday

Easter Term begins May 5, ends May 31.

In fifteen Days of Easter	May 2	3	4	5	Wedn.
From Easter Day in three Weeks	9	10	11	12	Wedn.
From Easter Day in one Month	16	17	18	19	Wedn.
From Easter Day in five Weeks	23	24	25	26	Wedn.
On the Mor. of the Ascension of the Lord	28	29	30	31	Monday

Trinity Term begins June 18, ends July 7.

On the Morrow of the Holy Trinity	June 14	15	16	18	Friday.
In eight Days of the Holy Trinity	20	21	22	23	Wedn.
In fifteen Days of the Holy Trinity	27	28	29	30	Wedn.
From the Day of the Holy Trin in 3 W. July 4	5	6	7	Wedn.

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

On the Morrow of All Souls	Nov. 3	4	5	6	Saturday
On the Morrow of St Martin	12	13	14	16	Tuesday
In eight Days of St. Martin	18	19	20	21	Monday
In fifteen Days of St. Martin	25	26	27	28	Monday

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

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

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

BIRTH-DAYS of the ROYAL FAMILY.

King George III.	June 4,	1738	Prince Adolph. Fred. Feb. 24, 1774
Prince of Wales, Aug. 12,	1762	Princefs Mary, April 25, - 1776
Duke of York, Auguft 16,	1763	Princefs Sophia, Nov. 3, - 1777
Duke of Clarence, Aug. 21,	1765	Princefs Amelia, Aug. 7, - 1783
Ds. of Witemberg, Sept. 29,	1766	Queen Charlotte, May 19, 1744
Duke of Kent, Nov. 2, -	1767	Duchefs of Brunfwic, Aug. 11, 1737
Prs. Augufta Sophia, Nov. 8,	1768	Duke of Gloucefter, Nov. 25, 1743
Prs. Elizabeth, May 22, -	1770	Princefs of Wales, May 17, 1768
Duke of Cumberland, June 5,	1771	Duchefs of York, May 7, 1767
Prince Aug. Fred. Jan. 27,	1773	

SOVEREIGNS of EUROPE, their Acceffion, &c.

Kingdoms, &c.	To whom fubject.	When born.	Began to reign.
England, &c.	George III.	June 4, 1738	Oct. 25, 1760
Ruffia	Alexander	Dec. 23, 1777	Mar. 24, 1801
Spain	Charles IV.	Nov. 11, 1748	Dec. 17, 1788
Portugal	Peter and Mary	Dec. 7, 1734	Feb. 24, 1777
Pruffia	Frederic Wm. III.	Aug. 6, 1770	Nov. 16, 1797
Denmark & Norway	Chriftian VII.	Jan. 29, 1749	Jan. 14, 1766
Sweden	Guftavus IV.	Nov. 1, 1778	Mar. 29, 1792
Germany	Francis II.	Feb. 12, 1767	Mar. 1, 1792
Popedom	Pius VII.	Aug. 11, 1742	Mar. 14, 1800
Sardinia	Charles-Emanuel	May 24, 1751	Oct. 16, 1796
Ottoman Empire	Selim III.	July 17, 1761	April 7, 1789

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

GOLD.	Wt. allowed. dwt. gr.	Full Wt. dwt. gr.	SILVER.	Full Wt. dwt. gr.
Guinea, - -	5 8	$5\ 9\frac{39}{89}$	A Crown, - -	$19\ 8\frac{16}{31}$
Half Guinea, -	2 16	$2\ 16\frac{64}{89}$	Half Crown, -	$9\ 16\frac{8}{31}$
Seven Shillings,	1 19	$1\ 19\frac{13}{89}$	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 filver is 62 s. or 3 l. 2 s. and of a *lb.* of gold is 44½ guineas, or 46 l. 14 s. 6 d. Alfo that the *oz.* of filver is 5 s. 2 d. and the *oz.* of gold 3 l. 17 s. 10½d. So that the value of the ftandard gold is 15 times that of the filver, 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.	⚥	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 acciden-	Winchester
Henry I.	1068	1100 Aug. 2	35 3 29	77	tally.	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	Fonteveraud
John	1165	1199 April 6	17 6 13	50	Arrow.	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 0	52		Westminster
Henry VIII.	1492	1509 April 22	37 9 6	55		Windsor
Edward VI.	1537	1547 Jan. 28	6 5 8	15		Westminster
Mary I.	1516	1553 July 6	5 4 11	42		Westminster
Elizabeth	1533	1558 Nov. 17	44 4 7	69		Westminster
James I.	1566	1603 Mar. 24	22 0 3	58		Westminster
Charles I.	1600	1625 Mar. 27	23 10 3	48	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		Westminster
Anne	1665	1702 Mar. 8	12 4 24	49		Westminster
George I.	1660	1714 Aug. 1	12 10 10	67		Hanover
George II.	1683	1727 June 11	33 4 14	77		Westminster
George III.	1738	1760 Oct. 25	Crowned Sept. 22, 1761.			

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

A TABLE of the moft Reverend, Right Reverend, and Reverend, the ARCH-BISHOPS, BISHOPS and DEANS, exercifing Ecclefiaftical Jurifdiction, 1802.

BISHOPS.	Sees.	Date.	Succeeded.	DEANS.
Dr. John Moore Arch-Bifhop	Bangor Canterb. A.B	1775 1783	Ewer deceafed Cornwallis dec.	Dr. Powys
Dr. Will. Markham Arch-Bifhop	Chefter York A. B.	1771 1777	Keene tranflat. Drummond de.	Dr. J. Fountayne
Dr. Beilby Porteus	Chefter London	1776 1787	Markham tran. Lowth deceaf.	Bifhop Pretyman
Ho. Dr. S. Barrington	Landaff Salifbury Durham	1769 1782 1791	Shipley tranfl.d Hume dec. Thurlow dec.	Bifhop Cornwallis
Hon. Dr. B. North	Litch & Cov. Worcefter Winchefter	1771 1774 1781	Egerton tranfl. Johnfon deceaf. Thomas deceaf.	Dr. Newton Ogle
Dr. Charles Mofs	St. David's Bath & Wells	1766 1774	Lowth tranfl. Willes deceafe	Dr. Geo. W. Lukin
H. Dr. James Yorke	St. David's Gloucefter Ely	1774 1779 1781	Mofs dec. Warburton dec. Keene deceafed	Dr. Wm. Pearce
Dr. Richard Hurd	Litch. & Cov. Worcefter	1775 1781	B. North tr. B. North tr.	Dr. Ar. Onflow
Dr. John Butler	Oxford Hereford	1777 1788	Lowth tranfl. Harley deceaf.	Dr. N. Wetherell
Dr. J. Cornwallis	Litch & Cov.	1781	Hurd tranfl.	Dr. Bapt. Proby
Dr. Lewis Bagot	Briftol Norwich St Afaph	1782 1783 1790	Newton dec. Yonge dec. Hallfax dec.	Mr. W. D. Shipley
Dr. Richard Watfon	Landaff	1782	Barrington tr.	Mr. S. Gate, Prec.
Dr. G. Pretyman	Lincoln	1787	Thurlow tran.	Sir Ri. Kaye, Bt.
Dr. John Douglas	Carlifle Salifbury	1787 1791	Law dec. Barrington tra.	Dr. John Ekins
Dr. Samuel Horfley	St. David's Rochefter	1788 1793	Smalwell tr. Thomas dec.	Dr. T. Dampier
Dr. Wm. Cleaver	Chefter Bangor	1788 1802	Porteus tran. Warren dec.	Mr. John Warren
Dr. Richard Beadon	Gloucefter	1789	Hallifax tran.	Dr. John Luxmore
Dr. E. V. Vernon	Carlifle	1791	Douglas tranfl.	Dr Ifaac Milner
Dr. Charles Sutton	Norwich	1792	Horne decea.	Dr. Jofeph Turner
Dr. Spencer Madan	Briftol Peterborough	1792 1794	Bagot tranfl. Hinchliffe dec.	Dr. Tho. Kipling
Dr. Regi. Courtenay	Briftol Exeter	1794 1797	Madan tranfl. Buller dec.	Dr. C. Harward
Dr. F. H. W. Cornwall	Briftol	1797	Courtenay tra.	Dr. C. P. Layard
Dr. John Buckner	Chichefter	1797	Afhburnham d.	Mr Combe Miller
Dr. John Randolph	Oxford	1799	Smalwell dec.	Dr. Cyril Jackfon
Dr. H. W. Majendie	Chefter	1800	Cleaver tran.	Dr. G. Cotton
Lord Geo. Murray	St. David's Weftminfter Windfor	1800 1793 1788	Stuart tranfl. Thomas dec. Douglas prom.	Mr. Wollafton, P. Bifhop Horfley Bifhop Sutton
Dr. Crigan	Sodor and Man			

IN the courfe of this year there will happen four eclipfes, two of each luminary, but only one of each will be vifible in thefe parts.

I. *March* 4, the Sun is eclipfed, but not vifible in thefe northern parts of the globe. The conjunction is at 4h 55m, in the morning, in longitude 11s 12° 57', the moon's latitude being 4⸗¼' fouth.

II. *March* 19, the Moon is eclipfed but invifible here. The beginning is at 9h 54m in the morning; the middle of the eclipfe 11h 6m; the ecliptic oppofition at 11h 15m; end of the eclipfe 22½m after 12; digits eclipfed 5° 16' on the north fide of the moon.

III. *Auguft* 28, the Sun is eclipfed, and partly vifible, as the Sun rifes eclipfed at 5h 7m; the vifible conjunction is at 5h 17m morning, the greateft obfcuration 5h 19m; and the eclipfe ends at 6h 13m; the digits eclipfed being 4° 44' on the fun's north fide.

IV. *September* 11, the Moon is eclipfed, and vifible here if clouds intervene not. The eclipfe begins at 9h 13¼m afternoon; middle of the eclipfe 10h 39¼; the ecliptic oppofi ion 10h 45¾ n; end of the eclipfe is 5m paft midnight; and the digits eclipfed 9° 12' on the moon's fouth fide.

Befide thefe eclipfes, there will be a tranfit of the planet Mercury over the Sun's difc, and feveral notable occultations of the planets by the moon.

Tranfit of Mercury. *November* 9 in the morning there happens a remarkable tranfit of the planet Mercury over the face of the Sun, paffing over it like a fmall round black fpeck, and will be vifible here if clouds interpofe not. The beginning of this tranfit will be feen as far as the Eaft Indies, New Holland, New Zealand, &c. the middle will be feen in all Africa, and moft part of Europe ond Afia; and the end will extend as far weftward as Cape Horn, South America, and moft part of the Weft India iflands. The annexed type fhows the appearance or path for London, where the Sun rifes, with Mercury on his face, at 7h 26m in the morning; the tranfit

begins on the left hand at I, at 6h 28m; the middle at 9h 14m; and the end, at E, at 12h 1m, or 1m afternoon. The figure fhows the appearance for the naked eye, ufing a darkened glafs to defend it againft the Sun's beams. In a telefcope that reverfes, the fides will be reverfed.

Obliquity of the Ecliptic.	1802.		Equation of Equinoctial Points.
23° 27' 59". 5	January 1,	-	+1" 7
23 28 0. 2	April 1,	-	+3. 2
23 27 59. 0	July 1,	-	+4. 7
23 27 59. 6	October 1,	-	+6. 1
23 27 58. 1	Decemb. 31,	-	+7. 6.

The LUNATIONS.

New Moon the 4th day, at 8 minutes past 8 morning.
First quarter the 10th day, at 4 minutes past 12 night.
Full Moon the 18th day, at 48 minutes past 9 night.
Last quarter the 27th day, at 3 minutes bef. 1 morning.

M D	Sundays & other remark. days	⊙ rises	⊙ sets	⊙'s declin.	☽'s declin.	☽ rises & sets	☽ south	Clock bef. ⊙
1	Circumcision	S 4	3 56	23 s 3	24 s 59	5 m 13	9 m 0	3' 48'
2	2 Sun. af. Chri.	8 4	3 56	22 58	27 40	6 36	10 1	4 16
3		8 3	3 57	22 53	28 27	7 52	11 6	4 44
4		8 2	3 58	22 47	27 9	☾ sets	0 a 13	5 12
5		8 2	3 58	22 40	23 50	5 a 15	1 17	5 39
6	Epiphany	f w.day	3 59	22 34	18 54	6 51	2 16	6 6
7	[O. Chr. D.	8 0	4 0	22 26	12 53	8 24	3 10	6 33
8	Lucian	7 59	4 1	22 19	6 17	9 50	3 59	6 59
9	1 S. aft. Epiph.	7 58	4 2	22 12	0 n 26	11 15	4 46	7 24
10		7 57	4 3	22 2	6 57	morn	5 32	7 49
11	Plow Mo. day	7 56	4 4	21 5	12 58	0 35	6 17	8 13
12		7 55	4 5	21 43	18 16	1 5	7 4	8 37
13	Hilary: Ca.T.b	O.N D	4 6	21 33	22 38	3 14	7 53	9 0
14	Oxford Ter. b.	7 53	4 7	21 23	25 53	4 33	8 44	9 22
15		7 52	4 8	21 12	27 53	5 43	9 36	9 44
16	2 Sun. a. Epiph.	7 50	4 10	21 1	28 30	6 45	10 28	10 5
17	Q. Char. b. d. k.	7 49	4 11	20 50	27 45	7 32	11 19	10 25
18	[Prisca	7 48	4 12	20 38	25 44	☽ rises	morn	10 44
19		7 46	4 14	20 25	22 35	4 a 41	0 8	11 3
20	Fabian	7 45	4 15	20 13	18 31	5 52	0 54	11 21
21	Agnes	7 44	4 16	20 0	13 45	7 5	1 37	11 38
22	Vincent	7 42	4 18	19 46	8 27	8 15	2 18	11 55
23	Hil. Term beg.	7 41	4 19	19 32	2 50	9 26	2 58	12 11
24	3 Sun. a. Epiph. Con. of St.Paul	7 39	4 21	19 18	2 s 57	10 38	3 37	12 26
25		7 38	4 22	19 4	8 43	11 52	4 17	12 40
26	Pr. Au. Fred. b.	7 36	4 24	18 49	14 18	morn	5 0	12 54
27		7 34	4 26	18 34	19 25	1 10	5 46	13 6
28		7 33	4 27	18 18	23 45	2 33	6 36	13 18
29	K. Che. I. mar.	7 31	4 29	18 2	26 55	3 58	7 33	13 29
30	4 S. aft. Epiph.	7 30	4 30	17 46	28 29	5 18	8 34	13 39
31		7 28	4 32	17 30	28 6	6 25	9 40	13 49

Days	Day increaf.	Length of Day.	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊙	Helioc long. ♀	Helioc. long. ☿	♄ rises
1	0 8	7 52	2° ♌ 11	27 ♌ 0	5 ♐ 2	10 ♑ 27	27 ♏ 7	20 ♏ 46	8 a 46
7	0 16	8 0	2 24	27 28	8 16	16 34	9 ♐ 40	7 ♐ 32	8 20
13	0 28	8 12	2 37	27 56	11 32	22 41	16 12	24 2	7 54
19	0 44	8 28	2 50	28 24	14 50	28 48	25 43	11 ♑ 2	7 28
25	1 0	8 44	3 2	28 52	18 10	4 ♌ 54	5 ♑ 13	29 20	7 3

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	0	34 ♓ 33	1 n 44	1 6	0 s 2	0 n 28	0 s 12
7	5	56	6	4	2	4	2 14	1 45	1 8	0 24	0 13	0 52
13	5	52	6	8	2	2	23 5	1 46	1 10	0 2	0 s 4	1 26
19	5	46	6	14	2	0	23 36	1 48	1 11	0 32	0 17	1 50
25	5	39	6	21	1	58	23 17	1 49	1 12	0 36	0 31	2 3

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

Days	♃ rises		♂ rises		♀ rises		☿ rises		♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	8 a 46	6 ♍ 33	6 m 44	7 m 2	10 n 27	10 n 2	23 s 21	22 s 46	23 s 35
7	8 17	6 28	6 53	7 20	10 32	10 36	23 42	23 15	24 16
13	7 49	6 23	7 3	7 35	10 39	10 46	23 55	23 12	24 12
19	7 21	6 17	7 7	7 50	10 47	10 58	23 51	22 56	23 16
25	6 53	6 11	7 17	7 54	10 56	11 11	23 54	22 8	21 28

The LUNATIONS.

New Moon   the 2d day, at 34 minutes paſt 6 afternoon
Firſt quarter the 9th day, at 1 minute paſt 2 afternoon.
Full Moon   the 17th day, at 8 minutes paſt 5 afternoon
Laſt quarter the 25th day, at 49 minutes paſt 1 afternoon

M D	Sundays & other remark. days	⊙ rises		⊙ ſets		⊙'s declin.		☽'s declin.		☽ rises & ſets		☽ ſouth		Clock bef. ⊙	
1		7	26	4	34	17 s 13	25 s 39		7 m 12	10 m 44	13' 58"				
2	Pur. or Cand. d.	7	25	4	35	16 56	21 21	☽ ſets	11 48	14 5				
3	Blaſe	7	23	4	37	16 38	15 36	5 a 41	0 a 46	14 12				
4		7	21	4	39	16 20	8 59	7 15	1 39	14 19				
5	Agatha	7	19	4	41	16 2	2 0	8 42	2 29	14 24				
6		7	18	4	42	15 44	4 n 53	10 7	3 17	14 29				
7	C 5 Sun. a. Epiph.	7	16	4	44	15 26	11 20	11 31	4 5	14 32				
8		7	14	4	46	15 7	17 2	morn	4 53	14 35				
9		7	12	4	48	14 48	21 47	0 54	5 43	14 37				
10		7	10	4	50	14 28	25 23	2 13	6 34	14 38				
11		7	9	4	51	14 9	27 41	3 29	7 27	14 39				
12	Hilary Ter. ends	7	7	4	53	13 49	28 37	4 35	8 19	14 39				
13		7	5	4	55	13 29	28 10	5 26	9 11	14 37				
14	C Septuageſima S.	7	3	4	57	13 9	26 25	6 7	10 1	14 35				
15	[Vale: O.Can.	7	1	4	59	12 49	23 31	6 33	10 48	14 33				
16		6	59	5	1	12 28	19 38	6 53	11 32	14 29				
17		6	57	5	3	12 7	14 59	☽ riſes	morn	14 25				
18		6	55	5	5	11 46	9 46	5 a 5	0 15	14 20				
19		6	53	5	7	11 25	4 10	7 14	0 53	14 15				
20		6	52	5	8	11 3	1 s 38	8 25	1 35	14 9				
21	☉ Sexageſima Sun.	6	50	5	10	10 42	7 27	9 40	2 15	14 1				
22		6	48	5	12	10 20	13 4	10 57	2 57	13 54				
23	[Ad.Fr.born	6	46	5	14	9 58	18 16	morn	3 42	13 46				
24	St.Matthias: Pr	6	44	5	16	9 36	22 46	0 18	4 30	13 37				
25	Ca. T. div. m.	6	42	5	18	9 14	26 13	1 40	5 23	13 28				
26		6	40	5	20	8 52	28 16	3 2	6 21	13 18				
27		6	38	5	22	8 29	28 35	4 12	7 23	13 8				
28	C Shrove Sunday	6	36	5	24	8 7	27 0	5 5	8 26	12 57				

Days	Day increaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊕	Helioc. long. ♀	Helioc. long. ☿	♄ riſes
1	1 24	9 8	3 ♏ 17	20 ♌ 25	22 ♐ 5	12 ♌ 0	16 ♒ 17	23 ♒ 36	6 a. 32
7	1 41	9 28	3 30	29 52	25 30	18 5	25 46	18 ♓ 18	6 6
13	2 6	9 50	3 43	0 ♍ 20	28 56	24 9	5 ♒ 15	17 ♈ 52	5 40
19	2 30	10 14	3 56	0 48	2 ♑ 24	0 ♍ 12	14 41	22 ♉ 38	5 14
25	2 52	10 36	4 8	1 16	5 55	6 14	24 13	0 ♊ 18	4 47

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 29	1 55	22 ♓ 55	1 n 50	1 n 14	0 s 41	0 s 46	2 s 1
7	5 22	6 37	1 54	22 36	1 51	1 15	0 45	0 58	1 39
13	5 12	6 48	1 54	22 17	1 52	1 15	0 48	1 7	0 55
19	5 1	6 59	1 52	21 58	1 53	1 10	0 52	1 15	0 n 14
25	4 50	7 10	1 52	21 38	1 53	1 16	0 56	1 21	1 40

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

Days	♃ rises	♂ rises	♀ rises	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	6 31	6 3	7 10 1	4 1 42	11 n 7	11 n 29	23 s 37	20 s 41	18 s 11
7	5 51	5 56	7 2	5 23	11 18	11 46	23 12	19 2	14 23
13	5 23	5 48	6 57	6 3	11 29	12 3	22 39	17 5	9 50
19	4 55	5 46	6 5	6 40	12 6	12 20	21 51	14 50	4 53
25	4 28	5 44	6 45	7 4	11 51	12 38	21 5	12 20	0 45

The LUNATIONS.

New Moon the 4th day, at 55 minutes paſt 4 morning.
Firſt quarter the 11th day, at 24 minutes paſt 6 morning.
Full Moon the 19th day, at 15 minutes paſt 11 morning.
Laſt quarter the 26th day, at 7 minutes paſt 11 night.

M D	Sundays & other remark. days	☉ rifes		☉ fets		☾'s declin.		☾'s declin.		☾ rifes & fets		☾ South		Clock bef. ☉	
1	David Chai	6	34	5	2	7 8 44	23 ♒ 32	5 m 44	9 m 29	12′ 45″					
2	**Shrove Tuefday**	6	32	5	28	7 2 18	27	6 8	10 28	12 33					
3	**Aſh Wednefday**	6	30	5	30	6 58 12	12	6 26	11 24	12 21					
4		6	28	5	32	6 12	5 16	☽ fets	0 a 16	12 8					
5		6	2	5	34	6 1	1 n 51	7 a 37	1 7	11 54					
6		6	24	5	36	5 49	8 40	9 4	1 56	11 41					
C	1 Sun. in Lent	6	22	5	38	5 26	14 51	10 32	2 46	11 26					
8	[Perpetua	6	20	5	40	5 2	20 16	11 58	3 37	11 12					
9		6	18	5	42	4 3	24 24	morn	4 29	10 56					
10	**Ember Week**	6	16	5	44	4 16	27 12	1 18	5 23	10 41					
11		6	14	5	46	3 52	28 30	2 29	6 17	10 25					
12	Gregory	6	12	5	48	3 29	28 30	3 28	7 10	10 9					
13		6	10	5	50	3 5	27 5	4 11	8 1	9 52					
C	2 Sun. in Lent	6	8	5	52	2 41	24 28	4 41	8 49	9 35					
15		6	6	5	54	2 18	20 50	5 4	9 35	9 18					
16		6	4	5	56	1 54	16 22	5 21	10 18	9 1					
17	St. Patrick ♐	6	2	5	58	1 30	11 16	5 34	10 59	8 43					
18	Edwa. K. W. S.	6	0	6	0	1 7	5 43	5 46	11 40	8 25					
19	Elfrida	5	58	6	2	0 43	0 5	☽ rifes	morn	8 7					
20		5	56	6	4	0 19	5 59	7 a 38	0 21	7 49					
C	3 Sun. in Lent	5	54	6	6	0 n 4	11 43	8 51	1 2	7 31					
22	[Benedict	5	52	6	8	0 28	17 5	10 11	1 46	7 12					
23		5	50	6	10	0 52	21 47	11 35	2 34	6 54					
24		5	48	6	12	1 15	25 30	morn	3 26	6 35					
25	**Annu. Lady Day**	5	46	6	14	1 30	27 54	0 58	4 22	6 17					
26		5	44	6	16	2 2	28 41	2 8	5 21	5 58					
27		5	42	6	18	2 26	27 40	3 8	6 23	5 40					
C	4 or Midl. Sund.	5	40	6	20	2 49	24 52	3 50	7 24	5 21					
29		5	39	6	21	3 12	20 29	4 17	8 22	5 2					
30		5	37	6	23	3 36	14 49	4 37	9 18	4 44					
31		5	36	6	25	3 59	8 17	4 53	10 10	4 25					

☉	Day increaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊖	Helioc. long. ♀	Helioc. long ☿	♄ fets
1	3 18	10 52	4 ♏ 17	1 ♏ 35	8 ♓ 16	10 ♍ 15	0 ♓ 33	24 ♋ 41	6 m 45
7	3 32	11 16	4 30	2 3	11 50	16 15	10 3	27 ♌ 15	6 22
13	3 56	11 40	4 42	2 30	15 25	22 14	19 3	24 ♍ 15	5 59
19	4 29	12 4	4 55	2 58	19 2	29 11	29 6	16 ♎ 44	5 36
25	4 44	12 28	5 8	3 26	22 41	4 ♎ 0	8 ♈ 20	6 ♏ 8	5 14

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 5	21♓26	1 n 53	1 n 17	0 s 58	1 s 24	2 n 36
7	4 30	7 30	1 52	21 7	1 54	1 17	1 2	1 26	3 32
13	4 17	7 43	1 53	20 48	1 54	1 17	1 5	1 26	3 26
19	4 4	7 56	1 54	20 20	1 54	1 16	1 0	1 23	2 19
25	3 50	8 10	2 5	20 10	1 53	1 16	1 12	1 18	0 48

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

Days	♃ sets	♂ rises	♀ rises	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	6 m 34	5 m 24	6 m 20	7 a 6	11 n 58	12 n 49	20 s 2	10 s 34	1 n 5
7	6 9	5 14	6 28	rises	12 9	13 4	19 23	7 46	1 37
13	5 45	5 3	6 19	5 m 48	12 19	13 19	18 12	4 50	0 s 25
19	5 22	4 52	6 9	5 25	12 28	13 32	16 55	1 50	3 27
25	5 1	4 40	5 58	5 7	12 36	13 43	15 31	1 n 12	5 44

The LUNATIONS.

New Moon   the 2d day, at 15 minutes paſt 3 afternoon.
Firſt quarter   the 9th day, at 25 minutes paſt 12 night.
Full Moon   the 18th day, at 35 minutes paſt 2 morning.
Laſt quarter   the 25th day, at 45 minutes paſt 5 morning.

M D	Sundays & other remark days	☉ rises	☉ ſets	☉'s declin.	☽'s declin.	☽ riſes & ſets	☽ South	Clock bef. ☉
1		5 33	6 27	4 n 23	1 s 18	5 m 8	11 m 1	4' 7"
2		5 31	6 29	4 46	5 n 4	☾ ſets 11	11 50	3 49
3	Richard	5 29	6 31	5 9	12 16	8 a 8	0 a 40	3 31
☽	5 Sund. in Lent	5 27	6 33	5 32	18 6	9 35	1 31	3 13
5	[Ambroſe	5 25	6 35	5 55	22 49	11 0	2 24	2 55
6	Old Lady Day	5 23	6 37	6 17	26 14	morn	3 19	2 37
7		5 21	6 39	6 40	28 11	0 19	4 14	2 20
8		5 19	6 41	7 3	28 37	1 24	5 9	2 2
9	Cam. T. ends	5 17	6 43	7 25	27 37	2 15	6 2	1 45
10	Oxf. T. ends	5 15	6 45	7 47	25 21	2 52	6 52	1 28
☽	Palm Sunday	5 13	6 47	8 9	22 21	3 17	7 39	1 12
12		5 11	6 49	8 32	17 47	3 36	8 22	0 55
13		5 9	6 51	8 53	12 52	3 50	9 4	0 39
14		5 7	6 53	9 15	7 28	4 3	9 45	0 24
15	Maundy Thurſ.	5 5	6 55	9 37	1 43	4 12	10 25	0 8
16	Good Friday	5 4	6 56	9 58	4 s 10	4 22	11 7	0 af. 7
17		5 2	6 58	10 19	10 1	4 33	11 51	0 22
☽	Eaſter Day	5 0	7 0	10 40	15 35	☾ riſes	morn	0 36
19	Eaſter Monday	Alphe.	7 2	11 1	20 33	9 a 25	0 38	0 50
20	Eaſter Tueſday	4 56	7 4	11 22	24 36	10 50	1 29	1 3
21		4 54	7 6	11 43	27 22	morn	2 24	1 17
22		4 52	7 8	12 3	28 32	0 9	3 23	1 30
23	St. George	4 50	7 10	12 23	27 56	1 12	4 24	1 42
24	[Prs. Mary b.	4 49	7 11	12 43	25 43	1 57	5 25	1 54
☽	Low S. St. Mar.	4 47	7 13	13 3	21 37	2 28	6 23	2 5
26		4 45	7 15	13 22	16 25	2 50	7 18	2 16
27		4 43	7 17	13 42	10 17	3 7	8 10	2 26
28	Ox. & Ca. T. b.	4 41	7 19	14 1	3 38	3 21	8 59	2 36
29		4 40	7 20	14 20	3 10	3 33	9 47	2 45
30		4 38	7 22	14 38	9 n 47	3 46	10 36	2 54

Days	Day increaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc long. ⊕	Helioc. long. ♀	Helioc. long. ☿	♄ ſets
1	5 16	12 54	5 ♏ 22	3 ♍ 58	26 ♐ 58	11 ♎ 3	19 ♈ 48	26 ♈ 31	4 m 48
7	5 34	13 18	5 35	4 26	0 ♑ 46	16 57	29 23	13 ♉ 6	4 23
13	5 50	13 42	5 48	4 54	4 24	22 50	8 ♉ 50	29 41	3 57
19	6 20	14 4	6 1	5 22	8 8	28 41	18 3	17 ♊ 1	3 31
25	6 42	14 26	6 13	5 4	11 54	4 ♏ 32	28 13	5 ♋ 5	3 5

Days	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☽'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	3 32	8 28	2 0	19♓47	1 n 53	1 n 15	1 s 15	1 s 10	0 s 47
7	3 16	8 44	2 4	19 28	1 53	1 15	1 18	1 1	1 47
13	3 0	9 0	2 5	19 9	1 52	1 14	1 20	0 50	2 25
19	2 43	9 17	2 14	18 50	1 51	1 13	1 22	0 38	2 42
25	2 26	9 34	2 20	18 31	1 51	1 12	1 24	0 25	2 39

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

Days	♃ sets	♂ rises	♀ sets	☿ rises	♄'s decln.	♃'s decln.	♂'s decln.	♀'s decln.	☿'s decln.
1	4m35	4m26	6a42	4m56	12 n 44	13 n 52	13 s 46	4 n 44	6 s 34
7	4 13	4 14	7 4	4 47	12 50	13 59	12 12	7 42	5 50
13	3 50	4 1	7 25	4 40	12 54	14 3	10 3	10 33	3 59
19	3 28	3 47	7 46	4 32	12 58	14 2	8 51	13 16	1 13
25	3 5	3 32	8 6	4 24	12 50	14 4	7 7	15 47	2 n 18

The LUNATIONS.

New Moon   the   2d day, at 43 minutes paſt   1 morning.
Firſt quarter the   9th day, at 57 minutes paſt 6 afternoon.
Full Moon   the 17th day, at 37 minutes paſt 2 afternoon.
Laſt quarter the 24th day, at 56 minutes paſt 10 morning.
New Moon   the 31ſt cay, at 43 minutes paſt 12 noon.

M D	Sundays & other remark. days	☉ riſes	☉ ſets	☉'s declin.	☽'s declin.	☽ riſes & ſets	☽ South	Clock aft. ☉
1	St. Phil. & Jam.	4 36	7 24	14 n 57	15 n 5	3 m 5	11 m 2	3'
C	2 Su. aft. Eaſter	4 35	7 26	15 15	21	☾ ſets	0 a 1	3 16
3	Inv. of Crofs	4 33	7 27	15 33	24 57	9 a 56	1 11	3 17
4		4 31	7 29	15 59	27 29	11 14	2 7	3 23
5	Eaſt. Term be.	4 29	7 31	16 8	28 28	morn	3 3	3 29
6	John Ev. A.P.L.	4 27	7 33	16 25	27 58	0 11	3 57	3 35
7		4 26	7 34	16 42	26 5	0 55	4 49	3 40
8		4 24	7 36	16 58	23 3	1 24	5 37	3 44
9	3 Su. aft. Eaſter	4 23	7 37	17 14	19 5	1 44	6 22	3 48
10		4 21	7 39	17 30	14 24	2 0	7 4	3 51
11		4 19	7 41	17 46	9 11	2 13	7 45	3 54
12		4 18	7 42	18 1	3 35	2 24	8 25	3 56
13	Old May Day	4 16	7 44	18 17	2 s 14	2 34	9 5	3 58
14		4 15	7 45	18 31	8 5	2 43	9 48	3 59
15		4 13	7 47	18 46	13 46	2 55	10 33	3 59
C	4 S. af. Eaſter	4 12	7 48	19 0	18 5	3 9	11 23	3 59
17	Pra. Wakes b.	4 10	7 50	19 14	23 22	☾ riſes	morn	3 58
18		4 9	7 51	19 27	26 36	9 a 54	0 17	3 57
19	Queen Char. b.	4 8	7 52	19 41	28 15	11 3	1 16	3 55
20	Dunſtan	4 6	7 54	19 53	28 6	11 57	2 18	3 53
21		4 5	7 55	20 6	26 6	morn	3 20	3 50
22	Prs. Eliz. born	4 4	7 56	20 18	22 26	0 32	4 20	3 46
23	5 or Roga. Sun	4 2	7 58	20 30	17 28	0 57	5 16	3 42
24		4 1	7 59	20 41	11 33	1 14	6 8	3 39
25		4 0	8 0	20 53	5 6	1 29	6 57	3 33
26	Auguſtin, Abp.	3 59	8 1	21 3	1 n 33	1 40	7 44	3 27
27	Aſcen, Holy Th.	3 58	8 2	21 14	8 4	1 53	8 31	3 21
28	Ven. Bede	3 57	8 3	21 24	14 9	2 7	9 19	3 14
29	K. Char. a reſt.	3 55	8 5	21 33	19 28	2 21	10 8	3 7
C	Sun. af. Aſcen.	3 54	8 6	21 43	23 44	2 41	11 0	2 59
31	Eaſter Term e.	3 53	8 7	21 52	26 42	☾ ſets	11 55	2 51

Days	Day increaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊕	Helioc. long. ♀	Helioc. long. ☿	♄ ſets
1	7 4	14 48	6 ♏ 26	6 ♏ 17	15 ♒ 40	10 ♏ 21	7 ♊ 52	7 ♒ 31	2 m 55
7	7 24	15 8	6 39	6 45	19 28	16 10	17 32	22 ♓ 57	2 31
13	7 44	15 28	6 51	7 12	23 16	21 5	27 13	23 ♈ 26	2 8
19	8 0	15 44	7 4	7 40	27 4	27 44	6 ♋ 56	28 ♉ 56	1 45
25	8 10	16 0	7 17	8 8	0 ♓ 52	3 ♐ 29	16 39	6 ♊ 39	1 22

M D	Day lig. begins	Dayl g. ends	Durat. twilig.	Pl. ☽'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitud	☿'s latitude
1	2 7	9 55	2 31	18♓12	1n 50	1n11	1s26	0s11	2s17
7	1 45	10 18	2 43	17 53	1 49	1 10	1 27	0n 4	1 36
13	1 20	10 48	3 1	17 34	1 49	1 9	1 28	0 19	0 41
19	0 48	11 20	3 27	17 10	1 48	1 9	1 29	0 34	0n22
25	All day light.			16 56	1 47	1 8	1 29	0 48	1 19

M D	☉'s longitude	☽'s long.	☽'s latitude	♄'s longit.	♃'s longit.	♂'s longit.	♀'s longit.	☿'s long.
1	♉10 21 19	3♉ 0	3n32	0♏35	25♌55	19♓50	21♉47	21♈56
C	11 19 29	16 47	4 18	0 37	25 57	20 36	23 1	23 41
3	12 17 37	0♊16	4 50	0D37	25 59	21 22	24 15	25 29
4	13 15 43	13 27	5 2	0 36	26 1	22 8	25 29	27 19
5	14 13 47	26 17	5 4	0 36	26 3	22 53	26 43	29 10
6	15 11 49	8♋49	4 48	0 36	26 5	23 40	27 57	1♉ 3
7	16 9 50	21 3	4 19	0 36	26 8	24 25	29 10	2 58
8	17 7 48	3♌4	3 40	0 36	26 11	25 11	0♊24	4 54
C	18 5 45	14 57	2 51	0 37	26 14	25 57	1 37	6 53
10	19 3 40	26 46	1 55	0 38	26 17	26 42	2 51	8 54
11	20 1 33	8♍37	0 54	0 39	26 20	27 28	4 4	10 56
12	20 59 24	20 35	0s10	0 40	26 23	28 14	5 18	13 0
13	21 57 13	2♎45	1 14	0 41	26 27	28 59	6 31	15 5
14	22 55 1	15 11	2 16	0 42	26 31	29 45	7 45	17 11
15	23 52 47	27 56	3 13	0 43	26 35	0♈30	8 58	19 19
C	24 50 32	11♏ 1	4 1	0 45	26 40	1 16	10 12	21 28
17	25 48 15	24 26	4 37	0 46	26 44	2 1	11 25	23 38
18	26 45 56	8♐9	4 58	0 47	26 48	2 47	12 39	25 49
19	27 43 37	22 7	5 2	0 49	26 53	3 32	13 52	28 1
20	28 41 17	6♑16	4 47	0 51	26 58	4 18	15 6	0♊13
21	29 38 55	20 29	4 15	0 53	27 3	5 3	16 19	2 24
22	♊0 36 33	4♒44	3 27	0 55	27 8	5 48	17 33	4 35
C	1 34 9	18 58	2 26	0 57	27 13	6 33	18 46	6 46
24	2 31 45	3♓7	1 16	0 59	27 18	7 18	20 0	8 56
25	3 29 20	17 11	0 2	1 1	27 23	8 3	21 13	11 5
26	4 26 54	1♈9	1n12	1 4	27 29	8 48	22 26	13 12
27	5 24 28	15 0	2 20	1 6	27 35	9 33	23 40	15 18
28	6 22 1	28 44	3 20	1 9	27 41	10 18	24 53	17 22
29	7 19 32	12♉19	4 7	1 12	27 47	11 3	26 6	19 24
30	8 17 3	25 42	4 40	1 14	27 53	11 48	27 20	21 24
31	9 14 33	8♊53	4 5	1 17	27 59	12 33	28 33	23 22

M D	♃ sets	♂ rises	♀ sets	☿ rises	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	2m43	3m17	8 s27	4 m16	13n 0	14n 1	5s21	18n 4	6n26
7	2 20	3 2	8 47	4 10	12 59	14 55	3 33	20 4	11 1
13	1 57	2 46	9 5	4 6	12 56	13 48	1 45	21 44	15 44
19	1 34	2 30	9 22	4 2	12 53	13 39	0n 3	23 3	20 6
25	1 11	2 13	9 37	4 9	12 48	13 27	1 50	23 58	23 26

B

The LUNATIONS.

First quarter the 8th day, at 48 minutes past 12 noon.
Full Moon the 15th day, at 50 minutes past 11 night.
Last quarter the 22d day, at 1 minute past 4 afternoon.
New Moon the 30th day, at 2 minutes before 1 morning.

M D	Sundays & other remark. days.	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock aft. ☉
1	Nicomede	3 52	8 8	22 n 0	28 n 12	9 a 59	0 a 50	2' 43"
2	[T. d. m.	3 52	8 8	22 8	28 10	10 48	1 46	2 34
3	Oxf. T. e. Cam.	3 51	8 9	22 16	26 41	11 22	2 38	2 24
4	⚹. Geo. 3 born	3 50	8 10	22 24	23 59	11 45	3 28	2 15
5	Duke of Cum. b.	Bonifa.	8 11	22 31	20 16	morn	4 14	2 4
6	Whit Sunday	3 48	8 12	22 37	15 47	0 3	4 57	1 54
7	Whit Monday	3 48	8 12	22 43	10 44	0 16	5 38	1 43
8	Whit Tuesday	3 47	8 13	22 49	5 17	0 28	6 17	1 32
9	Ember Week	3 46	8 14	22 55	0 s 25	0 38	6 57	1 21
10		3 46	8 14	23 0	6 11	0 48	7 38	1 10
11	St. Barnabas	3 45	8 15	23 4	11 51	0 58	8 21	0 58
12	Trinity Sunday	3 45	8 15	23 8	17 11	1 10	9 8	0 46
13		3 44	8 16	23 12	21 54	1 26	10 0	0 34
14		3 44	8 16	23 16	25 35	1 47	10 58	0 22
15		3 44	8 16	23 19	27 49	☽ rises	morn	0 10
16	Oxf. T. begins	3 44	8 16	23 21	28 17	9 a 46	0 0	0 b. 3
17	Alban: Cor.Ch.	3 43	8 17	23 23	26 48	10 29	1 3	0 16
18	Trin. T. begins	3 43	8 17	23 25	23 29	10 57	2 6	0 29
19	1 Sun. af. Trin.	3 43	8 17	23 26	18 41	11 15	3 5	0 41
20	Tr. Ed.	8 17	23 27	12 50	11 32	3 59	0 54	
21	Longest Day	3 43	8 17	23 28	6 22	11 44	4 50	1 7
22		3 43	8 17	23 28	0 n 19	11 56	5 38	1 20
23	Nati.St.J.Bapt.	3 43	8 17	23 28	6 52	morn	6 25	1 33
24		3 43	8 17	23 27	12 59	0 8	7 11	1 46
25		3 43	8 17	23 26	18 25	0 22	8 0	1 59
26	2 Sun. af. Trin.	3 44	8 16	23 24	22 52	0 40	8 50	2 12
27		3 44	8 16	23 22	26 6	1 5	9 43	2 24
28	St. Peter.	3 44	8 16	23 20	27 56	1 38	10 37	2 37
29		3 45	8 15	23 17	28 18	2 24	11 32	2 49
30		3 45	8 15	23 14	27 12	☽ sets	0 a 26	3 1

M D	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	8 32	16 16	7 ♏ 31	8 ♏ 40	5 ♓ 19	10 ♐ 12	28 ♋ 1	17 ♌ 8	0 m 54
7	8 40	16 24	7 44	9 8	9 8	15 57	3 ♌ 46	15 ♍ 55	0 29
13	8 48	16 32	7 57	9 35	12 56	21 40	17 32	9 ♎ 44	0 4
19	8 50	16 34	8 9	10 3	16 43	27 24	27 17	0 ♍ ?	11 a 39
25	8 50	16 34	8 22	10 31	20 30	3 ♑ 7	7 ♍ 3	18 5	11 14

M D	Daylig. begins	Daylig. ends	Durat. tw lig.	Pl. ☽'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1				16 ♓ 33	1 n 7	1 n 7	1 s 29	1 n 3	1 n 59
7				16 14	1 46	1 6	1 29	1 14	2 5
13	All	day	light.	15 55	1 45	1 5	1 28	1 24	1 44
19				15 36	1 44	1 5	1 27	1 32	0 58
25				15 17	1 44	1 4	1 25	1 38	0 s 59

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

M D	♃ fets	♂ rifes	♀ fets	☿ fets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	0 m 29	1 m 54	9 a 5c	9 a 27	12 n 4c	13 n 12	3 n 53	24 n 31	25 n 23
7	0 16	1 37	9 57	10 0	12 32	12 56	5 37	24 31	25 25
13	11 a 53	1 19	10 1	10 0	12 24	12 39	7 18	24 5	24 21
19	11 30	1 2	10 1	9 59	12 14	12 21	8 55	23 15	22 34
25	11 · 7	0 45	9 55	9 42	12 3	12 1	10 29	22 0	20 27

B 2

The Lunations.

First quarter the 8th day, at 57 minutes past 4 morning.
Full Moon the 15th day, at 28 minutes past 7 morning.
Last quarter the 21st day, at 22 minutes past 10 night.
New Moon the 29th day, at 4 minutes past 3 afternoon.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock bef. ☉
1		3 46	8 14	23 n 10	24 n 48	9 a 43	1 a 16	3′ 13″
2	Visita. of V. M.	3 46	8 14	23 6	21 20	10 3	2 4	3 25
3	Dog days begin	3 47	8 13	23 2	17 2	10 18	2 48	3 37
☾	Sun. af. Trin.	3 47	8 13	22 57	12 6	10 29	3 29	3 48
9	[Tra. St. Mar.	3 48	8 12	22 52	6 46	10 39	4 8	3 59
6	Cam. C:O. Midf.	3 49	8 11	22 46	1 10	10 48	4 47	4 9
7	Trin. Ter. ends	3 49	8 11	22 40	4 s 31	10 58	5 27	4 19
8	[Tho. à Becket	3 50	8 10	22 34	10 8	11 9	6 8	4 29
9	Camb. T. ends	3 51	8 9	22 27	15 31	11 24	6 53	4 38
10		3 52	8 8	22 20	20 22	11 43	7 42	4 47
☾	4 Sun. af. Trin.	3 53	8 7	22 12	24 24	morn	8 36	4 56
12	Oxford Act	3 54	8 6	22 4	27 12	0 10	9 35	5 4
13		3 55	8 5	21 56	28 23	0 52	10 39	5 11
14		3 56	8 4	21 47	27 38	1 53	11 43	5 18
15	Swithin	3 57	8 3	21 38	24 56	☽ rises	morn	5 25
16		3 58	8 2	21 29	20 27	9 a 14	0 45	5 31
17	Oxford Ter. e.	3 59	8 1	21 19	14 45	9 32	1 43	5 37
☾	5 Sun. aft. Tri.	4 0	8 0	21 9	8 13	9 46	2 38	5 42
19		4 1	7 59	20 58	1 20	9 59	3 28	5 47
20	Margaret	4 3	7 57	20 47	5 n 27	10 10	4 17	5 51
21		4 4	7 56	20 36	11 49	10 25	5 4	5 54
22	Magdalen	4 5	7 55	20 25	17 28	10 41	5 53	5 58
23		4 7	7 53	20 13	22 8	11 4	6 43	6 0
24	[St. James	4 8	7 52	20 0	25 38	11 34	7 35	6 2
☾	6 Sun. aft. Tri.	4 0	7 51	19 48	27 45	morn	8 29	6 4
26	St. Anne	4 11	7 49	19 35	28 26	0 15	9 23	6 4
27		4 12	7 48	19 22	27 39	1 11	10 17	6 5
28		4 14	7 46	19 8	25 34	2 17	11 9	6 4
29		4 15	7 45	18 54	22 20	☽ sets	11 57	6 4
30		4 17	7 43	18 40	18 12	8 a 22	0 a 43	6 2
31		4 18	7 42	18 25	13 24	8 34	1 25	6 0

M D	Day decreaf.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊕	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	0 6	16 28	8♏34	10♍58	24♓17	8♈51	16♍47	4♐57	10 a 50
7	0 12	16 22	8 47	10 26	28 2	14 34	26 31	21 27	10 26
13	0 24	16 10	9 0	11 53	1♈46	20 17	6≏14	8♑19	10 3
19	0 36	15 58	9 12	12 21	5 29	26 1	15 56	26 21	9 49
25	0 52	15 42	9 25	12 48	9 10	1♒44	25 36	16♒28	9 17

M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☽'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	All	day	light.	14♓58	1 n 43	1 n 3	1 s 23	1 n 41	1 s 33
7				14 39	1 43	1 3	1 21	1 41	3 4
13				14 20	1 42	1 2	1 18	1 39	4 21
19				14 1	1 42	1 2	1 15	1 33	4 56
25	0 45	11 10	3 20	13 42	1 42	1 2	1 11	1 25	4 32

M D	☉'s longitude	☽'s long.	☽'s latitude	♄'s long.	♃'s long.	♂'s long.	♀'s long.	☿'s long.
1	♋ 8 50 40	25♋21	3 n 47	3♍28	2♍17	5♌14	6♌12	1♌20
2	9 47 54	7♌24	3 0	3 33	2 27	5 57	7 25	1 30
3	10 45 7	19 18	2 5	3 39	2 37	6 39	8 37	1 43
C 4	11 42 21	1♍7	1 5	3 44	2 48	7 22	9 49	1 49
5	12 39 34	12 54	0 2	3 50	2 58	8 4	11 2	1R51
6	13 36 47	24 43	1 s 1	3 55	3 8	8 47	12 14	1 50
7	14 33 59	6♎40	2 2	4 1	3 19	9 29	13 26	1 45
8	15 31 12	18 50	2 59	4 7	3 30	10 11	14 38	1 36
9	16 28 24	1♏18	3 49	4 3	3 40	10 53	15 51	1 22
10	17 25 36	14 9	4 28	4 9	3 51	11 35	17 3	1 2
C	18 22 48	27 27	4 55	4 5	4 1	12 17	18 15	0 38
12	19 20 1	11♐11	5 7	4 1	4 12	12 59	19 27	0 10
13	20 17 13	25 23	5 0	4 37	4 23	13 41	20 39	29♋39
14	21 14 25	9♑58	3 43	4 43	4 34	14 22	21 51	29 5
15	22 11 38	24 50	3 49	4 49	4 45	15 4	23 2	28 28
16	23 8 52	9♒49	2 47	4 56	4 56	15 45	24 15	27 48
17	24 6 6	24 48	1 35	5 2	5 7	16 27	25 27	27 7
C	25 3 20	9♓38	0 16	5 8	5 18	17 8	26 39	26 26
19	26 0 35	24 13	1 n 3	5 15	5 30	17 49	27 51	25 46
20	26 57 51	8♈29	2 16	5 22	5 41	18 30	29 3	25 6
21	27 55 8	22 25	3 19	5 28	5 53	19 11	0♍15	24 27
22	28 52 26	6♉1	4 9	5 35	6 4	19 52	1 26	23 49
23	29 49 45	19 19	4 -45	5 41	6 16	20 33	2 38	23 14
24	♌ 0 47 5	2♊19	5 5	5 48	6 27	21 14	3 50	22 43
C	1 44 26	15 5	5 10	5 55	6 39	21 54	5 1	22 17
26	2 41 48	27 37	4 59	6 2	6 50	22 35	6 12	21 55
27	3 39 11	9♋58	4 35	6 9	7 2	23 15	7 24	21 43
28	4 36 33	22 8	3 58	6 15	7 14	23 55	8 35	21 25
29	5 34 0	4♌16	3 11	6 22	7 26	24 35	9 47	21 D17
30	6 31 25	16 4	2 16	6 28	7 38	25 15	10 58	21 18
31	7 28 52	27 54	1 16	6 35	7 50	25 55	12 10	21 27

M D	♃ sets	♂ rises	♀ sets	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	10 a 44	0 m 29	9 a 54	9 a 16	11 n 51	10 n 39	11 n 59	20 n 22	18 n 24
7	10 21	0 12	9 45	8 43	11 38	11 17	13 24	18 25	16 48
13	9 59	11 a 56	9 37	8 3	11 25	10 53	14 43	16 11	15 59
19	9 36	11 41	9 25	rises	11 11	10 28	15 59	13 41	16 9
25	9 14	11 27	9 14	3 m 32	10 56	10 2	17 7	11 0	17 8

B 3

The LUNATIONS.

First quarter the 6th day, at 55 minutes paſt 6 afternoon.
Full Moon the 13th day, at 48 minutes paſt 2 afternoon.
Laſt quarter the 20th day, at 14 minutes paſt 7 morning.
New Moon the 28th day, at 0 minutes paſt 7 morning.

M D	Sundays & other remark. days	⊙ riſes	⊙ ſets	⊙'s declin.	☽'s declin.	☽ riſes & ſets	☽ South	Clock bef. ⊙
C	y Sun. af. Tria.	4 20	7 40	18 n 10	8 n 8	8 a 45	2 a 5	5′ 57″
2	[Lammas Day	4 21	7 39	17 55	2 35	8 56	2 44	5 54
3		4 23	7 37	17 40	3 s 4	9 5	3 23	5 50
4		4 24	7 36	17 24	8 40	9 15	4 3	5 46
5		4 26	7 34	17 8	14 3	9 28	4 46	5 40
6	Transfiguration	4 28	7 32	16 52	19 0	9 43	5 32	5 35
7	Pſs. Amelia bor.	Na of J	7 31	16 35	23 14	10 7	6 23	5 28
8	8 Sun. af. Tri.	4 31	7 29	16 19	26 10	10 41	7 19	5 21
9		4 33	7 27	16 2	28 14	11 31	8 19	5 14
10	St. Lawrence	4 35	7 25	15 44	28 17	morn	9 22	5 5
11	Duch: Brunſ. b.	Do.d.e.	7 24	15 27	26 25	0 42	10 26	4 57
12	Pr. of Wales b.	4 38	7 22	15 9	22 40	2 13	11 26	4 47
13	Old Lammas	4 40	7 20	14 51	17 22	☽ riſes	morn	4 37
14	[Aſſumption	4 42	7 18	14 33	10 57	7 a 52	0 24	4 27
15	9 Sun. af. Tri.	4 43	7 17	14 14	3 56	8 6	1 18	4 16
16	D. of York b.	4 45	7 15	13 55	3 n 10	8 18	2 9	4 4
17		4 47	7 13	13 36	9 57	8 32	2 59	3 52
18		4 49	7 11	13 17	16 2	8 59	3 49	3 40
19		4 50	7 10	12 58	21 8	9 10	4 40	3 26
20		4 52	7 8	12 38	25 0	9 39	5 33	3 13
21	D. of Claren. b.	4 54	7 6	12 18	27 29	10 17	6 28	2 59
22	10 Sun. af. Tri.	4 56	7 4	11 58	28 30	11 8	7 23	2 45
23		4 58	7 2	11 38	28 3	morn	8 17	2 30
24	St. Bartholom.	5 0	7 0	11 18	26 15	0 11	9 9	2 14
25		5 2	6 58	10 57	23 16	1 23	9 59	1 59
26		5 3	6 57	10 36	19 21	2 37	10 45	1 43
27		5 5	6 55	10 15	14 41	3 51	11 29	1 26
28	St. Auguſtine	5 7	6 53	9 54	9 30	☽ ſets	0 a 10	1 9
29	11 Sun. a. Tri.	5 9	6 51	9 33	4 0	7 a 8	0 49	0 52
30	[J. Bap. beh.	5 11	6 49	9 12	1 s 40	7 18	1 28	0 35
31		5 13	6 47	8 50	7 19	7 29	2 8	0 7

M D	Day decreaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊖	Helioc. long. ♀	Helioc. long. ☿	♄ ſets
1	1 14	15 20	9 ♏ 40	13 ♍ 20	13 ♈ 27	8 ♒ 26	6 ♏ 50	14 ♓	8 a 51
7	1 32	15 2	9 52	13 48	17 5	14 11	16 26	12 ♈ 52	8 29
13	1 54	14 40	10 5	14 15	20 42	19 57	26 1	16 ♉ 53	8 7
19	2 14	14 20	10 18	14 43	24 16	25 43	5 ♐ 34	24 ♉ 22	7 46
25	2 38	13 56	10 30	15 10	27 49	1 ♓ 30	15 6	0 ♊ 18	7 25

M D	Day-lig begins	Day-lig ends	Durat. twilig.	Pl. ☽'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitud^e
1	1 23	10 30	2 56	13♓2c	1 n 42	1 n 2	1 s 6	1 n 12	3 s 4
7	1 46	10 13	2 43	13 1	1 42	1 1	1 2	0 57	1 28
13	2 7	9 52	2 32	12 42	1 42	1 1	0 51	0 4c	0 n 2
19	2 27	9 32	2 23	12 22	1 42	1 1	0 52	0 21	1 8
25	2 46	9 13	2 15	12 3	1 42	1 1	0 46	0 0	1 4¹

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

M D	♃ sets	♂ rises	♀ sets	☿ rises	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	8 a 49	11 a 10	9 a 0	3 m 3	10 n 38	9 n 31	18 n 21	7 n 39	18 n 42
7	8 27	10 58	8 17	2 51	10 22	9 3	19 16	4 40	19 40
13	8 6	10 46	8 34	3 0	10 6	8 35	20 6	1 36	19 41
19	7 46	10 34	8 21	3 28	9 49	8 6	20 50	1 s 30	18 7
25	7 28	10 23	8 8	4 12	9 32	7 37	21 28	4 35	15 5

B 4

The LUNATIONS.

First quarter the 5th day, at 41 minutes past 6 morning.
Full Moon the 11th day, at 46 minutes past 10 night.
Last quarter the 18th day, at 36 minutes past 7 afternoon.
New Moon the 26th day, at 56 minutes past 11 night.

M D	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock aft. ☉
1	Giles	5 15	6 45	8 n 29	12 s 45	7 a 42	2 – 50	0' 2"
2	Lon. burnt 1666	5 17	6 43	8 7	17 47	7 55	3 34	0 20
3		5 19	6 41	7 45	22 11	8 15	4 22	0 39
4		5 21	6 39	7 23	25 39	8 44	5 15	0 58
C	12 Sun. t. Trin.	5 23	6 37	7 1	27 52	9 25	6 12	1 18
6		5 24	6 36	6 30	28 32	10 26	7 13	1 37
7	Enurchus	5 26	6 34	6 16	27 26	11 45	8 14	1 57
8	Nativity V.M.	5 28	6 32	5 53	24 31	morn	9 15	2 18
9		5 30	6 30	5 31	19 56	1 18	10 13	2 38
10		5 32	6 28	5 8	14 1	2 53	11 9	2 59
11		5 34	6 26	4 45	7 13	morn		3 19
C	13 Sun. af. Tri.	5 36	6 24	4 22	0 1	6 a 32	0 1	3 40
13		5 38	6 22	3 59	7 n 7	6 46	0 53	4 1
14	Holy Cross	5 40	6 20	3 36	13 43	7 2	1 45	4 22
15	Ember Week	5 42	6 18	3 13	19 24	7 22	2 37	4 43
16		5 44	6 16	2 50	23 52	7 45	3 32	5 4
17	Lambert	5 46	6 14	2 27	26 54	8 22	4 27	5 25
18		5 48	6 12	2 4	28 22	9 10	5 24	5 46
C	14 Sun. af. Tri.	5 50	6 10	1 40	28 19	10 10	6 20	6 7
20		5 52	6 8	1 17	26 5	11 20	7 13	6 28
21	St. Matthew	5 54	6 6	0 54	24 8	morn	8 4	6 49
22	K.Geo.III.cr.	5 56	6 4	0 30	20 27	0 34	8 52	7 10
23		5 58	6 2	0 7	15 58	1 48	9 36	7 31
24		6 0	6 0	0 s 16	10 55	3 1	10 18	7 51
25		6 2	5 58	0 40	5 23	4 12	10 58	8 12
C	15 Sun. af. Tri. Cypri.		5 57	1 3	0 s 11	☽ sets	11 37	8 32
27	[O. Holy Rood	6 5	5 55	1 27	5 53	5 a 47	0 a 17	8 52
28	{Wirtem. b.	6 7	5 53	1 50	11 25	6 0	0 59	9 12
29	St. Michael; D.	6 9	5 51	2 14	16 34	6 13	1 42	9 31
30	St. Jerome	6 11	5 49	2 37	21 9	6 31	2 29	9 51

M D	Day decreaf.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊕	Helioc. long. ♀	Helioc. long. ☿	♄ rifes
1	3 4	13 30	10♏45	15♏43	1♉55	8♓17	26♐11	7♏0	5 m24
7	3 26	13 8	10 58	16 10	5 24	14 6	5♑11	2≏23	5 11
13	3 50	12 44	11 10	16 37	8 50	19 56	15 10	23 40	4 47
19	4 14	12 20	11 23	17 5	12 15	25 47	24 39	12♏19	4 29
25	4 38	11 56	11 35	17 32	15 37	1♈40	4♒7	29 29	4 12

M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitud	♀'s latitude	☿'s latitud
1	3 6	8 55	2 8	11♓41	1 n 42	1 n 1	0 s 38	0 s 28	1 n 43
7	3 22	8 37	2 4	11 22	1 42	1 1	0 31	0 52	1 23
13	3 37	8 23	2 0	0 11 3	1 43	1 2	0 24	1 18	0 49
19	3 51	8 8	1 58	10 44	1 43	1 2	0 16	1 44	0 9
25	4 4	7 54	1 56	10 25	1 44	1 2	0 7	2 9	0 s 35

M D	☉'s longitude	☾'s long.	☾'s latitude	♄'s long.	♃'s long.	♂'s long.	♀'s long.	☿'s long.
1	♍8 16 34	24♎15	3 s 36	10♍31	14♍33	15Ⅱ4	19♎39	7♏55
2	9 14 43	6♏30	4 20	10 38	14 46	16 23	20 40	9 54
3	10 12 54	18 58	4 54	10 4	14 59	16 57	21 57	11 48
4	11 11 6	1♐45	5 13	10 11	15 12	17 31	23 6	13 40
C	12 9 20	14 53	5 18	11	15 25	18 5	24 15	15 32
6	13 7 35	28 25	5 5	11 8	15 38	18 39	25 24	17 23
7	14 5 51	12♑21	4 34	11 16	15 51	19 12	26 33	19 13
8	15 4 9	26 43	3 45	11 24	16 4	19 45	27 42	21 2
9	16 2 29	11♒27	2 40	11 31	16 17	20 17	28 50	22 49
10	17 0 50	26 27	1 24	11 39	16 30	20 50	29 58	24 35
11	17 59 13	11♓37	0 0	11 46	16 43	21 22	1♏6	26 20
C	18 57 38	26 47	1 n 23	11 54	16 50	21 55	2 14	28 4
13	19 56 4	11♈47	2 40	11 7	17 9	22 27	3 22	29 47
14	20 54 33	26 30	3 44	12 9	17 22	22 58	4 30	1♐29
15	21 53 3	10♉49	4 33	12 16	17 35	23 29	5 37	3 10
16	22 51 36	24 41	5 4	12 24	17 48	24 0	6 45	4 50
17	23 50 11	8Ⅱ6	5 17	12 31	18 1	24 31	7 52	6 29
18	24 48 48	21 6	5 13	12 39	18 14	25 2	9 0	8 7
C	25 47 28	3♋42	4 54	12 46	18 26	25 33	10 7	9 44
20	26 46 10	16 0	4 22	12 53	18 39	26 3	11 14	11 20
21	27 44 54	28 4	3 39	13 1	18 52	26 33	12 21	12 55
22	28 43 41	9♌58	2 47	13 8	19 5	27 2	13 27	14 28
23	29 42 30	21 47	1 48	13 16	19 18	27 31	14 34	16 1
24	♎0 41 21	3♍33	0 45	13 23	19 31	28 0	15 41	17 33
25	1 40 14	15 21	0 s 20	13 30	19 44	28 29	16 47	19 4
C	2 39 10	27 13	1 25	13 38	19 57	28 57	17 53	20 34
27	3 38 7	9♎10	2 26	13 45	20 9	29 24	18 59	22 3
28	4 37 7	21 16	3 21	13 52	20 22	29 52	20 4	23 32
29	5 36 9	3♏31	4 8	14 0	20 35	♋0 19	21 10	25 0
30	6 35 12	15 58	4 44	14 7	20 47	0 47	22 16	26 26

M D	♃ rises	♂ rises	♀ sets	☿ sets	♄'s decln.	♃'s decln.	♂'s decln.	♀'s decln.	☿'s decln.
1	5m45	10♐11	7 a 54	6 a 59	9 n 13	7 n 2	22 n 5	8 s 8	10 n 11
7	5 32	10 1	7 43	6 53	8 56	6 32	22 31	11 4	5 33
13	5 18	9 51	7 31	6 46	8 39	6 2	22 13	13 52	0 50
19	5 4	9 41	7 20	6 36	8 22	5 32	23 8	16 31	3 s 43
25	4 49	9 30	7 11	6 26	8 6	5 2	23 21	18 56	8 1

The LUNATIONS.

First quarter the 4th day, at 36 minutes past 4 afternoon.
Full Moon the 11th day, at 58 minutes past 7 morning.
Last quarter the 18th day, at 56 minutes past 11 morning.
New Moon the 26th day, at 34 minutes past 4 afternoon.

M D	Sundays & other remark. days	⊙ rises	⊙ sets	⊙'s declin.	☽'s declin.	☽ rises & sets	☽ South	Clock aft. ⊙
1	Remigius	6 13	5 47	3 s 0	24 s 51	6 a 56	3 a 20	10' 10''
2		6 15	5 45	3 24	27 22	7 32	4 15	10 29
C	x 6 Sun. aft. Tri.	6 17	5 43	3 47	28 27	8 26	5 13	10 48
4		6 19	5 41	4 16	27 53	9 37	6 13	11 6
5		6 21	5 39	4 34	25 37	11 1	7 12	11 24
6	Faith	6 23	5 37	4 57	21 44	moin	8 9	11 42
7		6 25	5 35	5 20	16 29	0 32	9 3	11 59
8		6 27	5 33	5 43	10 12	2 4	9 56	12 16
9	Denys	6 29	5 31	6 6	3 16	3 39	10 47	12 32
C	x7 Sun. a. Tri.	6 31	5 29	6 29	3 n 52	5	11 38	12 49
11	Oll.M c. [Ox.&	C.T.b.	5 27	6 51	10 45	☽ rises	morn	13 4
12		6 35	5 25	7 14	16 56	5 a 32	0 30	13 19
13	Tra.K.Edw.C.	6 37	5 23	7 37	22 3	5 55	1 25	13 34
14		6 39	5 21	7 59	25 46	6 26	2 21	13 48
15		6 41	5 19	8 22	27 53	7 9	3 19	14 2
16	[Etheldred	6 43	5 17	8 44	28 23	8 7	4 17	14 15
18	18 Sun. af. Tri.	6 44	5 16	9 6	27 19	9 14	5 13	14 27
18	St. Luke	6 46	5 14	9 28	24 57	10 28	6 6	14 39
19		6 48	5 12	9 50	21 30	11 41	6 55	14 50
20		6 50	5 10	10 11	17 13	morn	7 40	15 1
21		6 52	5 8	10 33	12 20	0 54	8 23	15 11
22		6 54	5 6	10 55	7 0	2 6	9 3	15 20
23		6 56	5 4	11 16	1 25	3 16	9 42	15 28
C	19 Sun. af. Tri.	6 58	5 2	11 37	4 s 16	4 27	10 22	15 36
25	K. Geo. 3.a	Crispin	5 0	12 58	9 53	5 39	11 3	15 43
26	K.Geo. 3. proc.	7 2	4 59	12 19	15 11	☽ sets	11 46	15 50
27		7 3	4 58	12 39	19 59	4 a 43	0 a 32	15 56
28	St. Sim. & Jude	7 5	4 57	12 59	23 56	5 7	1 22	16 1
29		7 7	4 55	13 20	26 45	5 40	2 16	16 5
30		7 9	4 51	13 39	28 11	6 28	3 14	16 8
C	20 Sun. af. Tri.	7 11	4 49	13 59	27 59	7 33	4 12	16 11

M D	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊖	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	5 0	11 34	11♏48	18♏ 0	18♊58	7♈34	13≈36	16♌ 0	3 m54
7	5 24	11 10	12 0	18 27	22 16	13 30	23 6	2♉40	3 36
13	5 48	10 46	12 13	18 55	25 32	19 26	2♓35	20 13	3 17
19	6 10	10 24	12 26	19 22	28 47	25 23	12 6	9≈31	2 59
25	6 36	9 58	12 38	19 49	1♊59	1♉22	21 37	1♓40	2 40

M D	Daylig. begins	Daylig. ends	Durat. twilig.	Pl. node	☽'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	4 18	7 42	1 56	10 ♓ 6	1 n 45	1 n 3	0 n 2	2 s 34	1 s 19
7	4 31	7 29	1 55	9 47	1 46	1 3	0 12	2 57	2 6
13	4 43	7 17	1 54	9 28	1 46	1 4	0 23	3 18	2 35
19	4 55	7 5	1 54	9 9	1 47	1 4	0 35	3 36	2 58
25	5 4	6 56	1 55	8 50	1 48	1 5	0 48	3 50	3 1

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

M D	♃ rises	♂ rises	♀ sets	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	4 m 35	9 a 18	7 a 1	6 a 16	7 n 49	4 s 32	23 30	21 s 7	11 s 57
7	4 21	9 7	6 53	6 6	7 34	4 2	23 37	23 1	15 26
13	4 6	8 55	6 46	5 55	7 19	3 33	23 42	24 36	18 22
19	3 50	8 42	6 40	5 43	7 4	3 5	23 48	25 52	20 33
25	3 33	8 24	6 36	5 30	6 50	2 38	23 55	26 46	21 44

The LUNATIONS.

First quarter the   3d day, at 11 minutes paſt   1 morning.
Full Moon the   9th day, at 47 minutes paſt   6 evening.
Laſt quarter the 17th day, at 48 minutes paſt   7 morning.
New Moon the 25th day, at 55 minuⁱes paſt   7 morning.

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 19	20 b 7	8 a 54	5 a 12	16' 13"
2	Du. of Kent bo.	AllSoul	4 46	14 38	22 42	10 19	6 7	16 14
3	Prs. Sophia born	7 16	4 44	14 57	17 50	11 48	7 6	16 14
4	K. William lan.	7 18	4 42	15 16	12 8	morn	7 51	16 14
5	Powder Plot	7 20	4 40	15 34	5 37	1 16	8 40	16 13
6	Mic.T.b.Leon.	7 21	4 39	15 53	1 n 13	2 43	9 28	16 11
C	x Sun. af. Tri.	7 23	4 37	16 11	8 2	4 10	10 19	16 8
8	Prs. Aug. So. b.	7 25	4 35	16 28	14 25	5 37	11 11	16 4
9	Lord Mayor's d.	7 26	4 34	16 46	19 57	☽ riſes	morn	16 0
10		7 28	4 32	17 3	24 16	4 a 24	0 6	15 55
11	St.Martin	7 30	4 30	17 20	27 4	5 0	1 4	15 48
12	Cam. T. div.m	7 32	4 28	17 36	28 12	5 54	2 2	15 41
13	Britius	7 33	4 27	17 53	27 41	6 59	3 1	15 33
14	2 Sun. af.Trin.	7 35	4 25	18 9	25 43	8 11	3 56	15 25
15	Machutus	7 36	4 24	18 24	22 53	9 25	4 47	15 16
16		7 38	4 22	18 39	18 29	10 40	5 34	15 5
17	Hugh	7 39	4 21	18 54	13 44	11 51	6 18	14 53
18		7 41	4 19	19 8	8 32	morn	6 59	14 41
19		7 42	4 18	19 23	3 3	1 0	7 38	14 28
20	Edmund	7 44	4 16	19 37	2 s 35	2 11	8 18	14 14
C	23 Sun. af.Trin.	7 45	4 15	19 51	8 11	3 21	8 57	13 59
22	Cecilia	7 46	4 14	20 4	13 35	4 33	9 38	13 44
23	Clem : OldMart.	7 48	4 12	20 17	18 33	5 49	10 23	13 27
24		7 49	4 11	20 30	22 48	7 8	11 12	13 10
25	Duke of Glo. b.	Cath'r.	4 10	20 41	26 0	☽ ſets	0 a 5	12 52
26		7 52	4 8	20 53	27 47	4 a 17	1 2	12 34
27		7 53	4 7	21 5	28 1	5 15	2 1	12 14
28	Advent ⸺	7 54	4 6	21 16	26 30	6 36	3 1	11 54
29	[Mic. Term e.	7 55	4 5	21 26	23 21	8 2	3 58	11 33
30	St. Andrew	7 56	4 4	21 36	18 49	9 31	4 52	11 12

M D	Day decreaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ riſes
1	7 0	9 34	12 ♏ 53	20 ♏ 0	5 ♊ 41	8 ♉ 22	2 ♈ 45	2 ♈ 46	2 m 17
7	7 20	9 14	13 5	20 40	8 49	14 24	12 18	5 ♉ 5	1 55
13	7 40	8 54	13 18	21 16	11 55	20 26	21 5	11 �Π 50	1 33
19	7 58	8 36	13 30	21 43	15 0	26 20	1 ♉ 27	19 ♏ 11	1 11
25	8 14	8 20	13 43	22 1	18 2	2 ♊ 33	11 3	22 ♌ 36	0 49

M D	Daylig. begins	Daylig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	5 17	6 43	1 56	8 ♓ 27	1 n 50	1 n 6	1 n 5	4 s 1	2 s 16
7	5 26	6 34	1 58	8 8	1 51	1 7	1 20	4 3	0 38
13	5 33	6 28	2 0	7 4	1 52	1 8	1 36	3 58	1 n 19
19	5 41	6 19	2 2	7 30	1 54	1 9	1 53	3 44	2 22
25	5 47	6 13	2 4	7 11	1 55	1 10	2 11	3 19	2 25

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

M D	♃ rises	♂ rises	♀ sets	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	3 m 14	8 a 2	6 a 35	5 a 9	6 n 35	2 n 0	24 n 4	27 s 22	21 s 4
7	2 57	7 36	6 33	4 44	6 24	1 41	24 15	27 31	18 2
13	2 39	7 10	6 31	r ses	6 13	1 17	24 29	27 20	14 0
19	2 20	6 44	6 29	5 m 54	6 4	0 54	24 46	26 52	12 16
25	2 0	6 18	6 26	5 48	5 56	0 33	25 7	26 10	13 20

The Lunations.

Firſt quarter the 2d day, at 4 minutes paſt 9 morning.
Full Moon the 9th day, at 40 minutes paſt 7 morning.
Laſt quarter the 17th day, at 33 minutes paſt 5 morning.
New Moon the 24th day, at 40 minutes paſt 9 night.
Firſt quarter the 31ſt day, at 3 minutes paſt 5 evening.

M D	Sundays & other remark: days	☉ riſes	☉ ſets	☉'s declin.	☽'s declin.	☽ riſes & ſets	☽ South	Clock aft. ☉
1		7 57	4 3	21 s 46	13 s 15	10 a 57	5 a 42	10' 50"
2		7 58	4 2	21 55	6 59	morn	6 31	10 27
3		7 59	4 1	22 4	0 22	0 21	7 18	10 3
4	1 Su. in Adve	8 0	4 0	22 13	6 n 16	1 43	8 5	9 39
5		8 1	3 59	22 21	12 35	3 8	8 55	9 15
6	Nicholas	8 2	3 58	22 28	18 14	4 36	9 47	8 50
7		8 3	3 57	22 36	22 52	6 3	10 42	8 24
8	Concept. V.M.	8 3	3 57	22 42	26 9	7 26	11 39	7 58
9		8 4	3 56	22 48	27 53	☽ riſes	morn	7 32
10		8 4	3 56	22 54	27 56	4 a 3	0 37	7 5
11		8 5	3 55	23 0	26 26	5 4	1 34	6 37
12	3 Su. in Advent	8 6	3 54	23 5	23 37	6 56	2 27	6 9
13	Lucy	8 6	3 54	23 9	19 46	8 10	3 16	5 41
14		8 6	3 54	23 13	15 10	9 25	4 1	5 13
15	Em. r Week	8 7	3 53	23 16	10 4	10 35	4 44	4 44
16	Cam. T.e:O.Sa.	8 7	3 53	23 20	4 39	11 44	5 23	4 15
17	Oxf. Term ends	8 7	3 53	23 22	0 s 55	morn	6 2	3 45
18		8 8	3 52	23 24	6 30	0 54	6 41	3 16
19	4 Su. in Advent	8 8	3 52	23 26	11 55	2 4	7 21	2 46
20		8 8	3 52	23 27	16 59	3 17	8 3	2 16
21	St. Thomas	Shor. d.	3 52	23 28	21 28	4 34	8 50	1 46
22		8 8	3 52	23 28	25 2	5 53	9 41	1 16
23		8 8	3 52	23 27	27 22	7 12	10 37	0 46
24	Chriſtmas Day	8 8	3 52	23 27	28 6	☽ ſets	11 36	0 15
25		8 7	3 53	23 26	27 5	3 a 56	0 a 37	ob. 15
26	1 Sun. af. Chri.	8 7	3 53	23 24	24 18	5 30	1 36	0 45
27	St. John[St.Ste.	8 7	3 53	23 22	19 58	7 1	2 33	1 15
28	Innocents	8 6	3 54	23 19	14 29	8 30	3 26	1 45
29		8 6	3 54	23 16	8 12	9 57	4 16	2 14
30		8 6	3 54	23 13	1 34	11 22	5 3	2 44
31	Silveſter	8 5	3 55	23 9	5 n 5	morn	5 50	3 13

M D	Day decreaſ.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. lonᵣ.⊕	Helioc. long. ♀	Helioc. long. ☿	♄ riſes
1	8 28	8 6	13♏55	22♏38	21 Ⅱ 3	8 Ⅱ 39	20 ♌ 40	20♏27	c m 26
7	8 40	7 54	14 8	23 6	24 2	14 44	0 ♍ 18	13♎32	0 1
13	8 46	7 48	14 20	23 33	27 0	20 50	9 58	3♏20	11 a 35
19	8 50	7 44	14 33	24 0	29 55	26 57	19 38	21 8	11 8
25	8 inc.2	7 46	14 45	24 28	2♋50	3♋4	29 20	7♐53	10 40

M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	5 54	6 6	2 5	6 ♓ 52	1 n 57	1 n 12	2 n 29	2 s 42	1 n 56
7	5 57	6 3	2 6	6 33	1 58	1 13	2 46	1 50	1 15
13	5 59	6 1	2 7	6 14	2 0	1 14	3 1	0 41	0 33
19	6 1	5 59	2 7	5 55	2 1	1 16	3 15	0 n 43	0 s 12
25	6 1	5 59	2 7	5 36	2 2	1 17	3 25	2 16	0 52

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

M D	♃ rises	♂ rises	♀ sets	☿ rises	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	1 m 38	5 a 48	6 a 18	6 m 2	5 n 49	0 n 13	25 n 31	25 s 15	15 s 46
7	1 17	5 17	6 6	6 25	5 43	0 s 5	25 55	24 1	18 28
13	0 55	4 42	5 49	6 50	5 3	0 20	26 18	23 3	20 57
19	0 32	4 3	5 24	7 15	5 37	0 34	26 37	21 50	22 55
25	0 7	3 17	4 54	7 39	5 36	0 45	26 52	20 34	24 14

Dates Months	Days	Heliocentric longitude	latitude	Geocentric longitude	latitude	Declin.	South.
		° ′	° ′	° ′	° ′	° ′	n m
January	1	3 ♎ 58	0 n 43	7 ♎ 3	0 n 43	2 s 8	17 38
	11	4 6	0 43	7 R 6	0 44	2 9	16 55
	21	4 13	0 43	7 4	0 44	2 8	16 12
February	1	4 22	0 43	6 54	0 44	2 4	15 26
	11	4 30	0 43	6 41	0 45	1 58	14 45
	21	4 38	0 43	6 23	0 45	1 51	14 5
March	1	4 44	0 43	6 6	0 45	1 44	13 34
	11	4 52	0 43	5 42	0 45	1 34	12 56
	21	5 0	0 43	5 16	0 45	1 24	12 18
April	1	5 8	0 43	4 48	0 45	1 13	11 36
	11	5 16	0 43	4 22	0 45	1 3	10 58
	21	5 24	0 43	3 58	0 45	0 54	10 20
May	1	5 32	0 44	3 38	0 45	0 46	9 41
	11	5 39	0 43	3 20	0 44	0 39	9 2
	21	5 47	0 43	3 8	0 44	0 34	8 21
June	1	5 56	0 43	2 59	0 44	0 31	7 37
	11	6 4	0 43	2 D 57	0 43	0 31	6 55
	21	6 11	0 43	3 0	0 43	0 32	6 14
July	1	6 19	0 42	3 8	0 42	0 36	5 33
	11	6 27	0 42	3 22	0 42	0 42	4 53
	21	6 35	0 42	3 40	0 41	0 44	4 14
August	1	6 44	0 42	4 5	0 41	1 0	3 32
	11	6 51	0 42	4 32	0 41	1 11	2 55
	21	6 59	0 42	5 3	0 46	1 23	2 20
September	1	7 8	0 42	5 40	0 40	1 38	1 42
	11	7 16	0 42	6 16	0 40	1 53	1 8
	21	7 23	0 42	6 53	0 40	2 8	0 35
October	1	7 31	0 42	7 31	0 40	2 23	0 1
	11	7 39	0 42	8 9	0 40	2 38	23 23
	21	7 47	0 42	8 47	0 40	2 52	22 48
November	1	7 55	0 42	9 26	0 40	3 8	22 8
	11	8 3	0 42	9 5	0 40	3 21	21 30
	21	8 11	0 42	10 30	0 40	3 32	20 51
December	1	8 19	0 42	10 56	0 41	3 43	20 10
	11	8 27	0 42	10 19	0 41	3 51	19 28
	21	8 34	0 42	10 30	0 41	3 58	18 45
	31	8 42	0 42	10 4	0 42	4 2	18 1

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

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

This Table may serve the following Places, by adding

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

C

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

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

Adding

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

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

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

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

C 2

The Eclipses of Jupiter's

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

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

first Satellite for the Year 1802.

SEPTEMBER	OCTOBER				NOVEMBER				DECEMBER			
	Immersions				Immersions				Immersions			
	d	h	m	s	d	h	m	s	d	h	m	s
	9	5	16	1	1	5	25	54	1	7	28	55
	10	23	44	26	2	23	54	24	3	1	57	14
The eclipses	12	18	12	56	4	18	22	45	4	20	25	42
of Jupiter's	14	12	41	23	6	12	51	15	6*	14	54	0
Satellites are	16	7	9	54	8	7	19	36	8	9	22	28
not visible this	18	1	38	18	10	1	48	6	10	3	50	45
Month, Jupi-	19	20	6	49	11	20	16	27	11	22	19	13
ter being too	21	14	35	14	13	14	44	56	13*	16	47	30
near the Sun.	23	9	3	44	15	9	13	16	15	11	15	57
	25	3	32	8	17	3	41	45	17	5	44	14
	26	22	0	39	18	22	10	5	19	0	12	41
	28*	16	29	2	20*	16	38	33	20*	18	40	59
	30	10	57	31	22	11	6	53	22*	13	9	25
					24	5	35	22	24	7	37	44
					26	0	3	41	26	2	6	11
					27*	18	32	9	27	20	34	27
					29	13	0	27	29*	15	2	53
									31	9	31	11

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 16th Day of October of this Year, the Time of the Immersion of Jupiter's first Satellite be observed (by a Telescope) in an unknown Meridian, to happen at 8 h. 58 min. 14 sec.; I find by the Table, that the Time of this Immersion will happen at the British Observatory, at 7 h. 9 min. 54 sec. the same day: The Difference of the Times is 1 hour 48 min. 20 sec. which being converted into Degrees and Minutes of the Equator, will make 27 deg. 5 min. the Longitude of the Place of Observation, to the East, because the Time is more than that at the British Observatory.

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

Note, also, that the times of the above eclipses are set down according to mean or clock time.

Speculum Phænomenorum

JANUARY		
2	☌ ☽ ♂	7h.
2	☌ ☽ ♀	13h.
2	☌ ☽ ☿	20h.
5	☽ in perige	
9	☿ in aphelion	
11	♀ in ♉	
13	♅ ſtationary	
20	☉ in ♒	4h. 27m.
20	☽ in apoge	
21	☌ ☽ ♃	11h.
21	☌ ☽ ♄	15h.
24	☽ ♅	4h.
27	☌ ☉ ☿	10½h
31	☌ ☽ ♂	4 h.

FEBRUARY		
1	☌ ☽ ♀	12h.
2	☌ ☽ ☿	14h.
2	☽ in perige	
15	☽ in apoge	
16	♀ in aphelion	
17	☌ ☽ ♃	11h.
17	☌ ☽ ♄	17½h.
18	☉ in ♓	19h. 14m.
18	☿ in ♉	
19	☌ ☉ ♃	15½h.
20	☌ ☽ ♅	10h.
22	☌ ☉ ♄	20h.
22	☿ in perihelion	
24	☿ elong. max.	

MARCH		
1	☌ ☽ ♂	1h.
2	☿ ſtationary	
2	☽ in perige	
3	☉ eclipſed invif.	
3	☌ ☽ ♀	11h.
4	☌ ☽ ☿	15h.
12	☌ ☉ ☿	8¼h.
15	☽ in apoge	
16	☌ ☽ ♃	10h.
16	☌ ☽ ♄	20h.
17	☌ ☉ ♀	11½h.
18	☽ eclip. invif.	
19	☌ ☽ ♅	14h.
20	☉ in ♈	19h. 35m.
25	☿ ☉ ♅	22¼h.
26	☿ ſtationary	
28	☽ in ♉	
29	☌ ☽ ♂	22½h.
30	☽ in perige	
31	☌ ☽ ☿	6h.

APRIL		
2	☌ ☽ ♀	10½h.
7	☿ in aphelion	
9	☿ elong. max.	
11	☽ in apoge	
12	☌ ☽ ♃	14h.
13	☌ ☽ ♄	0h.
15	☌ ☽ ♅	19h.
20	☉ in ♉	8h. 15m.
22	♃ ſtationary	
27	☌ ☽ ♂	19h.
27	☽ in perige	
30	☌ ☽ ☿	2h.

MAY		
2	☌ ☽ ♀	12h.
3	♄ ſtationary	
5	♀ in ♉	
9	☽ in apoge	
10	☌ ☽ ♃	1h.
10	☌ ☽ ♄	7½h.
13	☌ ☽ ♅	7h.
17	☿ in ♉	
18	□ ☉ ♃	1h.
18	☌ ☉ ☿	18¾h.
21	☉ in ♊	8h. 47m.
22	□ ☉ ♄	8h.
22	☽ in perige	
22	☿ in perihelion	
26	☌ ☽ ♂	14h.
28	♂ in perihelion	

JUNE		
1	☌ ☽ ☿	8h.
1	☌ ☽ ♀	17h.
6	☌ ☽ ♃	12h.
6	☌ ☽ ♄	17½h.
6	☽ in apoge	
9	☌ ☽ ♅	9h.
9	♅ ſtationary	
9	♀ in perihelion	
18	☽ in perige	
21	☿ elong. max.	
21	☉ in ♋	17h. 27m.
24	☌ ☽ ♂	9h.
24	□ ☉ ♅	22h.
24	☿ in ♉	

ad Annum 1802.

JULY	AUGUST	SEPTEMBER
1 ☌ ☽ ☿ 12h.	1 ☌ ☽ ♀ 8h.	1 ☌ ☉ ☿ 8h.
1 ⊕ in aphelion	3 ☌ ☽ ♅ 1½h.	3 ☌ ☉ ♄ 15½h.
2 ☌ ☽ ♀ 0h.	7 ☿ elong. max.	9 ☌ ☉ ♃ 7½h.
4 ☌ ☽ ♃ 4h.	12 ☿ in ☊	11 ☽ eclipsed visible
4 ☽ in apoge	13 ☽ in perige	11 ☽ in perige
4 ☿ in aphelion	17 ☿ in perihelion	18 ☌ ☽ ♂ 8h.
4 ☿ stationary	20 ☌ ☽ ♂ 18h.	18 □ ☉ ♂ 11¾h.
5 ☌ ☽ ♅ 17½h.	23 ☉ in ♍ 10h. 39m.	20 ☌ ☉ ♅ 22¾h.
16 ☽ in perige	24 ♀ in ☊	20 ☿ in ☊
18 ☌ ☉ ☿ 20¼h.	27 ☌ ☽ ☿ 8h.	23 ☉ in ♎ 7h. 8m.
23 ☌ ☽ ♂ 2h.	27 ☉ eclipsed visible	24 ☌ ☽ ♄ 20h.
23 ☉ in ♌ 4h. 17m.	27 ☽ in apoge	24 ☽ in apoge
27 ☌ ☽ ☿ 22h.	28 ☌ ☽ ♄ 6½h.	25 ☌ ☽ ♃ 9h.
29 ☿ stationary	28 ☌ ☽ ♃ 14½h.	26 ☌ ☽ ♅ 19h.
31 ☌ ☽ ♄ 17½h.	30 ☌ ☽ ♅ 9½h.	28 ☌ ☽ ♀ 5h.
31 ☌ ☽ ♃ 20½n.	31 ☌ ☽ ♀ 14h.	28 ♂ in ☊
31 ☽ in apoge		29 ♀ in aphelion
		30 ☌ ☽ ♀ 13h.

OCTOBER	NOVEMBER	DECEMBER
1 ☿ in aphelion	8 ☌ ☉ ☿ 21¼h.	10 ☌ ☽ ♂ 11h.
9 ☽ in perige	8 ☿ in ☊	10 ♀ stationary
16 ☌ ☽ ♂ 14h.	13 ☿ in perihelion	12 □ ☉ ♄ 13h.
17 ☿ elong. max.	13 ☌ ☽ ♂ 10h.	16 ♀ in ☊
20 ♀ elong. max.	15 ♂ stationary	16 ☌ ☽ ♄ 9h.
21 ☽ in apoge	18 ☿ stationary	17 ☌ ☽ ♃ 13h.
22 ☌ ☽ ♄ 9½h.	19 ☌ ☽ ♄ 0h.	17 ☿ in ☊
23 ☌ ☽ ♃ 3½h.	19 ☌ ☽ ♃ 21h.	18 ☌ ☽ ♅ 3½h.
23 ☉ in ♏ 15h. 8m.	20 ☌ ☽ ♅ 16½h.	21 ☉ in ♑ 23h. 51m.
24 ☌ ☽ ♅ 5h.	22 ☉ in ♐ 11h. 25m.	23 ☌ ☽ ☿ 16h.
27 ☌ ☽ ☿ 23h.	23 ☌ ☽ ☿ 4h.	24 ☌ ☉ ♂ 13½h.
29 ☿ stationary	25 ☿ elong. max.	25 ☌ ☉ ♀ 4h.
30 ☌ ☽ ♀ 2½h.	27 ☌ ☽ ♀ 21½h.	26 □ ☉ ♃ 21½h.
		26 ☿ in aphelion
		31 ♄ stationary
		31 ⊕ in perihelion

A Table of the Sun's femi-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 thefe Tables the Times of the Sun's Rifing 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 defire to know the Time of his Rifing and Setting; and with it, according as it is either North or South, enter thefe 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	3	3	58	3	53	3	47	3	42
24	4	1	3	56	3	51	3	46	3	40	3	34

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

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

The Sun's Declination North.

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

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

of his visible half Duration above the Horizon.

The Sun's Declination South.

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

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

A Table of the Sun's Right-Afcenfion in Time, the greateft

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

The time of the fouthing or meridian tranfits of the fixed ftars 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 fouthing of any of thofe ftars, find the Sun's place in the Ephemeris, and with it take out of the above table his right afcenfion in time; this you may do by infpection to a minute, which will be fufficient for your prefent purpofe: Then from the right-afcenfion of the ftar in pa. 46, corrected to the propofed time, by means of the numbers in the column of annual differences, fubtract the right-afcenfion of the Sun, the remainder will be the eftimate time of the ftar's fouthing, and will not differ from the true time above 2 or 3 minutes at moft, which may be near enough for ordinary ufes. But when great exactnefs is required, reduce the Sun's place to this eftimate time, and with it find in the above table his right afcenfion to feconds, which being fubtracted from that of the ftar, the remainder will be

Obliquity of the Ecliptic being 23° 28'.

Degr.	♎ h m s	♏ h m s	♐ h m s	♑ h m s	♒ h m s	♓ h m s
0	12 0 0	13 51 37	15 51 15	18 0 0	20 8 45	22 8 23
1	12 3 40	13 55 27	15 55 25	18 4 22	20 12 54	22 12 12
2	12 7 20	13 59 17	15 59 36	18 8 43	20 17 3	22 16 0
3	12 11 0	14 3 8	16 3 48	18 13 5	20 21 11	22 19 48
4	12 14 41	14 6 59	16 7 0	18 17 26	20 25 19	22 23 35
5	12 18 21	14 10 51	16 12 13	18 21 48	20 29 26	22 27 22
6	12 22 2	14 14 44	16 16 26	18 26 9	20 33 31	22 31 8
7	12 25 42	14 18 37	16 20 40	18 30 30	20 37 37	22 34 54
8	12 29 23	14 22 31	16 24 55	18 34 51	20 41 41	22 38 40
9	12 33 4	14 26 25	16 29 10	18 39 11	20 45 45	22 42 25
10	12 36 45	14 30 20	16 33 26	18 43 31	20 49 48	22 46 9
11	12 40 26	14 34 16	16 37 42	18 47 51	20 53 51	22 49 53
12	12 44 8	14 38 13	16 41 59	18 52 11	20 57 52	22 53 37
13	12 47 50	14 42 10	16 46 16	18 56 31	21 1 53	22 57 20
14	12 51 32	14 46 8	16 50 34	19 0 50	21 5 53	23 1 3
15	12 55 14	14 50 7	16 54 52	19 5 8	21 9 53	23 4 46
16	12 58 57	14 54 7	16 59 10	19 9 26	21 13 52	23 8 28
17	13 2 40	14 58 7	17 3 29	19 13 44	21 17 50	23 12 10
18	13 6 23	15 2 8	17 7 49	19 18 1	21 21 47	23 15 52
19	13 10 7	15 6 9	17 12 9	19 22 18	21 25 44	23 19 34
20	13 13 51	15 10 12	17 16 29	19 26 34	21 29 40	23 23 15
21	13 17 35	15 14 15	17 20 49	19 30 50	21 33 35	23 26 56
22	13 21 20	15 18 19	17 25 9	19 35 5	21 37 29	23 30 37
23	13 25 6	15 22 23	17 29 30	19 39 20	21 41 23	23 34 18
24	13 28 52	15 26 29	17 33 51	19 43 34	21 45 16	23 37 58
25	13 32 38	15 30 35	17 38 12	19 47 47	21 49 9	23 41 39
26	13 36 25	15 34 41	17 42 34	19 52 0	21 53 1	23 45 19
27	13 40 12	15 38 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, 1802.

	h m s
☉'s place at noon ♒ 10° 59'	
Rt. Asc. of Sirius -	6 36 26
☉'s rt. asc. subtract -	20 53 47
✳'s estimate southing -	9 42 39
☉'s rt. asc. at that time sub.	20 53 50
✳'s true southing - -	9 43 36
Semid. arc sub. & add -	4 36 55
✳'s rising aftern. - -	5 6 41
✳'s setting -	14 20 31

A Table of the mean Right-Afcenfions in time, and Declinations, and their Annual Difference; alfo the Semidiurnal-Arcs, and Magnitudes, of 40 remarkable fixed Stars, with their Names, and Bayer's Literal Characters, for January 1, 1800.

Names of the Stars	Ch.	Rt. Afc.	A.Di.	Declination	A.Diff.	Semid.Ar.	M
		h m s	fec.	° ′ ″	feconds	h m s	
Poleftar, Alruccabah	α	0 52 20	12.53	88 14 25 n	+19.6	fets not	2
Andro.gird. Mirach	β	0 58 34	3.30	34 33 29 n	+19.4	10 7 32	2
Andro.foot, Almach	γ	1 51 41	3.62	41 21 50 n	+17.7	fets not	2
Ram's follow-horn	α	1 55 55	3.34	22 30 47 n	+17.5	8 9 35	2
Whale's ja. Menkar	α	2 51 50	3.12	3 18 8 n	+15.2	6 19 48	2
Medufa's hea. Algol	β	2 55 12	3.85	40 10 29 n	+14.5	fets not	2
Perfeus' ii. Algenib	α	3 10 7	4.20	49 8 15 n	+13.6	fets not	e
Brighteft of the 7 ft.	η	3 35 37	3.54	23 28 36 n	+11.9	8 16 40	3
Bull's eye, Aldebar.	α	4 24 27	3.42	16 5 43 n	+ 8.0	7 28 51	1
Auriga's fh. Capella	α	5 1 56	4.41	45 46 40 n	+ 4.5	fets not	1
Orion's l. foot, Rigel	β	5 4 56	2.87	8 26 24 s	— 5.1	5 20 28	1
Bull's north horn	β	5 13 40	3.78	28 25 37 n	+ 4.1	8 57 1	2
Orion's l. fh. Bellat.	γ	5 14 25	3.21	6 9 21 n	+ 4.0	6 34 41	2
Orion's girdle	δ	5 26 4	3.04	1 20 27 s	— 3.0	5 56 42	2
Orion's r.fh. Betelg.	α	5 44 21	3.24	7 21 41 n	+ 1.7	6 40 58	1
Great Dog, Sirius	α	6 36 20	2.65	16 27 2 s	+ 4.4	4 36 55	1
1ft Twin, Caftor	α	7 21 49	3.86	32 18 59 n	— 6 8	9 38 21	1
LittleDog, Procyon	α	7 28 49	3.14	5 43 45 n	— 8.7	6 32 50	1
2d Twin, Pollux	β	7 33 3	3.69	28 29 59 n	— 7.6	8 58 13	2
Hydra's heart, Alp.	α	9 17 45	2.94	7 46 46 s	+14.8	5 24 20	2
Lyon's heart, Regu.	α	9 57 42	3.20	12 56 29 n	—16.9	7 11 28	1
Gr.Bear, L Pointer	β	10 49 40	3.71	57 27 3 n	—19.1	fets not	2
Gr.Bear, U.Pointer	α	10 51 16	3 85	62 49 45 n	—19.1	fets not	2
Lion's tail, Deneb	β	11 38 50	3.06	15 41 36 n	—19.8	7 27 18	2
G.Bear's tail, Aliath	δ	12 45 13	2.75	57 2 57 n	—19.7	fets not	2
Virgius' fpike	α	13 14 40	3.14	10 6 37 s	+18.8	5 12 20	1
Dragon's tail	α	13 58 59	1.63	65 20 8 n	—17.4	fets not	2
Bootes, Arcturus	α	14 6 32	2.72	20 13 43 n	—19.1	7 55 26	1
Libra, South. Scale	α	14 39 39	3.30	15 11 54 s	+15.3	4 44 23	2
Libra, North. Scale	β	15 6 16	3.22	8 38 3 s	+13.8	5 19 57	2
North Crown	α	15 25 58	2.53	27 23 58 n	—12.3	8 48 36	2
Scor. heart, Antares	α	16 17 10	3.65	25 58 21 s	+ 8.6	3 34 6	1
Her.head, R.Alget.	α	17 5 32	2.73	14 37 48 n	— 4.7	7 20 41	2
Head of Serpentarius	α	17 25 39	2.77	12 43 9 n	— 3.0	7 9 50	2
Drag.head,Raftaben	γ	17 51 58	1.39	51 31 5 n	— 0.7	fets not	2
The Harp, Lyra	α	18 30 10	1.99	38 36 26 n	+ 3.1	fets not	1
The Eagle, Atair	α	19 41 1	2.92	8 21 11 n	+ 9.1	6 45 57	2
S.Fifh, Fomalhaut	α	22 46 34	3.33	30 40 31 s	—19.1	2 52 6	1
Pegafus' w.Markab	α	22 54 48	2.96	14 7 56 n	+19.7	7 17 10	2
Andromeda's head	α	23 58 4	3.07	27 59 34 n	+20.8	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 1800.

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

This table ſhewing the mean longitudes of 60 ſtars to the beginning of the year 1800, their mean longitudes for any other time may be found if 50⅓ ſeconds be added for each ſucceeding, and ſubtracted for each preceding year, and proportionably for a part of a year. Thus, to find the longitude of the firſt ſtar ♓ δ, or δ piſcium, for Feb. 15, 1802, or 2 years and one eighth after the tabular time; here 2⅛ times 50⅓ ſec. make 1′ 47″, which being added to the tabular longitude, gives ♈ 11° 23′ 21″ for the longitude required at the propoſed time.——The latitudes vary not.

The Latitudes and Longitudes of Ninety remarkable Places.

	Lat. ° '	Long. ° '		Lat. ° '	Long. ° '
Alexandria, Egypt	31 11 n	30 17 e	Ifpahan	32 25 n	52 55 e
Amfterdam, Hol.	52 23 n	4 52 e	Land's end	50 6 n	5 50 w
Archangel, Ruf.	64 34 n	38 30 e	Leghorn	43 33 n	10 25 e
Athens	37 40 n	23 52 e	Leoftoff	52 38 n	1 54 e
Babelmandel	12 50 n	43 50 e	Liverpool	53 22 n	3 10 w
Batavia	6 12 s	106 45 e	Lima	12 1 s	76 50 w
Bengal	22 0 n	92 45 e	Lifbon	38 42 n	9 4 w
Berlin	52 33 n	13 26 e	Lizard	49 57 n	5 21 w
Bombay Ifle	19 42 n	73 3 e	London	51 31 n	0 0
Bofton, Amer.	42 25 n	70 37 w	Madras	13 8 n	80 7 e
Breflau	51 3 n	17 13 e	Madrid	40 25 n	3 45 w
Breft	48 23 n	4 30 w	Manilla	14 30 n	120 25 e
Briftol	51 28 n	2 30 w	Marfeilles	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	Miffiffipi, mouth	29 0 n	89 17 w
Calais	50 58 n	1 51 e	Mofcow	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	Newcaftle	55 0 n	1 18 w
Canaria Iflands	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	Peterfburg	59 56 n	30 19 e
Conftantinople	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	Portfmouth	50 48 n	1 1 w
Dover	51 7 n	1 19 e	Prague	50 5 n	14 15 e
Dublin	53 20 n	6 55 w	Quebec	46 55 n	71 12 w
Edinburgh	55 58 n	3 1 w	Rome	41 54 n	12 32 e
Ferro, Ifle	27 48 n	18 6 w	Scilly Ifles	50 0 n	6 45 w
Finifterre, 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	Syracufe	37 4 n	15 20 e
Glafgow	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	Upfal	59 52 n	17 43 e
Jerufalem	31 50 n	35 25 e	Uraniberg	55 54 n	12 52 e

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