Ἄτλας Οὐράνιος,

THE CŒLESTIAL ATLAS;

OR, A NEW

EPHEMERIS

FOR THE YEAR OF OUR LORD

1816,

Being The Bissextile or Leap Year:

Wherein are contained

The Heliocentrick and Geocentrick Places of the Planets,

THE ECLIPSES OF THE LUMINARIES,

And other remarkable PHÆNOMENA that will happen this Year;

carefully computed from the genuine Tables of

Dr. EDMUND HALLEY, those of Professor MAYER,

And other the latest and most correct Astronomical Tables. Also,

A 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 LATITUDES and LONGITUDES of the most remarkable Places in the World.

BY ROBERT WHITE,

Teacher of the Mathematicks.

Οἱ οὐρανοὶ διηγοῦνται δόξαν Θεοῦ.

THE SIXTY-SEVENTH IMPRESSION.

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CHRONOLOGICAL NOTES FOR THE YEAR 1816.

Golden Number - -	12	Septuagesima Sund.	Feb. 11
Cycle of the Sun -	5	Shrove Sunday -	Feb. 25
The Epact - - -	1	Easter Day - -	Apr. 14
Dominical Letter -	G F	Whit Sunday - -	June 2
Number of Direction,	25	Trinity Sunday -	June 9
Roman Indiction -	4	Advent Sunday -	Dec. 1

Astronomical Characters explained

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

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

☌ 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 dis

Of the Four Quarters of the Year.

		d	h	m	
THE Spring Quarter begins - - -	March	20	5	9	aftern.
The Summer Quarter begins - -	June	21	2	45	aftern.
The Autumnal Quarter begins - - -	Sept.	23	4	43	morn.
The Winter Quarter begins - - - -	Dec.	22	2	27	morn.

THE beautiful Planet VENUS will be a Morning Star till Aug. 1; and after that Time she will be an Evening Star to the Year's End.

JUPITER will be a Morning Star till April 25; then an Evening Star till Nov. 12; then a Morning Star to the Year's End.

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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.
Sir Thomas Plumer, - - Vice Chancellor.

II. In the K. Bench. } Rt. Hon. Lord Ellenborough, L.C.J. Sir S. Le Blanc, Knt. Sir John Bayley, Knt. Sir Henry Dampier, Knt.

III. In the C. Pleas. } Rt. Hon. Sir V. Gibbs, Knt. L.C.J. Sir A. Chambre, Knt. John Heath, Esq. Sir R. Dallas, Knt.

IV. In the Exchequer } Rt. Hon. Sir A. Thompson, Kt. L.C.B. Sir R. Graham, Kt. Sir George Wood, Knt. Sir Richard Richards, Knt.

Sir W. Garrow, Attor. Gen.—Sir S. Shepherd, Sol. Gen.

A TABLE of TERMS and Returns.

Hilary Term *begins* January 23; ends February 12.

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

Easter Term *begins* May 1; ends May 27.

In Fifteen Days of Easter - -	April 28	29	30	M1	Wedn.
From Easter Day in three Weeks -	May 5	6	7	8	Wedn.
From Easter Day in one Month - -	12	13	14	15	Wedn.
From Easter Day in five Weeks - -	19	20	21	22	Wedn.
On the Mor. of the Ascension - -	24	25	26	27	Monday

Trinity Term *begins* June 16; ends July 8.

On the Morrow of the Holy Trinity -	June 10	11	12	14	Friday.
In Eight Days of the Holy Trinity - -	16	17	18	19	Wedn.
In Fifteen Days of the Holy Trinity - -	23	24	25	26	Wedn.
From the Day of the Holy Trin. in 3 W. -	30	J. 1	2	3	Wedn.

Michaelmas Term *begins* Nov. 6; ends Nov. 28.

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

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

The Exchequer opens Eight Days before any Term begins, except Trinity, before which it opens but Four Days.

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

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BIRTH-DAYS of the ROYAL FAMILY.

KING GEORGE III. June 4,	1738	Duke of Cumberland, June 5,	1771
Queen CHARLOTTE May 19,	1744	Duke of Suſſex, Jan. 27, -	1773
Prince of Wales, Aug. 12,	1762	Duke of Cambridge, Feb. 24,	1774
Duke of York, Auguſt 16,	1763	Princeſs Mary, April 25, -	1776
Duke of Clarence, Aug. 21,	1765	Princeſs Sophia, Nov. 3, -	1777
Queen of Wirtemberg, Sep. 29,	1766	Princeſs of Wales, May 17,	1768
Duke of Kent, Nov. 2, -	1767	Duchess of York, May 7,	1767
Prs. Auguſta Sophia, Nov. 8,	1768	Duchess of Cumberland,	
Prs. Elizabeth, May 22, -	1770	Prs. Charlotte of Wales, Jan. 7,	1796

SOVEREIGNS of EUROPE, their Accession, &c.

Kingdoms, &c.	To whom subject.	When born.	Began to reign.
England, &c.	George III.	June 4, 1738	Oct. 25, 1760
France	Louis XVIII.	Nov. 7, 1755	May, 1814
Ruſſia	Alexander	Dec. 23, 1777	Mar. 24, 1801
Spain	Ferdinand VII.	- - -	- - - 1808
Portugal	Maria	Dec. 17, 1734	Feb. 24, 1777
Pruſſia	Frederic Wm. IV.	Aug. 3, 1770	Nov. 16, 1797
Netherlands	William Frederick		
Denmark	Frederick VI.	Jan. 27, 1768	Mar. 13, 1808
Sweden & Norway	Charles XIII.	Oct. 7, 1748	June 6, 1809
Auſtria	Francis II.	Feb. 12, 1768	Mar. 1, 1792
Popedom	Pius VII.	Aug. 14, 1742	Mar. 14, 1800
Sardinia	Victor Emanuel	July 24, 1759	June 4, 1801
Naples, or Two Sicilies	Ferdinand	- - -	Restored, 1815
Ottoman Empire	Mahmud	July 20, 1785	July 28, 1808

The FULL WEIGHT of the COINS,

With the LEAST WEIGHT allowed TO PASS of the GOLD COIN.

GOLD.	Wt. allowed. dwt. gr.	Full Wt. dwt. gr.	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 ſilver is 62 s. or 3 l. 2 s.; and of a *lb.* of gold is $44\frac{1}{2}$ guineas, or 46 l. 14 s. 6 d. Alſo that the *oz.* of ſilver is 5 s 2 d.; and the *oz.* of gold 3 l. 17 s. $10\frac{1}{2}$ d. So that the value of the ſtandard gold is 15 times that of the ſilver, and 1-14th more.

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A TABLE of the KINGS and QUEENS of ENGLAND since the Conquest.

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

IRELAND united to these Kingdoms, Jan. 1801.

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.

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A TABLE of the Most Reverend, Right Reverend, and Very Reverend, the ARCHBISHOPS, BISHOPS and DEANS, exercising Ecclesiastical Jurisdiction.

BISHOPS.	Sees.	Date.	Succeeded.	DEANS.
Rt. Ho. Dr. Sutton	*Norwich*	1792	Horne deceased	
Arch-Bishop	Canterb. A. B	1805	Moore deceased	Dr. G. Andrews
Rt. Ho. Dr. Vernon	*Carlisle*	1791	Douglas transl.	
Arch-Bishop	York, A.B.	1807	Markham dec.	Dr. G. Markham
Rt. Ho. Dr. Howley	London	1813	Randolph dec.	Bishop Tomline
Ho. Dr. S. Barrington	*Landaff*	1769	Shipley dec.	
	Salisbury	1782	Hume dec.	
	Durham	1791	Thurlow dec.	Bishop Cornwallis
Hon. Dr. B. North	*Litch. & Cov.*	1771	Egerton transl.	
	Worcester	1774	Johnson deceas.	
	Winchester	1781	Thomas deceas.	Dr. Tho. Rennell
Ho. Dr. J. Cornwallis	Litch. & Cov.	1781	Hurd transl.	Dr. Woodhouse
Dr. Richard Watson	Landaff	1782	Barrington tr.	J. Probyn, Archd.
Dr. Geo. Tomline	Lincoln	1787	Thurlow tran.	Dr. Gordon
Dr. John Luxmore	*Bristol*	1807	Pelham tran.	
	Hereford	1808	Cornwall tran.	
	St. Asaph	1815	Cleaver dec.	Mr. W. Shipley
Dr. Richard Beadon	*Gloucester*	1789	Hallifax tran.	
	Bath & Wells	1802	Moss deceased	
Dr. F. H. W. Cornwall	*Bristol*	1797	Courtenay tra.	
	Hereford	1802	Butler dec.	
	Worcester	1808	Hurd deceased.	Dr. Onslow
Dr. John Buckner	Chichester	1797	Ashburnham d.	Mr. C. Bethell
Dr. H. W. Majendie	*Chester*	1800	Cleaver tran.	
	Bangor	1809	Randolph tr.	Mr. John Warren
Ho. Dr. G. Pelham	*Bristol*	1802	Cornwall tra.	
	Exeter	1807	Fisher transl.	Dr. W. Landon
Dr. Thomas Burgess	St. David's	1803	Ld G. Murray d.	Mr. Wollaston, P.
Dr. John Fisher	*Exeter*	1803	Courtenay dec.	
	Salisbury	1807	Douglas dec.	Dr. Talbot
Dr. Henry Bathurst	Norwich	1805	Sutton transl.	Dr. Joseph Turner
Dr. G. I. Huntingford	*Gloucester*	1802	Beadon transl.	
	Hereford	1815	Luxmore tran.	Dr. G. Gretton
Dr. S. Goodenough	Carlisle	1807	Vernon transl.	Dr. Isaac Milner
Dr. W. Lort Mansel	Bristol	1808	Luxmore transl.	Dr. H. Beeke
Dr. Walker King	Rochester	1808	Dampier transl.	Dr. Busby
Dr. B. E. Sparke	*Chester*	1809	Majendie tr.	
	Ely	1812	Dampier dec.	Dr. Tho. Pearce
Dr. W. Jackson	Oxford	1812	Moss deceas.	Dr. C. H. Hall
Dr. Geo. H. Law	Chester	1812	Sparke tr.	Mr Cholmondeley
Dr. John Parsons	Peterborough	1813	Madan, dec.	Dr. Tho. Kipling
Hon. Dr. H. Ryder	Gloucester	1815	Huntinford tr.	Dr. Plumtre
Dean of	Westminster	1802	Horsley prom.	Dr. Vincent
——	Windsor	1805	Sutton prom.	Hon. Dr. E. Legge

Dr. G. Murray - Sodor and Mann.——Other Deans: *Bocking*, Christ. Wordsworth, D.D.; *Battle*, Thomas Birch, LL.D.; *Guernsey*, Daniel Francis Durand, M.A.; *Jersey*, Edw. Dupré, LL.D.; *Ripon*, R.D. Waddilove, D.D

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IN the course of this YEAR there will be

FOUR ECLIPSES;

Two of the SUN, and Two of the MOON;

of which Three will be visible in these Parts.

I. *May* 27, The SUN is eclipsed, but invisible here.
The ☉ is at 3h. 6m. morn. in long. 2s 5° 38′;
The ☾'s latitude being 53′ 41″ south.

II. *June* 9 & 10, The MOON is totally and visibly eclipsed here.

	h.	m.		h.	m.
Beginning, June 9, aftern.	11	30	Ecliptic ☾ - - - - -	1	19
Begin. of total darkness -	0	39	End of total darkness - -	1	51
Middle of Eclipse - - -	1	15	End of the Eclipse - - -	3	0

Digits eclipsed 14° 56′, on the ☾'s north side.

III. *Nov.* 19, The SUN is eclipsed, visible in the morning.

	h.	m.		h.	m.
Beginning of the Eclipse -	8	18	The ☉ - - - - - -	10	23
Greatest Obscuration - -	9	24	End of the Eclipse - -	10	34

Digits eclipsed 9° 23′ on the north limb.

IV. *Dec* 4, The MOON is eclipsed, in the afternoon, visible here.

	h.	m.		h.	m.
Beginning of the Eclipse -	7	15	Ecliptic ☾ - - - - -	8	51
Middle - - - - - - -	8	44	End of the Eclipse - -	10	14

Digits eclipsed 8° on the ☾'s south limb.

Obliquity of the Ecliptic.	1816.			Equat. of Equinoctial Points.
23° 27′ 49.2″ -	January	1,	-	— 17.9″
23 27 50.8 -	April	1,	-	— 17.7
23 27 50.8 -	July	1,	-	— 17.4
23 27 52.3 -	October	1,	-	— 16.9
23 27 52.3 -	Dec.	31,	-	— 16.3

The most remarkable HIGH TIDES this year, will be those of March 14, Apr. 13, Sep. 22, and Oct. 22; which may occasion disagreeable accidents on the sea coasts, especially if assisted by particular winds.

Of the MAGNETIC NEEDLE, the Declination in 1814 at London, was 24° 20′, and the Dip was 70° 33′.

The quantity of RAIN at London, in 1814, was 21 inches.

The medium of the Barometer was 29·84; and Thermometer 54·7 within, and 48·2 without

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THE LUNATIONS.

First quarter the 7th day, at 41 minutes past 6 afternoon.
Full Moon the 14th day, at 18 minutes past 1 morning.
Last quarter the 21st day, at 13 minutes past 4 afternoon.
New Moon the 29th day, at 50 minutes past 8 morning.

M D	Sundays & other remark. days.	☽ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock bef. ☉
1	Circumcision.	8 5	3 55	23 s 5	22 s 57	5 a 37	1 a 37	3′ 36″
2		8 5	3 55	23 0	20 35	6 43	2 25	4 4
3		8 4	3 56	22 55	17 22	7 50	3 10	4 32
4		8 3	3 57	22 49	13 29	8 58	3 53	5 0
5		8 3	3 57	22 43	9 5	10 6	4 35	5 27
6	Epiph. O. Ch.	12th D.	3 58	22 36	4 21	11 13	5 15	5 54
G	1 S. af. Epiph. Pre. Ch. Wak.			22 29	0 n 35	morn.	5 56	6 21
8	Lucian. Plow	8 0	4 0	22 22	5 34	0 21	6 37	6 47
9	[Monday.	7 59	4 1	22 14	10 28	1 30	7 21	7 13
10		7 58	4 2	22 5	15 3	2 42	8 8	7 37
11		7 57	4 3	21 56	19 8	3 51	9 0	8 2
12		7 56	4 4	21 47	22 11	5 14	9 56	8 26
13	Hila. Cam.T.b.	7 55	4 5	21 37	24 4	6 28	10 56	8 49
G	2 S. af Epiph.	7 54	4 6	21 27	24 25	rises	11 58	9 11
15	[Oxf.T.b	7 53	4 7	21 17	23 4	4 a 36	morn.	9 33
16		7 52	4 8	21 6	20 6	6 1	1 0	9 54
17		7 51	4 9	20 54	15 48	7 27	2 0	10 15
18	CHAR. b.d.k.	7 49	4 11	20 43	10 33	8 52	2 56	10 35
19	[Prisca	7 48	4 12	20 30	4 48	10 16	3 49	10 54
20	Fabian.	7 47	4 13	20 18	1 s 6	11 38	4 39	11 12
G	3 S. af. Epiph.	7 45	4 15	20 5	6 48	morn.	5 28	11 30
22	Vincent. [Ag.	7 44	4 16	19 52	12 3	0 57	6 16	11 47
23	Hil. T. begins.	7 42	4 18	19 38	16 36	2 15	7 5	12 3
24		7 41	4 19	19 24	20 15	3 31	7 55	12 19
25	Conv. St. Paul.	7 40	4 20	19 10	22 50	4 43	8 46	12 33
26		7 38	4 22	18 55	24 15	5 48	9 38	12 47
27	D. of Sussex b.	7 37	4 23	18 40	24 25	6 44	10 30	13 0
G	4 S. af. Epiph.	7 35	4 25	18 24	23 25	7 29	11 21	13 13
29		7 33	4 27	18 9	21 19	sets	0 a 10	13 24
30	K. C. I. mart.	7 32	4 28	17 53	18 18	5 a 30	0 57	13 35
31		7 30	4 30	17 36	14 34	6 39	1 41	13 45

M D	Day increas.	Length of Day.	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊕	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	0 6	7 50	13♒43	26♎32	5♊56	10♋ 2	28♌29	20♐47	6 a 35
7	0 14	7 58	13 54	26 59	9 4	16 10	8♍14	7♑38	6 13
13	0 26	8 10	14 6	27 26	12 11	22 16	17 58	25 36	5 51
19	0 40	8 24	14 17	27 53	15 15	28 23	27 42	15♒37	5 29
25	0 56	8 40	14 28	28 21	18 18	4♌29	7♎24	8♓50	5 8

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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 59	6 1	2 10	23 ♊ 48	0 s 51	1 n 10	0 n 58	3 n 10	1 s 18
7	5 56	6 4	2 9	23 29	0 51	1 11	1 4	3 5	1 45
13	5 52	6 8	2 7	23 9	0 51	1 12	1 9	2 56	2 1
19	5 46	6 14	2 5	22 50	0 52	1 13	1 13	2 44	2 5
25	5 39	6 21	2 3	22 31	0 52	1 14	1 17	2 28	1 52

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

M D	♃ rises	♂ sets	♀ rises	☿ rises	♄'s declin.	♃'s declin.	♂'s declin.	♀ s declin.	☿'s declin.
1	2 m 33	2 m 5	4 m 2	7 m 51	18 s 21	12 s 23	11 n 38	15 s 35	24 s 42
7	2 12	1 33	4 11	8 5	18 11	12 39	12 38	17 8	24 31
13	1 50	1 42	4 21	8 14	17 59	12 53	13 40	18 32	23 27
19	1 28	1 34	4 31	8 17	17 48	13 5	14 42	19 43	21 26
25	1 6	1 26	4 41	8 15	17 36	13 15	15 43	20 39	18 29

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THE LUNATIONS.

First quarter the 6th day, at 29 minutes past 1 afternoon.
Full Moon the 13th day, at 9 minutes past 12 noon.
Last quarter the 20th day, at 42 minutes past 3 morning.
New Moon the 28th day, at 31 minutes past 3 morning.

M D	Sundays & other remark. days	☉ rises		☉ sets		☉'s declin.		☾'s declin.		☾ rises & sets		☾ south		Clock bef. ☉
1		7	29	4	31	17 s	19	10 s	16	7 a	47	2 a	24	13′ 54″
2	Pur. Candl. D.	7	27	4	33	17	2	5	37	8	53	3	4	14 2
3	Blase.	7	25	4	35	16	45	0	44	9	59	3	44	14 9
☾	5 S. af. Epiph.	7	23	4	37	16	28	4 n	12	11	7	4	25	14 16
5	Agatha.	7	22	4	38	16	10	9	4	morn.		5	7	14 21
6		7	20	4	40	15	51	13 n	40	0	17	5	52	14 26
7		7	18	4	42	15	33	17	47	1	30	6	40	14 30
8		7	16	4	44	15	14	21	12	2	44	7	33	14 33
9		7	15	4	45	14	55	23	32	3	58	8	30	14 35
10		7	13	4	47	14	36	24	33	5	7	9	31	14 37
☾	Septuages. S.	7	11	4	49	14	17	23	56	6	7	10	34	14 38
12	Hila. Term e.	7	9	4	51	13	57	21	39	6	56	11	36	14 38
13		7	7	4	53	13	37	17	49	rises		morn.		14 37
14	Valentine. Old	7	5	4	55	13	17	12	46	6 a	21	0	35	14 35
15	[Candl.	7	4	4	56	12	57	6	58	7	48	1	32	14 33
16		7	2	4	58	12	36	0	48	9	8	2	26	14 30
17		7	0	5	0	12	15	5 s	14	10	37	3	17	14 26
☾	Sexagesima S.	6	58	5	2	11	54	10	51	11	59	4	7	14 21
19		6	56	5	4	11	33	15	44	morn.		4	58	14 16
20		6	54	5	6	11	12	19	41	1	19	5	49	14 10
21		6	52	5	8	10	51	22	32	2	34	6	41	14 4
22		6	50	5	10	10	29	24	12	3	43	7	34	13 57
23	Cam. T. div. m.	6	48	5	12	10	7	24	38	4	42	8	26	13 49
24	St. Mat. D. of Cam. b.			5	14	9	45	23	52	5	29	9	17	13 40
☾	Shrove Sund.	6	44	5	16	9	23	21	59	6	6	10	7	13 31
26		6	42	5	18	9	1	19	10	6	37	10	54	13 22
27	Shrove Tuesd.	6	41	5	19	8	38	15	34	7	0	11	39	13 12
28	Ash Wednesd.	6	39	5	21	8	16	11	22	fets		0 a	23	13 1
29		6	37	5	23	7	53	6	45	6 a	43	1	4	12 50

M D	Day increas.		Length of day		Helioc. long. ♄		Helioc. long. ♃		Helioc. long. ♂		Helioc. long. ☉		Helioc. long. ♀		Helioc. long. ☿		♄ rises	
1	1	18	9	2	14 ♒	41	28 ♎	52	21 ♊	49	11 ♌	36	18 ♎	42	11 ♈	38	7 ♏	42
7	1	40	9	24	14	52	29	20	24	48	17	41	28	21	15 ♉	27	7	19
13	2	2	9	46	15	3	29	47	27	45	23	45	7 ♏	59	22 ♊	52	6	51
19	2	24	10	8	15	14	0 ♏	14	0 ♑	40	29	47	17	35	29 ♑	26	6	35
25	2	48	10	32	15	26	0	42	3	34	5 ♏	50	27	9	1 ♏	14	6	12

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M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿ latitude
1	5 30	6 30	2 0	22 ♊ 9	0 s 52	1 n 16	1 n 21	2 n 16	1 s 8
7	5 21	6 39	1 59	21 50	0 53	1 17	1 23	1 46	0 2
13	5 12	6 49	1 58	21 31	0 53	1 18	1 25	1 24	1 n 23
19	5 0	7 0	1 57	21 12	0 54	1 19	1 27	1 2	2 58
25	4 50	7 10	1 56	20 53	0 54	1 20	1 28	0 40	3 43

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

M D	♃ rises	♂ sets	♀ rises	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	0 m 40	1 m 18	4 m 49	5 a 49	17 s 22	13 s 25	16 n 55	21 s 21	13 s 58
7	0 19	1 13	4 57	6 21	17 9	13 31	17 54	21 36	9 40
13	11 a 52	1 8	5 3	6 39	16 57	13 35	18 51	21 29	5 55
19	11 29	1 4	5 8	6 26	16 45	13 37	19 46	21 1	4 5
25	11 7	1 0	5 10	5 42	16 33	13 36	20 37	20 11	5 0

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THE LUNATIONS.

First quarter the 6th day, at 29 minutes past 1 afternoon.
Full Moon the 13th day, at 9 minutes past 12 noon.
Last quarter the 20th day, at 42 minutes past 3 morning.
New Moon the 28th day, at 31 minutes past 3 morning.

M. D.	Sundays & other remark. days	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock bef. ☉
1		7 29	4 31	17 s 19	10 s 16	7 a 47	2 a 24	13′ 54″
2	Pur. Candl. D.	7 27	4 33	17 2	5 37	8 53	3 4	14 2
3	Blase.	7 25	4 35	16 45	0 44	9 59	3 44	14 9
☾ 4	5 S. af. Epiph.	7 23	4 37	16 28	4 n 12	11 7	4 25	14 16
5	Agatha.	7 22	4 38	16 10	9 4	morn.	5 7	14 21
6		7 20	4 40	15 51	13 40	0 17	5 52	14 26
7		7 18	4 42	15 33	17 47	1 30	6 40	14 30
8		7 16	4 44	15 14	21 12	2 44	7 33	14 33
9		7 15	4 45	14 55	23 32	3 58	8 30	14 35
10		7 13	4 47	14 36	24 33	5 7	9 31	14 37
☾ 11	Septuages. S.	7 11	4 49	14 17	23 56	6 7	10 34	14 38
12	Hila. Term e.	7 9	4 51	13 57	21 39	6 56	11 36	14 38
13		7 7	4 53	13 37	17 49	rises	morn.	14 37
14	Valentine. Old	7 5	4 55	13 17	12 46	6 a 21	0 35	14 35
15	[Candl.	7 4	4 56	12 57	6 58	7 48	1 32	14 33
16		7 2	4 58	12 36	0 48	9 8	2 26	14 30
17		7 0	5 0	12 15	5 s 14	10 37	3 17	14 26
☾ 18	Sexagesima S.	6 58	5 2	11 54	10 51	11 59	4 7	14 21
19		6 56	5 4	11 33	15 44	morn.	4 58	14 16
20		6 54	5 6	11 12	19 41	1 19	5 49	14 10
21		6 52	5 8	10 51	22 32	2 34	6 41	14 4
22		6 50	5 10	10 29	24 12	3 43	7 34	13 57
23	Cam. T. div. m.	6 48	5 12	10 7	24 38	4 42	8 26	13 49
24	St. Mat. D. of Cam. b.		5 14	9 45	23 52	5 29	9 17	13 40
☾ 25	Shrove Sund.	6 44	5 16	9 23	21 59	6 6	10 7	13 31
26		6 42	5 18	9 1	19 10	6 37	10 54	13 22
27	Shrove Tuesd.	6 41	5 19	8 38	15 34	7 0	11 39	13 12
28	Ash Wednesd.	6 39	5 21	8 16	11 22	sets	0 a 23	13 1
29		6 37	5 23	7 53	6 45	6 a 43	1 4	12 50

M. D.	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊖	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	1 18	9 2	14 ♒ 41	28 ♎ 52	21 ♊ 49	11 ♏ 36	18 ♎ 42	11 ♈ 38	7 m 42
7	1 40	9 24	14 52	29 20	24 48	17 41	28 21	15 ♉ 27	7 19
13	2 2	9 46	15 3	29 47	27 45	23 45	7 ♏ 59	22 ♊ 52	6 51
19	2 24	10 8	15 14	0 ♏ 14	0 ♋ 40	29 47	17 35	29 ♋ 26	6 35
25	2 48	10 32	15 26	0 42	3 34	5 ♏ 50	27 9	1 ♏ 14	6 12

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M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿ latitude
1	5 30	6 30	2 0	22♊ 9	0 s 52	1 n 16	1 n 21	2 n 16	1 s 8
7	5 21	6 39	1 59	21 50	0 53	1 17	1 23	1 46	0 2
13	5 12	6 49	1 58	21 31	0 53	1 18	1 25	1 24	1 n 23
19	5 0	7 0	1 57	21 12	0 54	1 19	1 27	1 2	2 58
25	4 50	7 10	1 56	20 53	0 54	1 20	1 28	0 40	3 43

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

M D	♃ rises	♂ sets	♀ rises	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	0 m 40	1 m 18	4 m 49	5 a 49	17 s 22	13 s 25	16 n 55	21 s 21	13 s 58
7	0 19	1 13	4 57	6 21	17 9	13 31	17 54	21 36	9 40
13	11 a 52	1 8	5 3	6 39	16 57	13 35	18 51	21 29	5 55
19	11 29	1 4	5 8	6 26	16 45	13 37	19 46	21 1	4 5
25	11 7	1 0	5 10	5 42	16 33	13 36	20 37	20 11	5 0

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THE LUNATIONS.

First quarter the 7th day, at 55 minutes past 4 morning.
Full Moon the 13th day, at 47 minutes past 9 afternoon.
Last quarter the 20th day, at 41 minutes past 5 afternoon.
New Moon the 28th day, at 27 minutes past 9 afternoon.

	and other remarkable days.	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock bef. ☉.
1	David.	6 35	5 25	7 s 30	1 s 52	7 a 52	1 a 45	12′ 38″
2	Chad.	6 33	5 27	7 7	3 n 6	9 0	2 26	12 26
F 3	S. in Lent.	6 31	5 29	6 45	8 1	10 9	3 7	12 13
4		6 29	5 31	6 21	12 40	11 20	3 51	12 0
5		6 27	5 33	5 58	16 54	morn.	4 37	11 46
6	Ember Weeks.	6 25	5 35	5 35	20 28	0 32	5 27	11 32
7	Perpetua.	6 23	5 37	5 12	23 8	1 45	6 21	11 17
8		6 21	5 39	4 48	24 35	2 56	7 18	11 2
9		6 19	5 41	4 25	24 36	3 59	8 19	10 47
F 10	S. in Lent.	6 17	5 43	4 2	23 2	4 51	9 20	10 31
11		6 15	5 45	3 38	19 52	5 32	10 19	10 15
12	Gregory.	6 13	5 47	3 14	15 20	6 3	11 17	9 59
13		6 11	5 49	2 51	9 44	rises	morn.	9 42
14		6 9	5 51	2 27	3 33	6 a 48	0 13	9 25
15		6 7	5 53	2 4	2 s 48	8 14	1 7	9 8
16	St. Patrick.	6 5	5 55	1 40	8 51	9 41	2 0	8 50
F 17	S. in Lent.	6 3	5 57	1 16	14 16	11 6	2 53	8 32
18	Edw. K. W. S.	6 1	5 59	0 52	18 45	morn.	3 46	8 15
19		5 59	6 1	0 29	22 4	0 26	4 40	7 56
20		5 57	6 3	0 5	24 8	1 40	5 34	7 38
21	Benedict.	5 55	6 5	0 n 19	24 53	2 43	6 27	7 20
22		5 53	6 7	0 42	24 23	3 36	7 20	7 2
23		5 51	6 9	1 6	22 44	4 18	8 11	6 43
F 24	Palm Sund.	5 49	6 11	1 30	20 6	4 48	8 59	6 25
25	Lady Day.	5 47	6 13	1 53	16 39	5 14	9 45	6 6
26		5 4	6 15	2 17	12 33	5 34	10 29	5 48
27		5 4	6 17	2 40	7 59	5 50	11 11	5 29
28		5 41	6 19	3 4	3 5	sets	11 52	5 11
29		5 39	6 21	3 27	1 n 56	6 a 59	0 a 32	4 52
30		5 3	6 23	3 50	6 57	8 7	1 14	4 34
F 31	S. in Lent.	5 35	6 25	4 14	11 45	9 19	1 56	4 16

M. D.	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ♁	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	3 6	10 50	15 ♋ 35	1 ♏ 4	5 ♋ 58	10 ♏ 51	5 ♐ 6	23 ♏ 30	5 m 55
1	3 30	11 14	15 [illegible]	1 32	8 50	16 51	14 38	16 ♎ 6	5 34
1	3 54	11 38	15 58	1 59	11 40	22 50	24 8	5 ♏ 36	5 14
1	4 18	12 2	16 9	2 26	14 28	28 48	3 ♑ 38	23 13	4 54
25	4 42	12 26	16 2[illegible]	2 54	17 16	4 ♎ 44	13 8	9 ♐ 53	4 33

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M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	4 43	7 17	1 55	20♊37	0 s 55	1 n 22	1 n 29	0 n 22	3 n 24
7	4 30	7 30	1 56	20 18	0 55	1 23	1 29	0 1	2 12
13	4 17	7 43	1 57	19 59	0 56	1 24	1 30	0 s 19	0 46
19	4 4	7 56	1 58	19 40	0 56	1 25	1 30	0 37	0 s 28
25	3 50	8 10	2 0	19 21	0 57	1 26	1 30	0 53	1 27

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

M D	♃ rises	♂ sets	♀ rises	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	10 a 48	0 m 57	5 m 10	4 a 49	16 s 22	13 s 34	21 n 17	19 s 13	7 s 11
7	10 25	0 54	5 8	4 5	16 10	13 30	22 2	17 46	9 45
13	10 1	0 52	5 4	3 36	15 59	13 24	22 42	16 1	11 11
19	9 36	0 49	5 1	3 26	15 48	13 16	23 18	14 0	11 9
25	9 12	0 46	4 56	3 31	15 37	13 6	23 48	11 44	10 19

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THE LUNATIONS.

First quarter the 5th day, at 22 minutes past 4 afternoon.
Full Moon the 12th day, at 43 minutes past 6 morning.
Last quarter the 19th day, at 38 minutes past 9 morning.
New Moon the 27th day, at 31 minutes past 1 afternoon.

M D	Sundays & other remark. days.	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock bef. ☉
1		5 33	6 27	4 n 37	16 n 8	10 a 31	2 a 42	3 57
2		5 31	6 29	5 0	19 54	11 44	3 31	3 39
3	Rich. Bp.	5 29	6 31	5 23	22 48	morn.	4 23	3 21
4	St. Ambrose.	5 27	6 33	5 46	24 3	0 56	5 18	3 3
5	Cam. T. ends.	5 25	6 35	6 8	25 1	2 0	6 16	2 45
6	O. Lady D. Ox. T. e.	6 37	6 31	23 58	2 53	7 15	2 28	
F 8	Palm Sunday.	5 21	6 39	6 54	21 25	3 38	8 13	2 10
		5 20	6 40	7 16	17 28	4 11	9 10	1 53
9		5 18	6 42	7 38	12 22	4 38	10 5	1 36
10		5 16	6 44	8 1	6 28	5 0	10 59	1 19
11	Maundy Thur.	5 14	6 46	8 23	0 8	5 20	11 52	1 2
12	Good Friday.	5 12	6 48	8 45	6 s 11	rises	morn.	0 47
13		5 10	6 50	9 6	12 4	8 a 53	0 45	0 31
F	Easter Day.	5 8	6 52	9 28	17 8	10 9	1 39	0 15
15	Easter Mond.	5 6	6 54	9 50	21 6	11 28	2 34	0 af. 0
16	Easter Tuesd.	5 4	6 56	10 11	23 45	morn.	3 29	0 15
17		5 2	6 58	10 32	25 1	0 40	4 25	0 30
18		5 0	7 0	10 53	24 55	1 40	5 20	0 44
19	Alphege.	4 58	7 2	11 14	23 34	2 25	6 13	0 57
20		4 57	7 3	11 34	21 9	3 2	7 3	1 11
F	Low Sunday.	4 55	7 5	11 55	17 52	3 27	7 50	1 23
22		4 53	7 7	12 15	13 53	3 49	8 34	1 36
23	St. George.	4 51	7 9	12 35	9 24	4 5	9 16	1 47
24	Ox.& Cam.T.b.	4 49	7 11	12 55	4 33	4 21	9 57	1 59
25	St. Mark. Prs. Ma. b.		7 13	13 15	0 n 30	4 35	10 38	2 10
26		4 46	7 14	13 34	5 36	4 49	11 19	2 20
27		4 44	7 16	13 53	10 33	sets	0 a 2	2 30
F	2 S. af. Easter.	4 42	7 18	14 12	15 9	8 a 28	0 47	2 39
29		4 40	7 20	14 31	19 10	9 41	1 35	2 48
30		4 38	7 22	14 49	22 21	10 54	2 26	2 57

M D	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	5 10	12 54	16 ♒ 33	3 ♏ 26	20 ♋ 30	11 ♎ 39	24 ♑ 11	29 ♐ 12	4 m 9
7	5 34	13 18	16 44	3 53	23 15	17 33	3 ♒ 40	16 ♑ 30	3 48
13	5 56	13 40	16 55	4 21	25 59	23 25	13 9	5 ♒ 22	3 28
19	6 20	14 4	17 7	4 48	28 42	29 17	22 39	26 50	3 7
25	6 42	14 26	17 18	5 15	1 ♌ 24	5 ♏ 7	2 ♓ 9	22 ♓ 8	2 46

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M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	3 33	8 27	2 3	18 ♊ 58	0 s 58	1 n 26	1 n 30	1 s 9	2 s 12
7	3 17	8 43	2 8	18 39	0 59	1 27	1 30	1 20	2 30
13	3 2	8 58	2 11	18 20	1 0	1 27	1 29	1 28	2 30
19	2 47	9 13	2 15	18 1	1 1	1 27	1 29	1 34	2 12
25	2 26	9 34	2 25	17 42	1 2	1 27	1 28	1 37	1 35

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

M D	♃ rises	♂ sets	♀ rises	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	8 a 43	0 m 42	4 m 47	3 a 51	15 s 25	12 n 53	24 n 17	8 s 51	7 s 55
7	8 18	0 38	4 41	4 18	15 16	12 40	24 35	6 13	4 56
13	7 52	6 33	4 32	4 48	15 8	12 26	24 48	3 28	1 13
19	7 25	0 28	4 23	5 27	15 0	12 11	24 55	0 39	3 n 5
25	6 58	0 20	4 12	6 5	14 53	11 56	24 56	2 n 11	7 55

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THE LUNATIONS.

First quarter the 5th day, at 22 minutes past 4 afternoon.
Full Moon the 12th day, at 43 minutes past 6 morning.
Last quarter the 19th day, at 38 minutes past 9 morning.
New Moon the 27th day, at 31 minutes past 1 afternoon.

M D	Sundays & other remark. days.	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock bef. ☉
1		5 33	6 27	4 n 37	16 n 8	10 a 31	2 a 42	3 57
2		5 31	6 29	5 0	19 54	11 44	3 31	3 39
3	Rich. Bp.	5 29	6 31	5 23	22 48	morn.	4 23	3 21
4	St. Ambrose.	5 27	6 33	5 46	24 3[illegible]	0 56	5 18	3 3
5	Cam. T. ends.	5 25	6 35	6 8	25 1	2 0	6 16	2 45
6	O. Lady D. Ox. T. e.	6 37	6 31	23 58	2 53	7 15	2 28	
F	Palm Sunday.	5 21	6 39	6 54	21 25	3 38	8 13	2 10
8		5 20	6 40	7 16	17 28	4 11	9 10	1 53
9		5 18	6 42	7 38	12 22	4 38	10 5	1 36
10		5 16	6 44	8 1	6 28	5 0	10 59	1 19
11	Maundy Thur.	5 14	6 46	8 23	0 8	5 20	11 52	1 2
12	Good Friday.	5 12	6 48	8 45	6 s 11	rises	morn.	0 47
13		5 10	6 50	9 6	12 4	8 a 53	0 45	0 31
F	Easter Day.	5 8	6 52	9 28	17 8	10 9	1 39	0 15
15	Easter Mond.	5 6	6 54	9 50	21 6	11 28	2 34	0 af. 0
16	Easter Tuesd.	5 4	6 56	10 11	23 45	morn.	3 29	0 15
17		5 2	6 58	10 32	25 1	0 40	4 25	0 30
18		5 0	7 0	10 53	24 55	1 40	5 20	0 44
19	Alphege.	4 58	7 2	11 14	23 34	2 25	6 13	0 57
20		4 57	7 3	11 34	21 9	3 2	7 3	1 11
F	Low Sunday.	4 55	7 5	11 55	17 52	3 27	7 50	1 23
22		4 53	7 7	12 15	13 53	3 49	8 34	1 36
23	St. George.	4 51	7 9	12 35	9 24	4 5	9 16	1 47
24	Ox.& Cam.T.b.	4 49	7 11	12 55	4 33	4 21	9 57	1 59
25	St. Mark. Pis. Mag. b.		7 13	13 15	0 n 30	4 35	10 38	2 10
26		4 46	7 14	13 34	5 36	4 49	11 19	2 20
27		4 44	7 16	13 53	10 33	sets	0 a 2	2 30
F	2 S. af. Easter.	4 42	7 18	14 12	15 9	8 a 28	0 47	2 39
29		4 40	7 20	14 31	19 10	9 41	1 35	2 48
30		4 38	7 22	14 49	22 21	10 54	2 26	2 57

M D	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊕	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	5 10	12 54	16♒33	3♏26	20♋30	11♎39	24♑11	29♐12	4 m 9
7	5 34	13 18	16 44	3 53	23 15	17 33	3♒40	16♑30	3 48
13	5 56	13 40	16 55	4 21	25 59	23 25	13 9	5♒22	3 28
19	6 20	14 4	17 7	4 48	28 42	29 17	22 39	26 50	3 7
25	6 42	14 26	17 18	5 15	1♌24	5♏ 7	2♓ 9	22♓ 8	2 46

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M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	3 33	8 27	2 3	18 ♊ 58	0 s 58	1 n 26	1 n 30	1 s 9	2 s 12
7	3 17	8 43	2 8	18 39	0 59	1 27	1 30	1 20	2 30
13	3 2	8 58	2 11	18 20	1 0	1 27	1 29	1 28	2 30
19	2 47	9 13	2 15	18 1	1 1	1 27	1 29	1 34	2 12
25	2 26	9 34	2 25	17 42	1 2	1 27	1 28	1 37	1 35

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

M D	♃ rises	♂ sets	♀ rises	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	8 a 43	0 m 42	4 m 47	3 a 51	15 s 25	12 n 53	24 n 17	8 s 51	7 s 55
7	8 18	0 38	4 41	4 18	15 16	12 40	24 35	6 13	4 56
13	7 52	6 33	4 32	4 48	15 8	12 26	24 48	3 28	1 13
19	7 25	0 28	4 23	5 27	15 0	12 11	24 55	0 39	3 n 5
25	6 58	0 20	4 12	6 5	14 53	11 56	24 56	2 n 11	7 55

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THE LUNATIONS.

First quarter the 4th day, at 8 minutes past 12 midnight.
Full Moon the 11th day, at 40 minutes past 3 afternoon.
Last quarter the 19th day, at 35 minutes past 2 morning.
New Moon the 27th day, at 7 minutes past 3 morning.

M D	S	Mondays Sundays Holidays Saints	☉ rises	☾ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock aft. ☉
1		K. Mark. Evang.	4 37	7 23	15 n 8	24 n 27	12 a 0	3 a 20	3′ 4″
2		[Term bg.	4 35	7 25	15 26	25 14	morn.	4 17	3 12
3		Inv. of the Cross.	4 33	7 27	15 43	24 33	0 59	5 15	3 19
4			4 31	7 29	16 1	22 25	1 45	6 12	3 25
5	R	S. af. Easter.	4 30	7 30	16 18	18 55	2 20	7 7	3 30
6		John Ev. a. P. L.	4 28	7 32	16 35	14 15	2 46	8 1	3 36
7		Ds. of York b.	4 26	7 34	16 52	8 43	3 10	8 53	3 40
8			4 25	7 35	17 8	2 40	3 30	9 44	3 44
9			4 23	7 37	17 24	3 s 35	3 48	10 35	3 48
10			4 22	7 38	17 40	9 38	4 6	11 27	3 51
11			4 20	7 40	17 55	15 5	rises	morn.	3 53
12	F	S. af. Easter.	4 18	7 42	18 11	19 37	9 a 4	0 21	3 55
13		Old May Day.	4 17	7 43	18 25	22 55	10 24	1 17	3 56
14			4 15	7 45	18 40	24 48	11 32	2 14	3 57
15			4 14	7 46	18 54	25 15	morn.	3 11	3 57
16			4 12	7 48	19 8	24 19	0 24	4 6	3 57
17		Ds. of W. b.	4 11	7 49	19 22	22 13	1 3	4 58	3 55
18			4 9	7 51	19 35	19 9	1 33	5 46	3 54
19	F	Rogat. S. Q. Chr. b.		7 52	19 48	15 19	1 56	6 32	3 51
20		[Dunst.	4 7	7 53	20 1	10 56	2 15	7 15	3 49
21			4 5	7 55	20 13	6 10	2 31	7 56	3 45
22		Ds. Eliz. b.	4 4	7 56	20 25	1 9	2 45	8 36	3 41
23		Asc. Holy Th.	4 3	7 57	20 37	3 n 58	2 58	9 17	3 37
24			4 1	7 59	20 48	9 0	3 13	9 59	3 32
25			4 0	8 0	20 59	13 47	3 29	10 43	3 26
26	F	S. af. Asc. Aug.	3 59	8 1	21 10	18 4	3 49	11 30	3 20
27		Venerable Bede.	3 58	8 2	21 20	21 35	sets	0 a 20	3 14
28		[Term ends.	3 57	8 3	21 30	24 3	9 a 48	1 14	3 6
29	R	Ch. H. rest	3 56	8 4	21 39	25 13	10 54	2 11	2 59
30			3 55	8 5	21 48	24 55	11 44	3 9	2 51
31			3 54	8 6	21 57	23 5	morn.	4 7	2 43

M D	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	7 2	14 46	17♒29	5♍43	4♌ 6	10♍57	11♓40	22♈26	2 m25
7	7 24	15 8	17 40	6 10	6 47	16 45	21 11	27♉49	2 2
13	7 42	15 26	17 52	6 37	9 27	22 32	0♈43	5♊31	1 39
19	8 0	15 44	18 3	7 5	12 6	28 19	10 17	10♌46	1 16
25	8 16	16 0	18 14	7 32	14 45	4♐ 5	19 51	10♍40	0 53

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M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	2 6	9 57	2 37	17 ♊ 23	1 s 3	1 n 26	1 n 27	1 s 38	0 s 42
7	1 44	10 19	2 48	17 4	1 4	1 26	1 26	1 35	0 n 20
13	1 19	10 45	3 5	16 45	1 5	1 25	1 25	1 31	1 19
19	0 48	11 20	3 32	16 26	1 6	1 24	1 24	1 24	2 0
25	All Day Light.			16 7	1 8	1 23	1 23	1 15	2 14

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

M D	♃ sets	♂ sets	♀ rises	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	4 m 42	0 m 14	4 m 0	6 a 55	14 s 47	11 s 41	24 n 50	5 n 2	13 n 1
7	4 18	0 6	3 50	7 50	14 43	11 27	24 39	7 48	17 54
13	3 53	11 a 55	3 40	8 45	14 39	11 13	24 22	10 20	21 55
19	3 28	11 44	3 30	9 31	14 37	11 1	23 58	13 2	24 30
25	3 2	11 32	3 21	10 0	14 35	10 50	23 28	15 24	25 35

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THE LUNATIONS.

First quarter the 3d day, at 18 minutes past 5 morning.
Full Moon the 10th day, at 19 minutes past 1 morning.
Last quarter the 17th day, at 48 minutes past 7 afternoon.
New Moon the 25th day, at 7 minutes past 2 afternoon.

M D	Sundays & other remark. days.	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock aft. ☉
1	Nicom. Ox. T. c.	3 53	8 7	22 n 5	19 n 53	om 24	5 a 3	2′ 34″
F	Whit Sunday.	3 52	8 8	22 13	15 30	0 52	5 56	2 25
3	Whit Mond.	3 51	8 9	22 21	10 14	1 16	6 47	2 15
4	Whit Tu. K. Geo. III. b.			22 28	4 24	1 35	7 37	2 6
5	Emo. W. D. of Cum. b.	8 11	22 35	1 s 41		1 53	8 26	1 55
6	[Boniface. Ox. T. b.	8 11	22 41	7 40	2 10	9 16	1 45
7		3 48	8 12	22 47	13 14	2 28	10 8	1 34
8		3 47	8 13	22 52	18 3	2 51	11 1	1 23
F	Trinity Sund.	3 47	8 13	22 58	21 48	3 16	11 57	1 12
10		3 46	8 14	23 2	24 15	rises	morn.	1 0
11	St. Barnabas.	3 46	8 14	23 7	25 15	10 a 9	0 53	0 48
12		3 45	8 15	23 11	24 50	10 55	1 49	0 36
13	Corpus Christi.	3 45	8 15	23 14	23 8	11 30	2 43	0 24
14	Trin. Term. b.	3 44	8 16	23 17	20 20	11 57	3 34	0 12
15		3 44	8 16	23 20	16 43	morn.	4 22	obef. 1
F	1 S. aft. Trin.	3 44	8 16	23 22	12 27	0 16	5 6	0 13
17	St. Alban.	3 43	8 17	23 24	7 46	0 32	5 48	0 26
18		3 43	8 17	23 26	2 49	0 47	6 28	0 39
19		3 43	8 17	23 27	2 n 16	1 0	7 8	0 52
20	Tra. Ed. K. W. S.	3 43	8 17	23 28	7 19	1 14	7 49	1 5
21	Longest Day.	3 43	8 17	23 28	12 11	1 29	8 31	1 18
22		3 43	8 17	23 28	16 39	1 46	9 17	1 31
F	2 S. aft. Trin.	3 43	8 17	23 27	20 29	2 9	10 6	1 44
24	Nat. J. Bap.	3 43	8 17	23 26	23 21	2 38	10 59	1 57
25	[Midsum.	3 43	8 17	23 25	25 0	sets	11 55	2 10
26		3 44	8 16	23 23	25 9	9 a 34	0 a 54	2 23
27		3 44	8 16	23 21	23 43	10 17	1 53	2 35
28		3 44	8 16	23 18	20 47	10 50	2 51	2 48
29	St. Peter.	3 45	8 15	23 15	16 35	11 14	3 46	3 0
F	3 S. aft. Trin.	3 45	8 15	23 12	11 26	11 35	4 39	3 12

M D	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊕	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	8 30	16 14	18 ♒ 27	8 ♏ 4	17 ♌ 50	10 ♐ 47	1 ♉ 2	9 ♎ 4	om 24
7	8 40	16 24	18 38	8 32	20 28	16 32	10 38	29 27	0 0
13	8 46	16 30	18 49	8 59	23 6	22 15	20 15	11 ♏ 34	11 a 31
19	8 50	16 34	19 1	9 27	25 44	27 59	29 54	4 ♐ 27	11 6
25	8 50	16 34	19 12	9 54	28 21	3 ♑ 42	9 ♊ 33	20 57	10 41

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M D	Daylig. begins	Daylig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1				15 ♊ 45	1 s 9	1 n 21	1 n 22	1 s 3	1 n 55
7	All	Day	light.	15 26	1 10	1 20	1 20	0 50	1 7
13				15 7	1 11	1 18	1 19	0 37	0 s 7
19				14 47	1 12	1 16	1 17	0 23	1 40
25				14 28	1 13	1 15	1 16	0 8	3 15

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

M D	♃ sets	♂ sets	♀ rises	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	2 m 33	11 a 17	3 m 12	10 a 13	14 s 35	10 s 39	22 n 46	17 n 52	25 n 18
7	2 8	11 3	3 7	10 6	14 36	10 32	22 5	19 42	24 10
13	1 42	10 49	3 2	9 46	14 39	10 27	21 18	21 13	22 36
19	1 16	10 23	3 1	9 14	14 42	10 25	20 25	22 23	20 55
25	0 51	10 17	3 2	8 13	14 47	10 24	19 28	23 11	19 29

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THE LUNATIONS.

First quarter the 3d day, at 18 minutes past 5 morning.
Full Moon the 10th day, at 19 minutes past 1 morning.
Last quarter the 17th day, at 48 minutes past 7 afternoon.
New Moon the 25th day, at 7 minutes past 2 afternoon.

M D	Sundays & other remark. days.	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock aft. ☉
1	Nicom. Ox. T.e.	3 53	8 7	22 n 5	19 n 53	om 24	5 a 3	2′ 34″
F	Whit Sunday.	3 52	8 8	22 13	15 30	0 52	5 56	2 25
3	Whit Mond.	3 51	8 9	22 21	10 14	1 16	6 47	2 15
4	Whit Tu. K. Geo. III. b.			22 28	4 24	1 35	7 37	2 6
5	Emb. W. D. of Cum. b.		8 11	22 35	1 s 41	1 53	8 26	1 55
6	[Boniface. Ox. T. b.		8 11	22 41	7 40	2 10	9 16	1 45
7		3 48	8 12	22 47	13 14	2 28	10 8	1 34
8		3 47	8 13	22 52	18 3	2 51	11 1	1 23
F	Trinity Sund.	3 47	8 13	22 58	21 48	3 16	11 57	1 12
10		3 46	8 14	23 2	24 15	rises	morn.	1 0
11	St. Barnabas.	3 46	8 14	23 7	25 15	10 a 9	0 53	0 48
12		3 45	8 15	23 11	24 50	10 55	1 49	0 36
13	Corpus Christi.	3 45	8 15	23 14	23 8	11 30	2 43	0 24
14	Trin. Term. b.	3 44	8 16	23 17	20 20	11 57	3 34	0 12
15		3 44	8 16	23 20	16 43	morn.	4 22	obef. 1
F	1 S. aft. Trin.	3 44	8 16	23 22	12 27	0 16	5 6	0 13
17	St. Alban.	3 43	8 17	23 24	7 46	0 32	5 48	0 26
18		3 43	8 17	23 26	2 49	0 47	6 28	0 39
19		3 43	8 17	23 27	2 n 16	1 0	7 8	0 52
20	Tra. Ed. K. W. S.	3 43	8 17	23 28	7 19	1 14	7 49	1 5
21	Longest Day.	3 43	8 17	23 28	12 11	1 29	8 31	1 18
22		3 43	8 17	23 28	16 39	1 46	9 17	1 31
F	2 S. aft. Trin.	3 43	8 17	23 27	20 29	2 9	10 6	1 44
24	Nat. J. Bap.	3 43	8 17	23 26	23 21	2 38	10 59	1 57
25	[Midsum.	3 43	8 17	23 25	25 0	sets	11 55	2 10
26		3 44	8 16	23 23	25 9	9 a 34	0 a 54	2 23
27		3 44	8 16	23 21	23 43	10 17	1 53	2 35
28		3 44	8 16	23 18	20 47	10 50	2 51	2 48
29	St. Peter.	3 45	8 15	23 15	16 35	11 14	3 46	3 0
F	3 S. aft. Trin.	3 45	8 15	23 12	11 26	11 35	4 39	3 12

M D	Day increas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊖	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	8 30	16 14	18 ♒ 27	8 ♏ 4	17 ♌ 50	10 ♐ 47	1 ♉ 2	9 ♎ 4	om 24
7	8 40	16 24	18 38	8 32	20 28	16 32	10 38	29 27	0 0
13	8 46	16 30	18 49	8 59	23 6	22 15	20 15	11 ♏ 34	11 a 31
19	8 50	16 34	19 1	9 27	25 44	27 59	29 54	4 ♐ 27	11 6
25	8 50	16 34	19 12	9 54	28 21	3 ♑ 42	9 ♊ 33	20 57	10 41

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M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1				14 ♊ 9	1 s 14	1 n 13	1 n 14	0 n 6	4 s 27
7	All	Day	light.	13 50	1 15	1 12	1 12	0 20	4 50
13				13 31	1 16	1 10	1 11	0 34	4 17
19				13 12	1 17	1 8	1 9	0 46	3 7
25	0 45	11 7	3 20	12 53	1 18	1 6	1 7	0 58	1 40

M D	☉'s longitude	☾'s long.	☾'s latitude	♄'s long.	♃'s long.	♂'s long.	♀'s long.	☿'s long.
1	♋ 9 25 46	27 ♍ 33	5 n 7	23 ♒ 30	0 ♏ 15	11 ♌ 52	12 ♋ 4	10 ♋ 45
2	10 22 58	11 ♎ 47	4 41	23 28	0 16	12 29	2 17	10 9
3	11 20 10	25 54	3 58	23 25	0 17	13 6	3 31	9 32
4	12 17 21	9 ♏ 52	3 2	23 22	0 18	13 43	4 45	8 56
5	13 14 32	23 40	1 56	23 19	0 19	14 20	5 58	8 22
6	14 11 43	7 ♐ 16	0 44	23 16	0 20	14 57	7 12	7 51
F 7	15 8 54	20 41	0 s 30	23 13	0 22	15 35	8 26	7 22
8	16 6 5	3 ♑ 54	1 40	23 10	0 24	16 12	9 39	6 57
9	17 3 16	16 53	2 44	23 7	0 26	16 49	10 53	6 36
10	18 0 28	29 38	3 39	23 4	0 28	17 27	12 7	6 18
11	18 57 39	12 ♒ 11	4 21	23 1	0 31	18 4	13 20	6 5
12	19 54 51	24 30	4 51	22 58	0 33	18 41	14 34	5 58
13	20 52 4	6 ♓ 39	5 7	22 54	0 36	19 19	15 48	5 D56
F 14	21 49 17	18 39	5 10	22 51	0 39	19 56	17 1	5 59
15	22 46 31	0 ♈ 33	4 59	22 47	0 43	20 33	18 15	6 7
16	23 43 45	12 25	4 35	22 44	0 46	21 11	19 29	6 21
17	24 41 1	24 20	3 59	22 40	0 50	21 48	20 43	6 41
18	25 38 16	6 ♉ 23	3 13	22 36	0 53	22 25	21 57	7 6
19	26 35 33	18 38	2 17	22 32	0 57	23 3	23 11	7 36
20	27 32 51	1 ♊ 10	1 13	22 28	1 1	23 40	24 24	8 12
F 21	28 30 10	14 4	0 3	22 24	1 5	24 18	25 38	8 55
22	29 27 29	27 21	1 n 8	22 20	1 9	24 55	26 52	9 44
23	♌ 0 24 49	11 ♋ 3	2 17	22 16	1 14	25 33	28 6	10 38
24	1 22 10	25 9	3 20	22 12	1 18	26 10	29 20	11 37
25	2 19 32	9 ♌ 34	4 12	22 8	1 23	26 48	0 ♌ 34	12 41
26	3 16 54	24 13	4 48	22 4	1 28	27 25	1 48	13 50
27	4 14 17	8 ♍ 59	5 5	22 0	1 33	28 3	3 2	15 4
F 28	5 11 41	23 48	5 2	21 56	1 39	28 41	4 16	16 24
29	6 9 5	8 ♎ 18	4 40	21 52	1 44	29 19	5 30	17 48
30	7 6 30	22 40	4 0	21 48	1 49	29 57	6 44	19 17
31	8 3 55	6 ♏ 46	3 6	21 44	1 54	0 ♍ 35	7 58	20 52

M D	♃ sets	♂ sets	♀ rises	☿ rises	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	0 m 26	10 a 1	3 m 6	4 m 24	14 s 52	10 s 26	18 n 26	23 n 35	18 n 36
7	0 2	9 45	3 13	3 40	14 59	10 30	17 20	23 32	18 27
13	11 a 33	9 28	3 25	3 7	15 6	10 36	16 10	23 5	19 3
19	11 9	9 11	3 38	2 44	15 14	10 45	14 56	22 14	20 8
25	10 44	8 57	3 54	2 36	15 23	10 56	13 38	20 59	21 12

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THE LUNATIONS.

First quarter the 3d day, at 28 minutes past 9 morning.
Full Moon the 9th day, at 21 minutes past 12 noon.
Last quarter the 17th day, at 46 minutes past 12 noon.
New Moon the 24th day, at 9 minutes past 11 afternoon.
First quarter the 31st day, at 25 minutes past 2 afternoon.

☽ D	Holidays & Events	☉ rises	☉ sets	☉'s declin.	☾'s decln	☾ rises & sets	☾ south	Clock bef. ☉
1		3 45	8 15	23 n 8	5 n 38	11 a 54	5 a 29	3′ 24″
2	Visit. V. M. Oxf. Act. Cam. C			23 3	0 s 21	morn.	6 18	3 35
3	Term e. D g Days beg.		8 14	22 59	6 19	0 11	7 7	3 46
4	Trans. Mart.	3 47	8 13	22 54	11 54	0 29	7 57	3 57
5	Cam. T. ends.	3 48	8 12	22 48	16 50	0 49	8 48	4 8
6	Oxf. T. ends. O Midf.		8 12	22 42	20 50	1 10	9 42	4 18
7	S. after Thos. a Bec.		8 11	22 36	23 38	1 42	10 37	4 27
8		3 50	8 10	22 30	25 5	2 21	11 33	4 37
9		3 51	8 9	22 23	25 7	rises	morn.	4 46
10		3 52	8 8	22 15	23 48	9 a 26	0 28	4 54
11		3 53	8 7	22 7	21 20	9 52	1 20	5 3
12		3 53	8 7	21 59	17 56	10 15	2 9	5 10
13		3 54	8 6	21 51	13 50	10 31	2 55	5 18
14	S. af. Tho.	3 55	8 5	21 42	9 1	10 48	3 38	5 25
15	Swithin.	3 57	8 3	21 32	4 21	11 2	4 19	5 31
16		3 59	8 2	21 23	0 n 42	11 15	4 5	5 37
17		3 59	8 1	21 13	5 44	11 29	5 3	5 42
18		4 0	8 0	21 2	10 37	11 46	6 20	5 47
19		4 1	7 59	20 51	15 12	morn.	7 4	5 52
20	Margaret.	4 2	7 5	20 40	19 14	0 7	7 51	5 56
21	S. af. Tho.	4 4	7 56	20 29	22 27	0 32	8 42	5 59
22	Magdalen.	4 5	7 55	20 17	24 32	1 6	9 37	6 2
23		4 6	7 54	20 5	25 17	1 52	10 35	6 4
24		4 7	7 53	19 53	24 25	sets	11 36	6 6
25	St. James.	4 9	7 51	19 40	21 55	8 a 46	0 a 36	6 7
26	St. Anne.	4 10	7 50	19 27	17 50	9 14	1 34	6 7
27		4 12	7 48	19 13	12 55	9 38	2 29	6 7
28	S. af. Ann.	4 13	7 47	18 59	7 8	9 57	3 21	6 7
29		4 15	7 45	18 45	0 59	10 14	4 12	6 5
30		4 16	7 44	18 31	5 s 7	10 31	5 1	6 3
31		4 18	7 42	18 16	10 51	10 51	5 51	6 1

M D	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊕	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	0 4	16 30	19♒23	10♏21	0♏58	9♑26	19♊14	7♑48	10 a 17
7	0 12	16 22	19 34	10 49	3 35	15 9	28 55	25 47	9 52
13	0 22	16 12	19 46	11 16	6 13	20 52	8♋38	15♒50	9 26
19	0 36	15 58	19 57	11 44	8 50	26 36	18 21	9♓4	9 1
25	0 52	15 42	20 8	12 12	11 27	2♒20	28 6	6♈48	8 36

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M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1				14 ♊ 9	1 s 14	1 n 13	1 n 14	0 n 6	4 s 27
7				13 50	1 15	1 12	1 12	0 20	4 50
13	All	Day	light.	13 31	1 16	1 10	1 11	0 34	4 17
19				13 12	1 17	1 8	1 9	0 46	3 7
25	0 45	11 7	3 20	12 53	1 18	1 6	1 7	0 58	1 40

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

M D	♃ sets	♂ sets	♀ rises	☿ rises	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	0 m 26	10 a 1	3 m 6	4 m 24	14 s 52	10 s 26	18 n 26	23 n 35	18 n 36
7	0 2	9 45	3 13	3 40	14 59	10 30	17 20	23 32	18 27
13	11 a 33	9 28	3 25	3 7	15 6	10 36	16 10	23 5	19 3
19	11 9	9 11	3 38	2 44	15 14	10 45	14 56	22 14	20 8
25	10 44	8 57	3 54	2 36	15 23	10 56	13 38	20 59	21 12

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THE LUNATIONS.

Full Moon the 8th day, at 18 minutes past 1 morning.
Last quarter the 16th day, at 58 minutes past 4 morning.
New Moon the 23d day, at 6 minutes past 7 morning.
First quarter the 29th day, at 43 minutes past 9 afternoon.

M D	Sundays & other remark. days.	☉ rises	☉ sets.	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock bef. ☉
1	Lammas D.	4 19	7 41	18 n 1	15 s 57	11 a 13	6 a 43	5′ 57″
2		4 21	7 39	17 46	20 8	11 41	7 36	5 54
3		4 22	7 38	17 30	23 10	morn.	8 30	5 49
F	9 S. af. Trin.	4 24	7 36	17 14	24 55	0 17	9 25	5 44
5		4 26	7 34	16 58	25 17	1 4	10 20	5 38
6	Transfiguration	4 27	7 33	16 42	24 19	2 3	11 13	5 32
7	Name of Jesus.	4 29	7 31	16 25	22 9	3 9	morn.	5 25
8		4 31	7 29	16 8	19 0	rises	0 3	5 18
9		4 32	7 28	15 51	15 3	8 a 38	0 50	5 10
10	St. Lawrence	4 34	7 26	15 34	10 33	8 54	1 34	5 1
T	9 S. af. Trin. D. D. end.		7 24	15 16	5 43	9 8	2 16	4 52
12	Pr. of Wales b.	4 37	7 23	14 58	0 41	9 22	2 57	4 42
13	Old Lammas.	4 39	7 21	14 40	4 n 22	9 37	3 37	4 32
14		4 41	7 19	14 21	9 18	9 52	4 18	4 21
15	Assumption.	4 43	7 17	14 3	13 56	10 10	5 0	4 10
16	D. of York b.	4 45	7 15	13 44	18 6	10 32	5 45	3 58
17		4 46	7 14	13 25	21 34	11 1	6 33	3 46
T	10 S. af. Trin.	4 48	7 12	13 5	24 4	11 40	7 25	3 33
19		4 50	7 10	12 46	25 19	morn.	8 21	3 20
20		4 52	7 8	12 26	25 5	0 35	9 20	3 6
21	D. of Clar. b.	4 54	7 6	12 6	23 13	1 46	10 21	2 52
22		4 55	7 5	11 46	19 47	3 6	11 21	2 37
23		4 57	7 3	11 26	15 1	sets	0 a 19	2 22
24	St. Bartholom.	4 59	7 1	11 5	9 16	8 a 4	1 14	2 7
F	11 S. af. Trin	5 1	6 59	10 45	2 59	8 22	2 7	1 51
26		5 3	6 57	10 24	3 s 24	8 40	2 59	1 34
27		5 5	6 55	10 3	9 29	8 59	3 51	1 17
28	St. Augustine.	5 7	6 53	9 42	14 57	9 21	4 43	1 0
29	J. Bap. beh.	5 9	6 51	9 20	19 27	9 49	5 37	0 43
30		5 10	6 50	8 59	22 48	10 23	6 32	0 25
31		5 12	6 48	8 37	24 50	11 5	7 27	0 7

M D	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ rises
1	1 12	15 22	20♒21	12♏44	14♑31	9♒ 1	9♌28	15♉47	8 a 8
7	1 32	15 2	20 33	13 11	17 9	14 46	19 13	23♊13	7 44
13	1 52	14 42	20 44	13 39	19 48	20 32	28 58	29♋45	7 21
19	2 14	14 20	20 55	14 7	22 27	26 18	8♍43	1♍31	6 58
25	2 36	13 58	21 6	14 34	25 6	2♐ 5	18 27	27 46	6 35

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M D	Daylig. begins	Daylig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	1 23	10 34	2 58	12♊31	1 s 19	1 n 5	1 n 5	1 n 9	0 s 1
7	1 47	10 13	2 46	12 12	1 20	1 4	1 3	1 16	1 n 4
13	2 9	9 51	2 34	11 53	1 20	1 2	1 1	1 21	1 39
19	2 29	9 31	2 25	11 34	1 20	1 1	0 58	1 25	1 45
25	2 47	9 13	2 18	11 15	1 21	1 0	0 56	1 25	1 29

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

M D	♃ sets	♂ sets	♀ sets	☿ rises	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	10 a 20	8 a 35	7 a 49	2 m 51	15 s 33	11 s 10	12 n 4	19 n 5	21 n 34
7	9 59	8 19	7 44	3 22	15 42	11 24	10 40	17 5	20 26
13	9 38	8 2	7 38	3 56	15 51	11 40	9 13	14 48	17 46
19	9 16	7 46	7 29	sets	16 0	11 57	7 45	12 17	13 57
25	8 55	30	7 21	7 a 22	16 9	12 16	6 14	9 34	9 42

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THE LUNATIONS.

Full Moon the 6th day, at 22 minutes past 4 afternoon.
Last quarter the 14th day, at 47 minutes past 7 afternoon.
New Moon the 21st day, at 3 minutes past 3 afternoon.
First quarter the 28th day, at 25 minutes past 8 morning.

	Saints' Days.				☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock aft. ☉
1	[illegible]	Giles.	6	46	8 n 15	25 s 30	12 a 0	8 a 22	0 12
2	Lond. bt. 1666.	5 16	6	44	7 54	24 48	morn.	9 15	0 31
3		5 18	6	42	7 31	22 54	1 5	10 6	0 50
4		5 20	6	40	7 9	19 57	2 14	10 54	1 10
5		5 22	6	38	6 47	16 11	3 26	11 39	1 29
6		5 24	6	36	6 25	11 47	rises	morn.	1 49
7	Enurchus.	5 26	6	34	6 2	6 59	7 a 22	0 21	2 10
8	[illegible] Nat.	5 28	6	32	5 40	1 57	7 36	1 2	2 30
9	[of V. M.	5 30	6	30	5 17	3 n 9	7 50	1 43	2 50
10		5 32	6	28	4 54	8 9	8 5	2 23	3 11
11		5 34	6	26	4 32	12 53	8 22	3 5	3 32
12		5 36	6	24	4 9	17 10	8 41	3 48	3 53
13		5 37	6	23	3 46	20 49	9 7	4 34	4 14
14	Holy Cross.	5 39	6	21	3 23	23 36	9 42	5 24	4 35
15	[illegible]	5 41	6	19	2 59	25 17	10 29	6 17	4 56
16		5 43	6	17	2 36	25 35	11 29	7 14	5 17
17	Lambert.	5 45	6	15	2 13	24 22	morn.	8 12	5 38
18	Ember Week.	5 47	6	13	1 50	21 37	0 44	9 12	5 59
19		5 49	6	11	1 26	17 24	2 9	10 10	6 20
20		5 51	6	9	1 3	12 0	3 37	11 6	6 40
21	St. Matthew.	5 53	6	7	0 40	5 48	sets	0 a 0	7 1
22	[illegible] Trin. K.	5 55	6	5	0 16	0 s 47	6 a 53	0 54	7 22
23	[Gosmer.	5 57	6	3	0 s 7	7 16	7 12	1 48	7 43
24		5 59	6	1	0 31	13 14	7 33	2 41	8 3
25		6 1	5	59	0 54	18 18	7 58	3 37	8 24
26	Cyprian. Old	6 3	5	57	1 17	22 10	8 28	4 33	8 44
27	[Holy Rood.	6 5	5	55	1 41	24 40	9 10	5 30	9 4
28		6 7	5	53	2 4	25 42	10 1	6 26	9 24
29	[illegible] Trin. St. Mich.		5	51	2 28	25 19	11 5	7 21	9 43
30	St. Jerome.		5	49	2 51	23 40	morn.	8 13	10 3

M D	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ♁	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	3 2	13 32	21 ♒ 19	15 ♏ 7	28 ♏ 13	8 ♓ 52	29 ♏ 48	23 ♎ 4	3 m 27
7	3 26	13 8	21 30	15 34	0 ♎ 53	14 41	9 ♎ 30	11 ♏ 48	3 3
13	3 48	12 46	21 41	16 2	3 35	20 31	19 10	28 59	2 39
19	4 12	12 22	21 53	16 30	6 17	26 23	28 49	15 ♐ 31	2 15
25	4 36	11 58	22 5	16 57	9 c	2 ♈ 16	8 ♏ 27	2 ♑ 10	1 53

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M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	3 7	8 53	2 11	10 ♊ 52	1 s 21	0 n 58	0 n 53	1 n 24	0 n 52
7	3 24	8 36	2 6	10 33	1 21	0 57	0 51	1 19	0 11
13	3 37	8 23	2 4	10 14	1 21	0 56	0 48	1 13	0 s 35
19	3 52	8 8	2 1	9 55	1 21	0 55	0 46	1 5	1 22
25	4 5	7 55	2 0	9 36	1 21	0 54	0 43	0 54	2 6

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

M D	♃ sets	♂ sets	♀ sets	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	8 a 32	7 a 12	7 a 10	7 a 19	16 s 19	12 s 39	4 n 26	6 n 13	4 n 8
7	8 12	6 56	7 0	7 4	16 26	13 0	2 52	3 12	0 s 24
13	7 53	6 41	6 50	6 53	16 33	13 21	1 17	0 8	4 44
19	7 34	6 26	6 40	6 41	16 39	13 43	0 s 18	2 s 56	8 45
25	7 14	6 10	6 30	6 28	16 44	14 5	1 53	5 59	12 19

THE LUNATIONS.

Full Moon the 6th day, at 19 minutes past 9 morning.
Last quarter the 14th day, at 35 minutes past 8 morning.
New Moon the 20th day, at 56 minutes past 11 afternoon.
First quarter the 27th day, at 58 minutes past 10 afternoon.

M D	Sundays & other remarkable days.	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock aft. ☉
1	Remigius.	6 13	5 47	3 s 14	20 s 55	o m 14	9 a 1	10′ 27″
2		6 15	5 45	3 38	17 18	1 24	9 47	10 41
3		6 17	5 43	4 1	13 2	2 31	10 30	10 59
4		6 19	5 41	4 24	8 17	3 45	11 11	11 18
5		6 21	5 39	4 47	3 15	4 55	11 51	11 36
F	17 S. aft. Trin.	6 23	5 37	5 10	1 n 53	rises	morn.	11 53
7	[Faith.	6 24	5 36	5 33	6 59	6 a 21	0 31	12 10
8		6 26	5 34	5 56	11 51	6 35	1 12	12 27
9	St. Denys.	6 28	5 32	6 19	16 19	6 53	1 55	12 43
10	Oxf.&Cam.T.b.	6 30	5 30	6 42	20 10	7 18	2 40	12 59
11	Old Michael.	6 32	5 28	7 5	23 11	7 49	3 28	13 14
12		6 34	5 26	7 27	25 10	8 30	4 20	13 29
F	18 S. aft. Trin.	6 36	5 24	7 50	25 52	9 24	5 14	13 43
14	[Transf. Ed. Conf.		5 22	8 12	25 10	10 30	6 10	13 57
15		6 40	5 20	8 35	23 0	11 49	7 7	14 11
16		6 42	5 18	8 57	19 24	morn.	8 4	14 23
17	Etheldred.	6 44	5 16	9 19	14 34	1 14	8 59	14 35
18	St. Luke.	6 46	5 14	9 41	8 46	2 41	9 52	14 46
19		6 48	5 12	10 3	2 21	4 10	10 45	14 57
F	19 S. aft. Trin.	6 50	5 10	10 24	4 s 17	sets	11 38	15 7
21		6 52	5 8	10 46	10 40	5 a 39	0 a 32	15 17
22		6 53	5 7	11 7	16 20	6 2	1 28	15 26
23		6 55	5 5	11 28	20 55	6 30	2 25	15 34
24	[Crisp.	6 57	5 3	11 49	24 5	7 8	3 24	15 41
25	K. Geo. III. ac.	6 59	5 1	12 10	25 43	7 58	4 23	15 48
26	K. Geo. III. pro.	7 1	4 59	12 31	25 48	8 58	5 20	15 54
F	20 S. aft. Trin.	7 3	4 57	12 51	24 28	10 6	6 13	15 59
28	St. Simon & Jude.	7 5	4 55	13 11	21 57	11 18	7 3	16 4
29		7 7	4 53	13 31	18 30	morn.	7 50	16 8
30		7 8	4 52	13 51	14 21	0 29	8 34	16 11
31		7 10	4 50	14 11	9 41	1 40	9 15	16 14

M D	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ⊕	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	5 0	11 34	22 ♒ 15	17 ♏ 25	11 ♎ 44	8 ♈ 10	18 ♏ 2	19 ♑ 41	1 m 30
7	5 22	11 12	22 22	17 52	14 29	14 5	27 36	8 ♒ 55	1 7
13	5 46	10 48	22 38	18 20	17 15	20 1	7 ♐ 9	0 ♓ 58	0 44
19	6 10	10 24	22 19	18 48	20 2	25 59	16 40	27 4	0 22
25	6 32	10 2	23 0	19 16	22 50	1 ♉ 58	26 11	28 ♈ 19	11 a 59

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M D	Day lig. begins	Day lig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	4 18	7 42	1 59	9 ♊ 17	1 s 21	0 n 54	0 n 41	0 n 41	2 s 46
7	4 31	7 29	1 58	8 58	1 21	0 53	0 38	0 28	3 13
13	4 43	7 17	1 57	8 39	1 20	0 52	0 35	0 13	3 18
19	4 55	7 5	1 57	8 20	1 20	0 51	0 32	0 s 3	2 40
25	5 6	6 54	1 58	8 1	1 20	0 51	0 29	0 19	1 3

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

M D	♃ sets	♂ sets	♀ sets	☿ sets	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	6 a 55	5 a 55	6 a 21	6 a 15	16 s 48	14 s 28	3 s 29	8 s 58	15 s 26
7	6 36	5 40	6 12	6 0	16 51	14 51	5 4	11 49	17 30
13	6 17	5 24	6 3	5 43	16 53	15 14	6 38	14 31	18 26
19	5 57	5 9	5 55	5 21	16 54	15 37	8 11	17 0	17 21
25	5 37	4 53	5 49	4 57	16 54	16 0	9 43	19 14	13 45

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THE LUNATIONS.

Full Moon the 5th day, at 18 minutes past 3 morning.
Last quarter the 12th day, at 8 minutes past 7 afternoon.
New Moon the 19th day, at 23 minutes past 10 morning.
First quarter the 26th day, at 6 minutes past 5 afternoon.

M D	Sundays & other remarkable days.	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south	Clock aft. ☉
1	All Saints.	7 12	4 48	14 s 30	4 s 41	2m 50	9 a 55	16′ 15″
2	D. of Kent b.	All So.	4 46	14 49	0 n 28	3 57	10 35	16 16
F	21 S. af. Trin. Prs. So. b.		4 44	15 8	5 37	5 5	11 15	16 16
4	K. Wm. landed.	7 17	4 43	15 27	10 37	6 13	11 57	16 15
5	Powder Plot.	7 19	4 41	15 45	15 16	rises	morn.	16 14
6	Leonard. Mic. T. beg.		4 39	16 3	19 21	5 a 24	0 41	16 11
7		7 23	4 37	16 21	22 39	5 52	1 28	16 8
8	Prs. Aug. So b.	7 24	4 36	16 39	24 55	6 30	2 19	16 4
9	Ld. Mayor's D.	7 26	4 34	16 56	25 58	7 18	3 12	15 59
10	22 S. af. Trin.	7 28	4 32	17 13	25 37	8 21	4 7	15 53
11	St. Martin.	7 30	4 30	17 29	23 51	9 34	5 3	15 46
12	Cam. T. div. m.	7 31	4 29	17 46	20 43	10 53	5 58	15 38
13	Britius.	7 33	4 27	18 2	16 21	morn.	6 51	15 30
14		7 34	4 26	18 18	11 1	0 17	7 43	15 21
15	Machutus.	7 36	4 24	18 33	4 58	1 41	8 34	15 10
16		7 37	4 23	18 48	1 s 27	3 6	9 24	14 59
17	23 S. af. Trin.	Hugh Bp.	4 21	19 3	7 52	4 33	10 16	14 47
18		7 40	4 20	19 18	13 51	5 57	11 9	14 35
19		7 42	4 18	19 32	19 0	sets	0 a 5	14 21
20	Edm. K. & M.	7 43	4 17	19 45	22 54	4 a 57	1 3	14 6
21		7 45	4 15	19 59	25 17	5 42	2 3	13 51
22	Cecilia.	7 46	4 14	20 12	26 1	6 37	3 2	13 35
23	Clem. O. Mart.	7 47	4 13	20 24	25 12	7 43	3 59	13 18
24	24 S. af. Trin.	7 49	4 11	20 37	23 2	8 56	4 52	13 1
25	Catherine.	7 50	4 10	20 49	19 48	10 8	5 40	12 42
26		7 51	4 9	21 0	15 46	11 21	6 25	12 23
27		7 52	4 8	21 11	11 11	morn.	7 8	12 4
28	Mich. T. ends.	7 53	4 7	21 22	6 14	0 31	7 48	11 43
29		7 55	4 5	21 32	1 6	1 39	8 27	11 22
30	St. Andrew.	7 56	4 4	21 42	4 n 5	2 46	9 7	11 0

M D	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long. ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	6 58	9 36	23♒14	19♏48	26♎ 8	8♉59	7♑15	10♊41	11 a 28
7	7 20	9 14	23 26	20 15	28 59	14 59	16 45	18♋ 5	11 6
13	7 40	8 54	23 37	20 43	1♏52	21 2	26 14	21♌39	10 43
19	7 58	8 36	23 48	21 11	4 46	27 5	5♒43	19♍39	10 20
25	8 14	8 20	24 0	21 39	7 42	3♊10	15 12	12♎52	9 56

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M D	Daylig. begins	Daylig. ends	Durat. twilig.	Pl. ☾'s node	♄'s latitude	♃'s latitude	♂'s latitude	♀'s latitude	☿'s latitude
1	5 17	6 43	1 59	7 ♊ 39	1 s 19	0 n 50	0 n 26	0 s 37	1 n 12
7	5 25	6 35	2 2	7 19	1 19	0 50	0 23	0 53	2 11
13	5 34	6 26	2 3	7 0	1 18	0 50	0 19	1 7	2 16
19	5 41	6 19	2 5	6 41	1 18	0 49	0 16	1 21	1 52
25	5 48	6 12	2 7	6 22	1 18	0 49	0 13	1 32	1 14

M D	☉'s longitude	☾'s long.	☾'s latitude	♄'s long.	♃'s long.	♂'s long.	♀'s long.	☿'s long.
1	♏ 8 57 56	29 ♓ 18	4 s 49	17 ♒ 31	18 ♏ 7	♏ 2	3 ♐ 13	26 ♎ 29
2	9 58 4	11 ♈ 9	4 18	17 32	18 20	1 43	4 27	26 1
3	10 58 14	23 2	3 35	17 33	18 33	2 24	5 41	25 46
4	11 58 26	4 ♉ 58	2 44	17 34	18 46	3 4	6 56	25 D45
5	12 58 39	17 0	1 44	17 36	18 59	3 45	8 10	25 54
6	13 58 54	29 9	0 39	17 37	19 12	4 26	9 24	26 12
7	14 59 11	11 ♊ 27	0 n 29	17 39	19 26	5 7	10 39	26 40
8	15 59 30	23 55	1 36	17 41	19 39	5 47	11 53	27 17
9	16 59 50	6 ♋ 36	2 40	17 43	19 52	6 28	13 7	28 2
10	18 0 13	19 31	3 37	17 45	20 6	7 9	14 21	28 54
11	19 0 38	2 ♌ 43	4 24	17 47	20 19	7 50	15 36	29 52
12	20 1 5	16 14	4 57	17 49	20 32	8 31	16 50	0 ♏ 56
13	21 1 34	0 ♍ 5	5 14	17 51	20 46	9 12	18 4	2 15
14	22 2 4	14 15	5 13	17 54	20 59	9 53	19 18	3 18
15	23 2 37	28 45	4 53	17 56	21 12	10 34	20 32	4 34
16	24 3 12	13 ♎ 28	4 12	17 59	21 26	11 15	21 47	5 53
17	25 3 48	28 21	3 15	18 1	21 39	11 56	23 1	7 15
18	26 4 26	13 ♏ 14	2 4	18 4	21 52	12 37	24 15	8 38
19	27 5 6	28 0	0 45	18 7	22 6	13 19	25 30	10 3
20	28 5 47	12 ♐ 33	0 s 35	18 10	22 19	14 0	26 44	11 29
21	29 6 29	26 45	1 52	18 13	22 32	14 41	27 58	12 57
22	♐ 0 7 13	10 ♑ 32	2 59	18 16	22 45	15 23	29 12	14 27
23	1 7 58	23 55	3 55	18 19	22 58	16 4	0 ♑ 27	15 57
24	2 8 44	6 ♒ 54	4 37	18 22	23 11	16 45	1 41	17 28
25	3 9 31	19 30	5 4	18 25	23 25	17 27	2 55	19 0
26	4 10 19	1 ♓ 49	5 17	18 28	23 38	18 8	4 9	20 32
27	5 11 9	13 54	5 15	18 31	23 51	18 50	5 23	22 4
28	6 11 59	25 49	4 59	18 34	24 4	19 32	6 37	23 36
29	7 12 50	7 ♈ 41	4 31	18 37	24 17	20 14	7 51	25 8
30	8 13 42	19 32	3 51	18 40	24 30	20 56	9 5	26 41

M D	♃ rises	♂ rises	♀ sets	☿ rises	♄'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	8 m 0	6 m 25	5 a 44	5 m 29	16 s 61	16 s 26	11 s 27	21 s 26	9 s 7
7	7 44	6 24	5 42	5 30	16 48	16 48	12 53	22 56	8 15
13	7 27	6 24	5 41	5 37	16 44	17 10	14 16	24 3	10 5
19	7 10	6 22	5 43	5 58	16 39	17 31	15 36	24 44	13 5
25	6 53	6 21	5 48	6 27	16 33	17 52	16 51	24 58	16 18

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THE LUNATIONS.

Full Moon the 4th day, at 51 minutes past 8 afternoon.
Last quarter the 12th day, at 52 minutes past 3 morning.
New Moon the 18th day, at 37 minutes past 10 afternoon.
First quarter the 26th day, at 52 minutes past 1 afternoon.

Sol D	Holy days & other remarkable days.	☉ rises	☉ sets	☉'s declin.	☾'s declin.	☾ rises & sets	☾ south.	Clock aft. ☉
F 2	Advent Sund.	7 57	4 3	21 s 52	9 n 9	3m 54	9 a 48	10' 38''
		7 58	4 2	22 1	13 56	5 1	10 31	10 15
3		7 59	4 1	22 9	18 15	6 14	11 17	9 51
4		8 0	4 0	22 17	21 50	rises	morn.	9 27
5		8 1	3 59	22 25	24 57	4 a 20	0 6	9 2
6	Nicholas.	8 1	3 59	22 33	25 50	5 6	0 59	8 37
7		8 2	3 58	22 39	25 50	6 4	1 54	8 11
F 8	2 S. in Adv.	8 3	3 57	22 46	24 22	7 15	2 50	7 44
9	[Con. V. M	8 4	3 56	22 52	21 31	8 33	3 46	7 18
10		8 4	3 56	22 57	17 26	9 55	4 39	6 50
11		8 5	3 55	23 2	12 23	11 18	5 30	6 23
12		8 6	3 54	23 7	6 38	morn.	6 20	5 54
13	Lucy.	8 6	3 54	23 11	0 28	0 40	7 8	5 26
14		8 6	3 54	23 15	5 s 46	2 3	7 57	4 57
F 15	3 S. in Advent	8 7	3 53	23 18	11 45	3 28	8 47	4 28
16	O Sap. Ca. T. e.	8 7	3 53	23 21	17 7	4 54	9 40	3 59
17	Oxf. T. ends.	8 7	3 53	23 23	21 28	6 18	10 35	3 29
18	Ember Week.	8 8	3 52	23 25	24 28	sets	11 34	2 59
19		8 8	3 52	23 27	25 54	4 a 10	0 a 33	2 29
20		8 8	3 52	23 27	25 42	5 12	1 31	1 59
21	S. Tho. Sh. D.	8 8	3 52	23 28	24 0	6 21	2 27	1 29
F 22	4 S. in Advent.	8 8	3 52	23 28	21 5	7 36	3 19	0 59
23		8 8	3 52	23 27	17 14	8 50	4 6	0 29
24		8 8	3 52	23 26	12 44	10 2	4 50	0 bef. 2
25	Christmas Day.	8 8	3 52	23 25	7 50	11 11	5 31	0 32
26	St. Stephen.	8 7	3 53	23 23	2 43	morn.	6 11	1 2
27	St. John.	8 7	3 53	23 20	2 n 28	0 19	6 50	1 31
28	Innocents.	8 7	3 53	23 18	7 35	1 27	7 30	2 1
F 29	1 S. aft. Chr.	8 6	3 54	23 14	12 27	2 35	8 12	2 31
30		8 6	3 54	23 10	16 55	3 45	8 56	2 50
31	Silvester.	8 5	3 55	23 6	20 45	4 57	9 44	3 28

M D	Day decreas.	Length of day	Helioc. long. ♄	Helioc. long ♃	Helioc. long. ♂	Helioc. long. ☉	Helioc. long. ♀	Helioc. long. ☿	♄ sets
1	8 28	8 6	24♒11	22♏7	10♏39	9♊15	24♒42	2♏46	9 a 33
7	8 38	7 56	24 22	22 35	13 38	15 20	4♓12	20 36	9 9
13	8 46	7 48	24 33	23 2	16 38	21 26	13 44	7♐23	8 45
19	8 50	7 44	24 45	23 30	19 41	27 33	23 15	23 53	8 21
25	8 50	7 44	24 56	23 58	22 45	3♋40	2♈48	10♑53	7 58

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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 8	6 ♊ 3	1 s 17	0 n 49	0 n 9	1 s 42	0 n 31
7	5 57	6 3	2 10	5 44	1 17	0 49	0 6	1 49	0 s 11
13	5 59	6 1	2 11	5 25	1 17	0 48	0 2	1 54	0 49
19	6 1	5 59	2 11	5 6	1 16	0 48	0 s 2	1 56	1 23
25	6 1	5 59	2 11	4 47	1 16	0 48	0 6	1 54	1 49

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

M D	♃ rises	♂ rises	☿ sets	♀ rises	☿'s declin.	♃'s declin.	♂'s declin.	♀'s declin.	☿'s declin.
1	6 m 34	6 m 19	5 a 57	6 m 50	16 s 26	18 s 11	18 s 3	24 s 45	19 s 17
7	6 16	6 16	6 9	7 22	16 18	18 30	19 9	24 6	21 46
13	5 55	6 14	6 22	7 52	16 9	18 48	20 9	23 0	23 38
19	5 35	6 11	6 37	8 12	15 59	19 5	21 3	21 31	24 48
25	5 16	6 8	6 52	8 28	15 48	19 21	21 51	19 39	25 8

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The Georgian or Herschel Planet.

Dates. Months	Days	Heliocentric longitude	Heliocentric latitude	Geocentric longitude	Geocentric latitude	Declination.	Southing.
		° ′	° ′	° ′	° ′	° ′	h m
January	1	7 ♐ 34	0 n 4	9 ♐ 5	0 n 4	21 s 46	21 42
	11	7 41	0 4	9 37	0 4	21 51	21 1
	21	7 48	0 4	10 5	0 4	21 55	20 20
February	1	7 56	0 4	10 32	0 4	21 59	19 36
	11	8 3	0 4	10 52	0 4	22 2	18 58
	21	8 10	0 4	11 7	0 4	22 4	18 20
March	1	8 17	0 4	11 16	0 4	22 5	17 47
	11	8 24	0 4	11 21	0 4	22 6	17 10
	21	8 31	0 4	11 21	0 4	22 6	16 34
April	1	8 39	0 3	11 15	0 4	22 6	15 53
	11	8 46	0 3	11 4	0 3	22 4	15 16
	21	8 53	0 3	10 49	0 3	22 2	14 38
May	1	9 1	0 3	10 31	0 3	22 0	14 0
	11	9 8	0 3	10 9	0 3	21 56	13 19
	21	9 15	0 3	9 45	0 3	21 54	12 38
June	1	9 23	0 3	9 18	0 3	21 49	11 52
	11	9 30	0 3	8 54	0 3	21 45	11 9
	21	9 37	0 3	8 30	0 3	21 42	10 26
July	1	9 45	0 3	8 9	0 3	21 39	9 43
	11	9 52	0 2	7 51	0 3	21 36	9 1
	21	9 59	0 2	7 36	0 2	21 34	8 19
August	1	10 7	0 2	7 25	0 2	21 32	7 35
	11	10 14	0 2	7 20	0 2	21 31	6 57
	21	10 21	0 2	7 21	0 2	21 31	6 20
September	1	10 29	0 2	7 27	0 2	21 33	5 40
	11	10 36	0 2	7 38	0 2	21 35	5 5
	21	10 43	0 2	7 54	0 2	21 37	4 30
October	1	10 51	0 2	8 14	0 2	21 41	3 55
	11	10 58	0 2	8 39	0 2	21 45	3 21
	21	11 5	0 2	9 6	0 2	21 49	2 45
November	1	11 13	0 1	9 41	0 1	21 54	2 6
	11	11 20	0 1	10 15	0 1	21 59	1 28
	21	11 27	0 1	10 51	0 1	22 5	0 49
December	1	11 34	0 1	11 27	0 1	22 10	0 9
	11	11 41	0 1	12 4	0 1	22 15	23 24
	21	11 48	0 1	12 40	0 1	22 20	22 43
	31	11 56	0 1	13 15	0 1	22 24	22 1

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Time of HIGH WATER at London in the Morning and Afternoon of every day in the year.

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

This Table may serve the following Places, by adding

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

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Time of High Water at London in the Morning and Afternoon of every day in the year.

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

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

Subtracting	h	m
For Leigh, Maes, *and* Gouries Gut — — — —	0	5
Gravesend, Rochester, *and* Rammekins — — —	1	20
Buoy of the Nore *and* Flushing — — — — —	1	30
Portsmouth, Ostend, Shoe-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

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The Eclipses of Jupiter's - - - - -

January

Immersions.			
*2	16	32	33
4	11	0	52
6	5	29	18
7	23	57	36
*9	18	26	1
11	12	54	18
13	7	22	44
15	1	51	1
16	20	19	27
18*	14	47	44
20	9	16	10
22	3	44	26
23	22	12	53
25*	16	41	9
27	11	9	35
29	5	37	52
31	0	6	19

February

Immersions.			
d	h	m	s.
*1	18	34	35
3	13	3	2
5	7	31	19
7	1	59	45
8	20	28	2
10*	14	56	28
12	9	24	46
14	3	53	12
15	22	21	30
17*	16	49	57
19	11	18	14
21	5	46	42
23	0	15	0
24	18	43	28
26*	13	11	47
28	7	40	15

March

Immersions.			
1	2	8	34
2	20	37	2
*4	15	5	20
6	9	33	50
8	4	2	10
9	22	30	39
11*	16	59	0
13*	11	27	28
15	5	55	50
17	0	24	19
18	18	52	41
20*	13	21	12
22	7	49	34
24	2	18	5
25	20	46	28
27*	15	15	0
29	9	43	24
31	4	11	56

April.

Immersions.			
1	22	40	21
3	17	8	52
*5	11	37	19
7	6	5	52
9	0	34	18
10	19	2	52
12*	13	31	19
14*	7	59	53
16	2	28	21
17	20	56	56
19*	15	25	24
21*	9	54	0
23	4	22	30
24	22	51	6
Emersions.			
26	19	27	22
28*	13	53	58
30*	8	24	28

May

Emersions.			
2	2	53	5
3	21	21	35
5	15	50	13
*7	10	18	44
9	4	47	22
10	23	15	55
12	17	44	34
14*	12	13	7
16	6	41	45
18	1	10	20
19	19	38	58
21*	14	7	34
23	8	36	13
25	3	4	49
26	21	33	28
28	16	2	5
30*	10	30	45

June

Emersions.			
d	h	m	s
1	4	59	22
2	23	28	2
4	17	56	40
*6	12	25	21
8	6	53	59
10	1	22	40
11	19	51	18
13	14	20	0
15	8	48	38
17	3	17	21
18	21	46	0
20	16	14	42
22*	10	43	21
24	5	12	3
25	23	40	42
27	18	9	25
29	12	38	4

July

Emersions.			
1	7	6	46
3	1	35	28
4	20	4	9
6	14	32	48
8	9	1	30
10	3	30	10
11	21	58	53
13	16	27	32
15	10	56	15
17	5	24	54
18	23	53	37
20	18	22	16
22	12	50	59
24	7	19	38
26	1	48	21
27	20	16	59
29	14	45	42
31*	9	14	20

August.

Emersions.			
d	h	m	s
2	3	43	2
3	22	11	40
5	16	40	23
7	11	9	1
9	5	37	43
11	0	6	20
12	18	35	1
14	13	3	39
16	7	32	20
18	2	0	58
19	20	29	38
21	14	58	15
23	9	26	55
25	3	55	32
26	22	24	12
28	16	52	49
30	11	21	27

— — — first Satellite for 1816; Mean Time.

SEPTEMBER. Emersions.				OCTOBER. Emersions.				NOVEMBER	DECEMBER. Immersions.			
d	h	m	s	d	h	m	s		d	h	m	s
1	5	50	4	1	7	56	11	The ECLIPSES of Jupiter's Satellites are not visible this Month, JUPITER being too near the SUN.	11	0	48	16
3	0	18	43	3	2	24	45		12	19	16	42
4	18	47	18	4	20	53	19		14	13	45	3
6	13	15	56	6	15	21	52		16	8	13	28
8	7	44	32	8	9	50	24		18	2	41	49
10	2	13	10	10	4	18	58		19	21	10	13
11	20	41	46	11	22	47	29		21	15	38	34
13	15	10	23						23	10	6	58
15	9	38	58						25	4	35	19
17	4	7	34						26	23	3	42
18	22	36	9						28	17	32	2
20	17	4	45						30	12	0	26
22	11	33	20									
24	6	1	55									
26	0	30	30									
27	18	59	3									
29	13	27	38									

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

Suppoſe on the 5th day of February 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 9 h. 19 min. 39 ſec.; I find by the Table, that the Time of this Immerſion will happen at the Britiſh Obſervatory, at 7 h. 31 min. 19 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.

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Speculum Phænomenorum - - - - - -

January

1	♂ ☾ ♄ 1¾h.
4	☾ in apoge
8	♂ ☾ ♂ 11½h.
11	♂ ☉ ☿ 9 h.
16	☾ in perige
20	☉ in ♒ 14h. 11m.
21	♂ ☾ ♃ 18¾ h.
24	♂ ☾ ♀ 1h.
24	♂ ☾ ♅ 1¾h.
28	□ ☉ ♃ 13h.
29	♂ ☾ ♄ 8h.
30	♂ ☾ ☿ 9h.
31	☾ in apoge

February

3	□ ☉ ♂ 1h.
4	♂ ☉ ♄ 3½h.
5	♂ ☾ ♂ 22½h.
7	☿ in ♌
10	☿ elong. max.
11	☿ in perihelion
13	☾ in perige
17	☿ stationary
18	♂ ☾ ♃ 3½h.
19	☉ in ♓ 4h. 54m.
20	♂ ☾ ♅ 11h.
24	♂ ☾ ♀ 2h.
25	♂ ☾ ♄ 20½h.
26	♂ ☉ ☿ 5½h.
27	♂ ☾ ☿ 10½h.
28	☾ in apoge

March

1	□ ☉ ♅ 10h.
5	♂ ☾ ♂ 12h.
6	♀ in ♉
9	☿ stationary
13	☾ in perige
16	♂ ☾ ♃ 11¾h.
16	♅ stationary
16	☿ in ♉
18	♂ ☾ ♅ 19½h.
20	☉ in ♈ 5h. 9m.
24	♂ ☾ ♄ 8½h.
25	♂ ☾ ♀ 7¾h.
25	♂ ☾ ☿ 20¼h.
25	☿ elong. max.
26	☾ in apoge.
27	☿ in aphelion

April

3	♂ ☾ ♂ 1½h.
10	☾ in perige
10	♀ in aphelio
12	♂ ☾ ♃ 18¾h.
15	♂ ☾ ♅ 4½h.
19	☉ in ♉ 17h. 42m.
20	♂ ☾ ♄ 20h.
22	☾ in apoge
24	♂ ☾ ♀ 18h.
25	♌ ☉ ♃ 3¾h.
26	♂ ☾ ☿ 4½h.
27	♃ stationary

May

1	♂ ☾ ♂ 14½h.
4	♂ ☉ ☿ 20h.
5	☿ in ♌
8	☾ in perige
9	☿ in perihelion
9	♂ ☾ ♃ 23h.
12	♂ ☾ ♅ 12½h.
14	□ ☉ ♃ 6¼h.
18	♂ ☾ ♄ 6½h.
20	☉ in ♊ 18h. 8m.
20	☾ in apoge
25	♂ ☾ ♀ 2h.
26	☉ eclips. invis.
28	♂ ☾ ☿ 11h.
30	♂ ☾ ♂ 3h.
30	♌ ☉ ♅

June

1	♄ stationary
4	☾ in perige
5	☿ elong. max.
6	♂ ☾ ♃ 2¼h.
8	♂ ☾ ♅ 20¼h.
9	☾ eclips. visible
12	☿ in ♉
14	♂ ☾ ♄ 14¾h.
17	☾ in apoge
19	☿ stationary
21	☉ in ♋ 2h. 45m.
22	☿ in aphelion
24	♂ ☾ ♀ 6¼h.
25	♂ ☾ ☿ 20½h.
26	♃ stationary
27	♂ ☾ ♂ 15¾h.
28	♀ in ♌
30	☾ in perige

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- - - - - - - ad Annum 1816.

July			August			September		
1	♂ ☉ ☿	20⅓h.	1	☿ in ♋		4	♂ ☾ ♄	3h.
3	♂ ☾ ♃	7½h.	2	♀ in perihelion		7	☿ in ♍	
4	♂ in aphelion		5	☿ in perihelion		8	☾ in apoge	
6	♂ ☾ ♅	1½h.	8	♂ ☾ ♄	½h.	19	☿ in aphelion	
11	♂ ☾ ♄	2½h.	11	☾ in apoge		21	☾ in perihelion	
13	☿ stationary		13	☿ ☉ ♄	5¼h.	21	♂ ☾ ♂	12h.
15	☾ in apoge		16	♅ stationary		22	♂ ☾ ♀	3h.
22	☉ in ♌	13h. 37m.	17	♂ ☉ ☿	16¾h.	22	☉ in ♎	16h. 43m.
22	♂ ☾ ☿	23 h.	22	☉ in ♍	20h. 5m.	22	♂ ☾ ☿	22½h.
22	☿ elong. max.		23	♂ ☾ ☿	4½h.	23	♂ ☾ ♃	19½h.
23	□ ☉ ♃	22½h.	23	♂ ☾ ♀	5¾h.	25	♂ ☾ ♅	20¼h.
24	♂ ☾ ♀	7¾h.	23	♂ ☾ ♂	20h.			
26	♂ ☾ ♂	5½h.	24	☾ in perige				
27	☾ in perihelion		27	♂ ☾ ♃	4¼h.			
30	♂ ☾ ♃	15½h.	29	♂ ☾ ♅	11½h.			
31	♂ ☾ ♅	1¾h.	30	□ ☉ ♅	12½h.			
31	♂ ☉ ♀	8½h.						

October			November			December		
1	♂ ☾ ♄	6h.	1	☾ in apoge		3	♂ ☉ ♅	7½h.
5	☾ in apoge		2	☿ in perihelio		4	☾ eclips. visib.	
7	♂ ☉ ♂	18¼h.	9	□ ☉ ♃	18h.	5	☿ in ♍	
15	☿ stationary		10	☿ elong. max.		14	♂ in ♍	
17	♀ in ♍		12	♂ ☉ ♃	16h.	15	☾ in perige	
18	♂ ☾ ♂	3½h.	17	♂ ☾ ☿	16h.	16	♂ ☾ ♃	9½h.
19	♄ stationary		17	♂ ☾ ♂	23¼h.	16	♂ ☾ ♂	17¼h.
19	☾ in perige		17	☾ in perige		16	☿ in aphelio	
21	♂ ☾ ☿	4¾h.	18	☉ eclips. visib.		17	♂ ☾ ♅	11h.
21	♂ ☾ ♃	17½h.	18	♂ ☾ ♃	14h.	18	♂ ☾ ☿	8h.
22	♂ ☾ ♀	1½h.	19	♂ ☾ ♅	21h.	21	♂ ☉ ☿	1¾h.
23	☉ in ♏	0h. 49m.	21	♂ ☾ ♀	2h.	21	♂ ☾ ♀	6¾h.
23	♂ ☾ ♅	7¼h.	21	☉ in ♐	21h. 9m.	21	☉ in ♑	14h. 27m.
25	♂ ☉ ☿	11h.	21	♀ in aphelio		22	♂ ☾ ♄	10¼h.
28	♂ ☾ ♄	15½h.	24	♂ ☾ ♄	21½h.	27	☾ in apoge	
28	☿ in ♋		29	☾ in apoge				

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A TABLE of the SUN's semi-diurnal Arches, or Times

The Sun's Declination North.

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

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

of his visible half Duration above the Horizon.

The Sun's Declination South.

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

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

A TABLE of the SUN's semi-diurnal Arches, or Times

The Sun's Declination North.

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

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

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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.

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A TABLE of the SUN's Right-Ascension in Time, the greatest

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

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

OBLIQUITY of the ECLIPTIC being 23° 28′.

Deg.	♎			♏			♐			♑			♒			♓		
	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, 1814.

		h	m	s
☉'s place at noon	♒ 10° 49′			
Rt. Asc. of Sirius	- -	6	37	0
☉'s rt.-asc. subtract	-	20	52	10
✱'s estimate southing	-	9	44	50
☉'s rt. asc. at that time sub.		20	52	11
✱'s true southing	- -	9	44	49
Semid. arc sub. & add	-	4	36	55
✱'s rising aftern.	- -	5	7	54
✱'s setting	- -	14	21	44

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A TABLE of the mean Right-Ascensions in time, and Declinations, and their Annual Difference; also the Semidiurnal-Arcs, and Magnitudes, of 40 remarkable FIXED STARS; with their Names, and Bayer's Literal Characters; for January 1, 1810.

Names of the Stars	Ch.	Rt. Asc.			A.Di.	Declination				A.Diff.	Semid.Ar.			M
		h	m	s	sec.	°	′	″		seconds	h	m	s	
Polestar, Alruccabah	α	0	54	25	12.53	88	17	41	n	+19.6	sets not			2
Andro.gird. Mirach	β	0	59	7	3.30	34	36	43	n	+19.4	10	7	32	2
Andro.foot, Almach	γ	1	52	17	3.62	41	24	47	n	+17.7	sets not			2
Ram's follow. horn	α	1	56	28	3.34	22	33	42	n	+17.5	8	9	35	2
Whale's ja. Menkar	α	2	52	21	3.12	3	20	40	n	+15.2	6	19	48	2
Medusa's hea. Algol	β	2	55	51	3.85	40	12	54	n	+14.5	sets not			2
Perseus' fi. Algenib	α	3	10	40	4.20	49	10	31	n	+13.6	sets not			2
Brightest of the 7st.	η	3	36	12	3.54	23	30	35	n	+11.9	8	16	40	3
Bull's eye, Aldebar.	α	4	25	1	3.42	16	7	3	n	+ 8.0	7	28	51	1
Auriga's sh. Capella	α	5	2	40	4.41	45	47	25	n	+ 4.5	sets not			1
Orion's l.foot, Rigel	β	5	5	25	2.87	8	25	33	s	— 5.1	5	20	28	1
Bull's north horn	β	5	14	18	3.78	28	26	18	n	+ 4.1	8	57	12	2
Orion's l.sh. Bellat.	γ	5	14	57	3.21	6	10	1	n	+ 4.0	6	34	41	2
Orion's girdle	ε	5	26	34	3.04	1	19	57	s	— 3.0	5	56	42	2
Orion's r.sh. Betelg.	α	5	44	53	3.24	7	21	58	n	+ 1.7	6	40	58	1
Great Dog, Sirius	α	6	36	46	2.65	16	27	46	s	+ 4.4	4	36	55	1
1st Twin, Castor	α	7	22	28	3.86	32	17	51	n	— 6.8	9	38	21	1
Little Dog, Procyon	α	7	29	20	3.14	5	42	18	n	— 8.7	6	32	50	1
2d Twin, Pollux	β	7	33	40	3.69	28	28	43	n	— 7.6	8	58	13	2
Hydra's heart, Alp.	α	9	18	14	2.94	7	49	14	s	+14.8	5	24	20	2
Lion's heart, Regu.	α	9	58	14	3.20	12	53	40	n	—16.9	7	11	28	1
Gr. Bear, L. Pointer	β	10	50	17	3.71	57	23	52	n	—19.1	sets not			2
Gr. Bear, U. Pointer	α	10	51	54	3.85	62	46	34	n	—19.1	sets not			2
Lion's tail, Deneb	β	11	39	21	3.06	15	38	18	n	—19.8	7	27	18	2
G. Bear's tail, Aliath	ε	12	45	40	2.75	56	59	40	n	—19.7	sets not			2
Virgin's spike	α	13	15	11	3.14	10	9	45	s	+18.8	5	12	20	1
Dragon's tail	α	13	59	15	1.63	65	17	14	n	—17.4	sets not			2
Bootes, Arcturus	α	14	6	59	2.72	20	10	32	n	—19.1	7	55	26	1
Libra, South. Scale	α	14	40	12	3.30	15	14	27	s	+15.3	4	44	23	2
Libra, North. Scale	β	15	6	48	3.22	8	40	21	s	+13.8	5	19	57	2
North Crown	α	15	26	23	2.53	27	21	55	n	—12.3	8	48	36	2
Scor. heart, Antares	α	16	17	46	3.65	25	59	47	s	+ 8.6	3	34	6	1
Her. head, R. Alget.	α	17	5	59	2.73	14	37	1	n	— 4.7	7	20	41	2
Head of Serpentarius	α	17	26	7	2.77	12	42	39	n	— 3.0	7	9	50	2
Drag. head, Rastaben	γ	17	52	12	1.39	51	30	58	n	— 0.7	sets not			2
The Harp, Lyra	α	18	30	30	1.99	38	36	57	n	+ 3.1	sets not			1
The Eagle, Atair	α	19	41	30	2.92	8	22	42	n	+ 9.1	6	45	57	2
S. Fish, Fomalhaut	α	22	47	7	3.33	30	37	20	s	—19.1	2	52	6	1
Pegasus' w. Markab	α	22	55	18	2.96	14	11	13	n	+19.7	7	17	10	2
Andromeda's head	α	23	58	35	3.07	28	3	2	n	+20.8	8	52	19	2

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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 1810.

Con.	Cha.	Long.	Lat.	Mag.
		° ′ ″	° ′ ″	
♓	δ	♈ 11 29 57	2 9 44 n	4
	ε	14 52 56	1 5 37 n	4
	ζ	17 13 11	0 13 11 s	4
♈	δ	♉ 18 11 30	1 48 7 n	4
♉	η	27 28 30	4 1 36 n	3
	γ	♊ 3 0 46	5 45 30 s	3
	ε	5 48 23	2 35 37 s	3
	α	7 8 6	5 29 2 s	1
	β	19 55 23	5 21 59 n	2
	ζ	22 8 1	2 13 29 s	3
♊	η	♋ 0 47 23	0 55 4 s	4
	μ	2 38 48	0 50 34 s	3
	γ	5 27 6	6 46 12 s	2
	ε	7 17 16	2 2 28 n	3
	δ	15 52 15	0 12 19 s	3
	β	20 36 20	6 40 4 n	1
♋	γ	♌ 4 23 37	3 10 22 n	4
	δ	6 3 55	0 4 13 n	4
♌	ξ	19 0 9	3 1 57 s	4
	θ	21 36 24	3 46 1 s	4
	η	25 15 9	4 51 9 n	4
	κ	27 11 35	0 27 27 n	1
	ρ	♍ 3 44 11	0 8 29 n	4
	τ	18 51 33	0 31 21 s	4
	υ	22 23 18	3 2 51 s	4
♍	β	24 27 33	0 41 36 n	3
	θ	♎ 0 42 56	5 4 42 n	3
	η	2 11 2	1 22 24 n	3
	γ	7 31 27	2 48 57 n	3
	α	21 11 36	2 2 11 s	1

Con.	Cha.	Long.	Lat.	Mag.
		° ′ ″	° ′ ″	
♎	α	♏ 12 26 11	0 21 48 n	2
	12	18 21 23	1 49 14 s	3
	γ	22 28 55	4 24 41 n	3
	η	24 43 19	4 2 52 n	4
	κ	25 6 33	0 1 1 n	4
	θ	27 12 58	3 29 24 n	4
	λ	27 49 32	0 6 53 n	4
♏	δ	29 55 14	1 57 17 s	3
	π	♐ 0 17 21	5 26 15 s	3
	β	0 32 19	1 2 18 n	2
		1 59 36	1 39 52 n	4
	σ	5 8 59	4 0 23 s	4
	α	7 6 44	4 32 17 s	1
	τ	8 48 28	6 5 21 s	4
♐	γ	28 36 49	6 56 48 s	3
	μ	♑ 0 33 44	2 22 24 n	4
	λ	3 40 17	2 5 31 s	4
	φ	7 41 34	3 55 22 s	3
	σ	9 44 3	3 24 55 s	3
	τ	12 11 18	5 2 33 s	3
	θ	12 20 22	0 53 36 n	3
	π	13 36 7	1 28 7 n	4
♑	β	♒ 1 23 41	4 36 46 n	3
	ε	17 32 46	4 57 31 s	4
	γ	19 7 39	2 32 6 s	4
	δ	20 52 51	2 33 40 s	3
	ι	26 4 3	2 3 47 s	4
	θ	♓ 0 36 28	2 43 22 n	4
	λ	8 55 29	0 22 57 s	4
	φ	14 29 21	1 2 8 s	4

THIS Table shewing the mean longitudes of 60 stars to the beginning of the year 1810, 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, 1813, 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° 31′ 44″ for the longitude required at the proposed time.——The latitudes vary not.

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The LATITUDES and LONGITUDES of Ninety remarkable Places.

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

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