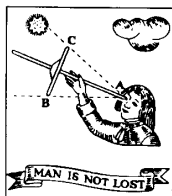


# ASTRONOMICAL INFORMATION SHEET No. 100



Prepared by

HM Nautical Almanac Office

**THE UNITED KINGDOM HYDROGRAPHIC OFFICE**

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## ASTRONOMICAL AND CALENDARIAL DATA SHEET FOR 2016

### PHASES OF THE MOON

New Moon			First Quarter			Full Moon			Last Quarter		
d	h	m	d	h	m	d	h	m	d	h	m
Jan.	10	01	31	Jan.	16	23	26	Jan.	24	01	46
Feb.	8	14	39	Feb.	15	07	46	Feb.	22	18	20
Mar.	9	01	54	Mar.	15	17	03	Mar.	23	12	01
Apr.	7	11	24	Apr.	14	03	59	Apr.	22	05	24
May	6	19	30	May	13	17	02	May	21	21	14
June	5	03	00	June	12	08	10	June	20	11	02
July	4	11	01	July	12	00	52	July	19	22	57
Aug.	2	20	45	Aug.	10	18	21	Aug.	18	09	27
Sept.	1	09	03	Sept.	9	11	49	Sept.	16	19	05
Oct.	1	00	11	Oct.	9	04	33	Oct.	16	04	23
Oct.	30	17	38	Nov.	7	19	51	Nov.	14	13	52
Nov.	29	12	18	Dec.	7	09	03	Dec.	14	00	06
Dec.	29	06	53								

### SEASONS

			d	h	m
Vernal Equinox	—	Spring begins	Mar.	20	04 30
Summer Solstice	—	Summer begins	June	20	22 34
Autumnal Equinox	—	Autumn begins	Sept.	22	14 21
Winter Solstice	—	Winter begins	Dec.	21	10 44

### SUMMER TIME\*

In the United Kingdom BST, one hour in advance of GMT, will be kept from March 27<sup>d</sup> 01<sup>h</sup> to October 30<sup>d</sup> 01<sup>h</sup> GMT.\*

### ECLIPSES

Eclipses Online Portal—<http://astro.ukho.gov.uk/eclbin/query.cgi?year=2016>

1. A total eclipse of the Sun on March 8-9. The path of totality begins over the Indian Ocean west of Sumatra and crosses southern Sumatra, Kalimantan, Sulawesi and the northern Moluccan Islands in Indonesia and the western Pacific Ocean and ends north east of the Hawaiian Islands. The partial phase is visible from most of India, the southern half of China, Japan, the Philippines, Indonesia, Australia except the south-east part, Micronesia, most of Melanesia, most of the northern Pacific Ocean, the Hawaiian Islands and Alaska. The eclipse begins at 23<sup>h</sup> 19<sup>m</sup> and ends at 04<sup>h</sup> 35<sup>m</sup>; the total phase begins at 00<sup>h</sup> 17<sup>m</sup> and ends at 03<sup>h</sup> 38<sup>m</sup>. The maximum duration of totality is 4<sup>m</sup> 14<sup>s</sup>.

2. An annular eclipse of the Sun on September 1. The path of annularity begins over the central Atlantic Ocean and crosses the central parts of Gabon, Congo and the Democratic Republic of Congo, western and southern parts of Tanzania, the north-east tip of Mozambique, northern Madagascar, Reunion and ends off the south-west coast of Australia. The partial phase is visible from Cape Verde, most of Africa except the northernmost part, the southern and western parts of the Arabian Peninsula, most of the Indian Ocean, part of Antarctica, the westernmost tip of Australia, southern Sumatra and western Java. The eclipse begins at 06<sup>h</sup> 13<sup>m</sup> and ends at 12<sup>h</sup> 01<sup>m</sup>; the annular phase begins at 07<sup>h</sup> 19<sup>m</sup> and ends at 10<sup>h</sup> 54<sup>m</sup>. The maximum duration of annularity is 3<sup>m</sup> 00<sup>s</sup>.

All times are in GMT (UT, i.e. UT1)

\*[www.gov.uk/when-do-the-clocks-change](http://www.gov.uk/when-do-the-clocks-change)

CYH/JW/SAB

2010 July  
Updated 2014 October

CALENDAR 2016

CHRONOLOGICAL CYCLES AND ERAS

Dominical Letter	CB	Julian Period (year of)	6729
Epact	21	Roman Indiction	9
Golden Number (Lunar Cycle)	III	Solar Cycle	9

Era	Year	Begins	Era	Year	Begins
Byzantine	7525	Sept. 14	Grecian (Seleucidæ)	2328	Sept. 14
Roman (AUC)	2769	Jan. 14			(or Oct. 14)
Nabonassar	2765	Apr. 19	Saka (Indian)	1938	Mar. 21
Japanese	2676	Jan. 1	Diocletian (Coptic)	1733	Sept. 11

RELIGIOUS CALENDARS

Epiphany	Jan. 6	Low Sunday	Apr. 3
Septuagesima Sunday	Jan. 24	Rogation Sunday	May 1
Quinquagesima Sunday	Feb. 7	Ascension Day—Holy Thursday	May 5
Ash Wednesday	Feb. 10	Whit Sunday—Pentecost	May 15
Quadragesima Sunday	Feb. 14	Trinity Sunday	May 22
Fourth Sunday in Lent—Mothering Sunday	Mar. 6	Corpus Christi	May 26
Palm Sunday	Mar. 20	First Sunday in Advent	Nov. 27
Good Friday	Mar. 25	Christmas Day (Sunday)	Dec. 25
Easter Day	Mar. 27		
First Day of Passover (Pesach)	Apr. 23	Day of Atonement (Yom Kippur)	Oct. 12
Feast of Weeks (Shavuot)	June 12	First day of Tabernacles (Succoth)	Oct. 17
Jewish New Year (Rosh Hashanah)	5777 Oct. 3		
First day of Ramadân	June 7	Islamic New Year	1438 Oct. 3

All Jewish and Islamic dates above are tabular dates, which begin at sunset on the previous evening and end at sunset on the date tabulated. In practice, the dates of Islamic fasts and festivals are determined by an actual sighting of the appropriate new Moon.

CIVIL CALENDAR—UNITED KINGDOM

Accession of Queen Elizabeth II	Feb. 6	Coronation Day	June 2
St David (Wales)	Mar. 1	Birthday of Prince Philip, Duke of Edinburgh	June 10
Commonwealth Day	Mar. 14	The Queen's Official Birthday*	June 11
St Patrick (Ireland)	Mar. 17	Remembrance Sunday	Nov. 13
Birthday of Queen Elizabeth II	Apr. 21	Birthday of the Prince of Wales	Nov. 14
St George (England)	Apr. 23	St Andrew (Scotland)	Nov. 30

\*Date subject to confirmation

HOLIDAYS IN THE UNITED KINGDOM

The following list contains bank holidays, (compiled from the *Banking and Financial Dealings Act 1971*), common law holidays and days to be given in lieu for holidays which fall on a weekend. Dates given in *italic* are those which are subject to Royal proclamation or for Northern Ireland proclamation by the Secretary of State. There is no statutory requirement for a day to be given in lieu if one of the days falls at the weekend and is not covered by the act. In such cases probable dates are given in *italic* when they have not yet been authorised. Consult our web site at <http://astro.ukho.gov.uk/nao/online/index.html#calendar> for various UK Government links which will give the latest details.

	England and Wales	Northern Ireland	Scotland
New Year	Jan. 1	Jan. 1	Jan. 1 Jan. 2# Jan. 4
St Patrick	—	Mar. 17	—
Good Friday	Mar. 25 ‡	Mar. 25 ‡	Mar. 25
Easter Monday	Mar. 28	Mar. 28	—
Early (Spring) May	May 2	May 2	May 2
Spring	May 30	May 30	May 30
Battle of the Boyne	—	July 12	—
Summer	Aug. 29	Aug. 29	Aug. 1
Christmas	Dec. 25 ‡† Dec. 27	Dec. 25 ‡† Dec. 27	Dec. 25 † Dec. 27
Boxing Day	Dec. 26	Dec. 26	Dec. 26

‡ Common Law Holiday # Holiday falls on a Saturday † Holiday falls on a Sunday

**Warning:** Clauses in the *Banking and Financial Dealings Act* allow the Government to alter dates at short notice.