

# ASTRONOMICAL INFORMATION SHEET No. 91



Prepared by

HM Nautical Almanac Office

**THE UNITED KINGDOM HYDROGRAPHIC OFFICE**

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## ASTRONOMICAL AND CALENDARIAL DATA SHEET FOR 2010

### 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.	15	07 11	Jan.	23	10 53	Jan.	30	06 18	Jan.	7	10 39
Feb.	14	02 51	Feb.	22	00 42	Feb.	28	16 38	Feb.	5	23 48
Mar.	15	21 01	Mar.	23	11 00	Mar.	30	02 25	Mar.	7	15 42
Apr.	14	12 29	Apr.	21	18 20	Apr.	28	12 18	Apr.	6	09 37
May	14	01 04	May	20	23 43	May	27	23 07	May	6	04 15
June	12	11 15	June	19	04 29	June	26	11 30	June	4	22 13
July	11	19 40	July	18	10 11	July	26	01 37	July	4	14 35
Aug.	10	03 08	Aug.	16	18 14	Aug.	24	17 05	Aug.	3	04 59
Sept.	8	10 30	Sept.	15	05 50	Sept.	23	09 17	Sept.	1	17 22
Oct.	7	18 44	Oct.	14	21 27	Oct.	23	01 37	Oct.	30	12 46
Nov.	6	04 52	Nov.	13	16 39	Nov.	21	17 27	Nov.	28	20 36
Dec.	5	17 36	Dec.	13	13 59	Dec.	21	08 13	Dec.	28	04 18

### SEASONS

			d	h	m
Vernal Equinox	—	Spring begins	Mar.	20	17 32
Summer Solstice	—	Summer begins	June	21	11 28
Autumnal Equinox	—	Autumn begins	Sept.	23	03 09
Winter Solstice	—	Winter begins	Dec.	21	23 38

### SUMMER TIME\*

In the United Kingdom BST, one hour in advance of GMT, will be kept from March 28<sup>d</sup> 01<sup>h</sup> to October 31<sup>d</sup> 01<sup>h</sup> GMT.\*

### ECLIPSES

1. An annular eclipse of the Sun on January 15. The path of annularity begins over the southern tip of Chad and crosses the Central African Republic, the northern Democratic Republic of Congo, Uganda, Kenya, the southern tip of Somalia, the Indian Ocean, the southern tip of India, northern Sri Lanka, the south-eastern tip of Bangladesh, Myanmar and south-eastern China. The partial phase is visible from south-east Europe, Africa except the western part, the Middle East, India, most of Asia, the Philippines and western Indonesia. The eclipse begins at 04<sup>h</sup> 05<sup>m</sup> and ends at 10<sup>h</sup> 08<sup>m</sup>; the annular phase begins at 05<sup>h</sup> 17<sup>m</sup> and ends at 08<sup>h</sup> 56<sup>m</sup>. The maximum duration of annularity is 11<sup>m</sup> 04<sup>s</sup>.
2. A partial eclipse of the Moon on June 26 is visible from western parts of the Americas, the Pacific Ocean, Antarctica, eastern Asia and Australasia. The umbral eclipse begins at 10<sup>h</sup> 17<sup>m</sup> and ends at 13<sup>h</sup> 00<sup>m</sup>. The time of maximum eclipse is 11<sup>h</sup> 38<sup>m</sup> when 0.54 of the Moon's diameter is obscured.
3. A total eclipse of the Sun on July 11. The path of totality begins over the Cook Islands and crosses French Polynesia, the south-eastern Pacific Ocean and the southernmost parts of Chile and Argentina. The partial phase is visible from Polynesia, the South Pacific Ocean and the southern half of South America. The eclipse begins at 17<sup>h</sup> 10<sup>m</sup> and ends at 21<sup>h</sup> 57<sup>m</sup>; the total phase begins at 18<sup>h</sup> 16<sup>m</sup> and ends at 20<sup>h</sup> 51<sup>m</sup>. The maximum duration of totality is 5<sup>m</sup> 25<sup>s</sup>.
4. A total eclipse of the Moon on December 21 is visible from Europe including the British Isles, west Africa, the Americas, the Pacific Ocean, eastern Australia, the Philippines and eastern and northern Asia. The umbral eclipse begins at 06<sup>h</sup> 32<sup>m</sup> and ends at 10<sup>h</sup> 02<sup>m</sup>. Totality lasts from 07<sup>h</sup> 40<sup>m</sup> to 08<sup>h</sup> 54<sup>m</sup>.

All times are in GMT (UT)

\* [www.berr.gov.uk/employment/bank-public-holidays/bst/page12528.html](http://www.berr.gov.uk/employment/bank-public-holidays/bst/page12528.html)

CYH/SAB

2005 March  
Updated 2008 May

CALENDAR 2010

CHRONOLOGICAL CYCLES AND ERAS

Dominical Letter	C	Julian Period (year of)	6723		
Epact	14	Roman Indiction	3		
Golden Number (Lunar Cycle)	XVI	Solar Cycle	3		
Era	Year	Begins	Era	Year	Begins
Byzantine	7519	Sept. 14	Grecian (Seleucidæ)	2322	Sept. 14
Roman (AUC)	2763	Jan. 14			(or Oct. 14)
Nabonassar	2759	Apr. 21	Indian (Saka)	1932	Mar. 22
Japanese	2670	Jan. 1	Diocletian	1727	Sept. 11

RELIGIOUS CALENDARS

Epiphany	Jan. 6	Low Sunday	Apr. 11
Septuagesima Sunday	Jan. 31	Rogation Sunday	May 9
Quinquagesima Sunday	Feb. 14	Ascension Day—Holy Thursday	May 13
Ash Wednesday	Feb. 17	Whit Sunday—Pentecost	May 23
Quadragesima Sunday	Feb. 21	Trinity Sunday	May 30
Fourth Sunday in Lent—Mothering Sunday	Mar. 14	Corpus Christi	June 3
Palm Sunday	Mar. 28	First Sunday in Advent	Nov. 28
Good Friday	Apr. 2	Christmas Day (Saturday)	Dec. 25
Easter Day	Apr. 4		
First Day of Passover (Pesach)	Mar. 30	Day of Atonement (Yom Kippur)	Sept. 18
Feast of Weeks (Shavuot)	May 19	First day of Tabernacles (Succoth)	Sept. 23
Jewish New Year (Rosh Hashanah)	5771 Sept. 9		
First day of Ramadân	Aug. 11	Islamic New Year	1432 Dec. 8

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. 8	The Queen's Official Birthday*	June 12
St Patrick (Ireland)	Mar. 17	Remembrance Sunday	Nov. 14
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 the Department of Trade and Industry, [www.berr.gov.uk/employment/bank-public-holidays](http://www.berr.gov.uk/employment/bank-public-holidays), or the Scottish Executive, [www.scotland.gov.uk/Publications/2005/01/bankholidays](http://www.scotland.gov.uk/Publications/2005/01/bankholidays), for 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	Apr. 2‡	Apr. 2‡	Apr. 2
Easter Monday	Apr. 5	Apr. 5	—
Early Spring	May 3	May 3	May 3
Spring	May 31	May 31	May 31
Battle of the Boyne	—	July 12	—
Summer	Aug. 30	Aug. 30	Aug. 2
Christmas	Dec. 25‡# Dec. 28	Dec. 25‡# Dec. 28	Dec. 25# Dec. 28
Boxing Day	Dec. 26† Dec. 27	Dec. 26† Dec. 27	Dec. 26† Dec. 27

‡ 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.