ASTRONOMICAL INFORMATION SHEET No. 97

Prepared by

HM Nautical Almanac Office

THE UNITED KINGDOM HYDROGRAPHIC OFFICE

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ASTRONOMICAL AND CALENDARIAL DATA SHEET FOR 2013

PHASES OF THE MOON

New Moon	d	h	m	First Quarter	d	h	m	Full Moon	d	h	m	Last Quarter	d	h	m
												Jan.	5	03	58
Jan.	11	19	44	Jan.	18	23	45	Jan.	27	04	38	Feb.	3	13	56
Feb.	10	07	20	Feb.	17	20	31	Feb.	25	20	26	Mar.	4	21	53
Mar.	11	19	51	Mar.	19	17	27	Mar.	27	09	27	Apr.	3	04	37
Apr.	10	09	35	Apr.	18	12	31	Apr.	25	19	57	May	2	11	14
May	10	00	28	May	18	04	35	May	25	04	25	May	31	18	58
June	8	15	56	June	16	17	24	June	23	11	32	June	30	04	54
July	8	07	14	July	16	03	18	July	22	18	16	July	29	17	43
Aug.	6	21	51	Aug.	14	10	56	Aug.	21	01	45	Aug.	28	09	35
Sept.	5	11	36	Sept.	12	17	08	Sept.	19	11	13	Sept.	27	03	55
Oct.	5	00	35	Oct.	11	23	02	Oct.	18	23	38	Oct.	26	23	40
Nov.	3	12	50	Nov.	10	05	57	Nov.	17	15	16	Nov.	25	19	28
Dec.	3	00	22	Dec.	9	15	12	Dec.	17	09	28	Dec.	25	13	48

SEASONS

				d	h	m
Vernal Equinox	—	Spring begins	Mar.	20	11	02
Summer Solstice	—	Summer begins	June	21	05	04
Autumnal Equinox	—	Autumn begins	Sept.	22	20	44
Winter Solstice	—	Winter begins	Dec.	21	17	11

SUMMER TIME*

In the United Kingdom BST, one hour in advance of GMT, will be kept from March $31^{d}\ 01^{h}$ to October $27^{d}\ 01^{h}$ GMT.*

ECLIPSES

1. A partial eclipse of the Moon on April 25 is visible from Africa, Europe (except the extreme north-western part of the British Isles), Asia, except the north east, Antarctica, and Australia. The umbral eclipse begins at $19^{h}\ 52^{m}$ and ends at $20^{h}\ 23^{m}$. The time of maximum eclipse is $20^{h}\ 08^{m}$ when 0·02 of the Moon's diameter is obscured.

2. An annular eclipse of the Sun on May 9-10. The path of annularity begins over north-western Australia, crosses the southern tip of Papua New Guinea and passes over the Solomon Islands and the Republic of Kiribati and ends in the Pacific Ocean south of the equator at longitude W127°. The partial phase is visible from the southern Philippines, eastern Indonesia, Australia, Tasmania, most of New Zealand and much of the Pacific Ocean, including the Hawaiian Islands. The eclipse begins on May 9 at $21^{h}\ 25^{m}$ and ends at $03^{h}\ 25^{m}$ on May 10; the annular phase begins on May 9 at $22^{h}\ 32^{m}$ and ends at $02^{h}\ 18^{m}$ on May 10. The maximum duration of annularity is $05^{m}\ 58^{s}$.

3. A total eclipse of the Sun on November 3. The path of totality begins over the Sargasso Sea, passing south of West Africa, crossing Gabon, the Republic of Congo, the northern part of the Democratic Republic of Congo, northern Uganda, the northern tip of Kenya, southern Ethiopia and ends in western Somalia. The partial phase is visible from extreme eastern North America, northern South America, the Iberian peninsula, southern Italy, Greece, most of Turkey, and Africa except the extreme south. The eclipse begins at $10^{h}\ 05^{m}$ and ends at $15^{h}\ 28^{m}$. The total phase begins at $11^{h}\ 05^{m}$ and ends at $14^{h}\ 28^{m}$. The maximum duration of totality is $01^{m}45^{s}$.

All times are in GMT (UT)

* www.direct.gov.uk/en/Employment/Employees/Timeoffandholidays/DG_073741

CYH/SAB

2008 May

Updated 2011 December

At the time this sheet was produced, HMNAO believes the information to be accurate.

CALENDAR 2013

CHRONOLOGICAL CYCLES AND ERAS

Dominical Letter	F	Julian Period (year of)	6726
Epact	17	Roman Indiction	6
Golden Number (Lunar Cycle)	XIX	Solar Cycle	6

Era	Year	Begins	Era	Year	Begins
Byzantine	7522	Sept. 14	Grecian (Seleucidæ)	2325	Sept. 14
Roman (AUC)	2766	Jan. 14			(or Oct. 14)
Nabonassar	2762	Apr. 20	Indian (Saka)	1935	Mar. 22
Japanese	2673	Jan. 1	Diocletian	1730	Sept. 11

RELIGIOUS CALENDARS

Epiphany		Jan. 6	Low Sunday		Apr. 7
Septuagesima Sunday		Jan. 27	Rogation Sunday		May 5
Quinquagesima Sunday		Feb. 10	Ascension Day—Holy Thursday		May 9
Ash Wednesday		Feb. 13	Whit Sunday—Pentecost		May 19
Quadragesima Sunday		Feb. 17	Trinity Sunday		May 26
Fourth Sunday in Lent—Mothering Sunday		Mar. 10	Corpus Christi		May 30
Palm Sunday		Mar. 24	First Sunday in Advent		Dec. 1
Good Friday		Mar. 29	Christmas Day (Wednesday)		Dec. 25
Easter Day		Mar. 31			
First Day of Passover (Pesach)		Mar. 26	Day of Atonement (Yom Kippur)		Sept. 14
Feast of Weeks (Shavuot)		May 15	First day of Tabernacles (Succoth)		Sept. 19
Jewish New Year (Rosh Hashanah)	5774	Sept. 5			
First day of Ramadân		July 9	Islamic New Year	1435	Nov. 5

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	The Queen's Official Birthday*	June 8
Commonwealth Day	Mar. 11	Birthday of Prince Philip, Duke of Edinburgh	June 10
St Patrick (Ireland)	Mar. 17	Remembrance Sunday	Nov. 10
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
St Patrick	—	Mar. 17† Mar. 18	—
Good Friday	Mar. 29‡	Mar. 29‡	Mar. 29
Easter Monday	Apr. 1	Apr. 1	—
Early Spring	*May 6*	*May 6*	May 6
Spring	May 27	May 27	*May 27*
Battle of the Boyne	—	*July 12*	—
Summer	Aug. 26	Aug. 26	Aug. 5
Christmas	Dec. 25‡	Dec. 25‡	Dec. 25‡
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.