



# NIGHT SKY

All times GMT

## SUN

Rises approximately between 07.50 - 07.00  
Sets approximately between 16.30 - 17.30

## MOON



2nd



9th



17th



25th

MERCURY Maximum western elongation is on 1st (25°). Mercury will be low in the south east sky all month and will be difficult to see. Mag. -0.2

VENUS Venus can now be seen in the morning sky. it rises about 2 hours before the sun. Mag. -4.6

MARS Mars is also visible in the morning sky. It is low down in the sky. Mag. 1.2

JUPITER Jupiter remains well placed for observation in the evening sky all month. Mag. -2.4

SATURN Saturn will be rising at about 5.00 in mid month. Mag. 0.6

URANUS Rises about ½ hour before Saturn.

NEPTUNE Rise at about the same time as Saturn

## LUNAR ECLIPSE

There is a total eclipse of the moon on the 9th.

Moon rises at 16.51

Eclipse starts at 17.30 and ends at 20.54

Totality begins at 18.51 and ends at 19.33



## SOCIETY NEWS

### 1 1990 SUBSCRIPTIONS

The 1990 membership subscriptions are now due.  
The rates are :-

Junior & QAP's	£4.50 +	£2.00	for newsletter postage
Adult	£7.00 +	"	" " " "
Family	£8.00 +	"	" " " "

Please send all monies as soon as possible to :-

Mr.D.Barnard

Ipswich  
IP4 5PP

### 2 COMMITTEE MEETING

The next committee meeting will be held at the observatory on Saturday 3rd February, starting at 7.30. As usual this meeting is open for any member to attend if they wish.

### 3 1990 LECTURE PROGRAMME

All meetings will be held at the Friends Meeting House, 39 Fonnereau Road Ipswich.

#### a Asteroids

By Neil Taylor.  
Friday 16th February at 8.00

#### b) Unidentified Flying Objects.

By Del Newman with Brenda Butler.  
Friday 16th March at 8.00

## ASTRONOMERS CALENDER 1990

### The Observers Universe

As we reach a **maxima in solar activity** this year, which looks set to break all records in its intensity, solar observers and **aurora** hunters should find 1990 particularly rewarding. As usual, an OASI group will be heading for the Scottish Highlands and Islands, for the eleventh year running, this time flying to the Orkney Islands sometime in February, with the intention of observing the Aurora Borealis. Anyone wanting to join them should contact Alan Smith or Dave Barnard ( Address/phone numbers on the back Page ) ASAP.

This years **Graze Occultation** event for the OASI will be on December 29th in Norfolk. Planning will start at the beginning of that month.

The planet **Jupiter**, as its regular observers will know, has lost its South Equatorial Belt ( along with the north equatorial belt these two features are the most easily seen on Jupiter with small aperture telescopes ). Watching for signs of its return will add interest to Jupiter Observation Programs this year. Jupiter is not at opposition until January 1991. [ Don't forget that **Mars** is at opposition this year : on November 27th.]

The **total lunar eclipse** of the 9th of February is described in the Night Sky feature of this journal.

**Meteor Watches** will be arranged for the Persiids, which peak on the 12th/13th of August, and the Geminids, which peak on December the 13th/14th.

Other events include, in Finland/USSR etc., a **total Solar eclipse** on July the 22nd.

### National Conventions and Events

The **Winchester Weekend** [ 30th March to 1st April] will be particularly interesting this year with the BAA [ British Astronomical Association ] celebrating its centenary. A contingent from the OASI will be attending as it has for a number of years. [ BAA members pay £45 and non-members £51. ]

The **FAS** [ Federation of Astronomical Societies ] will be holding its autumn convention in Cardiff on September 29th.

**Astrocamp** will again be held in Ashdown Forest [ 11th to 25th August].

The Oxford Astronomy Weekend, run by the Oxford University Department of External Studies, is an opportunity for armchair cosmologists and amateur astronomers to get [ big? ] bang up to date with the latest information in astrophysics and cosmology from leading professionals in the fields. [ The fee for this course and full board with single on-suite room is £80 with reductions for shared rooms, half board or the lectures only option.]

Information about other national events are given on the Armagh Planetarium year planner in the observatory clubroom and on the notice board.

### Society Events

Not mentioned above, is National Astronomy Week [ 17th to 24th November], for which OASI events will be arranged.

This year we will again be able to present a lecture season starting with a talk by Niel Taylor, on Asteroids. The venue will be the friends meeting house in Fonneraeu Road and the talks will be held on Friday evenings.

Trips planned include the FAS convention in Cardiff, the Old Royal Observatory, Greenwich [ Eventually we'll get a clear night ] and the Norwich Astronomical Society Observatory. This will be the last chance for will to visit the Norwich Observatory at its Colney Lane site because of its imminent move to escape from encroaching developments : it will be actually relocated a little nearer to Ipswich, at Hempnal, just off the A140.

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*
*           TALK   ON   ASTEROIDS
*
*                   BY
*
*           NEIL   TAYLOR
*
*   8.00pm   FRIDAY   16th   FEBRUARY
*
*
*   AT THE FRIENDS MEETING HOUSE
*
*
*           39 FONNEREAU ROAD
*
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In 1992, so I am told, it is intended to gear all our clocks, watches and other timepieces to one Eurotime. Whilst some people seem to agree with this idea, many, probably most, do not. I also understand that 'officials' somewhere (I wish I knew where, as I'd like to write to them) are sifting through thousands of letters voicing individual opinion about what sort of time system we should keep - or if as at present, continually mess about with two or more times a year.

What are your views on this?

Personally, I don't agree that any country should have to keep to a timeframe more suited to another or small group of countries, or that a whole country should be forced to match another's schedules or chop and change twice, maybe four times a year.

The sheer waste of time and energy involved in changing all sorts of timepieces including those in equipment, lighting timeswitches and so on, possibly as many as a half-billion nationwide - it would be interesting to do and see some results on research on this - two, maybe four times every year surely takes up at least five million person-hours, worth on average more than £20m annually.

The trouble can be great where traditional 'landmark', such as church tower clocks, not really built for such interference, particularly in regard to putting them back, are concerned. Lots of people still have difficulty fathoming digital watch adjustments. And all that bother changing lighting timeswitches!

There's also the point that during about seven months each year, there's an hour or two's 'borrowing' of our time without our consent. One can argue that time is money, and that just one hour from 20 million people of the country who are wage-earners (it may be more) is a seven-month advance of £80m if the average wage is £4/hour!

The disruption and confusion of the human and animal clocks is, however, more important and in my view totally unnecessary, in fact negatively productive. Where scientific and economic analysis or research is concerned, figures involving time datums and durations are made uncertain or changed and sometimes elaborate adjustments need to be made to make data viable or properly valid. Years on, the matter of whether there's an hour or two's difference in figures around March and October, or whether there was GMT, or the equivalent of it, or BST or Double Summer Time operating, can be hard to settle. It may be important, but not even thought about, or forgotten. Even astronomers and astrologers may be fooled, though used to allowing in their calculations and observations, for local time and many other aberrations and effects, like precession and refraction due to altitude.

The bill for making and checking on and adjusting figures involving time changes between GMT, BST and Double Summer Time in one country, apart from allowing for datum-fixation in other parts of the world, must already be billions of pounds annually throughout the world, maybe at least £1B a year just in this country. Again, more research is desirable.

It has long been the practice of Air Traffic Control organisations, for example, needing a universal time base, to keep just that, worldwide. Why not follow such an example? Think of all the time and trouble and confusion we could all save, too! I have always kept to the old U. T. and will continue to. One won't change time itself by changing clock- and watch-hands or figures. It's best just to get up, do things and go to bed earlier if one wants to be in synch, with Europe. And leave others like farmers and the Scottish to do what is natural and suited to them, respectively for their animals and because of their further-west longitude. In other words, let all

of the British Isles keep to the 'old' GMT and UT.

I say 'the old' GMT and UT because recently, every two years or so, the 'Powers that be' have in their 'infinite wisdom' officially also adjusted GMT by adding one second at the very beginning of the New Year (yes, we had another a few days ago).

I will also refuse to change by what I regard as silly one-second additions every couple of years for Earth's rotation slowdown. Now that has got into the 'System', precision will be hard to maintain for so much has to be accounted. I maintain that such adjustments should be made en-bloc once every hundred years only. I see no reason for troubling the lay community with such pettiness, and certainly do not see why one should suffer 'jet-lag' while not even moving from our own home town!

Should any reader have some strong interest in this subject, please get in touch with me at my home address, [redacted], Ipswich, Suffolk, IP2 9ST. Tel: Ips. [redacted].

### Continuation Of Choosing A Telescope.

Glossary of Telescope Terms These are not complete definitions, but they should give you enough information to be able to understand telescope catalogues and advertisements.

- Achromatic - lens virtually free from false colour
- Altazimuth - mounting with simple vertical and horizontal axes
- Aluminizing - reflective coating on surface of telescope mirror
- Aperture - clear diameter of lens or mirror
- Apheric - optical surface which has been figured beyond the basic spherical figure
- Barlow - lens which converts eyepiece to, say, double their power
- Cassegrain - reflecting telescope design with comparatively long focal length giving high magnification
- Catadioptric - optical system using both mirrors and correcting plate or lens to focus light
- Cell - holder for mirror or lens
- Circles - discs graduated in sky coordinates - right ascension and declination
- Collimation - alignment of optical system
- Dawes Limit - practical performance limit of telescope
- Declination - sky equivalent of latitude on Earth
- Diffraction - effect seen when light passes an obstacle

- Diffraction Limited - optical system whose performance is limited only by diffraction, not by poor manufacture
- Diffraction Rings - fine rings seen round good quality star images
- Dobsonian - simple altazimuth mount, usually home made, with Teflon bearings
- Draw Tube - push-pull tube carrying eyepiece
- Elliptical - shape of optical surface between spherical and parabolic
- Equatorial - telescope mounting with one axis at an angle, aligned with Earth's axis
- Erecting Prism/Lens - corrects upside-down image
- Erfler - eyepiece with very wide field of view
- Eyepiece - small lenses which provide magnification on a telescope
- f-number or Ratio - telescope's focal length divided by aperture given as  $f/8$ , for example. High f-numbers are suited planetary observation, low ones to wide field views
- Finder - small, low power telescope with cross wires to help in the location of objects in the sky
- Flat - the flat, upper mirror (or secondary) of a Newtonian telescope
- Focal Length - the distance between a lens and the point at which it focusses parallel light
- Focusing Mount - the eyepiece focusing system
- Fork Mount - telescope mount, either equatorial or altazimuth, with telescope between arms of a fork
- Foucault Test - used to test accuracy of figure of a mirror
- Huygenian - simple eyepiece design, common on refractors
- Kellner - eyepiece design, better characteristics than Huygenian
- Magnification - how much an object is increased in size by a telescope. Equal to objective focal length divided by eyepiece focal length
- Magnification Areas - produced by squaring magnification: only used to create impressively high number from small magnification
- Magnitude - star brightness. Bright stars are magnitude 1 or so, faint naked-eye stars around mag. 6
- Maksutov - type of compact catadioptric telescope
- Monocular - single half of a pair of binoculars
- Moon Filter - coloured glass eyepiece filter to limit the brilliance of a full Moon
- Newtonian - most popular reflecting telescope design
- Null Test - Foucault-style test using artificial star

Objective - main lens of refracting telescope

OG - Object Glass (objective)

Orthoscopic - high quality eyepiece design

Parabolic - cross-section of ideal Newtonian mirror

Polar Axis - axis of equatorial mount

Power - same as magnification. Low power (LP) less than 50x; high power (HP) more than 200x, or highest that small telescope will stand

RA - right ascension

Ramsden - simple eyepiece design

Reflector - telescope design using mirrors to focus light

Refractor - telescope design using lens to focus light

Resolving Power, Resolution - ability of telescope to show fine detail

Rich Field Telescope (RFT) - has small f-number and wide field of view

Right Ascension (RA) - sky coordinate, the equivalent of longitude on Earth

Roof Prism - compact design of binocular prism

Schmidt-Cassegrain - popular catadioptric telescope design

Secondary - the smaller of the two mirrors in a reflector; in a Newtonian called the flat

Seeing - the unsteadiness of star images, etc. caused by turbulence in our atmosphere

Slow Motions - controls for moving telescope slowly; can be either manual or electric

Solar Diagonal - wedge-shaped glass cutting down Sun's brightness. Also called Herschel wedge

Spec - short for speculum, or main mirror of reflector

Spherical - simplest mirror curvature; gives poor images unless corrected

Spider - support for secondary mirror in reflector

Star Diagonal - prism or mirror which turns through 90°, allowing easier viewing with refractor

Sun Filter - dark glass eyepiece attachment for viewing Sun; dangerous as it may crack

Synchronous Motor - drives telescopes accurately; locks onto AC frequency

Variable frequency oscillator (VFO) - controls AC frequency to drive synchronous motor precisely

Wave (eg 1/10 wave) - claimed accuracy of surface of mirror; 1/4 wave or better usually necessary

York Mount - term muddling fork and yoke; only used by Japanese manufacturers

#### EQUIPMENT SUPPLIERS

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After each name is shown the type of items supplied, as far as is known. Most suppliers have lists or catalogues available at a small charge, or sent on receipt of an SAE.

A. E. OPTICS LTD 6 Power Court, Luton, Beds. Tel: 0582 31572. Telescopes, object glasses.

ASTRO-BITS 211A Hightown Road, Luton, LU2 0BZ. Eyepieces, finders, accessories, binoculars.

BEDFORD ASTRONOMICAL SUPPLIES 111 Todmorden Road, Bacup, Lancs. Tel: 0706 7020. Agents for Astro Systems Ltd.

CAMBRIDGE ASTRONOMICAL TELESCOPES Buckleberry House, The Green, Weston Colville, Cambs. Telescopes, optics, mountings, accessories.

CAVE ASTROLA 62 Caversham Road, Reading, Berks., RG1 7BG. Telescopes and accessories.

COCHRANES OF OXFORD LTD Leafield, Oxford, OX8 5NT. Tel: 099 387 641.

COOKS STORES LTD 159 and 187 Praed Street, London, W2. New and second hand telescopes and accessories.

COSMOTRON 34 Coal Clough Lane, Burnley, Lancs. Manufacturers of telescopes and accessories. Aluminising.

B. G. CRABB 6 The Crescent, Nantwich, Cheshire. Refiguring of mirrors.

C. J. AND A. J. DIXON LTD 23 Prospect Street, Bridlington, N. Humberside, YO15 2AE. Tel: 0262 76877 or 73539. Binoculars and telescopes.

CHARLES FRANK P. O. Box 5, Carlton Park, Saxmundham, Suffolk, IP17 2NL. Tel: 0728 3506. Binoculars, telescopes and optics.

FREW-SMITH OPTICS 33 Macadam Place, South Newmoor Industrial Estate, Irvine, Ayrshire. Telescopes, telescope kits, optics.

FULLERSCOPES 63 Farringdon Road, London, EC1M 3JB. Telescopes, optics, eyepieces, finders, accessories, books.

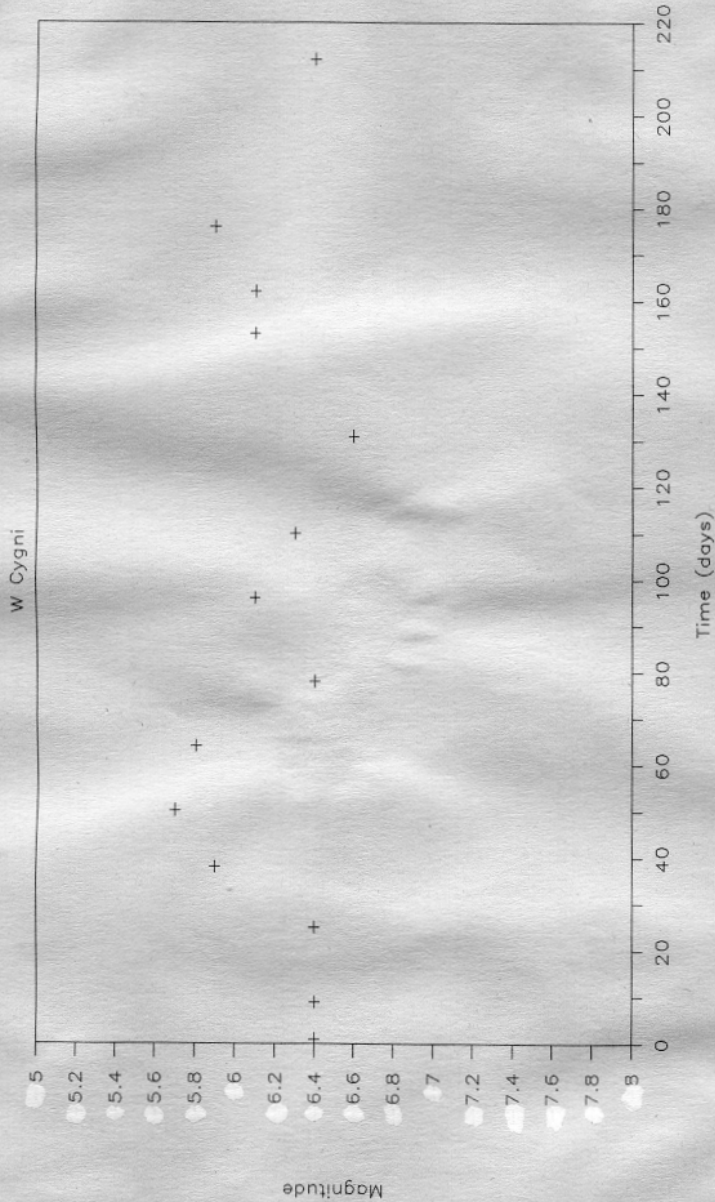
R. M. GREEN 57A Long Lane, Newton, Ct. Wyrley, Walsall, WS6 6AT. Tel: 0922 409759. Equatorial mounts, drawings and castings for these mounts.

GALVOPTICS Telescope Division, Harvey Road, Burnt Mills, Basildon, Essex. Tel: 0268 728077. Optics.

More Next Month If Space Is Available.

PROGRAMME FOR FEBRUARY

VARIABLE STAR OBSERVATIONS



This light curve shows W Cygni from May to December last year. The recognised period of 130 days stands out quite well.

Mike Nicholls

**Mondays from 8pm GENERAL OBSERVATION SECTION & SCHOOL GROUP A**  
 5-12 Mr R Newman [redacted] Felixstowe, IP11 9DY. Tel. Fel. [redacted]  
 19-26 Mr J King [redacted], Felixstowe, IP11 9LQ. Tel. Fel. [redacted]

**Tuesdays from 8pm GENERAL OBSERVATION SECTION & SCHOOL GROUP B**  
 6-13 Mr R Newman [redacted] Felixstowe, IP11 9DY Tel. Fel. [redacted]  
 20-27 Mr J King [redacted], Felixstowe, IP11 9LQ Tel. Fel. [redacted]

**Wednesdays from 8pm NEBULA AND FAINT OBJECTS SECTION**  
 7-14 Mr M Cook [redacted], Ipswich, IP4 5PZ Tel. [redacted]  
 21-28 Mr D Payne [redacted], Wickham Market, IP13 0SD. Tel. W [redacted]

**Fridays from 8pm GENERAL OBSERVATION SECTION**  
 2- Mr P R Richards [redacted], Ipswich, IP4 1QB. Tel. [redacted]  
 16-23 Mr M Harlow [redacted], Trimley IP10 0XB. Tel. [redacted]  
 Mr R A Lobbett [redacted], Felixstowe IP11 8UJ. Tel. [redacted]

All nights are open to all members, but, on nights other than Wednesday ring directors to confirm dates. [ Directors will also be able to inform you of whether a group visit is taking place that evening. ] All numbers, Ipswich ( 0473 ) unless otherwise indicated.

1990 COMMITTEE

CHAIRMAN	D Payne	( Address above )	Home: [redacted] Work: [redacted]
VICE CHAIRMAN	D Barnard	[redacted], Ipswich, IP4 5PP	Home: [redacted] Work: [redacted]
SECRETARY	R Gooding	[redacted], Ipswich, IP1 6AE.	Home: [redacted]
TREASURER	M Nicholls	[redacted], Capel St Mary, Ipswich, IP9 2EX.	Home: [redacted] Work: [redacted]
MAINTENANCE	M Cook	( Address above )	Home: [redacted] Work: [redacted]
JOURNAL CO-ORD	E Sims	[redacted], Ipswich IP1 4HA	Home: [redacted]
LIBRARIAN	P Richards	( Address above )	Home: [redacted] Work: [redacted]
EQUIPMENT CURATOR	J King	( Address above )	Home: [redacted]
SPECIAL EVENTS CO-ORD	A Smith	[redacted], Ipswich IP2 9ES	Home: [redacted]