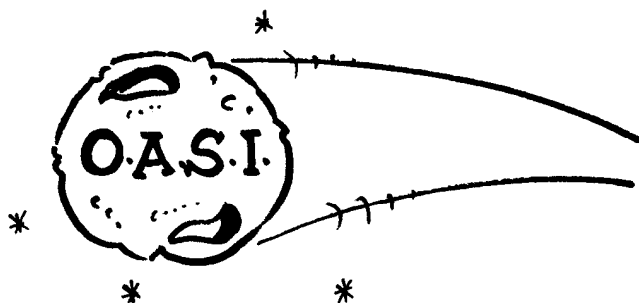
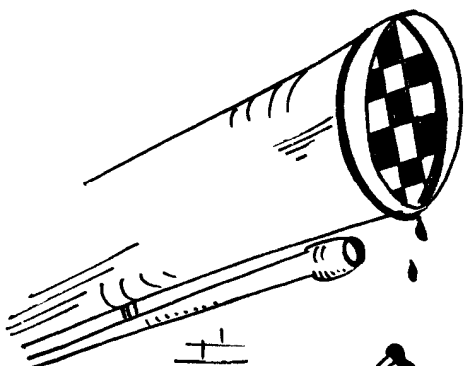


# ORWELL ASTRONOMICAL SOCIETY IPSWICH.



**FEBRUARY 1988**



I'VE "CHECKED" YOUR  
LEN'S MATE... AN' IT LOOKS  
VERY NICE, EVEN IF I DO  
SAY SO MYSELF!



# SOCIETY NEWS

## 1. 1988 Subscriptions

These were due on January 1st  
Rates are: Junior & O.A.P. £4.00  
Adult ..... £6.50  
Family ..... £7.50

These rates remain unchanged from 1987.

Members wishing to receive their newsletter by post, please add an additional £2.00 to cover postage and stationery costs.

All other newsletters will be left for collection in the club room.

## 2. February Committee Meeting

Will be held on Saturday 13th at 7.30 p.m. in the club room. This meeting is open to all members.

## 3. Redecoration of the Observatory

Help still required. Please come along on Wednesday evenings (decoration section).

# NIGHT SKY

(all times G.M.T.)

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

Moon ○ 2nd ◐ 10th ● 17th ◑ 24th

Mercury At inferior conjunction on the 11th. Rises about 1 hour before the sun at the end of the month. Not easily seen.

Venus Visible in the evening sky. Sets at 21.20 in mid month. Mag. -4.0

Mars Rises at about 04.00. Mag. 1.2

Jupiter Visible in evening sky. Sets at about 22.30 in mid month. Mag. -2.2

Saturn Visible in morning sky. Rises at about 04.30 in mid month. Mag. 0.6

Uranus Visible in morning sky. Rises at about 04.10 in mid month. Mag. 5.9

Neptune Visible in morning sky. Rises about 40 minutes after Uranus. Mag. 7.7

## Observing the Pleiades Occultation on 27th January

David Payne

This month a very interesting lunar occultation occurs on Wednesday evening of the 27th when the moon passes through the famous open cluster the Pleiades. More than a dozen fairly bright stars will be occulted between 17hrs 55m and 21hrs 3m and the moon is well placed throughout the period. Observations could be made with binoculars (weather permitting) although a telescope would be preferable.

I would like as many members as possible to make observations of this event from their own observatories/observing sites and send their results to myself or any committee member. We will use the results in a display at our 21st anniversary Open Day on 9th July, showing how the results can be used to determine the position and distance of the moon. We will also send the results on to the BAA occultation coordinator, Alan Wells in Birmingham.

The following describes one technique for observing the occultations. The equipment required is a pair of binoculars or preferably a telescope of 3 inch aperture or greater (suitably mounted), a portable tape recorder, periodic access to a telephone to record the speaking clock as a time reference, a map of the Pleiades (such as the one below) and a list of the approximate timings for each occultation event to be recorded.

Assuming all of the items are to hand the procedure is as follows: Between 10 and 20 minutes before the first event (a list of the major events are listed below, obtained from Astronomy Now magazine, as did the map) start observing the Pleiades and familiarise one self with the stars and the sequence of occultations. A few minutes before the first event (the actual time will depend on how long it takes to get to a telephone, call the speaking clock and get back to the telescope) obtain a recording of the speaking clock LEAVE THE RECORD RUNNING and start observing. I find it is useful, as the event approaches, to give a running commentary or count down to the event. At the event give some short sharp expletive to record the event (it is better to use a word starting with an explosive consonant like the letter t such as 'time' rather than a softer consonant like 'n' and 'now'). If time allows before the next event get another recording of the speaking clock. In any event make sure another recording of the clock is obtained BEFORE SWITCHING THE RECORDER OFF. These two timings are used to take into account any tape stretch or change in speed of the recorder that might occur between recording and successive playbacks.

This method allows the actual timings to be extracted at leisure and also gives a 'live' record of the event. The actual event timings can be extracted using a stop watch or electronic timer with preferably a resolution of 1/10 of a second. At a convenient time in the start up recording of the speaking clock start the stop watch/timer and note the speaking clock time (call this time  $T_s$ ). At the time of the event stop the stop watch or timer and note the time ( $T_{me}$ ). At this point if a conventional stop watch is used the timing will have stopped and the tape will need to be rewound and the stop watch restarted at the same point in the speaking clock recording as previously used. This time leave the clock running past the event until a convenient time in the 'post event' speaking clock recording is reached. Again record the time on the stop watch/timer ( $T_{mf}$ ) and note the time recorded by the speaking clock ( $T_r$ ). The time of the event can now be calculated from:

$$\text{Event Time } T_e = T_s + T_{me}(T_r - T_s)/T_{mf}$$

If it is possible it is best to 'surround' every event with a recording of the speaking clock switching off the recorder between events to make searching for them on tape relatively easy. Ideally the timing measurements made from the recording for each event should be made several times and the results averaged to reduce random errors. There will of course be systematic errors caused by the reaction time of the individual observers that will not be eliminated by repeated estimates of the timings no matter how many times they are carried out.

Having obtained your results list them together with any useful comments about seeing conditions, equipment used, magnifications etc. and most importantly the longitude and latitude of your observing site or alternatively the Ordnance survey grid reference to as many significant figures as possible, and send them to myself or any other committee member (addresses on back cover) or take them to the observatory.

Good luck and may clear skies be with you!



# LETTERS

Dear Fellow OAS(I) members,

I am writing to offer some suggestions regarding the observatory renovation work.

The stair well is now greatly improved by its new coating of sandtex. The increased brightness and the covering up of much of the discoloured and damaged concrete is definately an improvement. May I suggest that the top sides of the steps be painted as well, either the using same sandtex or a tougher material. This would be much tidier and more attractive than leaving the treads unpainted.

Another project worth undertaking would be the removal of the paint and polishing up of the brass on the main telescope tube. This would, undoubtedly, show the instrument in its full glory.

I realise that the work entailed in following up these suggestions is in addition to the essential tasks and will require a great deal of participation in maintenance work by more society members. I think that many members who are able to assist would be interested in being involved in the often facinating and always important work of restoring and maintaining the Orwell Park Observatory

Yours Enthusiastically,

An OAS(I) member.

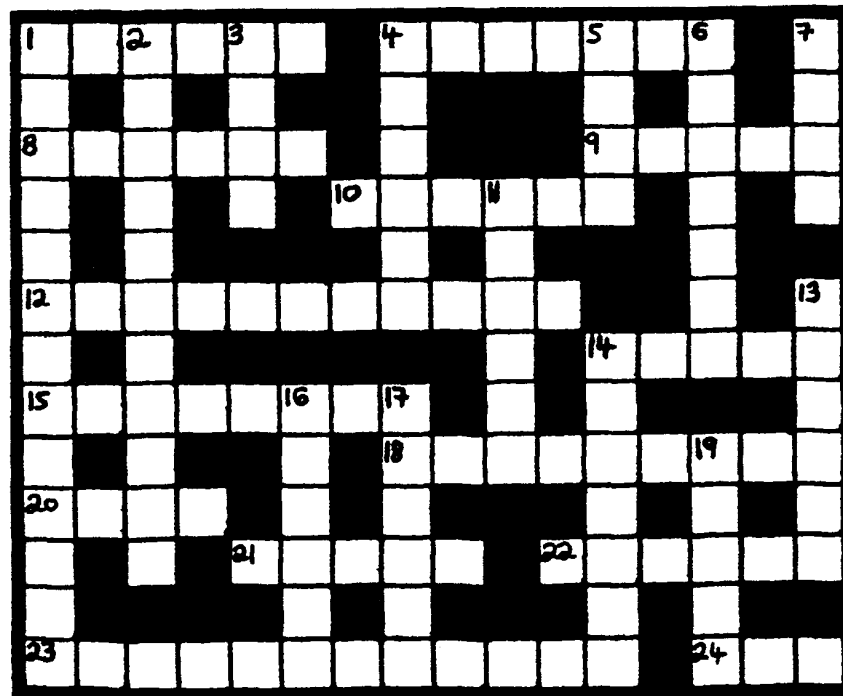
LETTERS SHOULD BE ADDRESSED TO ERIC SIMS AND LEFT IN THE OBSERVATORY CLUB ROOM OR POSTED TO HIS HOME ADDRESS ( SEE BACK PAGE ).

## Solution to crossword number 11

Across 1 Pioneer, 4 Luminosity, 6 Aberration, 9 Ecliptic, 12 Exobiology, 13 Autumnal Equinox, 15 Iris, 17 Arabs, 19 Seven Sisters, 22 Corvus, 23 Jupiter, 25 Nadir, 26 Nine, 27 Norma, 29 Bamberga, 30 Summer Solstice, 31 Red

Down 1 Planetoids, 2 Oberon, 3 Errai, 4 Leo, 5 Orbit, 7 Tellus, 8 Stern, 10 Cameras, 11 Crux, 13 Asterism, 14 Neptune, 16 Ashen, 18 Barnard, 20 Radiant, 21 Furnace, 22 Crab, 23 Janus, 24 Rings 28 Ram

## XWORD No 12



XWORD No. 12

ACROSS

- 1 This Program of lunar exploration ended in 1972 (6)
- 4 Winged horse (7)
- 8 The painter's easel - constellation (6)
- 9 The first eclipsing variable to be discovered (it's located in Perseus) (5)
- 10 Brilliant greenish-white star, mag 0.77 located in Aquila (6)
- 12 "----- hypothesis/theory which suggested that the solar system originated in a collision or near collision of a star with the sun (11)
- 14 7th satellite of Jupiter (5)
- 15 Periodic variations in precession (8)
- 18 The serpent bearer - constellation (9)
- 20 Asteroid discovered in 1932. It can approach within 10 million miles from the Earth (4)
- 21 This meridian is at Greenwich (5)
- 22 An accurate modern clock (6)
- 23 Between the stars (12)
- 24 Messier's classification of the Andromeda galaxy (3)

DOWN

- 1 Star system nearest to our solar system (5,8)
- 2 An eclipse of a star or planet by the moon (11)
- 3 French astronomer who invented the coronagraph (4)
- 4 Asteroid over 500 km in diameter (6)
- 5 Can vary in observable magnitude from -26.8 to 21 (4)
- 6 The Arrow - constellation (7)
- 7 Taurus - constellation (4)
- 11 Located in Ursa Major RA 12hr 50m; Dec +56deg 30m (6)
- 13 Further than a light year (6)
- 14 Between poles (7)
- 16 Minor planet whose perihelion lies within the orbit of Mercury (6)
- 17 The Carpenter's square - constellation (6)
- 19 Star between Markab & Baham in the constellation Pegasus (5)

R. A. LOBBETT

PROGRAMME FOR FEBRUARY

**Mondays from 8pm.** Double Star & Planets Section  
 Mr. N. Taylor [redacted], Farmlands, Trimley. Tel: Fel. [redacted]  
 Mr. T. Gillen. [redacted]  
 Bardwell, Bury St. Edmunds. Tel: 0359  
 Miss. M. Edwards [redacted] Felixstowe. Tel: Fel. [redacted]

**1-8-15-22**  
**29**

**Tuesdays from 8pm.** General Observation Section.  
 Mr. N. Gage [redacted], Trimley Tel: Fel. [redacted]  
 Mr. R. Newman [redacted], Felixstowe Tel: Fel. [redacted]  
 Mr. J. King. [redacted] Felixstowe Tel: Fel. [redacted]

**2-9-16-23**

**Wednesdays from 8pm.** Nebulae & Faint Objects Section.  
 Mr. M. Cook [redacted], Ipswich Tel: Ips. [redacted]  
 Mr. D. Payne [redacted], Wickham Market. Tel: W.Mkt. [redacted]

**3-10-17-24**

**Fridays from 8pm.** General Observation Section  
 Mr. R.A. Lobbett [redacted] Felixstowe Tel: Fel. [redacted]  
 Mr. J. Hood [redacted] Ipswich Tel: Ips. [redacted]  
 Mr. M. Harlow [redacted] Trimley Tel: Fel. [redacted]

**5-19**

On nights other than Wednesdays please contact directors to confirm dates.

1987 COMMITTEE

Chairman	D. Payne. [redacted], Wickham Market, IP13 OSD	Work: [redacted] Tel: W [redacted]
Vice Chairman /P.R.O.	D. Barnard [redacted], Ipswich, IP4 5PP	TEL [redacted] WORK [redacted]
Secretary	R. Gooding [redacted], Ipswich IP16AE	Tel: [redacted]
Treasurer	M. Nicholls [redacted], Capel St. Mary, Ipswich. IP 9 2EX	Work: [redacted] Tel: [redacted]
Maintenance	M. Cook [redacted], Ipswich, IP4 5PZ	Work: [redacted] Tel: [redacted]
Journal Co-Ord.	E. Sims [redacted], Ipswich. IP1 4HA	Tel: [redacted]
Society Events	R. Lobbett [redacted], Felixstowe	Work: [redacted] Tel: [redacted]
F.A.S. Articles Librarian	M. Harlow [redacted] Trimley P. Richards [redacted] Ipswich	Tel: [redacted] Tel: [redacted]