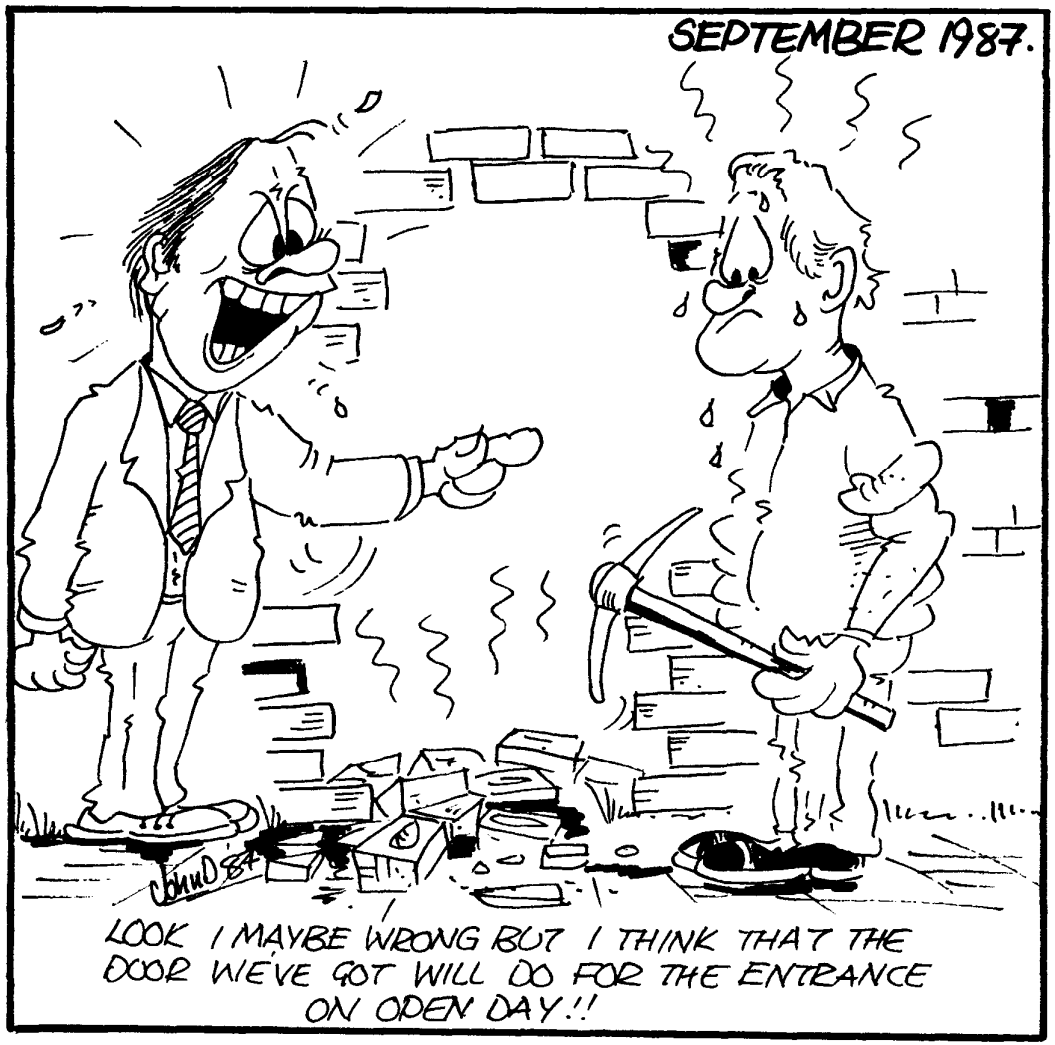
ORWELL ASTRONOMICAL SOCIETY, IPSWICH.

O.A.S.I.



SOCIETY NEWS

1 OPEN WEEKEND

FRIDAY	25th	8.00	to	10.30	p.m.
SATURDAY	26th	7.30	to	10.30	"
SUNDAY	27th	7.30	to	10.30	"
MONDAY	28th	8.00	to	10.30	"

Please come along and help at the times given above.

2 HERSTMONCEUX TRIP

This convention takes place on Saturday 3rd October at the Royal Greenwich Observatory at Herstmonceux. Interested members please contact Roy Gooding.

NIGHT SKY

(all times G.M.T.)

SUN Rises approximately between 05.10 - 06.10

Sets approximately between 19.00 - 1700

MOON 1st 7th 14th 23rd 30th

Mercury	An evening object, not easily seen in the twilight sky.
Venus	An evening object dificult to see in twilight sky.
Mars	Difficult to see in morning sky due to the close proximity of the sun.
Jupiter	Rises at 18.40 in mid month. Mag. -2.8
Saturn	Sets at about 21.00 in mid month. Mag. 0.5
Uranus	Sets at about 21.40 in mid month. Mag. 5.8
Neptune	Sets at about 22.20 in mid month. Mag. 7.7

CONSTRUCTION OF ORWELL PARK OBSERVATORY

First published in 'Engineering October 2nd 1874.

PART 2

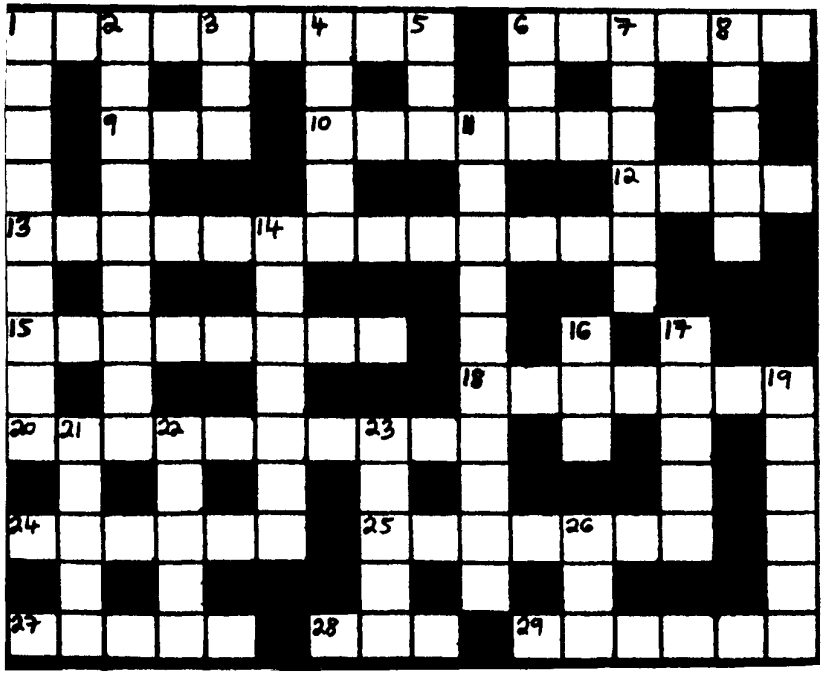
The instrument best suited for a private observatory is a powerful equatorial instrument, which must be supplemented by a small transit instrument for obtaining time and adjusting the clock. An equatorial instrument requires a revolving dome, and it is of great importance that this dome and its shutter should move easily and with no unnecessary labour to the obser -ver.The domes are usually made to run upon cannon balls, or upon a live ring of wheels, but in the case of Orwell Park Observatory it was considered best to run the dome upon wheels in fixed wall-boxes.The reason for this arrangement was that the edge of the dome could then be kept about a foot lower than the live ring arrangement would allow, and yet give the necessary height of doorway: of course, the object of keeping the edge of the dome as low as possible is to keep the centre of motion of the telescope as low down as possible and avoid climbing about into inconvenient positions while observing.

With regard to the construction of domes for observatories, it is best to make the shell double, so as to prevent the observatory from getting too hot in the sun, and it would be well to have the skeleton of the dome of iron in order that it may keep its shape and run true on the wheels: a wooden dome is apt to warp and run very heavy.The shutter of the dome should run easily and leave open a space from the horizon to beyond the zenith.Various arrangements of shutter have been adopted at different observatories, but there is none so convenient as that adopted at Orwell Park (see engravings on page 259), where the shutter runs on two tangent bars at the top and bottom of the dome respectively, and draws away to one side in order to open the slit.

The details of the Orwell Park dome will be under-stood from the engravings on page 259: the internal diameter is 20 feet, and the weight rather less than 3 tons: the skeleton is of wrought iron, the internal casing is of polished mahogany,and the external casing (which carries the copper sheathing) is of thin deal.The moving power to turn the dome is applied by means of an endless rope on a grooved wheel; the axle of the wheel carries a pinion gearing into a circular rack which is fixed on the wall of the observatory, and the dome revolves with great ease by the power of one man applied at the rope. In some observatories the power is applied directly to one of the live-ring wheels which carry the dome, but this method is always satisfactory,as the driving wheel is apt to slip,and it then becomes necessary to distribute the weight of the dome unequally, so as to throw more weight upon the driving wheel and increase the friction.The Orwell Park dome was constructed by the contractors,Messrs. George Smith and Co.It may be well to mention that when wall-boxes are used it is advisable to provide an arrangement for getting at each of them without disturbing the dome, in case they should require adjustment, or get choked with rain-water or rubbish; in the case of the Orwell Park Observatory this was done by means of a movable slab of stone which was held by bolts against the side of the wall-box on the inside of the wall,and could be removed at will for the purposeof getting at the wall-box.

To be continued.

XWORD No 9



Across

1 Minor planets (9)
6 ♄ - this is it's symbol (6)
9 A spiral galaxy would have one (3)
10 Eclipse of sun where shadow of moon is not long enough to reach the earth (7)
12 American satellite balloons with diameters >= 100 ft (4)
13 Famous globular cluster (5,8)
15 Constellation which meanders across the sky (8)
18 Contary to earlier belief it's day is not as long as it's year (7)
20 Gaseous envelope surrounding a celestial body (10)
24 Canis Major was known this by the Egyptions (6)
25 Camelopardalis (7)
27 Once thought to be the centre of the universe (5)
28 Constellation located NW of the large Megallanic cloud (3)
29 Star cluster over six degrees in diameter (6)

Down

1 Constellation between Perseus & Pegasus (9)
2 Nickname for the multiple star Theta Orionis (9)
3 Constellation with this symbol ♈(3)
4 Often inverted (5)
5 Primary source of light for this planet (3)
6 Latin for answer to clue 5 (3)
7 Referring to the ornament of a ship's stern - star within constellation Carina (6)
8 He determined the limiting value for a satellite's distance from it's primary planet (5)
11 Maps or charts & catalogues of fixed stars (10)
14 Second brightest star in the sky (7)
16 Constellation RH 17H; Dec -55 (3)
17 "the bear" in Arabic, is the pointer near Polaris (5)
19 Famous observatory at lake Geneva, Winsconsin (6)
21 Hind paws of Ursa Major (5)
22 Curve in which a celestial body moves under the influence of gravitation (50)
23 Aquila (5)
26 This constellation would require a big bowl of soup to be an annoyance (3)

Solution to crossword number 8

Across - 1 Quasar, 4 River, 6 Astronomical, 8 Refraction, 10 Noctilucent, 13 Airy, 14 Multiple, 15 Zone, 17 Bradley, 19 Retrograde.

Down - 1 Quadrant, 2 Artificial, 3 Anomalistic, 4 Ram, 5 Rilles, 7 Canon, 9 Trumpler, 11 Era, 12 Tarazed, 14 Mizar, 16 Net, 17 Big, 18 Ara.

OBSERVATORY OPEN EVENINGS

As many OASI members as possible will be needed to ensure that the open evenings, which are vitally (financially) important to the societies operation, are a success. For each evening two telescope operators and at least four others will be required.

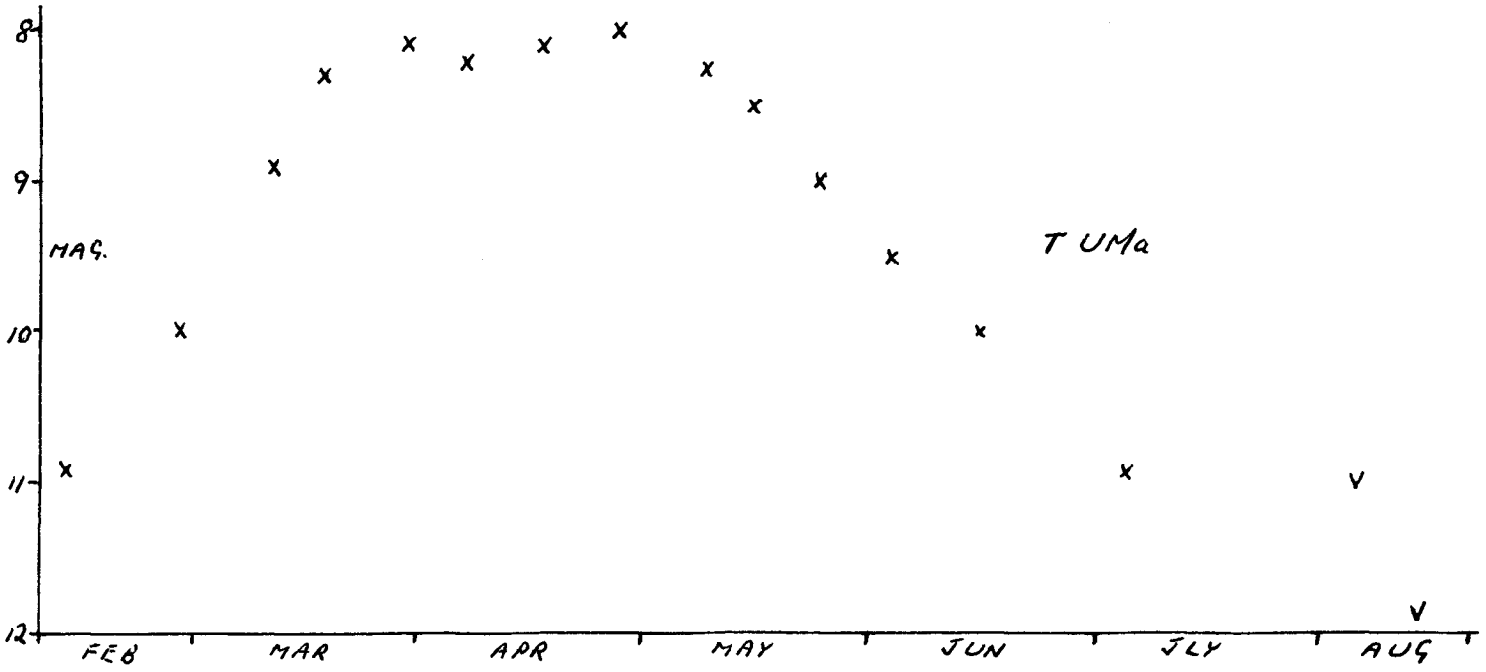
All members who can arrange to be at the observatory on one or more particular nights should contact me or another committee member as soon as possible so that a 'rota' list can be drawn up. If you are unable to specify a day but will definitely be coming up to help out please inform us so that we can see if we are likely to have good coverage of the weekend. Of course if you can help out even if you can't be certain that the weekend will be free for you every one will be of help on the night.

If anyone has any ideas for demonstrations displays (e.g. photo's or observations) again contact me or another committee member.

P. Richards

VARIABLE STAR OBSERVATIONS by Mike Nicholls

Below is shown the light curve of T Ursae Majoris from February to August this year. It shows a well defined maximum for this long period or Mira type variable. Note that the rise to maximum is steeper than the fall. Also the 'flattish' top to the curve. The normal light range is from magnitude 7.7 to 13.0 with a period of 257 days.
All observations were made with an 8" reflector.



PROGRAMME FOR SEPTEMBER

MONDAYS from 8pm — 7-14-21

DOUBLE STAR & PLANETS SECTION
Mr N Taylor, Farmlands, Trimley Tel:Fel.
Mr T Gillan, Bardwell, Bury St.Edmunds. Tel:0359
Miss M Edwards, Felixstowe Tel:Fel.

TUESDAYS from 8pm — 1-8-15-22-29

GENERAL OBSERVATION SECTION
Mr N Gage, Trimley Tel: Fel.
Mr R Newman, Felixstowe Tel: Fel.
Mr J King, Felixstowe Tel: Fel.

WEDNESDAYS from 8pm — 2-9-16-23-30

NEBULEA & FAINT OBJECTS SECTION
Mr M Cook, Ipswich Tel: Ips.
Mr D Payne, Wickham Market. Tel:W.Mkt

FRIDAYS from 8pm — 4-18

GENERAL OBSERVATION SECTION
Mr R A Lobbett, Felixstowe. Tel:Fel.
Mr J Hood, Ipswich. Tel:Ips.
Mr M Harlow, Felixstowe Tel:Fel.

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

1987 COMMITTEE

CHAIRMAN	D Payne, Wickham Market, IP13 0SD	Work: Home:
VICE CHAIRMAN /P.R.O	D Barnard, Ipswich, IP4 5PP	Home:
	Essex SS17 9BU	Work: Extn
SECRETARY	R Gooding, Ipswich IP1 6AE	Home:
TREASURER	M Nicholls, Capel St. Mary, Ipswich, IP9 2EX	Work: Home:
MAINTENANCE	M Cook Ipswich, IP4 5PZ	Home: Work:
JOURNAL CO-ORD	E Sims, Ipswich, IP1 4HA	Home:
SOCIETY EVENTS	R Lobbett, Felixstowe	WORK: Home:
F.A.S. ARTICLES	M Harlow	Home:
LIBRARIAN	P Richards, Ipswich	Home:

ORWELL ASTRONOMICAL SOCIETY (IPSWICH)

ORWELL PARK OBSERVATORY

NACTON
(Near IPSWICH)

OPEN EVENINGS

TOUR THE SOLAR SYSTEM

SEPT. 25th 26th 27th 28th

ORWELL PARK OBSERVATORY WILL BE OPEN TO THE PUBLIC TO OBSERVE THE MOON AND VISIBLE PLANETS, AT THE FOLLOWING TIMES. WEATHER PERMITTING.

FRIDAY	**25th**	**800**	to	**1030 pm**
SATURDAY	**26th**	**730**	to	**1030 pm**
SUNDAY	**27th**	**730**	to	**1030 pm**
MONDAY	**28th**	**800**	to	**1030 pm**

(SLIDE SHOW IF CLOUDY)

ENTRANCE DONATION
ADULT 50p
OAP 25p
CHILD 25p

Secretary: Mr.R. Gooding
168 Ashcroft Road
Ipswich