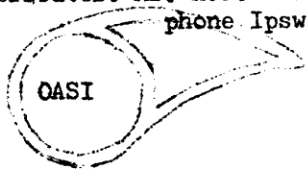
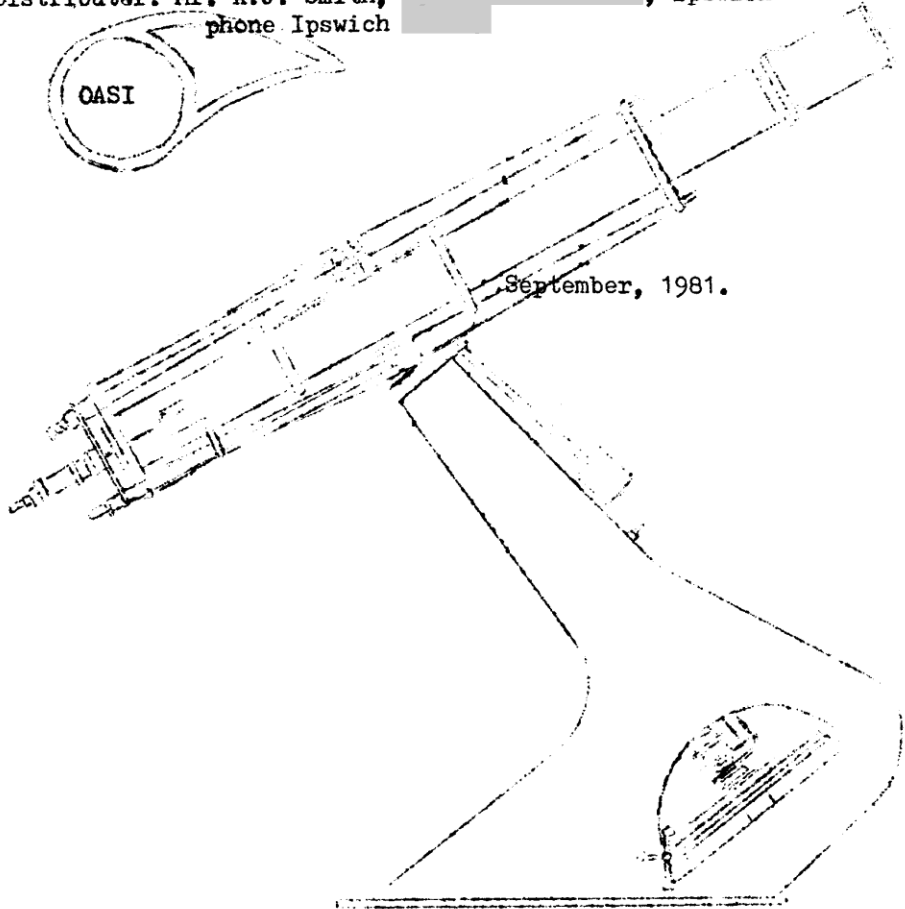


JOURNAL OF THE ORWELL ASTRONOMICAL SOCIETY (IPSWICH)

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September, 1981.



The Orwell Park 10 inch Astronomical Telescope  
at Nacton, near Ipswich.

THE NIGHT SKY AS SEEN FROM ORWELL PARK IN SEPTEMBER.

by Paul Burt.

Cepheus and Lacerta occupy the zenith during late evening this month, bordered by Cassiopeia to the east and Cygnus to the west. Aquarius is on the meridian at midnight at the beginning of the month, with Capricornus directly south-west of it. Pisces is well into the sky by midnight in the south-east, below Andromeda and Pegasus, while to the north-east Perseus and Auriga are becoming prominent during late evening. Over to the west Hercules is still visible below Vega, with Aquilla to the west of it.

THE SUN:

Sunrise is at 05h 10m at the beginning of the month, changing to 06h 10m at month-end. Sunset changes from 18h 50m to 17h40m. During the month the Sun moves from Leo to Virgo.

THE MOON: - PHASES

|               |             |              |             |
|---------------|-------------|--------------|-------------|
| First Quarter | 6d 13h 26m  | Last Quarter | 20d 19h 47m |
| Full Moon     | 14d 03h 09m | New Moon     | 28d 04h 07m |

Occultations

| <u>Star</u> | <u>Phase</u> | <u>Mag.</u> | <u>d.</u> | <u>Time</u> |              |
|-------------|--------------|-------------|-----------|-------------|--------------|
|             |              |             |           | <u>hrs</u>  | <u>mins.</u> |
| 2208        | D            | 7.4         | 4         | 19          | 20.8         |
| *2736       | D            | 6.2         | 8         | 20          | 24.9         |
| 2739        | D            | 6.7         | 8         | 21          | 20.2         |
| **3026      | D            | 7.3         | 10        | 23          | 43.7         |
| 3171        | D            | 3.8         | 11        | 24          | 02.6         |
| 462         | R            | 5.9         | 18        | 1           | 50.1         |
| *764        | R            | 5.0         | 20        | 1           | 40.0         |
| 915         | R            | 4.7         | 21        | 0           | 11.9         |
| *1077       | R            | 3.7 to 4.1  | 22        | 0           | 28.4         |

D = Disappearance: R = Reappearance.

Stars listed according to Zodiacal Catalog (ZC) numbers

\*denotes double star

\*\* denotes time is correct for latitude and longitude of Greenwich.

## THE PLANETS:

- Mercury is an evening star, reaching greatest elongation of  $26^{\circ}$  on the 23rd at mag. +0.3 (decreasing), but will be setting only half an hour after the Sun.
- Venus is also an evening star, setting an hour after the Sun at mag. -3.5.
- Mars is in Cancer, rising at 0100 hours at mag. +1.8
- Jupiter is in Virgo at mag. -1.2, becoming lost in the Sun-set glow.
- Saturn will be lost in the Sun-set glow by mid-month.

Source: B.A.A. Handbook, 1981.

All times are U.T. (=B.S.T. minus 1 Hour)

## FROM OTHER JOURNALS:

by Paul Burt.

## MONSTER SUPERSTAR DISCOVERY?

Astronomers at the University of Wisconsin have discovered what they believe to be a supermassive star, from observations by the International Ultraviolet Explorer Satellite. The star, known as R136a, lies in the centre of the Tarantula Nebula, which is a bright cloud of ionised hydrogen in the Large Magellanic cloud. Optical observations showed that the star is 200 to 1000 times heavier than the Sun, but ultra-violet observations put the figure at 2500 suns - 20 times heavier than any other known star.

Like the Orion Nebula, the Tarantula is illuminated by the light of exceptionally bright young stars embedded in it. Spectral observations of Tarantula's centre showed that most of the ionising radiation is coming from compact region 0.3 light years across, and that there is also a rapid mass loss in the form of a stellar wind from this region. No previous observations of single objects can account for these phenomena, and it is unlikely to be a cluster of supergiants because of the small area involved, and also the spectrum would not be as detailed as it is.

Some theorists have suggested that such supermassive stars existed in the early days of the universe, and generated the microwave background radiation. Others think that they are the centres of active nuclei, while rival theorists believe that supermassive stars do not live long enough to be seen. - take your pick!!

New Scientist 30th July, 1981.

### METEOR NOTES:

by David Barnard.

During September there are only three minor showers:

1. The Delta Piscids. This shower reaches maximum on September 8th with the normal limits between Sept. 5 - 11th. The radiant is R.A. 8 and Dec. +12°
2. The Xi Piscids reaches peak rate on September 30th and the normal limits are between Sept. 27th and Oct. 3rd. R.A. = 23 and Dec. +2°.
3. The Rho Cygnids has it's maximum on September 30th as well with the normal limits falling between Sept 27th and October 2nd. R.A. = 325 and Dec. +45°

All these showers are very weak giving a Z.H.R. of only one meteor every hour or so.

In next month's Journal I will be giving a report on the Society's expedition to Scotland.

David Barnard.

### VARIABLE STAR OBSERVATIONS by Mike Nicholls.

The light curve on page 4 of this month's Journal is that of X Aurigae. This is the star belonging to the long period class of variables, but has a shorter than usual average period of 164 days. The light curve shows about 1½ cycles with a period between the minima longer than the average. The observations were made with an 8" reflector over a period of nine months. The star is circumpolar.

8-

9-

10-

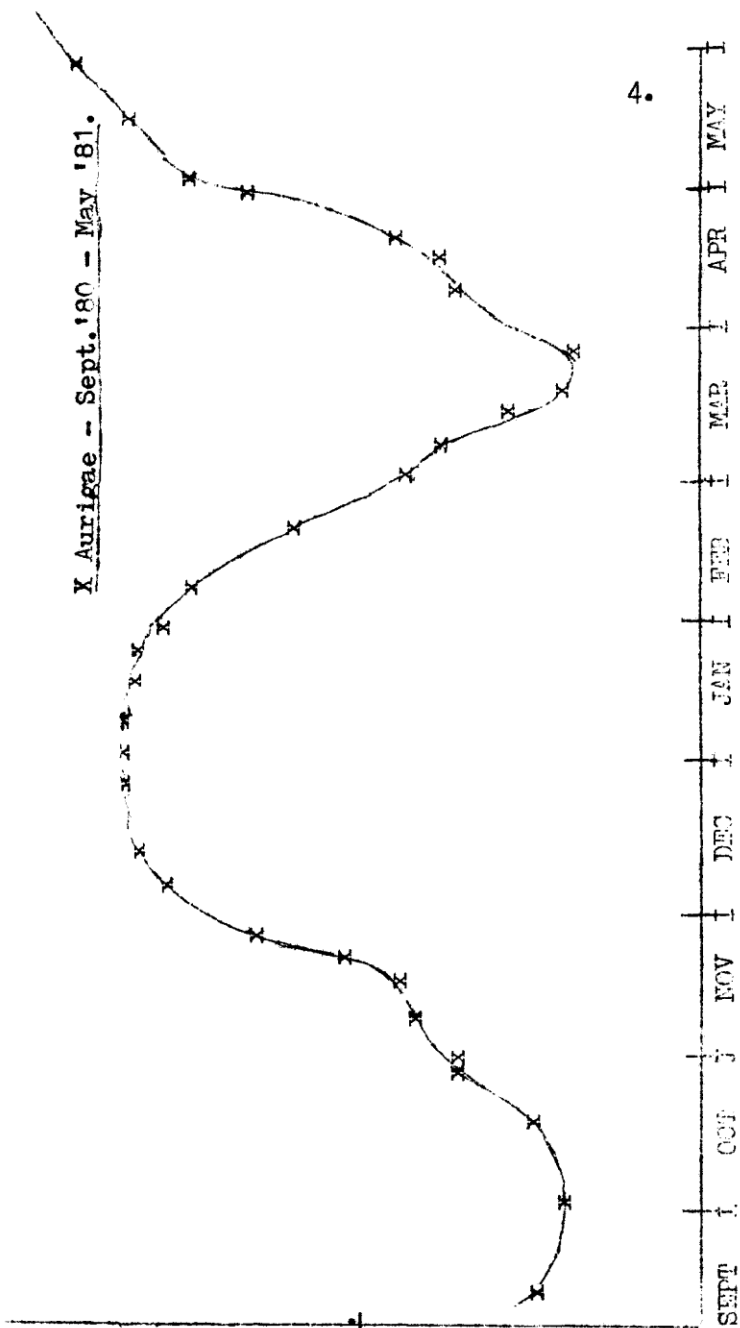
MAG.

11-

12-

13-

X Aurigae - Sept. '80 - May '81.



4.

*Gooding*

SOCIETY NEWS:NEW MEMBERS

We would like to welcome the following new members who have just joined our Society:

Mr. C. BALLE, [REDACTED], Ipswich  
 Mr. A.R. WHITE, [REDACTED], Whitton, Ipswich  
 Mr. D.R. BEALE, [REDACTED], Ipswich.  
 Mr. K. CARDEN, [REDACTED], Ipswich  
 Mr. M. JOLLY, [REDACTED], Woodbridge.  
 Mr. V.E. WARNE, [REDACTED], Badingham, Woodbridge.

This year so far we have had 26 new members to our Society, 12 members have not renewed their subscriptions so our membership now stands at 80 paid up members plus four Honorary members.

DECORATING THE OBSERVATORY:

We still have a tremendous amount of work to be done at the observatory and members are urged to help as much as they can. Work parties at the observatory generally work until it gets dark and then some observations are carried out through the telescope. At the moment the observatory dome has been sanded down and re-varnished and it is a sight to be seen! Colin Button is still pointing the outside walls of the tower - did you see his photograph in the 'Evening Star'? So if you can spare an hour or so please come up the observatory to lend a hand. It was nice to see that one of our new members, Mr. D.R. Beale has been coming to the observatory to help.

ASTRONOMY FOR BEGINNERS

It is hoped that starting Friday 16th October that we will start up again 'Astronomy for Beginners' at the Observatory. Mr. Roy Gooding will start off by giving a talk on the 'History of Astronomy' and it is hoped that as many members will give little talks on various aspects of astronomy throughout the winter months.

OPEN DAY.

There are still many things to be done for the Open Day on Saturday 10th October, 1981. If you can help in any way, either on the day or before the day please contact Mr. M. Nicholls, [REDACTED], Ipswich. Please also contact him if you have anything of astronomical interest which we might be able to put on display.

OPEN COMMITTEE MEETING:

There will be an open Committee Meeting held on Saturday 19th September starting at 7.30p.m. in the Observatory to which all members are invited.

DEADLINE FOR OCTOBER JOURNAL:

All items for the October Journal should be sent to arrive by Monday 21st September to Mr. R.M. Cheesman, [REDACTED], WEST HANNINGFIELD, Chelmsford Essex. CM2 8LQ.

Mr. Peter Laycock, South East Essex Astronomical Society,  
Southend-on Sea.

It is with great regret that I have to advise members of the death of Peter Laycock of The South East Essex Astronomical Society on Tuesday 18th August. Peter was the Secretary of S.E.E.A.S. for many years and also served for five years as the Treasurer of the Federation of Astronomical Societies. Since founding S.E.E.A.S. over ten years ago he has been a close friend of our Society and visited us on many occasions to give us talks.

His death is a great loss for S.E.E.A.S. and our own Society as well as all amateur astronomers throughout the U.K.

To his wife Pat and his sons we extend our deepest sympathy in their sad loss. He will be greatly missed.

R.M. Cheesman.

FOR SALE:-

Mr. Simon Harvey, [REDACTED], Needham Market, Ipswich, Suffolk, telephone Needham Market [REDACTED] has the following books for sale. Anyone interested should contact Simon direct.

- |                                                                                           |             |
|-------------------------------------------------------------------------------------------|-------------|
| 1. The Amateur Astronomer, Patrick Moore, pp 356                                          | £1.50       |
| 2. Astronomy for 'O' level, Patrick Moore, pp 216                                         | £0.50       |
| 3. Basic Astronomy, Haysham, Hardback pp 228                                              | £2.50       |
| 4. The Amateur Astronomers Glossary, P. Moore pp 162                                      | £1.50       |
| 5. 1977 Astronomical Ephemeris, H.M.S.O.                                                  | £2.00       |
| 6. Explanatory supplement to the Astronomical Ephemeris, H.M.S.O.                         | £4.00       |
| 7. Challenge of the Stars, Patrick Moore                                                  | £2.50       |
| 8. Patrick Moores colour Star Atlas pp 112                                                | £2.00       |
| 9. The Universe, Sampson Low, pp 160                                                      | £2.50       |
| 10. Apollo 17 cap. Navy blue with gold braid oak leaves, also mission emblem and insignia |             |
| Collectors item                                                                           | £30. 0.N.O. |



ORWELL ASTRONOMICAL SOCIETY (IPSWICH)  
PROGRAMME FOR SEPTEMBER, 1981.

AT THE OBSERVATORY, Orwell Park School, Nacton.

TUESDAYS: Solar, Lunar & Planetary Sections from 7p.m.

Directors: Mr. J. Hood, [REDACTED]. Ipswich  
Tel. [REDACTED]

Mr. J. Ranson, [REDACTED]. Ipswich  
Tel. [REDACTED]

1st, 8th 15th 22nd & 29th

WEDNESDAYS Nebulae & Faint Objects Section from 8p.m.

Directors: Mr. D. Payne, [REDACTED],  
Wickham Market, Tel. Wickham Mkt. [REDACTED]

Mr. M. Cook, [REDACTED], Ipswich  
Tel. [REDACTED]

2nd 9th 16th 23rd & 30th

FRIDAYS Variable Stars Section from 8p.m.

Directors: Mr. M. Nicholls, [REDACTED]. Ipswich

Mr. R.T. Hodgkiss, [REDACTED]. Ipswich.

4th 11th 18th & 25th

SATURDAY 19th September at 7.30p.m.

Open Committee Meeting to which all members  
are invited.