

MARCH 1984



SOCIETY NEWS

SUBSCRIPTIONS

This is the last newsletter you will receive if you have not paid your subscription for 1984. The rates are: £3, £5 and £6 for under 18's, adult and family memberships respectively, plus Journal postage of an extra £1.50. Cheques etc. should be made out to Orwell Astronomical Society and sent to the Membership Secretary - Mike Barriskill (address on back page).

A lecture meeting will be held at the Friends' Meeting House, Fonnereau Road, on Friday 30th March, at 8.00 p.m. when Mr. K. Dunlop will be speaking about the Space Telescope.

COMMITTEE MEETING

There will be an open Committee Meeting on Saturday, 17th March, at 7.30 p.m. at the Observatory.

NIGHT SKY

Constellations (all times G.M.T.)

The map intended for February's Newsletter was not included because of insufficient space. However, space permitting, it should be opposite.

Sun Rises approx. between 06.50 to 05.50

Sets approx. between 17.30 to 18.30

Moon ● 2nd      ◐ 10th      ○ 17th      ◑ 24th

Occultations

|      |    |      |          |   |            |
|------|----|------|----------|---|------------|
| 9th  | ZC | 651  | mag. 5.9 | D | 18h. 24.0m |
| 11th |    | 977  | " 6.6    | D | 21h. 26.6m |
| 12th |    | 1117 | " 5.1    | D | 20h. 04.2m |
| 13th |    | 1157 | " 6.0    | D | 2h. 51.8m  |
| 14th |    | 1308 | " 4.7    | D | 3h. 42.0m  |

Mercury Superior conjunction March 8th. Best seen near the 25th after sunset in the West. mag.-1

Venus Rises about 1hr.20m before sunrise. mag.-3.3

Mars Rises 23h.20m in mid month. mag. 0.0

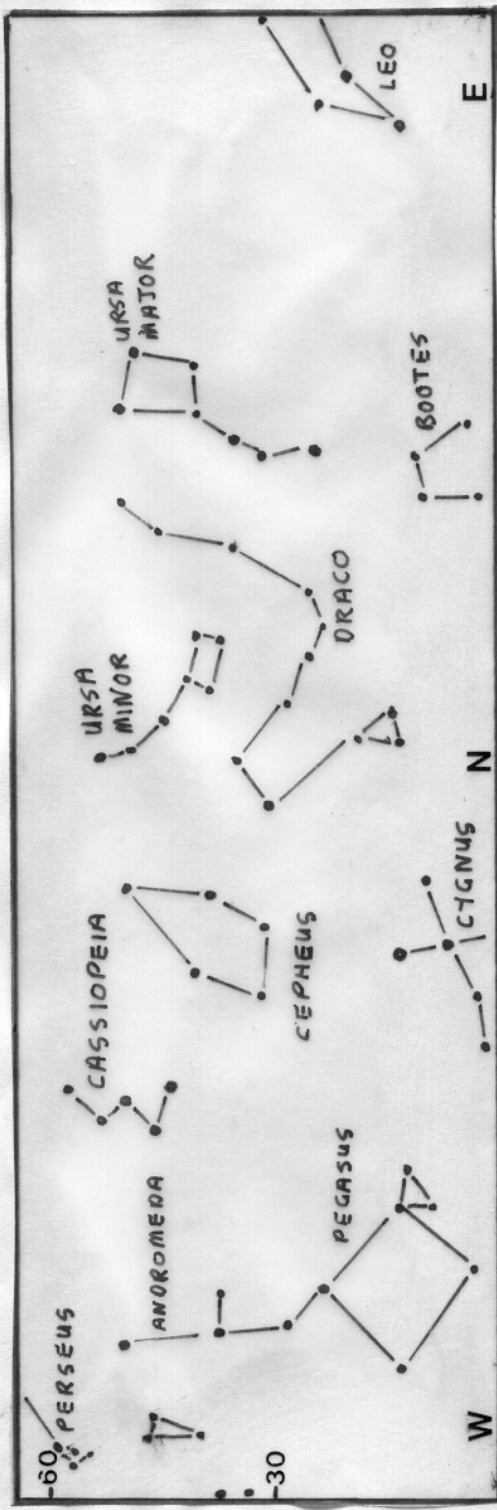
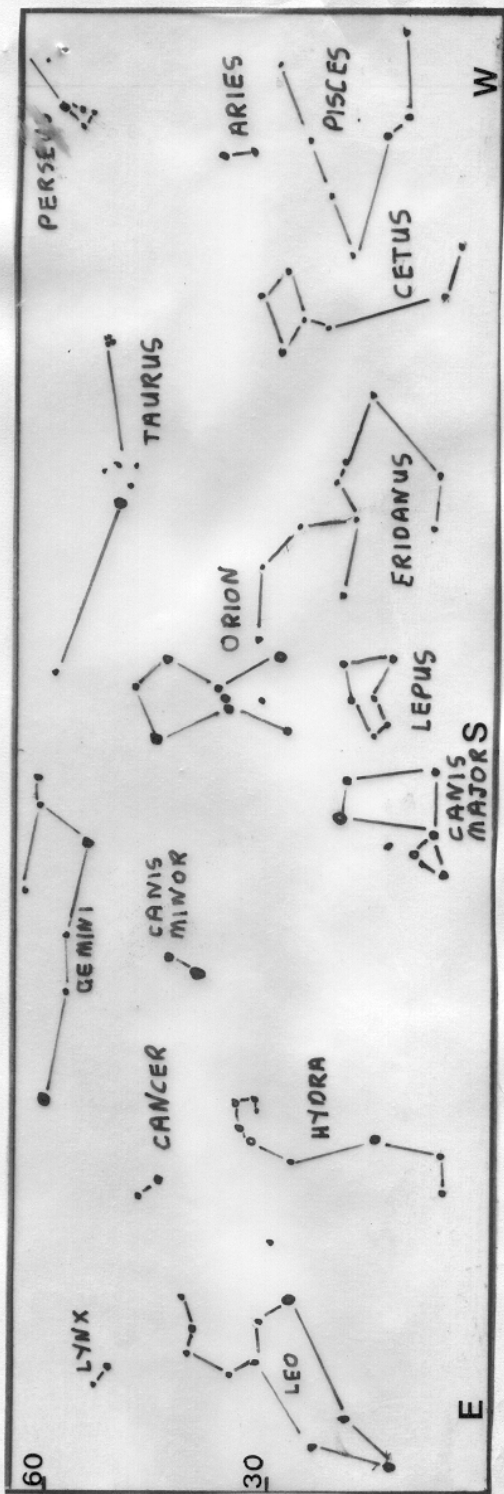
Jupiter Rises at 03.30 in mid month. mag. -1.6

Saturn Rises at 23.00 in mid month. mag. +0.5

Uranus Rises at 01.30 in mid month. mag. +5.8

Neptune Rises at 02.40 in mid month. mag. +7.7

R. Gooding.



To my friends at O.A.S.I.

I would like to thank you all for the gift of the Sky Catalogue 2000, that was presented to me during my recent illness. I can assure you that it has already been used a lot and will be a constant boon to my observations in the future.

Many thanks  
Bob Newman

FOR INFORMATION:

Two phone numbers for your reference:

01-246.8055. Astronomy hot line. This service provides a recorded message of current astronomical news and events, with information on any space flights in progress. There is a "whats up" in the sky section as well, giving data on meteor showers, comets etc.

01-01-900-410-6272. This is a direct line to NASA giving a live running commentary on Shuttle flights. This service is only available while a shuttle mission is in progress.  
(Beware though, this is a trans-Atlantic number).

FIREBALL PHOTOGRAPHED.

This notice should have appeared in February's Journal but was omitted by mistake: A Fireball was photographed by Alan Smith sometime between 10:30pm on 5th January 83 and 06:30 am on 6th January 83. It was recorded almost due north of Ipswich. If any members were observing that night and think they may have seen it please contact Alan Smith on Ipswich [redacted].

\*\*\* WANTED \*\*\*

Astronomical refractor, with or without stand, or decent size sighting telescope, (Buyer will collect).

R M Cheesman,  
[redacted],  
Corringham,  
Stanford-Le-Hope,  
ESSEX SS17 9BU.

Phone: [redacted]

## COMETS AROUND VEGA?

When the Infrared Astronomical Satellite discovered a warm dust cloud around Vega (January issue page 7), IRAS scientists suggested that the material could represent the beginnings of planetary accretion. Situated some eight billion miles (about twice the radius of Pluto's orbit) from the bright young (A0) star, the dust grains are at least a millimetre across and may be much larger. Anything smaller, they reason, would soon be either swept into Vega or flung deep into space - depending on how the material absorbs and interacts with the star's intense radiation.

One possibility overlooked by the IRAS team is that Vega may be surrounded by comets. Paul Weissman of the Jet Propulsion Laboratory explains that at the dust's distance from Vega, the most common molecules to condense as the primordial star formed would have been ices - especially water ice - and lesser amounts of carbon and silicate dust. Sublimation of the ice (and collisions?) would create a swarm of particles on a continuing basis. He notes that our own solar system is also surrounded by billions of comets (the Oort cloud) far beyond the orbit of Pluto.

David Barnard

The Messier Objects M81 and M82 in Ursa Major

D Payne

With the arrival of spring the well known constellation Ursa Major the Great Bear is approaching the zenith from the east. The Messier objects M81 and M82 are in the north western corner of the constellation and can fairly easily be found by extending a line from through in the bowl of the dipper towards the north west about the distance separating and (see map below).

These nebulae are a pair of galaxies just over half a degree apart and so can be observed together in a low power field. Both objects can be found with 10x50 binoculars as rather faint small misty patches. In a 3inch telescope M81 appears circular while the elongated shape of M82 is discernable. On a clear dark night with a 10inch telescope some of the irregularity of the galaxy M82 can be glimpsed.

M81 is a spiral galaxy of magnitude 8.0 lying at a distance of about 8.5 million light years. The galaxy appears to be about 36,000 light years in diameter only 1/3 the diameter of our own galaxy yet it has a mass of around 250,000 million suns which is larger than the estimated mass of the Milky Way system. This makes M81 one of the densest galaxies known.

M82 is an unusual galaxy with no real spiral structure. In photographs taken with large telescopes it appears as an elongated glowing mass with dark spots and streaks presumably produced by dark obscuring material. The light from the galaxy is significantly polarised particularly in the outer edges suggesting a strong and extensive magnetic field. The galaxy is also a strong source of radio waves generated by energetic charged particles travelling through the magnetic fields.

It used to be thought that the peculiar features of M82 were caused by the collision of two galaxies but it is now known that the energy of the radio emissions is far too great to be explained by any such collision process. Studies of M82 now suggest that there was a tremendous outburst some 1.5 million years ago involving the energy from several million suns. One probable explanation could be that in the core of the galaxy huge 'hyper stars' are formed from many thousands of stars. These hyper stars could collapse directly into black holes releasing enormous amounts of energy in the process.

Although M82 is not visually one of the best objects for small telescopes, it is worth searching for bearing in mind that you will be witnessing the results of one of the most violent explosions in the universe.

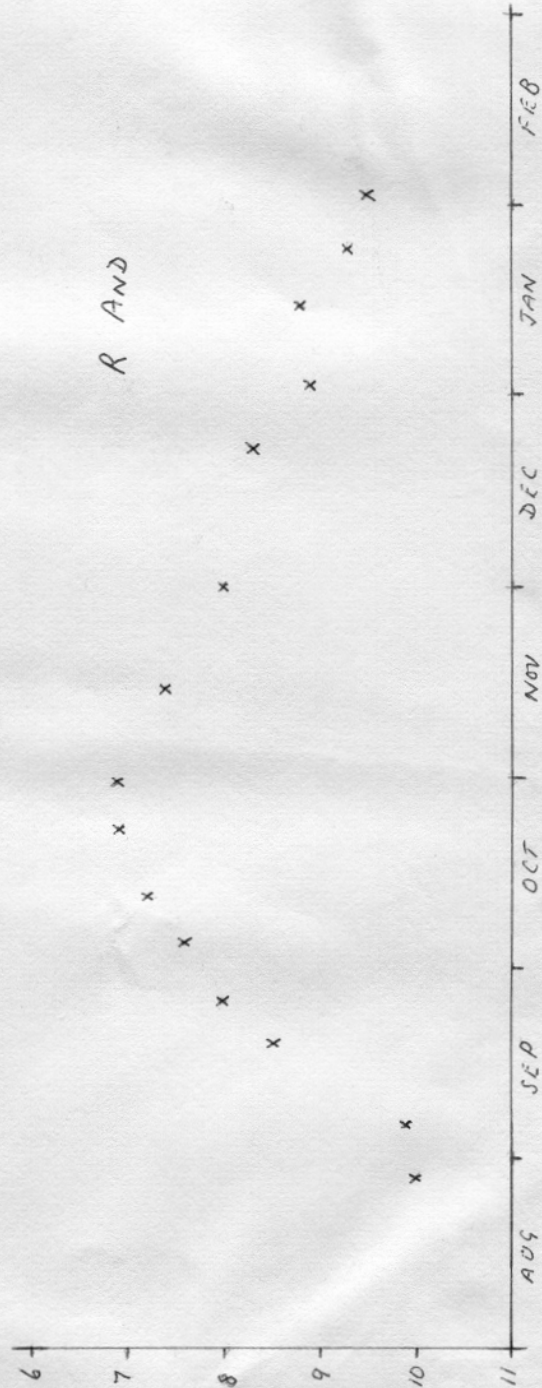


## VARIABLE STAR OBSERVATIONS

by Mike Nicholls

The light curve shows R Andromedae from August 1983 to February 1984. This star is a member of the class of long period variables with a period of 409 days. The curve shows a maximum occurring at the end of October, (predicted time October 20th). Notice the steeper rising portion of the curve which is typical of the class, although some members have equal rise and fall rates. The maximum in this case is about magnitude 7. It has however been known to reach naked eye visibility. The minimum is usually around the 14th magnitude.

Observations were made using an 8" reflector.



## PROGRAMME FOR MARCH

|   |  |   |
|---|--|---|
| <b>MONDAYS from 8pm</b><br>5, 12, 19, 26    | <b>DOUBLE STAR &amp; PLANETS SECTION</b><br>Mr N Taylor [redacted], Farmlands<br>Trimley<br>Mr T Gillan [redacted], Felixstowe | Tel: Fel. [redacted]<br>Tel: Fel. [redacted]  |
| <b>TUESDAYS from 7pm</b><br>6, 13, 20, 27   | <b>GENERAL OBSERVATION SECTION</b><br>Mr N Gage, [redacted], Trimley<br>Mr R Newman [redacted], Felixstowe                     | Tel: Fel. [redacted]<br>Tel: Fel. [redacted]  |
| <b>WEDNESDAYS from 8pm</b><br>7, 14, 21, 28 | <b>NEBULEA &amp; FAINT OBJECTS SECTION</b><br>Mr M Cook, [redacted], Ipswich<br>Mr D Payne, [redacted],<br>Wickham Market.     | Tel: Ips. [redacted]<br>Tel: W.Mkt [redacted] |
| <b>FRIDAYS from 8pm</b><br>2, 16            | <b>VARIABLE STAR SECTION</b><br>Mr R Gooding, [redacted], Ipswich<br>Mr M Nicholls, [redacted],<br>Capel St. Mary.             | Tel: Ips. [redacted]<br>Tel: Ips. [redacted]  |
| <b>SUNDAYS from 8pm</b><br>4, 18            | <b>GENERAL OBSERVATION SECTION</b><br>Mr R Adams, [redacted], Ipswich<br>Mr M Barriskill, [redacted], Ipswich                  | Tel: Ips. [redacted]                          |

## 1984 COMMITTEE

|                        |  |                                      |
|------------------------|--|--------------------------------------|
| <b>CHAIRMAN</b>        | D Payne [redacted],<br>Wickham Market, IP13 OSD            | Work: [redacted]<br>Home: [redacted] |
| <b>VICE CHAIRMAN</b>   | R Cheesman [redacted], Corringham,<br>Essex SS17 9BU       | Work: [redacted]<br>Extn: [redacted] |
| <b>SECRETARY</b>       | R Gooding [redacted], Ipswich<br>IP1 6AE                   | Work: [redacted]<br>Home: [redacted] |
| <b>TREASURER</b>       | M Nicholls [redacted], Capel St. Mary,<br>Ipswich, IP9 2EX | Work: [redacted]<br>Home: [redacted] |
| <b>MEMBERSHIP SEC.</b> | M Barriskill [redacted], Ipswich<br>IP1 2EZ                |                                      |
| <b>P.R.O.</b>          | D Barnard [redacted],<br>Ipswich, IP4 5PP                  | Home: [redacted]<br>Work: [redacted] |
| <b>MAINTENANCE</b>     | M Cook [redacted],<br>Ipswich, IP4 5QA                     | Home: [redacted]<br>Work: [redacted] |
| <b>FUNCTIONS</b>       | E Sims [redacted],<br>Ipswich, IP1 4HA                     | Home: [redacted]                     |
| <b>LIBRARIAN</b>       | N Gage [redacted],<br>Trimley St Mary, IP11 9QY            | Home: [redacted]<br>Work: [redacted] |

# Orwell Astronomical Society

PRESENTS

A LECTURE BY

## Mr. K. DUNLOP

# THE SPACE TELESCOPE

AT THE

FRIENDS MEETING HOUSE

FONNEREAU ROAD

## AT 800 pm

# FRIDAY 30th MARCH

FREE ADMISSION

Secretary: Mr. R. Gooding,  
168 Ashcroft Road,  
Ipswich.