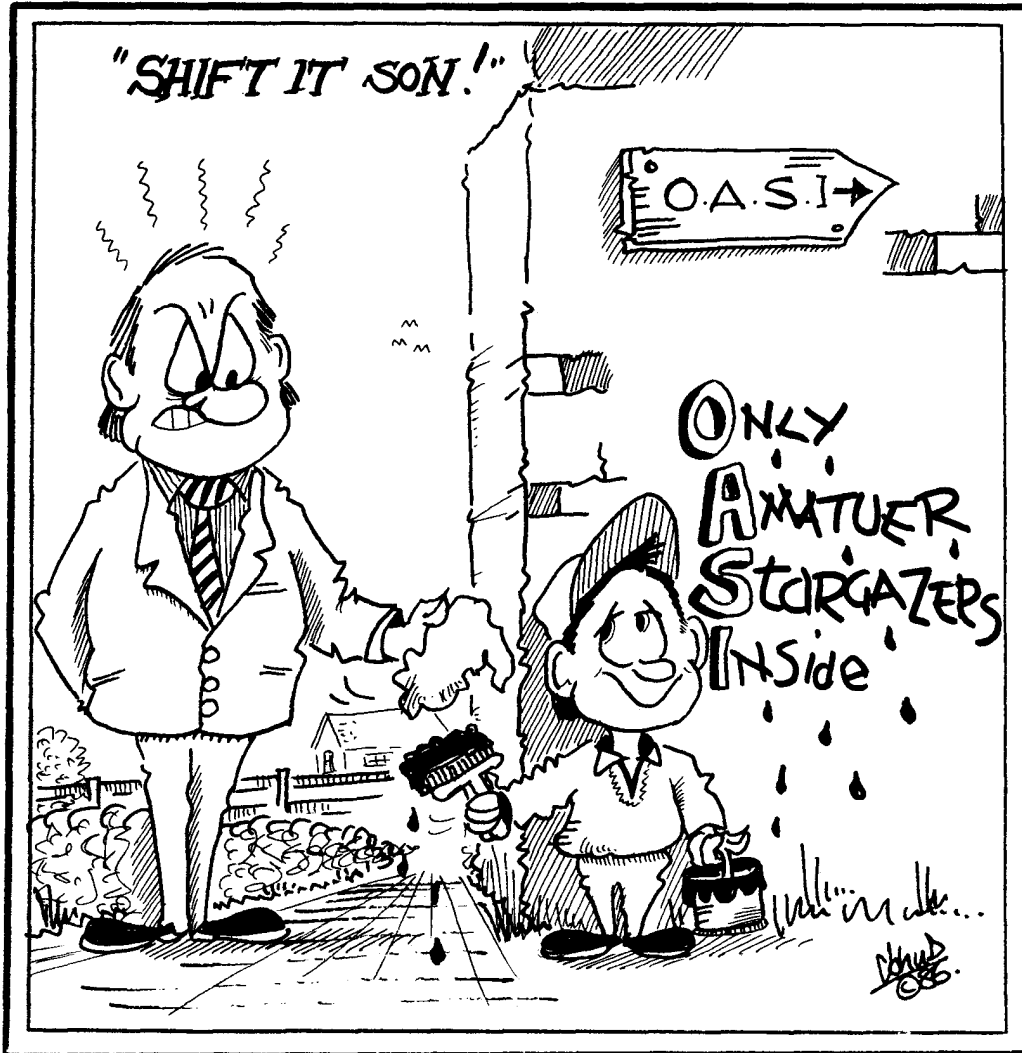


ORWELL ASTRONOMICAL SOCIETY, IPSWICH.

SOCIETY NEWS

Q.A.S.I.

OCTOBER 1986



1. Congratulations

For the second month running congratulations are in order for Michael Barriskill and Jan Kirk who will be getting married on Saturday 25th October.

2. Greenwich Trip Cancelled

The Greenwich 28" refractor dome is undergoing extensive repairs, therefore our planned excursion dates are cancelled. New dates will be rebooked in the new year.

3. Norwich Trip

either

This has been rebooked provisionally for Friday 10th, 17th, 24th or 31st October. It is intended to undertake observations with their 30" reflector. If the weather is unsuitable an alternative date will be found. Please contact R. Gooding.

4. Dome repairs

By the time you have received this newsletter, repairs to the dome track will be complete. The winter programme of opening the observatory 3/4 times a week is resumed at the beginning of the month.

5. Open Evenings

Our annual fund raising event was staged over the four evenings of 19th to 22nd September inclusive. The weather conditions were near perfect with clear skies on the Friday, Saturday and Monday. Sunday evening remained cloudy until 10.00. Objects observed were Saturn, Mars, Jupiter and the Moon.

The number of visitors over the four nights was under 200, a number less than we would have expected considering the mild late summer evenings.

The evenings were well supported by members who came along to help. A total of about £70 was raised.

NIGHT SKY (all times G.M.T.)

Sun Rises approximately between 06.00 - 07.00
Sets approximately between 17.50 - 16.30

Moon ● 3rd ◐ 10th ○ 17th ◑ 25th

Total eclipse of the moon visible on 17th. Begins at 17.30, ends 21.06. Totality lasts from 18.41 to 19.55

Mercury Reaches greatest eastern elongation on the 21st
Mag. -0.1. Sets about 30 minutes after the sun.

Venus Sets less than 1/2 hour after the sun. Mag. -4.6
on the 1st.

Mars Sets at about 22.40 throughout the month. Mag. -0.6

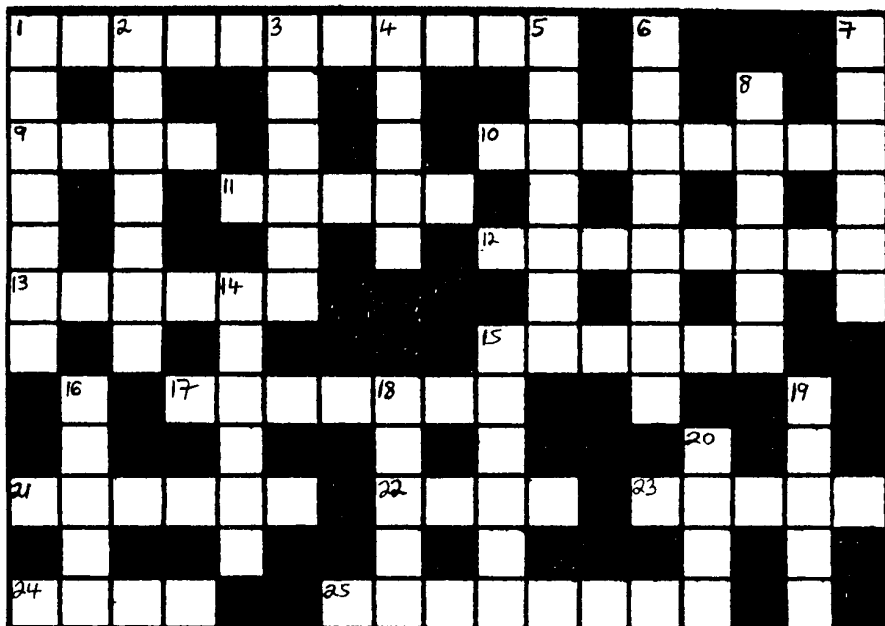
Jupiter Sets at about 02.00 in mid month. Mag. -2.8

Saturn Lost in twilight. Sets at about 18.50 in mid month.

Uranus Sets at about 20.30 in mid month. Mag. 5.8

Neptune Sets at about 21.00 in mid month. Mag. 7.7

XWORD № 4



PTO FOR CLUES

ACROSS

- 1 Projection instrument used to demonstrate the position & motion of celestial bodies (11)
- 9 Vega dominates this constellation (4)
- 10 The fourth brightest star in the sky (8)
- 11 The only named star within the "crater" constellation (5)
- 12 This class of stars include binary and triple systems (8)
- 13 Minor planet named after the Mythological flyer who went so close to the sun that the wax fastening the wings to his body melted (6)
- 15 An open star cluster in the constellation of Taurus (6)
- 17 This spectroscopic binary in Auriga makes up the 6th brightest star in the sky (7)
- 21 When close to the horizon this very bright star flashes and twinkles from atmospheric turbulence and is often reported as a UFO (6)
- 22 Taurus (4)
- 23 An exploding star (5)
- 24 Central star within Cygnus "the Hen's breast" (4)
- 25 Large satellite of Jupiter (8)

DOWN

- 1 The north pole star (7)
- 2 Northern and southern lights (7)
- 3 The first Greek philosopher (640 - 560 B.C.). He suggested using the User Minor group as a guide for Greek sailors (6)
- 4 The brightest star in Orion (5)
- 5 Planet which always appears close to the horizon (7)
- 6 London's is 51.5 degrees N. (8)
- 7 The sun is in this constellation from March 13 to April 19 (6)
- 8 This star marks Castor's left foot (6)
- 14 This outer planet is named after the Roman God of the Heavens (6)
- 15 Very famous comet (6)
- 16 Brightest star in Virgo (5)
- 18 For the Greeks this constellation used to be the claws of the Scorpion (5)
- 19 16th century Danish nobleman & astronomer, first name Tycho (5)
- 20 The points of intersection between the orbit of a celestial body and the ecliptic (4)

Solution to the last crossword (XWORD №3)

Across - 1 Fireball, 5 Star, 7 Altair, 8 Ozone, 10 Ophiuchus, 12 Pup, 14 Corona, 15 Universe, 16 Tides, 17 Shadow, 19 Mira, 20 Pegasus, 21 Phase.

Down - 1 Flare, 2 Retrograde, 3 Brightness, 4 Leo, 5 Sinus, 6 Rhea, 9 Sun, 11 Horizon, 12 Perseids, 13 Pherkad, 14 Cetus, 15 Uranus, 18 Age.

R. A. LOBBETT

PLEASE NOTE, I WILL TRY TO PRODUCE XWORDS ON ALTERNATIVE MONTHS FROM NOW ON, THE MONTHS BEING: - OCT; DEC; FEB; APR; JUN; AUG etc

One Saturday morning back in August a letter arrived announcing the discovery of a new comet by Margaret Wilson of mount Palomar. This first report was somewhat confused; four observations had been made very close together (within two days) but brightness estimates varied widely suggesting that the comet had gone through some outburst before settling down to about magnitude 12.

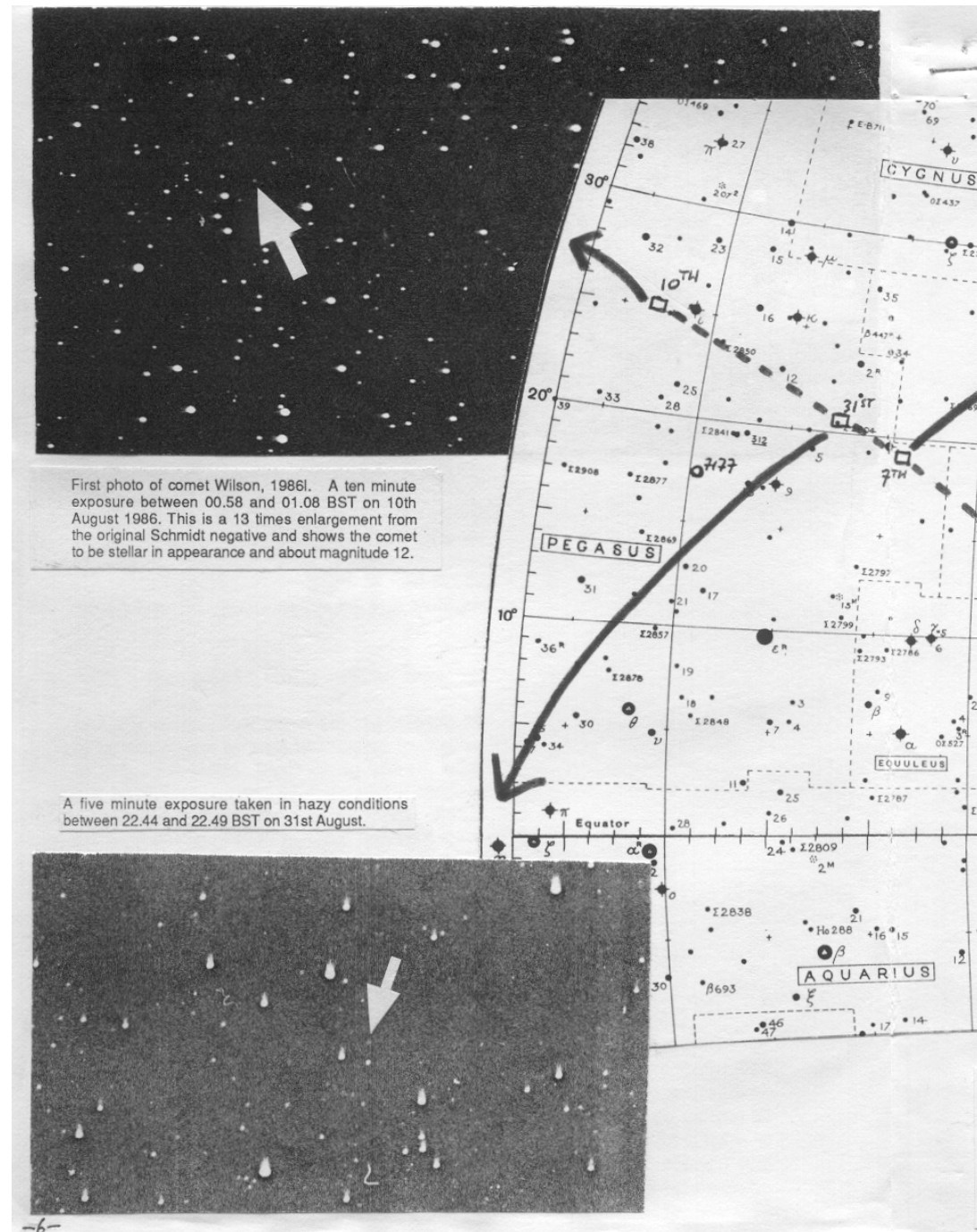
Predicting the path was a little difficult from only these few observations but I estimated where it should be that night, 9th August, and after getting back from the Wolsey I set up my Schmidt camera (described in the August OASI Journal) and located the correct star field in Pegasus. Around 1 a.m. I took a 10 minute exposure and developed it immediately. The following morning, having found what I thought was the comet, I came up to the observatory to check the photographic charts for the area and, sure enough, there was an image on my negative but nothing on the chart in that position. This was my first photo of the comet only 5 days after it's discovery.

I phoned Guy Hurst who is the editor of "The Astronomer" magazine and also national coordinator for new observations of comets, supernovae, etc. He said that up to that time only one other person, Alan Young, had succeeded in obtaining a photo (in fact about 2 hours before I did). He asked if I would send him the negative and he subsequently worked out an accurate position for August 10.001 as,

R.A. $22^{\text{h}} 14^{\text{m}}.04$ Dec. $+24^{\circ} 44'.21$ (1950 coordinates)

Encouraged by this I have taken several photos since then. After the first observations a more accurate path was calculated so that it was easier to predict where the comet would be on any given night. After a couple of weeks of bad weather I took another photo on a rather hazy night at the end of August. On the 7th September however the sky stayed clear for long enough to take two photos separated by just over an hour in which time the comet moved by almost 100" (100 arc seconds, about twice the apparent diameter of Jupiter at the moment) which was easy to see on my negatives. I was able to do the same thing a couple of nights later and the comet was definitely fuzzy in appearance compared to a stellar appearance in early August.

The comet itself is still a very long way away; on the 10th August when I took the first photo it was 540 000 000Km from the sun. By the 7th September it had moved 45 000 000Km closer! The fact that it is relatively bright even at these distances is encouraging; it's been estimated that it should be easily visible to the naked eye in April-May next year although, just like Halley, only from the southern hemisphere (!). Of course comets are unpredictable: will it be as poor as Kohoutek in 1973 or maybe as good as West in 1976? As it's closest approach to the sun is still outside the orbit of the Earth it is unlikely to be very bright but nevertheless it will still be interesting to follow it's progress over the next year or so.



First photo of comet Wilson, 1986I. A ten minute exposure between 00.58 and 01.08 BST on 10th August 1986. This is a 13 times enlargement from the original Schmidt negative and shows the comet to be stellar in appearance and about magnitude 12.

A five minute exposure taken in hazy conditions between 22.44 and 22.49 BST on 31st August.

FIXED STARS

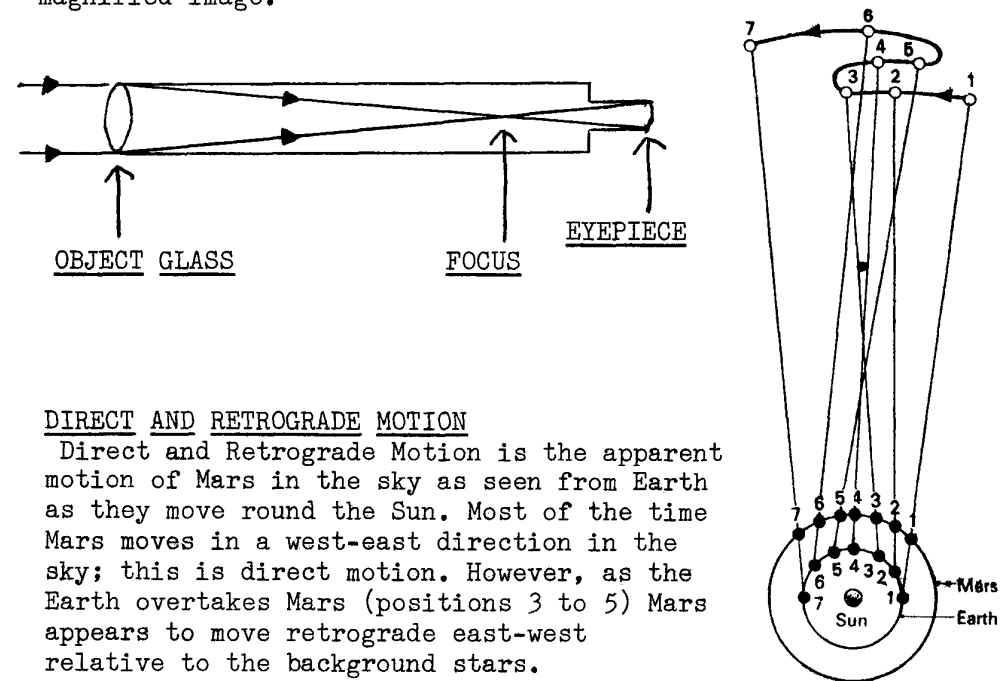
Fixed Stars were until comparatively recent time thought to be attached to a huge sphere, the Celestial Sphere which rotated each day round the Earth. We now know that the stars actually lie at different distances, and that they are all in motion relative to one another. Because of their great distances this motion is not readily apparent. For many purposes (such as plotting the motion of Planets, Comets, Satellites and any thing that moves about the universe) they can be regarded as a fixed frame of reference.

OBJECT GLASS

The Object Glass or O.G. as it is sometimes called is the principal Lens of the refracting telescope, which gathers light from a distant object and forms an image of the object at the focal plane of the lens.

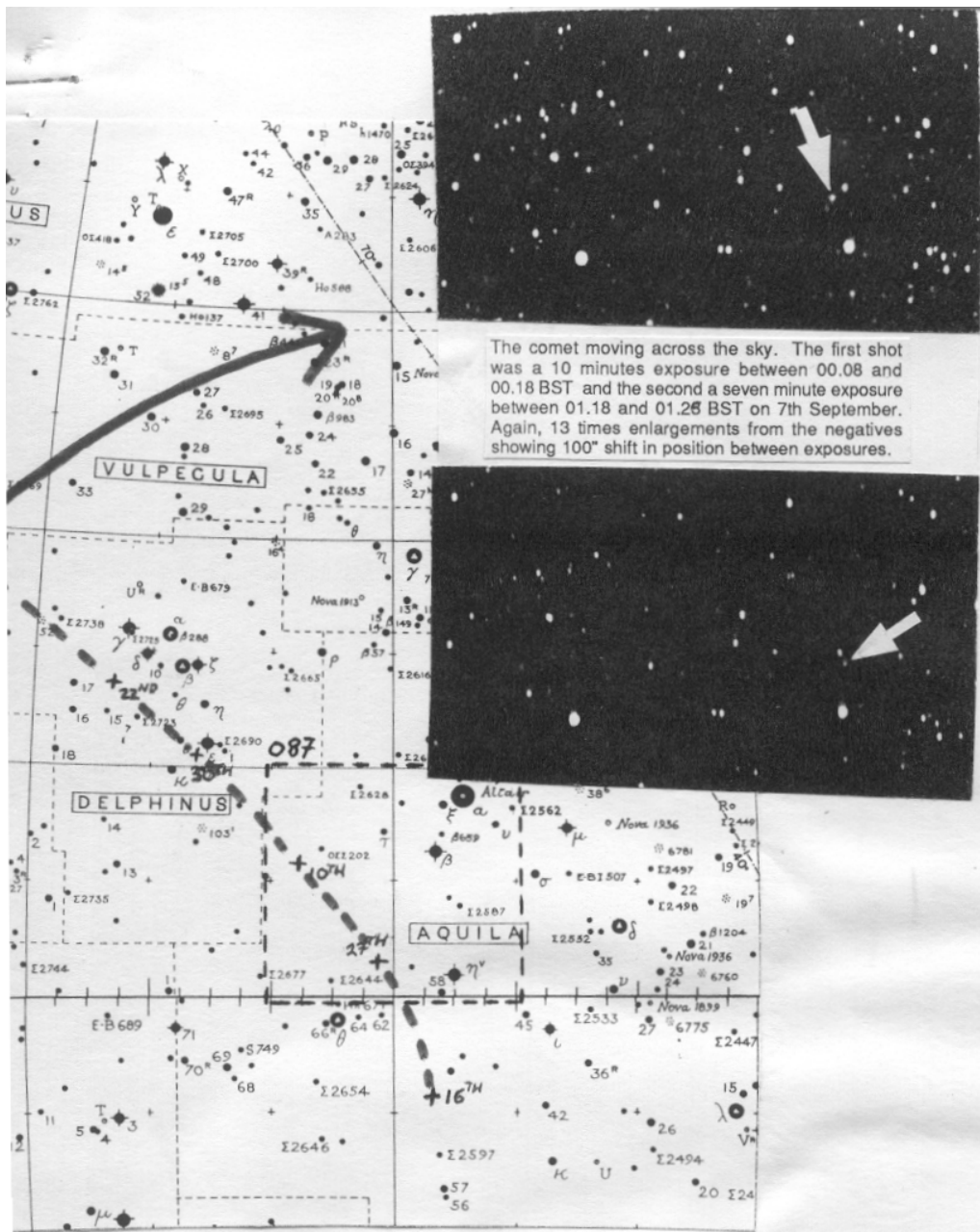
REFRACTOR TELESCOPE.

The Refractor Telescope consists of the object glass which collects the light and brings it to focus then the eyepiece is placed beyond this point to produce a magnified image.



DIRECT AND RETROGRADE MOTION

Direct and Retrograde Motion is the apparent motion of Mars in the sky as seen from Earth as they move round the Sun. Most of the time Mars moves in a west-east direction in the sky; this is direct motion. However, as the Earth overtakes Mars (positions 3 to 5) Mars appears to move retrograde east-west relative to the background stars.



The comet moving across the sky. The first shot was a 10 minutes exposure between 00.08 and 00.18 BST and the second a seven minute exposure between 01.18 and 01.25 BST on 7th September. Again, 13 times enlargements from the negatives showing 100" shift in position between exposures.

It will be visible through a telescope from Britain to around the end of November: the chart shows where it has been and where it is going. Starting in Pegasus in August, past Delphinus in the second half of September and down into Aquila in November by which time it should be easily visible in the 10" at the observatory and possibly even in our large binoculars.

Over the week end Friday 19th to Monday 22nd September the Society opened it's doors (dome?) to the public for the annual fund raising event. We were going to open the weekend before (the VERY wet one) but Martin Cook decided that was the weekend to get married on (CONGRATULATIONS MARTIN & JUDITH from all at the OASI) so we postponed the event until the following weekend.

The weather was excellent apart from Sunday night when it clouded over but three out of four clear nights for such an event must be some kind of record. Unfortunately the attendance by the public did not match the superb weather. Friday night we saw some 30-40 visitors and we began to wonder if we might lose money on the event. Things improved on Saturday night with an attendance of around 80 people, better but well below other years. Sunday night was back to around 30-40 despite the cloudy conditions (actually not too different from previous years for a cloudy Sunday evening). Monday night was again clear and about 50 visitors turned up during the evening. This was not too different from other years for the Monday evening attendance.

In total over the weekend around 200 people came and visited the observatory enough to give us a small profit but about half the total we have attracted on previous years, what was the reason?

The advertising was at the same level as in previous years so we do not think that was the cause.

Could it have been Comet Halley? We know that some visitors turned up especially early "to avoid the queues" that had occurred during National Astronomy Week. On the first night of this event about 500 people turned up and queued for up to two and a half hours for a 30 second glimpse of an indistinct fuzzy blob that we told them was the long awaited Halley's Comet! Could those long queues have put people off? Did Comet Halley retrospectively do us a disservice by attracting too much interest and then disappointing the expectant public?

If this was the case we can only hope that Halley will be forgotten by the time of next years event!

David Payne

Grand Draw Winners

Personal Stereo	No.2004	Keith 10 Shed c/o E.Sims
Clock Radio	No.0271	R.Nice, [REDACTED], F'Stowe
Travel Clock	No.1783	S.Dedman, [REDACTED], Ufford
£3 Book Token	No.2086	E.Pearson, c/o E.Sims
£3 Book Token	No.1992	C.Wright, c/o E.Sims
Hock	No.1109	R.Adams, Felixstowe
Red Wine	No.1897	C.Button
Aftereight	No.0279	R.Nice, [REDACTED], F'Stowe
After Dinner Mints	No.0231	Rod Widdrington, Felixstowe

Visits in October

Tuesday Oct.7th, Woodbridge Lions at 7.45pm.
 Thursday Oct.9th, Kesgrave Young Wives at 7.45pm.
 Wednesday Oct.22nd, Suffolk Naturalists Society at 7.45pm.

Other Events

Saturday Oct.4th, Herstmonceaux Visit by ticket only.
 Saturday Oct.18th, Open Committee Meeting at 7.30pm in the clubroom. All welcome.

New Members

We welcome the following who have joined the society recently:

Mr P Double, Mr I Armstrong, Dr J Haigh, Mr D A Norman,
 Mr P Grace, Mr J E Mathews, Miss R Keveren, Mr L Maxim,
 Mr P Richards.

Recent Meteor Watch

Saturday August 9th, between 2104 & 2255 GMT, 19 Perseids & 11 sporadic were observed by R Cheesman, Jane Dixon, Zena White, and Bernard Soley at Great Wakering, Essex. The brightest seen was a -1 shower. All of the above are members of the Rayleigh Astronomical Society. Also seen at this site at Potton Island were a dozen artificial satellites.

Membership List

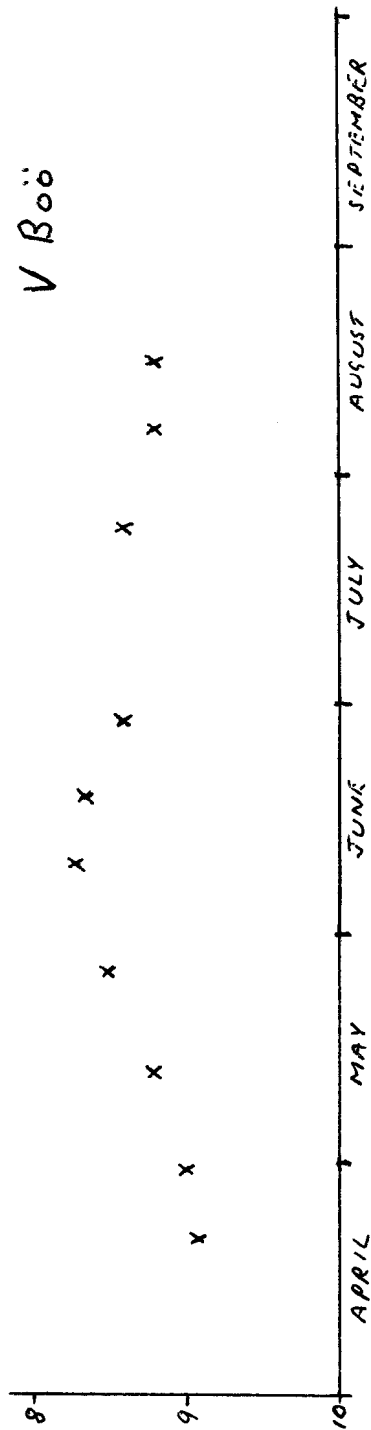
With this newsletter there should be a copy of a latest membership list. Any errors then please inform me.

(David Barnard)

VARIABLE STAR OBSERVATIONS

by Mike Nicholls

This light curve is of V Boötis from April to September this year. It shows a maximum during June. V Boö belongs to the class of semiregular variables, which consists of mainly giant stars. A period of 258 days is quoted in the literature, but of course, this is only approximate. The light range is quoted as magnitude 7.6 to 10.4, which is about normal for this class of variable. Some catalogues put this star into the class of long period variables, which shows the close relationship and overlap between the two classes. The observations shown were all made using an 8" reflector.



PROGRAMME FOR OCTOBER

MONDAYS from 8pm 6, 13, 20, 27	DOUBLE STAR & PLANETS SECTION Mr N Taylor [redacted], Farmlands Trimley Mr T Gillan [redacted], Felixstowe Miss M Edwards [redacted], Felixstowe	Tel: Fel. [redacted] Tel: Fel. [redacted] Tel: Fel. [redacted]
TUESDAYS from 8pm 7, 14, 21, 28	GENERAL OBSERVATION SECTION Mr N Gage, [redacted], Trimley Mr R Newman [redacted], Felixstowe Mr J King, [redacted], Felixstowe	Tel: Fel. [redacted] Tel: Fel. [redacted] Tel: Fel. [redacted]
WEDNESDAYS from 8pm 8, 15, 22, 29	NEBULEA & FAINT OBJECTS SECTION Mr M Cook, [redacted], Ipswich Mr D Payne, [redacted] Wickham Market.	Tel: Ips. [redacted] Tel: W.Mkt [redacted]
FRIDAYS from 8pm 3, 17, 31	GENERAL OBSERVATION SECTION Mr R A Lobbett, [redacted] Felixstowe. Mr J Hood, [redacted], Ipswich. Mr M Harlow, [redacted], Felixstowe	Tel: Fel. [redacted] Tel: Ips. [redacted] Tel: Fel. [redacted]

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

1986 COMMITTEE

CHAIRMAN	D Payne	[redacted] Wickham Market, IP13 OSD	Work: [redacted] Home: [redacted]
VICE CHAIRMAN	R Cheesman	[redacted], Corringham, Essex SS17 9BU	Work: [redacted] Extn [redacted]
SECRETARY	R Gooding	[redacted], Ipswich IP1 6AE	Work: [redacted] Home: [redacted]
TREASURER	M Nicholls	[redacted], Capel St. Mary, Ipswich, IP9 2EX	Work: [redacted] Home: [redacted]
MEMBERSHIP SEC. /P.R.O	D Barnard	[redacted], Ipswich, IP4 5PP	Work: [redacted] Home: [redacted]
MAINTENANCE	M Cook	[redacted], Ipswich, IP4 5QA	Work: [redacted] Home: [redacted]
LIBRARIAN	E Sims	[redacted], Ipswich, IP1 4HA	Work: [redacted] Home: [redacted]
SOCIETY EVENTS	R Lobbett	[redacted], Felixstowe	WORK: [redacted] Home: [redacted]
F.A.S. ARTICLES	M Harlow	[redacted], Felixstowe	Home: [redacted]