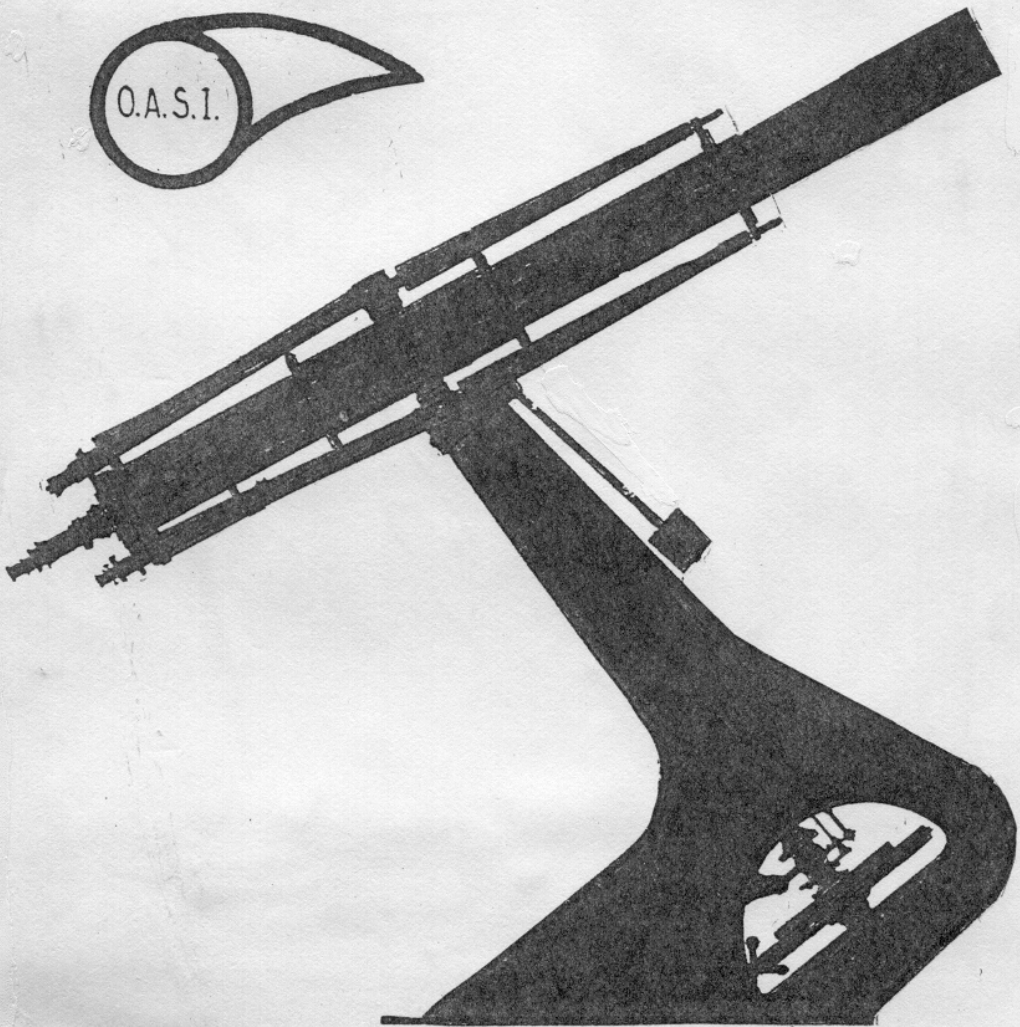
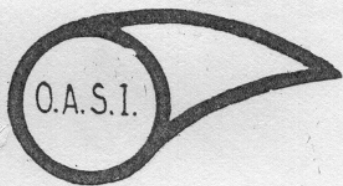


JULY 1984



The Orwell Park Observatory 10 inch Astronomical Telescope at Nacton near Ipswich

1. Draw tickets are enclosed this month for all members to sell.

2. Open Weekend

The Open Weekend will be held from 28th Sept. to 1st Oct. As many members as possible will be required to attend on each of the four nights. If you are able to help, please contact Eric Sims. Several portable telescopes will also be required for use on the balconies. Again, if you are able to help, please contact any of the committee members.

NIGHT SKY

Constellations (all times G.M.T.)

The Summer Constellations of Cygnus, Lyra and Aquila are becoming well placed for observation.

Sun Rises approx. between 03.50 to 04.10

Sets approx. between 20.10 to 19.50

Moon ● 5th ○ 13th ● 21st ● 28th

Occultations

5th ZC 1864 mag. 6.8 D 21hr. 35.2m

20th ZC 150 mag. 6.2 R Ohr. 32.1m

Mercury Setting about 1 hr. after the Sun mag. 0.0

Venus Setting about 3 hr. after the Sun mag. -3.4

Mars Sets at 23.30 in mid month mag. -0.5

Jupiter Sets at 02.30 in mid month mag. -2.2

Saturn Sets at 23.40 in mid month mag. +0.7

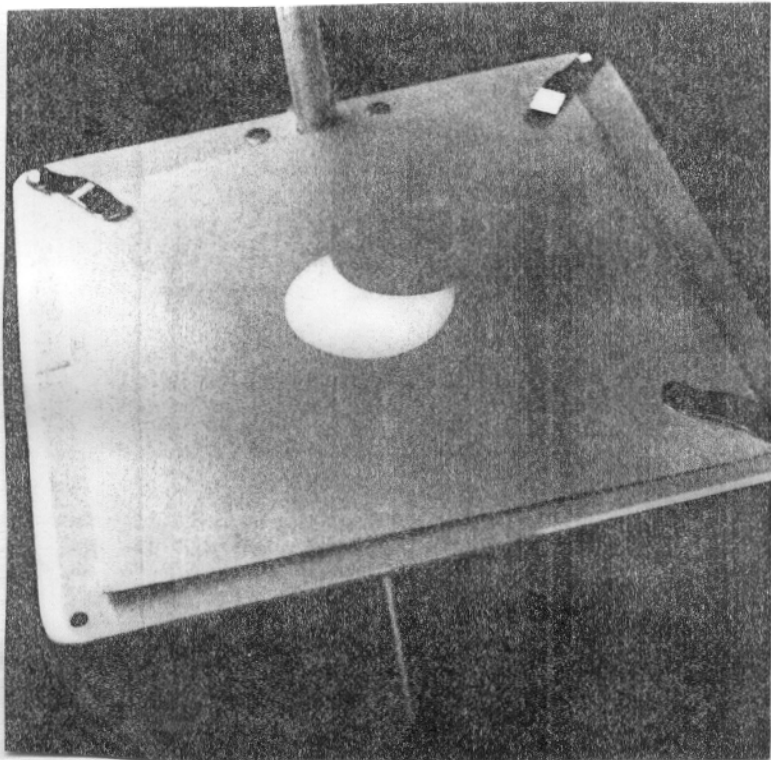
Uranus Sets at 00.40 in mid month mag. +5.8

Neptune Sets at 02.00 in mid month mag. +7.7

R. Gooding

The Partial Eclipse

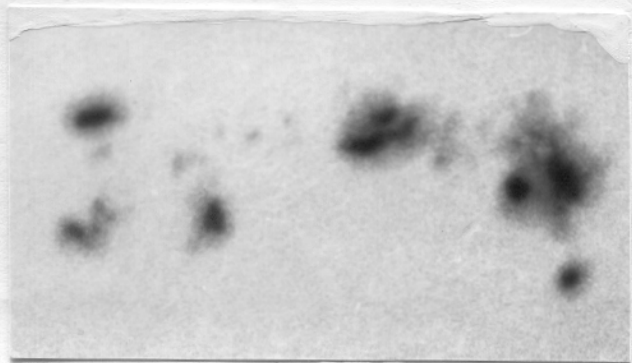
For once the weather was on our side allowing the whole eclipse to be seen. It began at 18.14 p.m. ending at 20.00 p.m. with the maximum coverage of the sun at 19.09. David Barnard and Alan Smith observed the eclipse at Nacton Observatory along with several friends and a photographer from the E.A.D.T. You may have seen the photographs in the local press the following day.



Partial Eclipse of the Sun and Sun Spot Group

The above is a photograph of the partial eclipse of the sun one minute before maximum on Wednesday 30th May 1984 at 7:08 pm B.S.T.. It was photographed by Roy Gooding using his 70mm Maksutov.

Below is a group of sun spots photographed by Roy Adams using a 60mm refractor on 26th April 1984 at 17:00 U.T.. The group is approximately 175,000 miles across.



On the night of April 23/24 at 20:27 U.T. a brilliant, -10 mag, fireball was widely observed in the South of England. This fireball was photographed, low down near the North Eastern horizon, by Bob McNaught of the Hewitt Camera group at R.G.O., Herstmonceux.

After hearing about the fireball, I developed the film taken by the society 'All Sky' camera, and there was recorded a very bright fireball, high in the North East sky. This object, estimated at -14 mag., for observers in Suffolk, was not, as far as I know reported by anyone in East Anglia, although brighter than the full moon it must have cast shadows and have been a very spectacular event even in the late twilight of this April evening.

This is the first time that a fireball captured by our camera has been photographed by a second station.



The constellation Ophiuchus is in the south during July, but the light evening skies will mean observing faint objects after 11:00 p.m. B.S.T. The constellation contains many faint nebulae amongst which are five globular clusters listed in the Messier catalogue. These are M9, M10, M12, M14 and M19.

On good clear nights all can be seen as faint fuzzy stars with 10 x 50 binoculars. M10 and M12 are the easiest to see because of their brightness, mag. 7 and 8 respectively, and their reasonable northerly position (Declinations; South 4 02' and South 01 25' respectively). M14 is fairly difficult in binoculars because of its faintness, while M9 and M19 are difficult because of their southerly declinations (South 18 28' and South 26 11').

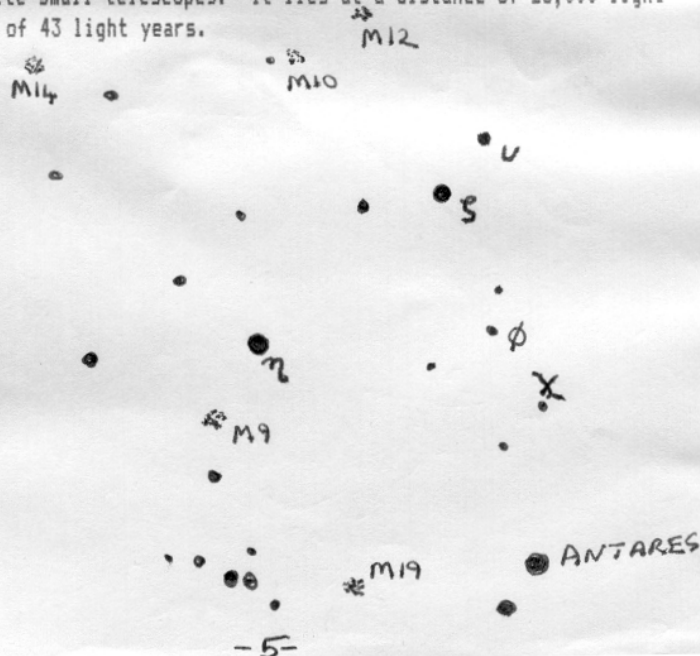
All the clusters are readily visible as misty patches in a 3 inch telescope but without any resolution of the component stars.

M9 is the smallest of the clusters and requires a 10 inch to give some resolution into stars. It lies around 26,000 light years away with a diameter of 30 light years.

M10 and M12 can show some resolution with a 6 inch on good nights. These two clusters are relatively close, only about 2000 light years apart. They lie about 20,000 light years away with diameters around 46 and 58 light years respectively.

M14 is much more difficult to resolve and only a hint of resolution is possible with a 10 inch. It is a larger and more distant cluster than the other four with a diameter around 120 light years, and a distance of 70,000 light years.

M19 requires large instruments to resolve but does have a distinct oval appearance even in quite small telescopes. It lies at a distance of 25,000 light years with a diameter of 43 light years.



Superluminous infrared galaxies

When IRAS, the infrared satellite, discovered several point sources of infrared radiation on the sky, it was not known whether the sources were from objects in our own galaxy or very distant extragalactic objects. Now, it can be revealed that some sources are from distant galaxies. They are also intrinsically very bright. The identifications have been made by the University of Arizona and the Dominion Astrophysical Observatory in British Columbia. They used a charge-coupled device capable of detecting very small quantities of light, to find the optical counterparts of IRAS sources. It was concluded that most of the IRAS sources at high latitudes (i.e., out of the plane of our Milky Way) have an extragalactic origin.

Obviously these sources are very bright. But how bright? This question can be only answered by estimating the distances to the sources and comparing these with their observed brightnesses. This has already been done for one galaxy, whose redshift has been measured. This indicates that the galaxy, labelled 0422+009, is shining 35 times more brightly in the infrared than the well-known active galaxy M82.

The energy involved here cannot be explained by an active phase of star formation going on in the galaxy. But one possible source of power could be an active central region to the galaxy, an energetic nucleus that is similar to those found in active galaxies such as the Seyferts, or, on a much larger scale, in quasars.

David Barnard.

Meteor Showers this month

There are no less than seven showers active in July.

- 1) The Ophiuchids, maxima occurring last month,
- 2) The Alpha Lyrids, maxima occurring on July 15th.
- 3) Capricornids. Three radiants on the 7th, 15th & 25th.
- 4) Delta Aquarids, active from 15th, maxima on 20th.
- 5) Alpha Capricornids, active from 15th.
- 6) Iota Aquarids, active throughout the month.
- 7) Perseids, active from 23rd.

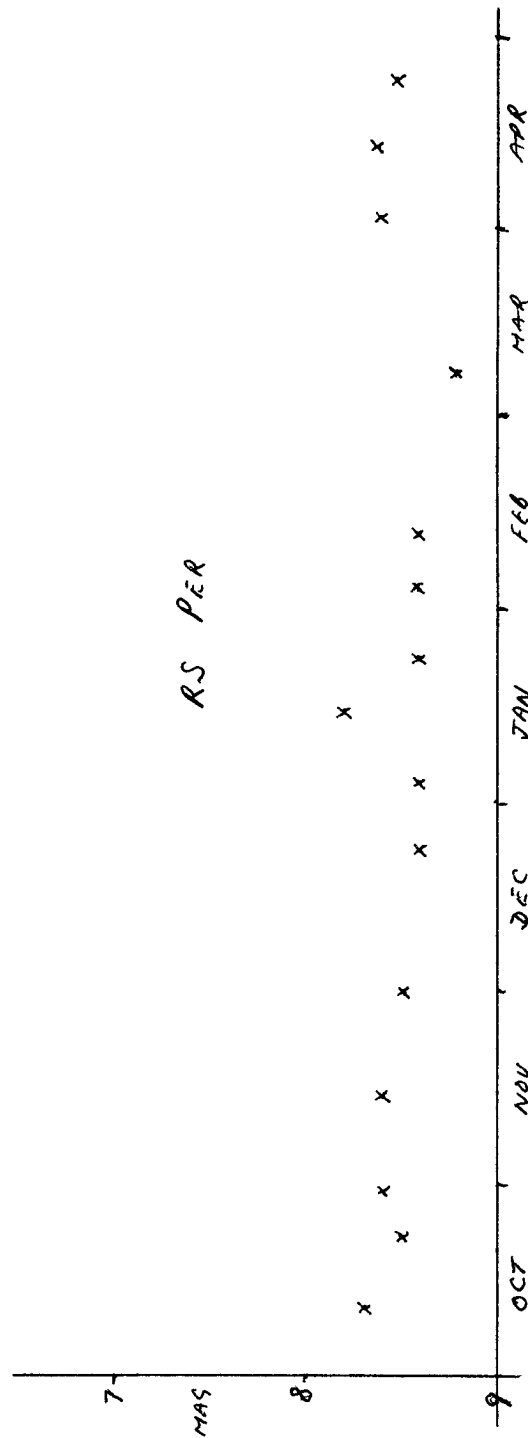
VARIABLE STAR OBSERVATIONS

by Mike Nicholls

This light curve shows RS Persei from October 1983 to April 1984. This star belongs to the semi-regular class of pulsating variables, which are old red giants. As can be seen, the magnitude does not vary a great deal over the period considered. Various literature suggests that it has a light range from 7.9 to 10.5 with a period of 152 days on average. However, I have not seen it vary far from 8.5 during the past 3 years. Presumably it has done so at some time in the past.

It is located in one of the sword handle clusters and is thought to be a probable member.

Observations were made using an 8" reflector



PROGRAMME FOR JULY

MONDAYS from 8pm 2, 9, 16, 23, 30	DOUBLE STAR & PLANETS SECTION Mr N Taylor [redacted], Farmlands Trimley Mr T Gillan [redacted], Felixstowe	Tel: Fel. [redacted] Tel: Fel. [redacted]
TUESDAYS from 7pm 3, 10, 17, 24, 31	GENERAL OBSERVATION SECTION Mr N Gage, [redacted], Trimley, Ipswich Mr R Newman [redacted], Felixstowe	Tel: Fel. [redacted]
WEDNESDAYS from 8pm 4, 11, 18, 25	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 6, 20	VARIABLE STAR SECTION Mr R Gooding, [redacted], Ipswich Mr M Nicholls, [redacted], Capel St. Mary.	Tel: Ips. [redacted] Tel: Ips. [redacted]

1984 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.	M Barriskill [redacted], Ipswich IP1 2EZ	Home: [redacted]
P.R.O.	D Barnard [redacted], Ipswich, IP4 5PP	Home: [redacted] Work: [redacted]
MAINTENANCE	M Cook [redacted], Ipswich, IP4 5QA	Home: [redacted] Work: [redacted]
FUNCTIONS	E Sims [redacted], Ipswich, IP1 4HA	Home: [redacted]
LIBRARIAN	N Gage [redacted], Trimley.	Work: [redacted]