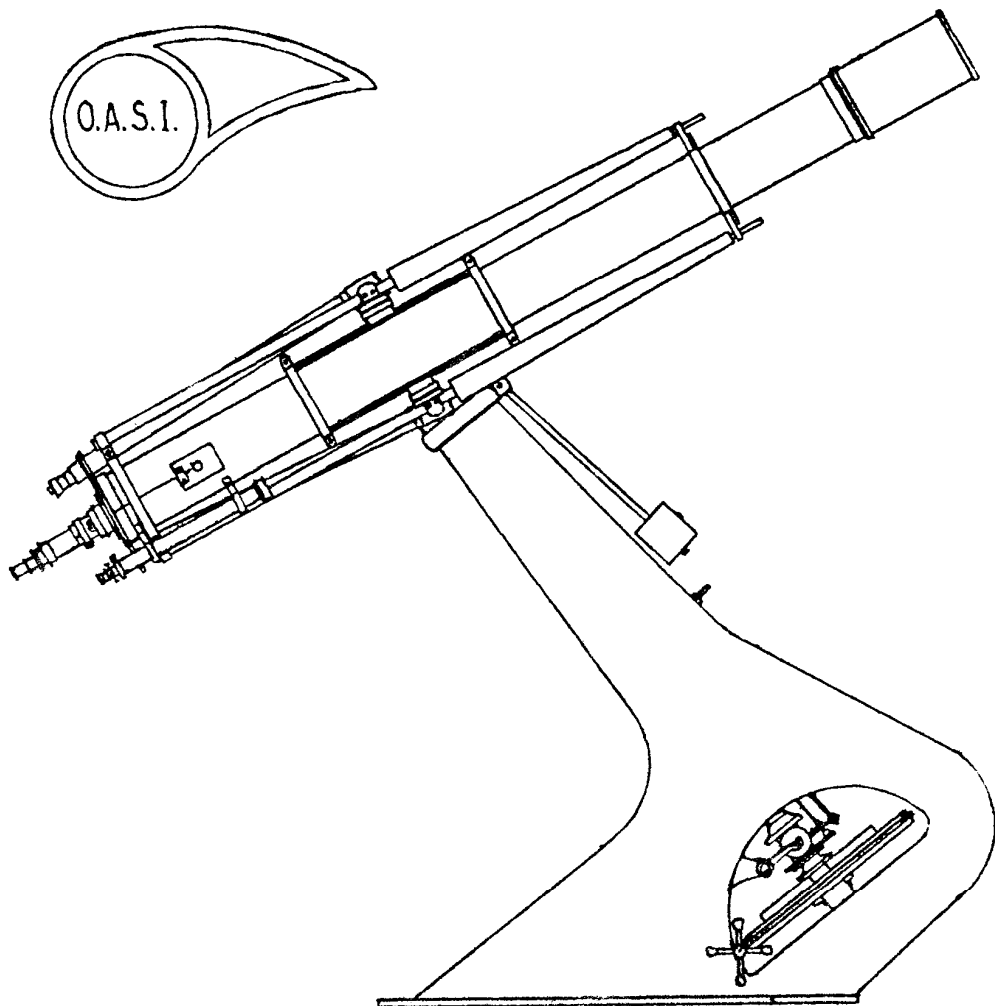
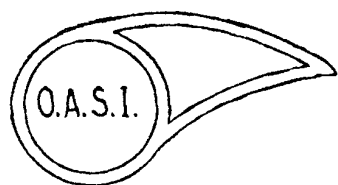


JULY 1982

Your submissions of items for the Journal will be welcome.



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

THE NIGHT SKY AS SEEN FROM ORWELL PARK IN

JULY THE head of Draco is in the zenith around midnight, with Cygnus and Lyra now high in the sky to the east of it. Andromeda and Pegasus are stretched horizontally above the north-eastern horizon. To the south-east, between epsilon Pegasi and Altair (alpha Aquilae), lies the small constellation of Delphinus (the Dolphin). Hercules and Ophiuchus still dominate the meridian during late evening, and on the southern horizon Antares may be found on a moonless night. Also on the southern horizon lies Sagittarius, to the east of Antares. The western sky is dominated by Bootes and Ursa Major, with Virgo slipping below the western horizon by midnight.

THE SUN Sunrise is at 03h 40m at the beginning of the month, changing to 04h 20m at month-end. Sunset changes from 20h 30m to 20h 00m. The Sun moves from Gemini to Cancer during the month. There is a partial eclipse of the Sun, visible only from north-western parts of the U. K., on the 20th, between 1900h and 2000h.

THE MOON - Phases. Full Moon 6d 07h 32m New Moon 20d 18h 57m
Last Quarter 14d 03h 47m First Quarter 27d 18h 22m

Occultations.	Star	Phase	Mag.	Time	D = Disappearance
	2196	D	6.7	1d 21h 54.0m	Stars listed
	2331*	D	6.4	3d 00h 28.8m	according to

* Denotes time is correct for latitude and longitude of Greenwich. Zodiacal Catalog (ZC) numbers.

THE PLANETS

Mercury is a morning star, rising an hour before the Sun, and increasing in magnitude from +0.4 to -1.2 during the month, until it reaches superior conjunction on the 25th.

Venus is also a morning object, rising two hours before the Sun, at mag. -3.3.

Mars is an evening object setting two hours after the Sun, at mag. +0.6 in Virgo.

Jupiter will be setting before midnight by month-end, at mag. -1.7, also in Virgo.

Saturn will be close to Mars throughout the month, at mag. +1.0.

Source: BAA Handbook 1982. All times are U. T. (= B. S. T. minus 1 hour).

SUNSPOT ACTIVITY REPORT by Roy Adams

The cloudy and rather wet weather we have been having toward the end of June has not cost us much in the way of sunspots. Indeed, there is but one very mediocre spot worth mentioning visible as I type this, right at the end of June.

But from the start of the month there was very strong activity, a whole procession of groups passing steadily across the solar disk. At least one of these groups contained a 'naked eye' spot very clearly seen without optical aid, except where necessary, when no haze sufficiently intervened, filtering. One group looked quite like our 'Comet' logo. Watch to see what comes round soon.

SOCIETY NEWS

METEOR NOTES for JULY 1982

by David Barnard 3

There are SEVEN showers active this month:

- 1) The Ophiuchids Maxima occurring on June 10th and 20th, normal limits May 19th - July, with ZHR of 10. Radiants (there are several!) - 17hrs 56mins -23°, 17hrs 20mins -20°.
- 2) ♄-Lyrids Maximum is on July 15th, but active from July 10th - 20th. Hourly rate is not known. Telescopic shower which needs observations to determine radiant structure. Radiant 18hrs 40mins +38°.
- 3) ♄-Aquarids July 29th is the maximum with a ZHR of 25, normal limits July 15th - August 15th. Rich in faint meteors - double radiant, RA 22hrs 36mins 00, and 22hrs 36mins -17°.
- 4) Capricornids Have three maxima - July 8th, 15th and 25th. Active in July and August with an hourly rate of 6. Characteristic, bright meteors. Radiant 20hrs 44mins -15°, 21hrs 00mins -15°.
- 5) ♄-Capricornids Maximum on August 2nd, normal limits July 15th to 25th. ZHR = 8. Quite rich in yellow fireballs. Radiant 20hrs 36mins -10°.
- 6) Iota-Aquarids Active in July reaching peak activity in early August. ZHR = 8. Rich in faint meteors - double radiant.
- 7) Perseids Maximum August 12.8 but active in last week of July. ZHR expected this year, of over 100 due to parent comet, Swift-Tuttle, approaching perihelion. Bright meteors. Radiant 03hrs 04mins +58°.

SCOTLAND TRIP

by David Barnard

There are now SIX members travelling up by minibus and one by car. The chief reason for travelling in the third week of July is to observe the partial eclipse of the Sun on July 20th. This eclipse is best seen in the extreme north-western parts of the British Isles before sunset.

Edinburgh times for the Eclipse:	Begins	PO	Max.	Ends	PO
	1900h	330	1933h	2004h	50

Observations of this event will probably take place from a point near Cape Wrath, with its favourable site, that is, clear western horizon! Aurora observations are very unlikely this year due to the almost permanent glare in the northern sky, unlike last year when three white rays were well observed.

It is also hoped that we may see some noctilucent clouds. These clouds, seen daylight during summer nights, form on the underside of the auroral layer in the atmosphere and are of interest in the study of aurorae. It may be possible to see these clouds in daylight when all the normal foreground clouds are in darkness, obviously best seen in northern parts of the country due to the longer daylight hours.

More next month.

HERSTMONCEUX '82 The F. A. S. are holding a convention at Herstmonceux on Saturday, 2nd October, for which there is only a limited number of tickets available. If you are interested, please contact R. Gooding or D. Payne as soon as possible. Tickets are £2.50 each, plus transport costs, on a first-come, first-served basis. Further information in the Club Room.

(Don't forget - as soon as possible, please - HERSTMONCEUX '82 ... HERSTMONCEUX '82...)

NEW COMMITTEE MEMBER

At the Committee meeting held on Saturday, 5th July, Mr. Nigel Gage of [redacted], Felixstowe, Suffolk, 'phone Felixstowe [redacted] was elected onto the Committee for the remaining part of 1982 to replace one of the two Committee members who had resigned during the year.

TOOLS - With all the repairs we do up the Observatory it was suggested that the Society have its own 'tool kit' on site rather than members carry their own tools up the 100-odd stairs each time. If you have any spare tools knocking around your garage which you do not want and would like to donate them to the Society we would be pleased to receive them. Please either bring them up to the Observatory or contact any committee member.

OPEN COMMITTEE MEETING

There will be an Open Committee Meeting to which all members are invited on Saturday, 31st July starting at 7.30 pm in the Observatory.

DEADLINE FOR AUGUST'S JOURNAL

The deadline for August's Journal is Friday 16th July. All items for the Journal will be welcome and should be sent to:

Mr. R. M. Cheesman,

[redacted]
WEST HANNINGFIELD, Chelmsford, Essex, CM2 8LQ.

PLEASE NOTE: All items for the August Journal and forthcoming Journals will be gratefully received. (There will be plenty of space available for articles, smaller items, drawings and reasonably contrasty pictures. Make it even more YOUR Journal by having something published in it.)

OBSERVATORY OPEN WEEKEND

The Open Weekend at the Observatory held Friday 7th May to Monday 10th May as reported in last month's Journal was a great success with the Society's funds being boosted by about £128 with no capital outlay at all. From all reports, this type of event should be encouraged and in future we might have an 'Open Day' every other year with the 'Open Weekend' on alternate years.

Our thanks go to so many members who did a great deal of work both before and during the event. Special thanks should go to Mr. Roy Adams and friends who arranged the display in Radio Orwell's window, to Radio Orwell for allowing us to use their window and to Mr. I. Angus of Orwell Park School for allowing us to hold this event.

NEW SECTION STARTING AT THE OBSERVATORY

On the 19th of this month Mr. Nigel Gage and Mr. Ron Hebbs (of Bretmain Ltd.) will be starting a section at the Observatory to run every other week. Until they settle down, they are calling their section, 'General Observations'.

If you would like to go along to any of the section meetings, just to see what goes on or to take active part, the members - and any prospective non-members - would be pleased to see you.

Ever since the Society started in 1968 we have produced a 'Monthly Journal'. In the beginning Charles Radley produced the Journal for nearly two years before going to University. This first Journal was loose-leafed and in glorious colour. At that time we had only about twenty members and a 'Banda Spirit Duplicator' was used which could easily produce colour copies. As our membership increased we found that the 'Banda' duplicator could not print more than about thirty copies from one master and we had either to print two masters or use an ink duplicator. The latter was used as it was less aggravation and when I took over the printing of the Journal way back in 1971 I had use of my employer's ink duplicating machine.

During the following seven years I changed offices with my company and all the new offices had ink duplicators and I was given access to them whenever I wanted providing that I purchased the ink and paper. There were times during this period that we had problems because of the duplicators not working but we still managed to produce the Monthly Journal. During early 1979 I moved away from Ipswich with my work and the new office was a modern one: dry copying machines and word processor machines but no ink duplicator. The Society then managed to purchase an ink duplicator for about £20 which worked fairly well but I had the problem of getting a 'heap of papers' to Ipswich every month for distribution.

Because of the problems the ink duplicator was moved to Alan Smith in Ipswich to run the Journal off with the stencils which I typed up in my spare time at work. By this time the duplicator was getting a bit old and did not seem to want to print properly - it was always temperamental and getting good copies out of it was somewhat tedious. This machine finally gave up and the Committee was faced with a big problem. After many hours of investigation it was decided that I would type up the master copy and it would be sent away to be commercially dry copied - an expensive hobby which not only proved expensive but unreliable. After a couple of months we had trouble with the printers and we withdrew our contract with them.

Roy Adams then came on the scene. He redesigned the Journal into the new format of a booklet and microtyped the masters before he managed to get them printed by another printer. Again problems arose and the Journal masters were typed up by me once more and we tried many ways of printing them.

The problems of printing the Journal were raised at nearly every Committee meeting and Annual General Meeting and the problems still kept coming.

Early this year we were offered an 'Offset Litho' printer and after many hours of hard work by a great number of members and non-members we managed to get one rather tatty Journal out of it. After nearly four months of hard work and only one Journal out of it the 'offset litho printer' idea was put to bed and the Journal problem came again.

At the Committee meeting held at the Observatory on Saturday, 5th June it was decided that again we should have the Monthly Journal commercially printed. Roy Adams will microtype it up and then send it away for photocopying. We have other printers 'up our sleeve' if anything goes wrong. I will still co-ordinate all the material for the Journal.

We hope that over the next few months we can 'pull ahead' in getting the Journal ready for printing so that if we do have any problems we will have more time to panic. Any 'red-hot' astro news which comes up after the Journal has been printed and before it has gone out, we can put in an insertion in the Journal printed on maybe our wet copying machine.

(continued on page 6 ...)

If you have any items for the Journal please send them off to me as soon as you can so we can get ahead of ourselves. We hope that as from now the Journal will be more informative and better presented and the information in it relies on YOU sending us something. Perhaps when space allows we can put a photograph and a little write-up in on your observations or telescope/equipment.

We hope, but I very much doubt, that our problems experienced with the Journal are now over but we can now blame the printers for a poorly printed Journal.

Roy Cheesman, [redacted], West Hammingfield,
Chelmsford, Essex, CM2 8LA.

SPACEFLIGHT NEWS

The Guardian newspaper reports that a 43-year-old French colonel, Jean-Loup Christian, will meet up with two Soviet cosmonauts on a scientific mission that was to be launched from Russia on 24th June.

From slightly later news on Monday 28th June, the space shuttle Columbia was doing quite well on a fourth and final test flight from Cape Canaveral, though in a slightly lower orbit due, it is believed, to a slight fuel problem.

(Interjected 'Stop Press' by Roy Adams)

COSMOS EVOLUTION CLUES - LATEST.

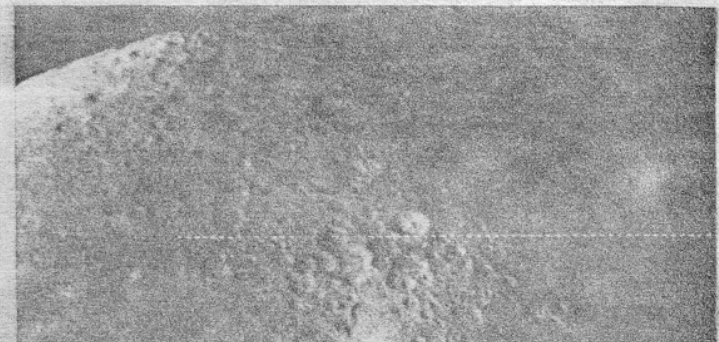
The local Evening Star of Monday 26th June carries a small news item on the discovery of a new type of pulsating star. The variations in the light from such stars could improve our knowledge of the internal structures of stars and galaxies, which in turn could help give a better idea of how the Universe evolved.

THOSE PICTURES ...

Last issue, some attempt was made with a somewhat 'caught-napping' photocopier (no new developer increment in hand or immediately available) to show you how a camera - in this case a standard Single-Lens Reflex camera, fits on the end of the 10-inch telescope at Orwell Park. The other picture as most of you will know, is the main equatorial drive wheel and other gearing on the Ten-inch.

Where there are 'odd' pieces of space that would otherwise be unfilled, these can be filled by pictures of various sizes which we hope you will think are useful.

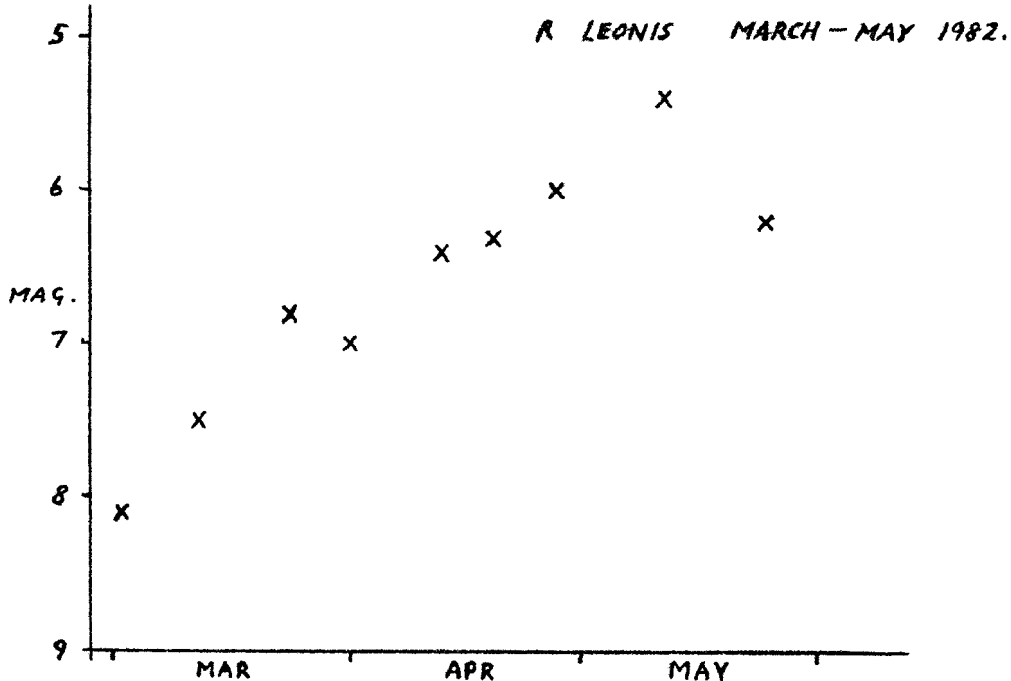
Below is a small section of the southern half of the Moon as taken recently using this sort of camera and the Orwell Park Telescope.



Blancanus
Clarinus
Longoman-
tarus
Tycho

A light curve this month, below, shows R Leonis from March to May this year. This star is one of the best known examples of a long-period variable. The average period is about 313 days and the range from about magnitude 5.4 to 10.5. The light curve shows the variable as it rises up to a maximum and begins to fall again. The interesting part of the curve is the slight drop in brightness at around magnitude 7 at the end of March. This same drop occurred last year at almost the same magnitude at the middle of May, as shown in the August 1981 Journal. Having repeated itself suggests that the drop really exists and is not due to observing error. Some long-period variables do exhibit this phenomenon. The time between the two short drops is roughly 317 days; quite close to the average period.

Observations were made using an 8" reflector and 10x50 binoculars.



TRIAL OF A FULL-APERTURE FRONTAL METALLIZED SOLAR FILTER ON THE TEN-INCH

'Quick Report' by Roy Adams.

Still hoping to find something suitable in this direction, I managed to have a rather thin specimen sent to me for trial, and duly with two assistants, took the sample up the Dome together with a heavy plywood ring specially made to fit the auxiliary equipment bolts I placed on the front end of the telescope about three years previously. My expectations that the filter would be of little use with its thickness of only 2.5 mm, from 'commonsense' and from some hint by first holding it over my 60 mm Prinz telescope, were well-founded. The image was worse than that in my Prinz telescope with a 48 mm clear (purple Perspex 1/4" and red glass 1/12" filter) aperture. So although still searching and currently expecting another quote on a much thicker frontal filter, it seems projection and/or a frontal shutter arrangement will still have to 'do' us for the time being. (When we make it!)

at the Observatory, Orwell Park School, Nacton, near Ipswich.

TUESDAYS from 8 pm General Observations Section

Directors: N. Gage and R. Hebbs. 13th and 27th

WEDNESDAYS from 8 pm Nebular and Faint Objects Section

Directors: Mr. D. Payne and Mr. M. Cook 7th, 14th, 21st and 28th

FRIDAYS from 8 pm Variable Stars Section

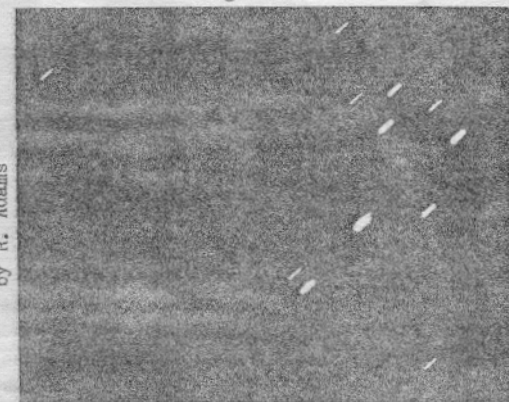
Director: Mr. M. Nicholls 2nd, 9th, 16th, 23rd and 30th

SUNDAYS from 8 pm General Observation Section

Directors: Mr. M. Barriskill and Mr. R. Adams 4th and 18th

SATURDAY, 31st JULY at 7.30 pm in the Observatory: OPEN COMMITTEE MEETING to which ALL MEMBERS ARE INVITED

THE PLEIADES Using a Zenit-E SLR camera with a 300 mm f.l.



Short startrail pic by R. Adams

Prinzgalaxy telephoto lens at full F5.6 aperture. Exposure 20 seconds on Kodak Tri-X film (rated and used for 400 ASA). Camera mounted on heavy bricks.

END STITCH-PIECE

(translated)

