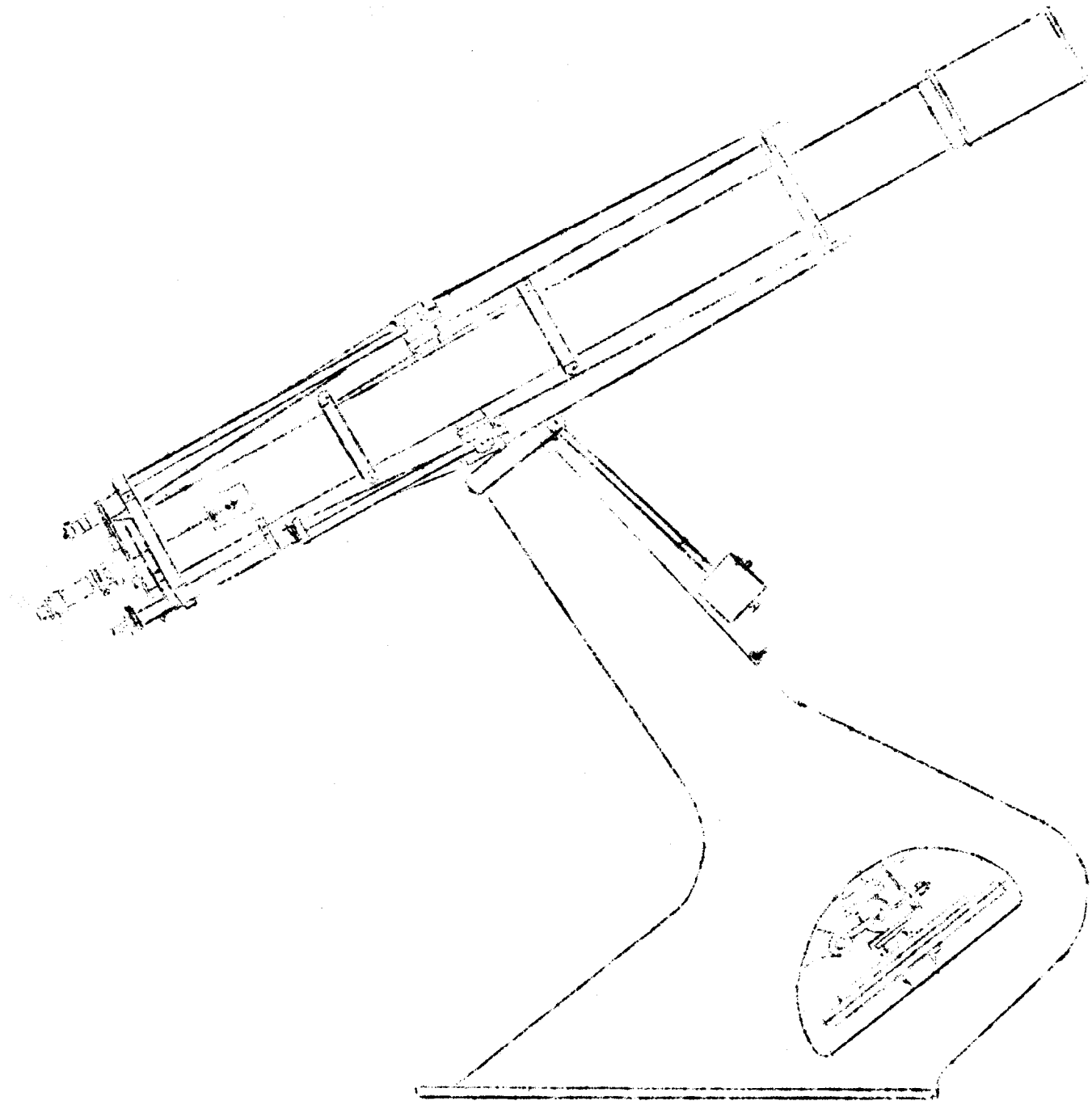


JOURNAL of the
ORWELL ASTRONOMICAL SOCIETY (IPSWICH)
January, 1977



Editor: Mr. M. Howe,
[REDACTED],
BURY ST. EDMUNDS,
Suffolk.
'Phone Bury St. Edmunds [REDACTED]

THE NIGHT SKY as seen from Suffolk this month

At around midnight this month Canis minor and Gemini are due South. Sirius is lower down, and towards the West Orion is still resplendant. In Auriga, there is a small group of 3 stars next to Capella called the Haedi or the Kids. One of them, Epsilon Aurigae, is an eclipsing binary with a period of 27 years. The secondary is the largest star known to man with a diameter of 2000 million miles (cf. solar diameter 865 000 miles) and may mark the sight of a member of that enigmatic class of objects, the black holes.

THE SUN

The Sun rises at 08h10m U.T. and sets at 15h55m U.T. in Sagittarius at the beginning of the month. It finishes up in Capricornus at the end of the month, with sunrise at 07h50m and sunset at 16h40m. Synodic Rotation no.1650 commenced at Dec. 31.04d and ends Jan. 28.18d.

Heliographic Co-ordinates at Noon U.T.

	P	Bo	Lo		P	Bo	Lo
Jan. 2	+1.6°	-3.2°	344.7°	/ 17	-5.6°	-4.8°	147.2°
" 7	-0.8°	-3.7°	278.9°	/ 22	-7.9°	-5.2°	81.4°
" 12	-3.2°	-4.3°	213.0°	/ 27	-10.3°	-5.7°	15.5°

THE MOON - Phases

Full Moon	Jan. 5d12h10m U.T.
Last Quarter	Jan.12d19h55m U.T.
New Moon	Jan.19d14h11m U.T.
First Quarter	Jan.27d05h11m U.T.

Occultations

Star	Phase	Mag.	Time (U.T.)
577	D	6.0	1d17h46m
590	D	6.3	1d27h40m
836	D	5.5	3d16h43m
1327	R	5.1	7d20h30m
* 527	D	6.3	28d19h44m
* 688	D	4.2	29d17h10m
* 684	D	6.2	29d22h24m
* 323	D	6.6	31d01h10m
829	D	7.0	31d02h33m
832	D	4.7	31d02h31m
836	D	5.5	31d03h07m
934	D	6.4	31d13h55m

D=disappearance, R= reappearance. Stars are listed according to Zodiacal Catalogue (ZC) numbers, * denotes double star, and the times are accurate to within ± 2 mins. at worst.

THE PLANETS

Mercury is a morning star reaching greatest Western elongation (25°) on the 29th when its magnitude will be +0.1 and its angular diameter approximately $6\frac{1}{2}''$.

Venus, still splendid low down in the South-west after sunset, reaches greatest elongation this month (47°) and its magnitude increases from -3.9 to -4.1 .

Earth reaches perihelion on the 3rd at a distance of 0.98 AU.

Mars is unlikely to be seen this month as it lies in Sagittarius.

Jupiter, though still a brilliant object in Aries, is past its best at mag. -2.2 . It reaches a stationary point in mid-month, thereafter moving direct towards Taurus.

Saturn is in Cancer this month at mag. -0.1 and rises at about 18h.

EDITORIAL

It is my belief that one of the signs of a thriving society is a lively journal to which members feel free to contribute. After all, it is probably the only way in which a member can express an opinion or throw light on a problem and ensure that the message gets through to all concerned.

Presumably, many people are deterred from such action because they believe they have nothing to contribute, particularly in the way of specialist knowledge; this is not necessarily true. There are many subjects, such as physics, geology, chemistry, optics, navigation, meteorology or even biology, parts of which have a direct bearing on Astronomy. For example, spectroscopy is now of great value in industry but was originally developed for the study of stellar spectra. Someone whose profession lies in one of these fields might have an article of great interest to offer.

This does not, of course, preclude those having no specialist knowledge. Items of practical interest, such as a member's solution to the problem of finding a low-cost motor drive, would be of equal value. On the other hand, it may be that a member has a particular problem he cannot solve; through the medium of the Journal it might be possible for him to contact someone who could help out. Or the Journal could be used as a vehicle for the expression of a particular opinion - this could foster a stimulating exchange of ideas.

Finally, I am sure that the rest of the Society will join me in expressing gratitude to John Deans who has ably edited the Journal for the past $2\frac{1}{2}$ years. If I do as well as he has done I shall be pleased!

FROM OTHER JOURNALS

Pluto - Spectroscopic observations made by 3 astronomers of the University of Hawaii, at Kitt Peak National Observatory seem to show that Pluto's surface is wholly or partly covered with frozen methane. This means that the planet's albedo is higher than was previously thought; calculations based on this figure and its magnitude of 13.7 would then give a figure of approx. 3000 km (1900 mi) for its diameter. Thus it is probably smaller than the moon, and, unless improbably dense, not massive enough to cause the observed perturbations of Uranus and Neptune which led to its discovery in 1930 ('Science', vol 194 p835)

Space Exploration - NASA scientists have developed a means of having mobile soft-landers which may be incorporated on future Viking missions to Mars and other planets. The Elastic Loop Mobility System (ELMS) can climb slopes of up to 45° and it is envisaged that two-year missions covering 500 km could be attempted. The 3 landing pads on the present Viking landers would be replaced by barrel-shaped continuous loops. ('New Scientist', vol 72 p 388).

27-11-76

On Saturday we had 13 members and 2 outsiders attending this meeting to observe the grazing occultation of star AC 3199 Mag 6.8 from Timworth Green near Bury St. Edmunds in Suffolk.

After a half hour delay waiting for someone to turn up from London on the train which was forty minutes late because of a derailed railway engine at Witham we finally left Whitton Haypole at 5.45p.m. The skies so far that day had been very clear and the Moon was visible from early afternoon and although rain and high winds were forecast for the evening we pushed on to Timworth Green where we set up three stations which were kept in radio contact with each other and the speaking clock on the telephone.

After setting up all our telescopes and synchronising stop watches, tape recorders and watches with the speaking clock we got ready for the graze which was at 19hrs 0m 30sec U.T.

At 18hrs 59m 59secs on the dot the clouds came over and although we could just see the moon through the clouds the star which was at mag 6.8 could not be seen. After hanging around for about half an hour like a load of idiots (as we did in 1974 at the last graze) we packed up all our gear again after Charlie Radley had tried to take some photographs. We retired to the local pub at Beyton where we drowned our sorrows before leaving to get one of our visitors back to Ipswich to catch the 945p.m. train home to London.

I would like to thank all those people who came to the dummy run and on the graze itself and hope that the next graze, when ever it is will not be a failure again because of 'Spode' interfering. Well at lease we now have plenty of experience of dummy runs and straight occultations!

METEOR NOTES by Mr. D. Barnard, [REDACTED], Ipswich.

The Geminid Meteor count held on Saturday 11th December was only attended by three members. The sub-zero temperatures meant that the observers had to stand up and move about if they did not want to get frost bite. Nine meteors were seen, most of them shower. The L.L.R. is predicted at about 58 but our low number recorded was because this shower on this occasion was affected by the Moon which was 22 days old. There was a -2 mag Geminid seen with a persistent train.

There is only one major shower during January which is the last shower until mid April when we have the April Lyrids on April 22nd.

THE QUADRANTIDS METEOR SHOWER max January 3rd (1600hrs). Normal limits Jan 1 -6th. L.L.R. 110, R.A. 15hrs 28m. Dec. +50, blue meteors with fine trains, rich in faint meteors, described by the B.M.A. as UNF.VOUCRA. etc. There is a 13 day old Moon which will interfere to rather a great extent but this shower is still well worth observing.

We are holding a Meteor Count to observe this shower on MONDAY 3rd JANUARY from 7.p.m. I know the 'Town' is playing Manchester United at home on this day (Up the sooper blues) and it is a bank holiday but please come along for a few hours, and remember to wrap up warm. This count is being held at 7p.m. because we want to catch the maximum which is from about 4p.m. onwards on this day!

A FIREBALL was seen over Rattlesden on WEDNESDAY 24th NOVEMBER at 3.45p.m. Anybody who saw this please contact me as soon as possible.

SPORADIC METEOR COUNT

Apart from the main shower meteor count of the Quadrantids we propose to hold a Sporadic Meteor Count on SATURDAY 29th JANUARY at 9p.m. again meet outside the Golf Hotel, Foxhall Road, Ipswich.

There are no minor showers this month.

D. BARNARD.

My Fan was delighted by my recent episil - to the best of my knowledge it was well received by the only other member in the society who read it (even the Journal typist keeps his eyes closed when he types it and does not bother to read it through for spelling mistkaes!)

We again this month have been blessed with clear skies apart from the Superb effort by the whole Society (all 15 of us) who struggled against well nigh impossible odds and a few difficult evens to observe the GRAZE OF THE YEAR. Howsoever, with impeccable timing, the Moon disappeared from view just when we needed it most,

This marvellous non-event inspired the following words of wisdom by Mrs. Annie Nonamous (A. Psuedonym known to her best friends as Non dePlume)

"Grazing Occultation"
Such an impressive name
but all it really means is
setting up, and taking down again.
The weather wasn't with us
the weather never is
until after the event
when miraculously clears again.

After this magnificent limerick, which was dashed off in between looking at some of the most beautiful and distant celestial objects, we decided that we would have a competition for limericks (clean ones only please) and the first prize will be one free double star night and the second prize will be TWO free double star nights and the booby prize will be a free night at the Observatory with the Solar, Loony and Planetary Section.

To galvanise you into action, here is another two limericks for your persual:

Bearcrofts the name
Astronomy is his game
and clear Thursday nights
his main claim to fame.
Double Stars he's persuing
blessed with trouble free viewing
All his nights are clear
except when it rains.

there is three really and after having
words with my solicitor (you dont know
her) I decided to put it in
signed. R.M. Cheesman, Esq.

An old man once want to the dome,
round the sky with the 'scope he did roam
he was having such fun
with M 31
that he clean forgot to go home.

We once had a Chairman
his name it was Roy
Studied astronomy since he was a boy (1893)
now his nerves are all shattered
his tin soldiers battered
and the mighty 10" his favourit^e toy!

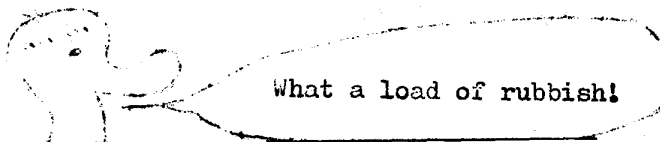
These will give some idea of the libelous verses we require for this grand competition.

All entries to me Mr. David Bearcroft, Esq., 3" refractor and stand,

IPSWICH.

and after the courtcase to

Mr. David Bearcroft (will be known as Mrs)
Cell 2453,
HOLLOWAY PRISON.



ANNUAL GENERAL MEETING.

Just another reminder that the Annual General Meeting of our Society takes place on Friday 7th January, 1977 starting at 8p.m. This meeting will be held in the Library, Orwell Park School, Nacton.

MEMBERSHIP SUBSCRIPTIONS 1977.

All membership subscriptions became due on the 1st January, 1977 and those members who have not renewed their membership for 1977 and would like to do so should send their subscriptions to

Mrs. R. Markham,
Hon. Treasurer,
Orwell Astronomical Society (Ipswich)
[REDACTED],
IPSWICH, Suffolk.
IP3 8HB.

JOURNAL.

We have just had our bill in for the duplicating paper for our Journal for 1976. The cost of this paper has more than doubled during 1976. As the cost of the Journal is absorbed in the amount we receive from our subscriptions charged to members this cost now accounts for a high per-centage of our costs of running the Society. We have about one-hundred members who receive the monthly Journal which generally has about ten pages to it. I have not heard from any member who receive their Journal by post if they have had to pay any extra postage as the Journal generally is over the normal weight for first or second class postage.

To save on extra postage and to cut the cost of paper for the Journal we propose to print on both sides of the Journal paper as from February Journal, but check through this Journal as some sides are double side printed as we are a bit unorganised this month.

RONEO DUPLICATOR:

Still on the subject of printing the monthly Journal we can see a situation coming up during 1977 when we have not got the use of an ink duplicator. Although the Society has a BANDA type duplicator which we used to use many years ago this type of duplicator is only suitable for printing successfully about fifty copies (in colour) and I really do not want to type the Journal twice each month!

So, if you have an ink duplicator or know of one for sale please contact me as soon as possible,

R.M. Cheesman, [REDACTED], Ipswich.

OBSERVATORY CLOCK.

As reported in last month's Journal the observatory clock donated to our Society by Mr. N.C.C. Barrell is now installed in the Observatory Club Room. At the last check it was running slow by one second per day. We have adjusted the clock and hope that it will now be 'spot on'.

ARTICLES FOR THE JOURNAL.

If you have anything which you would like printed in our Journal please send them to our Editor Mr. Mark Howe. Our 'deadline' for articles for the Journal is generally about the 20th of the month. If you have anything urgent which comes up after the 20th which you would like put in the Journal please send direct to Mr. R.M. Cheesman, [REDACTED], Ipswich.

STARS AND SPACE, 1977.

'Stars and Space '77' is the title of a new 96 page magazine edited by Ian Ridpath. This is a monthly Journal similar to 'Sky and Telescope' and costs £1. If you would like a copy and cannot find it in the shops please send 65p plus postage to Mr. Nicholas Leonard, Independent Newspapers, Ltd., Aitkin House, 118 Fleet Street, London, EC4A 2BA and mention that you are a member of Orwell Astronomical Society (Ipswich). or contact Mr. R.M. Cheesman, [REDACTED], Ipswich who will put in a bulk order if necessary.

programme for JANUARY, 1977.

At Orwell Park Observatory, Nacton, Nr. Ipswich.

MONDAYS from 7.30p.m. General Observations Section.

Director Mr. N. Gage, [REDACTED], Felixstowe, 'Phone Felixstowe [REDACTED]
and Mr. S. Flory, [REDACTED], Ipswich, 'Phone Ipswich [REDACTED]10th January
17th "
24th "
31st "

WEDNESDAYS from 7.p.m. Solar, Lunar & Planetary Section.

Director Mr. R.M. Cheesman, [REDACTED], Ipswich.

5th January
12th "
19th "
26th "
2nd February

THURSDAYS from 8.p.m. Double Stars Section

Director Mr. D. Bearcroft, [REDACTED], Ipswich, 'Phone Ipswich [REDACTED]

13th January
27th "

FRIDAYS from 7.30p.m. Nebula and Paint Objects Section

Director Mr. R. Hazelwood, [REDACTED], Ipswich 'Phone Ipswich [REDACTED]
and Mr. R. Gooding, [REDACTED], Ipswich14th January
28th "***FRIDAY Annual General Meeting of the Society on FRIDAY 7th JANUARY at 8p.m.
in the Library, Orwell Park School, Nacton.

Visits to the Observatory organised by Mr. R.M. Cheesman, [REDACTED], Ipswich.

Thursday 13th January from 6.45p.m. 5th Rushmere Cub Pack

Thursday 20th January from 6.35p.m. 5th Rushmere Cub Pack

Saturday 29th January from 7p.m. 32nd Ipswich Scouts

METEOR SECTION Director Mr. D. Barnard, [REDACTED], Ipswich

'Phone Ipswich [REDACTED]

The Following two meetings will be held on Foxhall Heath, Ipswich.

1. QUANTRANIDS METEOR SHOWER The meteor count to observe this shower is on

MONDAY 3rd JANUARY starting at 7p.m.

Meet outside the Golf Hotel, Foxhall Road, Ipswich.

2. SPORADIC METEOR COUNT will be held on SATURDAY 29th JANUARY starting at 9p.m.

Meet outside the Golf Hotel, Foxhall Road, Ipswich.

REMEMBER TO COME ALONG AND WRAP UP WARM.