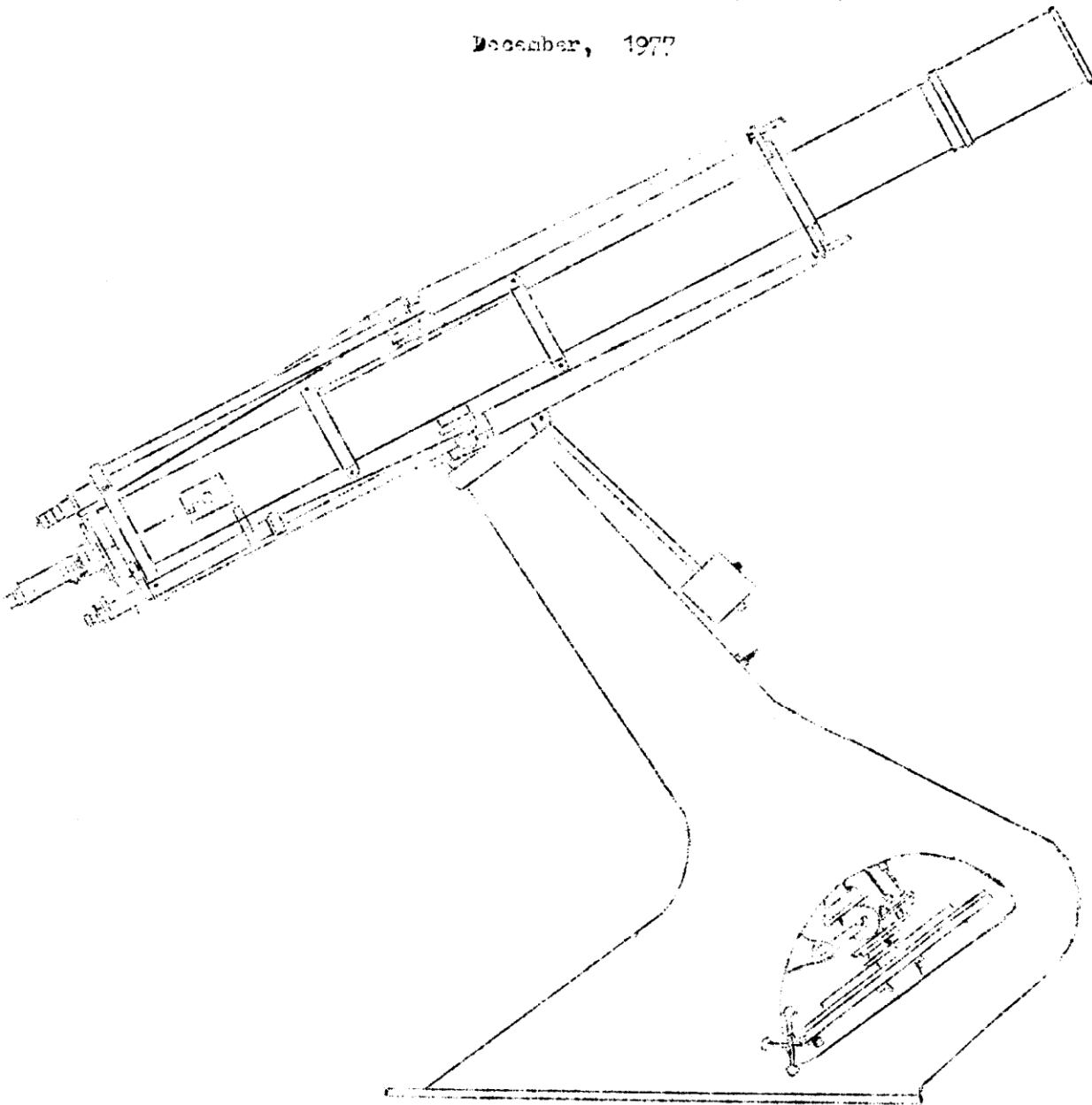




JOURNAL OF THE  
ORWELL ASTRONOMICAL SOCIETY (IPSWICH)

December, 1977



Editor: Mr. Mark Howe,  
BURY ST. EDMUNDS,  
Suffolk.  
'Phone Bury St. Edmunds

December 1977

Dear Member,

The Committee invites you to the Annual General Meeting of the Orwell Astronomical Society (Ipswich) which will be held on Friday, 6th January, 1978 at 8 p.m. The meeting will take place in the library of Orwell Park School, Nacton.

I hope that you will be able to attend and help to make this a successful occasion.

AGENDA

1. Apologies for absence
2. Minutes of the previous Annual General Meeting and Matters Arising
3. Chairman's Introduction
4. Secretary's Report
5. Treasurer's Report
6. Election of Officers
7. Any other business

M.W.STOW (Honorary Secretary)

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The present Committee:

- Mr. R. Cheesman (Chairman)
- Mr. M.W. Stow (Secretary)
- Mrs. P.A. Long (Treasurer)
- Mr. D. Barnard
- Mr. D. Bearcroft
- Mr. J. Deans
- Mr. V. Wilkés

All are willing to stand for re-election except the Secretary, who due to work commitments wishes to resign from this office. Mr. M. Stow is however willing to stand for election to the Committee.

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Nomination Form for Officers and Committee Members of the Orwell Astronomical Society

a) OFFICERS. I would like to nominate .....as  
 ..... of the Orwell Astronomical Society for 1978

Signed ..... Seconded .....

b) COMMITTEE MEMBERS. I would like to nominate ..... as a  
 Committee Member of the Orwell Astronomical Society for 1978

Signed ..... Seconded.....

PLEASE NOTE. Nominees must agree to their nomination.

Please return this form to Mr. M.W. Stow (Hon. Secretary), [redacted], Ipswich by 23rd December 1977.

IPSWICH,  
Suffolk.  
IP2 9JH

1st December, 1977.

Dear Member,

MEMBERSHIP SUBSCRIPTIONS, 1978.

All membership subscriptions for 1978 become due on 1st January, 1978 and are at the following rates:

Junior Membership (those under 18 years of age or still in full time education)	£1.50
Full Membership	£2.25
Family Membership	£3.00

If you would like to renew your membership for 1978 to our Society please send your cheque made payable to 'Orwell Astronomical Society (Ipswich) to me at the above address.

Yours faithfully,

*P. A. Long*

Mrs. P. Long, Honorary Treasurer.

## THE SUN

The Sun passes through Sagittarius and Ophiuchus this month, Sunrise and Sunset being at 08h00m and 15h50m respectively near mid-month.

THE MOON - Phases

Last Quarter	3d21h16m
New Moon	10d17h33m
First Quarter	17d10h37m
Full Moon	25d12h49m.

Occultations

Star	Phase	Mag.	Time
1281	R	6.4	1d01h36.8m
3269	D	4.3	15d19h02.2m
3278	D	5.4	15d20h40.0m
247	D	6.7	19d22h05.8m
257	D	4.5	20d01h05.8m
1234	R	6.1	27d19h46.5m
1364	R	6.5	29d01h47.4m
1465	R	6.3	30d01h21.7m
1468	R	4.9	30d03h21.7m
*1565	R	6.3	31d00h06.8m

D=disappearance, R=reappearance, \*denotes star is double. Stars are listed according to Zodiacal Catalog (ZC) numbers.

## THE PLANETS

Mercury. Greatest eastern elongation ( $21^\circ$ ) occurs on the 3rd, after which time the elongation decreases until inferior conjunction on the 21st. The planet will be visible as an evening star.

Venus is a morning star at mag. -3.4.

Mars increases in magnitude from -0.2 to -0.6 and may be seen as a morning star in Cancer, reaching a stationary point this month.

Jupiter comes to opposition on the 23rd in Gemini when its magnitude will be -2.3 and its apparent diameter (equatorial)  $47.2''$ . Its opposition distance is 4.171 AU.

Saturn is in Leo, where it reaches a stationary point in its orbit at mag. 0.7.

APOLOGIES for the omission of certain regular features this month, but 'A' levels and University Entrance Exams loom large on the horizon this month (November). Back to normal next month.

URANUS.

On the 23rd December 1977 the planet Uranus will occult a star, usually magnitude 10, photographic magnitude 12.2, and it is possible that the visually unobservablerings that have recently been discovered may cause a number of dissappearances of the star. Anyone wishing to observe this occultation please contact Mr. A.J. Smith [redacted], Stoke Park Estate, Ipswich telephone no Ipswich [redacted].

Details: 1950 Epoch: 14hrs 48mins 44.66 Secs. R.A.  $15^\circ 49m 47.9secs$  Dec.

Visual magnitude 10.2 photographic mag. 12.2 Eclipse of star by outer (EpsilonN) ring at 6.55 U.T. and again at 7.46 U.T.

On Friday 16th December, 1977 at 8p.m. in the Friends Meeting House, Fonnereau Road, Ipswich, Dr. Keith B. Hindley will give an illustrated talk to the C.A.S.I. about 'Fireballs in Britain', and the photographic fireball network.

Dr. Hindley is the Director of the Meteor Section of the British Astronomical Association, and Director of the all-sky camera patrol British Fireball Network. Dr. Hindley is a freelance journalist specialising in Solar System Studies. He regularly writes for the magazine "New Scientist", has been on Radio Orwell, and is currently working on several books.

fireball is a meteor (shooting star) brighter than magnitude -5 (or brighter than Venus). Not to be confused with ball lightning which sometimes has the same name. Fireballs are very spectacular, and more common than most people realise. If you see one you will never forget it! I have seen two. Occassionally a bright fireball drops a meteorite which reaches the ground.

Observations of fireballs are of immense scientific value. Sightings of fireballs should be reported at once to David Barnard, [redacted], Ipswich, telephone Ipswich 77853 (or direct to the B.A.A.) who will gather all reports and send them to the B.A.A. Fireball Programme Director.

Reports of fireballs should contain the following information: fireball peak magnitude (approx); time duration in seconds; details of any fluctuations, fragmentations, explosions etc; time and date of the fireball event; position (elevation and compass bearing)(fireball track with references to the stars is equally valuable) start and end points of the fireball; position (address or map reference) of the site from where the fireball was seen.

To find out more about these brief but beautiful visitors from outer space and our efforts to observe them, come to Dr. Hindley's Lecture.

References for reading:

1. Hindley. K.B. "New Scientist" 72(1032) page 695, 23rd - 30th December, 1976.
2. Hindley, K.B. "New Scientist" 73(1045) page 772 31st March, 1977, 'Canadians Recover 3rd photographed meteorite fall'
3. Hindley. K.B. "New Scientist" 75(1059) page 20 7th July 1977, 'Fallen Stars by the tonne'
4. Hindley K.B. "New Scientist" 76(1076) page 78 13th October 1977 'The Stars fell like rain'
5. Hindley K.B. Journal of the British Astronomical Association 87(6) page 606 October 1977, 'Meteor Section, Report of Meeting' held 2nd April 1977.

See also various Meteor Section reports in past B.A.A. Journals.

NEW OBJECT: by Charles Radley.

Recently a television company have been publicising (even overplaying) the discovery of a new asteroid like object. Discovery on Thursday 9th November by Professor C. Kowal, he first noticed it on some plates he took using the 122cm Schmidt telescope of the Hale Observatory at Mt. Palomar. Subsequently it was seen on a pre-discovery plate by Tom Garrelis. Kowal is a prolific observer having several extra-galactic supernovae under his belt, as well as finding one comet and recovering several others.

Little is known about it, apart from its existence. Object kowal, as this mini-planet is currently being called, is in a near circular orbit around the sun slightly closer than Uranus, and inclined at about  $3^{\circ}$  to the ecliptic. Preliminary estimates give it a period between 66 and 70 years, If it is an asteroid (Kowal says a comet would be fuzzy and not so bright) at magnitude 19 it must be about 200 to 400 kilometres in diameter, However, I am highly suspicious of diameter estimates for such small bodies, Pluto for example has an anomolous diameter going by current measurements. Speckly interferometry (the technique used to show Betelgeuse as a disc with detail on it) is difficult to perform on these dim objects, and I fear we will have to wait for space probes or the Space Telescope before we can properly measure Object Kowal.

Hopes have risen that Object Kowal is just one of a whole asteroid belt between Saturn and Uranus. There can be no asteroid belt between Jupiter and Saturn (the only one known is between Mars and Jupiter) because the planets are massive enough to severely perturb all orbits lying between their own. A second asteroid belt would make life easier for solar system theoreticians, since the formation of the solar system would have left behind more debris than we can at present account for

Small objects as far out as Saturn and Urnaus could easily have been unnoticed up to now. Asteroids typically reflect only 2 or 3% of the light which reaches them from the Sun and would be extremely dim that far away.

Change of addresses:

Mr. R. Hazelwood to [REDACTED], Ipswich.  
Mr. J. Hood to [REDACTED], Ipswich

Newspaper Cuttings.

With my request a few months ago we had many cuttings from newspapers/magazines come in but the supply has dwindled. If you see anything of astronomical interest in papers/magazines/Journals which you think might be of interest to our members please send them either to Mr. M. Howe (editor) or me.

December Lecture.

This month's illustrated lecture is being given by Dr. K.B. Hindley and is entitled 'Fireballs in Britain'. which will take place at The Friends Meeting House, Fonnereau Road, Ipswich on Friday 16th December commencing at 8.p.m.

Mr. Hindley is coming from York to give us this talk so please come along to swell our numbers.

Visits to Observatory.

Just a reminder that if you are approached by a group which would like to visit our Observatory at Nacton their secretary/organiser should come direct to me. Please do not arrange a date at all as we have bookings for visits to the Observatory going right up until October, 1979.

JANUARY JOURNAL.

If you have any articles to be inserted in the January Journal please get them to the editor or myself as soon as possible, deadline December 14th otherwise the Journal will not get printed and posted before the new year.

Astronomy for beginners.

Our first Wednesday this month (7th December) at the Observatory to which every-body is invited will be taking a lighthearted aspect in astronomy. One of our members will give an illustrated talk on U.F.O.s starting at 7.15p.m. Come along and air your views on this very controversial subject.

A.G.M.

Just a little note for your diary, our A.G.M. is on Friday 6th January, 1978 which starts at 8p.m. in the Library of Orwell Park School. At this meeting new officers will be elected to represent you on the Society's Committee for 1978.

UMBRELLA.

With reference to my request for a large beach type umbrella in last month's Journal within 24 hours of publication of November's Journal I was offered one. It's astronomical application will be revealed at a later date.

SOCIETY'S LOAN EQUIPMENT.

We have now allocated our two loan equipment reflectors to members but if you would like to have either one of these instruments on loan please contact me and I will put your name on the list.

The Society, apart from the two telescopes, has for loan to members an all-sky camera for photographing fireballs for the British Fireball Network under the Directorship of Dr. K.B. Hindley. If you would like to operate this camera on behalf of the Society please contact Mr. D. Barnard, [REDACTED], Ipswich or myself and we will give you all the information you require. Anymore information about operating an all-sky camera can be gained at Dr. Hindley's talk to us on Friday 16th December. The basic requirements of operating this camera are: a fairly dark garden with a fair horizon to horizon view; be prepared to move the film on in the camera every hour or so; to fill in a simple form with the film no. exposure no and time. The films for this camera are issued free! If you do not have a telescope and would like to play an important part in astronomical observations not only for the British network but also for the world-wide camera patrol of the sky for fireballs NOW IS YOUR OPPORTUNITY!!!

The camera ideally should be operated every night which is clear from dusk until as late as possible but we know that this is not generally possible so the camera will be issued to any member who can use it as much as possible, even if is only a couple of nights a week.

PROGRAMME FOR DECEMBER, 1977.

AT ORWELL PARK NACTION.

MONDAYS: from 7.30p.m. General Observations Section.

Directors. Mr. N. Gage, [REDACTED], Felixstowe, Phone Felixstowe [REDACTED]  
and Mr. S. Flory, [REDACTED], Ipswich. Phone [REDACTED]

5th December  
12th "  
19th "

TUESDAYS; from 8p.m. Planetary Section

Directors. Mr. J. Beans, [REDACTED], Capel St. Mary Phone GT. WENHAM [REDACTED]

and Mr. J. Hood, [REDACTED], Ipswich.

13th December.

WEDNESDAYS from 7p.m. Astronomy for Beginners.

This month's illustrated talk by one of our members will be on U.F.O.s.  
on Wednesday 7th November.

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

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

14th December  
21st "  
28th "

THURSDAYS from 8p.m. Double Stars Section.

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

8th December.

FRIDAYS from 8p.m. Variable Stars Section.

Director. Mr. R.S. Manning, [REDACTED], Ipswich, Phone [REDACTED]  
and Mr. M. Siggers, [REDACTED], Ipswich

9th December.

OTHER MEETINGS:

LECTURE: at the Friends Meeting House, 39 Fonnereau Road, Ipswich at 8p.m.  
and illustrated talk by Dr. Keith B. Hindley, Director British  
Astronomical Association Meteor Section on 'FIREBALLS IN BRITAIN'.

Admission Free - everybody welcome.

1st December, 1977.

ASTRONOMY EVENING COURSE  
at the  
SUFFOLK COLLEGE.

This is a public opinion survey. It will help a great deal if you complete the questionnaire below and post it (fairly quickly is possible) to:

Charles Radley,

WHERSTEAD,  
Ipswich.

In the July 1977 edition of the O.A.S.I. Journal the plans were announced for astronomy evening classes to be held at the Suffolk College (formerly Ipswich Civic College) organised by the University of Cambridge Board of Extra-Mural Studies, starting September 1978.

The details of the course are not yet known but it will probably be as follows. A course of twenty-one evening classes over the autumn and spring academic terms. Each class would be two hours long broken by a coffee break. Enrolment fee would be approx £9.

Members and non-members of the O.A.S.I. are invited to indicate their answers to the questions below. Further copies of this questionnaire are available from me at the above address.

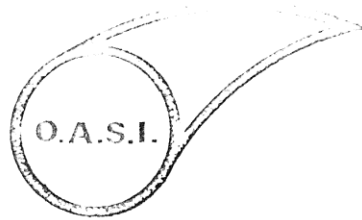
1. Will you enrol for the astronomy evening classes?  
YES/PROBABLY/POSSIBLE/NO/DON'T KNOW
2. Which day of the week would be most convenient for you?  
MON/TUES/WED/THURS/FRID
3. Are you interested in taking the astronomy GCE 'O' Level Examination?  
YES/NO
4. Do you attend the O.A.S.I. monthly winter lectures?  
INVARIABLE/FREQUENTLY/OCCASSIONALLY/NEVER
5. Are you a member of the O.A.S.I.? YES/NO
6. How did you obtain this questionnaire?  
O.A.S.I. NEWSLETTER/ORWELL OBSERVATORY/BY HAND/  
/OTHER (please state)

Other comments and enquiries welcomed. Please write below, overlead, or in a separate letter.

Thank you for your co-operation,

Charles Radley.





Orwell Astronomical Society (Ipswich)  
presents  
a lecture entitled

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**FIREBALLS  
IN  
BRITAIN**

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by

**Dr. KEITH B. HINDLEY**

Director – B.A.A. Meteor Section

on

**FRIDAY 16th. DECEMBER 1977**

at 8p.m.

at

**The Friends Meeting House**

**Fonnereau Road, Ipswich**

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**REFRESHMENTS**

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**ADMISSION FREE**

Secretary: Mr. M. Stow,  
13 Ladywood Road,  
Ipswich.