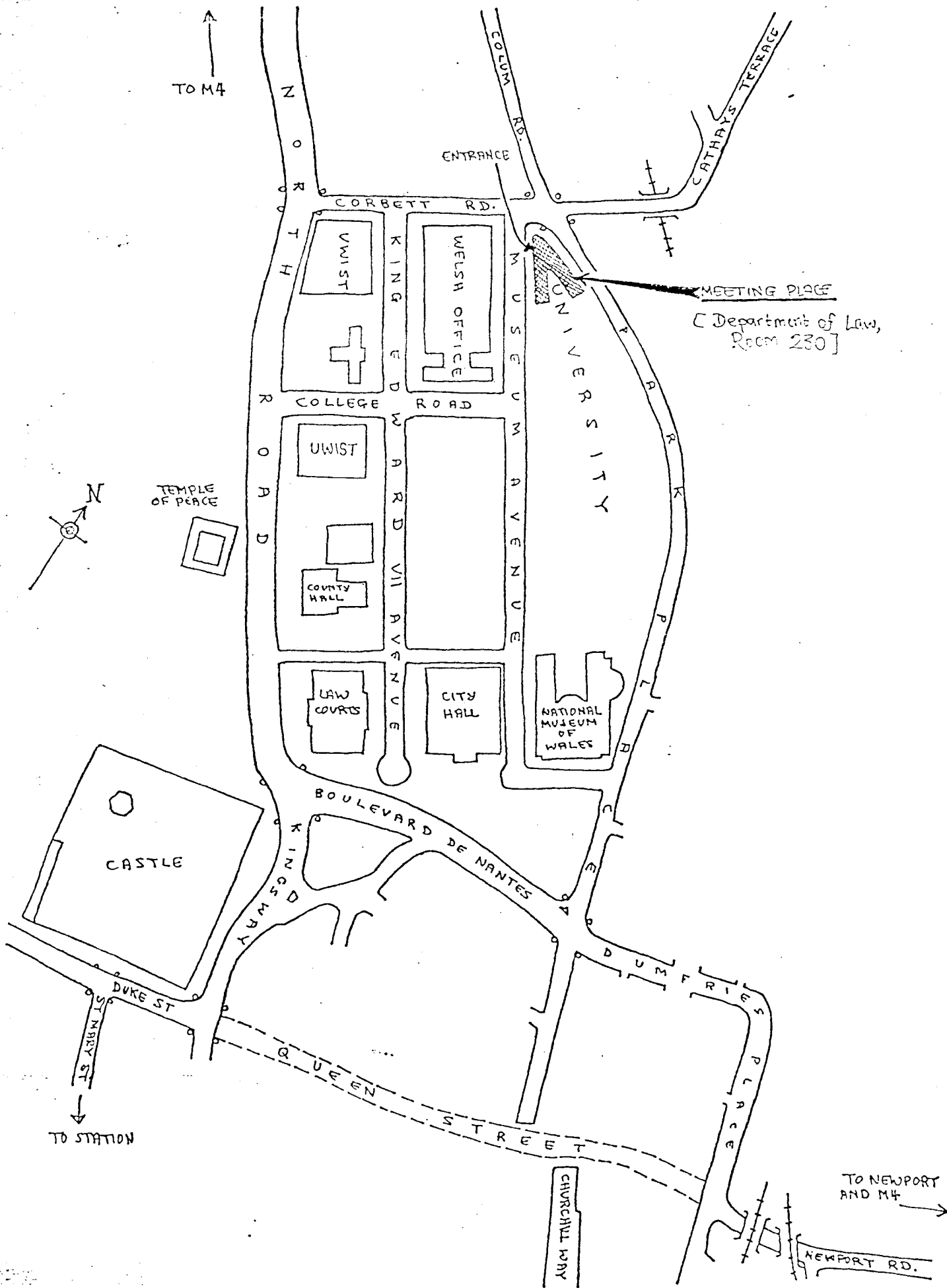


C A R D I F F

A S T R O N O M I C A L S O C I E T Y

H A N D B O O K

I 9 8 3 / 8 4



I N T R O D U C T I O N

Since it seems as if the C.A.S. handbook has been a success in its first year, it has been decided by the committee to make it an annual publication. The pattern of this edition closely follows that of its predecessor, but if members have suggestions for improvements to future editions, they will be warmly welcomed by the Committee.

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M E E T I N G S

Indoor meetings are held on alternate Thursdays from September to July in Room 230, Department of Law, University College, Cardiff, at the north end of Museum Avenue. (See map opposite). The commence at 7.30pm and finish by 9.30 pm. (Lectures normally end shortly after 9.00pm). Occasional meetings are held on days other than Thursdays, and you should check the programme at the end of this handbook for details.

Apart from indoor meetings, outdoor observing sessions, where members bring their own portable instruments, are held from time to time. Details are announced at the indoor meetings or in the Newsletter.

CARDIFF ASTRONOMICAL SOCIETY

Cardiff has seen a succession of astronomical societies since the end of the war. The predecessors of the current society disbanded for various reasons, and its immediate predecessor, The Cambrian Astronomical Society, finally became moribund by 1970.

At an Extra-Mural course held at Duffryn House in June 1975, the present Treasurer (Bob Owens) and Secretary (Dave Powell) were encouraged by the organiser Dr. G.P. Thomas (formally of the Extra-Mural Dept. of the University College of Swansea, now at the Dept. for External Studies, University of Oxford), to revive the Cardiff Society, particularly in view of the existence of large and vigorous societies in our neighbouring cities of Swansea and Bristol. Consequently, they got together with Ron Lane, Custodian of Penylan Observatory, and two of his group at the observatory - Colin Lang and Martin Chick - and arranged an exploratory meeting in July 1975. It immediately became apparent that there would be support for a new society, and so an interim committee, with Ron Lane in the chair, was set up. It set about arranging a programme for the Autumn, and by the end of 1975 the membership had reached 50, and a keen, enthusiastic nucleus had been established. Despite pessimism from members of earlier societies, who had seen several rise only to fall again, the present society quickly became well established, and the membership has consistently topped the 100 mark for the past three years.

We are still a fledgling society compared with our long-established neighbours, who have given us a good deal of help and encouragement, but we are gradually becoming more sophisticated, with members obtaining larger telescopes and gaining observational experience. Several members now contribute to the observing sections of such national organisations as the B.A.A. and the British Meteor Society, and we have become involved in joint meteor watches with Swansea and Bristol. We are also attempting - so far without much success - to encourage members to make their own instruments, particularly since we have members very experienced in this field. Towards this end there is a co-operative society effort under way to construct a six inch Newtonian reflector hopefully (!) ready for use during the coming winter.

We try to offer a wide and interesting variety of lectures at our fortnightly meetings so as to cater not only for the practical observer, but also for the 'armchair' astronomer. Also, informal 'observing sessions' are held from time to time in a dark out-of-town location to allow members - especially those who are beginners without their own instruments - to have use of portable telescopes and to get to know their way about the sky. The society is normally represented at the courses arranged by the Extra Mural Department, University College of Swansea, held alternately at Duffryn House, St. Nicholas in South Glamorgan and at Gregynog Hall, near Newtown in Powys, as well as at the annual B.A.A. course on observational astronomy held at Winchester. Social events are also held, sometime in conjunction with our neighbouring societies.

Until the end of 1978 our society had its headquarters at Penylan Observatory, owned by Cardiff City Council and equipped with a 12½" Newtonian reflector. This telescope is a rare example of a Browning reflector, made in the nineteenth century, and modified by Calver, who added the drive. It is thus an instrument of high quality as well as of historical importance. Sadly, the observatory compound has been so badly vandalised that it became necessary to dismantle and remove the telescope entirely in April 1980 so that it could be moved to the safety of a council store. Members of the committee, in concert with members of the South Glamorgan Education Committee, are currently seeking a new site on which to re-erect the observatory.

Through the good offices of our President, Professor M. Disney, we will be able to have use of the sixteen inch reflector belonging to the University College of Cardiff, and it will be available after the end of some of the fortnightly meetings. It is used essentially as a training telescope by the Department of Mathematics and Astronomy to prepare students for working with bigger instruments abroad.

The Society owns a few small portable telescopes for use by members, and these can be obtained on loan from the Director of Observations. There is also a small but growing library, and books are available for loan at each meeting.

It is the intention of the committee to build up a library of 35mm transparencies for the use of members and although there is not yet a society slide library as such, some members do privately possess some interesting astronomical slides. If members are interested in these, personal contacts can be arranged by any committee member.

COMMITTEE 1983-84

PRESIDENT: Professor M. Disney,
Professor of Observational Astronomy,
Department of Mathematics and Astronomy,
University College,
Cardiff.

VICE PRESIDENT: R.C. Lane (Ron),
Custodian of Penylan Observatory,
53 Romilly Road,
Canton,
Cardiff.

Instrument - 2½" refractor.
Interests - Cosmology; Deep sky objects.

CHAIRMAN: Mr. G.P. Dolan (Gerry),
Civil Servant,
9 Hendy Street,
Roath Park,
Cardiff.
Tel. Cardiff 496296.

Instruments - 3" refractor.
7 x 50 binoculars.

VICE CHAIRMAN: Mr. W. Sutherland (Bill),
Physicist, Velindre Hospital,
13 St. John's Crescent,
Whitchurch,
Cardiff.
Tel. Cardiff 66132 (home).

Instruments: 6" and 4" Maksutovs.
6" Cassegrain.
Interests: Instrument making and Cosmology.

SECRETARY: Mr. D.W.S. Powell (Dave) F.R.A.S.,
Hospital Supervisor,
1 Tal-y-Bont Road,
Ely,
Cardiff.
Tel. Cardiff 551704 (home)
564822 (business)

Instruments - 6" Newtonian reflector.
20 x 70 and 7 x 50 binoculars.
Interests - Variable stars; Nova patrols;
Meteors; Deep Sky objects and
Stellar Evolution.

TREASURER:

Dr. R.M. Owens (Bob) B.Sc., Ph.D., F.R.A.S.,
Assistant Keeper of Geology,
National Museum of Wales.
Home address:
3 Duxford Close,
Llandaff,
Cardiff. CF5 2PR.
Tel. Cardiff 397951 Ext. 213 (Museum)
554154 (home)

Instruments - 8" Schmidt-Cassegrain
6 x 30 binoculars.
Interests - Solar system and photography.

EDITOR:

Miss M.J. Lewis (Mary),
Clerical Assistant,
Wales Tourist Board.
86 Highbury Road,
Ely,
Cardiff.
Tel. Cardiff 499909 Ext. 215 (Work).

Instruments - 10 x 50 binoculars.
Interests - Solar System and Space Exploration.

DIRECTOR OF
OBSERVATIONS:

Mr. M.E.J. Chick (Martin), F.R.A.S.,
Police Photographer,
South Wales Police.
25 Calderton Road,
Gwaen Miskin,
Nr. Pontypridd,
Mid Glamorgan.
Tel. Cardiff 44111 Ext. 256 (Business).

Instruments - $8\frac{3}{4}$ " Newtonian reflector.
7 x 50 binoculars.
Interests - Planetary observation and photography.

EX CHAIRMAN:

Ms. P. Chick (Pam), F.R.A.S.,
Data Controller,
25 Calderton Road,
Gwaen Miskin,
Mid Glamorgan.
Tel. Cardiff 396131 Ext. 41 (Business).

Instruments - $8\frac{1}{2}$ " Newtonian reflector.
Interests - Planetary and solar observation;
Spectroscopy.

JUNIOR REPRESENTATIVE
AND LIBRARIAN:

K.A. Walsh (Kevin),
School Pupil,
125 Diana Street,
Roath Park,
Cardiff.
Tel. Cardiff 496449.

Instruments: 4" Newtonian reflector.
Interests - Cosmology; Variable stars and
Double stars.

COMMITTEE MEMBER:

Mr. N.L. Jenkins (Norman),
E.E.C. Engineer,
34 St. Margarets Road,
Whitchurch,
Cardiff. CF4 7AB.
Tel. Cardiff 68335 (home).

Instruments - 7 x 50 binoculars.
Interests - Astronomical instruments and
their construction; Deep Sky
Objects and Planetary observation.

COMMITTEE MEMBER:

Mr. P.L. Bennett,
Television Engineer,
6 Church Close,
Llantwit Fadre,
Mid Glamorgan.
Tel. Newtown Llantwit 203247.

Instruments - 12 $\frac{1}{2}$ " reflector.
6" refractor.
4" reflector.
Interests - Deep Sky objects and Telescope/
Instrument making.

LIBRARY

A comprehensive list of books currently available
for loan to members:-

(A) GENERAL

ABELL, George O	Astronomy for Everybody
ASIMOV, Isaac	The Universe
AVENEL, Anthony	The View from Orbit II
BALL, R.	The Story of the Heavens
BRANDT, John C. & MARAN, S.P.	New Astronomy and Space Science Reader
BROWN, Peter Lancaster	Astronomy in Colour
	Comets, Meteorites and Men
	Stars and Planet Spotting
	The Restless Earth
	The Violent Universe
CALDER, Nigel	Into Space
	Space Frontiers
CLEATOR, P.E.	
COUPER, Heather & HENBEST, Nigel	Radio Studies of the Universe
DAVIES, R.D. & PALMER, H.P.	
DUFFET-SMITH, Peter	Practical Astronomy with your Calculator
EVANS, I.O.	The Earth
EVANS, David S	Teach Yourself Astronomy
FRANK, Charles	Franks Book of the Telescope
GALLANT, R.	Bombarded Earth
GATLAND, Kenneth	Robot Explorers
GOODAVAGE, Joseph F	The Comet Kohoutek
	Storm on the Sun
HEBWYRD, James D	The Living Universe
HENDRICKSON, Walter	Reach for the Moon
HICKLEY, James C	Introducing the Universe
HILL, Douglas	The Comet
HINKS, A.R.	Astronomy
HOLMES, Cpt. D.C.	The Search for Life on Other Worlds
HYDE, Frank W	Radio Astronomy
KEYHOE, Mjr. D.E.	Flying Saucers from Outer Space
LYTTLETON, Raymond A	The Modern Universe (2 copies)
LOVELL, Bernard & Joyce	Discovering the Universe
MALLAS & KREIMER	The Messier Album
MOORE, Patrick	The A - Z of Astronomy
	The Boys Book of Space
	Challenge of the Stars
	Exploring other Planets
	Exploring the Galaxies
	Guide to the Moon
	Guide to the Planets
	Guide to the Stars
	Practical Amateur Astronomy
	The Stars Above
	Yearbook of Astronomy 1975
	Yearbook of Astronomy 1977
	Yearbook of Astronomy 1978
	Yearbook of Astronomy 1979
NEWTON, Jack	Deep Sky Objects
	Sky Shooting
NICHOLSON, J	Exploring the Planets
PECK, W	The Constellations and How to Find Them
POOCEY, S	Exploring the Solar System

LIBRARY (Continued)

RICHARDSON R.S.	Man and the Planets
RIDPATH Ian	Signs of Life
RONAN, Colin A	Man Probes the Universe
	The Practical Amateur Astronomer
	The Amateur Astronomer and his Telescope
ROTH, Gundter D.	Handbook for Planet Observers
	Invasion of the Moon, 1969.
RYAN, Peter	Mathematicians Delight
SAWYER, W.W.	Introducing Astronomy
SIDGWICK, J.B.	The Riddle of the Universe
SMART, W.M.	A Key to Worlds Beyond (TASCO)
SMITH, A.	Make Your Own Telescope
SPRY, Reg	Is Anyone Out There?
STONELEY, J.	Black Holes
TAYLOR, J.	Astronomical Spectroscopy
THACKERAY, A.D.	The UFO Enigma
VALLEE, J & J.	Mars at Last!
WASHBURN, M.	The Revolving Heavens
WATERFIELD, Reginald L.	Celestial Objects for Common Telescopes:-
WEBB, Rev. T.W.	Vol. 1: The Solar System
	The First Three Minutes
WEINBURG, S.	Earth, Moon and Planets
WHIPPLE, F.	Our Mysterious Spaceship Moon
WILSON, D.	Exploring Space (2 copies)
WORRILL, R.	The Stars and their Legends

(B) YEARBOOKS AND ASTRONOMICAL CALENDARS

Yearbooks; see general list under Moore, Patrick.

The Night Sky:	1961
The Night Sky:	1963
The Night Sky:	1976
CAS Calendar	1977
CAS Calendar (3 copies)	1978
CAS Calendar	1979
CAS Calendar	1980
CAS Calendar	1981

(C) PERIODICALS

Federation of Astronomical Societies (newletters)	1981
Stars and Space '77	1977
BAA, New South Wales Branch, Bulletins	Nos. 579 - 585
	590 - 592
	595 - 599
The Astronomer	Oct 1977
	Jan-Mar 1978
	Feb-Aug 1981
Spectrum No.5	Nov 1976
Sky and Telescope	1965 issues

PROGRAMME FOR 1983/84 SEASON

The following is a list of speakers arranged for the coming months. Apart from unavoidable short-notice changes all alterations will be announced in the CAS Newsletter or at meetings.

1983

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|----------------|----------------|---|
| 1st September | ✓ | 'Star Deaths' by Dr. P.J. Walters, B.Sc., Ph.D., University of Swansea. |
| 15th September | X | 'Time, Gravity and the Moon' by Dr. R.R. Hillier, University of Bristol. |
| 29th September | X | 'Space Travel, Time Travel in the Universe from Fireball to Black Hole' by Dr. P. Blake, University of Cardiff. |
| 13th October | X | 'Meteorites' by Dr. R.M. Owens, B.Sc., Ph.D., F.R.A.S., CAS. |
| 27th October | X | 'Sundials, Star Time and Star Finding' by Dr. F. Jenkins, University of Swansea. |
| 10th November | X | 'The Distance Ladder of the Universe' by Professor M. Disney, (CAS President) and University of Cardiff. |
| 24th November | ✓ | 'Quasars and Radio Galaxies' by Dr. P.J.S. Williams, University of Aberystwyth. |
| 8th December | X | 'Visual Hunting of Comets and Novae' by Mr. R. Panther, Northampton. |
| 5th January | X | 'Radio Astronomy for the Beginner' by Mr. H. Lang, C.A.S. |
| 19th January | ✓ X | 'Introducing Spectroscopy' by Ms. P. Chick, F.R.A.S., CAS. |
| 2nd February | X | 'Diffuse Interstellar Spectrum Features' by Dr. D. McNally, University of London. |
| 16th February | X | 'Junior Night' by K. Walsh & team, CAS. |
| 1st March | | 'Cosmic Ray Research at Bristol' by Dr. A. Worley, University of Bristol. |
| 15th March | | 'X-Rays from Galaxy Clusters' by Professor A.P. Willmore, University of Birmingham. |
| 29th March | | 'Annual General Meeting'. |
| 12th April | | 'Techniques of Observing Deep Sky Objects' by Mr. M. Chick, F.R.A.S., CAS. |
| 26th April | | 'Active Elliptical Galaxies' by Professor M. Disney (President CAS) and University of Cardiff. |
| 10th May | | 'Survey of Celestial Splendours' by Dr. S.J. Lubbock, Bridgend Astronomical Society. |

Cont'd ...

Programme for I984 continued ...

24th May 'Astronomy for the Masses' by
Dr. G.P. Thomas, University of Oxford.

7th June 'Some Unsolved Problems in Astronomy' by
B. Sutherland, CAS.

21st June 'Neutron Stars' by Dr. H. Griffiths,
Cardiff.

5th July 'Positional Astronomy' by Mr. G. Dolan, CAS.

In addition to the main programme there will also be some short talks aimed particularly at the beginners, some of which are mentioned below:

1st September (before main lecture)	Dr. Owens will give a short talk.
5th January " " "	Mr. M. Chick " " " "
Date to be arranged	Mr. H. Walsh " " " "
" " " "	Mr. G. Dolan " " " "

Others will be arranged when speakers can be found.

In addition to the fortnightly indoor meetings, there will be informal observing sessions, joint meteor watches with the Swansea and Bristol Societies, and an outing to a place of astronomical interest in the summer. Jumble sales will be arranged from time to time in order to raise funds for the society and details of all these events will be announced at the meetings and in the newsletter.

Our subscription rates for the 1983/84 sessions remains at:-

Adults - £5; Juniors - £2.

Price

This becomes due at the first meeting of our September session.
