The Federation's latest secretary, Mrs Chris Sheldon is seen here observing sunspots by projection in her garden at Pershore, Worcestershire. Mr and Mrs Sheldon have an observatory with a run-off roof, which can be seen in the background. Chris was elected FAS secretary at the AGM in May. She is a member of the Worcestershire Society, and her group's assistant secretary is one of the founder members of the society. It is Tony Ireland, 8 Mereswater Stones, The Park, Cheltenham, Glos.

SUBSCRIPTIONS

Subscriptions for the year beginning 1st September 1988 were fixed at the AGM. Yet again they remain unchanged, due to the continuing success of the various FAS activities. The market for new membership is still high. The FAS plan is to put in a bid for Herstmonceux Castle should they be ignored, and Treasurers should, with confidence, renew their Society's membership at the rate of £5.50 per year from September 1988 or £5.00 for a newly formed society (or one with fewer than 25 members). Cheques made payable to FAS and sent to the Treasurer.

FAS HANDBOOK 1988

The 1988 Handbook came in April and all paid-up members should have received a copy. If you have not received a copy, check that your current subscription has been paid. Further copies can be obtained from the Handbook Editor, Brian Jones. The cost is £2.50 per copy to members and £2.80 to non-members (including p&p). The Handbook is such a useful reference to all things of an astronomical interest that local societies should show a copy to their local reference library, information centre etc. and persuade them to buy a copy from the Editor who will supply both Handbook and invoice.

The following Council members were elected at the Annual General Meeting:

PRESIDENT: Bob Owens, 3 Duxford Close, Llandaff,
CARDIFF, CF5 2PR
Tel: 0222 554154

VICE PRESIDENT: Tony Balfour, 43a Ellesborough Road,
WENDOVER, Bucks., HP22 6EL
Tel: 0296 622442

SECRETARY: Mrs Chris Sheldon, "Whitehaven", Maytree
Road, Lower Moor, PERSHORE, Worcs., WR10 2NY
Tel: 0886 860202

TREASURER: Ken Marcus, 5 Cedars Gardens, "BRIGHTON",
East Sussex, BN1 6YD
Tel: 0273 556265

EDITOR: Mrs Rosemary Naylor, 256 Bacup Road,
TODMORDEN, Lancashire, OL14 7HJ
Tel: 0706 817767

EDITOR (Council Newsletter): Bill O'Shaughnessy,
14 New Way, WOODBURY SALERTON, Devon, EX5 1PW
Tel: 0395 33192

EDITOR (Handbook): Brian Jones, 17 Havelock Street,
Thornbury, Bradford, West Yorkshire, BD13 3HA
Tel: 0274 833651

MEETINGS ORGANISER: Stephen Williams, 120 Brickhill
Road, WELLSBOROUGH, Northants., NN8 3JP
Tel: 0933 77972

EDUCATION SECRETARY: Eric Zucker, 35 Gundreda Road,
LEWES, East Sussex, BN7 1PT
Tel: 0273 474347

SOCIETY NEWS EDITOR: Martin Chick, 2 Magnolia WAY,
Chandlers Reach, 2 Ealif Isar, Pontypridd, CF38 2NJ
Tel: 0443 206594

ASSISTANT NEWS EDITOR: Mrs Pam Chick, address as above

There are also three non-elected members of Council, each representing a group of societies, as follows:

CHILTERN GROUP: John Smith, 26 Mahoney Court, Oakridge
Road, HIGH WYCOMBE, Bucks., HP11 2NH
Tel: 0494 442429

SOUTHERN AREA GROUP: Roy Easto, 60 Whitworth Road,
South Norwood, LONDON, SE25 6XJ
Tel: 01-771 3230

YORKSHIRE GROUP: Paul Harper, 62 Kingston Avenue,
Dalton, HUDERSFIELD, West Yorkshire, HD5 9HL
Tel: 0484 25988

FAS SLIDE SCHEME

Members who have taken 35mm transparencies of astronomical subjects which they consider of a good quality are invited to submit them to the FAS, c/o Ken Marcus, for possible inclusion in the FAS Slide List. Any slides accepted will be used by the FAS in two ways. They may be reproduced and sold as a service to teachers and others, the FAS retaining the resulting minimal profit. They may also be used as illustrations in publications etc., but only with the owner's consent. Royalties will be due to the photographer. The copyright remains with the original photographer. It is essential, therefore, that members submit only their own work. Ken Marcus' address is shown on the Council List.

SOCIETY NEWS ROUND-UP

PLEASE SEND YOUR SOCIETY NEWS TO PAY AND MARTIN CHICK
AT THEIR NEW ADDRESS SHOWN ABOVE BY MID OCTOBER.

AYLESBURY AS: In their latest Newsletter a member gave
details of a device which enables the user to tell the
time at night, and which can be made on a cloudy
evening. You view the Pole Star through a hole in
the device and turn a handle until it points at the
Points of the Plough and read the time on a
cardboard disc. Talks to the Society have included
Cosmology, Pluto and its Satellite Charon and the
Planet Mars.
BASETT LAW AS: They have recently purchased a 6-inch Newtonian telescope. Fund raising events for the purchase of fresh observing instruments were held. A visiting lecturer from Mansfield & Sutton AS gave a talk on advanced techniques of astrophotography. They will be at the WOBKOP Hobbies Fair in July with a stand set up and publicising the Society. Further details from Paul Stanley, 28 Festival Avenue, Harworth, Doncaster, DN18 8HP.

BRADFORD AS: The Society has recently received a grant of £300 from the Bradford Metropolitan Council which is to be used to purchase a pair of 11 x 80 binoculars and a heavy-duty tripod. They have recently held a sponsored walk which raised around £180 for Society funds. The Society is also planning to reintroduce the annual Christmas lecture and video for use at meetings. In September a treasure hunt will be held to raise funds for the purchase of new telescopes and equipment.

BRITISH AEROSPACE AS: A visit to the Condor Brow Observatory, Lancaster was planned for March. Patrick Moore was a guest speaker at a meeting held in Preston. To encourage observing a Messier League challenge is planned in January. Dr Allan Chapman gave a Christmas lecture on the history of the discovery of Neptune.

COVENTRY & WARRICKSHIRE AS: The magazine contains many observational reports and includes excellent drawings of the telescope of the moon and Jupiter.

COTSWOLD AS: John Fletcher spent a week at St Andrews University in January with Andrew Packer while studying astronomy there. St Andrews has five observatories housing instruments ranging from a 6-inch refractor to a 37-inch Schmidt-Cassegrain. John took the opportunity of using them as well as making up for a week's absence on one of the telescopes. He was offered a post as Observatory Manager. Andrew Packer has landed himself a summer holiday job at the Anglo-Australian Telescope taking photographs using the UK Schmidt and the AAT.

GUILDFORD AS: A lot of work has been carried out on the Society's 20.5-inch telescope including fitting a 6-inch guide scope. The Society has also photographed a 6-inch guide scope. Members have taken photographs which were later matched in the guide scope. The main mirror heater of 24 watts keeps the mirror dry except in the most severe conditions of rising temperature and humidity. The Astrophotographer on a Saturday in May attracted many members. There was a display of amateur astronomy, several stands, refreshments and talks. The lectures included: "The Solar System: A Microcourse". Topics included: "Minor Bodies of the Solar System" and "The Sun". There was also a talk by Allan Swan and Jan Willems on the history of the Society for its 20th anniversary meeting. The Society obtained some land at High Top in 1974 from a landowner, Hon. T. W. P. Cayzer, for a peppercorn rent. When he died, his widow offered the site to the Society. On 22nd June 1974 he donated the site to the Society. A barbeque is planned for July.

WEST MIDLAND AS: In April the WMAA celebrated its 10th anniversary and held a special meeting of lectures held at the "Solar System: A Microcourse". Topics included: "Minor Bodies of the Solar System". There was also a talk by Allan Swan and Jan Willems on the history of the Society for its 20th anniversary meeting. The Society obtained some land at High Top in 1974 from a landowner, Hon. T. W. P. Cayzer, for a peppercorn rent. When he died, his widow offered the site to the Society. On 22nd June 1974 he donated the site to the Society. A barbeque is planned for July.

NORTH EAST LONDON AS: Talks to the Society included: "New Thoughts on Quantum Physics and Cosmology" by Dr. M. MacCallum and "Hunting Down the Dragon - 70 Years of Questions to Astrophysics" by Dr A. Lawrence of QMC, London. One of the members, John Langstaff, attended the annual meeting of the Catalogue des Composants d'ETOILES DU MULTIPLES which took place at the Meudon Observatory in France last August. It consisted of talks and a day's reports from groups, discussions and talks.

OAKHAM SCHOOL OBSERVING SOCIETY: The Society held two trips: one to Jodrell Bank and the other to the London Planetarium. Patrick Moore gave a memorable talk on Voyager and the Outer Planets. Colin Goodman of Leicester has also given a talk. Events planned for the future include a trip to Cambridge Observatories and an annual dinner.

ORWELL AS: 16th July was the Society's Open Day at the Observatory and included games, telescope making, refreshments and a Sky Camp organized by the North Star AS in East Harling. Despite rain and cloud it was possible to observe for four hours on one night.

PLYMOUTH AS: At the 23rd anniversary meeting in February four speakers gave short talks on a variety of subjects. Several "brick parties" were held during the year to help with the construction of a new observatory, and Lawrence Harris has been on hospital radio for a few months and this has helped publicise the Society. The main summer event is a hike in Dartmoor followed by a barbecue.

SAGS: Croydon hosted the SAGS meeting in July at Chichester; a skittles match was planned for the evening.

SALFORD AS: The Society visited the Bradford Museum of Photography and Television and saw the IMAX film about the Space Shuttle programme. Several members attended the 21st anniversary meeting of the Amateur Astronomers Association at the Amateur Astronomy Centre. Talks to the Society this session included one on the best sites for observing, from a meteorological viewpoint. The Observing programme for the next few months and every Friday is the Messier Meeting when deep-sky objects are observed, weather permitting.

S W HERTS AS: Dr Robert Hutchinson from the Natural History Museum gave the Society a preview of the talk he is to present at the 150th meeting of the British Association in Oxford, on the subject of "Early Planetary Processes: the Evidence from Meteorites". The talk will be given on 13th September and will include a talk by Allan Swan and Jan Willems on the history of the Society for its 20th anniversary meeting. The Society obtained some land at High Top in 1974 from a landowner, Hon. T. W. P. Cayzer, for a peppercorn rent. When he died, his widow offered the site to the Society. On 22nd June 1974 he donated the site to the Society. A barbeque is planned for July.

WOLVERHAMPTON AS: The Society held its annual weekend course at Alston Hall, Preston in March. Friday night was a members' session and the video made by Robert MacNaught was also shown. Cloud and a full moon made observation difficult. Saturday night the members gave talks, the first on Astrophotography, with slides taken from Tenerife. His second talk was on Pulzar using a model made from pipes cleaners and polystyrene and decorations which involved food mixers and eggs. Dr Fiona Trenchant's talks on Astronomy and the Radio Amateur and the Minor Planets. Dr Gillian Pearson spoke about SN1987A in the LMC and Observations of the Sun. The weekend is already booked for next year.
The Department of Education and Science (DES) has set up a number of school curriculum working groups. Amongst them, there was a group dealing with Science under the chairmanship of Professor Jeff Thompson, pro-Vice Chancellor of the University of Bath. The group has produced an interim report on the science curriculum (which runs to about 80 pages); astronomy is included as part of science 1988. The DES circulated copies of the interim report to a number of interested bodies, asking for their comments. Amongst these were the PAS and the AAE (Committee for Astronomy Education). As often happens with this kind of exercise there was little time to meet the deadline and to involve the PAS as a whole in a lengthy discussion. It was thus left to the Council to respond to the report, and this was done in part 1 of the Science 1988.

The AAE, also under pressure of time, had made its response to the DES a week or so earlier, and the PAS Council supported the AAE response and added two items of its own. The overall response suggests the following topics to form the basis of the report on astronomy in the SOLAR SYSTEM and our place in the space: the different kind of matters encountered in the Universe - Satellites - Earth and its future in our hands - the Universe - structure and the galaxies - some basic biographies of famous astronomers.

These topics cover the range 5 to 16 (ie. both primary and secondary schools).

Anyone wishing to have a photocopy of the PAS response in full should contact me at the address below (a SAE would be appreciated).

The Outcome

The DES has decided (subject to confirmation at the time of writing - June 1988) that astronomy will indeed form part of the school curriculum, covering about 1 out of 17 themes in science. We also understand that this decision will mark just the beginning of a period of activity in astronomy in schools. The PAS may be pleased that its views were taken into account when the DES made its decision.

Eric Zucker (Education Secretary), 35 Gurneade Road, Lewes, East Sussex, BN7 1PT.

ASSOCIATION FOR ASTRONOMY EDUCATION
CATALOGUE OF ASTRONOMICAL VIDEOS AND FILMS.

A catalogue of videos and films is currently being prepared for the AAE with whom we have close links. This will be a useful guide to societies when planning their meetings. It will be available free to PAS members and each society will be sent one copy in due course.

PLYMOUTH'S EDITOR SCOPS TOP PRIZE

Congratulations to Jason Semmens of the Plymouth AS for coming out top writer in a national competition for young people posed by the weekly 'New Scientist' magazine. Barbara Beddard, Plymouth's secretary writes in their quarterly magazine, edited by Jason, is the best-known scientific magazine. It is obtained on subscription for anyone interested. However, Jason has achieved national recognition for his writing for the essay competition set by officials of New Scientist.

Jason at 16 years old beat over 200 other contestants with his paper "The Sun, the Earth and the Telescope brightly". His winning inclusion in a picture goes to Oxford for the meeting of the British Association for the Advancement of Science in order to be presented with a cheque for £200. He also gets a year's subscription to New Scientist. Jason has planned a trip to California next year to visit the Voyager encounter with Neptune.

So, I can assume all members of the PAS will want to add their congratulations. Well done Jason Lee Semmens!

WEST OF LONDON AS

To celebrate the 21st Anniversary of this Society a Convention will be held at Wiston Churchill Hall, Kusilp, on Saturday 17th September. Speakers will include F Lady Couper, H Maurin, M. Irvine and Greg Smye-Rumsby. There will be various other activities, exhibitions and trade stands. Admission £2.00 unless tickets are purchased in advance at £1.50 from Corina Clinton, 31 Besce Place, Kingsgate Road, Richmond, London, W4 4JT.
EXCITING NEW PROPOSALS FOR THE DEVELOPMENT OF THE HERSTMONCEUX TELESCOPES

This article has been written by a distinguished astronomer under the pseudonym "Aquarius". It is intended for simultaneous publication in the newsletters of the AAE and the FAS. The plan has already been welcomed by the Council of the FAS, and by the Southern Area Group of Astronomical societies. The AAE Council will consider the plan in September.

Ask yourself three questions:

1) We all know that the moon causes the tides. We only have one moon so why are there two tides every day?

2) How high could the highest mountain be on the earth and why?

3) If the whole solar system was shrunken down to the size of a typical classroom how large would the earth and sun be on the same scale and how far would the earth be from the sun?

These questions are the astronomical equivalent of asking what colour daisies are, or how big are elephants or fleas, neither of which many children have actually seen. If you do not know the answers to these questions then perhaps you, like many of today's children, were brought up with inaccurate educational facilities directed at the nature of the world in which we find ourselves.

The Americans have had men on the moon and space probes visiting Jupiter and Saturn. The Russians have sent probes to Venus and had a man in space for almost a year, returning him to earth in apparently good health. Britain, once a leader in exploration, has not only failed to invest in mankind's future in space but even fails to educate its young in astronomical matters. It is just as much a part of learning about the environment to know the answers to the above questions as it is to learn about the seasons, the names of trees and animals and about the birds and the bees. A society which does not have the will to explore its environment and to learn how it relates to both the large and the small in nature probably lacks the will to survive. If we fail to educate the young about nature on both the large and small scales then how can we hope that a new generation will even seek to find answers to some of the questions which might one day be important for our survival as a society?

The decision of the SERC to abandon the Herstmonceux site has created a unique opportunity which must be firmly and decidedly grasped. There is no other example of a government giving up its own national astronomical observatory complete with telescopes and instrumentation and the opportunity is, therefore unlikely to occur again. Decisions as to the future of the Herstmonceux site, which will have to be taken over the next year or two, will directly influence future generations' access to astronomical knowledge and the way in which our society views it as a technologically and scientifically aware culture.

It might be thought that astronomy is sufficiently far removed from the world of commerce and industry that it should play no part in the everyday effort of our society. Instead, the converse is true. Many who do enter into a scientific career do so, not because of their immediate involvement, but rather because they identify with the least immediate goal of the search for pure knowledge and the broader perspective of viewing mankind against a larger backdrop. Astronomy, perhaps the oldest of the sciences, provides that reference frame. Any society which is possessed of such a poverty of spirit that it cannot find the effort to pause and wonder occasionally will not only fail to attract people into its high technology but will also fail to retain its best brains and its most enquiring minds; the very people that it needs to become the future leaders of both industry and society. It is within this context that the future use of the Herstmonceux site should be viewed.

The new plan for the site which is currently under discussion with a wide variety of those interested in astronomy in Britain has already received the support of many professional astronomers and amateur astronomical societies both in this country and in the wider context of Europe.

A new educational charity is being formed; the purpose of which is the furtherance of astronomical knowledge throughout society at large and amongst the young in particular, and to encourage and sponsor astronomical research both by professional and amateur astronomers.

The following bodies will be invited to put forward one representative each for the management committee of the Trust: The three main amateur astronomical bodies in the UK (the BAA, JAS and FAS), the AAE (Britain's major body for encouraging astronomical education), the RAS, Wealden District Council, East Sussex County Council, the English Tourist Board and the Trust itself. It is to be hoped to attract patrons of stature including politicians of national status and scientists of international repute.

A recent survey of the structure of the domes and the connected buildings has shown them to be in sound condition. The telescopes were in regular use until approximately 10 years ago and are still used occasionally. There is therefore no need for any significant rebuilding of them. It is intended that the existing domes would be supplemented by a new building containing both a public exhibition and a lecture theatre.

The lecture theatre is intended to cater for two groups: parties of school children and amateur astronomers. The parties of school children would be given a tour of the site and exhibition and then a chance to ask questions of the astronomers on the site. Herstmonceux is well placed to serve the whole South East region from the Portsmouth-Southampton complex in the West to the whole of the Greater London area in the North.

The second group at which the lecture theatre will be aimed is amateur astronomers. There has never been a major forum in Europe to promote interaction between professional and amateur astronomers.

This is a rapidly growing area of interest. Contacts with senior French amateurs suggest that they, as well as British amateurs, would welcome such a forum. The idea is to create a centre for "summer" schools for amateurs where they can be taught the skills and techniques required to allow them to make serious scientific contributions.

Therefore the development and exploitation of the telescope site forms a central part of the project and is intended to be the central engine which generates publicity and income for the site. The exhibition would cater to the needs of both the tourists and the parties of school children. The lecture theatre would provide facilities for both the school parties and the amateur astronomers' needs. A new coude refractor telescope, in a transparent dome would be provided and would make available safe observing facilities for both the young and the old in a comfortable environment. The surplus funds raised from the education and tourism would be used to fund both serious research on the existing large telescopes and to provide facilities for dedicated amateur astronomers to make serious scientific contributions.

Thus a direct link would be forged between those who have an interest in astronomy and who want either casual information (the tourists), education (school parties and amateur astronomers) or to make serious contributions (the professionals and the dedicated amateurs). The concept is novel and has never been attempted before but it is very much in line with present government thinking in the way in which it would provide a direct link between the consumer and the producer of astronomical information.

Additionally Herstmonceux would serve as a central location for the organisation of international amateur astronomical observing campaigns, from where data would be received, collated, analysed, redistributed and published. It is also intended that Herstmonceux would act as a centre for the manufacture and distribution of several items for serious astronomical use such as a new generation of telescopes and both single and multi-channel photometers.

Herstmonceux, with its attractive setting, its reputation as a national observatory, its position in a major tourist area of South East England and its proximity to mainland Europe should be the core of a major resurgence of astronomical effort and interest.

continued over ...
A major change with established astronomy in Britain will be the use of commercial sponsorship for specific projects from companies who might be able to see some corporate advantage in being associated with such projects. Negotiations have already started with Europe’s largest manufacturer of carbon fibre who would be interested in the new high technology telescope design and with England’s longest established manufacturer of telescopes. One of England’s largest electronics and entertainment industries has also expressed a willingness to provide sponsorship once the viability of the scheme has been demonstrated.

ON SITE RESEARCH
For the Herstmonceux site to realise its proper potential it is vital that it is an active research centre where new discoveries are made and where these discoveries are made public. To this end a short, and incomplete, list of research projects is attached. They have a common theme in that they are all long term projects which cannot be undertaken at Britain’s overseas observatories where observing time is allocated for a few days at a time only. They would thus be complementary to the work of our overseas sites.

1) Photometric and spectroscopic monitoring of Be, Beta Cephei and Delta Scuti stars to discover whether their variations can tell us more about their true nature.
2) Observations of long period variable stars which have recently been shown to contain several different periods.
3) Observations in conjunction with observers at other longitudes to search for very low level variations.
4) Analysis of data to search for multiperiodic phenomena.
5) Monitoring of massive binary star systems including both those stars which do not emit x-rays and those that do, eg: Cygnus X-1, the potential ‘black hole’ candidate.
6) Binary star measurements.

If agreement with the present owners of the site, the SERC, and the new owners of the site, whoever they may turn out to be, can be reached then out of the dissolution of the old observatory a bright new future for British astronomy might yet dawn.

"Aquarius"

Herstmonceux

This REALLY is our last chance to meet at our favourite venue, Herstmonceux Castle, near Hailsham, East Sussex.
The Federation’s regular October meeting will be held on Saturday October 8 (not October 1 as originally thought), and the turn out looks like being the best yet. Admission fee, again £2.50 per member. There will be a mid-day meal and an evening buffet for those staying to the evening lecture. Charges for these will be announced later in a circular to society secretaries.

Speakers will include:
DAVID STICKLAND: IUE, the most productive telescope in the world.
ALLAN CHAPMAN: The Drudges of Airy

There will be the usual other activities; competitions, exhibitions, visits, trade stands.

We may even know more about the future of Herstmonceux Castle by then.

Your suggestions as to how we should mark the occasion/make this a memorable day/get yourselves arrested... should be sent to the organiser:
Ken Marcus, 5 Cedars Gardens, BRIGHTON BN1 6YD
Do come!

NCG 6939, an open cluster in Cepheus. Photograph taken at the 10 inch F/5 reflector on Tri-X film. This 8 minute exposure by Bernard Abrams, Cotswolds AS.

Messier 51, the Whirlpool Galaxy in Canes Venatici. 8 minute exposure at the 10 inch F/5 reflector on T-max 400 film by Bernard Abrams. The spiral nature of this "nebula" was recognised by Lord Rosse before the days of photography.
ASTRONOMY: PRINCIPLES AND PRACTICE

A E Roy and D Clarke
Adam Hilger, Bristol, 1988
EC 5MA ISBN 0-582-3399-9 pbk pp 357, £15.00
(Ala available in hardback at £45.00)

The two companion volumes, "Astronomy: Principles and Practice" and "Astronomy: Structure of the Universe", by Professor Roy and Dr. Clarke of the University of Glasgow, have proved to be successful textbooks since they first appeared in 1977. They ran to a second edition, and now "Principles and Practice" has appeared in its third edition. The book has been evolved out of some lecture courses given at the University of Glasgow. The subject matter is arranged in a logical manner, but as the authors point out, the book should be of help to the serious amateur astronaut, as well as to students in astronomy and related sciences. The third edition contains a new section on astrophysics (The New Astronomy) with material on X-ray, gamma-ray, ultra-violet, infra-red and mm astronomy, neutrino astronomy, and more. The book is useful in the context of the scientific world, and is comprehensive.

In the chapters that are included, the book is useful in the context of the scientific world, and is comprehensive.

I would certainly recommend this book to readers of this newsletter as a worthy addition to their astronomical libraries.

Eric Zucker
5th June 1988

THE COSMOS FROM SPACE

David N Clark, Adam Hilger, pbk, pp168, £14.95

Books abound, written by journalists and science correspondents on the various aspects of the exploration of space, so it is a delight to find, after all, a book on astronomical discoveries made from space written by a professional astronomer with real experience of conducting experiments in space. David Clark combines his work with the Institute of Astronomy Research Council with a writing career designed to inform the intelligent reader. This latest book persuades the reader that important discoveries about the Universe have already been made by Earth orbiting craft and manned spacecraft. The book is largely devoted to describing those missions which have expanded our knowledge of the Cosmos by viewing at wavelengths which cannot penetrate to the Earth’s surface, namely X-ray, infrared and ultraviolet. He describes the instrumentation and methods employed and details the American and European personnel responsible for the achievements of the last few decades.

The Cosmos is a观点 of the two books by two colleagues at the University of Glasgow. The book would have preferred to offer at least twice the length of this short book but was obliged to keep it short to satisfy his publisher. Nevertheless, the book is a vital source to the future man and machines in space. He considers robots much better value than men in space and looks forward wholeheartedly to the Hubble Space Telescope, which offers a revolution in the necessary technology for a manned orbiting platform.

Once one can adjust to the many acronyms employed (IOC for Initial Operations Completion, etc.), the book becomes more readable. The reference section indicates that where a concept was already understood, the diagram was comprehensible, but where there were to illustrate an unfamiliar concept, eg, the focal planes of the HST, then the diagrams were no longer helpful. All in all, this is a useful addition to one’s bookshelf.

Rosemary Naylor

NIGHT SKY PHOTOGRAPHY

W F Arnold, George Philip & Son Ltd.
Hbk, pp192, £9.95, ISBN 0-582-11018-0

In recent years there has been an outbreak of interest in astrophotography. This has been supported by several books: Gordon at £18.95, Martinez at £18.95 and Covington at £15.00 and, most recently, a subject of this review. I have no experience of Gordon or Martinez but regularly refer to Covington. My first thought was that this book was "not another book on night photography" but, on scanning the pages I was delighted to find that it complemented Covington beautifully, approaching the subject from a much broader and more comprehensive viewpoint.

The credentials of the author are most impressive and I feel that I would have to bow my head in presence should I be lucky enough to meet to approach this technical aspect of the text which contains many useful formulae. The general approach is to attempt to acquaint the photographer who has no knowledge or understanding of the technical aspects of equipment for long exposure photography, including useful instructions for a "laid mount" or "Scotch mount" or "screw drive which I wish to warn you that there exists a great deal of literature on this subject.

The final chapter deals with more advanced techniques and techniques which are not dealt with in the more specialised book. Night Sky Photography should prove to be very popular and useful. However, another minor criticism would be that there is virtually no mention of colour film. Admittedly this is not a great deal of use to the astrophotographer, yet experience tells me that this is the first type of emulsion that the amateur is most likely to use to make slides; some are not even aware of its existence.

In all, a delightfully presented and useful book, beautifully illustrated.

Geoffrey Johnstone

CLEVELAND AS A HOST

A Convention will take place at Teesside Polytechnic, Middlesbrough, Cleveland, on Saturday 15th October. Speakers will include Heather Cooper, Nigel Henbe, Peter Rea, David Davine, Neil Bone and Paul L Morgan. There will be a trade stands in attendance, including demonstrations from Neil Haggath, 5 Fountains Crescent, Norton, Middlesbrough, Cleveland, TS8 9DF.