

Federation of Astronomical Societies

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REPORT FROM THE AGM OF 1986 MAY 3

Subscriptions have yet again been held at £7.50 and these become due on September 1. Societies with no more than 24 members may pay £2.50.

The newly elected Council consists of those persons nominated, as listed in the last newsletter, with the exception of Mike Pace, who asked to retire from his role as Meetings Organiser. Having performed this function for as long as anyone can remember, he was presented with a book on comets. (Perhaps he will rejoin the Council in 76 years' time?) Also retiring after sterling service to the FAS, was Stuart Lonsdale, who has written the Round-up for the past five years.

At the AGM, West of London AS asked that the Federation should send a resolution to the Chairman of SERC and all other interested parties deploring the threat to the Royal Greenwich Observatory at Herstmonceux. It was left to the Council to reward the resolution in more positive terms.

Herstmonceux '86

There is one more FAS meeting for 1986: the Herstmonceux annual meeting, which could quite well be our last. This takes place as usual at Herstmonceux Castle on SATURDAY OCTOBER 4. Members should book through their society secretary please. Entrance is £2.50 (and for non-FAS members £3.50). There will be an evening meal to be booked separately and accommodation in the castle is available. Speakers will include Bernard Carr of Queen Mary College on Cosmology. There will be all the usual side shows, competitions and trade stands so come prepared to make this a great day out. Approximate starting time 11am. Programme issued on the day.

EDITORIAL

When I overheard one of my colleagues from SAGAS territory exclaim: "I didn't know there was so much going on in the North", I knew that the FAS Festival of Astronomy had achieved its main purpose. This meeting of July 12 has just taken place at the Amateur Astronomy Centre on the Yorkshire/Lancashire border.

Attendance of around 200 was disappointingly low for a meeting which cost so much to stage. Nevertheless, those who did attend heard eight local society speakers - volunteers to a man (but where were the women?) - expound on famous astronomers and observatories of the region.

Guest speaker, the Astronomer Royal, Sir Francis Graham Smith, answered questions on the work and achievements of Jodrell Bank. We certainly promoted ourselves here "Up North".

SAGAS contributed with a balloon debate which Ken Marcus won with his portrayal of Edmund Halley. The AAC, our hosts, won the fancy dress competition which was judged by Dr Anne Cohen of Jodrell Bank. The AAC team fielded a most active Draco. Thanks all for making it a success!

Also promoting British Astronomy is Dr Tony Jones of Jodrell Bank. With the backing of the Royal Astronomical Society he is producing a glossy full colour A3 sized wall calendar for 1987. This depicts, each month, some aspect of astronomical research in the UK. Astronomical data is also included, and a bit about the FAS and local societies. The calendar will be available in October.

Some of the speakers at the FAS meeting of July 12:
Clockwise - Tony Balfour (FAS President) Frank Dyson (Halifax AS), Peter Wade (Lancaster & Morecambe AS), Allan Chapman (Salford AS), Keith Robinson (Preston and Lancaster & Morecambe), Graham Smith (Jodrell Bank) and Ken Marcus (Brighton AS)



This being our first News Round-up we would like to thank the many society editors for their excellent newsletters, please keep them coming. A useful addition to the newsletters would be brief introductory notes about your society to put us in the picture. If there is any item about your society that you would particularly like included in the Round-up please enclose a separate note.

How about all the other societies in the FAS not included in this Round-up - what are you doing?

We hope that we can keep up the standard set by Stuart Lonsdale, of the many reviews that he made during the five years that he was News Round-up editor.

AYLESBURY AS: Ray Jones gave a talk about Voyager 2's encounter with Uranus giving details of the wealth of data sent back which included a few surprises.

A short talk was given by Les Clark about his recent visit to La Palma.

Peters (Biswell, Edwards and Le Masurier) have been catching an elusive wanderer: the planet Mercury. They made a trip to Winchendon to take advantage of a low horizon, and were successful.

BRAINTREE, HALSTEAD & DISTRICT AS: During March observing sessions were held and on one night a member's sightings of galaxies were increased by 600%! Bill O'Shaughnessy gave a talk entitled "Chasing the Ms", a guide to locating some Messier objects, and as a bonus slides of Halley's Comet taken from the Southern Hemisphere.

Neil Shuttlewood and other members observed an extremely rich meteor shower at Southend, at a guess about 70 per minute! This was a show at the Southend Planetarium!

BRITISH METEOR SOCIETY: Phillip Bagnall has given details of The Perseid Project, which is to raise funds for a national charity through sponsored meteor watches. A project in which the astronomical community can directly help the less fortunate.

The newsletter showed photographs taken of Halley's Comet, the work of many observers in many countries, including Austria, Japan, Spain and Australia.

BRIGHTON AS: Halley's Comet was celebrated in style with a 66AD Roman Dinner on 27th March.

The society was involved with the Brighton Festival in May, holding public observing sessions and an exhibition.

There will be an open day at the University of Sussex on June 14th and the society hope to have an exhibition there.

There was a trip planned to Greenwich on June 21st. Members hoped to attend the FAS meeting at the AAC taking a minibus and visiting Jodrell Bank on the way home.

CARDIFF AS: The society celebrated its tenth anniversary during the session 85-86, which commenced with the RAS out of town meeting on, guess what, comets in September. A public lecture given by Patrick Moore and John Mason was well received with 350 people attending, a raffle on the night raised an amazing £81.

NAN observing sessions were very well attended in a week with 5 clear nights out of 7. There were 10 telescopes, from 2" refractors to an 8" Meade and an 8" Fullerscope Reflector set up at Duffryn Gardens on the outskirts of Cardiff. About 15 members of the society showed Halley's Comet to the public and on the best night over 300 people turned up.

Ten members of Cardiff and Worcester societies went to La Palma on 1st April, more about that next time.

DERWENTSIDE AS: The society had a sponsored walk, taking part were members and friends.

Members of the society agreed that they should build an observatory at Saltergate at a height of 1120 feet, possibly the highest observatory in the country! Can any society beat this? Jim Iaidlaw gave details of Asteroids and a link with Comets.

GUILDFORD AS: Details were given about Aldershot Observatory which stands today as it has done for the past 77 years, and is now a listed building. It has been closed since 1979 because of bad corrosion. Repairs are now underway.

Maurice Gavine gave the society a talk on Microcomputers and the Amateur Astronomer, and examples of software packages for a 64K Spectrum were shown.

A letter was received by the society from Houston, Texas, written by Leland A. Dolan, to share his experience in astrophotography.

HAMPSHIRE AS: Members used the 20" at Clanfield to view Halley's Comet as it finished its evening apparition before perihelion. The comet was extensively photographed by members and the results were shown at Nelson in February.

A maintenance programme is to begin for the many items of equipment and buildings owned by the society.

Robin Gorman and Don Miles observed the best display in years of the Northern Lights and Robin managed to get an article in a local paper about the event.

Half a dozen brave members set out one Friday during March at 3.30am to observe Halley's Comet, but just as the moment arrived, a bank of cloud blotted out the sky.

HUDDESFIELD AS: Members were involved in observing the Quadrantid meteor shower at the beginning of January.

A public lecture was given by Lt Cdr Doherty from Halifax, the BAA Solar Section Director. The talk was titled "The Sun", and he provided a refreshing look at the sun.

Members showed photographs taken of Halley's Comet showing a fan-like tail.

Public lectures have been reduced from six to two to enable an elementary course on astronomy to take place, and telescope making classes.

LEEDS AS: An exhibition was held at Leeds City Museum to commemorate the return of Halley's Comet.

Dr W K Griffiths of the Leeds University, Department of Physics, gave a well-illustrated talk entitled "Recording the Heavens".

During a discussion at the AGM a mention was made of possible future outings to other societies and their observatories.

This is the second time in the society's 125 year history that Halley's Comet has appeared. During the 1910 return it was observed by C Whitwell at the former Cecil Duncombe Observatory on Woodhouse Moor, Leeds.

Observations of Halley's Comet were illustrated by A J Higgins, who stated that the comet was considerably brighter than predicted.

N E LONDON AS: Tony Sizer was welcomed to a February meeting and gave a talk on "The Aspects of Measuring Stars".

During March the society celebrated its 30th anniversary, it was founded in March 1956

by Leslie Green, the first chairman; meetings were held in members' houses. Ian Ridpath took over the chair when the society settled down.

During March a talk was given on a completely new topic by the editor Hans Saraph, titled "The problems with communicating with our space vehicles".

ORWELL AS: Four members attended the Mid-Kent Astronomical Convention in Chatham on 1st February. The day's programme consisted of 8 lectures based on Voyager to Uranus, Giotto and Halley's Comet. Various trade stands were in attendance.

Two members of the society have been to Australia to observe a partial eclipse of the sun, and that comet!!!

February proved a trying time for the observers at Orwell Park Observatory when the dome of the building had frozen solid. The evening was adjourned to the pub. A week later the dome was still frozen; this time a solution was found, a 20w fan heater was put to work and after a few minutes the dome turned. To prevent the dome freezing again members kept turning the dome, but this time the cloud was against them - so back to the pub!

SOUTH WEST HERTS AS: Several members were fortunate to observe the spectacular Auroral display on February 8th; the first time it has been recorded from their observatory.

Two interesting talks were received - one from member Neil Haggart on "Islands in the Sky", a view of colonisation of space. Jo Burnett gave a talk on "Astronomy 100 years ago", describing how popular interest had been stimulated by two magnificent comets, Donati's of 1858 and the great comet of 1843. What will they be saying in 2086?

WEST OF LONDON AS: The annual observing weekend was planned for May, staying at a house near Buxton. The aim was to get a dark sky for observing. A day programme of events was planned with a trip to the National Museum of Photography at Bradford and possibly a visit to the AAC.

One of their most popular speakers, Gregor Sneye-Rumsby, was booked to do a talk on Pluto, and Gordon White was due to do a talk on the Story of Communication Satellites & Telstar to DBS.

WEST MIDLANDS AS: Efforts are being made to establish a group to time minor planet occultations. Interest outside the society is encouraged with talks being given to groups ranging from OAPs to 7-year-olds. Articles in Nova included a tribute to the crew of the shuttle Challenger and Part 1 of a series on how to take and improve your astrophotography.

WEST YORKSHIRE AS: A WYAS/York Star Party was planned for March 8th/9th on the Wolds. Their journal included an interesting article by Melvyn Taylor on his observations of Aurora since 1972. He was lucky enough to photograph it on one occasion. Details of Fireball seen on January 3 1986. Members of the society planned to visit the FAS AGM at Coventry and various events at the AAC.

Newsletters for inclusion in the next Round-up to be received by September 10th. If your society is not mentioned, send us your newsletter or an article.

Martin and Pam Chick, 25 Calderton Road, Gwawn Miskin, Near Pontypridd, Mid-Glam, CF38 2LL.

MARTIN AND PAM CHICK

by our fearless reporter A Vincent of Worthing AS



Eclipses caused many fears thousands of years ago and the ancient Chinese thought they were due to dragons attacking the sun and moon. So they threw up spears and made as much noise as possible to scare away the dragon - and they always succeeded! The Chinese astronomers Hsi and Ho were put to death because they failed in their duties to scare away the dragon at the total solar eclipse of October 22 2137 BC. This may only be a myth.

On October 17 1986 there will be a total eclipse of the moon. The moon enters the penumbra at 16.19 and enters the umbra at 17.29. Totality begins at 18.40 and mid-totality occurs at 19.19; totality ends at 19.55. The moon leaves the umbra at 21.06 and penumbra at 22.16. All times are UT.

Let us hope for clear skies to see this total lunar eclipse, as it will be the last total lunar eclipse visible in Britain until August 17 1989. It should be worth a photograph.

The photograph shows the eclipsed moon on May 4 1985 at 21.08 UT. On that occasion the moon rose totally eclipsed but clouds prevented a photograph from Worthing. Instrument: 2-inch refractor.

A POSSIBLE NATIONAL ASSOCIATION OF TELESCOPE MAKERS?

Tony Roberts of Croydon AS is looking for support for his idea of a national association to bring telescope makers together. The aims would be to act as an information exchange, to offer simple advice on obtaining materials, and to give beginners a chance to seek help from experts. Tony thinks bulk buying of materials would result in sufficient support, say 100+ people, could be guaranteed.

In order to judge the level of interest, would telescope builders keen to join such an organisation, please contact: Mr Tony Roberts, 52 Gonville Road, Thornton Heath, Surrey, CR4 6DB.

CALL MY ASTRONOMICAL BLUFF

Fiona Vincent offers her help:

Do you want an idea for a light-hearted astronomical meeting? BORROW the "Call My Bluff" kit from the Mills Observatory, Dundee! Kit comprises 16 fairly obscure words, printed in large white letters on black paper ready to be hung up, plus set of 3 cards for each word giving one true and two false definitions. Play one team against another, or a team against the audience. Tested by the Dundee AS who guessed them all! Contact Dr Fiona Vincent, Mills Observatory, Balguy Park, Glamis Road, Dundee, DD2 2UB.

SPACEPRINTS of Prospect House, Station Road, Stockton-on-Tees, Cleveland, who sell NASA prints and calendars, have very generously offered £150 in prize money, to be awarded in competitions administered by the FAS. The three sections, already publicised in the last newsletter, are shown below. The closing date was previously July 1 but the competition has been extended and prizes will be awarded at Herstmonceux 196 on October 4. If you plan to enter, please notify the editor or the President, Tony Balfour, 43a Ellesborough Road, Wendover, Bucks (tel: 0296 622442).

Entrants from FAS societies may enter without charge.

Telescope making: The winning telescope will give reasonable performance for least cost of construction. The judges will look for economy in building costs, preferably using materials easily and cheaply available. The design and castings should be submitted to Tony Balfour by September 1 and the telescope itself presented for judging at Herstmonceux on October 4.

New technique: The judges are looking for a new technique introduced into an observing programme which gives valuable results which could not otherwise have been obtained. Details to Tony Balfour by September 1, preferably with examples of the results obtained, but consideration will be given to untested ideas if they seem feasible.

Observations: A programme of visual and/or photographic observations should be submitted, made during the year ending September '86. Preference will be given to team programmes and a generous allowance will be made for local difficulties, lack of facilities, etc. Entries to Tony Balfour by September 1.

Non-FAS astronomers may compete, but an entrance fee of £2 is asked. There will be a second prize in each section for entrants only, consisting of £10 given by the FAS.

The FAS are grateful to SPACEPRINTS for this opportunity to advance and publicise the work of amateur astronomers.

PLEA FROM THE SECRETARY

Light Pollution: At our last Council meeting we agreed that the Federation should have a policy on this most important subject. We should like to know what societies think about light pollution. Is action necessary? Who should we contact? Have local societies tackled this problem in their own areas? What has been the response?

Please let me have your views, ideas, proposals. All correspondence on this matter will be put before the Council. Write to Dave Powell, Secretary FAS, 1 Tal-y-bont Road, Ely, Cardiff, CF5 5EU.

BRITISH METEOR SOCIETY SUMMER PROJECT

The BMS have a project which they hope will raise funds for the NSPC through a sponsored meteor watch. Participants are asked to get friends to sponsor them for 1p per meteor observed during the Perseid shower between July 23rd and August 20th. Please ask at once if you wish to take part by writing for sponsorship forms and report sheets to:

The Perseid Project, 26 Adrian Street, Dover, Kent, CT17 9AT.

by Geoffrey Johnstone, Tudor Cottage, Stoneleigh Road, Blackdown, Leamington Spa, CV32 6QR.

In the last Newsletter I mentioned how it was possible to improve the information in a photograph by increasing its contrast. I was pleased to receive a letter and black and white print from Alan Heath of Long Eaton. Alan printed his negative on to hard paper and then rephotographed it, finally printing that negative, again on to hard paper.

I thought I would turn my attention to colour film on this occasion. One of the problems of using colour film is the choice between colour print film or colour slide film. Prints can be handed round to friends whereas slides can be shown at local society meetings. If you do use slide film any processing house will make prints for you, so you get the best of both worlds. If you use print films it is much more difficult to find anyone who will make slides from them. Prints from slides in any case are said to be better than prints from negatives. I made the mistake recently of using print film for some of my comet photographs. I had the devil's own job of persuading the processing firm to print them and because they were necessarily over-exposed they found it very difficult to produce a print with a dark background. The later comet photographs I took using slide film were much better.

A new film has just been tested by Amateur Photographer magazine, it was Fujichrome 1600 slide film. They found that for pictorial work it performed better when rated at ISO 1000. This now means that there are three ISO 1000 slide films to choose from: Agfachrome 1000, 3M1000, and now the new Fujichrome. I have had very good results with 3M1000, however a report at a BAA meeting seemed to prove that the Agfachrome was less sensitive to sky fog from sodium lighting, a very important factor. It will be interesting to see how the Fujichrome behaves.

Unguided exposures with this type of fast slide film of 15-20 seconds using a standard lens, are unbelievable, and guided exposures of two or three minutes are quite fantastic.

If anyone like, Alan has a good idea that might be worth passing on to others, please don't hesitate to write to me.



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CAN I ATTEND YOUR CONVENTION?



BEST OF THE SPACE SHUTTLE - 1977-1984

40 slides with cassette narration. £14.50.

Distributed by: Astro Slides, 59 Hill Street, Reading, Berks, RG1 2NT.

Reviewed by Brian Jones

This slide/cassette set provides a very good background to the early years of the American Space Shuttle project, from the Enterprise flights in 1976/77 through to the famous satellite rescue mission in late 1984. Many notable landmarks of the Shuttle programme are highlighted including the first launch in April 1981, the first satellite launch in 1982, the first Shuttle space-walk in April 1983, and the initial flight of SpaceLab in November 1983. Some marvellous views both from Earth and orbit coupled with a very informative narration make this set very good value for money. It is just one of a number of sets available from Astro Slides, other topics covered including Apollo 11, Voyager 1 at Saturn and so on. It can be safely said that "Best of the Space Shuttle" sets a very good precedent.



Book Reviews

THE CASE FOR MARS

Edited by Penelope J Boston

Published by the American Astronautical Society; 1984

Reviewed by Neville Kidger FBIS

The volume "The Case for Mars", published by the American Astronautical Society as Volume 57 of its Science and Technology Series, consists of a series of papers which were presented at the first "Case for Mars" gathering which was held between 29 April and 2 May 1981.

The volume is divided into sections starting at the reasons for wanting to go to the planet and settle there to intricate proposals for the designs of the spacecrafts which will take the Martian explorers to that planet.

It is a little difficult to be critical about such a volume being a personal advocate of the need for a manned Mars expedition, but I have one major grouse: The first "Case for Mars" conference took place in 1981 and the proceedings were published in this volume three years later. The second "Case for Mars" conference was held in 1984 so the book was almost outdated before publication. I hope that the AAS manages to publish the proceedings of the second conference before the onset of the third!

That grouse apart, I am delighted to see that the forward thinkers of the United States Space Programme have been active during the long dark days of the 1970s when it became almost taboo to speak of planetary exploration. I wait with interest to see the latest proposals from the second conference, but in the meantime on a cold winter's night reading about what life would be like on a Mars base it might not seem so cold after all!

The first section seeks to give a historical context for the manned exploration of Mars. Of interest here is the paper by Stan Kent on the efforts of the "Viking Fund" to raise money for the continued gathering of data from the Viking landers on the planet. That appeal had raised some \$100,000 at the time of the conference, indicating support for the continued exploration of the planet.

The second section deals with the types of missions which could be undertaken with a long paper by Professor Singer which proposes an 8-person (women are included) crew to the moons of Mars.

In Section 3, which deals with specific designs of spacecraft to undertake the flight to Mars, there are many interesting papers including designs for a Mars sample return mission, solar electric propulsion, solar "sails" which would use the solar wind to push the spacecraft along, and even an intriguing proposal to use the spare fuel tanks of the Space Shuttle!

Section 4 deals with the complexities of keeping men (and women) alive during the Martian expedition and goes into great detail about the types of life-support systems which are needed to perform that task. The task is complicated by the fact that the consumables needed will have to be recycled. The problems of keeping people alive in a Mars base are also covered and the medical problems which will be encountered.

Several papers in Section 5 cover the scientific rationale behind the Mars exploration and give a number of interesting designs and ideas for the extraction of minerals from the Martian soil and the scientific and practical uses of such work.

In the final section, the social and political aspects of the Mars expedition are addressed. In this section the authors speculate about the political and monetary costs of the expedition with interesting papers dealing with the Soviet unmanned Mars exploration programme (which has been spectacularly unsuccessful!) and a "Manifesto" detailing events which could herald the onset of the Martian expedition.

A comprehensive appendix ends the book with basic facts about the environment and physical properties of Mars and other data.

The book is illustrated by means of line drawings of suitably futuristic Martian vehicles and astronauts on the surface.

The printing is clear and the tables are well reproduced. General readers may find some of the papers very technical but there are enough non-technical papers in the collection to convey the feeling that the Mars expedition is both possible and required.



THE CAMBRIDGE ASTRONOMY GUIDE

by Bill Liller and Ben Mayer

Cambridge University Press

176pp, £13.95 hardback.

Reviewed by Brian Jones

The Cambridge Astronomy Guide is a highly practical book aimed at explaining how the sky can be explored both with and without a telescope. It also gives a fascinating insight into astrophotography showing how, with a little dedication, the reader can produce attractive and useful photographs of the night sky. This publication is intended to stimulate the fascination of discovery and promotes interest in comet hunting, sweeping for novae and so on. It is well illustrated throughout with many of the photographs being taken by Ben Mayer himself, including a stunning series of deep-sky masterpieces at the end of the book. The enthusiasm of amateur astronomer Ben Mayer mixes beautifully with the professional contribution of Bill Liller to produce a fascinating book that is a pleasure to read.

ASTRONOMY WITH A SMALL TELESCOPE

by James Muirhead

(George Philip), 224 pages, £9.95

Reviewed by Brian Jones

There must be a great number of small scopes gathering dust, bought by would-be observers at the height of enthusiasm subsequently lost interest, perhaps Halley's Comet was just that bit too far but there is still hope. Astronomy with a Small Telescope will show that there is more to astronomy than the perhaps over-rated once-in-a-lifetime spectacle was Halley. The night sky is a beautiful thing and a small telescope can easily see this home. The opening chapter explains how to look at the sky and contains information on instruments, mountings, set-up and testing a telescope, recording observations and celestial motions. The book goes on to give practical information on observing the Sun, Moon, Planets, Meteors, Comets, Stars and Galaxies. There is a lengthy selection of star charts and selected objects for both northern and southern hemisphere observers. Final chapter on Astronomical Photography and Location. Stars round off what is an ideal book for owner of moderate telescopic equipment. James Muirhead's book, together with his enthusiasm, will show that a small telescope, in fact, be a wonderful window into the starry sky.

ASTRONOMY AND THE IMAGINATION

by Norman Davidson

Published by Routledge & Kegan Paul

238 pp; Hardback £12.95

Reviewed by Brian Jones

This book details our visual experience of the sky and illustrates how we actually see the heavens above us. Although we are familiar with a heliocentric planetary system, we actually experience an earth-centred one with the Sun, Moon, planets and stars in apparent orbit around our world. The author brings this home through psychology and history, psychology and philosophy and describes how human experience of the cosmos has helped to shape our culture through the ages. It is written in an easy-to-understand style and is a must for the observer who would like to take a new and innovative look at the night sky. In some ways, the heavens may never look quite the same again, although it is safe to say any change in their perspective will be for the better.

MEMBERS' ADVERTISE

Brian Jones, 17 Havelock Street, Thornton, Bedford, BD13 3HA, wishes to acquire Mr. Sky At Night No 4; also biographies of famous astronomers. Can anyone help?

"OUTREACH FOR THE PLANETS" by C.B. Hancock - a basic text of the solar system in 144 pages. Remastered at 60p to include postage from the author: Mr C B Hancock, 53 Finland Way, Damesholme, Corby, Northants