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April 1986

FAS SECRETARY:

FAS TREASURER:

Ken Marcus, 5 Cedars Gardens, Brighton,

@ FAS 1986

Partial Days rown partial Societies £££££ 1*)*)

SPACEPRINTS" PRIZEWINNING COMPETITION OR UK AMATEUR ASTRONOMERS

Spaceprints" have offered £150 in prizes or a competition to be organised by the AS. The results will be judged prior to he FAS Convention at the Amateur Astronomy entre and the prizes presented on that ccasion, July 12, by Patrick Moore.

he judges will be Tony Balfour (FAS int), Alan Bell (Spaceprints) and re ete-Drew (AAC).

he competition, open to all UK amateur stronomers, is in three sections. Each ection will attract a prize of £50 for the utright winner of that section. The FAS re offering a £10 prize for the best unner-up from amongst the FAS entries. n entrance fee of £2 will be required from ach non-FAS entry.

ection 1: TELESCOPE MAKING: The winning telescope will give reasonable erformance for least cost of construction. The judges will look for economy in buildng costs, preferably using materials easily nd cheaply available.

he design and costings should be submitted o the organisers by July 1 for preliminary judging and the telescope presented at the AC on July 12 for inspection and final udging.

Section 2: NEW TECHNIQUE: The judges are looking for a new technique ntroduced into an observing programme which gives valuable results which could not

th ise have been obtained. Details to the ganisers by July 1, preferably with examples of the results obtained, but conideration will be given to untested ideas if they seem feasible.

ection 3: OBSERVATIONS: A programme of visual and/or photographic bservations should be submitted, made uring the year ending June 1986. Prefrence will be given to team programmes and generous allowance will be made for any ocal difficulties, lack of facilities, etc. lease state names of observers, instruents used, location, etc. Entries to the rganisers by July 1.

RGANISERS: FAS c/o Rosemary Naylor, 56 Bacup Road, Todmorden, Lancs, OL14 7HJ; tel 070 681 7767). fore information can be obtained from the bove or from Tony Balfour, President FAS,

3a Ellesborough Road, Wendover, Bucks, IP22 6EL; (tel 0296 622442). The FAS are extremely grateful to Spaceorinta for their generous contribution to ema astronomers.

Astronomy, being for many of us a very visual thing, prompts me to report two contemporary events which have pleased/ amused me respectively, especially after the gloom of January's Challenger disaster.

Firstly, I note that the Royal Astronomical Society have awarded the Jackson-Gwilt Medal and Gift to D F Malin for his development of new techniques in astronomical photography. David Malin's colour prints of the Horsehead Nebula and Orion Nebula will be known to many. Secondly, the commemorative Halley Comet

stamps issued by the Post Office on February 18 were designed by Ralph Steadman. Being many interpretations of the comet. they are highly appropriate for the subject and a welcome change from the recent boring special issues. I have been a fan of Ralph Steadman since buying his book "I Leonardo"; a highly original illustrated biography of da Vinci which may or may not have been faithful to the life of this eccentric character.

PHOTOGRAPHING HALLEY'S COMET

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

Now that the first phase of the current apparition of Halley's comet is over it is perhaps time to take stock of our successes or failures, or indeed if we have seen it at all. It has been quite bright, apparently even brighter than predicted. It was a splendid sight visually through a small telescope in December and even my wife could see it with no prompting.

I wonder how many people have recorded it photographically. It should not have been too difficult, the major problem being the weather. I never did see the comet near the Pleiades. Indeed I hardly saw it at all from the middle of November to the middle of December.

I set out with considerable determination to photograph Halley whenever possible and finally totalled 49 exposures taken on ten nights. In order to record it as early as possible, even before I could see it visually, required getting up long before dawn during September. The alarm clock was Halley's Comet 1986 January 11 11.25 minute exposure on Kodak 2415 (Pure H₂; 10h; 50°C) 254mm spec. PF.

set each night; if it was clear I went out, if not I went back to bed. My reward was to record it on September 20th and 26th when the comet was in the same telescopic field. On November 15th it showed a most exciting feature, a long curved jet. December the dust tail developed and in January the tail showed considerable structure.

It is interesting to compare the methods of enlarging the negatives to make the prints in September and November with that used in January. Kodak Technical Pan 2415 is a slow film (ISO 25) but when gas hypersensitised it is very sensitive for long exposures. It exceeds the speed of an ISO 400 film in less than ten minutes and an ISO 1000 in under twenty minutes using the same telescope. The grain structure of the film is so fine that it enabled me to make huge enlargements, as great as x20 without showing any appreciable grain. To do this I had to set the enlarger at the top of the column, while the easel was on the floor. In January the dust tail reached more than half way across the negative so that very little enlargement was required. The photograph of the comet shown was produced by first making a slide, using a slide copier, and then a print from the slide. This technique increases the contrast, often dramatically, revealing far more detail.

	CDCDAI	1014 142400	PRESIDENT'S REPORT
PEDERATION OF ASTRONOMIC	AL SOCIETIES		1985 was the Year of the Comet and every astronomical society
FEDERATION OF ASTRONOMICAL SOCIETIES ANNUAL GENERAL MEETING Notice is hereby given that the AGM will be held on 1986 May 3 at the Herbert Lecture Theatre, Coventry, at 11.30am.		ANNUAL REPORTS FOR THE YEAR TO THE AGM 1986 TREASURER'S REPORT The financial position of the Federation is	and every astronomical society the land had a pretty successfi National Astronomy Week showin, Halley to thousands of people would not have seen it otherwil and in the process making many new friends and quite a few ner
AGENDA:		good, as the financial statements to be presented at the AGM will show. As in the	members. The Federation has
1 To approve the minutes of the 1985 AGM.		past, we rely upon the surplus made at the various conventions and it is hoped that	helped with this, and held suc- cessful meetings at Coventry as
2 Matters arising out of the minutes not covered elsewhere in the agenda.		the convention at the AAC on July 12 will have a large attendance. Our thanks are due to the advertisers in the Handbook,	Herstmonceux, thanks to the har work of a great many people.
3 To receive the report of the Treasurer, and the accounts for the year ended 1985 April 30.		Newsletters and the Astrocalendar, their contibutions help to keep down costs and enable us to improve both quality and quan-	Aside from this, we have carri- out our main function of being source of help and particular!
4 To fix the subscription rates for the session 1986/87.		tity of publications. Ken Marcus	information to any society whi needs it. This work is essent but usually undramatic. We have
5 To receive officers' reports and questions to the existing council.			been encouraged that the Calena
6 To elect a council to serve for the session 1986/87.			has sold well, showing many pe- find it useful, and we are loo at a similar booklet to help beginners; and the Hanubook is
7 Any other business.		SECRETARY'S REPORT	enlandid value as always. Mem
Council nominations for President Vice-President Secretary Assistant Secretary Treasurer Editor Assistant Editor and Editor for Council Newslette	the new council are: Tony Balfour Philip Heppenstall Dave Powell Bob Owens Ken Marcus Rosemary Naylor Bill O'Shaughnessy	been quite well attended. Some members of Council still find it difficult to meet due to geographical locations and cost. To overcome thin, a Council Newsletter is Council members the chance to have their say on any subject. This means that those Who do attend can make decisions with the knowledge that everyone has had a say.	ship is increasing steadily, as in 1986 we plan to increase ou activities by holding a third function, he Northern Newting function, the Northern Newting July. The one disappointment been that we have and few suggions for more things to be dead of the constraint of the new that want and offer to holy if you ween - new suggestions and new ween - new suggestions and new
Publications Secretary Meetings Organizer	Brian Jones Mike Pace	The Handbook continues to be widely distributed and remains one of our main	faces are always welcome, we c- use them all! Tony Balfour
Education Secretary	Eric Zucker Martin Chick	achievements.	Tony Ballour
Society News Editor Public Relations	Pam Chick	The Astrocalendar continues to grow in popularity and represents exceptional value for money.	EDITOR'S REPORT
Further nominations, offers of help, etc, should be sent to the Secretary asap.		To complement these publications we hope to publish a beginner's guide to Astro- nomy in the near future.	Newsletters have appeared as follows: Issue No 6 - June 1985 Issue No 7 - September 1985 Issue No 8 - January 1986
To save congestion and delay on the day, please book in advance wherever possible. Cheques payable to FAS should be sent to Ken Marcus, 5 Cedars Gardens, Brighton, BN1 57D. Understandably, Ken is not able to arrive in Coventry until immediately		Also, we are improving facilities such as the slides offered for sale, and we now have several additions to the set. Member societies continue to be active and information on this can be found in the FAS Newsletter which has been so well	Issue No 8 - January 1986 Issue No 9 - April 1986 These have been despatched in bulk to member societies. In general, societ paying £7 subscriptions receive 15 co and those paying £7.50 receive either or 35 according to needs. Societies
Entrance charges, per person, as last year, £2.50 for members. £3.50 for non-members.		received by members. The Conventions at Herstmonceux and Coven-	quiring any other quantity should mak appropriate arrangements with the Edi
Under 16s, half price. Societies booking in advance for six or		try remain as popular as ever and both will be repeated in 1986. This year,	Assistant Editor, George Bolland, has
more delegates, qualify for a year's free subscription to the Federation.		however, we intend to hold an extra Conven- tion at the AAC. I feel sure this event will become as permanent as the other two	successful in obtaining commercial ad ising to defray some of the productio costs. Thanks George!
Coffee anu biscuits are provided, and delegates find their own lunch in one of the many eating places in Coventry.		meetings. During the year a major compet- ition, sponsored by Spaceprints, will take place. The regular work of the Federation has	Stuart Lonsdale has written the Round for several years, but is now hoping hand over the job. His is the longes contribution to the Newsletter, yet a
The convention ends around 6.00pm. Trade stands will be in attendance and there is limited space for societies to display material. Please notify Mike Pace,		continued, the Secretary has handled a large volume of mail from outside bodies and individuals. Judging from the letters, Halley's Comet, and National Astronomy	arrives on the Editor's desk on time. will be missed, Stuart. Many thanks myself and the past Editor, GB. Thanks to all other contributors. It
telephone 09363 6514, of your requirements.		Week gave local societies a unique opport- unity to increase membership and bring Astronomy to the public at large.	becomes a cliche, but without your co tributions, the Newsletter could not exist. Readers may have noticed arti on astrophotography at regular interv
REMEMBER TO BRING THIS NEWSLETTER WITH YOU FOR THE AGENDA, NOMINATIONS, COUNCIL REPORTS, ETC.		The number of societies joining the Federation is growing, and I think we are well on the way to giving real value for money.	from Geoffrey Johnstone. I have adop him, now, as astrophotography corresp ent.
		The Council is always open to requests and advice, so please make the effort to attend the Annual General Meeting and Convention on May 3rd, we look forward to hearing what you have to say.	The editorial team are contemplating ducing an observing section correspon to widen the appeal of the Newsletter
SPEAKERS FOR THE AFTERNOON			As yet, photographs do not reproduce in this style Newsletter, but I am wo
CONVENTION AT COVENTRY		Lastly, I should like to pay tribute to Rosemary Naylor, for her valuable help and advice given in this my first year in the	at it. Finally, I would appeal to members to this publication as a vehicle through
SATURDAY, MAY 3, TO BE ANNOUNCED LATER.		hot seat.	to talk to one another, through a let column. This is your chance to voice
AMOUNDED INTER.		Dave Powell	views and ideas.

Society News Round-Up

The public exhibition and lecture attracted STHART LONSDALE 47 who were treated to four talks on Astro-

nis "Round-Up" is my 16th since 1981 and dly it will be my last one. I feel that done my bit for the FAS and it is n o hand over to someone else. Really lioving what you do, either at work or at av is a great thing, and I can honestly y that I have thoroughly enjoyed being ciety News Editor. Even though I have ever met many of the people that send in eir letters, magazines and newsletters, feel somehow that I know them. From all the correspondence received over the last ve years I don't think I have ever had any riticism of my style of writing. After 1, as I said when I took over, it is YOU to tell me what to put about your society.

job is to put it on paper for all to ad, and not to criticise it. Running an tronomical society is often a thankless sk and those who go to the trouble of procing a magazine or whatever, should be aised. I trust that those who take over 11 remember to do the same. ny, many thanks to all my "nen-nals" and the Council of the FAS. I wish them and

meir respective societies all the very best d I look forward to reading of your ploits and continuing sagas. Good luck! JURY AS: They have never failed to as Tony Balfour's handwritten comments to at the top of each newsletter. th four clear nights and some three

ndred visitors. NAW was successful.

sitors were able to see Halley with the ciety's 6-inch refractor and 8-inch flector. However, a follow-up during Dec-ber was let down by the weather with just e clear night. d Bert Pedel, 92 years old, and underandably their oldest member, was able to e Halley during December for the second me around. His first view in 1910.

cording to Bert, was that it was brighter en. was agreed that more should be done to courage observing at Winchendon and they uld try to organize observing parties. couple of members and wives had an enjoy-le visit to the AAC. Ted Oates, however,

s surprised to find that he was "deceased" cording to the AAC computer! He says, "I remember when my subscription was due to be sorry that my association with the oject had been so short!"

e January meeting had a quiz based on the programme "Blockbusters". STON ASTRONOMERS: Writes Bryne Tongue, hings have been happening rather fast re in Boston. A concrete pier was con ructed for the 8-inch reflector and it is w fully operational. Seven members tended the last AAC Star Party and member ul Money won the Song Contest. On Satday October 12, Paul Money found Halley

th his 14-inch reflector. Public Halley tches commenced on November 11, when, spite rain, 42 people turned up at Hedgeg Bridge to be entertained by computers d a slide display. Further Halley watches re held on the 7th, 8th and 14th of cember and they were fairly well attended th Halley being visible together with her objects of interest. Our last meeting s a talk on Halley's Comet by Colin Goodn and around 50 people turned up.

Seven new members resulted and contact was made with one Dorothy Dacombe aged 81. who saw Halley in 1910 and remembers it clearly, they were able to show her it again during December. It seems she has accepted an Honorary Life Membership and is able to attend meetings regularly. The December meeting was a first attempt at a "family night" and it was a great success. Food, drink, dancing and musical

nomy by Bill. Telescopes by Peter Smith.

by Neil Shuttlewood.

for funde

and Water".

The Solar System by Phil Harvey and Comets

BRIGHTON AS: Membership has increased by some 50% as a result of good old NAW. The previously under-used telescopes are now in use again.

Another exhibition in the foyer of a small theatre in Brighton is to be staged during the Brighton Festival in May. It will run for three weeks and the lectures will relate to the theme of the Festival. "Earth. Fire

As part of the summer lectures, already booked are Colin Roman, Professor Harry Kroto (they hope) and a geologist from Brighton Poly. It was hoped that this would keep the public in touch with the society through interest generated in the Some nine members are booked to visit

La Palma at the beginning of June for a

week's holiday. They hope to include an

inspection of the observatory and to find out if they want any help while they are there! Like keeping an eye on it at night? Best of luck. BRITISH METEOR SOCIETY: A Journal I will certainly miss being sent. I will have to

Bob Mackenzie says he finally managed to recover Hallev on November 1 at 2250 UT. With bright moonlight the comet was very faint in his 62-inch reflector and could only been seen with averted vision.

It seems that a very strong Draconid return took place in 1985. According to the latest results, which are still arriving, the maximum ZHR reached was some 800 meteors per hour on October 8. There had been peculiar Perseid activity

and the parent comet had still to be recovered. Bob stressed the need for naked eve observations and how important they were. He has written a book called "The Astronomer's Software Handbook" which is a comprehensive collection of software including

over 50 working programs, such as making characteristics of the Sun, Moon, planets, satellites, meteors and stars. There is a section on the use of commercial software packages in the study of astronomy, image processing, etc. It is available now price £3.95, and is published by SIGMA Press.

The BMS Handbook Vol V is completed and is now "in the press". HEBDEN BRIDGE AS: A group of members

visited the Huddersfield society's Crosland Moor Observatory in December, where they were met by Philip Heppenstall. Having glimpsed Halley's Comet briefly in binoculars before leaving Hebden Bridge, they had hoped for better views in the 16-inch reflector at Huddersfield. Unfortunately,

higher as some were unable to get in to view. Only two days out of the week were cloudy, the rest could not have be better. The lecture by Chris Devoy, "Comet Halley", attracted around 70 pec and the hall was bursting at the seams. Publicity posters went out to all the libraries, we were in the Kirklees "Wha On" leaflet and Philip Heppenstall was interviewed by Radio Leeds at the obser atory. A profit of some £340 was made direct result of NAW. However, we only

HUDDERSFIELD AS: Writes Paul Harper "Some 523 visitors signed in during NAV the observatory and the figure may be

one new member from it all. Out of our found wealth we have bought a computer and the Cambridge Atlas of Astronomy." games for the kids! The raffle made £14 LONDON SOLAR COMMITTEE: Unfortunately, Bert Chapman who is the Editor of Solar News has been in hospital and so the us Magazine contents are lacking.

> Four members are going "down under" to Halley and it is hoped they will be abl give a report in April. At the moment, Haig camera mounts are b constructed and tested.

> It was expected that the solar minimum : be in 1986. Bruce Hardie says that from his records he noted that for the first time in 20 years he did not record the on Christmas Day. The one observation of that day showed that the sun was spotles NORTH EAST LONDON AS: Newsletters from Bernard Beeston indicate that monthly lectures continue with interesting and unusual topics. In November, Geoff Whit spoke on sizes and distance measuring ur

> oceans, in a talk entitled "Navigation Through the Ages". Then in January, Peter Weston argued that the true invent of the achromatic lens was Lee Chester M Hall, and explained how Dolland, by pate ing the system, did no good at all the t opticians of the day. ORWELL AS: NAW attracted around 1,000 eager visitors including a gentleman of who saw Halley's Comet in 1910. They queued for up to two hours to get a few seconds' glimpse. Each person who did s the comet was given a certificate signed

> the title "The Universe at Large". In December, Stuart Malin lectured on the

problems, historically, of crossing the

a member of the society witnessing the f What a nice memento for the public! With the bad weather on some nights at least half of the 1,000 failed to see an thing. So during December it was decide open up again. Weather triumphed once more, bad weather in fact. Quite often observatory was empty except for the har members. December 18 produced about an of clear skies.

During one evening in December, the 7th

fact, while at the observatory, members noticed a very bright flash and were luc to see the terminal flare of a magnitude -8 meteor. The society fireball camera running at the time and has indeed recor the event. The day before that event, another event

took place with a visit to Greenwich and hopes of a view through the 28-inch, an observing session had been booked for so time. Unfortunately the weather was poo and observing was not possible.

SALFORD AS: Again as with all societies NAW was a success. Some 400 visitors an three consecutive clear nights together an increase in membership of seven made

It was decided that observing sessions w

A__REE, HALSTEAD & DISTRICT AS: 11 O'Shaughnessy writes to say that for

SHEFFIELD AS: The Annual Astronomical Auction at the Christmas meeting produced an incredible £90-plus in just one hour! After the Auction we held a buffet which was very well received by all members and some Wives who attended The Sponsored Meteor Watch was poorly

attended but to be honest the sky was just as poor. That did not stop member Ted Railev who managed to raise some £34 in sponsorship The annual visit will be to Greenwich and

the National Maritime Museum on Saturday June 7. Our President, Kim Lindley, took advantage

of some exceptionally clear skies recently to do some photography with his camera drive. He described the seeing on some nights in November and January as probably nights in November and Sandary as processly the best one will ever get from our area of Rotherham. A slide of Orion taken in November with a Tamron 135mm lens and Fuli RD100 shows clearly the Horsehead Nebulat On January 3 while photographing the Rosette Nebula, a -2 Quadrantid passed directly in front of the Nebula! Both are recorded on the slide. The Nebula is outstanding to say it's only ordinary film. Again in January. a slide of the Sword Handle shows clearly A SIIGE OF the aword named shows ofer. I IC1795 and IC1805. A 44-minute exposure with 135mm Tampon and Fuii RD100 film.

Member Ray Ward had one of those flights to see Halley. Will report in next Round-Up. It is hoped to make a video during the summer of how to use the observatory and telescope.

SOUTH WEST HERTS AS: According to their newsletter, most members succeeded in views ing Halley and many took photographs. Arthur Davies, using a 200mm lens with Kodak 2476, and Clive Jackson with a 500mm and HP5, both took exceptional photographs. Interesting talks recently have included

"Astronomy One Hundred Years Ago" by John Burnett of the Science Museum, and "Observatory Timepieces" by Beresford Hutch-inson of the Old Greenwich Observatory. Finding speakers is probably one of the most difficult tasks, so perhaps we should hear more of the interesting ones, we can then all make a note of their names.

STEVENAGE & DISTRICT AS: Once more I can say that NAW proved a success. Stevenage found it generated a lot of interest and the public lecture on November 14 prompted a congratulations from the Director and General Manager of British Aerospace. Mr Hockridge. Another letter of congratulation comes from Stevenage Borough Council for the services offered to the people of Stevenage during NAW. I wonder how many other councils sent thanks? Not many, I bet. The trip to Bradford on January 12 to the National Museum of Photography and Tele-

vision was enjoyed by all. It has been suggested that given sufficient support, a visit might be made to the Kennedy Space Centre for perhaps four days. A letter has been sent to the Centre sounding them out. If you get the chance to go, Stevenage, take it. I can assure you it is a fantastic place - even more so if

you see a launch. Star Parties are to be held on a regular pasis at the Fairlands Valley complex. ocal press and radio have shown some

nterest. t is hoped that a 41-inch reflector will e available for members to borrow. aul Bishop is hoping to arrange observing essions for members to use his 8-incl

SKYCALC 48k Spectrum program finds detailed data for sun, moon, principal planets, and Halley's Comet. Also displays moving map of stars and planets. Many features.

MEMBERS' ADVERT

be sent to Martin Chick,

Christmas and included a supplement of astronomical terms. The idea behind the astronomical terms. The idea bening the annual edition is to provide members with a gride to the forthcoming events and guide to the forthcoming events and beginners' guides. Very useful for WMAA members as you will remember it is a members as you will remember to to a "nostal" astronomical association and does not hold meetings as such

oroduced entirely on a computer printer The open evenings for NAW held in Alan Wells' garden with his 12-inch reflector for viewing Halley, were successful in attracting public attention. A party of about 3 societa turned up in a coach, much to the surprise of everyone present. Unfortunately on this particular night the clouds refused to clear. Still, they now have more members than ever before.

said that they had some international links which were increasing all the time. This is a very good idea. We in Sheffield have made lifelong friends with our Maltage "astro-pen-pals".

WEST OF LONDON AS: The WOLAS observations of Halley during NAW were a great success. The comet was shown to several hundred people over the five clear nights and according to Robin Scagell, most of them actually said they could see it. Member David Prydman apparently saw Halley

with the naked eye on November 12. Him observation was mentioned in the Daily Telegraph. Sounds impossible but Robin says that David's eyesight is quite remarkable and he can see 12 of the Pleiades with the naked eye from Wembley. A social event was to be held sometime in

A social event was to be new sometime in January - a WOLAS tradition each year after Christmas.

WEST YORKSHIRE AS: A Christmas raffle raised some £150 for funds. This was, however, only half that raised last year. The open evenings during December were as

most societies found - cloudy. WYAS managed about one hour of clear weather during which all present saw Halley. A quiz against Bradford resulted in a win for WYAS.

As a result of NAW, membership is at a record level. This is in common with most other societies who have increased their flook. A reorganisation of the library has been necessary following the disappearance of some books. A visit to the observatory by some scouts

was too late to spot Halley so Orion became a good substitute together with a slide

In January, some members visited the Bradford Museum of Photography and Television to see the Space Shuttle film. Items for the "Round-Up" should

PLEASE NOTE THE CHANGE

WRST MIDLANDS AA: The third edition of WEST MIDLANDS AA: The third edition of "An Astronomical Portrait" was produced at The monthly magazine "Nova" is being

Alan Wells says that there is a possibility of a wisit to a French meteor group. He

Paul Roggemans writes from Mecheler

hooing to strengthen links with met chservers in the IK and the neet of I have a lengthy account of three s mattona 1 International Meteor Weekend: 1

- nlace in Belgium. 1986 October place in Beigium, 1900 october a evening to Sun aft), with formal informal discussions, papers inv Food and accommodation available 1000 Bf. Language English.
- International meteor journal: 6 per year 250 Re 3 International Camp for Meteor Obs
 - at Puimichel, Haute Provence, S I a permanent site with instruments facilities for group visite

Meteor observers wanting the full ir on the above should send for full fs sheets from Rosemary Navlor. Please SAE + two 12b stamps to pay for phot



HERSTMONCEUX 85 COMPETITION RESULTS We inadvertently omitted the results We inagvertently omitted the results Instruments Section which was judged

Norman Fisher, who also donated the r of an astro tie to Bob White of Worth for his Poncet Mounting. Other prizewinners are in Issue No 8.

FUTURE MEETING DATES

Saturday May 3: AGM and Convention at Saturday July 12: Convention at the #

Astronomy Centre Saturday October 4: Convention at the

CHANGE OF ADDRESS

Brian Jones, Publications Officer, no at.

17 Havelock Street BRADFORD

BD13 3HA Tel: 0274 833651

Please amend this on page 44 of your FA

Handbook.



25 Calderton Road, Gwaun Miskin,
Nr Pontypridd, South Wales CF38 2LL by J S Coombes ECLIPSE PROGRAM FOR THE SINCLAIR SPECTRE

Reviewed by Martin Chick

The program gives details of solar and

been made easier to understand

lunar eclipses for the years 1951-2050. Clear display of data showing times, data and where the eclipse will be visible from the program is versatile, contrib etc. The program is versatile, contr many sub-pages of very useful informa The program is complete with a one-page sheet of instructions which could have