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Federation of Astronomical Societies

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****
DITORIAL
****

ow is the time to pension off those ritish astronauts currently in train-ng. Let's face it; they will never ly in space.

ime was when space exploration was xciting; it seemed a new age was awning. When men walked on the Moon, I ersonally felt involved. These explorers ere my generation. They could have been he men I was at University with, except f course they were American. I was very roud of my generation.

ut what of the present generation of ould-be space travellers? If they live n Middle Eastern and Asian countries ey can play a part in the Russian ssions into space. But where does that eave us in Britain, excepted grounded? ride has turned to shame. It is time to EMAND of our leaders that we in Britain lay a proper role in the European Space gency and its peaceful development of pace.

****
EDERATION NOTES
****

RIGADIER KENNETH PAPWORTH

ounder member of Brighton AS and an arly supporter of the Federation rigadier Kenneth Papworth died on 14 ctober. Longstanding members of the AS will remember him as our first reasurer.

e was largely responsible for drawing p the Federation's first constitution.

ur sympathies are extended to his amily and to the Brighton society.

AS ASTROCALENDAR 1988

his monthly sky guide which runs from utumn 1987 to the end of 1988 is now vailable. It shows the view of the ight sky for each month. This includes he planets, eclipses, meteor showers xpected etc.

t is produced by FAS President, Bob wen and is published by the Federation t 60p per copy to include postage. end a cheque for the number required to en Marcus, 5 Cedars Gardens, Brighton, ast Sussex BN1 6YD. Make the cheque ayable to the Federation of stronomical Societies.

Since announcing to Societies the availability of the Beginners handbook "Observational Astronomy" by Steve Lubbock of Bridgend AS, almost 1000 copies have been sold. This is a good response and demonstrates that the FAS are supplying much needed information. Order your copies now from Mr Marcus, as above at the rates:

1-9 copies	75peach
10-24 copies	70p each
25-49 copies	65p each
50-99 copies	60p each
100 and over	55p each

Prices include postage.

HERSTMONCEUX 1987
****
A PERSONAL VIEW BY PAUL L MONEY
BOSTON AMATEUR ASTRONOMERS

For the first time in three years, the long drive to Herstmonceux from Lincolnshire, was not a burden. Travelling on Friday afternoon, instead of the usual early Saturday morning, meant that I began Saturday morning refreshed. Paul Lake of Boston Astronomers was my companion on the journey.

For the third year in succession, the FAS was blessed with sunshine. Chance then for several of us to explore the vast grounds surrounding the Castle, and for the first time I saw 'the Folly' It was here that I saw some of the most beautiful (and tame!) dragonflies I have ever seen. That used up at least half a roll of film. It was fortunate that Speedibrews was at the Convention!

Back at the Castle, there was just time to browse over the many well organised trade stands before the official opening. This was performed by an old friend of the FAS, Professor W H McCrea FRS.

Dr K Subramanian of Sussex University presented the first of the day's lectures; and what a lecture! For the first time I felt I actually understood what gravitational lenses were all about. This was an entertaining lecture covering basic principles through theoretical predictions to observed examples. From the audience's applause, Dr Subramanian should be a regular contributor to FAS meetings.

After lunch the usual group visits to the various facilities were being organised and many of us made our way to the Equatorial Telescopes. Here we saw the Hewitt satellite tracking camera operated by the University of Aston; also the 26 inch Refractor and the very comprehensive Exhibition. These were the scheduled visits, however, when it was discovered that the 36 inch Yapp reflector building was unlocked our guide was persuaded to open the dome and give us a view.

From the Equatorial Group, Paul and I went on the the Satellite Laser Ranger.

We were told why satellite laser ranging is so important, it being the most accurate way of tracking artificial satellites and so determining the rotation of the Earth, its geometry and surface deformations, and variations in the Earth's gravitational field. Despite British weather, satellite observations made from this site are ranked amongst the best in the world. This is an achievement which will be undermined if the S.L.R. is moved to Cambridge. At Herstmonceux, its postion on the globe is known to an accuracy of just a few centimetres, a determination not achieved overnight.

These visits were a fine opportunity to see many of the instruments which may well become moth-balled when the RGO moves to its new site at Cambridge. Lets hope amateur astronomers will get chance to use them in future.

We missed the afternoon lectures: Dr M Shallis on Chemically Peculiar Stars and Dr M Shortland with "And God Created Newton". From those who did attend these we gather they were on a par with the morning's talk.

After the evening meal which some took in the Castle, while others took at surrounding village pubs, we turned up for the the final lecture. This was "The RGO Archives - a History of the Royal Greenwich Observatory" by the RGO Archivist, Adam Perkins. I suspect he was a little nervous about talking in front of the large assembled audience, and I must confess I was expecting a somewhat boring talk. How wrong I was! Adam Perkins, for me, brought the subject to life. Adam showed us the tremendous volume of observations and writings that all the Astronomers Royal had produced and gave us a look at how much work is really needed in order to preserve our Astronomical Heritage. With the move to Herstmonceux during the 1960's, the entire archive has had to be moved around, which does the valuable documents no good. The archives are gradually being rebound, which includes restoration work on each page. Some is being microfilmed.

The task before Adam Perkins appears daunting, but he carries on, despite the upheavals yet to come with the move to Cambridge. Here we learn, the archive is to be split up with the antiquarian section of rare books being separated out. Surely a bad move? Having said all this, I believe Adam Perkins and the staff of the RGO will cope with the upcoming upheavals and their unstinting work will enable the RGO Archive to survive.

In his concluding remarks, Adam mentioned that specific information from the Archive will be supplied to anyone with a genuine interest in the material in store, to help them with their project/studies.

We were all heartened to learn that we will be at Herstmonceux with the FAS in

August 1987

Dear Editor

Re letter from Mrs Sue Buckman in Issue 13, I have written to her as follows:

Dear Mrs Buckman

I was interested to read about your experiences (or perhaps lack of them) with the publishers of the journal UNIVERSE.

The Wolverhampton AS also received the brochure regarding this magazine and I sent a bankers draft for 44 US dollars in order to take up one year's subscription and take up the additional offers. Result, nothing.

A second letter to chase up the first resulted in nothing.

I cannot establish whether the bank draft was cashed as my account was debited at the time it was ordered. I have had to write it off as a bad debt.

I thought McGraw were a reputable firm and wondered if Sky and Telescope might help as I subscribe to that publication as probably you do.

If I hear more I will keep you advised.

Malcolm Astley, Secretary, Wolverhampton AS.

THE FUTURE OF THE HORACE DALL OBSERVATORY AND TELESCOPE

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Information supplied by David White; Secretary, Luton & District AS.

The report in Issue 13 of the Newsletter, that the late Horace Dall's observatory and telescope had been given to Luton College, is not strictly true. In fact the observatory and telescope were transferred to the charge of the Luton & District Astronomical Society on the understanding that they remain in Luton as a permanent memorial to Horace Dall.

It became necessary to resite Horace Dall's observatory when his widow, Mrs Helina Dall, decided to sell the house in which they had lived.

The Luton AS were called in and their members have dismantled and moved the observatory at the society's expense, to the College at Putteridgebury. The

Society will be responsible for the cost of rebuilding the observatory and will have the continuing expense of its maintenance.

After initial objections, the Bedfordshire authorities have now given the go-ahead for the observatory to be built at Putteridgebury College. However, planning permission is still awaited from the North Hertfordshire Council.

Should things proceed as planned, the College will be allowed frequent access to the telescope, under the guidance of the Luton AS.

The delays incurred by having to deal with the various authorities have brought the Luton members to a near standstill. Having raised £600 by September it is disappointing that the winter will be upon us before permission is granted (or otherwise) for outdoor work to proceed. The best chance of immediate progress seems to be for renovation work to be carried out under cover inside a large barn, before outdoor work can begin next year.

Luton members had been looking forward to observing the planets through Dall's telescope this winter. Let's hope it is interest in this account since my telescope was built by Horace Dall for a gentleman in Norfolk in the 1930s and so must be one of his earliest instruments.

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KEEPING THE MEMORY OF WILLIAM HERSCHEL ALIVE

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The Federation received the following letter from John Waterfield, a descendent of William Herschel's. Any subscriptions to his fund will be gratefully received.

5 North Street, Somerton, Somerset

26 September 1987

THE RENEWAL OF THE MEMORIAL TO SIR WILLIAM HERSCHEL IN WESTMINSTER ABBEY 1987

I think I ought to give an account of this enterprise to all, descendents and other generous admirers of the Herschels who contributed.

As many will know, the new Memorial in cast iron, made under the direction of the Surveyor of the Fabric, by Morris Singer Foundry, but otherwise a duplicate of the original stone, with the inscription "Coelorum Perrupit Claustra" (composed on Sir William's death by Dr Goodall, Provost of Eton) was installed in June. We secured the old stone, which is now in the safe keeping of John Herschel Shorland in Norfolk.

All bills have been settled from the fund: £1,150 for the Memorial and £84.50 for installation.

A most happy party to celebrate the occasion was held on 8 July for donors, descendents and others, at the London flat of Mrs Faith Norman Butler, great great granddaughter of Sir William. About 36 people of all generations attended.

To date there are 49 contributors, some acting for societies, so the number of people associated with the enterprise is larger. 26 donors are direct descendents, and one, my mother, widow of a great grandson, and one my cousin (though not a descendent) named after my grand-daughter.

The fund now has a modest surplus of £375, earning interest. Subject to any or better suggestion, I plan to transfer this sum in due course, to the Herschel Museum Trust which is in process of being set up by Dr and Mrs Leslie Hilliard of Bath, under the perpetual trusteeship of the Royal Society and the Royal Astronomical Society, and the Maritime Museum at Greenwich. The generosity and far-sighted munificence of Dr and Mrs Hilliard, who bought and restored the house at New King Street, and created the Museum, deserve and get the admiration of all who know what they have done.

My plan is that the surplus should be held by the Trustees in a special deposit account as a first contribution for the maintenance of the Abbey Memorials by future generations. Sir John's Memorial was renewed a few years ago at the Abbey's cost in "Belgian fossil" and this may well wear under the feet of tourists over the years. There is also Sir William's gravestone at Upton, near Slough, to be considered. Any further contributions would therefore be welcomed.

Lastly, I should say that the other descendents, notably Mrs Charlotte Dunherly of Salisbury, are, in conjunction with Dr Hilliard, the Society in Bath, and others, nobly exploring what might suitably and happily be done to celebrate the

John Waterfield

(The FAS made a donation to his appe

A VISIT TO MEUDON, FRANCE

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by John C C Larard

In 1984, I first attended a meeting of the Double Star Commission of the Soci Astronomique de France. This year the meeting was held at Meudon, and I was present, along with 20 French astronom and some ladies with them.

The first day (22 August) was given to lectures in the Observatory's Scientif Council Room. We met at 1000hrs, when M Pierre Durand, President of the Commission, welcomed all present. Before lunch, accounts were given of Double S work carried out at Tours, Nice and th Pic-du-Midi Observatories. Professor Bacchus of Lille lastly spoke on the n Double Star catalogue, the CCDM, and indicated the difference of presentati

between this and the earlier IDS. Two hours were taken for a good, boisterou 3-course lunch, at 105 francs a head.

We resumed our deliberations at 1430hr The President spoke about the making o simple ring micrometer. Then M Agati spoke of the recent making of a micrometer using Iceland spa. Those who ha used the micrometer gave their reports so that, if there were a demand for th they could go into production.

MM Baudu and Marguet spoke about the observations with the Paris astrolabe.

Dinner was taken at 1900hr with the evening left free.

Sunday 23 August

At 1000hrs we met at the gates of the Meuden Observatory, to be shown round M Edgard Stram. He gave a history of Meuden that went back several hundred years. Some of the buildings are quit old. We visited the table equatorial, and then entered the grand coupole of 33-inch refractor. The tube is rectan ular, and it has two lenses at the top M Thorel, Secretary of the Commission, handled its moving well. Near the eye piece there is a pear-shaped fixture hanging from the tube. This is an eme ency button which, when inverted, must stop all movement, when necessary.

Walking in the grounds, one notices th the Observatory is on a high hill. In the distance, the Eiffel Tower can be clearly seen, along with the spires of Paris. Lunch of Pizza, glaces and cheese was taken, after which we went back to the Council Room. It was deci that next year the summer meeting shou be held in Strasbourg. Final minutes the meeting would be published in the Commission's Bulletin.

Lastly, at my behest, photographs were taken, and the meeting closed at 1700h

Real fellowship is always appreciated, and my visit had been well worth while

The Editor would welcome black an whiteprints for publication in th newsletter, particularly photographs of the sky. They should be no larger than 5 inches by 4 inches and should give detai of instrument, camera, film, exposure time etc. Photographs o people and events can also be use if there is a story to accompany.

****
BOOK REVIEWS
****

EXPLORING THE SOUTHERN SKY
A Pictorial Atlas from the European Southern Observatory (ESO)
by Laustsen, Madsen and West
Springer-Verlag 1987
Hardback pp 274 £36

We in Britain are becoming familiar with the skies as seen from Australia, thanks to the published photographs from the Anglo-Australian Observatory. We tend to forget that other European professional astronomers also have a major observatory in the southern hemisphere.

The European Southern Observatory is at La Silla in the Atacama Desert in Northern Chile. It is near the Tropic of Capricorn and the centre of the galaxy culminates at the zenith. Conditions, European observers believe, are near perfect, with a dry atmosphere unpolluted by light from terrestrial sources.

The Observatory is home to 14 telescopes of various sizes, belonging both to ESO and to individual European countries. The most powerful instrument is the 3.6 meter reflector, which will be joined next year by a similar but more modern instrument. There are instruments of 2.2 meters and 1.5 meters together with a Schmidt telescope which matches the Palomar Schmidt for image scale and which shares the mapping of the southern skies with the UK Schmidt in Australia. There is a submillimeter dish for "listening in" to the molecules between the stars.

The authors of this pictorial atlas are three Danes, Laustsen, Madsen and West (he of comet fame), but some 26 observers are responsible for the 240 plates which illustrate the book. It must have been a great temptation for the authors to present us with a fine collection of photographs from the archives, and indeed this is what we get. But they are arranged in a carefully thought out way, each with accompanying text, to give a detailed account of the structure of the Universe.

Hubble's classification of galaxies is described with photographs selected to illustrate each of the types. When necessary, several photographs of certain galaxies are employed. One will illustrate the different ages of the stars (a colour photo from the Schmidt) while a black and white negative print from the 3.6m will show the detailed structure. There are interacting galaxies, peculiar galaxies and even an utterly peculiar galaxy.

Having dealt with the large scale structure of creation, the atlas goes on to examine the composition of the Galaxy. The whole band of the Milky Way (or Winter Street as the Swedes have it) is presented as a single panorama. The full 360 degrees was filmed by Hasselblad cameras in Chile and in the Canaries. The book also carries a separate copy in a pocket at the back for wall mounting.

The southern sections are considered in glorious colour, length by length. The nebulae, open clusters, planetary nebulae and other phenomena are illustrated and described. Again the photographs are a mixture of

and negative, CCD images and even a little colour coding where it is pertinent to include the infra-red and radio continuum.

In addition to the familiar nebulae: Orion, Eta Carinae, Trifid, Omega, Gum and Vela SNR etc, there are detailed images of cometary globules in space. And for lovers of globular clusters, of whom I have met a few since Halley called some south, there are spectacular globulars. The LMC supernova also appears.

Although La Silla astronomers carry out research work on Solar System bodies, the authors have confined themselves to showing objects not commonly seen elsewhere. Some interesting plates show minor planets, and of course Comet West, including the discovery plate - a Schmidt survey plate. Again those who went south to see Halley will love the March 1986 photograph of the comet approaching the Milky Way.

This is a treasure of a book. It is not an observing guide so it matters little that many of the objects illustrated are over our horizon. The photographs used are superb, but they all tell a story. There are 240 plates of which the first 205 are of the sky. The others show the observatory itself in what is an interesting final section to the book. Tables give details of each plate: instrument employed, filters, scale, observer etc etc.

This book has been printed in Germany on good quality glossy paper. One is bound to compare it with that other German book - Hans Vehrenberg's Atlas of Deep Sky Splendours, with photographs from his Schmidt in the Northern hemisphere. Comparisons are a mistake though, for while Vehrenberg's book is a treasure both to armchair astronomers and to observers, this book out of ESO shows us detail way beyond the reach of amateur telescopes. It is entirely an armchair book, both instructive and visually exciting.

Springer-Verlag have produced a beautiful book. I usually complain about the cost of books from this publisher, but this time you will, I believe, get your money's worth in photographs.

Go sell an eyepiece and buy a copy; or drop loud hints for Christmas.

Rosemary Naylor

COSMIC MAGNETISM
by Dr Percy Seymour
Adam Hilger 1986
Hardback £14.50 : 150 pages

"Why is astronomy important?" - the author's opening question - and, as principal lecturer in astronomy at Plymouth Polytechnic and director of Plymouth Planetarium, dedicated to promoting public awareness of astronomy, he shows the real relevance of his subject to all listeners and readers.

Why is it necessary to study cosmic magnetism? You may think this is a more difficult question to deal with, but scientists of many disciplines now realise their need to turn to the "celestial physical laboratories" of astronomy to further their understanding of things terrestrial and you won't have to read far into this book to discover the answer to the question. This is clearly a vital

FOUND at Herstmonceux after the FAS meeting in October:

a Cassette film ILFORD FP4 which may be unused. On the other hand it may have been exposed, in which case the owner will be disappointed at its loss. Apply to Ken Marcus for recovery.

subject to all concerned with, or interested in physics and astrophysics, especially those seeking to understand the structure, evolution, and maybe the origin of our universe - and the complexities of plasma states and particle physics.

All amateur astronomers with a reasonably good basic knowledge of astronomy and school physics will be able to follow the methodically developed arguments in this book, which, though slim, also packs an astonishing amount of astronomical information between its covers. So don't be put off by its title - it's a most useful presentation of the current understanding of this somewhat difficult subject without the unnecessary encumbrance of mathematics (the mathematics of "magnetism" is notoriously abstruse). The author achieves this by using throughout the well-known concept of the Faraday lines of magnetic force, profusely illustrated by diagrams, and their physical properties - which most readers will recall from their school studies of terrestrial magnetism.

The book also reflects the comprehensive research into celestial magnetism by the author over many years and he offers the fascinating possibility of explaining many celestial mysteries and problems by reconsidering them in relation to their accompanying magnetic fields. So those who have read Percy Seymour's "Adventures with Astronomy" will be expecting something different from the usual glossy run-of-the-mill stuff on astronomy bookshelves. You will not be disappointed - it's both different and challenging.

Contents-wise, a general consideration of the forces of nature is followed in turn by studies of the magnetic fields of earth, sun, interplanetary space, planets, stars, pulsars, visual and radio galaxies and quasars. A brief summary closes each chapter and opens the way to the next, and each one presets the scene with a brief exposition of the relevant facts and physical properties of that particular subject. It is in these brief expositions where so much astronomy is packed but which require a reasonably good background knowledge since some of the principles used in the text (eg polarisation of EM radiation) are not fundamentally explained. This is not a criticism - it illustrates the author's intention to present his subject without unduly complicating it. A little confusion may arise from the sometimes loosely worded association of forces and fields with matter - unless the reader is aware of the current thinking of particle physicists, in which the distinction between these entities seems to be getting nebulous. But along with the author's non-dogmatic stance on the highly debatable controversies in high energy astrophysics, etc, these attributes make the book all the more worthy of a place in the reference section of the reviewer's bookshelf.

Geoff Pearce

PS: One trivial error could usefully be rectified in a reprint: last paragraph of p 136 - distance of Sombrero galaxy should be 40 million light years, not miles!

IN THE SKY
****

I suppose one answer to the problem of light pollution caused by street lighting is to observe instead by daylight, and not just that obvious astronomical body; the sun. Certainly there is nothing new in observations of Venus and Mercury during daylight, but how many people seek out the stars at noon?

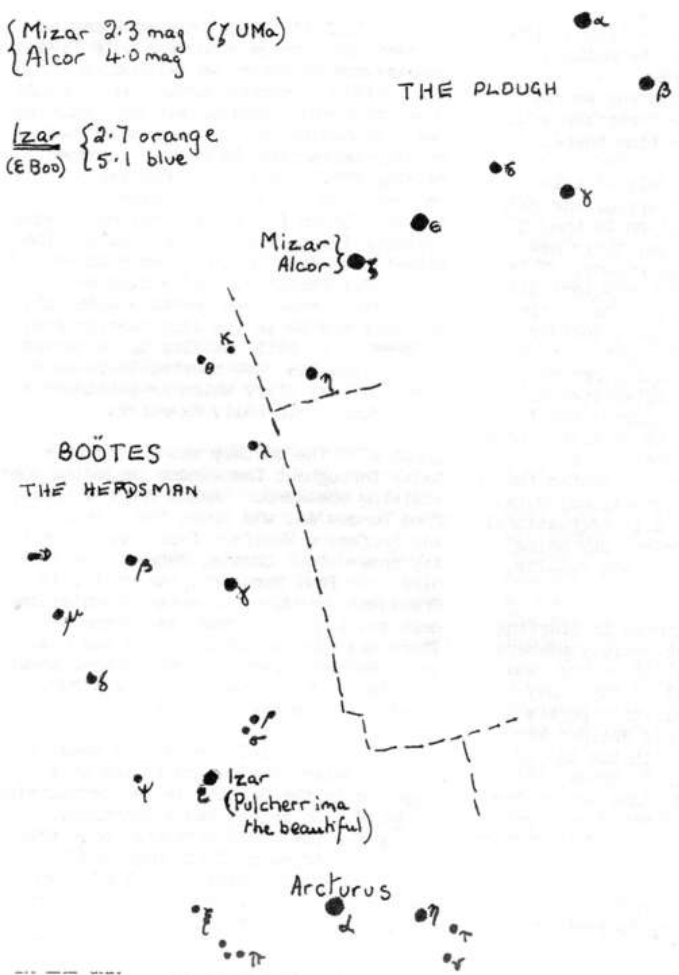
The following report shows what is possible and may come as a surprise to all those of us who have never tried to see the stars by day. My correspondent is Ernest Appleton of Howarth, near Keighley, Yorkshire; a member of the Hebden Bridge AS.

DAYTIME OBSERVING

The telescope in use is a 10 inch F6.3 reflector on a German equatorial mount with setting circles and drive in R.A. An alarm clock set to local sidereal time is used to work out the hour angle west or east of the meridian.

Objects are first obtained using a 40mm eyepiece which has an angular field of view of about 75 minutes of arc. The focussing tube is marked to show when the eyepiece is in focus.

On Sunday 25 October this year, the following observations were made in order to provide material for this report. Venus was the first target, at 12 noon UT. The Astronomical Almanac gives the time of transit and the declination, and these figures must be corrected for the longitude of the observing site. After first locating Venus with the 40mm eyepiece, then switching to the 8mm eyepiece, the full disc of the planet could easily be seen.



Next, the first magnitude stars, Arcturus, Vega and Deneb were found, all looking very bright. Almost at the zenith, Mizar in the tail of the Great Bear was located. Of course, the reason for finding Mizar in preference to the other stars of Ursa Major, was to test the telescope on its companion, Alcor. The 8mm eyepiece revealed this fourth magnitude star. By 1400 UT stars of third magnitude could be seen in the 40mm eyepiece, including Alnireo in Cygnus and Izar in Booted. On other occasions, the fifth magnitude companion of the double star Izar has been seen in full daylight.

E Appleton, Keighley, West Yorkshire.

EDITOR'S AFTERTHOUGHT: Collins Guide to Stars and Planets by Ridpath and Tirion describes Izar (epsilon Boo) as a celebrated double star, saying that the close double is difficult because the brighter primary tends to overwhelm its fainter companion. The alternative name for this star is Pulcherrina, the most beautiful. Mr Appleton's observations make me think that if this double can be split in daylight, might not day time be a good time to search for the companion of Sirius, once that glorious star has left the night time sky? Your letters to the editor re day time viewing of stars might be most revealing.

NEXT "IN THE SKY"
The BAA Handbook for 1987 lists just one grazing occultation for the south of England for this year. Observers along a line from Cornwall to Norfolk were well placed to see the star ZC701, alternatively catalogued as Σ572 Tauri skim the northern limb of the Moon in the very early hours of September 14. I have received two very brief notices of this event from observers who dragged themselves out of bed to find clear skies.
These were members of Fitzharry's AS who made it a team event, and Tim Haymes, alone, except for a fat tabby cat who happened along.
Please can I have detailed reports of this apparently very interesting graze. The 'star' was in fact a pair, only one of which disappeared, as seen by both above sets of

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ASTROPHOTOGRAPHY
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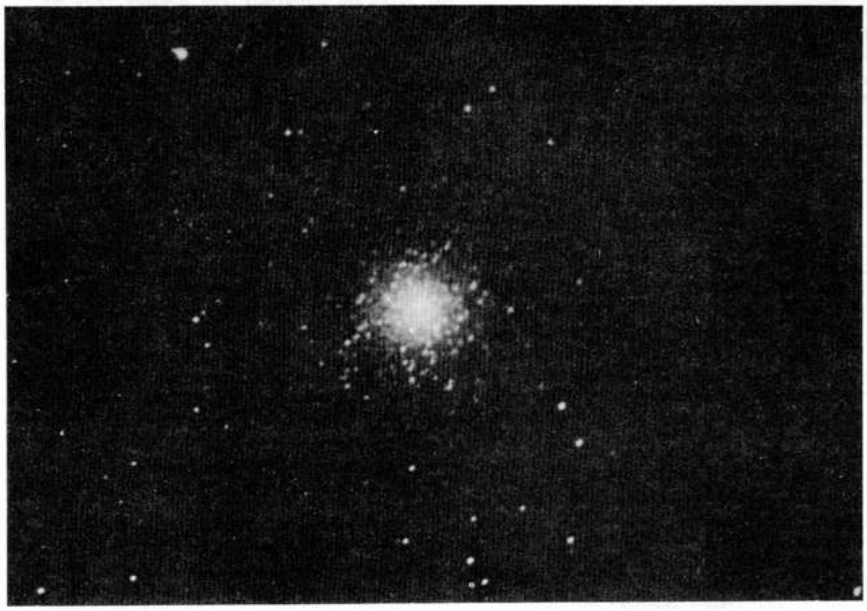
By Geoffrey Johnstone

I am afraid time has beaten me on this occasion and I have not managed a full article. I did however promise a photographn of M13, the Great Globular Cluster in Hercules. This was taken at the prime focus of my 254 mm Newtonian reflector.

The film used was the new T-MAX-400 and it certainly looks very promising. Subjectively, it seems to perform bette than TRI X, which is probably in no small part due to the lower reciprocity failure showed by this film.

Tudor Cottage, Stoneleigh Road, Blackdown, Leamington Spa CV32 6QR

M13 The Great Globular in Hercules
10 minute exposure on 1987 October 12



ASSOCIATION FOR ASTRONOMY EDUCATION
****

ric Zucker, Education Secretary

AAE formally came into existence at
inaugural meeting on 16 May 1981 at
rpool, attended by about 100 part-
ants. Before this meeting, however,
979 the Department of Education and
nce had set up a Working Party to
ew astronomy education in the UK and
e was representation on this party
he FAS, RAS, JAS and BAA. At a work-
on Astronomy at Hatfield Polytechnic
uary 1981), a nucleus of astronomy
ators backed the idea of a separate
nization to be concerned with astro-
EDUCATION and this resulted in the
ch of of the AAE at Liverpool. The
Working Party was dissolved in favour
he AAE. The DES has nominated an
(inspector) to attend meetings of the
Council; the current President of the
Donald Gold, is himself a retired

aim of the AAE is to promote the
hing of astronomy at all levels in
educational system. The word teach-
is interpreted in its widest sense,
acing not only teachers at schools,
eges, polytechnics and universities,
at planetaria, museums, libraries and,
but not least, from local astron-
al societies.

article is specifically written for
ers of the FAS, and members will not-
a considerable overlap of the
ational aims of FAS with those of the
(see, for example, FAS Handbook for
, p 38). The basic difference
een the AAE and other astronomical
nizations, however, is that the AAE
asically concerned with astronomy
ATION, as distinct from astronomy
lf.

meeting in London on 15 March 1987,
nized jointly by the BAA and RAS, the
President, Donald Gold, called for a
t approach to astronomy education by
astronomical organizations. One way
hich this could be realized was for
FAS, RAS, JAS and BAA (and also the
rdinating committee for National
onomy Week 1990) to nominate repres-
tives to the AAE Council. In this
the AAE would be regarded as the
rdinating body for astronomy educa-
n, thereby avoiding wasteful duplic-
n of effort.

various astronomical organizations
been approached by the AAE to sound
their views on such a body. The FAS
ussed this at their Council meeting
1 July 1987 and supported the idea.
as agreed that the FAS Education
etary (and perhaps one other person)
ld represent the FAS on the AAE
cil.

in no way detracts from the indep-
nce of the FAS. In practice what it
d mean (to take an example) is that
ducational query, referred to the
ation Secretary, might also be
rred to the AAE, especially where the
tion may be of interest to the other
nisations.

vidual membership of the AAE costs
er year (less an income tax allow-
if you are a teacher). Institutions,
uding Astronomical Societies, may
for £10. Further details are avail-
from the undersigned:

Zucker
undreda Road
s
Sussex
1PY
0273 474347).

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This newsletter begins life with a page size 297mm x 420mm which is A3 portrait. It is photoreduced at the printers to 210mm x 297mm which is A4 portrait.

Small single column lengths, as with the above, are reduced by a scale factor of root 2 ie 1.414 so that a final 4cm begins as 5.66cm on the editor's copy.

Advertisers should submit their copy, preferably camera ready, but plain typing can be added by the editor, at no extra cost. Large advertisements which do not fit neatly into column widths can be accepted if necessary.

REVIEWS Continued
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HEROES IN SPACE: FROM GAGARIN TO CHALLENGER
by Peter Bond
Basil Blackwell
Hardback £14.95

For any single book to try and encompass the history of manned spaceflight is a tall order. But in this book, the author, Peter Bond, has produced a conscientious, if straightforward, account of the development of man in space since Gagarin to the Soviet Mir activities of 1986.

He covers, in varying degrees of thoroughness, the early single flights of man in space to the Moon landings and the US and Soviet space station activities to the flights of the Space Shuttle programme. The text flows easily and is free of the jargon of space activities, in the main, which makes the book easy reading for the non-technical person. There are many line drawings throughout the book which illustrate the machines which have carried men, and women, in space.

However, for the reader who is familiar with man's flights into space the book has no major revelations and even, on the Soviet side, some errors (Bond states that the Soviets have not released any pictures of the Voshkod spacecraft; this reviewer has published pictures of the vehicle in the magazine "Spaceflight" which the author uses as a reference in the book).

The author has pieced the history together using his own narrative and by quoting many contemporary books and articles, all of which are referenced at the end of the book.

Whilst the book would probably not appeal to someone with a knowledge of the history of spaceflight it would be a nice present for a young person or someone with only a smattering of knowledge but an interest in the subject.

The book's strength is its broad-sweep interest although this reviewer would have liked to see more in-depth descriptions of the Space Shuttle flights and the disaster of January 1986.

The book is completed by several black and white photographs of some of the famous events of the space age.

Neville Kidger FBIS

THE GREENWICH STAR DISC
Published by Star Disc, PO Box 88,
Brentford, Middlesex TW8 8PD
Price £2.99: for latitudes 50°N to 58°N

The Greenwich Star Disc is the brainchild of Ian Ridpath, writer and broadcaster. It consists of two 25 cm discs stapled at their centres. One shows the star fields centred on the Pole Star and the other has a window to reveal those stars in the sky at any particular time. In other words it is a planisphere as has long been marketed by George Philip.

The stars are shown in blue against a white background on the lowwer disc. The overlay disc shows the horizon for 50°N and for 58°N. With a larger size than the 10 inch Philip's planisphere there is room for a few binocular objects to be shown. First magnitude stars only have their names marked.

Users will have to decide for themselves whether or not they prefer blue stars on white or white on blue, but this new star disc has one distinct advantage. It is approximately £1 cheaper than its older equivalent. The disc is packaged with an accompanying leaflet in a resealable plastic envelope. George Philips usually supply a stiff plastic sleeve with theirs.
Although made for the home market, it will equally display the sky for S Canada, Holland, N Germany, and similar latitudes.

It is available from the above address or from Earth and Sky, with postage extra.

Rosemary Naylor

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FEDERATION NOTES
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FUTURE DATES 1988

SATURDAY MARCH 5

Convention at Jodrell Bank - our first at this location.

Programme to be organised but please book the date in your diaries.

SATURDAY OCTOBER 1

Convention at Herstmonceux Castle - surely our last at this location. It is expected that the Castle will be put up for tender in the Spring; and it could be April 1st, really!

So make a note of October 1 in case we make our last stand, at the RGO in its present site.

JUNIOR ASTRONOMICAL SOCIETY AGM:

Saturday January 30: 1988
At the Holborn Public Library,
Theobald's Road, London 2.30pm

FEDERATION SLIDES

The Federation markets a good range of slides, as listed in the Handbook. It is rare for slides to be sold individually at such low prices, and we are grateful to Michael Maunder who is now responsible for their reproduction.
If you have good transparencies which you would be willing to offer to the FAS, please consult Ken Marcus who handles the slide list. It has been known for donor photographers to receive royalty payments where the Federation has been approached to supply illustrations for publication.

Obviously the photographs should be of your own taking and not copies from existing photographs taken from other sources.

Our set of constellation slides are very popular but we still do not have a complete sky coverage. Any offers?

(Please refer to pages 40-44 in the current FAS Handbook)