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EDITORIAL

The time to pension off those British astronauts currently in training.
Let’s hope it will never

Lick was when space exploration was
exciting; it seemed a new age was
arriving. When men walked on the Moon, I
personally felt involved. These explorers
were my generation. They could have been
those men I was at University with, except
I am American. I was very

But what of the present generation
of would-be space travellers? If they live
in the Middle Eastern and Asian countries
they can play a part in the Russian
missions into space. But where does that
leave us in Britain, except grounded?

The强壮 to turn to. It is time to
REMARKS the leaders that we in Britain
play a proper role in the European Space
Agency and its peaceful development of

FEDERATION NOTES

brigadier kenneth papworth

Brigadier Kenneth Papworth died on 14
October. Longstanding members of the
FAS will remember him as our first

He was largely responsible for drawing
up the Federation’s first constitution.

Our sympathies are extended to his
family and to the Brighton society.

FAS ASTROCALENDAR 1988

This monthly sky guide which runs from
November 1987 to the end of 1988 is now
available. It shows the view of the
night sky for each month. This includes
the planets, eclipses, meteor showers
expected etc.

It is produced by FAS President, Bob
Boyd, and is published by the Federation
for 50p per copy. To include postage
and a cheque for the number required to
Ken Marcus, 3 Cedars Gardens, Brighton,
BN1 6YD. Make the cheque payable to the Federation of
Astronomical Societies.

Since announcing to Societies the
availability of the Beginners’ handbook
"Observational Astronomy" by Steve
Lubbock of Bridgwater, 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 75p each
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 MOWRY
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 McCrean
FAS.

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 lensing 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 Binoculars. 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 Range.

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 Britain’s evident interest, satellite
observations made from this site are
ranked amongst the best in the world.
This is an achievement which will be
underlined if the S.L.R. is moved
from Cambridge. At Herstmonceux, its
position 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 we
may well become much more familiar with
when the RGO moves to its new site at Cambridge. Let’s hope amateur astronomers will get chance to use them in future.

We missed the afternoon lectures; Dr M
Sholling on Chemistry of 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 a
surrounding walk, we turned up for 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
voluminous 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 has the valuable
documents in 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 unifying
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 archive, to help them with their
project/studies.

We are all heartened to learn that we
will still be in touch with the FAS in

We are all heartened to learn that we
will still be in touch with the FAS in

Dear Editor,

I am interested to read about your experiences (or perhaps lack of them) with the publishers of the Journal of the Environment.

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

Mrs Sue Buckman

I 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, Somerset, Somerset
26 September 1987

THE FUTURE OF THE HORACE DALL OBSERVATORY

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. The structure 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 relocate Horace Dall's observatory when his widow, Mrs Helena Dall, wanted to sell the house in which they lived.

The Luton AS were called in and their members have dismantled and moved the observatory to the site of Luton College. 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 Luton College. However, planning permission is still awaited from the Luton City 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 a considerable expense. Having raised £200 by September it is disappointing that the winter will be upon us before permission is granted (or otherwise) for outdoor work to proceed.

The 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 6-inch refractor.

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John C. Ward

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

The first day (22 August) was given to lectures in the Observatory's Scientific Council Room. We met at 10:00hrs, when M. Pierre Durand, President of the Commission, welcomed us all present. Before lunch, accounts were given of Double Star work carried out by Mrs. D. and the President's new telescope, Bouchaud. Bouchaud's talk was followed by Mr. M. de la Caze's report on his work with the Meudon catalogue, the CCD, and AAVSO. The afternoon was given to the presentation of the difference between this and the earlier IDS. Two hours were taken for a good, bolstering 3-course lunch, at 105 top a head.

We resumed our deliberations at 1400hrs. The subject was the making of a simple ring micrometer. Then M. Agut spoke of the recent making of a micrometer using Icelandite. Those who used the micrometer gave their reports so that, if there was a demand for them, they could go into production.

M. Baudot and Margot spoke about their observations with the Paris astrolabe.

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

Monday 23 August

At 1000hrs we met at the gates of the Meudon Observatory, to be shown round M. Edgard Streer. He gave a history of Meudon that went back several hundred years. Some of the buildings are quite old. We visited the table equatorial, and then entered the grand coupole of the 3-inch refractor. The tube is rectangular, and it has two lenses at the top. M. Thorel, Secretary of the Commission, then went to the 36-inch reflector, which had a diameter of 36 inches. Near the eye piece there is a pair of glasses, which give a view of the tube. The tube is on a pedestal, which can be turned by means of a handle. The observer can move the telescope to any place, without moving the pedestal.

While walking in the grounds, one notices that the Observatory is on a hill. In the distance, the Eiffel Tower can be seen, along with the spires of Paris. Lunch of Pizza, cakes and wine was taken, after which we went back to the Council Room. It was decided that the next year the summer meeting should be held in Strasbourg. Final minutes were then read, and the meeting was closed in the Commission's Bulletin.

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

Reiss Fellowship is always appreciated, and my visit had been well worth while.

The Editor would welcome black and white prints for publication in the Newsletter, particularly photographs of the sky. They should be not less than 5 inches by 4 inches and should give details of instrument, camera, filter, exposure time etc. Photographs and events can also be used.

If there is a story to accompany the photographs, it would be appreciated.
book reviews

EXPLORING THE SOUTHERN SKY
A Pictorial Atlas from the European Southern Observatory (ESO)
by Ulrich Faust, H. 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 planned telescope 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 situated at the Tropic of Capricorn and in the centre of the galaxy's nucleus at the zenith. Conditions, European observers believe, are near perfect, with the air being clear and free from the light from terrestrial sources.

The Observatory is home to 14 telescopes of various sizes, belonging to both ESO and to individual European countries. The most powerful instrument is the 3.6 meter reflector, which will be joined 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 speed of the camera and which shares the mapping of the southern skies with the 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 Danish, H. Madsen and West (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 their collection of photographs from the archives, and indeed this is what we get. But they are arranged in a 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, other phenomena are illustrated and described. The authors give a separate copy in a pocket at the back for wall mounting.

The southern sections are considered in glorious colour, long by length. The nebulae, open clusters, planetary nebulae and other phenomena are illustrated and described. Again the photographs are a mixture of negative, CCD images and even a little colour coding where possible. Particulars include the infrared and radio continuum.

In addition to the familiar nebulae: Orion, Eagle, Carina, Trifid, Omega, Gum and Vela SNR etc. there are details images of cometary globules in space. And for lovers of globular clusters, of which there are over 12000 counted to date, there is a 360 degree panorama of Michaelis called some south, there are spectacular globulars. The LMC supernova also appears.

Although Lala Silla astronomers carry out research work on Solar System bodies, the authors have confined themselves to showing objects which can be seen elsewhere. Some interesting plates show minor planets, and of course Comet West, including the discovery plate of Schmidt in Lincoln. The latter is one of those who were keen to see Halley's Comet in 1986 when this book was printed and he surely will love this version of Halley's Comet approaching the Milky Way.

This is a treasure of a book. It is not an observing guide so it matters little for many of the objects illustrated are over our horizon. The photographs used are superb, but they tell a story. There are 240 plates and of which 205 are variously printed in the book. Others show the observatory itself in what is an interesting selection of sections to the book. Tables give details of each plate as inserted next year by Sathler, Fellers, scale, observer 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 Wehrenberg's Atlas of Deep Sky Splendours, with photographs from his Schmidt in the Northern hemisphere. Comparisons are a mistake though, while Wehrenberg's book is a treasure both to armchair astronomers and to observers, this book is out of ESO and 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 since I publish them all the time. I believe, get your money's worth in photographs.

Go sell an eyelash and buy a copy; or drop load hints for Christmas.

Rosemary Naylor

COSMIC MAGNETISM
by Dr Percy Seymour
Adam Hilger 1985
Hardback £14.50 : 150 pages

"Why is astronomy important?" the author's opening question and the physical location in astronomy at Plymouth Polytechnic and director of Plymouth Planetarium, dedicated to promoting public awareness of astronomy, he shows the other of his subject to all listeners and readers.

Why is it necessary to study cosmic magnetism? You might think this is a more difficult question to deal with, but scientists who make use of it see that the need to turn to the 'celestial magnetic cycles' of astronomy to understand the structure of things terrestrial and you won't find a chance to discover the answer to the question. This is clearly a vital subject to all concerned with, or interested in physics, mathematics, especially those wishing 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 it is also packed with astronomical information between its covers, has not been put off by its title - it's a most useful presentation of the understanding of this difficult subject which all unnecessary encumbrance of mathematics (the mathematics of 'magnetism' is notoriously abstruse). The book 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 and university 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 cosmic mysteries and problems by reconsidering them in relation to their accompanying magnetic fields. So those who have read Dr. Seymour's 'Wonders of the Universe' will be expecting something different from the usual glossy run-of-the-mill stuff on astronomy in book-shelves. You will not be disappointed - it's both different and challenging.

Context-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 the magnetic properties of those particular materials. It is in these brief expositions where so much astronomy is packed but where much can be given a good background impression of the science, some of the problems used in the text (e.g. polarisation of energy) and the new and fundamental principles 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 is not as clear as it used to be. The reader's non-dogmatic stance on the highly debilitating controversies in high energy astrophysics, etc., these attributes are preserved, 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 156 - distance of Sombrero galaxy should be 40 million light years, not miles.
I suppose one answer to the problem of light pollution caused by street lighting is to observe instead by daylight, and not just at night. I am afraid time has beaten me on this occasion and I have not managed a full article. I did however promise a photograph of M3, the Great Globular Cluster in Hercules. This was taken at the prime focus of my 254 mm Newtonian reflector.

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 Arcturus 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 Alniro in Cygnus and Izar in Bootes. 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 Tizard describes Izar (spelled 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.
SIDEREAL CLOCKS

A new range of Sidereal Clocks to keep time are now available from AWR Technology. These are ideal for the observatory and have the following features:

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- Dual display Sidereal/GMT: SC101 £99.00 + VAT

5% discount for 2 or more units purchased.

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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.
The book review continues...

HEROES IN SPACE: FROM GAGARIN TO CHALLENGER
by Peter Bond
Basil Blackwell
Handback £16.95

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, straightforward, account of the development of manned spaceflight in the Soviet Union. It covers, in varying degrees of thoroughness, the early single flights of man into space, the Moon landings and the US and Soviet space station activities to the flights of the Space Shuttle programme.

REVIEWS Continued

However, for the reader who is familiar with many of the 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 Voskhod spacecraft; this reviewer has published pictures of the vehicle in the magazine "Spaceflight" which the author uses as a reference in the book).

The book's strength is in 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 FINS

THE GREENWICH STAR DISC
Published by Star Disc, PO Box 88, Brentford, Middlesex TW8 8DP
Price £12.99; for latitudes 50°N to 50°S

The Greenwich Star Disc is the brainchild of Ian Ridpath, writer and sky-gazer supreme. It contains over 25 maps and guide charts of the sky and it could be described as a pocket atlas of the night sky.

Send for a SAE for current lists and details. Please quote Ref 121/1.

TAN HOUGHTON DUFF
Highfield
Fairview Road
Headley Down
Hampshire GU35 8HD

SECONDHAND AND OUT OF PRINT BOOKS
on astronomy, space and related subjects for sale (and purchased).

Send SAE for current lists and details. Please quote Ref FAS/18.

FEDERATION NOTES

FUTURE DATES 1988

SATURDAY MARCH 5
Convention at Jodrell Bank - our first at this location.
Programe 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, really!
So make a note of October 1 in case we make our last stand, at the BGO in its present site.

JUNIOR ASTRONOMICAL SOCIETY AGM
Saturday January 30: 1988
At the Bollorn 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 McCumber who is now responsible for their reproduction. If you have good transparency boards which you would be willing to offer to the FAS, please consult Ken Marcus who handles the slide list. It has been known for them to be sold to other federations for a small percentage of the original cost. 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)