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NEWSLETTER

No. 102

October 1969

STATION REVIEW PANEL

The various activities and Establishments of the S.R.C. have been, or are being, reviewed by specially constituted panels to help the Council to determine its policy for the support of future research in the Establishment and elsewhere. A panel to review the R.S.R.S. programme was recently constituted and consists of Dr. E. Eastwood (Chairman), Dr. F. E. Jones, Professor F. G. Smith, Mr. J. F. Hosie and myself.

J. A. Saxton

STATION OPEN DAYS

Comments to the Director, both formal and informal, have uniformly indicated a high appreciation not only of the quality of the work itself, but also of the manner of presentation and, particularly, the expert and enthusiastic demonstrations by all staff concerned.

Ariel III is Resting!

During Revolution 12,864 on 1st September 1969 Ariel III was commanded by Winkfield into a standby mode of operation. The satellite was then 2 $\frac{1}{4}$ years old had travelled 540 million kilometres or 320 million miles. There were a few signs of travel fatigue! The apogee had fallen from 600 kilometres at launch to 527 kilometres and the satellite had stopped spinning. The on-board tape recorder was no longer operating and a shorted cell in the storage battery had meant "daylight only" working. But Ariel III was planned to have a useful life of one year, so troubles of this sort were not unexpected when it was operating for a period of more than two years. In spite of the troubles, the satellite was still producing good real-time data to the very last.

The fact that Ariel III has stopped transmitting makes little difference to the work of the Data Processing Section. Information has been acquired from 21,499 passes which amounts to almost a quarter of a million minutes or 175 days of recording-time. The section does not plan to digitise all this data but follows the requirements of the five experimenters involved with Ariel III, who request data from passes or periods in which they are interested.

Four experimenters were interested in the low-speed data which had been stored during each orbit on the satellite tape recorder; 3967 playbacks or 95% of the data acquired have been successfully digitised onto computer tapes.

All experimenters were interested in the real-time data recorded in the first year of the satellites life and about half the data available have been processed. It is anticipated that a similar proportion of the data obtained during the second year of the satellites life will be requested.

Processing will finally have to stop in order that the equipment can be refurbished and modified to handle information from the next British Satellite - UK IV - which is due to be launched in mid-1971. The processor may also have to digitise some more data from Ariel III because plans are afoot to command it on again for a short period after UK IV has been launched.

C. Medhurst

Station News

The Director delivered his Inaugural Address as Chairman of the I.E.E. Electronics Division on the 15th October. The Address, entitled Radio and Weather, was illustrated not only by slides but also by a film, prepared at the Station, describing radio meteorological investigations carried out by R.S.R.S. Staff at Cardington, England, and at Wallops Island in the United States. There were also practical demonstrations prepared by the Staff of Mr. Lane's division.

Consequent upon the resignation of Professor F. G. Smith, on 30th Sept., from the post of part-time Deputy Director (Scientific Programmes) there has been a reversion to the original structure preceding his appointment, and, as from 1st October, Dr. Horner became Deputy Director of the Station. At the same time, the post of Deputy Director (Administration) was discontinued. Dr. Horner's long and varied service at the Station should serve him in good stead in meeting the new responsibilities which he now has to bear, and all Staff will wish him well in his new post.

Staff are reminded of the Station News item of last April in which it was announced that Mr. Dalziel has become the I.E.E. Station Representative. He will be glad to advise on any matters relating to Institution activities or membership.

Dr. Croom has been given a year's Special Leave to take up a Senior Post-doctoral Research Associateship awarded by the U.S. National Research Council. He will be spending the year in the Radio-astronomy section of the Air Force Cambridge Research Laboratories near Boston, Mass., and leaves R.S.R.S. in early November.

Mr. Dalziel attended an ESRO colloquium on the GEOSTATIONARY satellite, at Copenhagen, from October 15th to 17th.

ESRO will invite proposals for new experiments in the near future.

The ESRO-1B satellite was successfully launched from the Western Test Range in California, on October 1st. All the experiments are functioning correctly but the tape recorder failed after one week. Attempts are being made to recover the lost data by using extra ground stations.

Four Petrel rockets were launched from South Uist during October. The launchings had been held up for a fortnight by strong winds, which reached 95 m.p.h. at times.

Two Skylark rockets were launched from Kiruna, as part of the ESRO programme. Included in both rockets were University of Birmingham experiments.

Staff News

Congratulations to:

Colin Murphy and Jenny Wood who were married at Maidenhead on 18th October.

Mr. J. A. Lane now S.P.S.O. (perm.)
Mr. R. Adlam " Craftsman I
Mr. R. C. Dorey " Craftsman I
Mr. A. Thackray " Craftsman I

Welcome to:

G. R. Dowling	S.O. (perm.)
J. H. G. Williams	A.E.O. (perm.)
Miss M. A. Bland	S.A. (perm.)
R. A. Challinor	S.S.O. (non. perm.)
K. L. Seal	A.E.O. (perm.)
C. Pickering	A.E.O. (perm.)
S. Warhaft	A.E.O. (perm.)
T. P. W. Winteringham	A.E.O. (perm.)
Mrs. J. M. Wainwright	Casual Canteen Worker (6 weeks only)
Mrs. A. G. Callacher	Industrial Messenger (part-time)

Resignations

I. A. Parkin	S.S.O. (perm.)
R. Morrell	Sandwich Course Student
D. Dyal	Sandwich Course Student
N. J. Neal	Vacation Worker
M. R. Rees	Sandwich Course Student
Miss J. B. Turner	Ex.O. (perm.)
Miss M. J. Day	Vacation Worker
J. G. Lumsden	Vacation Worker
I. Watson	Vacation Worker
J. D. Heck	Vacation Worker
R. Buckley	Junior Research Fellow.
E. Page	S.S.O. (non. perm.)
Miss H. Mason	Vacation Worker
B. C. Gage	Vacation Worker
B. L. Gostlow	Vacation Worker
M. C. W. Sandford	S.O. (non. perm.)
W. Donaldson	S.O. (non. perm.)
C. S. Scott	A.E.O. (perm.)
D. R. H. Milton	Craftsman II

News of Former Staff

Congratulations to:

Margaret (Horwill) and Adrian Baber, now in Sydney, Australia, on the birth of their son, Christopher.

Jean and Geoff Fooks, now in Darmstadt, Germany, on the birth of their daughter, Monica Jane on 12th May.

Sports and Social Club News

Wine Circle

Early in October, a new sub-section of the Sports and Social Club was formed, the Wine Circle. Its first meeting was held on the 28th of October when Dr. J. E. Hall gave a short talk on the basic principles of making fruit wines. He concluded his talk by opening two bottles of excellent wine for sampling.

A 17 $\frac{1}{2}$ % discount on bulk orders, when placed with Grey Owl Products, has been arranged.

Membership of the circle is open to all interested on payment of 2/6d. entrance fee and 2/6d. annual subscription. Further details may be obtained from the committee.

Officers elected were:-

Chairman	F. D. G. Bennett
Secretary	M. E. Farman
Treasurer	A. Dagnall

Bridge Club

As a prelude to the 1969-70 bridge season, the annual meeting was held on the 17th of September, when last year's committee was re-elected unopposed.

The first event was a bridge evening held on 8th October and despite the poor attendance there was an enjoyable evening's play. The first match was played on 24th October at N.P.L. and resulted in a loss by 63 IMPs to 109, the majority of the difference in scores appearing in the second half. A second match, also away, has been arranged against R.R.L. for 7th November.

Lunch-time bridge continued throughout the summer, only to be somewhat disturbed by activities connected with Open Days. A welcome development has been the appearance of several new faces at these sessions and further newcomers will be most welcome. For complete beginners, brief explanatory notes are available at these sessions, which are held most lunch hours in E127.

Film Shows

The Sports and Social Club are considering showing films, during one lunch hour per month, through the six winter months.

A programme giving further details will be posted on the main Notice Board.

Christmas Decorations

Will anyone who is interested in helping with Christmas decorations please contact Mike Farman in Room 121.

STAFF OPEN DAY

On Saturday, 25th October, by kind permission of the Director, staff were invited to bring their families and friends to visit the Station. Over 200 adults and 100 children came to meet each other, look around the exhibits, see the films and partake of refreshments in the canteen. The Organising Committee would like to take this opportunity of thanking all those who helped, both before and on the day, to make the event the success it undoubtedly was.

Letter to the Outstations

Dear Colleagues,

Open Days that were to be, now have come and gone, that sounds like the opening line of a hymn rather than a letter, but it does state the case. Despite a heartfelt Amen from all as the last visitor departed in peace, it's probably true to say that a pretty good time was had by everybody. Included in this were the press who, each in his own way, featured the Station's work. Headings varied from the sober and factual to such flights of fancy as 'MINI-WAVES BEAT SOUND BARRIER'. Make what you will of that.

Now boards are stowed, silken dalliance - or at any rate sober suiting - in the wardrobe lies, and all our sketches, pictures, arguments are shrunk to the little measure of five brown paper parcels and a cryptic note, suggestive of dark deeds at the M.C.C., which tells me 'Three short legs missing'. With any luck the unwanted wrappings and remains of our enterprise can serve a final display purpose - to augment the Guy Fawkes bonfire and the delight of all children, including,

Yours sincerely,

The Editor

Reprint List - October 1969

- D. Eccles and
J. W. King
A review of topside sounder studies of the equatorial ionosphere.
Proc. I.E.E. (U.S.A.) 1969. 57. 1012-1018.
- G. L. Wrenn and
P. A. Smith
Results derived from simultaneous measurements using the langmuir plate and spherical ion probe on explorer XXXI and the ionosonde on Alouette II.
Proc. I.E.E. (U.S.A.) 1969. 57. 1085-1089.
- A. J. Gibson
A flashlamp-pumped dye laser for resonance scattering studies of the upper atmosphere.
Journal of Scientific Instruments 1969. 2. 802-806.
- L. Thomas
Ionospheric phenomena related to airglow.
Proc. of the NATO Advanced Study Inst. held at 423-435. As, Norway, July 29 - August 9th 1968.

Internal Memoranda

Nil