

Bulletin

of the Rutherford Appleton Laboratory

23 June 1986 No.6

Federation Aeronautique Internationale Award



On 1 May 1986 Dr J.E. Harries, Associate Director, Astronomy Space and Radio Board, was a guest of the Royal Aero Club at their annual awards ceremony, held this year at the RAF Museum, Hendon. The Club acts as the national agency in the UK for the FAI, and the award to RAL was the Honorary Group Diploma. The citation read as follows:

"Honorary Group Diploma - Rutherford Appleton Laboratory"

For more than two decades the laboratories now known as the Rutherford Appleton Laboratory have played a leading role in establishing the world-wide reputation of the United Kingdom's space science programme. Responsibilities have included scientific coordination for many sounding rocket projects, science programme management for the six UK Ariel satellites and provision of advanced instruments for many Ariel, ESRO and Nimbus missions, and for the International Ultraviolet Explorer and Solar Maximum Missions. The Laboratory has provided the ground system and preliminary analysis facilities for a number of satellites including the Infra-red Astronomical Satellite and, in collaboration with universities, built and operated the magnetospheric satellite AMPTE UKS."

This award is very prestigious and is a clear indication of the Laboratory's growing stature in the space science field.

The awards were presented by the Royal Aero Club's President, HRH Prince Andrew, and the photograph shows the Prince making the presentation of the certificate to Dr Harries.

(Photo: Simon Ward)

GB3RAL National Radio Beacon

Radio propagation radio beacons are operated through-out the world, allocated to various frequency bands for the purpose of determining radio propagation availability. In this way, for example, listening on the frequency allocated to, say the Bermuda beacon in the 28MHz band will indicate if conditions for radio communications to the Caribbean can be achieved at this frequency and time of day.

In summary the main objectives for radio beacons are:

- To indicate the conditions over the path between the beacon and observer, to help communication prospects, by directional calls.
- To provide, within ground wave range, reliable signals for testing and alignment of antennas and apparatus.
- To offer facilities for the serious study of propagation phenomena.

There are many such beacons being operated by the national radio amateur organisations world wide, hence any user, professional or amateur, can judge the radio propagation conditions for a given frequency band. Most beacons are allocated to frequencies that suffer varied and often, poor propagation conditions.

The British national 28MHz beacon was operated from Sussex for many years. In late 1984 the site used for the beacon had to be given up. At this time the Rutherford Appleton Ionospheric Observatory, at Slough, was involved in long distance communication experiments. The nature of this work suggested that operating an HF beacon from our site, would enhance the data base being collected. After investigations and negotiations it was agreed to locate the National 28MHz beacon at Slough. This would become a collaborative venture between ourselves and the Amateur national body, the Radio Society of Great Britain (RSGB). After a long period waiting for the DTI to provide a transmitting licence for operation

from the Slough site, the new beacon was installed in late 1985. The call sign for this station was allocated as GB3RAL, and transmissions started in January of this year.

The transmitter being used is a 25 Watt Frequency Shift Keyed (FSK) unit, this is an old DX40U transmitter modified for single frequency operation. Transmission frequency is 28.215 MHz with a frequency shift of 150 Hz. Aerials for beacons should be omni-directional in order to give general coverage. The aerial installed at Slough is a 3/4 wave vertical ground plane fixed at a height of 6 metres. It is proposed to upgrade these equipments during this year providing greater power output and better aerial height. Keying of the beacon is achieved with an automatic keyer built for the purpose. The transmitter runs continuously and sends information once each minute. The call sign is sent first, followed by its location, coded in a way to be reduced to the national grid reference of the Slough site. All this data is keyed on the carrier as morse code with a sending speed of 12 words per minute.

Reception log sheets have been devised to record all HF beacon transmissions heard, these are gradually being returned from all over the world. Once the flow of these reports becomes regular studies of the data will be made in an attempt to identify modes of propagation, one of which of great interest to both the professional and amateur community is sporadic E.

For further details of the Rutherford Appleton Laboratory Beacon please contact John Gilbert on extension 6530.

(ED. note. John is responsible for engineering at all our ionospheric observatories, Slough, South Uist and Falkland Islands. He is a member of the radio propagation studies group of the RSGB, and a member of the working party set up to study future planning for the international radio beacon group).

Signing Off

Peter Wilde Ups Anchor at the End of an Era

In the course of 30 years at the Laboratory Peter Wilde has guided Electronics Group through four Divisions and a revolution in electronics - from circuit diagrams on the backs of envelopes to Computer Aided Design; from Post-office racks to custom-built microchips.

Under his leadership the group has gained a fine international reputation, their contribution to the success of the Nobel Prize winning UAL experiment (a fast, sophisticated trigger processor) being acknowledged as outstanding.

In his early years, it was written of him, "the turning point in getting Nimrod to work coincided with Peter Wilde's return from leave - and it was no coincidence!" He continued in the same vein.

The university community and the Laboratory have much to thank him for, said Geoff Manning, presenting gifts on behalf of all Peter's many friends and colleagues. "Your expertise, wisdom and sound common sense will be missed by us all. We wish you a very happy retirement," he said.

The gift of a large anchor caused much hilarity, especially when Peter surmised that it had been the choice of his ex-division heads. "They haven't been able to hold me down yet," he quipped, "is this their final effort?"

On a more serious note, he had thanks for everyone. He was, he said, grateful for the environment in which he had been fortunate to work and for the encouragement to do so in relative freedom and with enjoyment.

He thanked the electronics group for achieving their current magnificent standard and all who'd ever been at RAL, helping to create the environment that sponsors the innovative developments that are the strength of the Laboratory. His final words of thanks were directed towards RAL's Directors, "for keeping the Lab the place it is".

Missing

The following items are the subject of loss reports. Please contact enquirers with information.

Kettle - Russell-Hobbs. K3 Automatic
Janice Gore, Ext: 5628

WEE Megger Ser. No. 1460069
J Langridge, Ext: 5537/74

Yashica Camera Body
Andrea Roberts, Ext: 6384

Sharp Calculator Type EL813f
Inv. No. R020061
Jean Banford R1, Ext. 5484

Trade Exhibition

STC Instrument Services will be exhibiting their range of computers oscilloscopes, meters, analysers and other test and measuring equipment on 25 June from 1000 - 1600hrs in the R12 Conference Room.

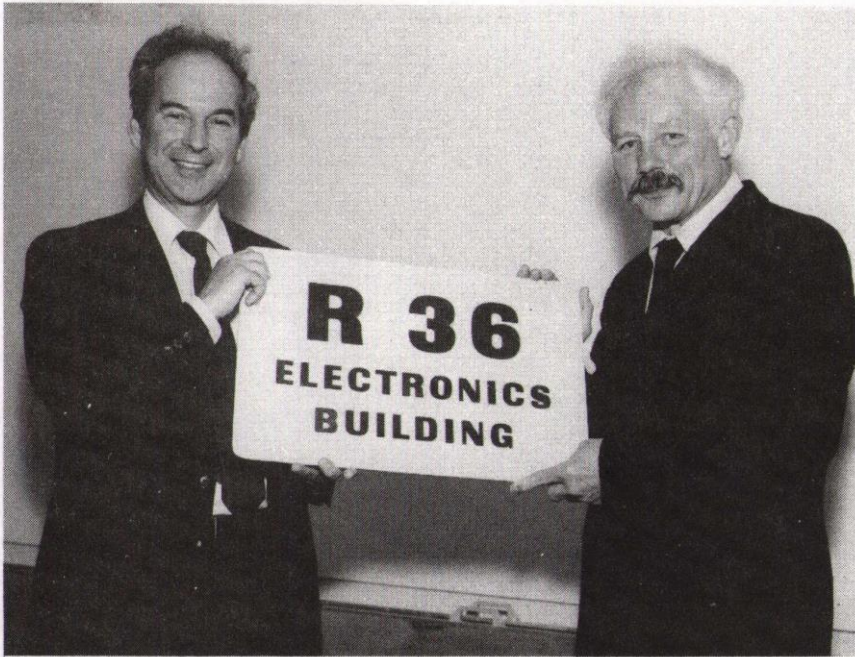
Film Badge Notice

It is period 7 Colour strip YELLOW.

Please be sure you are wearing the correct dosimeters. Return all old ones to Jenny Coates, R12.

Don Collingwood RN HMS Nimrod (retired).

Don's career was divided into two stages. He served in the Royal Navy as a Chief Ordnance Artificer and became steeped in naval history and tradition. After this long service he joined the Laboratory as a Shift Mechanical Duty Technician on what became known as HMS Nimrod because of the presence of so many ex-naval personnel amongst the mechanical engineers and technicians. Don's ability was accepted but he was also acknowledged as the shift expert on ghost stories.



'The glory that was Rome'. Peter (right) accepts the sign from the old Electronics building, from Geoff Manning.

86RC 2943.



Handing over ceremony?
Don, Mrs Collingwood and Eric (right).

86RC 2933.

Ever keen to learn, Don undertook a British Institute of Technology course and then later, after another period of intensive study, was awarded a Bachelor of Arts Degree from the Open University.

His career at the Laboratory took a new turn when he joined the Health and Safety Group. He continued to study, which on this occasion gave him professional safety qualifications and allowed him to develop his new role to such a degree, that he was promoted in 1981.

Now that he has retired, Don intends to complete his first book on a particular class of warship and its activities during the Second World War, hopefully with more to follow.

At the presentation in a crowded R12 Conference Room Don's wife received a bouquet of flowers and Don a gift of a fully automatic camera (and a Ray Roberts card), to record the pleasure of his friendship and as an appreciation of his companionship during his years at the Laboratory.

Bruce Thomas Another Old Salt Retires

More of a voyage through life, was how Bruce Thomas' working career appeared when detailed by Roy Price at a ceremony arranged by Bruce's colleagues to mark his retirement.

Starting as an apprentice fitter with British Power Boats, Southampton, Bruce remained tied to the sea, through wartime naval service, work on private motor yachts and a period in the Merchant Navy.

In 1950 he "took to the air", working for British Overseas Airways and a couple of years later tied up to British Petroleum for a spell.

Then began a tour of the local research establishments, 11 years with AERE and six years with Culham before dropping anchor at RAL in 1974.

Amidst all this roving, Bruce has also found time for many happy hours under cars, and was a member of the Royal Observer Corp.

Roy said that he was sure he spoke for everyone present when he wished Bruce many happy years of retirement with good health and good luck.

In reply, Bruce thanked all his workmates and friends for their gifts - the binoculars for looking at birds of all varieties and the whisky to keep him warm while he was doing it!



Bruce (with binoculars) gets a helping hand with his card from Roy.

76RC 2937

Student Accommodation

Accommodation is required for vacation students at RAL. Can anyone offer accommodation plus meals at approx. £40 per week.

If you can help please write to Accommodation Section, Bldg. 142 Harwell Oxon.

Five-a-Side Football



The RAL Five-a-side football team (RATS) started well in the 1986 Civil Service Sports Council (Southern Region) competition, winning their way through the first rounds to the finals.

The team of Mark Wheeler, Graham Douglas, Tony Furnival, Jackie Allen, Andy Leech and Dave Rippington beat Post Office Finance and MAFF to win their place in the semi-finals against Aylesbury DHSS who they defeated 1-0. In all they scored 6 goals to this stage of the competition, conceding not a single one.

On 1 July at the Alton Sports Centre, Hants, sadly they found very strong opposition. At this point in the competition 8 teams have qualified.

Back row: Dave Rippington, Mark Wheeler, Tony Furnival.

Front row: Andy Leech, Graham Douglas, Jackie Allen.

86 RC 3063

These are divided into 2 leagues of four teams each, and the leg is played as a Round Robin. RAL started well by beating IBAP 2-1, but their following two games ended in narrow defeats.

Never-the-less, the team acquitted themselves well, enjoyed themselves, and look forward to next year's competition.

Hard luck lads - and best wishes for 1987!

SERC Outdoor Sportsday

Sportsday will be held at Birmingham again this year on Friday 4 July.

For anyone not having received an entry form, these can be obtained from Tudor Morgan, R18 or Ian Forster, R2.

Transport from RAL main gate is provided, returning at approx 1930 hrs to the Laboratory. A fee of 50p will be charged to non-RecSoc members.

Darts

Lunchtime League

	Pl.	W.	L.	L/F.	L/A.	Pts.
Stores A	4	4	-	16	4	8
Stores B	4	4	-	16	4	8
R18 26ers	4	3	1	13	7	6
R2	3	2	1	12	3	4
R18 Tonuppers	4	1	3	7	13	2
Repro R3	4	1	3	6	14	2
R18 C	4	1	3	5	15	2
Stores C	4	0	5	5	20	0

At the half-way point in the League the Stores A & B sides are dominating the top two places. Both have identical legs, for and against, and they have yet to play each other.

I have had suggestions of a Finals Night at the close of the League!! Any comments welcome.

Andy Napper, Metal Store, Ext. 6136.

Generous Authors

The RAL Fund, established last year to finance minor commemorative and similar items which cannot be paid for out of public funds, has received a handsome gift from four generous authors in Informatics and Central Computing Divisions.

Bob Hopgood, David Duce, Julian Gallop and Dale Sutcliffe have recently been engaged in preparing a second edition of their book "Introduction to the Graphical Kernel System" first published in 1983. The RAL Fund has just received a cheque for £1000 from their publisher in recognition of their efforts, and is now close to the point when it will start to earn a worthwhile amount of interest each year.

Many thanks are due to our four colleagues for their welcome donation.

Civil Service Philatelic Society

SERC staff may not realise that they are eligible to join the Civil Service Philatelic Society. This society, in existence since 1948, has a nationwide membership although the meetings are held in London. There is a bimonthly bulletin, and exchange packets are circulated regularly. The cost is only £4.75 for life membership.

Further details from R J Knight.
Ext: 6585.

The Dave Craddock Cup

Once again I will be running the six-a-side cricket cup at the Lab. Please may I have teams and names of players wishing to enter, as soon as possible.

We have a new cup for presentation to the winners. This is displayed in the Trophy Cabinet in the foyer of R1.

The rules will be basically the same as last year, with everyone playing everyone else, on a league basis, the top two teams competing for the 'Dave Craddock Cup'.

For the benefit of new teams who may be joining us (please) this competition runs on various evenings, after work, for about 2 hours.

Enquiries to A Napper, R9, Ext. 6136.

Bulletin

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