



APPLETON LABORATORY NEWSLETTER

No. 215

August 1979

My career in radio research started forty years ago when the VHF and UHF bands were being developed and centimetre waves were a topic for speculative research. Radioastronomy on a significant scale was still nearly ten years away and space research nearly twenty. Also well in the future were magnetospheric studies, incoherent ionospheric scatter, transistors, integrated circuits, and lasers, all essential components of our current programme. The only computer I had seen was made from Meccano parts, and black holes were places in which we sheltered during air raids.

The vast changes in the scientific topics of our programme are therefore self-evident. Other changes are in name and in character from an establishment with a prime purpose of carrying out excellent research to one in which the support role to Universities predominates. The Laboratory has thus amply demonstrated its ability to change with the times, and this characteristic will no doubt be further tested in the future. I am sure that the staff will be able to adapt as effectively as in the past, and will gladly do so if this is in the interests of science.

The last two years have been particularly difficult for the Laboratory; increased demands have coincided with staff shortages and a loss of valuable expertise in several important areas. With the general uncertainty as to the future prospects, many have decided that they will have a more promising future elsewhere, throwing an extra burden on those who remain. The next two years will not be easy, but one can hope that it will all come right in the end and that the remarkable devotion to duty which I have witnessed will have its proper reward. If my successor, Professor Houghton, receives the same kind of support, the future should be assured.

To all staff I say thank you, good-bye and good luck.

A handwritten signature in cursive script, appearing to read 'J. Horan'.

PROFESSOR J. T. HOUGHTON FRS

Professor John Houghton, FRS, Professor of Atmospheric Physics, Oxford University, will take up his appointment as Director (Appleton) in the combined Appleton and Rutherford Laboratories on 1 September 1979 following the retirement of Dr. F. Horner on 28 August. Professor Houghton, who will be on a five year secondment, will maintain links with the work of his University Department.

Aged 47, Professor Houghton was educated at Rhyl Grammar School and was a scholar at Jesus College, Oxford, where he took a double first in mathematics and physics. A Research student in the Department of Meteorology, Clarendon Laboratory, from 1951 to 1954, he took his D.Phil. in 1955. He was a Research Fellow at the Royal Aircraft Establishment, Farnborough, before returning to Oxford in 1958 as Lecturer in Atmospheric Physics. In 1962 he was appointed Reader and became Professor in 1976. Official Fellow and Tutor in Physics at Jesus from 1960 to 1973, he became Professorial Fellow in 1973. He spent a term in 1969 as Visiting Professor at the University of California, Los Angeles.

Professor Houghton is well known internationally for his outstanding research in the upper atmosphere and his experiments have been carried on a number of space missions including NASA's Nimbus series and Venus Orbiter.

A member of the Astronomy, Space and Radio Board of the Council 1970 to 1973 and since 1976, many of his experiments have received engineering and project support from the Rutherford Laboratory.

Elected Fellow of the Royal Society in 1972, Professor Houghton is also Fellow of the Institute of Physics, Fellow of the Royal Meteorological Society (President 1976-78) and was awarded the Darton Prize 1954 and the Buchan Prize 1966. He is also a Fellow of the Optical Society of America, and a Member of the American Meteorological Society and the American Geophysical Union.

Professor Houghton is married with one son and one daughter.

WARC 1979

The above initials are the short way of referring to the World Administrative Radio Conference which is to take place in Geneva, starting 24th September 1979, and lasting for ten weeks. Such conferences are aimed at reaching agreement on the regulations by which radio services are organized, particularly the many aspects for which international collaboration is essential. Some conferences are called for special purposes, e.g. for planning the use of broadcasting allocations or for allocating frequencies for space services, but from time to time the regulations need to be revised as a whole. This was done in 1948 and 1959, and the WARC 1979 is the next in this series and will set the pattern for the next twenty years.

The SRC is involved in two ways with the International Telecommunication Union (ITU) which organizes radio conferences. The first is by providing technical information, mainly on radio propagation and related matters, which helps the world at large and the UK in particular to achieve the objectives of conferences. This technical work is carried out within the International Radio Consultative Committee (CCIR) which is part of the ITU, and which organized a special meeting in 1978, under the Chairmanship of Dr. Saxton, to prepare the technical groundwork for the WARC. The second SRC involvement is as a user; it has a vital interest in ensuring that frequency allocations and other radio regulations affecting radio-astronomy and space science are as favourable as possible to the scientists concerned. The SRC is regarded as the authority which, in the UK, speaks on behalf of the scientific community on such matters. I am attending the WARC as the SRC representative on the UK delegation; I also have interests as secretary of the Inter-Union Commission on Frequency Allocations for Radio Astronomy and Space Science, (IUCAF) and as International Vice-Chairman of Study Group 2 (which deals with these topics) of CCIR.

The WARC is no small enterprise. It is estimated that there will be some 1500 delegates from about 150 countries and that a complete set of documents in each of the three official languages (English, French and Spanish) will run to about 20,000 pages, of which about 5,000 have already been distributed. It is expected that the conference will use about 100 tons of paper, so delegates can expect to finish with shorter legs and longer arms. As many of the working documents will be generated by discussion at the meetings, the typing, translation, reproduction and distribution requirements are prodigious.

In the UK, the WARC is the culmination of about three years of preparation. There is unlikely to be another general WARC much before the year 2000; if the SRC again participates, some-one else can have the job.

F. HORNER

R.I.P., 31.8.79

(with apologies to William Shakespeare)

Scientists, typists, clerks, if you have tears,
Prepare to shed them now.
We have to bury Appleton, not praise it.
The work we've left undone lives after us;
The glory lies, forgotten, with our bones.
Thus must it be with us. The noble Senate
Hath told you we were not adaptable.
If it were so, it was a grievous fault
And grievously must now we answer it.
Yet from the world at large we've had much praise
For triumphs hardly won against all odds,
In studies of the heavens and outer space.
So too in serving, for long years,
The cause of science here and far across the sea.
Yet even so they said 'twas not enough;
And they of course are honourable men.
But you will recall, but few years since,
With Minister and V.I.P.'s of high renown,
We were re-named; our hopes were high;
Of stirring deeds the blessed Margaret heard us tell.
Did we not then deserve her accolade,
Marked for all time by tablets on the wall?
Yet even then some must have had their doubts:
And they are honourable men.
We speak not to disprove what Senate said
But simply here do tell what we do know.
All men did love us once, not without cause,
What cause withholds them then to mourn for us?
So Appleton, as now you take your rest, let us away
To quietly shed our tears upon this sorry day.

MARCUS ANTONIUS

Staff, Sports and Social News is being
held over until the September Newsletter.

Letter to the Outstations

Dear Colleagues

Our Laboratory is about to enter another phase of its existence. Let us seek signs and portents. There are no comets seen; no owl hoots mournfully atop the aerial masts; so far the earth stays steady. Thunder, whether from right or left, has been well below average for the season and if you think I'm going to ferret about in the innards of a fowl - forget it.

Does nobody CARE? Well, yes - sort of. Over the weekend THEY have transformed the main entrance by putting down a fresh, new, bright, tiled floor. As an event-marker this may not seem much compared with a conflagration in the 'twenties, radar in the 'thirties and our present building which was begun in the 'fifties. These pointed our history from those original diverse enterprises, unified to become a satellite of N.P.L., to later independence of that worthy guardian.

Perhaps it's not such a bad symbol, though. New times, new thresholds. An attempt at encouragement. It must be owned that, up to now, no ravens croak above library bookshelf or office door, disturbing the philosopher and the after-lunch doze of

Yours sincerely

The Editor