



NEWSLETTER

No. 120

May 1971

THE MEASUREMENTS LABORATORY

Our terms of reference are to provide a service to the Scientific Staff of the Station. This takes many forms and seems to cover a multitude of sins.

The first, and most essential part, is to maintain and extend the basic measuring facilities of the Station and to provide adequate standards for this purpose. A typical example is the Rubidium Frequency Standard which is now in service. This changed the rate of drift of our frequency standard from 3 parts in 10^9 per day to 6 parts in 10^9 per year. In more simple terms the time derived from this standard will be in error by one second after five hundred years.

The second part is the maintenance of station equipment. We repair between one hundred and fifty and two hundred items per year out of a total of five thousand on the station. Some take minutes, some take hours, some take days, some even take months. The ones that take months are easy to explain, we have a stock answer, "We cannot obtain spare parts". This by some strange coincidence is the same answer used by industry when a long delay occurs. In other words we had forgotten about it and we will have to look around the lab. to see if we can find it. There is another possibility; we lent it to someone else and we will have to get it back. There are simple faults, these are the sort we like. There are intermittent faults, which are always guaranteed to take a long time, in fact on occasions a dispute arises as to whether the fault does exist. There are mysterious faults in the words of a more senior member of staff "Fault came right after probing about for four hours"

We have some eighteen filing cabinets all filled to the brim with sales and other useful information. A few months ago there was a request for the handbook of a radio receiver which was made in the early 1930's. We were able to produce a copy which was printed in 1935. Fortunately not all the information is as old as this, the latest addition to the information field is a system known as Technical Index. Manufacturer's catalogues are reproduced on micro-film and there are some one hundred and fifty thousand pages available at present. There are disadvantages to the user however, in order to look at a page you need a large film reader, you also need a book to tell you when to start looking in the first place. The films incidentally are blue though nothing of a more stimulating nature has turned up so far.

One of our other duties is to meet sales representatives. This can be an enlightening experience. Sales men are usually type-cast by the theatre and television as slick, fast talking characters who are quite capable of selling their grandmother if the price is right. This is not so in practice, we certainly meet the type who expect a large order next week, they are doomed to disappointment. On the other hand some give the impression that they dropped in for morning coffee on the way to some other place, after a quick chat they disappear again and you are left wondering if they ever sell anything. This part of our work however is very good training for dealing with door to door salesmen at home. The conversation is usually brief and to the point. In fact they do not seem to knock on our door very often these days.

We have many other sins but this is not the most appropriate magazine in which to publish them. A normal question at our progress reviews is "Are there any complaints". If there are you can always write to the Editor.

J. Gourlay

SPORTS AND SOCIAL CLUB NEWS

The Committee for the year 1971-72 is as follows:-

Chairman	John Cathrew
Vice-Chairman	Peter Hicks
Treasurer	Bob Walls
Secretary	Pat Scammell
Minutes Secretary	Yvonne Dias

Bar Representatives

Piers Eggett
David Kelley

Hanne Lennon
John Halley

WINE CIRCLE

For the modest price of 12½p membership fee plus 12½p annual subscription, you too could be a happy (merry) wine-making maniac. The magazine 'Amateur Wine Maker' is circulated monthly and free advice is freely given by those who have become expert (?) in the art.

Join now, before the next bulk order is placed and you will soon be able to make six bottles of wine at a cost of 15p per bottle (and four hours of your time spread over two months).

P.S. We promise that you will not even be aware of the effort involved in making the next lot.

SPORTS DAY

The S.R.C. Sports Day will be held this year on 30th June. Volunteers who are willing to help on the day, please contact Pat Scammell.

BRIDGE CLUB

The general outcome of the three fixtures shown in my March report was satisfactory, having won two out of the three to reach an end of season tally of 3 wins out of six matches. The three results were : against ICI, won 72-71; against NPL, lost 79-61; and against RRL, won 105-64. This only leaves the teams of 4 match for the ex-D.S.I.R. cup which will be played at the Warren Spring Laboratory, Stevenage on May 23rd. We are again entering 2 teams and hope to return the trophy to R.S.R.S. from whence it has been missing for the last 3 years.

Robert Pratt

LETTER TO THE EDITOR

Re p.5 April Newsletter

Dear Eve Ninchina,

A gallant attempt to guess the sport, but unfortunately incorrect. In any case your entry was not accompanied by the requisite five Green Queen Vouchers. Also please send photograph in time for your next season.

Yours

(Hon. (SIC) Sec. of ?

STAFF NEWS

Congratulations to:

Tony Gibson and Diana Norris who were married at Windsor on 15th May.

Mr. G. L. Addison	now	C. Exec. Officer
Mrs. E. Carroll ✓	"	Exec. Officer
Mr. V. Foley ✓	"	H. Exec. Officer
Miss R. A. Ford	"	AEO (acting)
Miss E. B. Zbikowska	"	D/Shift Leader

Mr. J. Crawford on his being awarded an S.R.C. Bursary

Welcome to:

N. H. Higson	E.O.
J. A. Crawford	S.A. Returned to RSRS from SLWOP
H. J. Convey	S.C. Student
N. R. P. Milway	"
I. W. White	"
R. A. Raphael	"
A. J. Wilton	"

Resignations

R. F. Hemmings	Executive Officer. Transferred to London Office
S. K. Wee	Tech. Officer Singapore
Mrs. D. E. Butler	P/T Cleaner

Other changes

J. E. Goodyer ✓	E.O. Left Singapore for U.K. - on leave (returning to RSRS on 12.5.71)
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E.S.R.O.

D. W. Hardy	A.E.O. Returned to duty at RSRS (on Training Course at Redu)
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STATION NEWS

On the 16th June the Science Research Council will visit R.S.R.S. for the first time and hold one of its regular business meetings at the Station during the morning. In the afternoon members of the Research Council will have the opportunity of seeing the work in progress on the Station; some members hope to visit the Chilbolton aerial on the previous day.

A World Administrative Radio Conference will be held in Geneva from 7th June for six weeks. It will have among its concerns the planning of space telecommunications services. The Director will attend and will have a special interest in matters affecting space research and radioastronomy. The Deputy Director will also attend until at least the end of June.

A few days before the Conference, Dr. Horner will be attending a meeting of the International Working Group which is considering the design of lightning flash counters and the analysis of data from them.

In association with the Conference, a Telecommunications Exhibition will take place from the 17th June, for ten days. The S.R.C. has a stand in the Exhibition, involving R.S.R.S., M.S.S.L. and the Cambridge and Jodrell Bank Radio Astronomy Group. Dr. P. Davies and Mr. R. Powell will demonstrate the S.R.C. exhibit. On the opening day of the Exhibition, there will be a T.V. broadcast, organised by the B.B.C. and the S.R.C. may be involved in this.

Dr. J. E. Hall is attending an Administration Course at the Civil Service Staff College, Henley, for three months.

Mr. Lane attended a Senior Management Course at Sunningdale from May 24th-27th.

LETTER TO THE OUTSTATIONS

Dear Colleagues

What has our journal in common with the Guardian? What indeed you may well ask - apart from a high literary standard and an occasional deliberate misprint just to ensure that perfection rests only with the Gods. The answer lies in the times; this year sees both of us celebrating anniversaries, it is one hundred and fifty years old, we are only ten but very knowing with it.

Recollection of times past prompts examination of our 1961 issue number one. To be accurate, there existed before that time a sort of ur-newsletter which appeared very occasionally. (Your editor has one for 1955 - condition fair, slightly foxed as the booksellers have it). In this first of the present series various matters of interest were disclosed. There was the decision to build a 25m steerable dish

to be sited near Camberley, though Chilbolton was eventually chosen. We began rocket-borne experiments in the D-region in collaboration with Sheffield University and proposals were afoot to study the ionosphere using satellite-borne 'topside sounders', this unfamiliar phrase being carefully explained.

Then as now arrivals and departures were chronicled, and among distinguished visitors we entertained the Hon. Sec. D.I.R. and Lord Hailsham. Names still familiar appeared in the staff movements and changes. We organised theatre visits, looked forward to the Queen's birthday and Whitsun leave and offered a number of sporting events for all who wished to participate. Format then was much as now. though time's burden on your shoulders was a scruple less - there was no letter to the Outstations from,

Yours sincerely,

The Editor

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H. Rishbeth

Polarization fields produced by winds in the
equatorial F-region

Planet. Space Science 1971, 19, 357-369

J. R. Smeathers

Ground-interference pattern of 16 kHz radio waves
during summer days

Proc. I.E.E. 1971, 118, 515-518

Internal Memoranda - NIL