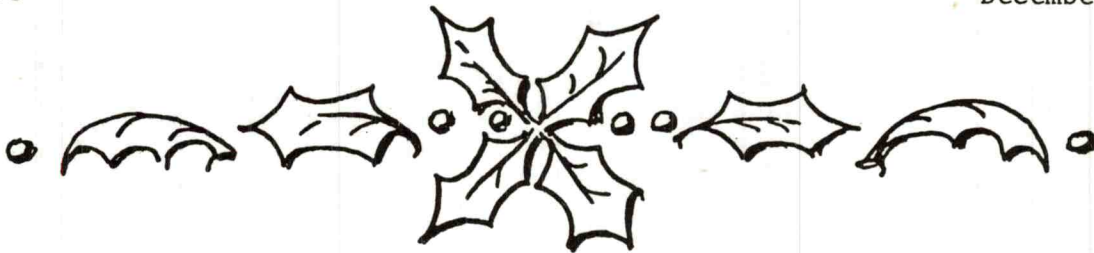




APPLETON LABORATORY NEWSLETTER

No. 175

December, 1975



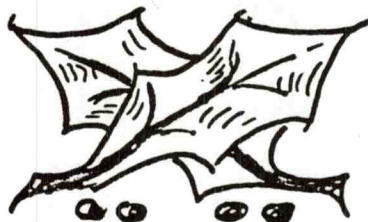
Xmas 1975

As members of the staff are well aware these are not easy times for the Laboratory. Prospects for the SRC have suffered a considerable setback in the past year and since "big" science, which includes the space research programme, is to bear the brunt of the effects of reduced funding the Laboratory is bound to feel the effects of this in ways I indicated in the November Newsletter.

It is clear that we must husband our diminished resources in the future and seek to exploit them in the most effective manner possible, with which must go a searching examination of our priorities. We shall continue to have a central role to play in the programme of the ASR Board, which is not being reduced to zero, and much of our own research is in fact in the area of "little" science, ~~it~~ it is relatively less costly than most space science projects; so we should not let ourselves become too despondent.

I certainly see no reason why I should not again this year wish members of the staff and their families a Happy Christmas, which I sincerely do, nor why I should not ask them to look forward with me to the New Year with the determination to make the very most of those opportunities we shall have.

Ja. Saxton



STAFF NEWS

Congratulations to :

George Walters and Pauline Stirling on their marriage on 28 November.

Resignations :

M.T. Sprague HSO

Other Changes :

Mrs. M.T. Parissien	CO	Transferred from Div.VI Gp.IV to Accounts
Mrs. S.A. Laughher	CO	Transferred from Accounts to Finance
D. Roberts	CO	Transferred from Finance to Accounts
V.P. Sandal	CO	Transferred from Finance to Accounts
Mrs. Q.M. Sams	CO(P/T)	Transferred from Accounts to Finance

OBITUARY

Mr. G.E. Ashwell

It is with much regret that we learn of the recent death of Mr. G.E. Ashwell.

Gordon Ashwell spent his career in Government Science, beginning in the thirties at the National Physical Laboratory where he was concerned with acoustics, then in a variety of propagation studies at this Laboratory and finally with the Ministry of Agriculture.

He was an unusually rapid and gifted experimenter with a sound appreciation of fundamentals. This gave him a skill and economy of style, making use of high precision and stability where needed, backed by a flexibility of approach which could utilise such homely materials as brown paper and string where it was (rightly) judged to be sufficient.

While not apparently interested in producing a large output of papers, his writings, nonetheless, show the scope of his interests. These ranged from various aspects of radio direction finding from V.H.F. down to L.F.; accurate methods of phase comparison which greatly helped investigations into errors in navigational aids; field strength work and equipment for investigation of ionospheric movements, made at the Winkfield site long before the days of satellite tracking, though he was early involved with that as well.

In more recent times his attention turned to the use of laser techniques for atmospheric probing and, in the concluding phase of his work here, his early interest in acoustics found use in an ingenious technique for investigation of bonding between water-vapour molecules. For the past two years he worked for the Ministry of Agriculture devising small radio transmitters capable of being worn without discomfort by foxes so that he could determine the extent of their areas of foraging by direction-finding methods, to assess their potentiality as carriers of rabies. Latterly, he extended this valuable work to other animals.

He was an artist - literally so - and would on occasion speak of the pleasure gained from holidays spent painting. Harmony between aesthetic and practical needs excited his admiration and he would enthuse over the ergonomic positioning of the grips fashioned by prehistoric craftsmen on stone-age tools

he had found. As with his own work, effective design was a source of pleasure.

It is true, when confronted by an alternative approach which did not agree with his 'feel' for the problem in hand he could on occasion prove an outspoken though always good-natured colleague. That said, though, it was hard not to get swept along with his enthusiasm when he explained his work (sometimes after a ritual bout of private grumbling beforehand) to visitors. His knowledge and experience were always available for the asking. 'Have a word with Gordon Ashwell' was more often than not the prelude to a fresh insight into one's problem. It is hard to realise that can no longer be so.

The funeral was attended by old friends from the Laboratory, and we extend to Mrs. Ashwell and his family our deep sympathy.

A CHESS PROBLEM

A few weeks ago, while glancing at a colour-supplement, I came across an advertisement whose centre-piece was a chess board. Nothing unusual about this, you may say; chess, backgammon and similar games are often used to lend an air of spurious respectability to products of doubtful worth. This, however, was different: the board was correctly positioned; the pieces were of a practical design; and there were no 'players' in Ruritanian military costume or low-cut evening gowns. And, to my amazement, there was also a score-sheet, containing the moves of a game in Russian notation some of which were obscured by captured pieces. Here was a challenge; was it possible to reconstruct the entire game from the given information? It was indeed; the game, in fact, proved to be most entertaining; and, although I do not know who were the players, I should guess that White was Tal, the former world champion.

In order to enable readers to discover the game for themselves, I have converted the moves into English notation in such a way that no information has been lost; ? denotes an unspecified piece. Solution in the next issue.

Position

White : K on QB1; Q on KR1; B on K2; N on K4; P on QR2, QN2, QB2.

Black : K on KB5; Q on K4; R on QR1, KR1; P on QR2, Q5, KB3, KR4.

Moves : 5 KPXQP KPXQP 21 R-KB1 BX?(Q7)ch
6 B-QN5 B-Q3 22 NX?(Q2) Q-Q5
7 QPXBP Q-K2ch 23 RX?(KB5) KX?(KB4)
8 Q-K2 BX?(QB4) 24 B-Q3ch K-KB5
9 N-QN3 B-QN3 25 Q-Q6ch Q-K4
10 N-K5 K-KB1 26 Q-QN4ch P-Q5
11 B-KB4 Q-KB3 27 N-K4 K-KB4
12 B-KN3 P-KR4 28 QX?(QN7) K-KN5
13 P-KR4 29 B-K2ch KX?(KR5)
14 0-0-0 30 P-KN3ch K-KR6
31 N-KB2ch K-KR7
32 Q-KR1ch KX?(KN6)
33 N-K4ch K-KB5
34 Q-KB3 mate

D. H. Long

THE DITTON PARK GHOST

Ditton Park, an imposing mansion at Langley which is now a suburb of the town, was built in the nineteenth century. It now houses the Admiralty Compass Observatory. Extensive alterations were made at the time of the Admiralty's take-over, and mild excitement was caused by the finding of some mediaeval church plate. One or two people must have wondered at the time whether there had been another, older house on the same site, but there were no records and no great interest seems to have been taken.

Then, a few years later, a gardener working in the park looked up to see a funeral procession pass by with slow solemnity a hundred yards or so away from him. He dropped his spade and stared, seeing a coffin shouldered by six black-clad figures followed by a coach and then a shuffling retinue of mourners. As he watched, they vanished from his sight.

It is usually difficult to gain credence with that sort of a tale, but the gardener had no reputation for oddness or for telling a tall story, and his employers were sufficiently intrigued to give orders that some exploratory digging should be done on the spot where the procession vanished. The digging revealed the stone foundations of a mediaeval chapel.

From: 'Ghosts along the Thames'
Anne Mitchell -
Spurbooks Ltd.

THE NAME OF THE GAME

or

Who Do They Think We Are ?

Fisical Officer
National Aeronautics & Space Adm.
Langley.

African Labs. Attn. Mr. Sham
Ditton Park.

Applection Lab.
(Science Res. Council)
Appleton
Ditton Park.

Radio & Space Research Station
D. H. Long
Datchet

Radio & Space Research St.
3 Buckss
Sliugh.

Science Research Ltd.
Apareton Labs.

Appleton Laboratory
Slugh
Buckup.

LETTER TO THE OUTSTATIONS

Dear Colleagues,

Hard times at home, in a National sense, are bound to have their counterpart in our own parish. For all that, though, cheerfulness keeps breaking in. We may take pleasure in seeing that Britain can still build it, at least so far as fire escapes are concerned. This useful adjunct to the building has, to the layman anyway, been an unconscionable time a-coming. For months there was nothing save a door leading, without benefit of steps, to a long drop to the ground and to much speculation.

It could not be said for certain that all second floor staff had been issued with parachutes and a quick (mental) survey of the charms of the ladies in that region disclosed none with hair sufficiently long to play the part of a sort of Fire Service Damsel-in-distress. Such are the wiles of humanity, though, that there just may have been a hairpiece (false, Mk.I, long, fire escape) issued and locked away securely in somebody's handbag. This we shall never know. to ropes of knotted bed-linen, these articles cannot be conceived to exist in such a region of industry and high moral tone as our upper corridor area. One can only suppose the fire risk to have been administered away by peculiarly powerful spells until such time as the escape was ready.

Now it is. No flimsy staircase this, open to the elements and usable, when nicely rusted over, for a shoot-out sequence in a TV thriller. They have builded upon a rock - well, sort of - actually they had to build the rock first, with concrete, feet thick. Then came the escape itself and, finally, the whole tastefully encased in a tower of glass; there's posh for you. Protected thus against the elements of fire and water all may proceed smoothly and securely.

Speculation, however, does not die readily. The solution to the principal problem has, of itself, proved seed for further fancies. They say - what say they? - well, this and that, you know. Two of the suggestions being that the new edifice will form a useful landing stage in the event of severe flooding, or that it is a pilot exercise for a new tower of Babel wherein staff may be conditioned to work in a multilingual inter-european atmosphere. At least the glass brings light and does away with gloomy Piranesi-type stairs upon stairs leading up to darkness and the void.

Like I said, cheerfulness breaks in. The correspondent who wrote to us at 'Backup', did rather well, contriving with that address not only to admonish but to add an air of encouragement; sufficiently so for me to be able to wish you all a Merry Christmas and Happy New Year from

Yours sincerely,

The Editor.

REPRINTS DECEMBER 1975

- A. 1152 P.G. Davies Attenuation by cloud and rain on earth-sun
paths at 12 to 71 GHz.
Electronics Letters. Vol.2. No.22. 1975.
- A. 1178 M.F.K. Abur-Robb A Theoretical evaluation of the lunar
E. Dunford tidal variations in the ionospheric F2-
layer.
Planet Space Science 23. 1071-1080 (1975).

INTERNAL MEMORANDUM

N I L