

6388 St. Hubert Street,
Montreal. P.Q. Canada.
January 9th 1948.

Mr. Grote Rebur,

Dear Mr. Rebur,

I have read some notes in the Science section of "Time" regarding your experimental research into Galactic Noise, and I am wondering whether the work done in England during the last few years, by the National Physical Laboratory, and Admiralty Signal Establishment, is known to you.

I assisted in the latter organisation in Galactic Noise experiments in connection with Radar on H.M. Ships, on frequencies of 40, 60, 90 and 240 mcs. and it is now well known the effect of Galactic noise on reception, using these frequencies, and knowing the beam width of the aerial, and its direction and orientation. I worked with L.A. Moxon, whose reports you may have read, and also in conjunction with the National Physical Laboratory and the Clarendon Laboratory, Oxford.

For detecting Galactic noise on 200-240 mcs. we used a 32 element array, actually an American Radar aerial type SK, and a special set up known as the "Dicky" method, so named after the Physicist who introduced it. The reason for the special set up on 240 mcs. is as you probably know due to the very small amount of Galactic noise received on this frequency, enough to deteriorate the receiver performance by about 2 dbs. On 90 mcs. and lower it is much greater and therefore easier to record, although perhaps not so accurately, owing to the difficulty in getting narrow enough beam widths on the lower frequencies. On 90 mcs. aerial temperature is increased at certain times to about 10,000 degrees Kelvin and for a receiver whose sensitivity is measured as a noise factor, say 5 dbs, the deterioration in Reception sensitivity is a matter of about 11 dbs. This would be equivalent to a reduction in Transmitter power by a factor of 4.

I have found Galactic Noise experiments to be extremely interesting.

I was actually employed in A.S.E. as an Experimental Officer, and should you be requiring any Technical assistance, I should be glad to offer my services, as right now I am seeking employment, having very recently come out to Canada from England.

I shall follow any reports of your work with interest, and should be very pleased to hear from you.

With good wishes.

Yours faithfully,

W.P. Dolphin

(W.P. Dolphin).

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Mr. Grote Rebur,
c/o. National Bureau of Standards.
Washington. D.C.
U. S. A.