

13th May 1957
G.P.O., Hobart
Tasmania, Australia

Mr. Charles H. Schauer
Research Corporation
405 Lexington Avenue
New York 17, New York

Dear Hap:

Thank you for your letter of April 1st. The graph paper arrived down here on April 2nd. This is excellent service, much better than I can get buying things in Sydney. Incidentally, the desired paper was not available in Sydney. There are a few other small items which perhaps you could take care of below.

Along with the good luck is usually some bad. I got the two additional antennas put up quite some time ago for a total of four wires across the valley. Before much could be done with them a very objectionable power line disturbance started at 452pm on a holiday afternoon. Apparently some blokes went out rabbit hunting and couldn't find any rabbits. Then getting tired, they started shooting at insulators. Somewhere a high voltage wire came partially down and began arcing. The better part of two weeks were spent hunting for this disturbance with members of the power commission. We never did find it, but by opening all the nearby circuits, we were able to demonstrate that the trouble was over ten miles distant to the south. Beyond this is a more populous region approaching Hobart. While wondering what to do next, a big wind came and blew down three of my four wires. Two broke at the weak link. These we promptly put back up. Then, lo and behold, the power line disturbance was also gone as the wind seems to have blown it to a complete failure. The third antenna apparently was made of substandard wire as it tore to shreds and had to be completely rebuilt with all new material which caused quite a delay, but it is back up now and all four are working again. Recently, another power line disturbance of much weaker variety to the north has come on. It is not particularly objectionable but is probably worth hunting down, partly to find out what it is and more important to find out just how far these kind of things radiate. This kind of information is practically nil but will be of increasing importance in the future of radio astronomy. I have a hunch the AUI boys are going to have some eye openers in their West Virginia valley.

The first draft of my manuscript is typed and most of my pictures are drawn or charts assembled. Perhaps I can get the article completed and on its way to the editors by the end of the month. With all the above, not much time has been spent on my 170kc apparatus, so still no results are available at this frequency. However I will get some data before I fold up, mainly to find out what circumstances are and see if anything unexpected turns up. The success of 170kc observations mainly depends upon using big antennas, which I now have and it would be a mistake not to give this frequency a try while the antennas are available. Two years ago I brought with me some large loading coils. These are from old transmitters. Recently I tried them out and find

that I can tune my antennas down to 50kc by their use. Thus it will be possible to make observations down to this frequency, if such should be desirable at a future time. Presently, I have electronic equipment whatever to work at 50kc. no

There is a Russian article by A.A. Kolomenski entitled "Radiation Emitted by a Uniformly Moving Electron in an Electron Plasma and a Magnetic Field". It is related to the probable 520kc energy produced by the aurora. A translation has been made by Consultant's Bureau, 152 West 42nd Street, New York 36, and printed in their publication Soviet Physics (Doklady), vol.1, No.1, p.133 (1956). Please have them send one copy to me here by sea.

The University is in process of building a new school and they may want to re-equip their engineering laboratories with American apparatus. Please call up Westinghouse and General Electric and ask them to send their latest descriptive literature on Laboratory Apparatus for Educational Institutions, by sea directly to

Mr. John Heard
Electrical Engineering Department
University of Tasmania
Hobart, Tasmania, Australia

A few other things have caught his eye. These may be secured thru General Electric from their Nela Park lamp works.

2	"Plan It Yourself" lighting layout kit @ 1.75	3.50
100	Sheets extra graph paper for above @ .02	2.00
3	Sets pressure sensitive labels @ .50	1.00
1	"How to decorate & light your home"	.35
1	"See your home in a new light"	.35
	Total	<u>7.70</u>

If convenient, please have G.E. send these direct via sea to Mr. Heard. I'm sure he will be much appreciative. Put the charge on my account.

In regard to finances; another 2500 dollars sent down here on an air mail transfer to my account at the National Bank of Australasia at Hobart should finish up this adventure. I'll make you an accounting of the whole affair when I get back. Thanks in advance!

It is my intention to return in August or September on one of the new Matson boats, depending upon what is available.

Best regards,

Grote
Grote Reber

Ported NYC 3 June
Arrive Hobart 15 July