



## COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANIZATION

## DIVISION OF RADIOPHYSICS

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REFER TO A.1/3/1(a)

UNIVERSITY GROUNDS,

CITY ROAD,

CHIPPENDALE, N.S.W.

4th July 1952

Mr. G. Reber,  
WAILUKU, MAUI,  
Territory of Hawaii, U.S.A.

Dear Reber,

I was very pleased to hear from you again from Wailuku (your letter of June 22).

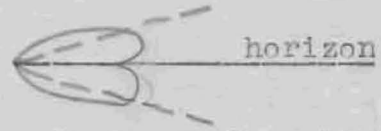
I am sending you reprints of the papers which you requested and shall see that you continue to get reprints at your new address.

I had written you a week or so previously at your Wheaton address, reminding you of U.R.S.I. and saying I hoped you might be able to come here in August. I enclose another notification card in case you may be able to attend but have not got my previous letter.

I was most impressed by the beautiful post-card you sent me. I regret that I cannot myself add anything to the information you have on refraction. It is possible that Bolton may be able to from his experience. I am passing on your letter to him, but no systematic studies have been made here.

Refraction is one difficulty you will meet. Sea waves, I do not think, will enter the picture. There is, however, an effect due to earth curvature which might be troublesome. It is discussed by Stanley and Snee (Aust.J.Sci. Res. A 3, 234 (1950).) in an appendix. You probably know of it already but I thought I ought to mention it. It is simply due to the reflected ray being weaker owing to reflection at a curved surface. It looks to me as if at your height the sea will act like a wall over the tip of which you see the source. If so, we need to follow this up with a few diffraction computations. It is a most interesting set-up. Incidentally, if the effect is as set out and blocks interference measurements for the first 5° or 10°, you could still use it at high angles

of elevation using a relatively small bandwidth. If the aerial then lets you down you might even employ one with a null directed horizontally and two equal lobes one above and the other below the horizon like this



I hope that we may have the pleasure of seeing you in August.

Yours sincerely,

*J. L. Pawsey*  
(J.L. Pawsey)