

April 23rd, 1950  
P.O. Box 4868  
Cleveland Park Station  
Washington, D.C., U.S.A.

Via Air Mail

Dr. J. L. Pawsey  
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University Grounds  
Chippendale, New South Wales  
Australia

Dear Pawsey:

I have recently received your letter of March 20th, a letter from Stanley of the 21st and one from Bolton in England of April 3rd plus manuscripts of three articles upon Galactic Radio Waves. Thanks very much for this wealth of material. So far, I've only been able to look at the figures, but will study it all in detail soon.

Figure 6 of Part II and the comments upon "Fluctuations" are most interesting. Apparently this difficulty is least bothersome when the ionosphere is most tenuous and has had a chance to reach its best equilibrium in the early morning. Further observations upon this phenomenon as we progress toward a minimum of solar activity will be very desirable. The alternative explanation involves turbulence in the troposphere. This will also be at a minimum in the early hours of the morning after the air has had a chance to reach equilibrium with a cool earth. The phenomenon should be much less pronounced over sea than over land and will not be dependent upon cycles of solar activity.

Since writing some months ago, I have studied up on the subject of reflections from a curved earth (divergence) and sea reflection. A very good book upon sea conditions is entitled "Wind Waves at Sea, Breakers and Surf". I am sending by parcel post an extra copy to you since it may not be available in Australia. If convenient, I'd appreciate learning more about your experiences at 25cm using the sea as a mirror. Plates IX thru XVI indicate that you are not at the best place on earth to do this type of experiment, but there should be some calms with low seas and swells.

Since joining NBS most of my efforts have been upon the construction of equipment, so very little has been published. A reprint from Sky and Telescope is enclosed. The big mirror has been turned down at NBS. However I think I can find other people who are more enlightened to underwrite the expense. When this time comes, I wish to be able to make a good sound recommendation upon where it should be installed.

Cordially yours,

Grote Reber