28th October 1966
C. S. I. R. O.
Stowell Avenue
Hobart, Tasmania
Australia

Dear Jinny:

Your good letter of the 16th arrived on the 27th. I'm always pleased to learn about affairs in Wheaton. You and Molly seem to have the itching foot. I'm glad your trip to Europe was so well timed. People here go back and forth to U.K. Few can recommend english weather. I suspect touring England is one thing. Living there is something else. Most people seem happy to get back here. Really, Tasmania is quite a civilized place. The scientific situation is as follows.

We passed thru solar activity minimum during October 1964. Since then solar activity has been rising gradually at first and more rapidly recently. Observing conditions have slowly deteriorated. Useful data has practically ceased coming thru the ionosphere. Thus my experiments here are rapidly coming to an end. Fortunately during 1963, 1964 and 1965 I secured large quantities of new and important results. In retrospect, I came to the right place at the right time and did the right thing. It has paid off handsomely. Attached to this letter are three aerial fotos of my installation at Bothwell.

A is looking north-east
B is looking south-east
C is closeup with sun exactly in west.

The self supporting poles are 67 feet above ground and 10 feet below ground. Each weighs 2½ tons. Spacing is 220 feet north-south, and 440 feet east-west. Diameter of array is 3520 feet. Operating frequency is 2085 kilocycles.

According to Oppenheimer, "If the enquiry is well conceived, it will not merely come up with a new answer; it will come up with something far more valuable, which is a new question, one which had not been thought of before." My experiments here have been prolific on these matters. I have surveyed the southern sky, the Magellanic Clouds, and especially the region around the center of the Milkyway. Much more could be done at a future time. I will leave that to others. All these things have pointed up the next most important questions. What is the nature of the sky near the periphery of the Milkyway; and how does the north galactic pole compare with its southern counterpart? Observations to elucidate these matters must be made from the northern hemisphere.

Considerations of the earths magnetic field and the ionosphere indicate that the best place to conduct the observations will be within a few hundred miles of the agonic line where the compass points true north and between 40° and 45° latitude. This line runs down eastern Wisconsin and the western shore of lake Michigan. Consequently the most auspicious locations appear to be Wisconsin or Lower Michigan. Lower Minnesota or Lower Ontario might also be useful in same manner Tasmania has been useful. The best place in this part of the world would be about 400 miles west of here in the Southern Ocean, obviously not practical.

I plan to fold up my affairs here at end of next southern summer and return to U.S.A. Such gear as I elect to salvage will be sent to New York and stored by the Research Corporation. During the northern summer of 1967 I will be touring the region mentioned above looking for a suitable place to make a new, larger, more elaborate and elegant installation. Where

I ultimately light will depend upon where I can secure the use of a few square miles of flat waste land. I have picked out on an assortment of maps over a score of possible places to visit. Probably there are other better places not apparent on the maps. Only visual inspection, measurement and inquiry can elucidate the matter.

If you are not on a world tour next May, I will stop in Wheaton and catch up on the latest gossip. My adventures seem to have a similarity to the parable "Acres of Diamonds".

Please remember me to Jack and your father.

Merry Christmas!

Grote

Grote Reber

also out Early Radio Astronomy at Wheaton Illinois