CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENA

NORMAN BRIDGE LABORATORY OF PHYSICS

June 15, 1937

Mr. Grote Reber,
212 West Seminary Avenue,
Wheaton, Illinois.

Dear Mr. Reber:

Surely it would be important to get more data on the Jansky radiation. The program you mentioned is exciting and I would like to urge you to include observations in the neighborhood of 15 meters if it is at all feasible. The difficulty out here was to get a location where the background was low enough. That meant prospecting around the mountains and desert with a portable antenna. It was most unwieldy and in the end had to be abandoned for lack of funds.

The calculation of Whipple and Greenstein was interesting although I had already convinced myself about that point by much the same argument. My own contribution to the subject is the suggestion that quantum electron jumps in the highly ionized instellar dust particles give the proper wavelength. The size of the dust particles is known roughly and the calculation of the quantum states is simple. Such radiation is little known and there is no experimental background available to support my ideas. I am now trying to estimate the intensity to be expected from the Milky Way. At the moment it seems to me to be strong enough to account for Jansky's observations. My own opinion is that at present it would be most important to get additional information about the intensity and spectral distribution of the radiation. This would require an apparatus of exceptional sensitivity and I feel it would be well to aim for high sensitivity even at the cost of angular resolving power.

If you get any data - positive or negative - it will be of highest interest to me. Moreover, Professor Potapenko here is also interested. We have been wondering at what laboratory you plan to do your experiments? Do you ever visit California?

Sincerely yours,

R. M. Langer

RML:HL

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