G. Reber

14.1/904

November 10, 1949

Dr. Ralph Williamson
David Dunlop Observatory
Ontario, Canada

Dear Ralph:

The matter of point sources of radio waves has been passing through my mind in a rather general way for some time. One possibility seems to be the very large stars of average mass and low temperature. They are often associated with normal stars in binary groups. These large bubbles of gas may be 100 times the diameter of the sun and have a density of one millionth. Since the various parts of the bubble of gas will rotate at different angular velocities a churning action will be present. The radiation from the normal type companion star will provide energy to ionize the gas. Thus all the necessary parts of a traveling wave-type generator are present on a grand scale.

A cursory look through the literature reveals three such possibilities; namely, Epsilon Aurigae, Zeta Aurigae, and Beta Lyrae. Unfortunately, none of these objects agree in position with known radio stars. I am wondering whether or not you care to look into the matter in a quantitative sort of way. Perhaps you know of other such stars better adapted to generate radio waves.

Sincerely yours,

G.R.

Grote Reber, In Charge
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GR:hjb

cc: Dr. Brode