

20th November 1956
G.P.O., Hobart
Tasmania, Australia

Dr. G. C. Southworth
Bell Telephone Laboratories
463 West Street
New York 14, New York

Dear Dr. Southworth:

The reprint of your article in Scientific Monthly arrived here some time ago. Thanks very much. The story you tell is well presented and long overdue. Certainly it should be an inspiration to others working in fields about which little is known.

As you mention in the article, Jansky was sufficiently alert to realize that he was observing a new and interesting set of phenomena, sufficiently thorough to follow the observations to a logical conclusion and sufficiently energetic to carry on this work which was considerably beyond the call of duty. These are a combination of qualities which is exceedingly rare in mankind. I can't help wondering how many other natural phenomenon have repeatedly slipped thru peoples grasp merely for lack of the proper man being present.

I have shown your article to quite a number of people and received a number of requests for copies. If any are still on hand, I'd appreciate a dozen or so for giving away.

Enclosed is a reprint of my last years observations.

*J.G.R.
March 56,*

This year I have some long wires strung across a valley about 30 miles north of Hobart. Observations are made night and day automatically at 520kc. So far quite a variety of results have been obtained and are far from understood. However there seems to be some celestial radio waves coming thru by a longitudinal mode of propagation. Essentially this scheme envisions a ray of cosmic static being converted from transverse (space condition) to longitudinal at the top side of the ionosphere where the critical frequency equals the operating frequency; then gliding thru the ionosphere along a line of the earths magnetic field rather similar to a train on a track; finally below the E region the ray gets off the track, is reconverted to a transverse wave and comes down to earth horizontally polarized. So far I haven't sufficient evidence to prove this, but it looks hopeful.

Sincerely yours,

Grote Reber

P.S. You wrote an article in the ~~July~~ September 1930 issue of Proc. IRE about computing patterns of directive antennas. If you still have any extra copies I could use one to assist me in estimating the patterns of my long wires at 520kc.

G.R.