

28th July 1964

Dear Art:

Three years have elapsed since our last exchange of correspondence. Much has transpired. My installation has been operating for a year and a half at 2.1 mcs. Norman Broten has probably given you the details. Results are steadily improving as solar activity declines. Apparently I timed this adventure just right. When the critical frequencies rise again I will fold up here and return to America. It is my plan to build a much better installation there to view the northern sky during the next solar activity minimum. I have pretty clear ideas about techniques; but where to put the installation is uncertain and very important.


Last October I had an exchange of correspondence with T.R.Hartz about the Alouette satellite. He included one chart showing a series of curves of critical frequencies versus height from  $60^{\circ}\text{N}$  to  $40^{\circ}\text{S}$  at about  $70^{\circ}\text{W}$ . There was a very sharp trough giving very low criticals near  $45^{\circ}\text{N}$ . This trough is in reasonable agreement with my estimate of over ten years ago based upon ground observations. Hartz attributed this chart to G.L.Nelms. I have written to the latter twice to secure more information about the trough. How far does it extend east and west of  $70^{\circ}\text{W}$ ? How does its latitude vary with longitude? How does its position, width, depth and occurrence vary with the time of night, seasons of the year and solar activity? Unfortunately the one reply was something less than vague. I have a hunch that Nelms' group is so busy building more equipment that no time is available to make anything out of the existing data which is mostly going to waste.

As you can understand, this is a very important matter for my future experiments. The action of this trough during the coming northern winter may determine what I do next. I am wondering what is the organizational setup and what part of NASA supports Helms financially? If he reports to J.W.C.Scott, I'll take the matter up with him. However, I'd like to know something about circumstances before I do anything. Perhaps you could make some inquiries or show

this letter to Scott.

Your consideration, comments and advice will be much appreciated by me.

Best regards,

  
G. Reber

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