

13th February 1967

Dear Hap:

Thanks for your note of 21st December. Yes, I've heard considerable about McCusker's large cosmic ray installation but not seen it. Construction is still in progress. Only a trivial part of the 250 square kilometers is covered with detectors. The idea is to hunt for particles of very high energy, such as 10^{20} ev. Undoubtedly a few do exist, like one a week. The subject seems rather uninteresting.

My studies here are gradually being completed. I expect to get to NYC on 9th May. Three matters are on my agenda.

A. Purchase a car and tour around Wisconsin, Lower Michigan, and Ontario looking for a site to conduct more radio astronomy at a future date. I am sending two range finders and all the maps for this search.

B. Do some lobbying in Washington attempting to dismantle the cozy arrangement Green Bank has of soaking up nearly all the NSF radio astronomy money. I've made contact with two senators and two representatives. Please find out for me the name of the Director of the Bureau of the Budget and his address. This is going to create some unhappiness, but I've nothing to lose and perhaps something to gain.

C. Try my hand at constructing cosmic ray detectors. The cosmic ray flux I'm looking for has a density of 0.6 particle per minute per square meter area. The energy is 10^{10} ev or greater. Enclosed is a sketch. The device must have large area and low natural activity. The tank ends and most of the contents can be purchased. However I'll need facilities to assemble, bake, evacuate, fill and test these devices. I'm sending some Japanese geiger tubes for comparison.

I'm particularly interested in learning techniques of low level counting and environments. The test environment must have a very low natural activity. The lowest activity environment I've been able to find here has a flux of 560 particles per square meter per minute. It is between the pelton wheel and tail race

underneath a 60 mw vertical shaft machine at Poatina power station 500 feet underground. Perhaps you can make arrangements for me to carry out the above studies at a suitable place. Your letter of 15/4/66 mentions a Ray Davis at Brookhaven.

Please send a tourist class one way ticket (US\$649.50) Sydney to NYC. Pan Am flight 812 leaves Sydney on 8th May at 1730 and arrives L.A. on 8th May at 1655. Jennie can find a night flight which will get me into NYC between 5 and 7 am on 9th May. I'll be at your office tuesday before you open the doors.

Best regards,


Grote Reber