

December 9th, 1950  
P.O. Box 4868  
Washington, D.C.

Dear Van de Hulst:

Thanks for your letter of November 15th. I am certainly pleased to hear that you will be in this country again next summer and spring. We will be glad to have you call at NBS any time which suits your convenience.

In order to get into the Naval Research Laboratory it will be necessary to have your embassy write to the Office of Naval Intelligence, Washington 25, D.C. and request permission for an interview with Dr. J. P. Hagen and his associates. The subject matter of interview is to be specified in at least a general way such as radio astronomy and/or solar research. Also request permission to inspect and discuss equipment relating to these subjects. Since you will be in this country for several months the date is to be left open subject to mutual agreement during the period January thru July 1951. It appears that the above request will be well received and everything will be OK.

The pips I mentioned in my letter to Oort were measured at frequencies near 51,160 and 480mc. During times of solar activity the solar transients are very complex and it is necessary to properly edit the data before anything can be deduced. Only pips which had a peak amplitude of three or more times the background, were used. Also each one was carefully surveyed as to symmetry and smoothness of the sides. Thus minor pips and closely overlapping pips were in a large measure eliminated. Each of these elementary transients has a slow smooth rise and decay. It looks quite like a resonance curve obtained when the receiver response or pass band is measured. Thus it may be easily deduced that some monochromatic radiation of constant amplitude and varying frequency is being encountered. Close frequency measurements at 156 and 160mc definitely demonstrate that this is not the case. Properly chosen pips according to the above criteria show that the times of occurrence and duration at these two frequencies are precisely the same to better than 0.1 second. The amplitudes are rarely the same however. I'll be glad to go over the above and show to you our data when you arrive. In the mean time I believe that some mention of the above facts will be satisfactory in your popular article. If and when, it gets published, I would appreciate a reprint. I discussed this business with Bolton when he was here. They had done some work on it but not in detail. However he volunteered the information that these pips were all circularly polarized and were referred to in Australia as "Spot Noise".

When you are here I would like to get together with you on the subject of hyperfine spectrum of hydrogen.

Best Regards,