November 27th, 1948
P.O. Box 4868
Cleveland Park Station
Washington, D.C.

Dear Jesse:

Thanks for your note of the 23rd. The instrumental blurring (beam width of the antenna) has not been removed from any of the data except possibly the 64mc contours. Unfortunately I have been unable to determine just what they did to his observations, altho he intimates that he did something to reduce the apparent beam width of the antenna. This means he effectively increased the resolving power by some mathematical artifice. I do not understand how this can be done. The simplest thing to do is to take his contours at face value.

The contours of Jansky and Sanders were taken with antenna having beam widths of about 30° in asimuth and about 50° in altitude. The patterns had a few small nulls and some side lobes. Thus, at no time, were all the bright parts of the milkyway excluded from the antenna pattern. Consequently it seems certain that the poles of the galaxy have a very much lower surface brightness than is indicated at 20 and 60mc. The antennas used by these investigators integrated large but similar and nearly equal areas of the sky. Thus it may be inferred from these contours that the rate of decrease of surface brightness with increasing galactic latitude is larger at 60mc than at 20mc. No information may be squeesed out as to the minimum value of surface brightness at the poles.

Yes, I expect to be at New Haven after Christmas and hope to see you there. If you have any other questions I'll be pleased to try to answer them.

Best regards,

Saw Jesse on 12-30-48 at New Haven. He had some interesting pictures of Langer's original equipment. First a loop in city. Then a dipole in the desert.