

November 21, 1938  
 312 W. Seminary Ave.  
 Wheaton, Illinois

Dear Schuyler:

The results obtained from October 10th to November 4th are as follows.

		Point sources have been located at				Unknown	Unknown	Unknown
						near	near	near
Dec.	-26°	-26½°	-27°	-27½°	-26	-29	-31	
		1625						
R.A.	1713	1710	1802	1700	1704	1603	1642	
	1838	1730		1805	1710	1629		
		1730				1710		
		1813						
		1840						

These unknown Declination points were taken before a Dec. scale was marked out. Two large regions of radiation were found, each about 5° in diameter centering on Dec. -27° R.A. 1800 and Dec. -26° R.A. 2000. These positions may have a systematic error of a degree or so because I have no accurate calibration of direction but are accurate among themselves.

The maximum intensity measured is about  $3 \times 10^{-24}$  watt/sq.cm/kc. band at a frequency of 160 megacycles. This is in general agreement with my theory, however the point sources are unexplainable. Previous tests at 900 and 3300 megacycles were failures due to poor sensitivity of equipment and low level of radiation.

These point sources may be due to a type of super-giant star such as Antares which happens to fit Dec. -26½° R.A. 1625 fairly well. On 10-28-38 the moon crossed focus at approx. 1935 when quite a large dip occurred. Whether

this has any meaning or is just a coincidence remains to be checked.

On the 5th of Nov. a heavy rain flooded out the receiver. Since then it has been in process of overhaul to make water tight and increase electrical sensitivity.

Last winter Greenstein told me Whipple of Harvard Astronomy department was working on the problem. You might look him up and see what he has done. Perhaps you can find some good photographs of sky and see if any unusual objects are located near the above position. I am enclosing a photo I took of machine with drum straight up. Most of those you took came out blurred because you punched the button too hard.

Yours truly,

Grote Reber