prising given that the spectrum is flat between 2695 and 8085 MHz, and in interferometric observations using the 35-kilometer baseline indicate that the source is smaller than 0.1" in size (1.6 pc at 3.2 Mpc). Such properties are characteristic of other variable extragalactic radio sources, but this is the first detection of variability in a normal spiral galaxy. This work was supported in part by grants from the National Science Foundation.

*The National Radio Astronomy Observatory is operated by Associated Universities, Inc. under contract with the National Science Foundation.

21.07.10 Comparison between VLBI and IPS Observations of Compact Sources. G. M. Beach, N. R. Vanadnberg*, W. C. Erickson, T. A. Clark, Univ. of Maryland and Goddard Space Flight Center - Recent experiments using very long baseline interferometry (VLBI) techniques have been performed at 74 MHz using telescopes at Arecibo, NRAO, and Sugar Grove. The flux densities and diameters of the small components of 44 radio sources were measured with an angular resolution (fringe spacing) of 0.3 arcsec and a sensitivity 

(5σ rms) of 0.3 mJy. These results have been compared with those of a recent source survey by Readhead and Hewish (1974, Mem. Roy. Astr. Soc. 78, 1) who used interplanetary scintillation (IPS) techniques. For the sources common between the two surveys, both the flux densities and source diameters are in general agreement to within the error limits of both experiments. To make the comparison, it was assumed that the observed sizes are due to interstellar scattering and that the scaling between 74 and 81.5 MHz goes as wavelength-squared. For several sources, a marked difference exists between the IPS and VLBI measurements of flux density and source size. For most of these sources, the discrepancy could be explained in terms of intrinsic source structure. This argument fails, however, in the case of the Crab nebula pulsar for which the VLBI flux density is about a factor of two smaller than that measured in the IPS survey whereas the apparent sizes agree.

*Presently at National Radio Astronomy Observatory.