1096-42-1403 **Michael Goldberg*** (goldbeml@ucmail.uc.edu), Department of Mathematical Sciences, University of Cincinnati, French Hall - West, Cincinnati, OH 45221-0025. *Bochner-Riesz estimates for functions with vanishing Fourier transform.* Preliminary report.

The Bochner-Riesz multipliers are characterized by a nonsmooth transition at the unit sphere, therefore one can expect better behavior when they are applied to functions whose Fourier transform vanishes on the unit sphere. We prove a range of improved $L^p \to L^q$ estimates in $\mathbf{R}^n$, $n \geq 2$, for Bochner-Riesz multipliers acting on such functions. The problem arises naturally in applications including the uniqueness of solutions to the Helmholtz equation, or the absence of embedded resonances for Schrödinger operators with potentials in $L^r(\mathbf{R}^n)$. (Received September 15, 2013)