1038-62-140 Chunfeng Huang* (huang48@indiana.edu), Statistics House, 309 North Park Ave., Bloomington, IN 47408, Tailen Hsing (thsing@umich.edu), Department of Statistics, University of MIchigan, 460 West Hall, 1085 South University, Ann Arbor, MI 48109, and Noel Cressie (ncressie@stat.ohio-state.edu), Department of Statistics, 1958 Neil Ave, 404 Cockins Hall, The Ohio State University, Columbus, OH 43210. Spectrum Estimation for Isotropic Intrinsically Stationary Spatial Processes. Preliminary report.

In the study of isotropic intrinsically stationary spatial processes, the spectral density function is a parameter of interest. A new spectrum estimation is formalated in terms of solving a regularized inverse problem. The regularized inverse problem is solved in a reproducing kernel Hilbert space as a constrained optimization problem. (Received February 05, 2008)