Abstract Submitted for the DPP11 Meeting of The American Physical Society

Spatial Intermittency in Electron Magnetohydrodynamic Turbu-

lence BHIMSEN SHIVAMOGGI, University of Central Florida — Spatial intermittency in the energy cascade of electron magnetohydrodynamic (EMHD) turbulence is considered. A multi- fractal model for the energy dissipation field is considered to determine intermittency corrections to the scaling behavior in the high-wavenumber (hydrodynamic limit) and low-wavenumber (magnetization limit) asymptotic regimes of the inertial range. Extrapolation of the multi-fractal scaling down to the dissipative microscales does seem to confirm in these asymptotic regimes a dissipative anomaly previously indicated by the numerical simulations of EMHD turbulence.

Bhimsen Shivamoggi University of Central Florida

Date submitted: 17 May 2011 Electronic form version 1.4