Abstract Submitted
for the DFD08 Meeting of
The American Physical Society

Magnetohydrodynamic Turbulence: Generalized Formulation and Extension to Compressible Cases BHIMSEN SHIVAMOGGI, University Of Central Florida — A general framework that incorporates the Iroshnikov-Kraichnan (IK) and Goldreich- Sridhar (GS) phenomenologies of magnetohydrodynamic (MHD) turbulence is developed [1]. This affords a clarification of the regimes of validity of IK and GS models of MHD turbulence. This formulation is generalized further to include compressibility effects. [1] B.K. Shivamoggi: Ann. Phys., vol. 323, p.1295, (2008).

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Date submitted: 21 Jul 2008   Electronic form version 1.4