

Abstract Submitted  
for the DPP14 Meeting of  
The American Physical Society

**Electron Magnetohydrodynamic Turbulence: Universal Features<sup>1</sup>**

BHIMSEN SHIVAMOGGI, University of Central Florida — The energy cascade of electron magnetohydrodynamic (EMHD) turbulence is considered (Shivamoggi [1]). Several basic features of the EMHD turbulent system are found to be universal which seem to transcend the existence of the characteristic length scale  $d_e$  (which is the electron skin depth) in the EMHD problem—

- *equipartition* spectrum,
- Reynolds-number scaling of the dissipative microscales,
- scaling of the probability distribution function (PDF) of the electron-flow velocity (or magnetic field) gradient (even with intermittency corrections),
- *dissipative anomaly*,
- *critical exponent* scaling.

[1] B. K. Shivamoggi: arXiv:1105.3741, (2014).

<sup>1</sup>This research was supported in part by NSF grant No. PHY05-51164.

Bhimsen Shivamoggi  
University of Central Florida

Date submitted: 08 Jul 2014

Electronic form version 1.4