

Abstract Submitted
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Noise in an Electron Glass, Amorphous Indium Oxide STEPHEN ARNASON, University of Massachusetts Boston — Amorphous Indium Oxide is a material that manifests a rich spectrum of physical phenomena. It undergoes both the disorder driven and the magnetic field driven superconductor to insulator transitions. In addition, in highly disordered samples, it shows electron glass behavior, where correlations amongst the electrons leads to memory and aging effects. It is hypothesized that this glassy behavior is the consequence of a hierarchy of multielectron relaxation processes. To study this hierarchical relaxation we are measuring conductance fluctuations in samples in the glassy regime, where the spectrum of fluctuations is related to the relaxation processes, leading to a $1/f$ type of spectral dependence.

Stephen Arnason
University of Massachusetts Boston

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