

Abstract Submitted  
for the MAR07 Meeting of  
The American Physical Society

**Fluctuations and Glassy Behavior in the 2D Superconductor-Insulator Transition in Granular Bismuth**<sup>1</sup> KEVIN PARENDO, SARWATAN, ALLEN GOLDMAN, University of Minnesota — The superconductor-insulator transition has been investigated in granular, amorphous bismuth films. The system's dynamics have been investigated at various levels of disorder by incrementing film thickness and measuring voltage fluctuations. In insulating films in which local superconductivity was not evident, the first power spectra had  $1/f^2$  frequency dependences. In films that exhibited local superconductivity, the spectra had weaker frequency dependences. In a film with low enough disorder, the resistance had a very weak temperature dependence below 1.5 K and non-ergodic behavior and strong fluctuations were observed below 400 mK. The variations of the first and second power spectra with disorder and temperature will be discussed.

<sup>1</sup>This work was supported by the National Science Foundation under grant no. NSF/DMR-0455121.

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Date submitted: 20 Nov 2006

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