

Abstract Submitted  
for the MAR16 Meeting of  
The American Physical Society

**Resistance Fluctuation Spectroscopy of Charge Stripes and Intertwined Orders in the Phase Diagram of  $\text{La}_{2-x}\text{Ba}_x\text{CuO}_4$** <sup>1</sup> ADAM WEIS, MOUNIR FIZARI, DAVID HAMILTON, AZTON WELLS, JUSTIN LANE, University of Illinois at Urbana-Champaign, SO RA CHUNG, Belmont University, PATHIKUMAR SELLAPPAN, WALTRAUD KRIVEN, DALE VAN HARLINGEN, University of Illinois at Urbana-Champaign — The unusual phase diagram of  $\text{La}_{2-x}\text{Ba}_x\text{CuO}_4$  (LBCO) near  $x=1/8$  doping suggests a complex intertwined relationship between high-temperature superconductivity, charge stripes, spin order, and phase coherence. The charge stripe state's short-range conductance anisotropy may be observable as fluctuations in resistance. In thin film LBCO devices grown by pulsed laser deposition, our time-resolved resistance measurements have revealed an onset of resistance noise at dopings and critical temperatures consistent with charge stripes. The phase diagram of LBCO is explored by comparing the noise onset signature of charge order to measurements of superconductivity, the Hall effect, and other phenomena. I will briefly discuss the relevance of our results in LBCO thin films and crystals to a proposed "pair-density-wave" state near  $x=1/8$ .

<sup>1</sup>This research was supported by the DOE-BES under grant DE-SC0012368, through the Frederick Seitz Materials Research Laboratory at the University of Illinois at Urbana-Champaign. SRC was sponsored by NSF-REU 13-59126.

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Date submitted: 06 Nov 2015

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