

Abstract Submitted  
for the MAR15 Meeting of  
The American Physical Society

**Mapping the Striped Phase Diagram of  $\text{La}_{2-x}\text{Ba}_x\text{CuO}_4$  with Resistance Fluctuation Spectroscopy**<sup>1</sup> ADAM WEIS, AZTON WELLS, JUSTIN LANE, University of Illinois at Urbana-Champaign, SO RA CHUNG, Belmont University, PATHIKUMAR SELLAPPAN, WALTRAUD KRIVEN, DALE VAN HARTLINGEN, University of Illinois at Urbana-Champaign —  $\text{La}_{2-x}\text{Ba}_x\text{CuO}_4$  (LBCO) is an exceptional high-temperature superconductor in which, near  $x=1/8$  doping, superconductivity is suppressed and ‘striped’ charge order emerges. The charge stripes cause short-range conductance anisotropy that may be observed as fluctuations in resistance. In thin film LBCO devices grown by pulsed laser deposition, we measure time-resolved resistance as a function of bias current, temperature, and doping. As is consistent with charge stripes, the resistance noise exhibits a critical onset temperature and suppression at high currents. Combining resistance fluctuation spectroscopy with combinatorial laser deposition techniques, we are able to tune the doping of LBCO and map its phase diagram.

<sup>1</sup>This research was supported by the DOE-BES under grant DE-FG02-07ER46453, 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: 13 Nov 2014

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