

Abstract Submitted  
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**Dissipation in Nanostructured Superconductors** SERENA ELEY,  
JAMES ECKSTEIN, NADYA MASON, University of Illinois Urbana-Champaign  
— Decoherence due to dissipative coupling to an environment is a topic of both  
fundamental and practical interest. To study the interplay between coherence and  
dissipation, we have fabricated planar arrays of proximity-coupled superconducting  
islands on metallic substrates. The superconducting islands are well-understood  
coherent systems with long-range electron interactions, while the intervening normal  
metal channels introduce known dissipation into the system. We will present results  
of low-temperature transport measurements of these systems, where we analyze the  
effects of dissipation by changing the island sizes and spacings.

Serena Eley  
University of Illinois Urbana-Champaign

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