

Abstract Submitted  
for the MAR11 Meeting of  
The American Physical Society

**Dynamical conductivity at the dirty superconductor-metal quantum phase transition**<sup>1</sup> J.A. HOYOS, Universidade de São Paulo, ADRIAN DEL MAESTRO, Johns Hopkins University, BERND ROSENOW, University of Leipzig, THOMAS VOJTA, Missouri University of Science and Technology — We study the transport properties of ultrathin disordered nanowires in the neighborhood of the superconductor-metal quantum phase transition. To this end we combine numerical calculations with analytical strong-disorder renormalization group results. The quantum critical conductivity at zero temperature diverges logarithmically as a function of frequency. In the metallic phase, it obeys activated scaling associated with an infinite-randomness quantum critical point. We extend the scaling theory to higher dimensions and discuss implications for experiments.

<sup>1</sup>Financial support: Fapesp, CNPq, NSF, and Research Corporation

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Date submitted: 14 Dec 2010

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