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**A Theory of the Quantum Metal to Superconductor Transition In Highly Conducting Films** PAUL ORETO, STEVEN KIVELSON, Department of Physics, Stanford University, BORIS SPIVAK, Department of Physics, University of Washington, Seattle — Treating the inhomogeneous solution of the BCS mean-field equations as the saddle point of an effective quantum action, we derive the theory of the superconductor to metal transition in films under the conditions in which the critical resistance is small compared to the quantum of resistance. The present results are applicable to the magnetic field driven transition in MoGe films. It is also applicable to the transition in zero field in a weakly coupled d-wave superconductor, which may in turn be a useful caricature of a cuprate high temperature superconductor.

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