

Abstract Submitted  
for the MAR05 Meeting of  
The American Physical Society

**On the magnetization of two-dimensional superconductors** VADIM OGANESYAN, Princeton University, DAVID HUSE, Princeton University, SHIVAJI SONDHI, Princeton University — We calculate the magnetization of a two-dimensional superconductor in a perpendicular magnetic field near its Kosterlitz-Thouless transition and in the low temperature algebraically ordered phase. We find that the critical behavior is more complex than assumed in the literature and that, in particular, the critical magnetization is *not* field independent as naive scaling predicts. We compare our analysis with the data on the cuprates.

Vadim Oganessian  
Princeton University

Date submitted: 29 Nov 2004

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