On the magnetization of two-dimensional superconductors VADIM
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AJI 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.

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