Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Lower critical field, anisotropy, and two-gap features of LiFeAs KALYAN SASMAL, Department of Physics and TCSUH, University of Houston, Houston, Texas 77204-5002, USA, B. LV, Z. TANG, Department of Chemistry and TCSUH, University of Houston, Houston, Texas 77204-5003, USA, F. WEI, Y. XUE, Department of Physics and TCSUH, University of Houston, Houston, Texas 77204-5002, USA, A. GULOY, Department of Chemistry and TCSUH, University of Houston, Houston, Texas 77204-5003, USA, CHING-WU CHU, Department of Physics and TCSUH, University of Houston, Houston, Texas 77204-5002;Lawrence Berkeley National Laboratory, 1 Cyclotron Road, USA
— The magnetic properties of LiFeAs, as single crystalline and polycrystalline samples, were investigated. The lower critical field deduced from the vortex penetration of two single crystals appears to be almost isotropic with a temperature dependence closer to that of two-gap superconductors. The parameters extracted from the reversible magnetizations of sintered polycrystalline samples are in good agreement with those from the single-crystal data.

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Date submitted: 16 Nov 2011 Electronic form version 1.4