

Abstract Submitted
for the CAL12 Meeting of
The American Physical Society

Pseudogap Precursors in Optimal Doped EuBCO R. SCHWARTZ,
San Jose State University — For the pseudogap phase, an important feature of
cuprate superconductivity, Varma et al. predict the existence of loop currents. By
means of Maximum Entropy analysis, we investigate transverse field μ SR data of
optimal-doped $\text{EuBa}_2\text{Cu}_3\text{O}_{7-\delta}$ ($T_c = 93$ K). To search for precursor effects, and for
predicted pseudogap loop currents, our focus is on a temperature interval between
 T_c and T^* . An extra drop in normal-state frequency indicates demagnetization
effects, possibly caused by short-living Cooper-pairs in the Cu-O₂ planes. In sum,
our results suggest magnetic roots of cuprate superconductivity.

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Date submitted: 28 Sep 2012

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