

Abstract Submitted  
for the APR11 Meeting of  
The American Physical Society

**Distribution of demagnetization field in paramagnetic materials with spherical sample geometries** CHRISTOPHER WECKERLY, SEAN HEFFERNAN, NEIL BAUMANN, BRANWYN HOLMES, WILLIAM NELSON, GUOQING WU<sup>1</sup>, Physics Dept, University of West Florida, Pensacola, Florida, 32514 — A general method for the calculation of distribution of demagnetization field in paramagnetic materials is described, and the demagnetization field is calculated for samples with spherical geometries. The results show high non-uniformity for the demagnetization field inside the sample depending on the sample aspect ratio and the direction of the externally applied magnetic field.

<sup>1</sup>Corresponding author

Guoqing Wu  
University of West Florida

Date submitted: 16 Feb 2011

Electronic form version 1.4