Abstract Submitted
for the SES05 Meeting of
The American Physical Society

**Magnetism in Cobalt Clusters** LOUIS BLOOMFIELD, FORREST PAYNE, WEI JIANG, University of Virginia — We have measured the magnetic moments of cobalt clusters, ranging in size from <10 to 200 atoms. Improvements to our cluster source have allowed us to produce smaller and colder (∼60K) clusters than we were able to study in previous work, and to study each cluster size individually. We will present measured values for the magnetic moments of these clusters as functions of size, temperature, and applied field. We have also investigated the superparamagnetic behaviors of cobalt clusters, looking for deviations from that behavior. Applications of this work in the area of magnetic data recording will be discussed. This presentation is based upon work supported by the National Science Foundation under Grant No. DMR-0405203.

Forrest Payne
University of Virginia

Date submitted: 04 Oct 2005 Electronic form version 1.4