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Magnetic imaging of individual nanomagnets B. KALISKY, J. R. KIRTLEY, L. QIAN, N. KOSHNICK, Geballe Laboratory for Advanced Materials, Stanford University, M. E. HUBER, Department of Physics, University of Colorado Denver, K. A. MOLER, Geballe Laboratory for Advanced Materials, Stanford University —

Characterization of nanomagnets is usually done in ensembles, which is problematic because their magnetic properties are inherently sensitive to small variations in volume, shape and structure. Our aim is to detect and characterize *individual* nanomagnets using scanning microscopy, which allows gathering statistics about the behavior of many individual particles under the same conditions. Scanning SQUID is a suitable tool for this challenge because it has sensitivity of $\sim$800 spins. We built a scanning microscope for this purpose, which is intended to measure the nanomagnets up to their superparamagetic state while keeping the SQUID superconducting. We will present on our preliminary efforts to measure FePt particles.

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