

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

NMR Force Microscopy on Co/Cu interface YU. OBUKHOV, D. V. PELEKHOV, P. BANERJEE, J. MARTINDALE, K. C. FONG, P. C. HAMMEL — We present our recent NMR Force Microscopy experiments, where we demonstrate the first detection of ^{63}Cu and ^{65}Cu NMR using Magnetic Resonance Force Microscopy (MRFM). The signals were detected at $T = 5$ K using a commercial Si_3N_4 cantilever with a spherical NdFeB probe magnet. We demonstrate MRFM detection sensitivity of 1.0×10^5 nuclear spins. We report measurements of the relaxation time, signal lifetime, and the results of nutation experiments. We also discuss the application of NMRFM for spatially resolved mapping of the local hyperfine field variation in the vicinity of a buried Co/Cu interface arising from the RKKY interaction.

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Date submitted: 27 Nov 2007

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