

Abstract Submitted  
for the DAMOP16 Meeting of  
The American Physical Society

**Applications of Nanoscale NMR Using Ensembles of NV Centers in Diamond** DOMINIK BUCHER, DAVID GLENN, RONALD WALSWORTH, Harvard University — Ensembles of nitrogen vacancy (NV) centers in diamond are now the frontier modality for nuclear magnetic resonance (NMR) signals at length-scales of microns to Angstroms. Promising applications including NMR and nuclear quadrupole resonance (NQR) spectroscopy in sub-nanoliter volumes, studies of diffusion and transport in small samples of biological tissue, and magnetic resonance imaging (MRI) of individual biological cells and molecules. Here, we describe recent progress toward such applications.

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Date submitted: 31 Jan 2016

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