

Abstract Submitted  
for the DAMOP18 Meeting of  
The American Physical Society

**RF imaging with NV centers in diamond** PAULI KEHAYIAS, DIANA PRADO LOPES AUDE CRAIK, RONALD WALSWORTH, Harvard University — We use nitrogen-vacancy (NV) defect centers in diamond for wide-field imaging of radio frequency (RF) magnetic fields from microelectronic sources. Building on our ongoing work using NV centers for imaging static magnetic fields from geological and biological samples, we image magnetic fields with a wide frequency range over a millimeter field of view. We outline ongoing sensitivity and instrumentation improvements and present initial demonstrations measuring fields from simple electronic circuits, validating the measurements with finite-element simulations. We extend this technique to more sophisticated circuits, for which finite-element models are nontrivial.

Pauli Kehayias  
Harvard University

Date submitted: 25 Jan 2018

Electronic form version 1.4