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Abstract for an Invited Paper
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Low Frequency Noise in Mesoscopic Magnetic Dots¹

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Measurements of random telegraph noise (RTN) in individual mesoscopic sized NiFe alloy dots will be presented; the dots dimensions are as small as 200nm x 200nm x 10nm. The temperature and magnetic field dependence of the RTN are explained by the energy landscape in the dots; the energy landscape RTN was independently measured [Appl. Phys. Lett. 103, 042409 (2013)]. The research was motivated by questions raised in understanding magnetic noise in magnetic tunnel junctions and giant magnetoresistance devices [Appl. Phys. Lett. 95, 062512 (2009) and Phys. Rev. B 88, 014409 (2013)]. This work was supported primarily by ONR Grant N00014-11-1-0850 and the MRSEC Program of the NSF under Grant No. DMR-0819885. Additional support for work done using the University of Minnesota Nanofabrication Center and Characterization Facility was provided by the NSF NNIN network.

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