

Abstract Submitted
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Broadband

Ferromagnetic Resonance Using Coplanar Waveguides¹ ADAM REED, I.H. LEE, Y. OBUKHOV, D. PELEKHOV, P. HAMMEL — Many schemes to exploit the spin of the electron involve microscale or nanoscale ferromagnets. Ferromagnetic resonance (FMR) is a powerful probe of the magnetic properties of magnetic materials. For many applications multi-frequency operation is desirable; however, conventional FMR operates at a fixed frequency. We present a broadband FMR detection scheme based on coplanar wave guides. Increasing the sensitivity of the FMR experiment will permit the study of micron and nano-sized ferromagnets, such as ferromagnetic nanowires.² Understanding nanomagnetic structures is significant not only to fundamental physics, but for potential applications such as high density magnetic storage.

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²S. Pignard, *et al.*, “Ferromagnetic Resonance in Submicron Metallic Wires,” **IEEE Transactions on Magnetics**, Vol. 36, No. 5, pp. 3482 – 3484, September 2000.

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