

Abstract Submitted
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A Measurement of the Deuteron Magnetic Dipole Form Factor from Vector Polarization Observables PETE KARPIUS, JOHN CALARCO, University of New Hampshire Nuclear Physics Group, BLAST COLLABORATION — A measurement of the vector analyzing powers T_{10}^e and T_{11}^e and the magnetic dipole form factor G_M in elastic electron-deuteron scattering has been conducted at the MIT-Bates Linear Accelerator Facility using a polarized electron beam, an internal polarized atomic deuterium target, and the symmetric BLAST(Bates Large Acceptance Spectrometer Toroid) detector in the Bates South Hall Ring. The beam helicity dependent target vector asymmetries, simultaneously measured in both sectors of BLAST, allow the extraction of T_{10}^e and T_{11}^e . To our knowledge this is the first such use of a polarized target in measuring these observables. At low Q^2 , the statistically more significant observable T_{11}^e is dominated by the interference of G_M and the charge monopole form factor G_C . The high accuracy to which G_C is known in this region allows for the extraction of G_M yielding the first such measurement of this kind from spin observables. Preliminary results for T_{10}^e , T_{11}^e , and G_M will be presented. This work supported by DOE grants 181021 (UNH) and DEFC02-94ER40818 (MIT-Bates).

Pete Karpus
Univ. of New Hampshire Nuclear Physics Group

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