

Abstract Submitted
for the SES06 Meeting of
The American Physical Society

Measuring the proton's electromagnetic form factors to high Q^2 via recoil polarimetry in Hall C at Jefferson Lab ANDREW PUCKETT, Massachusetts Institute of Technology, GEP-III COLLABORATION, MIT NUCLEAR INTERACTIONS GROUP TEAM — The electromagnetic form factors of the nucleon, as measured in elastic electron-nucleon scattering, are of crucial interest to a wide variety of areas of current research in both theoretical and experimental nuclear and subnuclear physics. In addition to being an important component of an understanding of nucleon structure in terms of QCD (e.g. the connection between elastic form factors and Generalized Parton Distributions), empirical knowledge of the elastic form factors is an important input for the interpretation of many other experiments, particularly quasi-elastic electron and neutrino scattering. Experiment E04-108 in Jefferson Lab's Hall C will measure the ratio of the electric and magnetic form factors of the proton to high Q^2 by measuring the components of the transferred polarization in the ${}^1H(\vec{e}, e'\vec{p})$ reaction, and is *tentatively* scheduled to take data in the latter part of 2007. This paper will discuss the current status of preparations for the experiment, in particular the new equipment necessary to perform this measurement in Hall C. BigCal, a large solid-angle electromagnetic calorimeter consisting of 1744 lead-glass blocks, will detect the scattered electron. The Focal Plane Polarimeter for the Hall C High Momentum Spectrometer, consisting of a series of two blocks of CH_2 analyzer, each followed by a gas drift chamber, will measure the polarization of the scattered proton.

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Date submitted: 18 Aug 2006

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