

Abstract Submitted
for the HAW05 Meeting of
The American Physical Society

Detector Characterization for a Parity-Violation Experiment

BLAIR CARDIGAN SMITH, University of Winnipeg, G0 TEAM — The G0 experiment at Jefferson Lab uses parity-violating elastic electron scattering to extract the strange quark contribution to the charge and magnetization distributions within the proton. The backward-angle phase of the experiment will begin acquiring data in December 2005. In this phase of the experiment, the trajectories of recoiling electrons will be reconstructed with plastic scintillator detectors. Aerogel threshold Cherenkov counters will be used for particle identification. Owing to the small asymmetries that must be measured in parity-violating experiments, the detectors function at a high rate and with high efficiency. Each detector must therefore be characterized in terms of light yield and timing resolution. Cosmic rays were used for this purpose, simulating the response to high energy electrons. Results of the calibration process will be presented.

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Date submitted: 30 Jun 2005

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