

Abstract Submitted  
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**The BigBite Spectrometer: Tracking and Optics for the Measurement of  $G_E^n$  at High  $Q^2$  in Hall A** SEAMUS RIORDAN, Carnegie Mellon University, E02-013 COLLABORATION, HALL A COLLABORATION — The  $G_E^n$  experiment, a measurement of the electric form factor of the neutron between the  $Q^2$  range 1.2 to 3.5 GeV<sup>2</sup> through  $\vec{e}(^3\vec{H}e, e'n)$  has been carried out in Jefferson Lab's Hall A. This experiment was made possible by the arrival of the BigBite spectrometer, a non-focusing large momentum and angular acceptance spectrometer. With a recently constructed detector package in BigBite, efforts are now being made to understand and optimize the reconstruction of charged particle tracks and momenta. The data taken during  $G_E^n$  provide a good opportunity for understanding the behavior and performance of the spectrometer. However, identifying tracks from charged particles accurately and efficiently is especially challenging given the high background rates up to 20 MHz at the detectors. Results showing the performance of the track reconstruction and the momentum resolution of the spectrometer will be presented.

Seamus Riordan  
Carnegie Mellon University

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