Abstract Submitted for the DNP07 Meeting of The American Physical Society

Double-Coincidence ¹²C(e, e'p) in a Correlations Dominant Regime PETER MONAGHAN, MIT, E01-015 COLLABORATION, JEFFERSON LAB HALL A COLLABORATION — We performed an experiment to investigate short-range correlations in carbon via a *triple-coincidence* (e, e'pN) reaction in Hall A at Jefferson Lab. As a natural consequence of studying the three-body reaction, we collected high-quality *double-coincidence* (e, e'p) data, which are presented here. Our kinematics were chosen with $Q^2 = 2$ (GeV/c)² and $x_B > 1$ to provide a regime in which short-range correlations are expected to dominate the initial state; thus, the electrons were scattering primarily off nucleon pairs. The resulting (e, e'p) data were obtained over a high missing-momentum region, $P_m \sim 200 - 600$ MeV/c. We present the cross-section data for the bound-state reaction ¹²C(e, e'p)¹¹B and also for scattering to the continuum from carbon, and compare our results to relativistic theoretical calculations.

> Peter Monaghan MIT

Date submitted: 02 Jul 2007

Electronic form version 1.4