

# Short-Range Correlations from $^{12}\text{C}(\text{e},\text{e}'\text{n})/{}^2\text{H}(\text{e},\text{e}'\text{n})$

Ramesh Raj Subedi

For the E01-015 and Hall A Collaborations

University of Virginia, Charlottesville, VA 22904.

The data analysis of the semi-inclusive channel of one of the kinematics of the Short-Range Correlations experiment E01-015 in Hall A at Jefferson Laboratory is in progress. The kinematics involved has a beam energy of 4.6 GeV, an energy transfer of 0.9 GeV, a  $Q^2$  of 2 GeV<sup>2</sup>/c<sup>2</sup>, and a wide  $x_b$  (Bjorken  $x$ ) coverage around 1.2. In this analysis we are looking at backward going neutrons for each detected electron. The reactions being analyzed are  $^{12}\text{C}(\text{e},\text{e}'\text{n})$  and  ${}^2\text{H}(\text{e},\text{e}'\text{n})$  in order to calculate the cross-section ratio  $^{12}\text{C}(\text{e},\text{e}'\text{n})/{}^2\text{H}(\text{e},\text{e}'\text{n})$ . We compare this ratio with the result of inclusive reaction's ratio  $^{12}\text{C}(\text{e},\text{e}')/{}^2\text{H}(\text{e},\text{e}')$ . We see a clear dip at  $x_b = 1$  and a flat region at  $x_b > 1.4$  for the inclusive data. Due to the scarcity of semi-inclusive data in the region of  $x_b > 1.3$ , we cannot see the flat region, but the shape of available data in the two cases appear to be matching. The flat region is believed to be due to the two nucleon short-range correlations. The method of analysis and the recent results will be presented.