Extracting The Isospin Dependence of Short Range Correlations

DIEN NGUYEN, None, E08014 COLLABORATION — Short Range Correlations (SRCs) have been recognized as responsible for the high momentum tail of the nucleon momentum distribution. Several experiments at Jefferson Lab have exploited inclusive scattering to study these SRCs. An experiment (E08014) took place in Hall A at Jefferson Lab in Spring 2011 and measured the A(e,e) cross-section from the Ca isotopes ($^{40}$Ca and $^{48}$Ca). By taking the ratio of the per nucleon cross sections of $^{48}$Ca to $^{40}$Ca in a kinematic region dominated by SRCs we are able to extract their isospin dependence. Data was also collected on $^{3}$He and $^{4}$He at $2 < x < 3$ to study 3 nucleon short-range correlations. After a brief discussion of the motivation and of the experimental details, the preliminary results will be presented.

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