DNP13-2013-020016

Abstract for an Invited Paper for the DNP13 Meeting of the American Physical Society

## Detailed study of Short Range Correlations at Jefferson Lab PATRICIA SOLVIGNON, University of New Hampshire and Jefferson Lab

The force which holds the nucleus together has been under intense study for many decades. The nuclear shell model, which plays a central role in these investigations, has been very successful in reproducing low energy measurements, but is insufficient to predict medium energy results. The discrepancy is believed to originate from short range correlations, i.e. overlapping nucleons in the nucleus which briefly create densities close to those in neutron stars. Using an electron beam, these features of the nucleus can be isolated and studied at kinematics where  $x_{bj} > 1$ . In order to present the new results from Jefferson Lab, we will first highlight what has happened in the field over the last decade. We will also discuss the goals of the future related measurements scheduled to run at Jefferson Lab after the 12 GeV upgrade.