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SRC scaling below the inclusive limit IGOR KOROVER, NRCN — Short Range Correlated (SRC) pairs are temporary fluctuations of two strongly interacting nucleons in close proximity. SRC pairing shifts nucleons from low-momentum nuclear shell model states to high-momentum states with momenta greater than the nuclear Fermi momentum (k_F). This high-momentum tail has a similar shape for all nuclei (scaling). One can isolate SRC contributions by measuring inclusive electron scattering cross sections in select kinematic regions, eg. large Q^2 and $x_B > x_B^{thr} \approx 1.4$. For these kinematics the scattering is off nucleons with momentum above k_F, Meson Exchange Current (MEC) effect as well as inelastic contributions are largely suppressed. The relative abundance of SRC pairs in a nucleus relative to deuterium approximately equals to the ratio of their inclusive (e,e) cross-sections in the selected quasi-elastic kinematics presented above. We extended these ratios to much lower x_B by tagging the inclusive scattering to identify scattering from nucleons in SRC pairs. We did this by detecting the associated knocked-out proton and requiring that the missing momentum (which is related to the initial momentum of the knocked-out proton) be greater than the Fermi momentum. By using the large acceptance Jefferson Lab CLAS spectrometer.

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