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A New Theoretical Analysis of the Effects of Short Range Correlations in Inclusive Lepton Scattering CHIARA BENEDETTA MEZZETTI, CLAUDIO CIOFI DEGLI ATTI, Department of Physics, University of Perugia and INFN — Recently, evidence of short range correlations (SRC) has been provided by experimental data on inclusive lepton $A(e, e')X$ scattering by the observation of a scaling behavior of the ratios of the cross sections on heavy nuclei to those on the deuteron and 3He . Other attempts to get information on SRC rely on the concept of Y-scaling, whose interest has been renewed by new Jlab data. A new approach to Y-scaling, relying on the definition of a new relativistic scaling variable which incorporates the momentum dependence of the excitation energy of the $(A - 1)$ system is presented, with the resulting scaling function being closely related to the longitudinal momentum distributions. Taking into account final state interaction effects, the new analysis of experimental data on nuclei, ranging from 3He to Nuclear Matter, provides unique information on the nucleon momentum distributions and confirms the analysis in terms of cross section ratios.

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