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**Quasielastic Transverse and Longitudinal Response Functions in the range 0.55 GeV/c$\leq|\vec{q}|\leq$1.0 GeV/c**[1] HAMZA ATAC, Temple University, JLAB HALL A E05-110 COLLABORATION — In order to determine the Coulomb sum in nuclei, a precision measurement of inclusive electron scattering cross sections in the quasi-elastic region was performed at Jefferson Lab. Incident electrons with energies ranging from 0.4 GeV to 4 GeV scattered from $^{4}He$,$^{12}C$,$^{56}Fe$ and $^{208}Pb$ nuclei at four scattering angles $(15^{\circ}, 60^{\circ}, 90^{\circ}, 120^{\circ})$ and scattered energies ranging from 0.1 GeV to 4 GeV. A Rosenbluth separation method is performed to extract the transverse and longitudinal response functions at three-momentum transfers in the range 0.55 GeV/c$\leq|\vec{q}|\leq$1.0 GeV/c. The Coulomb Sum is obtained for $^{56}Fe$ and $^{12}C$ ,and compared to predictions. We will present the results and discuss their impact in regard to short range nucleon-nucleon correlations and as well as the possible modification of the nucleon electromagnetic properties in the nuclear medium.

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