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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, on behalf of JLab Halla E05110 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 ^4He,^{12}C,^{56}Fe and ^{208}Pb nuclei at four scattering angles $(15°, 60°, 90°, 120°)$ and scattered energies ranging from 0.1 GeV to 4 GeV. The Rosenbluth separation method is used 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 discuss the impact of our results on short range nucleon-nucleon correlations and the possible modification of the nucleon electromagnetic properties in the nuclear medium.

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