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Measurement of the Target Single-Spin Asymmetry in Quasi-Elastic ${}^3\text{He}^\uparrow(e,e')$ YAWEI ZHANG, Rutgers University, JEFFERSON LAB HALL A COLLABORATION — Nuclear and nucleon structure are often studied by measuring form factors using the Born approximation, which assumes one-photon exchange, with multiple-photon exchanges neglected, so the target single-spin asymmetry is expected to be zero in the Born approximation. The Jefferson Lab experiment E05-015 was devoted to the measurement of the neutron target single-spin asymmetry, A_y^n , using the inclusive quasi-elastic ${}^3\text{He}^\uparrow(e,e')$ reaction with a vertically polarized ${}^3\text{He}$ target and standard Hall A high resolution spectrometers at $Q^2=0.13, 0.46$ and 0.97 $(\text{GeV}/c)^2$. The non-zero results from this experiment clearly demonstrate the contribution of two-photon exchange, providing new constraints on Generalized Parton Distribution Models and new information on the dynamics of the two-photon exchange process. Details of this experiment and a very preliminary result will be presented.

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