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**Single and Double Spin Asymmetries from Deeply Virtual Exclusive  $\pi^0$  Production on a Longitudinally Polarized Proton with CLAS** ANDREY KIM, Kyungpook National University, CLAS COLLABORATION — Deeply Virtual  $\pi^0$  production offers a unique opportunity to study the internal structure of the nucleon at the parton level. This reaction was identified as especially sensitive to the chiral-odd transversity GPDs. They encode correlations of parton distributions in transverse impact parameter space that are accessible through the measurements of the  $x_B$  and  $t$  dependence of  $\pi^0$  production. Longitudinally polarized electron beam at Jefferson Lab and dynamically polarized  $NH_3$  target with the spins of free protons aligned along the beam axis in Hall B allow the measurements of three polarization observables, greatly improving the extraction of polarized structure function ratios. Preliminary results for single and double spin asymmetries will be presented and compared to recent theoretical calculations using the handbag mechanism.

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