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Semi-Inclusive Pion Electroproduction in Deep Inelastic Scattering WESLEY GOHN, U. of Connecticut, HARUT AVAKIAN, Jefferson Lab, KYUNGSEON JOO, MAURIZIO UNGARO, U. of Connecticut, CLAS COLLABORATION — Measurements of pion electro-production in semi-inclusive deep inelastic scattering (SIDIS) have been performed. Data were taken with the CEBAF Large Acceptance Spectrometer (CLAS) at Jefferson Lab using a 5.498 GeV longitudinally polarized electron beam and an unpolarized liquid hydrogen target during the E1-f run period in 2003. All three pion channels (π^+, π^0 and π^-) were measured simultaneously over a large range of kinematics($Q^2 \approx$ 1-4 GeV^2 and $x \approx$0.1-0.5). Preliminary results from our study of single-spin azimuthal asymmetries from all three pion channels as functions of x, z, and P_T, from which $A_{LU}^{sin\phi}$ is extracted, will be presented, as will preliminary measurements of $A_{UU}^{cos\phi}$ and $A_{UU}^{cos2\phi}$ in the charged pion channels. This new high statistical data could provide access to transverse-momentum dependent parton distribution functions (TMD's), which are thought to be important in understanding of the physics underlying the spin structure of the nucleon.

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