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Beam-spin Asymmetries from Semi-inclusive Pion Electroproduction WESLEY GOHN, University of Kentucky, HARUT AVAKIAN, Jefferson Lab, KYUNGSEON JOO, University of Connecticut, MAURIZIO UNGARO, Jefferson Lab, CLAS COLLABORATION — The moment of the semi-inclusive deep inelastic scattering (SIDIS) cross section corresponding to a polarized lepton scattering from an unpolarized target is $A_{LU}^{\sin\phi}$. It has been extracted from measurements of beam-spin asymmetries (BSAs) from pion electro-production in SIDIS. Data were taken with the continuous electron beam accelerator facility (CEBAF) Large Acceptance Spectrometer (CLAS) at Jefferson Lab using a 5.498 GeV longitudinally polarized electron beam and an unpolarized liquid hydrogen target. All three pion channels (π^+, π^0 and π^-) were measured simultaneously over a large range of kinematics at the intermediate Q^2 range ($Q^2 \approx 1$ - 4.5 GeV^2). The moment is measured as functions of z, P_T, x, and Q^2. $A_{LU}^{\sin\phi}$ is a twist-3 structure providing information about quark-gluon-quark correlations. This new high statistical data will provide an important means of studying the transverse degrees of freedom in the nucleon.

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