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**Title:**

**Measurements of the Cosφ and Cos2φ Moments of the Unpolarized SIDIS π+ Cross-section at CLAS12**

**Abstract:**

Semi-inclusive deep inelastic π+ electroproduction has been studied with the CLAS12 detector at Jefferson Laboratory. Data were taken by Run Group A using a polarized 10.6 GeV electron beam, interacting with an unpolarized liquid hydrogen target. The collected statistics enable a high-precision study of the Cosφ and Cos2φ azimuthal moments of the unpolarized cross-sections. These azimuthal moments probe the Boer-Mulders function, which describes the net polarization of quarks inside an unpolarized proton, and the Cahn effect, which has a purely kinematic origin. The high statistics data will, for the first time, enable a multidimensional analysis of both moments over a large kinematic range of Q2, y, z, and PT. We present the status of this ongoing analysis, detailing our current multidimensional unfolding procedures for acceptance corrections and preliminary studies of radiative correction effects.