

Abstract Submitted
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Deep Exclusive π^- Production using a Transversely Polarized ^3He Target and the SoLID Spectrometer¹ GARTH HUBER, Univ of Regina — The $\sin(\phi - \phi_S)$ and $\sin(\phi_S)$ Fourier amplitudes of the single-spin azimuthal asymmetry in exclusive electroproduction of charged pions from transversely polarized nucleons have been noted as providing unique views of nucleon structure. The $\sin(\phi - \phi_S)$ amplitude is expected to be particularly sensitive to the spin-flip generalized parton distribution (GPD) \tilde{E} , yielding structure information unlikely to be obtained from any other source. The $\sin(\phi_S)$ amplitude is also extremely important, as it provides powerful constraints on the transversity GPDs. The only measurements to date of these quantities were published by the HERMES Collaboration in 2010. The high luminosity and large acceptance capabilities of the proposed Solenoidal Large Intensity Detector (SoLID) at Jefferson Lab would allow an improved measurement with broader kinematic coverage and significantly reduced errors. I will present projections using a transversely polarized ^3He target and the $\vec{n}(e, e'\pi^-p)$ reaction.

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