Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Single Target-Spin Asymmetries in Inclusive Hadron Electroproduction Reaction Using a Transversely Polarized ^{3}He Target KALYAN ALLADA, Thomas Jefferson National Accelerator Facility, HALL-A E06-010 COLLABORATION — Single-spin asymmetries (SSAs) are an invaluable tool to study the transverse-spin and transverse-momentum structure of the hadron. First measurements of transverse SSA were performed in $pp^{\uparrow} \rightarrow hX$ reactions in mid-70s followed by much more precise measurements from early 90s onwards. More recently transverse SSA were explored using semi-inclusive deep inelastic scattering (SIDIS) reactions using transversely polarized targets. A different type of reaction which is sensitive to transverse spin structure of nucleon, and experimentally least explored, is the inclusive hadron electroproduction on a transversely polarized nucleon ($eN^{\uparrow} \rightarrow hX$). We report the first measurement of such SSAs, measured using a transversely polarized ^{3}He target and the 5.9 GeV electron beam at Jefferson Lab. The Hall-A high-resolution spectrometer was used to detect hadrons ($\pi^{\pm}, K^{\pm}, p$) which had an average hadron transverse momentum (p_T) of 0.64 GeV/c. In this talk we will present the preliminary results of this experiment.

Kalyan Allada
Thomas Jefferson National Accelerator Facility

Date submitted: 14 Jan 2013 Electronic form version 1.4