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SIDIS Single Pion Beam Spin Asymmetry measurements with CLAS12[1] KYUNGSEON JOO, University of Connecticut, STEFAN DIEHL, Justus Liebig University Giessen and University of Connecticut, CLAS COLLABORATION — The CLAS12 detector at Jefferson Laboratory (JLab) started data taking with a polarized 10.6 GeV electron beam, interacting with an unpolarized liquid hydrogen target in February 2018. The collected statistics enable a high precision study of the moment $A_{LU}^{\sin(\phi)}$ corresponding to the polarized electron beam spin asymmetry in semi-inclusive deep inelastic scattering. $A_{LU}^{\sin(\phi)}$ is a twist-3 quantity which provides information about the quark gluon correlations in the nucleon. Based on the available statistics, a multidimensional analysis becomes possible. This contribution will present a simultaneous study of all three pion channels (π^+, π^0 and π^-) over a large kinematic range of z, x_B, P_T and Qwith virtualities Q^2 ranging from 1 GeVup to 8 GeV.

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