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SIDIS Pion Beam Spin Asymmetries with CLAS 12 at 10.6 GeV

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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. One of the first quantities which could be extracted from the new data is 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. The talk will present a simultaneous study of all three pion channels (π^+ , π^0 and π^-) over a large kinematic range with virtualities Q^2 ranging from 1 GeV² up to 8 GeV². Preliminary results for the measurement in a large range of z , x_B , P_T and Q^2 , including up to now not measured kinematic regions will be presented.

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