



Contribution ID: 26

Type: **not specified**

C1q and C2q with SoLID

Wednesday, 6 May 2020 15:30 (30 minutes)

The SoLID Spectrometer has been designed at JLab in order to provide a high luminosity and high-acceptance device for studies of parity-violation in deep inelastic scattering (PVDIS) as well as fit the QCD structure of the proton in the valance quark region. The program is complementary to that of the EIC, which focusses more on the lower Bjorken x region. The PVDIS studies will measure the vector-electron and axial quark current, described by the coupling constants C_{2u} and C_{2d} . Since these are small in the Standard Model, a precision measurement provides a good test of BSM physics. Deep inelastic scattering is the only reaction for which the radiative corrections can be precisely determined. In addition, the method provides a unique way to measure hadron physics at large Bjorken x . Charge symmetry violation can be isolated with a deuterium target and an isovector EMC effect can be studied in a neutron-rich nucleus such as ^{48}Ca . In addition, quark-quark correlations can be isolated in high-twist effects. With a proton target, the d/u PDF ratio can be measured directly without making corrections for nuclear targets.

Primary author: Prof. SOUDER, Paul (Syracuse University)

Presenter: Prof. SOUDER, Paul (Syracuse University)