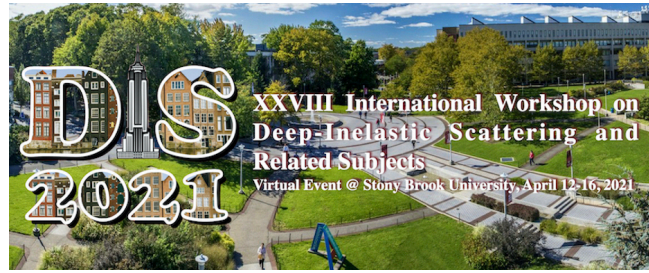


XXVIII International Workshop on Deep-Inelastic Scattering and Related Subjects



Contribution ID: 680

Type: **Contributed Talk**

Light anti-quarks Siverson function at Fermilab SpinQuest

Wednesday, 14 April 2021 09:26 (18 minutes)

The SpinQuest (Fermilab E1039) experiment intends to perform the first high statistics measurement of the sea-quarks Siverson asymmetry. Specifically, the primary focus of the experiment is to utilize proton induced polarized Drell-Yan production of di-muon pairs to extract the sign and magnitude of the anti-u and anti-d quark Siverson functions. A nonzero asymmetry would present strong evidence for orbital angular momentum of sea-quarks: a possible contributor to the proton's spin. The experiment will use the unpolarized 120 GeV beam from the Fermilab Main Injector in conjunction with newly developed solid polarized NH₃ and ND₃ targets. The produced di-muon pairs will be observed in the SeaQuest (Fermilab E906) muon spectrometer. After a brief introduction to the experiment and experimental apparatus, the current SpinQuest status and plans will be presented.

Primary author: YUROV, Mikhail

Presenter: YUROV, Mikhail

Session Classification: Future Experiments

Track Classification: Future Experiments