Hall B Virtual Seminar

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SpinQuest: probing nucleon's spin structure

Abstract

The SpinQuest (Fermilab E1039) experiment intends to perform the first high statistics measurement of the sea-quarks Sivers 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 Sivers functions. A nonzero asymmetry would present a 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.

Friday, May 13, 2022

1:30 PM – 2:30 PM

https://jlab-org.zoomgov.com/j/1607950478?pwd=QjFSUUROcUhFdzFsTWkrRUVQQjZjUT09&from=addon