

Abstract Submitted
for the SES20 Meeting of
The American Physical Society

A Program of Spin-dependent Electron scattering from a Polarized ^3He target in CLAS12 DIEN NGUYEN, JLab/MIT, RICHARD MILNER, MIT, HARUT AVAKIAN, JAMES MAXELL, JLAB, CLAS12 COLLABORATION — We will present a new approved proposal using polarized ^3He target and CLAS12 detector in Hall B at the JLab. This experiment will carry out a precision measurement of spin-dependent inclusive and semi-inclusive DIS (SIDIS) directly from a longitudinally polarized neutron over a large kinematic range: $0.05 < x < 0.7$, $1 < Q^2 < 9 \text{ (GeV/c)}^2$, $0.2 < z < 0.9$ and $0 < P_T < 1.3 \text{ GeV/c}$. The principal scientific aim of this proposal is to extract the flavor dependence of the quark polarization and, in particular, determining their transverse momentum dependence. This experiment will also provide the data to study the nuclear correction to SIDIS in polarized ^3He , compare them to those for the deuteron and confront the current theoretical understanding of the hadronization process in light nuclei.

Dien Nguyen
JLab/MIT

Date submitted: 19 Oct 2020

Electronic form version 1.4