

Abstract Submitted  
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**Medium modification of hadronic distributions in SIDIS** HARUT AVAGYAN, Jefferson Lab — Medium modifications of spin-orbit correlations in Semi-Inclusive Deep Inelastic Scattering (SIDIS) processes with polarized leptons and targets provide access to studies of partonic distributions in nucleons and nuclei. Measurements of multiplicities and different spin and azimuthal asymmetries can be used to extract the quark transverse momentum broadening  $\Delta_{2F}$  and/or quark transport parameter  $\hat{q}$  studied theoretically in the corresponding cases. We will present ongoing studies of medium modifications of SIDIS observables at Jefferson Lab, and proposed future measurement to study the transverse momentum broadening and some spin and azimuthal asymmetries in reactions using polarized lepton and polarized and unpolarized nuclei. Calculations have been performed assuming factorized Gaussian dependence on intrinsic momenta for the TMD distributions and a Gaussian dilution from the fragmentation functions.

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