

Abstract Submitted  
for the DNP17 Meeting of  
The American Physical Society

**Hadron Mass Effects for Kaon Production on deuteron**<sup>1</sup> JUAN GUERRERO, Hampton University/Jefferson Lab — The spin-independent cross section for semi-inclusive lepton-nucleon scattering are derived in the framework of collinear factorization, including the effects of the target and produced hadron masses at small momentum transfer squared  $Q^2$ . At leading order, the cross section factorizes into products of parton distributions and fragmentation functions evaluated in terms of new, mass-dependent scaling variables. This talk focuses on Kaon production at HERMES and COMPASS kinematics. In particular, hadron mass corrections for integrated kaon multiplicities measured by the two collaborations are shown to sizeably reduce the apparent large discrepancy between the results for both experiments.

<sup>1</sup>This work was supported by the DOE contract No. DE-AC05-06OR23177, under which Jefferson Science Associates, LLC operates Jefferson Lab, and by the DOE contract No. DE-SC008791

Juan Guerrero  
Hampton University/Jefferson Lab

Date submitted: 04 Jul 2017

Electronic form version 1.4