

SES19-2019-000029

Abstract for an Invited Paper
for the SES19 Meeting of
the American Physical Society

Fragmentation at large- z

TIANBO LIU, Jefferson Lab

The COMPASS collaboration published precise data on production cross section of charged hadrons in lepton-hadron semi-inclusive deep inelastic scattering, showing almost an order of magnitude larger than next-to-leading order QCD calculations when P_{h_T} and z_h are sufficiently large. We explore the role of power corrections to the theoretical calculations, and quantitatively demonstrate that the power corrections are extremely important for these data when the final-state multiplicity is low and the production kinematics is near the edge of phase space. Our finding motivates more detailed studies on power corrections for upcoming experiments at Jefferson Lab, as well as the future Electron-Ion Collider.