

APR14-2014-000252

Abstract for an Invited Paper
for the APR14 Meeting of
the American Physical Society

Studies of Transverse Momentum Distributions of Partons

HARUT AVAGYAN, Jefferson Lab

The detailed understanding of the orbital structure of partonic distributions, encoded in Transverse Momentum Dependent (TMD) parton distributions, has been widely recognized as key objective of the JLab 12 GeV upgrade, the polarised pp program at RHIC, and a driving force behind the construction of the Electron Ion Collider. Several proposals have been already approved by the JLab PAC to study TMDs using different spin-azimuthal asymmetries at JLab12 and were awarded the highest physics rating. Although the interest in TMDs has grown enormously we are still in need of fresh theoretical and phenomenological ideas. One of the main challenges still remaining is the extraction of actual 3D parton distribution functions from hard scattering processes in nucleons and nuclei. In this talk, we present an overview of the latest developments and future studies of the TMDs.