Abstract Submitted
for the APR15 Meeting of
The American Physical Society

Extracting GPDs from hard exclusive processes LATIFA ELOUADRHIRI, Thomas Jefferson National Accelerator Facility, 12000 Jefferson Ave., Newport News, VA 23601, USA — In recent years a set of non-perturbative functions has been introduced to investigate and describe the structure of hadrons at the quark-gluon level. Transverse spatial distributions of partons, encoded in Generalized Parton Distributions (GPDs) have been widely recognized as key objectives of the JLab 12 GeV upgrade and, and are part of the key physics program of an Electron Ion Collider. Much of the interest in GPDs has been triggered by their potential to help unravel the spin structure of the nucleon, as they carry information not only on the longitudinal but also on the transverse position of partons, providing rich and direct information on the orbital motion of quarks. Although the interest in GPDs has grown enormously we are still in need of a consistent theoretical and phenomenological description spanning the full kinematic regime covered by the (un) polarized world-data. One of the main challenges still remaining is the extraction of actual 2+1D parton distribution functions from different spin and azimuthal asymmetries with minimal model dependence. In this talk, we present approaches to extract GPDs from existing data on hard exclusive production of photons and pions as well as some future measurements at various facilities worldwide.

Latifa Elouadrhiri
None

Date submitted: 09 Jan 2015 Electronic form version 1.4