Abstract Submitted
for the SES13 Meeting of
The American Physical Society

Generalised Transverse Momentum Distributions FNU ABHA RAJAN, University of Virginia — Thirty years after the discovery of the EMC effect, the missing source of the proton spin continues to baffle the scientific community. Analysis of other contributing factors such as quark and gluon orbital orbital angular momentum is the key to a clearer understanding of the problem. Wigner distributions are density distributions that give simultaneous description in momentum transfer and transverse spatial separation. We study how generalised transverse momentum distributions, (purely momentum space counterparts of wigner distributions) that are expected to describe the orbital angular momentum of partons in the nucleon, can enter the deeply virtual compton scattering amplitude only through matrix elements involving a final state interaction. With a clearer understanding of the order of twist of these distributions, we will have access to the much sought after observables related to partonic orbital angular momentum.

FNU Abha Rajan
University of Virginia

Date submitted: 20 Sep 2013 Electronic form version 1.4