



Contribution ID: 55

Type: **not specified**

## Nuclear-modified TMD PDFs and FFs

*Wednesday, 29 May 2024 09:00 (30 minutes)*

For more than 50 years, bound nucleons have been known to undergo non-trivial modifications due to the presence of the cold nuclear medium. During this time, experimental measurements at collider facilities have focused on exploring how the one-dimensional structure of nucleons is modified, with global QCD analyses proving extremely successful in extracting these distributions. More recently, we have extended this methodology to describe the three-dimensional structure of bound nucleons and used experimental data from Jefferson Lab to constrain the nuclear-modified TMD fragmentation functions. Our methodology incorporates the global set of experimental data from both Drell-Yan production and Semi-Inclusive Deep Inelastic Scattering. Through a comprehensive global extraction of these distributions, we demonstrate the effectiveness of this extension by strongly describing the entire global dataset. Additionally, I will discuss the use of lepton-jet correlations and transverse EECs as a precision probe of the structure of bound nucleons and efforts to extend this framework within a GLV formalism.

**Primary author:** TERRY, John (LANL)

**Presenter:** TERRY, John (LANL)

**Session Classification:** Wednesday