

The 3D nucleon structure program at JLab

Monday, 8 July 2019 10:20 (40 minutes)

In the recent years, it has been realized that in DIS reactions, single and dihadron semi-inclusive and hard exclusive production, provide a variety of spin and azimuthal angle dependent observables sensitive to the dynamics of quark-gluon interactions. New parton distributions and fragmentation functions have been introduced to describe the rich complexity of the hadron structure and move towards a multi-dimensional imaging of the underlying parton correlations. Besides the hard probe scale, these functions explicitly depend on the parton transverse degrees of freedom at the scale of confinement. Studies of the parton distribution functions which encode transverse momentum (TMDs) or transverse position (GPDs) promise to open a unprecedented gateway to the unique dynamics of the strongly interacting force. This work presents a selection of available observations and upcoming measurements planned at Jefferson Lab to address the mysteries of the nucleon structure from a modern point of view.

Primary author: CONTALBRIGO, Marco (FE)

Presenter: CONTALBRIGO, Marco (FE)