

Accessing GTMDs through pair production of jets, Quarkonia and open heavy flavours

Tuesday 23 March 2021 16:40 (15 minutes)

Generalized transverse momentum-dependent parton distribution functions (GTMD-PDFs) are the building blocks that encode the spatial and momentum distribution of quarks and gluons inside hadronic matter. In the forward region (small- x) of deeply inelastic scattering (DIS) experiments, various inclusive and exclusive multi-particle observables depend only on two types of GTMD-PDFs: the dipole gluon and the Weizsacker-Williams type.

In this talk, I will briefly review a few promising observables that give access to these two types of distributions. I will focus on the measurement of azimuthal correlations in the production of forward dijets, quarkonia, and open heavy flavor at the future Electron-Ion Collider (EIC). The complementarity and the challenges of measuring these observables at the EIC will be discussed.

Finally, I will attempt to address some recent developments on the computation of these observables at higher-order loop.

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Session Classification: Day 2 (mostly exclusive reactions)

Track Classification: Exclusive reactions & tools for GPDs & Wigner functions,...