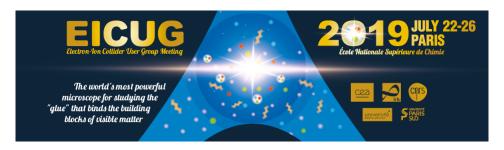
2019 EIC User Group Meeting



ID de Contribution: 58 Type: Oral presentation

Studies of partonic spatial imaging at an Electron-Ion Collider - current status and future plans

mardi 23 juillet 2019 09:18 (15 minutes)

With the design of an EIC, advancements in theory and further development of phenomenological tools, we are now preparing for the next step in subnuclear tomographic imaging. The collider's large range of center-of-mass energy, in combination with very high luminosity and polarization of both the lepton and the hadron beams, will open a unique opportunity for very high precision measurements of both cross sections and spin-asymmetries. This will allow us for a detailed investigation of the partonic substructure of hadrons in multi-dimensions, as well as addressing the role of orbital angular momentum with respect to the nucleon spin.

Generalized parton distributions (GPDs) describe the multi-dimensional partonic structure of a nucleon in coordinate space, providing new information about the internal dynamics of quarks and gluons. Extraction of GPDs from hard exclusive processes and all related probes, is a pillar of the EIC science program.

We will highlighting key measurements, experimental challenges and present the current status and near-future plans to assess the EIC's expected impact over the current knowledge of GPDs.

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