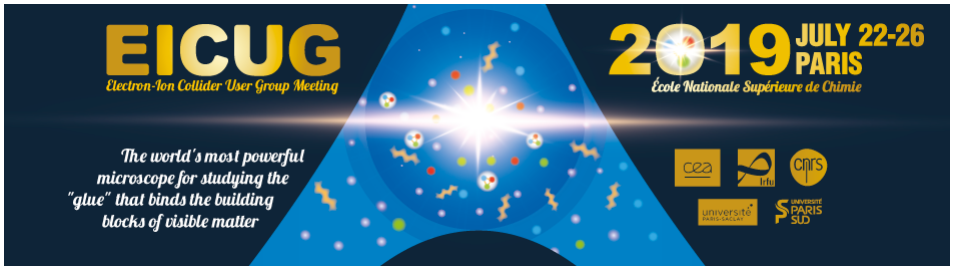

ID de Contribution: **44** Type: **Oral presentation**

Study of nuclear Short-Range Correlations in high energy colliders

mardi 23 juillet 2019 09:54 (15 minutes)

Nuclear dynamics at short distances among nucleons is one of the most outstanding phenomena in nuclear physics, where understanding the role of QCD in generating nuclear forces is important for uncovering the underlying physics of Short-Range Correlations (SRCs). In recent years, SRCs has been observed from light to heavy nuclei using fixed target experiments at Jefferson lab via high energy electron-nucleus scattering. In this talk, I will talk about opportunities and challenges of studying SRCs using light and heavy nuclei at high energy collider experiments, e.g., the current Relativistic-Heavy-Ion-Collider (RHIC) facility at Brookhaven National Lab and a future US based facility of Electron-Ion Collider (EIC). Based on the STAR experiment at RHIC and its upcoming forward upgrades, the ultra-peripheral collisions from nucleus-nucleus to proton-(deuteron-) nucleus can provide new insights into the short-range dynamics in nuclei and further constrains to the nuclear Parton Distribution Functions. Furthermore, the designs of the interaction region and the forward detectors R&D at an EIC would greatly benefit from these accessible studies.

Auteur principal: TU, Zhoudunming (BNL)

Orateur: TU, Zhoudunming (BNL)

Classification de Session: Parallel session B

Classification de thématique: Physics