

ID de Contribution: 321 Type: Talk

Collectivity in small systems with the ATLAS detector

mardi 4 juin 2024 08:50 (20 minutes)

This talk presents the latest ATLAS measurements of collective phenomena in small collision systems, including pp collisions and Ultraperipheral collisions (UPC) of heavy ions. In pp collisions, presented measurements include flow decorrelations in rapidity for probing the longitudinal structure and study of the sensitivity of collective motion in pp collisions to the presence of jets, which aims to distinguish the role that semi-hard processes play in the origin of these phenomena. In UPCs, the measurement of charged hadron production is presented as a function of pseudorapidity and transverse momentum in different categories of event multiplicity. Together with previously measured elliptic flow coefficients, the yields and mean pT results are compared with calculations from DPMJET and hydrodynamic-based models. These comparisons enable detailed characterizations of photonuclear event properties, including the photon energy distribution and whether small QGP droplets may be formed.

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Classification de Session: Track6-SmallSyst

Classification de thématique: Collective effects in small systems