

ID de Contribution: 260

Type: Poster

Measurement of charged-particle multiplicity in Au+Au collisions at 200 GeV with sPHENIX at RHIC

mardi 4 juin 2024 20:08 (1 minute)

sPHENIX, the first detector to be built at the Relativistic Heavy-Ion Collider (RHIC) in over two decades, will bring unprecedented measurement capabilities at RHIC energies. One of the initial physics measurements performed by sPHENIX is that of the total charged-particle multiplicity, which utilizes two-point tracklets constructed from clusters in the Intermediate Silicon Tracker (INTT), and is presented for the first time in this talk. This measurement serves to directly validate, based on real collision data, the operational readiness of the INTT readout and clustering methods, as well as the supporting detectors used for event characterization in sPHENIX. Additionally, this measurement provides a key diagnostic tool for acceptance, alignment, and vertex finding, which are critical components of the full tracking system that will enable the entire physics program of sPHENIX. The measurement of charged-particle multiplicity will be presented and discussed in the context of previous measurements at RHIC energies and the latest models of bulk particle production in heavy-ion collisions.

Auteur principal: ROSATI, Marzia (Iowa State University)

Orateur: ROSATI, Marzia (Iowa State University)

Classification de Session: Posters

Classification de thématique: Bulk matter phenomena, QCD phase diagram and Critical point