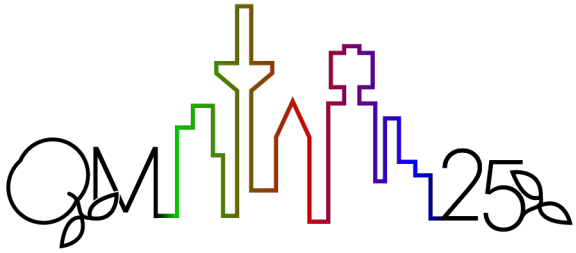

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Hyperon flow and polarization in Run 3 Pb-Pb collisions with ALICE

The anisotropic flow of identified hadrons is sensitive to the early dynamics of heavy-ion collisions and to the equation of state (EoS) of the medium. In particular, strange and (multi-)strange baryons have small hadronic cross-sections, thus being clean probes of the early stages of the collision system evolution. As such, they constitute the perfect observable to test the hydrodynamic evolution of the fireball. Additionally, strange and multi-strange baryons are sensitive to the vorticity of the produced medium and to the magnetic field that it experiences at collision time. The effect of vorticity and magnetic field can be examined experimentally by studying the polarization of strange and (multi-)strange baryons. This talk will present the v_2 and the longitudinal polarization of strange baryons measured with the high statistics sample of Pb–Pb collisions collected by the ALICE Collaboration during the Run 3 of the LHC. The measurements will be discussed in comparison with predictions from state-of-the-art QCD-inspired models.

Category

Experiment

Collaboration (if applicable)

ALICE

Authors: COLLABORATION, ALICE; KUNDU, Sourav (CERN)

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