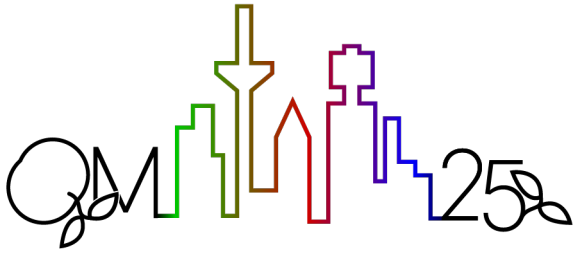

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Elliptic flow measurement of resonances in Pb−Pb collisions at $\sqrt{s_{\rm NN}}$ = 5.36 TeV with ALICE

Hadronic resonances are crucial probes to understand the various phases of matter created during relativistic heavy-ion collisions. Due to their short lifetimes, the yields of these resonances can be affected by competing rescattering and regeneration mechanisms in the final hadronic phase. Rescattering can alter the momentum of the resonance decay products, limiting their reconstruction through the invariant-mass technique, while pseudo-elastic scattering can regenerate them. An important final state observable for understanding these late-stage effects is the measurement of elliptic flow (v_2), which originates from the anisotropic expansion of the system driven by the initial spatial asymmetry in the collision geometry. Late-stage hadronic rescattering can alter the momentum distributions of resonances, thereby influencing their elliptic flow. Measuring the elliptic flow of resonances like K^{*0} and ϕ, and comparing them to the elliptic flow of the other hadrons, provides deeper insights into the impact of final state effects. This contribution will present new elliptic flow measurements for K^{*0} and ϕ resonances in Pb–Pb collisions at $\sqrt{s_{\rm NN}}$ = 5.36 TeV.

Category

Experiment

Collaboration (if applicable)

ALICE

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