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Latest results on anisotropy flow of light and heavy flavors in PbPb collisions at CMS

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The v_2 and v_3 anisotropy harmonics of charged particles and prompt D^0 meson are measured at $|y| \leq 1$ as a function of transverse momentum (p_T) and centrality classes in PbPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV collected with the CMS detector. The results indicate that the charm quarks interact strongly with the QGP medium. Comparisons between theoretical predictions and data provide new constraints on the interaction between charm quarks and the QGP medium. Additionally, nonlinear response coefficients of higher-order anisotropy harmonics for charged particles are measured in PbPb collisions at 2.76 and 5.02 TeV. It is performed by comparing the higher order v_n measured with respect to their own plane with the mixed harmonics. The results are compared with hydrodynamic predictions with different shear viscosity to entropy density ratios and initial conditions.

Experimental Collaboration

CMS

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