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Quarkonium collectivity in Pb-Pb collisions at √sNN = 5.36 TeV with ALICE

Quarkonium production has long been recognized as a key probe for exploring the properties of the quarkgluon plasma (QGP). Among various observables, azimuthal anisotropies in quarkonium production offer valuable insights to investigate its collective behavior in a strongly interacting medium. In particular, the measurement of J/ψ elliptic flow (v_2) in Pb–Pb collisions at the LHC provides important evidence for the thermalization of charm quarks in the QGP, supporting the hypothesis of charmonium (re)generation at low transverse momentum (p_T). In contrast, for the $\Upsilon(1S)$ state, (re)generation is expected to have a negligible impact due to the much larger mass of beauty quarks, which limits their possibilities to thermalize within the medium.

This contribution will present recent ALICE results on quarkonium flow coefficients in Pb-Pb collisions at $\sqrt{s_{\rm NN}} = 5.36$ TeV. New measurements of J/ ψv_2 will be discussed, using both the event-plane and the scalar product methods as functions of $p_{\rm T}$ and rapidity. Additionally, the first measurement of the four-particle cumulant v_2 {4} for J/ ψ will be presented, providing deeper insight into charm quark thermalization in the QGP. Finally, the first measurement of v_2 for $\Upsilon(1S)$ will be shown, exploring the (re)generation mechanism for beauty quark.

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