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Typ: Talk

Heavy-flavour leptons and non-prompt D mesons to investigate beauty-quark interaction in the QGP with ALICE

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In this contribution, new results for beauty measurements with ALICE are presented. The production of beauty hadrons can be accessed with measurements of leptons from beauty- and charm-hadron decays as well as the reconstruction of non-prompt charmed hadrons.

We show the nuclear modification factor of electrons from beauty hadron decays in Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV, which gives an insight into the production and momentum distribution of beauty quarks via the decays of the different hadron species. In order to understand the contributions from the different hadrons, we also present the final results for non-prompt D_s^+ mesons, which are compared to the prompt contribution as well as the non-prompt D^0 measurement.

The azimuthal anisotropy of beauty quarks via the measurement of the non-prompt D^0 v_2 is also discussed. It helps to further investigate the degree of thermalization of beauty quarks in the hot and dense QCD medium. Additionally, ALICE can measure muons from heavy-flavour hadron decays in the forward direction $-4 < \eta < -2.5$. The new results for the azimuthal anisotropy of heavy flavor muon production in p-Pb collisions at $\sqrt{s_{NN}} = 8.16$ TeV provide new insights into the appearance of collective effects in smaller systems, which will be discussed and compared with measurements in Pb-Pb and pp as well as with model calculations.

Experiment/Theory

ALICE

Affiliation

ALICE

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Sitzung Einordnung: Parallel: Heavy Flavours & Quarkonia

Track Klassifizierung: Heavy flavor and quarkonia