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Beauty production in heavy-ion collisions with ALICE at the LHC

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In this contribution, the final measurements of the centrality dependence of R_{AA} of non-prompt D^0 and electrons from beauty hadron decays in Pb–Pb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV will be presented. These measurements provide important constraints to the in-medium mass-dependent energy loss and hadronization of the beauty quark. The integrated non-prompt D^0 R_{AA} will be presented for the first time and will be compared with the prompt D^0 one. This comparison will shed light on possible different shadowing effects between charm and beauty quarks. In addition, the first measurements of non-prompt D_s production in central and semi-central Pb–Pb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV will be discussed. The non-prompt D_s measurements provide additional information on the production and hadronization of B_s mesons. Finally, the first measurement of non-prompt D-mesons elliptic flow in Pb–Pb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV will also be discussed. It will help to further investigate the degree of thermalization of beauty quark in the hot and dense QCD medium.

In-person participation

Yes

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