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Measurement of heavy flavour jets with electrons from heavy-flavour hadron decays in pp and p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV with ALICE

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In heavy-ion collisions, charm and beauty quarks are produced in the initial hard partonic scattering and interact with the hot and dense QCD matter (QGP).

Therefore, measurements of heavy-flavour production provide relevant information on the properties of the QGP. The QCD predicts that partons lose energy via collisions with the plasma constituents and via gluon radiation, and the magnitude of the energy loss depends on the mass and the color charge of the parton. In Pb-Pb collisions, a strong suppression of heavy-flavour yields has been observed at high p_T with respect to pp collisions scaled by the number of binary collisions which is attributed to energy loss of heavy quarks in the QCD medium. Further information about the heavy-quark energy loss mechanism can be obtained by measuring the production of jets containing open charm and beauty particles.

Recently, a positive elliptic flow of open heavy-flavour particles has been observed in pA collisions and the possible formation of the QGP is under scrutiny.

In this poster, we show the measurements of jets with electrons from open heavy-flavour hadron decays in pp and p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV.

Jet measurements are performed with different resolution parameters ($R = 0.2, 0.3$ and 0.4). The nuclear modification factors for the different resolution parameters are calculated. Finally the results are compared with model calculations.

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