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Heavy-flavour jet studies by tagging electrons from heavy-flavour hadron decays with ALICE

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In heavy-ion collisions, charm and beauty (heavy flavour) quarks are produced in the initial hard partonic interactions. They successively interact with the hot and dense Quark-Gluon Plasma (QGP) formed in such collisions. Therefore, measurements of heavy-flavour production provide relevant information on the properties of the QGP.

In Pb–Pb collisions, a strong suppression of heavy-flavour yields has been observed at high $p_{\rm T}$ 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 energy-loss mechanism can be obtained by measuring the production of jets containing charm and beauty.

In ALICE, inclusive jet production has been measured for $p_{\rm T}>$ 20 GeV/c in pp and Pb-Pb collisions.

Heavy-flavour jets can be identified via heavy-flavour decay electrons inside the jet cone.

In this poster, we show studies of heavy-flavour jet production tagged by electrons from heavy-flavour hadron decays with ALICE.

On behalf of collaboration:

ALICE

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