

D* Mesons in Jets Analysis in proton-proton collisions at $\sqrt{s} = 10$ TeV using the ALICE detector at CERN-LHC.

Charm and bottom quarks have been proposed as probes to study partonic matter produced in high-energy heavy-ion collisions. The detailed understanding of the production mechanisms in such collisions is of considerable interest. Measurements of the *D* yield in jets probe the production processes in which the observed *D* mesons are formed primarily from gluon splitting into *c*- \bar{c} or *b*- \bar{b} pairs. The charm content in jets is calculable in perturbative QCD, and the leading non-perturbative correction is expected to be significant at LHC energies. In this contribution we present latest results on performance studies of the reconstruction of charged *D* mesons in jets in proton-proton collisions at $\sqrt{s} = 10$ TeV using the ALICE central detector. *D*⁺ mesons are reconstructed through the decay sequence $D^{*+} \rightarrow D^0 + \pi^+$ and $D^0 \rightarrow K^- + \pi^+$ (and its charge conjugate channel). The results are compared for different jet transverse momenta, and topological cut effects are discussed.

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