

Abstract Submitted
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Measurement of D0 production in jets in heavy-ion collisions at the LHC with ALICE ANTONIO CARLOS OLIVEIRA DA SILVA, University of Tennessee - Knoxville, ALICE COLLABORATION — Charm quarks are considered ideal probes of the Quark-Gluon Plasma (QGP). Due to their large mass they are produced in the early stages of ultra-relativistic heavy-ion collisions in hard-scattering processes. D^0 -tagged jets are valuable tools to investigate the charm interaction with the QGP. Furthermore, charmed jets can provide information to study the mass-dependent energy loss by analysing the modification of their yield in Pb-Pb collisions with respect to pp collisions as a function of the jet transverse momentum. D^0 mesons are reconstructed through their hadronic decay channels. The large combinatorial background is rejected by applying topological selections exploiting the relatively large lifetime of D^0 mesons and the particle-identification capabilities of the detector. The signal is extracted using an invariant mass analysis. Charged-track jets are reconstructed with anti- k_t algorithm. The ALICE detectors allow us to measure D^0 -tagged jets down to low p_T , where the probes are more sensitive to the effects of the hot medium. This contribution will present the current analysis status and results of the measurement of D^0 -tagged jets in Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV.

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