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Heavy Flavor Electron in ALICE at the LHC

In nucleus-nucleus collisions, the formation time of heavy quarks (charm and beauty) is approximately $1/M_Q$ (0,1 fm/c for c and 0,02 fm/c for b), much smaller than the expected lifetime of the QGP at LHC (about 10 fm/c). Therefore heavy quarks are uniquely suited to probe the QGP over its whole lifetime. The c-cbar and b-bbar production in pp collisions serves as an important baseline for the nucleus-nucleus studies and allows to test pQCD calculations. The cross-sections can be measured indirectly with semi-electronic decays of heavy flavor hadrons. Compared to the direct measurements of heavy flavor hadrons via their hadronic decay channels the large branching ratios are an advantage. We present first results on electron identification in pp collisions at 7 TeV with the central barrel of ALICE.

Electrons are identified using the Time Projection Chamber, the Transition Radiation Detector and the Time Of Flight Detector. Each detector has to be first calibrated and understood. The first results from the electron analysis are presented and discussed.

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