Contribution ID: **26** Type: **not specified**

D meson nuclear modification factor in Pb-Pb collisions with the ALICE detector

Open heavy-flavour hadrons are a powerful tool to investigate the properties of the high-density medium created in heavy-ion collisions at high energies as they come from the hadronization of heavy quarks. The latter are created in the early stage of the interaction and experience the whole collision history. Heavy quarks in-medium energy loss can be investigated by comparing the heavy flavour production cross sections in p-p and nucleus-nucleus collisions. D mesons are identified from their hadronic decays which can be reconstructed in the central rapidity region using the tracking and PID detectors. We report on the measurements of D+ , D0 , D*+ and Ds production as a function of $\sqrt{}$ transverse momentum in pp collisions at s = 7 TeV and Pb-Pb collisions at $\sqrt{}$ sNN = 2.76 TeV which allow one to calculate the nuclear modification factor expected to be sensitive to the in-medium energy loss of charm quarks.

Primary author: RUSSO, RICCARDO (TO)

Presenter: RUSSO, RICCARDO (TO)