ID de Contribution: **652** Type: **Parallel session talk**

Heavy flavour measurements in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$~TeV with the ALICE experiment

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The ALICE experiment studies the properties of the QCD matter at the extreme energy densities of the ultra-relativistic heavy-ion collisions at the LHC. Produced on a very short time-scale in the initial hard-scattering processes, the heavy quarks (charm and beauty) experience the whole collision evolution: measuring the open heavy flavour spectra allows to investigate the mechanisms of energy-loss and hadronization in the hot and dense medium formed in the nucleus-nucleus collision. In particular, the ALICE capability to disentangle charm and beauty production is expected to help investigating the predicted quark-mass dependence of the in-medium energy-loss.

The ALICE detector measures heavy-flavours in the semi-electroinc and semi-muonic decay channels at mid- and forward rapidity, respectively, and D mesons at mid-rapidity. The results in lead-lead collisions at $\sqrt{s_{NN}} = 2.76$~TeV and proton-proton collisions at $\sqrt{s} = 7$~TeV will be presented. The nuclear modification factor R_{AA}, defined as the ratio between the heavy-flavour production in nucleus-nucleus and proton-proton collisions rescaled to the number of binary collisions of nucleons in nuclei, will be discussed. The central to peripheral nuclear modification factor R_{CP}, obtained from the comparison of the measurements in heavy-ion collisions with a small and large impact parameter, respectively, will be presented as well.

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