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Open heavy flavor physics in the muon channel with ALICE in pp collisions at 7 TeV and PbPb at 2.76 TeV

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of the high-density medium formed in heavy-ion collisions. This investigation requires also the study of proton-proton collisions. Besides providing the necessary baseline for nucleus-nucleus collisions, proton-proton collisions are of great interest, also in their own right, since they allow to test perturbative QCD at unprecedented low Bjorken-x values. In this contribution, we measure the heavy-flavour production by detecting single muons from semi-leptonic decays.
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in pp collisions at √s = 7 TeV and Pb-Pb collisions at √sNN = 2.76 TeV. In particular,
we will show the pt-dierential production cross section in pp collisions and compare it to perturbative QCD predictions, and the nuclear modication factors in Pb-Pb collisions. RAA with respect to a pp reference at √s = 2.76 TeV and RCP in central with respect to peripheral collisions.

Author: ZHANG, Xiaoming (Laboratoire de Physique Corpusculaire, Clermont-Ferrand)

Presenter: ZHANG, Xiaoming (Laboratoire de Physique Corpusculaire, Clermont-Ferrand)

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