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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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Heavy-quark production is one of the probes for the investigation of the properties 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, protonproton 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. After a description of the ALICE muon spectrometer, we will present the results on the production of single muons from heavy flavour decays at forward rapidity (2.5 < y < 4) in pp collisions at Heavy-quark production is one of the probes for the investigation of the properties 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 heavyavour production by detecting single muons from semi-leptonic decays. After a description of the ALICE muon spectrometer, we will present the results on the production of single muons from heavy avour decays at forward rapidity (2:5 < y < 4)in pp collisions at \sqrt{s} = 7 TeV and Pb-Pb collisions at Heavy-quark production is one of the probes for the investigation of the properties 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 heavyavour production by detecting single muons from semi-leptonic decays. After a description of the ALICE muon spectrometer, we will present the results on the production of single muons from heavy avour decays at forward rapidity (2:5 < y < 4)in pp collisions at \sqrt{s} = 7 TeV and Pb-Pb collisions at \sqrt{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 \sqrt{s} = 2.76 TeV and RCP in central with respect to peripheral collisions.

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