

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

Monday, May 23, 2011 5:50 PM (20 minutes)

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 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 heavy-

avour 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 heavy-

avour 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 $\sqrt{s_{NN}} = 2.76$ TeV. In particular,

we will show the p_T -differential production cross section in pp collisions and compare it to perturbative QCD predictions, and the nuclear modification 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.

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

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

Session Classification: Heavy flavor

Track Classification: Heavy flavor and quarkonia production