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Production of muons in the ALICE experiment at the LHC

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Abstract content
 (Max 300 words)

The ALICE experiment is one of the 4 major experiments at the CERN Large Hadron Collider (LHC) and has been taking data since year 2009 [1]. ALICE is a general purpose heavy-ion detector, with the main physics goal to study the formation of a de-confined Quark-Gluon Plasma in heavy-ion collisions at ultra-relativistic high-energies. Heavy flavour is regarded as good tool for the study of the properties of this high-density state of QCD matter. In ALICE heavy-flavour has been measured in proton-proton and lead-lead (Pb-Pb) collisions at central and forward rapidity using different decays final states. Here we present a summary of the first results obtained from heavy-flavour muon production in ALICE. In addition, we will outline the relevance of measuring W^\pm bosons via the single muon channel in the forward rapidity range in ALICE.

References

1. J. Instrum. 3, S08002 (2008). The ALICE Experiment at the CERN LHC.
2. ALICE-INT-2006-021 version 1.0, 23-09-2006Z. Conesa Del Valle et al. Production of W vector bosons in p + p and Pb + Pb collisions at LHC energies. W detection in the ALICE muon spectrometer.

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