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Data analysis of W-boson in p-p and Pb-Pb collisions at LHC energies

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Abstract :

The ALICE detector at the CERN-LHC is dedicated to studying the quark-gluon plasma (QGP), which is expected to be formed at extreme energy densities in heavy-ion collisions. The Muon Spectrometer covers the forward rapidity region ($-4 < \eta < -2.5$) and detects muons decaying from heavy-quarkonia states (e.g. J/Ψ) and W-boson which are hard, penetrating probes. They are essential tools for studying the initial conditions of the interaction and determining medium induced effects. Because of an increase in luminosity for LHC since 2011 it is now possible to study the high-pT region in ALICE. Data analyses of W-boson in the single muon decay channel in p-p (Pb-Pb) collisions at 7TeV (2.76TeV) are performed.

Award :

Yes

Level :

MSc

Supervisor :

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Paper :

Yes

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