Quark Matter 2018



Contribution ID: 250

Type: Poster

K^{*}(892)± production in pp collisions at \sqrt{s} = 5.02 and 8 TeV with ALICE at the LHC

Tuesday 15 May 2018 19:10 (30 minutes)

Resonances are useful tools to study the properties of the hadronic medium produced in high energy heavy-ion collisions, due to their short lifetime. They are good candidates to probe the interplay of particle re-scattering and regeneration in the hadronic phase. In particular, the K^{*} (892)[±] resonances are important because of their very short lifetimes (~ 4 fm/c) which are comparable to that of the fireball. The K^{*±} is reconstructed via a two-step decay process: the resonance undergoes a strong decay to K⁰_S + π^{\pm} and then the K⁰_S decays weakly to π^{+} + π^{-} . Measurements in pp collisions constitute a reference for the measurements in p-Pb and Pb-Pb collisions at the same center-of-mass energy and contribute to the study of the energy and multiplicity dependence of particle production in pp collisions. The results presented here include the transverse momentum (p_{T}) spectra, integrated yields and $\langle p_{T} \rangle$ for K^{*±} in pp collisions at $\sqrt{s} = 5.02$ and 8 TeV. The results are compared to the measured production of neutral K^{*}(892) and with the predictions from commonly used QCD-inspired event generators.

Content type

Experiment

Collaboration

ALICE

Centralised submission by Collaboration

Presenter name already specified

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Session Classification: Poster Session

Track Classification: QCD at high temperature