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First results on charged $K*(892)^{\pm}$ resonance production in pp collisions with ALICE at the LHC

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The study of strange hadronic resonances in pp collisions contributes to the study of strangeness production in small systems. Measurements in pp collisions constitute a reference for the study in larger colliding systems and provide constraints for tuning QCD-inspired event generators. Since the lifetimes of short-lived resonances such as $K^*(892)^{\pm}$ ($\tau \sim 4$ fm/c) are comparable with the lifetime of the fireball produced in heavy-ion collisions, regeneration and rescattering effects can modify the measured yield, especially at low transverse momentum. \\

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The first results for the $K^*(892)^{\pm}$ resonance obtained in inelastic pp collisions at $\sqrt{s} = 5.02$, 8, and 13 TeV will be shown. The $K^*(892)^{\pm}$ has been measured at mid-rapidity via its hadronic decay channel $K^*(892)^{\pm} \rightarrow K^0_S + \pi^{\pm}$, with the ALICE detector. In particular, the transverse momentum (p_T) spectrum, integrated yields, $\langle p_T \rangle$ and ratio to stable hadrons will be presented. The $K^*(892)^{\pm}$ results are compared with K^{*0} measurements and with commonly-used Monte Carlo models. Measurements at 13 TeV are in addition a baseline for comparison with pp measurements at other LHC energies.

Author: GARG, Kunal (Universita e INFN, Catania (IT))

Co-author: COLLABORATION, ALICE

Presenter: GARG, Kunal (Universita e INFN, Catania (IT))

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