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Charged-particle multiplicity dependence of $K^*(892)^\pm$ resonance production in pp collisions at $\sqrt{s} = 13$ TeV with ALICE

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Hadronic resonances have been shown to be good probes to investigate the late-stage evolution of ultra-relativistic heavy-ion collisions. Their lifetimes are comparable with the time scale of the fireball generated in these collisions. Therefore they are sensitive to the competing re-scattering and regeneration effects occurring in the hadronic phase, which modify particle momentum distributions and yields after hadronization. Recent measurements of resonance production in high-multiplicity proton-proton (pp) and proton-lead (p-Pb) collisions have shown the onset of phenomena typical of heavy-ion (Pb-Pb) collisions even in those smaller collision systems. In particular, there are hints of suppression of the $K^*(892)^0/K$ ratio with increasing charged-particle multiplicity. A study of $K^*(892)^\pm$ production can provide further evidence to confirm the observed trend.

In this poster the measurement of $K^{*\pm}$ production at mid-rapidity in pp collisions at 13 TeV as a function of the charged-particle multiplicity will be presented and discussed. The measurements will be compared to results for the K^{*0} , other collision systems and energies, and to theoretical models.

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