

Resonance of $K^*0(892)$ in and out of jets in pp collisions at $\sqrt{s} = 13.6$ TeV

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Recent measurements of two-particle correlations within jets in high-multiplicity pp collisions at $\sqrt{s} = 13.6$ TeV reveal flow-like patterns among jet constituents. Such effects were previously considered unique to heavy-ion collisions, suggesting that a hot, dense QCD medium may form even inside jets in small systems. As this medium hadronizes, substantial final-state hadronic interactions can persist, leading to significant modifications of short-lived resonance yields through (pseudo-)elastic scatterings with other hadrons after chemical freeze-out. To investigate this, we analyze yields of the short-lived K^0 meson *using high-multiplicity jets in pp collision data at $\sqrt{s} = 13.6$ TeV collected by the ALICE Collaboration during LHC Run 3. Charged-particle jets are reconstructed, and per-jet K^0 yields are measured in and out of the jet cone. Comparing these yields for this resonance offers new insight into final-state hadronic interactions inside jets produced in small collision systems.*

Research field of your presentation

Experimental high-energy nuclear physics

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