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Effects of hadronic reinteraction on jet fragmentation from small to large systems

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The effect of the hadronic phase on jet quenching in nuclear collisions is largely an open question, although there are tantalizing hints from previous studies that the effects might be sizable. We have implemented a hadronic afterburner phase for jet fragmentation hadrons in the JETSCAPE framework using SMASH. We have applied the new setup to $e^+ + e^-$, $p + p$ and $A + A$ systems in order to study the effects of hadronic rescattering. For a quantitative analysis we compare simulations, with and without rescatterings of shower hadrons during the afterburner phase. We report here effects of hadronic rescattering on hadron spectra, event shape observables and jet observables as functions of collision system and multiplicity. We find sizable corrections for many observables, in particular for hadron-hadron correlation functions.

Category

Theory

Collaboration

JETSCAPE

Authors: Mr ROCH, Hendrik (FIAS); COLLABORATION, JETSCAPE

Presenter: Mr ROCH, Hendrik (FIAS)

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