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Jet shape modifications from quenching

The striking suppression and modification patterns that are observed in jet observables measured in heavy-ion collisions, with respect to the proton-proton baseline, have the potential to constrain the spatio-temporal branching process of energetic partons in a dense QCD medium. The mechanism of jet energy loss in a deconfined medium is intricately associated with medium resolution of jet substructure fluctuations. This effect was recently understood to give rise to a novel Sudakov form factor, the collimator function, that was analyzed on the level of the single-inclusive jet spectrum. We show how this Sudakov suppression mechanism, that affects splitting processes inside the medium, contributes to jet shape observables in the presence of grooming. Additionally, we discuss the influence of soft splittings that are affected by color decoherence.

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