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## Quenching effects in the jet spectrum at various cone sizes

*Monday 26 July 2021 15:30 (15 minutes)*

The strong suppression of high- $p_T$  jets in heavy-ion collisions is a result of elastic and inelastic energy loss, suffered by the jet multi-prong collection of color charges that are resolved by medium interactions. We develop a novel analytic framework to study the quenched jet spectrum in which we include many energy-loss-related effects, such as resummation of soft and hard medium induced emissions, broadening, elastic scattering, jet fragmentation, cone size, coherence effects, etc. We present the first predictions for the nuclear modification factor and the quantile procedure with cone size dependence. We compare dijet and boson+jet events to unfold the spectrum bias effects and improve quark-, and gluon-jet classification in heavy-ion jets. Besides pointing out its flexibility, we show our formalism relevance in pp jets modeling non-perturbative effects.

The talk is based on arXiv:2101.01742 and arXiv:2103.14676

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### Collaboration / Activity

theory

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