

Abstract Submitted  
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**Hadron+jet coincidence measurements with ALICE** RONGRONG MA, Yale University, ALICE COLLABORATION — The primary goal of the heavy-ion field is to study the properties of the quark-gluon plasma (QGP) created in relativistic heavy ion collisions. At the early stage of the collisions, hard scatterings of quarks and gluons (partons) take place and the scattered partons subsequently interact with the medium. The kinematics of the partons could be recovered approximately using reconstructed jets, which provides an opportunity to study the properties of the medium. One challenge for jet reconstruction in heavy-ion collisions is the large background. The hadron+jet coincidence measurement presented in this talk is designed to overcome this issue. Charged particles are used as triggers, and the charged jets recoiling back-to-back from these triggers are collected. Triggering on the charged hadrons should bias the initial hard scatterings towards the surface of the medium, such that the recoiling jets would go through longer than average length in the medium. Since the background contribution to the recoil jet spectrum is uncorrelated with the trigger hadrons, it can be removed by taking the difference of the jet spectra in different trigger intervals. Results from Pb-Pb collisions are compared to quenched models, and a baseline perturbative QCD calculation at Next-To-Leading order.

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