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Jet Quenching via Jet Collimation

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The ATLAS and CMS Collaborations recently reported strong modifications of dijet properties in heavy ion collisions. In this work, we discuss the extent to which these first data constrain the microscopic mechanism underlying jet quenching. Simple kinematic arguments lead us to identify a frequency collimation mechanism via which the medium efficiently trims away the soft components of the jet parton shower. Through this mechanism, the observed dijet asymmetry can be accomodated with values of $\hat{q}\,L$ that lie in the expected order of magnitude.

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