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Using Jets and Other High pT Probes to Understand Properties of the QGP

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In high energy collisions of heavy ions, high momentum partons traverse and lose energy in the dense medium created, known as Quark Gluon Plasma (QGP). By studying how these high momentum probes interact and lose energy in the medium we can learn more about the properties of the QGP. These partons, produced by hard scatterings early in the collision, eventually fragment into particles which can be observed by experiments and used to measure medium-induced parton energy loss. To access these probes and the medium modification of jet fragmentation, several observables have been measured from spectra and angular correlations of high momentum fragments to full jet reconstruction. By comparing these measurements in heavy ion collisions to those in pp, we can quantify the modification due to the medium and with the aid of models, begin to build a picture of the QGP and its properties. Results from a variety of collision species and energies, from the LHC and RHIC experiments, including the latest results from this year's pPb run at the LHC, and the resulting picture of the QGP will be presented.