

Microseconds after the Big Bang, a state of matter called Quark-gluon plasma (QGP) existed where the quarks and gluons that are typically confined inside of hadrons were asymptotically free. A transition from hadrons to this hot, dense state of deconfined matter is predicted by QCD and is expected to occur at very high temperatures and pressures. We can experimentally reproduce these conditions in high energy heavy-ion collisions using colliders such as the LHC and RHIC in order to study the properties and dynamics of this primordial QGP phase. Collimated streams of partons from high momentum QCD scatterings called jets are ideal probes of the QGP since they experience its full evolution. The partons inside the jet interact strongly with the medium as they propagate through it, leading to jet energy loss and internal structure modification. Jet substructure tools were developed for use in pp collisions to probe fundamental QCD since the jet is sensitive to many QCD processes during its evolution. These tools can also be used in heavy-ion collisions to isolate different jet-medium interactions and answer questions about the microscopic structure of the QGP. This seminar will discuss recent jet substructure measurements from the ALICE collaboration in both pp and Pb-Pb collisions.