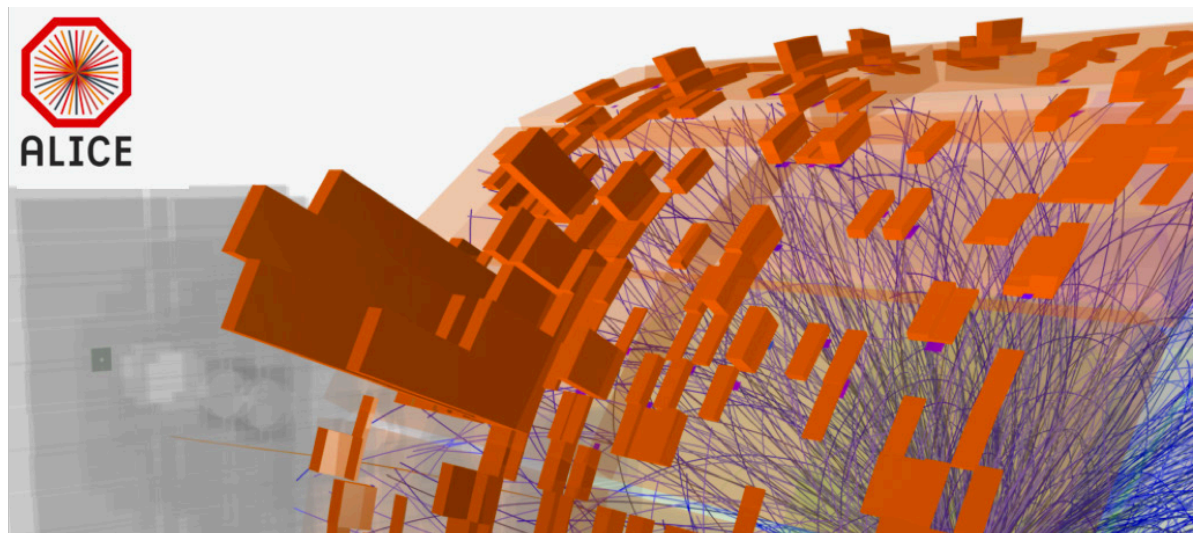




**Laura Havener**  
Yale University

**April 14, 2020 at 12:00 p.m. via Zoom**

**Exploring jet splittings in heavy ion collisions with ALICE**



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. We can experimentally reproduce these conditions in high energy heavy ion collisions using colliders such as the LHC 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 lose energy through strong interactions with the medium as they propagate through it, a phenomena called jet quenching. Jet splittings, QCD processes where the original parton that produced the jet can split into two or more partons, probe the jet's complicated internal structure that is expected to be significantly modified by the medium. Therefore, jet splittings allow us to look back at the history of the jet as it propagated through the medium giving insight into the time evolution of jet-medium interactions. This seminar will discuss recent results on jet splittings in heavy ion collisions at the LHC using the ALICE detector.

Host: Giacomo Scanavini

**Connection Info:** <https://yale.zoom.us/j/7544440361> Meeting ID: 754 440 361

*Sponsored by the Flint Fund, Yale Wright Laboratory, Yale University, and the Yale Physics Department.*