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## Probing the Dead Cone using the Lund plane

We exploit a jet substructure observable called the Lund Jet Plane (LJP) to map the momentum and angular orientation of particle emissions from a jet-initiating quark in order to study the jet evolution. This approach is useful for probing the Dead Cone phenomenon, a predicted suppression of soft gluon radiation in a conical region around the forward axis of a radiating massive quark. We present preliminary findings from analyzing the emission density within the LJP of bottom jets generated in PYTHIA8 simulations. Furthermore, we discuss opportunities for extensions to heavy-ion collisions where medium-induced radiation is expected to fill the Dead Cone, providing a tool to characterize the high temperature phase of the Quark Gluon Plasma.

### Category

Theory

### Collaboration (if applicable)

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