



Contribution ID: 24

Type: **not specified**

Novel approach to measure quark/gluon jets at the LHC

In this talk, we present a new proposal on how to measure quark/gluon jet properties at the Large Hadron Collider (LHC). The main advantage of this approach is that our construction of an observable allows a single set of experimental cuts to be used to select jets, keeping all detector parameters unchanged, and in this way, reducing many systematic uncertainties. We will discuss the details of the measurement strategy, including the theoretical basis and the experimental techniques for measuring them. We will also present preliminary results from our phenomenological analysis of samples generated by Herwing and Pythia event generators using this approach. Overall, our proposed measurement strategy provides a promising new avenue for studying quark/gluon jet properties at the LHC.

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