

Calibration of q/g Taggers in the ATLAS Detector

The data set provided by the Large Hadron Collider, with an integrated luminosity of 139.0 fb^{-1} at a center-of-mass energy of $\sqrt{s} = 13 \text{ TeV}$, opens a window to search for new physics beyond the Standard Model (BSM). Searches for a resonance in the dijet mass spectrum are powerful probes of many BSM theories. For particles decaying into light-flavor quarks, inclusive searches provide good sensitivity. For BSM decays to gluons, boosted decision tree (BDT) based gluon taggers using track and calorimeter information can improve the discovery significance. Imperfect modeling of hadronization makes it difficult to calibrate quark/gluon taggers. To calibrate the taggers, a matrix method is applied to find scale factors between the detector and monte-carlo data. In this talk I will present the preliminary scale factors for dijet events along with the systematic uncertainties.

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No

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