Measurement of jet substructure with the ATLAS detector

Thursday 18 July 2024 11:45 (15 minutes)

Measurements of the substructure of jets are presented using 140 fb-1 of proton-proton collisions with sqrt(s)=13 TeV center-of-mass energy recorded with the ATLAS detector at CERN Large Hadron Collider. Various results are presented including the measurement of non-perturbative track functions, or, the ratio of a jet transverse momentum carried by its charged constituents to its complete transverse momentum. The first differential cross-section measurement of Lund sub-jet multiplicities using dijet events and the measurement of the Lund Jet Plane in ttbar events are also shown in this contribution. Moreover, the measurements of the substructure of top-quark jets are presented using top quarks which are reconstructed with Antikt algorithm with a radius parameter R=1.0.

Alternate track

1. Top Quark and Electroweak Physics

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Yes

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Track Classification: 06. Strong Interactions and Hadron Physics