

Jet substructure measurements in multijet production with the ATLAS experiment

Tuesday, 30 July 2024 10:00 (20 minutes)

Jets, the collimated streams of hadrons resulting from the fragmentation of highly energetic quarks and gluons, are some of the most commonly observed radiation patterns in hadron collider experiments. The distribution of quantum chromodynamic (QCD) radiation within jets is determined by complex processes, the production of showers of quarks and gluons and their subsequent recombination into hadrons. Presented are measurements of non-perturbative track functions, as well as differential cross-section of Lund sub-jet multiplicities and measurements of the Lund Jet Plane in top quark pair production. Finally, the substructure of top-quark jets, using top quarks reconstructed with the anti-kt algorithm is highlighted. The results are compared to a large variety of parton shower models and tunes.

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Session Classification: QCD

Track Classification: QCD