

Top-quark jet substructure measured with the ATLAS detector

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The large production cross section of top-quark pairs at the LHC allows for detailed studies of the substructure of jets arising from light quarks, b-quarks, and gluons. In this talk, recent measurements of the jet substructure in the decay products of top quarks performed by the ATLAS experiment are presented, using the reconstructed charged particles in the decay of W bosons and the fragmentation of b-quarks. One- and two-dimensional differential cross-sections for eight substructure variables, defined using only the charged components of the jets, as well as a measurement of the Lund plane are discussed. The observed substructure distributions are compared with several MC generator predictions using different phenomenological models for parton showering and hadronization.

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