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## Measurement of 4-jet production cross sections and transverse energy correlations with the ATLAS detector

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The production of multi-jet final states at hadron colliders probes pQCD at several mass scales. The processes can also be used to probe the gluon density function of the proton.

The ATLAS collaboration has measured the production of 4-jets final states in in 20.3 /fb of data collected at a center-of-mass energy of 8TeV. The measurements have been performed differentially as a function of a variety of kinematic and topological observables and compared with state-of-the-art theory calculations at NLO in pQCD and with the predictions of several MC generators.

The collaboration has also used multi-jets events in data taken at an effective integrated luminosity of 158 /pb at a center-of-mass energy of 7TeV to measure the transverse energy correlation and its asymmetry and derive a measurement of the strong coupling constant.

**Primary author:** Dr SHABALINA, Elizaveta (University of Gottingen)

**Presenter:** RIDEL, Melissa (LPNHE-Paris)

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