

# XXIV International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS16)



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## Measurement of jet properties with the ATLAS detector

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The average charge and the multiplicity of charged hadrons within a jet provide new insights into the modeling of strong interactions. The jet charge can also be used to tag hadronically decaying gauge bosons and the number of charged particles within a jet provides a powerful means to distinguish gluon-initiated from quark-initiated jets.

The ATLAS collaboration has used a selection of di-jet events in 20.3 /fb of data collected at a center-of-mass energy of 8TeV to measure the average charged-particle multiplicity and the transverse-momentum weighted average charge of the hadrons within the jets, separately for the more central and the more forward jet and as a function of the jet transverse momentum.

The results have been compared with calculations at NLO in pQCD and with predictions of MC generators interfaced with various parton distribution functions and underlying-event tunes.

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