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Measurement of c-jet tagging efficiency in ATLAS with W+c-jet events

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The correct identication of the jet quark flavour (flavour tagging) is of fundamental importance for hadron collider experiments, such as ATLAS and CMS at the Large Hadron Collider. In particular, it is an important tool for many physics analyses with heavy flavour jets in the final state (b-quarks from top quark decays, H to bb decays and new physics searches). The ATLAS experiment developed a new flavour tagging algorithm for Run II: in this contribution, the measurement of its tagging efficiency performed on a c-jet enriched sample will be presented, using 13 TeV data collected by ATLAS during 2015. A high purity c-jet sample has been selected by reconstructing W+c-jet events, with the W boson reconstructed via its decay into an electron and a neutrino and the c-jet identified via a soft muon stemming from a semileptonic c-hadron decay, exploiting the charge correlation between the electron and the muon.

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