

Abstract Submitted
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***b*-tagging calibration of ATLAS data using the System8 method**

KEVIN SAPP, University of Pittsburgh, ATLAS COLLABORATION — We present results of calibrating the efficiency of various *b*-tagging algorithms using data taken with the ATLAS detector in 2011. The calibration method, called *System8*, separates a sample of jets containing muons into 8 subsamples based on whether they pass or fail three different methods for selecting *b*-jets: passing a Soft Muon tagging algorithm, passing a Lifetime tagging algorithm, and the presence of a corresponding *b*-tagged jet opposite the one under study. A system of 8 equations, which relates the fraction of *b*-jets, the tagging efficiencies and the correlations between the three subsamples to the observed numbers of events in each subsample, is then solved to extract the *b*-tagging efficiencies. We will show the basic procedures behind System8 and the measured efficiencies with statistical and systematic uncertainties. These efficiencies will be compared to those obtained from Monte Carlo truth information. Scale factors relating the measured efficiencies to those obtained from Monte Carlo will also be presented.

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