



## **Measurement of b-jet efficiency for high $p_T$ jets in ATLAS with di-jet events**

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The identification of jets originating from b quarks (b-tagging) is a crucial tool for many physics analyses at the LHC. It is especially important for measurements involving top quarks, in searches for new physics, and in Standard Model and beyond the Standard Model Higgs boson searches. The b-tagging algorithms need to be calibrated in data to account for possible differences between data and simulation. Current calibration techniques used in ATLAS only reach approximately 300 GeV in jet transverse momentum. We present a new technique to calibrate the efficiency of b-tagging algorithms at high  $p_T$  in di-jet events, which is based on template fits, extending the calibration to jets with  $p_T$  up to 1200 GeV. Jets based on the energy deposits reconstructed in the calorimeter are calibrated, as well as jets formed by tracks reconstructed in the inner tracking detector. Calibration results for both types of jets are presented in the form of  $p_T$ -dependent data-to-MC scale factors.

**Primary author:** COLLABORATION, ATLAS (CERN)

**Presenter:** SHCHERBAKOVA, Anna (Stockholm University (SE))

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