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## **Tau Energy calibration in the ATLAS experiment (POSTER)**

The ATLAS calorimeter plays a crucial role in the reconstruction of the energy of hadronically decaying tau leptons in the ATLAS experiment. We discuss the calibration procedure, as well as new data driven methods to measure the systematic uncertainties on the tau energy scale.

The systematic uncertainty on the energy scale of hadronic tau decays is calculated using the convolution of the individual visible tau decay products, namely charged and neutral pions. The systematic uncertainty quoted using the deconvolution method, in the region where no test beam data are available, is confirmed by using the reconstructed visible mass calculated from Z to tau+tau- decays. The algorithms and their performance

are presented in details, using high energy data collected at the ATLAS experiment during the 2012 run and simulation data.

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