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Measurements of the Electron Reconstruction and Identification Efficiencies in ATLAS

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Isolated, high-energy electrons constitute a very clean signature at hadron collider experiments. As the final states of many Standard Model processes, as well as physics beyond the Standard Model, electrons are a vital part of the ATLAS physics program. A precise knowledge of the efficiency to correctly reconstruct and identify these electrons is thus important. In this contribution the measurement of these efficiencies is described. It is performed with a tag-and-probe method using Z and J/psi decays to electrons in 20.3 fb of pp collisions recorded in 2012 at $\sqrt{s}=8$ TeV. The combination of the measurements results in identification efficiencies determined with an accuracy of a few per mil for electrons with a transverse energy of $E_t > 30$ GeV.

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