Contribution ID: **825** Type: **Poster**

Identification and calibration of high-rapidity electrons with the ATLAS detector

Monday, 15 July 2019 18:30 (1h 30m)

Drell-Yan events with high-rapidity electrons provide strong constraints on the proton parton density functions, and the highest sensitivity for the measurement of the electroweak mixing angle. Optimal electron identification and energy calibration are crucial to exploit these features. The identification relies on a multivariate likelihood technique to separate prompt electrons from hadrons. Measurements of the forward electron identification efficiency are performed using the tag-and-probe technique and large samples of Z boson decays. A new method is used to perform the energy calibration, accounting for possible non-linearities in the energy response. The identification efficiency and energy calibration results are obtained with pp collision data recorded at sqrt(s)=13 TeV in 2015-2016, and corresponding to an integrated luminosity of 36 fb-1.

Primary author: FERRANDO, James Edward (Deutsches Elektronen-Synchrotron (DE))

Presenter: GAO, Jun (University of Science and Technology of China (CN))

Session Classification: Wine & Cheese Poster Session

Track Classification: Detector R&D and Data Handling