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Type: **Poster**

Energy and jet measurements at forward rapidities in Pb+Pb collisions at 5.36 TeV with the ATLAS detector

Understanding energy reconstruction in the forward rapidity region is crucial for the definition of collision centrality as well as for the measurements of jet suppression in the forward region. In this poster, we discuss the performance in the forward rapidity region of the ATLAS detector in 2023 and 2024 Pb+Pb data for both total energy reconstruction and jet reconstruction. Jet reconstruction performance is evaluated in terms of jet energy scale, jet energy resolution, jet position resolution, and jet reconstruction efficiency. The difference between the inclusive jet performance and forward jet performance is quantified. An important part of the ability to reconstruct jets is the trigger. We show the evaluation of the high-level trigger performance in the forward region in terms of trigger efficiency and the momentum difference between jets reconstructed using HLT and offline jets. Lastly, we describe the strategy to reconstruct total energy in the forward rapidity region and related performance. Contributions from various sources of background will also be discussed and the strategy to deal with them will be put forward.

Category

Experiment

Collaboration (if applicable)

ATLAS Collaboration

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