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Hadronic Reconstruction Techniques at ATLAS

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The reconstruction and calibration of hadronic final states is an extremely challenging experimental aspect of measurements and searches at the LHC. This talk summarizes the latest results from ATLAS for jet reconstruction and calibration. New approaches to jet inputs better utilize relationships between calorimeter and tracking information to significantly improve the reconstruction of jet substructure. Additionally, a full suite of in-situ measurements of the jet energy scale and jet energy resolution for ATLAS's new particle flow jets yield the lowest uncertainties yet in the high pileup conditions of the LHC Run 2. Finally, new machine learning approaches for various aspects of reconstruction will be discussed.

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