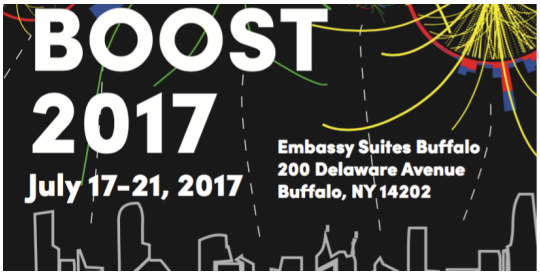

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Large R jet reconstruction and calibration algorithms (ATLAS)

Wednesday, July 19, 2017 10:00 AM (20 minutes)

Large-R jets are used by many ATLAS analyses working in boosted regimes. ATLAS Large-R jets are reconstructed from locally calibrated calorimeter topoclusters with the Anti-k_{t} algorithm with radius parameter R=1.0, and then groomed to remove pile-up with the trimming algorithm with f_{cut} 0.05 and subjet radius R=0.2. Monte Carlo based energy and mass calibrations correct the reconstructed jet energy and mass to truth, followed by in-situ calibrations using a number of different techniques. Large-R jets can also be reconstructed using small-R jets as constituents, instead of topoclusters, a technique called jet reclustering, or from track calo clusters (TCCs), which are constituents constructed using both tracking and calorimeter information. An overview of large-R jet reconstruction will be presented here, along with selected results from the jet mass calibrations, both Monte Carlo based an insitu, from jet reclustering, and from track calo clusters.

Presenter: TAENZER, Joe (Tel Aviv University (IL))

Session Classification: Algorithms