



XXIV QUARK MATTER DARMSTADT 2014

Contribution ID: 446

Type: **Poster**

CMS Jet reconstruction

Tuesday 20 May 2014 16:30 (2 hours)

We present the latest development of a particle-flow-based jet reconstruction and underlying event subtraction algorithm in heavy ion collisions with CMS. This new algorithm uses a data-driven method to estimate the underlying event level from the forward calorimeter energy distribution, taking into account possible flow modulation. Unlike jet-level subtraction methods, this approach produces a fully subtracted “hard event” as input to algorithms such as anti-kT, that automatically clusters to the hard jets. We show its improved performance to the CMS iterative pile-up subtraction, and also compare to other jet reconstruction strategies currently used in heavy ion collisions.

On behalf of collaboration:

CMS

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Session Classification: Poster session

Track Classification: Jets