



**HEP 2013
Stockholm
18-24 July 2013**



Contribution ID: 160

Type: **Talk presentation**

Jet performance in CMS

Thursday 18 July 2013 11:15 (15 minutes)

Calibration and reconstruction of jets critically rely on the performance of the calorimeters. Extending from out to $\eta < 5$, jets must critically rely on the interplay between forward calorimeters, central calorimeters and the tracker. The high pileup scenario poses further complications. These difficulties are overcome in CMS using the “particle flow approach”. A summary of the measurements of the jet energy calibration in CMS is presented, performed with data samples collected in proton-proton collisions at a centre-of-mass energy of 8 TeV corresponding to an integrated luminosity of 12.1/fb. The final jet energy calibration is based on dijet, γ +jet and Z+jet events. The effect of pile-up interactions and the state of the art mitigation techniques used in CMS and we describe the main sources of uncertainty on the jet energy calibration.

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Session Classification: QCD

Track Classification: QCD