Contribution ID: **27** Type: **not specified**

ttbar simulation and jet energy studies (towards a measurement of the ttbar mass difference at CMS)

Both CMS and ATLAS, the two general-purpose detectors at the LHC, need a vast array of large Monte-Carlo data samples, in order to probe the Standard Model. Common MC samples allow for assessing differences in detector performance and analysis strategy. A new ttbar sample based on the Sherpa generator is compared to CMS and ATLAS data using the Rivet validation framework. The measurement of the top/antitop mass difference requires careful energy calibration of the jets initiated by different quark flavors. The current status is presented, including first studies of quark vs anti-quark jet energy response in simulation.

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