



## Performance and Upgrade plans for the CMS Hadron Calorimeter at the LHC

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The hadron calorimeters of the CMS experiment have successfully recorded data at 7 TeV and 8 TeV center-of-mass energy during 2011 and 2012 LHC operation. The performance of all systems (barrel, end-cap, forward and the outer calorimeters) are discussed and results from the full 2011 dataset are shown on noise rejection, calibration, collision timing, and identification of jet candidates and for other salient features. In addition, the CMS collaboration is planning improvements to the hadron calorimeters which include the replacement of the HPD photodetectors with SiPMs, increased depth segmentation in the calorimeter, and the inclusion of TDC capability. The status of the R&D for these upgrades will be discussed, including the testing of the upgraded microTCA readout electronics during current LHC data taking.

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