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CMS Electromagnetic Calorimeter Performance During the 2011 LHC Run

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The CMS Electromagnetic Calorimeter (ECAL) is a high resolution, fine-grained calorimeter devised to measure photons and electrons at the LHC. Built of lead tungstate crystals, it plays a crucial role in the search for new physics as well as in precision measurements of the Standard Model. A preshower detector, based on silicon strip sensors, improves position measurements and particle identification in the endcaps. The operation and performance of the ECAL during the 2011 run at the LHC, with pp collisions at $\sqrt{s} = 7\text{ TeV}$ will be reviewed. Pure samples of electrons and photons from decays of known resonances have been exploited to improve and verify the trigger efficiency, the reconstruction algorithms, the detector calibration and stability, and the particle identification efficiency. A review of all these aspects will be given.

for the collaboration

CMS Collaboration

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