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## **Energy clustering, Calibration and Particle Identification with the CMS Preshower detector**

The Preshower detector is located in front of the CMS endcap electromagnetic calorimeter. It is a sampling detector with two layers of lead absorber, each followed by 1.9 mm pitch silicon strip sensors. The 4288 DC-coupled sensors each have an active area of 61 x 61 mm<sup>2</sup>, with a total surface area of around 16 m<sup>2</sup>, the largest ever built. The Preshower was installed to improve  $\gamma$ /pi0 discrimination. The Preshower energy clustering algorithms and calibration strategies are described. The algorithms have been improved to deal with bremsstrahlung and photon conversions due to the tracker material in front of the Preshower. Improved photon identification, for physics analyses such as Higgs decays to two photons, as well as improved electron identification in the endcap region of CMS are discussed.

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