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## Performance of the CMS electromagnetic calorimeter in Run II and its role in the measurement of the Higgs boson properties

The characterisation of the Higgs boson discovered in 2012 around 125 GeV, and confirmed with the data collected in Run II, requires the precise determination of its mass, width and couplings. The electromagnetic calorimeter (ECAL) of the Compact Muon Solenoid Experiment (CMS) is crucial for measurements in the highest resolution channels,  $H \rightarrow \gamma\gamma$  and  $H \rightarrow 4\text{ leptons}$ . In particular the energy resolution, the scale uncertainty and the position resolution for electrons and photons are required to be as good as possible. During Run II the LHC is continuously operating with 25ns bunch spacing and increasing instantaneous luminosity. The calorimeter reconstruction algorithm has been adapted to cope with increasing levels of pile-up and the calibration and monitoring strategy have been optimized to maintain the excellent performance of the CMS ECAL throughout Run II. We show first performance results from the Run II data taking periods, achieved through energy calibrations using physics events, with a special emphasis on the impact on the measurement of the properties of the Higgs boson and on searches for new physics.

### Experimental Collaboration

CMS

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