

Performance of the CMS Electromagnetic Calorimeter in the LHC Run II



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Electromagnetic Calorimeter is a crucial component of the CMS detector

- measures energy of electrons and photons with resolution up to 1.5%;
- excellent position reconstruction thanks to fine detector granularity provides high photon-resonance mass resolution

Ever increasing levels of absorbed irradiation dose and higher number of pile-up interactions make it challenging to maintain the high level of ECAL performance.

Nevertheless, it is achieved thanks to a number of parallel efforts:

- **continuous monitoring and servicing:** to maintain all the ECAL systems operational during data taking;
- **regular calibrations:** to take into account variations of mechanical structure, crystal and electronics response, beam conditions;
- **improvement of reconstruction algorithms:** to better identify increasing contributions from pile-up collisions and to improve reconstructed energy resolution.

