Calibrating the CMS Electromagnetic Calorimeter using $\pi^0$'s

JINGZHI ZHANG, D. GONG, Y. KUBOTA, R. RUSACK, University of Minnesota, Y. GERSTEIN, Florida State University, CMS COLLABORATION — Calibration defines the ultimate performance of the CMS electromagnetic calorimeter (ECAL) at the LHC. The individual calibration of all 75848 crystal channels to the desired precision of 0.5% is a challenge. $\pi^0 \rightarrow \gamma\gamma$ has a very large production rate and a substantial sample can be accumulated relatively easily. Here we present a study on calibrating this detector in-situ using inclusive $\pi^0$'s.

Sarah Eno
U. Maryland

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