

Looking for Light at the End of the LHC Tunnel: The Search for SUSY with Photons at CMS

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With the expectation exceeding 7 TeV run in 2011, CMS quickly excluded much of the phase space where early SUSY was proposed to be found. In 2012, with the LHC producing collisions at unprecedented rates at 8 TeV, we are transitioning from “simple” cut & count searches for early new physics to more subtle and challenging signatures. Those with photons in the final state form one of the cornerstones of the 2012 CMS SUSY search strategy. Photons can be identified with high purity in CMS and are predicted to be present in many new physics signatures, from Gauge Mediated SUSY to Universal Extra Dimensions. Here I will present CMS’s most recent SUSY search results, emphasizing those utilizing final state photons.