

PHYSICS AND ASTRONOMY COLLOQUIUM

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Searching for Physics Beyond the Standard Model at the CMS Experiment at the LHC

Abstract

The Large Hadron Collider (LHC) has had a successful Run I. It provided the highest energy proton collisions to-date to the experiments, at a center-of-mass energy of 8 TeV. In 2012, the observation of a new Higgs-like boson was announced to the world. There is also an extensive program at the LHC to search for physics beyond the Standard Model. I will give an overview of the status of such searches at the LHC, with a special focus on the CMS experiment and on searches for Supersymmetry, a theory that predicts a symmetry between matter and forces and provides a promising candidate for dark matter.

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