

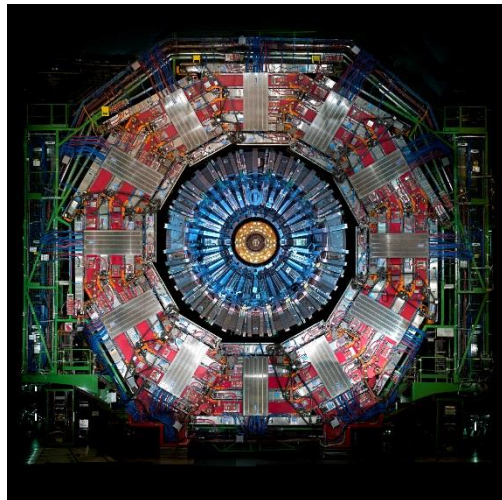


LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS (LEPP)

Joint Experimental and Theory Seminar in Particle Physics and Cosmology

Menglei Sun
Carnegie Mellon
University

Search for supersymmetry at CMS in events with photons



The Standard Model (SM) of particle physics successfully describes the elementary particles and their interactions. With the discovery of the Higgs boson, the SM was finally completed. Yet there are still many unsolved problems in the SM, such as the hierarchy problem in the Higgs sector and the lack of particle candidate for dark matter. Supersymmetry (SUSY) is one of the most favored extensions of the Standard Model. It can stabilize the Higgs mass, as well as provide dark matter candidates. Models of SUSY with general gauge-mediated supersymmetry breaking often lead to final states containing photons. In this talk, I will present a search for supersymmetry in final states with one photon, one lepton and large transverse missing momentum. This search was performed with the full dataset collected with the CMS detector during 2016 corresponding to a total integrated luminosity of 36.1 fb^{-1} .



Tuesday, May 29, 2018

3:30pm

301 Physical Sciences Bldg.

