

Abstract Submitted  
for the APR14 Meeting of  
The American Physical Society

**Search for New Physics in the Photon+MET Final State** ZEYNEP DEMIRAGLI, Brown University, CMS COLLABORATION — With the recent discovery of the Higgs boson at the Large Hadron Collider, the next goals of the Compact Muon Solenoid (CMS) Experiment include characterizing this new particle and probing for new physics beyond the Standard Model (SM). We present a search for new physics which results in a final state consisting of a low pt photon, low missing transverse energy and low jet multiplicity, which can arise from models involving dark matter production or exotic decays of the Higgs in low scale supersymmetry breaking scenarios. This analysis is extremely challenging due to the lack of a fully reconstructed final state, the low energy spectrum of the final state objects, as well as the large SM backgrounds.

Toyoko Orimoto  
Northeastern University

Date submitted: 10 Jan 2014

Electronic form version 1.4