

Abstract Submitted  
for the SES13 Meeting of  
The American Physical Society

**Investigation of Wavelength Dependent Radiation Damage in ECAL Crystals** JOSEPH GOODELL, Univ of Virginia, CMS COLLABORATION — The Compact Muon Solenoid (CMS) experiment at the Large Hadron Collider (LHC) uses a Light Monitoring Farm (LMF) to assess the behavior and response of the lead tungstate scintillating crystals and the vacuum phototriode (VPT) photodetectors. The LMF uses 440nm blue laser light, 455nm blue LED light, and 617 orange LED light to try to extract a wavelength dependence on the radiation damage to crystals and VPTs. Data from the LMF are compared with non-radiation VPT studies performed at the University of Virginia to separate whether the effects are due to radiation or to VPT performance. Combining these experimental results with radiation damage theory we compare what we expect from radiation damage to observed differences in blue and orange light response.

Joseph Goodell  
Univ of Virginia

Date submitted: 20 Sep 2013

Electronic form version 1.4