Contribution ID: **285** Type: **Poster**

Influence of Neutrons on Signal Fluctuations for APD Structures

Wednesday, 23 May 2012 11:26 (0 minutes)

Silicon Avalanche Photodiodes (APD) working in proportional were chosen as a readout device for the PbWO4 crystals in the barrel of the CMS Electromagnetic Calorimeter (ECAL). During 10 years of operation, the CMS ECAL will be exposed to 2×10^{13} neutrons/cm^2 under a severe radiation environment. In this study, we studied on the effect of photostatistical fluctuations from those of neutrons by using GEANT4 toolkit. Afterwards, the resulting photons have been tracked with a single-particle Monte Carlo simulation technique.

Primary author: KILIC, Adnan (Department of Physics, Uludag University, Bursa)

Co-authors: Dr PILICER, Ercan (Department of Physics, Uludag University, Bursa); Dr KOCAK, Fatma (Department of Physics, Uludag University, Bursa); Prof. TAPAN, Ilhan (Department of Physics, Uludag University, Bursa)

Presenter: KILIC, Adnan (Department of Physics, Uludag University, Bursa)

Session Classification: Front End, Trigger, DAQ and Data Management - Poster Session

Track Classification: P4 - Front End, Trigger, DAQ and Data Management