



Contribution ID: 106

Type: **Poster Presentation**

Observation of Radiation Damage in the ATLAS Pixel Detector Using the High Voltage Delivery System

Wednesday 14 September 2011 09:00 (1 hour)

We describe the implementation of radiation damage monitoring using leakage current measurement of the silicon pixel sensors provided by the circuits of the ATLAS Pixel Detector high voltage delivery system. The dependence of the leakage current upon the integrated luminosity for several temperature scenarios is presented. Based on the analysis we have determined the sensitivity specifications for a Current Measurement System. The status of the system and the first measurement of the radiation damage corresponding to 1.5 inverse femtobarns of integrated luminosity are presented, as well as a comparison with the theoretical model.

Preferred medium (Oral/poster)

Oral

Authors: Dr GORELOV, Igor (University of New Mexico); Dr TOMS, Konstantin (University of New Mexico); Mr HOEFERKAMP, Martin (University of New Mexico); Prof. SEIDEL, Sally (University of New Mexico (UNM))

Presenter: Dr TOMS, Konstantin (University of New Mexico)

Session Classification: Poster Session

Track Classification: Detectors for High Radiation and Extreme Environments