

Radiation Damage in Silicon Sensors at the LHC

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The LHC silicon tracking detectors have been designed and realized with radiation tolerance strategies in mind. Today, with more than 5fb^{-1} of data collected all detectors experience increase in leakage currents dependent on their location and operation temperature. The more inner pixel detectors at ATLAS and CMS and the VELO at LHCb measure changes in the depletion voltage up to partially inverted areas in the LHCb VELO sensors.

This talk will exemplarily show first results and try a comparison with the predicting models. I will describe the different strategies how to derive e.g. the depletion voltage in situ and how to use the data to project into the future.