

Pixel Detector Calibration Visualization

Description

The ATLAS pixel detector is built out of almost 50000 modules with 80 million read-out channels. The extreme collision environment at the LHC required a complex design of the pixel detector, being only 4.1cm from the collision point, in both the design of the sensors themselves and the way data from the pixel detector is collected. This complex design also implies a comprehensive calibration and validation program to ensure the detector operation and data quality. In order to monitor such a large complex system many tools at various level of detail is needed. The Pixel Calibration Web Browser is a tool developed by the SLAC group that enables the user to search for and analyze calibration data from anywhere using only a web browser.

The project involves extending the pixel calibration browser capabilities and its use to facilitate studies of the performance of the pixel detector with the most recent calibration data. The project is a good way to get an overview of a state-of-the-art detector system at the largest detector ever built.

Please contact Per Hansson or Philippe Grenier for more information about this project.