DESY Seminar

Tuesday, 29.04.2008, 17h

DESY Hörsaal

The CDF Silicon Detector

Design, Operations, Studies

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The CDF experiment is a multi-purpose particle physics experiment at the Tevatron proton-antiproton collider at Fermi National Accelerator Laboratory. The CDF silicon vertex detector is one of the largest operating silicon detectors in particle physics. Covering an active sensor area of 6 m^2, the detector comprises 722,432 read-out channels on 5,456 chips. The detector is used for precision tracking and vertexing, and in a hardware trigger for events with displaced vertices. The silicon detector plays a critical role for the success of the CDF physics program. Starting from the history of silicon vertex detectors in particle physics, the presentation motivates the design of the current CDF silicon detector. The presentation gives an overview of the experience gained during the commissioning and day-to-day operations of the detector, which can be valuable for the LHC experiments. In adddition, the presentation will show recent studies on the detector performance and on the influence of radiation damage on the longevity of the silicon detector.

- **Tea and cookies will be served at 16.45h in the lobby**
- **After the seminar there is a chance for private discussions with the speaker over wine and pretzels**