



detector seminar

SPEAKER: Duccio Abbaneo (CERN)
TITLE: **The upgrade of the CMS Tracker for HL-LHC**
DATE: Fri 28/08/2015 11:00
PLACE: Salle Dirac

ABSTRACT

In order to maintain or improve the physics performance of the CMS detector in the high pileup conditions of the HL-LHC, the entire tracking system will be replaced with new detectors featuring higher radiation tolerance and enhanced functionality.

The Inner Pixel Detector will cope with unprecedented requirements in terms of radiation levels and readout bandwidth; a new layout will extend the tracking capability of CMS in the forward region.

The Outer Tracker will contribute to the Level-1 trigger decision of CMS, in order to maintain and improve the ability to select interesting physics events at high pileup. A new concept of silicon detector modules with local data reduction in the front-end readout electronics enables the implementation of the trigger functionality.

The use of advanced technologies and novel materials permits the realization of an enhanced tracking system with reduced mass.