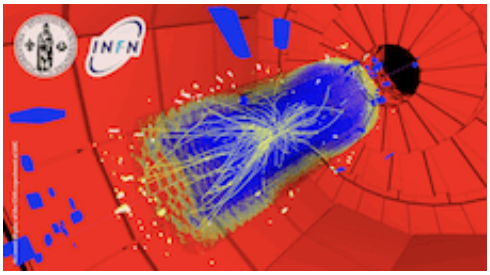

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Performance results of the LHCb Silicon Tracker detector at the LHC

Wednesday, 6 July 2011 09:30 (20 minutes)

The LHCb experiment is one of the four big experiments at the Large Hadron Collider (LHC) and it is designed to perform high-precision measurements of CP violation and search for New Physics. It is constructed as a forward single-arm spectrometer covering the polar angle 15-300 mrad. The Silicon Tracker (ST) of LHCb is a silicon micro-strip detector designed to perform a precise measurement of the particle trajectories produced by the proton-proton interactions. It consists of two sub-detectors, the Tracker Turicensis and the Inner Tracker and covers an area of about 12 m2 in the highest occupancy region around the beam axis. Results of the detector calibration and performance using data from the LHC p-p collisions collected in the 2010 and 2011 campaigns are reported here: the time and spatial alignment of the detector was performed using data from both campaigns; studies about the intrinsic detector efficiency and resolution are also shown; recent results on the detector performance compared to the expectations will be shown as well.

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