

Performance of the LHCb Silicon Tracker

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The LHCb detector has been optimized for the search for New Physics in CP violating observables and rare heavy-quark decays at the Large Hadron Collider (LHC). The detector is a single arm forward spectrometer with excellent tracking and particle identification capabilities. The LHCb Silicon Tracker is constructed from silicon micro-strip detectors with long readout strips. It consists of one four-layer tracking station upstream of the LHCb spectrometer magnet and three stations downstream of the magnet. The detectors have performed extremely well right from the start of LHC operation, permitting the experiment to collect data at instantaneous luminosities well exceeding the design value. In this presentation, an overview of the operational experience from the first two years of data taking at the LHC will be given, with special emphasis on problems encountered. Calibration procedures will be discussed as well as studies of the intrinsic detector efficiency and resolution. First measurements of the observed radiation damage will also be shown.

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