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The LHCb Silicon Tracker

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The LHCb experiment is dedicated to the study of heavy flavour physics at the Large Hadron Collider (LHC). The primary goal of the experiment is to search
for indirect evidence of new physics via measurements of CP violation and rare decays of beauty and charm hadrons. The LHCb detector
is a single-arm forward spectrometer and includes a high-precision tracking system consisting of a silicon-strip vertex detector surrounding the
proton-proton interaction region, a large-area silicon-strip detector located upstream of a dipole magnet, and three stations of silicon-strip
detectors and straw drift tubes placed downstream of the magnet. The silicon-strip detectors located upstream and downstream of the magnet, the
Tracker Turicensis (TT) and the Inner Tracker (IT), collectively form the
LHCb Silicon Tracker (ST). The TT covers the full acceptance before the magnet while the IT covers a cross-shaped region in the region of highest
particle density around the beam-pipe downstream of the magnet.
The design of the ST was presented at previous "Hiroshima" symposia.
The performance and operation of the Silicon Tracker during LHC Run 1 will be reviewed. The maintenance and operation of the
detectors during the two year shutdown of the LHC will be discussed and the various repairs and improvements that have been made to the
detector hardware and software will be shown. Finally, the re-commissioning of the detector for LHC Run 2 and first results on the performance of the
detector will be presented. In particular,
the latest measurements of the observed radiation damage will be shown and compared to that expected from simulation.

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