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Operational Experience and Performance with the ATLAS Pixel detector at the Large Hadron Collider at CERN

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The tracking performance of the ATLAS detector relies critically on its 4-layer
Pixel Detector
The key status and performance metrics of the ATLAS Pixel Detector are
summarised, and the operational experience and requirements to ensure
optimum data quality and data taking efficiency will be described, with special emphasis to radiation damage experience.
By the end of the proton-proton collision runs in 2018, the innermost layer IBL,
consisting of planar and 3D pixel sensors, had received an integrated fluence of approximately $\Phi = 1\times 10^{**}15$ 1 MeV neq/cm2.
The ATLAS collaboration is continually evaluating the impact of radiation on the Pixel Detector. A quantitative analysis of charge collection, dE/dX, occupancy reduction with integrated luminosity, under-depletion effects with IBL, effects of annealing will be presented and discussed, as well as the operational issues and mitigation techniques adopted during the LHC Run2 and the ones foreseen for Run3.

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