

The Expected Performance of the ATLAS Inner Detector

The ATLAS inner detector will see of the order of 1000 charged particle tracks for every beam crossing at the design luminosity of the CERN Large Hadron Collider (LHC).

This talk summarizes the design of the detector and outlines the reconstruction software.

The expected performance for reconstructing single particles is presented, along with an indication of the vertexing capabilities.

The effect of the detector material on electrons and photons is discussed along with methods for improving their reconstruction.

The studies presented focus on the performance expected for the initial running at the start-up of the LHC.

Results from the 2008 cosmic-ray running are also included.

Primary author: Dr NICKERSON, Richard (Oxford University)

Presenter: LEE, Jason (University of Sydney)

Track Classification: Poster session