

Track reconstruction in high-multiplicity environments with the ATLAS Detector at the LHC

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During 2017, the Large Hadron Collider provided record-breaking integrated and instantaneous luminosities, resulting in huge amounts of data being provided with numbers of interaction per bunch crossing significantly beyond initial projections. In spite of these challenging conditions, the ATLAS Inner Detector (ID) track reconstruction continued to perform excellently, and this contribution will discuss the latest performance results covering the key aspects of track reconstruction. Potential areas for improvement will also be highlighted, and planned improvements to track reconstruction techniques for future data-taking periods, in areas such as track ambiguity solving and vertex reconstruction, will be outlined.

Primary authors: ATLAS COLLABORATION; BUTTI, Pierfrancesco (CERN)

Presenter: BUTTI, Pierfrancesco (CERN)

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