

Track and vertex reconstruction performance of the ATLAS detector

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During the third data taking period, 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. In this contribution the algorithms used to reconstruct charged particles and primary vertices will be described. The software configuration used for the Run 3 data-taking period and its performance will be presented using data and simulated events. Additional track reconstruction passes, developed to improve the tracking capabilities in dedicated physics scenarios, will be discussed as well.

Alternate track

I read the instructions above

Yes

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