

Improvements to ATLAS Inner Detector Track reconstruction for LHC Run-3

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This talk summarises the main changes to the ATLAS experiment's Inner Detector Track reconstruction software chain in preparation of LHC Run 3 (2022-2024). The work was carried out to ensure that the expected high-activity collisions with on average 50 simultaneous proton-proton interactions per bunch crossing (pile-up) can be reconstructed promptly using the available computing resources. Performance figures in terms of CPU consumption for the key components of the reconstruction algorithm chain and their dependence on the pile-up are shown. For the design pile-up value of 60 the updated track reconstruction is a factor of 2 faster than the previous version.

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