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Expected tracking performance of the ATLAS Phase-II Inner Tracker Upgrade

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The upgrade to the High-Luminosity LHC (HL-LHC), with its increase to 140-200 proton-proton collisions per bunch crossing, poses formidable challenges for track reconstruction. The Inner Tracker (ITk) is a silicon-only replacement of the current ATLAS tracking system as part of its Phase-II upgrade, designed to meet the challenges and continue to deliver high-performance track reconstruction. This contribution gives an overview of the expected performance of tracking and its impact on higher level objects. The ITk most recent layout optimisation and developments, and their impact on tracking performance, will also be reviewed.

In-person participation

Yes

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