

# CMS track reconstruction performance and tracking developments during Run 3

*Friday 19 July 2024 12:00 (15 minutes)*

The efficient and precise reconstruction of charged particle tracks is crucial for the overall performance of the CMS experiment. Prior to the beginning of the Run 3 at the LHC in 2022, the first layer of the Tracker Barrel Pixel subdetector was replaced in order to cope with the high pileup environment, and significant upgrades were made to the track reconstruction algorithms. Performance measurements of the track reconstruction both in simulation and data will be presented from the collisions which occurred in 2022 and 2023. Finally we will discuss the ongoing developments to improve track reconstruction for the remainder of Run 3 and for the future.

## Alternate track

### I read the instructions above

Yes

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