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Type: Talk

Performance of the CMS Tracker in Run 3

Tuesday, July 18, 2023 11:00 AM (25 minutes)

The CMS inner tracking system consists of Silicon Pixel and Silicon Strip detectors. The tracker is designed to measure the trajectory of the charged particles tracks. The pixel detector provided high-quality physics data during the LHC Run 2, finishing with a detector live fraction of 95% and hit efficiency of >99% in all but the innermost layer. After the end of Run 2 in 2018, a thorough refurbishment of the detector was done including the replacement of the innermost barrel layer. The refurbished pixel detector was reinstalled in CMS in June 2021, followed by an extensive commissioning period. The CMS silicon strip tracker has been successfully taking data in LHC Run 1 and Run 2. After the second long shutdown period from the end of 2018, the detector resumed operations in Summer 2021. Since last year, both the CMS pixel and strip detectors have been successfully taking data at 13.6 TeV collisions. In this presentation, the performance of the CMS pixel and silicon strip detector during the Run 3 operation will be summarized. In addition, results of the complex tracker alignment procedure will be highlighted.

Is this abstract from experiment?

Yes

Name of experiment and experimental site

CMS Collaboration, CERN

Is the speaker for that presentation defined?

Yes

Details

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Internet talk

No

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