Contribution ID: **835** Type: **Parallel session talk**

Operation and performance of the upgraded ALICE Inner Tracking System

Thursday 18 July 2024 10:45 (18 minutes)

The ALICE detector underwent significant upgrades during the LHC Long Shutdown 2 from 2019 to 2021. A key upgrade was the installation of the new Inner Tracking System (ITS2), comprising 7 layers with 12.5 billion pixels over 10 m², enhancing its tracking capabilities using the ALPIDE chips that are capable of recording Pb-Pb collisions at an interaction rate of 50 kHz. It offers a significant improvement in impact parameter resolution and tracking efficiency at low transverse momentum, attributed to its increased granularity, low material budget of only 0.36% X0/layer for the innermost 3 layers and the closer positioning of the first layer to the interaction point.

ITS2 was successfully commissioned in ALICE, becoming operational with the start of LHC Run 3. This presentation will give an overview of ITS2's operational experience and first performance results, covering aspects of detector operation, calibration, alignment and tracking performance in both pp and Pb-Pb collisions.

Alternate track

I read the instructions above

Yes

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Session Classification: Operation, Performance and Upgrade (incl. HL-LHC) of Present Detectors

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