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## **ALICE ITS: Operational Experience, Performance and Lessons Learned**

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ALICE (A Large Ion Collider Experiment) is one of the four main experiments at the CERN LHC. It is dedicated to the study of heavy-ion collisions, to address the physics of strongly-interacting matter at extreme energy densities, where the formation of the quark-gluon plasma (QGP), a deconfined phase of matter, is expected.

During the LHC Run1 and Run2 periods, the innermost detector of ALICE was the Inner Tracking System (ITS), a six-layer silicon vertex detector that provided primary vertex reconstruction as well as secondary vertex reconstruction of heavy-flavour and strange particle decays, particle identification and tracking of low-momentum particles and precise determination of the impact parameter. It was based on three different technologies: moving outward from the beam line, two layers of Silicon Pixel Detector (SPD), two Silicon Drift Detector (SDD) layers and two Silicon Strip Detector (SSD) layers forming the ITS cylinder. In the LHC Run3 period it will be replaced by an upgraded version with seven layers of monolithic pixel detectors.

In this report, the status and performance of the first version of the ALICE ITS detector during Run2 are summarized and the final operational experience and lessons learned to ensure optimum data quality and data taking efficiency are described.

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