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Operational experience with the current tracker in ALICE

ALICE (A Large Ion Collider Experiment) is a general purpose heavy-ion experiment, designed for the study of strongly-interacting matter at the extreme energy densities that characterise Pb-Pb collisions at the CERN LHC. At such energy, the formation of the Quark-Gluon Plasma (QGP), a deconfined phase of matter, is expected.

The innermost detector of ALICE is the Inner Tracking System (ITS). The ITS consists of six cylindrical layers of silicon detectors based on different technologies: two inner layers with pixel sensors (Silicon Pixel Detector), two intermediate layers with drift sensors (Silicon Drift Detector), two outer layers with strip sensors (Silicon Strip Detector).

The ITS is used for the reconstruction of primary and secondary vertices, for particle tracking, for a precise determination of the impact parameter and for particle identification at low-momentum.

In this report, after a brief description of the three sub-detectors, the operational experience with the ITS during Run2 is summarised, describing the status and the performance of the detector.

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