

Status Report on Inner Tracking System Upgrade of ALICE

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The ALICE Collaboration is preparing a major upgrade of the ALICE detector, planned for installation during the second long LHC shutdown. The construction is expected to be completed by 2020 for data taking until 2029. A key element of the ALICE upgrade is the construction of a new, ultra-light, high-resolution Inner Tracking System (ITS).

With respect to the current ITS, this upgrade is aiming at a better position resolution (5 micron), a lower material budget (0.3% X_0 for the three innermost layers) and a faster readout (up to 100 kHz in Pb-Pb collisions). This will be obtained by seven concentric detector layers based on an advanced Monolithic Active Pixel Sensor (MAPS) chip, with a pixel pitch of $30 \times 30 \mu\text{m}^2$.

I will present the general layout and main components of the new ITS, a summary of the R&D activities, the current status and outlook.

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