

Upgrade of the ALICE experiment for LHC Run 4 and beyond (live)

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The ALICE experiment is preparing the ITS3, an upgrade of its Inner Tracking System for LHC Run 4. The three innermost layers will be replaced by wafer-scale, truly cylindrical, ultra-thin detector layers, made of Monolithic Active Pixel Sensors. This innovative technology will permit to lower the material budget even further and to improve the tracking and vertexing capabilities. We will present the R&D programme, including the already achieved demonstration of the operability of bent MAPS and future plans.

Moreover, we will present the plans for ALICE 3, a next-generation heavy-ion experiment for LHC Run 5. The idea of this major upgrade is to exploit silicon technologies to build an ultra-thin and fast tracker with unprecedented vertexing capabilities in combination with excellent particle identification from a silicon-based time-of-flight detector in combination with complementary approaches.

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