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ALICE upgrade and physics prospectives in LHC Run 3

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The full characterisation of the properties of the QGP requires high-precision measurements of light and heavy flavour, quarkonium, jet and (real and virtual) photon production over a wide momentum range.
In order to achieve these goals, the ALICE Collaboration has implemented a major upgrade of the experimental apparatus, aimed to improve the pointing resolution and increase the event readout rate. The upgrades involve a complete replacement of the inner tracking system (ITS) and the installation of the muon forward tracker (both of which are entirely instrumented with monolithic active pixel sensors), the replacement of the TPC readout chambers with GEM chambers, the installation of a fast interaction trigger (FIT) detector. In addition, the readout of several other detectors is being upgraded and a new Online-Offline system for data recording, compression, calibration and reconstruction is being implemented, allowing continuous readout to fully exploit the 50 kHz Pb-Pb interaction rate of the LHC.
In this talk, a review of the main physics goals of the ALICE experiment during LHC Run 3 as well as the characteristics of the main upgraded detectors will be shown.

Primary author: COLELLA, Domenico (Istituto Nazionale di Fisica Nucleare)

Presenter: COLELLA, Domenico (Istituto Nazionale di Fisica Nucleare)

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