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Performance and future plans of the ALICE experiment

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The ALICE Experiment at the LHC is providing precision measurements on strongly interacting matter at unprecedented high-energy density by studying A-A, p-A and pp collisions. This will allow a detailed characterization of the properties of the Quark-Gluon Plasma in the first running period up to 2017. Further progress in understanding the dynamics of this condensed phase of QCD will need to focus on rare probes and the study of their collective properties and hadronization mechanism, particularly at soft momentum scales. Such considerations have motivated the development of a comprehensive upgrade strategy for ALICE to provide high rate capability (50 kHz for Pb-Pb collisions), in a near minimum bias mode, and improved tracking accuracy at low momentum. This talk will cover the experimental challenges and performance of the ALICE current detector and give an overview of the upgrade program, including a discussion of the modifications and replacements needed in all ALICE detectors and online systems for high luminosity running.

for the collaboration

ALICE

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