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ALICE ITS upgrade and CCNU effort

Summary

A Large Ion Collider Experiment(ALICE) will undergo a major upgrade during the next LHC Long Shutdown (LS2) scheduled in 2019-20 that will allow to study in detail the QGP properties exploiting the increased Pb-Pb luminosity expected during Run 3 and Run 4. The replacement of the existing Inner Tracking System (ITS) with a completely new ultra-light high-resolution detector is one of the cornerstones within this upgrade program. The main motivation of the ITS upgrade is to provide ALICE with an improved tracking capability and impact parameter resolution at very low transverse momentum, as well as to enable a substantial increase of the interaction rate readout. The new ITS will consist of seven layers of an in- novative Monolithic Active Pixel Sensors (MAPS) with the innermost layers sitting at only 22 mm from the interaction point. CCNU (Central China Normal University), be a important collaborator in this project. In this talk, we will will not only focus on the physics performance of the new ITS, but also introduce the detector module production and test. The status of the project and CCNU efforts will be presented.

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