TWEPP 2015 - Topical Workshop on Electronics for Particle Physics



Contribution ID: 242

Type: Plenary

Upgrade of the ALICE Silicon Tracker Using CMOS Pixel Sensors

Thursday, 1 October 2015 14:00 (45 minutes)

ALICE is studying the physics of strongly interacting matter using nucleus-nucleus collisions at the CERN LHC. The ALICE Collaboration is preparing a major upgrade of the experimental apparatus, planned for installation in the second long LHC shutdown. 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 detector, the new ITS will significantly enhance the determination of the track impact parameter, the tracking efficiency at low transverse momenta, and the read-out rate capabilities. This will be obtained by seven concentric detector layers based on a 50-um thick CMOS pixel sensor with a pixel pitch of about 30x30um². I will present the design goals and layout of the new ALICE ITS, a summary of the R&D activities, with focus on the technical implementation of the main detector components.

Presenter: MUSA, Luciano (CERN)

Session Classification: Invited Plenary