

HV-CMOS Developments

In the framework of the ATLAS Inner Tracker Upgrade (ITk) project, the ATLAS CMOS collaboration is pursuing a R&D effort to demonstrate the capabilities of modern High-Voltage and High-Resistivity CMOS (HV/HR-CMOS) technologies in terms of particle detection. The use of commercial large scale CMOS production facilities and the possibility to integrate amplification and logic inside the sensor open the door to large cost reduction for the construction of large area tracking and vertexing detectors. In this presentation, I will introduce the concept of particle detection using HV/HR-CMOS sensors and present the latest results from the collaboration in terms of laboratory and test beam characterization.

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