

Industrial production of silicon strip sensors with Infineon

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All modern particle physics experiments use silicon-based sensors for their vertex and tracking systems. The largest single device built so far is the CMS Tracker with more than 24,000 sensors, each made on a 6" silicon wafer. An academic institution cannot perform such a large production, and even the number of potential commercial vendors is small. Therefore we are developing planar silicon strip sensors together with the European semiconductor manufacturer Infineon Technologies AG. In this talk, the project is presented and results from electrical characterization and beam tests of prototypes in p-on-n-technology are shown. Moreover, the current work for large-area detectors in n-on-p technology for possible Phase-2-Upgrades of the LHC experiments will be discussed.

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