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【346】 Test beam characterization results with CCPDv4 capacitively coupled to FEI4

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A novel generation of silicon pixel detectors based on the commercial High-Voltage CMOS (HV-CMOS) technology will be presented. HV-CMOS pixel sensors are depleted active pixel sensors that allow for the implementation of complex in-pixel electronics. This feature, together with fast charge collection, high efficiency and radiation hardness, makes them promising candidates for the next generation of pixel tracking detectors in HEP experiments.

In particular, the HV-CMOS sensors have been proposed for the outermost layers of the new silicon pixel detector that the ATLAS Collaboration will build for the High Luminosity LHC program starting in 2026. Results of laboratory and test-beam measurements of irradiated and non-irradiated HV-CMOS prototypes will be presented.

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