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【324】Beam Tests of HV-CMOS Pixel Sensors for the ATLAS HL-LHC Tracker Upgrade

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The LHC will be upgraded to a High Luminosity running mode around 2025. In accordance with this machine upgrade, the current Inner Detector of the ATLAS experiment will be replaced with a new all-silicon Inner Tracker (ITk) comprising of pixel and micro-strip silicon sensors. A candidate technology for the outer pixel layers of ITk is a new radiation hard monolithic pixel sensor, based on High Voltage CMOS (HV-CMOS) technology, allowing for the pixel electronics to be embedded in the silicon sensor itself. The characterisation of full demonstrator sensors produced in both the 350nm and 180nm process will be presented, as part of an overview of a designated test beam campaign.

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