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## ATLAS ITk Pixel Sensor Characterization for the HL-LHC upgrade

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To cope with the much increased pile-up, data rates and radiation damage from the upgrade of High Luminosity LHC, the current ATLAS Inner Detector will be replaced by an all-silicon Inner Tracker (ITk). The inner most part of ITk will be the pixel detector which covers an area of about  $13\text{m}^2$  and comprises the modules made of silicon planar or 3D sensors bump bonded to readout FE ASICs. Data taking is planned to start in 2029 and last for 10 years. Currently, the ITk pixel project is in pre-production. To assure the sensors meet the specification of being used in the detector, a fraction of full size pixel sensors and test structures, were tested in lab. The characterization results of ITk pixel sensors will be presented.

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