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Developments of ITkPixV1.1 module Quality Control tools

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The current ATLAS Inner Detector will be replaced with a new all-silicon Inner Tracker (ITk) to cope with the high-density environment during High Luminosity LHC (HL-LHC). The innermost part of the ITk will comprise a state-of-the-art pixel detector. The individual modules of the Inner Tracker pixel detector incorporate silicon sensors using diverse technologies, with the sensors readout using the new ITkPix ASIC.

The pixel project has mostly completed the prototyping phase and is moving toward the pre-production and production periods. The electrical performances that each module needs to meet to be used in the detector have been documented, and the quality control (QC) testing procedures and tools used to verify them are being developed. Since modules will be assembled and tested in many different institutes across the world, developing universal tools for electrical QC will help ensure uniformly high quality of all modules. In this poster, some of these procedures and tools will be presented.

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