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The ATLAS ITk Strip Detector System for the Phase-II LHC Upgrade

Monday 4 December 2023 18:00 (20 minutes)

Author: ATLAS-ITK Collaboration
(the speaker to be selected by the ITk Speakers Committee after the contribution acceptance)

ATLAS is currently preparing for the HL-LHC upgrade, with an all-silicon Inner Tracker (ITk) that will replace the current Inner Detector. The ITk will feature a pixel detector surrounded by a strip detector, with the strip system consisting of 4 barrel layers and 6 endcap disks. After completion of final design reviews in key areas, such as Sensors, Modules, Front-End electronics and ASICs, a large scale prototyping program has been completed in all areas successfully. We present an overview of the Strip System, and highlight the final design choices of sensors, module designs and ASICs. We will summarize results achieved during prototyping and the current status of production and pre-production on various detector components, with an emphasis on QA and QC procedures.

Submission declaration

Original and unplublished

Presenter: IAKOVIDIS, George (Brookhaven National Laboratory (US))

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