



Contribution ID: 129

Type: Poster

ATLAS ITk Pixel Module Electrical Quality Control

Tuesday, 7 November 2023 19:40 (20 minutes)

The High-Luminosity Large Hadron Collider (HL-LHC) is set to commence operations in 2029 and will reach unprecedented peak instantaneous luminosity values, resulting in 200 proton-proton interactions per bunch crossing. To cope with this challenging environment, the ATLAS Inner Detector will be replaced by an all-silicon system, the Inner Tracker (ITk). The inner most part of the ITk will consist of a pixel detector, constructed from about 10,000 pixel modules for a combined active area of 13 m². Each of these pixel modules will undergo a rigorous electrical quality control (QC) testing procedure to ensure that they meet the required electrical specifications for optimal performance in the final detector.

Ensuring the uniformity and consistency of electrical tests across 25 different testing sites and several testing stages is of utmost importance. This talk will present the module electrical QC procedure and the specially designed tools aimed at addressing this challenge.

Early Career

Yes

Primary author: THOMPSON, Emily (Lawrence Berkeley National Lab)

Presenter: THOMPSON, Emily (Lawrence Berkeley National Lab)

Session Classification: Poster Session

Track Classification: RDC Parallel Sessions: RDC3: Solid State Tracking