

10th Edition of the Large Hadron Collider Physics Conference



Contribution ID: 815

Type: **Experimental poster**

Event Filter Tracking for the Upgrade of the ATLAS Trigger and Data Acquisition System

Tuesday 17 May 2022 19:00 (1 hour)

This submission describes revised plans for Event Filter Tracking in the upgrade of the ATLAS Trigger and Data Acquisition system for the high pileup environment of the High-Luminosity Large Hadron Collider (HL-LHC). The new Event Filter Tracking system is a flexible, heterogeneous commercial system consisting of CPU cores and possibly accelerators (e.g., FPGAs or GPUs) to perform the compute-intensive Inner Tracker charged particle reconstruction. Demonstrators based on commodity components have been developed to support the proposed architecture: a software-based fast tracking demonstrator, an FPGA-based demonstrator, and a GPU-based demonstrator. Areas of study are highlighted in view of a final system for HL-LHC running.

Authors: ATLAS, Collaboration; ZHU, Junjie (University of Michigan (US)); LEONE, Sandra (Universita & INFN Pisa (IT))

Presenter: AHUJA, Sudha (Royal Holloway, University of London (GB))

Session Classification: Poster Session I

Track Classification: Upgrade & Future Projects