



Contribution ID: 81

Type: **Oral presentation**

Combining Triggered and Streaming Readout - The sPHENIX DAQ System

Thursday 22 October 2020 00:40 (20 minutes)

Recently, the Streaming Readout paradigm has gained traction as a viable alternative to classic triggered readout architectures for future experiments, for example at the planned Electron-Ion Collider. The sPHENIX apparatus at the Relativistic Heavy Ion Collider, a significant upgrade of the former PHENIX detector, cannot yet implement a full streaming readout, although the (by data volume) major detectors will already be read out in this way. The electromagnetic and hadronic calorimeters are the main detector components still using a traditional triggered readout. We have made significant progress combining the triggered with streaming data and implementing a combined readout. We will show results and progress from recent test beams. We will explain the challenges with the combination of streaming and triggered data streams, and present a general update of our DAQ system status.

Minioral

Yes

IEEE Member

Yes

Are you a student?

No

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Session Classification: Oral presentations DAQ04

Track Classification: Data Acquisition System Architectures