

Recent experience with Streaming Readout for CLAS12-Forward Tagger

Wednesday, May 26, 2021 8:42 AM (18 minutes)

CLAS12 detector is installed at JLab and the purpose of its huge science program is to provide substantial progress in understanding the QCD. Such a detector requires a sophisticated trigger and current experiments use an on-line FPGA-based system that relies upon custom firmware and electronics both of which are difficult to reconfigure from one experiment to the next. To overcome these challenges an effort is underway to develop a streaming readout (SRO) data acquisition system. The latter would allow a more flexible, easier to debug, software trigger to be developed. A SRO prototype system was developed based on four main components: front-end electronics based on JLAB-FADC250 and VTP modules, TriDAS and CODA data acquisition systems and the JANA2 reconstruction framework. In this contribution I will present the results of successful on-beam tests performed in the winter and summer of 2020 to read in streaming mode, with the cited triggerless chain, the CLAS12 Forward Tagger.

TIPP2020 abstract resubmission?

Funding information

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Session Classification: Readout: Trigger and DAQ

Track Classification: Readout and Data Processing: Readout: Trigger and DAQ