

Streaming Readout of the CLAS12 Forward Tagger Using TriDAS and JANA2

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An effort is underway to develop streaming readout data acquisition system for the CLAS12 detector in Jefferson Lab's experimental Hall-B. Successful beam tests were performed in the spring and summer of 2020 using a 10GeV electron beam from Jefferson Lab's CEBAF accelerator. The prototype system combined elements of the TriDAS and CODA data acquisition systems with the JANA2 analysis/reconstruction framework. This successfully merged components that included an FPGA stream source, a distributed hit processing system, and software plugins that allowed offline analysis written in C++ to be used for online event filtering. Details of the system design and performance are presented.

Primary authors: LAWRENCE, David (Jefferson Lab); Dr AMELI, Fabrizio; BATTAGLIERI, Marco Andrea (INFN e Universita Genova (IT)); BONDI, Mariangela (INFN - National Institute for Nuclear Physics); CELENTANO, Andrea (INFN-Genova); Dr BOYARINOV, Sergey (Jefferson Lab); BREI, Nathan (Thomas Jefferson National Accelerator Facility); CHIARUSI, Tommaso (INFN - Sezione di Bologna); DE VITA, Raffaella; Dr GYURJAN, Vardan (Jefferson Lab); MUSICO, Paolo (INFN e Universita Genova (IT)); PELLEGRINO, Carmelo (INFN); RAYDO, Ben (Jefferson Lab); Dr FANELLI, Cristiano (MIT); VALLARINO, Simone (INFN)

Presenter: CHIARUSI, Tommaso (INFN - Sezione di Bologna)

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