



Contribution ID: 223

Type: **Parallel Talk**

## A real time pulse processing DAQ for neutron wall modular detector on RIBRAS experiments

*Tuesday, 24 October 2017 10:30 (30 minutes)*

In order to potentiate the experiments with Brazil Radioactive Ion Beam (RIBRAS), new VME (Versa Module Euro Card) Data Acquisition (DAQ) modules characteristics to control, triggering and data acquisition will be described. The DAQ will define to include the Strip Array and Neutron Wall detectors with maximum readout efficiency, no dead time, data selection and event synchronization.

CAEN digitizer modules for VME provide features like zero suppressed readout and overflow suppression. Zero suppression, once enabled, prevents conversion of value which is lower than user defined threshold. Overflow suppression, once enabled, aborts the memorization of data which constitutes an ADC overflow. Adding FPGAs (field programmable gate array) to data acquisition provides pre- and post-algorithmic processing on data. The hardware elements chosen should have features that make the modules easy to program and handle, while the FPGAs should be reprogrammable when required.

For simplification of the interaction between DAQ elements, provision of standalone working mode for each sub detectors, easy reconfiguration of active sub-detector and easy hardware replacement, the DAQ hardware units are functionally subdivided into hierarchy by logical level along the data stream.

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**Session Classification:** Parallel Sessions - NINST

**Track Classification:** Nuclear Instrumentation and Facilities