2x2 April 11 Shift Exercise Overview

Kevin Wood

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ND-LAr Management Board Meeting

Exercise Overview

- 12-hour continuous data taking with shifter support
- 2 6-hour shifts with 2 shifters/shift
- CRS configured for pedestal run. No disabled channels. Handful of chips excluded from hydra network
  - Checklists, data quality monitoring tools, and instructions provided to shifters
- LRS readout continuously for several hours
- Mx2x2 Overall Run Control Software (MORCS) was integrated and tested with both LRS and CRS
  - Control start/stop of CRS and LRS runs
  - Data file storage organization
  - Write metadata (LRS)
    - Did not test ingest daemon - targeting for next iteration

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Charge Readout

- Configured CRS for pedestal run just after 9:00CT → peak CPU and memory demand
- Program logging data to file unexpectedly crashed and wasn't noticed until ~12:00CT
- "Data rate - Private" shows activity on device connected to Pacman
- "Data rate - Public" is showing activity on the device managing the data transfer to NERSC
- Module 2, which was not able to successfully stream data for the 12-hour period during the previous attempt, worked well (MPOD setting for pacman fans)

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Light Readout

- Cabling not connected to SiPMs
- 1 Hz forced triggers
- Continuous data taking for ~4.5 hours
- Interfaced with run control software
- Writing metadata at end of subruns
- Now working towards shifter checklists and instructions to include LRS in future shift exercises
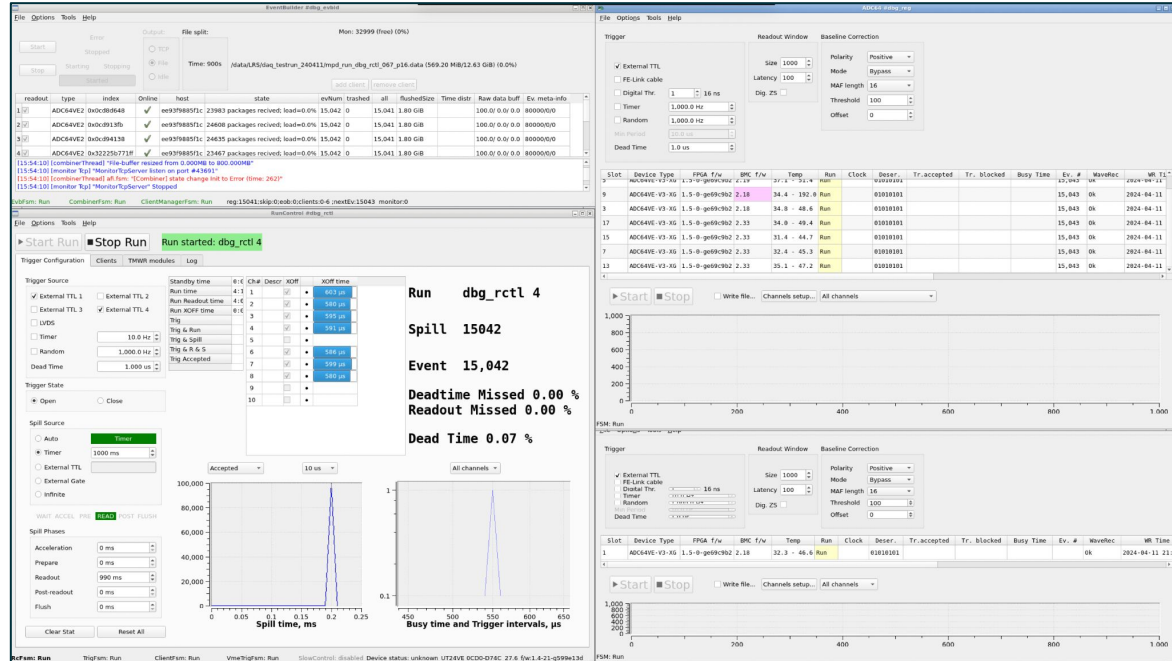
Run Control

- Tested MORC integration with CRS DAQ and control code and LRS DAQ and control code separately
- Minor technical points identified and being iterated on for next tests
  - E.g. was not able to initiate runs from different servers than where DAQ is running (already fixed)
- Flagged a desire for better organization and naming of data files
- Working on a runs database to hold readout configuration information (e.g. threshold settings) and select detector conditions (e.g. drift HV)
  - Should include everything an analyzer would need to make sense of the data

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