Two quick updates from Martin

Interesting items for this group:

1. The BHcal setup in the HighBay is up and working again
2. I gave a presentation in last week's computing meeting where I demonstrated a full "in-house" analysis chain from RCDAQ -> EICRecon Indico: https://indico.bnl.gov/event/30440/

11:20 AM → 12:10 PM **Test-Beam Support**

11:20 AM **Software Repositories for Test-Beam Studies: Strategies for Integration and Reproducibility**

Speaker: Dr Derek Anderson (Thomas Jefferson National Accelerator Facility)

TBSoftwareIntegrati...

11:30 AM **Status Update: nestDAQ and EICrecon Integration (TBC)**

Speaker: Nobuyuki Kobayashi (RCNP, Osaka University)

epic_nestdaq_spadi...

11:40 AM **Status Update: rcDAQ and EICrecon Integration**

Speaker: Martin Purschke (BNL)

testbeam_2025_12_... testbeam_2025_12_...

The HighBay setup is up again

The DAQ PC in the highbay (“va095”) got damaged during the safety checkout / modifications for the ESR

A metal PCI bracket was pushed into the PC case, eventually shortening something and killing the motherboard

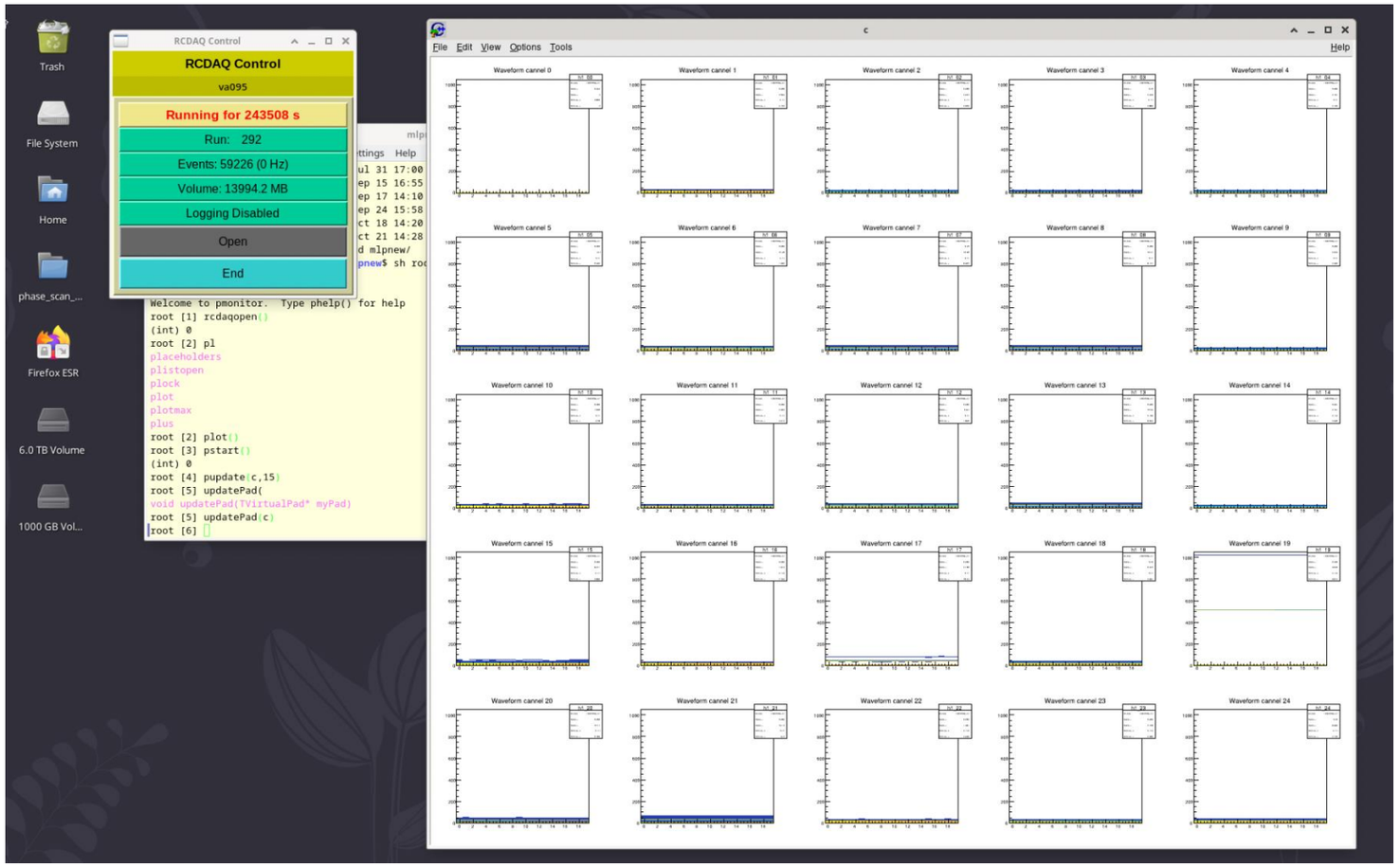
I appropriated a replacement board, replaced it, and it’s all back up again.

Today I will (try to) make the final mods and re-insert the 10G network card again (the assorted movements made the bracket find its maximal-damage spot)

There are no signal cable connected

Just pedestals to see that we can take data

We are now ready too move forward.



RCDAQ and EICrecon integration

From Dec 3

Martin Purschke

with a lot of help from Dmitrii, Derek, and Wouter

We have supported EIC-themed test beams with RCDAQ for ages, so *taking* the data is not an issue.

We have been going on about making a full “in-house” raw data -> EICrecon analysis toolchain

We really want and need to gain experience with a standard ePIC analysis for raw data so people get proficient with the tools that we have

We will also see what features need to be implemented or need improvement

We have 3 data taking campaigns going on, all using RCDAQ and the assorted online monitoring tools:

- the ”ePIC ZDC” test beam at the BNL NASA Space Radiation Lab (NSRL);
- the BHcal test setup in the Phys. Dept. HighBay area;
- the HRPPD high-field test in the BNL Magnet Division (Bldg 902) for the pfRICH

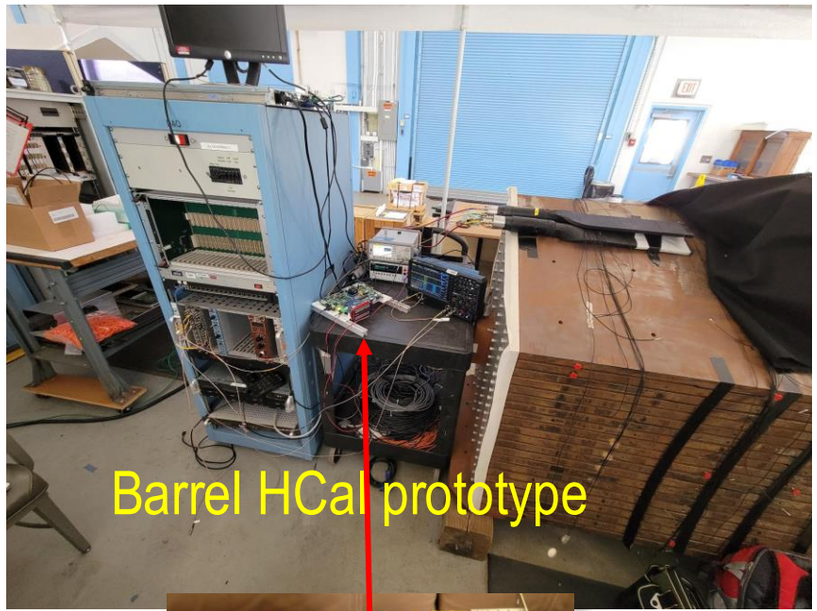
Current Data Taking Campaigns

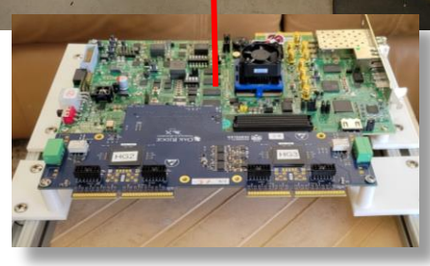
From Dec 3

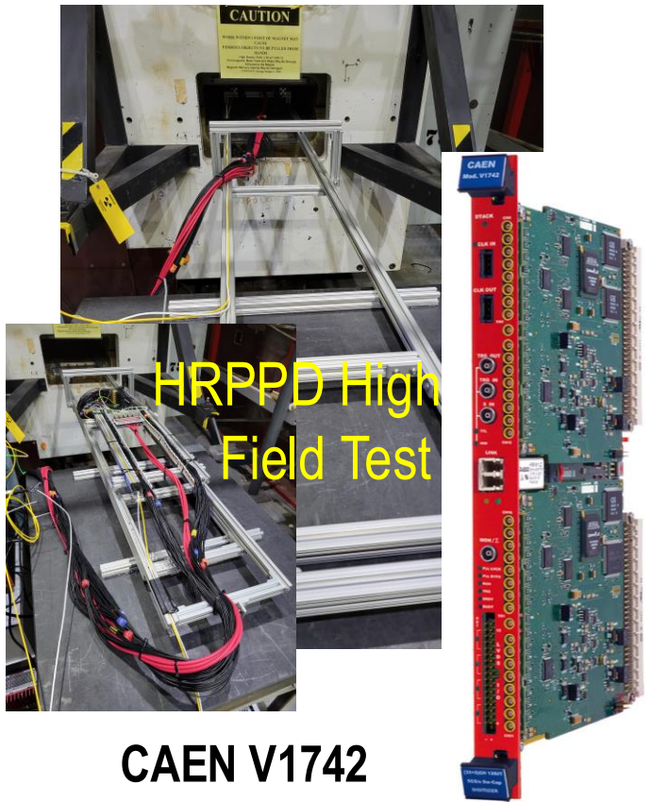
While the ZDC test is an actual test beam, the HRPPD feels most like an actual one (data taking shifts and all…)

Beam Dump

H2GCROC3 readout





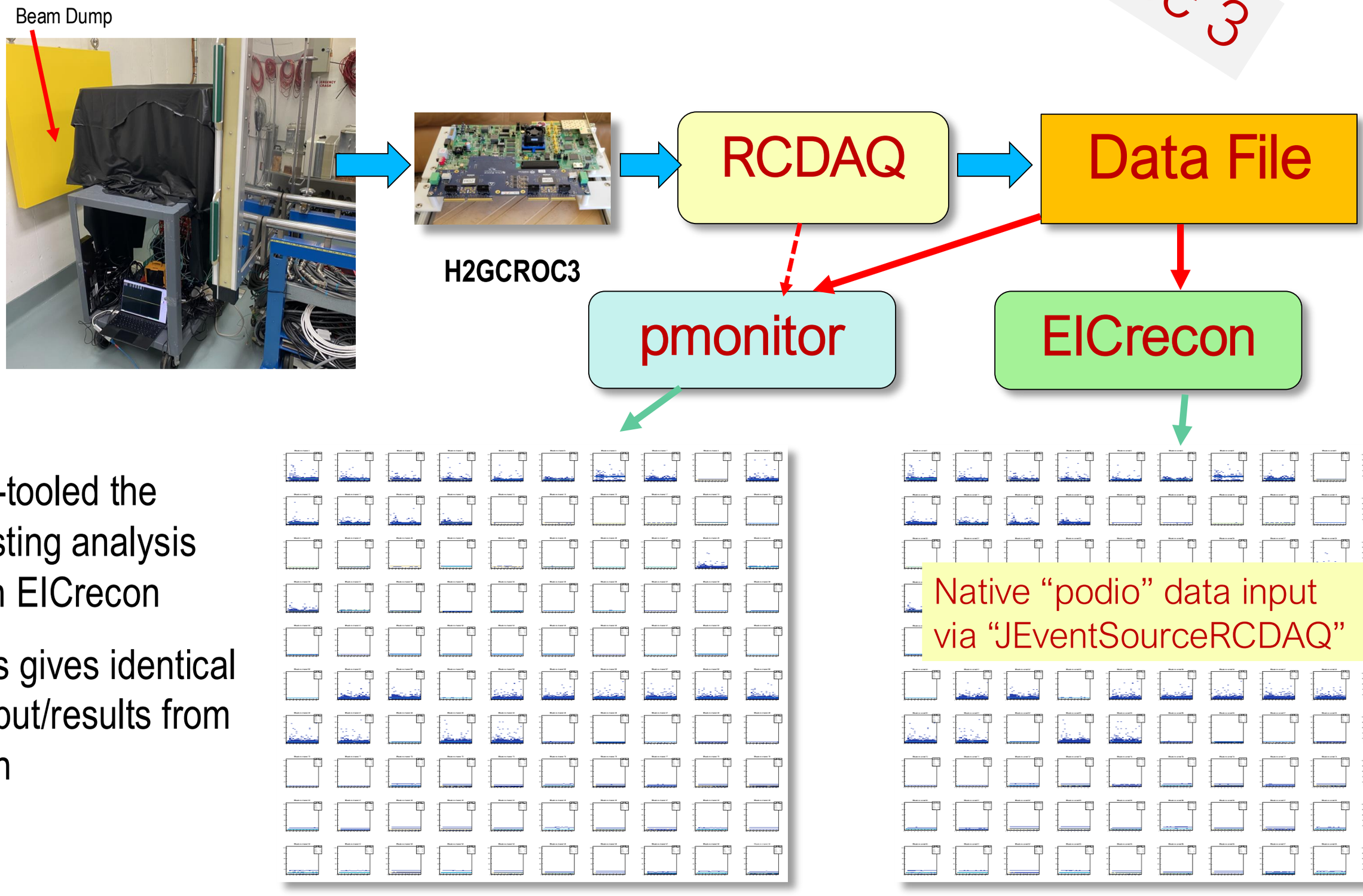


CAEN V1742 waveform digitizer

I used the ZDC data here, but of course it's the same for our BHCal data

From Dec 3

Just to jump way ahead:



I re-tooled the existing analysis with EICrecon

This gives identical output/results from both