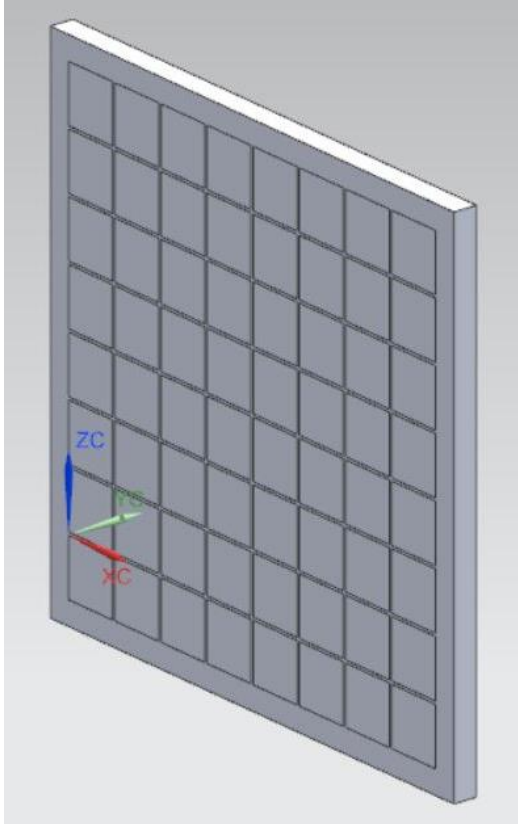


Hall A – LAPPD

Pablo Campero and Marc McMullen

- Generated pictures with isometric views, using 3D model files



LAPPD temperature readout board

- Started design of the support structure for the Gantry system

Hall A – Møller

Brian Eng, Marc McMullen

- Completed schematic for magnetometer PCB

Hall B – LTCC Gas System

Tyler Lemon

- Troubleshoot cRIO on lowest level of Forward Carriage, which stopped communicating; no remote access and no data transmission to EPICS
 - ★ Remote investigation not possible without network
 - ★ cRIO, local user interface, LTCC gas system parameters, and local heartbeat on cRIO all as expected
 - ★ No network traffic lights on cRIO's Ethernet port or for any ports on network switch, which had yellow status LEDs
 - ★ Rebooted network switch by unplugging and re-plugging its main power chord; resolved issue

Detector Support Group

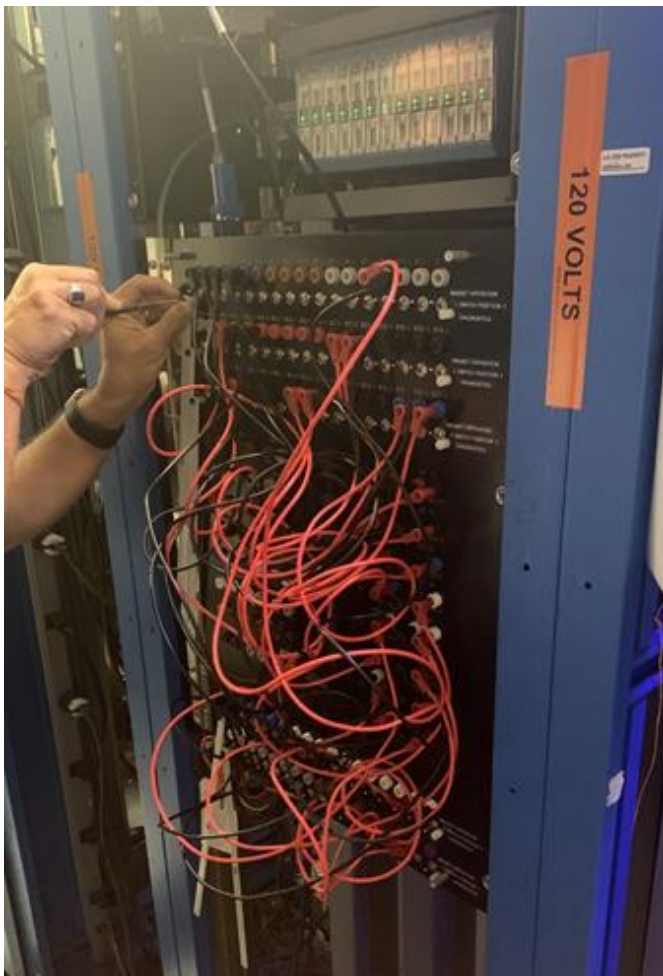
We choose to do these things "not because they are easy, but because they are hard".

Weekly Report, 2023-12-13

Hall B – Torus

Tyler Lemon

- Troubleshoot Torus fast dump (11:41 AM on 12/10) and fast dump in the Solenoid
 - ★ SOE timestamps showed QD2_SUM hardware interlock tripped first; QD unit front panel showed QD #1, Ch. 4 tripped
 - ★ Archived voltage tap data showed no voltage tap movement until ~1 s after dump
 - Suspected switches on Torus VT diagnostic panel, which disconnect voltage tap readout circuit from magnet for testing voltage tap interlocks
 - ★ Verified that VT10 and VT12 in QD #1, Ch. 4 respond properly to injected voltage
 - ★ Tested continuity of all QD channels on diagnostic panel and found four bad switches
 - ★ Installed bypass jumpers on Torus diagnostic panel



Torus voltage tap diagnostic panel after installation of bypass jumpers and before organization of jumpers



Detector Support Group

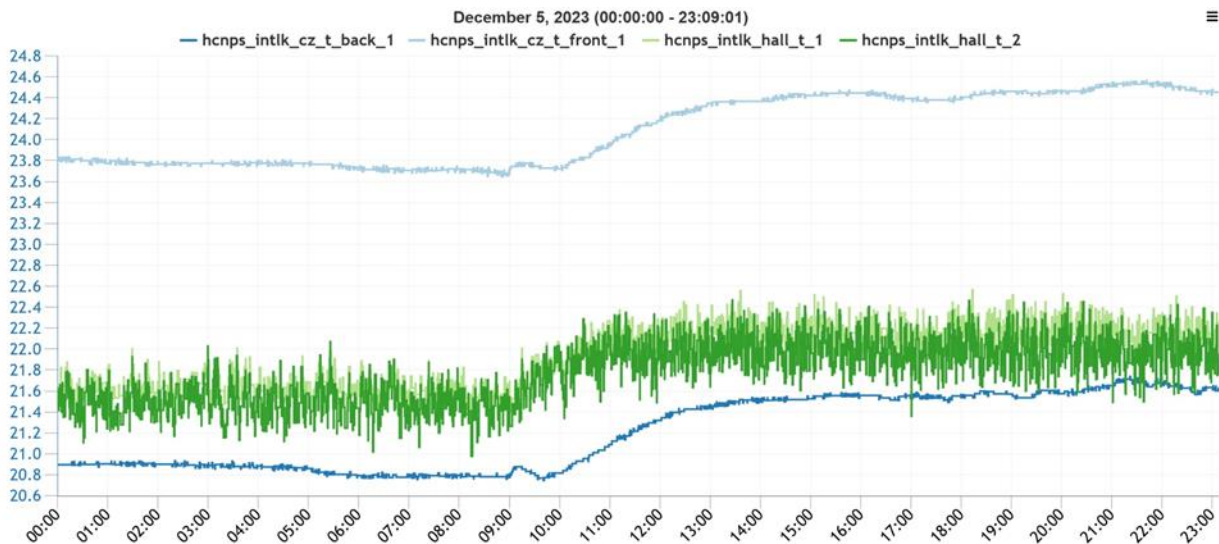
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Weekly Report, 2023-12-13

Hall C – NPS

Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, and Mindy Leffel

- Debugging control and monitoring LabVIEW program, vers. 2.
 - ★ Fixed Keysight channel lists cluster not showing on front panel; changed cluster from control to indicator and changed *bundle by name* input from front panel cluster to a constant
 - ★ After various attempts to fix uninitialized arrays, no solution found
 - ★ Resolved issue of two *number to average* arrays not initializing; changed reading of the configuration file from a specific number of lines to read to reading until end of the file
- Recovered Keysight mainframe: <https://logbooks.jlab.org/entry/4232489>
 - ★ Keysight had to be manually power-cycled; investigating why the remote power-cycling did not work
- Continued crystal temperature study using archived data
 - ★ From MYA plot, it appears that crystal 0 temperatures track with the ambient temperature, which confirms the Ansys Mechanical Steady-State and Transient simulation results



Screenshot of crystal 0 front (light blue) and back temperatures (dark blue), and Hall temperatures (green and light green) over 11 hours

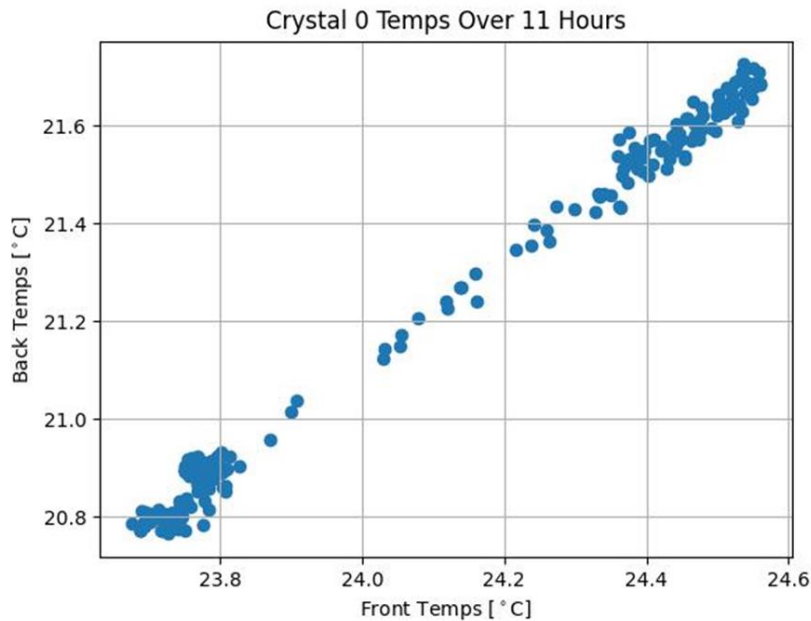
- Generated Python plot of crystal 0 front temperatures vs back temperatures, using MYA data
 - ★ Filtered data so that plotted only data points occurring within the same minute for both the front temperatures and the back temperatures



Detector Support Group

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Weekly Report, 2023-12-13



Python plot of crystal 0's front temperatures vs back temperatures

- Completed 3D model to be used in Ansys Fluent and Ansys Mechanical; started mesh of the model in Ansys Fluent

HalD – FCAL2

Mindy Leffel

- Populated 80 PMT bases; 1030/1750 completed
- Cut 450 wires for bases; stripped 150

EIC - DIRC

Peter Bonneau, Brian Eng, George Jacobs, Tyler Lemon, and Marc McMullen

- Completed the modification instructions for the shipping crates
- Created PR 427083 for shipping crate hardware and air spring pneumatic system
 - ★ Air compressors (PR to be made) and lumber (to be bought locally) not included
- Received DAQ PCB and tested for plane shorts; no issues found
- Cloned and tested Phoebus V4.6.10 development system, which is used for remote debugging and backup

DSG

Mary Ann Antonioli and Marc McMullen

- Added talks from years 2015 through 2023 (216 talks) to spreadsheet to be used for a future website revision
- ALERT documents added to website