



Detector Support Group

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

Weekly Report, 2021-06-02

Summary

Hall A – SoLID

Mary Ann Antonioli, Pablo Campero, Mindy Leffel, Marc McMullen

- Generated, using Visio, first draft of flowchart of code for position control of JTV3

Hall B – Heavy Photon Search

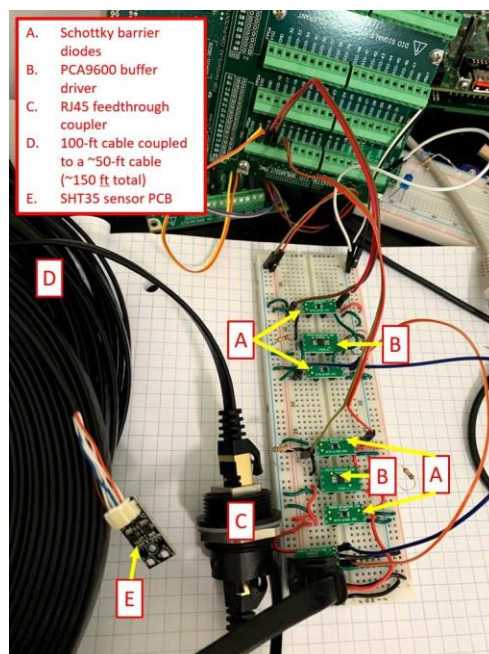
Brian Eng

- Troubleshooting lack of ability to turn chillers On or Off
- Determined issue was due to failed PLC relay module channel:
<https://logbooks.jlab.org/entry/3878609>

Hall B – RICH-II

Mary Ann Antonioli, Peter Bonneau, Pablo Campero, Tyler Lemon

- Moved all aerogel tiles into new dry cabinet
- Developed Python program to assist in configuring LabVIEW library for network shared variables and EPICS client
 - ★ Program creates EPICS database file and configures shared variables to link them to EPICS PVs
- Developing LabVIEW front panel for hardware interlock system
 - ★ Completed *Live Plots* tab used for monitoring 48 temperature and 48 humidity sensors
- Tested SHT35 sensor PCBs with prototype RMC circuit
 - ★ Circuit includes two sets of Schottky barrier diodes, buffer drivers, and pull-up resistors



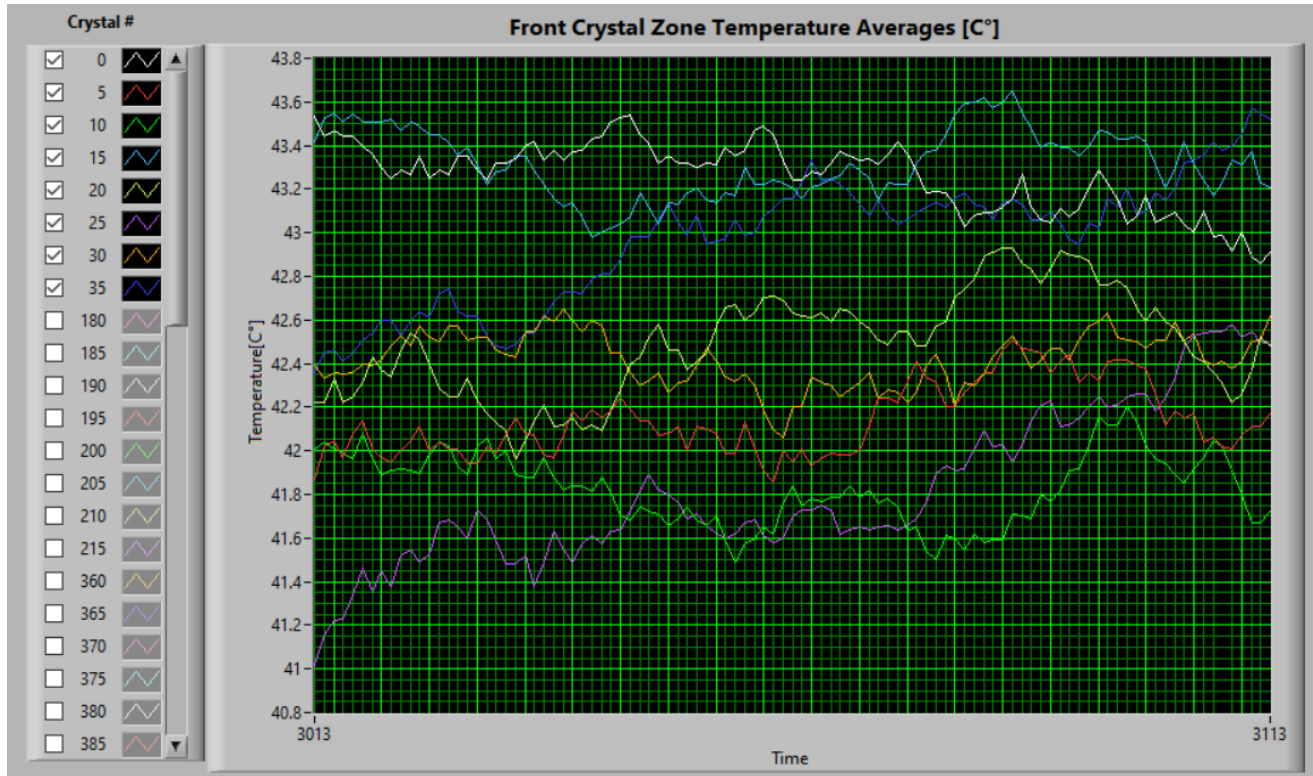
Prototype RMC circuit used to test SHT35 sensor PCBs

- Developing RMC PCB
 - ★ Completed routing traces for the output connectors, buffer drivers, and Schottky barrier diodes

Hall C – NPS

Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, George Jacobs, Mindy Leffel, Tyler Lemon, Marc McMullen

- Generated plots for long-term load test of HV supply cables and uploaded to DSG Technical Documentation webpage
- Developing LabVIEW front panel for hardware interlock system
 - ★ Completed code for back crystal zone temperatures
 - ★ Added “all-temperatures average” to *Crystal Main* tab
 - ★ Completed plotting of average temperatures for front and back crystal zones



Screenshot of average temperature plots from LabVIEW front panel for NPS Front Crystal Zone; sensors for which curves are displayed are indicated by the checked boxes

- Fabricated 3 HV supply cables: 34 of 40 complete
- Long-term load testing of HV supply cables: 13 of 40 complete
- Discussed and reviewed specifications of components to be located in the shielded area for the support of the chiller monitoring system, leak detection system, and humidity sensors



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EIC

Brian Eng

- Attended meeting to discuss potential long lead time procurements
- None for tracking, at this time, that wouldn't fall under preconstruction engineering design PED (thus far have steel parts, mostly due to machining time and SiPMTs due to number needed and limited vendors)

DSG R&D

Brian Eng

- Assembling flow control prototype, need to order current-source DAC prior to development of new PCB
- Need an 8-channel DAC, but so far highest found has been 5-channels