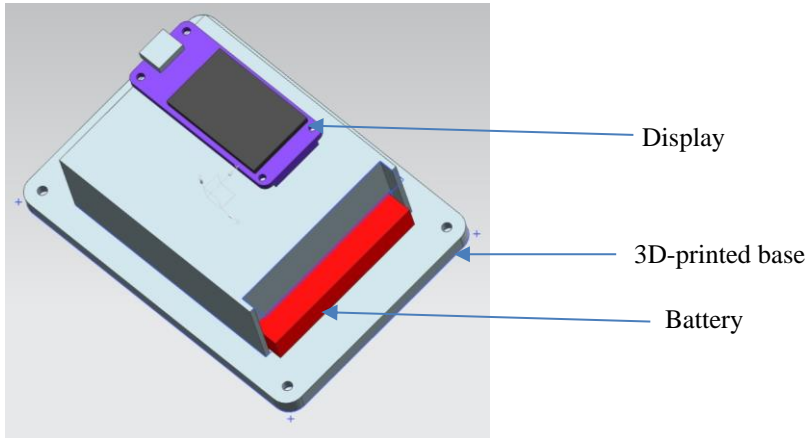


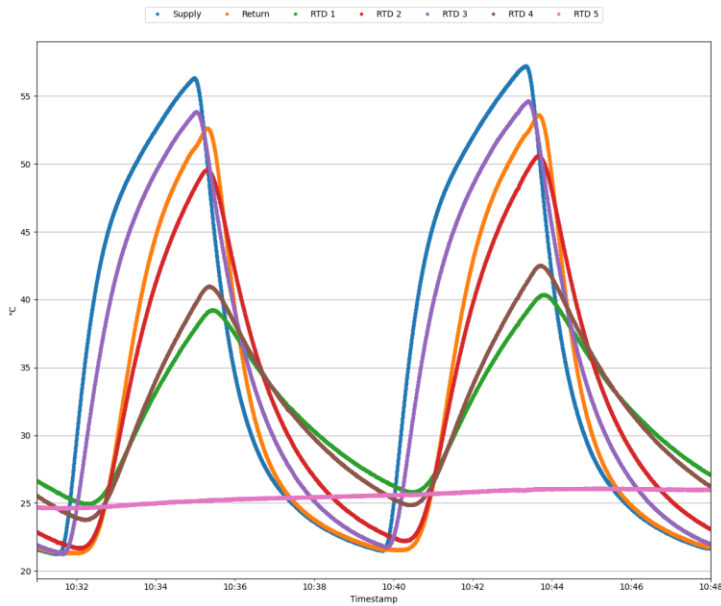
### Hall A – CLEO Magnet

*Aaron Brown, Brian Eng*

- Continued NX12 design of enclosure for mapping sensor
  - ★ Adding SD card to save data



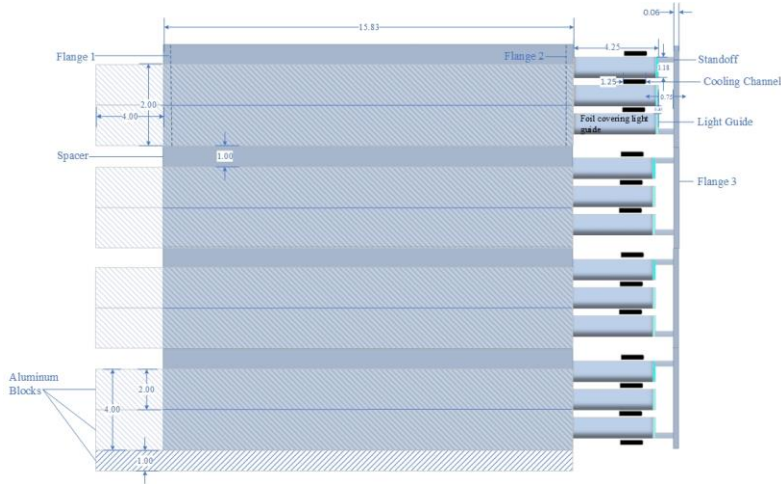
- Requirement for sensor measurement is once every 5 seconds
  - ★ Need to develop method to display data locally while still using sleep mode to save battery
- Generated plot of two testing cycles



### Hall A – ECal

*Brian Eng, Mindy Leffel, Marc McMullen*

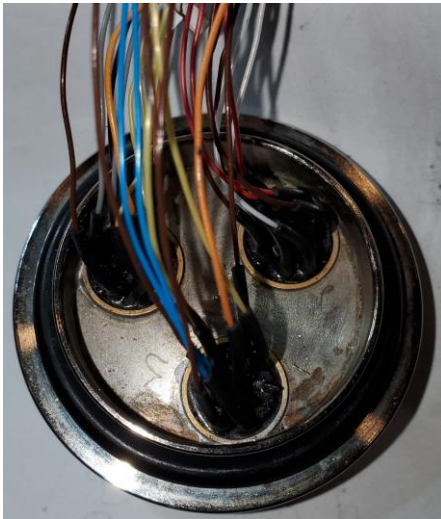
- Estimated delivery of heaters is 11/1/22
- Completed Visio drawing of modules



### Hall A – SoLID

*Mary Ann Antonioli, Pablo Campero, Mindy Leffel*

- Started rewiring turret cables; one of six flanges completed



- Continued communication test with power supply
  - ★ Power supply not previously used remotely and communication card never tested
  - ★ Researching connectors for power supply analog output, so current output can be read by the PLC
- Configured colors of mass flow controller indicators on the *Solenoid CCR Expert* screen
- Reviewed revisions of final ten electrical drawings; drawings converted to pdfs, pages compiled and rotated, and reposted

# Detector Support Group

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

**Weekly Report, 2022-10-19**

## Hall B – Magnets

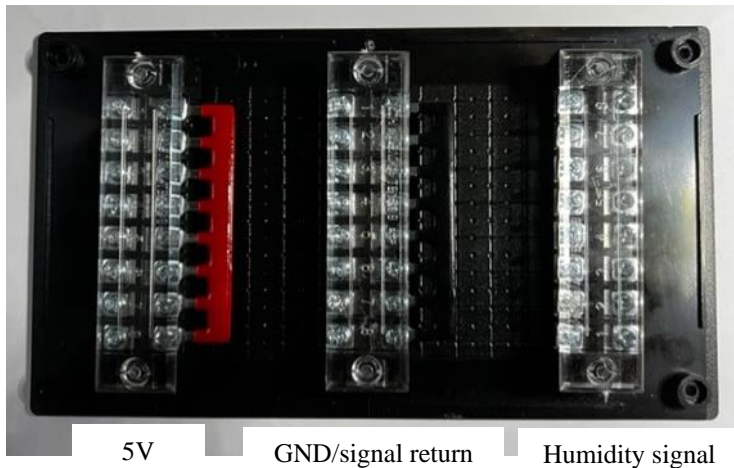
Brian Eng

- Investigated
  - ★ Torus fast dump: <https://logbooks.jlab.org/entry/4058433>
  - ★ Investigating torus fast dump: <https://logbooks.jlab.org/entry/4057368>
    - LCW needs to be flushed, but no obvious problems
  - ★ Solenoid controlled ramp: <https://logbooks.jlab.org/entry/4062189>
    - No obvious problem, but can see why it tripped (comparator 4)

## Hall C – NPS

Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Brian Eng, Tyler Lemon, Marc McMullen

- Wrote manual for two Phoebus screens, Chiller and Chiller Expert
- Started fabrication of humidity sensor power distribution panel



- Cut, terminated, and tested ten, 50' humidity sensor cables
- Debugging cause of Keysight mainframe losing network interfacing capability at random
- Got links to code for Hall A and B MPOD EPICS apps
- Crystal thermal analysis
  - ★ Remade 3D model parts in *Ansys-Design Modeler*
  - ★ Configured and created automatic contact surfaces
  - ★ Meshed model successfully
  - ★ Implementing model into *Ansys Fluent*; debugging error

## Hall D – JEF

Mindy Leffel

- Wrapped three crystals

## EIC

Pablo Campero, Brian Eng, George Jacobs, Marc McMullen

- DSGList approved and attached to the test location



# Detector Support Group

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**Weekly Report, 2022-10-19**

## **EIC - DIRC**

*Tyler Lemon, Marc McMullen*

- Revised interlock circuit to accommodate addition of magnetic locks
- Researched three data acquisition options for laser test station
  - ★ Option 1: cDAQ-9171 with NI-9219 module
  - ★ Option 2: Keithley 2010 multimeter with scan card
  - ★ Option 3: ADS1263 with Arduino or Raspberry Pi
- Researched methods to lower power of laser during alignment
  - ★ Propose using a neutral density filter with an optical density of 2.0 to lower the laser power to 0.1% of full power
  - ★ Filter will be moved into place using motorized flip mount that is tied into the laser's interlock system
- Met with Jenn Williams, laser safety officer, and Imani Burton, industrial hygienist, to discuss methods of laser work and the use of chemicals for cleaning

## **DSG R&D - CS-Studio Phoebus**

*Peter Bonneau*

- Updated Phoebus Alarm System Visio drawing
- Debugging channel access errors using EPICS base 3.14
  - ★ Recompiled EPICS base from source code
    - Compiling errors occurred during the EPICS system build of the channel access code
    - Reviewing channel access C++ code