



# Detector Support Group

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

**Weekly Report, 2022-09-14**

## Summary

### Hall A – ECal

*Brian Eng, George Jacobs, Mindy Leffel, Tyler Lemon, Marc McMullen*

- Simulated one module placed inside DSG's environmental test chamber (ETC)
- Received quote from Custom Heaters and Research; ordered 12 heaters

### Hall A – GEM

*Brian Eng, Marc McMullen*

- Re-terminated RJ-45 connector for SBS cable1, which was damaged during a survey lift
- Troubleshooting issues with SBS cable 1
  - ★ Will need to replace I2C extender board set

### Hall A – Moller

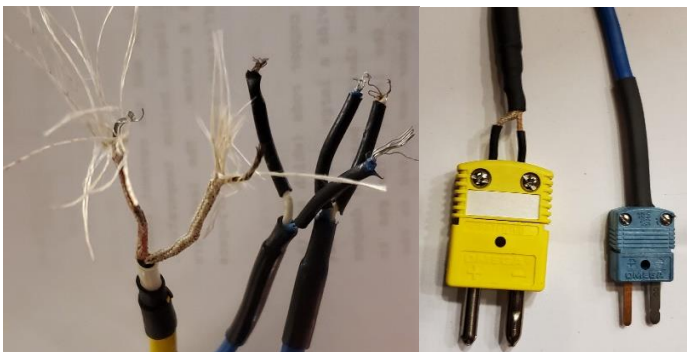
*Aaron Brown, Brian Eng*

- Met with Probir to discuss tasks that need DSG assistance; main focus will be coil 3 prototype test

### Hall A – SoLID

*Mary Ann Antonioli, Pablo Campero, Brian Eng, Mindy Leffel*

- Modifying *Solenoid Valve Setup* HMI screen
  - ★ Added controls for heat exchanger valves
  - ★ Added indicator to monitor valve operation mode
- Reviewing power supply user manual to enable modifications on PLC code used for communication with power supply
  - ★ Available communication protocols
  - ★ Command syntax
- Writing code for the start data log system to start recording automatically when HMI server computer is powered on
  - ★ Using macros and default commands available in FT View software
  - ★ Testing data log system on client computers
- Turret work
  - ★ Terminated thermocouple cables with Omega connectors

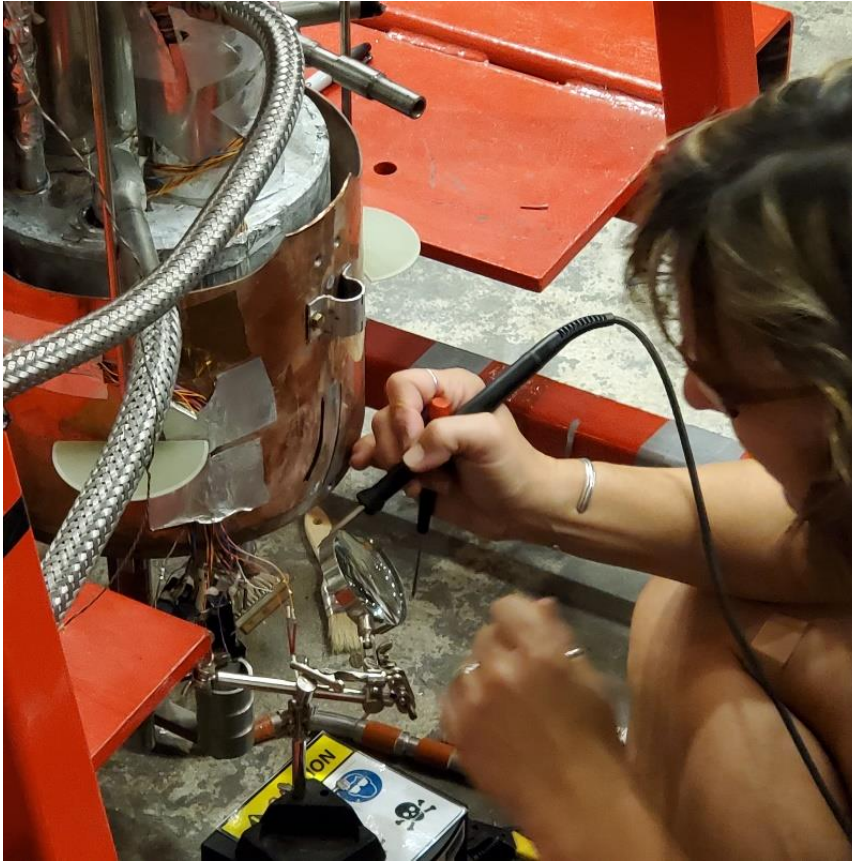


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- ★ Repaired turret broken wires on D-sub connectors



- Revised three electrical drawings with cabling and connector changes

### **Hall C – NPS**

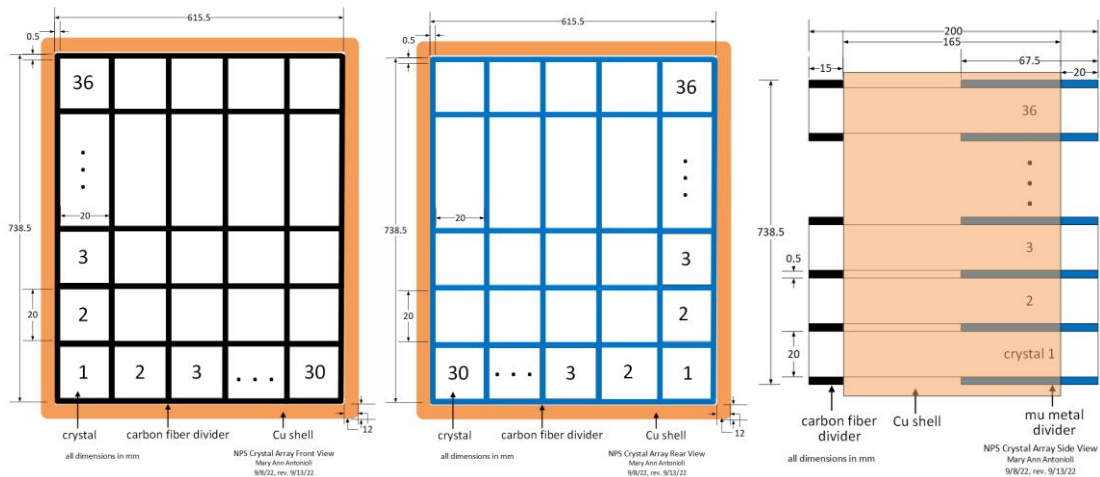
Mary Ann Antonioli, Aaron Brown, Brian Eng, Tyler Lemon

- Developing simplified LabVIEW code for configuration file management
- Debugging hardware interlock LabVIEW program running on NPS cRIO
  - ★ Multiple problems occurred (EPICS PVs had incorrect names, issues with interlock latching, etc.) when all VIs were moved to cRIO and ran the main program
  - ★ Moved all VIs back to computer and program ran with no problems
- Made Visio drawing of three views of crystal array

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- Began writing manual for Phoebus screens

## **Hal D – JEF**

*Mindy Leffel*

- Wrapped three crystals

## **EIC**

*Pablo Campero, Brian Eng, George Jacobs, Marc McMullen*

- Beampipe test stand
  - ★ Design authority assigned for the beryllium pipe test stand pressure systems
  - ★ Previously identified RTDs no longer in stock; need to find alternative
- In Silicon Consortium meeting, different sensor layouts of the disks were presented

## **EIC - DIRC**

*Tyler Lemon, Marc McMullen*

- Researched BaBar laser test station components on hand to determine what DAQ instrumentation could be used
  - ★ Two linear stages have built-in controllers
  - ★ Two rotary stages require an external stepper motor controller
    - Controller recommended by Thorlabs was used for RICH d0 test station
- Designing proposal for external laser interlock system
  - ★ Internal interlocks built-in to laser and its power supply
  - ★ External interlocks are required if Class 3B laser (5–500 mW) used
    - Door interlock to prevent access to area when laser is on
    - Emergency stop button
  - ★ Status lights needed
    - Sign stating status of laser area
    - Beacon warning that laser is on
  - ★ Proposed system would use transistors, logic gates, and relays to be not reliant on an external controller and/or software
- Received Laser Safety Operating Procedure information from EHS&Q; started reviewing documentation