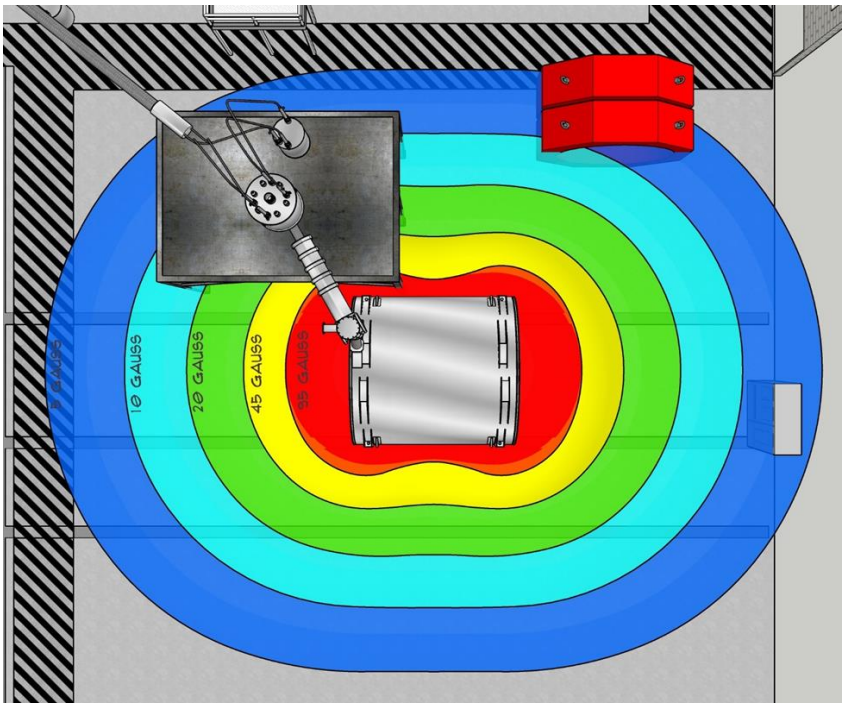
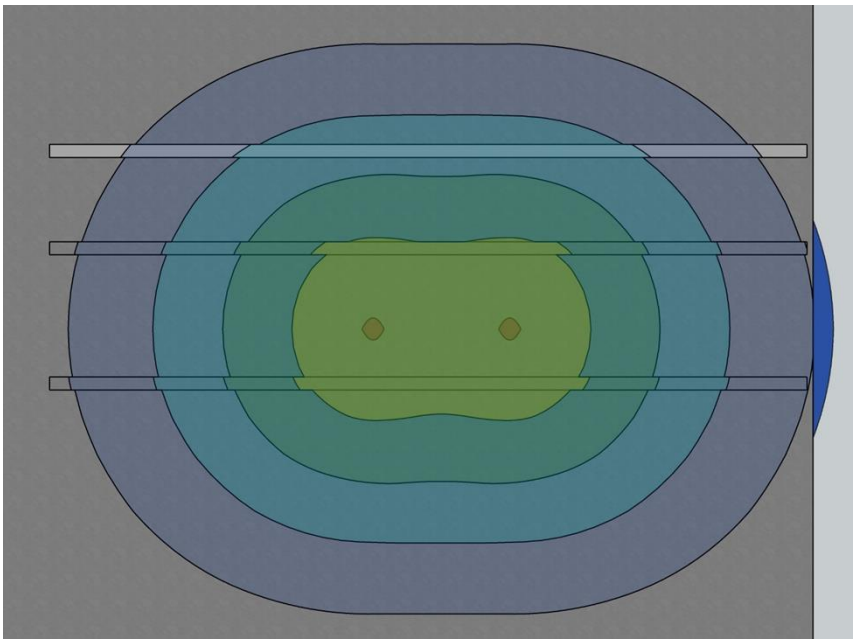
Hall A – CLEO

Brian Eng

- Received SketchUp model from Walt Akers with field lines



Top view; field lines are at bore of magnet

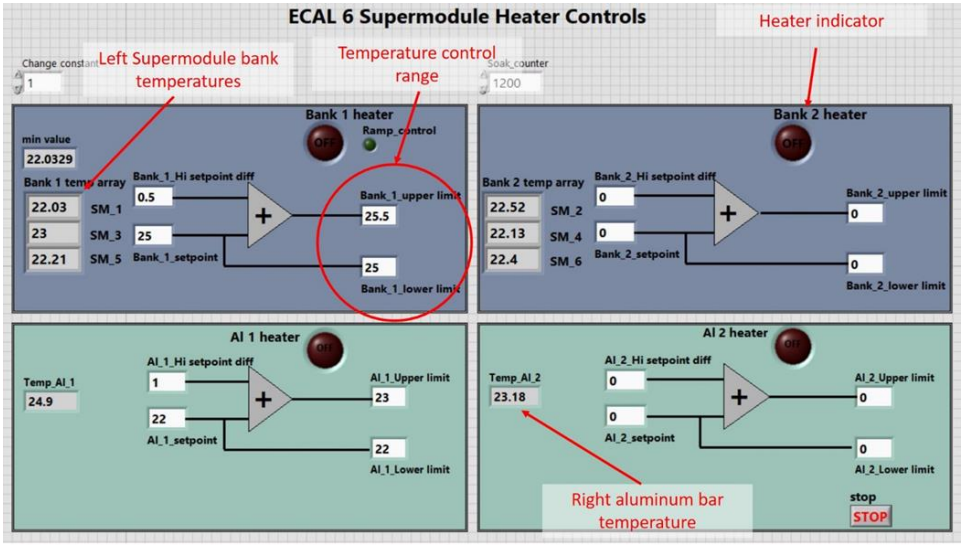


Bottom view, with section through floor; horizontal lines are cable trays in the floor

Hall A – ECAL

Brian Eng, Tyler Lemon, and Marc McMullen

- Started writing controls software for six-supermodule test stand to control four channels
  - ✶ Two channels of three supermodules in parallel
  - ✶ Two channels of aluminum bar heated for the boundary



- Created model in Ansys SpaceClaim of one lead glass block and its aluminum and copper wrapping
  - ✶ Trying to used SpaceClaim's Share Topology feature to ensure aluminum wrapping is treated as a separate object from the lead glass; no significant progress made due to unavailability of SpaceClaim or Fluent license

Hall A - GEp

Mindy Leffel

- Completed two and a half high voltage boxes; five of 22 completed

Hall A – Møller

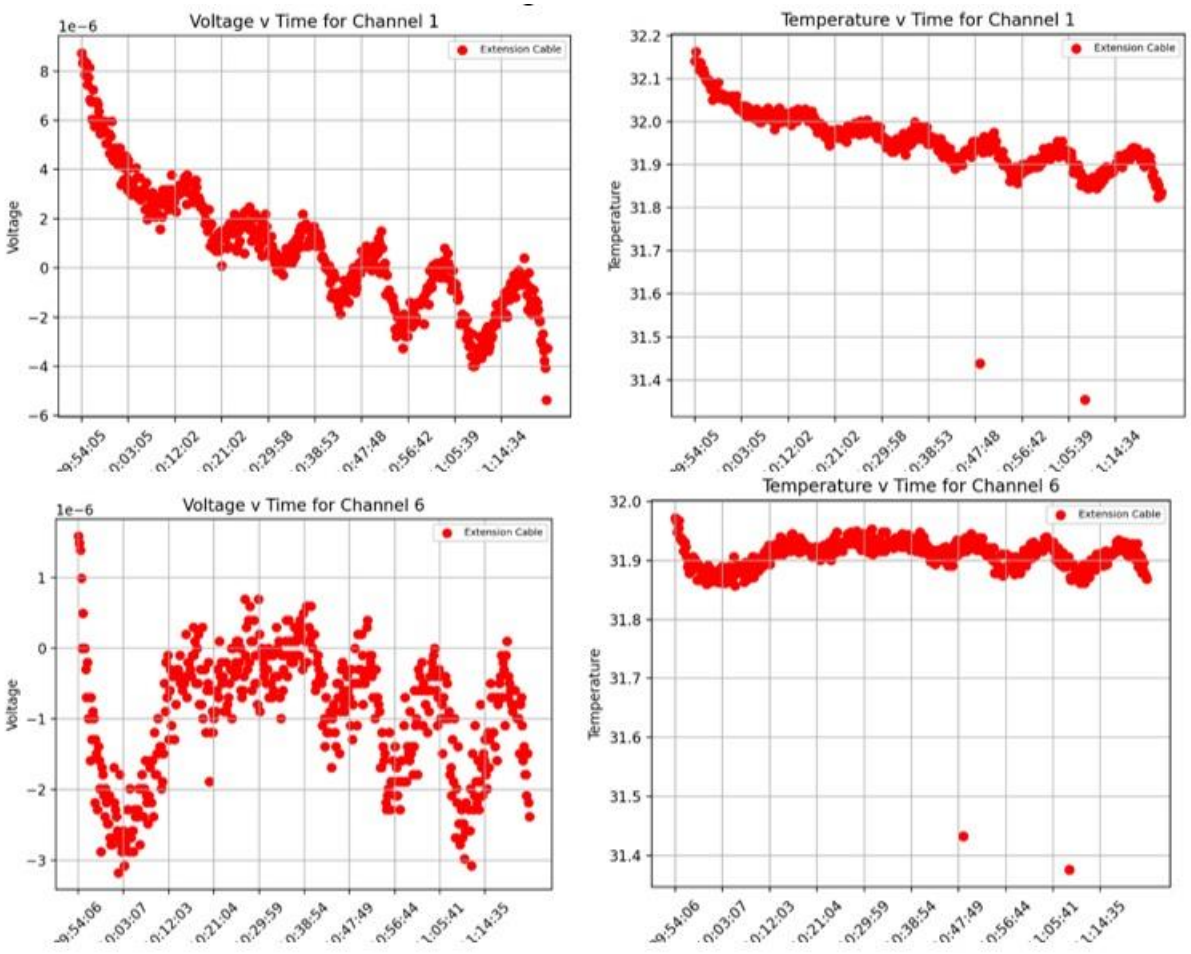
Mary Ann Antonioli and Brian Eng

- Reviewed voltage tap diagram

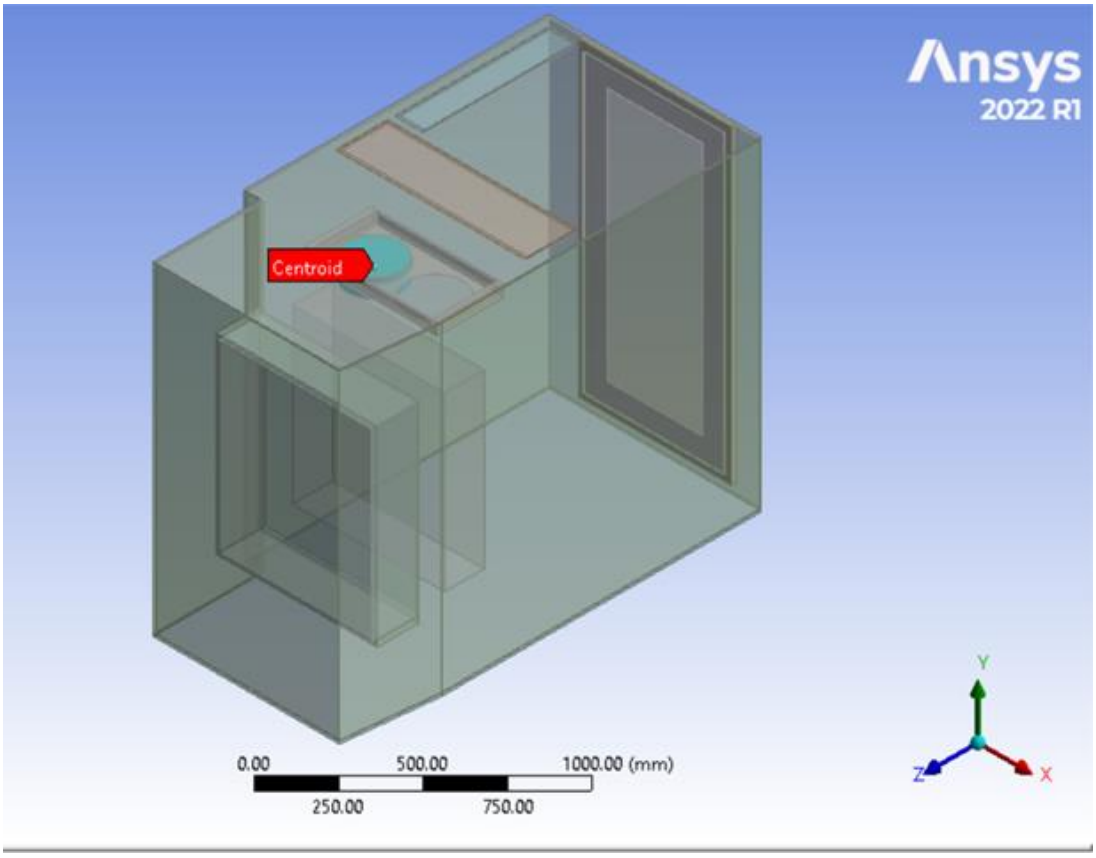
Hall C – NPS

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

- Adding all process variables to the softIOC in development
- Creating an EPICS client in LabVIEW thermal readback program
- Debugging communication issue with cRIO serial modules that enable communication with the chillers
- After rewiring of thermocouples in terminal block 1, took new temperature and voltage data from the 40 thermocouples using one extension cable; plotted each vs time



- Developed Python script to generate a GUI to load parameter values for individual high voltage channels
- Working with CAEN tech support to address problems with high voltage crates and modules
    - ✶ Sometimes EPICS commands need to be sent more than once; CAEN tech support suggested upgrading both the HV control firmware and the HiVoCs version
    - ✶ Sometimes when channels are turned off, various parameter setpoints are not retained correctly, often set to zero or an unreasonable value; still awaiting a response from CAEN tech support
        - ▪ Investigating method to check parameter setpoints before a high voltage channel is turned on
- Created simplified Ansys 3D model of detector (below)
    - ✶ Removed individual crystals, crystal supports, and three fans
    - ✶ Added rotating volume, which includes the fan volume blades, and a volume inside detector enclosure



- Imported 3D model to Fluent, added material thermal properties, and set boundary and cell zone conditions
  - ✶ Ran simulations; high temperatures in the detector volume
  - ✶ Checking model geometry and errors
- Investigated methods of implementing the Phoebus alarm server configuration file for the alarm test system softIOC process variables
  - ✶ At startup of the alarm server, a file in .XML format will be imported with alarm settings for each monitored process variable

Hall D – JEF

George Jacobs. Mindy Leffel

- Disassembled, cleaned, and inspected 12 crystals
- Wrapped 10 Crytur crystals with 3M foil and Tedlar

EIC

Brian Eng

- Reviewed cost and schedule with Rolf Ent, Elke Aschenauer, Phil Kessler, and Everett Woolsey (Phil and Everett are from project controls handling P6)
  - ✶ Added current R&D work as predecessors to some activities

EIC- Test Stand

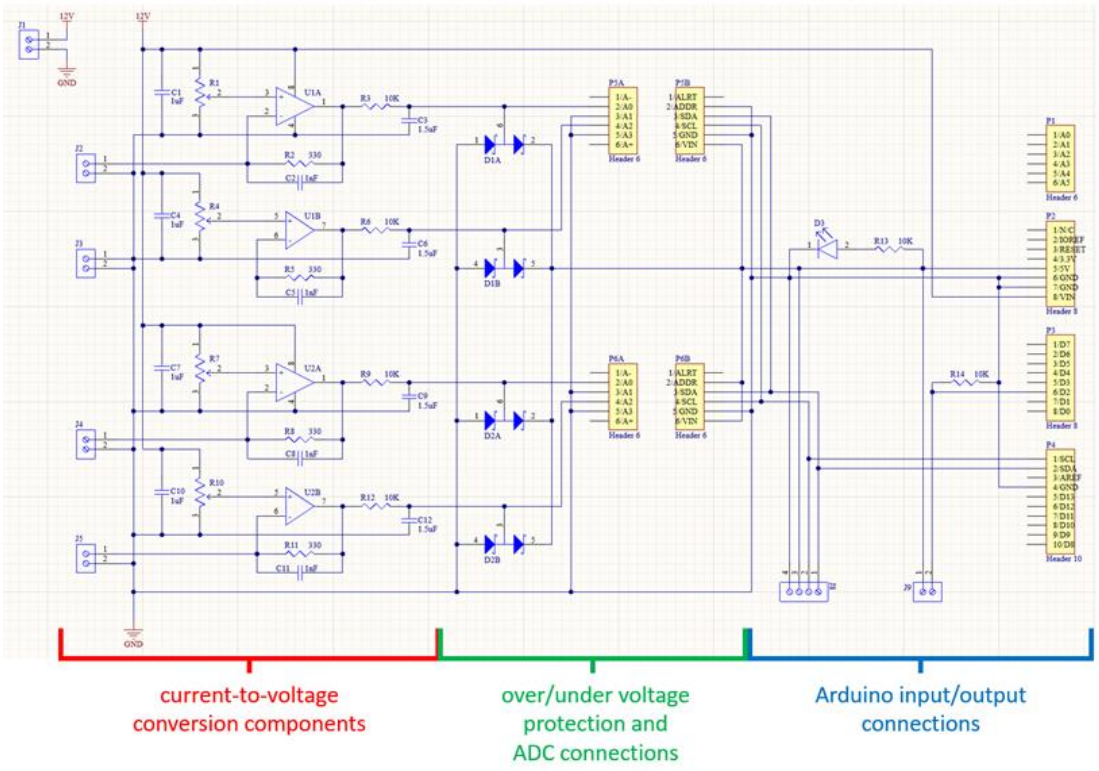
Brian Eng, Pablo Campero, George Jacobs, and Marc McMullen

- Continued modifying temperature ramping code
  - ✶ Added timed soak feature, which delays temperature increase by adding a timer between actuations of the relay that controls power to the immersion heater
- After discussing outgassing with Industrial Hygiene, ordered carbon filter to connect to output of test stand
- In Ansys SpaceClaim, modified model by adding 2-mm thick aerogel

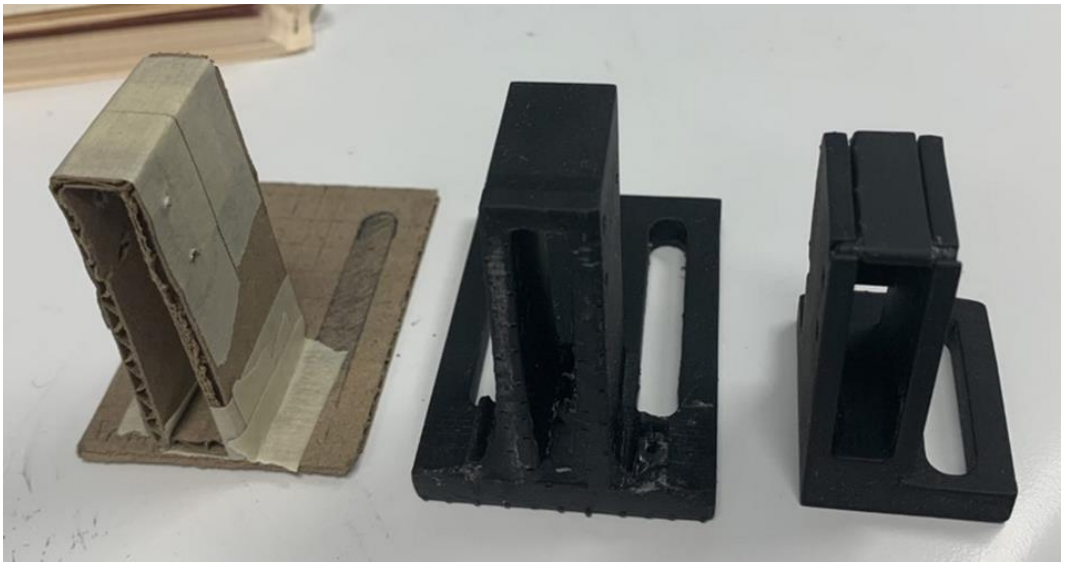
EIC-DIRC

Tyler Lemon and Marc McMullen

- Created schematic for photodiode DAQ circuit

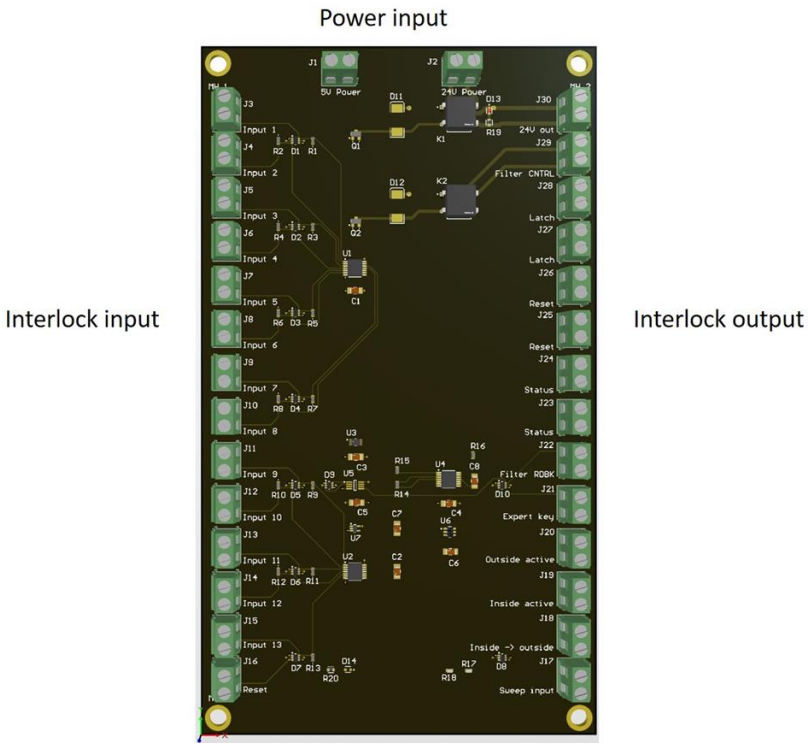


- Designing holder for optical table sidewall position monitor
  - ✶ Created NX12 model and 3D-printed
  - ✶ Refined design and reprinted
    - Removed slot on one side for fastening holder to optical table and reduced overall size of holder (less resin needed to print)
    - Added a removable cover for top and back of holder so solder lugs of sensor are covered and easily accessible
    - Added a small slot to allow a washer to be used with holder



Versions of sidewall position monitor holders. Left is cardboard version, middle is first 3D-printed version (lumps in surface are where resin accumulated), and right is refined version

- Began routing traces on laser interlock board



DSG Website

Peter Bonneau, Marc McMullen

- Added a page that provides updates of EIC tracker research and development
- Reformatting website source code to use links to pictures rather than embedded pixel data