Detector Support Group

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

Weekly Report, 2021-05-05

Summary

Hall A – GEM

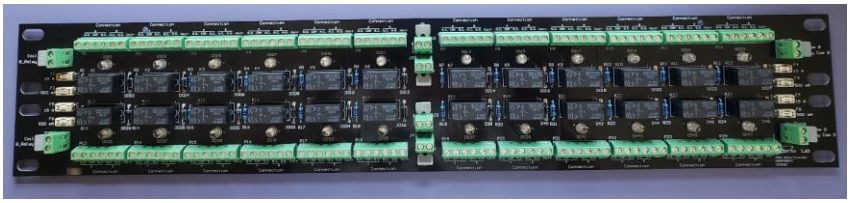
Mary Ann Antonioli, Peter Bonneau, Brian Eng, George Jacobs, Mindy Leffel, Tyler Lemon, Marc McMullen

- Populated eight gas flow sensor boards
- Fabricated one gas flow sensor chassis; five of six complete

Hall A – SoLID

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

- Completed electrical drawings: *Voltage Taps Wiring Diagram*, *Quench Detector Wiring Diagram*, and *Analog Input PLC I/O Module Wiring Diagram*
- Populated one of two motor controller boards



Fully populated motor controller board

Hall B – RICH-II

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

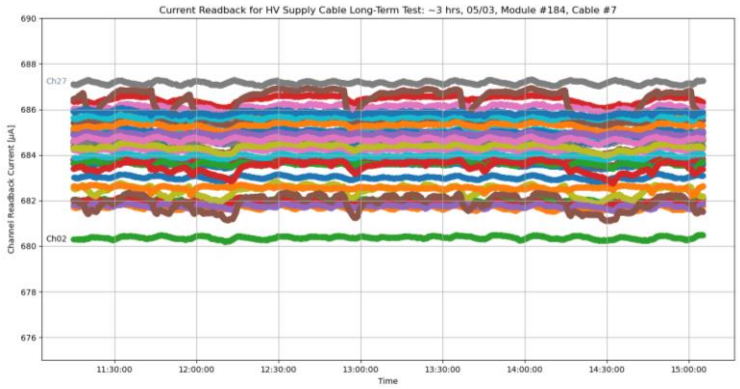
- Developing LabVIEW front panel for the hardware interlock system
  - ✶ Added temperature and humidity sensor readout indicators in the *Interlock Status Monitoring* tab
- Completed flow calculations for the air cooling pressure regulators
- Simulated proposed RMC relay circuit using online simulator to verify that it behaves as expected
- Completed assembly of new Super Dry dry cabinet and moved it to EEL 124
  - ✶ Placed dry cabinet in area that has power and network connection, does not block any vents for the cleanroom's air handling, and adheres to the keep-out zone around the circuit breaker panel

New Super Dry cabinet in EEL 124

Hall C – NPS

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

- Developing LabVIEW code for Keysight scanning subroutine
- Developed, using Python, program for HV supply cable testing
  - ✶ Program selects three random channels and conducts a switching test and then immediately starts a long-term test for all channels
- Generated plot for long-term load test of cable #7 on module #184
  - ✶ Noticed that the readback current for all channels was ~7 μA higher than expected based on measured resistance
  - ✶ Will test cable on a different module to see if issue persists



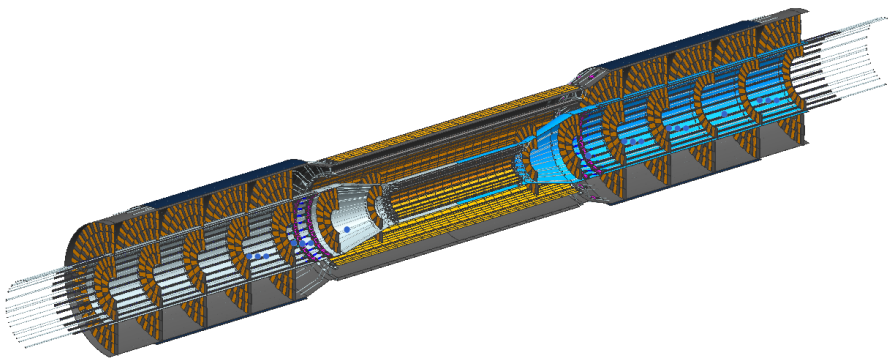
Readback current from long-term test of cable #7 in module #184

- Fabricated two HV supply cables; 17 of 40 complete

EIC

Brian Eng

- Updated costing spreadsheet for tracking detectors that will go to collaboration initiatives
- Working with Jim Fast on silicon services



Three-dimensional model showing silicon services