Summary

Hall A – ECal

George Jacobs, Mindy Leffel, and Marc McMullen

- Assembling supermodules – 45 of 59 complete
- Measured and sorted 27 lead-glass assemblies

Hall A – GEM

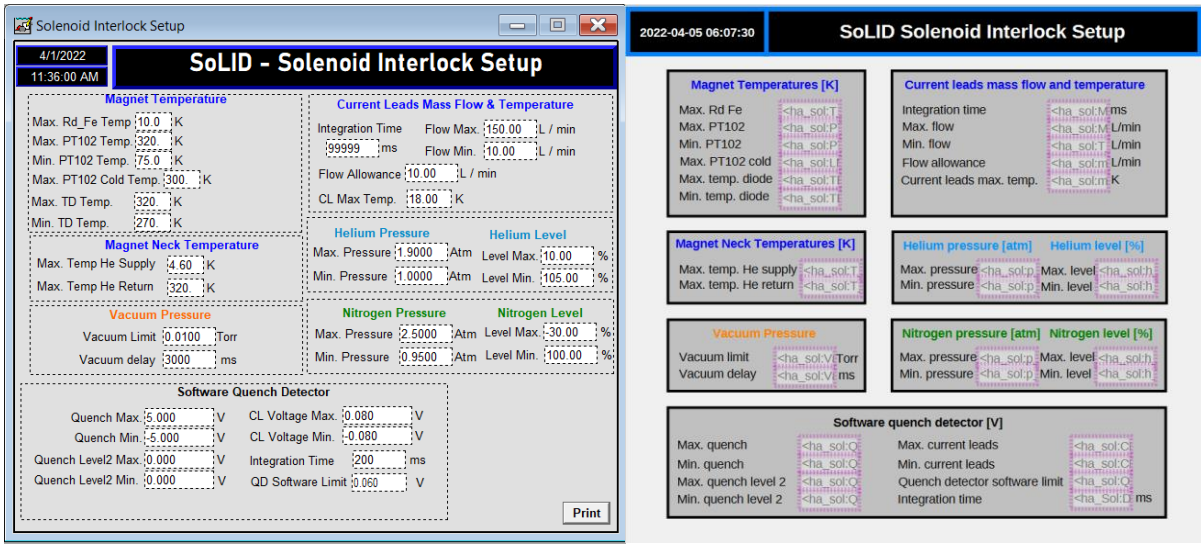
Brian Eng, George Jacobs, and Marc McMullen

- Modifying gas flow and pressure monitoring system software to supply flow values to the Hall A plotting utility

Hall A – SoLID

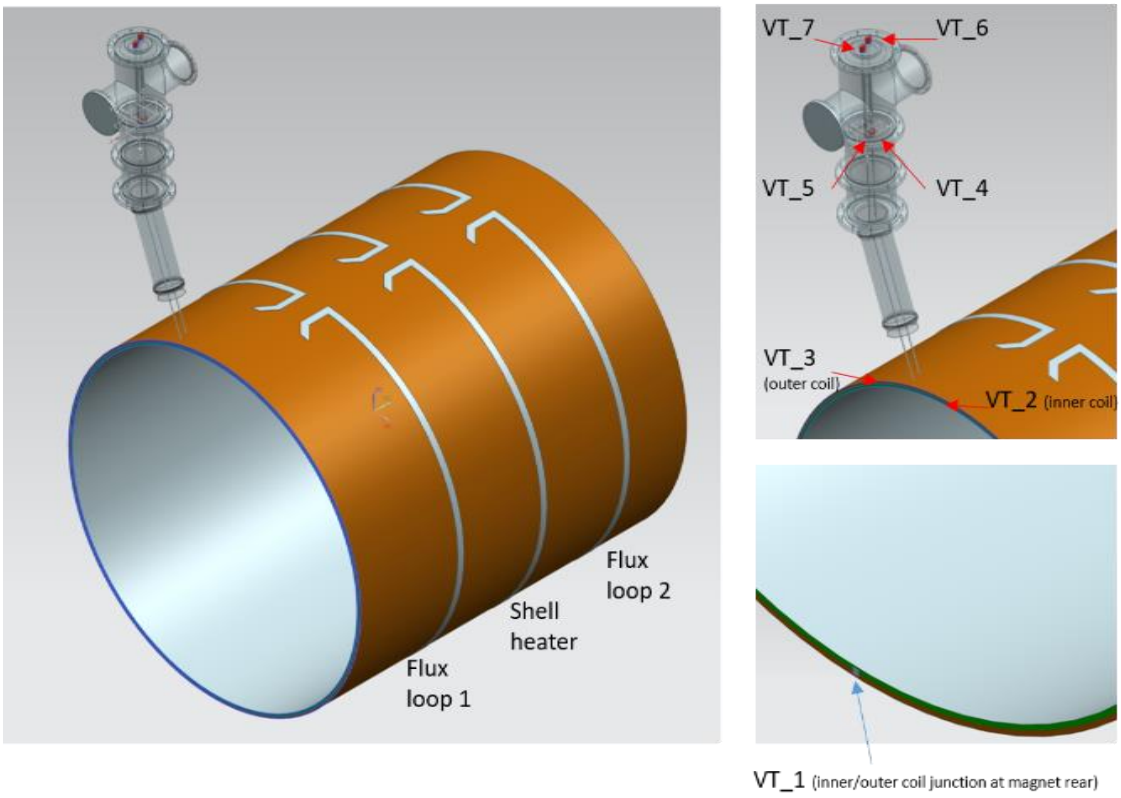
Mary Ann Antonioli, Pablo Campero, Mindy Leffel, and Marc McMullen

- Completed *Solenoid Interlock Setup* HMI screen and Phoebus screen



SoLID Solenoid Interlock Setup HMI screen (left) and Phoebus screen (right)

- Testing electric ball valve readout
  - ✶ Voltage measured at valve terminal is -0.23 V when open and closed – fully open valve should show 5 V and closed valve 0 V; debugging in progress
- Fabricated four, 4-conductor cables with CPC connectors
- Completed NX12 rendering of SoLID solenoid magnet

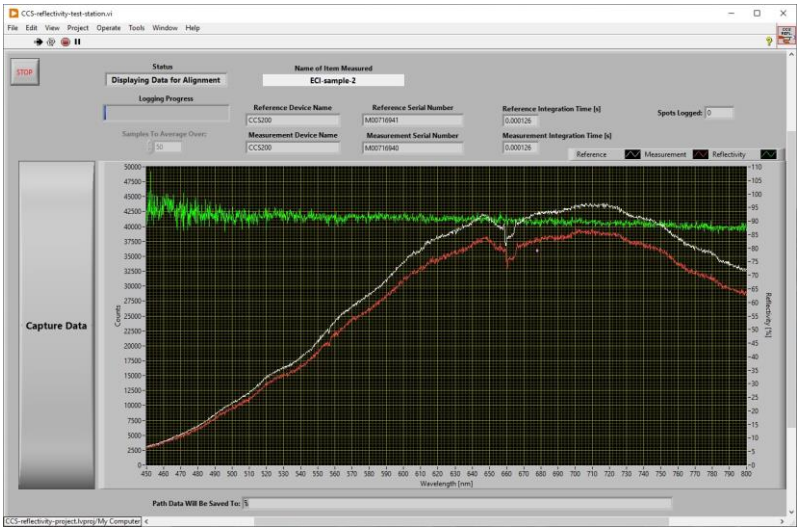


SoLID magnet and turret rendering with voltage tap locations and flux loops

Hall B – RICH-II

Mary Ann Antonioli, Peter Bonneau, Pablo Campero, Brian Eng, George Jacobs, Tyler Lemon, and Marc McMullen

- Connected EEL air-cooling and nitrogen setups' flow meters and pressure transducers to hardware interlock chassis
- Developed LabVIEW program for new compact CCD spectrometer (CCS) reflectivity test station
  - ✶ Program measures mirror reflectivity for light of wavelengths from 450 – 800 nm
  - ✶ When user runs program, it displays CCS data for reference light and light reflected off of mirror
  - ✶ When user triggers a data capture, 50 measurements (quantity is user-settable), are recorded and averaged – averaging helps eliminate some of the noise at lower wavelengths
  - ✶ Tested program by successfully measuring reflectivity of a mirror sample from ECI from RICH-I to be ~90% (sample has specified reflectivity of at least 90%)



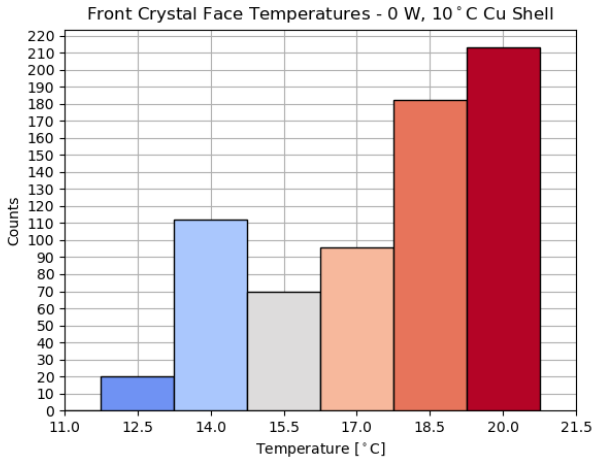
LabVIEW front panel of new reflectivity test station program using two CCSs. White waveform is CCS counts from reference light (data uses left y-axis). Red waveform is CCS counts from measurement light (data uses left (y-axis). Green waveform is calculated reflectivity of mirror sample (data uses right y-axis).

- Submitted cooling tube to JLab machine shop for modification

Hall C – NPS

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

- Hardware interlock LabVIEW program development
  - ✶ Developed Python program to generate configuration file
  - ✶ Wrote LabVIEW code to initialize high and low limits for all temperature, humidity, pressure, and flow variables
  - ✶ Added Keysight scanning and averaging code
- Generated histogram of front crystal face temperatures using temperature probe data exported from Ansys steady-state thermal analysis



Histogram of front crystal face temperatures

Hall D – JEF

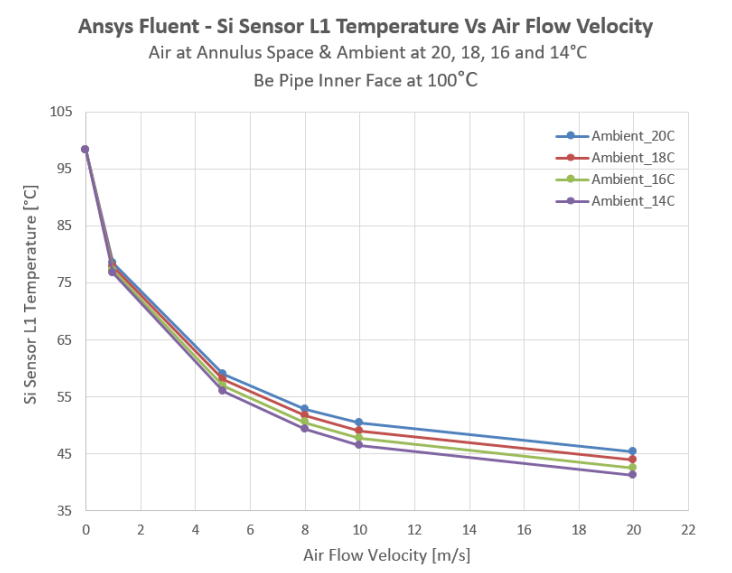
Mary Ann Antonioli, Aaron Brown, George Jacobs, and Mindy Leffel

- FCAL foil pre-shaping (total of 608 foils)
- Wrapped 29 crystals with foil and Tedlar

EIC

Pablo Campero, Brian Eng

- Conducting simulations in Ansys *Fluid Flow Fluent* to get the maximum temperature at the Si sensor layer 1
  - ✶ Assumed air temperature in the annulus space and enclosed (ambient) of 20, 18, 16, 14°C
  - ✶ For each temperature, air velocities of 0, 1,5, 8, 10 m/s were used for the ambient and annulus space



- Continued comparing Reference (CD1) and ECCE cost spreadsheets, with ATHENA as a sanity check – total costs are similar, but material/labor are far apart

DSG R&D – EPICS Alarm System

Peter Bonneau

- Debugging the Kafka message stream for alarm system PV configuration settings
  - ✶ Some of the configuration settings are not being accepted by the alarm server
  - ✶ Wrote a Kafka message stream spy program to aid in the debug of the configuration message stream – found errors in the format of the message stream
  - ✶ Successfully debugged PV configuration message stream
- Developing an Input/Output Controller (IOC) using EPICS base 3.14 to be used for the development and testing of the alarm system