# Summary

## Hall A – SoLID
*Pablo Campero, Mindy Leffel, and Marc McMullen*

- Developing *SoLID Solenoid Cooldown* Phoebus screen – adding graphs and buttons to change the values for process variables

## Hall B – LTCC
*Brian Eng and Marc McMullen*

- Updating gas system to use the same pressure readout setup for S2 & S6 as currently deployed for S3 & S5
  - ✶ Dual differential pressure transmitters: one directly to the cRIO and one to the Omega process controller
- Upgraded gas system pressure controls – tested system to ensure additional sensors would work without code modification



Screenshot of LTCC gas system pressure controls GUI

  - ✶ Tested the installed solenoid valves with the software to ensure the solenoids and controls work on S2 & S6

## Hall B – RICH-II
*Mary Ann Antonioli, Peter Bonneau, Pablo Campero, Brian Eng, George Jacobs, Tyler Lemon, and Marc McMullen*

- Designed and printed reflectivity test station probe tripod
  - ✶ Tripod holds probe face parallel to mirror surface, with probe face ~3 mm from mirror
  - ✶ Tripod designed in attempt to create a probe stand that is easier to align than articulated support arm

- Added pressure gauge to monitor detector pressure and increased exhaust line diameter from ¼" to ½" to reduce detector pressure during $N_2$ purge
- Modified second Aerogel dry-tent assembly – expanded tent dimensions to 64 ft$^2$
- Fabricated three of six spare Molex-to-RJ45 cables; added heat shrink for strain relief
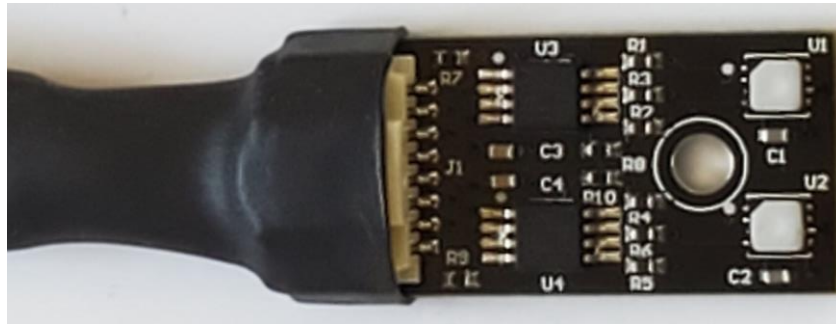


Molex-to-RJ45 cable with heat shrink

- Reviewed and signed RICH-II operational safety procedure

## Hall C – NPS
*Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, George Jacobs, Mindy Leffel, Tyler Lemon, and Marc McMullen*

- Modified crystal array model using Ansys DesignModeler to more closely represent actual dimensions
  - ✶ Created new Cu cooling shell – 165 mm wide instead of 200 mm
  - ✶ Increased the width of the mu-metal dividers from 15 mm to 67.5 mm
  - ✶ Conducted new steady-state thermal simulation with 0.5 W/crystal, ambient temp. of 20°C, and the Cu cooling shell set at 10°C – new dimensions did not affect crystal face temperatures
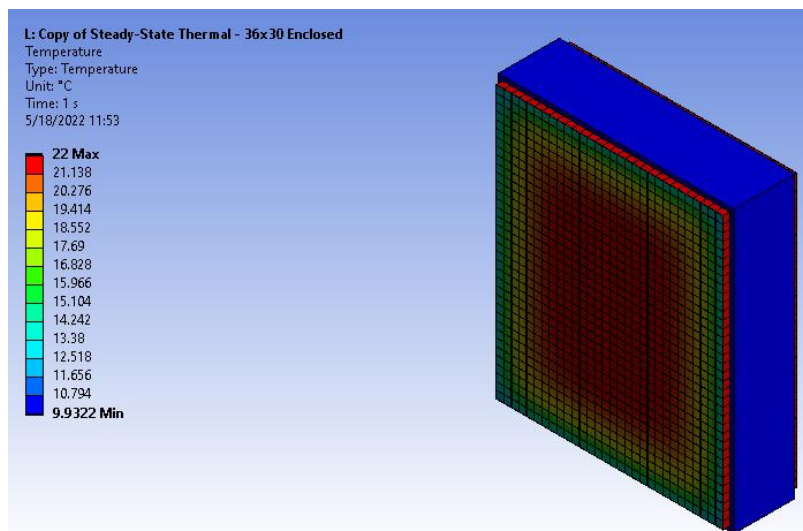


Result of steady-state thermal simulation with new component dimensions

- Developing Ansys Fluent thermal simulation which includes heat removal effects of heat exchangers
  - ✦ Modifying simplified model – added fans and crystal array block
  - ✦ Implementing conditions to simulate the rotation of the heat exchanger fans
- Developing NX12 model of crystal array
- Developing hardware interlock LabVIEW program – adding average of all values for each monitored area (crystal zone front and back, electronics zone, detector frame, hall, and chillers)
- Testing HV CAEN cables using Python – 17 of 40 cables complete
- Glued seven Radiall connectors – 32 of 40 complete

## Hall D – JEF
*Aaron Brown, George Jacobs, and Mindy Leffel*
- ESR foil pre-shaping – 1019 of 1600 foils complete
- Wrapped 28 crystals with ESR foil and Tedlar

## EIC
*Pablo Campero, Brian Eng*
- Continued updating cost/schedule for CD2 – mostly based on ECCE, but some from reference and some from ATHENA (namely the schedule for the silicon)