

Summary

Hall A – SoLID

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

- Wiring instrumentation racks #1 and #2
 - ★ Wired 17 signal conditioners and three terminal strip groups for temperature sensors

Hall B – RICH-II

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

- Debugging failed FPGA Command Engine response timeout during testing of SHT35 sensor board using defective sensor
- Added two banana plugs to hardware interlock chassis for connecting RJ45 port shields to an external ground



NX-12 model of hardware interlock chassis with banana plugs

- Completed fabrication drawings for hardware interlock chassis

Hall C – NPS

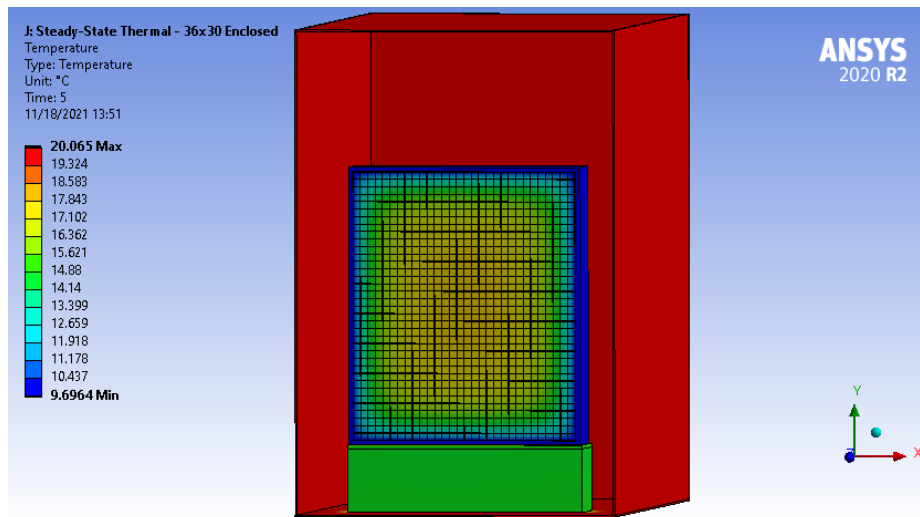
Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, George Jacobs, Mindy Leffel, Tyler Lemon, and Marc McMullen

- Revised 36x30 PbWO₄ crystal array model: added polyethylene enclosure and aluminum stand
 - ★ Conducted thermal analysis with 22°C ambient temperature outside of the enclosure, 18°C ambient temperature inside of the enclosure, and a heat load of 0.5 W applied to the rear face of each crystal
 - ★ Maximum crystal temperature: ~17.8°C

Detector Support Group

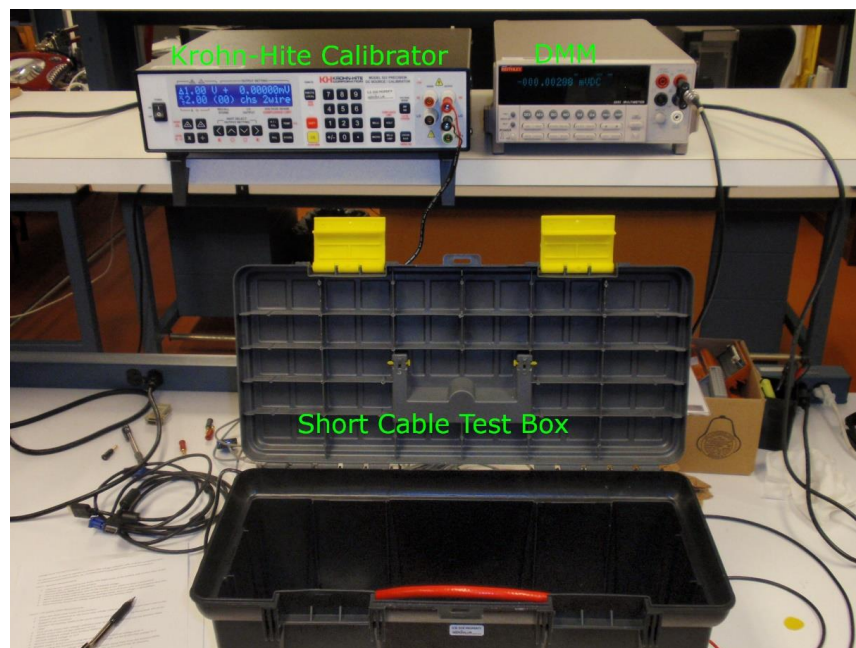
We choose to do these things “not because they are easy, but because they are hard”.

Weekly Report, 2021-11-17



Screenshot of new PbWO₄ crystal array model with front wall of enclosure removed

- Researching conducting Ansys thermal simulations and exporting results to CSV file using Python scripting
 - ★ Able to export overall minimum, maximum, and average temperature – investigating how to export temperature probe values
- Completed hall temperature and humidity tab in LabVIEW hardware monitoring program
- Developing *monitor voltage, current, and power status* Phoebus screen
- Conducting high voltage supply cable voltage drop testing: 6 of 36 channels tested



High voltage supply cable voltage drop test station

- Worked on ESR foil pre-shaping – 220 of 600 completed (~37%)



Detector Support Group

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Weekly Report, 2021-11-17

EIC

Pablo Campero, Brian Eng

- Using Ansys, conducting thermal analysis of Be beam pipe and Barrel L1 Si sensor (with and without PEEK rings)
- Started preparing documentation for long lead procurement of GEM foils
 - ★ Only one vendor (CERN) and cost > \$750K; procurement process will be quite long

DSG – Cleanroom

Marc McMullen

- Flooring contractor has completed large cleanroom floor project
 - ★ Facilities management is scheduled to clean the walls and change the filters this week



Completed second half of cleanroom floor