



Detector Support Group

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

Weekly Report, 2022-06-01

Summary

Hall B – LTCC

Brian Eng, Mindy Leffel, and Marc McMullen

- Completed upgrade of detector gas system's pressure controls and tested solenoids
- Debugging issues with gas shed cRIO after upgrading from 2019 to 2021
 - ★ Had to roll gas shed cRIO back to 2019; was unable to stay online after upgrade – service ticket submitted to National Instruments

Hall B – RICH-II

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

- Writing Python program to plot mirror reflectivity test results
- Installed stiffening tool on detector
- Rotated detector to horizontal
- Fabricated front panel lifting frame and attached to floor jack
- Installed exit window on detector shell
- Moved hardware interlock system to Hall B
 - ★ Chassis moved to Forward Carriage level 3 rack C3-4 (same rack as RICH-I interlocks)
 - ★ Ran two 100-ft cables to extend sensor readout cable from chassis to detector on lifting tool in hall for monitoring detector humidity overnight while detector is awaiting installation

Hall C – NPS

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

- Developing hardware interlock LabVIEW program
 - ★ Adding number of values to average for each zone
 - ★ Adding code to convert voltages returned from humidity sensors to %RH
- Glued two Radial connectors – 36 of 40 complete
- Testing HV CAEN cable using Python – 21 of 40 complete

Hall D – JEF

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

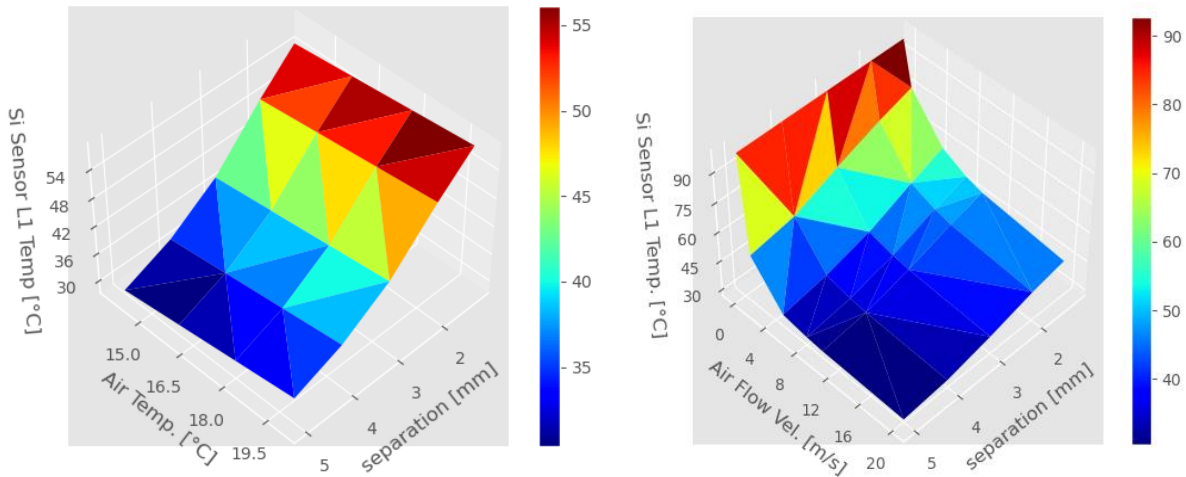
- ESR foil pre-shaping – 1083 of 1600 foils complete
- Wrapped 6 crystals with ESR foil and Tedlar

EIC

Pablo Campero, Brian Eng

- Developed Python code to generate three-dimensional surface plots
 - ★ Plotted separation (x-axis), ambient and annulus space air temperature (y-axis), and Si sensor layer 1 temperature (z-axis)

- ★ Plotted separation (x-axis), ambient and annulus space air velocity (y-axis), and Si sensor layer 1 temperature (z-axis)



Three-dimensional surface plots showing the maximum temperature of the Si sensor layer 1 when the air flow velocity in the annulus space and ambient is 5 m/s (left) and when the air temperature in the annulus space and ambient is 20°C (right)

- Attended Detector 1 meeting

DSG R&D – EPICS Alarm System

Peter Bonneau

- Debugging Phoebus alarm system test softIOC
 - ★ Test softIOC stopped working after an automatic computer center system update
 - ★ Prior to system update softIOC worked consistently for ~1 month