



Detector Support Group

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

Weekly Report, 2021-09-08

Summary

Hall A – GEM

Brian Eng, George Jacobs, Mindy Leffel, Tyler Lemon, Marc McMullen

- Tested, remotely, SBS gas flow and pressure sensors

Hall A - Detectors

Brian Eng

- Modifying Python script to allow generated screens to be embedded into a base screen – this base screen will be used as an overall voltage differentials status screen

Hall A – SoLID

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

- Developing PLC program to simulate PID valve controls
 - ★ Investigating RSLogix-5000 Emulator software to determine if it can be used to simulate input and output signals
- Developing MySQL database system, using MariaDB, to manage information for magnet control systems
- Completed drawing A00000-16-03-350 *Power Distribution Wiring Diagram*
- Cut 24, 20-conductor ferrule-to-ferrule cables – terminated 10 of 24

Hall B – RICH-II

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

- Prototyped RMC relay circuit with parts specified in the RMC design's bill of materials
 - ★ Verified relay and NPN transistor used in Altium design work as expected with sbRIO
- Revised Hardware Interlock System diagram to show the direct communication path between the gas system expansion chassis and the sbRIO

Hall C – NPS

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

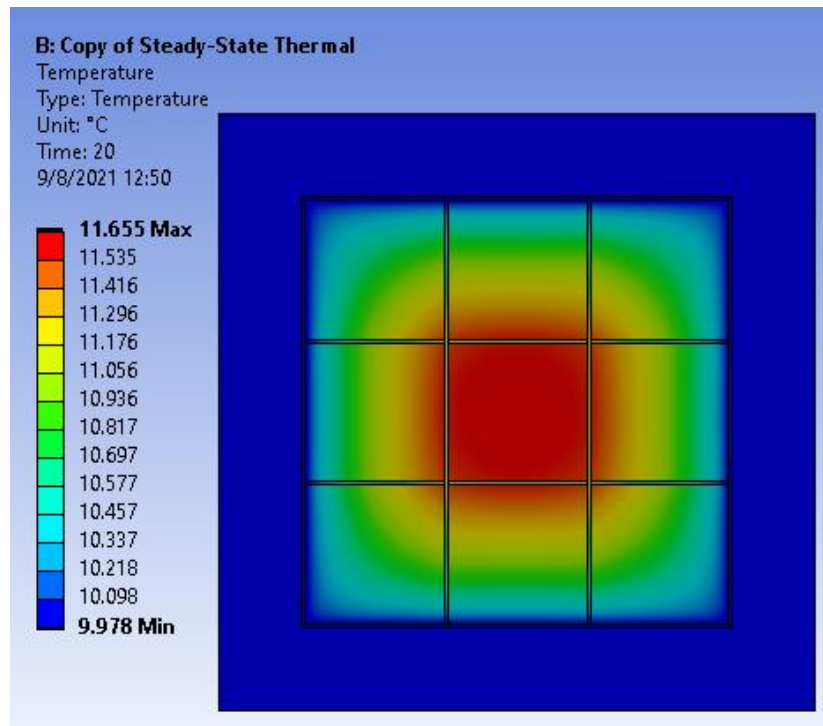
- Developed, using Ansys, new model of 3x3 block of PbWO₄ crystals which includes carbon fiber dividers



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Rear face with 0.5 W heat load applied to each crystal; copper shell held at constant 10°C

- Developing Python script to generate random numbers for both the LabVIEW Hardware Interlock Monitoring program's *Temperature Map* tab and the Phoebus EPICS *Temperature Map* screen
- Revised *Temperature Map* tab to include Back Crystal Zone temperature map

EIC

Brian Eng

- Updated task list for FY2021 with current status
- Discussions with JLab Engineering about new hires that might contribute to EIC mechanical design