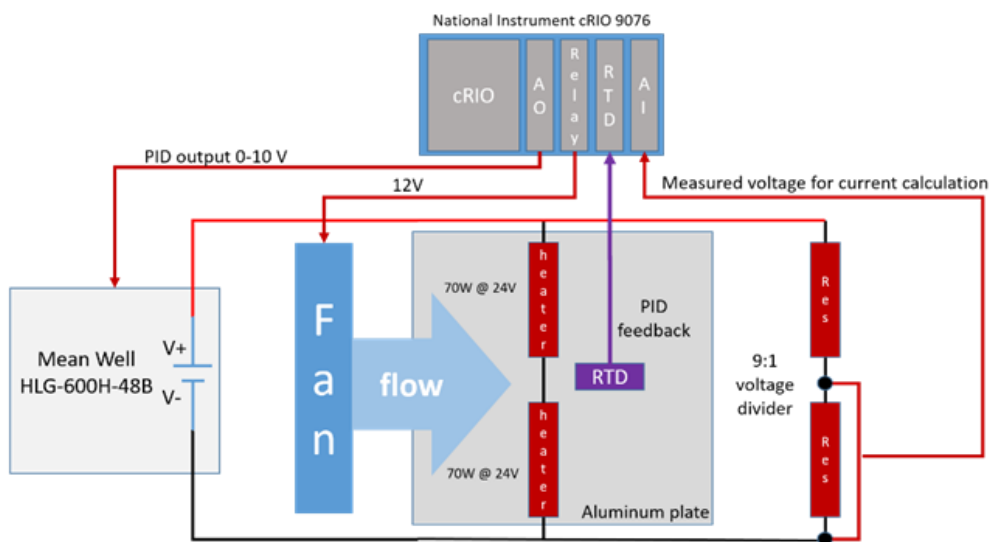


Hall A – ECAL

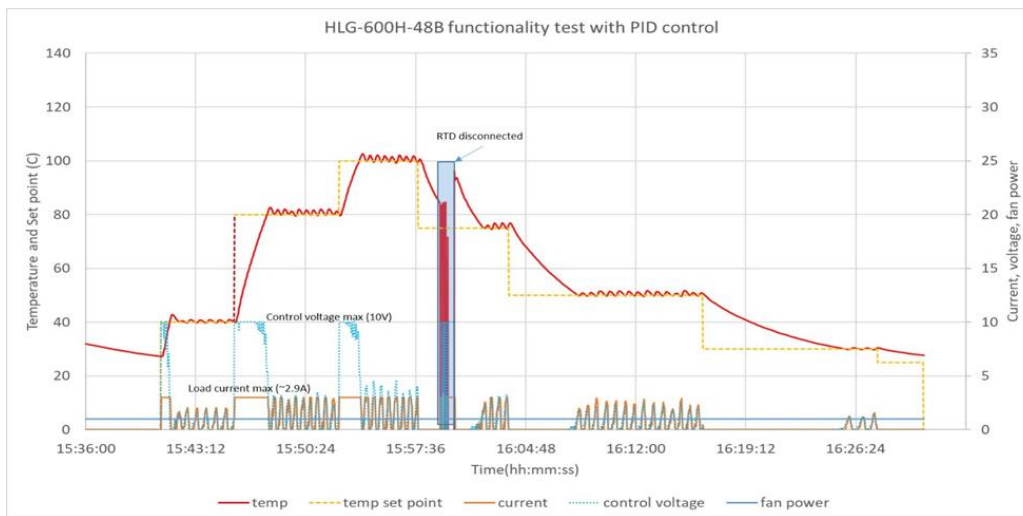
Brian Eng and Marc McMullen

- Assembled a cRIO test stand to run a range control test of the proposed power supply (HGL-600H-48B) for the supermodule heaters
 - ★ Uses a 140-W heater as the source and a PC fan to remove the heat
 - ★ Analog output channel from the cRIO provides current that is adjustable by way of a 0–10 V control signal
 - ★ Wrote a proportional, integral, derivative LabVIEW program to control the power supply output

ECal power supply test stand



- ★ Tested the control software of the power supply at setpoints of 40°C, 80°C, 100°C, 75°C, 50°C, and 30°C





Detector Support Group

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

Weekly Report, 2023-05-24

- Measured the power supply using an oscilloscope at outputs of 5%, 6%, and 10%

Supply output (%)	Peak-to-peak (mV)	Period (Hz)
5	360	395
6	200	593
10	400	1306

Hall A - GEp

Mindy Leffel

- Completed two high voltage boxes; 16 of 22 completed

Hall A – SoLID

Mary Ann Antonioli and Pablo Campero

- Revised drawing A00000-16-03-0250

Hall C – NPS

Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng,

Mindy Leffel, and Marc McMullen

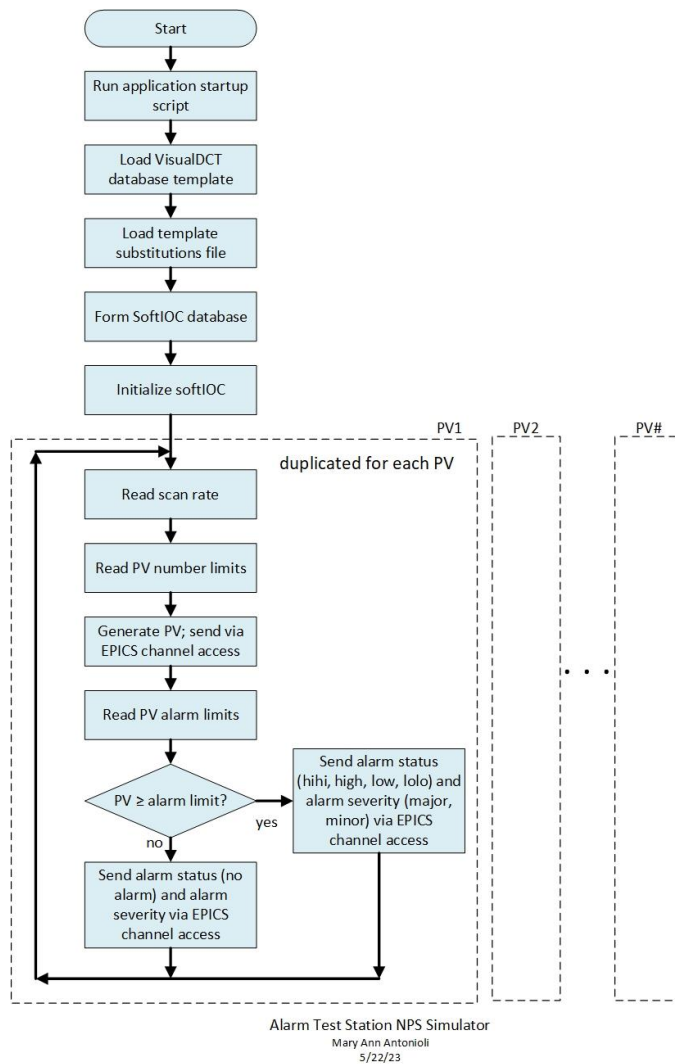
- Worked with Christopher Slominski (Accelerator) to archive all high voltage process variables (PVs) on the Mya OPS deployment
- Debugging high voltage overview screen with Simona Malace
 - ★ Problems possibly stem from EPICS, which is a CAEN problem
 - ★ For some channels, the PV for channel power will show as powered ON, but the status PV will show that channel as powered OFF
 - ★ Upgraded firmware for all 16 modules in crate 1
- Tested the 120-ft. serial cable fabricated by Mindy for chiller communication, using the crystal zone chiller
 - ★ All commands sent and received as expected
 - ★ Ordered CAT5 cable to fabricate second cable
- Completed 46 loops to LabVIEW code that break out arrays into individual variables
- Revised Phoebus menu screen with new PVs
- Made two Visio drawings (one for PV simulator, shown below)
- Developing NPS PV simulator
 - ★ Simulator produces all detector signal PVs
 - ★ PVs are generated via SoftIOC server and sent to clients via EPICS channel access
 - ★ PVs are generated independently of each other at rates set by user
 - ★ PV values are set by user and can be randomly generated or fixed
 - ★ Simulator will be used to develop and test Phoebus applications including the alarm system



Detector Support Group

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Weekly Report, 2023-05-24



Hall D – JEF

Mindy Leffel

- Wrapped 10 crystals with 3M foil and Tedlar; 773 wrapped to date

Hall D – Solenoid

Brian Eng

- Swapped out PXI controller with spare
 - ★ Old = PXIe-8135 running Pharlap (which will no longer be manufactured by National Instruments)
 - ★ New = PXIe-8840 Quad Core running NI-Linux

EIC - DIRC

Tyler Lemon and Marc McMullen

- Routing traces on interlock board

EIC - Thermal Test Stand

Pablo Campero, Brian Eng, George Jacobs, and Marc McMullen

- Drained oil from unit
- Removed heater, aerogel coated pipe, and thermal insulation (to access inner beampipe)
- Working on thermal simulation
 - ★ Completed geometry and mesh setup improvements for the model
 - ★ Completed setup of boundary and cell zone conditions
 - Air flow temperature of 23°C
 - Heater temperature of 100°C
 - ★ Ran 500 steady state simulations with airflow of 100 slm
 - Simulation result was ~2°C cooler for the inlet section than the measured value
 - Velocity contour plot showed high velocity at the inlet connectors and low velocity at the outlet end of the model, as expected

