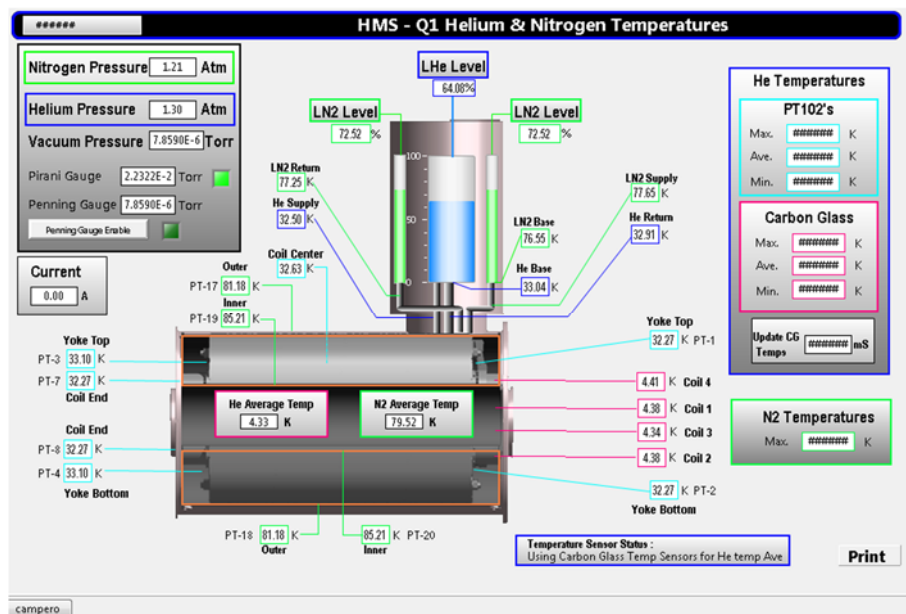


Summary

Hall C EPICS

- To re-enable HV crates after a crash, restore functions developed for *HV System Control* program.
- Restore and back up file browser GUIs developed in CSS-BOY.
- CSS-BOY GUIs created for HMS Q1, Q2, and Q3 Helium and Nitrogen Temperatures.



HMS – Q1 Helium and Nitrogen Temperatures CSS-BOY screen.

Hall C CAEN Test Station

- Verification tests of HV CAEN supply’s monitored current completed for 120 of 192 channels.
- LabVIEW program written to plot and compare test results with manufacturer’s specifications.

LTCC

- Sector 2 mass flow controller rebooted to resolve communication errors.
- C4F10 purifier controls and GUI developed and tested.

RICH

- Air-cooling buffer tank’s defective pressure transducer (PT) debugged.
 - ★ Verified PT gets correct input voltage of 24 V.
 - ★ PT outputs -0.7 V at 0 psi (0 V expected), hence indicates negative pressure.
 - ★ New Dwyer PTs procured to replace current PT.

RTPC

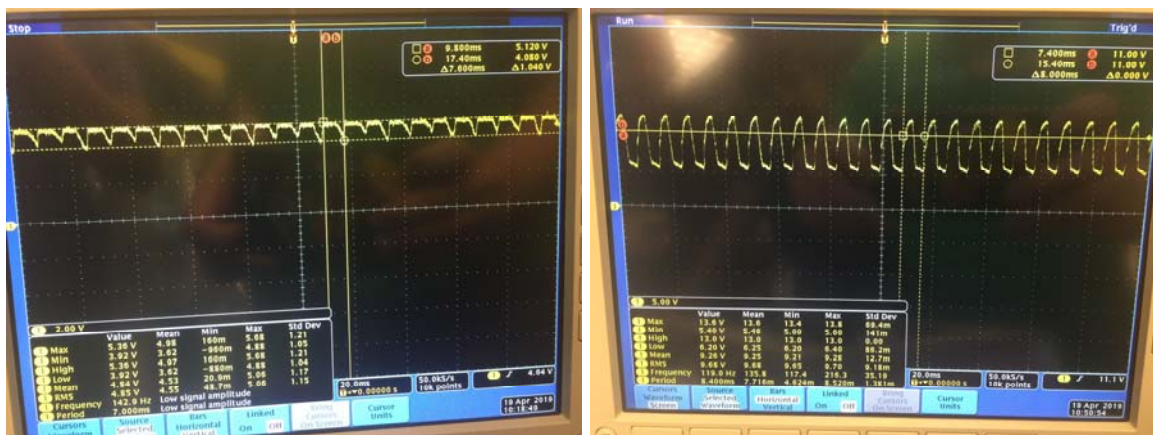
- Continuing assembly of gas system’s interface chassis.
- Developing gas controls LabVIEW program.

Detector Support Group

Weekly Report, 2019-04-24

HDice

- Bad +5 V power supply investigated in Dilution Refrigerator's Intelligent Gas Handler.
 - ★ On scope scan noticed +5 V supply dropped to ~ 4 V every 8 ms.
 - ★ Unregulated 11 V supply varied between ~5 V and ~13 V.
 - ★ No erratic blinking of LEDs on startup when regulator is bypassed and a benchtop 5 V DC-supply is used.
 - ★ Replacing +5 V regulator and 2200 μ F capacitor in 5 V circuit resolved issues.



Left: +5 V supply before repairs (max = 5.36 V, min = 3.92 V, mean = 4.84 V).
 Right: Unregulated 11 V supply before repairs (max = 13.6 V, min = 5.40 V, mean = 9.26 V).



+5 V (yellow signal; max = 5.60 V, min = 4.60 V, mean = 5.04 V) and unregulated 11 V (blue signal; max = 12.8 V, min = 10.6 V, mean = 11.9 V) supplies after repairs.

Hall A Dynapower MPS PLCs

- Determined CompactLogix 24 V output (1769-OV16) will not toggle at 10 ms rate.

Engineering Division

- BPM PCB population continued.
 - ★ All surface mount components placed on both sides of board.
 - ★ List of missing components compiled and sent to Engineering division for ordering.



Detector Support Group

Weekly Report, 2019-04-24

Wire Bonder Repairs

- PR and paperwork submitted for repairs, but vendor does not carry necessary insurance and cannot perform any work onsite. Repair will be done at later date.

DSG R&D

cRIO Test Stand

- For NI 9216 module, automatic mode cases developed, tested and debugged for dynamic range, offset error, gain error, differential nonlinearity, and integral nonlinearity.
- Code that sends data to Excel and resets test selection re-developed and moved to each individual test.

PLC Test Station

- Developed routine to toggle output of digital output module at varying frequencies.
- Development of routine to verify output using digital input module in progress.