

Summary

Hall A - SoLID Cleo II Magnet

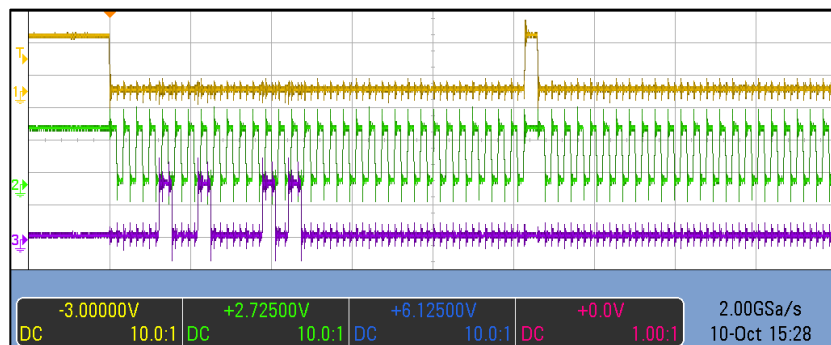
- Generating spreadsheet for control systems networking and PLC chassis layouts with module specifications.

Hall A – Super BigBite HCAL

- 95% of 1888 cables completed

Hall B – Magnets’ LV Chassis

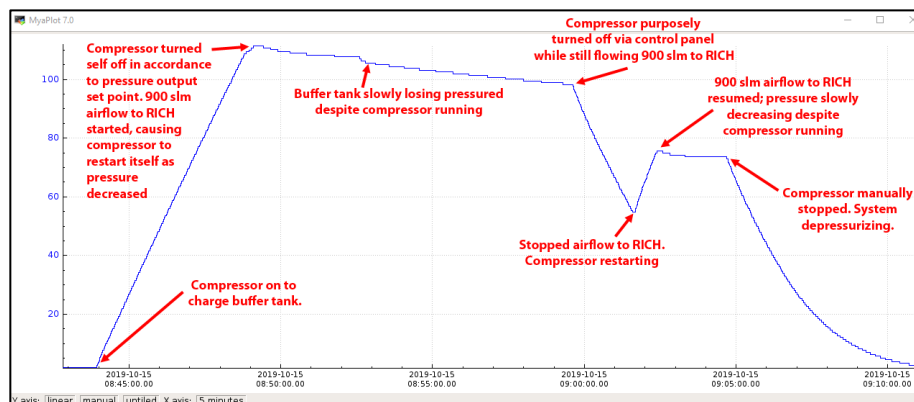
- Adding 25.5- μ s delay to DAC initialization code in FPGA resolved DAC communication issues.
 - ★ Delay allows Cyclone V on DE0-Nano-SoC to run existing LV Chassis FPGA program.



Oscilloscope output for Cyclone V FPGA showing correct DAC initialization with 25.5- μ s delay.

Hall B – RICH

- Debugged and tested cooling system’s compressors.
 - ★ Leak at fitting of buffer tank supply hose found and repaired.
 - ★ Drive belts checked and tightened on Compressor 1.
 - ★ Compressor 1 cannot maintain set pressure (~110 psi) when flowing 900 slm to RICH.
 - If no airflow to RICH, compressor builds buffer tank pressure to set point.
 - With airflow, buffer tank pressure slowly decreases despite compressor running.
 - ★ Compressor 2 behaves as expected and maintains pressure in buffer tank within compressor’s internally set output range.



Buffer tank pressure during test of Compressor 1 where it was found compressor does not maintain pressure in buffer tank with 900 slm flow to RICH.



Detector Support Group

Weekly Report, 2019-10-16

- Developed Python program to analyze Compressor 2 start-stop timing from October 9, 2019 at 10:28AM to October 10 at 9:59AM:
 - * Average cycle time: 23.62 ± 1.76 minutes
 - * Average time on during a cycle: 20.89 ± 1.66 minutes
 - * Average time off during a cycle: 2.73 ± 0.54 minutes
 - * Duty cycle: 88.44%

Engineering Division

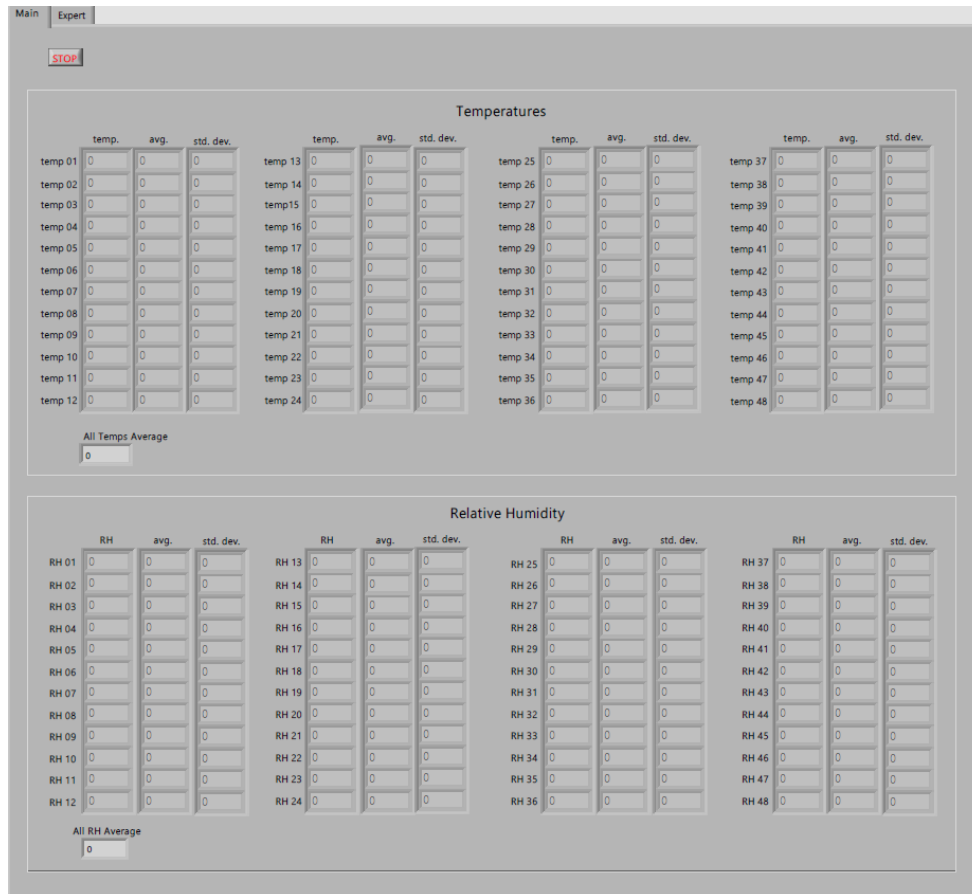
- Soldered 240 capacitors on to beam position monitor PCBs

DSG R&D – EPICS Archiver

- Wrote shell script to monitor and log data for multiple PVs into text file
- Created MySQL database to archive PV information

DSG R&D – Analysis Package for Hardware Interlock Data

- Added average and standard deviation calculation for all relative humidity and temperature sensors.



Front panel of LabVIEW program with average and standard deviation displayed with raw data.