Detector Support Group

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

Weekly Report, 2021-04-21

Summary

Hall A – GEM

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

- Fabricated one gas flow sensor chassis; four of six complete

Hall A – SoLID

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

- Calculated resistance values for the constant current source board resistor to recommend currents for diodes and PT-102 temperature sensors
- Generated electrical drawings: *Cable Diagram for Voltage Taps* and *Cable Diagram for Diode and PT-102 Temperature Sensors*

Hall B – Magnets

Pablo Campero, Tyler Lemon

- Completed pre-power up instrumentation checkout for the Solenoid and Torus
  - ✶ P025 – Torus Pre-Power-Up Instrumentation Checkout
  - ✶ P003 – Solenoid Pre-Power-Up Instrument Checkout

Hall B – RICH-II

Mary Ann Antonioli, Peter Bonneau, Pablo Campero, Tyler Lemon, Marc McMullen

- Created test setup for measuring capacitance of cables for hardware interlock system
- Determined based on measured cable capacitance that a ~300 Ω pull-up resistor should be used on RMC for SHT35 I^2C communication
- Researched and discussed connection of the cRIO expansion chassis to the 9629 sbRIO
- Unpacked and installed wheels on the new Super Dry cabinet

New dry cabinet in EEL 125 after installing wheels on to base of each section

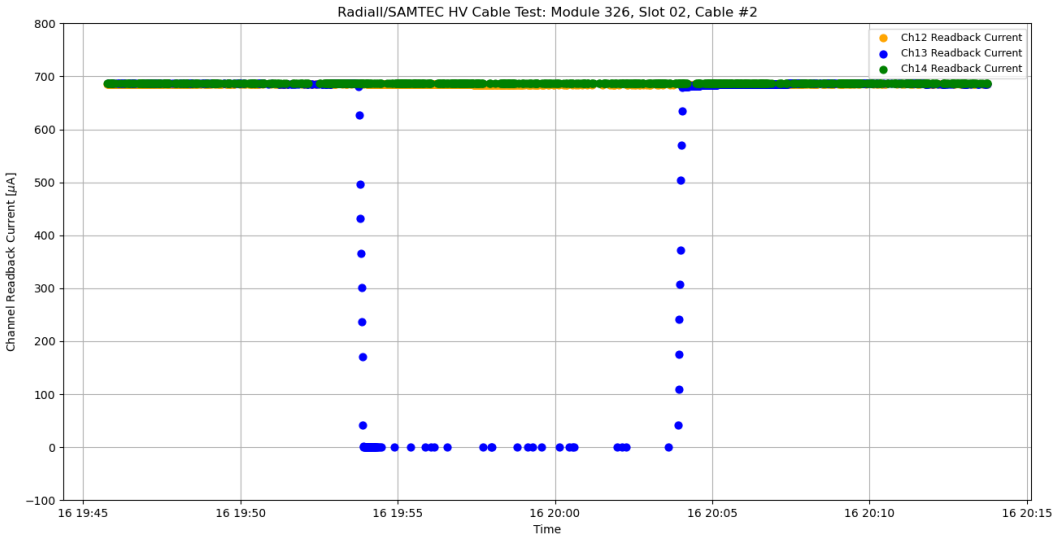
Hall C – NPS

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

- Conducted switching test for HV supply cables (3 of 40) at 2000 V with a 3 MΩ load
  - ✶ A channel is powered off and the readback current for the adjacent channels is monitored to check if there was a change

DSG designed load box for testing of HV supply cables

- Developed Python code to plot HV supply cable switching test data



Switching test data for channel #13 of cable #2 connected to module #326

- Researched sensors and instrumentation for hardware interlock system chiller monitoring
  - ✶ External to the chillers, the interlock system will monitor coolant flow, pressure, and temperature
- Fabricated three HV supply cables; 10 of 40 complete

EIC

Brian Eng

- Attended meeting with Elke, Rolf, and Jim Fast to go over EIC silicon
  - ✶ Discussed the need to change to overlapping modules
  - ✶ Plan to assemble the silicon over the beam pipe prior to installation inside other detectors which will simplify the installation process