Detector Support Group

We choose to do these things "not because they are easy, but because they are hard".
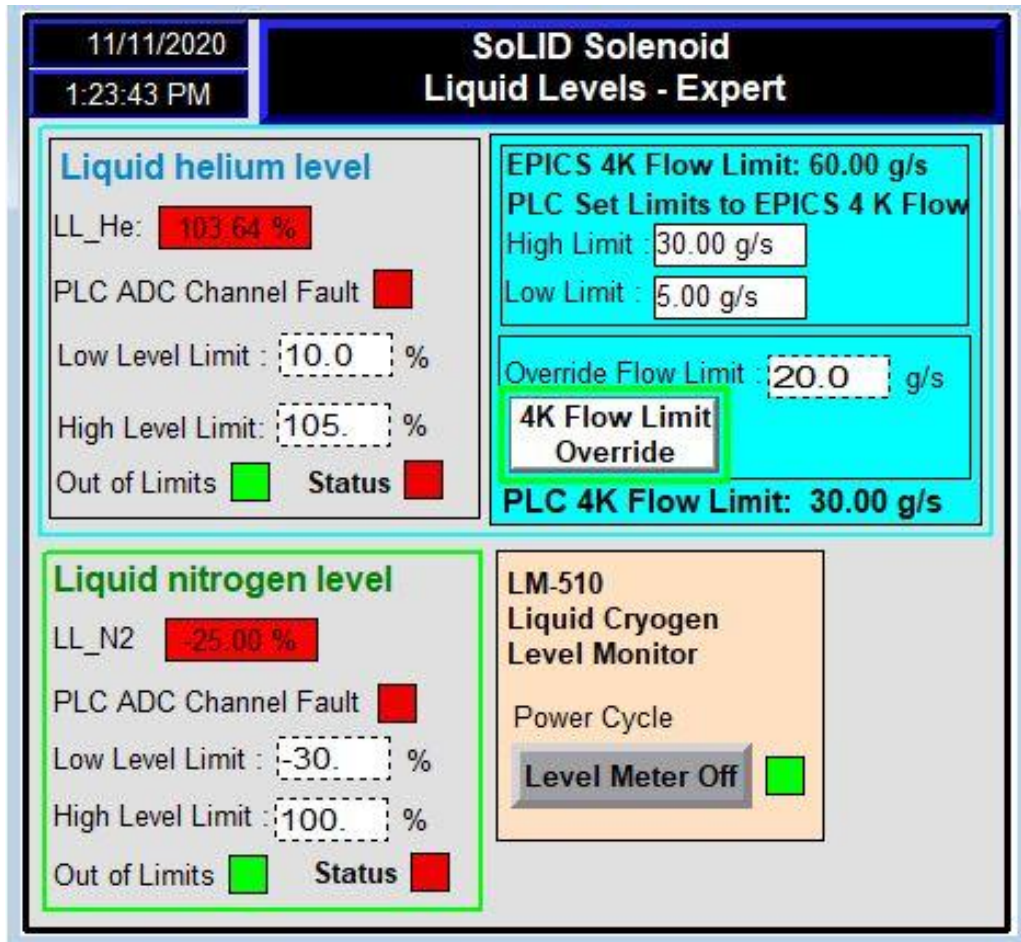
Weekly Report, 2020-11-11

<u>Summary</u>

<u>Hall A – SoLID Magnet Controls</u>
Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon, Marc McMullen

- Completed *Solenoid Liquid Levels - Expert* HMI screen

Solenoid Liquid Levels – Expert HMI screen.

- Developing *SoLID Liquid Levels - Expert* CSS-BOY screen

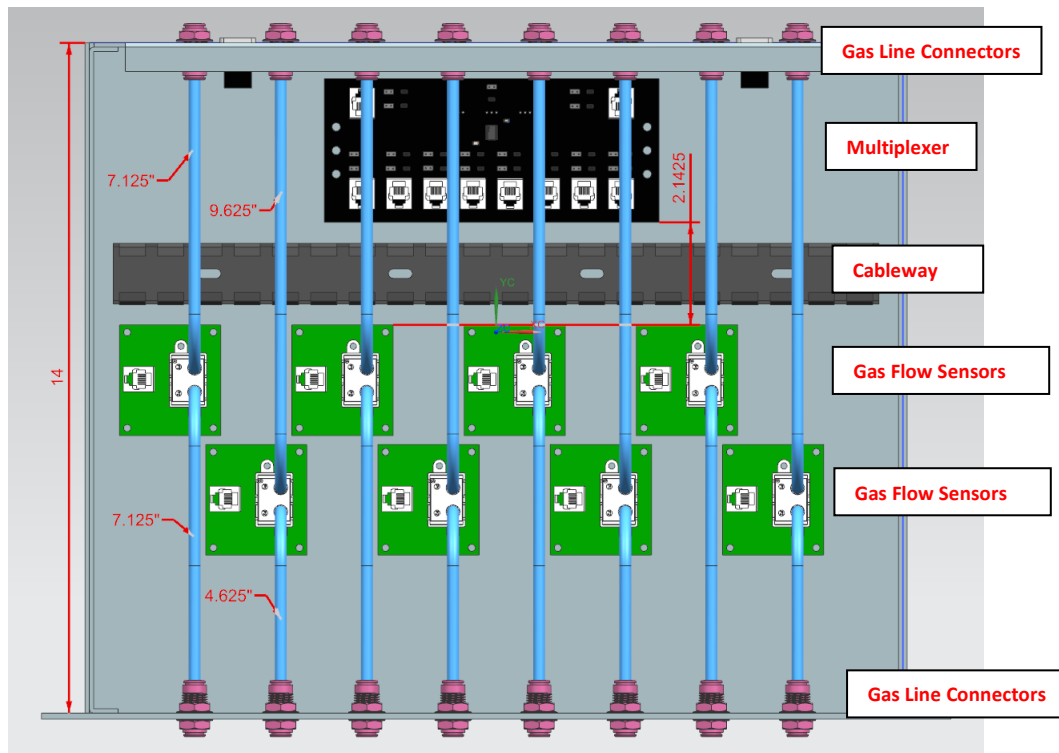## <u>Hall A – GEM Detector Gas Distribution System</u>
Peter Bonneau, Brian Eng, George Jacobs, Mindy Leffel, Tyler Lemon, Marc McMullen

- Created, using NX12, new model of flow sensor chassis with components spaced to allow for a cableway between the multiplexer and flow sensor PCBs

New version of GEM Gas Flow Sensor Chassis with cableway.

- Modified, using Python, gas flow readback program to return the status of gas flow sensor (1 for "GOOD", 0 for "BAD")

Hall B – RICH
Brian Eng, George Jacobs, Tyler Lemon
- Noticed one of the three aerogel dry boxes was reading 28% humidity
- Removed aerogel tiles from broken dry box and placed them in the other two dry boxes

Hall B – SVT
Peter Bonneau, Mindy Leffel
- Reviewed and documented SVT Hardware Interlock disconnect system design
- Terminated 13 of 18 disconnect cables with CPC connectors

Hall C – NPS
Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, George Jacobs, Mindy Leffel, Tyler Lemon
- Debugging EPICS communication issues noticed during CAEN HV module ramp tests with CSS-BOY script
  - ✶ Some channels did not ramp properly, or at all
  - ✶ Developing Python program that uses PyEpics to conduct ramp test to resolve EPICS communication issues
- Updated Hardware Interlock Input Signals list

Sensor Type	Qty	Sensor Location
Temperature thermocouples	112	NPS Crystal Array (56 front - 56 Rear)
Temperature - RTD's	10	Detector internal frame
Temperature - RTD's	2	External ambient (Hall)
Humidity	10	Detector Internal frame
Humidity	2	External ambient (Hall)
Fan Speed	4	Electronics Zone Heat exchangers
Contact switch	2	Frame access door (HV Safety)
Coolant Leak Sensor	2	NPS crystal & electronics zone

- Three hundred and forty-three of 1080 PMT Settings screens developed