# Summary

Hall A – SoLID Magnet Controls

Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon, Marc McMullen

- Completed final review of motor controller relay board design
- Completed *Solenoid JT Valve* HMI screen used to control and monitor valve position for warm return helium flow
- Completed modifications, using AutoCAD, for *PLC Rack Layout* drawing
  - ✶ Added breakers and terminal strips
- Modified, using AutoCAD, *Instrumentation Rack Layout* drawing
  - ✶ Verified 5 VDC and 24 VDC circuits to determine the total amount of breakers and terminal strips that need to be procured
- Adding PLC code to control interlocks, which are based on radial support's load sensor readouts
  - ✶ Added code for four radial support sensors

Hall A – GEM Detector Gas System

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

- Tested I^2C multiplexer PCB; clock and data lines are swapped on the RJ11 connectors
- Populated two I^2C multiplexer boards
- Finished CAD model of fixture for testing multiplexer chassis tubing lengths
  - ✶ Multiple baseplates allows the multiplexer board to slide back and forth to adjust for different tubing lengths
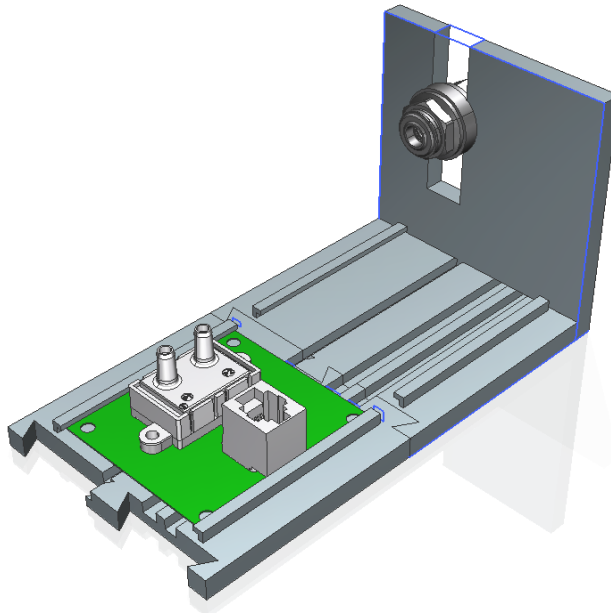
Three-dimensional model of 2 baseplates showing the flow sensor board and bulkhead fitting

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HDice – fsNMR Program
Peter Bonneau, Tyler Lemon
- Developed LabVIEW subVI to acquire and read parameters from the Zurich lock-in amplifier

Hall C - NPS
Mary Ann Antonioli, Peter Bonneau, Aaron Brown, George Jacobs, Mindy Leffel, Tyler Lemon
- Completed 108 of 1080 PMT voltage and current limit settings CSS-BOY screens
- Analyzing HV (with load) stability test current and voltage data; 23 of 32 modules' voltage data analyzed
- Seven hundred and sixty of 1100 high voltage divider cables fabricated
- Investigating the use of National Instruments Remote I/O for interlock system
  - ✶ Contacted vendor regarding pricing for modules and DAQ interface to be used for the readout of the ~140 temperature sensors
- Platinum RTD PT100 temperature sensors with 4-wire configuration is the front runner for use in Environment Monitoring System
  - ✶ Commonly used in high radiation areas including nuclear power plant applications (certified for 300 MRads)
- Developing, in EPICS, CAEN HV trip test
- Developing *NPS Trip Reset* and *NPS Overview* CSS-BOY screens

DSG – Website Design
Mary Ann Antonioli, Peter Bonneau, Aaron Brown
- Continued updating all DSG technical documentation sections