Detector Support Group
Weekly Report, 2020-05-27

<u>Summary</u>

<u>Hall A – SoLID Magnet Controls</u>
Mary Ann Antonioli, Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon,
Marc McMullen
- Completed PLC code for heat exchanger
  - Added additional code to control JT valves for liquid Nitrogen and Helium
  - Additions under review
- Investigated MPS communication code for the type of power supply used
  - No information on power supply to be used
- Completed portion of Axial and Radial Supports - Expert CSS-BOY screen
  - To complete screen imbalanced forces for radial and axial supports required
- Continued development of Test OPI Creator to implement different controls for different data types of PVs used to trigger rules
  - Debugging issues with test screens created by program as they arise
- Sent 24 channel motor controller board for quote to Fusion PCB
  - Manufacturing will cost ~$122 for 10 bare boards

<u>Hall A – SBS</u>
Brian Eng, Mary Ann Antoniolli, Marc McMullen
- Posted DSG note 2020-20

<u>Hall A – SoLID HGC</u>
George Jacobs
- Continued modification and updates for C_4F_{10} gas system drawing

<u>HDice - fsNMR Program</u>
Peter Bonneau, Marc McMullen, Tyler Lemon
- Program testing was successful and returned correct data
- Evaluated FRS cryogenic target sensor measurement program and data-logging capabilities
- Working on the integration of the cryogenic measurement program into fsNMR

<u>HDice - Documentation</u>
Peter Bonneau, Tyler Lemon
- Created presentation of DSG's contributions to project.
  - Created documentation section on SharePoint to be used as the source material for the HDice talks

<u>Hall C CAEN - HV Test</u>
Aaron Brown, George Jacobs
- Continued analysis of stability test data in Excel for module 0173

Hall C- Magnets CSS Screen Development
Mary Ann Antonioli, Pablo Campero, Brian Eng, Tyler Lemon
- Continued HMS Dipole NMR CSS screen
  - ✶ Verified PLC code and NMR status PLC data type
  - ✶ Provided information about bitwise operators used to compare PLC tags values and turn indicators green
  - ✶ Developed a HMI screen to test proper bitwise operators and comparators to allow development of the CSS screen
- Started HMS Dipole JT Page CSS screen
  - ✶ Created document with questions concerning the HMS JT page screen
  - ✶ Found out the use of placeholders and HMI tags used in the screen's header to control 11 JT valves
  - ✶ Developed and tested HMI screen to make sure proper operations for new CSS screens

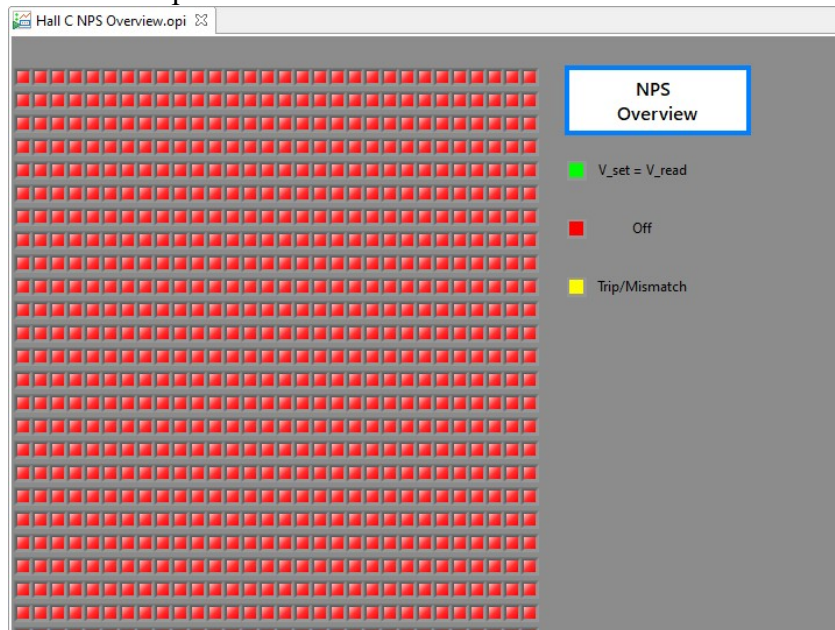## Hall C – CSS-BOY Screen Development for Checklist
Peter Bonneau, Aaron Brown
- Completed "first draft" of CSS-BOY screen for the Hall C Shift Checklist

Hall C – NPS
Aaron Brown, Mindy Leffel
- Continued fabrication of NPS HV diverter cables, 90 cables completed
- Continued development of the "Control" and "Overview" CSS-BOY screens

Hall C NPS Overview CSS-BOY screen under development

Training
Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon
- Systems Engineering Lecture Series – Predictive Maintenance
- MED 13