



Detector Support Group

We do things not because they are easy, but because they are hard.

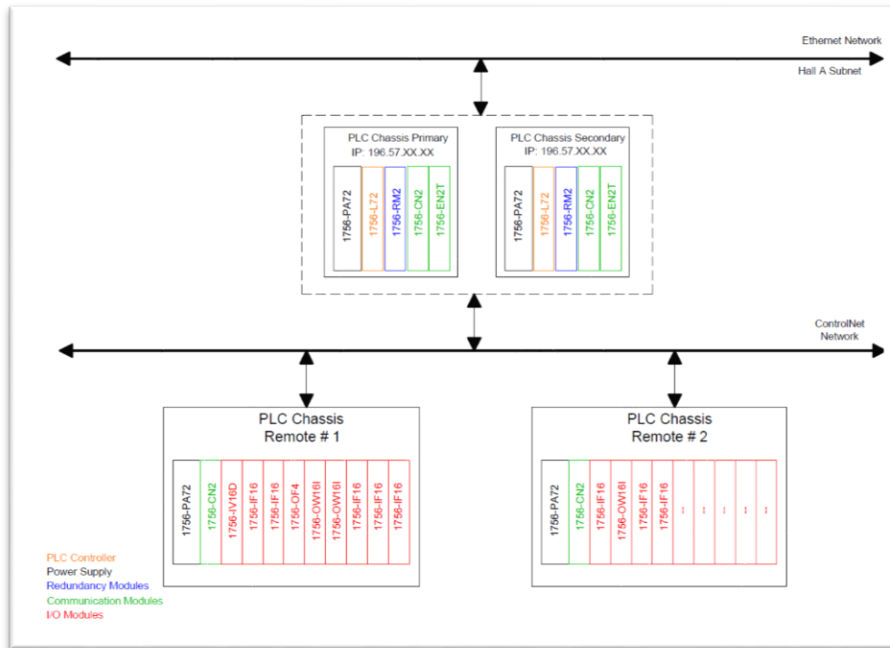
Weekly Report, 2020-06-10

Summary

Hall A – SoLID Magnet Instrumentation & Controls

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

- Started development of Cryo Control Reservoir CSS-BOY screen
- Developed electrical drawings
 - ★ Changed signal conditioner's model labels Drawing A00000-16-03-0450
 - ★ Moved Mass Flow LCL to sheet #2 Drawing A00000-16-03-0600
- Developed Hall A SoLID Magnet Control System diagram
 - ★ Added motor controller boards
 - ★ Modified control lines and instrumentation names
- Created PLC layout diagram



SoLID Magnet PLC layout diagram

Hall A – SBS

Brian Eng, Mindy Leffel, Marc McMullen

- Soldered test leads to the Gas Flow Sensor Board



Gas Flow Sensor board with test leads.

HDice - fsNMR Program

Peter Bonneau, Marc McMullen, Tyler Lemon

- Developing subroutine for target cryogenic temperature and *He* level measurement
 - * Working on global variables which will feed data to the new sensor tab
 - * Testing and debugging using simulator mode
- Features added to the fsNMR program
 - * Customizable delay between cycles
 - User can select duration and units (hours, minutes, or seconds) of wait period
 - Also added features to allow user to skip waiting if needed
 - * Ability to trigger pop-up window to force user to set attenuator if background is not used
 - If background processing is selected, program automatically uses that setting instead.
 - * Logging of raw data from lock-in amplifier
 - Provides full set of data acquired by fsNMR program
 - Allows for offline analysis
 - * Logging after each cycle
 - Previously, data was logged at end of successful program
 - Logging data after each run ensures at least some data is saved if program stops or crashes mid-run.
 - * Zoom functionality to plots in fsNMR program
 - Zoom functions performed by built-in zoom tools on graph palette.

Hall C - CAEN HV Test

Aaron Brown, George Jacobs

- Analyzing data from HV stability tests
 - * Performed data analysis – modules #0324 and #0326 with load

Hall C- Magnets CSS Screen Development

Mary Ann Antonioli, Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon

- Added buttons to *HMS Dipole Valves* CSS screen to open *JT Page* screen. Tested successfully
- Made *JT Page* screen



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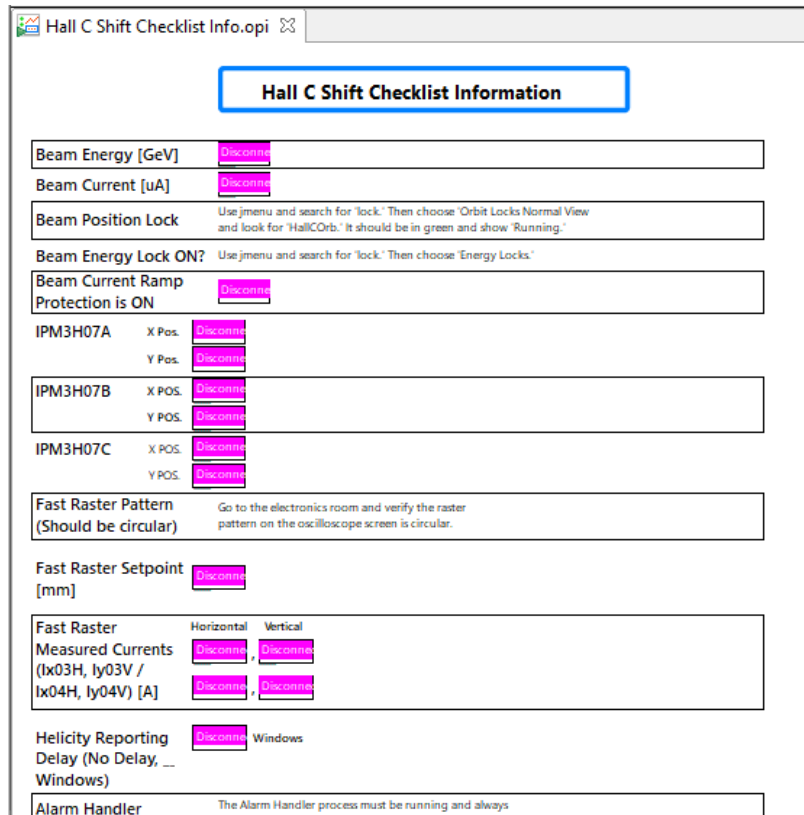
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Hall C – CSS-BOY Checklist Screen Development

Peter Bonneau, Aaron Brown, Tyler Lemon

- Documented procedure on how to add new CSS screens to Hall C Magnets CSS environment set up
- Testing the Hall C Shift Checklist Info screen on the Hall C subnet



Screenshot of information CSS-BOY screen to be used by Hall C shift workers.

Hall C – NPS

Aaron Brown, Mindy Leffel

- Terminated 60 HV diverter cables, current total is 190 cables

EIC

- Received latest beamline presentations

Training

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

- Systems Engineering Lecture Series Class 3: *Complex Systems and Their Wicked Problems*
- MED 13
- SAF003



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DSG

- DSG website development
 - * Worked with David Chopard on the Drupal development of the DSG front page index file
 - * Researched Java search implementations for websites
 - * Consulted with David Chopard on search engines compatible with Drupal
 - * Completed HDice technical documentation area
 - * Revised layout of the DSG photo log.
 - Compiled new version and deployed onto website

DSG R&D - Databasing

- Investigating if changing the timestamping method used in MySQL database will fix issues with time series plotting using R
 - * Current timestamp is the Timestamp data type, which saves timestamp in UTC and converts to local time zone upon query
 - * Changing to the Datetime data type, which saves timestamp in local time zone