

Summary

Hall A – SoLID Magnet

Mary Ann Antonioli, Pablo Campero, Marc McMullen

- Developed and revised AutoCAD drawings for:
 - ★ Instrumentation Control Panel – Front Side Layout
 - ★ Instrumentation Control Panel – Rear Side Layout
- Completed reverse engineering of motor control relay board used for JT valves
 - ★ The double pole, double throw relay (part number: Idea RD2N-1u) is obsolete, researching a suitable replacement
- Uploaded temperature sensor readout program to CLEO-II PLC controller
 - ★ Added a temperature sensors for Cryo Control Reservoir (CCR)
- Development of CCR HMI screen in progress
- Compiling parts list of all instrumentation and control components required for project

Hall A – GEM Gas System (SBS)

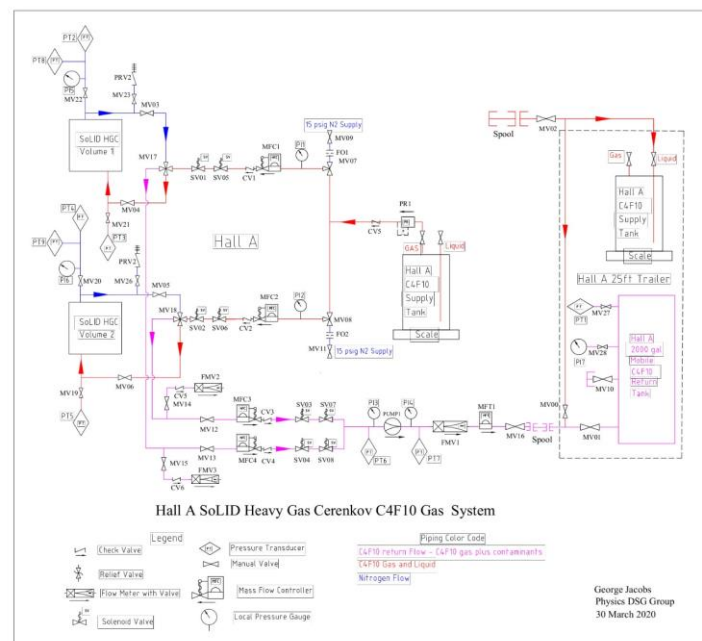
Brian Eng

- Completed Honeywell HAF Sensor component for Altium to design flow sensor PCB

Hall A SoLID - Heavy Gas Cherenkov

George Jacobs

- Development of Heavy Gas Cherenkov (HGC) gas system operations manual in progress
- Gas system diagram modified for improved control of N₂ vent after N₂ leak check process



Updated HGC Gas System diagram



Detector Support Group

Weekly Report, 2020-04-01

Hall B – Gas System

Brian Eng

- Developed LabVIEW program to handle the non-standard valve and mass flow controller setup for DC gas Argon purge during MEDCON6.

Hall C – HMI-to-CS-Studio

Mary Ann Antonioli, Pablo Campero

- Completed SHMS Dipole Interlock Setup screen and its corresponding LabVIEW test program.
- Completed SHMS screens HB Interlock Setup, Q1 Interlock Setup, Q2 Interlock Setup, and Q3 Interlock Setup.

HMS Q1 Interlock screen in CS-Studio

- Completed HMS screens Dipole Interlock Setup, Q1 Interlock Setup, Q2 Interlock Setup, and Q3 Interlock Setup.
- Completed HMS Overview screen and its corresponding LabVIEW test program.
- Converting HMS Heat Exchanger (HX) JT trend screen in progress.

Hall C – Neutral Particle Spectrometer (NPS)

Aaron Brown

- Development of CSS-BOY monitoring and controls screens in progress.



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HDice – fsNMR

Peter Bonneau, Tyler Lemon

- Added ability to read in previous run's averaged results as background noise data.
 - ★ Program checks settings of background run to verify settings match that of current run.
- Investigated timing and optimized of fsNMR program to remove unnecessarily long delays times.
- Implemented gain setting readback for subsequent cycles in attempt to further speed up DAQ.
 - ★ Had opposite effect on program, caused all acquisitions to take ~ two times longer while using previous gain setting due to program settings gain for every acquisition instead of just when needed.

Engineering

Mindy Leffel

- Continued populating BPM boards
 - ★ Completed another board, seven remaining.
 - ★ Took inventory of parts and cross referenced part numbers.

DSG R&D – EPICS Data Logger

Aaron Brown

- Developing R code to plot queries directly from the MySQL database.
- Investigating methods to allow access to database regardless of network

DSG R&D – PXI

Peter Bonneau

- Researching high-speed peer-to-peer data streaming architecture for DAQ using National Instruments PXI

DSG R&D – RICH

Peter Bonneau

- Design in progress of RIO Mezzanine Card (RMC) interface for sbRIO used in Hardware Interlock System for the next RICH sector.
 - ★ Reviewed specifications for an I²C dual bidirectional bus buffer IC (part number: TI P82B96)

DSG R&D – MSELV Chassis

Peter Bonneau, Tyler Lemon, Marc McMullen

- Review in progress of netlist and PCB layout of RIO Mezzanine Card (RMC) for the MSELV chassis.

DSG R&D – Raspberry Pi

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

- Received and distributed Raspberry Pi single board computers for R&D