

DSG Weekly Report – April 8, 2015

Antonioli, Mary Ann:

Hall B

- Testing **SVT** EPICS Interlocks.
 - **Status:** Estimated date for completion 4/13/15
 - R3 HFCB, R2 HV, Ambient temperature, R1 LV digital, and Humidity **OK**
 - R3 HV: Problem – channels 5-16 were missing from the drop-down menu for card 1. Problem fixed and all tested **OK**.
 - R2 LV digital: Problem – For 7 of 8 channels of card 6, the Mpod screen did not display any values. Problem fixed and all tested **OK**.
 - Found problem with dewpoint testing. Could not get the test out of alarm state. Buttons that allow access to screens for removing the alarms were missing on the “expert” screen. Buttons have been added, but not tested yet.
- Drew in Illustrator control system wiring of **HDice** RF Attenuation/Switching chassis.
- Flowchart of **HDice** LabVIEW program completed.
- Updated Excel spreadsheet of **LTCC** Winston cones (WCs) on a daily basis.

DSG

- Edited and Posted DSG **Note** 2015-005, *Programmable Logic Controller System for the Hall D LH₂ Cryotarget*, on the DSG website.
- Changed photo and archived replaced photo in the DSG **website**.

Arslan, Sahin:

Hall B

- Assembled **LTCC** Control rack in gas shed.
 - Safety Pressure Control S3,4,5 and S1,2,6
 - MKS647B Multi Gas Controller (Flow Control)
 - MKS250 Controller (Pressure Controller)
 - Solenoid Power Supply Distribution Box
 - Transferred Solenoid Panel to Hall B
 - Transferred four gas bottle cart from ESB to gas shed and moved out all the empty CO₂/Argon bottles from gas shed
- Delaminated (with Anatoly) aluminized coating from **LTCC** WCs.
- Updated Excel spreadsheet **LTCC** WC delamination and inventory
 - Shipped 17 LTCC WC to ECI for coating.
 - Received 20 LTCC WC from ECI to be delaminated.
- Training on **LTCC** WC calibration, mirror alignment, and testing with Robert and Tina.
- Configured test set up for **DC** R1 HV board.
- Replaced Co₂/Argon gas bottle (Tina helped) for **DC** R1.

Bonneau, Peter:

No report received (sick)

Butler, Dave:

Hall B

- Coding for **DC Gas System**.
 - Continued working on PID control
 - Started work on EPICS IOC and shared variable channel list.
- Discussed with Amrit and George division of **DC Gas System** funding into software and hardware categories.
- Estimating cost for additional equipment required for LTCC, HTCC, SVT, Micromegas and Rich **Gas Systems**.

Hall D

- Attended the **FDC** meeting, minutes are at the following link <https://halldweb1.jlab.org/wiki/index.php/Minutes-4-2-2015>

Eng, Brian:

Hall B

- Commissioning **SVT** EPICS interlock with Mary Ann.
- Compiled cleanroom protocol for **SVT** users with Marc.
- Investigating with Sue slow SNMP responses on **SVT** V450 VME crate.
 - Discovered a bad network cable was the problem, replacing the cable fixed the problem.
- Added nfs mount on `svtsystem1` to allow clasrun account access to public website directory (<http://clasweb.jlab.org/SVT/>)
- Upgraded all **SVT VSCMs** in EEL/124 to new firmware.
 - New firmware should allow VSCMs to trigger the TI via the SD.
- Re-setup **SVT** MPOD for 4 module cosmic stand, gain scans on 4 modules.
- Attended **SVT** meeting.
- Researched flexible coax for possible use as NMR cable for **HDice**
 - Ordered tw ten foot sections for evaluation after Xiangdong approved cable.
- Updated Mathematica notebook upgrade status, still missing **HDice** NMR package, and data files on remaining notebooks.

Hall D

- Monitored **EPICS** screens.
- Reviewed in Hall D with Dave and Marc PLC locations/setup after **Magnet** PXI issue
 - EPICS indicated communication problem with PXI on Voltage Reading screen. Turns out CSS screen was frozen. Opening same screen on different terminal was fine and restarting screen fixed issue.

Jacobs, George:

Hall B

- Supervised assembly of **LTCC** Controls rack with gas flow MKS 647B, MKS 250 pressure controller, Individual sector pressure indication, Omega pressure safety controllers, and solenoid power distribution crate with wiring and labels.
- Purchased spill tray and siphon pump for **LTCC** bubbler refurbishment.
- Installed capacitance manometer pressure control transducer and Magnahelic analog pressure gauge on **LTCC** buffer tank on top of fwd carriage.

- Meeting with Marc about space frame **Gas System** patch panel, connections, 24 VDC current loop power supplies, ± 15 VDC valve/sensor power, O₂, and H₂O sensor input to cRIOs.
- **HTCC's** CO₂ gas supply line complete up to the downstream end of space frame.
 - Line ready to be attached to the HTCC mass flow controller once its location has been determined.
- Moved **DC Gas System** solenoid panel to Hall B and attached it to buffer tank rack. Connected controls piping from solenoid panel to the tanks.
- Attended **TDG meeting**.
 - Topics include prerequisites for running DC Gas System and LTCC gas lines in Hall B, subway rack installation, N₂O gas for the HTCC, and TORUS coil attachment tooling interferes with the downstream subway racks.
- Attended monthly **Engineering meeting**.
 - Topics included power supply, LCW and leads, DC, LTCC, and HTCC gas system status, and proposed HTCC switch to N₂O.

Leffel, Mindy:

Hall B

- Researched and requested a quote for yellow four-conductor cable for **SVT** MPOD crate interlock cables; 500' = \$1477 and 1000' = \$1846, 3-4 week lead time.
- Verified color code of reworked **SVT** R4 slow controls cables and tested for continuity.
- Shrank heat-shrink on reworked **SVT** R4 LV and slow controls cables and documented rework on travelers.
- Reworked the drain wire on five spare **SVT** LV cables and started prepping seven slow controls spares for rework
- Reviewed the **LTCC** WC calibration procedure.

Mann, Tina:

Hall B

- Met with Amrit, Mary Ann, and Sahin on the **LTCC** WC inventory.
- Inventoried **LTCC** WC's and numbered the boxes according to the inventory.
- Training Sahin and Werth on the **LTCC** WC calibration and mirror test.
- Emailed George about the cleaning process for cleaning the **LTCC** bubblers.
 - Met with George and Jennifer Williams about safety concerns and disposal of the mineral oil from the bubblers.
- Discussed **Gas System** Mass Flow Control Test Rack with George.
- Measured cable lengths for mass flow controls in Hall B for **Gas System** and looked up prices for the cable and connectors.
- Helped Sahin with replacing gas for **DC**.
- Training on **Cleanroom** clean up policy.

McMullen, Marc:

Hall B

- Designing **DC Gas System** PID patch panel.
 - Researched internal supplies for the ± 15 V and 4 - 20mA current source to be used for the valve controls, capacitance manometer, and oxygen sensor.
- Estimated cost for the two **DC Gas System** chassis.

- Attended **SVT** weekly status meeting.

Hall D

- Fabricated hand held momentary switch for the **Solenoid** chiller reset.
 - This switch will add the ability to safely engage the chiller pump if the safety signals from MCC fails to supply the correct bit to be able to restart the chiller.
- Investigated an **EPICs** error in Hall D.
 - GUI for the solenoid voltage readings had frozen up. Screen needed to be closed and reopened.

DSG

- Wrote (with Brian) protocol for DSG cleanroom.
 - Document details dressing, cleaning, and the proper method of preparing equipment for the cleanroom.
- Configured supplemental interlock for using external power supplies in the **Probe Station** dark box.
 - A relay controlled AC outlet has been connected to the dark box interlock. Allows for safe HV operations in the dark box.

Sitnikov, Anatoly:

Hall B

- Delaminated, polished, and cleaned 4 **LTCC** WCs (U3-8L, U5-15L,U3-18R,U2-14R).
- Delaminated and cleaned 4 **LTCC** WCs (U4-8R, U4-9R,U2-13L,U4-14R).
- Cleaned 2 **LTCC** WCs (U4-12R, U1-12-R).
- Packed 17 **LTCC** WCs for shipping.

Teachey, Robert Werth:

Hall B

- Researched and reviewed prices of RF cable and connectors for the **HDIce** NMR system.
- Coding: added liquid He and Target Temperature communication port initialization and disable functions into the new 2015 **HDIce** NMR System LabVIEW control code.
- Installed initialization driver for the **HDIce** RF Attenuation/Switching Chassis' LCD.
- Wrote summary of the operation of the **HDIce** RF Attenuation/Switching Chassis.
- Estimated cost of the **HDIce** NMR System upgrades.
- Training with Tina and Sahin to calibrate the **LTCC** Laser Test Stand and test WCs.