

# DSG Weekly Report – April 22, 2015

## Antonioli, Mary Ann:

### Hall B

#### SVT

- Testing **EPICS Slow Controls Interlocks** for R4
  - R4 HFCB high temperatures completed; all OK.
  - R4 HV: 6/12 channels failed due to incorrect turning off LV; problem reported.
  - R4 LV analog: 10/24 modules completed.
  - Testing stopped due to Y. Gotra's "other priorities".

#### HDice

- Rewiring of **RF Attenuation/Switching Box** completed.
  - Added wiring to two 4-pin CPC connectors for controls.
  - Re-wired RS485 connector, which was wired incorrectly.
  - Made changes to wiring diagrams.
- Attended daily **program development meetings**.
- Wrote LabVIEW program to check **digital input module's** high and low bit settings.

#### LTCC

- Updated status spreadsheet of **Winston cones (WC)**.

### Hall D

#### FDC

- Attended daily meeting on **magnet and detector performance**.
  - Reviewed FDC gas system's EPICS screens.

## Arslan, Sahin:

### Hall B

#### LTCC

- Delaminating and polishing aluminized coating of **WCs**.
- Testing **WC's** calibration and mirror alignment.
- Shipped 21 **WCs** to ECI.
- Running **gas lines**. Completed so far:
  - S1T and S1B
  - S6T and S6B

#### SVT

- Changed N<sub>2</sub> **gas bottle** for SVT.

## **Bonneau, Peter:**

### **Hall B**

#### **HDice**

- Conducted daily **work progress meeting**.
  - Items reviewed this week include the hardware upgrades to the RF Attenuator/Switching box. Requested modifications have been completed and the development of test programs and debugging of the box is underway.
  - Reviewed requested LabVIEW modifications being developed for detection of RF cable types and termination.

#### **LTCC**

- Installed **Dropbox** on the test station for another user.

#### **SVT**

- Developed test system to study ground line noise problems when the **Hardware Interlock System** and the **EPICS Slow Controls Hardware** are connected together at the same patch panel.
  - The hardware used in this test included a VME system with controller and V450 ADC, NI cRio 9067 chassis with an isolated 3230 ADC, SVT VXS DAq system with Linux controller and VSCM, MPOD crate with HV/LV modules, patch panel components, and interfaces.
  - Wrote FPGA/LabVIEW test code for cRio for this test system. System reads the isolated ADC channels connected to the patch panel and the HFCB temperature outputs.
  - Wrote test readout code for the V450 ADC.
  - Initial noise tests are underway.
- Wrote system summary and status report for the **Hardware Interlock System**.
  - Summary included signals to be monitored and interlocked by the system, required initial tests, cost estimate, task list for the development and test of the system, and the DSG personnel assigned to the project.
  - Researched components needed for the project.

### **Hall D**

#### **FDC**

- Attended daily meeting on **magnet and detector performance**.

#### **Magnet and Detector Performance**

- Examined the status of **Slow Control Systems** on a daily basis.
- Wrote instructional summary sheet for logging into **PLC and EPICS** systems and use of the Mya interface for viewing data-logger signals.

### **DSG**

- Tried to add additional users to the **dsgslowc group** to allow read/write access to the DSG Slow Controls directory on the “M” drive for additional DSG group members. The computer center’s utility program to modify groups failed for this specific group. Submitted CCPR to fix the problem

## Butler, Dave:

### Hall B

#### Gas System

- Ordered the cRio chassis and modules for the Hall portion of the **Drift Chamber Gas System**.
  - Will be able to accomplish PID testing in the Hall with this system.

### Hall D

#### Magnet

- Debugged, with Brian, issue with the **PXI System** crashing.
  - Code to write the root files, which does not take place in the PXI, was causing the IOC to crash and thus ending the DAQ loop in the PXI. Root file code was replaced with the original file; the problem has not reoccurred.
- Training DSG on **Slow Controls System**.

## Eng, Brian:

### Hall B

#### SVT

- Switched **VSCM** self-trigger for CODA to require  $\geq 2$  modules for the trigger.
- Found and fixed swapped **HV cables** on distribution box.
  - Added labels to all HV cables and boxes.
- Set up all **VXS crates** so that the Hall B roc\_reboot <controller> command would function properly.
- Installed **MKS 647C controller** and **1359C MFC** in EEL 124 to regulate N<sub>2</sub> flow, currently set to 2 SLM.

### Hall D

#### Magnet

- Debugged, with Dave, failing communications on **magnet PXI**.
  - Problem caused by changes to ROOT analysis script on IOC that Beni made. Reverting to Yi's version resolved PXI crashes.
- Attended daily meeting on **magnet and detector performance**.
  - Went over CSS screens; covered FDC gas system.

## Jacobs, George:

### Hall B

#### Meeting

- Attended weekly **TDG meeting**.
  - Highlights; Current LTCC, HTCC, and SVT status and issues

#### LTCC

- Pre job walk through of **gas line** installation on the forward carriage with Sahin and Tina.

- Supervised installation of 7 **gas lines** on forward carriage; job is ~20% complete.
- Supervised **pressure relief bubbler** cleaning and rebuilding, 100% complete.
- Performed leak test on **pressure relief bubblers**, 100% complete..

#### DC Gas System

- Installed the 4 **MKS 1249 valve driver modules** on the gas solenoid valve panel.
- Determined critical path items for hardware and cables, for **PID loop pressure control** development/testing.
- Installed pumps in the **gas lines** return in 96B.

#### SVT

- Ordered N<sub>2</sub> **gas** for SVT purging.

### Hall D

#### FDC

- Participated in **gas system** training – gas mixing and distribution **EPICS GUI**.

### DSG

- Training and orientation of Sahin on the **Genie articulating boom** lift in Hall B.

### Leffel, Mindy:

#### Hall B

#### LTCC

- Met with Maurizio, Vladimir, and Mary Ann to discuss rework of the **PMTs**.
- Reworked the first two **PMTs**.
- Populated 24 **divider boards** each with three resistors, one capacitor, and three of the six jumper wires, which will be attached to the PMT bases.

### Mann, Tina:

#### Hall B

#### LTCC

- Trained Sahin and Werth on **WC** testing.
- Retested a large **WC** (U114L).
- Installed **gas lines**.
- Researched control cables to order for **gas system**.
- Researched lead former for forming resistors for **divider boards**.
- Worked on delamination and polishing **WC**.
- Trained on **gas cylinder** storage and connection.

## Hall D

- Worked, with Dave, on the **detector process variable checklist**.
- Went to the hall with Dave to go over the **detector process variable checklist**.
- Took pictures of everything on the checklist.

## McMullen, Marc:

### Hall B

#### SVT

- Completed population tests for 7 **HFCBs**
  - Visually inspected under microscope
  - Secured data connectors with screws and Loctite
  - Applied LV and HV
  - Measured output of LV regulators.

#### DC

- Tested cRio virtual instrument on Bertan HV supply output used to test **DC HV board**.
  - VI was able to accurately display the output of the supply with a virtual gauge, as well as convert the voltage to the actual supplied voltage value and display that on a separate gauge.

## Hall D

#### FDC

- Installed cable for **chiller's** momentary reset button.

## Sitnikov, Anatoly:

### Hall B

#### LTCC

- Assembled, epoxied and checked 9 **bubblers**
- Punched a hole for BNC connector in **PMT base cover**
- 60/240 done

## Teachey, Robert Werth:

### Hall B

#### LTCC

- Completed training to test the **Winston Cones**.
- Setup of PC desktop for LabVIEW, Newport Laser, and dropbox for **testing code**.

#### HDIce

- Writing a LabVIEW test program to test all the functions of the **RF Attenuation/Switching Box**.

- Wrote a test program in LabVIEW to convert decimal inputs for the **RF Attenuation / Switching Box** to Hexadecimal, which is used to communicate with the Relay and Analog Input Modules in the Chassis.
- Received the National Instruments **USB to RS485 converters**.
  - Installed the drivers for the converters and began testing.
- Troubleshooting communication issues with the **RF Attenuation/Switching Box** over RS485.
  - First issue was: pinouts for the RS485 connector on the RF Attenuation/Switching Box were incorrect.
  - RS485 is used to switch the attenuators and readback various chassis statuses