DSG Weekly Report – April 29, 2015

Antonioli, Mary Ann:

Hall B

SVT

- Testing **EPICS Slow Controls Interlocks** for R4
  - **R4** LV analog: modules 11-24 tested. Problem of LV turning off and then randomly turning back on was detected and reported to Sue Witherspoon.

HDice

- Attended daily **program development meetings**.
- Made front panel of LabVIEW **program for rotation of target polarization**.
- Worked on LabVIEW **program for providing scale factor**, to be used for testing RF Attenuation/Switching Chassis.

LTCC

- QC-ed 33 reworked **PMT bases**.
- Labeled 90 **PMT bases** with serial number.
- Computed reflectivity averages of 6 re-coated **Winston cones (WC)** and updated all spreadsheets.

Hall D

Meeting

- Attended daily meeting on **magnet and detector performance**.
  - Reviewed FDC and CDC HV and LV EPICS screens.

Arslan, Sahin:

Hall B

LTCC

- Formed resistors and cut and stripped jumper wires for the **PMT divider boards**.
- Received and checked in **WCs** from ECI.
- Testing **WCs** calibration and mirror alignment.
- Transferred 23 **WCs** to TEDF building for assembly of LTCC.

Bonneau, Peter:

No report received (Sick)

Butler, Dave

Hall B

Gas System

- Testing **National Instruments cRio**.
- Met with Ken Livingston to discuss Gas System's **EPICS variable naming conventions** and gas system overview.

SVT

- Attended the weekly **status meeting**.

Hall D

- Attended the **beam readiness** meetings.
- Training DSG on **EPICS Slow Controls Screens**.

Eng, Brian:

Hall B

SVT

- Rewired **R1** cables on crate end after re-installation
  - This time modules are in correct locations.
- Installed **R1** cable strain reliefs and fixed 2 slow control cables that broke at L1C end.
- Met with Hall B Engineering to go over **Installation Cart** design.
  - Sent dimensions for UPSs and confirmed HV distribution boxes are safe in magnetic field (no steel).
- Added NI cRIO to monitor and control MKS 647C for **N_2 gas flow.**
  - Visible via website on Windows LabVIEW computer only.
- Removed **sfs61 NFS server** (9TB available) from **SVT CODA** configurations as data file directory due to limited disk space; however, due to problems converted back to use **clonfs1** (up to 1.2TB, but almost always full).
- Backed up ~50GB of **data/files** to free up space.

Hall D

Meeting

- Attended daily meeting on **magnet and detector performance**.
  - Hall D slow controls meetings to go over CSS screens; CDC & FDC voltages & magnet power system.

Jacobs, George:

Hall B

Gas System

- Meeting in Hall B to formulate **gas line and cable routing requirements** with Bob Miller and Eugene Pasyuk.
  - Updated gas system's status spreadsheet with new gas line and cable routing requirements.
- Determined part numbers for **Mass Flow Controllers** (MFC) needed for the upgrade.
  - For the DC, LTCC, HTCC, gas shed, and space frame the Gas System needs a total of 12 units of **MKS IE250A013255SBV0020** (10 units + 2 spares).
  - For LTCC on the forward carriage the Gas System needs a total of 7 units of **MKS IE50A013504RBV010** (6units + 1 spare).
  - For the SVT on the space frame the Gas System needs a total of 2 units of MKS **IE50A013504KBV010** (1unit +1 spare).
- Requested quote for additional lengths of tubing for **DC and LTCC**.
- Installed, for the DC Gas System, 4 **MKS 1249 valve driver modules** on the gas solenoid valve panel.
- Determined, for the DC Gas System, critical path items for hardware and cables, for **PID loop pressure control** development/testing.
- Installed, for the DC Gas System, pumps in the **gas lines** return in 96B.
- Estimated man hours required to complete assembly of gas systems, **DCGAS, LTCC, HTCC, SVT**, with upgraded components

DC

- Meeting about **DC attachments** to the TORUS and cable tray routing with Bob Miller, Mac Mestayer, and Steve Christo.

LTCC

- Moved the refurbished **bubbler assemblies** to Hall B.
- Planning how to test fill the first LTCC with C_4F_{10} to **check window viability** in installed position.
  - Project is requested to be done ~4 weeks from now.

Hall D

Meeting

- Attended daily meeting on **magnet and detector performance**.
  - Topics: FDC and CDC gas mixing and distribution, HV and LV systems, and solenoid magnet how-to EPICS GUIs.

DSG

- Completed SAF100 **EH&S Orientation**.
- Completed SAF138 **Silica Safety**.

Leffel, Mindy:

Hall B

LTCC

- **Attached the six** jumper wires to the first group of 24 LTCC **PMT divider boards**.
- Modified 29 **PMTs**.
- Populated another group of 24 **PMT divider board**s.

Mann, Tina:

Hall B

LTCC

- Installed 2 **gas lines** in Hall B and 1 line for the bubbler system.
- Calibrated on the **reflectivity test stand**, A and B, pinholes
- Tested 6 **WCs** that came in from ECI
- Pulled **WCs** (All U1 sector that we had in house) and delivered to the TED for installation.
- Trained with Mindy on **PMT divider board** assembly and installing the board onto the PMT.
- Assembled 24 **PMT divider boards.**
- Installed 11 PMT **PMT divider boards**.

McMullen, Marc:

Hall B

SVT

- Attended weekly **status meeting**.
- Discussed with Hall B Mechanical and SVT staff current status of the **Insertion Cart** as it has been submitted for bids.
  - The location of the cart in operational position (in reference to CTOF) requires consideration of how work on the crates and cards will be done. The closest distance of ~18" impacts the center VXS crate. To remove cards, for this crate, it is likely that CTOF must be partially de-cabled for access.
  - Additionally, changes to the design of the cart require that the current version of the slow controls patch panel be de-cabled when the insertion cart must be craned out.
  - DSG is researching the cost in redesigning the patch panel.
  - The design of the cart also may not support the placement of the UPS system, which is composed of 5 2U chassis. The mechanical group is researching how to best fit the chassis.

Gas System

- Completed a **diagram of the locations of the controls equipment.**
  - Completed the miscellaneous equipment, connecting cables, and chassis cost spreadsheet.
  - This document breaks down the cost of the listed equipment into two locations, Hall B and the Hall B gas shed

Hall D

Meeting

- Attended **beam readiness** meetings.

DSG:

- Testing the **LH-10 Environmental Test Station (ETC)**.
  - Programmed a profile which auto starts a sequences of temperature and humidity set points for a given amount of time for each step.

- Investigated a **burning** smell which was detected by DSG members in EEL126.
  - A NIM crate, which was running, had a malfunction of some internal components. The crate was shut off, Physics EH&S was notified and the owner was located and informed.

The resolution of the matter was that Hall D would look into the crate malfunction and complete necessary repairs; documentation was verified at the test stand.

Sitnikov, Anatoly:

Hall B

LTCC

- Punched 160 holes for **PMT base covers**
- Cleaning 160 places for 160 connectors on the **PMT bases.**

Teachey, Robert Werth

Hall B

HDIce

- Debugging of the RS485 **communication to the RF Attenuation / Switching Chassis** completed. Established communication.
  - The two-wire communication that is needed by the Relay, Digital and Analog input modules in the chassis is different in the new NI USB to RS 485 converters compared to the old USB to RS 485 converters.
- Checked and **confirmed address** via RS 485 **and LabVIEW test program** of the Relay, Digital and Analog input modules in the **RF Attenuation / Switching Chassis**.
- Checked and **confirmed operation of the RF switch** in the **RF Attenuation / Switching Chassis**.
- Wrote LabVIEW code **to convert the binary read-back from the digital module** in the **RF Attenuation / Switching Chassis** to strings that can be displayed to the front panel LCD screen.