

## DSG Meeting Minutes – Wednesday, November 26, 2014

### Antonioli, Mary Ann:

#### Hall B

- Estimated actual average **SVT** sensor currents of module P71, using burn-in data plots.
- Analyzed data of 16 large Winston cones for **CTOF**. Two cones need retesting.
- Tested HV interlocks of **SVT** EPICS program.
  - Tested R1S1—S4 and documented on Excel spreadsheet.

### Arslan, Sahin:

#### Hall B

- Working on **DC** HV cables for R1S1, R1S3, R1S5.
  - Unbundled HV cables, laid out on the floor, measured the length of cables, and reorganized.

#### DSG

- Attended 3-day training class on **Master Rigging** (Certified).

### Bonneau, Peter:

#### Hall B

- Troubleshooting **SVT** modules P69 and P4 using the logic analyzer test station.
  - P69 started failing after the sensors were mounted on one side (bottom). HV current is ~ 500 nA @ 85 V. The FSSR2 ASIC *U3* is failing with GotHit and Coretalking errors. In addition to this, the output data lines *OUT 1*, *OUT 2*, and *OUT 3* were intermittently failing the test. The other ASIC's *U1*, *U2*, and *U4* passed all tests. This module is a good candidate for testing the ASIC changing procedure of a module that has been developed.
  - P4 failed after being fully assembled. @ 85 V, topside HV current is ~ 340 nA, bottom side ~380 nA. After testing using the logic analyzer test station, *U1* was found to have GotHit and Coretalking errors. In addition to this, the output data lines *OUT 1* and *OUT 2* were consistently failing the test. The other ASIC's *U2*, *U3*, and *U4* passed all tests. After a close inspection of wirebonding defects around *U1* is completed, changing *U1* at FNAL is recommended.
- Training Mary Ann on the procedures to test **SVT** EPICS interlocks.
  - Starting system, use of the control screens, setting interlock levels, and operation of the EPICS alarm handler were part of this training. The testing of the HV current interlocks for R1 modules will be the first to be tested. An accelerator computer account for Mary Ann was requested from the computer center.

#### DSG

- Worked on **DSG website**.
  - Added and corrected links on DSG website. Added DSG cable note. Requested links on the following pages as suggested by Patrizia:  
<https://www.jlab.org/experimental-hallB>  
<https://www.jlab.org/experimental-hallD>

## **Butler, Dave:**

### **Hall B**

- Specified Programmable Automation Controls (PAC) data acquisition equipment for the **Tracking Detector Safety System**.
- Requested signals for the **Micromegas** from Irakli Mandjavidze. Have not heard back so the signals are being assumed.

### **Hall D**

- Troubleshooting **Solenoid** trips.
  - Solenoid tripped several times over the weekend because of a cryo monitor trip signal. Came in on Sunday at ~6:30 pm and set up the PLC to monitor this signal in real time to catch any additional trips. It appears that a relay was faulty and was replaced by Hall D personnel. Sequence of Events (SOE) module in the PLC appeared to not work properly every time that the magnet tripped; so, investigating possible interaction between PLC and EPICS code. Testing cannot be done until the magnet is ramped down.
- Writing code to ramp down **Solenoid** current at 0.04 A/s instead of the normal 0.06 A/s as requested by George Biallas.
  - Code will be implemented as an online change after the beam is shut down.

## **Eng, Brian:**

### **Hall B**

- Completed code for expanded differential line test of **SVT** ASICs.
  - Testing all possible output line modes on each output line. Also found issue with VSCM state machine where signal could get synced to bogus status words and then never return any status words, Ben is modifying firmware to reset the state machine when output line mode is changed
- Tested **SVT** modules P8, P30, P32, P40, P45, P55, P69 with new differential line test as well as with cosmic rays, currently modules P40, P45 & P55 are taking cosmic ray data.

## **Jacobs, George:**

### **Hall B**

- On travel to AES for QA of **Torus** and **Solenoid** coils.

## **Leffel, Mindy:**

### **Hall B**

- Worked on **SVT** Slow Control patch panel D-sub cables.
  - Crimped contacts to nine cables.
  - Attached connectors to five of those cables.
  - Out of 22 cables, 12 have contacts and 6 have connectors.
- Wrapped, labeled, and packaged ten tested large **LTCC** Winston Cones.

## Mann, Tina:

### Hall B

- For the **LTCC** reflectivity tests:
  - Aligned laser through pin holes and performed calibration and mirror tests.
  - Tested 26 large Winston cones (total 72 completed).
  - Tested 5 small Winston cones.

## McMullen, Marc:

### Hall B

- AutoCad-ing **SVT** Rack layout.
  - Met with Mandal to discuss insertion cart travel distance and design changes to the cart. Cart was redesigned to be narrow enough to fit between support beams. Added service position of cart to the space frame level 1 (SFL1) drawing (~6' upstream).
- Reconfigured the **SVT** cosmic test stand in EEL/231 to accommodate three modules.
  - Added modules P40, P45, and P55. Adjusted upper hodoscope paddle height to fit all three.
- Completed setup to troubleshoot a **SVT** LV cable (bottom analog positive sense has no continuity).
- Wrote a short document on the progress of the **SVT** HFCB manufacturing.
  - Compunetics did not deliver a shipment on 11/19/14 due to failed QA (on all panels). Document details the issue of delamination between layers 7 and 8, as well as the manufacturers request to change the prepreg material between those layers. The next scheduled shipment is 12/5/14.

### Hall D

- Attended daily **Beam Readiness** meeting.
  - Hall D is commissioning all detectors and dealing with trigger synchronization between the FCAL and BCAL. The solenoid had multiple trips midweek due to a failed relay. Hall D will have beam until 8am 11/26/14 and then they will shutdown for Thanksgiving weekend.

## Sitnikov, Anatoly:

### Hall B

- Cut and polished 161 boron-silicone fibers ( $\Phi=0.32$  mm, L=4.8 m) of the **CTOF** Laser calibration system.

## Teachey, Robert Werth:

### Hall B

- For the **SVT** MPOD test stand.
  - Estimated work time for the MPOD/VME Test Stand.
  - Specified hardware for the MPOD Test Stand.
  - Started paper for the proposal and detailed time estimates for the MPOD Test Stand.
  - Started coding the Main Control program for the MPOD Test Stand.