

DSG Weekly Report – July 8, 2015

Antonioli, Mary Ann:

Hall B

DC

- Coordinating and overseeing activities on signal cable fabrication, repairs, cleaning, sorting, and inventorying.
 - ★ Sorted cable labels to determine what is missing and needs to be made.

HDICE

- Attended the daily program development meeting.
- Began the LabVIEW program for manual rotation of target polarization.

Hall D

Meeting

- Attended DSG group's daily meeting on magnet and detector performance.

Arslan, Sahin:

Hall B

DC

- QC-ed and tested signal cables.

HDICE

- Attend daily slow controls status

DSG

- Attend Worker Safety Committee Meeting

Bonneau, Peter:

Hall B

HDICE:

- **Hardware Status**

- ★ **RF cables**

- ▲ Molex responded to request for:
 - Custom cables available provided minimum order is \$100,000.
 - Cable purchase (without connectors to be fabricated at Jlab) available provided minimum order is 1500 ft. (~\$10,000). Xiangdong will discuss this option with the HDICE group.
 - DSG will research connectors and tooling needed for fabricating the cable if HDICE group decides to proceed.
- ▲ Xiangdong sent test results of the short cables to DSG. Test results are posted on the HDICE website:

<https://userweb.jlab.org/~bonneau/HDice/HDice%20Cable%20Test%20Report%206-23-2015.pdf>

- ★ **Test station in DSG clean room**

- ▲ EH&S needs to approve setup for testing to begin. Bert Manzlak has been contacted.
- ▲ Updated (with Windows 7) computer and installed RS485 and RS232 interfaces.

- ★ **CAENs CT-Box current shunt hardware**

- ▲ CT-Box current shunt hardware received.
- ▲ Hardware consisting of the current transducer box, DC current transducer, and interconnect cables assembled.
- ▲ CT-Box passed power-up self-tests.

- ★ DSG requested HDice Piping & Instrumentation diagrams.
- **Software Status**
 - ★ Rotation of Target Polarization program
 - ▲ Initial programming of automatic mode completed.
 - ▲ Debugging of automatic mode pending EH&S approval of test station.
 - ▲ Programming of manual mode started.
 - ▲ As requested by Xiangdong, DSG added magnet-power-supply pause button to automatic mode.
 - ★ CAENels CT-Box current shunt
 - ▲ CAENels will send software and documentation to interface CT box with computer.
 - ▲ Firmware update will accompany documentation.
 - ★ Mathematica analysis code
 - ▲ Each one of the 7 notebooks requires a certain number of data files.
 - ▲ Craig Thorn (BNL) stated two weeks ago that he would be sending a memory stick to Brian with the needed files. Craig will be contacted again regarding the memory stick.

SVT

- Developed sub-VI's for HFCB temperature sensor conversion, humidity sensor conversion, latched interlock errors, and dew point calculations.
- Programmed and tested interlock fault handling subroutines.
- Added latched and current status interlocks to the real time and user interface routines.

Hall D:

- Attended DSG group's daily meeting on magnet and detector performance.
- Reviewed CDC/ FDC Gas System P& I diagram.
- Examined the status of the Hall D slow control systems on a daily basis.
 - ★ Reviewed tests on the FCAL bases after the firmware updates.

Butler, Dave:

Hall B

- Continue to test the gas system equipment that was received (moisture sensors).
 - ★ Sent the DIN rail mounting kits for the cRIO's back to vendor to have them exchanged, the new kits are the same price and have a different bolt pattern.
 - ★ Oxygen sensors have a manufacturing delay and won't ship until July 17 at the earliest.
 - ★ Three of the GE250A013255SBV0020 MKS flow controllers will ship on July 10 and seven of the GE250A013255SBV0020 flow controllers will ship on August 4.
- Continuing to work on the gas system code

Hall D

Meeting

- Attended the weekly FDC/CDC meeting.
- Gave Marc and Sahin a daily controls briefing in the hall to discuss the control system layout and troubleshooting.
- Attended DSG group's daily meeting on magnet and detector performance.

Eng. Brian:

Hall B

SVT

- Added functionality to store data as TTree for MYA to ROOT program.
- Investigating issues with SVT EPICS and/or MYA.

- ★ Many modules went into warning state despite no data having values at or above warning levels in MYA. Initial results look like network connectivity issues.

HDICE

- Got quote from a Molex distributor: minimum order for Temp-Flex cable is 1500 feet, which is ~\$10k.

Hall D

- Selected SSD for PXI upgrade and ordered (due end of week).
- Submitted PR for PXI ADC module & terminal block (signed for and assigned a buyer).

Meeting

- Attended DSG group's daily meeting on magnet and detector performance.

Jacobs, George:

Hall B

Gas System

- Updating the DCGAS and LTCC gas operator manuals for 12GEV operations in progress
- Placed PR for 5% CO₂ in Argon gas for DC test stand
- Ordered molecular sieve for LTCC gas system by Pcard
- Meeting with Tom Cooper, GE Panametrics Measurement and Control, and John Lajoie, CIMTEC automation and controls, about H₂O and O₂ monitoring and measurement.
- Meeting with Richard Sperber, PRAXAIR territory Manager, about gas cylinder and Dewar purchasing. We also discussed the availability of neon gas and the COMPASS gas neon mixture.
- Attended weekly TDG meeting, topics included DC cable trays for downstream row of racks under the subway, CTOF final procurements, DCGAS manifolds for the TORUS

DSG

Consultations

- Discussions with Christian Walen, JLAB property manager, about gas cylinders on site that are not supplied by the current vendor.
- Performed Inventory of bldg 90 Physics gas cylinder storage cage
- Discussions with Zhiwen Zhao on C₄F₁₀ gas system costs and manpower requirements.
- Maurizio Ungaro requested advice on leak detectors for C₄F₁₀.
- Analyzed ESB floor space utilization and made recommendations to those who may be impacted

Hall D

Meeting

- Attended DSG group's daily meeting on magnet and detector performance.

Leffel, Mindy:

Hall B

SVT

- Repaired the zoom adjustment knob on the wire bonder trinocular microscope
- Created labels for the cables associated with the SVT hardware interlock signals.

DC

- Soldered 16, 100 Ohm resistors to a 32 pin, male, IDC connector, to be used for testing drift chamber signal cables
- Repaired a test jumper for DC cable test.

Hall D

- Did a Hall D walk through with Tina.

Mann, Tina:

Hall B

Gas System

- Assisted George with gas cylinder inventory.
- Created a gas shed cylinder inventory sheet.

McMullen, Marc:

Hall B

Gas System

- Started pinout diagram for the analog input cables, which will connect each chassis to a 16 channel analog input on the controls cRIO.

SVT

- Continued internal wiring for SVT Hardware Interlock chassis.
 - ★ Made connections for ambient temperature and humidity, detector humidity, and leak detection.
- Switched out nitrogen bottle.

Hall D

- Reviewed locations and operations for the Hall D PLCs with Dave and Sahin.
 - ★ Went over gas shed Brooks controllers outage protocols and the location of the network devices.
 - ★ Went over the FDC/CDC pressure controls panel.
 - ★ Went over BCAL RTD/Dew Point controls system.

DSG

Safety

- Contacted physics safety on approval of the BList for the HDice magnet power supply.
- Wrote a VI to read out the second channels of Hybrid Temperature and Humidity Board.

Sitnikov, Anatoly:

Hall B

DC

- Separating dirty signal cables from clean signal cables.

Teachey, Robert Werth:

- No report