Detector Support Group
Weekly Report – September 16, 2015

Antonioli, Mary Ann
Hall B
DC
- Examined test data and completed spreadsheet for 26 signal cables.
- Worked with Mindy to label the first signal cable bundle, to assess procedure.

HDICE
- Made additions to LabVIEW target rotation program so that program can be tested.

Arslan, Sahin
Hall B
DC
- Working on moving, labeling, and testing cables.
  - Moved 25 bundles of signal cables from ESB to EEL.
  - Labelled 28 bundles of signal cables.
  - Tested with scope 6 bundles of signal cables.

Bonneau, Peter
Hall B
HDICE
- NMR Program – CAENels Current Transducer Shunt (CCTS)
  - Completed 46 LabVIEW-device-driver VIs to support all currently working CCTS commands.
  - Tested commands for setup of the communication ports, readback of the system status, calibration of the head, and the SD memory card options.
  - CAENels is sending an update to enable the use of the 100 KHz data acquisition rate (called "Oscilloscope" mode).
- Test station
  - Tested newly installed communication interfaces between Oxford power supply, RF generator, Lock-in amplifier, and RF Attenuation/Switching chassis.
  - Reprogrammed and tested the firmware controlled upper limits on the Oxford power supply to support the upcoming testing of the Rotation of Target Polarization program.
- Test station computers
  - Completed installing software to support the test station.
  - Installed GPIB board in test computer and installed device drivers.
  - Emailed procurement for updated status on the overdue second computer.

SVT
- Monitored Hardware Interlock System on a daily basis.

Hall D
- Reviewed issues with the warm-up of the Hall D solenoid magnet in preparation for modifications in the chimneys including Ohmic heating status, resistance of the Solenoid magnet windings, and vacuum spoilage.
- Examined status of slow control systems on a daily basis.

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Butler, Dave

Hall B

- Received the MKS 226A Differential Pressure Transducer for the gas system.
- Attended LabVIEW user group meeting at JLab.

Hall D

- Ordered a single channel accelerometer conditioner (PCBPiezotronics 682A02) for testing the solenoid pre-quench "listening" theory.
- Attended the FDC/CDC meeting.
  - Discussed FDC and CDC response to 55Fe and 90Sr sources.
  - Discussed CDC straw sagging issues.
- Attended the solenoid acoustics emissions meeting.
  - Planning further testing and possible implementation of a permanent acoustic monitoring system.
- Worked on an issue with the gas system flow reporting to EPICS.
  - Serial communication from the Brooks MFC box #4 and the PLC was shifting periodically and writing the data to the wrong tag. The NBX435 serial bridge that allows serial communication via the Ethernet between the Brooks and PLC has an 82 character limit for the string data type. The response sent to the PLC for the Brooks is 82 characters long; however, it was observed that occasionally the response was 83 characters which resulted in the data being buffered in the NBX435 module.
  - Resolved issue by sending a “buffer clear” command to the NBX435 each time a “send flow data” command is sent.
  - Monitoring behavior to see if the problem is solved.

Eng, Brian

Hall B

SVT

- Attended meeting to discuss upcoming work (mainly software issues).
- Set up NFS server on Linux computer in EEL/124, since current work area on VME controllers keeps running out of space.

HDICE

- Teleconference with Craig Thorn (BNL) about Mathematica notebooks.
  - Discussed which sections can be removed from a few of the notebooks

Hall D

Solenoid PXI System

- Installed final ADC module in PXI chassis; all slots now occupied.
- Tested higher data rate to determine CPU usage with new controller (https://logbooks.jlab.org/entry/3351500)
- Installed signal conditioner for accelerometer, which should have a lower excitation voltage than current DAQ system.
- Investigated different accelerometers, in case signal conditioner doesn't work.

Jacobs, George

Hall B

Gas System

- Researched pressure vessels for use as DCGAS pressure control tanks and ordered DCGAS pressure control tanks.
- Made CAD diagram of proposed new location and larger footprint of DCGAS valve panel and pressure control tanks.
- Planned relocation of DCGAS system solenoid valve panel, safety control box, and pressure control tanks.
- Removed DCGAS control cables from the level 0 cable tray and staged them on level 2 until proper routing is determined.

Meetings

- DC Installation meeting; Bob, Eugene, Mac, and Marc.
  - ✶ Topics; DC signal cables prep, R1 cables needed first, DC R1 pre-fab cables in trays, DCLV cable fabrication, R3 cables required last, R2 downstream cable tray isolation mounts, installation schedule will be distributed by Bob.

Leffel, Mindy

Hall B

DC

- Cleaned two bundles of signal cables.
- Labeled 31 bundles of signal cables.
- Replaced one connector with crossed wires.

SVT

- Continued wire bonding FSSR2 chip to U2 on HFCB
- Figured out wire why bond was breaking after 1st bond: wire was getting hung-up on spool.

Mann, Tina

Hall B

DC

- Labeled 28 bundles of signal cables.

Hall D

- Went daily to Hall D for updates on repair work needed in chimneys.
- Attended weekly tech meeting.

McMullen, Marc

Hall B

Gas System

- Continued work on PID loop test program.
  - ✶ Modified the pressure feedback controls VI into a PID controlled system.
- Modified Chassis 1 (DC/HTCC/SVT Gas Controls) to connect to MKS 226 (differential pressure sensor).
  - ✶ Fabricated cable to be used for testing the MKS 226.

- Assembling Chassis 3 (LTCC/RICH Gas Controls.

DC

- Attended DC cabling meeting.
  - ✶ Provided information on proposed dates and deadlines for DC cable testing, cable tray manufacturing, and dressing.

Hall D

- Attended the weekly CDC/FDC meeting.
  - ✶ Topics discussed: progress of the CDC straw sagging issues and source testing results.

Sitnikov, Anatoly

Hall B

DC

- Tested 29 cable bundles.