



Detector Support Group

Weekly Report, 2015-11-18

Antonioli, Mary Ann

Hall B

DC

- Coordinated fabrication of LV cables.
 - * Received final lengths from B. Miller.
 - * Cutting of cables is being done by Sahin and Anatoly.
 - * Attaching connectors to cables is being done by Mindy.
 - R1S1SL1 and R1S2SL2 completed.
 - * Created spreadsheet to be used for test results.
 - Testing of cables is being done by Anatoly.
 - * Received final labeling scheme from C. Cuevas.

HDICE

- Began testing target polarization software.
 - * Completed testing of the axial power supply in automatic mode (nine tests).
 - * Wrote testing procedure.
- Generated test station's racklayout in AutoCAD and schematics in Illustrator.
- Attended bi-weekly meeting.

Hall D

- Reviewed Hall D slow controls and elog.
 - Noticed CDC HV channels H5 and I6 had tripped. Logbook entry made by Sandoval lists steps taken to troubleshoot. No solution found at this time.
- Began documentation of FDC work done by Mindy and Sahin.

Arslan, Sahin

Hall B

DC

- Transferred HV main frames and modules to EEL 2nd floor for cleaning, with Mindy.
 - * Cleaned 1 of 4 main frame and 7 of 42 modules.
- Transferred spooler to ESB to cut DC LV cables, with Mindy.
 - * R1S1,S2,S3 are cut (total 42 cables).

DSG

- Submitted work request for air filter replacement in control room
- Transferred computer from Computer Center (for Peter)
- Fabricated 2 power supply for compact rio (for Peter)
- Ran three network cable in control room
- Attend worker safety meeting



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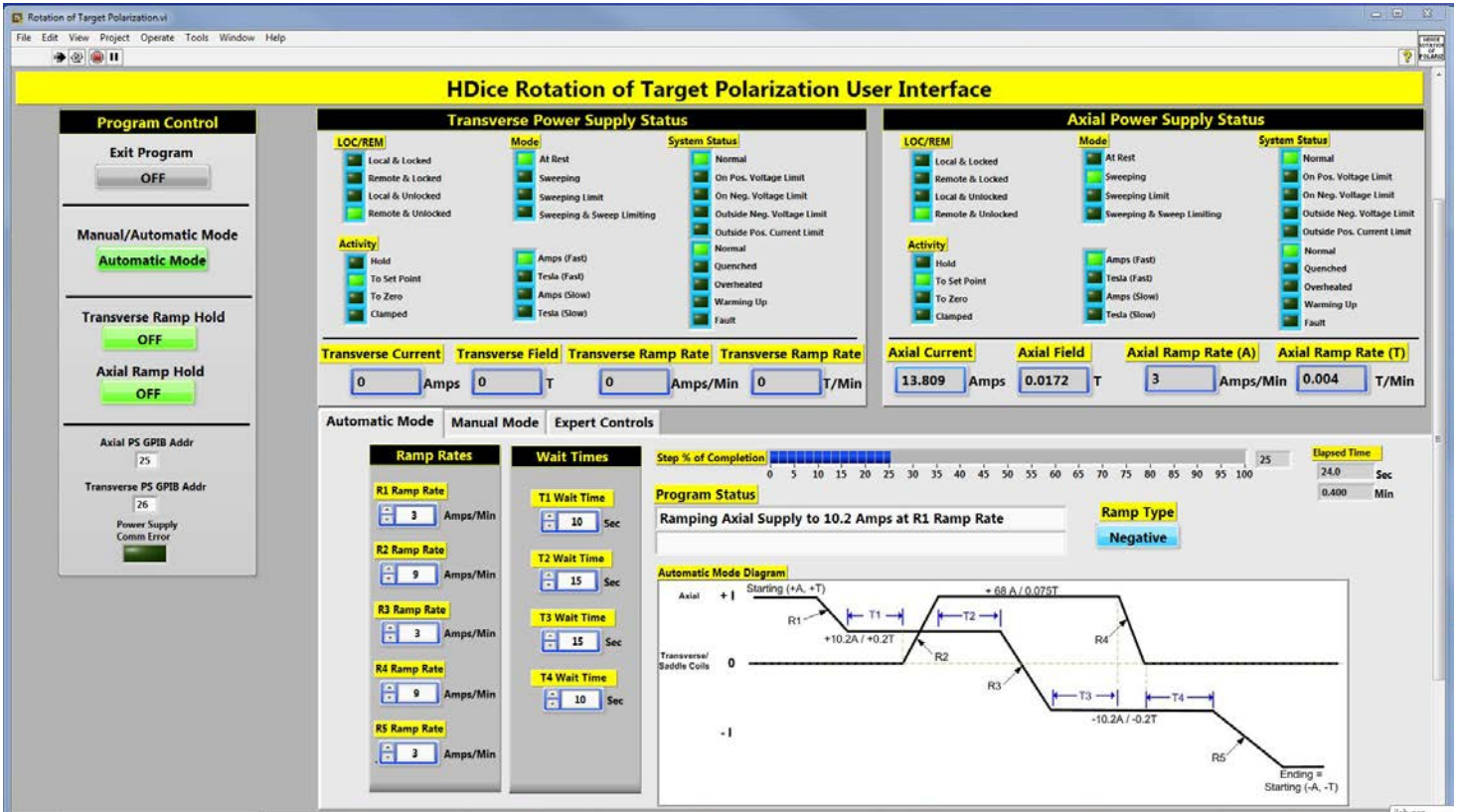
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Bonneau, Peter

Hall B

HDICE

- Demonstrated, during meeting, a full rotation sequence of the Target Polarization Program on the HDice Test Station..



Front Panel 'User Interface' of the LabVIEW controls program

Hall D

- Attended Slow Controls Meeting.
 - ★ Reported on the development of MYA configuration files for monitoring the health of Hall D detectors.
 - ★ Discussed with Tim Whitlatch and Hovanes the organization of the files.
- Examined the status of the Hall D slow control systems on a daily basis.
- Attended daily status and instructional meeting on Hall D systems.

DSG

- Conducted LabVIEW training sessions with DSG employees.
 - ★ Base communication with device using GPIB was demonstrated.



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Butler, Dave

Hall B

- Attended slow controls meeting and discussed implementing the full EPICS IOC code onto the cRIO.
 - ★ Will work with Hovanes to install the required software.
- Met with Steve Cristo to discuss the temperature gas controls for the HTCC to ensure that the correct equipment is being utilized for the data required.
- Discussed with George the serial communication for the gas system for the scales in the gas shed.

Hall D

- Attended the FDC/CDC meeting and discussed the following information:

CDC update

- Presentation by Mike about precise fitting of the time-to-distance in presence of tube deformation.
 - ★ The 3D plots show average drift distance (from track fitting) as function of drift time and of wire offset from the center. Garfield results don't describe the data very well, but using the same functional form they were fitted to the data. The time-to-distance relation obtained this way turned out to be different for different runs (not clear why). As a result of this procedure the resolution looks very good. Once correct relation is determined, plan to run the alignment procedure once more.

FDC update

- Spare package has been moved to the Hall.
 - ★ Signal and LV cables have been connected. Right side of the ST crate will be used. Setting of the trigger interface needs to be changed. HV connections and grounding will be done soon. The middle of the package is above the beam line, thus making space around it. There will be no need to remove it when backing the target and working on the CDC. Curtis mentioned the need to protect the package at the downstream side. After the meeting aluminum cover was installed there.

Electronics

- Lubomir and Luke measured the response function of the FDC preamp-cable-fADC125 system using the DAQ in the tagger.
 - ★ A charge injector at the input – step function from pulse generator on 1pC capacitor on a board was used. We looked with a scope and found that the peak and tail-cancellation parts saturate in different way. Fernando says that's normal.
 - ★ Poor dE/dx resolution of the FDC can be explained by saturation effects present already at ~2000 units, i.e. half of the fADC125 range. The undershooting is about 20-25% of the peak amplitude. Looking at the Naomi's result for the CDC pre-amp we see that there the tail-cancellation is only about 10%. This might be an explanation for the ion tails seen in the CDC. We will repeat the measurement with a CDC pre-amp.
- Put the aluminum protective cover on the spare FDC package that was placed in the hall.



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- Attended Slow Controls meeting and discussed adding a tag for each PLC and the PXI to show how much time in seconds had elapsed since last reboot.
 - ★ Wrote code to use a simple 1000[ms] timer and will send an integer tag to EPICS. Code will be implemented on Friday since each PLC will have to be taken off line for the changes.

Eng. Brian

Hall B

SVT

- Fixed screen grab script on DAQ computer which failed to properly capture the entire screen after upgrade to RHEL7.
- Analyzing data from HV currents via manually getting data from MPOD to bypass EPICS/MYA.
 - ★ Need to see if a better dead band value can be selected in order to get data more frequently than is currently being saved; sometimes almost a month between saves when SVT in steady state.

HDICE

- Got initial adapters for RF cable from JLAB machine shop.
 - ★ The inner diameter of the part is too small (but matches Molex part and drawings) to easily and repeatedly install the cable. Next revision will have a larger ID.
- Teleconference with Craig @ BNL & Wei from JLAB.
 - ★ Craig has said he will be sending USB key with additional files shortly.

Hall D

- Controls meeting: Discuss hot check out items and solenoid controls
- Updated accelerometer naming per the meeting, also added 4 additional signals.

DSG

- Helped Marc troubleshoot issues with communicating with MFC via network (default state is to control MFC via analog input on connector instead of MODBUS).

Hoebel, Amanda

Hall B

- Assisted Mary Ann in testing HDice program.

Hall D

- Inspected the CDC and FDC HV and LV channels.
 - ★ Noted channels I:C4:2P and I:C4:1N tripped

DSG

- Attended Clas12 Software meeting.
- Started learning PLCs.



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Jacobs, George

Hall B

- Produced CriticalPath-DCGAS-OPS-11-17-2015 document detailing the critical path steps for an operational drift chamber gas system.
- Ordered a shelving unit for 96B control room.

DSG

- Multiple discussions with B. Manzlak and J. Williams about hazards and properties of DME gas they incorrectly identified as a hazard.
- Researched properties of hazardous chemicals, safe management of shock sensitive and peroxide forming chemicals, and provided feedback to B. Manzlak and J. Williams.
- Participated in quarterly Physics division safety warden meeting.

Leffel, Mindy

Hall B

DC

- Started fabricating DC LV cables, completed 15 of 252.
- Documented fabrication steps of a DC LV cable.
- Attended Hall D tech meeting

DSG

- Worked with Sahin, moved CAEN power supplies and cards from the gowning room to upstairs
- Ran network cables in rm 121C.
- Moved cable spool holder, counter, and spooler (borrowed from stockroom) to the ESB.

McMullen, Marc

Hall B

HTCC

- Made adjustments to the gas monitoring program.
 - ★ Combined temperature, humidity, and pressure into a single graph.
 - ★ Made a separate graph for intake and exhaust flow and setpoint.
 - ★ Continued work on datalogger.

DSG

- Attended quarterly safety warden meeting.
 - ★ Covered topics such as injury and illness statistics (Phys. 0 recordables, 4 first aid), work planning guidance, and government vehicle accident reporting.

Sitnikov, Anatoly

Hall B

DC

- Measured and cut 42 of 252 LV cables (50' 7,65' 21,75' 14).