



Detector Support Group

Weekly Report, 2016-06-29

Ongoing Projects

Hall B

Drift Chambers

- Gas manifolds expected to be installed mid-July.

HTCC

- Received iseg demo HV module so that HTCC can do testing.
 - * **Waiting on OSP before giving Youri Sharabian card for installation in detector.**

RICH

- Request for quote for compressor sent on 6/28/16.
- Cost estimate for Piping and Instrumentation developed.
- Mirror 5C reanalyzed in 3-D AutoCAD.

MicroMegas

- CEA Saclay response to ERR recommendations:
 - * *Will be ready for CLAS12 ERR.*
 - **No OSP → No integration and testing in EEL during Fall supported by DSG.**
- Gas shed mixing system and cost estimates developed to address ERR recommendations.
- Drawing of valve panel location in gas shed completed .

Forward Tagger

- Provided information on cRIO for FT to Raffaella De Vita so that she could generate a cost estimate.
- LED pulse tests for calorimeter channels in progress.
- Discussed tasks emailed to group by Marco Battaglieri.

HDIce

- Software to test RF Attenuation/Switching Unit under development.
- Coding of sub-VIs that acquire data from CT-Box while reading from lock-in amplifier during NMR sweep completed.
- Live magnetic field readback display and graphing is being debugged.
- **No progress on Mathematica.**

Hall D

- Documentation of HV Reset_Environment controls system reviewed.



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Antonioli, Mary Ann

Hall B

- Debugging issues, due to changes made, with sub-VI that reads the DIO modules of the **HDice** RF Attenuation/Switching Unit; additionally, debugging resulting problems in VIs that are built on this sub-VI.

Arslan, Sahin

Hall B

- Provided N₂ gas bottle for **FT** and **SVT**.
- Completed drawing of **MVT** valve panel location in gas shed.

Bonneau, Peter

Hall B

- Completed installation, update, debug, and test of **SVT** Hardware Interlock System software to LabVIEW 2015.
 - * CPU usage slightly increased (to ~30%).

HDice

- Wrote sub-VIs that acquire data from CT-Box while reading from lock-in amplifier during NMR sweep.
- Debugging live magnetic field readback display and graphing.
- Working with MaryAnn on troubleshooting and testing of status readback from the DIO module for RF Attenuation/Switching Unit.
- Working with Pablo on development of device drivers and test code for Oxford Mercury IPS power supply.

Hall D

- Attended Hall D Slow Controls meeting.
 - * Discussed update of EPICS FDC Chiller interface was.

DSG

- Working with Amanda on development of VME Test Station.
- Troubleshooting communication issues with VME crate controller.
 - * Set up and initialized Highland V450 ADC.
 - * Overview of example VME controller program

Campero, Pablo

Hall B

- Worked on testing geometry of **RICH** mirror C5.
 - * Exported coordinates points from CMM measurements.
 - * Started to generate 3D view in AutoCAD.



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HDICE

- Writing LabVIEW code to set and read back current from Mercury power supply.
- Developed LabVIEW front panel design for the program which combining set current and read back current.
- Debugging generation of text file of set and readback values.

FT

- Collaborated with Amanda LED test of calorimeter channels.
 - * Researched CODA systems to monitor and test channels on calorimeter.
 - * Changed range of amplitude for each LED until value reached 1500—2000 fADC counts; maximum value used for test was 4095; all data was saved in spreadsheet.
 - * Checked “dead LED channels” to make sure no new ones had appeared since the previous test.

Hall D

Slow Controls

- Researched documentation of HV Reset_Environment controls system.
- Looked for wiring schematics on M: Drive/ halld engineering archives; unable to locate.

Eng. Brian

Hall B

- Fixed error in **Gas System** daily log file creation after discovering Gas Shed cRIO had run out of space on SD card.
 - * LabVIEW now creates a new file daily and zips old files to save space. A separate job automatically copies zip files to a Linux RAID for backup purposes (in addition to M drive, which is done manually).
- Had iseg send a demo HV module so that **HTCC** can do testing; waiting on safety paperwork to be completed before giving Youri card.
- Gave information on cRIO to **FT** so Raffaella could generate an estimate.

SVT

- DOE has mandated noise test in Hall; test planned for July-Aug.
- Developed with Yuri tasks for noise test.

Hoebel, Amanda

Hall B

- Collaborated with Pablo on **HDice** LabVIEW program for Mercury iPS calibration.

FT

- Tested calorimeter channels signals generated by LED pulses.
 - * Pulse height of signal depends on amplitude set for LED.
 - * Signals should be 1500—2000 fADC counts above pedestal of 200 counts.

DSG

- Identified ADC module in VME crate with LabVIEW.



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- ★ Identify command address C000 reads back FEEE (as instructed in manual).

Jacobs, George

Hall B

- Requested price quote and availability of Atlas Copco SF11-8 MC FF compressor for **RICH**.

MVT

- Designed valve panel for gas mixing system.
- Created MVT Gas Mixing System power point.
- Developing gas system document.
- Modified gas mixing system diagram for latest gas mixture requirements.

DC

- Attended Hall B Engineering meeting cable trays, gas manifolds, R1 installation, and DC platforms.

Leffel, Mindy

Hall B

HDice

- Soldered leads to 25 contact D-sub terminal block for CT box.
- Started terminating two 25' RF cables.

DSG

- Terminated 6' RF SMA to SMA cable for **Target group**, at request of HDice.
- Terminated 37 contact D-sub to D-sub cable for NI **cRIO test station**.

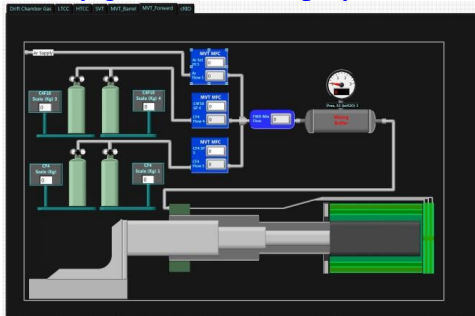
Lemon, Tyler

No report - vacation

McMullen, Marc

Hall B

- Attended Hall B Engineering meeting. Topics covered: installation of the DCs and SVT.
- Completed **SVT** preliminary gas controls display.
- Completed **MVT** preliminary gas controls displays for forward and barrel.



Example of MVT Barrel gas controls display.