Detector Support Group

Weekly Report, 2016-07-20

Antonioli, Mary Ann

No report - vacation

Arslan, Sahin

- Provided N_2 gas bottle for **Forward Tagger**.
- Working on **gas system's** piping and instrumentation drawing.
- Submitted work request to Facilities Management for pest control in gas shed (bugs, critters, spiders) and gas cage (beehive).

Bonneau, Peter

- Working with Amada on **Forward Tagger** interlock system's signal definitions and component specifications.
- Researched and specified slow control components for **RICH** interlock system.

HDice

- Added programming support, for NMR program, for multiple configurations of HDice equipment. Previously, different versions of program were used for PD-I, PD-II, and SD.
- Completed and emailed current status of work requests.
  - All tasks under control of DSG are completed.
  - Equipment for second rack is ready for installation and testing in HDice lab.
  - Requested status of OSP for work in HDice lab.
- Assisted MaryAnn with debugging code for the automated attenuator B test for the RF Attenuation / Switching Unit.
- Working with Pablo on revision of Rotation of Target Polarization Program. Option of using Oxford Mercury IPS power supply will be added to program.
  - Power supply status readback VI is needed for Mercury IPS.
- Defining tests for LV/HV cards of the Mpod Test Stand.
- Meeting with Theo Larrieu regarding the operation of new DSG list.
  - Amanda and Peter are initial administrators of list.
  - Reviewed administrator options including email, system owners, and work areas.
  - Administrators can "approve" tasks and add options to list.
  - Theo will look into problems found with PPE section on list.
  - Search function is currently not working correctly for any Jlab task list.
- Updated **DSG** website with revised photo log and added front page link to DSG Task list.

Campero, Pablo

HDice

- Completed note on calibration test of Mercury iPS power supply.
- Plotted graphs of Set vs. Measured current and Set vs. Error Measured Current using Python 3.5 software for 1,000 measurements for each set point, step size of 5 A, and a range of 0─120 [A].
- Discussed with Peter implementation of Mercury iPS drivers to Rotation of Target Polarization program.

RICH

- Imported mirror 5C step files sent by Marco to AutoCAD 2015.
  - ✶ Generated 3D model and overlapped with data points taken from the CMM measurements.
  - ✶ Projected all CMM points for mirror surface onto planes generated on CAD Model (ideal model).

Eng, Brian

- Analyzing CMM data for **RICH** mirrors. Tried doing a circle fit on edge points, but results thus far have been nonsensical, i.e. mirror surface having a bigger radius than back surface.

SVT

- New proposed schedule with work breakdown and time estimates for noise test in Hall presented.
- Worked with Marc to find equipment to safely load crates into higher levels of insertion cart as they are above head height.
- Got additional signage (HV and ESD) for administrative controls from Mary Boggs.
- Discovered that brackets securing crates to trays on insertion cart won't work with UPS; Saptarshi is investigating solution.
- Still no response from ACC about networking in Hall.

Gas System

- Installed new AC power cords for switches; so now they're on UPS power.
- Still waiting for CC to give me administrator rights on Windows computer in Gas Shed so I can install LabVIEW.

Hoebel, Amanda

- Created Python program to analyze best-fit equation of **RICH** mirror sides of 5C.

Forward Tagger

- Replaced preamp board in thick layer of hodoscope with modified board.
  - ✶ Board was modified to correct for saturation observed at ~0.6 V.
  - ✶ Channels 1.1, 2.3, and 2.4 tripped, when HV was turned on.
- Started LED runs to check for channels with light leaks.
  - ✶ Found 24 channels not picking up LED pulses.
  - ✶ Channels were set to amplitude of 4094 (max amplitude).
  - ✶ Channels were then set to appropriate amplitude one at a time to check for changes in current.
- Researched equipment used for signal monitoring for interlock system.
- Met with Pete and Theo Larrieu on how to make **DSG**list

Jacobs, George

- Requested and received quote for MKS Baratron pressure transducer
- Submitted **RICH** PRs for cooling and purge circuits.

Leffel, Mindy

- Terminated second diagnostic tool for **HDice** CT box and modified it with a disconnect.
- Modified and started terminating two more 37 contact D-sub to D-sub cables for National Instruments cRIO test station.
- Fabricated HTSBs for test stations.
  - Soldered and glued humidity sensor leads.

Lemon, Tyler

- Analyzed **RICH** mirror dimensions using NX 9 and Python.
  - NX 9: Generated plane from Mirror C5 CMM data, projected CMM data on to plane, measured sides using built-in tool.
  - Python: fit plane to Mirror C5 data, projected CMM data on to plane, used projected points to calculate regression lines for sides.
- MPOD Test Station.
  - Wrote 20 SNMP drivers in LabVIEW for communication to MPOD.
  - Wrote THA for test station.
- Familiarized myself with new **DSG**List.

McMullen, Marc

Gas System

- Completed initial gas mixing VI for the **MVT**.
  - Gas is mixed at a given ratio, similar to the DC mix controls. Ratio can be changed by adjusting the percentage values. Where the VI differs is in the addition of pressure controlled flow settings.
- Reviewing with Brian, work and equipment needed to safely transfer **SVT** crates to insertion cart.
- Submitted four PRs for **RICH** interlock and gas controls.
  - All PRs signed and buyers assigned.
- Updated components list and signal spreadsheet with all items requisitioned for interlocks, controls, and gas system hardware.
- Completed, using AutoCAD, visual reference of interlocks, gas controls and electronics locations in hall.