DSG Weekly Report – June 3, 2015

Antonioli, Mary Ann:

Hall B

LTCC

- Coordinating and overseeing project activities:
  - Component preparation, divider board fabrication, PMT base assembly, and Winston cone's reflectance tests.
- QC-ed fabrication and assembly of 12 reworked PMT bases.
  - Updated spreadsheet.
- Computed averages of reflectance of 31 Winston cones.
  - Updated two spreadsheets.

HDICE

- Attended the daily program development meeting.
- Programming in LabVIEW rotation of target polarization.

DC

- Maintaining spreadsheet of measured and bundled signal cables.

Hall D

Meeting

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

Arslan, Sahin:

Hall B

DC

- Sorted 32 bundles of signal cables (with Anatoli).
- Measured and re-organized signal cables by length (with Anatoli).
- Replaced Ar/CO_2 cylinder for R1, currently being tested.
- Wrote Physics Support list to work on DC signal cables in ESB.
- Wrote procedure for gas bottle handling.

Bonneau, Peter:

Hall B

HDICE:

- Reviewed in the daily status meeting: test station set up in DSG control room and test results of RF Attenuator/Switching Chassis.
  - The HDICE test station to test hardware and software, as well as to commission CAEN CT-Box – current shunt, consists of an Oxford magnet power supply, RF generator, RF Attenuator/Switching box, and a lock-in amplifier.
  - Daily programming sessions with the group on the rotation of target polarization program. The instrumentation disable mode feature was expanded and used to check the algorithms of the program. All implemented error checking worked as envisioned.

SVT

- Designed chassis layout for Hardware Interlock System.
  - A NI chassis will be mounted in the rear of the main SVT patch panel in Hall B; doing so minimizes cable lengths, since majority of signals for interlocks originate at patch panel.
- Tested water sensor controller manufactured by Panasonic.

- This leak detection system does not depend on water resistivity. Sensors use capillarity effect of liquid along with a light emitter and receiver to detect leak. Controller will be mounted within the Hardware Interlock System's chassis. A four conductor cable connects the controller to leak sensor mounted in the drip pan. Mechanical design of the drip pan has not been completed. Mechanical design must accommodate size of the water sensor.

Hall D

Meeting

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

Meeting

- Attended daily status and instructional meeting on Hall D systems.
  - This week examined the warmup of the solenoid to N_2 temperature the solenoid PLC screens.
- Examined status of slow control systems on a daily basis.

Butler, Dave:

Hall B

Gas System

- Developing configuration file for LabVIEW code.
- Sent information on SVT gas control to Yuri for his review presentation.

Hall D

- Provided input to technicians for a maintenance checklist.
  - Checklist requested by Tim Whitlatch and Tom Carstens. Added battery changes for PLC equipment.
- Attended controls meeting and discussed a framework for planning PXI updates for quench detection and voltage tap monitoring.
- Assisted technicians with UPS test on the gas shed controls systems for the upcoming power shutdown (week of June 15).

Meeting

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

Eng, Brian:

Hall B

SVT

- Set up and wired R4 cold plate's outlet flow meter.
- Connected HTSB for R4 cold plate (a few had swapped pins on humidity sensors).
  - All sensors are working and used in interlocks.
- Moved N_2 mass flow controller from R1-3 to front of "T" connection that supplies both R1-3 and R4.
- Coding for gain scan using the FSSR2's internal pulser instead of the VSCM's pulser.
  - Few modules have low gain, so to eliminate the VSCM pulser as the problem.

HDICE

- Teleconference with Craig Thorn and Xiangdong Wei about Mathematica notebooks.
  - Craig provided NMR package, still looking for various data files needed to run notebooks.

Hall D

- Investigated complaint: "PXI not working", found no issues with communication or data.

Meeting

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

Jacobs, George:

Hall B

Gas System

- Determined manpower requirements and added it to the remaining tasks spreadsheet.
- Installed N_2 gas supply tap with shut off valves and pressure regulator for SVT detector purge supply on L1 space frame.
- Installed N_2 gas supply tap with shut off valves for RICH on top of forward carriage.

DC

- Discussion with Mac about DC signal cables, racks, cable labels, and HV cable lengths.
- Meeting with Mark Taylor and Paul Hanson, designer, about the final rack layout, potential problems, TORUS support locations, and interferences.
- Analyzed TORUS support leg interference with downstream rack-row under subway.
- Wrote procedure for test stand gas cylinder change-out in EEL Rm 125.
- Ordered 4 cylinders of 10% CO_2 in Argon gas mix for test stand in EEL Rm 125.

Meeting

- Attended TDG meeting, discussed HTCC status, LTCC, gas system upgrades.
  - Bob Miller, Steve Christo, Yuri Sharabian, Saptarshi Mandal, and I were present.

Hall D

Meeting

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

Leffel, Mindy:

Hall B

LTCC

- Reworked 12 PMT bases.
- Cut and stripped 144 jumper wires.
- Populated 24 PMT boards.

Mann, Tina:

Hall B

LTCC

- Calibrated Winston cone with Mauri.
- Aligned pinholes for calibration and mirror test.
- Tested 31 Winston cones.
- Wrapped Winston cones for storage.

DSG/Safety

- Acquired Silica Safety Training.

McMullen, Marc:

Hall B

Gas System

- Requested quotes for purchase and machining of PID/Controls Chassis.
- Discussed scope of the cRIO/LabView program to be used on the LTCC and RICH.
  - Program provides gas flow control for the mass flow controllers and PID loop for LTCC as well as readout for the mass flow transducer for RICH. Program designed to remote interface from Gas Shed and Space Frame control panels.

SVT

- Made eight three-wire bundles for region 4 HFCB grounding.
  - Wires connects LV to the cold plate, which is grounded to the electrical racks in the clean room.
- Modified humidity leads on HTSB jumpers to terminate on slow controls patch panel.
- Added an inline fuse to the chiller control cable assembly.
- Discussed the Hardware Interlock Chassis and associated cables with Peter.
- Changed the N_2 tank.

DSG/Safety

- Discussed the process submission of Physics Support Lists with Werth and Sahin.

Sitnikov, Anatoly:

Hall B

DC

- Unbundled, measured, sorted and re-bundled 32 bundles of signal cables.

Teachey, Robert Werth

Hall B

HDICE

- Task Hazard Analysis for NMR and Spin Flip test stand in DSG control room done.
- Completed the Magnet Power Supply Safety Shield version 1.
  - Version 1 needs some changes and version 2 has been started.
- Writing Physics Support List for the NMR and Spin Flip test stand.
- Developing RF Attenuator/Switching Chassis' control function for NMR Control Code.