

Long Shutdown Status of Experimental Halls + 6 months

J. Gomez

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Experimental Hall A

- **Scope of Work:**
 - Removal of last two experiments (g_2^p & G_E^p)
 - Beam line upgrades for 11 GeV beam operation
 - Compton and Moller polarimeters.
 - Arc magnets refurbishing & mapping (no modification)
 - Install first experiment
 - Commission equipment
 - General hall maintenance
- Scheduled to Receive Beam early 2014

Hall A Status + 6m

- **Last experiments (g_2^p/G_E^p)** - removed
- **Moller polarimeter upgrade** - All parts delivered & installed except for cradle supporting first two quadrupoles (minor machining). **Remaining:** install cradle with quads and align system.
- **Compton polarimeter upgrade** - Characterized high power laser cavity. Waiting for field measurement of one dipole chicane before reducing chicane bend. **Remaining:** raise laser table & two dipoles (~ 80 mm), install new beam pipes and align.
- **Arc magnets (L. Harwood)** - To be pulled during Fall/Winter, refurbished but not steel added (remaining as C-magnets). Cross map for operation to 11 GeV.
- **General Maintenance** - Replacement of SC magnet JT valves with lab design (~50%). Fix/upgrade HRS motion system (~50%). Minimal flood damage.

Hall A Status + 6m ...

- **First set of experiments selected - installation to begin January**
 - G_M^p and DVCS - two, in parallel/compatible with each other
 - Straight forward installation using “standard” equipment (low cost & effort): HRS, DVCS calorimeter & electronics (both previously used) and, hydrogen cryogenic target.
 - Kinematics spans a wide range of energy and currents - can adapt to early beam conditions.

Hall A - Key Items

- **ARC magnet remapping project** - G_M^p needs good energy meas.
- **Hall A ARC power supply upgrade** - 11 GeV op.
- **Timeline for refurbishing of High Power Beam Dump** - affects DVCS installation and allowed beam currents
- **Experiments/Hall need to go through “Experiment Readiness Review” process to be able to receive beam in early 2014.**

Experimental Hall B

- **Scope of Work:**
 - **Removal of last experiment (g14/HD-ice)**
 - **Removal of CLAS components and infrastructure**
 - **CLAS12 - fabricate & install**
 - **Beam line upgrades**
 - **Commissioning**
- **Scheduled for Beam Late 2015**

Hall B Status + 6m

- **Last experiment (g14/HD-ice)** - removed
- **De-installation of CLAS on-track to be completed by Feb 2013 - so far, no snag remains standing**
- **CLAS 12 INSTALLATION - begin Feb. 2013**
 - **Forward Carriage modifications**
 - **Installation of “Subway” addition to existing Spaceframe**
 - **Start pre-cabling of electronic crates on Forward Carriage**
- **Fabrication/refurbishing of detector systems** - in progress, many systems in parallel.

Hall B - Key Items

- **Achieving goals but tight,**
 - **manpower** - effort required, availability & skill mix
 - **space** - amount and requirements of work & storage space
- **Torus/Solenoid Delivery Schedule** - effort & schedule

Experimental Hall C

- **Scope of Work:**
 - **Decommission and removal of Qweak**
 - **Removal of the Short Orbit Spectrometer (SOS)**
 - **Installation of the Super-High Momentum Spectrometer (SHMS)**
 - **Beam line upgrades - e.g. polarimeters**
 - **Testing and commissioning**
- **Scheduled to Receive Beam Late 2015**

Hall C Status + 6m

- **Last experiment (Qweak)** - Removed. Raised concrete floor removed.
- **Short Orbit Spectrometer removal** - magnet removed, shielding lead removed, rails installed and SOS rotated forward. Cutting of shield house concrete proceeding.

Hall preparations to deal with Silica (concrete cutting and removal) as well as lead removal have been very good.

Flood damage & recovery as well as equipment failure introduced some weeks delay - partial recovery by change of job sequence. Expect SOS removal complete by January - **main impact is installation of SHMS rails**

- **Super-High Momentum Spectrometer (SHMS) installation**
 - Install SHMS rails after SOS removal
 - Begin SHMS carriage fabrication (end of March)

Hall C Status + 6m ...

- **Begin Compton and Moller polarimeter upgrades** - modify collimators & install additional quadrupole for Moller.
- **Cool-down High Momentum Spectrometer (HMS) (Feb-May)**
 - **Test power supplies for SHMS (5)**
 - **Certify HMS dipole to 3 kA**

Hall C - Key Items

- **PSS/ODH recertification** - some systems damaged during flood. Need to perform repairs & recertification prior to HMS cool-down in March.
- **SHMS magnet delivery schedule**

Experimental Hall D

- **Scope of Work:**
 - Ongoing installation of Hall D infrastructure
 - Complete Solenoid Installation
 - Beamline and Cryogenic Installation
 - Detectors, Magnet and Target Installation
 - Alignment and Commissioning
- **Scheduled to Receive Beam Middle 2014**

Hall D Status + 6m

- **Solenoid & refrigerator** - assembly going well but much more work to do.
 - Targeting mid-December to start cool-down
 - The “Experiment Readiness Review Procedure” calls for an independent EHS&Q review of the equipment (or experiment) by the Physics division. The reviews are organized by the Deputy AD for Physics, P. Rossi.
 - A review was conducted November 6 of the measures taken to ensure personnel safety and magnet integrity in the event of a cryogenic fault - e.g., loss of insulation vacuum in one of the coils. Committee members are J. Preble (chair), A. Sidi-Yekhlef, W. Schneider & M. Wiseman. Final report should be available shortly.
- **1st FDC package tested with cosmics** - all channels work. Efficiency is > 98%.
- **2nd FDC package ready for testing**

Hall D - Key Items

- **Solenoid electrical protection** - a review of the magnet electrical protection systems is being organized for January.
- **Successful test of solenoid** - cryo supply & load. Solenoid power
- **Delays caused by redirection of effort to solenoid** - so far able to absorb but ...
 - Slow down of Forward Drift Chamber fabrication - may require rethinking of space needs
 - Tagger installation delayed - detectors arrive in February
- **Should effort/schedule be adjusted to reflect current priorities?**

Across Halls

Hall B and Hall C configurations would be completely different from the past. Hall D is a new hall. Three out of four halls would have been in operation for 15+ years. **Are the new safety considerations/solutions the same than before?**

- Many cable runs - fire detection and protection?
- Equipment age - are they able to remain operational for a number of years?
- Is the safety equipment located in the right place for the new configurations?
- Hazards and exit routes in multilevel structures