

Weekly Report – week of April 18, 2011
Fabrication and Assembly of ERL hardware
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Cryogenics: The installation of the cryogenic transfer lines along with wiring of level and temperature sensors to support the ERL and VTF cryo refrigerator continues. There are a couple of changes required to one or two transfer lines. The VTF controls are scheduled to be completed by August.

Laser: The supplemental AC unit continues to provide adequate cooling for the laser room. We await the replacement crystal to correct the performance of the Lumera Laser. Local logging software for phase lock control is now operational. Design work on timing system and interface with low-level RF and diagnostics software continues.

FPC conditioning: The Navy FPC's were tested to 250KW pulsed power using a software program that takes into consideration a variety of parameters and responds accordingly. The Navy FPC's and test cart has been prepared for shipment back to AES.

Photocathode: A sample which is half SS and half Moly has been coated in the deposition system with antimony and will be removed for testing.

Gun Cryomodule: The gun cavity string mock-up is packaged-up and ready to be shipped to J-Lab. The clamping mechanism required rework and subsequently will be assembled in the clean room. The cryo module has been assembled as far as it can be at this time. The transport cart drawings are in the signature loop.

PASS System: The installation and testing of the VTF PASS system awaits electrical power to be hooked-up. We have had discussions on the associated sweep procedure and how to interface this into the PASS system. The PASS system for the LBH is complete and training for users was given this week.

Mezzanine: The second pass-thru sleeve in the mezzanine decking has been installed. The electricians are installing cable tray for electrical power needs.

Large Grain Gun: Stepper motor and controller for variable RF coupler actuator have been received and are being configured. Requisition for hardware required for two support platforms to stage experimental assembly and to support the helium dewar has been approved and is in procurement. Cable and feedthrough selection for both low-power and high-power testing has been completed and reviewed. Requisition for hardware is being prepared. Efforts are underway in survey group to measure and verify dimensions of VTF cathode in preparation for fabrication of new copper cathode. Experimental program overview document has been prepared and forwarded to ESSHQ Division Head in preparation for discussion of safety considerations.

5-cell cavity/cryomodule: The paperwork continues for the G-5 test safety review. There are a couple of vacuum gauge trees that are being reconfigured for the G-5 test. There was discussion on a 5/18 date for the next 5-cell cavity run to test the LLRF feedback loop.

ERL injection line: Vacuum envelope is in preparation to final review, correction magnets are under design.

ERL Extraction line: Magnets are being fabricated, beam dump pressure vessel code compliance under evaluation, vacuum/instrumentation layout needs to be reviewed and finalized.

ERL Tech Support Area: The EEBA area is on hold due to funding issues. Design drawings and cost estimates have been completed. The BID packages have gone out for the construction of the enclosure and refurbishment of this area.

ERL Vacuum Support: Turbopump system for clean room UHV QA placed in service. Continue low level support for laser mirror bake out test in 905 high bay tent. Designer assigned and work underway to update detail design of ERL zig-zag injection beamline. Purge valve subassemblies prepared for 5-cell gate valve exchange. Portable clean room set-up at 5-cell underway for replacement of purge valve assemblies.