

Weekly Report – week of May 2, 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. Termination of the numerous wires pulled last week has started. This will tie the refrigerator to the control racks in the condo area.

Laser: Design work on timing system and interface with low-level RF and diagnostics software continues. Testing control software for laser transport mirrors is in progress.

FPC conditioning: The FPC's for the ERL were delivered to BNL for testing this week. Initial set-up for bakeout has started.

Photocathode: The ceramic break was delivered to BNL this week. This will be added to the sample holder to isolate and allow current readings of subsequent samples. Inventory has been taken of the cesium and potassium sources along with their expiration dates.

Gun Cryomodule: The gun and string assembly is in the crate ready to be shipped to J-Lab. The signature loop for the cathode transport cart drawings is complete. The RFQ for component fabrication has been written and submitted.

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.

Mezzanine: The electricians are installing cable tray and conduit to connect the vacuum furnace to the required power source. Preliminary discussions have taken place for the routing of water cooling lines for the vacuum furnace. We are awaiting funding for the proposed clean room area under the mezzanine.

Large Grain Gun: . Large grain: there was a meeting to discuss preparations for the test. The dewar layout is almost complete and we are ready to begin generation of the detail drawings. Depending on the progress with the dewar top plate modification and other preparations for the test, the cavity will either go through the standard processing (BCP + HPR) or only HPR for the first test.

5-cell cavity/cryomodule: The paperwork continues for the G-5 test safety review. There was discussion on a 5/18 date for the next 5 cell run to test the LLRF feedback loop. . Due to a conflict with FPC test, the next cold test of the ERL 5-cell cavity is moved to June (tentatively the week of June 12th).

ERL injection line: Layout and detail design of zig-zag continues. Vacuum component ports populated. Refining chamber to vacuum device port details. Orienting vacuum devices for mechanical support and beamline chamber flanges to convention.

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: Upstream and downstream 5-cell purge valves are exchanged. The portable tent will be removed once the permanent UHP N2 purge line is installed.