

Cryomodule Maintenance and Recovery

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LSD Re-Baseline Review
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Cryomodule Maintenance

Vacuum Recovery Complete

Insulating Vacuum Leak Checks Complete in Inj / NL / FEL

- **Leak Checks in Progress in SL**

Lift Plate and O-Ring Maintenance Complete in Inj /NL / FEL

- **Maintenance in Progress in SL**

Standardization tasks in progress

- **Insulating Vac Valves and Cold Cathode Installation**
- **Baratron “trees” on Return End Cans**

Cryomodule Maintenance

- **Repair work includes:**
- **Ion Pump Replacements (2 so far)**
- **BL Valve Replacements (20 scheduled)**
- **Window Temp Sensor Replacements (2 so far)**
- **Feedthru Replacements (2 so far)**

Cryomodule Maintenance

Moving Forward

- **Completion of all basic maintenance tasks expected in December.**
- **Some repair tasks may not be complete until January.**
- **May necessitate delayed cool downs for a few cryomodules.**

Cryomodule Re-commission

Unique opportunity to re-baseline cryomodule performance.

- **Address C50 performance degradation questions.**
- **Locate candidates for Helium Processing.**

Cryomodule Recommission

Manpower Needed

Four RF operators (full time) plus two cryo operators (on standby for Qo measurements)

- **Currently have 14 RF operators available to cover this and C100 testing.**
- **Two more have been promised from EES**
- **Two more from NGLS**

This is will be a 7 day /week operation

Will operate in parallel with C100 Testing

Cryomodule Re-Commission

Commissioning Task List

Emax Determination

One Hour Runs

Eight Cavity Runs

Field Emission Survey

- **Determine whether module is candidate for He Processing**

Qo's

Estimated time:

C20 -7 shifts, C50 – 9 shifts, C100 - 11 shifts

Cryomodule Re-Commission

Schedule

~01/14/2013 N. Linac to 2K

- **One Cart at 0L02**
- **One Cart at 1L11**

~ 01/28/2013 S. Linac to 2 K

- **One Cart at 2L02**
- **One Cart at 2L11**

Completion of last zone (2L25)-end of May

Helium Processing

- **Reduce Field Emission in some cases**
 - Reduce arc rates in C20's
 - Reduce dynamic heat loads in C20's and C50's
 - Increase operating gradients

Helium Processing

Time requirements

- 1-2 weeks per zone
- 2 to 4 zones at a time depending on available equipment.
- Total time dependent on how many zones chosen as candidates.
- Expect to continue processing Jun - Sept

Cryomodule Installation Schedule

- **1/23/13 Install C100-06 at 1L23**
- **3/20/13 Install C100-08 at 2L26**
- **5/06/13 Install C100-09 at 1L25**
- **6/26/13 Install C100-10 at 1L26**
- **8/12/13 Install F100 in FEL Vault**
- **Remove One C-20 in February**
 - **Location to be Determined**