

# MuCool Resource Needs

## *Mechanical*



# MuCool Test Area

## Overview



- MuCool Test Area
  - RF Power
    - 201 MHz (5MW)
    - 805 MHz (12 MW)
  - Class 100 clean room
  - Instrumentation
    - Ion counters, scintillation counters, optical signal, spectrophotometer
  - 4T SC Solenoid
    - 250W LHe cryo-plant
  - 400 MeV p beam line





- Programmatic/on-going needs
  - Pillbox cavity inspection and window change **Repetitive**
    - 3-4 times in 2 months
  - HPRF cavity installation in magnet in hall **July 5**
  - Installation/removal of cavities under test at 2nd RF station and/or inside magnet (rectangular box(es), ALD-pillbox, 4-season, Be-wall) **Repetitive**
  - 201-MHz cavity coupler replacement and pump down **August 11**

# Upcoming Activities



- HPRF with beam
- Continued testing of existing cavities
  - “All-seasons” (vacuum & HP)
  - Pillbox
    - Button tests
- Test of an E parallel to B box cavity
- Test of 201 MHz cavity in realistic B

Resource Intensive

# Resource Needs

## *Requested*



- Design support system for installation of 805 MHz re-circulator and switch (linac gallery and MTA hall) and install. System delivery is scheduled for June 2011.
  - Our MP estimate:
    - 1 man-month engineering
    - 2 man-week designer
    - 6 man-week technician for installation

No work started yet

# Resource Needs

## *Requested*

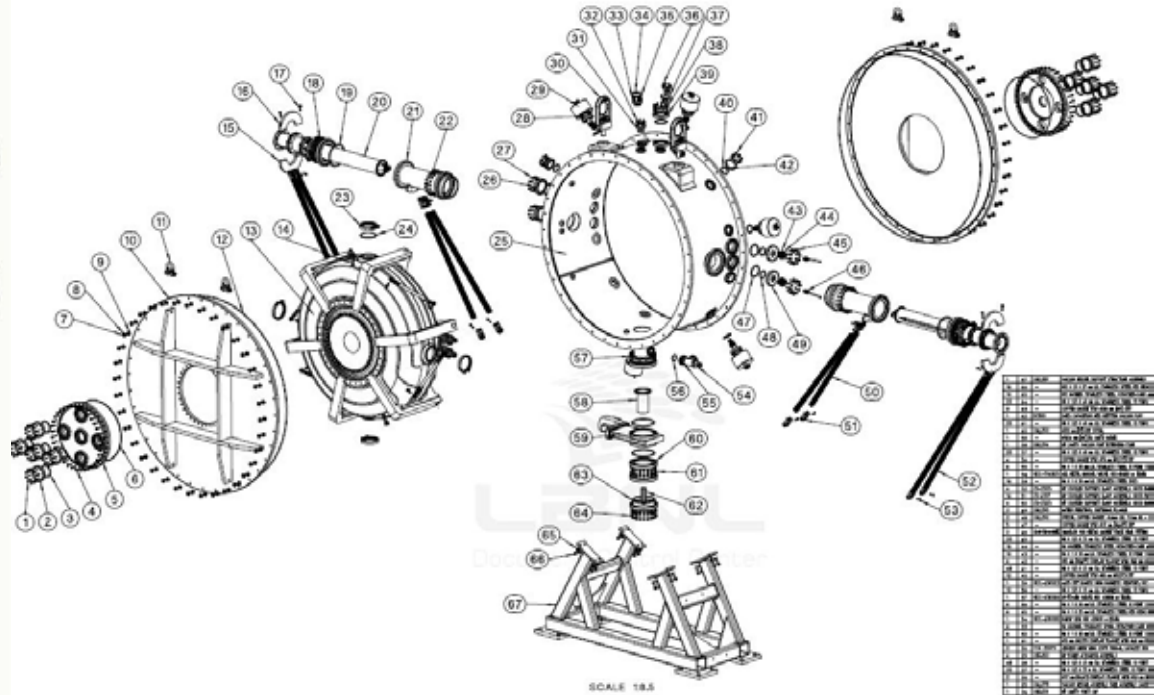
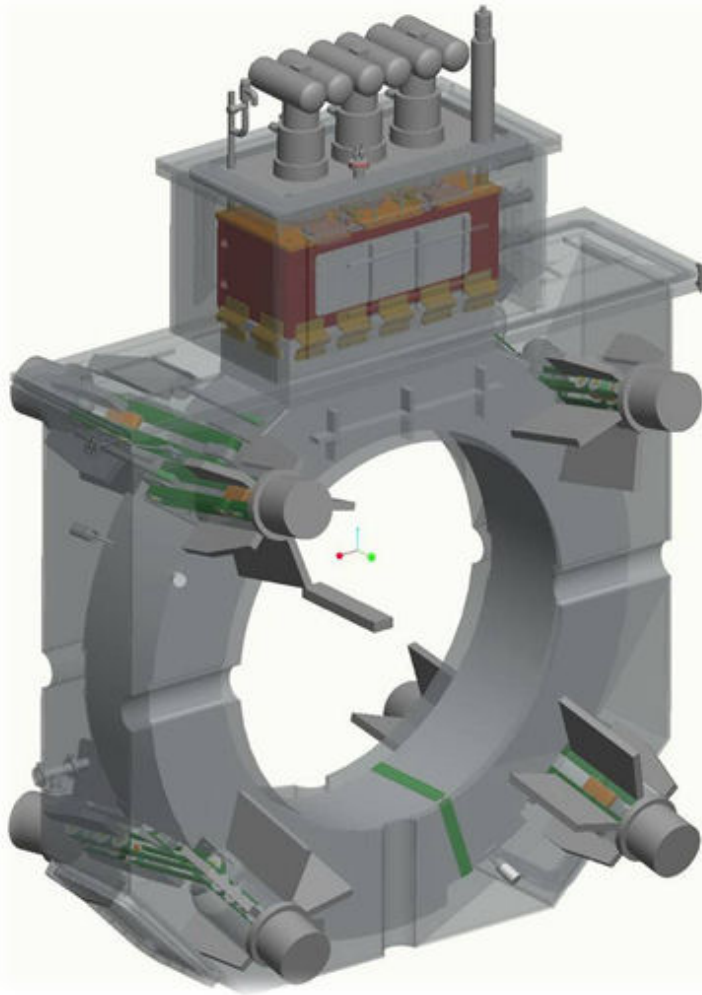


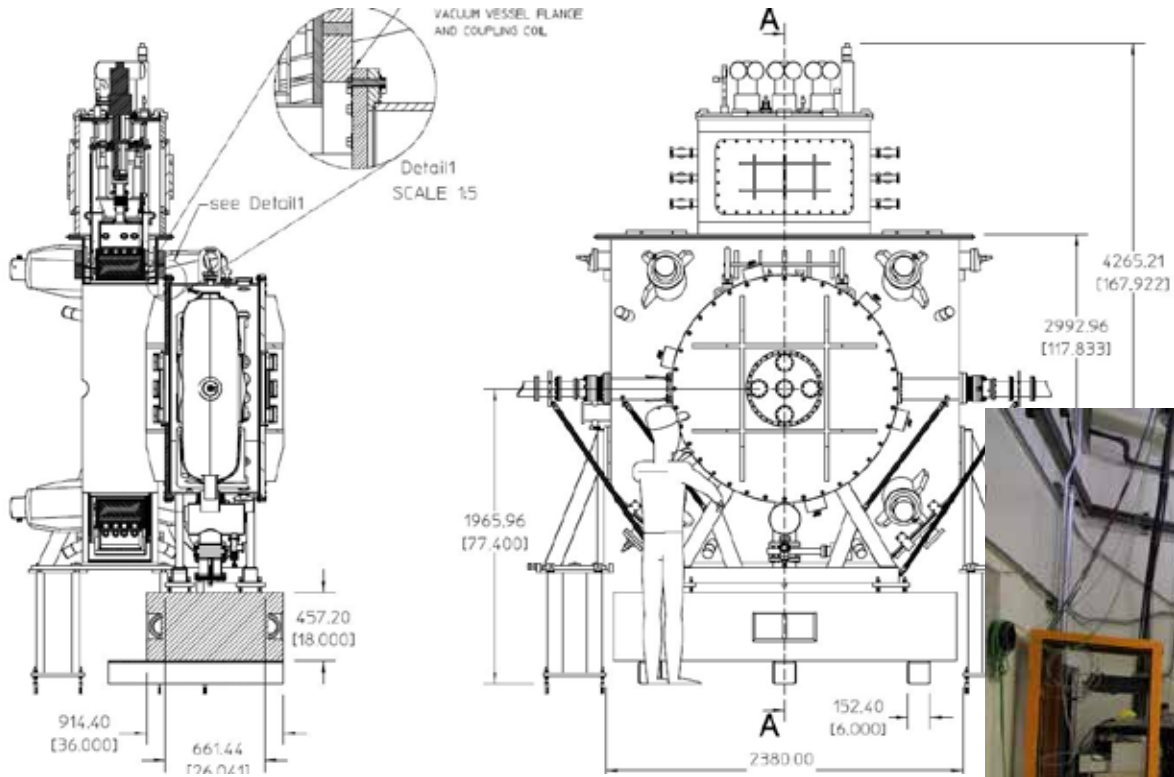
- Design/Fabrication/assembly of new "parallel" box cavity
  - 1 man-month engineer
  - 1 man-month designer/draftsman
  - 2 man-week fabrication support
- Develop plan and tooling and support design for installation of 2.5m bore solenoid in the MTA hall.
  - 1 man-month engineering
  - 2 man-week designer
- Support for assembly of single-cell 201 MHz MICE cavity vacuum vessel
  - 1 man-month Tech
- Installation of the 2.5m bore superconducting solenoid in the MTA hall
  - 1 man-week engineering
  - 10 man-week technician

No work started yet



# Coupling Coil & SCVV







# Conclusions



- Programmatic/on-going needs are in good shape w/r to engineering & technical support
  - Supplemented to a great deal by experimenters
- Resources for upcoming requirements have not been found
  - First step is to get engineering support to make detailed estimated of required resources
    - Our estimates are likely to be “lite”
    - Some things are just slipping day-for-day
      - New box cavity
    - Work to prepare for installation of coupling coil and SCVV becoming time critical due to complexity & schedule
      - SCVV out for bids
      - Expect Coupling Coil in 2012