

# Cryomodule Recommission

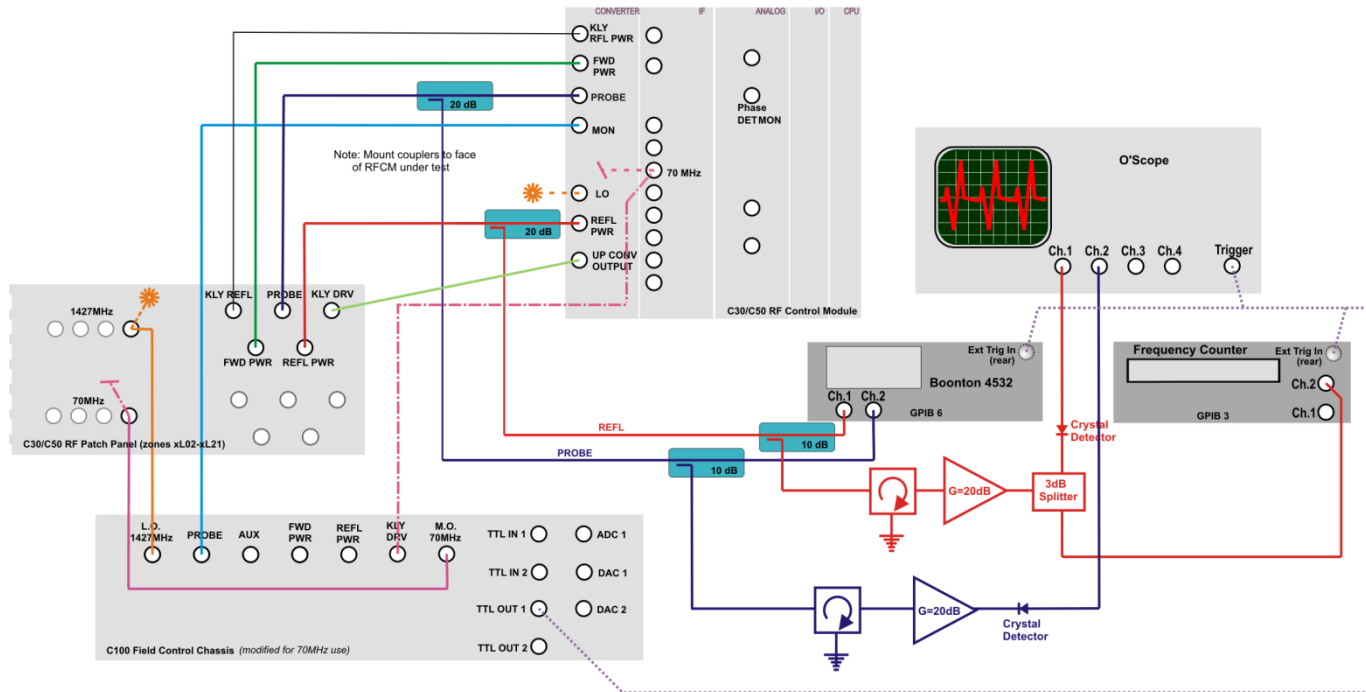
# Equipment needed

- Four Commissioning Carts stocked with
  - Digital Field Control Chassis
  - 4 Channel O'Scope
  - 2 ch. Power Meter
  - Frequency counter
  - DC Supply for Heater control
  - Multimeter or DAQ hardware to read He Pressure
  - Laptop with Labview, GPIB hardware and epics
  - Equip. Cart and Desk / Work Surface
- Four Decarads (in addition to what is required for C100 work)

# Cart Layout

36.8	21 U	Boonton 2U		
35	20 U			
33.3	19 U	DMM 2U	Frequency Counter 2U	
31.5	18 U			
29.8	17 U	RF Patch Panel 3U		
28	16 U			
26.3	15 U			
24.5	14 U			
22.8	13 U	O'Scope 4U		
21	12 U			
19.3	11 U			
17.5	10 U	FCC 3U		
15.8	9 U			
14	8 U			
12.3	7 U	DecaRad Comm chassis 1U		
10.5	6 U	UPS 2U	DC Power Supply 2U	
8.75	5 U			
7	4 U	Desktop PC 4U		
5.25	3 U			
3.5	2 U			
1.75	1 U			

# Connection Diagram



Connection Diagram for use of Modified Field Control Chassis for C30/C50 Zone Commissioning  
L. King x7803 22FEB2013

# Commissioning Task List

- Emax Determination
  - Time per cavity =
    - 2 hours for C20
    - 4 hours for C50
    - 6 hours for C100 (to run a cavity out to 25 MV/m)
  - One hour runs -two hours per cavity
  - Eight Cavity Runs – 4 hours per zone
  - Field Emission Survey – 0.5 hours per cavity
    - Determine whether module is candidate for He Processing
  - Qo's – 3 hours per cavity (for a C100 out to 25 MV/m)
  - Total: C20 -7 shifts, C50 – 10 shifts, C100 - 12 shifts

# Deliverables

- New set of DRVH's
- Field Emission Data – Onsets and Magnitude
- Heat Load data from  $Q_0$  Measurements
- Insight into possible C50 Performance Loss

# Manpower Needed

- Four rf operators (full time) plus two cryo operators (on standby for  $Q_0$  measurements)
- Rf operators would be scheduled three days on / four days off

# RF Operators

- **In Hand**

- G. Ciovati SRRFPRJ
- A. Cornejo OPSMCC trainee
- K. Davis SRFTM
- M. Drury SRFOPS back up only
- S. Dutton SRFOPS
- G. Eremeev SRFPMA trainee
- J. Fischer SRFCMP trainee
- C. Grenoble SRFTM
- L. King SRFTM
- B. Legg FEL trainee
- M. McCaughan OPSMCC trainee
- M. Morrone SRFTM
- D. Moser OPSMCC trainee
- M. Merz OPSMCC trainee
- L. Richardson OPSMCC
- M. Stirbet SRFTM
- Haipeng Wang SRFPRJ HOM measurements only
- T. Powers FEL

- **Promised**

- Jiquan Guo SRFPRJ future trainee
- Shaoheng Wang SRFPRJ future trainee
- Pashupati Dhakal SRFPRJ future trainee
- EESRF 1 future trainees
- EESRF 2 future trainees



# Cryo Operators

- **In Hand**

- D. Bigelow SRFCMP
- J. Fischer SRFCMP
- J. Hogan SRF PJS ?
- F. Humphry SRFOPS
- L. Page SRFCMP trainee
- J. Preble SRFMGT
- K. Worland SRFCMP

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- **Potential**

- H. Park MSMECH possible trainee
- J. Matalевич MSMECH possible trainee
- D. Forehand SRFCAV possible trainee
- R. Overton SRFCAV possible trainee
- G. Cheng MSMECH possible trainee
- K. Wilson MSMECH possible trainee
- S. Yang MSMECH possible trainee

# Schedule

- ~04/15/2013 Linacs to 2K
  - One Station in Injector (two zones)
- ~04/22/2013
  - One Station at 1L11
- ~ 04/24/13
  - One Station at 2L02
  - One Station at 2L11

# Modified Schedule

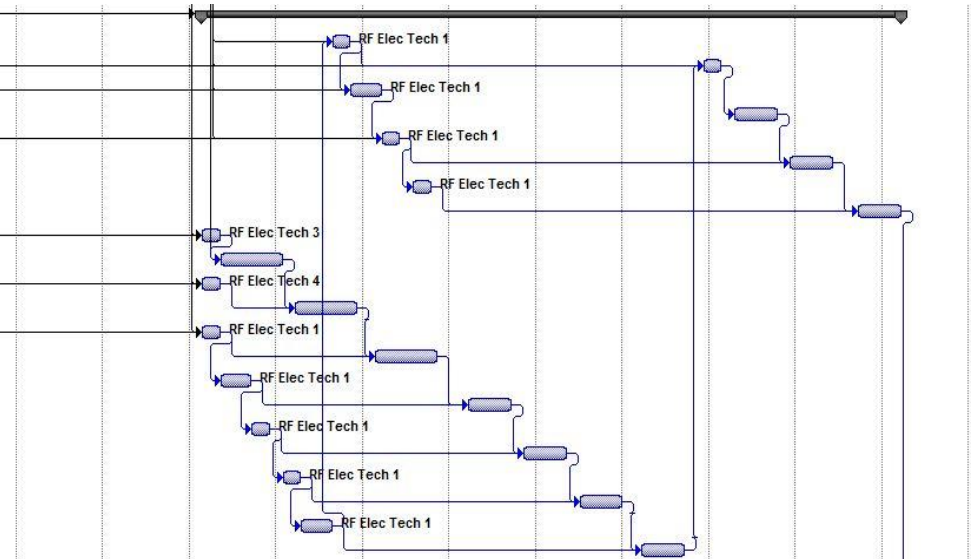
- ~04/15/2013 Linacs to 2K
  - Start at 1L05
- ~04/22/2013
  - One Station at 1L11
- ~ 04/24/13
  - One Station at 2L04
  - One Station at 2L16

# C50's

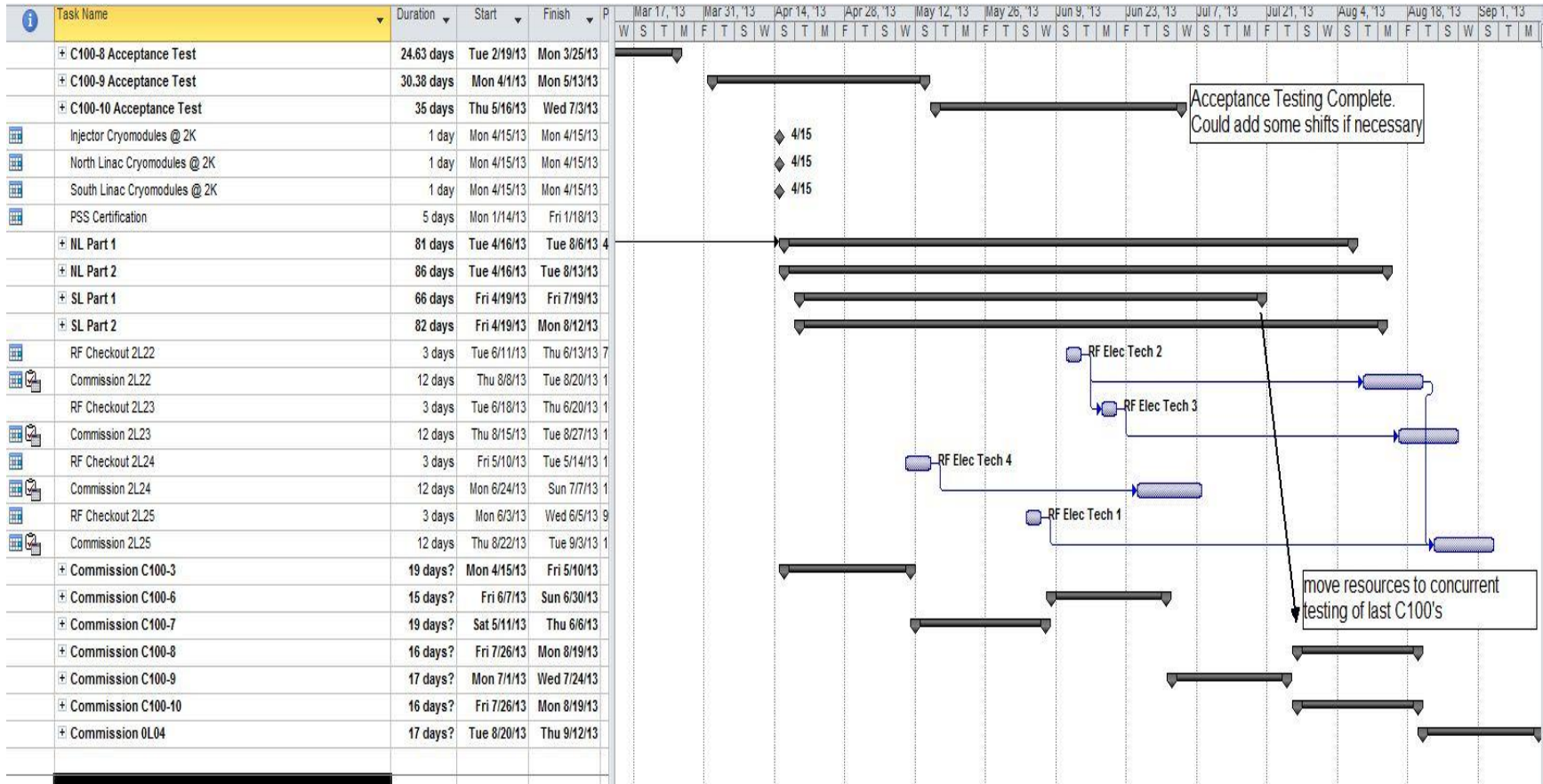
- Moving C50's to the front of the line doesn't have an impact on the schedule.
- Two C50's - 1L12 and 2L15 cannot be moved to the front of the line due to delayed cool down.

# Schedule Excerpt

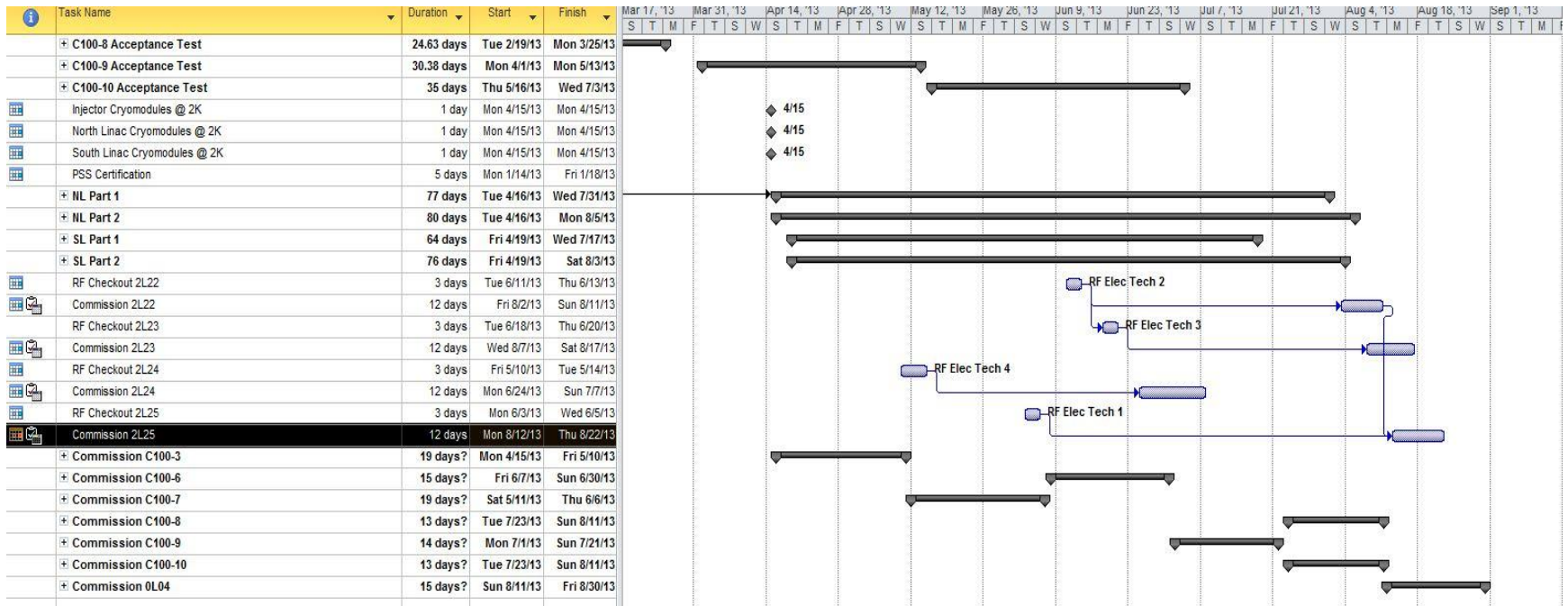
NL Part 1		81 days	Tue 4/16/13	Tue 8/6/13	4
RF Checkout 0L02	3 days	Tue 5/7/13	Thu 5/9/13	4	
Commission 0L02	3 days	Fri 7/5/13	Mon 7/8/13	5	
RF Checkout 0L03	3 days	Fri 5/10/13	Tue 5/14/13	4	
Commission 0L03	7 days	Wed 7/10/13	Wed 7/17/13	5	
RF Checkout 1L02	3 days	Wed 5/15/13	Fri 5/17/13	4	
Commission 1L02	7 days	Fri 7/19/13	Fri 7/26/13	5	
RF Checkout 1L03	3 days	Mon 5/20/13	Wed 5/22/13	5	
Commission 1L03	7 days	Tue 7/30/13	Tue 8/6/13	5	
RF Checkout 1L04	3 days	Tue 4/16/13	Thu 4/18/13	4	
Commission 1L04	10 days	Thu 4/18/13	Sun 4/28/13	5	
RF Checkout 1L05	3 days	Tue 4/16/13	Thu 4/18/13	4	
Commission 1L05	10 days	Tue 4/30/13	Fri 5/10/13	6	
RF Checkout 1L06	3 days	Tue 4/16/13	Thu 4/18/13	4	
Commission 1L06	10 days	Mon 5/13/13	Thu 5/23/13	6	
RF Checkout 1L07	3 days	Fri 4/19/13	Tue 4/23/13	6	
Commission 1L07	7 days	Tue 5/28/13	Tue 6/4/13	6	
RF Checkout 1L08	3 days	Wed 4/24/13	Fri 4/26/13	6	
Commission 1L08	7 days	Thu 6/6/13	Thu 6/13/13	6	
RF Checkout 1L09	3 days	Mon 4/29/13	Wed 5/1/13	6	
Commission 1L09	7 days	Sat 6/15/13	Sat 6/22/13	6	
RF Checkout 1L10	3 days	Thu 5/2/13	Mon 5/6/13	6	
Commission 1L10	7 days	Tue 6/25/13	Tue 7/2/13	7	



# Swing Shift Schedule



# Extra Weekend Shifts



# 10 Hour Shift Schedule

