RFQ Injector Installation Overview

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The Plan

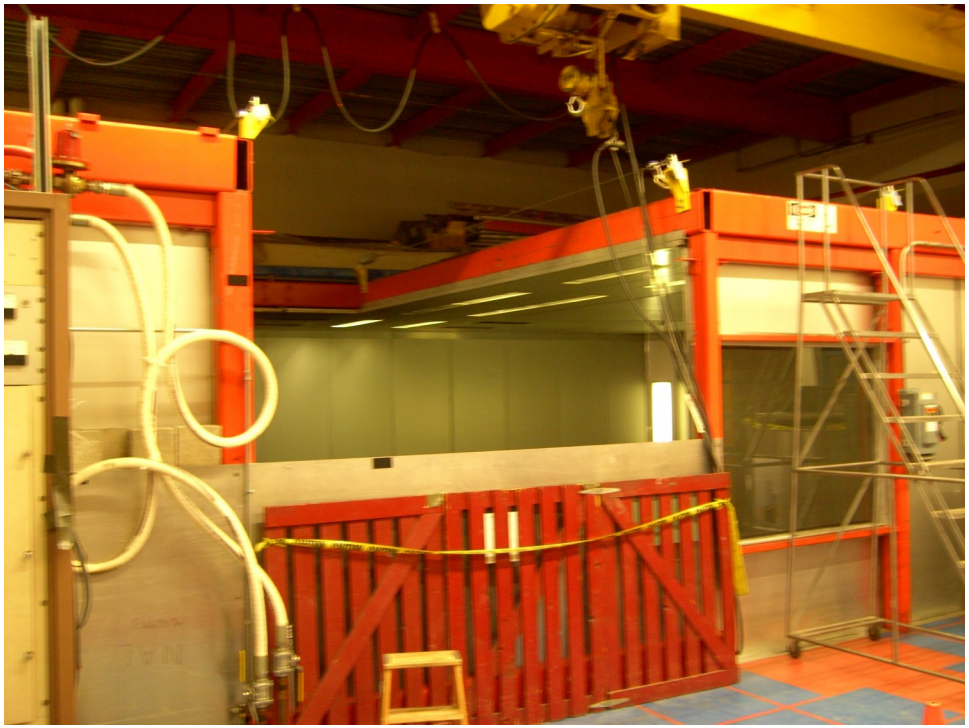
- Installation of the new RFQ injector must be compatible with NTF treatment plan.
  - NTF will shut off on 10 Sep – 3 Dec 2012.
  - Removal of H- Ps's can only be done after NTF shuts off.
- Before NTF shuts down
  - Remove I- column
  - Install platform
- After NTF shuts down
  - Remove H- components and PSs.
  - Install new ion source, LEBT and RFQ
  - Test system
  - Install MEBT
  - Send beam to Linac! (Of course, it's Thanksgiving!)

show/hide Booster show/hide Linac show/hide RFQ

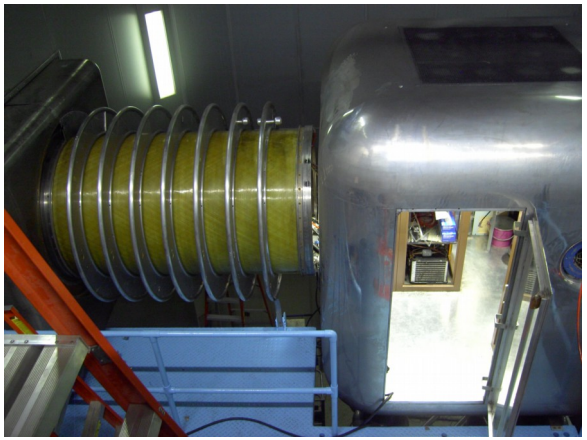
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
RFQ		remove wall		disassemble I- column			
wk 19 RFQ	Sep 2	3	4	5	6	7	8
			install platform and steps				
						disassemble LEBT	
wk 20 RFQ	Sep 9	10	11	12	13	14	15
		install platform and steps					
		disassemble LEBT	disconnect power/water in 750 line		remove H- cables in tray		
wk 21 RFQ	Sep 16	17	18	19	20	21	22
		install platform and steps				cut door in concrete	
		remove hoses etc from wall by H- line		remove H- line components			
				clean out H- and I- supplies from racks			
wk 22 RFQ	Sep 23	24	25	26	27	28	29
		install platform and steps					
		put power supplies in					
		remove 750 line magnets and stands					
wk 23 RFQ	Sep 30	Oct 1	2	3	4	5	6
		install ion source racks/controls on platform					
		pull cables			install safety system electronics/cabling		
		remove orange steel			install support I beams		
wk 24 RFQ	Oct 7	8	9	10	11	12	13
		install LEBT			put rougher in	install RFQ	
wk 25 RFQ	Oct 14	15	16	17	18	19	20
		ion source startup	connect vacuum controls	connect high power RF to RFQ	connect power to solenoids	connect water to RFQ, solenoids	
wk 26 RFQ	Oct 21	22	23	24	25	26	27
		align LEBT and RFQ			pumpdown, leak check	condition RFQ and get arc	beam tests
wk 27 RFQ	Oct 28	29	30	31	Nov 1	2	3
	beam tests	install MEBT, connect MEBT to tank 1				connect water to quads	
			align MEBT			connect vac ctrl, high power RF, power to quads	
wk 28 RFQ	Nov 4	5	6	7	8	9	10
		pumpdown, leak check		condition buncher			
		controls testing					
			interlocks testing				
wk 29 RFQ	Nov 11	12	13	14	15	16	17
		power testing	beam test to end of tank 1				
wk 30 RFQ	Nov 18	19	20	21	22	23	24
	beam studies / commissioning						
wk 31	Nov 25	26	27	28	29	30	Dec 1

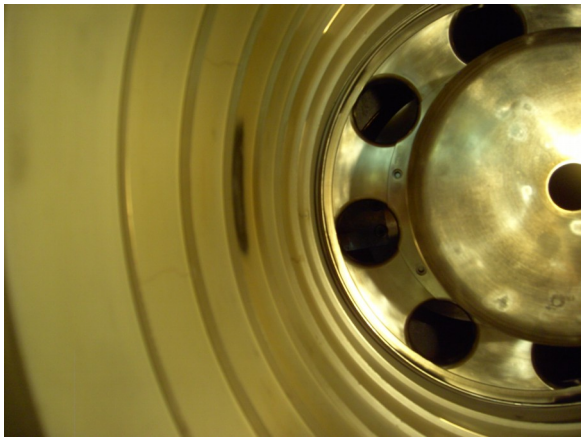
mech vacuum/rigging	mech water	alignment	rad safety
EE support	electricians	FESS/contract	building manager
Booster RF	Booster personnel	Linac personnel	RFQ personnel

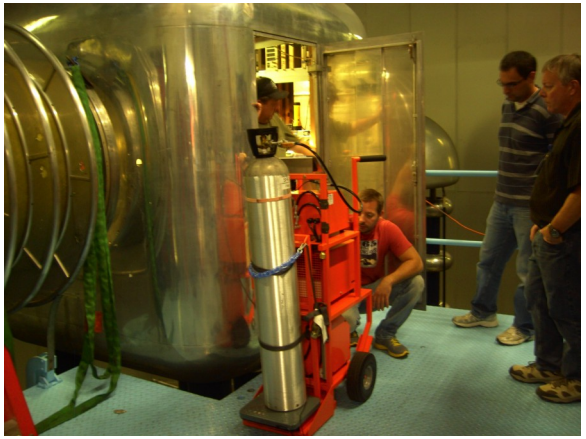
Wall is off

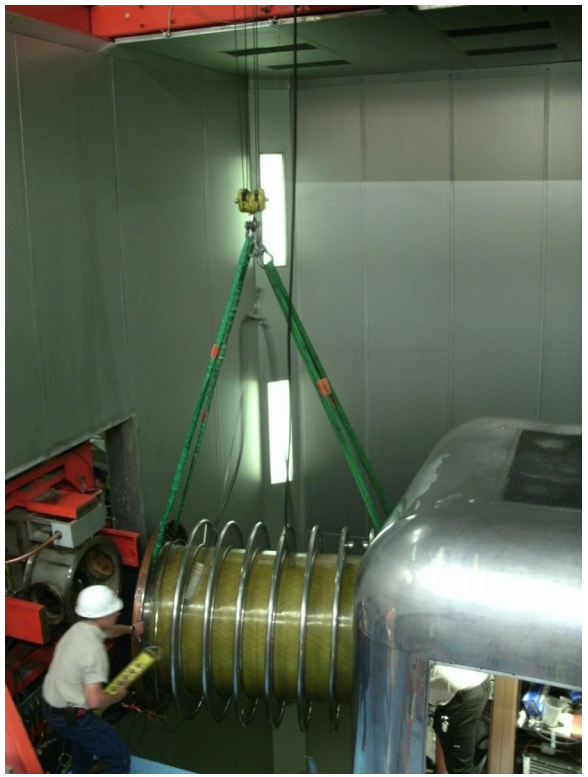


Column detached

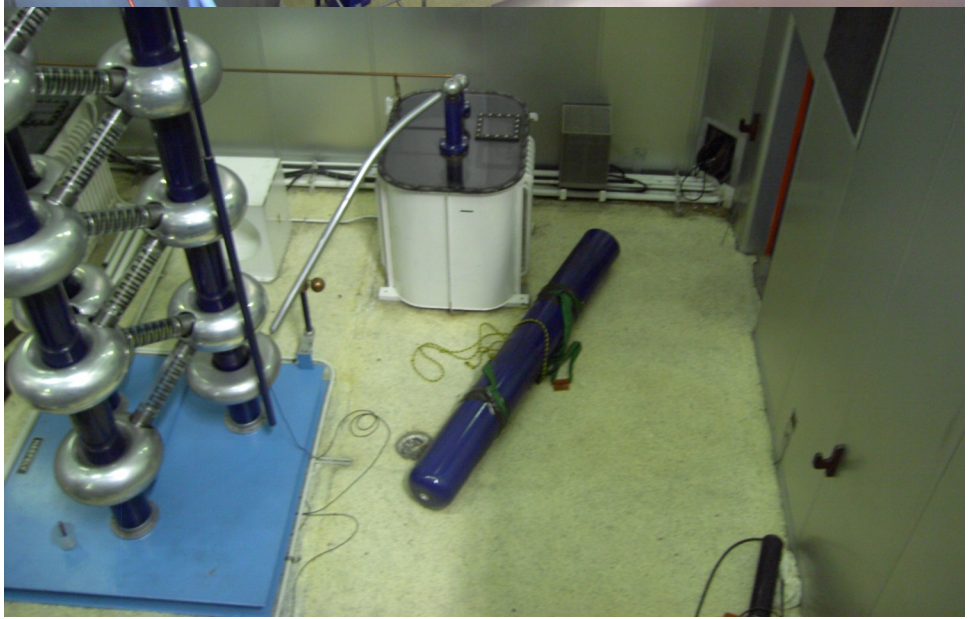








Resistor



Conclusion

- Extremely tight schedule. We must have beam to NTF by 04 Dec!
- We have 1.5 weeks (including Thanksgiving) to get beam to NTF.
  - If there are any slips we will be eating into beam commissioning time!
  - Beam studies will continue until we get beam to Booster in January.