

# RFQ Injector Installation Overview

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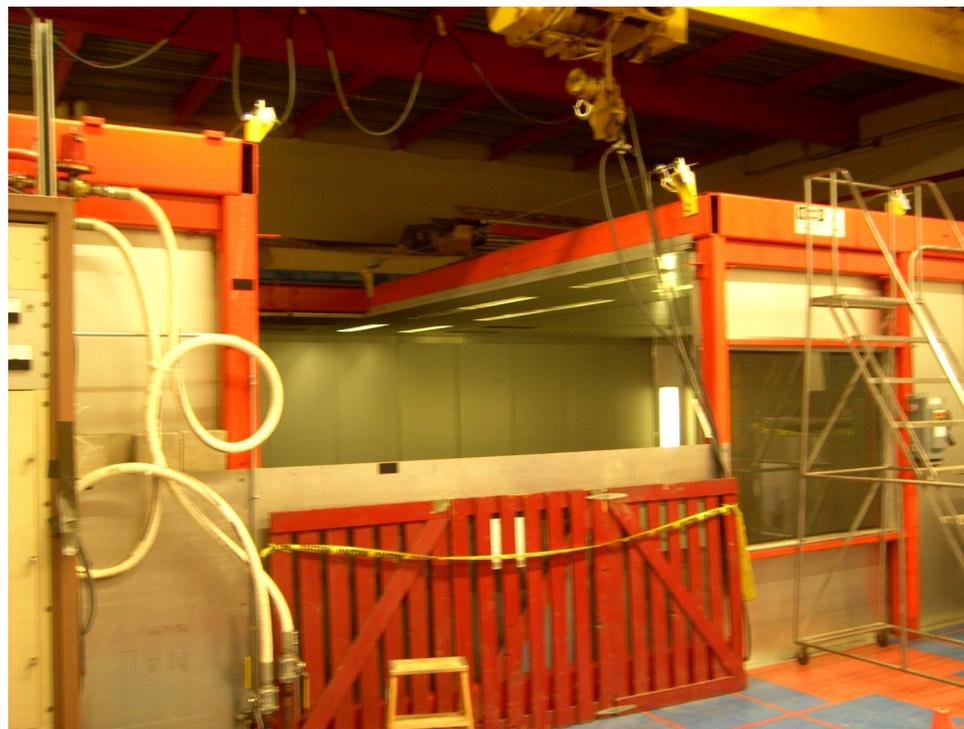
# The Plan

- 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!)

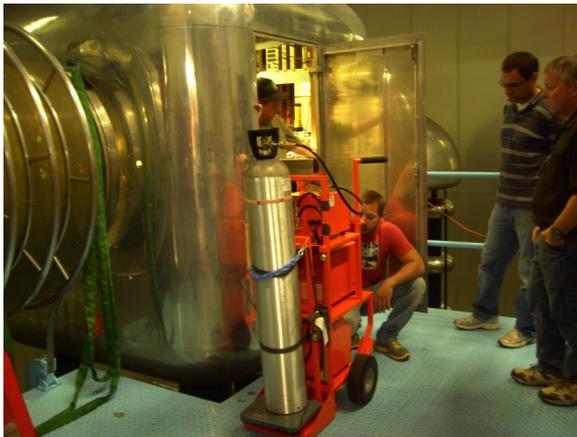
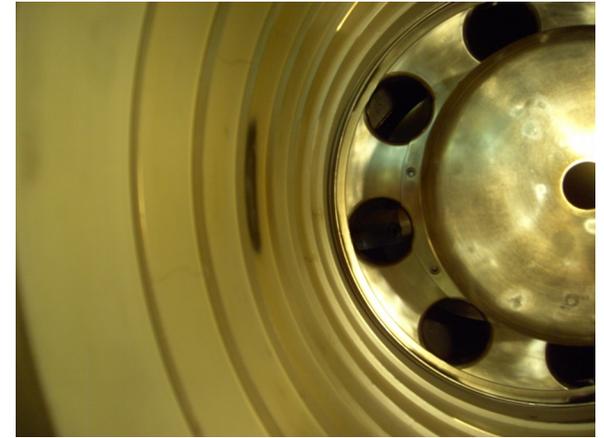
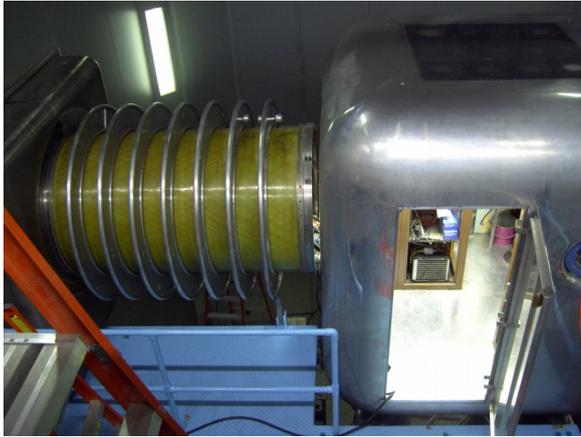
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
RFQ		remove wall		disassemble I- column				
wk 19 RFQ	Sep 2	3	4	5	6	7	8	
			install platform and steps				disassemble LEBT	
wk 20 RFQ	Sep 9	10	11	12	13	14	15	
		install platform and steps				disassemble LEBT		
		disassemble LEBT	disconnect power/water 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

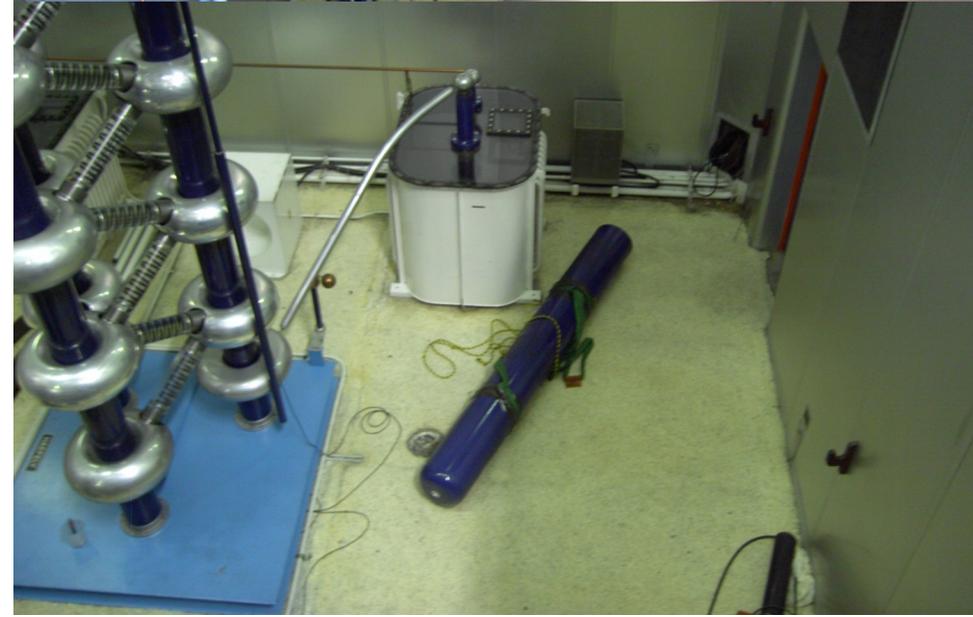
# Wall is off



# 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.