



# **Introduction: Goals of mid-run review**

# U Context

- HL-LHC has very demanding requirements on beam characteristics
- The beam has to be provided **reliably by the existing injectors.**

What are the upgrades to implement and how close can they bring the beam characteristics from the LHC requirements?

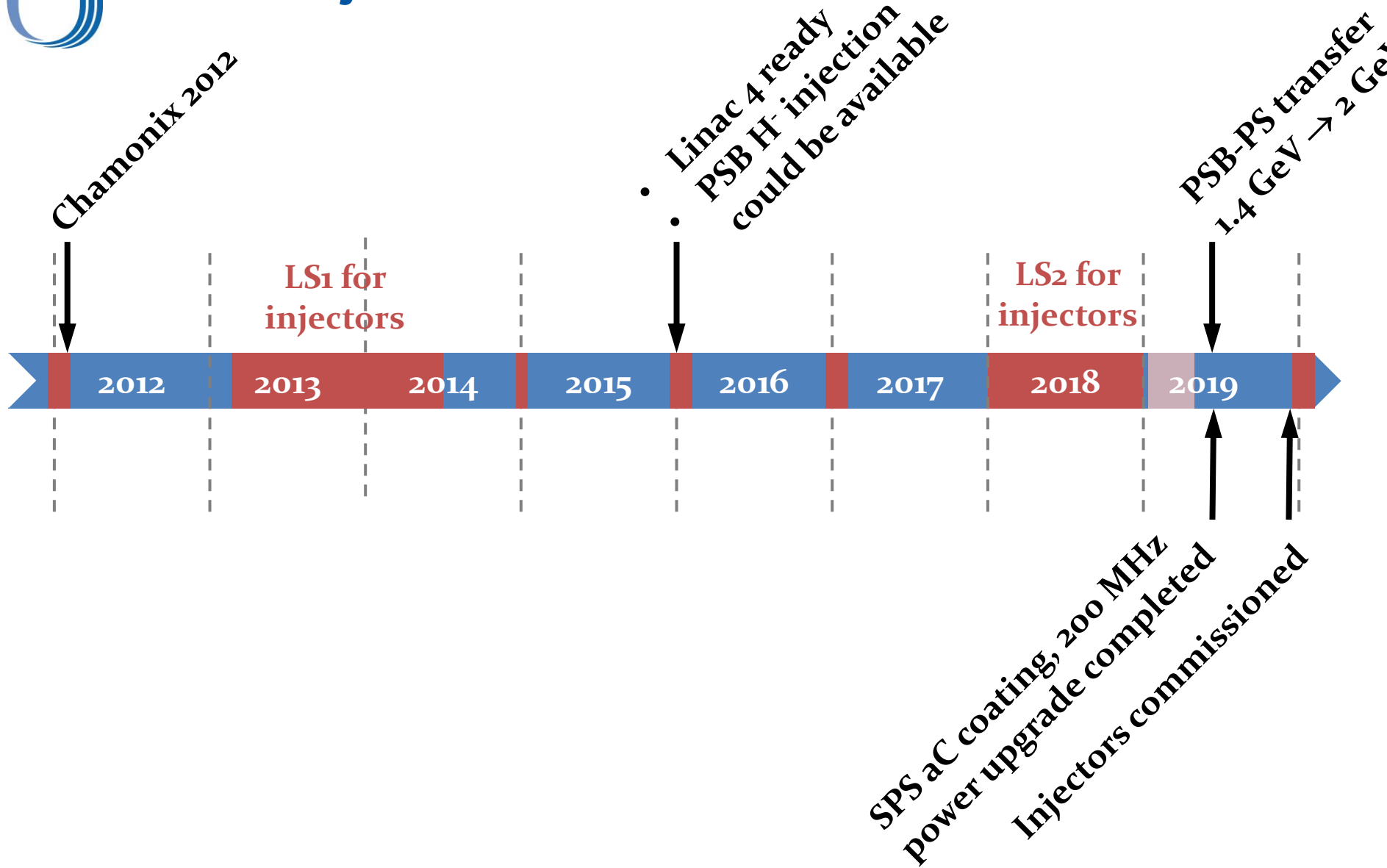


## Generic questions for this meeting

- What is left to understand?
- What is left to demonstrate?
- What else do we need to know to estimate performance after LIU?
- How much can we gain from the foreseen upgrades?
- ...



# LIU Project Timeline





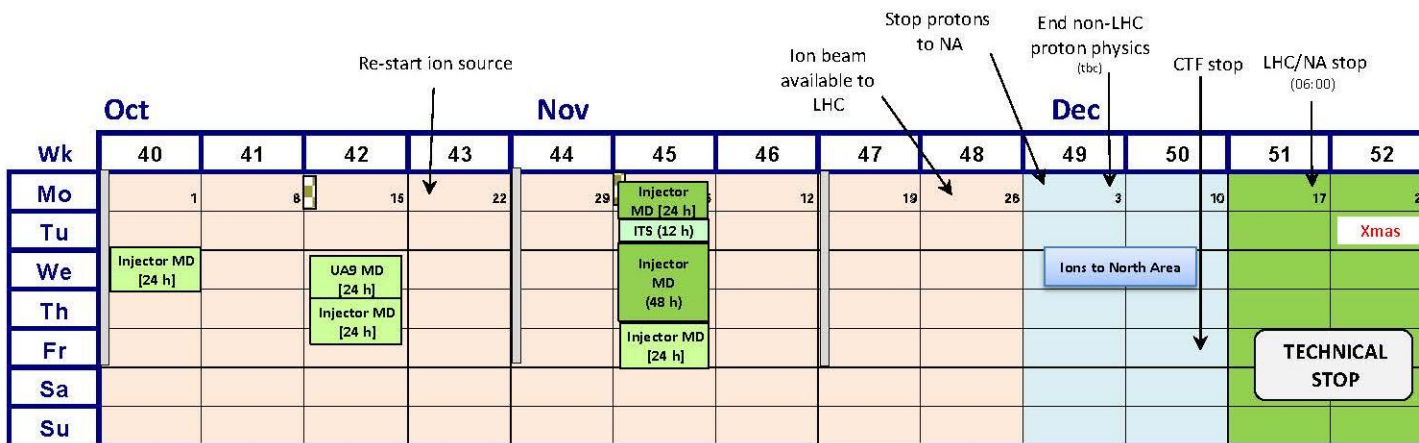
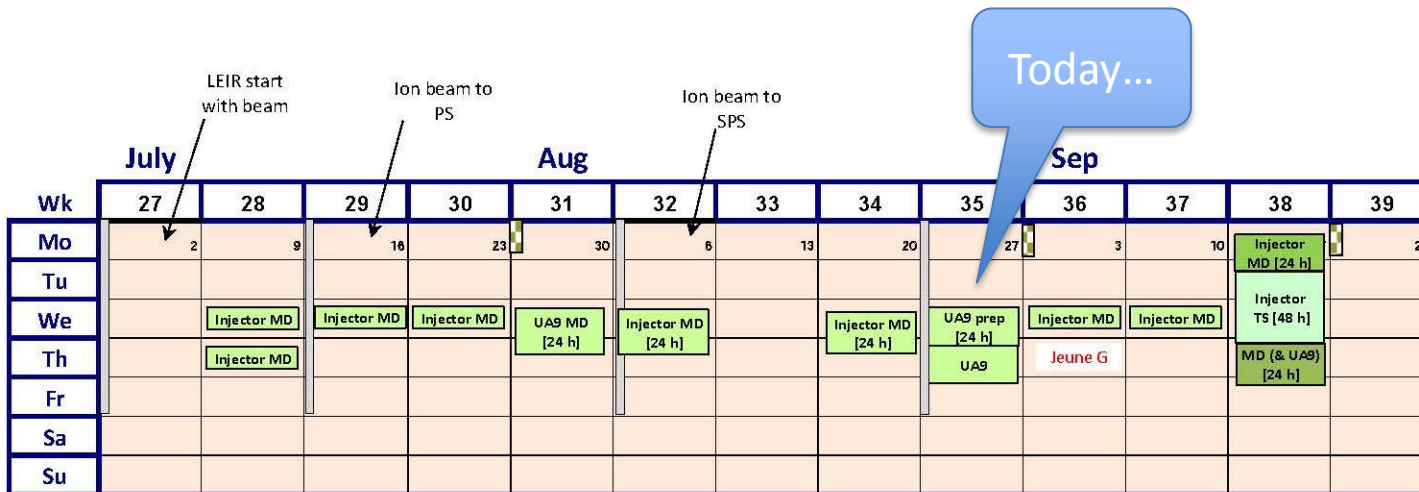
# Upcoming LIU Milestones

	2012				2013						
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July
		Note on ions			LIU review ?		Draft L&MTP to Council		TDR publication	Final L&MTP to Council	
Organization of table of parameters			X								
Definition of work programme for ions		X									
Statement of baseline goals & decision or precise planning for decision on hardware options*					X						
Update of APT data**						X					
Publication of Planning* & Cost Estimate							X				
Contribution to new LTP and MTP***							X				
Publication of TDR									X		

Crucial need for input from beam studies



# Remaining MD opportunities...



- Injector Complex MD Block
- Injector Stop Technical stop for the Injector Chain
- Floating injector MD - LHC beam has priority
- AD Setting-up & Studies
- Ions to LHC
- Ions to North Area
- HiRadMat: possible beam request

**YOUR HELP IS HIGHLY  
WELCOME!**