

# HIE-ISOLDE Project: Phase 2 Planning

Y. KADI for the HIE-ISOLDE Project Team ISOLDE Collaboration Committee Meeting CERN, 28 June 2016



#### **Planning overview**

August – December 2015:

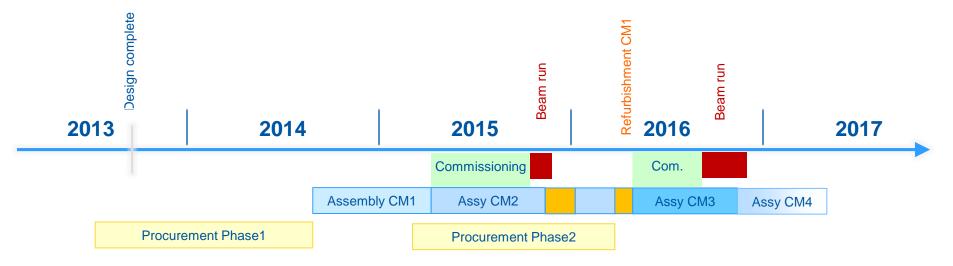
- Design and manufacturing of coupler thermalisations
- CM2 assembly pursued until cavities assembly

2016:

- January: restart CM2 assembly <u>with upgraded</u> <u>design</u>
- February: start refurbishment CM1 in parallel
- End April:
  - CM1 & CM2 installed in the Linac
  - Start CM3 assembly



Co-activity CM1 refurbishment / CM2 final testing at SM18



#### CM3 assembly

- Planning:
  - Baseline 24w (+2w contingency) as for CM2
  - + 2 weeks final testing (initially planned in bunker)
  - On schedule so far

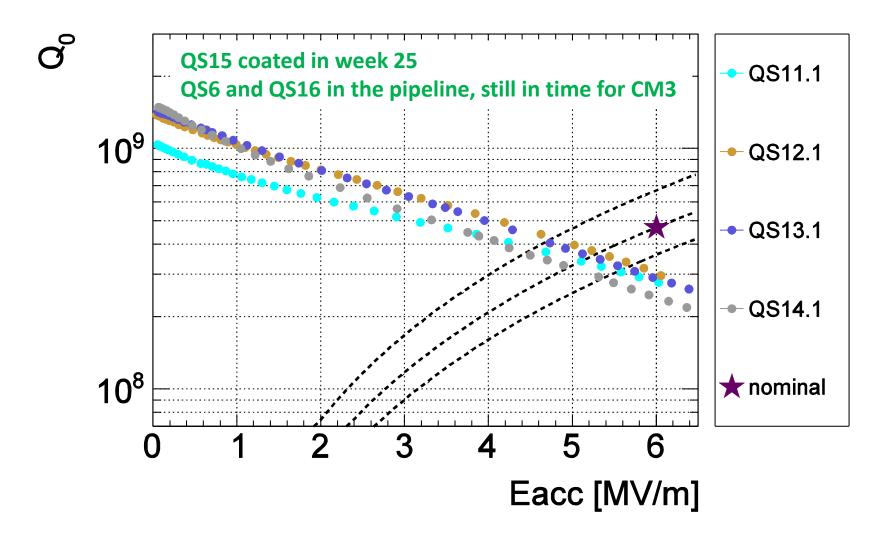
Organisation

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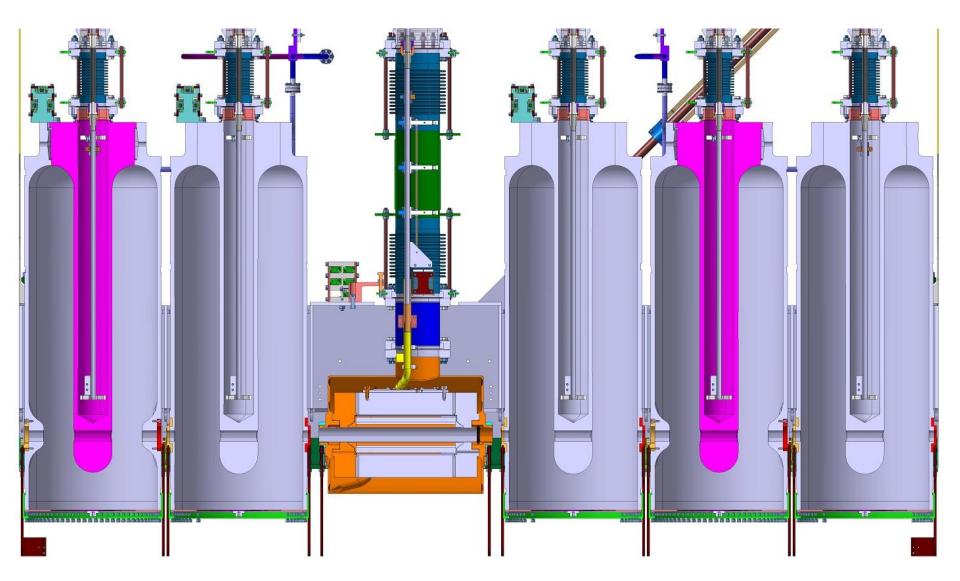
- Same team as for CM1-CM2
- All parts ready before assembly start
- Use of upgraded procedures

	Roadmap (clean room assembly activity, excluding component preparation, blank assemblies,etc.)	<b>~</b>																								→	
	In progress Achieved																										
	Pending		May		June			July			August					September				October							
	Assembly steps (including QA)	17			20	21			24	25				29			33	34			37		-				43
1	Vacuum vessel assembly																										
2	Thermal shield and vacuum vessel assembly																										
3	Chimney assembly																										
4	Top plate assembly															Ir	nsta	llati	on s	ole	noid						
5	Upper thermal shield and helium tank															_											
6	Insertion of chiminey																			lr	nstal	latio	n ca	aviti	es		
7	Install. of the support frame															Ļ											
8	Install. of the solenoid																										
9	Intermediate vacuum testing (newly added)																			Ļ							
10	Install. of the cavities																										
11	Install. of the cavities's aux.(tuner, coupler, RF cables)																										
12	Cryo-module vessel closure																										
13	Final assembly qualification testing																										
	Contingency																										

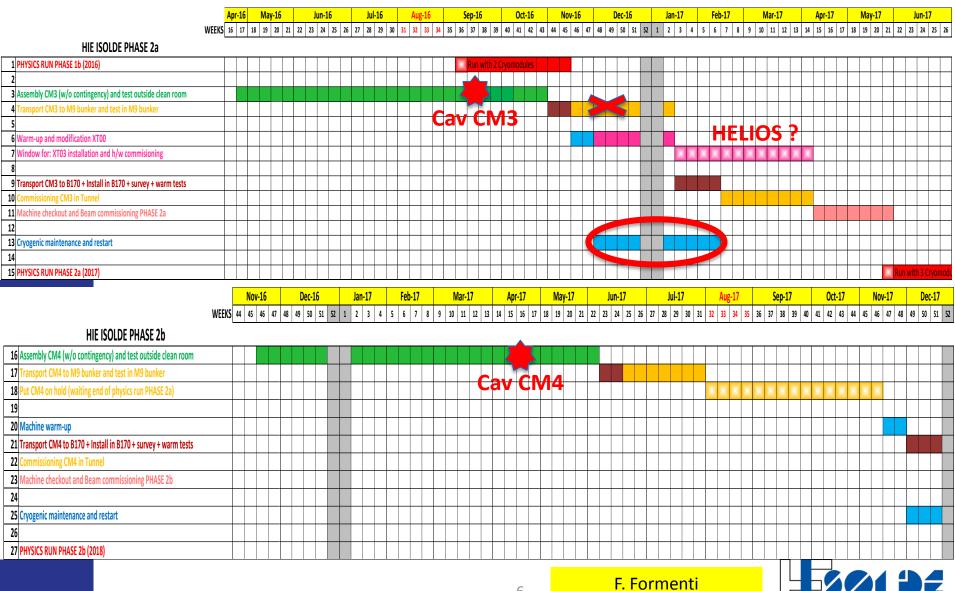
### 4 out of 5 cavities available (tested) for CM3



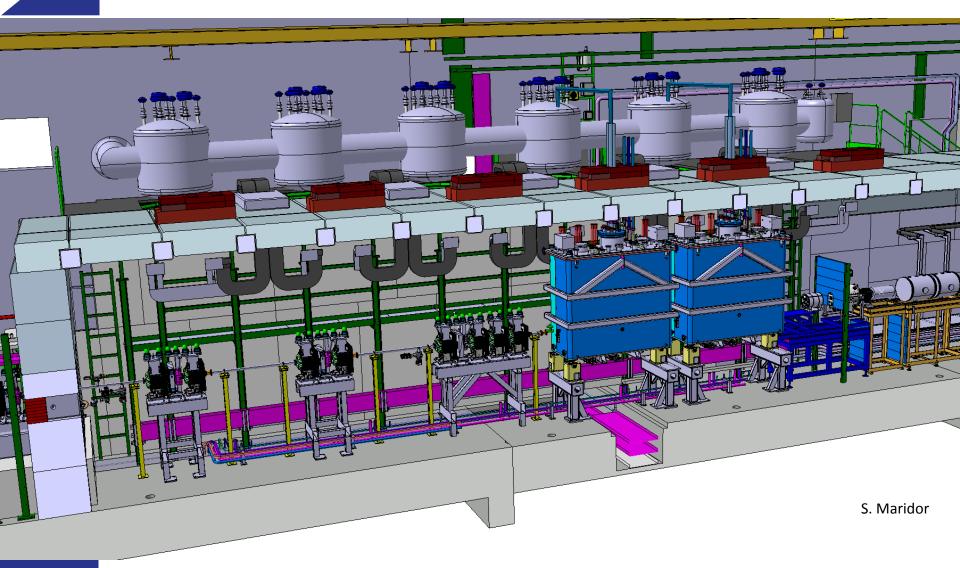
### CM4 configuration

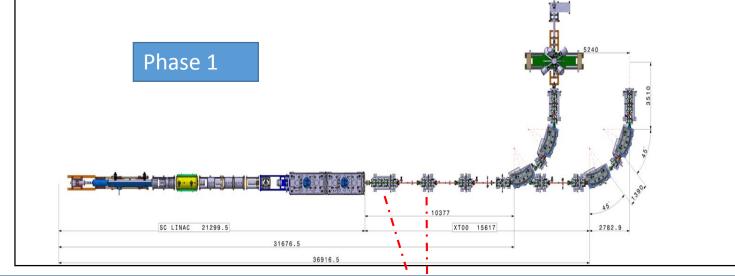


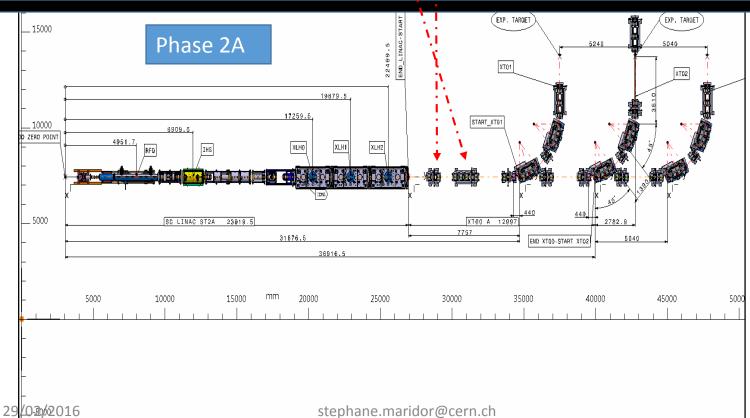
### Forecast for HIE-ISOLDE Phase 2 (2016-2017)

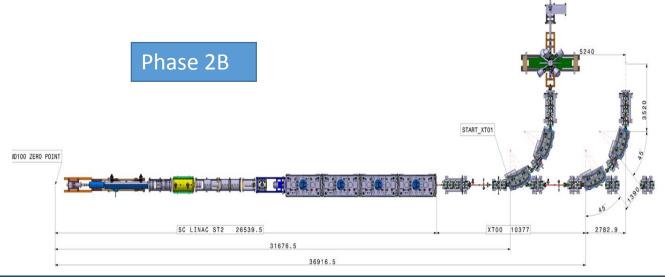


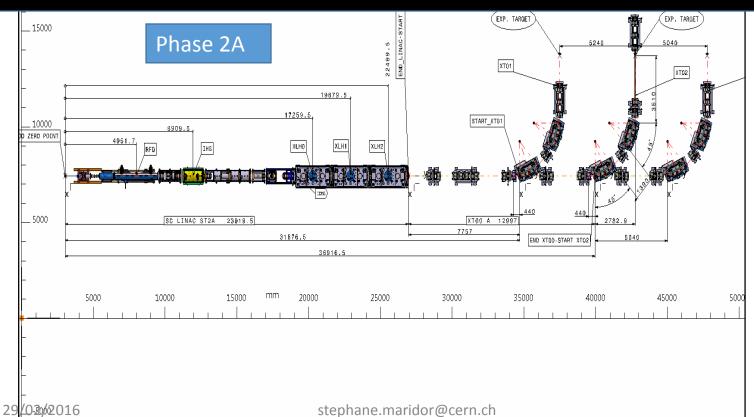
### **HIE-ISOLDE SC LINAC: Phase 1**











## **Overall Summary**

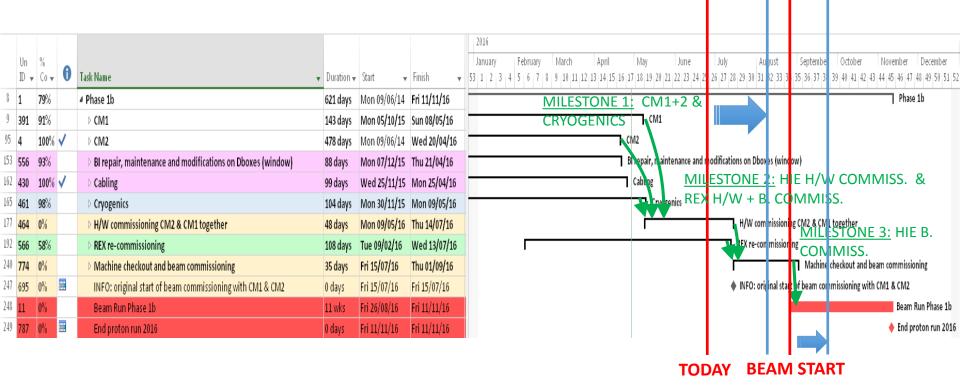
- Planning for Physics with 3 and then with 4 cryomodules chosen such as to maximise beam time in 2017 and 2018 respectively (> 25 wks)
- Main limitation in installing CMs during YETS = restart of cryo plant on time
  - Limit cryo plant shutdown works => early maintenance (incl. cooling plant)
  - Keep SC Linac cold during EYETS => availability of cooling plant
  - Cooldown with 2 CMS this year: 3 wks -> 6 wks
  - Cooldown with 3 or 4 CMs: ?? => rely on experience gained this year !
- Install XT03 during EYETS 2016-2017
- Keep XT02 as is until ISS is installed







### PLANNING FOR PHASE 1



- Extended overhaul of cryo-plant, polution, fixing leaks, automatization of the process, training of cryo operators => main cause of delay
- HW commissioning on stand by since 3 weeks waiting for cavities to be cold
- On time achievement of last two milestones is not still possible unless we consider limiting the HW & B commissioning activities
- First (stable) beam for machine and experiment setup initially planned for end wk35 => now end wk38