



2009 Hardware Commissioning Day - Session 3b: Powering Tests

How does it look altogether

Boris, Mirko, Matteo, Katy, Julie, Rudiger, Reiner, Knud, Nuria and Antonio

Hardware Commissioning



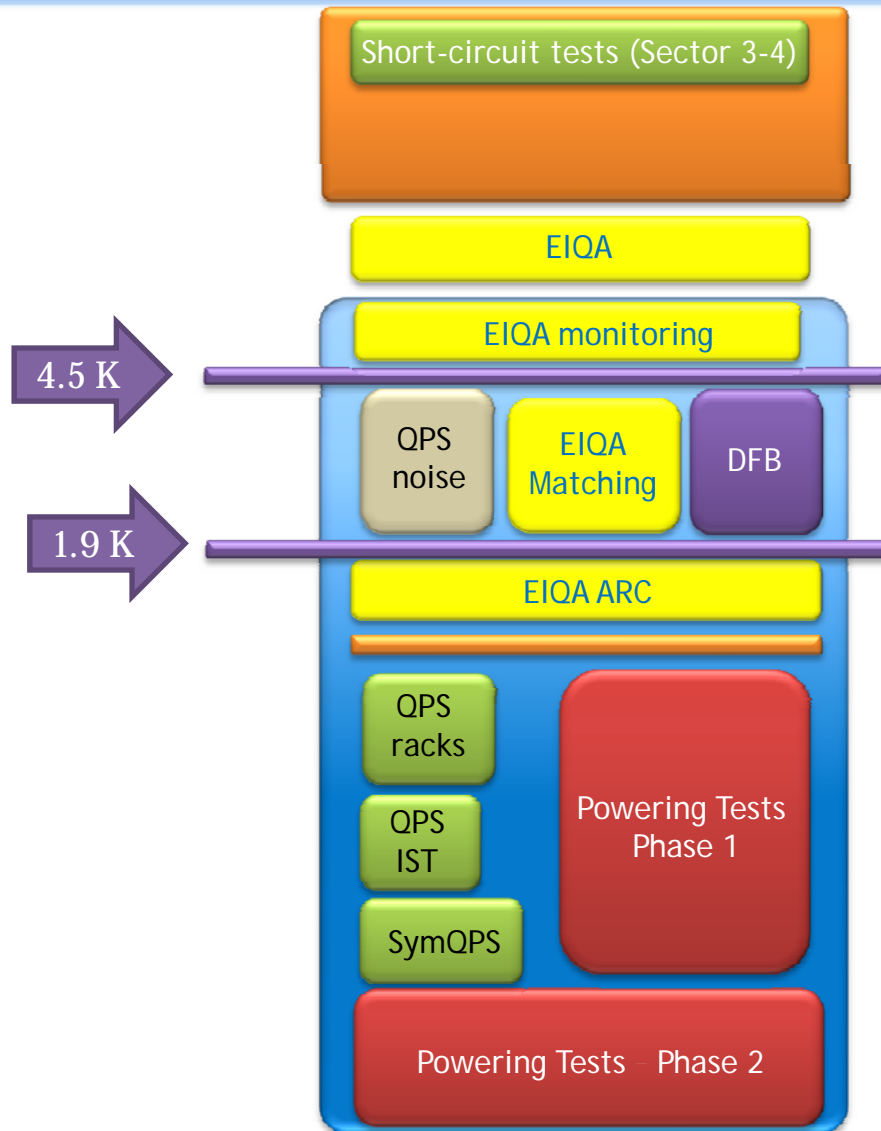
Shutdown

Cool-down

Cryo-OK



2009 Commissioning

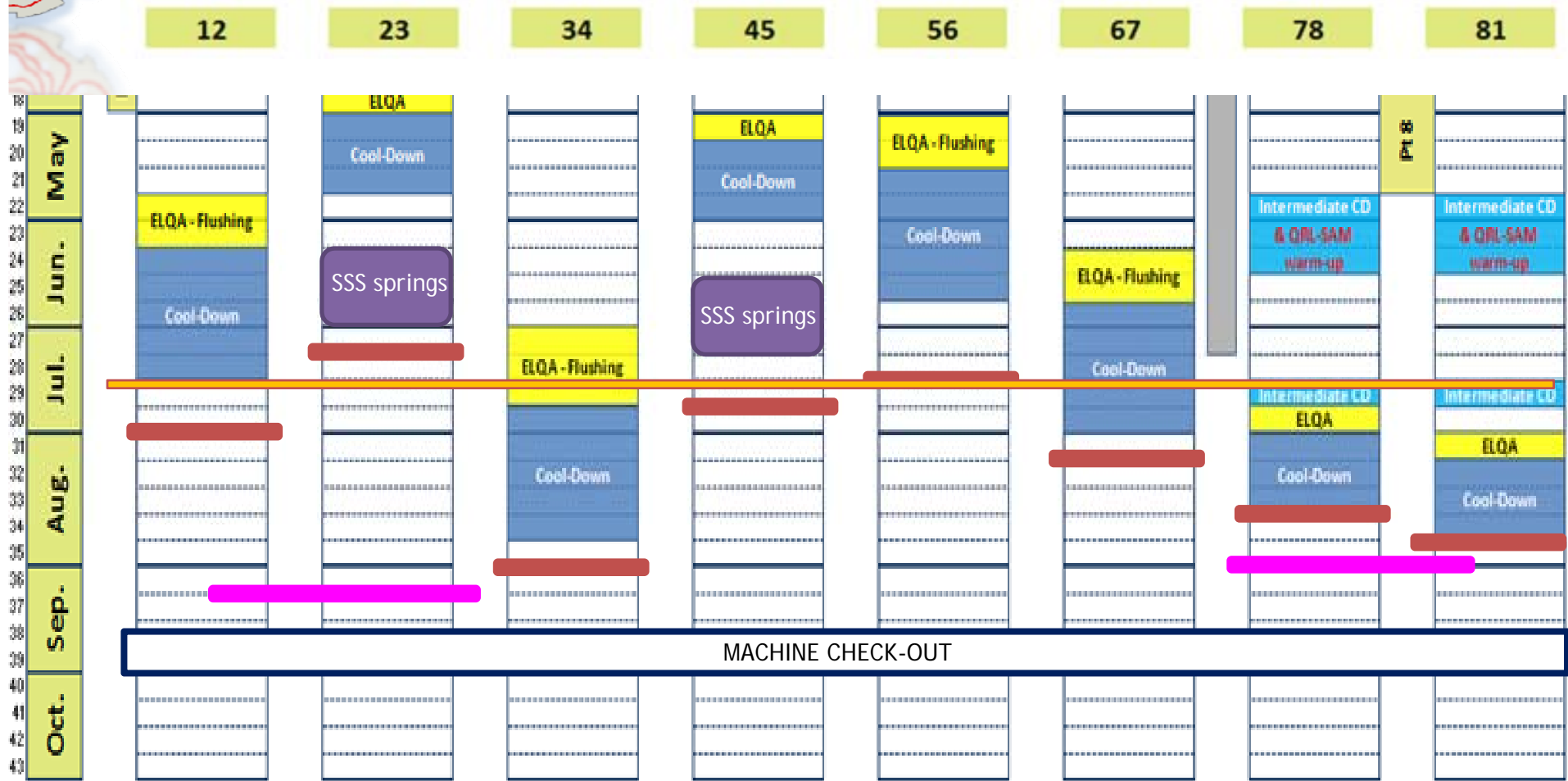
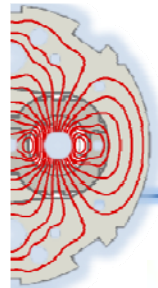




Powering Test Planning: Boundaries

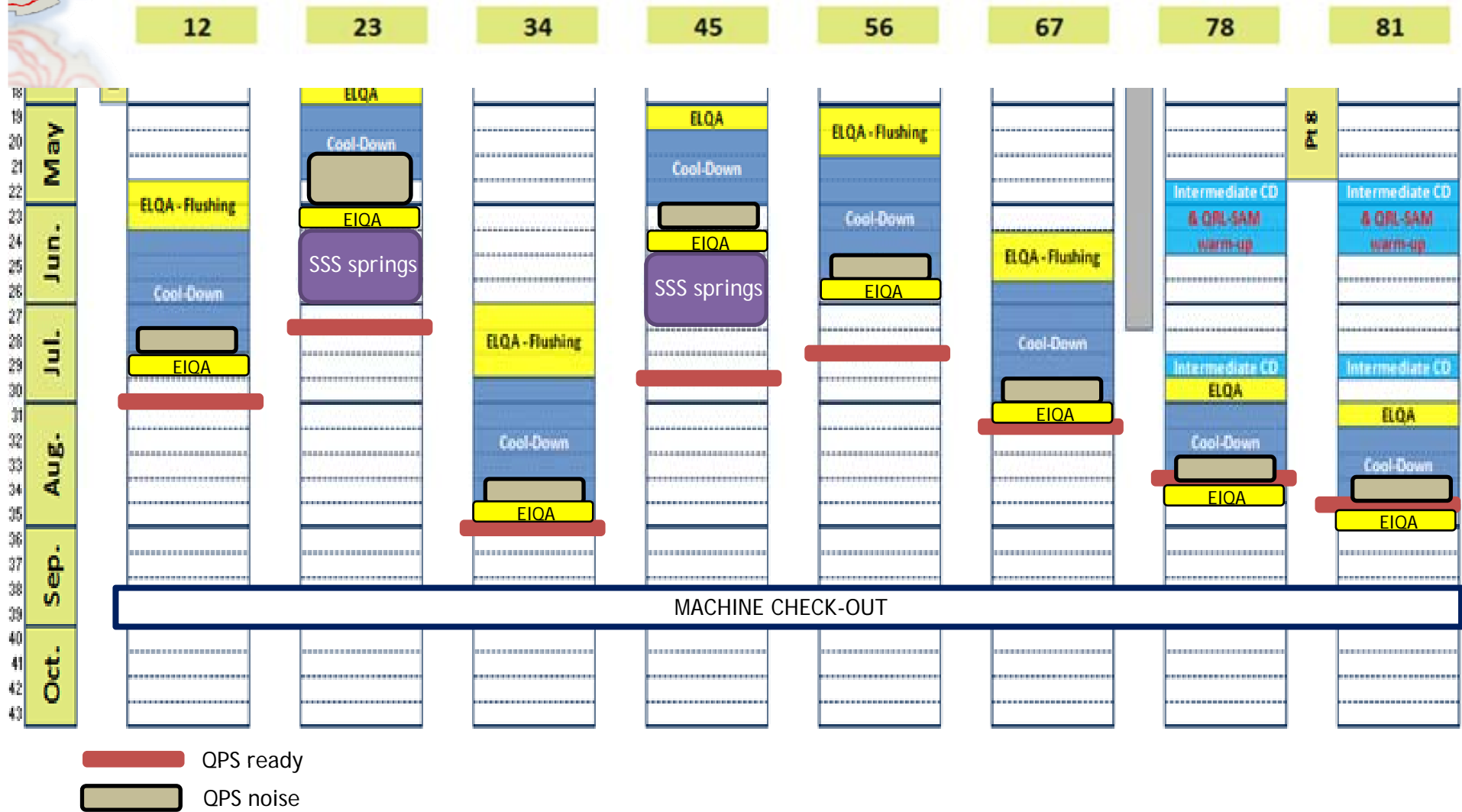
		12	23	34	45	56	67	78	81
2	Jan.		Intermediate CD		Intermediate CD	Warm-up			
3									
4									
5									
6	Feb.		Intermediate CD		Intermediate CD		Warm-up		
7									
8									
9	Mar.		Intermediate CD & QRL-SAM warm-up		Intermediate CD & QRL-SAM warm-up				
10									
11									
12	Apr.		Interm. CD		Intermediate CD			He emptying	He emptying
13									
14									
15	May		ELQA		ELQA	ELQA - Flushing		Intermediate CD QRL&SAM w-up	Intermediate CD QRL&SAM w-up
16									
17									
18	Jun.		Cool-Down		Cool-Down			Intermediate CD & QRL-SAM warm-up	Intermediate CD & QRL-SAM warm-up
19									
20									
21	Jul.								
22									
23									
24	Aug.							Intermediate CD	Intermediate CD
25								ELQA	ELQA
26									
27	Sep.								
28									
29									
30	Oct.								
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Powering Test Planning: Boundaries

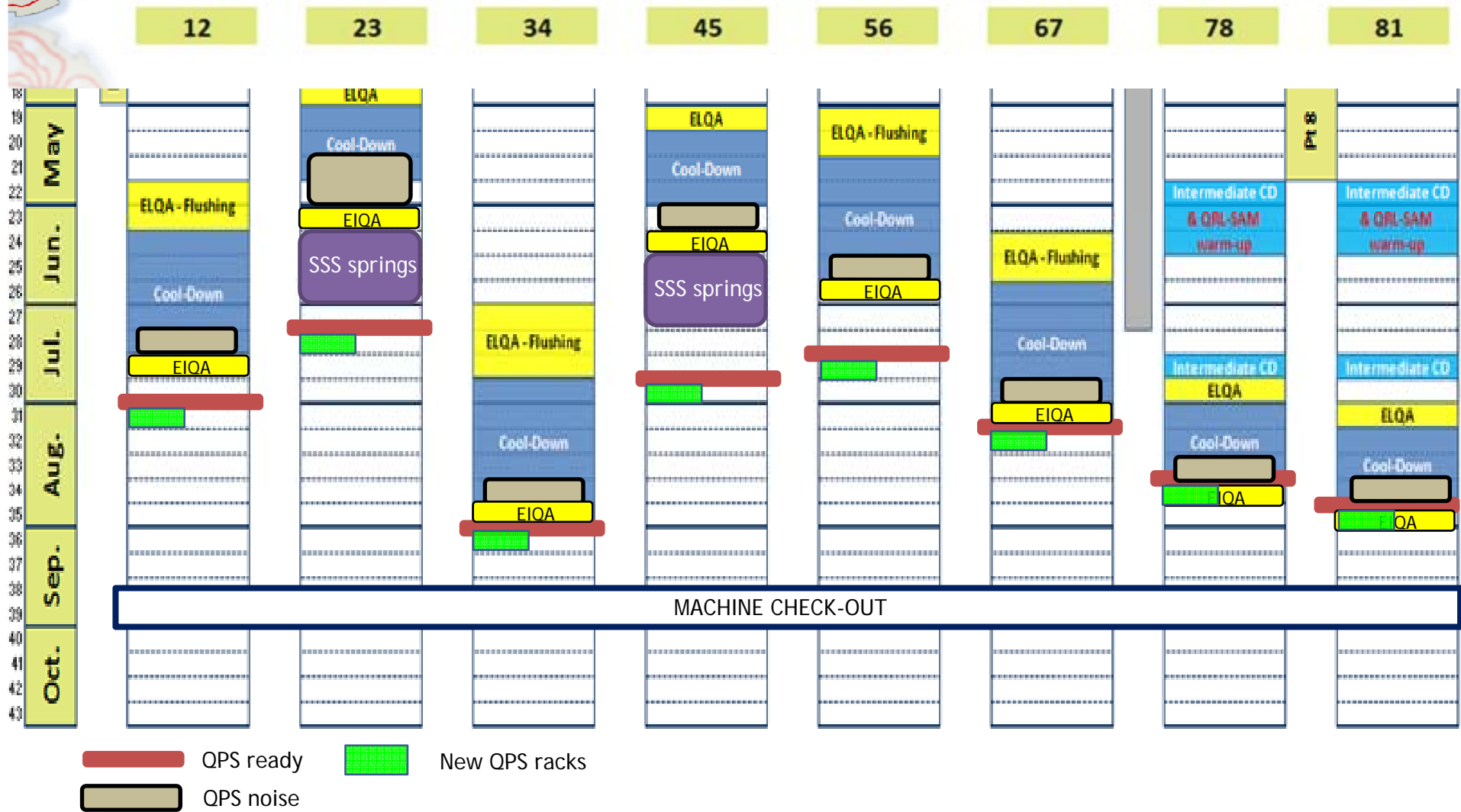


- QPS new splice detector ready for installation in the tunnel
- Beam injection tests
- Symmetric quench detectors available

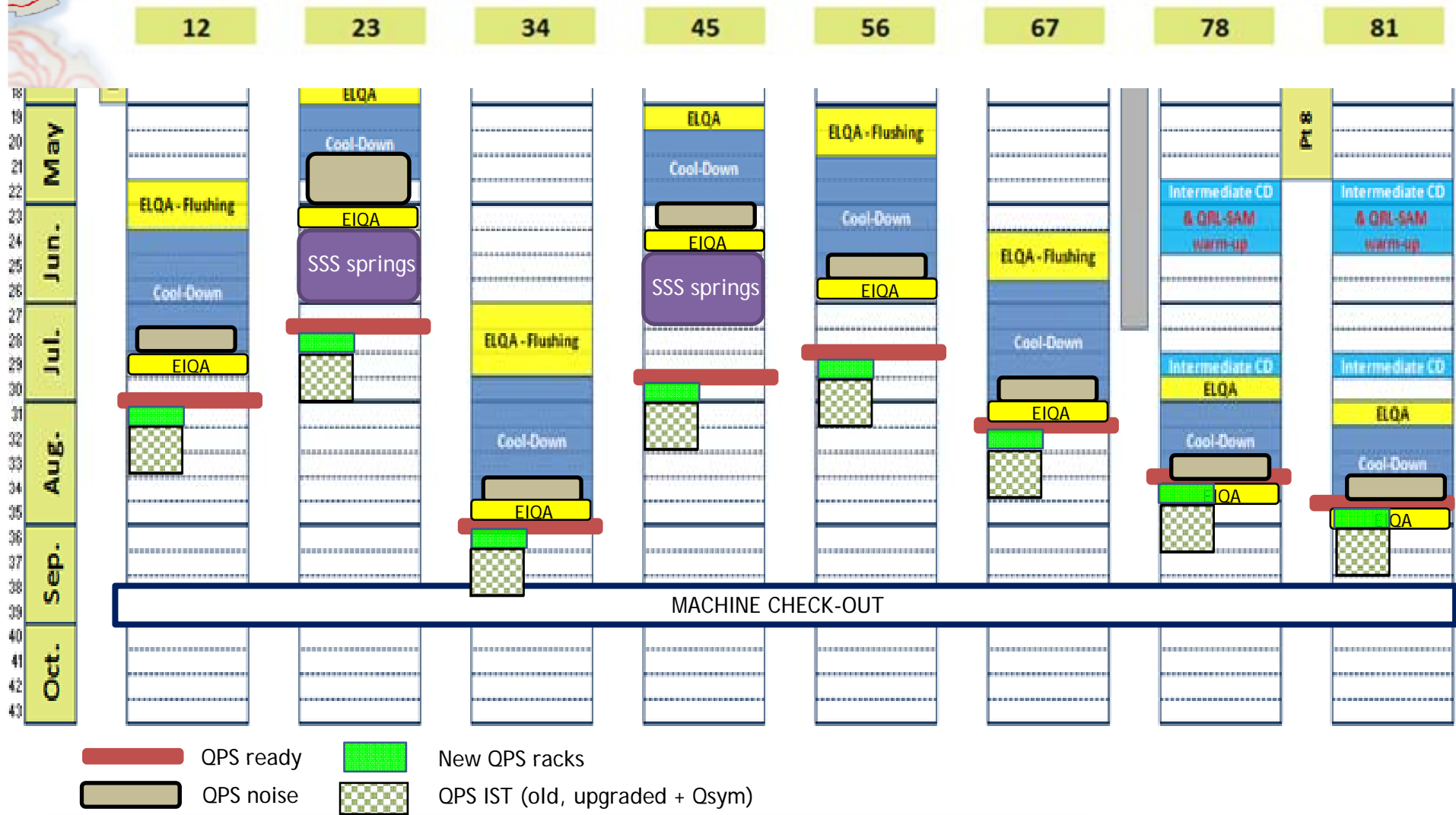
Powering Test Planning: Preparation



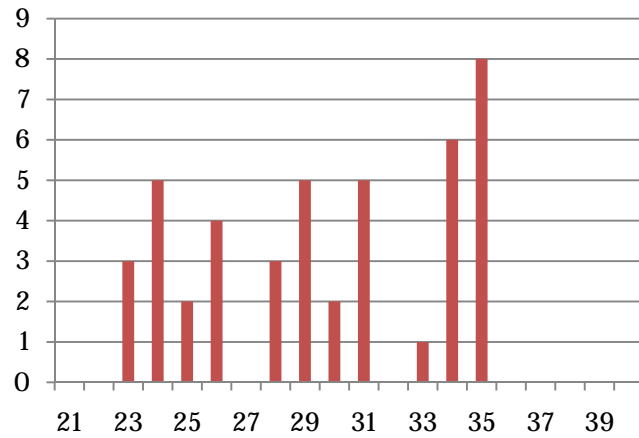
Powering Test Planning: Preparation



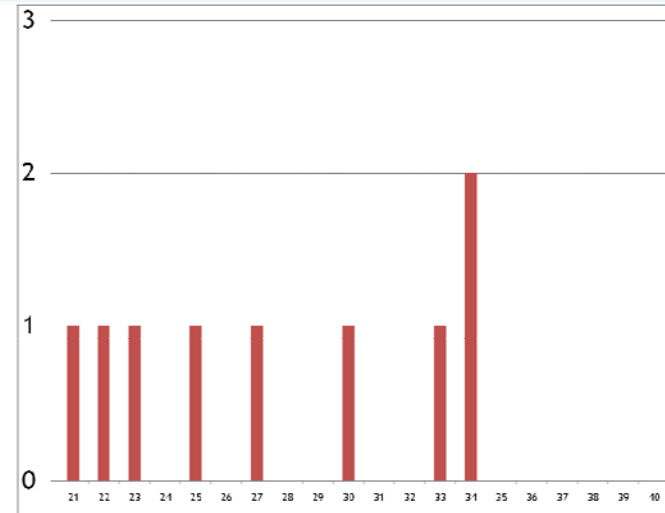
Powering Test Planning: Preparation



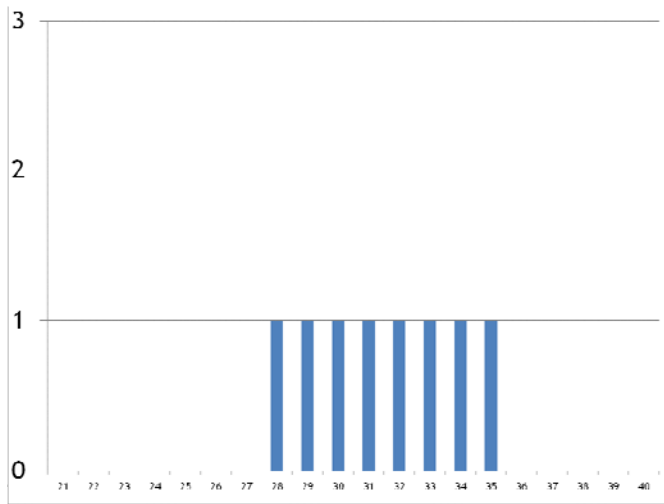
2009 Commissioning



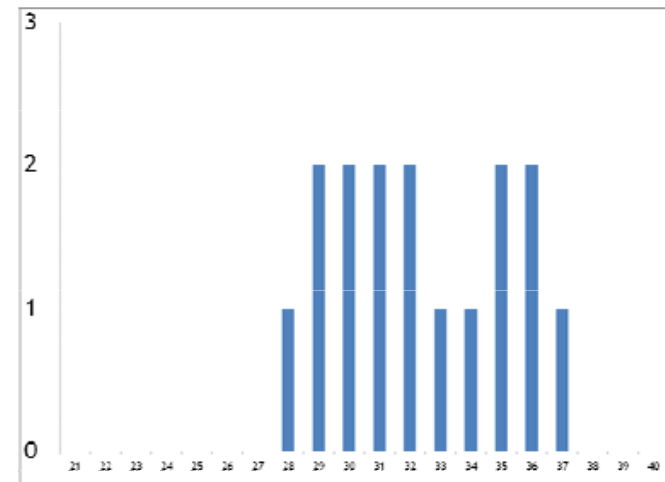
EIQA



QPS Noise Evaluation

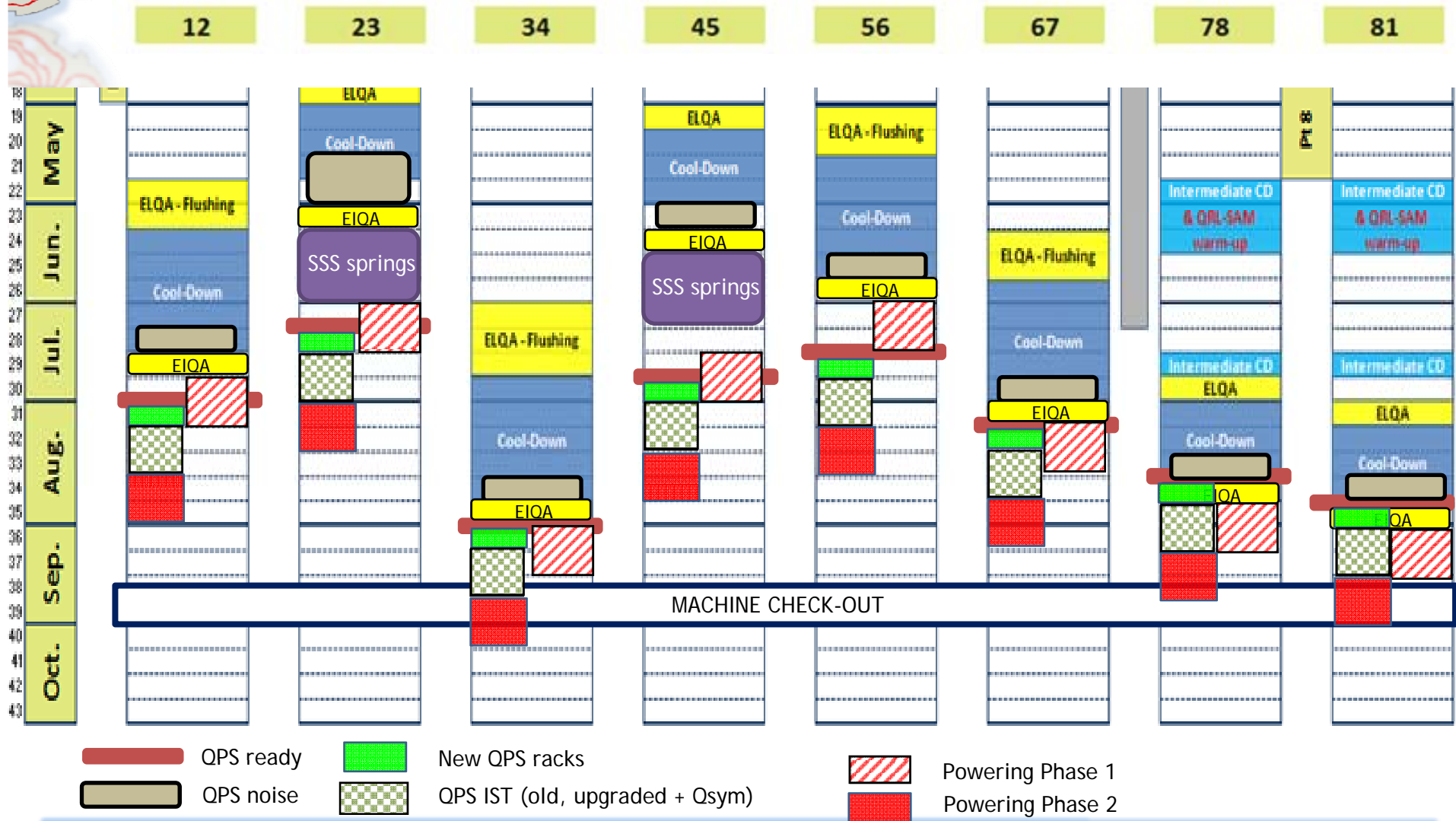


QPS Racks



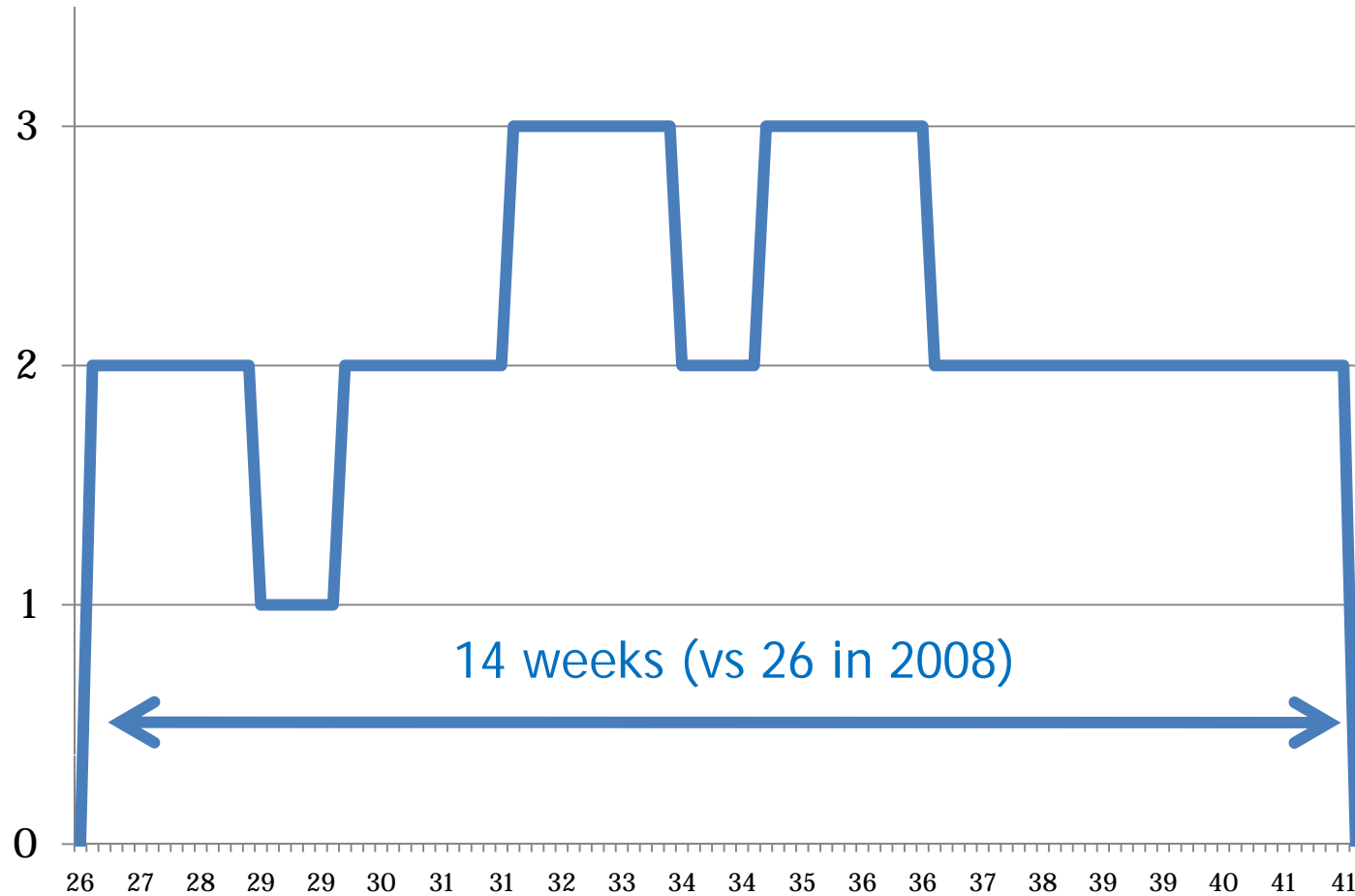
QPS IST

Powering Test Planning: Powering - 2

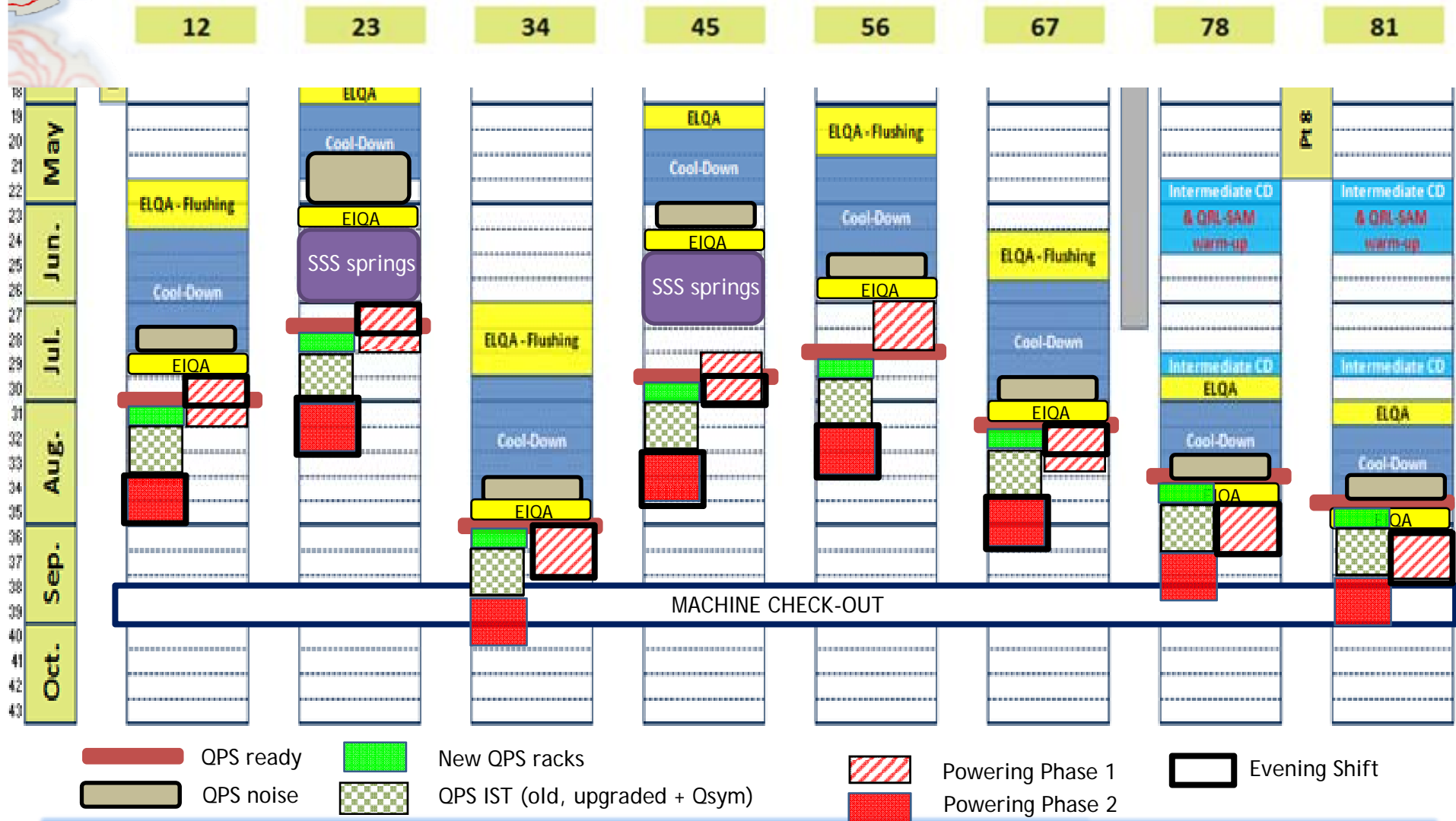
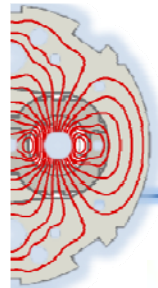




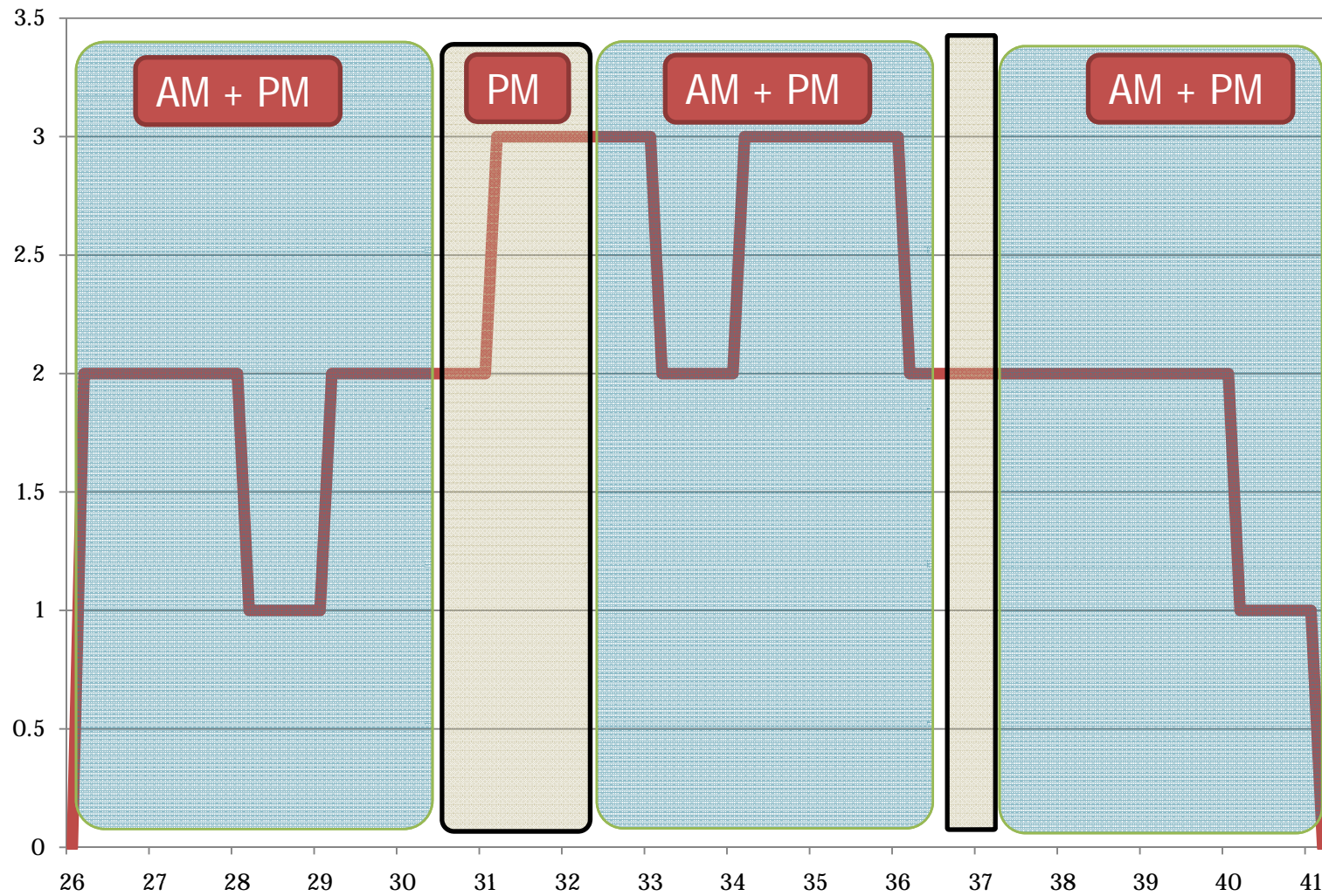
Powering Tests: Sectors in Parallel



Powering Test Planning - Shifts



Powering Tests - Shifts



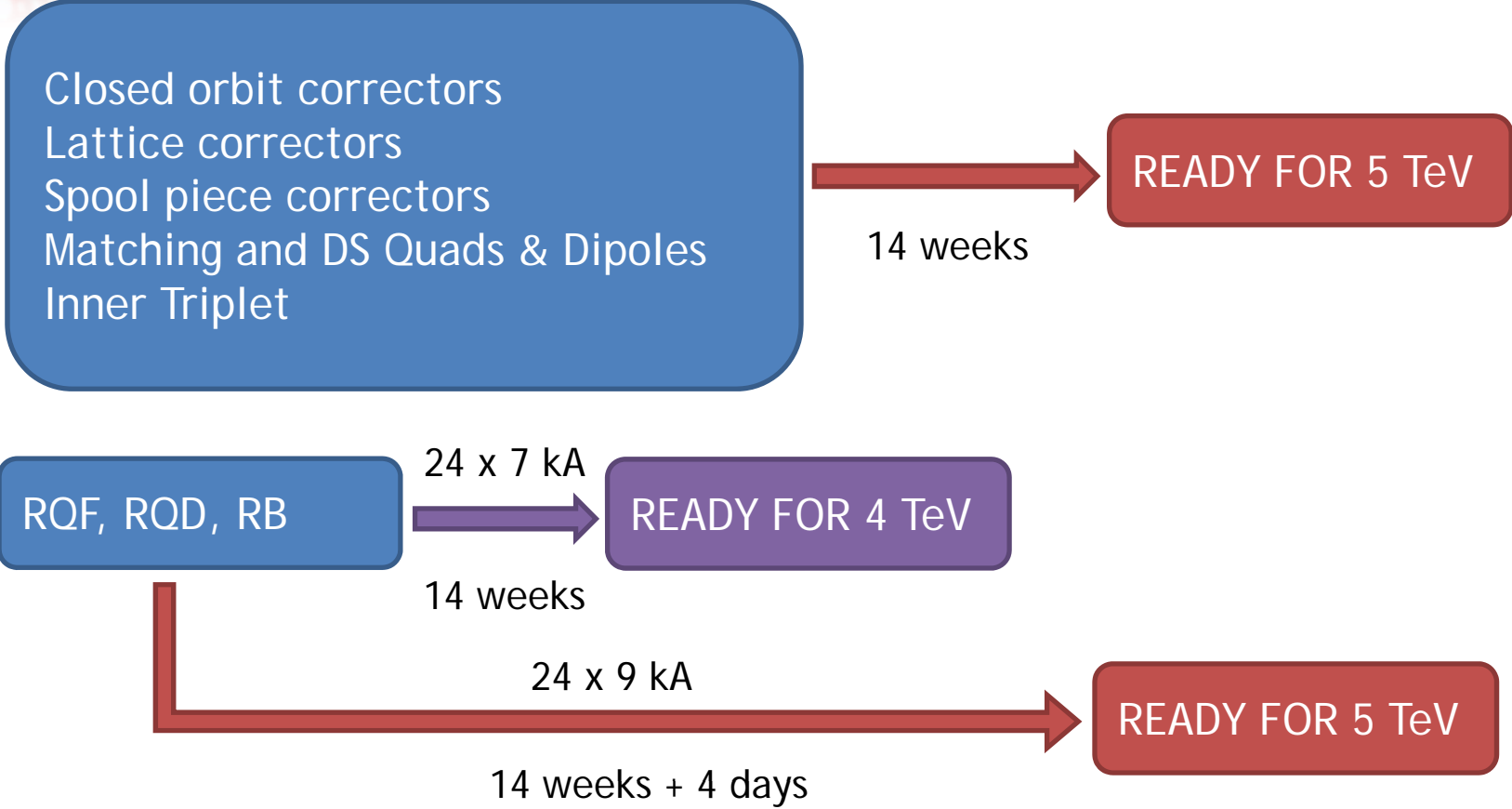


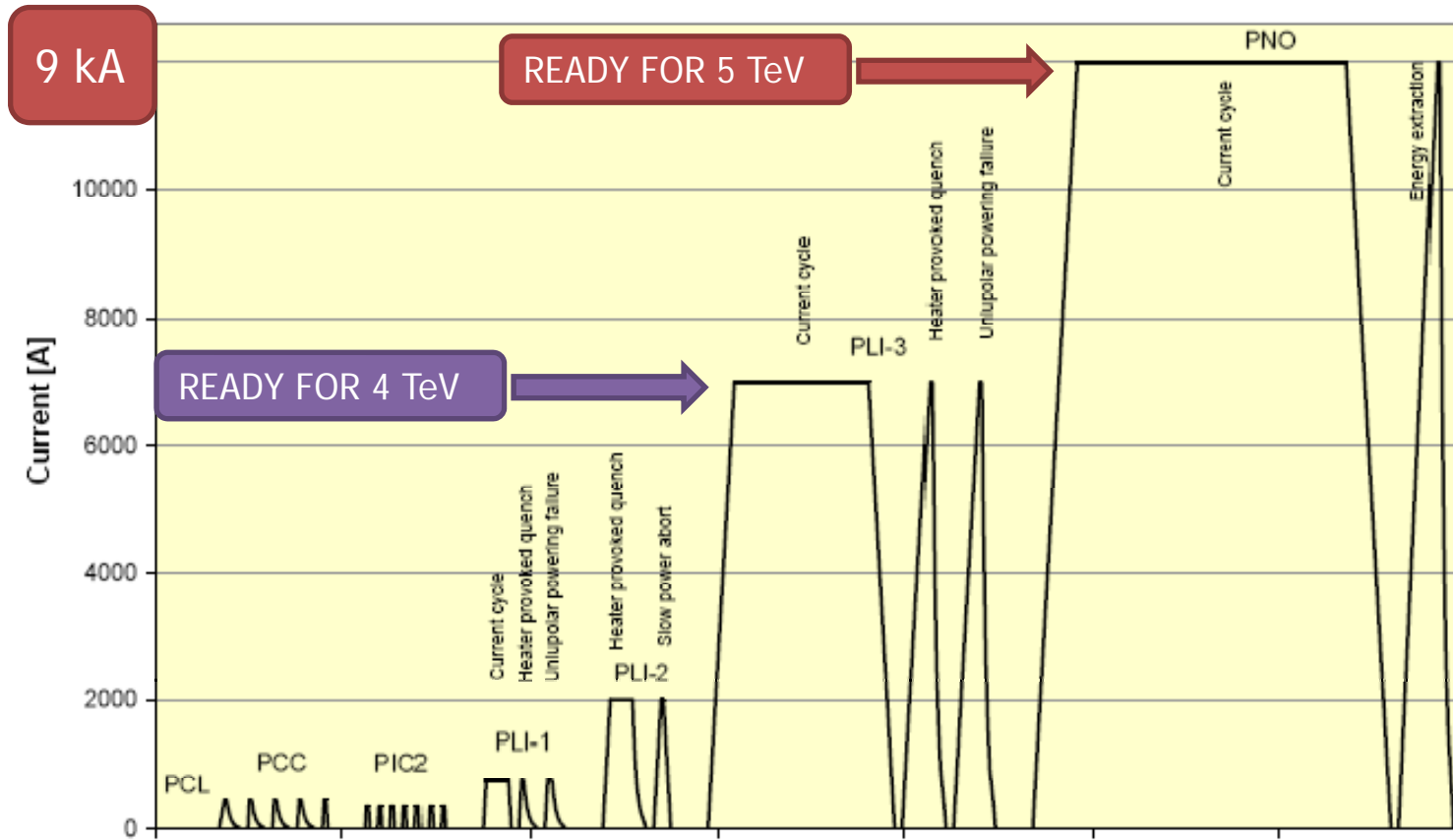
Other things to take into account

- Some commissioning activities still have to be scheduled:
 - Verification of equipment connection to the UPS (AUG or pseudo-AUG tests)
 - Calorimetry tests
 - Warm magnet heat runs (all points)
- Everything has to be done in coordination with the beam commissioning activities
 - Dry-runs
 - Injection tests
 - Machine check-out
 - Machine protection tests
- We are planning for success: remember that we still have some doubts on some splices and two sectors have not gone through the calorimetry tests yet

From 4 to 5 TeV

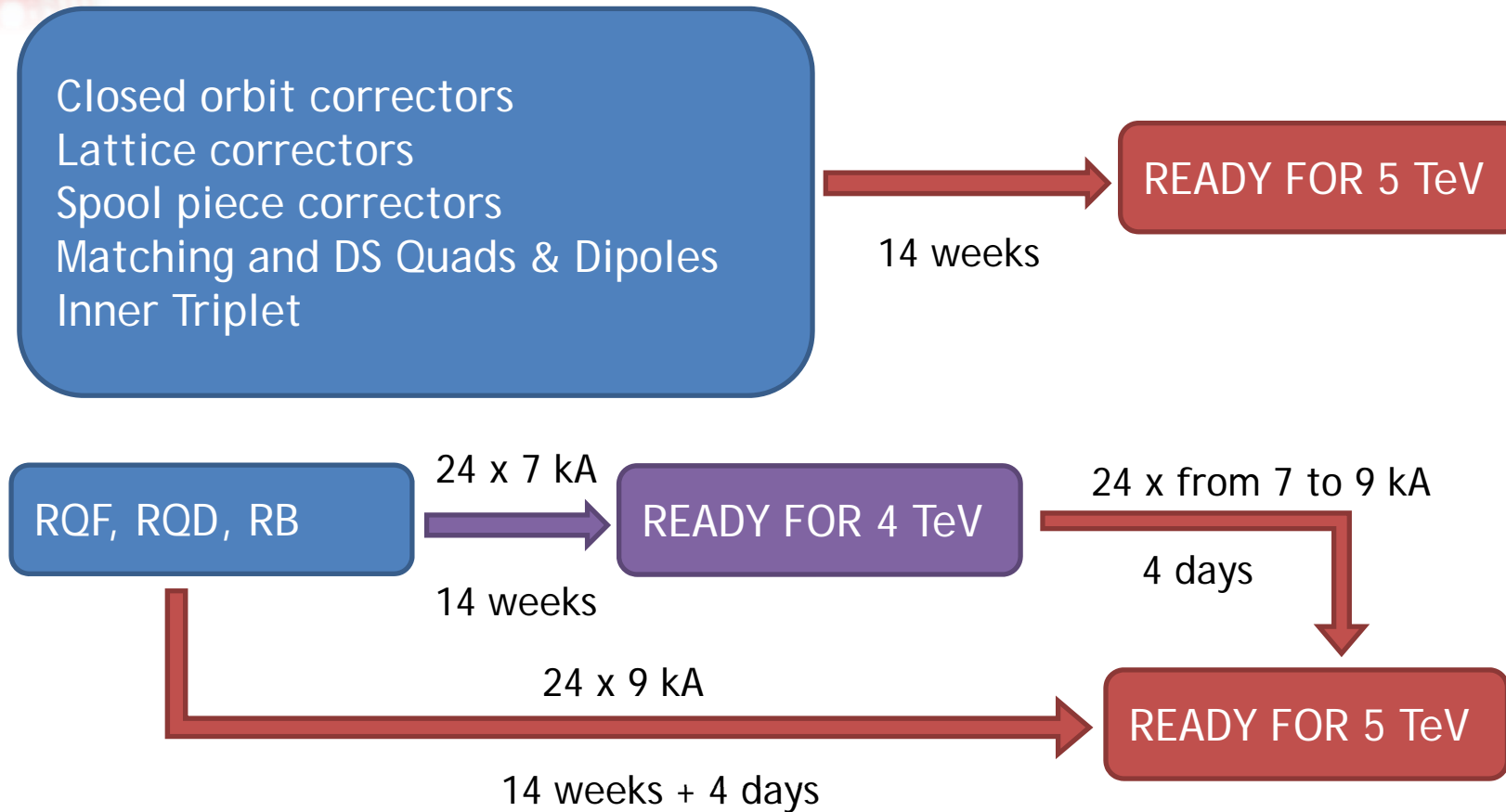
In an ideal world, on the 5th of October at 22H00, after 14 weeks of hard work:

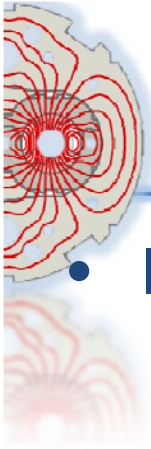




From 4 to 5 TeV

In an ideal world, on the 5th of October at 22H00, after 14 weeks of hard work:





Summary and Conclusions

- Important dates:
 - First sector under HCC control: **June 1st (Sector 2-3)**
 - First sector in powering phase 1: **July 1st (Sectors 2-3 & 5-6)**
 - First sector in powering phase 2: **August 1st (Sector 2-3)**
 - First two sectors powered together: **July 1st (Sectors 2-3 & 5-6)**
 - First three sectors powered together: **August 8th (Sectors 2-3, 5-6 & 6-7)**
 - End of 2009 Hardware Commissioning to 4 TeV: **October 5th (at 22H00)**
- It's not going to be easy
- We are planning to do the same number of tests in almost half of the time. We just cannot make it shorter
- New activities or delays on the shutdown planning will imply a delay of the cold check-out and commissioning with beam



thank you