

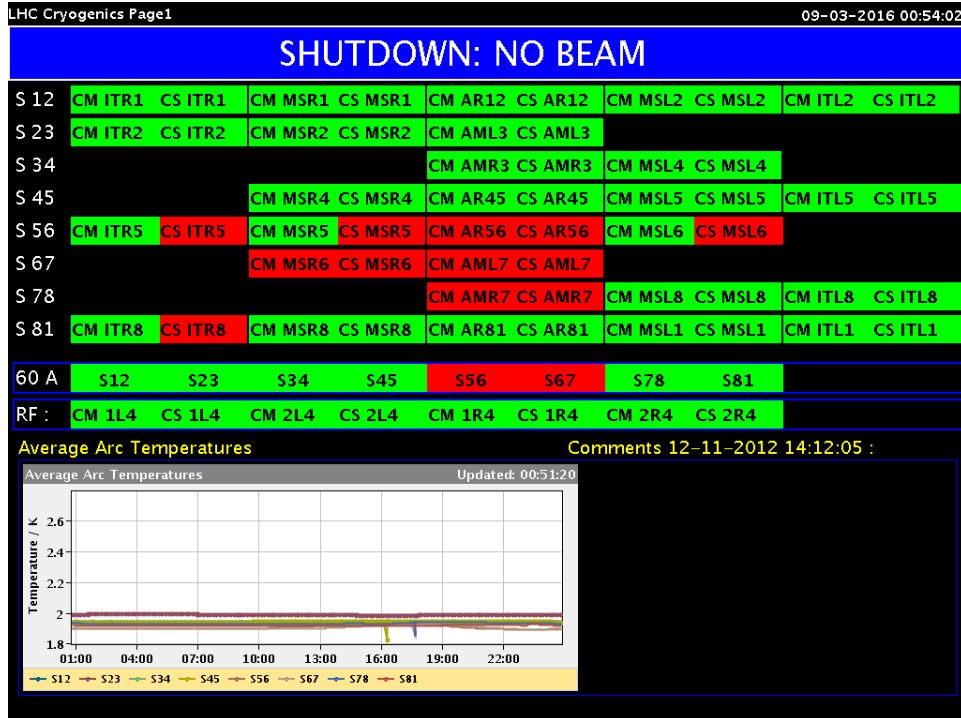


# Powering tests preparation\_meeting 6

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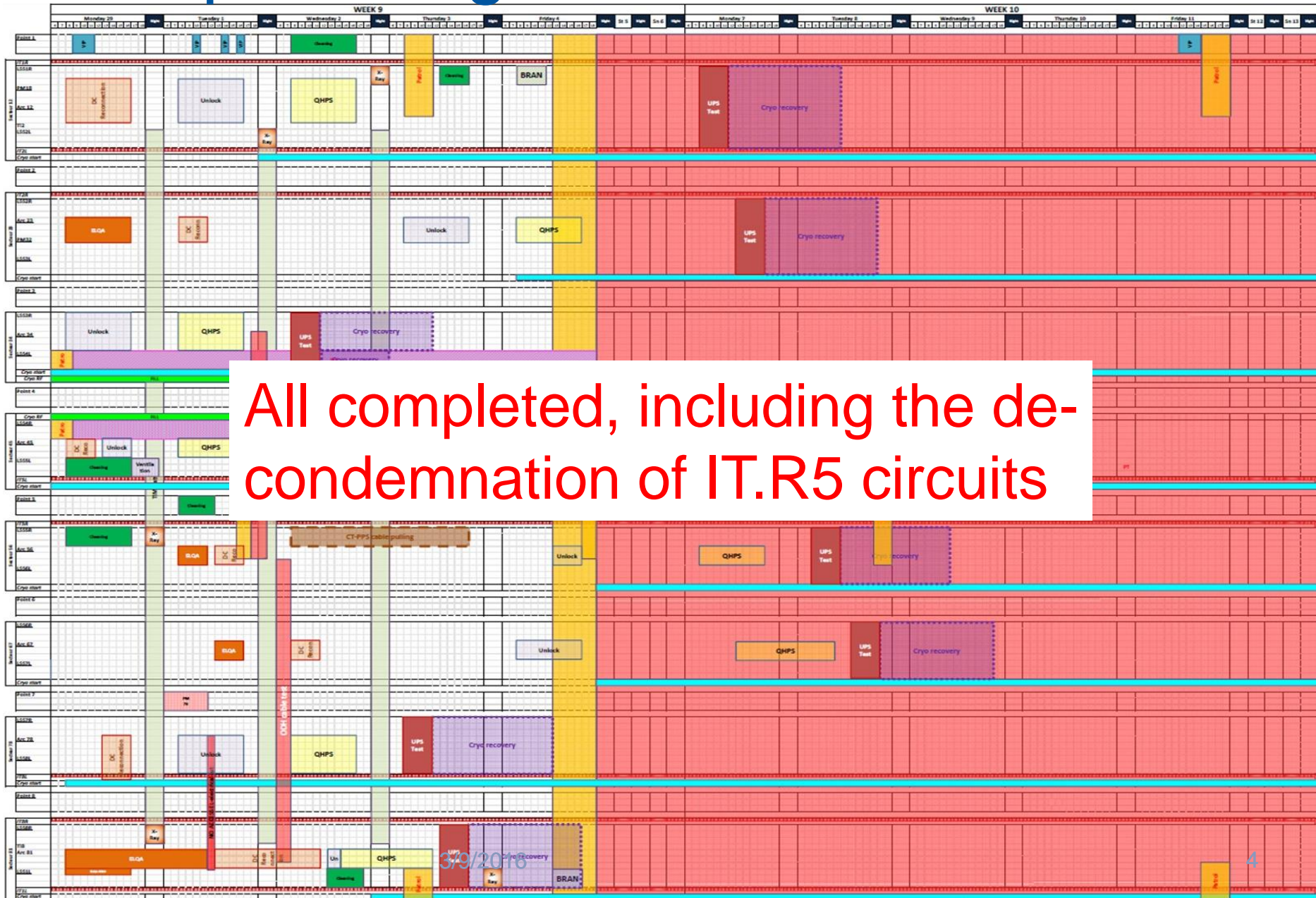
# Cryogenics

- IT.R8 “stability check” ongoing

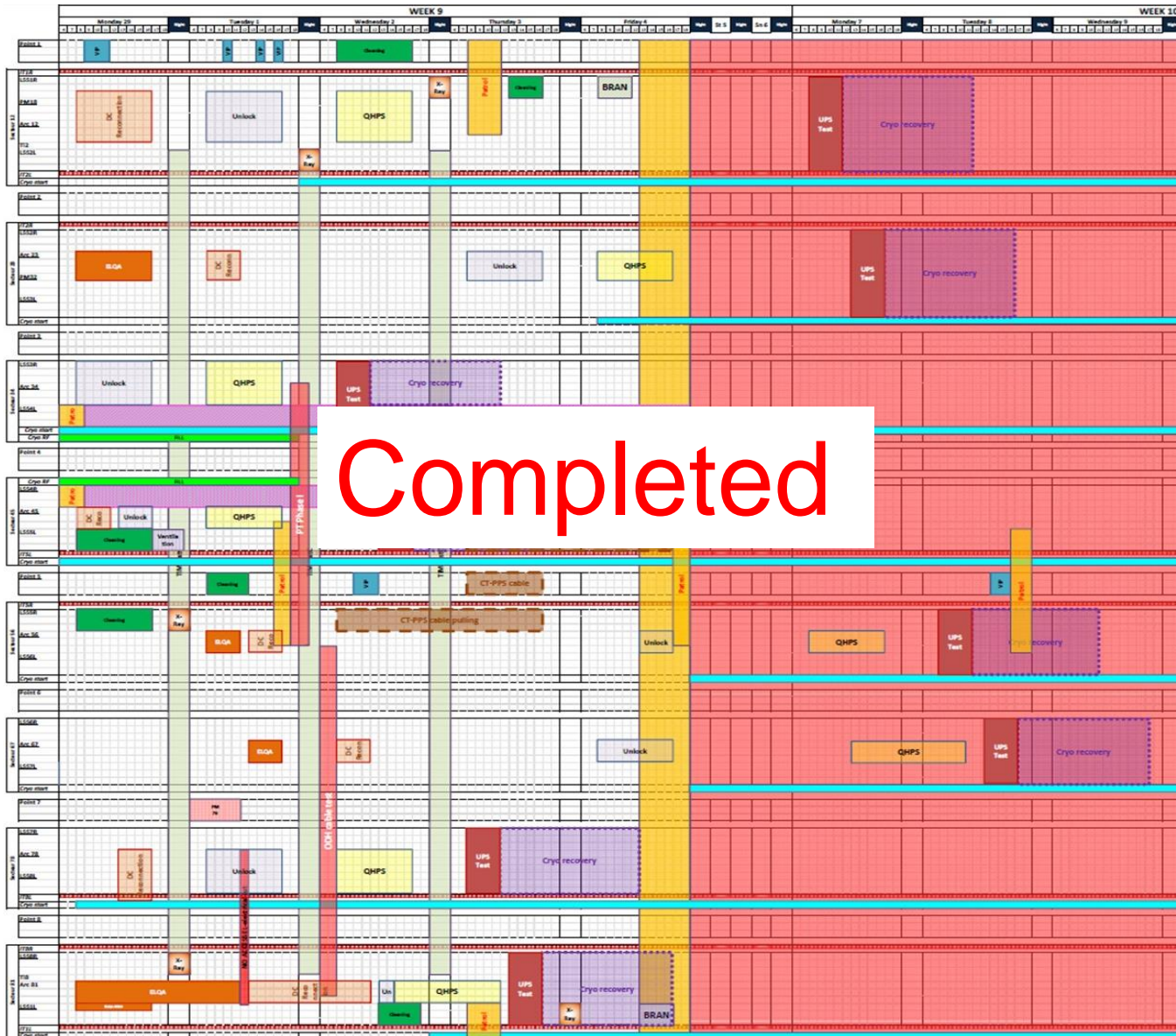


- Cryogenics for S12 and S23 is in a “unusual” configuration with both sectors cooled by the unique installation of P18 (configuration required by the intervention on the transformer at point 2)
  - Will need 2 days at the end of the transformer intervention to reconfigure
  - 3.5 additional days will be needed for the cryogenics test of “maximum heat load” in week 11 (March 14<sup>th</sup> - 16<sup>th</sup>)
- S78 will also be tested for “maximum heat load” from March 14<sup>th</sup> to 16<sup>th</sup>
- 2 days will be needed at the end to set S23 and S78 in Run II configuration

# Pre-powering activities



# UPS (powering redundancy) test



3/9/2016

# General news

- New firmware upgrade done in RR53:
  - Seems there is a synchronization to be adjusted between sequencer and QPS
- PNO.d1 automatic analysis for 120 A to be reviewed with a new version deployment of the Acc\_testing
- Current detection on dump resistor of RB.A81 and RB.A34 showed 0 A on discharge of PLI2.b2. Automatic analysis failed (as the calculated discharge was incorrect), but they were signed manually (the discharge was correct!)

# Some EPC actions/findings

- All LHC converters are now de-condemned, UL557 included. All converters are ready for powering.
- RPLB.UL16.RCOX3.R1 is now operational; the DC cables were reconnected and the converter was de-condemned.
- RU Circuits : configuration changed.
- RCO.A34 Circuits : Gérard found wires used for the grounding of the circuits between the both polarities of the converters.

# S12

- **“Communication” problem in L2**
  - “Setting:qps io not executed” – PVSS problem or what?
- **Missing in XR1**
  - RQX.R1 failed to go to SB
  - 600A and 120A ongoing
- **Missing in LR1**
  - IPQs started – no problem so far
  - RD2.R1 started – no problem so far
  - 120 A – last test missing
- **Missing in A12**
  - **Mains not yet available**
  - IPQs started – no problem so far
  - 600 A well advanced from 2L; **no tests for 1R since the new firmware is not yet deployed**
  - Some 60A failed due to missing permit



# S12

- Missing in ML2
  - IPQs ongoing
  - RQ5.L2 did not come back from PM, had to reset it
  - RD2.L2 ongoing
  - 120 A – last test missing
- Missing in XL2
  - RQX.L2 started – no problem so far
  - RD1.L2 started – no problem so far
  - 600 A ongoing
  - 120 A almost completed

# S23

- Missing in MR2
  - IPQs started – RQ4.R2, U\_HDS\_2\_B1 is at 0
  - RD2.R2 started – no problem so far
  - 120 A – last test missing
- Missing in XR2
  - RQX.R2 started – no problem so far
  - RD1.R2 started – no problem so far
  - 600 A ongoing
  - 120 A – last test missing
- Missing in A23
  - Mains started
  - IPQs started
  - 600 A, 120 A and 60 ongoing

# S34

## ■ Missing in A34

- RQD/F.A34 – Last test missing
- Most of the 600 A are at the last step, excluding
  - ~~RCOs don't go to SB: EPC Grounding found and removed~~
  - RCS/D failed PIC2\_circuit\_quench\_via\_QPS
  - ~~RSS.A34B2: switch Z not active, Gert should check it~~ Test successfully repeated
- Several 120 A failed PNO.d1 (signed by EPC and MP3!)
- One 60 A to be completed
  - RCBV13.L4B2 – resistance of warm cables to be checked by cryo

## ■ Missing in ML4

- **RU.L4 – Inductive compensation to be improved**
- 2 x 120 A circuits failed at PNO.d1 (signed by EPC!)

# S45

- Missing in MR4
  - RU.R4 – last step missing.... And it is going faster... (0.2 A/s...)
  - One 120 a circuit failed PNO.d1 (signed by EPC!)
- Missing in A45 – Quench loop open on the MAINS
  - RB.A45 – all tests done, ready for PNO.b2
  - RQD/F.A45 are ready for the 760 A test
  - 600 A ongoing:
    - UA47, commissioning almost completed
    - RR53, automatic analysis failing on many circuits; timing issue between QPS and sequencer to be fixed

# S45 II

- Missing in LL5
  - RQ6.L5 – When simulating the quench, the detector freezes – circuit **again** blocked (heaters already fired three times)
  - Few 120 A failed PNO.d1 (signed by EPC!)
- Missing in XL5
  - RQX.L5 – commissioned
  - 600 A:
    - RCBXH2.L5/RCBXH3.L5 - TT893 badly regulated
  - Few 120 A failed PNO.d1 (signed by EPC!)

# S78

- No cryo in the ARC after UPS test
- Missing in A78
  - RB.A78 blocked – EE works well, but many errors in micro-switched data in the automatic analysis
  - RQF.A78 ready for test at 2 kA; already done for RQD.A78
  - 600 A ongoing – almost completed from 8L; no tests for 7R since the new firmware is not yet deployed
  - 120-60 A ongoing (signed by EPC!)
- ML8 - COMPLETED
- Missing in XL8
  - Few 120 A failed PNO.d1 (signed by EPC!)

# S81

- Missing in XR8
  - 600 A – RCBXV3.R8 failed on T regulation
  - Few 120 A failed PNO.d1 (signed by EPC!)
- Missing in MR8
  - Two 120 A failed PNO.d1 (signed by EPC!)
- Missing in A81
  - RB.A81 – last test (4h long) done
  - Last test missing for RQD/RQF.A81
  - 600 A almost completed in 8R - **no tests for 1L since the new firmware is not yet deployed**
  - One 120 A failed PNO.d1

# S81 II

- LL1 is commissioned
- Missing in XL1
  - 600 A to be analysed
    - Regulation issues
  - Few 120 A failed PNO.d1 (signed by EPC!)



# Accesses

- Maintenance of Alimak lifts of PM18 and PM32 from 7h to 8h30 on Wed 9/3 and Fri 11/3
- 09/03 - Point 5, TIM intervention
- Thu. 10/03 -1h - Restart power line for motors and emergency stop of low beta cryostat alignment system. The system got down since the UPS tests.
- Friday 12:25-12:45 – point 1 - Visit of Dr France A. Córdova, Director of National Science Foundation (NSF)
  
- Pressure valves for RP stations in 6R1- possibly 4-5 hours on Friday and the same on Monday
- - **Wed. 16th March, 8h30-10h15 AM:** forcing the end-of-zone door of the UJ561 in order to reach the PM56 lift for the CMS Emergency guide training course (this means losing the patrol),
- - **Thu. 17th March, 19h-21h:** commissioning of the smoke detection of UXC55 (this means no personnel underground as the evacuation sirens will ring in all underground areas, LHC tunnel and CMS caverns).



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