

CM 42

Hydrogen system & Focus Coil

22/06/15

Hydrogen system - paperwork

- Working group has accepted all fundamental changes to the system – **big milestone**
- Outstanding documentation:
 - Operating procedures – first draft in circulation for comment
 - Maintenance plan – first draft nearing completion
 - Pressure systems technical file – minor additions required
 - Risk assessments and system descriptions – final drafts in circulation for comment
- Anticipating some difficulty in agreeing on:
 - Evacuation procedure
 - Split of responsibilities for MICE shifters, ISIS crew and hydrogen operators
 - Published instructions (one document or many?)
- Final sign-off will be after completion of hardware but a provisional ‘paperwork only’ sign-off will be sought at the earliest opportunity
- **The working group chair is optimistic about deadlines, which is good!**

Hydrogen system - commissioning

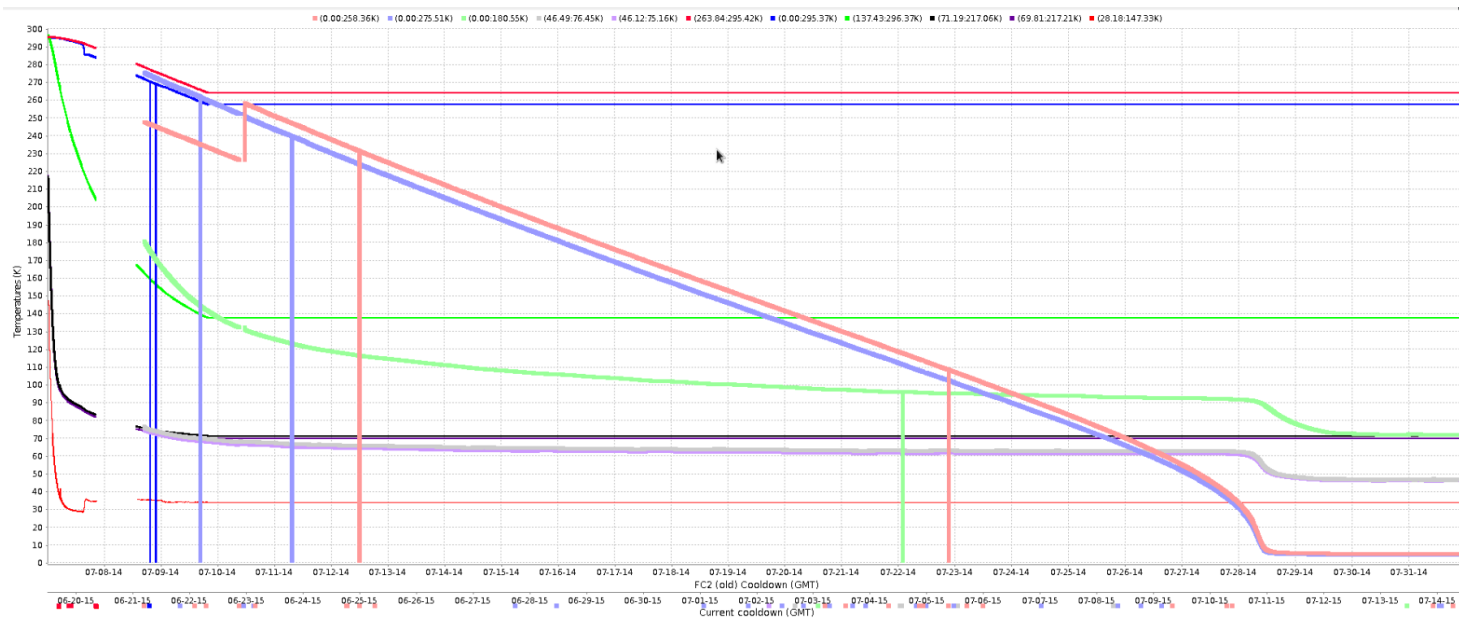
- Nearly all hardware for helium testing installed; absorber plus transfer line, vacuum line and pumping line
 - Once bottle platform is reinstated to provide helium supply, cooling should be able to commence
 - Need to find time to carry out leak testing too
- Outstanding hardware for hydrogen testing:
 - Turbo bypass – delivery expected first week of July
 - H₂ bottle platform – quoted completion first week of July (warnings from BPG that contractor is unreliable...looking at alternatives)
 - Charging line – nearly complete, x-ray testing will be first week of July
- Significant amount of software re-writing to do but this is necessarily done 'on-the hoof' during helium commissioning. Regardless, should not be underestimated.

Hydrogen system - schedule

- Helium cooldown
 - Will have started by 29th June, hopefully earlier
- Paperwork sign-off
 - Currently expected to be the week ending 3rd July
- Hardware sign-off
 - Actual installation expected to be complete by 10th July
 - Likely to carry out tour of installation around 13th/14th July
 - Give 3 days to actually get director signatures, so 17th July
- Hydrogen/LiH absorber decision
 - When is the latest date for this? What is required? Sign-off? Cold?
- Start of hydrogen absorber run
 - 8th September
 - Can the system be run with helium in period prior to this to eke out as many bugs as possible?

Focus Coil

- Cooling down as we speak, albeit only in preparation for purification of helium
- Recall that actual cooldown takes 3 weeks because of poor thermal connections internally
 - Some time 'may' be bought with nitrogen pre-cool, but only a couple of days at most
 - Also, liquid helium can buy a day or so at the end of the cooling period but at significant expense



21 days