

FOCUS COIL STATUS

OXFORD

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MICE PPS
Searched Area
Entry Restricted.
Access by Permit to Work only
Contact
MICE Ops' Manager: 07789272992

RD43010310-01 REV A

WT 224 KG

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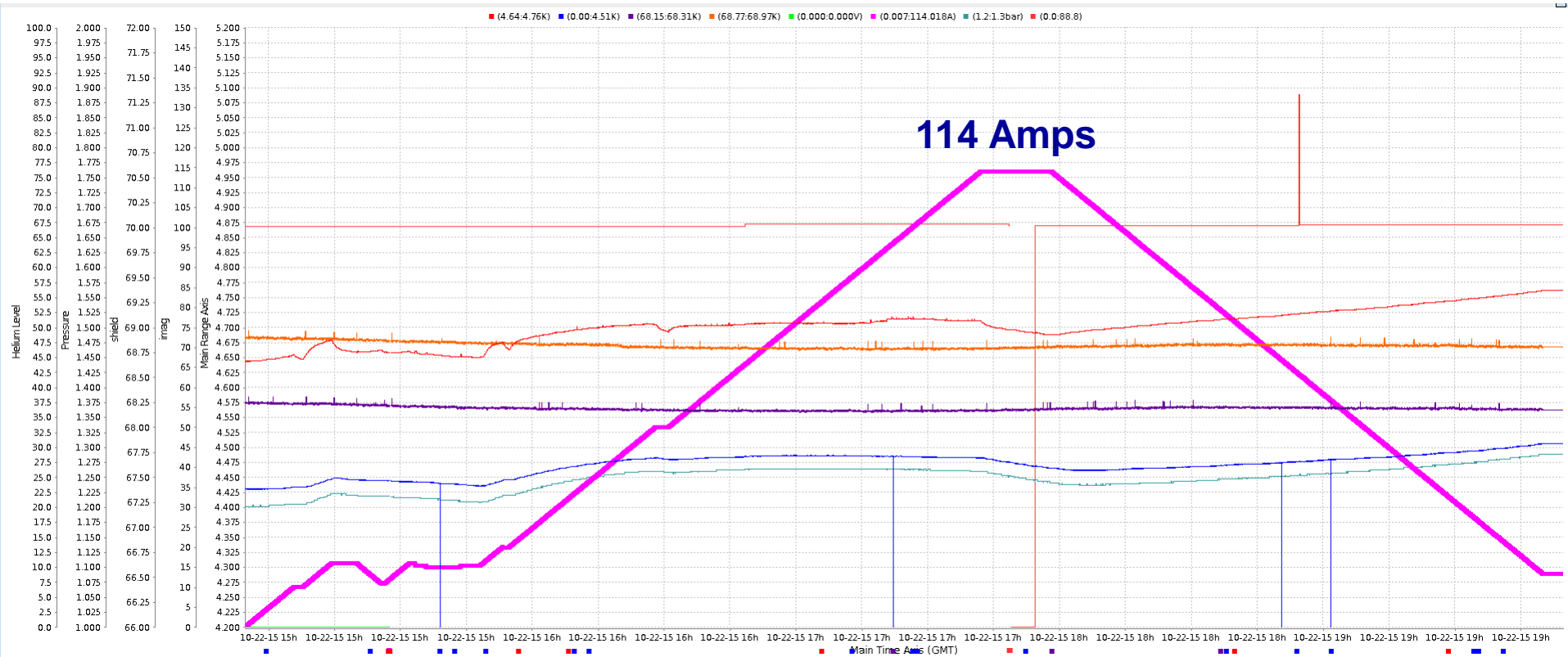
HISTORY

- **FC 1 did not train to full current**
 - But remembered training
- **FC2 had thermal shorts on arrival**
 - Returned to Tesla & repaired
 - Tested in R9
 - Thermally slightly marginal
 - *Trained much better than FC1*
- **FC2 chosen for Step IV in preference to FC1**
 - Maximum current required
 - (Now known as FCU)

FCU COMMISSIONING

- **Did not cool down properly June / July**
 - Confusing story
 - Many & various opinions / hypotheses / theories
 - Calculations
 - ***Warm up***
 - Gas analysis
 - Move cryocoolers to shorten hoses
 - Pump & purge
 - Discussions with Tesla
- **Second cool-down started September 11**
 - Looked good thermally
 - Better than R9
- ***Electrical testing started 14 October***

NOMINAL CURRENT SOLENOID MODE ON 22 OCTOBER



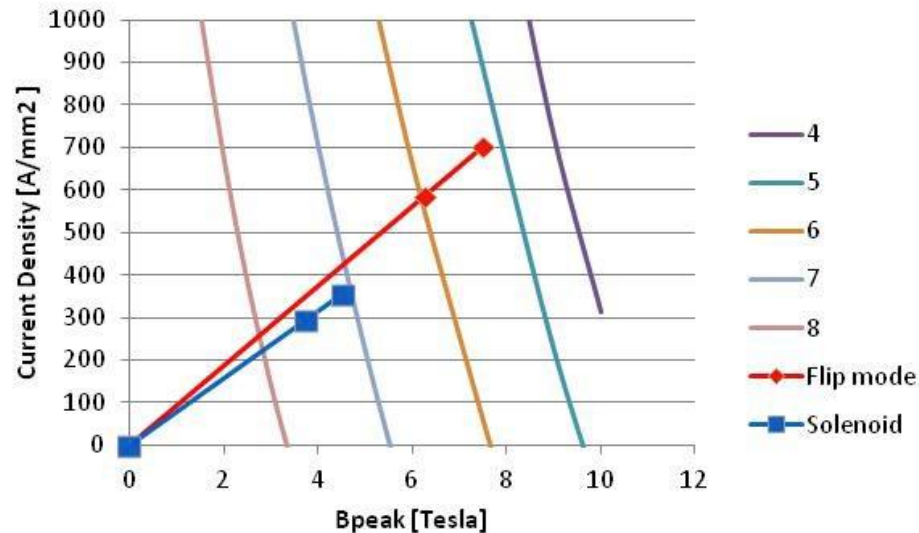
- Temperatures & He pressure behaved normally
 - like testing in R9
- No spikes on voltage traces

STILL TO DO

- **Minor electrical items including:**
 - **Adjustment of quench detector system**
 - **Allow for extra length of link between coils**
 - **Currently rather sensitive**
- **Soak test in solenoid mode**
 - **24 hrs at 120 Amps**
- ***Evaluate effect of running with asymmetric SSs***
 - **Asymmetric forces on cold mass**
 - **Requires calculations**

TO BE DECIDED

- ***In consultation with stakeholders***
 - MICE, project management..., optics experts....



- ***Find limit of Solenoid Mode***
 - Never quenched in this mode (up to 120 A)
 - Expect ~85% of Flip Mode maximum ~ 190A
- ***Test in Flip Mode***



**THE
END**