

Present:

- Phone: PG, ABr, AK, PS, HN, JPa, CW
- RAL: MC, PF, JB, DR, JC, VBI, MW, KL, CR, PMH

Goal of meeting was to debrief on the lessons learnt in the 48 hr magnet soak test. Slides were uploaded for each talk. Please see the slides on the MIPO meeting wiki page. Notes below record agreements or actions arising.

1. Magnets: J. Boehm

- **Agreed:**
 - Calculate and report power being delivered into SSU, SSD by the heater. This is possible as the voltage and current are recored.
 - Review history monitoring data required (e.g. is the discontinuity in the magnetic field observed by J.Cobb real and correlated with changes in other state parameters).
 - Issues arising from magnetic forces:
 - Review/agree assumptions to be made in the numerical force analysis (to make results comparable from Boehm/Tarrant and Plate/Witte)
 - Distinguish between static and dynamic analyses.
 - Agree maximum permissible movement of the bobbin inside the cryostat.
 - Requires consultation between J.Tarrant, J.Boehm, A.Bross, S.Plate, H.Witte.
- Discussion of “auto ramp down” of trim supply to SSD(E1). We distinguished three issues:
 1. Communication issues between MLCR and RR2;
 2. Absence of persistent alarm when SSD(E1) trim power supply changed state;
 3. Information provided to, and reaction of, personnel on shift.
- These issues would be dealt with: 1 and 2 via controls personnel (PMH, AK, MC) and 3 via improving ALH/information for shift crews.
- Arrangement for Supervision of SSs:
 - **Kurup**: will prepare auto SMS.
 - **Courthold**: wil liaise with A.Oates et al at DL to resolve communication issues.
 - **Boehm, Bross, Cobb (and Courthold)**: consult to agree preconditions for 24-hour operation.
- **Agreed:**
 - Operate without trim power supplies in SSU (and SSD) unless A.Dobbs analysis of effect of removing the trim supplies shows unacceptably bad degradation of resolution (unexpected);
 - Require further discussion of balance of current in M1 and M2. Beam focussing prefers larger current in M1 than M2 while minimisation of force between SSU and FC prefers lower current in M1 than in M2;
 - Require further review of cryoperformance of SSD. Possible remedial actions include increasing the compressor pressure and re-gassing the high-pressure hoses.

- Powering for empty-channel data taking to commence Monday 03Oct16.
- 2. Operations: C. Rogers
 - List of issues to be addressed noted in the presentation on the meeting page.
 - Points noted:
 - Tracker DAQ and EMR have caused issues in bringing the DAQ into operation. Tracker DAQ is being addressed. The EMR issues will be addressed with updates from AK.
 - Need for improved “masking out” of equipment that does not respond properly in Run Control.
- 3. Electrical and network: S. Griffiths
 - **Agreed:**
 - Critical issue of communication failures in communication to be addressed with top priority. A.Oates will be invited to RAL in the week of the 10Oct16 (during the absorber change).
 - Courthold to interface with Oates (as noted above).
- 4. Controls and monitoring: P. Hanlet
 - **Agreed:**
 - In addition to sorting out the communication issues, robustification of the Run Control and Alarm Handler will be pursued with high priority.
- 5. MICE Muon Beam: H. Nebrensky
 - **Agreed:**
 - Water to conventional magnets must be addressed with high priority.
 - Review of training requirements/regime required;
 - Review of BLOC modus operandi and division of responsibilities between BLOC and shift leader required.

Post mortem; 27 Sep 16; 14:00

- Present: PG; AB; AK; PS; (LN); JPa; MC; PF; SB; DR; JC; VBL; MW; KL; CR; PMH
- Phon Rm.

1. Boehm

- ? histogram of variables in achiev/strip tool ; - want to see power into magnet.
 - can be done but not yet.
 - Need to look at width of the magnet.
 → need to archive I and V.

- * Need to investigate discontinuity in Hall probe.
- Force calculation - need to be sure about the mechanical properties of the straps.
 - validity of assumption: pr. tension; force sensors; dynamic vs static
 - and connection between Jason + opposite nos in U.S.
 - What is permissible bobbin movement? [Support or lead flexibility]
 - What is permissible force between SSU and FC?

- Ramp-down of E1: by accident.
 - When T1 started ramping, the state machine took over. → Must be fixed.

↳ Need to fix the exp't state
 ↳ Three issues: Network/communication. Controls: state of exp't. Also silencing of extant alarm. Personnel on shift 1st information.

- Operation without trims ? - Dobbs check → if no bad issue found in resolution
- Balance of M1/M2 current ? -
- Cryo system setting for SSD ? - ? (old-head cycle temp or gas)

~~Supervision~~ Supervision of system - Ajit - auto sms
 - Communication problem needs to be fixed
 Court hold
 * Boehm: + Bron; Cbb; → 24hr running

↳ Plan to ramp on Monday

2. Griffiths

- See list; but touch dog was added
 ↳ dog never crashed too.
 EMR OAD rest
 ↳ Mashing out of dead equipment.
- Chris' list + everything coming bad.

3. Griffiths

- Prop-out @ nose: [Adrian]:
- Adrian has some ideas → can we get his trims to RAC.
 - * Court hold to interface to AD &

Griffiths work

4. Hamlet

- Robustness of alarm handle -
- " " run control -

- list of tasks in slides

4. Henry