Target Workshop – 7th January 2013

E39, Hicks Building, Sheffield from 11:00

Present: EO, GB, PH, PS, BS, KL, CB

Draft Agenda

1. **Welcome** **CB**
    - Welcome to all who travelled. Excellent progress in 2012 must be followed up in 2013.
2. **Organisation** **KL**
    - KL agreed with progress and reported that PH had agreed to take charge of the Target activity with immiediate effect. All wished Paul well and promised support.
3. **Electronics and DAQ** **PS**
    - See slides: here;
    - Points noted:
        - **i.** On change from T series to S series, BPS parameters will need to be changed. This will require a formal change request with ISIS;
        - **ii.** Spares:
            1. R78 electronics and DAQ system is a hot spare for the ISIS system. Important to push through the building of the third system to ensure that the R78 system, if cannibalised, can be resurrected rapidly;
            2. Need to get a spare capacitor bank. This is part of the (DL) spare controller build.
        - **iii.** Correlation of quadrature signals with mains has not yet been fully analysed. Could the analysis be an MSci project?
4. **Control and Monitoring Software** **MR**
    - See slides: here
    - Points noted:
        i. New system ready to be tested. Waiting for R78 h/w problems to be solved before testing it on the R78 system;
        ii. ***Agreed:***
            1. Test in R78 when fire-up S1.3;
5. **Performance of S1.1 & S1.2** **EO & PH**
    - **EO:**
        - **i.** See slides: here
        - **ii.** Points noted:
            1. S1.2 as good as T2.n … need to make S series as good as T1.n;
    - **PH:**
        - **i.** See slides: here
        - **ii.** Points noted:
            1. Need to ask ISIS if the ever intend to run routinely for MICE without the beam bump. If there would be such a requirement, we'd have to increase acceleration a

little;

2. Agreed to go back to study of alternative bearing materials when have commissioned 2 S-series targets;

6. Performance of T2.9 and running on ISIS **EO & PH**

- See slides: here
- Points noted:
  - **i.** Presently happy with development of T2.9 performance;

7. S2 fabrication (and plans for Sn for n > 2) **GB**

- See slides: here
- Points noted:
  - i. GB and EC's preference is to stick with potting material and techniques since this worked well on S1: **we agreed!**
- Agreed to make Hall-probe wand such that CMM can measure position of probe;

8. Stator field mapping **GB & BS**

- Dealt with under item 7.

9. Permanent Magnet developments **PH**

- We agree this is on the back burner;
- Have 6 permanent magnet sets available. No pressure to buy more yet;

10. Other developments and tests? **All**

- Other bearing materials?
- Reflective or circular "vane"
- We agree these ideas are on the back burner

11. Snagging list items: **All**

- Implement guides to ensure minimum bend radius of fibres is not exceeded:
  - i. We don't believe this is necessary at the moment. If we re-lay fibres, we install them then;
- Consider simplifying target removal:
  - i. ***Agreed:***
    1. Will seek to simplify as far as possible. Issue mostly mechanical. JT agreed to mastermind the mechanical issues. Advice on fibres and cables from Sheffield team;
- Analyse laser amplitude data being collected by new controller with a view to defining ageing properties, alarm and operating limits;
  - i. Alarm and operating limits have been dealt with. Seek to make a summer student (or MSci student project) of analysis;
- Implement chiller-flow-meter read-back:
  - i. ***Agreed***:
    1. Will implement this. Need to liaise with I. Mullacrane.
- Resolve issue of different target travel between T1.0 and T2.n/T1.1.
  - i. Done. CB produced a note which was not formally issued as a MICE note. Now superceded.
- Revise design of the holding of the limit switches;:
  - i. ***Agreed:***
    1. Some simple solution is required. JT agreed to mastermind;

12. Publication news (if any feedback from referees) **CB**

- Email from referees on Thursday PM (circulated);
- All positive, some minor corrections. We agreed what to do.

13. AoB

- No meeting on Wednesday; so next meeting is 16Jan13.