

# Magnetic shielding meeting: 2013-02-20: 15:00 GMT

## CR4, R1 (phone conference details circulated)

**Present:** HW, MG, KL, KM, IT, CP, PS, JT, LF, AG, MC, PH, JW, CMacW

### 1. Actions:

- **KL:** Liaise with ISIS to set up joint meeting after Christmas.  
Stands.
- **IT:** Take information on local shielding from MC to CMacW to see if we can consider testing the shields in R9.  
Done. TI and CMacW discussed the company in question. Test in R9 will happen later when parts are available.
- **KL:** Add validation agenda item for future meetings.  
Done.
- **KL:** Propose Tuesday 15:00 GMT as regular.  
Done. This was agreed.

### . Magnetic model of MICE Hall:

**PS**

- See slides:
- PS makes argument for a consultant to help guide the modelling effort and with greater experience in the calculation of fields and the checks themselves. Principal issues are model checks and validation;
  - Points noted in discussion:
    - MC: points out the VF personnel would be well matched to our requirement;
    - HW: agrees that issues raised are correct.
  - **Agreed:**
    - Investigate recruitment of experienced support. Presumption is that VF is the right place to go as they are the authors;
  - We defined two actions:
    - **PS, KM, MC:** Provide first draft of questions and specification of advice required;
    - **PS, KM, MC, with KL:** Seek solution with VF to see what is feasible.

### 3. Magnetic model of tracker cryostat

**KM**

- No modelling this week. Information gathering continued. KM has received CAD drawings from JT. This has led to the realisation of the space constraints. With CMacW, KM has considered weight and space issues.
- Proposes to look at shielding effect versus thickness. Goal to generate early feeling for the thickness needed.
- Also, clarified existence of possibility of Leybold equipment.
- Also, splitting time with other projects slows things down.

#### 4. Magnetic model of racks and R9

MG

- No progress with rack model. Problems encountered traced to in appropriate licence format. (Windows vs Linux);
- MG has now received from V. Bayliss the comi scripts. Several different models have been developed for different applications;
- Propose to continue with rack model at lower priority than R9 and compressor model.

#### 5. Partial return yokes: magnetic analysis and design

HW

- Just returned to the US from CM35. Correspondence between JT and BNL engineer has taken place.
- JT comments that he has information from BNL engineer. Some clash with south mezzanine observed. Ideas being generated and discussed.

#### 6. Progress on magnetic measurements

IT

- New measurements made today. Some measurements made at 50 A at floor level to try and gain understanding of metal in the floor. At 100 A located an area at 10 G and moved a compressor into the area. Measurements were then made around the edges and the inside. Measurements will be a start in comparing the MG R9/compressor model with measurements in R9.
- Spare rack with blister can be brought to R9 from DL.

#### 6. Schedule and plans, discussion

CMacW

- No update this week.

#### 7. DONM:

05Mar13; 15:00 GMT

Propose MICE/ISIS magnetic field meeting – to be defined

#### 8. AoB

- PH:
  - SS2 has made it to full current and is within the soak test. At C=270A, a Hall probe was used to measure the fields outside a rack. 20 G was observed outside the rack. With the doors closed, a field of “noise”. More detailed information will be provided.

#### Summary of actions: