

# Magnetic shielding meeting: 2013-05-07: 15:00 GMT

## CR2 R1 (phone conference details circulated)

**Present:** KM, LC, JW, IT, CP, HW, MG, PS

### 1. Actions:

- **CM:** Report to KM typical power dissipation in Tracker Cryo Weiner PSU – stands. Need to contact P.Rubinov at FNAL regards typical steady state current loads
- **KL:** JW requires input regards way forward on study of substation components – Show Ken Excel spreadsheet with test costs breakdown

### 2. Magnetic model of MICE Hall:

**PS**

- See slides
- Paul in contact with VF with regards validation exercise. Klaus requires simpler model to start with but we need to ensure model they work with is relevant.
- Fighting with latest Model 79 to provide for VF validation.
- Starting to look at “Fry” list items and bring together locations in hall model with Luke’s CAD model.

### 3. Magnetic model of tracker cryostat

**KM**

- See slides
- Presented analysis of Weiner PSU shielding with consideration for ventilation. Showed 5mm steel box with chimneys should be adequate. Requires worse case power dissipation figure to firm up ventilation design.
- Suggests making scale prototype to test shielding, ventilation and engineering issues such as welding effectiveness.

### 4. Magnetic model of racks and R9

**MG**

- See slides
- Showed progress on R9 model and rack & compressor items. Basic version of model complete without walls or hidden ferrous content.
- Racks have inner item detail of shelves. Compressors have some internal structure.

### 5. Stray field measurements at Wang

**PH**

- No report. Need to re-assess data from last week’s report.

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

**HW**

- See slides
- Highlighted detrimental shielding performance if gaps exist at interface between Virostek plates and end of main steel channel. Offered backing plate solution.
- Proposed thicker (12cm) steel in the main channel to improve shielding and to allow for (1010 steel) material composition tolerances.
- Offered booster plates as retro-fit solution if require increased shielding performance
- Investigated differences arising from variation in BH curve data.

- Started to look at cost/benefit of different composition shielding steels.

## **7. Progress on magnetic measurements and validation of model**

**IT**

- Waiting to compare practical results to first pass of new R9 model.

### ***6.1 Progress on assessment of substation-components***

***JW***

- DL ready to go with plans for RR2. Half the racks now assembled.
- When will we have decision on go ahead for this?

## **8. Schedule and plans, discussion**

**CM**

- Produce new Gantt chart for wider discussion, include updated milestones?

## **9. DONM:**

14<sup>th</sup> May 13; 15:00 GMT

## **10. AoB**

## **Summary of actions:**