

Thomas Strauss

From: Thomas Strauss
Sent: Friday, June 7, 2019 11:13 AM
To: Maxim Marchevsky <mmartchevskii@lbl.gov> (mmartchevskii@lbl.gov); Daniel W. Cheng; Joshi, Piyush; Joseph F. Muratore; Sandor Feher; Guram Chlachidze; Stoyan Emilov Stoynev; Amm, Kathleen; Dimaiuta, Sebastian A; Giorgio Apollinari; Giorgio Ambrosio; Michael Anerella; Honghai Song
Subject: Summary of QA meeting

Hi everyone

Notes and action items of the meeting

Top priority:

Overlay drawing of the QA with mechanical structure is top priority to identify quench location on structure.

ToDo

- Confirm the channel numbering in DAQ and Antenna (BNL)
- QA disk distance measurement with tape measure (BNL)
- Generate an assembly drawing (BNL)
- Check the gain settings (BNL)
- Determine the mechanical center of the magnet w.r.t. QA location
- Check interface box has capacitors or not, have them identical.
- Check orientation, idea is the coil looks at the inner layer
- Quench propagation in low field region estimate (Giorgio) Inner layer: 8mm/ms - done
- This will determine the QA distance needed

Short term plan, next test in next Thermal cycle with better coverage of QA. 8mm/ms with ~10ms: 16cm spacing or 25 elements needed, e.g. 50 channels.

Maxim

- Send existing PCB boards and parts to BNL, and schematics for assembly.
- Send interface board drawing to BNL

BNL

- Assemble PCB boards
- Assemble interface box
- Assemble a cable for 8 channels
- 32 more channels available, cards would need to be bought, 4 more cards (\$2.2k/card).
- Measure the extra resistors on the boards to ensure is everything is the same
- Change DAQ range from 1V to 100mV
- Plastic spacer manufacturing and procurement - get the right length (maybe Maxim has spares).

Before next test

- Confirm QA gain settings, and test of full assembly with long cables before insertion.

Fermi

Investigate how more elements can be added. Check if alternative to PCB antenna exists, can be made or re-used (suggestion Stoyan/Joe DiMarco design).

Medium Term goal

- Update the schematic drawings (Maxim)

Goal a 64 channel QA - 32 elements
64 channel interface box

Long term plans

Plan for Test Stand 4 QA

QA on trace on the coil, possibilities at BNL and FNAL

Thank you

Thomas

Thomas Strauss

Associate Scientist

Technical Division (Magnet Systems Department)

Fermi National Accelerator Laboratory

P.O. Box 500, MS 314

Batavia, Illinois 60510

USA

630 840 4531 office

630 962 0908 mobile

www.fnal.gov

strauss@fnal.gov

Connect with us!

[Facebook](#) | [Twitter](#)