

RE: CBETA FFAg magnets

Michnoff, Robert J

Sent: Wednesday, September 06, 2017 11:26 AM**To:** Michnoff, Robert J; Peggs, Stephen G; Trbojevic, Dejan; Mahler, George J; Trabocchi, Steven; Brooks, Stephen; Berg, J Scott; Tuozzolo, Joseph E**Cc:** Roser, Thomas; Tsoupas, Nicholas; Karl Smolenski [karl.smolenski@cornell.edu]; Georg Heinz Hoffstaetter [Georg.Hoffstaetter@cornell.edu]; Michnoff, Robert J; Minty, Michiko**Attachments:** FFAg-meeting-2017-09-06.pptx (1 MB) ; CBETAAnn-Measurement-Proc~1.docx (28 KB)

Attached are sides from today's meeting.

And here a few notes:

Personnel Present: Joe Tuozzolo, Rob Michnoff, Dejan Trbojevic, George Mahler, Steve Trabocchi, Stephen Brooks, Nick Tsoupas, Steve Peggs

- Stephen Brooks recently prepared a draft magnet measurement procedure (see attached). Some issues exist regarding measurement differences when the same magnet is measured several times. Stephen suspects that calibration settings may be changing. This issue needs to be understood and resolved.
- The 1/2 length BDH magnet for the fractional arc test will be assembled at BNL as soon as the first batch of permanent magnet material is received.
 - Fabrication of the aluminum housing for this 1/2 length magnet will begin right away. Housings for 2 magnets will be fabricated - one with nominal inside dimensions (to be specified by Stephen Brooks) and the other will not have the inside dimensions cut until the permanent magnet values are known so that the magnet strength can be optimized prior to wire tuning.
- Steve Trabocchi has all the required dimensions and magnet positions for the fractional arc test girder plate. Drawings are in progress and are expected to be complete by 9/18.
- The girder plates are planned to sit flush on the Rexroth stand and bolted down, and the +/- 1/8" vertical adjustment of the magnets is expected to be sufficient; but should be confirmed.
- An FFAg magnet and girder design review is planned for September 20, 2017, 9am and will include Cornell team members. The basic outline for this review is included on slides in the attached ppt.
- We will plan to meet on Monday 9/18/2017 to review details to be presented in the design review. Specific time and location to be determined.
- Of the 8 preproduction magnets, one half magnet remains to be rebuilt.
- A phone conference will take place this morning with AllStar Magnetics to clarify the degree variation specification. The permanent magnet material order will hopefully be placed within the next few days.
- Need to confirm if Cornell will provide the cable trays that will sit under the FFAg magnet girder.
- The option of assembling the Halbach magnets in house is being considered. One significant issue that needs to be addressed is special tooling requirements. At this time we do not have tooling that would be viable for assembling the required production quantities. Options for tooling need to be considered, and may require significant engineering.
- Bids for the Halbach magnet assembly are due on 9/15 (or 9/18).

Please let me know if anything needs to be changed or added.

Thanks,
Rob

From: Michnoff, Robert J

Sent: Wednesday, August 30, 2017 1:51 PM

Required: Peggs, Stephen G; Trbojevic, Dejan; Mahler, George J; Trabocchi, Steven; Brooks, Stephen; Berg, J Scott; Michnoff, Robert J

Optional: Roser, Thomas; Tsoupas, Nicholas

Subject: CBETA FFAG magnets

When: Wednesday, September 06, 2017 9:00 AM-10:00 AM.

Where: 911B SCR

Let's meet next Wednesday 9/6/2017 in the 911B SCR to discuss the CBETA FFAG magnets.

Here's a rough agenda:

- Girder for fractional arc test
- Design review / status and procurement plan review - scheduled for Wednesday 9/20, 9:00am
- Magnet procurement and assembly plan
- Schedule
 - first article production milestone (12/2017)
 - complete girder production and full assembly (11/2018)
 - complete final assembly at Cornell (early Jan 2019)

Thanks,

Rob