

## November 10, 2004 Barrel Electronics VC Minutes

### Agenda Items:

- 1) update on burn-in/re-testing and temperature cycling of barrel boards at NBI
- 2) update on designs
- 3) continuation of last week's discussion of manpower for barrel board testing at CERN
- 4) start planning for sector tests.

### Update from NBI:

Mogens didn't have the information right in front of him so he said he would send out an email after the meeting. here is it:

Hi, -

I have to run!

Just scanned through the remaining 15 barrel boards to see how they were. Here follows my subjective summary. On top comes K0014 and G0006 which I sent you inf./questions about before.

The boards are all in burn-in at the moment.

Have fun,  
-Mogens

G0017:

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3 chans w no/low gain; all repaired.

G0018:

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Offsets high in chans 9, 13 (repaired)  
Offsets low in chans 50, 63, 103, 119 (same)

G0021:

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3 chans w no/low gain; all repaired.

G0017:

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DTM chip missing + 2 chans w no/low gain; all repaired.

G0032

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Several problems, all repaired.

H0006

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repaired

H0009

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2 no-gain channels repaired

H0015

-----

repaired

H0016

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2 nonresponding channels repaired; gain lowish in chan 118.

H0019

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2 no-gain chans repaired; but now something strange in 64-80 (probably communication; no prob in injector test)

H0022

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Repaired, but chan 38 has large offset

J0017

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Only tested at NBI. Good!

J0019

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2 no-gain chans repaired; but offset in chan 143.

J0020

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1 ASD TP not working(?); Repaired, but offset in 96.

J0032

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2 no-gain chans repaired

#### Update on designs:

**AR3F:** still not done. there is a new design in from Bjorn and Nandor is checking it over.

**AR2F:** Blank boards being processed at CORTEK. they should be done just after thanksgiving. Updated schematic and BOM are still needed.

**AR2B:** production stuffing has been OK'd.

**AR3B:** pre-series stuffing kit was sent to ACAMAS Nov. 9th.

#### Manpower at CERN for barrel board testing:

Following up from last week, Brig talked to Oleg at PNPI and found out that Sergei Kovalenkov is needed back there, so he will not be available to help with board testing. Oleg mentioned someone else (Alexandrei Kristovich), but he is needed for acceptance tests. One possible option is to shift End-cap spring soldering and other such

mechanical tasks from the electronics personnel to the mechanical side in order to free up manpower to do board testing.

As was mentioned last week, Chuck from Hampton can be available every other month to help out (though it isn't whether that will coincide with the times when help is needed at CERN) and Mike Reilly can come from PENN as long as it doesn't interfere with chip testing (for which he is responsible). Ben asks if either of these options could be made to work within a two week time frame, as that is when the AR2B boards are expected at CERN. Brig says that it's possible that either Mike or Chuck could come to help out in that time scale and that he will find out.

Start thinking about read-out for sector tests:

This discussion was mostly centered around what parts will be needed for this and when/how they will be available.

patch panels: four needed to read out full 1/16th sector, both sides. two sets are in the test beam. one set is built and mostly checked out at PENN (though the TTC patch panel at PENN has developed a nasty short that they have been as of yet unable to find/fix. Sabetta is working on the re-design of the TTC patch panel (changing the number of front-end connectors from two to three).

harnesses: PENN is almost finished with one complete front-side harness. The documentation needs to be finished and sent to Dubna in the next few weeks so that they can start and make a few more that could be used for this test. It should be noted that these will need to be modified (or some sort of Y cable made up) to work with the style of patch panel that is currently running in the test beam.

LV power: Laia has finished the schematic and a design review is scheduled for one week from now. After that, the plan is to run the design through the CERN layout/board fab process, which is expected to take about 10 weeks. that would mean we could possibly have LV power patch panels by March 1st. this is a month later than we would like since we hope to have AR3F pre-series boards by Feb 1st. The set of Endcap patch panels that is being used for LV regulation in the test beam could be used to power one side of a 6 module sector in the mean time. As for cables, Dubna is making the LV power cables, but the wire still hasn't been chosen so this has not started.

On another note, planning for the combined TRT/SCT tests that will go on in SR-1 in October has started. Heinz has asked for a checklist of parts that will be needed from the TRT. We are planning on using final RODs, signal patch panels, LV patch panels, and harnesses, so this is separate from the above discussion. sector tests will have to be performed with "old" RODs (2003 version) and associated hardware while the October test will be performed with final versions.