

Minutes for October 6<sup>th</sup> barrel electronics meeting.

Agenda items were the following:

- 1: relevant updates on board testing/repair/production
- 2: final sign-off on AR2B
- 3: update from SR

1: Relevant updates on board testing/repair/production

A question was raised as to what progress had been made recently on repairing the type 1 boards that were sent to PENN for re-work out of the type 1 production lot. The response came that work at PENN has been focused largely on getting AR2B out the door lately and not much progress has been made on the broken boards. There are 16 boards that have been fixed already and were awaiting re-test (which depended on installing the board test software at PENN which depended on fixing the SBC at PENN, etc). These will be sent off directly to NBI. The rest require Mitch's attention and a timeline for fixing these is uncertain as these boards have special problems.

A question was raised as to *when* AR2F was submitted. The reply came from PENN that AR2F *will be* submitted in mid to late October. Nandor mentioned that there is still a silkscreen problem and a cap that interferes mechanically with the cooling plate for these boards. Fido suggests that PENN get on the phone with Bjorn and offer to have him travel to PENN for a week to finish the 2 and 3 designs once and for all. PENN will follow up on that.

As for production, ACAMAS is just finishing up with the pre-series of AR2B and it should arrive at CERN at the end of the week following this meeting. All of the bare boards for 2B have been received from CORTEK and a package is being prepared for ACAMAS.

2: Final sign-off for AR2B

plots for this section can be found at

[http://www.hep.upenn.edu/atlas/PCBOARDS/Active\\_Roof\\_Boards/AR2\\_Boards/](http://www.hep.upenn.edu/atlas/PCBOARDS/Active_Roof_Boards/AR2_Boards/)

This item didn't get very far owing dually to the fact that the video was not working at CERN (so no plots/presentations could be shown) and no one had a current copy of the sign-off checklist. it was noted that for AR2BL everything is done except for the data read-out noise measurement and that there have been many problems bringing up the godwin-stuffed AR2BS that is at PENN. Chief among these are timing/readout problems.

3: Update from SR

plots for this section can be found at

[http://www.hep.upenn.edu/atlas/sysperf/barrel\\_cern/current/SR\\_plots.html](http://www.hep.upenn.edu/atlas/sysperf/barrel_cern/current/SR_plots.html)

protection board testing/installation has been proceeding nicely thanks to Alex. 5 modules worth of type 1 electronics has now been installed. There is a notable discrepancy in the connectivity test that has shown itself to be consistent across all 5 modules. Two of the seven channels on the front side that don't connect to any wire (as is the design on the tension plate) respond to the injected pulse and thus seem to be connected. This has been seen for the same two channels on all 5 modules. This will need to be explored.

It has been noted previously that the first set of board that had cooling plates mounted on them (20 in total) had the plates mounted quite close to the tops of the DTMROC chips and this is inducing a clock pick-up in some positions. A question was raised as to whether it was worth removing the cooling plates for these boards and re-mounting them farther away from the chips. This was seen as a good idea and a few suggestions were given for a method of removing the plates (using an exact-o-knife to separate the chips around the edge from the cooling plate, using a wire, pulled through the joint between the RTV and the cooling plate to separate the two, and heating the cooling plate and then twisting it with respect to the AR board to shear off the joint between the RTV and the cooling plate). These will be tried over the next week.