

Minutes – 21-Apr-04 Electronics meeting

Action items –

- Mark the protection boards that pass visual inspection and electrical tests
- When testing AR2FL board at lower voltages look for DLL lock
- Measure the gap in the test beam frame between frame and edge of AR1B boards as we know they have a good fit.
- Measure size of AR2FL board both in software – compare gerber files of what was built to the expected size. Measure the actual part at CERN
- Need to update the front end electronics installation procedures to add several plug and unplug cycles of the active roof boards before the AR boards are installed on modules in the BSS.

Minutes -

Mitch talked about testing of the protection boards at Penn. He noted that a visual inspection is important.

Mitch's recommended tests

- Look for extra solder which can cause shorts
- Look for placement of parts resistors shorted together lead to increased noise
- Resistance test of resistors
- Diode test of conduction to ground

A short in the NIS connector or between 2 resistors is seen as extra noise
Diode packages are symmetric

Mitch reported that the 100 RF gaskets for the barrel are in transit to Ole at CERN

Mitch then presented his work on testing boards at Penn. Please see his slides
http://agenda.cern.ch/askArchive.php?base=agenda&categ=a041548&id=a041548s1t12%2Ftransparencies%2FInstallation_Readiness_Review_2.pdf

Mitch's comments running with multiple boards in the BSS will show us what other things we have to in terms of electronics performance (more grounding etc).
When running at a lower voltages (which looks good) check for DLL lock
AR2FL quieter than AR1FL for both 300 kHz noise and clock noise. Could see one see two channels shorted together in protection board from looking at the noise plots.
In order to get the RF gaskets to make good contact need to understand the board size. For the AR2FL board Mitch had to shim the RF gaskets to ensure good contact.

We have at least 10% spares on the cooling plates.

As part of installation in order to reduce the resistance to insertion of the NIS connectors on the AR boards, the NIS connectors on the AR boards need several plug and unplug cycles. This reduces the require insertion force in the BSS (good thing).

- Any other Business section of meeting

Slight confusion at SEI systems, the file containing the bill of material was wrong. SEI looked at the wrong file. SEI claims the 200 pf caps are the wrong size and will

not fit on the board. Rick noted that any ceramic capacitor 0.1uf, 6V that will fit on the pads are good enough. SEI will try to get off the shelf capacitors.