

Mini-BCAL Bench testing

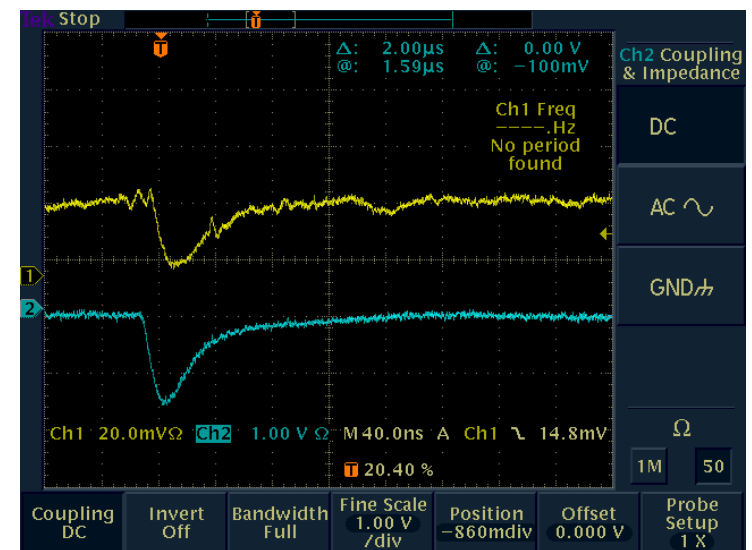
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Cross-talk

Some cross-talk was observed between channels when LED was flashing

Unclear whether due to light or electronics

Will investigate further once gain-matched voltages can be applied



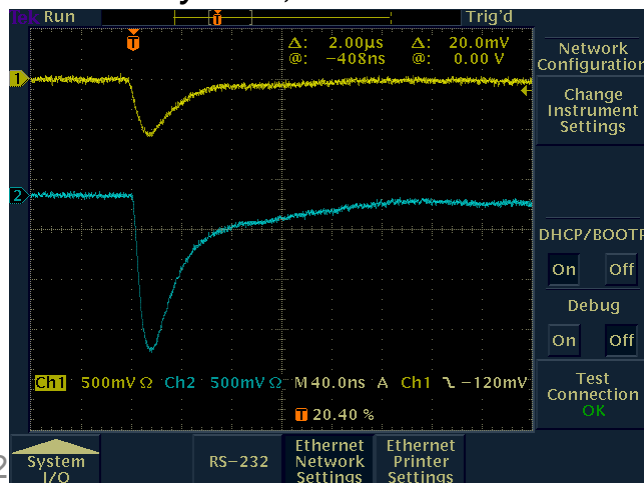
LED signals read from both ends

- LED flashing Downstream end only
- SiPM biases both set to 75V
- Read out 1 SiPM at a time
- Upstream to downstream amplitude ratio is $\sim 3:1$ (without gain matching)

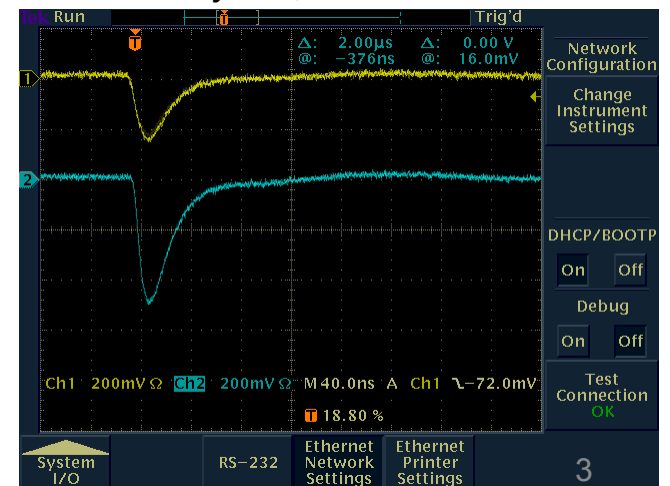
All channels check out OK!

*Yellow (top) = Downstream
Blue (bottom) = Upstream*

Layer 10, Sector 2



Layer 7, Sector 2



Questions

4/15/2012 ES

Asked Scot to send Devcom 2 component epoxy.
pass = 00ZUx66B

JLAB / SiPM-dag

- LED pulser
- Bias supply → Reset
- Low Voltage supply +3.5V -5V
- VSA crate
- libraries / sipm-test → sipm V2.3 program

start program

"run" Labview. Must now complete sequence.

- program automatically sets up pulser, etc

Initialize V792

enable only modules of interest
disable thresholds

- Follow number on buttons → nearby lights on modules.

Question 1.) Low-voltage

"+5V" for Upstream SiPM power was set to +3.067V

All other SiPM power was set to 5V.

? Should this be 5V too?

Question 2.) Heating

We are not using the chiller.

Is there a maximum time we should leave power on without the chiller running?

Should we reconnect it?

Summary

- All SiPMs checked
 - Upstream and Downstream
 - All gave signals
 - All channels on BCAL-CNTRL board appear to be working (small question of cross-talk)
- Next steps
 - Re-establish fine grained SiPM bias voltage control
 - Hovanes will help
 - Look more closely at cross-talk (after gain-matched voltages can be applied)
 - Cosmic trigger paddle