

LArIAT group meeting

Electronics for Hamamatsu 3x3mm VUV3 SiPM in the cryostat

Dung Phan, Will Flanagan

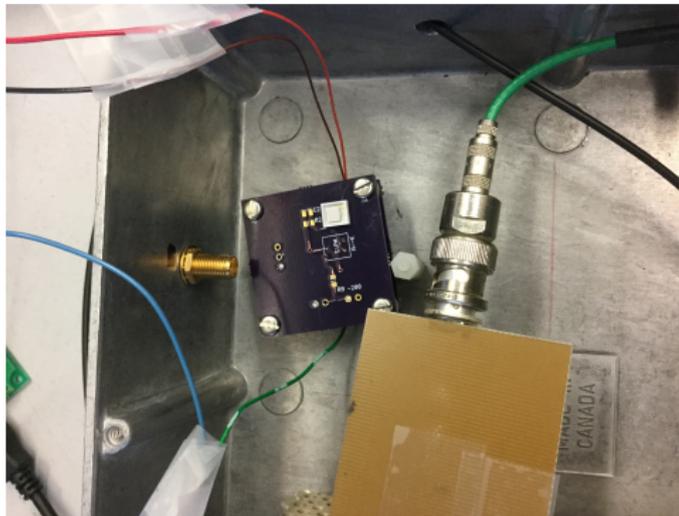
The University of Texas at Austin



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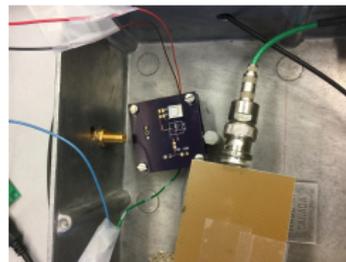
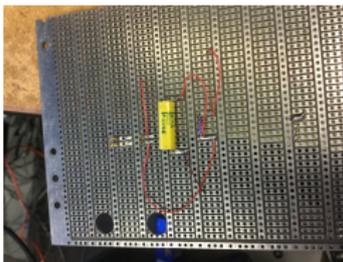
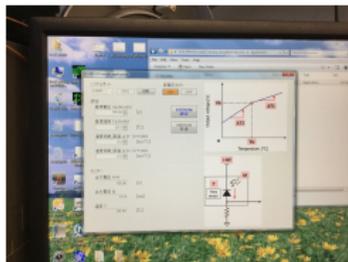
Build Rev. 3

- The board is delivered on Monday.
- Soldering parts on the board is done Monday.



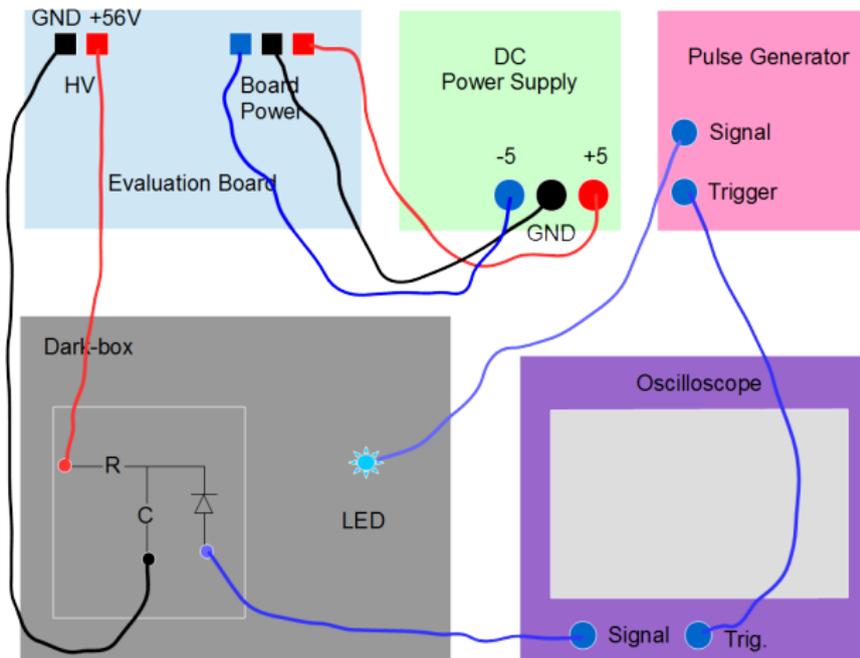
Setup Hamamatsu Eval. Board

- Installed needed software on the computer at teststand on 14NW.
- Made a custom (quick and dirty) board to hold SiPM for quick test. But couldn't find a dark ox big enough to hold this board.
- So, used a spare PCB Rev. 3 and made some wire connections instead.

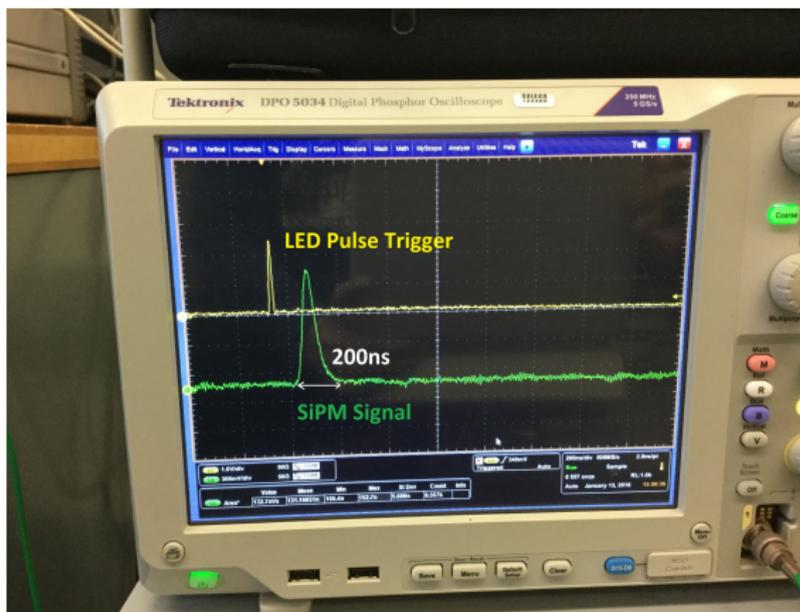


Setup of the test

- Testing the VUV SiPM in room temp.



Signal waveform



- Didn't figure out how to make waveform area histogram on the LArIAT oscilloscope (for 1PE characterization).

Testing SiPM in low temp

Problems

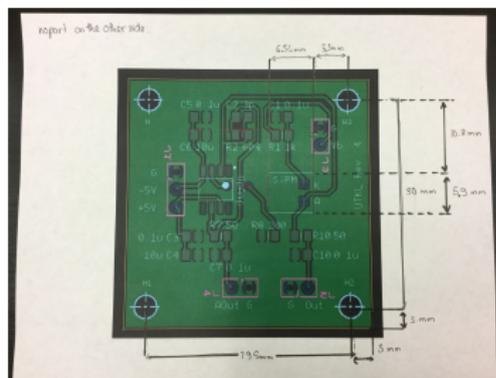
- As mentioned before, Rev. 3 have parts on both side so can't be used in cryo-cooler.
- VUV SiPM is fragile, not sure is that safe to directly dip it into liquid nitrogen.

Solutions

- Made a new board Rev. 4, transferred to PCB manufacturer on Sunday. We will get it on Saturday. I will solder the parts and prepare a cryo-cooler test right after we get it.
- Also, emailed Hamamatsu about the possibility of using liquid nitrogen. But hope not to resort on this option.

Other problems

- Talked to Will Foreman about the mounting points and feed-through.



- What's next
 - Will Flanagan will be here today. We will work on transferring the tasks.
 - What are the tests we want to conduct next? (1PE at low temp?, dark rate count?, light source?)