

TRIUMF nEXO SiPM Studies



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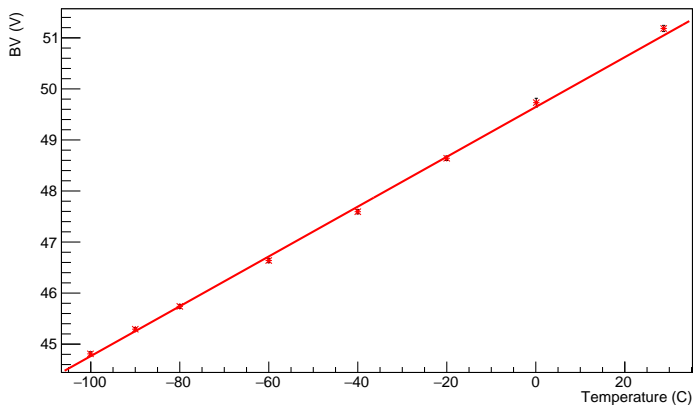


Figure : Breakdown Voltage against Temperature for VUV3 device.

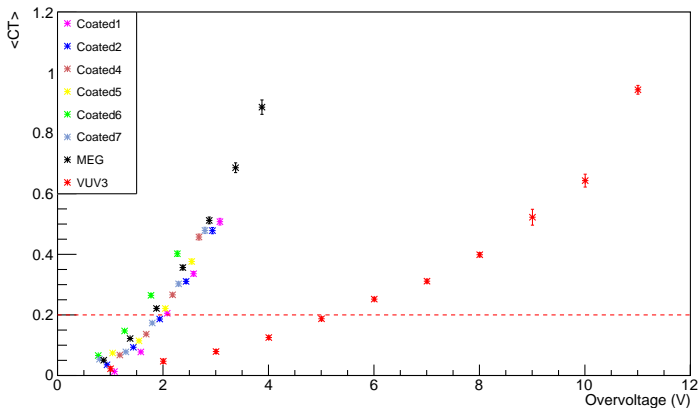


Figure : Crosstalk rate against overvoltage for different devices.

Remote control of the power supply / picoammeter was implemented and interfaced with the scope DAQ software so that voltage scans can now be done automatically.

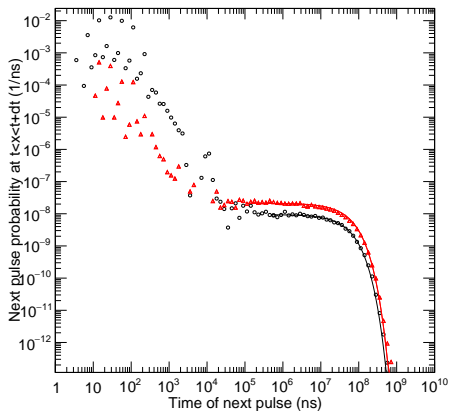


Figure : Delta-time distribution for VUV3 device.

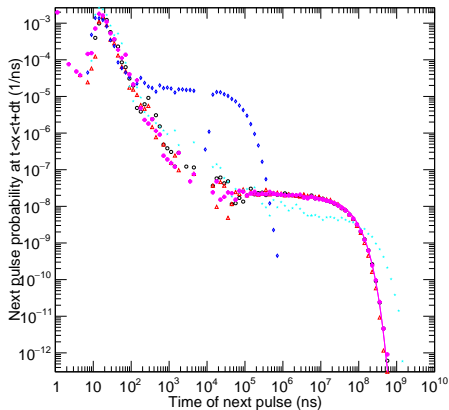


Figure : Delta-time distribution showing that while there is light leak into the box, with the steps taken to cover the box there is no longer a leak.

To determine the source of the inconsistency in PE measurements, the following steps were taken:

- Installing temperature sensors in the setup to keep track of temperature at different places in the box.
- Other stuff?

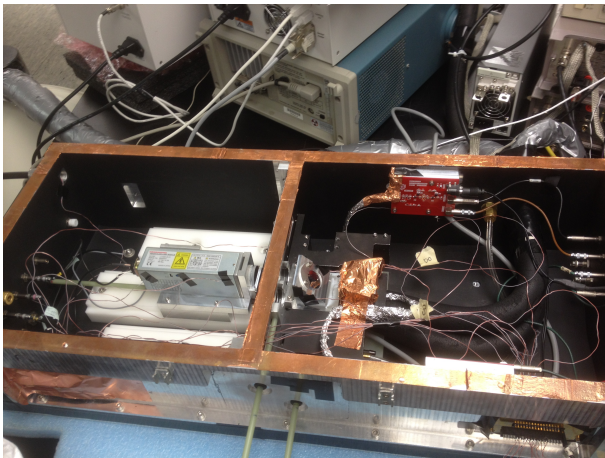


Figure : 10 thermocouples were installed in various locations around the box so that temperature could be recorded in each location over time.

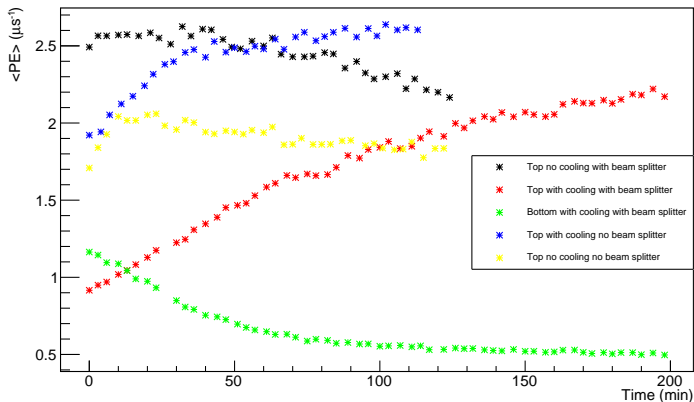


Figure : PE variation over 200 minutes in different cooling conditions.

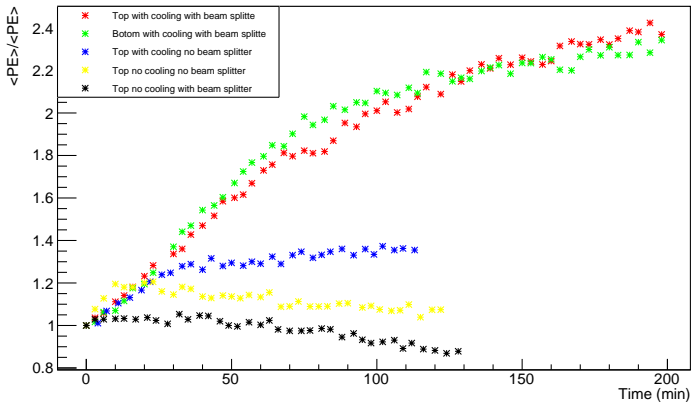


Figure : Variation of ratio of PE to initial PE over 200 minutes in different cooling conditions.