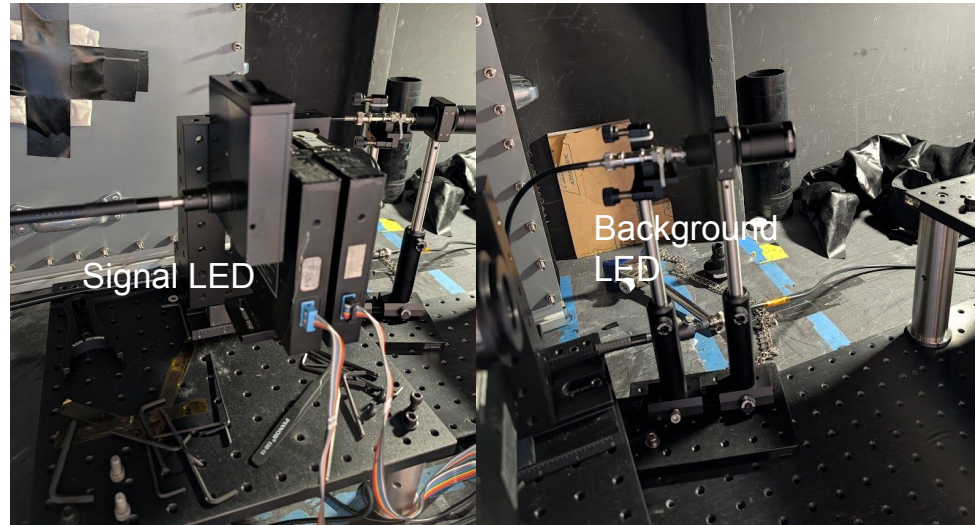
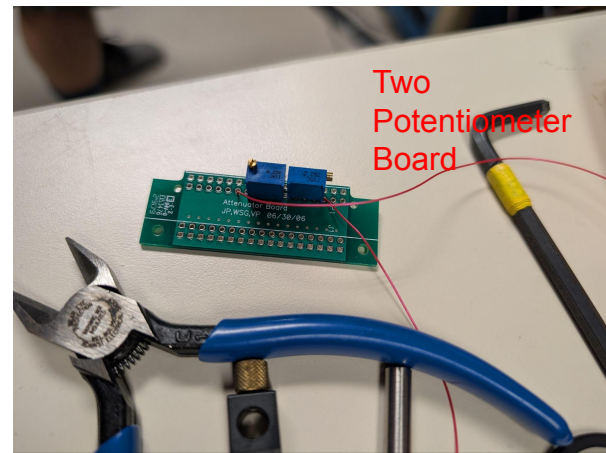
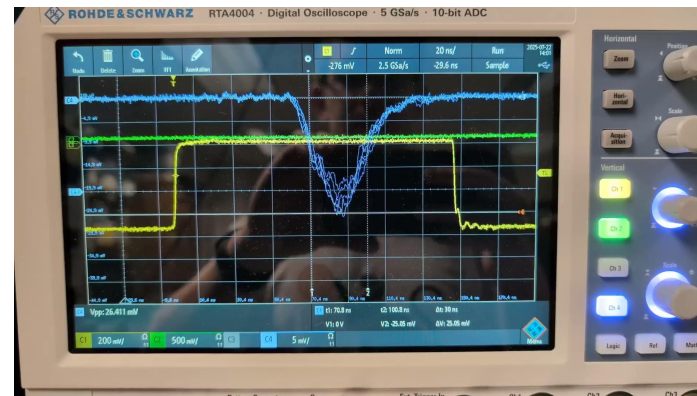


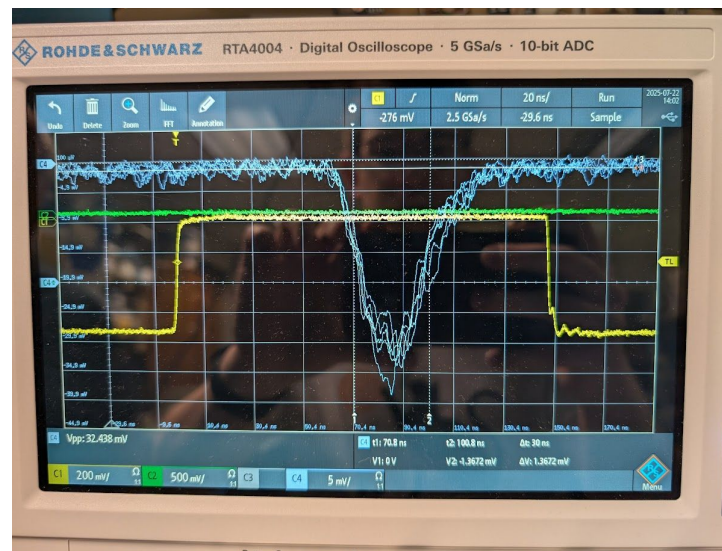
- Resistor board assembled by Bill in the EEL to adjust background LED current (max 250 k Ω)
- Both LEDs are fully connected. Carl had to swap the attenuator for the background LED (100x $\rightarrow$ 10x)
- Running background LED with 6V DC
- Pico-ammeter is set up. Can swap BNC cable from PMT anode between O-Scope and it
- Initial tests show the sort of gain shift we expect...



- 25 mV $\rightarrow$ 35 mV peak and ~ 3 mV baseline shift with 30 μ A anode current
 - Signal LED rate has no appreciable effect on gain or the anode current between 4-50 kHz. It really runs away at ~ 2 MHz



- Saw $\sim 2\times$ gain with 60 μ A anode current, which roughly matches the beam test
- Anode current appears to be fairly unstable, even at “low” bench test setting (6 μ A). Saw it repeatedly lower and raise by up to ~ 0.3 μ A



Resistance Measurements

- Adjusted left potentiometer to match lower PMT anode current settings between 6 and 30 μA and recorded the resistance
- Did a quick and dirty fit of the non-linear relationship between resistance and the PMT anode current to predict nominal resistances that should be used for the higher current settings
 - LED should be linear with applied current, so this curve is entirely due to the PMT response

Anode Current (μA)	Resistance ($\text{k}\Omega$)	Nominal Beam Current Equivalent (μA)
6.0	29.30	5
12.2	18.32	10
18.1	14.40	15
24.0	12.87	20
30.0	11.26	25
36.2	10.46	30

