ZACHARY CHEN-WISHART 20/04/2020

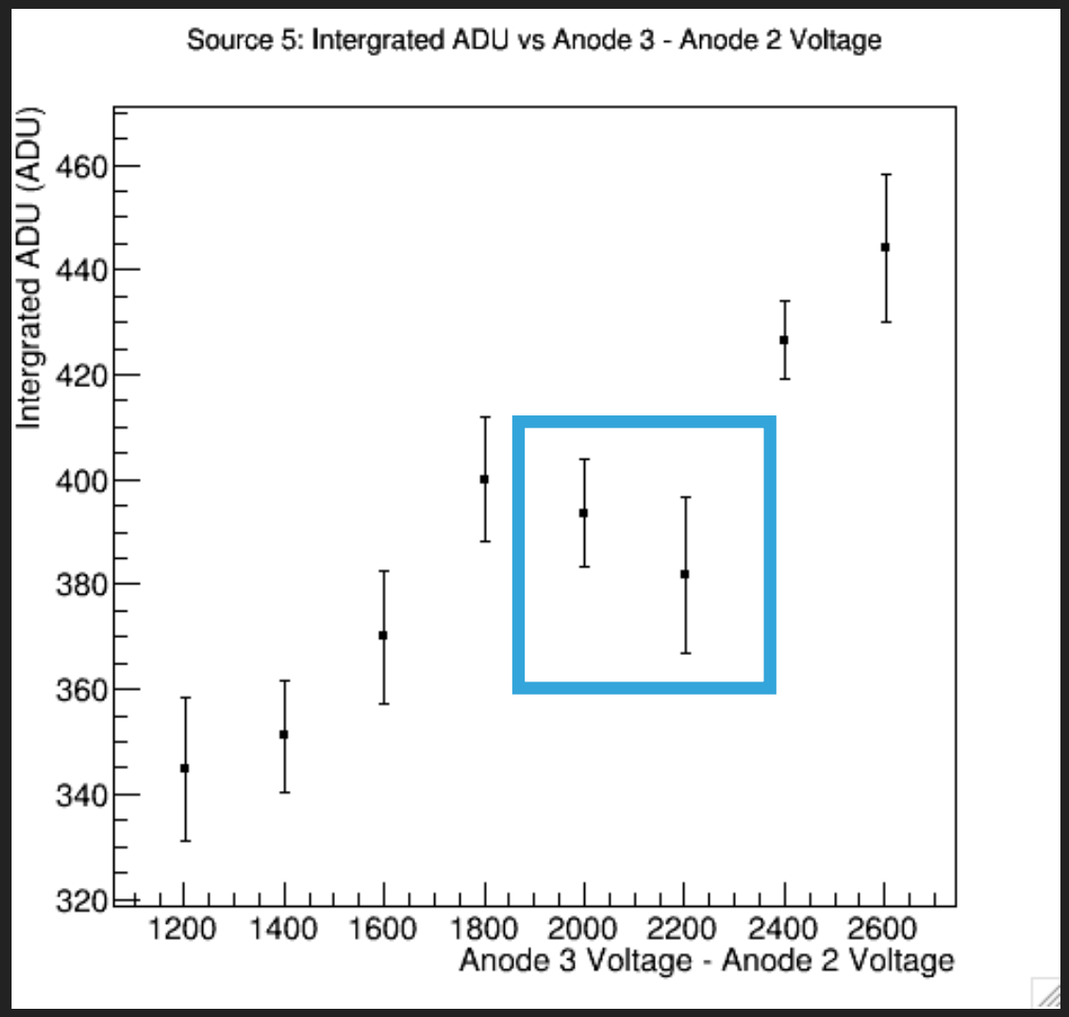
LIGHT SUM SQUARE

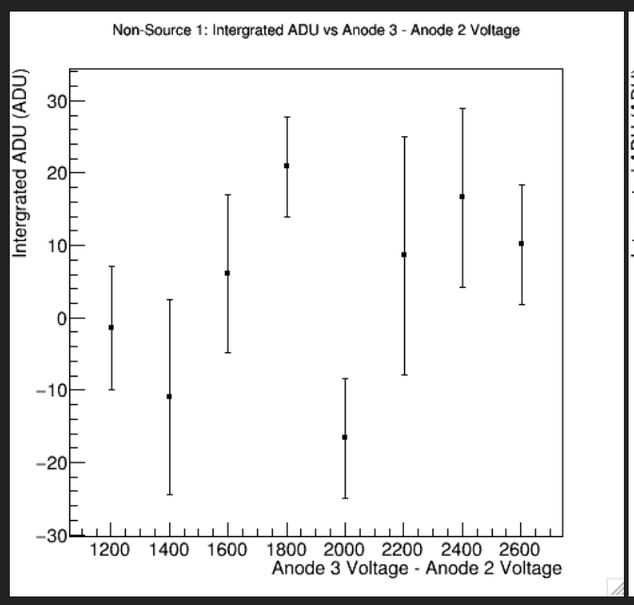
LIGHT SUM SQUARED

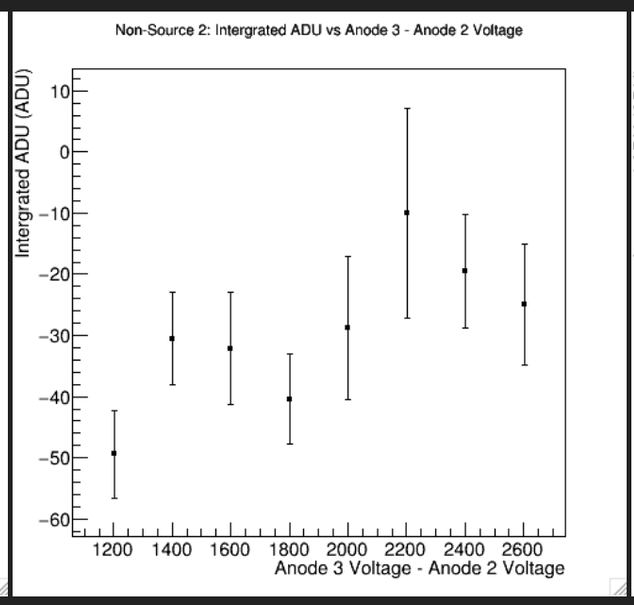
- I have a suspicion that these is some additional scheme to scheme variation that are currently unaccounted for:
  - I believe that it was not immediately apparent due to pedestal row corrections
    - I have been looking into it and have added in some code to measure pixels surrounding boxes to see if we can measure and correct for this on a per scheme per box (source or non-source) level
    - However, due to a slow linapp and a packed farm towards the end of last week I don't have results yet-> I will post to Slack as they arrive
- We now have the Charge (peak position) vs Light plot for Scheme B

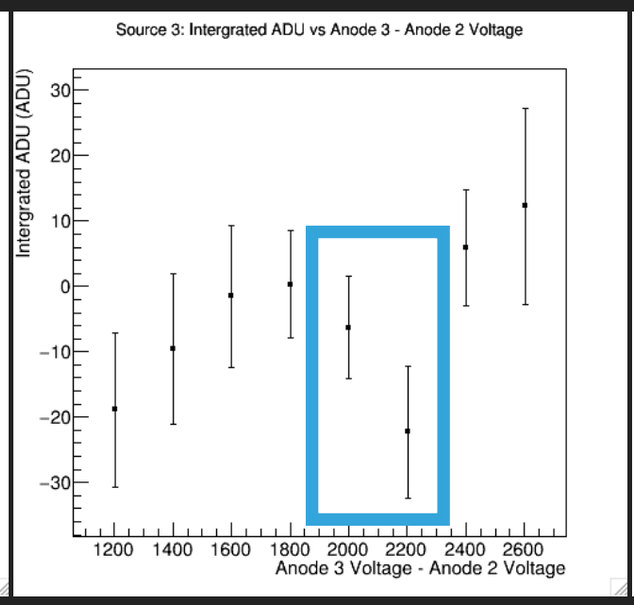
LIGHT SUM SQUARED

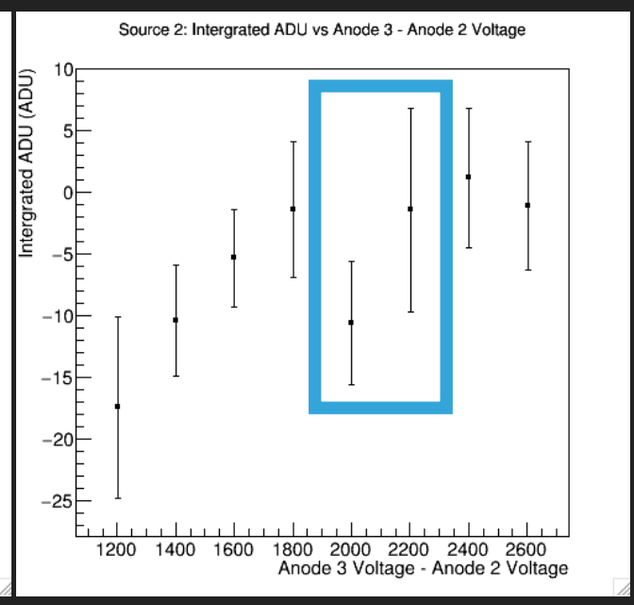
- Scheme B at 2000 V and 2200 V have lower integrated ADU than expected
- Non-source locations don't seem entirely consistent its 0 ADU
- Two non-source locations have these similar low points at 2000 V and 2200 V





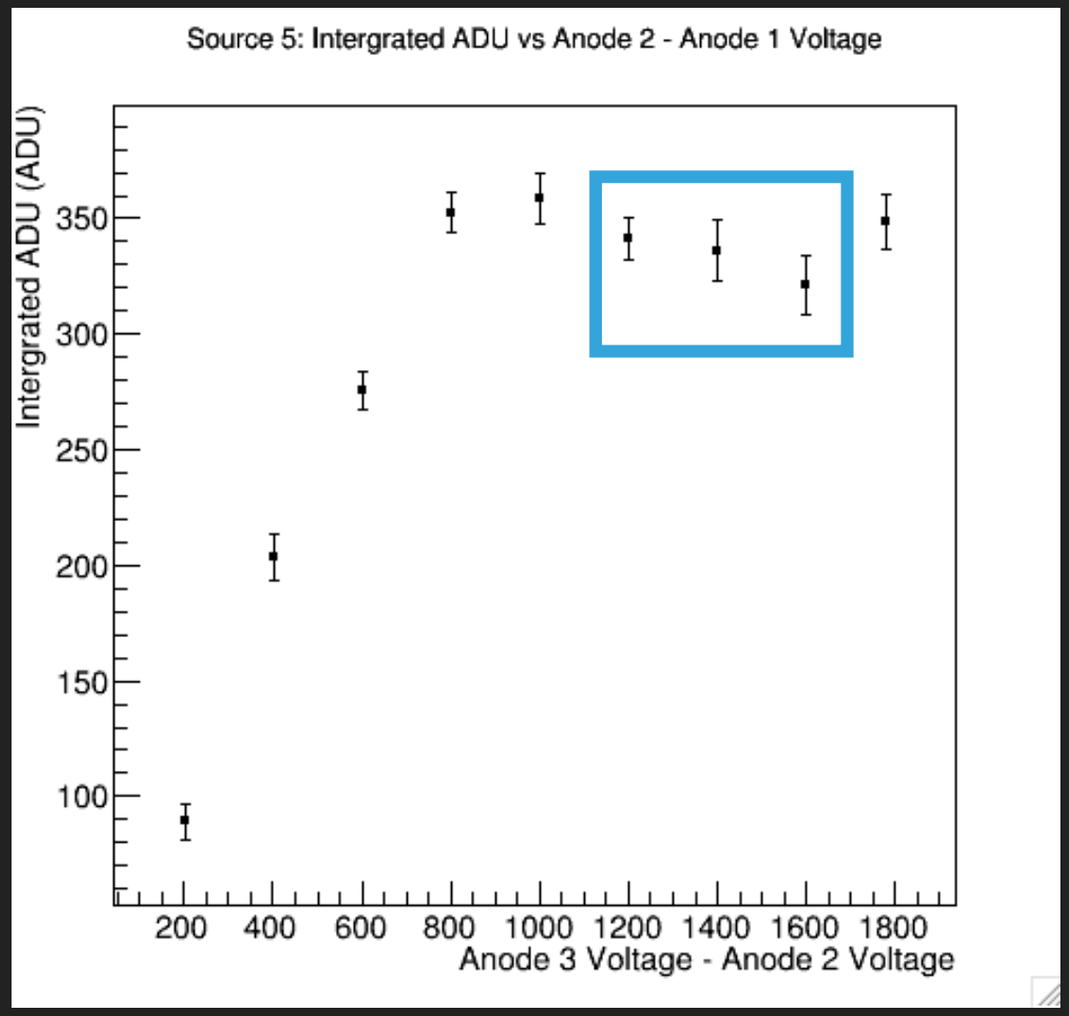


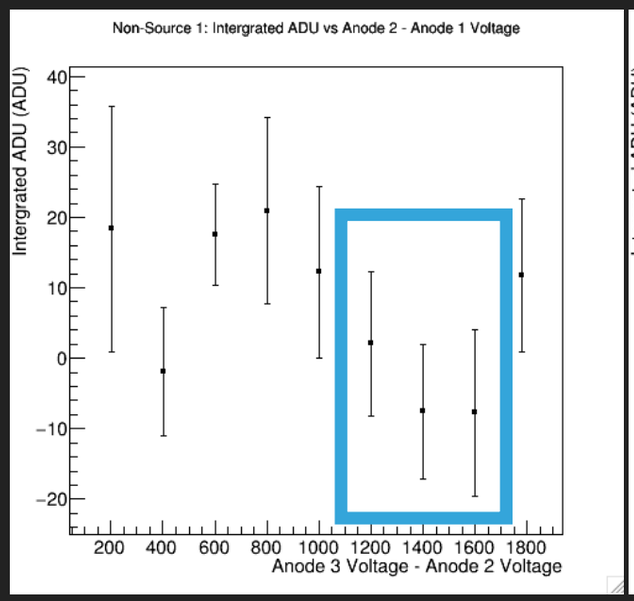


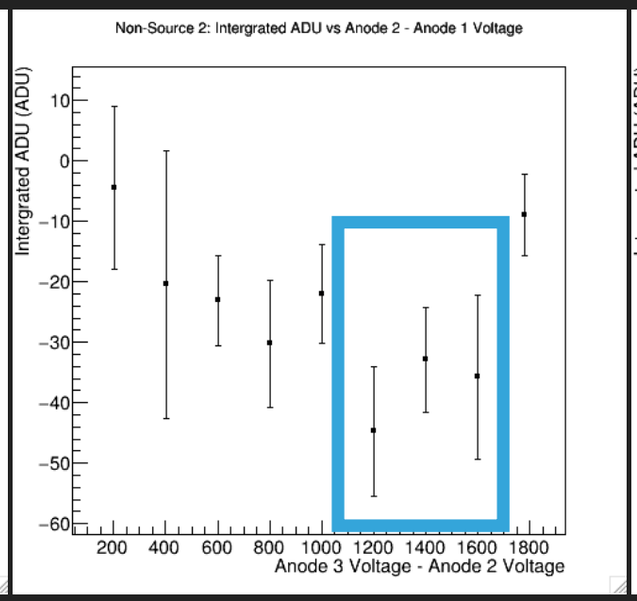


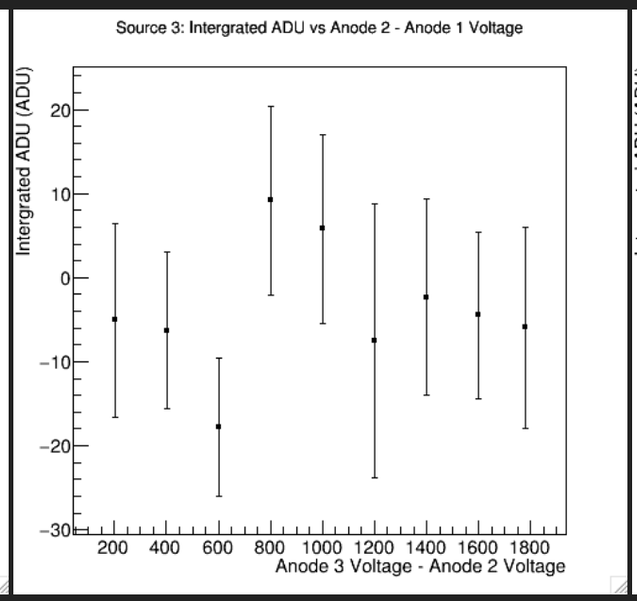
LIGHT SUM SQUARED

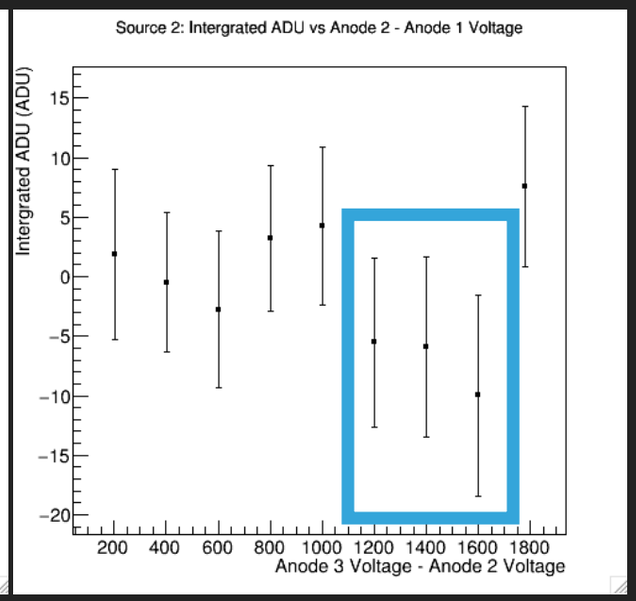
- Scheme B at 1200 V, 14400 V and 1600 V have lower integrated ADU than expected
- Three non-source locations have these similar low points at 1200 V, 14400 V and 1600 V









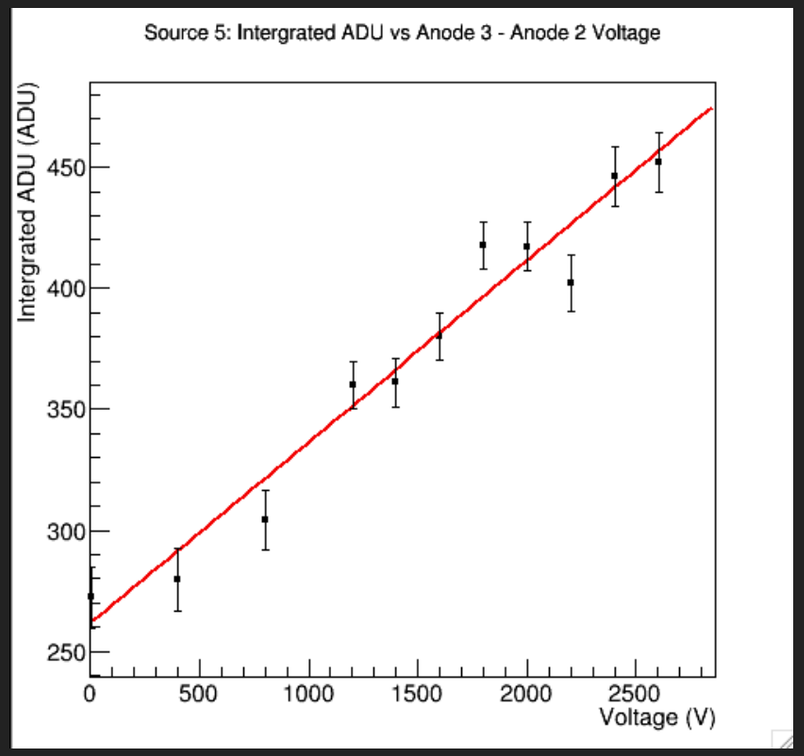


CURRENT STATE OF LIGHT VS CHARGE

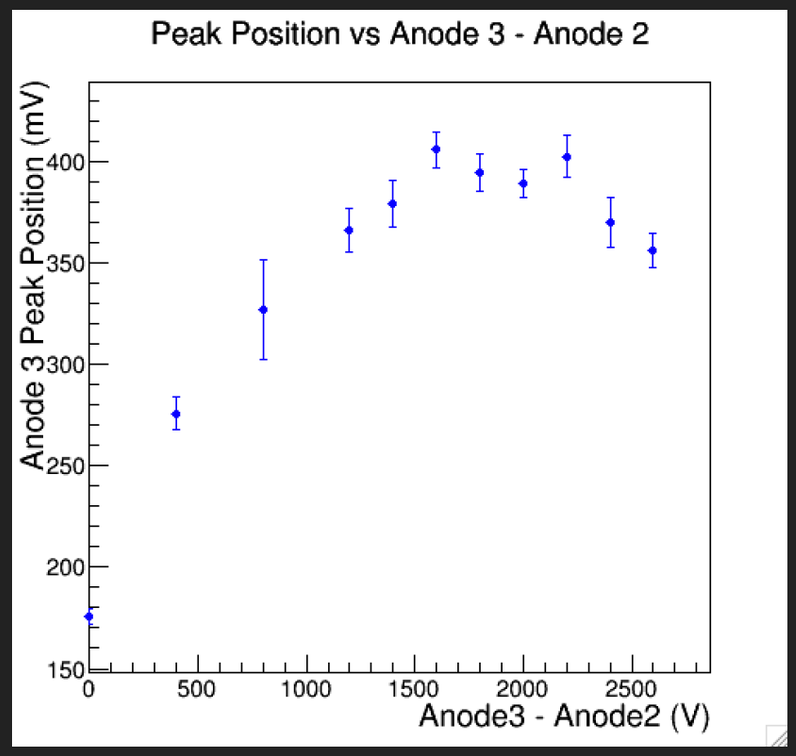
LIGHT VS CHARGE: SCHEME B

- Here we have the integrated ADU and entries vs anode 3 voltage minus anode 2 voltage

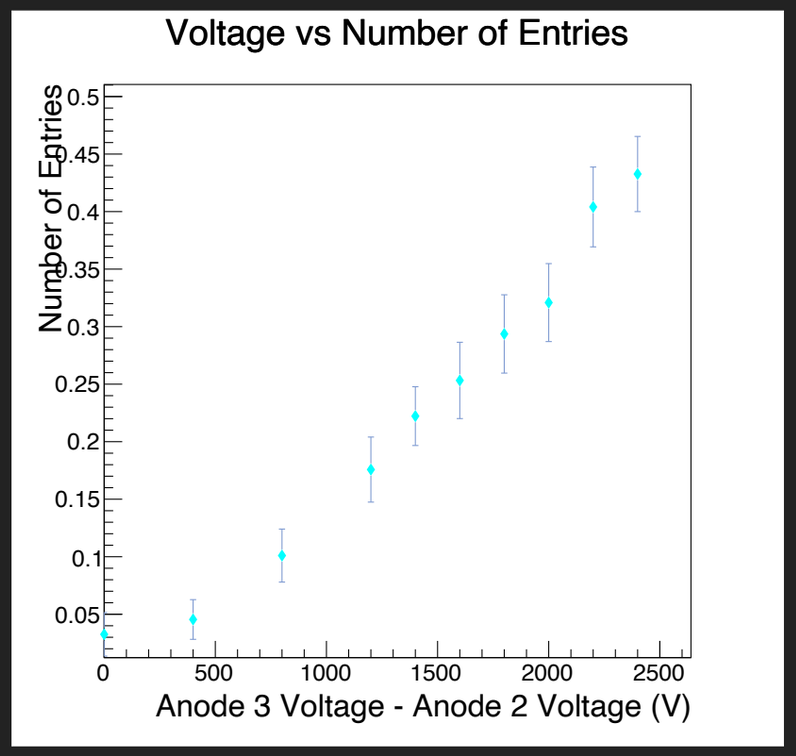
INT. ADU VS V(A3–A2)



PEAK POSITION VS V(A3–A2)



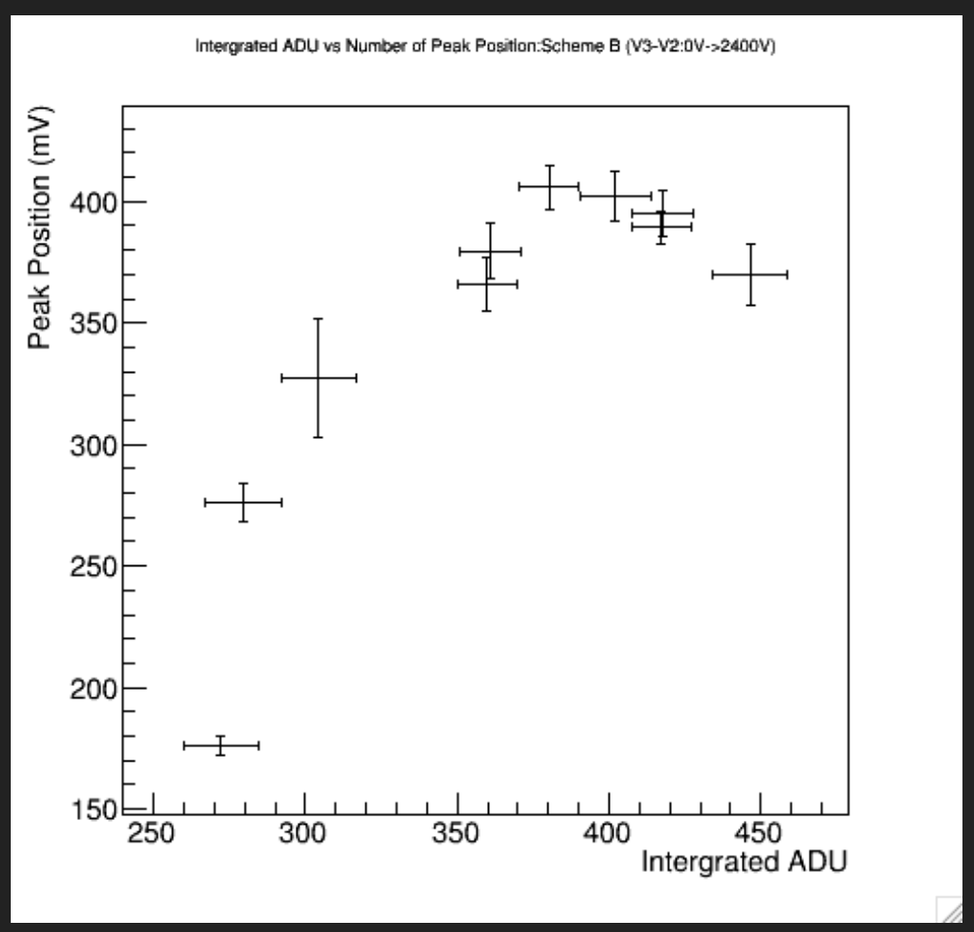
ENTRIES VS V(A3–A2)



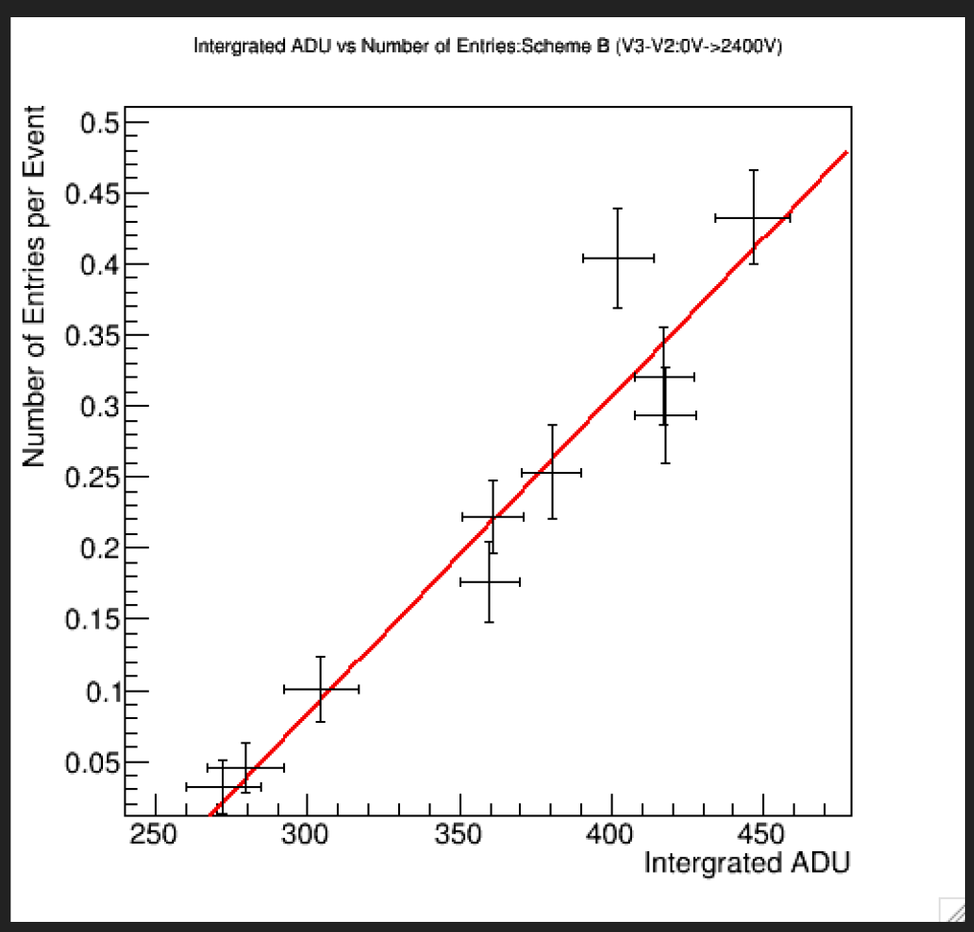
LIGHT VS CHARGE: SCHEME B

- This shows the integrated ADU vs entries plot & peak position
- These points have anode 3 minus anode 2 voltages of 0 V, 400 V, 800 V, 1200 V, 1400 V, 1600 V, 1800 V, 2000 V, 2200 V and 2400 V

INT. ADU VS PEAK P.



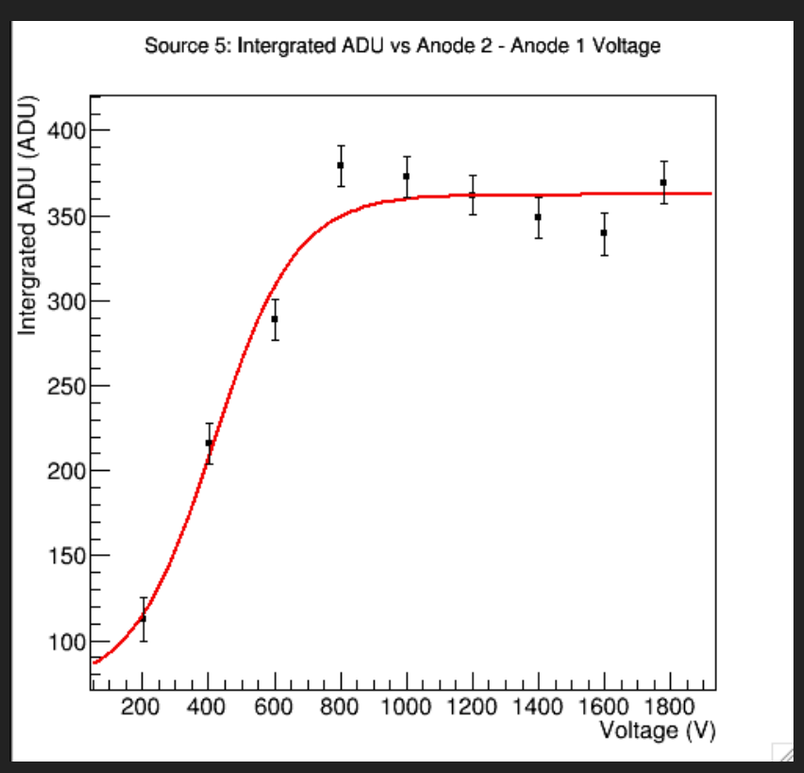
INT. ADU VS ENTRIES



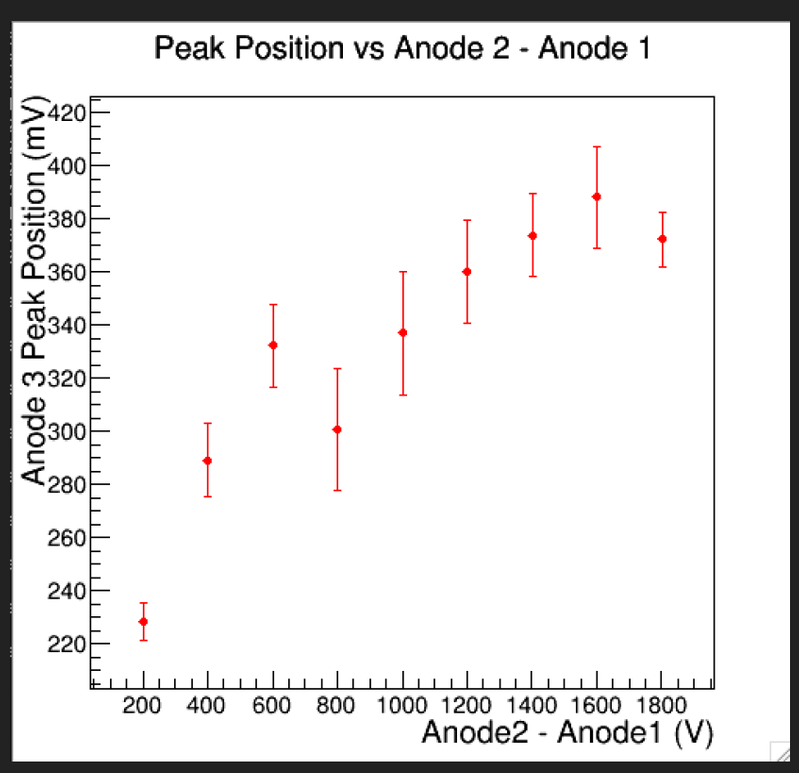
LIGHT VS CHARGE: SCHEME C

- Here we have the integrated ADU, entries and peak position vs anode 2 voltage minus anode 1 voltage

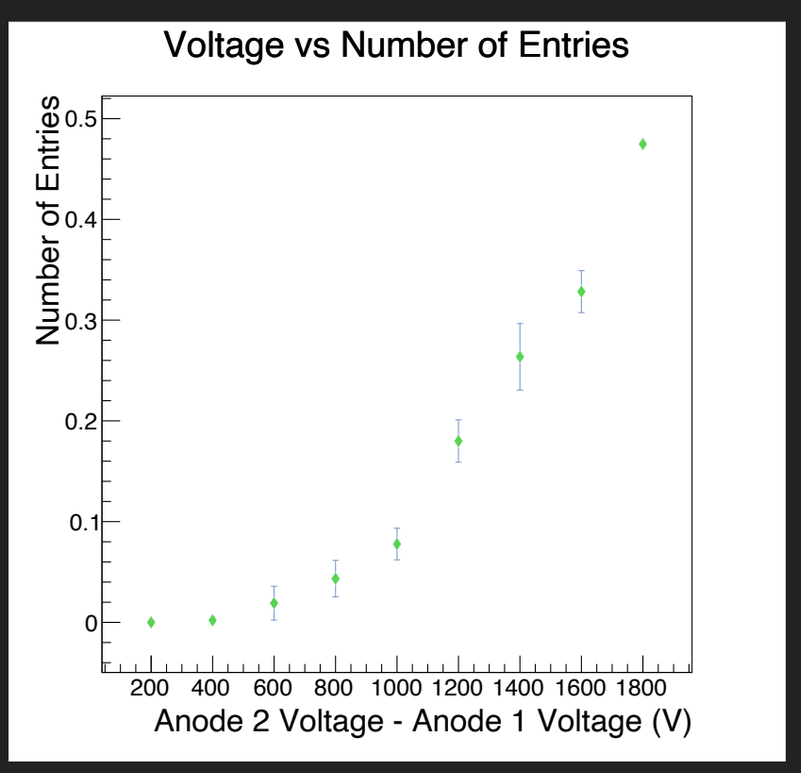
INT. ADU VS V(A2–A1)



PEAK POSITION VS V(A2–A1)



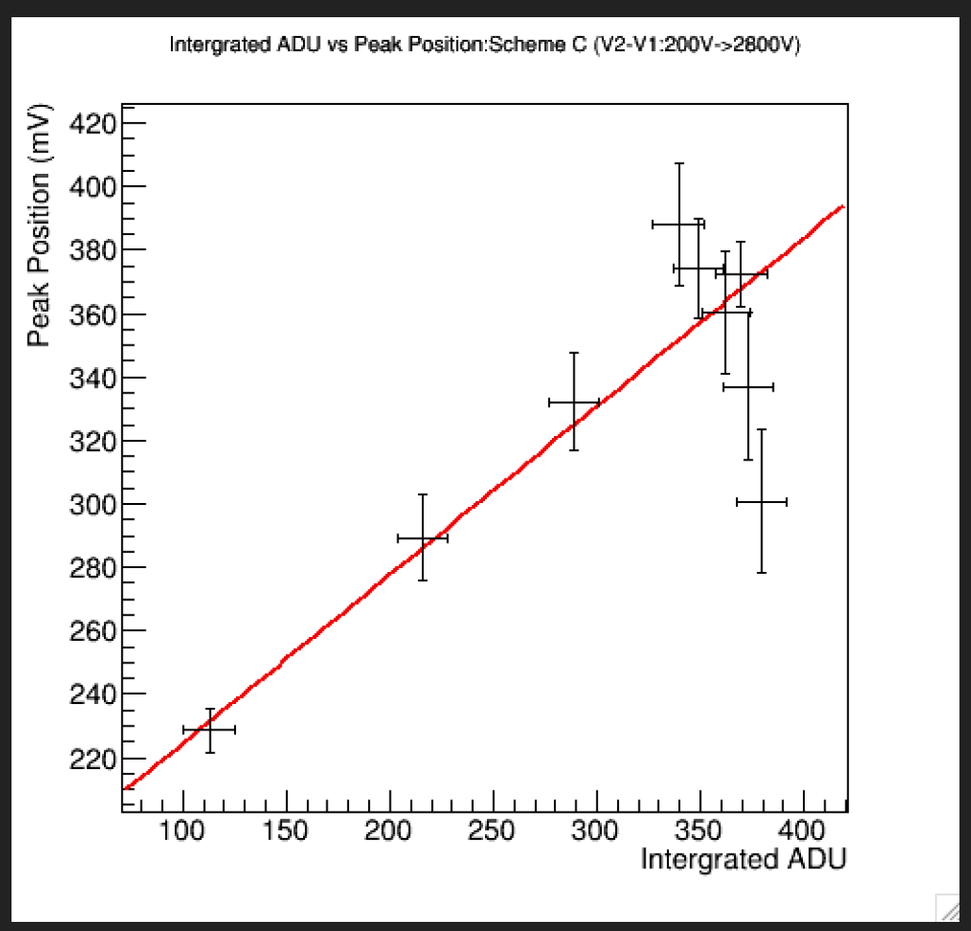
ENTRIES VS V(A2–A1)



LIGHT VS CHARGE: SCHEME C

- This shows the integrated ADU vs entries plot and peak position
- These points have anode 3 minus anode 2 voltages of 200 V, 400 V, 600 V, 800 V, 1000 V, 1200 V, 1400 V, 1600 V and 1800 V

INT. ADU VS PEAK P.



INT. ADU VS ENTRIES