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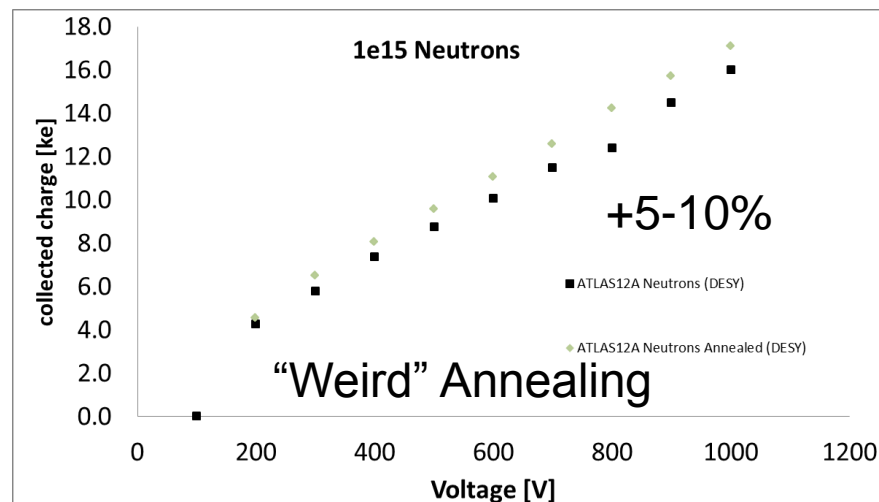
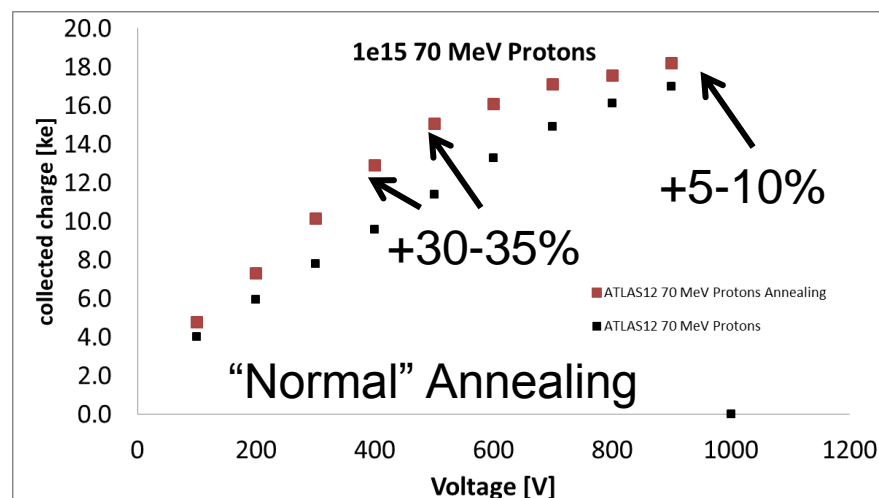
# “Weirdness” in collected charge and additional irradiation plans

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# Weirdness in Collected Charge



- ATLAS12 neutron and proton irradiated devices anneal differently
  - Don't believe ATLAS07 had this difference
- Not clear how ATLAS07 and ATLAS12 compare in detail
  - Normalization was performed differently as we were unaware of thickness of backplane connection (~7% effect)
- Would like to understand both things to help in definition of final spec



# Irradiation Plan



- Want to compare ATLAS07/12 before/after annealing after proton/neutron irradiation
- Plan is to irradiate sets of 4 ATLAS07 + 4 ATLAS12 minis at the same time to 2 doses ( $5e14$ ,  $1e15$ ) at both Ljubljana and Birmingham
  - The parts for Ljubljana are being sent
  - Measurement plan is to measure each before and after annealing at DESY, Liverpool and Ljubljana
    - One extra set available if anyone interested
- Should give clear comparisons between ATLAS07/ATLAS12, protons/neutrons, and pre/post annealing for specs and confidence in new sensors