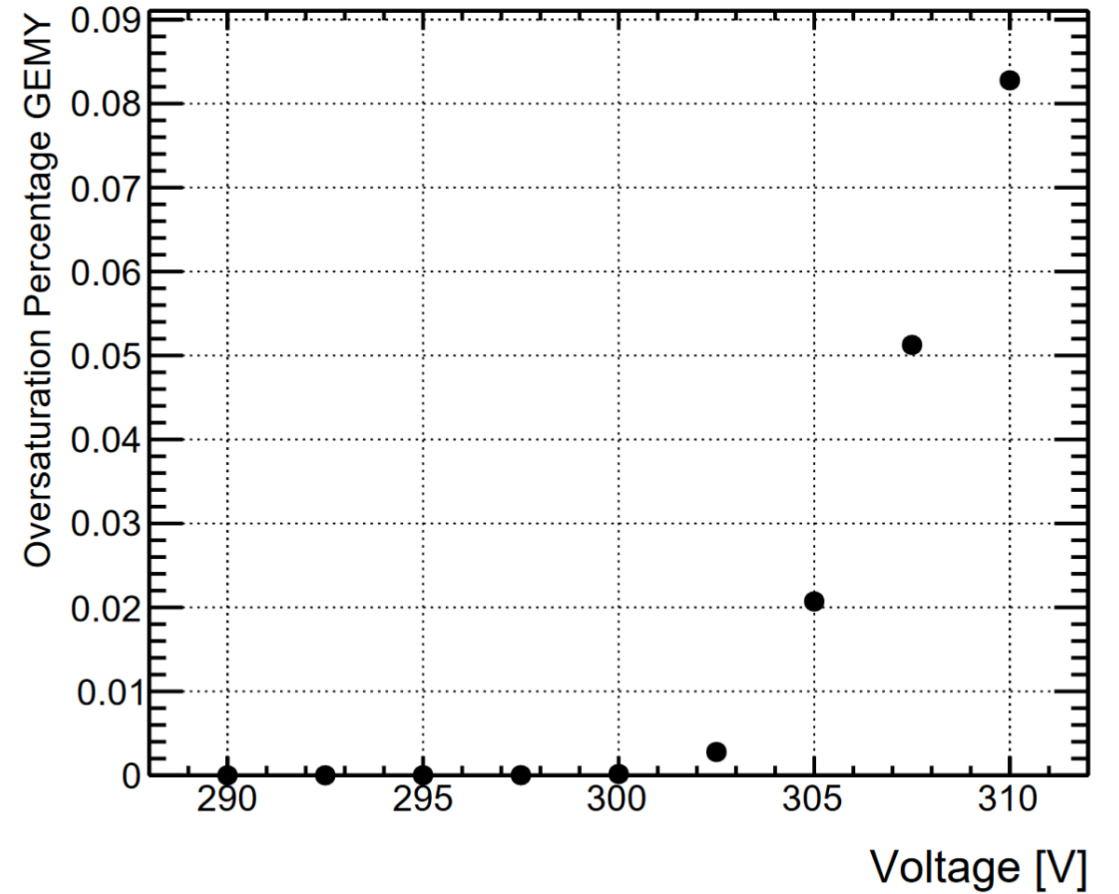
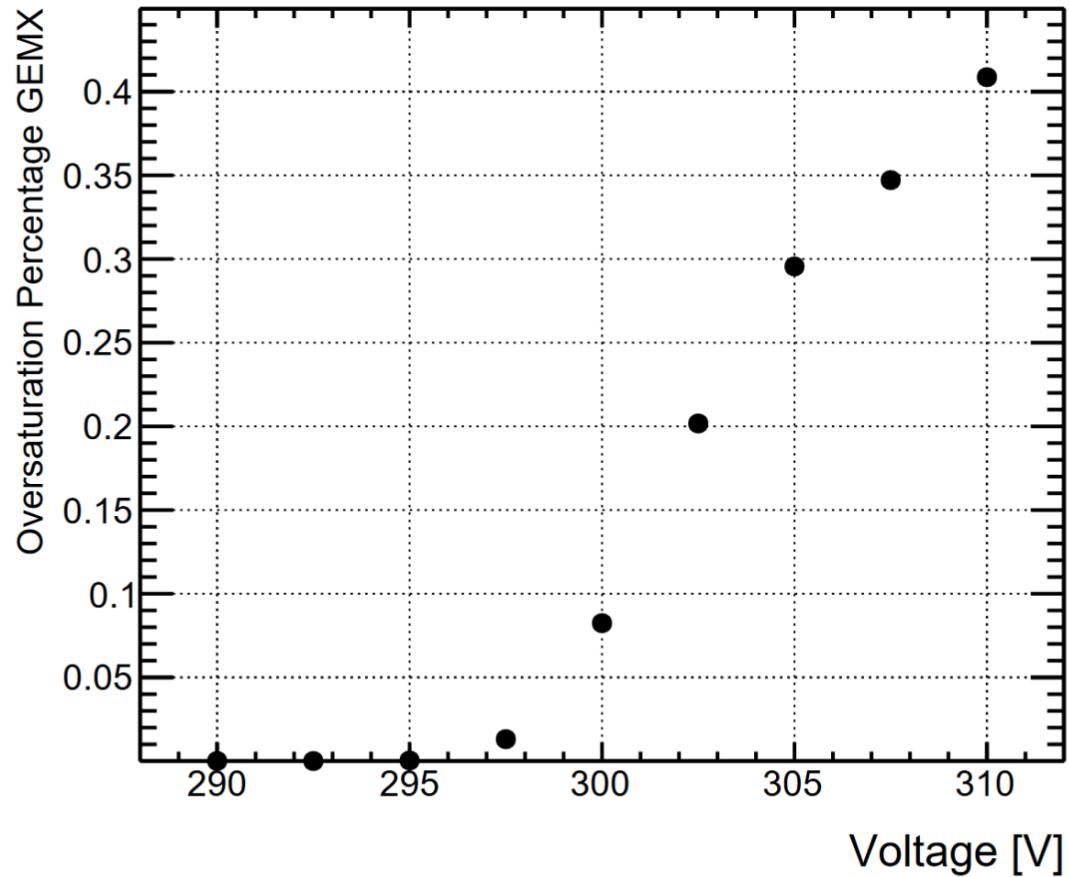


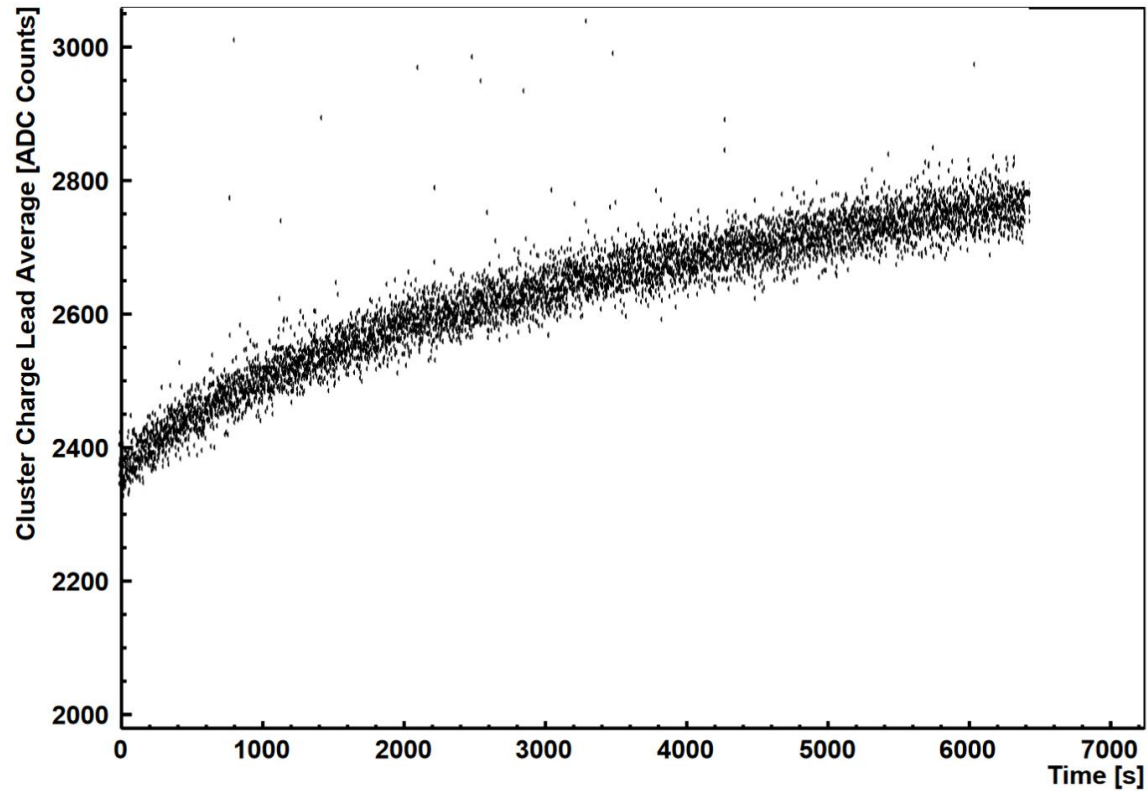
Updates on the 20x20 GEM Detector

Maja Rynkiewicz

Oversaturation for different Voltages

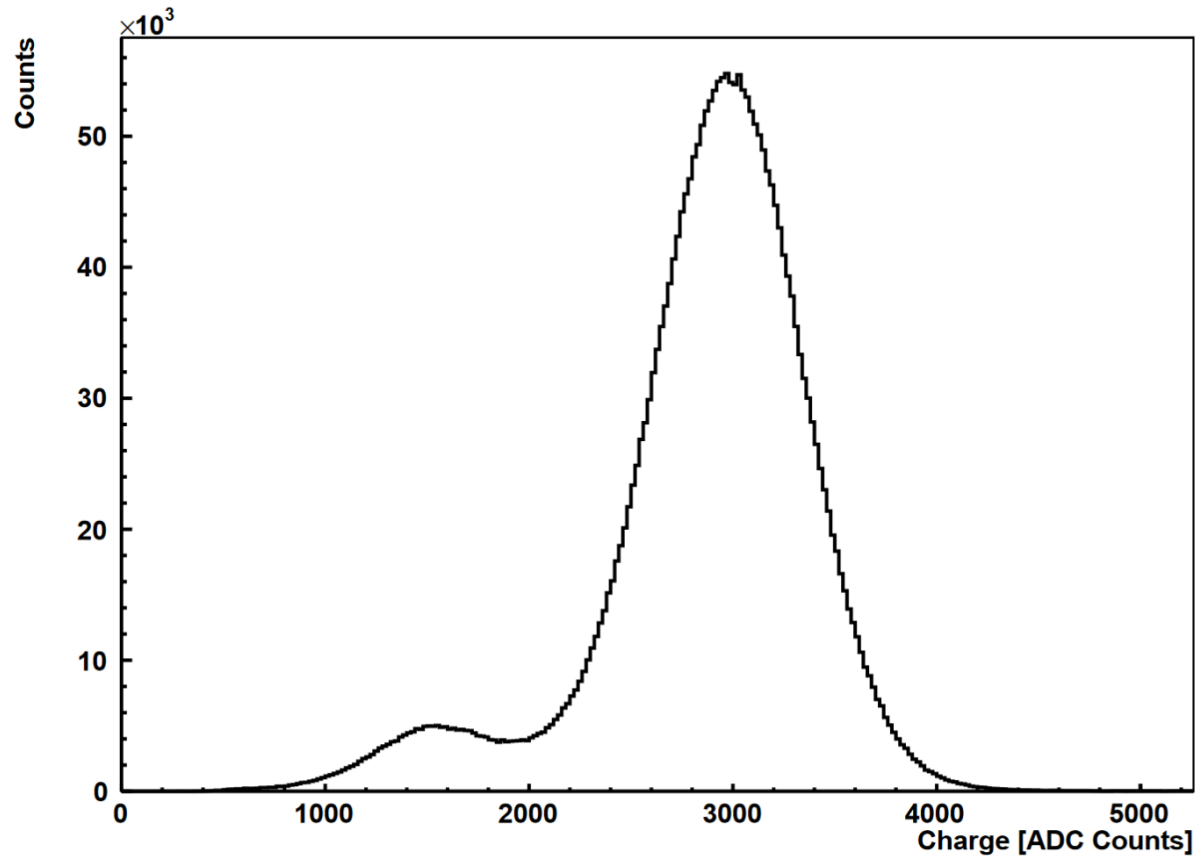


Charge-Up Effect



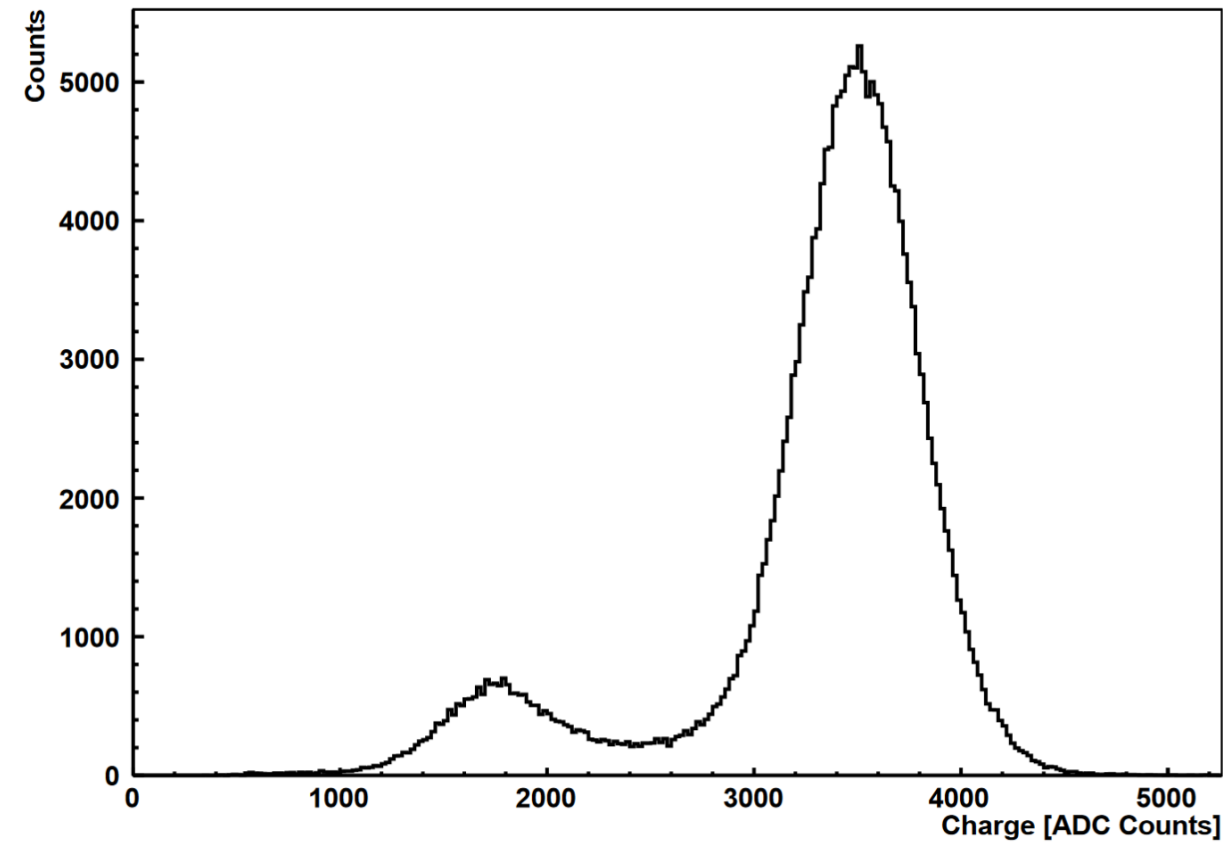
- Charge-Up Effect of GEM-Foils
- Measurement over ~ 2 h
- Worsens Energy Resolution
- 297.5V

Energy Resolution with Charge-Up



- 5.9keV Peak Resolution = 0.12
- 2.9keV Peak Resolution = 0.22
- Calculated with: $\frac{\sigma}{\text{Position Mean}}$

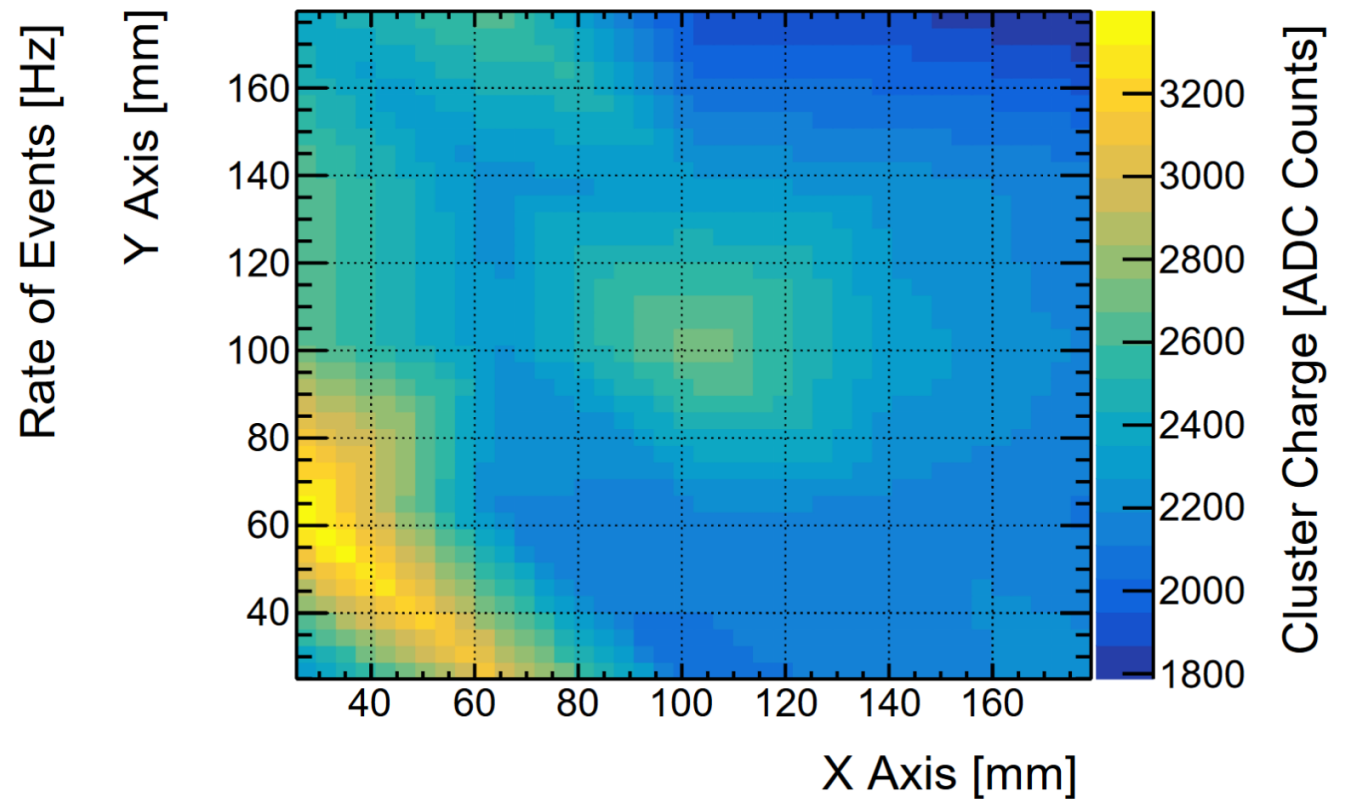
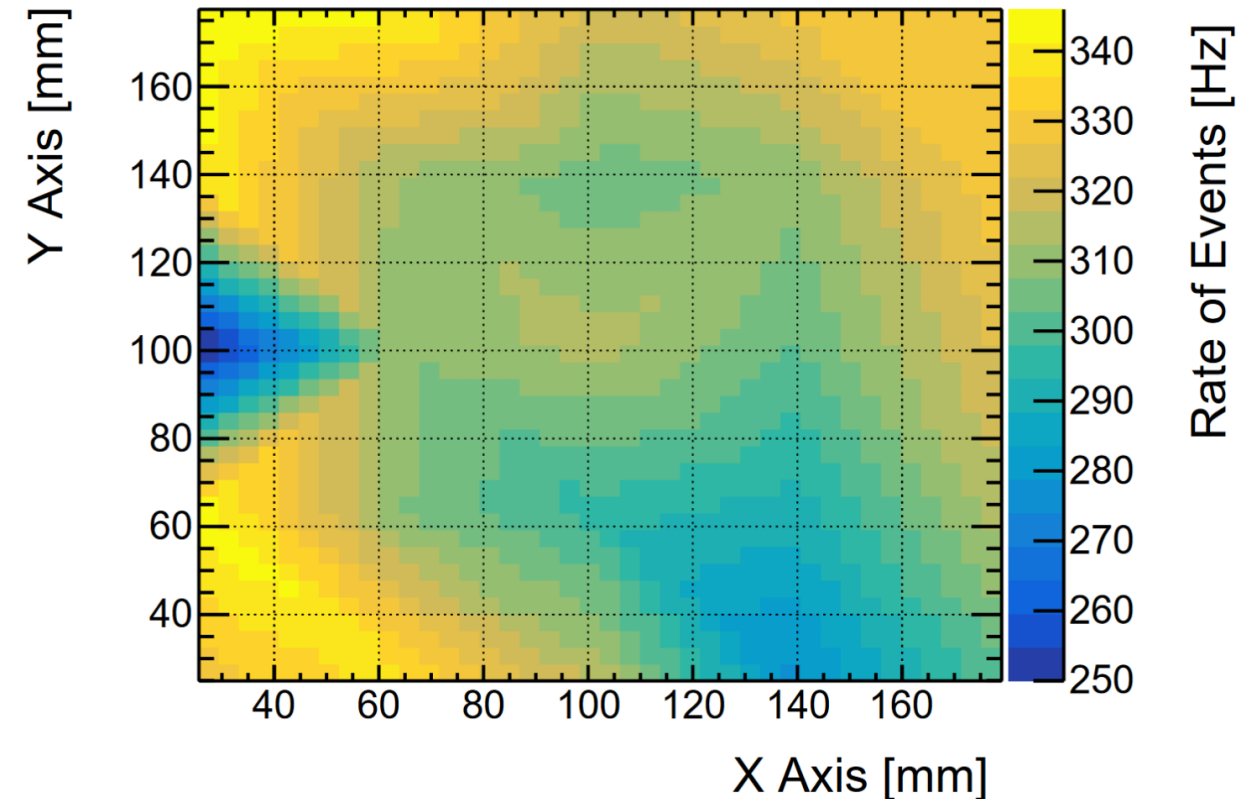
Improved Energy Resolution

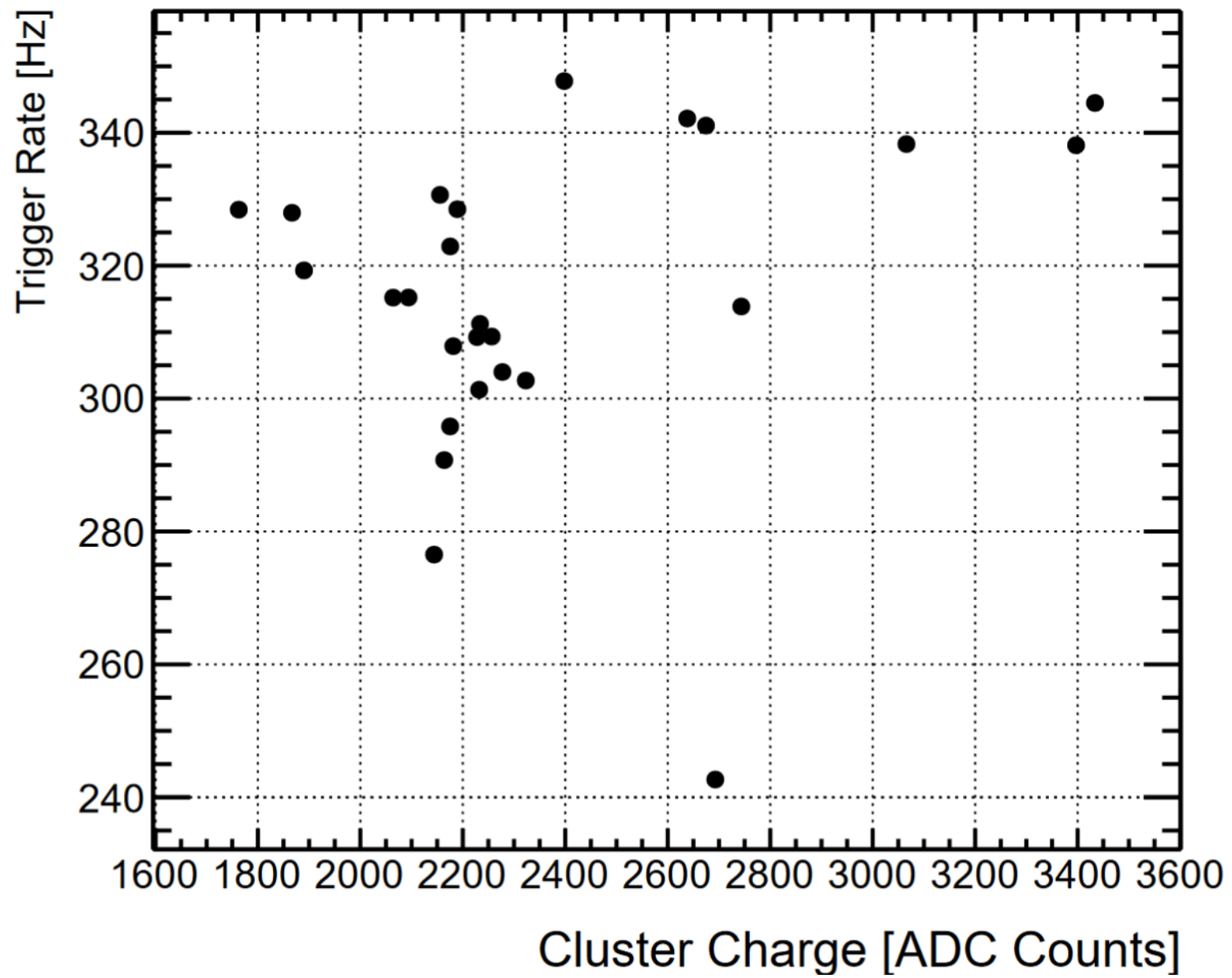


- 5.9keV Peak Resolution = 0.084
- 2.9keV Peak Resolution = 0.16
- Position Ratio of Peaks = 1.98
- Height Ratio of Peaks = 8.02
- 297.5V

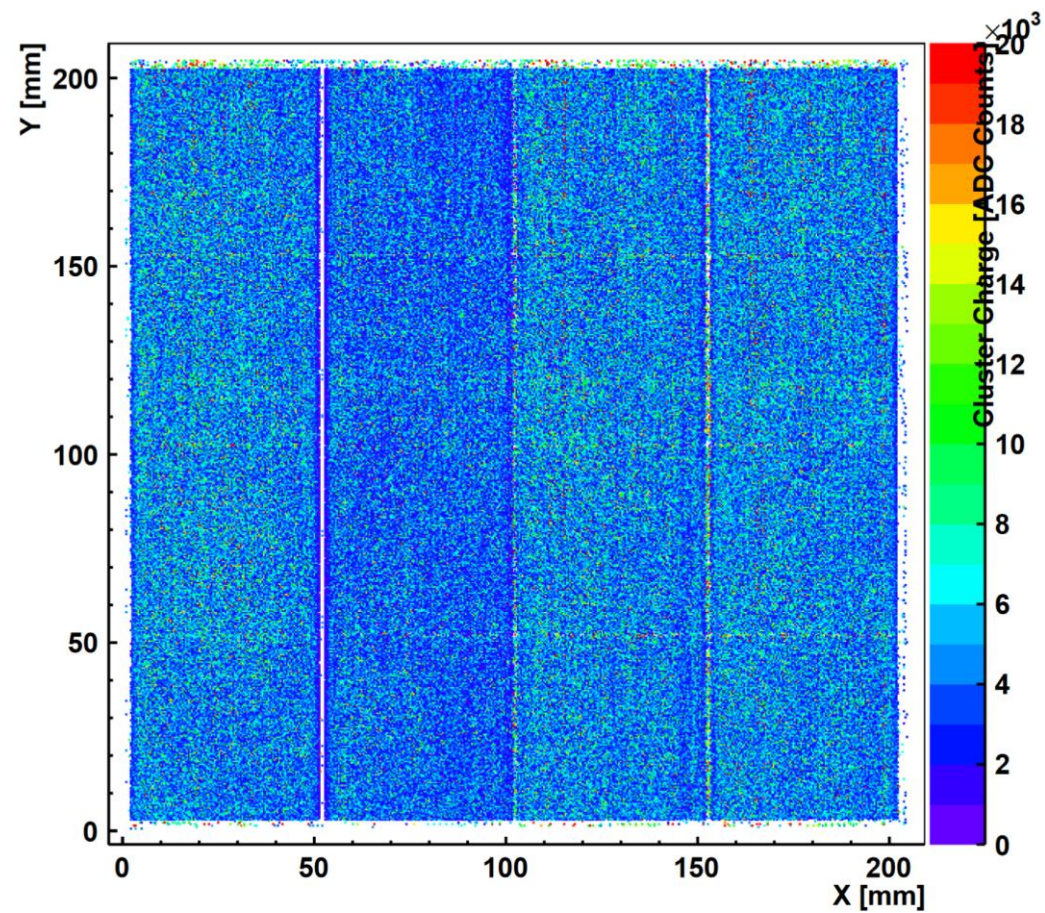
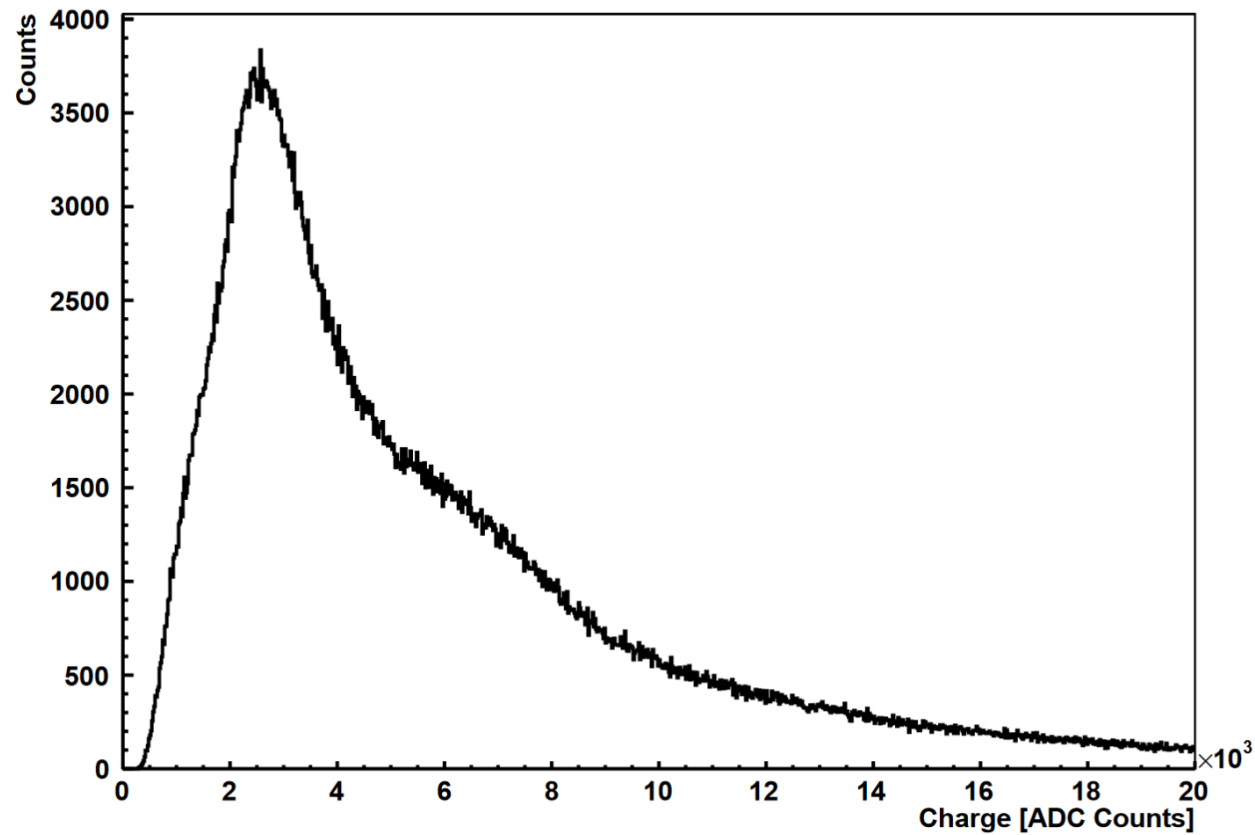
Cluster Charge Lead and Trigger Rate for Different Positions

- 2 Minute Measurement for each Position
- 295V

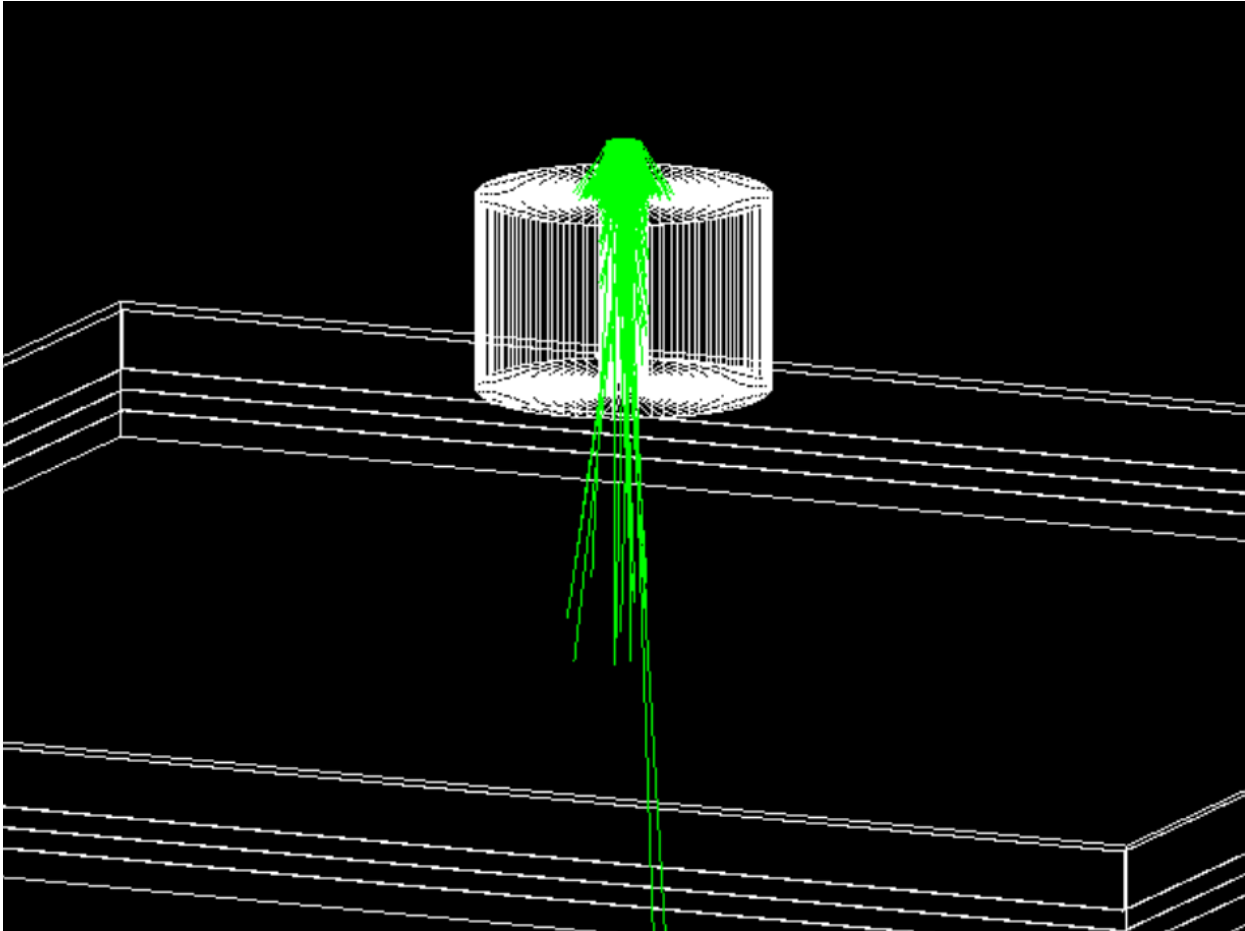




Myon Measurement at 310V



Whats Next?



- Position Resolution Measurements with different Collimator Sizes
- Simulation for the Position Resolution
- Measurement of Charge-Up Effect next week