Paddy Analysis follow up

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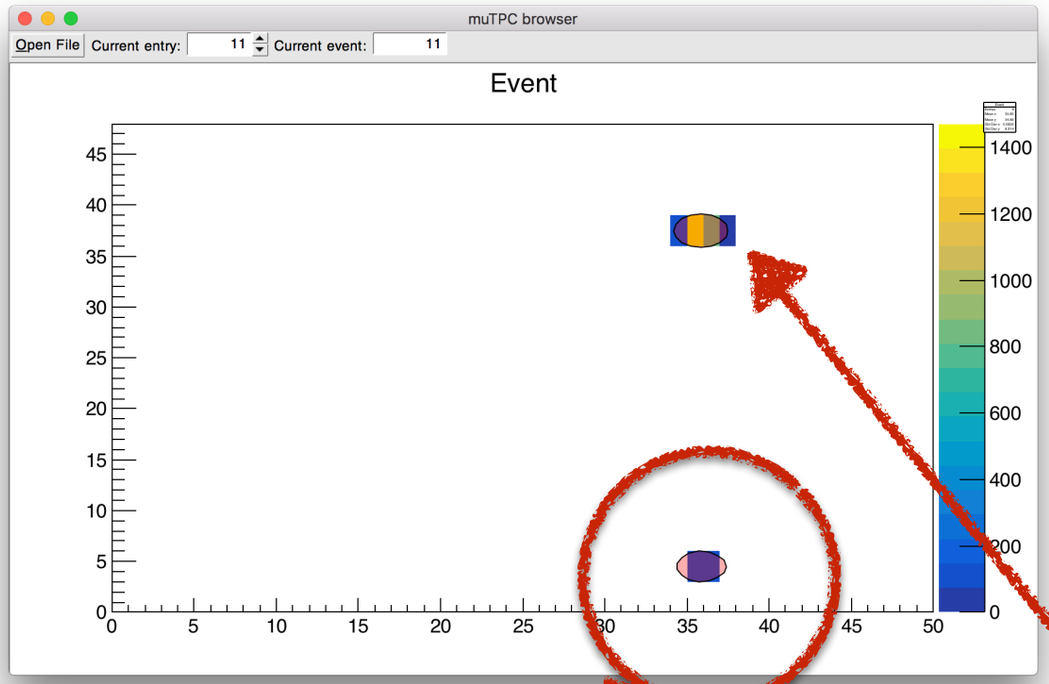
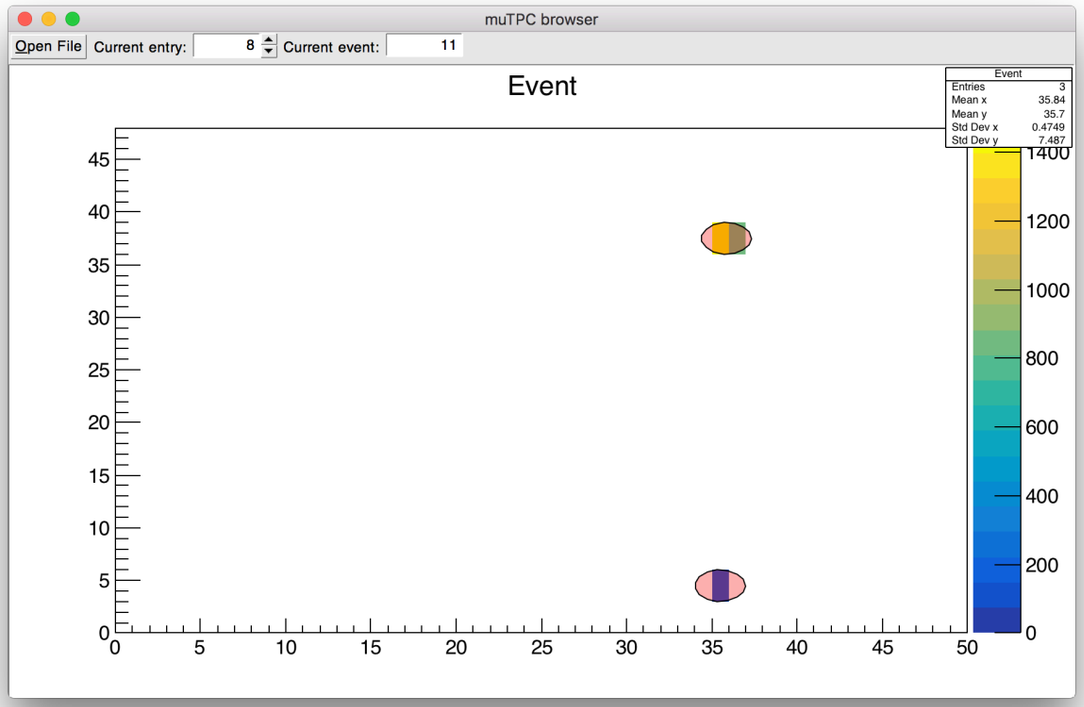
Cleaning of Noise - OLD

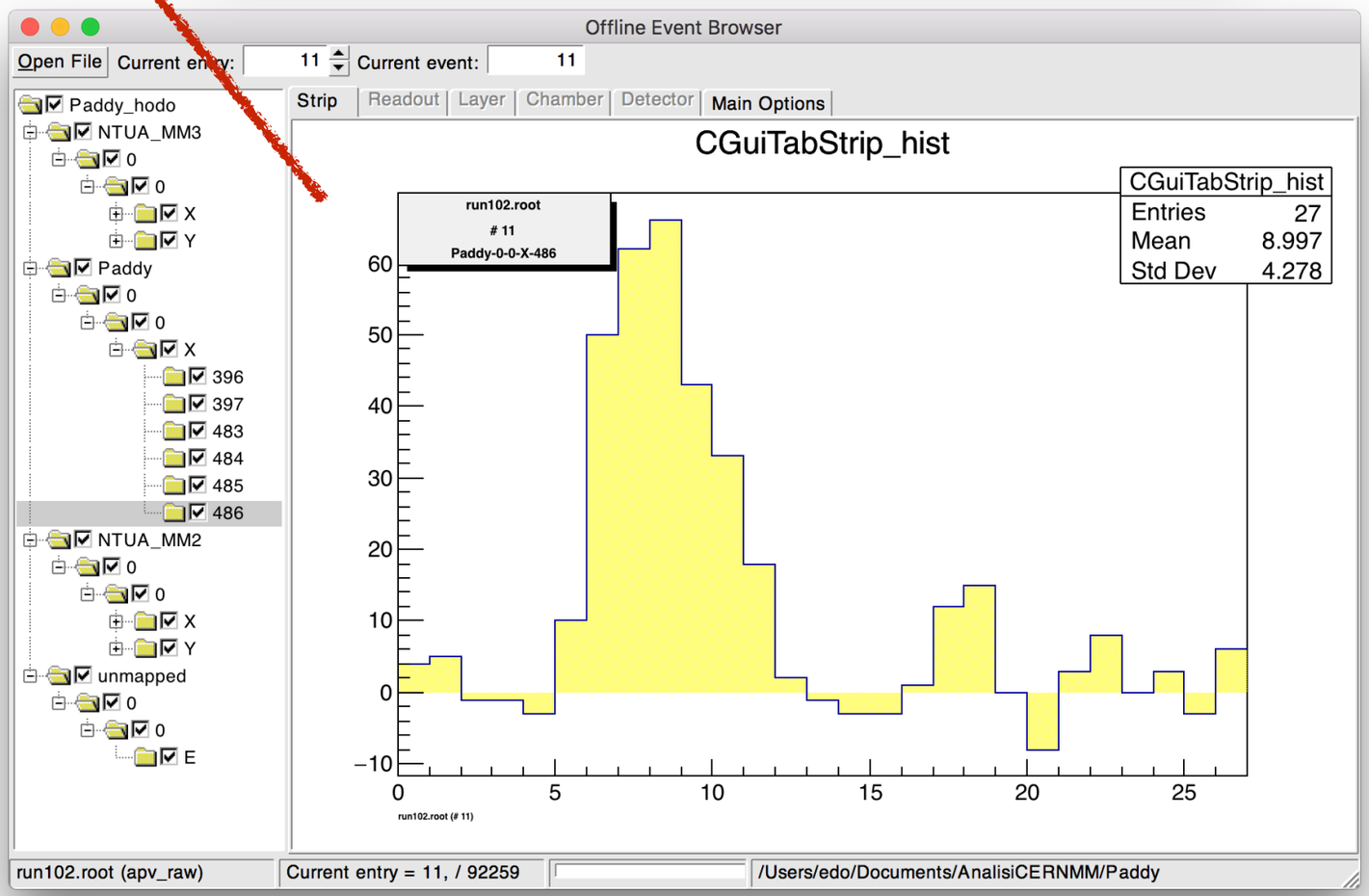




XTalk

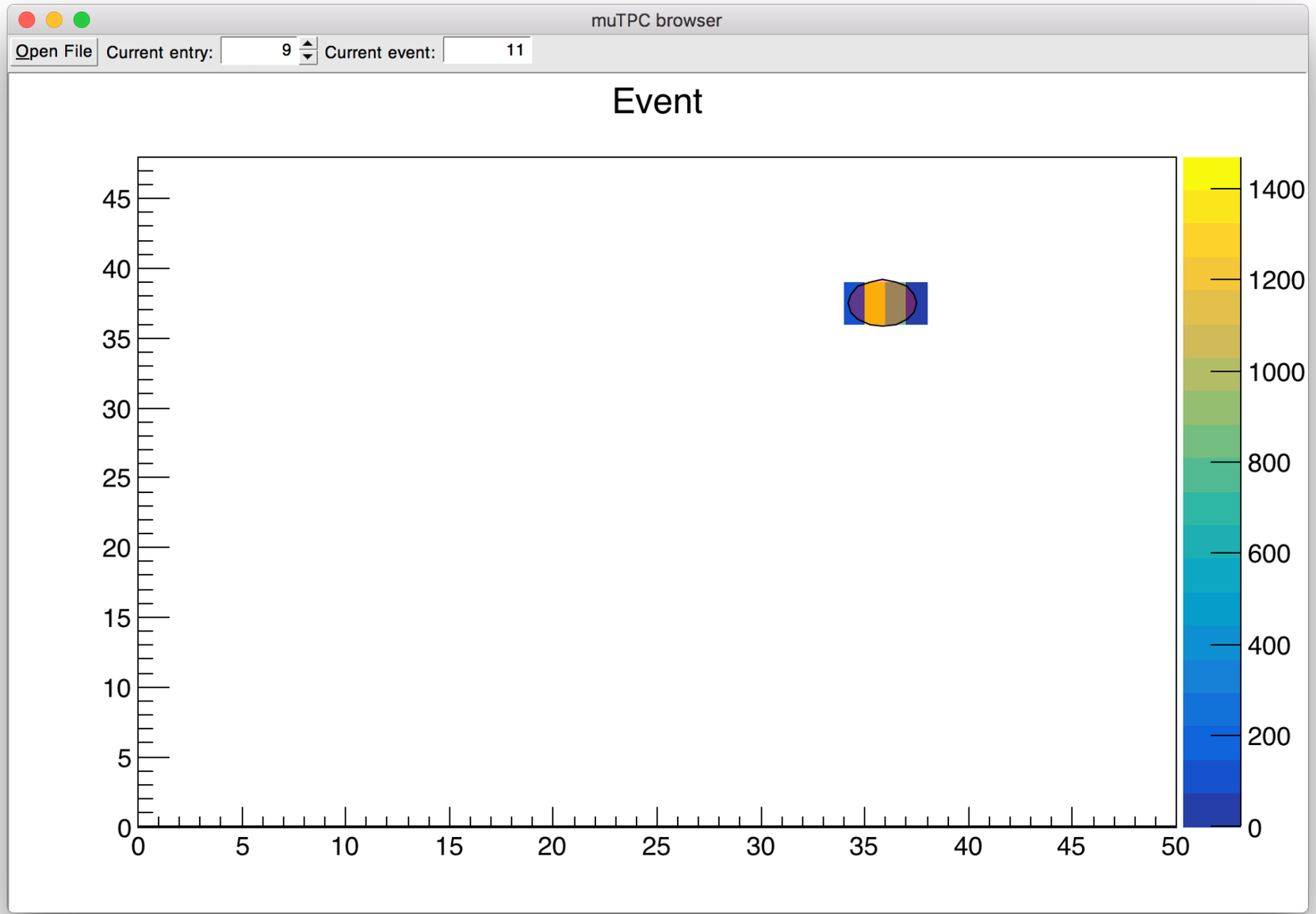
For each event, for each strip, the std dev of the signal distribution as a function of the time is calculated with respect to the mean value

If the value obtained is smaller than 4 times the std dev of the pedestal for the specific strip the strip is rejected.

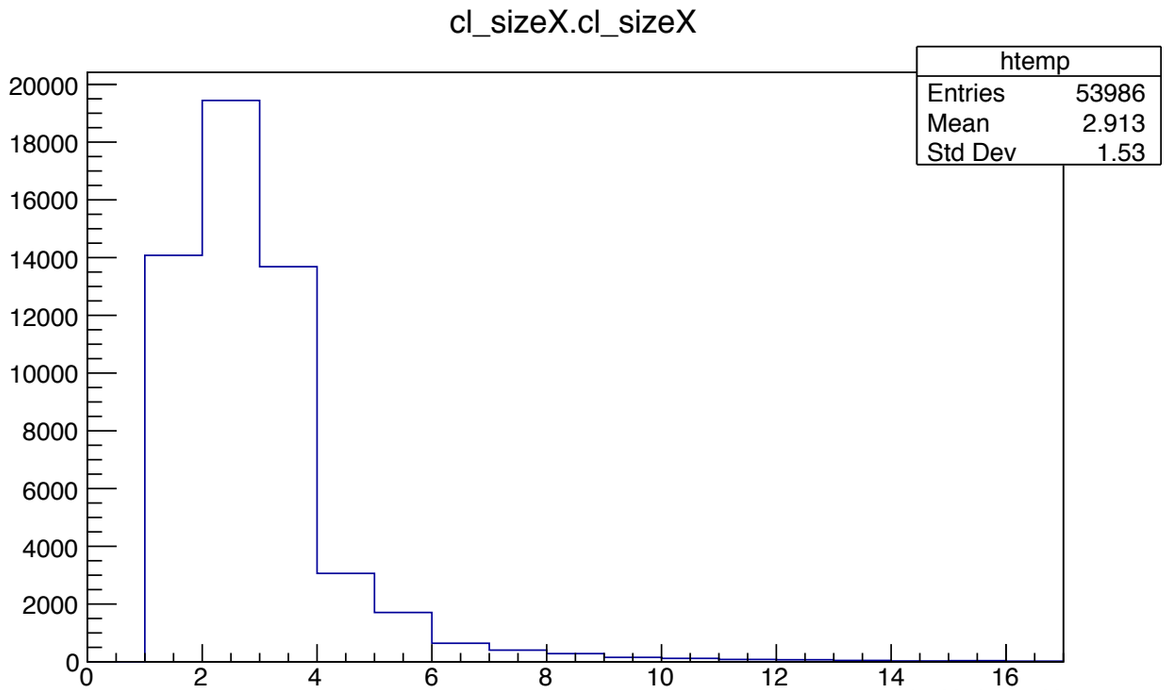


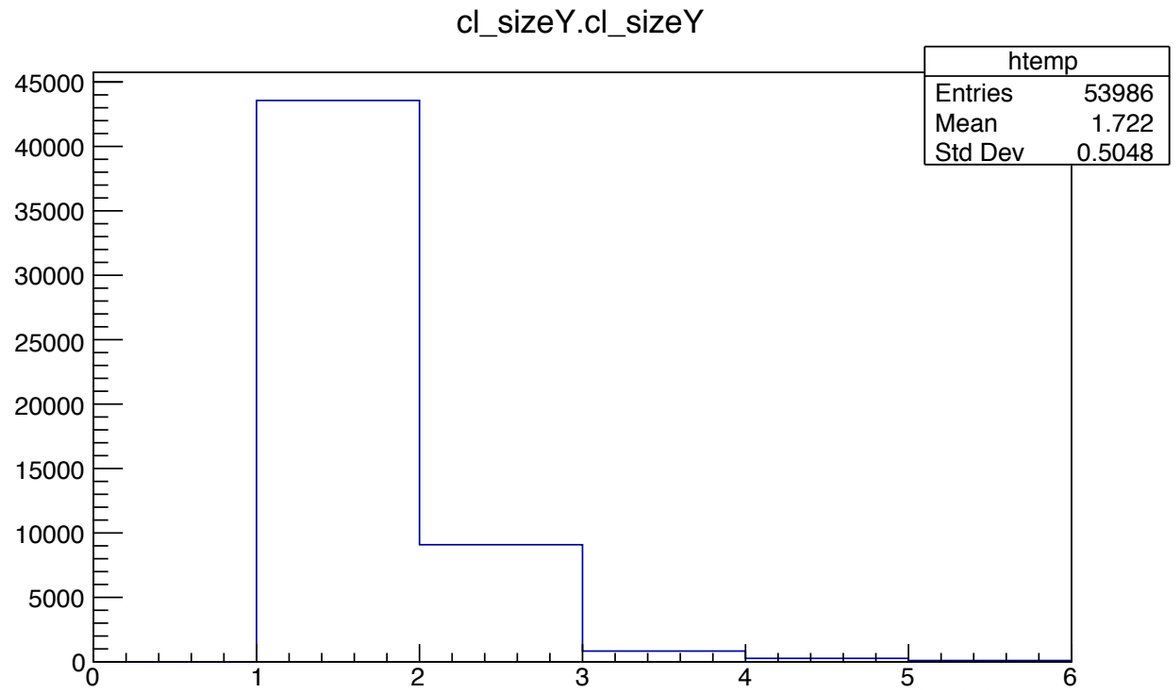
Cleaning of Noise - NEW

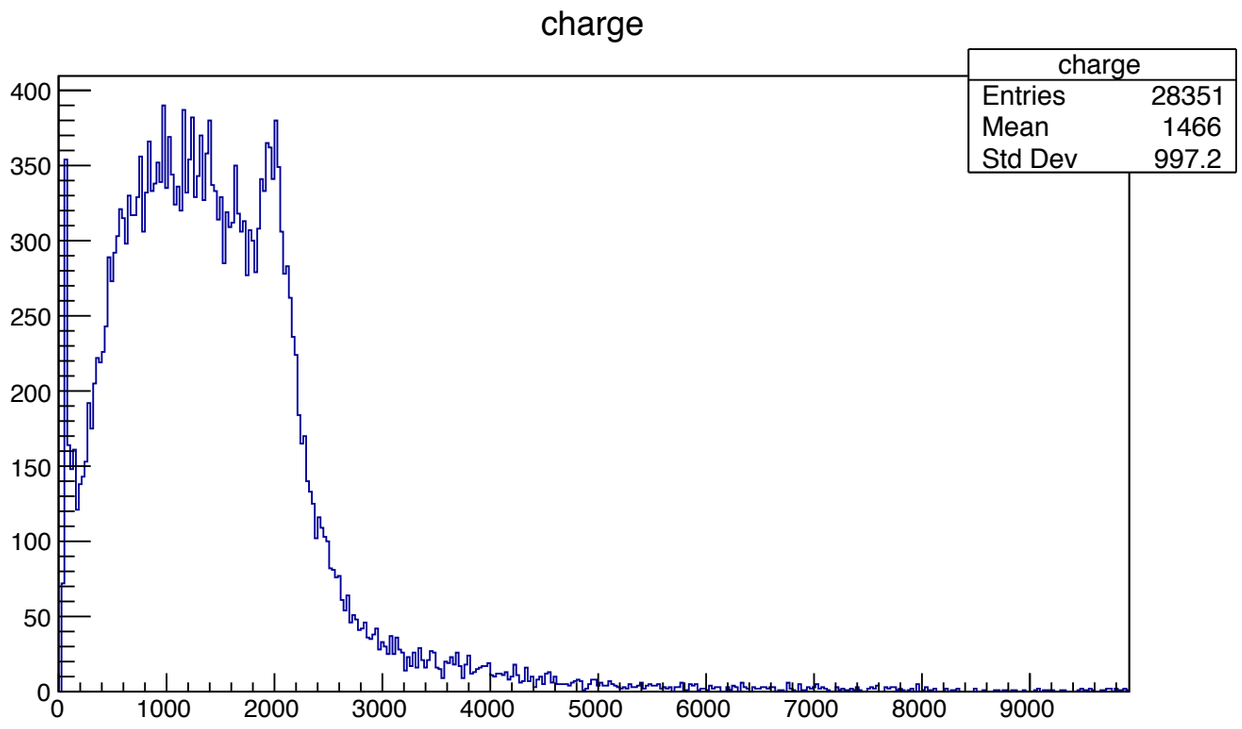
For each event, for each strip, the
std dev of the signal distribution
as a function of the time is calculated with respect to the mean value
If the value obtained is smaller than 2 times the std dev of the pedestal for the specific strip the strip is rejected.
The signal is required moreover to have three strips with increasing charge before the one with maximum charge and four with decreasing charge after.



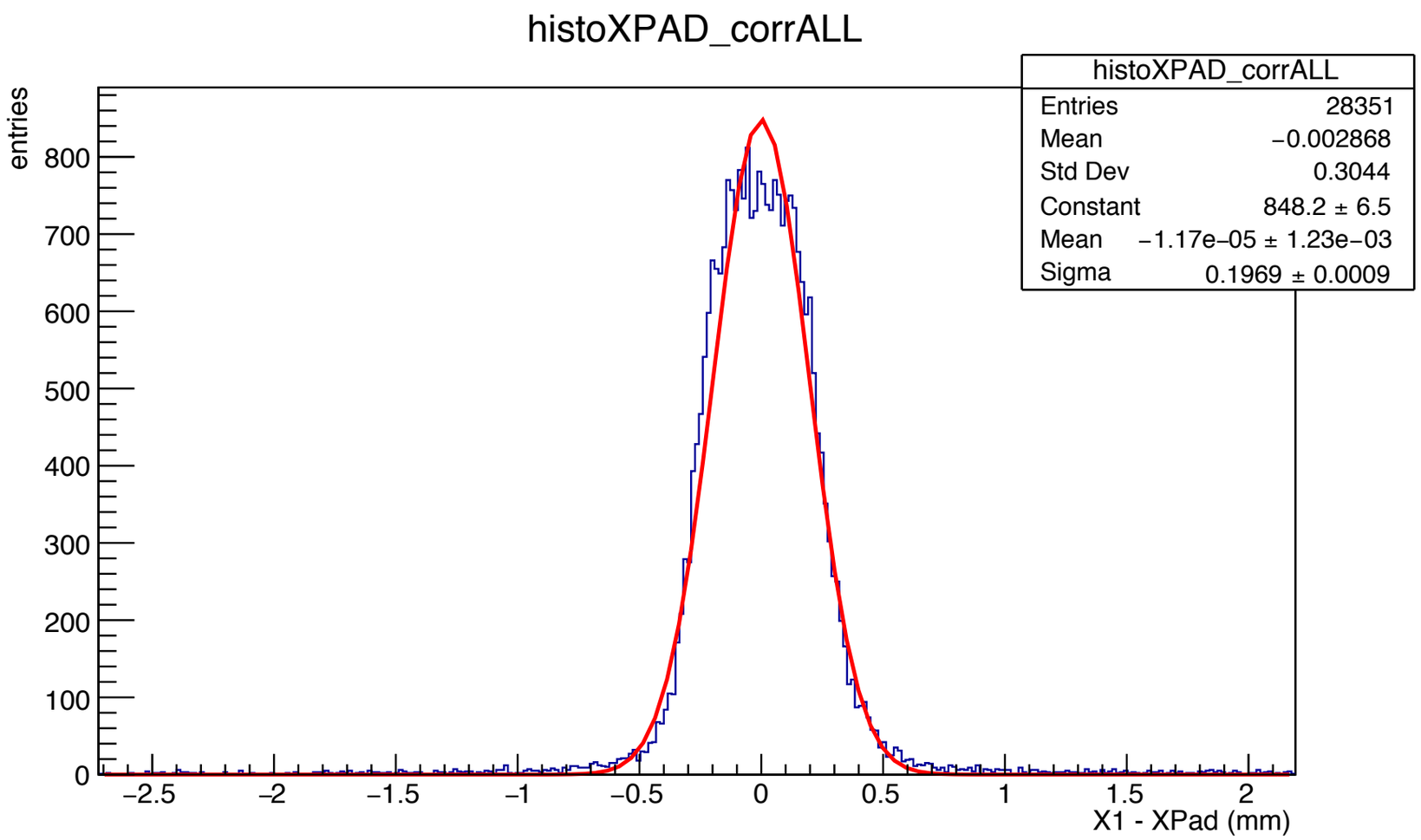
Cluster size X and Y and Cl charge





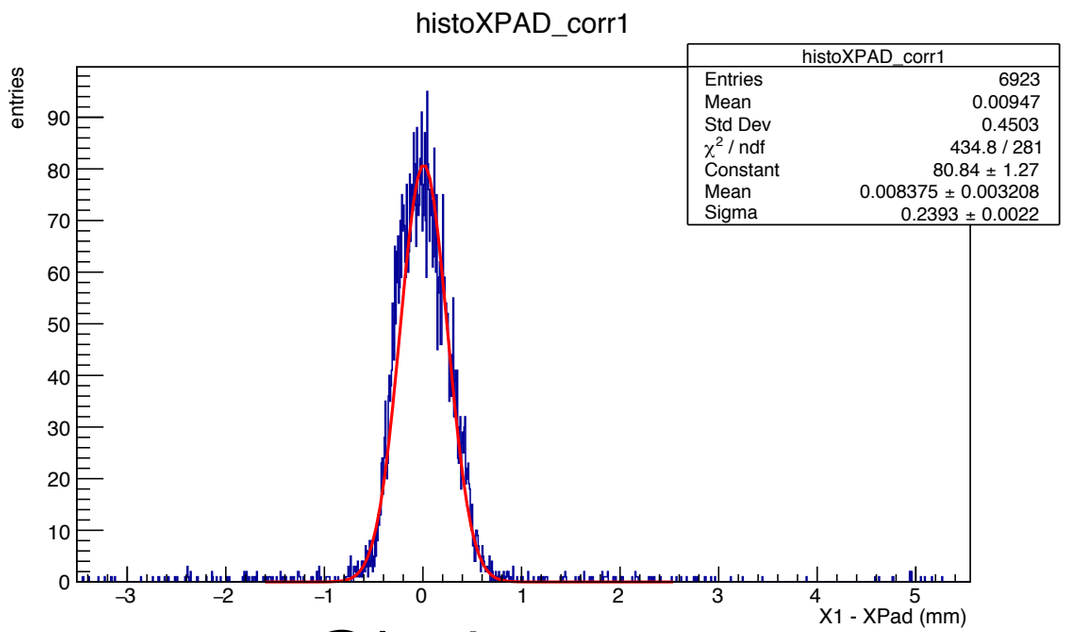


Residual wrt extrapolated Tmm track

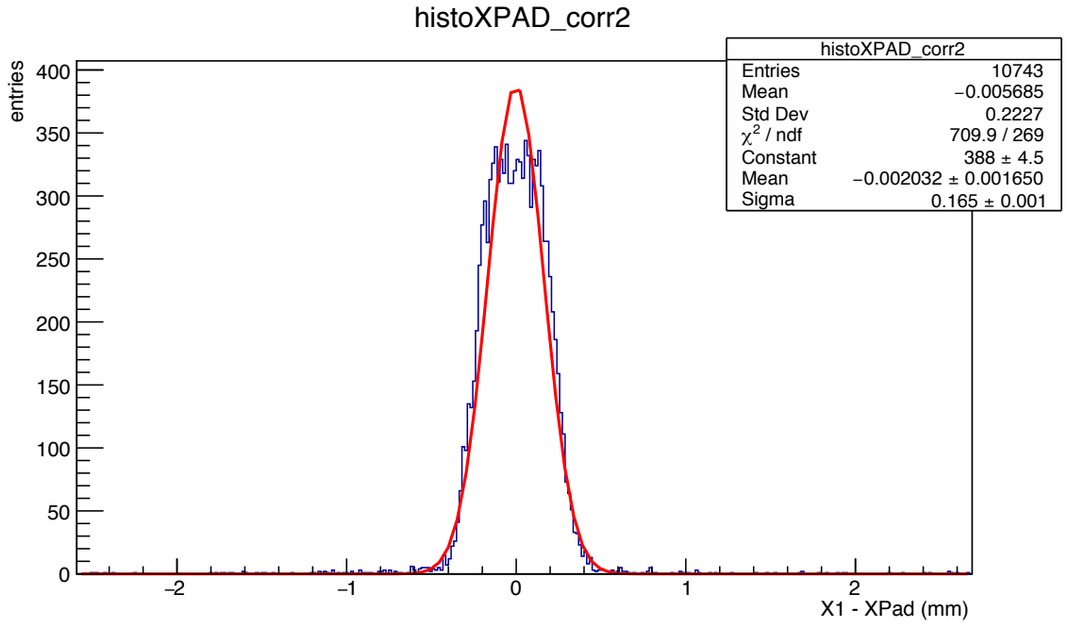


Done after rotation and alignment of all the chambers

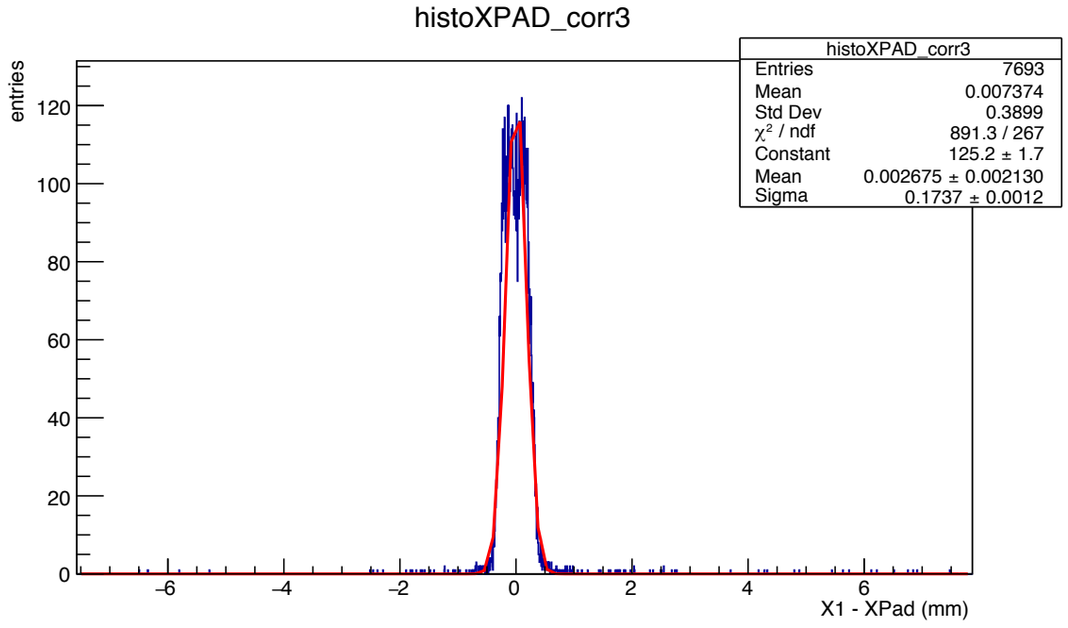
Different Pad X dimension



Cl size = 1

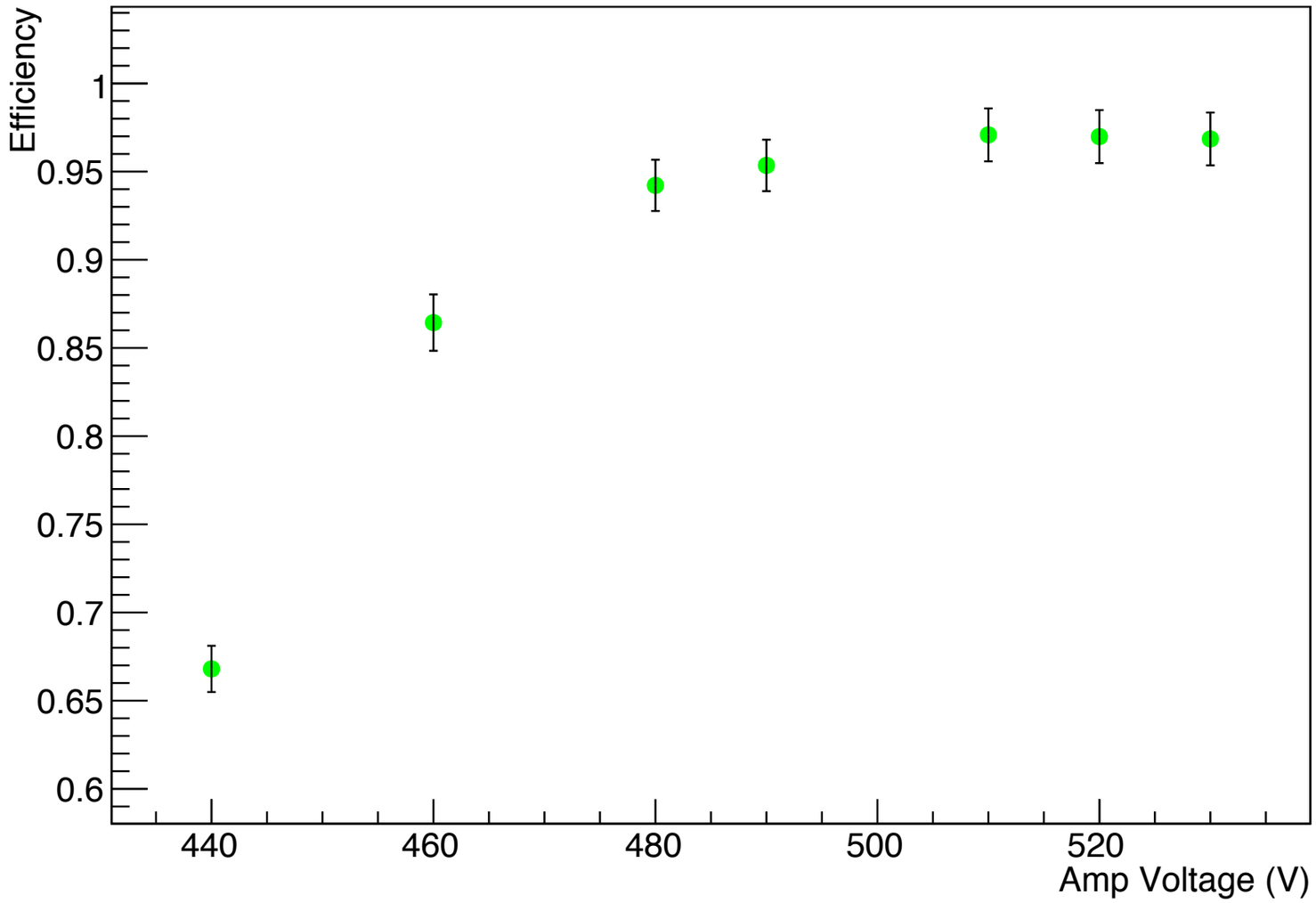


Cl size = 2



Cl size = 3

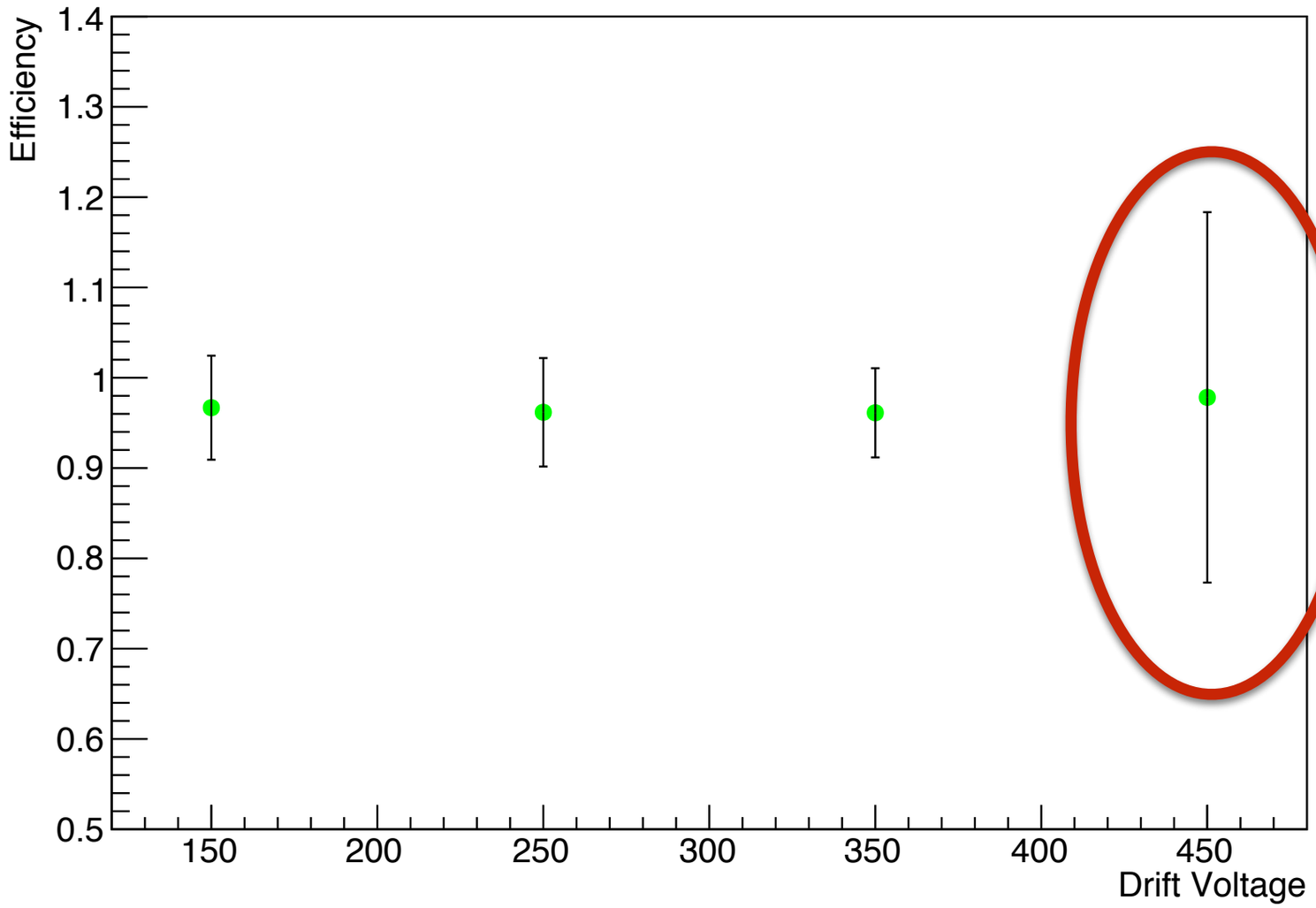
Efficiency



Amp scan runs:
109 -> 440 V
108 -> 460 V
106 -> 480 V
106 -> 490 V
102 -> 510 V
103 -> 520 V
104 -> 530 V

Acceptance region of +- 0.7 mm around the expected position is used

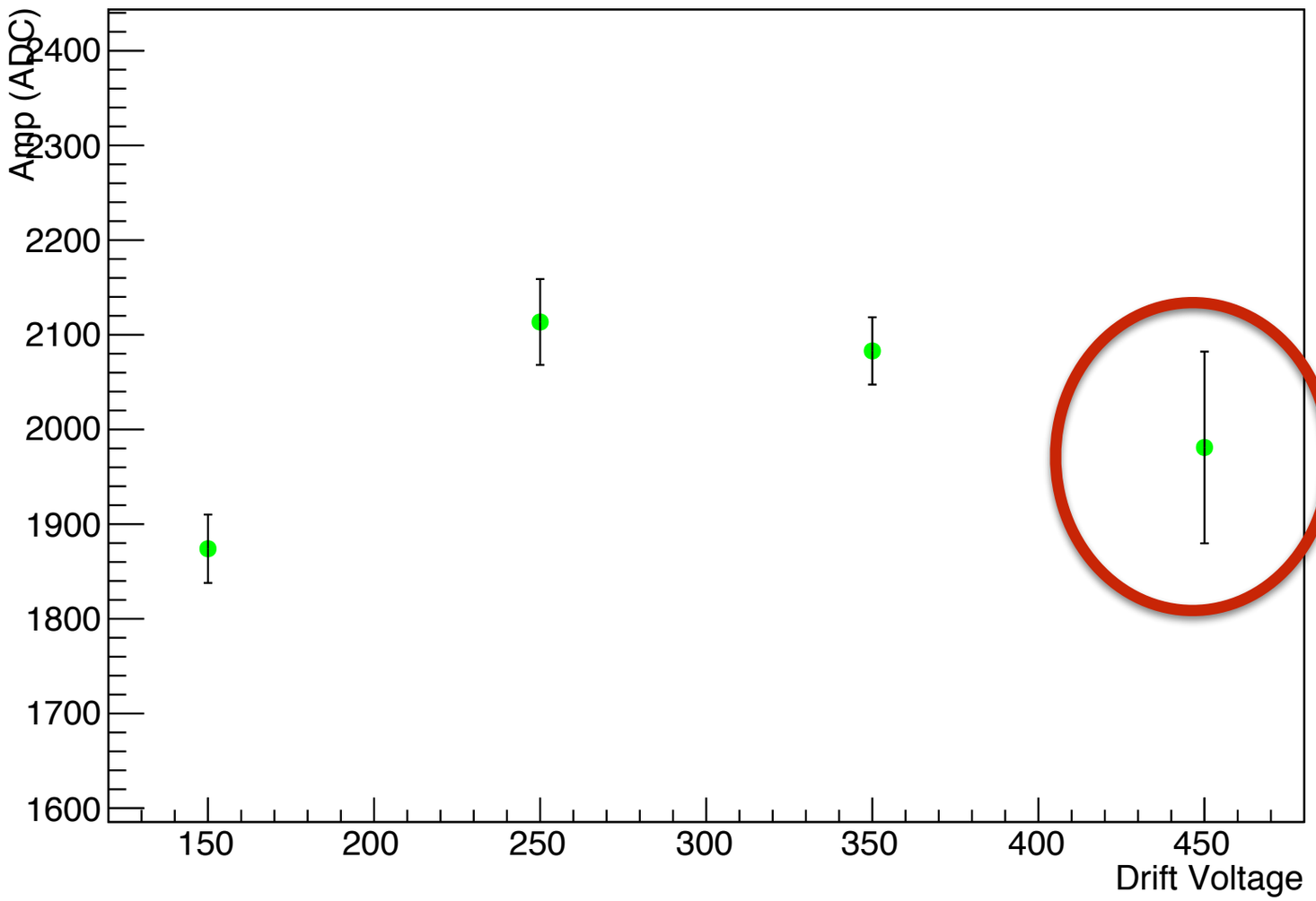
Efficiency - DRIFT SCAN



Amp scan runs:
126 -> 150 V
127 -> 250 V
128 -> 350 V
129 -> 450 V

Error is bigger due to problem with the file

Mean cluster charge - Drift SCAN



Amp scan runs:
126 -> 150 V
127 -> 250 V
128 -> 350 V
129 -> 450 V

Error is bigger due to problem with the file

Dependance of extrapolated track position and Cluster dimension

- Align chamber
- Divide the pad into 10 bins
- Take the extrapolated track position and associate to the corresponding bin
- For each bin calculate the fraction of events having 1,2,3 pad size cluster