

# Outline

1. Charge normalized  $\pi^0$  yield results
2. Charge normalized DVCS yield results
3. A summary about the previous barriers

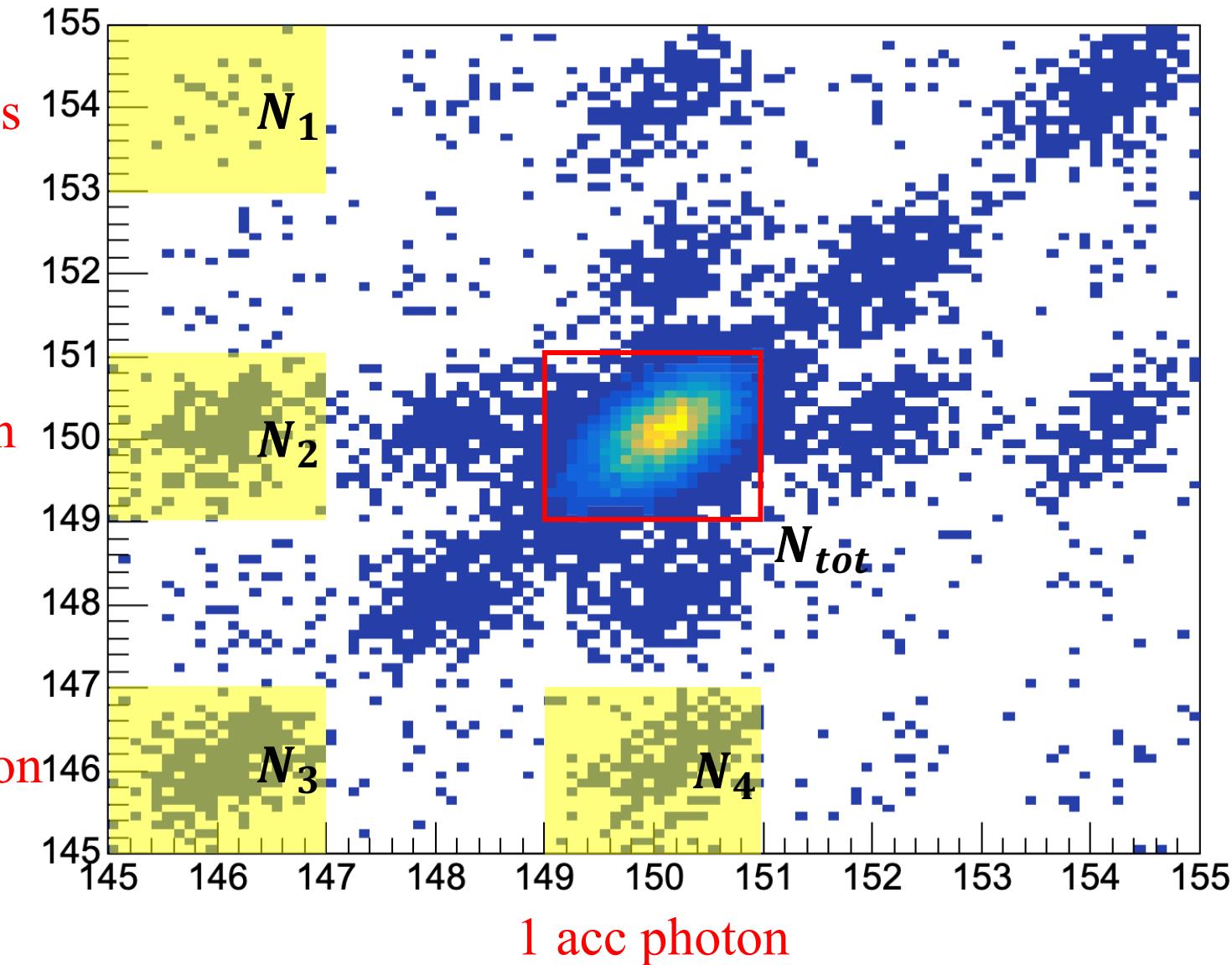
# $1. \pi^0 clusT_1$ vs. $clusT_2$

clusT1 vs. clusT2 for run 2731

3 acc particles

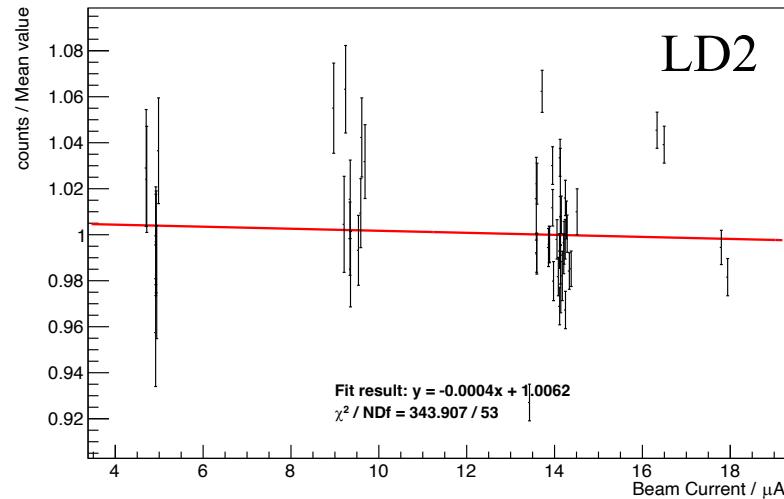
1 acc photon

1 acc electron

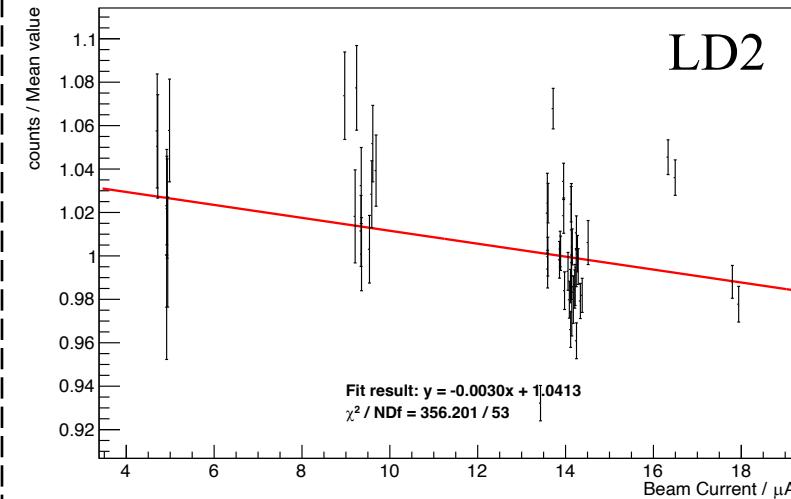


$N_{tot}$  (raw)

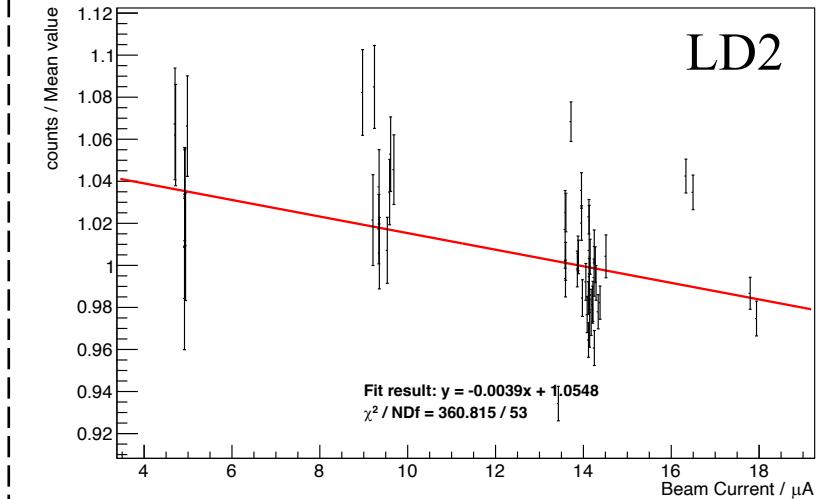
Charge normalized pi0 events(LD2) / Mean value

 $N_{tot} - N_3 - N_4 + N_1$   
Mongi's thesis

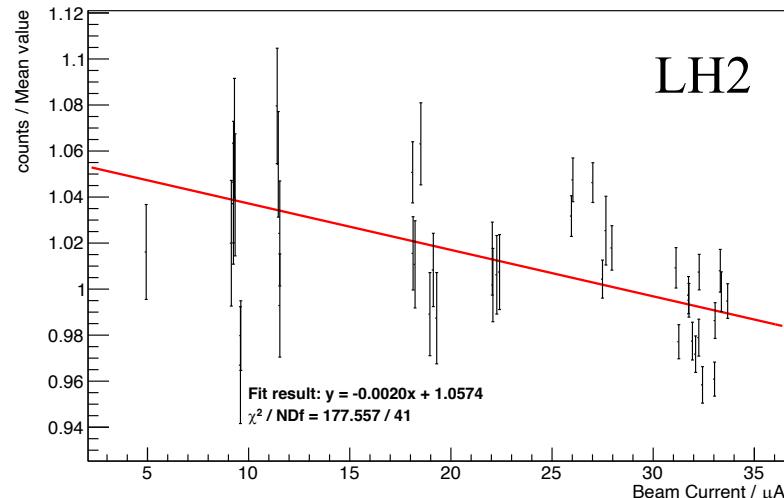
Charge normalized pi0 events(LD2) / Mean value

 $N_{tot} - N_2 - N_3 - N_4 + 2N_1$ 

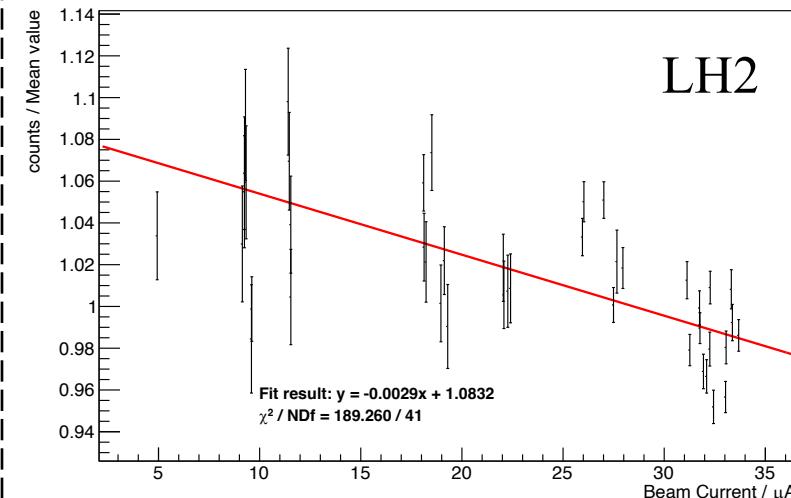
Charge normalized pi0 events(LD2) / Mean value



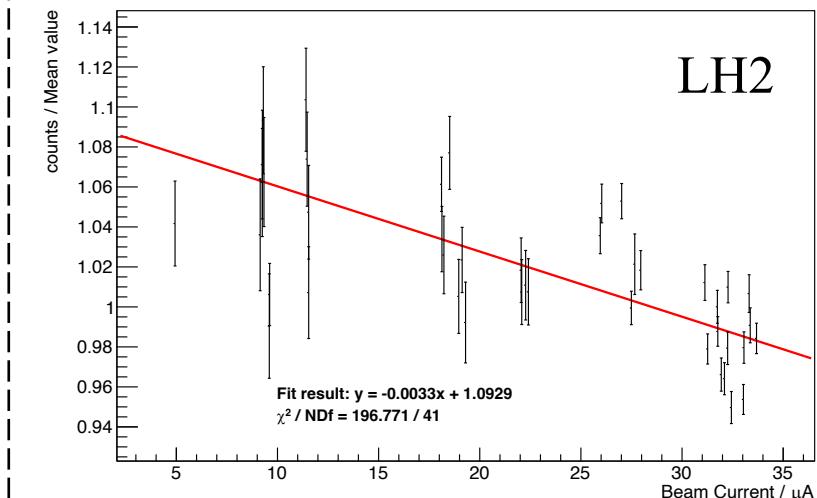
Charge normalized pi0 events(LH2) / Mean value



Charge normalized pi0 events(LH2) / Mean value



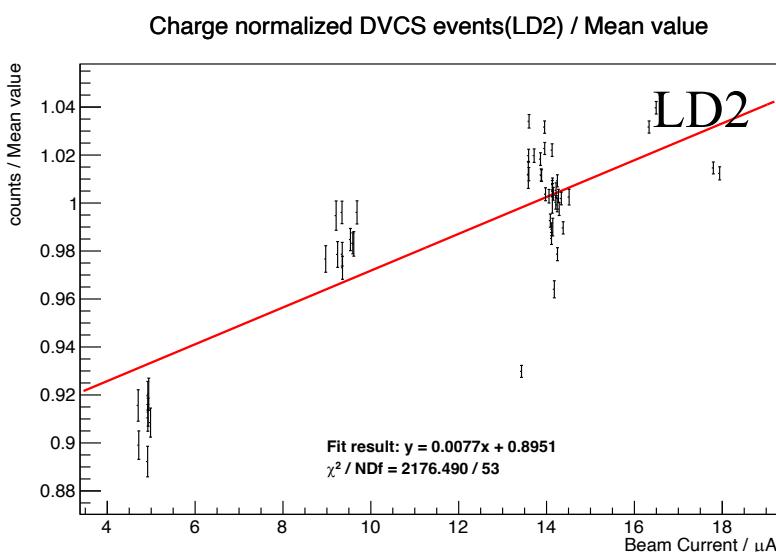
Charge normalized pi0 events(LH2) / Mean value

 $\pi^0$  selection: photon > 1 GeV &  $0.1 < \text{Invmass} < 0.13$

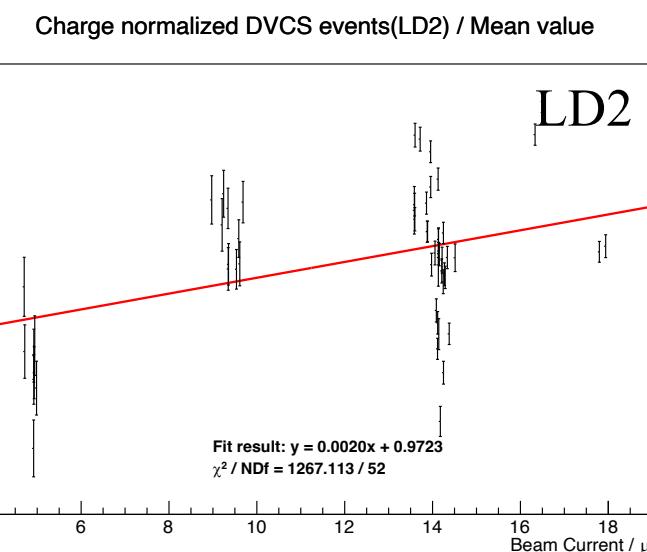
## 2. DVCS charge normalized yield

- Only ps6 production good runs (KinC\_x50\_4)
- Cluster time window:  $145 < \text{clusT} < 155$
- DVCS event selection: Good timing &  $\text{Emax} > 1.2 / 1.5 / 2.0$
- Using the correct clusters:
  - First “nclust” values in the array
  - Ignore nclust=0 events (The main barrier in previous analysis)

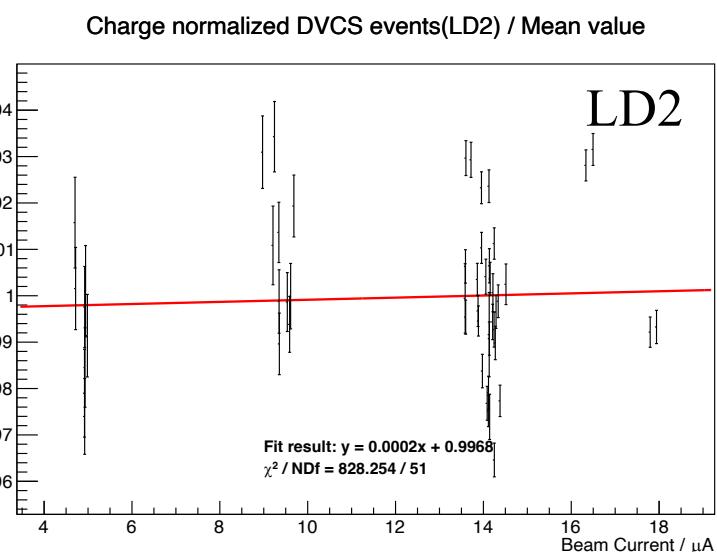
$E_{\max} > 1.2$



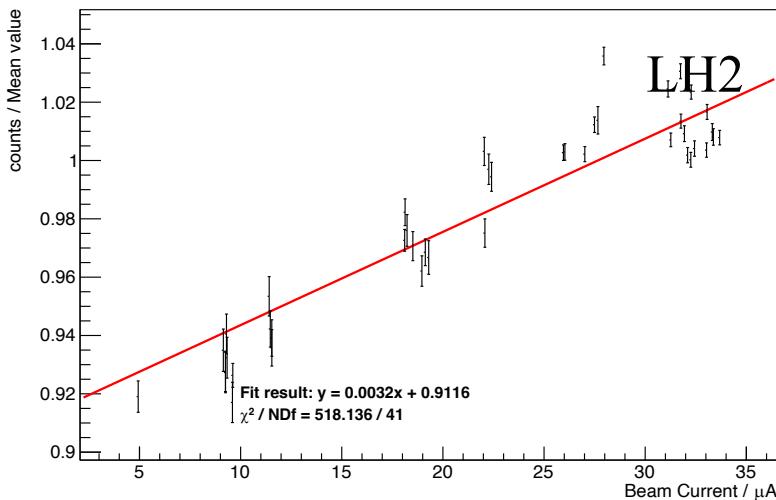
$E_{\max} > 1.5$



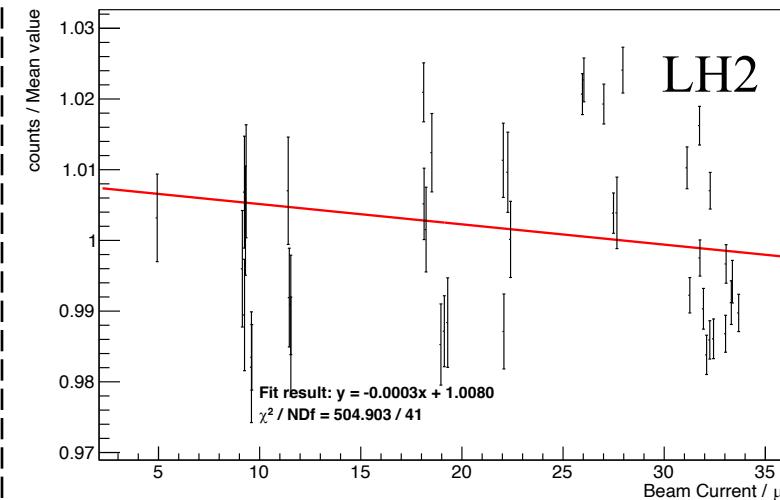
$E_{\max} > 2.0$



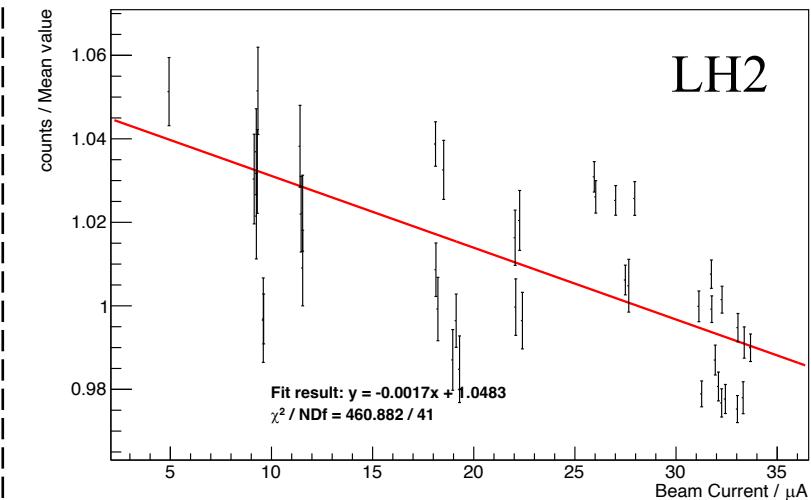
Charge normalized DVCS events(LH2) / Mean value



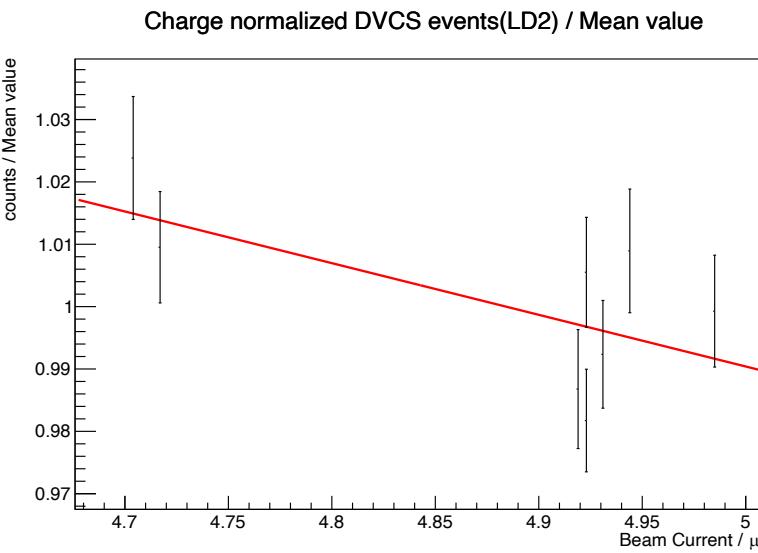
Charge normalized DVCS events(LH2) / Mean value



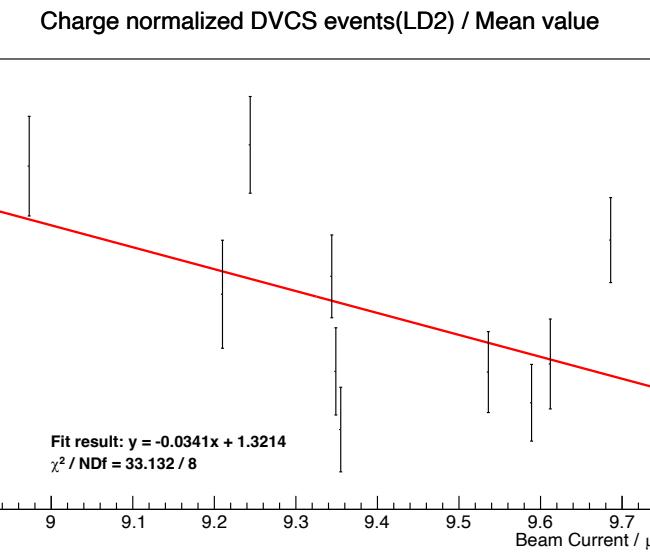
Charge normalized DVCS events(LH2) / Mean value



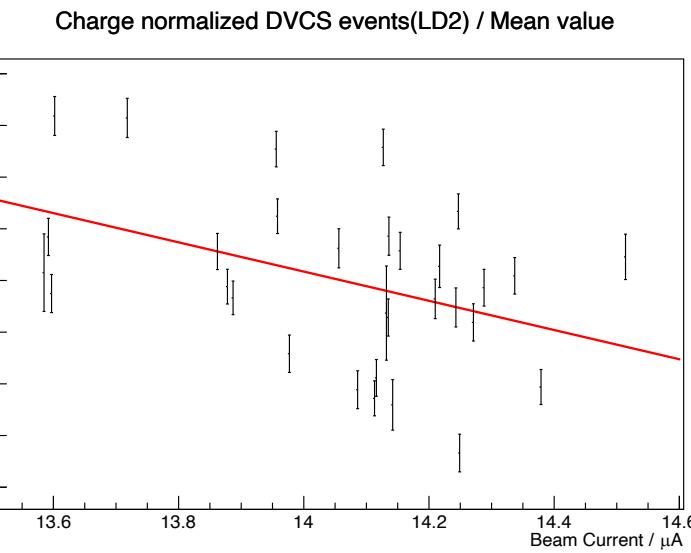
$5\mu A$



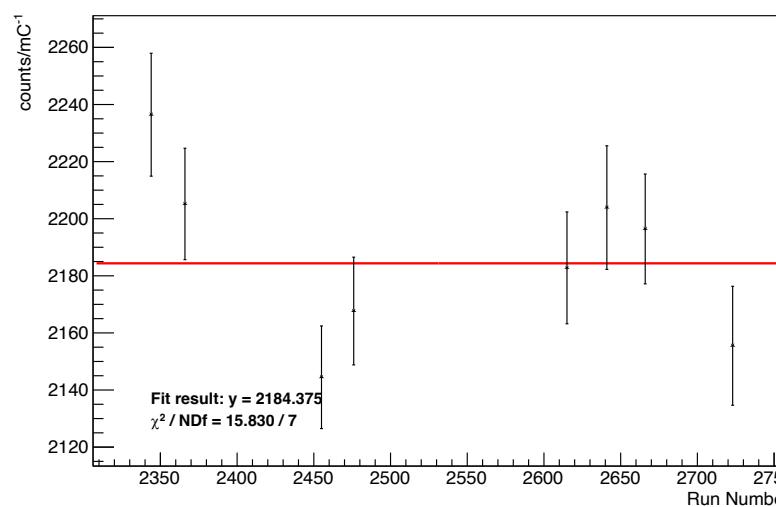
$10\mu A$



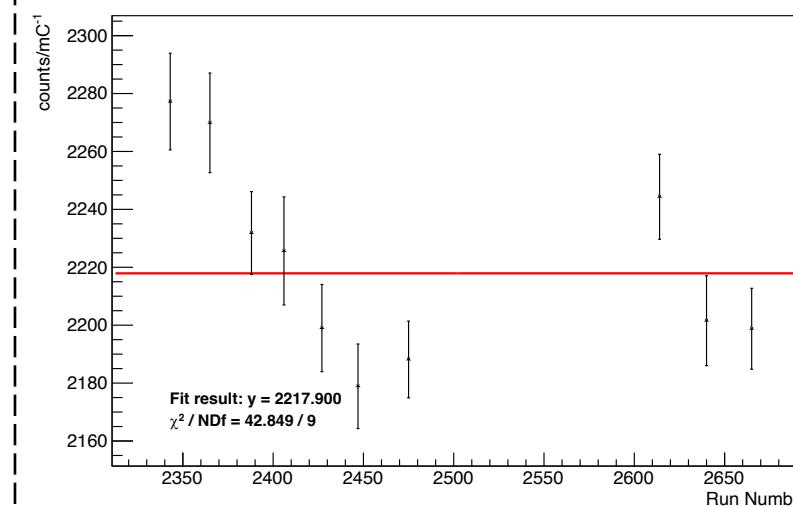
$15\mu A$



Charge normalized DVCS events(LD2)



Charge normalized DVCS events(LD2)



Charge normalized DVCS events(LD2)

