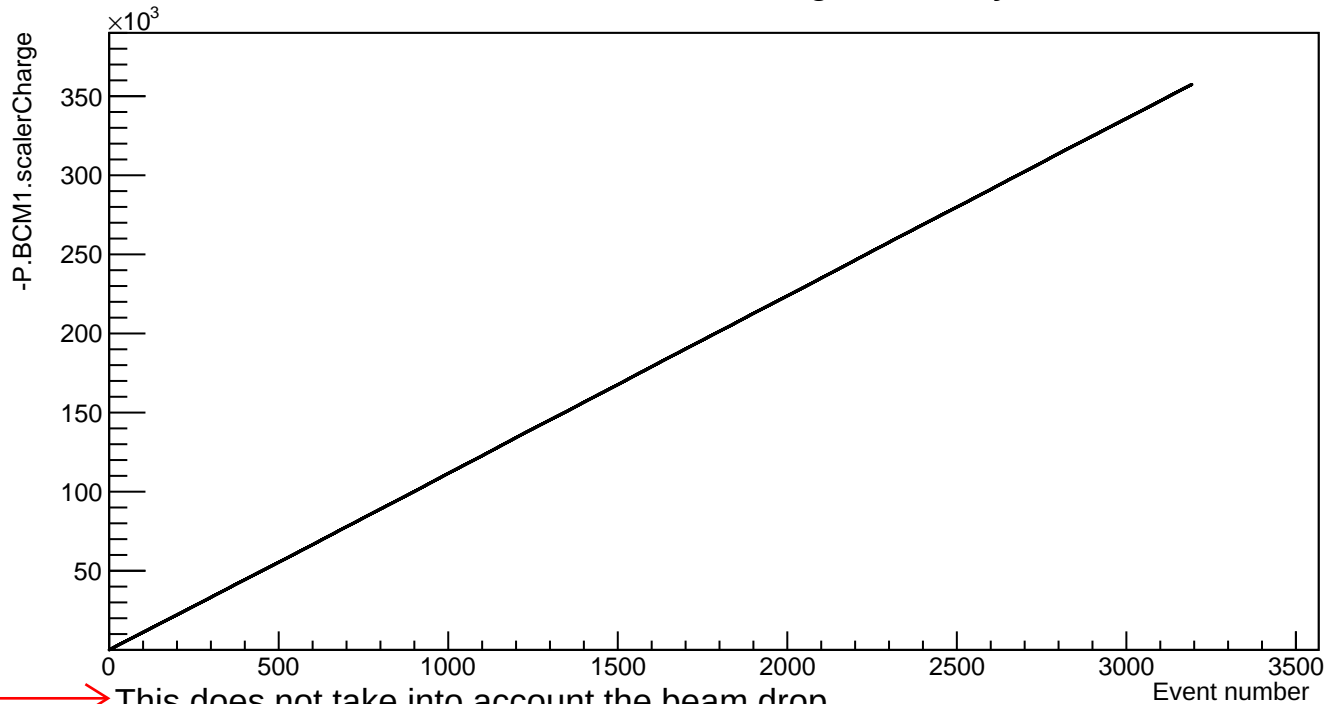


## Charge normalized yield for CT coin runs from pass1

- No detector / Tracking efficiencies taken into account

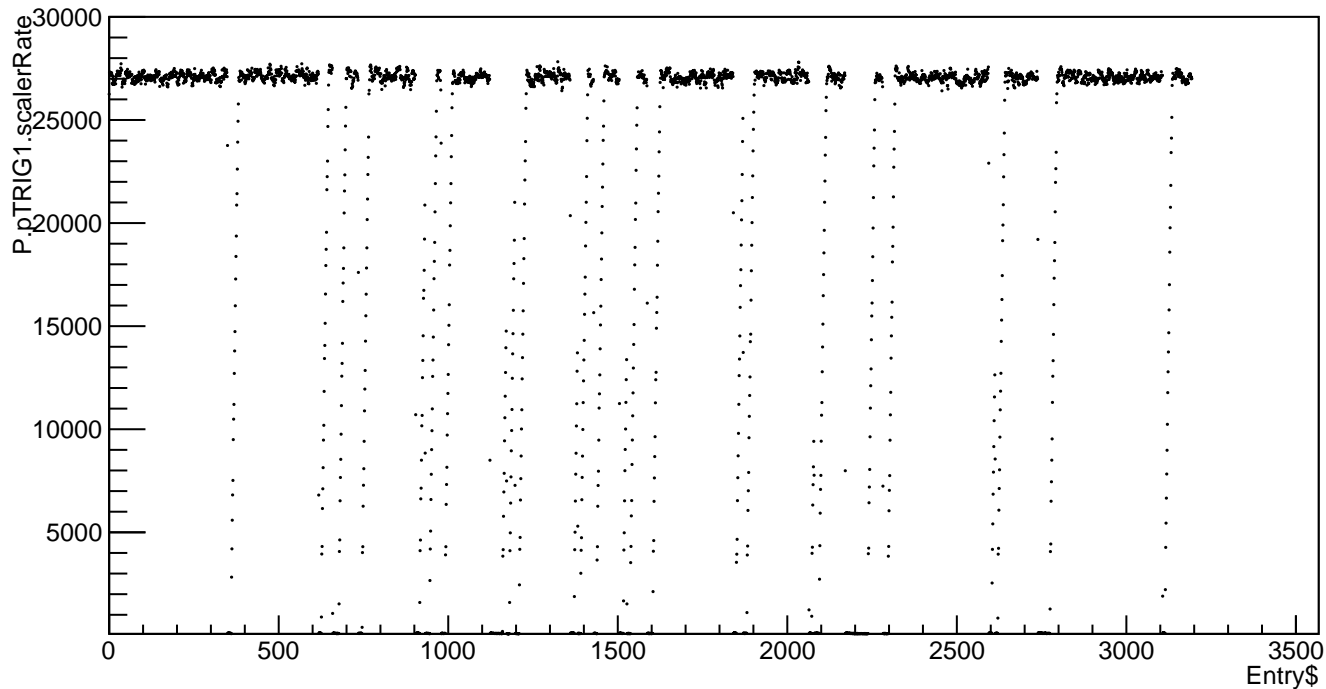
How do we get total charge from the TTree instead of report file ?

# -P.BCM1.scalerCharge:Event number

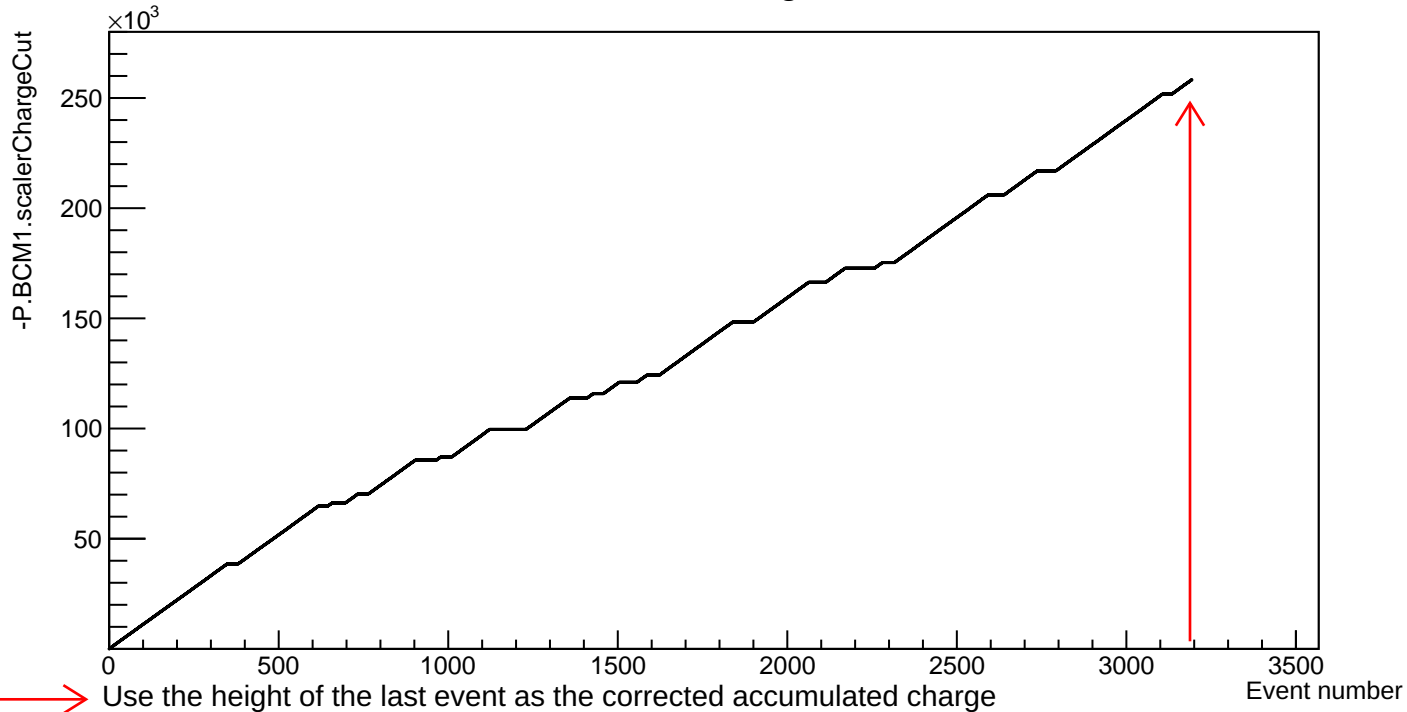


→ This does not take into account the beam drop

P.pTRIG1.scalerRate:Event number



# -P.BCM1.scalerChargeCut: Event number



## Charge.cpp

```
1 //Get gated accumulated charge
2 TFile *f = new TFile("coin_replay_production_2464_-1.root");
3 TTree *t = (TTree*)f->Get("TSP");
4 Int_t nEntries = t->GetEntries();
5 t->GetEntry(nEntries -1);
6 Double_t charge = t->GetLeaf("P.BCM1.scalerChargeCut")->GetValue() / 1000.0; // Charge
7
8
9
10
```

PID cut for good events (yield):

Applied Cut:

P.gtr.beta >=0.6 && P.gtr.beta <=1.4

&& H.gtr.beta >=0.8 && H.gtr.beta <=1.2

&& P.gtr.dp >=-10 && P.gtr.dp <=20

&& H.gtr.dp >=-8 && H.gtr.dp <=8

&& P.hgcer.npeSum <=0.1 && H.cer.npeSum >=0

&& H.cal.etottracknorm >=0.8 && H.cal.etottracknorm <=1.15

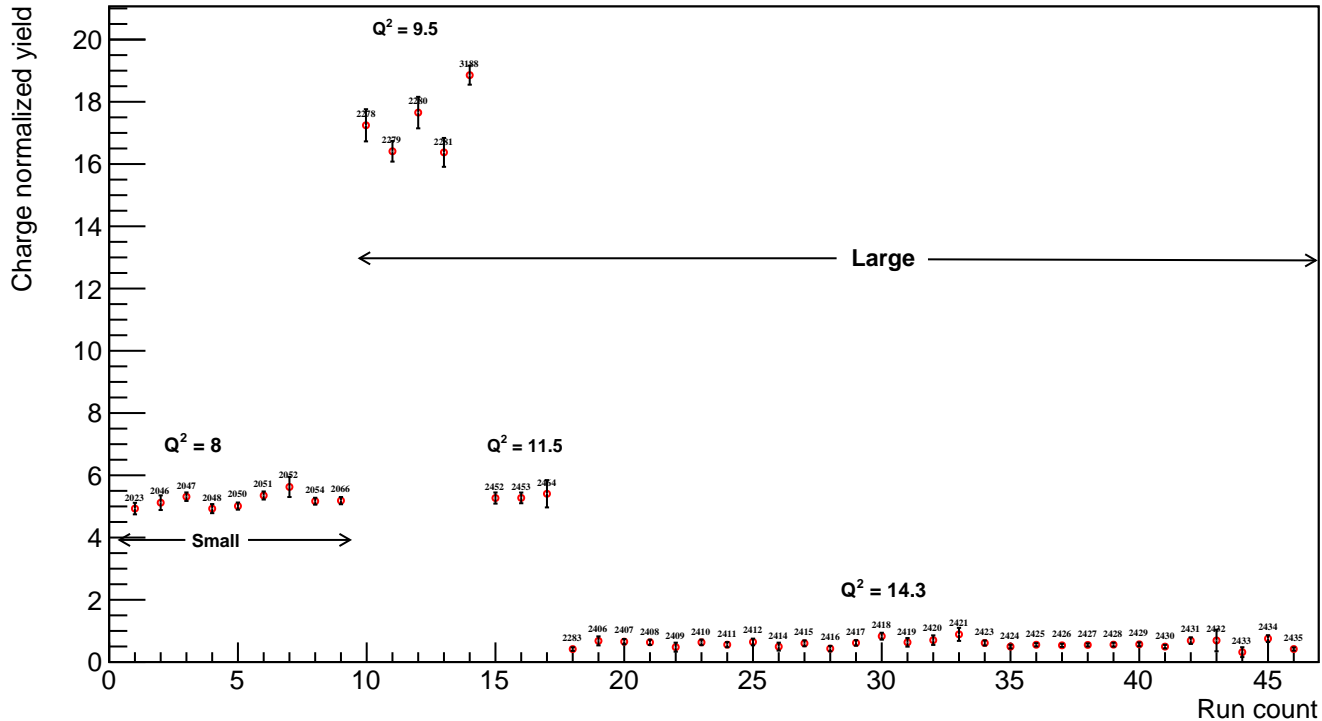
&& CTime.epCoinTime\_ROC2 >=-2.5 && CTime.epCoinTime\_ROC2 <=2.5

&& P.hod.goodstarttime ==1 && H.hod.goodstarttime ==1

Charge normalized yield =  $N / q$

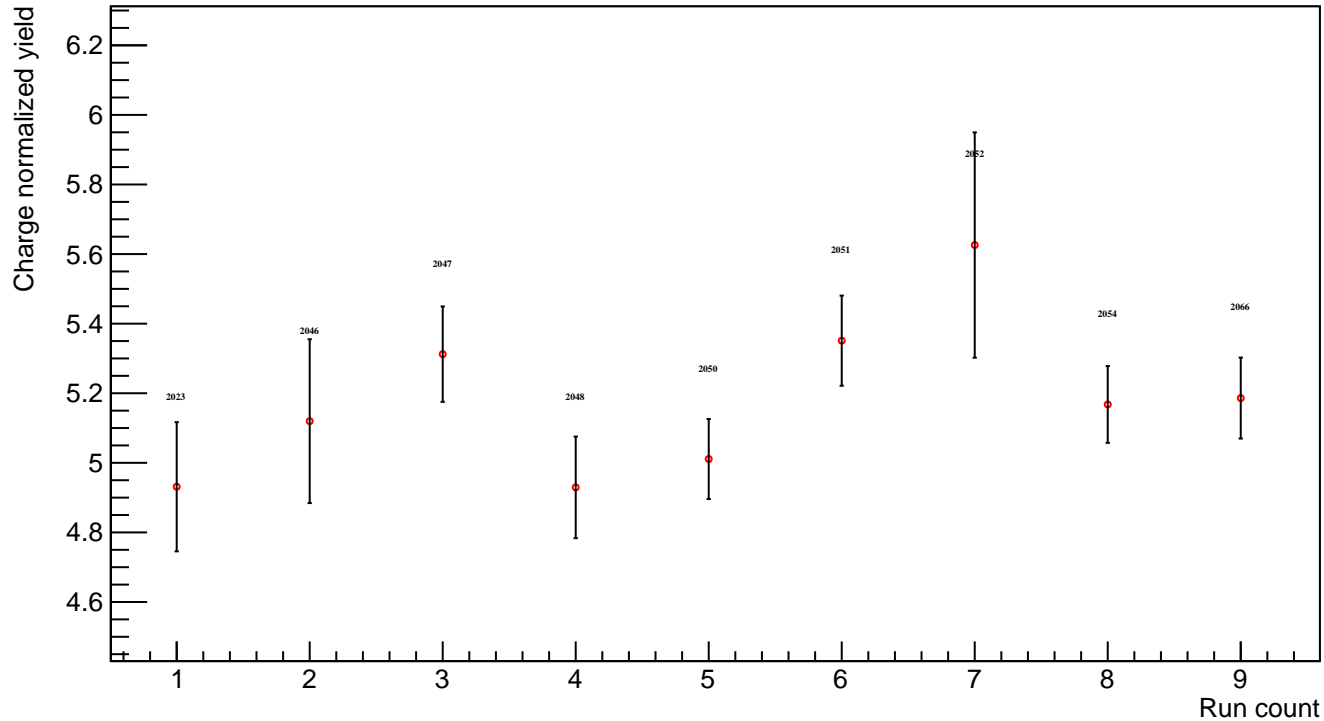
Error =  $\text{sqrt}(N) / q$

# LH2 all coin runs

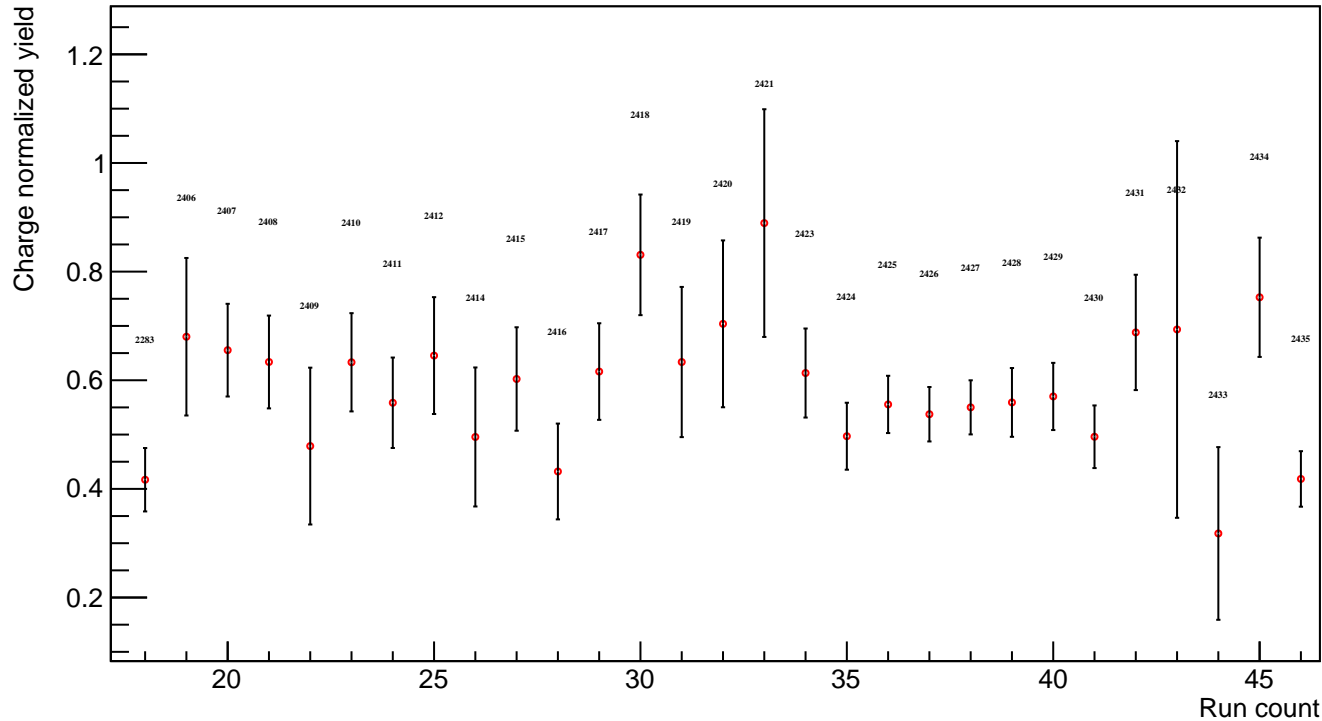




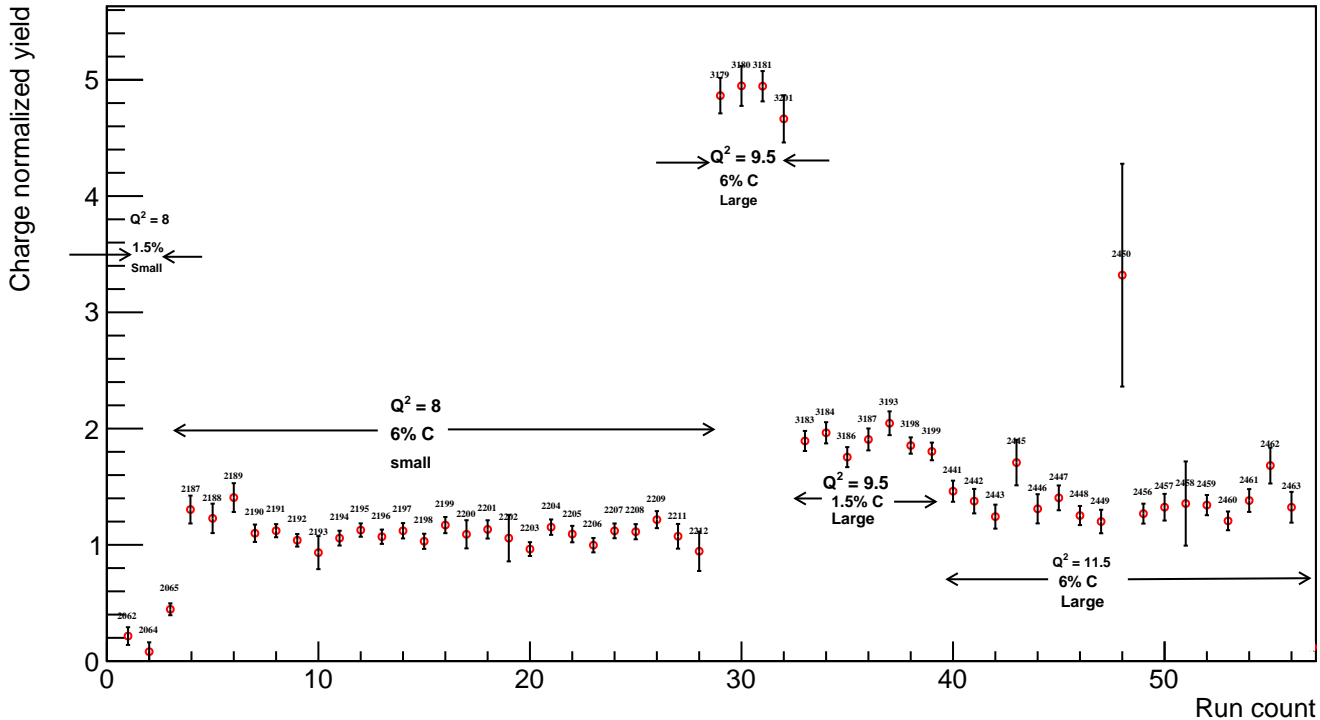
# LH2 coin $Q^2 = 8 \text{ GeV}^2$ runs, small collimator



# LH2 coin $Q^2 = 14.3 \text{ GeV}^2$ runs



# All C12 coin runs except $Q^2 = 14.3$ (plotted separately)



# C12 coin $Q^2 = 14.3 \text{ GeV}^2$ runs

