

2019.10.08

acceptance

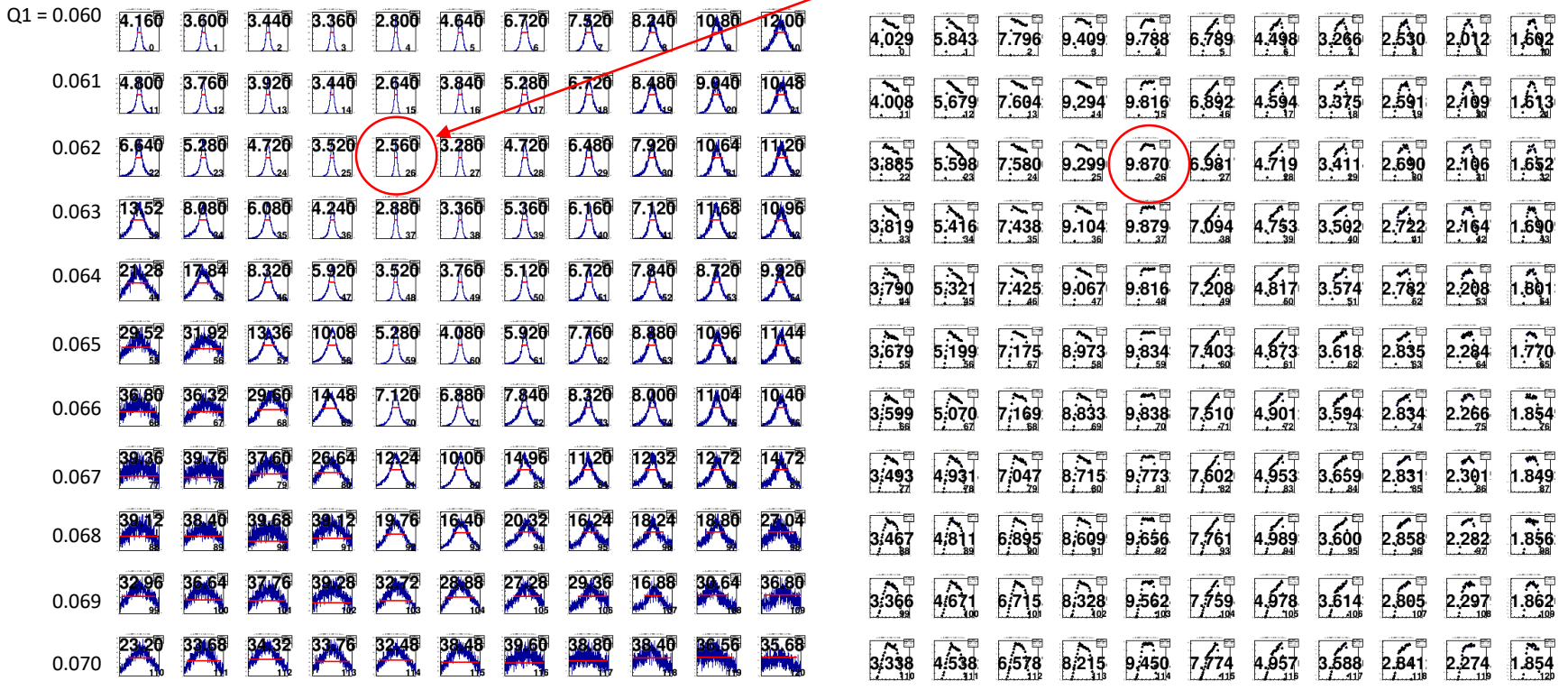
woPhysicsQ10.06_0.07Q20.015_0.025Q1col15Q2col30_6th.root

Q1 vertical, Q2 horizontal

VDC σ : x, y 100um px,py 5.0*1e-4

Q2 =
0.015 0.016 0.017 0.018 0.019 0.020 0.021 0.022 0.023 0.024 0.025

Q1 -0.062, Q2 0.019 is best ?



mom res

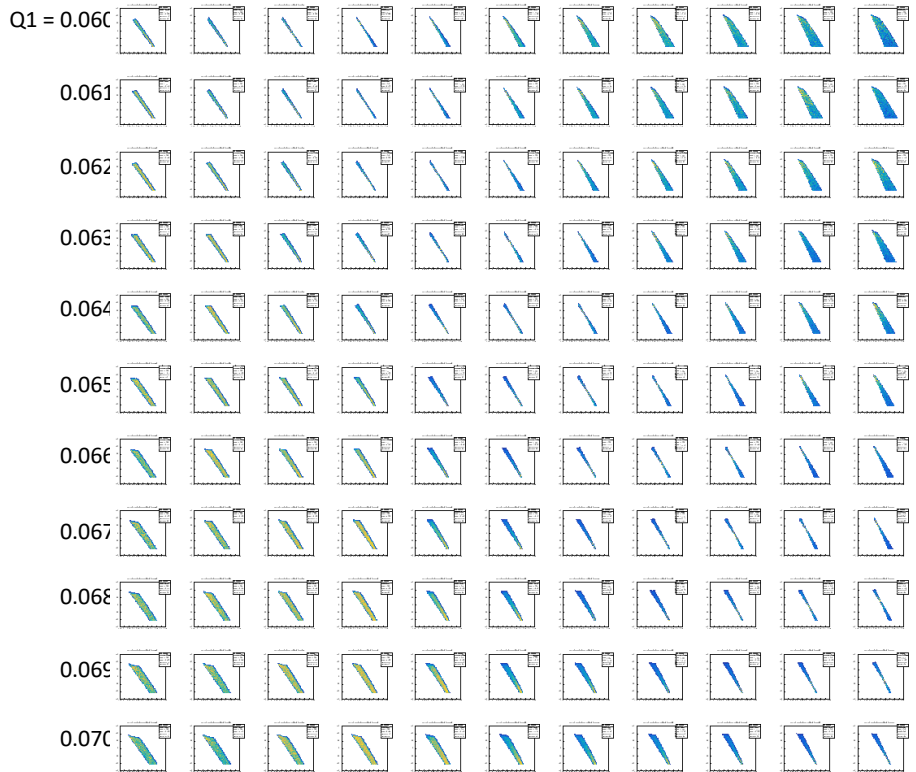
mom acc

woPhysicsQ10.06_0.07Q20.015_0.025Q1col15Q2col30_6th.root

Q1 vertical, Q2 horizontal

VDC σ : x, y 100um px,py 5.0*1e-4

Q2 =
0.015 0.016 0.017 0.018 0.019 0.020 0.021 0.022 0.023 0.024 0.025



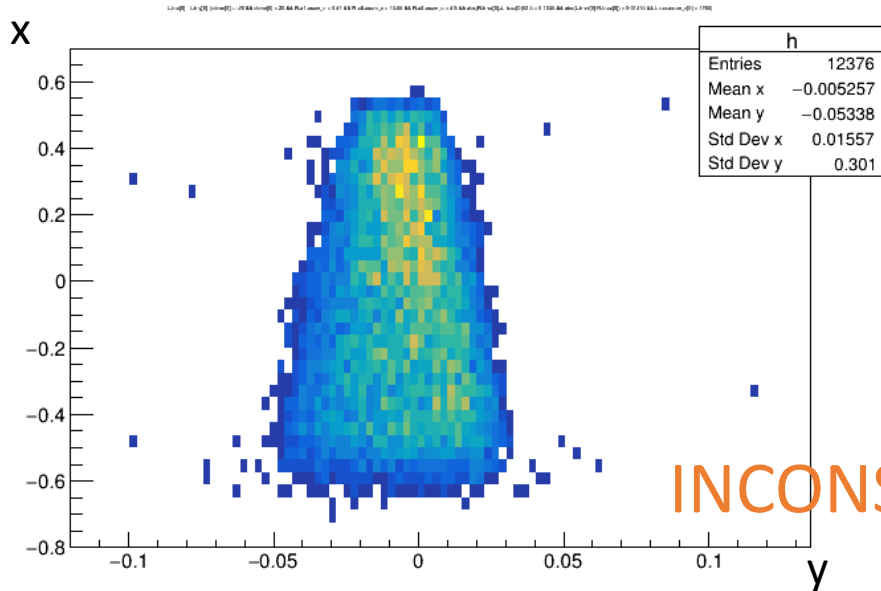
mom vs x(dispersive)



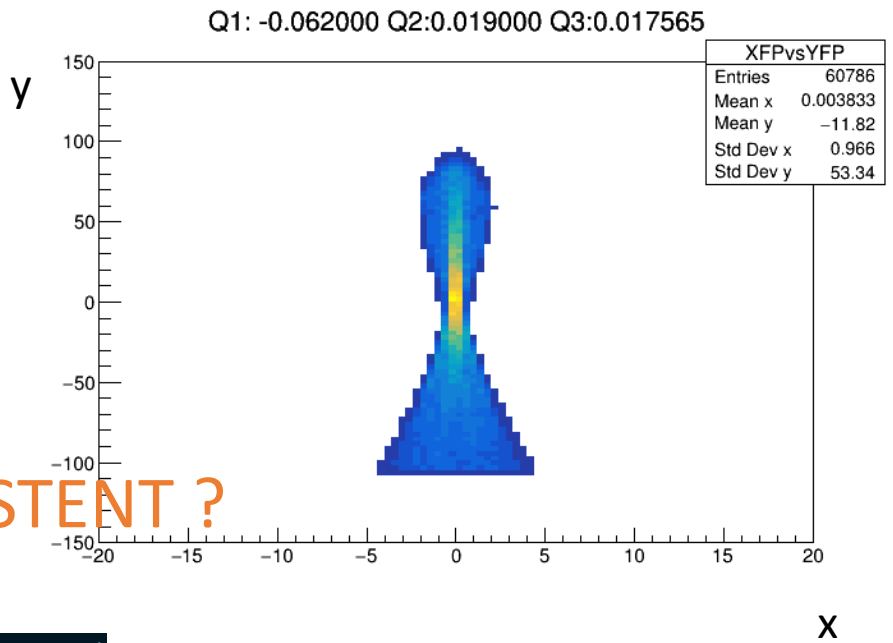
XFP vs YFP

comparison simulation with data

T2 data (x focal plain)



simulation (y focal plain)



INCONSISTENT ?

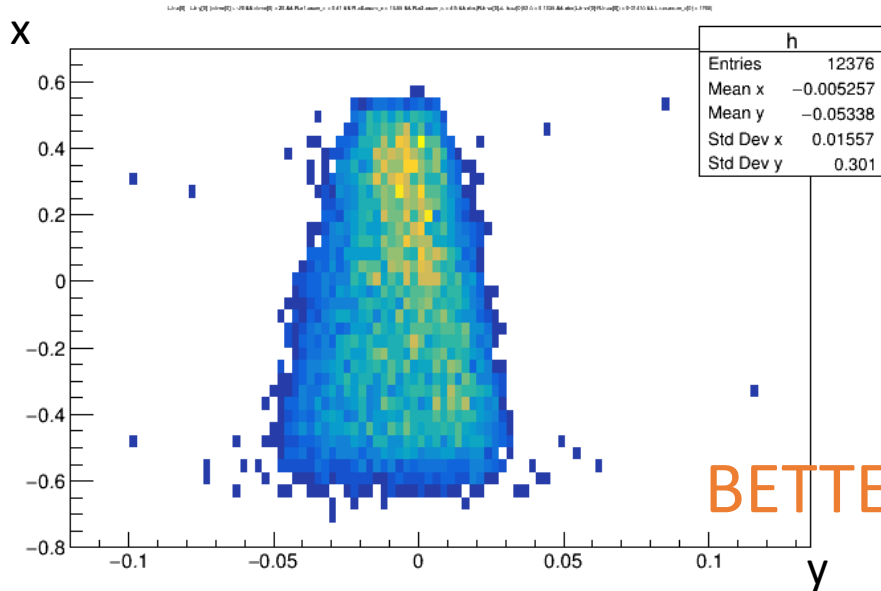
X

```
TCut cut_T2 = "ctime[0] > -20 && ctime[0] < 20 && R.a1.asum_c < 0.41 && R.a2.asum_c < 14.65 && R.a2.a  
sum_c > 4.5 && abs(R.tr.vz[0]+L.tr.vz[0])/2.0 < 0.1035 && abs(L.tr.vz[0]-R.tr.vz[0]) < 0.01410 && L.cer  
.asum_c[0] > 1700";
```

without ctimecut -> include pi and proton

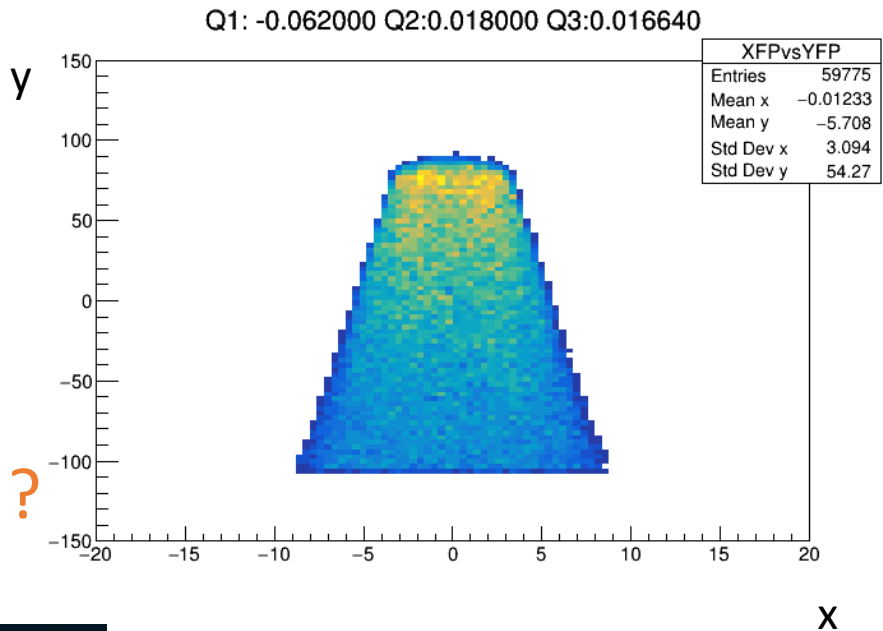
comparison simulation with data

T2 data (x focal plain)



BETTER ?

simulation (y focal plain)



But an acceptance is larger
in the case of simulation

```
TCut cut_T2 = "ctime[0] > -20 && ctime[0] < 20 && R.a1.asum_c < 0.41 && R.a2.asum_c < 14.65 && R.a2.a  
sum_c > 4.5 && abs(R.tr.vz[0]+L.tr.vz[0])/2.0 < 0.1035 && abs(L.tr.vz[0]-R.tr.vz[0]) < 0.01410 && L.cer  
.asum_c[0] > 1700";
```

without ctimecut -> include pi and proton

comparison simulation with data

Add YFP cut in software

-65 cm < YFP

55cm > YFP

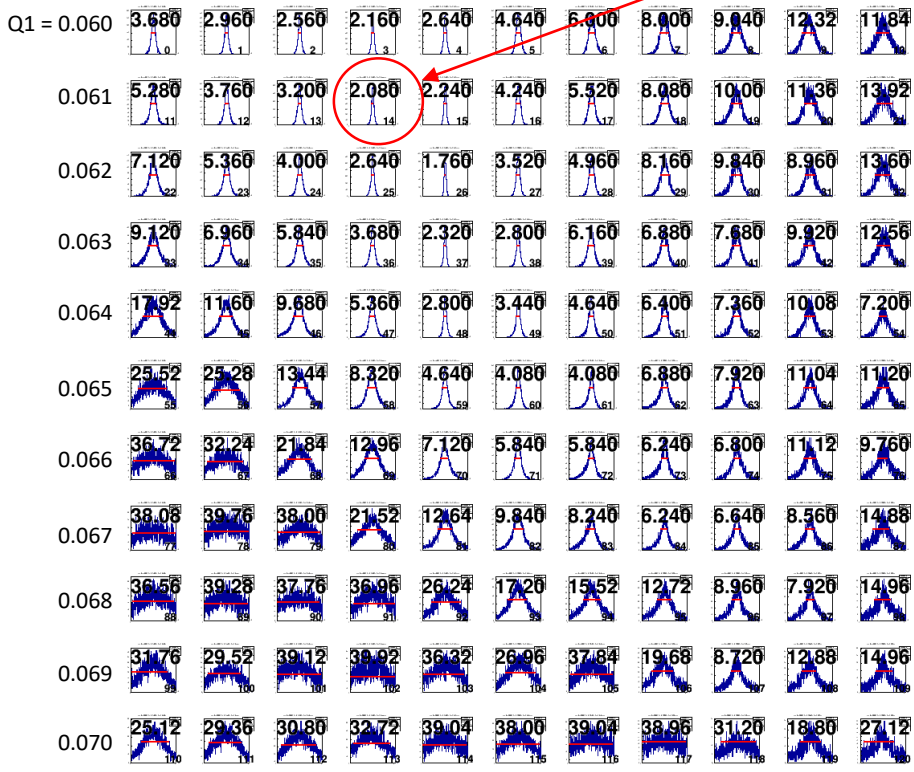
woPhysicsQ10.06_0.07Q20.015_0.025Q1col15Q2col30_yfp-65_55_6th.root

Q1 vertical, Q2 horizontal

VDC σ : x, y 100um px,py 5.0*1e-4

Q1 -0.061, Q2 0.019 is near to experiment ?

Q2 =
0.015 0.016 0.017 0.018 0.019 0.020 0.021 0.022 0.023 0.024 0.025



mom res

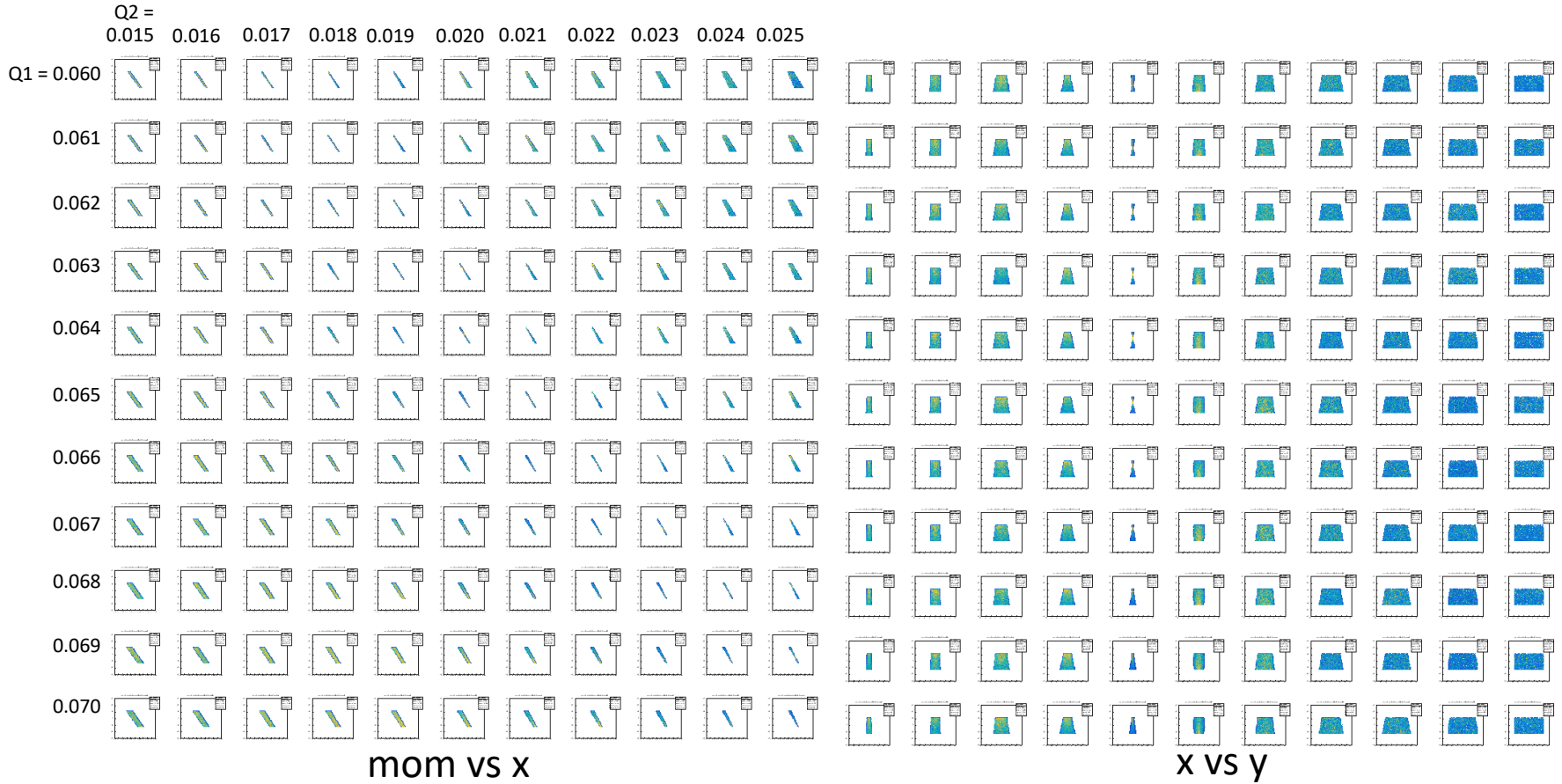


mom acc

woPhysicsQ10.06_0.07Q20.015_0.025Q1col15Q2col30_yfp-65_55_6th.root

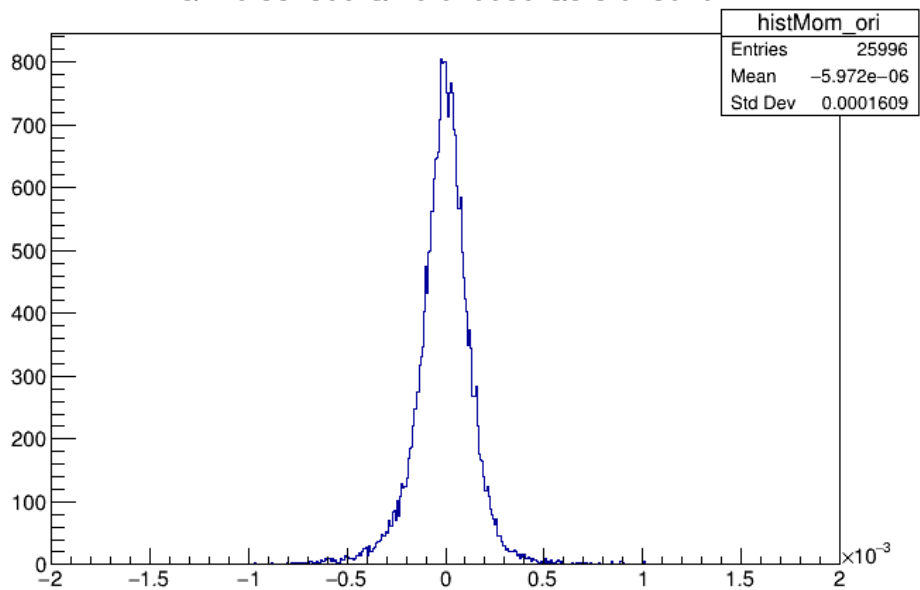
Q1 vertical, Q2 horizontal

VDC σ : x, y 100um px,py 5.0*1e-4



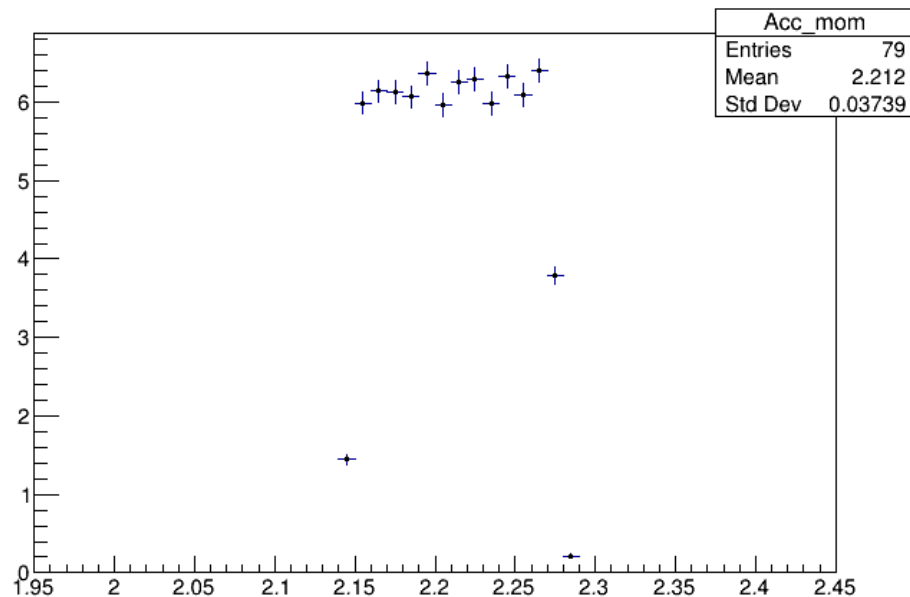
woPhysicsQ10.06_0.07Q20.015_0.025Q1col15Q2col30_yfp-65_55_6th.root

Q1:-0.061000 Q2:0.018000 Q3:0.016640



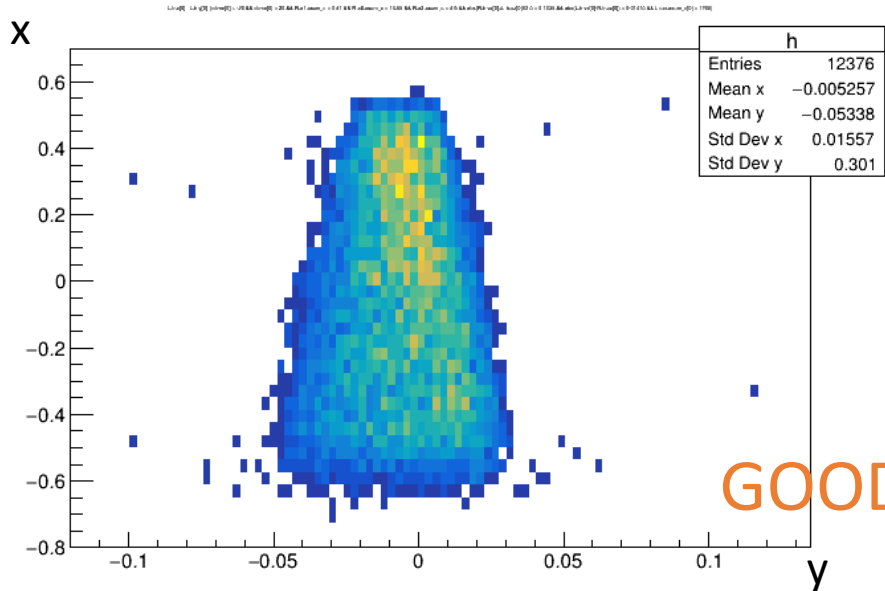
FWHM $\sim 2.08 \times 10^{-4}$

Q1:-0.061000 Q2:0.018000 Q3:0.016640



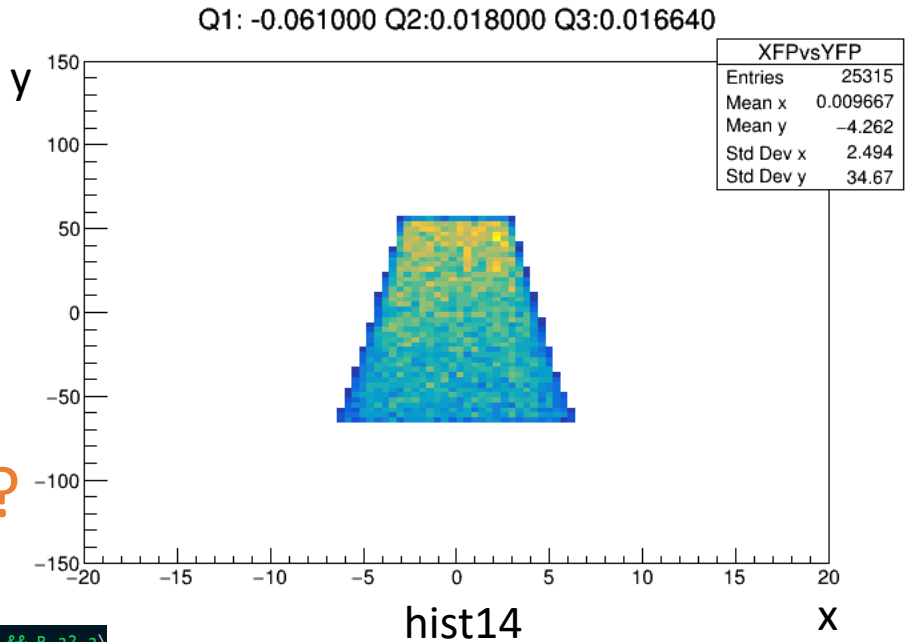
comparison simulation with data

T2 data (x focal plain)



GOOD ?

simulation (y focal plain)



```
TCut cut_T2 = "ctime[0] > -20 && ctime[0] < 20 && R.a1.asum_c < 0.41 && R.a2.asum_c < 14.65 && R.a2.a  
sum_c > 4.5 && abs(R.tr.vz[0]+L.tr.vz[0])/2.0 < 0.1035 && abs(L.tr.vz[0]-R.tr.vz[0]) < 0.01410 && L.cer  
.asum_c[0] > 1700";
```

without ctimecut -> include pi and proton

To do

Check

acceptance -> AC, DC, S2

xpfp , ypfp, etc

include z raster