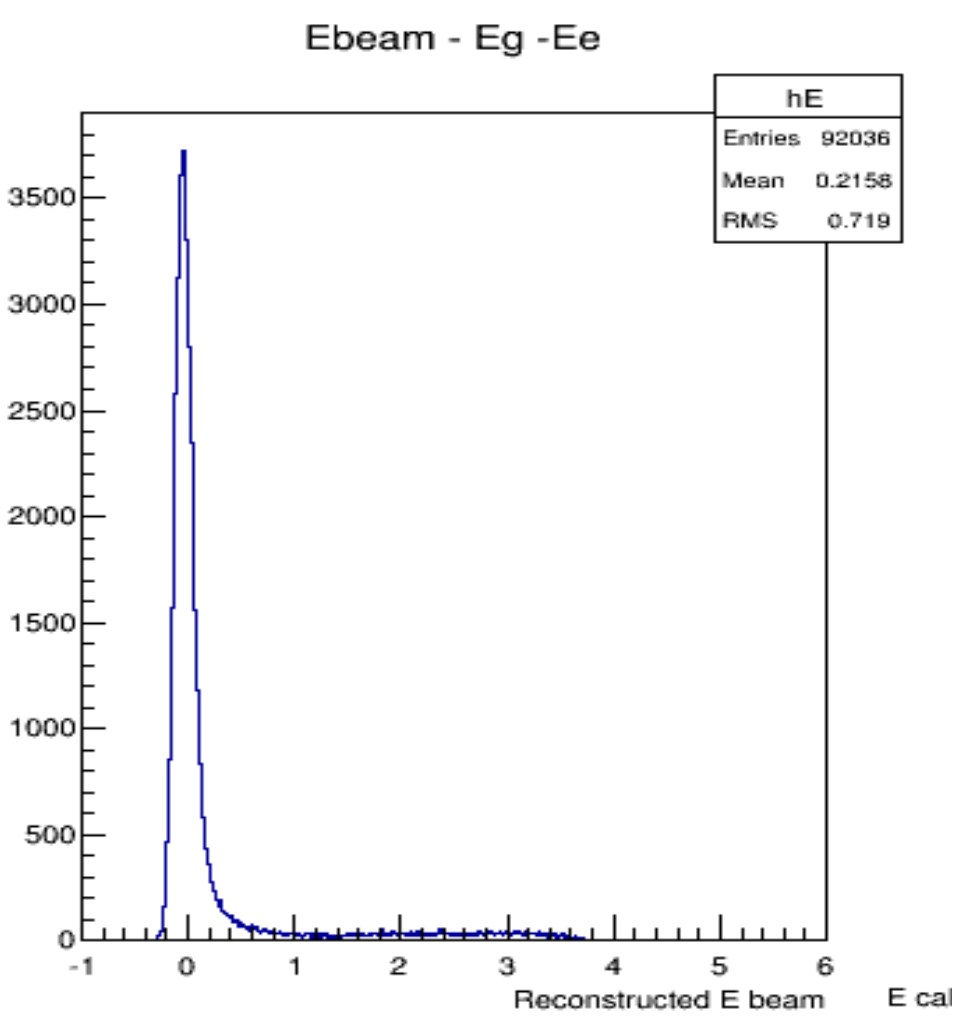
Compton MC and real data comparing

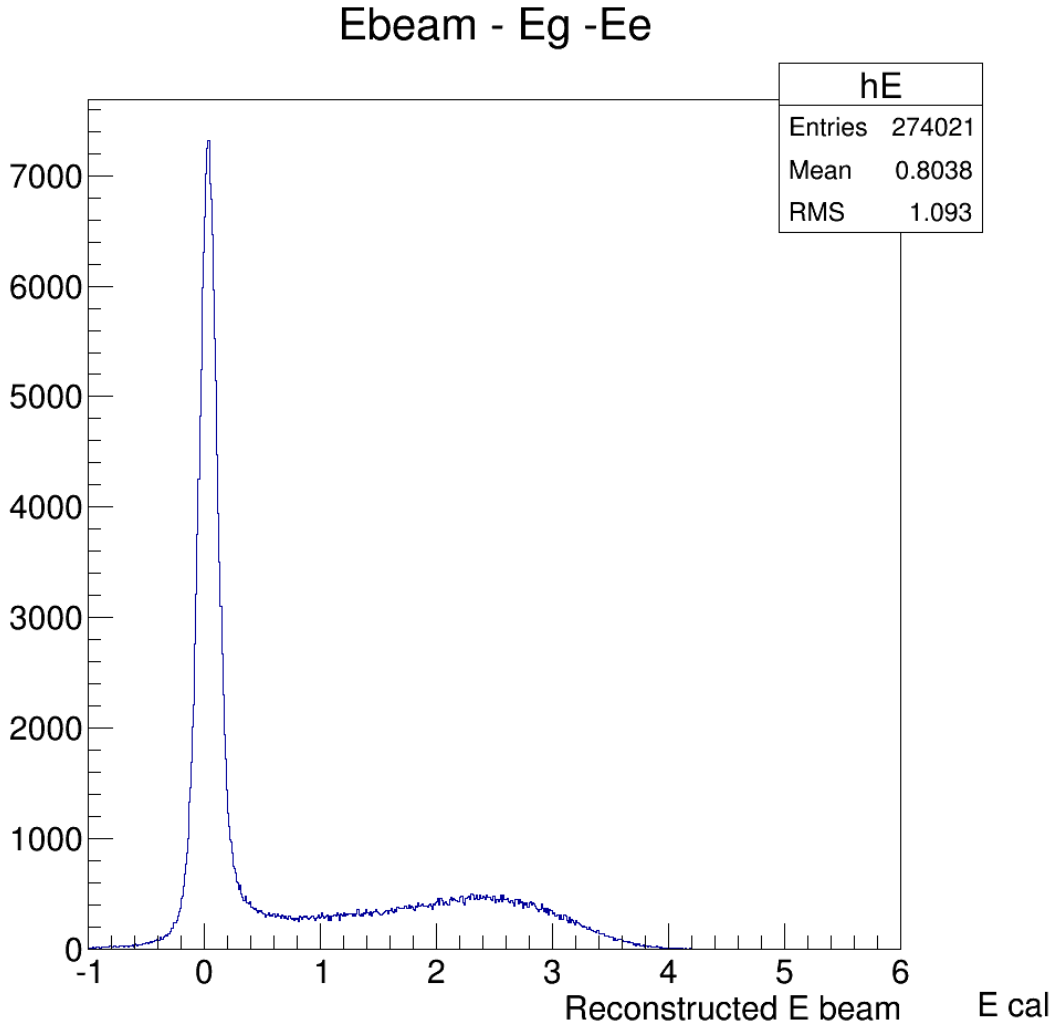
1. MC data: 500k Klein-Nishina compton events generated in carbon target from Ilya

2.Real data:Carborn run 64877 to give similar amount of events

3.Elasticity cuts study

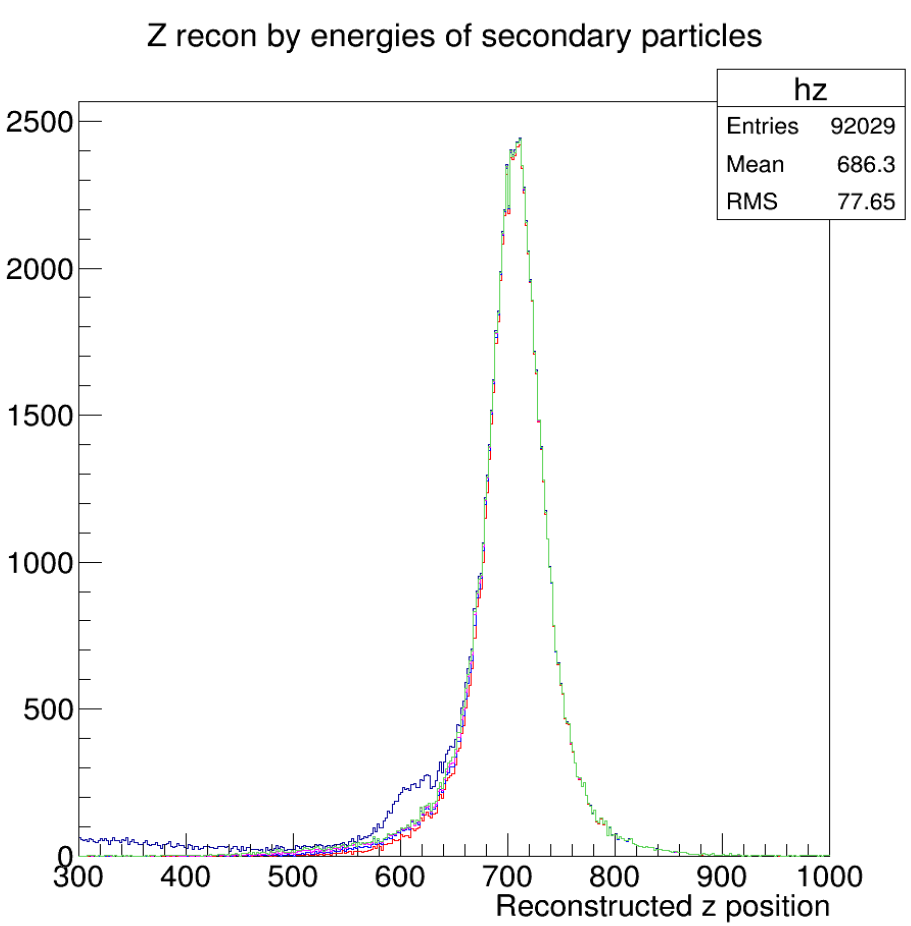
MC data / K-N compton events

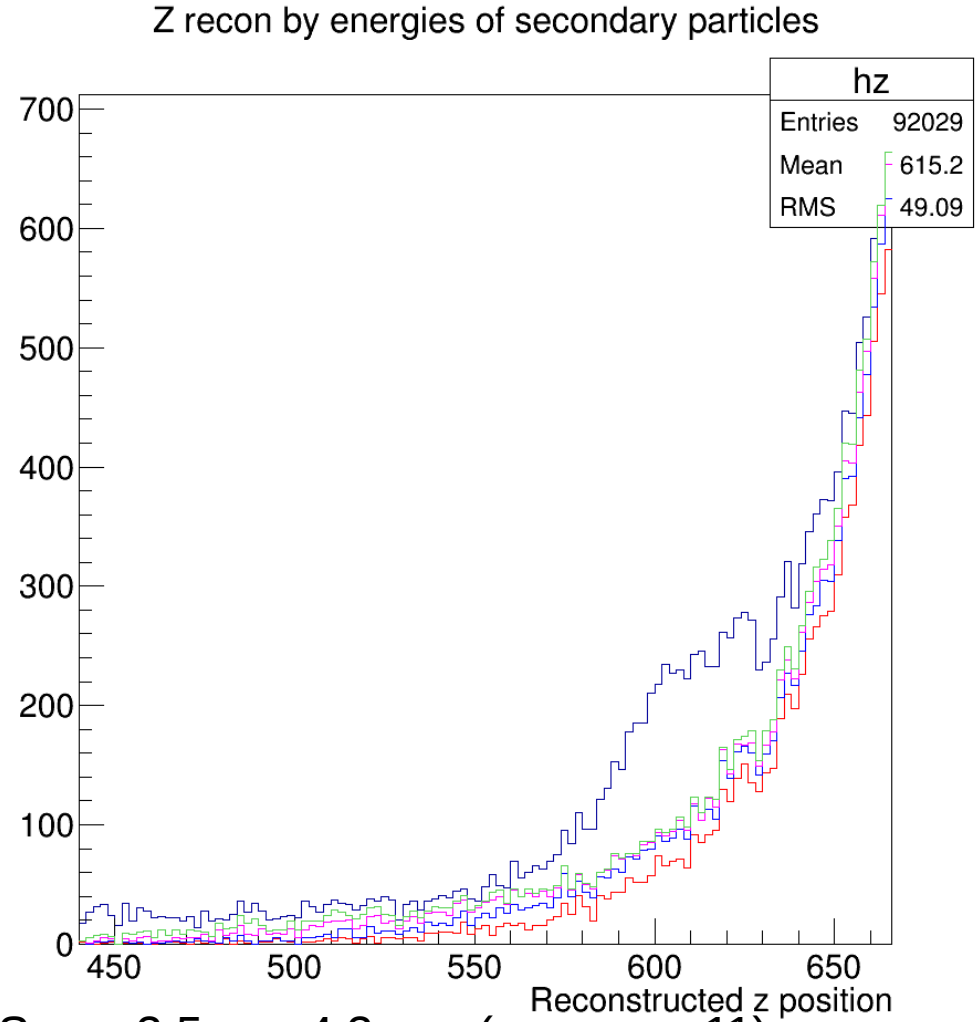




Cuts:|fai-180|<25degree,Crystal part of Hycal with inner and outer 1 layer out.

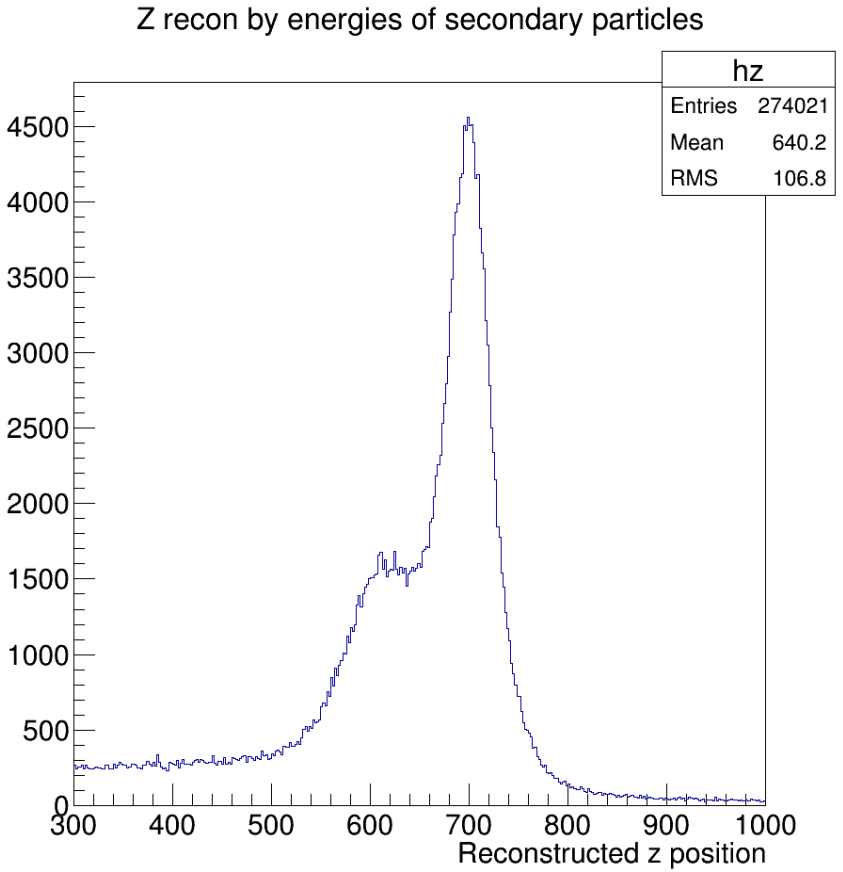
MC Reconstructed Z

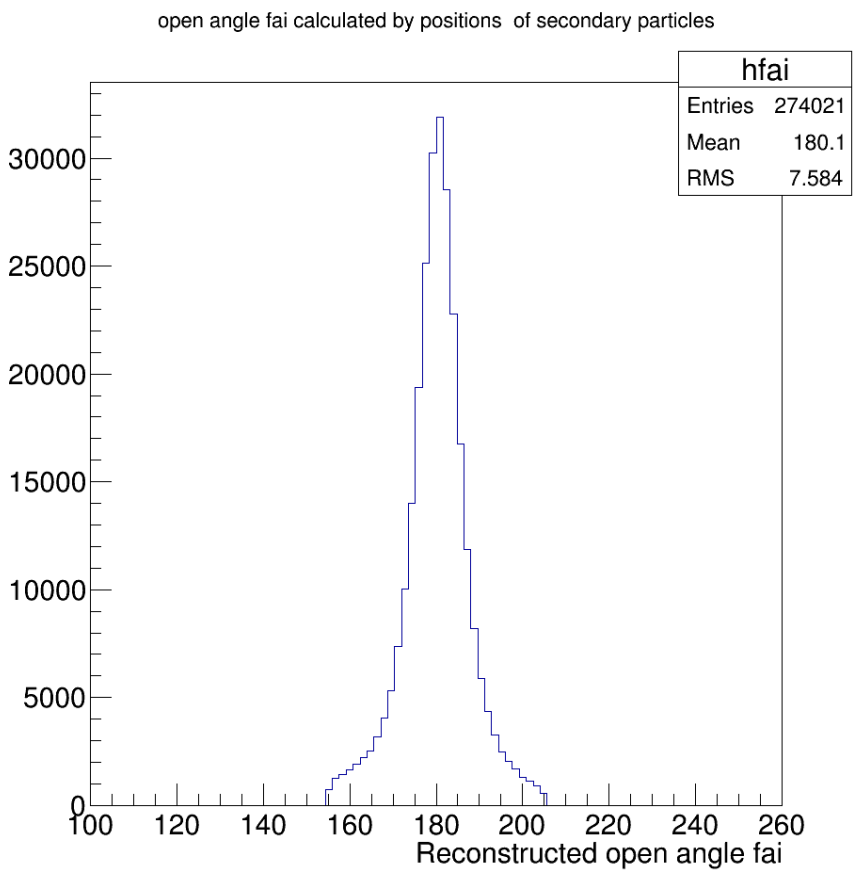




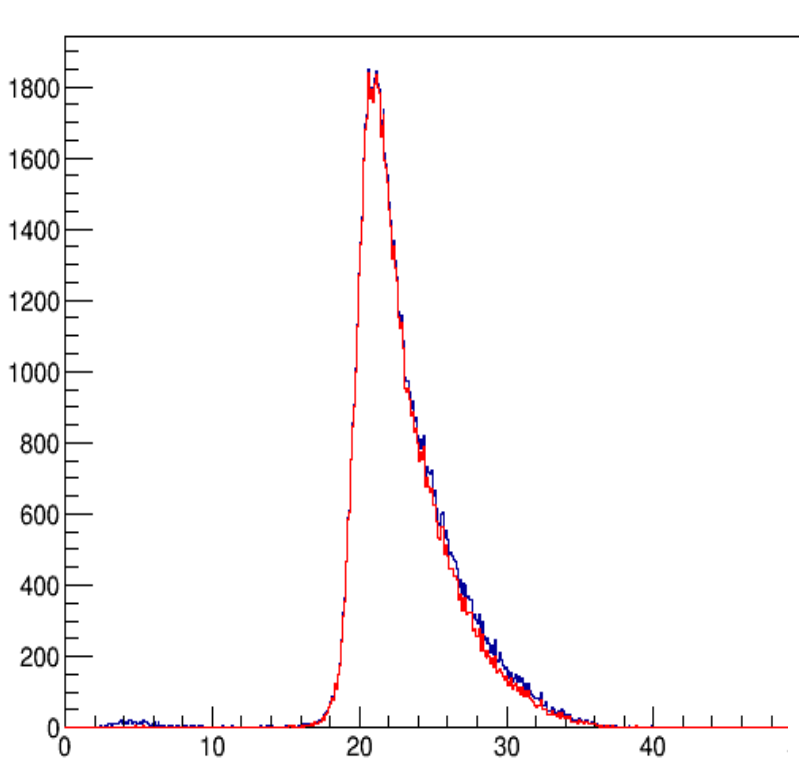
Up to down: elasticity cuts : 1.no cuts,2. 9Sgma,3.5sgm,4.3sgm (see page 11)

Real data reconstructed z

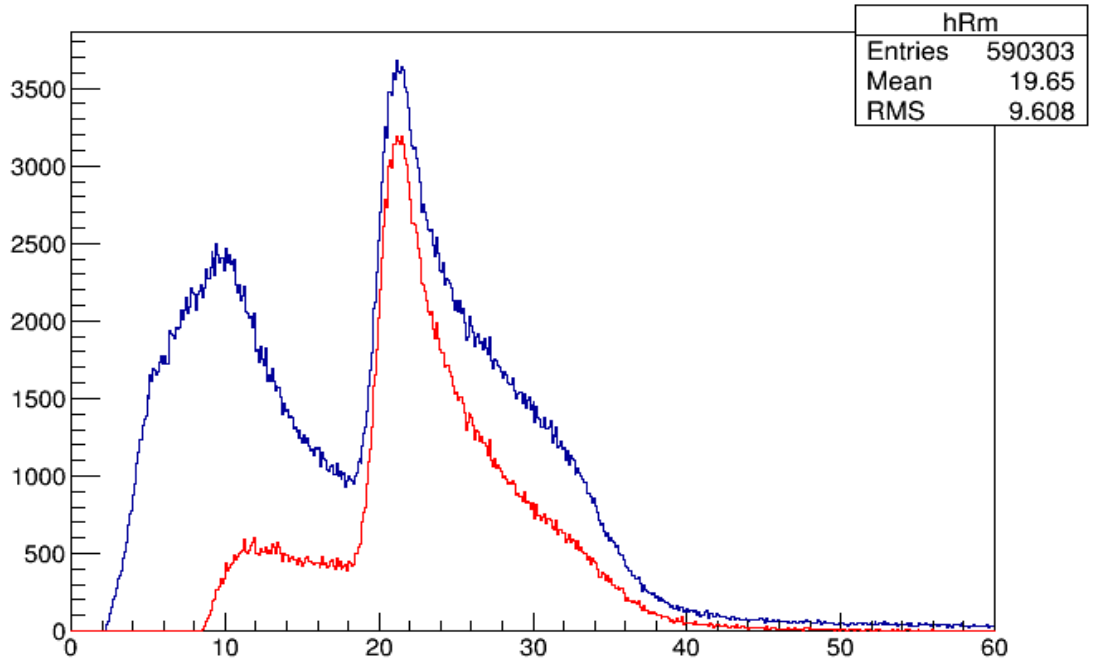




Electron gamma distance (only crystal cuts)

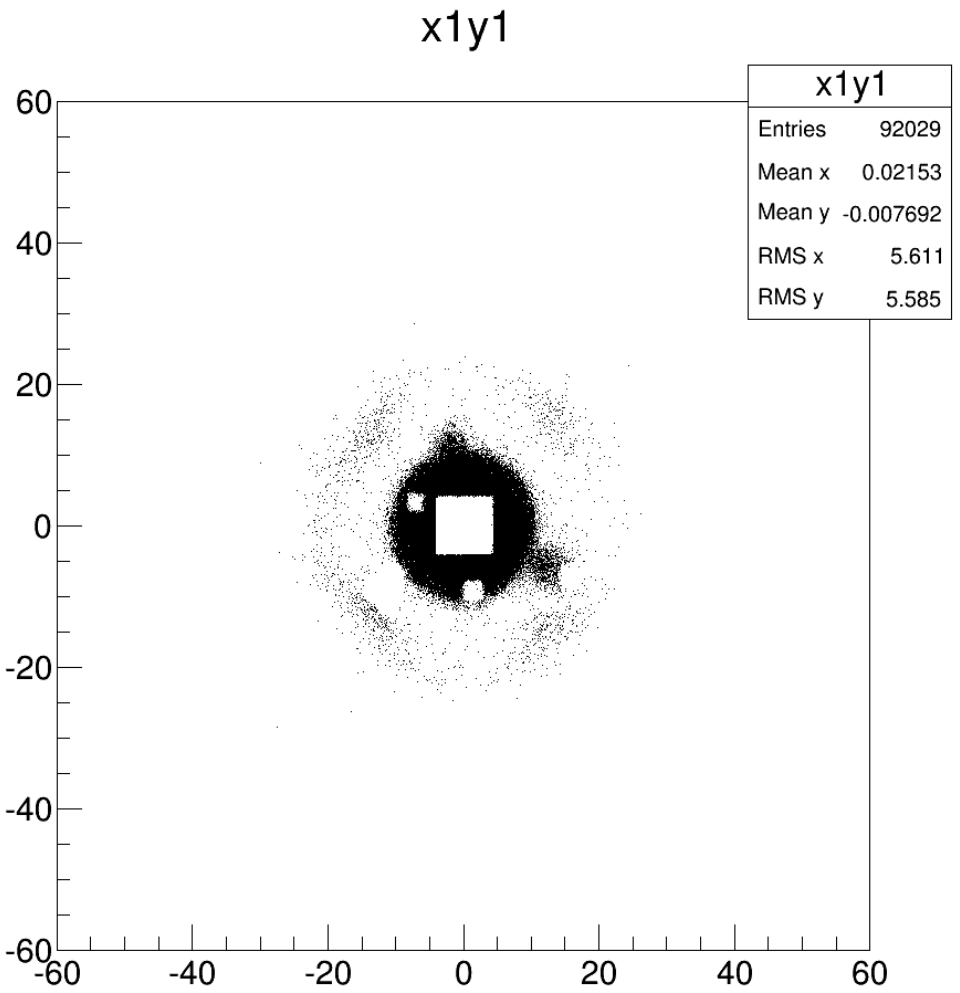


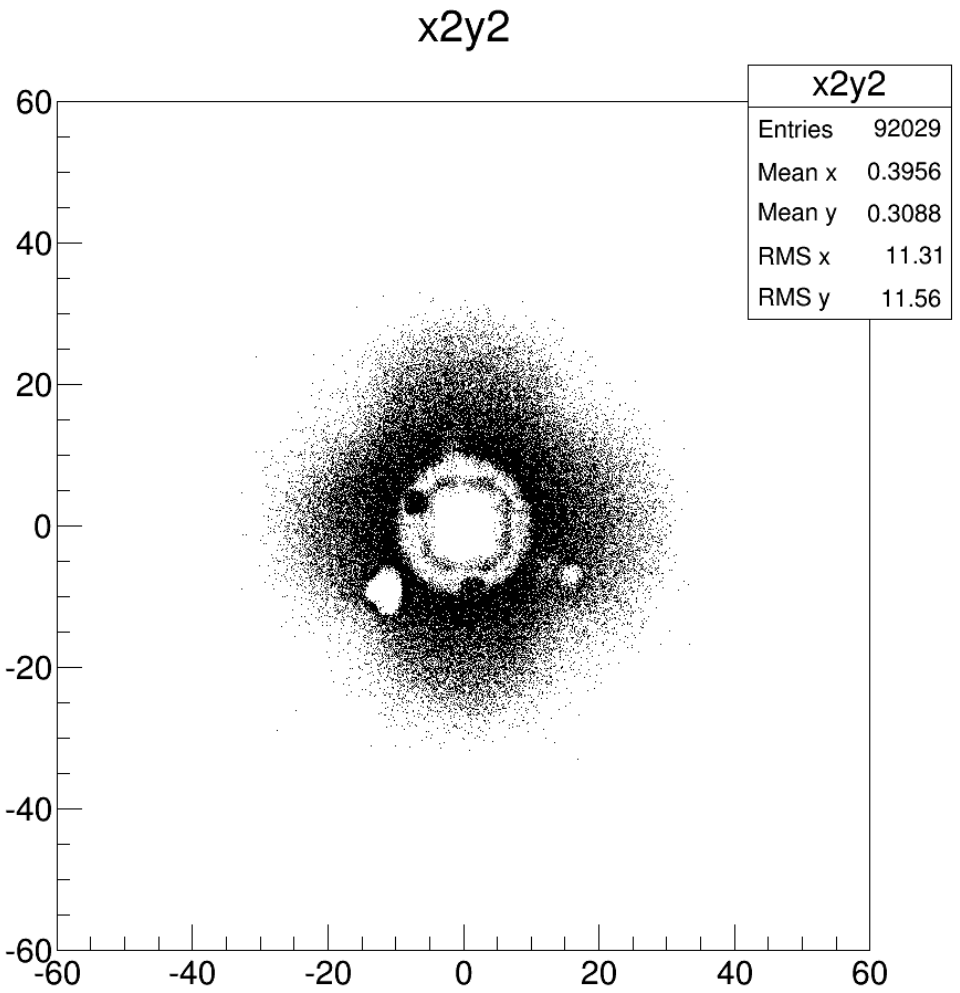
MC



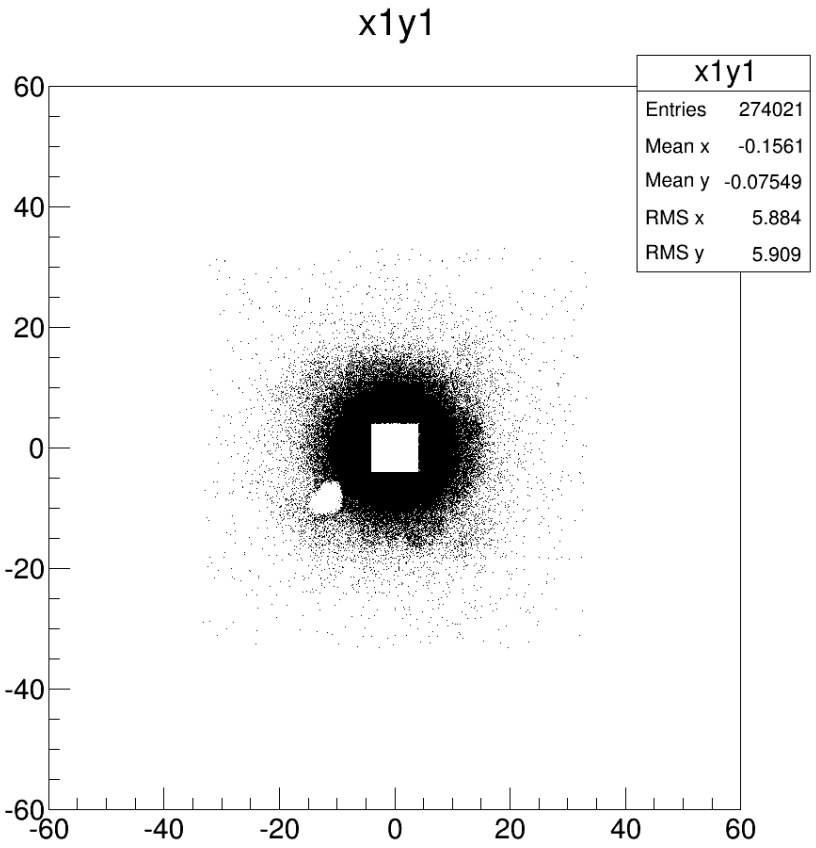
Real 64877run

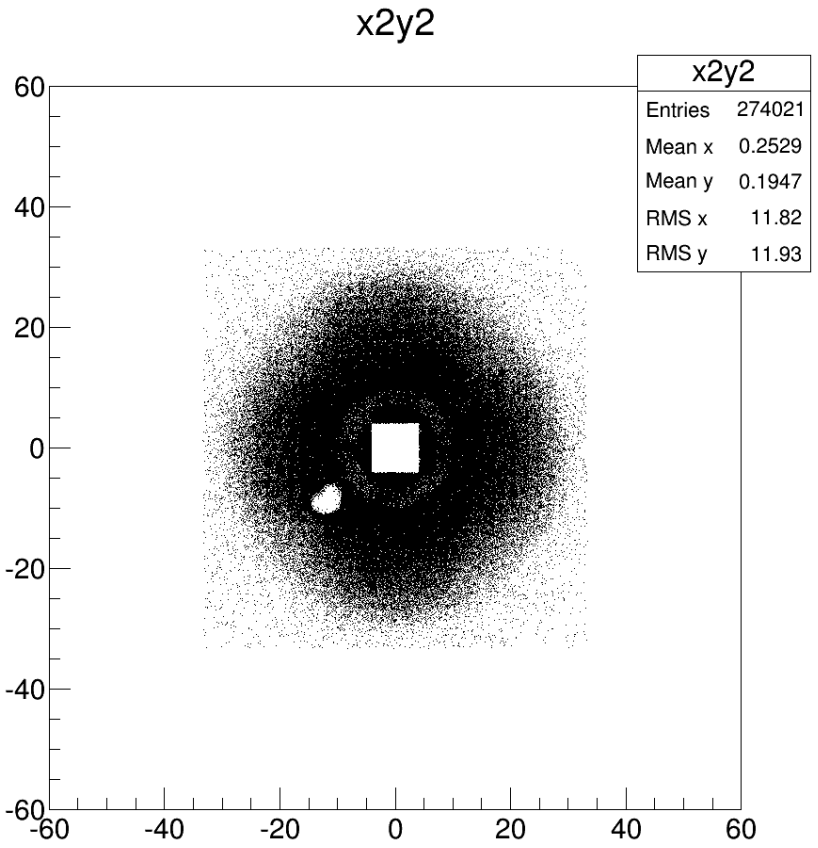
MC


x1y1
x1y1
Entries 92029
Mean x 0.02153
Mean y -0.007692
RMS x 5.611
RMS y 5.585
60
40
20
0
-20
-40
-60
-60 -40 -20 0 20 40 60

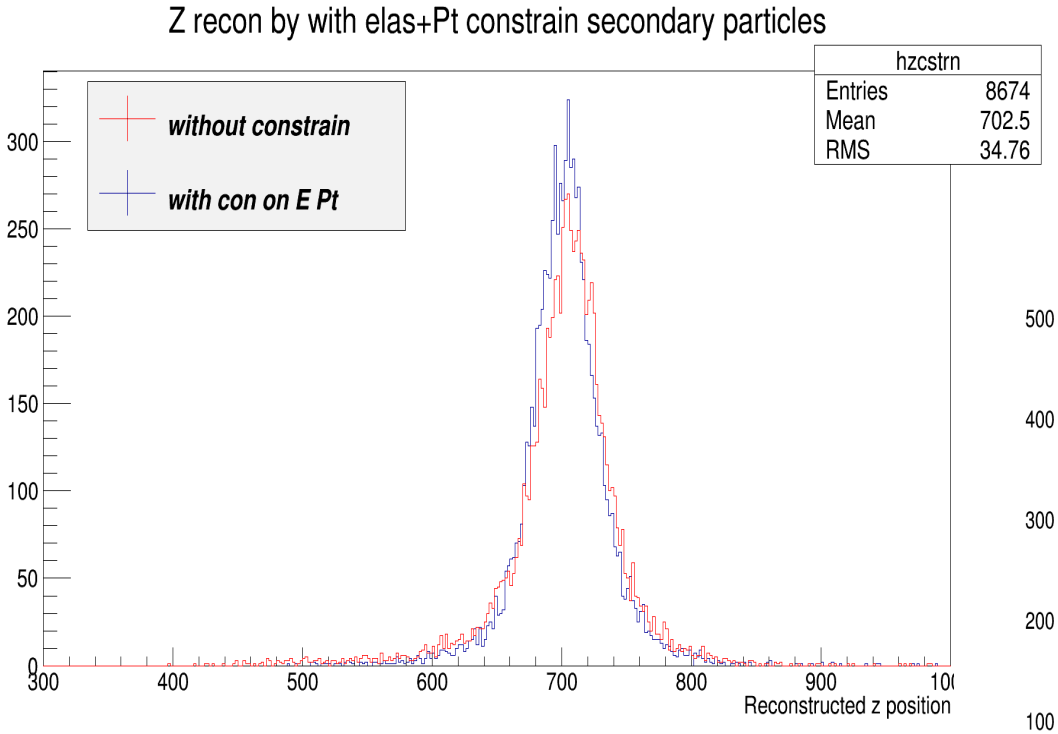

x2y2
x2y2
Entries 92029
Mean x 0.3956
Mean y 0.3088
RMS x 11.31
RMS y 11.56
60
40
20
0
-20
-40
-60
-60 -40 -20 0 20 40 60

Real data

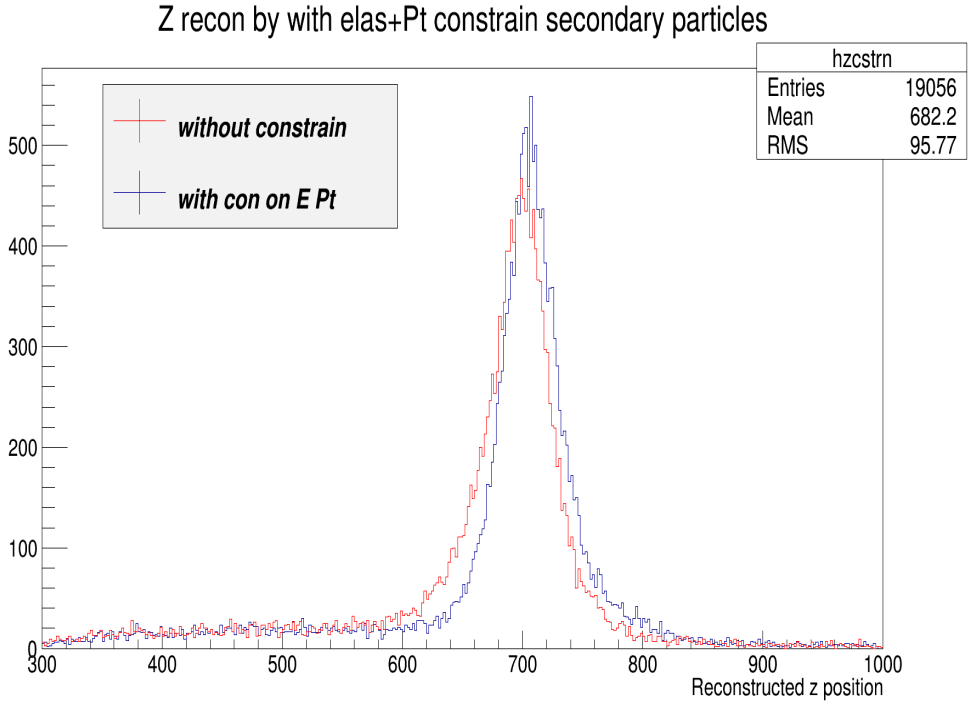

x1y1
x1y1
Entries 274021
Mean x -0.1561
Mean y -0.07549
RMS x 5.884
RMS y 5.909
60
40
20
0
-20
-40
-60
-60 -40 -20 0 20 40 60


x2y2
x2y2
Entries 274021
Mean x 0.2529
Mean y 0.1947
RMS x 11.82
RMS y 11.93
60
40
20
0
-20
-40
-60
-60 -40 -20 0 20 40 60

Mc and real constraint



MC



Run64877

Elasticity Cut

|Ebeam-E1-E2|< n sgm	Compton events number from Z reconstructed	Relative change	
3sgm /0.36GeV	80144	N/a	
4sgm/0.48GeV	81440	1.6%	
5sgm/0.60GeV	82240	.98%	
6sgm/0.72GeV	82918	.82%	
7sgm/0.84GeV	83395	.6%	
8sgm/0.96GeV	83811	.5%	
9sgm/1.08GeV	84144	.4%	

Next move

- Constraint P ,E
- Acceptance (Mcdata)
- Flux
- Target thickness
- CS for Tcounters1-11