

Pilot blade in global runs: 280383-280385

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Pilot Blade Operation meeting



Global run info

LHC Fill 5288

InjectionScheme 25ns_2220b_2208_1940_2036_96bpi_24inj

Date: 2016-09-09

Run number: from 280383 (at 8:14) -

Run number: until 280385 (until 22:15)

All: around 14 hours

Number of events: 1.1M

Pilot Blade configuration

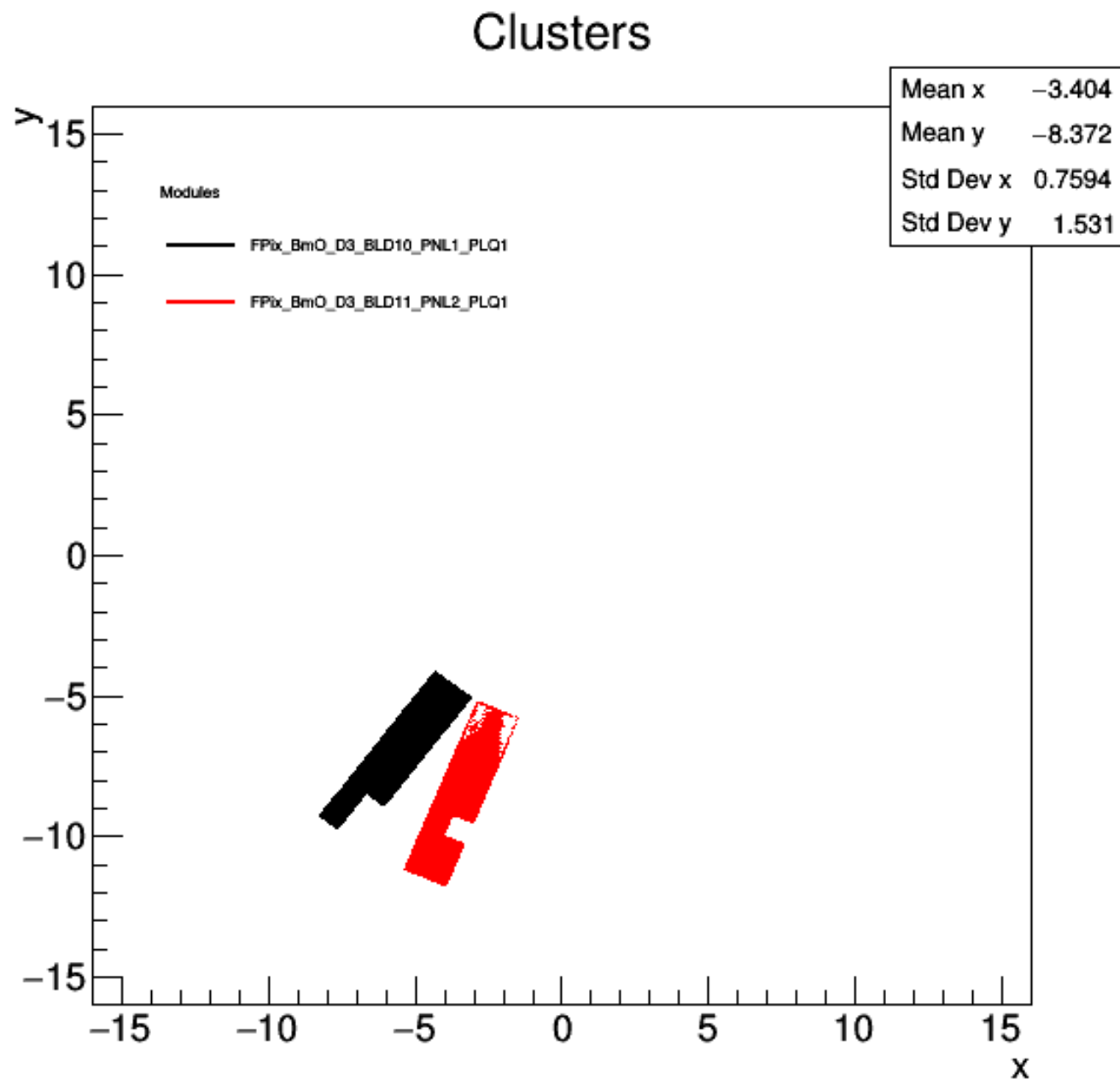
2 modules configured (2 BmO).

FPix_BmO_D3_BLD10_PNL1_PLQ1
FPix_BmO_D3_BLD11_PNL2_PLQ1

FED 40 included
FED 1240 excluded (uTCA port)

Clusters

Global positions



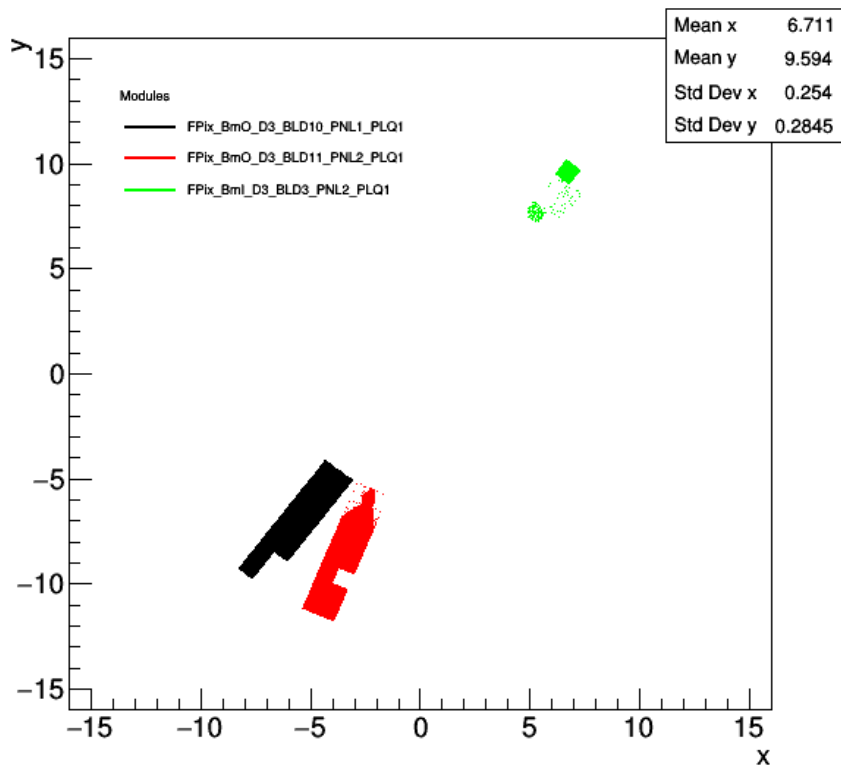
Cluster comparison

279071-279073

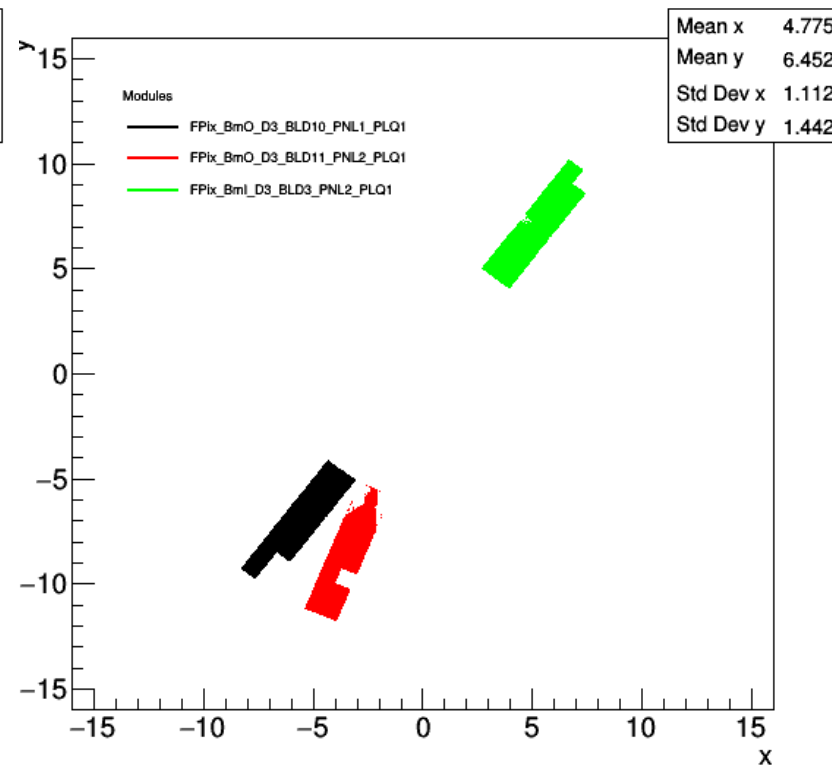
279853-279865

280383-280385

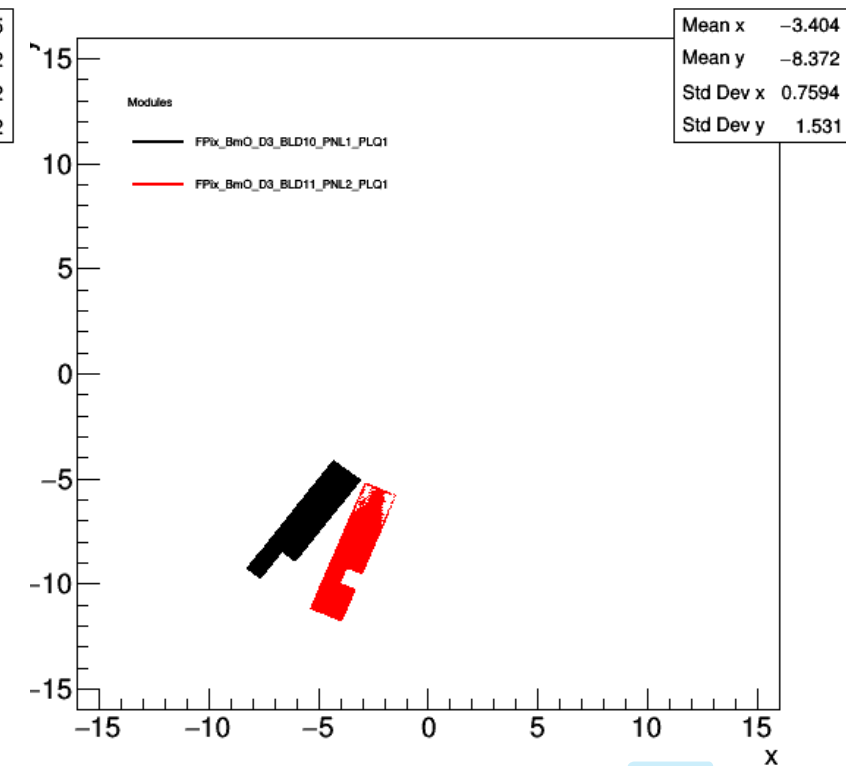
Clusters



Clusters

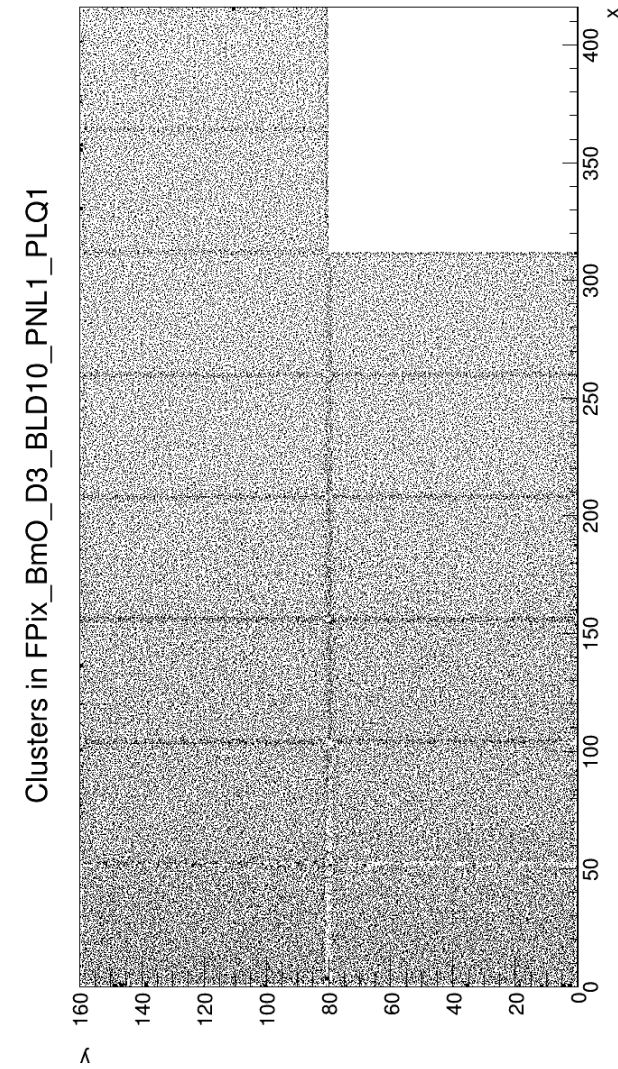
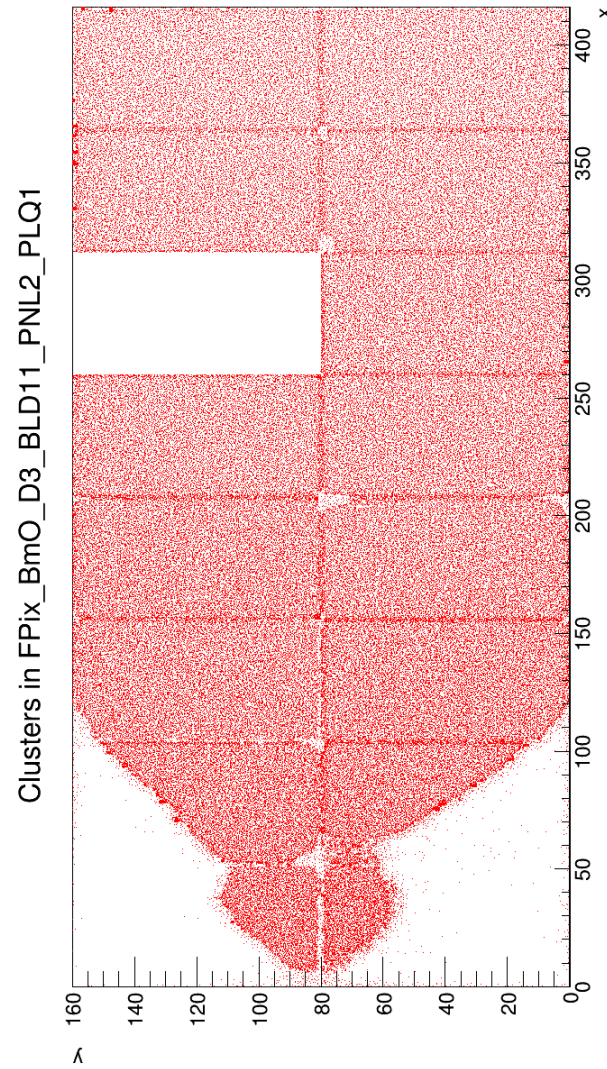


Clusters

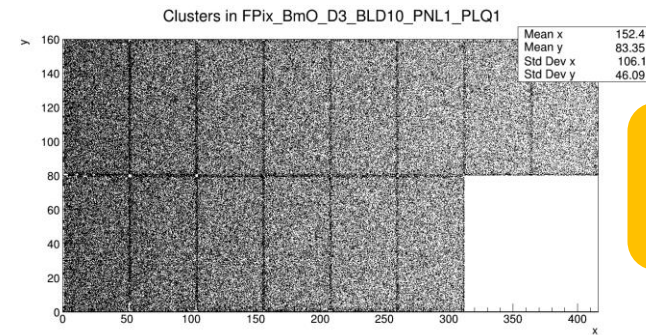
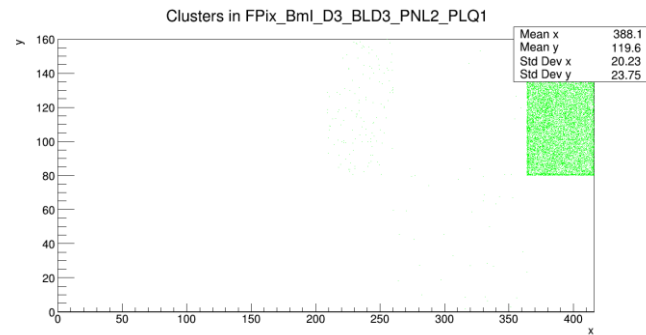
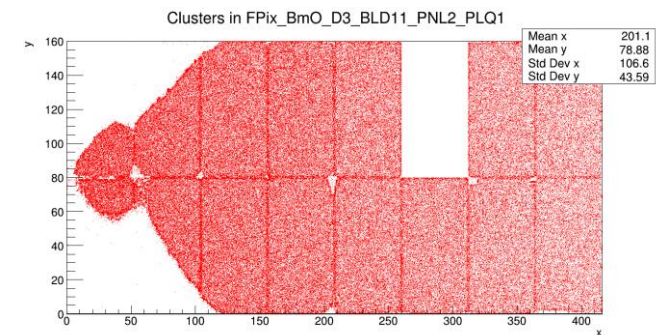


Clusters

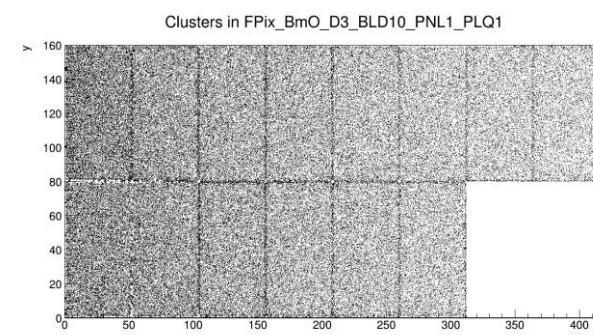
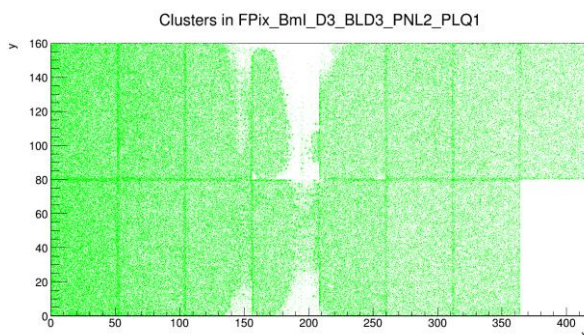
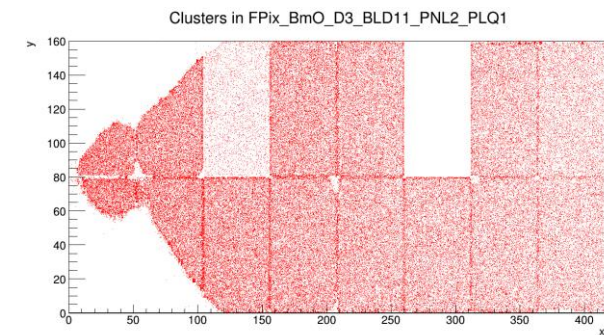
Local positions



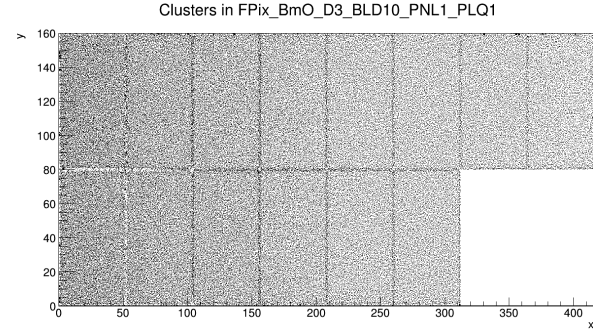
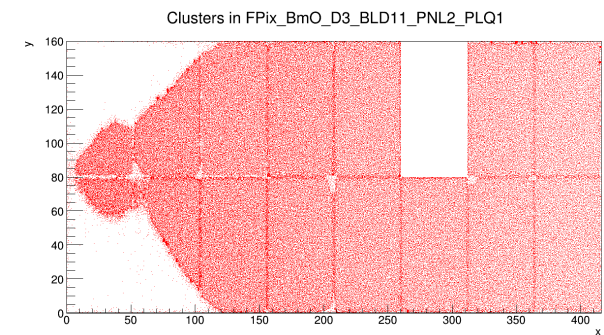
Cluster comparison



279071-279073



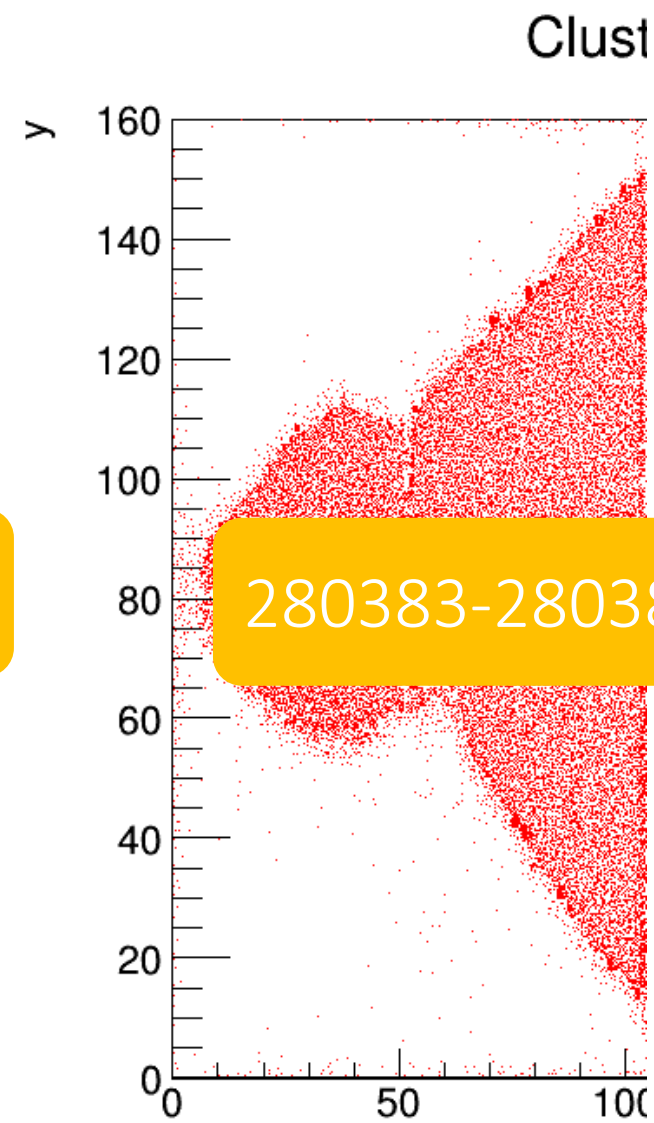
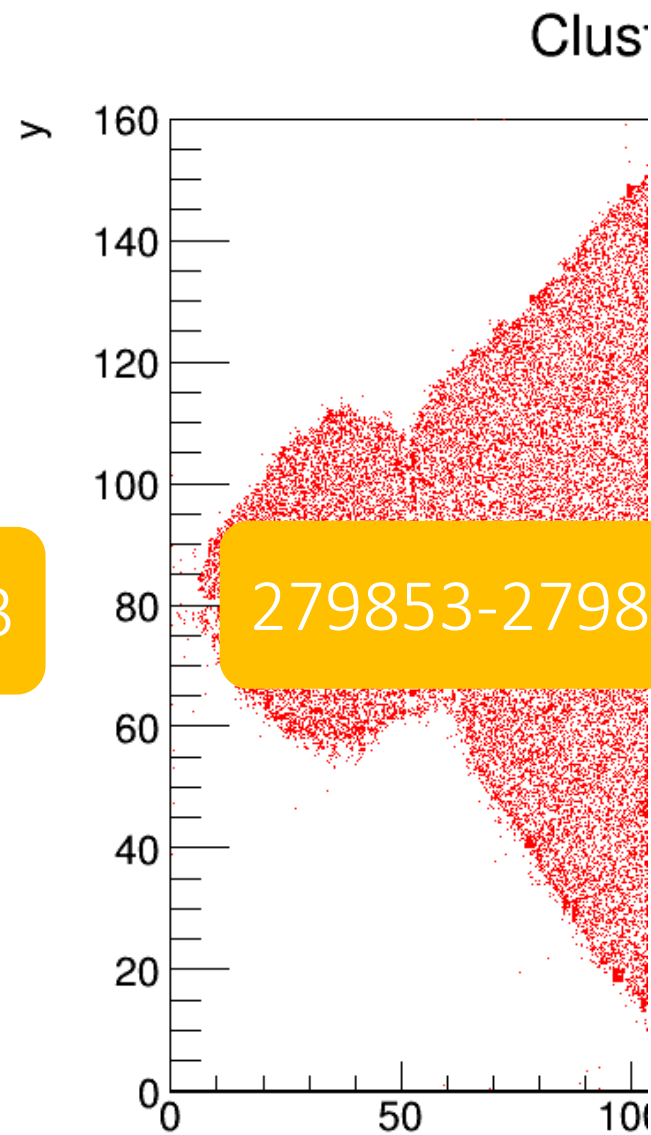
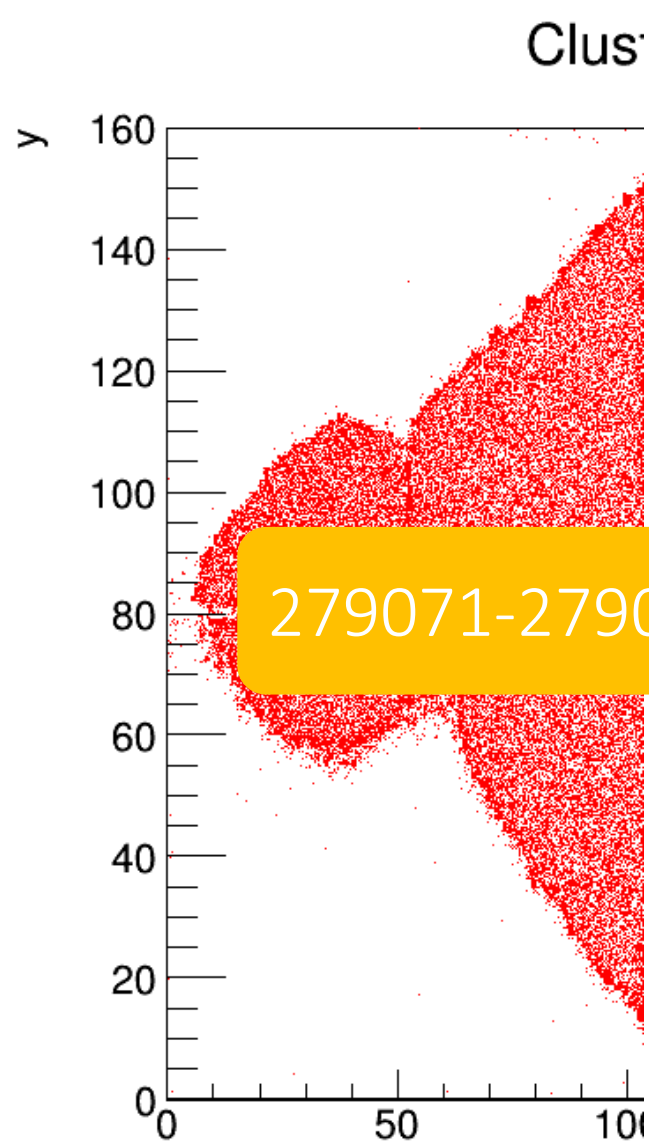
279853-279865



280383-280385



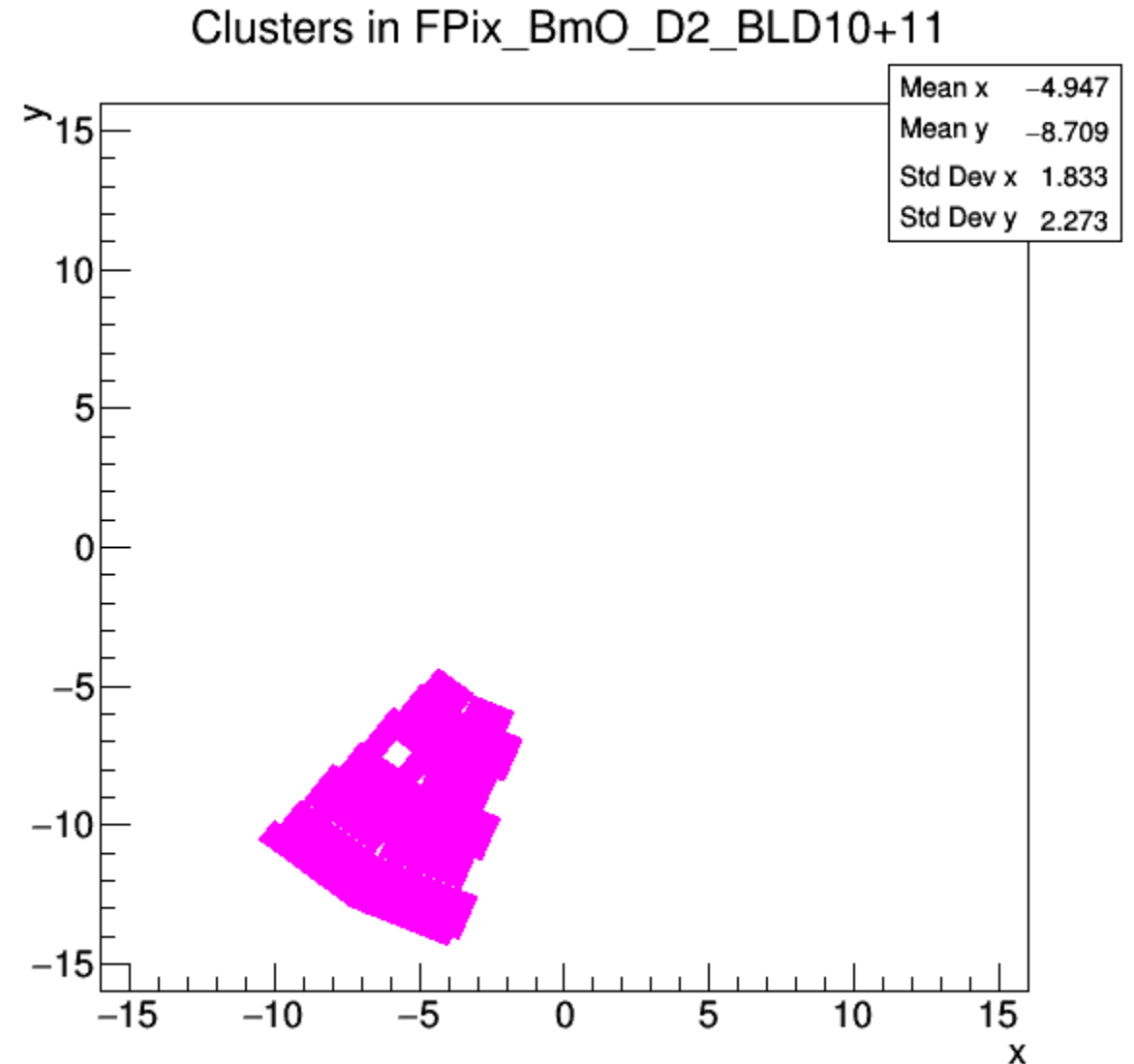
Cluster comparison



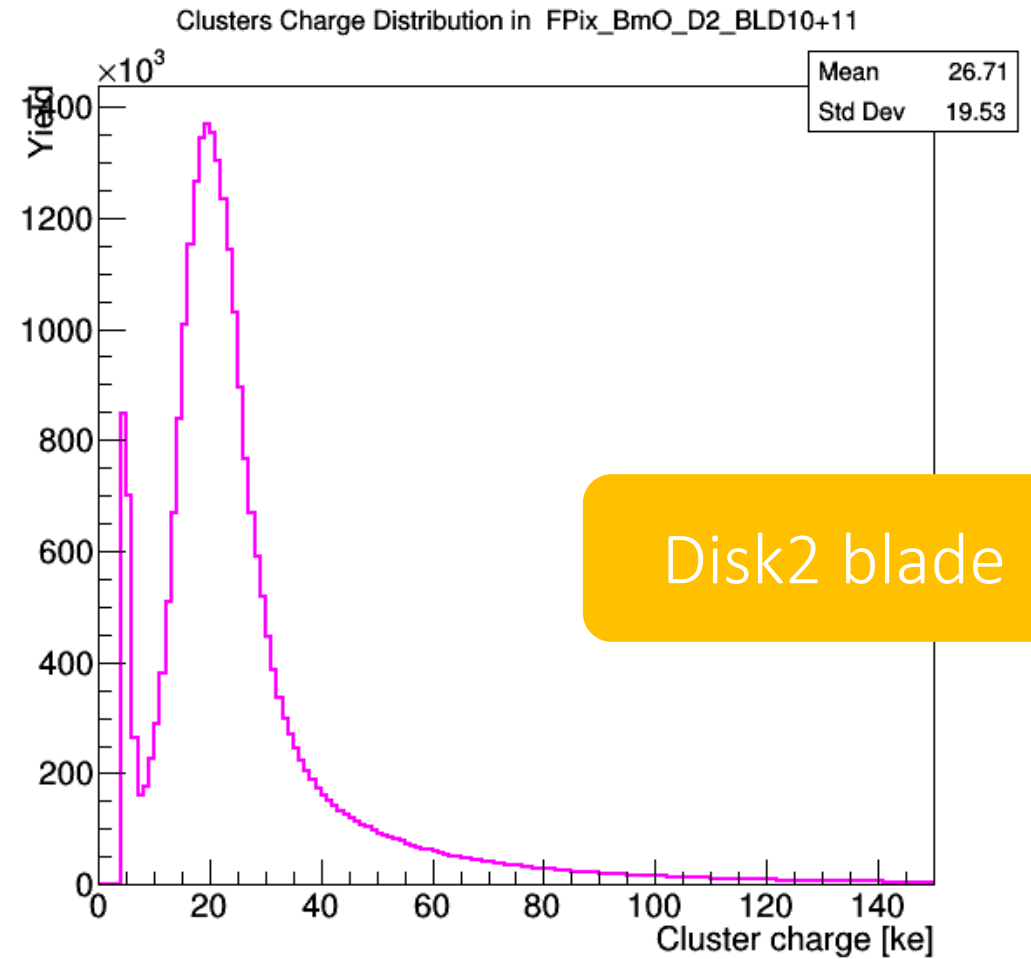
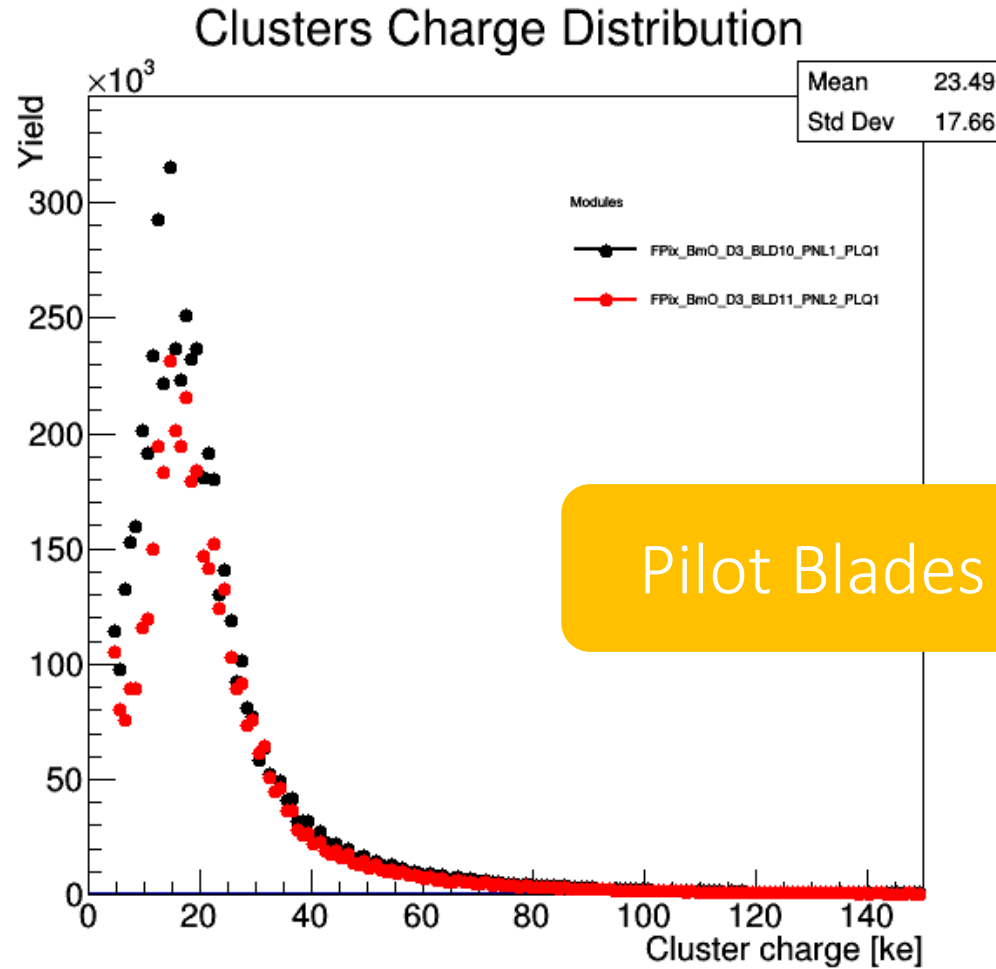
Comparison blade

Disk 2 blade that is located
before the Pilot Blades

To be able to compare with the
Pilot Blade



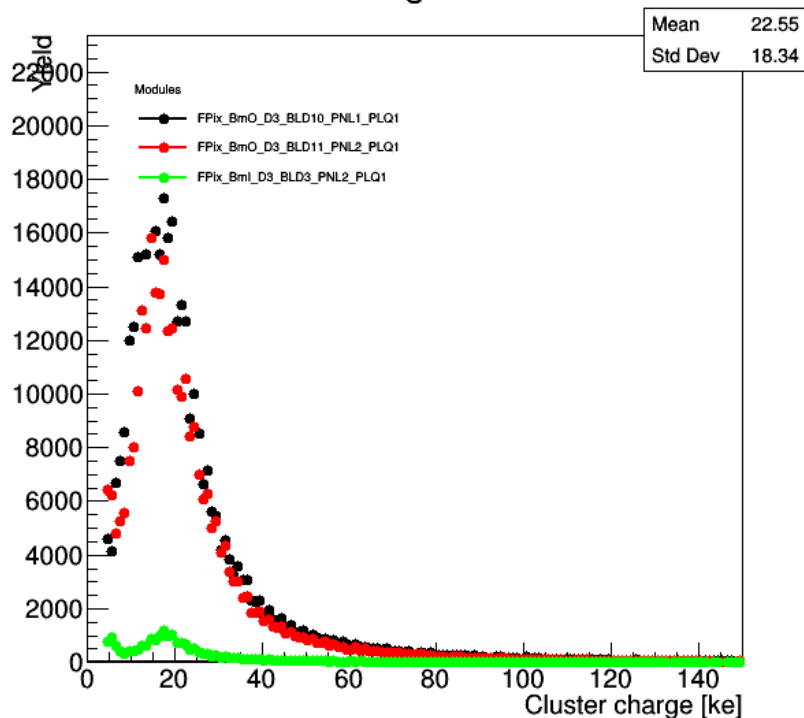
Cluster charge



Cluster charge comparison

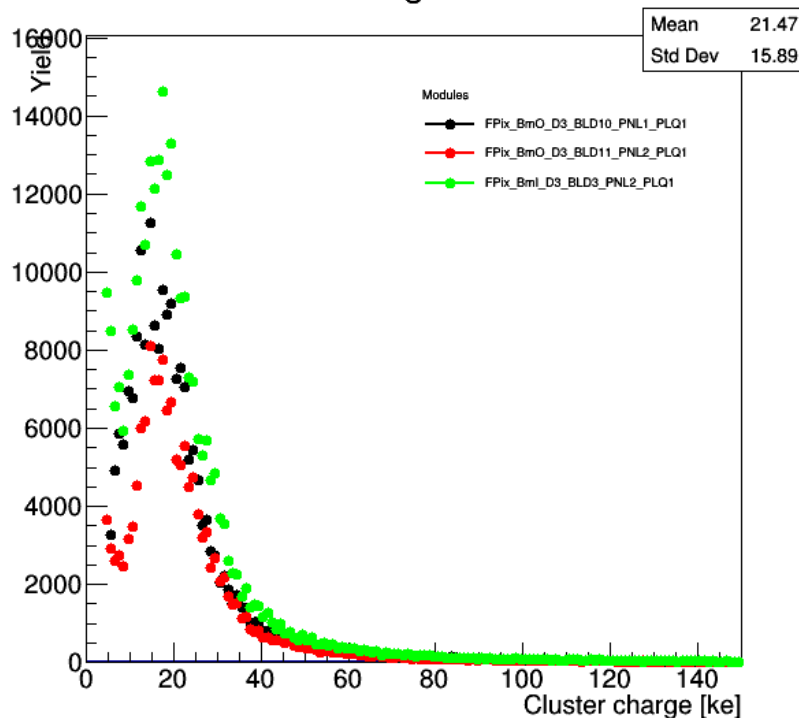
279071-279073

Clusters Charge Distribution



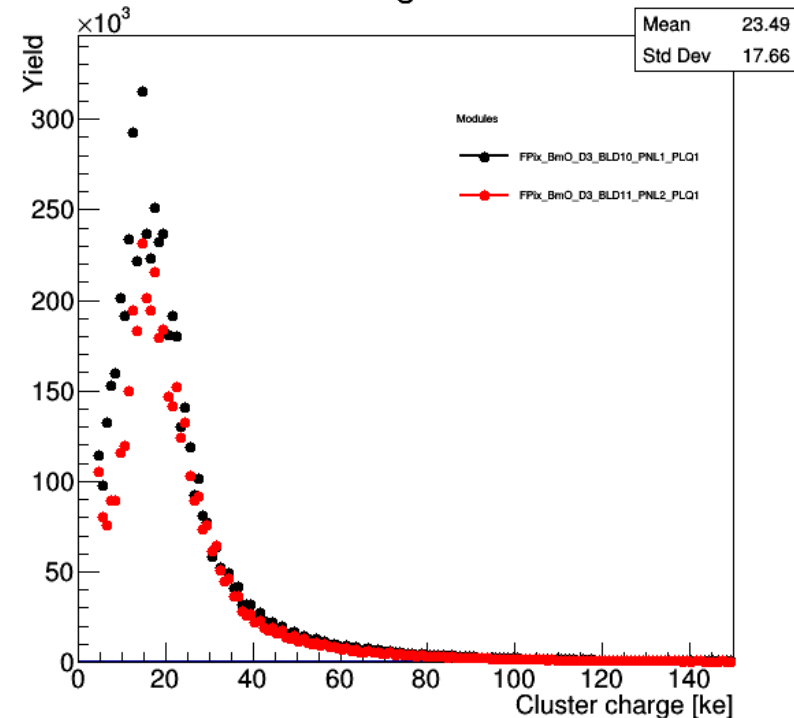
279853-279865

Clusters Charge Distribution

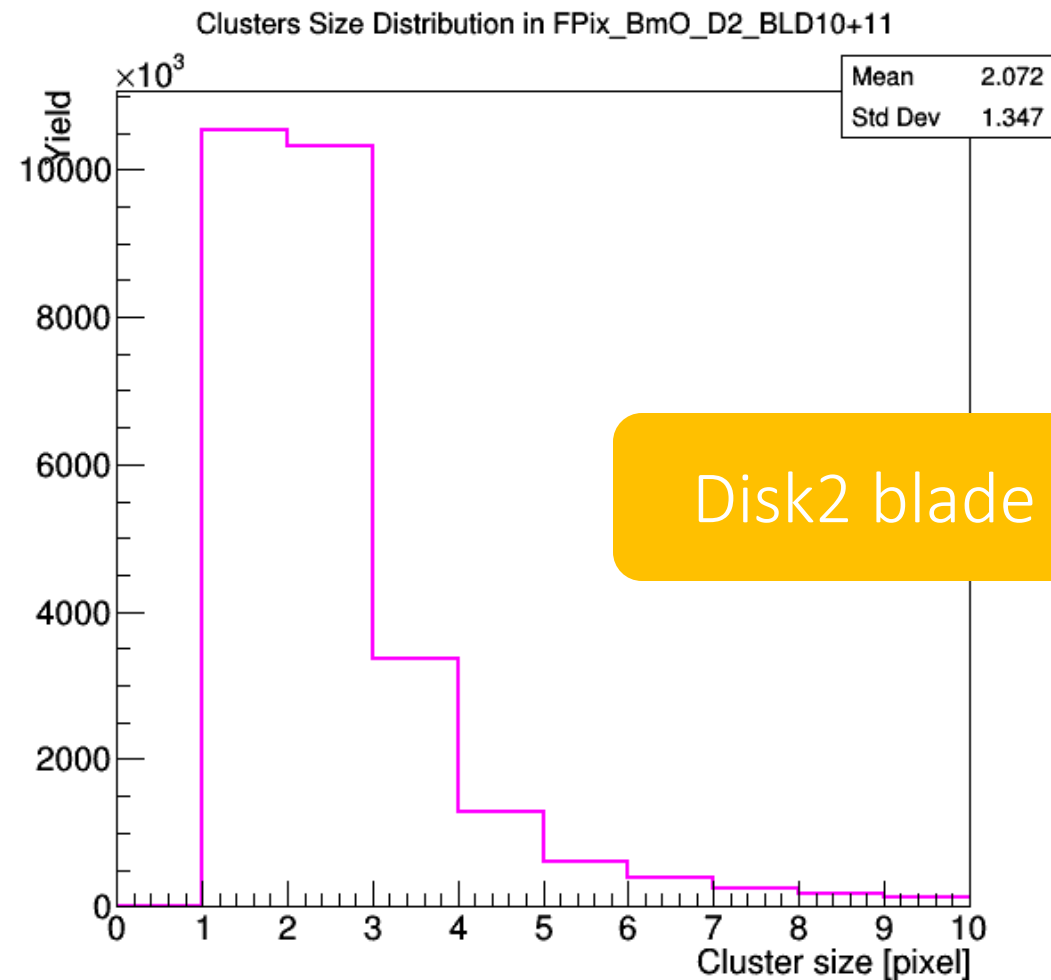
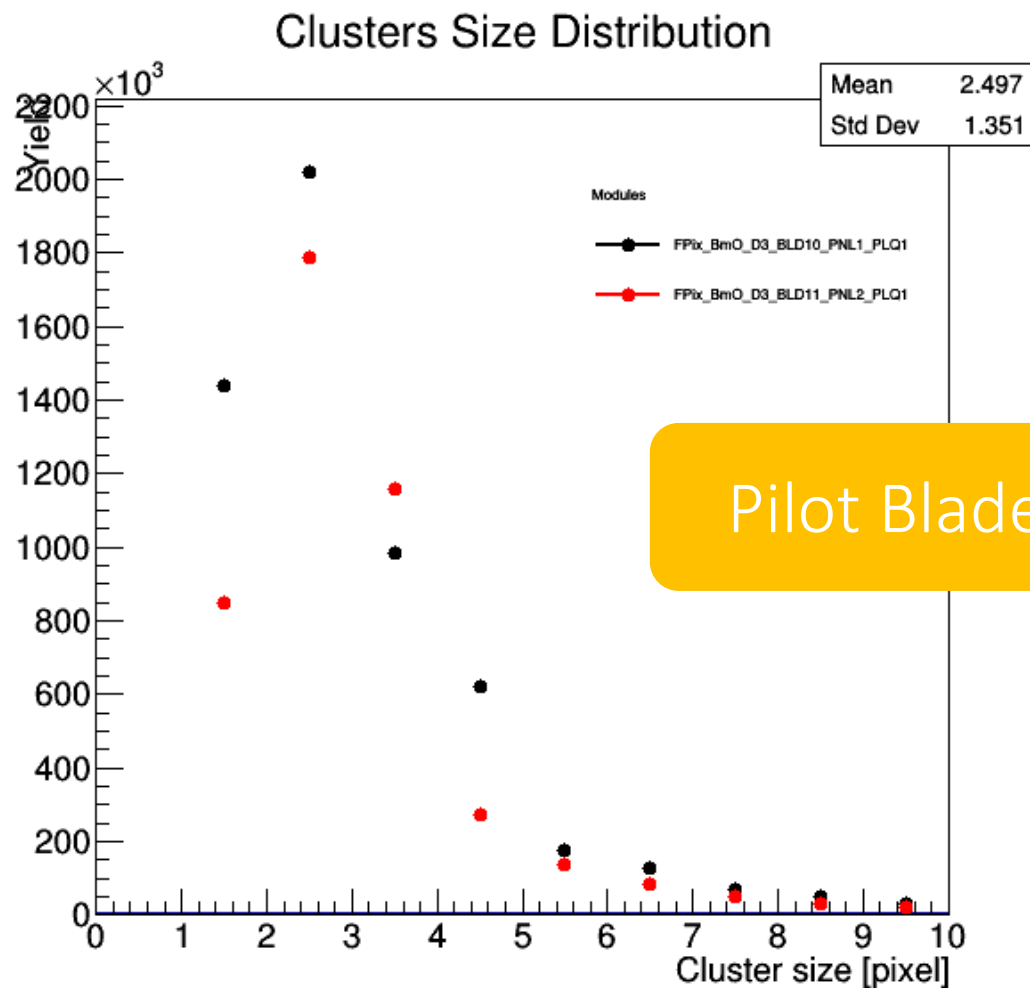


280383-280385

Clusters Charge Distribution

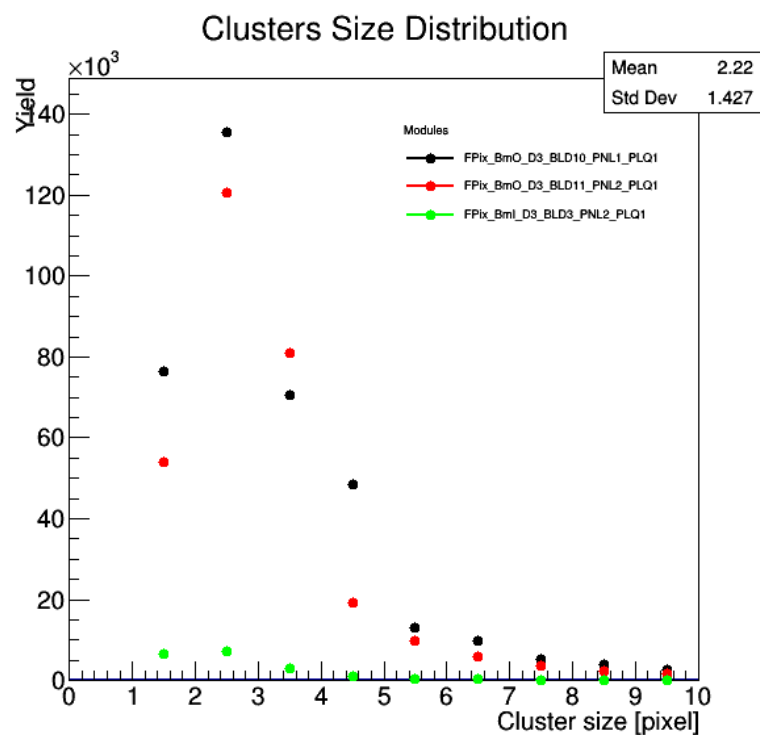


Cluster size

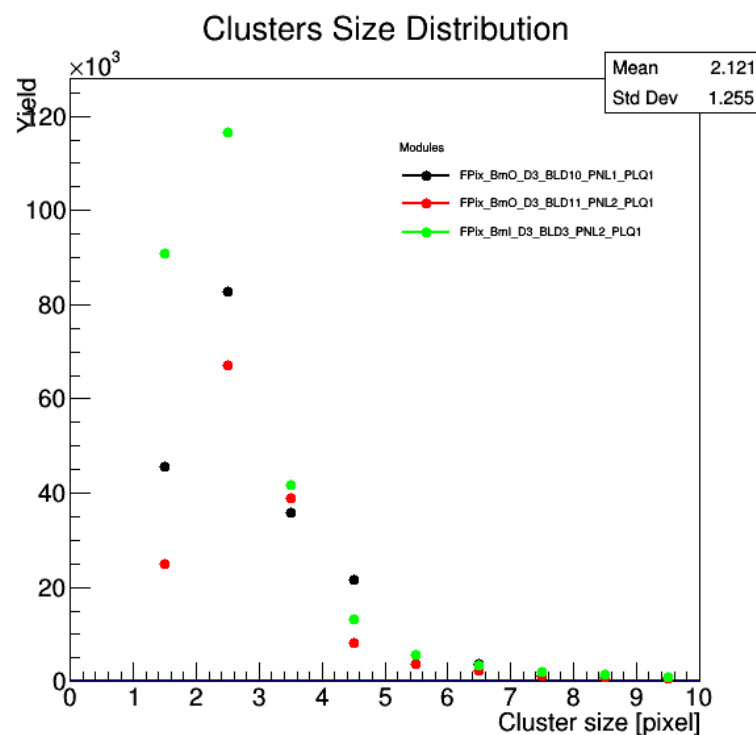


Cluster size comparison

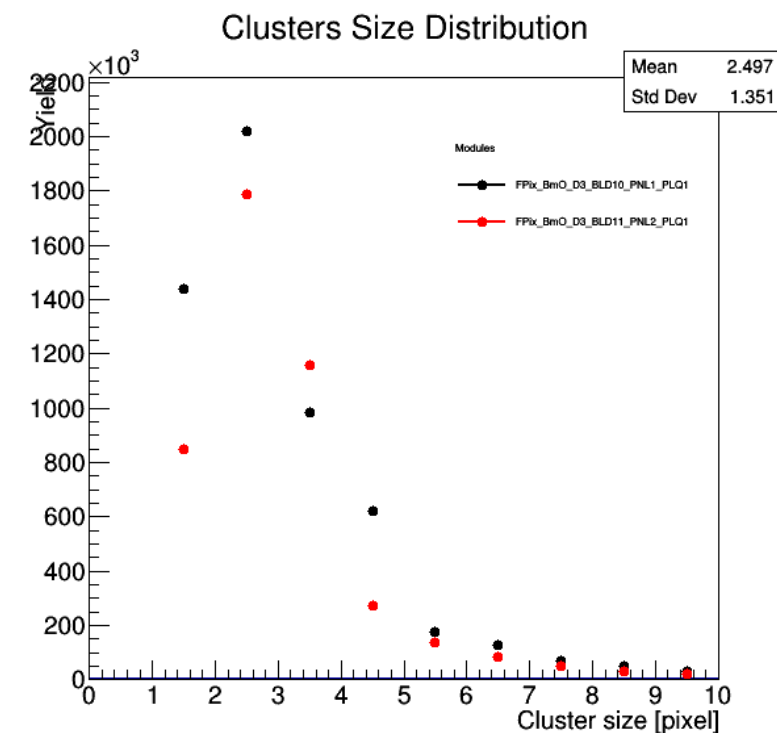
279071-279073



279853-279865

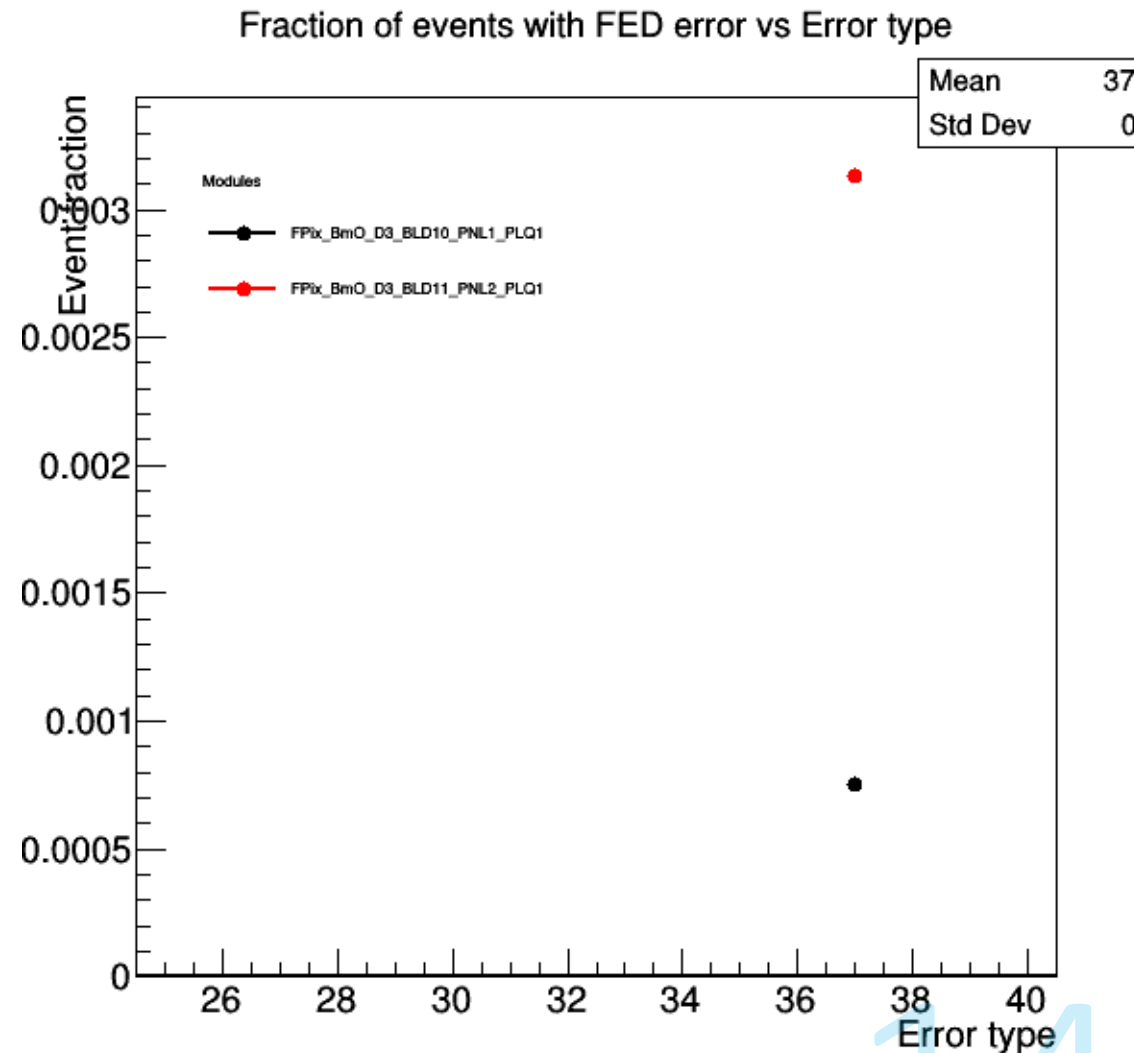
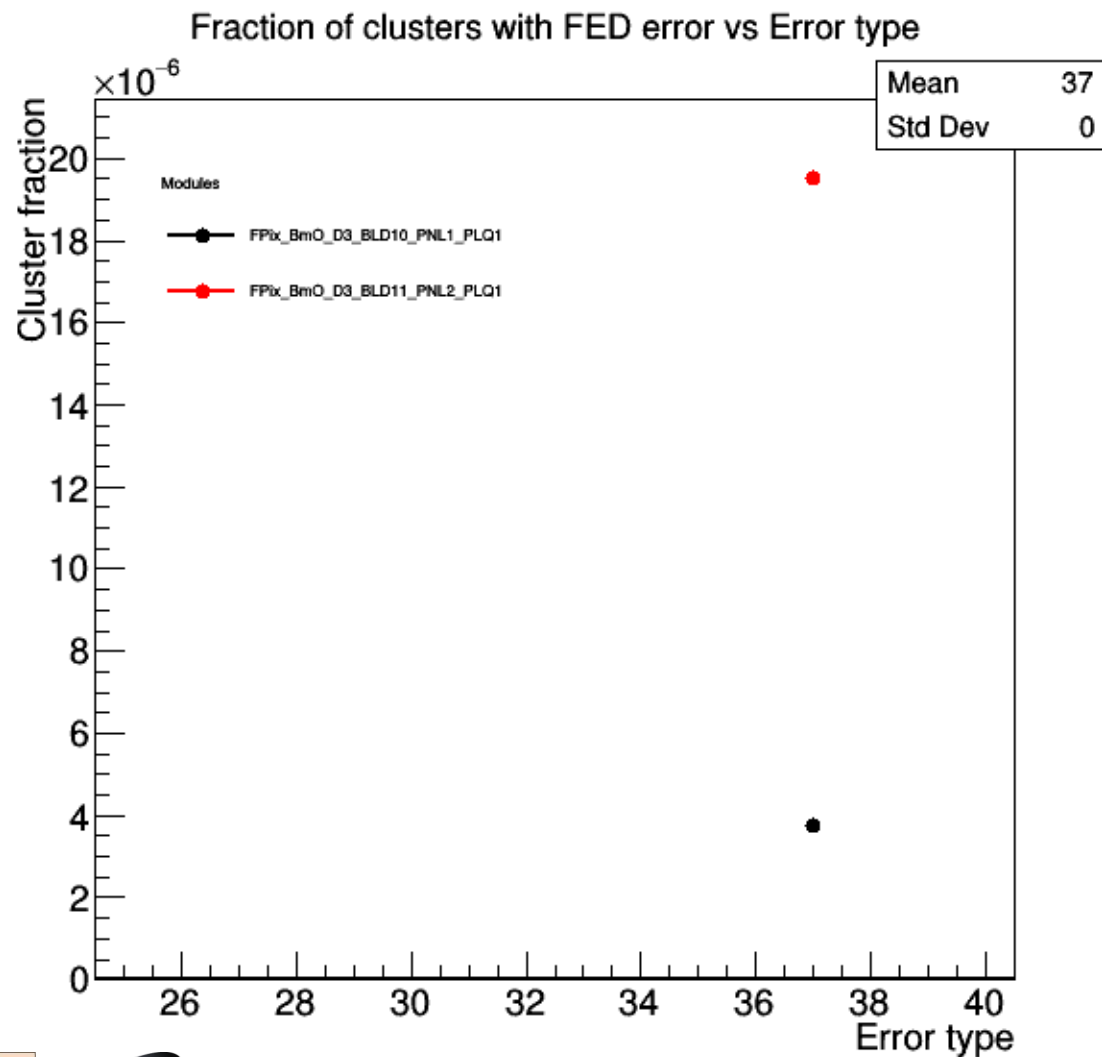


280383-280385



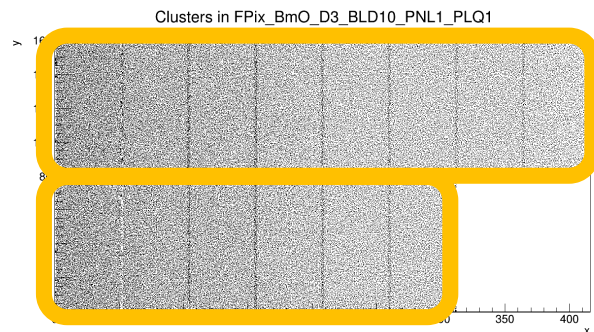
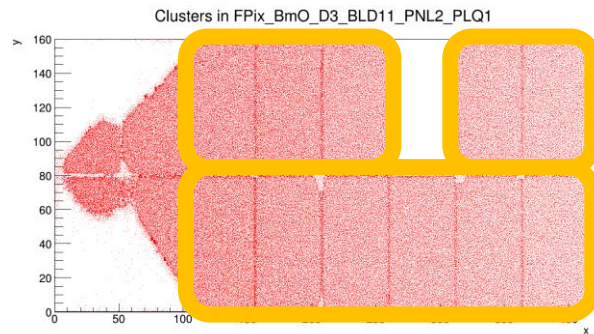
FED Errors

The error type is invalid dcol or pixel value

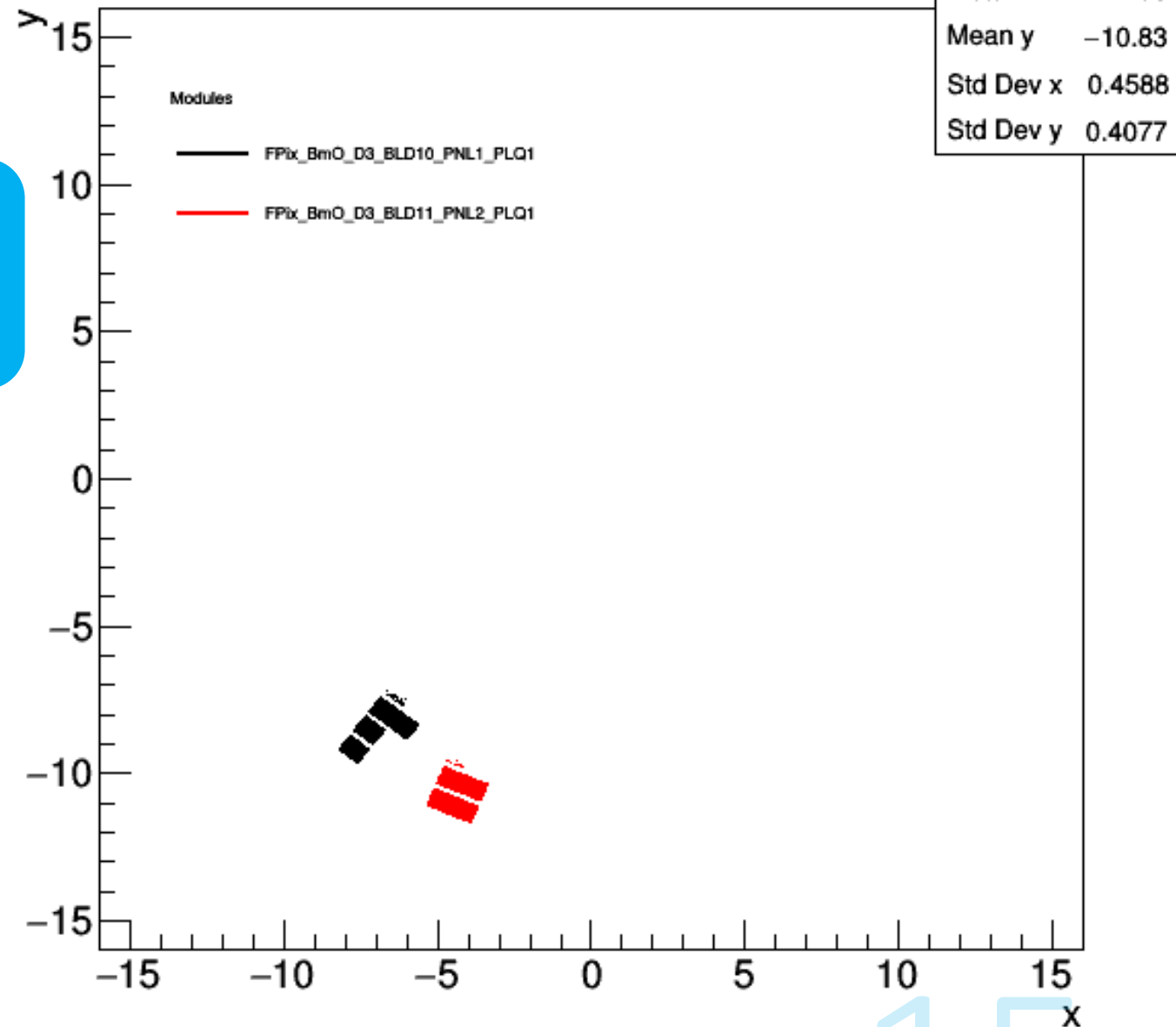


RecHits on Tracks

All of these plots are in the fiducial regions only

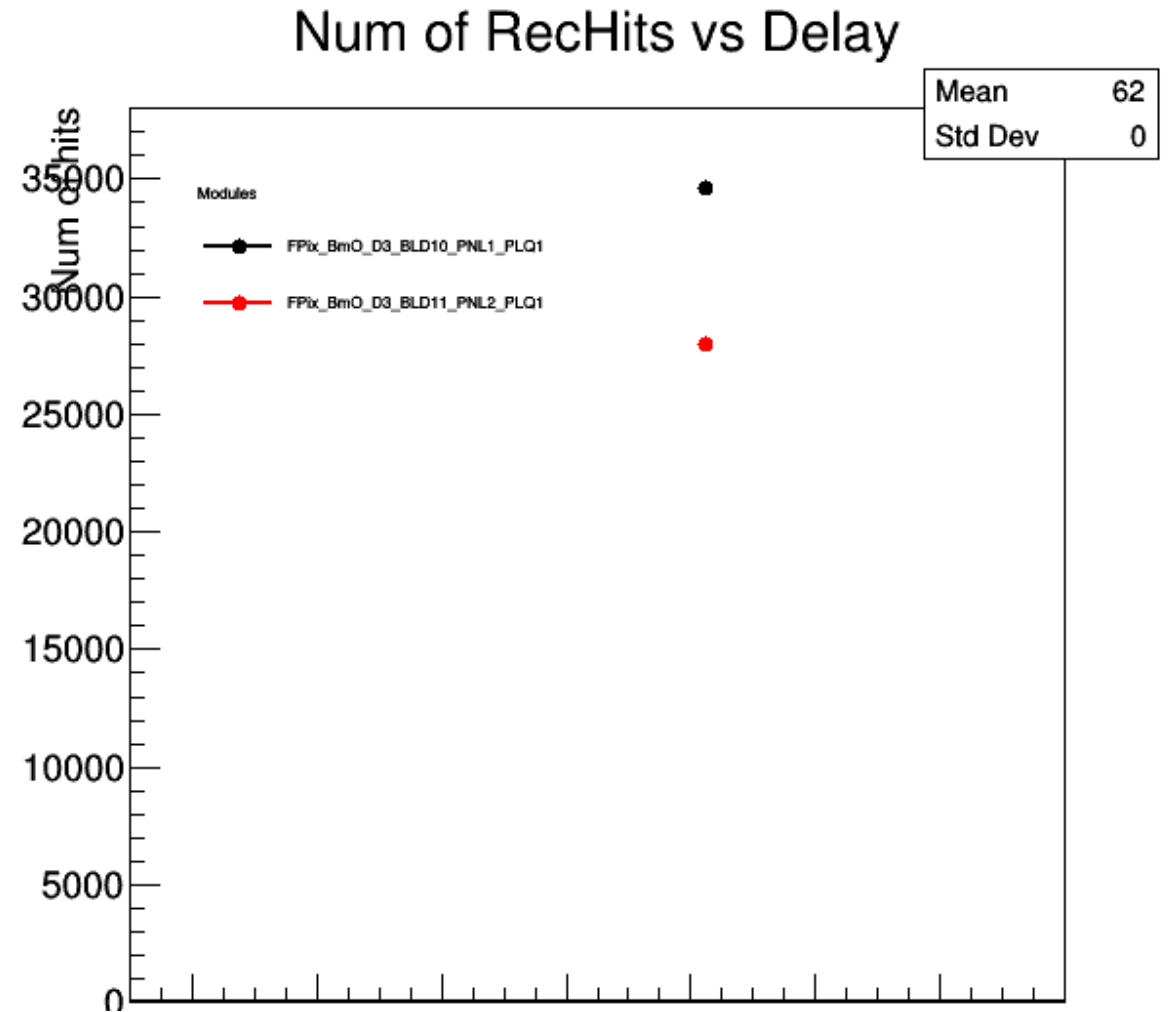


+ no margin



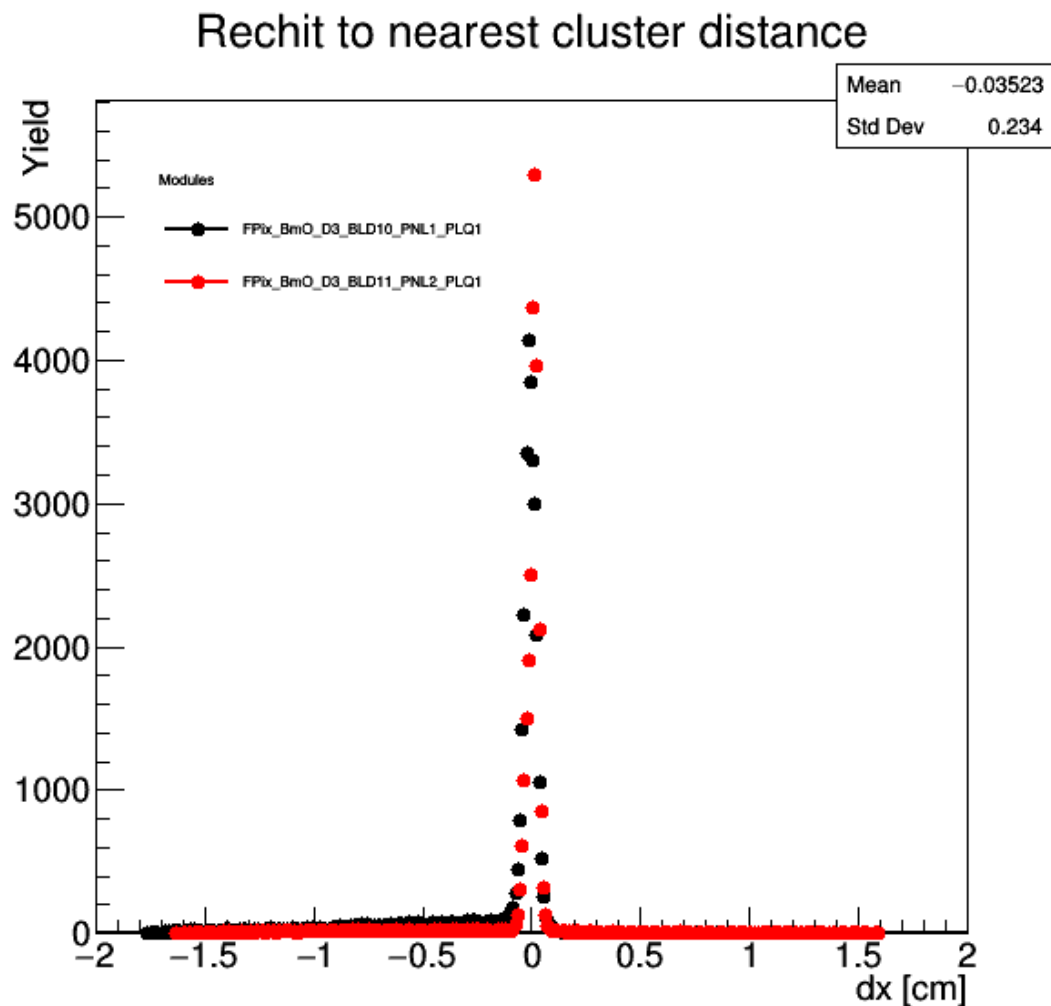
RecHits on Track

Number of hits

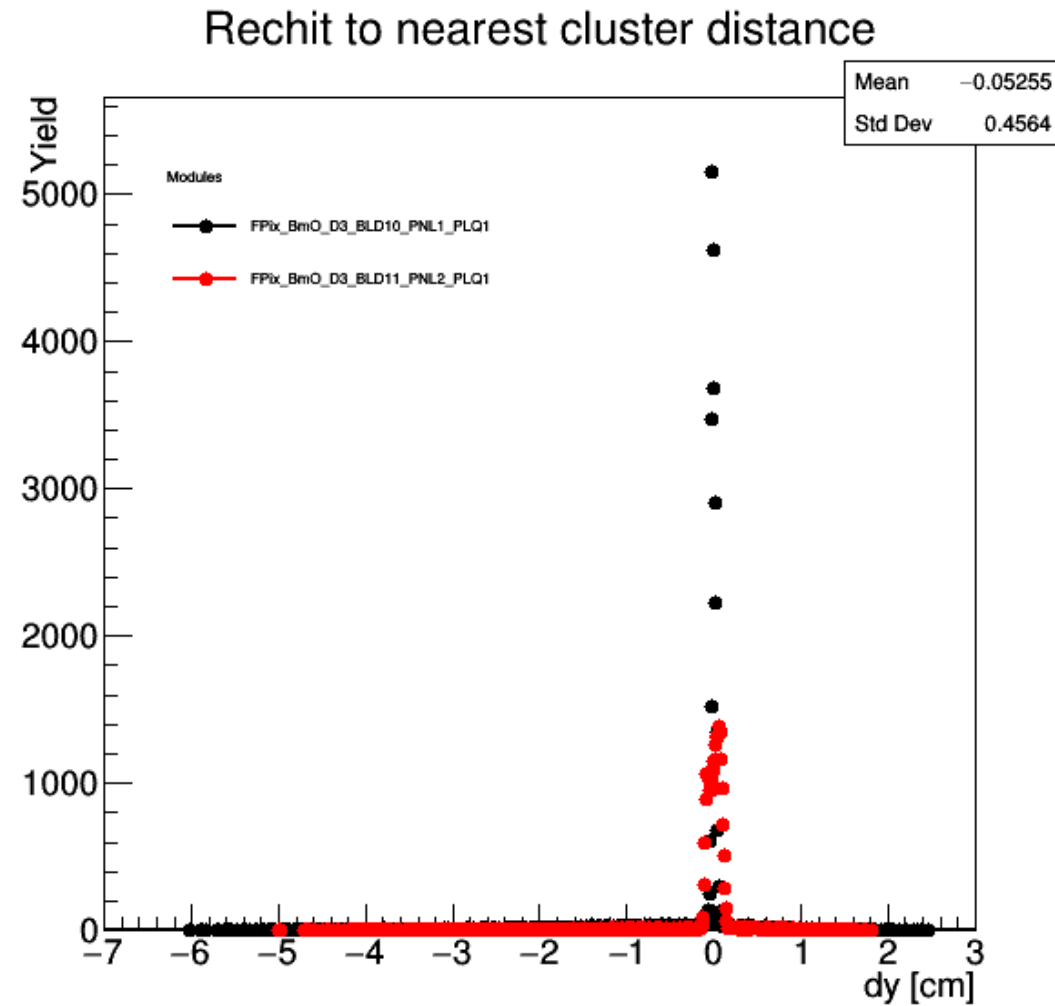


Residuals

Azimuthal
direction



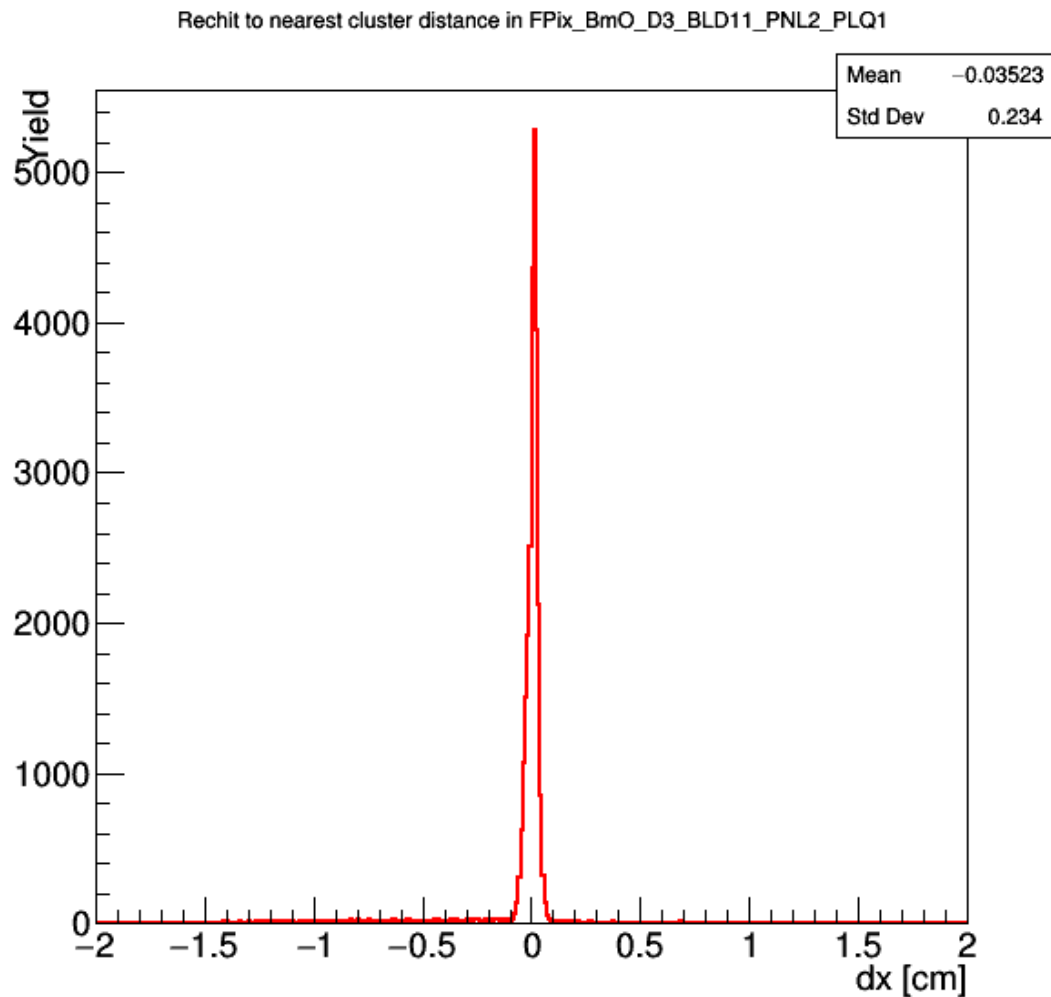
Radial direction



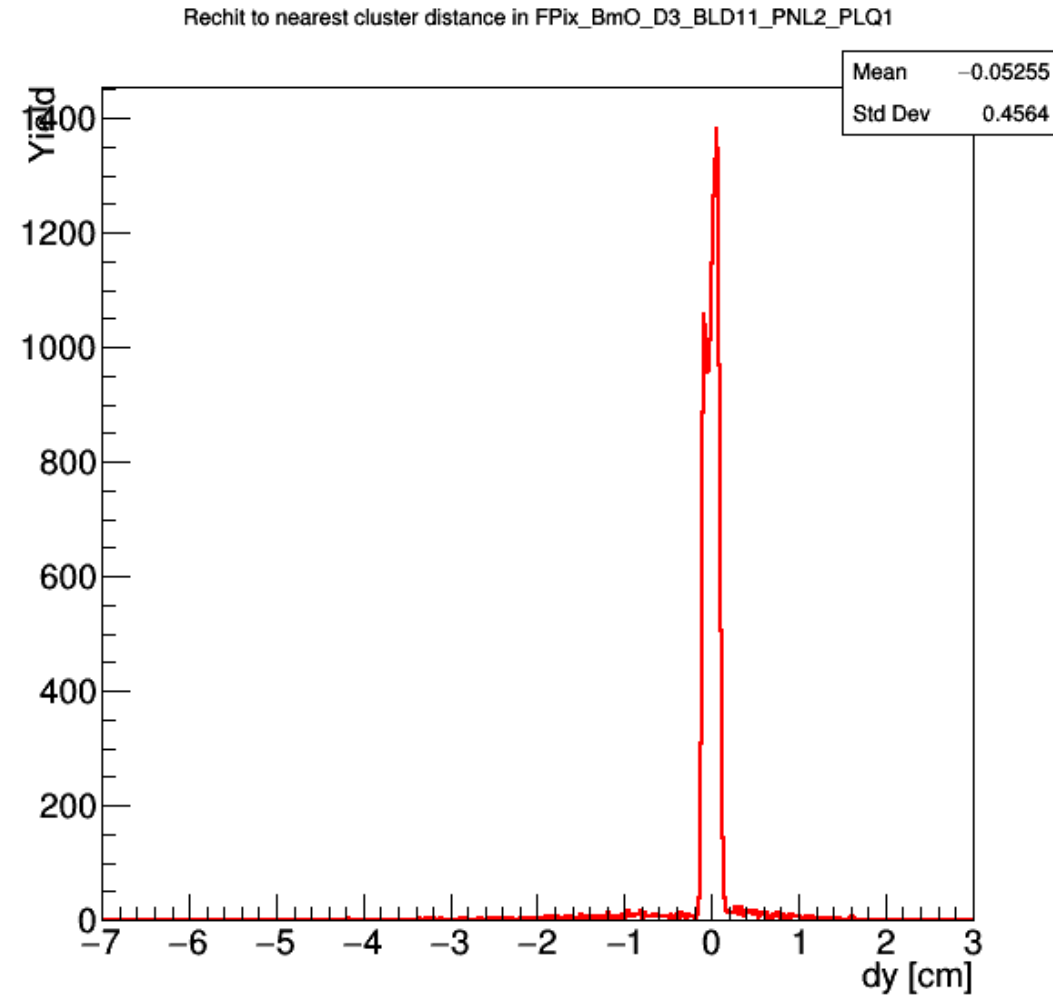
Residuals

FPix_BmO_D3_BLD11_PNL2_PLQ1

Azimuthal
direction



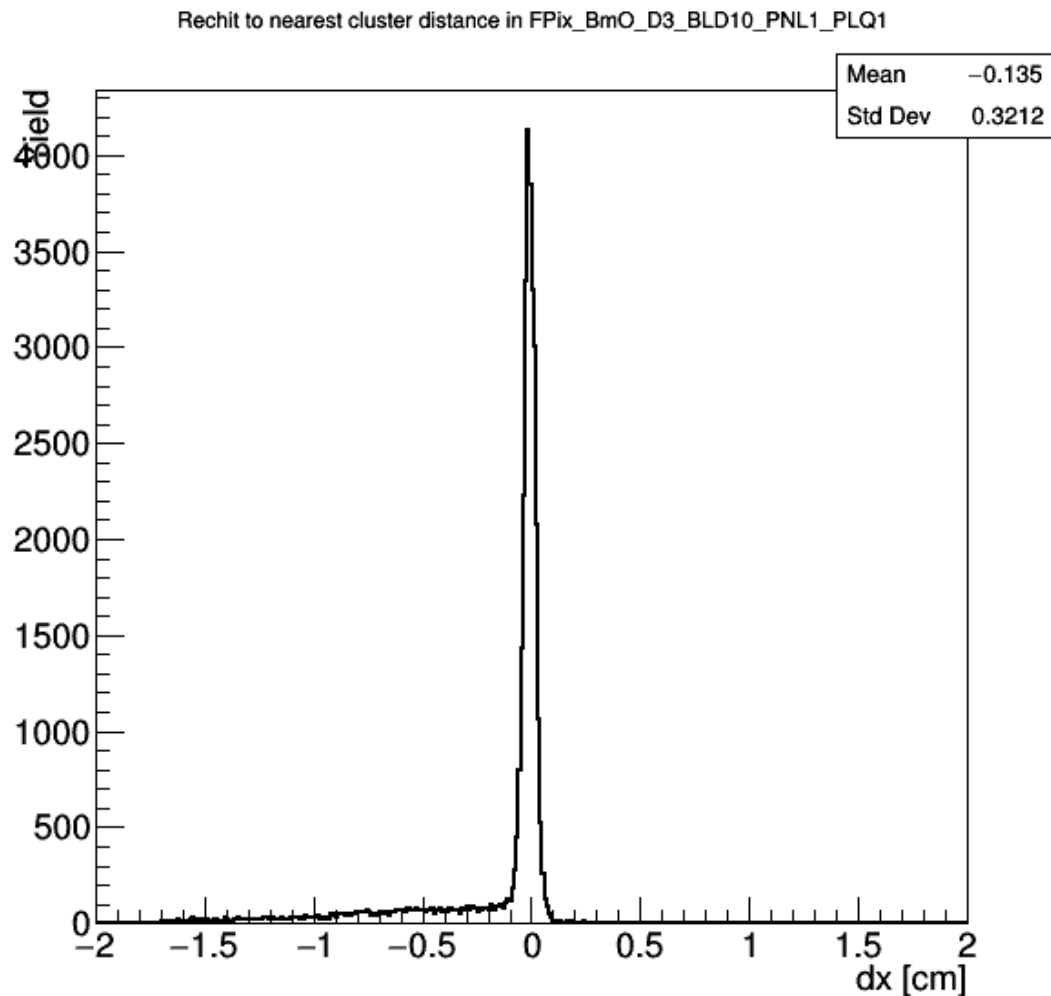
Radial direction



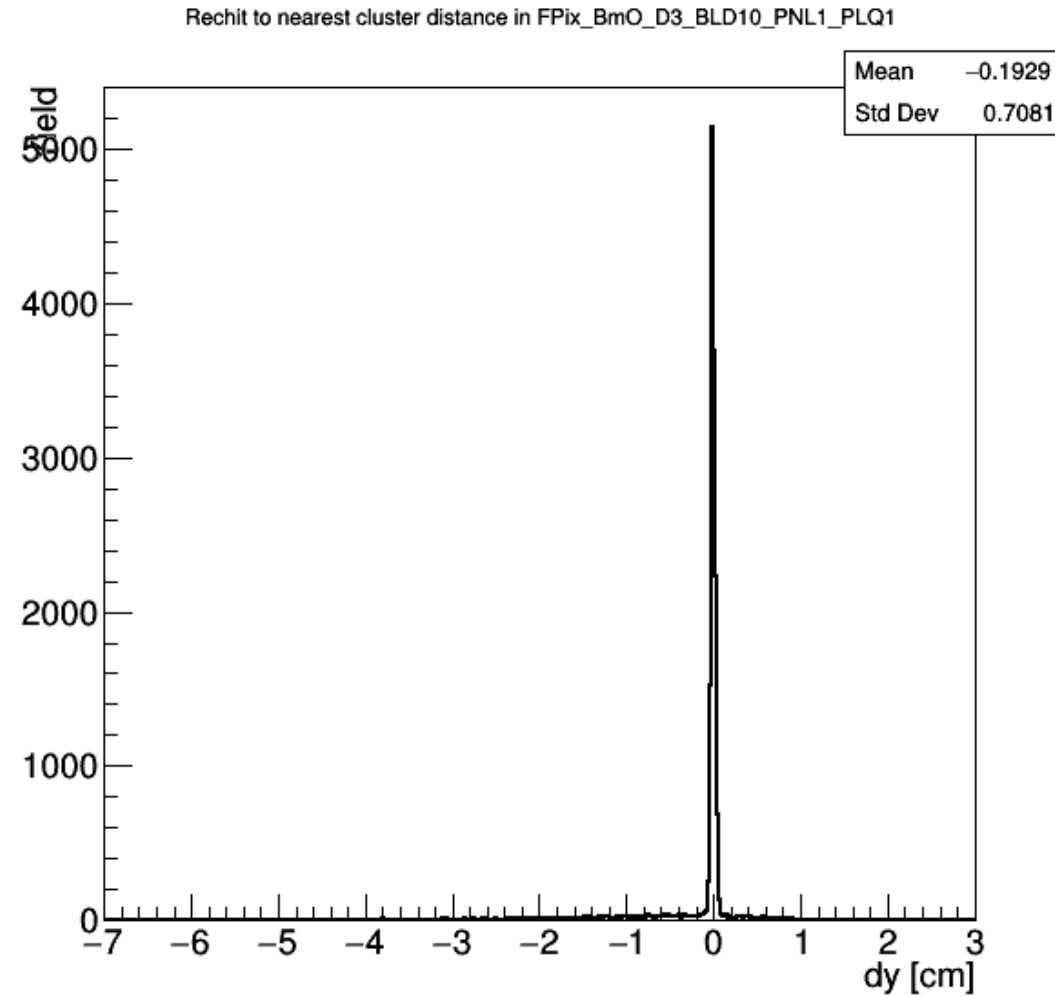
Residuals

FPix_BmO_D3_BLD10_PNL1_PLQ1

Azimuthal
direction

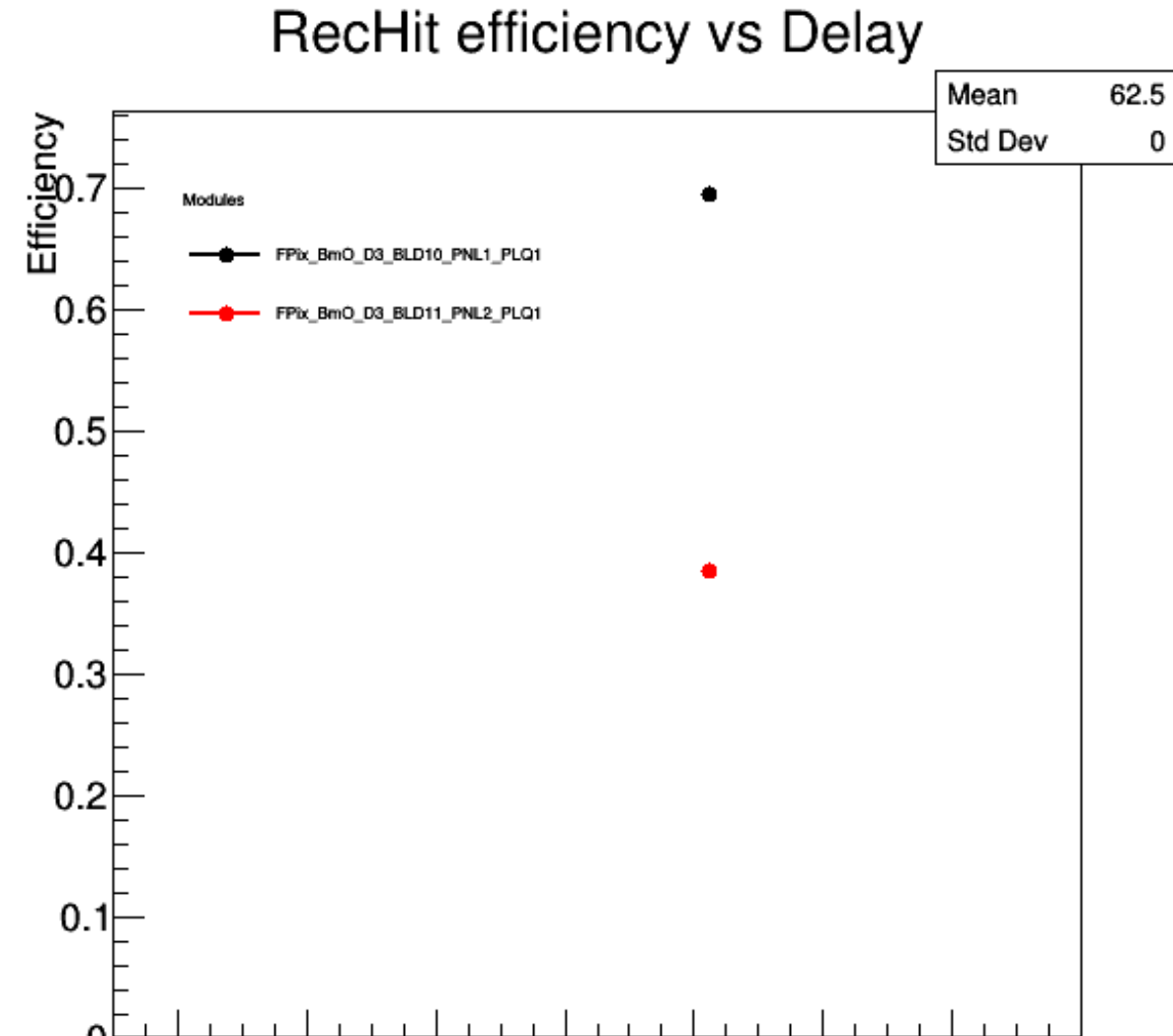


Radial direction

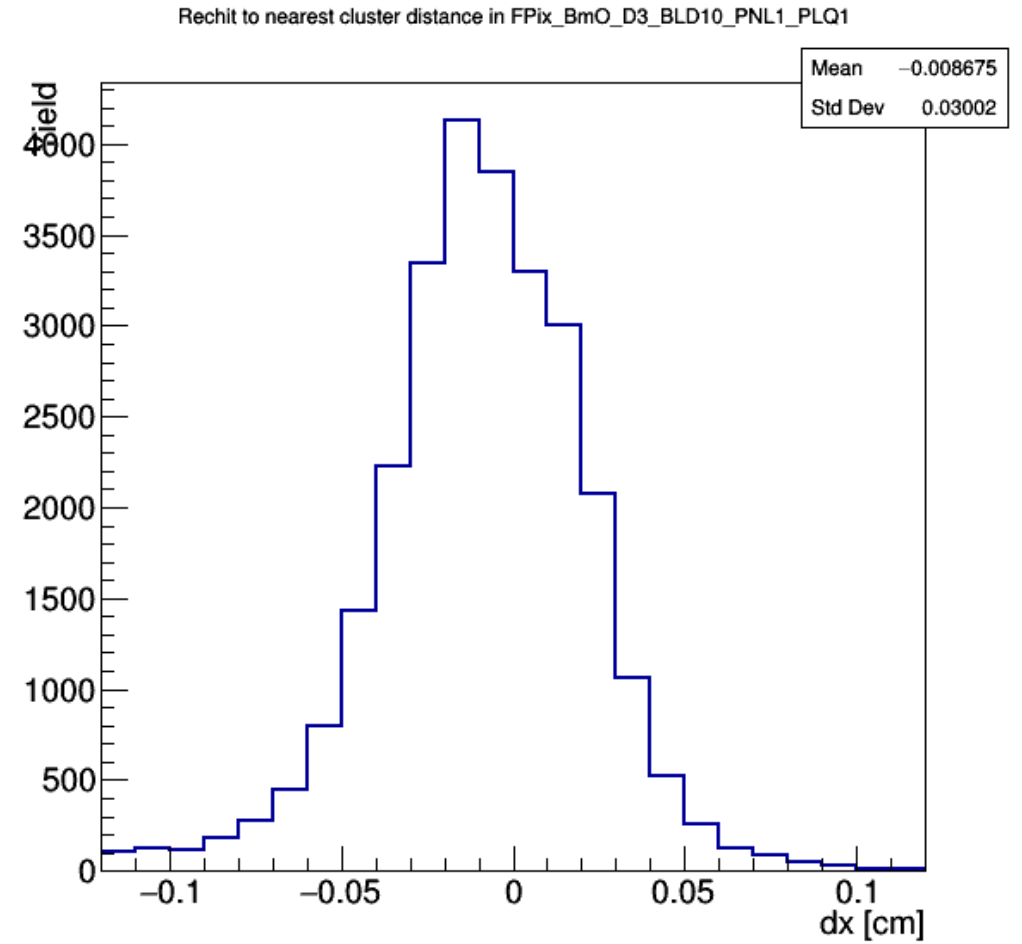
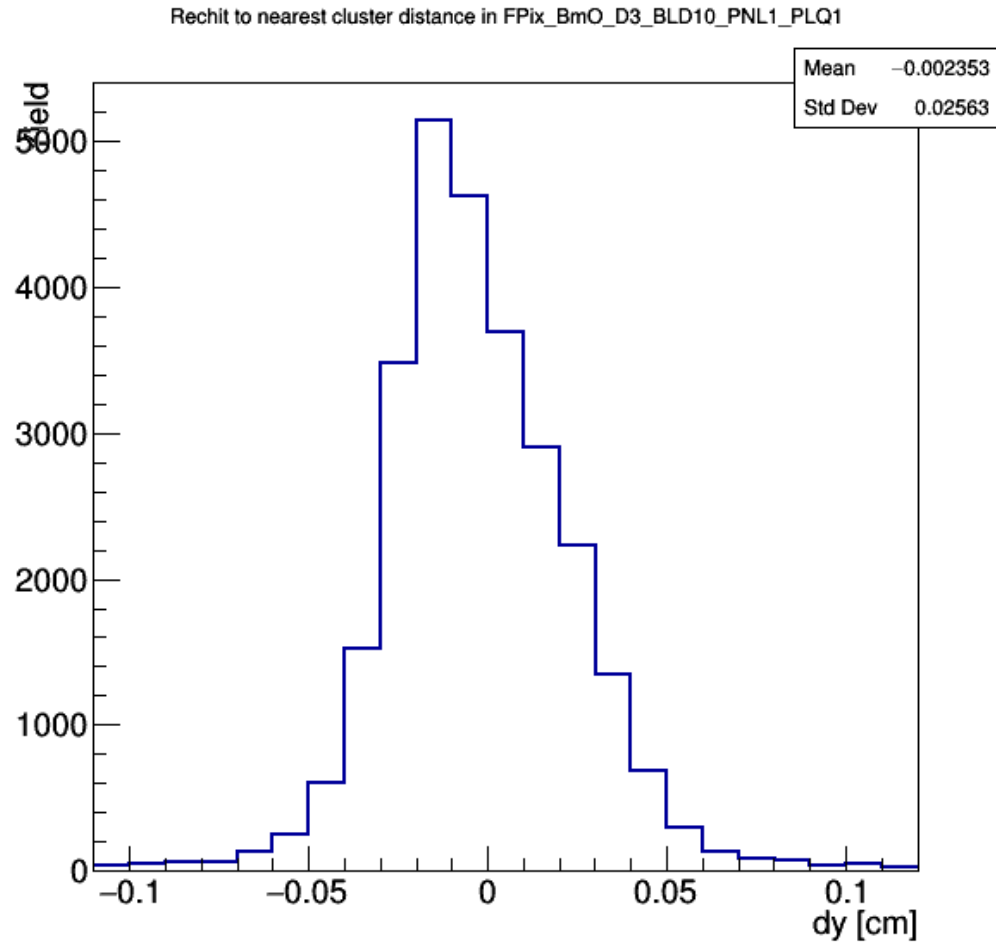


Efficiency

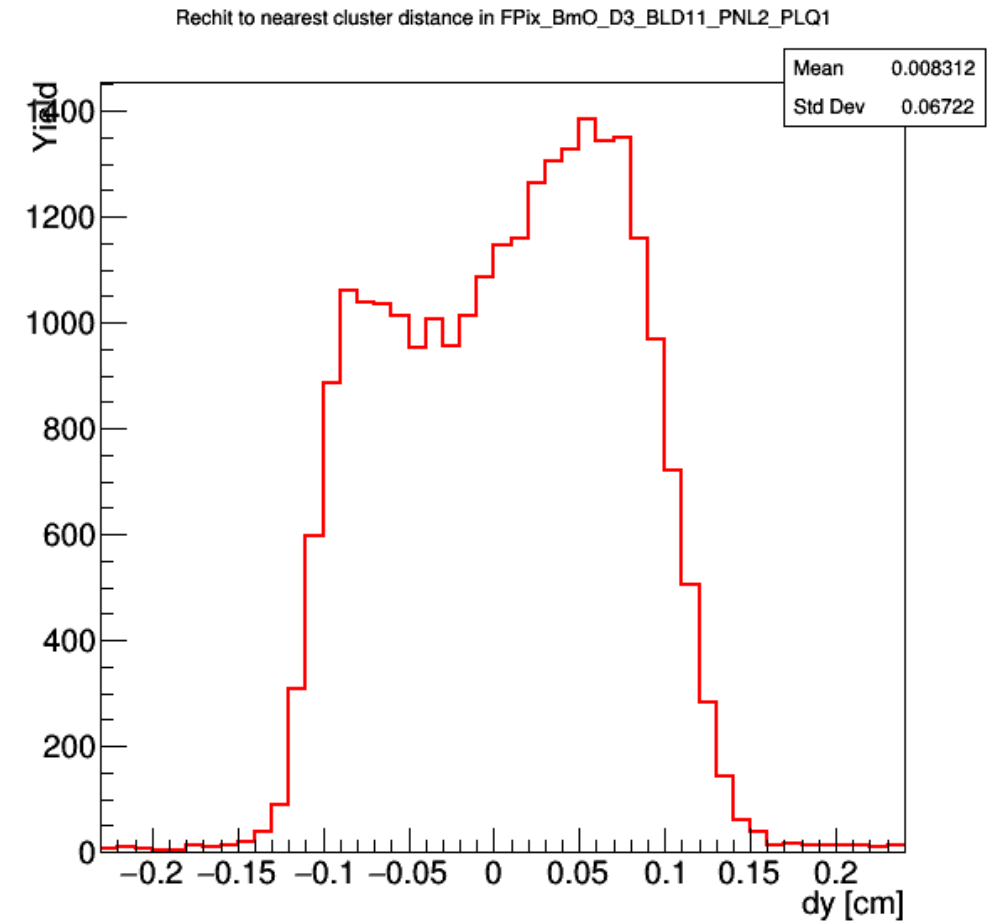
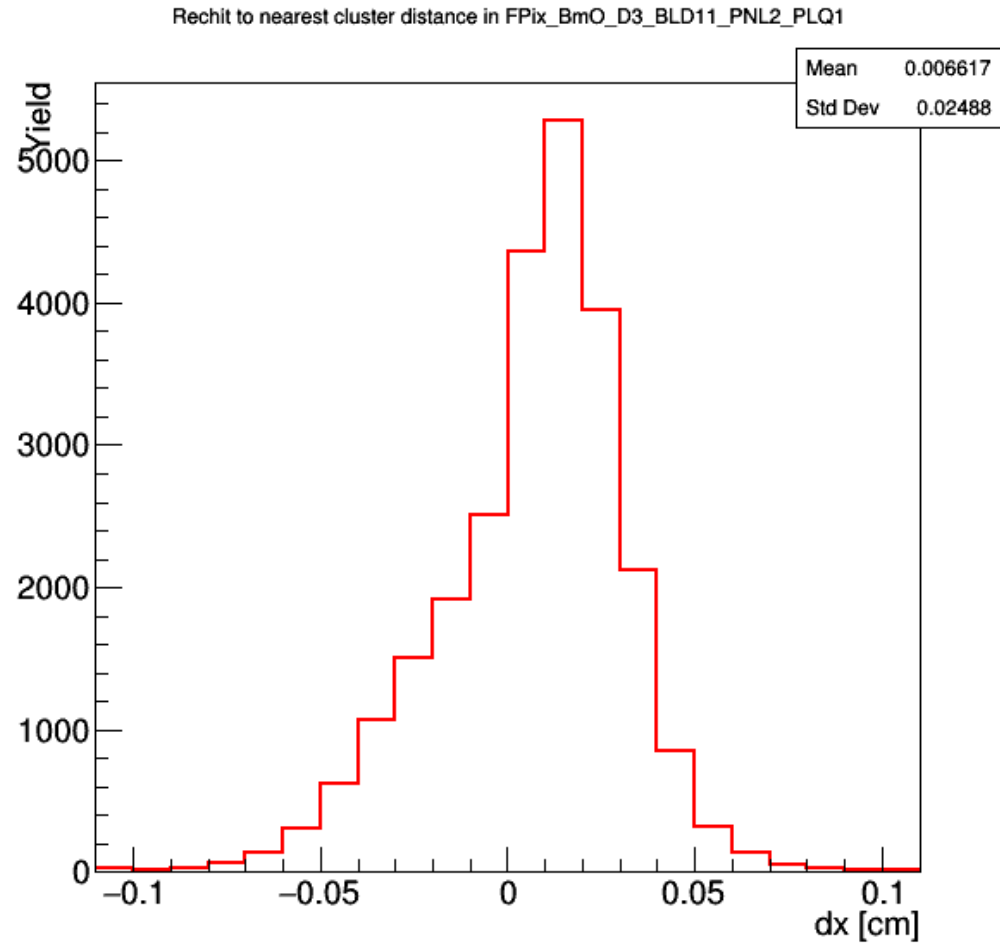
Efficiency cut:
 $\text{fabs}(\text{dx_cl}) < 0.05 \ \&\& \ \text{fabs}(\text{dy_cl}) < 0.05$



Efficiency cut

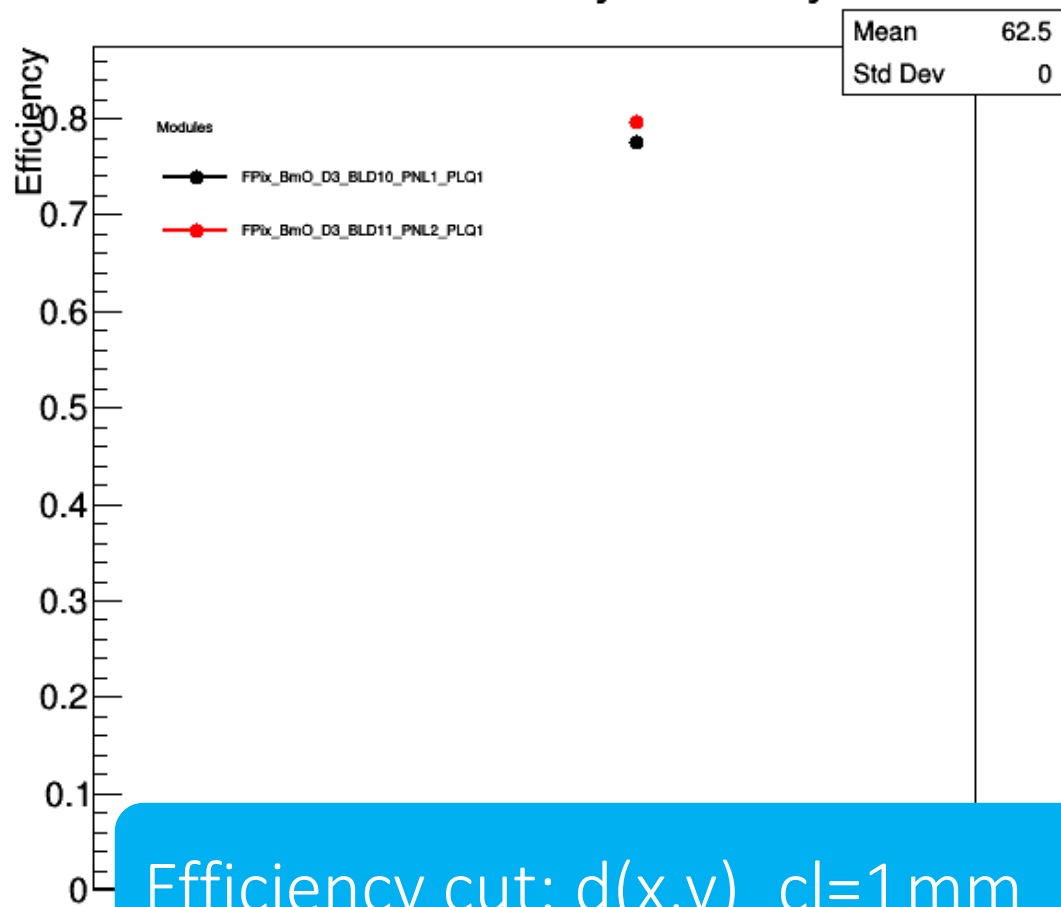


Efficiency cut

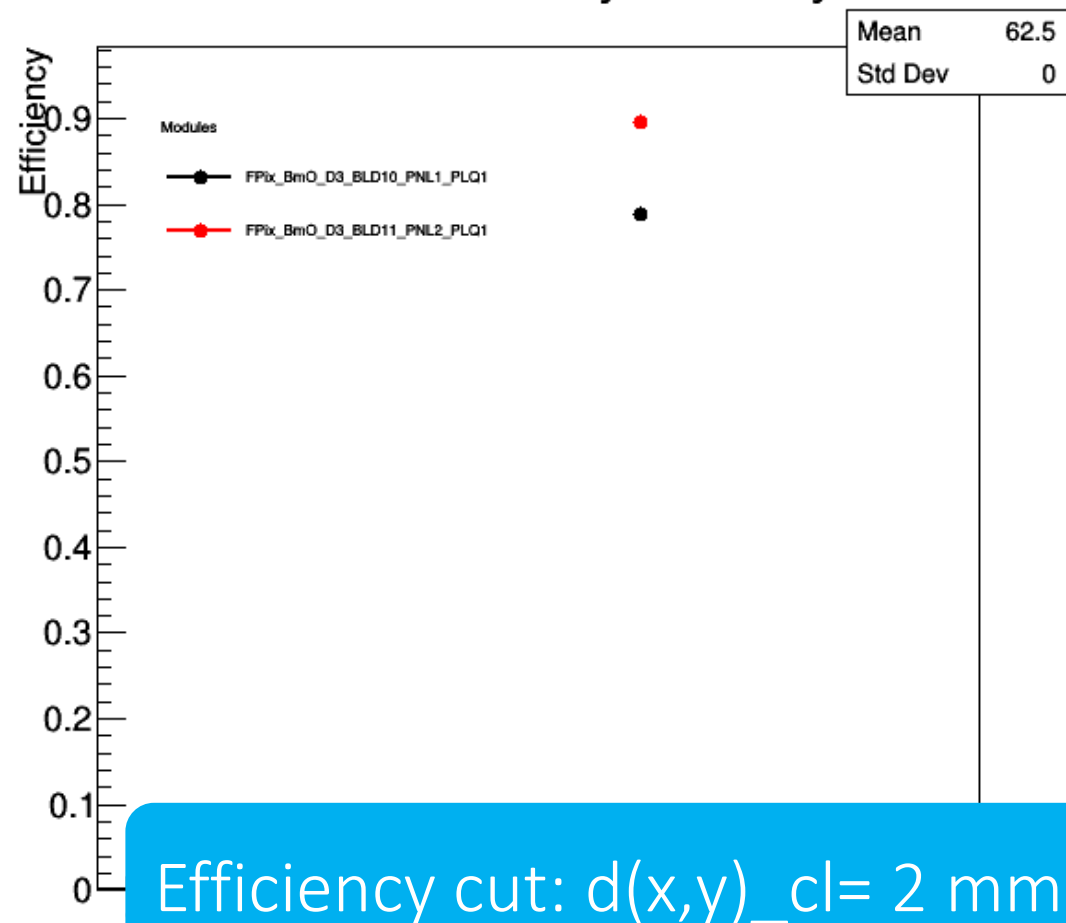


Efficiency

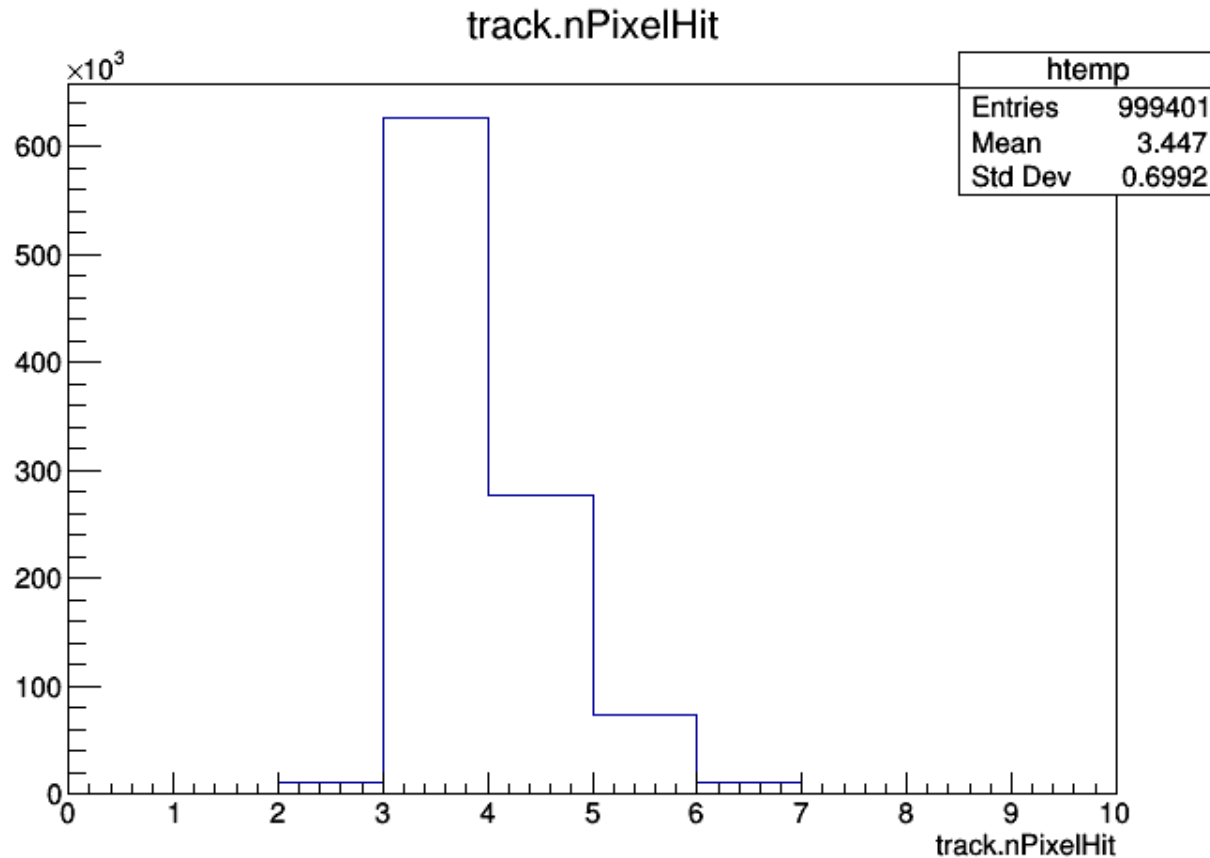
RecHit efficiency vs Delay



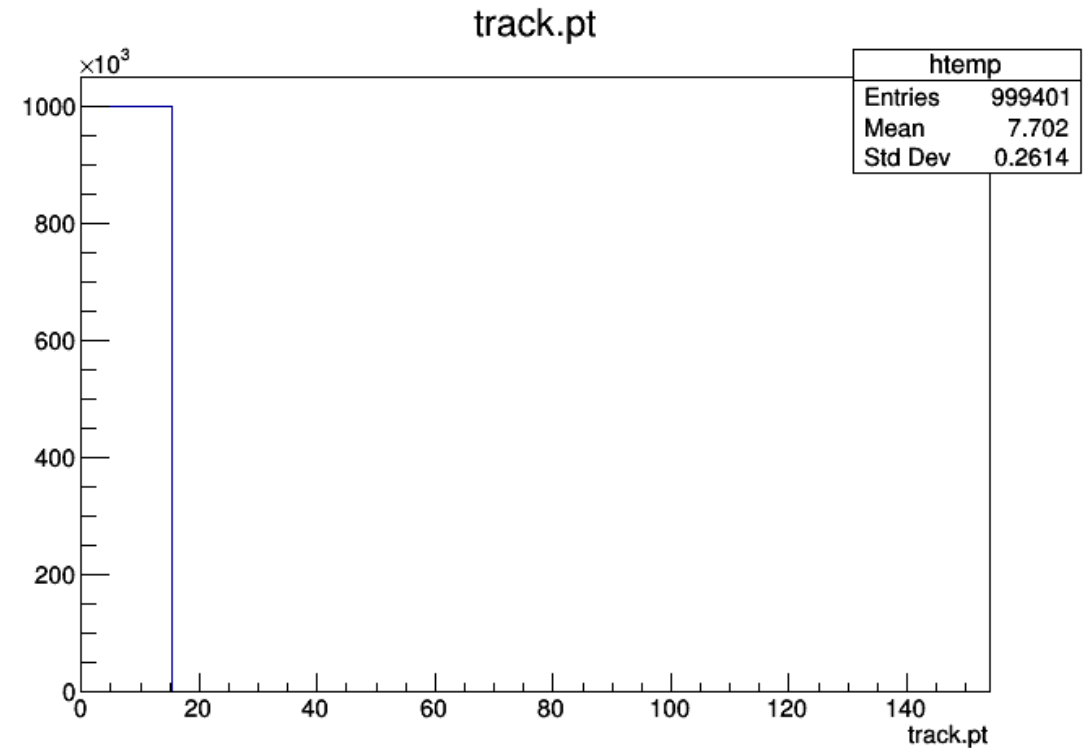
RecHit efficiency vs Delay



Track information

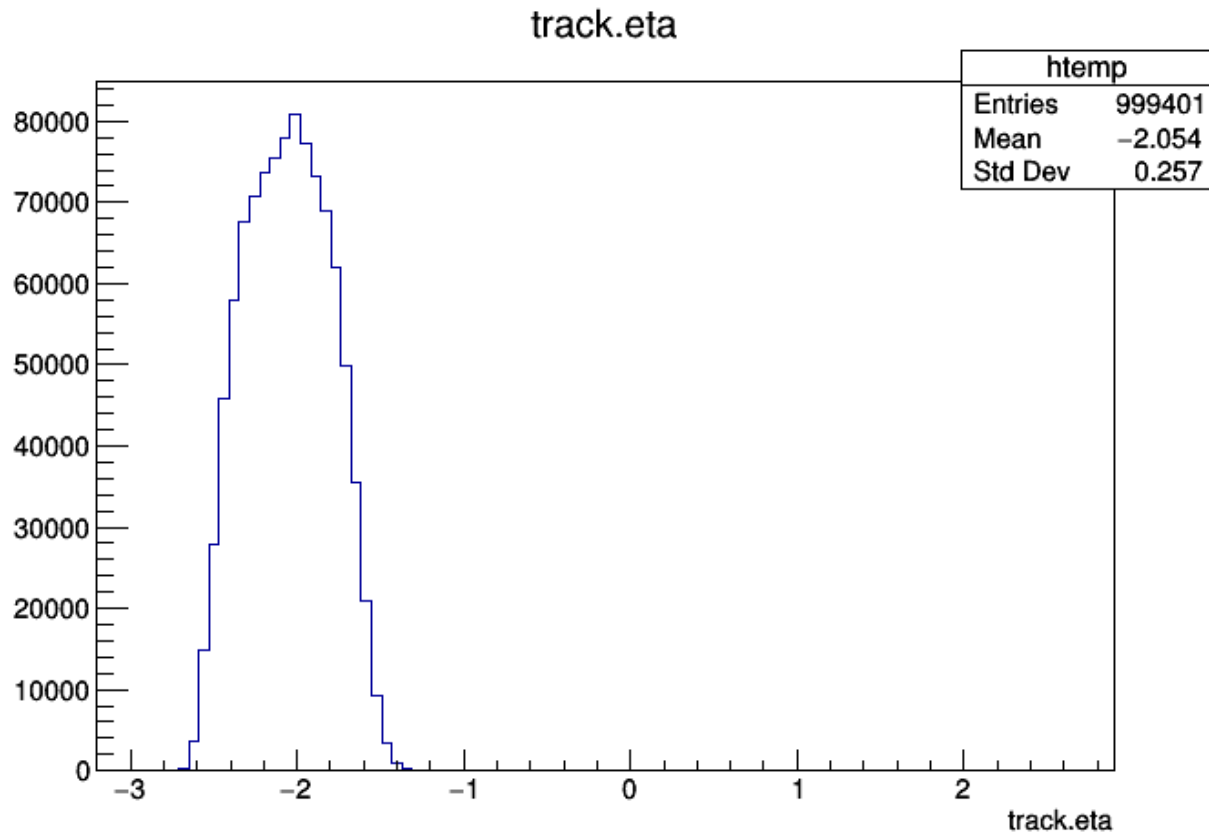


Number of pixel hits along the track

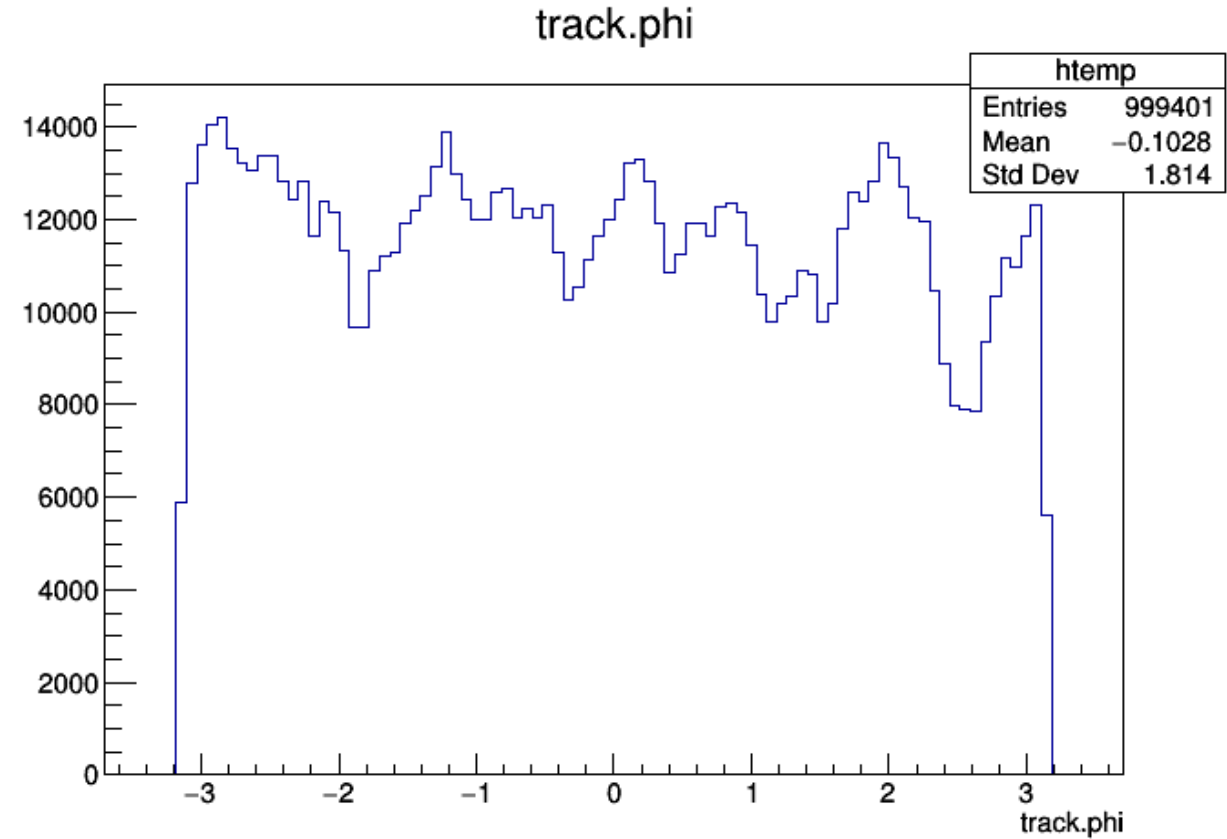


Track pT

Track information



Track η



Track φ

Pilot Blade uTCA configuration

All Bml modules configured.

FPix_Bml_D3_BLD3_PNL2

FPix_Bml_D3_BLD2_PNL2

FPix_Bml_D3_BLD3_PNL1

FPix_Bml_D3_BLD2_PNL1

FED 40 excluded

FED 1240 included (uTCA port)

Pilot Blade uTCA configuration

I have created a cabling map with channel numbers

LNK: 37 MOD: FPix_Bml_D3_BLD2_PNL1_PLQ1 TYP: P2X8 ROC: 0, 7
LNK: 38 MOD: FPix_Bml_D3_BLD2_PNL1_PLQ1 TYP: P2X8 ROC: 8, 15
LNK: 39 MOD: FPix_Bml_D3_BLD2_PNL2_PLQ1 TYP: P2X8 ROC: 0, 7
LNK: 40 MOD: FPix_Bml_D3_BLD2_PNL2_PLQ1 TYP: P2X8 ROC: 8, 15
LNK: 43 MOD: FPix_Bml_D3_BLD3_PNL1_PLQ1 TYP: P2X8 ROC: 0, 7
LNK: 43 MOD: FPix_Bml_D3_BLD3_PNL1_PLQ1 TYP: P2X8 ROC: 8, 15
LNK: 45 MOD: FPix_Bml_D3_BLD3_PNL2_PLQ1 TYP: P2X8 ROC: 0, 7
LNK: 46 MOD: FPix_Bml_D3_BLD3_PNL2_PLQ1 TYP: P2X8 ROC: 8, 15

Still no digis, maybe Danek has some info about this