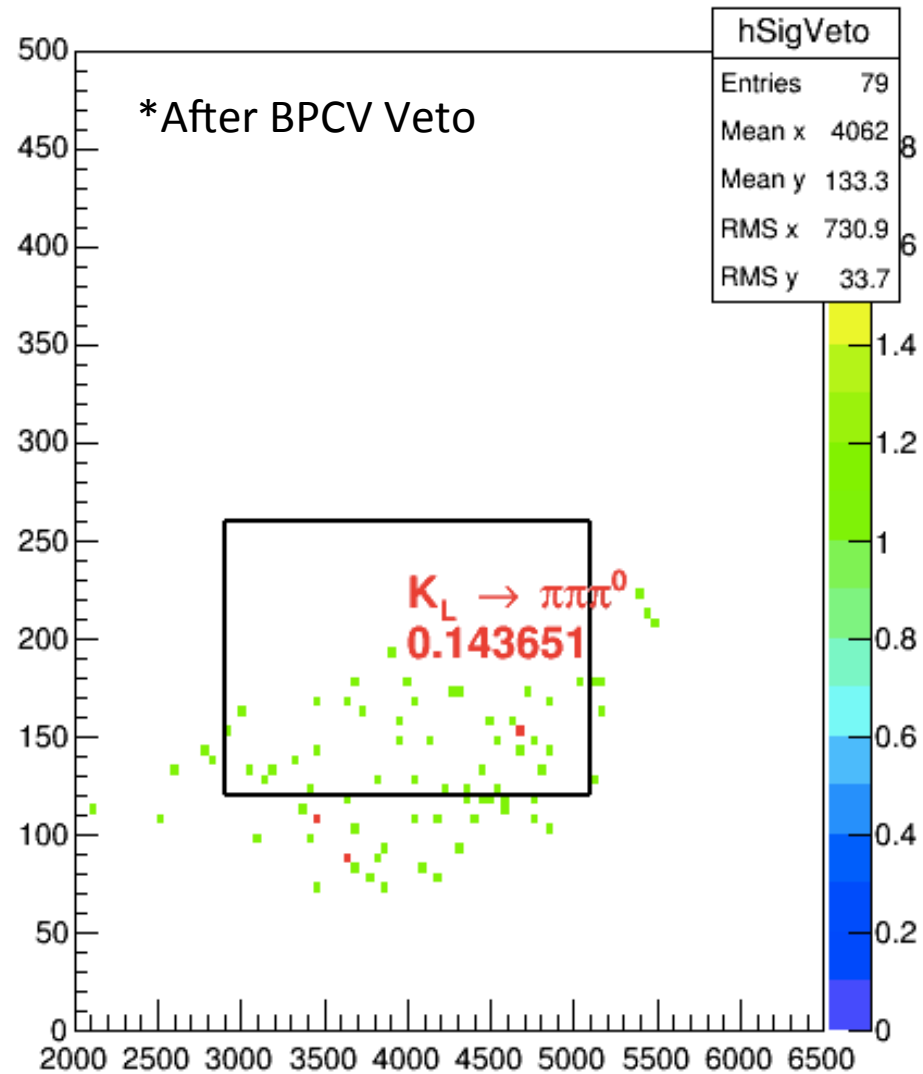
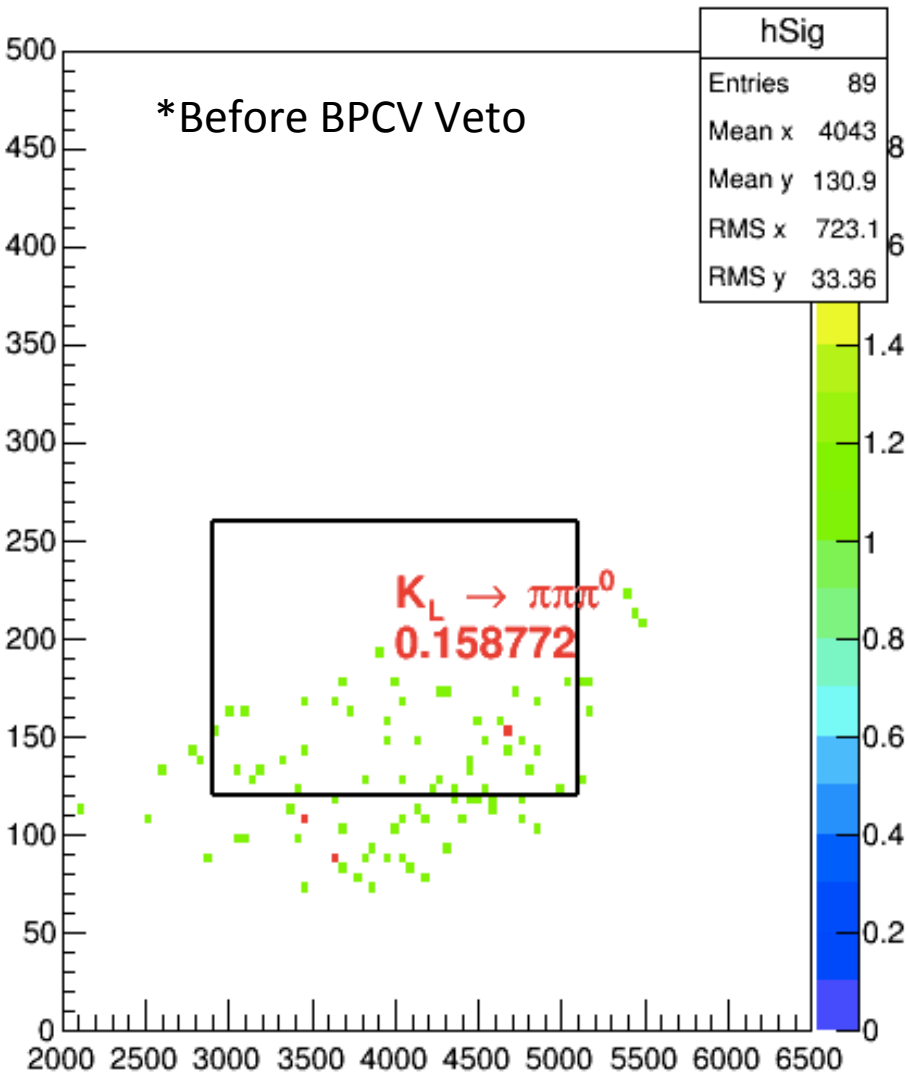


Report_170621

MC with more statistics (pi0pi0)

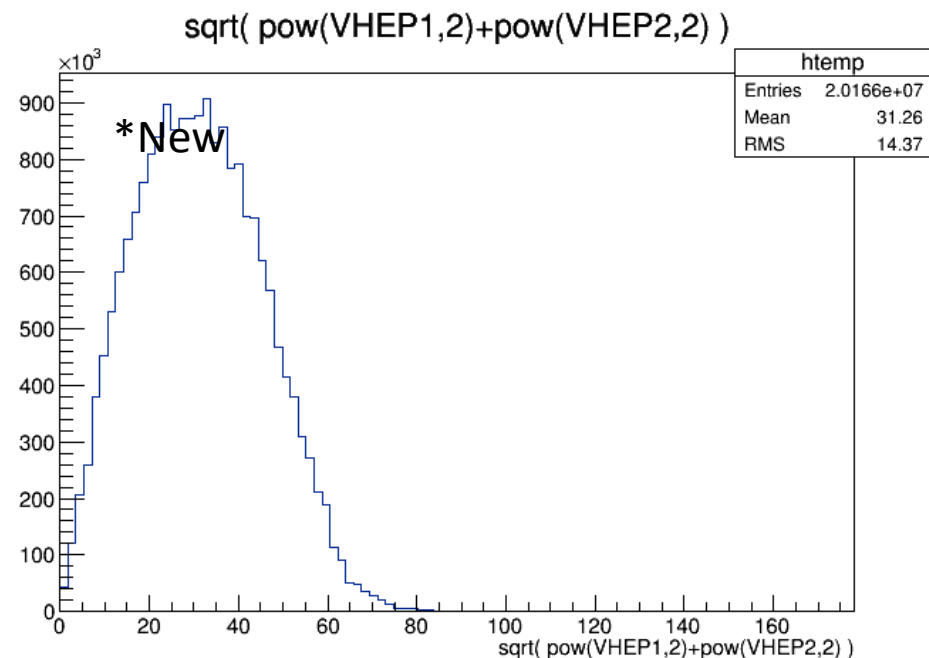
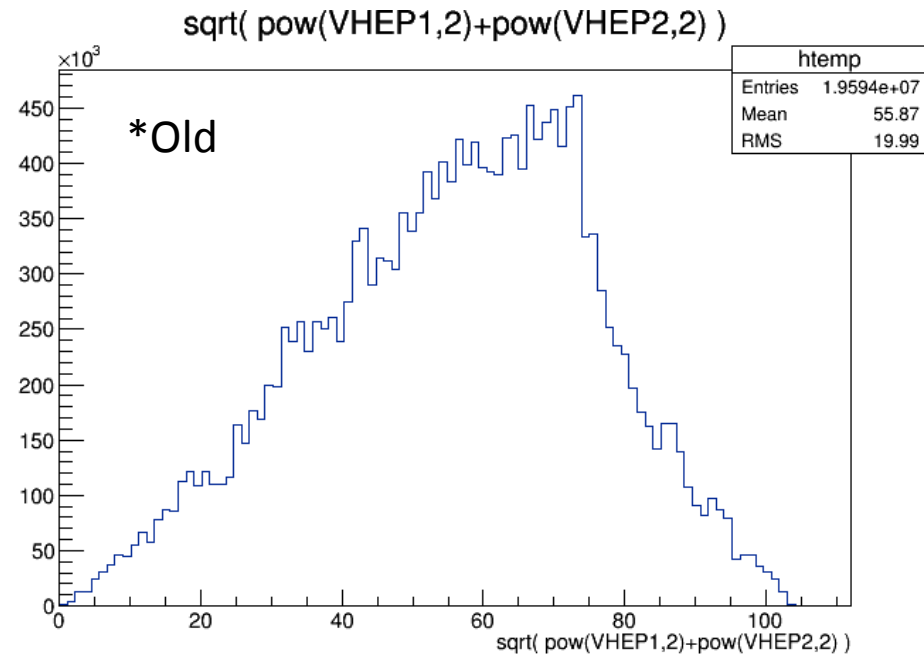
hSig

hSigVeto



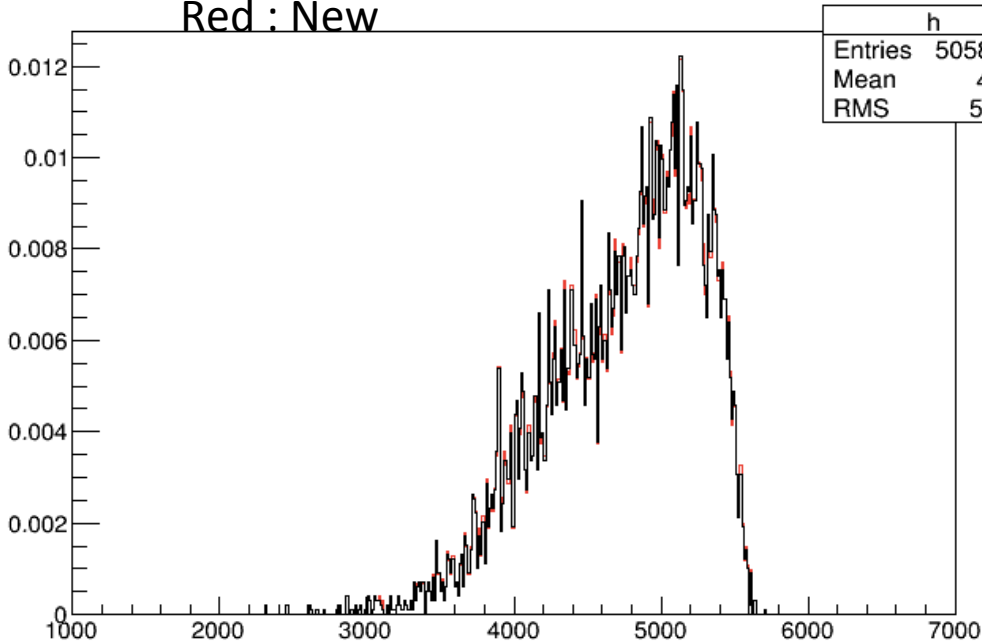
NewGen

- For recycling, Only $Z > 6648$ events are selected
 - 6648 \rightarrow 5530 (DS_CSI \rightarrow in front of fCV MEM)
 - $|X|, |Y| < 74.5$ for both cases (need to change?)

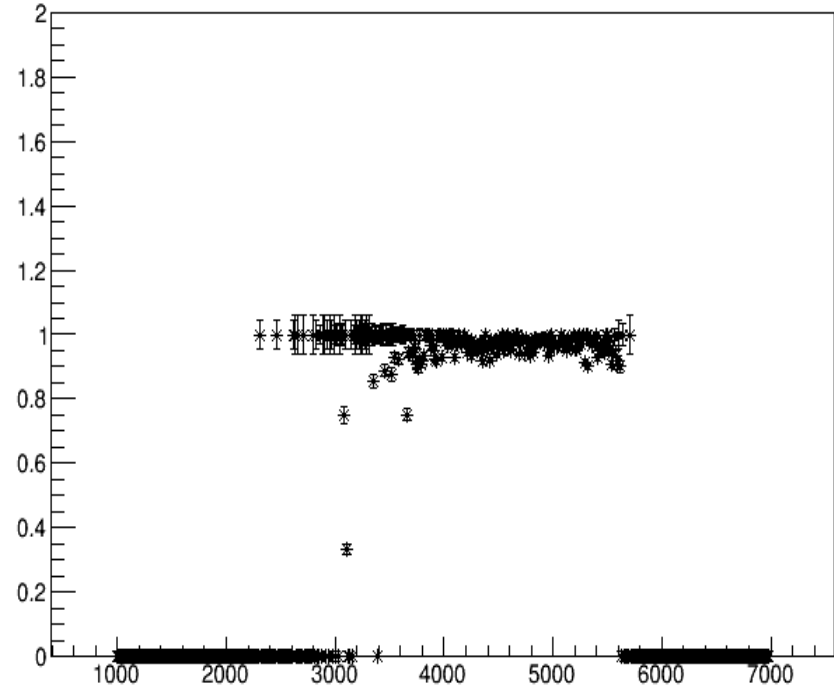


Kaon Vertex

Black : Current
Red : New

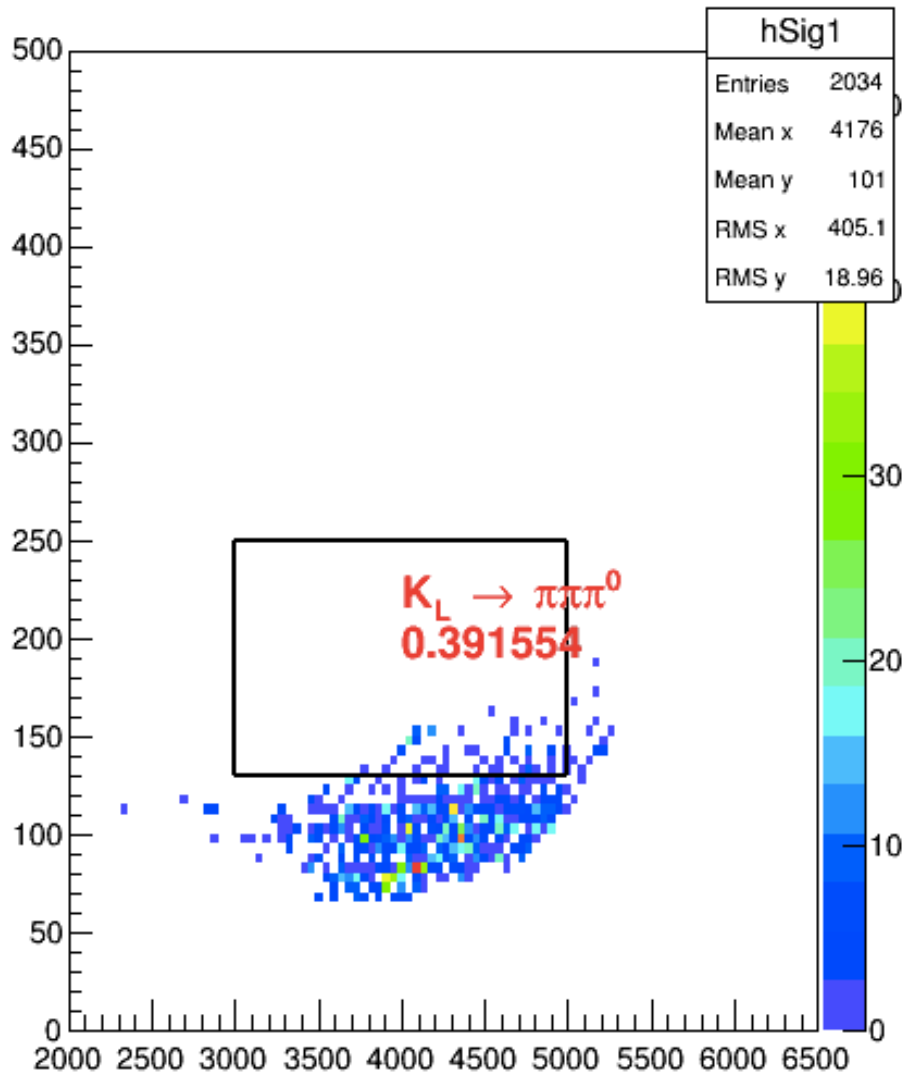


Current/New

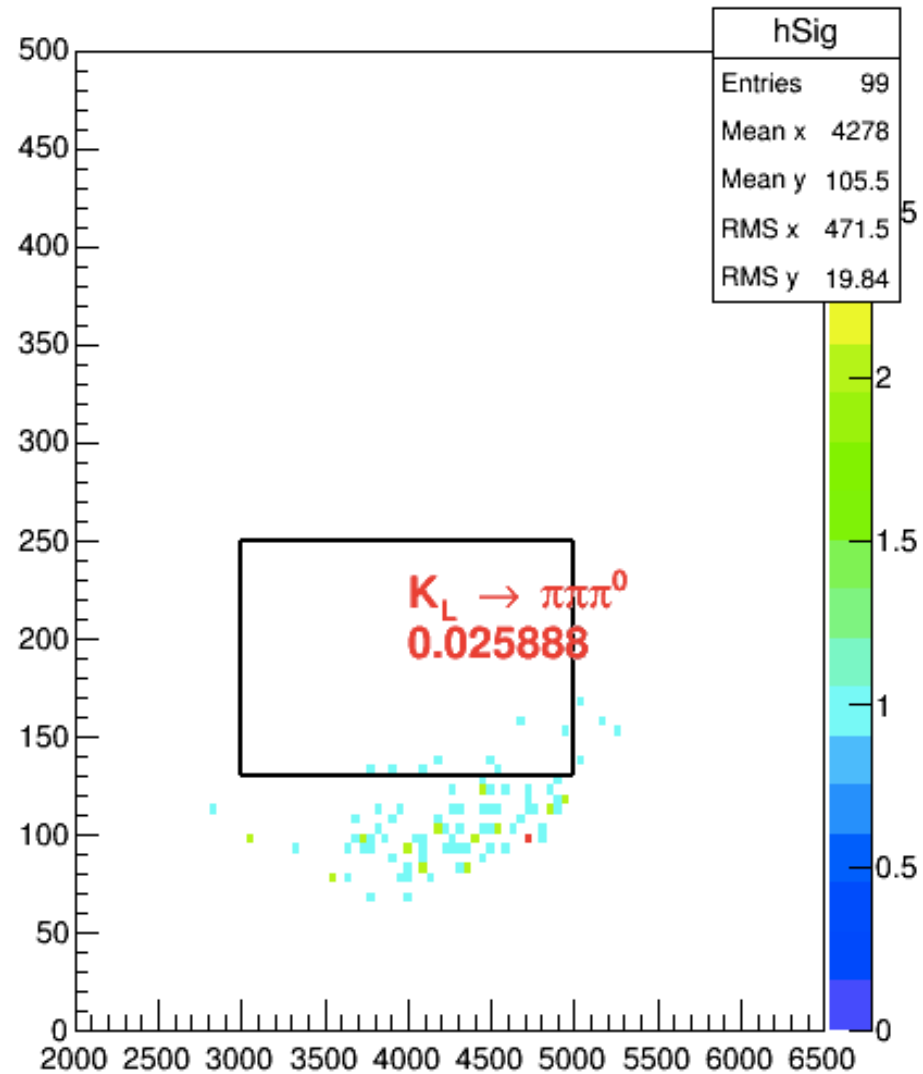


Signal Box (Orig.)

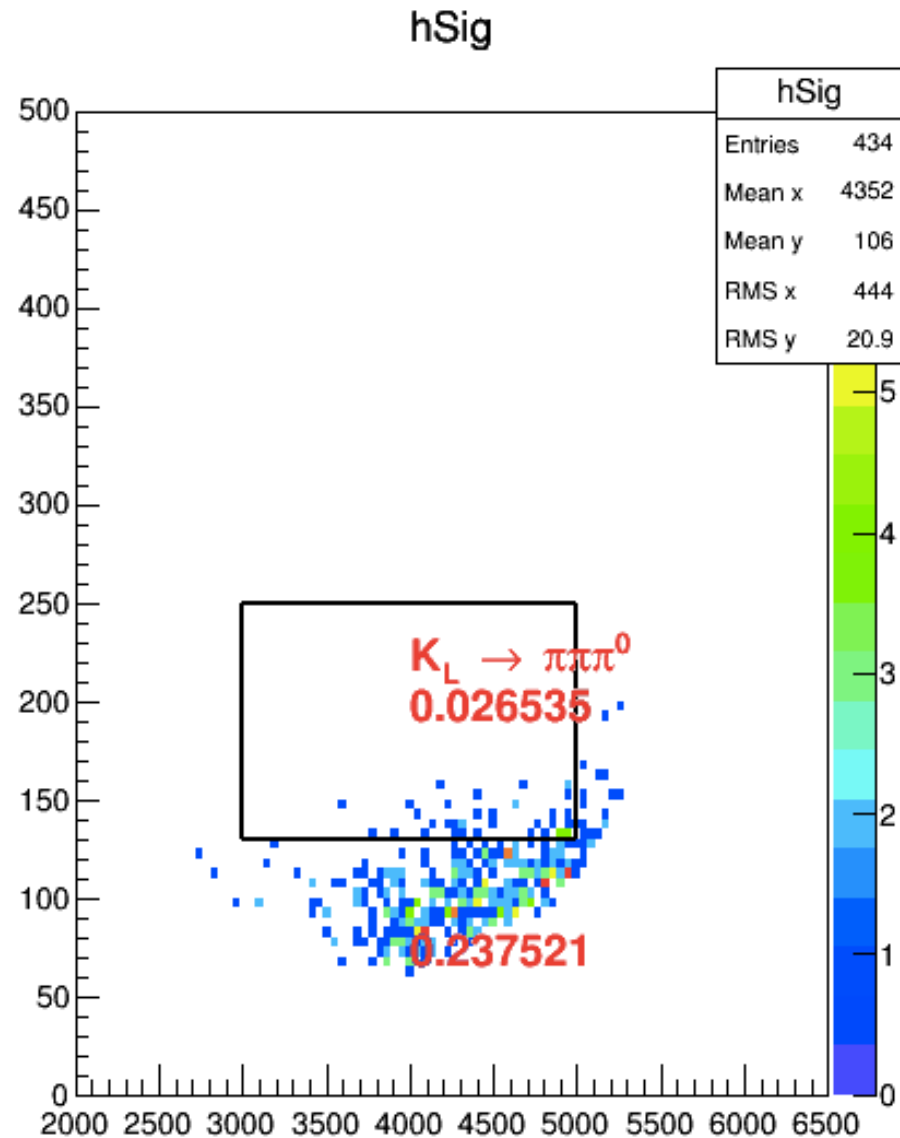
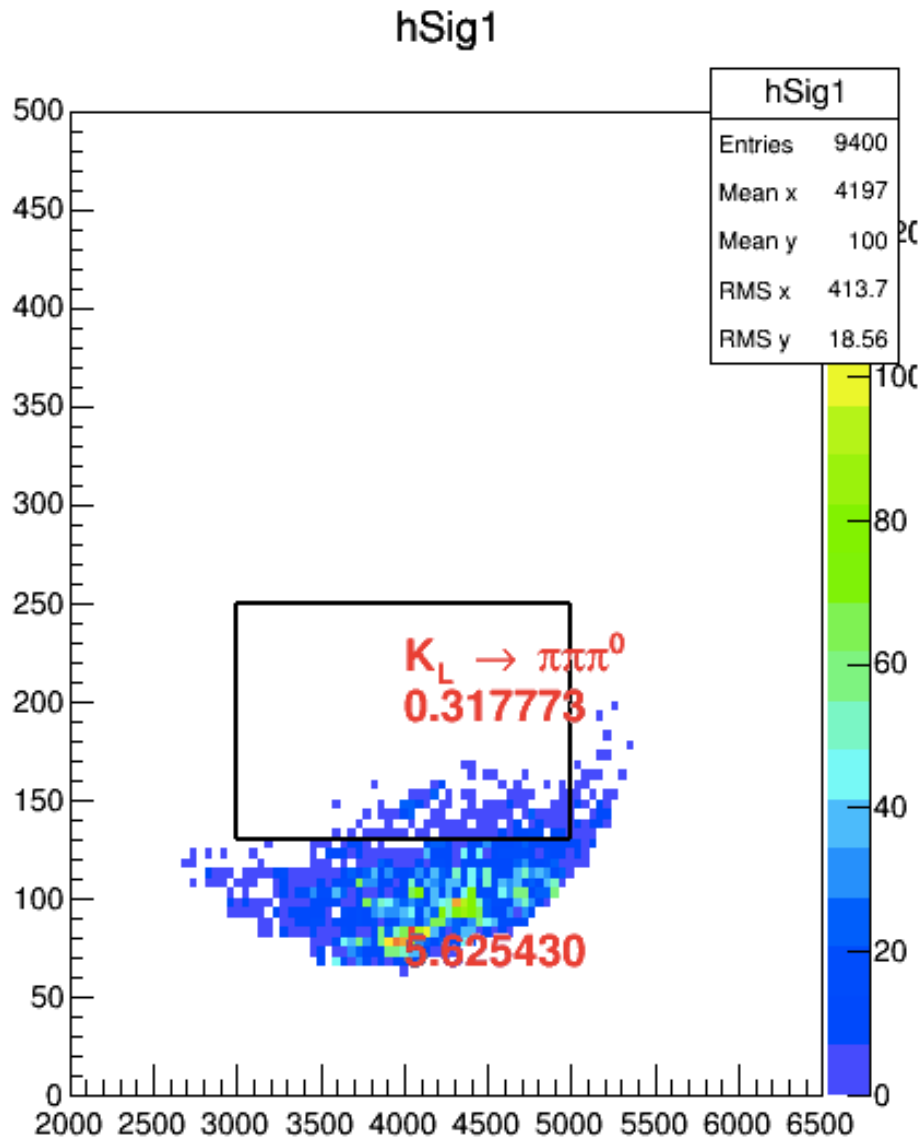
hSig1



hSig

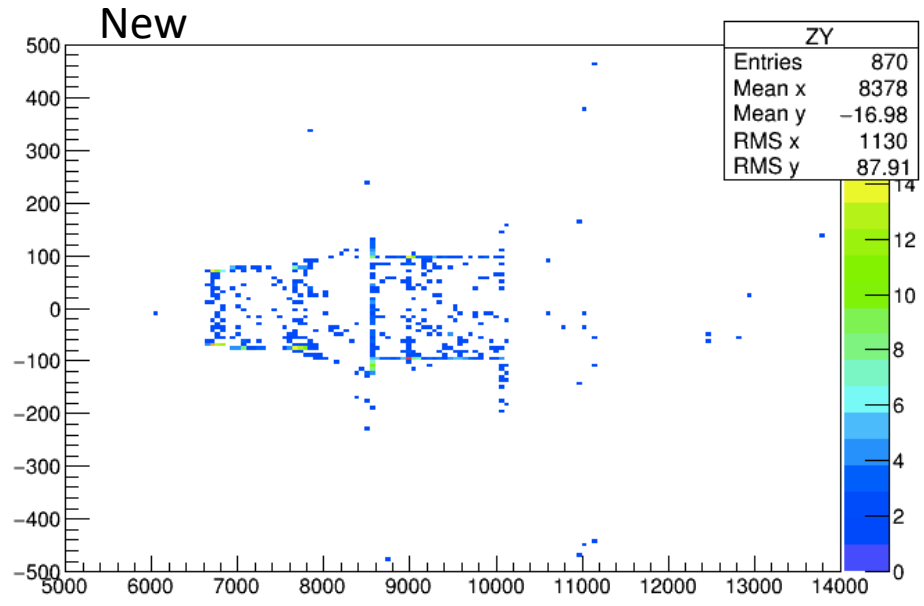
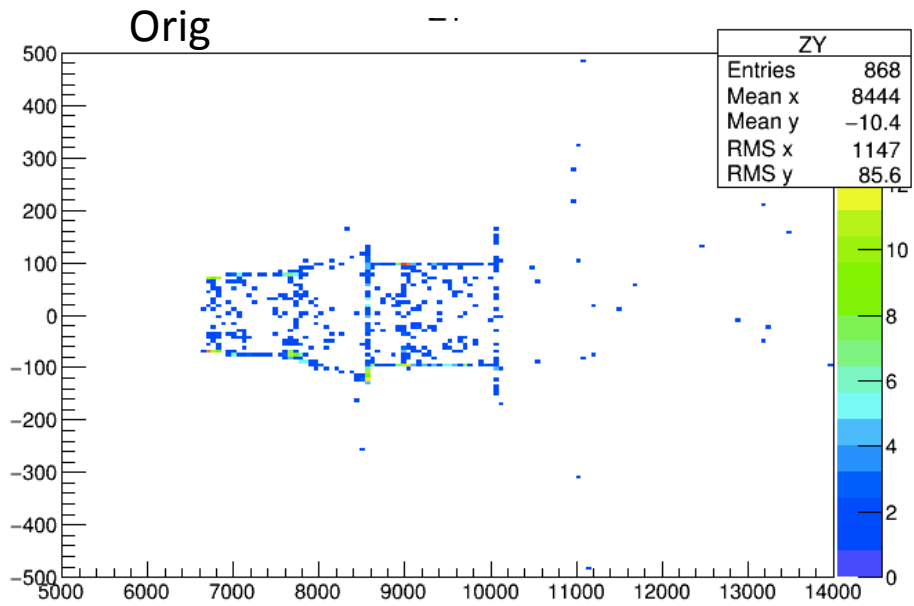


Signal Box (New)

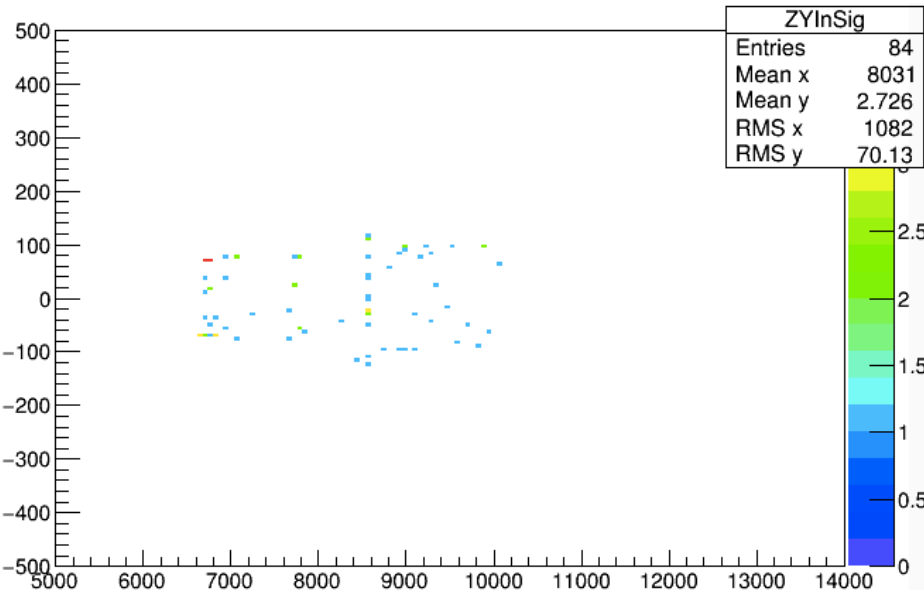
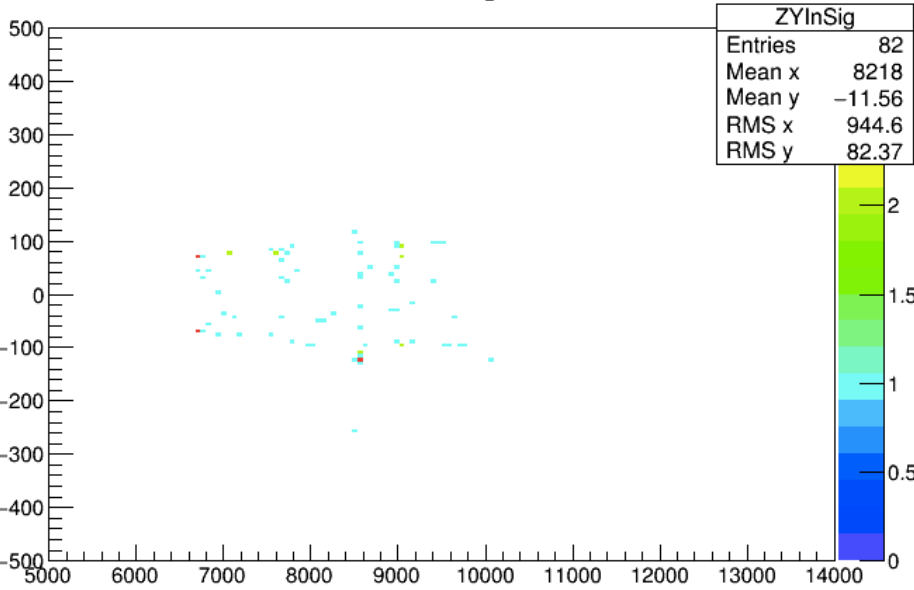


With more statistics

Interaction Position



No crucial effect from CC03 part

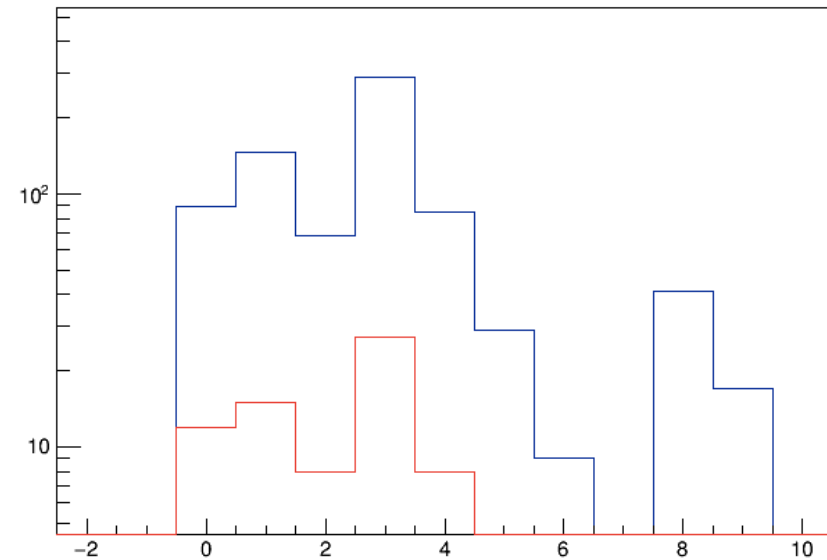


Dead material interaction

Material (detector)	#Pions	#Pions Inside SigBox
G10 at Csl(0)	89/116	12/24
G10 at CC04(1)	146/146	15/15
DS. MEM. Pipe(2)	68/51	8/4
DS. Square pipe(3)	288/286	27/22
DS. MEM. Flange(?, 4)	85/90	8/14
DS. Square flange(5)	29/24	1/1
CC04 (edge)(6)	9/4	1/0
CC05 (edge)(7)	0/4	0/1
World(8)	41/52	2/1
Csl flange(?, 9)	17/14	4/0
Not Decided (-1)	0/1	0/0

Blue : All pions

Red : pions inside signal box



-1 : not decided

*Orig/New

Not Decided event property

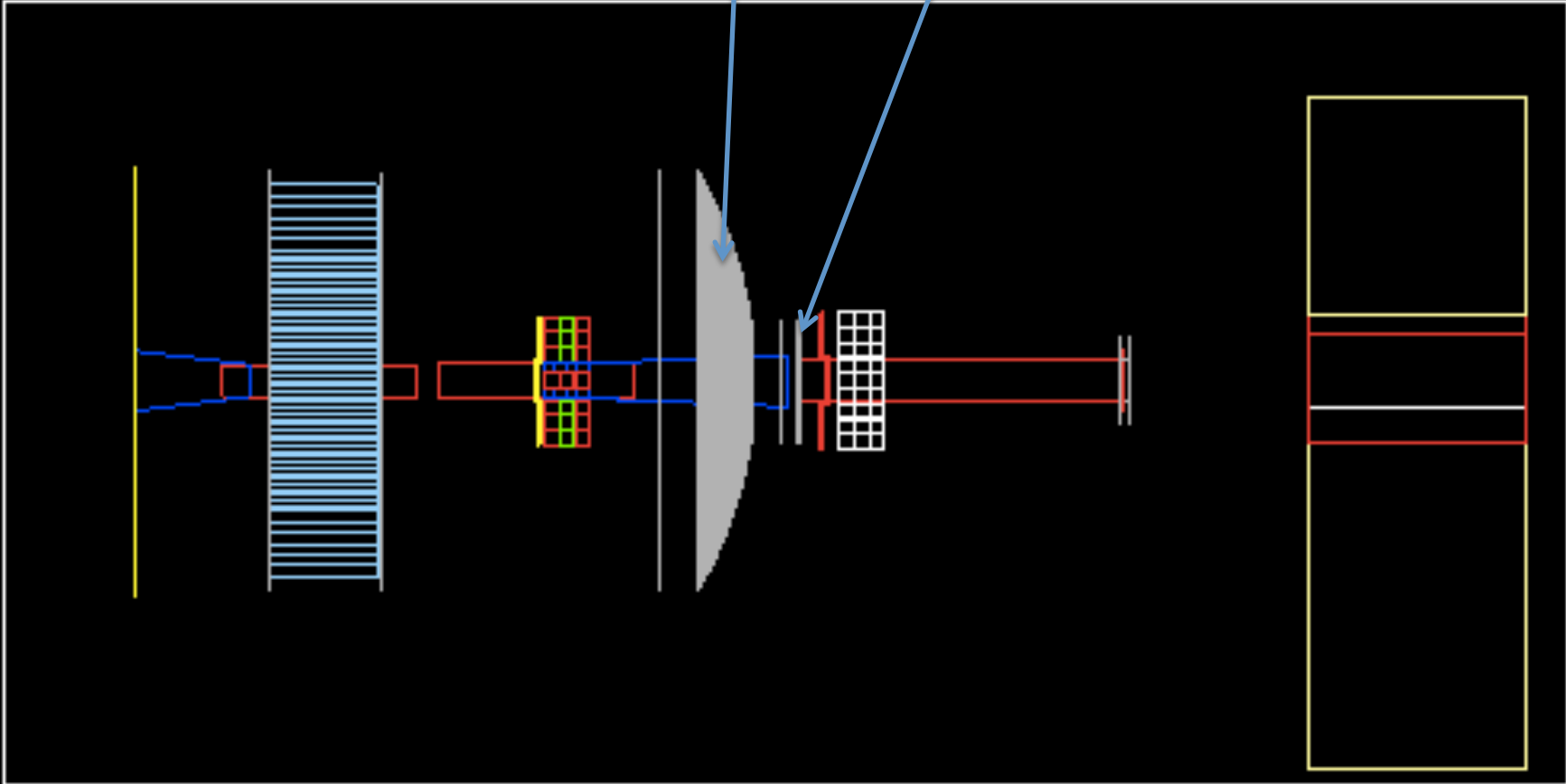
EndPos_X EndPos_Y EndPos_Z

Pi+

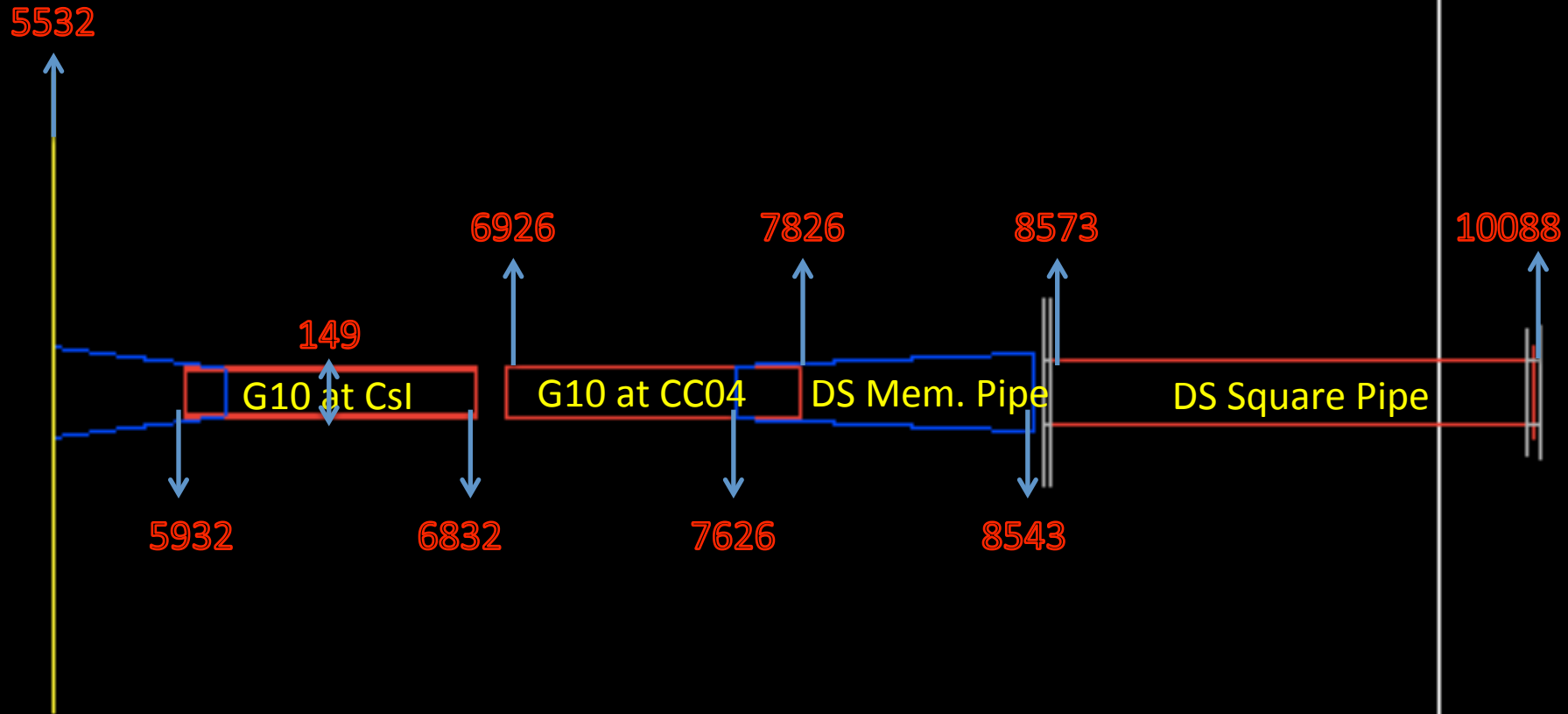
```
*****364*****  
448.538, 698.35, 6476.47 Inside Csl  
Total Track : 7  
211, -1, 2, 448.538, 698.35, 6476.47  
-211, -1, 1, 43.5547, -72.6112, 6751.01  
14, 2, 8, -2500, -1008.28, 6915.67  
-13, 2, 9, -447.939, -698.26, 6476.35  
-11, 9, 27, -457.268, -700.441, 6498.67  
12, 9, 26, -367.487, 2500, 5671.64  
-14, 9, 25, 110.002, -2500, 2696.94
```

Extrapolation method permits this event to be selected. (&& CVVetoIneff.)
Need to understand (real gamma position)

Csl flange(?, 9) DS. MEM. Flange(?, 4)

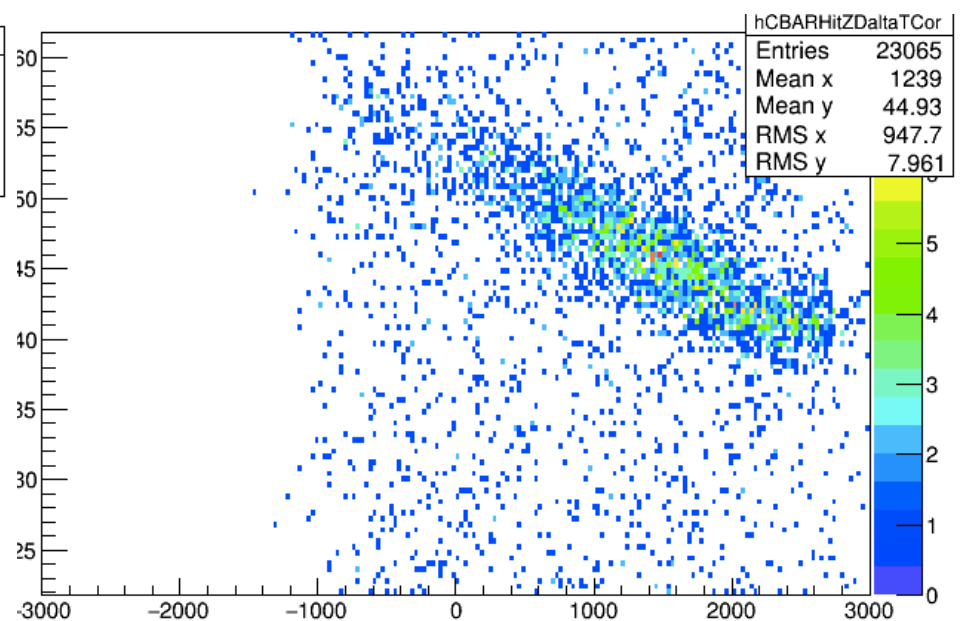
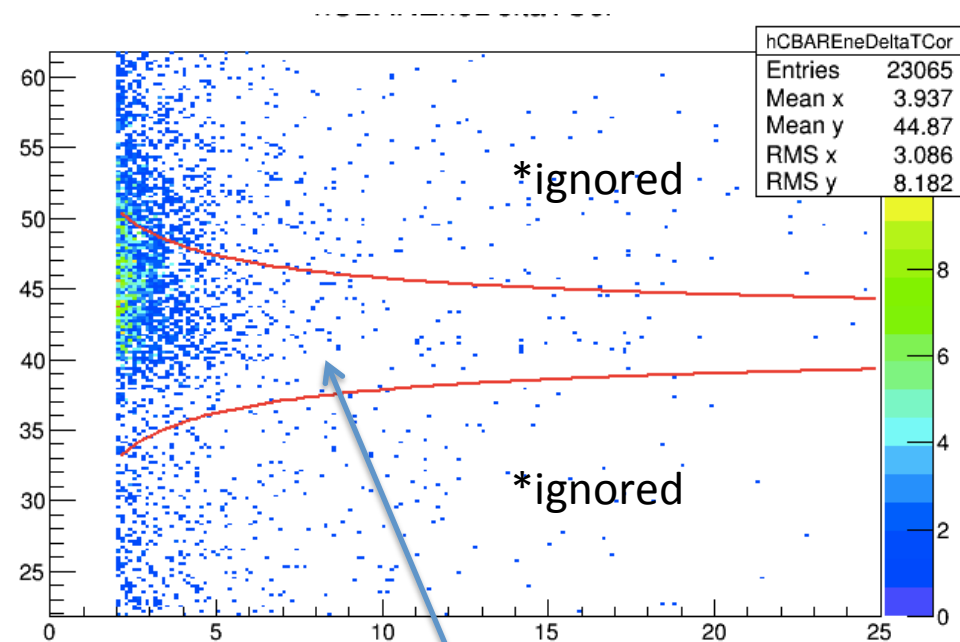


Coordinates



New Veto

5 sigma line



Pi0nunu MC
Clear back splash signal

Veto signal

Back splash recovery

Statistics = $7e1 * 2e6 = 1.4e8$ (*5.12)

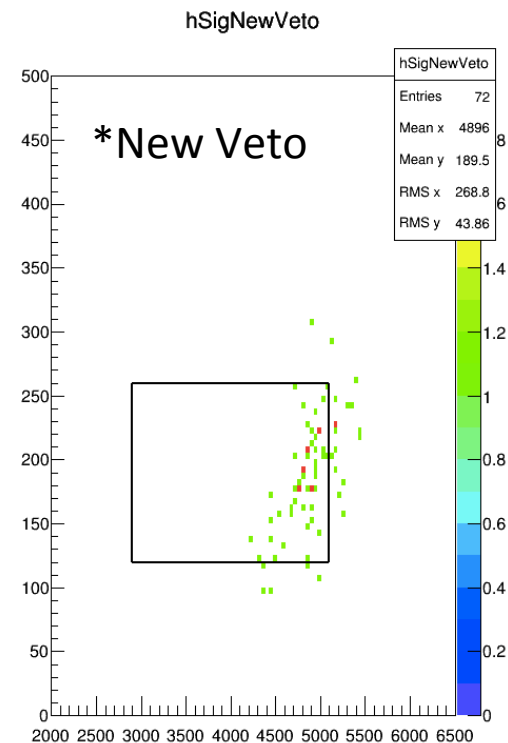
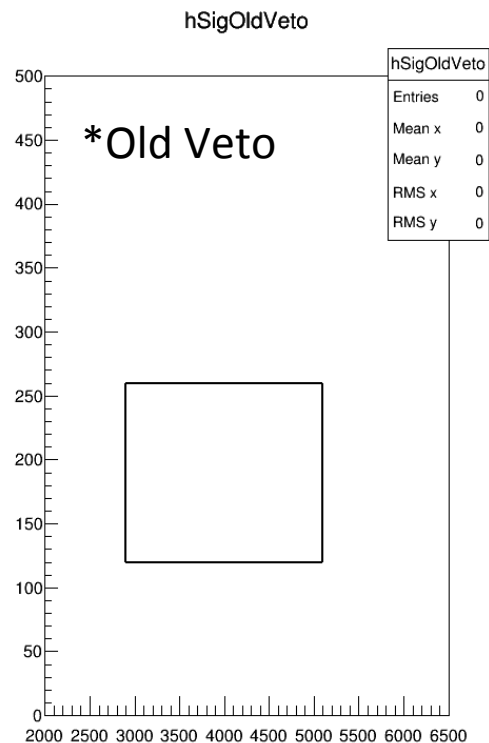
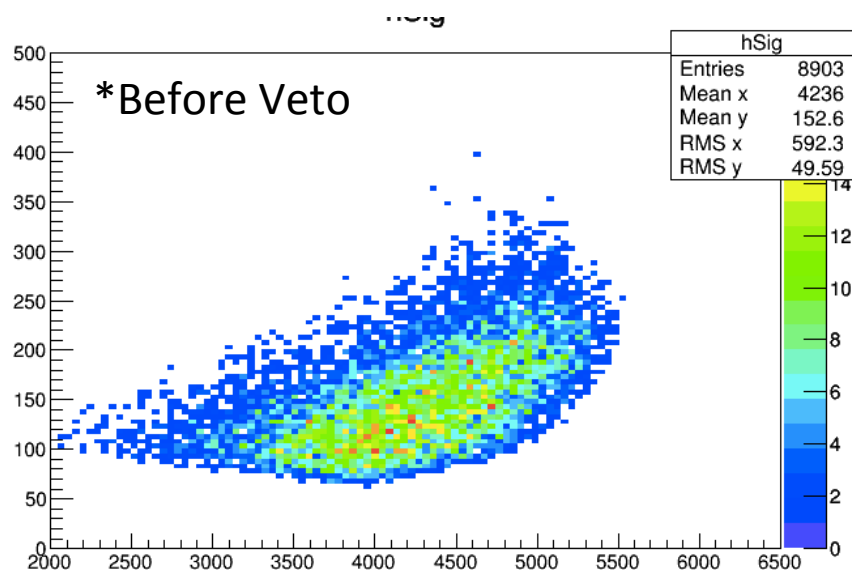
Preliminary selection :

(CutCondition | 0xc)==0xc

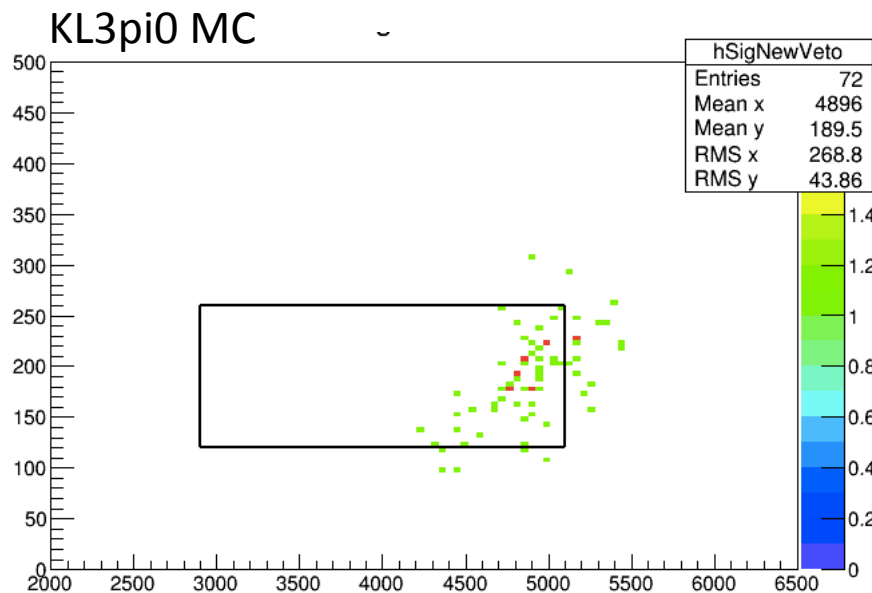
(AddCutCondition | 0xc0)==0xc0

(MyVetoCondition==64) (MB)

BPCVVetoEne<1.0



Missing Gamma after New Veto



5 events have gamma which isn't going to barrel

BHPV

-116.516, 39.8278, 14277.6

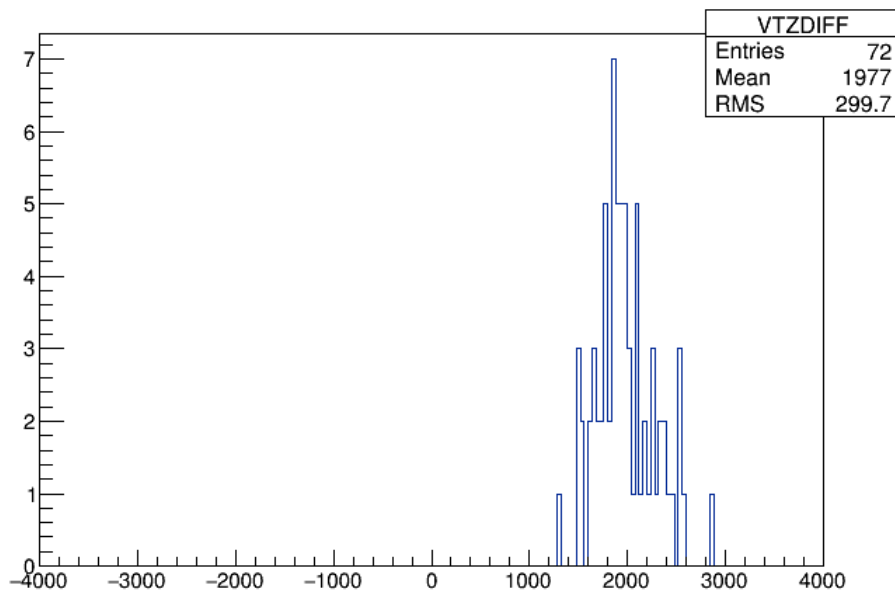
Upstream

-187.399, 371.694, 2548.94

-325.729, -479.529, 2353.86

-174.848, -474.271, 2749.67

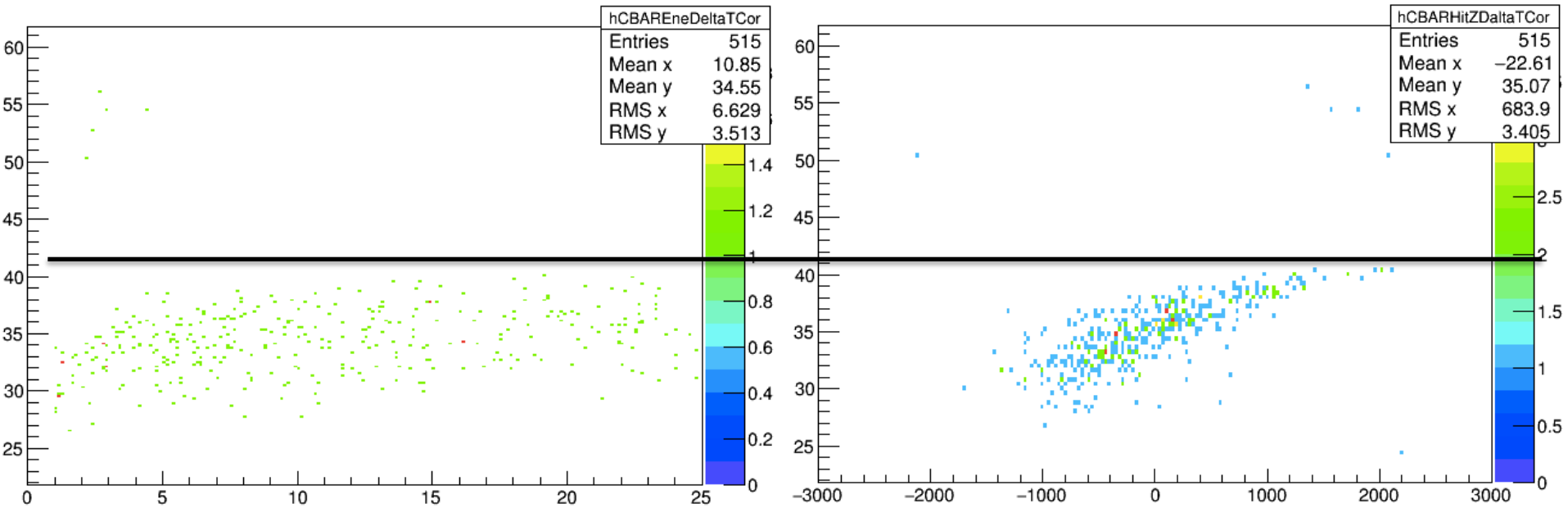
-331.535, -81.7498, 2494.91



In all events,
at least 3 gammas go to barrel

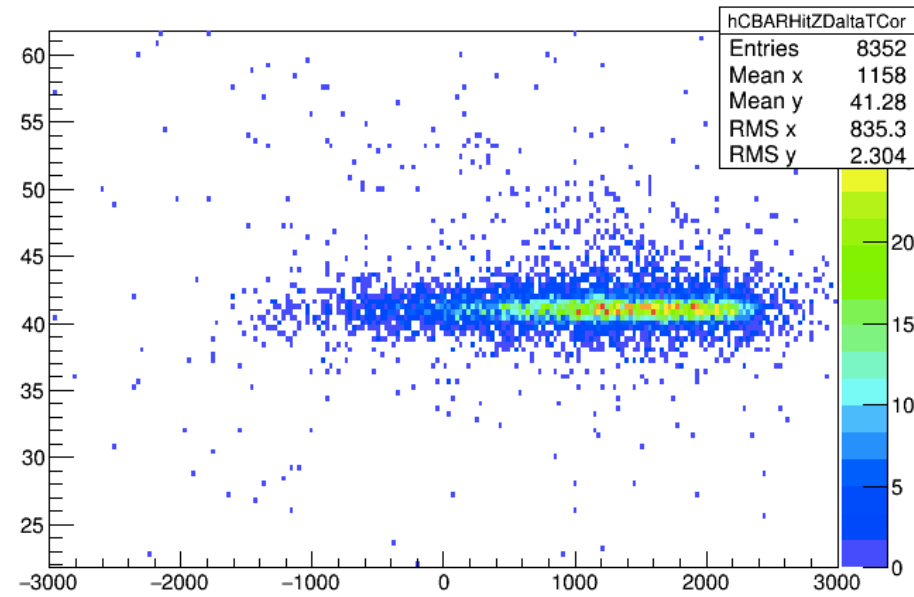
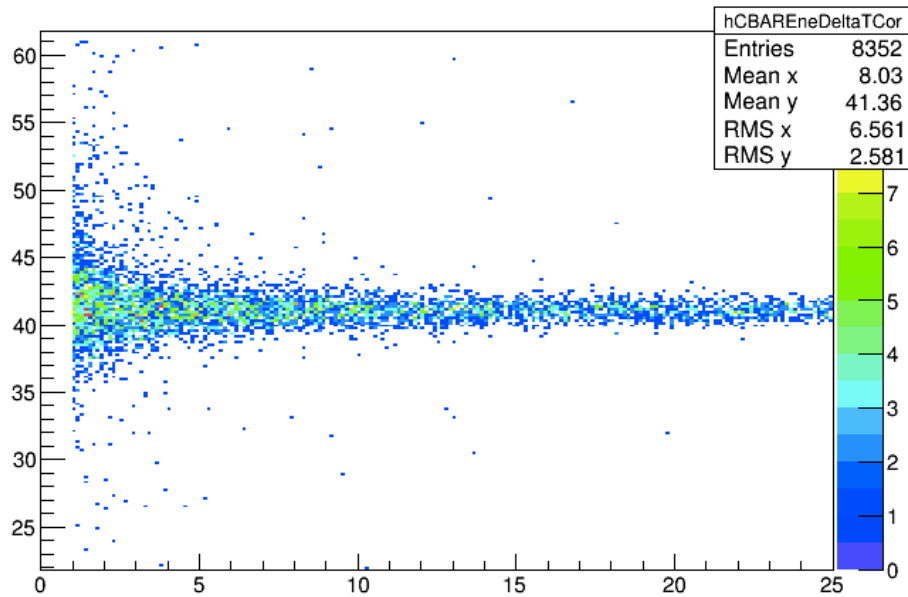
All events failed reconstructing vertex

Barrel Information

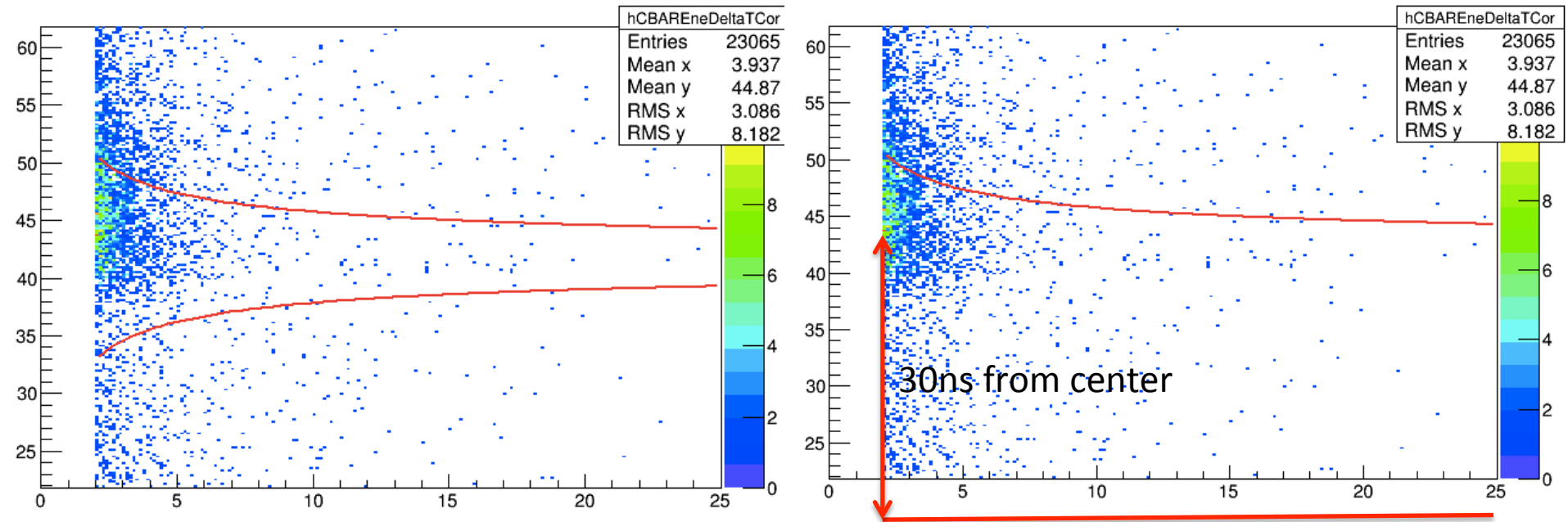


With successful vertex reconstruction

$\text{Abs}(\text{True Vertex} - \text{Reco. Vertex}) < 200\text{mm}$

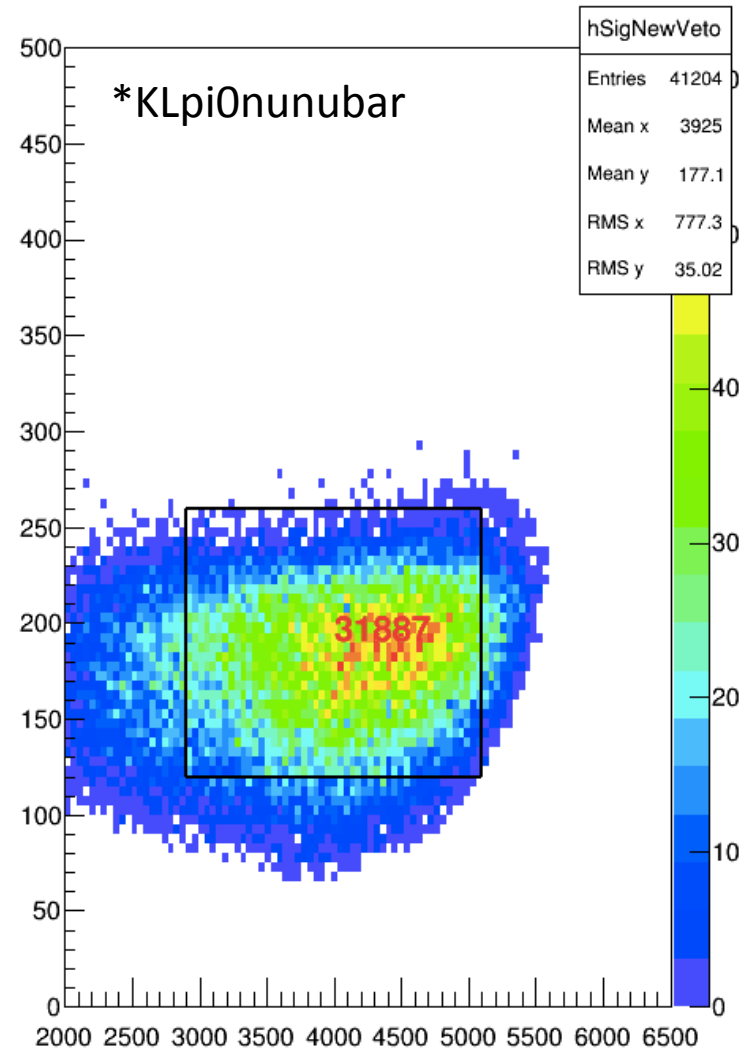
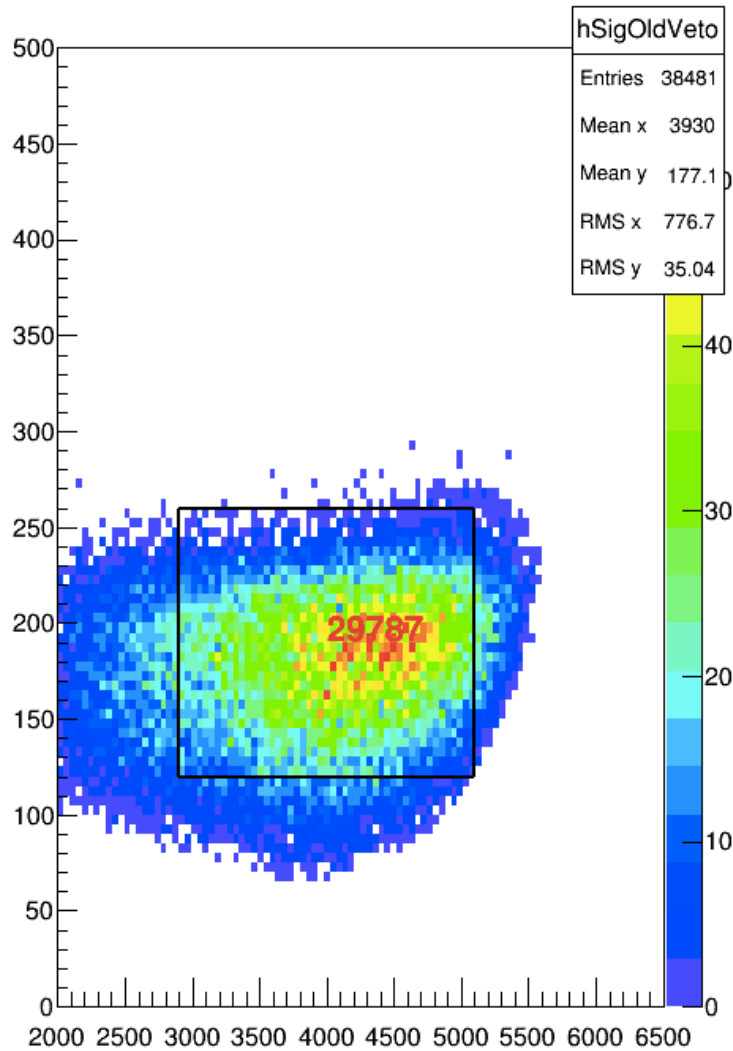


Rejection of mis-vertex reconstruction

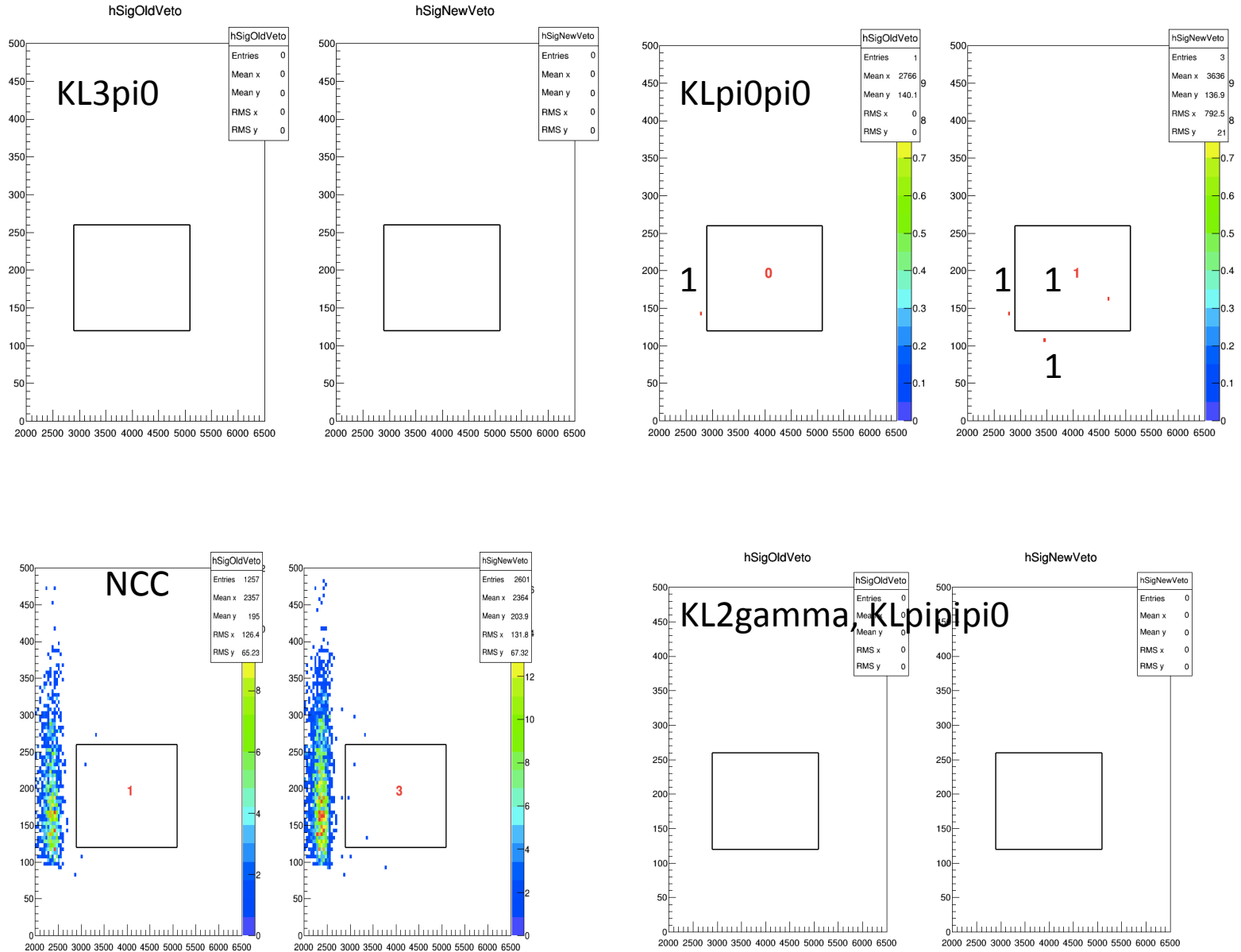


Acceptance check

~6.6% enhanced



Background rejection



Data

Many NCC B.G. are accepted

One more event from High RecZ is accepted (KL3pi0?)

