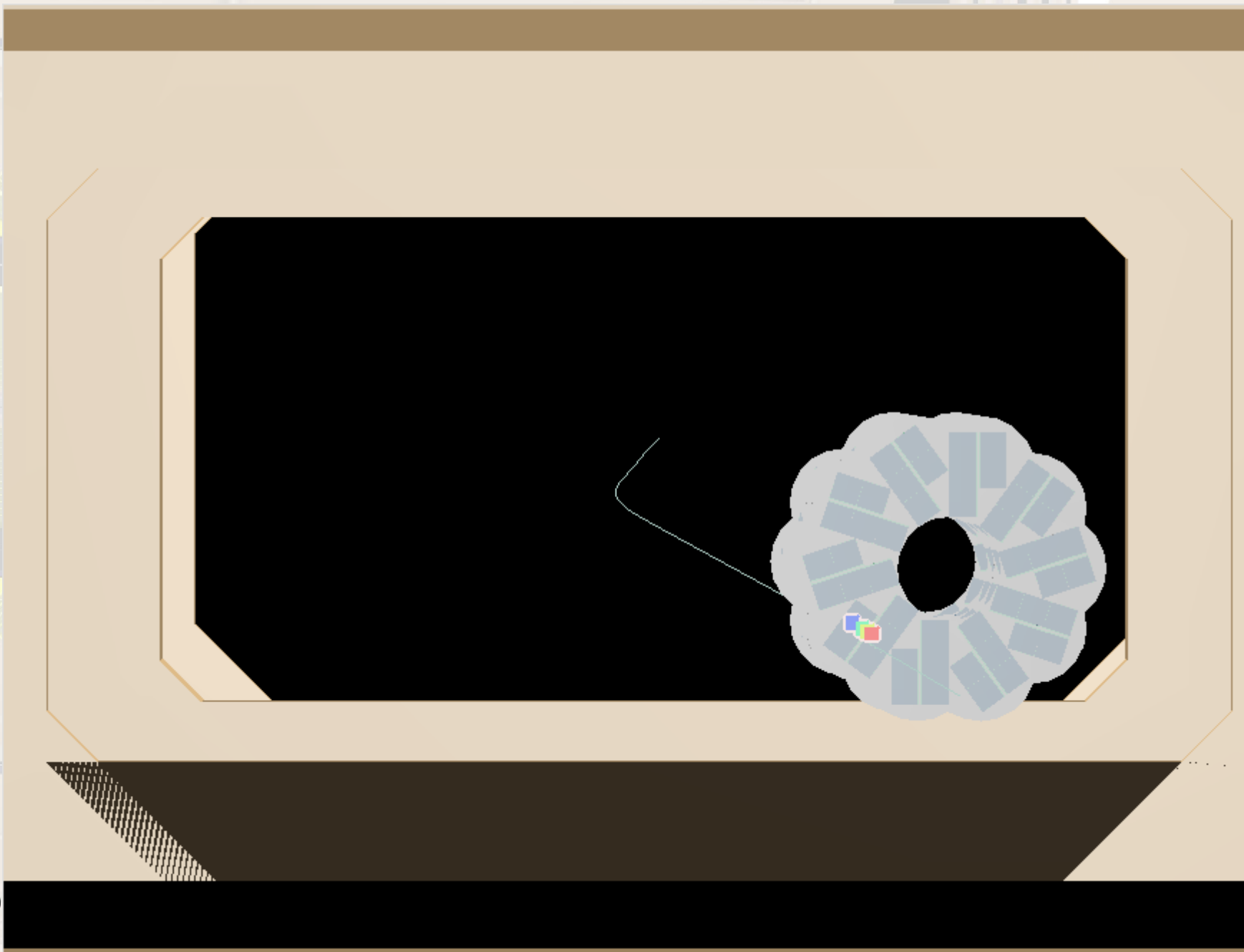


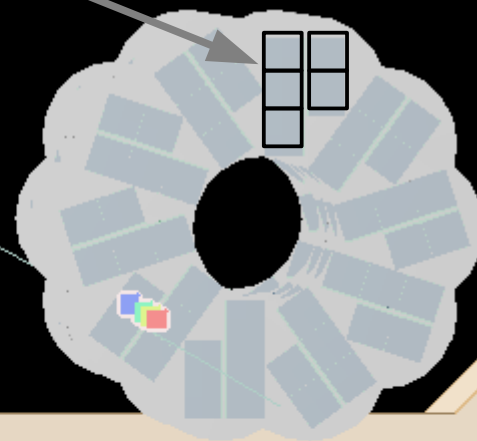
Pixel Design



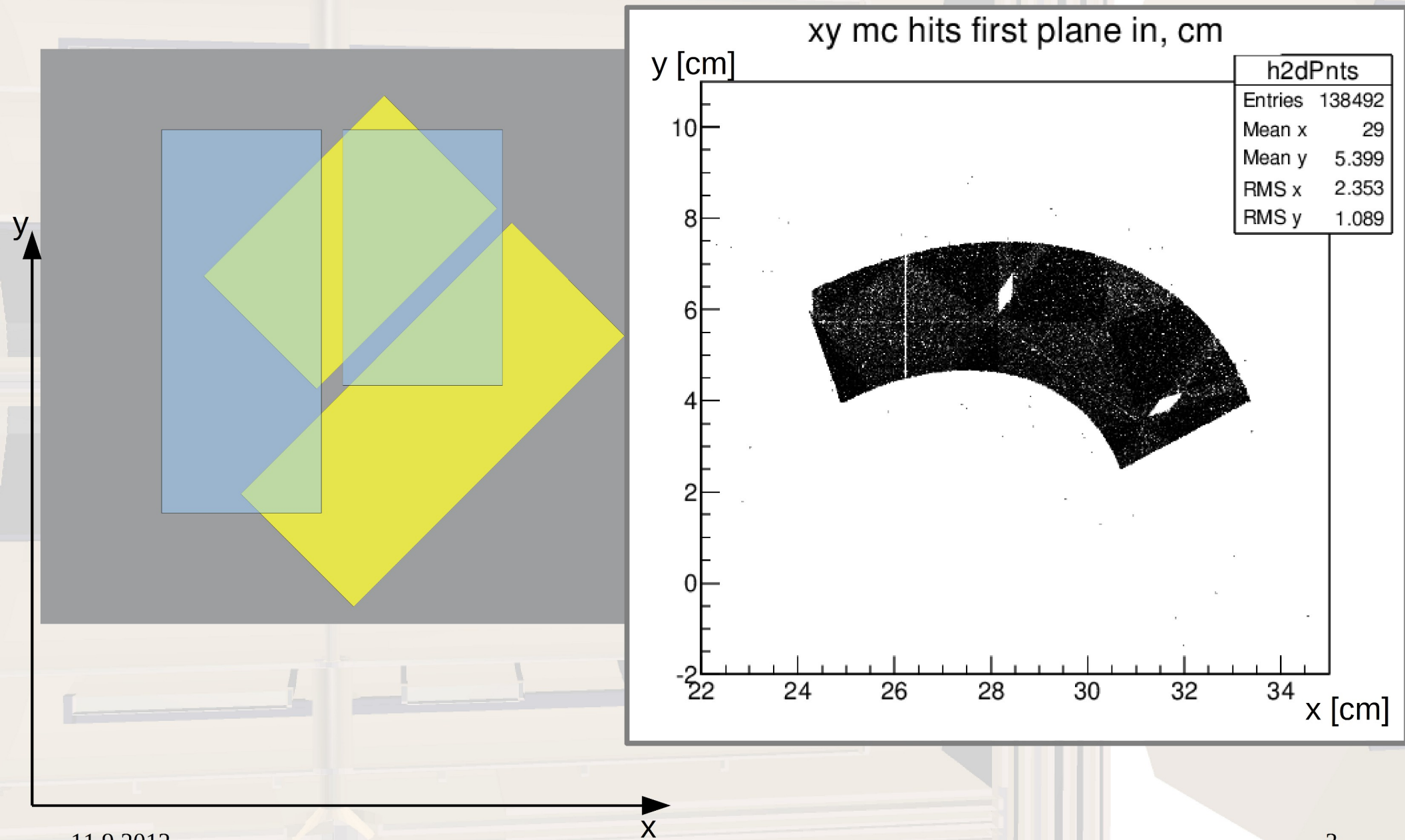
Pixel Design

HV-Maps:

- 2*2 cm modules
- 100*100 μm pixels
- small inactive region on one edge



Acceptance



Lumi Software Update

Transportation

PndLmdDetector

Digitization

...StripHitProducer

...HybridHitProducer

...HitProducerIdeal

...PixelHitProducerFast

Hit-Reco

...StripClusterTask

...PixelClusterTask

Track-Finder

...TrackFinderTask

...HitMergeTask

...TrackFinderCATask

Track-Fit

...LinFitTask

...IdealFitTask

Backtracking

...GeaneTask

...QATask

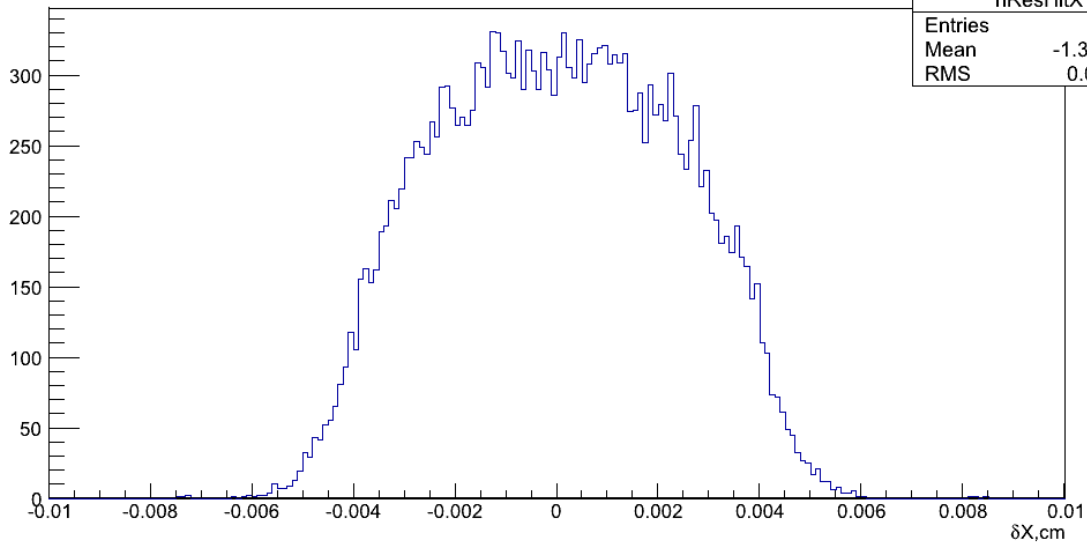
SDS

New Macros:

runLumi1FastDigi
runLumi1PixelDigi
runLumi2PixelReco
runLumi2bHitMerge

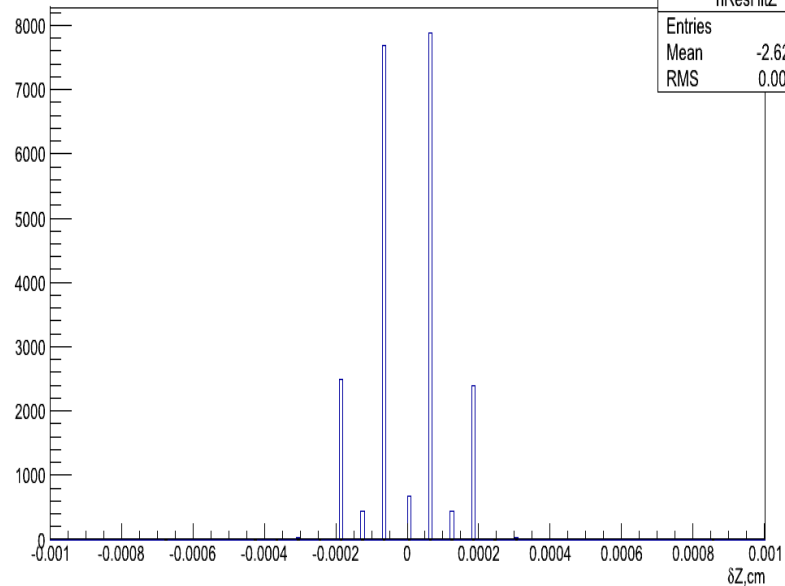
Hit-Resolution

$$X_{MC} - X_{rec}$$



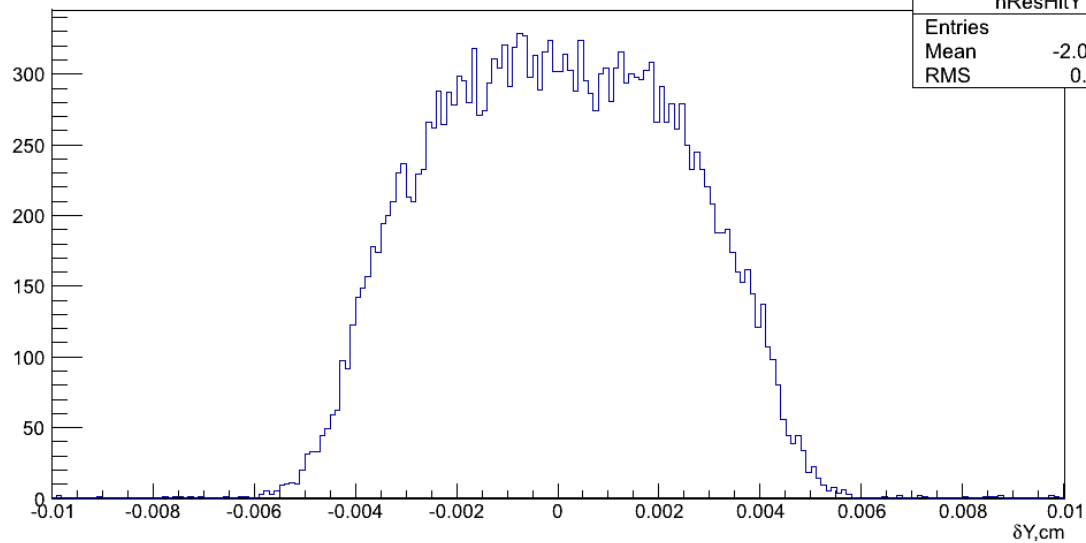
hResHitX	
Entries	39068
Mean	-1.334e-06
RMS	0.002316

$$Z_{MC} - Z_{rec}$$



hResHitZ	
Entries	39068
Mean	-2.623e-07
RMS	0.0001049

$$Y_{MC} - Y_{rec}$$

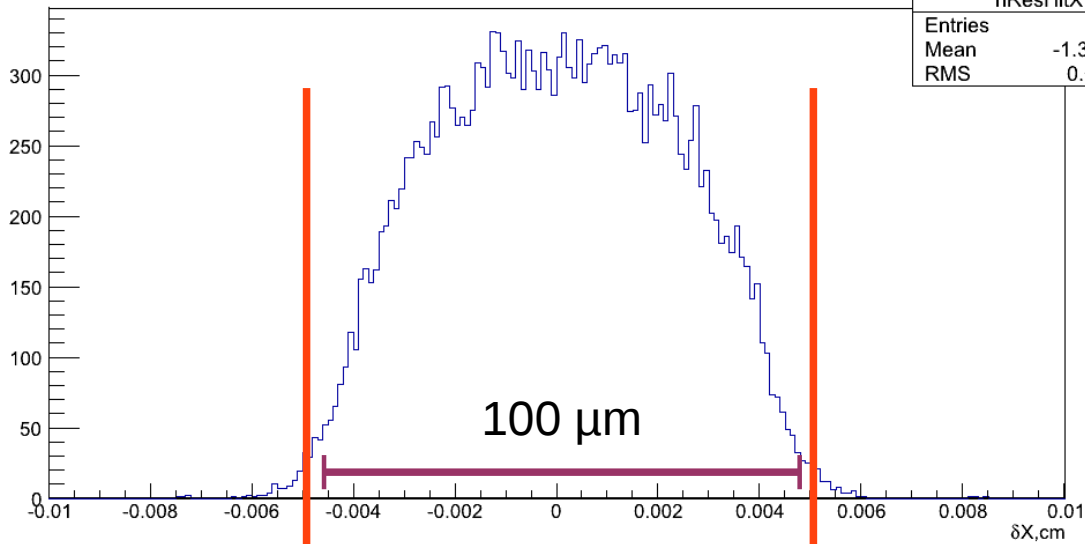


hResHitY	
Entries	39068
Mean	-2.067e-05
RMS	0.002331

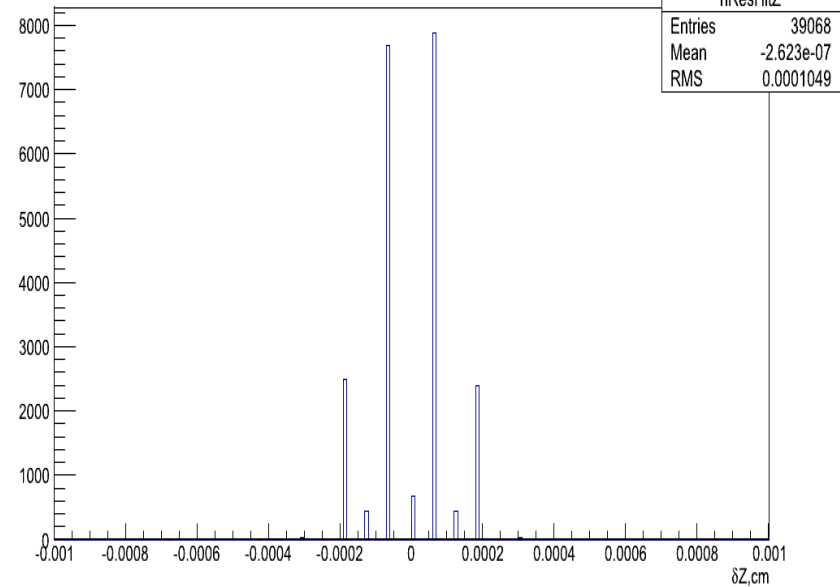
11.9.2012

Hit-Resolution

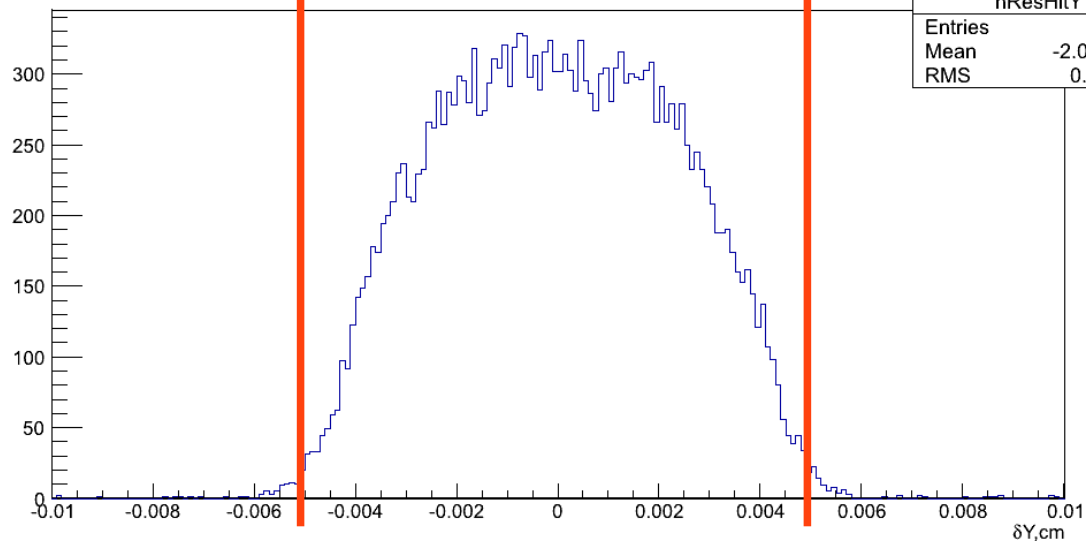
$X_{MC} - X_{rec}$



$Z_{MC} - Z_{rec}$



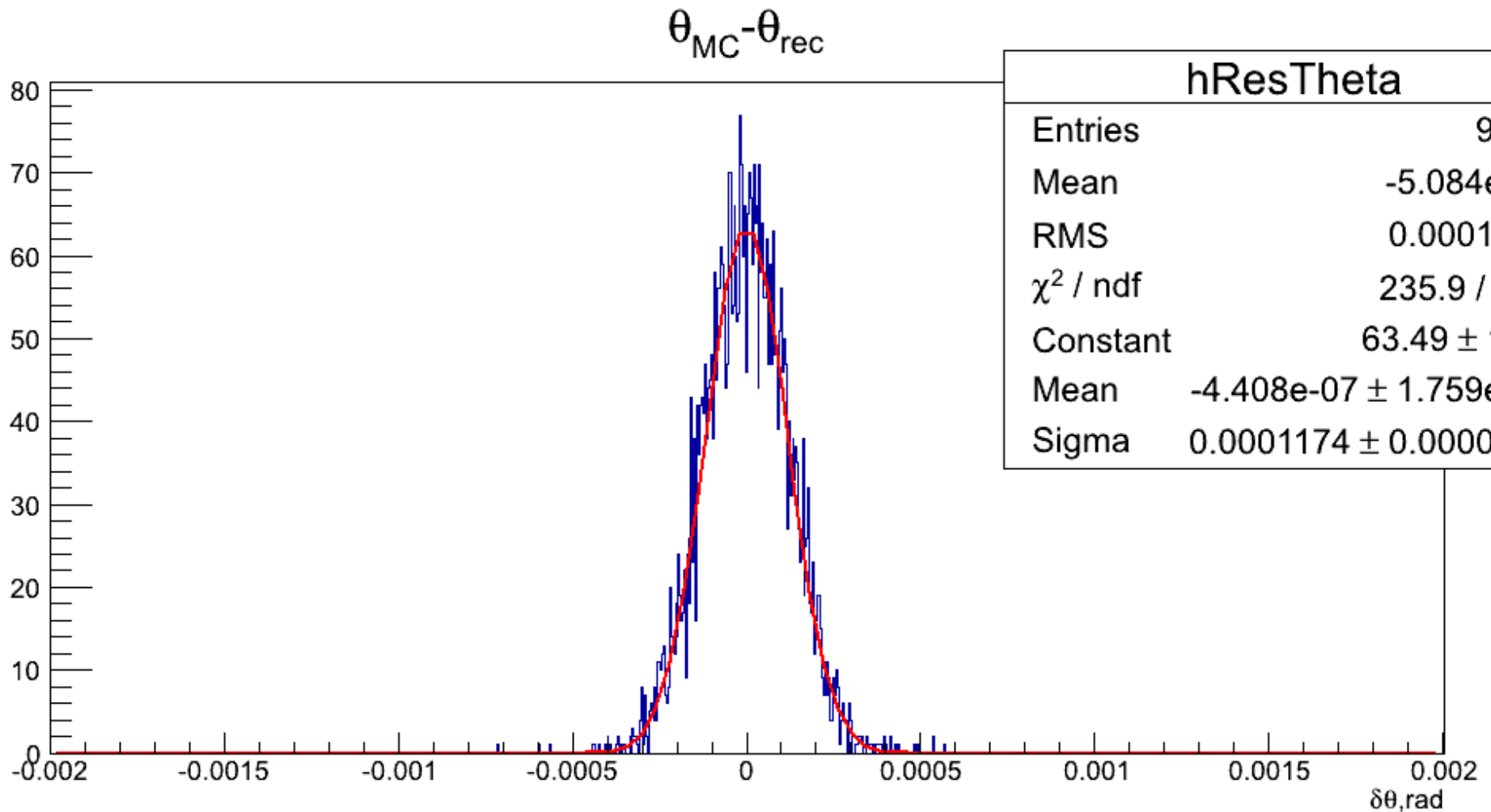
$Y_{MC} - Y_{rec}$



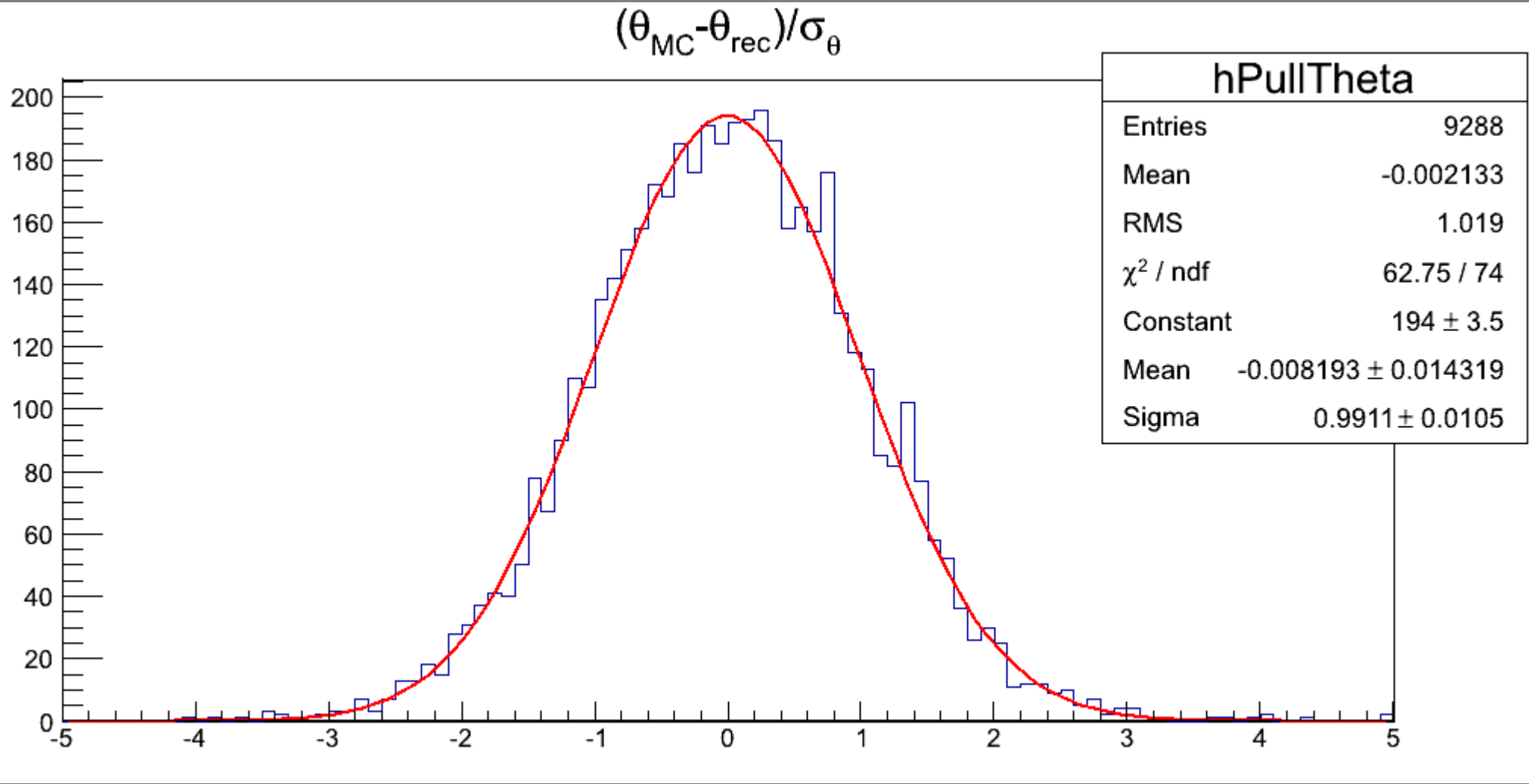
$4 \mu m$

Dipole rotation
=> Backmapping to
local Lumi coordinates

Polarangle-Resolution



Polarangle-Pull



Resolution

p(beam) [GeV/c]	Pixel-Detector		Pixel-Detector with rotated planes		Pixel-Detector no fit		Strip-Det 150μm
	$\sigma(\Delta\theta)$ [mrad]	RMS $\Delta\theta$ [mrad]	$\sigma(\Delta\theta)$ [mrad]	RMS $\Delta\theta$ [mrad]	$\sigma(\Delta\theta)$ [mrad]	RMS $\Delta\theta$ [mrad]	$\sigma(\Delta\theta)$ [mrad]
1.5	0.598	0.473	0.594	0.479	0.604	0.470	0.502
4.06	0.210	0.221	0.196	0.214	0.257	0.262	0.195
8.9	0.117	0.124	0.117	0.117	0.194	0.195	0.137
11.91	0.098	0.101	0.099	0.102	0.179	0.181	0.115
15	0.101	0.103	0.099	0.102	0.183	0.181	0.129

Efficiency

P_{lab} [GeV/c]	Not Rotated	Rotated (9°)
1,5	54,2 %	53,7 %
4,06	91,7 %	91,9 %
8,9	92,9 %	92,9 %
11,09	92,6 %	92,8 %
15	92,8 %	93,3 %