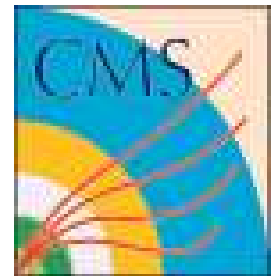


MP alignment using Cosmic MC



UHH Alignment Meeting
27.01.2009



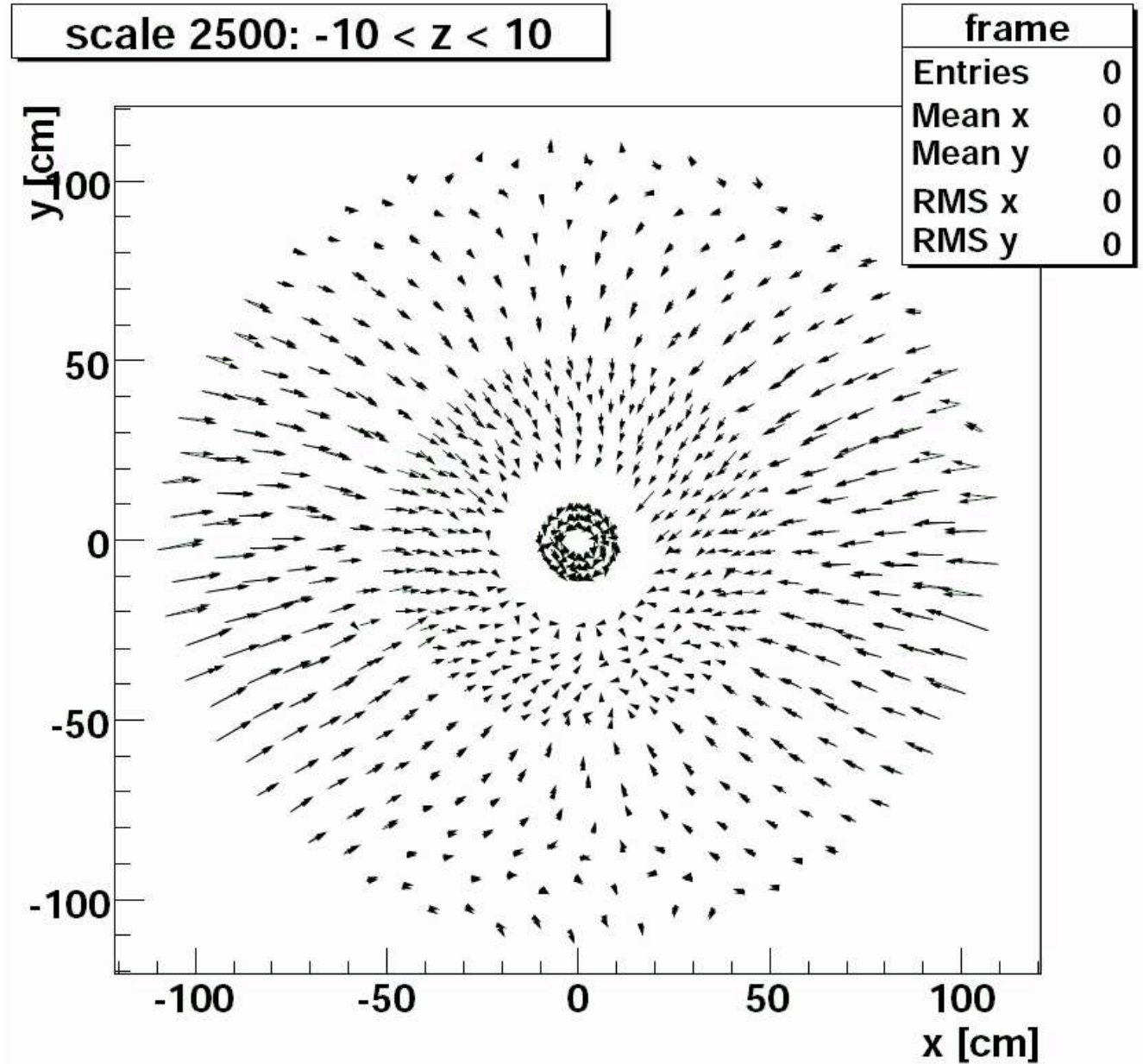
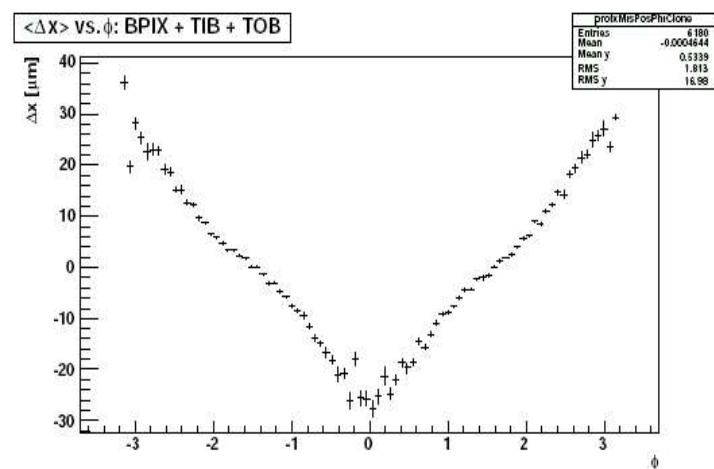
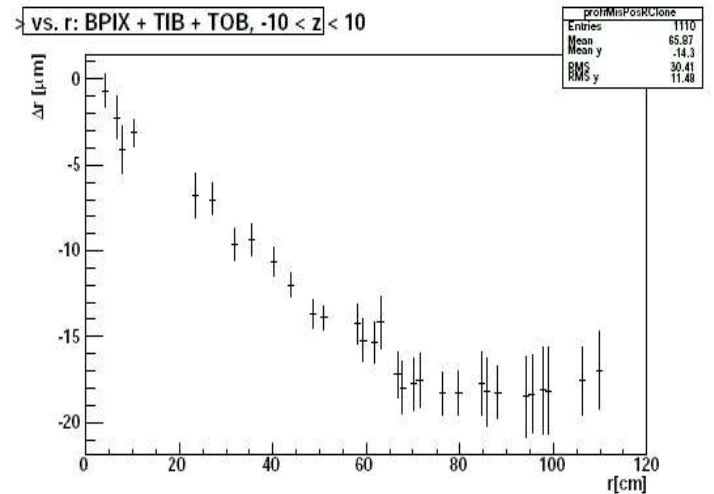


General Alignment Setup

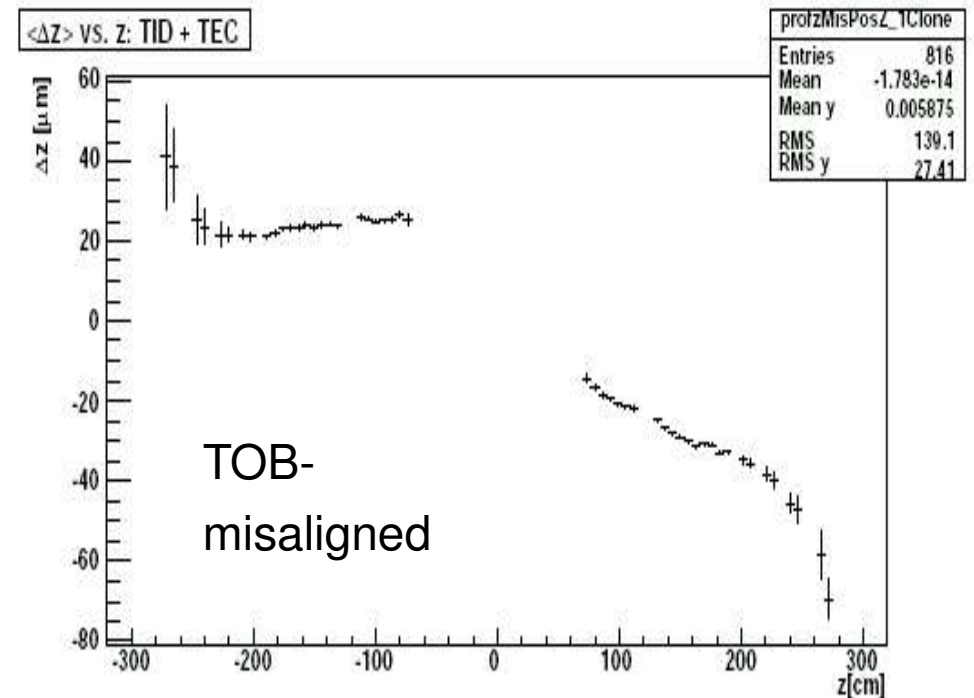
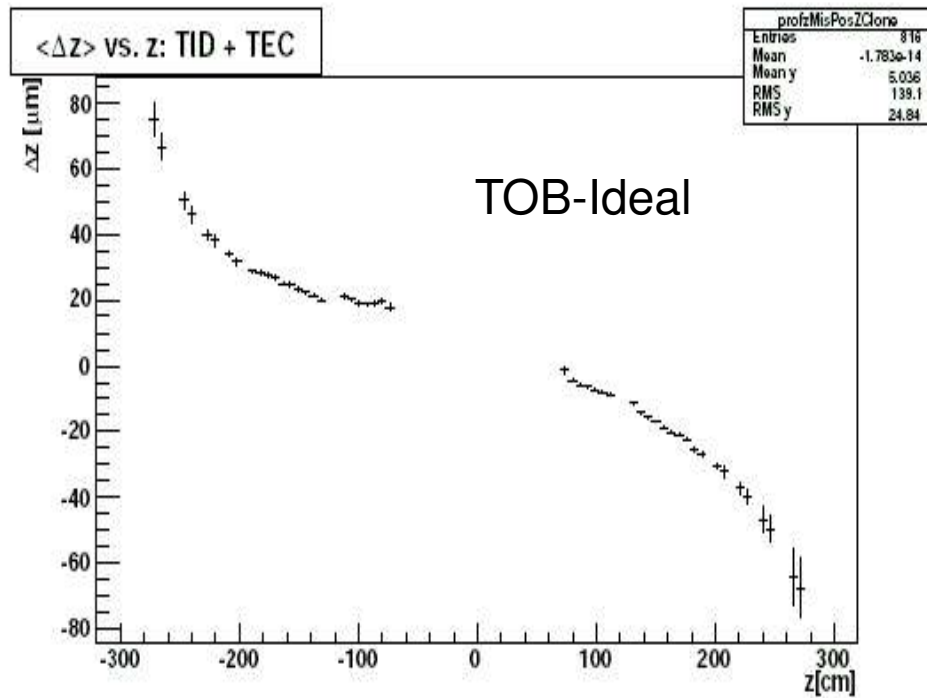


- using double refit (cosmic track refitter)
- cosmic track finder
- Alignment track selection:
 - $ptMin = 0.$, $pMin = 5$, $etaMin = -5.$, $etaMax = 5.$, $nHitMin = 15$, $nHitMin2D = 3$, $chi2nMax = 100$
- Misalignment:
 - **TOB : IDEAL**
 - **TIB** : ModuleLevel $u = 0.025$, $w = 0.05$, $gamma = 0.001$ for SS + $alpha = 0.002$, $beta = 0.002$ + $v = 0.05$ DS
 - **TEC** : PetalLevel $u = 0.05$, $v = 0.05$, $w = 0.05$
 - **TID** : ModuleLevel $u = 0.025$, $w = 0.05$, $gamma = 0.001$ for SS + $v = 0.05$ DS
 - **Pixel Barrel** : LadderLevel $u = 0.05$, $v = 0.05$, $w = 0.05$, $v = 0.001$
 - **Pixel Endcaps** : BladeLevel $u = 0.05$, $v = 0.05$, $w = 0.05$

- shrinkage in r/x



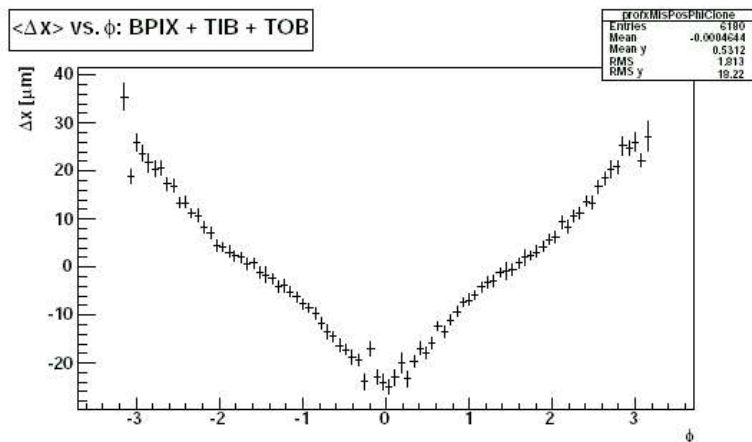
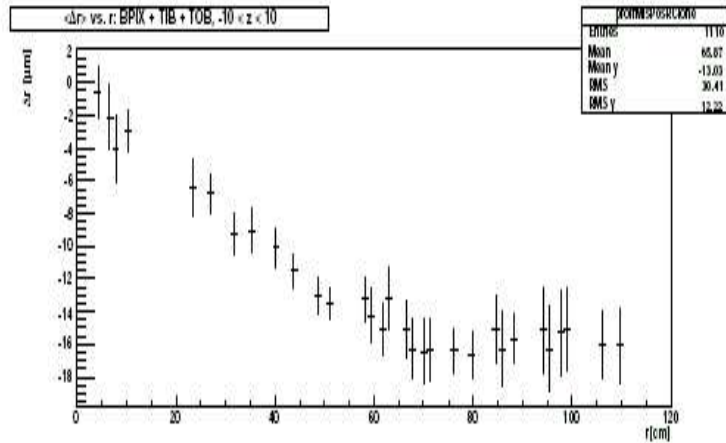
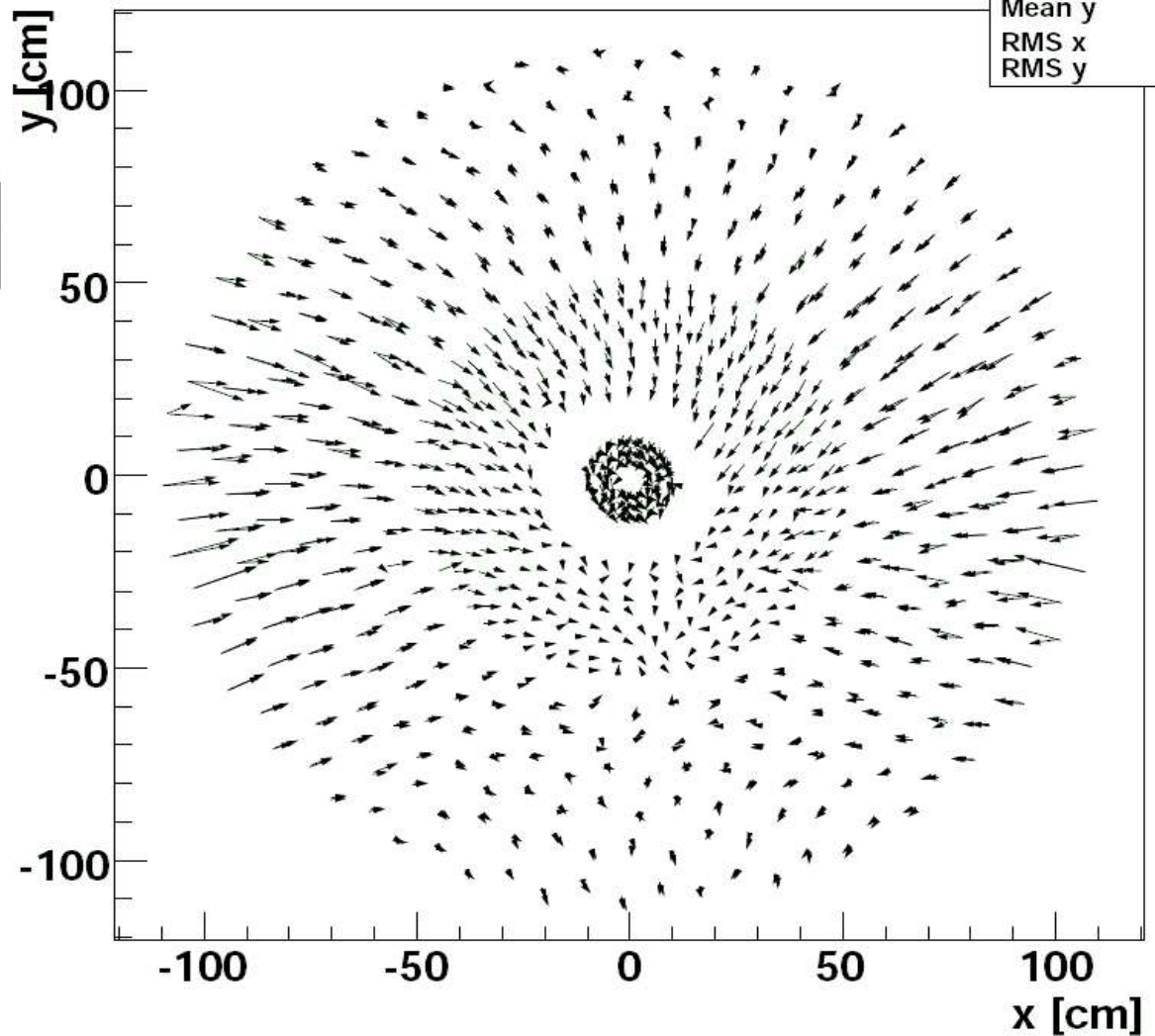
- shrinkage in z



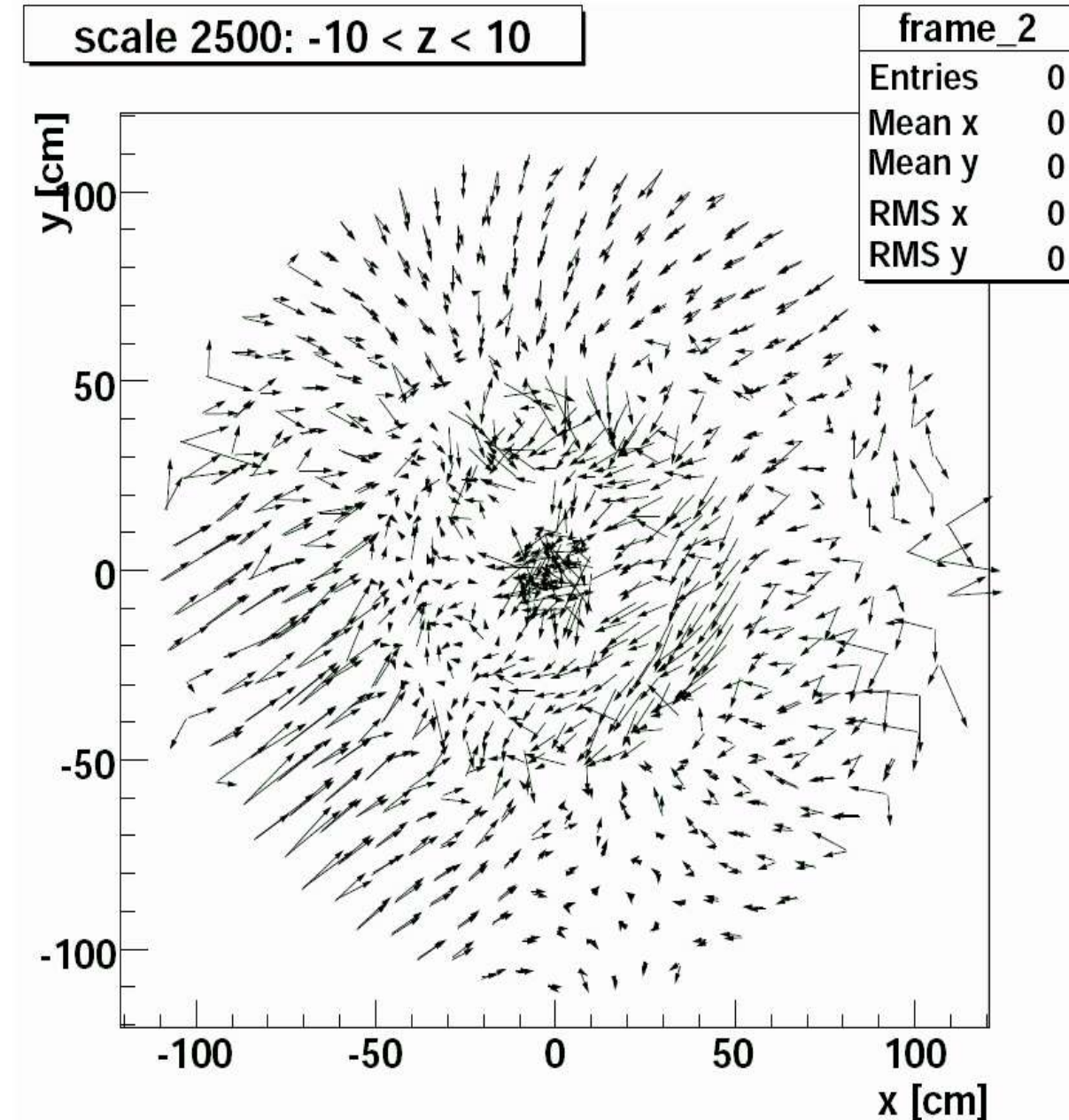
- similar movements as without misalignment of TOB

scale 2500: $-10 < z < 10$

frame	
Entries	0
Mean x	0
Mean y	0
RMS x	0
RMS y	0

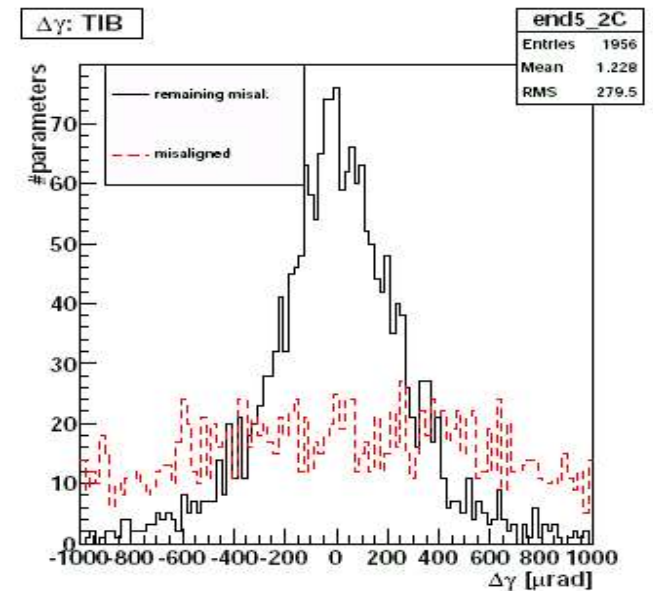
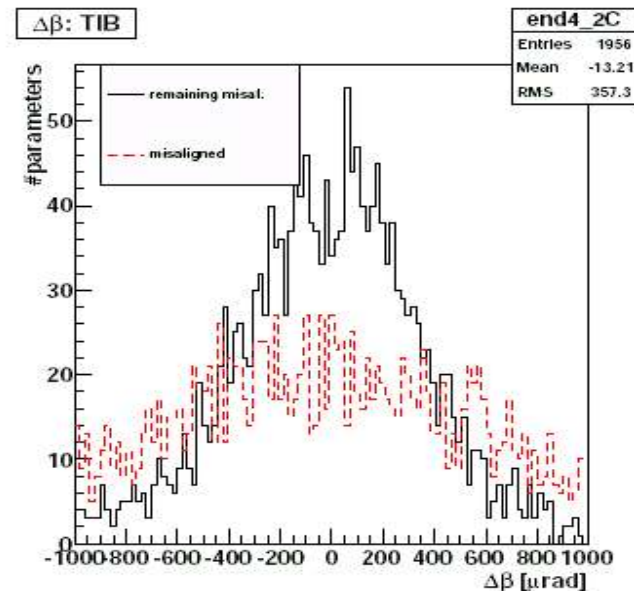
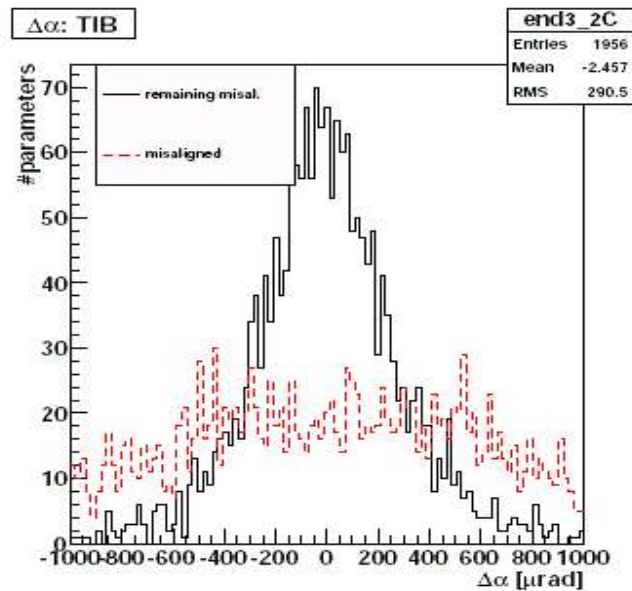
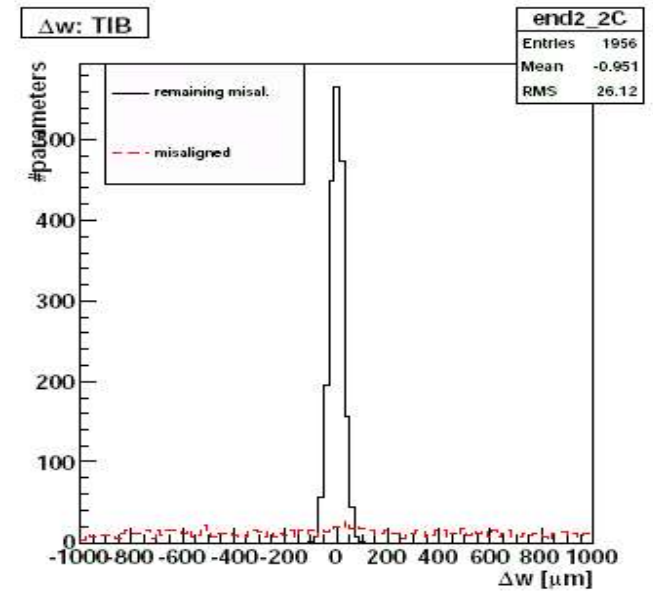
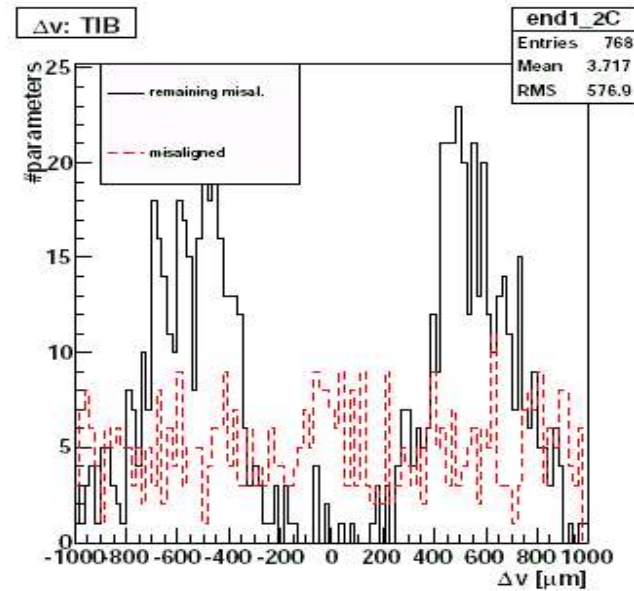
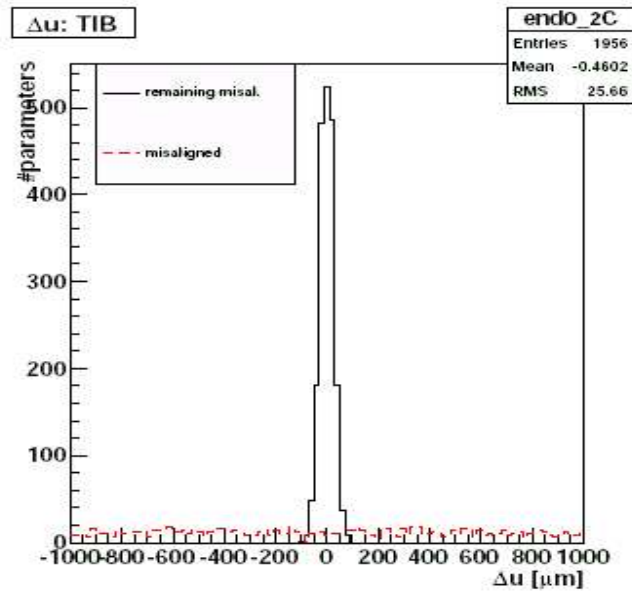


- “wild” movements in
 - TIB (especially $Y > 0$)
 - TOB (right side, $x > 80\text{cm}$)

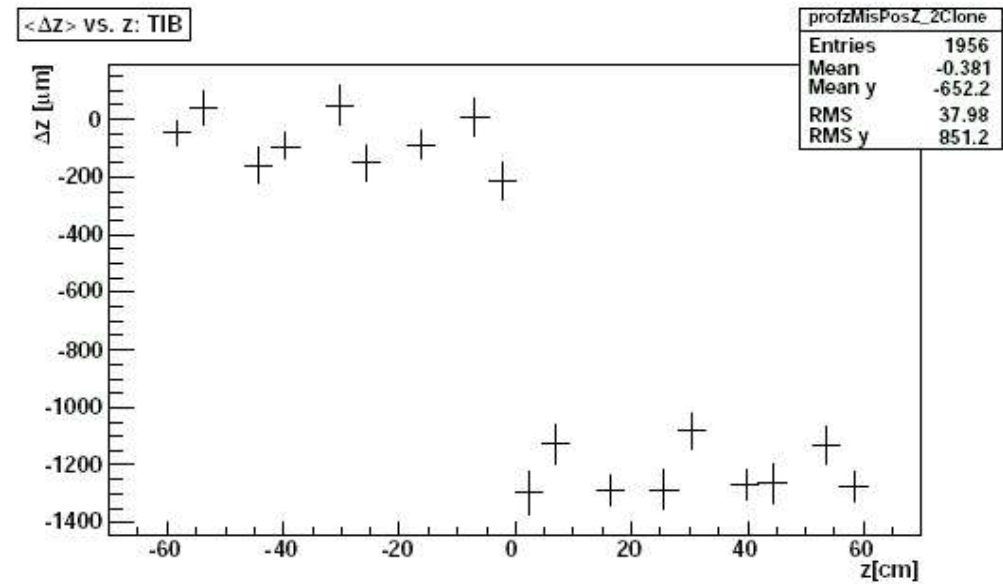
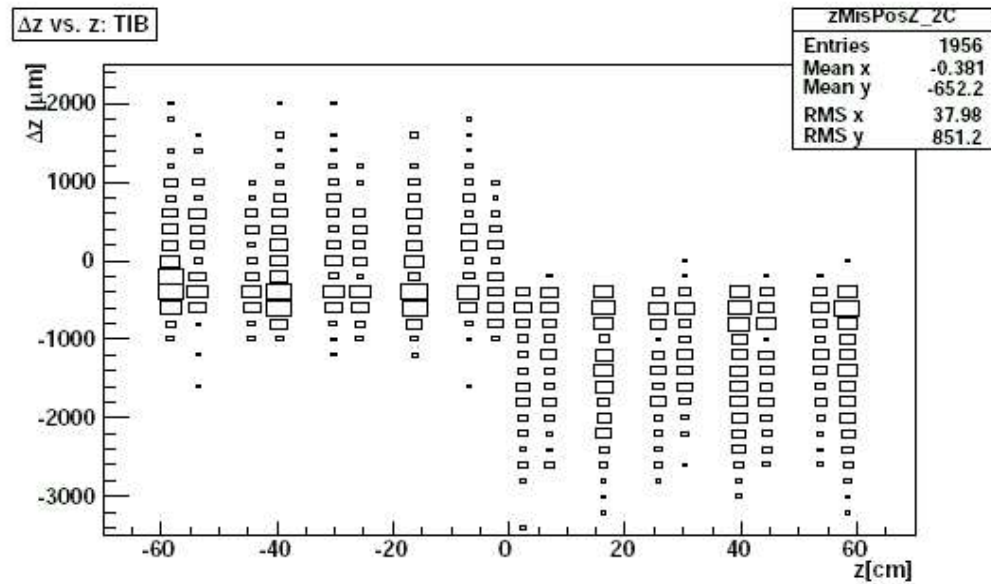
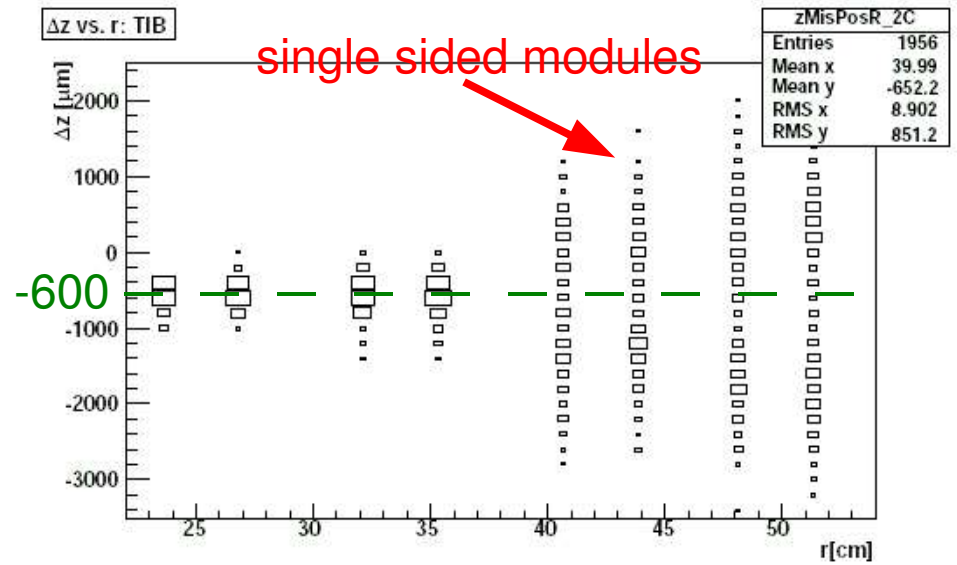
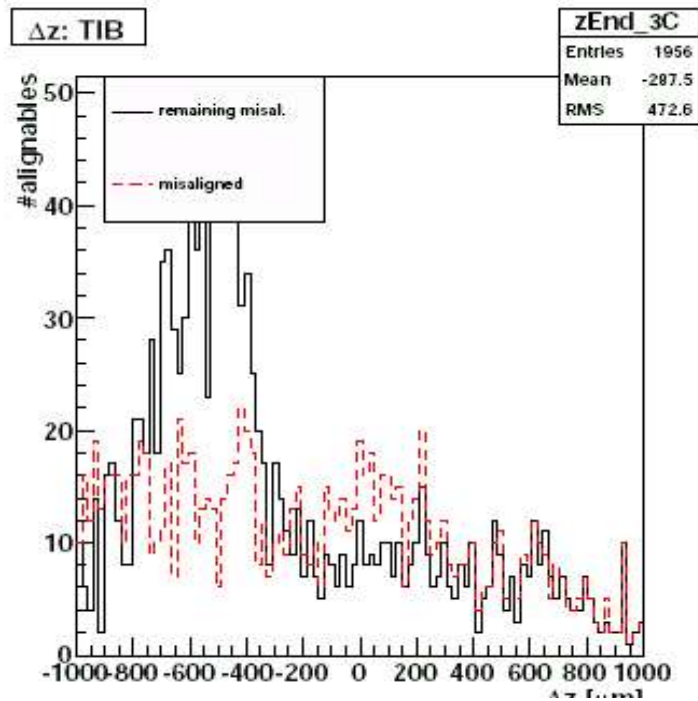




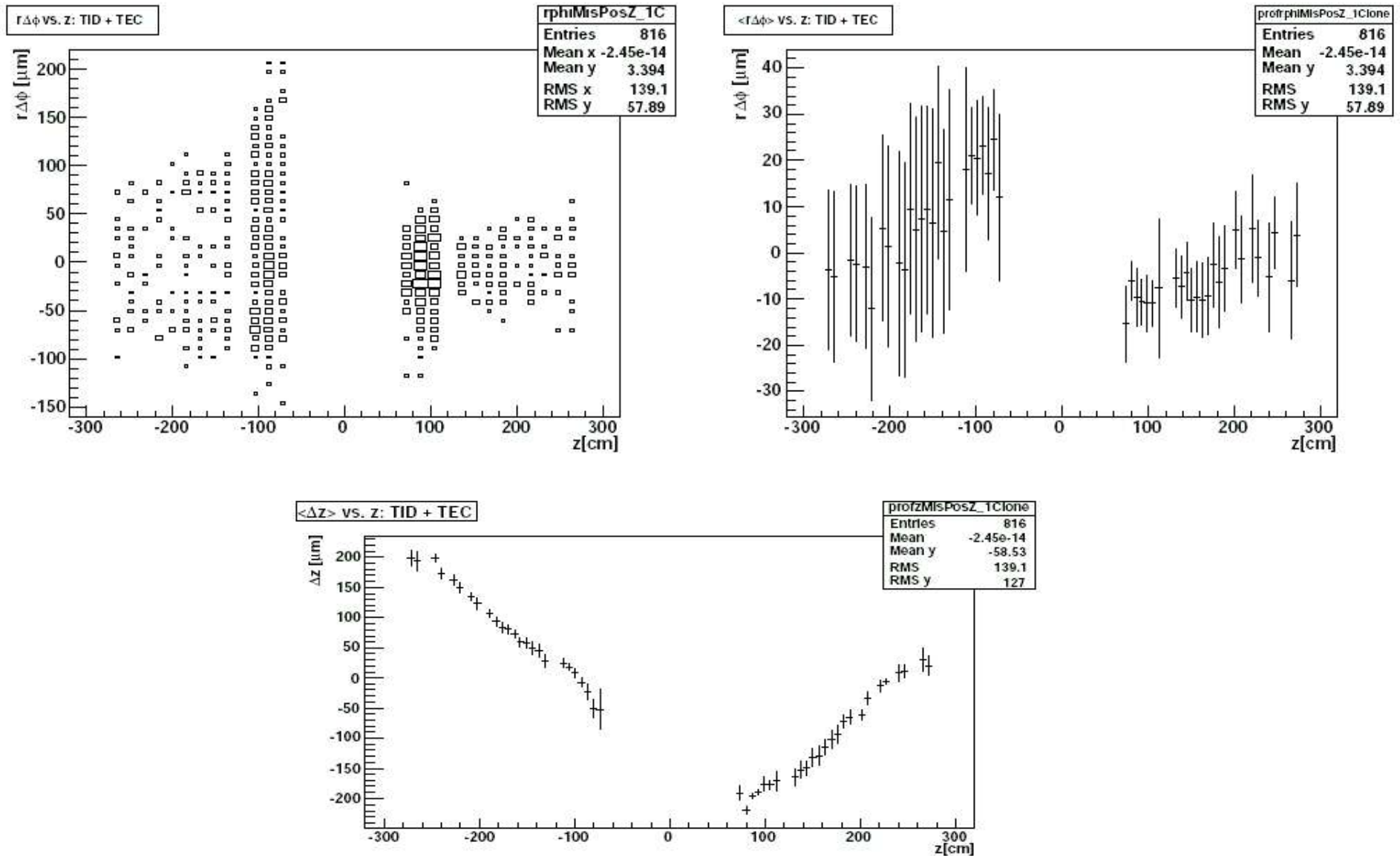
0T Cosmics TIB



0T Cosmics – TIB movement in z



- asymmetry in $r\Delta\phi$ in endcaps



- same setup (TOB NOT misaligned)

CosmicTF

CTF

