



Open questions and things still left undone



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SCT weekly meeting
January 20, 2006



- Kalman Align
- Iterations within jobs (pending, needs our input)
- Cluster handling (pending, needs PRD, many implications)
- True unbiased (SCT problem only)
- Size of track sample
 - DC3 (Grid -> membership in ATLAS VO, ESD MemLeak)
 - FATRAS (new fast simulation, very viable alternative)
- CTB (needs to get started)
 - ESD production (easy to store, copy to RZG)
 - Track constraints (force momentum on tracks)
 - Survey constraints ($z = 0$ with error assumption)
- EventFilter (ID calibration and alignment stream format)
- Analytical derivatives (better understanding of distributions)



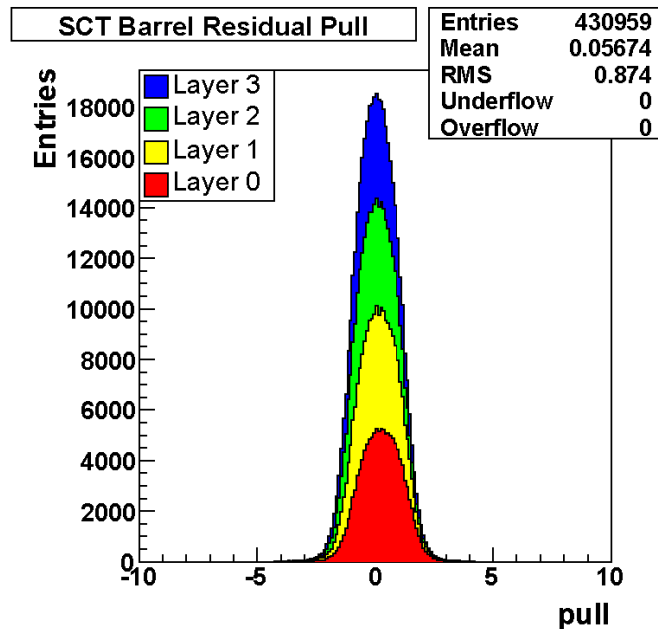
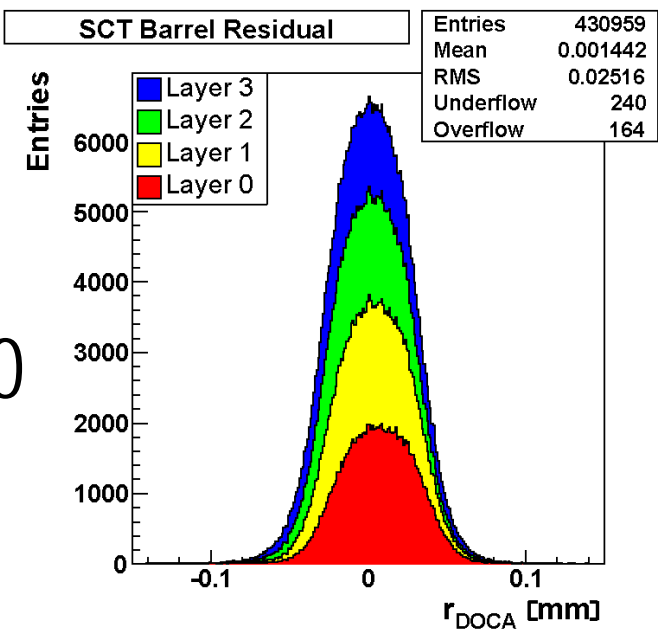
- Redo Athena exercise with current release
- Investigate substructure of plots
- Redo iterations
 - compare / monitor behavior of pathological modules
 - New / better suited misalignment sets (random, systematic)
 - Redo table of achievable alignment accuracy

alignment parameter	SCT Barrel				SCT EndCap			
	68 % CL	σ_{stat}	as built	TDR req.	68 % CL	σ_{stat}	as built	TDR req.
a_x [μm]	48	29	100	12	19	4.9	50	12
a_y [μm]	253	169	100	50	145	57	50	50
a_z [μm]	245	149	500	100	1100	300	500	200
a_α [mrad]	1.5	1.2			21	8.5		
a_β [mrad]	2.6	1.8			13	5.0		
a_γ [mrad]	0.33	0.25			0.38	0.13		

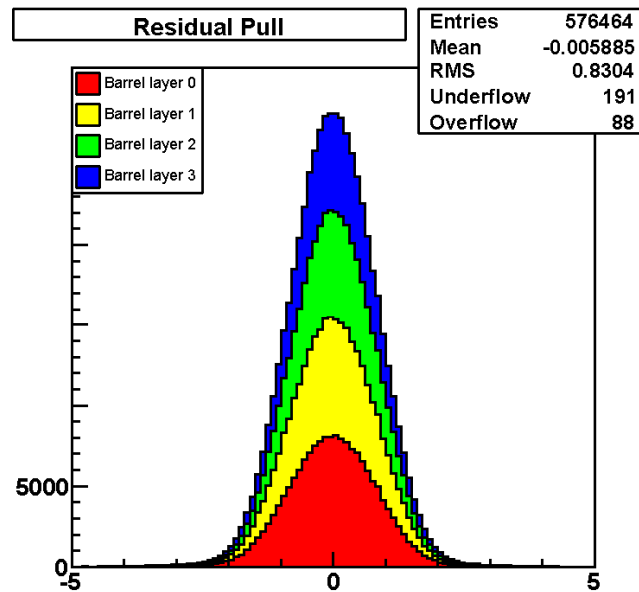
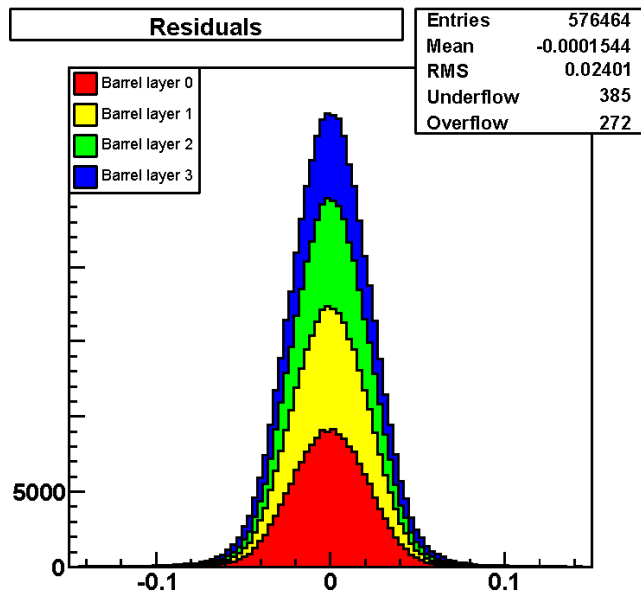


Comparison release 10.5.0 vs 11.0.3

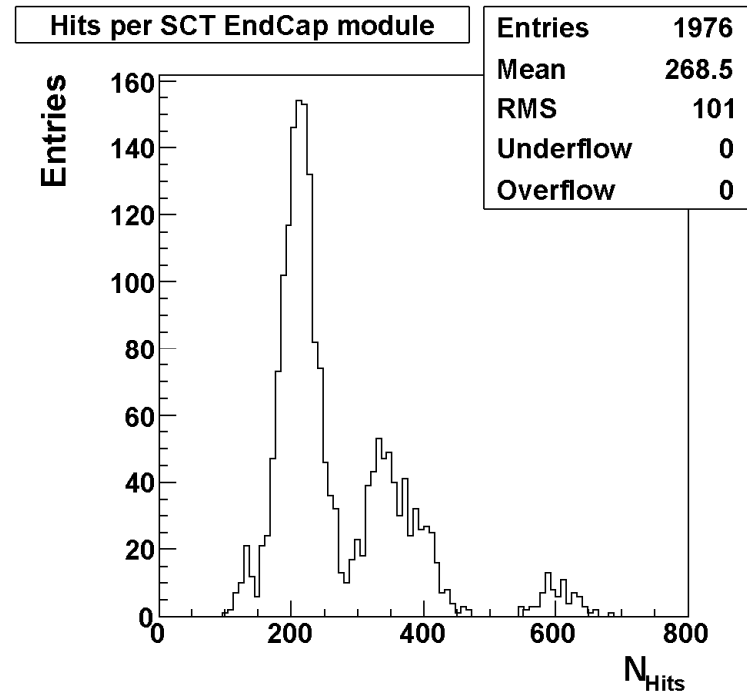
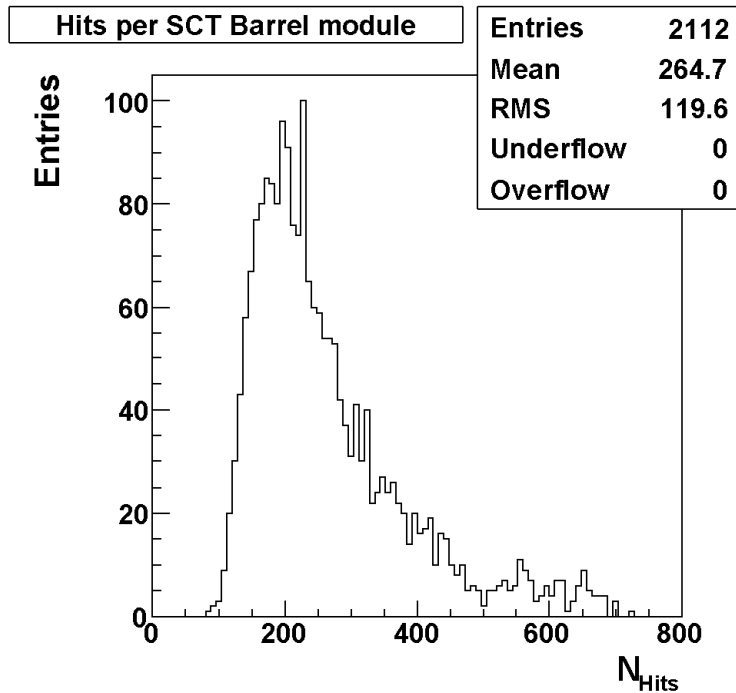
10.5.0



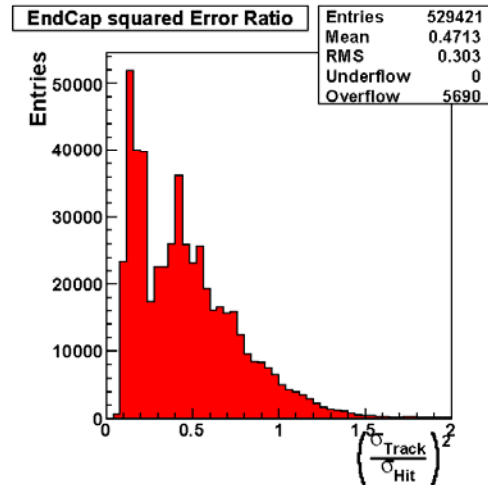
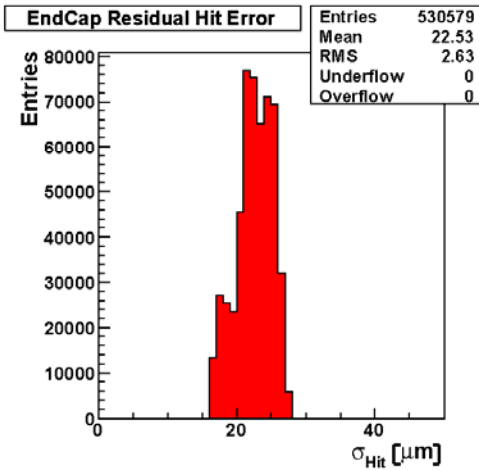
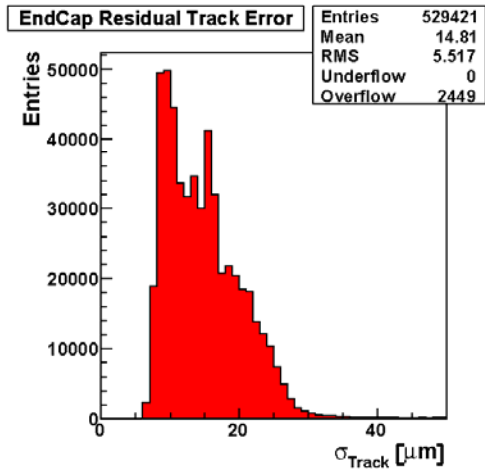
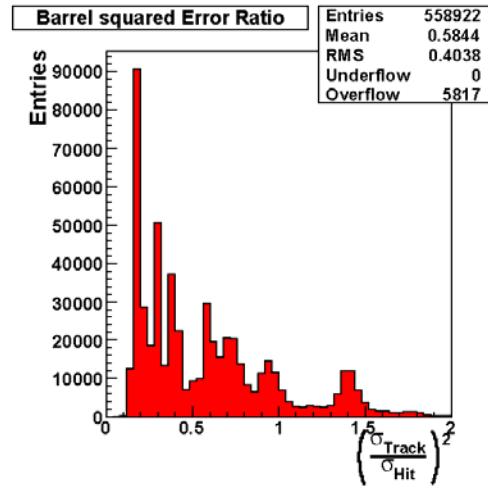
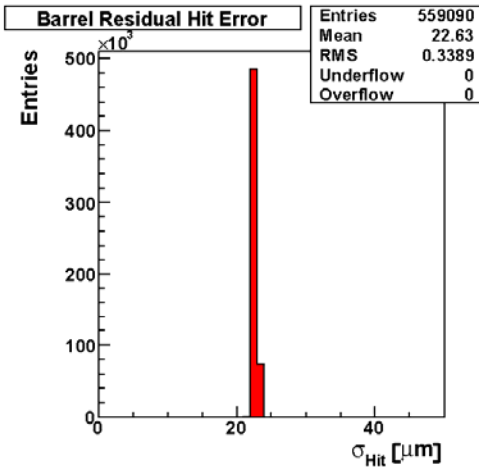
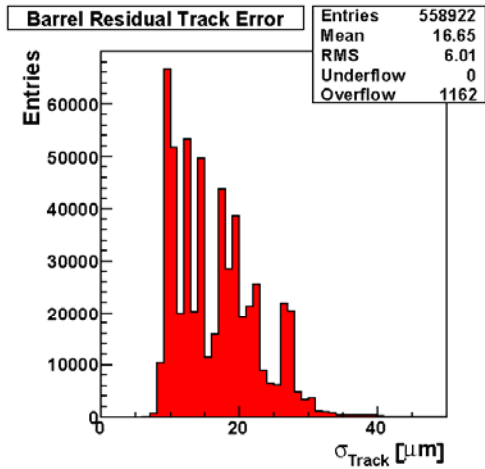
11.0.3



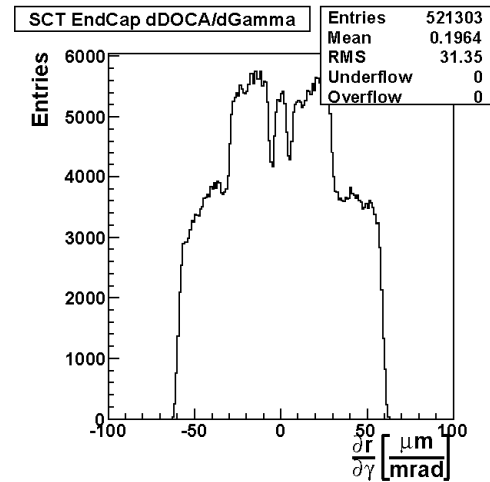
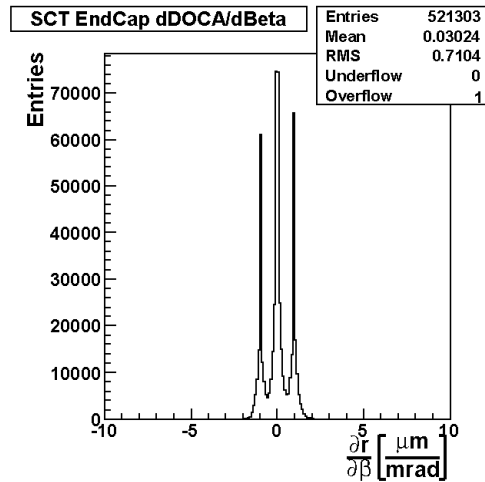
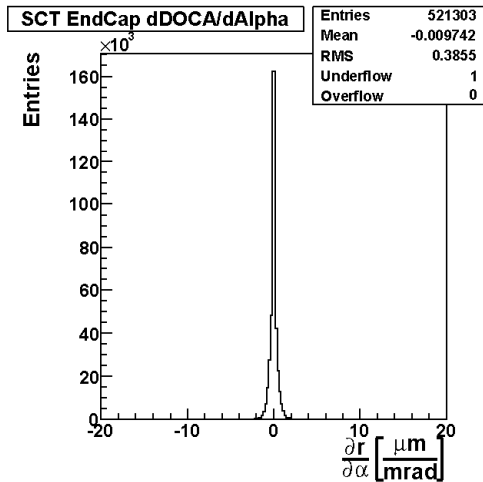
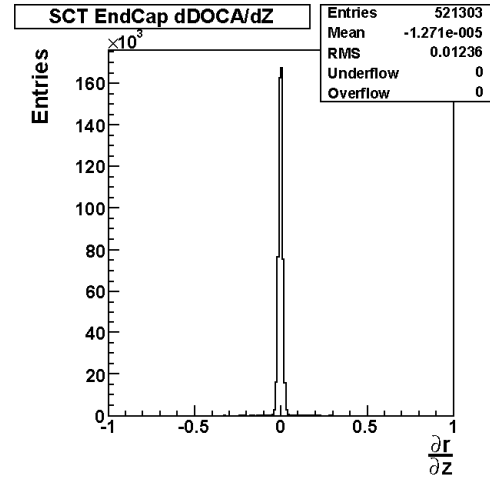
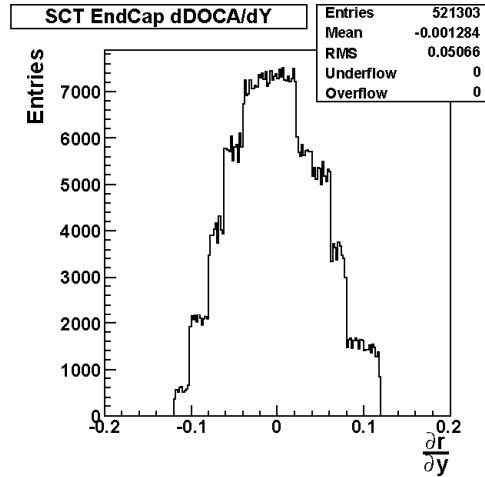
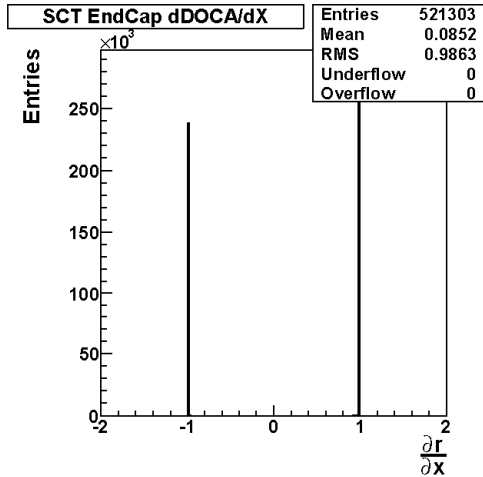
Substructure of various plots (1)



Substructure of various plots (2)



Substructure of various plots (3)



Substructure of various plots (4)

