

2011 Alignment. Status report.

Nastja Grebenyuk

Tuesady Meeting
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Baseline alignment for 2011 data for all 5 fb^{-1} :

- using all peak cosmics available
- NOT using deco mode cosmics
- using peak cosmics with $B = 0 \text{ T}$
- switch on local y in TID/TEC (as in mp1320)

[/mp1321/jobData/jobm](#)

Following variations of the baseline alignment:

- without the field-off cosmics; [/mp1321/jobData/jobm1](#)
- add the deco cosmics; [/mp1324/jobData/jobm](#)
- switch off the local y parameters of TID/TEC modules everywhere except in TEC R7; [/mp1325/jobData/jobm](#)

Alignment sample sizes

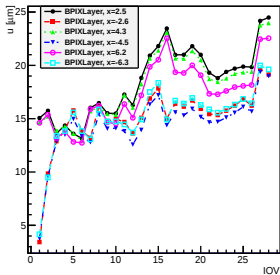
Comparison with the 2012 alignment sample sizes:

New 2011:	2012 alignment (mp1260)
Isolated muons: 4.5146729e+07	1.455171e+07
Min bias: 4 864 184	7 119 625
Peak cosmics: 3 275 189($B \neq 0$) + 106075($B = 0$)	1 499 282
μ from Z decay: 3 148 654	3 364 680
Deco cosmics: 3 450 864 ($B \neq 0$) + 185833($B = 0$)	

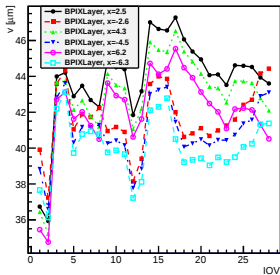
For minbias sample there is a limitation on maximum number of events

For isolated μ there is such limitation only in one of the variations which uses deco cosmics data

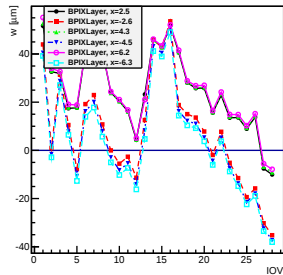
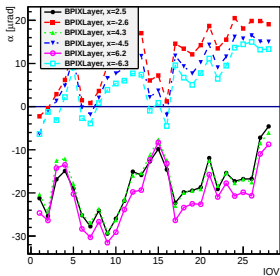
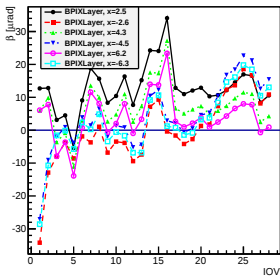
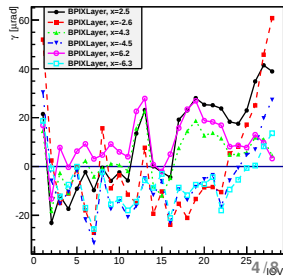
u IOVs: BPIX, hier. level 1



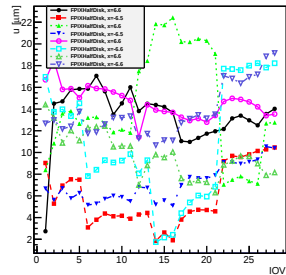
v IOVs: BPIX, hier. level 1



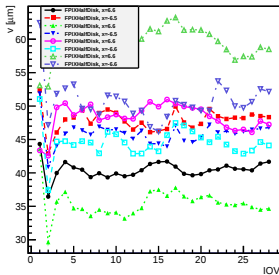
w IOVs: BPIX, hier. level 1

 α IOVs: BPIX, hier. level 1 β IOVs: BPIX, hier. level 1 γ IOVs: BPIX, hier. level 1

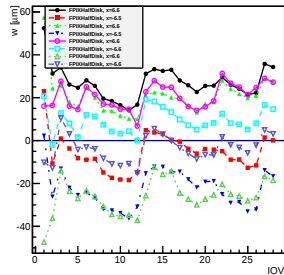
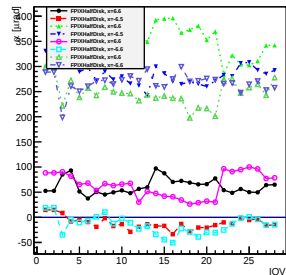
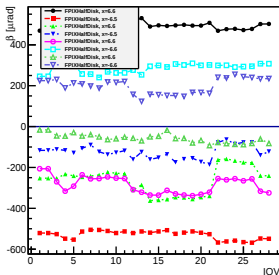
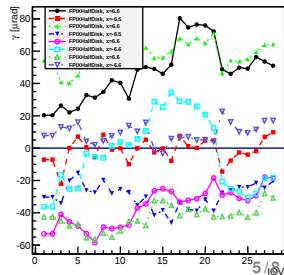
u IOVs: FPIX, hier. level 1



v IOVs: FPIX, hier. level 1



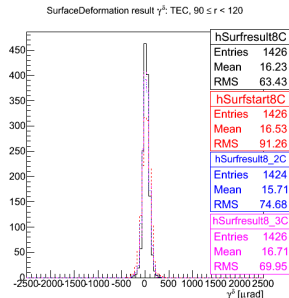
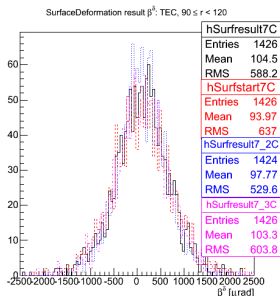
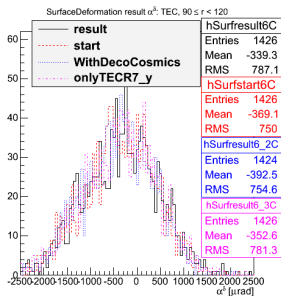
w IOVs: FPIX, hier. level 1

 α IOVs: FPIX, hier. level 1 β IOVs: FPIX, hier. level 1 γ IOVs: FPIX, hier. level 1

TEC Bows and Kinks

Rotations of the Two TEC R7 Sensors

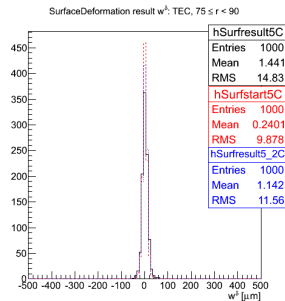
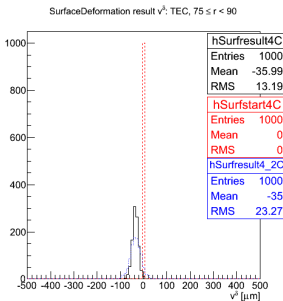
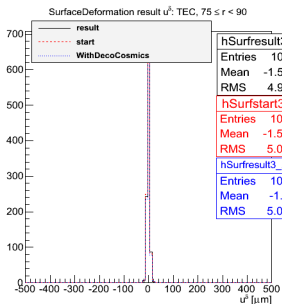
Current 2011, Baseline,
Baseline + deco cosmics, Baseline + y only in TEC R7



TEC Bows and Kinks

Relative Shifts of the Two TEC R6 Sensors

Current 2011, Baseline,
Baseline + deco cosmics



Iterations

- Iteration on the baseline alignment is in progress
- Repeat baseline alignment using one of its IOV as a starting geometry
(ex. Alignments_4, Deformations_4)