

Alignment with beam halo

- Based on 20X beam halo Monte Carlo
- Track collection: ALCARECOTkAlBeamHalo
- Track selection:
 - $ptMin = 0.$
 - $etaMin = -999.$ / $etaMax = +999.$
 - $nHitMin = 8$ / $nHitMin2D = 2$
 - $chi2nMax = 50.$
 - $minMultiplicity = 1$
- Number of events: 61873
- Nb. of selected tracks: 22634
- Nb. of used tracks: 22419

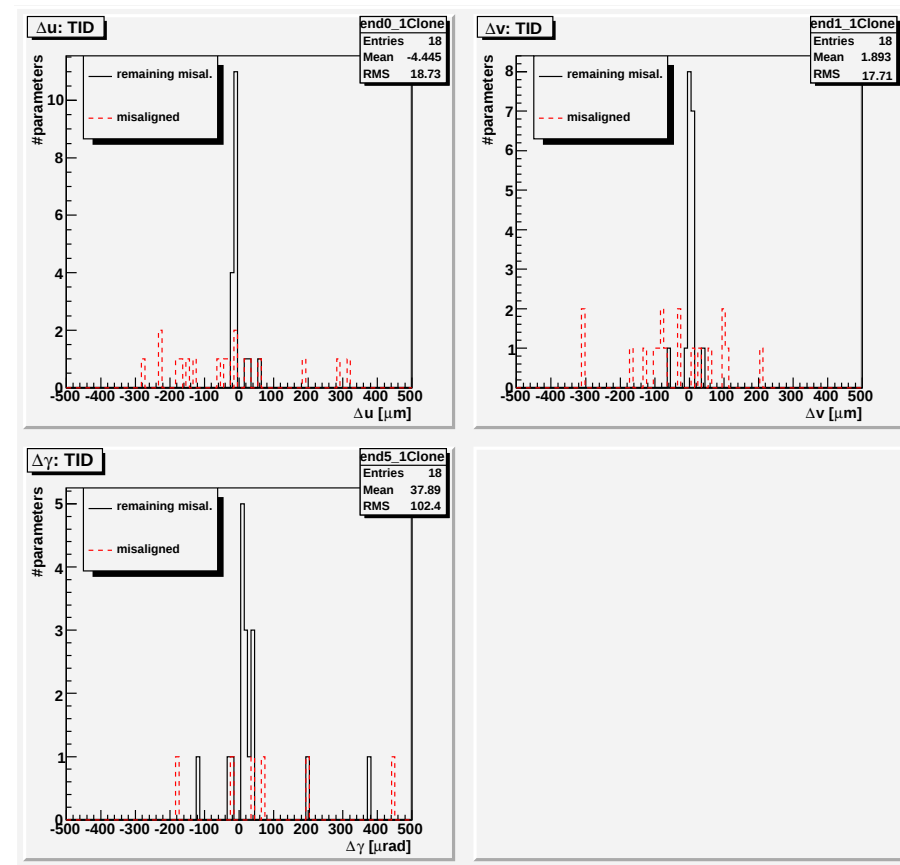
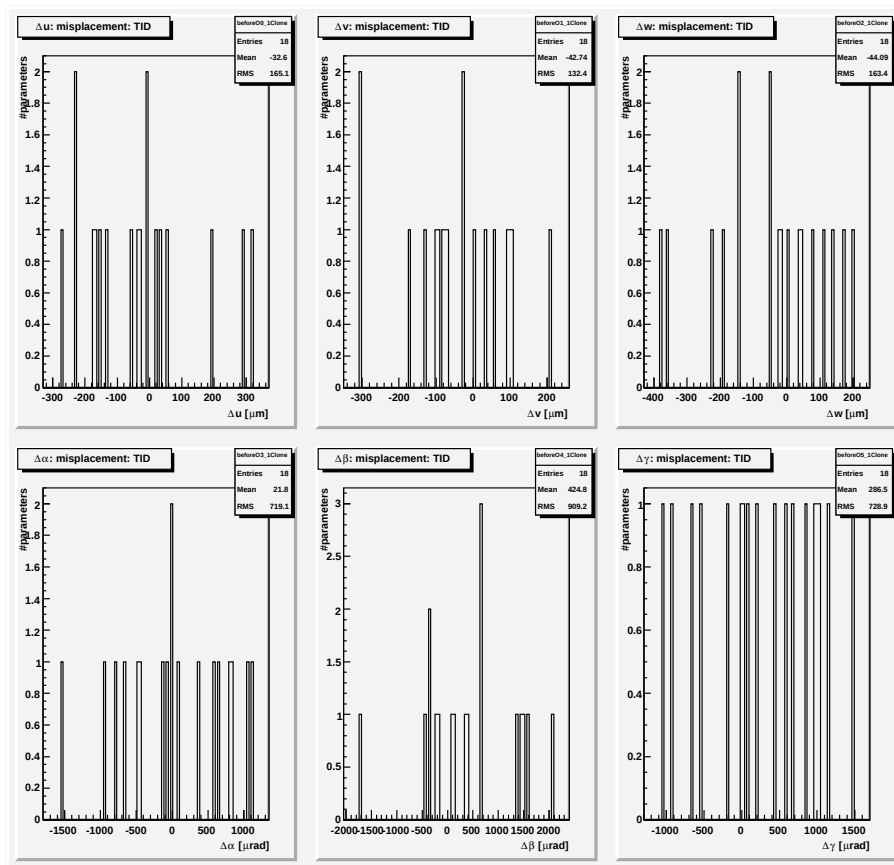
Initial geometry and parameters

- 'TIDRingsLayers13,110001', 'TECPetalsLayers11,ff000f', 'TECPetalsLayers24,110001', 'TECPetalsLayers55,ff000f', 'TECPetalsLayers69,110001'}
- Ideal geometry + custom misalignment
 - TIDRings & TECPetals as in 10pbScenario
 - TIDRings: 185 μ m, 850 μ rad
 - TECPetals: 70 μ m, 30 μ rad

TID

- Starting geometry:

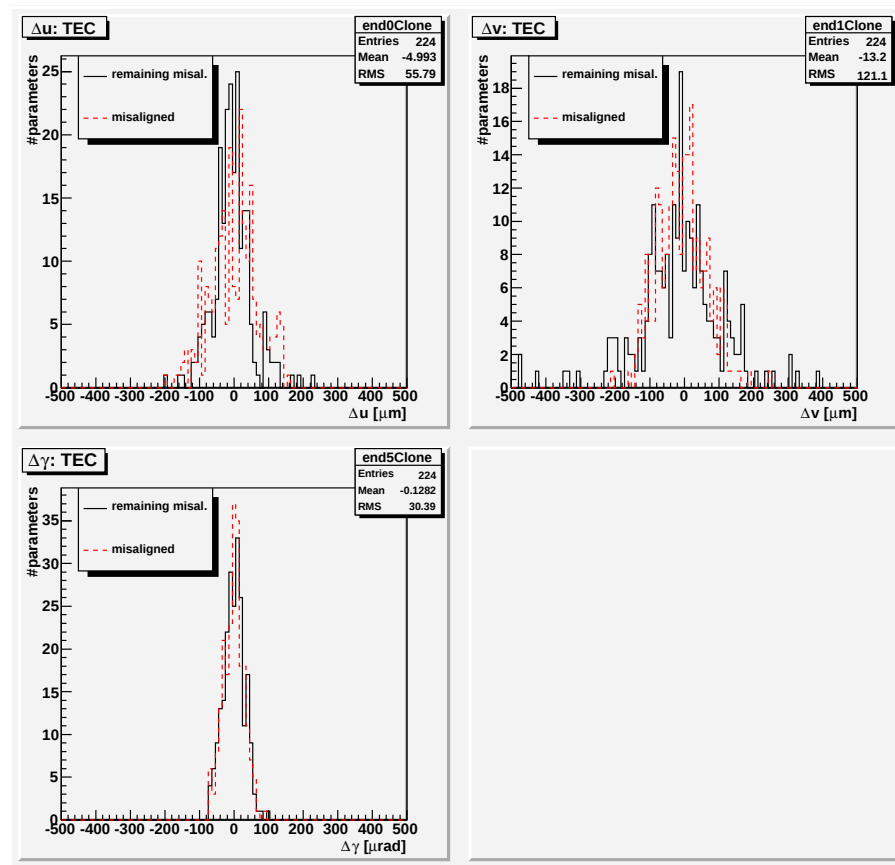
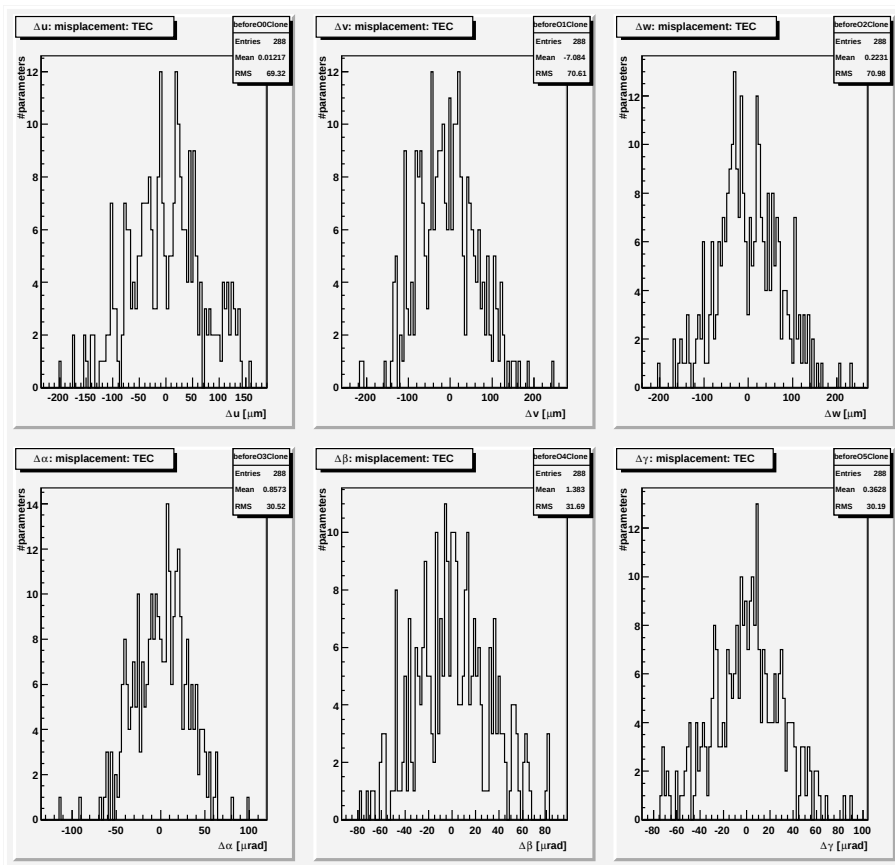
- Residual misalignment:



TEC

- Starting geometry:

- Residual misalignment:



Comments

- MP is able to align back the TID
- TEC is left misaligned, further checks are ongoing:
 - enlarge the initial misalignment
 - increase number of input tracks (by loosening cuts)
 - do not apply misalignment to Layers that are fixed in the procedure
 - ...