

Particle Gun Studies

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First Iterations

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Setup

10 mio. events generated with particle gun
(Ideal conditions, design geometry, vertex smearing)

Simulated: 5 mio. pions / 5 mio. antipions

Reconstructed (exactly 1 track): 4,275,323 / 4,273,696

HighPurity: 4,254,289 (85.1%) / 4,252,279 (85.0%)

Misalignment introduced, refitted without outlier rejection

Gaussian smearing of localX of all TOB modules with $\sigma=20\mu\text{m}$

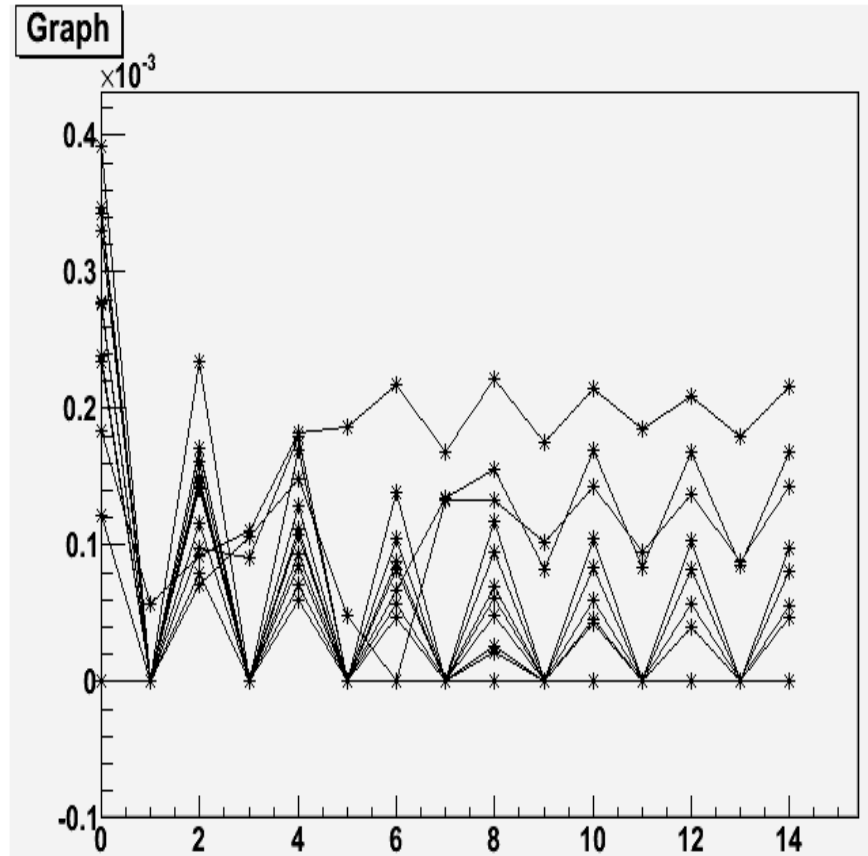
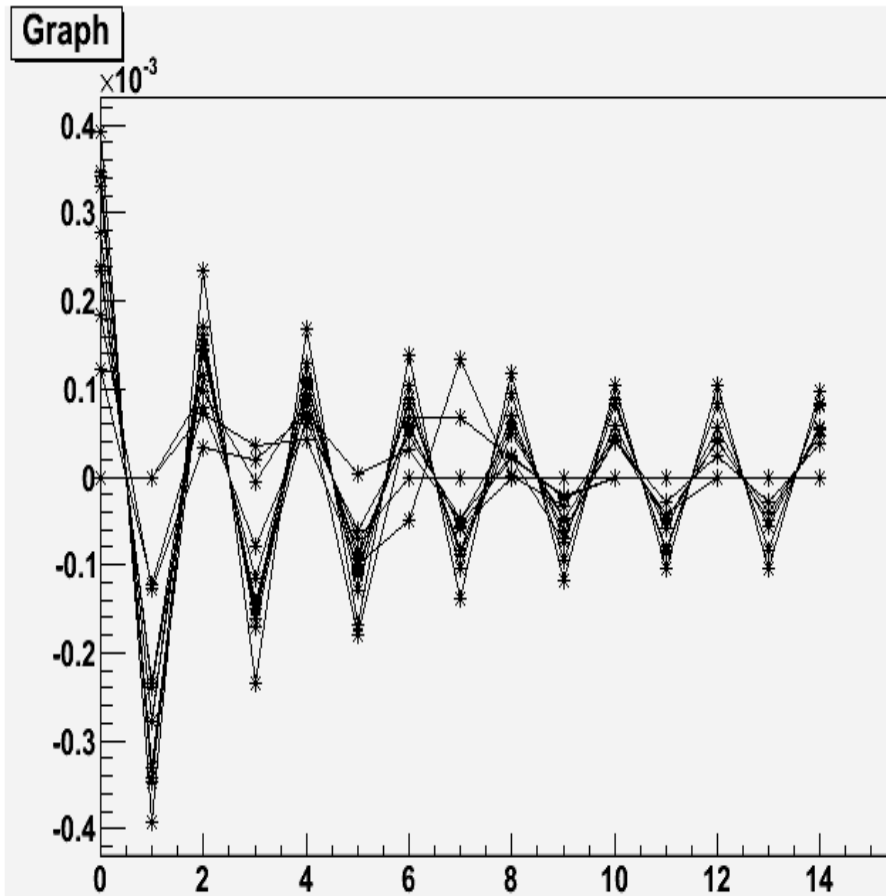
Overview

2 different iteration approaches

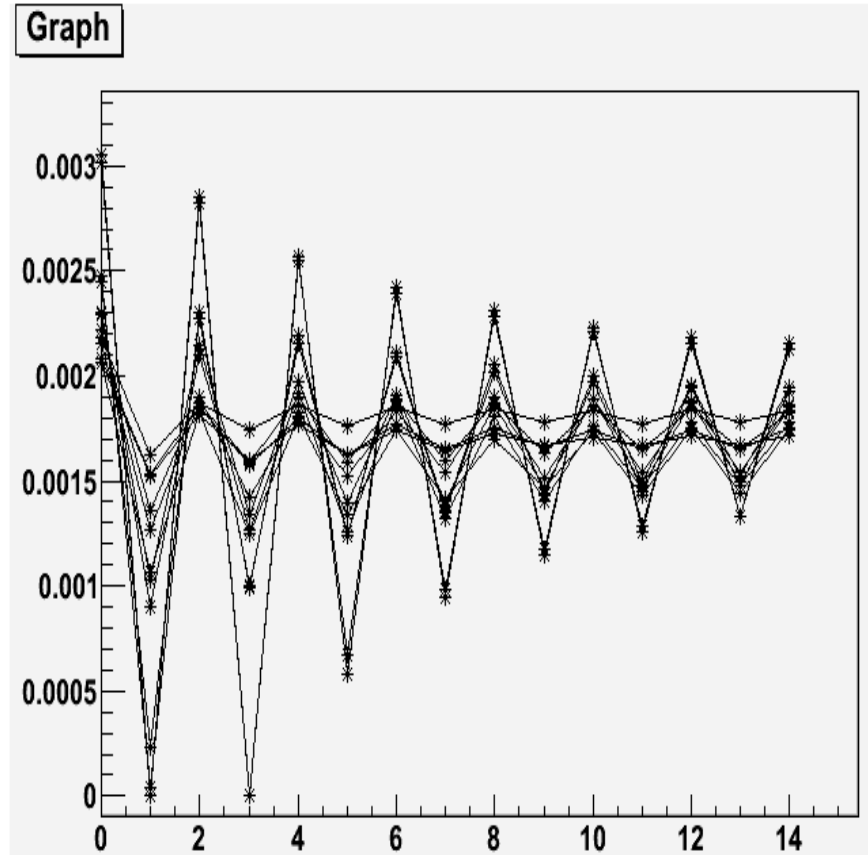
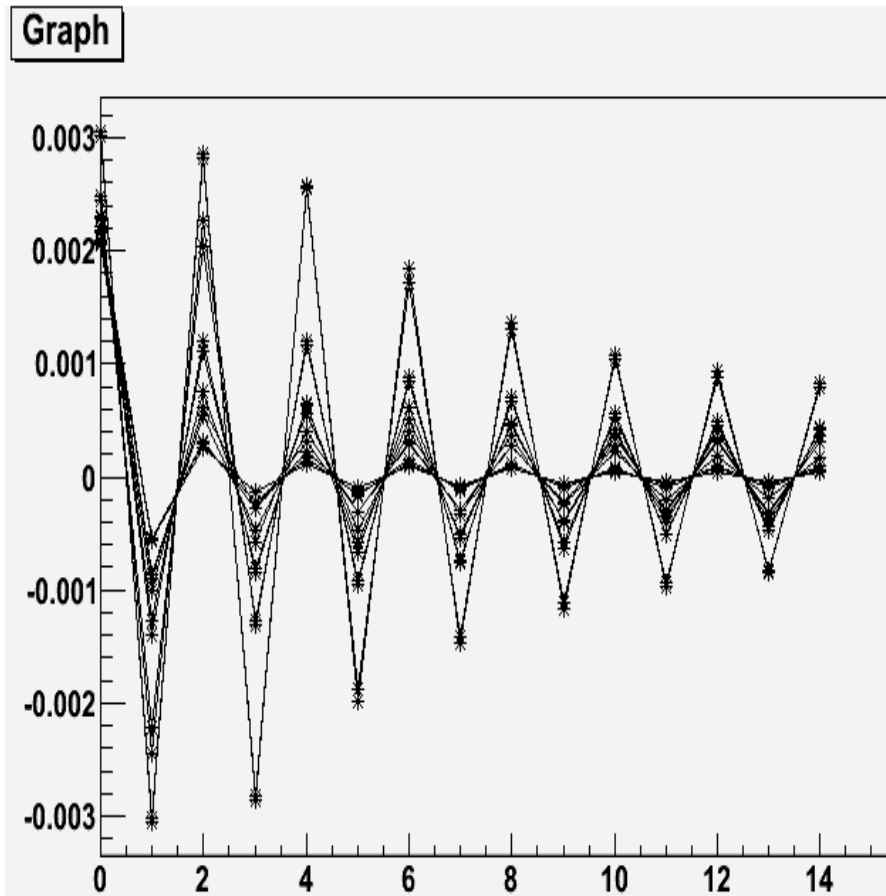
Correction per step without scaling – apply correction as estimated

Scale correction with factor 2

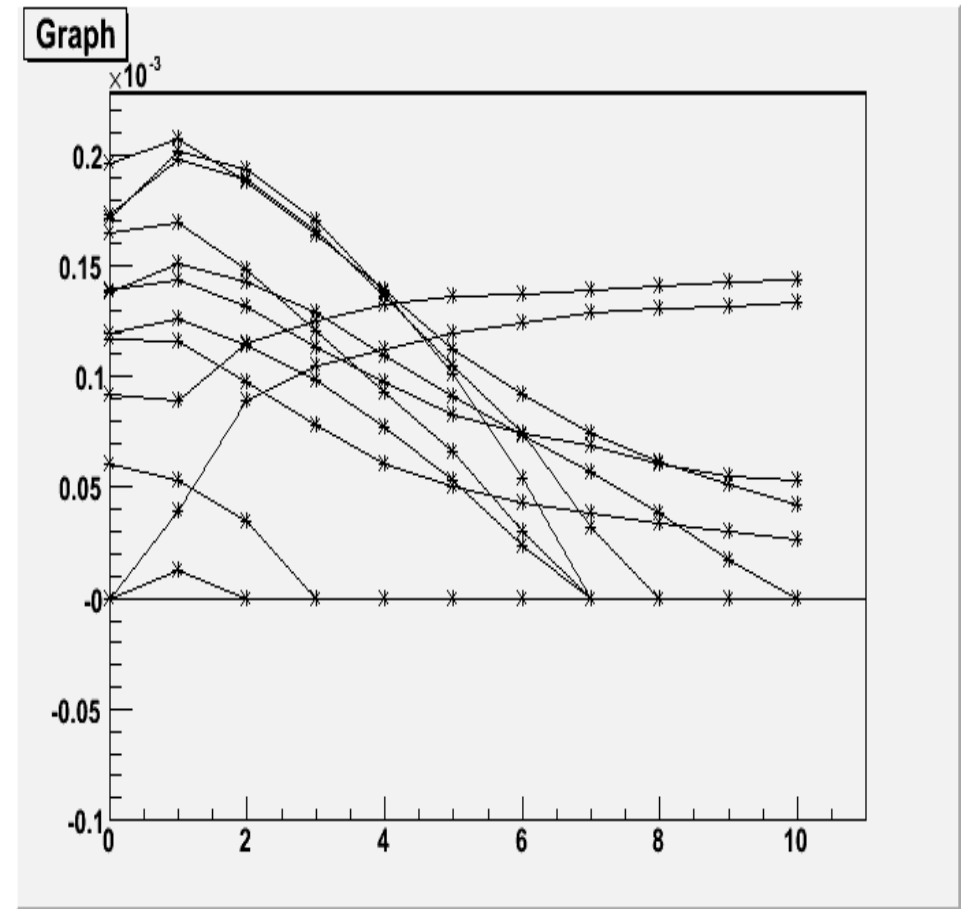
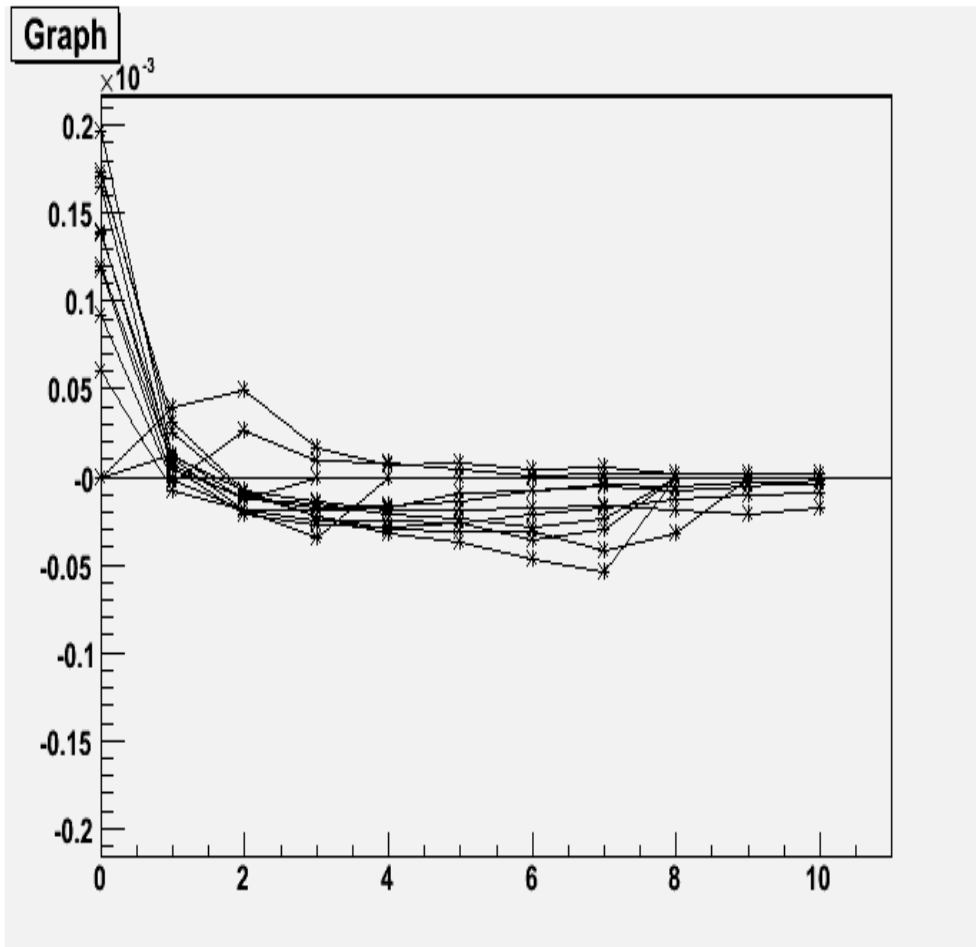
Iterations in TIB (w/o scaling)



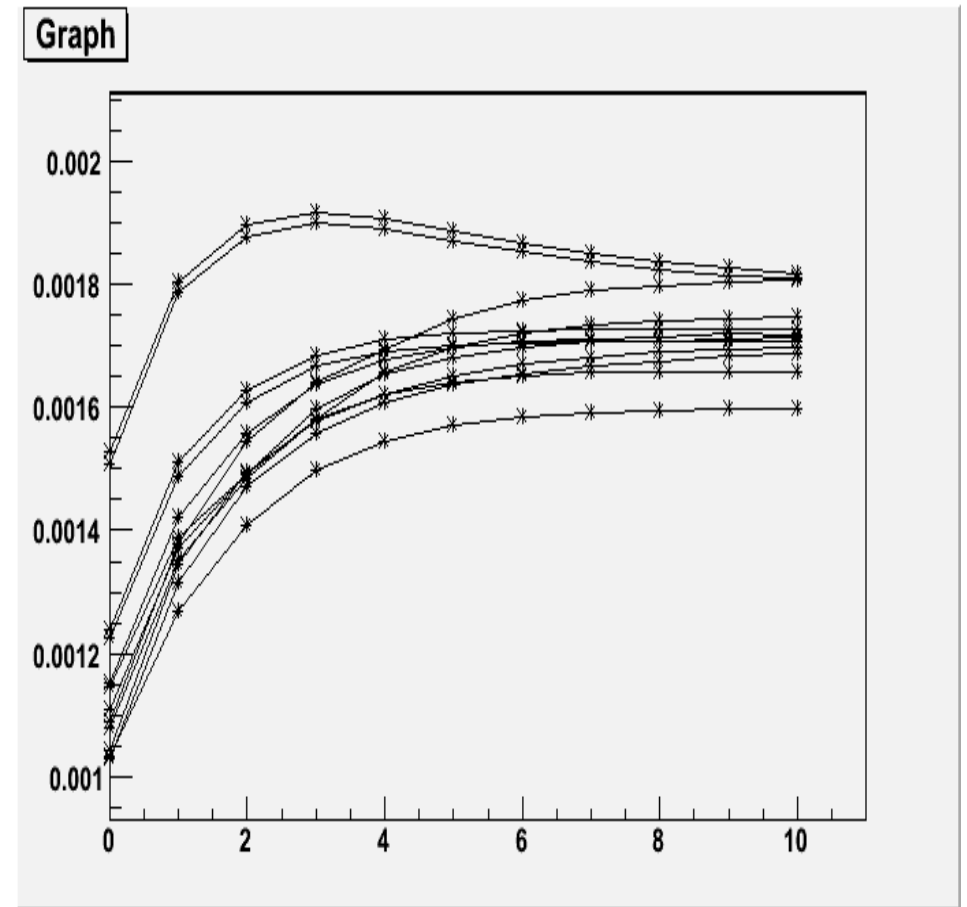
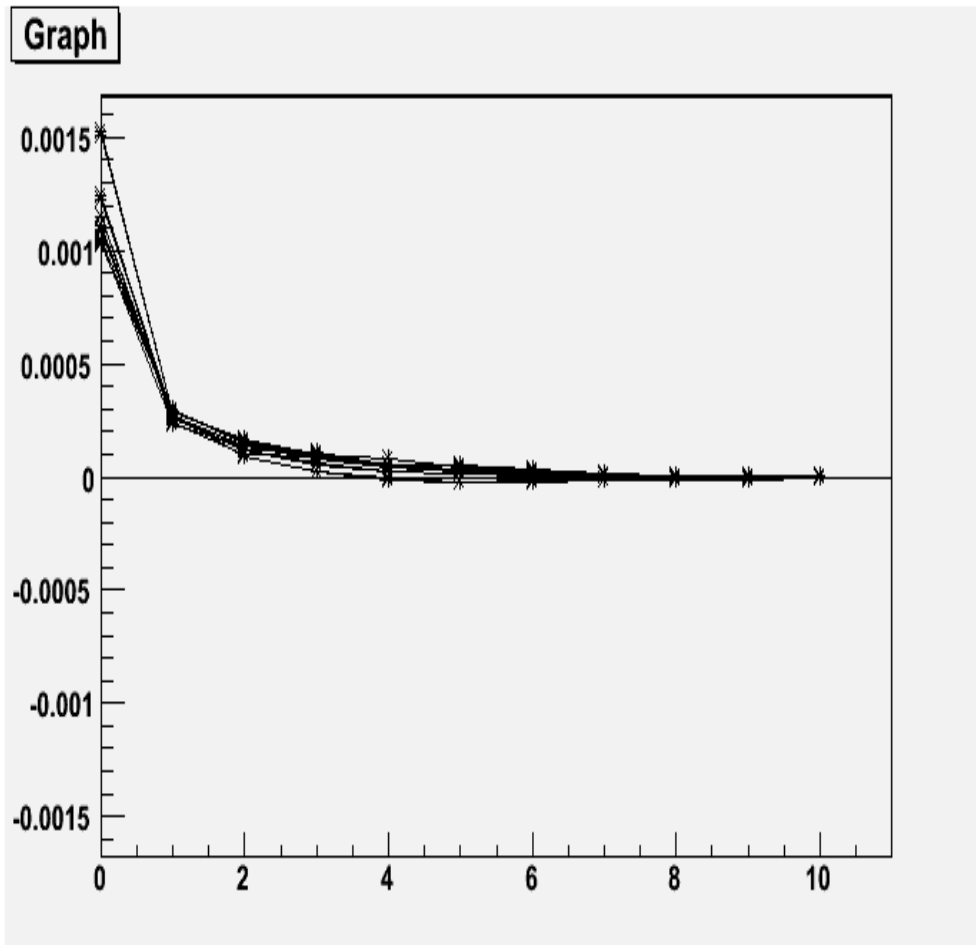
Iterations in TOB (w/o scaling)



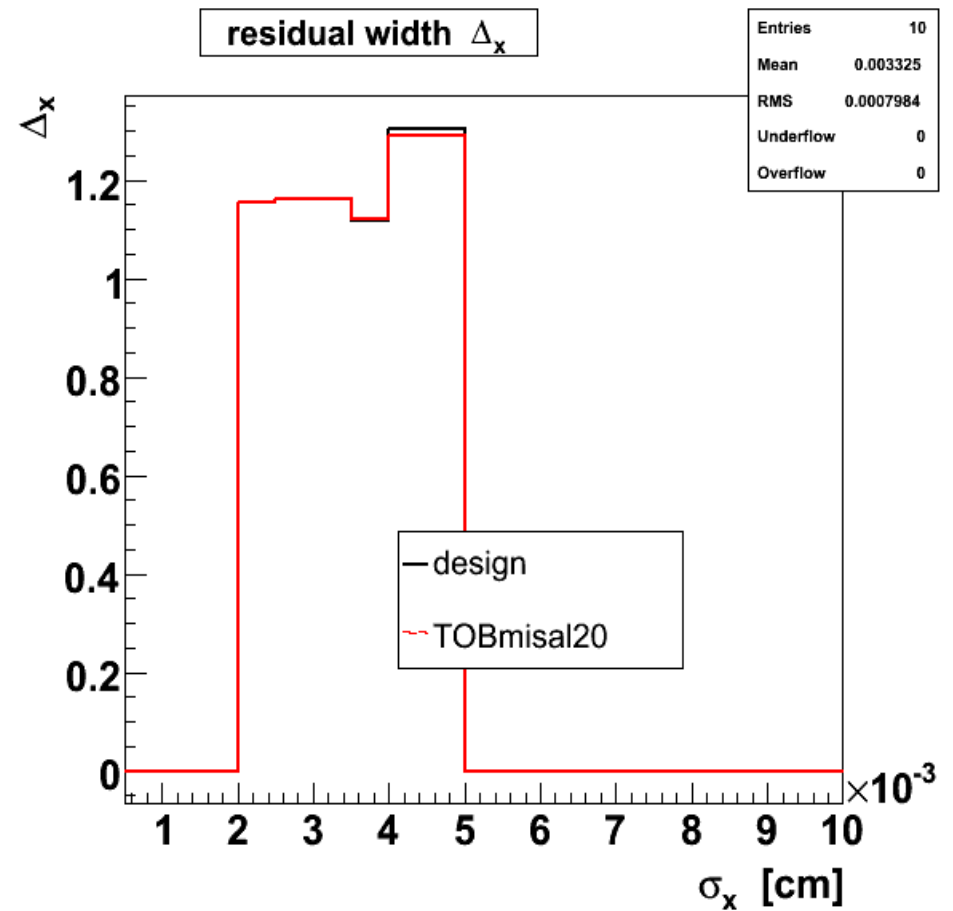
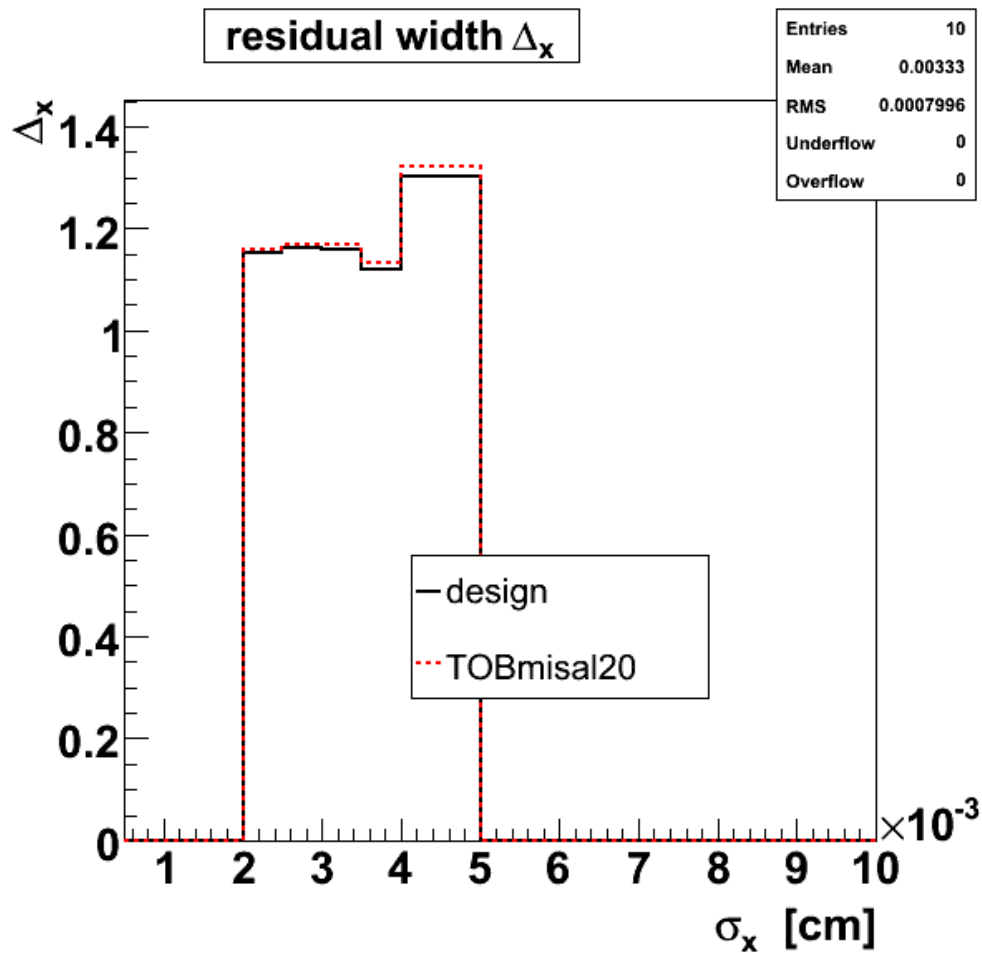
Iterations in TIB (scaling factor 0.5)



Iterations in TOB (scaling factor 0.5)



Result in TIB layer 4 (scaling factor 0.5)



Result in TOB layer 1 (scaling factor 0.5)

