status of TB analysis

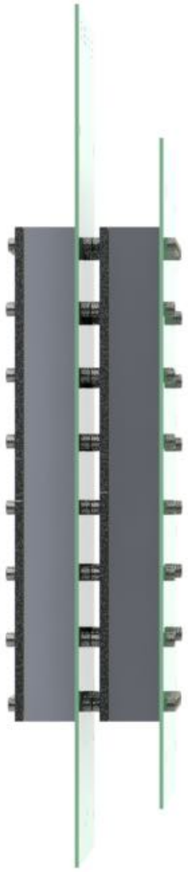
April-May 2023 (TIGER)

26/05/2023

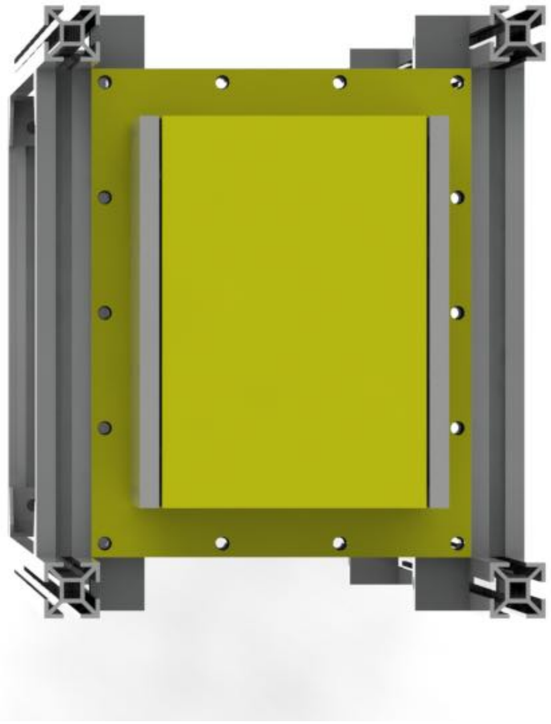
A.Zelenov

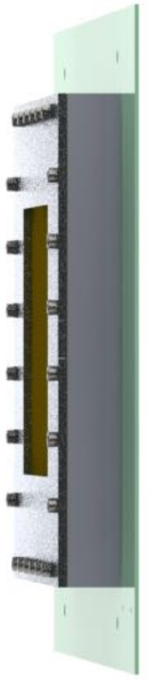
Setup

MM1



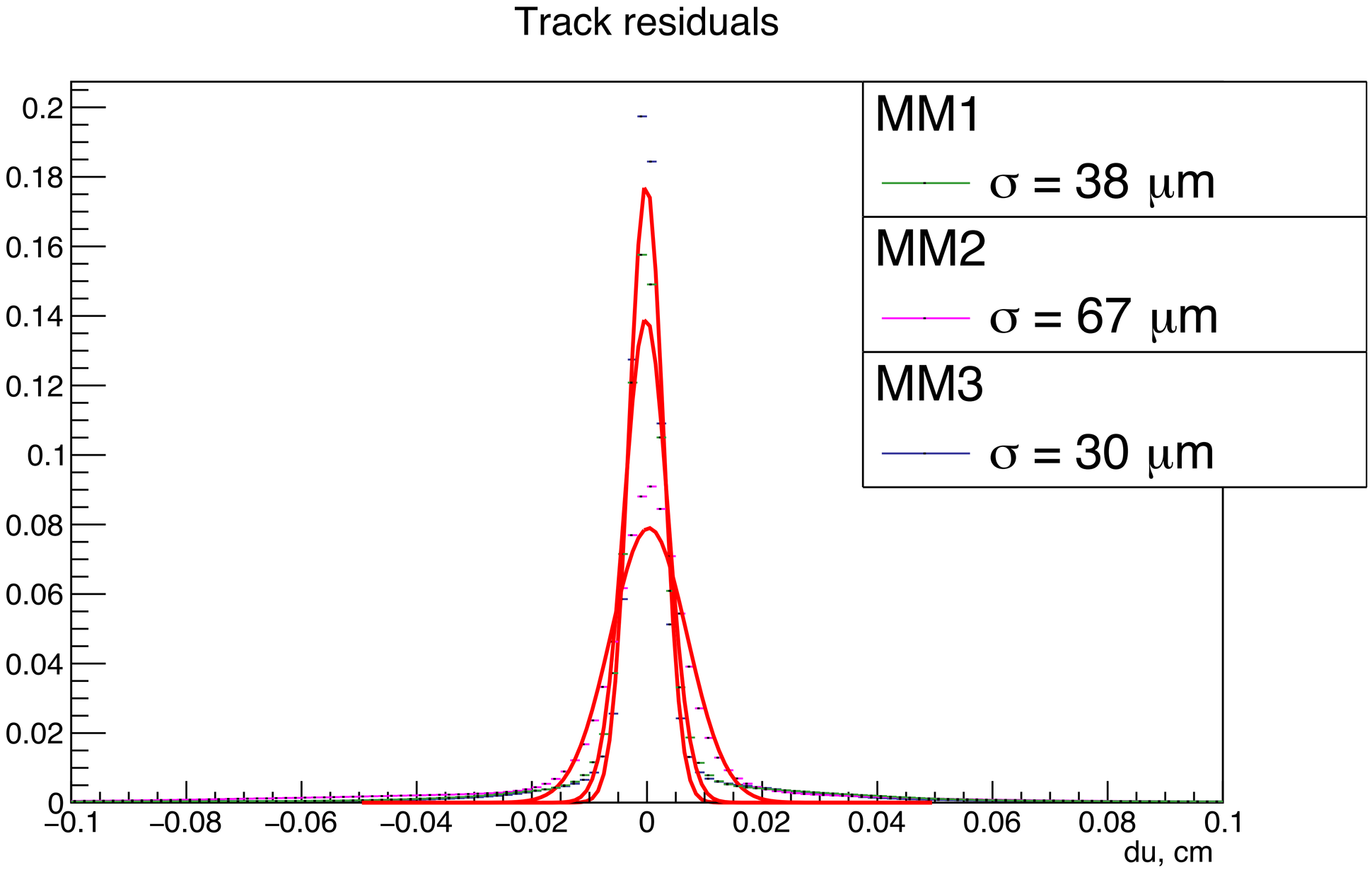
MM2



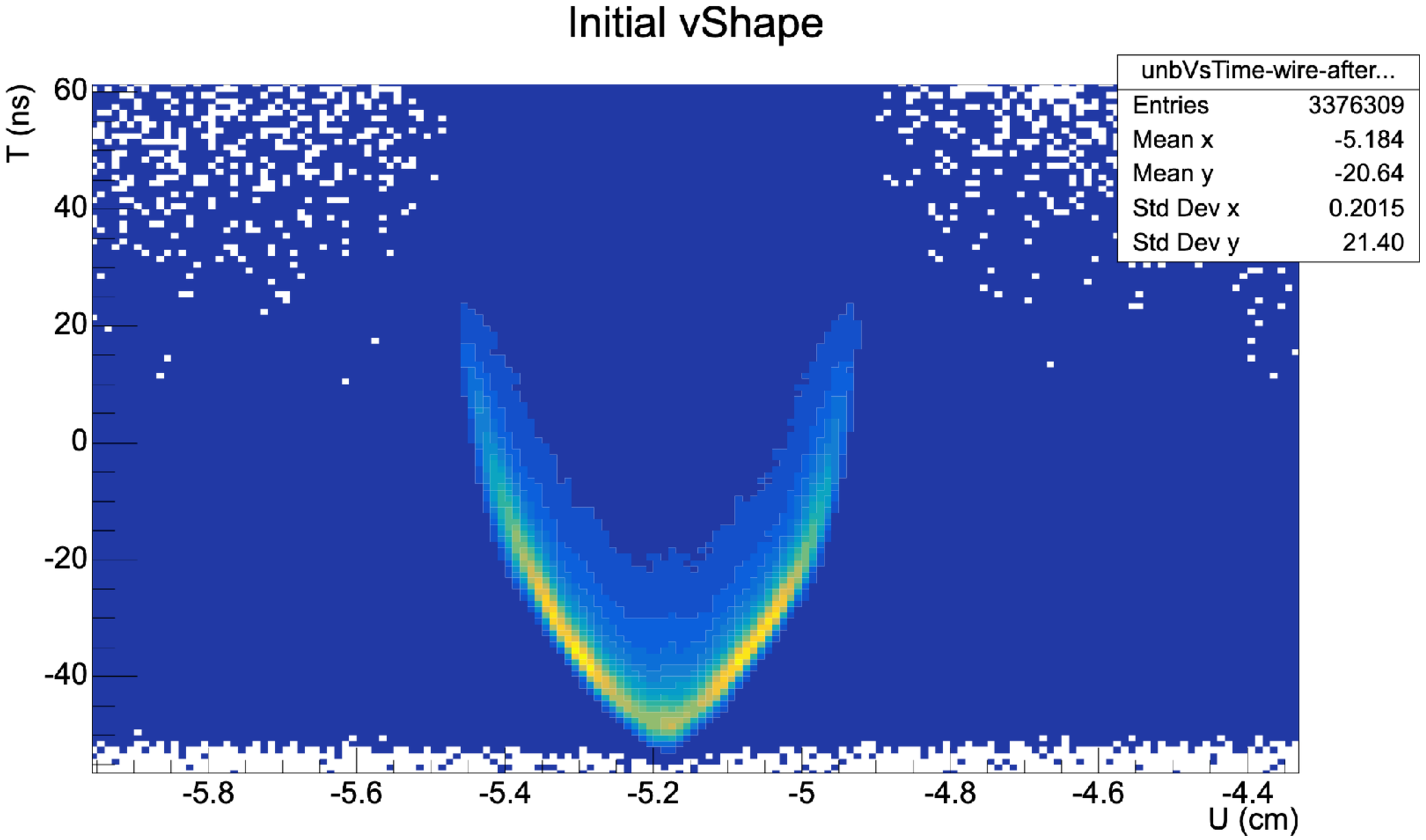


MM3

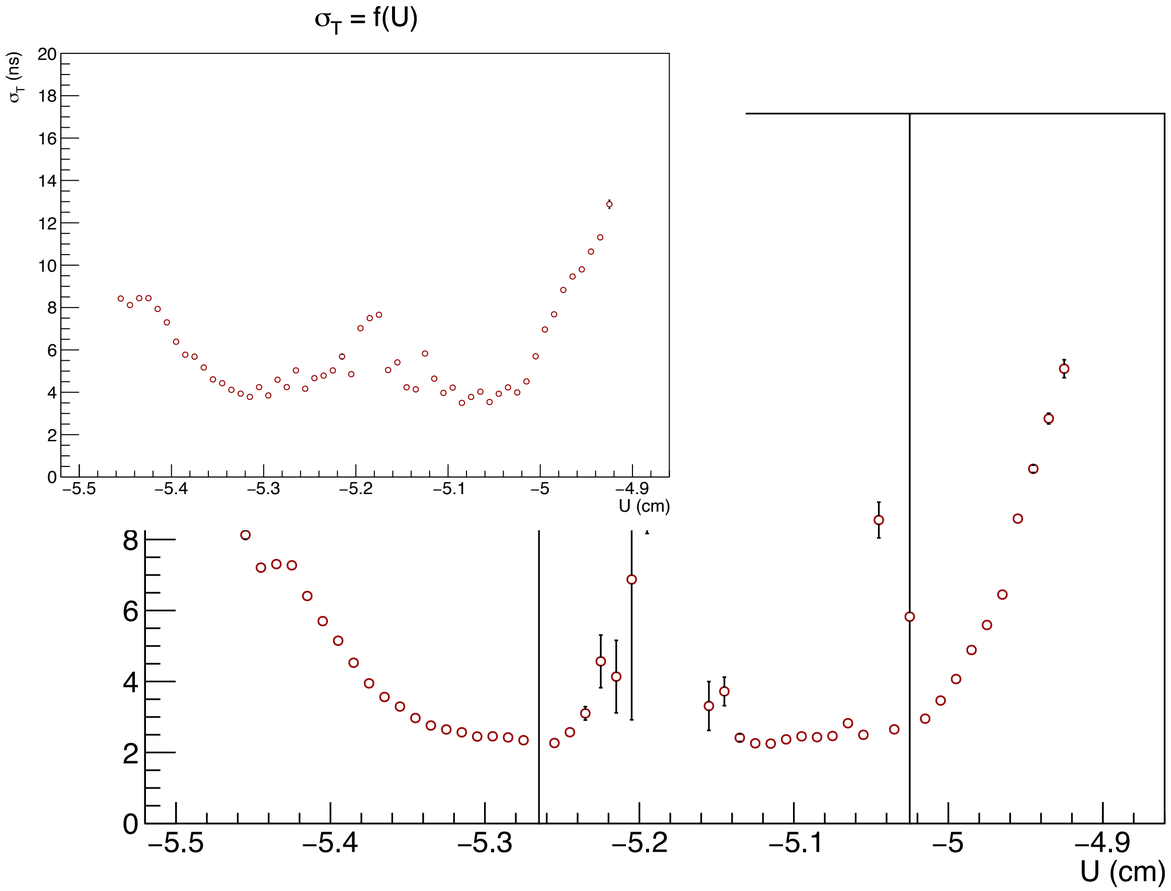
Residuals

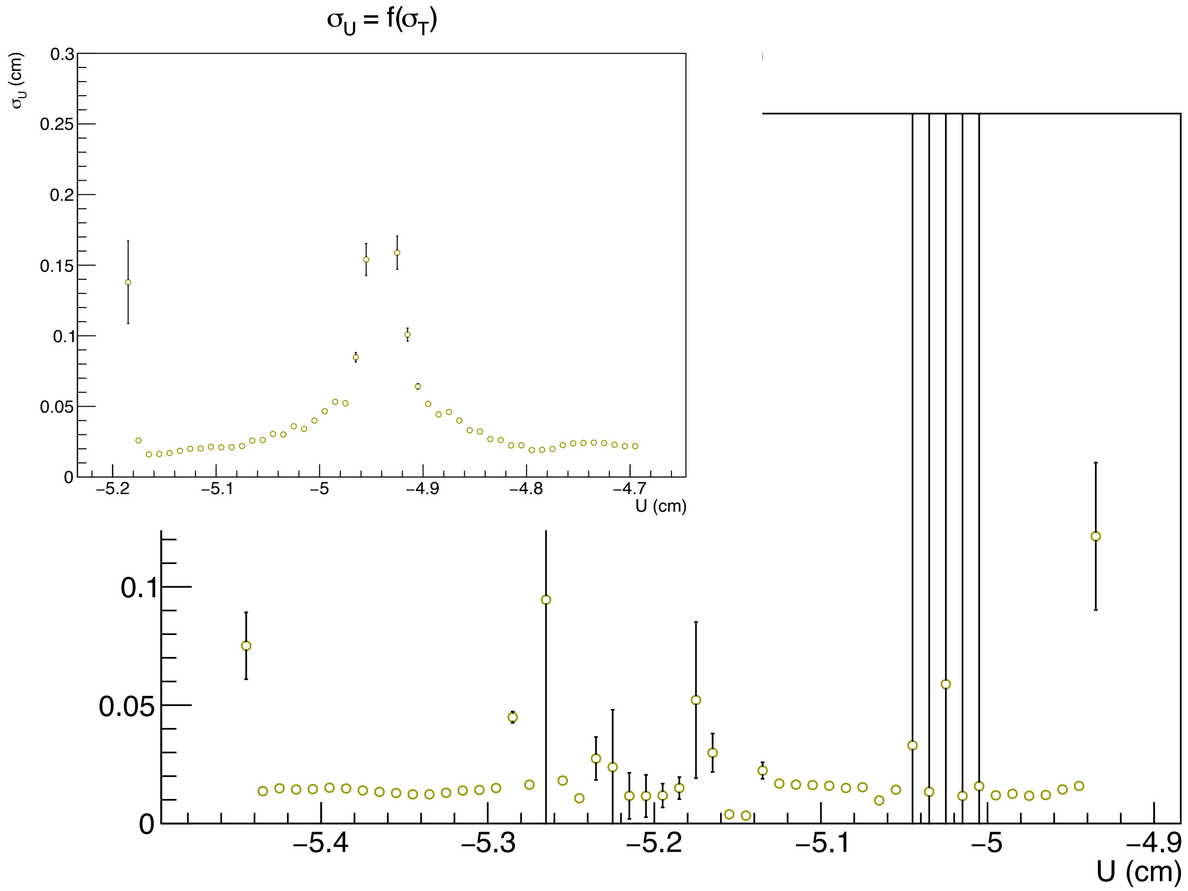

Track residuals
MM1
σ = 38 μm
MM2
σ = 67 μm
MM3
σ = 30 μm
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
–0.1
–0.08
–0.06
–0.04
–0.02
0
0.02
0.04
0.06
0.08
0.1
du, cm

Run 72: 5mm straw (№24)



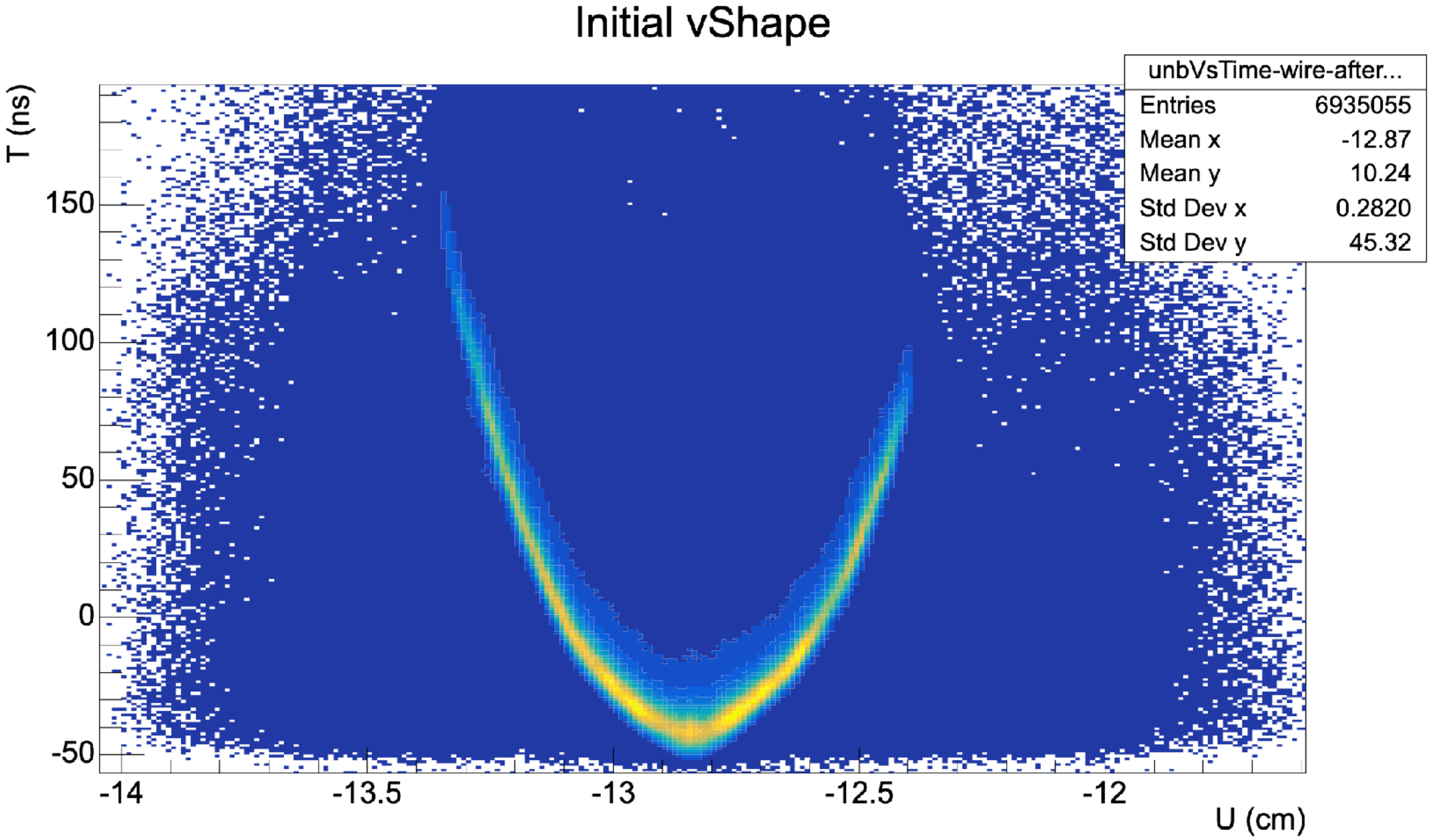
Run 72: 5mm straw (№24): CB vs Gauss



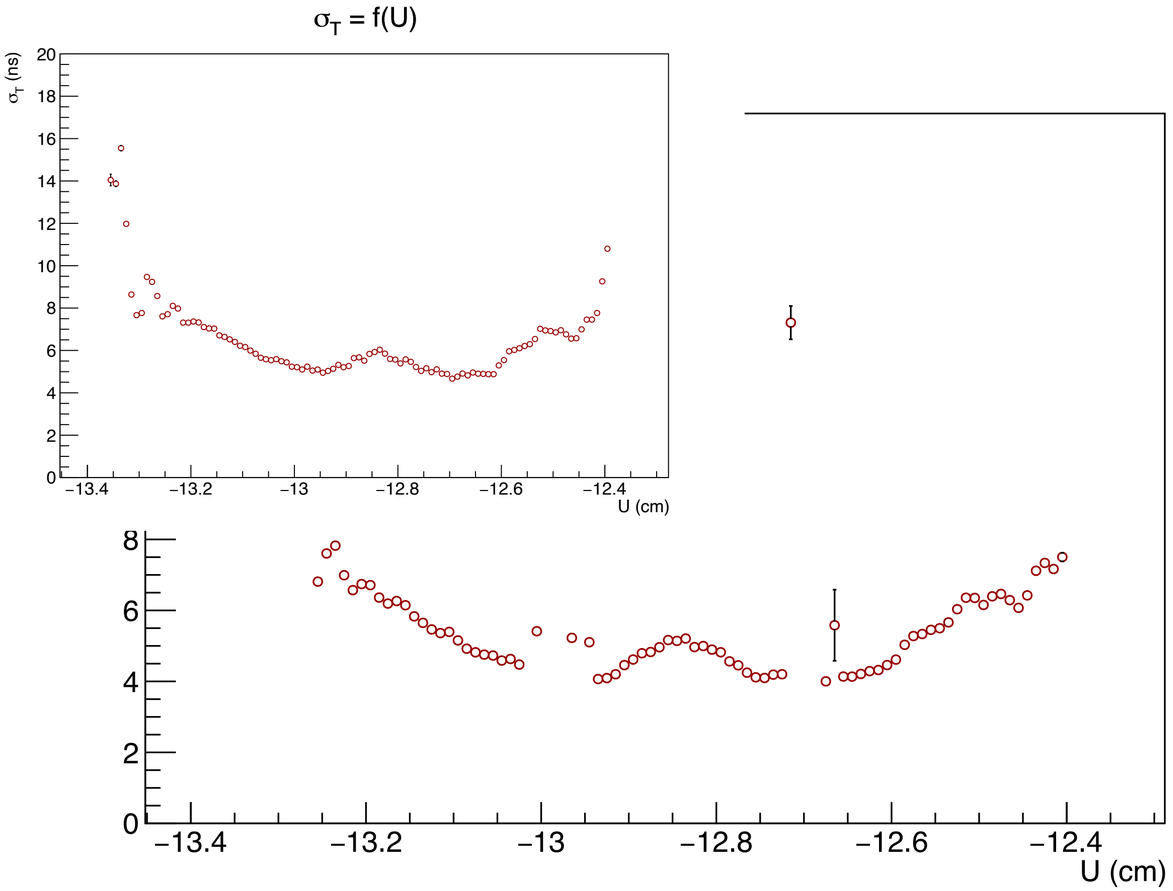


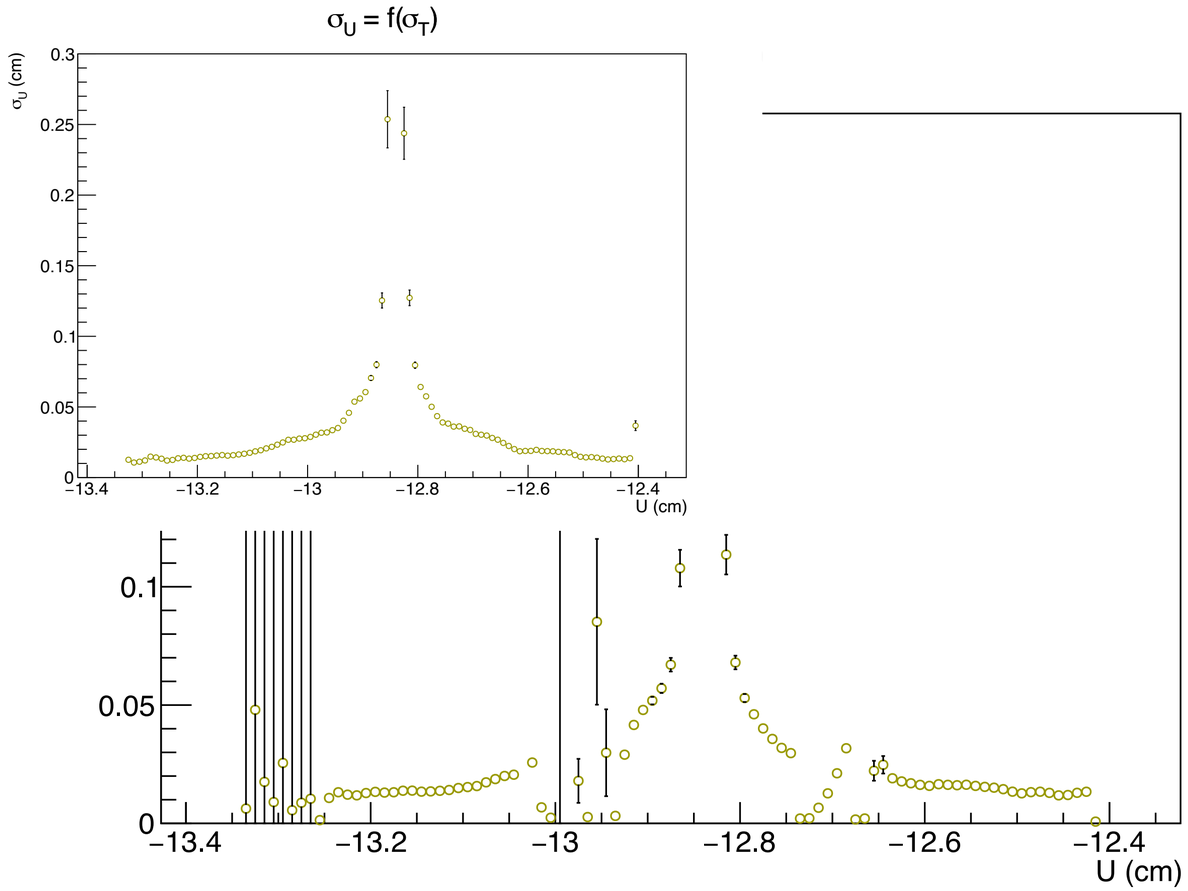
1. The weighted mean of *Coordinate resolution* distribution is **136 μm!**
2. The best time '*resolution*' is about **2 ns!**

Run 72: 10mm straw (№12)



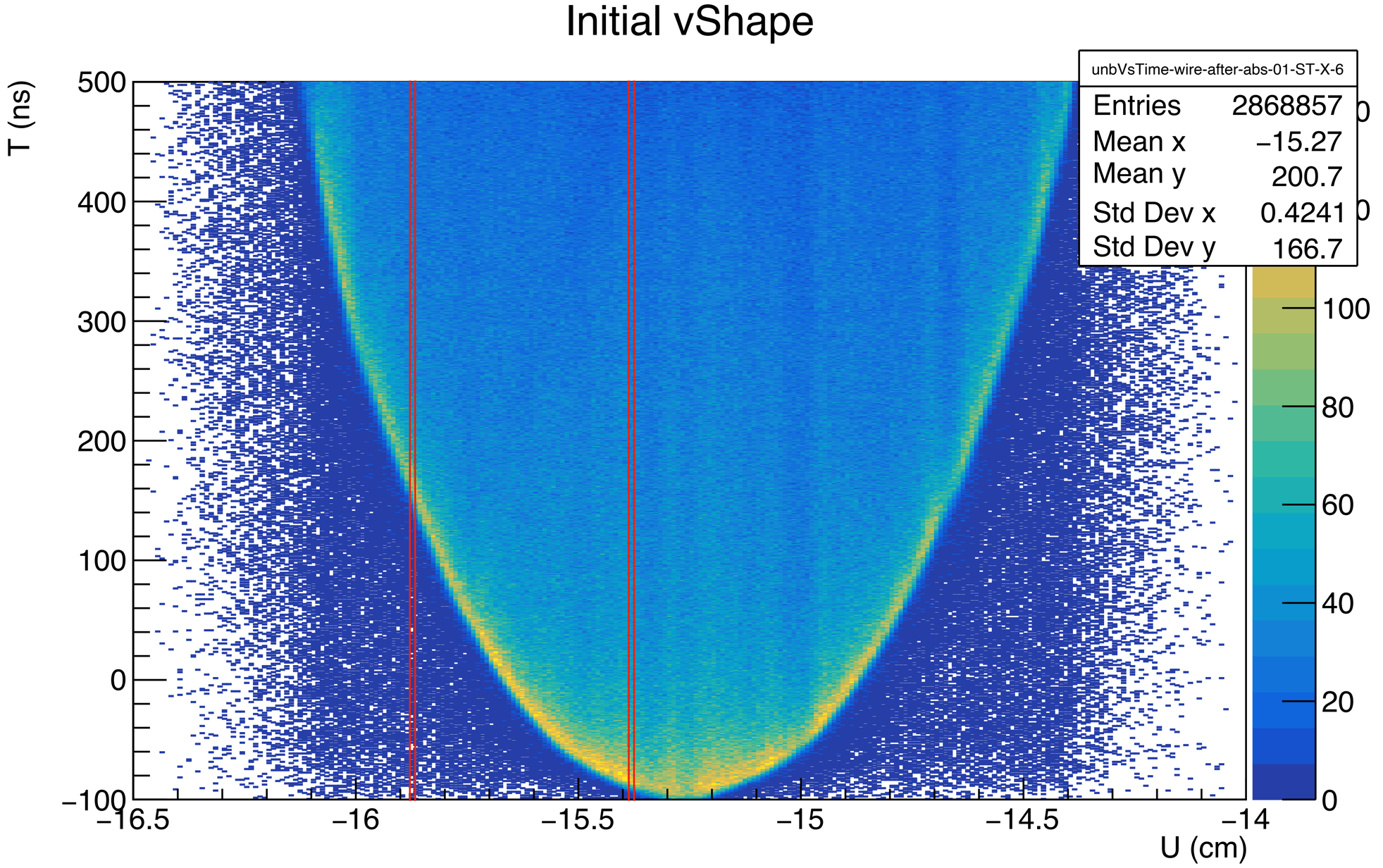
Run 72: 10mm straw (№12): CB vs Gauss



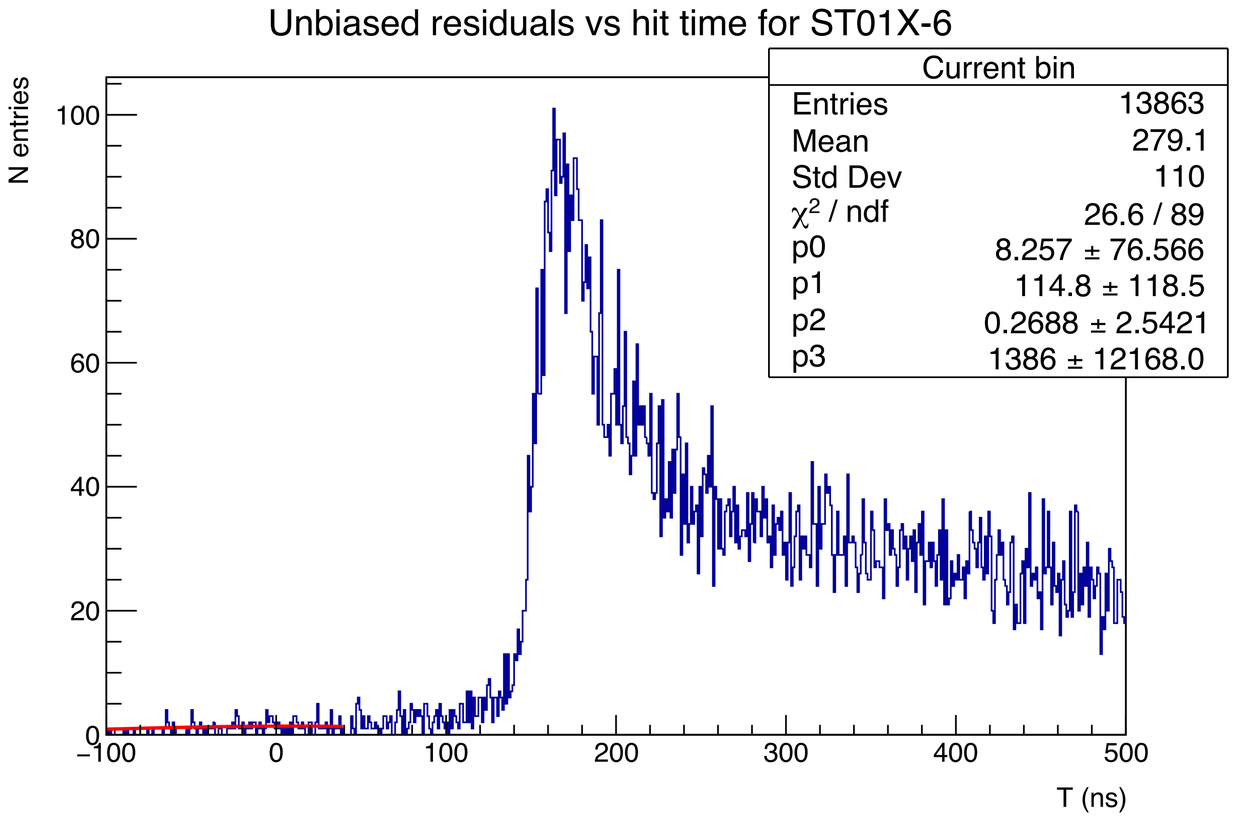


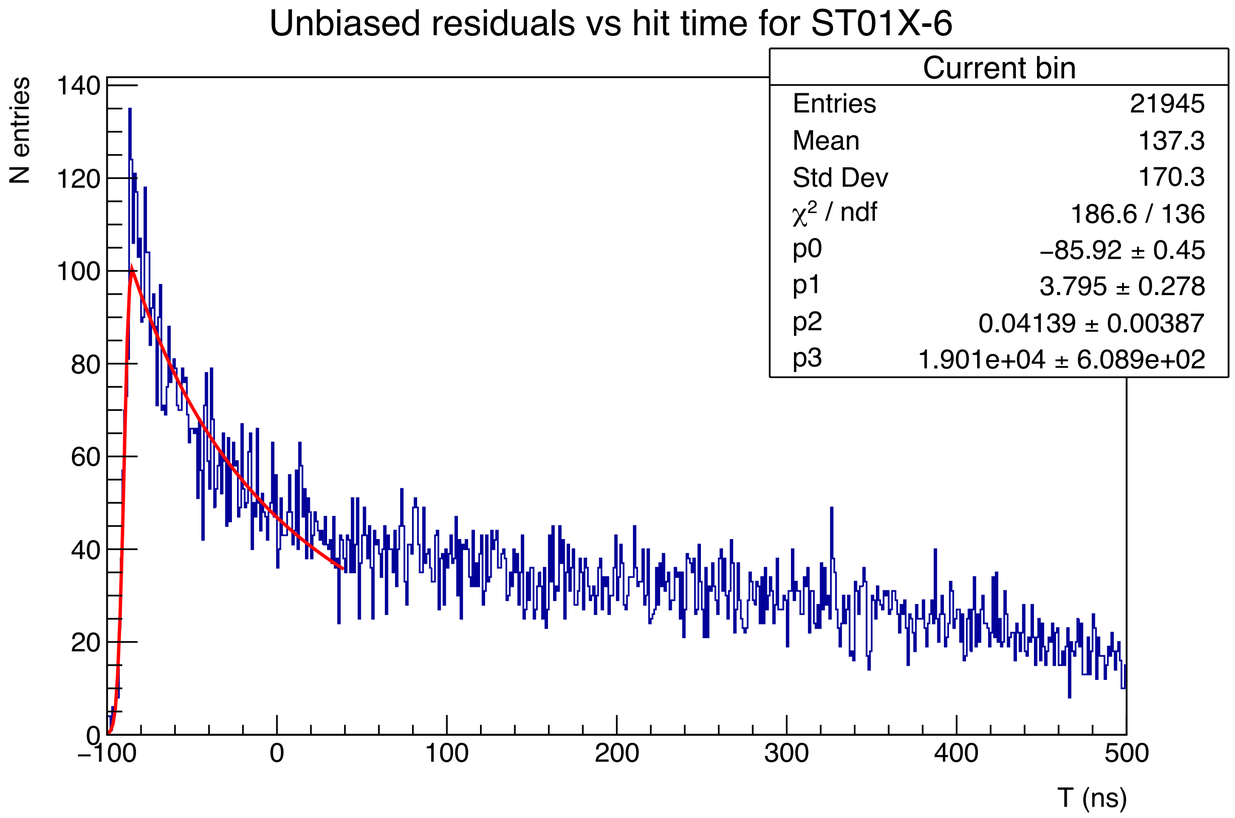
1. The weighted mean of *Coordinate resolution* distribution is **150 μm!**
2. The best time '*resolution*' is about **4 ns!**
3. Algorithm should be tuned

Run 72: 20mm straw (№6)



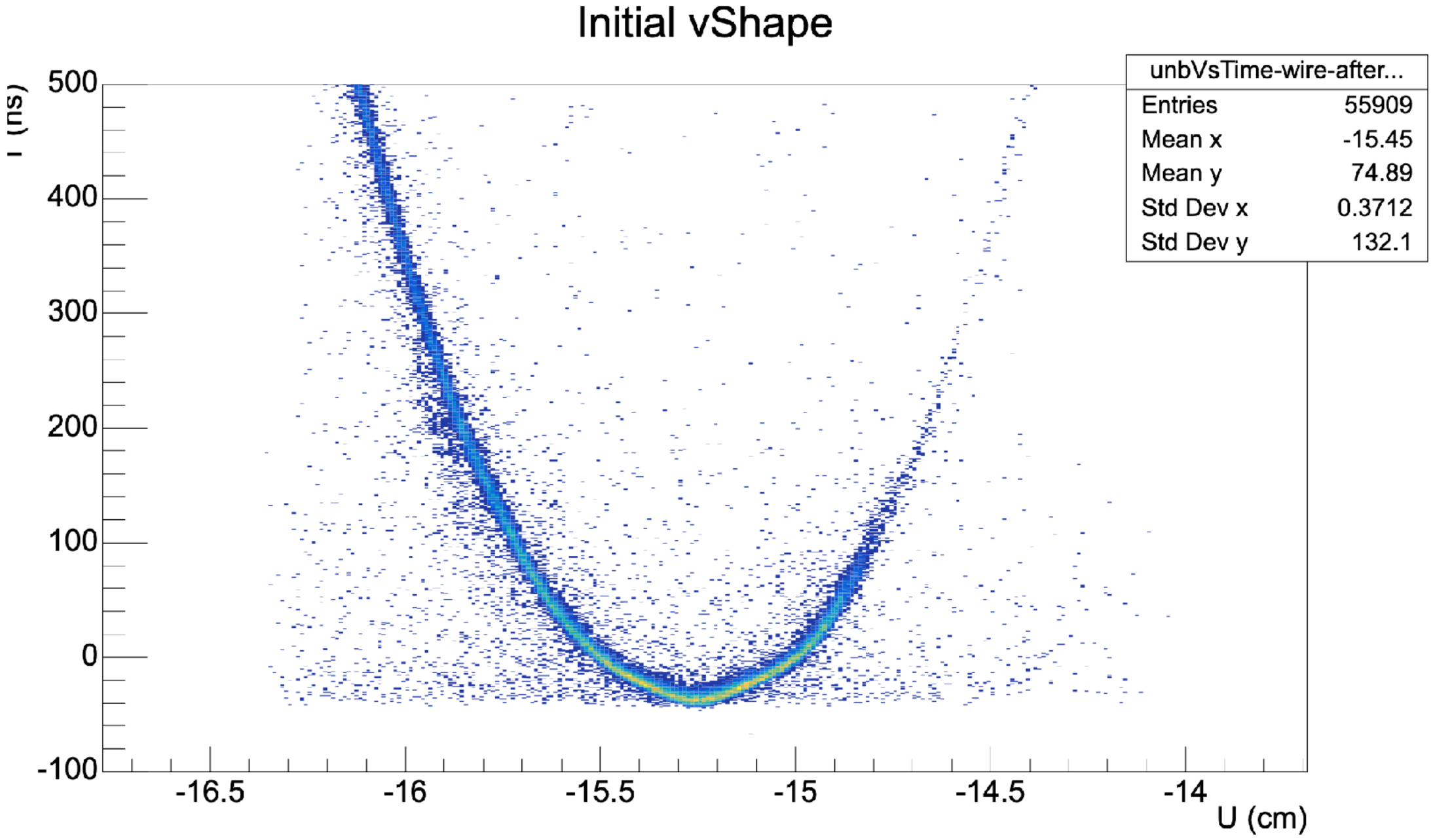
Run 72: 20mm straw (№6)



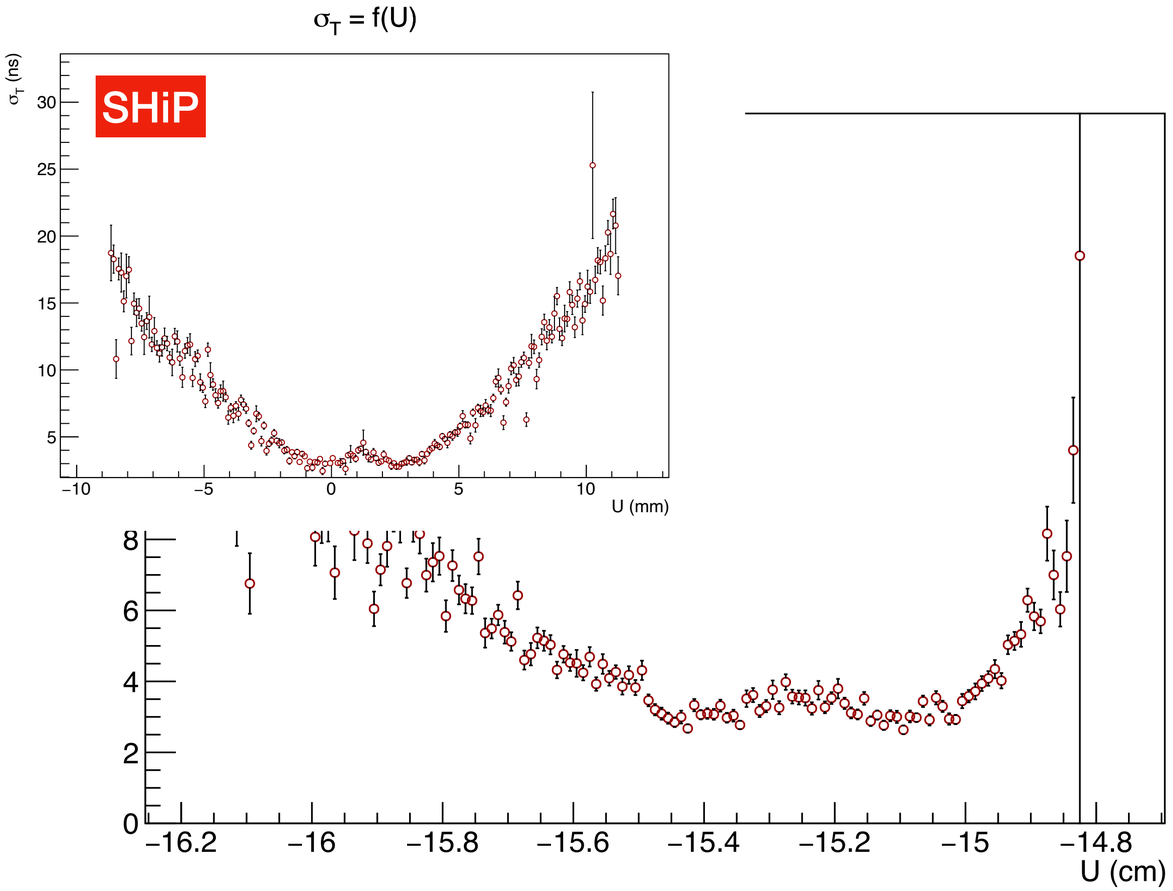


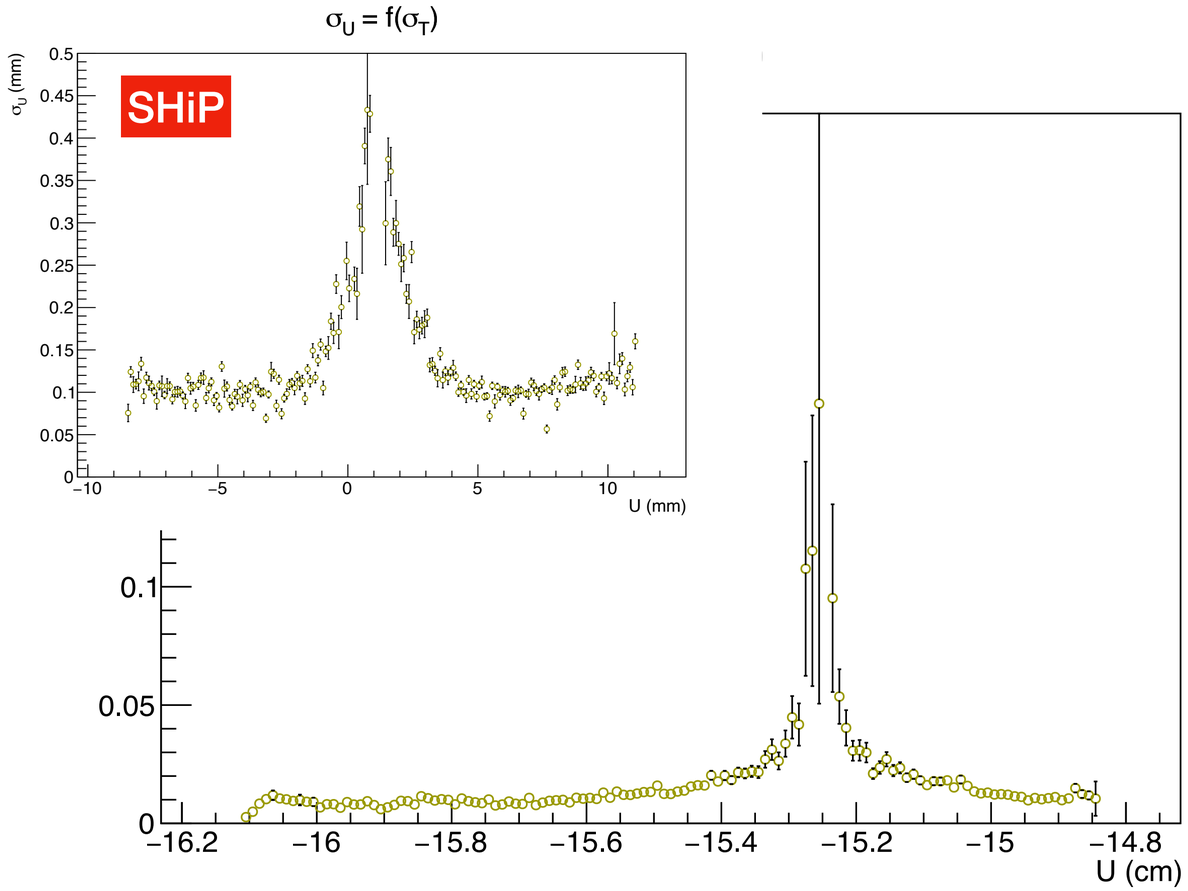
1. Fit does not converged
2. 20 mm straw looks too ‘noisy’(?)
3. Is it problem of the tube or of the reconstruction (*Dima said **NO***)?

Run 5: 20mm straw (№6): from beam dump



Run 5: 20mm straw (№6): from beam dump





1. The weighted mean of *Coordinate resolution* distribution is **102 μm!** 🤯
2. The best time '*resolution*' is about **3 ns!**
3. In SHiP case we also had **100 ± 5 μm**