

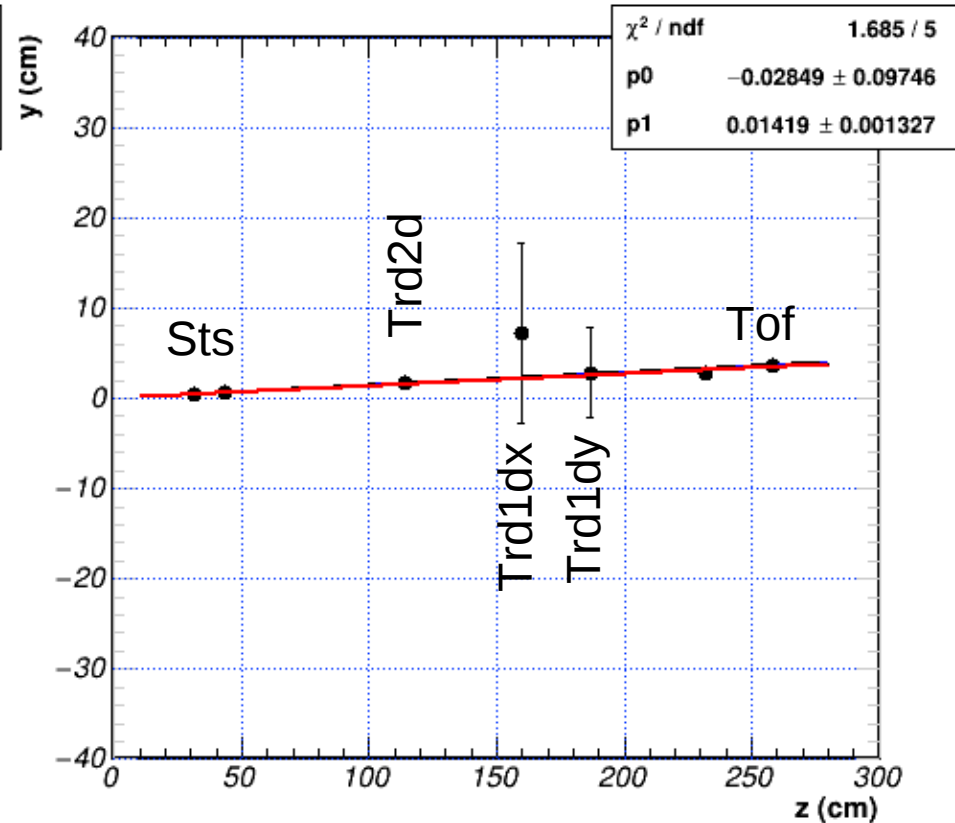
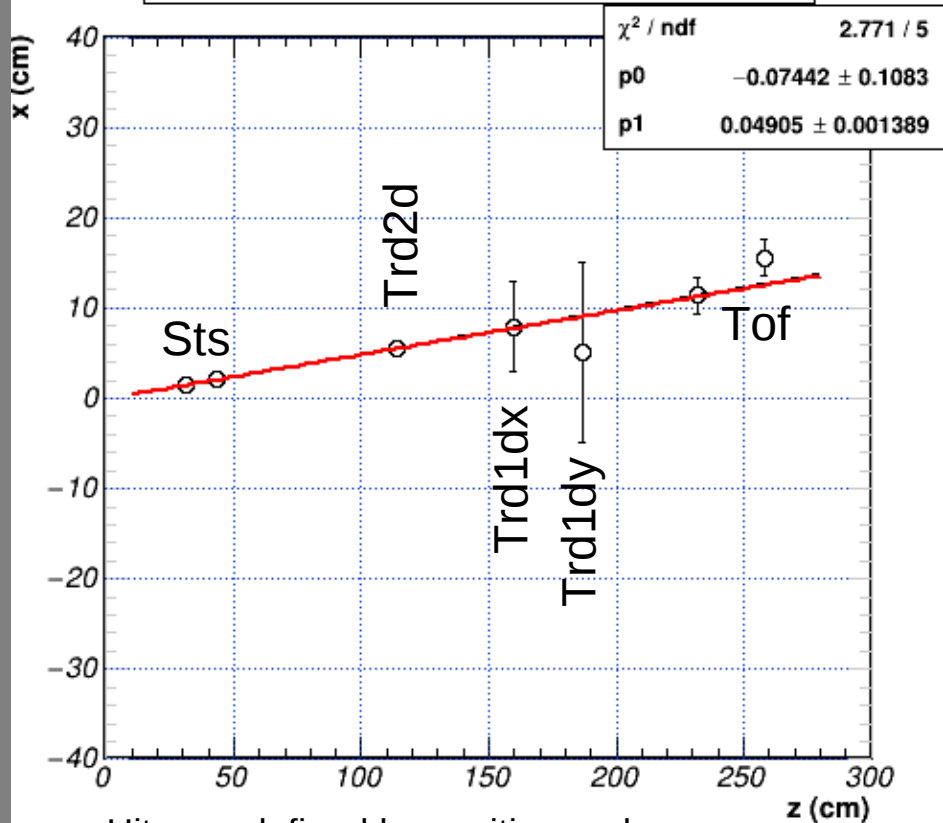
TRD contribution for Tracking and Vertexing @ mCBM22 [2391]

Alex Bercuci

*TRD Meeting
14th February 2024*

Attached hits and the track model

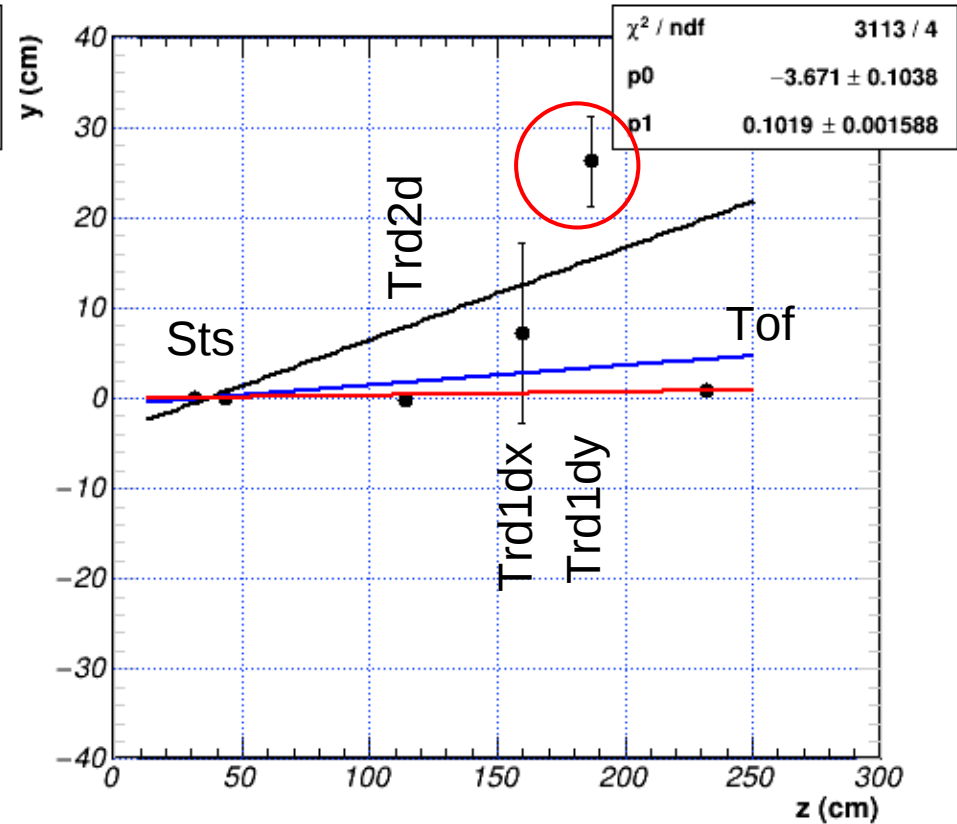
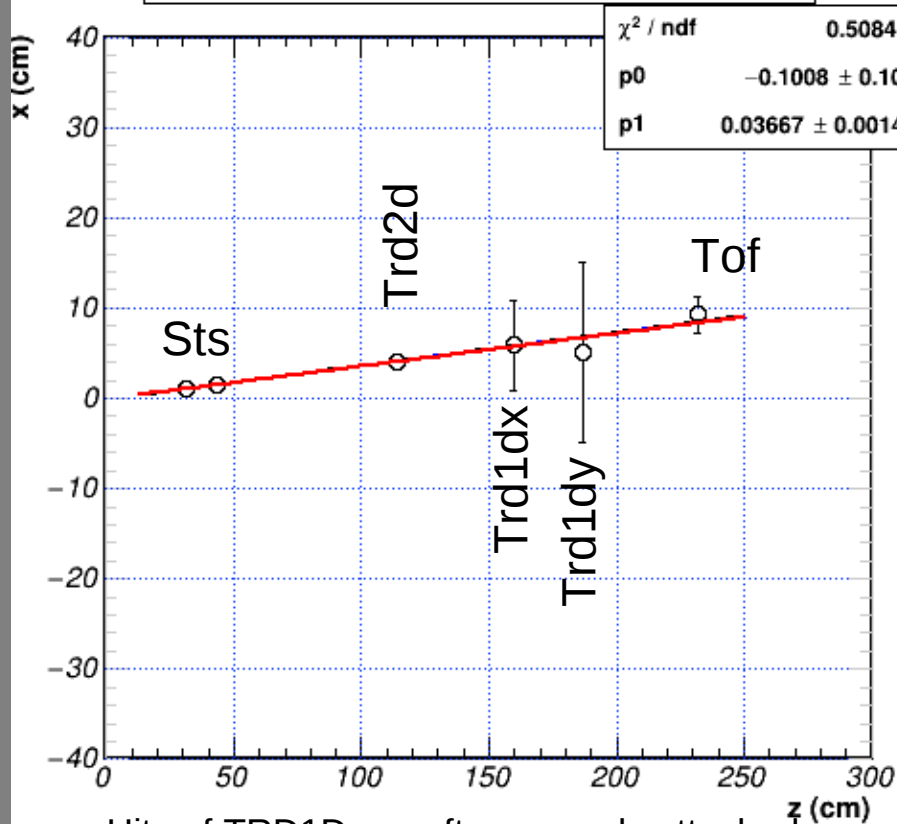
2391_node9_5_0027_TS18923_EV15872



- Hits are defined by position and errors
- Errors should account for : reco uncertainties, [incomplete] calibration, [incomplete] alignment, [fake attachment], track definition, multiple-scattering, etc
- The track model is pol1 and can be used to iteratively determine errors !
 - STS $\text{dxy} = 1 \times 1 \text{ mm}$
 - TRD2D $\text{dxy} = 1 \times 5 \text{ mm}$
 - TRD1D $\text{dxy} = 3 \times 100 \text{ mm}$
 - ToF $\text{dxy} = 20 \times 5 \text{ mm}$ (due to time calibration uncertainty)

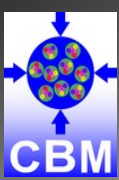
Attached hits and the track model

2391_node9_5_0027_TS18923_EV17671

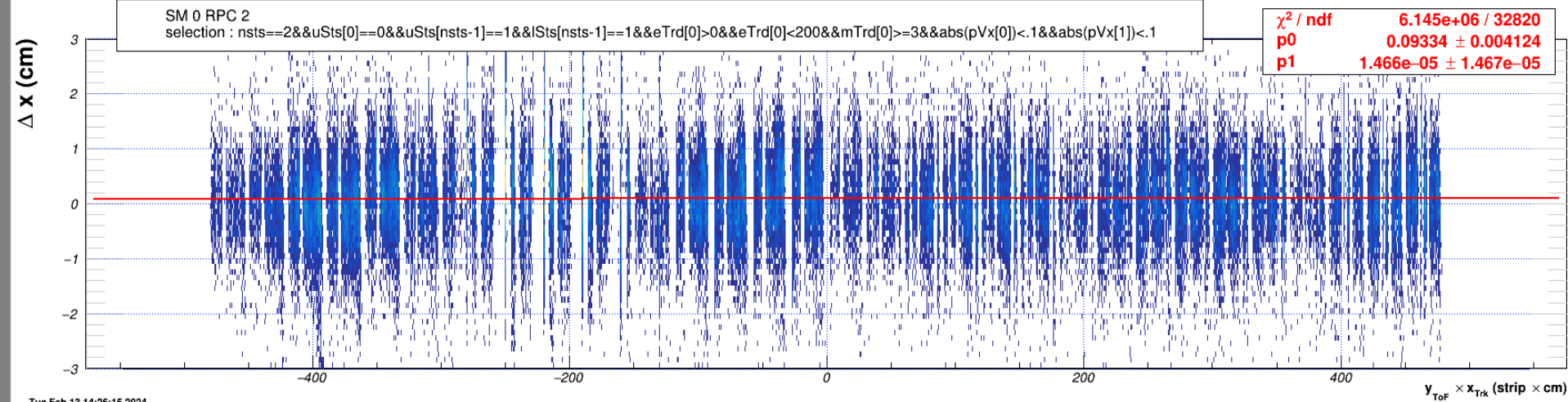
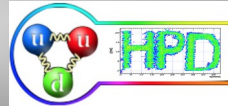


- Hits of TRD1D are often wrongly attached
- Errors should account for **fake attachment**

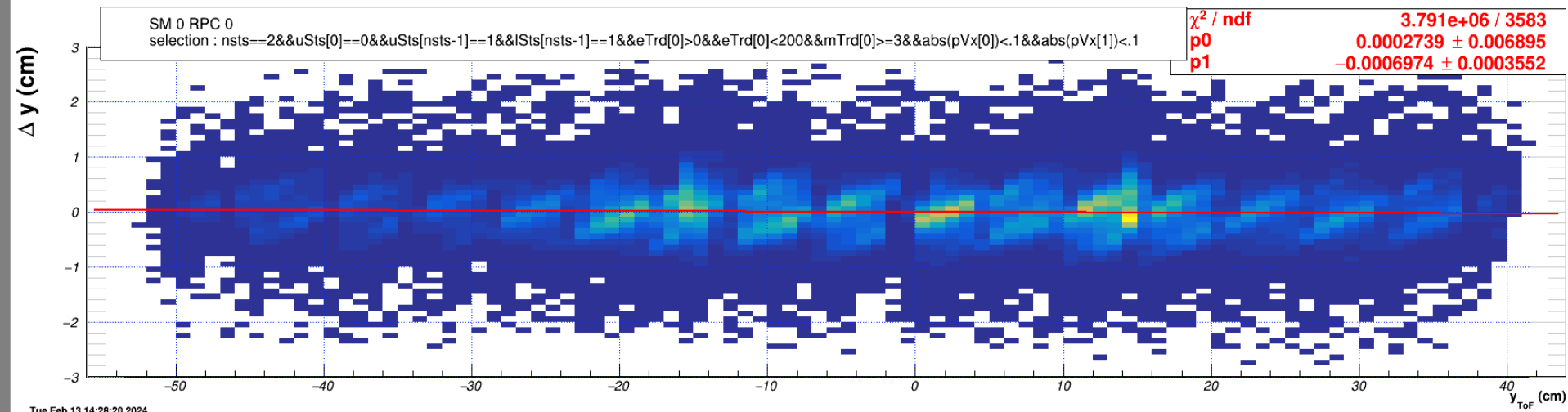
- TRD1D dxy = 3 x 100 mm (default)
- TRD1D dxy = 10 x 100 mm (intermediate but still pulls on ToF residuals)
- TRD1D dxy = 50 x 100 mm (irrelevant but conserve vertex and ToF residuals)



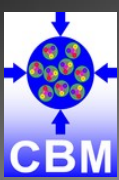
ToF alignment



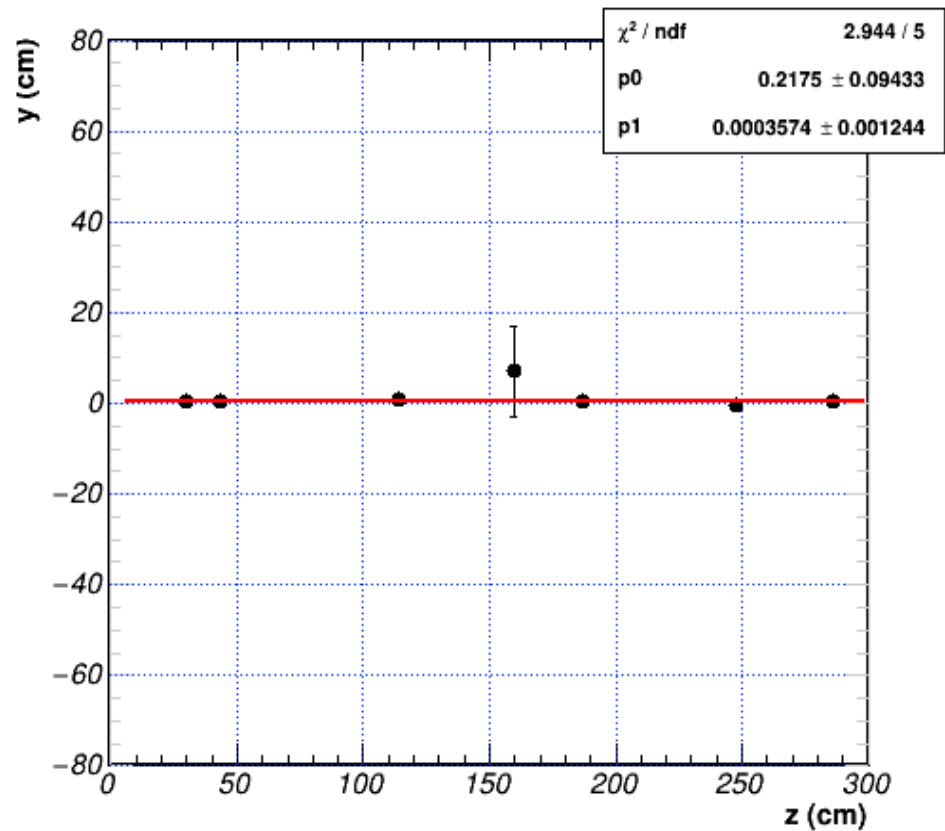
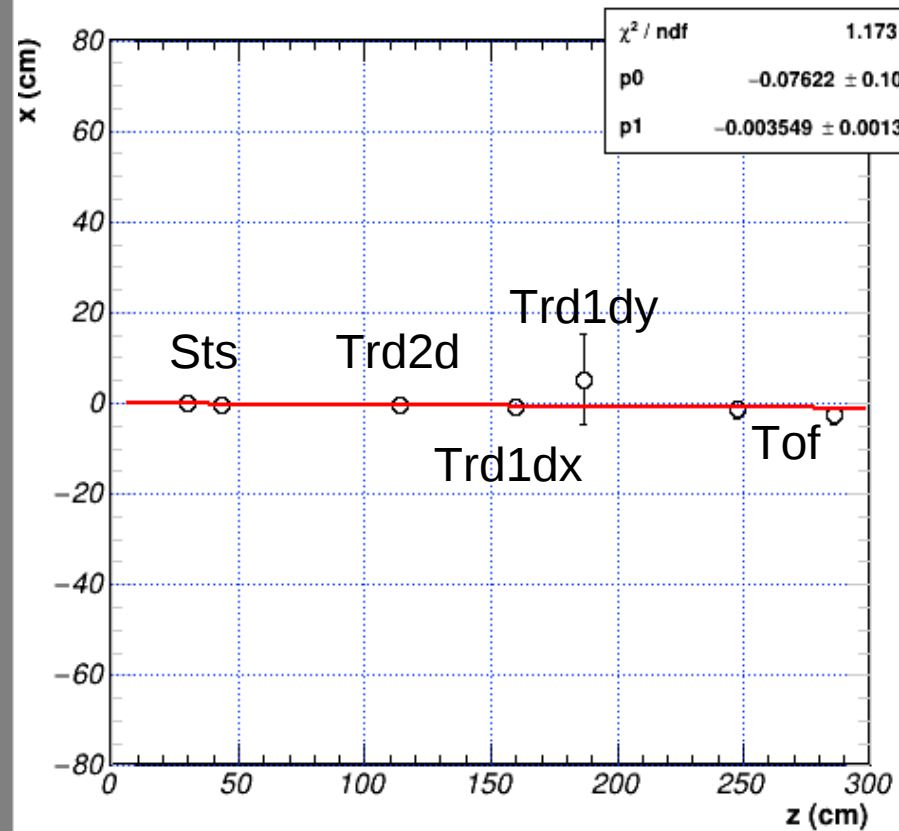
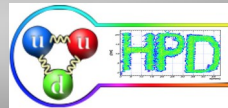
Tue Feb 13 14:26:15 2024

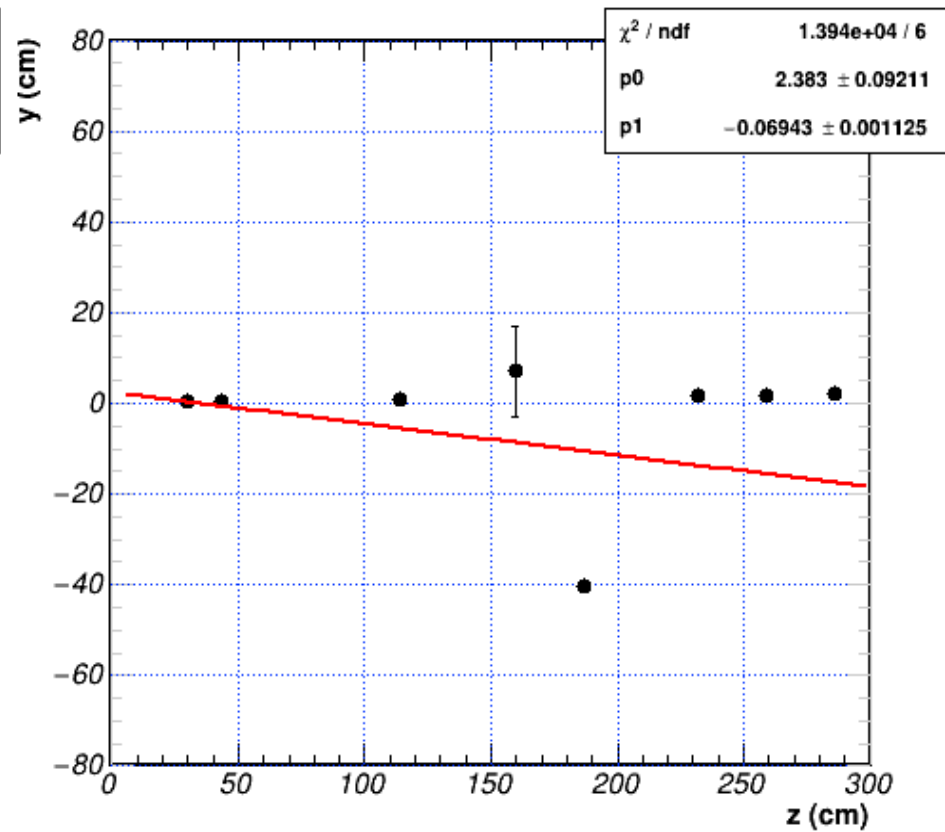
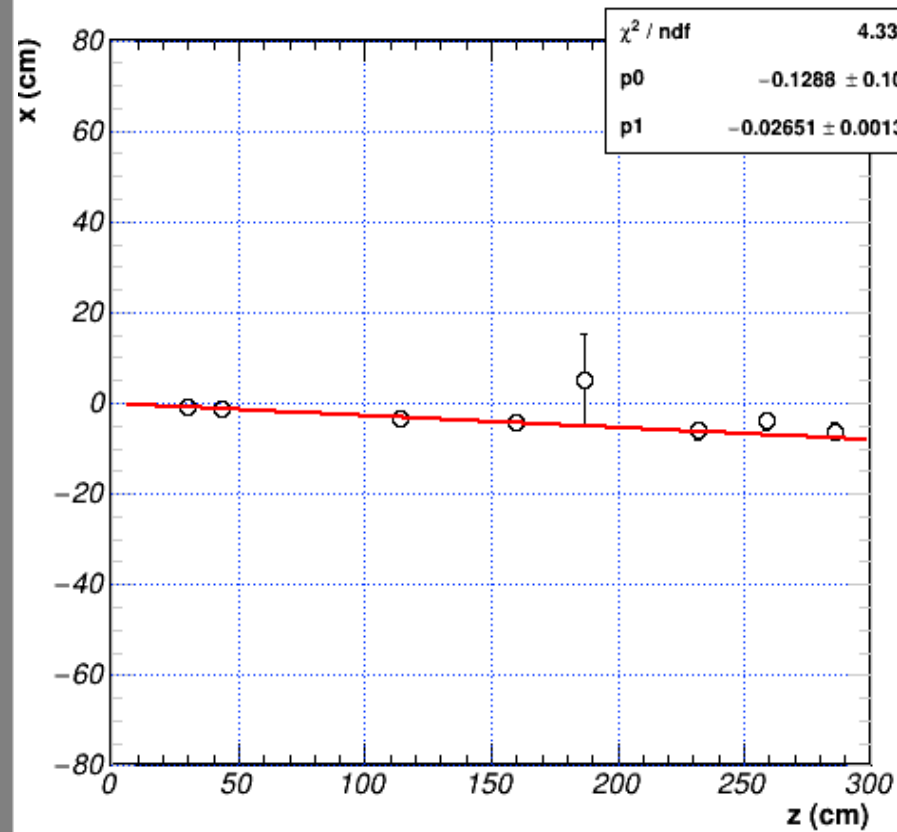


Tue Feb 13 14:28:20 2024



Track QA





Once in a while Trd1dy get a wrong hit picked
- may be an error on the tracking