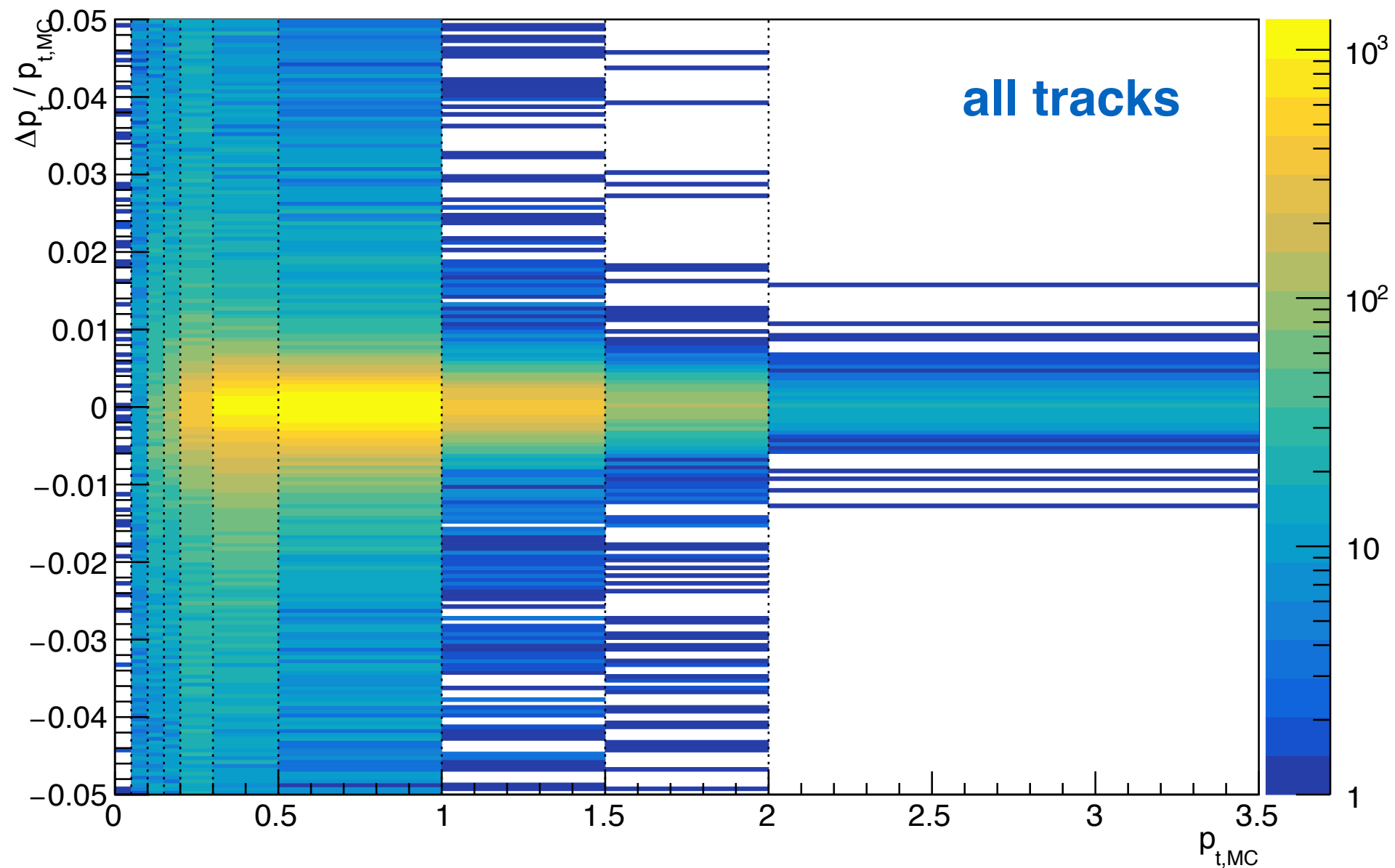


TRACKING PERFORMANCE

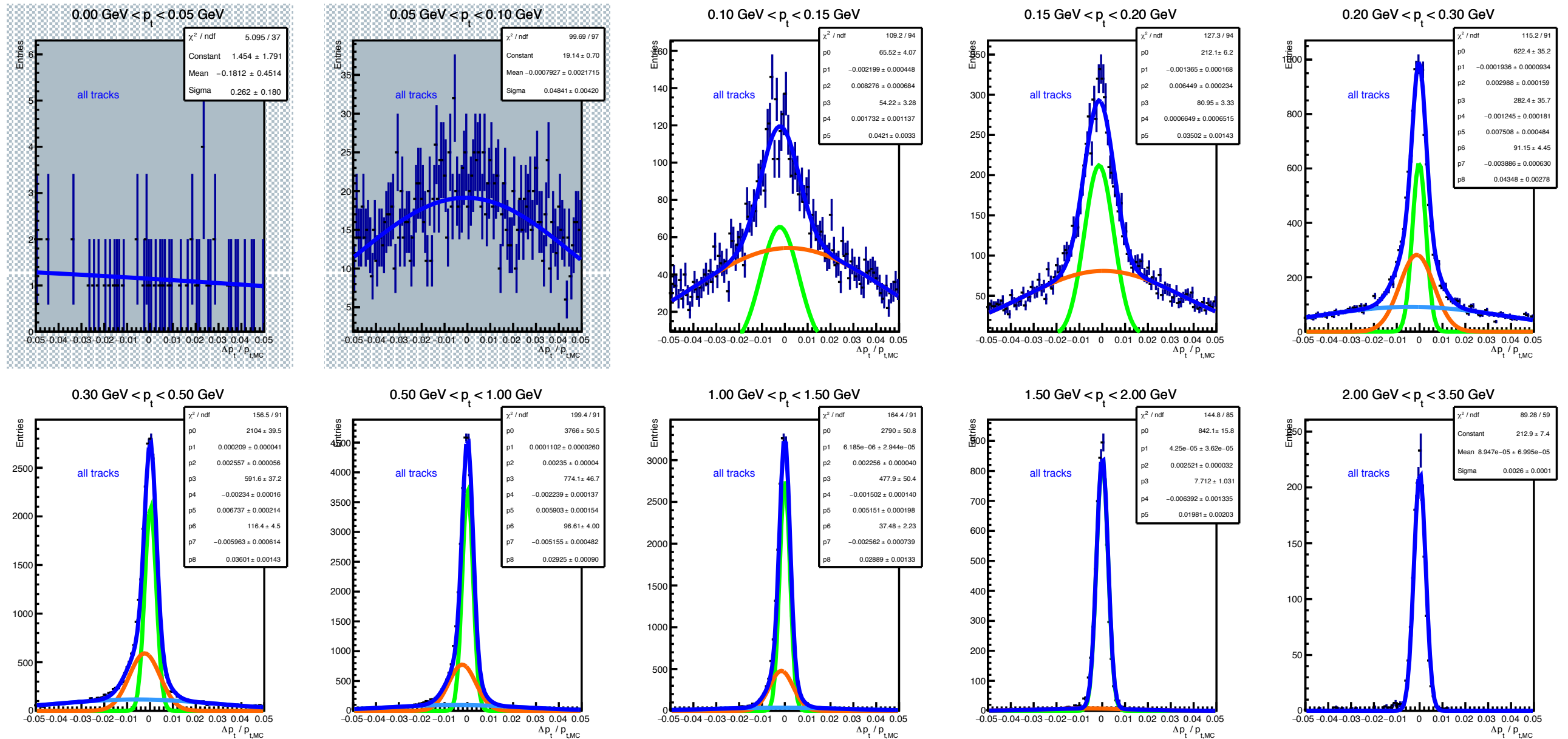
p_t resolution

Relative p_t residuals VS $p_{t,MC}$



- 2D plot: $(p_{t,reco} - p_{t,MC}) / p_{t,MC}$ VS $p_{t,MC}$
- 10 bins of $p_{t,MC}$ (irregular binning), projection Y, gaussian fit of the distribution
- 3 types of tracks: all tracks, tracks with only CDC hits, tracks with VXD+CDC hits

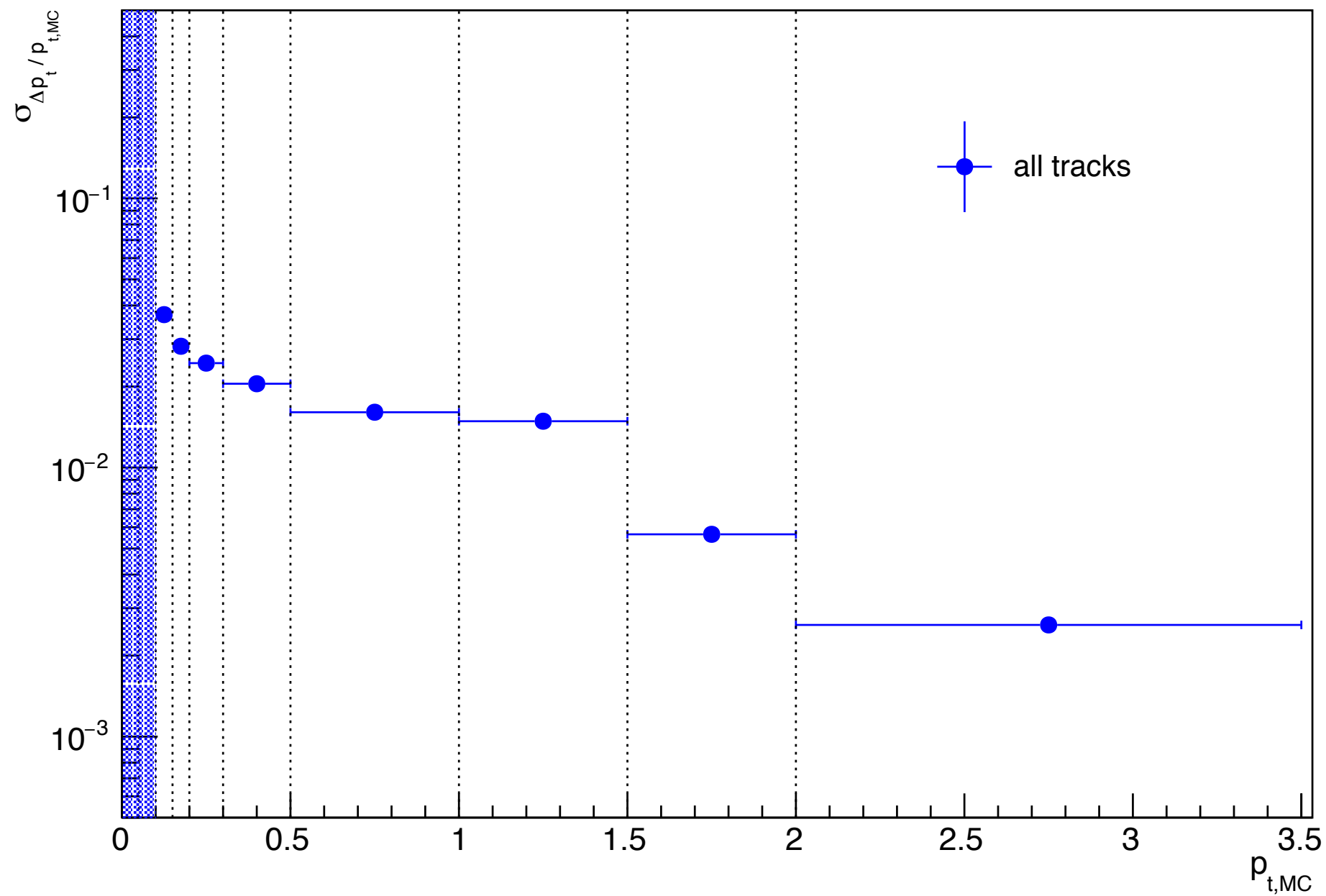
all tracks



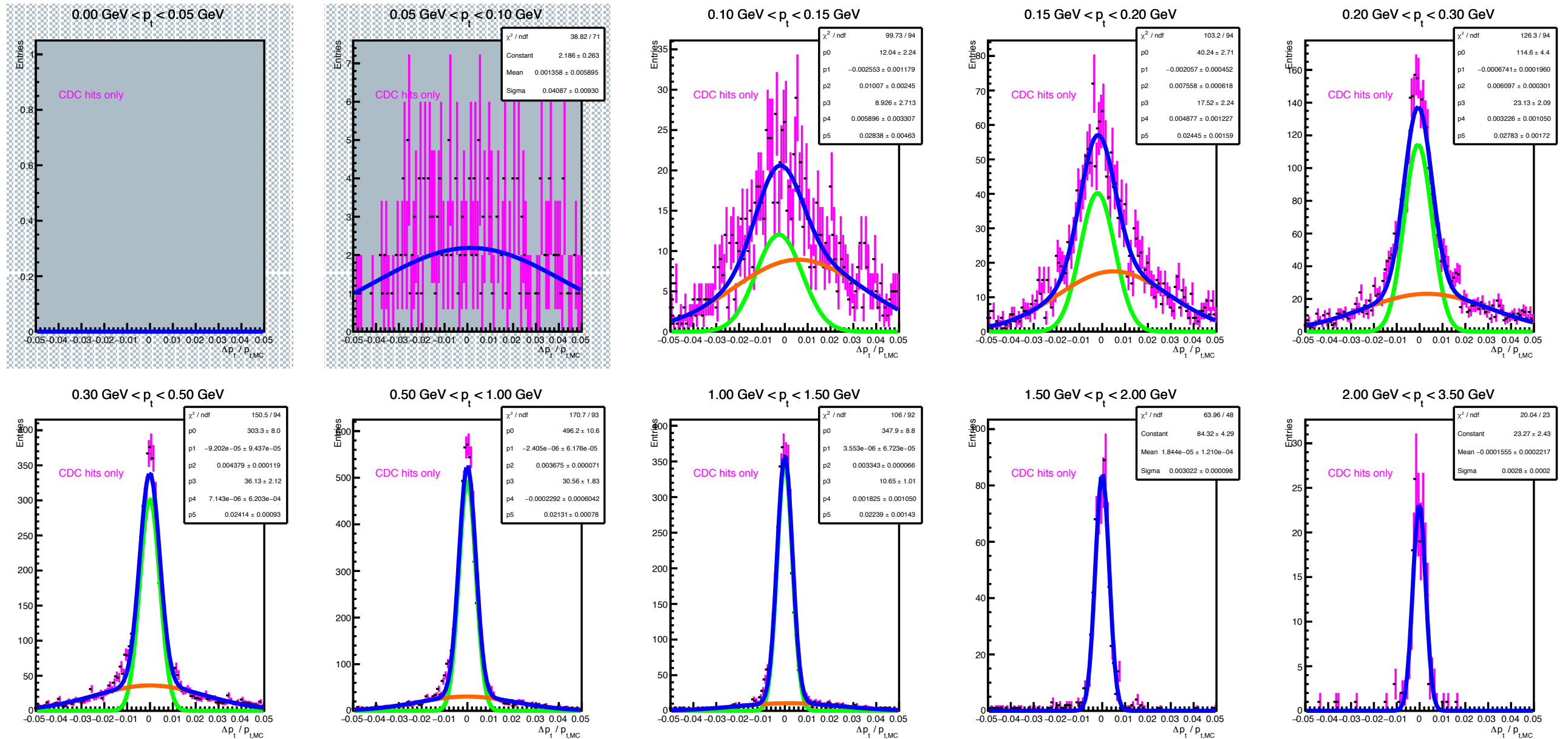
- first 2 bins ignored ($p_{t,MC} < 100$ MeV)
- # 1 bin $\rightarrow$ single gaussian fit
- # 3 bins $\rightarrow$ double gaussian fit
- # 4 bins $\rightarrow$ triple gaussian fit

all tracks

- σ : square root of the weighted sum of the fitted variances

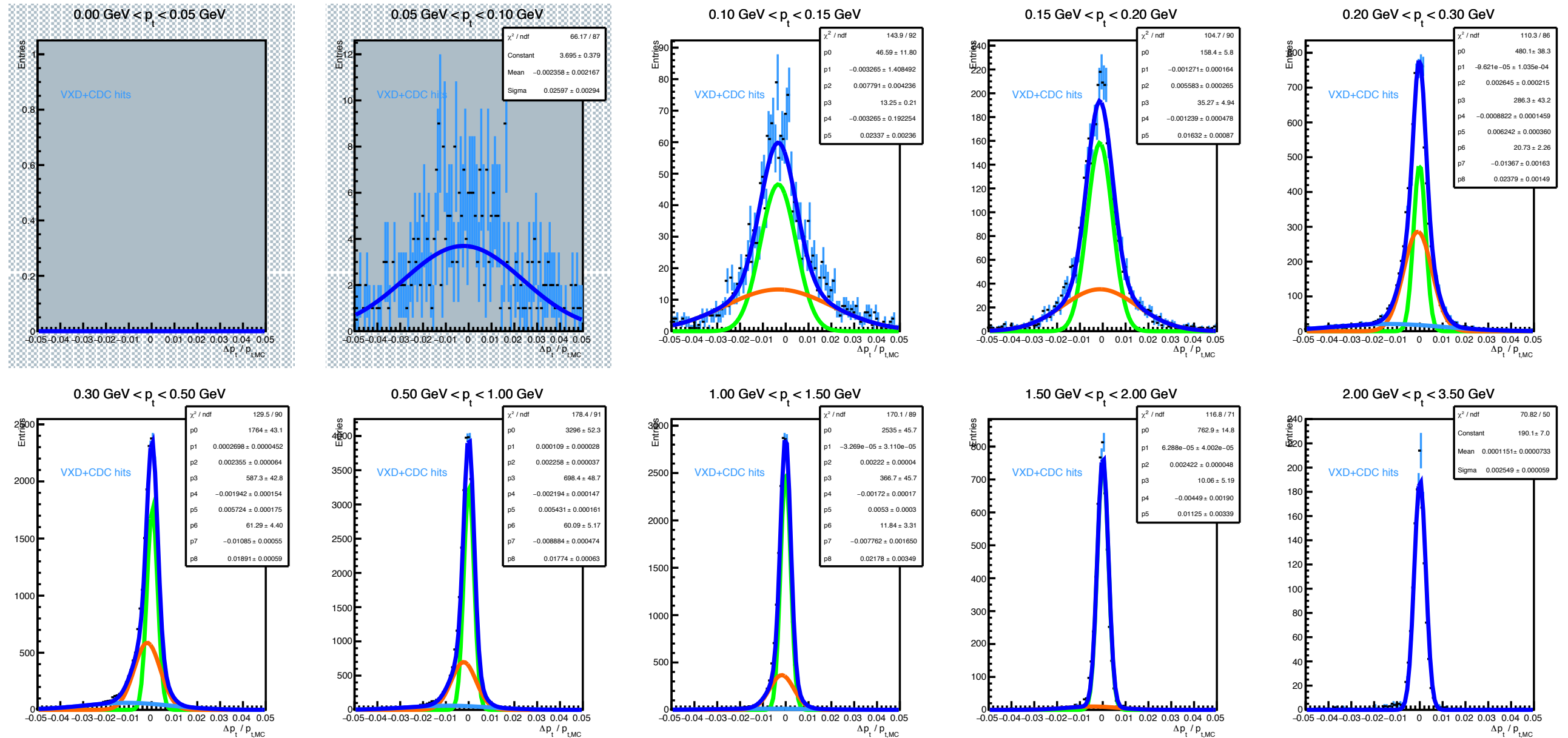


CDC hits only



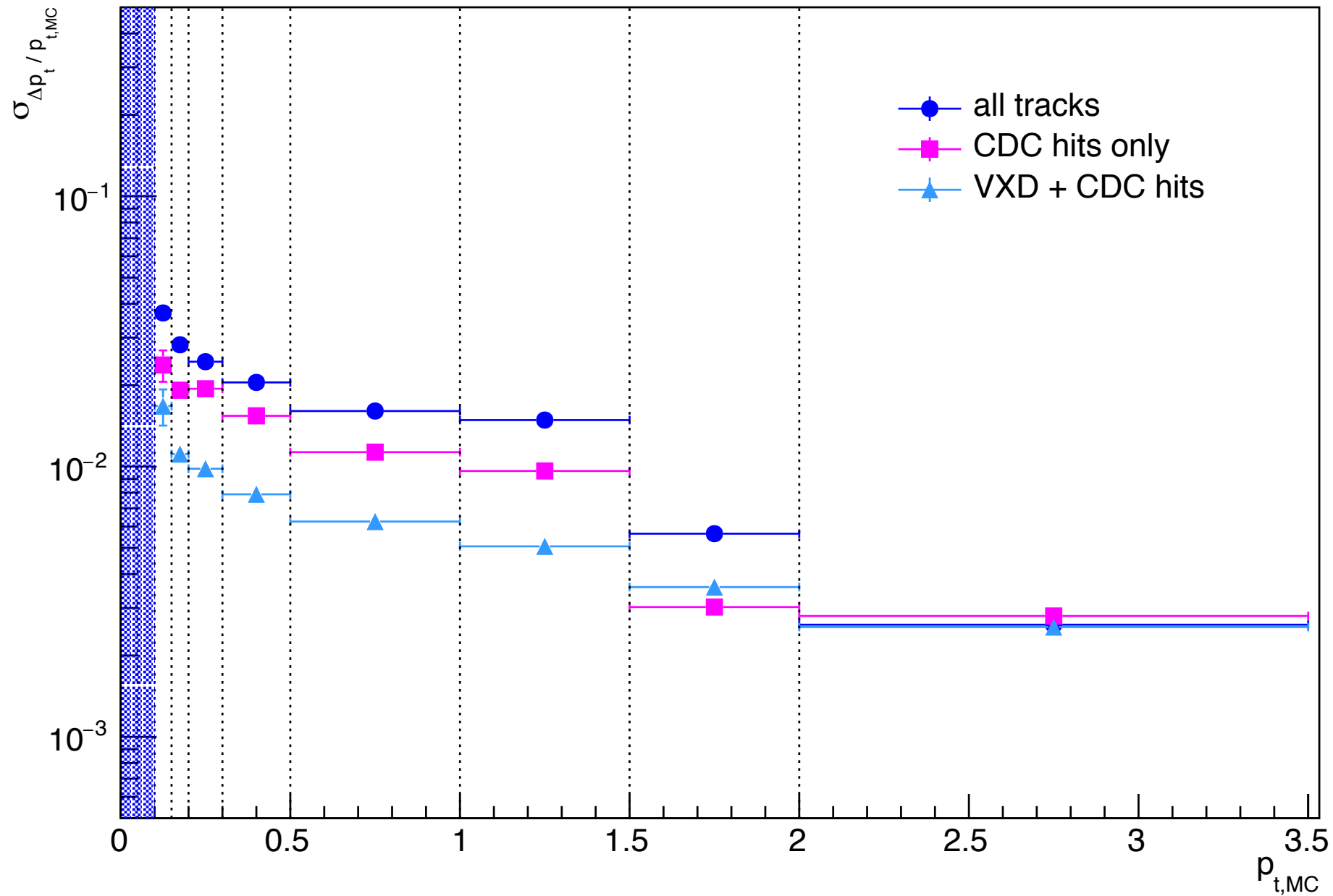
- first 2 bins ignored ($p_{t,MC} < 100$ MeV)
- # 2 bins → single gaussian fit
- # 6 bins → double gaussian fit
- # 0 bins → triple gaussian fit

VXD + CDC hits



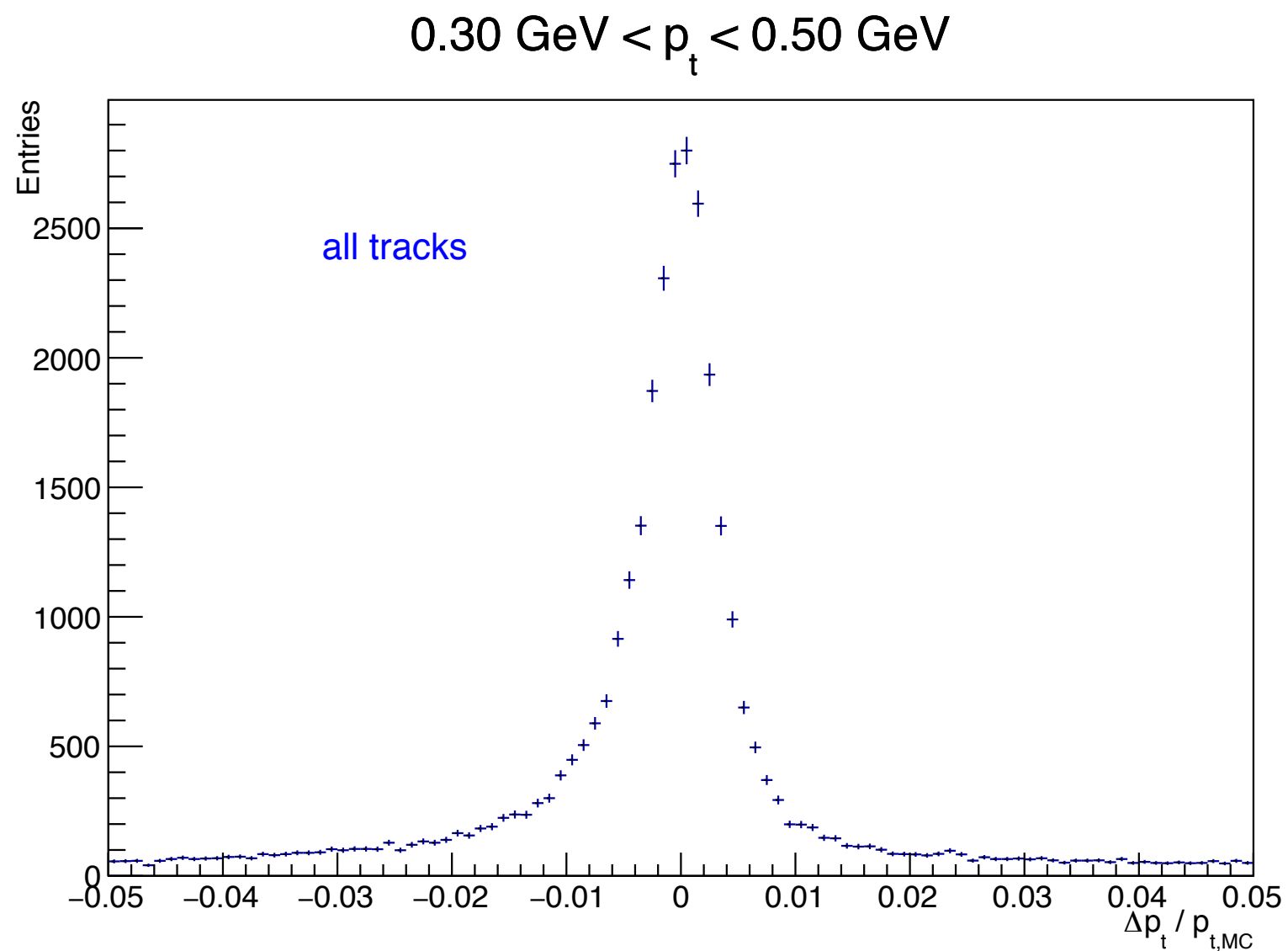
- first 2 bins ignored ($p_{t,MC} < 100$ MeV)
- # 1 bin → single gaussian fit
- # 3 bins → double gaussian fit
- # 4 bins → triple gaussian fit

Track types comparison



- better resolution for tracks with VXD+CDC hits
- Exception: $1.5 \text{ GeV} < p_{t,MC} < 2.0 \text{ GeV}$
Difference: #of gaussians used for the fit

Features of the distributions



- asymmetry in the residual distribution
- more enhanced in the central p_t region ($0.3 \text{ GeV} < p_t < 1.5 \text{ GeV}$)
- less evident when considering tracks with CDC hits only