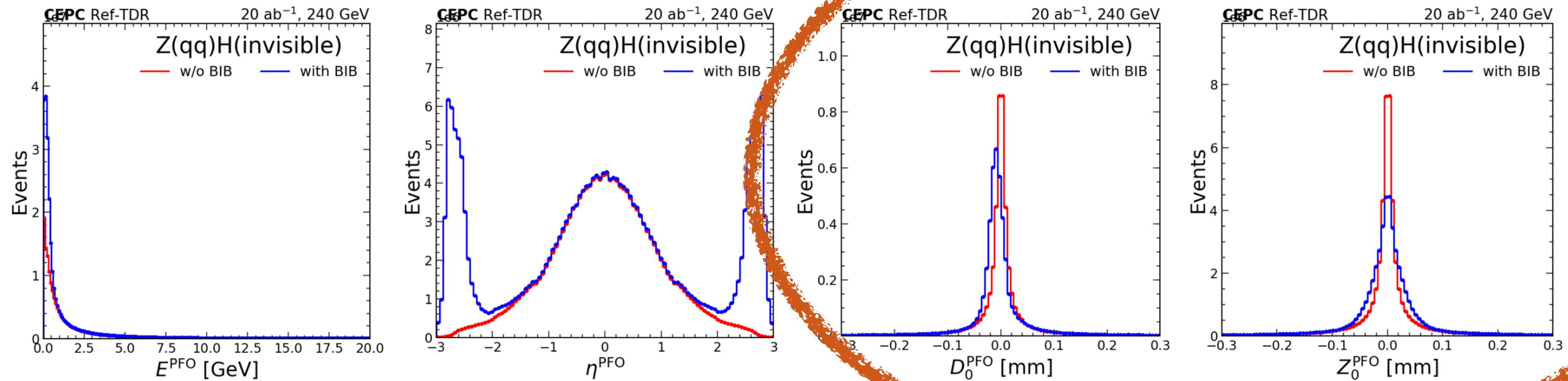# Status update

Chenguang Zhang / 02Jul2025

BIB for tracks
Geliang's previous talk [11Jun2025]
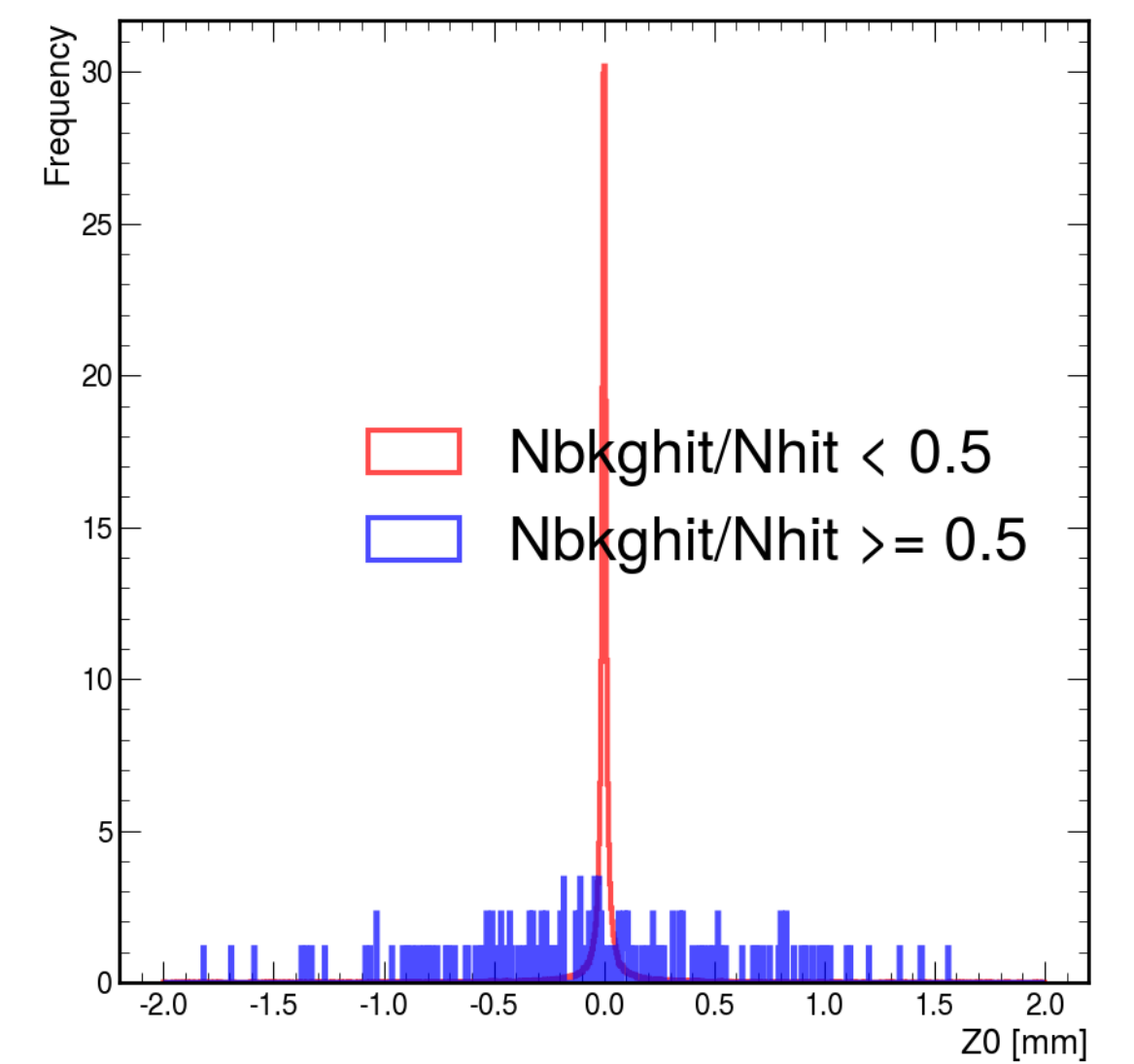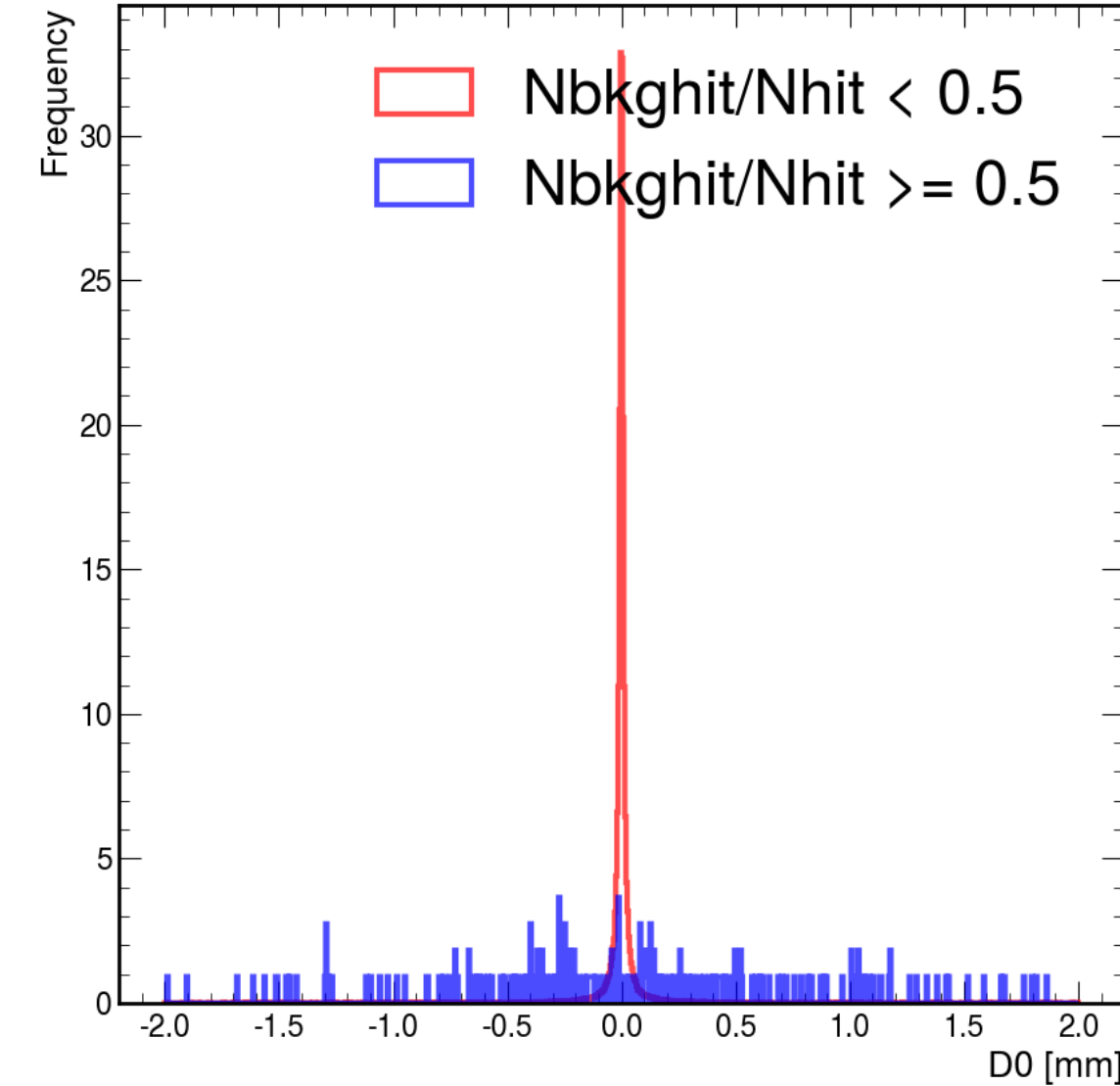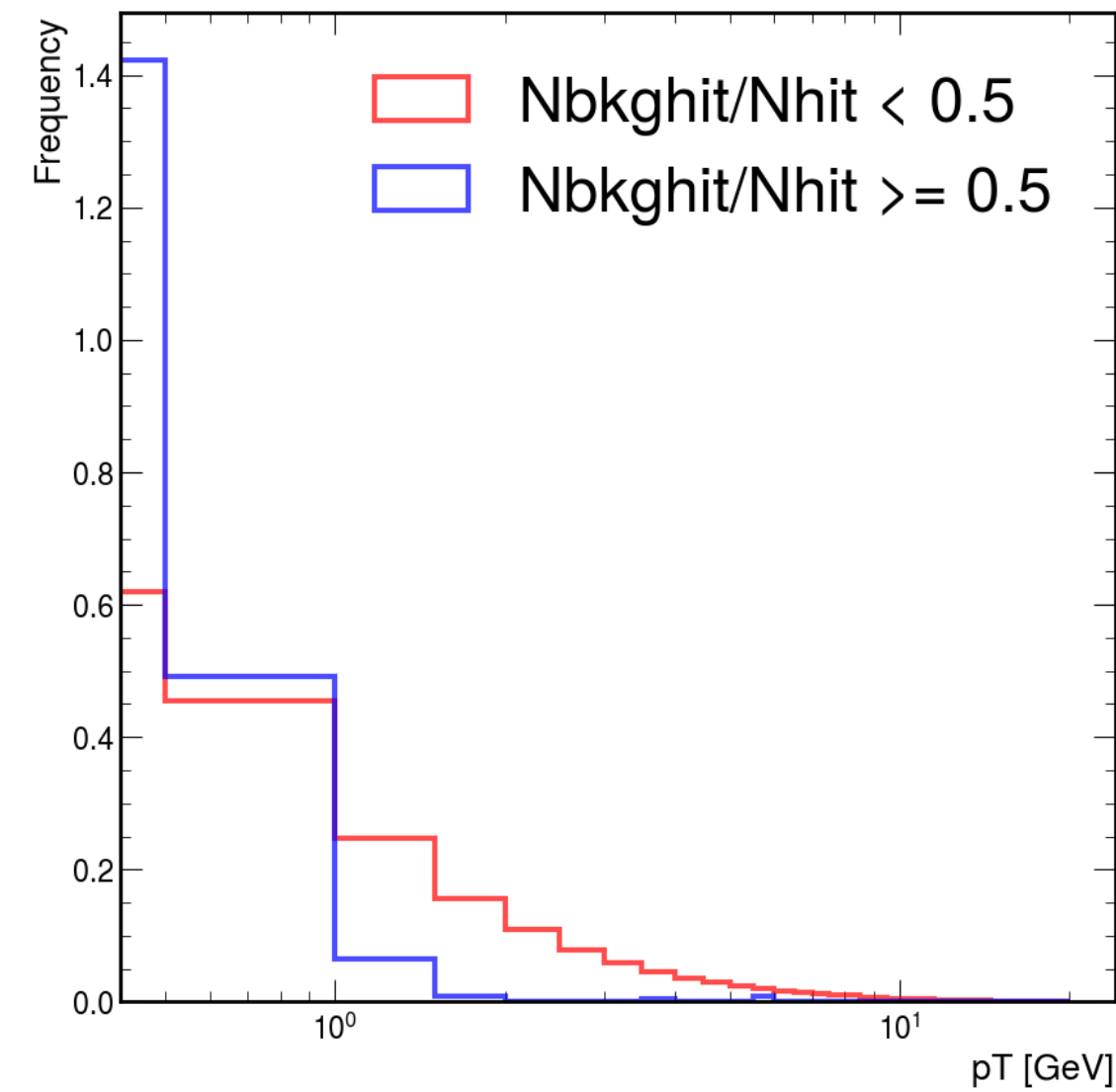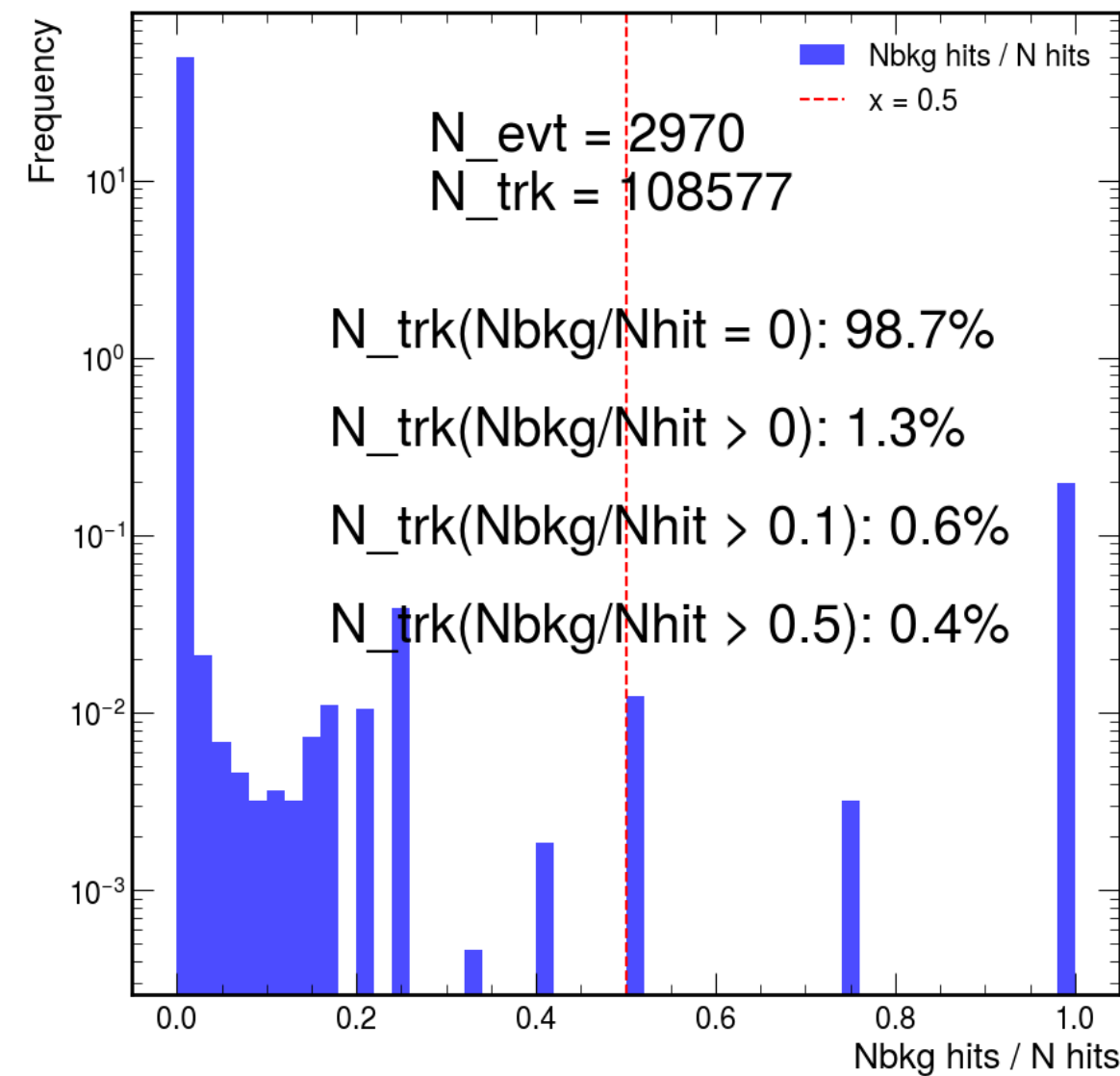
Distributions

- At PFO level, BIB mostly lies in very low energy and high eta range.
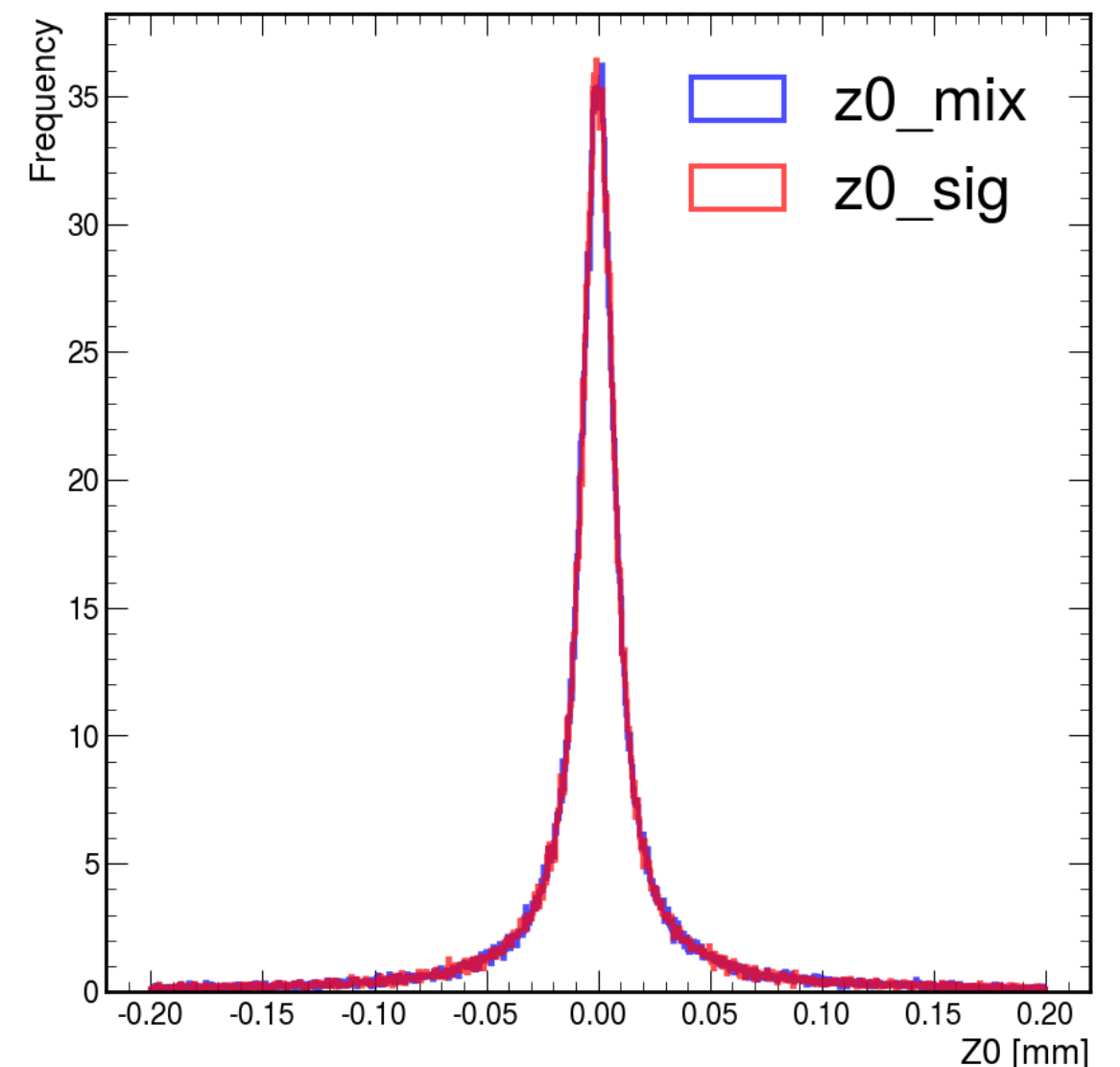- Measurements of impact parameters are affected.

- qqHnn samples, **tdr.25.5.0**
- BIB samples, /cefs/higgs/shihy/tools/ **CEPCSW_TDR255**/CEPCSW/Test/Higgs
- Mixed by **tdr.25.6.0**

BIB for tracks
My previous talk [16May2025]

- nnHgg, **tdr.25.3.6**
- BIB samples: /cefs/higgs/shihy/tools/**CEPCSW_TDR2536**/CEPCSW/Test/Higgs
- Signals: nnHgg
- Mixed by **the master branch 11May2025 [25.3.6+bkgmixalgo]**

3

BIB for tracks
new samples with previous steps

N_evt = 29700
N_trk = 689700

N_trk(Nbkg/Nhit = 0): 98.2%

N_trk(Nbkg/Nhit > 0): 1.8%

N_trk(Nbkg/Nhit > 0.1): 1.0%
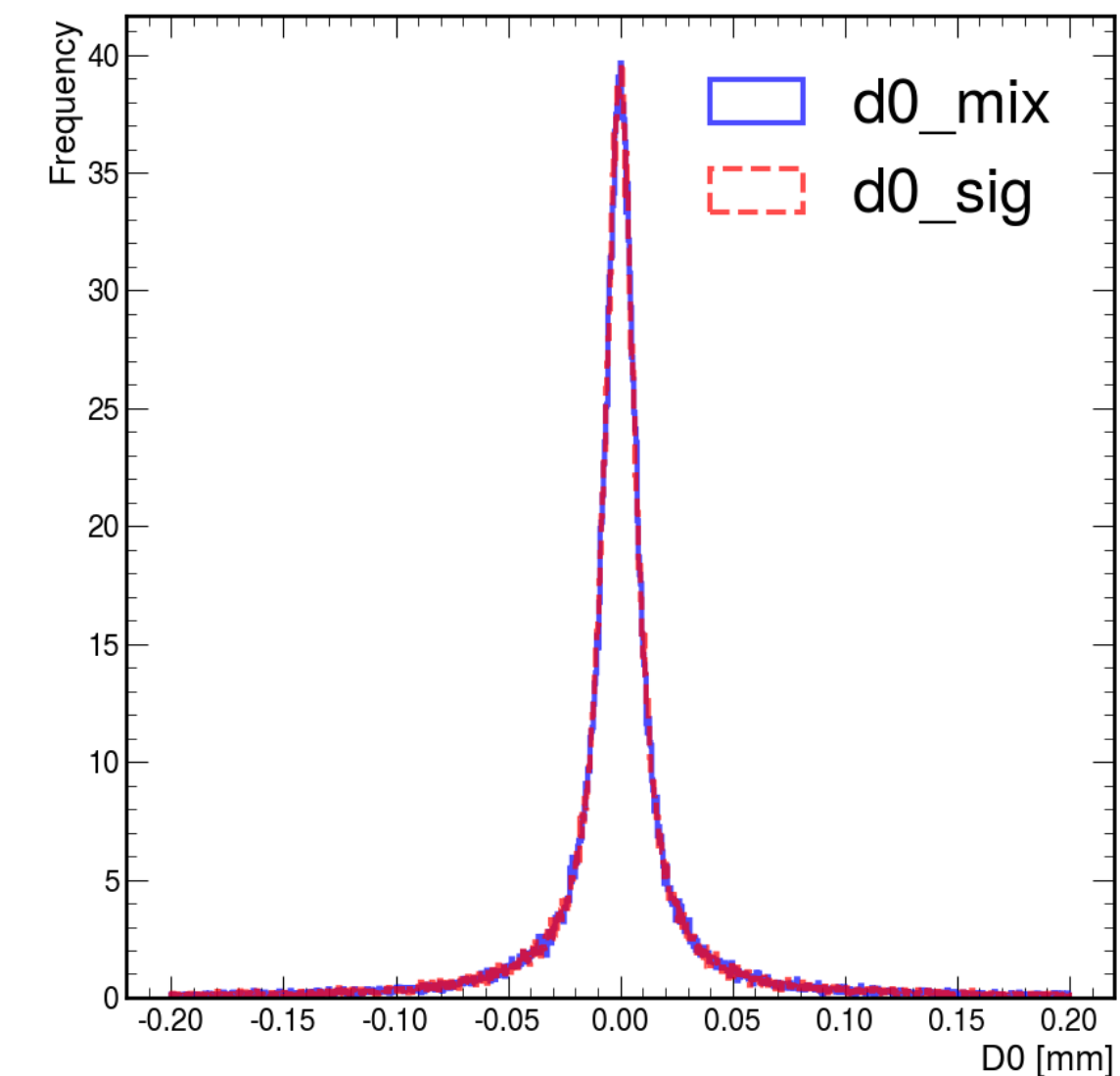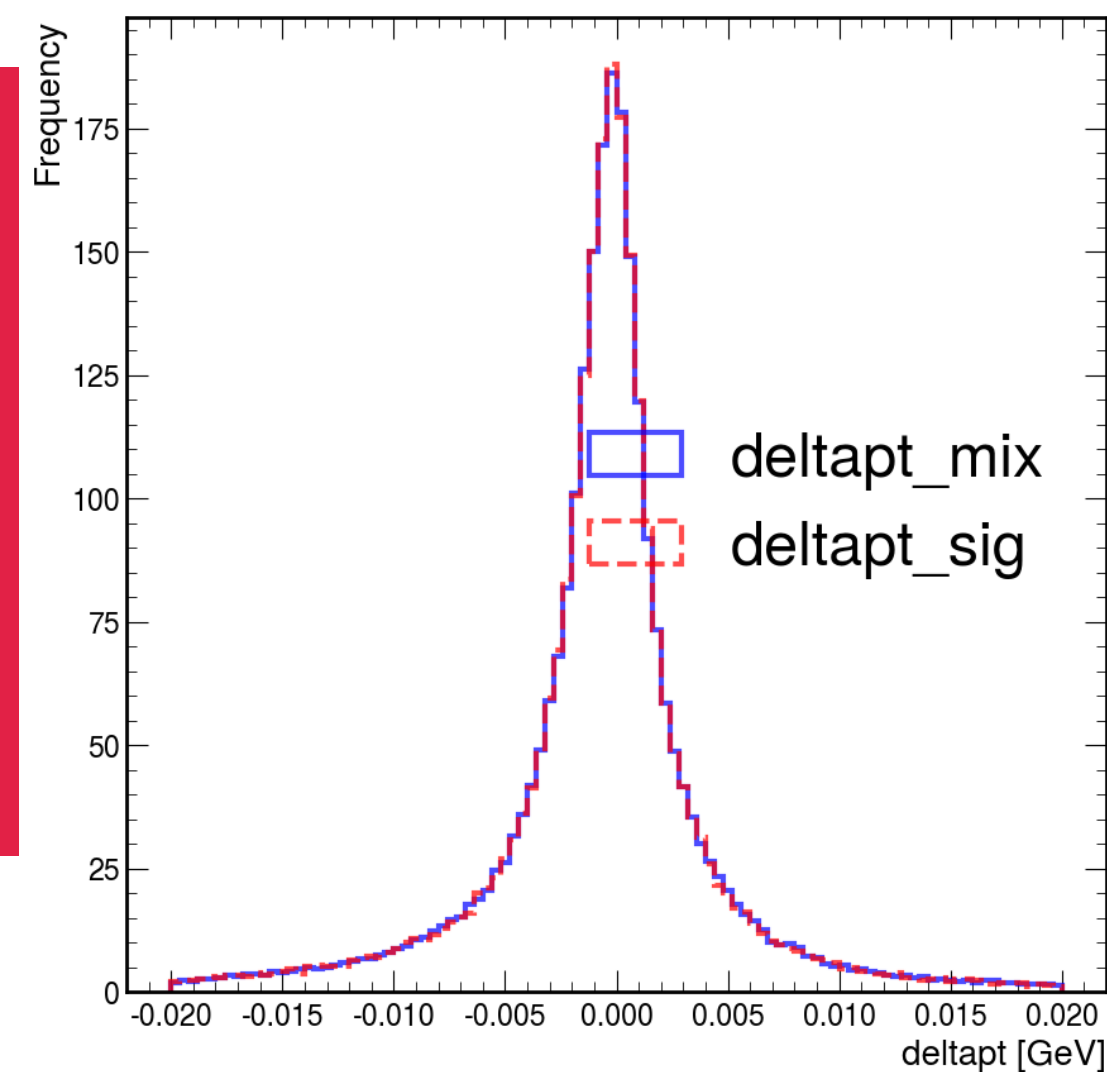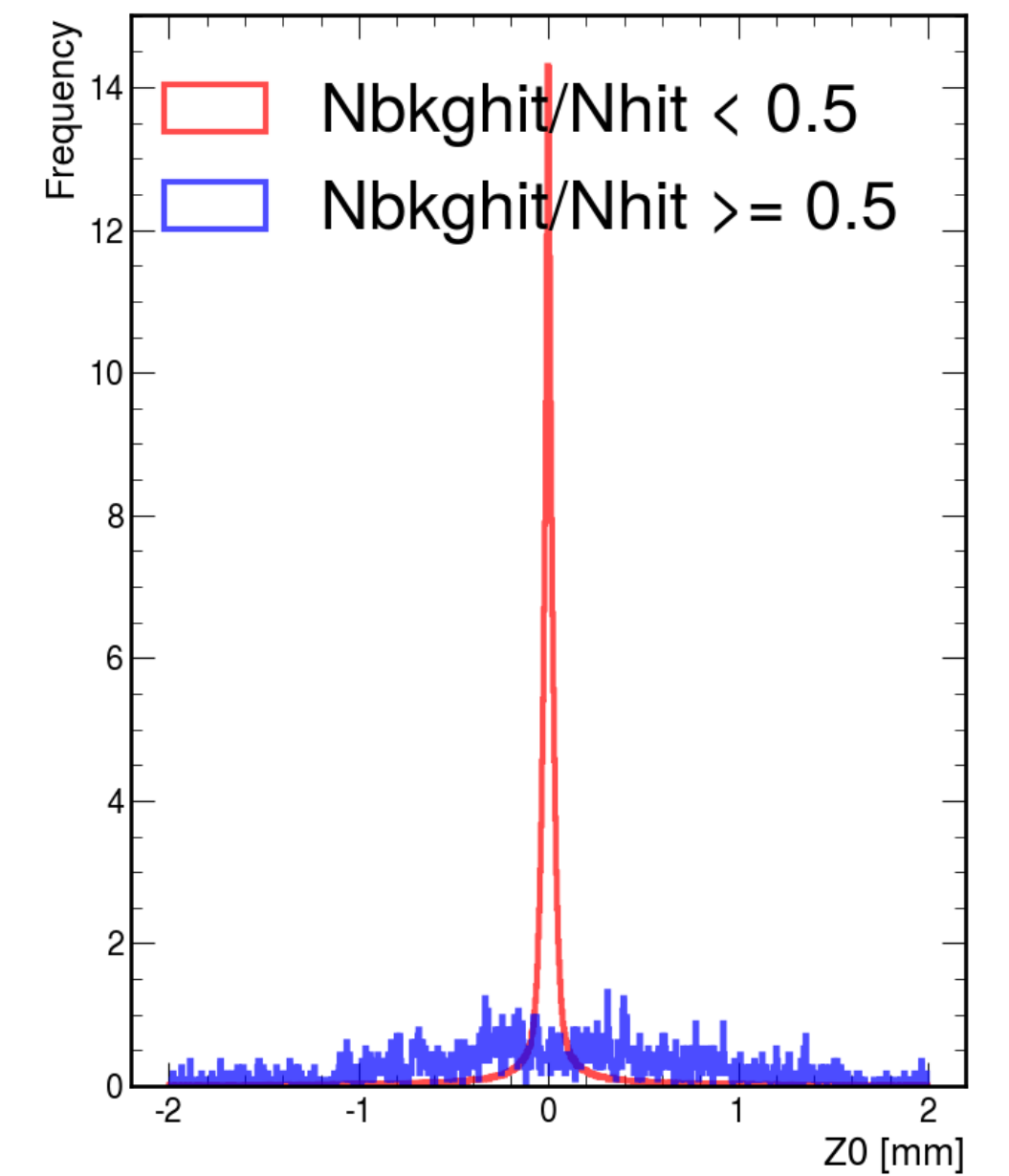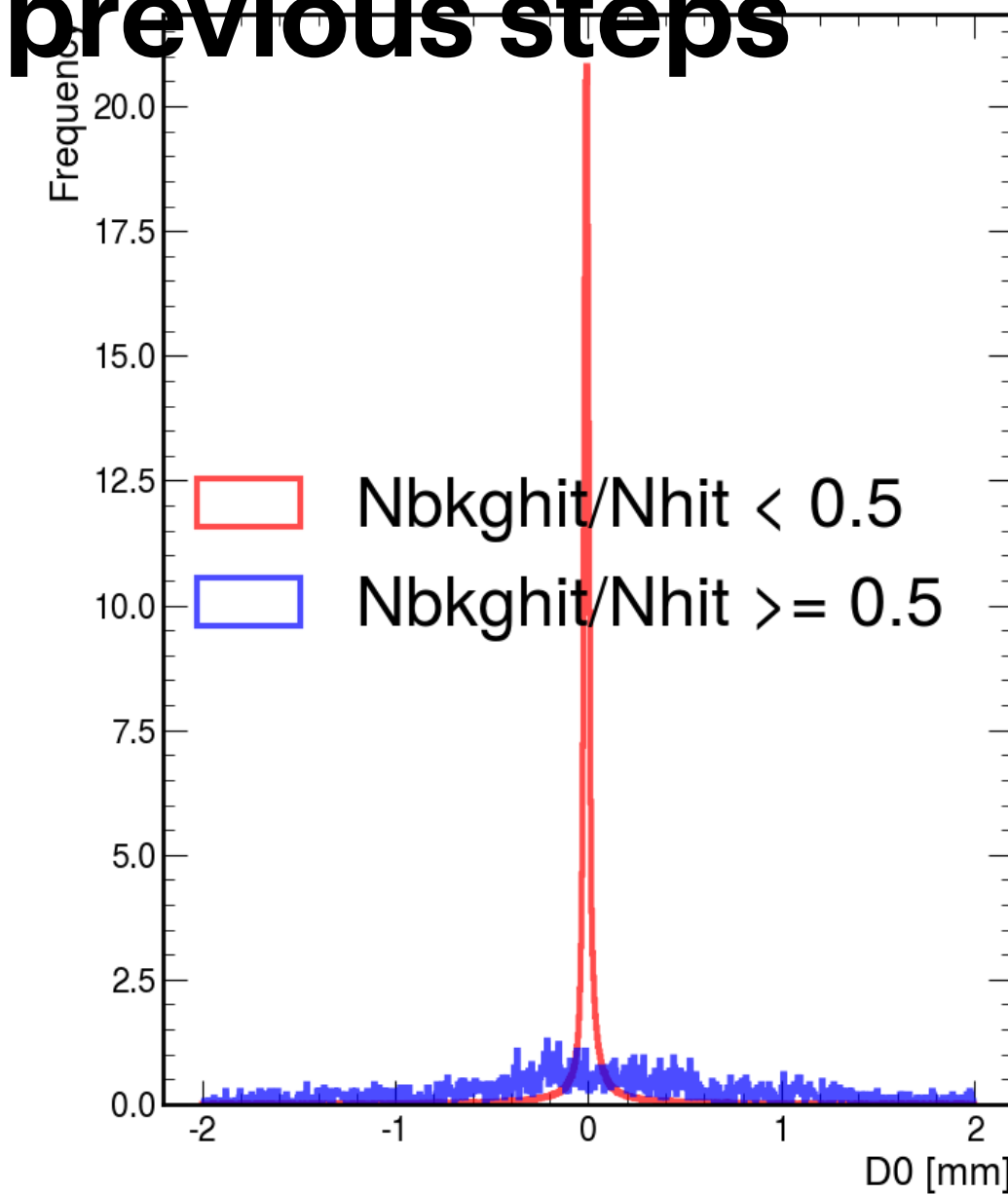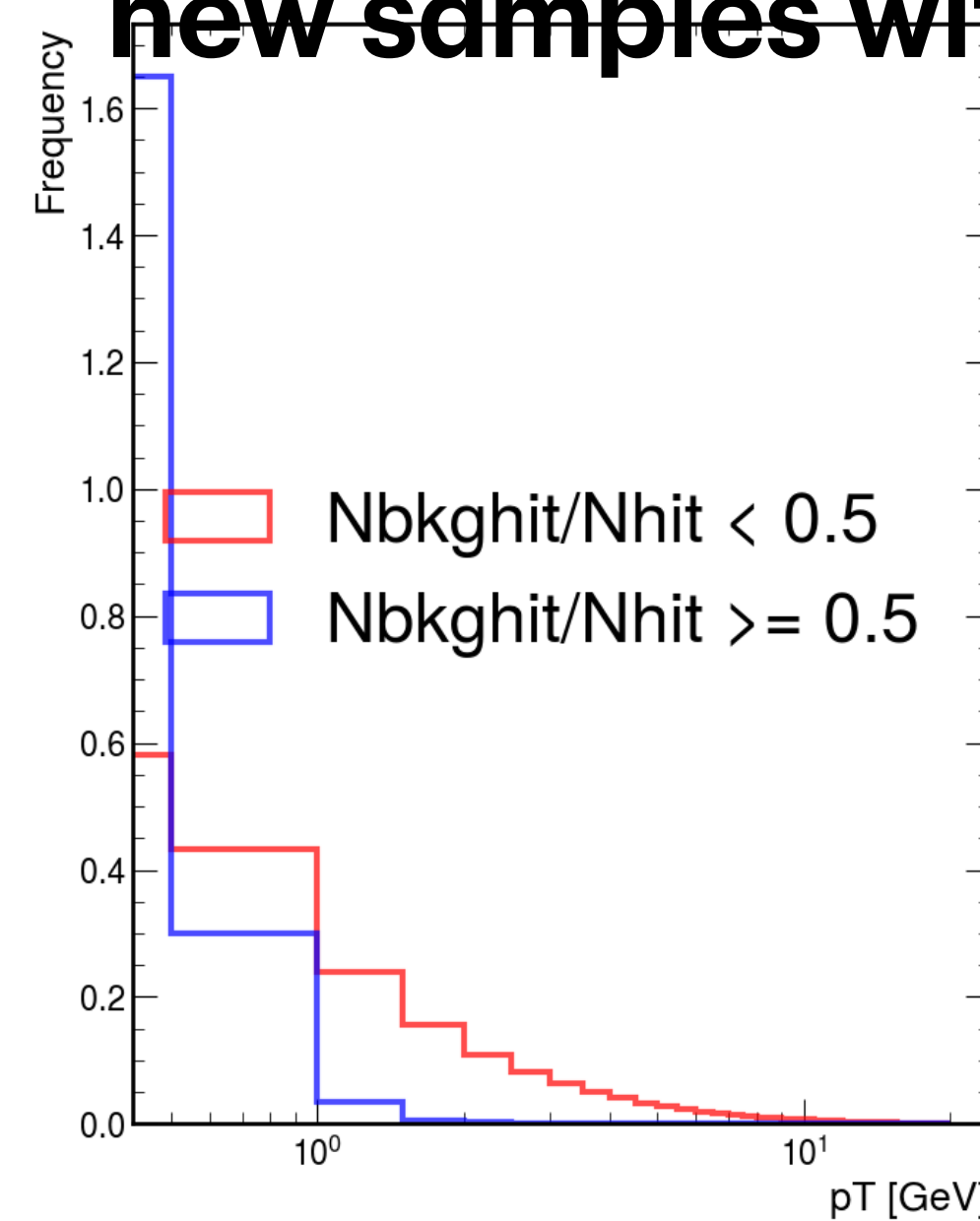
N_trk(Nbkg/Nhit > 0.5): 0.8%

- qqHnn samples, **tdr.25.5.0**
- BIB samples, /cefs/higgs/shihy/tools/ **CEPCSW_TDR255**/CEPCSW/Test/Higgs
- Mixed by **tdr.25.6.0**

4

BIB for Track

signal simulation [25.5.0] → reconstruction [25.5.0]

signal simulation [25.5.0] → mixing algo [25.6.0] → reconstruction [25.6.0]

bib simulation [25.5.0] → mixing algo [25.6.0]

signal simulation [25.5.0] → reconstruction [25.6.0]

reconstruction [25.5.0]

mixing algo [25.6.0]
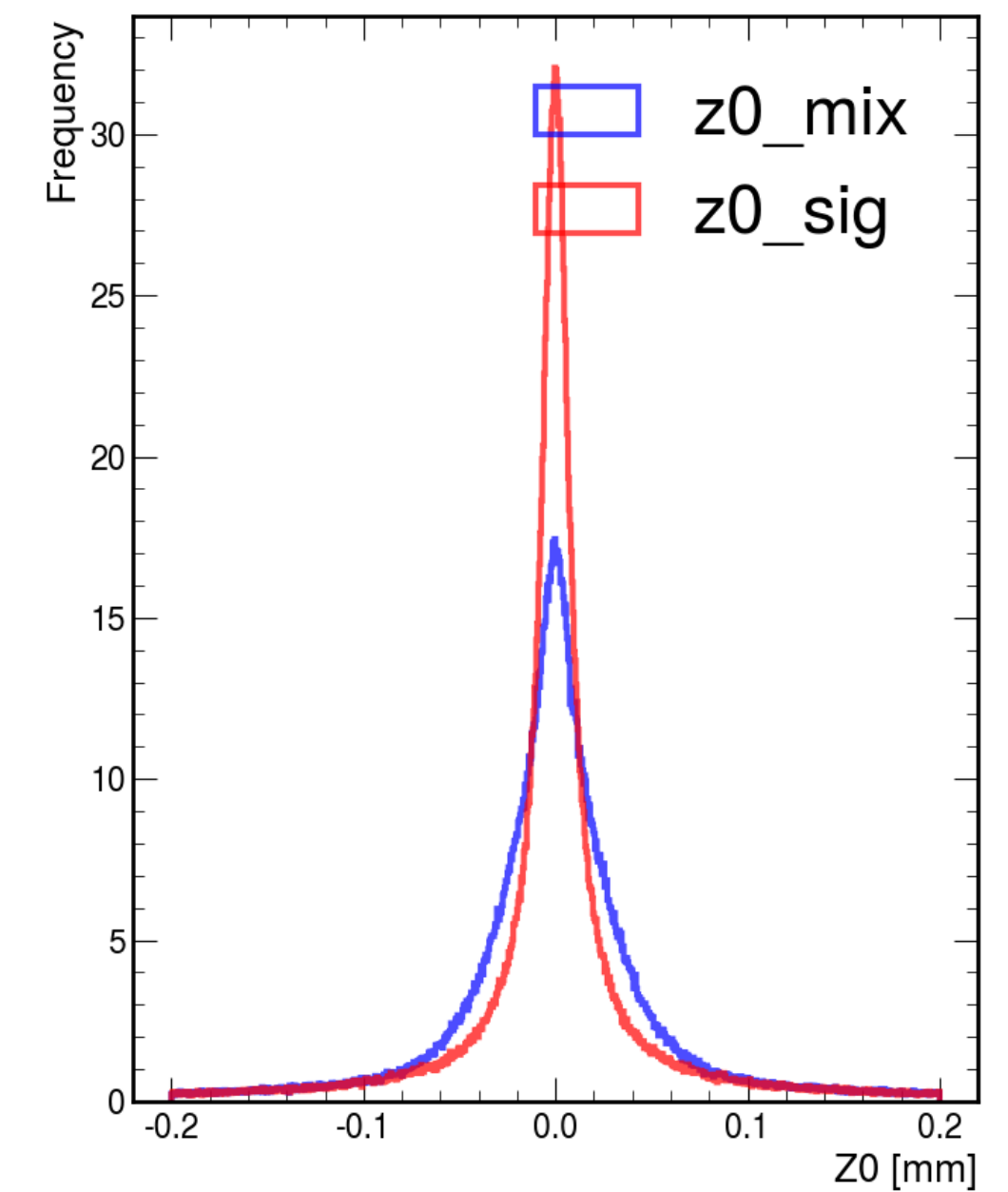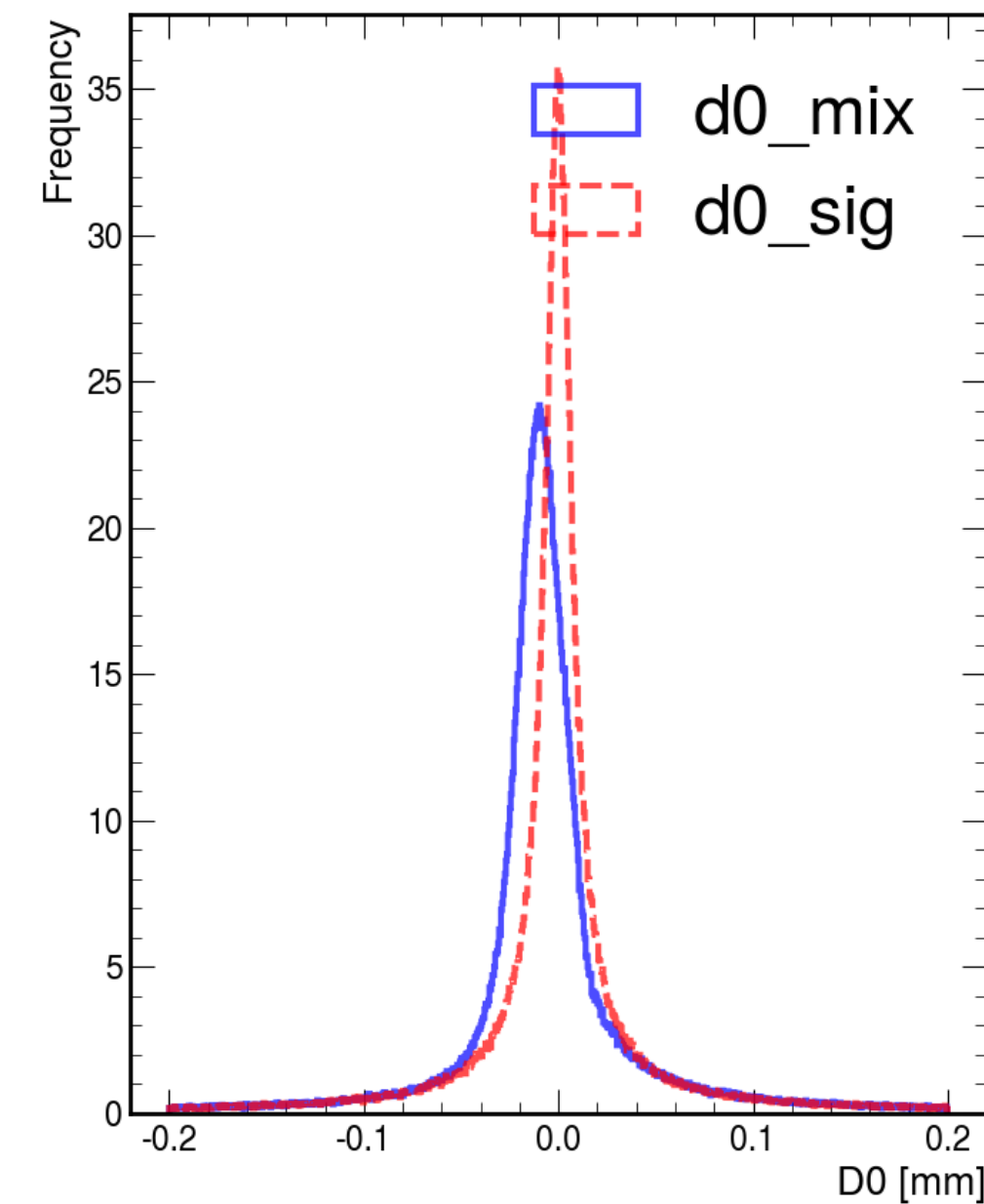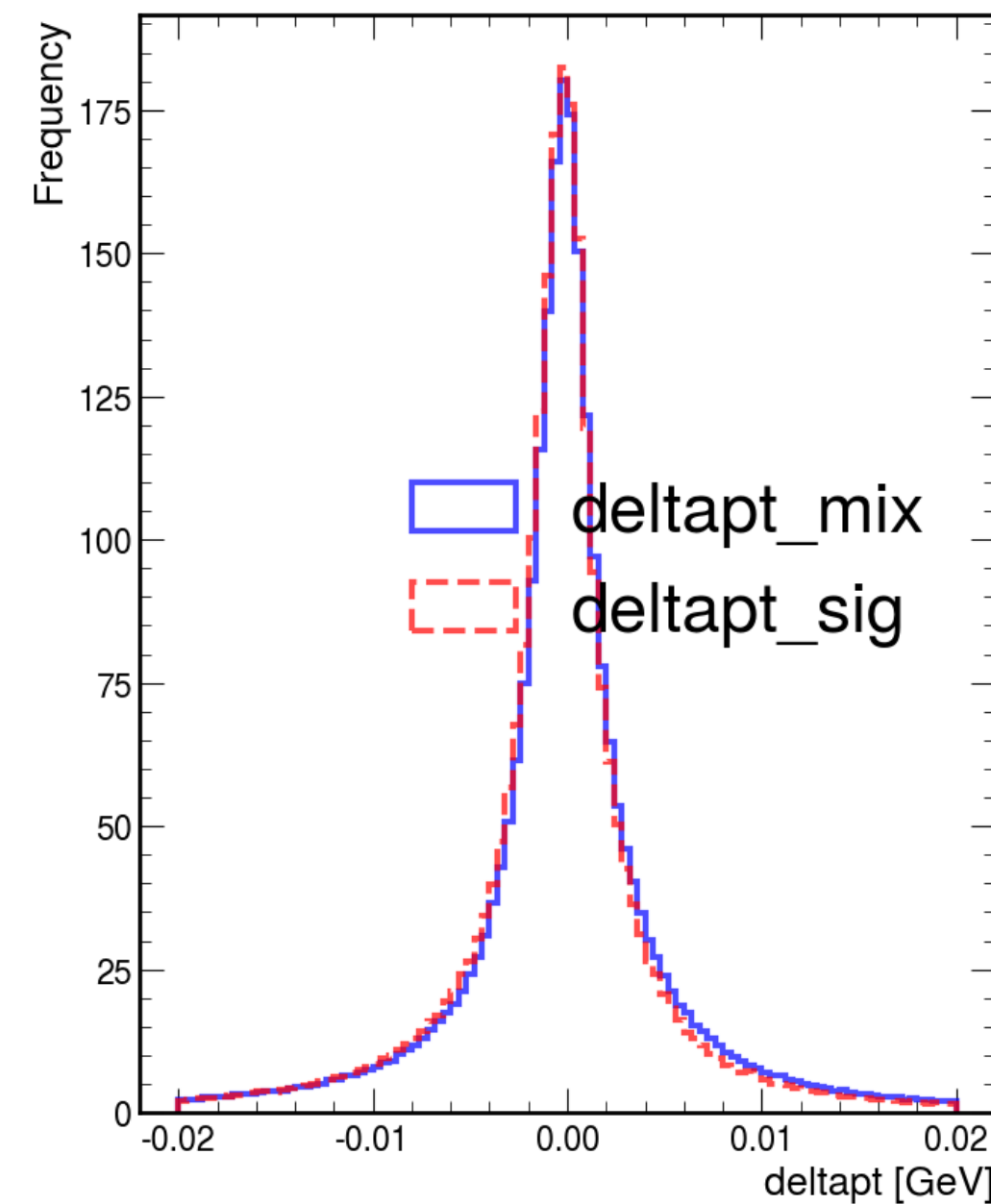
bib simulation [25.5.0]

BIB for tracks [5.0 sim + 6.0 rec]

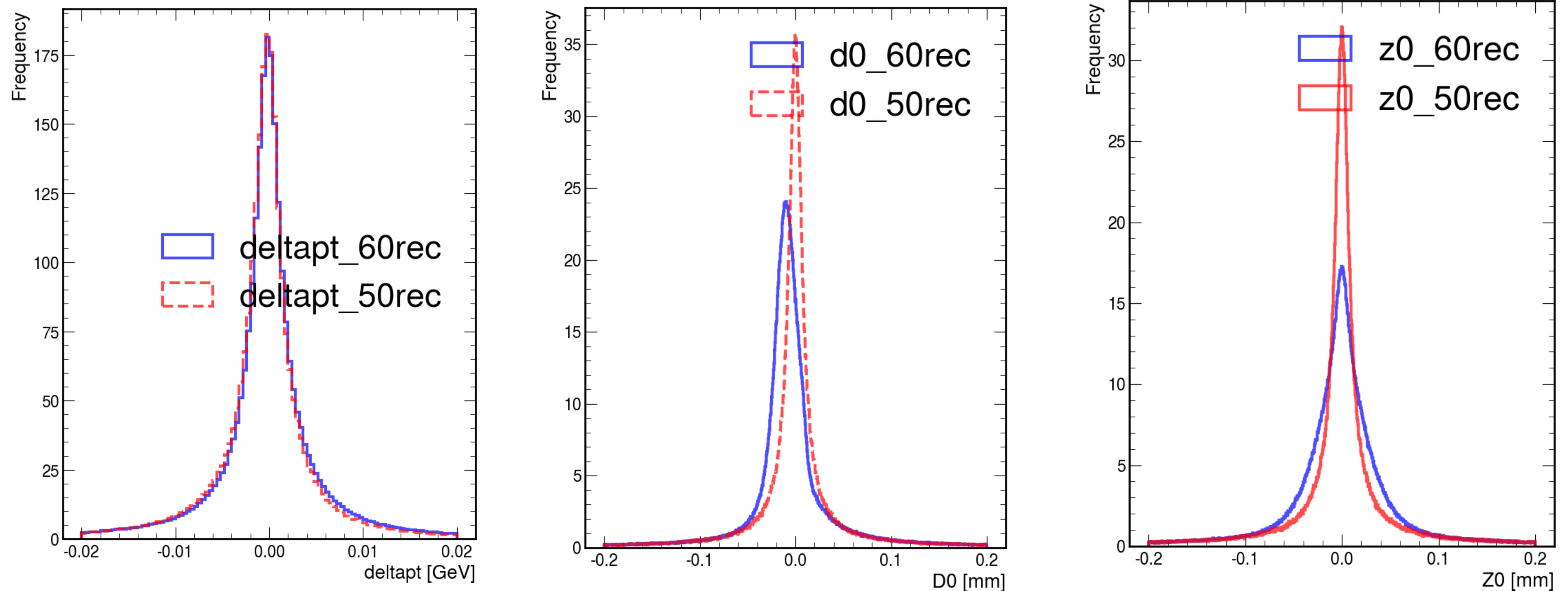
NO BIB
25.5.0 simulation + 25.5.0 reconstruction
25.5.0 simulation + 25.6.0 reconstruction

Summary

- Still expect BIB does not impact tracking, but more work needs to be done

- The conclusion regarding the missing bunch crossing in calorimeter remains valid

- Some new functions are only supported in the new SW release, while the performance of the new needs to be evaluated and new samples are not yet available