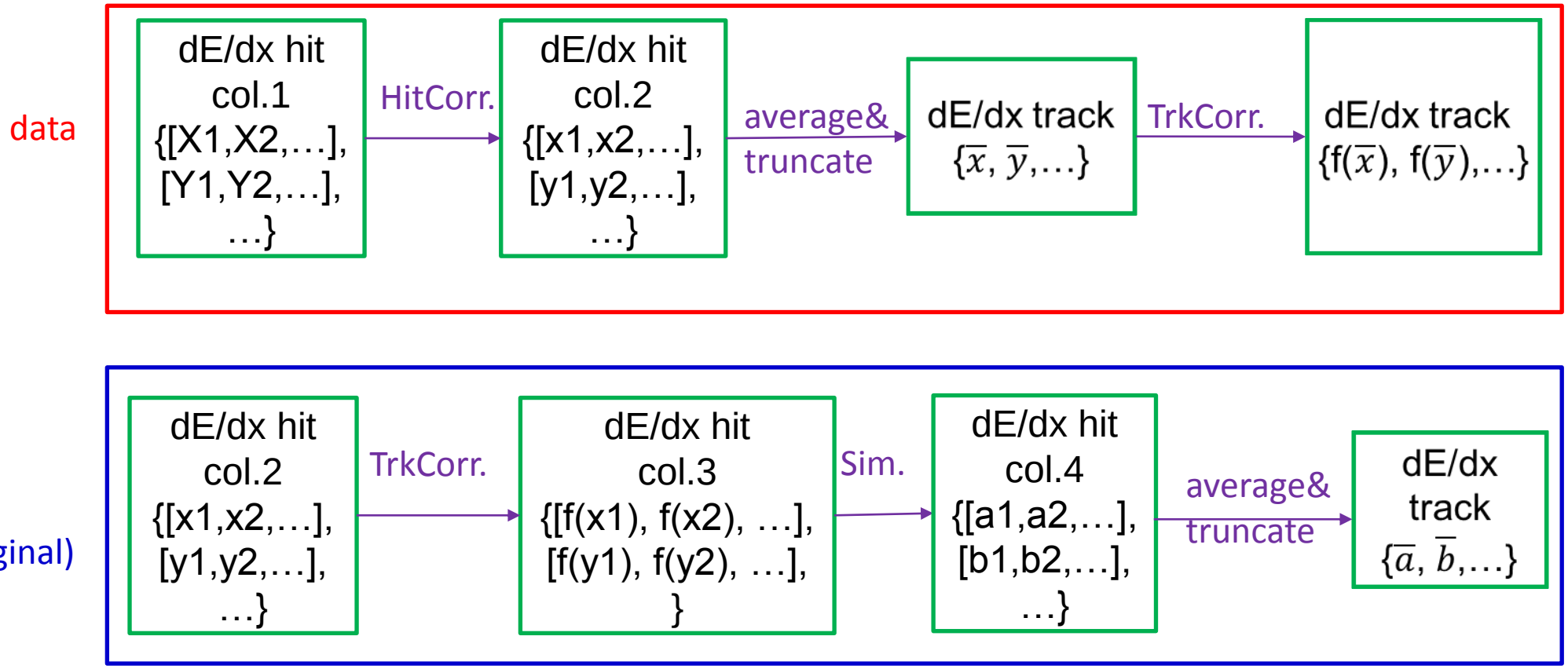
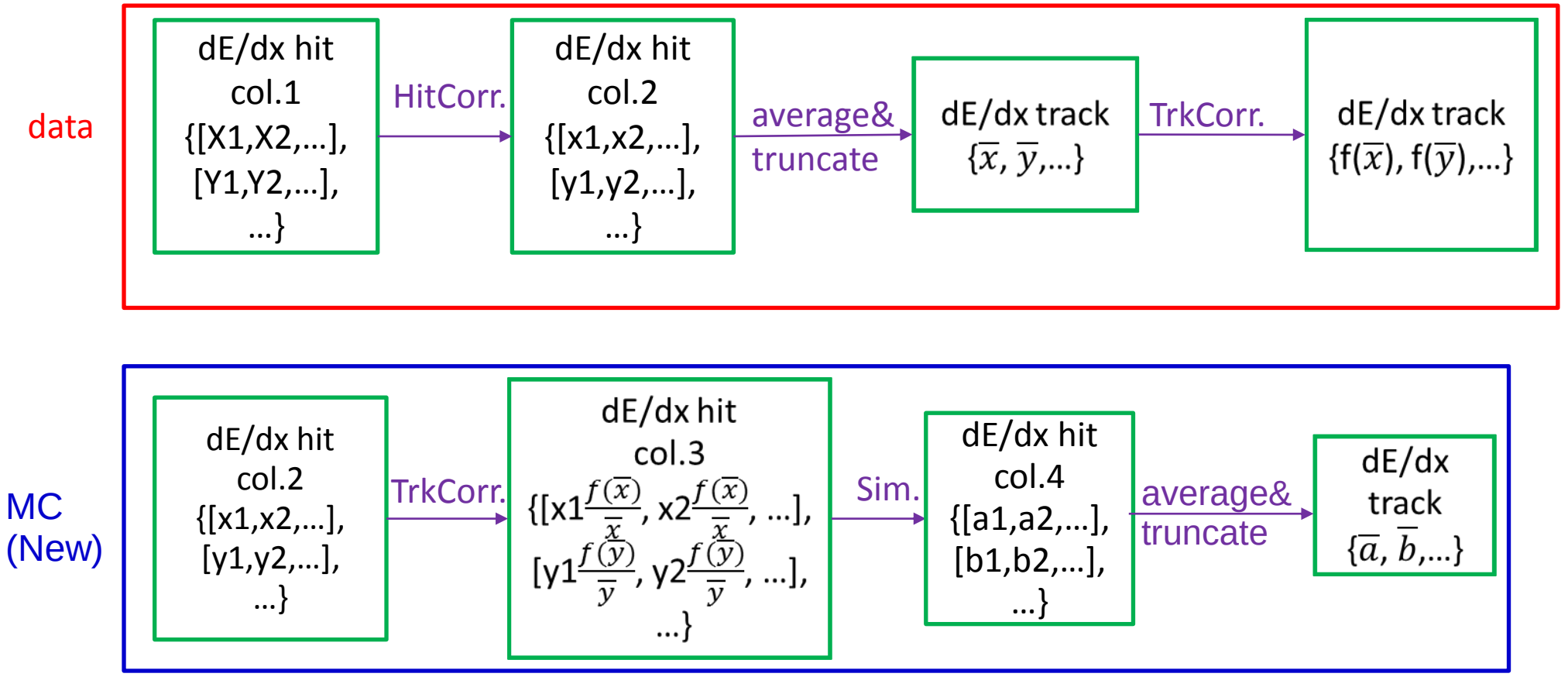
Review

1. Intro. of new dE/dx rec.

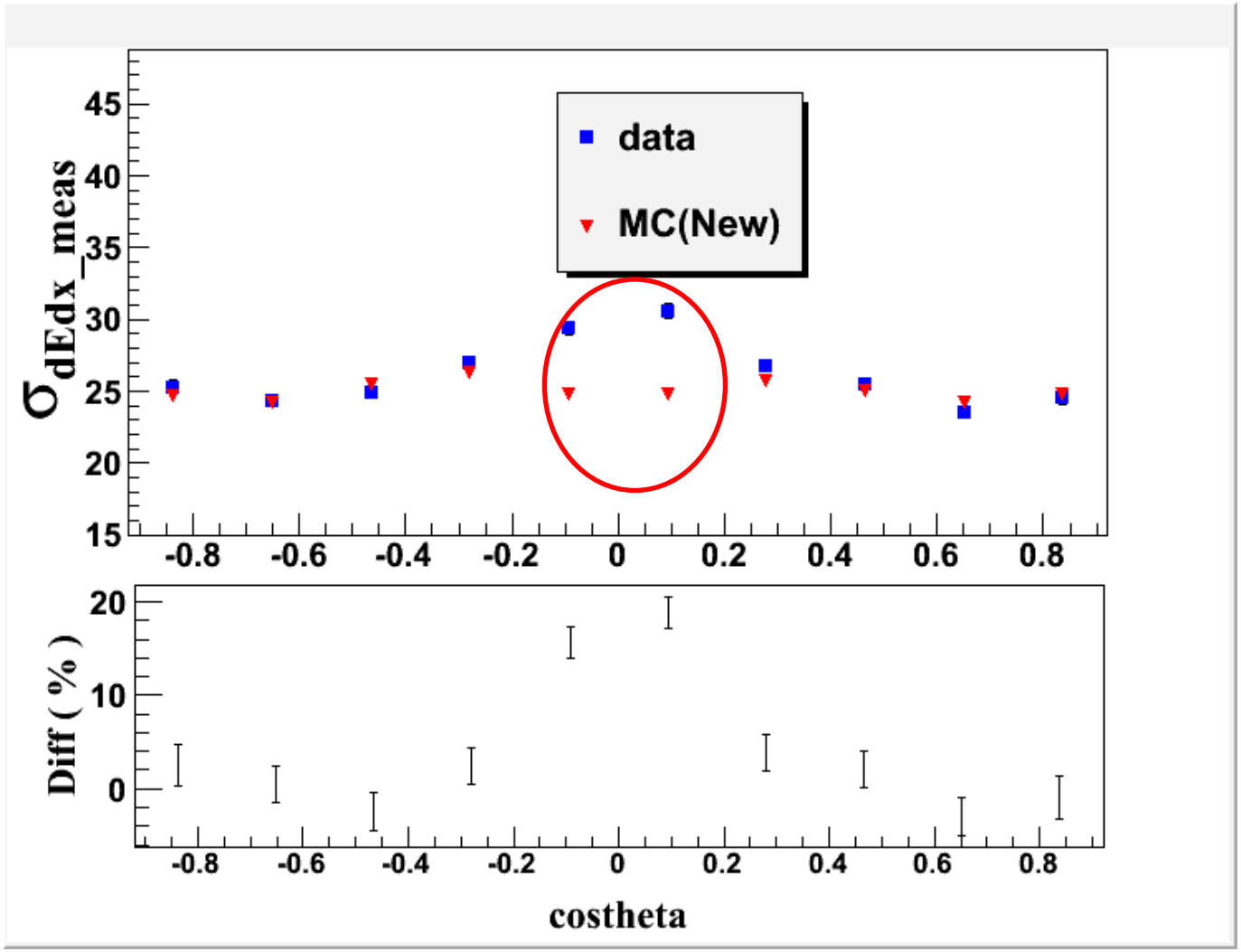
f(x) : TrkCorr.
As f(x) is nonlinear, the order of TrkCorr. really matters.



Review
1. Intro. of new dE/dx rec.



Review
1. Intro. of new dE/dx rec.
Incredible diff. of σ when cosθ ~0



$$Diff = \frac{data - MC}{data}$$

Even if we change binning of cosθ, the diff. can't be reduced.

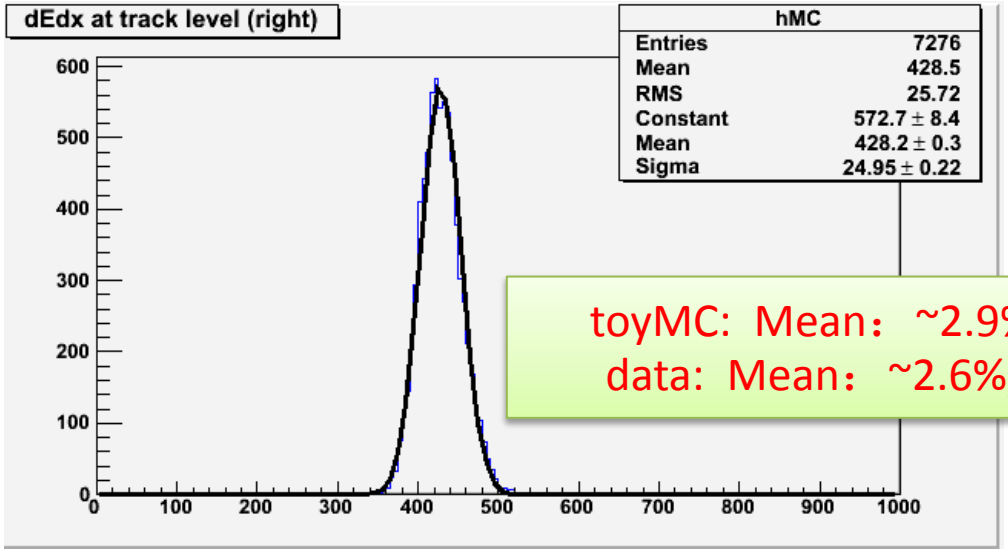
2.Possible problems

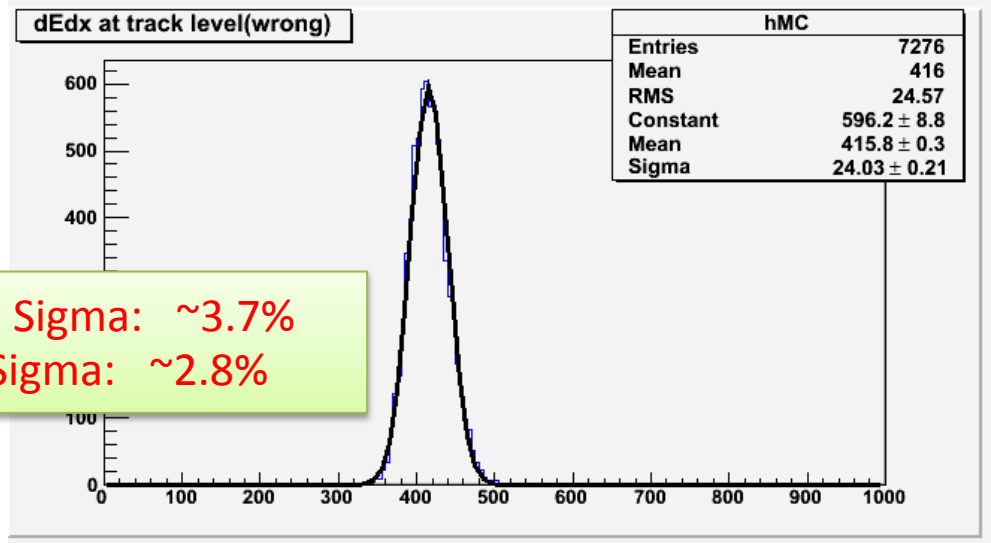
（1） the error in “ truncate & average “ part

- Track级别的dE/dx通过对hit级别的dE/dx进行截断（低端5%和高端75%）然后平均得到。
- 重建算法中截断平均的错误：击中数 nhit < 10 时， 计算平均值时少算截断后击中级别dE/dx最高值。(对data和MC都存在这个问题)

$$\frac{390 + 400 + 410 + 420 + 430 + 440 + 450}{7} = 420$$

$$\frac{390 + 400 + 410 + 420 + 430 + 440 + 450}{7} = 355.7$$

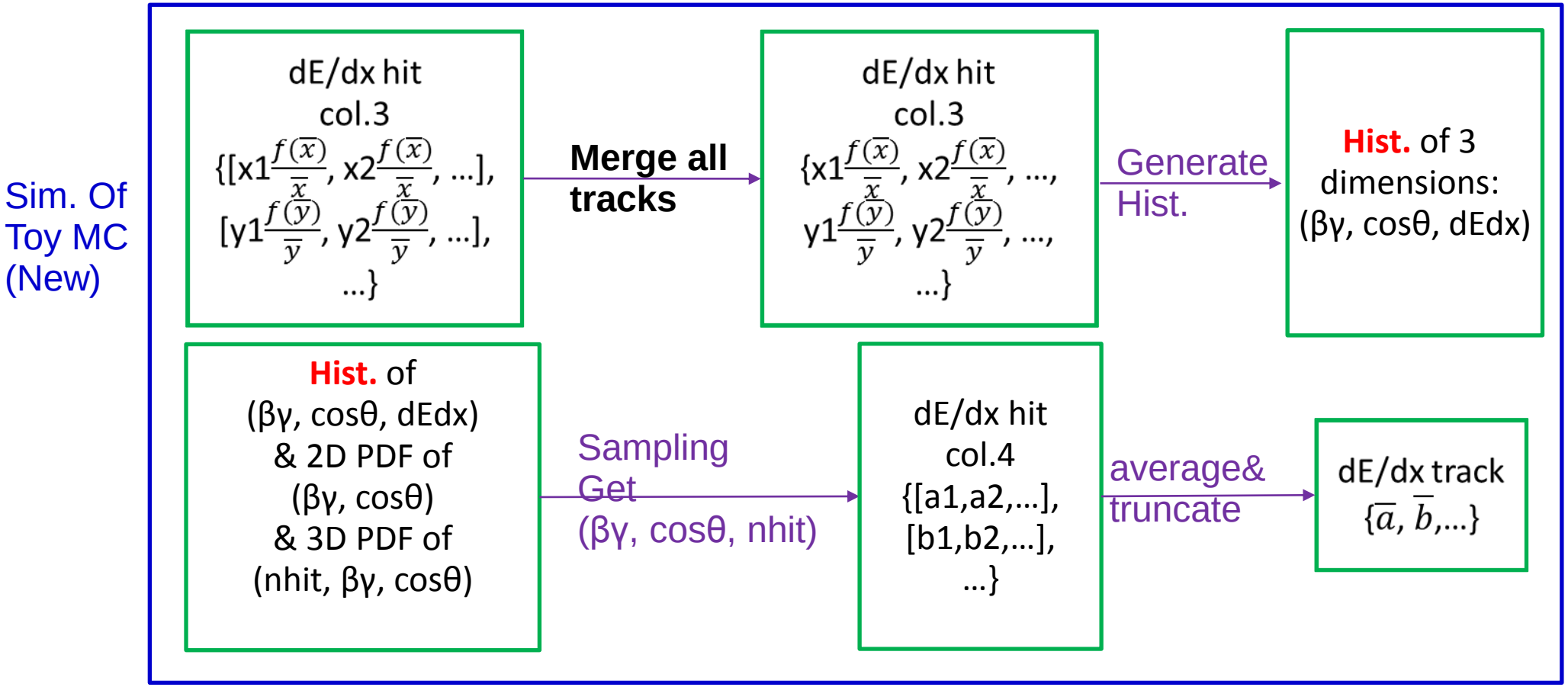




toyMC: Mean：~2.9%, Sigma: ~3.7%
data: Mean：~2.6%, Sigma: ~2.8%

2.Possible problems

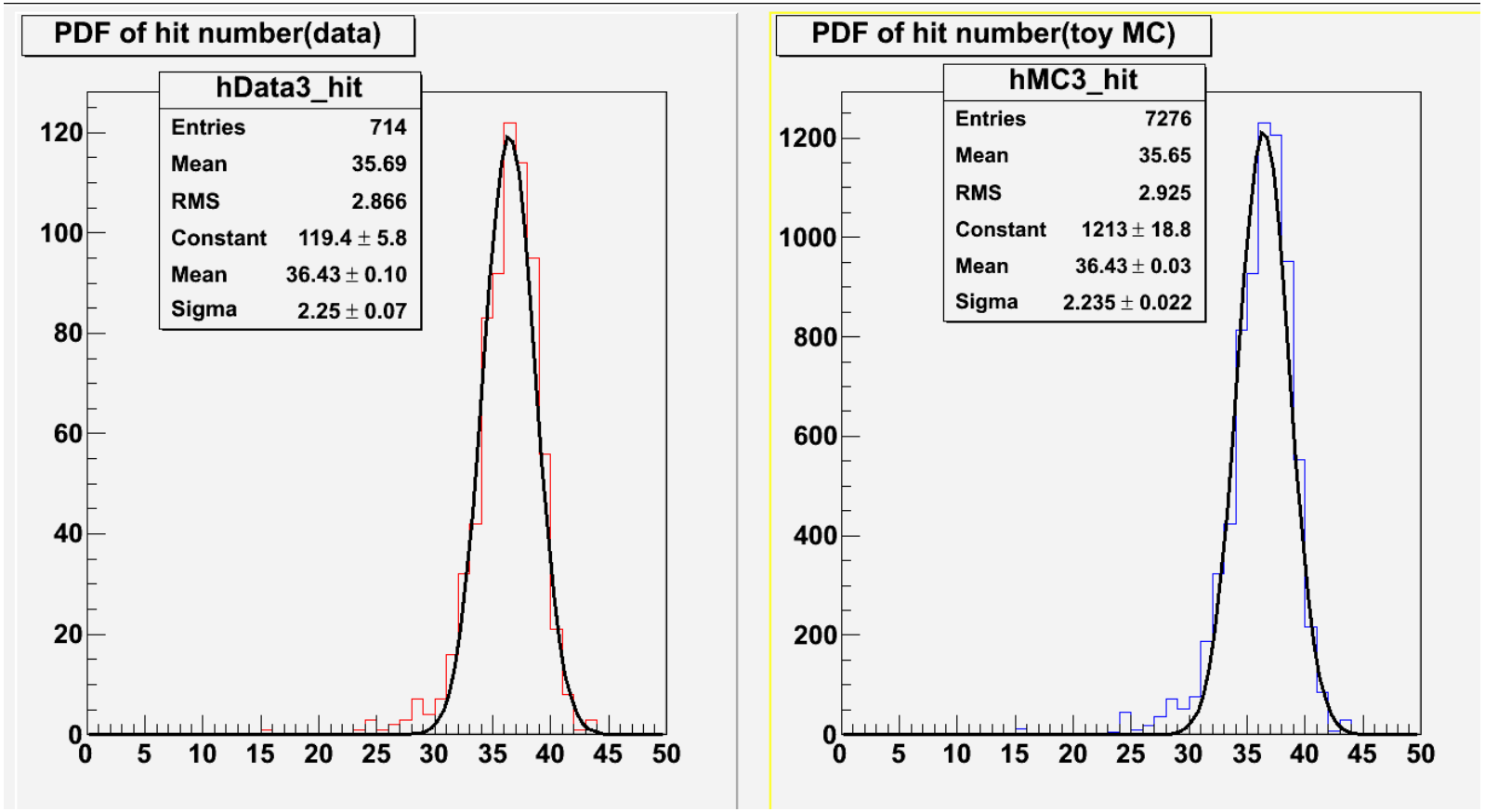
（2）loss of info. in sim.



2. （2）loss of info. in sim.

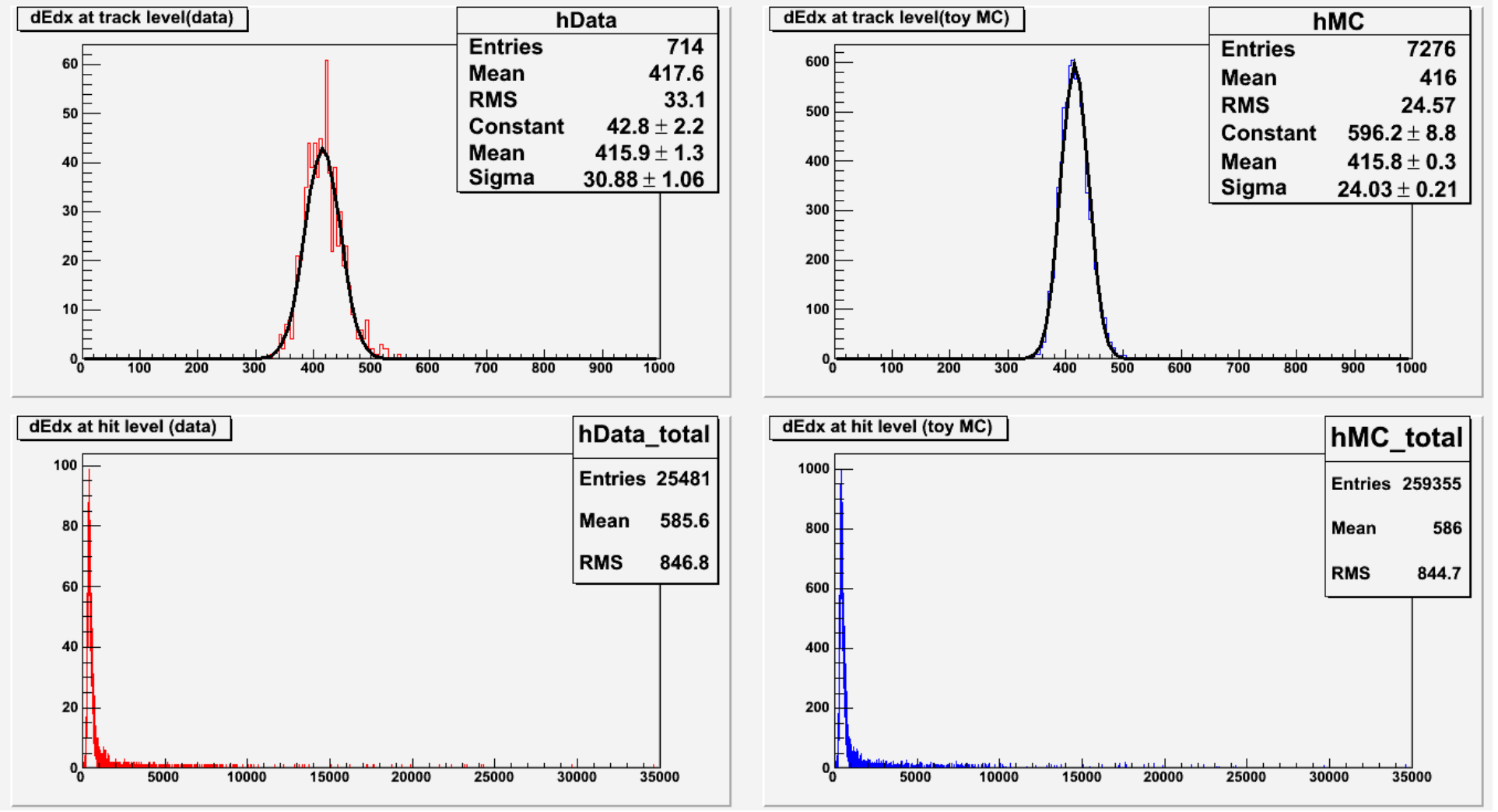
(a) Samling from a single hist.

- 以下toy MC 的dEdx只从单个直方图抽取.(排除动量、角度、击中数分布不一致的影响)
- Momentum： 0.8GeV/c< p < 0.85GeV/c , angle： 0 < cosθ < 0.1



2. （2）loss of info. in sim.

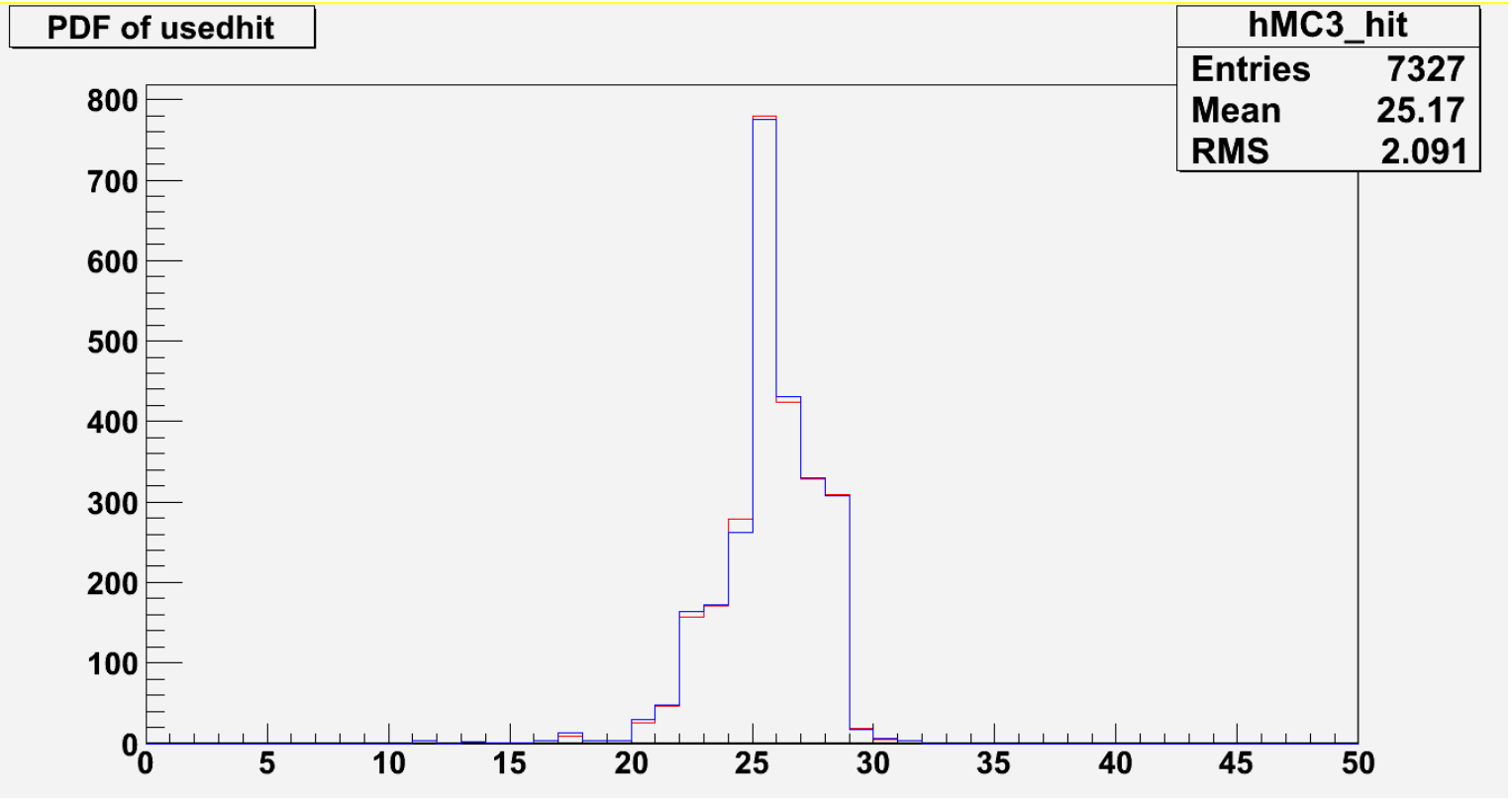
(a) Sampling from a single hist.



2. （2）loss of info. in sim.

(b) Samling from a single hist. (take nhit into account when sampling)

- Momentum： 0.8GeV/c< p < 1.0GeV/c , angle： 0 < cosθ < 0.1



2. （2）loss of info. in sim.

(b) Sampling from a single hist.(take nhit into account when sampling)