

Tracker reconstruction deviation

Sample: $5e+8$ inclusive

Fitting method: GenFit

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Hit position digitization

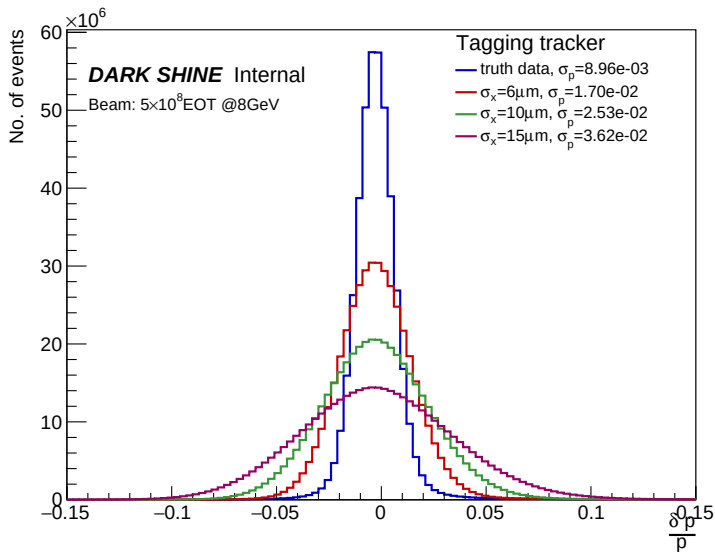
Gaussian smear

1. $\sigma_x = 6\mu m$
 2. $\sigma_x = 10\mu m$
 3. $\sigma_x = 15\mu m$
- $\sigma_y = 10 \times \sigma_x$
y: B direction

$\delta p/p$ tagging tracker

p : truth momentum

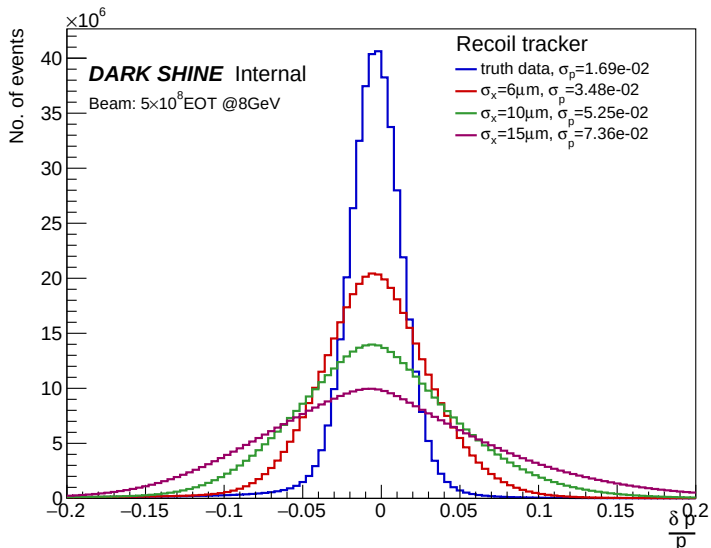
δp = reconstructed momentum - truth momentum



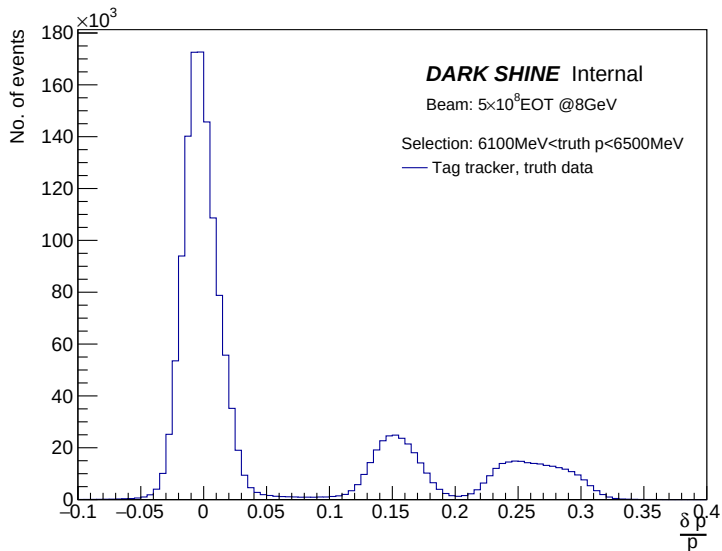
$\delta p/p$ recoil tracker

p : truth momentum

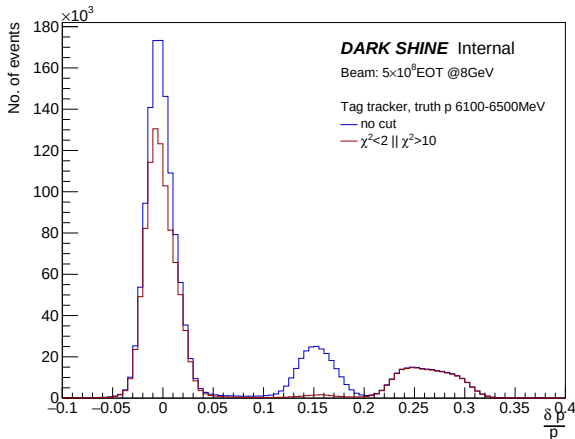
δp = reconstructed momentum - truth momentum



$\delta p/p$ in truth momentum of 6100MeV-6500MeV
(3.8‰)(95.7% for $p_{truth} > 7500\text{MeV}$ and 92.7% for $p_{truth} > 7900\text{MeV}$)
Tagging tracker



$\delta p/p$ in truth momentum of 6100MeV-6500MeV



The peak at 0.15 can be removed by applying a cut: $\chi^2 < 2 \parallel \chi^2 > 10$.

(χ^2 : a parameter given by GenFit suggests how well the fitting is)

The peak at 0.25 can't be removed, their tracks are like 8 GeV electrons but their momenta are 6000 MeV.