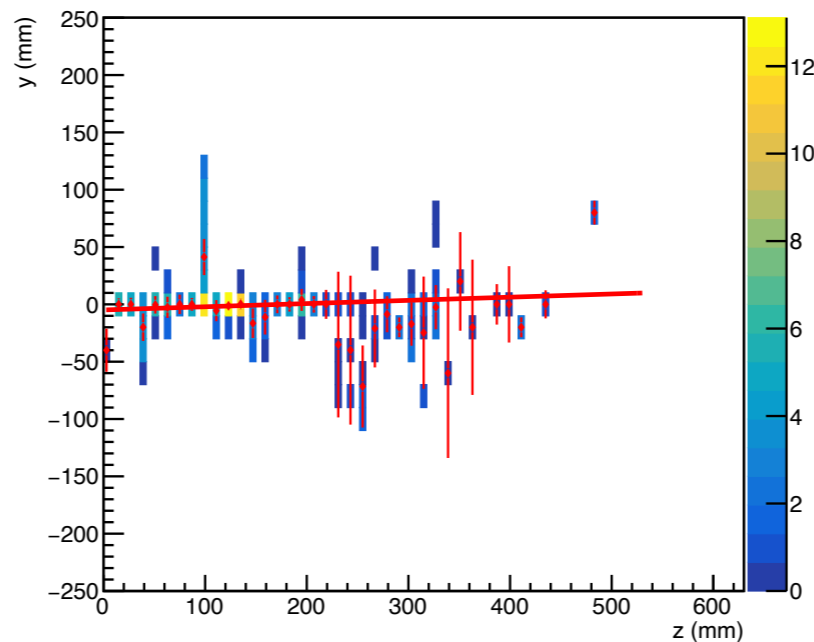
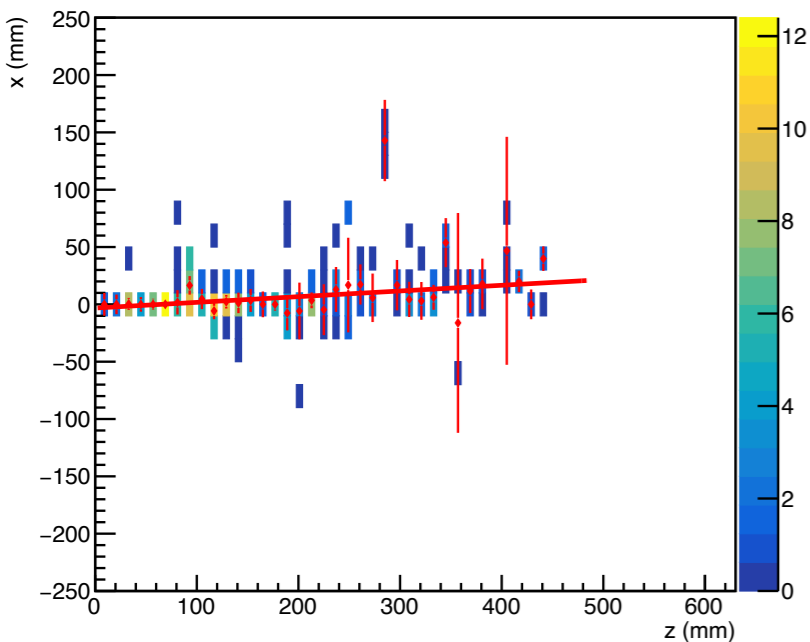
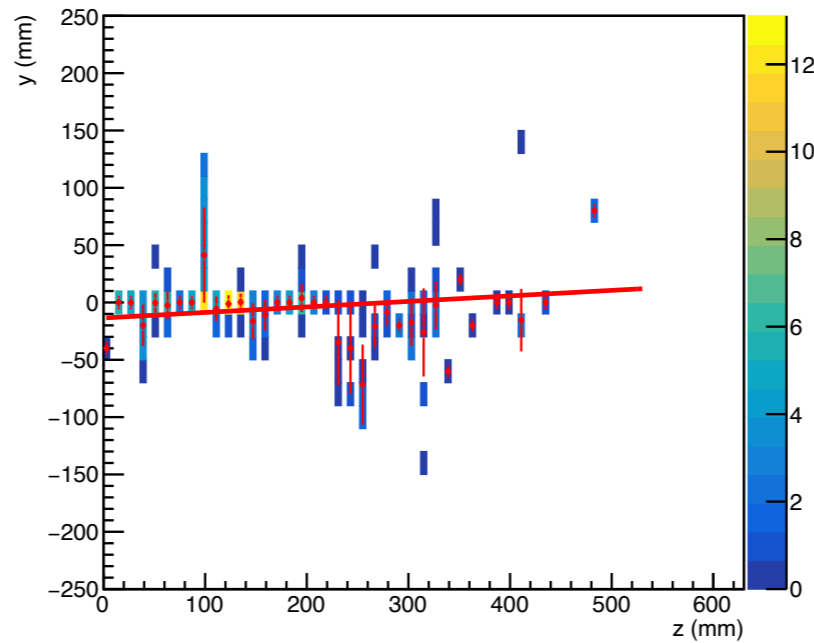
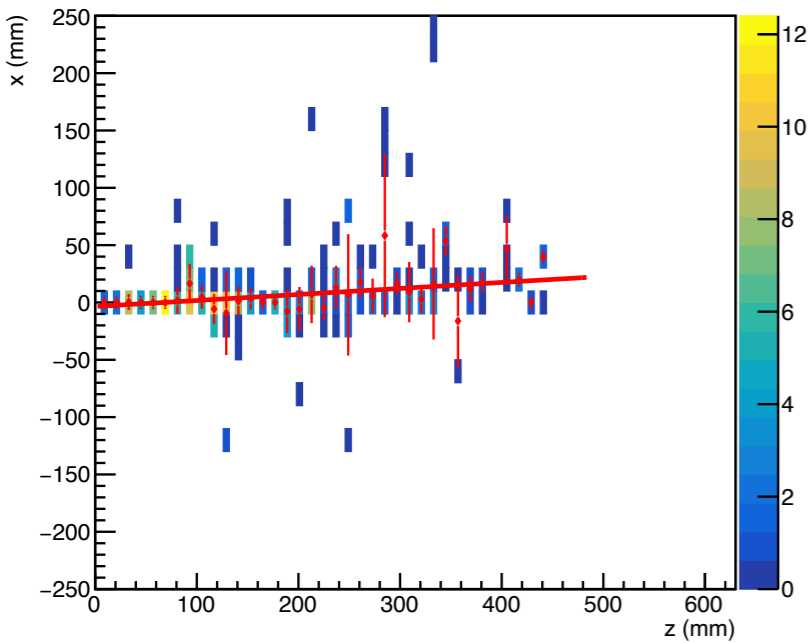


K-Koto Meeting

2020/04/22

YoungJun Kim

Single event



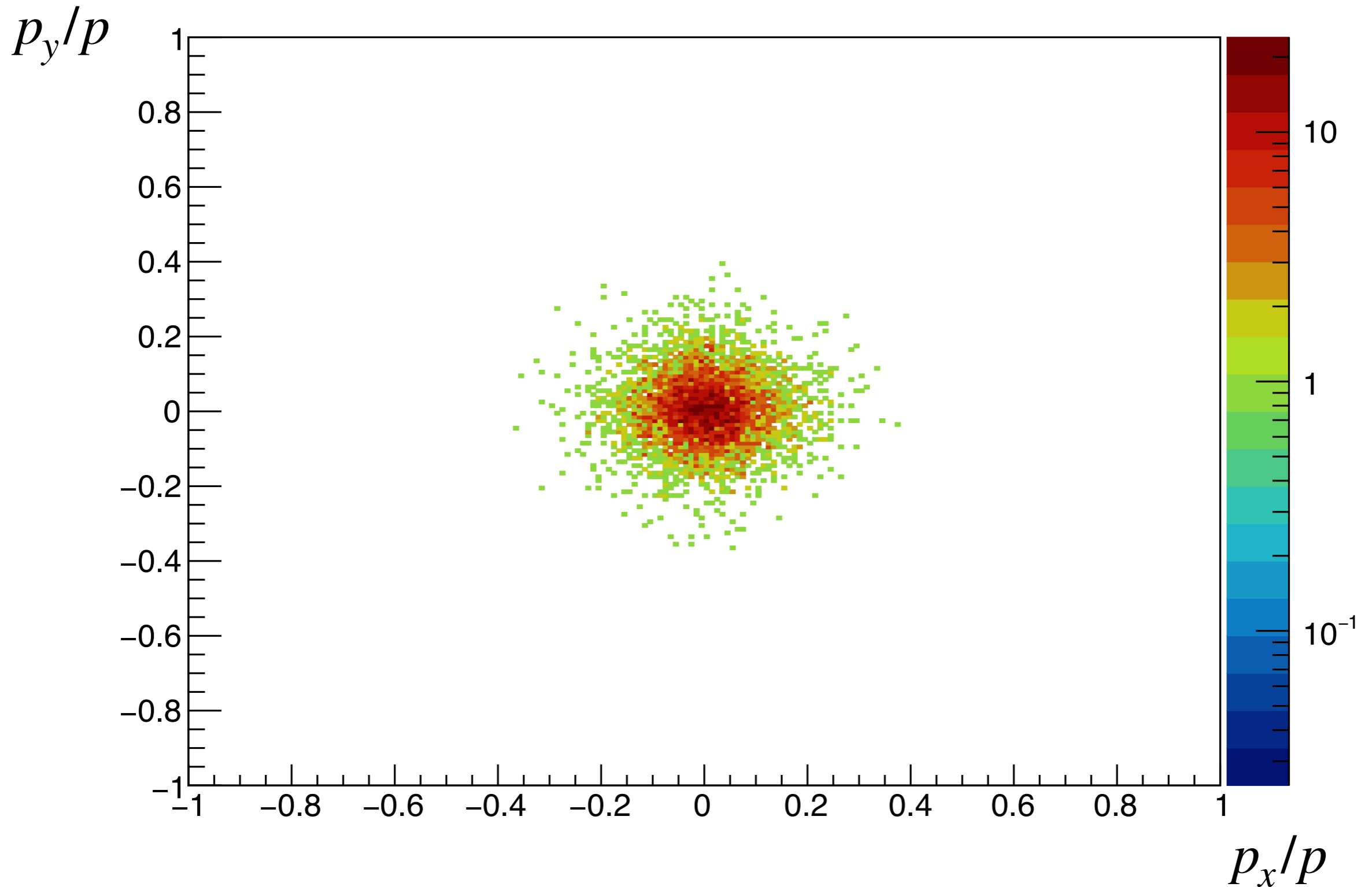
$$\chi^2 = \sum_i \frac{(f(x_i) - y_i)^2}{\sigma_i^2} \times e_i$$

$$e_i = E_i / \bar{E}$$

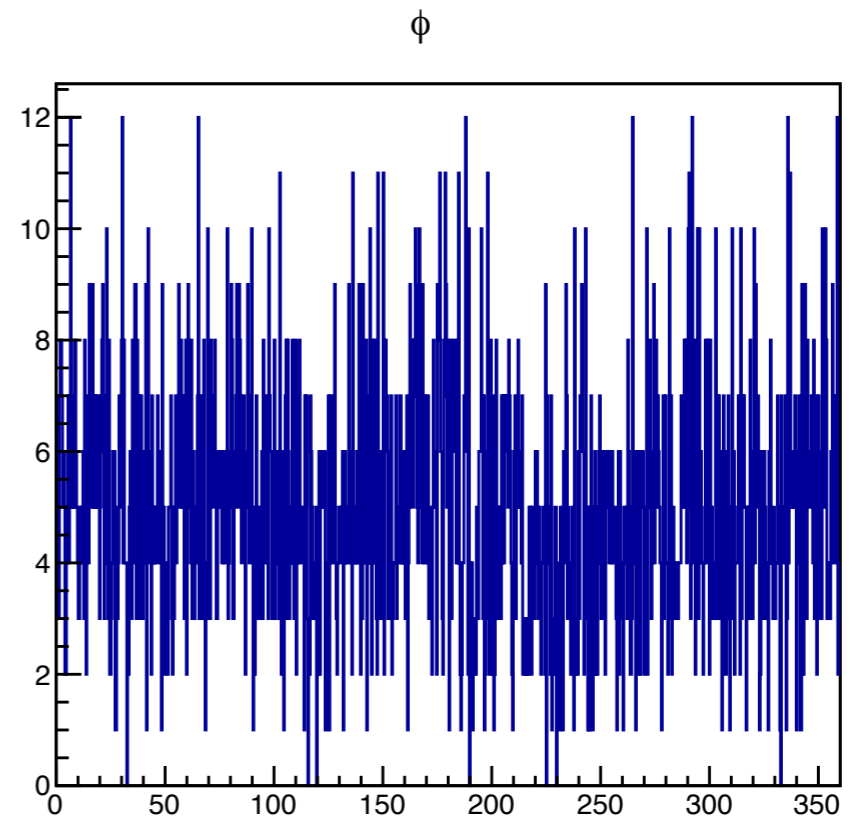
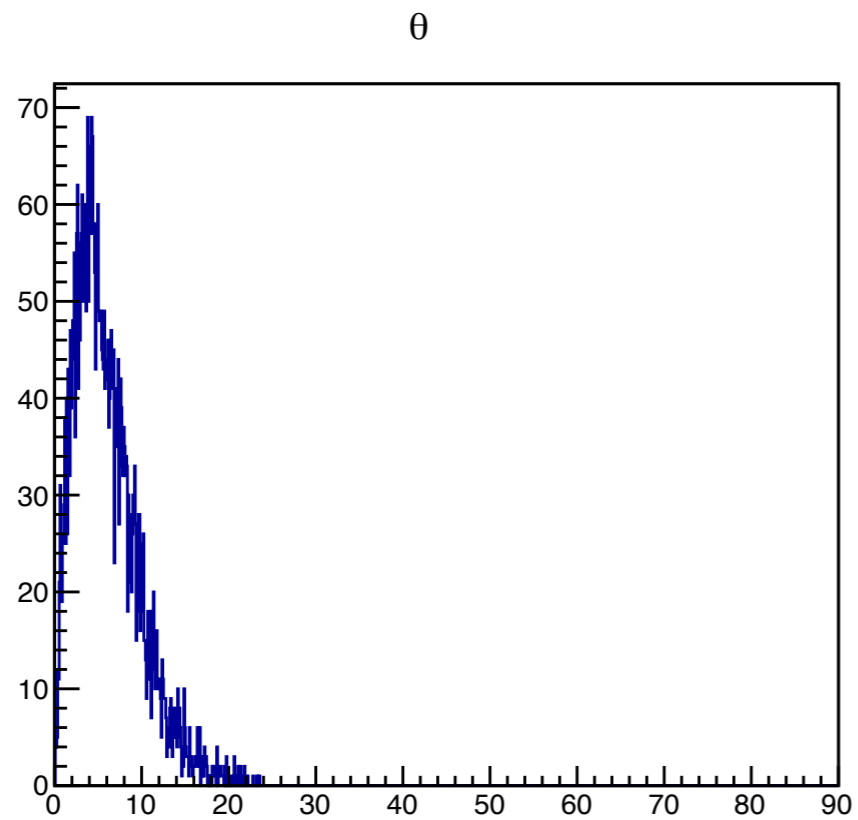
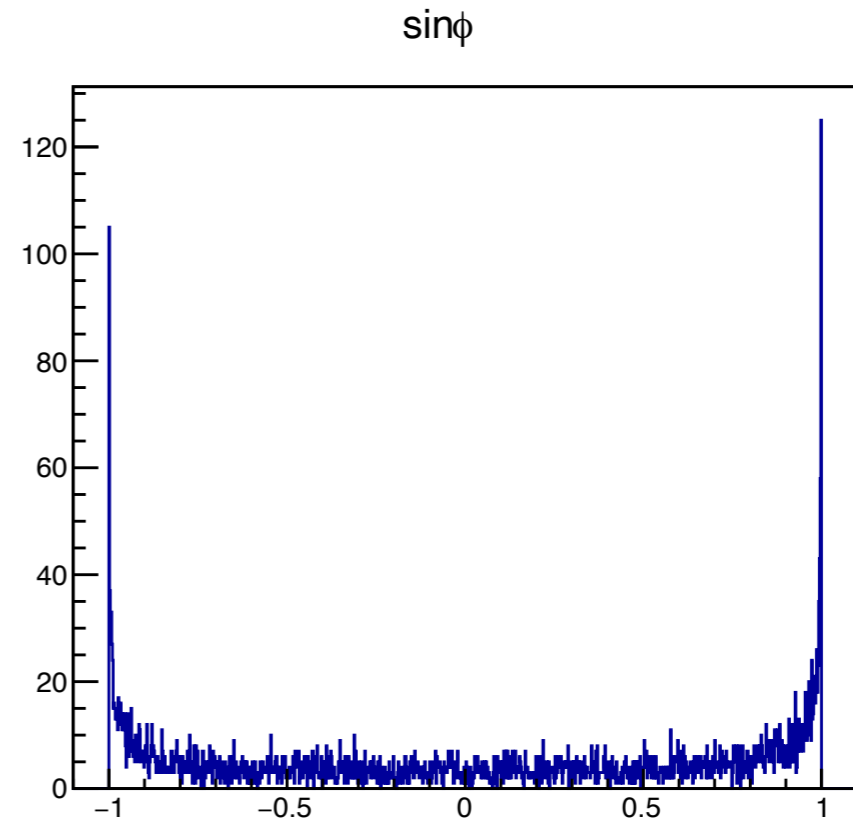
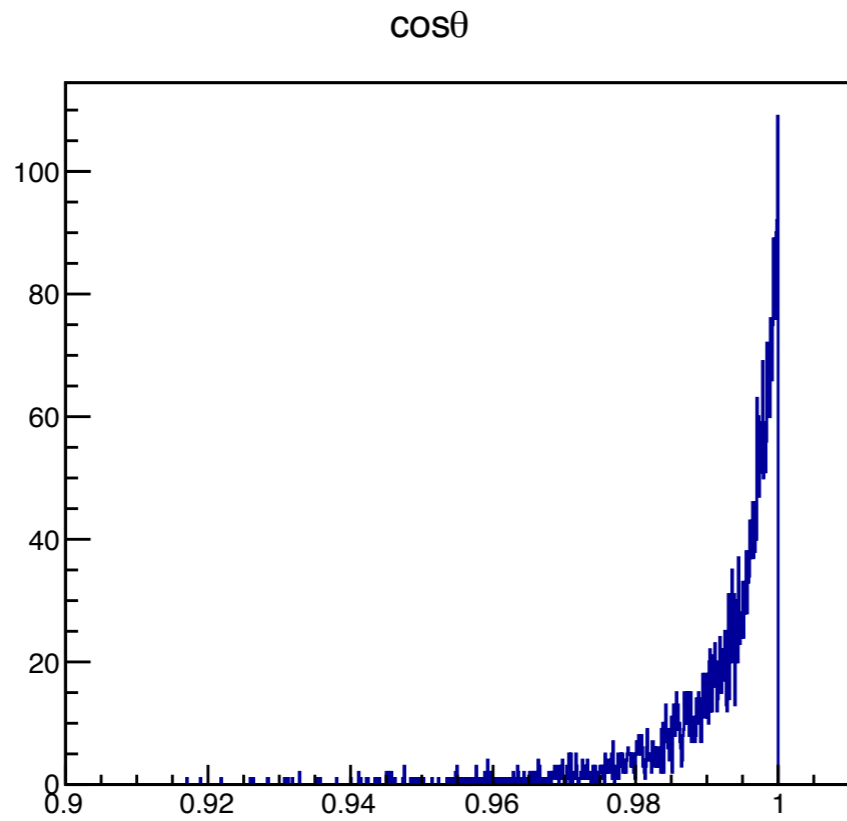
$$\left| \frac{\sum_{i \neq j}^n E_i x_i}{\sum_{i \neq j}^n E_i} - x_j \right| < \text{distance cut}$$

distance cut 100 mm

Spread on XY axis (Log scale)



Angular distributions

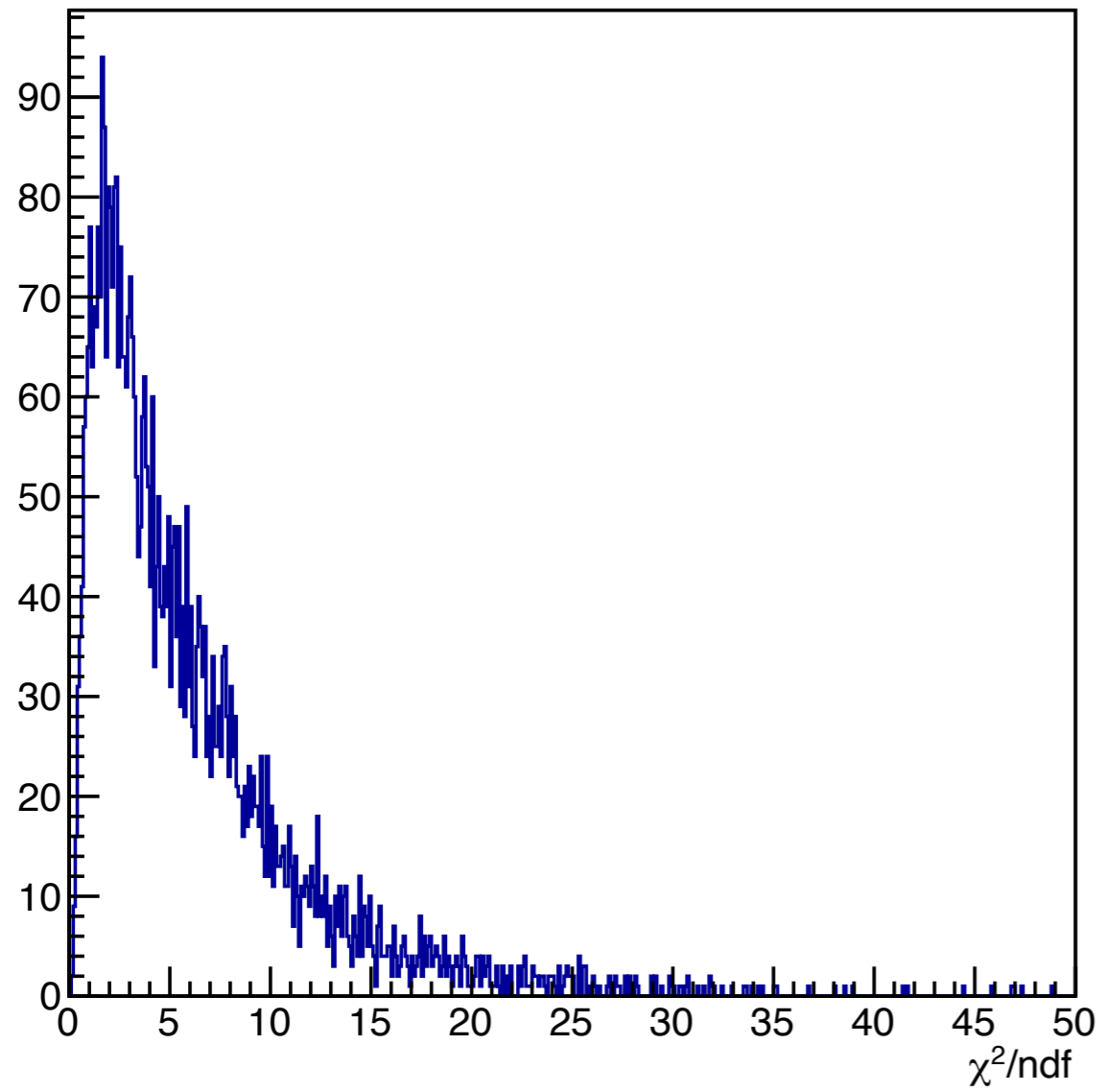


degree

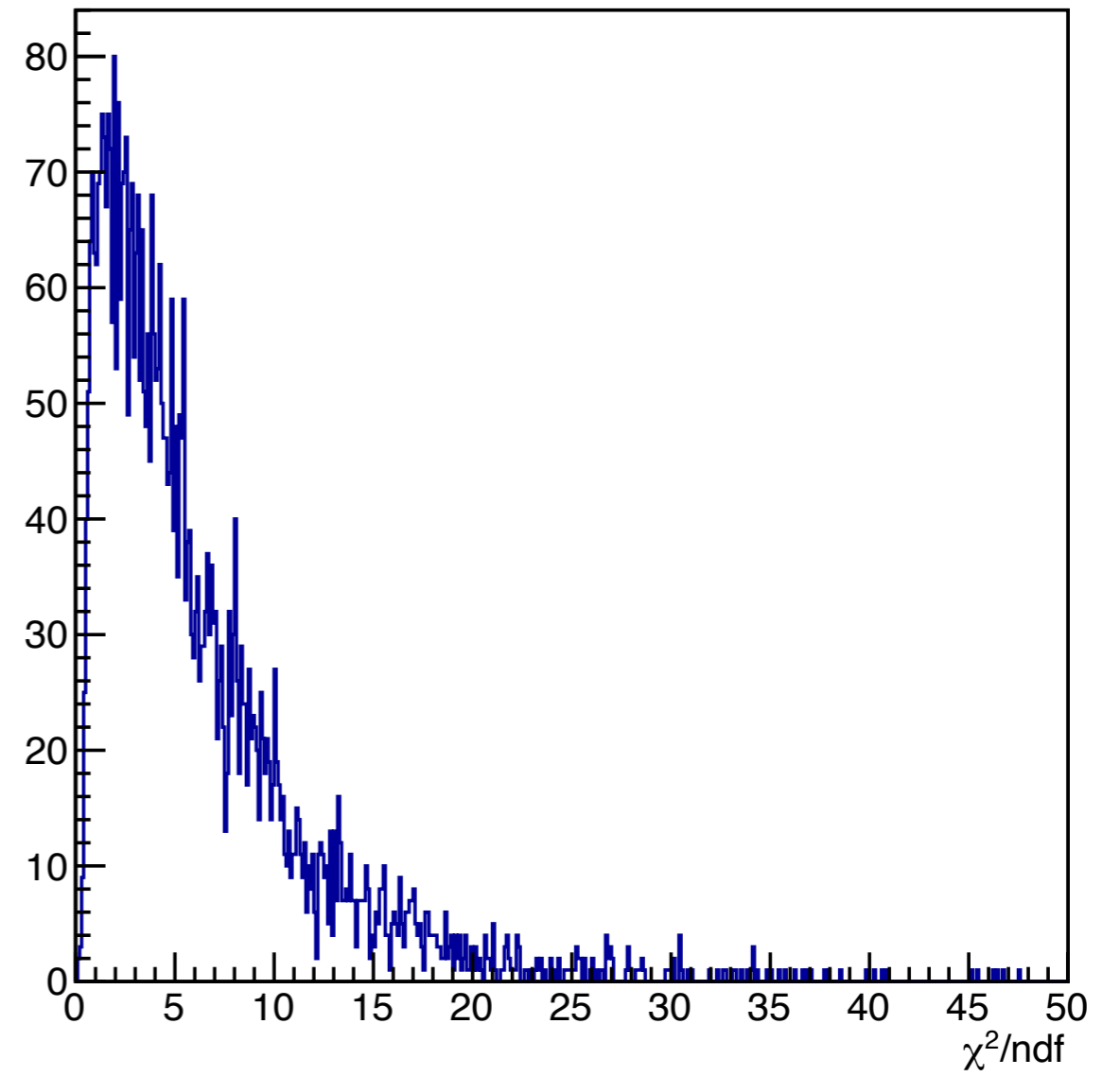
degree

χ^2 distribution

xz axis



yz axis



back up

Error and χ^2

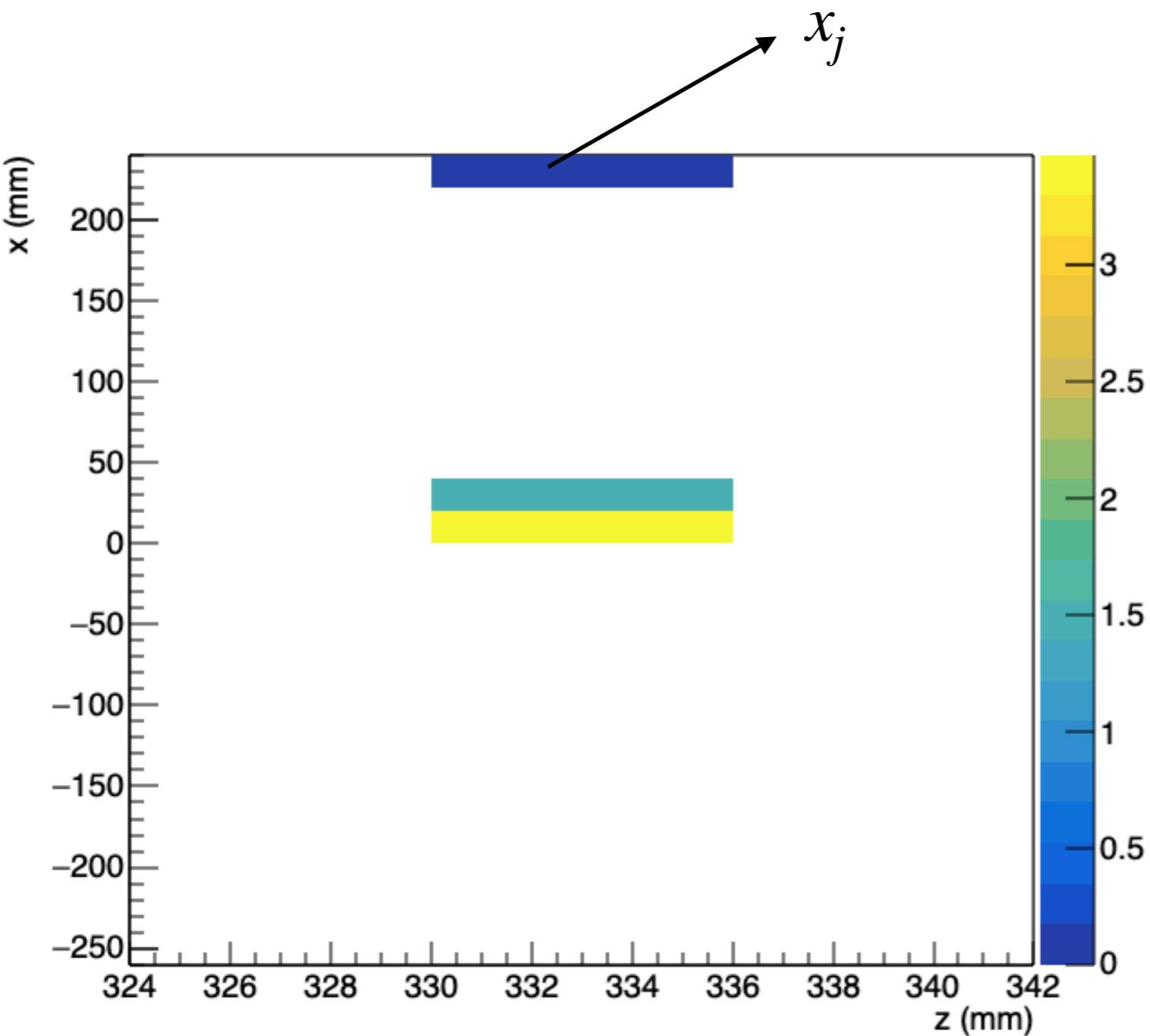
$$\sigma_x^2 = \sigma_{x(E \text{ weighted})}^2 + (L_x/\sqrt{12})^2$$

$$\sigma_z = L_z/\sqrt{12}$$

$$\chi^2 = \sum_i \frac{(f(x_i) - y_i)^2}{\sigma_i^2} \times e_i$$

, $e_i = E_i/\bar{E}$ (or $e_i = E_i^2/\bar{E}^2$??)
, i : layer id

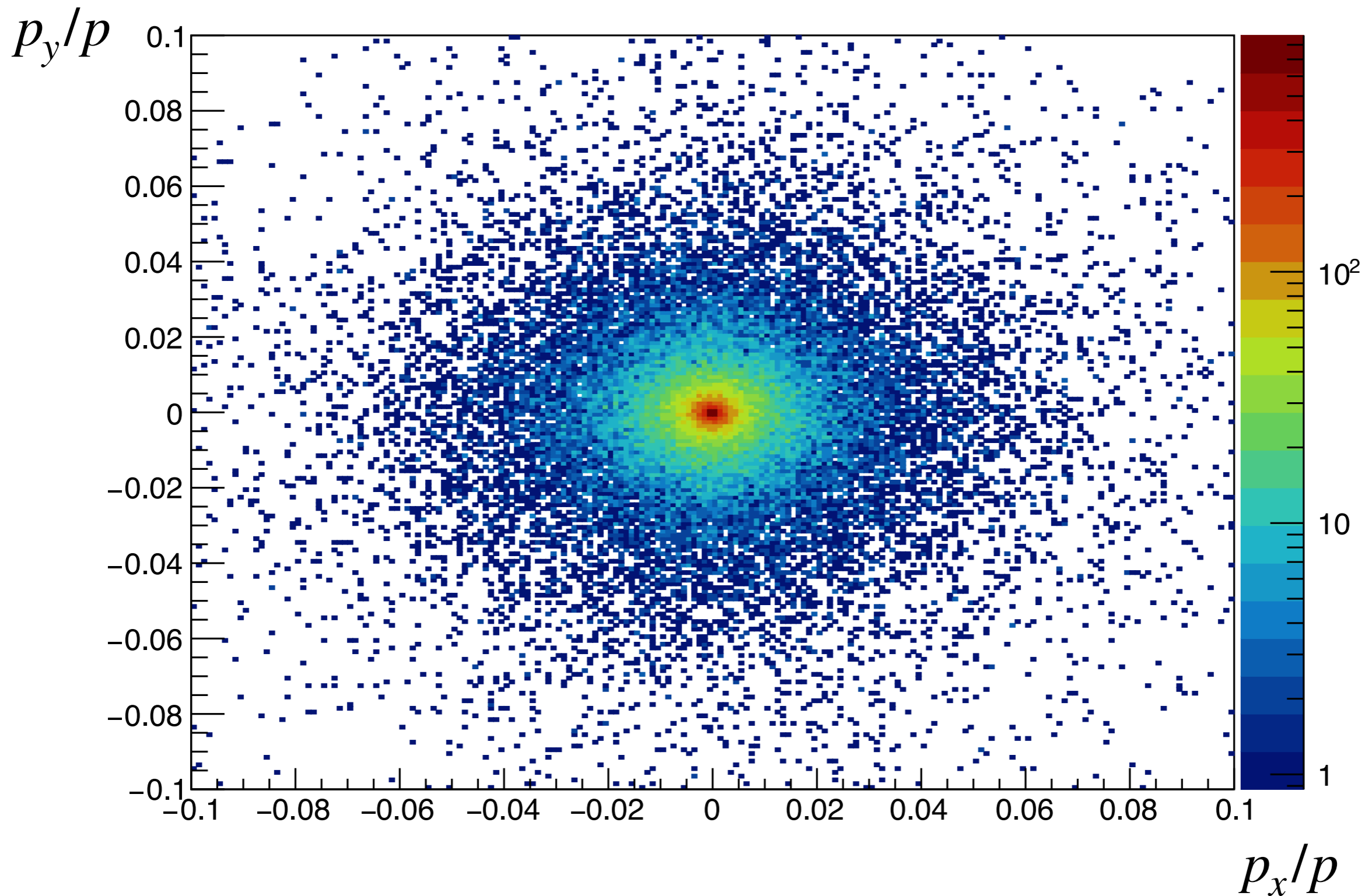
Remove outlier



Energy weighted mean
excluding x_j

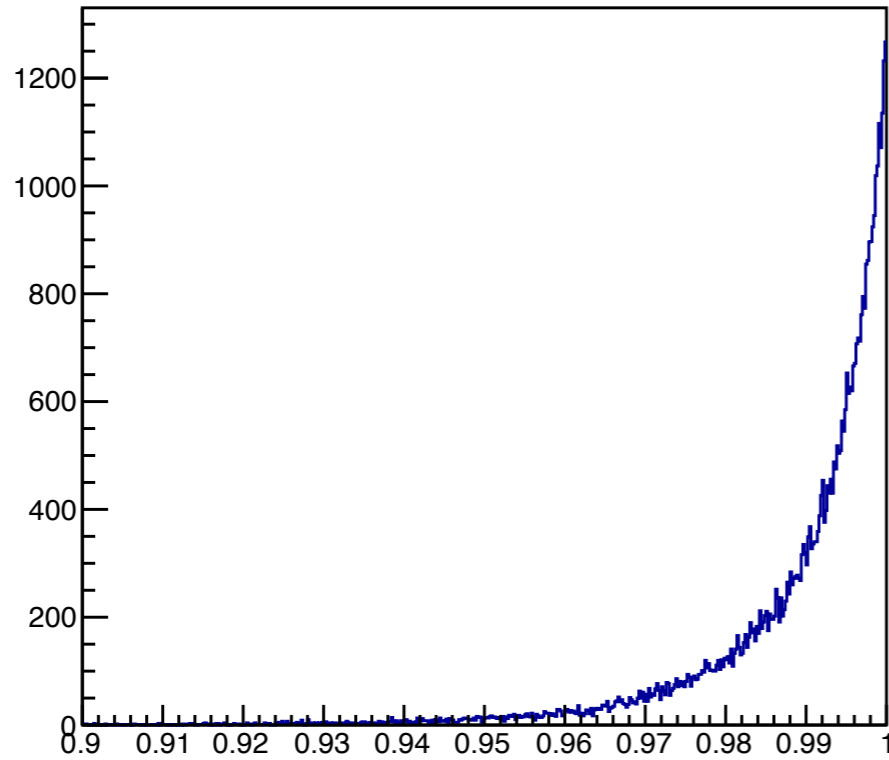
$$\left| \frac{\sum_{i \neq j}^n E_i x_i}{\sum_{i \neq j}^n E_i} - x_j \right| < \textit{distance cut}$$

Spread on XY axis (Log scale) - w/o any algorithm



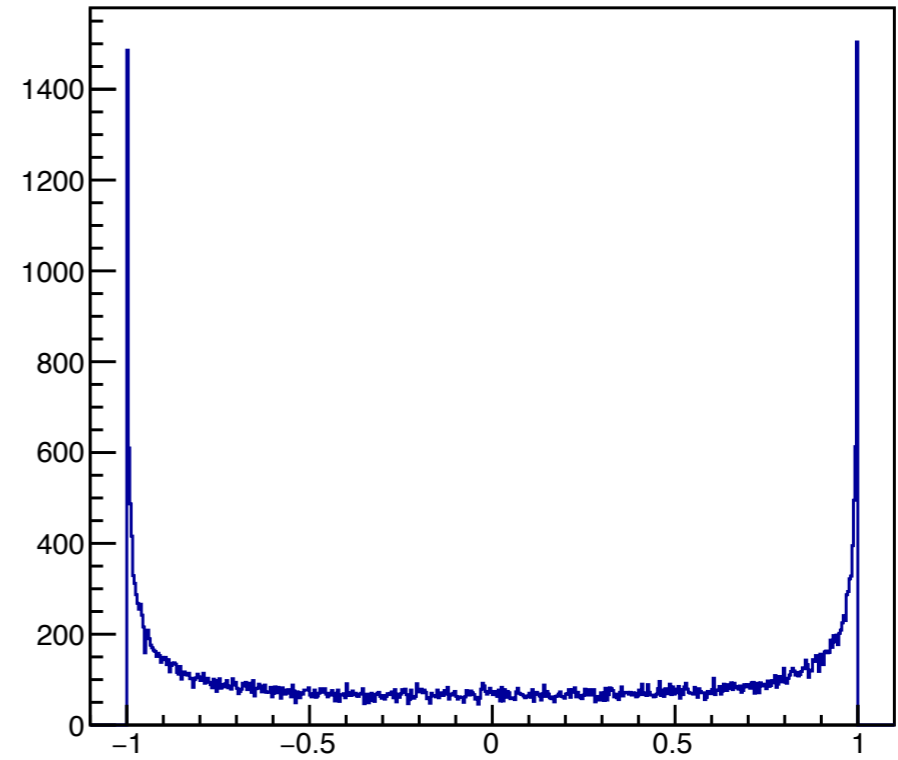
Angular distributions - w/o any algorithm

$\cos\theta$

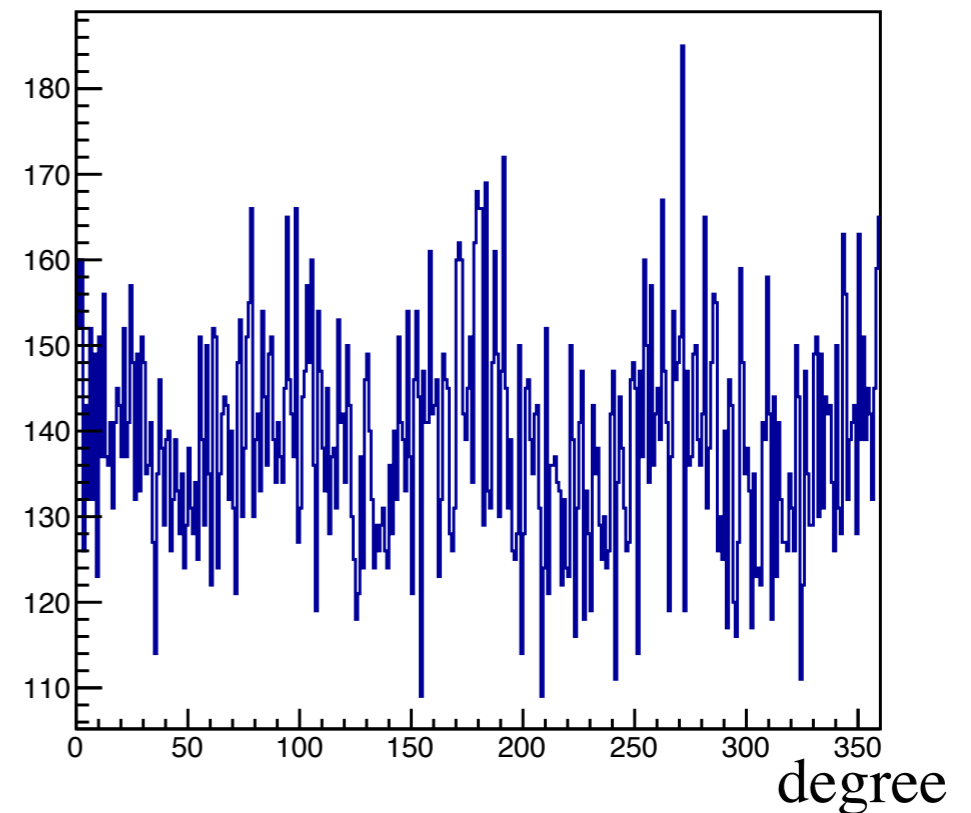
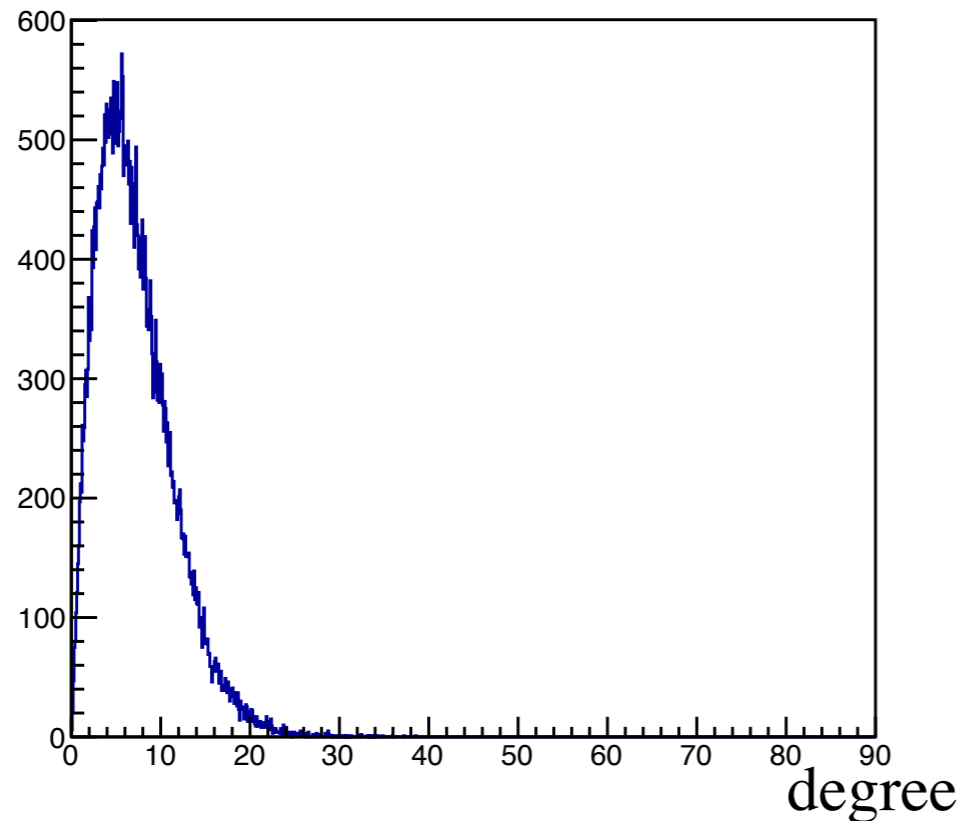


θ

$\sin\phi$

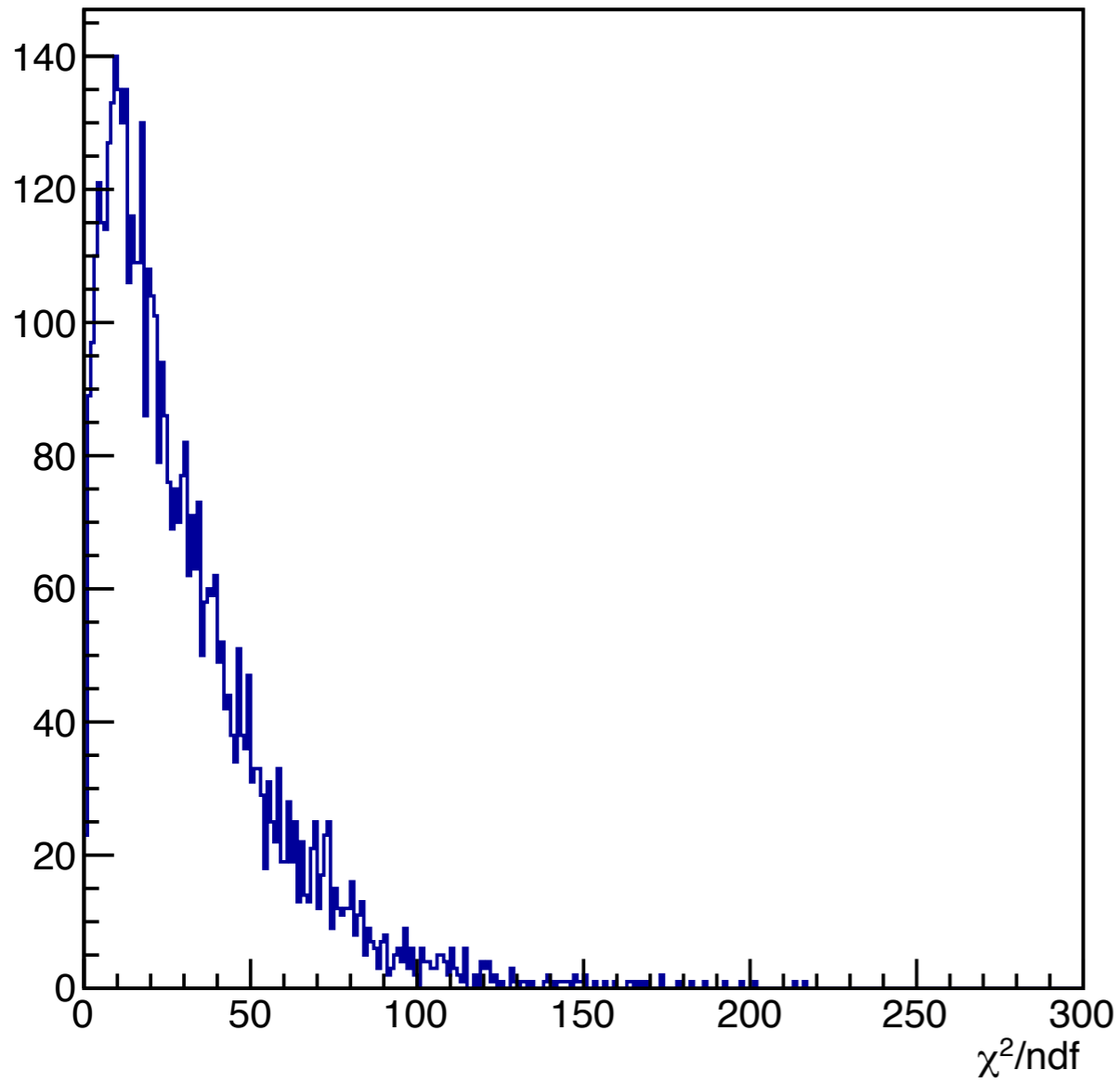


ϕ



χ^2 distribution - w/o any algorithm

xz axis



yz axis

