K-Koto Meeting

2020/04/29

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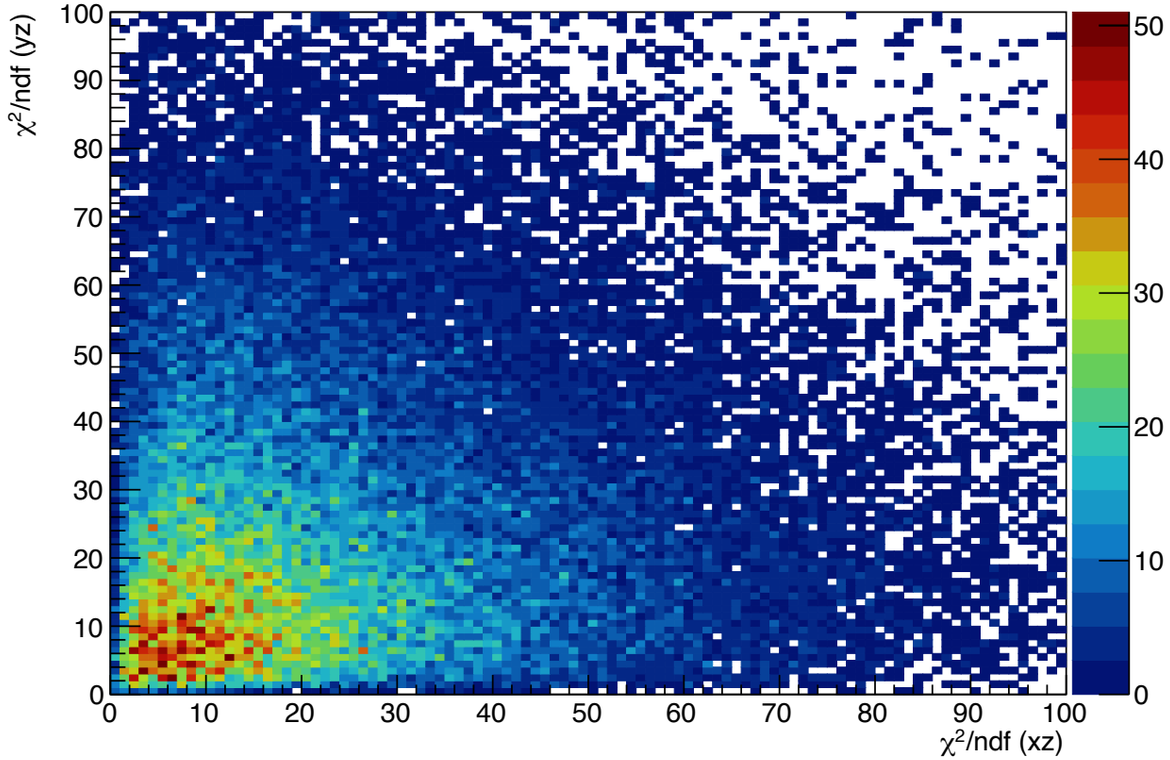
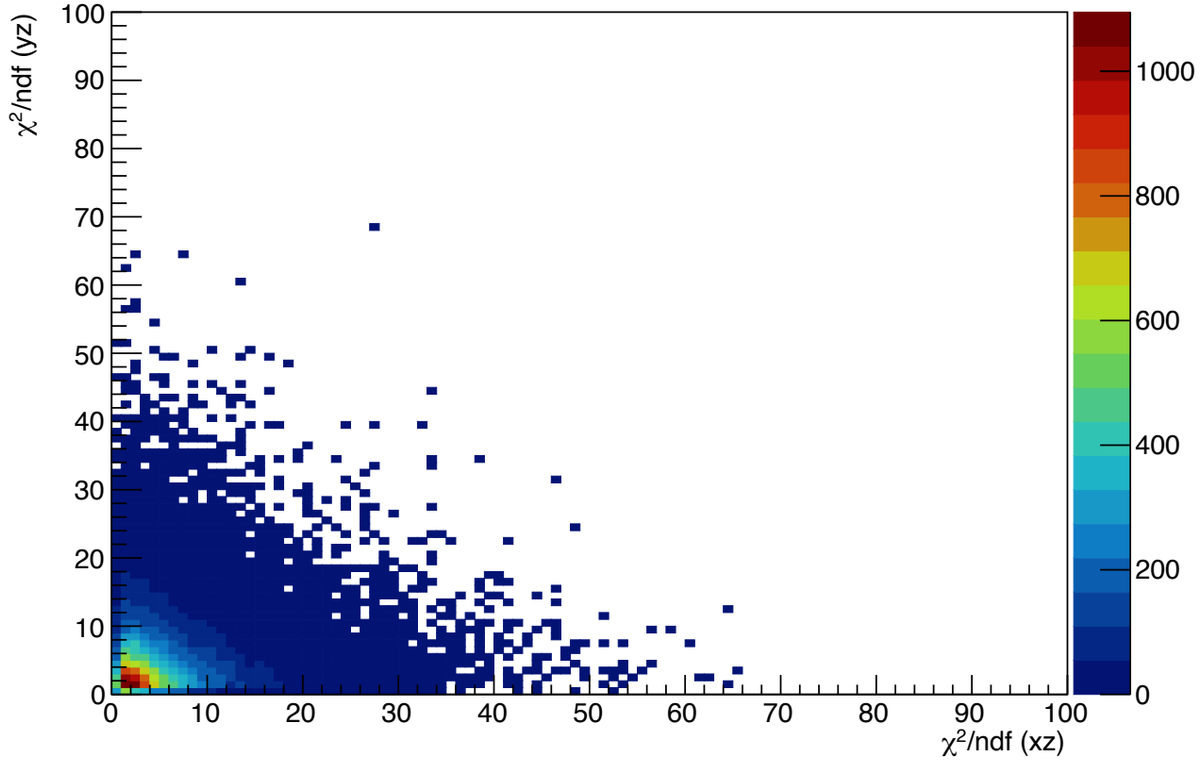
Hadron & Nuclear Physics Lab

χ^2 (yz vs. xz)

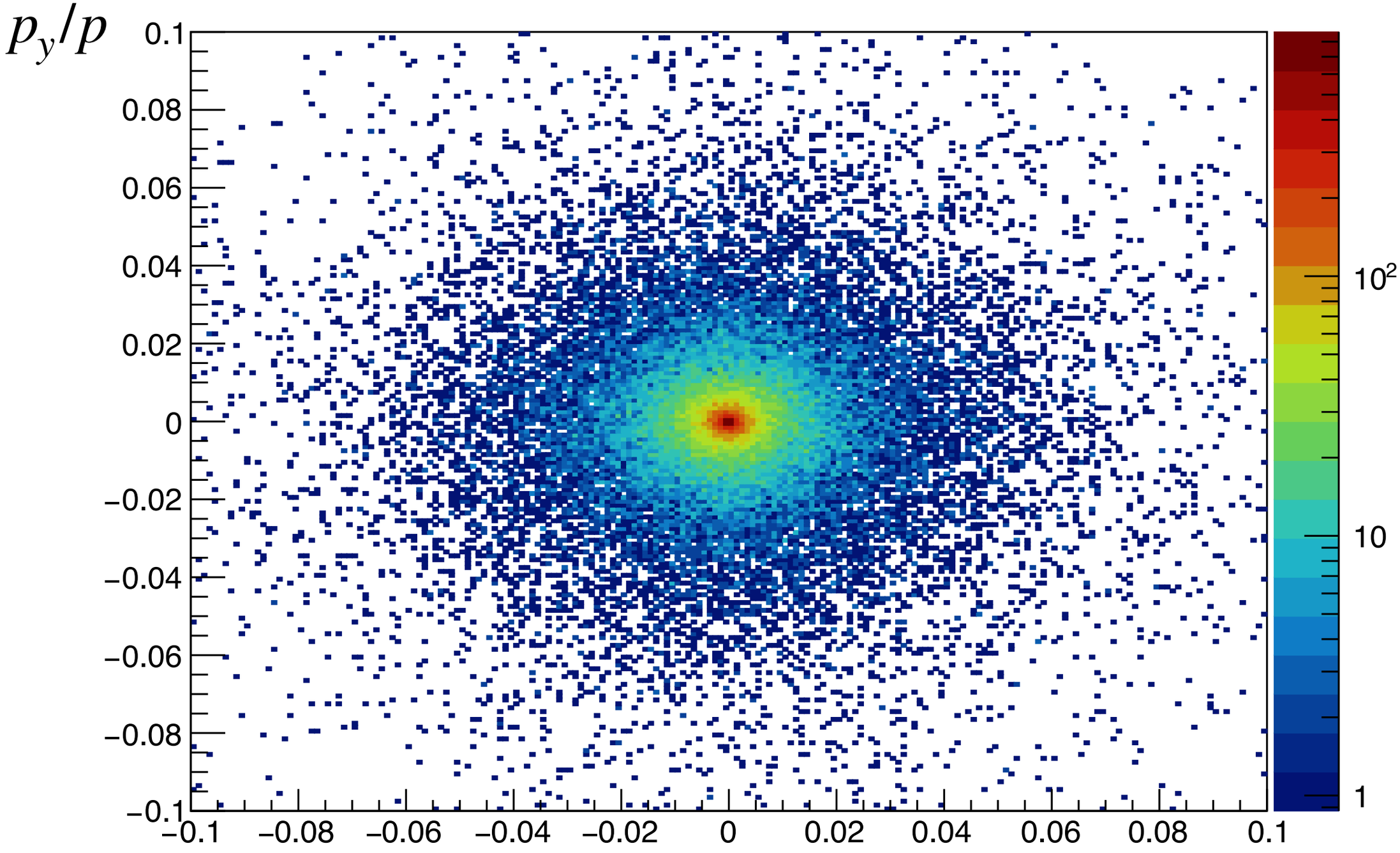


w/o any algorithm



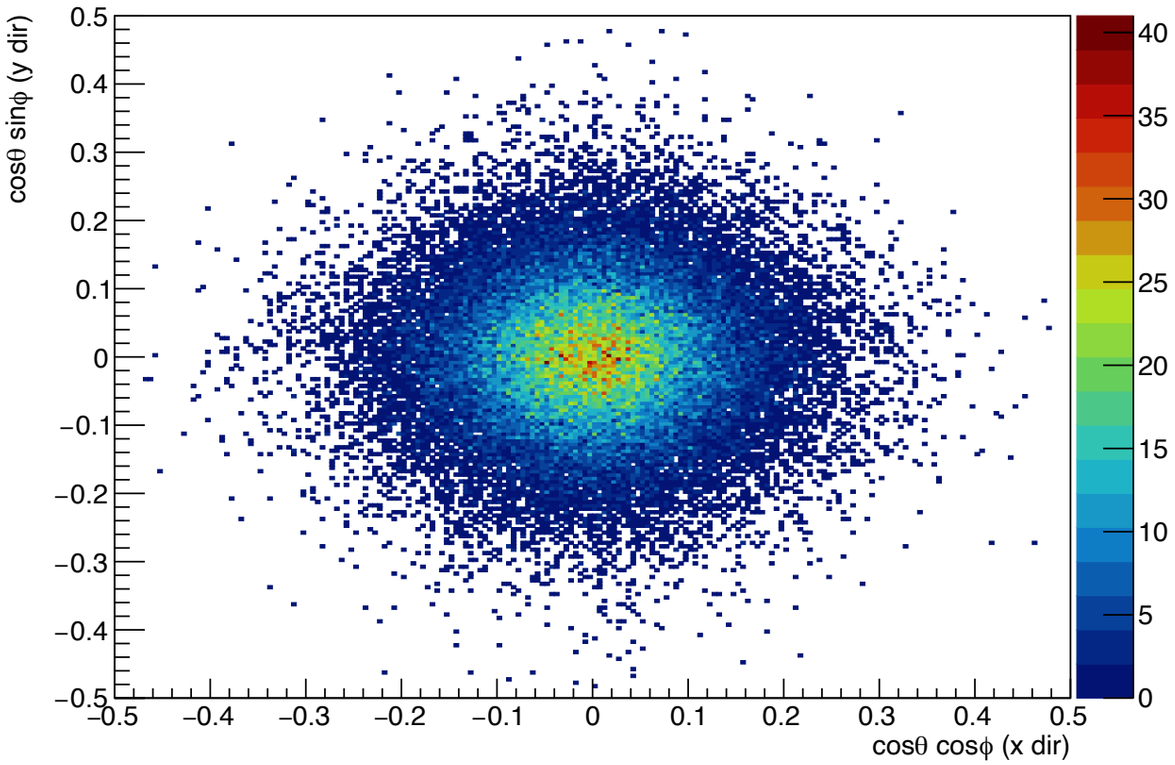
Distance cut 100mm
Energy weighted fit

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

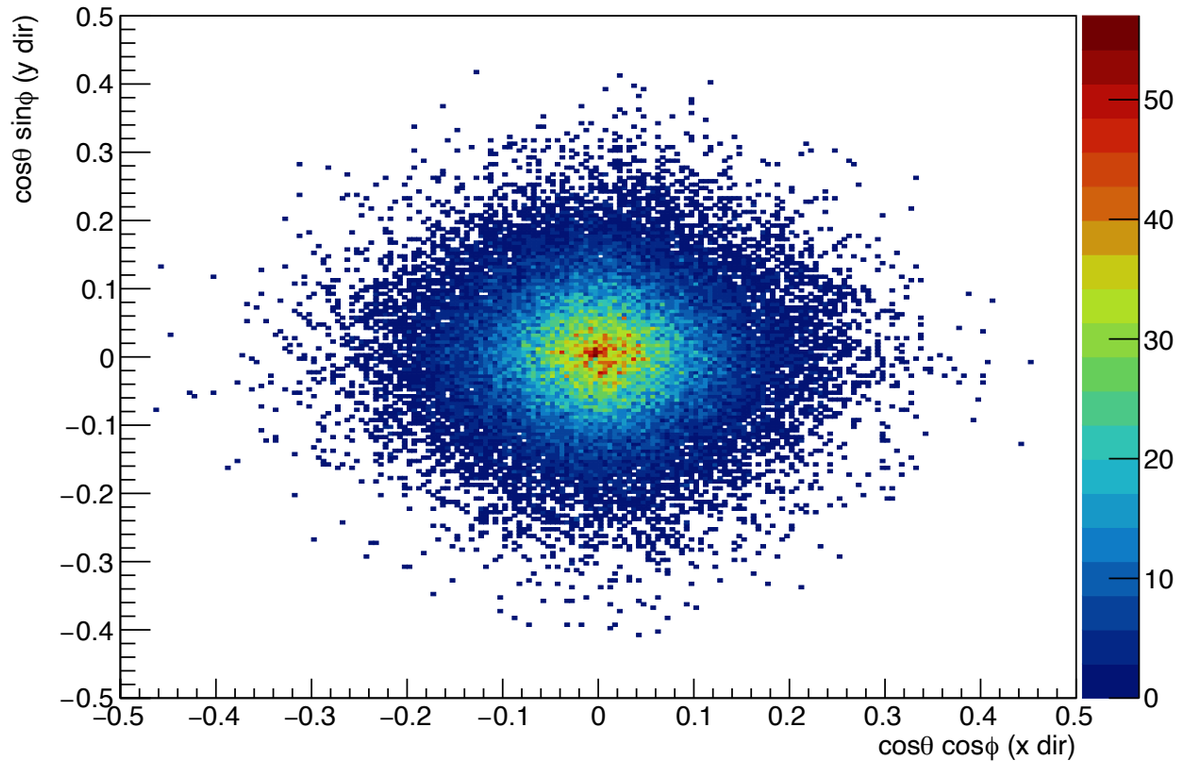


cannot be reproduced…???

Fit results

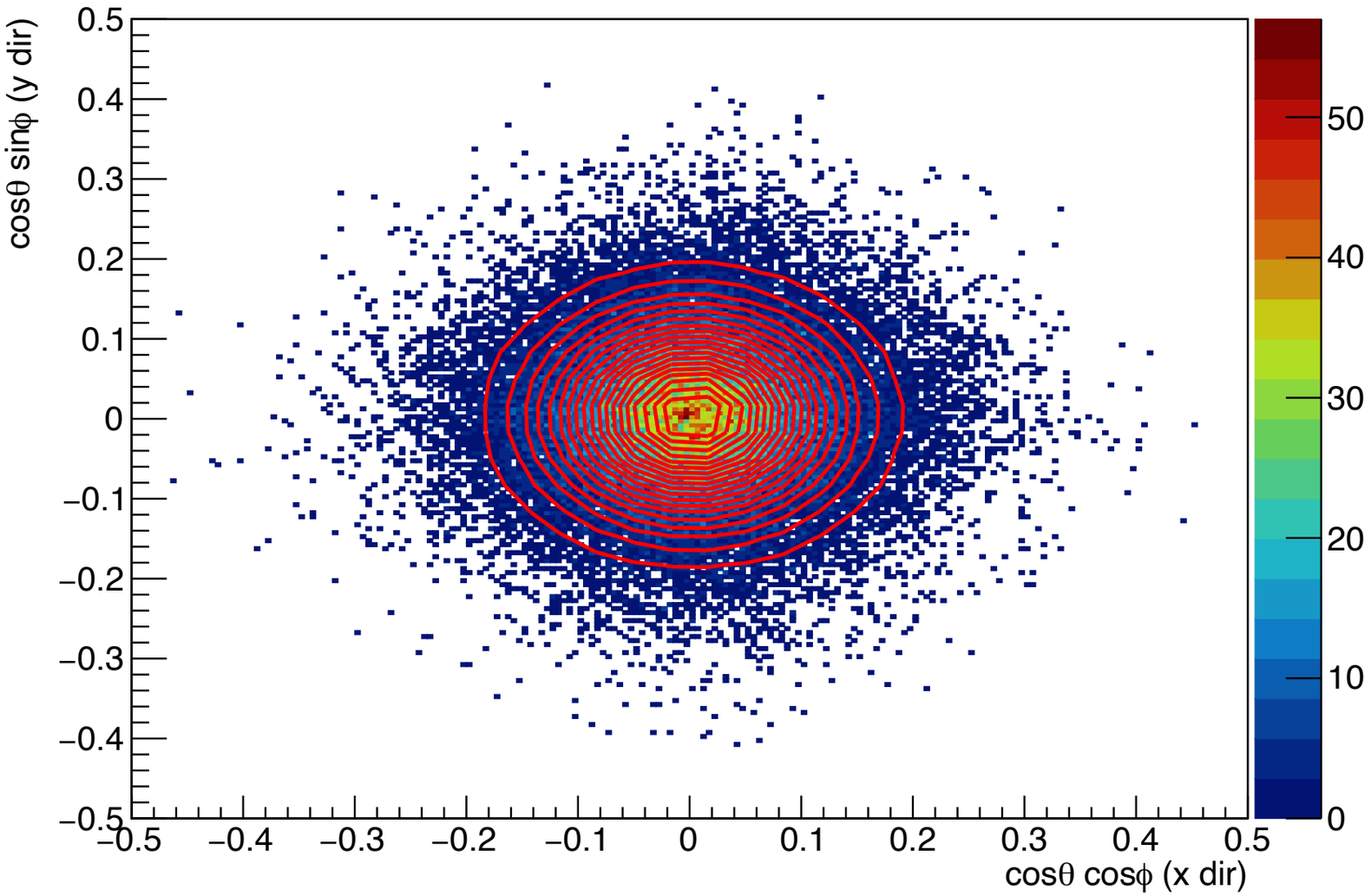


w/o any algorithm



Distance cut 100mm
Energy weighted fit

Angular resolution



$$Gaus(x,y) = Ae^{-(a(x-x_0)^2+2b(x-x_0)(y-y_0)+c(y-y_0)^2)}$$

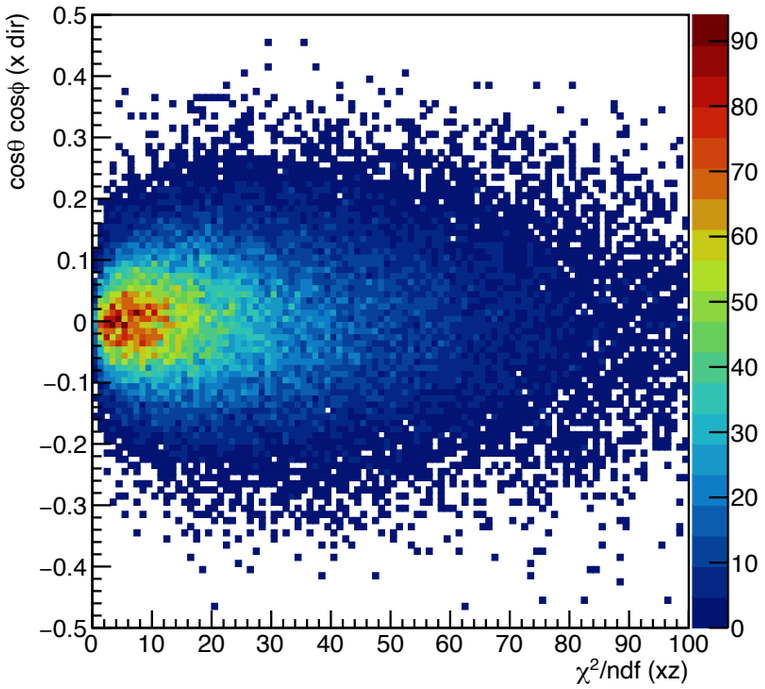
$$a = \frac{\cos^2\theta}{2\sigma_X^2} + \frac{\sin^2\theta}{2\sigma_Y^2}$$

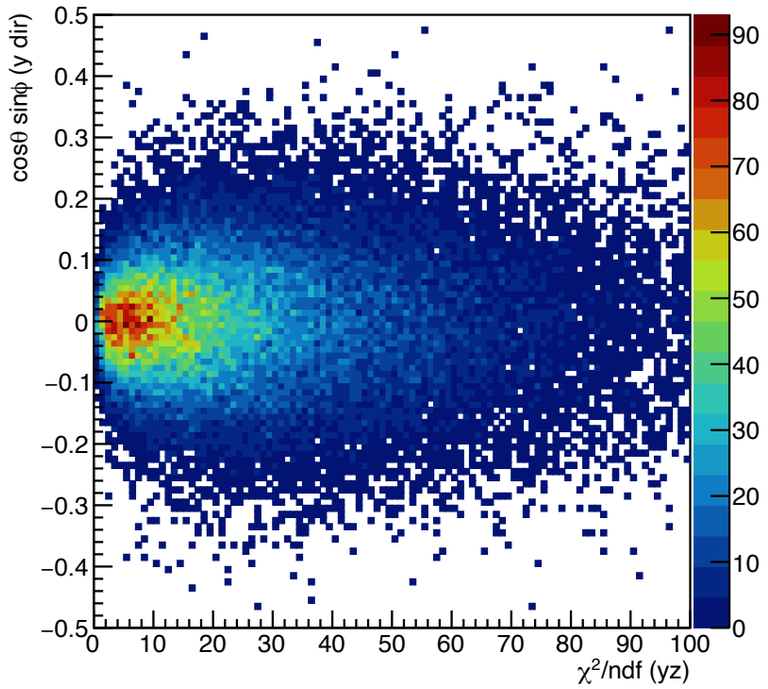
$$b = -\frac{\sin 2\theta}{4\sigma_X^2} + \frac{\sin 2\theta}{4\sigma_Y^2}$$

$$c = \frac{\sin^2\theta}{2\sigma_X^2} + \frac{\cos^2\theta}{2\sigma_Y^2}$$

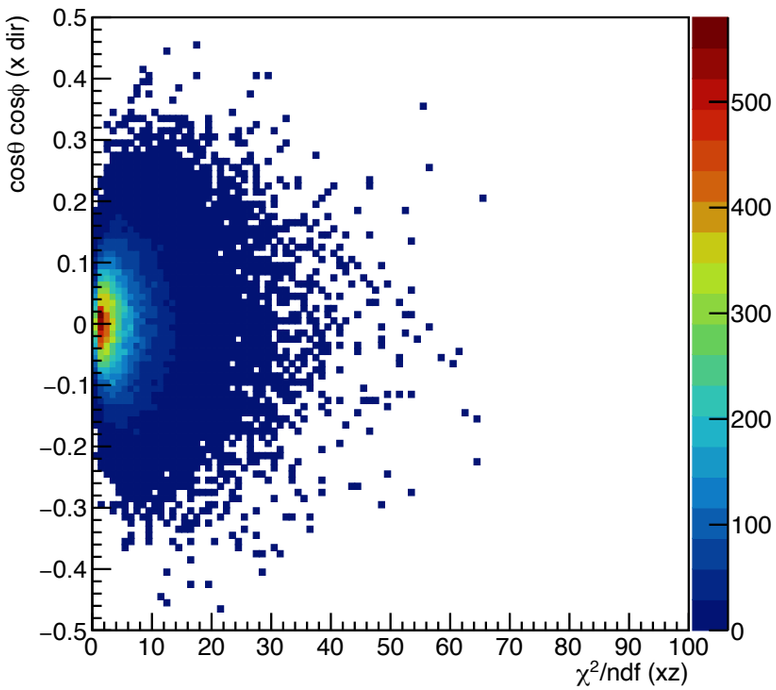
or $Gaus(x,y) = Ae^{-((x-x_0)^2+(y-y_0)^2)/2\sigma^2}$ (if symmetric on xy plane)

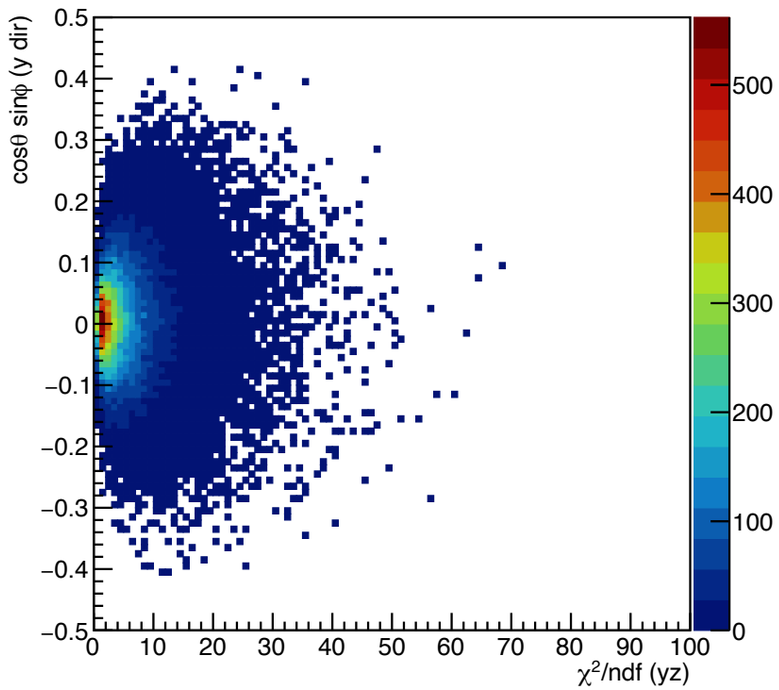
Fit result vs. χ^2





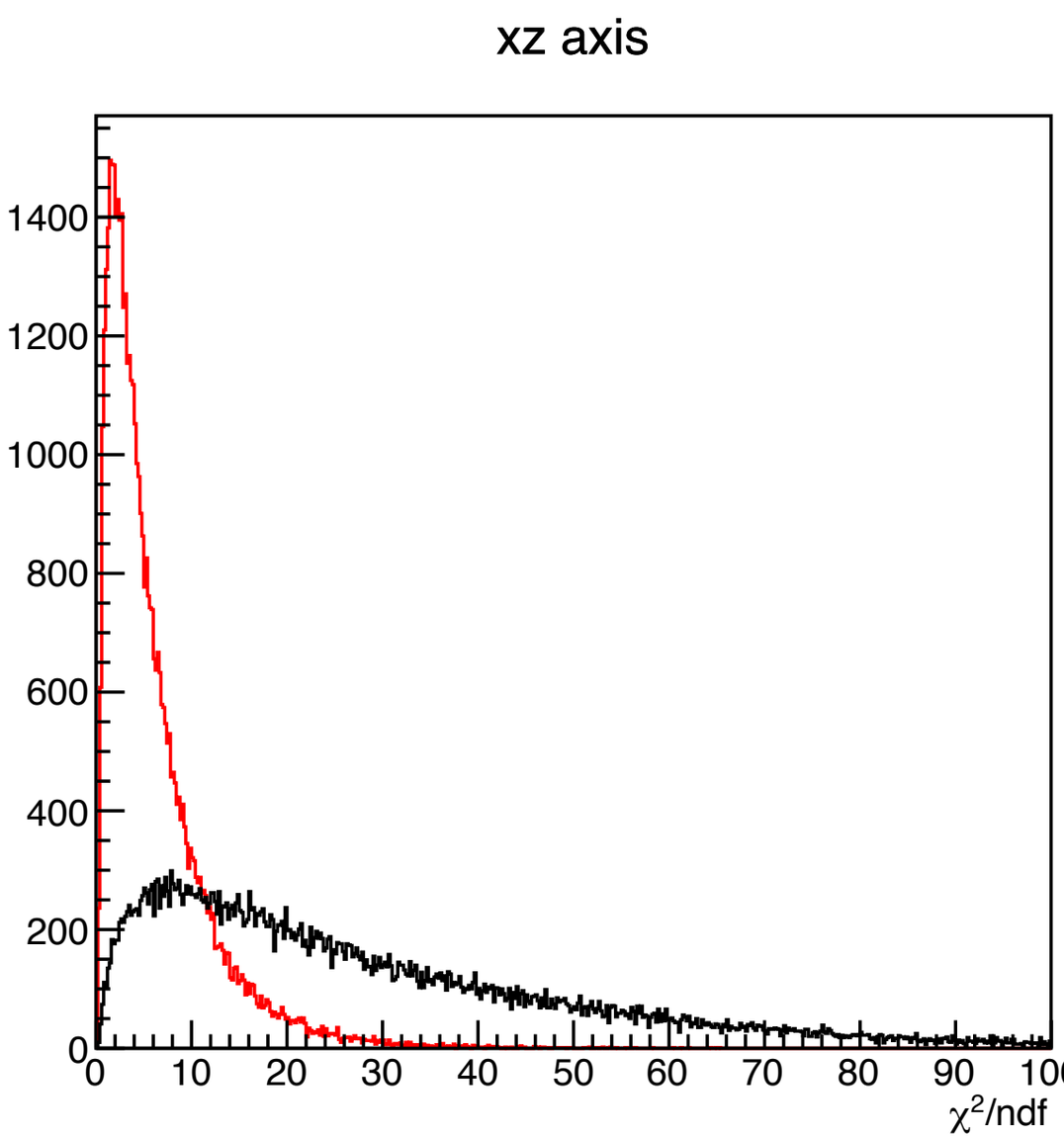
w/o any algorithm

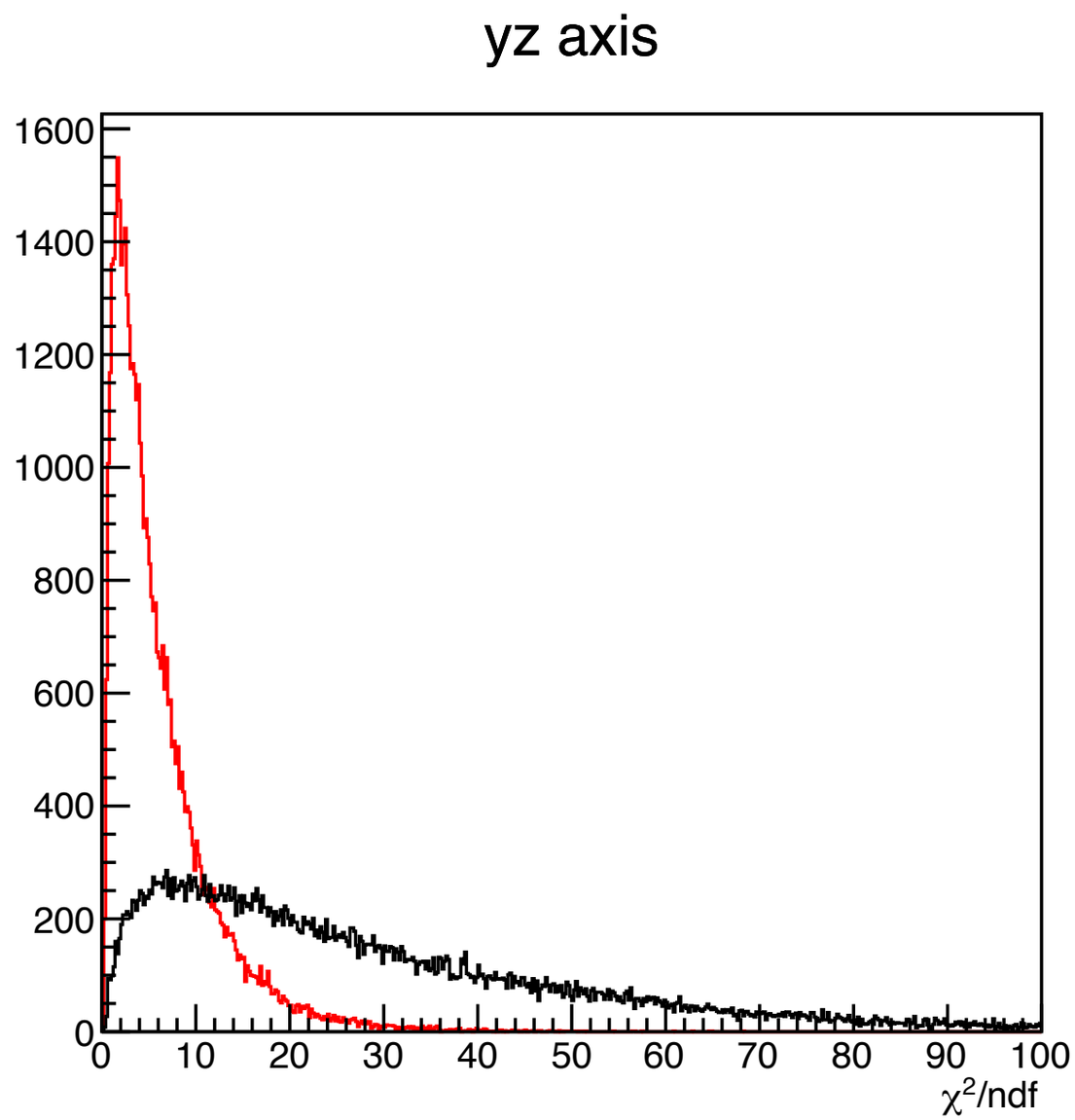




Distance cut 100mm
Energy weighted fit

χ^2 distribution



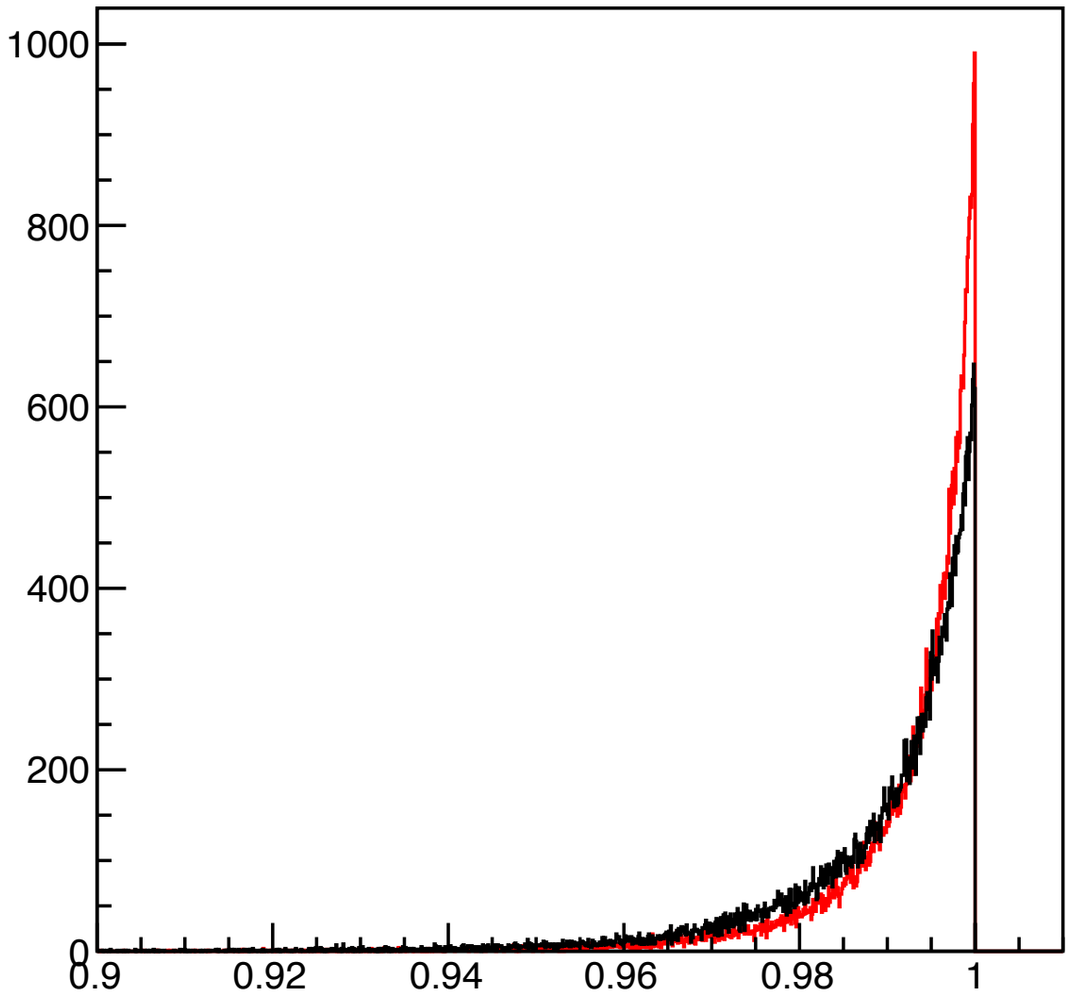


Red : new method

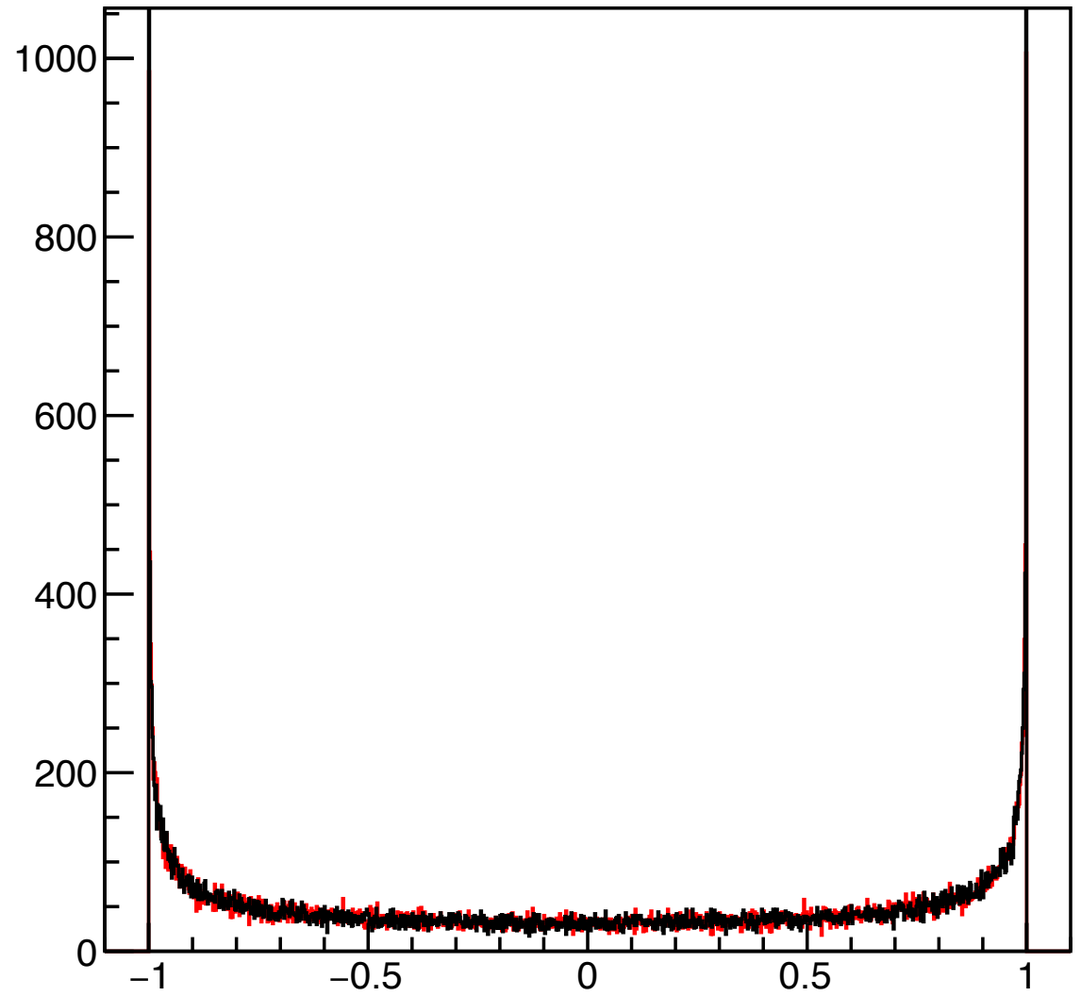
Black : old method

Angular distributions

cosθ



sinϕ

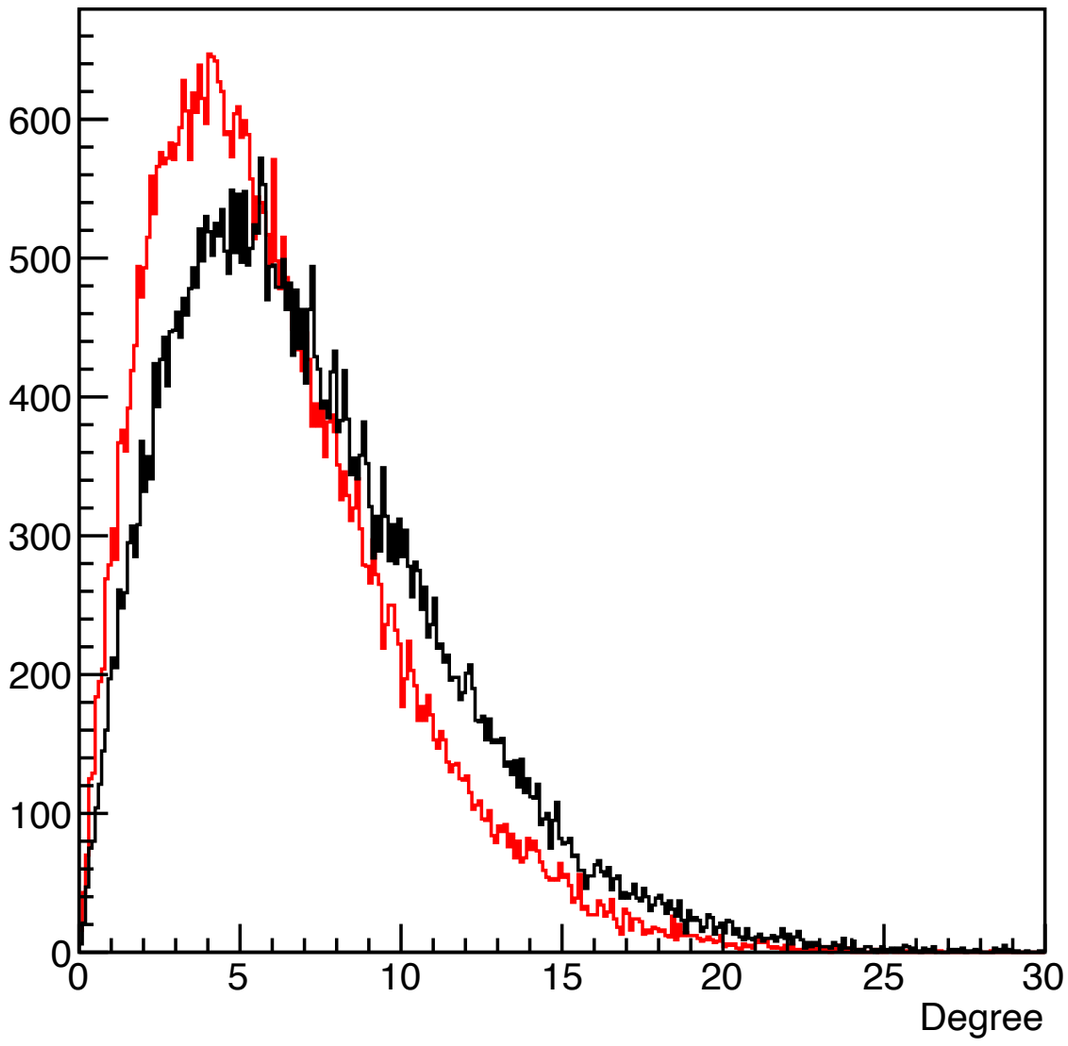


Red : new method

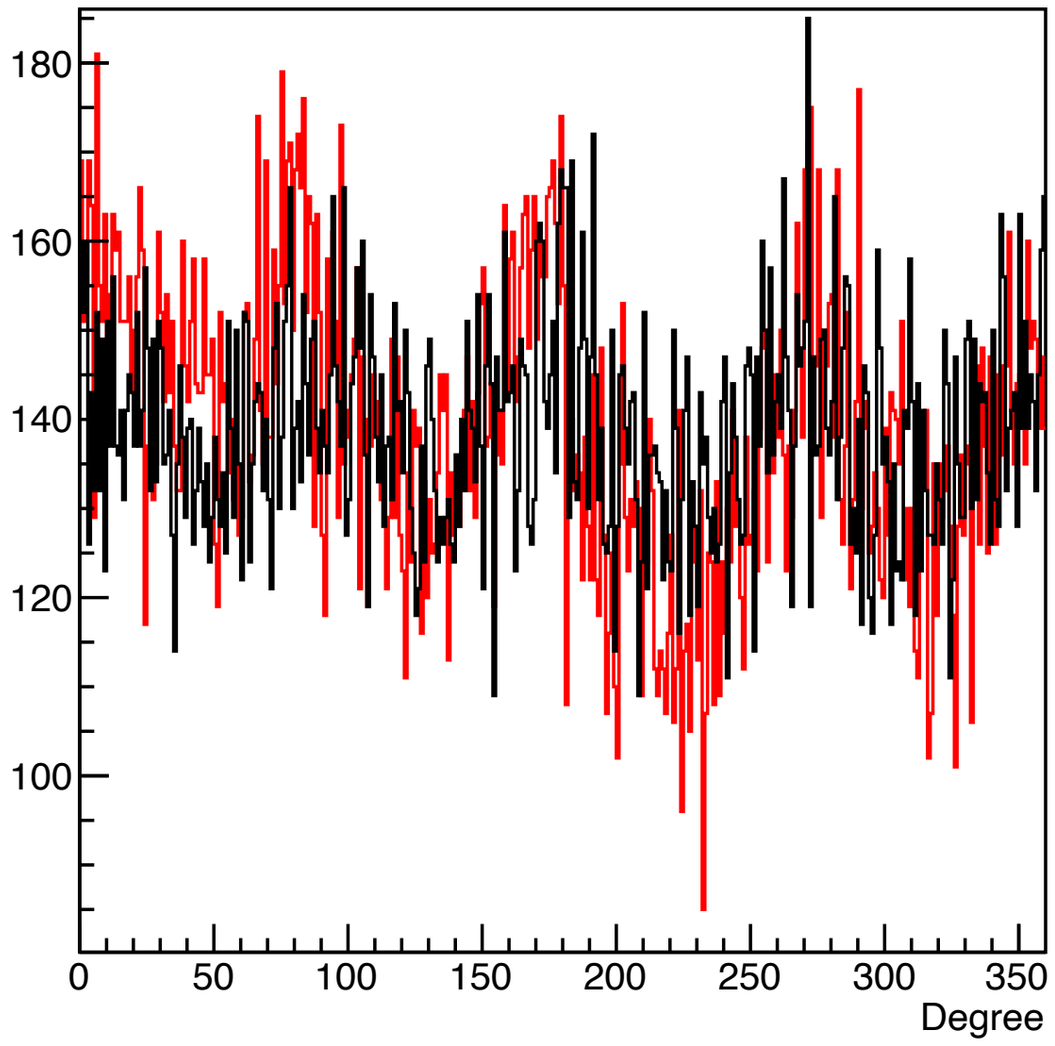
Black : old method

Angular distributions

θ



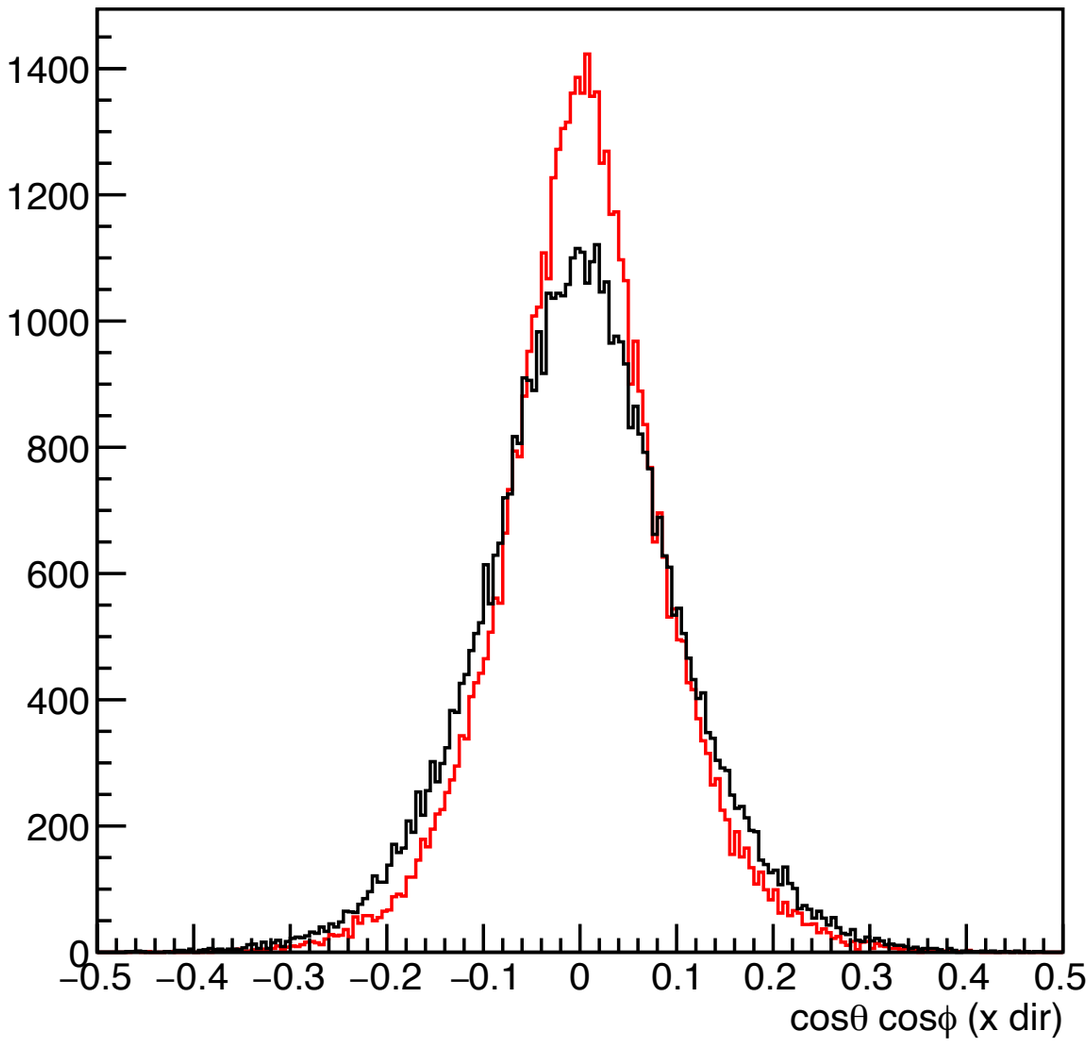
ϕ

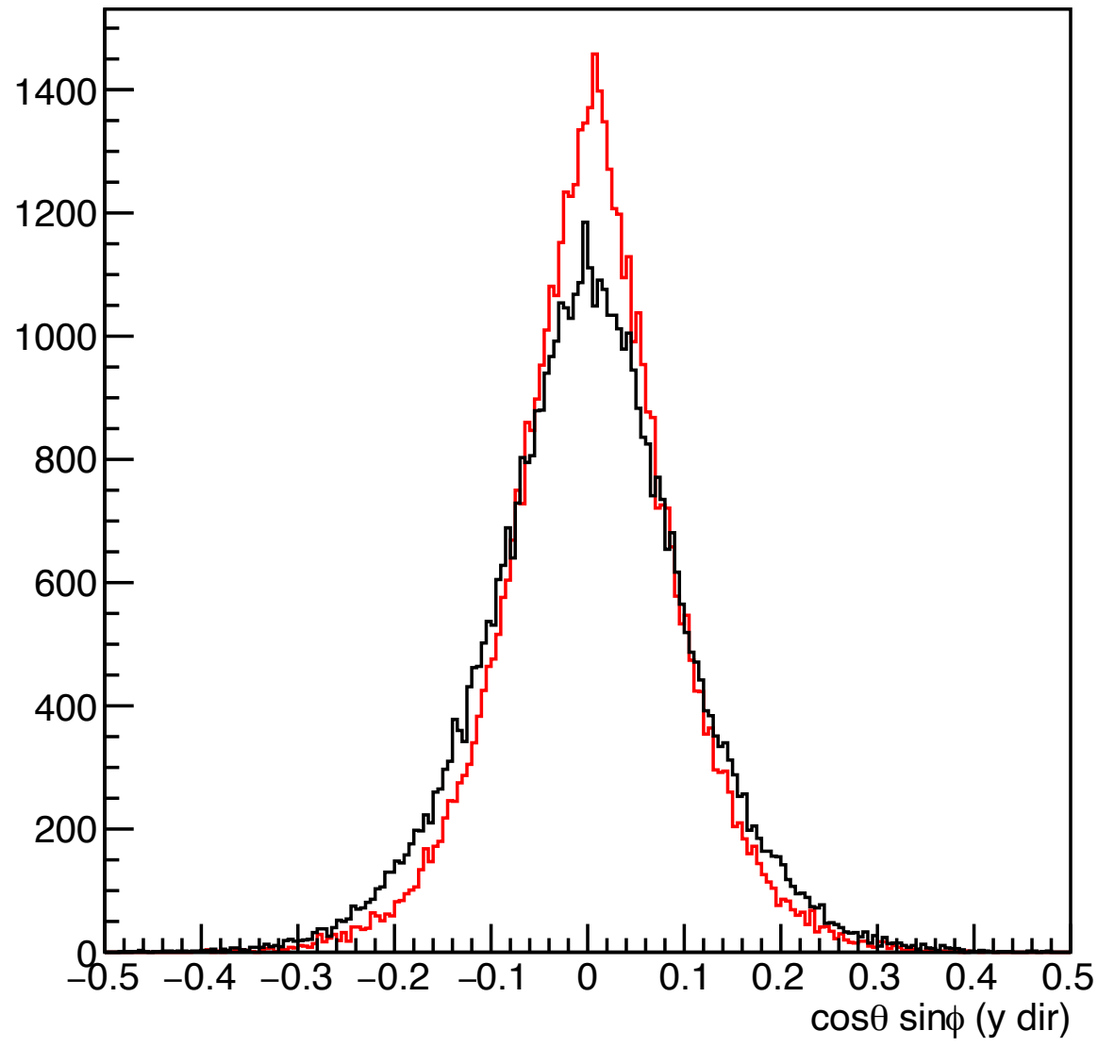


Red : new method

Black : old method

Fit results



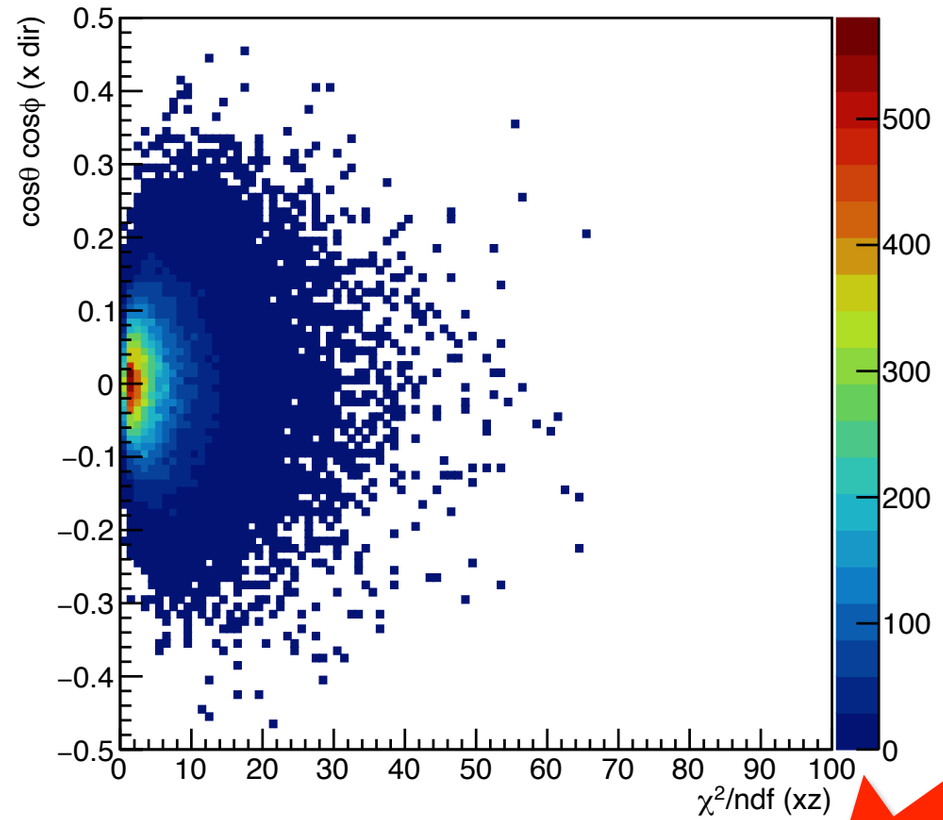


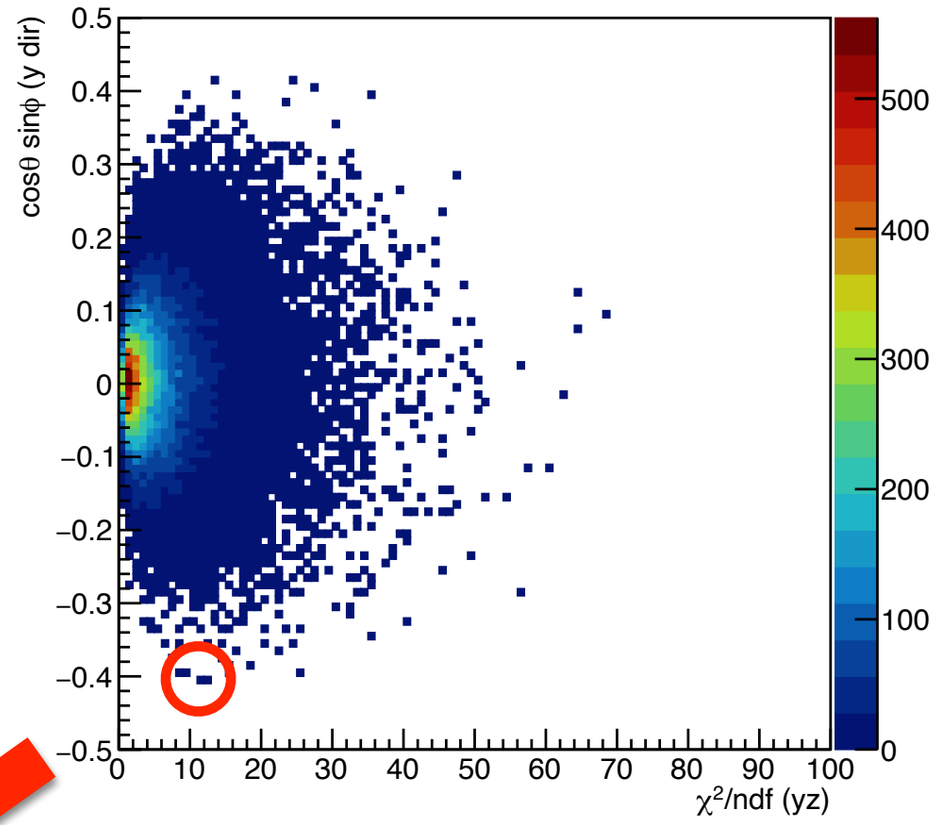
Red : new method

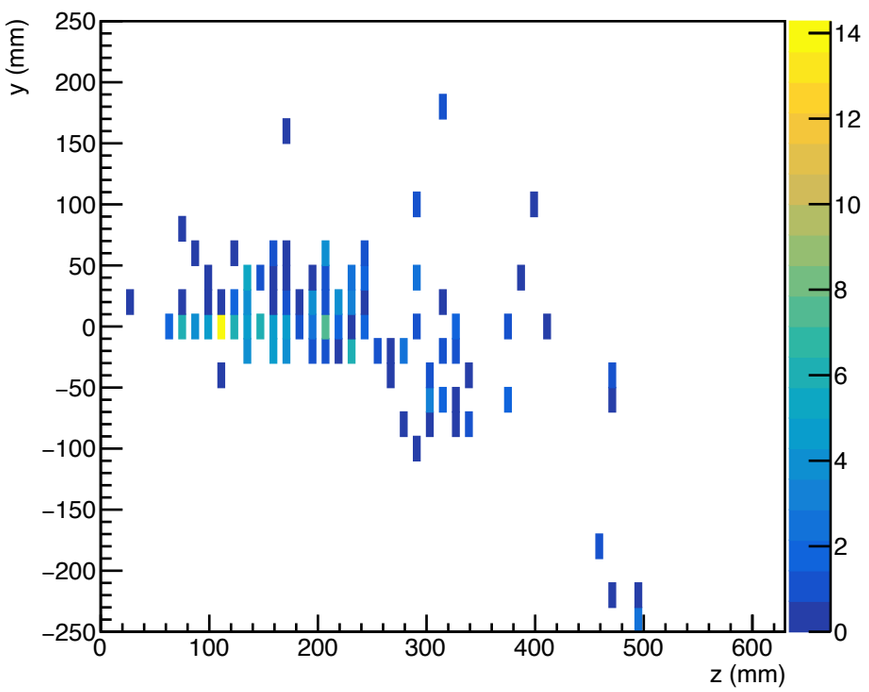
Black : old method

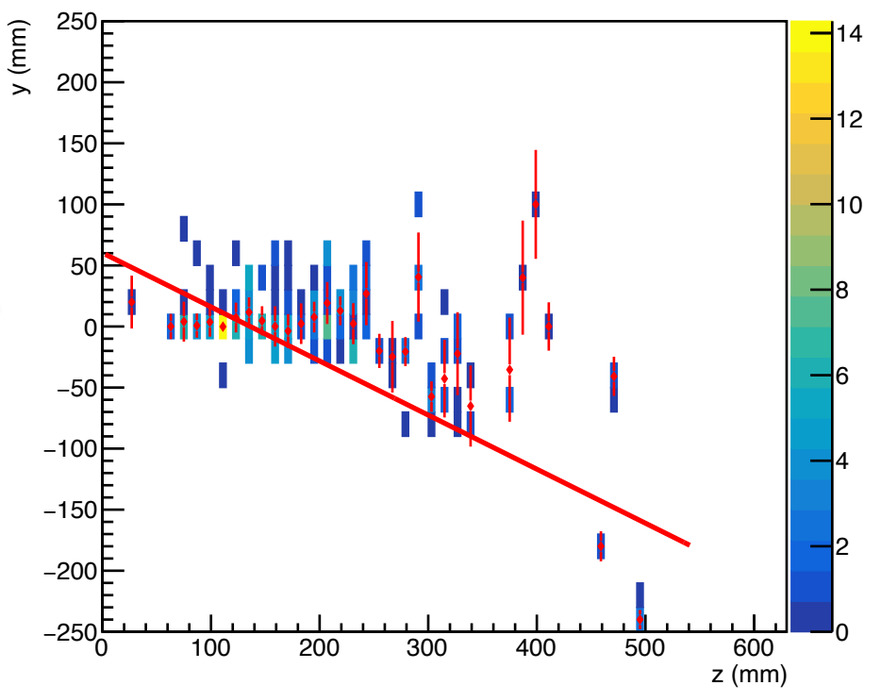
back up

Fit result vs. χ^2

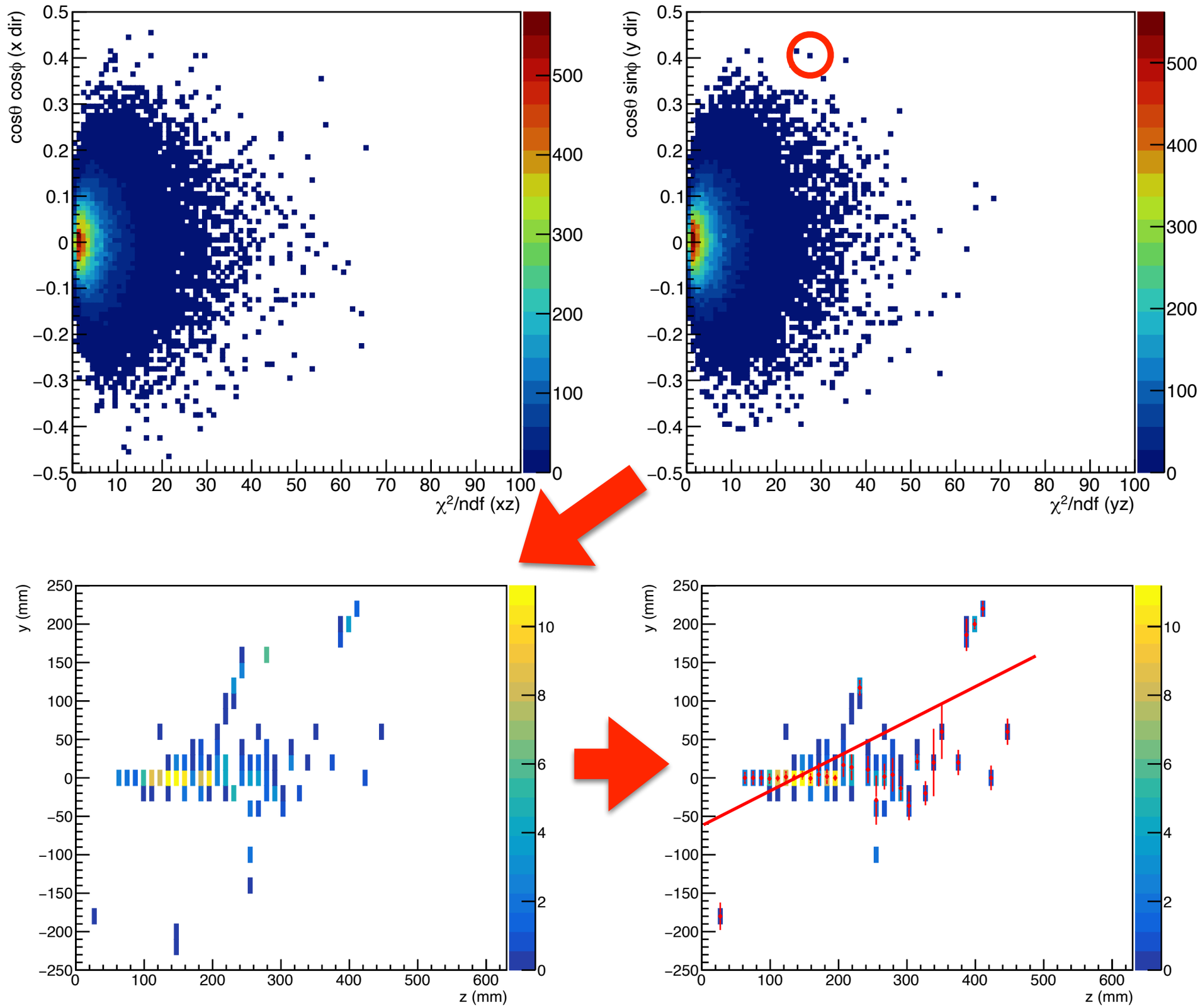








Fit result vs. χ^2



Fit result vs. χ^2