

K-Koto Meeting

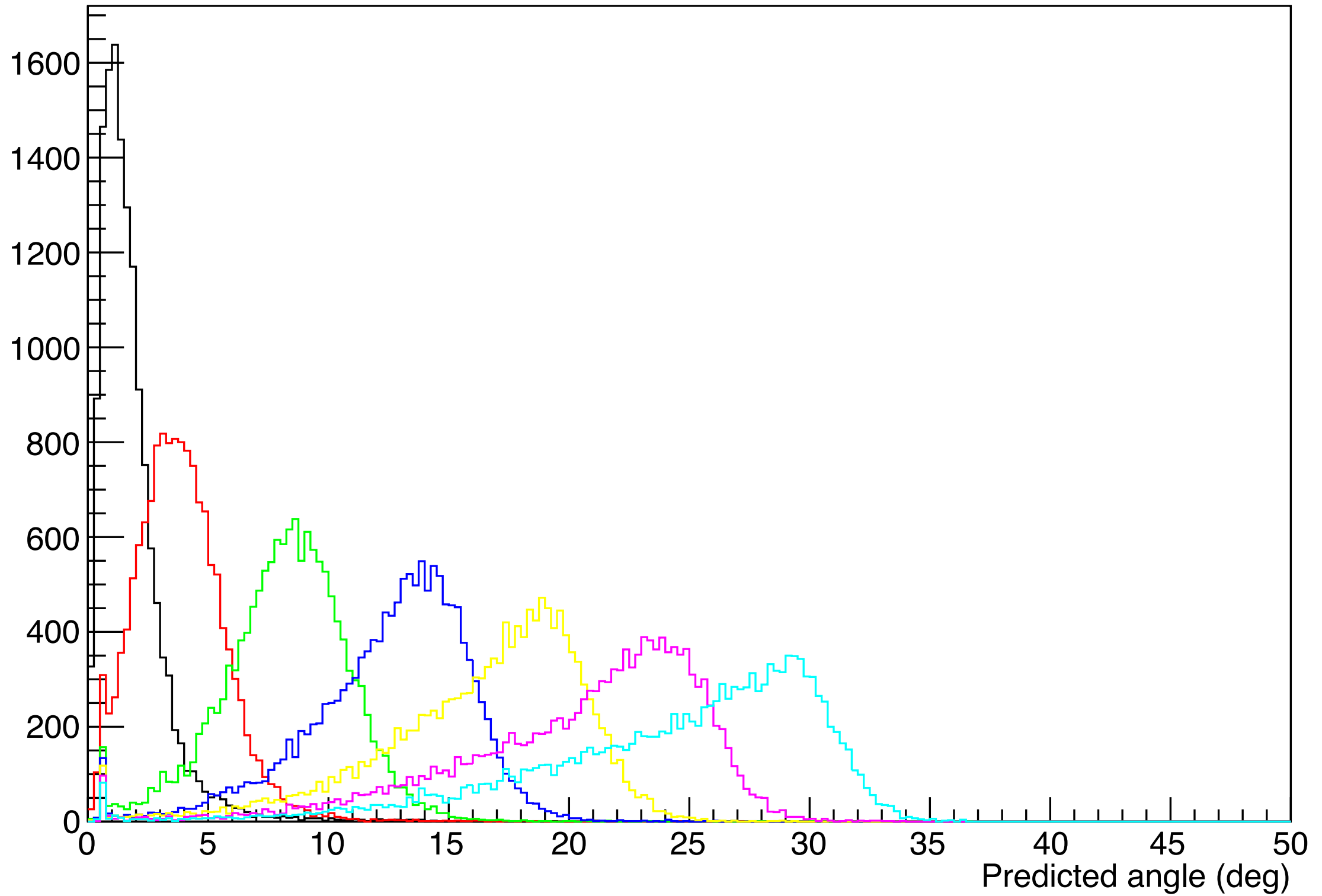
2021/07/28

YoungJun Kim

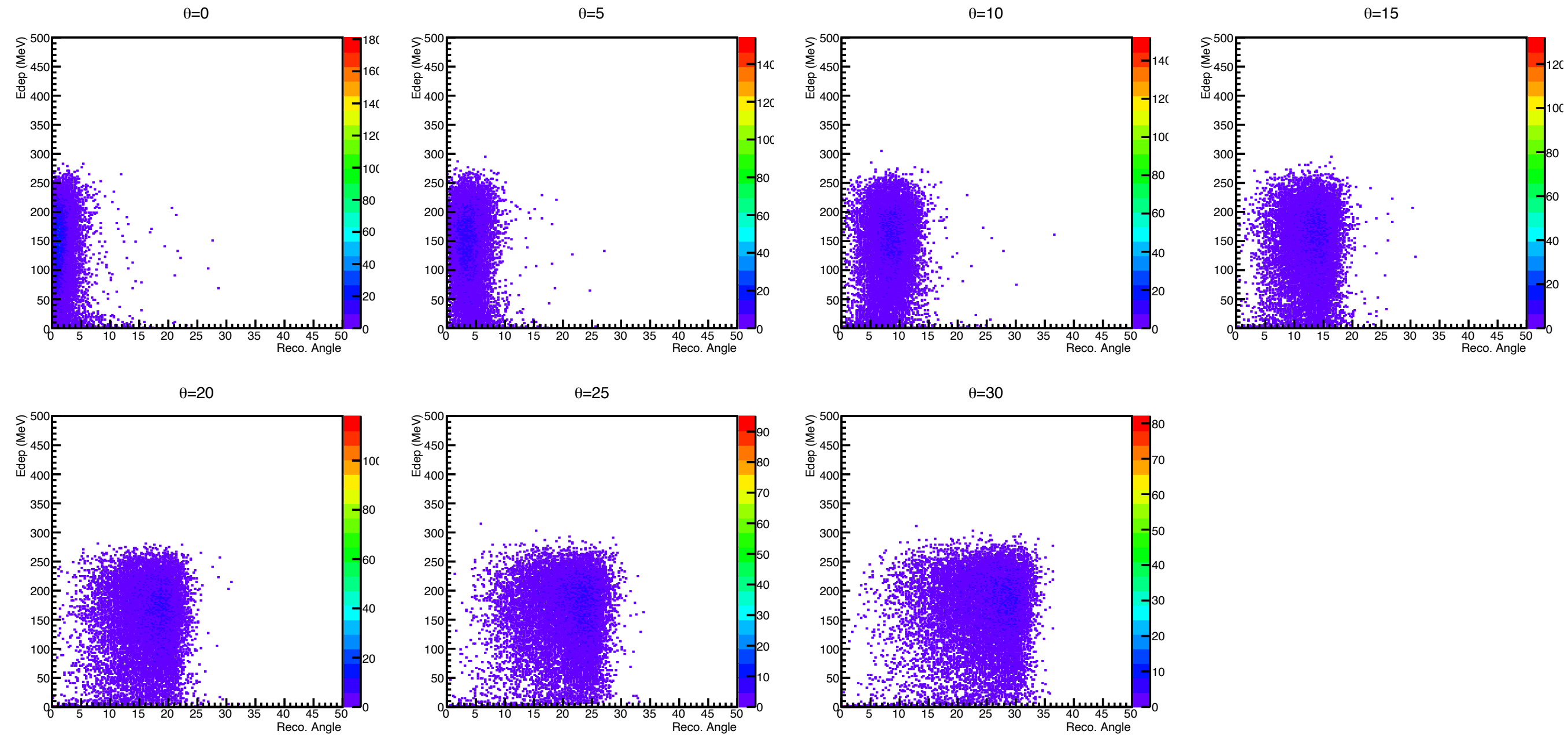
Fiber + W detector

- $28.5 \text{ cm} \times 28.5 \text{ cm} \times (0.15 \text{ mm W} + 1 \text{ mm scintillator}) \times 110 \text{ layers}$
 - $285 \times 110 \text{ channels}$
- CsI arrays attached on backward
 - $7 \text{ cm} \times 7 \text{ cm} \times 30 \text{ cm}$ CsI block, 7×7 arrays
 - Total $49 \text{ cm} \times 49 \text{ cm} \times 30 \text{ cm}$
- Uploaded on https://github.com/kyj0118/Fiber_W

ML result

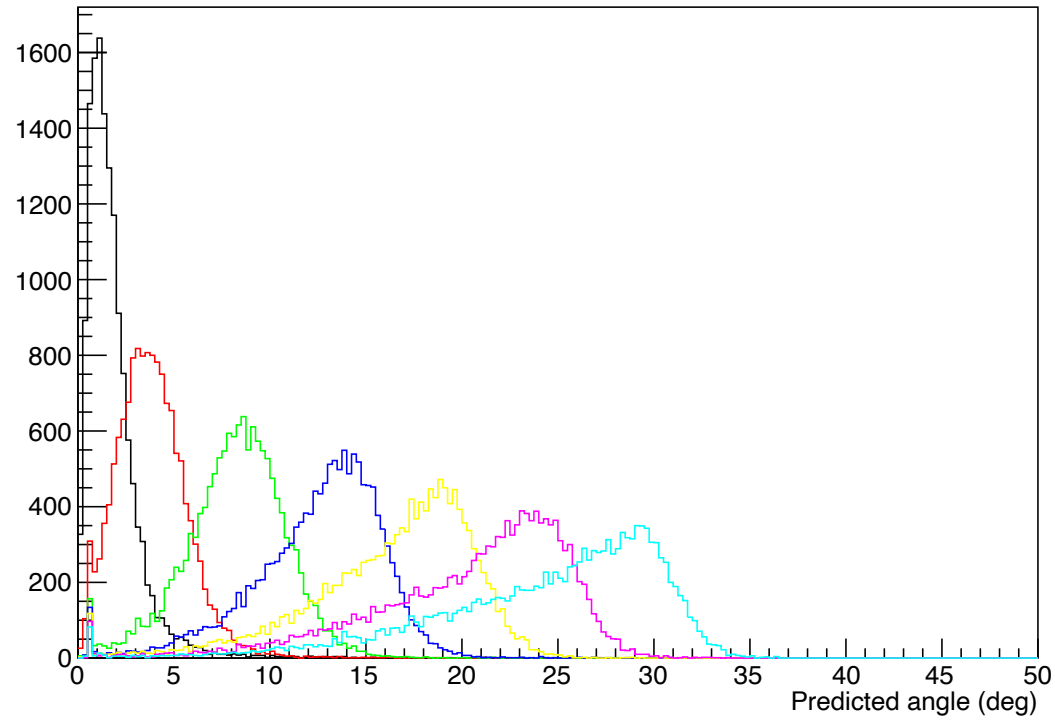


Energy dependency?

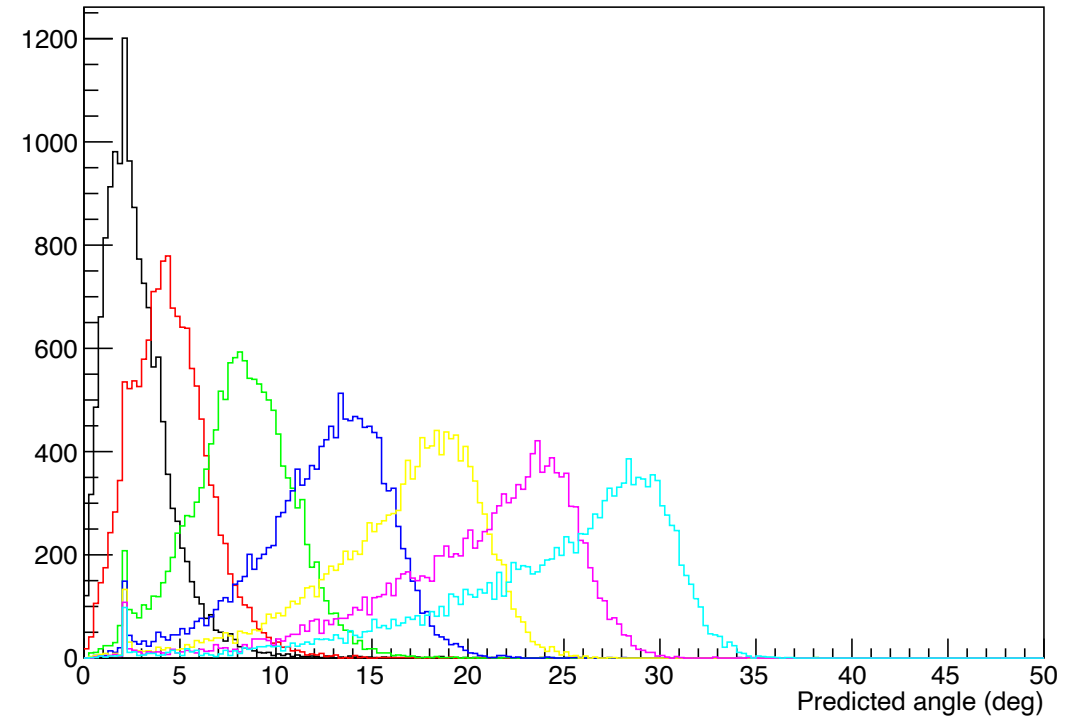


Energy dependency?

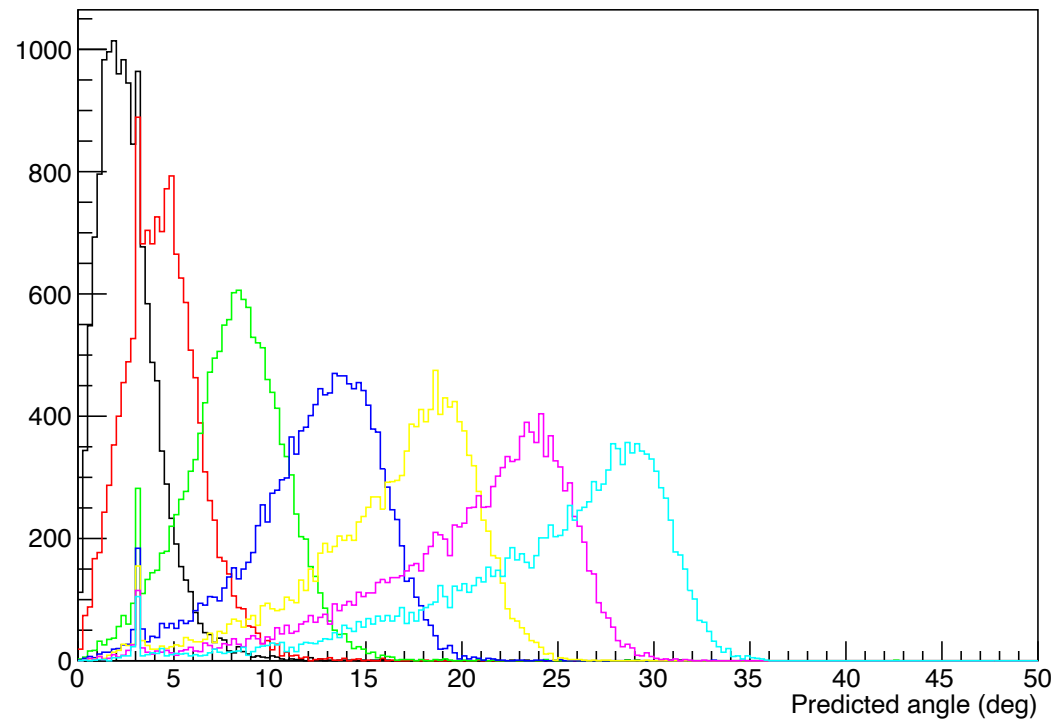
Ecut 0 MeV



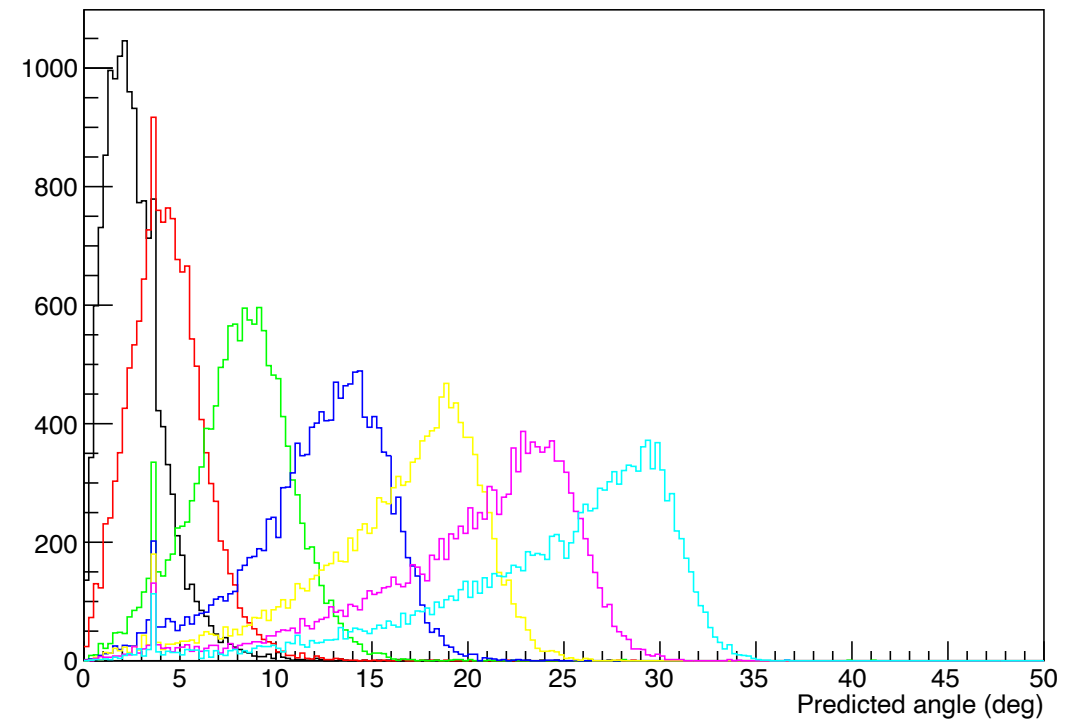
Ecut 10 MeV



Ecut 30 MeV

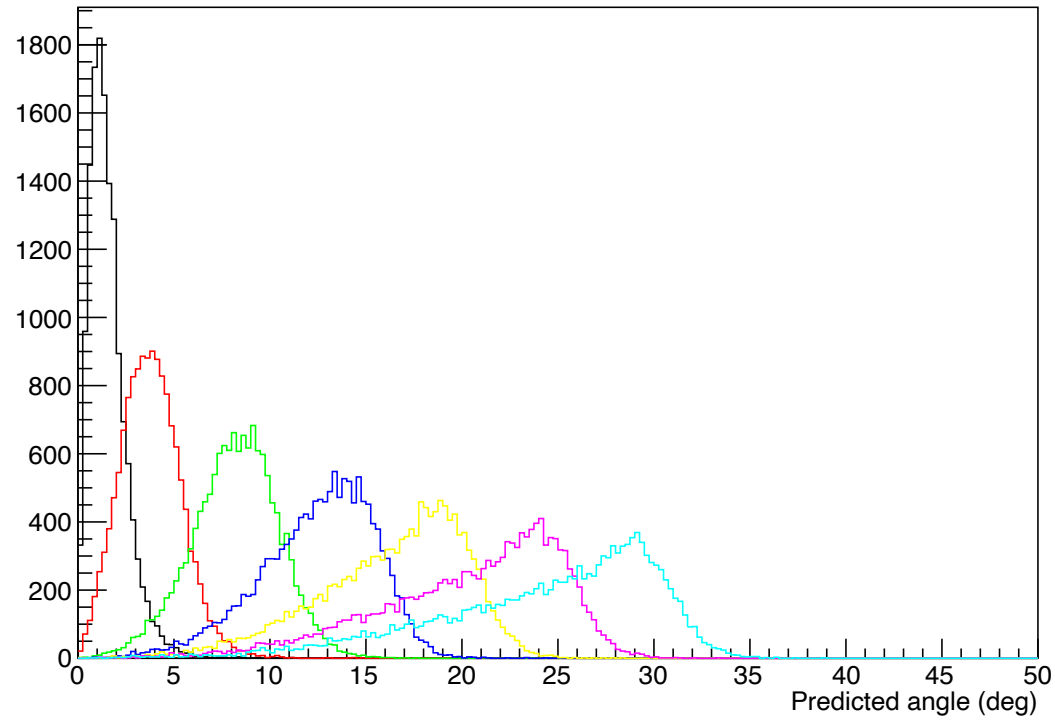


Ecut 50 MeV

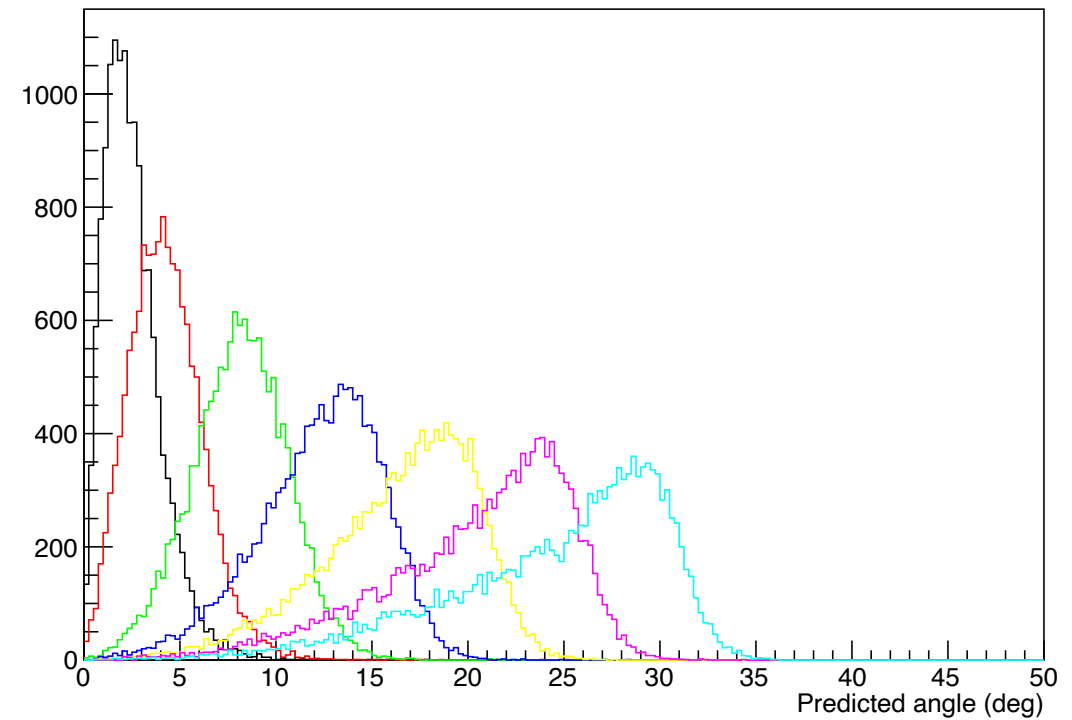


Number of layer x 2 (using 220 layers)

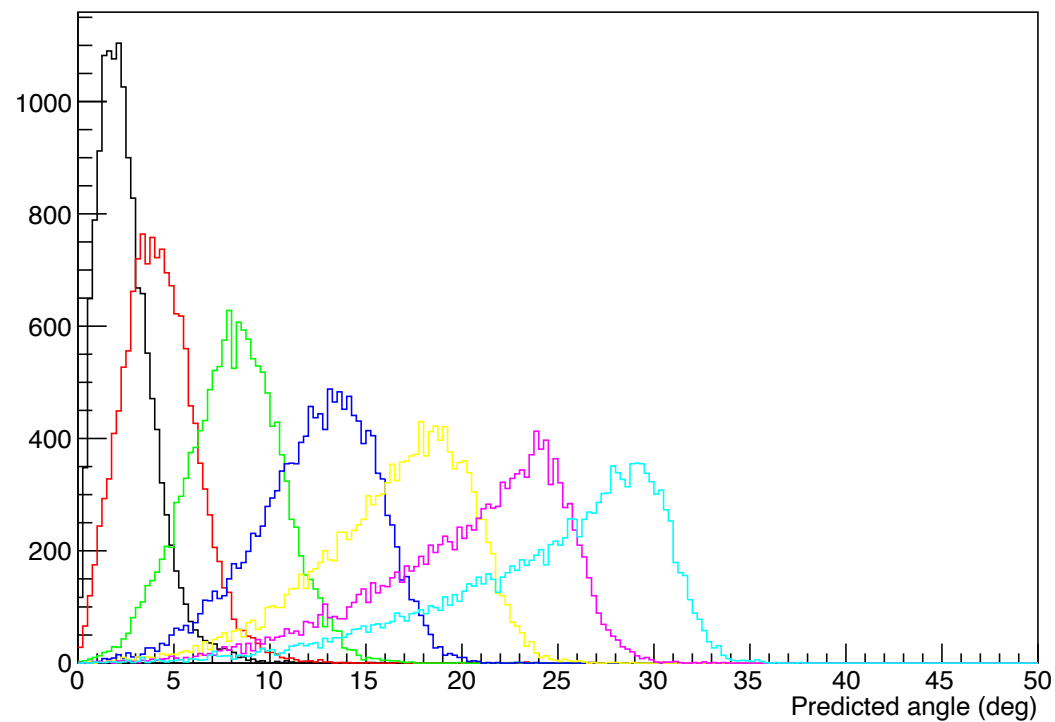
Ecut 0 MeV



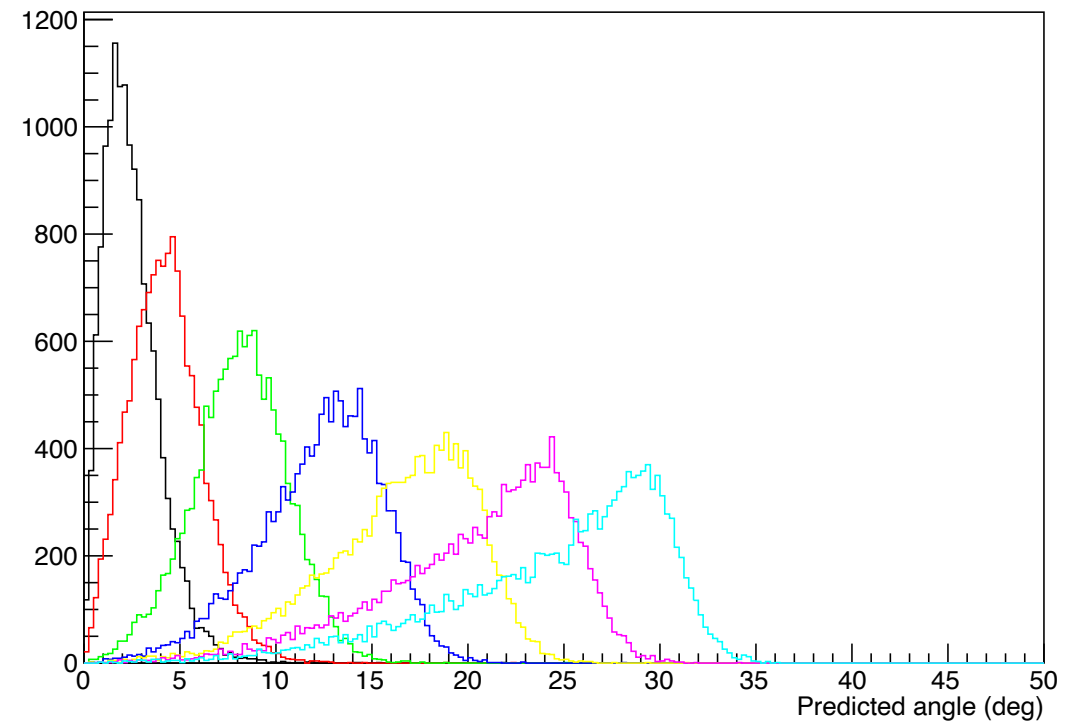
Ecut 10 MeV



Ecut 30 MeV

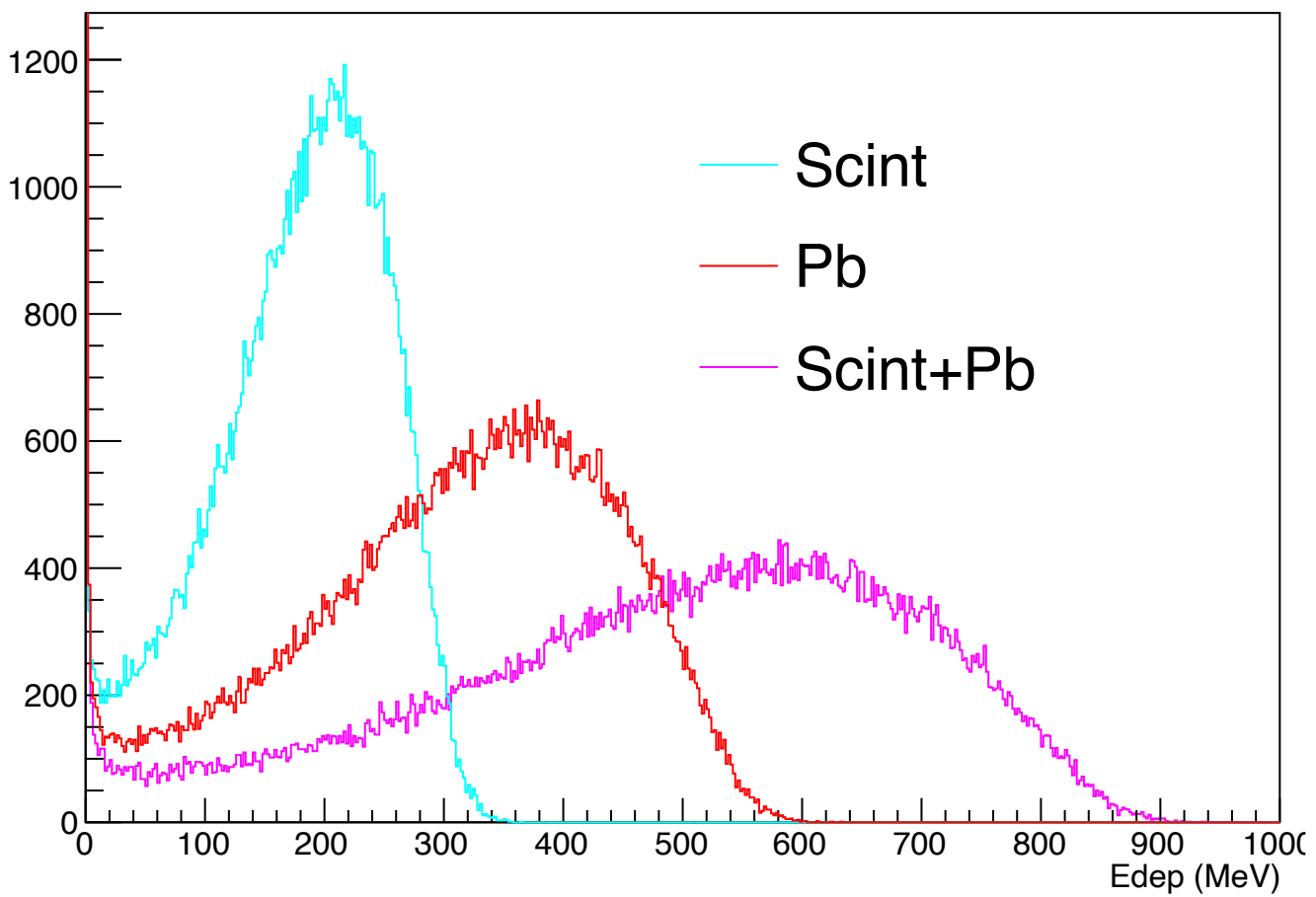


Ecut 50 MeV

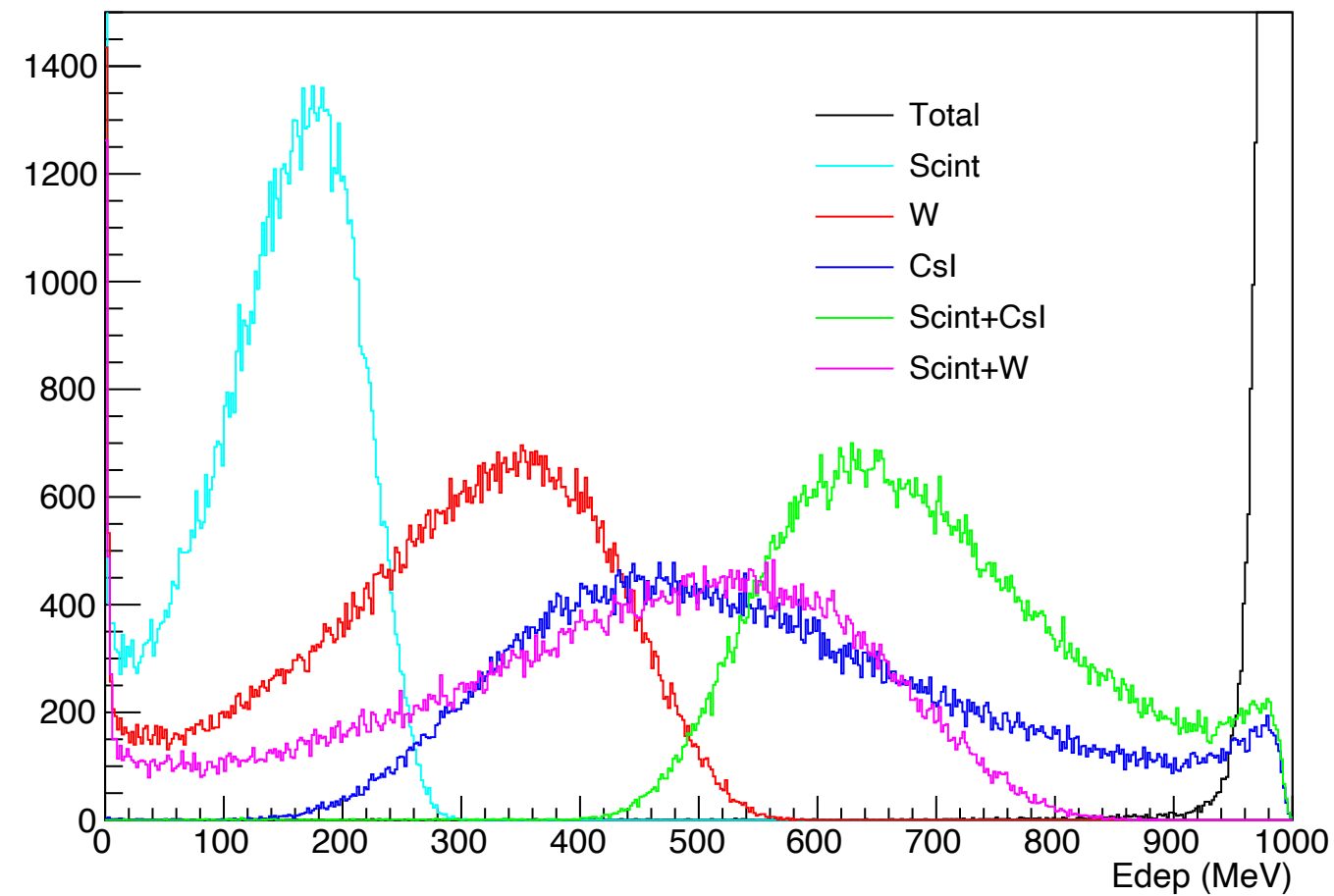


Sampling fraction?

Scintillator + Pb 24 layers



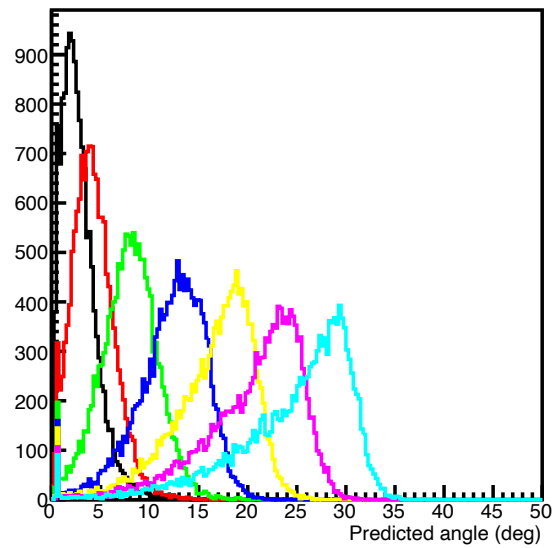
Fiber + W 110 layers



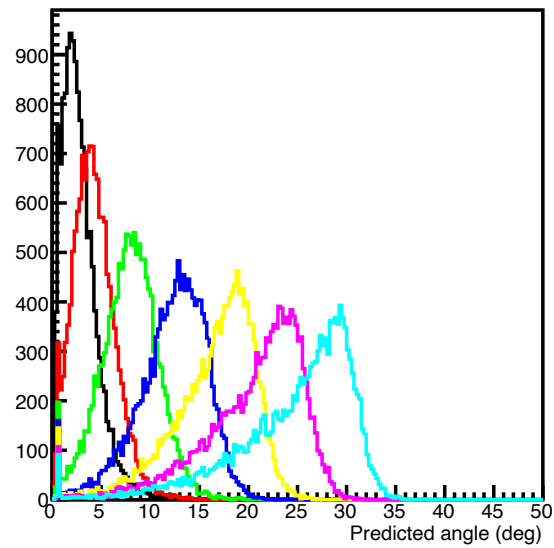
N_estimator & gamma

w/o energy cut

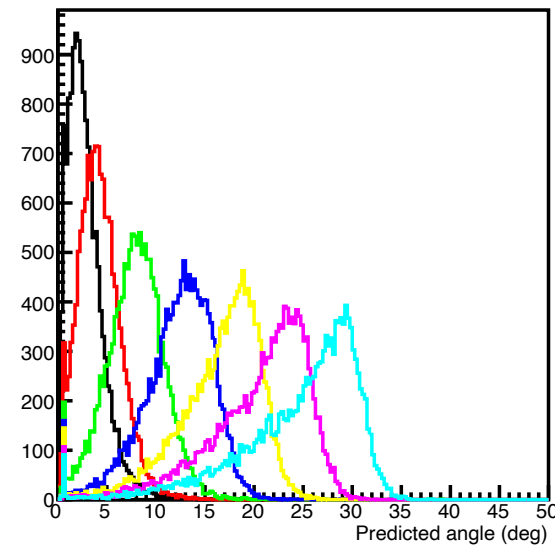
Nestimator 500, gamma 0.05



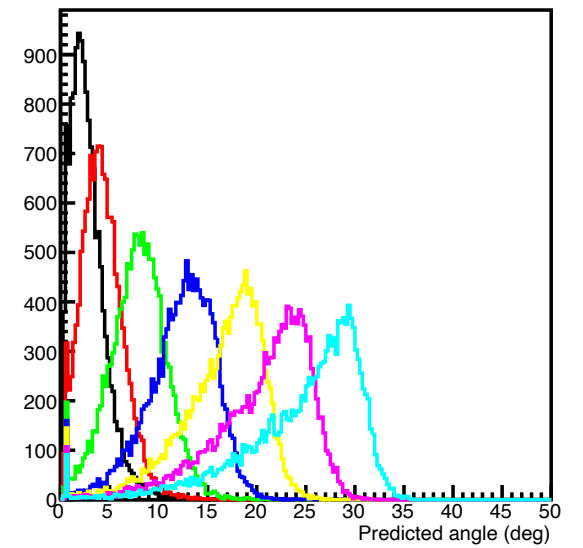
Nestimator 1000, gamma 0.05



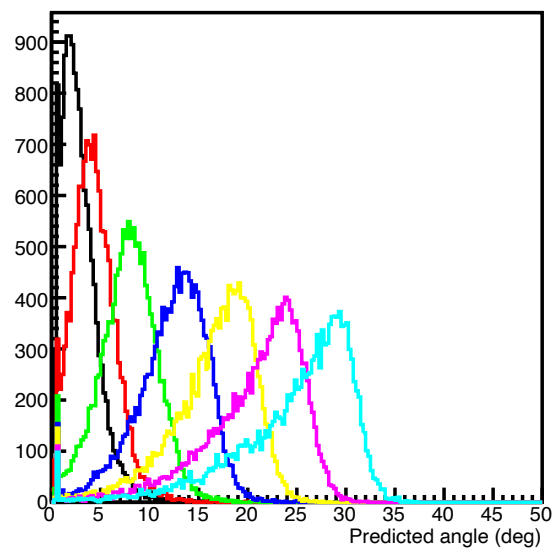
Nestimator 2000, gamma 0.05



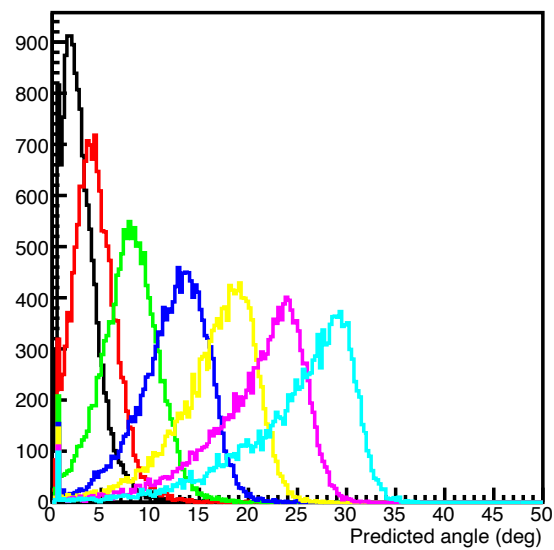
Nestimator 3000, gamma 0.05



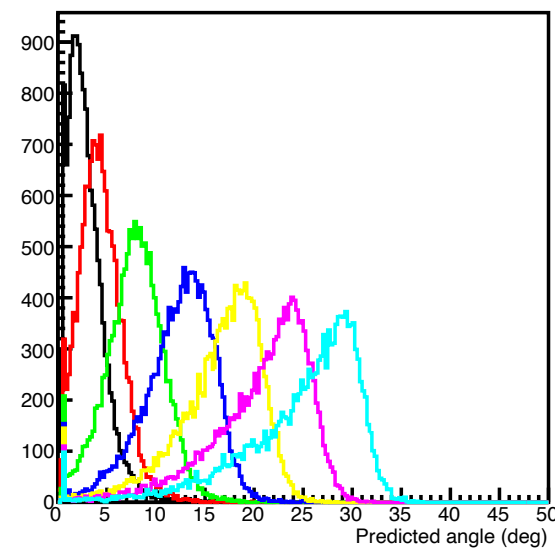
Nestimator 500, gamma 0.1



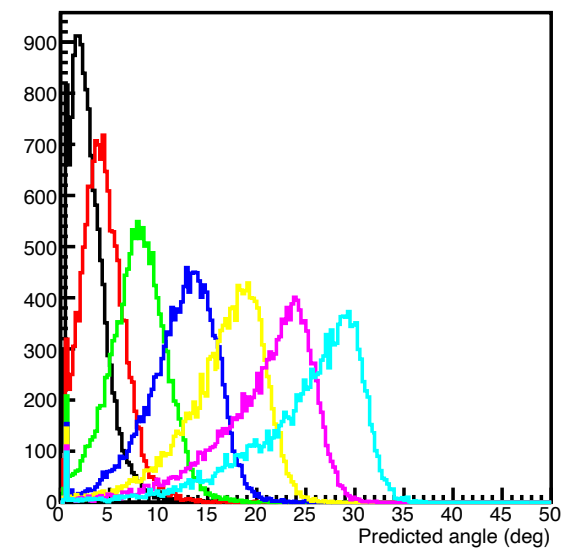
Nestimator 1000, gamma 0.1



Nestimator 2000, gamma 0.1



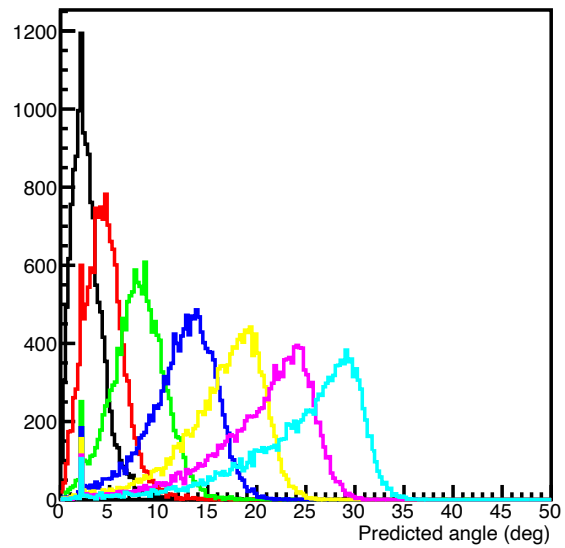
Nestimator 3000, gamma 0.1



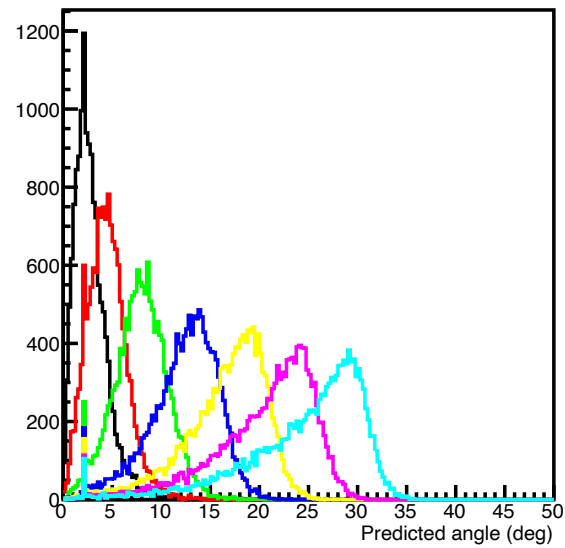
N_estimator & gamma

energy cut > 10 MeV

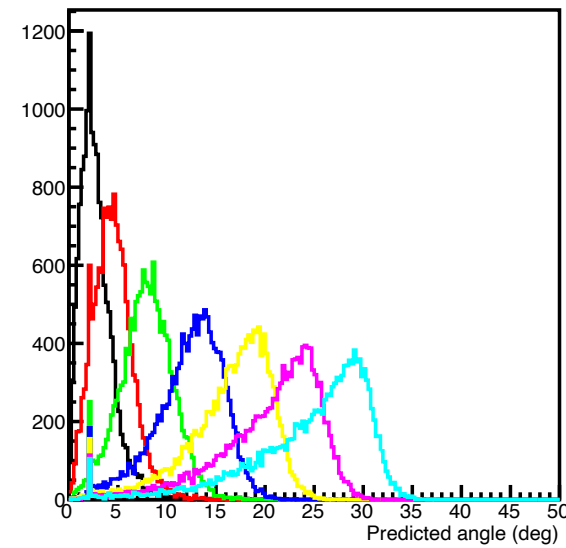
Nestimator 500, gamma 0.05



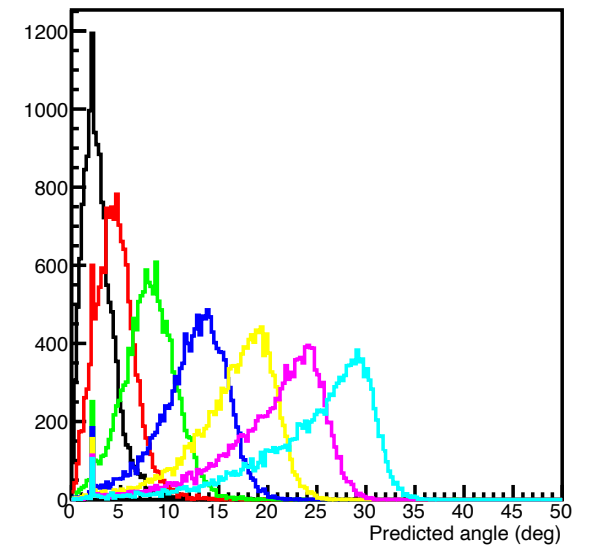
Nestimator 1000, gamma 0.05



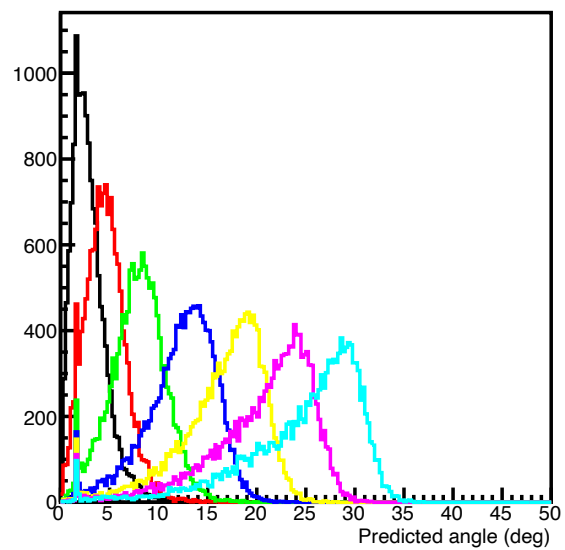
Nestimator 2000, gamma 0.05



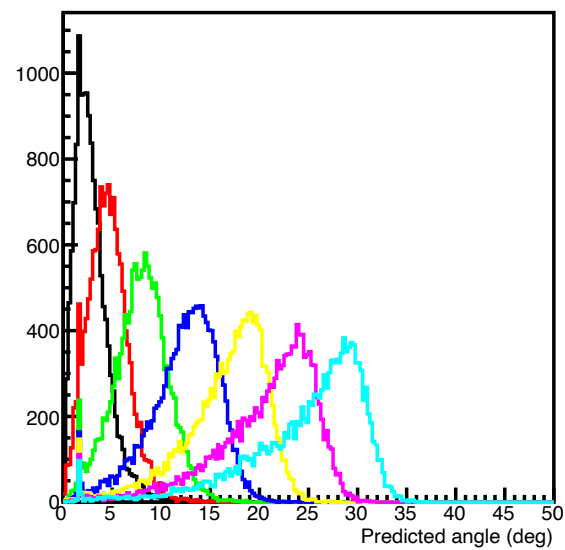
Nestimator 3000, gamma 0.05



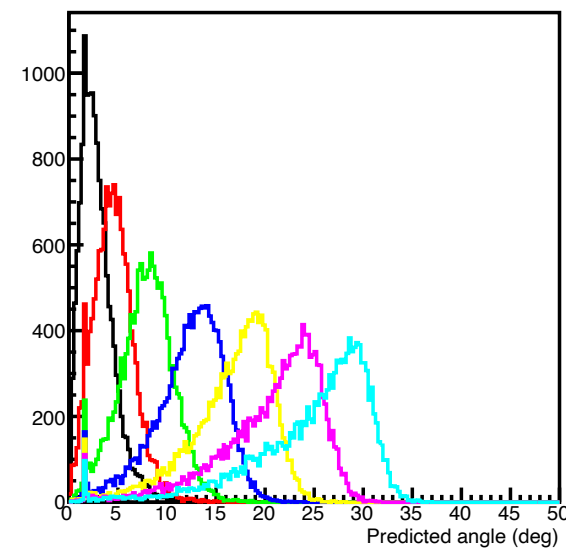
Nestimator 500, gamma 0.1



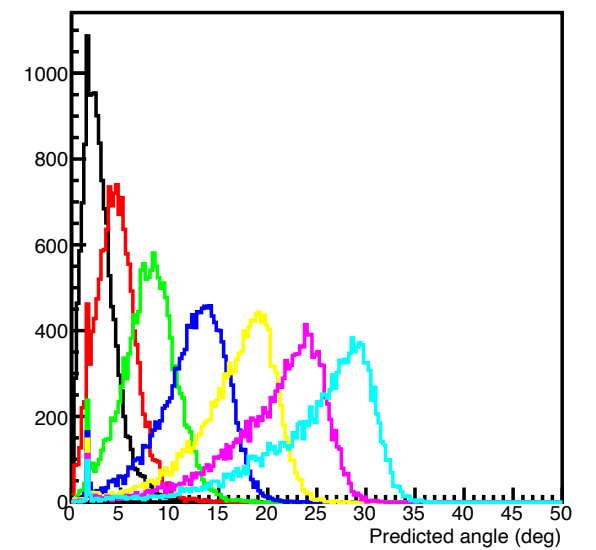
Nestimator 1000, gamma 0.1



Nestimator 2000, gamma 0.1



Nestimator 3000, gamma 0.1



Different grouping along width/depth

Backup

Fiber + W 110 layers

