



**Institute of High Energy Physics**  
Chinese Academy of Sciences

# Weekly Report

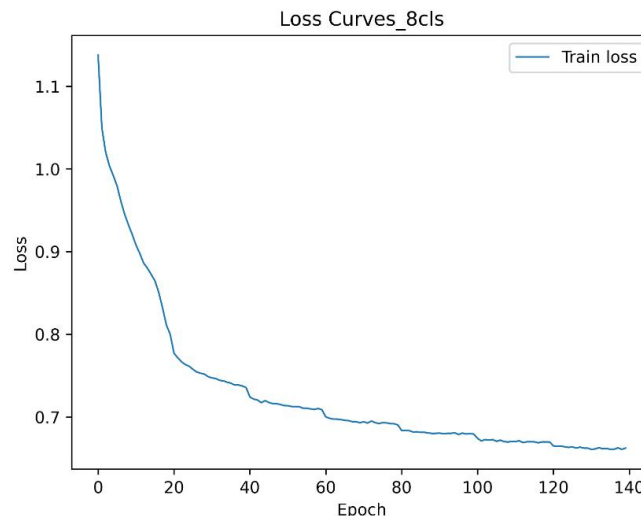
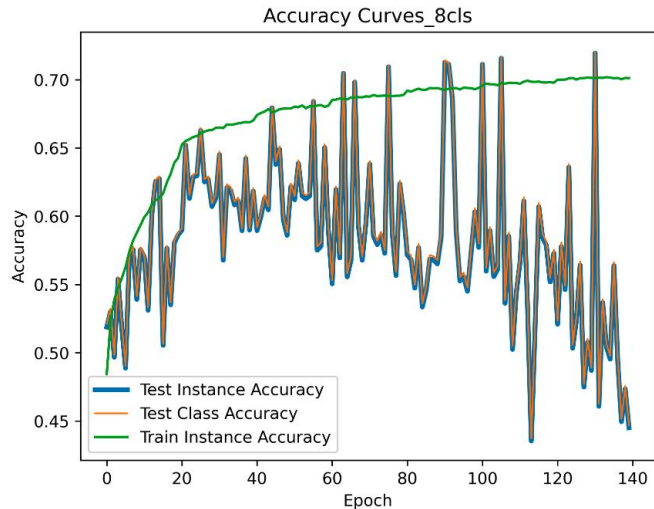
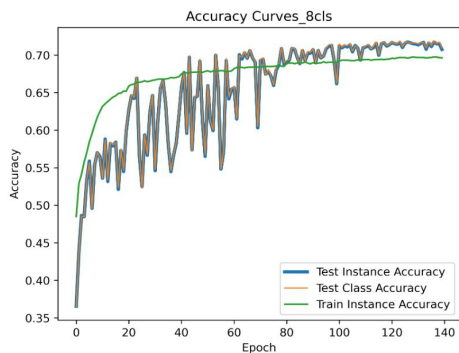
Liyan QIAN  
Jul.10th 2023

# Pointnet++ on CEPC calorimeter

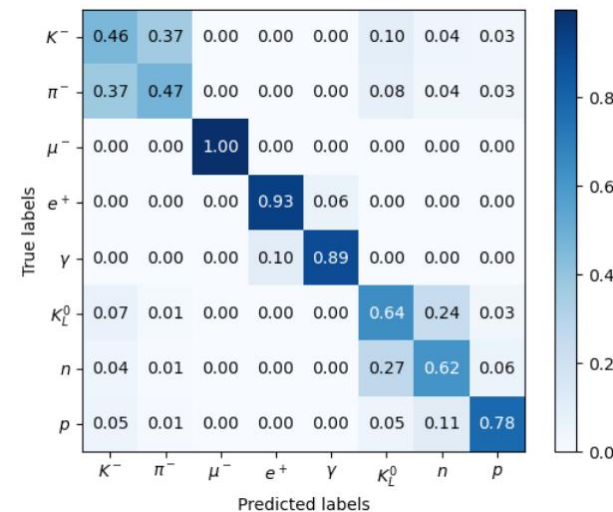
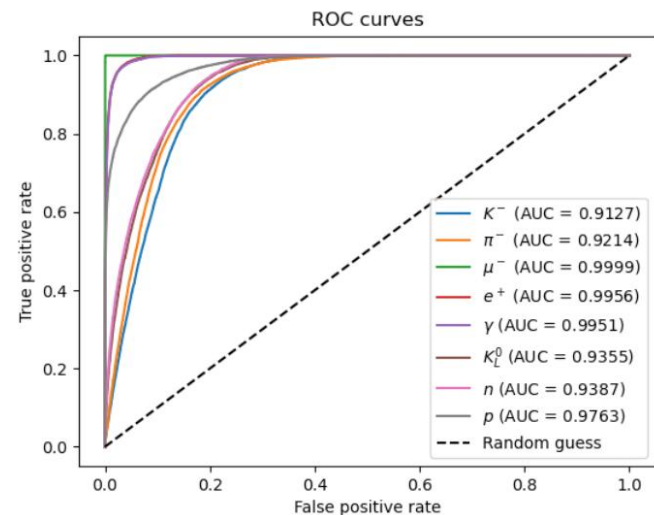
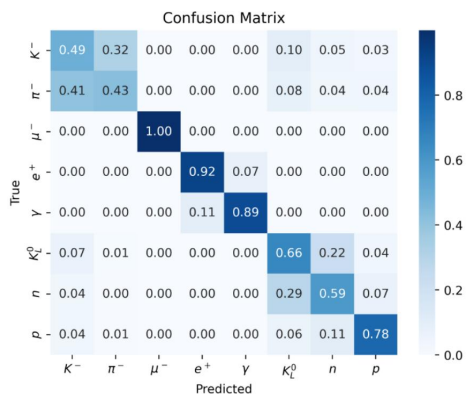
## ➤ 8-category classification

No longer exploring 8-category classification...

Overfitting?



datasize=400,000  
batchsize=256  
feature:  $x, y, z, \mathbf{E}$



feature:  $x, y, z$

# Pointnet++ on CEPC calorimeter

➤ 2-category classification

$$Accuracy_{instance} = \frac{N_{\text{accurately predicted samples in all classes}}}{N_{\text{total samples in all classes}}}$$

➤  $e^+\gamma$

$$Accuracy_{class_i} = \frac{N_{\text{accurately predicted samples in class}_i}}{N_{\text{total samples in class}_i}}$$

$$Accuracy_{class} = \frac{\sum_{class_i} Accuracy_{class_i}}{\text{Number of classes}}$$

datasize=5w/class

batchsize=256

epoch=200

feature: x,y,z

