

# FCAL energy calibration QC

Igal Jaeglé

Thomas Jefferson National Accelerator Facility

for the GlueX Collaboration

hesrcmethod0period16

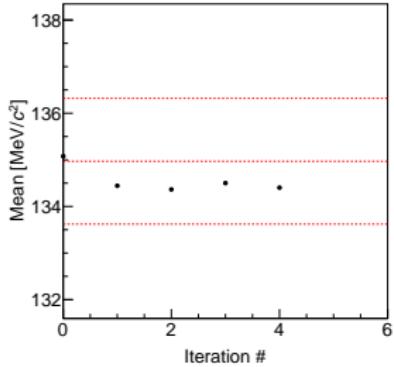


# Table of contents

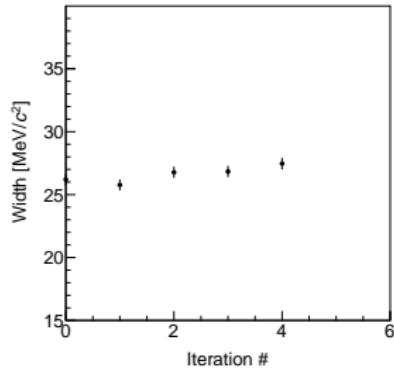
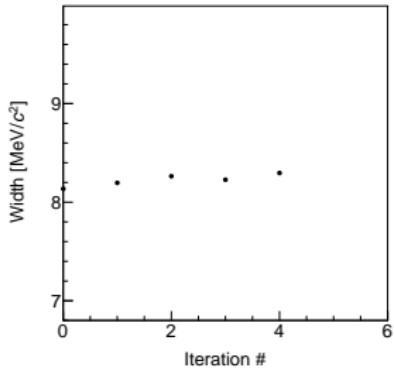
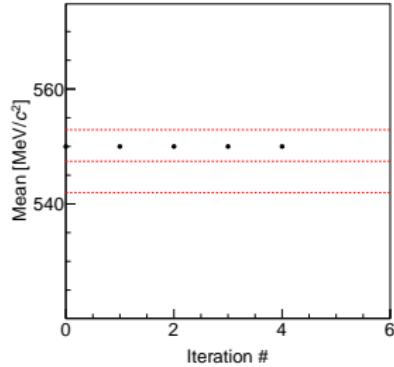
- 1 Overall QC
- 2 QC per rings

# Overall QC vs iteration

●  $\pi^0$

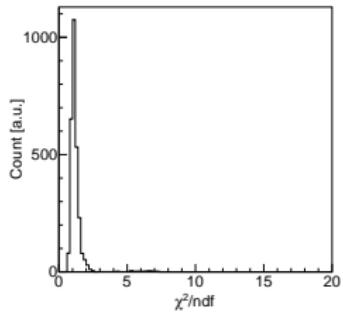


●  $\eta$

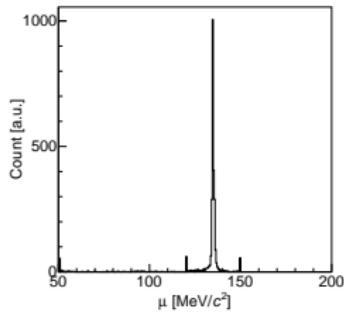


# Overall QC, summary distributions

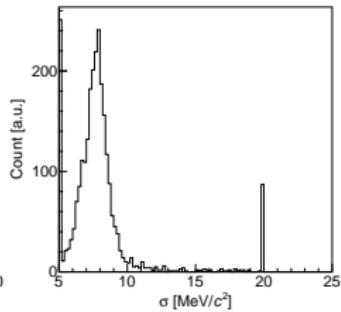
●  $\chi^2$  distribution



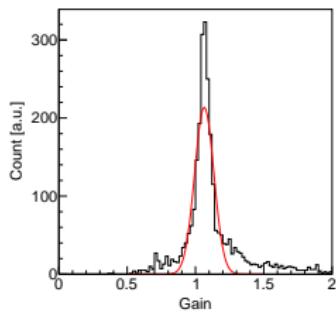
● Fitted peak distribution



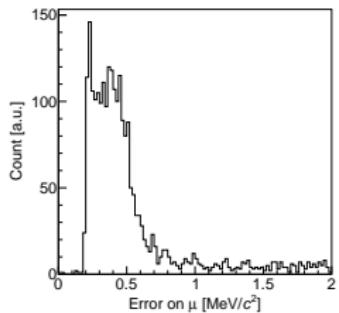
● Fitted width distribution



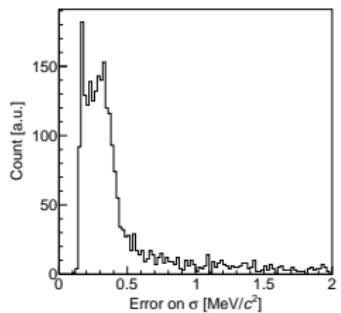
● Gain distribution



● Fitted peak error distribution

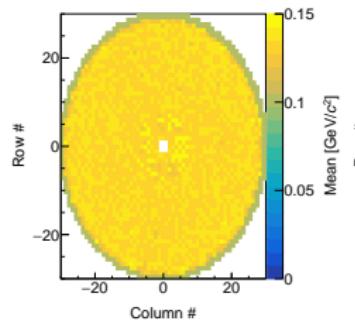


● Fitted width error distribution

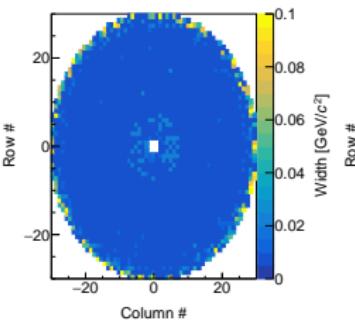


# Overall QC, summary maps

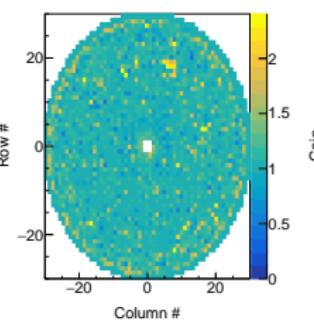
● Fitted peak map



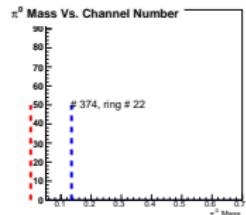
● Fitted width map



● Gain map



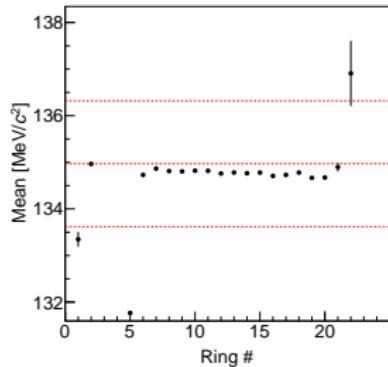
# Overall QC, bad channels



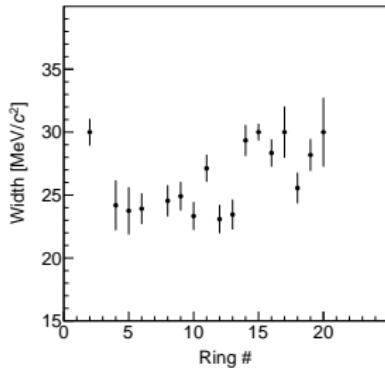
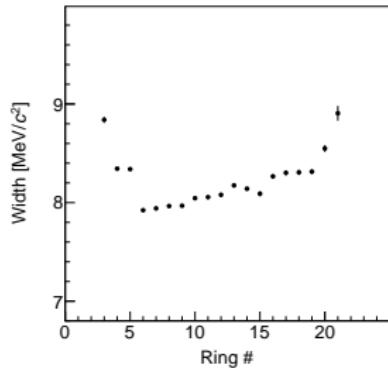
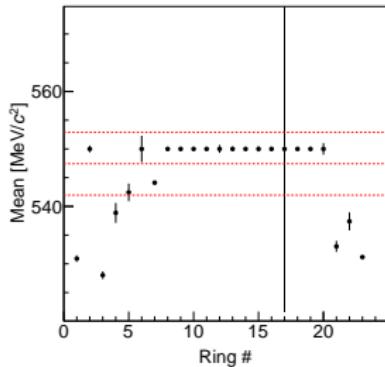
# QC per rings

If radius divided by 5 cm, there is 24 rings

●  $\pi^0$



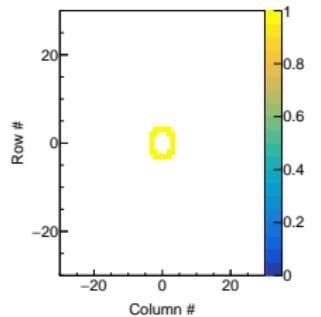
●  $\eta$



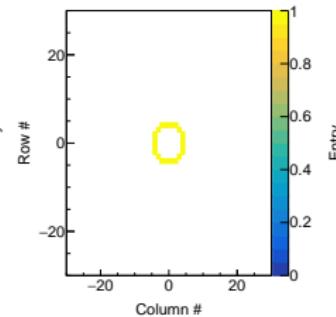
# QC per rings

If radius divided by 5 cm, there is 24 rings

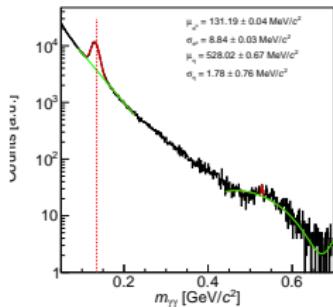
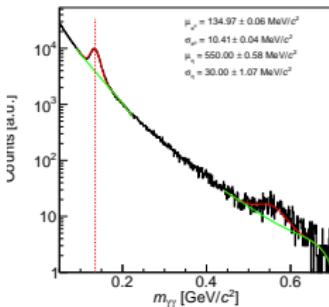
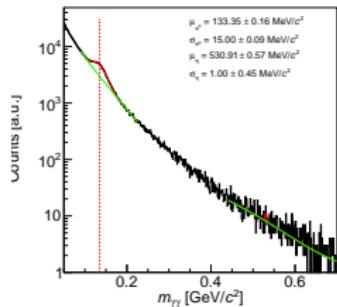
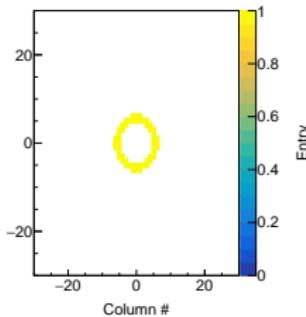
Ring 1



Ring 2



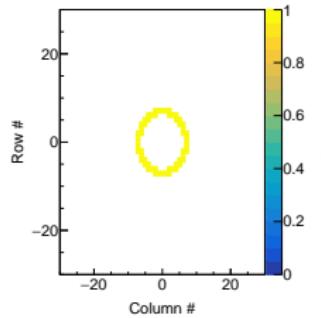
Ring 3



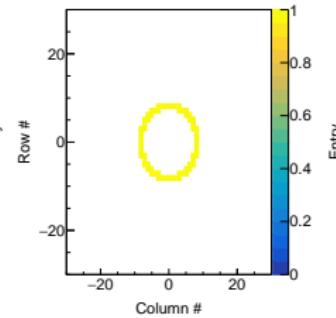
# QC per rings

If radius divided by 5 cm, there is 24 rings

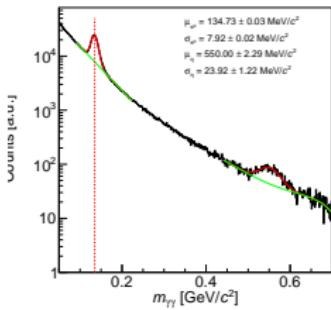
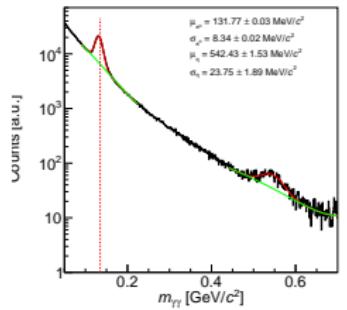
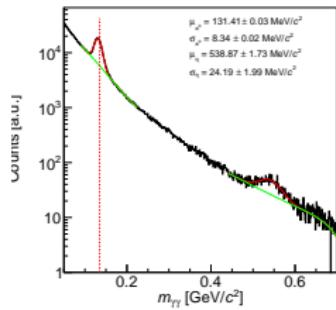
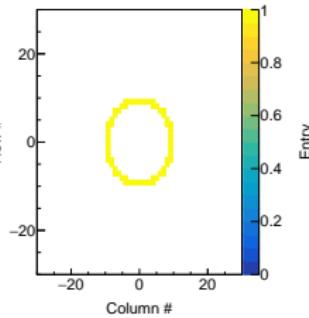
● Ring 4



● Ring 5



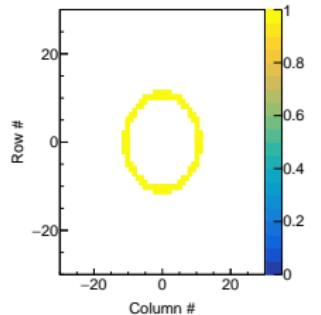
● Ring 6



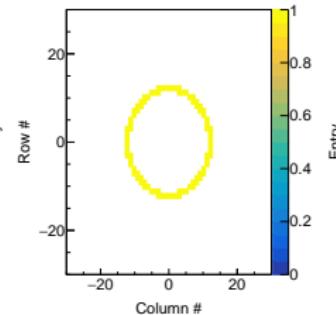
# QC per rings

If radius divided by 5 cm, there is 24 rings

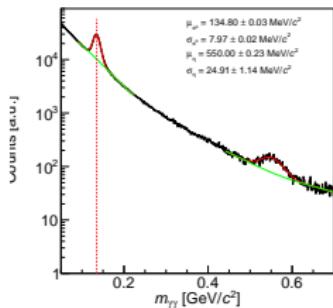
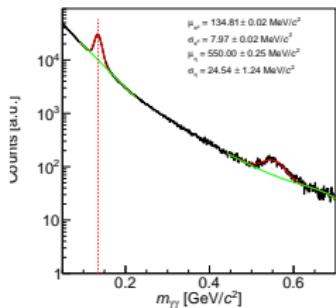
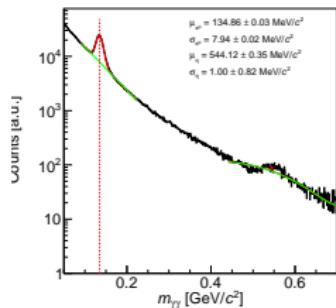
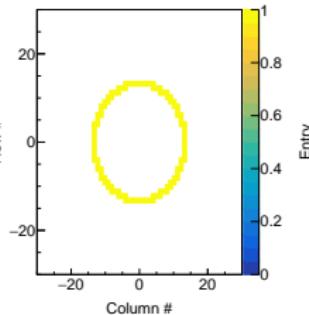
● Ring 7



● Ring 8



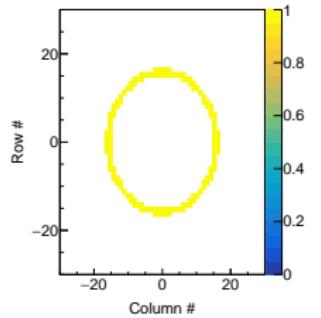
● Ring 9



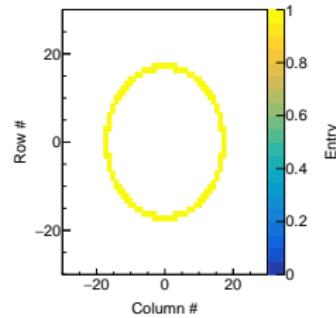
# QC per rings

If radius divided by 5 cm, there is 24 rings

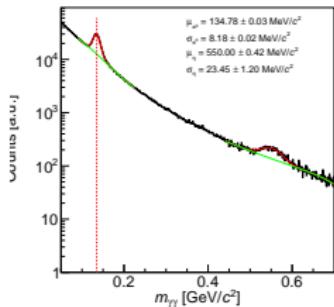
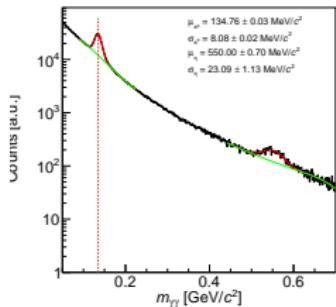
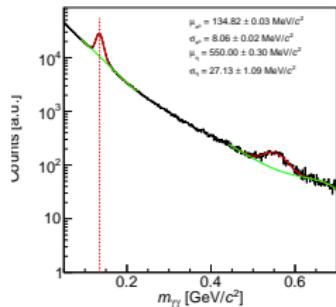
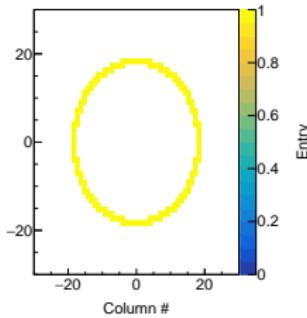
● Ring 11



● Ring 12



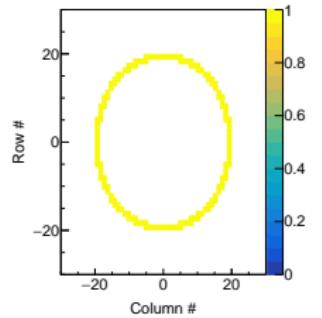
● Ring 13



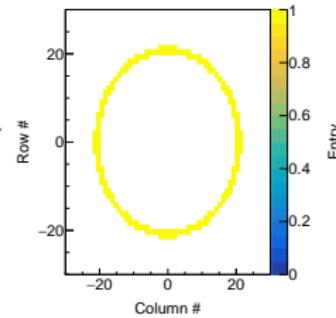
# QC per rings

If radius divided by 5 cm, there is 24 rings

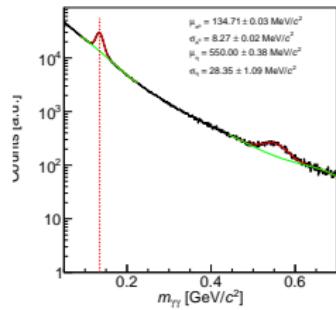
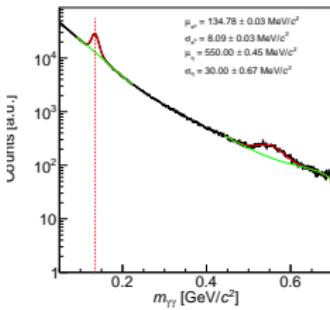
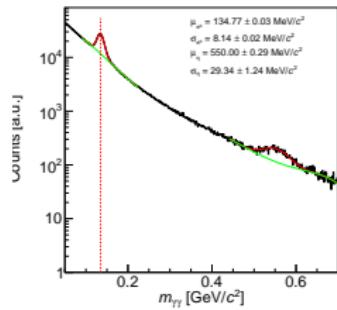
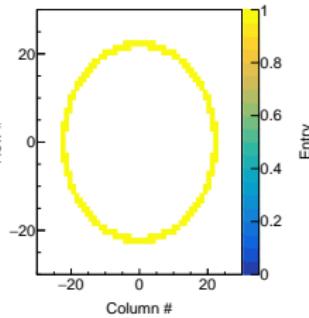
Ring 14



Ring 15



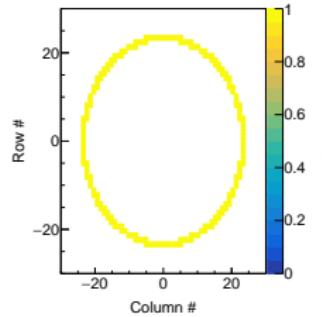
Ring 16



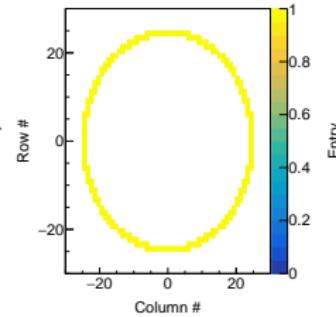
# QC per rings

If radius divided by 5 cm, there is 24 rings

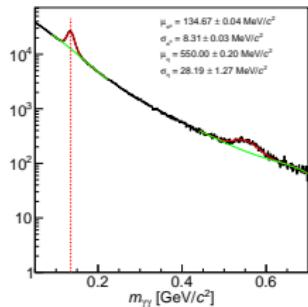
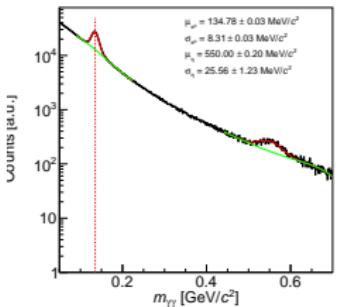
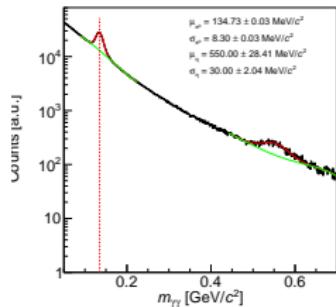
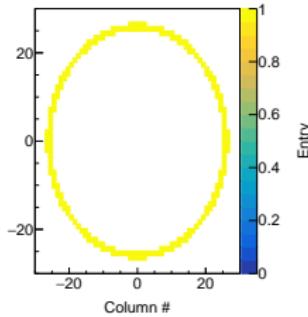
Ring 17



Ring 18



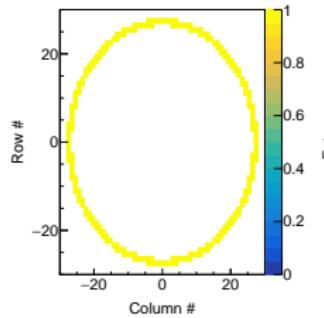
Ring 19



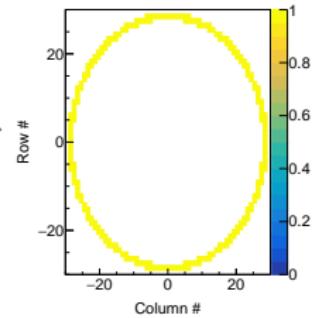
# QC per rings

If radius divided by 5 cm, there is 24 rings

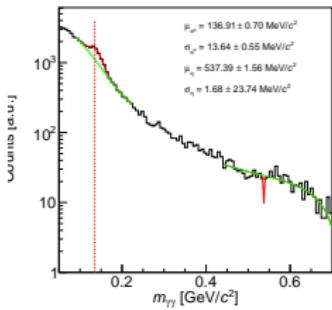
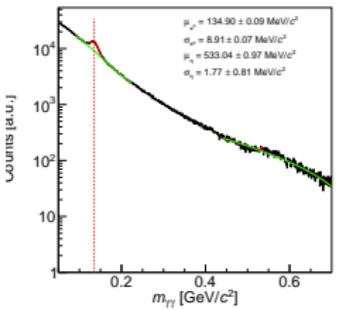
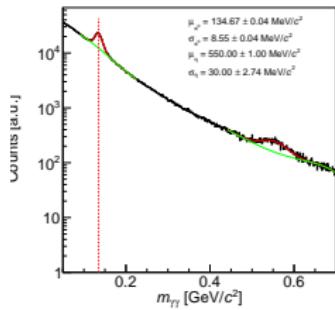
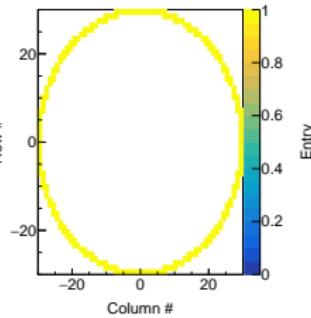
● Ring 20



● Ring 21



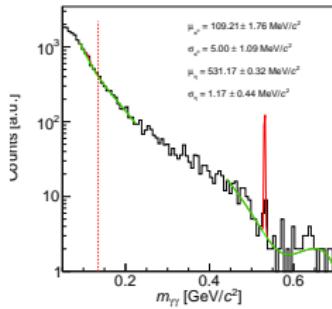
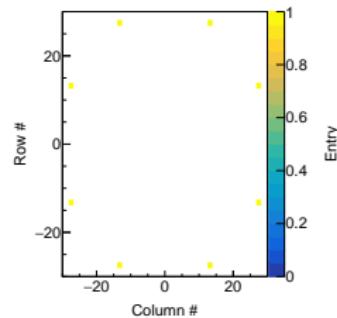
● Ring 22



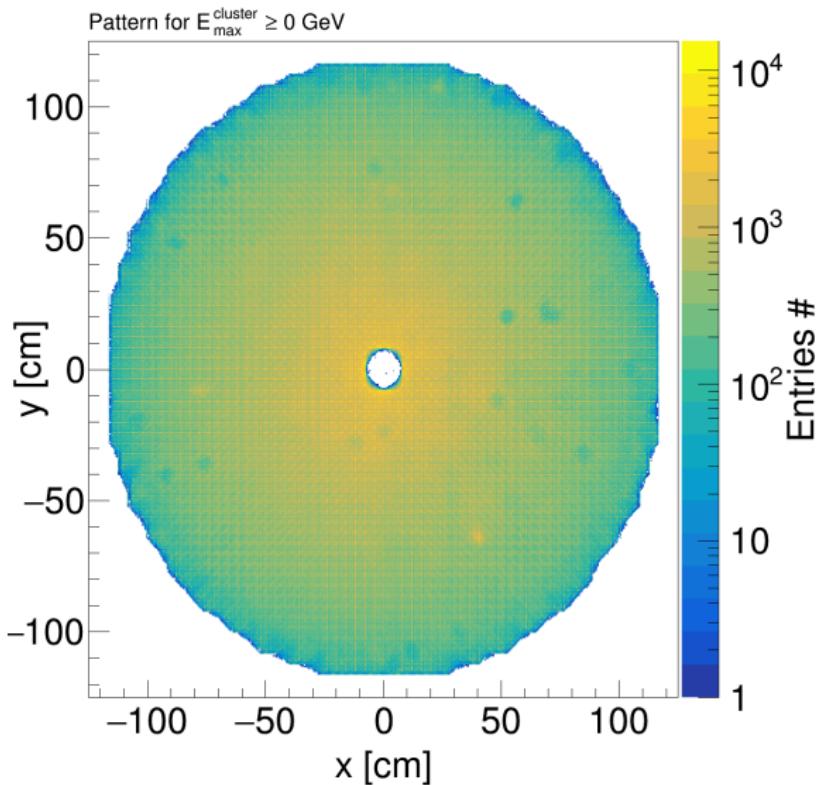
# QC per rings

If radius divided by 5 cm, there is 24 rings

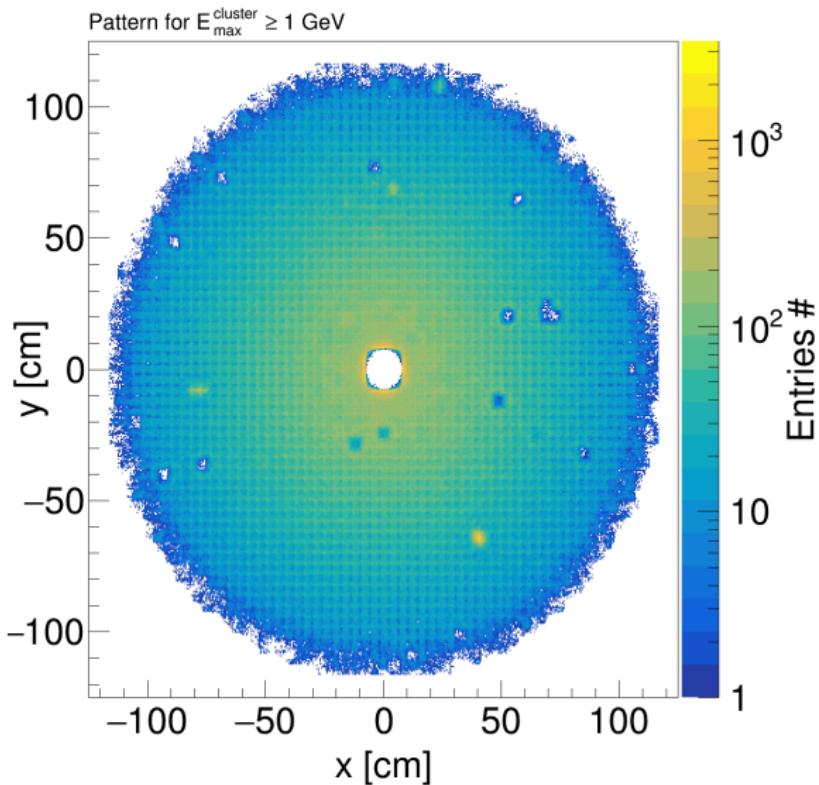
● Ring 23



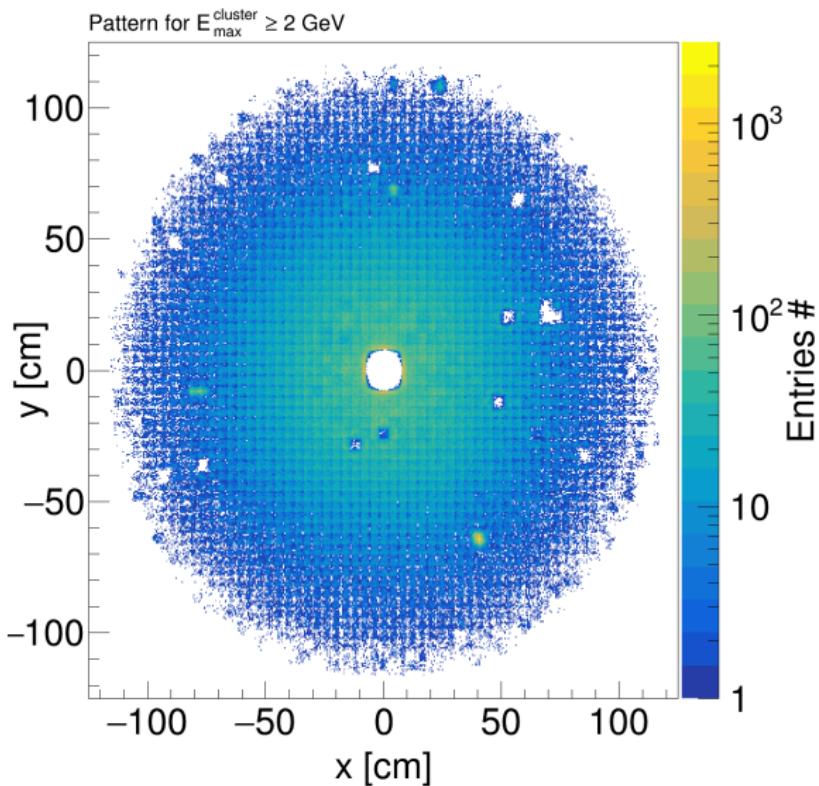
# FCAL pattern



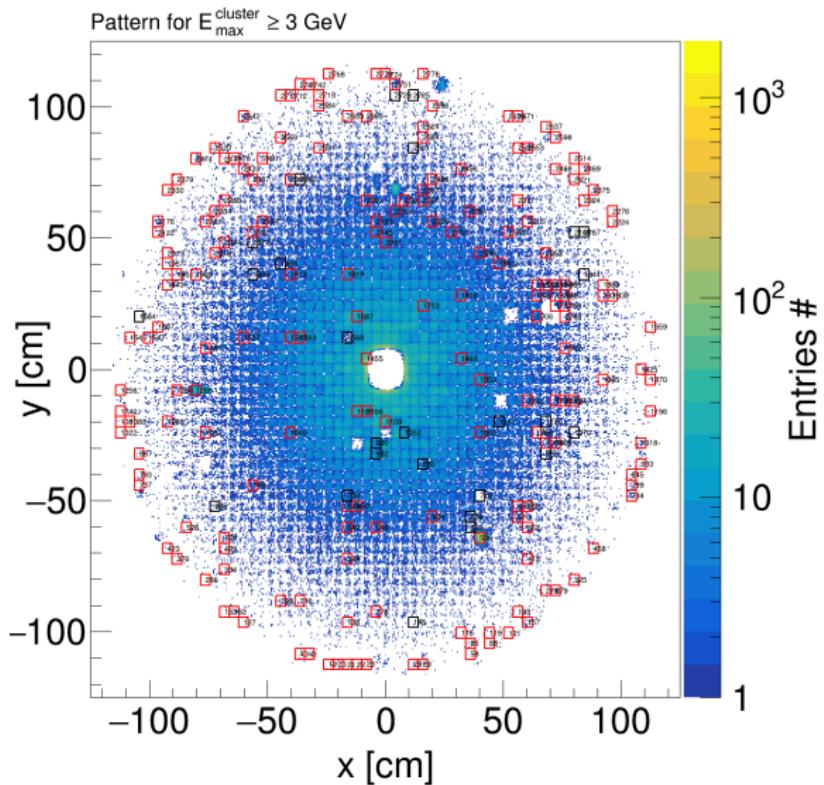
# FCAL pattern



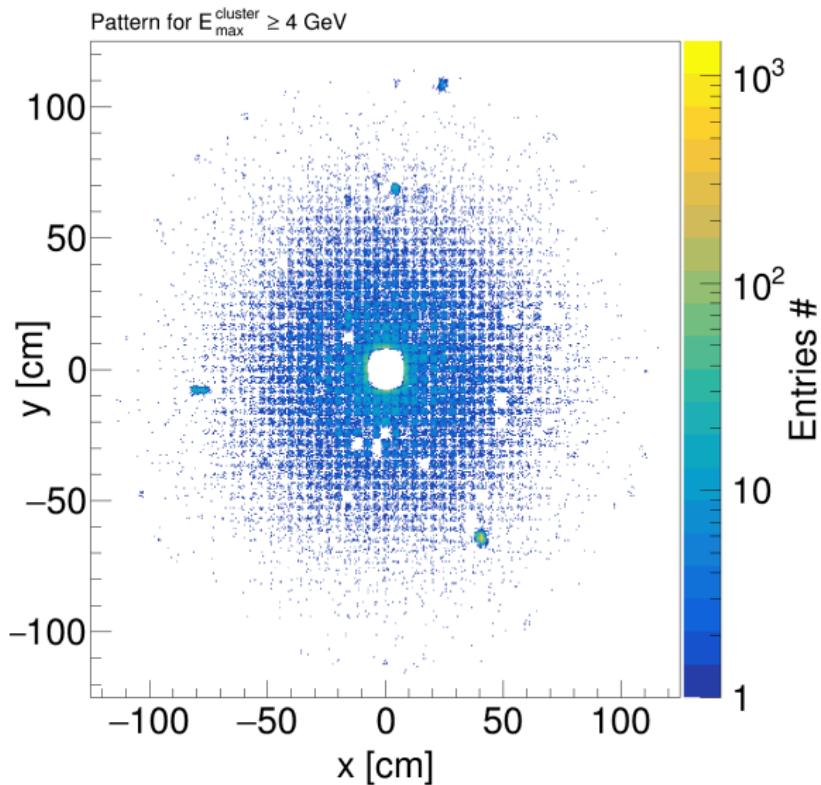
# FCAL pattern



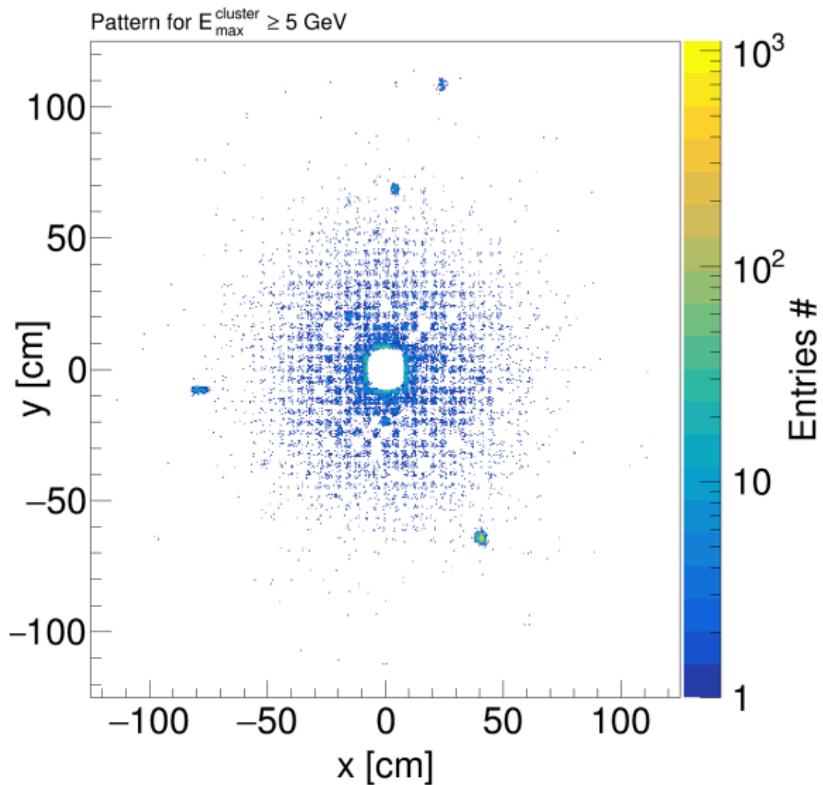
# FCAL pattern



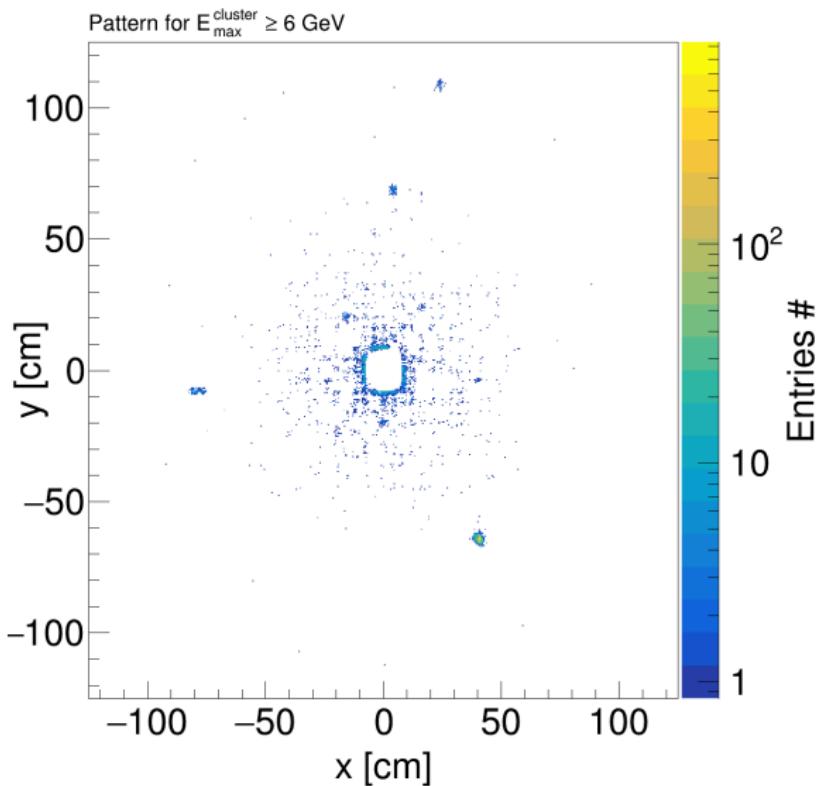
# FCAL pattern



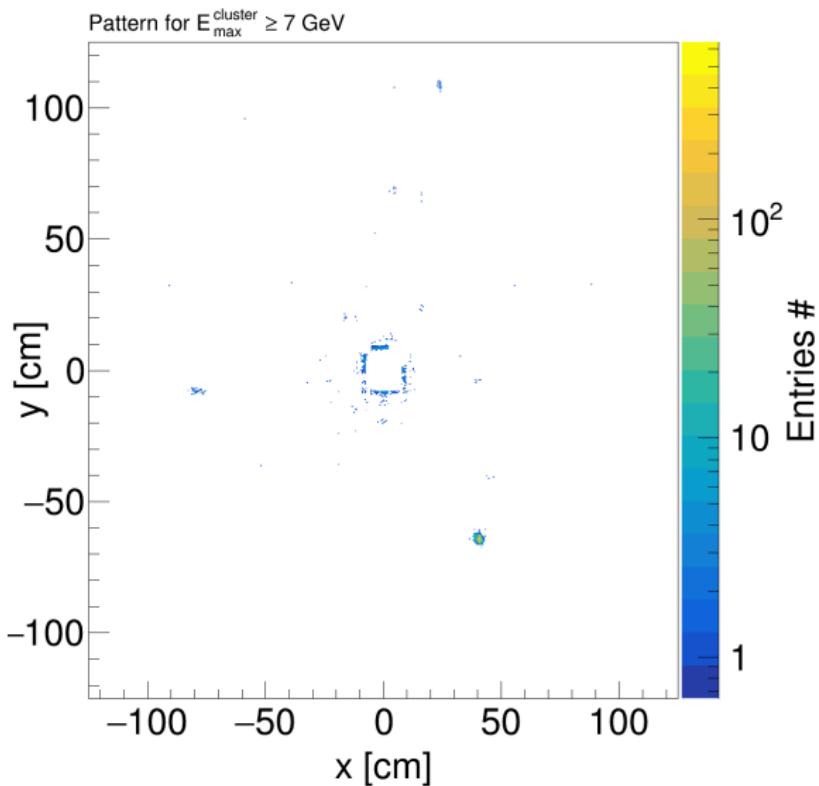
# FCAL pattern



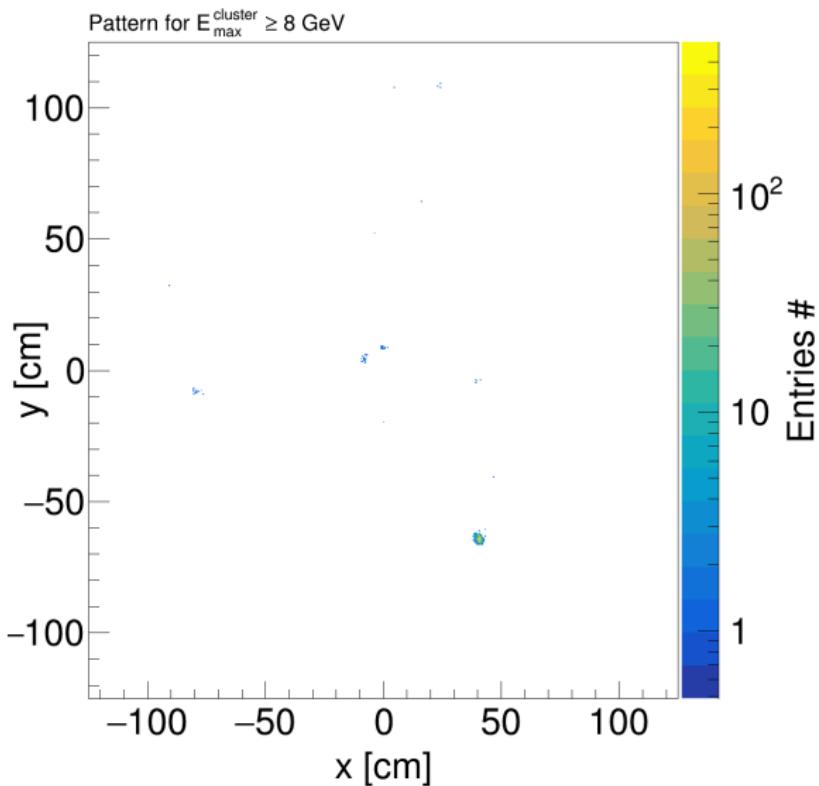
# FCAL pattern



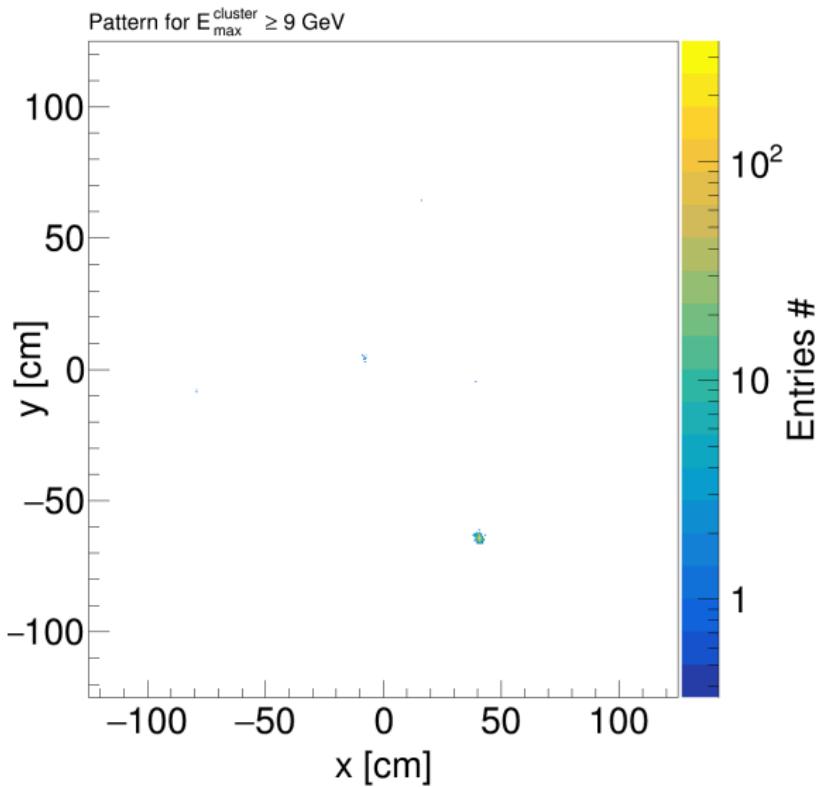
# FCAL pattern



# FCAL pattern



# FCAL pattern



# FCAL pattern

