

# ECAL energy calibration QC

Igal Jaegle

Thomas Jefferson National Accelerator Facility

for the GlueX Collaboration

April 29, 2025

2025-01-period-16-iteration-1-method-2

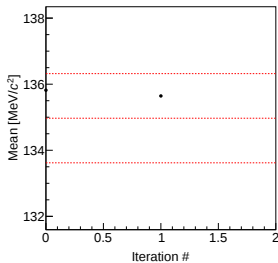


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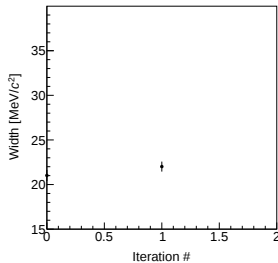
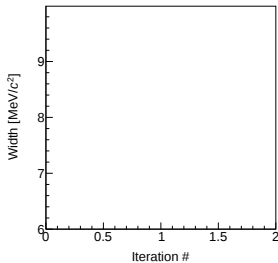
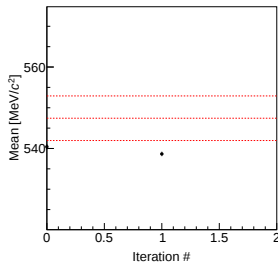
- 1 Overall QC
- 2 QC per rings

# Overall QC vs iteration

●  $\pi^0$

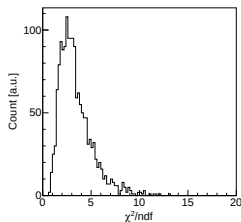


●  $\eta$

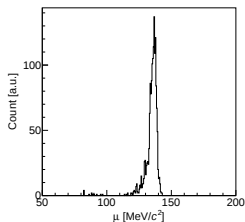


# Overall QC, summary distributions

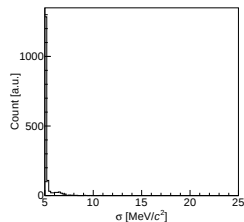
•  $\chi^2$  distribution



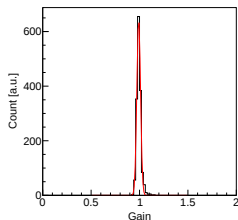
• Fitted peak distribution



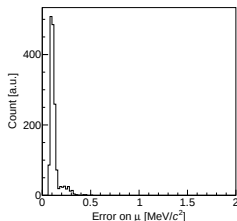
• Fitted width distribution



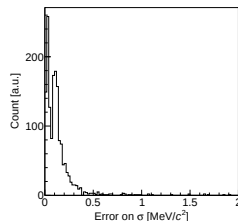
• Gain distribution



• Fitted peak error distribution

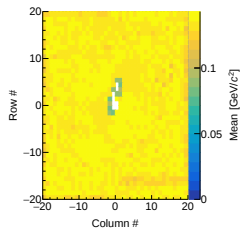


• Fitted width error distribution

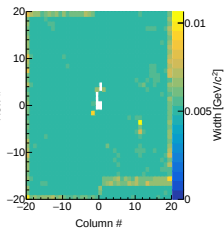


# Overall QC, summary maps

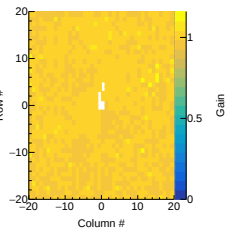
● Fitted peak map



● Fitted width map



● Gain map

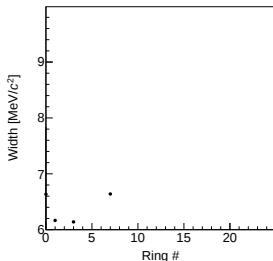
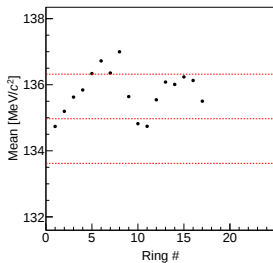


# Overall QC, bad channels

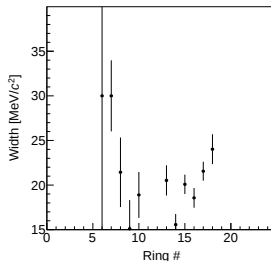
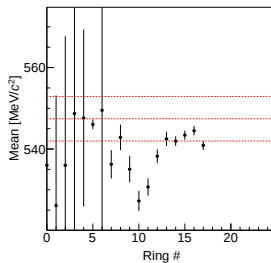
# QC per rings

There are 19 squared layers, from 0 to 18, but in reality from 11 to 29

●  $\pi^0$



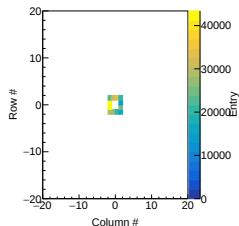
●  $\eta$



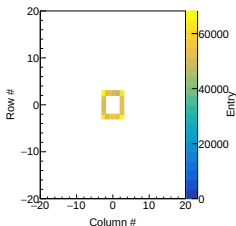
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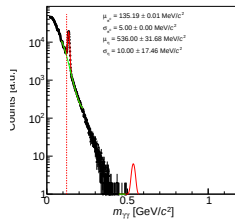
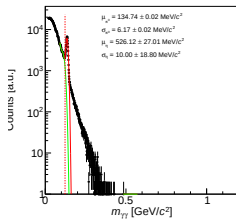
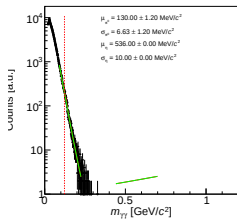
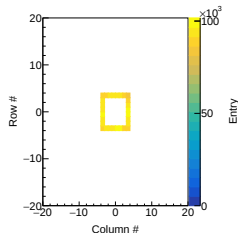
● Ring 0



● Ring 1



● Ring 2



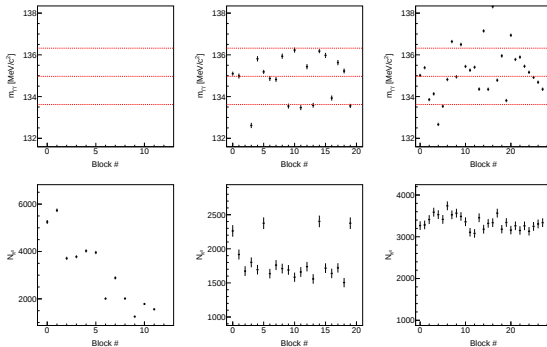
# QC per rings

There are 19 squared layers, from 0 to 18, but in reality from 11 to 29

● Ring 0

● Ring 1

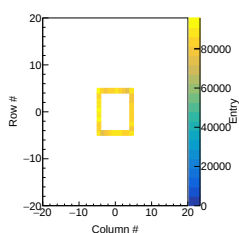
● Ring 2



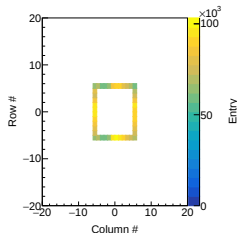
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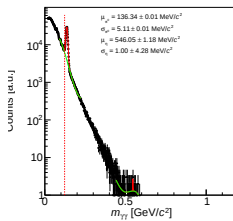
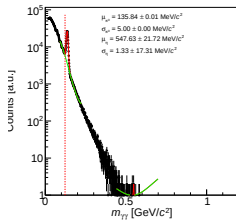
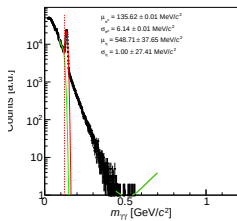
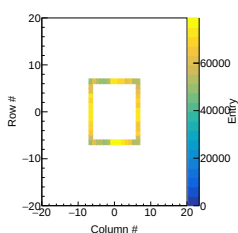
● Ring 3



● Ring 4



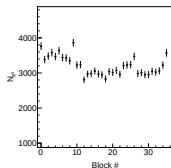
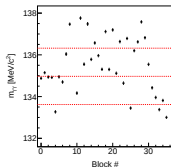
● Ring 5



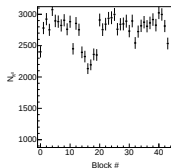
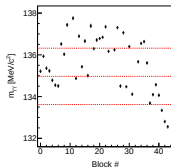
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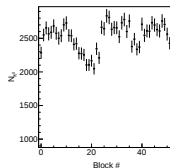
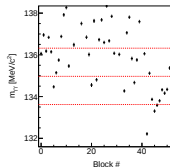
● Ring 3



● Ring 4



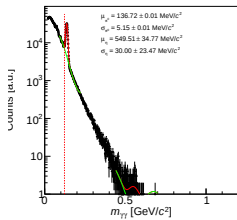
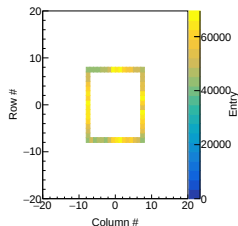
● Ring 5



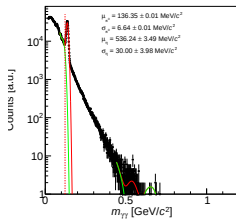
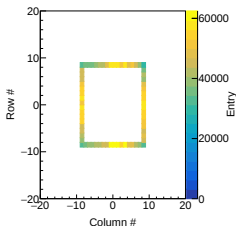
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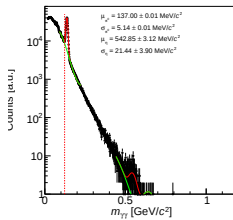
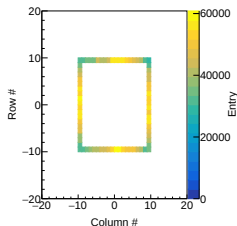
● Ring 6



● Ring 7



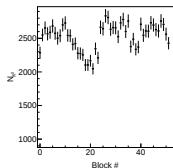
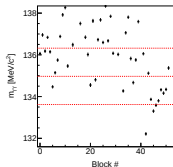
● Ring 8



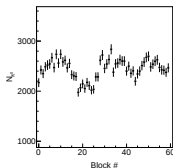
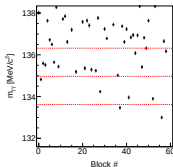
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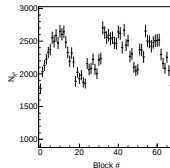
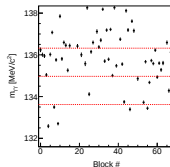
● Ring 6



● Ring 7



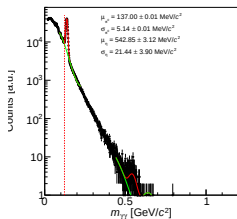
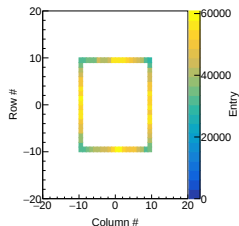
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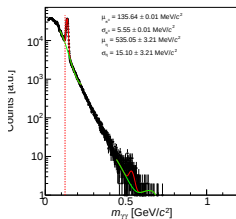
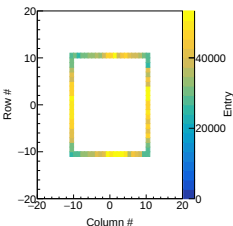
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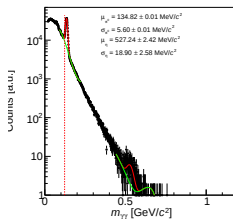
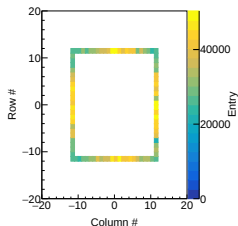
● Ring 8



● Ring 9



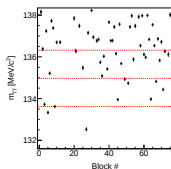
● Ring 10



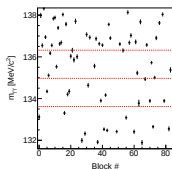
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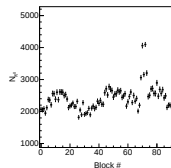
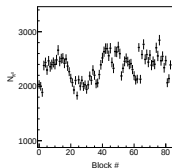
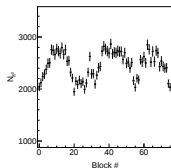
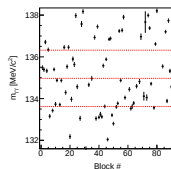
● Ring 8



● Ring 9



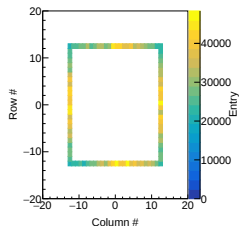
● Ring 10



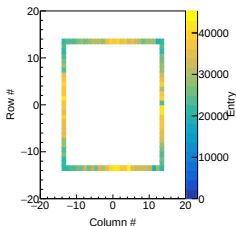
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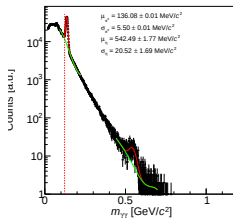
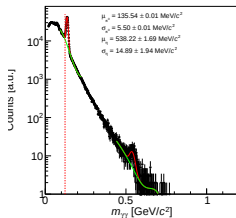
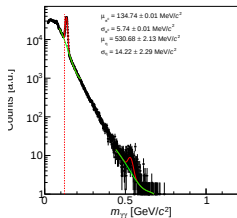
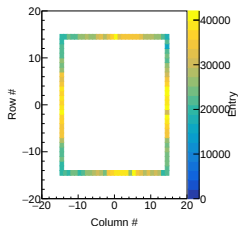
● Ring 11



● Ring 12



● Ring 13



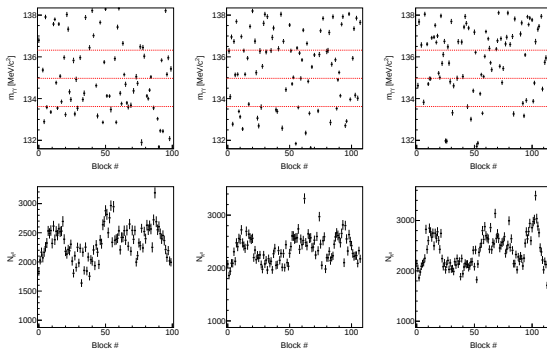
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There are 19 squared layers, from 0 to 18, but in reality from 11 to 29

● Ring 11

● Ring 12

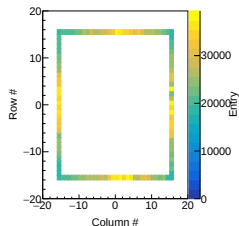
● Ring 13



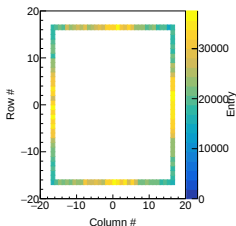
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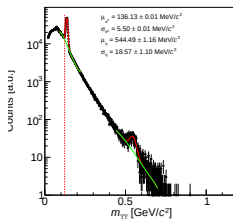
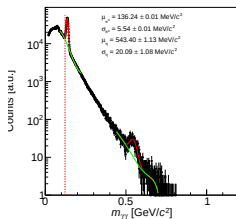
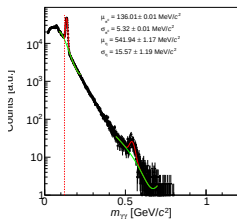
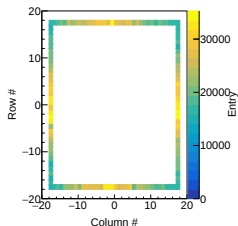
● Ring 14



● Ring 15



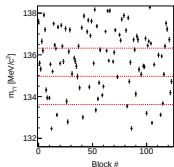
● Ring 16



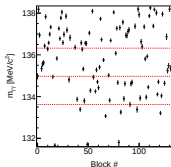
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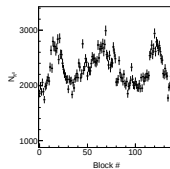
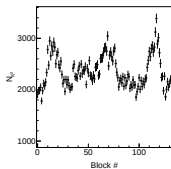
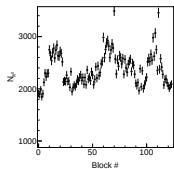
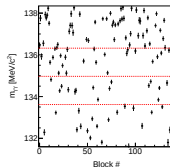
● Ring 14



● Ring 15



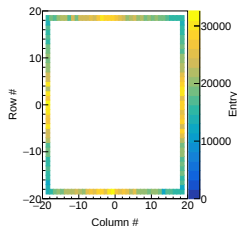
● Ring 16



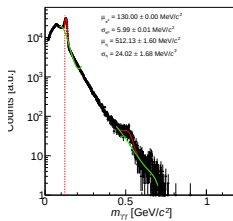
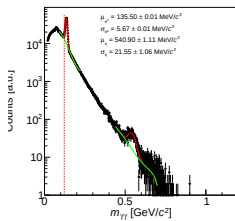
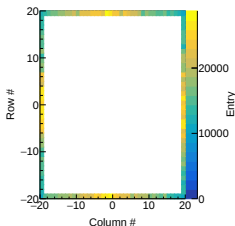
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● Ring 17



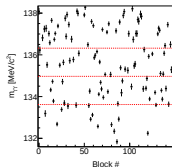
● Ring 18



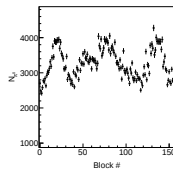
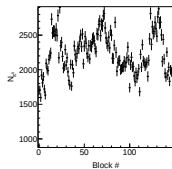
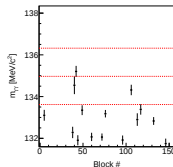
# QC per rings

There are 19 squared layers, from 0 to 18, but in reality from 11 to 29

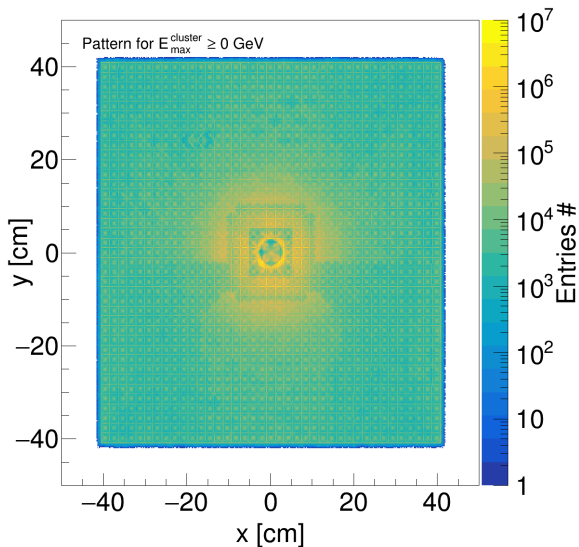
● Ring 17



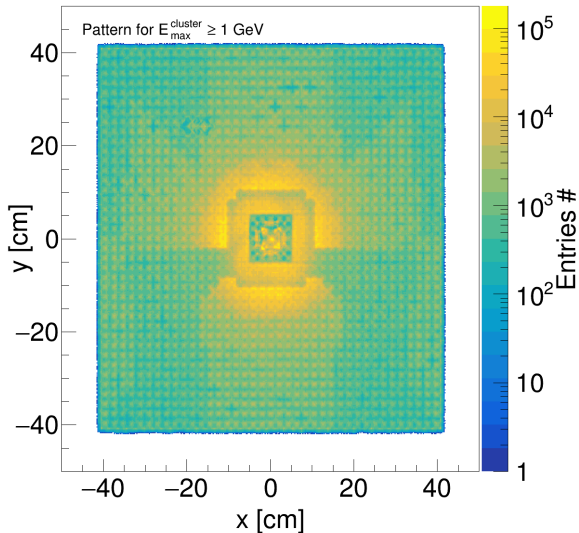
● Ring 18



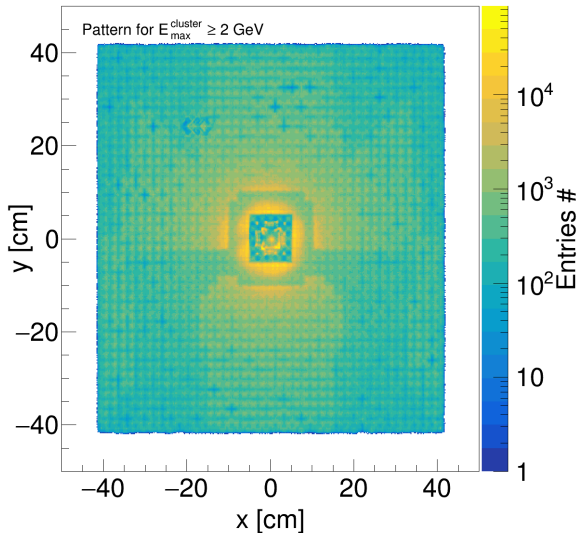
# ECAL pattern



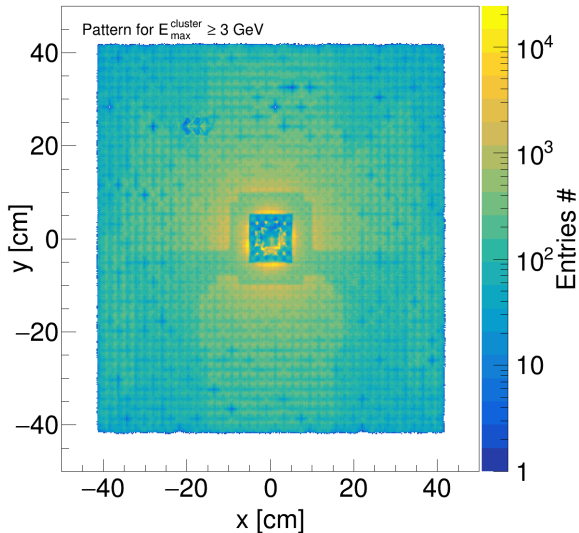
# ECAL pattern



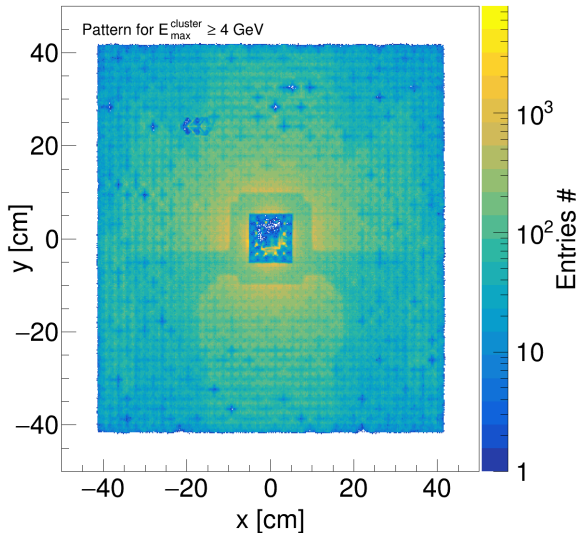
# ECAL pattern



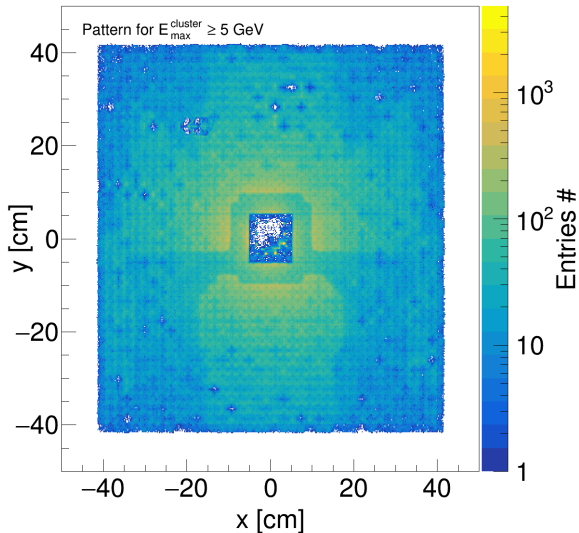
# ECAL pattern



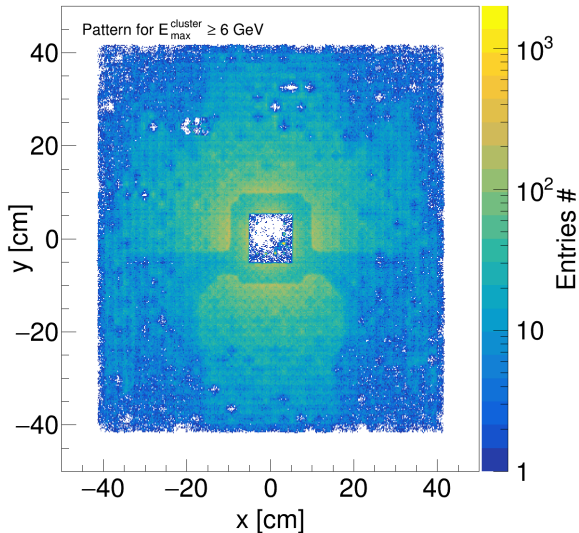
# ECAL pattern



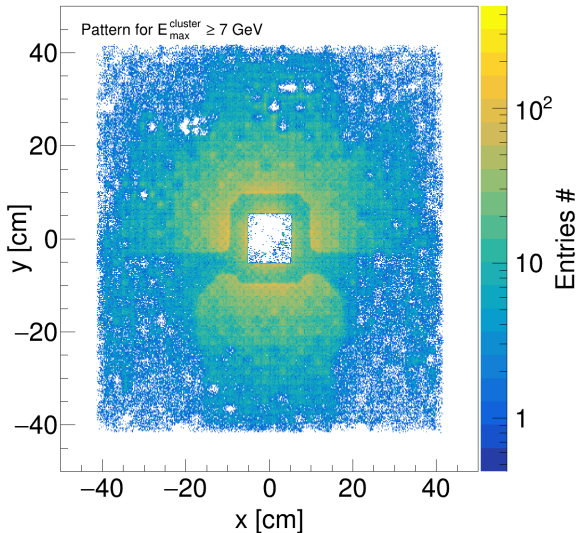
# ECAL pattern



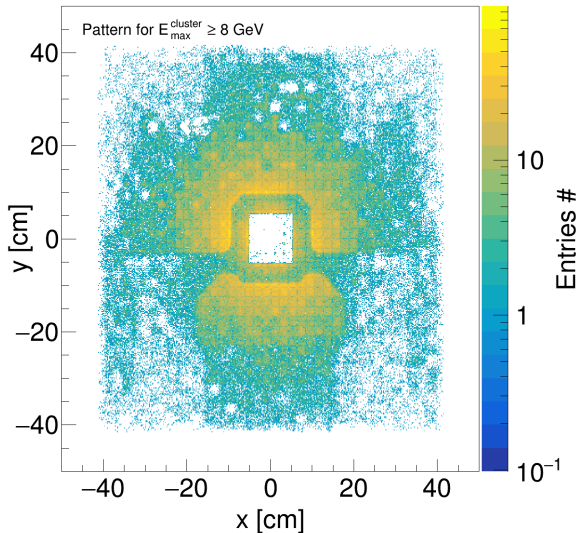
# ECAL pattern



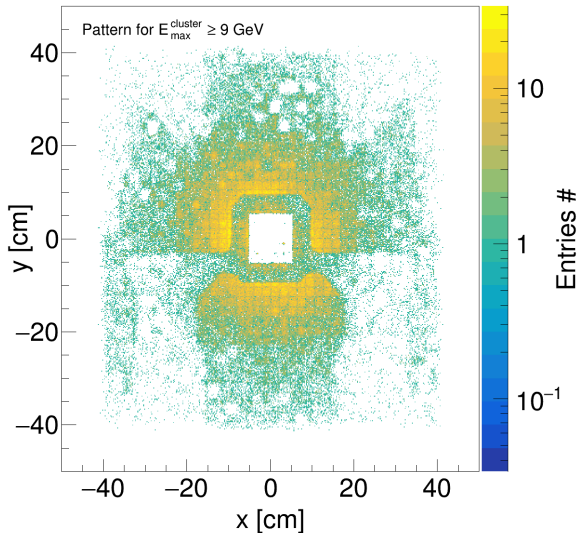
# ECAL pattern



# ECAL pattern



# ECAL pattern



# ECAL pattern

