

# FCAL energy calibration QC

Igal Jaeglé

Thomas Jefferson National Accelerator Facility

for the GlueX Collaboration

period20

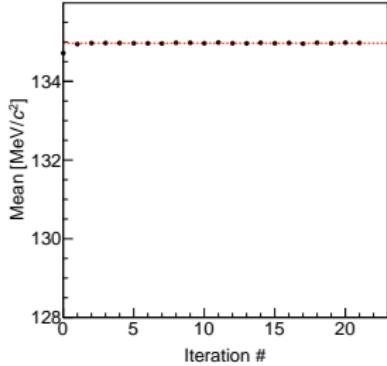


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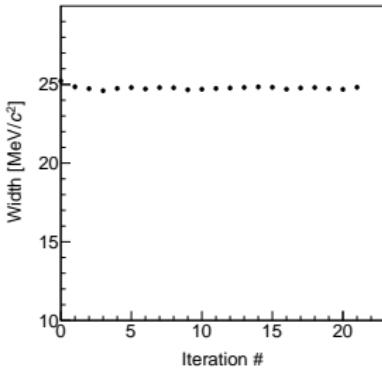
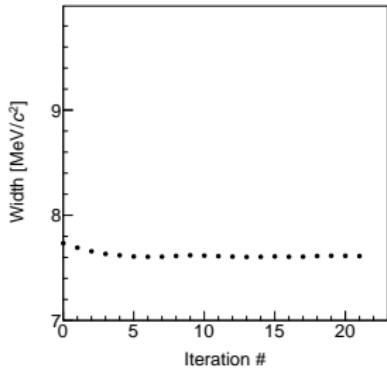
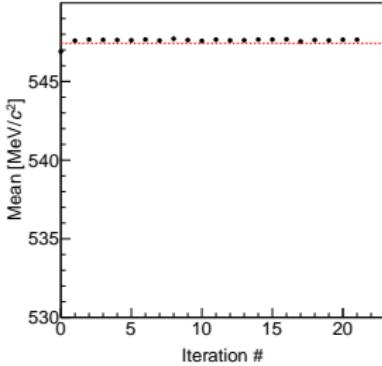
- 1 Overall QC
- 2 QC per rings

# Overall QC vs iteration

●  $\pi^0$

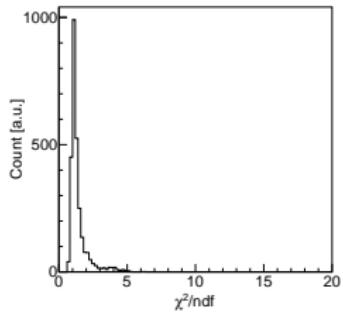


●  $\eta$

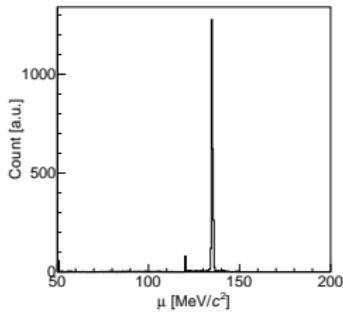


# Overall QC, summary distributions

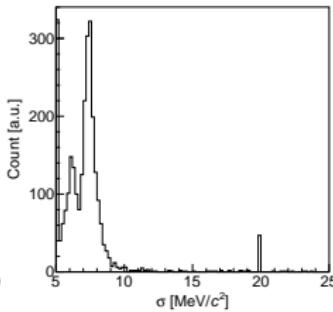
●  $\chi^2$  distribution



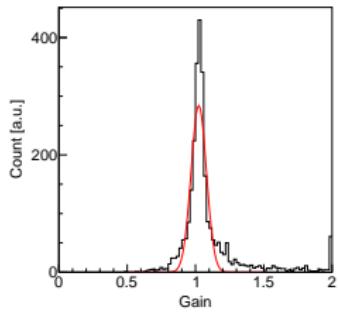
● Fitted peak distribution



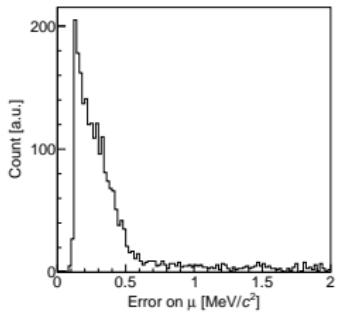
● Fitted width distribution



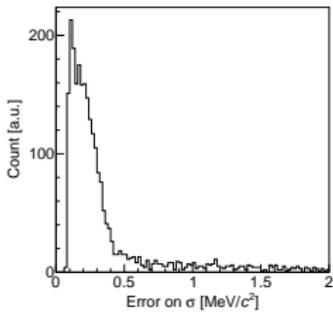
● Gain distribution



● Fitted peak error distribution

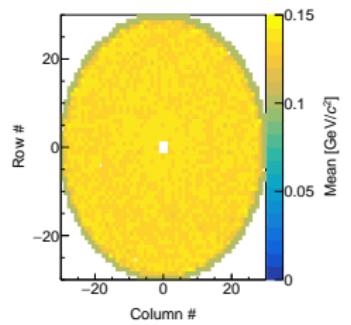


● Fitted width error distribution

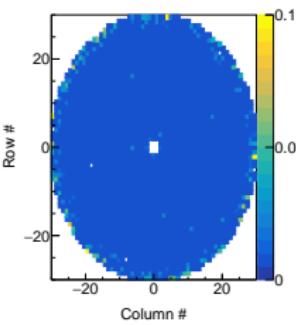


# Overall QC, summary maps

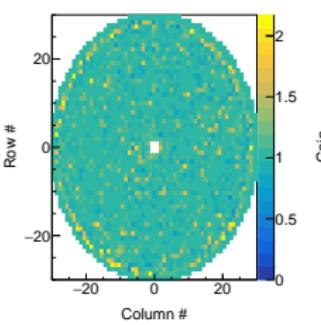
● Fitted peak map



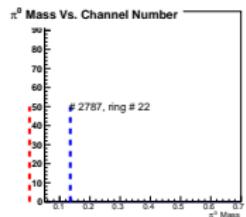
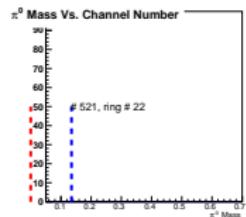
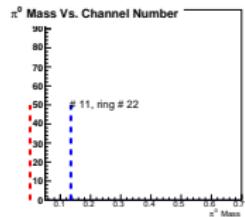
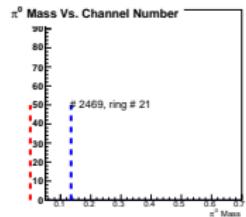
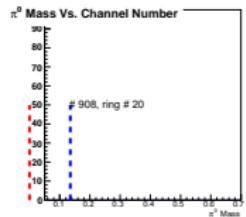
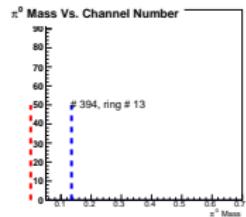
● Fitted width map



● Gain map



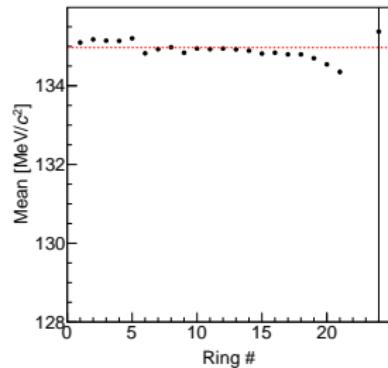
# Overall QC, bad channels



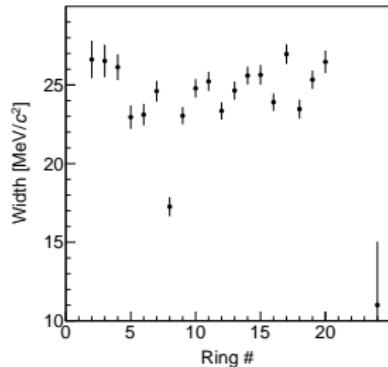
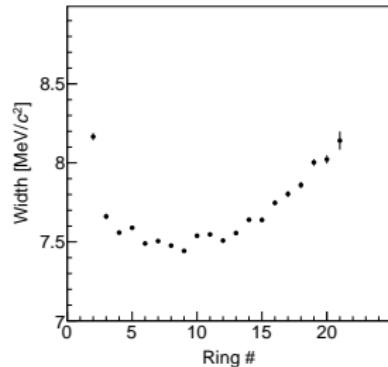
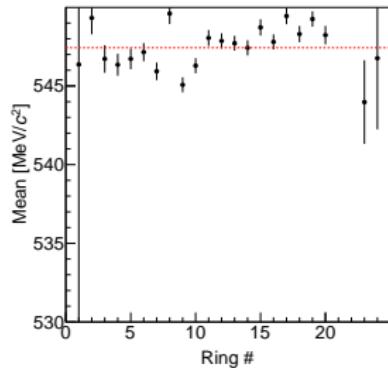
# QC per rings

If radius divided by 5 cm, there is 24 rings

●  $\pi^0$



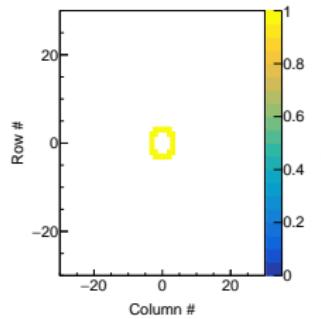
●  $\eta$



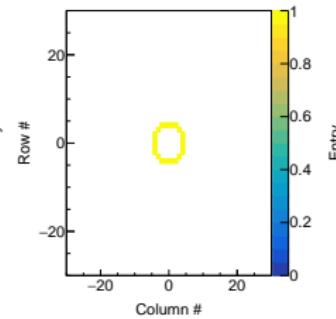
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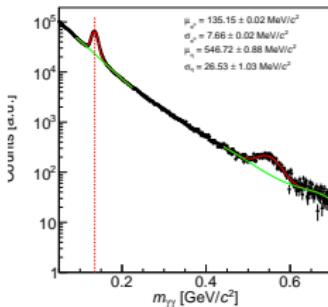
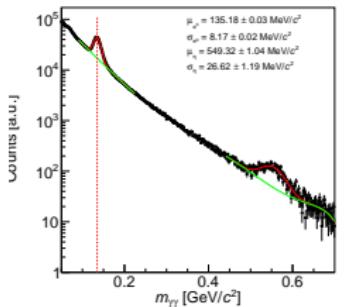
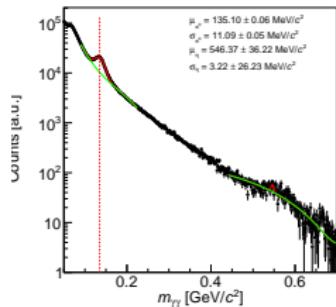
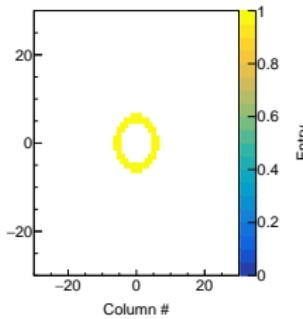
Ring 1



Ring 2



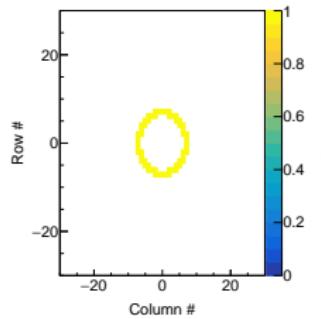
Ring 3



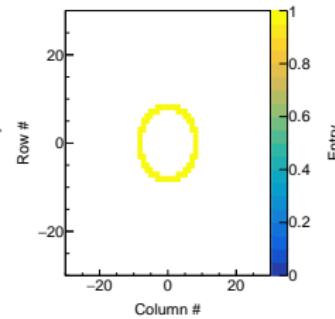
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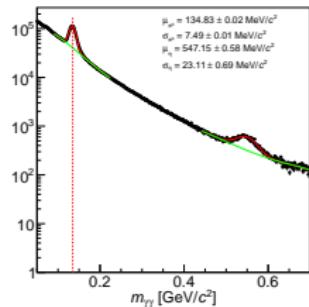
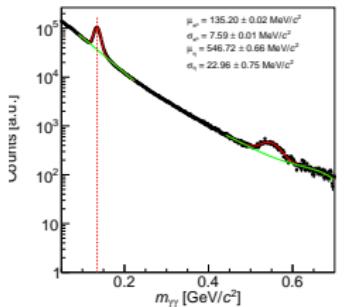
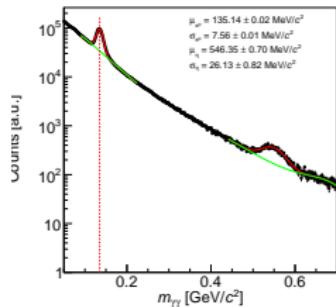
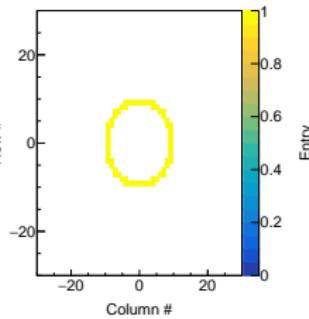
● Ring 4



● Ring 5



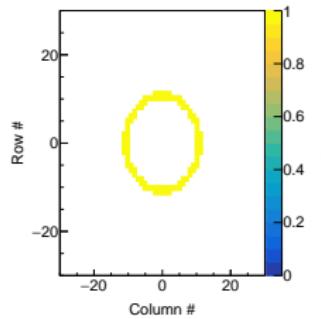
● Ring 6



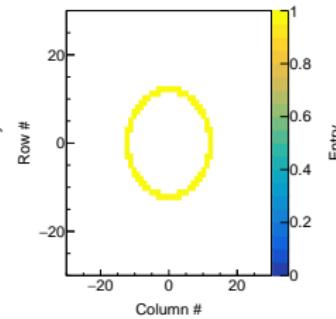
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If radius divided by 5 cm, there is 24 rings

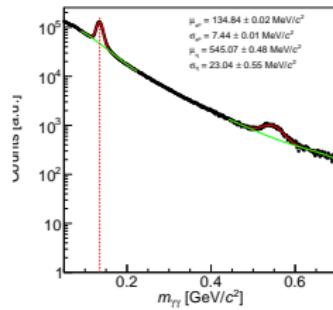
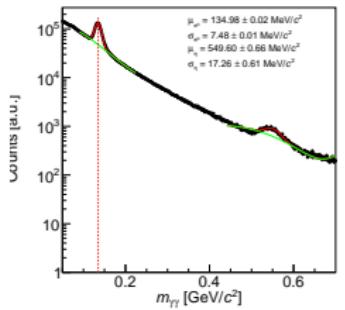
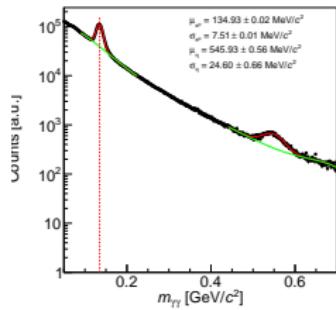
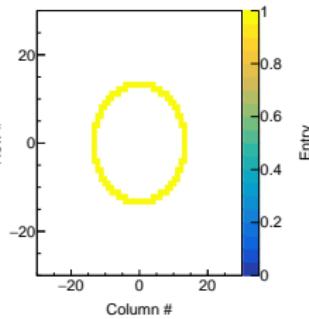
● Ring 7



● Ring 8



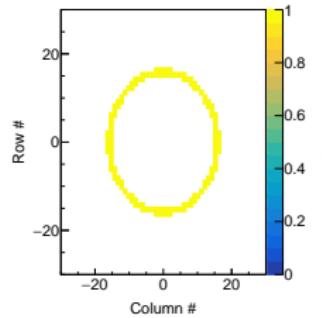
● Ring 9



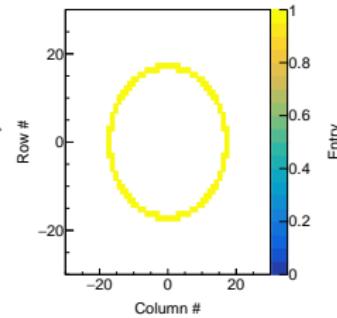
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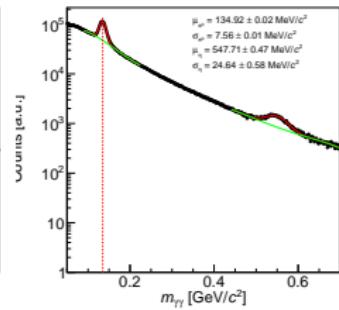
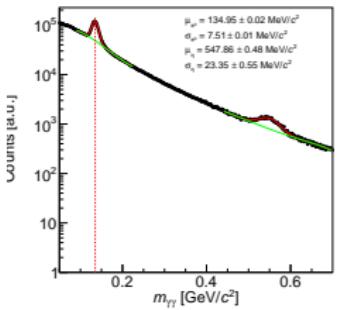
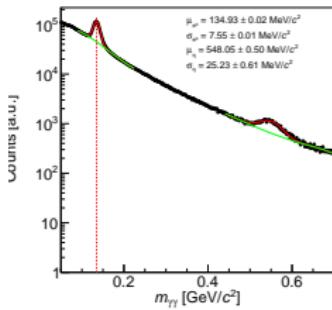
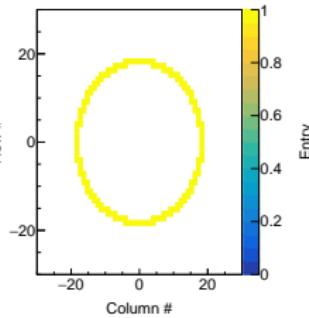
● Ring 11



● Ring 12



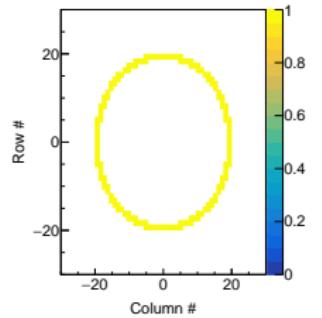
● Ring 13



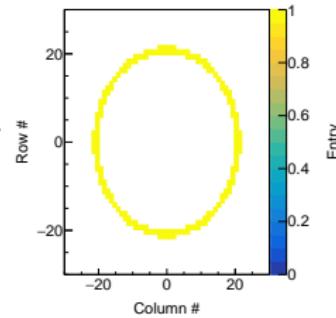
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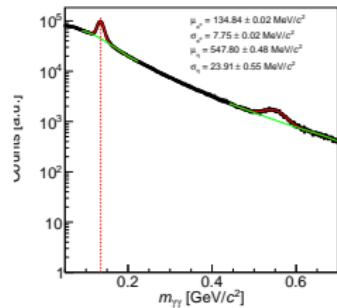
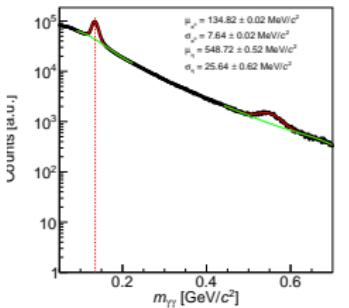
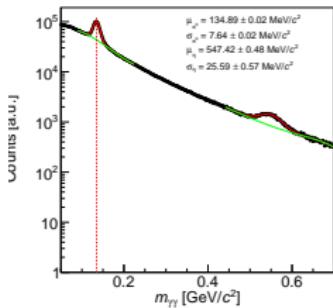
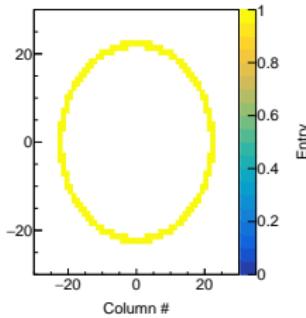
● Ring 14



● Ring 15



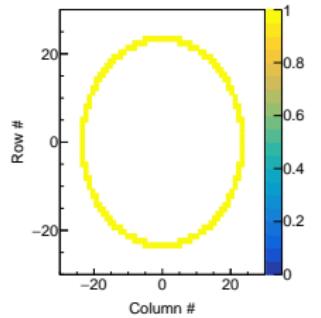
● Ring 16



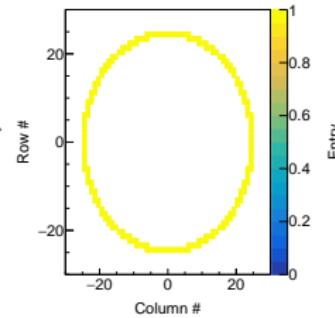
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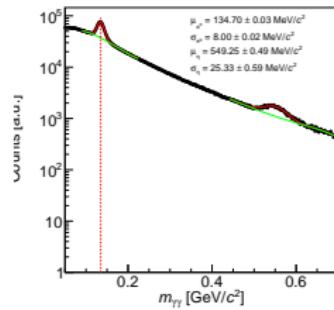
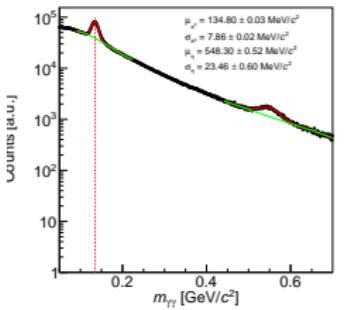
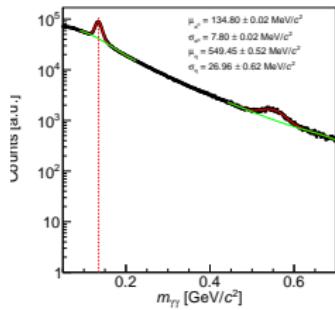
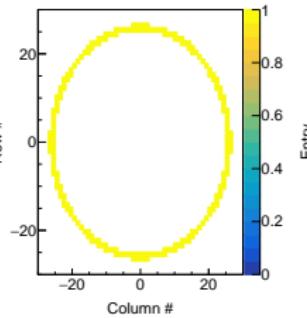
● Ring 17



● Ring 18



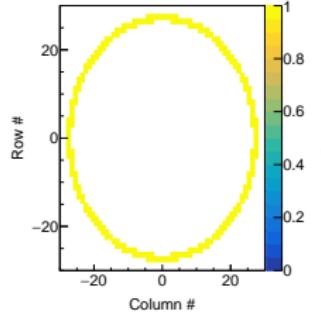
● Ring 19



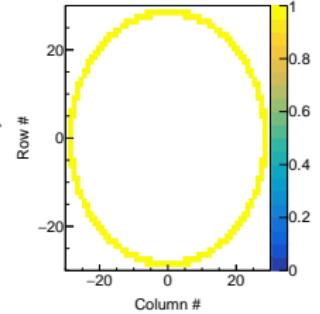
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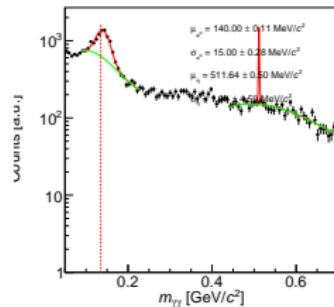
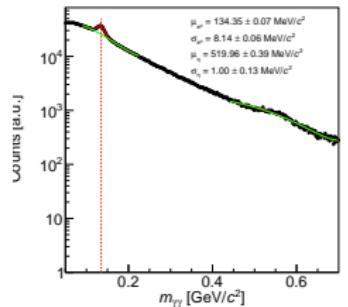
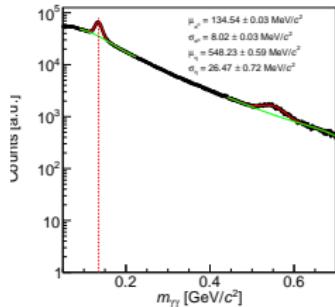
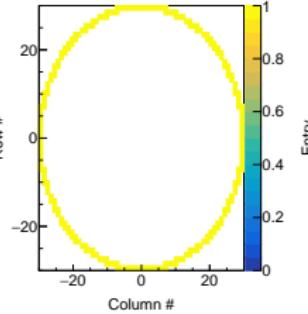
● Ring 20



● Ring 21



● Ring 22



# QC per rings

If radius divided by 5 cm, there is 24 rings

● Ring 23

