

FCAL energy calibration QC

Igal Jaeglé

Thomas Jefferson National Accelerator Facility

for the GlueX Collaboration

ed-period-1

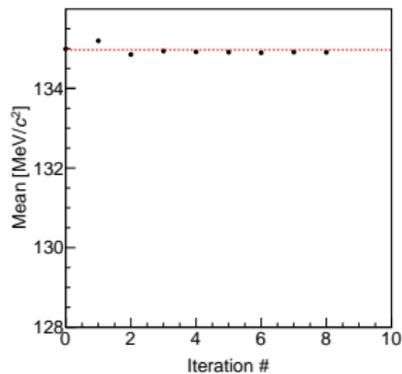


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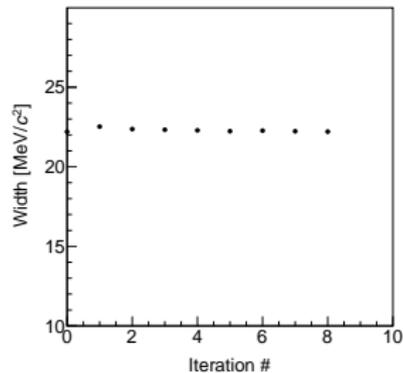
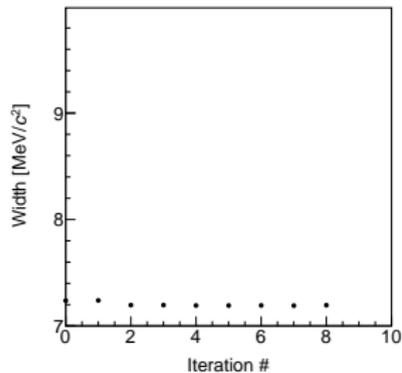
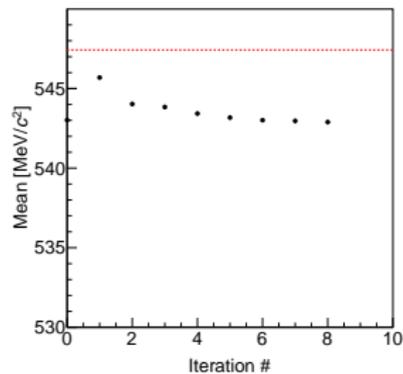
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Overall QC vs iteration

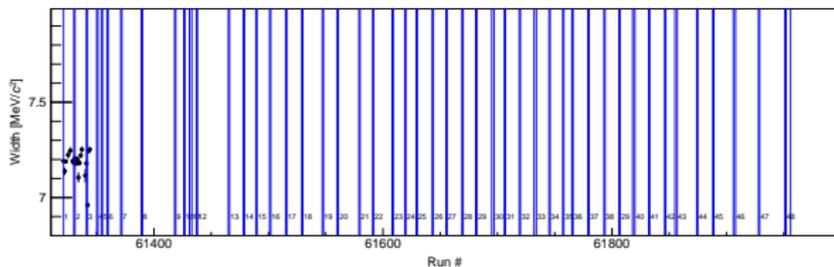
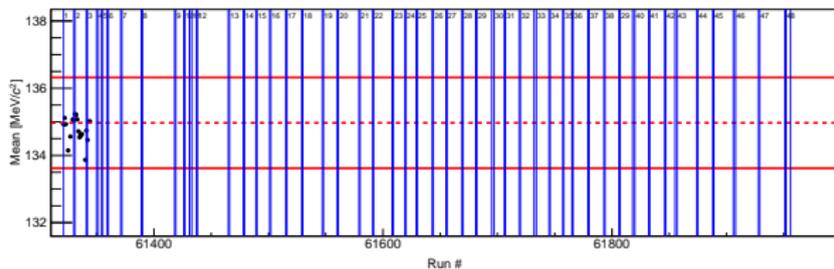
• π^0



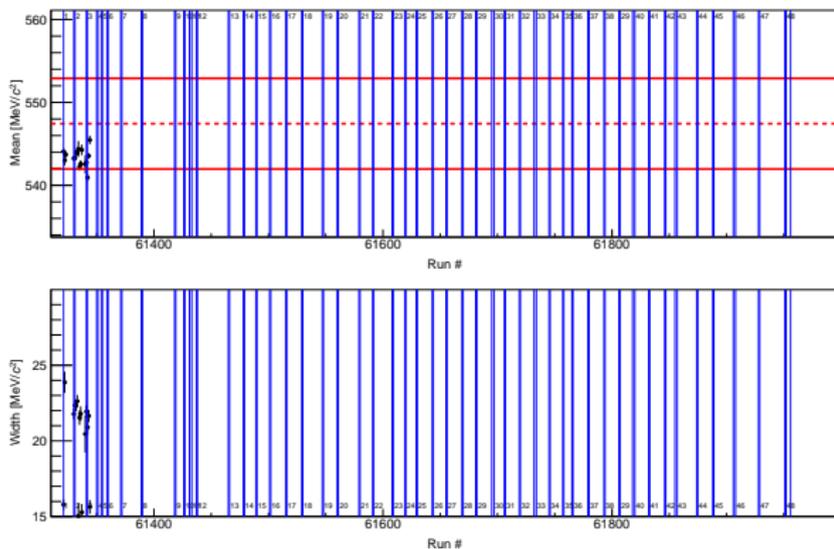
• η



QC vs run number



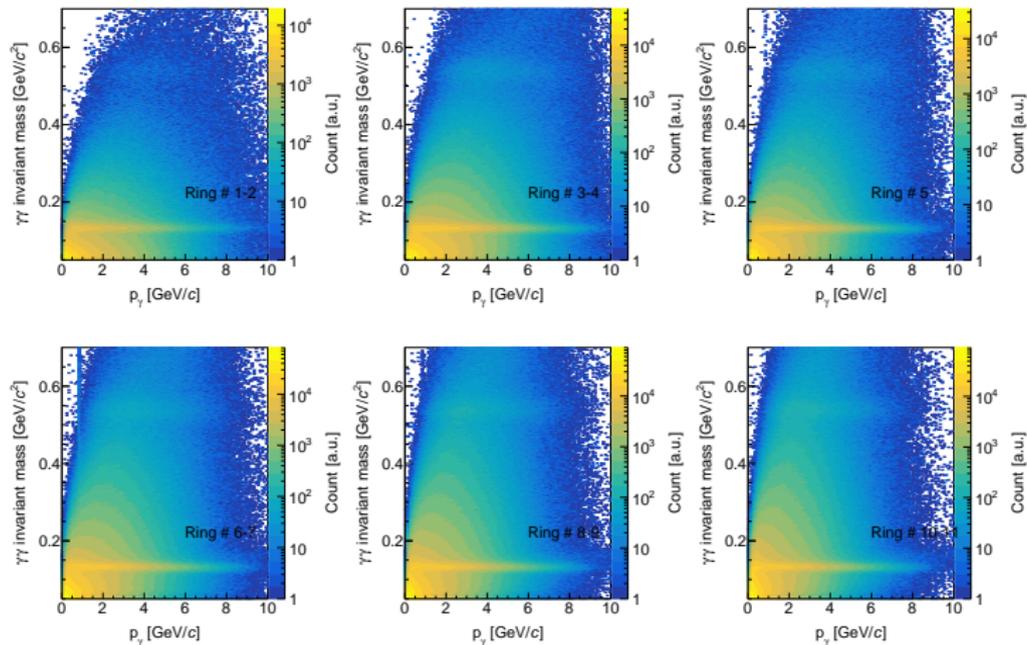
QC vs run number



vspace5cm

Energy dependence correction

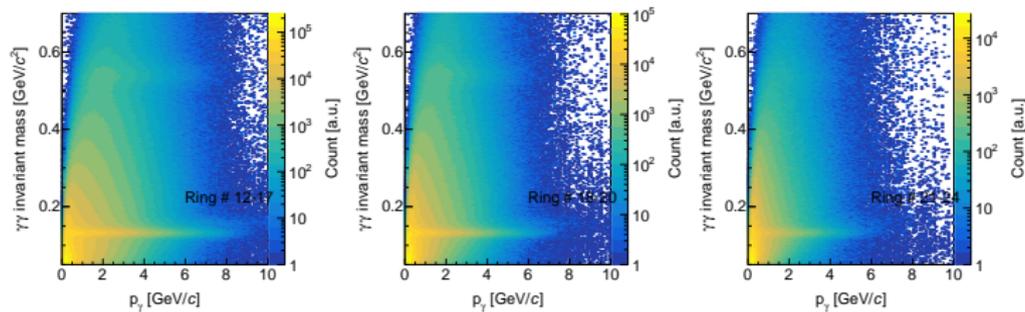
Di-photon invariant mass vs. photon momentum when $0.7 \leq p_{\gamma}^1/p_{\gamma}^2 \leq 1.3$



vspace5cm

Energy dependence correction

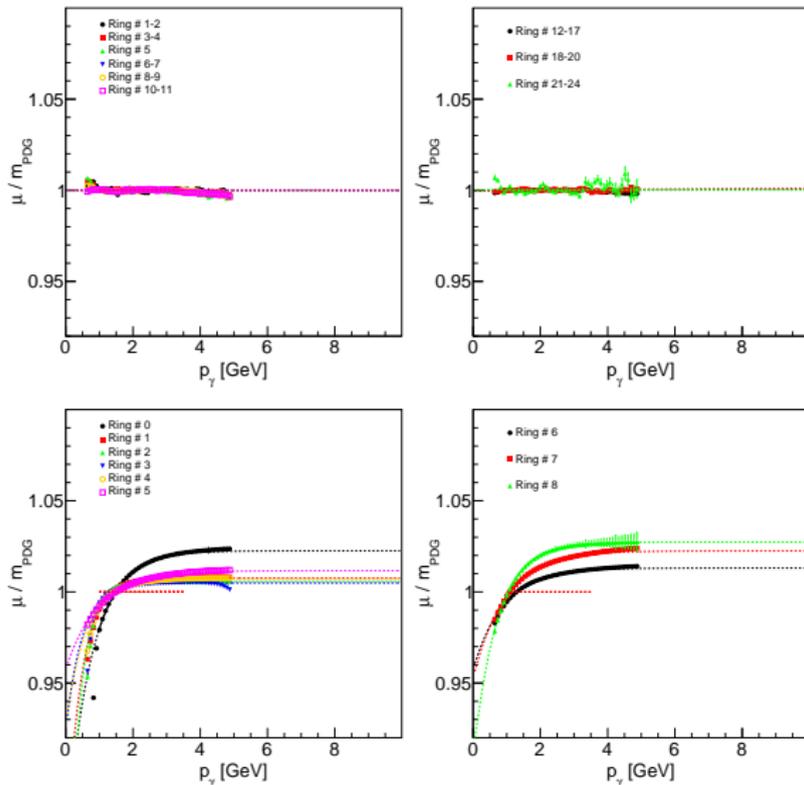
Di-photon invariant mass vs. photon momentum when $0.7 \leq p_{\gamma}^1/p_{\gamma}^2 \leq 1.3$



vspace5cm

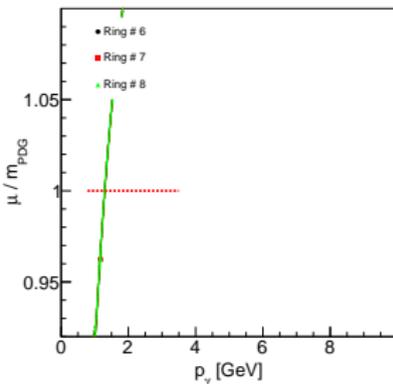
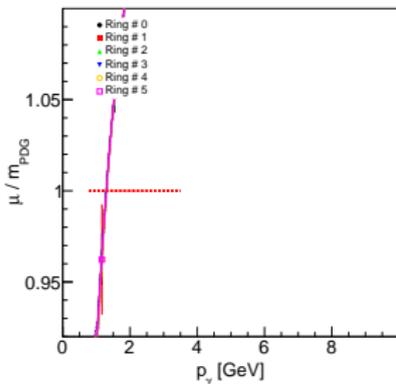
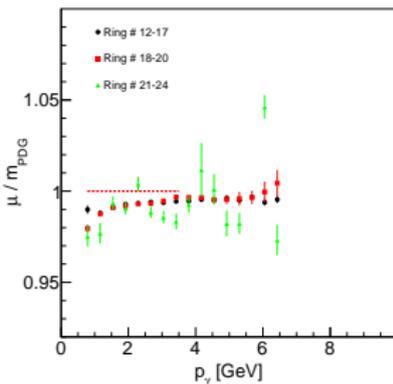
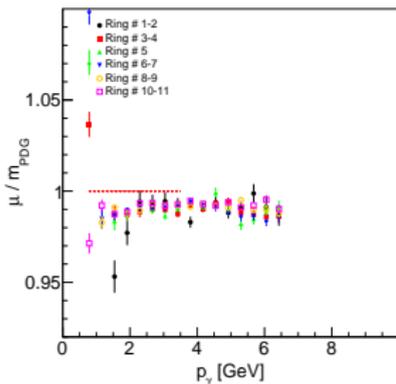
Energy dependence correction

Di-photon invariant mass vs. photon momentum when $0.7 \leq p_{\gamma 1}^1 / p_{\gamma 2}^2 \leq 1.3$



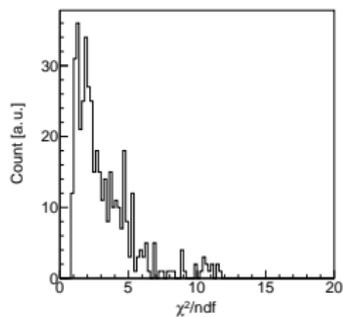
Energy dependence correction

Di-photon invariant mass vs. photon momentum when no selection criteria for η

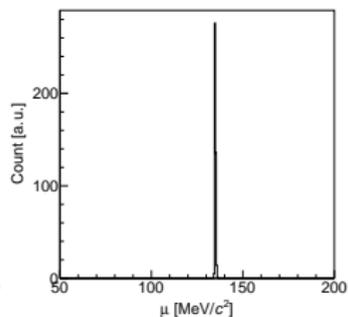


Overall QC, fit quality

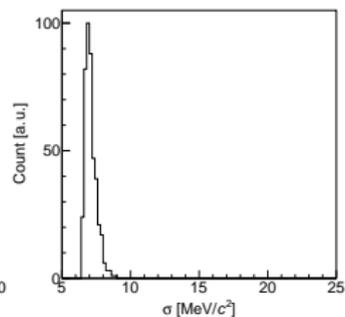
● χ^2 distribution



● Fitted peak distribution



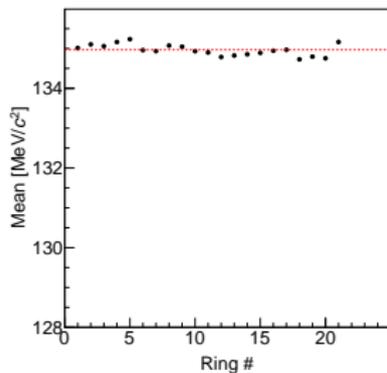
● Fitted width distribution



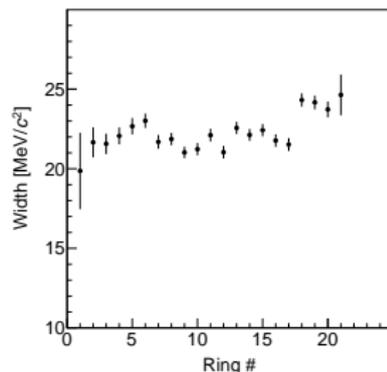
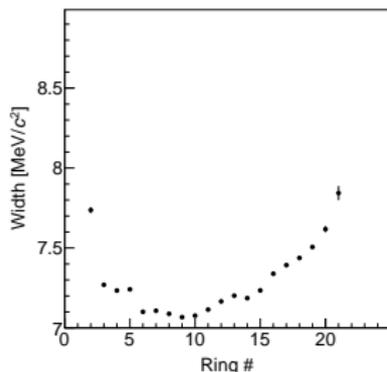
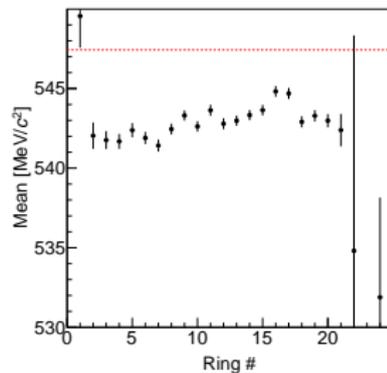
QC per rings

If radius divided by 5 cm, there is 24 rings

● π^0



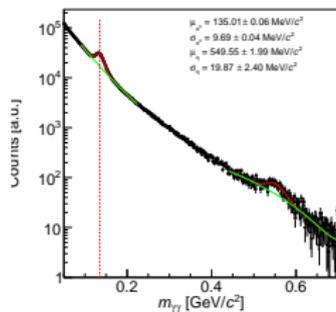
● η



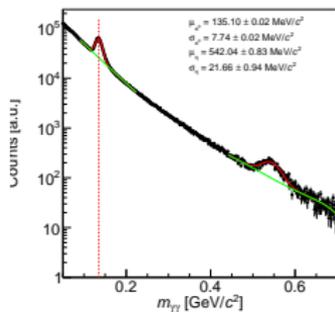
QC per rings

If radius divided by 5 cm, there is 24 rings

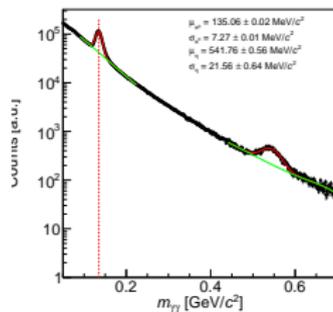
● Ring 1



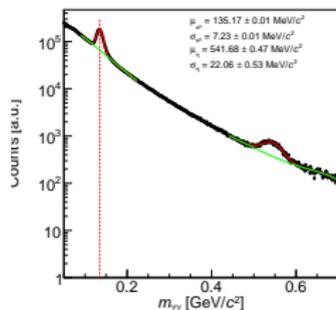
● Ring 2



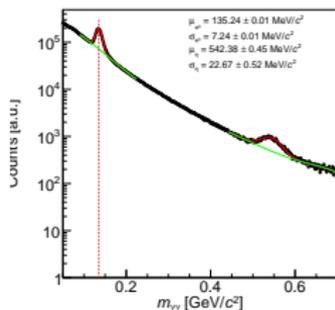
● Ring 3



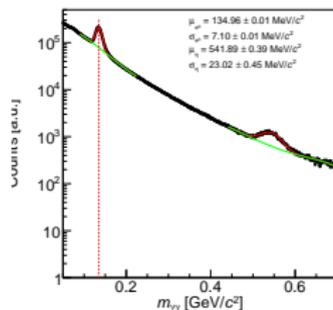
● Ring 4



● Ring 5



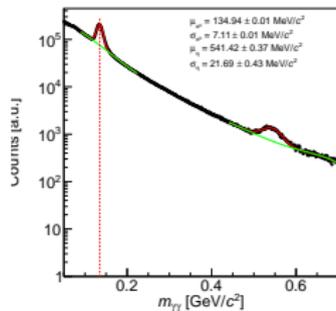
● Ring 6



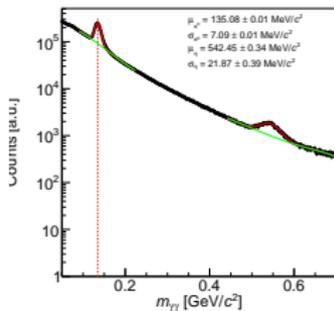
QC per rings

If radius divided by 5 cm, there is 24 rings

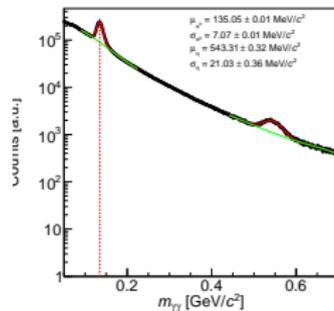
● Ring 7



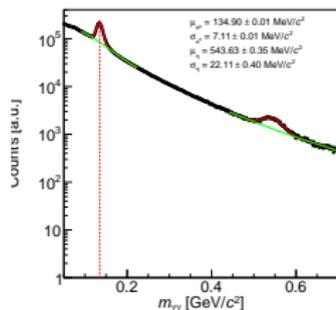
● Ring 8



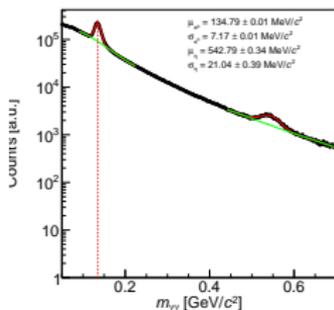
● Ring 9



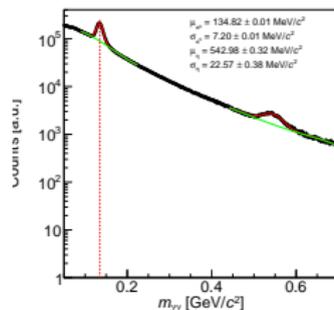
● Ring 11



● Ring 12



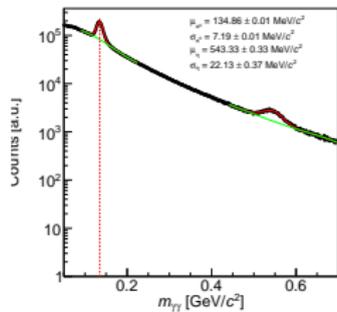
● Ring 13



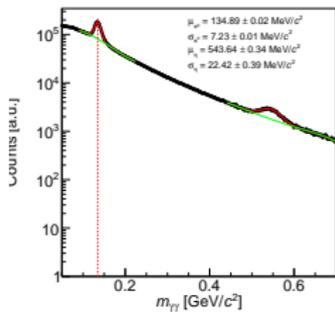
QC per rings

If radius divided by 5 cm, there is 24 rings

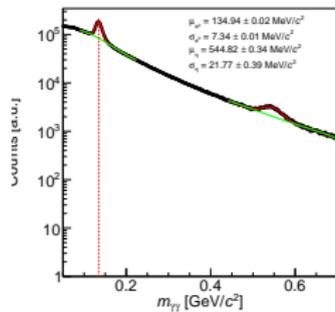
● Ring 14



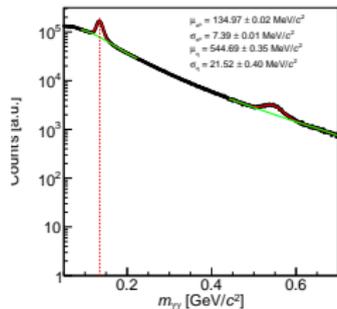
● Ring 15



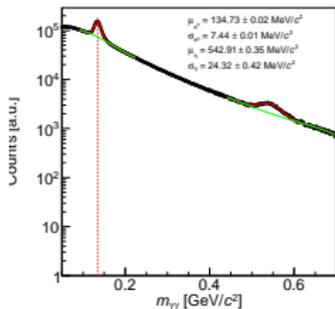
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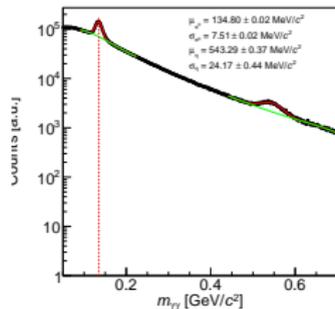
● Ring 17



● Ring 18



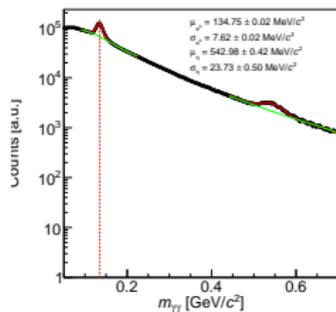
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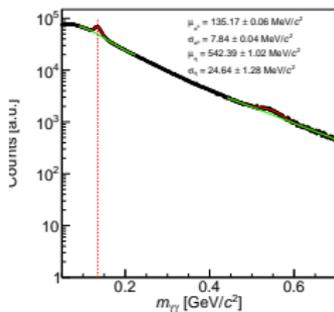
QC per rings

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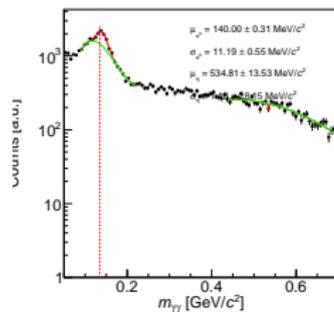
● Ring 20



● Ring 21



● Ring 22



● Ring 23

