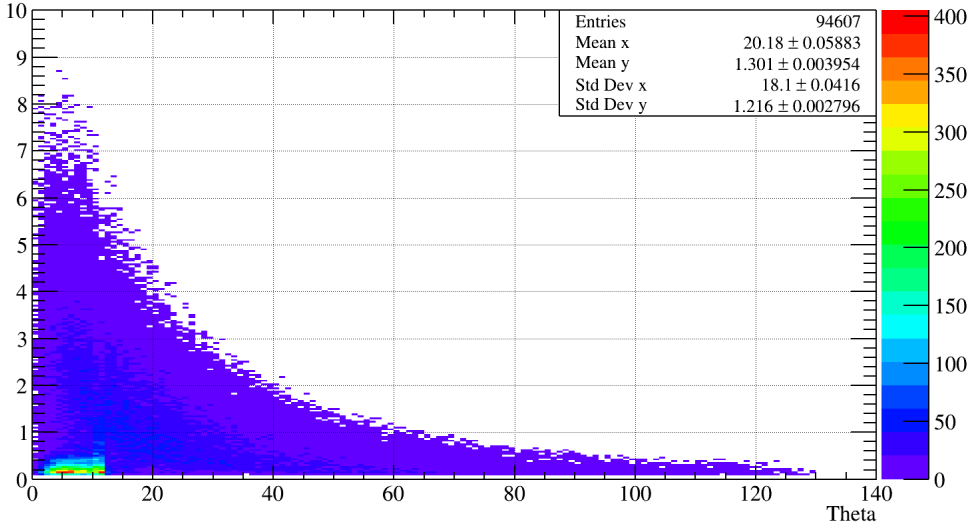
Secondary Study

Discussion:

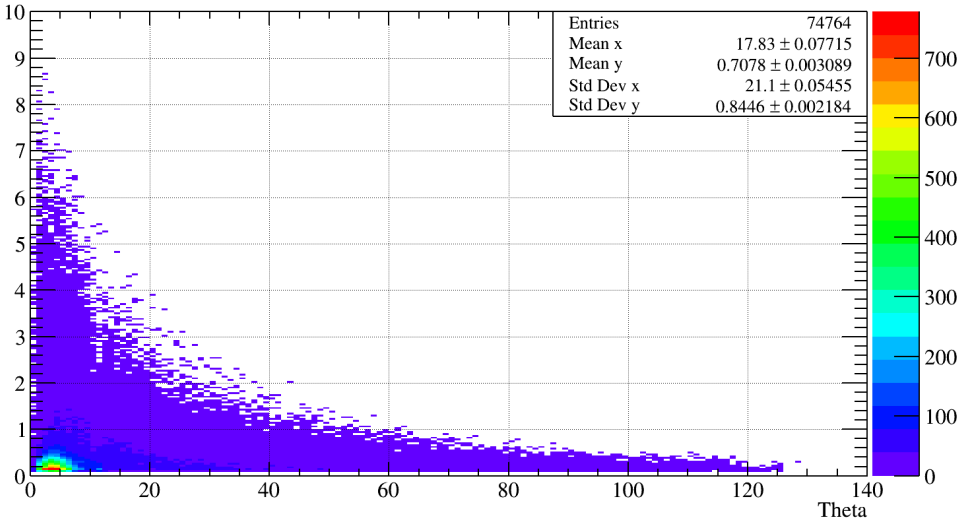
- After yesterdays meeting, we decided to perform a simple study with MC/bggen to see what the distributions of secondary photons look like compared to thrown photons.
- We also decided to look at how many thrown events we would lose by just doing a 2 photon cut and nothing else
- This study will perform both tasks mentioned above and also see the effect from this study on data

P Vs Theta; All Photons

Accepted Monte Carlo



bggen



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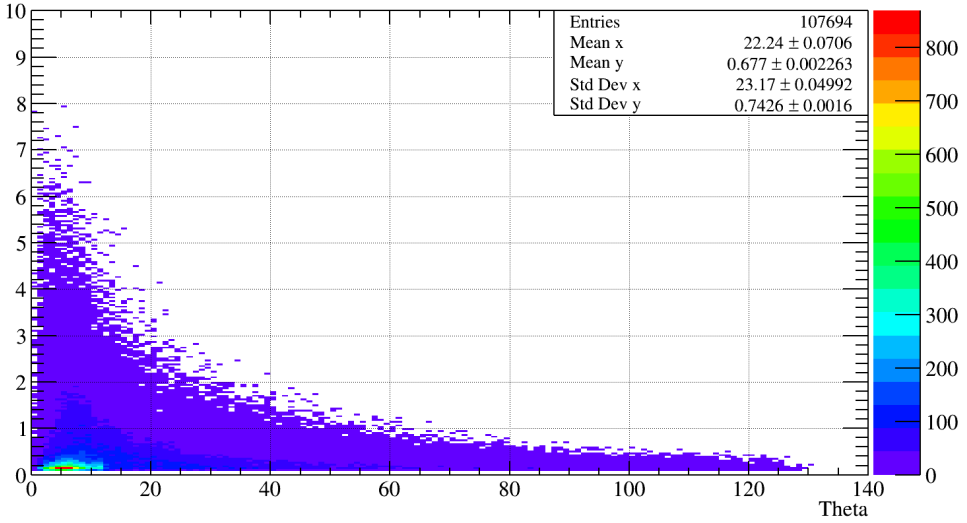
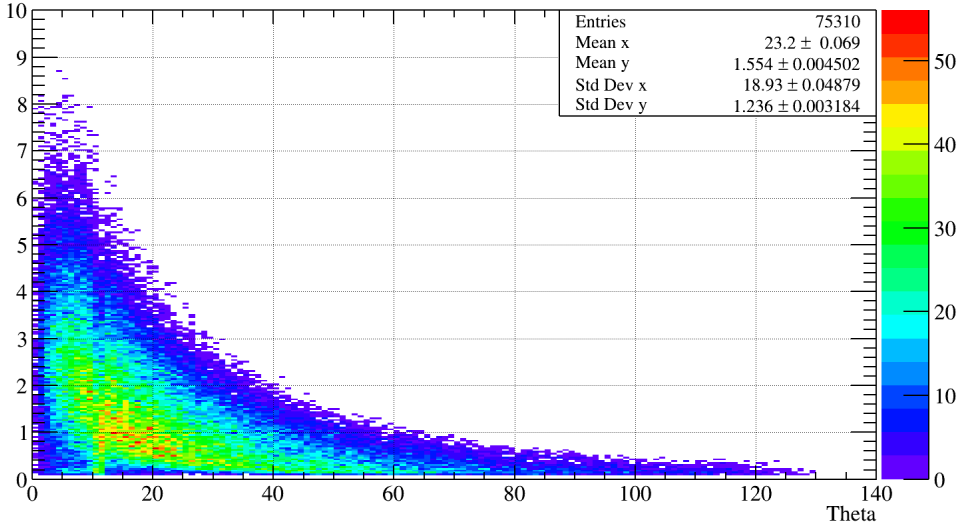
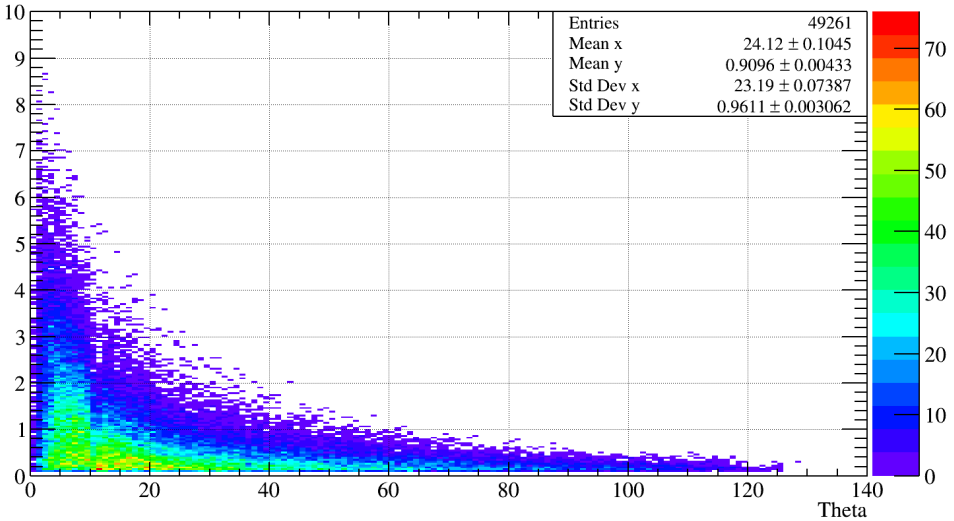


P Vs Theta; Thrown Photons

Accepted Monte Carlo



bggen



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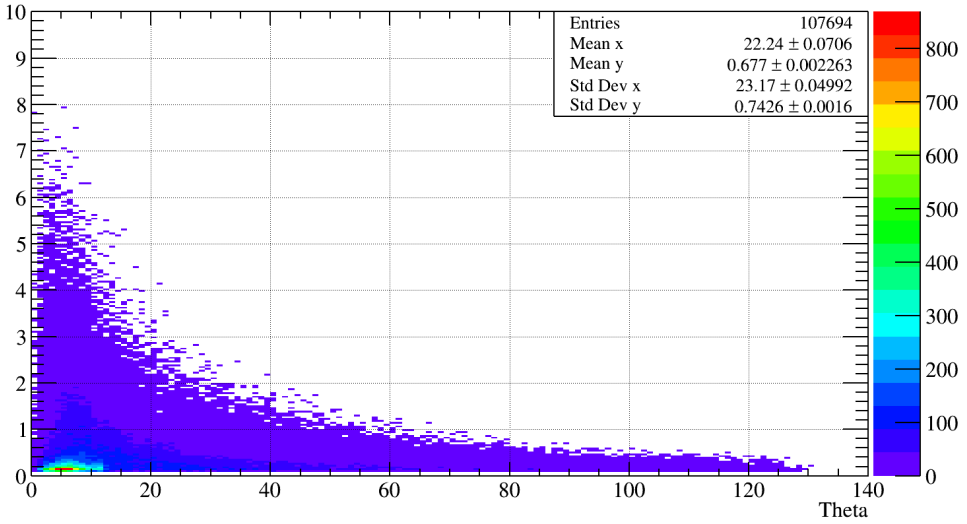
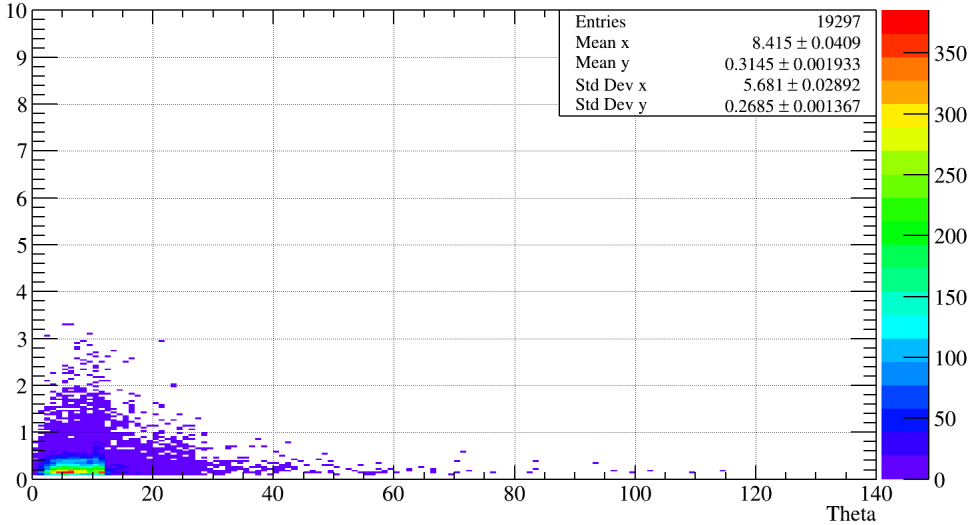


P Vs Theta; Secondary Photons

Accepted Monte Carlo



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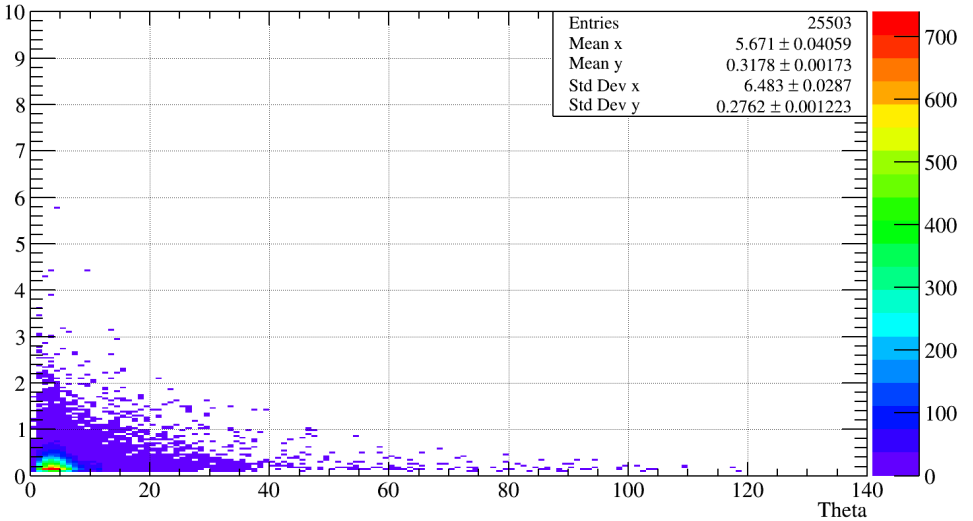

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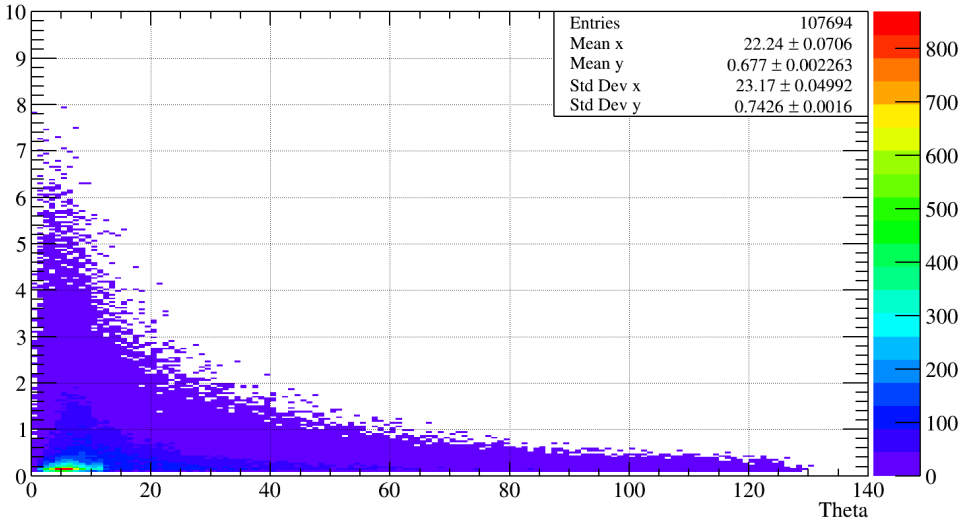
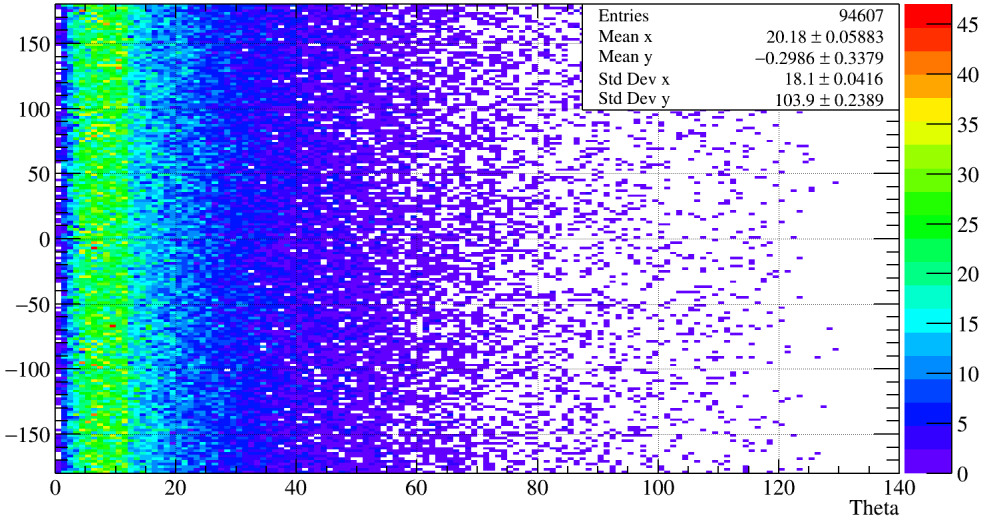
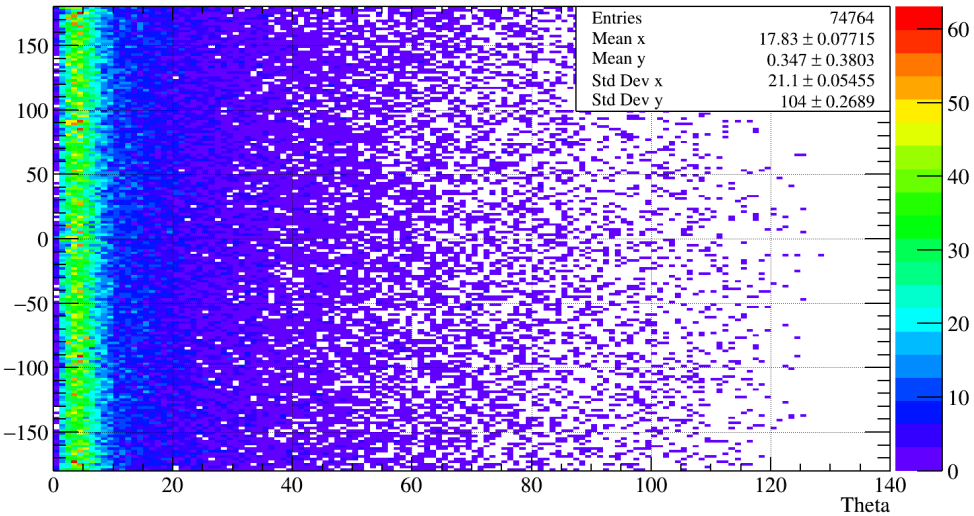


Phi Vs Theta; All Photons

Accepted Monte Carlo



bggen



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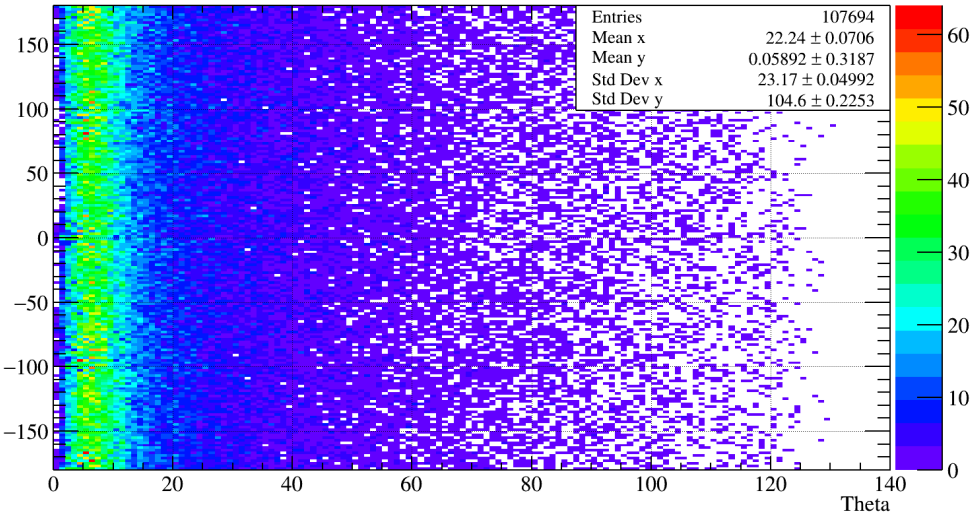
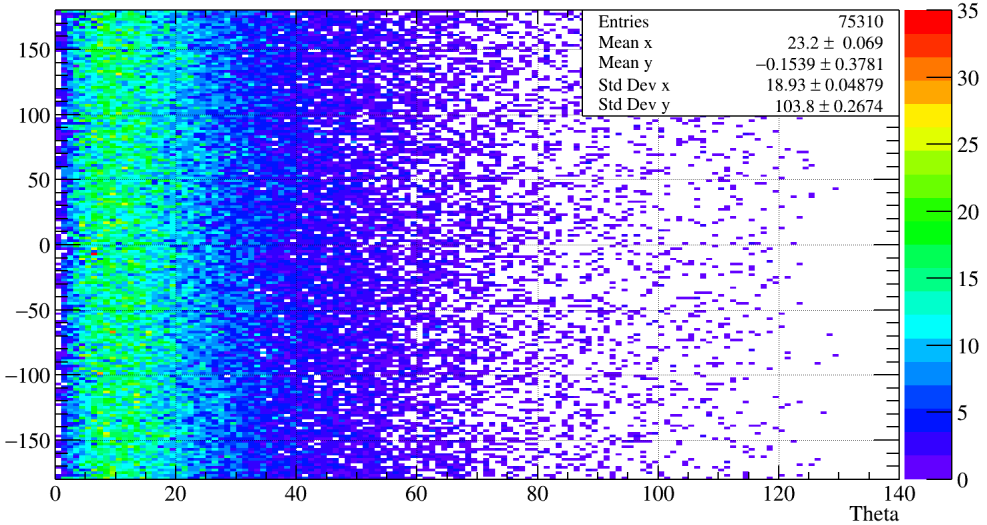


Phi Vs Theta; Thrown Photons

Accepted Monte Carlo



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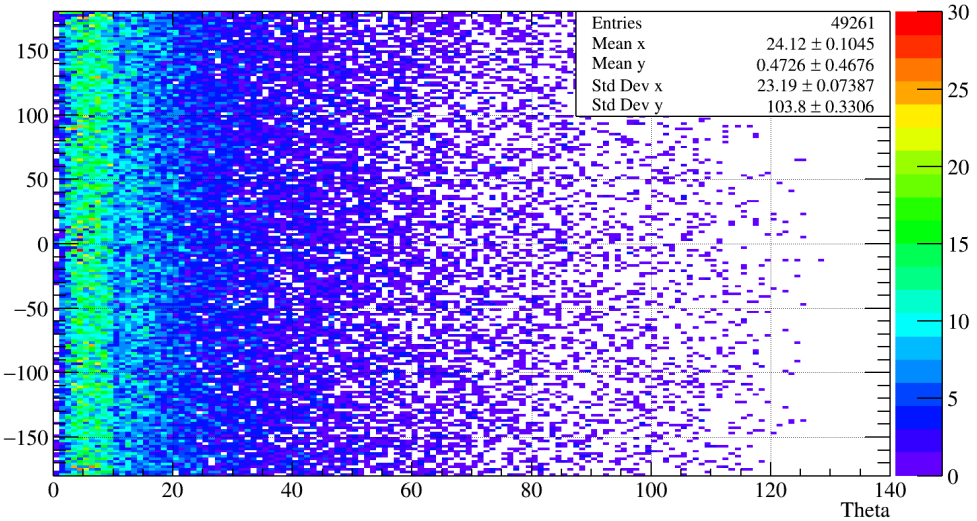

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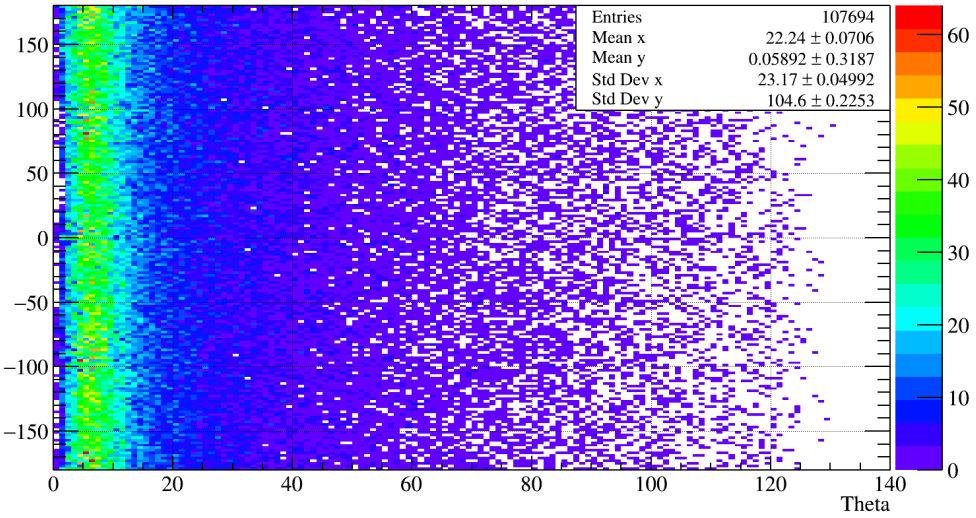
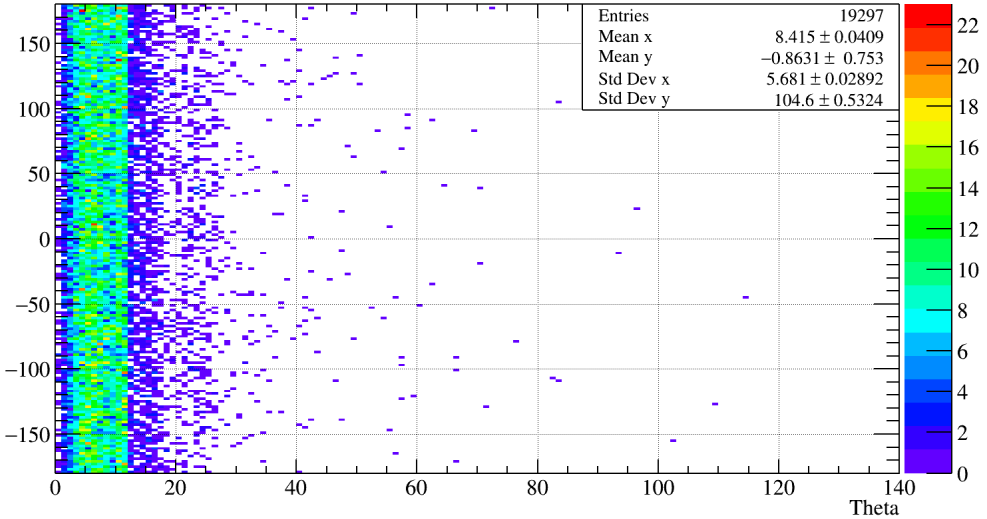


Phi Vs Theta; Secondary Photons

Accepted Monte Carlo



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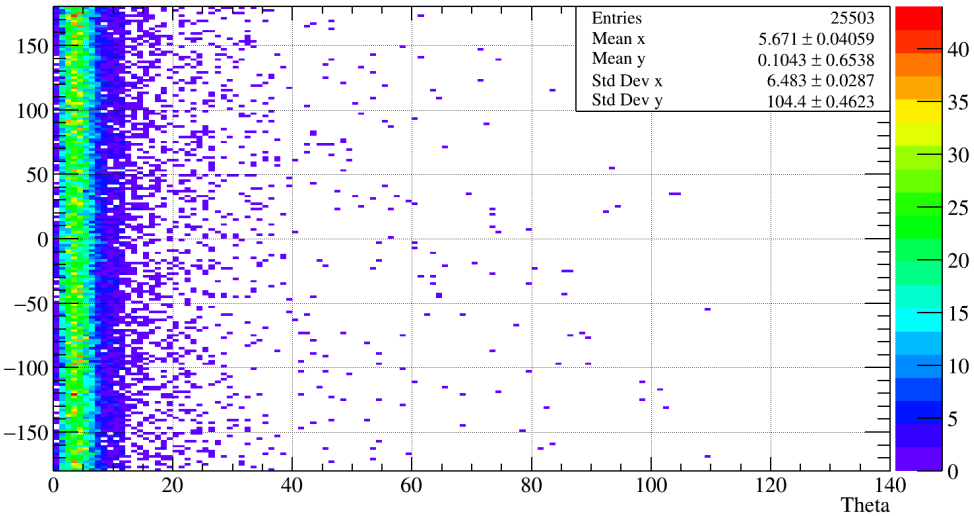

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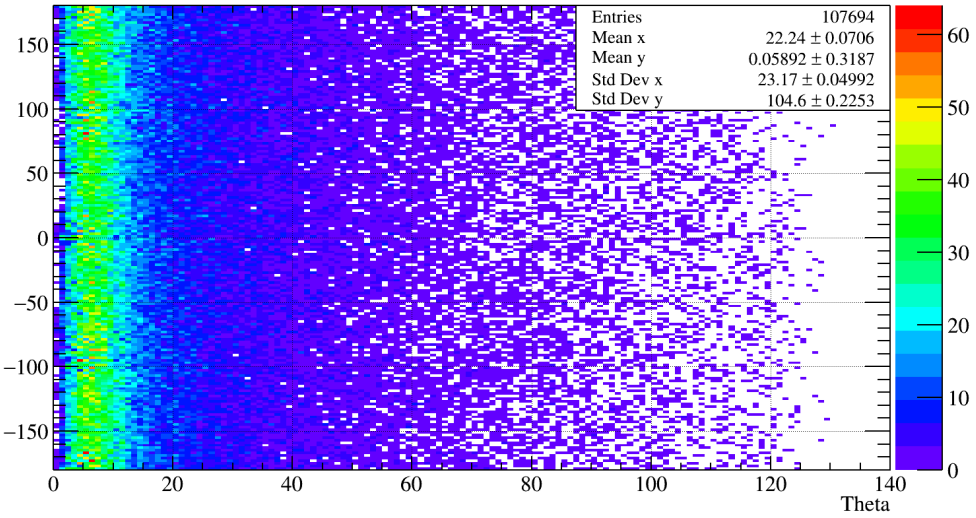
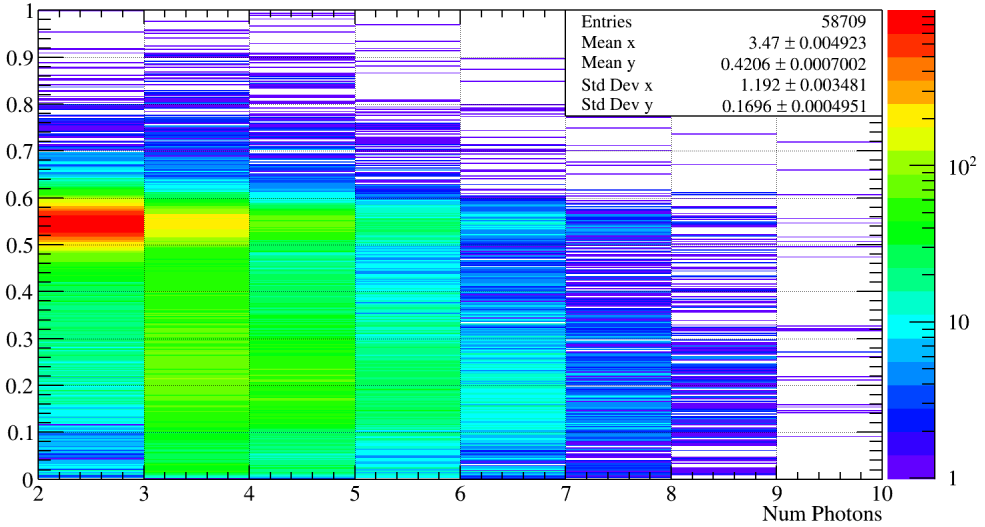


g1g2 Mass Vs Number of Photons in Event; All Photons

Accepted Monte Carlo



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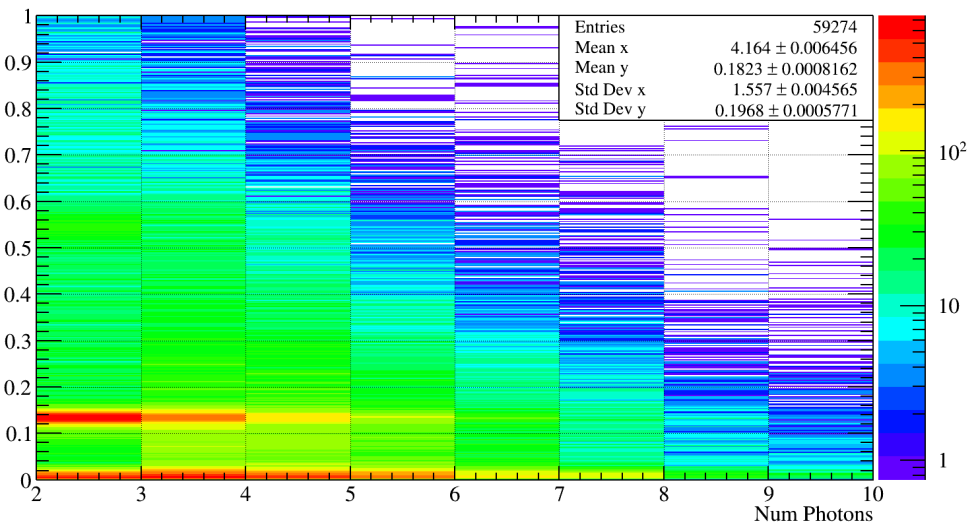

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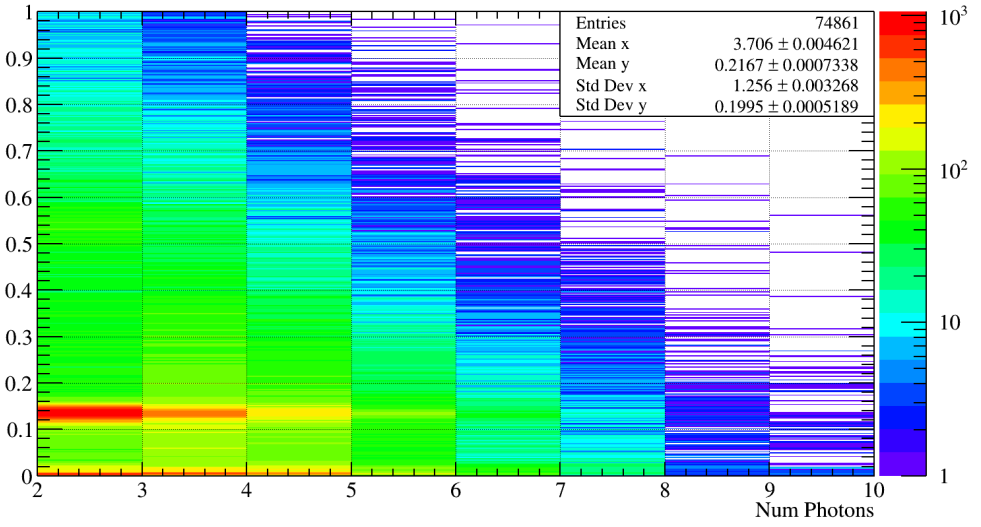
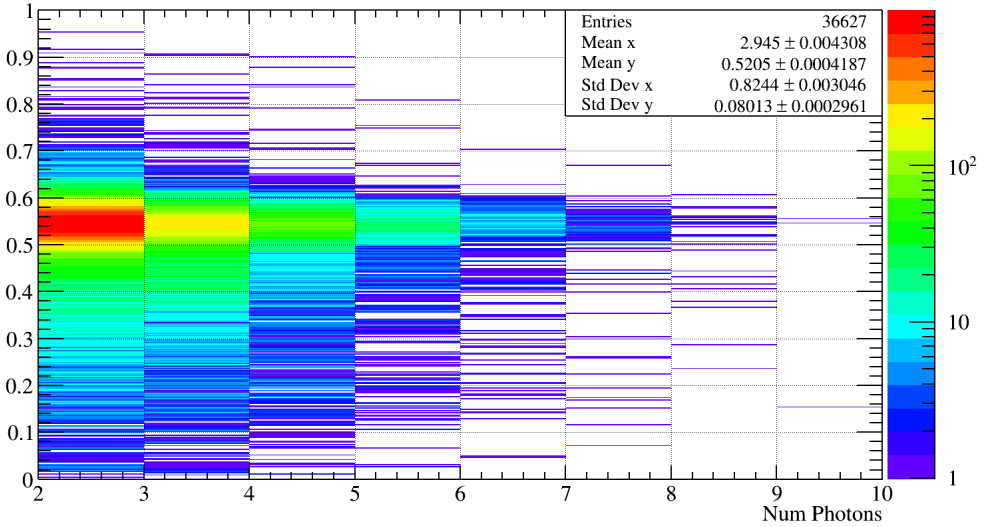


g1g2 Mass Vs Number of Photons in Event; Thrown Photons

Accepted Monte Carlo



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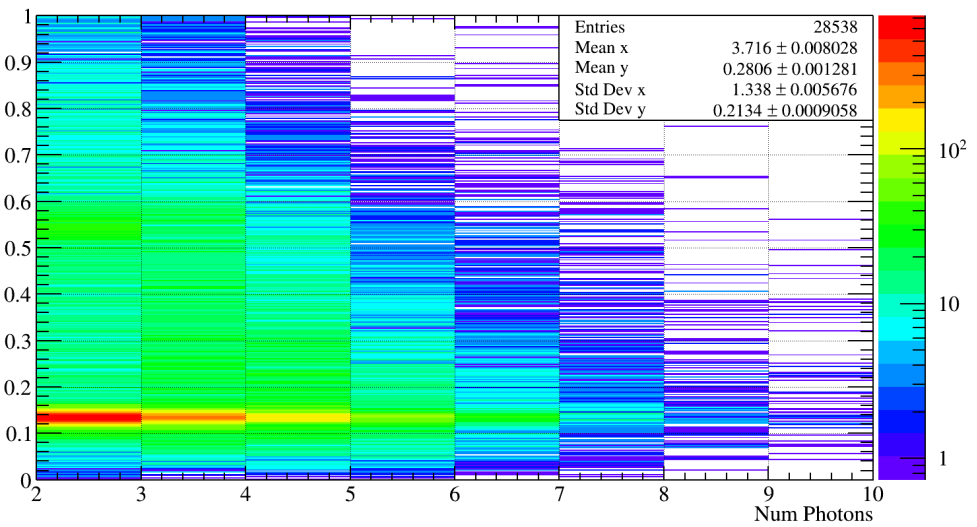

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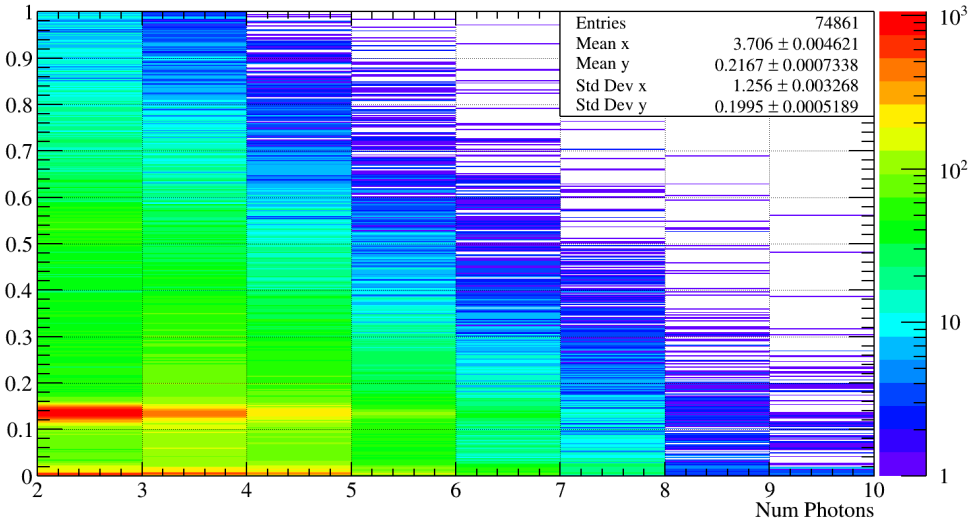
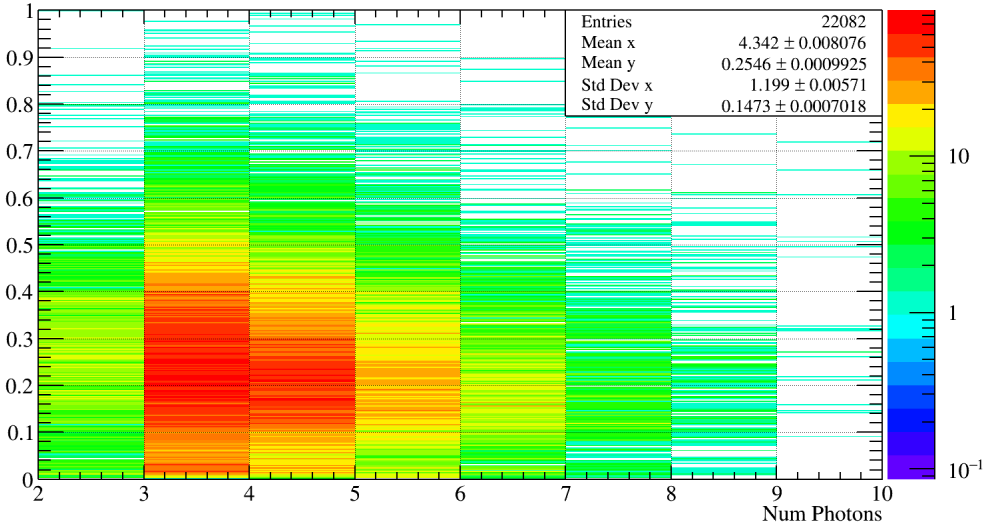


g1g2 Mass Vs Number of Photons in Event; Secondary Photons

Accepted Monte Carlo



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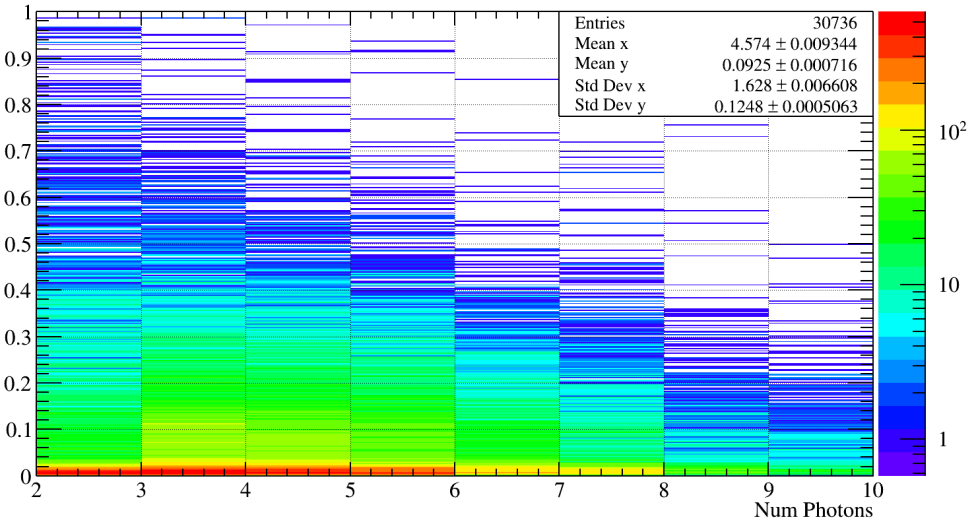

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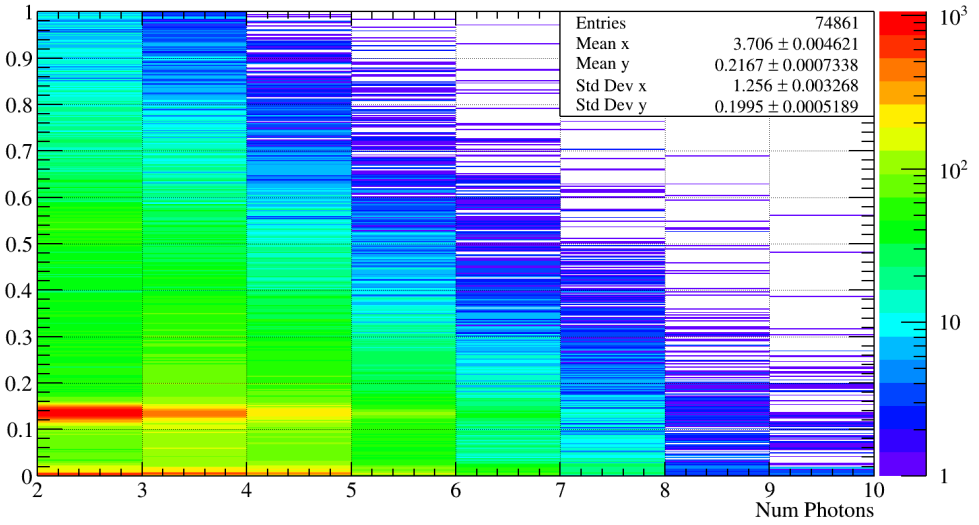
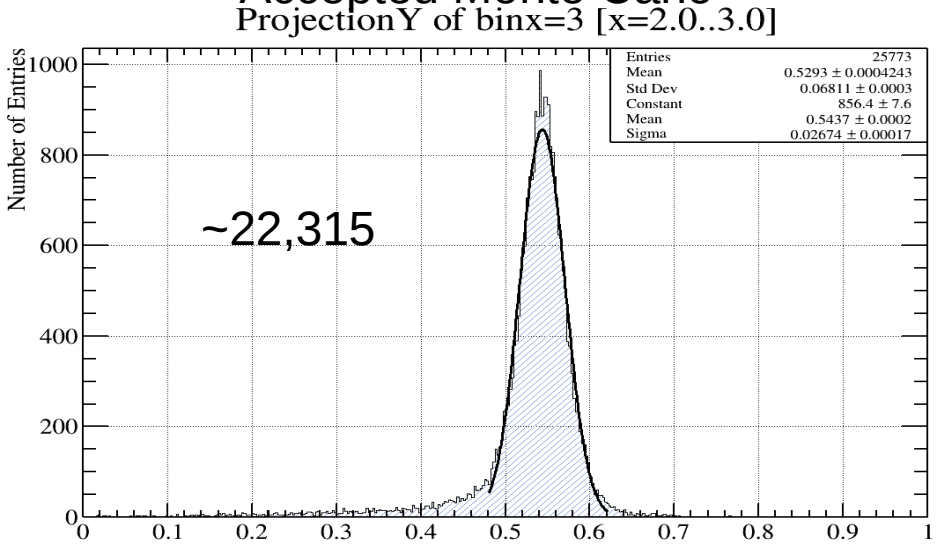


g1g2 Mass with 2 Photons in Event; Thrown Photons

Accepted Monte Carlo



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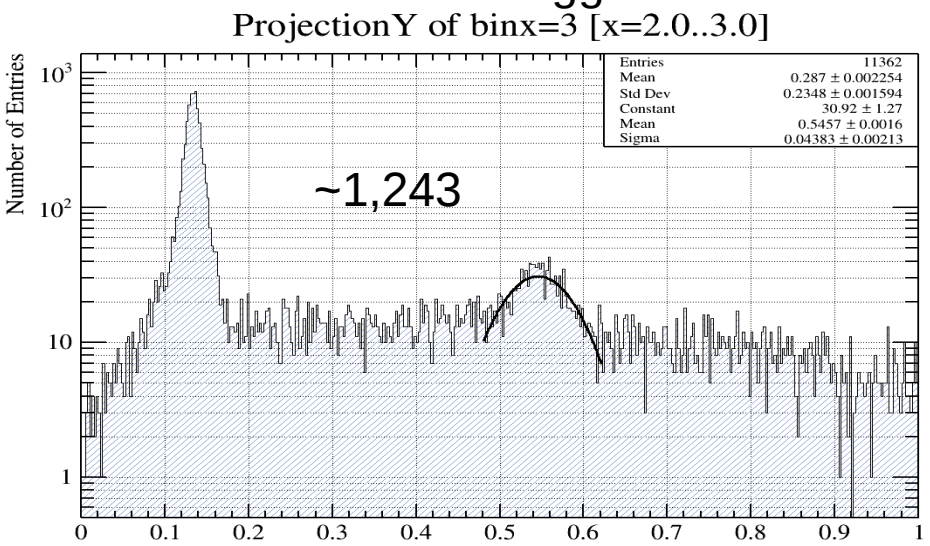

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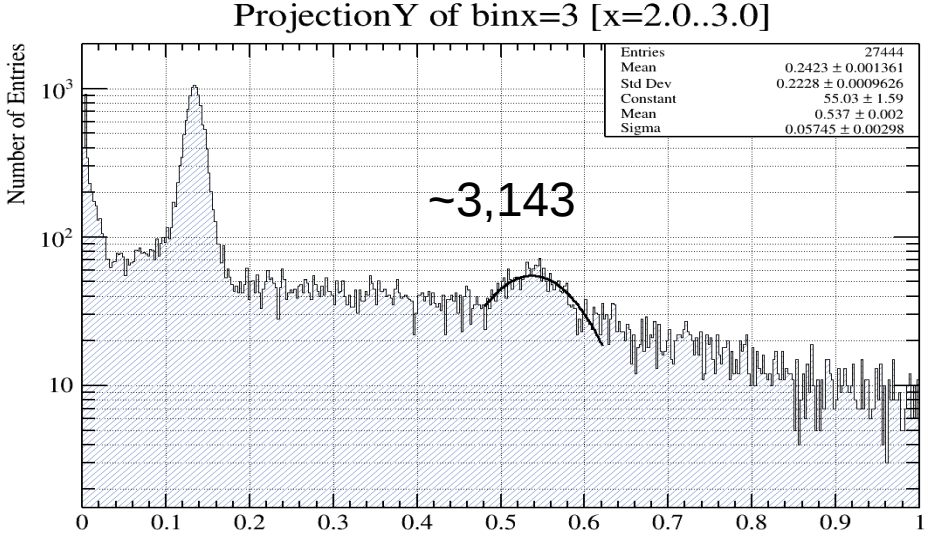
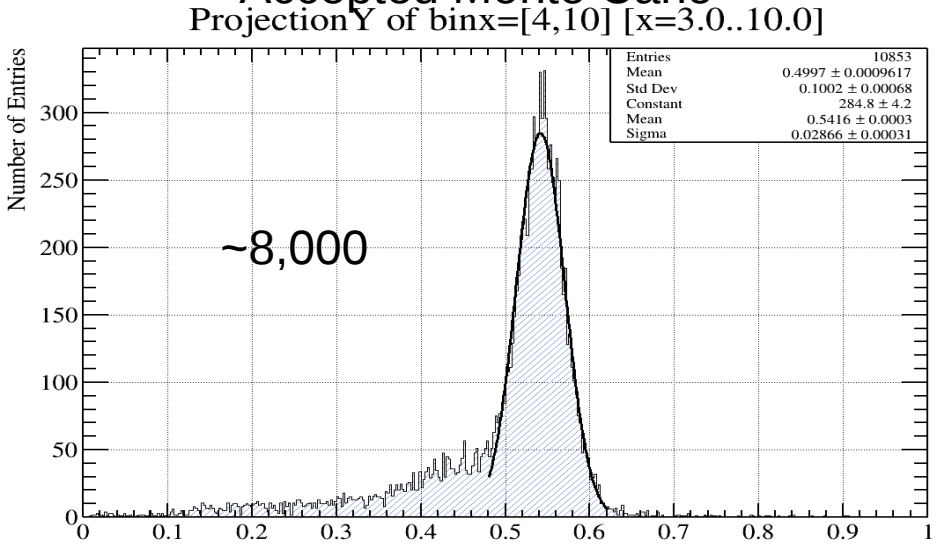


g1g2 Mass with more than 2 Photons in Event; Thrown Photons

Accepted Monte Carlo



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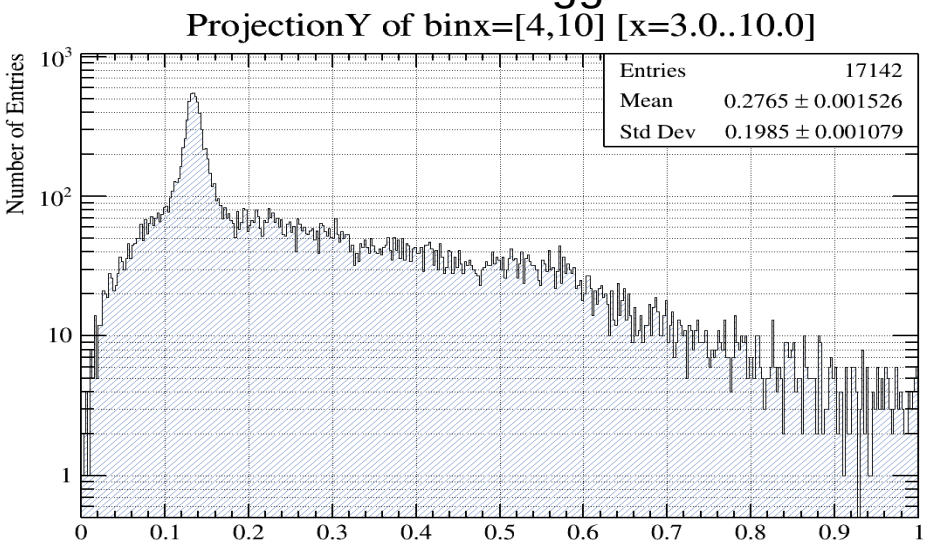

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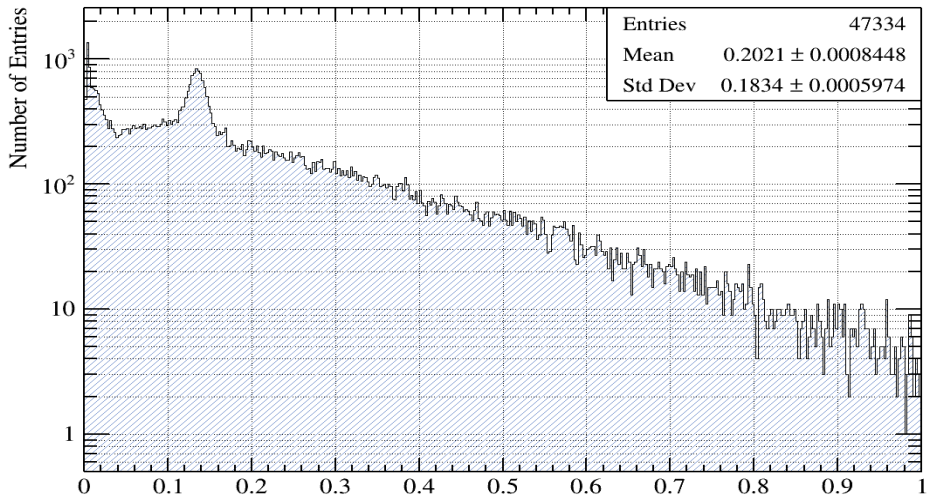
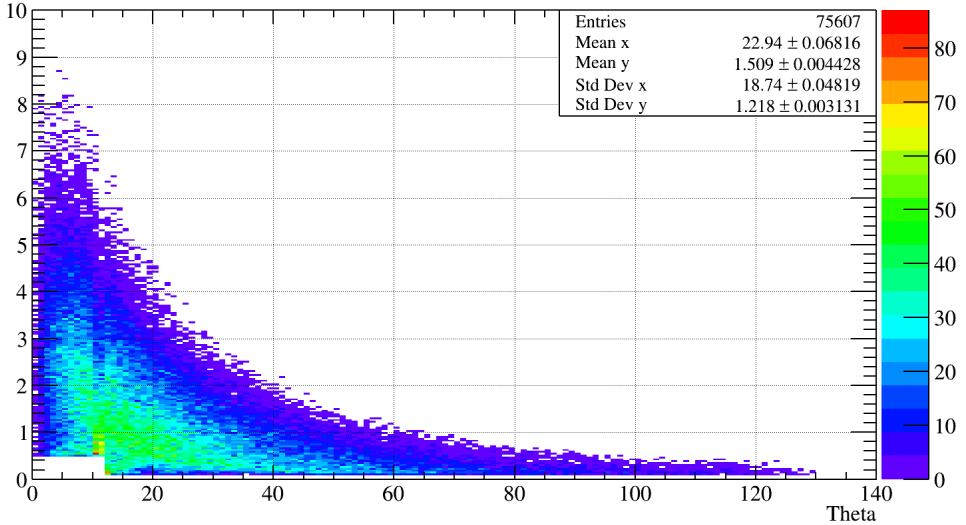
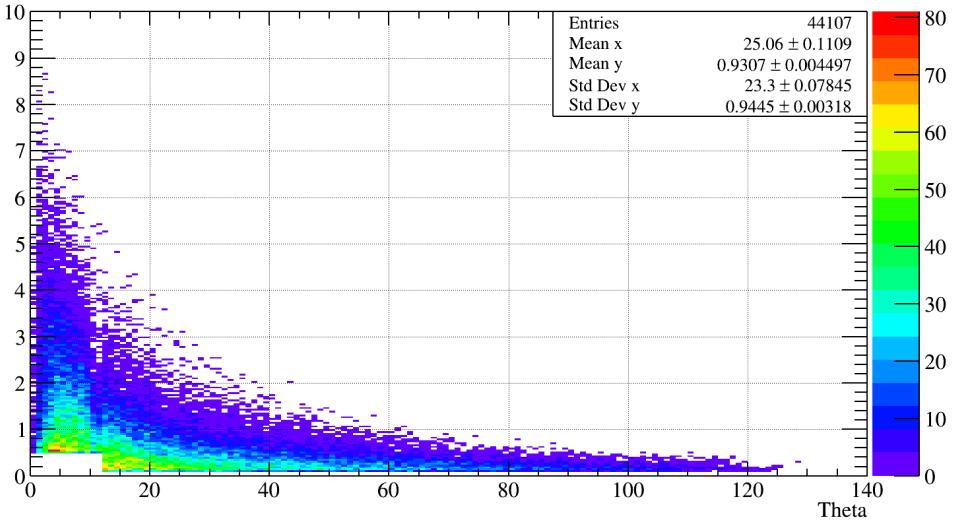


P Vs Theta Distributions With Cut, All Photons

Accepted Monte Carlo



bggen



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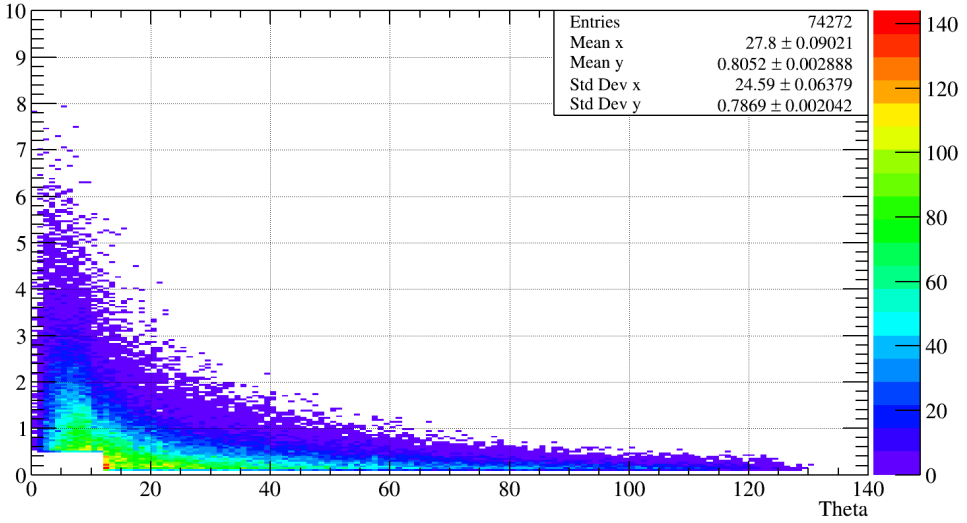
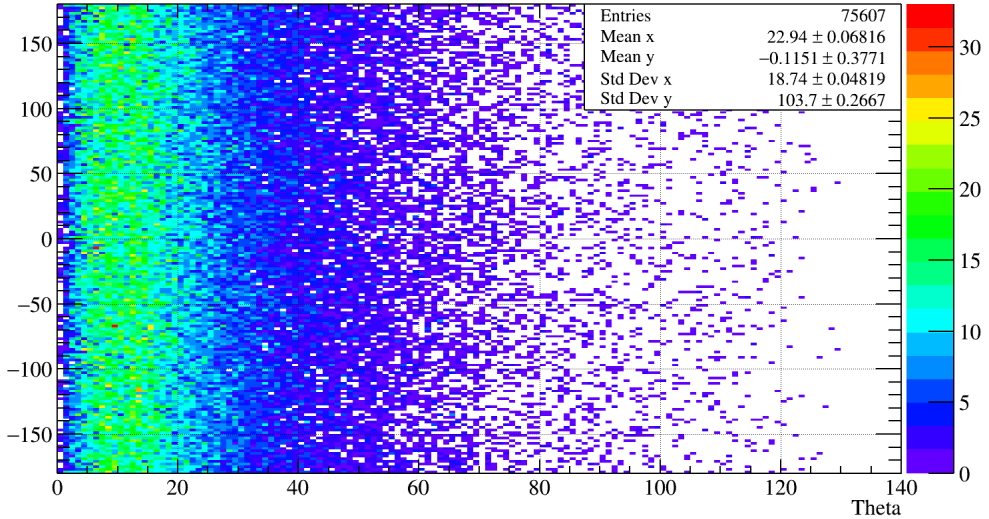


Phi Vs Theta Distributions With Cut, All Photons

Accepted Monte Carlo



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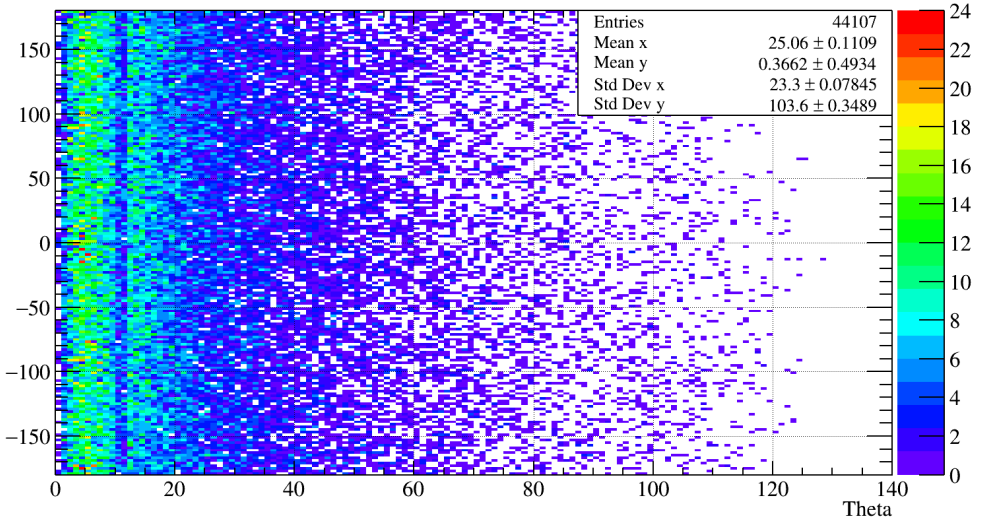

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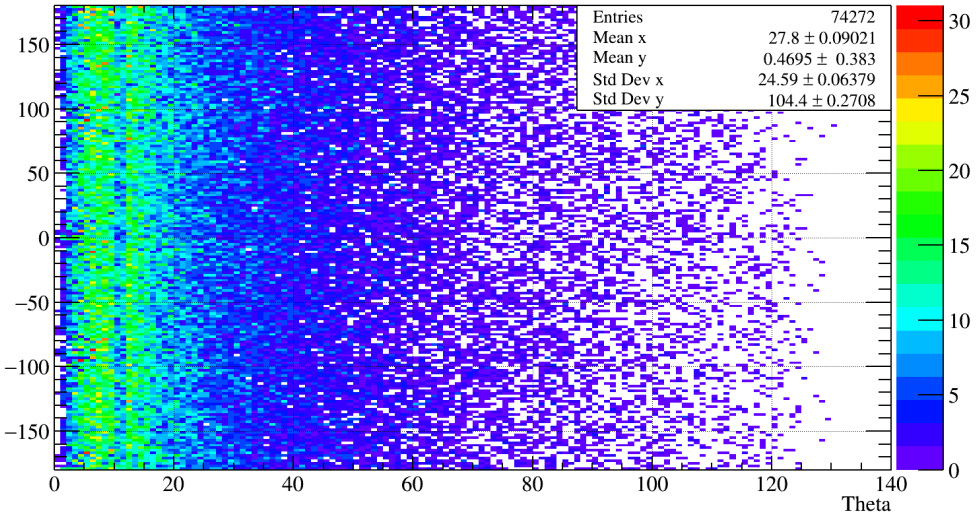
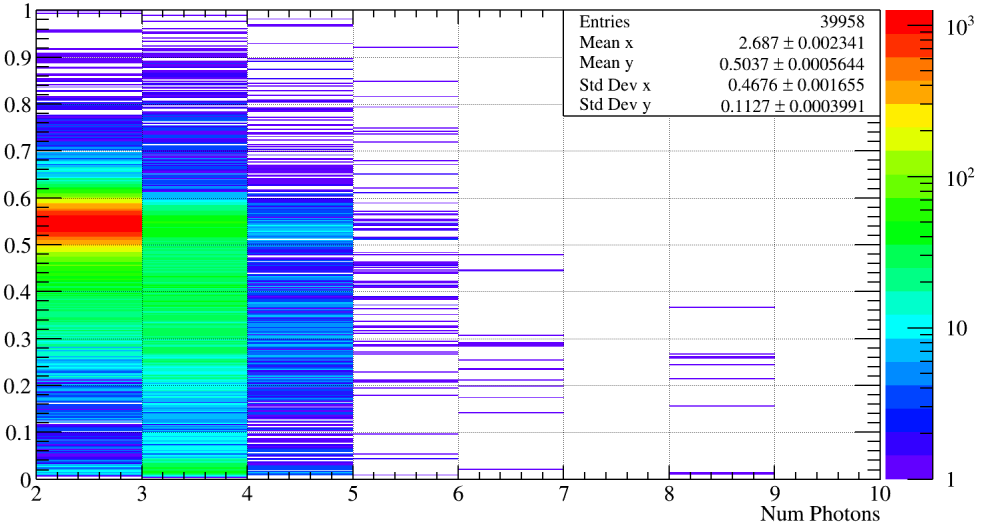


g1g2 Mass Vs Number of Photons in Event; All Photons

Accepted Monte Carlo



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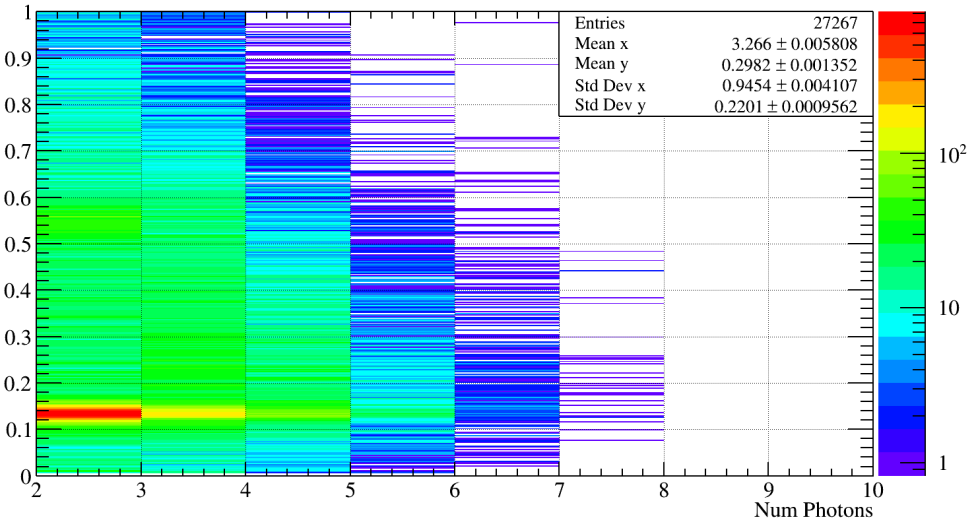

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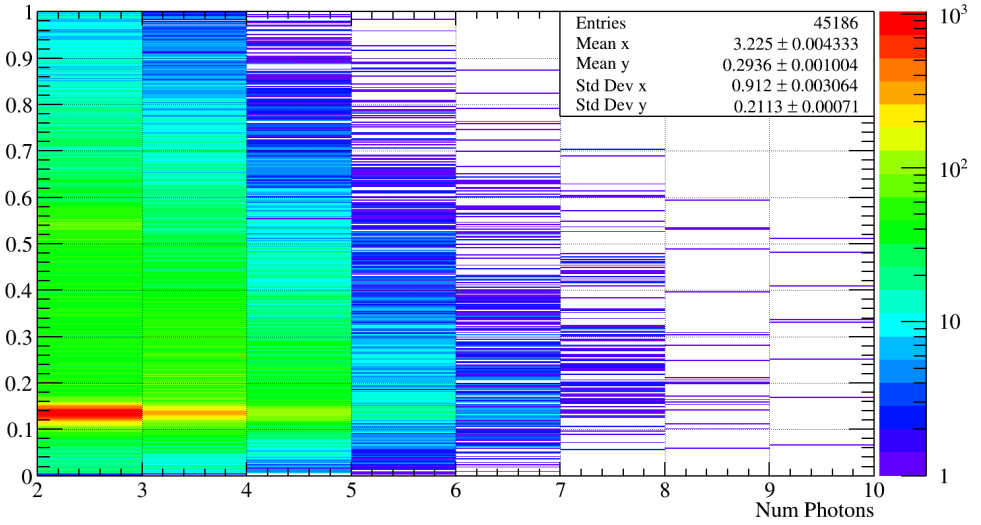
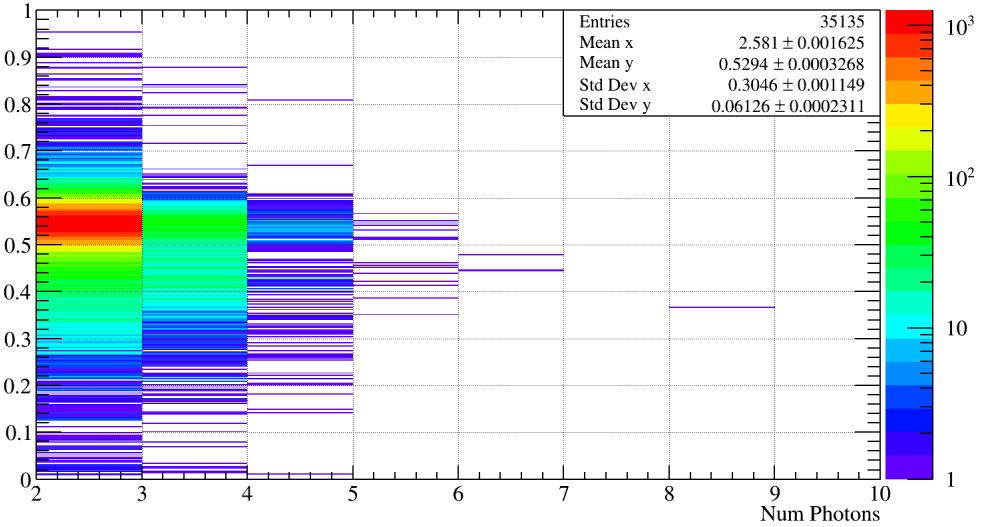


g1g2 Mass Vs Number of Photons in Event; Thrown Photons

Accepted Monte Carlo



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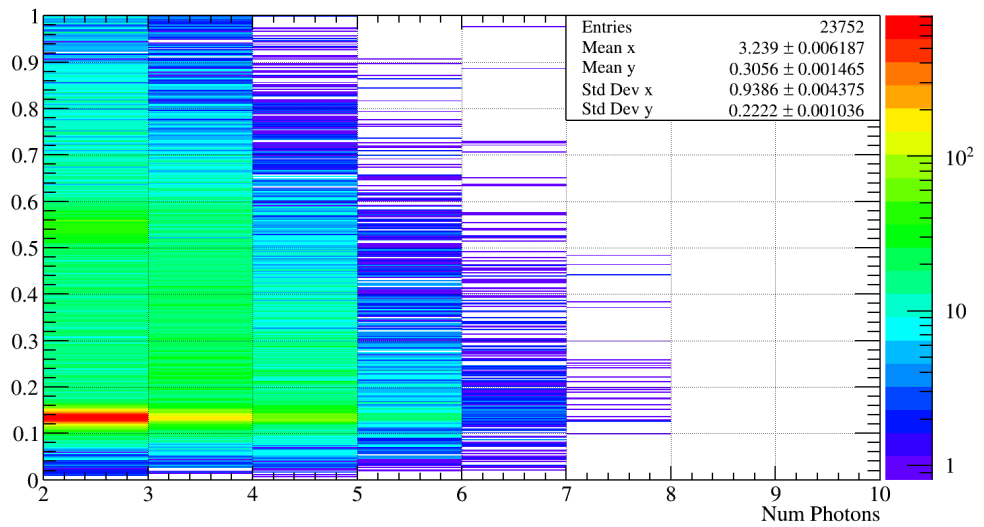

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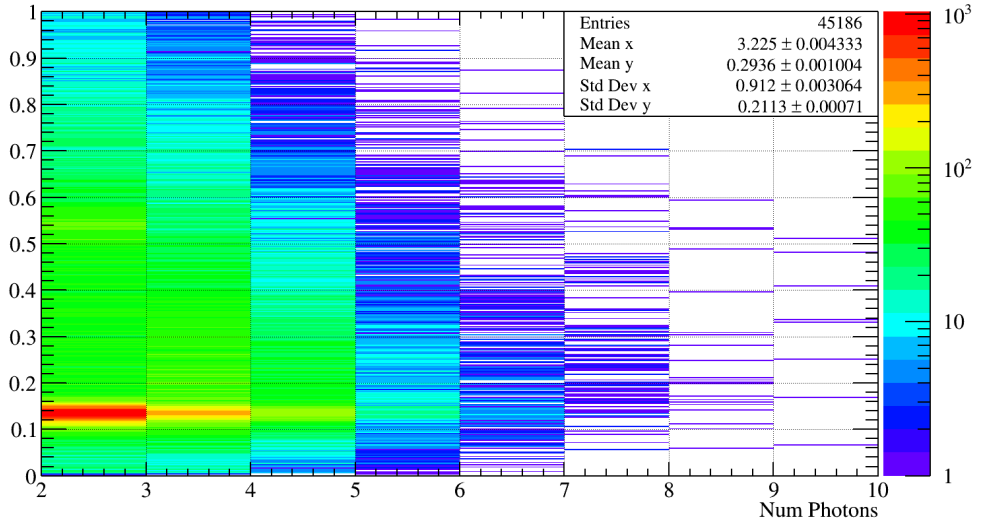
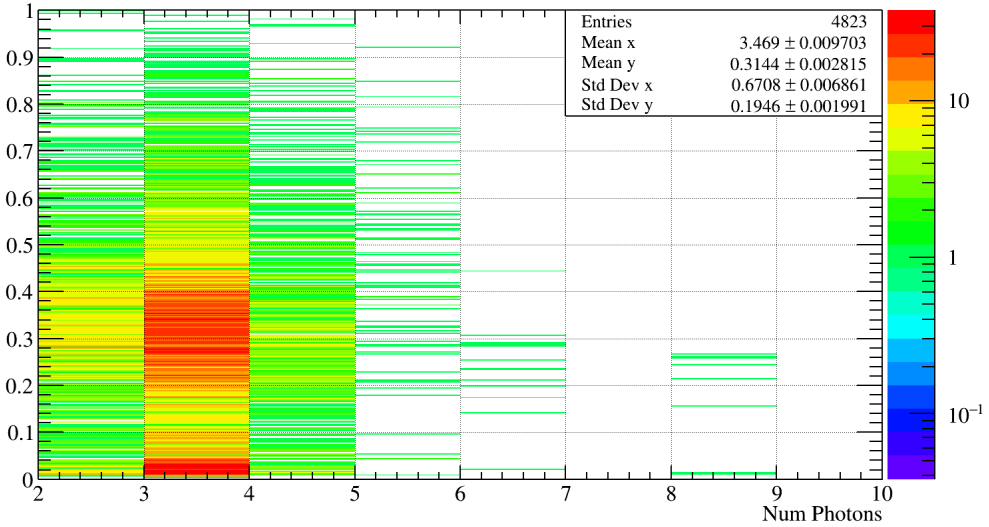


g1g2 Mass Vs Number of Photons in Event; Secondary Photons

Accepted Monte Carlo



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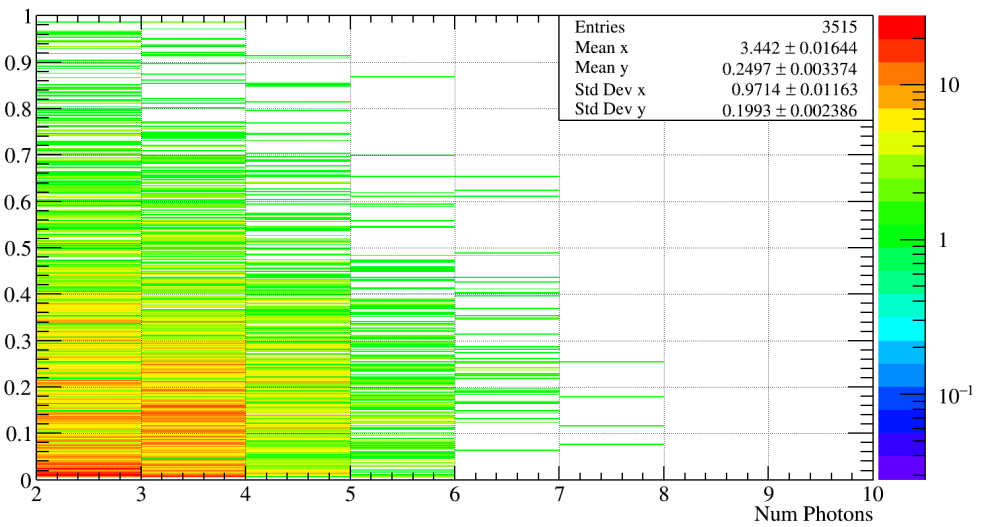

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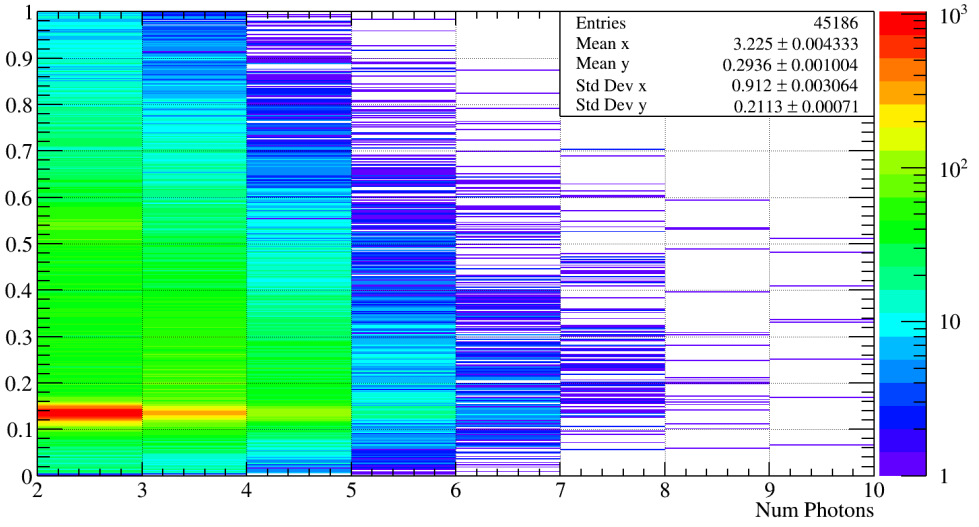
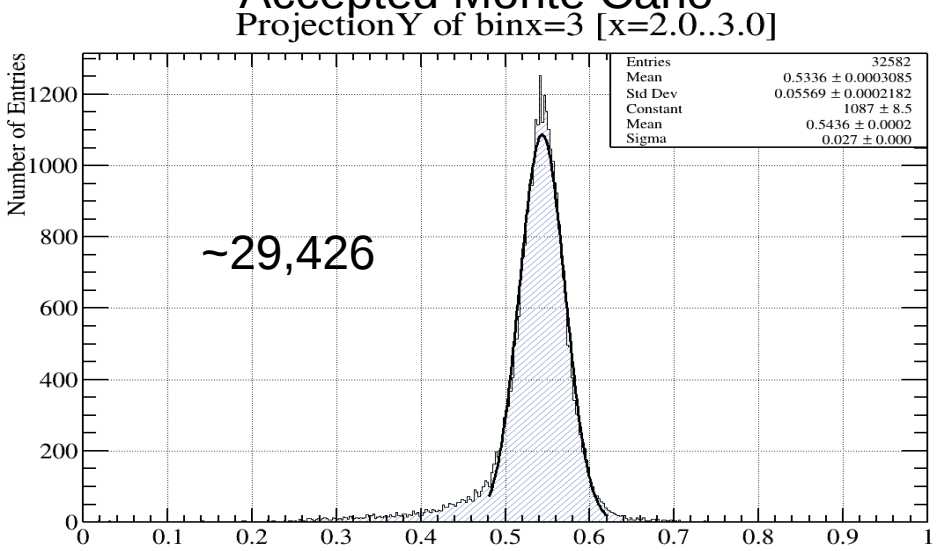


g1g2 Mass with 2 Photons in Event; Thrown Photons

Accepted Monte Carlo



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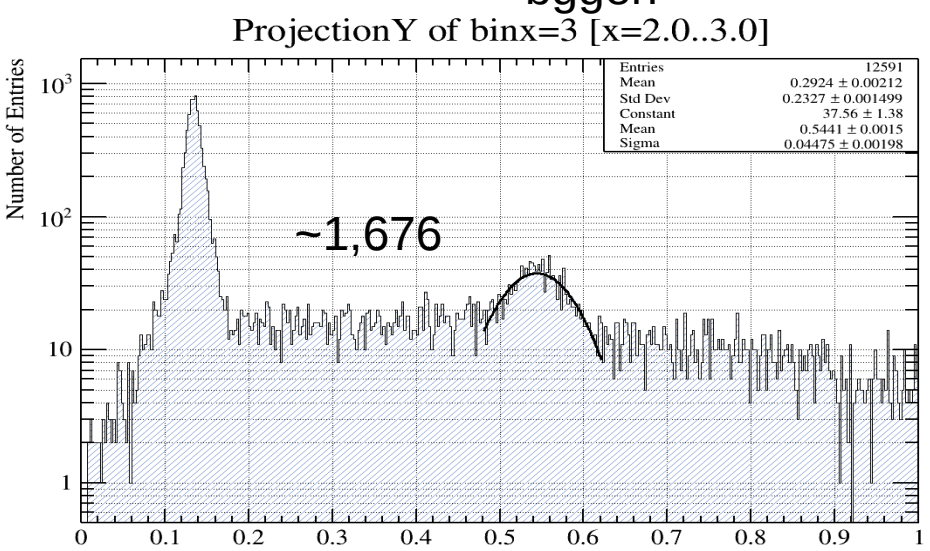

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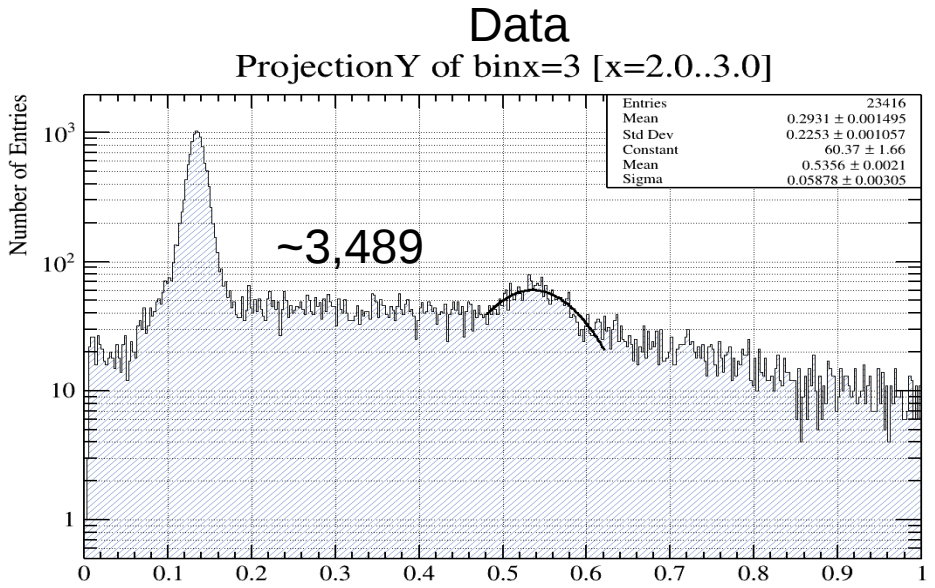
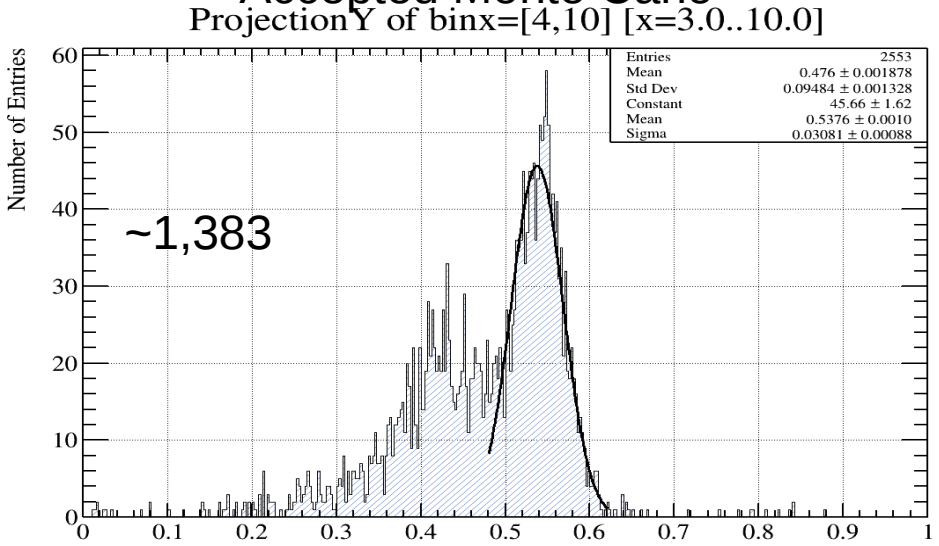


g1g2 Mass with more than 2 Photons in Event; Thrown Photons

Accepted Monte Carlo



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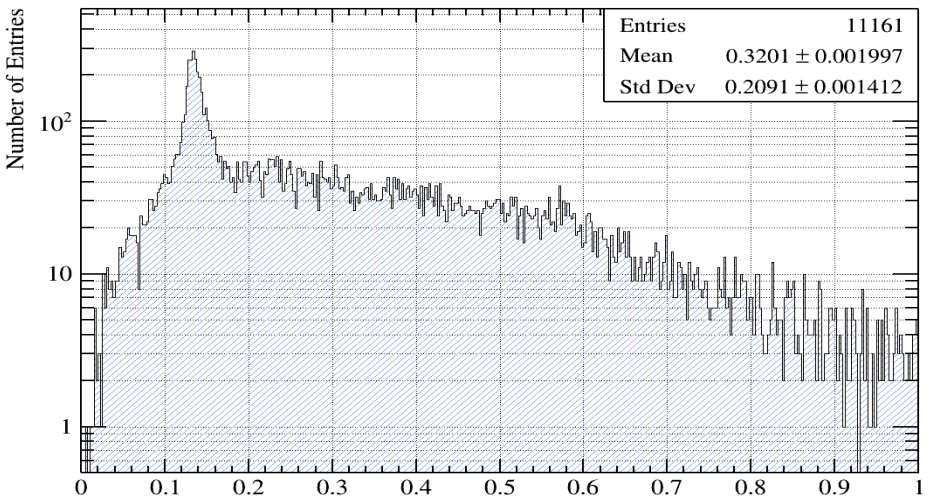

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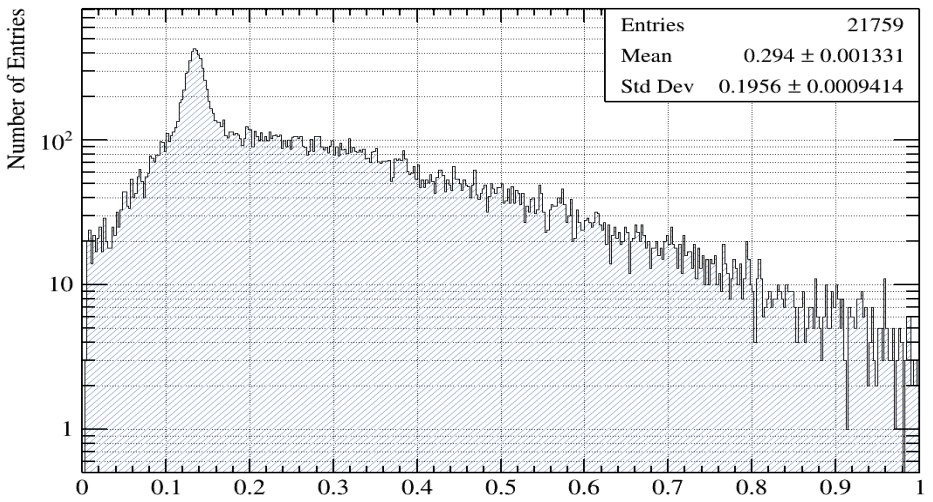

Table of Results:

	2 Gamma Cut	P Vs Theta Cut + 2 Gamma Cut
Thrown	8,000/30,315 = 26 %	1383/30,315 = 5%
bggen	1,243	1,676
Data	3,143	3,489