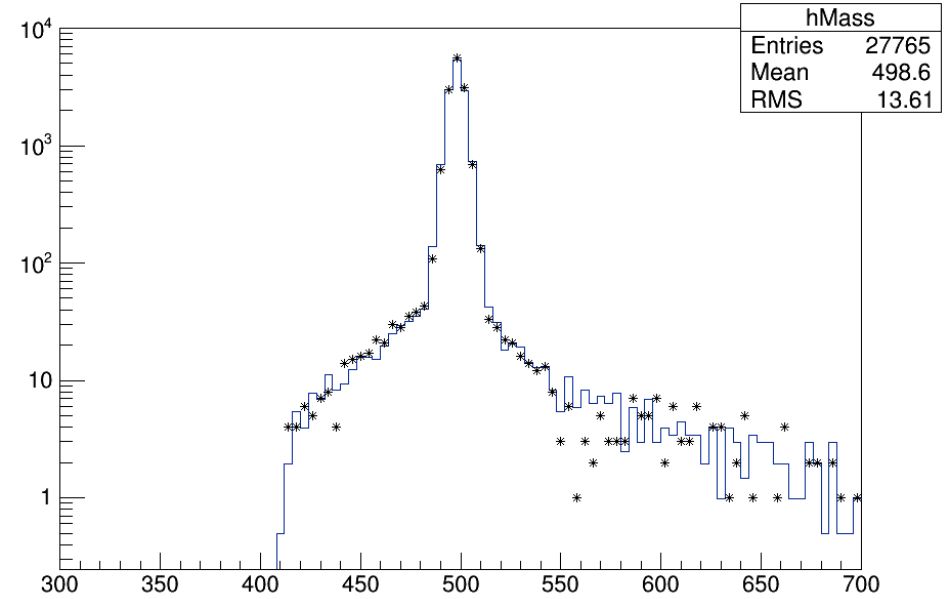
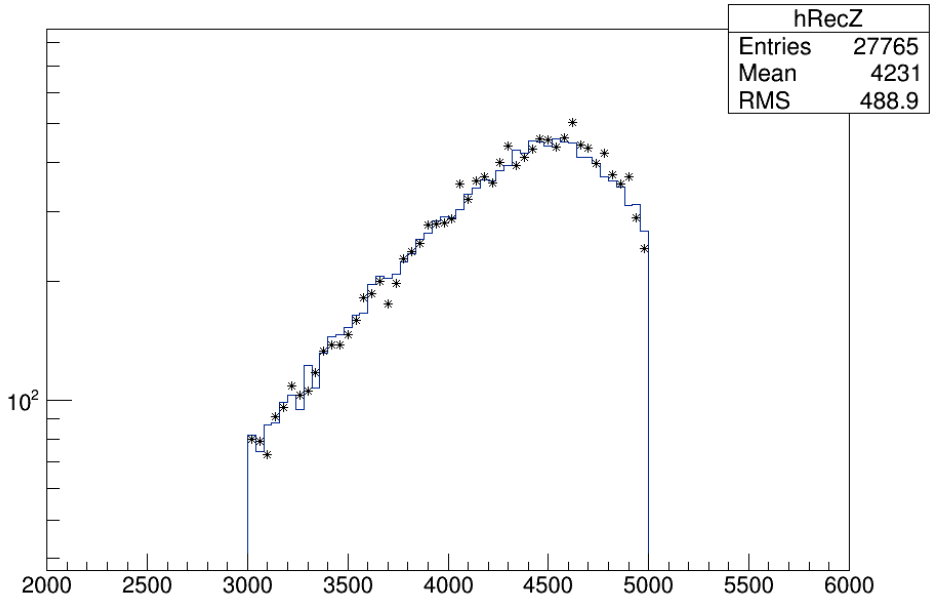
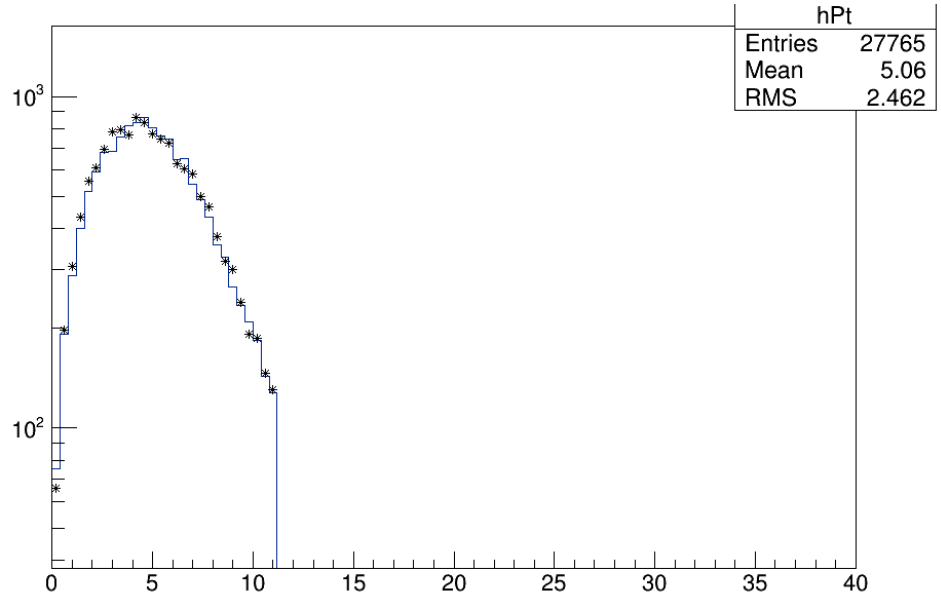
Report_170510

KL3pi0 study
Run74 vs Run69

- KL3pi0, Min Bias data
- Check status of CSI
- Run69 : 2.736e9 KL
- Run74 : 1.342e9 KL
  - All from 4e7KL/2e14(POT to KL)
  - And 9.74e9(SEC to POT, Run69)
  - And 10.18e9(SEC to POT, Run74)





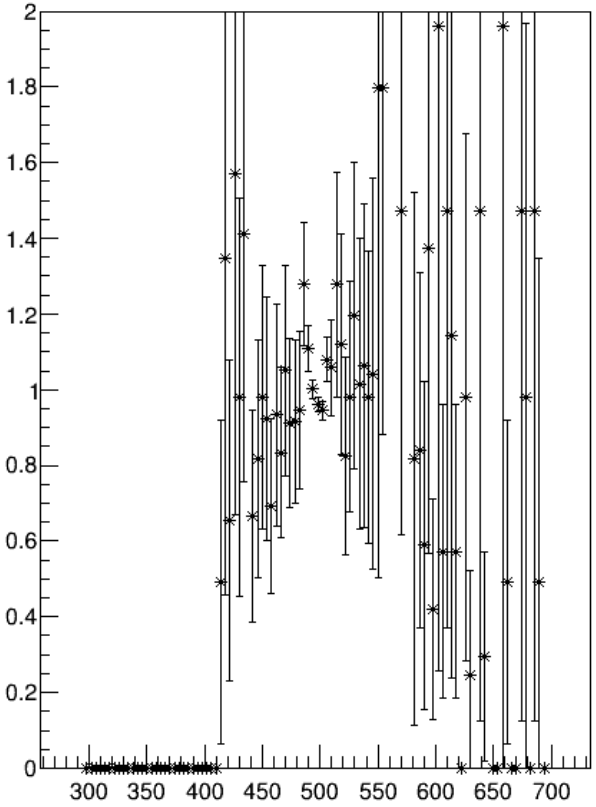


g6ana

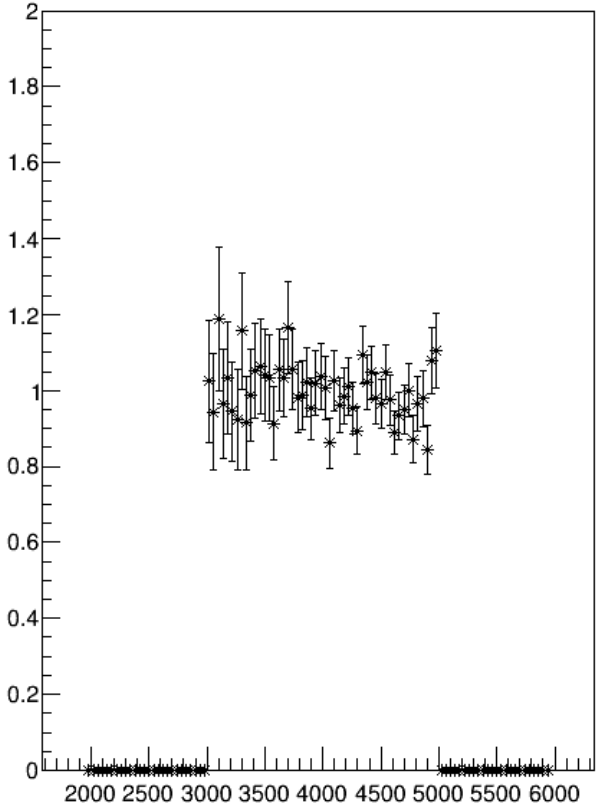
Normalized by POT
Kinematical Cut applied

Run69/Run74

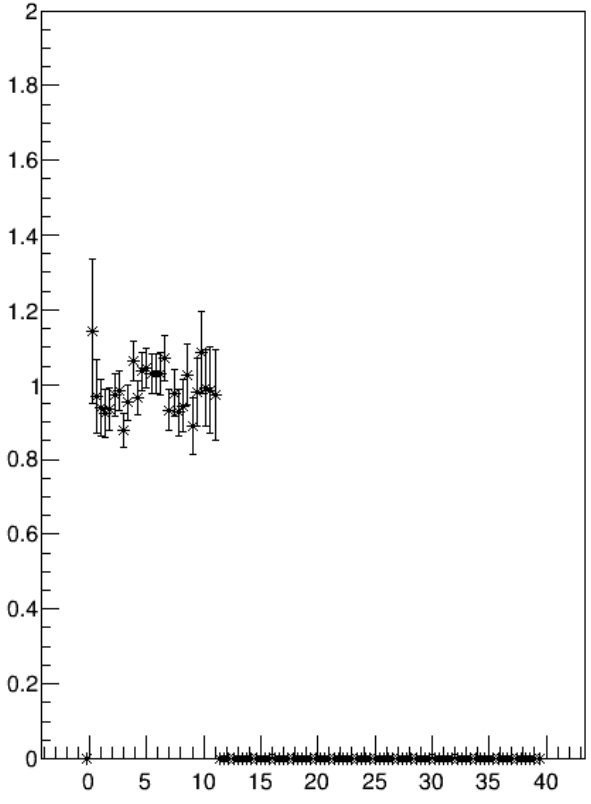
Mass



RecZ

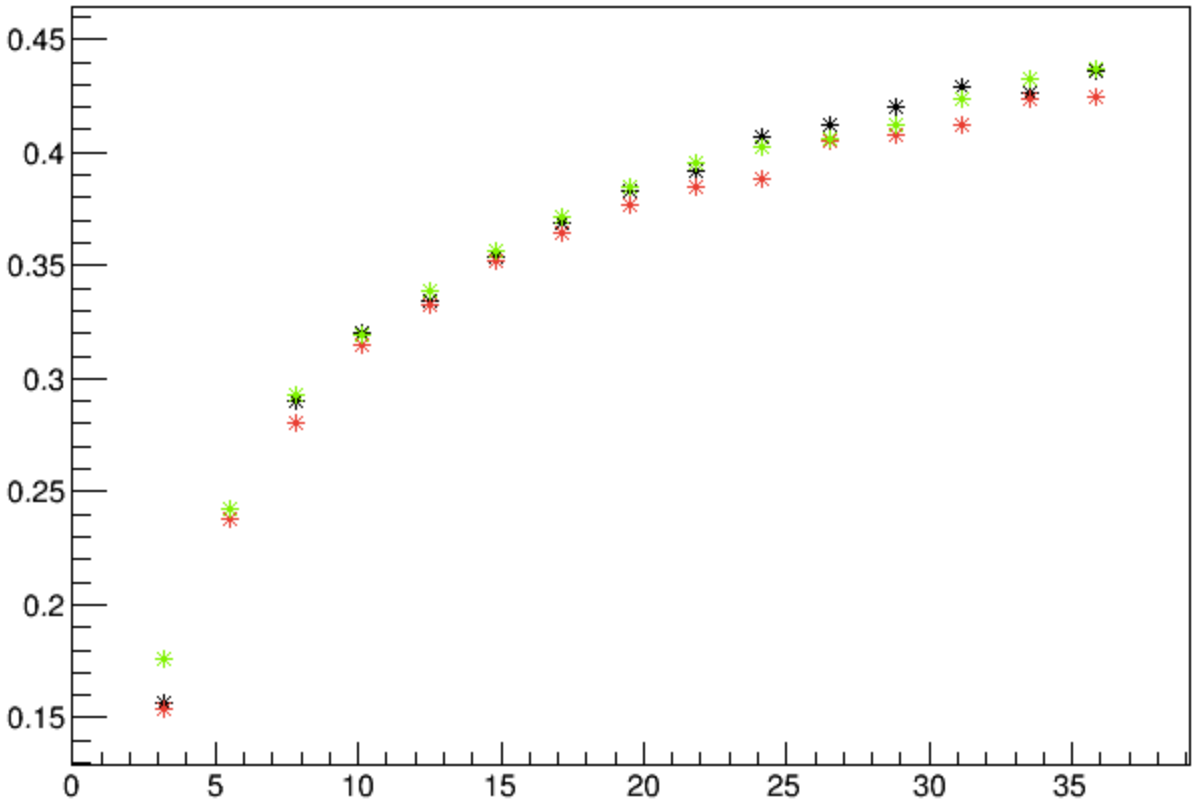


Pt



Run69 vs Run74 in g5ana

- Discrepancy of Gamma HitZ Position on Barrel
  - Because of Calibration constant
  - After changing, there corresponded each other

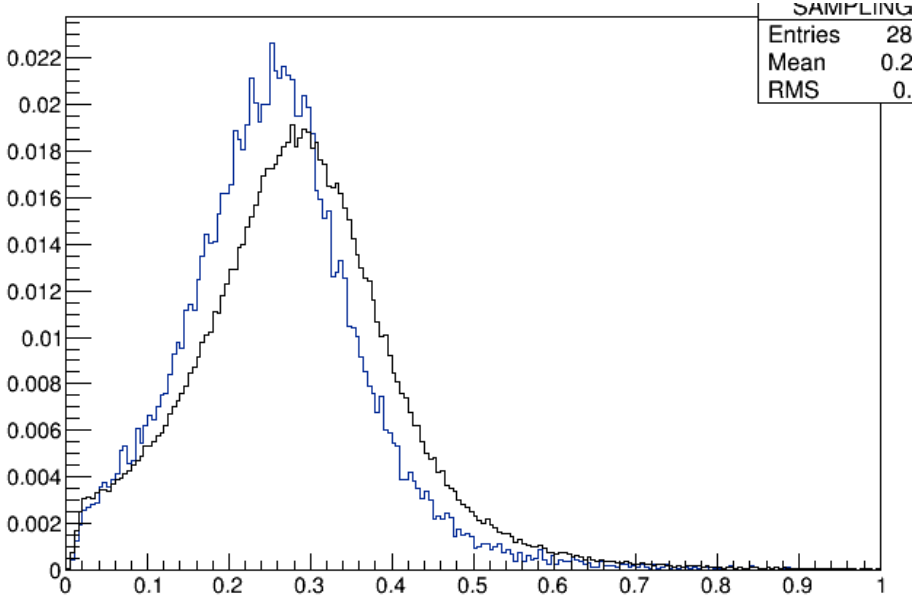


Black : Run69
Red : Run74
Green : Run69MC

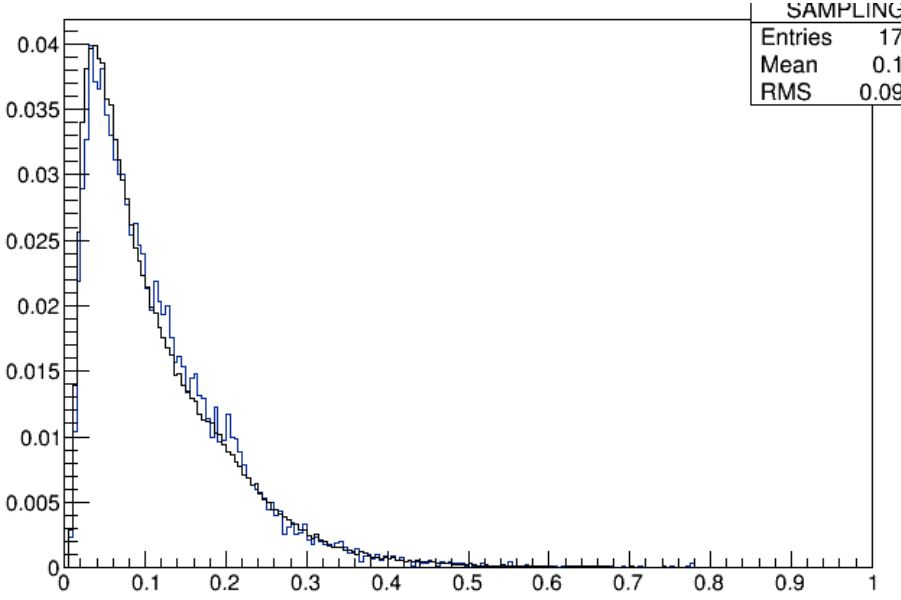
Black : data
Blue : MC

Sampling Fraction
Multi hit accepted

Inner Module



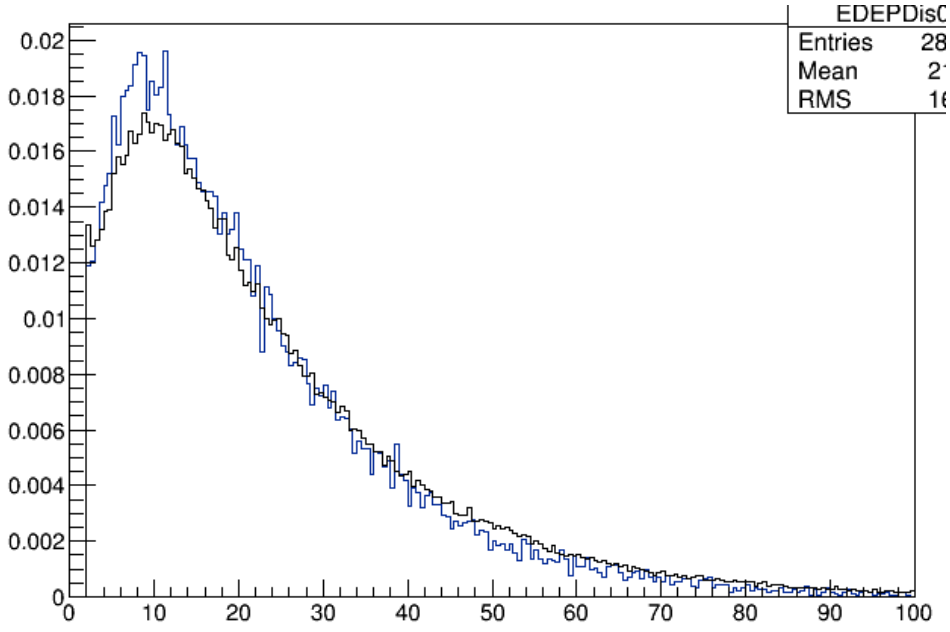
Outer Module



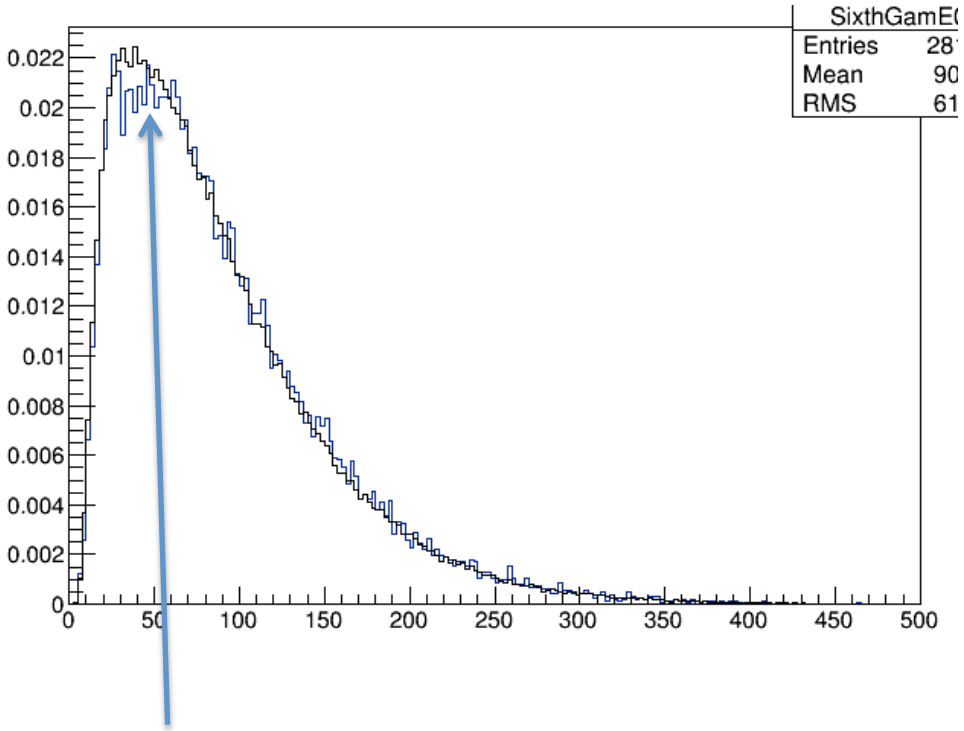
Black : data
Blue : MC

Inner Module

Energy Deposited

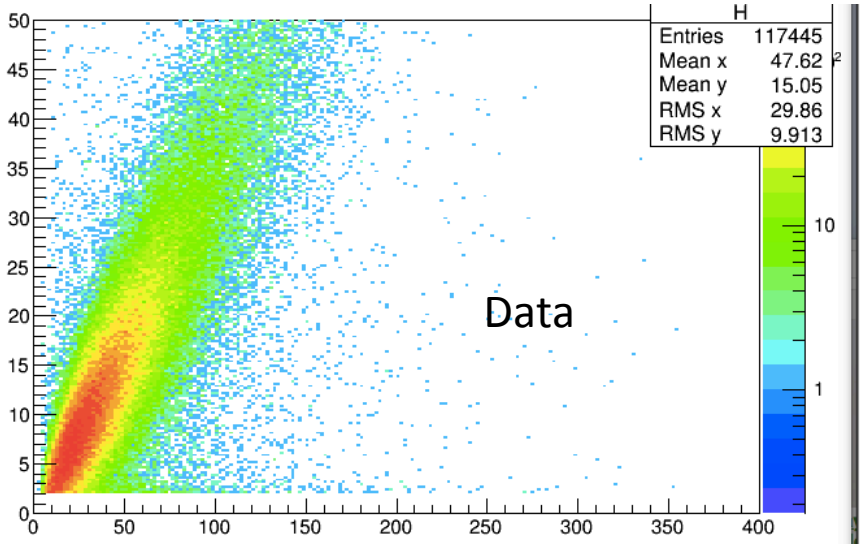


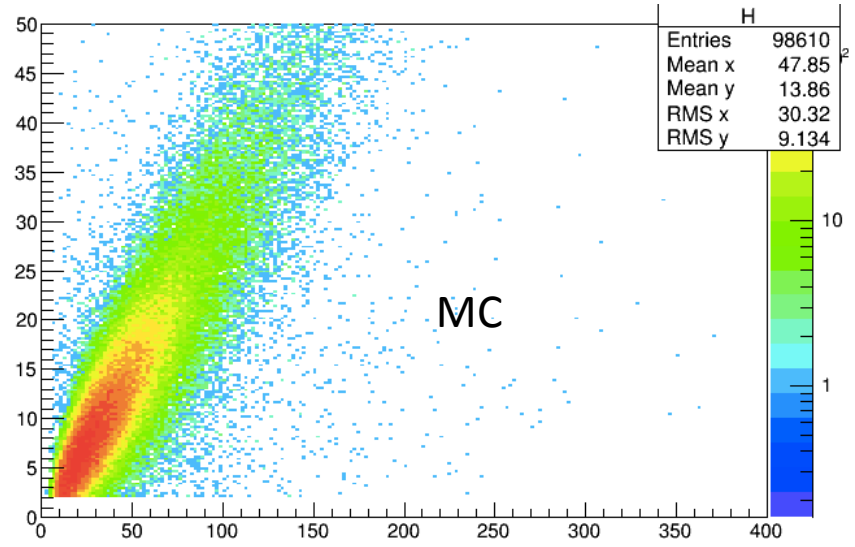
Gamma Energy

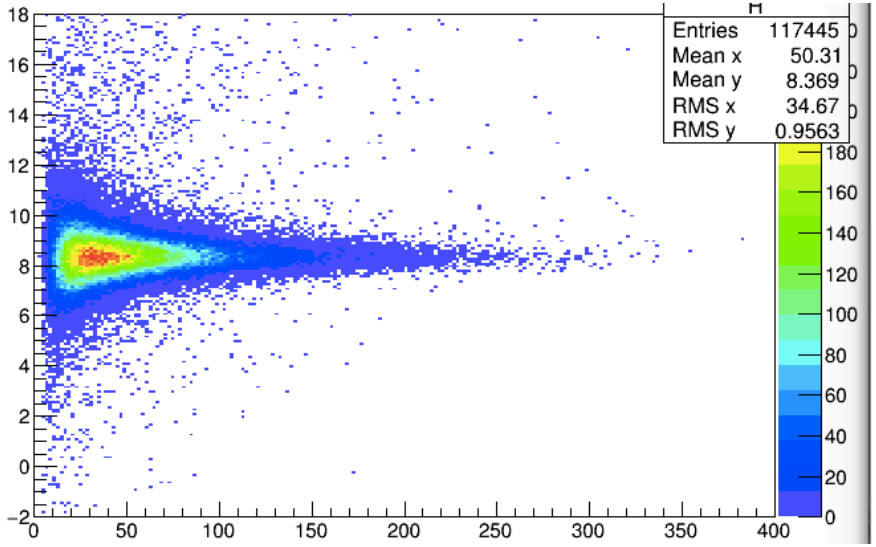


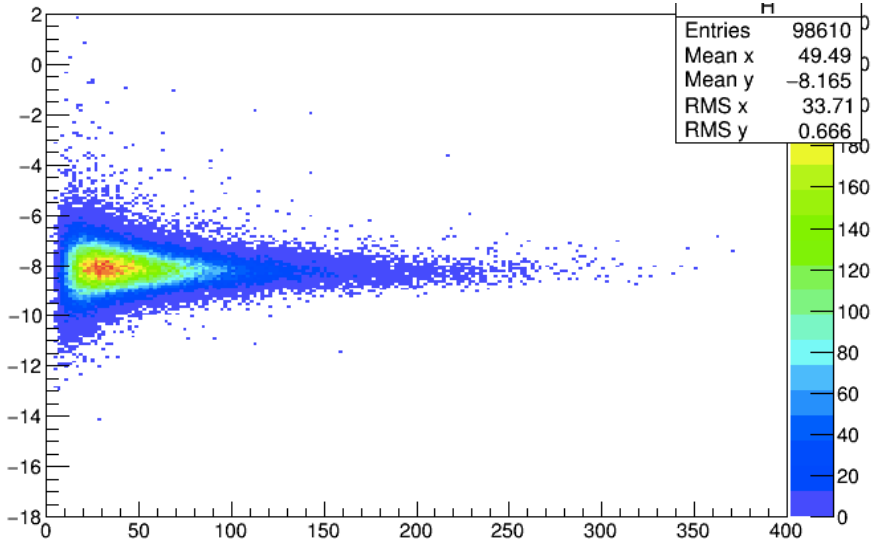
Discrepancy?

Events which have energy<65MeV?

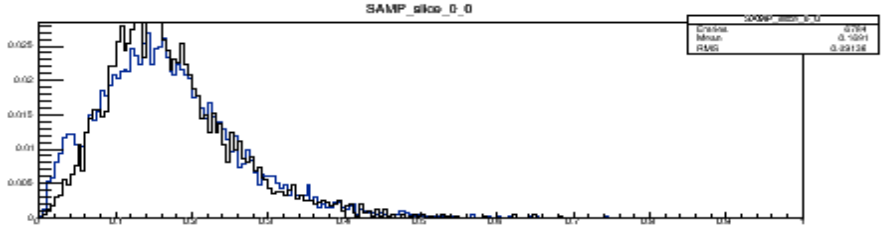


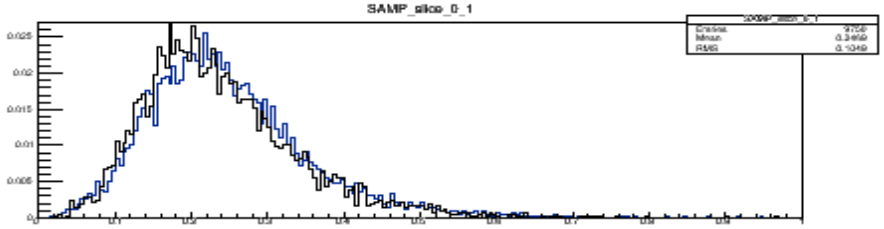


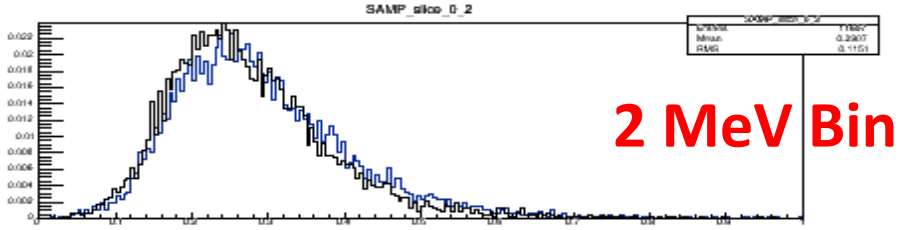




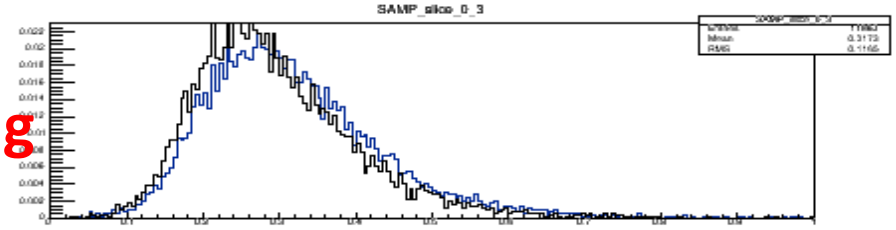
Raw distributions, (MC, Data)

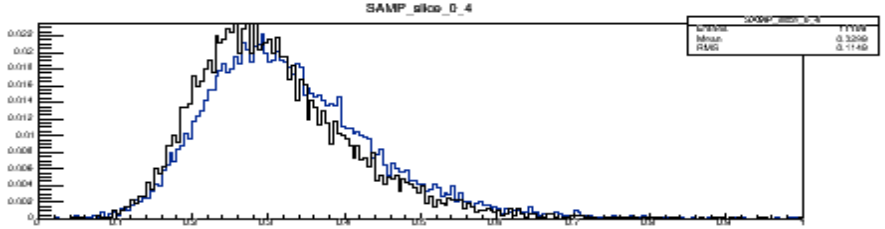


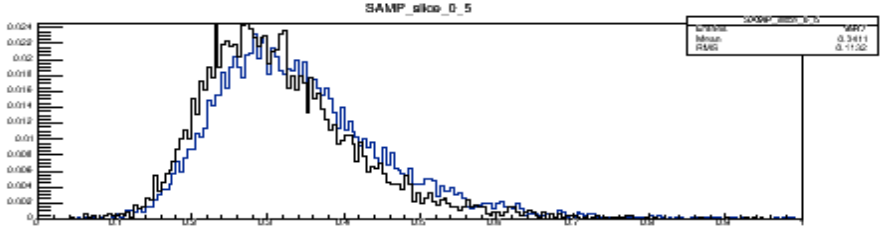


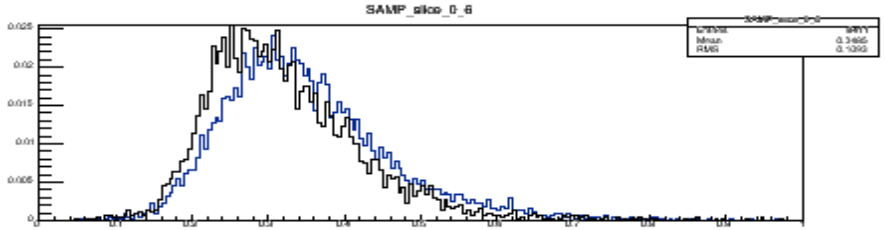


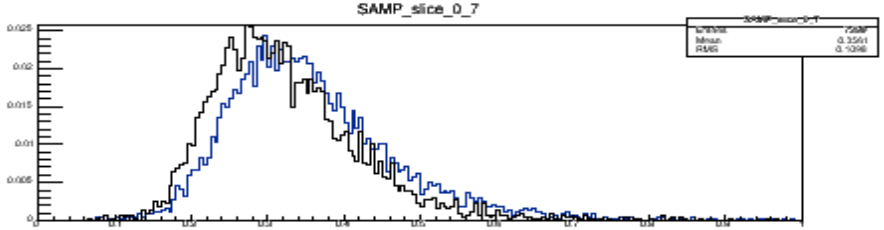
2 MeV Binning

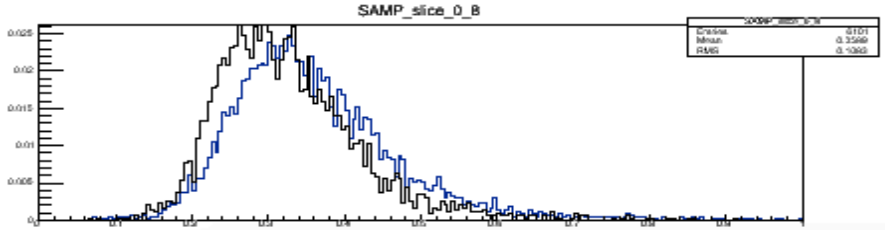


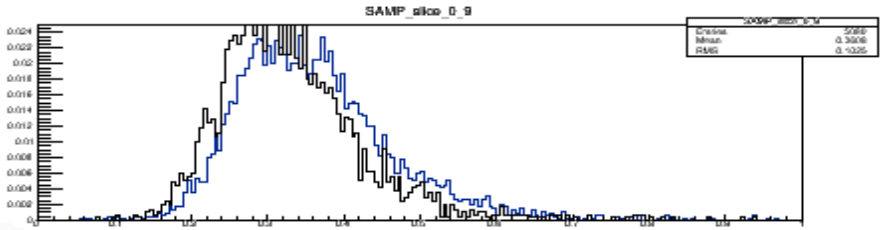




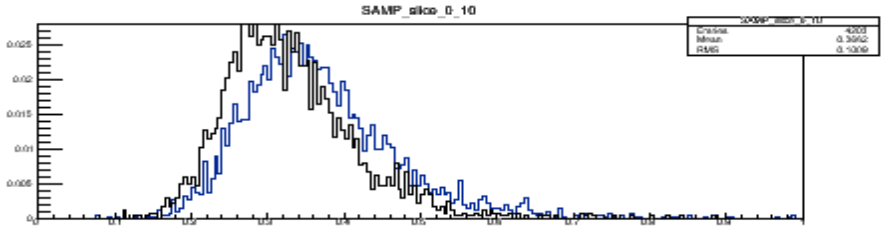


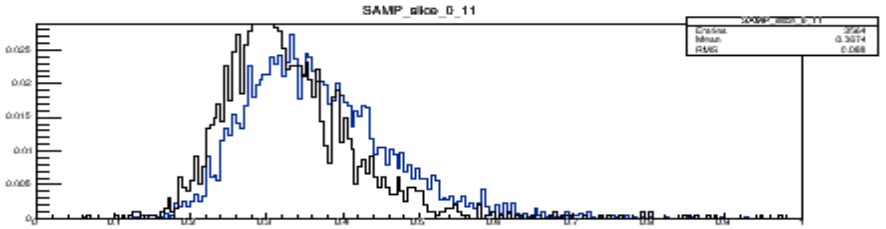


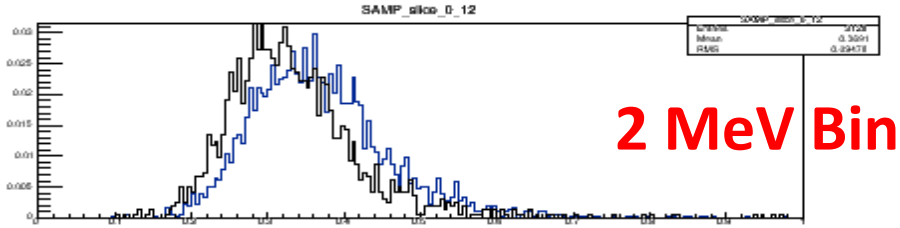




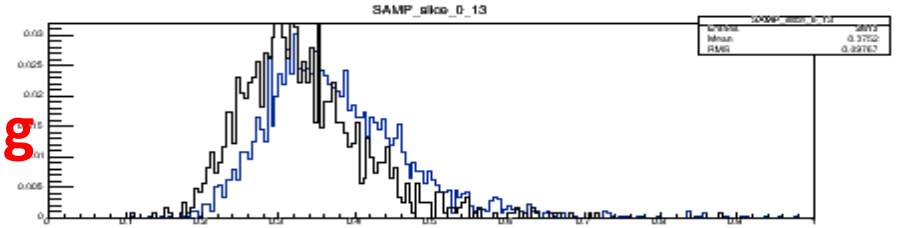
Raw distributions. (MC, Data)

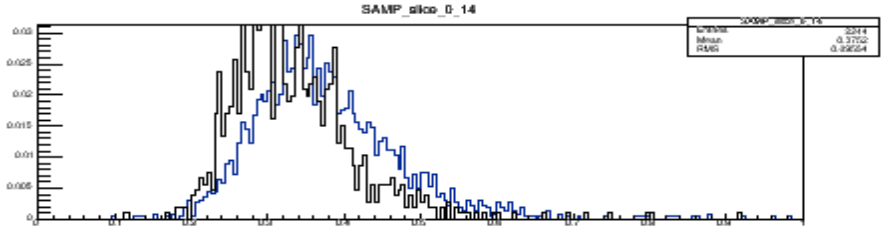


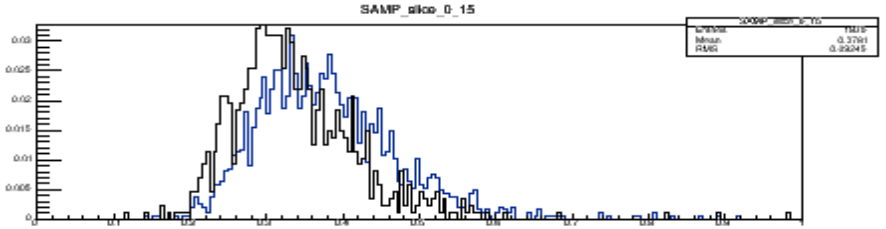


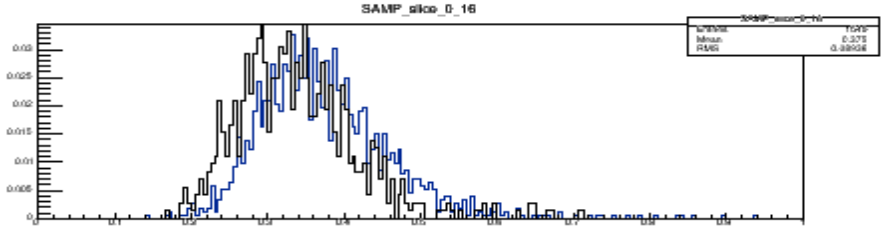


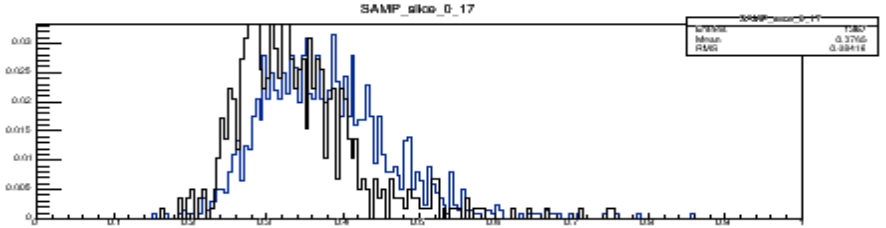
2 MeV Binning

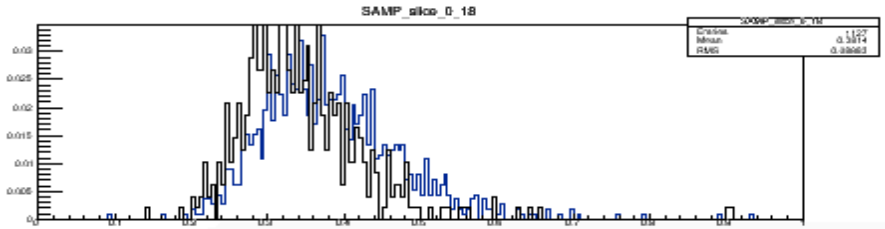


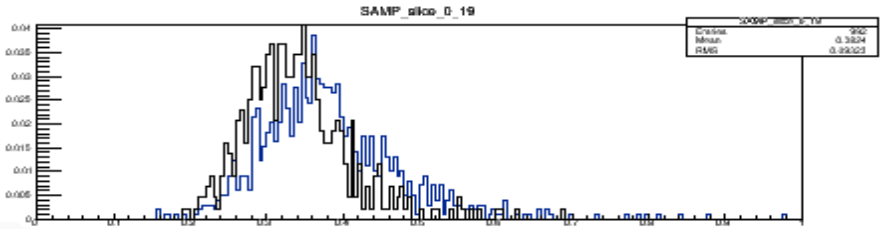




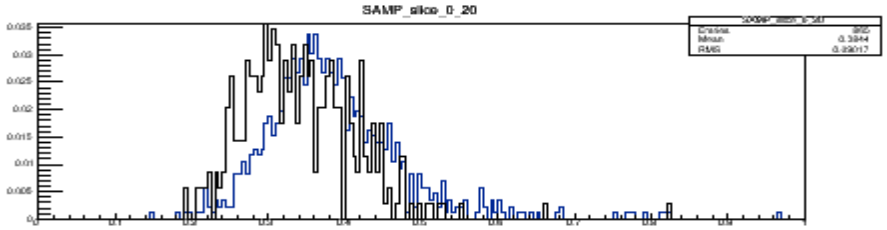


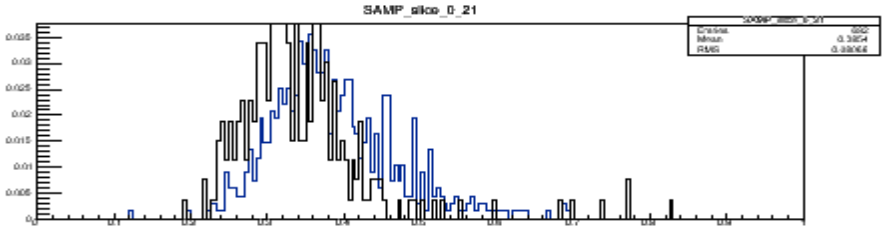


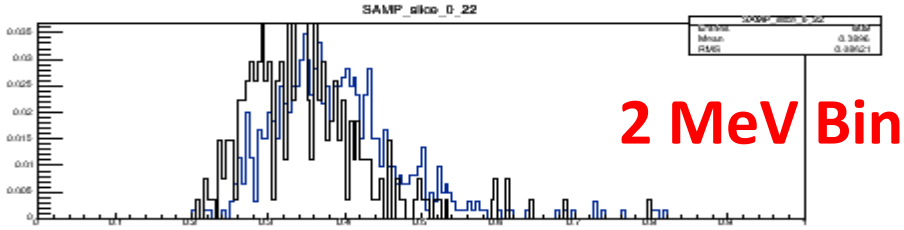




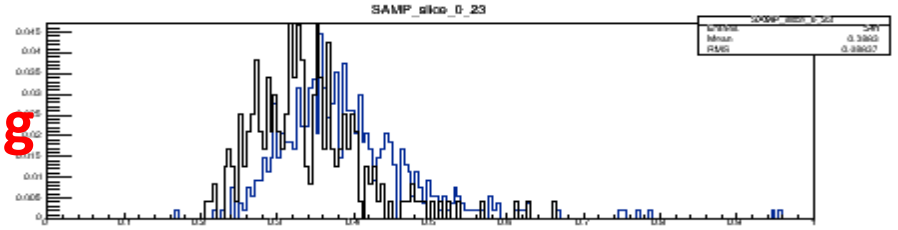
Raw distributions, (MC, Data)

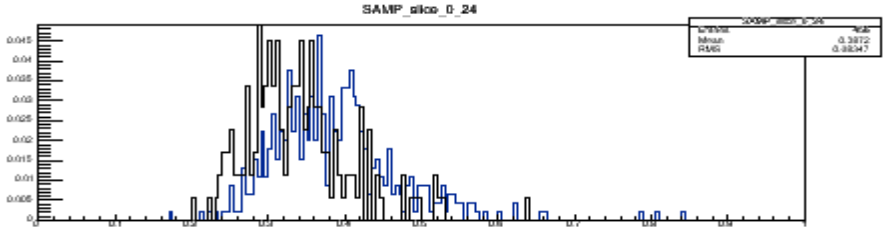


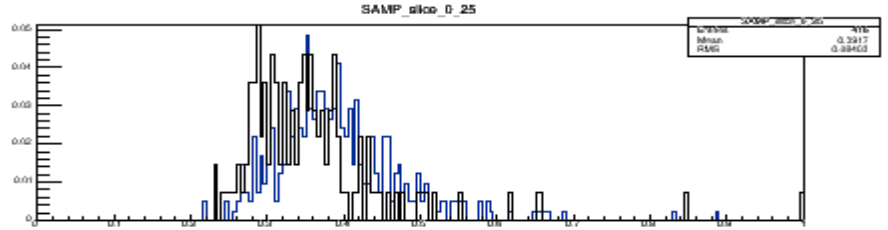


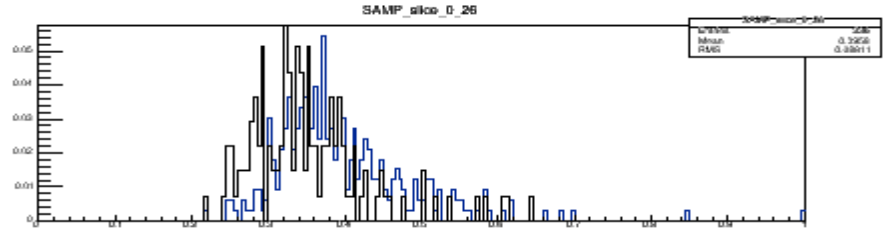


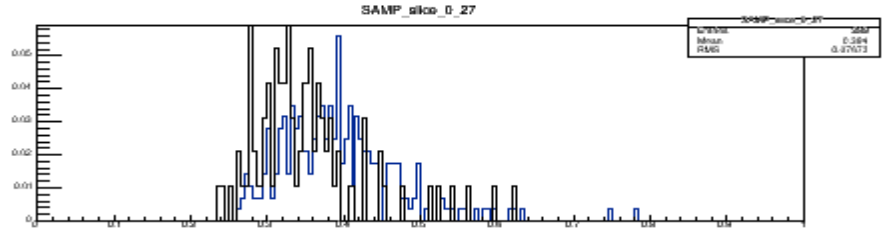
2 MeV Binning

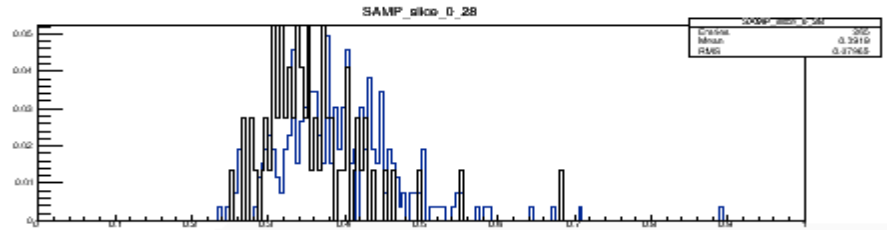


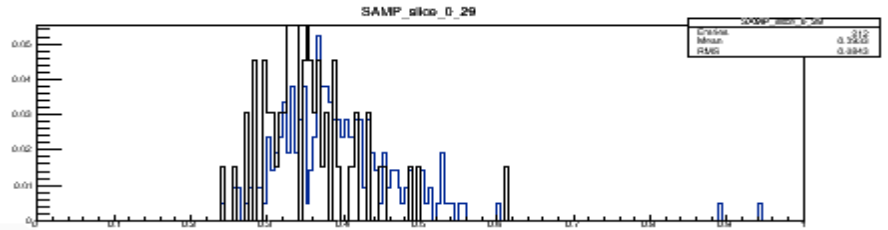




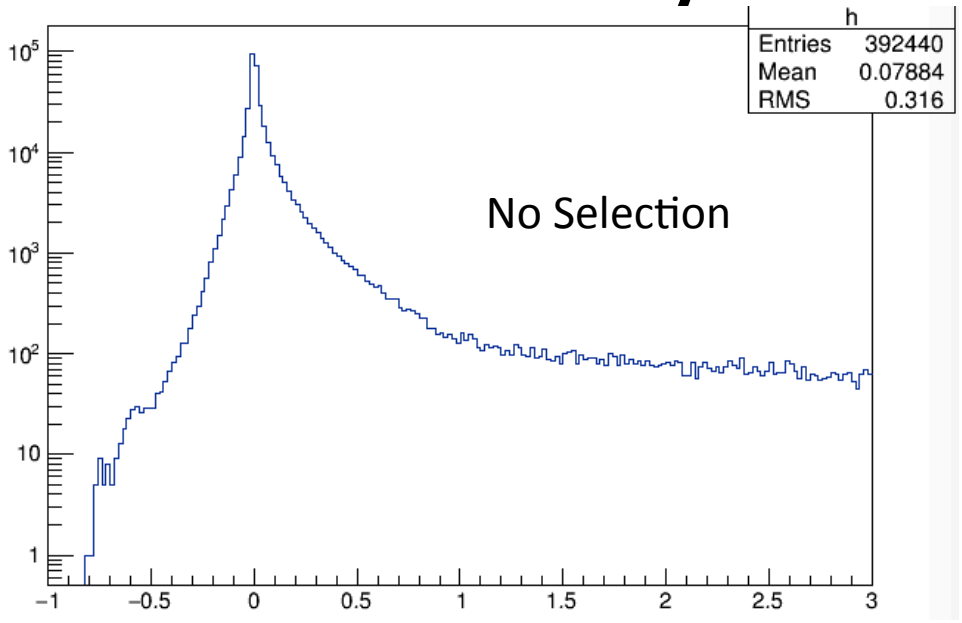


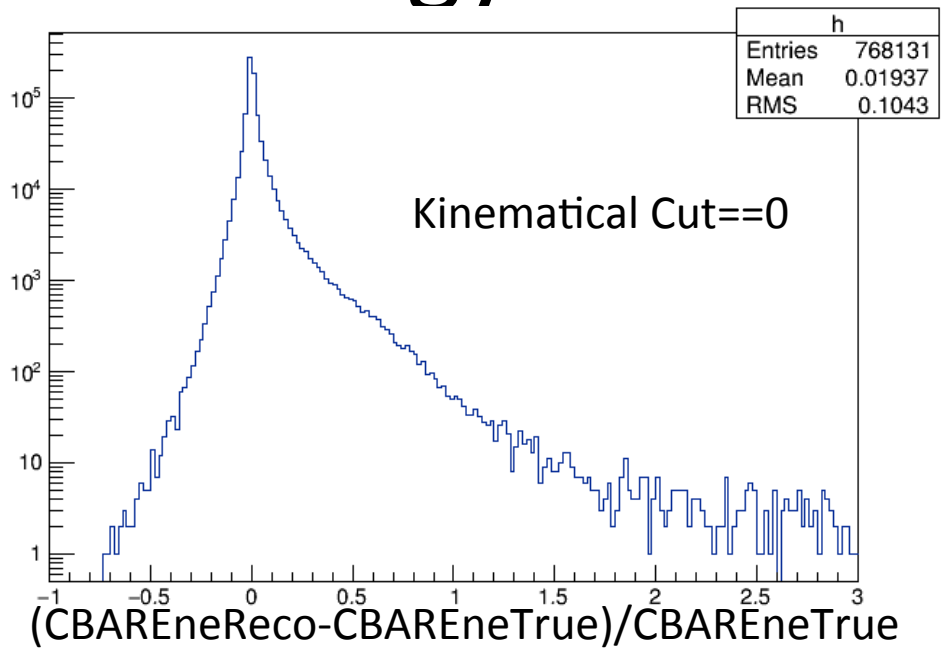


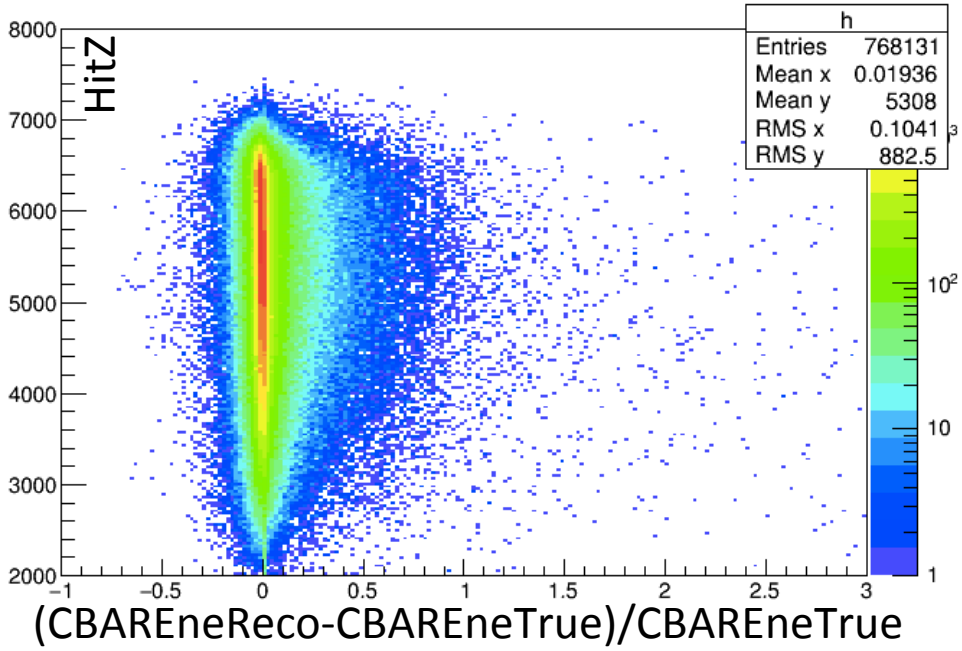




Study of CBAR Energy

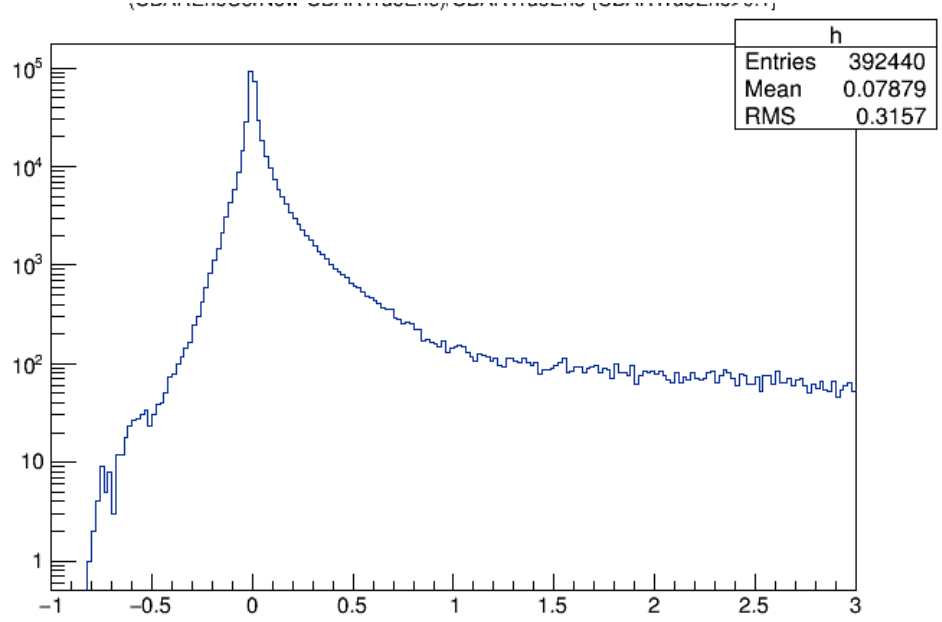




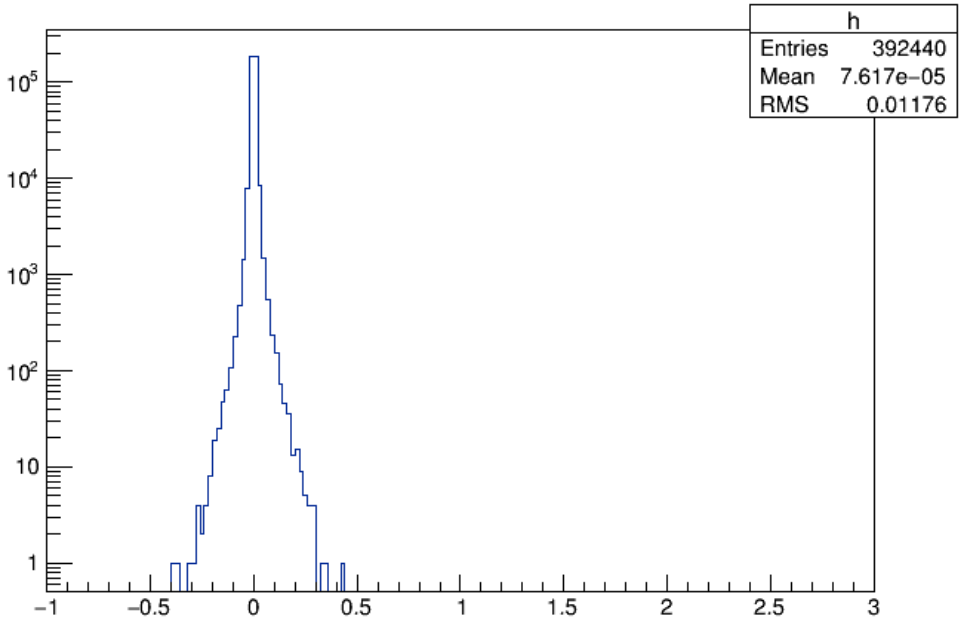


Add Resolution

- Current ana
  - Reconstruct Energy with timing information
  - Apply resolution for timing with Reconstructed energy
- New ana
  - Apply resolution for timing with True energy
  - Reconstruct Energy with timing information(resolution included)

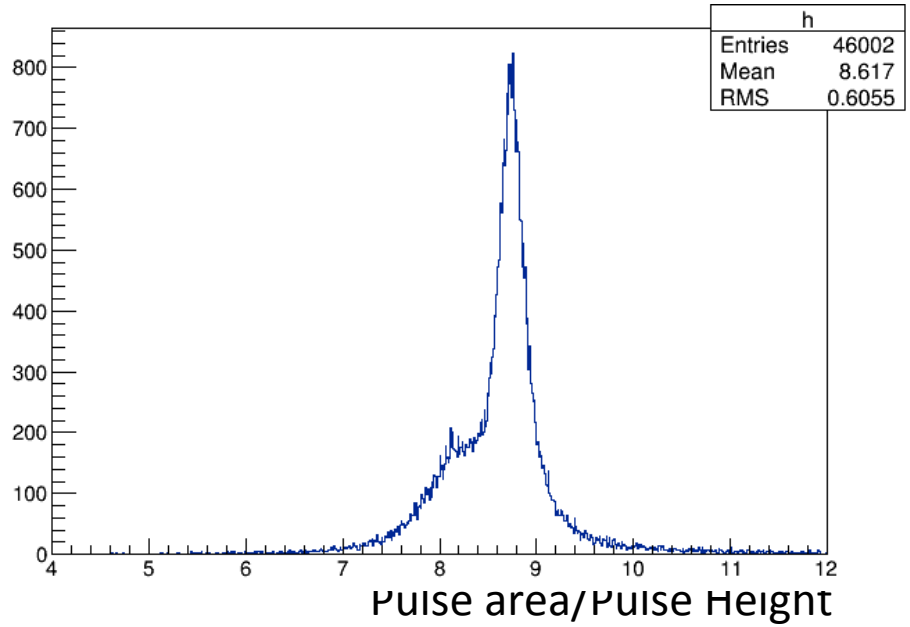


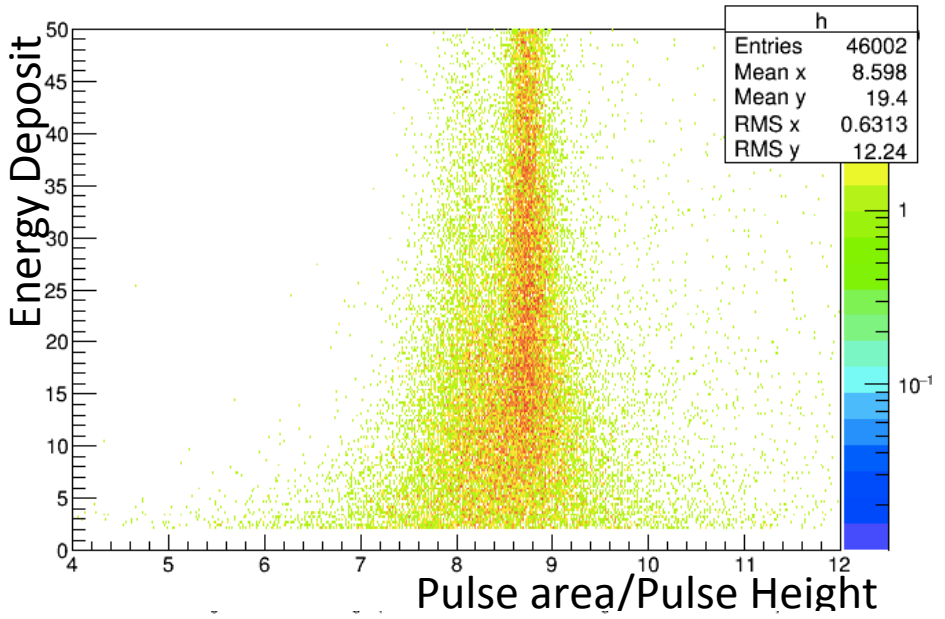
(CBAREneReco-CBAREneTrue)/CBAREneTrue

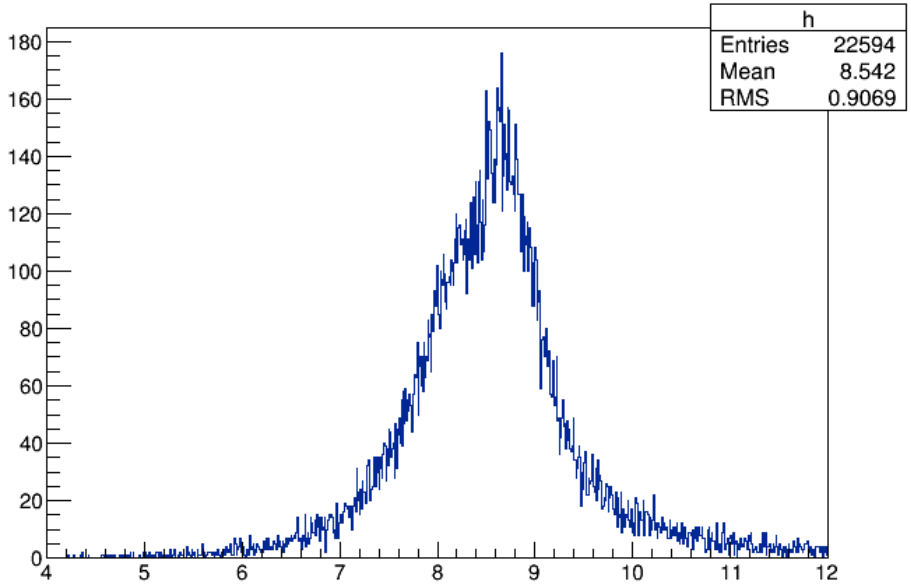


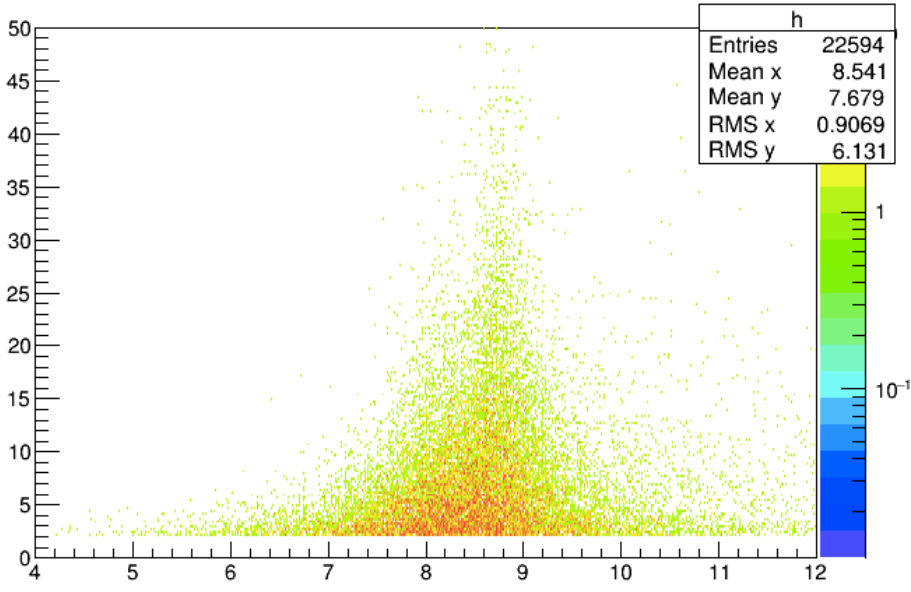
(CBAREneNew-CBAREne)/CBAREne

Pulse Area/Pulse Height





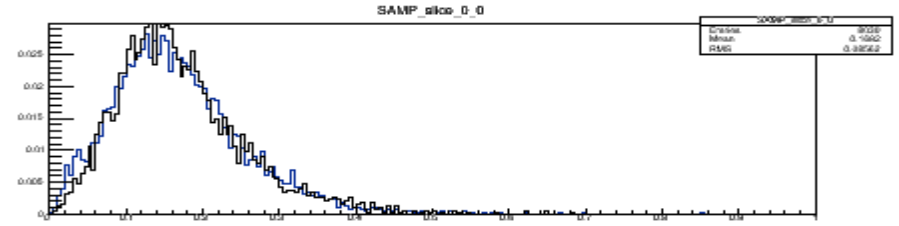


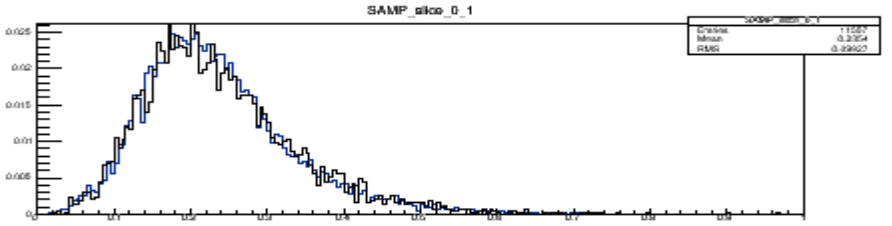


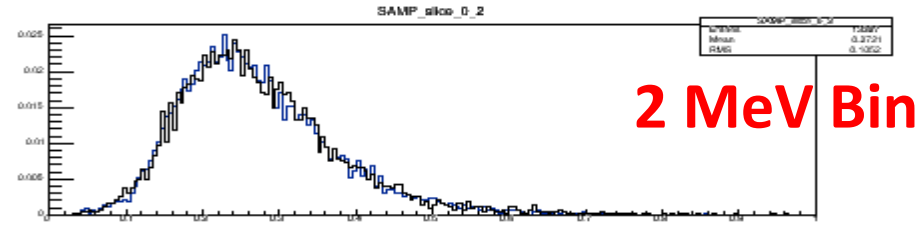
Calibration constant?

- Just add scaling factor 0.9 to CBAREne
  - (0.35-0.32)/0.32 ~ 0.1
  - 0.9 correspond 7.5mm Scintillator

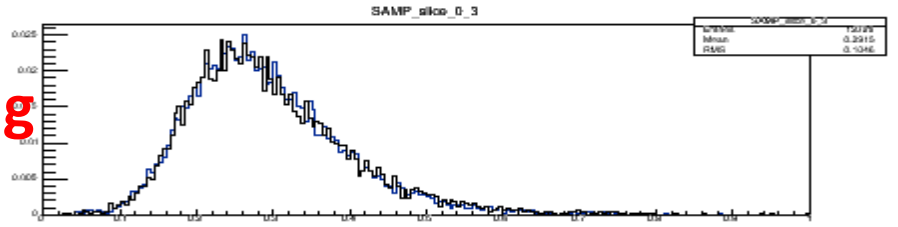
Raw distributions, (MC, Data)

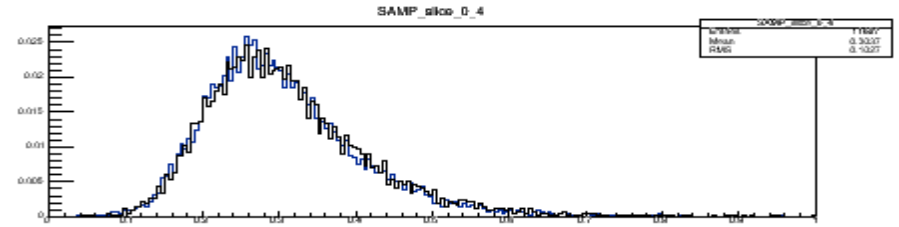


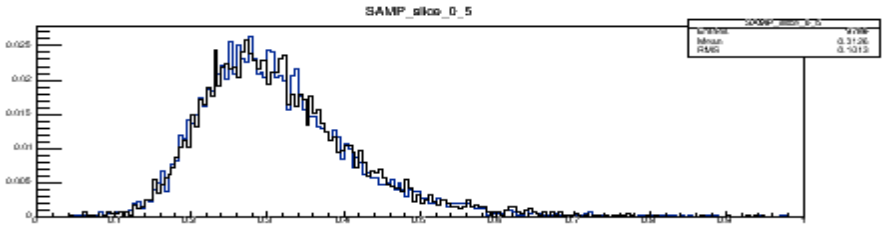


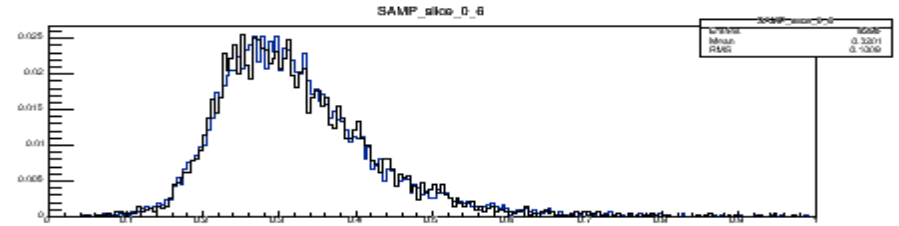


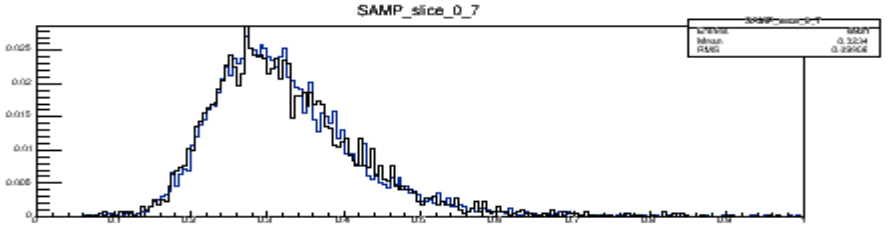
2 MeV Binning

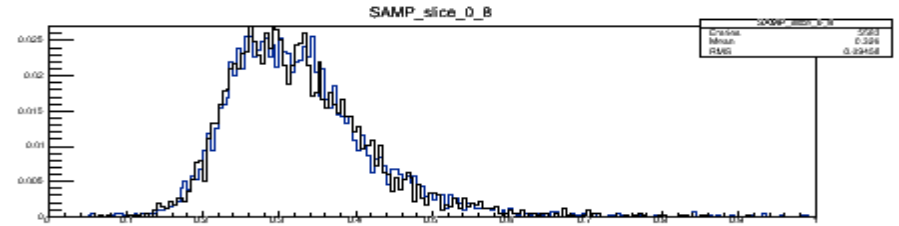


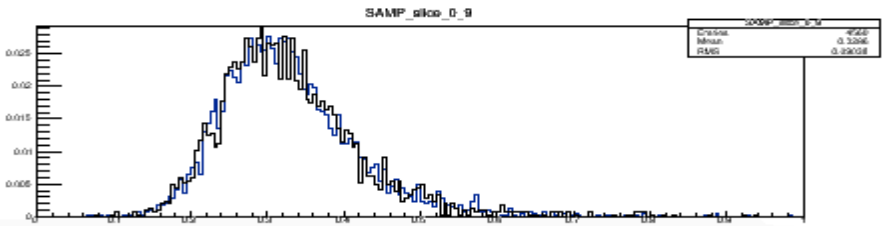




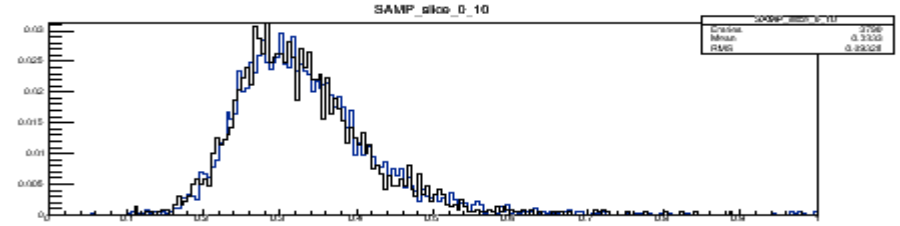


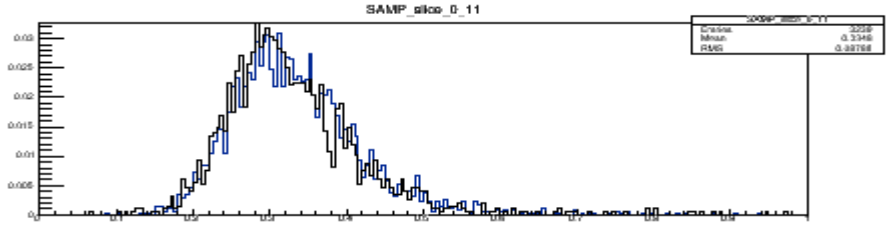


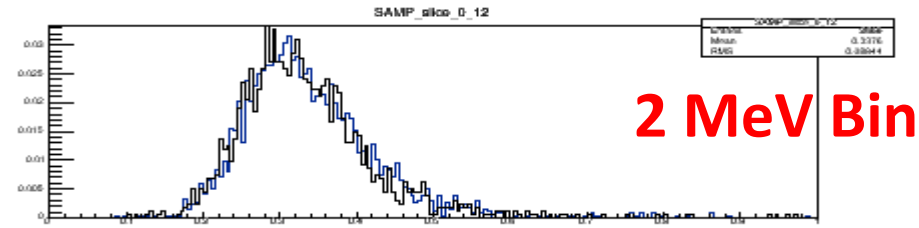




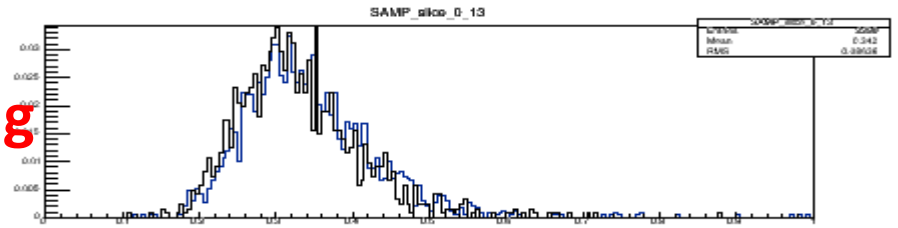
Raw distributions, (MC, Data)

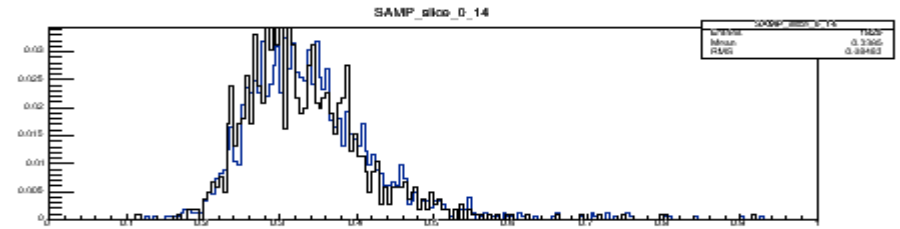


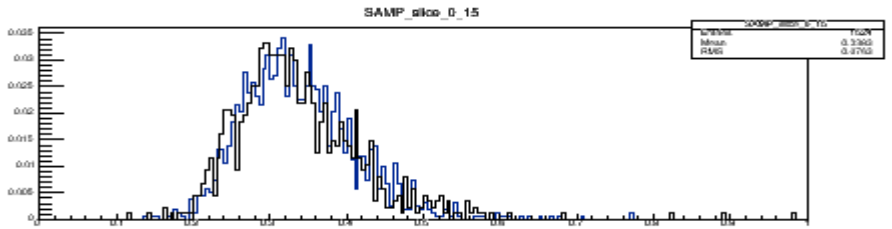


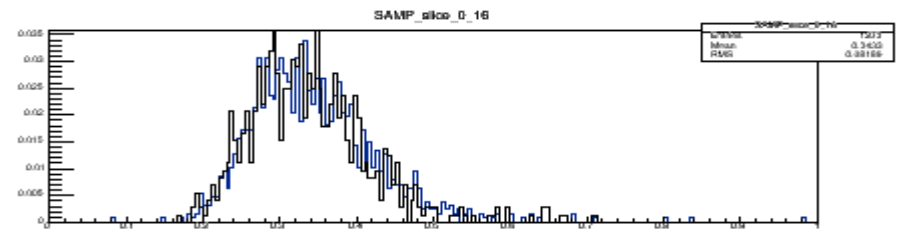


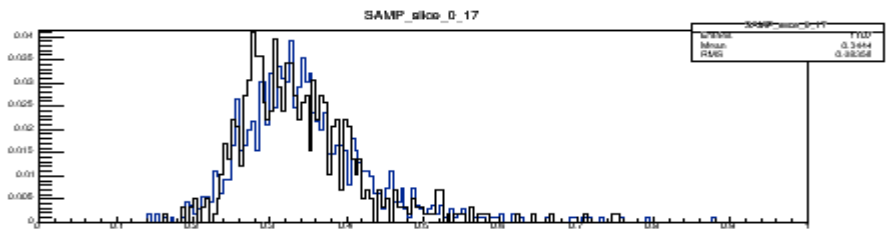
2 MeV Binning

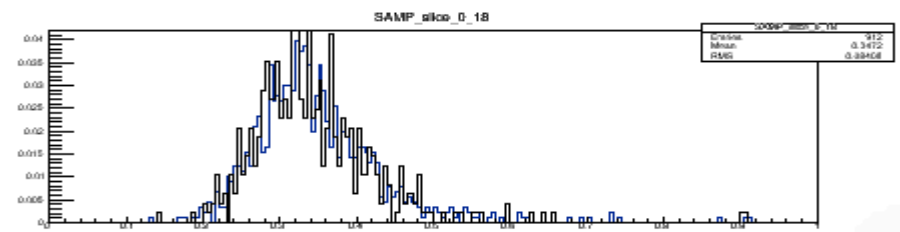


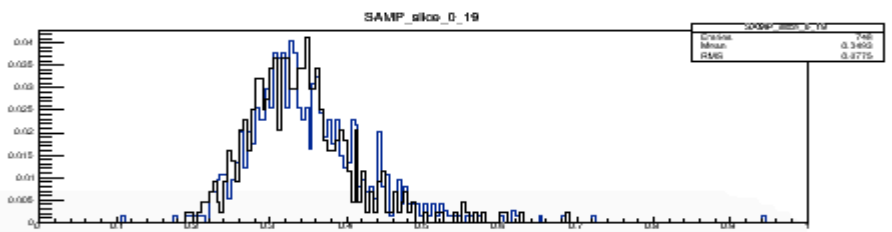




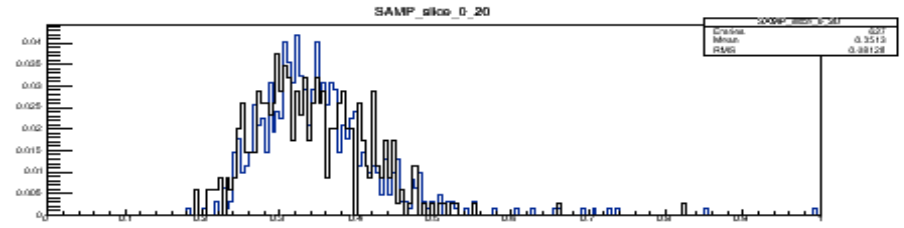


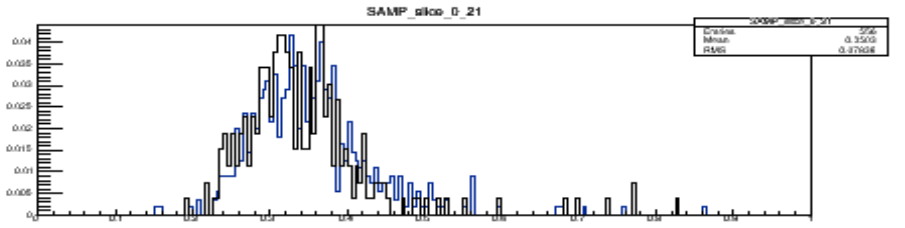


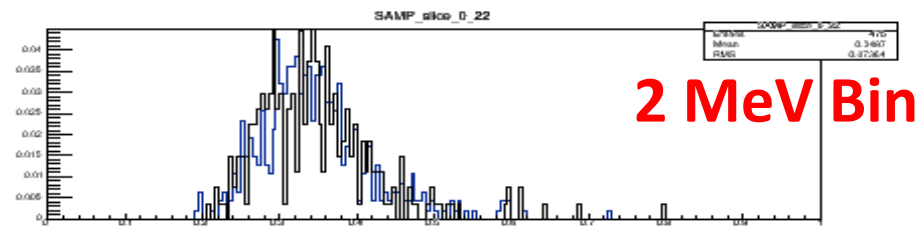




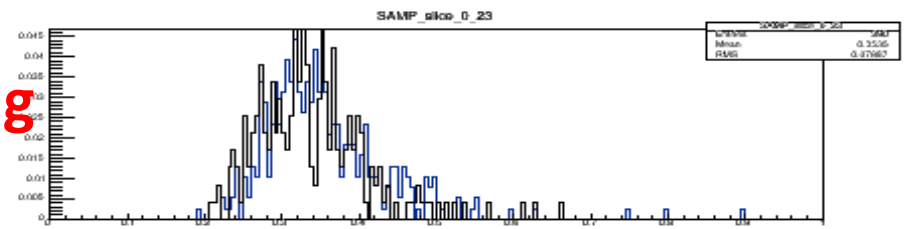
Raw distributions, (MC, Data)

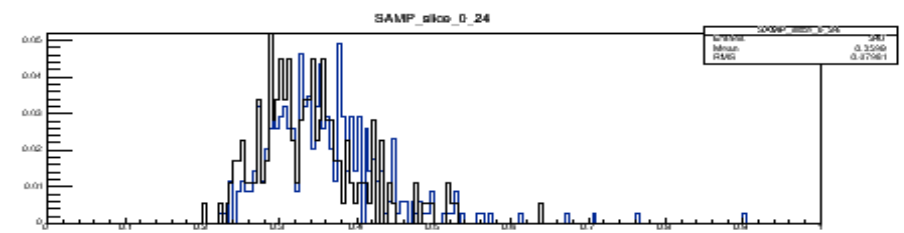


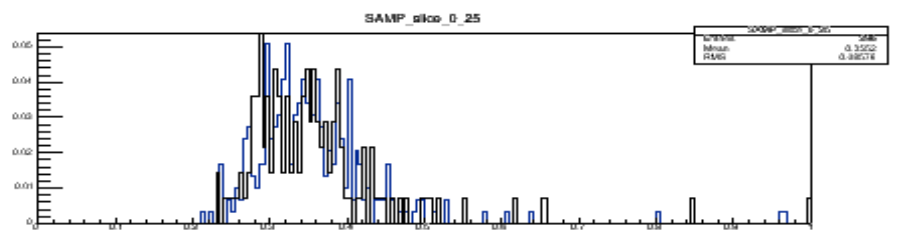


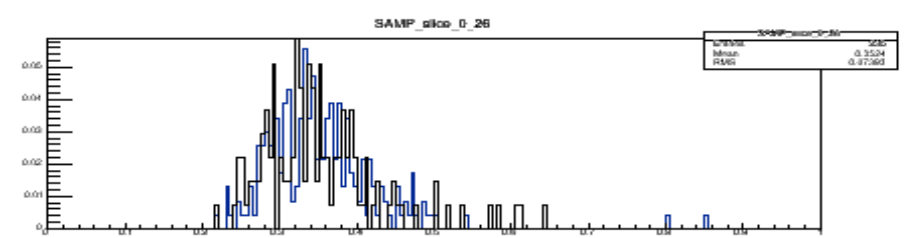


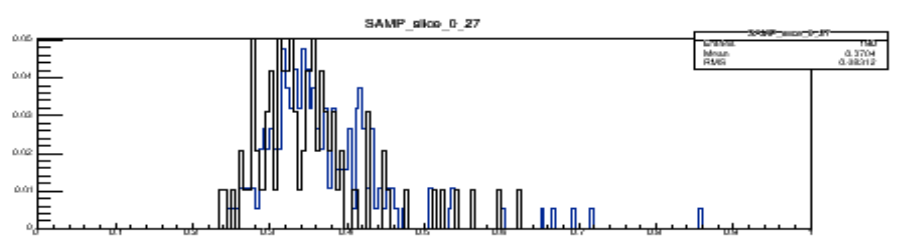
2 MeV Binning

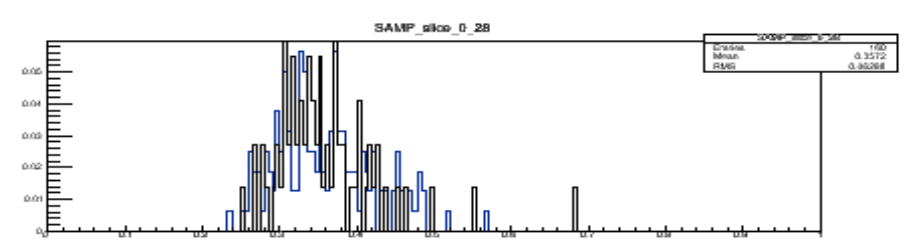


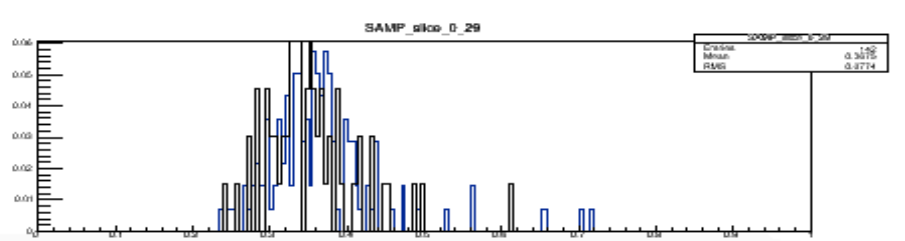












status

- Discrepancy of CBARENE between MC and data