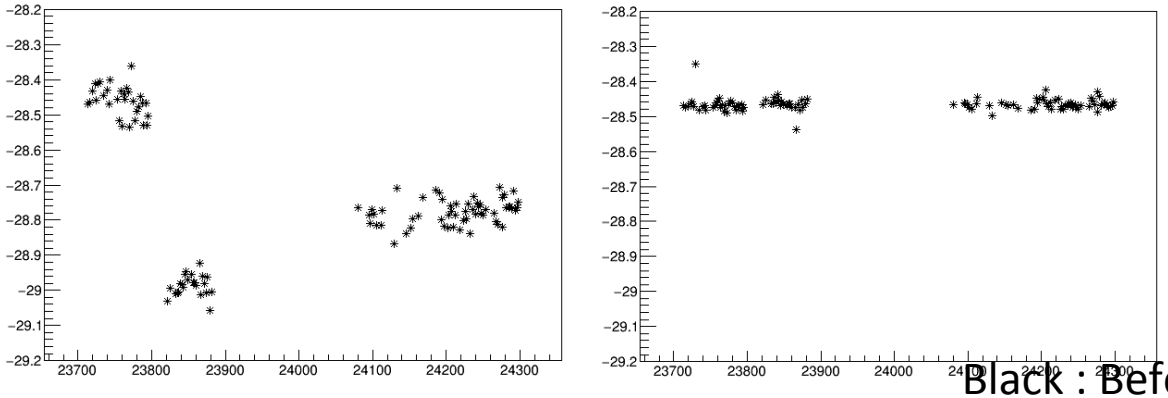
Current status

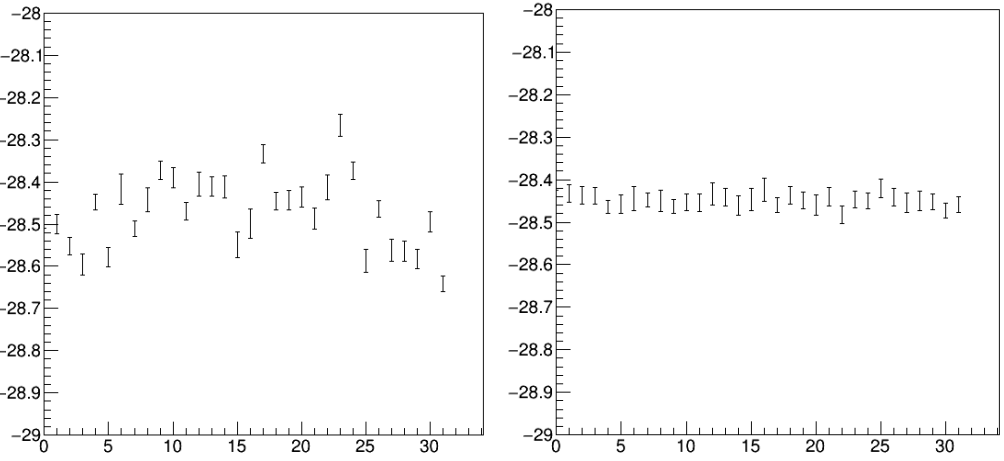
Contents

- 1) IB Resolution
  - Discrepancy between M.C. and Data
- 2) MBCV Calibration
  - Firstly done.
  - But energy cut gives difference fraction in a few modules
- 3) E14pipig
  - MC Generation is made using Geant4
  - Need to check method of reconstructing KLpipig
- 4) E14AlTarget
  - Need to check distributions of momentum, energy, open angle of pi0
  - Comparison with true value. (calculated kinematics)

1) IB Resolution

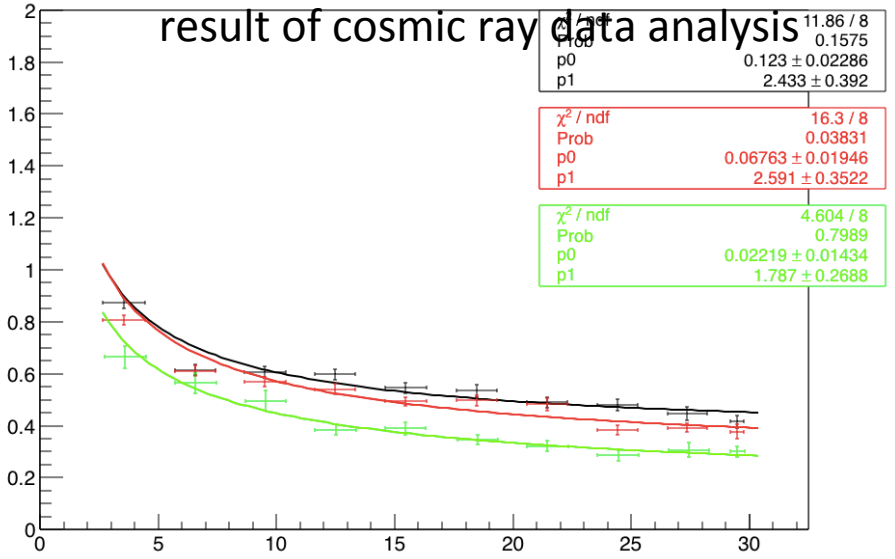


Run Correction : move offsets run by run

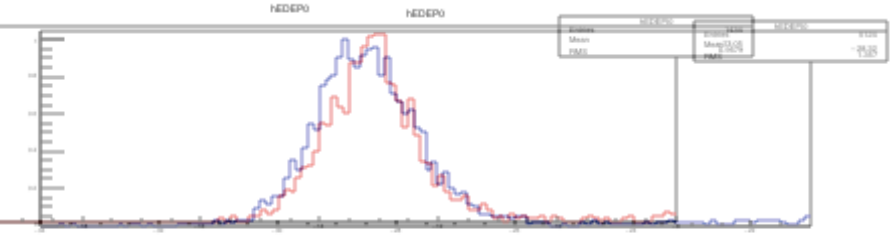


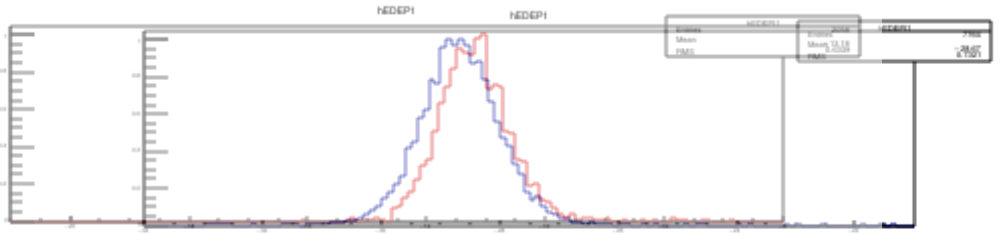
Move offsets module by module
(after run correction)

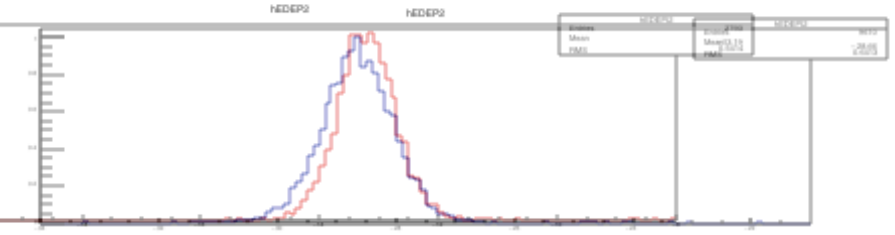
Black : Before corrections
Red : After corrections
Green : MC with smearing using
result of cosmic ray data analysis

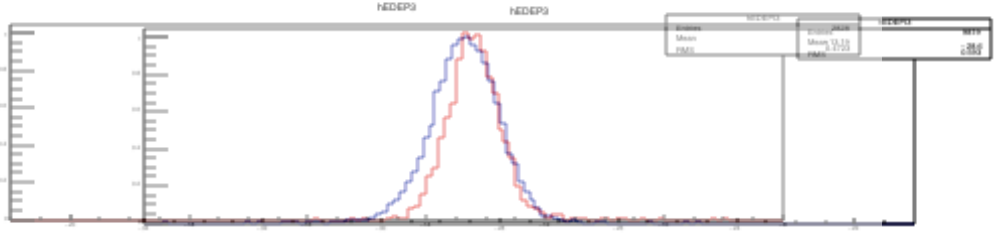


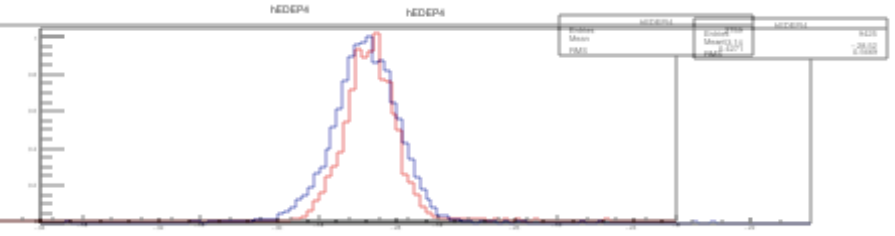
Blue : data with correction, Red : MC

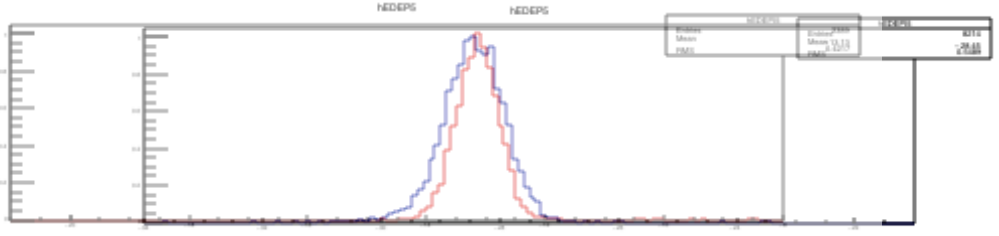


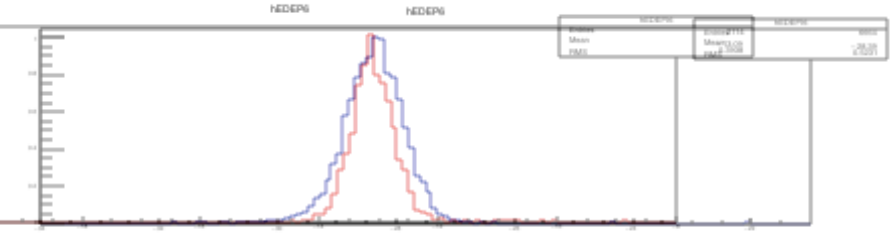


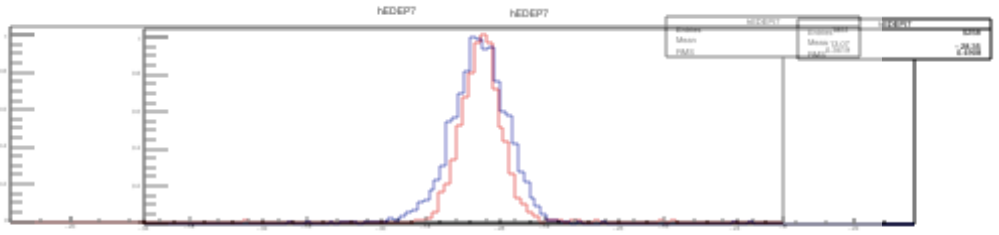


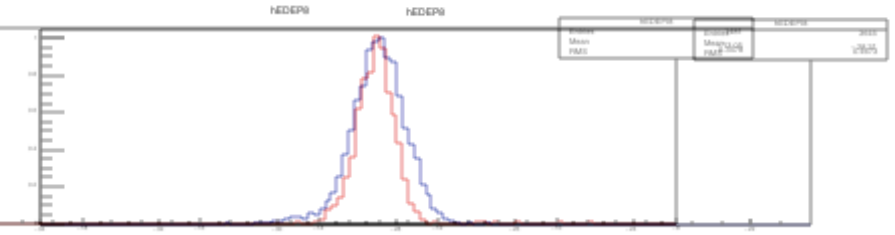


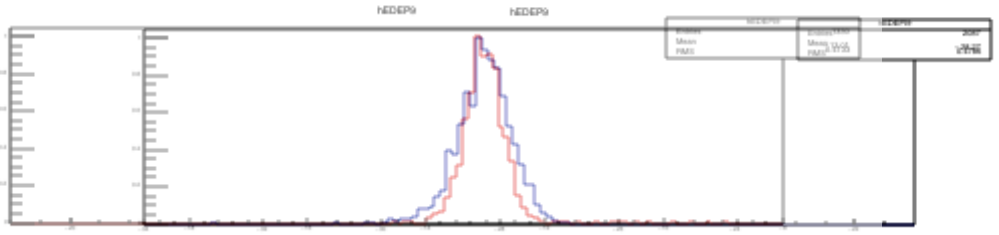




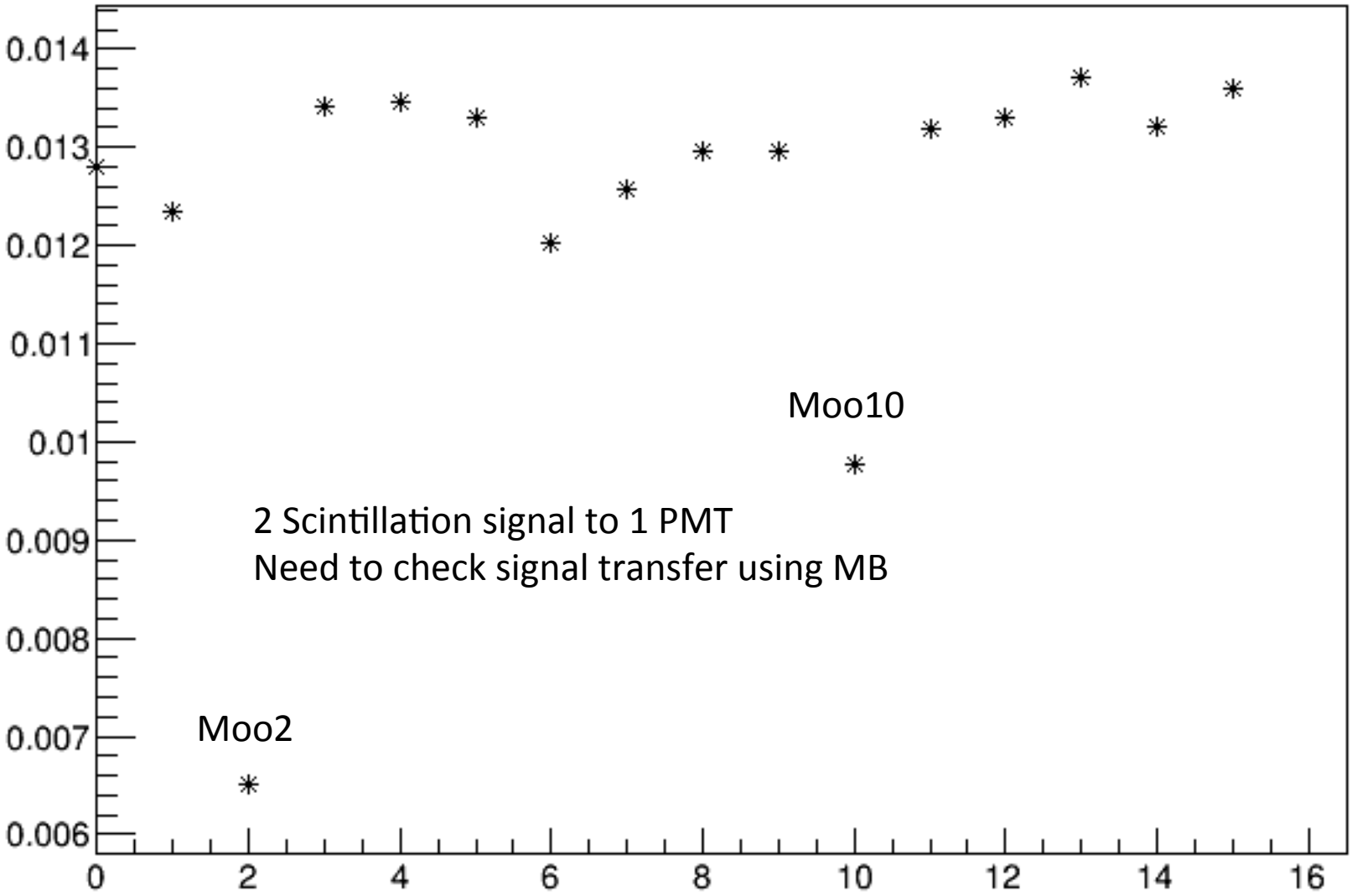




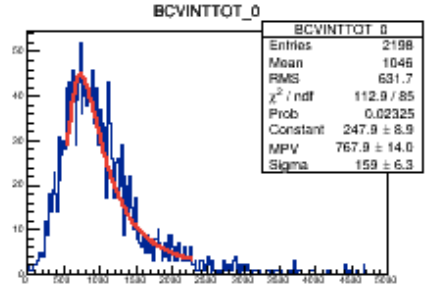


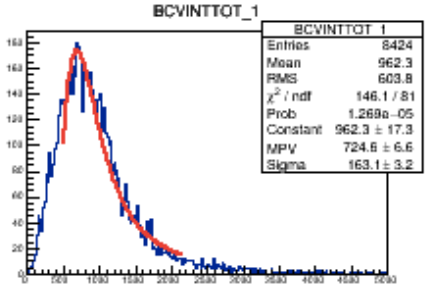


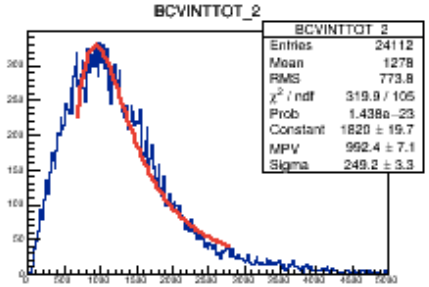
2) MBCV Calibration result

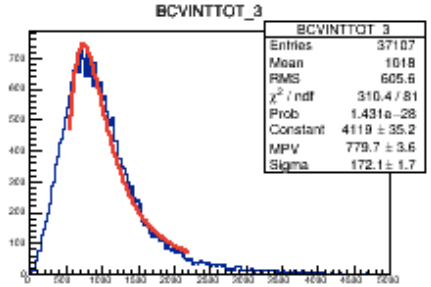


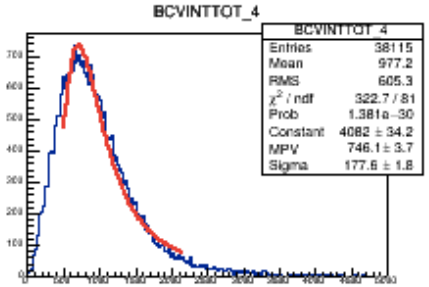
Fitting quality

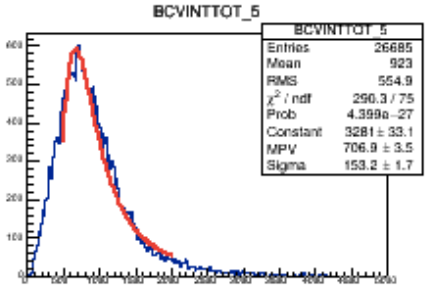


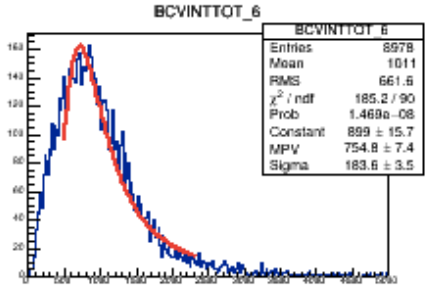


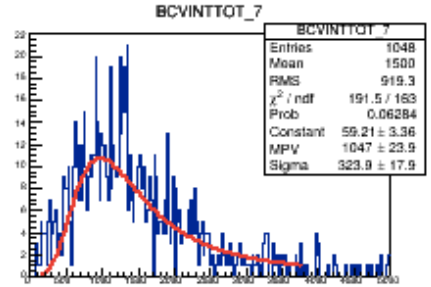


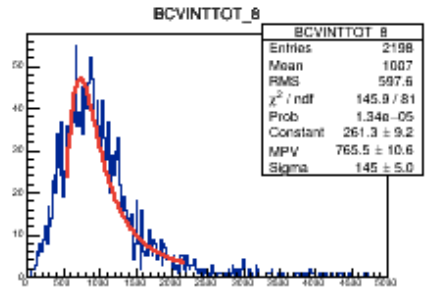


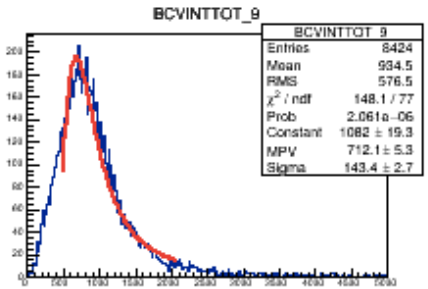


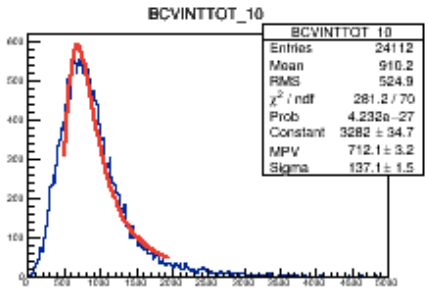


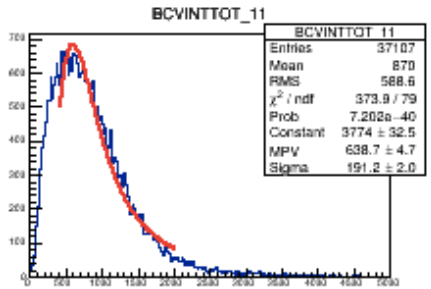


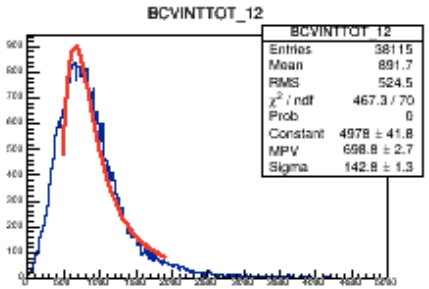


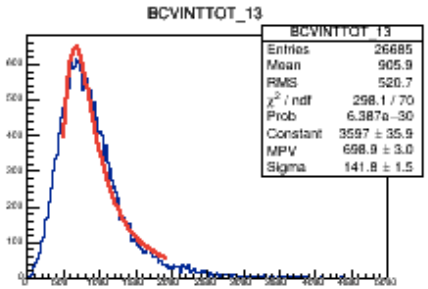


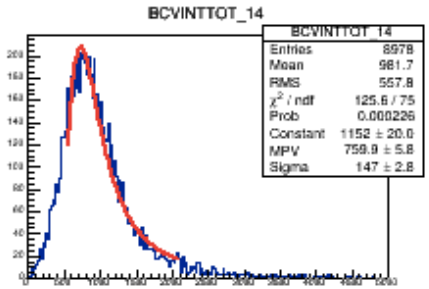


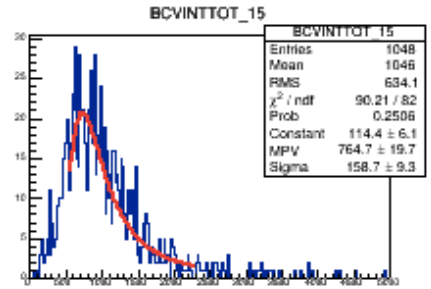






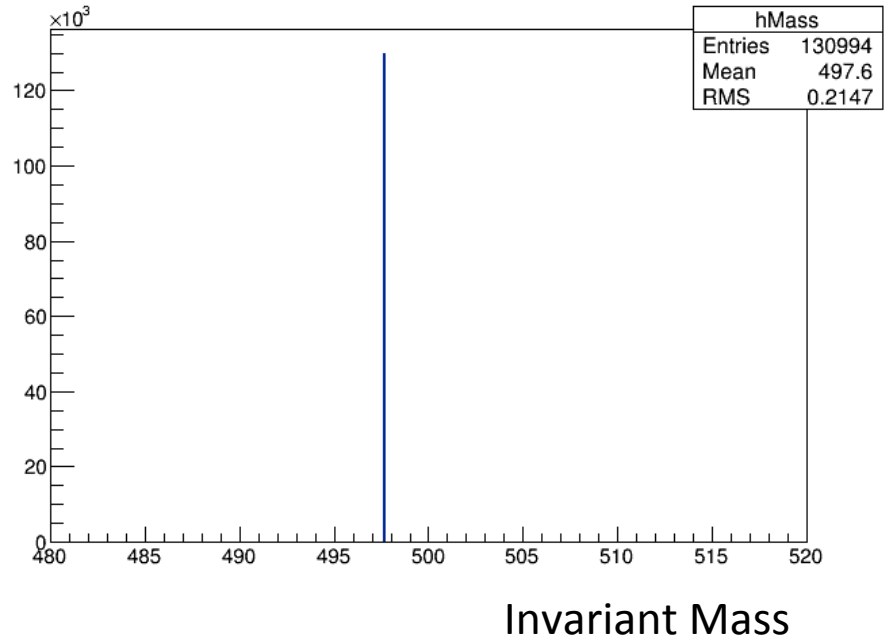






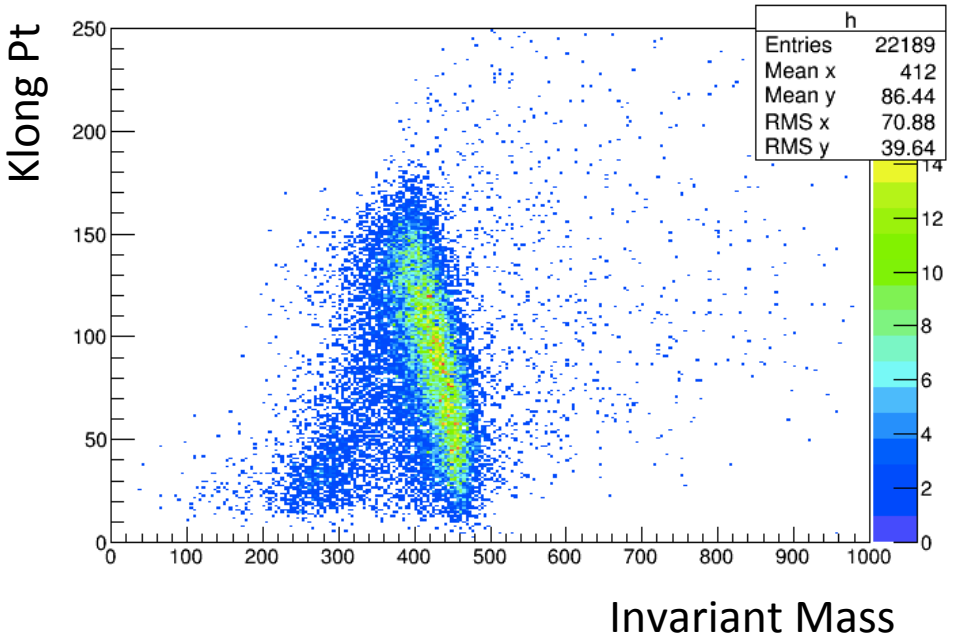
3) E14pipig

Invariant mass with MC true value



Invariant Mass

Kinematical Cut && Detector Veto



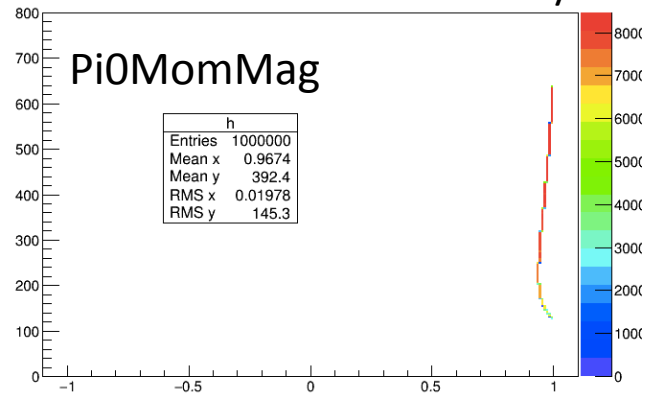
Invariant Mass

- Too high Klong Pt
  - Bug in code?
- Mass goes to ~460MeV

4) E14AlTarget

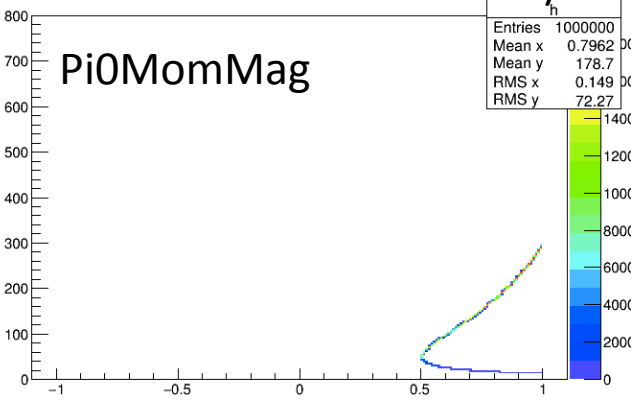
- Pi0 Kinematical distribution

Pz of lambda = 2500MeV/c



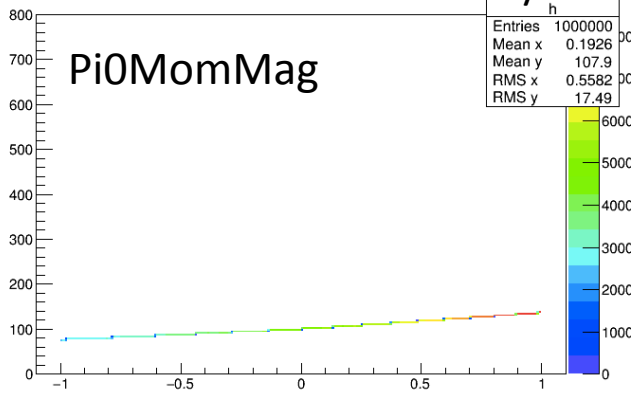
Pz/PMag

Pz of lambda = 1000MeV/c

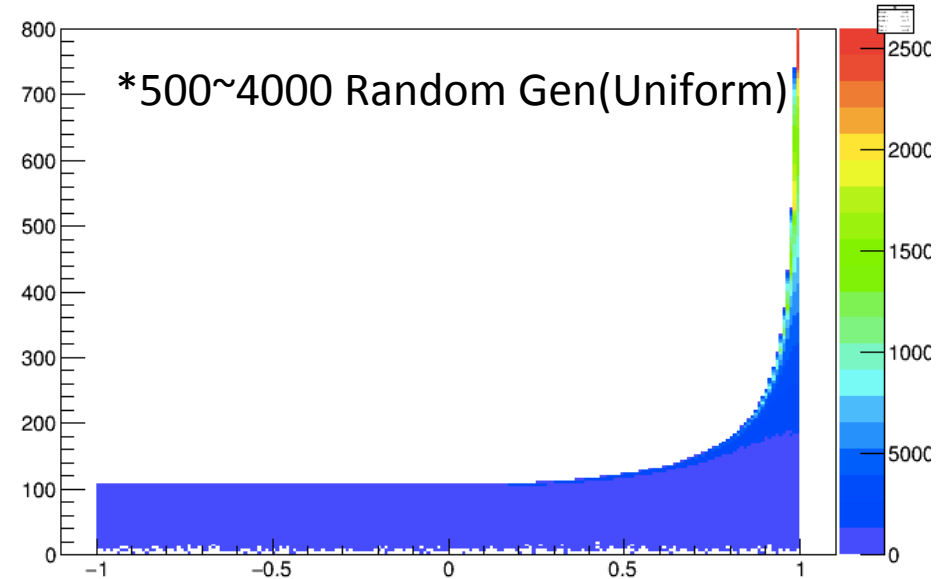


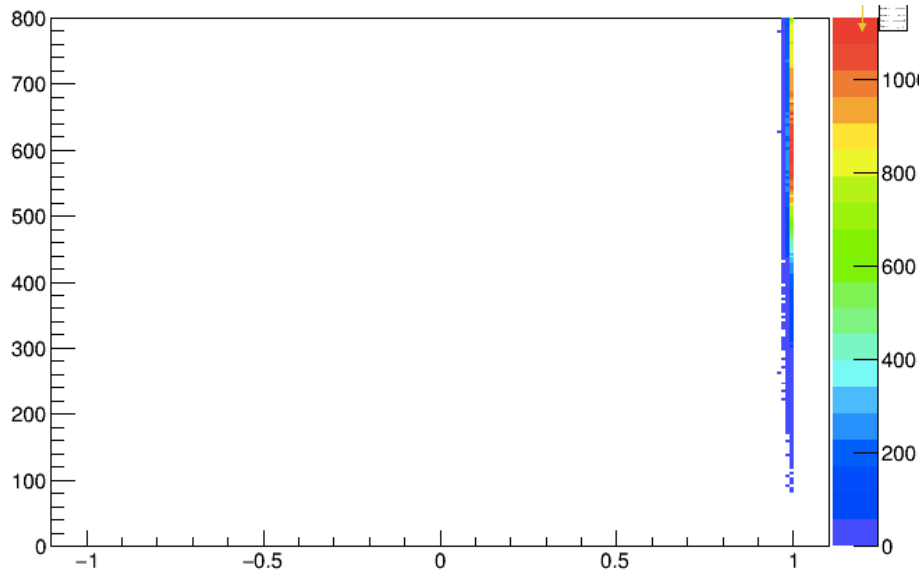
Pz/PMag

Pz of lambda = 200MeV/c



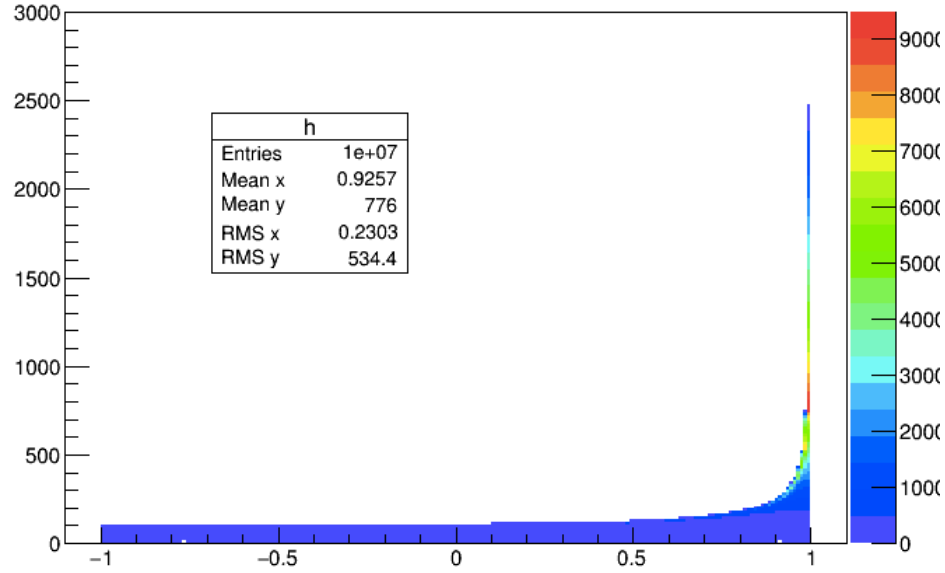
Pz/PMag



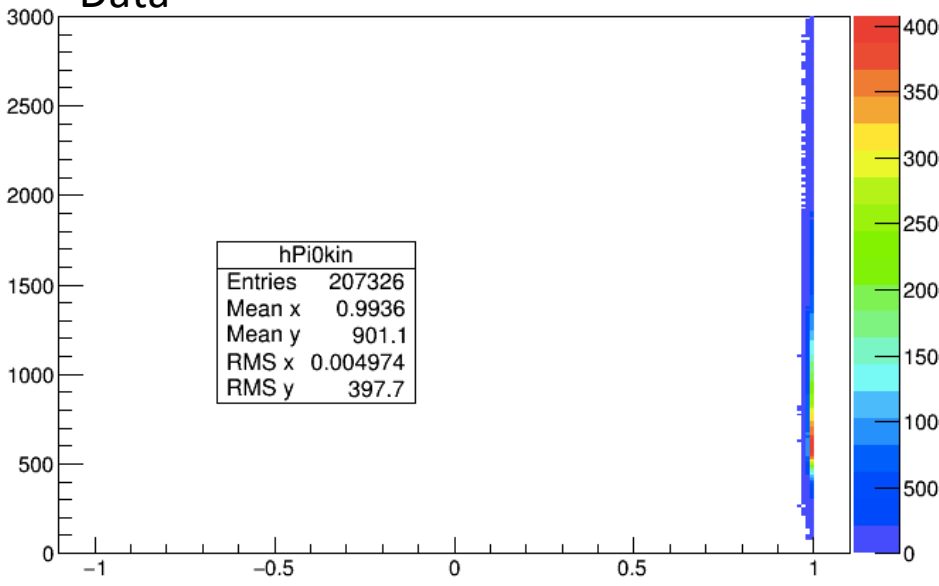


After adjusting Y-axis

Calculated variables



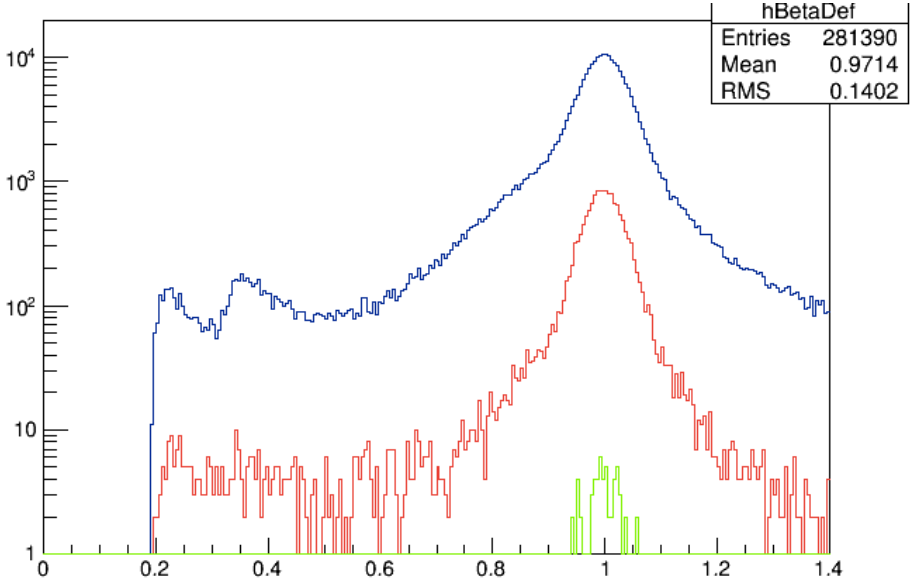
Data

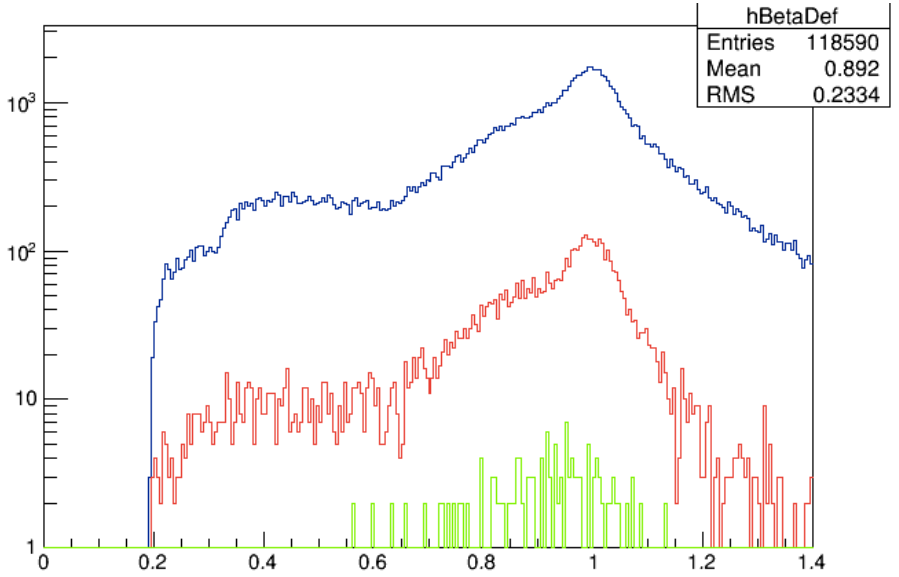


3g event

- Beta estimation
- Condition
  - Pi0 Mass Cut : +/- 5MeV/c^2
  - Detector Veto

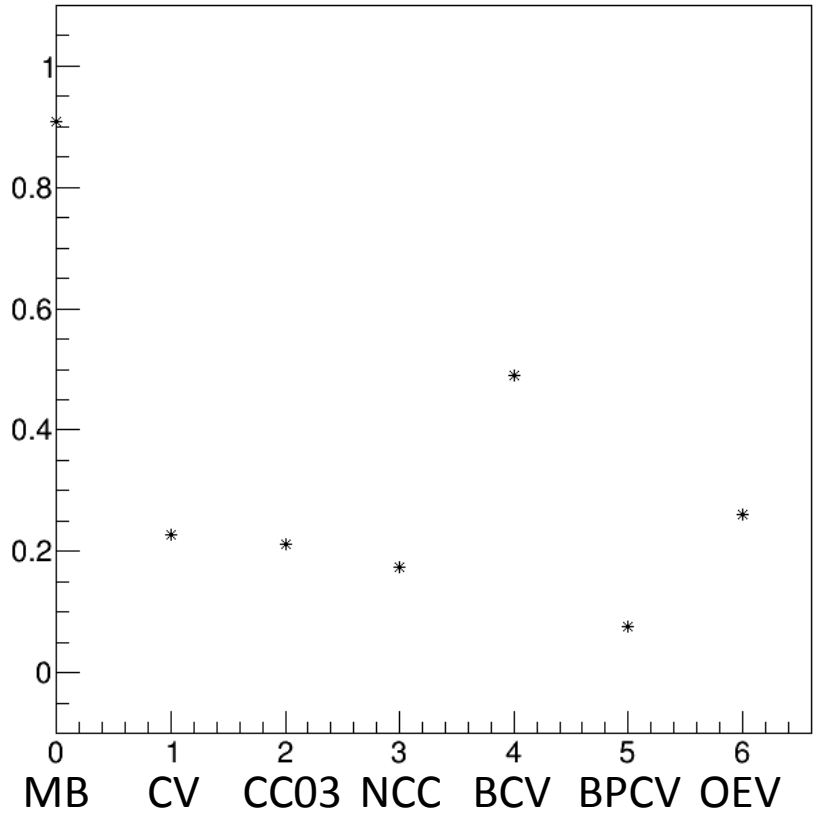
	Physics	Al Target
No Cut	281390	118590
Pi0Mass	16659	6356
+Veto	80	197



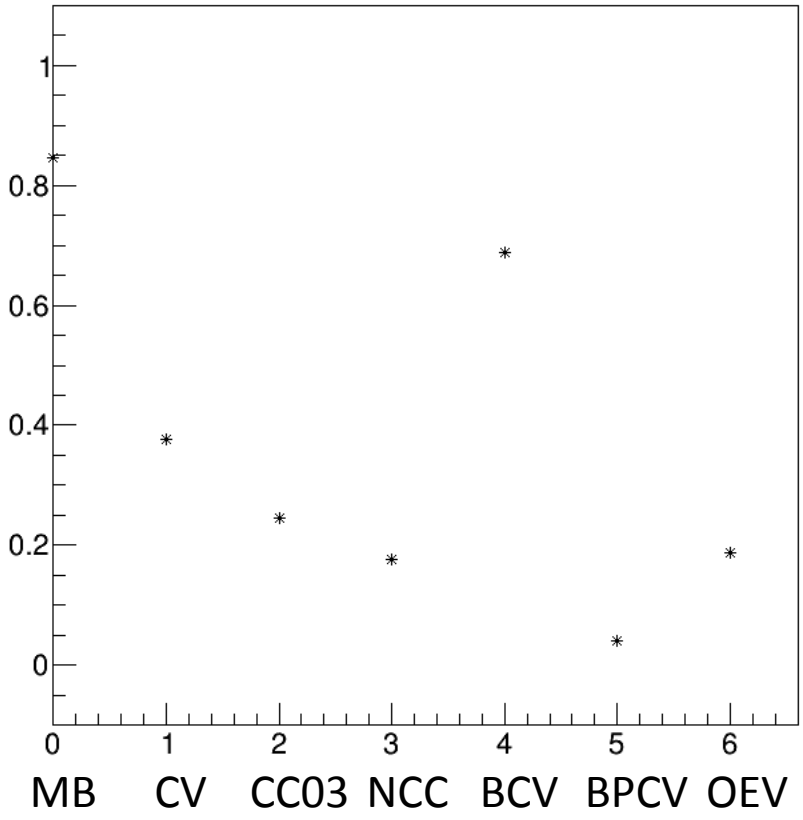


Reduction of Veto

Veto efficiency



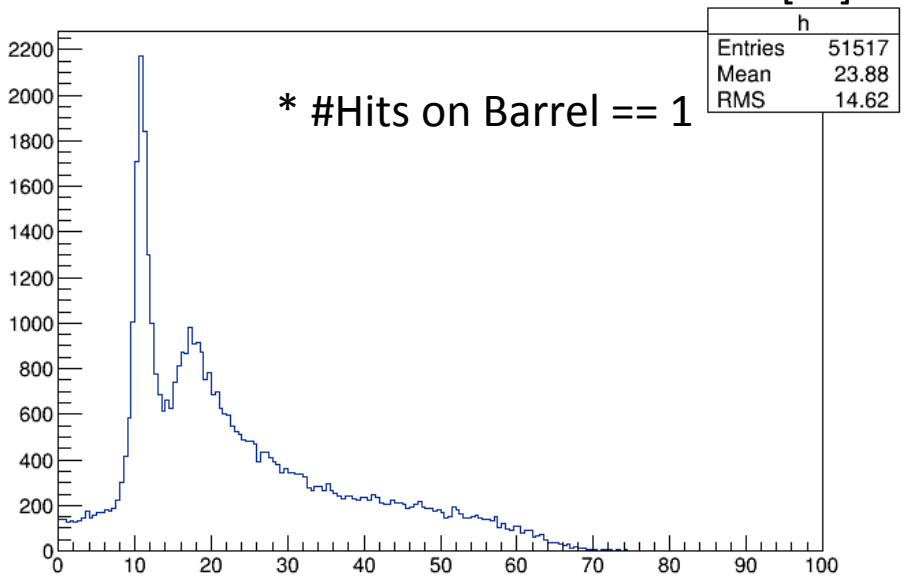
Veto efficiency



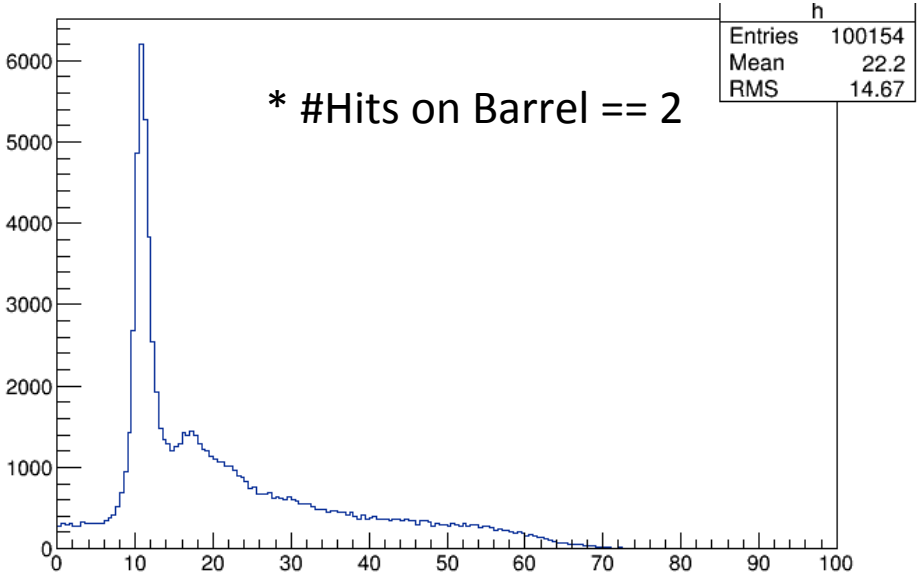
Signal at MB

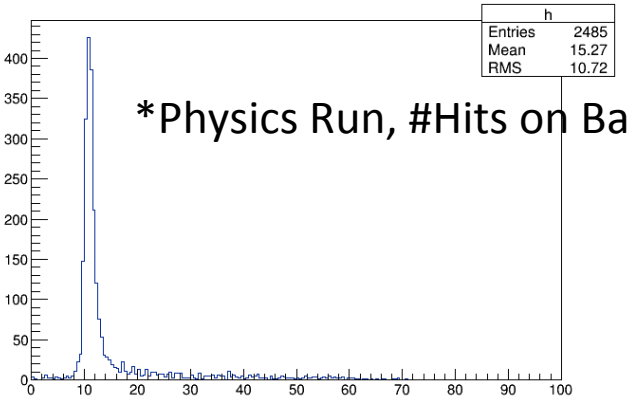
- Need to make cluster from MB Hits

Barrel Vertex Time – CsI Vertex Time [ns]



Barrel Vertex Time – CsI Vertex Time





Schedule about next beam time

- 종합시험 신청기간 4월3일~4월10일
- 외국어시험 면제신청 : 4월 7일까지
- 전북대학교 입학시험 : 5월 중순
- 학위청구논문 심사 : 6월 9일
- 한국물리학회 : 4월19일~4월21일

Refining the codes

- Refining codes about
  - Calibration of Barrels.
  - 5g+1g analysis.

  - For sharing these to other KOTO members