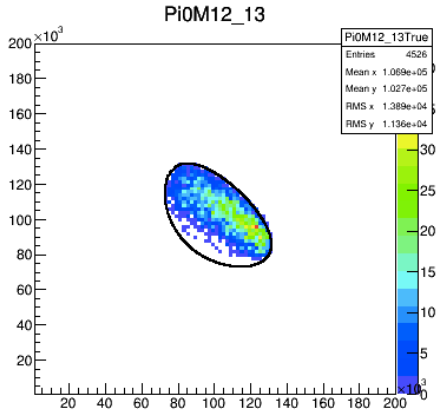
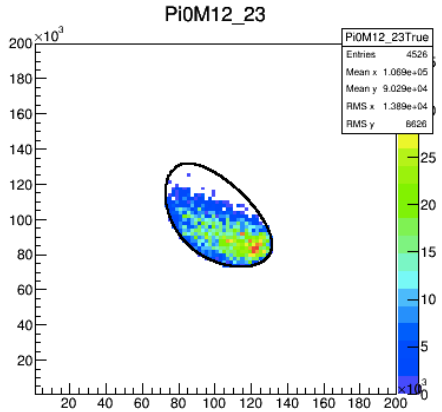
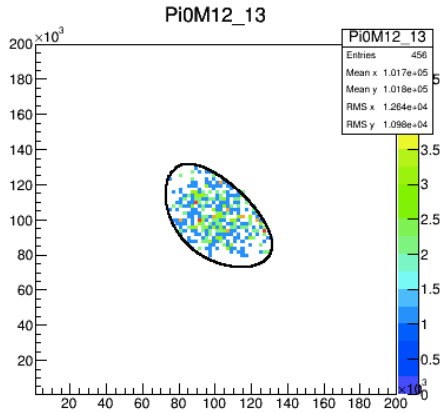
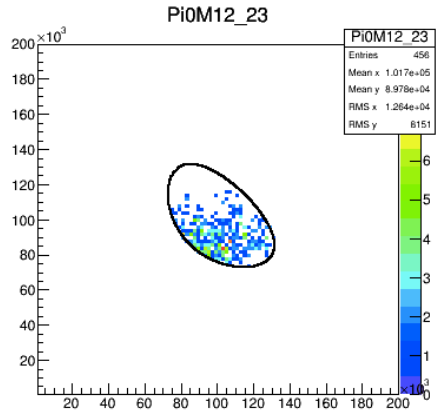
Report_161129

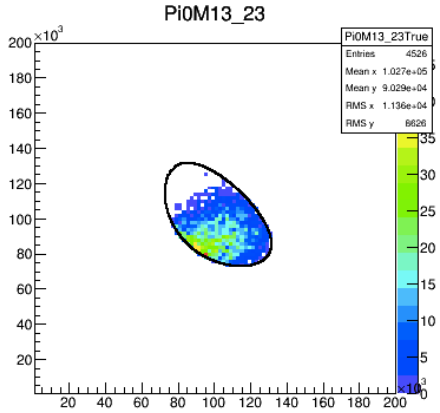
Graphical cut check

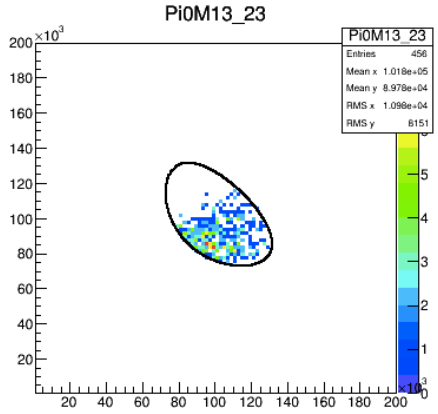












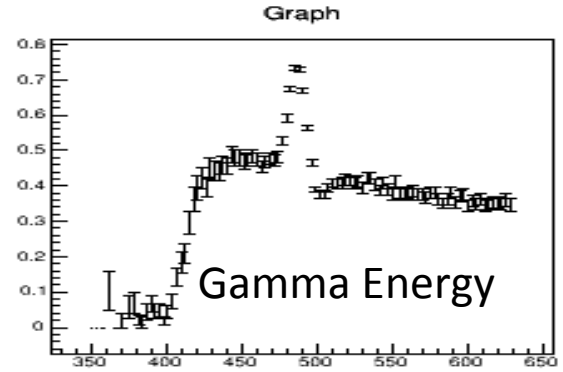
KL3pi0

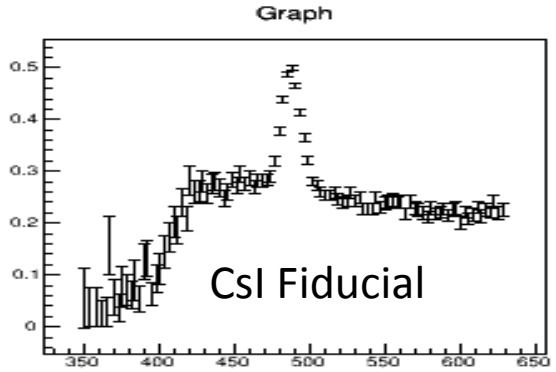
- #events
  - Run62 : 421909 -> 13310 [Kin. Cut]
  - Run69 : 442745(1.05) -> 15289(1.15) [Kin. Cut]

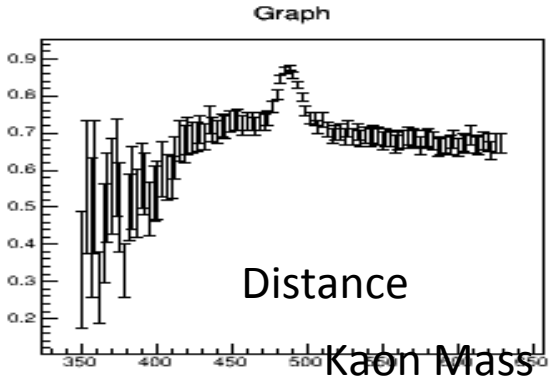
1.05 -> 1.15 in kinematical cut?

Run62

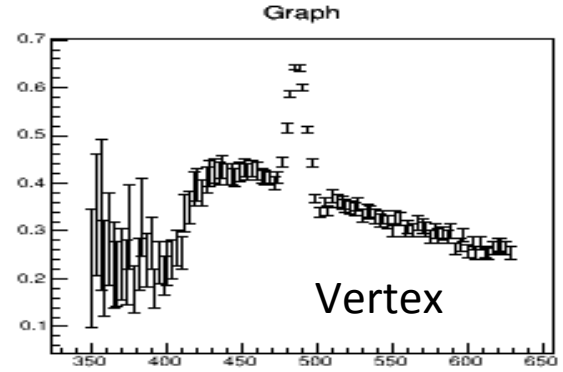
HIST_i = distribution with Cut i / no cut

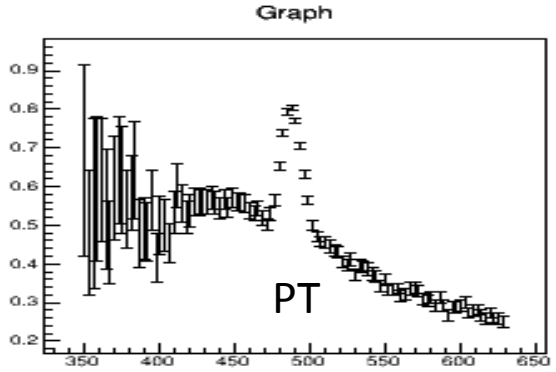


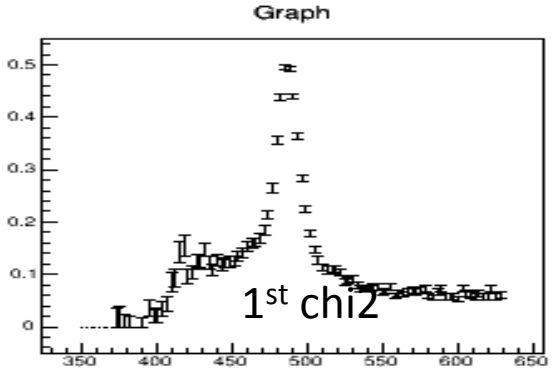


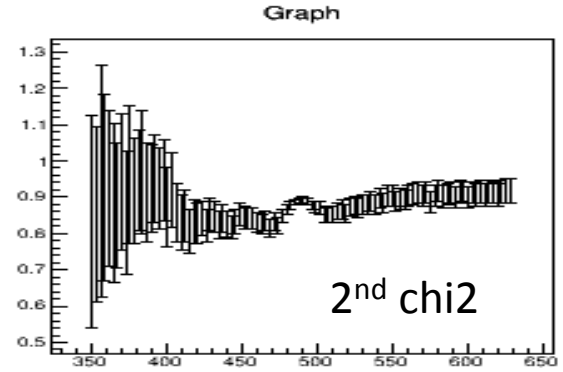


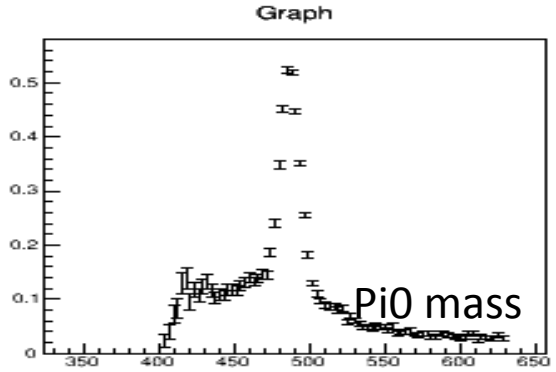
Kaon Mass

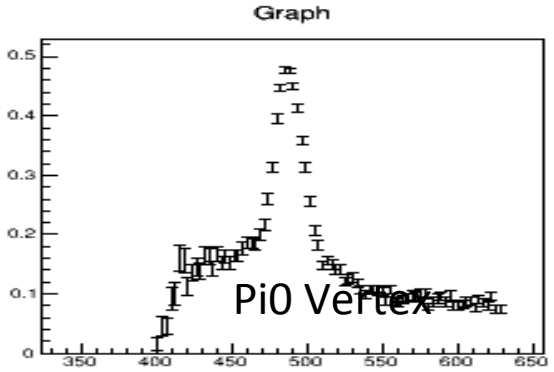








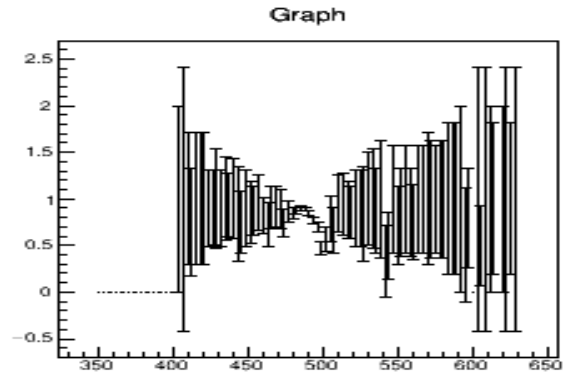


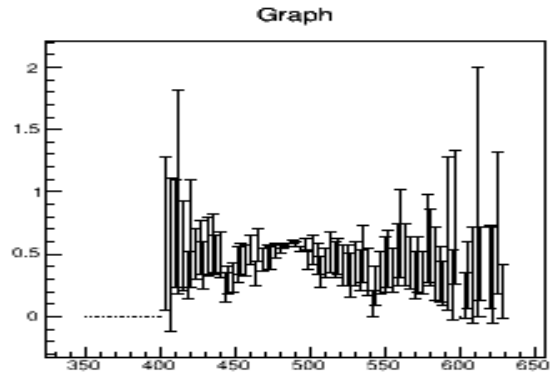


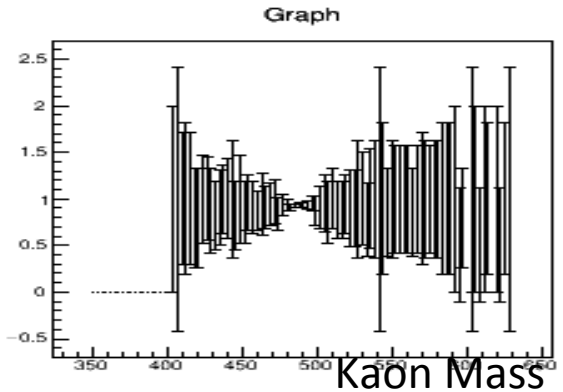
1.05 -> 1.15 in kinematical cut?

Run62

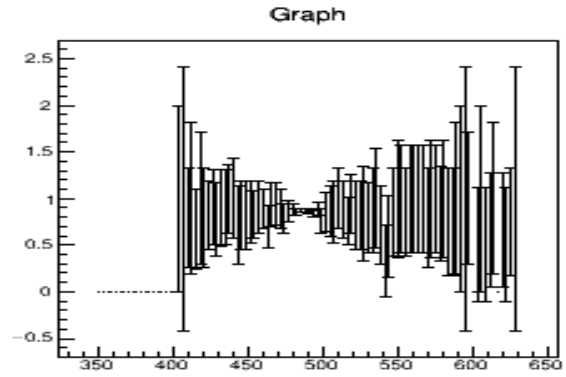
HIST_i = distribution only without Cut i / all cut

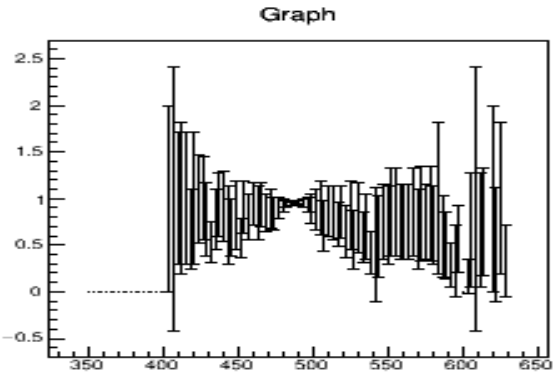


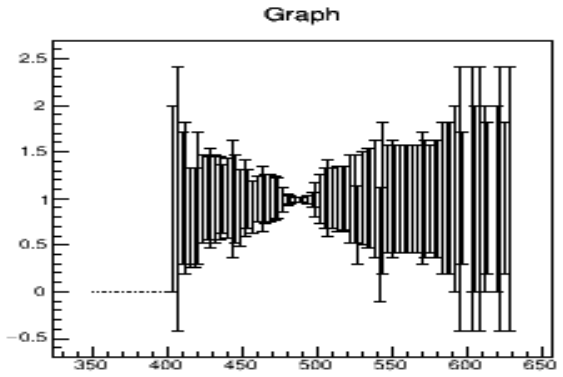


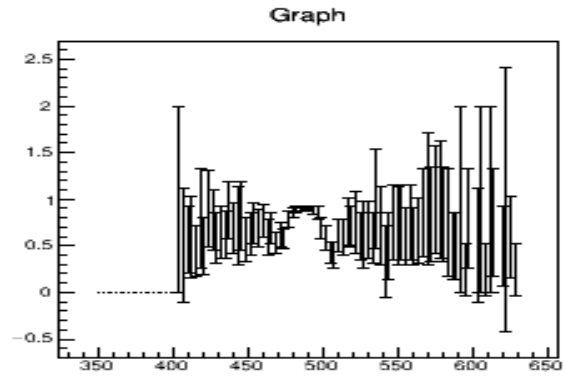


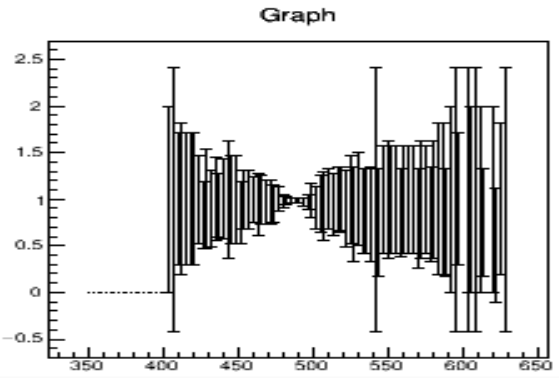
Kaon Mass

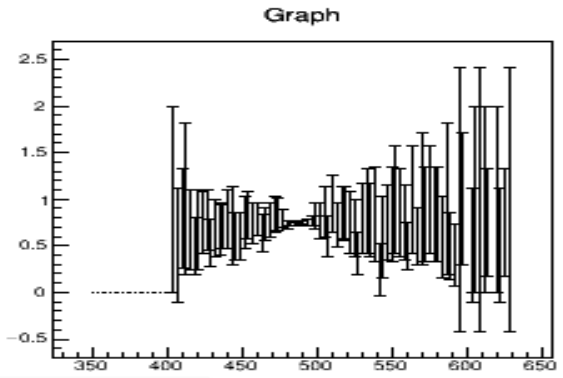






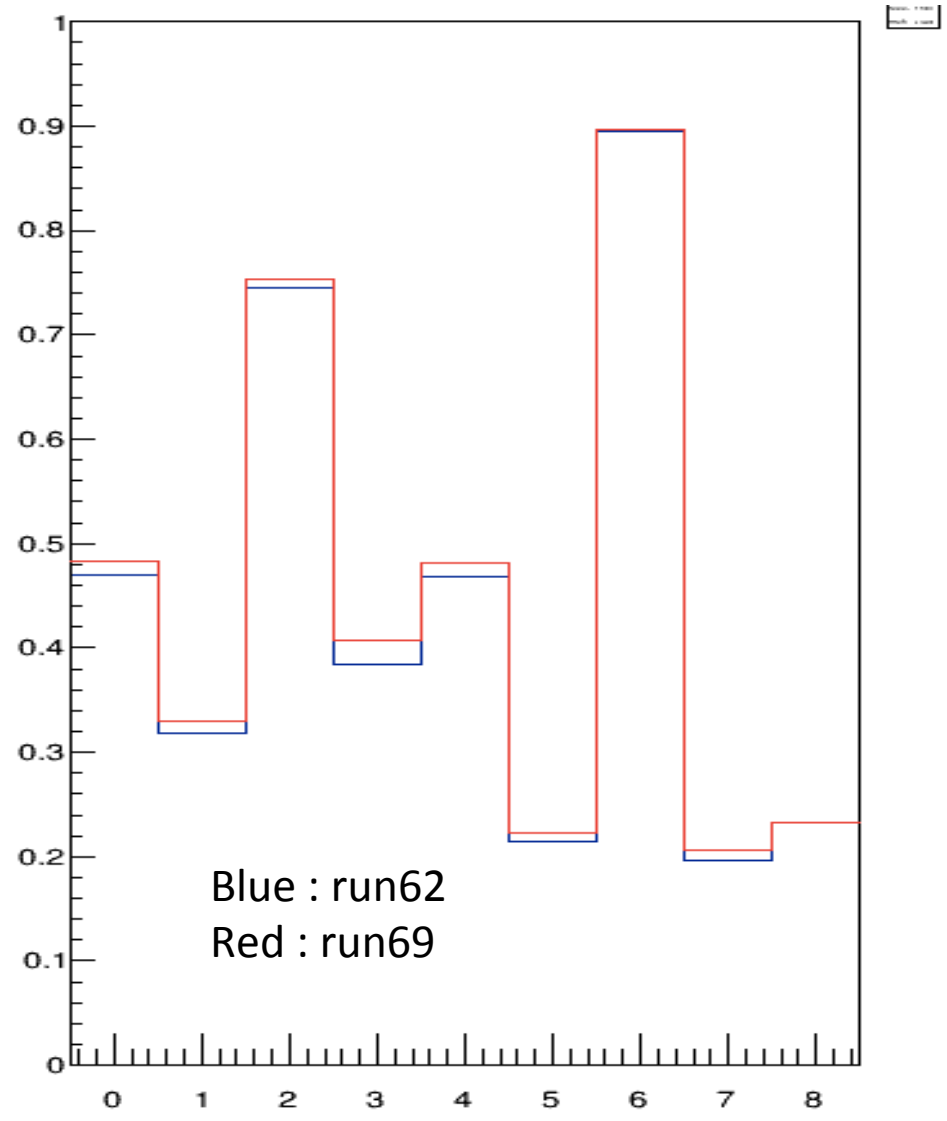




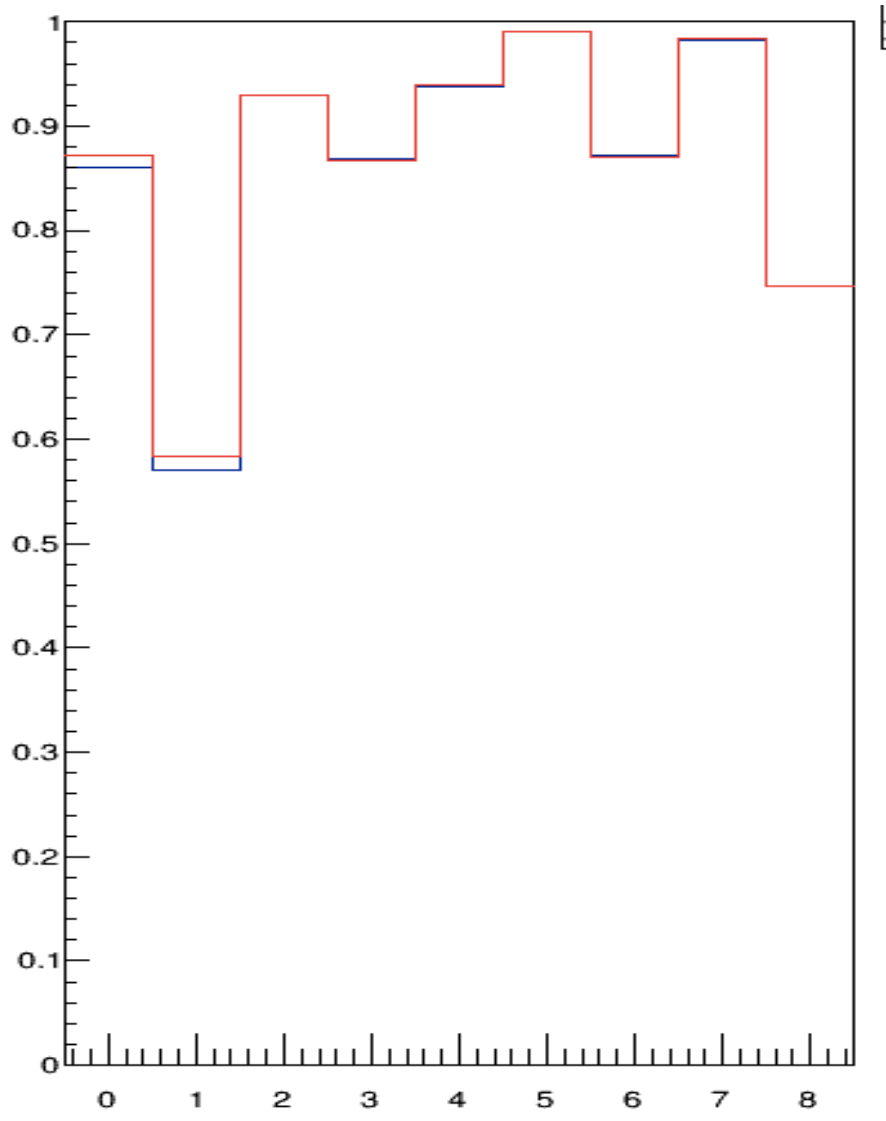


Ratio of events after each cut

HIST_i = distribution with Cut i / no cut

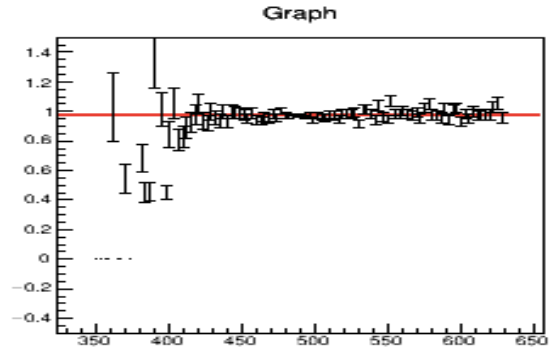


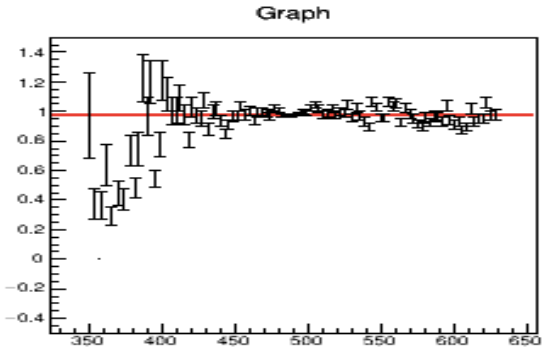
HIST_i = distribution only without Cut i / all cut

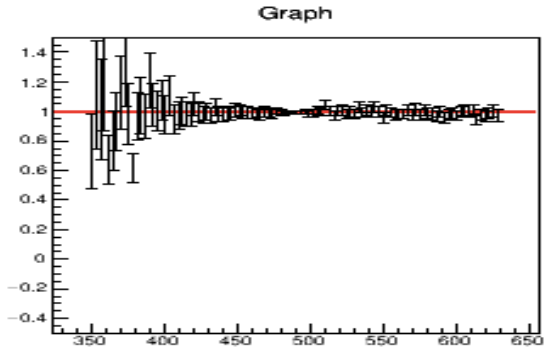


Run62/Run69
Single Cut

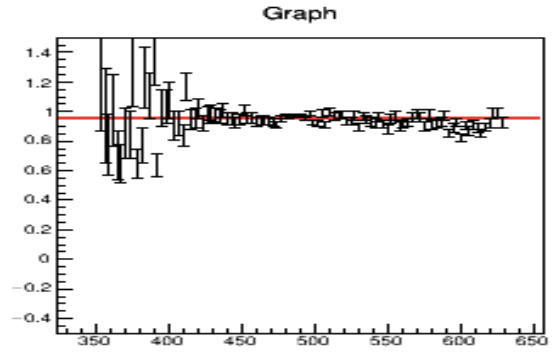
HIST_i = distribution with Cut i / no cut

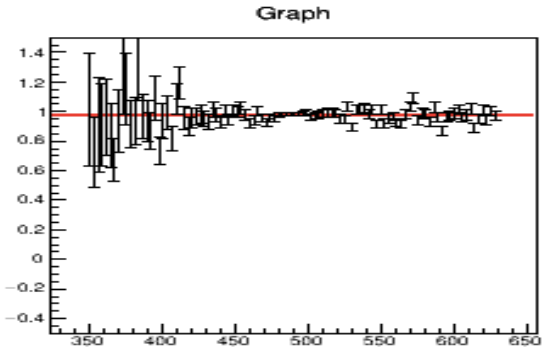


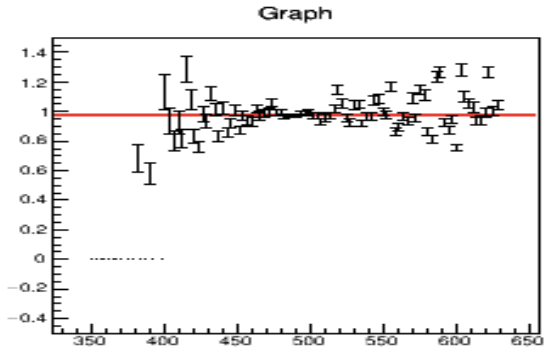


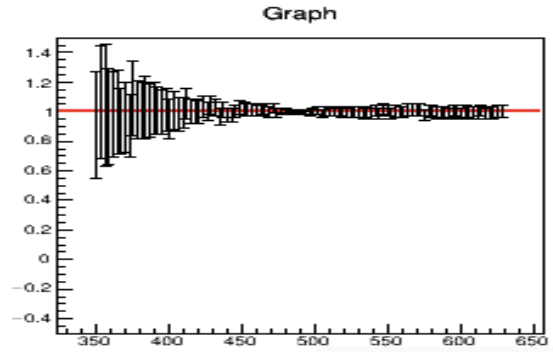


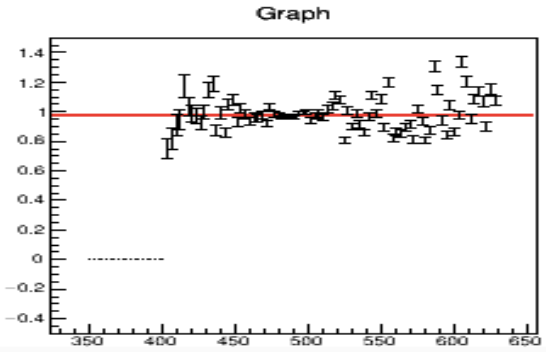
Kaon Mass

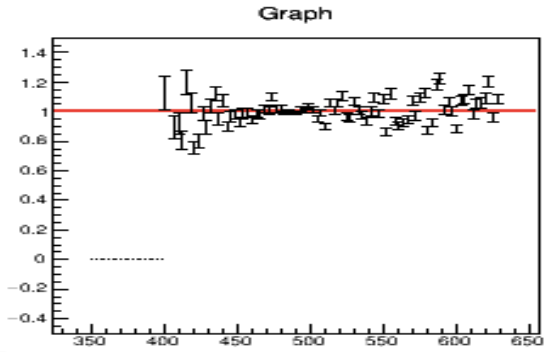






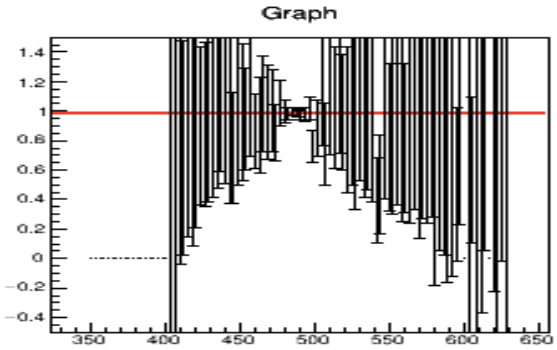


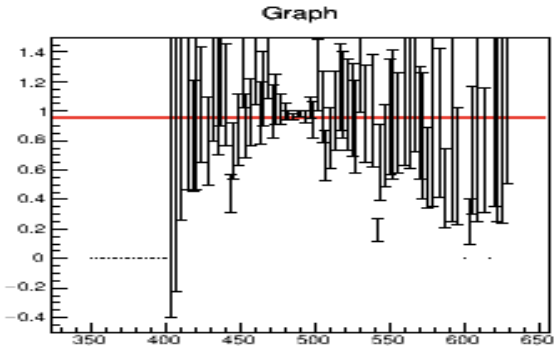


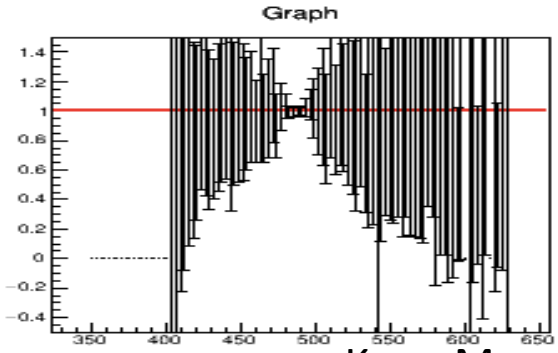


Run62/Run69
Partial Check

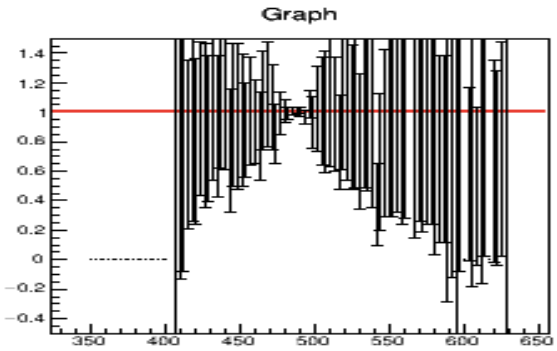
HIST_i = distribution only without Cut i / all cut

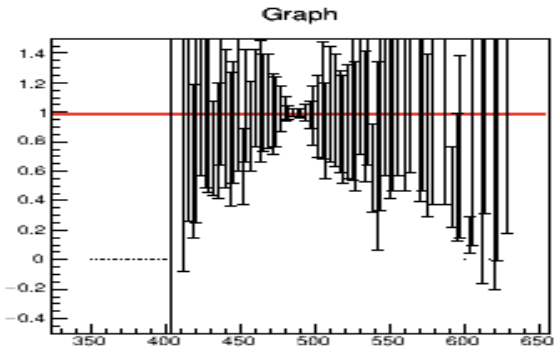


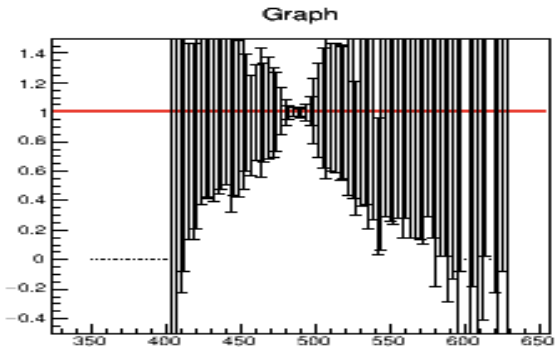


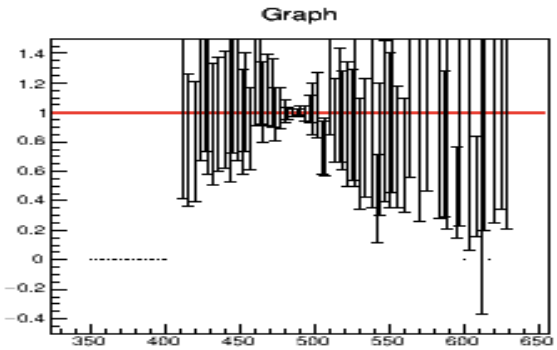


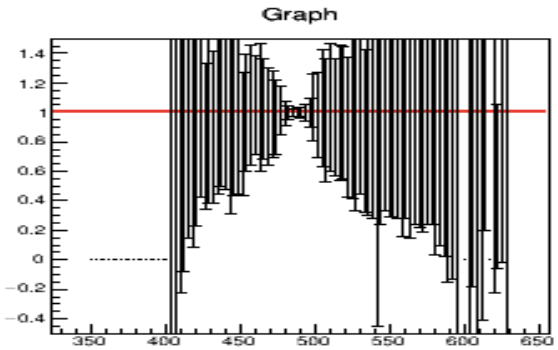
Kaon Mass

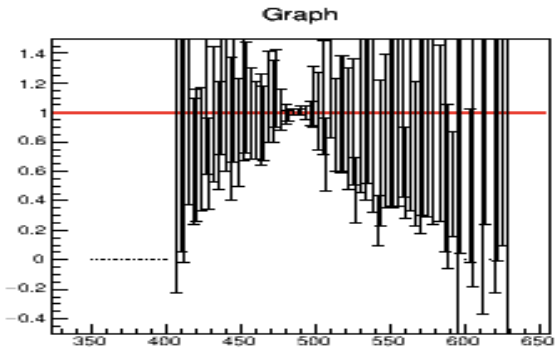








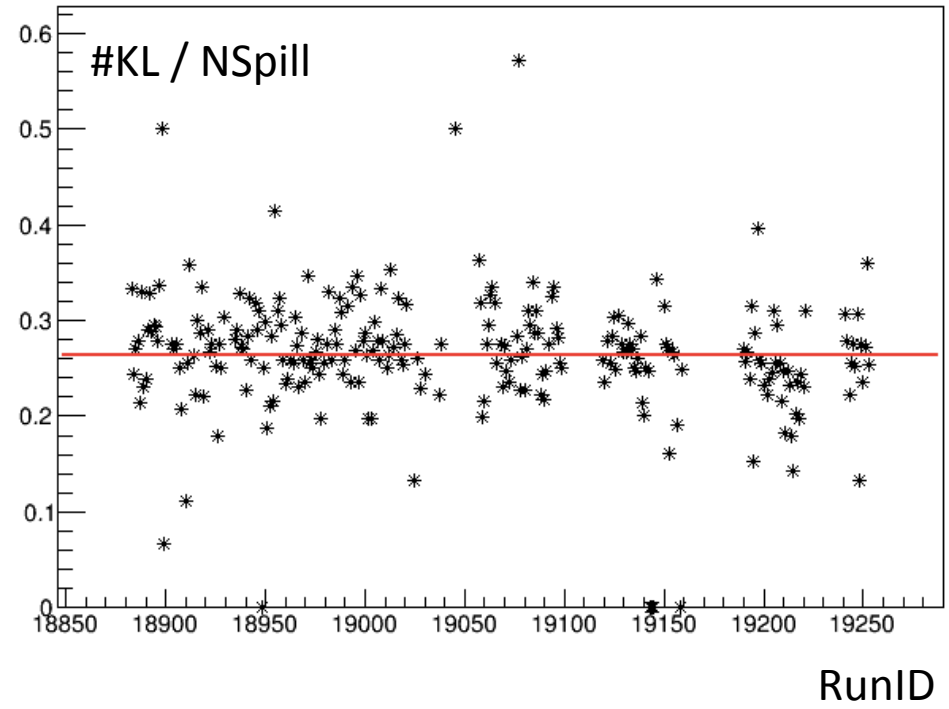




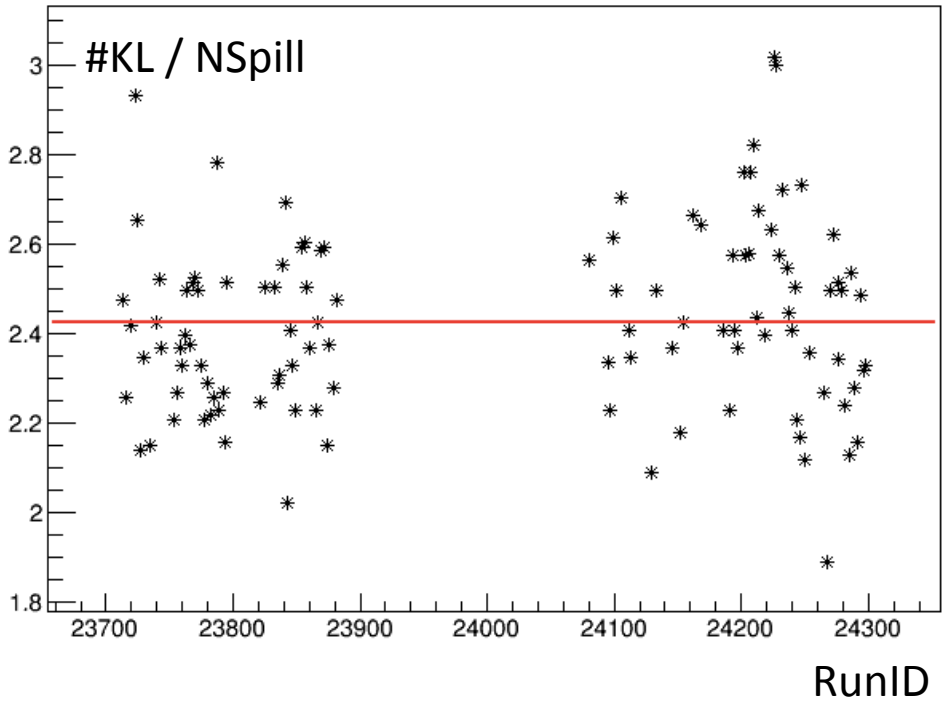
Run stability

KL3pi0, Minimum Bias data(CsIET Trigger > 800MeV in offline, 650MeV in online)

Run62(~250spill) 27kW

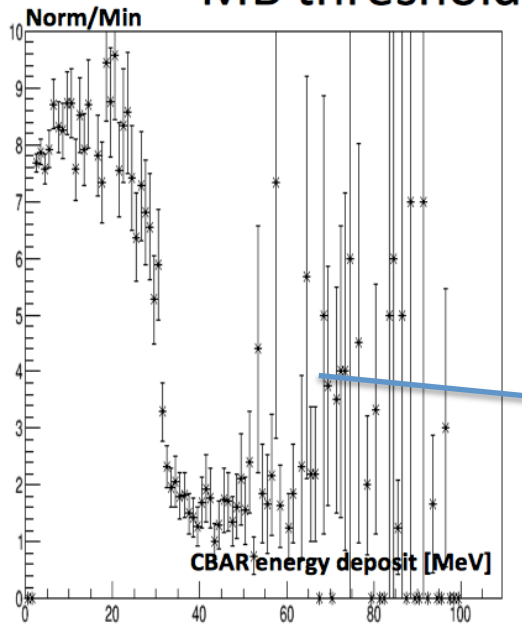


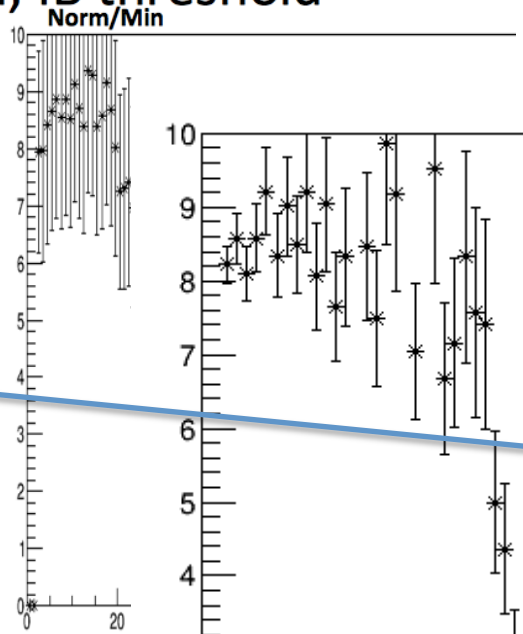
Run69(~100spill) 42kW



Energy Deposits on MB (revised)

Normalization data in run69
MB threshold, IB threshold

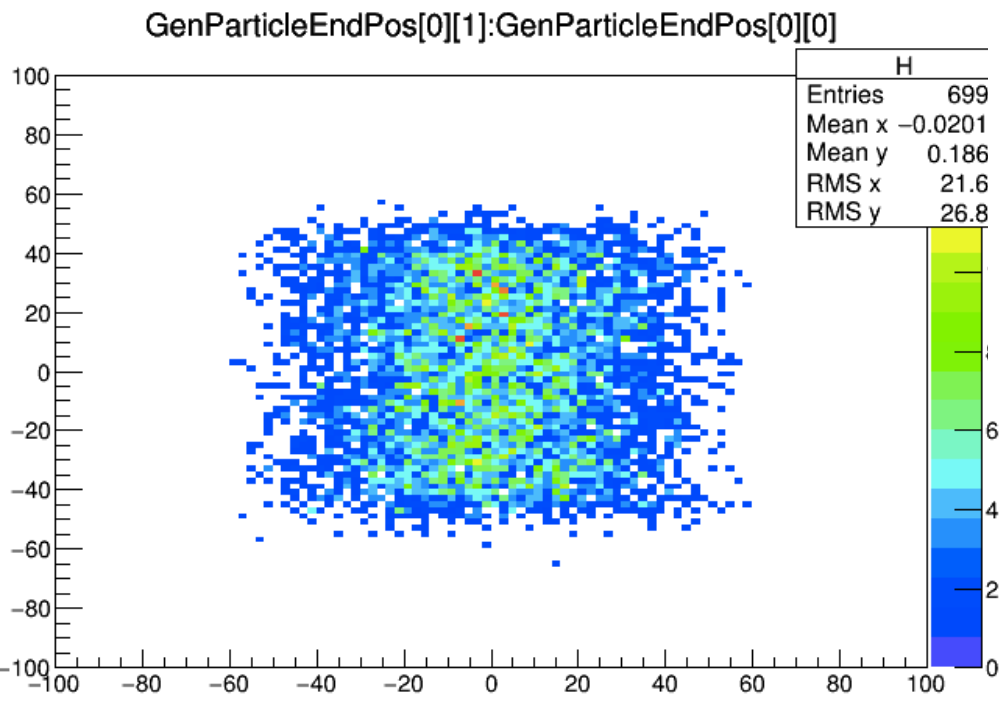




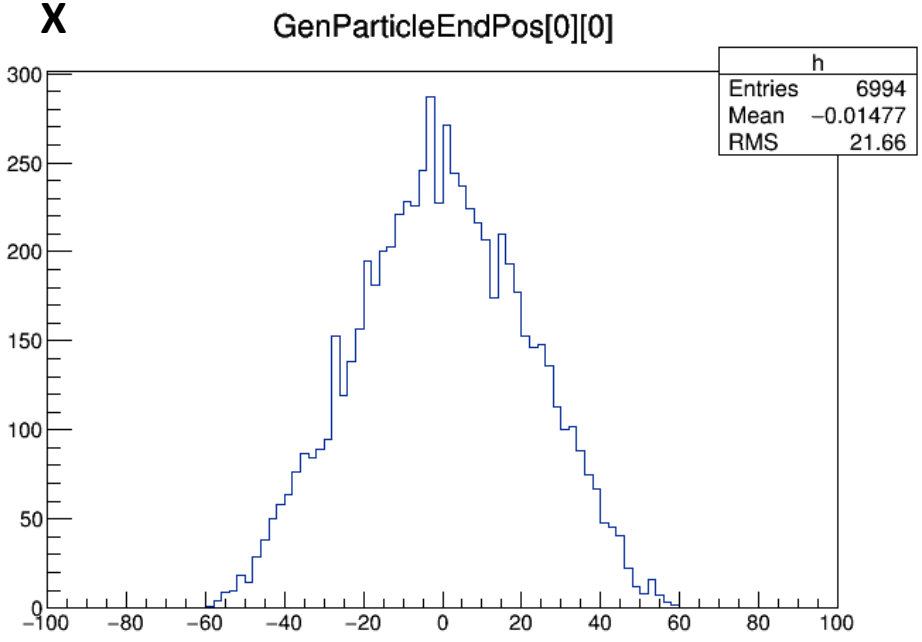
Modification of MB energy deposits
If(HitZ > GeomMB)energy = PMTenergy

Kaon beam size check

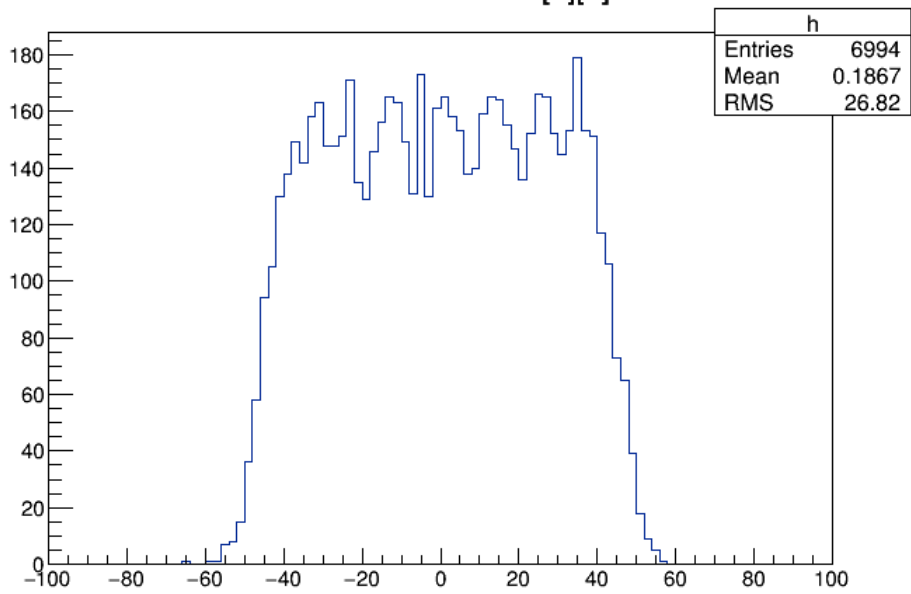
MC Generation



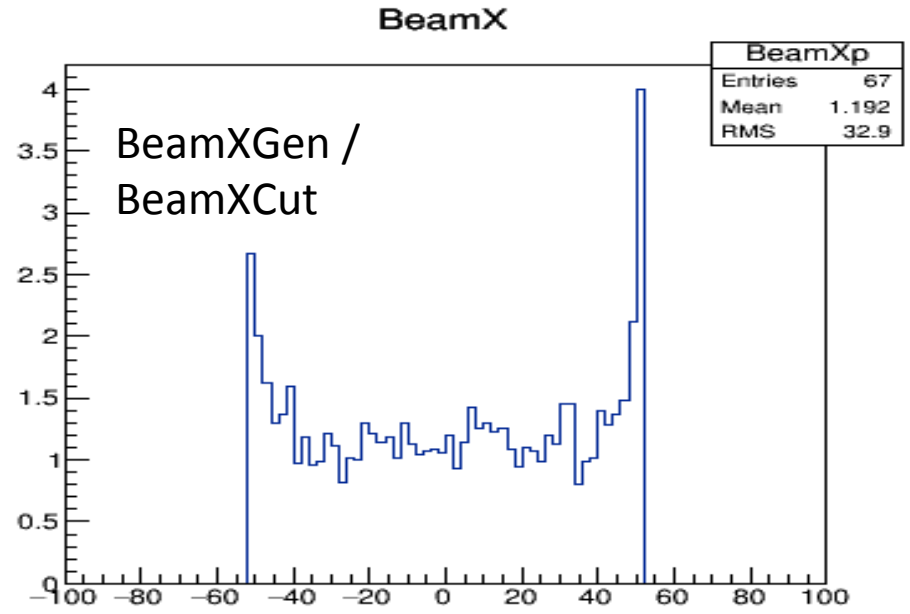
X

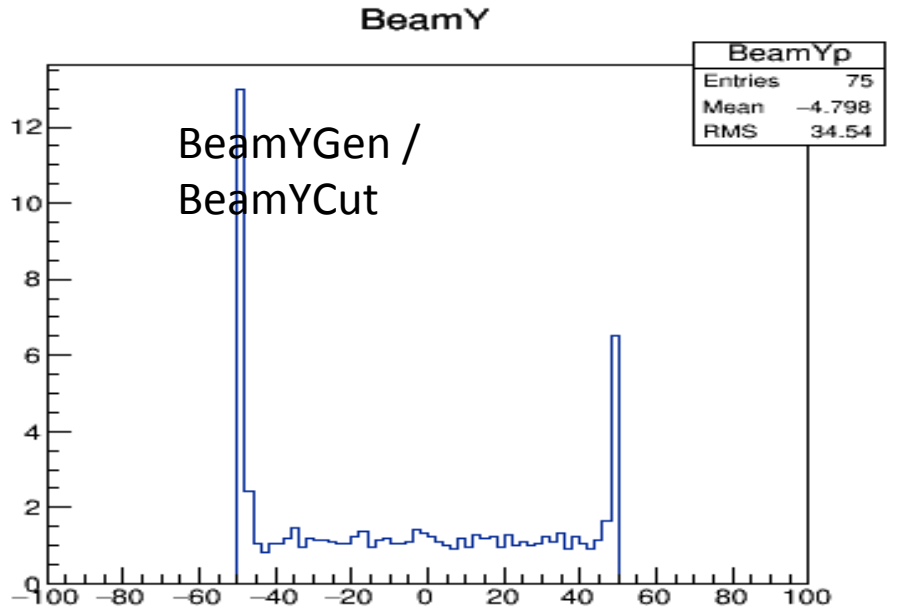


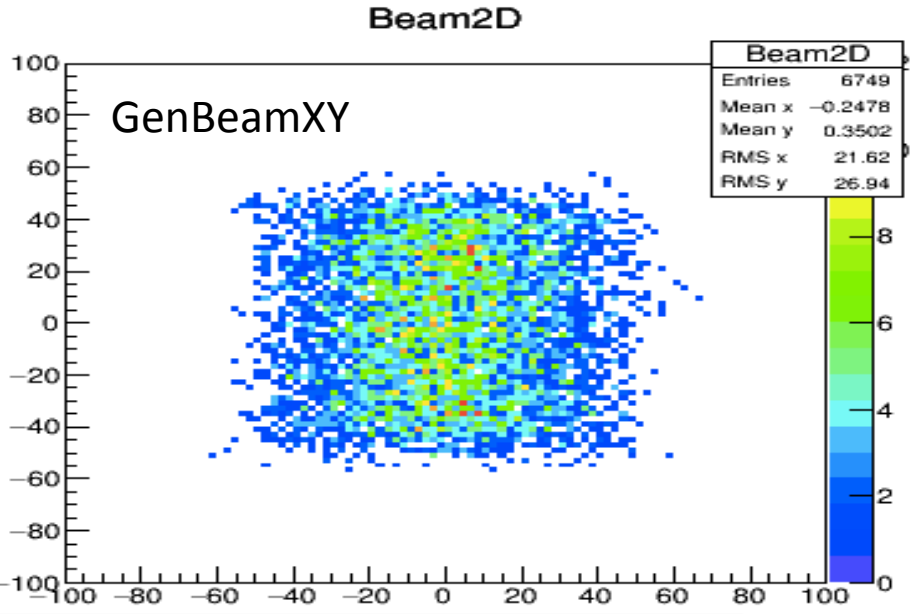
Y

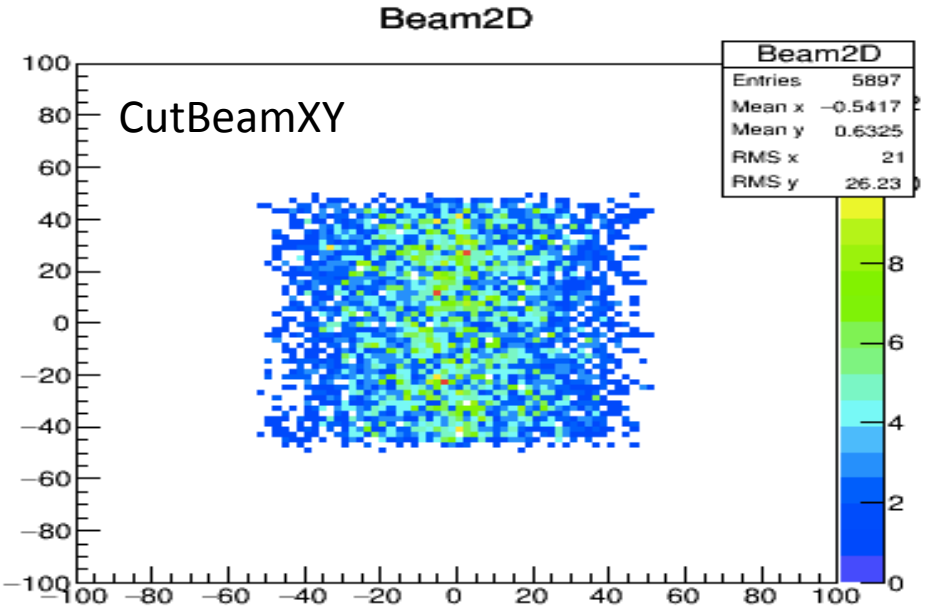


Beam size after Kinematical cut



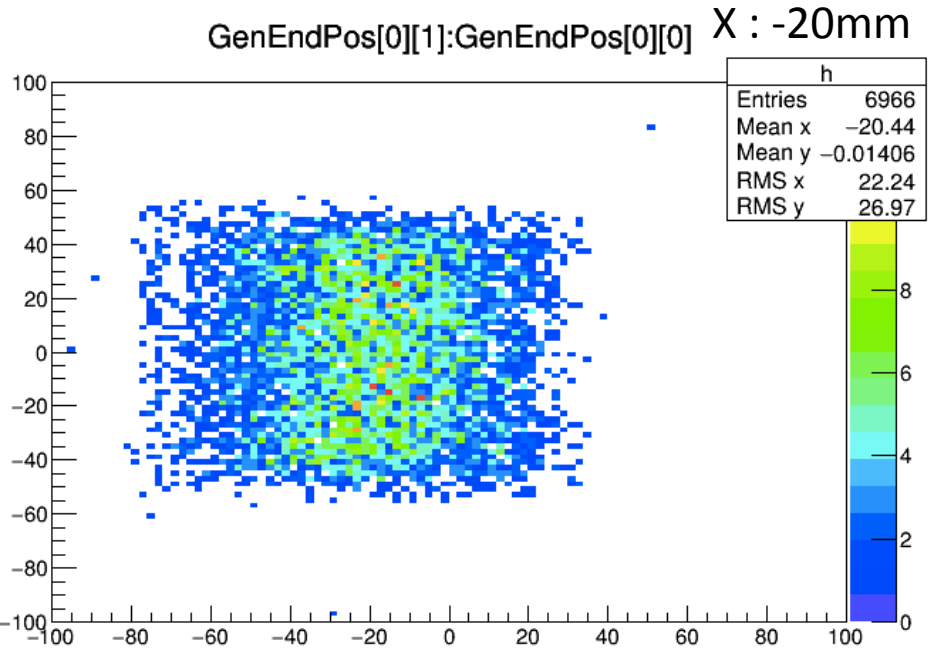




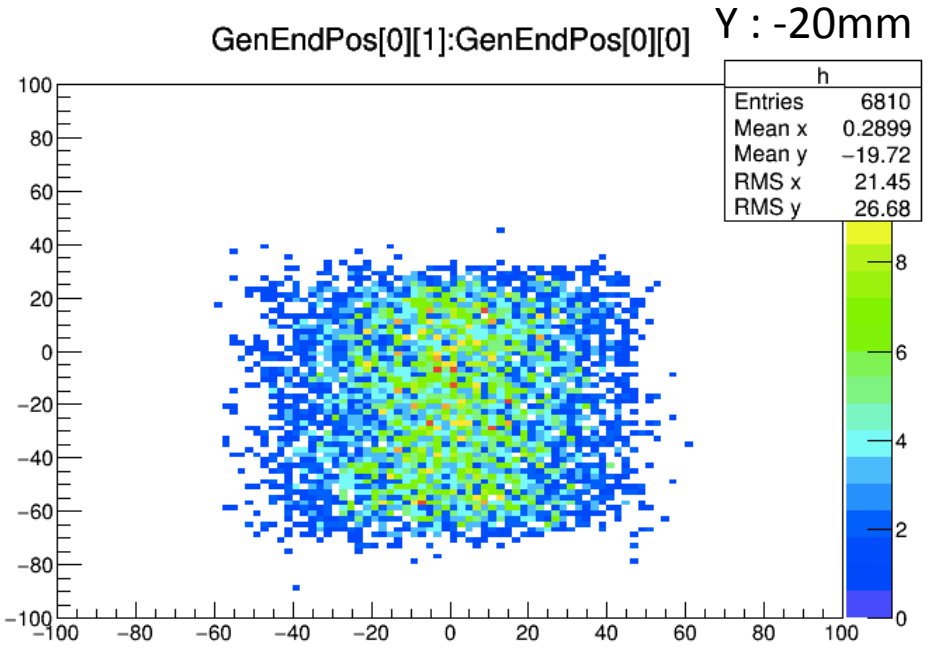


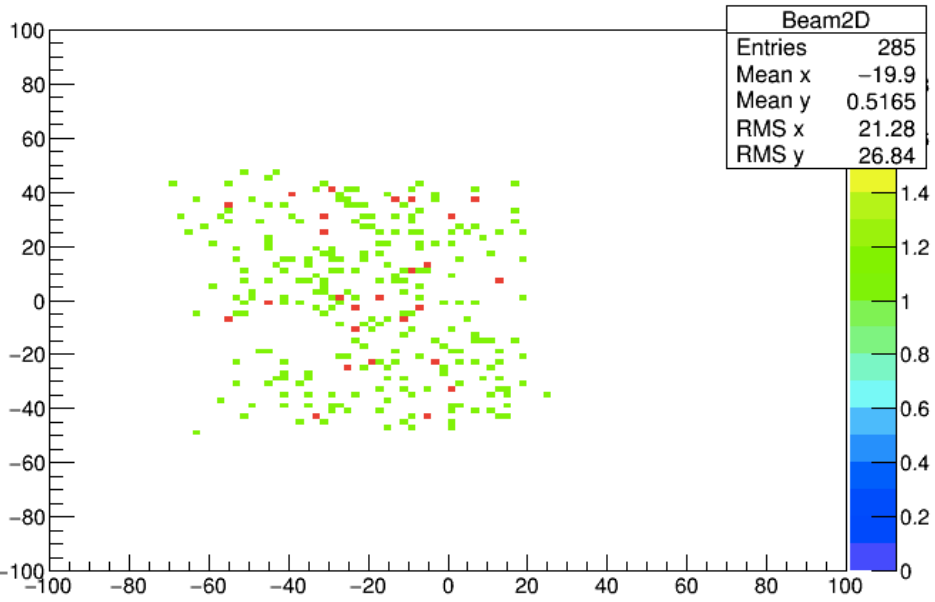
beam size effect check

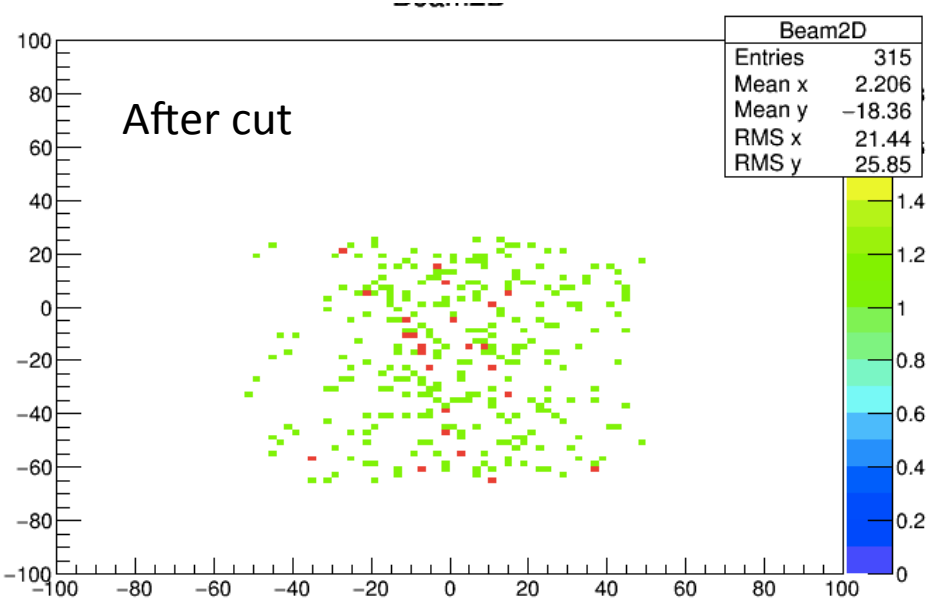
X : -20mm



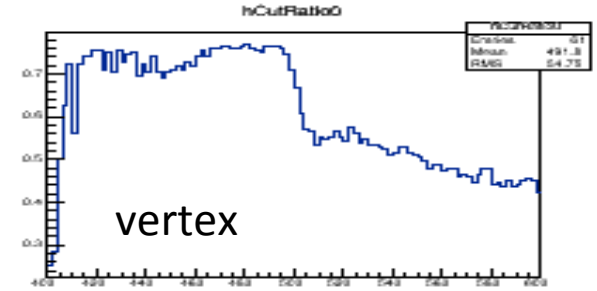
Y : -20mm

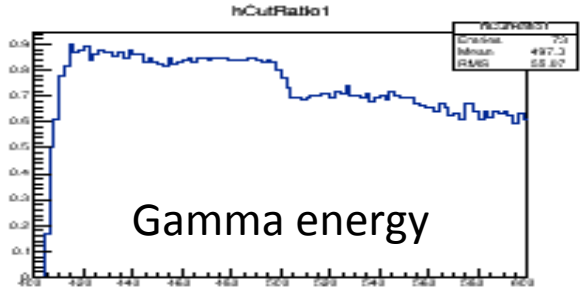


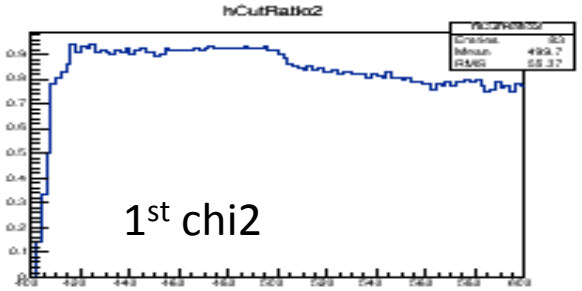


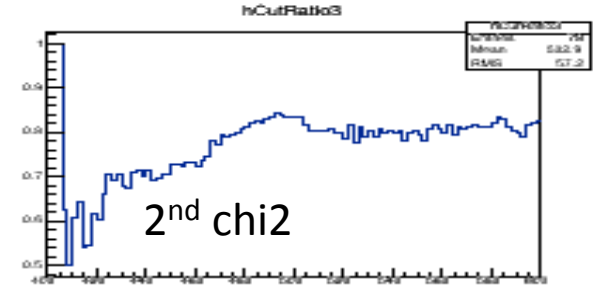


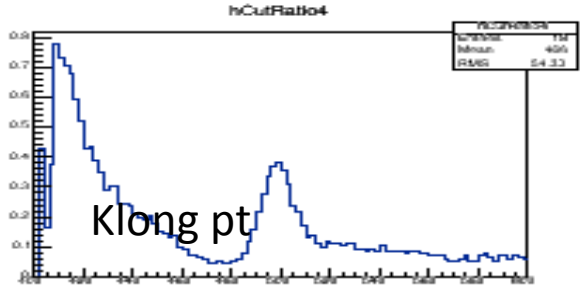
5g+1g cut status

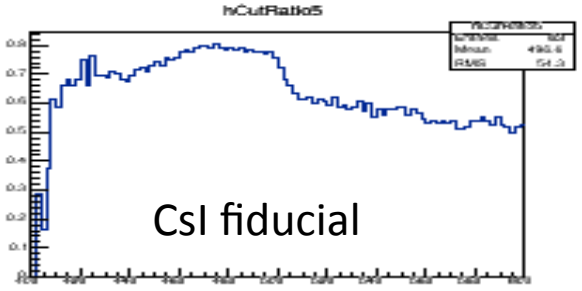


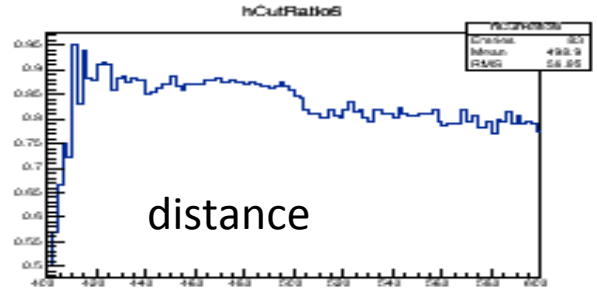


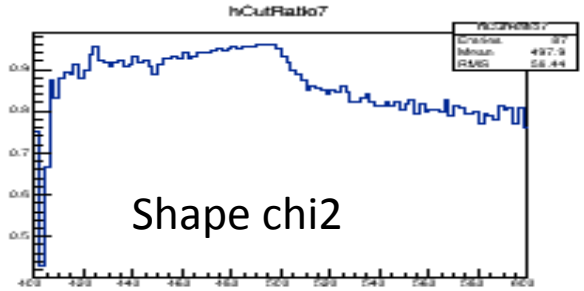


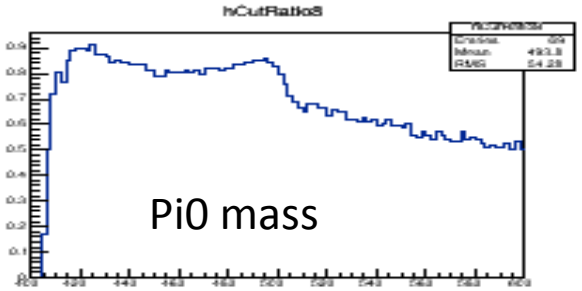


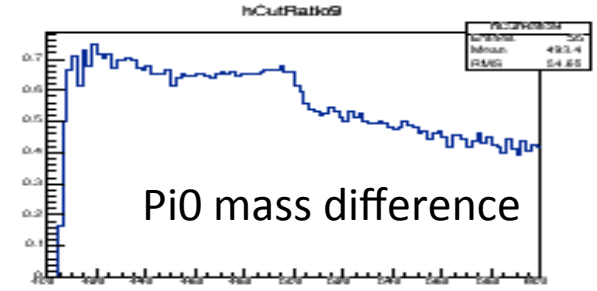


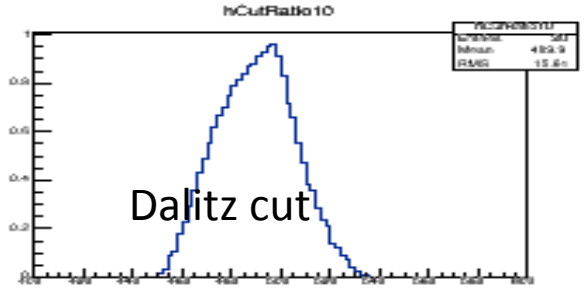






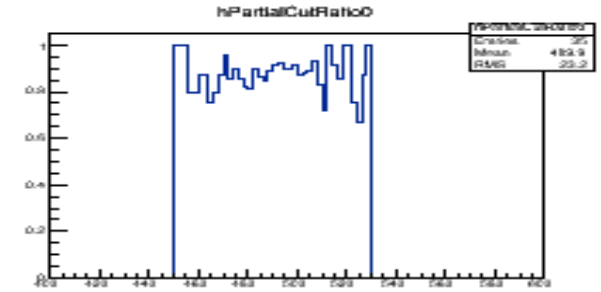


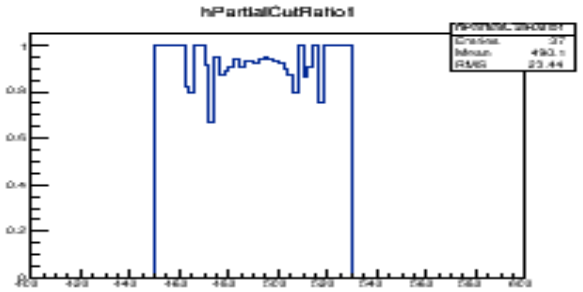


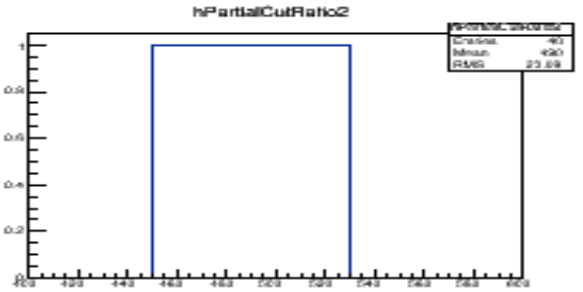


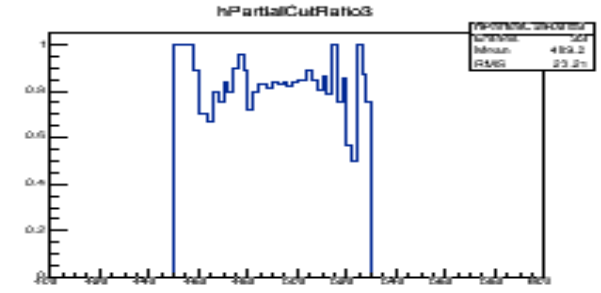
HIST_i = distribution with Cut i / no cut

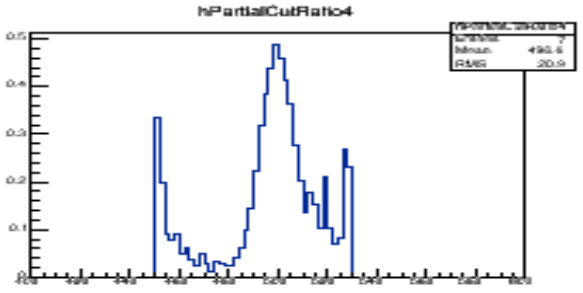
5g+1g cut status

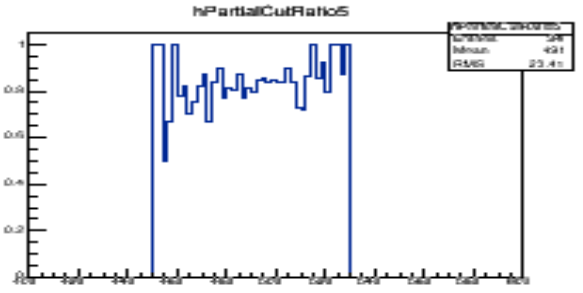


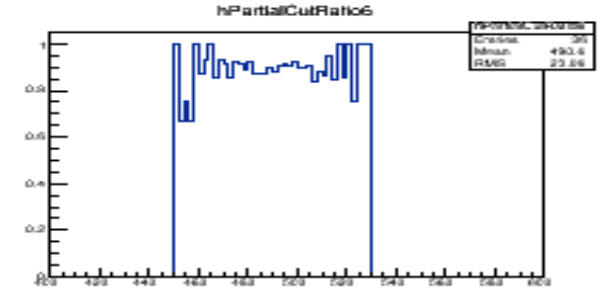


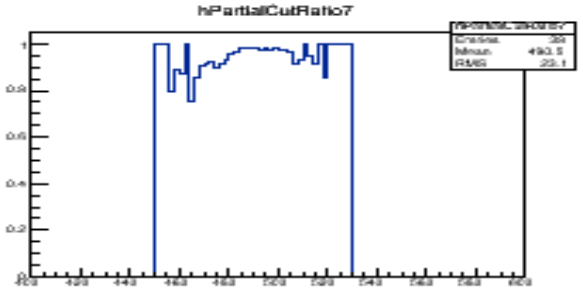


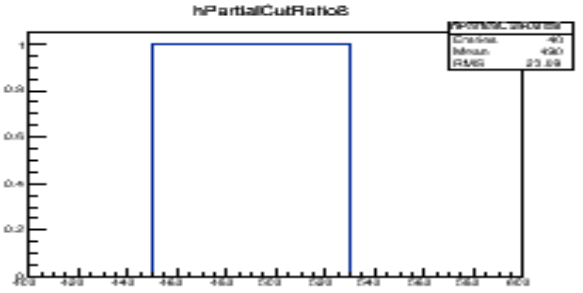


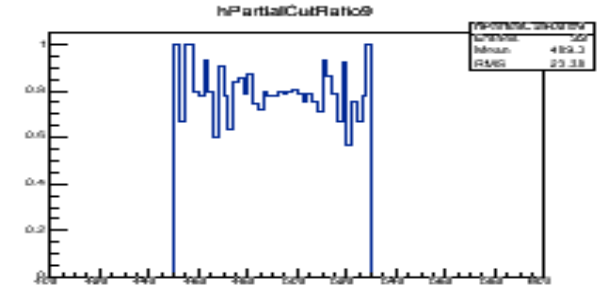


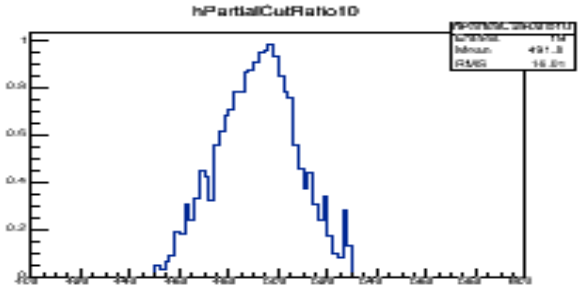








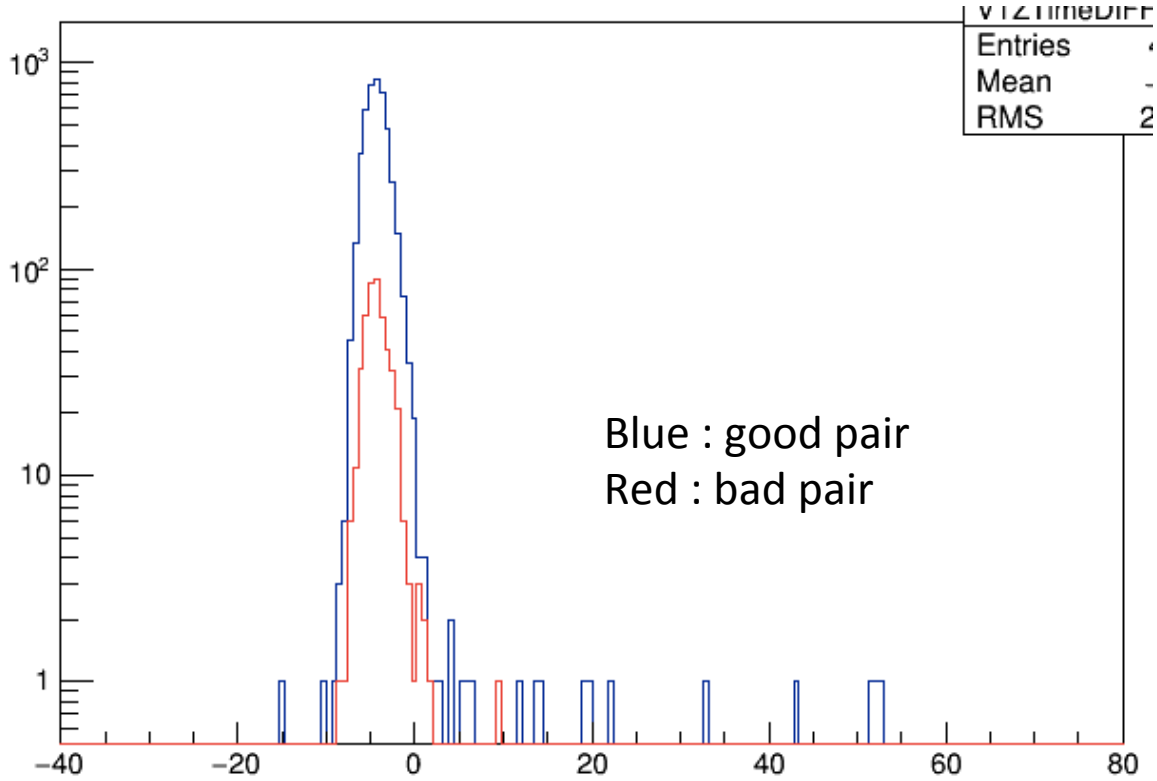




HIST_i = distribution only without Cut i / all cut

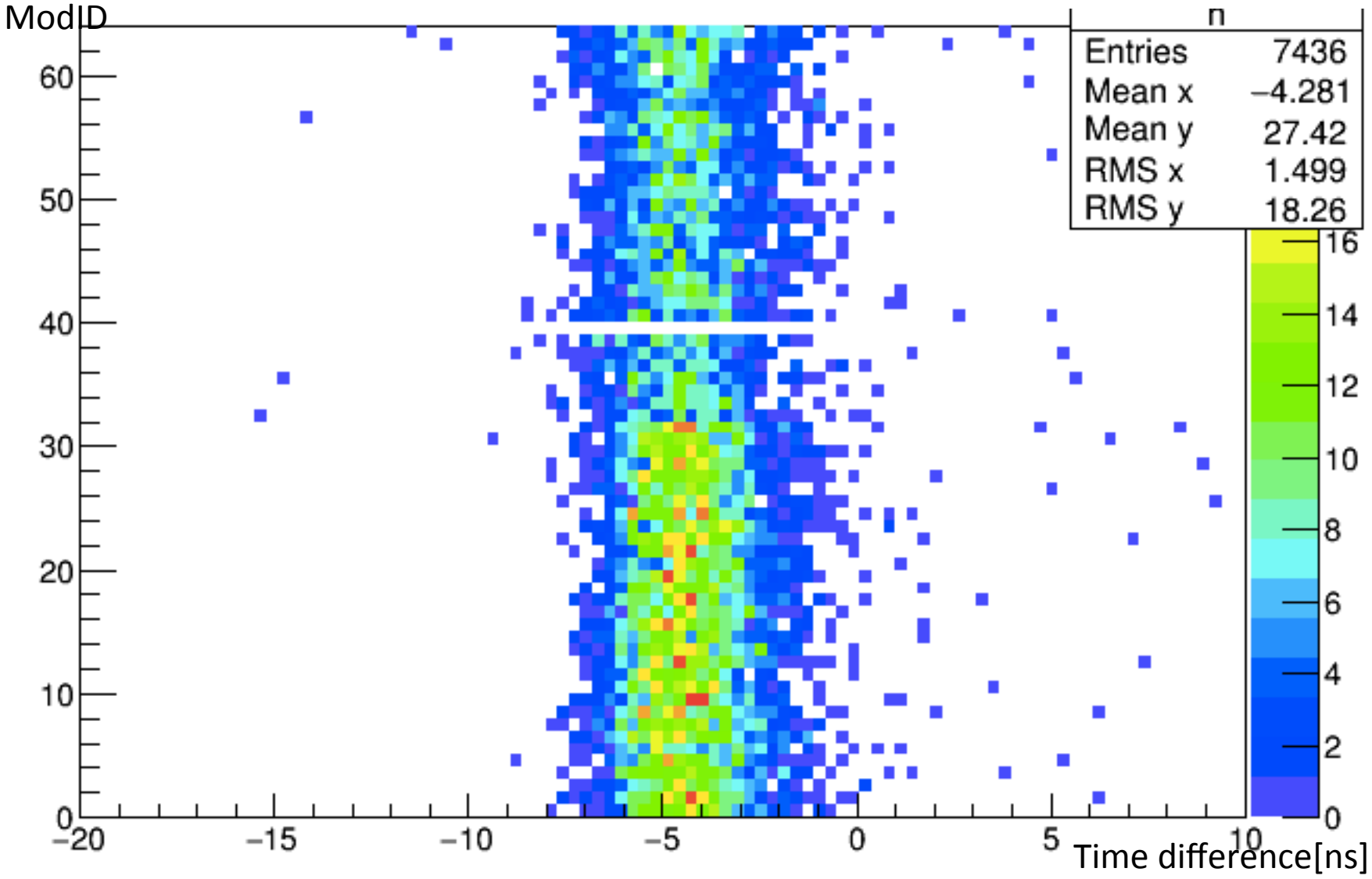
Vertex Time

- After applying all kinematical cut,
  - Distribution of (Mean Vertex GammaTime – MBVertexTime)

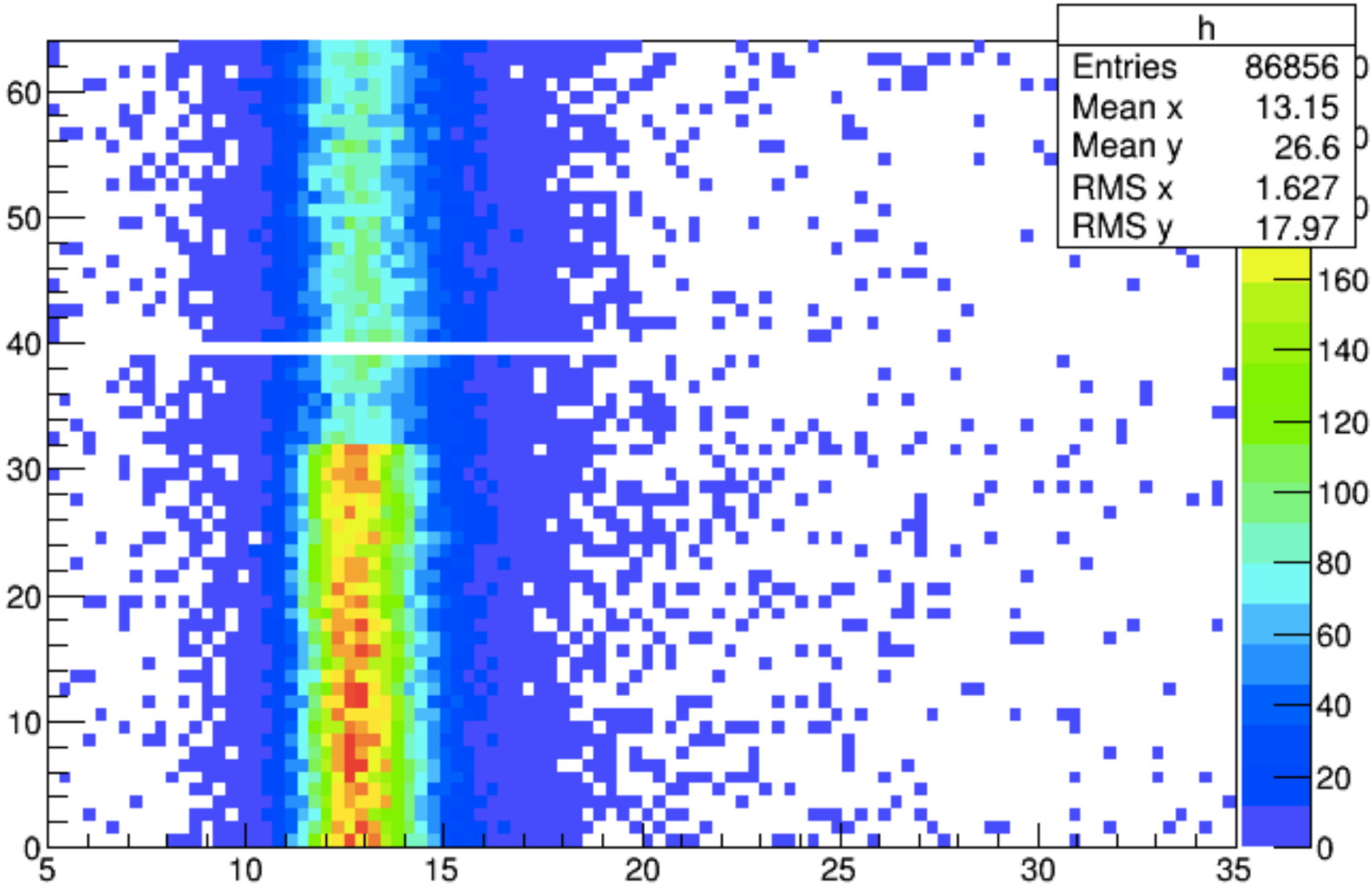


- Hard to reject bad-pair events using vertex time

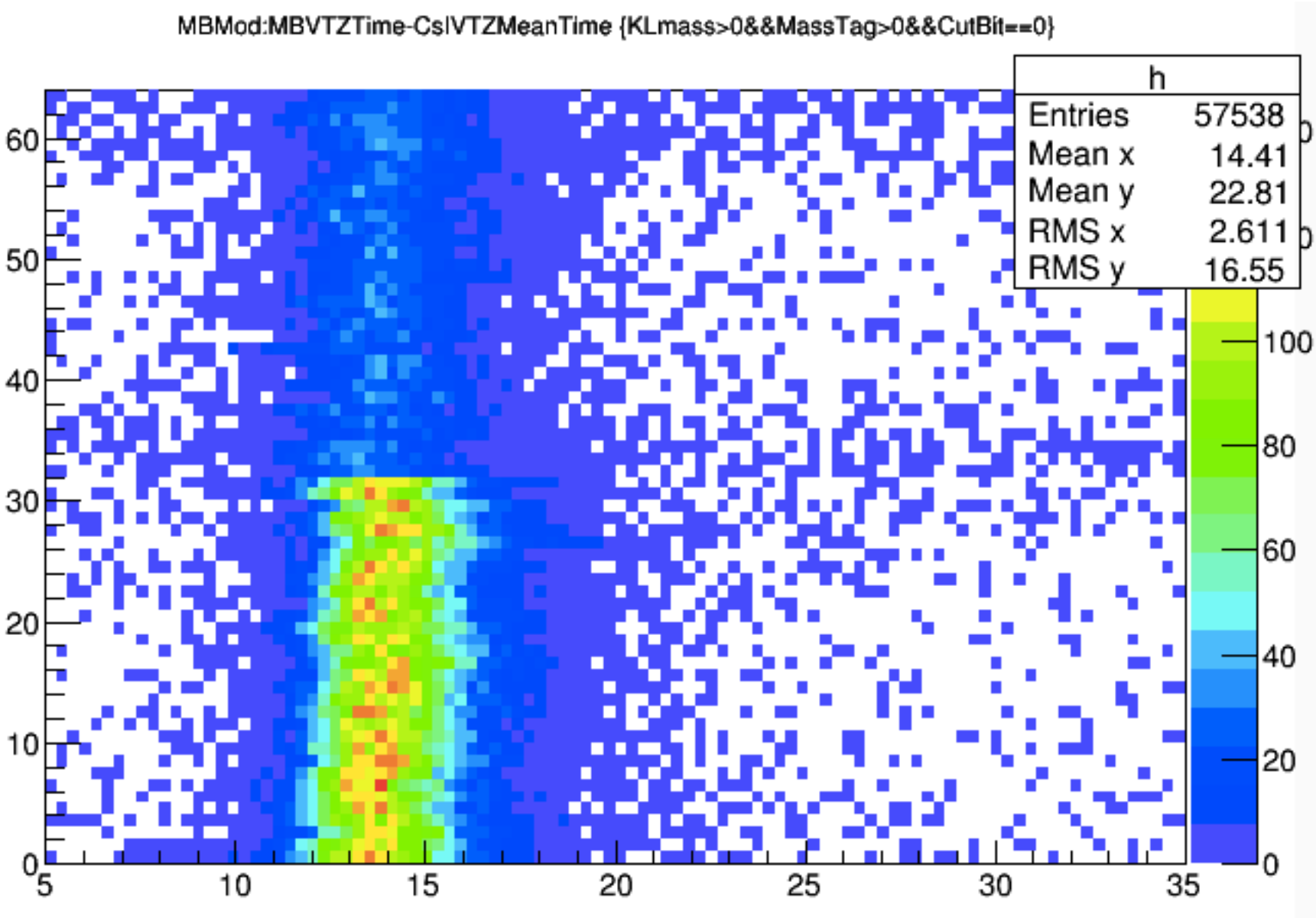
Vertex Time difference vs ModID MC



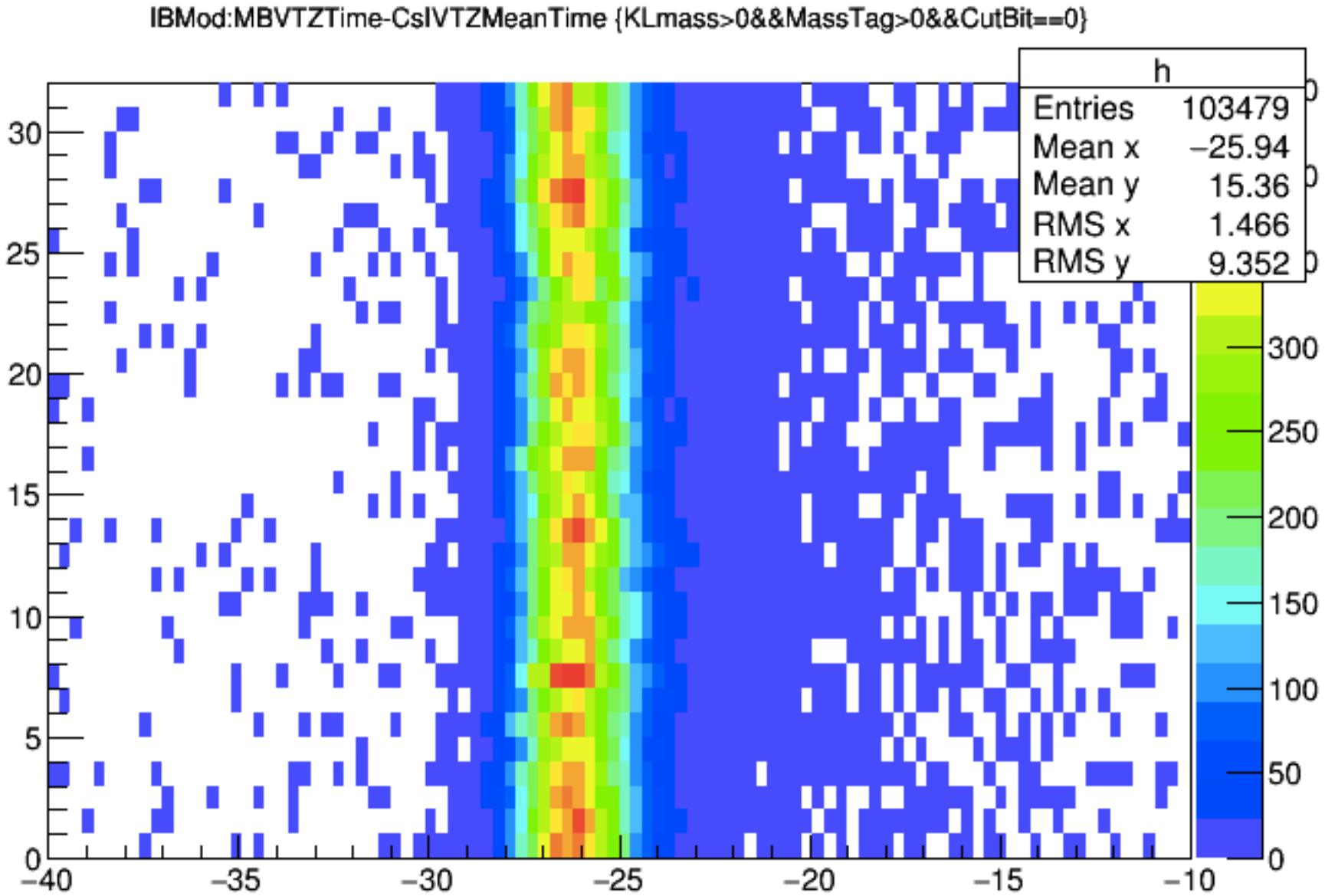
Vertex Time vs ModID
Run62



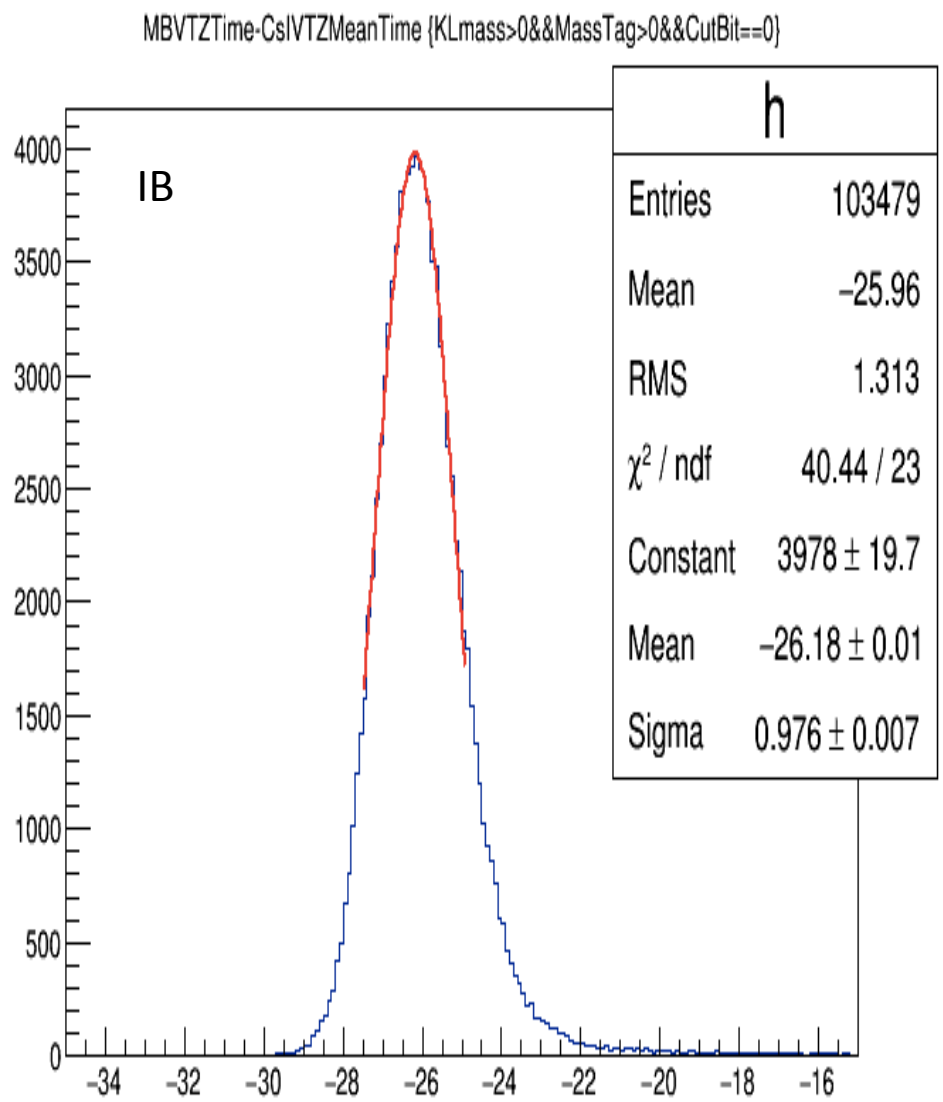
Vertex Time vs ModID
Run69 MB

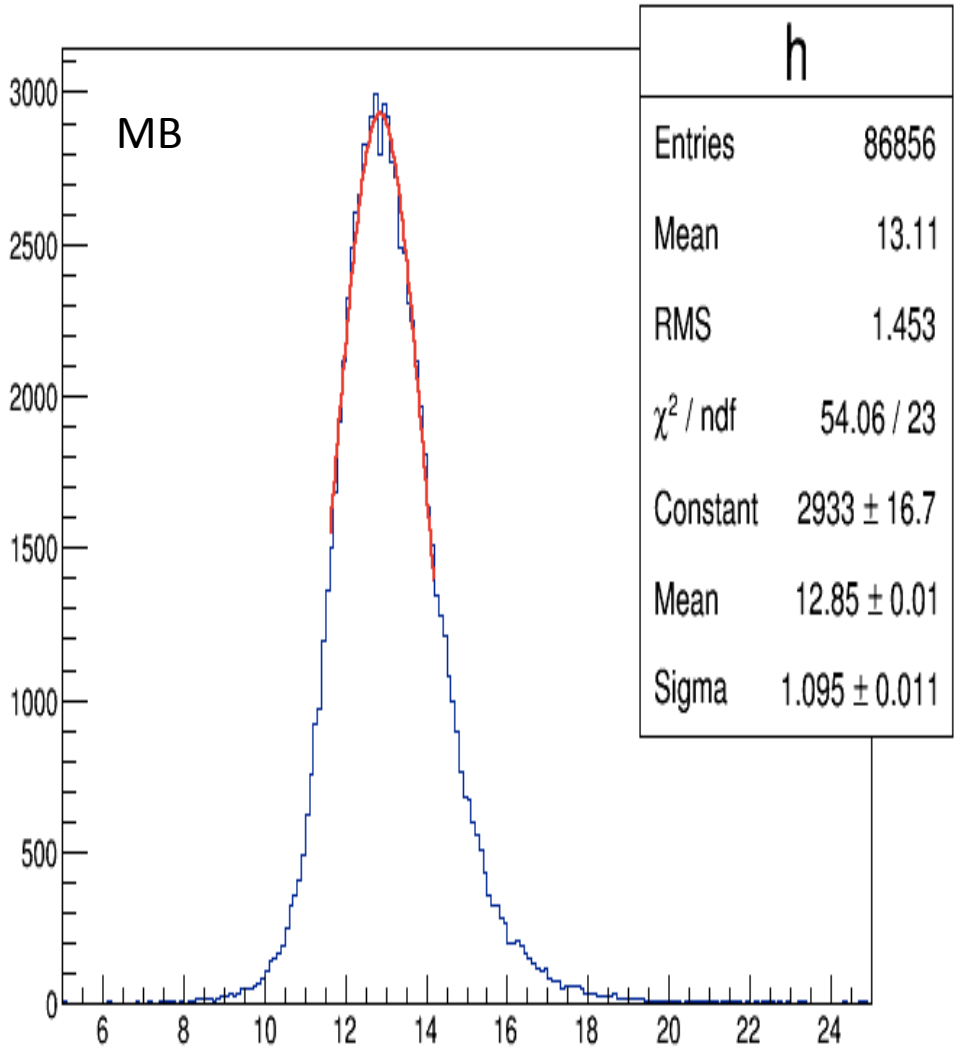


Vertex Time vs ModID
Run69 IB



Run62 vs Run69 IB





summary

- Similar behavior of Kinematical cut of KL3pi0
- Bad calibration to MB in run69