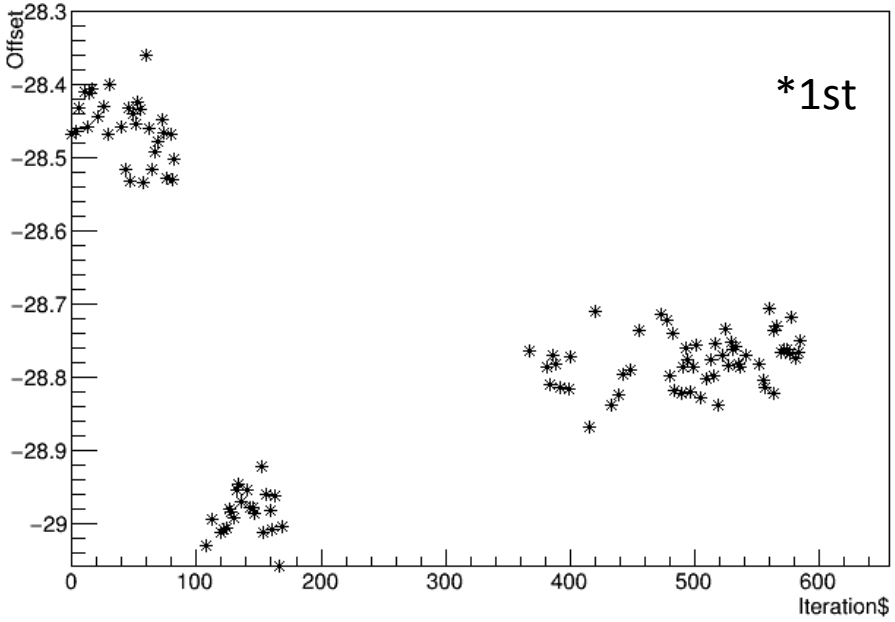
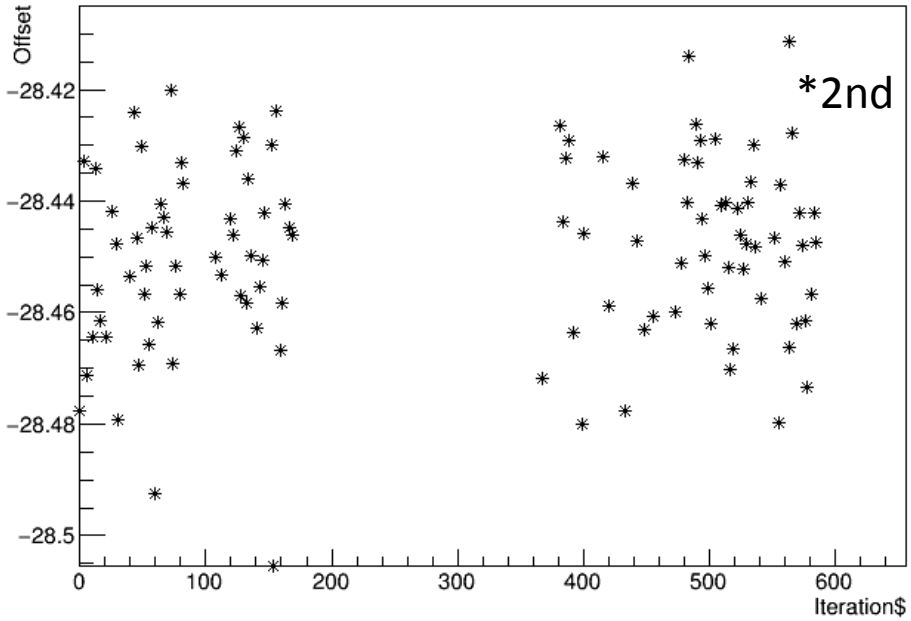
Report 170322

Correction iteration

Run correction_1

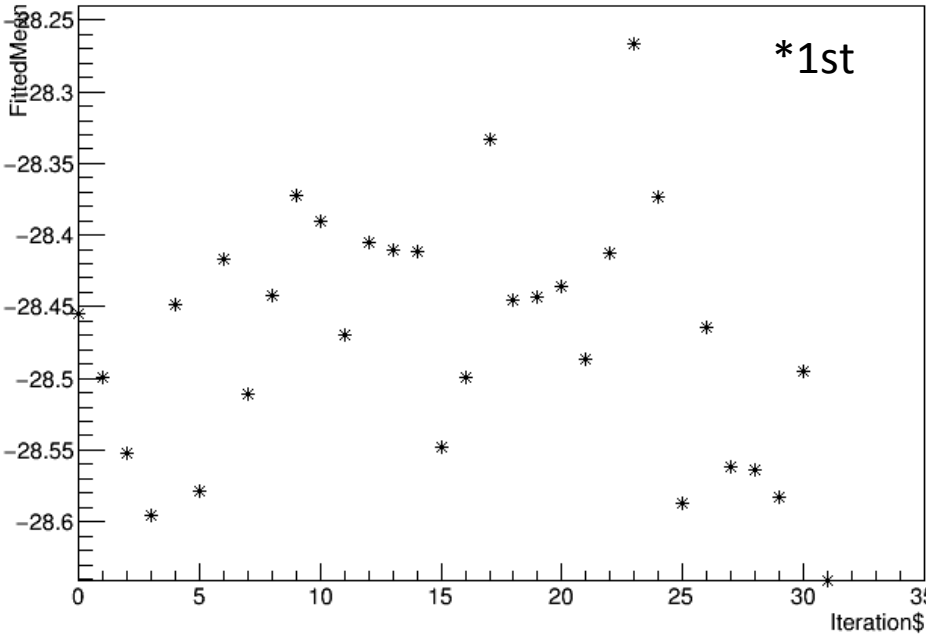


Run correction_2

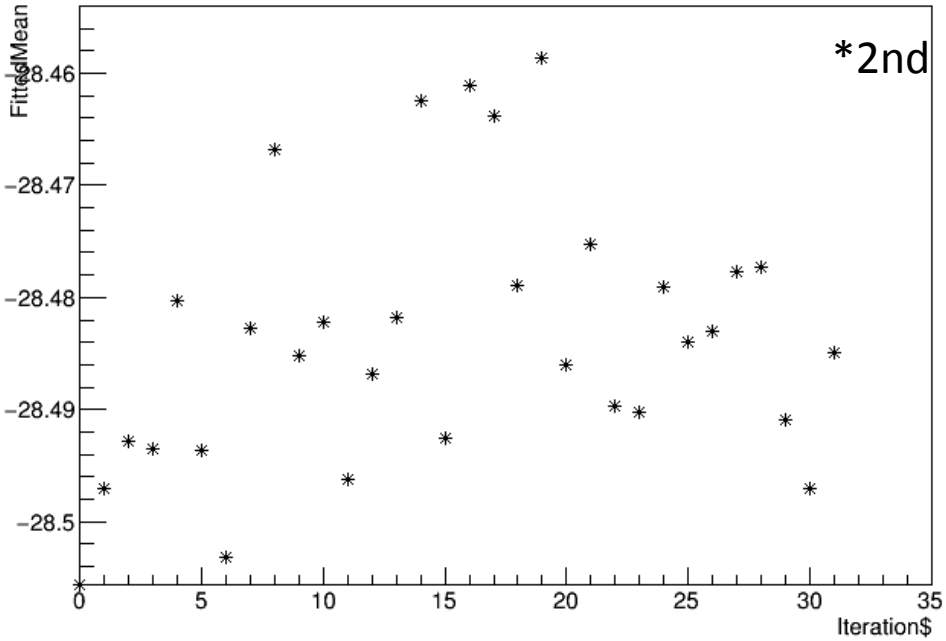


Module correction

module correction_1

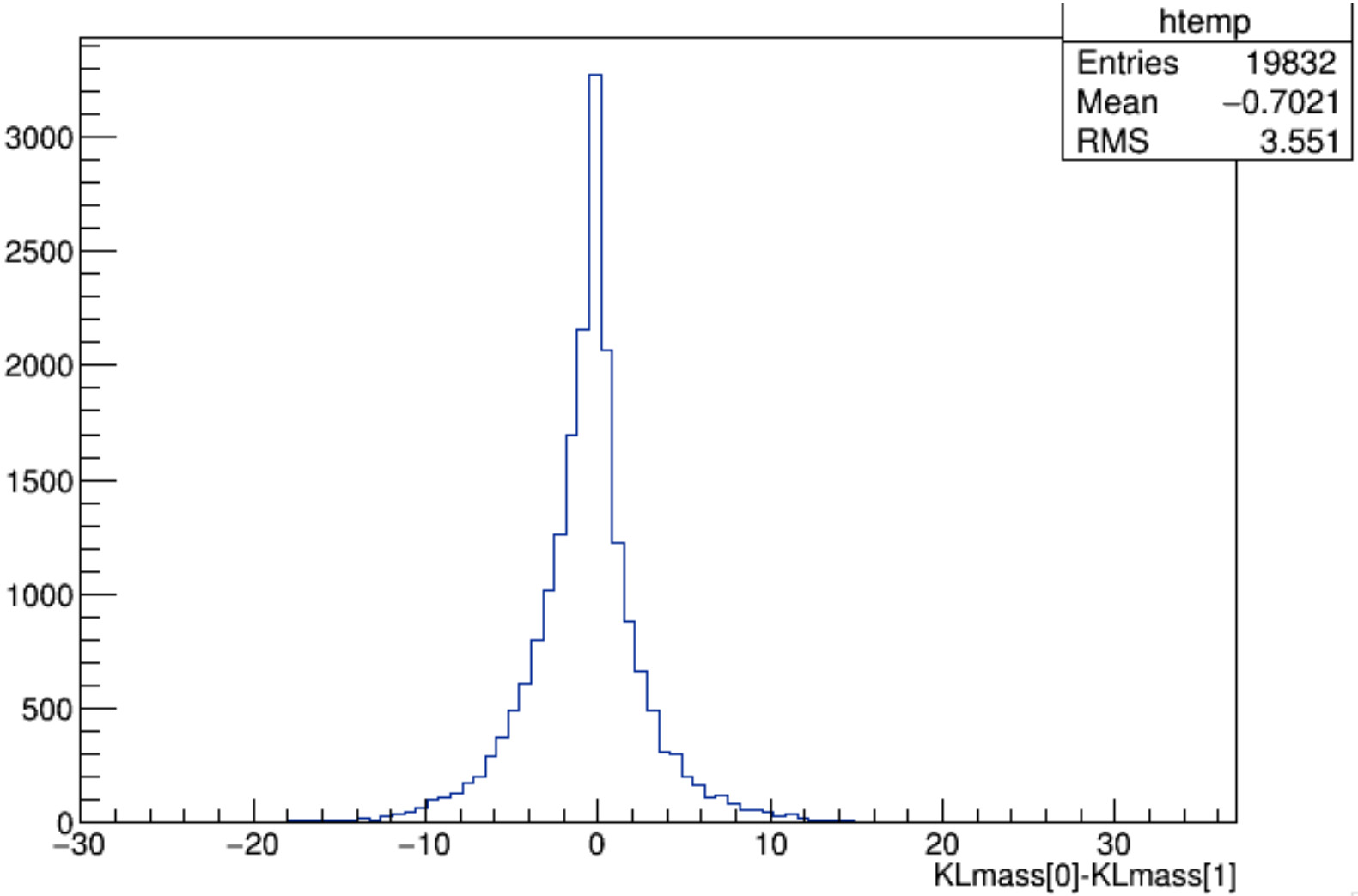


module correction_2

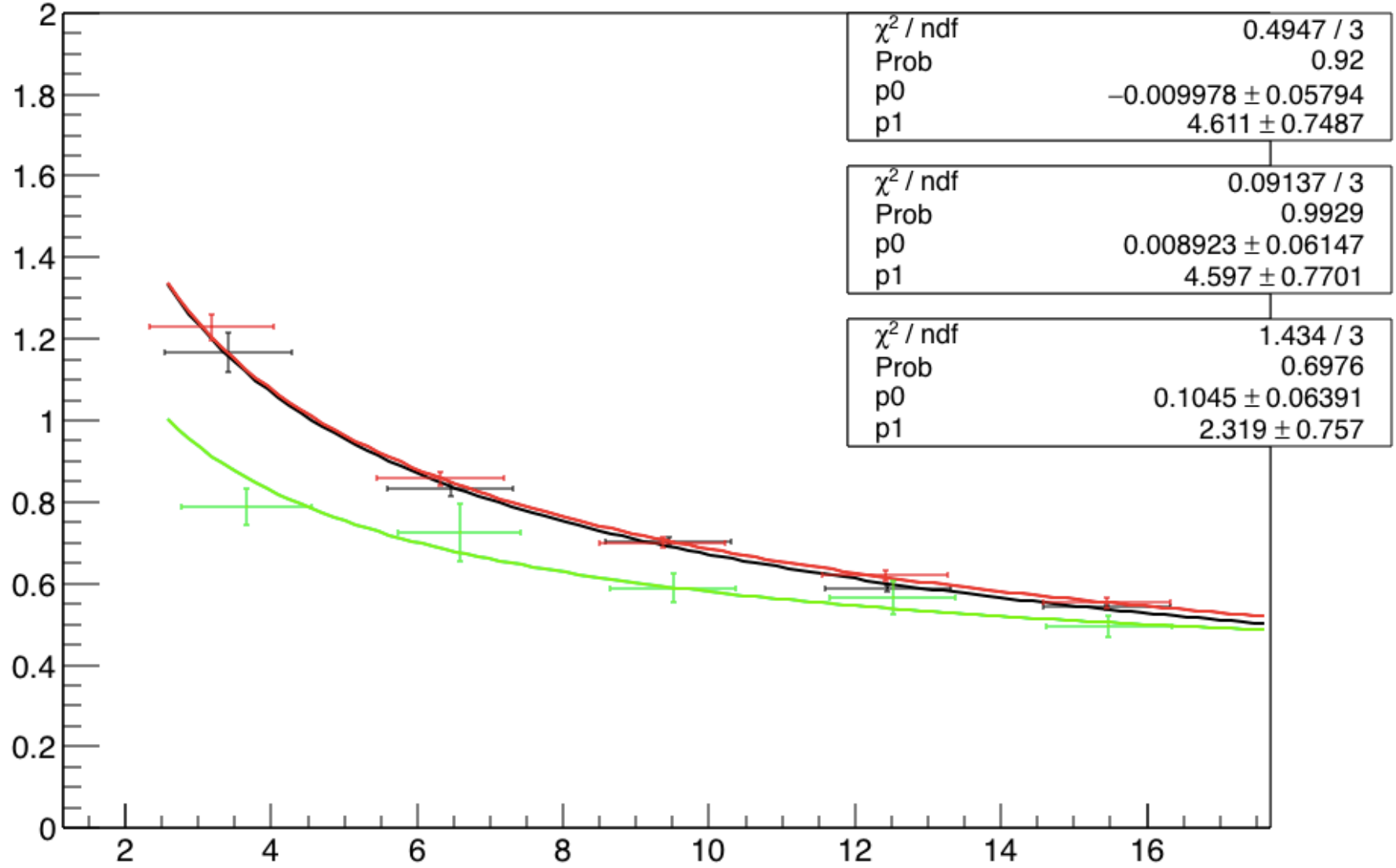


- Iteration is not so effective

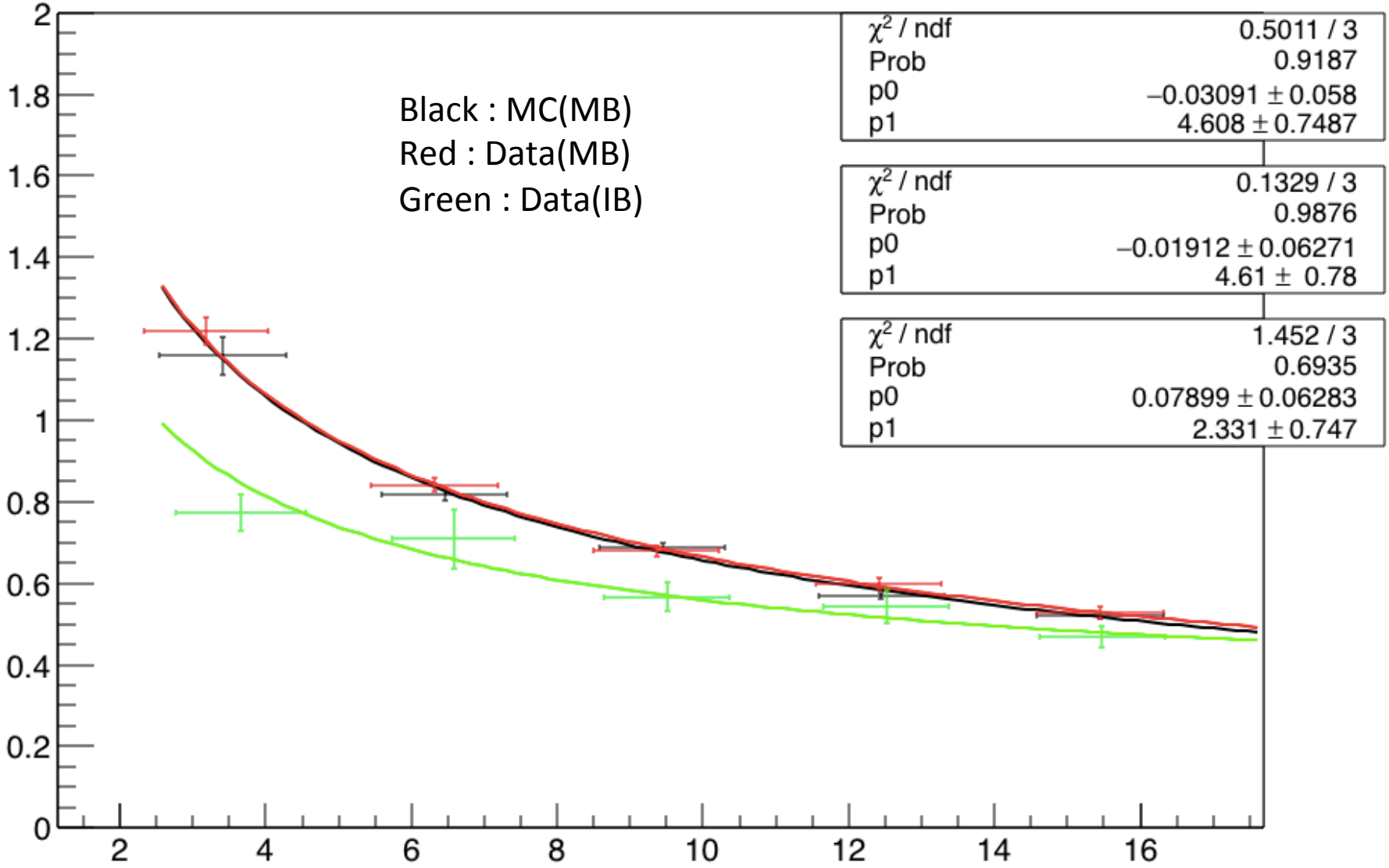
Consistency of two KL within one event



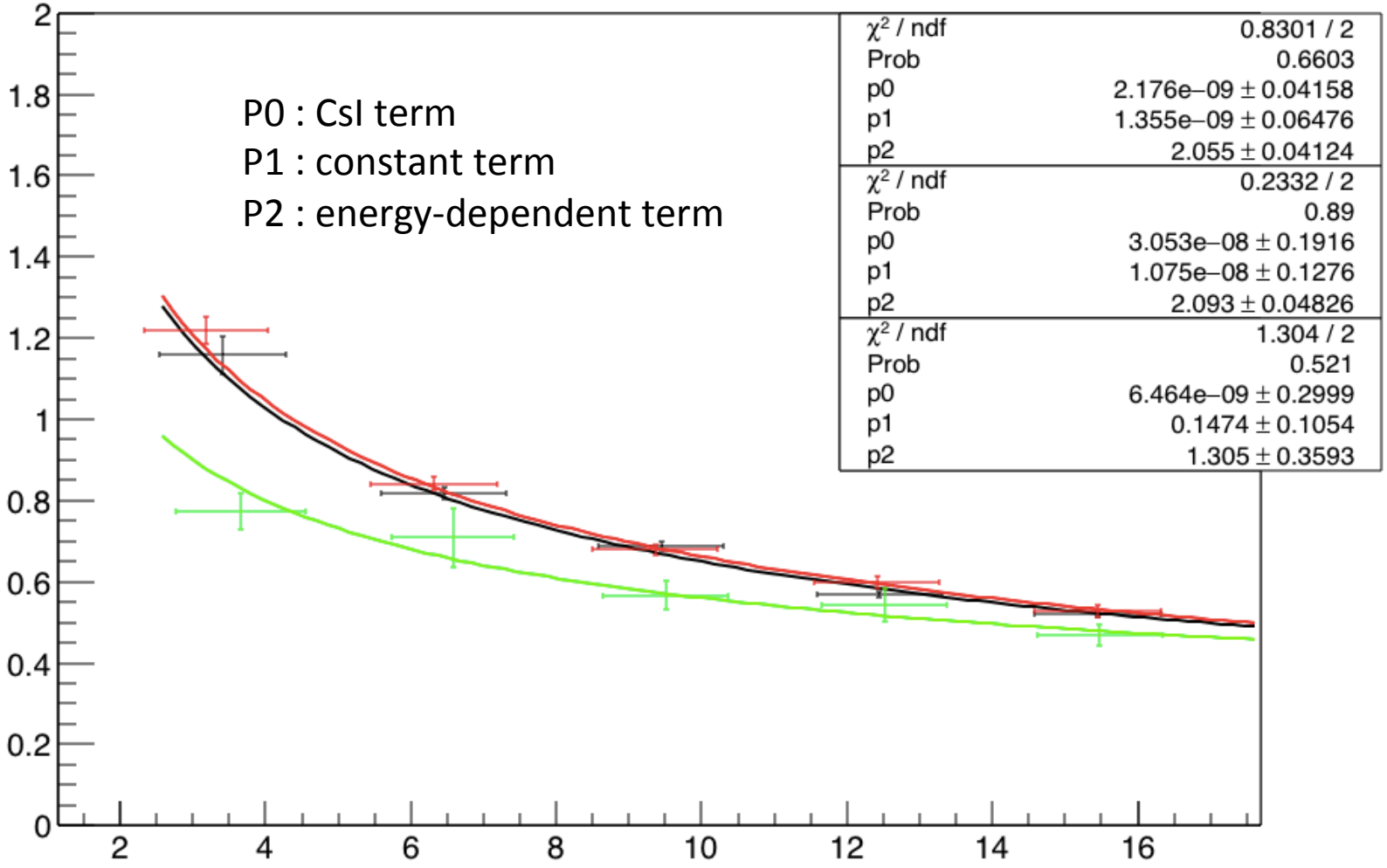
time resolution



Time resolution (CsI effect removed)

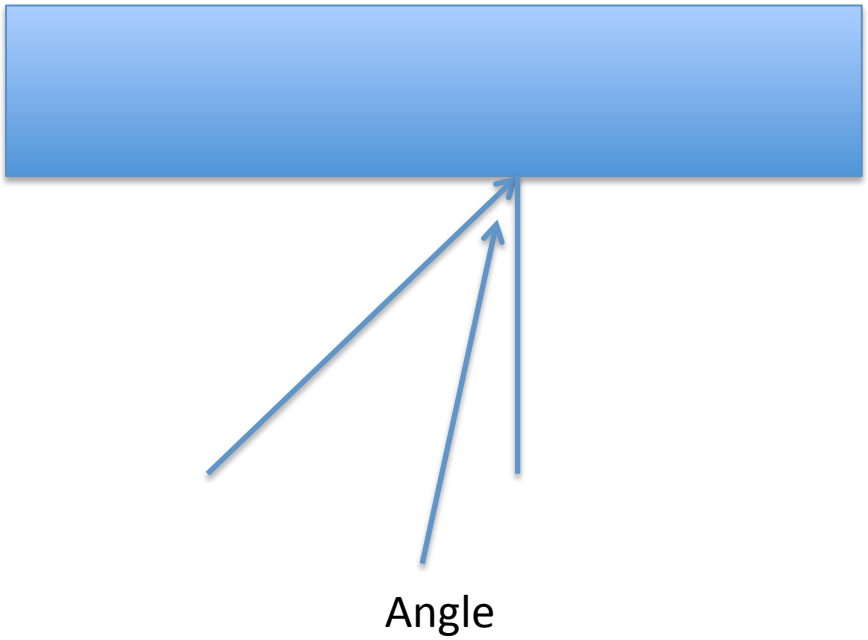


Using another fitting function (CsI Removed)

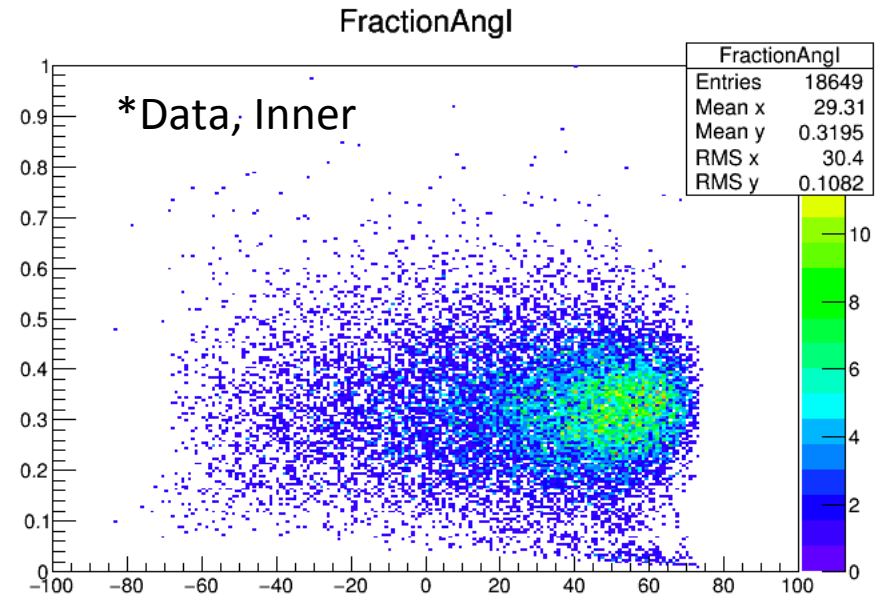


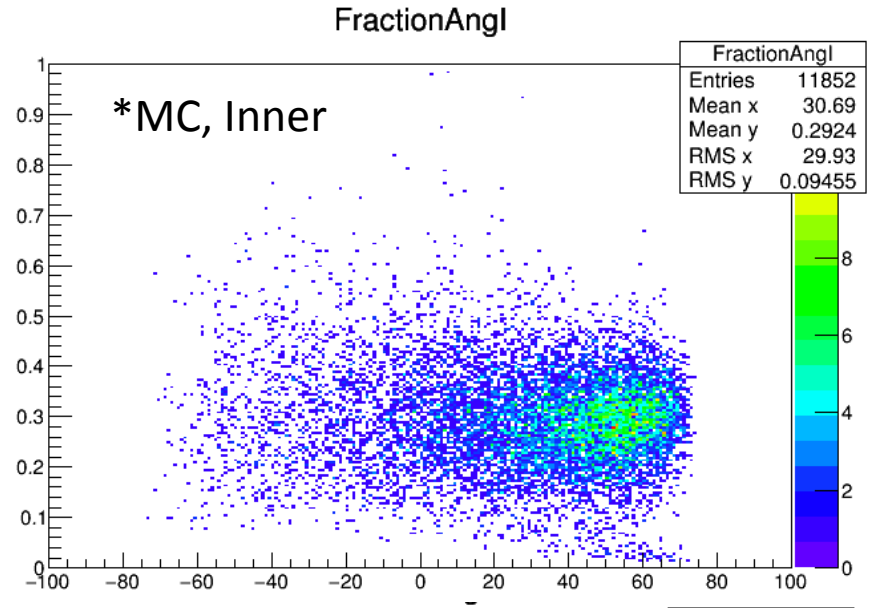
Sampling fraction vs Incident angle

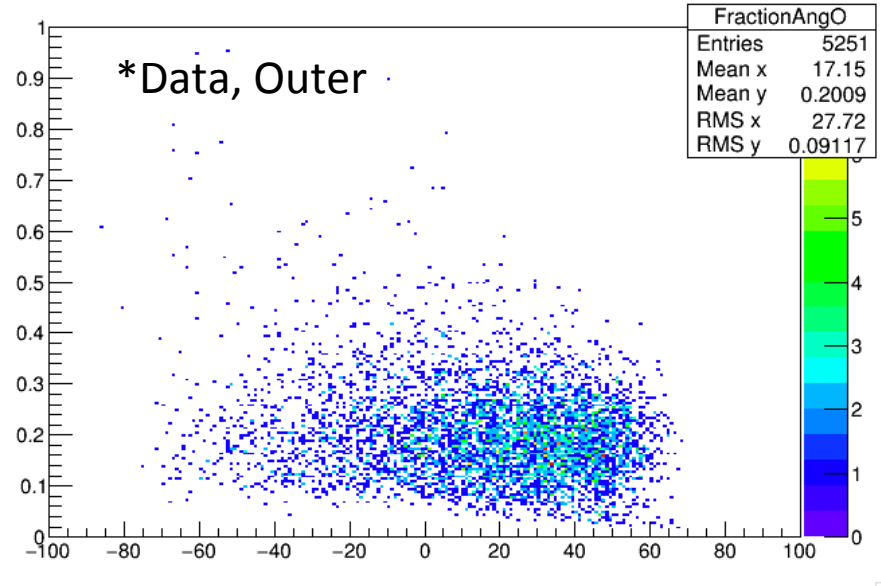
- Check angle dependency

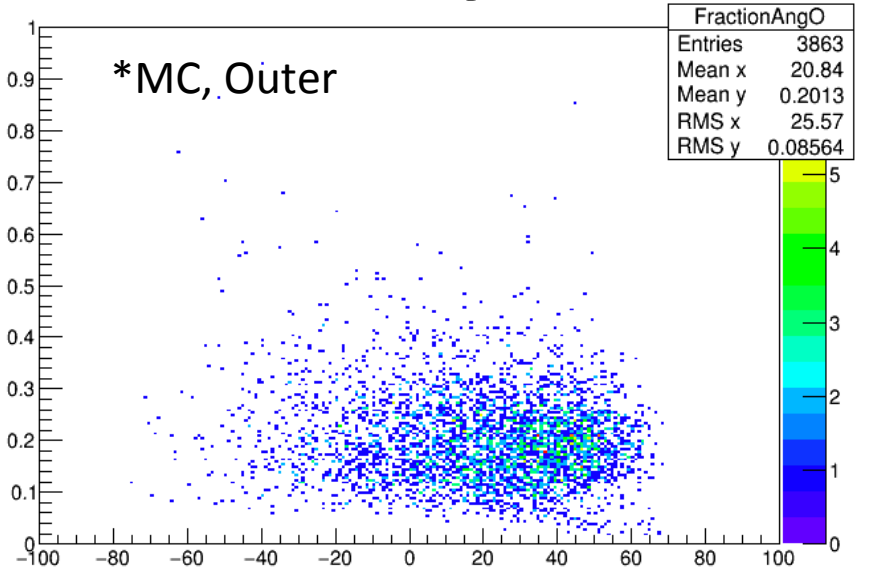


Sampling fraction vs Incident angle



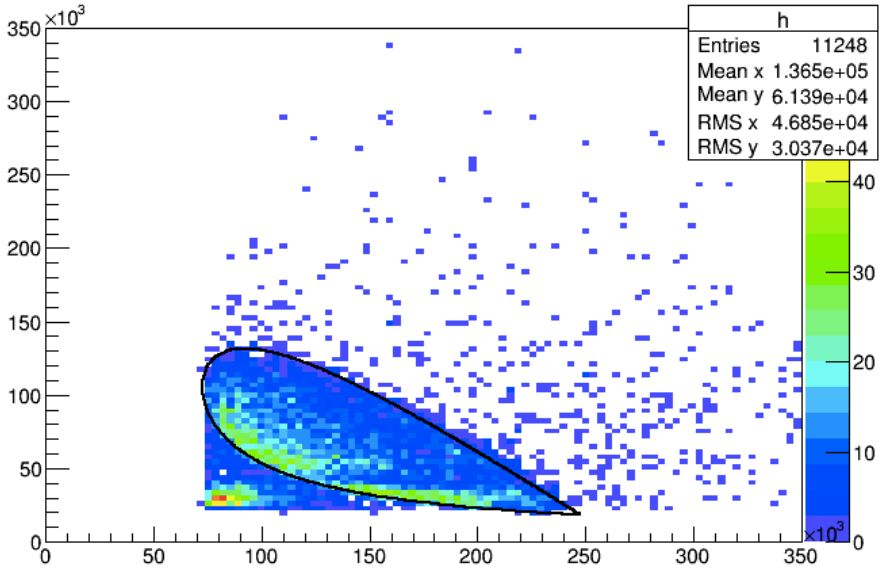


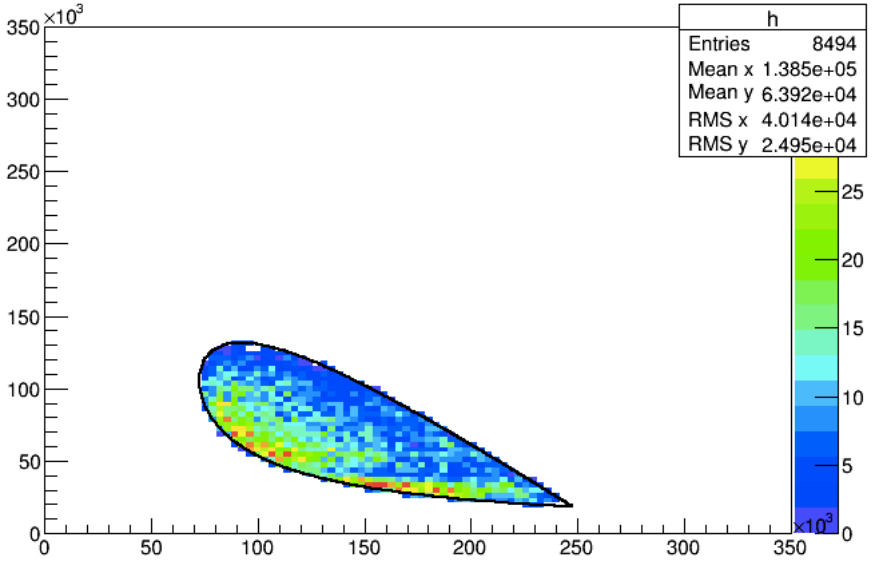




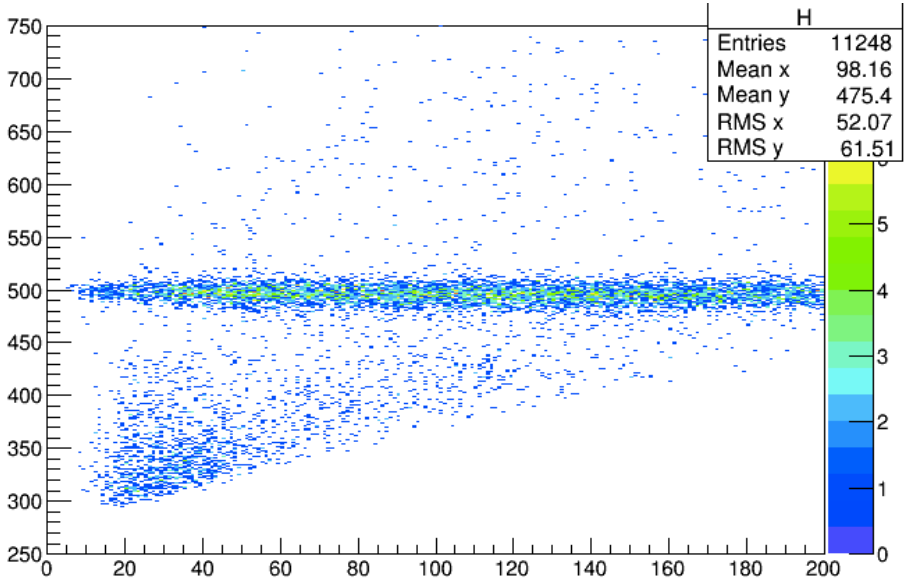
Pipig with modified vertex position

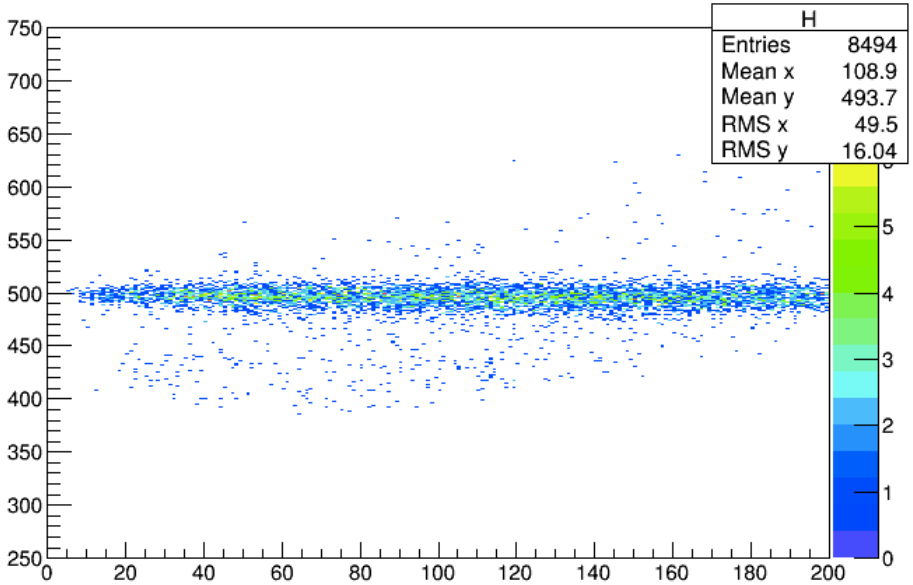
- Vertex_X,Y determined by COE
- With dalitz cut
  - X-axis : pipi mass
  - Y-axis : pig mass





Mass vs KlongPt

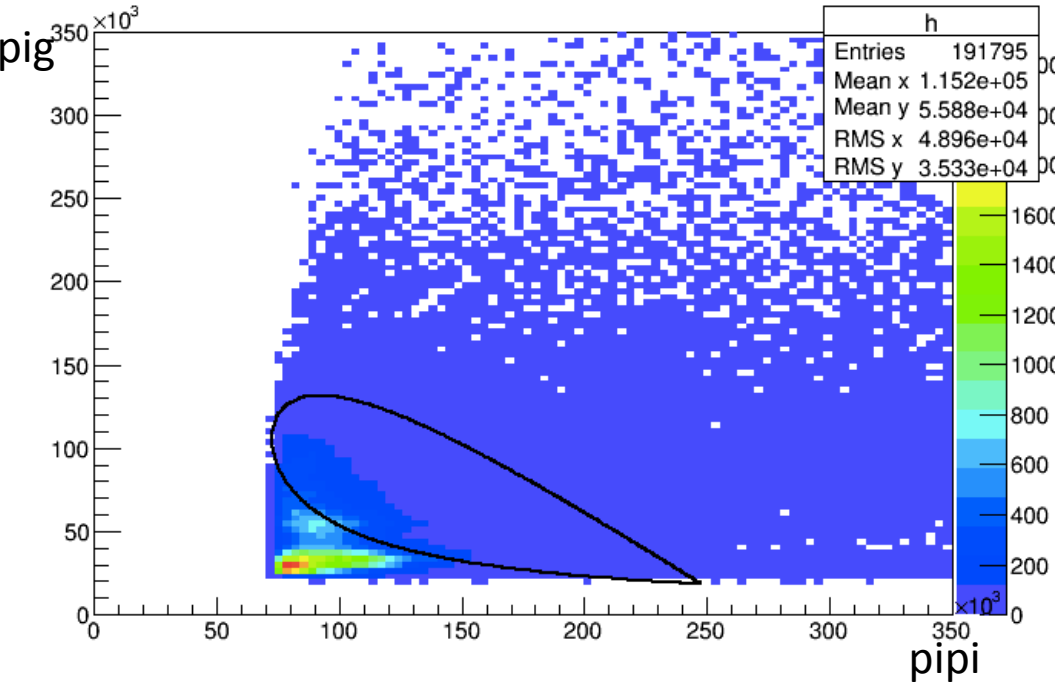




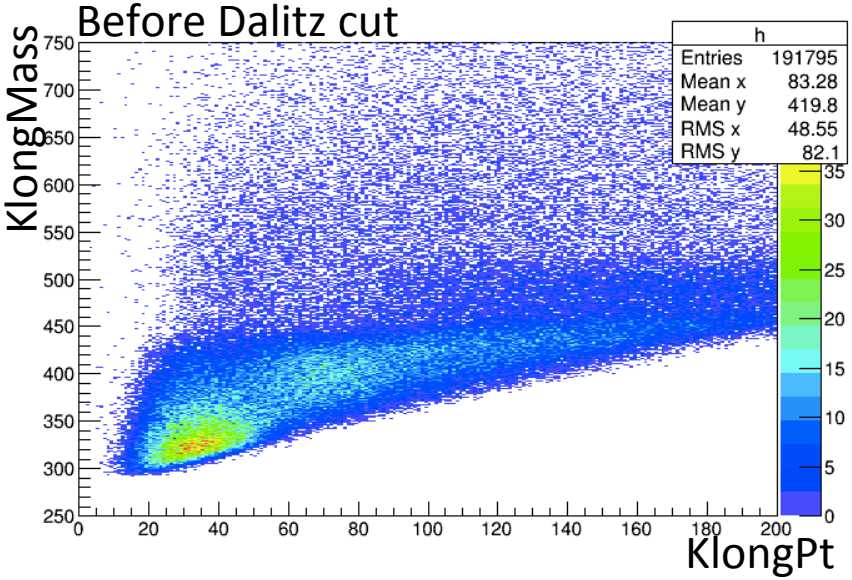
- Effectively removed low-mass region

Data (Run65)

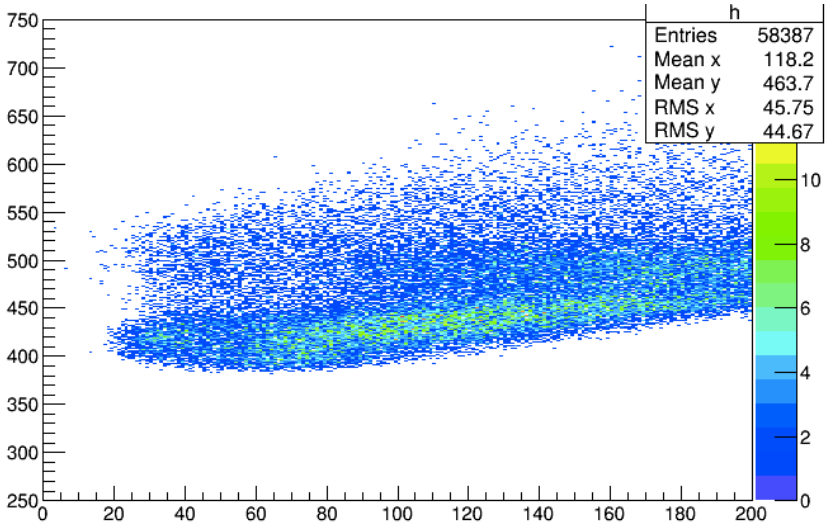
Dalitz plot



Before Dalitz cut

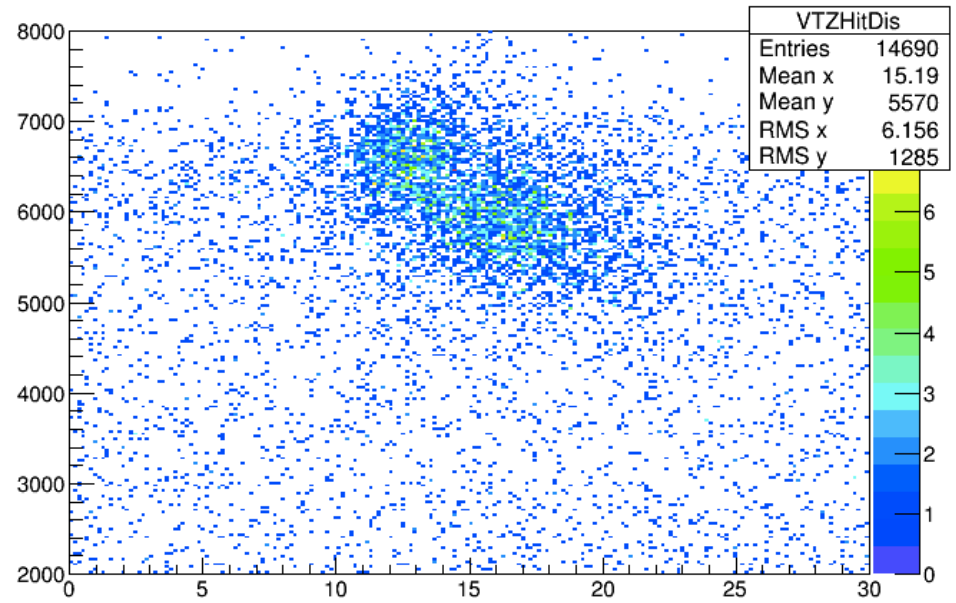


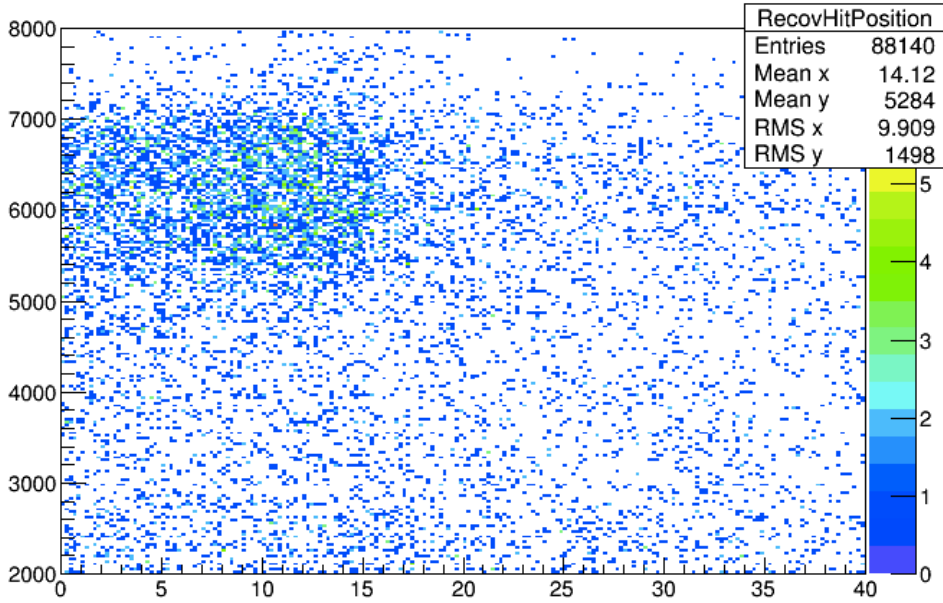
After Dalitz cut



Back splash recovery

- Why g6ana?
  - There should be no signal in Barrel when kl3pi0 reconstruction are well done.
- MB in Run69
  - Upstream Region(~5500mm) is covered by IB



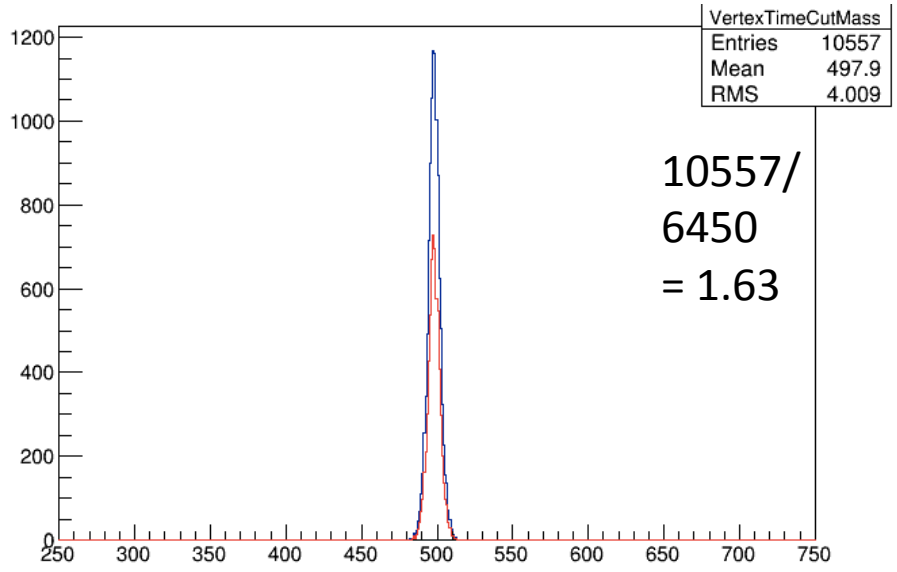


Recovery strategy

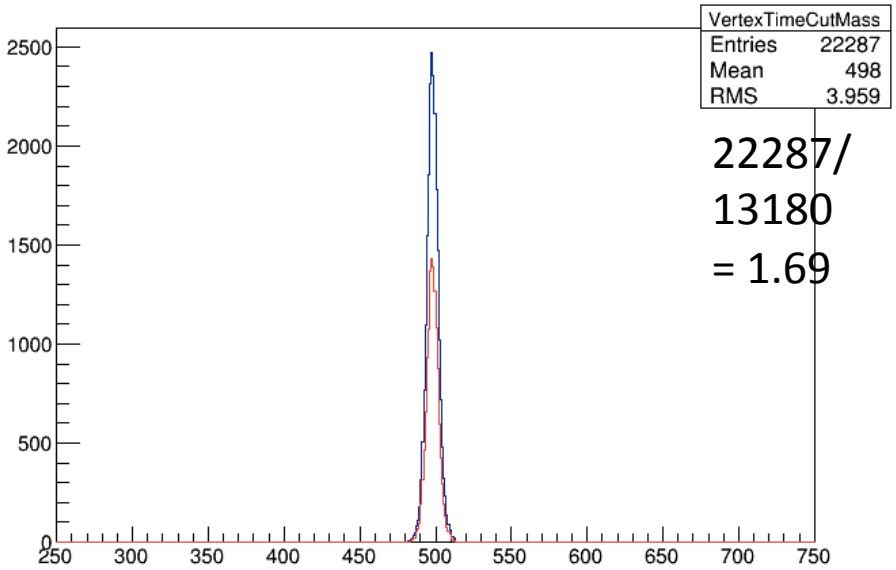
- Vertex time difference should be in offset from result of 5g+1g analysis
- If vertex time difference is sufficiently far from the offset,
  - We can save events even if there is signal in Barrel
- If vertex time difference is in offset with resolution,
  - We should reject events because time of signal in barrel is deeply related to CsI signal

Recovery efficiency

- Recovery efficiency in g6ana=
  - #events using vertex time veto window /
    #events using Barrel mean time veto window



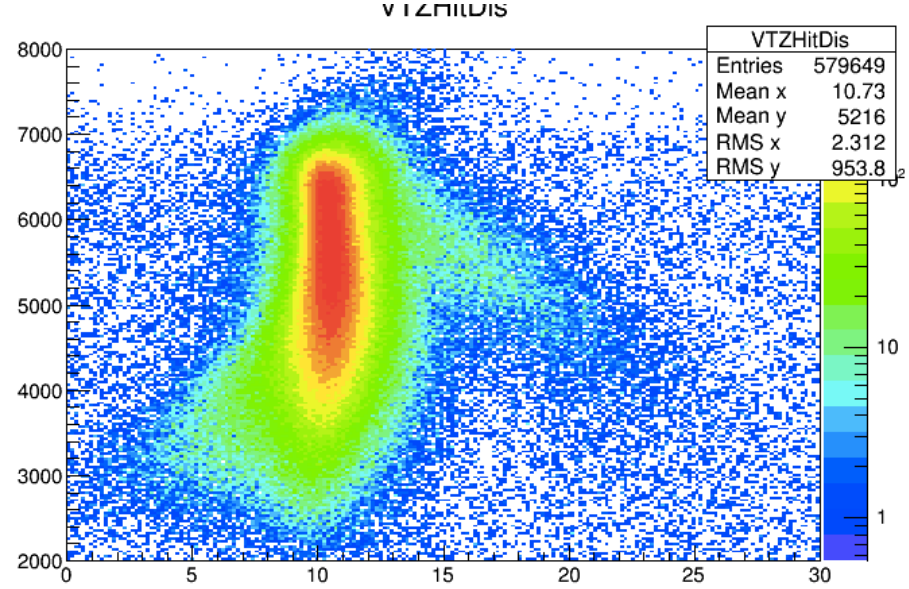
IB+MB(run69, min bias)



At g4ana

- In g4ana, there are two factors
  - 1) missing 2gammas from kl3pi0
  - 2) back splash event from CsI

MB



IB