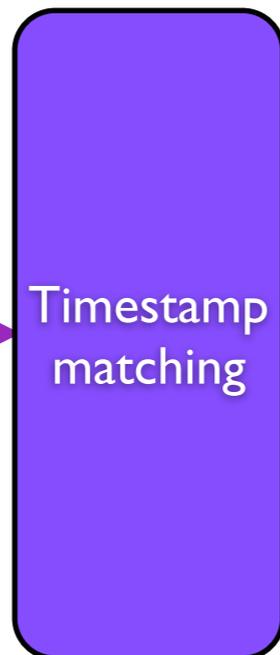
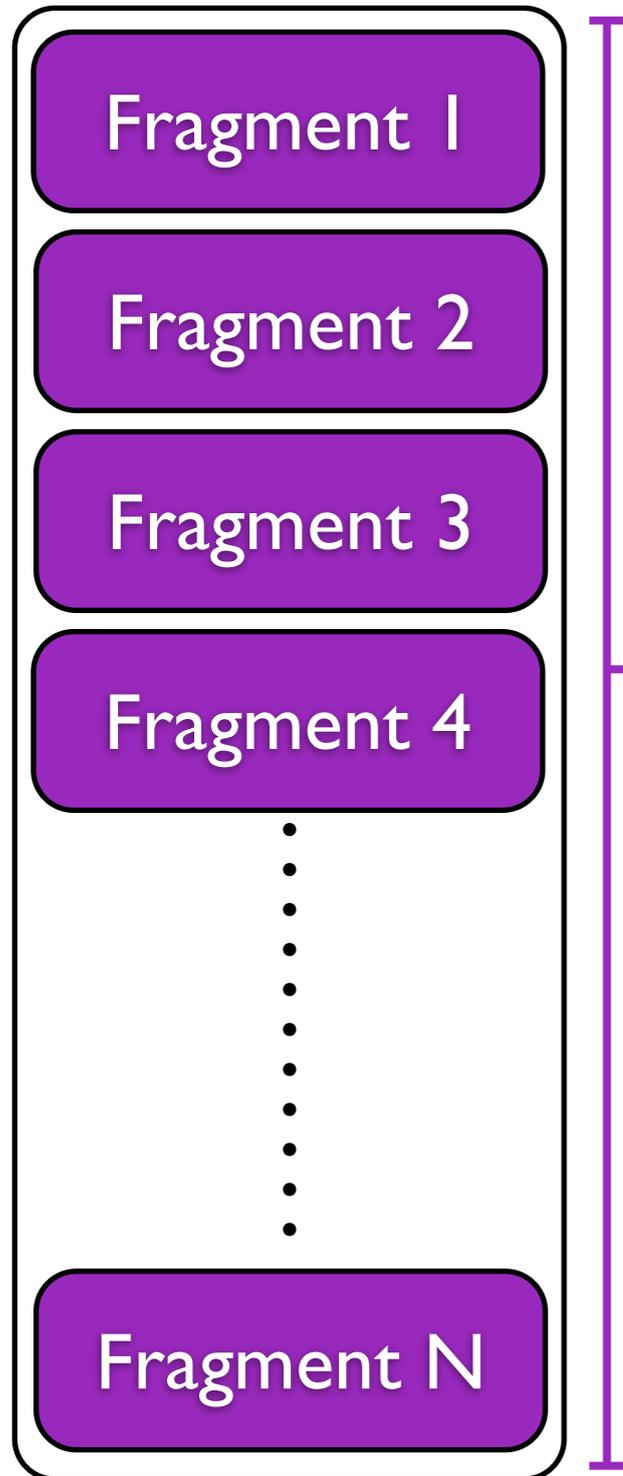


Event Slicer

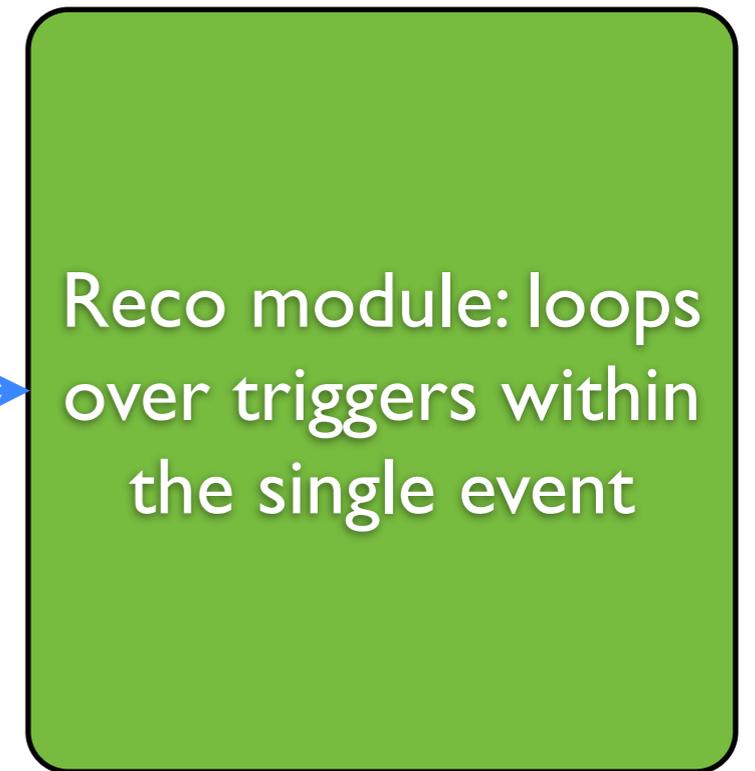
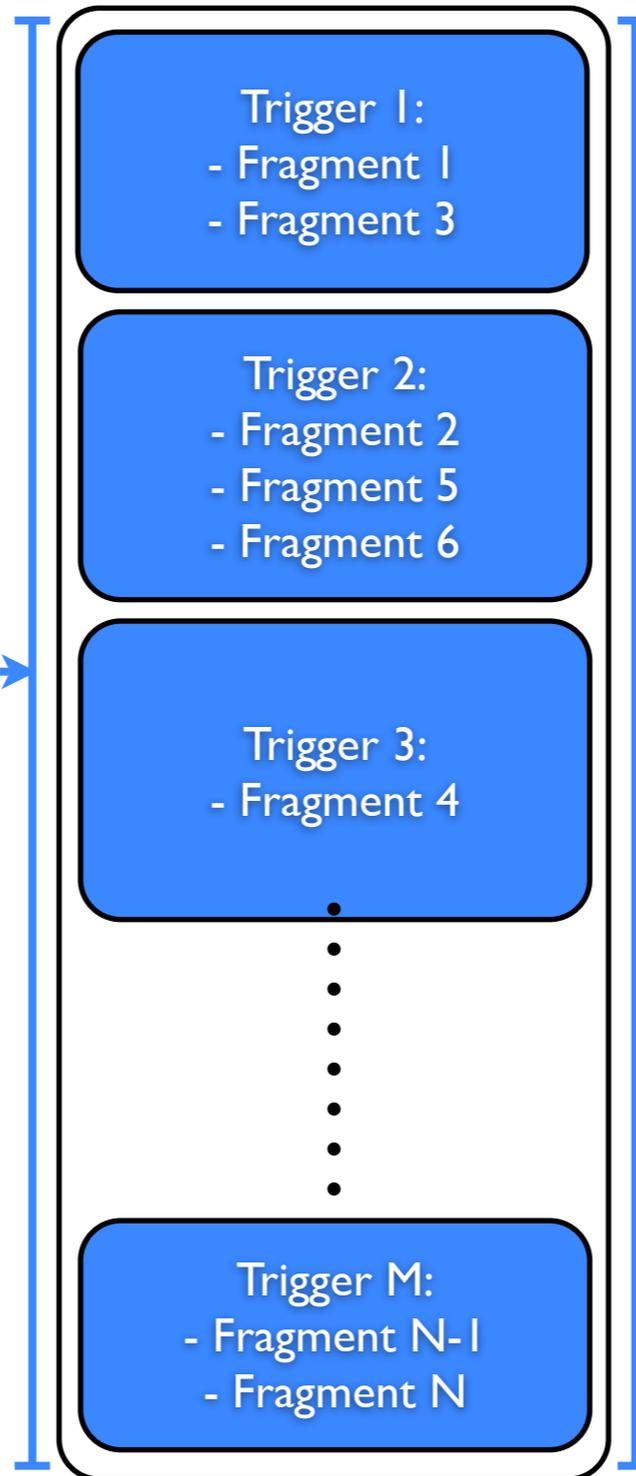
by Ryan Linehan, Jason St. John, Johnny Ho, and Pawel
Kryczynski

(with the enormous help of Kyle and Chris from
computing)

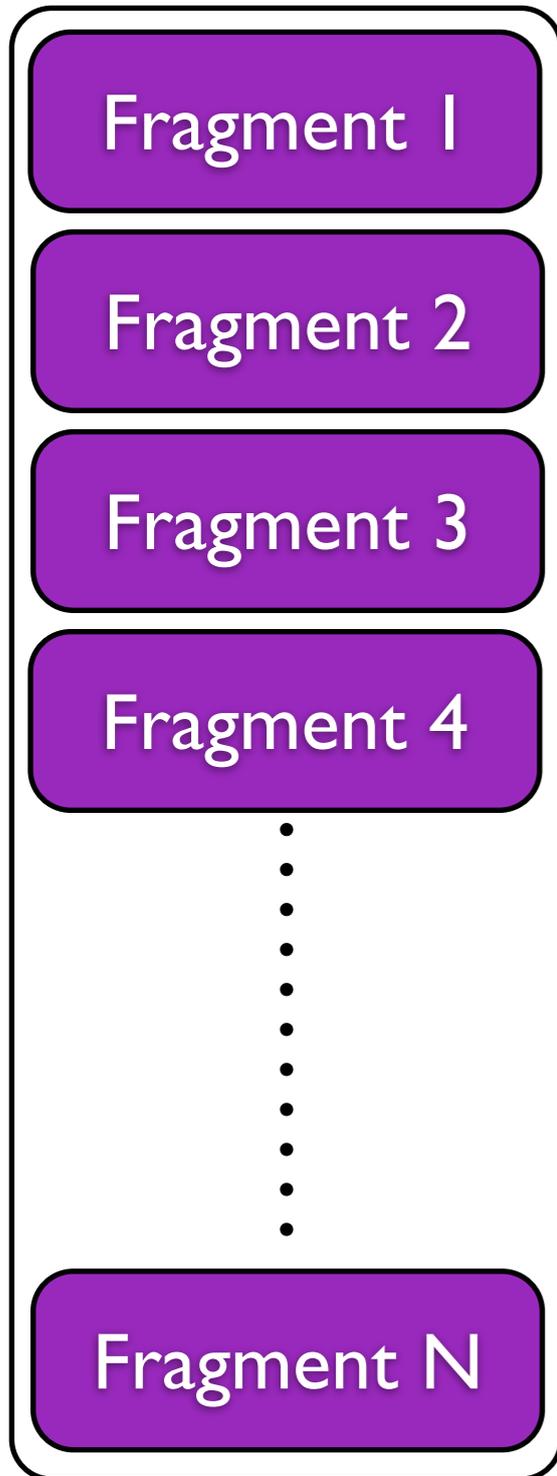
Input From DAQ:
1 Spill = 1 Event



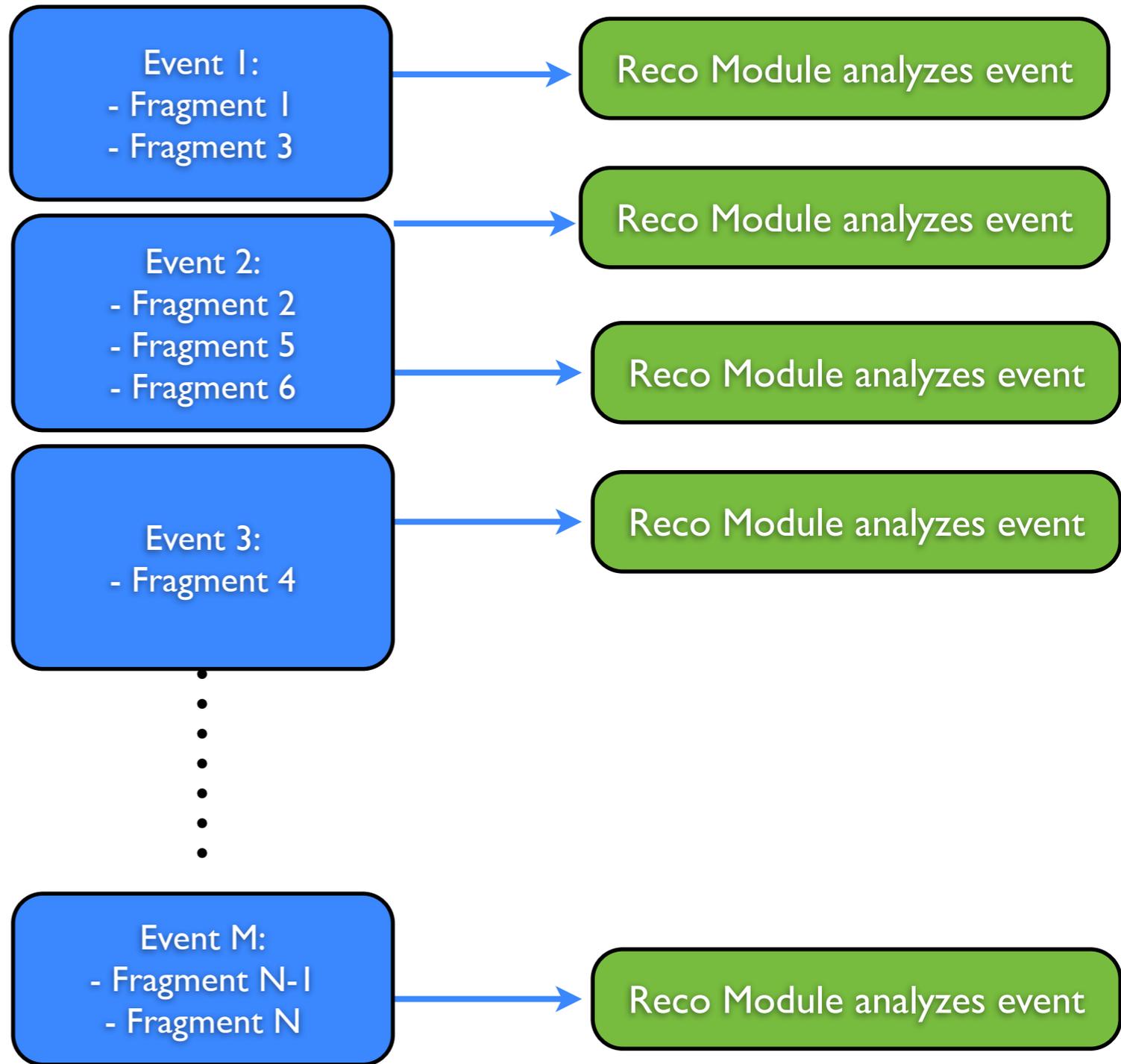
Output: Still 1 Event



Input From DAQ:
1 Spill = 1 Event



Output:
1 Spill = Many Events



Events are now defined in a way consistent with community standards.
(And we don't have to loop³ over triggers anymore!!)

Parallel Updates

WCTrackBuilder and TimeOfFlight modules have been updated to use sliced events:

Located in LArIATRecoModule (develop branch)

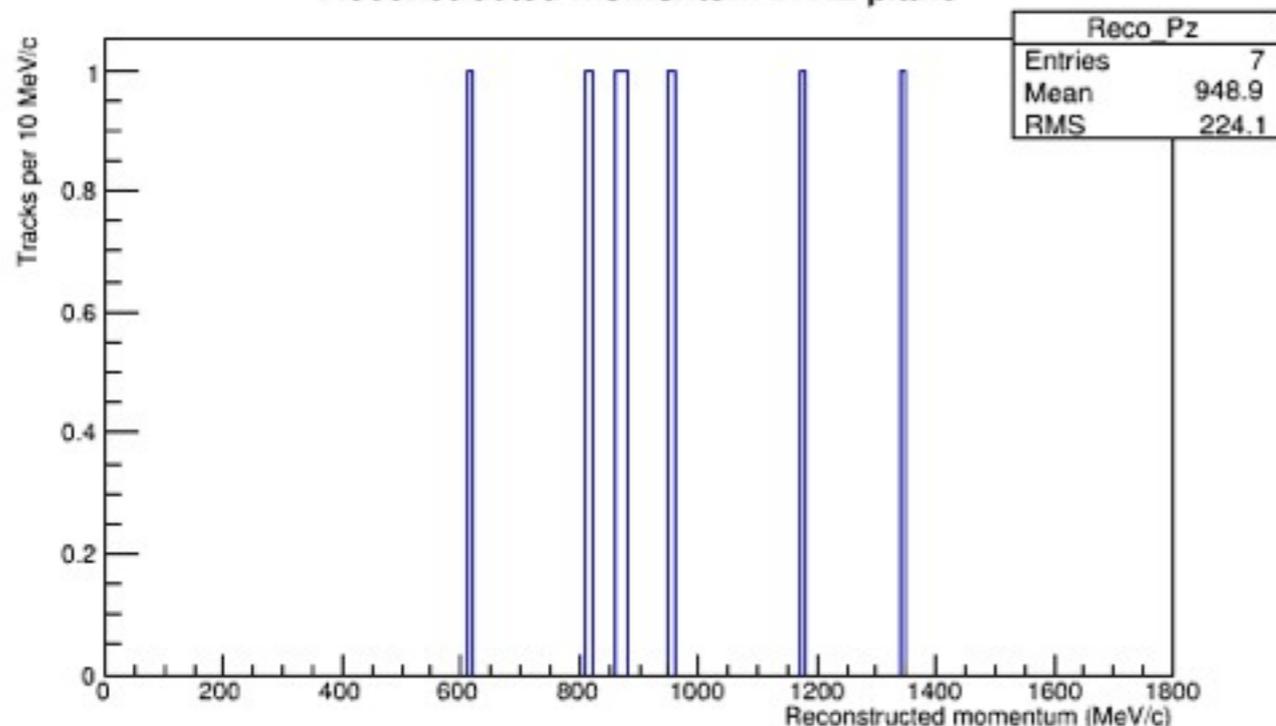
- WCTrackBuilderSlicing_module.cc
- TimeOfFlightSlicing_module.cc

Before Slicer

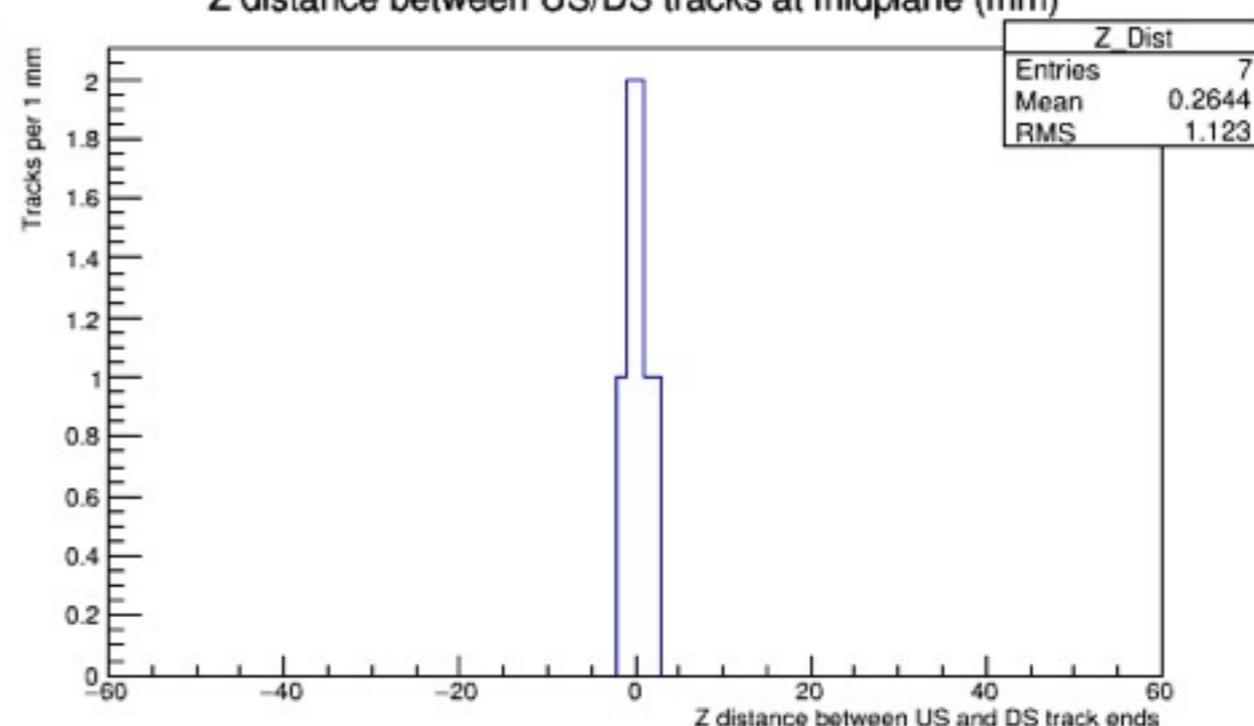
Run 5103, spill 15

WCTrackBuilder

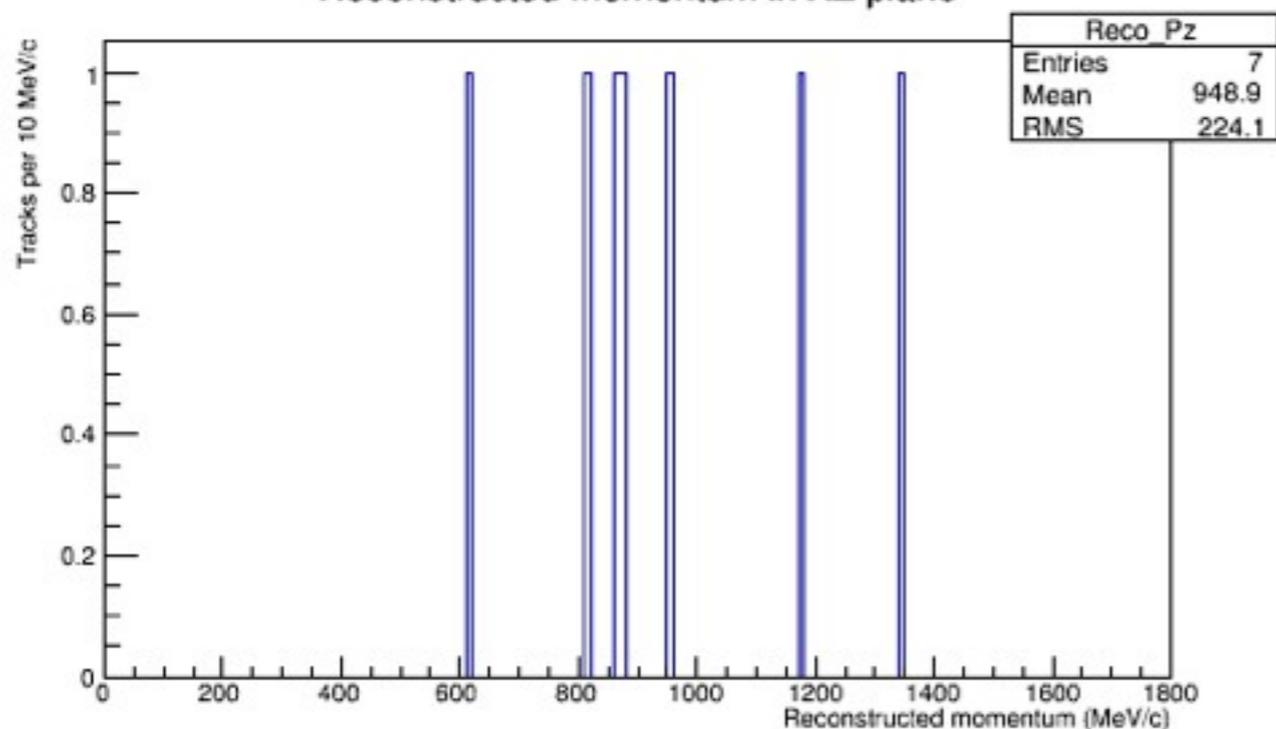
Reconstructed momentum in XZ plane



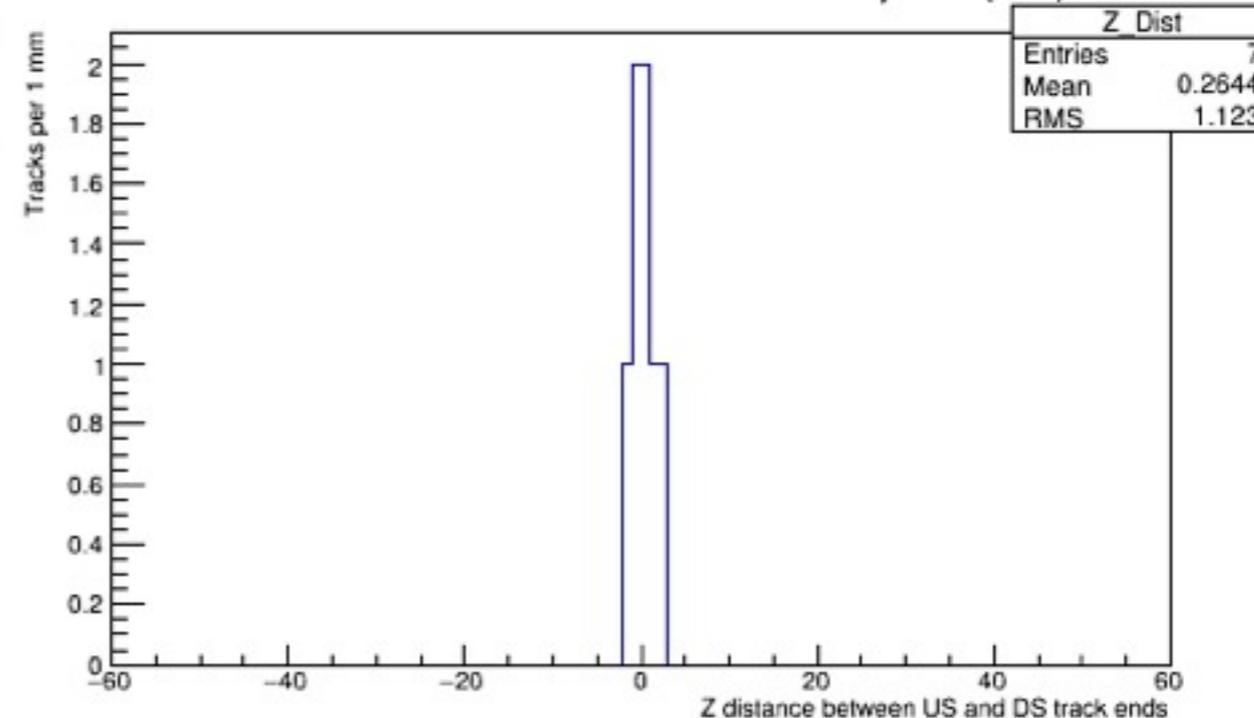
Z distance between US/DS tracks at midplane (mm)



Reconstructed momentum in XZ plane



Z distance between US/DS tracks at midplane (mm)



After Slicer

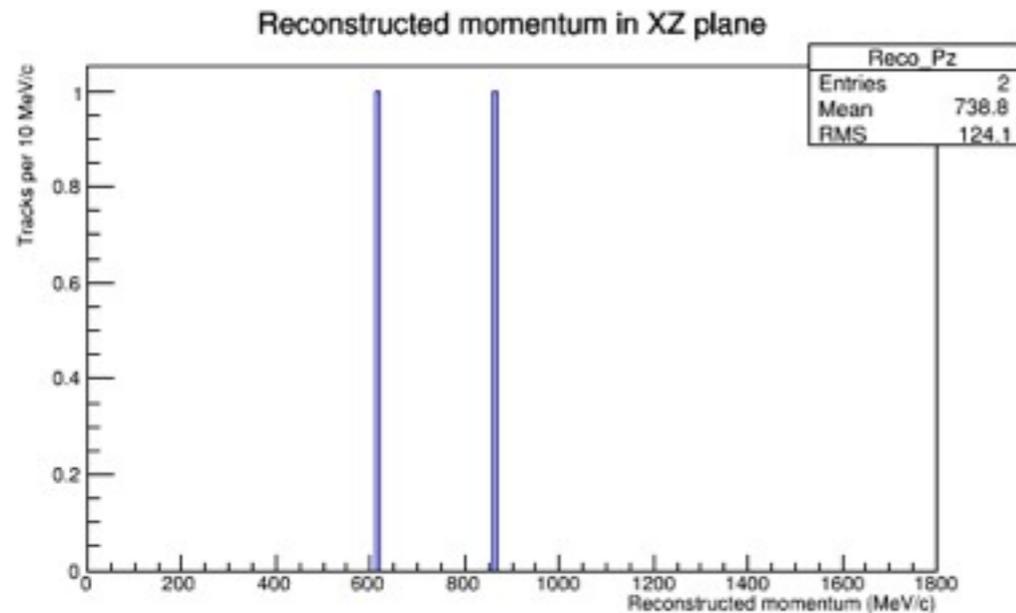
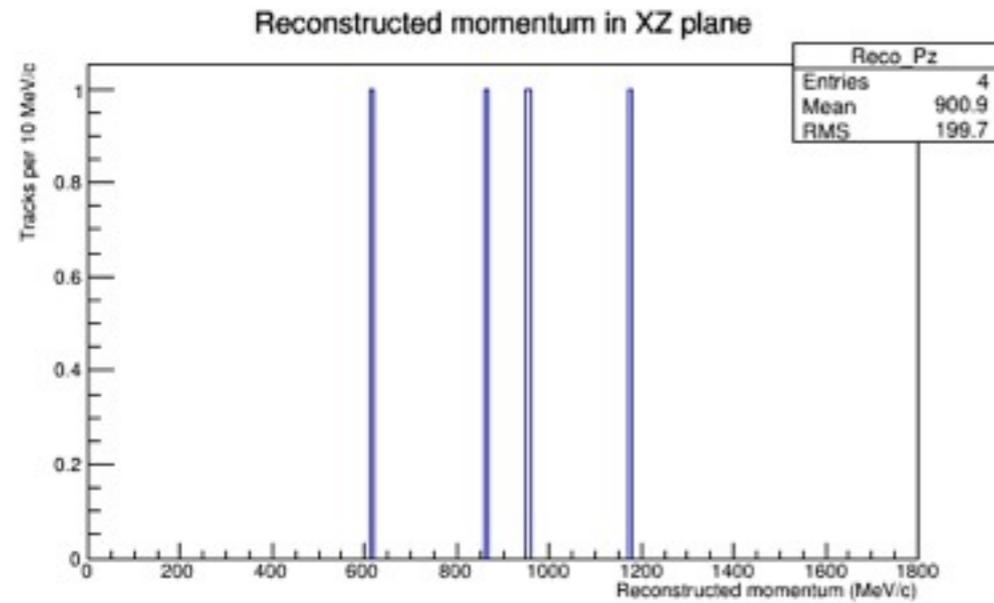
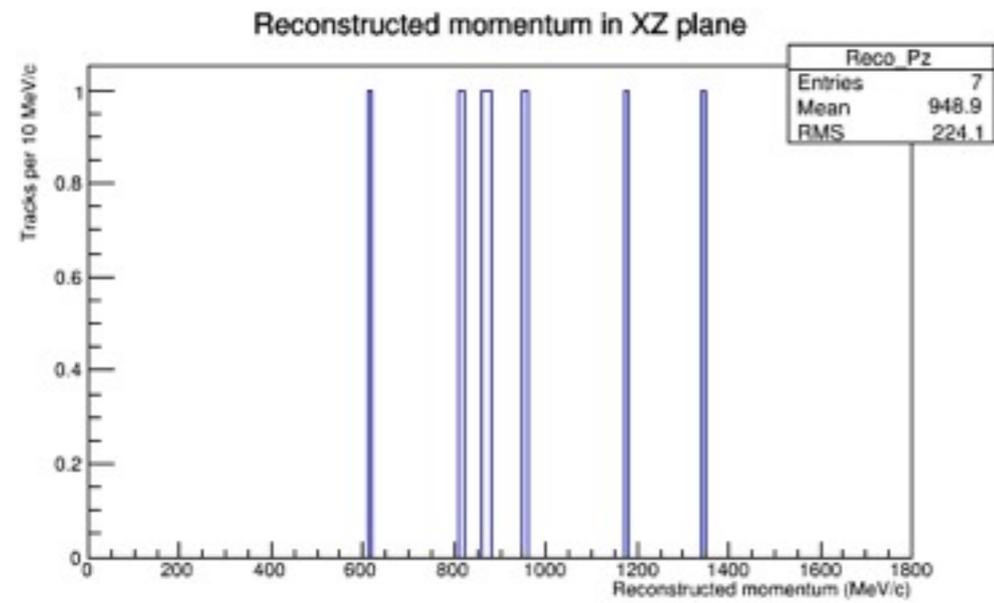
Run 5103, spill 15

101 events

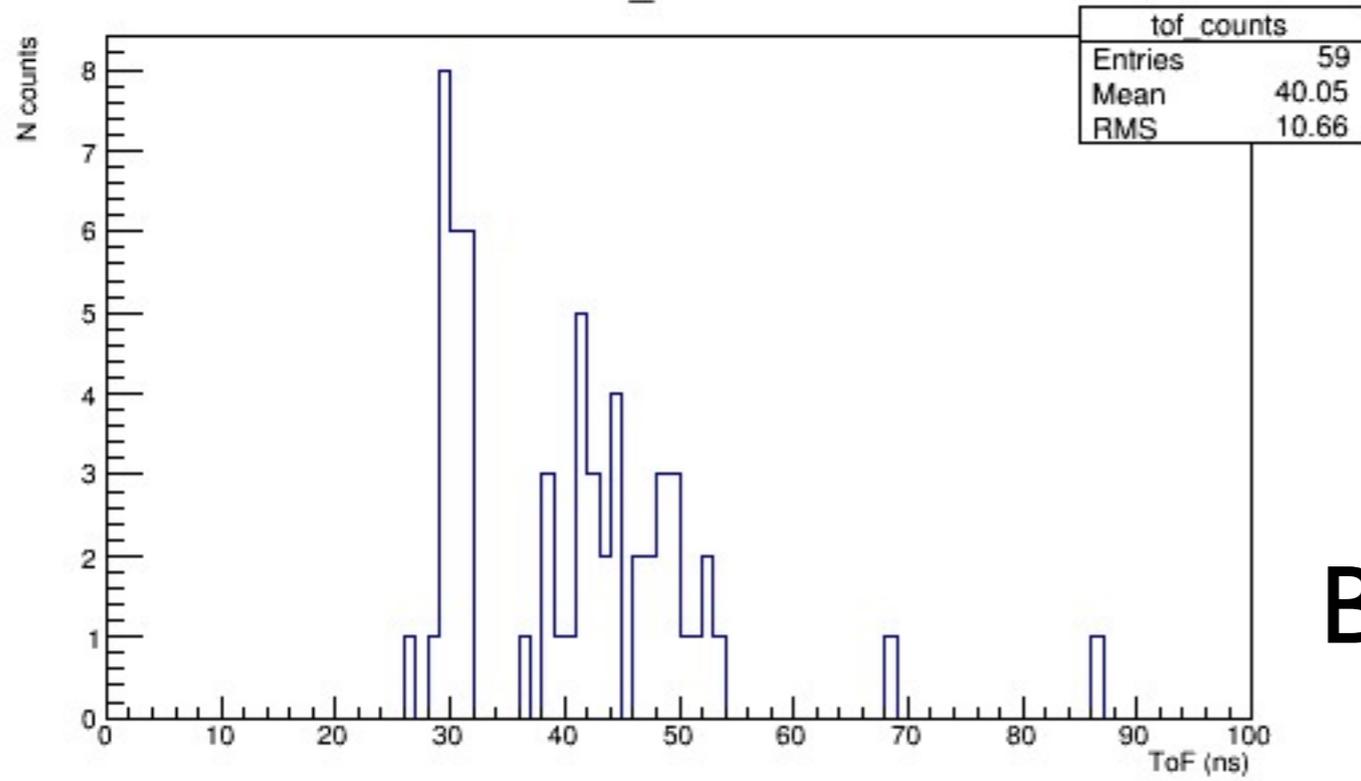
Between these, I only changed the argument of -n in the lar command

50 events

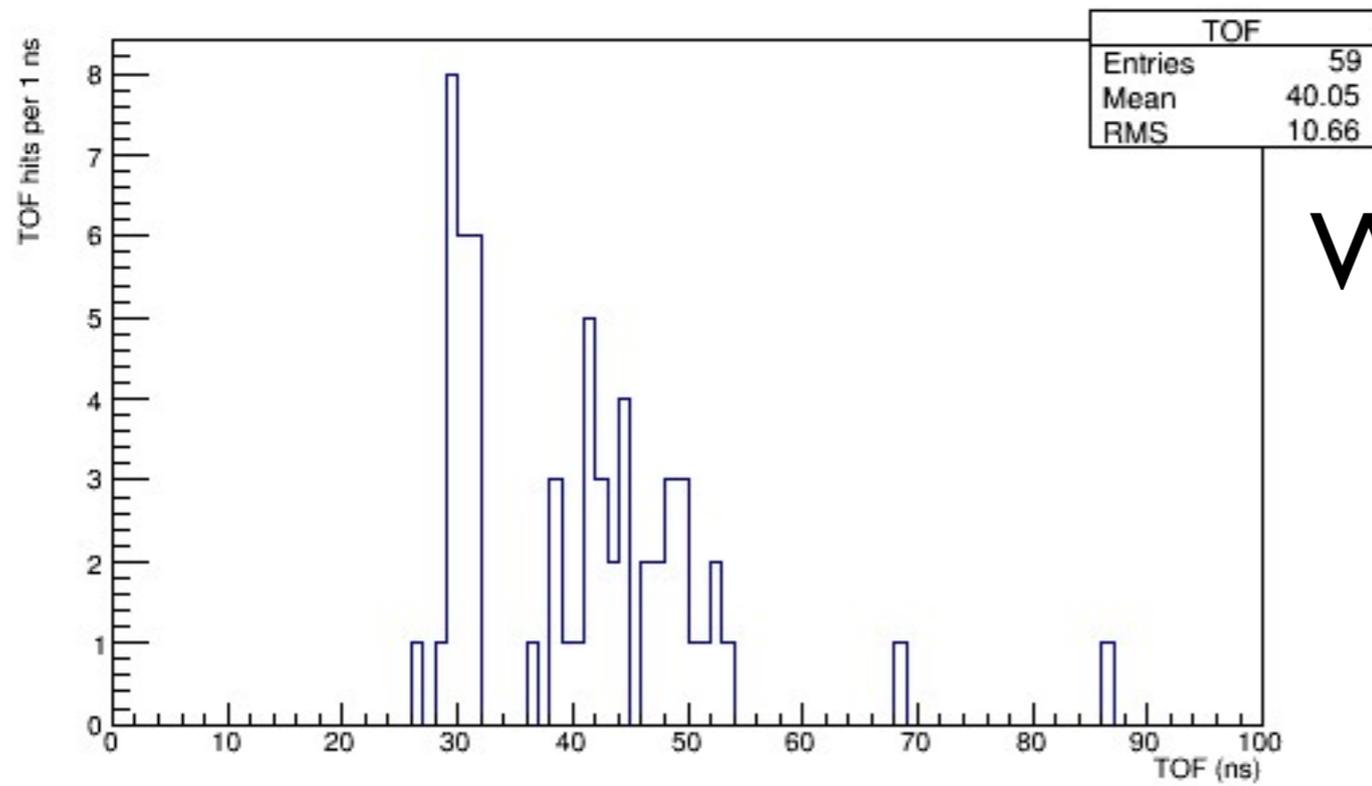
20 events



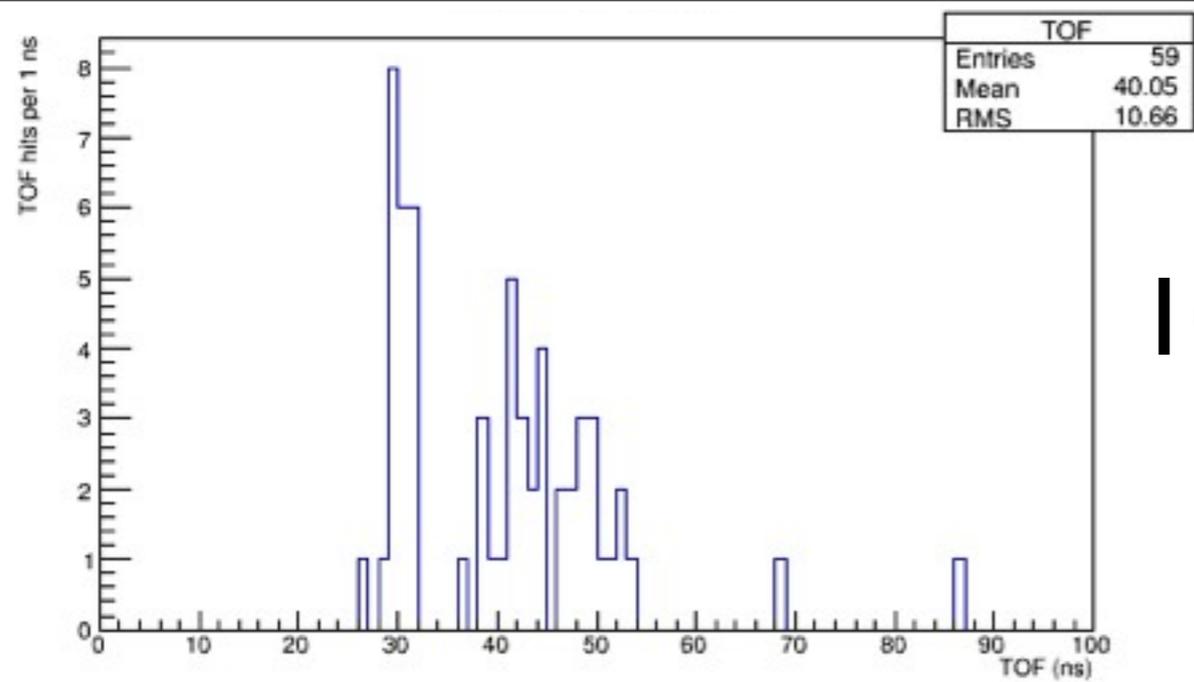
tof_counts



Before Slicer

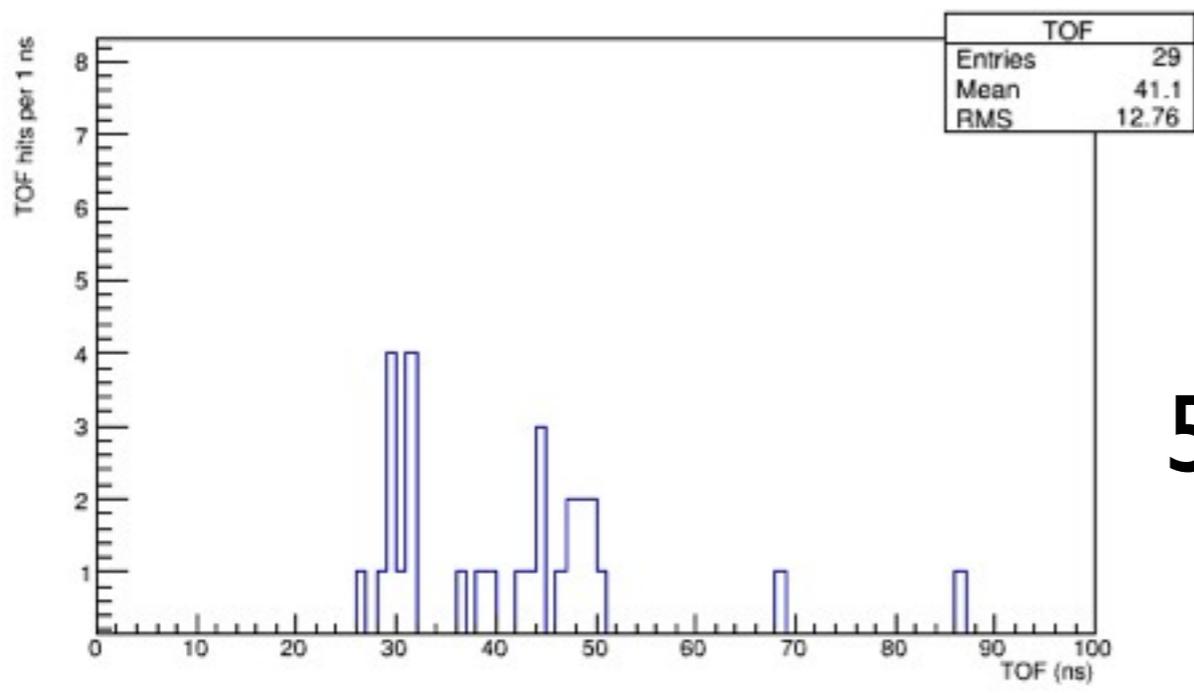


With Slicer

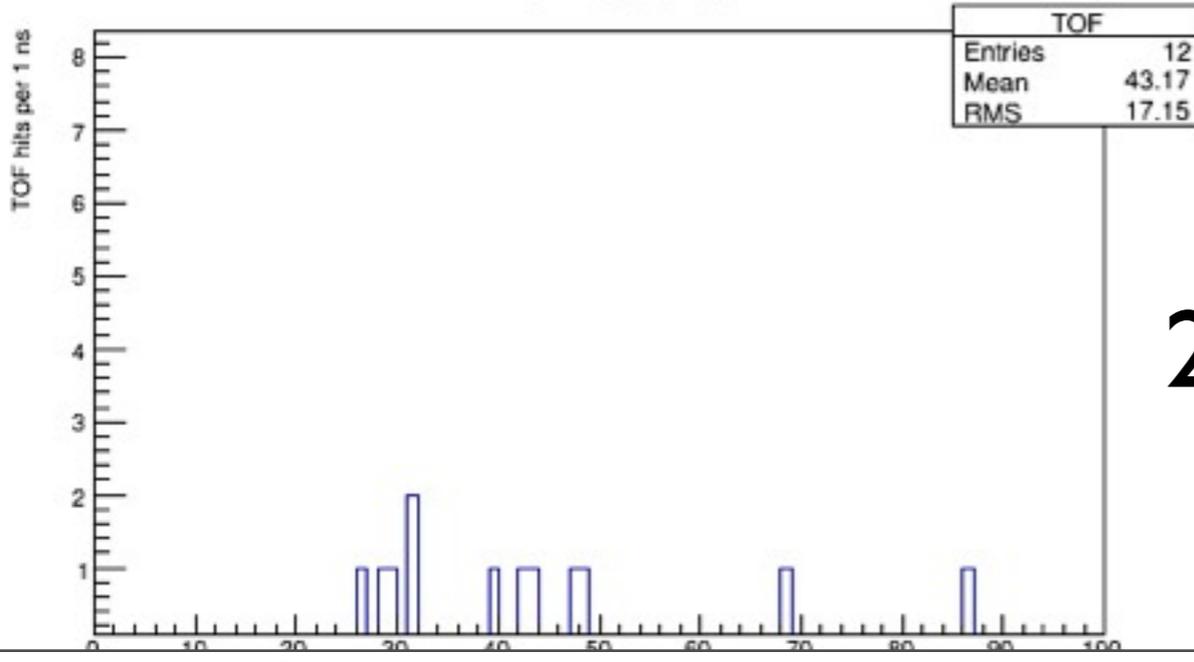


101 events

Between these, I only changed the argument of -n in the lar command



50 events



20 events

Summary

We have an operational slicer!

- Creates events from individual triggers and associated data products

Warnings/To-Do:

- At the moment, this is not able to accommodate the TriggerFilter algorithm

+ Update for this coming very soon!