

BigBite Analysis

BB Optics Radius, Transversity Class

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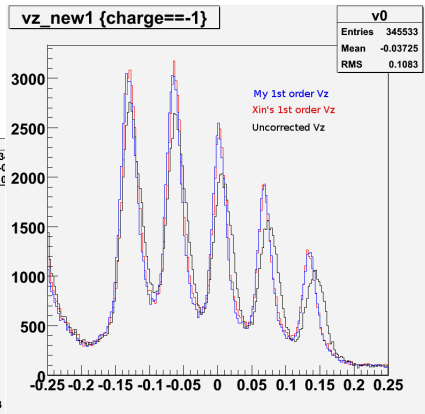
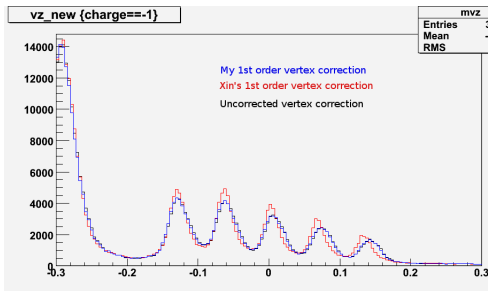
Outline

- 1 BB Optics
- 2 Transversity Class
- 3 Summary
- 4 Whats Next

Transversity Class Differences

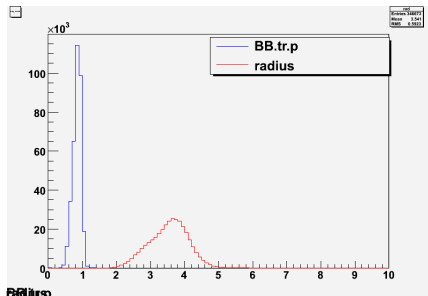
Took a look at how my vertex corrections compared to Xin's, found that I had the wrong first order correction for Carbon 1-pass

So I re-did it

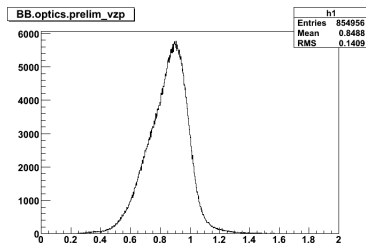


Momentum issue

Carbon 1-pass run momentum is odd



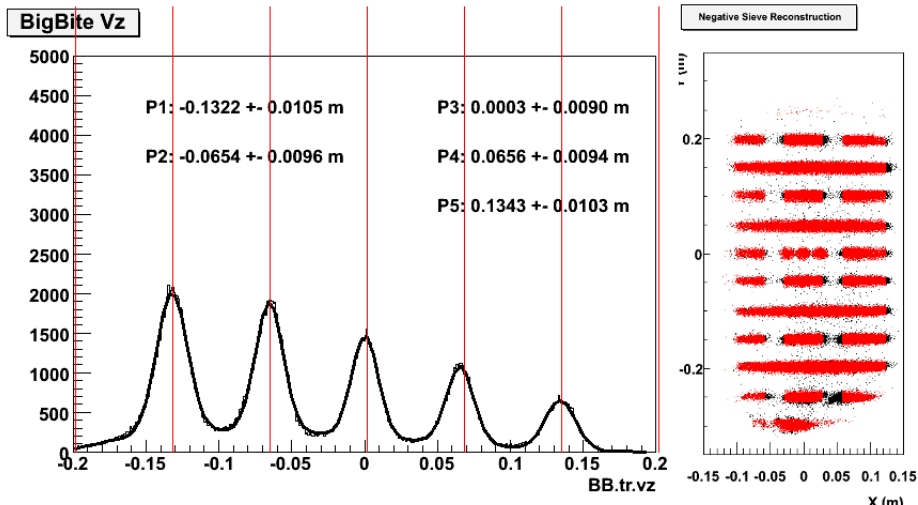
my radius after first order correction and final BB.tr.p



Diana's radius after 1st order correction

Negative Sieve and Vertex

What our replay currently gives us for 1-pass Carbon runs



Transversity Class Differences

I have taken a look at some of the differences from the Transversity BigBite Library and ours

- The Shower Classes (THaBB-ShowerBlock, THaBBShowerCluster, THaBBShower, THaBBTotalShow
- Cluster and track comparisons made
- Cluster Cluster comparisons made
- Multiple clusters saved
- Also read corrected energies from data base based on charge accumulation (will need to be updated for us)

Transversity Class Differences Cont.

- `THaOpticsE06010`

- Pulls wall thickness from database
- saves original momentum before applying energyloss



`THaOpticsAGen.h`, `THaOpticsAnalytical.h`, `THaOpticsHRS.h`, `THaOpticsHRSAnalytical.h`

- has the line using `ThaOptics::ApplyOptics` (to avoid hidden override problem)
- There are a few E06010 specific classes which should not affect us:
 - `THaBeamElossE06010`, `THaCoinTimeE06010`, `THaHRSE06010` and `THaTriggerTimeE06010`

Summary

- Want to understand the momentum issue
- Other than this is it worth looking into further corrections on the vertex?
- Should be able to implement the Transversity Shower classes

For Next week

- Set up an independent analysis directory (including bigbite lib that I can modify like Diana did) on d2n machine
- Look into the momentum issue using a modified optics class
- Implement the Transversity Shower classes into this bigbite directory