

# BigBite Analysis

Positive Polarity Energy, N2 Dilution Fix

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# Outline

1 Pre-Shower Y-Block Dimension Change

2 4-Pass Positive Polarity Energy

- Overall Energy and E/p
- 4-pass E/p Stability

3 N2 Dilution

4 Summary

5 What's Next

# Results of Pre-Shower Y Block Dimension of 35cm

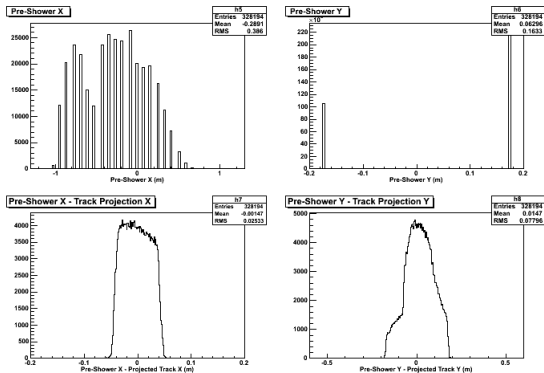


Figure: Results of having pre-shower y block of 35cm with 4-pass all cuts applied

# Results of Pre-Shower Y Block Dimension of 34cm

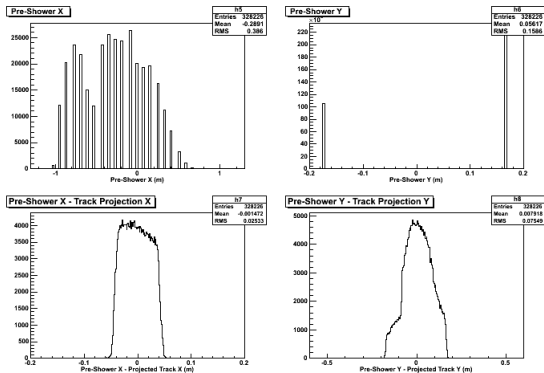


Figure: Results of having pre-shower y block of 34cm with 4-pass all cuts applied

# Positive Polarity Energy

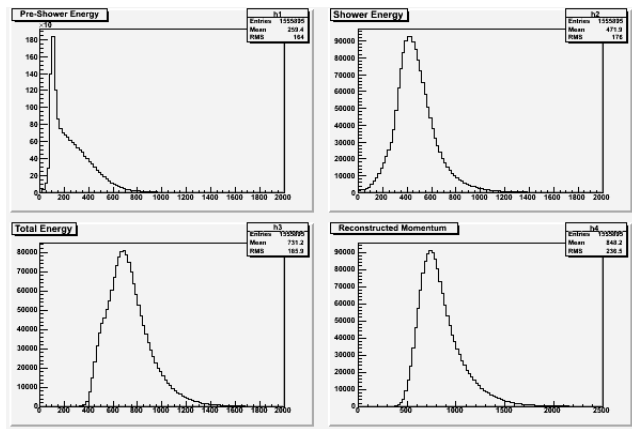


Figure: Shows 4-pass positive polarity pre-shower, shower, total energy and momentum with all cuts but E/p and pre-shower

# Positive Polarity E/p

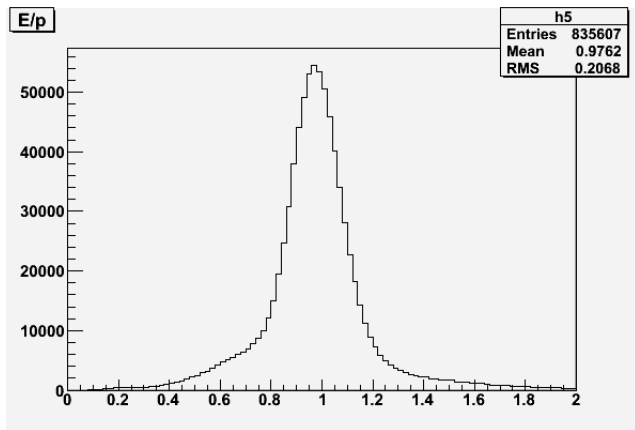


Figure: Shows 4-pass positive polarity E/p with all cuts but E/p

# Positive Polarity E/p

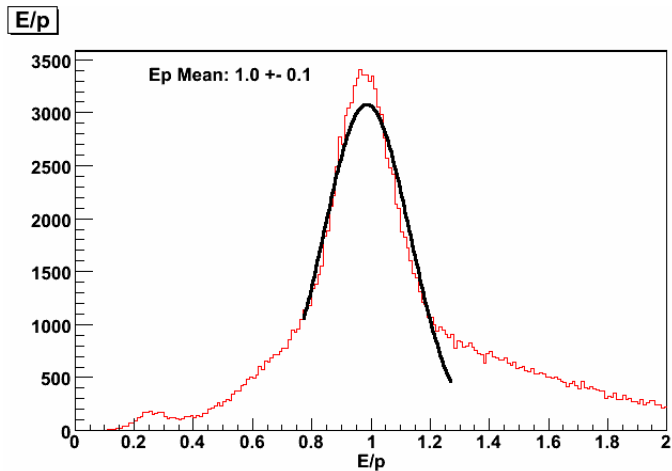


Figure: Shows 4-pass positive polarity E/p for run 2201

# Positive Polarity E/p Stability

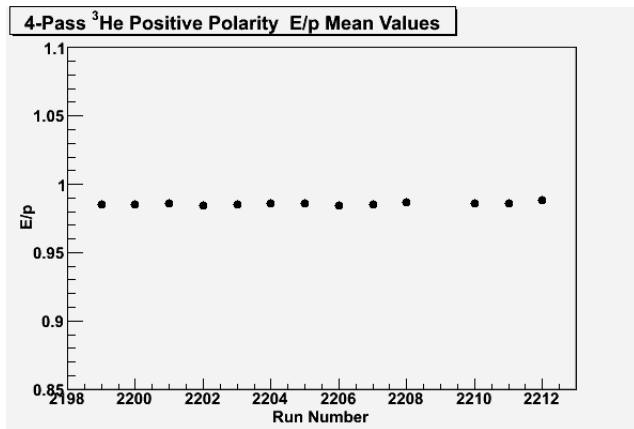
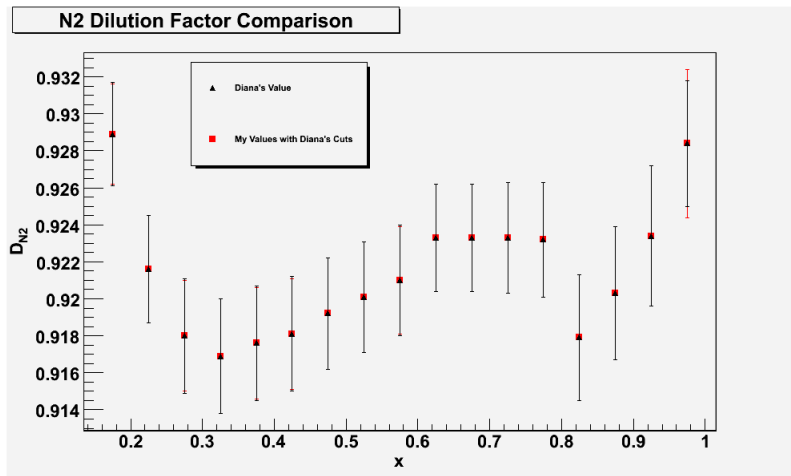


Figure: Shows 4-pass positive polarity E/p over all runs



# $D_{N_2}$ : Comparison (All most fixed)

- Compare to Diana's dilution factor. Last bin errors off (check double counting)



# Summary

- Using Pre-Shower Y block dimension of 34cm increases our reconstructed events by less than 0.01%
- Same difference of pre-shower Y and track Y cut should be ok
- Positive polarity E/p peak near 1
- Dilution factor now matches Diana's
- BB Čerenkov HV1 calibration are done. Will send Brad updated DB

# For Next week

- Get x-binned kinematic variables
- Work on BB d2n cut list for wiki