BigBite Analysis

4-Pass Live Times and 5-Pass Energy Calibration

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Outline

4-Pass T2 Live Times

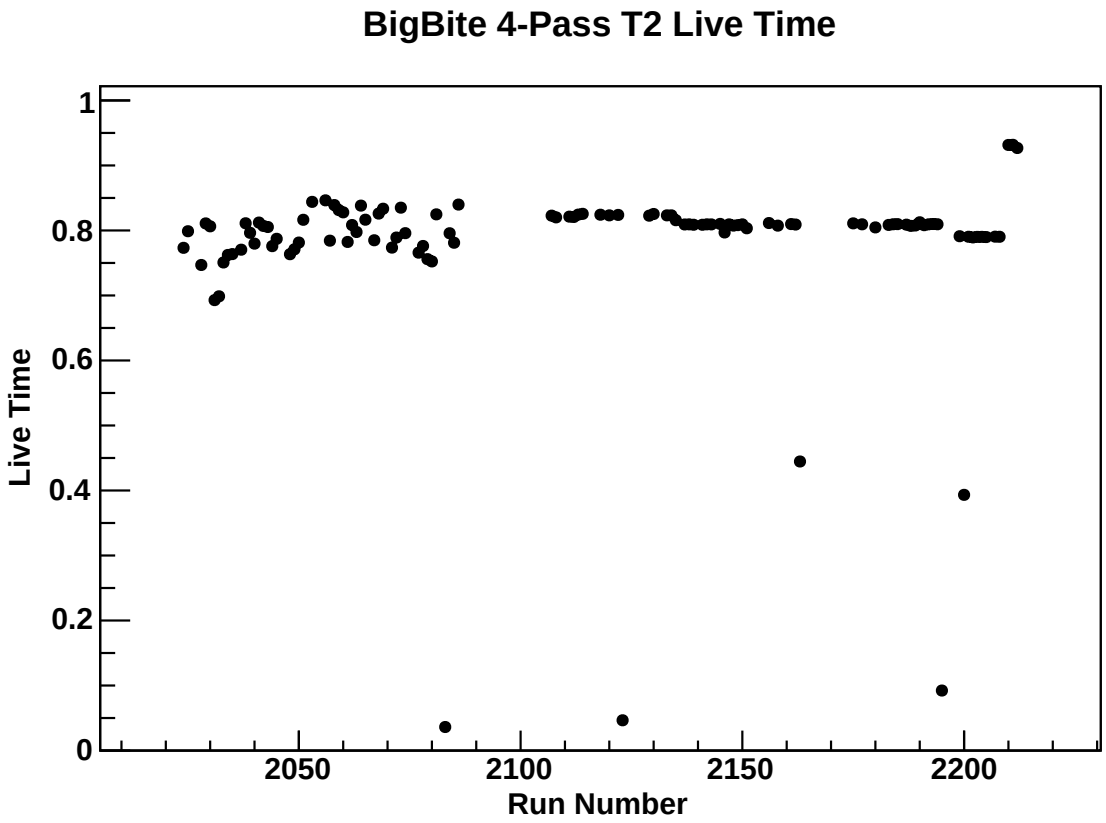

Figure: 4-Pass Live Times as a function of run number. Runs 2199-2212 are positive polarity runs. Runs 2210-2212 have prescale of 2 all other runs have prescale of 1.

5-Pass Shower HV Changes

- There were 3 HV changes relevant to our 5-pass production data
  - Runs (1311-1475)
    - 1311-1447 (before shower mod. fix)
    - 1448-1475 (after shower mod. fix)
  - Runs (1476-1742) Already calibrated see talk from 9/28/2011
  - Runs (1829-2020)

Before Shower Mod. Fix: Calibration Coefficients

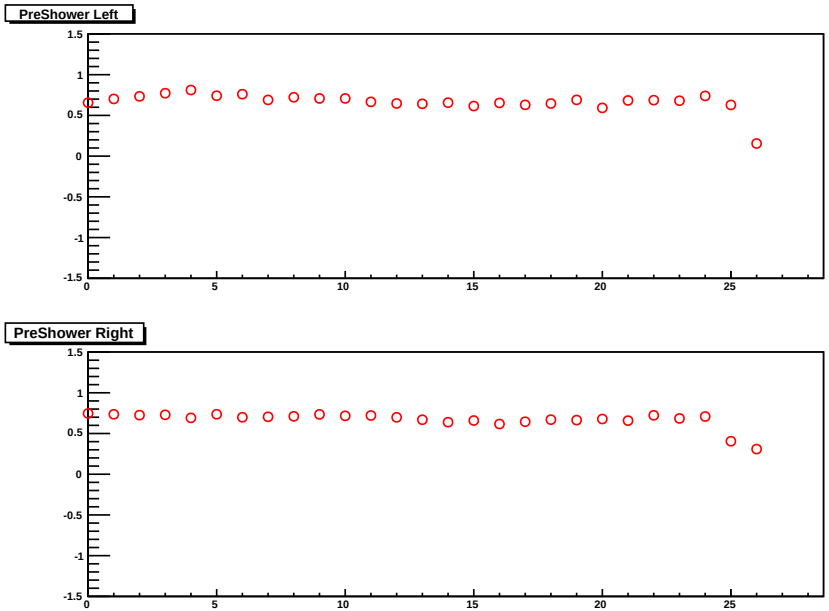

Figure: Left and right pre-shower calibration coefficients.

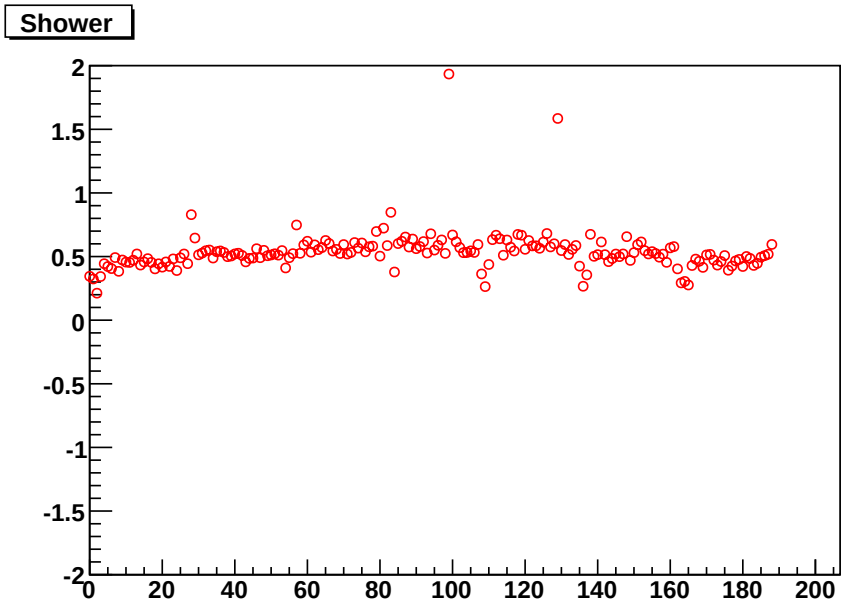

Figure: Shower calibration coefficients.

Before Shower Mod. Fix: E/p

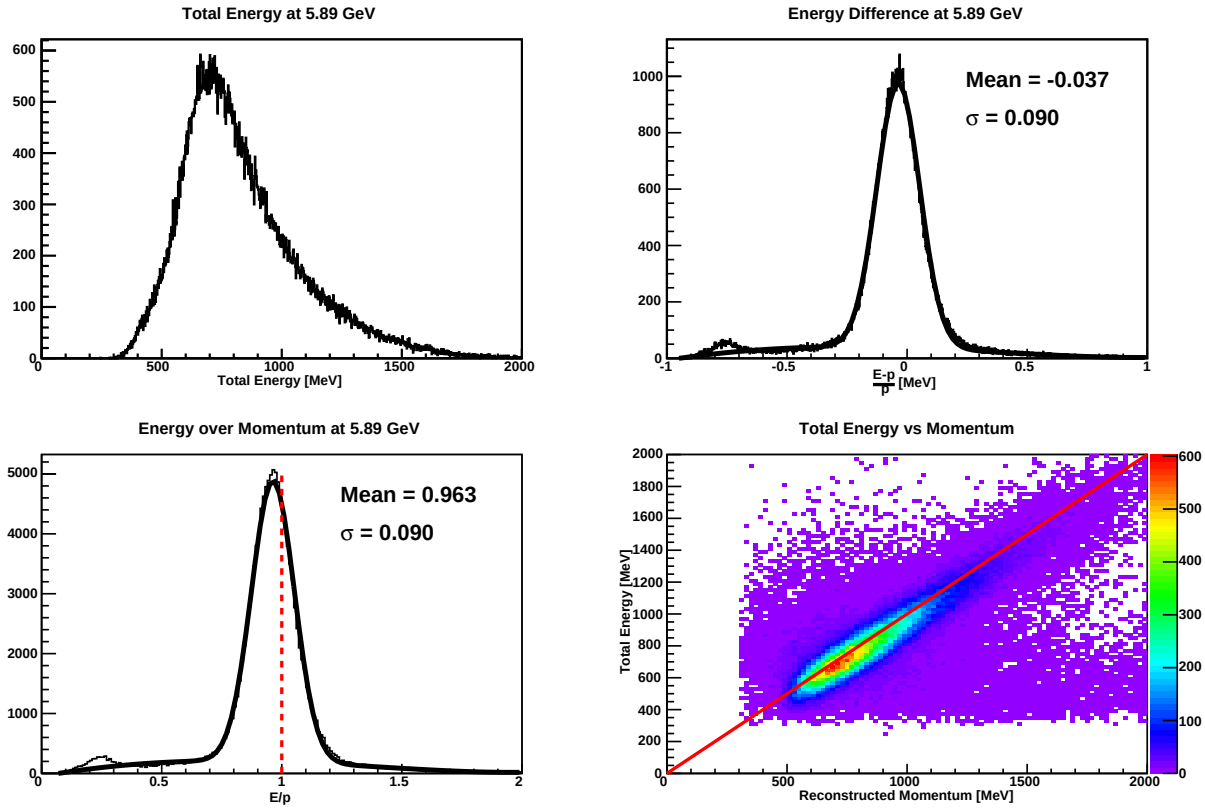

Figure: Upper left is the calibrated energy, upper right is energy-momentum/momentum, bottom left is E/p and bottom right is E vs p.

After Shower Mod. Fix: Calibration Coefficients (1)

Negative values for last two preshower blocks

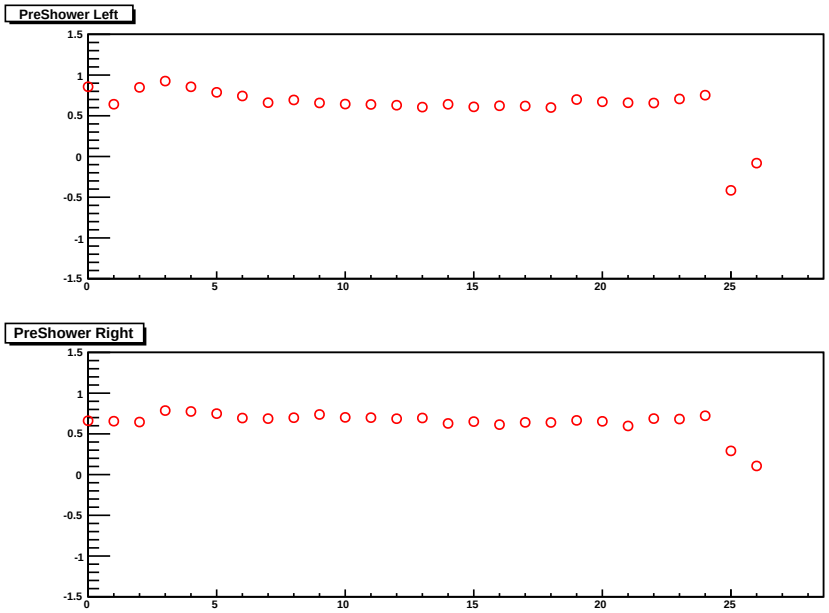

Figure: Left and right pre-shower calibration coefficients.

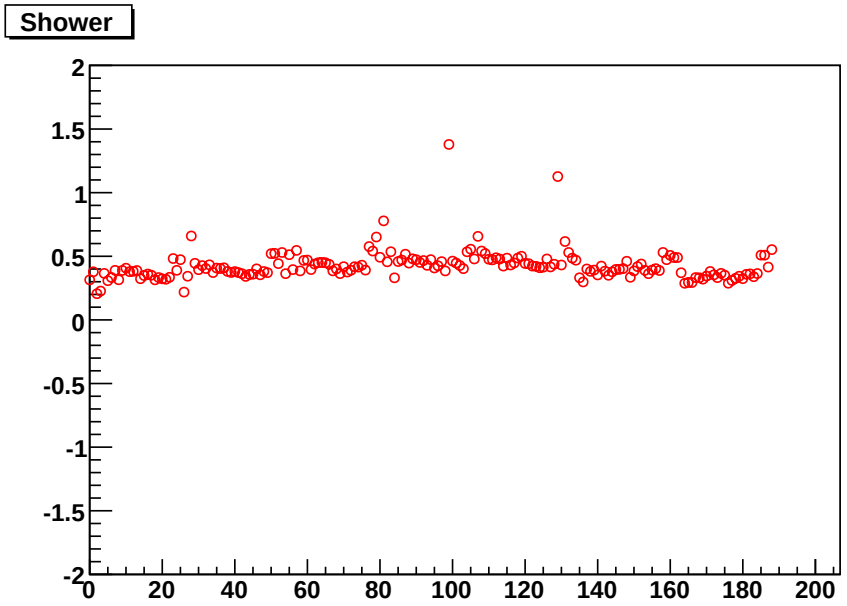

Figure: Shower calibration coefficients.

After Shower Mod. Fix: Calibration Coefficients (2)

Set negative values to mean of neighbors

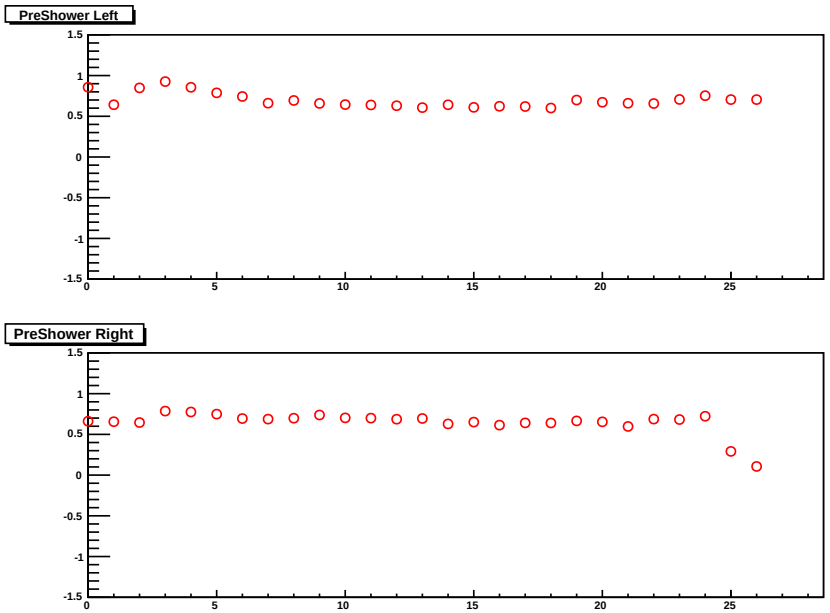

Figure: Left and right pre-shower calibration coefficients.

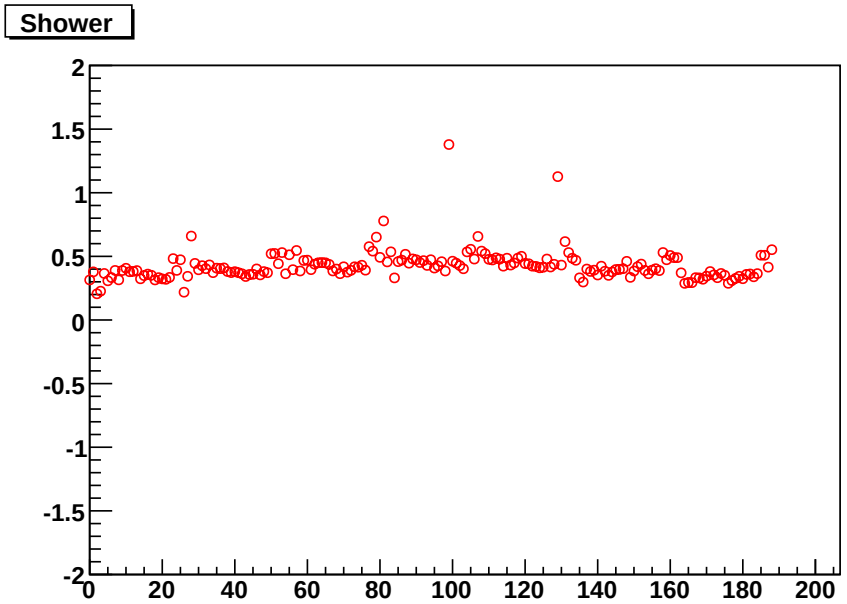

Figure: Shower calibration coefficients.

After Shower Mod. Fix: E/p

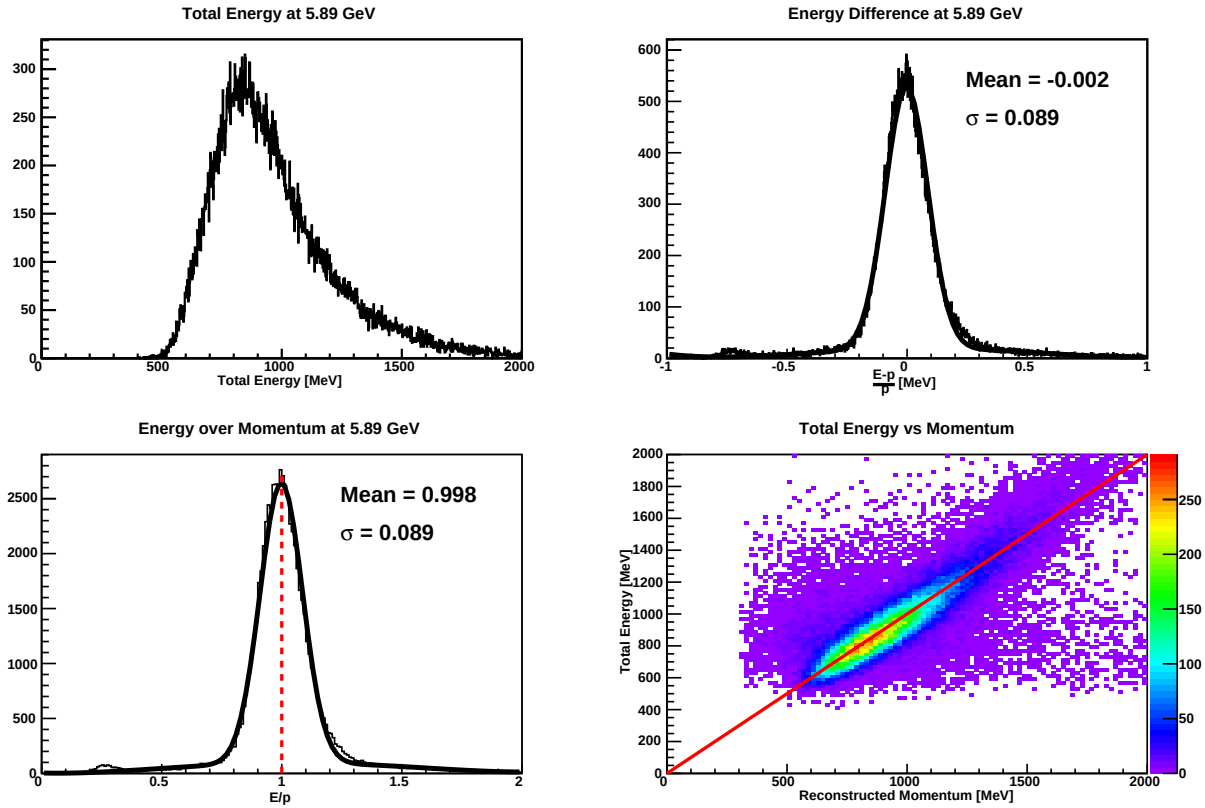

Figure: Upper left is the calibrated energy, upper right is energy-momentum/momentum, bottom left is E/p and bottom right is E vs p.

Calibration Coefficients

Set negative values to mean of neighbors

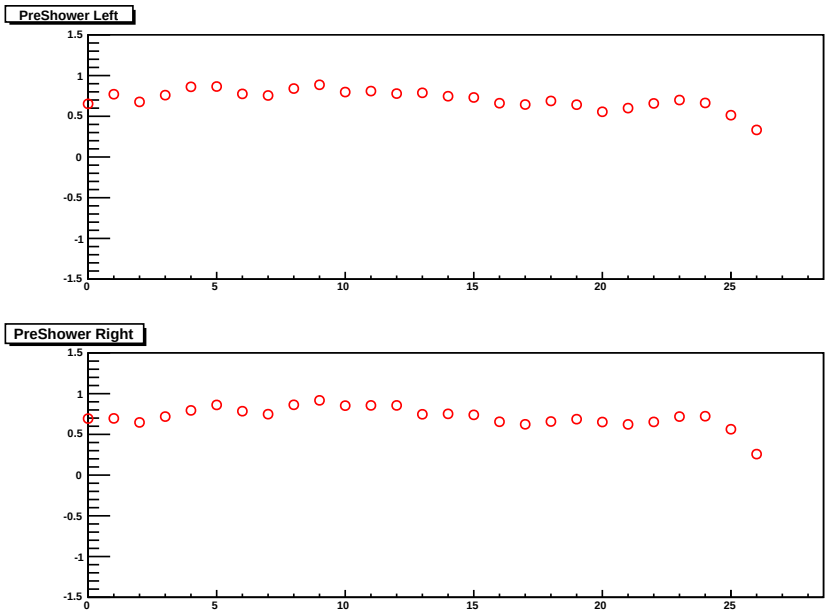

Figure: Left and right pre-shower calibration coefficients.

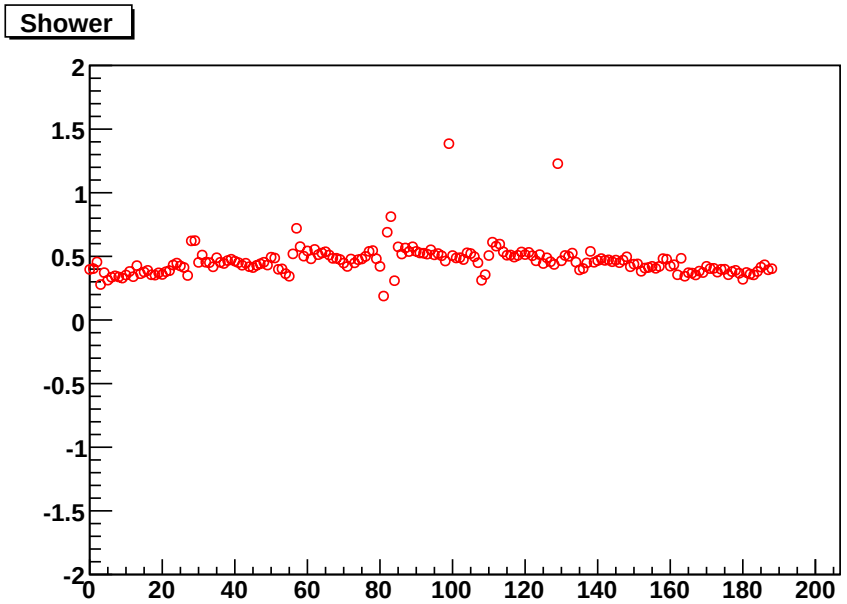

Figure: Shower calibration coefficients.

E/p

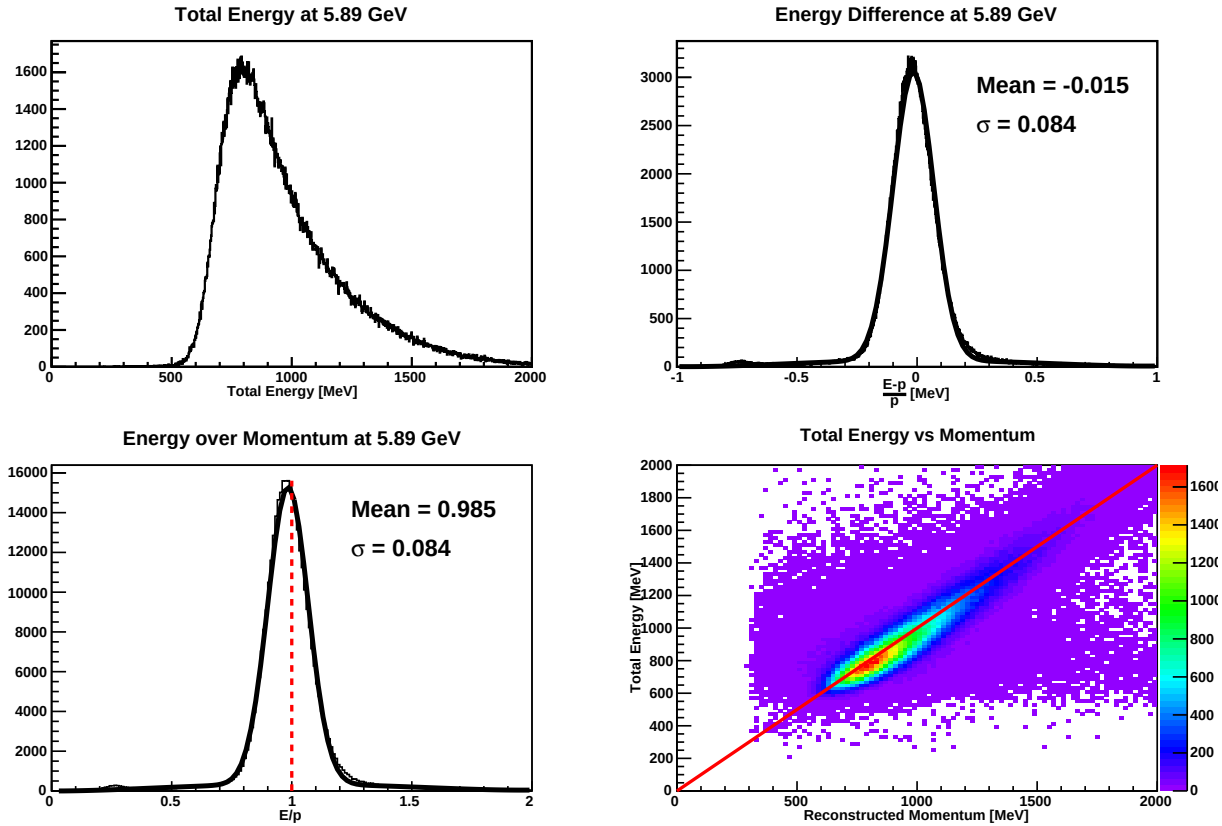

Figure: Upper left is the calibrated energy, upper right is energy-momentum/momentum, bottom left is E/p and bottom right is E vs p.

What's Next

- Finish Implementing MWDC calibrations into database and StartType
- Finish Energy calibrations and update database and StartType
- Compute e+ and e- yields using live times