

# $D(e,e'p)$ SHMS Delta Cuts Study

**General Cuts:**

$|E_m| < 40 \text{ MeV}$

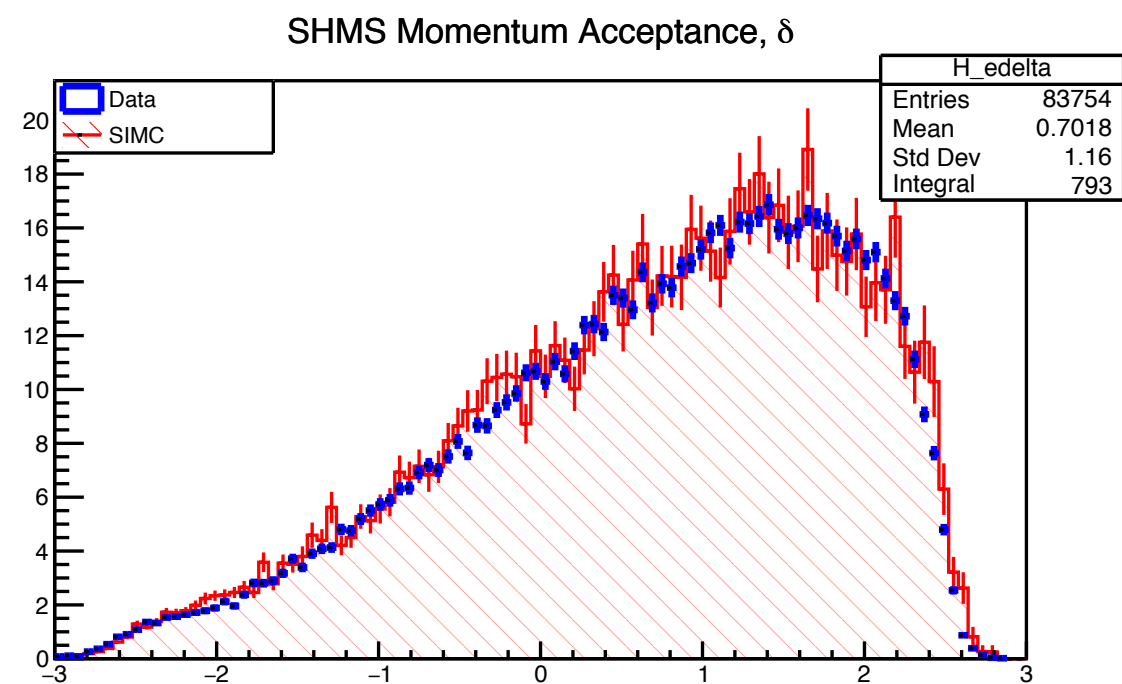
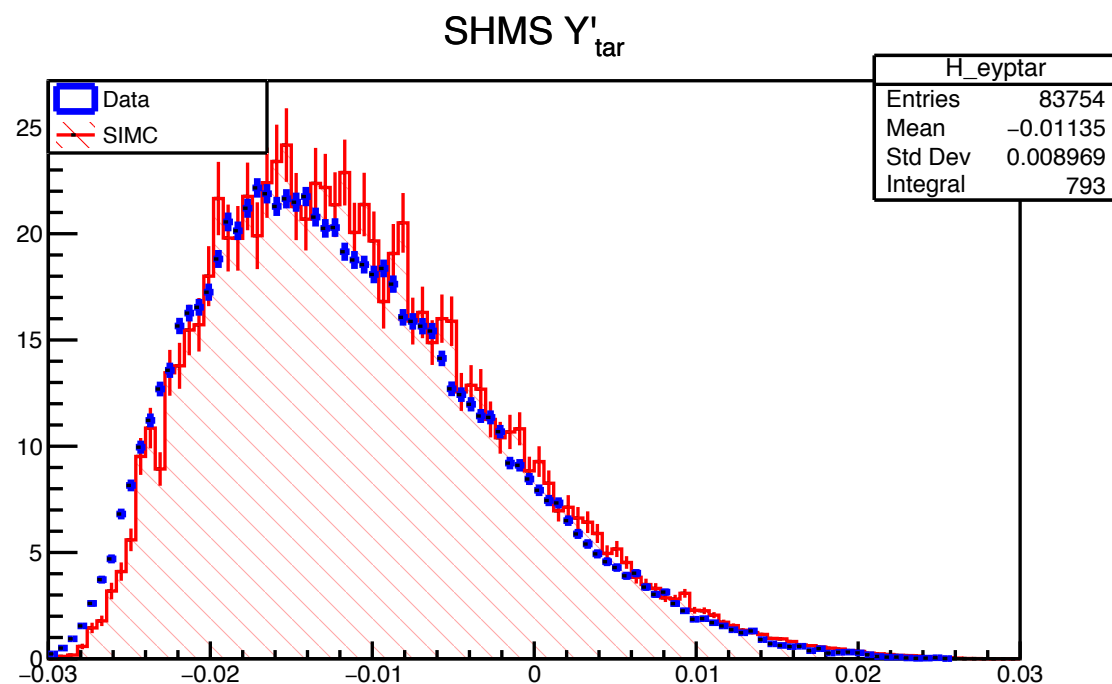
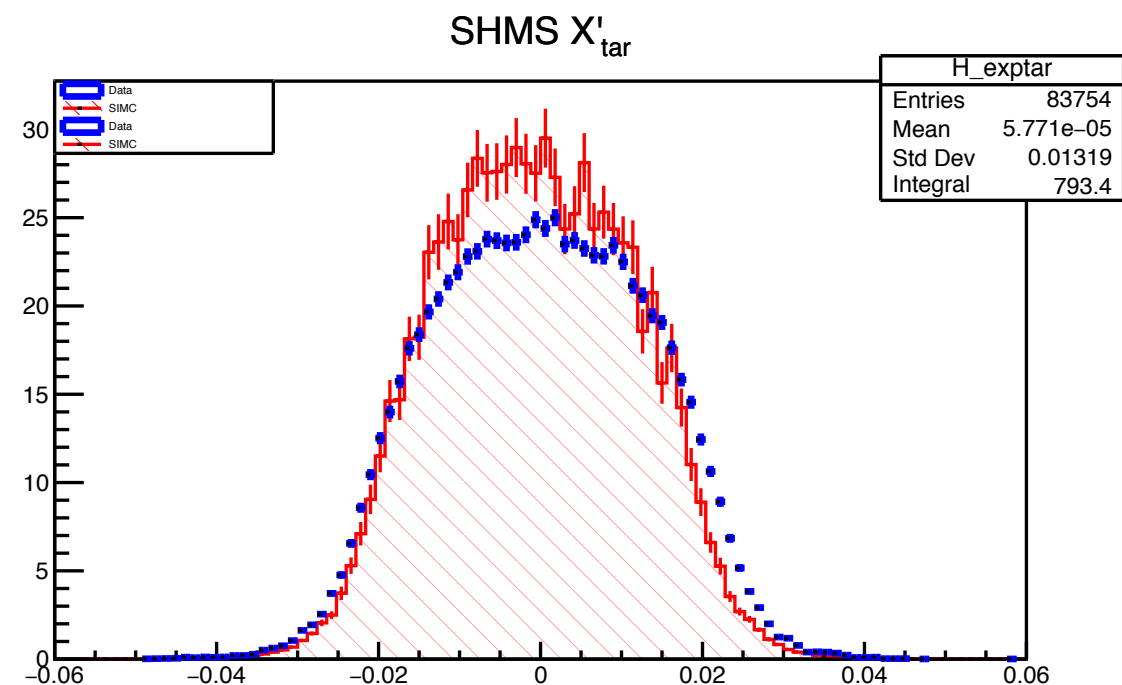
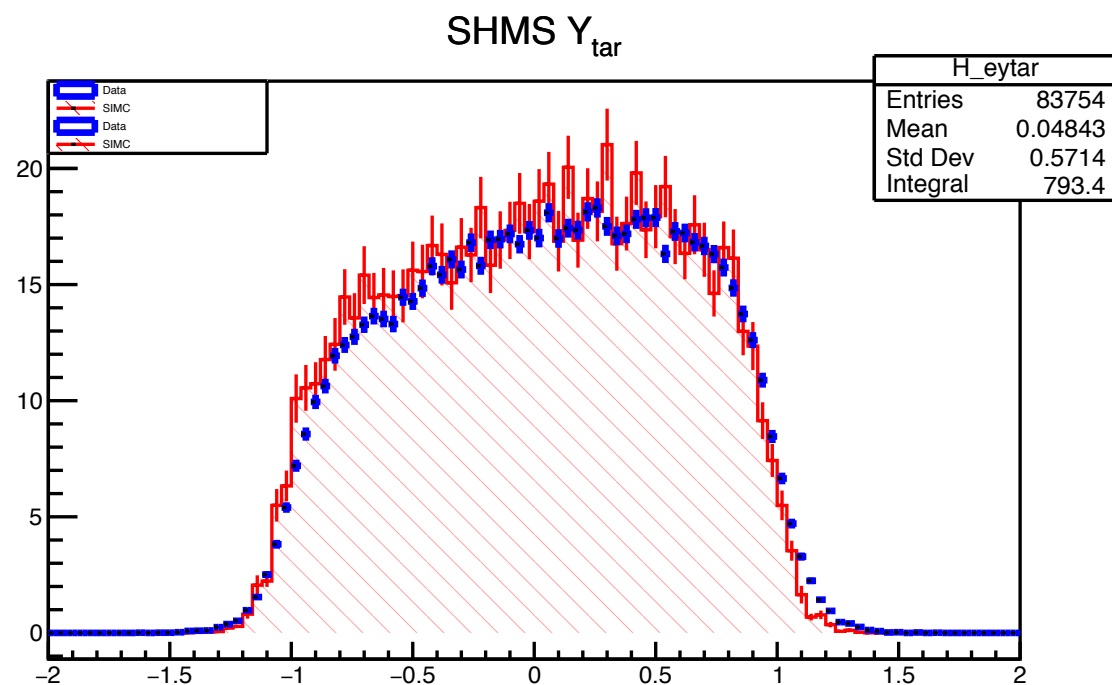
HMS Delta: (-8,8)

Coin. Time: (11, 15)

$| \text{HMS Ztar\_Difference} | < 2 \text{ cm}$

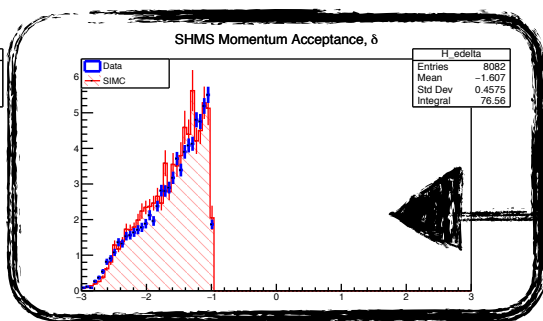
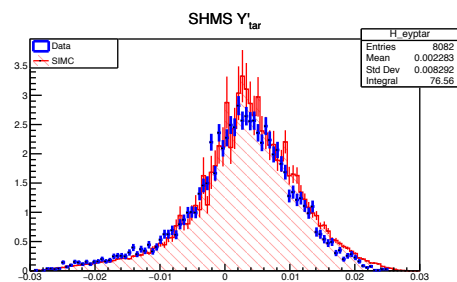
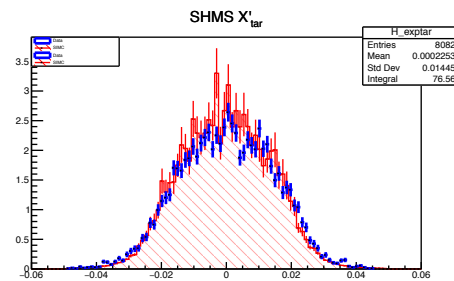
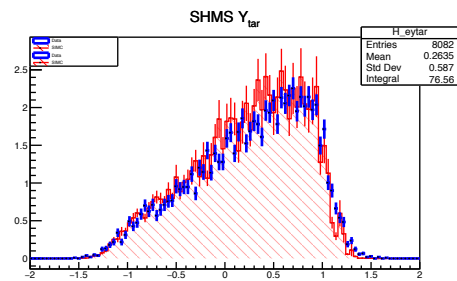
HMS Collimator Cut

# STUDY PART 1: Vary Delta in 2% Bins to Study Pm Yield Ratio

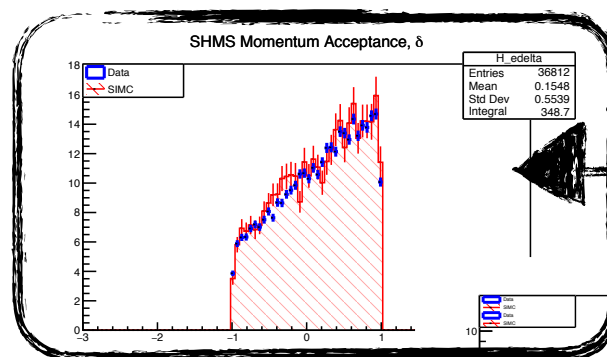
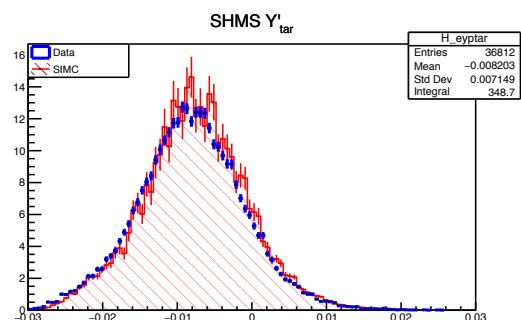
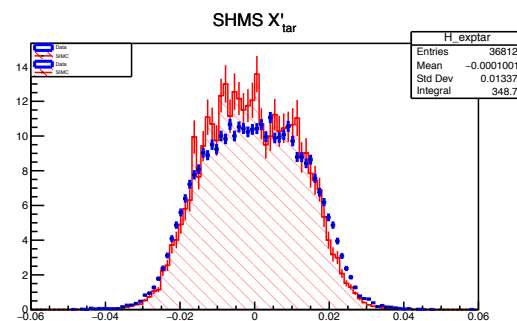
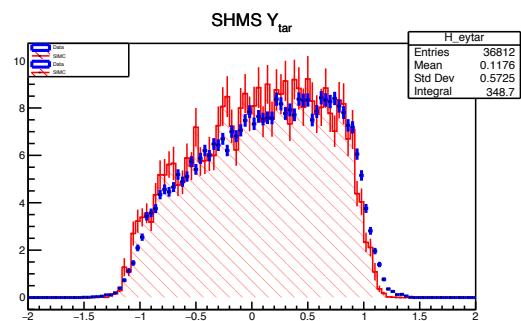


**Full Range of Delta is (-3,3) % for the D(e,e'p) 80 MeV Setting**

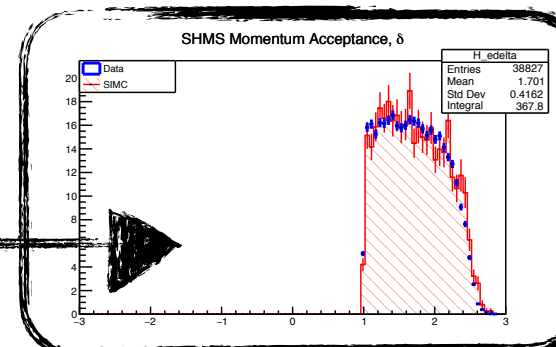
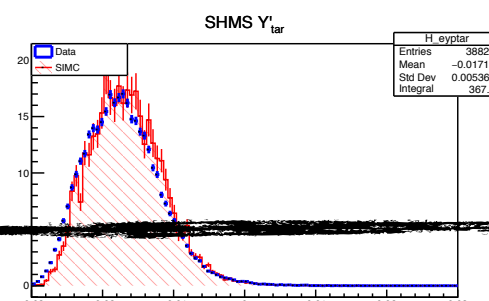
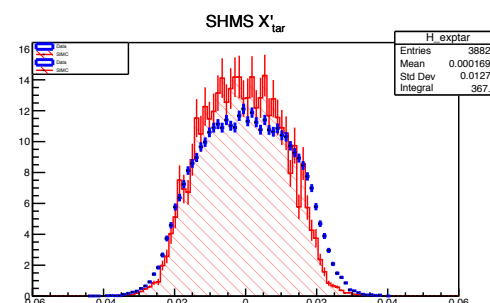
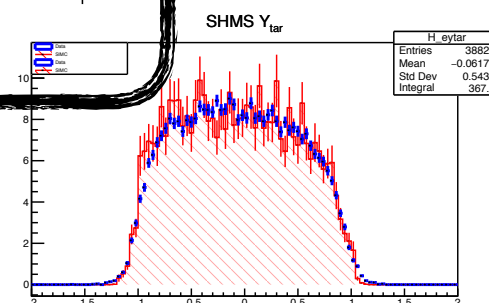
# STUDY PART 1: Vary Delta in 2% Bins to Study Pm Yield Ratio



Delta: (-3, -1) %



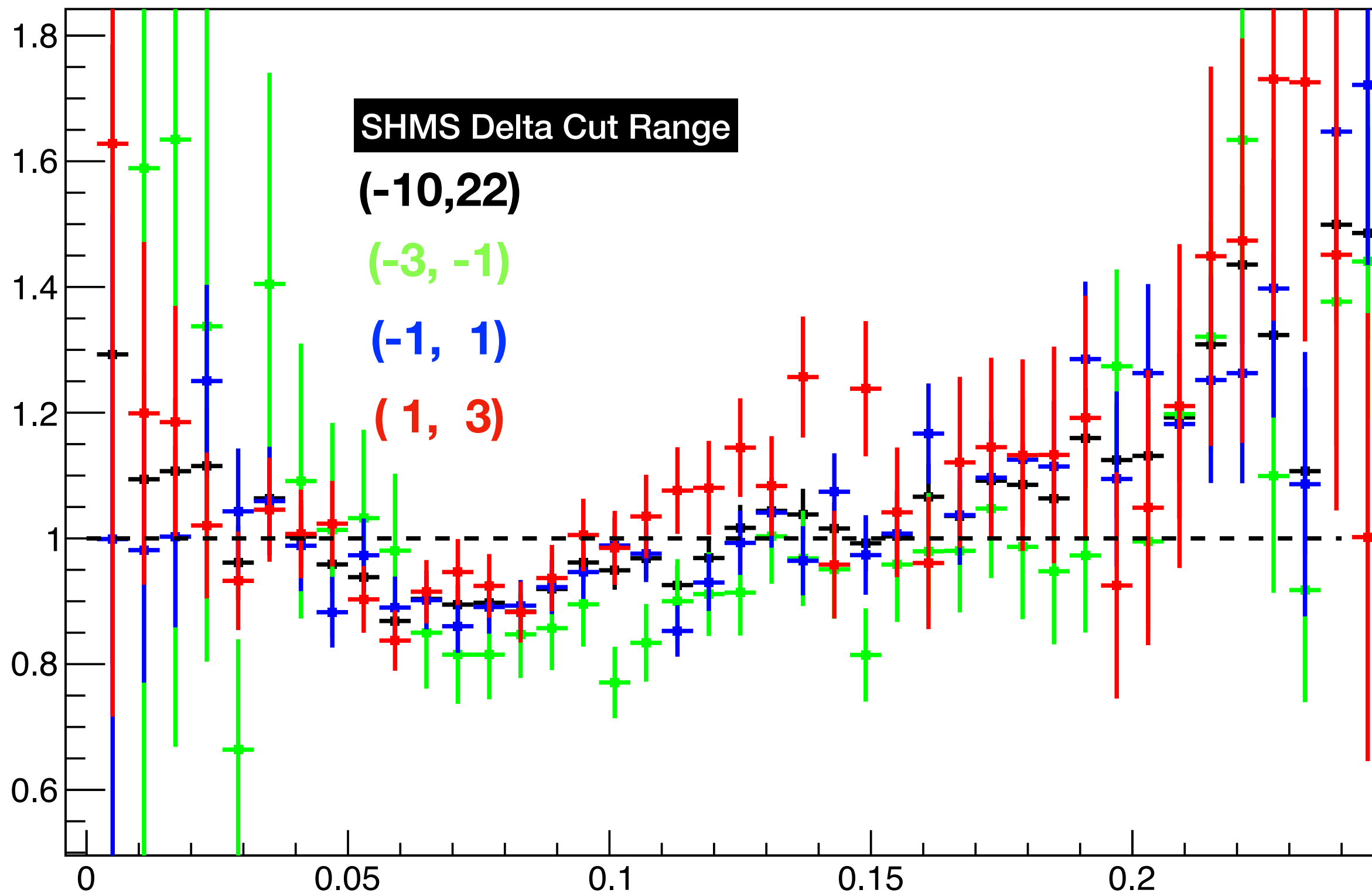
Delta: (-1, 1) %



Delta: (1, 3) %

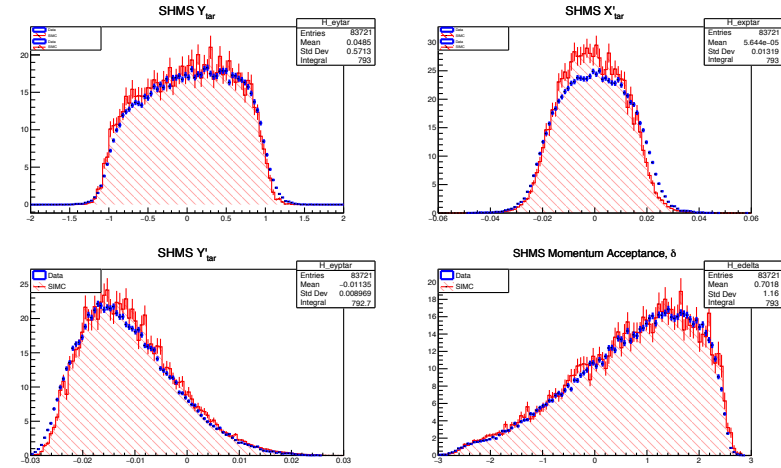
# STUDY PART 1: Vary Delta in 2% Bins to Study Pm Yield Ratio

## Missing Momentum

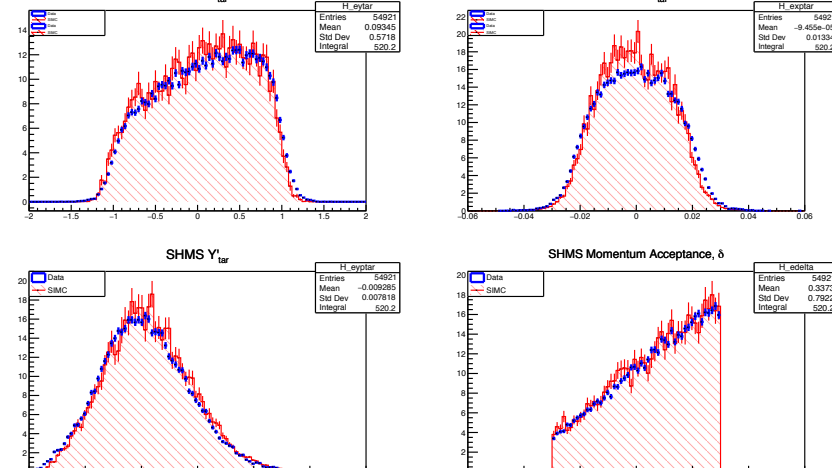


# STUDY PART 2: Vary Delta in Equal Absolute Range

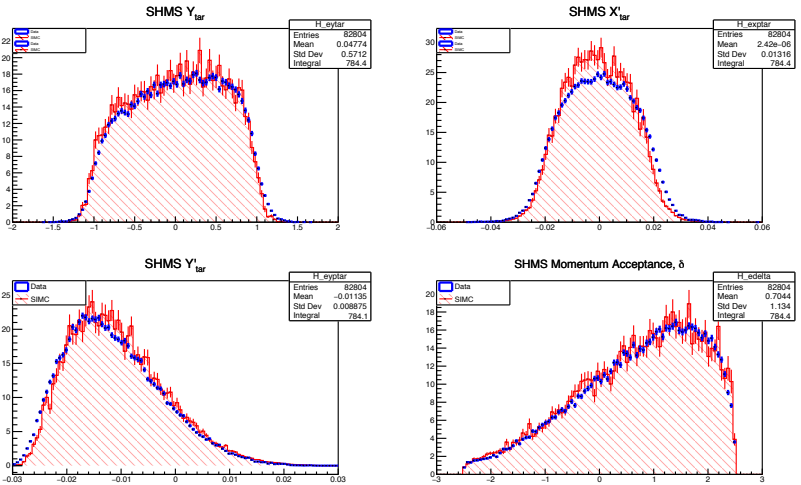
Delta: (-3, 3) %



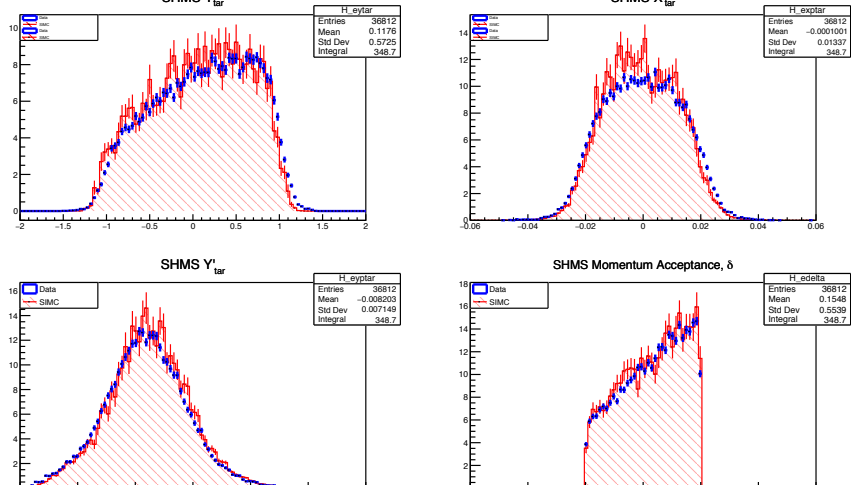
Delta: (-1.5, 1.5) %



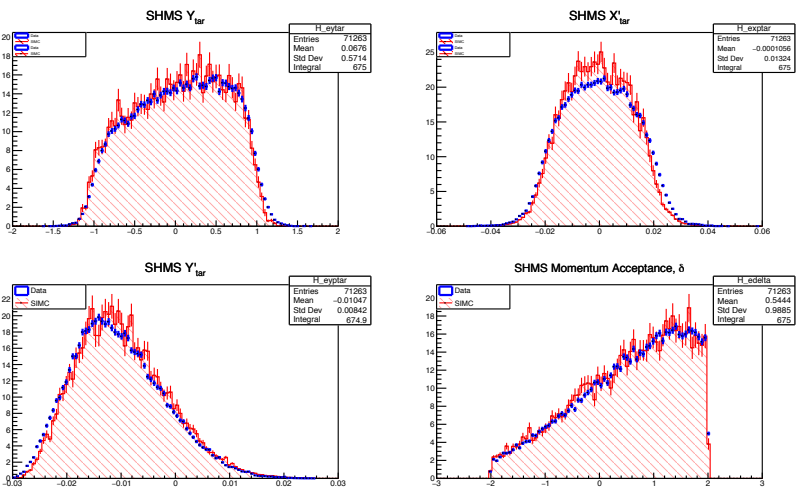
Delta: (-2.5, 2.5) %



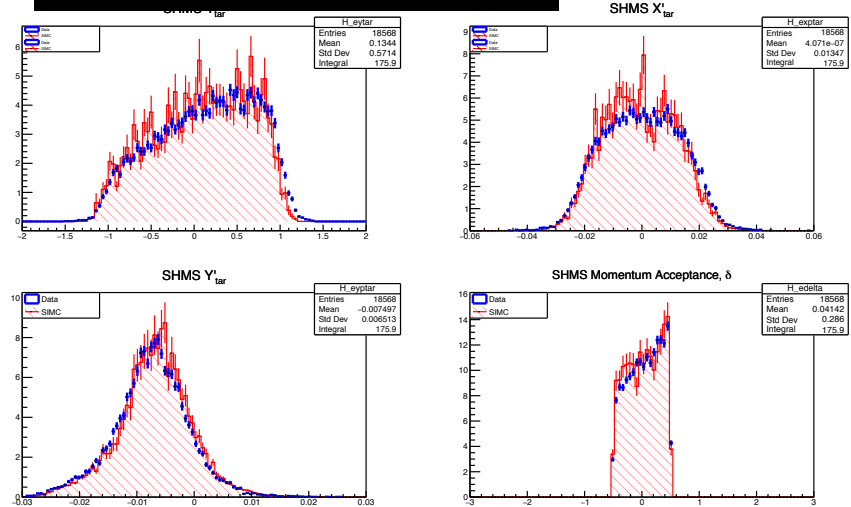
Delta: (-1, 1) %



Delta: (-2, 2) %

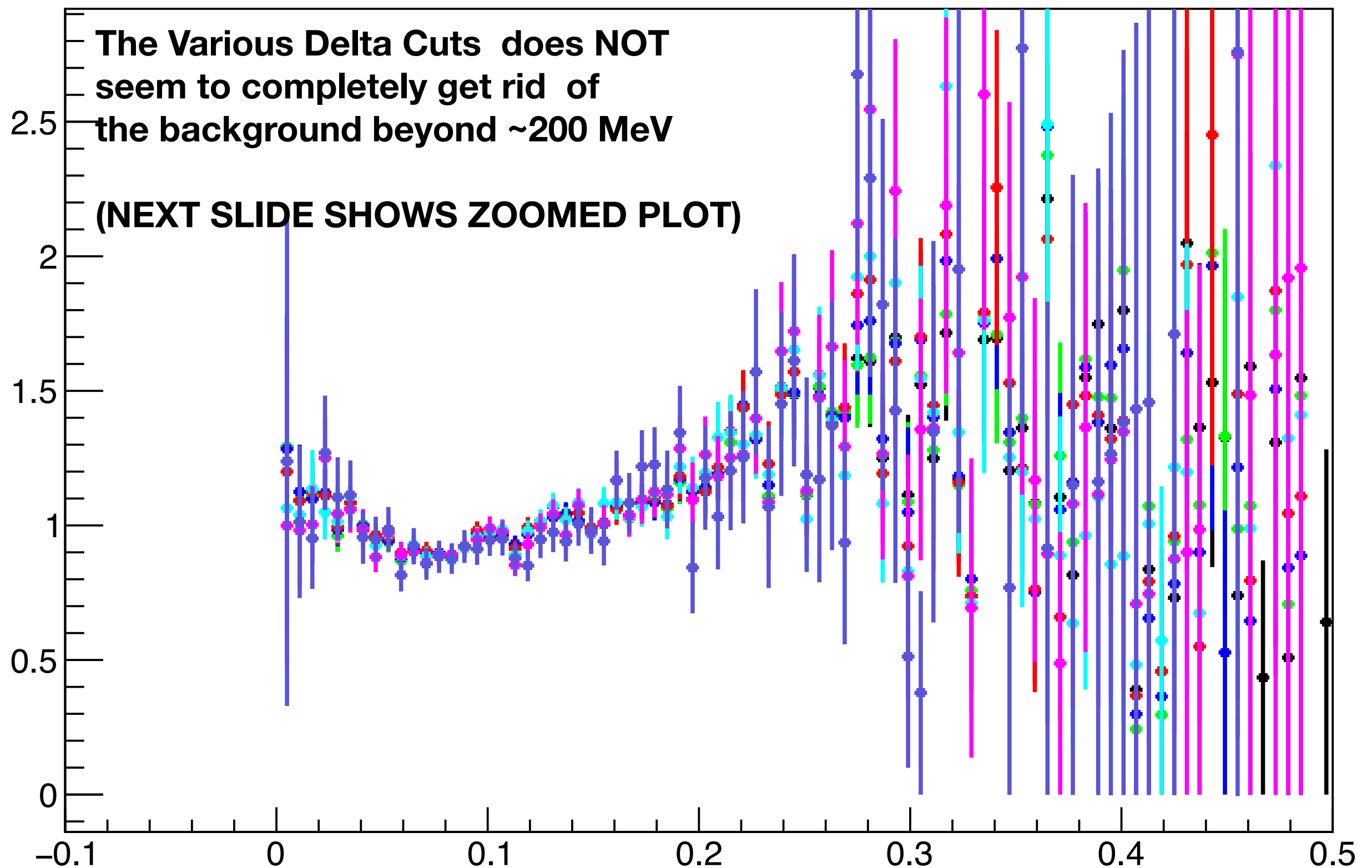


Delta: (-0.5, 0.5) %

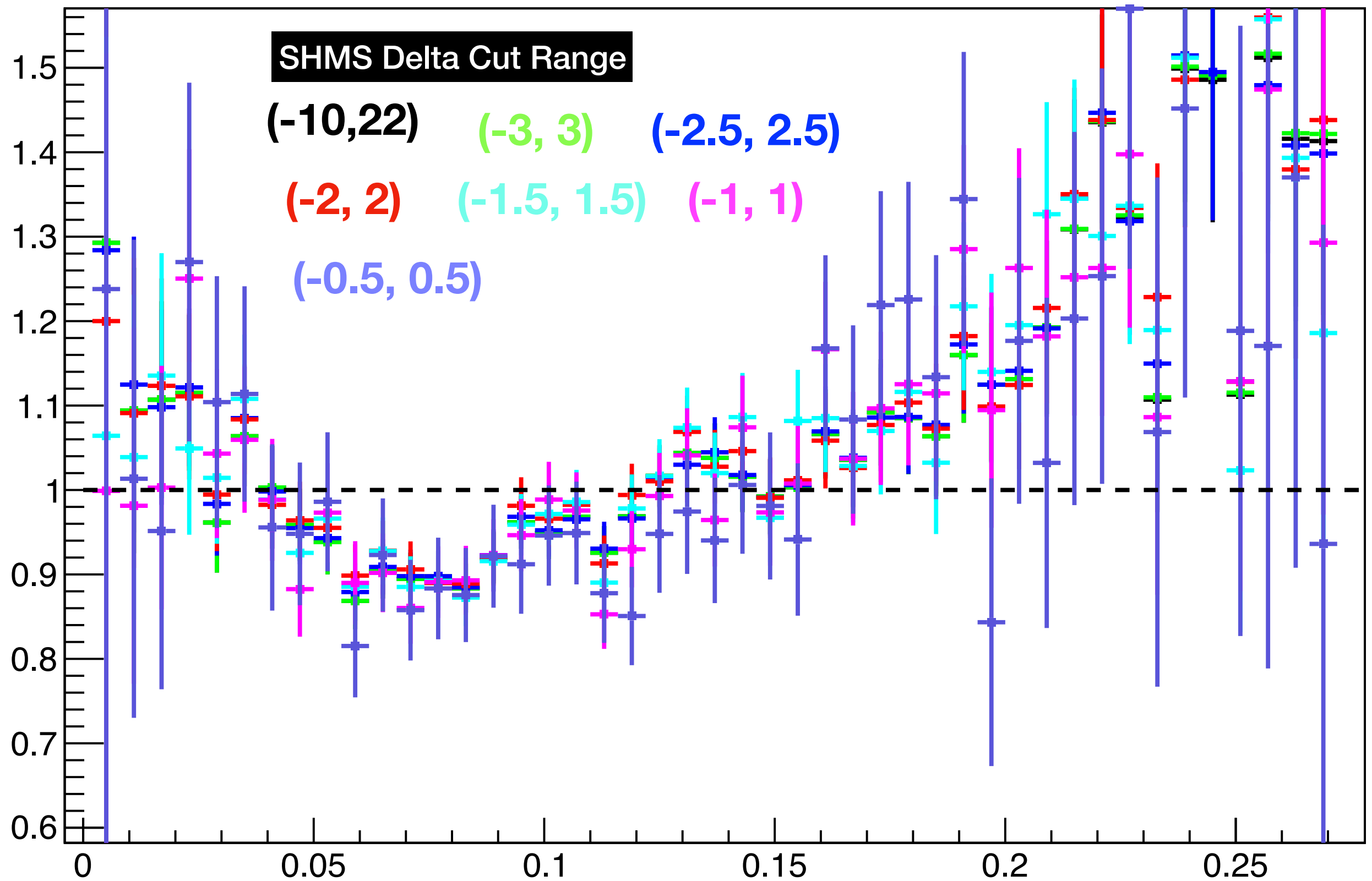


## STUDY PART 2: Vary Delta in Equal Absolute Range

### Missing Momentum



**STUDY PART 2: Vary Delta in Equal Absolute Range**  
**( ZOOMED IN )**  
**Missing Momentum**



## **SUMMARY:**

**Even though the various SHMS delta cut ranges did NOT seem to completely get rid of background for  $P_m > \sim 200$  MeV, the yield ratios do seem stable and within uncertainty of each other with respect to the various cuts**