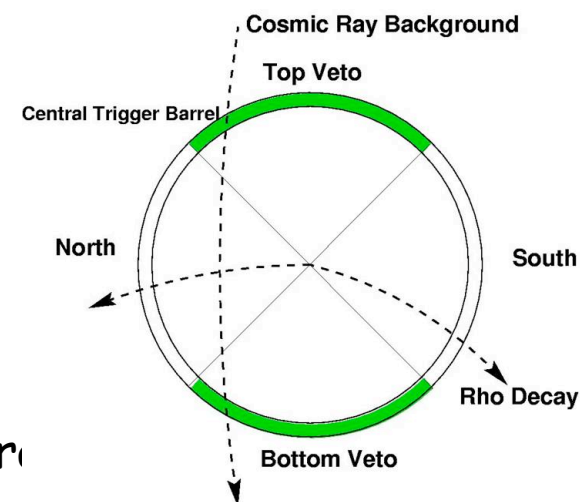


# Triggers

## Topology(UPC) $Au+Au \rightarrow Au+Au+\rho^0$

- Central Trigger Barrel divided into four quadrants
- Verification of  $\rho$  decay candidate with hits in North/South quadrants
- Cosmic Ray Background vetoed in Top/Bottom quadrants

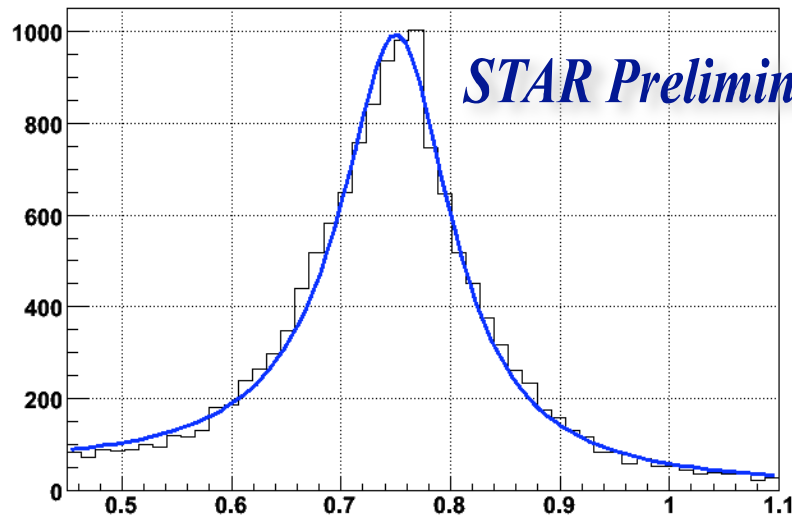


## Minbias $Au+Au \rightarrow Au^*+Au^*+\rho^0$

- Minimum one neutron in each Zero Degree Calorimeter required
- Low Multiplicity



# Finding the $\rho^0$ in 200 GeV Au+Au data



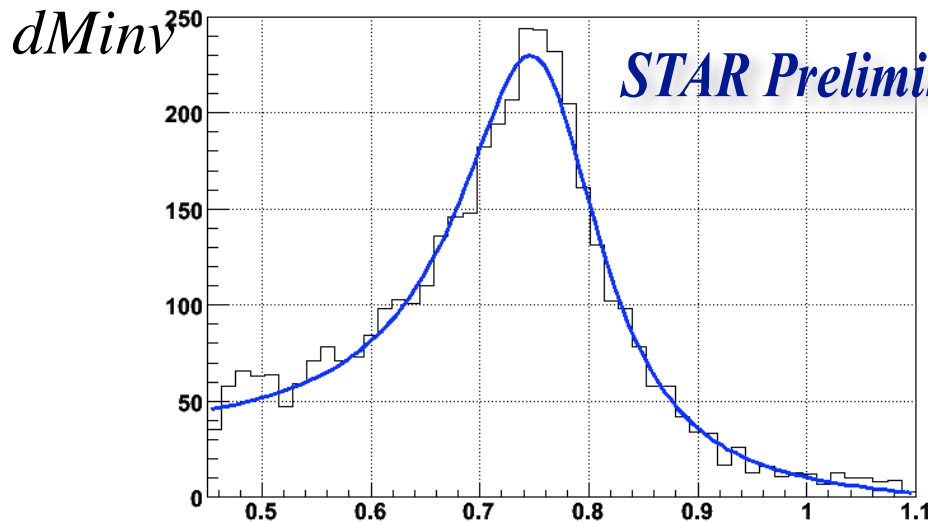
$$\rho^0 \rightarrow \pi^+ \pi^-$$

Topology  $Au+Au \rightarrow Au+Au+\rho^0$

Mass measurement  $\rightarrow .756 \pm .001$  GeV,  
 PDG  $\rightarrow .770$  GeV

Width measurement  $\rightarrow .124 \pm .002$  GeV,  
 PDG  $\rightarrow .149$  GeV

$\frac{dN}{dM_{inv}}$



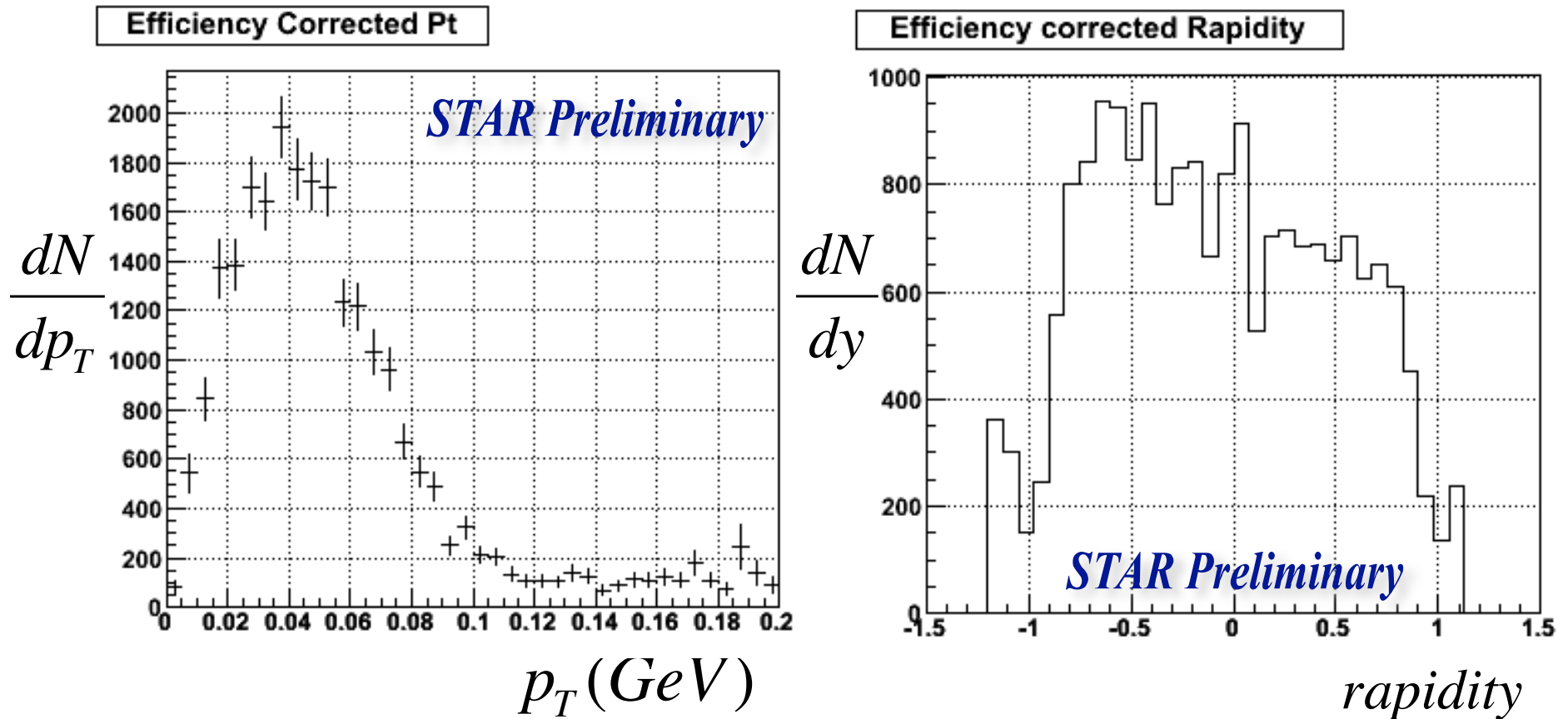
Minbias  $Au+Au \rightarrow Au^*+Au^*+\rho^0$

Mass measurement  $\rightarrow .763 \pm .002$  GeV,  
 PDG  $\rightarrow .770$  GeV

Width measurement  $\rightarrow .160 \pm .005$  GeV,  
 PDG  $\rightarrow .149$  GeV



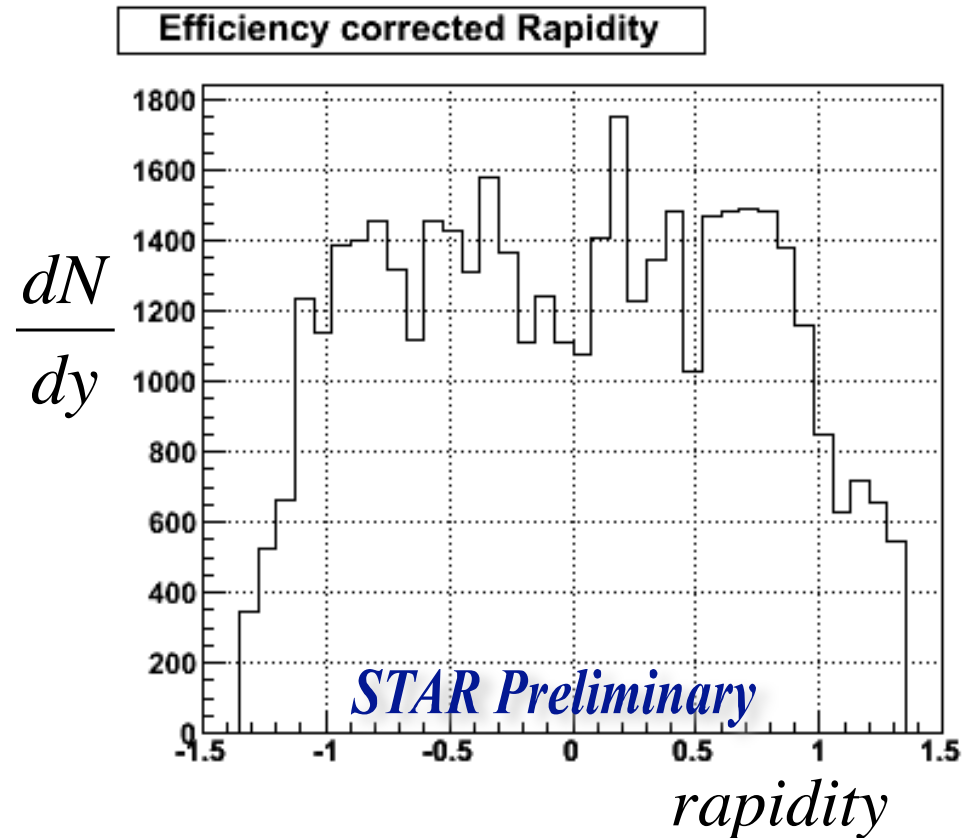
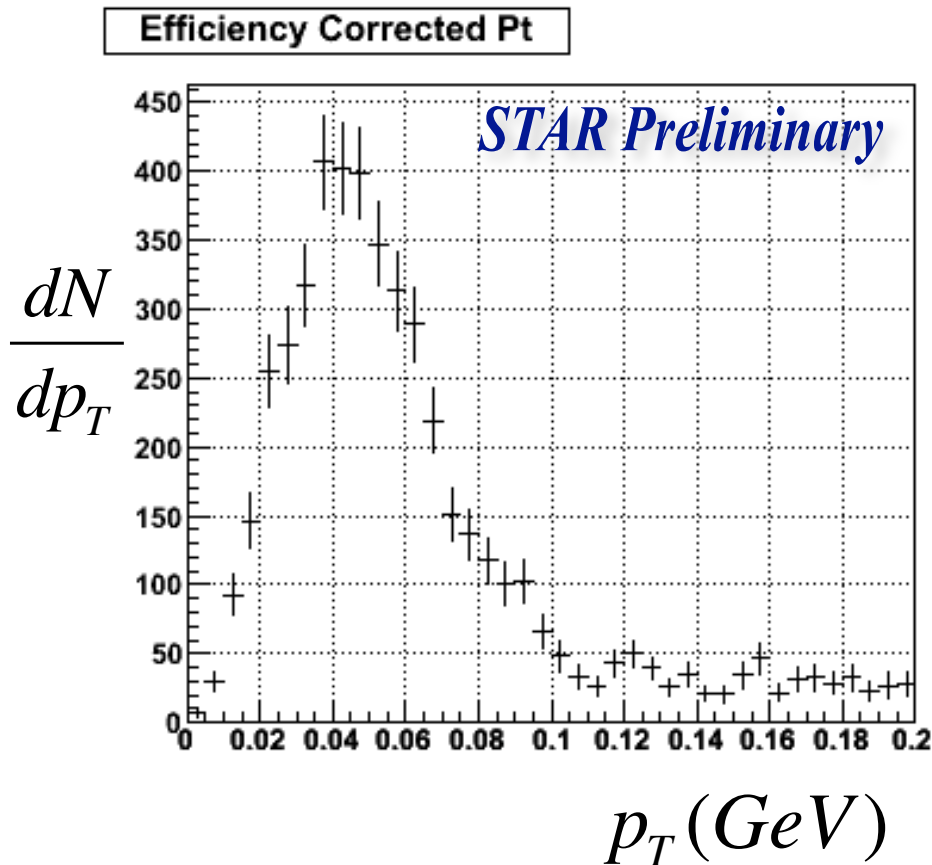
# Rapidity and $p_T$ distributions for $\rho^0$ -- Topology



Cuts applied to minimize cosmic ray background,  
maximize interference signal



# Rapidity and $p_T$ distributions for $\rho^0$ -- Minbias



Cuts applied to minimize cosmic ray background,  
maximize interference signal



# t-spectrum for minbias and topology data

