

# $p_T$ spectra and multiplicity vs centrality in Pb-Pb collision at $\sqrt{s_{NN}} = 5.02$ TeV Analysis Update

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## 1 pT Ratios

# Ratios low/high

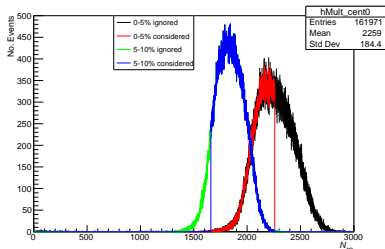
- We want to study the  $p_T$  ratios low/high
- As before, we define

$$R_{lh,i} := \frac{\left( \frac{1}{N_{ev}} \frac{d^2 N}{dp_T d\eta} \right)_{\text{low},i}}{\left( \frac{1}{N_{ev}} \frac{d^2 N}{dp_T d\eta} \right)_{\text{high},i}}$$

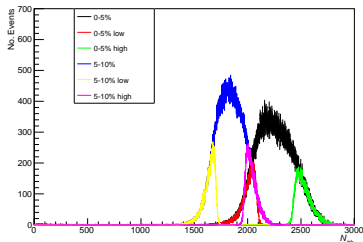
where  $i =$  for  $0 - 1\%$ ,  $i = 1$  for  $1 - 2\%$  etc.

# Overlap between low and high

- We also want to study the overlap region, the ratio between the low multiplicity part of 0 – 5% and the high multiplicity part of 5 – 10%.

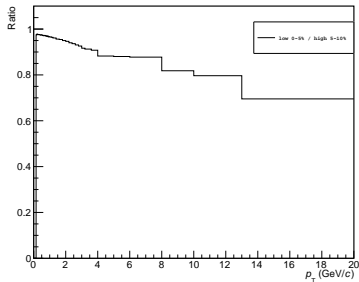


(a) Region studied two weeks ago.

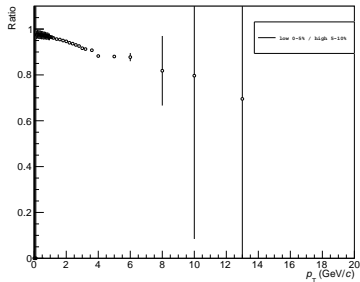


(b) Region studied last week.

# Overlap between low and high



(a) Overlap ratio without errors.



(b) Overlap ratio with errors.

## Progress

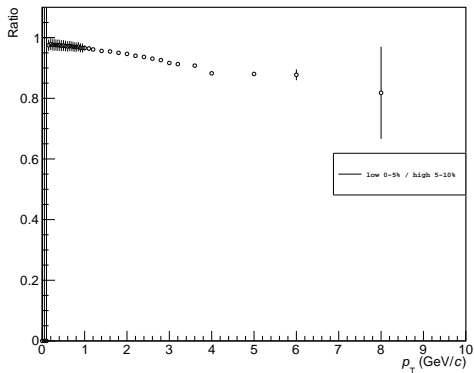
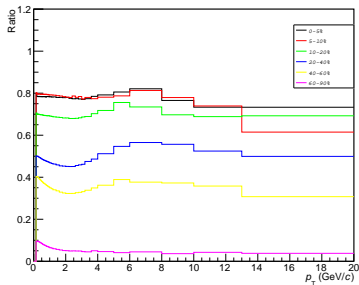
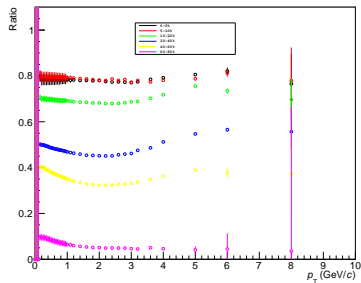


图 3: Same plot until 10 GeV.

# Overlap between low and high



(a) Ratio without errors.



(b) Ratio with errors.

## Progress

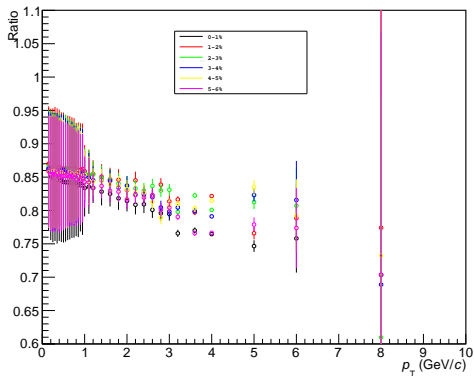


图 5: For 1% error bars are too big to separate the distributions.