

Analysis of π^0 in the large 2014 200 GeV Au+Au dataset

In 2014 large amount of Au+Au data were collected. This makes it possible to extend the transverse momentum range and improve the systematic uncertainties.



Study DHM (dead-hot-map)

Applying several condition then organize these parameters in our analysis's "DHM" will help to identify the malfunctioning towers.

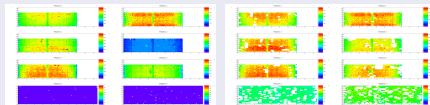


Figure: Raw hit map before (the left side) & after (the right side) applying DHM.

Apply DHM

As a result, here we apply the final DHM to see how does it work.

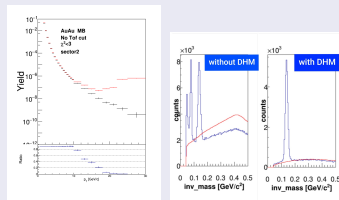


Figure: γ (w/wo)-DHM (left) & The invariant mass distributions of π^0 (right).

The Method of π^0 Extraction

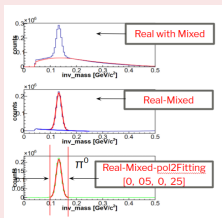


Figure: Mixed Event Background Subtraction Method (low p_T).

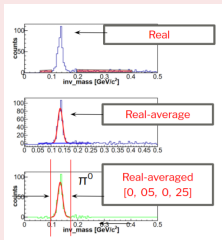


Figure: Background Subtraction by Average Bin Content (High p_T).

Raw π^0 in centrality classes (MB)

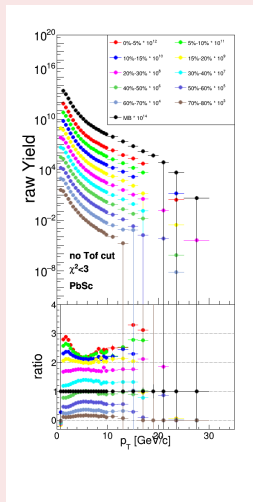


Figure: The raw yield of π^0 in centrality bins(upper) and the ratios of individual centrality to MB(lower).

