

E_T and centrality studies

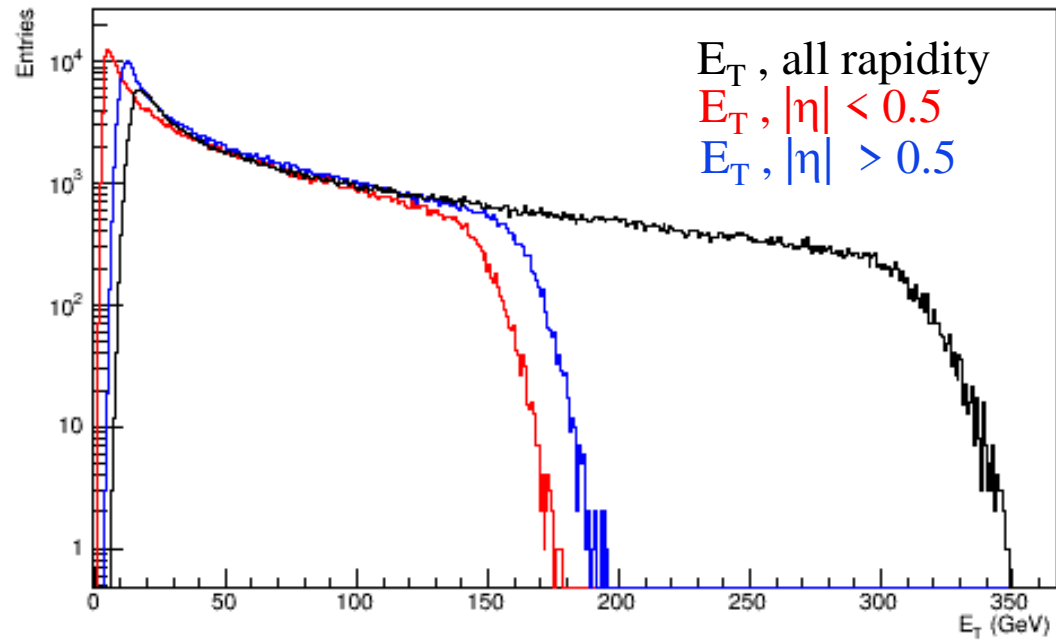
V. Riabov for PWG4

Selection cuts

- Event selections:
 - ✓ BiBi@9.2, UrQMD v.3.4
 - ✓ $B = 0-14$ fm, minbias
 - ✓ z -vertex = 0 to avoid efficiency corrections
 - ✓ no centrality/multiplicity selections
- Track selections (for centrality by TPC multiplicity):
 - ✓ n -hits > 10
 - ✓ $|\eta| < 0.5$
 - ✓ $|\text{DCA}_{x,y,z}| < 2$ cm
- ECAL cluster selections:
 - ✓ $E_\gamma > 50$ MeV
 - ✓ n -towers > 1

E_T distributions

- Transverse energy E_T



E_T distributions, CPV

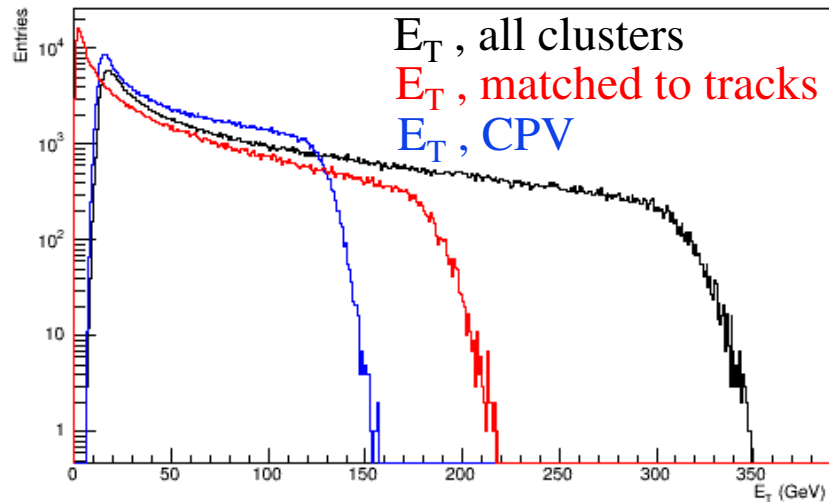
- Transverse energy E_T , all rapidity

Matched clusters:

$|\text{dphi}| < 10$ && $|\text{dzed}| < 10$

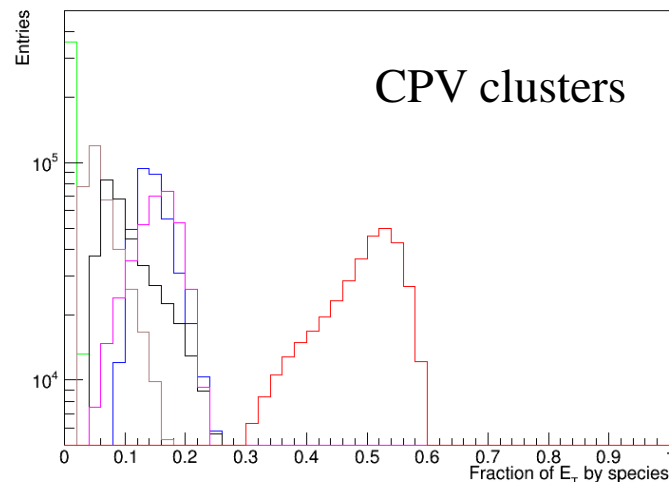
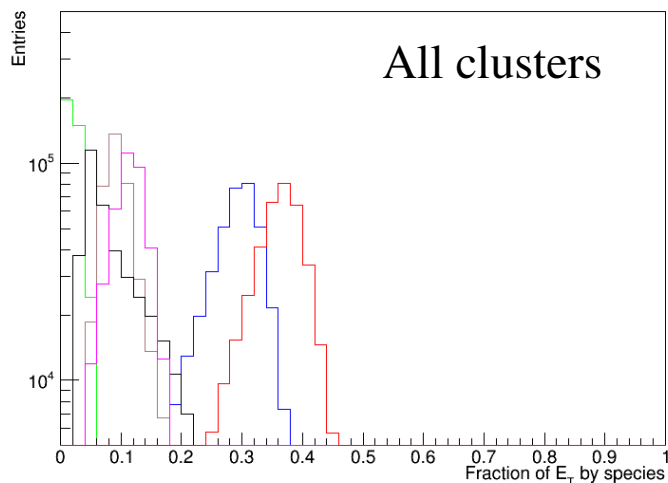
CPV:

!Matched



- Contributors:

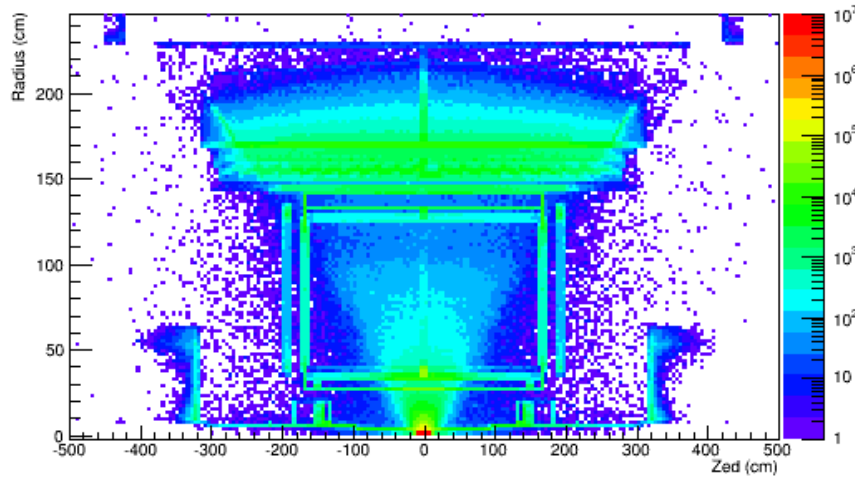
γ , π^\pm , e^\pm , K^\pm , p^\pm , n



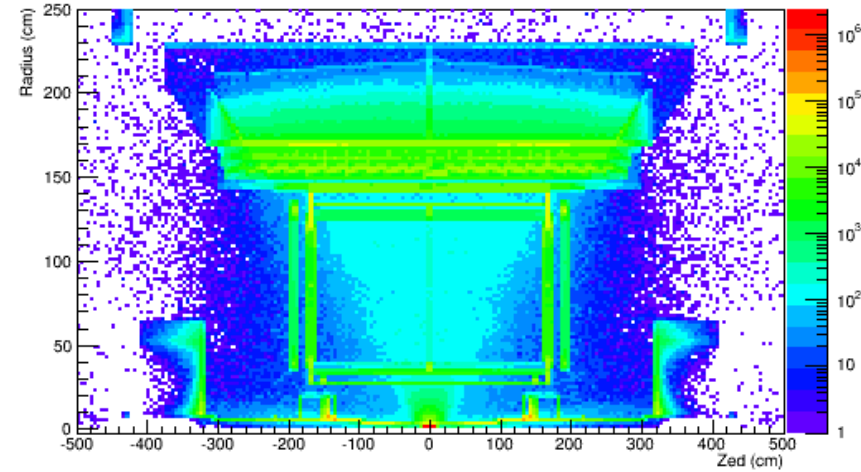
Origin of clusters

- Selected clusters produced by pions, kaons, protons and electrons

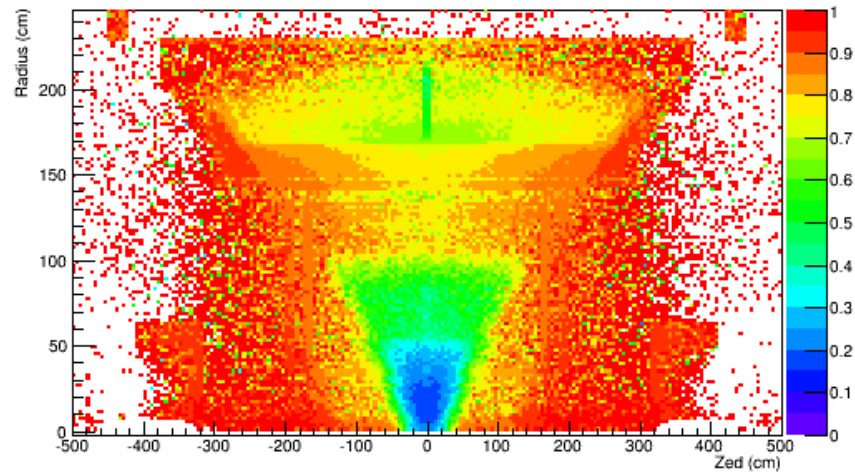
Matched



CPV

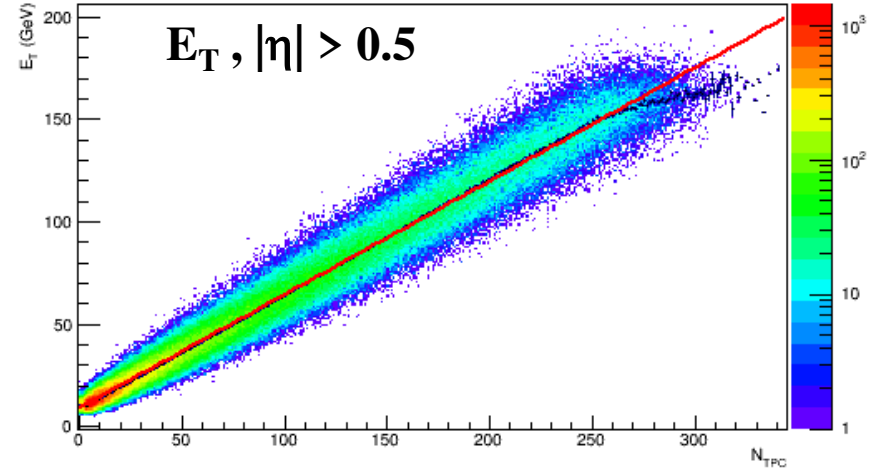
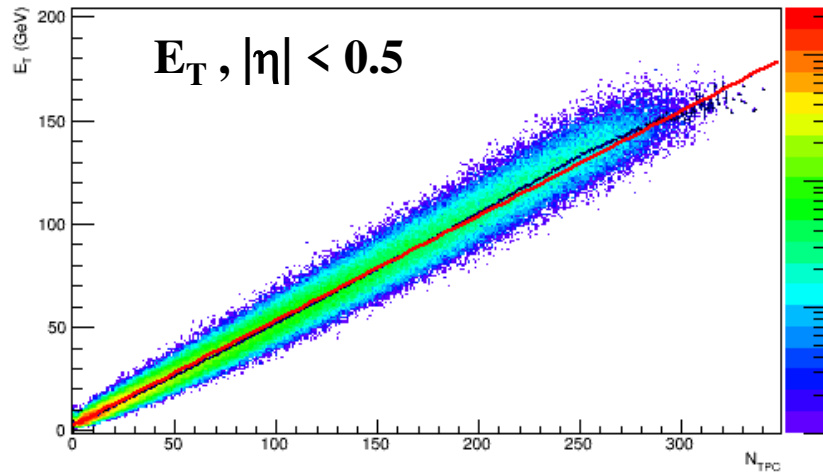


CPV/All

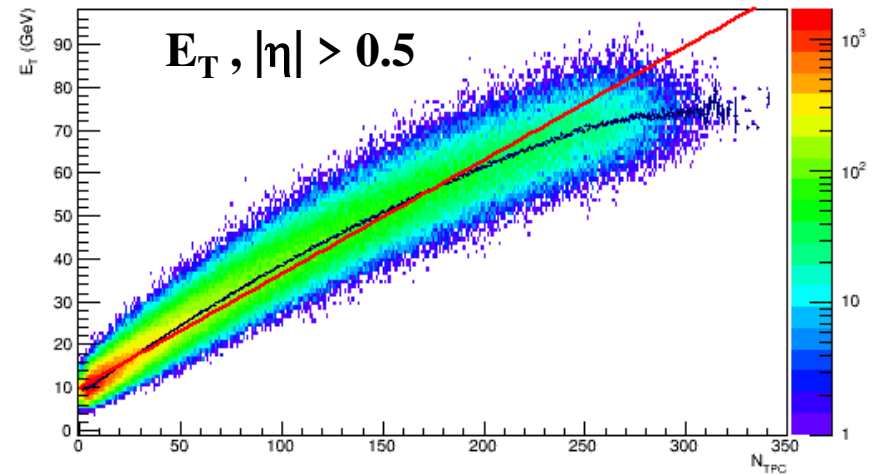
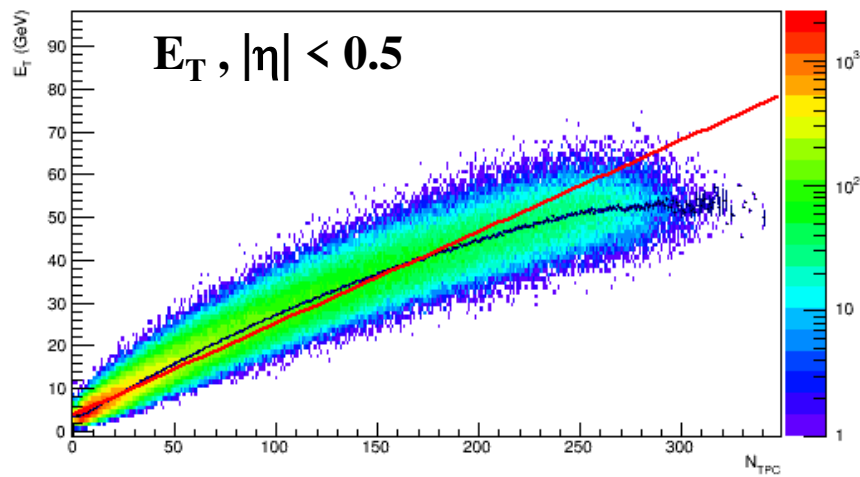


E_T vs. N_{tracks}

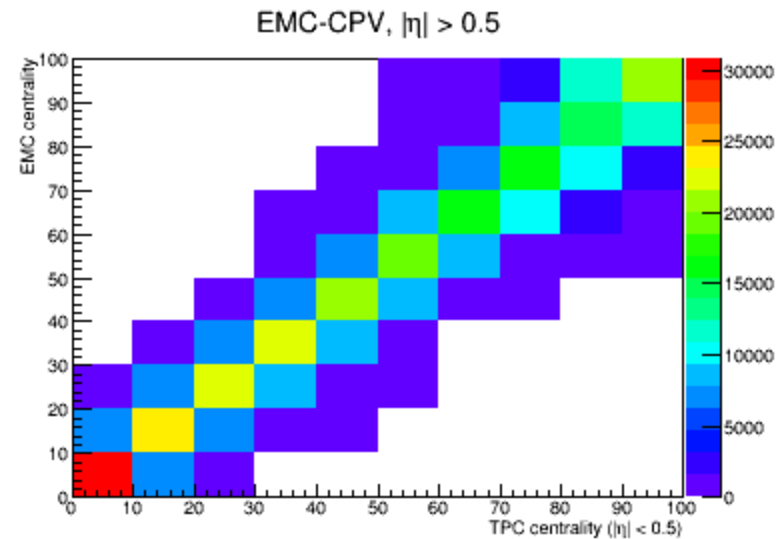
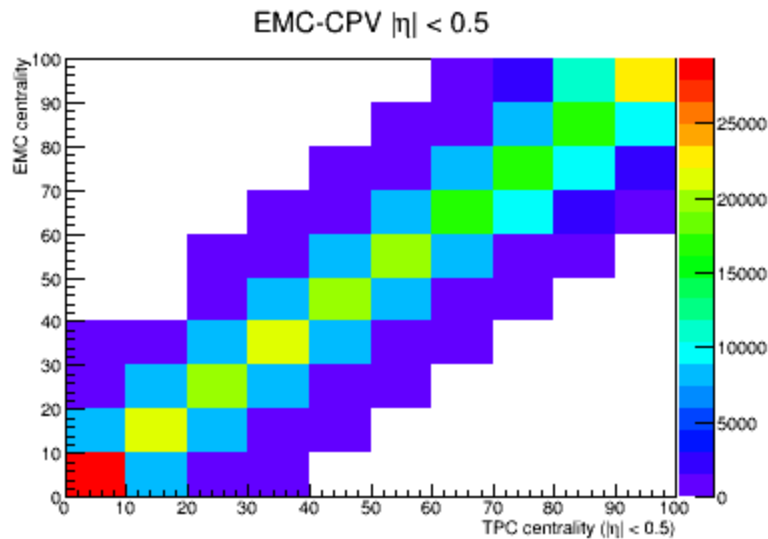
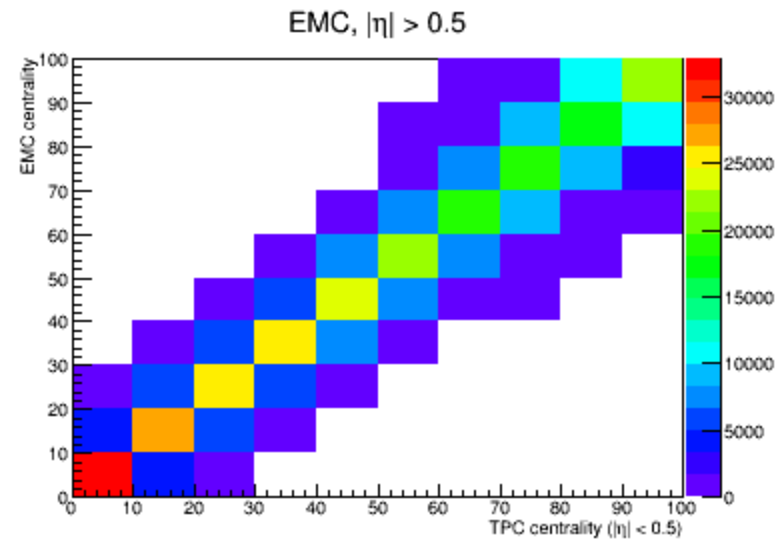
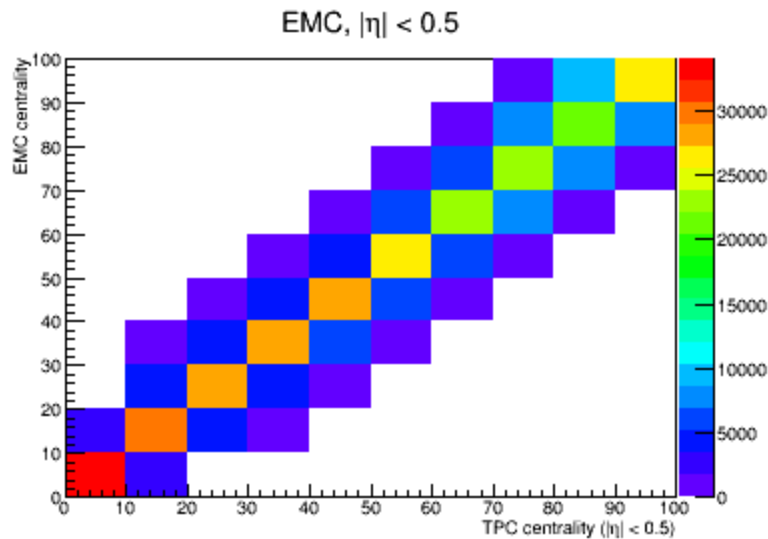
- All clusters



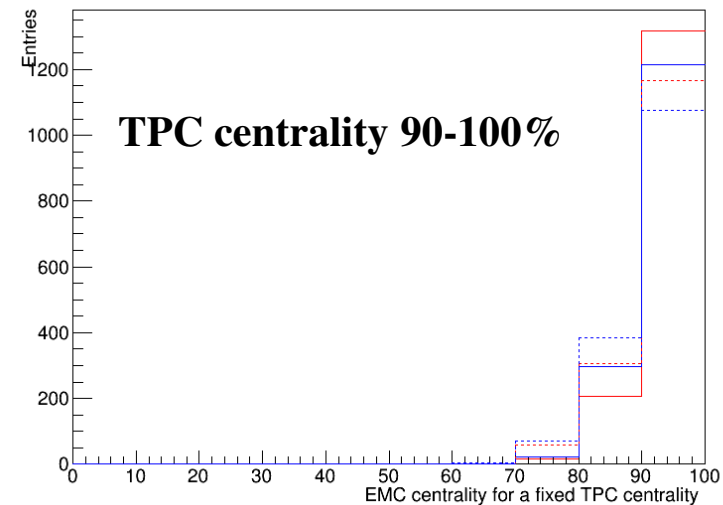
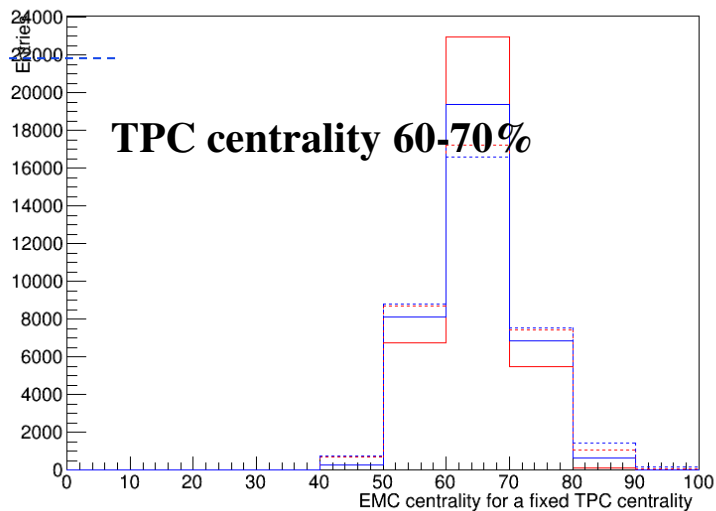
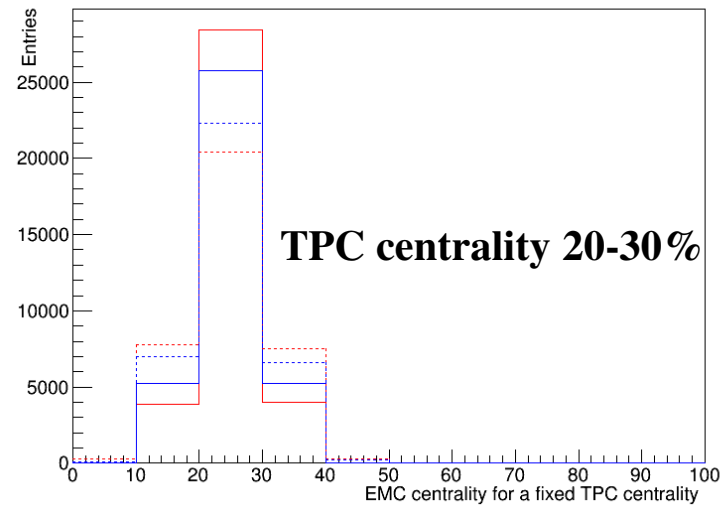
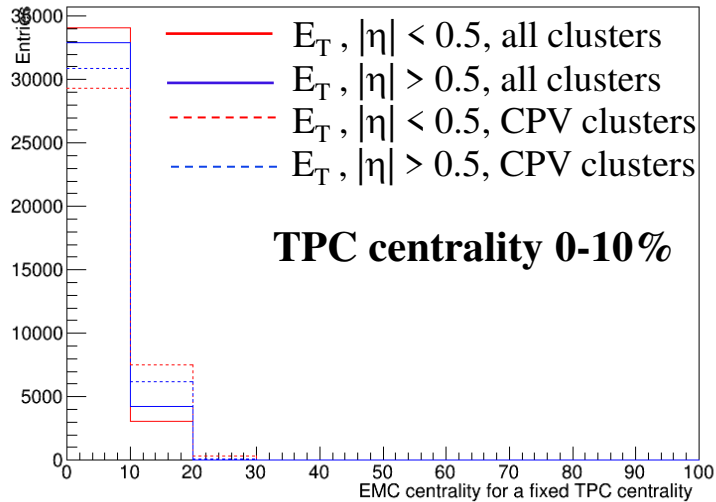
- CPV clusters



Centrality by E_T vs. centrality by TPC

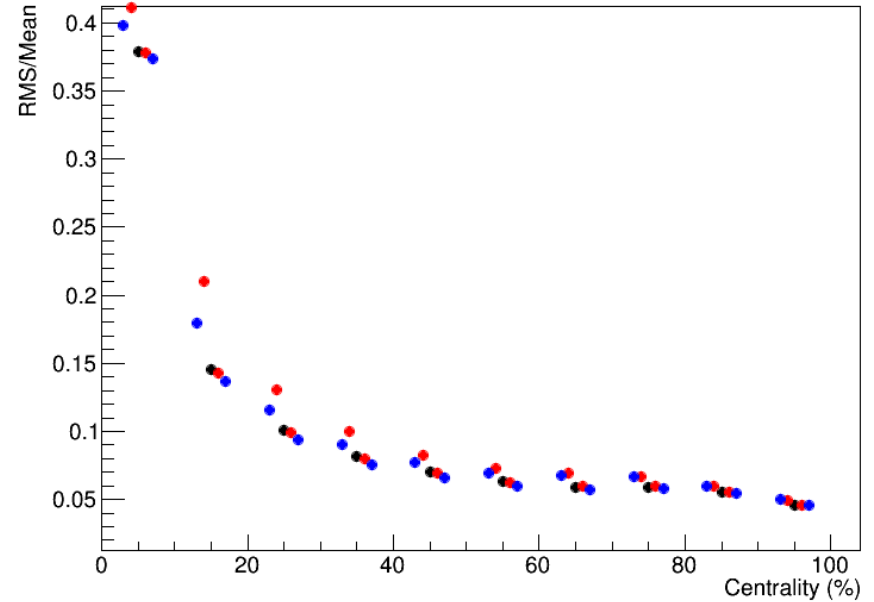
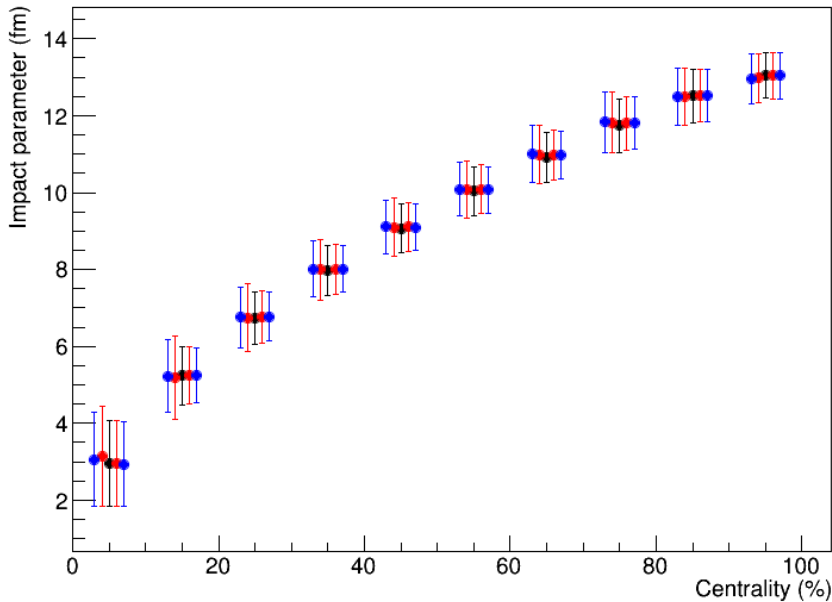


Centrality by E_T vs. centrality by TPC



Sampled impact parameter distributions

E_T -CPV, $|\eta| > 0.5$, E_T -CPV, $|\eta| < 0.5$, TPC centrality, E_T , $|\eta| < 0.5$, E_T , $|\eta| > 0.5$



- Sampled impact parameter distributions are similar but event samples are different

Conclusions

- Observe close correlation between E_T and N_{TPC}
- Width of correlation depends on rapidity selections
- Sampled impact parameter distributions are similar while events are different