

Rapidity and centrality dependence of transverse energy distributions in PbPb collisions from CMS

Transverse energy measurements offer insight into the dynamics of heavy ion collisions and the total entropy created. At very forward angles they may also be sensitive to the low momentum components of the nuclear wave-function. CMS has almost hermetic calorimetry coverage with fine granularity and excellent resolution. In addition for particles near central rapidity momenta from the tracker can be combined with the calorimeter data to give a significant improvement of the system resolution. In this talk the transverse energy measurements from 2.76 TeV PbPb collisions as a function of centrality will be compared to similar CMS results from pp collisions and to our recently published multiplicity results. The pseudo rapidity dependence of the transverse energy per participant is susceptible to the longitudinal expansion of the system. This quantity has not been measured for truly heavy ions for centre of mass energies above 8 GeV. The width of this distribution grows slowly with centrality. At central rapidity the transverse energy per participant is above predictions based on lower energy data that assumed a logarithmic scaling with centre of mass energy.

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